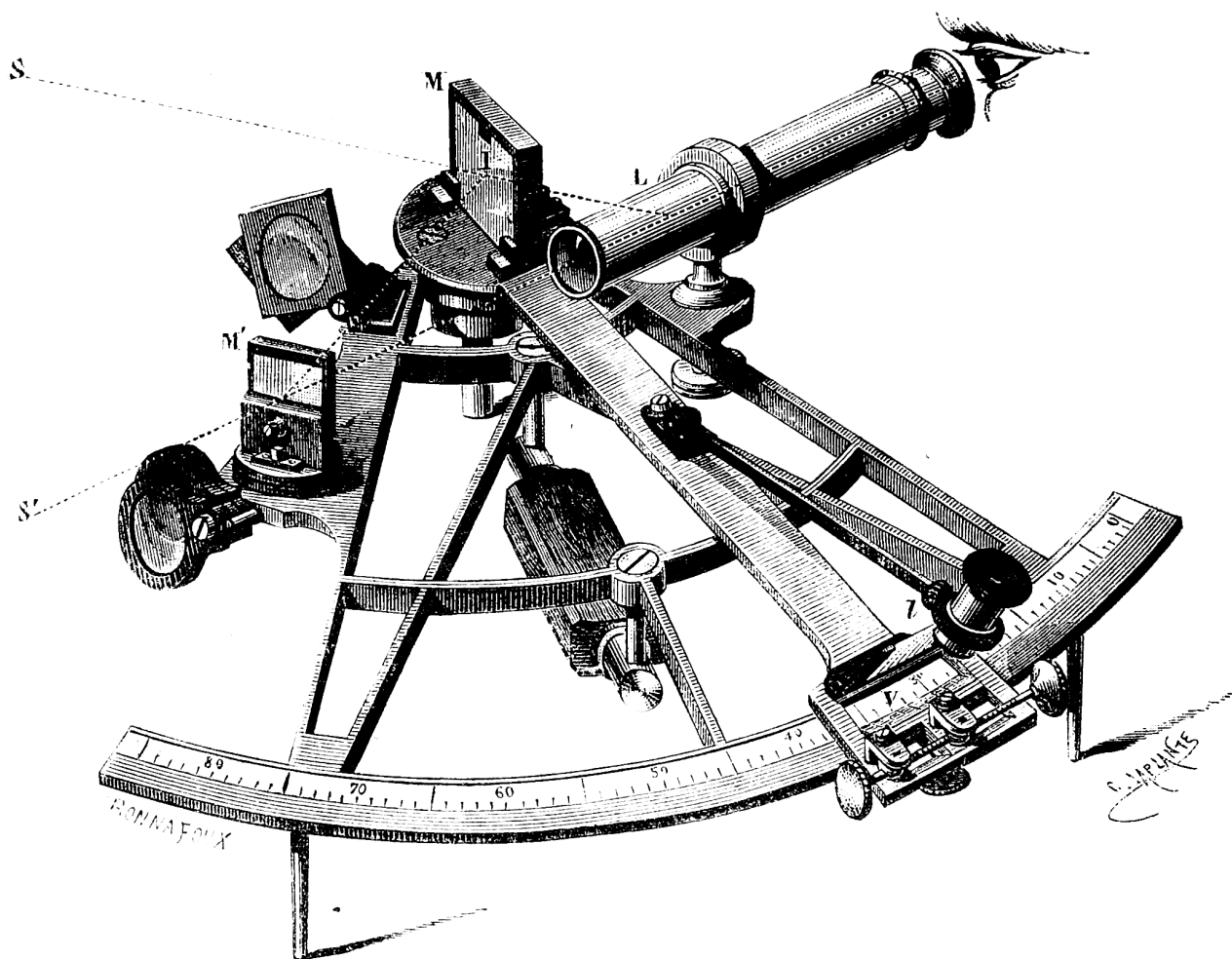




ALMANAQUE NÁUTICO PERSEIS 2008

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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 3				Edad: 22 ^d 3 PHE { 4 ^h : 54'5 12 ^h : 54'4 20 ^h : 54'3 PMG: 6 ^h 29 ^m R°: 41 ^m												
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	179	13.9	-23	04.1	265	32.6	-10	20.8	60 N	7 09	8 06	9 03	1 38	85	11 03	1	
1	194	13.6		04.0	280	07.8 ¹⁶²		34.0 ¹³²	58	7 02	7 54	8 46	31	82	11	4	
2	209	13.3		03.8	294	42.9 ¹⁶¹	-10	47.1 ¹³¹	56	6 56	44	31	26	78	17	8	
3	224	13.0		03.6	309	18.0 ¹⁶¹	-11	00.1 ¹³⁰	54	50	36	19	21	74	23	11	
4	239	12.7		03.4	323	53.1 ¹⁶¹		13.1 ¹³⁰	52	44	28	8 08	16	72	29	13	
5	254	12.4	-23	03.2	338	28.2 ¹⁶¹	-11	26.1 ¹³⁰	50	6 39	7 20	7 59	1 12	70	11 33	16	
6	269	12.1	-23	03.0	353	03.2 ¹⁶⁰	-11	39.0 ¹²⁹	45	6 28	7 05	7 38	1 03	65	11 44	20	
7	284	11.8		02.8	7	38.2 ¹⁶⁰	-11	51.8 ¹²⁸	40	17	6 51	22	0 56	61	11 53	24	
8	299	11.5		02.6	22	13.2 ¹⁶⁰	-12	04.6 ¹²⁸	35	08	40	7 08	50	57	12 00	27	
9	314	11.2		02.4	36	48.1 ¹⁵⁹		17.4 ¹²⁸	30	6 00	29	6 56	44	55	07	30	
10	329	10.9		02.2	51	23.0 ¹⁵⁹		30.1 ¹²⁷	20	5 44	6 11	35	35	49	19	34	
11	344	10.6	-23	02.0	65	57.9 ¹⁵⁹	-12	42.7 ¹²⁶	10 N	5 28	5 54	6 17	0 26	46	12 29	38	
12	359	10.3	-23	01.8	80	32.7 ¹⁵⁸	-12	55.3 ¹²⁶	0	5 11	5 37	6 00	0 19	41	12 39	42	
13	14	10.0		01.6	95	07.5 ¹⁵⁸	-13	07.9 ¹²⁶	10 S	4 52	5 19	5 42	11	38	48	46	
14	29	09.7		01.4	109	42.3 ¹⁵⁸		20.3 ¹²⁴	20	30	4 59	24	0 03	33	12 59	50	
15	44	09.4		01.2	124	17.1 ¹⁵⁸		32.8 ¹²⁵	30	4 01	35	5 02	** ** *	**	13 10	55	
16	59	09.2		01.0	138	51.8 ¹⁵⁷		45.2 ¹²⁴	35	3 43	20	4 49	** ** *	**	17	58	
17	74	08.9	-23	00.8	153	26.4 ¹⁵⁶	-13	57.5 ¹²³	40	3 20	4 02	4 34	** ** *	**	13 25	61	
18	89	08.6	-23	00.6	168	01.0 ¹⁵⁶	-14	09.7 ¹²²	45	2 50	3 40	4 17	23 55	22	13 34	66	
19	104	08.3		00.4	182	35.6 ¹⁵⁶		21.9 ¹²²	50	2 06	3 10	3 55	42	17	46	70	
20	119	08.0	-23	00.2	197	10.2 ¹⁵⁶		34.1 ¹²²	52	1 40	2 56	44	36	15	51	72	
21	134	07.7	-23	00.0	211	44.7 ¹⁵⁵		46.2 ¹²¹	54	0 59	38	32	30	12	13 57	75	
22	149	07.4	-22	59.8	226	19.1 ¹⁵⁴	-14	58.2 ¹²⁰	56	** ** *	2 17	18	22	10	14 03	78	
23	164	07.1		59.6	240	53.5 ¹⁵⁴	-15	10.2 ¹²⁰	58	** ** *	1 49	3 02	14	6	10	82	
24	179	06.8	-22	59.4	255	27.9 ¹⁵⁴	-15	22.1 ¹¹⁹	60 S	** ** *	1 04	2 42	23 05	2	14 18	87	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 17 ^h 17 ^m 0		Mag: -4.1 PMG: 9 ^h 20 ^m		Mag: -1.5 PMG: 23 ^h 14 ^m		Mag: -1.8 PMG: 11 ^h 32 ^m		Mag: +0.6 PMG: 4 ^h 02 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	100	01.9	220	12.1	-18	28.2	186	45.0	-23	14.2
1	115	04.4	235	11.5		28.9	201	46.8		14.2
2	130	06.8	250	10.8		29.5	216	48.7		14.2
3	145	09.3	265	10.2		30.2	231	50.5		14.2
4	160	11.8	280	09.5		30.9	246	52.3		14.2
5	175	14.2	295	08.9	-18	31.5	261	54.2	-23	14.2
6	190	16.7	310	08.2	-18	32.2	276	56.0	-23	14.2
7	205	19.1	325	07.6		32.9	291	57.9		14.1
8	220	21.6	340	06.9		33.6	306	59.7		14.1
9	235	24.1	355	06.3		34.2	322	01.5		14.1
10	250	26.5	10	05.6		34.9	337	03.4		14.1
11	265	29.0	25	05.0	-18	35.6	352	05.2	-23	14.1
12	280	31.5	40	04.3	-18	36.2	7	07.1	-23	14.1
13	295	33.9	55	03.6		36.9	22	08.9		14.1
14	310	36.4	70	03.0		37.5	37	10.8		14.1
15	325	38.9	85	02.3		38.2	52	12.6		14.1
16	340	41.3	100	01.7		38.9	67	14.4		14.1
17	355	43.8	115	01.0	-18	39.5	82	16.3	-23	14.0
18	10	46.3	130	00.4	-18	40.2	97	18.1	-23	14.0
19	25	48.7	144	59.7		40.9	112	20.0		14.0
20	40	51.2	159	59.1		41.5	127	21.8		14.0
21	55	53.6	174	58.4		42.2	142	23.7		14.0
22	70	56.1	189	57.7		42.8	157	25.5		14.0
23	85	58.6	204	57.1		43.5	172	27.3		14.0
24	101	01.0	219	56.4	-18	44.1	187	29.2	-23	14.0
Dif	—		-7		-7		+35		0	
							+18		0	
									+25	
									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 8			Edad: 23 ^d 3 PHE { SD: 14'8 PMG: 7 ^h 10 ^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	179	06.8	-22 59.4	255	27.9	-15 22.1		60 N	15 06	16 02	16 59	3 03 88	11 04 2	
1	194	06.5	59.1	270	02.2 ¹⁵³	33.9 ¹¹⁸		58	22	14	17 06	2 53 83	15 7	
2	209	06.2	58.9	284	36.5 ¹⁵³	45.7 ¹¹⁸		56	37	23	12	44 79	25 11	
3	224	05.9	58.7	299	10.7 ¹⁵²	-15 57.4 ¹¹⁷		54	15 49	32	18	35 76	34 14	
4	239	05.6	58.5	313	44.9 ¹⁵²	-16 09.0 ¹¹⁶		52	16 00	40	24	28 73	42 17	
5	254	05.3	-22 58.3	328	19.0 ¹⁵¹	-16 20.6 ¹¹⁶		50	16 09	16 47	17 29	2 22 70	11 49 19	
6	269	05.0	-22 58.1	342	53.1 ¹⁵¹	-16 32.1 ¹¹⁵		45	16 29	17 03	17 40	2 08 66	12 04 24	
7	284	04.7	57.9	357	27.1 ¹⁵⁰	43.6 ¹¹⁵		40	16 46	16	50	1 57 61	17 27	
8	299	04.4	57.7	12	01.1 ¹⁵⁰	-16 55.0 ¹¹⁴		35	17 00	28	17 59	47 59	27 31	
9	314	04.1	57.4	26	35.0 ¹⁴⁹	-17 06.3 ¹¹³		30	12	38	18 08	39 55	37 33	
10	329	03.8	57.2	41	08.9 ¹⁴⁹	17.5 ¹¹²		20	32	17 56	24	24 51	12 53 38	
11	344	03.5	-22 57.0	55	42.7 ¹⁴⁸	-17 28.7 ¹¹²		10 N	17 50	18 13	18 39	1 12 47	13 07 42	
12	359	03.3	-22 56.8	70	16.5 ¹⁴⁸	-17 39.8 ¹¹¹		0	18 08	18 30	18 56	1 00 44	13 21 45	
13	14	03.0	56.6	84	50.2 ¹⁴⁷	-17 50.9 ¹¹¹		10 S	25	18 48	19 15	0 49 39	34 48	
14	29	02.7	56.3	99	23.8 ¹⁴⁶	-18 01.8 ¹⁰⁹		20	18 43	19 08	19 37	36 36	13 49 52	
15	44	02.4	56.1	113	57.4 ¹⁴⁶	12.7 ¹⁰⁹		30	19 05	32	20 05	23 31	14 05 57	
16	59	02.1	55.9	128	31.0 ¹⁴⁶	23.6 ¹⁰⁹		35	17	19 47	23	14 29	15 59	
17	74	01.8	-22 55.7	143	04.5 ¹⁴⁵	-18 34.3 ¹⁰⁷		40	19 32	20 05	20 46	0 05 26	14 26 62	
18	89	01.5	-22 55.5	157	37.9 ¹⁴⁴	-18 45.0 ¹⁰⁷		45	19 50	20 27	21 16	** ** *	14 40 65	
19	104	01.2	55.2	172	11.3 ¹⁴⁴	-18 55.6 ¹⁰⁶		50	20 12	20 55	21 59	23 59 22	14 56 70	
20	119	00.9	55.0	186	44.6 ¹⁴³	-19 06.1 ¹⁰⁵		52	22	21 10	22 25	51 20	15 03 73	
21	134	00.6	54.8	201	17.8 ¹⁴²	16.5 ¹⁰⁴		54	34	27	23 04	42 17	12 76	
22	149	00.3	54.6	215	51.0 ¹⁴²	26.9 ¹⁰⁴		56	20 48	21 48	** ** *	32 13	21 80	
23	164	00.0	54.3	230	24.1 ¹⁴¹	37.2 ¹⁰³		58	21 04	22 16	** ** *	20 10	32 84	
24	178	59.7	-22 54.1	244	57.2 ¹⁴¹	-19 47.4 ¹⁰²		60 S	21 23	22 58	** ** *	23 07 4	15 45 89	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 17 ^h 13 ^m 1		Mag: -4.1 PMG: 9 ^h 21 ^m		Mag: -1.5 PMG: 23 ^h 08 ^m		Mag: -1.8 PMG: 11 ^h 29 ^m		Mag: +0.6 PMG: 3 ^h 58 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	101	01.0	219 56.4	-18 44.1	11 33.3	+26 57.2	187 29.2	-23 14.0	300 20.3	+9 59.0
1	116	03.5	234 55.8	44.8	26 36.8	57.3	202 31.0	14.0	315 22.8	59.0
2	131	06.0	249 55.1	45.4	41 40.2	57.3	217 32.9	14.0	330 25.3	59.1
3	146	08.4	264 54.4	46.1	56 43.7	57.3	232 34.7	13.9	345 27.8	59.1
4	161	10.9	279 53.8	46.8	71 47.1	57.4	247 36.5	13.9	0 30.4	59.1
5	176	13.4	294 53.1	-18 47.4	86 50.6	+26 57.4	262 38.4	-23 13.9	15 32.9	+9 59.2
6	191	15.8	309 52.5	-18 48.1	101 54.0	+26 57.4	277 40.2	-23 13.9	30 35.4	+9 59.2
7	206	18.3	324 51.8	48.7	116 57.5	57.4	292 42.1	13.9	45 37.9	59.2
8	221	20.7	339 51.1	49.4	132 00.9	57.5	307 43.9	13.9	60 40.4	59.3
9	236	23.2	354 50.5	50.0	147 04.4	57.5	322 45.8	13.9	75 43.0	59.3
10	251	25.7	9 49.8	50.7	162 07.8	57.5	337 47.6	13.9	90 45.5	59.3
11	266	28.1	24 49.1	-18 51.3	177 11.3	+26 57.5	352 49.4	-23 13.9	105 48.0	+9 59.4
12	281	30.6	39 48.5	-18 51.9	192 14.7	+26 57.6	7 51.3	-23 13.8	120 50.5	+9 59.4
13	296	33.1	54 47.8	52.6	207 18.2	57.6	22 53.1	13.8	135 53.0	59.4
14	311	35.5	69 47.1	53.2	222 21.6	57.6	37 55.0	13.8	150 55.6	59.5
15	326	38.0	84 46.5	53.9	237 25.1	57.6	52 56.8	13.8	165 58.1	59.5
16	341	40.5	99 45.8	54.5	252 28.5	57.7	67 58.7	13.8	181 00.6	59.5
17	356	42.9	114 45.1	-18 55.2	267 32.0	+26 57.7	83 00.5	-23 13.8	196 03.1	+9 59.6
18	11	45.4	129 44.5	-18 55.8	282 35.4	+26 57.7	98 02.3	-23 13.8	211 05.6	+9 59.6
19	26	47.9	144 43.8	56.4	297 38.9	57.7	113 04.2	13.8	226 08.2	59.6
20	41	50.3	159 43.1	57.1	312 42.3	57.8	128 06.0	13.8	241 10.7	59.7
21	56	52.8	174 42.5	57.7	327 45.7	57.8	143 07.9	13.8	256 13.2	59.7
22	71	55.2	189 41.8	58.4	342 49.2	57.8	158 09.7	13.7	271 15.7	59.7
23	86	57.7	204 41.1	59.0	357 52.6	57.8	173 11.6	13.7	286 18.3	59.8
24	102	00.2	219 40.5	-18 59.6	12 56.0	+26 57.9	188 13.4	-23 13.7	301 20.8	+9 59.8
Dif	—		-7	-6	+34	0	+18	0	+25	0

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16'3 PMG: 12 ^h 04 ^m 3			Edad: 24 ^d 3 SD: 14'7 PMG: 7 ^h 55 ^m	PHE { 4 ^h : 54'1 12 ^h : 54'1 20 ^h : 54'1 R°: 46 ^m												
	hG ☉	Dec				hG ☾		Dif	Dec		Dif	Náutico	Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	178	59.7	-22 54.1	244	57.2	-19 47.4		60 N	7 09	8 05	9 02		4 31	91	11 06	6	
1	193	59.5	53.9	259	30.2 ¹⁴⁰	-19 57.5 ¹⁰¹		58	7 02	7 54	8 45		16	84	22	12	
2	208	59.2	53.6	274	03.1 ¹³⁹	-20 07.5 ¹⁰⁰		56	6 55	44	31		4 03	79	36	17	
3	223	58.9	53.4	288	36.0 ¹³⁹	17.5 ¹⁰⁰		54	50	35	19		3 51	76	48	20	
4	238	58.6	53.2	303	08.8 ¹³⁸	27.4 ⁹⁹		52	44	28	8 08		41	73	11 59	22	
5	253	58.3	-22 53.0	317	41.5 ¹³⁷	-20 37.2 ⁹⁸		50	6 39	7 20	7 58		3 32	71	12 08	25	
6	268	58.0	-22 52.7	332	14.2 ¹³⁷	-20 46.9 ⁹⁷		45	6 28	7 05	7 38		3 14	65	12 28	30	
7	283	57.7	52.5	346	46.8 ¹³⁶	-20 56.5 ⁹⁶		40	18	6 52	22		2 58	62	44	33	
8	298	57.4	52.3	1	19.4 ¹³⁶	-21 06.0 ⁹⁵		35	09	40	7 08		46	59	12 58	36	
9	313	57.1	52.0	15	51.8 ¹³⁴	15.5 ⁹⁵		30	6 00	30	6 56		34	57	13 10	38	
10	328	56.8	51.8	30	24.2 ¹³⁴	24.9 ⁹⁴		20	5 44	6 12	36		2 15	53	31	41	
11	343	56.5	-22 51.5	44	56.6 ¹³⁴	-21 34.1 ⁹²		10 N	5 29	5 55	6 18		1 59	49	13 49	44	
12	358	56.3	-22 51.3	59	28.9 ¹³³	-21 43.3 ⁹²		0	5 12	5 38	6 01		1 44	46	14 06	47	
13	13	56.0	51.1	74	01.1 ¹³²	-21 52.4 ⁹¹		10 S	4 53	20	5 43		28	43	22	51	
14	28	55.7	50.8	88	33.2 ¹³¹	-22 01.4 ⁹⁰		20	31	5 00	25		1 12	40	14 41	53	
15	43	55.4	50.6	103	05.3 ¹³¹	10.3 ⁸⁹		30	4 03	4 36	5 03		0 54	35	15 02	57	
16	58	55.1	50.4	117	37.3 ¹³⁰	19.1 ⁸⁸		35	3 45	21	4 51		43	33	14	59	
17	73	54.8	-22 50.1	132	09.2 ¹²⁹	-22 27.9 ⁸⁸		40	3 22	4 03	4 36		0 31	30	15 28	62	
18	88	54.5	-22 49.9	146	41.1 ¹²⁹	-22 36.5 ⁸⁶		45	2 53	3 42	4 19		0 17	26	15 45	65	
19	103	54.2	49.6	161	12.9 ¹²⁸	45.0 ⁸⁵		50	2 09	3 13	3 57		** ** *	**	16 06	70	
20	118	53.9	49.4	175	44.6 ¹²⁷	-22 53.5 ⁸⁵		52	1 44	2 58	46		** ** *	**	16	72	
21	133	53.7	49.1	190	16.3 ¹²⁷	-23 01.8 ⁸³		54	1 05	41	34		23 59	24	28	74	
22	148	53.4	48.9	204	47.9 ¹²⁶	10.1 ⁸³		56	** ** *	2 20	21		45	21	41	78	
23	163	53.1	48.6	219	19.4 ¹²⁵	18.2 ⁸¹		58	** ** *	1 53	3 05		30	16	16 56	83	
24	178	52.8	-22 48.4	233	50.8 ¹²⁴	-23 26.2 ⁸⁰		60 S	** ** *	1 10	2 45		23 11	9	17 14	90	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO			
	PMG: 17 ^h 09 ^m 2		Mag: -4.0 PMG: 9 ^h 22 ^m		Mag: -1.4 PMG: 23 ^h 03 ^m		Mag: -1.8 PMG: 11 ^h 26 ^m		Mag: +0.6 PMG: 3 ^h 54 ^m			
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'		
0	102	00.2	219	40.5	-18 59.6	12 56.0	+26 57.9	188	13.4	-23 13.7	301 20.8	+9 59.8
1	117	02.6	234	39.8	-19 00.3	27 59.5	57.9	203	15.2	13.7	316 23.3	59.8
2	132	05.1	249	39.1	00.9	43 02.9	57.9	218	17.1	13.7	331 25.8	59.9
3	147	07.6	264	38.4	01.5	58 06.4	57.9	233	18.9	13.7	346 28.3	59.9
4	162	10.0	279	37.8	02.2	73 09.8	58.0	248	20.8	13.7	1 30.9	+9 59.9
5	177	12.5	294	37.1	-19 02.8	88 13.2	+26 58.0	263	22.6	-23 13.7	16 33.4	+10 00.0
6	192	15.0	309	36.4	-19 03.4	103 16.7	+26 58.0	278	24.5	-23 13.6	31 35.9	+10 00.0
7	207	17.4	324	35.7	04.1	118 20.1	58.0	293	26.3	13.6	46 38.4	+10 00.0
8	222	19.9	339	35.1	04.7	133 23.5	58.0	308	28.1	13.6	61 41.0	+10 00.1
9	237	22.4	354	34.4	05.3	148 26.9	58.1	323	30.0	13.6	76 43.5	00.1
10	252	24.8	9	33.7	05.9	163 30.4	58.1	338	31.8	13.6	91 46.0	00.1
11	267	27.3	24	33.0	-19 06.6	178 33.8	+26 58.1	353	33.7	-23 13.6	106 48.5	+10 00.2
12	282	29.7	39	32.4	-19 07.2	193 37.2	+26 58.1	8	35.5	-23 13.6	121 51.1	+10 00.2
13	297	32.2	54	31.7	07.8	208 40.6	58.1	23	37.4	13.6	136 53.6	00.2
14	312	34.7	69	31.0	08.4	223 44.1	58.2	38	39.2	13.6	151 56.1	00.3
15	327	37.1	84	30.3	09.1	238 47.5	58.2	53	41.0	13.5	166 58.6	00.3
16	342	39.6	99	29.6	09.7	253 50.9	58.2	68	42.9	13.5	182 01.2	00.4
17	357	42.1	114	29.0	-19 10.3	268 54.3	+26 58.2	83	44.7	-23 13.5	197 03.7	+10 00.4
18	12	44.5	129	28.3	-19 10.9	283 57.7	+26 58.2	98	46.6	-23 13.5	212 06.2	+10 00.4
19	27	47.0	144	27.6	11.6	299 01.2	58.3	113	48.4	13.5	227 08.7	00.5
20	42	49.5	159	26.9	12.2	314 04.6	58.3	128	50.3	13.5	242 11.3	00.5
21	57	51.9	174	26.2	12.8	329 08.0	58.3	143	52.1	13.5	257 13.8	00.5
22	72	54.4	189	25.6	13.4	344 11.4	58.3	158	53.9	13.5	272 16.3	00.6
23	87	56.9	204	24.9	14.0	359 14.8	58.3	173	55.8	13.4	287 18.8	00.6
24	102	59.3	219	24.2	-19 14.6	14 18.2	+26 58.3	188	57.6	-23 13.4	302 21.4	+10 00.6
Dif	—		-7	-6		+34	0	+18		0	+25	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 7			Edad: 25 ^d 3 PHE { 4 ^h : 54:1 12 ^h : 54:2 20 ^h : 54:3 SD: 14:7 PMG: 8 ^h 41 ^m R°: 50 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	°	'	°	'	h m	h m	h m	h m m	h m m	h m m	
0	178	52.8	-22 48.4	233	50.8	-23 26.2	60 N	15 09	16 05	17 01	6 02 90	11 12 13		
1	193	52.5	48.2	248	22.2 ¹²⁴	34.2 ⁸⁰	58	25	16	08	5 40 82	34 22		
2	208	52.2	47.9	262	53.5 ¹²³	42.0 ⁷⁸	56	39	26	14	22 77	11 53 26		
3	223	51.9	47.7	277	24.7 ¹²²	49.8 ⁷⁸	54	15 51	34	20	5 07 73	12 08 30		
4	238	51.6	47.4	291	55.9 ¹²²	-23 57.4 ⁷⁶	52	16 02	42	26	4 54 71	21 32		
5	253	51.3	-22 47.2	306	27.0 ¹²¹	-24 04.9 ⁷⁵	50	16 11	16 49	17 31	4 43 68	12 33 34		
6	268	51.1	-22 46.9	320	58.0 ¹²⁰	-24 12.4 ⁷⁵	45	16 31	17 05	17 42	4 19 64	12 58 37		
7	283	50.8	46.7	335	29.0 ¹²⁰	19.7 ⁷³	40	16 47	18	17 52	4 00 62	13 17 41		
8	298	50.5	46.4	349	59.9 ¹¹⁹	26.9 ⁷²	35	17 01	29	18 01	3 45 59	34 42		
9	313	50.2	46.1	4	30.7 ¹¹⁸	34.0 ⁷¹	30	13	39	09	31 57	13 48 44		
10	328	49.9	45.9	19	01.4 ¹¹⁷	41.0 ⁷⁰	20	34	17 58	25	3 08 54	14 12 47		
11	343	49.6	-22 45.6	33	32.1 ¹¹⁷	-24 47.9 ⁶⁹	10 N	17 52	18 14	18 41	2 48 52	14 33 49		
12	358	49.3	-22 45.4	48	02.7 ¹¹⁶	-24 54.7 ⁶⁸	0	18 08	18 31	18 57	2 30 49	14 53 50		
13	13	49.1	45.1	62	33.3 ¹¹⁶	-25 01.3 ⁶⁶	10 S	25	18 48	19 15	2 11 47	15 13 52		
14	28	48.8	44.9	77	03.7 ¹¹⁴	07.9 ⁶⁶	20	18 44	19 08	19 37	1 52 44	34 54		
15	43	48.5	44.6	91	34.1 ¹¹⁴	14.3 ⁶⁴	30	19 05	32	20 05	29 41	15 59 56		
16	58	48.2	44.3	106	04.5 ¹¹⁴	20.7 ⁶⁴	35	18	19 47	23	16 39	16 13 58		
17	73	47.9	-22 44.1	120	34.7 ¹¹²	-25 26.9 ⁶²	40	19 32	20 05	20 46	1 01 37	16 30 60		
18	88	47.6	-22 43.8	135	04.9 ¹¹²	-25 33.0 ⁶¹	45	19 50	20 26	21 15	0 43 34	16 50 62		
19	103	47.3	43.6	149	35.1 ¹¹²	39.0 ⁶⁰	50	20 11	20 55	21 58	21 30	17 16 65		
20	118	47.1	43.3	164	05.1 ¹¹⁰	44.8 ⁵⁸	52	22	21 09	22 22	0 11 27	28 67		
21	133	46.8	43.0	178	35.1 ¹¹⁰	50.6 ⁵⁸	54	33	26	22 59	** ** *	42 70		
22	148	46.5	42.8	193	05.0 ¹⁰⁹	-25 56.2 ⁵⁶	56	20 47	21 47	** ** *	** ** *	17 59 72		
23	163	46.2	42.5	207	34.9 ¹⁰⁹	-26 01.7 ⁵⁵	58	21 03	22 13	** ** *	23 46 29	18 19 77		
24	178	45.9	-22 42.2	222	04.7 ¹⁰⁸	-26 07.1 ⁵⁴	60 S	21 22	22 53	** ** *	23 20 22	18 44 84		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 17 ^h 05 ^m 2		Mag: -4.0 PMG: 9 ^h 23 ^m		Mag: -1.4 PMG: 22 ^h 58 ^m		Mag: -1.8 PMG: 11 ^h 23 ^m		Mag: +0.6 PMG: 3 ^h 50 ^m							
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'						
0	102	59.3	219	24.2	14	18.2	+26 58.3	188	57.6	-23 13.4	302	21.4	+10 00.6			
1	118	01.8	234	23.5	29	21.7	58.4	203	59.5	13.4	317	23.9	00.7			
2	133	04.2	249	22.8	44	25.1	58.4	219	01.3	13.4	332	26.4	00.7			
3	148	06.7	264	22.1	59	28.5	58.4	234	03.2	13.4	347	28.9	00.7			
4	163	09.2	279	21.4	74	31.9	58.4	249	05.0	13.4	2	31.5	00.8			
5	178	11.6	294	20.8	-19 17.7	89	35.3	+26 58.4	264	06.8	-23 13.4	17	34.0	+10 00.8		
6	193	14.1	309	20.1	-19 18.3	104	38.7	+26 58.4	279	08.7	-23 13.4	32	36.5	+10 00.9		
7	208	16.6	324	19.4	18.9	119	42.1	58.5	294	10.5	13.3	47	39.0	00.9		
8	223	19.0	339	18.7	19.5	134	45.5	58.5	309	12.4	13.3	62	41.6	00.9		
9	238	21.5	354	18.0	20.1	149	48.9	58.5	324	14.2	13.3	77	44.1	01.0		
10	253	24.0	9	17.3	20.8	164	52.3	58.5	339	16.1	13.3	92	46.6	01.0		
11	268	26.4	24	16.6	-19 21.4	179	55.7	+26 58.5	354	17.9	-23 13.3	107	49.2	+10 01.0		
12	283	28.9	39	15.9	-19 22.0	194	59.1	+26 58.5	9	19.8	-23 13.3	122	51.7	+10 01.1		
13	298	31.3	54	15.3	22.6	210	02.5	58.6	24	21.6	13.3	137	54.2	01.1		
14	313	33.8	69	14.6	23.2	225	05.9	58.6	39	23.4	13.3	152	56.7	01.1		
15	328	36.3	84	13.9	23.8	240	09.3	58.6	54	25.3	13.2	167	59.3	01.2		
16	343	38.7	99	13.2	24.4	255	12.7	58.6	69	27.1	13.2	183	01.8	01.2		
17	358	41.2	114	12.5	-19 25.0	270	16.1	+26 58.6	84	29.0	-23 13.2	198	04.3	+10 01.2		
18	13	43.7	129	11.8	-19 25.6	285	19.5	+26 58.6	99	30.8	-23 13.2	213	06.9	+10 01.3		
19	28	46.1	144	11.1	26.2	300	22.9	58.6	114	32.7	13.2	228	09.4	01.3		
20	43	48.6	159	10.4	26.8	315	26.3	58.6	129	34.5	13.2	243	11.9	01.4		
21	58	51.1	174	09.7	27.4	330	29.7	58.7	144	36.3	13.2	258	14.4	01.4		
22	73	53.5	189	09.0	28.0	345	33.1	58.7	159	38.2	13.2	273	17.0	01.4		
23	88	56.0	204	08.3	28.6	0	36.5	58.7	174	40.0	13.1	288	19.5	01.5		
24	103	58.5	219	07.6	-19 29.2	15	39.8	+26 58.7	189	41.9	-23 13.1	303	22.0	+10 01.5		
Dif	—		-7		-6		+34		0		+18		0		+25	

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 2			Edad: 26 ^d 3 PHE { 4 ^h : 54 ^m 3 12 ^h : 54 ^m 4 20 ^h : 54 ^m 5 PMG: 9 ^h 31 ^m R°: 52 ^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	h m m	
0	178	45.9	-22 42.2	222	04.7	-26 07.1	60 N	7 08	8 04	9 00	7 32 76	11 25 33		
1	193	45.6	42.0	236	34.5 ¹⁰⁸	12.4 ⁵³	58	7 01	7 53	8 44	7 02 69	11 56 38		
2	208	45.4	41.7	251	04.1 ¹⁰⁶	17.6 ⁵²	56	6 55	44	30	6 39 66	12 19 41		
3	223	45.1	41.4	265	33.7 ¹⁰⁶	22.6 ⁵⁰	54	49	35	18	20 65	38 43		
4	238	44.8	41.2	280	03.3 ¹⁰⁶	27.5 ⁴⁹	52	44	27	8 07	6 05 62	12 53 45		
5	253	44.5	-22 40.9	294	32.8 ¹⁰⁵	-26 32.3 ⁴⁸	50	6 39	7 20	7 58	5 51 62	13 07 46		
6	268	44.2	-22 40.6	309	02.2 ¹⁰⁴	-26 36.9 ⁴⁶	45	6 28	7 05	7 38	5 23 60	13 35 48		
7	283	43.9	40.4	323	31.6 ¹⁰⁴	41.5 ⁴⁶	40	18	6 52	22	5 02 58	13 58 48		
8	298	43.7	40.1	338	00.9 ¹⁰³	45.9 ⁴⁴	35	09	41	7 09	4 44 56	14 16 49		
9	313	43.4	39.8	352	30.1 ¹⁰²	50.1 ⁴²	30	6 01	30	6 57	28 56	32 50		
10	328	43.1	39.5	6	59.3 ¹⁰²	54.3 ⁴²	20	5 45	6 12	36	4 02 54	14 59 51		
11	343	42.8	-22 39.3	21	28.5 ¹⁰²	-26 58.3 ⁴⁰	10 N	5 29	5 56	6 18	3 40 53	15 22 52		
12	358	42.5	-22 39.0	35	57.5 ¹⁰⁰	-27 02.2 ³⁹	0	5 13	5 39	6 01	3 19 51	15 43 53		
13	13	42.2	38.7	50	26.6 ¹⁰¹	06.0 ³⁸	10 S	4 55	22	5 44	2 58 50	16 05 53		
14	28	42.0	38.4	64	55.5 ⁹⁹	09.6 ³⁶	20	33	5 02	26	36 49	28 54		
15	43	41.7	38.2	79	24.4 ⁹⁹	13.1 ³⁵	30	4 05	4 38	5 05	2 10 47	16 55 55		
16	58	41.4	37.9	93	53.3 ⁹⁹	16.5 ³⁴	35	3 47	23	4 52	1 55 46	17 11 55		
17	73	41.1	-22 37.6	108	22.1 ⁹⁸	-27 19.7 ³²	40	3 24	4 05	4 38	1 38 44	17 30 55		
18	88	40.8	-22 37.3	122	50.9 ⁹⁸	-27 22.8 ³¹	45	2 55	3 44	4 21	1 17 42	17 52 56		
19	103	40.6	37.0	137	19.6 ⁹⁷	25.8 ³⁰	50	2 13	15	3 59	0 51 39	18 21 57		
20	118	40.3	36.8	151	48.3 ⁹⁷	28.6 ²⁸	52	1 48	3 01	49	38 38	35 58		
21	133	40.0	36.5	166	16.9 ⁹⁶	31.3 ²⁷	54	1 11	2 44	37	23 36	18 52 58		
22	148	39.7	36.2	180	45.5 ⁹⁶	33.9 ²⁶	56	** ** *	2 24	23	0 06 34	19 11 59		
23	163	39.4	35.9	195	14.0 ⁹⁵	36.3 ²⁴	58	** ** *	1 57	3 08	** ** *	19 36 59		
24	178	39.2	-22 35.6	209	42.5 ⁹⁵	-27 38.6 ²³	60 S	** ** *	1 17	2 49	23 42 49	20 08 62		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO			
	PMG: 17 ^h 01 ^m 3		Mag: -4.0 PMG: 9 ^h 24 ^m		Mag: -1.4 PMG: 22 ^h 52 ^m		Mag: -1.8 PMG: 11 ^h 20 ^m		Mag: +0.6 PMG: 3 ^h 46 ^m			
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'		
0	103	58.5	219 07.6	-19 29.2	15 39.8	+26 58.7	189	41.9	-23 13.1	303	22.0	+10 01.5
1	119	00.9	234 06.9	29.8	30 43.2	58.7	204	43.7	13.1	318	24.6	01.5
2	134	03.4	249 06.2	30.4	45 46.6	58.7	219	45.6	13.1	333	27.1	01.6
3	149	05.8	264 05.5	30.9	60 50.0	58.7	234	47.4	13.1	348	29.6	01.6
4	164	08.3	279 04.8	31.5	75 53.4	58.7	249	49.3	13.1	3	32.2	01.7
5	179	10.8	294 04.1	-19 32.1	90 56.8	+26 58.7	264	51.1	-23 13.1	18	34.7	+10 01.7
6	194	13.2	309 03.4	-19 32.7	106 00.1	+26 58.8	279	52.9	-23 13.0	33	37.2	+10 01.7
7	209	15.7	324 02.7	33.3	121 03.5	58.8	294	54.8	13.0	48	39.8	01.8
8	224	18.2	339 02.0	33.9	136 06.9	58.8	309	56.6	13.0	63	42.3	01.8
9	239	20.6	354 01.3	34.5	151 10.3	58.8	324	58.5	13.0	78	44.8	01.8
10	254	23.1	9 00.6	35.1	166 13.6	58.8	340	00.3	13.0	93	47.4	01.9
11	269	25.6	23 59.9	-19 35.7	181 17.0	+26 58.8	355	02.2	-23 13.0	108	49.9	+10 01.9
12	284	28.0	38 59.2	-19 36.2	196 20.4	+26 58.8	10	04.0	-23 13.0	123	52.4	+10 02.0
13	299	30.5	53 58.5	36.8	211 23.8	58.8	25	05.9	13.0	138	54.9	02.0
14	314	33.0	68 57.8	37.4	226 27.1	58.8	40	07.7	12.9	153	57.5	02.0
15	329	35.4	83 57.1	38.0	241 30.5	58.8	55	09.5	12.9	169	00.0	02.1
16	344	37.9	98 56.4	38.6	256 33.9	58.8	70	11.4	12.9	184	02.5	02.1
17	359	40.3	113 55.7	-19 39.1	271 37.3	+26 58.9	85	13.2	-23 12.9	199	05.1	+10 02.1
18	14	42.8	128 55.0	-19 39.7	286 40.6	+26 58.9	100	15.1	-23 12.9	214	07.6	+10 02.2
19	29	45.3	143 54.3	40.3	301 44.0	58.9	115	16.9	12.9	229	10.1	02.2
20	44	47.7	158 53.6	40.9	316 47.3	58.9	130	18.8	12.9	244	12.7	02.3
21	59	50.2	173 52.9	41.5	331 50.7	58.9	145	20.6	12.8	259	15.2	02.3
22	74	52.7	188 52.2	42.0	346 54.1	58.9	160	22.5	12.8	274	17.8	02.3
23	89	55.1	203 51.5	42.6	1 57.4	58.9	175	24.3	12.8	289	20.3	02.4
24	104	57.6	218 50.8	-19 43.2	17 00.8	+26 58.9	190	26.1	-23 12.8	304	22.8	+10 02.4
Dif	—		-7	-6	+34	0	+18		0	+25		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 6				Edad: 27 ^d 3 PHE { 4 ^h : 54/6 12 ^h : 54/7 20 ^h : 54/9 PMG: 10 ^h 23 ^m R°: 53 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif	Civil	Náutico			Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	178	39.2	-22	35.6	209	42.5	-27	38.6	60 N	15 12	16 08	17 04	8 48 46	11 58 65		
1	193	38.9		35.3	224	10.9 94		40.8 22	58	28	19	11	8 11 49	12 34 62		
2	208	38.6		35.1	238	39.3 94		42.8 20	56	42	28	17	7 45 50	13 00 61		
3	223	38.3		34.8	253	07.7 94		44.7 19	54	15 54	37	22	25 50	21 60		
4	238	38.0		34.5	267	36.0 93		46.4 17	52	16 04	45	28	7 07 52	38 59		
5	253	37.8	-22	34.2	282	04.3 93	-27	48.0 16	50	16 14	16 52	17 33	6 53 51	13 53 58		
6	268	37.5	-22	33.9	296	32.5 92	-27	49.5 15	45	16 33	17 07	17 44	6 23 52	14 23 57		
7	283	37.2		33.6	311	00.7 92		50.8 13	40	16 49	20	17 53	6 00 52	14 46 57		
8	298	36.9		33.3	325	28.9 92		52.0 12	35	17 03	31	18 02	5 40 53	15 05 57		
9	313	36.6		33.0	339	57.0 91		53.0 10	30	15	41	10	5 24 53	22 56		
10	328	36.4		32.7	354	25.1 91		53.9 9	20	35	17 59	26	4 56 53	15 50 55		
11	343	36.1	-22	32.5	8	53.2 91	-27	54.6 7	10 N	17 53	18 15	18 42	4 33 53	16 14 54		
12	358	35.8	-22	32.2	23	21.3 91	-27	55.3 7	0	18 09	18 32	18 58	4 10 54	16 36 53		
13	13	35.5		31.9	37	49.3 90		55.7 4	10 S	26	18 49	19 16	3 48 54	16 58 53		
14	28	35.3		31.6	52	17.3 90		56.1 4	20	18 44	19 09	19 38	3 25 53	17 22 52		
15	43	35.0		31.3	66	45.3 90		56.2 1	30	19 05	33	20 05	2 57 53	17 50 50		
16	58	34.7		31.0	81	13.2 89		56.3 1	35	18	19 47	23	41 53	18 06 50		
17	73	34.4	-22	30.7	95	41.2 90	-27	56.2 1	40	19 32	20 04	20 45	2 22 53	18 25 49		
18	88	34.2	-22	30.4	110	09.1 89	-27	55.9 3	45	19 49	20 26	21 14	1 59 53	18 48 48		
19	103	33.9		30.1	124	37.0 89		55.5 4	50	20 11	20 54	21 56	30 53	19 18 46		
20	118	33.6		29.8	139	04.8 88		55.0 5	52	21	21 08	22 20	1 16 52	33 44		
21	133	33.3		29.5	153	32.7 89		54.3 7	54	32	24	22 55	0 59 52	19 50 43		
22	148	33.1		29.2	168	00.5 88		53.5 8	56	20 46	21 45	** **	40 51	20 10 41		
23	163	32.8		28.9	182	28.4 89		52.5 10	58	21 01	22 10	** **	0 15 51	20 35 38		
24	178	32.5	-22	28.6	196	56.2 88	-27	51.4 11	60 S	21 20	22 48	** **	** ** *	21 10 32		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 16 ^h 57 ^m 4		Mag: -4.0 PMG: 9 ^h 25 ^m		Mag: -1.4 PMG: 22 ^h 47 ^m		Mag: -1.8 PMG: 11 ^h 17 ^m		Mag: +0.6 PMG: 3 ^h 42 ^m							
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄							
h	°	'	°	'	°	'	°	'	°	'						
0	104	57.6	218	50.8	-19	43.2	17	00.8	+26	58.9						
1	120	00.1	233	50.1		43.8	32	04.2		58.9						
2	135	02.5	248	49.4		44.3	47	07.5		58.9						
3	150	05.0	263	48.7		44.9	62	10.9		58.9						
4	165	07.5	278	48.0		45.5	77	14.2		58.9						
5	180	09.9	293	47.3	-19	46.0	92	17.6	+26	58.9						
6	195	12.4	308	46.5	-19	46.6	107	20.9	+26	58.9						
7	210	14.8	323	45.8		47.2	122	24.3		58.9						
8	225	17.3	338	45.1		47.7	137	27.6		58.9						
9	240	19.8	353	44.4		48.3	152	31.0		58.9						
10	255	22.2	8	43.7		48.9	167	34.3		58.9						
11	270	24.7	23	43.0	-19	49.4	182	37.7	+26	59.0						
12	285	27.2	38	42.3	-19	50.0	197	41.0	+26	59.0						
13	300	29.6	53	41.6		50.6	212	44.4		59.0						
14	315	32.1	68	40.8		51.1	227	47.7		59.0						
15	330	34.6	83	40.1		51.7	242	51.1		59.0						
16	345	37.0	98	39.4		52.2	257	54.4		59.0						
17	0	39.5	113	38.7	-19	52.8	272	57.7	+26	59.0						
18	15	42.0	128	38.0	-19	53.4	288	01.1	+26	59.0						
19	30	44.4	143	37.3		53.9	303	04.4		59.0						
20	45	46.9	158	36.6		54.5	318	07.7		59.0						
21	60	49.3	173	35.8		55.0	333	11.1		59.0						
22	75	51.8	188	35.1		55.6	348	14.4		59.0						
23	90	54.3	203	34.4		56.1	3	17.7		59.0						
24	105	56.7	218	33.7	-19	56.7	18	21.1	+26	59.0						
Dif	—		-7		-6		+33		0							
							+18		0							
									+25							
									0							

UT	SOL				● LUNA							Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16 ^h 3 PMG: 12 ^h 06 ^m 1				Edad: 28 ^d 3 PHE { 4 ^h : 55 ^o 0 12 ^h : 55 ^o 1 20 ^h : 55 ^o 3 R ^o : 54 ^m																
	hG ☉		Dec		hG ☾		Dif		Dec		Dif		Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m
0	178	32.5	-22	28.6	196	56.2	-27	51.4	13	50.1	13	60 N	7 08	8 03	8 58	9 34	20	13 03	90		
1	193	32.2		28.3	211	24.0		88		48.7	14	58	7 01	7 52	42	9 00	29	13 36	82		
2	208	32.0		28.0	225	51.8		88		47.2	15	56	6 54	43	29	8 35	33	14 01	77		
3	223	31.7		27.7	240	19.6		88		45.5	17	54		49	34	17	8 15	36	21	73	
4	238	31.4		27.4	254	47.4		88		43.6	19	52		44	27	8 07	7 59	38	37	71	
5	253	31.1	-22	27.0	269	15.2	-27	43.6	19	41.7	19	50	6 39	7 20	7 57	7 44	40	14 51	70		
6	268	30.9	-22	26.7	283	42.9	-27	41.7	19	39.5	22	45	6 28	7 05	7 38	7 15	43	15 20	66		
7	283	30.6		26.4	298	10.7		88		37.2	23	40		18	6 52	22	6 52	45	15 43	63	
8	298	30.3		26.1	312	38.5		88		34.8	24	35		09	41	7 09	33	47	16 02	61	
9	313	30.0		25.8	327	06.3		88		32.2	26	30	6 01	31	6 57	6 17	48		18	59	
10	328	29.8		25.5	341	34.0		87		29.5	27	20	5 46	6 13	37	5 49	51	16 45	57		
11	343	29.5	-22	25.2	356	01.8	-27	29.5	27	26.7	28	10 N	5 30	5 56	6 19	5 26	51	17 08	55		
12	358	29.2	-22	24.9	10	29.6	-27	26.7	28	23.6	31	0	5 14	5 40	6 02	5 04	53	17 29	53		
13	13	28.9		24.6	24	57.4		88		20.5	31	10 S	4 56	23	5 46	4 42	54	17 51	51		
14	28	28.7		24.3	39	25.2		88		17.2	33	20		34	5 03	27	4 18	56	18 14	48	
15	43	28.4		23.9	53	53.0		88		13.8	34	30	4 06	4 39	5 06	3 50	58		40	46	
16	58	28.1		23.6	68	20.9		89		10.2	36	35	3 49	25	4 54	34	59	18 56	44		
17	73	27.9	-22	23.3	82	48.7	-27	10.2	36	06.4	38	40	3 27	4 07	4 40	3 15	60	19 14	42		
18	88	27.6	-22	23.0	97	16.6	-27	06.4	38	02.6	38	45	2 58	3 46	4 23	2 52	62	19 36	39		
19	103	27.3		22.7	111	44.4	-27	02.6	38	58.5	41	50	2 16	18	4 01	23	64	20 04	35		
20	118	27.0		22.4	126	12.3	-26	58.5	41	54.4	41	52	1 52	3 04	3 51	2 08	66		17	33	
21	133	26.8		22.0	140	40.2		89		50.1	43	54	1 17	2 48	40	1 51	67		33	30	
22	148	26.5		21.7	155	08.1		89		45.6	45	56	** **	27	26	31	69	20 51	27		
23	163	26.2		21.4	169	36.1		90		41.0	46	58	** **	2 02	3 11	1 06	72	21 13	22		
24	178	26.0	-22	21.1	184	04.1	-26	41.0	46			60 S	** **	1 24	2 52	0 31	79	21 42	14		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 16 ^h 53 ^m 4		Mag: -4.0 PMG: 9 ^h 26 ^m		Mag: -1.3 PMG: 22 ^h 42 ^m		Mag: -1.8 PMG: 11 ^h 14 ^m		Mag: +0.6 PMG: 3 ^h 38 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	105	56.7	218	33.7	-19	56.7	18	21.1	+26	59.0
1	120	59.2	233	33.0		57.2	33	24.4		59.0
2	136	01.7	248	32.2		57.8	48	27.7		59.0
3	151	04.1	263	31.5		58.3	63	31.1		59.0
4	166	06.6	278	30.8		58.9	78	34.4		59.0
5	181	09.1	293	30.1	-19	59.4	93	37.7	+26	59.0
6	196	11.5	308	29.4	-20	00.0	108	41.0	+26	59.0
7	211	14.0	323	28.6	-20	00.5	123	44.4		59.0
8	226	16.5	338	27.9		01.1	138	47.7		59.0
9	241	18.9	353	27.2		01.6	153	51.0		59.0
10	256	21.4	8	26.5		02.2	168	54.3		59.0
11	271	23.8	23	25.7	-20	02.7	183	57.6	+26	59.0
12	286	26.3	38	25.0	-20	03.2	199	00.9	+26	59.0
13	301	28.8	53	24.3		03.8	214	04.3		59.0
14	316	31.2	68	23.6		04.3	229	07.6		59.0
15	331	33.7	83	22.9		04.9	244	10.9		59.0
16	346	36.2	98	22.1		05.4	259	14.2		59.0
17	1	38.6	113	21.4	-20	05.9	274	17.5	+26	59.0
18	16	41.1	128	20.7	-20	06.5	289	20.8	+26	59.0
19	31	43.6	143	19.9		07.0	304	24.1		59.0
20	46	46.0	158	19.2		07.5	319	27.4		59.0
21	61	48.5	173	18.5		08.1	334	30.7		59.0
22	76	50.9	188	17.8		08.6	349	34.0		59.0
23	91	53.4	203	17.0		09.1	4	37.3		58.9
24	106	55.9	218	16.3	-20	09.7	19	40.6	+26	58.9
Dif	—		-7		-5		+33		0	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:3			Edad: 29 ^d 3 PHE { 4 ^h : 55:4 12 ^h : 55:6 20 ^h : 55:8 R°: 51 ^m	SD: 15:1				Final del crepúsculo		Salida de Luna		Puesta de Luna	
	PMG: 12 ^h 06 ^m 5	PMG: 12 ^h 10 ^m	Civil		Náutico	Hora			R°	Hora	R°			
	hG ☉	Dec	hG ☾ Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'		°		h m	h m	h m		h m m	h m m	
0	178	26.0	-22	21.1		184	04.1	15 16	16 11	17 06		9 54 8	14 33 98	
1	193	25.7		20.7		198	32.0 89	32	22	13		29 15	14 58 91	
2	208	25.4		20.4		213	00.1 91	45	31	19		9 08 21	15 18 85	
3	223	25.1		20.1		227	28.1 90	15 57	39	25		8 51 25	34 82	
4	238	24.9		19.8		241	56.2 91	16 07	47	30		37 28	15 48 79	
5	253	24.6	-22	19.5		256	24.3 91	16 16	16 54	17 35		8 24 30	16 01 76	
6	268	24.3	-22	19.1		270	52.4 91	16 35	17 09	17 46		7 58 35	16 26 71	
7	283	24.1		18.8		285	20.5 91	16 51	21	17 55		37 38	16 46 67	
8	298	23.8		18.5		299	48.7 92	17 05	32	18 04		20 41	17 03 64	
9	313	23.5		18.1		314	16.9 92	16	17 42	12		7 05 43	17 62	
10	328	23.3		17.8		328	45.2 93	36	18 00	27		6 40 46	17 42 57	
11	343	23.0	-22	17.5		343	13.5 93	17 54	18 16	18 42		6 17 50	18 03 54	
12	358	22.7	-22	17.2		357	41.8 93	18 10	18 33	18 59		5 57 52	18 22 51	
13	13	22.5		16.8		12	10.1 93	27	18 50	19 16		36 55	18 42 47	
14	28	22.2		16.5		26	38.5 94	18 45	19 09	19 38		5 14 58	19 02 45	
15	43	21.9		16.2		41	07.0 95	19 06	33	20 05		4 48 61	26 40	
16	58	21.7		15.8		55	35.4 94	18	19 47	23		33 63	40 38	
17	73	21.4	-22	15.5		70	03.9 95	19 32	20 04	20 45		4 15 66	19 56 35	
18	88	21.1	-22	15.2		84	32.5 96	19 49	20 25	21 13		3 54 69	20 15 31	
19	103	20.9		14.8		99	01.1 96	20 10	20 53	21 54		27 73	39 26	
20	118	20.6		14.5		113	29.7 96	20	21 07	22 17		3 14 75	20 50 24	
21	133	20.3		14.1		127	58.4 97	31	23	22 50		2 58 79	21 03 21	
22	148	20.1		13.8		142	27.1 97	44	21 42	** **		40 82	18 17	
23	163	19.8		13.5		156	55.9 98	20 59	22 07	** **		2 18 88	35 12	
24	178	19.5	-22	13.1		171	24.7 98	21 17	22 43	** **		1 50 95	21 56 6	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 16 ^h 49 ^m 5	Mag: -4.0 PMG: 9 ^h 27 ^m	Mag: -1.3 PMG: 22 ^h 36 ^m	Mag: -1.8 PMG: 11 ^h 11 ^m	Mag: +0.5 PMG: 3 ^h 34 ^m					
	hG ♈	hG ♀ Dec	hG ♂ Dec	hG ♃ Dec	hG ♄ Dec					
h	°	'	°	'	°	'	°	'	°	'
0	106	55.9	218	16.3	19	40.6	191	54.7	306	24.7
1	121	58.3	233	15.6	34	43.9	206	56.6	321	27.2
2	137	00.8	248	14.8	49	47.2	221	58.4	336	29.8
3	152	03.3	263	14.1	64	50.5	237	00.3	351	32.3
4	167	05.7	278	13.4	79	53.8	252	02.1	6	34.8
5	182	08.2	293	12.6	94	57.1	267	04.0	21	37.4
6	197	10.7	308	11.9	110	00.4	282	05.8	36	39.9
7	212	13.1	323	11.2	125	03.7	297	07.7	51	42.5
8	227	15.6	338	10.5	140	07.0	312	09.5	66	45.0
9	242	18.1	353	09.7	155	10.3	327	11.4	81	47.6
10	257	20.5	8	09.0	170	13.6	342	13.2	96	50.1
11	272	23.0	23	08.2	185	16.9	357	15.1	111	52.7
12	287	25.4	38	07.5	200	20.1	12	16.9	126	55.2
13	302	27.9	53	06.8	215	23.4	27	18.8	141	57.7
14	317	30.4	68	06.0	230	26.7	42	20.6	157	00.3
15	332	32.8	83	05.3	245	30.0	57	22.4	172	02.8
16	347	35.3	98	04.6	260	33.3	72	24.3	187	05.4
17	2	37.8	113	03.8	275	36.5	87	26.1	202	07.9
18	17	40.2	128	03.1	290	39.8	102	28.0	217	10.5
19	32	42.7	143	02.4	305	43.1	117	29.8	232	13.0
20	47	45.2	158	01.6	320	46.4	132	31.7	247	15.6
21	62	47.6	173	00.9	335	49.6	147	33.5	262	18.1
22	77	50.1	188	00.1	350	52.9	162	35.4	277	20.7
23	92	52.6	202	59.4	5	56.2	177	37.2	292	23.2
24	107	55.0	217	58.7	20	59.5	192	39.1	307	25.8
Dif	—	—	-7	-5	+33	0	+18	0	+25	0

ALMANAQUE NÁUTICO PERSEIS

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 16:3 PMG: 12 ^h 07 ^m 3			Edad: 1 ^d 5 PHE { 4 ^h : 56:4 12 ^h : 56:6 20 ^h : 56:7 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	13.3	-22	04.8	159	11.3	-20	23.5	60 N	15 20	16 14	17 09	10 06	1	17 50 96			
1	193	13.0		04.4	173	41.4 ¹¹¹		12.7 ¹⁰⁸	58	35	25	16	9 54	6	18 01 92			
2	208	12.7		04.0	188	11.5 ¹¹¹	-20	01.7 ¹¹⁰	56	15 48	34	22	43 10		11 88			
3	223	12.5		03.7	202	41.7 ¹¹²	-19	50.7 ¹¹⁰	54	16 00	42	27	33 13		20 84			
4	238	12.2		03.3	217	12.0 ¹¹³		39.5 ¹¹²	52	10	49	32	25 16		28 81			
5	253	12.0	-22	03.0	231	42.3 ¹¹³	-19	28.3 ¹¹²	50	16 19	16 56	17 37	9 17	18	18 35 78			
6	268	11.7	-22	02.6	246	12.7 ¹¹⁴	-19	16.9 ¹¹⁴	45	16 38	17 11	17 48	9 01	23	18 50 72			
7	283	11.4		02.2	260	43.1 ¹¹⁴	-19	05.5 ¹¹⁴	40	16 53	23	17 57	8 48	27	19 02 68			
8	298	11.2		01.9	275	13.6 ¹¹⁵	-18	53.9 ¹¹⁶	35	17 06	34	18 05	36 31		12 65			
9	313	10.9		01.5	289	44.1 ¹¹⁵		42.3 ¹¹⁶	30	18	17 44	13	26 34		21 61			
10	328	10.7		01.1	304	14.7 ¹¹⁶		30.5 ¹¹⁸	20	38	18 01	28	8 08	40	36 56			
11	343	10.4	-22	00.8	318	45.3 ¹¹⁶	-18	18.7 ¹¹⁸	10 N	17 55	18 17	18 43	7 53	44	19 50 51			
12	358	10.2	-22	00.4	333	16.0 ¹¹⁷	-18	06.7 ¹²⁰	0	18 11	18 33	18 59	7 39	48	20 02 47			
13	13	09.9	-22	00.0	347	46.7 ¹¹⁷	-17	54.7 ¹²⁰	10 S	27	18 50	19 17	25 51		14 43			
14	28	09.7	-21	59.7	2	17.5 ¹¹⁸		42.6 ¹²¹	20	18 45	19 09	19 38	7 09	57	27 38			
15	43	09.4		59.3	16	48.3 ¹¹⁸		30.3 ¹²³	30	19 06	33	20 05	6 51	62	42 33			
16	58	09.1		58.9	31	19.2 ¹¹⁹		18.0 ¹²³	35	18	19 47	23	41 65		20 51 29			
17	73	08.9	-21	58.6	45	50.2 ¹²⁰	-17	05.6 ¹²⁴	40	19 32	20 04	20 44	6 29	68	21 00 26			
18	88	08.6	-21	58.2	60	21.2 ¹²⁰	-16	53.1 ¹²⁵	45	19 48	20 24	21 12	6 15	73	21 12 21			
19	103	08.4		57.8	74	52.2 ¹²⁰		40.5 ¹²⁶	50	20 09	20 51	21 51	5 57	79	25 17 17			
20	118	08.1		57.4	89	23.3 ¹²¹		27.9 ¹²⁶	52	19	21 05	22 14	49 81		31 15			
21	133	07.9		57.1	103	54.4 ¹²¹		15.1 ¹²⁸	54	30	21	22 45	40 84		38 12			
22	148	07.6		56.7	118	25.6 ¹²²	-16	02.3 ¹²⁸	56	42	21 40	** **	29 88		46 8			
23	163	07.4		56.3	132	56.8 ¹²²	-15	49.3 ¹³⁰	58	20 57	22 04	** **	18 91		21 55 5			
24	178	07.1	-21	55.9	147	28.1 ¹²³	-15	36.3 ¹³⁰	60 S	21 15	22 37	** **	5 04	97	22 05 1			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 16 ^h 41 ^m 6		Mag: -4.0 PMG: 9 ^h 30 ^m				Mag: -1.2 PMG: 22 ^h 26 ^m				Mag: -1.8 PMG: 11 ^h 05 ^m				Mag: +0.5 PMG: 3 ^h 26 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	108	54.2	217	40.8	-20	34.0	22	17.5	+26	58.5	193	23.4	-23	11.3	308	26.9	+10	06.4
1	123	56.6	232	40.0		34.5	37	20.7		58.5	208	25.3		11.2	323	29.5		06.5
2	138	59.1	247	39.3		35.0	52	24.0		58.5	223	27.1		11.2	338	32.0		06.5
3	154	01.6	262	38.5		35.5	67	27.2		58.5	238	29.0		11.2	353	34.6		06.6
4	169	04.0	277	37.8		36.0	82	30.4		58.5	253	30.8		11.2	8	37.1		06.6
5	184	06.5	292	37.0	-20	36.4	97	33.7	+26	58.5	268	32.7	-23	11.2	23	39.7	+10	06.7
6	199	08.9	307	36.3	-20	36.9	112	36.9	+26	58.5	283	34.5	-23	11.1	38	42.2	+10	06.7
7	214	11.4	322	35.5		37.4	127	40.1		58.4	298	36.4		11.1	53	44.8		06.7
8	229	13.9	337	34.7		37.9	142	43.3		58.4	313	38.2		11.1	68	47.3		06.8
9	244	16.3	352	34.0		38.4	157	46.6		58.4	328	40.1		11.1	83	49.9		06.8
10	259	18.8	7	33.2		38.8	172	49.8		58.4	343	41.9		11.1	98	52.4		06.9
11	274	21.3	22	32.5	-20	39.3	187	53.0	+26	58.4	358	43.8	-23	11.1	113	55.0	+10	06.9
12	289	23.7	37	31.7	-20	39.8	202	56.2	+26	58.4	13	45.6	-23	11.0	128	57.5	+10	07.0
13	304	26.2	52	31.0		40.2	217	59.4		58.4	28	47.5		11.0	144	00.1		07.0
14	319	28.7	67	30.2		40.7	233	02.7		58.3	43	49.3		11.0	159	02.6		07.1
15	334	31.1	82	29.5		41.2	248	05.9		58.3	58	51.2		11.0	174	05.2		07.1
16	349	33.6	97	28.7		41.7	263	09.1		58.3	73	53.0		11.0	189	07.8		07.2
17	4	36.0	112	27.9	-20	42.1	278	12.3	+26	58.3	88	54.9	-23	10.9	204	10.3	+10	07.2
18	19	38.5	127	27.2	-20	42.6	293	15.5	+26	58.3	103	56.7	-23	10.9	219	12.9	+10	07.2
19	34	41.0	142	26.4		43.1	308	18.7		58.3	118	58.6		10.9	234	15.4		07.3
20	49	43.4	157	25.7		43.5	323	21.9		58.3	134	00.4		10.9	249	18.0		07.3
21	64	45.9	172	24.9		44.0	338	25.1		58.2	149	02.3		10.9	264	20.5		07.4
22	79	48.4	187	24.2		44.5	353	28.3		58.2	164	04.1		10.9	279	23.1		07.4
23	94	50.8	202	23.4		44.9	8	31.5		58.2	179	06.0		10.8	294	25.6		07.5
24	109	53.3	217	22.6	-20	45.4	23	34.7	+26	58.2	194	07.8	-23	10.8	309	28.2	+10	07.5
Dif	—		-8		-5		+32		0		+18		0		+26			

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'3			Edad: 2 ^d 5	PHE {	R°: 46 ^m		Principio del crepúsculo			Salida de Luna		Puesta de Luna			
	PMG: 12 ^h 07 ^m 7					R°: 46 ^m		Principio del crepúsculo			Salida de Luna		Puesta de Luna			
	hG ☉		Dec	hG ☾ Dif		Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	07.1	-21	55.9	147	28.1	-15	36.3	60 N	7 05	8 00	8 54	10 07	1	19 26	94
1	193	06.9		55.6	161	59.4 ¹²³		23.2 ¹³¹	58	6 59	7 50	39	10 00	4	33	90
2	208	06.6		55.2	176	30.8 ¹²⁴	-15	10.0 ¹³²	56	53	40	26	9 53	7	39	86
3	223	06.3		54.8	191	02.2 ¹²⁴	-14	56.8 ¹³²	54	47	32	15	46	11	44	83
4	238	06.1		54.4	205	33.7 ¹²⁵		43.5 ¹³³	52	42	25	8 05	41	13	49	80
5	253	05.8	-21	54.1	220	05.2 ¹²⁵	-14	30.1 ¹³⁴	50	6 38	7 18	7 56	9 35	16	19 53	78
6	268	05.6	-21	53.7	234	36.7 ¹²⁵	-14	16.6 ¹³⁵	45	6 27	7 04	7 37	9 24	21	20 02	73
7	283	05.3		53.3	249	08.3 ¹²⁶	-14	03.0 ¹³⁶	40	18	6 51	21	15	25	10	68
8	298	05.1		52.9	263	39.9 ¹²⁶	-13	49.4 ¹³⁶	35	09	41	7 08	07	28	17	64
9	313	04.8		52.5	278	11.6 ¹²⁷		35.7 ¹³⁷	30	6 02	31	6 57	9 00	31	22	61
10	328	04.6		52.1	292	43.3 ¹²⁷		21.9 ¹³⁸	20	5 46	6 14	37	8 48	36	32	55
11	343	04.3	-21	51.8	307	15.1 ¹²⁸	-13	08.0 ¹³⁹	10 N	5 32	5 58	6 20	8 37	41	20 41	50
12	358	04.1	-21	51.4	321	46.9 ¹²⁸	-12	54.1 ¹³⁹	0	5 16	5 42	6 04	8 27	46	20 49	45
13	13	03.8		51.0	336	18.7 ¹²⁸		40.1 ¹⁴⁰	10 S	4 58	25	5 48	16	51	20 57	41
14	28	03.6		50.6	350	50.6 ¹²⁹		26.1 ¹⁴⁰	20	37	5 06	30	8 06	55	21 05	36
15	43	03.3		50.2	5	22.5 ¹²⁹	-12	12.0 ¹⁴¹	30	4 10	4 43	5 10	7 53	61	15	30
16	58	03.1		49.8	19	54.4 ¹²⁹	-11	57.8 ¹⁴²	35	3 53	28	4 58	46	64	20	27
17	73	02.8	-21	49.4	34	26.4 ¹³⁰	-11	43.5 ¹⁴³	40	3 31	4 12	4 44	7 37	69	21 26	24
18	88	02.6	-21	49.1	48	58.4 ¹³⁰	-11	29.2 ¹⁴³	45	3 04	3 51	4 27	7 28	72	21 33	20
19	103	02.3		48.7	63	30.4 ¹³⁰		14.8 ¹⁴⁴	50	2 24	24	4 07	16	78	42	14
20	118	02.1		48.3	78	02.5 ¹³¹	-11	00.4 ¹⁴⁴	52	2 01	3 11	3 57	10	81	46	12
21	133	01.8		47.9	92	34.6 ¹³¹	-10	45.9 ¹⁴⁵	54	1 30	2 55	46	7 04	84	50	9
22	148	01.6		47.5	107	06.7 ¹³¹		31.4 ¹⁴⁵	56	** ** *	36	33	6 57	87	21 54	7
23	163	01.3		47.1	121	38.9 ¹³²		16.8 ¹⁴⁶	58	** ** *	2 12	18	49	91	22 00	3
24	178	01.1	-21	46.7	136	11.1 ¹³²	-10	02.1 ¹⁴⁷	60 S	** ** *	1 38	3 01	6 41	94	22 06	0

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 16 ^h 37 ^m 7		Mag: -4.0 PMG: 9 ^h 31 ^m		Mag: -1.2 PMG: 22 ^h 21 ^m		Mag: -1.8 PMG: 11 ^h 02 ^m		Mag: +0.5 PMG: 3 ^h 22 ^m									
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄									
h	°	'	°	'	°	'	°	'	°	'								
0	109	53.3	217	22.6	-20	45.4	23	34.7	+26	58.2	194	07.8	-23	10.8	309	28.2	+10	07.5
1	124	55.8	232	21.9		45.8	38	37.9		58.2	209	09.7		10.8	324	30.7		07.6
2	139	58.2	247	21.1		46.3	53	41.1		58.2	224	11.5		10.8	339	33.3		07.6
3	155	00.7	262	20.3		46.8	68	44.3		58.1	239	13.4		10.8	354	35.8		07.7
4	170	03.2	277	19.6		47.2	83	47.5		58.1	254	15.2		10.7	9	38.4		07.7
5	185	05.6	292	18.8	-20	47.7	98	50.7	+26	58.1	269	17.1	-23	10.7	24	41.0	+10	07.8
6	200	08.1	307	18.1	-20	48.1	113	53.9	+26	58.1	284	18.9	-23	10.7	39	43.5	+10	07.8
7	215	10.5	322	17.3		48.6	128	57.1		58.1	299	20.8		10.7	54	46.1		07.8
8	230	13.0	337	16.5		49.0	144	00.3		58.1	314	22.6		10.7	69	48.6		07.9
9	245	15.5	352	15.8		49.5	159	03.5		58.0	329	24.5		10.6	84	51.2		07.9
10	260	17.9	7	15.0		49.9	174	06.7		58.0	344	26.3		10.6	99	53.7		08.0
11	275	20.4	22	14.2	-20	50.4	189	09.9	+26	58.0	359	28.2	-23	10.6	114	56.3	+10	08.0
12	290	22.9	37	13.5	-20	50.8	204	13.1	+26	58.0	14	30.0	-23	10.6	129	58.9	+10	08.1
13	305	25.3	52	12.7		51.3	219	16.2		58.0	29	31.9		10.6	145	01.4		08.1
14	320	27.8	67	11.9		51.7	234	19.4		57.9	44	33.7		10.5	160	04.0		08.2
15	335	30.3	82	11.2		52.2	249	22.6		57.9	59	35.6		10.5	175	06.5		08.2
16	350	32.7	97	10.4		52.6	264	25.8		57.9	74	37.4		10.5	190	09.1		08.3
17	5	35.2	112	09.6	-20	53.1	279	29.0	+26	57.9	89	39.3	-23	10.5	205	11.6	+10	08.3
18	20	37.7	127	08.9	-20	53.5	294	32.1	+26	57.9	104	41.1	-23	10.5	220	14.2	+10	08.4
19	35	40.1	142	08.1		54.0	309	35.3		57.8	119	43.0		10.4	235	16.7		08.4
20	50	42.6	157	07.3		54.4	324	38.5		57.8	134	44.8		10.4	250	19.3		08.5
21	65	45.0	172	06.6		54.9	339	41.7		57.8	149	46.7		10.4	265	21.9		08.5
22	80	47.5	187	05.8		55.3	354	44.8		57.8	164	48.5		10.4	280	24.4		08.6
23	95	50.0	202	05.0		55.7	9	48.0		57.8	179	50.4		10.4	295	27.0		08.6
24	110	52.4	217	04.3	-20	56.2	24	51.2	+26	57.7	194	52.2	-23	10.3	310	29.5	+10	08.6
Dif	—		-8		-4		+32		0	+19		0	+26		0			

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna								
	SD: 16/3 PMG: 12 ^h 08 ^m 1			Edad: 3 ^d 5 PHE { 4 ^h : 57/4 12 ^h : 57/5 20 ^h : 57/7 R°: 45 ^m SD: 15/6 PMG: 15 ^h 24 ^m																	
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°						
h	°	'	°	'	°	'	°	h	m	h	m	h	m	m							
0	178	01.1	-21	46.7	136	11.1	-10	02.1	60 N	15	24	16	18	17	13	10	08	0	21	00	94
1	193	00.9		46.3	150	43.3 ¹³²	-9	47.4 ¹⁴⁷	58		39		28		19		04	3		03	90
2	208	00.6		45.9	165	15.5 ¹³²		32.6 ¹⁴⁸	56	15	52	37		25		10	00	6		05	87
3	223	00.4		45.5	179	47.8 ¹³³		17.8 ¹⁴⁸	54	16	03	45		30		9	57	9		07	84
4	238	00.1		45.1	194	20.1 ¹³³	-9	02.9 ¹⁴⁹	52		13		52		35		54	11		09	81
5	252	59.9	-21	44.7	208	52.4 ¹³³	-8	48.0 ¹⁴⁹	50	16	21	16	59	17	39	9	51	14	21	11	78
6	267	59.6	-21	44.3	223	24.7 ¹³³	-8	33.0 ¹⁵⁰	45	16	40	17	13	17	50	9	45	19	21	15	73
7	282	59.4		43.9	237	57.1 ¹³⁴		18.0 ¹⁵⁰	40	16	55		25	17	59	40	23		18	69	
8	297	59.1		43.5	252	29.5 ¹³⁴	-8	02.9 ¹⁵¹	35	17	08		36	18	07	35	27		21	64	
9	312	58.9		43.1	267	01.9 ¹³⁴	-7	47.8 ¹⁵¹	30		19	17	45		15	31	30		23	61	
10	327	58.6		42.7	281	34.3 ¹³⁴		32.6 ¹⁵²	20		39	18	03		30	24	36		27	56	
11	342	58.4	-21	42.3	296	06.7 ¹³⁴	-7	17.4 ¹⁵²	10 N	17	56	18	18	18	44	9	18	41	21	31	50
12	357	58.2	-21	41.9	310	39.2 ¹³⁵	-7	02.1 ¹⁵³	0	18	12	18	34	19	00	9	13	45	21	34	46
13	12	57.9		41.5	325	11.6 ¹³⁴	-6	46.8 ¹⁵³	10 S		28	18	51		17	07	50		38	40	
14	27	57.7		41.1	339	44.1 ¹³⁵		31.5 ¹⁵³	20	18	45	19	10	19	38	9	01	55	41	36	
15	42	57.4		40.7	354	16.6 ¹³⁵		16.1 ¹⁵⁴	30	19	05		32	20	05	8	54	61	45	30	
16	57	57.2		40.3	8	49.1 ¹³⁵	-6	00.7 ¹⁵⁴	35		17	19	46		22	50	64		47	27	
17	72	56.9	-21	39.9	23	21.6 ¹³⁵	-5	45.3 ¹⁵⁴	40	19	31	20	03	20	43	8	46	68	21	50	23
18	87	56.7	-21	39.5	37	54.1 ¹³⁵	-5	29.8 ¹⁵⁵	45	19	47	20	23	21	10	8	40	73	21	53	19
19	102	56.5		39.1	52	26.7 ¹³⁶	-5	14.3 ¹⁵⁵	50	20	08	20	50	21	49	34	78		56	14	
20	117	56.2		38.7	66	59.2 ¹³⁵	-4	58.8 ¹⁵⁵	52		17	21	03	22	10	31	80		58	11	
21	132	56.0		38.3	81	31.7 ¹³⁵		43.2 ¹⁵⁶	54		28		18	22	40	28	83	21	59	9	
22	147	55.7		37.9	96	04.3 ¹³⁶		27.6 ¹⁵⁶	56		40	21	37	23	32	24	86		22	01	7
23	162	55.5		37.5	110	36.8 ¹³⁵	-4	11.9 ¹⁵⁷	58	20	55	22	00	** **		20	90		03	4	
24	177	55.3	-21	37.0	125	09.4 ¹³⁶	-3	56.3 ¹⁵⁶	60 S	21	12	22	31	** **		8	15	94	22	06	0

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 16 ^h 33 ^m 8		Mag: -4.0 PMG: 9 ^h 32 ^m		Mag: -1.2 PMG: 22 ^h 16 ^m		Mag: -1.8 PMG: 10 ^h 59 ^m		Mag: +0.5 PMG: 3 ^h 17 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	110	52.4	217	04.3	-20	56.2	24	51.2	+26	57.7	194	52.2	-23	10.3	310	29.5	+10	08.6
1	125	54.9	232	03.5		56.6	39	54.3		57.7	209	54.1		10.3	325	32.1		08.7
2	140	57.4	247	02.7		57.0	54	57.5		57.7	224	55.9		10.3	340	34.7		08.7
3	155	59.8	262	01.9		57.5	70	00.7		57.7	239	57.8		10.3	355	37.2		08.8
4	171	02.3	277	01.2		57.9	85	03.8		57.7	254	59.6		10.3	10	39.8		08.8
5	186	04.8	292	00.4	-20	58.3	100	07.0	+26	57.6	270	01.5	-23	10.2	25	42.3	+10	08.9
6	201	07.2	306	59.6	-20	58.8	115	10.1	+26	57.6	285	03.3	-23	10.2	40	44.9	+10	08.9
7	216	09.7	321	58.9		59.2	130	13.3		57.6	300	05.2		10.2	55	47.5		09.0
8	231	12.1	336	58.1	-20	59.6	145	16.4		57.6	315	07.0		10.2	70	50.0		09.0
9	246	14.6	351	57.3	-21	00.1	160	19.6		57.6	330	08.9		10.2	85	52.6		09.1
10	261	17.1	6	56.5		00.5	175	22.7		57.5	345	10.7		10.1	100	55.1		09.1
11	276	19.5	21	55.8	-21	00.9	190	25.9	+26	57.5	0	12.6	-23	10.1	115	57.7	+10	09.2
12	291	22.0	36	55.0	-21	01.3	205	29.0	+26	57.5	15	14.4	-23	10.1	131	00.3	+10	09.2
13	306	24.5	51	54.2		01.8	220	32.2		57.5	30	16.3		10.1	146	02.8		09.3
14	321	26.9	66	53.4		02.2	235	35.3		57.5	45	18.1		10.1	161	05.4		09.3
15	336	29.4	81	52.7		02.6	250	38.5		57.4	60	20.0		10.0	176	07.9		09.4
16	351	31.9	96	51.9		03.0	265	41.6		57.4	75	21.8		10.0	191	10.5		09.4
17	6	34.3	111	51.1	-21	03.5	280	44.8	+26	57.4	90	23.7	-23	10.0	206	13.1	+10	09.5
18	21	36.8	126	50.3	-21	03.9	295	47.9	+26	57.4	105	25.5	-23	10.0	221	15.6	+10	09.5
19	36	39.3	141	49.5		04.3	310	51.1		57.3	120	27.4		10.0	236	18.2		09.6
20	51	41.7	156	48.8		04.7	325	54.2		57.3	135	29.3		09.9	251	20.7		09.6
21	66	44.2	171	48.0		05.1	340	57.3		57.3	150	31.1		09.9	266	23.3		09.7
22	81	46.6	186	47.2		05.6	356	00.5		57.3	165	33.0		09.9	281	25.9		09.7
23	96	49.1	201	46.4		06.0	11	03.6		57.2	180	34.8		09.9	296	28.4		09.8
24	111	51.6	216	45.7	-21	06.4	26	06.7	+26	57.2	195	36.7	-23	09.9	311	31.0	+10	09.8
Dif	—		-8		-4		+31		0		+19		0		+26		0	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16/3			Edad: 4 ^d 5	PHE {	4 ^h : 57/8 12 ^h : 58/0 20 ^h : 58/1								
	PMG: 12 ^h 08 ^m 5													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	Rº	Hora	Rº
h	°	'	°	°	'	°	'	h	m	h	m	h	m	m
0	177	55.3	-21	125	09.4	-3	56.3	7 03	7 58	8 52	10 08	0	22 34	96
1	192	55.0		139	42.0 ¹³⁶		40.6 ¹⁵⁷	6 57	48	37	07	3	33	92
2	207	54.8		154	14.5 ¹³⁵		24.8 ¹⁵⁸	51	39	24	06	7	32	88
3	222	54.5		168	47.1 ¹³⁶	-3	09.1 ¹⁵⁷	46	31	13	06	9	31	85
4	237	54.3		183	19.6 ¹³⁵	-2	53.3 ¹⁵⁸	41	24	8 03	05	12	30	83
5	252	54.1	-21	197	52.2 ¹³⁶	-2	37.5 ¹⁵⁸	6 37	7 17	7 55	10 05	14	22 29	81
6	267	53.8	-21	212	24.7 ¹³⁵	-2	21.7 ¹⁵⁸	6 27	7 03	7 36	10 04	19	22 28	74
7	282	53.6		226	57.2 ¹³⁵	-2	05.9 ¹⁵⁸	18	6 51	21	03	23	27	70
8	297	53.3		241	29.8 ¹³⁶	-1	50.0 ¹⁵⁹	09	41	7 08	02	27	25	66
9	312	53.1		256	02.3 ¹³⁵		34.2 ¹⁵⁸	6 02	31	6 57	01	31	24	63
10	327	52.9		270	34.8 ¹³⁵		18.3 ¹⁵⁹	5 47	6 14	38	10 00	36	23	56
11	342	52.6	-21	285	07.3 ¹³⁵	-1	02.4 ¹⁵⁹	5 32	5 58	6 21	9 59	41	22 21	52
12	357	52.4	-21	299	39.8 ¹³⁵	-0	46.4 ¹⁶⁰	5 17	5 43	6 05	9 58	46	22 20	46
13	12	52.1		314	12.2 ¹³⁴		30.5 ¹⁵⁹	4 59	26	5 49	57	51	18	42
14	27	51.9		328	44.7 ¹³⁵	-0	14.6 ¹⁵⁹	39	5 07	31	56	56	17	37
15	42	51.7		343	17.1 ¹³⁴	+0	01.4 ¹⁶⁰	4 12	4 44	11	55	62	15	31
16	57	51.4		357	49.5 ¹³⁴		17.4 ¹⁶⁰	3 55	30	5 00	54	66	14	28
17	72	51.2	-21	12	21.9 ¹³⁴	+0	33.3 ¹⁵⁹	3 34	4 14	4 46	9 54	69	22 13	24
18	87	51.0	-21	26	54.3 ¹³⁴	+0	49.3 ¹⁶⁰	3 07	3 54	4 30	9 53	74	22 12	19
19	102	50.7		41	26.7 ¹³⁴	+1	05.3 ¹⁶⁰	2 28	27	09	52	79	10	14
20	117	50.5		55	59.0 ¹³³		21.3 ¹⁶⁰	2 06	3 14	4 00	51	82	09	12
21	132	50.3		70	31.3 ¹³³		37.3 ¹⁶⁰	1 37	2 59	3 49	51	84	08	10
22	147	50.0		85	03.6 ¹³³	+1	53.3 ¹⁶⁰	0 45	40	37	50	88	08	6
23	162	49.8		99	35.9 ¹³³	+2	09.3 ¹⁶⁰	** **	2 17	22	50	91	07	3
24	177	49.6	-21	114	08.1 ¹³²	+2	25.3 ¹⁶⁰	** **	1 46	3 05	9 49	95	22 06	0

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 16 ^h 29 ^m 9		Mag: -4.0 PMG: 9 ^h 33 ^m		Mag: -1.2 PMG: 22 ^h 11 ^m		Mag: -1.8 PMG: 10 ^h 56 ^m		Mag: +0.5 PMG: 3 ^h 13 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	111	51.6	216	45.7	-21	06.4	26	06.7	+26	57.2	195	36.7	-23	09.9	311	31.0	+10	09.8
1	126	54.0	231	44.9		06.8	41	09.9		57.2	210	38.5		09.8	326	33.6		09.9
2	141	56.5	246	44.1		07.2	56	13.0		57.2	225	40.4		09.8	341	36.1		09.9
3	156	59.0	261	43.3		07.6	71	16.1		57.2	240	42.2		09.8	356	38.7		10.0
4	172	01.4	276	42.5		08.0	86	19.2		57.1	255	44.1		09.8	11	41.2		10.0
5	187	03.9	291	41.8	-21	08.4	101	22.4	+26	57.1	270	45.9	-23	09.8	26	43.8	+10	10.1
6	202	06.4	306	41.0	-21	08.8	116	25.5	+26	57.1	285	47.8	-23	09.7	41	46.4	+10	10.1
7	217	08.8	321	40.2		09.2	131	28.6		57.1	300	49.6		09.7	56	48.9		10.2
8	232	11.3	336	39.4		09.7	146	31.7		57.0	315	51.5		09.7	71	51.5		10.2
9	247	13.8	351	38.6		10.1	161	34.8		57.0	330	53.3		09.7	86	54.1		10.3
10	262	16.2	6	37.8		10.5	176	38.0		57.0	345	55.2		09.7	101	56.6		10.3
11	277	18.7	21	37.1	-21	10.9	191	41.1	+26	57.0	0	57.0	-23	09.6	116	59.2	+10	10.4
12	292	21.1	36	36.3	-21	11.3	206	44.2	+26	56.9	15	58.9	-23	09.6	132	01.7	+10	10.4
13	307	23.6	51	35.5		11.7	221	47.3		56.9	31	00.7		09.6	147	04.3		10.5
14	322	26.1	66	34.7		12.1	236	50.4		56.9	46	02.6		09.6	162	06.9		10.5
15	337	28.5	81	33.9		12.5	251	53.5		56.9	61	04.5		09.5	177	09.4		10.6
16	352	31.0	96	33.1		12.9	266	56.6		56.8	76	06.3		09.5	192	12.0		10.6
17	7	33.5	111	32.3	-21	13.3	281	59.7	+26	56.8	91	08.2	-23	09.5	207	14.6	+10	10.7
18	22	35.9	126	31.6	-21	13.7	297	02.8	+26	56.8	106	10.0	-23	09.5	222	17.1	+10	10.7
19	37	38.4	141	30.8		14.1	312	05.9		56.8	121	11.9		09.5	237	19.7		10.8
20	52	40.9	156	30.0		14.4	327	09.0		56.7	136	13.7		09.4	252	22.3		10.8
21	67	43.3	171	29.2		14.8	342	12.1		56.7	151	15.6		09.4	267	24.8		10.9
22	82	45.8	186	28.4		15.2	357	15.2		56.7	166	17.4		09.4	282	27.4		10.9
23	97	48.2	201	27.6		15.6	12	18.3		56.7	181	19.3		09.4	297	30.0		11.0
24	112	50.7	216	26.8	-21	16.0	27	21.4	+26	56.6	196	21.1	-23	09.4	312	32.5	+10	11.0
Dif	—		-8	-4			+31	0			+19	0			+26	0		

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna														
	SD: 16/3 PMG: 12 ^h 08. ^m 9			Edad: 5 ^d 5 PHE { SD: 15/9 PMG: 16 ^h 55 ^m																							
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°												
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m										
0	177	49.6	-21	27.0	114	08.1	+2	25.3	60 N	15 28	16 21	17 16	10 08	0	**	**	**										
1	192	49.3		26.5	128	40.3 ¹³²		41.2 ¹⁵⁹	58	43	31	22	10 5		**	**	**										
2	207	49.1		26.1	143	12.5 ¹³²	+2	57.2 ¹⁶⁰	56	15 55	40	28	13 7		**	**	**										
3	222	48.9		25.7	157	44.6 ¹³¹	+3	13.2 ¹⁶⁰	54	16 06	48	33	15 10		23	56	89										
4	237	48.6		25.2	172	16.7 ¹³¹		29.2 ¹⁶⁰	52	16	16 55	37	17 13		53	86											
5	252	48.4	-21	24.8	186	48.8 ¹³¹	+3	45.2 ¹⁶⁰	50	16 24	17 01	17 42	10 19	15	23	50	83										
6	267	48.2	-21	24.4	201	20.8 ¹³⁰	+4	01.1 ¹⁵⁹	45	16 42	17 15	17 52	10 23	20	23	42	78										
7	282	47.9		23.9	215	52.8 ¹³⁰		17.1 ¹⁶⁰	40	16 57	27	18 01	26 25		37	72											
8	297	47.7		23.5	230	24.8 ¹³⁰		33.0 ¹⁵⁹	35	17 10	38	09	29 29		31	69											
9	312	47.5		23.1	244	56.7 ¹²⁹	+4	49.0 ¹⁶⁰	30	21	17 47	16	32 32		27	65											
10	327	47.2		22.6	259	28.6 ¹²⁹	+5	04.9 ¹⁵⁹	20	40	18 04	31	36 38		19	59											
11	342	47.0	-21	22.2	274	00.4 ¹²⁸	+5	20.8 ¹⁵⁹	10 N	17 57	18 19	18 45	10 40	43	23	13	54										
12	357	46.8	-21	21.8	288	32.2 ¹²⁸	+5	36.7 ¹⁵⁹	0	18 13	18 35	19 01	10 44	48	23	06	50										
13	12	46.5		21.3	303	03.9 ¹²⁷	+5	52.6 ¹⁵⁹	10 S	28	18 51	18	48 52		23	00	45										
14	27	46.3		20.9	317	35.6 ¹²⁷	+6	08.4 ¹⁵⁸	20	18 45	19 10	19 38	52 58		22	54	39										
15	42	46.1		20.5	332	07.3 ¹²⁷		24.3 ¹⁵⁹	30	19 05	32	20 04	10 57	64	46	34											
16	57	45.9		20.0	346	38.8 ¹²⁵		40.1 ¹⁵⁸	35	17	19 46	21	11 00	67	42	30											
17	72	45.6	-21	19.6	1	10.4 ¹²⁶	+6	55.9 ¹⁵⁸	40	19 30	20 02	20 42	11 03	71	22	37	26										
18	87	45.4	-21	19.1	15	41.9 ¹²⁵	+7	11.6 ¹⁵⁷	45	19 46	20 22	21 08	11 07	75	22	31	22										
19	102	45.2		18.7	30	13.3 ¹²⁴		27.4 ¹⁵⁸	50	20 06	20 48	21 46	11 82		24	17											
20	117	44.9		18.2	44	44.7 ¹²⁴		43.1 ¹⁵⁷	52	16	21 01	22 07	13 84		21	14											
21	132	44.7		17.8	59	16.0 ¹²³	+7	58.8 ¹⁵⁷	54	26	16	22 34	15 88		18	11											
22	147	44.5		17.4	73	47.3 ¹²³	+8	14.4 ¹⁵⁶	56	38	33	23 19	18 91		14	8											
23	162	44.3		16.9	88	18.5 ¹²²		30.0 ¹⁵⁶	58	20 52	21 56	** ** *	21 94		10	5											
24	177	44.0	-21	16.5	102	49.6 ¹²¹	+8	45.6 ¹⁵⁶	60 S	21 09	22 25	** ** *	11 24	99	22	06	0										
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO														
	PMG: 16 ^h 25. ^m 9			Mag: -4.0 PMG: 9 ^h 35 ^m			Mag: -1.1 PMG: 22 ^h 06 ^m			Mag: -1.8 PMG: 10 ^h 53 ^m			Mag: +0.5 PMG: 3 ^h 09 ^m														
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec													
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'											
0	112	50.7	216	26.8	-21	16.0	27	21.4	+26	56.6	196	21.1	-23	09.4	312	32.5	+10	11.0									
1	127	53.2	231	26.1		16.4	42	24.5		56.6	211	23.0		09.3	327	35.1		11.1									
2	142	55.6	246	25.3		16.8	57	27.6		56.6	226	24.8		09.3	342	37.7		11.1									
3	157	58.1	261	24.5		17.2	72	30.7		56.5	241	26.7		09.3	357	40.2		11.2									
4	173	00.6	276	23.7		17.6	87	33.8		56.5	256	28.5		09.3	12	42.8		11.2									
5	188	03.0	291	22.9	-21	17.9	102	36.9	+26	56.5	271	30.4	-23	09.2	27	45.4	+10	11.3									
6	203	05.5	306	22.1	-21	18.3	117	40.0	+26	56.5	286	32.3	-23	09.2	42	47.9	+10	11.3									
7	218	08.0	321	21.3		18.7	132	43.0		56.4	301	34.1		09.2	57	50.5		11.4									
8	233	10.4	336	20.5		19.1	147	46.1		56.4	316	36.0		09.2	72	53.1		11.4									
9	248	12.9	351	19.7		19.5	162	49.2		56.4	331	37.8		09.2	87	55.6		11.5									
10	263	15.4	6	18.9		19.8	177	52.3		56.4	346	39.7		09.1	102	58.2		11.5									
11	278	17.8	21	18.1	-21	20.2	192	55.4	+26	56.3	1	41.5	-23	09.1	118	00.8	+10	11.6									
12	293	20.3	36	17.4	-21	20.6	207	58.4	+26	56.3	16	43.4	-23	09.1	133	03.3	+10	11.6									
13	308	22.7	51	16.6		21.0	223	01.5		56.3	31	45.2		09.1	148	05.9		11.7									
14	323	25.2	66	15.8		21.4	238	04.6		56.2	46	47.1		09.0	163	08.5		11.7									
15	338	27.7	81	15.0		21.7	253	07.7		56.2	61	48.9		09.0	178	11.0		11.8									
16	353	30.1	96	14.2		22.1	268	10.7		56.2	76	50.8		09.0	193	13.6		11.8									
17	8	32.6	111	13.4	-21	22.5	283	13.8	+26	56.2	91	52.7	-23	09.0	208	16.2	+10	11.9									
18	23	35.1	126	12.6	-21	22.8	298	16.9	+26	56.1	106	54.5	-23	09.0	223	18.7	+10	11.9									
19	38	37.5	141	11.8		23.2	313	19.9		56.1	121	56.4		08.9	238	21.3		12.0									
20	53	40.0	156	11.0		23.6	328	23.0		56.1	136	58.2		08.9	253	23.9		12.0									
21	68	42.5	171	10.2		24.0	343	26.1		56.0	152	00.1		08.9	268	26.5		12.1									
22	83	44.9	186	09.4		24.3	358	29.1		56.0	167	01.9		08.9	283	29.0		12.1									
23	98	47.4	201	08.6		24.7	13	32.2		56.0	182	03.8		08.8	298	31.6		12.2									
24	113	49.9	216	07.8	-21	25.1	28	35.2	+26	56.0	197	05.6	-23	08.8	313	34.2	+10	12.2									
Dif	—			-8			-4			+31			0			+19			0			+26			+1		

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'3 PMG: 12 ^h 09 ^m 2			Edad: 6 ^d 5 SD: 16'0 PMG: 17 ^h 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	177	44.0	-21	16.5	102	49.6	+8 45.6	60 N	7 02	7 56	8 49	10 08	2	0 10	101	
1	192	43.8		16.0	117	20.7 ¹²¹	+9 01.2 ¹⁵⁶	58	6 55	46	34	15	6	05	96	
2	207	43.6		15.6	131	51.7 ¹²⁰	16.7 ¹⁵⁵	56	50	37	22	20	10	0 00	93	
3	222	43.3		15.1	146	22.7 ¹²⁰	32.2 ¹⁵⁵	54	45	30	11	25	13	**	**	**
4	237	43.1		14.7	160	53.6 ¹¹⁹	+9 47.7 ¹⁵⁵	52	40	23	8 02	30	16	**	**	**
5	252	42.9	-21	14.2	175	24.4 ¹¹⁸	+10 03.1 ¹⁵⁴	50	6 36	7 16	7 53	10 34	19	**	**	**
6	267	42.7	-21	13.8	189	55.2 ¹¹⁸	+10 18.4 ¹⁵³	45	6 26	7 02	7 35	10 43	25	**	**	**
7	282	42.4		13.3	204	25.9 ¹¹⁷	33.8 ¹⁵⁴	40	17	6 51	20	51	29	**	**	**
8	297	42.2		12.9	218	56.5 ¹¹⁶	+10 49.0 ¹⁵²	35	09	40	7 08	10 58	32	**	**	**
9	312	42.0		12.4	233	27.0 ¹¹⁵	+11 04.3 ¹⁵³	30	6 02	31	6 57	11 04	35	**	**	**
10	327	41.8		12.0	247	57.5 ¹¹⁵	19.5 ¹⁵²	20	5 47	6 14	38	14	41	**	**	**
11	342	41.6	-21	11.5	262	27.9 ¹¹⁴	+11 34.6 ¹⁵¹	10 N	5 33	5 59	6 21	11 23	47	**	**	**
12	357	41.3	-21	11.1	276	58.2 ¹¹³	+11 49.7 ¹⁵¹	0	5 18	5 43	6 06	11 32	51	23	56	52
13	12	41.1		10.6	291	28.4 ¹¹²	+12 04.7 ¹⁵⁰	10 S	5 01	27	5 50	40	56	45	48	
14	27	40.9		10.2	305	58.6 ¹¹²	19.7 ¹⁵⁰	20	4 40	5 09	33	11 50	61	33	44	
15	42	40.7		09.7	320	28.7 ¹¹¹	34.6 ¹⁴⁹	30	4 14	4 46	13	12 01	66	20	38	
16	57	40.4		09.2	334	58.7 ¹¹⁰	+12 49.5 ¹⁴⁹	35	3 57	33	5 01	07	70	12	35	
17	72	40.2	-21	08.8	349	28.6 ¹⁰⁹	+13 04.3 ¹⁴⁸	40	3 37	4 16	4 48	12 14	74	23	03	31
18	87	40.0	-21	08.3	3	58.4 ¹⁰⁸	+13 19.1 ¹⁴⁸	45	3 10	3 56	4 32	12 22	79	22	53	27
19	102	39.8		07.9	18	28.2 ¹⁰⁸	33.8 ¹⁴⁷	50	2 32	31	12	33	85	41	21	
20	117	39.6		07.4	32	57.8 ¹⁰⁶	+13 48.4 ¹⁴⁶	52	2 12	18	4 03	37	88	35	19	
21	132	39.3		07.0	47	27.4 ¹⁰⁶	+14 02.9 ¹⁴⁵	54	1 44	3 03	3 52	43	91	29	15	
22	147	39.1		06.5	61	56.9 ¹⁰⁵	17.4 ¹⁴⁵	56	0 59	2 45	40	49	94	22	12	
23	162	38.9		06.0	76	26.3 ¹⁰⁴	31.9 ¹⁴⁵	58	** **	2 23	26	12 55	99	15	7	
24	177	38.7	-21	05.6	90	55.6 ¹⁰³	+14 46.2 ¹⁴³	60 S	** **	1 53	3 10	13 03	104	22	06	2

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 16 ^h 22 ^m 0		Mag: -4.0 PMG: 9 ^h 36 ^m		Mag: -1.1 PMG: 22 ^h 01 ^m		Mag: -1.9 PMG: 10 ^h 50 ^m		Mag: +0.5 PMG: 3 ^h 05 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	113	49.9	216	07.8	-21	25.1	28	35.2	+26	56.0	197	05.6	-23	08.8	313	34.2	+10	12.2
1	128	52.3	231	07.0		25.4	43	38.3		55.9	212	07.5		08.8	328	36.7		12.3
2	143	54.8	246	06.2		25.8	58	41.3		55.9	227	09.3		08.8	343	39.3		12.3
3	158	57.2	261	05.4		26.1	73	44.4		55.9	242	11.2		08.8	358	41.9		12.4
4	173	59.7	276	04.6		26.5	88	47.5		55.8	257	13.1		08.7	13	44.4		12.4
5	189	02.2	291	03.8	-21	26.9	103	50.5	+26	55.8	272	14.9	-23	08.7	28	47.0	+10	12.5
6	204	04.6	306	03.0	-21	27.2	118	53.6	+26	55.8	287	16.8	-23	08.7	43	49.6	+10	12.5
7	219	07.1	321	02.2		27.6	133	56.6		55.8	302	18.6		08.7	58	52.2		12.6
8	234	09.6	336	01.4		27.9	148	59.6		55.7	317	20.5		08.6	73	54.7		12.7
9	249	12.0	351	00.6		28.3	164	02.7		55.7	332	22.3		08.6	88	57.3		12.7
10	264	14.5	5	59.8		28.6	179	05.7		55.7	347	24.2		08.6	103	59.9		12.8
11	279	17.0	20	59.0	-21	29.0	194	08.8	+26	55.6	2	26.0	-23	08.6	119	02.4	+10	12.8
12	294	19.4	35	58.2	-21	29.3	209	11.8	+26	55.6	17	27.9	-23	08.6	134	05.0	+10	12.9
13	309	21.9	50	57.4		29.7	224	14.8		55.6	32	29.8		08.5	149	07.6		12.9
14	324	24.3	65	56.6		30.0	239	17.9		55.5	47	31.6		08.5	164	10.2		13.0
15	339	26.8	80	55.8		30.4	254	20.9		55.5	62	33.5		08.5	179	12.7		13.0
16	354	29.3	95	55.0		30.7	269	24.0		55.5	77	35.3		08.5	194	15.3		13.1
17	9	31.7	110	54.2	-21	31.1	284	27.0	+26	55.5	92	37.2	-23	08.4	209	17.9	+10	13.1
18	24	34.2	125	53.4	-21	31.4	299	30.0	+26	55.4	107	39.0	-23	08.4	224	20.4	+10	13.2
19	39	36.7	140	52.6		31.8	314	33.0		55.4	122	40.9		08.4	239	23.0		13.2
20	54	39.1	155	51.8		32.1	329	36.1		55.4	137	42.8		08.4	254	25.6		13.3
21	69	41.6	170	51.0		32.5	344	39.1		55.3	152	44.6		08.3	269	28.2		13.3
22	84	44.1	185	50.2		32.8	359	42.1		55.3	167	46.5		08.3	284	30.7		13.4
23	99	46.5	200	49.4		33.2	14	45.1		55.3	182	48.3		08.3	299	33.3		13.4
24	114	49.0	215	48.6	-21	33.5	29	48.2	+26	55.2	197	50.2	-23	08.3	314	35.9	+10	13.5
Dif	—		-8		-4		+30		0		+19		0		+26		+	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16/3 PMG: 12 ^h 09 ^m 6			Edad: 7 ^d 5 PHE { 4 ^h : 59/1 12 ^h : 59/3 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
0	177	38.7	-21	05.6	90	55.6	+14	46.2	60 N	15 33	16 25	17 19	10 10	4	1 51 107
1	192	38.4		05.1	105	24.8	+15	00.5	58	47	35	25	21	9	41 102
2	207	38.2		04.6	119	53.9		14.7	56	15 59	43	31	30	15	33 96
3	222	38.0		04.2	134	23.0		28.9	54	16 09	51	36	38	19	25 93
4	237	37.8		03.7	148	51.9		43.0	52	19	16 58	40	46	22	19 89
5	252	37.6	-21	03.2	163	20.8	+15	56.9	50	16 27	17 04	17 44	10 53	24	1 13 86
6	267	37.4	-21	02.8	177	49.5	+16	10.8	45	16 45	17 18	17 54	11 08	30	1 00 80
7	282	37.1		02.3	192	18.2		24.7	40	17 00	29	18 03	20	34	0 49 75
8	297	36.9		01.8	206	46.7		38.4	35	12	39	11	30	39	40 71
9	312	36.7		01.4	221	15.2	+16	52.1	30	23	17 49	18	39	42	32 68
10	327	36.5		00.9	235	43.5	+17	05.7	20	41	18 05	32	11 55	47	18 63
11	342	36.3	-21	00.4	250	11.8	+17	19.1	10 N	17 58	18 20	18 46	12 10	51	0 07 57
12	357	36.1	-21	00.0	264	39.9	+17	32.5	0	18 13	18 35	19 01	12 23	55	*** ** **
13	12	35.8	-20	59.5	279	08.0		45.8	10 S	29	18 51	18	36	60	*** ** **
14	27	35.6		59.0	293	35.9	+17	59.0	20	18 46	19 10	19 38	12 51	64	*** ** **
15	42	35.4		58.5	308	03.7	+18	12.2	30	19 05	32	20 04	13 07	70	23 58 45
16	57	35.2		58.1	322	31.5		25.2	35	16	19 45	20	17	73	47 42
17	72	35.0	-20	57.6	336	59.1	+18	38.1	40	19 30	20 01	20 41	13 28	77	23 34 39
18	87	34.8	-20	57.1	351	26.6	+18	50.9	45	19 45	20 21	21 07	13 41	81	23 20 34
19	102	34.5		56.7	5	54.0	+19	03.6	50	20 04	46	21 43	13 58	87	23 02 28
20	117	34.3		56.2	20	21.4		16.2	52	14	20 58	22 03	14 05	91	22 54 25
21	132	34.1		55.7	34	48.6		28.7	54	24	21 13	22 29	14	94	44 22
22	147	33.9		55.2	49	15.7		41.1	56	36	30	23 08	23	99	34 17
23	162	33.7		54.7	63	42.6	+19	53.4	58	20 49	21 51	*** **	34	104	22 12
24	177	33.5	-20	54.3	78	09.5	+20	05.6	60 S	21 05	22 19	*** **	14 47	112	22 08 6
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 16 ^h 18 ^m 1		Mag: -4.0 PMG: 9 ^h 37 ^m		Mag: -1.1 PMG: 21 ^h 56 ^m		Mag: -1.9 PMG: 10 ^h 47 ^m		Mag: +0.5 PMG: 3 ^h 01 ^m						
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄						
h	°	'	°	'	°	'	°	'	°	'					
0	114	49.0	215	48.6	29	48.2	+26	55.2	197	50.2					
1	129	51.5	230	47.8	44	51.2		55.2	212	52.0					
2	144	53.9	245	47.0	59	54.2		55.2	227	53.9					
3	159	56.4	260	46.2	74	57.2		55.1	242	55.7					
4	174	58.8	275	45.4	90	00.2		55.1	257	57.6					
5	190	01.3	290	44.6	105	03.2	+26	55.1	272	59.5					
6	205	03.8	305	43.8	120	06.2	+26	55.0	288	01.3					
7	220	06.2	320	43.0	135	09.3		55.0	303	03.2					
8	235	08.7	335	42.1	150	12.3		55.0	318	05.0					
9	250	11.2	350	41.3	165	15.3		54.9	333	06.9					
10	265	13.6	5	40.5	180	18.3		54.9	348	08.7					
11	280	16.1	20	39.7	195	21.3	+26	54.9	3	10.6					
12	295	18.6	35	38.9	210	24.3	+26	54.9	18	12.5					
13	310	21.0	50	38.1	225	27.3		54.8	33	14.3					
14	325	23.5	65	37.3	240	30.3		54.8	48	16.2					
15	340	26.0	80	36.5	255	33.3		54.8	63	18.0					
16	355	28.4	95	35.7	270	36.3		54.7	78	19.9					
17	10	30.9	110	34.9	285	39.3	+26	54.7	93	21.7					
18	25	33.3	125	34.1	300	42.3	+26	54.7	108	23.6					
19	40	35.8	140	33.2	315	45.2		54.6	123	25.5					
20	55	38.3	155	32.4	330	48.2		54.6	138	27.3					
21	70	40.7	170	31.6	345	51.2		54.6	153	29.2					
22	85	43.2	185	30.8	0	54.2		54.5	168	31.0					
23	100	45.7	200	30.0	15	57.2		54.5	183	32.9					
24	115	48.1	215	29.2	31	00.2	+26	54.5	198	34.8					
Dif	—		-8		-3		+30		+19						

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16/3 PMG: 12 ^h 09 ^m 9			Edad: 8 ^d 5 SD: 16/2 PMG: 19 ^h 32 ^m	PHE { 4 ^h : 59/5 12 ^h : 59/6 20 ^h : 59/7 R°: 61 ^m													
	hG ☉	Dec				hG ☾		Dif	Dec		Dif	Náutico	Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	h	m
0	177	33.5	-20	54.3	78	09.5	+20	05.6	60 N	6 59	7 53	8 46	10 14	10	3 38	112		
1	192	33.3		53.8	92	36.3	78	17.7 ¹²¹	58	54	44	32	30	18	23	103		
2	207	33.1		53.3	107	02.9	76	29.6 ¹¹⁹	56	48	35	20	45	23	3 09	98		
3	222	32.8		52.8	121	29.5	76	41.4 ¹¹⁸	54	43	28	09	10 57	28	2 58	93		
4	237	32.6		52.3	135	55.9	74	+20 53.1 ¹¹⁷	52	39	21	8 00	11 08	31	48	90		
5	252	32.4	-20	51.9	150	22.3	74	+21 04.7 ¹¹⁶	50	6 35	7 15	7 52	11 17	34	2 39	86		
6	267	32.2	-20	51.4	164	48.5	72	+21 16.2 ¹¹⁵	45	6 25	7 01	7 34	11 38	39	2 20	81		
7	282	32.0		50.9	179	14.6	71	27.5 ¹¹³	40	17	6 50	20	11 54	44	2 04	77		
8	297	31.8		50.4	193	40.6	70	38.8 ¹¹³	35	09	40	7 07	12 09	46	1 51	73		
9	312	31.6		49.9	208	06.5	69	+21 49.8 ¹¹⁰	30	6 01	31	6 56	12 42	53	40	70		
10	327	31.4		49.4	222	32.3	68	+22 00.8 ¹¹⁰	20	5 47	6 14	38	12 42	53	21	65		
11	342	31.2	-20	48.9	236	57.9	66	+22 11.6 ¹⁰⁸	10 N	5 33	5 59	6 22	13 01	56	1 04	61		
12	357	31.0	-20	48.5	251	23.5	66	+22 22.3 ¹⁰⁷	0	5 18	5 44	6 06	13 18	60	0 48	58		
13	12	30.7		48.0	265	48.9	64	32.9 ¹⁰⁶	10 S	5 02	28	5 51	36	63	33	54		
14	27	30.5		47.5	280	14.3	64	43.3 ¹⁰⁴	20	4 42	5 10	34	13 55	66	0 17	49		
15	42	30.3		47.0	294	39.5	62	+22 53.6 ¹⁰³	30	4 16	4 48	15	14 17	70	** ** *	**		
16	57	30.1		46.5	309	04.6	61	+23 03.7 ¹⁰¹	35	3 59	35	5 03	30	73	** ** *	**		
17	72	29.9	-20	46.0	323	29.6	60	+23 13.7 ¹⁰⁰	40	3 39	4 19	4 50	14 45	76	** ** *	**		
18	87	29.7	-20	45.5	337	54.5	59	+23 23.6 ⁹⁹	45	3 13	3 59	4 35	15 02	81	23 54	45		
19	102	29.5		45.0	352	19.3	58	33.3 ⁹⁷	50	2 37	34	15	25	85	30	40		
20	117	29.3		44.5	6	44.0	57	42.8 ⁹⁵	52	2 17	22	4 06	36	88	19	38		
21	132	29.1		44.0	21	08.6	56	+23 52.2 ⁹⁴	54	1 51	3 07	3 56	15 48	92	23 06	35		
22	147	28.9		43.6	35	33.1	55	+24 01.5 ⁹³	56	1 12	2 50	44	16 02	96	22 51	31		
23	162	28.7		43.1	49	57.5	54	10.6 ⁹¹	58	** ** *	29	31	18 103		34	24		
24	177	28.5	-20	42.6	64	21.7	52	+24 19.6 ⁹⁰	60 S	** ** *	2 01	3 15	16 39	112	22 14	14		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 16 ^h 14 ^m 1			Mag: -4.0 PMG: 9 ^h 39 ^m			Mag: -1.0 PMG: 21 ^h 52 ^m			Mag: -1.9 PMG: 10 ^h 44 ^m			Mag: +0.5 PMG: 2 ^h 57 ^m					
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	115	48.1	215	29.2	-21	41.3	31	00.2	+26	54.5	198	34.8	-23	07.7	315	37.7	+10	14.8
1	130	50.6	230	28.4		41.6	46	03.2		54.4	213	36.6		07.7	330	40.3		14.8
2	145	53.1	245	27.6		42.0	61	06.1		54.4	228	38.5		07.6	345	42.8		14.9
3	160	55.5	260	26.7		42.3	76	09.1		54.4	243	40.3		07.6	0	45.4		15.0
4	175	58.0	275	25.9		42.6	91	12.1		54.3	258	42.2		07.6	15	48.0		15.0
5	191	00.4	290	25.1	-21	42.9	106	15.1	+26	54.3	273	44.0	-23	07.6	30	50.6	+10	15.1
6	206	02.9	305	24.3	-21	43.2	121	18.0	+26	54.3	288	45.9	-23	07.6	45	53.1	+10	15.1
7	221	05.4	320	23.5		43.5	136	21.0		54.2	303	47.8		07.5	60	55.7		15.2
8	236	07.8	335	22.7		43.8	151	24.0		54.2	318	49.6		07.5	75	58.3		15.2
9	251	10.3	350	21.9		44.1	166	26.9		54.2	333	51.5		07.5	91	00.9		15.3
10	266	12.8	5	21.0		44.4	181	29.9		54.1	348	53.3		07.5	106	03.5		15.3
11	281	15.2	20	20.2	-21	44.7	196	32.9	+26	54.1	3	55.2	-23	07.4	121	06.0	+10	15.4
12	296	17.7	35	19.4	-21	45.0	211	35.8	+26	54.0	18	57.1	-23	07.4	136	08.6	+10	15.4
13	311	20.2	50	18.6		45.3	226	38.8		54.0	33	58.9		07.4	151	11.2		15.5
14	326	22.6	65	17.8		45.6	241	41.8		54.0	49	00.8		07.4	166	13.8		15.6
15	341	25.1	80	17.0		45.9	256	44.7		53.9	64	02.6		07.3	181	16.4		15.6
16	356	27.6	95	16.1		46.2	271	47.7		53.9	79	04.5		07.3	196	18.9		15.7
17	11	30.0	110	15.3	-21	46.5	286	50.6	+26	53.9	94	06.3	-23	07.3	211	21.5	+10	15.7
18	26	32.5	125	14.5	-21	46.8	301	53.6	+26	53.8	109	08.2	-23	07.3	226	24.1	+10	15.8
19	41	34.9	140	13.7		47.1	316	56.5		53.8	124	10.1		07.2	241	26.7		15.8
20	56	37.4	155	12.9		47.4	331	59.5		53.8	139	11.9		07.2	256	29.3		15.9
21	71	39.9	170	12.1		47.7	347	02.4		53.7	154	13.8		07.2	271	31.8		15.9
22	86	42.3	185	11.2		48.0	2	05.4		53.7	169	15.6		07.2	286	34.4		16.0
23	101	44.8	200	10.4		48.3	17	08.3		53.7	184	17.5		07.1	301	37.0		16.1
24	116	47.3	215	09.6	-21	48.5	32	11.3	+26	53.6	199	19.4	-23	07.1	316	39.6	+10	16.1
Dif	—			-8 -3			+30 0			+19 0			0			+26 +1		

UT	SOL			LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna															
	SD: 16 ^h 3			Edad: 9 ^d 5	PHE {	4 ^h : 59 ^m 7 12 ^h : 59 ^m 8 20 ^h : 59 ^m 8	R°: 64 ^m																							
	PMG: 12 ^h 10 ^m 3									SD: 16 ^h 3			PMG: 20 ^h 33 ^m			R°: 64 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif				Civil	Náutico	Hora	R°	Hora	R°														
h	°	'	°	°	'	°	'	°		h	m	h	m	h	m	m														
0	177	28.5	-20	64	21.7	+24	19.6	60 N	15	37	16	29	17	23	10	24	27	5	30	105										
1	192	28.3		78	45.9	52	28.4	58	15	51	39	29	10	48	36	5	06	96												
2	207	28.1		93	10.0	51	37.0	56	16	03	47	34	11	08	41	4	47	90												
3	222	27.9		107	33.9	49	45.5	54	13	16	54	38	25	43	31	87														
4	237	27.7		121	57.8	49	+24	53.8	52	22	17	01	43	39	46	18	83													
5	252	27.5	-20	136	21.6	48	+25	01.9	50	16	30	17	07	17	47	11	51	49	4	05	82									
6	267	27.3	-20	150	45.2	46	+25	09.9	45	16	48	17	20	17	56	12	17	52	3	41	77									
7	282	27.0		165	08.8	46	17.7	78	40	17	02	31	18	05	38	54	21	74												
8	297	26.8		179	32.3	45	25.4	77	35	14	41	12	12	55	56	3	04	72												
9	312	26.6		193	55.7	44	32.9	75	30	24	17	50	19	13	10	57	2	50	70											
10	327	26.4		208	19.0	43	40.2	73	20	43	18	06	33	35	60	26	67													
11	342	26.2	-20	222	42.2	42	+25	47.3	10 N	17	59	18	21	18	47	13	57	62	2	05	65									
12	357	26.0	-20	237	05.3	41	+25	54.3	0	18	14	18	36	19	02	14	18	63	1	46	62									
13	12	25.8		251	28.3	40	+26	01.0	10 S	29	18	52	18	14	39	65	27	59												
14	27	25.6		265	51.3	40	07.7	67	20	18	46	19	10	19	38	15	01	67	1	06	57									
15	42	25.4		280	14.1	38	14.1	64	30	19	05	31	20	03	27	69	0	43	53											
16	57	25.2		294	36.9	38	20.3	62	35	16	19	44	19	15	43	70	29	51												
17	72	25.0	-20	308	59.6	37	+26	26.4	40	19	29	20	00	20	39	16	01	71	0	13	48									
18	87	24.8	-20	323	22.2	36	+26	32.3	45	19	44	20	19	21	04	16	23	73	**	**	**									
19	102	24.6		337	44.8	36	38.0	57	50	20	03	44	40	16	50	76	16	50	76	**	**	**								
20	117	24.4		352	07.2	34	43.5	55	52	12	20	56	21	59	17	04	77	23	57	55										
21	132	24.2		6	29.6	34	48.8	53	54	22	21	10	22	23	20	79	41	54												
22	147	24.0		20	51.9	33	54.0	52	56	33	26	22	59	17	38	82	23	22	51											
23	162	23.8		35	14.2	33	+26	58.9	58	20	46	21	47	**	**	18	01	85	22	58	49									
24	177	23.6	-20	49	36.4	32	+27	03.7	60 S	21	02	22	13	**	**	18	31	93	22	28	41									
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO															
	PMG: 16 ^h 10 ^m 2		Mag: -4.0 PMG: 9 ^h 40 ^m				Mag: -1.0 PMG: 21 ^h 47 ^m				Mag: -1.9 PMG: 10 ^h 41 ^m				Mag: +0.5 PMG: 2 ^h 53 ^m															
	hG ♈		hG ♀				hG ♂				hG ♃				hG ♄															
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'										
0	116	47.3	215	09.6	-21	48.5	32	11.3	+26	53.6	199	19.4	-23	07.1	316	39.6	+10	16.1												
1	131	49.7	230	08.8		48.8	47	14.2		53.6	214	21.2		07.1	331	42.2		16.2												
2	146	52.2	245	08.0		49.1	62	17.2		53.6	229	23.1		07.1	346	44.7		16.2												
3	161	54.7	260	07.1		49.4	77	20.1		53.5	244	24.9		07.0	1	47.3		16.3												
4	176	57.1	275	06.3		49.7	92	23.0		53.5	259	26.8		07.0	16	49.9		16.3												
5	191	59.6	290	05.5	-21	50.0	107	26.0	+26	53.5	274	28.7	-23	07.0	31	52.5	+10	16.4												
6	207	02.1	305	04.7	-21	50.3	122	28.9	+26	53.4	289	30.5	-23	07.0	46	55.1	+10	16.4												
7	222	04.5	320	03.9		50.5	137	31.8		53.4	304	32.4		06.9	61	57.6		16.5												
8	237	07.0	335	03.0		50.8	152	34.8		53.3	319	34.2		06.9	77	00.2		16.6												
9	252	09.4	350	02.2		51.1	167	37.7		53.3	334	36.1		06.9	92	02.8		16.6												
10	267	11.9	5	01.4		51.4	182	40.6		53.3	349	38.0		06.8	107	05.4		16.7												
11	282	14.4	20	00.6	-21	51.7	197	43.6	+26	53.2	4	39.8	-23	06.8	122	08.0	+10	16.7												
12	297	16.8	34	59.7	-21	51.9	212	46.5	+26	53.2	19	41.7	-23	06.8	137	10.5	+10	16.8												
13	312	19.3	49	58.9		52.2	227	49.4		53.2	34	43.5		06.8	152	13.1		16.8												
14	327	21.8	64	58.1		52.5	242	52.3		53.1	49	45.4		06.7	167	15.7		16.9												
15	342	24.2	79	57.3		52.7	257	55.3		53.1	64	47.3		06.7	182	18.3		17.0												
16	357	26.7	94	56.4		53.0	272	58.2		53.1	79	49.1		06.7	197	20.9		17.0												
17	12	29.2	109	55.6	-21	53.3	288	01.1	+26	53.0	94	51.0	-23	06.7	212	23.5	+10	17.1												
18	27	31.6	124	54.8	-21	53.6	303	04.0	+26	53.0	109	52.9	-23	06.6	227	26.0	+10	17.1												
19	42	34.1	139	54.0		53.8	318	06.9		53.0	124	54.7		06.6	242	28.6		17.2												
20	57	36.6	154	53.1		54.1	333	09.8		52.9	139	56.6		06.6	257	31.2		17.2												
21	72	39.0	169	52.3		54.4	348	12.7		52.9	154	58.4		06.6	272	33.8		17.3												
22	87	41.5	184	51.5		54.6	3	15.7		52.8	170	00.3		06.5	287	36.4		17.3												
23	102	43.9	199	50.7		54.9	18	18.6		52.8	185	02.2		06.5	302	39.0		17.4												
24	117	46.4	214	49.8	-21	55.1	33	21.5	+26	52.8	200	04.0	-23	06.5	317	41.5	+10	17.5												
Dif	—		-8				+29				0				+19				0				+26				+1			

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'3			Edad: 10 ^d 5	PHE {	SD: 16'3	R°: 64 ^m										
	PMG: 12 ^h 10 ^m 6							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	177	23.6	-20 30.5	49	36.4	+27 03.7			60 N	6 57	7 50	8 42	10 51	64	7 15	71	
1	192	23.5	30.0	63	58.5	31 08.3	46		58	52	41	29	11 24	65	6 42	70	
2	207	23.3	29.4	78	20.6	31 12.7	44		56	46	33	17	11 49	65	6 17	70	
3	222	23.1	28.9	92	42.6	30 16.8	41		54	42	26	8 07	12 08	66	5 58	68	
4	237	22.9	28.4	107	04.6	30 20.8	40		52	37	19	7 58	25	66	41	68	
5	252	22.7	-20 27.9	121	26.5	29 +27 24.6	38		50	6 33	7 13	7 50	12 40	65	5 27	68	
6	267	22.5	-20 27.4	135	48.4	29 +27 28.3	37		45	6 24	7 00	7 33	13 09	65	4 58	67	
7	282	22.3	26.9	150	10.2	28 31.7	34		40	16	6 49	19	32	65	35	67	
8	297	22.1	26.4	164	32.0	28 34.9	32		35	08	39	7 07	13 51	65	16	67	
9	312	21.9	25.8	178	53.7	27 37.9	30		30	6 01	30	6 56	14 07	66	4 00	66	
10	327	21.7	25.3	193	15.4	27 40.7	28		20	5 47	14	38	35	65	3 33	66	
11	342	21.5	-20 24.8	207	37.0	26 +27 43.3	26		10 N	5 34	6 00	6 22	14 59	65	3 10	65	
12	357	21.3	-20 24.3	221	58.6	26 +27 45.7	24		0	5 19	5 45	6 07	15 21	65	2 48	64	
13	12	21.1	23.8	236	20.2	26 48.0	23		10 S	5 03	29	5 52	15 44	64	26	64	
14	27	20.9	23.2	250	41.8	26 50.0	20		20	4 43	5 12	35	16 08	63	2 03	63	
15	42	20.7	22.7	265	03.3	25 51.8	18		30	18	4 50	17	36	63	1 36	61	
16	57	20.5	22.2	279	24.8	25 53.4	16		35	4 02	37	5 05	16 53	62	20	61	
17	72	20.3	-20 21.7	293	46.3	25 +27 54.8	14		40	3 42	4 21	4 53	17 12	62	1 01	60	
18	87	20.1	-20 21.1	308	07.8	25 +27 56.0	12		45	3 17	4 02	4 37	17 36	60	0 39	59	
19	102	20.0	20.6	322	29.3	25 57.0	10		50	2 42	3 38	19	18 06	59	0 10	57	
20	117	19.8	20.1	336	50.7	24 57.8	8		52	2 22	26	10	21	58	** ** *	**	
21	132	19.6	19.6	351	12.2	25 58.4	6		54	1 58	3 11	4 00	18 39	57	** ** *	**	
22	147	19.4	19.0	5	33.6	24 58.8	4		56	1 22	2 55	3 48	19 00	55	** ** *	**	
23	162	19.2	18.5	19	55.0	24 59.0	2		58	** ** *	35	35	19 26	53	23 47	81	
24	177	19.0	-20 18.0	34	16.5	25 +27 59.0	0		60 S	** ** *	2 08	3 20	20 04	47	23 09	87	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 16 ^h 06 ^m 3		Mag: -4.0 PMG: 9 ^h 41 ^m			Mag: -1.0 PMG: 21 ^h 42 ^m			Mag: -1.9 PMG: 10 ^h 38 ^m			Mag: +0.5 PMG: 2 ^h 49 ^m				
	hG ♈		hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec		
h	°	'	°	'	°	°	'	°	'	°	'	°	'	°		
0	117	46.4	214	49.8	-21 55.1		33	21.5	+26 52.8	200	04.0	-23 06.5	317	41.5	+10 17.5	
1	132	48.9	229	49.0	55.4		48	24.4	52.7	215	05.9	06.5	332	44.1	17.5	
2	147	51.3	244	48.2	55.7		63	27.3	52.7	230	07.7	06.4	347	46.7	17.6	
3	162	53.8	259	47.4	55.9		78	30.2	52.7	245	09.6	06.4	2	49.3	17.6	
4	177	56.3	274	46.5	56.2		93	33.1	52.6	260	11.5	06.4	17	51.9	17.7	
5	192	58.7	289	45.7	-21 56.4		108	36.0	+26 52.6	275	13.3	-23 06.4	32	54.5	+10 17.7	
6	208	01.2	304	44.9	-21 56.7		123	38.9	+26 52.5	290	15.2	-23 06.3	47	57.1	+10 17.8	
7	223	03.7	319	44.1	57.0		138	41.8	52.5	305	17.0	06.3	62	59.6	17.9	
8	238	06.1	334	43.2	57.2		153	44.7	52.5	320	18.9	06.3	78	02.2	17.9	
9	253	08.6	349	42.4	57.5		168	47.6	52.4	335	20.8	06.3	93	04.8	18.0	
10	268	11.1	4	41.6	57.7		183	50.4	52.4	350	22.6	06.2	108	07.4	18.0	
11	283	13.5	19	40.7	-21 58.0		198	53.3	+26 52.4	5	24.5	-23 06.2	123	10.0	+10 18.1	
12	298	16.0	34	39.9	-21 58.2		213	56.2	+26 52.3	20	26.4	-23 06.2	138	12.6	+10 18.1	
13	313	18.4	49	39.1	58.5		228	59.1	52.3	35	28.2	06.1	153	15.1	18.2	
14	328	20.9	64	38.2	58.7		244	02.0	52.2	50	30.1	06.1	168	17.7	18.3	
15	343	23.4	79	37.4	59.0		259	04.9	52.2	65	31.9	06.1	183	20.3	18.3	
16	358	25.8	94	36.6	59.2		274	07.8	52.2	80	33.8	06.1	198	22.9	18.4	
17	13	28.3	109	35.8	-21 59.4		289	10.6	+26 52.1	95	35.7	-23 06.0	213	25.5	+10 18.4	
18	28	30.8	124	34.9	-21 59.7		304	13.5	+26 52.1	110	37.5	-23 06.0	228	28.1	+10 18.5	
19	43	33.2	139	34.1	-21 59.9		319	16.4	52.1	125	39.4	06.0	243	30.7	18.6	
20	58	35.7	154	33.3	-22 00.2		334	19.3	52.0	140	41.3	06.0	258	33.3	18.6	
21	73	38.2	169	32.4	00.4		349	22.1	52.0	155	43.1	05.9	273	35.8	18.7	
22	88	40.6	184	31.6	00.7		4	25.0	51.9	170	45.0	05.9	288	38.4	18.7	
23	103	43.1	199	30.8	00.9		19	27.9	51.9	185	46.8	05.9	303	41.0	18.8	
24	118	45.6	214	29.9	-22 01.1		34	30.7	+26 51.9	200	48.7	-23 05.9	318	43.6	+10 18.8	
Dif	—		-8		-2		+29		0	+19		0	+26		+	

UT	SOL			LUNA					Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16'3			Edad: 11 ^d 5	PHE {	4 ^h : 59'8 12 ^h : 59'7 20 ^h : 59'6	R°: 61 ^m	Civil			Náutico		Hora		R°			
	PMG: 12 ^h 10 ^m 9																	
	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	m	
0	177	19.0	-20	18.0	34	16.5	+27	59.0	60 N	15 42	16 33	17 27	11 55	101	8 26	30		
1	192	18.8		17.5	48	37.9	24	58.8	58	15 55		42	32	12 29	92	7 52	39	
2	207	18.6		16.9	62	59.4	25	58.4	56	16 07		50	37	12 54	87	27	43	
3	222	18.4		16.4	77	20.9	25	57.8	54	16	16 57	42	13 14	84	7 06	47		
4	237	18.3		15.9	91	42.4	25	57.0	52	25	17 04	46	31	81	6 49	49		
5	252	18.1	-20	15.3	106	03.9	25	+27 55.9	50	16 33	17 10	17 50	13 45	79	6 35	50		
6	267	17.9	-20	14.8	120	25.4	25	+27 54.7	45	16 50	17 23	17 59	14 14	76	6 05	54		
7	282	17.7		14.3	134	46.9	25	53.3	40	17 04		34	18 07	37 73	5 42	56		
8	297	17.5		13.7	149	08.5	26	51.7	35	16	43	14	14 56	71	23	57		
9	312	17.3		13.2	163	30.1	26	49.8	30	26	17 52	21	15 13	69	5 06	59		
10	327	17.1		12.7	177	51.7	26	47.8	20	17 44	18 08	34	15 40	67	4 39	60		
11	342	16.9	-20	12.1	192	13.4	27	+27 45.6	10 N	18 00	18 22	18 48	16 04	64	4 15	62		
12	357	16.8	-20	11.6	206	35.1	27	+27 43.1	0	18 15	18 37	19 02	16 26	62	3 52	64		
13	12	16.6		11.1	220	56.8	27	40.5	10 S	29	18 52	18	16 48	59	30	64		
14	27	16.4		10.5	235	18.6	28	37.7	20	18 45	19 09	19 38	17 11	57	3 06	66		
15	42	16.2		10.0	249	40.5	29	34.7	30	19 04		31	20 02	39 54	2 37	68		
16	57	16.0		09.5	264	02.4	29	31.5	32	15	43	18	17 55	52	21	68		
17	72	15.8	-20	08.9	278	24.3	29	+27 28.1	40	19 27	19 59	20 37	18 14	49	2 01	70		
18	87	15.6	-20	08.4	292	46.3	30	+27 24.5	45	19 42	20 17	21 02	18 36	47	1 38	71		
19	102	15.5		07.8	307	08.3	30	20.7	50	20 01		41	36	19 05	42	1 07	74	
20	117	15.3		07.3	321	30.5	32	16.7	52	09	20 53	21 55	19 40		0 52	75		
21	132	15.1		06.8	335	52.6	31	12.5	54	19	21 07	22 18	36 36		35	76		
22	147	14.9		06.2	350	14.9	33	08.1	56	30	23	22 50	19 55	33	0 13	78		
23	162	14.7		05.7	4	37.2	33	+27 03.5	58	43	21 42	** ** *	20 19	27	** ** *	** ** *		
24	177	14.6	-20	05.1	18	59.6	34	+26 58.8	60 S	20 58	22 07	** ** *	20 51	17	** ** *	** ** *		

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG		Mag: -4.0			Mag: -0.9			Mag: -1.9			Mag: +0.5						
	16 ^h 02 ^m 3		PMG: 9 ^h 43 ^m			PMG: 21 ^h 38 ^m			PMG: 10 ^h 35 ^m			PMG: 2 ^h 45 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	118	45.6	214	29.9	-22	01.1	34	30.7	+26	51.9	200	48.7	-23	05.9	318	43.6	+10	18.8
1	133	48.0	229	29.1		01.4	49	33.6		51.8	215	50.6		05.8	333	46.2		18.9
2	148	50.5	244	28.3		01.6	64	36.5		51.8	230	52.4		05.8	348	48.8		19.0
3	163	52.9	259	27.4		01.8	79	39.3		51.8	245	54.3		05.8	3	51.4		19.0
4	178	55.4	274	26.6		02.1	94	42.2		51.7	260	56.2		05.7	18	53.9		19.1
5	193	57.9	289	25.8	-22	02.3	109	45.1	+26	51.7	275	58.0	-23	05.7	33	56.5	+10	19.1
6	209	00.3	304	24.9	-22	02.5	124	47.9	+26	51.6	290	59.9	-23	05.7	48	59.1	+10	19.2
7	224	02.8	319	24.1		02.8	139	50.8		51.6	306	01.8		05.7	64	01.7		19.3
8	239	05.3	334	23.3		03.0	154	53.6		51.6	321	03.6		05.6	79	04.3		19.3
9	254	07.7	349	22.4		03.2	169	56.5		51.5	336	05.5		05.6	94	06.9		19.4
10	269	10.2	4	21.6		03.4	184	59.3		51.5	351	07.3		05.6	109	09.5		19.4
11	284	12.7	19	20.8	-22	03.7	200	02.2	+26	51.5	6	09.2	-23	05.6	124	12.1	+10	19.5
12	299	15.1	34	19.9	-22	03.9	215	05.0	+26	51.4	21	11.1	-23	05.5	139	14.7	+10	19.5
13	314	17.6	49	19.1		04.1	230	07.9		51.4	36	12.9		05.5	154	17.2		19.6
14	329	20.1	64	18.3		04.3	245	10.7		51.3	51	14.8		05.5	169	19.8		19.7
15	344	22.5	79	17.4		04.5	260	13.6		51.3	66	16.7		05.4	184	22.4		19.7
16	359	25.0	94	16.6		04.8	275	16.4		51.3	81	18.5		05.4	199	25.0		19.8
17	14	27.4	109	15.7	-22	05.0	290	19.3	+26	51.2	96	20.4	-23	05.4	214	27.6	+10	19.8
18	29	29.9	124	14.9	-22	05.2	305	22.1	+26	51.2	111	22.3	-23	05.4	229	30.2	+10	19.9
19	44	32.4	139	14.1		05.4	320	24.9		51.1	126	24.1		05.3	244	32.8		20.0
20	59	34.8	154	13.2		05.6	335	27.8		51.1	141	26.0		05.3	259	35.4		20.0
21	74	37.3	169	12.4		05.8	350	30.6		51.1	156	27.9		05.3	274	38.0		20.1
22	89	39.8	184	11.6		06.0	5	33.4		51.0	171	29.7		05.3	289	40.6		20.1
23	104	42.2	199	10.7		06.3	20	36.3		51.0	186	31.6		05.2	304	43.1		20.2
24	119	44.7	214	09.9	-22	06.5	35	39.1	+26	50.9	201	33.4	-23	05.2	319	45.7	+10	20.3
Dif	—		-8		-2	+28		0		+19		0		+26		+1		

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16/3 PMG: 12 ^h 11 ^m 2			Edad: 12 ^d 5 PHE { 4 ^h : 59/5 12 ^h : 59/4 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	177	14.6	-20	05.1	18	59.6	+26	58.8	60 N	6 55	7 48	8 39	13 36	110	8 56	12	
1	192	14.4		04.6	33	22.0		53.9	58	49	39	26	14 01	102	31	19	
2	207	14.2		04.0	47	44.5		48.7	56	44	31	14	21 96		8 10	25	
3	222	14.0		03.5	62	07.1		43.4	54	40	24	8 05	38 91		7 53	30	
4	237	13.8		03.0	76	29.8		37.9	52	36	18	7 56	14 52	88	38	33	
5	252	13.6	-20	02.4	90	52.6	+26	32.3	50	6 32	7 12	7 48	15 04	86	7 25	36	
6	267	13.5	-20	01.9	105	15.4	+26	26.4	45	6 23	6 59	7 31	15 30	80	6 59	41	
7	282	13.3		01.3	119	38.4		20.4	40	15	48	17	15 50	76	38	44	
8	297	13.1		00.8	134	01.4		14.2	62	08	39	7 06	16 07	73	20	48	
9	312	12.9	-20	00.2	148	24.5		07.8	64	6 01	30	6 56	22 69		6 05	50	
10	327	12.7	-19	59.7	162	47.7	+26	01.2	66	5 47	14	38	16 47	64	5 39	54	
11	342	12.6	-19	59.1	177	11.0	+25	54.5	67	5 34	6 00	6 22	17 08	61	5 17	57	
12	357	12.4	-19	58.6	191	34.4	+25	47.6	69	5 20	5 46	6 08	17 28	57	4 56	60	
13	12	12.2		58.0	205	57.9		40.5	71	5 04	30	5 53	17 47	54	34	63	
14	27	12.0		57.5	220	21.5		33.3	72	4 45	5 13	37	18 08	50	4 12	66	
15	42	11.9		56.9	234	45.2		25.9	74	20	4 52	18	33 45		3 45	70	
16	57	11.7		56.3	249	09.0		18.3	76	4 04	39	5 07	18 47	43	29	73	
17	72	11.5	-19	55.8	263	32.9	+25	10.5	78	3 45	4 24	4 55	19 03	40	3 11	75	
18	87	11.3	-19	55.2	277	56.9	+25	02.6	79	3 20	4 05	4 40	19 23	35	2 49	79	
19	102	11.2		54.7	292	21.0	+24	54.6	80	2 46	3 41	22	47 30		21	83	
20	117	11.0		54.1	306	45.2		46.4	82	28	30	13	19 59	27	2 07	86	
21	132	10.8		53.6	321	09.6		38.0	84	2 05	16	4 03	20 12	24	1 51	89	
22	147	10.6		53.0	335	34.0		29.4	86	1 32	3 00	3 52	28 19		31	95	
23	162	10.5		52.5	349	58.5		20.8	86	** **	2 41	40	20 46	13	1 08	100	
24	177	10.3	-19	51.9	4	23.2	+24	11.9	89	** **	2 16	3 25	21 08	6	0 36	111	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 15 ^h 58 ^m 4		Mag: -4.0 PMG: 9 ^h 44 ^m		Mag: -0.9 PMG: 21 ^h 33 ^m		Mag: -1.9 PMG: 10 ^h 32 ^m		Mag: +0.4 PMG: 2 ^h 40 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	119	44.7	214	09.9	-22	06.5	35	39.1	+26	50.9
1	134	47.2	229	09.0		06.7	50	41.9		50.9
2	149	49.6	244	08.2		06.9	65	44.8		50.9
3	164	52.1	259	07.4		07.1	80	47.6		50.8
4	179	54.6	274	06.5		07.3	95	50.4		50.8
5	194	57.0	289	05.7	-22	07.5	110	53.2	+26	50.8
6	209	59.5	304	04.9	-22	07.7	125	56.1	+26	50.7
7	225	01.9	319	04.0		07.9	140	58.9		50.7
8	240	04.4	334	03.2		08.1	156	01.7		50.6
9	255	06.9	349	02.3		08.3	171	04.5		50.6
10	270	09.3	4	01.5		08.5	186	07.3		50.6
11	285	11.8	19	00.6	-22	08.7	201	10.1	+26	50.5
12	300	14.3	33	59.8	-22	08.9	216	12.9	+26	50.5
13	315	16.7	48	59.0		09.1	231	15.8		50.4
14	330	19.2	63	58.1		09.3	246	18.6		50.4
15	345	21.7	78	57.3		09.5	261	21.4		50.4
16	0	24.1	93	56.4		09.7	276	24.2		50.3
17	15	26.6	108	55.6	-22	09.9	291	27.0	+26	50.3
18	30	29.0	123	54.8	-22	10.1	306	29.8	+26	50.2
19	45	31.5	138	53.9		10.2	321	32.6		50.2
20	60	34.0	153	53.1		10.4	336	35.4		50.2
21	75	36.4	168	52.2		10.6	351	38.2		50.1
22	90	38.9	183	51.4		10.8	6	41.0		50.1
23	105	41.4	198	50.5		11.0	21	43.8		50.0
24	120	43.8	213	49.7	-22	11.2	36	46.6	+26	50.0
Dif	—		-8 -2		+28 0		+19 0		0	

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16:3 PMG: 12 ^h 11 ^m 5			Edad: 13 ^d 5 PHE { 4 ^h : 59/1 12 ^h : 58/9 20 ^h : 58/7 R°: ***m					Civil		Náutico	Hora	R°	Hora	R°	
	hG ☉	Dec		hG ☾	Dif	Dec			Dif							
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m		
0	177	10.3	-19 51.9	4	23.2	+24 11.9	90	60 N	15 47	16 38	17 30	15 26 106	9 08 5			
1	192	10.1		18	48.0	+24 02.9	90	58	16 00	46	36	43 100	8 50 11			
2	207	09.9		33	12.9	+23 53.8	91	56	11	16 54	40	15 57 95	35 16			
3	222	09.8		47	37.9		93	54	20	17 01	45	16 09 91	23 19			
4	237	09.6		62	03.0		94	52	29	07	49	20 87	11 23			
5	252	09.4	-19 49.1	76	28.2	+23 25.6	95	50	16 36	17 13	17 52	16 30 84	8 01 25			
6	267	09.2	-19 48.5	90	53.6	+23 15.9	97	45	16 53	17 25	18 01	16 50 78	7 40 30			
7	282	09.1		105	19.1	+23 06.0	99	40	17 06		09	17 06 74	22 35			
8	297	08.9		119	44.6	+22 56.0	100	35	18	45	16	20 69	7 08 38			
9	312	08.7		134	10.4		101	30	28	17 54	23	31 67	6 55 42			
10	327	08.6		148	36.2		102	20	17 45	18 09	36	17 51 62	33 47			
11	342	08.4	-19 45.7	163	02.1	+22 25.3	104	10 N	18 01	18 23	18 49	18 09 57	6 14 51			
12	357	08.2	-19 45.1	177	28.2	+22 14.8	105	0	18 15	18 37	19 03	18 25 52	5 56 55			
13	12	08.1		191	54.4	+22 04.2	106	10 S	30	18 52	18	41 48	37 59			
14	27	07.9		206	20.7	+21 53.4	108	20	18 45	19 09	19 37	18 58 44	5 18 63			
15	42	07.7		220	47.1		108	30	19 03	30	20 01	19 18 38	4 55 69			
16	57	07.5		235	13.7		110	35	14	42	17	30 35	42 71			
17	72	07.4	-19 42.3	249	40.4	+21 20.5	111	40	19 26	19 57	20 36	19 43 31	4 26 75			
18	87	07.2	-19 41.7	264	07.2	+21 09.2	113	45	19 41	20 15	21 00	19 58 27	4 08 79			
19	102	07.0		278	34.1	+20 57.9	113	50	19 59	39	33	20 17 21	3 44 86			
20	117	06.9		293	01.1		115	52	20 07	20 50	21 50	26 18	33 89			
21	132	06.7		307	28.3		115	54	16	21 03	22 12	36 15	20 93			
22	147	06.5		321	55.6		117	56	27	19	22 42	47 11	3 06 96			
23	162	06.4		336	23.0	+20 11.4	118	58	39	21 37	23 36	20 59 8	2 48 103			
24	177	06.2	-19 38.3	350	50.5	+19 59.5	119	60 S	20 54	22 00	** **	21 14 2	2 27 110			
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 15 ^h 54 ^m 5			Mag: -4.0 PMG: 9 ^h 45 ^m			Mag: -0.9 PMG: 21 ^h 29 ^m			Mag: -1.9 PMG: 10 ^h 29 ^m			Mag: +0.4 PMG: 2 ^h 36 ^m			
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	'	°	°	'	°	'	°	°	'	
0	120	43.8	213 49.7	-22 11.2	36 46.6	+26 50.0		202 18.2	-23 04.5		320 47.9	+10 04.5	21.7			
1	135	46.3	228 48.9		51 49.3	50.0		217 20.1		04.5	335 50.5		21.8			
2	150	48.8	243 48.0		66 52.1	49.9		232 22.0		04.5	350 53.1		21.8			
3	165	51.2	258 47.2		81 54.9	49.9		247 23.8		04.4	5 55.7		21.9			
4	180	53.7	273 46.3		96 57.7	49.8		262 25.7		04.4	20 58.3		21.9			
5	195	56.2	288 45.5	-22 12.1	112 00.5	+26 49.8		277 27.6	-23 04.4		36 00.9	+10 22.0				
6	210	58.6	303 44.6	-22 12.3	127 03.3	+26 49.8		292 29.4	-23 04.4		51 03.5	+10 22.1				
7	226	01.1	318 43.8		142 06.1	49.7		307 31.3		04.3	66 06.1		22.1			
8	241	03.5	333 42.9		157 08.8	49.7		322 33.2		04.3	81 08.7		22.2			
9	256	06.0	348 42.1		172 11.6	49.6		337 35.0		04.3	96 11.3		22.2			
10	271	08.5	3 41.3		187 14.4	49.6		352 36.9		04.2	111 13.9		22.3			
11	286	10.9	18 40.4	-22 13.1	202 17.2	+26 49.6		7 38.8	-23 04.2		126 16.5	+10 22.4				
12	301	13.4	33 39.6	-22 13.3	217 19.9	+26 49.5		22 40.6	-23 04.2		141 19.1	+10 22.4				
13	316	15.9	48 38.7		232 22.7	49.5		37 42.5		04.2	156 21.7		22.5			
14	331	18.3	63 37.9		247 25.5	49.4		52 44.4		04.1	171 24.3		22.5			
15	346	20.8	78 37.0		262 28.2	49.4		67 46.2		04.1	186 26.9		22.6			
16	1	23.3	93 36.2		277 31.0	49.4		82 48.1		04.1	201 29.5		22.7			
17	16	25.7	108 35.3	-22 14.1	292 33.8	+26 49.3		97 50.0	-23 04.0		216 32.1	+10 22.7				
18	31	28.2	123 34.5	-22 14.3	307 36.5	+26 49.3		112 51.8	-23 04.0		231 34.7	+10 22.8				
19	46	30.7	138 33.6		322 39.3	49.2		127 53.7		04.0	246 37.3		22.9			
20	61	33.1	153 32.8		337 42.1	49.2		142 55.6		04.0	261 39.9		22.9			
21	76	35.6	168 31.9		352 44.8	49.2		157 57.4		03.9	276 42.5		23.0			
22	91	38.0	183 31.1		7 47.6	49.1		172 59.3		03.9	291 45.0		23.0			
23	106	40.5	198 30.2		22 50.3	49.1		188 01.2		03.9	306 47.6		23.1			
24	121	43.0	213 29.4	-22 15.2	37 53.1	+26 49.0		203 03.0	-23 03.8		321 50.2	+10 23.2				
Dif	—			-8	-2	+28	0	+19			0	+26			+1	

UT	SOL			LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16°3 PMG: 12 ^h 11 ^m 7			Edad: 14 ^d 5 SD: 16°0 PMG: 0 ^h 38 ^m	PHE { 4 ^h : 58°5 12 ^h : 58°3 20 ^h : 58°0 R°: 51 ^m	Dec	Dif					Hora	R°	Hora	R°	
	hG ☉	Dec	hG ☾													
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	177	06.2	-19 38.3	350	50.5	+19 59.5		60 N	6 52	7 44	8 35	17 12	98	9 13	1	
1	192	06.0		5	18.1 86		47.6 119	58	47	36	22	23 93		9 01	6	
2	207	05.9		19	45.9 88		35.5 121	56	42	28	11	32 89		8 51	10	
3	222	05.7		34	13.8 89		23.3 122	54	38	22	8 02	40 86		42	17	
4	237	05.5		48	41.8 90	+19 11.0 123		52	34	15	7 53	47 84		34	16	
5	252	05.4	-19 35.4	63	09.9 91	+18 58.6 124		50	6 30	7 10	7 46	17 54	80	8 26	19	
6	267	05.2	-19 34.8	77	38.2 93	+18 46.1 125		45	6 22	6 57	7 30	18 08	75	8 10	25	
7	282	05.1		92	06.5 93		33.6 125	40	14	47	16	20 70		7 57	29	
8	297	04.9		106	35.0 95		20.9 127	35	07	38	7 05	29 67		46	33	
9	312	04.7		121	03.6 96	+18 08.2 127		30	6 00	29	6 55	38 63		37	35	
10	327	04.6		135	32.3 97	+17 55.3 129		20	5 47	14	38	18 53	57	20	40	
11	342	04.4	-19 31.9	150	01.1 98	+17 42.4 129		10 N	5 35	6 00	6 22	19 06	52	7 05	45	
12	357	04.2	-19 31.4	164	30.1 100	+17 29.4 130		0	5 21	5 46	6 08	19 17	48	6 51	50	
13	12	04.1		178	59.1 100		16.4 130	10 S	5 05	31	5 54	29 44		36	55	
14	27	03.9		193	28.3 102	+17 03.2 132		20	4 46	5 14	38	42 38		21	60	
15	42	03.8		207	57.6 103	+16 50.0 132		30	22	4 54	20	19 56	33	6 04	65	
16	57	03.6		222	27.0 104		36.7 133	35	4 07	41	5 09	20 05	29	5 53	69	
17	72	03.4	-19 28.4	236	56.5 105	+16 23.3 134		40	3 48	4 26	4 57	20 14	26	5 41	73	
18	87	03.3	-19 27.9	251	26.1 106	+16 09.9 134		45	3 24	4 08	4 43	20 25	22	5 27	77	
19	102	03.1		265	55.8 107	+15 56.3 136		50	2 51	3 45	25	38 17		10	83	
20	117	03.0		280	25.7 109		42.8 135	52	33	34	17	44 14		5 02	86	
21	132	02.8		294	55.6 109		29.1 137	54	2 12	21	4 07	51 11		4 53	89	
22	147	02.6		309	25.7 111		15.4 137	56	1 42	3 05	3 57	20 58	9	42	93	
23	162	02.5		323	55.8 111	+15 01.6 138		58	0 48	2 47	44	21 07	4	31	97	
24	177	02.3	-19 24.3	338	26.1 113	+14 47.8 138		60 S	** **	2 23	3 30	21 16	1	4 17	102	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 15 ^h 50 ^m 5		Mag: -4.0 PMG: 9 ^h 47 ^m			Mag: -0.9 PMG: 21 ^h 25 ^m			Mag: -1.9 PMG: 10 ^h 26 ^m			Mag: +0.4 PMG: 2 ^h 32 ^m				
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'				
0	121	43.0	213 29.4	-22 15.2	37 53.1	+26 49.0	203 03.0	-23 03.8	321 50.2	+10 23.2						
1	136	45.4	228 28.5	15.4	52 55.8	49.0	218 04.9	03.8	336 52.8	23.2						
2	151	47.9	243 27.7	15.5	67 58.6	49.0	233 06.8	03.8	351 55.4	23.3						
3	166	50.4	258 26.9	15.7	83 01.3	48.9	248 08.7	03.7	6 58.0	23.3						
4	181	52.8	273 26.0	15.9	98 04.1	48.9	263 10.5	03.7	22 00.6	23.4						
5	196	55.3	288 25.2	-22 16.0	113 06.8	+26 48.8	278 12.4	-23 03.7	37 03.2	+10 23.5						
6	211	57.8	303 24.3	-22 16.2	128 09.6	+26 48.8	293 14.3	-23 03.7	52 05.8	+10 23.5						
7	227	00.2	318 23.5	16.3	143 12.3	48.8	308 16.1	03.6	67 08.4	23.6						
8	242	02.7	333 22.6	16.4	158 15.1	48.7	323 18.0	03.6	82 11.0	23.7						
9	257	05.2	348 21.8	16.6	173 17.8	48.7	338 19.9	03.6	97 13.6	23.7						
10	272	07.6	3 20.9	16.7	188 20.5	48.6	353 21.7	03.5	112 16.2	23.8						
11	287	10.1	18 20.1	-22 16.9	203 23.3	+26 48.6	8 23.6	-23 03.5	127 18.8	+10 23.8						
12	302	12.5	33 19.2	-22 17.0	218 26.0	+26 48.6	23 25.5	-23 03.5	142 21.4	+10 23.9						
13	317	15.0	48 18.4	17.2	233 28.8	48.5	38 27.3	03.5	157 24.0	24.0						
14	332	17.5	63 17.5	17.3	248 31.5	48.5	53 29.2	03.4	172 26.6	24.0						
15	347	19.9	78 16.7	17.5	263 34.2	48.4	68 31.1	03.4	187 29.2	24.1						
16	2	22.4	93 15.8	17.6	278 36.9	48.4	83 33.0	03.4	202 31.8	24.2						
17	17	24.9	108 14.9	-22 17.7	293 39.7	+26 48.3	98 34.8	-23 03.3	217 34.4	+10 24.2						
18	32	27.3	123 14.1	-22 17.9	308 42.4	+26 48.3	113 36.7	-23 03.3	232 37.0	+10 24.3						
19	47	29.8	138 13.2	18.0	323 45.1	48.3	128 38.6	03.3	247 39.6	24.3						
20	62	32.3	153 12.4	18.1	338 47.8	48.2	143 40.4	03.2	262 42.2	24.4						
21	77	34.7	168 11.5	18.3	353 50.6	48.2	158 42.3	03.2	277 44.8	24.5						
22	92	37.2	183 10.7	18.4	8 53.3	48.1	173 44.2	03.2	292 47.4	24.5						
23	107	39.7	198 09.8	18.5	23 56.0	48.1	188 46.0	03.2	307 50.0	24.6						
24	122	42.1	213 09.0	-22 18.7	38 58.7	+26 48.1	203 47.9	-23 03.1	322 52.6	+10 24.7						
Dif	—		-9	-1	+27	0	+19	0	+26	+						

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 16:2 PMG: 12 ^h 12 ^m 0			Edad: 15 ^d 5 PHE { 4 ^h : 57:8 12 ^h : 57:5 20 ^h : 57:3 R°: 47 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m		
0	177	02.3	-19	24.3	338	26.1	+14	47.8	60 N	15 52	16 42	17 34	18 50	92	9 14	1		
1	192	02.2		23.7	352	56.5 ¹¹⁴		33.9 ¹³⁹	58	16 04	50	39	18 56	88	07	4		
2	207	02.0		23.1	7	26.9 ¹¹⁴		19.9 ¹⁴⁰	56	15	16 58	44	19 01	85	9 01	7		
3	222	01.9		22.6	21	57.5 ¹¹⁶	+14	05.9 ¹⁴⁰	54	24	17 04	48	06 82	8 55	10			
4	237	01.7		22.0	36	28.2 ¹¹⁷	+13	51.9 ¹⁴⁰	52	32	10	52	11 78	50	12			
5	252	01.5	-19	21.4	50	59.0 ¹¹⁸	+13	37.7 ¹⁴²	50	16 40	17 16	17 55	19 14	77	8 45	15		
6	267	01.4	-19	20.8	65	29.8 ¹¹⁸	+13	23.6 ¹⁴¹	45	16 56	17 28	18 03	19 23	71	8 35	20		
7	282	01.2		20.2	80	00.8 ¹²⁰	+13	09.4 ¹⁴²	40	17 09	38	11	30 66	26	24			
8	297	01.1		19.6	94	31.9 ¹²¹	+12	55.1 ¹⁴³	35	20	47	18	36 62	19	27			
9	312	00.9		19.0	109	03.0 ¹²¹		40.8 ¹⁴³	30	30	17 55	24	41 59	12	31			
10	327	00.8		18.4	123	34.3 ¹²³		26.4 ¹⁴⁴	20	17 47	18 10	37	50 54	8 00	37			
11	342	00.6	-19	17.8	138	05.7 ¹²⁴	+12	12.0 ¹⁴⁴	10 N	18 02	18 24	18 49	19 58	49	7 50	42		
12	357	00.5	-19	17.2	152	37.1 ¹²⁴	+11	57.6 ¹⁴⁴	0	18 16	18 37	19 03	20 05	45	7 41	46		
13	12	00.3		16.6	167	08.6 ¹²⁵		43.1 ¹⁴⁵	10 S	30	18 52	18	13 39	31	51			
14	27	00.2		16.0	181	40.3 ¹²⁷		28.6 ¹⁴⁵	20	18 45	19 09	19 37	20 35	21	55			
15	42	00.0		15.4	196	12.0 ¹²⁷	+11	14.1 ¹⁴⁵	30	19 03	29	20 00	29 30	09	61			
16	56	59.8		14.8	210	43.8 ¹²⁸	+10	59.5 ¹⁴⁶	35	13	41	15	34 27	7 02	64			
17	71	59.7	-19	14.2	225	15.7 ¹²⁹	+10	44.8 ¹⁴⁷	40	19 25	19 56	20 34	20 40	23	6 54	68		
18	86	59.5	-19	13.6	239	47.7 ¹³⁰	+10	30.2 ¹⁴⁶	45	19 39	20 13	20 57	20 47	18	6 44	73		
19	101	59.4		13.0	254	19.7 ¹³⁰		15.5 ¹⁴⁷	50	19 56	36	21 29	55 13	33	78			
20	116	59.2		12.4	268	51.9 ¹³²	+10	00.8 ¹⁴⁷	52	20 04	20 47	21 46	20 58	12	28	81		
21	131	59.1		11.8	283	24.1 ¹³²	+9	46.0 ¹⁴⁸	54	14	21 00	22 06	21 02	9	22	84		
22	146	58.9		11.2	297	56.4 ¹³³		31.3 ¹⁴⁷	56	24	14	22 34	07 6	15	87			
23	161	58.8		10.6	312	28.8 ¹³⁴		16.5 ¹⁴⁸	58	36	32	23 18	11 4	6 08	91			
24	176	58.6	-19	10.0	327	01.3 ¹³⁵	+9	01.7 ¹⁴⁸	60 S	20 49	21 54	** **	21 17	0	5 59	95		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 15 ^h 46 ^m 6			Mag: -4.0 PMG: 9 ^h 48 ^m			Mag: -0.8 PMG: 21 ^h 20 ^m			Mag: -1.9 PMG: 10 ^h 24 ^m			Mag: +0.4 PMG: 2 ^h 28 ^m					
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	122	42.1	213	09.0	-22	18.7	38	58.7	+26	48.1	203	47.9	-23	03.1	322	52.6	+10	03.1
1	137	44.6	228	08.1		18.8	54	01.4		48.0	218	49.8		03.1	337	55.2		03.1
2	152	47.0	243	07.3		18.9	69	04.1		48.0	233	51.7		03.1	352	57.8		03.1
3	167	49.5	258	06.4		19.0	84	06.9		47.9	248	53.5		03.0	8	00.4		03.0
4	182	52.0	273	05.6		19.2	99	09.6		47.9	263	55.4		03.0	23	03.0		03.0
5	197	54.4	288	04.7	-22	19.3	114	12.3	+26	47.9	278	57.3	-23	03.0	38	05.6	+10	03.0
6	212	56.9	303	03.9	-22	19.4	129	15.0	+26	47.8	293	59.1	-23	02.9	53	08.2	+10	02.9
7	227	59.4	318	03.0		19.5	144	17.7		47.8	309	01.0		02.9	68	10.8		02.9
8	243	01.8	333	02.2		19.6	159	20.4		47.7	324	02.9		02.9	83	13.4		02.9
9	258	04.3	348	01.3		19.8	174	23.1		47.7	339	04.8		02.9	98	16.0		02.9
10	273	06.8	3	00.4		19.9	189	25.8		47.7	354	06.6		02.8	113	18.6		02.8
11	288	09.2	17	59.6	-22	20.0	204	28.5	+26	47.6	9	08.5	-23	02.8	128	21.2	+10	02.8
12	303	11.7	32	58.7	-22	20.1	219	31.2	+26	47.6	24	10.4	-23	02.8	143	23.8	+10	02.8
13	318	14.1	47	57.9		20.2	234	33.9		47.5	39	12.2		02.7	158	26.4		02.7
14	333	16.6	62	57.0		20.3	249	36.6		47.5	54	14.1		02.7	173	29.0		02.7
15	348	19.1	77	56.2		20.5	264	39.3		47.4	69	16.0		02.7	188	31.6		02.7
16	3	21.5	92	55.3		20.6	279	42.0		47.4	84	17.9		02.6	203	34.2		02.6
17	18	24.0	107	54.5	-22	20.7	294	44.7	+26	47.4	99	19.7	-23	02.6	218	36.8	+10	02.6
18	33	26.5	122	53.6	-22	20.8	309	47.4	+26	47.3	114	21.6	-23	02.6	233	39.4	+10	02.6
19	48	28.9	137	52.8		20.9	324	50.0		47.3	129	23.5		02.5	248	42.0		02.5
20	63	31.4	152	51.9		21.0	339	52.7		47.2	144	25.3		02.5	263	44.6		02.5
21	78	33.9	167	51.0		21.1	354	55.4		47.2	159	27.2		02.5	278	47.2		02.5
22	93	36.3	182	50.2		21.2	9	58.1		47.2	174	29.1		02.5	293	49.8		02.5
23	108	38.8	197	49.3		21.3	25	00.8		47.1	189	31.0		02.4	308	52.4		02.4
24	123	41.3	212	48.5	-22	21.4	40	03.4	+26	47.1	204	32.8	-23	02.4	323	55.1	+10	02.4
Dif	—		-9		-1		+27		0		+19		0		+26		+1	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16:2			Edad: 16 ^d 5	PHE	4 ^h : 57:0		Náutico	Civil		Hora	R°	Hora	R°	
	PMG: 12 ^h 12 ^m 2					SD: 15:6									12 ^h : 56:8
	hG ☉	Dec		hG ☾	Dif	Dec	Dif								
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	
0	176	58.6	-19 10.0	327	01.3	+9 01.7	60 N	6 49	7 41	8 31	20 22	87	9 15	0	
1	191	58.5	09.4	341	33.8 ¹³⁵	+8 46.8 ¹⁴⁹	58	44	33	19	24	84	11	3	
2	206	58.3	08.8	356	06.4 ¹³⁶	31.9 ¹⁴⁹	56	40	26	8 08	26	81	08	6	
3	221	58.2	08.2	10	39.1 ¹³⁷	17.1 ¹⁴⁸	54	36	19	7 59	28	78	05	9	
4	236	58.0	07.6	25	11.9 ¹³⁸	+8 02.2 ¹⁴⁹	52	32	13	51	29	76	02	11	
5	251	57.9	-19 07.0	39	44.7 ¹³⁸	+7 47.2 ¹⁵⁰	50	6 28	7 08	7 44	20 31	73	9 00	13	
6	266	57.7	-19 06.4	54	17.6 ¹³⁹	+7 32.3 ¹⁴⁹	45	6 20	6 56	7 28	20 34	68	8 55	18	
7	281	57.6	05.8	68	50.6 ¹⁴⁰	17.3 ¹⁵⁰	40	13	46	15	36	64	50	22	
8	296	57.5	05.1	83	23.7 ¹⁴¹	+7 02.4 ¹⁴⁹	35	06	37	7 04	38	61	46	26	
9	311	57.3	04.5	97	56.8 ¹⁴¹	+6 47.4 ¹⁵⁰	30	6 00	29	6 54	40	57	43	29	
10	326	57.2	03.9	112	29.9 ¹⁴¹	32.4 ¹⁵⁰	20	5 47	14	37	44	51	37	34	
11	341	57.0	-19 03.3	127	03.2 ¹⁴³	+6 17.4 ¹⁵⁰	10 N	5 35	6 00	6 23	20 47	46	8 32	38	
12	356	56.9	-19 02.7	141	36.5 ¹⁴³	+6 02.4 ¹⁵⁰	0	5 21	5 47	6 09	20 50	42	8 27	43	
13	11	56.7	02.1	156	09.9 ¹⁴⁴	+5 47.4 ¹⁵⁰	10 S	5 06	32	5 55	52	38	22	47	
14	26	56.6	01.5	170	43.3 ¹⁴⁴	32.3 ¹⁵¹	20	4 48	5 16	39	55	33	16	53	
15	41	56.4	00.9	185	16.8 ¹⁴⁵	17.3 ¹⁵⁰	30	24	4 56	22	20 59	27	10	58	
16	56	56.3	-19 00.3	199	50.3 ¹⁴⁵	+5 02.3 ¹⁵⁰	35	4 09	43	12	21 01	24	06	62	
17	71	56.1	-18 59.6	214	23.9 ¹⁴⁶	+4 47.2 ¹⁵¹	40	3 51	4 29	5 00	21 03	21	8 02	65	
18	86	56.0	-18 59.0	228	57.6 ¹⁴⁷	+4 32.2 ¹⁵⁰	45	3 27	4 11	4 46	21 05	18	7 57	70	
19	101	55.9	58.4	243	31.3 ¹⁴⁷	17.2 ¹⁵⁰	50	2 56	3 49	28	08	13	51	75	
20	116	55.7	57.8	258	05.1 ¹⁴⁸	+4 02.1 ¹⁵¹	52	39	38	20	10	10	49	77	
21	131	55.6	57.2	272	38.9 ¹⁴⁸	+3 47.1 ¹⁵⁰	54	2 18	25	11	11	8	46	79	
22	146	55.4	56.6	287	12.8 ¹⁴⁹	32.0 ¹⁵¹	56	1 51	3 10	4 01	13	5	42	83	
23	161	55.3	55.9	301	46.7 ¹⁴⁹	17.0 ¹⁵⁰	58	1 07	2 53	3 49	15	2	39	85	
24	176	55.1	-18 55.3	316	20.7 ¹⁵⁰	+3 02.0 ¹⁵⁰	60 S	** **	2 31	3 35	21 17	**	7 34	90	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 15 ^h 42 ^m 7		Mag: -4.0 PMG: 9 ^h 49 ^m		Mag: -0.8 PMG: 21 ^h 16 ^m		Mag: -1.9 PMG: 10 ^h 21 ^m		Mag: +0.4 PMG: 2 ^h 24 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	123	41.3	212	48.5	-22	21.4	40	03.4	+26	47.1	204	32.8	-23	02.4	323	55.1	+10	26.2
1	138	43.7	227	47.6		21.5	55	06.1		47.0	219	34.7		02.4	338	57.7		26.2
2	153	46.2	242	46.8		21.6	70	08.8		47.0	234	36.6		02.3	354	00.3		26.3
3	168	48.6	257	45.9		21.7	85	11.5		47.0	249	38.4		02.3	9	02.9		26.4
4	183	51.1	272	45.1		21.8	100	14.1		46.9	264	40.3		02.3	24	05.5		26.4
5	198	53.6	287	44.2	-22	21.9	115	16.8	+26	46.9	279	42.2	-23	02.2	39	08.1	+10	26.5
6	213	56.0	302	43.3	-22	22.0	130	19.5	+26	46.8	294	44.1	-23	02.2	54	10.7	+10	26.6
7	228	58.5	317	42.5		22.1	145	22.2		46.8	309	45.9		02.2	69	13.3		26.6
8	244	01.0	332	41.6		22.2	160	24.8		46.8	324	47.8		02.1	84	15.9		26.7
9	259	03.4	347	40.8		22.3	175	27.5		46.7	339	49.7		02.1	99	18.5		26.7
10	274	05.9	2	39.9		22.4	190	30.2		46.7	354	51.6		02.1	114	21.1		26.8
11	289	08.4	17	39.0	-22	22.5	205	32.8	+26	46.6	9	53.4	-23	02.1	129	23.7	+10	26.9
12	304	10.8	32	38.2	-22	22.6	220	35.5	+26	46.6	24	55.3	-23	02.0	144	26.3	+10	26.9
13	319	13.3	47	37.3		22.6	235	38.1		46.5	39	57.2		02.0	159	28.9		27.0
14	334	15.7	62	36.5		22.7	250	40.8		46.5	54	59.1		02.0	174	31.5		27.1
15	349	18.2	77	35.6		22.8	265	43.4		46.5	70	00.9		01.9	189	34.1		27.1
16	4	20.7	92	34.8		22.9	280	46.1		46.4	85	02.8		01.9	204	36.7		27.2
17	19	23.1	107	33.9	-22	23.0	295	48.8	+26	46.4	100	04.7	-23	01.9	219	39.3	+10	27.3
18	34	25.6	122	33.0	-22	23.1	310	51.4	+26	46.3	115	06.5	-23	01.8	234	41.9	+10	27.3
19	49	28.1	137	32.2		23.1	325	54.1		46.3	130	08.4		01.8	249	44.5		27.4
20	64	30.5	152	31.3		23.2	340	56.7		46.3	145	10.3		01.8	264	47.1		27.5
21	79	33.0	167	30.5		23.3	355	59.4		46.2	160	12.2		01.7	279	49.8		27.5
22	94	35.5	182	29.6		23.4	11	02.0		46.2	175	14.0		01.7	294	52.4		27.6
23	109	37.9	197	28.7		23.4	26	04.6		46.1	190	15.9		01.7	309	55.0		27.7
24	124	40.4	212	27.9	-22	23.5	41	07.3	+26	46.1	205	17.8	-23	01.6	324	57.6	+10	27.7
Dif	—		-9		-1		+27		0		+19		0		+26		+	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16:2 PMG: 12 ^h 12 ^m 4			Edad: 17 ^d 5 PHE { SD: 15:4 PMG: 3 ^h 00 ^m 4 ^h : 56:3 12 ^h : 56:0 20 ^h : 55:8 R°: 42 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	176	55.1	-18 55.3	316	20.7	+3 02.0	60 N	15 57	16 46	17 38	21 49	86	9 15	**		
1	191	55.0	54.7	330	54.7 ¹⁵⁰	+2 47.0 ¹⁵⁰	58	16 09	16 54	43	48	82	14	3		
2	206	54.9	54.1	345	28.8 ¹⁵¹	31.9 ¹⁵¹	56	19	17 01	47	47	79	14	6		
3	221	54.7	53.5	0	02.9 ¹⁵¹	16.9 ¹⁵⁰	54	28	08	51	46	76	14	8		
4	236	54.6	52.8	14	37.0 ¹⁵¹	+2 01.9 ¹⁵⁰	52	36	13	55	45	73	13	11		
5	251	54.4	-18 52.2	29	11.2 ¹⁵²	+1 46.9 ¹⁵⁰	50	16 43	17 19	17 58	21 44	71	9 13	13		
6	266	54.3	-18 51.6	43	45.4 ¹⁵²	+1 31.9 ¹⁵⁰	45	16 58	17 30	18 06	21 42	66	9 13	17		
7	281	54.2	51.0	58	19.7 ¹⁵³	17.0 ¹⁴⁹	40	17 11	40	13	40	62	12	21		
8	296	54.0	50.4	72	54.0 ¹⁵³	+1 02.0 ¹⁵⁰	35	22	49	19	39	58	12	24		
9	311	53.9	49.7	87	28.4 ¹⁵⁴	+0 47.1 ¹⁴⁹	30	31	17 57	26	37	56	12	27		
10	326	53.7	49.1	102	02.8 ¹⁵⁴	32.1 ¹⁵⁰	20	17 48	18 11	38	35	51	11	33		
11	341	53.6	-18 48.5	116	37.2 ¹⁵⁴	+0 17.2 ¹⁴⁹	10 N	18 02	18 24	18 50	21 33	46	9 10	38		
12	356	53.5	-18 47.9	131	11.6 ¹⁵⁴	+0 02.3 ¹⁴⁹	0	18 16	18 38	19 03	21 32	41	9 10	42		
13	11	53.3	47.2	145	46.1 ¹⁵⁵	-0 12.6 ¹⁴⁹	10 S	30	18 52	18	30	37	09	46		
14	26	53.2	46.6	160	20.6 ¹⁵⁵	27.5 ¹⁴⁹	20	18 45	19 08	36	28	33	09	51		
15	41	53.1	46.0	174	55.2 ¹⁵⁶	42.3 ¹⁴⁸	30	19 02	28	19 59	26	28	08	56		
16	56	52.9	45.3	189	29.8 ¹⁵⁶	-0 57.1 ¹⁴⁸	35	12	40	20 14	25	25	08	59		
17	71	52.8	-18 44.7	204	04.4 ¹⁵⁶	-1 12.0 ¹⁴⁹	40	19 23	19 54	20 32	21 24	21	9 07	63		
18	86	52.7	-18 44.1	218	39.0 ¹⁵⁶	-1 26.7 ¹⁴⁷	45	19 37	20 11	20 54	21 23	17	9 07	67		
19	101	52.5	43.5	233	13.6 ¹⁵⁶	41.5 ¹⁴⁸	50	19 54	33	21 25	21	12	06	72		
20	116	52.4	42.8	247	48.3 ¹⁵⁷	-1 56.3 ¹⁴⁸	52	20 02	44	21 41	20	11	06	74		
21	131	52.2	42.2	262	23.0 ¹⁵⁷	-2 11.0 ¹⁴⁷	54	10	20 56	22 01	19	8	05	77		
22	146	52.1	41.6	276	57.7 ¹⁵⁷	25.7 ¹⁴⁷	56	20	21 10	22 26	18	6	05	80		
23	161	52.0	40.9	291	32.5 ¹⁵⁸	40.3 ¹⁴⁶	58	32	27	23 04	17	3	04	83		
24	176	51.8	-18 40.3	306	07.2 ¹⁵⁷	-2 55.0 ¹⁴⁷	60 S	20 45	21 48	** **	21 16	0	9 04	86		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 15 ^h 38 ^m 7		Mag: -4.0 PMG: 9 ^h 51 ^m			Mag: -0.8 PMG: 21 ^h 12 ^m			Mag: -1.9 PMG: 10 ^h 18 ^m			Mag: +0.4 PMG: 2 ^h 20 ^m				
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'				
0	124	40.4	212 27.9	-22 23.5	41 07.3	+26 46.1	205 17.8	-23 01.6	324 57.6	+10 27.7						
1	139	42.9	227 27.0	23.6	56 09.9	46.1	220 19.7	01.6	340 00.2	27.8						
2	154	45.3	242 26.2	23.7	71 12.6	46.0	235 21.5	01.6	355 02.8	27.8						
3	169	47.8	257 25.3	23.7	86 15.2	46.0	250 23.4	01.5	10 05.4	27.9						
4	184	50.2	272 24.4	23.8	101 17.8	45.9	265 25.3	01.5	25 08.0	28.0						
5	199	52.7	287 23.6	-22 23.9	116 20.5	+26 45.9	280 27.2	-23 01.5	40 10.6	+10 28.0						
6	214	55.2	302 22.7	-22 23.9	131 23.1	+26 45.8	295 29.0	-23 01.5	55 13.2	+10 28.1						
7	229	57.6	317 21.9	24.0	146 25.7	45.8	310 30.9	01.4	70 15.8	28.2						
8	245	00.1	332 21.0	24.1	161 28.4	45.8	325 32.8	01.4	85 18.4	28.2						
9	260	02.6	347 20.1	24.1	176 31.0	45.7	340 34.7	01.4	100 21.0	28.3						
10	275	05.0	2 19.3	24.2	191 33.6	45.7	355 36.5	01.3	115 23.6	28.4						
11	290	07.5	17 18.4	-22 24.3	206 36.2	+26 45.6	10 38.4	-23 01.3	130 26.2	+10 28.4						
12	305	10.0	32 17.6	-22 24.3	221 38.9	+26 45.6	25 40.3	-23 01.3	145 28.9	+10 28.5						
13	320	12.4	47 16.7	24.4	236 41.5	45.6	40 42.2	01.2	160 31.5	28.6						
14	335	14.9	62 15.8	24.4	251 44.1	45.5	55 44.0	01.2	175 34.1	28.6						
15	350	17.4	77 15.0	24.5	266 46.7	45.5	70 45.9	01.2	190 36.7	28.7						
16	5 19.8	92 14.1	24.6	281 49.3	45.4	85 47.8	85 47.8	01.1	205 39.3	28.8						
17	20 22.3	107 13.3	-22 24.6	296 52.0	+26 45.4	100 49.7	-23 01.1	220 41.9	+10 28.8							
18	35 24.7	122 12.4	-22 24.7	311 54.6	+26 45.3	115 51.6	-23 01.1	235 44.5	+10 28.9							
19	50 27.2	137 11.5	24.7	326 57.2	45.3	130 53.4	01.0	250 47.1	29.0							
20	65 29.7	152 10.7	24.8	341 59.8	45.3	145 55.3	01.0	265 49.7	29.0							
21	80 32.1	167 09.8	24.8	357 02.4	45.2	160 57.2	01.0	280 52.3	29.1							
22	95 34.6	182 09.0	24.9	12 05.0	45.2	175 59.1	00.9	295 54.9	29.2							
23	110 37.1	197 08.1	24.9	27 07.6	45.1	191 00.9	00.9	310 57.5	29.2							
24	125 39.5	212 07.2	-22 25.0	42 10.2	+26 45.1	206 02.8	-23 00.9	326 00.2	+10 29.3							
Dif	—	-9	-1	+26	0	+19	0	+26	+							

UT	SOL			LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16 ^d 2 PMG: 12 ^h 12 ^m 7			Edad: 18 ^d 5 PHE { 4 ^h : 55 ^m /6 12 ^h : 55 ^m /4 20 ^h : 55 ^m /2 PMG: 3 ^h 42 ^m R°: 41 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m
0	176	51.8	-18	40.3	306	07.2	-2	55.0	60 N	6 46	7 38	8 27	23 15	86	9 14 0
1	191	51.7		39.7	320	42.0 ¹⁵⁸	-3	09.6 ¹⁴⁶	58	41	30	15	10 82		17 3
2	206	51.6		39.0	335	16.8 ¹⁵⁸		24.2 ¹⁴⁶	56	37	23	8 05	06 78		20 5
3	221	51.4		38.4	349	51.6 ¹⁵⁸		38.8 ¹⁴⁶	54	33	17	7 56	23 02 75		22 8
4	236	51.3		37.8	4	26.4 ¹⁵⁸	-3	53.3 ¹⁴⁵	52	30	11	48	22 58 73		24 11
5	251	51.2	-18	37.1	19	01.3 ¹⁵⁹	-4	07.8 ¹⁴⁵	50	6 26	7 06	7 41	22 55 71		9 26 13
6	266	51.1	-18	36.5	33	36.1 ¹⁵⁸	-4	22.3 ¹⁴⁵	45	6 19	6 54	7 26	22 48 66		9 30 18
7	281	50.9		35.9	48	11.0 ¹⁵⁹		36.7 ¹⁴⁴	40	12	44	13	42 62		33 22
8	296	50.8		35.2	62	45.9 ¹⁵⁹	-4	51.1 ¹⁴⁴	35	6 05	36	7 03	37 59		36 25
9	311	50.7		34.6	77	20.7 ¹⁵⁸	-5	05.5 ¹⁴⁴	30	5 59	28	6 53	33 55		39 28
10	326	50.5		33.9	91	55.6 ¹⁵⁹		19.8 ¹⁴³	20	47	14	37	26 50		44 32
11	341	50.4	-18	33.3	106	30.5 ¹⁵⁹	-5	34.1 ¹⁴³	10 N	5 35	6 01	6 23	22 19 46		9 48 37
12	356	50.3	-18	32.7	121	05.4 ¹⁵⁹	-5	48.4 ¹⁴³	0	5 22	5 47	6 09	22 13 42		9 52 41
13	11	50.1		32.0	135	40.3 ¹⁵⁹	-6	02.6 ¹⁴²	10 S	5 07	33	5 55	07 38		9 55 46
14	26	50.0		31.4	150	15.2 ¹⁵⁹		16.8 ¹⁴²	20	4 49	5 17	41	22 01 33	10 00	50 50
15	41	49.9		30.7	164	50.1 ¹⁵⁹		31.0 ¹⁴²	30	26	4 57	24	21 54 28		04 56
16	56	49.8		30.1	179	25.0 ¹⁵⁹		45.1 ¹⁴¹	35	4 12	46	14	50 25		07 58
17	71	49.6	-18	29.4	193	59.9 ¹⁵⁹	-6	59.2 ¹⁴¹	40	3 54	4 32	5 02	21 45 22	10 10	62 62
18	86	49.5	-18	28.8	208	34.8 ¹⁵⁹	-7	13.2 ¹⁴⁰	45	3 31	4 14	4 49	21 40 18	10 14	66 66
19	101	49.4		28.2	223	09.7 ¹⁵⁹		27.2 ¹⁴⁰	50	3 00	3 53	32	33 14		18 71
20	116	49.2		27.5	237	44.6 ¹⁵⁹		41.2 ¹⁴⁰	52	2 44	42	24	31 11		20 73
21	131	49.1		26.9	252	19.5 ¹⁵⁹	-7	55.1 ¹³⁹	54	25	30	15	27 9		22 76
22	146	49.0		26.2	266	54.4 ¹⁵⁹	-8	09.0 ¹³⁹	56	2 00	3 16	4 05	24 6		25 78
23	161	48.9		25.6	281	29.3 ¹⁵⁹		22.8 ¹³⁸	58	1 22	2 59	3 54	20 4		27 82
24	176	48.7	-18	24.9	296	04.2 ¹⁵⁹	-8	36.6 ¹³⁸	60 S	** **	2 38	3 41	21 16 0	10 30	86 86

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 15 ^h 34 ^m 8		Mag: -3.9 PMG: 9 ^h 52 ^m		Mag: -0.7 PMG: 21 ^h 08 ^m		Mag: -1.9 PMG: 10 ^h 15 ^m		Mag: +0.4 PMG: 2 ^h 16 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	125	39.5	212	07.2	-22	25.0	42	10.2	+26	45.1	206	02.8	-23	00.9	326	00.2	+10	29.3
1	140	42.0	227	06.4		25.0	57	12.8		45.1	221	04.7		00.8	341	02.8		29.4
2	155	44.5	242	05.5		25.1	72	15.4		45.0	236	06.6		00.8	356	05.4		29.4
3	170	46.9	257	04.6		25.1	87	18.0		45.0	251	08.4		00.8	11	08.0		29.5
4	185	49.4	272	03.8		25.1	102	20.6		44.9	266	10.3		00.7	26	10.6		29.5
5	200	51.8	287	02.9	-22	25.2	117	23.2	+26	44.9	281	12.2	-23	00.7	41	13.2	+10	29.6
6	215	54.3	302	02.1	-22	25.2	132	25.8	+26	44.9	296	14.1	-23	00.7	56	15.8	+10	29.7
7	230	56.8	317	01.2		25.3	147	28.4		44.8	311	16.0		00.6	71	18.4		29.7
8	245	59.2	332	00.3		25.3	162	31.0		44.8	326	17.8		00.6	86	21.0		29.8
9	261	01.7	346	59.5		25.3	177	33.6		44.7	341	19.7		00.6	101	23.6		29.9
10	276	04.2	1	58.6		25.4	192	36.2		44.7	356	21.6		00.6	116	26.3		29.9
11	291	06.6	16	57.7	-22	25.4	207	38.8	+26	44.6	11	23.5	-23	00.5	131	28.9	+10	30.0
12	306	09.1	31	56.9	-22	25.4	222	41.4	+26	44.6	26	25.3	-23	00.5	146	31.5	+10	30.1
13	321	11.6	46	56.0		25.5	237	44.0		44.6	41	27.2		00.5	161	34.1		30.1
14	336	14.0	61	55.2		25.5	252	46.5		44.5	56	29.1		00.4	176	36.7		30.2
15	351	16.5	76	54.3		25.5	267	49.1		44.5	71	31.0		00.4	191	39.3		30.3
16	6	19.0	91	53.4		25.6	282	51.7		44.4	86	32.9		00.4	206	41.9		30.3
17	21	21.4	106	52.6	-22	25.6	297	54.3	+26	44.4	101	34.7	-23	00.3	221	44.5	+10	30.4
18	36	23.9	121	51.7	-22	25.6	312	56.9	+26	44.4	116	36.6	-23	00.3	236	47.1	+10	30.5
19	51	26.3	136	50.8		25.6	327	59.4		44.3	131	38.5		00.3	251	49.8		30.5
20	66	28.8	151	50.0		25.7	343	02.0		44.3	146	40.4		00.2	266	52.4		30.6
21	81	31.3	166	49.1		25.7	358	04.6		44.2	161	42.2		00.2	281	55.0		30.7
22	96	33.7	181	48.2		25.7	13	07.1		44.2	176	44.1		00.2	296	57.6		30.7
23	111	36.2	196	47.4		25.7	28	09.7		44.2	191	46.0		00.1	312	00.2		30.8
24	126	38.7	211	46.5	-22	25.8	43	12.3	+26	44.1	206	47.9	-23	00.1	327	02.8	+10	30.9
Dif	—		-9		0		+26		0		+19		0		+26		+1	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna					
	SD: 16 ^h 2 PMG: 12 ^h 12 ^m 9			Edad: 19 ^d 5 PHE { 4 ^h : 55 ⁰ 12 ^h : 54 ⁸ 20 ^h : 54 ⁷ SD: 15 ⁰ PMG: 4 ^h 23 ^m R°: 42 ^m															
	hG ☉	Dec		hG ☾	Dif	Dec			Dif		Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	m	h m	m				
0	176	48.7	-18	24.9	296	04.2	-8	36.6	60 N	16 02	16 51	17 42	** ** *	9 14	0				
1	191	48.6		24.3	310	39.0 ¹⁵⁸	-8	50.3 ¹³⁷	58	13	16 58	47	** ** *	20	4				
2	206	48.5		23.6	325	13.9 ¹⁵⁹	-9	04.0 ¹³⁷	56	23	17 05	51	** ** *	25	8				
3	221	48.4		23.0	339	48.7 ¹⁵⁸		17.7 ¹³⁷	54	32	11	54	** ** *	30	10				
4	236	48.2		22.3	354	23.5 ¹⁵⁸		31.3 ¹³⁶	52	39	17	58	** ** *	35	12				
5	251	48.1	-18	21.7	8	58.4 ¹⁵⁹	-9	44.9 ¹³⁶	50	16 46	17 22	18 01	** ** *	9 39	14				
6	266	48.0	-18	21.0	23	33.2 ¹⁵⁸	-9	58.4 ¹³⁵	45	17 01	17 33	18 08	23 54	66	9 48	19			
7	281	47.9		20.4	38	08.0 ¹⁵⁸	-10	11.8 ¹³⁴	40	13	42	15	44	62	9 55	23			
8	296	47.8		19.7	52	42.7 ¹⁵⁷		25.2 ¹³⁴	35	24	51	21	36	58	10 01	26			
9	311	47.6		19.1	67	17.5 ¹⁵⁸		38.6 ¹³⁴	30	33	17 58	27	28	56	07	29			
10	326	47.5		18.4	81	52.2 ¹⁵⁷	-10	51.9 ¹³³	20	17 49	18 12	39	16	51	16	34			
11	341	47.4	-18	17.8	96	26.9 ¹⁵⁷	-11	05.1 ¹³²	10 N	18 03	18 25	18 51	23 05	47	10 25	38			
12	356	47.3	-18	17.1	111	01.6 ¹⁵⁷	-11	18.3 ¹³²	0	18 16	18 38	19 03	22 55	43	10 33	42			
13	11	47.1		16.5	125	36.3 ¹⁵⁷		31.5 ¹³²	10 S	30	18 52	18	45	39	41	46			
14	26	47.0		15.8	140	10.9 ¹⁵⁶		44.6 ¹³¹	20	18 44	19 08	35	34	35	10 50	50			
15	41	46.9		15.2	154	45.6 ¹⁵⁷	-11	57.6 ¹³⁰	30	19 01	27	19 58	22	30	11 00	55			
16	56	46.8		14.5	169	20.2 ¹⁵⁶	-12	10.6 ¹³⁰	35	11	38	20 12	15	28	05	59			
17	71	46.7	-18	13.8	183	54.7 ¹⁵⁵	-12	23.6 ¹³⁰	40	19 22	19 52	20 30	22 07	25	11 12	62			
18	86	46.5	-18	13.2	198	29.3 ¹⁵⁶	-12	36.4 ¹²⁸	45	19 35	20 09	20 52	21 58	21	11 20	65			
19	101	46.4		12.5	213	03.8 ¹⁵⁵	-12	49.2 ¹²⁸	50	51	30	21 21	47	16	29	71			
20	116	46.3		11.9	227	38.3 ¹⁵⁵	-13	02.0 ¹²⁸	52	19 59	40	36	42	14	33	73			
21	131	46.2		11.2	242	12.8 ¹⁵⁵		14.7 ¹²⁷	54	20 07	20 52	21 55	36	12	38	76			
22	146	46.1		10.6	256	47.2 ¹⁵⁴		27.3 ¹²⁶	56	17	21 05	22 19	30	9	43	79			
23	161	46.0		09.9	271	21.6 ¹⁵⁴		39.9 ¹²⁶	58	28	22	22 52	24	4	49	83			
24	176	45.8	-18	09.2	285	56.0 ¹⁵⁴	-13	52.5 ¹²⁶	60 S	20 40	21 41	** ** *	21 16	1	11 56	86			
UT	ARIES		VENUS			MARTE			JÚPITER				SATURNO						
	PMG: 15 ^h 30 ^m 9		Mag: -3.9 PMG: 9 ^h 53 ^m			Mag: -0.7 PMG: 21 ^h 04 ^m			Mag: -1.9 PMG: 10 ^h 12 ^m				Mag: +0.4 PMG: 2 ^h 11 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		hG ♅	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	126	38.7	211	46.5	-22	25.8	43	12.3	+26	44.1	206	47.9	-23	00.1	327	02.8	+10	30.9	
1	141	41.1	226	45.7		25.8	58	14.9		44.1	221	49.8	-23	00.1	342	05.4		30.9	
2	156	43.6	241	44.8		25.8	73	17.4		44.0	236	51.6	-23	00.0	357	08.0		31.0	
3	171	46.1	256	43.9		25.8	88	20.0		44.0	251	53.5		00.0	12	10.6		31.1	
4	186	48.5	271	43.1		25.8	103	22.5		44.0	266	55.4	-23	00.0	27	13.3		31.1	
5	201	51.0	286	42.2	-22	25.8	118	25.1	+26	43.9	281	57.3	-22	59.9	42	15.9	+10	31.2	
6	216	53.4	301	41.3	-22	25.8	133	27.7	+26	43.9	296	59.2	-22	59.9	57	18.5	+10	31.3	
7	231	55.9	316	40.5		25.9	148	30.2		43.8	312	01.0		59.9	72	21.1		31.3	
8	246	58.4	331	39.6		25.9	163	32.8		43.8	327	02.9		59.8	87	23.7		31.4	
9	262	00.8	346	38.7		25.9	178	35.3		43.7	342	04.8		59.8	102	26.3		31.5	
10	277	03.3	1	37.9		25.9	193	37.9		43.7	357	06.7		59.8	117	28.9		31.5	
11	292	05.8	16	37.0	-22	25.9	208	40.4	+26	43.7	12	08.6	-22	59.7	132	31.6	+10	31.6	
12	307	08.2	31	36.1	-22	25.9	223	43.0	+26	43.6	27	10.4	-22	59.7	147	34.2	+10	31.7	
13	322	10.7	46	35.3		25.9	238	45.5		43.6	42	12.3		59.7	162	36.8		31.7	
14	337	13.2	61	34.4		25.9	253	48.1		43.5	57	14.2		59.6	177	39.4		31.8	
15	352	15.6	76	33.6		25.9	268	50.6		43.5	72	16.1		59.6	192	42.0		31.9	
16	7	18.1	91	32.7		25.9	283	53.2		43.5	87	18.0		59.6	207	44.6		32.0	
17	22	20.6	106	31.8	-22	25.9	298	55.7	+26	43.4	102	19.8	-22	59.5	222	47.2	+10	32.0	
18	37	23.0	121	31.0	-22	25.9	313	58.3	+26	43.4	117	21.7	-22	59.5	237	49.8	+10	32.1	
19	52	25.5	136	30.1		25.9	329	00.8		43.3	132	23.6		59.5	252	52.5		32.2	
20	67	27.9	151	29.2		25.9	344	03.3		43.3	147	25.5		59.4	267	55.1		32.2	
21	82	30.4	166	28.4		25.9	359	05.9		43.3	162	27.4		59.4	282	57.7		32.3	
22	97	32.9	181	27.5		25.9	14	08.4		43.2	177	29.2		59.4	298	00.3		32.4	
23	112	35.3	196	26.6		25.9	29	10.9		43.2	192	31.1		59.3	313	02.9		32.4	
24	127	37.8	211	25.8	-22	25.9	44	13.5	+26	43.1	207	33.0	-22	59.3	328	05.5	+10	32.5	
Dif	—		-9			0	+25			0	+19			0	+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 0			Edad: 20 ^d 5 PHE { 4 ^h : 54'6 12 ^h : 54'5 20 ^h : 54'4 SD: 14'9 PMG: 5 ^h 05 ^m R°: 43 ^m																
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°					
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m					
0	176	45.8	-18	09.2	285	56.0	-13	52.5	60 N	6 42	7 34	8 22	0 41	88	9 14 2					
1	191	45.7		08.6	300	30.3 ¹⁵³	-14	04.9 ¹²⁴	58	38	26	11	32	83	24 6					
2	206	45.6		07.9	315	04.6 ¹⁵³		17.3 ¹²⁴	56	34	20	8 02	24	80	33 9					
3	221	45.5		07.2	329	38.9 ¹⁵³		29.6 ¹²³	54	31	14	7 53	17	77	40 13					
4	236	45.4		06.6	344	13.1 ¹⁵²		41.9 ¹²³	52	27	08	45	11	74	47 15					
5	251	45.3	-18	05.9	358	47.3 ¹⁵²	-14	54.1 ¹²²	50	6 24	7 03	7 39	0 06	71	9 53 18					
6	266	45.1	-18	05.3	13	21.5 ¹⁵²	-15	06.3 ¹²²	45	6 17	6 52	7 24	** ** *		10 07 22					
7	281	45.0		04.6	27	55.6 ¹⁵¹		18.3 ¹²⁰	40	10	43	12	** ** *		18 26					
8	296	44.9		03.9	42	29.7 ¹⁵¹		30.4 ¹²¹	35	6 04	35	7 01	** ** *		27 30					
9	311	44.8		03.3	57	03.7 ¹⁵⁰		42.3 ¹¹⁹	30	5 58	27	6 52	** ** *		36 32					
10	326	44.7		02.6	71	37.8 ¹⁵¹	-15	54.2 ¹¹⁹	20	47	13	37	** ** *		10 50 37					
11	341	44.6	-18	01.9	86	11.7 ¹⁴⁹	-16	06.0 ¹¹⁸	10 N	5 35	6 01	6 23	23 52	48	11 03 41					
12	356	44.5	-18	01.3	100	45.6 ¹⁴⁹	-16	17.7 ¹¹⁷	0	5 22	5 48	6 09	23 38	45	11 15 44					
13	11	44.4	-18	00.6	115	19.5 ¹⁴⁹		29.4 ¹¹⁷	10 S	5 08	34	5 56	24	42	27 48					
14	26	44.2	-17	59.9	129	53.3 ¹⁴⁸		41.0 ¹¹⁶	20	4 51	5 18	42	23 09	38	40 52					
15	41	44.1		59.3	144	27.1 ¹⁴⁸	-16	52.5 ¹¹⁵	30	28	4 59	25	22 52	34	11 55 56					
16	56	44.0		58.6	159	00.9 ¹⁴⁸	-17	04.0 ¹¹⁵	35	4 14	48	16	43	31	12 04 59					
17	71	43.9	-17	57.9	173	34.6 ¹⁴⁷	-17	15.4 ¹¹⁴	40	3 57	4 34	5 05	22 32	28	12 14 62					
18	86	43.8	-17	57.2	188	08.2 ¹⁴⁶	-17	26.7 ¹¹³	45	3 35	4 18	4 51	22 19	24	12 25 66					
19	101	43.7		56.6	202	41.8 ¹⁴⁶		37.9 ¹¹²	50	3 05	3 57	35	22 03	20	40 71					
20	116	43.6		55.9	217	15.4 ¹⁴⁶	-17	49.1 ¹¹²	52	2 50	46	28	21 56	17	46 74					
21	131	43.5		55.2	231	48.9 ¹⁴⁵	-18	00.2 ¹¹¹	54	32	35	19	48	14	12 54 76					
22	146	43.4		54.6	246	22.3 ¹⁴⁴		11.2 ¹¹⁰	56	2 08	21	4 10	39	11	13 02 80					
23	161	43.2		53.9	260	55.7 ¹⁴⁴		22.1 ¹⁰⁹	58	1 35	3 05	3 59	28	8	12 83					
24	176	43.1	-17	53.2	275	29.1 ¹⁴⁴	-18	33.0 ¹⁰⁹	60 S	** ** *	2 45	3 46	21 17	2	13 22 89					
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 15 ^h 26 ^m 9			Mag: -3.9 PMG: 9 ^h 55 ^m			Mag: -0.7 PMG: 21 ^h 00 ^m			Mag: -1.9 PMG: 10 ^h 09 ^m			Mag: +0.4 PMG: 2 ^h 07 ^m							
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec						
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°					
0	127	37.8	211	25.8	-22	25.9	44	13.5	+26	43.1	207	33.0	-22	59.3	328	05.5	+10	32.5		
1	142	40.3	226	24.9		25.9	59	16.0		43.1	222	34.9		59.3	343	08.2		32.6		
2	157	42.7	241	24.0		25.9	74	18.5		43.1	237	36.8		59.2	358	10.8		32.6		
3	172	45.2	256	23.2		25.8	89	21.1		43.0	252	38.6		59.2	13	13.4		32.7		
4	187	47.7	271	22.3		25.8	104	23.6		43.0	267	40.5		59.2	28	16.0		32.8		
5	202	50.1	286	21.4	-22	25.8	119	26.1	+26	42.9	282	42.4	-22	59.1	43	18.6	+10	32.8		
6	217	52.6	301	20.6	-22	25.8	134	28.6	+26	42.9	297	44.3	-22	59.1	58	21.2	+10	32.9		
7	232	55.1	316	19.7		25.8	149	31.2		42.8	312	46.2		59.0	73	23.8		33.0		
8	247	57.5	331	18.8		25.8	164	33.7		42.8	327	48.1		59.0	88	26.5		33.0		
9	263	00.0	346	18.0		25.7	179	36.2		42.8	342	49.9		59.0	103	29.1		33.1		
10	278	02.4	1	17.1		25.7	194	38.7		42.7	357	51.8		58.9	118	31.7		33.2		
11	293	04.9	16	16.2	-22	25.7	209	41.2	+26	42.7	12	53.7	-22	58.9	133	34.3	+10	33.2		
12	308	07.4	31	15.4	-22	25.7	224	43.7	+26	42.6	27	55.6	-22	58.9	148	36.9	+10	33.3		
13	323	09.8	46	14.5		25.7	239	46.3		42.6	42	57.5		58.8	163	39.5		33.4		
14	338	12.3	61	13.6		25.6	254	48.8		42.6	57	59.3		58.8	178	42.2		33.4		
15	353	14.8	76	12.8		25.6	269	51.3		42.5	73	01.2		58.8	193	44.8		33.5		
16	8	17.2	91	11.9		25.6	284	53.8		42.5	88	03.1		58.7	208	47.4		33.6		
17	23	19.7	106	11.1	-22	25.6	299	56.3	+26	42.4	103	05.0	-22	58.7	223	50.0	+10	33.6		
18	38	22.2	121	10.2	-22	25.5	314	58.8	+26	42.4	118	06.9	-22	58.7	238	52.6	+10	33.7		
19	53	24.6	136	09.3		25.5	330	01.3		42.4	133	08.8		58.6	253	55.2		33.8		
20	68	27.1	151	08.5		25.5	345	03.8		42.3	148	10.6		58.6	268	57.9		33.9		
21	83	29.5	166	07.6		25.4	0	06.3		42.3	163	12.5		58.6	284	00.5		33.9		
22	98	32.0	181	06.7		25.4	15	08.8		42.2	178	14.4		58.5	299	03.1		34.0		
23	113	34.5	196	05.9		25.4	30	11.3		42.2	193	16.3		58.5	314	05.7		34.1		
24	128	36.9	211	05.0	-22	25.3	45	13.8	+26	42.2	208	18.2	-22	58.5	329	08.3	+10	34.1		
Dif	—			-9			0			+19			0			+26			+	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16/2 PMG: 12 ^h 13 ^m 2			Edad: 21 ^d 5 PHE { SD: 14/8 PMG: 5 ^h 48 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m					
0	176	43.1	-17	53.2	275	29.1	-18 33.0	60 N	16 07	16 55	17 47	2 09 90	9 16 3					
1	191	43.0		52.5	290	02.4 ¹⁴³	43.8 ¹⁰⁸	58	18	17 03	51	1 55 85	30 9					
2	206	42.9		51.9	304	35.6 ¹⁴²	-18 54.5 ¹⁰⁷	56	27	09	54	44 80	42 14					
3	221	42.8		51.2	319	08.8 ¹⁴²	-19 05.1 ¹⁰⁶	54	36	15	17 58	34 76	9 53 17					
4	236	42.7		50.5	333	42.0 ¹⁴²	15.6 ¹⁰⁵	52	43	20	18 01	25 73	10 02 20					
5	251	42.6	-17	49.8	348	15.1 ¹⁴¹	-19 26.1 ¹⁰⁵	50	16 50	17 25	18 04	1 17 71	10 11 22					
6	266	42.5	-17	49.1	2	48.1 ¹⁴⁰	-19 36.5 ¹⁰⁴	45	17 04	17 36	18 11	1 00 66	10 29 27					
7	281	42.4		48.5	17	21.1 ¹⁴⁰	46.8 ¹⁰³	40	16	45	17	0 46 62	44 31					
8	296	42.3		47.8	31	54.0 ¹³⁹	-19 57.0 ¹⁰²	35	26	17 53	23	34 59	10 57 33					
9	311	42.2		47.1	46	26.8 ¹³⁸	-20 07.1 ¹⁰¹	30	35	18 00	29	24 57	11 08 36					
10	326	42.1		46.4	60	59.7 ¹³⁹	17.2 ¹⁰¹	20	17 50	13	40	0 07 52	27 40					
11	341	42.0	-17	45.7	75	32.4 ¹³⁷	-20 27.1 ⁹⁹	10 N	18 04	18 26	18 51	** ** *	11 44 43					
12	356	41.9	-17	45.1	90	05.1 ¹³⁷	-20 37.0 ⁹⁸	0	18 17	18 38	19 04	** ** *	11 59 47					
13	11	41.8		44.4	104	37.7 ¹³⁶	46.8 ⁹⁸	10 S	30	18 52	18	** ** *	12 15 49					
14	26	41.6		43.7	119	10.3 ¹³⁶	-20 56.5 ⁹⁷	20	18 44	19 07	35	23 47 42	32 53					
15	41	41.5		43.0	133	42.8 ¹³⁵	-21 06.1 ⁹⁶	30	19 00	26	19 57	26 39	12 51 57					
16	56	41.4		42.3	148	15.2 ¹³⁴	15.6 ⁹⁵	35	09	37	20 10	14 36	13 03 59					
17	71	41.3	-17	41.7	162	47.6 ¹³⁴	-21 25.1 ⁹⁵	40	19 20	19 50	20 27	23 00 34	13 16 62					
18	86	41.2	-17	41.0	177	20.0 ¹³⁴	-21 34.4 ⁹³	45	19 33	20 06	20 49	22 43 31	13 31 66					
19	101	41.1		40.3	191	52.2 ¹³²	43.7 ⁹³	50	48	27	21 17	23 26	13 51 70					
20	116	41.0		39.6	206	24.4 ¹³²	-21 52.8 ⁹¹	52	19 56	37	32	13 24	14 00 73					
21	131	40.9		38.9	220	56.6 ¹³²	-22 01.9 ⁹⁰	54	20 04	20 48	21 49	22 02 21	10 76					
22	146	40.8		38.2	235	28.7 ¹³¹	10.9 ⁹¹	56	13	21 01	22 11	21 50 18	22 79					
23	161	40.7		37.5	250	00.7 ¹³⁰	19.7 ⁸⁸	58	23	16	22 41	36 13	35 85					
24	176	40.6	-17	36.9	264	32.6 ¹²⁹	-22 28.5 ⁸⁸	60 S	20 36	21 35	23 35	21 19 7	14 51 91					
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 15 ^h 23 ^m 0		Mag: -3.9 PMG: 9 ^h 56 ^m			Mag: -0.6 PMG: 20 ^h 56 ^m			Mag: -1.9 PMG: 10 ^h 06 ^m			Mag: +0.4 PMG: 2 ^h 03 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	128	36.9	211	05.0	-22	25.3	45	13.8	+26	42.2	208	18.2	-22	58.5	329	08.3	+10	34.1
1	143	39.4	226	04.1		25.3	60	16.3		42.1	223	20.1		58.4	344	10.9		34.2
2	158	41.9	241	03.3		25.2	75	18.8		42.1	238	21.9		58.4	359	13.6		34.3
3	173	44.3	256	02.4		25.2	90	21.3		42.0	253	23.8		58.4	14	16.2		34.3
4	188	46.8	271	01.5		25.2	105	23.8		42.0	268	25.7		58.3	29	18.8		34.4
5	203	49.3	286	00.7	-22	25.1	120	26.3	+26	42.0	283	27.6	-22	58.3	44	21.4	+10	34.5
6	218	51.7	300	59.8	-22	25.1	135	28.7	+26	41.9	298	29.5	-22	58.3	59	24.0	+10	34.5
7	233	54.2	315	58.9		25.0	150	31.2		41.9	313	31.4		58.2	74	26.7		34.6
8	248	56.7	330	58.1		25.0	165	33.7		41.8	328	33.3		58.2	89	29.3		34.7
9	263	59.1	345	57.2		24.9	180	36.2		41.8	343	35.1		58.2	104	31.9		34.7
10	279	01.6	0	56.3		24.9	195	38.7		41.8	358	37.0		58.1	119	34.5		34.8
11	294	04.0	15	55.5	-22	24.9	210	41.2	+26	41.7	13	38.9	-22	58.1	134	37.1	+10	34.9
12	309	06.5	30	54.6	-22	24.8	225	43.6	+26	41.7	28	40.8	-22	58.0	149	39.7	+10	35.0
13	324	09.0	45	53.7		24.8	240	46.1		41.6	43	42.7		58.0	164	42.4		35.0
14	339	11.4	60	52.9		24.7	255	48.6		41.6	58	44.6		58.0	179	45.0		35.1
15	354	13.9	75	52.0		24.6	270	51.1		41.6	73	46.4		57.9	194	47.6		35.2
16	9	16.4	90	51.1		24.6	285	53.5		41.5	88	48.3		57.9	209	50.2		35.2
17	24	18.8	105	50.3	-22	24.5	300	56.0	+26	41.5	103	50.2	-22	57.9	224	52.8	+10	35.3
18	39	21.3	120	49.4	-22	24.5	315	58.5	+26	41.4	118	52.1	-22	57.8	239	55.5	+10	35.4
19	54	23.8	135	48.5		24.4	331	00.9		41.4	133	54.0		57.8	254	58.1		35.4
20	69	26.2	150	47.7		24.4	346	03.4		41.4	148	55.9		57.8	270	00.7		35.5
21	84	28.7	165	46.8		24.3	1	05.9		41.3	163	57.8		57.7	285	03.3		35.6
22	99	31.2	180	45.9		24.2	16	08.3		41.3	178	59.6		57.7	300	05.9		35.6
23	114	33.6	195	45.1		24.2	31	10.8		41.2	194	01.5		57.7	315	08.6		35.7
24	129	36.1	210	44.2	-22	24.1	46	13.3	+26	41.2	209	03.4	-22	57.6	330	11.2	+10	35.8
Dif	—		-9		+1		+25		0		+19		0		+26		+	

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna														
	SD: 16:2 PMG: 12 ^h 13 ^m 4			Edad: 22 ^d 5 PHE { 4 ^h : 54:2 12 ^h : 54:2 20 ^h : 54:2 SD: 14:8 PMG: 6 ^h 34 ^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	40.6	-17	36.9	264	32.6	-22	28.5	60 N	6 39	7 30	8 18	3 39	91	9 19	10											
1	191	40.5		36.2	279	04.5 ¹²⁹		37.2 ⁸⁷	58	35	23	8 07	20	83	39	17											
2	206	40.4		35.5	293	36.4 ¹²⁹		45.8 ⁸⁶	56	31	17	7 58	3 04	78	9 56	2											
3	221	40.3		34.8	308	08.1 ¹²⁷	-22	54.3 ⁸⁵	54	28	11	50	2 50	75	10 10	25											
4	236	40.2		34.1	322	39.8 ¹²⁷	-23	02.7 ⁸⁴	52	25	06	43	38	72	22	28											
5	251	40.1	-17	33.4	337	11.4 ¹²⁶	-23	11.0 ⁸³	50	6 22	7 01	7 36	2 28	69	10 33	30											
6	266	40.0	-17	32.7	351	43.0 ¹²⁶	-23	19.2 ⁸²	45	6 15	6 50	7 22	2 06	65	10 56	34											
7	281	39.9		32.0	6	14.5 ¹²⁵		27.2 ⁸⁰	40	09	41	10	1 48	62	11 15	37											
8	296	39.8		31.3	20	46.0 ¹²⁵		35.2 ⁸⁰	35	6 03	33	7 00	33	59	30	40											
9	311	39.7		30.6	35	17.3 ¹²³		43.1 ⁷⁹	30	5 57	26	6 51	1 21	57	11 44	41											
10	326	39.6		29.9	49	48.6 ¹²³		50.9 ⁷⁸	20	46	13	36	0 59	53	12 07	44											
11	341	39.5	-17	29.3	64	19.9 ¹²³	-23	58.6 ⁷⁷	10 N	5 35	6 01	6 23	0 40	51	12 27	47											
12	356	39.5	-17	28.6	78	51.1 ¹²²	-24	06.2 ⁷⁶	0	5 23	5 48	6 10	0 23	48	12 46	49											
13	11	39.4		27.9	93	22.2 ¹²¹		13.6 ⁷⁴	10 S	5 09	35	5 57	0 06	45	13 04	52											
14	26	39.3		27.2	107	53.2 ¹²⁰		21.0 ⁷⁴	20	4 52	20	43	**	**	**	25	54										
15	41	39.2		26.5	122	24.2 ¹²⁰		28.3 ⁷³	30	30	5 01	27	**	**	**	13 48	57										
16	56	39.1		25.8	136	55.1 ¹¹⁹		35.4 ⁷¹	35	17	4 50	18	23	50	43	14 02	58										
17	71	39.0	-17	25.1	151	26.0 ¹¹⁹	-24	42.5 ⁷¹	40	4 00	4 37	5 07	23	34	41	14 18	61										
18	86	38.9	-17	24.4	165	56.8 ¹¹⁸	-24	49.4 ⁶⁹	45	3 39	4 21	4 54	23	14	38	14 37	63										
19	101	38.8		23.7	180	27.5 ¹¹⁷	-24	56.2 ⁶⁸	50	3 10	4 00	39	22	49	35	15 01	67										
20	116	38.7		23.0	194	58.1 ¹¹⁶	-25	02.9 ⁶⁷	52	2 56	3 51	31	37	33		13	69										
21	131	38.6		22.3	209	28.7 ¹¹⁶		09.5 ⁶⁶	54	38	39	23	23	31		26	72										
22	146	38.5		21.6	223	59.3 ¹¹⁶		16.0 ⁶⁵	56	2 16	26	14	22	08	27	15	41	76									
23	161	38.4		20.9	238	29.7 ¹¹⁴		22.4 ⁶⁴	58	1 46	3 11	4 04	21	49	23	16	00	80									
24	176	38.3	-17	20.2	253	00.1 ¹¹⁴	-25	28.7 ⁶³	60 S	0 52	2 53	3 52	21	26	15	16	22	88									
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO														
	PMG 15 ^h 19 ^m 1			Mag: -3.9 PMG: 9 ^h 58 ^m			Mag: -0.6 PMG: 20 ^h 52 ^m			Mag: -1.9 PMG: 10 ^h 03 ^m			Mag: +0.4 PMG: 1 ^h 59 ^m														
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec													
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	'											
0	129	36.1	210	44.2	-22	24.1	46	13.3	+26	209	03.4	-22	57.6	330	11.2	+10	35.8										
1	144	38.5	225	43.3		24.0	61	15.7		224	05.3		57.6	345	13.8		35.9										
2	159	41.0	240	42.5		24.0	76	18.2		239	07.2		57.6	0	16.4		35.9										
3	174	43.5	255	41.6		23.9	91	20.6		254	09.1		57.5	15	19.0		36.0										
4	189	45.9	270	40.7		23.8	106	23.1		269	11.0		57.5	30	21.7		36.1										
5	204	48.4	285	39.9	-22	23.8	121	25.5	+26	284	12.8	-22	57.5	45	24.3	+10	36.1										
6	219	50.9	300	39.0	-22	23.7	136	28.0	+26	299	14.7	-22	57.4	60	26.9	+10	36.2										
7	234	53.3	315	38.1		23.6	151	30.4		314	16.6		57.4	75	29.5		36.3										
8	249	55.8	330	37.3		23.6	166	32.9		329	18.5		57.3	90	32.1		36.3										
9	264	58.3	345	36.4		23.5	181	35.3		344	20.4		57.3	105	34.8		36.4										
10	280	00.7	0	35.5		23.4	196	37.8		359	22.3		57.3	120	37.4		36.5										
11	295	03.2	15	34.7	-22	23.3	211	40.2	+26	40.8	14	24.2	-22	57.2	135	40.0	+10	36.6									
12	310	05.7	30	33.8	-22	23.3	226	42.7	+26	40.7	29	26.1	-22	57.2	150	42.6	+10	36.6									
13	325	08.1	45	32.9		23.2	241	45.1		40.7	44	27.9		57.2	165	45.3		36.7									
14	340	10.6	60	32.1		23.1	256	47.6		40.6	59	29.8		57.1	180	47.9		36.8									
15	355	13.0	75	31.2		23.0	271	50.0		40.6	74	31.7		57.1	195	50.5		36.8									
16	10	15.5	90	30.3		22.9	286	52.4		40.6	89	33.6		57.1	210	53.1		36.9									
17	25	18.0	105	29.5	-22	22.8	301	54.9	+26	40.5	104	35.5	-22	57.0	225	55.7	+10	37.0									
18	40	20.4	120	28.6	-22	22.8	316	57.3	+26	40.5	119	37.4	-22	57.0	240	58.4	+10	37.0									
19	55	22.9	135	27.7		22.7	331	59.7		40.4	134	39.3		57.0	256	01.0		37.1									
20	70	25.4	150	26.9		22.6	347	02.2		40.4	149	41.2		56.9	271	03.6		37.2									
21	85	27.8	165	26.0		22.5	2	04.6		40.4	164	43.0		56.9	286	06.2		37.3									
22	100	30.3	180	25.1		22.4	17	07.0		40.3	179	44.9		56.8	301	08.9		37.3									
23	115	32.8	195	24.3		22.3	32	09.5		40.3	194	46.8		56.8	316	11.5		37.4									
24	130	35.2	210	23.4	-22	22.2	47	11.9	+26	40.2	209	48.7	-22	56.8	331	14.1	+10	37.5									
Dif	—			-9			+1			+24			0			+19			0			+26			+		

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 12 ^h 13 ^m 5			Edad: 23 ^d 5 PHE { 4 ^h : 54:3 12 ^h : 54:4 20 ^h : 54:4 PMG: 7 ^h 23 ^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	38.3	-17	20.2	253	00.1	-25	28.7	60 N	16 12	17 00	17 51	5 10 84	9 29 22
1	191	38.2		19.5	267	30.5 ¹¹⁴		34.8	58	23	07	55	4 43 76	9 56 30
2	206	38.1		18.8	282	00.7 ¹¹²		40.8	56	32	13	17 58	22 71	10 17 35
3	221	38.1		18.1	296	30.9 ¹¹²		46.8	54	40	18	18 01	4 05 68	35 37
4	236	38.0		17.4	311	01.1 ¹¹²		52.5	52	47	23	04	3 50 66	10 50 39
5	251	37.9	-17	16.7	325	31.2 ¹¹¹	-25	58.2	50	16 53	17 28	18 07	3 37 64	11 03 41
6	266	37.8	-17	16.0	340	01.2 ¹¹⁰	-26	03.8	45	17 07	17 38	18 13	3 11 61	11 30 44
7	281	37.7		15.3	354	31.1 ¹⁰⁹		09.2	40	18	47	19	2 50 59	11 52 45
8	296	37.6		14.6	9	01.0 ¹⁰⁹		14.6	35	28	17 55	25	32 58	12 10 46
9	311	37.5		13.9	23	30.9 ¹⁰⁹		19.8	30	37	18 02	30	2 18 56	25 47
10	326	37.4		13.2	38	00.7 ¹⁰⁸		24.8	20	17 52	15	41	1 52 55	12 51 49
11	341	37.3	-17	12.4	52	30.4 ¹⁰⁷	-26	29.8	10 N	18 05	18 27	18 52	1 31 52	13 14 50
12	356	37.2	-17	11.7	67	00.0 ¹⁰⁶	-26	34.6	0	18 17	18 39	19 04	1 11 50	13 35 51
13	11	37.2		11.0	81	29.6 ¹⁰⁶		39.3	10 S	30	18 52	17	0 51 48	13 56 53
14	26	37.1		10.3	95	59.2 ¹⁰⁶		43.9	20	43	19 06	34	29 47	14 19 53
15	41	37.0		09.6	110	28.6 ¹⁰⁴		48.4	30	18 59	24	19 55	0 05 44	14 45 55
16	56	36.9		08.9	124	58.1 ¹⁰⁵		52.7	35	19 08	35	20 09	*** ** *	15 00 57
17	71	36.8	-17	08.2	139	27.4 ¹⁰³	-26	56.9	40	19 18	19 48	20 25	*** ** *	15 19 57
18	86	36.7	-17	07.5	153	56.7 ¹⁰³	-27	01.0	45	19 30	20 04	20 45	23 52 49	15 40 59
19	101	36.6		06.8	168	26.0 ¹⁰³		05.0	50	45	23	21 13	24 47	16 08 61
20	116	36.6		06.1	182	55.2 ¹⁰²		08.8	52	19 53	33	27	23 10 46	22 61
21	131	36.5		05.4	197	24.3 ¹⁰¹		12.5	54	20 00	44	21 43	22 54 45	38 62
22	146	36.4		04.6	211	53.4 ¹⁰¹		16.1	56	09	20 56	22 04	35 43	16 57 64
23	161	36.3		03.9	226	22.5 ¹⁰¹		19.5	58	19	21 11	22 31	22 12 41	17 20 67
24	176	36.2	-17	03.2	240	51.4 ⁹⁹	-27	22.8	60 S	20 31	21 28	23 14	21 41 36	17 50 73

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 15 ^h 15 ^m 1		Mag: -3.9 PMG: 9 ^h 59 ^m		Mag: -0.6 PMG: 20 ^h 48 ^m		Mag: -1.9 PMG: 9 ^h 59 ^m		Mag: +0.4 PMG: 1 ^h 55 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	130	35.2	210	23.4	47	11.9	+26	40.2	209	48.7
1	145	37.7	225	22.5	62	14.3		40.2	224	50.6
2	160	40.1	240	21.7	77	16.7		40.2	239	52.5
3	175	42.6	255	20.8	92	19.1		40.1	254	54.4
4	190	45.1	270	19.9	107	21.6		40.1	269	56.3
5	205	47.5	285	19.1	122	24.0	+26	40.0	284	58.1
6	220	50.0	300	18.2	137	26.4	+26	40.0	300	00.0
7	235	52.5	315	17.4	152	28.8		40.0	315	01.9
8	250	54.9	330	16.5	167	31.2		39.9	330	03.8
9	265	57.4	345	15.6	182	33.6		39.9	345	05.7
10	280	59.9	0	14.8	197	36.1		39.8	0	07.6
11	296	02.3	15	13.9	212	38.5	+26	39.8	15	09.5
12	311	04.8	30	13.0	227	40.9	+26	39.8	30	11.4
13	326	07.3	45	12.2	242	43.3		39.7	45	13.3
14	341	09.7	60	11.3	257	45.7		39.7	60	15.2
15	356	12.2	75	10.4	272	48.1		39.6	75	17.0
16	11	14.6	90	09.6	287	50.5		39.6	90	18.9
17	26	17.1	105	08.7	302	52.9	+26	39.6	105	20.8
18	41	19.6	120	07.8	317	55.3	+26	39.5	120	22.7
19	56	22.0	135	07.0	332	57.7		39.5	135	24.6
20	71	24.5	150	06.1	348	00.1		39.5	150	26.5
21	86	27.0	165	05.2	3	02.5		39.4	165	28.4
22	101	29.4	180	04.4	18	04.9		39.4	180	30.3
23	116	31.9	195	03.5	33	07.3		39.3	195	32.2
24	131	34.4	210	02.6	48	09.7	+26	39.3	210	34.1
Dif	—		-9		+1		+24		0	
									+19	
									0	
									+26	
									+	

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'2 PMG: 12 ^h 13 ^m 7			Edad: 24 ^d 5 SD: 14'8 PMG: 8 ^h 14 ^m	PHE { 4 ^h : 54'5 12 ^h : 54'6 20 ^h : 54'8 R°: 53 ^m	Dif		R°			R°				
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	176	36.2	-17	03.2	240	51.4	-27 22.8	60 N	6 35	7 26	8 13	6 34	59	9 51	51
1	191	36.1		02.5	255	20.4	26.0	58	32	19	8 03	5 59	57	10 26	53
2	206	36.1		01.8	269	49.3	29.0	56	28	13	7 54	33	57	10 52	53
3	221	36.0		01.1	284	18.1	31.9	54	25	08	46	5 13	56	11 12	53
4	236	35.9	-17	00.4	298	46.9	34.7	52	22	7 03	39	4 56	56	29	54
5	251	35.8	-16	59.6	313	15.6	-27 37.4	50	6 20	6 58	7 33	4 41	56	11 44	53
6	266	35.7	-16	58.9	327	44.3	-27 39.9	45	6 13	6 48	7 20	4 12	55	12 14	53
7	281	35.6		58.2	342	13.0	42.2	40	07	40	7 08	3 49	55	37	53
8	296	35.6		57.5	356	41.6	44.5	35	6 02	32	6 59	30	54	12 56	53
9	311	35.5		56.8	11	10.2	46.6	30	5 56	25	50	3 14	54	13 12	54
10	326	35.4		56.1	25	38.7	48.5	20	46	12	35	2 47	53	13 40	54
11	341	35.3	-16	55.3	40	07.2	-27 50.4	10 N	5 35	6 01	6 22	2 23	53	14 04	53
12	356	35.2	-16	54.6	54	35.6	-27 52.0	0	5 23	5 49	6 10	2 01	53	14 26	53
13	11	35.2		53.9	69	04.0	53.6	10 S	5 10	36	5 58	1 39	52	14 49	52
14	26	35.1		53.2	83	32.4	55.0	20	4 53	21	44	1 16	51	15 12	53
15	41	35.0		52.5	98	00.7	56.3	30	32	5 03	29	0 49	51	40	52
16	56	34.9		51.7	112	29.0	57.4	35	19	4 52	20	33	50	15 57	52
17	71	34.8	-16	51.0	126	57.3	-27 58.4	40	4 03	4 39	5 09	0 15	49	16 16	51
18	86	34.8	-16	50.3	141	25.5	-27 59.2	45	3 42	4 24	4 57	*** **	**	16 39	51
19	101	34.7		49.6	155	53.7	-28 00.0	50	15	4 04	42	*** **	**	17 09	50
20	116	34.6		48.8	170	21.8	-28 00.5	52	3 01	3 55	35	23 56	61	23	50
21	131	34.5		48.1	184	50.0	01.0	54	2 44	44	27	39	61	17 40	49
22	146	34.5		47.4	199	18.1	01.2	56	2 24	32	19	23 18	63	18 01	48
23	161	34.4		46.7	213	46.1	01.4	58	1 57	17	4 09	22 53	64	18 27	46
24	176	34.3	-16	45.9	228	14.2	-28 01.4	60 S	1 14	3 00	3 57	22 17	68	19 03	42

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 15 ^h 11 ^m 2		Mag: -3.9 PMG: 10 ^h 00 ^m		Mag: -0.5 PMG: 20 ^h 44 ^m		Mag: -1.9 PMG: 9 ^h 56 ^m		Mag: +0.4 PMG: 1 ^h 51 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	131	34.4	210	02.6	-22	19.7	210	34.1	-22	55.9
1	146	36.8	225	01.8		19.6	225	35.9		55.9
2	161	39.3	240	00.9		19.4	240	37.8		55.8
3	176	41.8	255	00.0		19.3	255	39.7		55.8
4	191	44.2	269	59.2		19.2	270	41.6		55.8
5	206	46.7	284	58.3	-22	19.1	285	43.5	-22	55.7
6	221	49.1	299	57.5	-22	18.9	300	45.4	-22	55.7
7	236	51.6	314	56.6		18.8	315	47.3		55.6
8	251	54.1	329	55.7		18.7	330	49.2		55.6
9	266	56.5	344	54.9		18.6	345	51.1		55.6
10	281	59.0	359	54.0		18.4	0	53.0		55.5
11	297	01.5	14	53.1	-22	18.3	15	54.9	-22	55.5
12	312	03.9	29	52.3	-22	18.2	30	56.8	-22	55.5
13	327	06.4	44	51.4		18.0	45	58.6		55.4
14	342	08.9	59	50.5		17.9	61	00.5		55.4
15	357	11.3	74	49.7		17.7	76	02.4		55.3
16	12	13.8	89	48.8		17.6	91	04.3		55.3
17	27	16.3	104	48.0	-22	17.5	106	06.2	-22	55.3
18	42	18.7	119	47.1	-22	17.3	121	08.1	-22	55.2
19	57	21.2	134	46.2		17.2	136	10.0		55.2
20	72	23.6	149	45.4		17.0	151	11.9		55.2
21	87	26.1	164	44.5		16.9	166	13.8		55.1
22	102	28.6	179	43.6		16.8	181	15.7		55.1
23	117	31.0	194	42.8		16.6	196	17.6		55.1
24	132	33.5	209	41.9	-22	16.5	211	19.5	-22	55.0
Dif	—		-9	+1	+24	0	+19	0	+26	+1

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 2			Edad: 25 ^d 5	PHE { 4 ^h : 54 ^h /9 12 ^h : 55 ^h /1 20 ^h : 55 ^h /2									
	PMG: 12 ^h 13 ^m 8					SD: 14 ^h 9			PMG: 9 ^h 07 ^m		R°: 53 ^m			
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	176	34.3	-16 45.9	228	14.2	-28 01.4	2	60 N	16 18	17 05	17 55	7 33 28	10 42 83	
1	191	34.2	45.2	242	42.2	90 01.2	2	58	27	11	17 59	6 56 36	11 19 75	
2	206	34.2	44.5	257	10.2	90 01.0	2	56	36	17	18 02	30 39	11 45 71	
3	221	34.1	43.8	271	38.2	90 -28 00.5	5	54	44	22	05	6 09 42	12 05 69	
4	236	34.0	43.0	286	06.1	89 -27 59.9	6	52	50	27	07	5 52 43	23 67	
5	251	33.9	-16 42.3	300	34.1	90 -27 59.2	7	50	16 57	17 31	18 10	5 37 45	12 37 66	
6	266	33.9	-16 41.6	315	02.0	89 -27 58.4	8	45	17 10	17 41	18 16	5 07 47	13 07 63	
7	281	33.8	40.8	329	29.9	89 57.4	10	40	21	49	22	4 44 48	30 61	
8	296	33.7	40.1	343	57.8	89 56.2	12	35	30	17 57	27	24 50	13 49 60	
9	311	33.7	39.4	358	25.7	89 54.9	13	30	38	18 03	32	4 08 50	14 06 58	
10	326	33.6	38.7	12	53.5	88 53.5	14	20	17 53	16	42	3 40 51	34 56	
11	341	33.5	-16 37.9	27	21.4	89 -27 51.9	16	10 N	18 05	18 27	18 52	3 16 52	14 57 55	
12	356	33.4	-16 37.2	41	49.2	88 -27 50.1	18	0	18 17	18 39	19 04	2 54 53	15 19 54	
13	11	33.4	36.5	56	17.0	88 48.3	18	10 S	29	18 51	17	31 55	15 41 52	
14	26	33.3	35.7	70	44.8	88 46.2	21	20	42	19 06	33	2 07 56	16 05 50	
15	41	33.2	35.0	85	12.7	89 44.1	21	30	18 57	23	19 54	1 40 56	32 48	
16	56	33.2	34.3	99	40.5	88 41.7	24	35	19 06	34	20 07	23 57	16 49 46	
17	71	33.1	-16 33.5	114	08.3	88 -27 39.3	24	40	19 16	19 46	20 22	1 04 57	17 07 45	
18	86	33.0	-16 32.8	128	36.1	88 -27 36.7	26	45	19 28	20 01	20 42	0 41 58	17 30 42	
19	101	32.9	32.1	143	03.9	88 33.9	28	50	42	20	21 09	0 11 60	17 59 39	
20	116	32.9	31.3	157	31.7	88 31.0	29	52	49	29	22	** ** *	18 13 37	
21	131	32.8	30.6	171	59.5	88 28.0	30	54	19 57	39	38	** ** *	29 35	
22	146	32.7	29.8	186	27.3	88 24.8	32	56	20 05	20 51	21 57	** ** *	18 49 32	
23	161	32.7	29.1	200	55.1	88 21.4	34	58	15	21 05	22 22	23 57 84	19 13 27	
24	176	32.6	-16 28.4	215	22.9	88 -27 17.9	35	60 S	20 26	21 22	22 58	23 25 92	19 45 19	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 15 ^h 07 ^m 3		Mag: -3.9 PMG: 10 ^h 02 ^m		Mag: -0.5 PMG: 20 ^h 40 ^m		Mag: -1.9 PMG: 9 ^h 53 ^m		Mag: +0.3 PMG: 1 ^h 46 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	132	33.5	209 41.9	-22 16.5	49 06.6	+26 38.4	211 19.5	-22 55.0	333 20.1	+10 40.9
1	147	36.0	224 41.0	16.3	64 09.0	38.3	226 21.4	55.0	348 22.7	40.9
2	162	38.4	239 40.2	16.2	79 11.3	38.3	241 23.3	54.9	3 25.4	41.0
3	177	40.9	254 39.3	16.0	94 13.7	38.3	256 25.2	54.9	18 28.0	41.1
4	192	43.4	269 38.5	15.9	109 16.0	38.2	271 27.0	54.9	33 30.6	41.2
5	207	45.8	284 37.6	-22 15.7	124 18.4	+26 38.2	286 28.9	-22 54.8	48 33.2	+10 41.2
6	222	48.3	299 36.7	-22 15.6	139 20.7	+26 38.1	301 30.8	-22 54.8	63 35.9	+10 41.3
7	237	50.8	314 35.9	15.4	154 23.1	38.1	316 32.7	54.8	78 38.5	41.4
8	252	53.2	329 35.0	15.2	169 25.4	38.1	331 34.6	54.7	93 41.1	41.4
9	267	55.7	344 34.1	15.1	184 27.8	38.0	346 36.5	54.7	108 43.8	41.5
10	282	58.1	359 33.3	14.9	199 30.1	38.0	1 38.4	54.6	123 46.4	41.6
11	298	00.6	14 32.4	-22 14.8	214 32.4	+26 37.9	16 40.3	-22 54.6	138 49.0	+10 41.7
12	313	03.1	29 31.6	-22 14.6	229 34.8	+26 37.9	31 42.2	-22 54.6	153 51.6	+10 41.7
13	328	05.5	44 30.7	14.4	244 37.1	37.9	46 44.1	54.5	168 54.3	41.8
14	343	08.0	59 29.8	14.3	259 39.5	37.8	61 46.0	54.5	183 56.9	41.9
15	358	10.5	74 29.0	14.1	274 41.8	37.8	76 47.9	54.5	198 59.5	42.0
16	13	12.9	89 28.1	13.9	289 44.1	37.8	91 49.8	54.4	214 02.2	42.0
17	28	15.4	104 27.2	-22 13.8	304 46.5	+26 37.7	106 51.7	-22 54.4	229 04.8	+10 42.1
18	43	17.9	119 26.4	-22 13.6	319 48.8	+26 37.7	121 53.6	-22 54.3	244 07.4	+10 42.2
19	58	20.3	134 25.5	13.4	334 51.1	37.6	136 55.5	54.3	259 10.0	42.2
20	73	22.8	149 24.7	13.3	349 53.4	37.6	151 57.4	54.3	274 12.7	42.3
21	88	25.2	164 23.8	13.1	4 55.8	37.6	166 59.3	54.2	289 15.3	42.4
22	103	27.7	179 22.9	12.9	19 58.1	37.5	182 01.2	54.2	304 17.9	42.5
23	118	30.2	194 22.1	12.8	35 00.4	37.5	197 03.1	54.2	319 20.6	42.5
24	133	32.6	209 21.2	-22 12.6	50 02.7	+26 37.5	212 05.0	-22 54.1	334 23.2	+10 42.6
Dif	—	—	-9	+2	+23	0	+19	0	+26	+

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'2 PMG: 12 ^h 13 ^m 9			Edad: 26 ^d 5 SD: 15'1 PMG: 10 ^h 00 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	176	32.6	-16 28.4	215	22.9	-27 17.9		60 N	6 31	7 22	8 08		8 01	11	12 05 98
1	191	32.5		229	50.7	14.3	36	58	28	15	7 59		7 32	20	34 89
2	206	32.5	26.9	244	18.5	10.5	38	56	25	10	50		7 09	25	12 56 84
3	221	32.4	26.2	258	46.3	06.6	39	54	22	05	43		6 51	29	13 14 80
4	236	32.3	25.4	273	14.2	-27 02.6	40	52	19	7 00	36		35	32	30 76
5	251	32.3	-16 24.7	287	42.0	-26 58.3	43	50	6 17	6 56	7 30		6 22	34	13 43 74
6	266	32.2	-16 23.9	302	09.9	-26 54.0	43	45	6 11	6 46	7 17		5 54	38	14 10 70
7	281	32.2	23.2	316	37.8	49.5	45	40	06	38	7 06		32	41	31 67
8	296	32.1	22.5	331	05.7	44.8	47	35	6 00	31	6 57		5 14	43	14 49 64
9	311	32.0	21.7	345	33.6	40.1	47	30	5 55	24	49		4 58	45	15 04 62
10	326	32.0	21.0	0	01.5	35.1	50	20	45	12	35		31	49	30 58
11	341	31.9	-16 20.2	14	29.5	-26 30.0	51	10 N	5 35	6 00	6 22		4 08	51	15 52 55
12	356	31.8	-16 19.5	28	57.4	-26 24.8	52	0	5 24	5 49	6 10		3 47	53	16 13 52
13	11	31.8	18.7	43	25.4	19.5	53	10 S	5 11	36	5 58		26	55	33 50
14	26	31.7	18.0	57	53.4	14.0	55	20	4 55	22	46		3 03	57	16 55 46
15	41	31.6	17.2	72	21.5	08.3	57	30	34	5 05	31		2 36	60	17 20 43
16	56	31.6	16.5	86	49.5	-26 02.5	58	35	21	4 55	22		20	62	35 40
17	71	31.5	-16 15.8	101	17.6	-25 56.6	59	40	4 06	4 42	5 12		2 01	65	17 52 38
18	86	31.5	-16 15.0	115	45.7	-25 50.5	61	45	3 46	4 27	5 00		1 39	67	18 12 35
19	101	31.4	14.3	130	13.8	44.3	62	50	20	4 08	4 46		1 11	70	38 29
20	116	31.3	13.5	144	42.0	38.0	63	52	3 06	3 59	39		0 57	72	18 50 27
21	131	31.3	12.8	159	10.2	31.5	65	54	2 51	49	32		40	75	19 04 24
22	146	31.2	12.0	173	38.4	24.8	67	56	31	37	23		0 21	79	21 20
23	161	31.2	11.3	188	06.7	18.1	67	58	2 07	23	14		** ** *	**	19 40 15
24	176	31.1	-16 10.5	202	34.9	-25 11.2	69	60 S	1 30	3 07	4 03		** ** *	**	20 04 8

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 15 ^h 03 ^m 4		Mag: -3.9 PMG: 10 ^h 03 ^m		Mag: -0.5 PMG: 20 ^h 37 ^m		Mag: -1.9 PMG: 9 ^h 50 ^m		Mag: +0.3 PMG: 1 ^h 42 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	133	32.6	209	21.2	-22 12.6	50 02.7	+26 37.5	212 05.0	-22 54.1	334 23.2	+10 42.6
1	148	35.1	224	20.4	12.4	65 05.1	37.4	227 06.8	54.1	349 25.8	42.7
2	163	37.6	239	19.5	12.2	80 07.4	37.4	242 08.7	54.0	4 28.5	42.7
3	178	40.0	254	18.6	12.0	95 09.7	37.3	257 10.6	54.0	19 31.1	42.8
4	193	42.5	269	17.8	11.9	110 12.0	37.3	272 12.5	54.0	34 33.7	42.9
5	208	45.0	284	16.9	-22 11.7	125 14.3	+26 37.3	287 14.4	-22 53.9	49 36.3	+10 43.0
6	223	47.4	299	16.1	-22 11.5	140 16.7	+26 37.2	302 16.3	-22 53.9	64 39.0	+10 43.0
7	238	49.9	314	15.2	11.3	155 19.0	37.2	317 18.2	53.8	79 41.6	43.1
8	253	52.4	329	14.3	11.1	170 21.3	37.2	332 20.1	53.8	94 44.2	43.2
9	268	54.8	344	13.5	11.0	185 23.6	37.1	347 22.0	53.8	109 46.9	43.3
10	283	57.3	359	12.6	10.8	200 25.9	37.1	2 23.9	53.7	124 49.5	43.3
11	298	59.7	14	11.8	-22 10.6	215 28.2	+26 37.0	17 25.8	-22 53.7	139 52.1	+10 43.4
12	314	02.2	29	10.9	-22 10.4	230 30.5	+26 37.0	32 27.7	-22 53.7	154 54.8	+10 43.5
13	329	04.7	44	10.0	10.2	245 32.8	37.0	47 29.6	53.6	169 57.4	43.5
14	344	07.1	59	09.2	10.0	260 35.1	36.9	62 31.5	53.6	185 00.0	43.6
15	359	09.6	74	08.3	09.8	275 37.4	36.9	77 33.4	53.5	200 02.7	43.7
16	14	12.1	89	07.5	09.6	290 39.7	36.9	92 35.3	53.5	215 05.3	43.8
17	29	14.5	104	06.6	-22 09.4	305 42.0	+26 36.8	107 37.2	-22 53.5	230 07.9	+10 43.8
18	44	17.0	119	05.7	-22 09.2	320 44.3	+26 36.8	122 39.1	-22 53.4	245 10.5	+10 43.9
19	59	19.5	134	04.9	09.0	335 46.6	36.7	137 41.0	53.4	260 13.2	44.0
20	74	21.9	149	04.0	08.8	350 48.9	36.7	152 42.9	53.4	275 15.8	44.1
21	89	24.4	164	03.2	08.6	5 51.2	36.7	167 44.8	53.3	290 18.4	44.1
22	104	26.9	179	02.3	08.4	20 53.5	36.6	182 46.7	53.3	305 21.1	44.2
23	119	29.3	194	01.4	08.2	35 55.8	36.6	197 48.6	53.2	320 23.7	44.3
24	134	31.8	209	00.6	-22 08.0	50 58.1	+26 36.6	212 50.5	-22 53.2	335 26.3	+10 44.4
Dif	—		-9	+2		+23	0	+19	0	+26	+1

UT	SOL				● LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 16:2 PMG: 12 ^h 14 ^m 0				Edad: 27 ^d 5 PHE { 4 ^h : 56/0 12 ^h : 56/2 20 ^h : 56/4 R°: 50 ^m															
	hG ☉		Dec		hG ☾		Dif				Dec		Dif		Civil		Náutico		Hora R°	
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m
0	176	31.1	-16	10.5	202	34.9	-25	11.2	60 N	16 23	17 09	18 00	8 12	5	13 43	101				
1	191	31.0		09.8	217	03.3	-25	04.1	58	32	15	03	7 52	11	14 03	94				
2	206	31.0		09.0	231	31.6	-24	56.9	56	40	21	06	34	16	20	89				
3	221	30.9		08.3	246	00.0		49.6	54	48	26	08	20	20	34	85				
4	236	30.9		07.5	260	28.4		42.2	52	16 54	30	11	7 07	23	46	82				
5	251	30.8	-16	06.8	274	56.9	-24	34.6	50	17 00	17 34	18 13	6 56	25	14 57	79				
6	266	30.8	-16	06.0	289	25.4	-24	26.9	45	17 13	17 44	18 19	6 32	31	15 20	73				
7	281	30.7		05.3	303	53.9		19.0	40	23	52	24	6 13	35	38	69				
8	296	30.7		04.5	318	22.5		11.0	35	32	17 59	29	5 57	38	15 53	66				
9	311	30.6		03.7	332	51.1	-24	02.9	30	40	18 05	33	43	41	16 06	63				
10	326	30.5		03.0	347	19.7	-23	54.6	20	17 54	17	43	5 20	44	28	58				
11	341	30.5	-16	02.2	1	48.4	-23	46.3	10 N	18 06	18 28	18 53	4 59	48	16 47	54				
12	356	30.4	-16	01.5	16	17.1	-23	37.7	0	18 17	18 39	19 04	4 40	51	17 05	50				
13	11	30.4	-16	00.7	30	45.9		29.1	10 S	29	18 51	17	21	55	23	46				
14	26	30.3	-16	00.0	45	14.7		20.3	20	42	19 05	32	4 00	58	17 41	43				
15	41	30.3	-15	59.2	59	43.5		11.4	30	18 56	22	19 52	3 36	63	18 03	38				
16	56	30.2		58.5	74	12.4	-23	02.4	35	19 04	32	20 04	22	65	15	35				
17	71	30.2	-15	57.7	88	41.4	-22	53.2	40	19 14	19 44	20 20	3 06	68	18 30	31				
18	86	30.1	-15	56.9	103	10.4	-22	43.9	45	19 25	19 58	20 39	2 46	72	18 47	27				
19	101	30.1		56.2	117	39.4		34.5	50	39	20 16	21 04	21	77	19 07	23				
20	116	30.0		55.4	132	08.5		25.0	52	46	25	17	2 09	80	17	20				
21	131	30.0		54.7	146	37.6		15.3	54	19 53	35	32	1 55	83	28	17				
22	146	29.9		53.9	161	06.7	-22	05.6	56	20 01	20 46	21 50	40	86	41	13				
23	161	29.9		53.1	175	36.0	-21	55.7	58	10	21 00	22 13	1 21	92	19 55	9				
24	176	29.8	-15	52.4	190	05.2	-21	45.7	60 S	20 20	21 15	22 45	0 57	99	20 12	4				

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 14 ^h 59 ^m 4		Mag: -3.9 PMG: 10 ^h 05 ^m		Mag: -0.5 PMG: 20 ^h 33 ^m		Mag: -1.9 PMG: 9 ^h 47 ^m		Mag: +0.3 PMG: 1 ^h 38 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	134	31.8	209	00.6	50	58.1	212	50.5	335	26.3
1	149	34.2	223	59.7	66	00.4	227	52.4	350	29.0
2	164	36.7	238	58.9	81	02.7	242	54.3	5	31.6
3	179	39.2	253	58.0	96	04.9	257	56.2	20	34.2
4	194	41.6	268	57.2	111	07.2	272	58.1	35	36.9
5	209	44.1	283	56.3	126	09.5	288	00.0	50	39.5
6	224	46.6	298	55.4	141	11.8	303	01.9	65	42.1
7	239	49.0	313	54.6	156	14.1	318	03.8	80	44.8
8	254	51.5	328	53.7	171	16.3	333	05.7	95	47.4
9	269	54.0	343	52.9	186	18.6	348	07.6	110	50.0
10	284	56.4	358	52.0	201	20.9	3	09.5	125	52.7
11	299	58.9	13	51.2	216	23.2	18	11.4	140	55.3
12	315	01.4	28	50.3	231	25.4	33	13.3	155	57.9
13	330	03.8	43	49.4	246	27.7	48	15.2	171	00.6
14	345	06.3	58	48.6	261	30.0	63	17.1	186	03.2
15	0	08.7	73	47.7	276	32.3	78	19.0	201	05.8
16	15	11.2	88	46.9	291	34.5	93	20.9	216	08.5
17	30	13.7	103	46.0	306	36.8	108	22.8	231	11.1
18	45	16.1	118	45.2	321	39.1	123	24.7	246	13.7
19	60	18.6	133	44.3	336	41.3	138	26.6	261	16.4
20	75	21.1	148	43.4	351	43.6	153	28.5	276	19.0
21	90	23.5	163	42.6	6	45.8	168	30.4	291	21.6
22	105	26.0	178	41.7	21	48.1	183	32.3	306	24.3
23	120	28.5	193	40.9	36	50.4	198	34.2	321	26.9
24	135	30.9	208	40.0	51	52.6	213	36.1	336	29.5
Dif	—		-9		+2		+19		+26	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16:2 PMG: 12 ^h 14 ^m 1			Edad: 28 ^d 5 PHE { 4 ^h : 56'6 12 ^h : 56'8 20 ^h : 57'0 R°: 49 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	h m	m
0	176	29.8	-15 52.4	190	05.2	-21 45.7		60 N	6 27	7 17	8 03	8 17	2	15 24	99
1	191	29.8		204	34.5 ¹⁰³	35.5 ¹⁰²		58	24	11	7 54	8 03	7	37	94
2	206	29.7		219	03.9 ¹⁰⁴	25.3 ¹⁰²		56	22	06	46	7 50	11	49	89
3	221	29.7		233	33.3 ¹⁰⁴	14.9 ¹⁰⁴		54	19	7 01	39	40	14	15	59
4	236	29.6		248	02.7 ¹⁰⁴	-21 04.4 ¹⁰⁵		52	17	6 57	33	30	17	16	08
5	251	29.6	-15 48.6	262	32.2 ¹⁰⁵	-20 53.8 ¹⁰⁶		50	6 14	6 53	7 27	7 21	20	16	16
6	266	29.5	-15 47.8	277	01.7 ¹⁰⁵	-20 43.0 ¹⁰⁸		45	6 09	6 44	7 15	7 03	25	16	33
7	281	29.5		291	31.3 ¹⁰⁶	32.2 ¹⁰⁸		40	6 04	36	7 04	6 48	29	47	70
8	296	29.4		306	00.9 ¹⁰⁶	21.2 ¹¹⁰		35	5 59	29	6 55	35	33	16	59
9	311	29.4		320	30.6 ¹⁰⁷	-20 10.2 ¹¹⁰		30	54	23	48	24	36	17	09
10	326	29.3		335	00.3 ¹⁰⁷	-19 59.0 ¹¹²		20	45	11	34	6 04	41	26	58
11	341	29.3	-15 44.0	349	30.1 ¹⁰⁸	-19 47.7 ¹¹³		10 N	5 35	6 00	6 22	5 47	46	17	41
12	356	29.2	-15 43.2	3	59.9 ¹⁰⁸	-19 36.3 ¹¹⁴		0	5 24	5 49	6 11	5 31	50	17	55
13	11	29.2		18	29.8 ¹⁰⁹	24.8 ¹¹⁵		10 S	5 12	37	5 59	5 16	53	18	09
14	26	29.1		32	59.7 ¹⁰⁹	13.2 ¹¹⁶		20	4 56	24	47	4 58	58	24	40
15	41	29.1		47	29.7 ¹¹⁰	-19 01.5 ¹¹⁷		30	36	5 07	32	39	63	41	34
16	56	29.0		61	59.7 ¹¹⁰	-18 49.7 ¹¹⁸		35	24	4 57	24	27	66	18	50
17	71	29.0	-15 39.4	76	29.8 ¹¹¹	-18 37.7 ¹²⁰		40	4 09	4 45	5 14	4 14	69	19	01
18	86	29.0	-15 38.6	90	59.9 ¹¹¹	-18 25.7 ¹²⁰		45	3 50	4 30	5 03	3 58	74	19	14
19	101	28.9		105	30.0 ¹¹¹	13.6 ¹²¹		50	24	12	4 49	38	80	30	18
20	116	28.9		120	00.2 ¹¹²	-18 01.3 ¹²³		52	3 12	4 04	43	29	82	37	16
21	131	28.8		134	30.5 ¹¹³	-17 49.0 ¹²³		54	2 57	3 54	36	18	86	45	13
22	146	28.8		149	00.8 ¹¹³	36.6 ¹²⁴		56	39	42	28	3 06	90	19	54
23	161	28.7		163	31.1 ¹¹³	24.0 ¹²⁶		58	2 16	29	19	2 53	94	20	04
24	176	28.7	-15 34.0	178	01.5 ¹¹⁴	-17 11.4 ¹²⁶		60 S	1 44	3 14	4 08	2 36	100	20	16

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG 14 ^h 55 ^m 5		Mag: -3.9 PMG: 10 ^h 06 ^m		Mag: -0.4 PMG: 20 ^h 29 ^m		Mag: -1.9 PMG: 9 ^h 44 ^m		Mag: +0.3 PMG: 1 ^h 34 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	135	30.9	208	40.0	-22 02.8	51 52.6	+26 35.7	213 36.1	-22 52.3	336 29.5	+10 46.1
1	150	33.4	223	39.2	02.6	66 54.9	35.6	228 38.0	52.2	351 32.2	46.2
2	165	35.9	238	38.3	02.4	81 57.1	35.6	243 39.9	52.2	6 34.8	46.3
3	180	38.3	253	37.5	02.1	96 59.4	35.6	258 41.8	52.2	21 37.4	46.3
4	195	40.8	268	36.6	01.9	112 01.6	35.5	273 43.7	52.1	36 40.1	46.4
5	210	43.2	283	35.8	-22 01.7	127 03.9	+26 35.5	288 45.6	-22 52.1	51 42.7	+10 46.5
6	225	45.7	298	34.9	-22 01.4	142 06.1	+26 35.5	303 47.5	-22 52.0	66 45.3	+10 46.6
7	240	48.2	313	34.0	01.2	157 08.4	35.4	318 49.4	52.0	81 48.0	46.6
8	255	50.6	328	33.2	00.9	172 10.6	35.4	333 51.3	52.0	96 50.6	46.7
9	270	53.1	343	32.3	00.7	187 12.9	35.3	348 53.2	51.9	111 53.2	46.8
10	285	55.6	358	31.5	00.5	202 15.1	35.3	3 55.1	51.9	126 55.9	46.9
11	300	58.0	13	30.6	-22 00.2	217 17.4	+26 35.3	18 57.0	-22 51.8	141 58.5	+10 46.9
12	316	00.5	28	29.8	-22 00.0	232 19.6	+26 35.2	33 58.9	-22 51.8	157 01.1	+10 47.0
13	331	03.0	43	28.9	-21 59.7	247 21.8	35.2	49 00.8	51.8	172 03.8	47.1
14	346	05.4	58	28.1	59.5	262 24.1	35.2	64 02.7	51.7	187 06.4	47.1
15	1	07.9	73	27.2	59.2	277 26.3	35.1	79 04.6	51.7	202 09.1	47.2
16	16	10.3	88	26.4	59.0	292 28.5	35.1	94 06.6	51.6	217 11.7	47.3
17	31	12.8	103	25.5	-21 58.7	307 30.8	+26 35.1	109 08.5	-22 51.6	232 14.3	+10 47.4
18	46	15.3	118	24.7	-21 58.5	322 33.0	+26 35.0	124 10.4	-22 51.6	247 17.0	+10 47.4
19	61	17.7	133	23.8	58.2	337 35.2	35.0	139 12.3	51.5	262 19.6	47.5
20	76	20.2	148	23.0	58.0	352 37.5	35.0	154 14.2	51.5	277 22.2	47.6
21	91	22.7	163	22.1	57.7	7 39.7	34.9	169 16.1	51.4	292 24.9	47.7
22	106	25.1	178	21.3	57.5	22 41.9	34.9	184 18.0	51.4	307 27.5	47.7
23	121	27.6	193	20.4	57.2	37 44.1	34.8	199 19.9	51.4	322 30.1	47.8
24	136	30.1	208	19.6	-21 57.0	52 46.4	+26 34.8	214 21.8	-22 51.3	337 32.8	+10 47.9
Dif	—		-9 +2		+22 0		+19 0		+26 +1		

UT	SOL				● LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 16:2 PMG: 12 ^h 14 ^m 1				Edad: 29 ^d 5 PHE { 4 ^h : 57:2 12 ^h : 57:4 20 ^h : 57:6 R°: 48 ^m															
	hG ☉		Dec		hG ☾		Dif													
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	m	h m	m				
0	176	28.7	-15	34.0	178	01.5	-17	11.4	60 N	16 28	17 14	18 04	8 19	1	17 03	97				
1	191	28.7		33.2	192	31.9 ¹¹⁴	-16	58.7 ¹²⁷	58	37	20	07	10	4	11	93				
2	206	28.6		32.4	207	02.4 ¹¹⁵		45.9 ¹²⁸	56	45	25	09	8 01	9	18	89				
3	221	28.6		31.6	221	32.9 ¹¹⁵		32.9 ¹³⁰	54	52	30	12	7 54	11	25	86				
4	236	28.5		30.9	236	03.5 ¹¹⁶		19.9 ¹³⁰	52	16 58	34	14	47	14	31	83				
5	251	28.5	-15	30.1	250	34.1 ¹¹⁶	-16	06.8 ¹³¹	50	17 03	17 38	18 16	7 41	17	17 36	80				
6	266	28.5	-15	29.3	265	04.7 ¹¹⁶	-15	53.7 ¹³¹	45	17 15	17 46	18 21	7 28	22	17 48	74				
7	281	28.4		28.5	279	35.4 ¹¹⁷		40.4 ¹³³	40	26	17 54	26	17	26	17 57	70				
8	296	28.4		27.8	294	06.2 ¹¹⁸		27.0 ¹³⁴	35	34	18 00	30	08	29	18 05	66				
9	311	28.3		27.0	308	37.0 ¹¹⁸		13.6 ¹³⁴	30	42	07	35	7 00	32	12	62				
10	326	28.3		26.2	323	07.8 ¹¹⁸	-15	00.1 ¹³⁵	20	17 55	18	44	6 45	39	24	56				
11	341	28.3	-15	25.4	337	38.6 ¹¹⁸	-14	46.4 ¹³⁷	10 N	18 07	18 28	18 53	6 33	43	18 34	52				
12	356	28.2	-15	24.7	352	09.5 ¹¹⁹	-14	32.7 ¹³⁷	0	18 18	18 39	19 04	6 21	48	18 44	47				
13	11	28.2		23.9	6	40.5 ¹²⁰		19.0 ¹³⁷	10 S	29	18 51	16	6 09	52	18 53	43				
14	26	28.2		23.1	21	11.5 ¹²⁰	-14	05.1 ¹³⁹	20	41	19 04	31	5 56	57	19 04	37				
15	41	28.1		22.3	35	42.5 ¹²⁰	-13	51.2 ¹³⁹	30	18 55	20	19 50	42	62	15	32				
16	56	28.1		21.5	50	13.6 ¹²¹		37.1 ¹⁴¹	35	19 03	30	20 02	33	66	22	28				
17	71	28.0	-15	20.8	64	44.6 ¹²⁰	-13	23.1 ¹⁴⁰	40	19 12	19 41	20 17	5 23	70	19 29	25				
18	86	28.0	-15	20.0	79	15.8 ¹²²	-13	08.9 ¹⁴²	45	19 23	19 55	20 35	5 12	74	19 38	20				
19	101	28.0		19.2	93	47.0 ¹²²	-12	54.6 ¹⁴³	50	36	20 13	21 00	4 58	80	48	15				
20	116	27.9		18.4	108	18.2 ¹²²		40.3 ¹⁴³	52	42	21	12	51	83	53	13				
21	131	27.9		17.6	122	49.4 ¹²²		25.9 ¹⁴⁴	54	49	31	26	44	86	19 58	10				
22	146	27.9		16.9	137	20.7 ¹²³	-12	11.5 ¹⁴⁴	56	19 57	41	21 43	36	89	20 04	7				
23	161	27.8		16.1	151	52.0 ¹²³	-11	56.9 ¹⁴⁶	58	20 05	20 54	22 04	27	93	10	4				
24	176	27.8	-15	15.3	166	23.3 ¹²³	-11	42.4 ¹⁴⁵	60 S	20 15	21 09	22 33	4 16	98	20 17	1				
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 14 ^h 51 ^m 6				Mag: -3.9 PMG: 10 ^h 07 ^m				Mag: -0.4 PMG: 20 ^h 26 ^m				Mag: -1.9 PMG: 9 ^h 41 ^m				Mag: +0.3 PMG: 1 ^h 30 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♎		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	136	30.1	208	19.6	-21	57.0	52	46.4	+26	34.8	214	21.8	-22	51.3	337	32.8	+10	47.9		
1	151	32.5	223	18.7		56.7	67	48.6		34.8	229	23.7		51.3	352	35.4		48.0		
2	166	35.0	238	17.9		56.4	82	50.8		34.7	244	25.6		51.2	7	38.0		48.0		
3	181	37.5	253	17.0		56.2	97	53.0		34.7	259	27.5		51.2	22	40.7		48.1		
4	196	39.9	268	16.2		55.9	112	55.3		34.7	274	29.4		51.2	37	43.3		48.2		
5	211	42.4	283	15.3	-21	55.7	127	57.5	+26	34.6	289	31.3	-22	51.1	52	46.0	+10	48.3		
6	226	44.8	298	14.5	-21	55.4	142	59.7	+26	34.6	304	33.2	-22	51.1	67	48.6	+10	48.3		
7	241	47.3	313	13.6		55.1	158	01.9		34.6	319	35.1		51.0	82	51.2		48.4		
8	256	49.8	328	12.8		54.9	173	04.1		34.5	334	37.0		51.0	97	53.9		48.5		
9	271	52.2	343	11.9		54.6	188	06.3		34.5	349	38.9		51.0	112	56.5		48.6		
10	286	54.7	358	11.1		54.3	203	08.5		34.4	4	40.8		50.9	127	59.1		48.6		
11	301	57.2	13	10.2	-21	54.1	218	10.8	+26	34.4	19	42.7	-22	50.9	143	01.8	+10	48.7		
12	316	59.6	28	09.4	-21	53.8	233	13.0	+26	34.4	34	44.7	-22	50.8	158	04.4	+10	48.8		
13	332	02.1	43	08.5		53.5	248	15.2		34.3	49	46.6		50.8	173	07.1		48.9		
14	347	04.6	58	07.7		53.2	263	17.4		34.3	64	48.5		50.8	188	09.7		48.9		
15	2	07.0	73	06.8		53.0	278	19.6		34.3	79	50.4		50.7	203	12.3		49.0		
16	17	09.5	88	06.0		52.7	293	21.8		34.2	94	52.3		50.7	218	15.0		49.1		
17	32	12.0	103	05.1	-21	52.4	308	24.0	+26	34.2	109	54.2	-22	50.6	233	17.6	+10	49.2		
18	47	14.4	118	04.3	-21	52.1	323	26.2	+26	34.2	124	56.1	-22	50.6	248	20.2	+10	49.2		
19	62	16.9	133	03.4		51.9	338	28.4		34.1	139	58.0		50.6	263	22.9		49.3		
20	77	19.3	148	02.6		51.6	353	30.6		34.1	154	59.9		50.5	278	25.5		49.4		
21	92	21.8	163	01.7		51.3	8	32.8		34.1	170	01.8		50.5	293	28.1		49.5		
22	107	24.3	178	00.9		51.0	23	35.0		34.0	185	03.7		50.4	308	30.8		49.5		
23	122	26.7	193	00.0		50.7	38	37.2		34.0	200	05.6		50.4	323	33.4		49.6		
24	137	29.2	207	59.2	-21	50.4	53	39.4	+26	34.0	215	07.5	-22	50.4	338	36.1	+10	49.7		
Dif	—		-8		+3		+22		0		+19		0		+26		+			

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna							
	SD: 16:2 PMG: 12 ^h 14 ^m 2			Edad: 0 ^d 8 PHE { 4 ^h : 57/8 12 ^h : 57/9 20 ^h : 58/1 R°: 46 ^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	27.8	-15	166	23.3	-11	42.4	60 N	6	23	7	13	7	58	8	20	0	18	40	96
1	191	27.8		180	54.7 ¹²⁴		27.7 ¹⁴⁷	58	20	07	50			14	4		44	92		
2	206	27.7		195	26.1 ¹²⁴	-11	13.0 ¹⁴⁷	56	18	7	02	42		10	6		47	89		
3	221	27.7		209	57.5 ¹²⁴	-10	58.2 ¹⁴⁸	54	16	6	58	35		05	10		51	85		
4	236	27.7		224	29.0 ¹²⁵		43.3 ¹⁴⁹	52	14	54	29			8	01	13	54	82		
5	251	27.6	-15	239	00.5 ¹²⁵	-10	28.4 ¹⁴⁹	50	6	11	6	50	7	24	7	58	14	18	56	80
6	266	27.6	-15	253	32.0 ¹²⁵	-10	13.4 ¹⁵⁰	45	6	06	6	41	7	12	7	50	20	19	02	74
7	281	27.6		268	03.6 ¹²⁶	-9	58.4 ¹⁵⁰	40	6	02	34	7	02	43	24		07	70		
8	296	27.5		282	35.1 ¹²⁵		43.3 ¹⁵¹	35	5	57	27	6	54	37	28		11	66		
9	311	27.5		297	06.7 ¹²⁶		28.1 ¹⁵²	30	53	21	46			32	31		14	63		
10	326	27.5		311	38.4 ¹²⁷	-9	12.9 ¹⁵²	20	44	10	33			24	36		20	57		
11	341	27.5	-15	326	10.0 ¹²⁶	-8	57.7 ¹⁵²	10 N	5	35	6	00	6	22	7	16	42	19	26	51
12	356	27.4	-15	340	41.7 ¹²⁷	-8	42.4 ¹⁵³	0	5	24	5	49	6	11	7	09	46	19	31	46
13	11	27.4		355	13.4 ¹²⁷		27.0 ¹⁵⁴	10 S	5	12	38	6	00	7	01	52		36	41	
14	26	27.4		9	45.1 ¹²⁷	-8	11.6 ¹⁵⁴	20	4	58	25	5	48	6	53	57		41	36	
15	41	27.3		24	16.8 ¹²⁷	-7	56.1 ¹⁵⁵	30	38	5	09	34		44	63		47	30		
16	56	27.3		38	48.6 ¹²⁸		40.6 ¹⁵⁵	35	26	4	59	26		39	66		50	27		
17	71	27.3	-15	53	20.3 ¹²⁷	-7	25.0 ¹⁵⁶	40	4	12	4	47	5	17	6	33	70	19	54	23
18	86	27.3	-15	67	52.1 ¹²⁸	-7	09.4 ¹⁵⁶	45	3	53	4	34	5	06	6	26	75	19	58	20
19	101	27.2	-15	82	23.9 ¹²⁸	-6	53.8 ¹⁵⁶	50	29	16	4	53		18	80		20	03	15	
20	116	27.2	-14	96	55.7 ¹²⁸		38.1 ¹⁵⁷	52	17	4	08	47		14	83		06	12		
21	131	27.2		111	27.6 ¹²⁹		22.4 ¹⁵⁷	54	3	03	3	58	40		10	85		08	10	
22	146	27.2		125	59.4 ¹²⁸	-6	06.6 ¹⁵⁸	56	2	46	48	32		05	89		11	7		
23	161	27.1		140	31.3 ¹²⁹	-5	50.8 ¹⁵⁸	58	2	25	35	24		6	00	92		14	4	
24	176	27.1	-14	155	03.1 ¹²⁸	-5	34.9 ¹⁵⁹	60 S	1	56	3	20	4	14	5	54	96	20	18	0
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 14 ^h 47 ^m 6			Mag: -3.9 PMG: 10 ^h 09 ^m			Mag: -0.4 PMG: 20 ^h 22 ^m			Mag: -1.9 PMG: 9 ^h 38 ^m			Mag: +0.3 PMG: 1 ^h 25 ^m							
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec						
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	137	29.2		207	59.2	-21	50.4		53	39.4	+26	34.0	215	07.5	-22	50.4	338	36.1	+10	49.7
1	152	31.7		222	58.3		50.2		68	41.6		33.9	230	09.4		50.3	353	38.7		49.8
2	167	34.1		237	57.5		49.9		83	43.7		33.9	245	11.4		50.3	8	41.3		49.8
3	182	36.6		252	56.7		49.6		98	45.9		33.8	260	13.3		50.2	23	44.0		49.9
4	197	39.1		267	55.8		49.3		113	48.1		33.8	275	15.2		50.2	38	46.6		50.0
5	212	41.5		282	55.0	-21	49.0		128	50.3	+26	33.8	290	17.1	-22	50.2	53	49.3	+10	50.1
6	227	44.0		297	54.1	-21	48.7		143	52.5	+26	33.7	305	19.0	-22	50.1	68	51.9	+10	50.1
7	242	46.4		312	53.3		48.4		158	54.7		33.7	320	20.9		50.1	83	54.5		50.2
8	257	48.9		327	52.4		48.1		173	56.9		33.7	335	22.8		50.0	98	57.2		50.3
9	272	51.4		342	51.6		47.8		188	59.0		33.6	350	24.7		50.0	113	59.8		50.4
10	287	53.8		357	50.7		47.5		204	01.2		33.6	5	26.6		50.0	129	02.4		50.4
11	302	56.3		12	49.9	-21	47.2		219	03.4	+26	33.6	20	28.5	-22	49.9	144	05.1	+10	50.5
12	317	58.8		27	49.1	-21	46.9		234	05.6	+26	33.5	35	30.4	-22	49.9	159	07.7	+10	50.6
13	333	01.2		42	48.2		46.6		249	07.8		33.5	50	32.4		49.8	174	10.4		50.7
14	348	03.7		57	47.4		46.3		264	09.9		33.5	65	34.3		49.8	189	13.0		50.7
15	3	06.2		72	46.5		46.0		279	12.1		33.4	80	36.2		49.8	204	15.6		50.8
16	18	08.6		87	45.7		45.7		294	14.3		33.4	95	38.1		49.7	219	18.3		50.9
17	33	11.1		102	44.8	-21	45.4		309	16.4	+26	33.4	110	40.0	-22	49.7	234	20.9	+10	51.0
18	48	13.6		117	44.0	-21	45.1		324	18.6	+26	33.3	125	41.9	-22	49.6	249	23.6	+10	51.0
19	63	16.0		132	43.2		44.8		339	20.8		33.3	140	43.8		49.6	264	26.2		51.1
20	78	18.5		147	42.3		44.5		354	22.9		33.3	155	45.7		49.6	279	28.8		51.2
21	93	20.9		162	41.5		44.2		9	25.1		33.2	170	47.6		49.5	294	31.5		51.3
22	108	23.4		177	40.6		43.9		24	27.3		33.2	185	49.5		49.5	309	34.1		51.3
23	123	25.9		192	39.8		43.6		39	29.4		33.1	200	51.5		49.4	324	36.8		51.4
24	138	28.3		207	38.9	-21	43.3		54	31.6	+26	33.1	215	53.4	-22	49.4	339	39.4	+10	51.5
Dif	—			-8			+3	+22			0	+19			0	+26			+1	

UT	SOL				● LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16:2 PMG: 12 ^h 14 ^m 2				Edad: 1 ^d 8 PHE { 4 ^h : 58:2 12 ^h : 58:4 20 ^h : 58:5 R°: 47 ^m													
	hG ☉		Dec		hG ☾		Dif				Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m		
0	176	27.1	-14	56.4	155	03.1	-5	34.9	60 N	16 34	17 19	18 09	8 20 0	20 16 97				
1	191	27.1		55.6	169	35.0 ¹²⁹		19.1 ¹⁵⁸	58	42	24	11	18 3	16 93				
2	206	27.1		54.8	184	06.9 ¹²⁹	-5	03.2 ¹⁵⁹	56	49	29	13	16 7	16 90				
3	221	27.0		54.0	198	38.8 ¹²⁹	-4	47.2 ¹⁶⁰	54	16 56	33	15	15 9	16 87				
4	236	27.0		53.2	213	10.7 ¹²⁹		31.2 ¹⁶⁰	52	17 02	37	17	14 11	16 84				
5	251	27.0	-14	52.4	227	42.6 ¹²⁹	-4	15.2 ¹⁶⁰	50	17 07	17 41	18 19	8 12 14	20 16 81				
6	266	27.0	-14	51.6	242	14.5 ¹²⁹	-3	59.2 ¹⁶⁰	45	17 18	17 49	18 24	8 10 19	20 16 76				
7	281	26.9		50.8	256	46.4 ¹²⁹		43.1 ¹⁶¹	40	28	17 56	28	07 24	17 70				
8	296	26.9		50.0	271	18.3 ¹²⁹		27.0 ¹⁶¹	35	36	18 02	32	05 28	17 66				
9	311	26.9		49.2	285	50.2 ¹²⁹	-3	10.9 ¹⁶¹	30	43	08	36	03 31	17 63				
10	326	26.9		48.4	300	22.1 ¹²⁹	-2	54.8 ¹⁶¹	20	17 56	19	45	8 00 37	17 57				
11	341	26.8	-14	47.6	314	54.0 ¹²⁹	-2	38.6 ¹⁶²	10 N	18 07	18 29	18 54	7 58 41	20 17 52				
12	356	26.8	-14	46.8	329	26.0 ¹³⁰	-2	22.4 ¹⁶²	0	18 18	18 39	19 04	7 55 47	20 17 47				
13	11	26.8		46.0	343	57.9 ¹²⁹	-2	06.2 ¹⁶²	10 S	28	18 50	16	53 51	17 42				
14	26	26.8		45.2	358	29.8 ¹²⁹	-1	50.0 ¹⁶²	20	40	19 03	30	50 57	17 37				
15	41	26.8		44.4	13	01.7 ¹²⁹		33.7 ¹⁶³	30	18 53	18	19 48	47 63	17 31				
16	56	26.7		43.6	27	33.6 ¹²⁹		17.5 ¹⁶²	35	19 01	28	20 00	45 66	17 28				
17	71	26.7	-14	42.8	42	05.4 ¹²⁸	-1	01.2 ¹⁶³	40	19 10	19 39	20 14	7 43 70	20 17 24				
18	86	26.7	-14	42.0	56	37.3 ¹²⁹	-0	44.9 ¹⁶³	45	19 20	19 52	20 32	7 41 75	20 18 19				
19	101	26.7		41.2	71	09.2 ¹²⁹		28.7 ¹⁶²	50	33	20 09	20 55	38 80	18 14				
20	116	26.7		40.4	85	41.0 ¹²⁸	-0	12.4 ¹⁶³	52	39	17	21 07	37 83	18 12				
21	131	26.7		39.6	100	12.9 ¹²⁹	+0	04.0 ¹⁶⁴	54	45	26	20	35 86	18 9				
22	146	26.6		38.8	114	44.7 ¹²⁸		20.3 ¹⁶³	56	19 52	36	36	34 89	18 6				
23	161	26.6		38.0	129	16.5 ¹²⁸		36.6 ¹⁶³	58	20 01	20 48	21 56	32 93	18 3				
24	176	26.6	-14	37.2	143	48.3 ¹²⁸	+0	52.9 ¹⁶³	60 S	20 10	21 02	22 22	7 30 96	20 18 **				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 14 ^h 43 ^m 7		Mag: -3.9 PMG: 10 ^h 10 ^m				Mag: -0.3 PMG: 20 ^h 19 ^m				Mag: -1.9 PMG: 9 ^h 35 ^m				Mag: +0.3 PMG: 1 ^h 21 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♎		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	138	28.3	207	38.9	-21	43.3	54	31.6	+26	33.1	215	53.4	-22	49.4	339	39.4	+10	51.5
1	153	30.8	222	38.1		43.0	69	33.8		33.1	230	55.3		49.4	354	42.0		51.6
2	168	33.3	237	37.3		42.6	84	35.9		33.0	245	57.2		49.3	9	44.7		51.6
3	183	35.7	252	36.4		42.3	99	38.1		33.0	260	59.1		49.3	24	47.3		51.7
4	198	38.2	267	35.6		42.0	114	40.2		33.0	276	01.0		49.2	39	50.0		51.8
5	213	40.7	282	34.7	-21	41.7	129	42.4	+26	32.9	291	02.9	-22	49.2	54	52.6	+10	51.9
6	228	43.1	297	33.9	-21	41.4	144	44.5	+26	32.9	306	04.8	-22	49.2	69	55.2	+10	51.9
7	243	45.6	312	33.1		41.0	159	46.7		32.9	321	06.7		49.1	84	57.9		52.0
8	258	48.0	327	32.2		40.7	174	48.8		32.8	336	08.7		49.1	100	00.5		52.1
9	273	50.5	342	31.4		40.4	189	51.0		32.8	351	10.6		49.0	115	03.2		52.2
10	288	53.0	357	30.5		40.1	204	53.1		32.8	6	12.5		49.0	130	05.8		52.2
11	303	55.4	12	29.7	-21	39.8	219	55.3	+26	32.7	21	14.4	-22	48.9	145	08.4	+10	52.3
12	318	57.9	27	28.9	-21	39.4	234	57.4	+26	32.7	36	16.3	-22	48.9	160	11.1	+10	52.4
13	334	00.4	42	28.0		39.1	249	59.6		32.7	51	18.2		48.9	175	13.7		52.5
14	349	02.8	57	27.2		38.8	265	01.7		32.6	66	20.1		48.8	190	16.4		52.5
15	4	05.3	72	26.4		38.5	280	03.9		32.6	81	22.0		48.8	205	19.0		52.6
16	19	07.8	87	25.5		38.1	295	06.0		32.6	96	24.0		48.7	220	21.6		52.7
17	34	10.2	102	24.7	-21	37.8	310	08.1	+26	32.5	111	25.9	-22	48.7	235	24.3	+10	52.8
18	49	12.7	117	23.8	-21	37.5	325	10.3	+26	32.5	126	27.8	-22	48.7	250	26.9	+10	52.8
19	64	15.2	132	23.0		37.1	340	12.4		32.5	141	29.7		48.6	265	29.6		52.9
20	79	17.6	147	22.2		36.8	355	14.6		32.4	156	31.6		48.6	280	32.2		53.0
21	94	20.1	162	21.3		36.5	10	16.7		32.4	171	33.5		48.5	295	34.8		53.1
22	109	22.5	177	20.5		36.1	25	18.8		32.4	186	35.4		48.5	310	37.5		53.1
23	124	25.0	192	19.7		35.8	40	21.0		32.3	201	37.4		48.5	325	40.1		53.2
24	139	27.5	207	18.8	-21	35.4	55	23.1	+26	32.3	216	39.3	-22	48.4	340	42.8	+10	53.3
Dif	—		-8		+3		+21		0		+19		0		+26		+1	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'2			Edad: 2 ^d 8 PHE {	SD: 15'9			Náutico	Civil		Hora	R°	Hora	R°
	PMG: 12 ^h 14 ^m 2				PMG: 14 ^h 53 ^m									
h	hG ☉	Dec		hG ☾	Dif	Dec	Dif	h m	h m	h m	h m m	h m m	h m m	
0	176	26.6	-14 37.2	143	48.3	+0 52.9	60 N	6 19	7 08	7 53	8 20 0	21 53 100		
1	191	26.6		158	20.1 ¹²⁸	+1 09.2 ¹⁶³	58	16	7 03	45	21 4	49 96		
2	206	26.6		172	51.8 ¹²⁷	25.6 ¹⁶⁴	56	14	6 58	38	23 7	46 92		
3	221	26.6		187	23.6 ¹²⁸	41.9 ¹⁶³	54	12	54	32	24 10	43 88		
4	236	26.5		201	55.3 ¹²⁷	+1 58.2 ¹⁶³	52	10	50	26	25 13	40 86		
5	251	26.5	-14 33.1	216	27.0 ¹²⁷	+2 14.6 ¹⁶⁴	50	6 08	6 47	7 21	8 26 15	21 37 83		
6	266	26.5	-14 32.3	230	58.7 ¹²⁷	+2 30.9 ¹⁶³	45	6 04	6 39	7 09	8 29 20	21 32 77		
7	281	26.5		245	30.3 ¹²⁶	+2 47.2 ¹⁶³	40	6 00	32	7 00	31 25	27 73		
8	296	26.5		260	01.9 ¹²⁶	+3 03.5 ¹⁶³	35	5 56	26	6 52	33 28	23 69		
9	311	26.5		274	33.5 ¹²⁶	19.8 ¹⁶³	30	52	20	45	34 32	20 65		
10	326	26.5		289	05.1 ¹²⁶	36.1 ¹⁶³	20	43	10	32	37 38	14 59		
11	341	26.4	-14 28.3	303	36.6 ¹²⁵	+3 52.4 ¹⁶³	10 N	5 35	6 00	6 21	8 39 43	21 09 54		
12	356	26.4	-14 27.5	318	08.1 ¹²⁵	+4 08.6 ¹⁶²	0	5 25	5 49	6 11	8 42 48	21 04 49		
13	11	26.4		332	39.6 ¹²⁵	24.9 ¹⁶³	10 S	5 13	38	6 00	44 53	20 59 44		
14	26	26.4		347	11.0 ¹²⁴	41.1 ¹⁶²	20	4 59	26	5 49	47 58	54 39		
15	41	26.4		1	42.4 ¹²⁴	+4 57.3 ¹⁶²	30	40	10	36	50 64	48 33		
16	56	26.4		16	13.8 ¹²⁴	+5 13.5 ¹⁶²	35	29	5 01	28	51 68	45 30		
17	71	26.4	-14 23.4	30	45.2 ¹²⁴	+5 29.7 ¹⁶²	40	4 15	4 50	5 19	8 53 72	20 41 26		
18	86	26.4	-14 22.6	45	16.4 ¹²²	+5 45.9 ¹⁶²	45	3 57	4 37	5 09	8 56 76	20 37 21		
19	101	26.3		59	47.7 ¹²³	+6 02.0 ¹⁶¹	50	34	20	4 56	8 58 83	32 16		
20	116	26.3		74	18.9 ¹²²	18.1 ¹⁶¹	52	22	12	51	9 00 85	30 13		
21	131	26.3		88	50.1 ¹²²	34.2 ¹⁶¹	54	3 09	4 03	44	01 88	27 11		
22	146	26.3		103	21.2 ¹²¹	+6 50.2 ¹⁶⁰	56	2 53	3 53	37	03 91	24 8		
23	161	26.3		117	52.3 ¹²¹	+7 06.3 ¹⁶¹	58	33	41	29	05 94	21 4		
24	176	26.3	-14 17.7	132	23.3 ¹²⁰	+7 22.3 ¹⁶⁰	60 S	2 07	3 27	4 19	9 06 99	20 17 1		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG 14 ^h 39 ^m 8		Mag: -3.9 PMG: 10 ^h 11 ^m			Mag: -0.3 PMG: 20 ^h 16 ^m			Mag: -1.9 PMG: 9 ^h 32 ^m			Mag: +0.3 PMG: 1 ^h 17 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	139	27.5	207	18.8	-21 35.4	55	23.1	+26 32.3	216	39.3	-22 48.4	340	42.8	+10 53.3
1	154	29.9	222	18.0	35.1	70	25.2	32.3	231	41.2	48.4	355	45.4	53.4
2	169	32.4	237	17.1	34.8	85	27.4	32.2	246	43.1	48.3	10	48.1	53.5
3	184	34.9	252	16.3	34.4	100	29.5	32.2	261	45.0	48.3	25	50.7	53.5
4	199	37.3	267	15.5	34.1	115	31.6	32.1	276	46.9	48.2	40	53.3	53.6
5	214	39.8	282	14.6	-21 33.7	130	33.7	+26 32.1	291	48.8	-22 48.2	55	56.0	+10 53.7
6	229	42.3	297	13.8	-21 33.4	145	35.9	+26 32.1	306	50.8	-22 48.2	70	58.6	+10 53.8
7	244	44.7	312	13.0	33.0	160	38.0	32.0	321	52.7	48.1	86	01.3	53.8
8	259	47.2	327	12.1	32.7	175	40.1	32.0	336	54.6	48.1	101	03.9	53.9
9	274	49.7	342	11.3	32.3	190	42.2	32.0	351	56.5	48.0	116	06.5	54.0
10	289	52.1	357	10.5	32.0	205	44.3	31.9	6	58.4	48.0	131	09.2	54.1
11	304	54.6	12	09.6	-21 31.6	220	46.4	+26 31.9	22	00.3	-22 48.0	146	11.8	+10 54.1
12	319	57.0	27	08.8	-21 31.3	235	48.6	+26 31.9	37	02.2	-22 47.9	161	14.5	+10 54.2
13	334	59.5	42	08.0	30.9	250	50.7	31.8	52	04.2	47.9	176	17.1	54.3
14	350	02.0	57	07.1	30.6	265	52.8	31.8	67	06.1	47.8	191	19.8	54.4
15	5	04.4	72	06.3	30.2	280	54.9	31.8	82	08.0	47.8	206	22.4	54.4
16	20	06.9	87	05.5	29.9	295	57.0	31.7	97	09.9	47.8	221	25.0	54.5
17	35	09.4	102	04.7	-21 29.5	310	59.1	+26 31.7	112	11.8	-22 47.7	236	27.7	+10 54.6
18	50	11.8	117	03.8	-21 29.2	326	01.2	+26 31.7	127	13.7	-22 47.7	251	30.3	+10 54.7
19	65	14.3	132	03.0	28.8	341	03.3	31.6	142	15.7	47.6	266	33.0	54.7
20	80	16.8	147	02.2	28.4	356	05.4	31.6	157	17.6	47.6	281	35.6	54.8
21	95	19.2	162	01.3	28.1	11	07.6	31.6	172	19.5	47.5	296	38.3	54.9
22	110	21.7	177	00.5	27.7	26	09.7	31.5	187	21.4	47.5	311	40.9	55.0
23	125	24.1	191	59.7	27.3	41	11.8	31.5	202	23.3	47.5	326	43.5	55.0
24	140	26.6	206	58.8	-21 27.0	56	13.9	+26 31.5	217	25.2	-22 47.4	341	46.2	+10 55.1
Dif	—		-8 +4			+21 0			+19 0			+26 +1		

UT	SOL				● LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna						
	SD: 16:2 PMG: 12 ^h 14 ^m 3				Edad: 3 ^d 8 PHE { 4 ^h : 58'9 12 ^h : 59'0 20 ^h : 59'0 R°: 51 ^m																	
	hG ☉		Dec		hG ☾		Dif							Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	h	m	h	m	
0	176	26.3	-14	17.7	132	23.3	+7	22.3	60 N	16	39	17	24	18	13	8	20	1	23	33	106	
1	191	26.3		16.9	146	54.3 ¹²⁰		38.2 ¹⁵⁹	58	47		29		15		25	5		25	100		
2	206	26.3		16.1	161	25.3 ¹²⁰	+7	54.2 ¹⁶⁰	56	16	54	33		17		30	9		18	95		
3	221	26.3		15.3	175	56.2 ¹¹⁹	+8	10.1 ¹⁵⁹	54	17	00	37		19		34	12		11	92		
4	236	26.3		14.5	190	27.0 ¹¹⁸		25.9 ¹⁵⁸	52	05		41		21		38	15		06	88		
5	251	26.3	-14	13.7	204	57.8 ¹¹⁸	+8	41.7 ¹⁵⁸	50	17	10	17	44	18	22	8	41	18	23	00	86	
6	266	26.3	-14	12.8	219	28.6 ¹¹⁸	+8	57.5 ¹⁵⁸	45	17	21	17	52	18	26	8	49	23	22	49	79	
7	281	26.2		12.0	233	59.3 ¹¹⁷	+9	13.3 ¹⁵⁸	40	30		17	58	30		8	56	27		40	74	
8	296	26.2		11.2	248	29.9 ¹¹⁶		28.9 ¹⁵⁶	35	38		18	04	34		9	01	31		32	70	
9	311	26.2		10.4	263	00.5 ¹¹⁶	+9	44.6 ¹⁵⁷	30		45		10	38		06	35		25	67		
10	326	26.2		09.6	277	31.0 ¹¹⁵	+10	00.2 ¹⁵⁶	20	17	57		20	46		15	40		13	61		
11	341	26.2	-14	08.8	292	01.5 ¹¹⁵	+10	15.8 ¹⁵⁶	10 N	18	08		18	29	18	54	9	22	46	22	03	56
12	356	26.2	-14	07.9	306	31.9 ¹¹⁴	+10	31.3 ¹⁵⁵	0	18	18		18	39	19	04	9	30	50	21	53	52
13	11	26.2		07.1	321	02.2 ¹¹³	+10	46.7 ¹⁵⁴	10 S		28		18	50	15		37	55		43	48	
14	26	26.2		06.3	335	32.5 ¹¹³	+11	02.1 ¹⁵⁴	20	39		19	02	29		45	60		33	42		
15	41	26.2		05.5	350	02.7 ¹¹²		17.5 ¹⁵⁴	30	51		17		46		54	66		21	37		
16	56	26.2		04.7	4	32.9 ¹¹²		32.8 ¹⁵³	35	18	59		26	19	58		9	59	70		15	33
17	71	26.2	-14	03.8	19	03.0 ¹¹¹	+11	48.0 ¹⁵²	40	19	07		19	36	20	11	10	05	74	21	07	30
18	86	26.2	-14	03.0	33	33.0 ¹¹⁰	+12	03.2 ¹⁵²	45	19	17		19	49	20	28	10	12	79	20	58	25
19	101	26.2		02.2	48	02.9 ¹⁰⁹		18.3 ¹⁵¹	50	29		20	05	20	51		21	84		48	19	
20	116	26.2		01.4	62	32.8 ¹⁰⁹		33.4 ¹⁵¹	52	35		13		21	02		25	87		43	17	
21	131	26.2	-14	00.5	77	02.6 ¹⁰⁸	+12	48.4 ¹⁵⁰	54	41		21		14		29	90		38	13		
22	146	26.2	-13	59.7	91	32.4 ¹⁰⁸	+13	03.3 ¹⁴⁹	56		48		31	30		34	94		32	10		
23	161	26.2		58.9	106	02.1 ¹⁰⁷		18.2 ¹⁴⁹	58	19	56		43	21	48		39	99		25	6	
24	176	26.2	-13	58.1	120	31.7 ¹⁰⁶	+13	33.0 ¹⁴⁸	60 S	20	04		20	56	22	12	10	45	104	20	18	1
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO					
	PMG: 14 ^h 35 ^m 8				Mag: -3.9 PMG: 10 ^h 13 ^m				Mag: -0.3 PMG: 20 ^h 12 ^m				Mag: -1.9 PMG: 9 ^h 29 ^m				Mag: +0.3 PMG: 1 ^h 13 ^m					
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♊		Dec		hG ♉		Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	140	26.6	206	58.8	-21	27.0	56	13.9	+26	31.5	217	25.2	-22	47.4	341	46.2	+10	55.1				
1	155	29.1	221	58.0		26.6	71	16.0		31.4	232	27.2		47.4	356	48.8		55.2				
2	170	31.5	236	57.2		26.2	86	18.1		31.4	247	29.1		47.3	11	51.5		55.3				
3	185	34.0	251	56.3		25.9	101	20.2		31.4	262	31.0		47.3	26	54.1		55.4				
4	200	36.5	266	55.5		25.5	116	22.2		31.3	277	32.9		47.2	41	56.8		55.4				
5	215	38.9	281	54.7	-21	25.1	131	24.3	+26	31.3	292	34.8	-22	47.2	56	59.4	+10	55.5				
6	230	41.4	296	53.9	-21	24.8	146	26.4	+26	31.3	307	36.8	-22	47.2	72	02.0	+10	55.6				
7	245	43.9	311	53.0		24.4	161	28.5		31.2	322	38.7		47.1	87	04.7		55.7				
8	260	46.3	326	52.2		24.0	176	30.6		31.2	337	40.6		47.1	102	07.3		55.7				
9	275	48.8	341	51.4		23.6	191	32.7		31.2	352	42.5		47.0	117	10.0		55.8				
10	290	51.3	356	50.6		23.3	206	34.8		31.1	7	44.4		47.0	132	12.6		55.9				
11	305	53.7	11	49.7	-21	22.9	221	36.9	+26	31.1	22	46.3	-22	47.0	147	15.3	+10	56.0				
12	320	56.2	26	48.9	-21	22.5	236	39.0	+26	31.1	37	48.3	-22	46.9	162	17.9	+10	56.0				
13	335	58.6	41	48.1		22.1	251	41.1		31.0	52	50.2		46.9	177	20.5		56.1				
14	351	01.1	56	47.2		21.7	266	43.1		31.0	67	52.1		46.8	192	23.2		56.2				
15	6	03.6	71	46.4		21.4	281	45.2		31.0	82	54.0		46.8	207	25.8		56.3				
16	21	06.0	86	45.6		21.0	296	47.3		30.9	97	55.9		46.7	222	28.5		56.3				
17	36	08.5	101	44.8	-21	20.6	311	49.4	+26	30.9	112	57.9	-22	46.7	237	31.1	+10	56.4				
18	51	11.0	116	43.9	-21	20.2	326	51.5	+26	30.9	127	59.8	-22	46.7	252	33.8	+10	56.5				
19	66	13.4	131	43.1		19.8	341	53.5		30.8	143	01.7		46.6	267	36.4		56.6				
20	81	15.9	146	42.3		19.4	356	55.6		30.8	158	03.6		46.6	282	39.1		56.7				
21	96	18.4	161	41.5		19.0	11	57.7		30.8	173	05.5		46.5	297	41.7		56.7				
22	111	20.8	176	40.7		18.7	26	59.8		30.7	188	07.5		46.5	312	44.3		56.8				
23	126	23.3	191	39.8		18.3	42	01.8		30.7	203	09.4		46.5	327	47.0		56.9				
24	141	25.7	206	39.0	-21	17.9	57	03.9	+26	30.7	218	11.3	-22	46.4	342	49.6	+10	57.0				
Dif	—				-8 +4				+21 0				+19 0				+26 +1					

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16:2 PMG: 12 ^h 14 ^m 3			Edad: 4 ^d 8 PHE { SD: 16:1 PMG: 16 ^h 32 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	176	26.2	-13	58.1	120	31.7	+13	33.0	60 N	6 14	7 03	7 48	8 21	3	***	***
1	191	26.2		57.3	135	01.2 ¹⁰⁵	+13	47.7 ¹⁴⁷	58	12	6 59	40	30	9	***	***
2	206	26.2		56.4	149	30.7 ¹⁰⁵	+14	02.4 ¹⁴⁷	56	10	54	34	39	12	***	***
3	221	26.2		55.6	164	00.0 ¹⁰³		17.0 ¹⁴⁶	54	09	50	28	46	16	***	***
4	236	26.2		54.8	178	29.3 ¹⁰³		31.5 ¹⁴⁵	52	07	47	22	53	19	***	***
5	251	26.2	-13	53.9	192	58.6 ¹⁰³	+14	45.9 ¹⁴⁴	50	6 05	6 43	7 17	8 59	22	***	***
6	266	26.2	-13	53.1	207	27.7 ¹⁰¹	+15	00.3 ¹⁴⁴	45	6 01	6 36	7 06	9 12	28	***	***
7	281	26.2		52.3	221	56.8 ¹⁰¹		14.6 ¹⁴³	40	5 58	30	6 58	23	32	23 54	76
8	296	26.2		51.5	236	25.8 ¹⁰⁰		28.8 ¹⁴²	35	54	24	50	32	36	42	73
9	311	26.2		50.6	250	54.7 ⁹⁹		42.9 ¹⁴¹	30	50	18	43	41	39	32	69
10	326	26.2		49.8	265	23.5 ⁹⁸	+15	56.9 ¹⁴⁰	20	43	6 09	31	9 55	45	23 14	64
11	341	26.2	-13	49.0	279	52.3 ⁹⁸	+16	10.9 ¹⁴⁰	10 N	5 34	5 59	6 21	10 08	49	22 59	60
12	356	26.2	-13	48.2	294	20.9 ⁹⁶	+16	24.8 ¹³⁹	0	5 25	5 50	6 11	10 20	53	22 45	55
13	11	26.2		47.3	308	49.5 ⁹⁶		38.5 ¹³⁷	10 S	14	39	6 01	32	58	31	51
14	26	26.2		46.5	323	18.0 ⁹⁵	+16	52.2 ¹³⁷	20	5 00	27	5 50	10 45	63	22 15	48
15	41	26.2		45.7	337	46.4 ⁹⁴	+17	05.8 ¹³⁶	30	4 42	12	37	11 00	68	21 58	42
16	56	26.2		44.8	352	14.7 ⁹³		19.3 ¹³⁵	35	31	5 03	30	09	71	48	39
17	71	26.2	-13	44.0	6	43.0 ⁹³	+17	32.7 ¹³⁴	40	4 18	4 53	5 22	11 19	75	21 37	35
18	86	26.2	-13	43.2	21	11.1 ⁹¹	+17	46.0 ¹³³	45	4 01	4 40	5 12	11 31	80	21 23	31
19	101	26.3		42.3	35	39.2 ⁹¹	+17	59.2 ¹³²	50	3 38	24	5 00	45	86	07	25
20	116	26.3		41.5	50	07.2 ⁹⁰	+18	12.3 ¹³¹	52	27	16	4 54	52	89	21 00	22
21	131	26.3		40.7	64	35.0 ⁸⁸		25.3 ¹³⁰	54	15	4 08	48	11 59	93	20 51	19
22	146	26.3		39.8	79	02.8 ⁸⁸		38.2 ¹²⁹	56	3 00	3 58	41	12 08	97	42	15
23	161	26.3		39.0	93	30.5 ⁸⁷	+18	51.0 ¹²⁸	58	2 41	47	34	18	102	31	10
24	176	26.3	-13	38.2	107	58.1 ⁸⁶	+19	03.7 ¹²⁷	60 S	2 18	3 34	4 25	12 29	109	20 19	4

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 14 ^h 31 ^m 9		Mag: -3.9 PMG: 10 ^h 14 ^m		Mag: -0.3 PMG: 20 ^h 09 ^m		Mag: -1.9 PMG: 9 ^h 26 ^m		Mag: +0.3 PMG: 1 ^h 08 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	141	25.7	206	39.0	-21	17.9	57	03.9	+26	30.7
1	156	28.2	221	38.2		17.5	72	06.0		30.6
2	171	30.7	236	37.4		17.1	87	08.1		30.6
3	186	33.1	251	36.5		16.7	102	10.1		30.6
4	201	35.6	266	35.7		16.3	117	12.2		30.5
5	216	38.1	281	34.9	-21	15.9	132	14.3	+26	30.5
6	231	40.5	296	34.1	-21	15.5	147	16.3	+26	30.5
7	246	43.0	311	33.3		15.1	162	18.4		30.4
8	261	45.5	326	32.4		14.7	177	20.4		30.4
9	276	47.9	341	31.6		14.3	192	22.5		30.4
10	291	50.4	356	30.8		13.9	207	24.6		30.3
11	306	52.9	11	30.0	-21	13.5	222	26.6	+26	30.3
12	321	55.3	26	29.1	-21	13.1	237	28.7	+26	30.3
13	336	57.8	41	28.3		12.7	252	30.7		30.2
14	352	00.2	56	27.5		12.3	267	32.8		30.2
15	7	02.7	71	26.7		11.9	282	34.8		30.2
16	22	05.2	86	25.9		11.4	297	36.9		30.1
17	37	07.6	101	25.1	-21	11.0	312	38.9	+26	30.1
18	52	10.1	116	24.2	-21	10.6	327	41.0	+26	30.1
19	67	12.6	131	23.4		10.2	342	43.0		30.0
20	82	15.0	146	22.6		09.8	357	45.1		30.0
21	97	17.5	161	21.8		09.4	12	47.1		30.0
22	112	20.0	176	21.0		09.0	27	49.2		29.9
23	127	22.4	191	20.2		08.6	42	51.2		29.9
24	142	24.9	206	19.3	-21	08.1	57	53.3	+26	29.9
Dif	—		-8		+4		+21		0	
								+19		0
									+26	
										+1

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 2 PMG: 12 ^h 14 ^m 2			Edad: 5 ^d 8 PHE { 4 ^h : 59/2 12 ^h : 59/2 20 ^h : 59/2 PMG: 17 ^h 27 ^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	176	26.3	-13	38.2	107	58.1	+19	03.7	60 N	16 44	17 29	18 18	8 24 7	1 19 110
1	191	26.3		37.3	122	25.7		16.3	58	52	33	19	39 14	1 05 103
2	206	26.3		36.5	136	53.1		28.8	56	16 58	37	21	8 51 20	0 53 98
3	221	26.3		35.7	151	20.4		41.1	54	17 04	41	23	9 02 24	43 93
4	236	26.3		34.8	165	47.7	+19	53.4	52	09	44	24	12 27	34 89
5	251	26.3	-13	34.0	180	14.8	+20	05.5	50	17 14	17 47	18 25	9 21 30	0 26 86
6	266	26.3	-13	33.2	194	41.9	+20	17.5	45	17 24	17 54	18 29	9 40 35	0 08 81
7	281	26.3		32.3	209	08.9		29.4	40	33	18 01	32	9 55 40	** ** *
8	296	26.4		31.5	223	35.7		41.2	35	40	06	36	10 08 43	** ** *
9	311	26.4		30.7	238	02.5	+20	52.9	30	47	11	39	20 46	** ** *
10	326	26.4		29.8	252	29.2	+21	04.4	20	17 58	21	47	40 50	** ** *
11	341	26.4	-13	29.0	266	55.8	+21	15.8	10 N	18 08	18 30	18 55	10 57 54	23 59 62
12	356	26.4	-13	28.1	281	22.3	+21	27.1	0	18 18	18 39	19 04	11 13 58	23 40 60
13	11	26.4		27.3	295	48.7		38.2	10 S	27	18 49	14	30 61	22 57
14	26	26.4		26.5	310	15.0	+21	49.3	20	38	19 01	27	11 48 65	23 03 53
15	41	26.4		25.6	324	41.2	+22	00.2	30	50	15	45	12 08 70	22 40 50
16	56	26.5		24.8	339	07.4		10.9	35	18 57	23	19 55	20 72	27 47
17	71	26.5	-13	24.0	353	33.4	+22	21.5	40	19 05	19 34	20 08	12 34 76	22 12 44
18	86	26.5	-13	23.1	7	59.3	+22	32.0	45	19 14	19 46	20 25	12 51 79	21 54 41
19	101	26.5		22.3	22	25.2		42.4	50	26	20 01	46	13 11 86	32 36
20	116	26.5		21.4	36	50.9	+22	52.6	52	31	09	20 57	21 88	22 33
21	131	26.5		20.6	51	16.6	+23	02.7	54	37	17	21 09	32 92	21 10 29
22	146	26.5		19.7	65	42.2		12.6	56	43	26	23	13 45 97	20 57 25
23	161	26.6		18.9	80	07.6		22.4	58	51	37	21 40	14 00 103	41 19
24	176	26.6	-13	18.1	94	33.0	+23	32.0	60 S	19 59	20 49	22 02	14 18 111	20 23 10

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 14 ^h 28 ^m 0		Mag: -3.9 PMG: 10 ^h 15 ^m		Mag: -0.2 PMG: 20 ^h 06 ^m		Mag: -1.9 PMG: 9 ^h 23 ^m		Mag: +0.3 PMG: 1 ^h 04 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	142	24.9	206	19.3	-21	08.1	57	53.3	+26	29.9	218	57.4	-22	45.4	343	53.1	+10	58.8
1	157	27.4	221	18.5		07.7	72	55.3		29.8	233	59.4		45.3	358	55.8		58.9
2	172	29.8	236	17.7		07.3	87	57.3		29.8	249	01.3		45.3	13	58.4		59.0
3	187	32.3	251	16.9		06.9	102	59.4		29.8	264	03.2		45.3	29	01.1		59.0
4	202	34.7	266	16.1		06.4	118	01.4		29.7	279	05.1		45.2	44	03.7		59.1
5	217	37.2	281	15.3	-21	06.0	133	03.5	+26	29.7	294	07.1	-22	45.2	59	06.3	+10	59.2
6	232	39.7	296	14.4	-21	05.6	148	05.5	+26	29.7	309	09.0	-22	45.1	74	09.0	+10	59.3
7	247	42.1	311	13.6		05.2	163	07.5		29.6	324	10.9		45.1	89	11.6		59.3
8	262	44.6	326	12.8		04.7	178	09.6		29.6	339	12.8		45.0	104	14.3		59.4
9	277	47.1	341	12.0		04.3	193	11.6		29.6	354	14.8		45.0	119	16.9		59.5
10	292	49.5	356	11.2		03.9	208	13.6		29.5	9	16.7		45.0	134	19.6		59.6
11	307	52.0	11	10.4	-21	03.5	223	15.7	+26	29.5	24	18.6	-22	44.9	149	22.2	+10	59.6
12	322	54.5	26	09.6	-21	03.0	238	17.7	+26	29.5	39	20.5	-22	44.9	164	24.9	+10	59.7
13	337	56.9	41	08.8		02.6	253	19.7		29.4	54	22.5		44.8	179	27.5		59.8
14	352	59.4	56	07.9		02.2	268	21.7		29.4	69	24.4		44.8	194	30.2	+10	59.9
15	8	01.8	71	07.1		01.7	283	23.8		29.4	84	26.3		44.7	209	32.8	+11	00.0
16	23	04.3	86	06.3		01.3	298	25.8		29.3	99	28.2		44.7	224	35.5	+11	00.0
17	38	06.8	101	05.5	-21	00.9	313	27.8	+26	29.3	114	30.2	-22	44.7	239	38.1	+11	00.1
18	53	09.2	116	04.7	-21	00.4	328	29.8	+26	29.3	129	32.1	-22	44.6	254	40.7	+11	00.2
19	68	11.7	131	03.9	-21	00.0	343	31.9		29.2	144	34.0		44.6	269	43.4		00.3
20	83	14.2	146	03.1	-20	59.5	358	33.9		29.2	159	35.9		44.5	284	46.0		00.3
21	98	16.6	161	02.3		59.1	13	35.9		29.2	174	37.9		44.5	299	48.7		00.4
22	113	19.1	176	01.5		58.7	28	37.9		29.1	189	39.8		44.4	314	51.3		00.5
23	128	21.6	191	00.6		58.2	43	39.9		29.1	204	41.7		44.4	329	54.0		00.6
24	143	24.0	205	59.8	-20	57.8	58	41.9	+26	29.1	219	43.7	-22	44.4	344	56.6	+11	00.6
Dif	—		-8		+4		+20		0		+19		0		+26		+1	

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16:2 PMG: 12 ^h 14 ^m 2				Edad: 6 ^d 8 PHE { 4 ^h : 59/2 12 ^h : 59/2 20 ^h : 59/2 PMG: 18 ^h 25 ^m R°: 62 ^m												
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	176	26.6	-13	18.1	94	33.0	+23	32.0	60 N	6	10	6	58	7	43	8	31
1	191	26.6		17.2	108	58.3		41.5	58		08		54		35	8	53
2	206	26.6		16.4	123	23.6	+23	50.9	56		06		50		29	9	11
3	221	26.6		15.5	137	48.7	+24	00.1	54		05		46		23		26
4	236	26.6		14.7	152	13.7		09.1	52		04		43		18		39
5	251	26.7	-13	13.8	166	38.7	+24	18.0	50	6	02	6	40	7	14	9	51
6	266	26.7	-13	13.0	181	03.5	+24	26.7	45	5	59	6	33	7	04	10	15
7	281	26.7		12.2	195	28.3		35.3	40		55		27		6	55	35
8	296	26.7		11.3	209	53.0		43.7	35		52		22		48	10	51
9	311	26.7		10.5	224	17.6	+24	52.0	30		49		17		41	11	06
10	326	26.7		09.6	238	42.1	+25	00.1	20		42	6	08		30		30
11	341	26.8	-13	08.8	253	06.6	+25	08.1	10 N	5	34	5	59	6	20	11	51
12	356	26.8	-13	07.9	267	30.9	+25	15.9	0	5	25	5	50	6	11	12	11
13	11	26.8		07.1	281	55.2		23.5	10 S		14		40		6	01	31
14	26	26.8		06.2	296	19.4		30.9	20	5	01		28	5	51	12	53
15	41	26.8		05.4	310	43.5		38.2	30	4	44		14		39	13	18
16	56	26.9		04.5	325	07.6		45.3	35		34	5	05		32		32
17	71	26.9	-13	03.7	339	31.6	+25	52.3	40	4	20	4	55	5	24	13	50
18	86	26.9	-13	02.8	353	55.5	+25	59.1	45	4	04	4	43	5	15	14	10
19	101	26.9		02.0	8	19.3	+26	05.7	50	3	43		28	5	04		37
20	116	27.0		01.1	22	43.1		12.1	52		33		21		4	58	14
21	131	27.0	-13	00.3	37	06.8		18.4	54		20		12		53	15	04
22	146	27.0	-12	59.4	51	30.4		24.5	56	3	06	4	03		46		22
23	161	27.0		58.6	65	54.0		30.4	58	2	49	3	53		39	15	43
24	176	27.0	-12	57.7	80	17.5	+26	36.2	60 S	2	28	3	40	4	30	16	09

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 14 ^h 24 ^m 0		Mag: -3.9 PMG: 10 ^h 17 ^m		Mag: -0.2 PMG: 20 ^h 03 ^m		Mag: -1.9 PMG: 9 ^h 20 ^m		Mag: +0.3 PMG: 1 ^h 00 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	143	24.0	205	59.8	-20	57.8	58	41.9	+26	29.1	219	43.7	-22	44.4	344	56.6	+11	00.6
1	158	26.5	220	59.0		57.3	73	44.0		29.0	234	45.6		44.3	359	59.3		00.7
2	173	29.0	235	58.2		56.9	88	46.0		29.0	249	47.5		44.3	15	01.9		00.8
3	188	31.4	250	57.4		56.4	103	48.0		29.0	264	49.4		44.2	30	04.6		00.9
4	203	33.9	265	56.6		56.0	118	50.0		28.9	279	51.4		44.2	45	07.2		01.0
5	218	36.3	280	55.8	-20	55.5	133	52.0	+26	28.9	294	53.3	-22	44.1	60	09.9	+11	01.0
6	233	38.8	295	55.0	-20	55.1	148	54.0	+26	28.9	309	55.2	-22	44.1	75	12.5	+11	01.1
7	248	41.3	310	54.2		54.6	163	56.0		28.8	324	57.2		44.1	90	15.2		01.2
8	263	43.7	325	53.4		54.2	178	58.0		28.8	339	59.1		44.0	105	17.8		01.3
9	278	46.2	340	52.6		53.7	194	00.0		28.8	355	01.0		44.0	120	20.5		01.3
10	293	48.7	355	51.8		53.3	209	02.0		28.7	10	02.9		43.9	135	23.1		01.4
11	308	51.1	10	51.0	-20	52.8	224	04.0	+26	28.7	25	04.9	-22	43.9	150	25.7	+11	01.5
12	323	53.6	25	50.2	-20	52.4	239	06.0	+26	28.7	40	06.8	-22	43.8	165	28.4	+11	01.6
13	338	56.1	40	49.4		51.9	254	08.0		28.6	55	08.7		43.8	180	31.0		01.6
14	353	58.5	55	48.5		51.4	269	10.0		28.6	70	10.7		43.8	195	33.7		01.7
15	9	01.0	70	47.7		51.0	284	12.0		28.6	85	12.6		43.7	210	36.3		01.8
16	24	03.5	85	46.9		50.5	299	14.0		28.5	100	14.5		43.7	225	39.0		01.9
17	39	05.9	100	46.1	-20	50.1	314	16.0	+26	28.5	115	16.4	-22	43.6	240	41.6	+11	02.0
18	54	08.4	115	45.3	-20	49.6	329	18.0	+26	28.5	130	18.4	-22	43.6	255	44.3	+11	02.0
19	69	10.8	130	44.5		49.1	344	20.0		28.5	145	20.3		43.5	270	46.9		02.1
20	84	13.3	145	43.7		48.7	359	22.0		28.4	160	22.2		43.5	285	49.6		02.2
21	99	15.8	160	42.9		48.2	14	24.0		28.4	175	24.2		43.5	300	52.2		02.3
22	114	18.2	175	42.1		47.7	29	26.0		28.4	190	26.1		43.4	315	54.9		02.3
23	129	20.7	190	41.3		47.3	44	28.0		28.3	205	28.0		43.4	330	57.5		02.4
24	144	23.2	205	40.5	-20	46.8	59	29.9	+26	28.3	220	30.0	-22	43.3	346	00.2	+11	02.5
Dif	—		-8		+5		+20		0		+19		0		+26		+	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 12 ^h 14 ^m 2			Edad: 7 ^d 8 PHE { SD: 16:1 PMG: 19 ^h 27 ^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	27.0	-12 57.7	80	17.5	+26 36.2	55	60 N	16 49	17 34	18 22	8 50 47	4 56 84	
1	191	27.1	56.9	94	40.9	44	41.7	58	16 56	38	24	9 20 53	26 78	
2	206	27.1	56.0	109	04.3	44	47.1	56	17 02	41	25	9 44 54	4 03 75	
3	221	27.1	55.2	123	27.6	43	52.3	52	08	45	26	10 03 56	3 44 73	
4	236	27.1	54.3	137	50.9	43	+26 57.3	50	13	48	27	19 57	28 72	
5	251	27.2	-12 53.5	152	14.1	42	+27 02.2	49	17 17	17 51	18 29	10 33 58	3 14 71	
6	266	27.2	-12 52.6	166	37.2	41	+27 06.8	46	17 27	17 57	18 32	11 02 59	2 46 69	
7	281	27.2	51.8	181	00.4	42	11.3	45	35	18 03	35	24 60	24 68	
8	296	27.2	50.9	195	23.4	40	15.6	43	42	08	38	43 60	2 06 67	
9	311	27.3	50.1	209	46.4	40	19.7	41	48	13	41	11 59 61	1 50 66	
10	326	27.3	49.2	224	09.4	40	23.7	40	17 59	21	47	12 26 62	24 64	
11	341	27.3	-12 48.3	238	32.3	39	+27 27.4	37	18 09	18 30	18 55	12 50 62	1 01 63	
12	356	27.4	-12 47.5	252	55.2	39	+27 30.9	35	18 18	18 39	19 03	13 12 62	0 40 62	
13	11	27.4	46.6	267	18.1	39	34.3	34	27	48	14	34 63	0 19 60	
14	26	27.4	45.8	281	40.9	38	37.5	32	37	18 59	26	13 58 63	** ** *	
15	41	27.4	44.9	296	03.7	38	40.5	30	48	19 13	42	14 26 63	** ** *	
16	56	27.5	44.1	310	26.4	37	43.3	28	18 55	21	19 53	14 42 63	** ** *	
17	71	27.5	-12 43.2	324	49.2	38	+27 45.9	26	19 02	19 31	20 05	15 01 64	23 51 65	
18	86	27.5	-12 42.3	339	11.9	37	+27 48.3	24	19 11	19 43	20 21	15 25 63	23 27 65	
19	101	27.6	41.5	353	34.6	37	50.6	23	22	19 57	41	15 54 64	22 57 66	
20	116	27.6	40.6	7	57.2	36	52.6	20	27	20 04	20 51	16 09 64	42 66	
21	131	27.6	39.8	22	19.9	37	54.4	18	32	12	21 03	27 63	25 66	
22	146	27.6	38.9	36	42.5	36	56.1	17	39	21	16	16 47 63	22 04 67	
23	161	27.7	38.0	51	05.1	36	57.6	15	46	31	33	17 13 63	21 38 67	
24	176	27.7	-12 37.2	65	27.7	36	+27 58.8	12	19 53	20 43	21 52	17 50 62	21 01 69	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 14 ^h 20 ^m 1		Mag: -3.9 PMG: 10 ^h 18 ^m			Mag: -0.2 PMG: 19 ^h 59 ^m			Mag: -1.9 PMG: 9 ^h 17 ^m			Mag: +0.3 PMG: 0 ^h 56 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	144	23.2	205 40.5	-20 46.8	59 29.9	+26 28.3	220 30.0	-22 43.3	346 00.2	+11 02.5				
1	159	25.6	220 39.7	46.3	74 31.9	28.3	235 31.9	43.3	1 02.8	02.6				
2	174	28.1	235 38.9	45.8	89 33.9	28.2	250 33.8	43.2	16 05.5	02.6				
3	189	30.6	250 38.1	45.4	104 35.9	28.2	265 35.8	43.2	31 08.1	02.7				
4	204	33.0	265 37.3	44.9	119 37.9	28.2	280 37.7	43.1	46 10.8	02.8				
5	219	35.5	280 36.5	-20 44.4	134 39.9	+26 28.1	295 39.6	-22 43.1	61 13.4	+11 02.9				
6	234	38.0	295 35.7	-20 43.9	149 41.8	+26 28.1	310 41.5	-22 43.1	76 16.1	+11 03.0				
7	249	40.4	310 34.9	43.5	164 43.8	28.1	325 43.5	43.0	91 18.7	03.0				
8	264	42.9	325 34.1	43.0	179 45.8	28.0	340 45.4	43.0	106 21.4	03.1				
9	279	45.3	340 33.3	42.5	194 47.8	28.0	355 47.3	42.9	121 24.0	03.2				
10	294	47.8	355 32.5	42.0	209 49.8	28.0	10 49.3	42.9	136 26.7	03.3				
11	309	50.3	10 31.7	-20 41.5	224 51.7	+26 27.9	25 51.2	-22 42.8	151 29.3	+11 03.3				
12	324	52.7	25 30.9	-20 41.1	239 53.7	+26 27.9	40 53.1	-22 42.8	166 32.0	+11 03.4				
13	339	55.2	40 30.1	40.6	254 55.7	27.9	55 55.1	42.8	181 34.6	03.5				
14	354	57.7	55 29.3	40.1	269 57.6	27.8	70 57.0	42.7	196 37.2	03.6				
15	10	00.1	70 28.5	39.6	284 59.6	27.8	85 58.9	42.7	211 39.9	03.7				
16	25	02.6	85 27.8	39.1	300 01.6	27.8	101 00.9	42.6	226 42.5	03.7				
17	40	05.1	100 27.0	-20 38.6	315 03.6	+26 27.7	116 02.8	-22 42.6	241 45.2	+11 03.8				
18	55	07.5	115 26.2	-20 38.1	330 05.5	+26 27.7	131 04.7	-22 42.5	256 47.8	+11 03.9				
19	70	10.0	130 25.4	37.7	345 07.5	27.7	146 06.7	42.5	271 50.5	04.0				
20	85	12.5	145 24.6	37.2	0 09.5	27.6	161 08.6	42.4	286 53.1	04.0				
21	100	14.9	160 23.8	36.7	15 11.4	27.6	176 10.5	42.4	301 55.8	04.1				
22	115	17.4	175 23.0	36.2	30 13.4	27.6	191 12.5	42.4	316 58.4	04.2				
23	130	19.8	190 22.2	35.7	45 15.3	27.5	206 14.4	42.3	332 01.1	04.3				
24	145	22.3	205 21.4	-20 35.2	60 17.3	+26 27.5	221 16.3	-22 42.3	347 03.7	+11 04.4				
Dif	—		-8	+5	+20	0	+19	0	+26	+1				

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16/2 PMG: 12 ^h 14 ^m 1			Edad: 8 ^d 8 PHE { SD: 16/1 PMG: 20 ^h 29 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº
h	°	'	°	°	'	°	'	h	m	h	m	h	m	h	m
0	176	27.7	-12	65	27.7	+27	58.8	6	05	6	53	7	37	9	37
1	191	27.7		79	50.3	+27	59.9	04	49		30	10	13	81	5
2	206	27.8		94	12.9	+28	00.8	02	46		25	38	78	5	18
3	221	27.8		108	35.5		01.5	01	43		19	10	59	76	4
4	236	27.8		122	58.0		02.0	6	00	39	14	11	16	74	40
5	251	27.9	-12	137	20.6	+28	02.4	5	59	6	37	7	10	31	73
6	266	27.9	-12	151	43.2	+28	02.5	5	56	6	30	7	01	01	70
7	281	27.9		166	05.8		02.4	53	25	6	53		24	69	32
8	296	28.0		180	28.4		02.2	50	20		46	12	43	68	3
9	311	28.0		194	51.0		01.7	47	15		40	13	00	66	2
10	326	28.0		209	13.6		01.1	41	6	07	29	28	64		28
11	341	28.1	-12	223	36.3	+28	00.2	5	33	5	58	6	20	52	63
12	356	28.1	-12	237	59.0	+27	59.2	5	25	5	50	6	11	14	61
13	11	28.1		252	21.6		58.0	15	40	6	02	14	37	59	1
14	26	28.2		266	44.3		56.6	5	02	29	5	52	15	01	58
15	41	28.2		281	07.1		55.0	4	46	16	41		29	55	27
16	56	28.3		295	29.9		53.2	36	5	08	34	15	45	55	0
17	71	28.3	-12	309	52.7	+27	51.2	4	23	4	58	5	27	05	52
18	86	28.3	-12	324	15.5	+27	49.1	4	08	4	46	5	18	28	50
19	101	28.4		338	38.4		46.7	3	48	32	07	16	58	47	
20	116	28.4		353	01.3		44.2	38	25	5	02	17	13	45	23
21	131	28.4		7	24.2		41.5	26	17	4	57		30	42	31
22	146	28.5		21	47.2		38.6	3	13	4	08	51	17	50	39
23	161	28.5		36	10.2		35.5	2	57	3	58	44	18	16	34
24	176	28.6	-12	50	33.3	+27	32.2	2	37	3	47	4	36	52	24

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 14 ^h 16 ^m 2		Mag: -3.9 PMG: 10 ^h 19 ^m		Mag: -0.2 PMG: 19 ^h 56 ^m		Mag: -2.0 PMG: 9 ^h 14 ^m		Mag: +0.3 PMG: 0 ^h 52 ^m							
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'						
0	145	22.3	205	21.4	-20	35.2	60	17.3	+26	221	16.3					
1	160	24.8	220	20.6		34.7	75	19.3		236	18.3					
2	175	27.2	235	19.8		34.2	90	21.2		251	20.2					
3	190	29.7	250	19.0		33.7	105	23.2		266	22.1					
4	205	32.2	265	18.2		33.2	120	25.1		281	24.1					
5	220	34.6	280	17.4	-20	32.7	135	27.1	+26	296	26.0					
6	235	37.1	295	16.6	-20	32.2	150	29.0	+26	311	28.0					
7	250	39.6	310	15.9		31.7	165	31.0		326	29.9					
8	265	42.0	325	15.1		31.2	180	32.9		341	31.8					
9	280	44.5	340	14.3		30.7	195	34.9		356	33.8					
10	295	46.9	355	13.5		30.2	210	36.8		11	35.7					
11	310	49.4	10	12.7	-20	29.7	225	38.8	+26	26	37.6					
12	325	51.9	25	11.9	-20	29.2	240	40.7	+26	41	39.6					
13	340	54.3	40	11.1		28.7	255	42.7		56	41.5					
14	355	56.8	55	10.3		28.1	270	44.6		71	43.4					
15	10	59.3	70	09.5		27.6	285	46.6		86	45.4					
16	26	01.7	85	08.8		27.1	300	48.5		101	47.3					
17	41	04.2	100	08.0	-20	26.6	315	50.5	+26	116	49.2					
18	56	06.7	115	07.2	-20	26.1	330	52.4	+26	131	51.2					
19	71	09.1	130	06.4		25.6	345	54.3		146	53.1					
20	86	11.6	145	05.6		25.1	0	56.3		161	55.1					
21	101	14.1	160	04.8		24.5	15	58.2		176	57.0					
22	116	16.5	175	04.0		24.0	31	00.1		191	58.9					
23	131	19.0	190	03.3		23.5	46	02.1		207	00.9					
24	146	21.4	205	02.5	-20	23.0	61	04.0	+26	222	02.8					
Dif	—		-8		+5		+19		0		+19		0		+26	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 16:2 PMG: 12 ^h 14 ^m 1			Edad: 9 ^d 8 PHE { 4 ^h : 58/9 12 ^h : 58/8 20 ^h : 58/7 R°: 56 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m		
0	176	28.6	-12	16.4	50	33.3	+27	32.2	60 N	16 55	17 38	18 27	11 05	106	7 01	16		
1	191	28.6		15.6	64	56.5	42	28.7	58	17 01	42	28	34	97	6 32	24		
2	206	28.6		14.7	79	19.7	42	25.1	56	07	45	29	11 56	92	6 09	30		
3	221	28.7		13.8	93	42.9	42	21.2	54	12	49	30	12 15	87	5 50	34		
4	236	28.7		13.0	108	06.2	43	17.2	52	17	51	31	30	84	34	38		
5	251	28.8	-12	12.1	122	29.6	44	+27 13.0	50	17 21	17 54	18 32	12 44	81	5 21	39		
6	266	28.8	-12	11.2	136	53.0	44	+27 08.7	45	17 30	18 00	18 34	13 11	77	4 52	45		
7	281	28.8		10.4	151	16.5	45	+27 04.1	40	37	05	37	33	73	30	48		
8	296	28.9		09.5	165	40.0	45	+26 59.4	35	44	10	39	13 51	70	4 12	49		
9	311	28.9		08.6	180	03.6	46	54.5	30	17 50	14	42	14 06	68	3 56	52		
10	326	29.0		07.7	194	27.3	47	49.4	20	18 00	22	48	32	64	29	55		
11	341	29.0	-12	06.9	208	51.1	48	+26 44.2	10 N	18 09	18 30	18 55	14 55	60	3 06	57		
12	356	29.1	-12	06.0	223	14.9	48	+26 38.7	0	18 17	18 39	19 03	15 15	58	2 44	60		
13	11	29.1		05.1	237	38.8	49	33.1	10 S	26	48	13	36	55	2 22	62		
14	26	29.1		04.3	252	02.8	50	27.4	20	35	18 58	25	15 59	51	1 58	65		
15	41	29.2		03.4	266	26.9	51	21.4	30	46	19 11	40	16 24	48	31	67		
16	56	29.2		02.5	280	51.0	51	15.3	35	18 52	19	19 50	40	45	1 15	69		
17	71	29.3	-12	01.6	295	15.2	52	+26 09.1	40	19 00	19 28	20 02	16 57	42	0 56	71		
18	86	29.3	-12	00.8	309	39.5	53	+26 02.6	45	19 08	19 39	20 17	17 18	38	0 33	74		
19	101	29.4	-11	59.9	324	03.9	54	+25 56.0	50	18	19 53	37	45	33	0 03	78		
20	116	29.4		59.0	338	28.4	55	49.3	52	23	20 00	46	17 58	30	** ** *			
21	131	29.4		58.1	352	52.9	55	42.3	54	28	07	20 57	18 12	27	** ** *			
22	146	29.5		57.3	7	17.6	57	35.3	56	34	16	21 10	29	23	** ** *			
23	161	29.5		56.4	21	42.3	57	28.0	58	40	25	25	18 50	17	** ** *			
24	176	29.6	-11	55.5	36	07.1	58	+25 20.6	60 S	19 48	20 36	21 43	19 16	8	23 52	109		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 14 ^h 12 ^m 2		Mag: -3.9 PMG: 10 ^h 20 ^m			Mag: -0.1 PMG: 19 ^h 53 ^m			Mag: -2.0 PMG: 9 ^h 11 ^m			Mag: +0.2 PMG: 0 ^h 47 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	146	21.4	205	02.5	-20	23.0	61	04.0	+26	26.7	222	02.8	-22	41.2	348	07.3	+11	06.2
1	161	23.9	220	01.7		22.5	76	06.0		26.7	237	04.8		41.2	3	10.0		06.3
2	176	26.4	235	00.9		21.9	91	07.9		26.7	252	06.7		41.1	18	12.6		06.4
3	191	28.8	250	00.1		21.4	106	09.8		26.6	267	08.6		41.1	33	15.3		06.4
4	206	31.3	264	59.3		20.9	121	11.7		26.6	282	10.6		41.0	48	17.9		06.5
5	221	33.8	279	58.6	-20	20.4	136	13.7	+26	26.6	297	12.5	-22	41.0	63	20.6	+11	06.6
6	236	36.2	294	57.8	-20	19.8	151	15.6	+26	26.5	312	14.4	-22	40.9	78	23.2	+11	06.7
7	251	38.7	309	57.0		19.3	166	17.5		26.5	327	16.4		40.9	93	25.9		06.8
8	266	41.2	324	56.2		18.8	181	19.5		26.5	342	18.3		40.9	108	28.5		06.8
9	281	43.6	339	55.4		18.3	196	21.4		26.4	357	20.3		40.8	123	31.2		06.9
10	296	46.1	354	54.7		17.7	211	23.3		26.4	12	22.2		40.8	138	33.8		07.0
11	311	48.6	9	53.9	-20	17.2	226	25.2	+26	26.4	27	24.1	-22	40.7	153	36.5	+11	07.1
12	326	51.0	24	53.1	-20	16.7	241	27.1	+26	26.3	42	26.1	-22	40.7	168	39.1	+11	07.1
13	341	53.5	39	52.3		16.1	256	29.1		26.3	57	28.0		40.6	183	41.8		07.2
14	356	55.9	54	51.5		15.6	271	31.0		26.3	72	30.0		40.6	198	44.4		07.3
15	11	58.4	69	50.8		15.1	286	32.9		26.2	87	31.9		40.5	213	47.1		07.4
16	27	00.9	84	50.0		14.5	301	34.8		26.2	102	33.8		40.5	228	49.7		07.5
17	42	03.3	99	49.2	-20	14.0	316	36.7	+26	26.2	117	35.8	-22	40.5	243	52.4	+11	07.5
18	57	05.8	114	48.4	-20	13.4	331	38.6	+26	26.1	132	37.7	-22	40.4	258	55.0	+11	07.6
19	72	08.3	129	47.6		12.9	346	40.6		26.1	147	39.7		40.4	273	57.7		07.7
20	87	10.7	144	46.9		12.4	1	42.5		26.1	162	41.6		40.3	289	00.3		07.8
21	102	13.2	159	46.1		11.8	16	44.4		26.0	177	43.5		40.3	304	03.0		07.8
22	117	15.7	174	45.3		11.3	31	46.3		26.0	192	45.5		40.2	319	05.6		07.9
23	132	18.1	189	44.5		10.7	46	48.2		26.0	207	47.4		40.2	334	08.3		08.0
24	147	20.6	204	43.8	-20	10.2	61	50.1	+26	25.9	222	49.4	-22	40.1	349	10.9	+11	08.1
Dif	—		-8 +5			+19 0			+19 0			+27 +1						

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'2 PMG: 12 ^h 14 ^m 0			Edad: 10 ^d 8 SD: 16'0 PMG: 22 ^h 26 ^m	PHE { 4 ^h : 58'6 12 ^h : 58'4 20 ^h : 58'3 R°: 53 ^m										
	hG ☉	Dec				hG ☾		Dif	Dec		Dif	Náutico	Civil	Hora	R°
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	176	29.6	-11 55.5	36	07.1	+25 20.6	60 N	6 00	6 48	7 32	12 51	106	7 17	6	
1	191	29.6		50	32.1	13.0	58	5 59	45	25	13 11	100	6 56	13	
2	206	29.7		64	57.1	+25 05.3	56	58	41	20	28 94		39	18	
3	221	29.7		79	22.2	+24 57.5	54	57	38	15	42 90		24	22	
4	236	29.8		93	47.4	49.4	52	56	36	10	13 54	87	12	25	
5	251	29.8	-11 51.1	108	12.7	+24 41.3	50	5 55	6 33	7 06	14 05	84	6 00	28	
6	266	29.9	-11 50.2	122	38.1	+24 33.0	45	5 53	6 27	6 57	14 28	77	5 37	33	
7	281	29.9		137	03.6	24.5	40	51	22	50	14 46	73	18	37	
8	296	30.0		151	29.2	15.9	35	48	18	44	15 01	70	5 01	41	
9	311	30.0		165	54.9	+24 07.1	30	45	13	38	14 67		4 48	43	
10	326	30.1		180	20.7	+23 58.2	20	40	6 05	28	36 62		24	48	
11	341	30.1	-11 45.9	194	46.6	+23 49.2	10 N	5 33	5 58	6 19	15 55	58	4 03	52	
12	356	30.2	-11 45.0	209	12.6	+23 40.0	0	5 25	5 49	6 11	16 13	54	3 44	55	
13	11	30.2		223	38.7	30.7	10 S	15	41	6 02	31 49		24	59	
14	26	30.3		238	04.9	21.3	20	5 04	30	5 53	16 50	45	3 03	63	
15	41	30.3		252	31.2	11.7	30	4 48	17	42	17 12	40	2 38	68	
16	56	30.4		266	57.6	+23 02.0	35	38	10	36	25 37		24	70	
17	71	30.4	-11 40.6	281	24.1	+22 52.1	40	4 26	5 00	5 29	17 39	34	2 07	74	
18	86	30.5	-11 39.7	295	50.7	+22 42.1	45	4 11	4 49	5 21	17 56	30	1 47	78	
19	101	30.5		310	17.5	32.0	50	3 52	36	11	18 18	23	21	84	
20	116	30.6		324	44.3	21.8	52	42	29	06	28 21		1 09	86	
21	131	30.6		339	11.2	11.4	54	32	22	5 01	39 18		0 55	90	
22	146	30.7		353	38.3	+22 01.0	56	19	13	4 55	18 52	14	38	94	
23	161	30.7		8	05.5	+21 50.4	58	3 04	4 04	49	19 07	9	0 18	100	
24	176	30.8	-11 34.4	22	32.7	+21 39.7	60 S	2 45	3 53	4 41	19 24	4	** ** *	**	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 14 ^h 08 ^m 3		Mag: -3.9 PMG: 10 ^h 22 ^m		Mag: -0.1 PMG: 19 ^h 50 ^m		Mag: -2.0 PMG: 9 ^h 08 ^m		Mag: +0.2 PMG: 0 ^h 43 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	°	°	'	°	°	°	'
0	147	20.6	204 43.8	-20 10.2	61 50.1	+26 25.9	222 49.4	-22 40.1	349 10.9	+11 08.1
1	162	23.1	219 43.0	09.6	76 52.0	25.9	237 51.3	40.1	4 13.6	08.2
2	177	25.5	234 42.2	09.1	91 53.9	25.9	252 53.3	40.1	19 16.2	08.2
3	192	28.0	249 41.4	08.5	106 55.8	25.9	267 55.2	40.0	34 18.9	08.3
4	207	30.4	264 40.7	08.0	121 57.7	25.8	282 57.1	40.0	49 21.5	08.4
5	222	32.9	279 39.9	-20 07.4	136 59.6	+26 25.8	297 59.1	-22 39.9	64 24.2	+11 08.5
6	237	35.4	294 39.1	-20 06.9	152 01.5	+26 25.8	313 01.0	-22 39.9	79 26.8	+11 08.5
7	252	37.8	309 38.3	06.3	167 03.4	25.7	328 03.0	39.8	94 29.5	08.6
8	267	40.3	324 37.6	05.8	182 05.3	25.7	343 04.9	39.8	109 32.2	08.7
9	282	42.8	339 36.8	05.2	197 07.2	25.7	358 06.9	39.7	124 34.8	08.8
10	297	45.2	354 36.0	04.7	212 09.1	25.6	13 08.8	39.7	139 37.5	08.8
11	312	47.7	9 35.3	-20 04.1	227 11.0	+26 25.6	28 10.7	-22 39.7	154 40.1	+11 08.9
12	327	50.2	24 34.5	-20 03.6	242 12.9	+26 25.6	43 12.7	-22 39.6	169 42.8	+11 09.0
13	342	52.6	39 33.7	03.0	257 14.8	25.5	58 14.6	39.6	184 45.4	09.1
14	357	55.1	54 32.9	02.4	272 16.7	25.5	73 16.6	39.5	199 48.1	09.2
15	12	57.6	69 32.2	01.9	287 18.6	25.5	88 18.5	39.5	214 50.7	09.2
16	28	00.0	84 31.4	01.3	302 20.5	25.4	103 20.5	39.4	229 53.4	09.3
17	43	02.5	99 30.6	-20 00.8	317 22.4	+26 25.4	118 22.4	-22 39.4	244 56.0	+11 09.4
18	58	04.9	114 29.9	-20 00.2	332 24.3	+26 25.4	133 24.3	-22 39.3	259 58.7	+11 09.5
19	73	07.4	129 29.1	-19 59.6	347 26.2	25.3	148 26.3	39.3	275 01.3	09.5
20	88	09.9	144 28.3	59.1	2 28.1	25.3	163 28.2	39.3	290 04.0	09.6
21	103	12.3	159 27.6	58.5	17 30.0	25.3	178 30.2	39.2	305 06.6	09.7
22	118	14.8	174 26.8	57.9	32 31.8	25.2	193 32.1	39.2	320 09.3	09.8
23	133	17.3	189 26.0	57.4	47 33.7	25.2	208 34.1	39.1	335 11.9	09.9
24	148	19.7	204 25.3	-19 56.8	62 35.6	+26 25.2	223 36.0	-22 39.1	350 14.6	+11 09.9
Dif	—		-8	+6	+19	0	+19	0	+27	+

UT	SOL				LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16'2				Edad: 11 ^d 8 PHE { 4 ^h : 58'2 12 ^h : 58'0 20 ^h : 57'8													
	PMG: 12 ^h 13 ^m 9				PMG: 23 ^h 19 ^m Rº: 48 ^m													
	hG ☉		Dec		hG ☾		Dif						Civil	Náutico	Hora	Rº	Hora	Rº
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m			
0	176	30.8	-11	34.4	22	32.7	+21	39.7	60 N	17 00	17 43	18 32	14 37 101		7 23 3			
1	191	30.8		33.5	37	00.1		28.8 ⁸⁴	58	06	47	32	14 51 95		7 09 8			
2	206	30.9		32.6	51	27.6		85	56	11	50	33	15 02 91		6 57 12			
3	221	31.0		31.7	65	55.1		85	54	16	52	34	12 87		46 15			
4	236	31.0		30.9	80	22.8		87	52	20	55	34	21 84		37 18			
5	251	31.1	-11	30.0	94	50.6		88	50	17 24	17 57	18 35	15 29 81		6 28 21			
6	266	31.1	-11	29.1	109	18.5		89	45	17 33	18 03	18 37	15 45 76		6 10 26			
7	281	31.2		28.2	123	46.5		90	40	40	07	39	15 59 71		5 55 31			
8	296	31.2		27.3	138	14.6		91	35	46	12	41	16 11 67		42 35			
9	311	31.3		26.4	152	42.8		92	30	17 51	16	44	21 63		31 38			
10	326	31.3		25.5	167	11.2		94	20	18 01	23	49	38 58		5 12 43			
11	341	31.4	-11	24.6	181	39.6		94	10 N	18 09	18 31	18 55	16 53 53		4 55 47			
12	356	31.5	-11	23.8	196	08.1		95	0	18 17	18 38	19 03	17 07 49		4 39 52			
13	11	31.5		22.9	210	36.8		97	10 S	25	47	12	20 45		23 56			
14	26	31.6		22.0	225	05.5		97	20	34	18 57	23	35 40		4 06 60			
15	41	31.6		21.1	239	34.4		99	30	44	19 09	38	17 52 35		3 46 66			
16	56	31.7		20.2	254	03.3		99	35	50	17	48	18 02 31		34 69			
17	71	31.8	-11	19.3	268	32.4		101	40	18 57	19 25	19 59	18 13 27		3 21 72			
18	86	31.8	-11	18.4	283	01.5		101	45	19 05	19 36	20 14	18 26 23		3 05 77			
19	101	31.9		17.5	297	30.8		103	50	14	49	32	41 18		2 45 83			
20	116	31.9		16.6	312	00.1		103	52	19	19 55	41	49 15		35 86			
21	131	32.0		15.8	326	29.6		105	54	24	20 02	20 51	18 57 12		25 89			
22	146	32.1		14.9	340	59.2		106	56	29	10	21 03	19 06 9		2 12 94			
23	161	32.1		14.0	355	28.8		106	58	35	19	18	16 5		1 58 98			
24	176	32.2	-11	13.1	9	58.6		108	60 S	19 42	20 30	21 35	19 28 1		1 41 105			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 14 ^h 04 ^m 4		Mag: -3.9 PMG: 10 ^h 23 ^m				Mag: -0.1 PMG: 19 ^h 47 ^m				Mag: -2.0 PMG: 9 ^h 04 ^m				Mag: +0.2 PMG: 0 ^h 39 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	148	19.7	204	25.3	-19	56.8	62	35.6	+26	25.2	223	36.0	-22	39.1	350	14.6	+11	09.9
1	163	22.2	219	24.5		56.2	77	37.5		25.1	238	38.0		39.0	5	17.2		10.0
2	178	24.7	234	23.7		55.6	92	39.4		25.1	253	39.9		39.0	20	19.9		10.1
3	193	27.1	249	23.0		55.1	107	41.3		25.1	268	41.9		38.9	35	22.5		10.2
4	208	29.6	264	22.2		54.5	122	43.1		25.0	283	43.8		38.9	50	25.2		10.2
5	223	32.0	279	21.4	-19	53.9	137	45.0	+26	25.0	298	45.7	-22	38.8	65	27.8	+11	10.3
6	238	34.5	294	20.7	-19	53.3	152	46.9	+26	25.0	313	47.7	-22	38.8	80	30.5	+11	10.4
7	253	37.0	309	19.9		52.8	167	48.8		24.9	328	49.6		38.8	95	33.1		10.5
8	268	39.4	324	19.1		52.2	182	50.6		24.9	343	51.6		38.7	110	35.8		10.6
9	283	41.9	339	18.4		51.6	197	52.5		24.9	358	53.5		38.7	125	38.4		10.6
10	298	44.4	354	17.6		51.0	212	54.4		24.8	13	55.5		38.6	140	41.1		10.7
11	313	46.8	9	16.8	-19	50.5	227	56.3	+26	24.8	28	57.4	-22	38.6	155	43.7	+11	10.8
12	328	49.3	24	16.1	-19	49.9	242	58.1	+26	24.8	43	59.4	-22	38.5	170	46.4	+11	10.9
13	343	51.8	39	15.3		49.3	258	00.0		24.7	59	01.3		38.5	185	49.0		10.9
14	358	54.2	54	14.6		48.7	273	01.9		24.7	74	03.3		38.4	200	51.7		11.0
15	13	56.7	69	13.8		48.1	288	03.7		24.7	89	05.2		38.4	215	54.4		11.1
16	28	59.2	84	13.0		47.5	303	05.6		24.6	104	07.2		38.4	230	57.0		11.2
17	44	01.6	99	12.3	-19	46.9	318	07.5	+26	24.6	119	09.1	-22	38.3	245	59.7	+11	11.3
18	59	04.1	114	11.5	-19	46.4	333	09.3	+26	24.6	134	11.1	-22	38.3	261	02.3	+11	11.3
19	74	06.5	129	10.8		45.8	348	11.2		24.5	149	13.0		38.2	276	05.0		11.4
20	89	09.0	144	10.0		45.2	3	13.1		24.5	164	15.0		38.2	291	07.6		11.5
21	104	11.5	159	09.2		44.6	18	14.9		24.5	179	16.9		38.1	306	10.3		11.6
22	119	13.9	174	08.5		44.0	33	16.8		24.4	194	18.9		38.1	321	12.9		11.6
23	134	16.4	189	07.7		43.4	48	18.7		24.4	209	20.8		38.0	336	15.6		11.7
24	149	18.9	204	07.0	-19	42.8	63	20.5	+26	24.4	224	22.8	-22	38.0	351	18.2	+11	11.8
Dif	—		-8		+6		+19		0		+19		0		+27		+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 8			Edad: 12 ^d 8 PHE { SD: 15:7 PMG: *** **m 4 ^h : 57:7 12 ^h : 57:5 20 ^h : 57:3 R°: ***											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	176	32.2	-11	13.1	9	58.6	+16	51.2	60 N	5	55	6	43	7	26
1	191	32.2		12.2	24	28.4 ¹⁰⁸		38.0 ¹³²	58	54	40	20	26	90	17
2	206	32.3		11.3	38	58.4 ¹¹⁰		24.8 ¹³²	56	54	37	15	33	86	09
3	221	32.4		10.4	53	28.4 ¹¹⁰	+16	11.5 ¹³³	54	53	34	11	39	83	7
4	236	32.4		09.5	67	58.6 ¹¹²	+15	58.1 ¹³⁴	52	53	32	06	45	80	6
5	251	32.5	-11	08.6	82	28.8 ¹¹²	+15	44.7 ¹³⁴	50	5	52	6	30	7	03
6	266	32.5	-11	07.7	96	59.1 ¹¹³	+15	31.2 ¹³⁵	45	5	50	6	24	6	54
7	281	32.6		06.8	111	29.6 ¹¹⁵		17.6 ¹³⁶	40	48	20	47	10	68	26
8	296	32.7		05.9	126	00.1 ¹¹⁵	+15	04.0 ¹³⁶	35	46	16	41	18	64	17
9	311	32.7		05.1	140	30.7 ¹¹⁶	+14	50.3 ¹³⁷	30	44	12	36	24	61	6
10	326	32.8		04.2	155	01.4 ¹¹⁷		36.5 ¹³⁸	20	38	6	04	27	36	55
11	341	32.9	-11	03.3	169	32.2 ¹¹⁸	+14	22.7 ¹³⁸	10 N	5	52	5	57	6	18
12	356	32.9	-11	02.4	184	03.1 ¹¹⁹	+14	08.8 ¹³⁹	0	5	55	5	49	6	10
13	11	33.0		01.5	198	34.1 ¹²⁰	+13	54.9 ¹³⁹	10 S	16	41	6	02	18	05
14	26	33.1	-11	00.6	213	05.1 ¹²⁰		40.9 ¹⁴⁰	20	5	05	31	5	54	15
15	41	33.1	-10	59.7	227	36.3 ¹²²		26.8 ¹⁴¹	30	4	50	19	44	27	30
16	56	33.2		58.8	242	07.5 ¹²²	+13	12.7 ¹⁴¹	35	40	12	38	33	28	43
17	71	33.3	-10	57.9	256	38.8 ¹²³	+12	58.6 ¹⁴¹	40	4	29	5	03	5	31
18	86	33.3	-10	57.0	271	10.2 ¹²⁴	+12	44.4 ¹⁴²	45	4	15	4	52	5	24
19	101	33.4		56.1	285	41.7 ¹²⁵		30.1 ¹⁴³	50	3	56	39	14	18	59
20	116	33.5		55.2	300	13.3 ¹²⁶		15.8 ¹⁴³	52	47	33	10	19	04	12
21	131	33.5		54.3	314	44.9 ¹²⁶	+12	01.5 ¹⁴³	54	37	26	05	09	10	3
22	146	33.6		53.4	329	16.6 ¹²⁷	+11	47.1 ¹⁴⁴	56	25	18	5	00	15	7
23	161	33.7		52.5	343	48.5 ¹²⁹		32.6 ¹⁴⁵	58	3	11	4	09	4	54
24	176	33.7	-10	51.6	358	20.3 ¹²⁸	+11	18.1 ¹⁴⁵	60 S	2	54	3	59	4	47

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 14 ^h 00 ^m 4		Mag: -3.9 PMG: 10 ^h 24 ^m		Mag: 0.0 PMG: 19 ^h 44 ^m		Mag: -2.0 PMG: 9 ^h 01 ^m		Mag: +0.2 PMG: 0 ^h 35 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	149	18.9	204	07.0	-19	42.8	63	20.5	+26	24.4
1	164	21.3	219	06.2		42.2	78	22.4		24.3
2	179	23.8	234	05.5		41.6	93	24.2		24.3
3	194	26.3	249	04.7		41.0	108	26.1		24.3
4	209	28.7	264	04.0		40.4	123	27.9		24.2
5	224	31.2	279	03.2	-19	39.8	138	29.8	+26	24.2
6	239	33.7	294	02.4	-19	39.2	153	31.7	+26	24.2
7	254	36.1	309	01.7		38.6	168	33.5		24.2
8	269	38.6	324	00.9		38.0	183	35.4		24.1
9	284	41.0	339	00.2		37.4	198	37.2		24.1
10	299	43.5	353	59.4		36.8	213	39.1		24.1
11	314	46.0	8	58.7	-19	36.2	228	40.9	+26	24.0
12	329	48.4	23	57.9	-19	35.6	243	42.8	+26	24.0
13	344	50.9	38	57.2		35.0	258	44.6		24.0
14	359	53.4	53	56.4		34.4	273	46.4		23.9
15	14	55.8	68	55.7		33.8	288	48.3		23.9
16	29	58.3	83	54.9		33.2	303	50.1		23.9
17	45	00.8	98	54.2	-19	32.6	318	52.0	+26	23.8
18	60	03.2	113	53.4	-19	32.0	333	53.8	+26	23.8
19	75	05.7	128	52.7		31.3	348	55.7		23.8
20	90	08.1	143	51.9		30.7	3	57.5		23.7
21	105	10.6	158	51.2		30.1	18	59.3		23.7
22	120	13.1	173	50.4		29.5	34	01.2		23.7
23	135	15.5	188	49.7		28.9	49	03.0		23.6
24	150	18.0	203	48.9	-19	28.3	64	04.8	+26	23.6
Dif	—		-8		+6		+18		0	

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16:2 PMG: 12 ^h 13 ^m 7			Edad: 13 ^d 8 PHE { SD: 15:6 PMG: 0 ^h 07 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec			Dif				Civil	Náutico	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m		
0	176	33.7	-10 51.6	358	20.3	+11 18.1	60 N	17 05	17 48	18 36	17 52 89	7 27 0				
1	191	33.8	50.7	12	52.3 ¹³⁰	+11 03.6 ¹⁴⁵	58	11	51	37	56 86	21 4				
2	206	33.9	49.8	27	24.3 ¹³⁰	+10 49.1 ¹⁴⁵	56	16	54	37	17 59 83	17 6				
3	221	33.9	48.9	41	56.4 ¹³¹	34.5 ¹⁴⁶	54	20	56	37	18 02 80	13 9				
4	236	34.0	48.0	56	28.6 ¹³²	19.8 ¹⁴⁷	52	24	17 58	38	05 77	09 11				
5	251	34.1	-10 47.1	71	00.9 ¹³³	+10 05.2 ¹⁴⁶	50	17 28	18 01	18 38	18 08 74	7 05 14				
6	266	34.1	-10 46.2	85	33.2 ¹³³	+9 50.5 ¹⁴⁷	45	17 35	18 05	18 39	18 13 70	6 58 19				
7	281	34.2	45.3	100	05.6 ¹³⁴	35.8 ¹⁴⁷	40	42	10	41	18 65	51 23				
8	296	34.3	44.4	114	38.1 ¹³⁵	21.0 ¹⁴⁸	35	48	13	43	22 61	46 26				
9	311	34.3	43.5	129	10.6 ¹³⁵	+9 06.2 ¹⁴⁸	30	17 53	17	45	25 58	41 30				
10	326	34.4	42.6	143	43.2 ¹³⁶	+8 51.4 ¹⁴⁸	20	18 02	24	50	31 53	33 34				
11	341	34.5	-10 41.7	158	15.9 ¹³⁷	+8 36.5 ¹⁴⁹	10 N	18 10	18 31	18 56	18 36 48	6 25 40				
12	356	34.6	-10 40.8	172	48.6 ¹³⁷	+8 21.7 ¹⁴⁸	0	18 17	18 38	19 03	18 41 44	6 18 44				
13	11	34.6	39.9	187	21.4 ¹³⁸	+8 06.8 ¹⁴⁹	10 S	25	46	11	46 39	11 49				
14	26	34.7	39.0	201	54.3 ¹³⁹	+7 51.9 ¹⁴⁹	20	33	18 55	22	51 34	6 03 54				
15	41	34.8	38.1	216	27.2 ¹³⁹	36.9 ¹⁵⁰	30	42	19 07	36	18 57 29	5 54 59				
16	56	34.8	37.2	231	00.2 ¹⁴⁰	22.0 ¹⁴⁹	35	48	14	45	19 01 25	49 63				
17	71	34.9	-10 36.3	245	33.2 ¹⁴⁰	+7 07.0 ¹⁵⁰	40	18 54	19 22	19 56	19 04 22	5 43 66				
18	86	35.0	-10 35.4	260	06.3 ¹⁴¹	+6 52.0 ¹⁵⁰	45	19 02	19 32	20 10	19 09 18	5 36 71				
19	101	35.1	34.5	274	39.5 ¹⁴²	37.0 ¹⁵⁰	50	10	45	27	14 13	28 76				
20	116	35.1	33.6	289	12.7 ¹⁴²	22.0 ¹⁵⁰	52	15	51	36	16 11	24 78				
21	131	35.2	32.7	303	46.0 ¹⁴³	+6 06.9 ¹⁵¹	54	19	19 57	46	19 9	19 82				
22	146	35.3	31.8	318	19.3 ¹⁴³	+5 51.9 ¹⁵⁰	56	24	20 05	20 57	22 6	15 84				
23	161	35.4	30.9	332	52.7 ¹⁴⁴	36.8 ¹⁵¹	58	30	13	21 10	25 3	09 88				
24	176	35.4	-10 30.0	347	26.1 ¹⁴⁴	+5 21.8 ¹⁵⁰	60 S	19 36	20 23	21 26	19 29 **	5 03 92				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 13 ^h 56 ^m 5		Mag: -3.9 PMG: 10 ^h 25 ^m			Mag: 0.0 PMG: 19 ^h 41 ^m			Mag: -2.0 PMG: 8 ^h 58 ^m			Mag: +0.2 PMG: 0 ^h 30 ^m				
	hG ♈	hG ♀		Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	°	'	°	'	°	°	'	°	°	'	°		
0	150	18.0	203 48.9	-19 28.3	64 04.8	+26 23.6	225 09.6	-22 36.9	352 21.9	+11 13.7						
1	165	20.5	218 48.2	27.6	79 06.7	23.6	240 11.5	36.9	7 24.5	13.7						
2	180	22.9	233 47.4	27.0	94 08.5	23.5	255 13.5	36.8	22 27.2	13.8						
3	195	25.4	248 46.7	26.4	109 10.3	23.5	270 15.4	36.8	37 29.8	13.9						
4	210	27.9	263 45.9	25.8	124 12.2	23.5	285 17.4	36.7	52 32.5	14.0						
5	225	30.3	278 45.2	-19 25.2	139 14.0	+26 23.4	300 19.4	-22 36.7	67 35.1	+11 14.1						
6	240	32.8	293 44.4	-19 24.5	154 15.8	+26 23.4	315 21.3	-22 36.6	82 37.8	+11 14.1						
7	255	35.3	308 43.7	23.9	169 17.7	23.4	330 23.3	36.6	97 40.5	14.2						
8	270	37.7	323 43.0	23.3	184 19.5	23.3	345 25.2	36.5	112 43.1	14.3						
9	285	40.2	338 42.2	22.7	199 21.3	23.3	0 27.2	36.5	127 45.8	14.4						
10	300	42.6	353 41.5	22.0	214 23.1	23.3	15 29.1	36.4	142 48.4	14.4						
11	315	45.1	8 40.7	-19 21.4	229 25.0	+26 23.2	30 31.1	-22 36.4	157 51.1	+11 14.5						
12	330	47.6	23 40.0	-19 20.8	244 26.8	+26 23.2	45 33.0	-22 36.4	172 53.7	+11 14.6						
13	345	50.0	38 39.2	20.1	259 28.6	23.2	60 35.0	36.3	187 56.4	14.7						
14	0	52.5	53 38.5	19.5	274 30.4	23.1	75 36.9	36.3	202 59.0	14.8						
15	15	55.0	68 37.8	18.9	289 32.3	23.1	90 38.9	36.2	218 01.7	14.8						
16	30	57.4	83 37.0	18.2	304 34.1	23.1	105 40.9	36.2	233 04.3	14.9						
17	45	59.9	98 36.3	-19 17.6	319 35.9	+26 23.0	120 42.8	-22 36.1	248 07.0	+11 15.0						
18	61	02.4	113 35.5	-19 17.0	334 37.7	+26 23.0	135 44.8	-22 36.1	263 09.6	+11 15.1						
19	76	04.8	128 34.8	16.3	349 39.5	23.0	150 46.7	36.0	278 12.3	15.1						
20	91	07.3	143 34.1	15.7	4 41.4	22.9	165 48.7	36.0	293 14.9	15.2						
21	106	09.8	158 33.3	15.1	19 43.2	22.9	180 50.6	35.9	308 17.6	15.3						
22	121	12.2	173 32.6	14.4	34 45.0	22.9	195 52.6	35.9	323 20.2	15.4						
23	136	14.7	188 31.8	13.8	49 46.8	22.8	210 54.5	35.9	338 22.9	15.5						
24	151	17.1	203 31.1	-19 13.1	64 48.6	+26 22.8	225 56.5	-22 35.8	353 25.6	+11 15.5						
Dif	—		-7 +6		+18 0		+20 0		+27 +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 6			Edad: 14 ^d 8 PHE { 4 ^h : 56:5 12 ^h : 56:3 20 ^h : 56:1 SD: 15:4 PMG: 0 ^h 52 ^m R°: 43 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m
0	176	35.4	-10	30.0	347	26.1	+5	21.8	60 N	5 50	6 38	7 21	19 21	88	7 27	**	
1	191	35.5		29.1	1	59.6 ¹⁴⁵	+5	06.7 ¹⁵¹	58	50	35	15	22	83	25	3	
2	206	35.6		28.2	16	33.1 ¹⁴⁵	+4	51.6 ¹⁵¹	56	49	32	10	22	80	23	6	
3	221	35.7		27.2	31	06.7 ¹⁴⁶		36.5 ¹⁵¹	54	49	30	06	22	78	22	8	
4	236	35.7		26.3	45	40.3 ¹⁴⁶		21.4 ¹⁵¹	52	49	28	7 02	22	75	20	11	
5	251	35.8	-10	25.4	60	13.9 ¹⁴⁶	+4	06.3 ¹⁵¹	50	5 48	6 26	6 59	19 22	73	7 19	13	
6	266	35.9	-10	24.5	74	47.7 ¹⁴⁸	+3	51.2 ¹⁵¹	45	5 47	6 21	6 51	19 23	67	7 17	17	
7	281	36.0		23.6	89	21.4 ¹⁴⁷		36.1 ¹⁵¹	40	46	17	45	23	63	14	22	
8	296	36.0		22.7	103	55.2 ¹⁴⁸		21.0 ¹⁵¹	35	44	13	39	23	60	12	25	
9	311	36.1		21.8	118	29.1 ¹⁴⁹	+3	05.8 ¹⁵²	30	42	10	34	23	57	11	28	
10	326	36.2		20.9	133	02.9 ¹⁴⁸	+2	50.7 ¹⁵¹	20	37	6 03	25	24	51	07	34	
11	341	36.3	-10	20.0	147	36.9 ¹⁵⁰	+2	35.6 ¹⁵¹	10 N	5 32	5 56	6 18	19 24	47	7 05	38	
12	356	36.4	-10	19.1	162	10.8 ¹⁴⁹	+2	20.5 ¹⁵¹	0	5 25	5 49	6 10	19 25	42	7 02	43	
13	11	36.4		18.2	176	44.8 ¹⁵⁰	+2	05.4 ¹⁵¹	10 S	16	41	6 03	25	37	7 00	47	
14	26	36.5		17.3	191	18.8 ¹⁵⁰	+1	50.3 ¹⁵¹	20	5 06	32	5 55	25	33	6 57	52	
15	41	36.6		16.4	205	52.9 ¹⁵¹		35.3 ¹⁵⁰	30	4 52	21	45	26	27	53	58	
16	56	36.7		15.4	220	27.0 ¹⁵¹		20.2 ¹⁵¹	35	43	14	40	26	25	52	60	
17	71	36.7	-10	14.5	235	01.1 ¹⁵¹	+1	05.1 ¹⁵¹	40	4 32	5 05	5 34	19 26	22	6 49	65	
18	86	36.8	-10	13.6	249	35.3 ¹⁵²	+0	50.0 ¹⁵¹	45	4 18	4 55	5 26	19 27	17	6 47	68	
19	101	36.9		12.7	264	09.5 ¹⁵²		35.0 ¹⁵⁰	50	4 01	43	18	27	13	44	73	
20	116	37.0		11.8	278	43.7 ¹⁵²		20.0 ¹⁵⁰	52	3 52	37	13	27	11	42	76	
21	131	37.1		10.9	293	18.0 ¹⁵³	+0	04.9 ¹⁵¹	54	42	31	09	28	8	41	78	
22	146	37.1		10.0	307	52.2 ¹⁵²	-0	10.1 ¹⁵⁰	56	31	23	5 04	28	5	39	82	
23	161	37.2		09.1	322	26.5 ¹⁵³		25.1 ¹⁵⁰	58	18	15	4 58	28	3	37	85	
24	176	37.3	-10	08.2	337	00.9 ¹⁵⁴	-0	40.1 ¹⁵⁰	60 S	3 02	4 05	4 52	19 28	0	6 35	88	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 13 ^h 52 ^m 6		Mag: -3.9 PMG: 10 ^h 26 ^m		Mag: 0.0 PMG: 19 ^h 38 ^m		Mag: -2.0 PMG: 8 ^h 55 ^m		Mag: +0.2 PMG: 0 ^h 26 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	151	17.1	203	31.1	-19	13.1	64	48.6	+26	22.8	225	56.5	-22	35.8	353	25.6	+11	15.5
1	166	19.6	218	30.4		12.5	79	50.4		22.8	240	58.5		35.8	8	28.2		15.6
2	181	22.1	233	29.6		11.9	94	52.2		22.7	256	00.4		35.7	23	30.9		15.7
3	196	24.5	248	28.9		11.2	109	54.0		22.7	271	02.4		35.7	38	33.5		15.8
4	211	27.0	263	28.2		10.6	124	55.9		22.7	286	04.3		35.6	53	36.2		15.8
5	226	29.5	278	27.4	-19	09.9	139	57.7	+26	22.6	301	06.3	-22	35.6	68	38.8	+11	15.9
6	241	31.9	293	26.7	-19	09.3	154	59.5	+26	22.6	316	08.2	-22	35.5	83	41.5	+11	16.0
7	256	34.4	308	25.9		08.6	170	01.3		22.5	331	10.2		35.5	98	44.1		16.1
8	271	36.9	323	25.2		08.0	185	03.1		22.5	346	12.2		35.4	113	46.8		16.2
9	286	39.3	338	24.5		07.3	200	04.9		22.5	1	14.1		35.4	128	49.4		16.2
10	301	41.8	353	23.7		06.7	215	06.7		22.4	16	16.1		35.3	143	52.1		16.3
11	316	44.2	8	23.0	-19	06.0	230	08.5	+26	22.4	31	18.0	-22	35.3	158	54.7	+11	16.4
12	331	46.7	23	22.3	-19	05.4	245	10.3	+26	22.4	46	20.0	-22	35.3	173	57.4	+11	16.5
13	346	49.2	38	21.5		04.7	260	12.1		22.3	61	22.0		35.2	189	00.0		16.5
14	1	51.6	53	20.8		04.1	275	13.9		22.3	76	23.9		35.2	204	02.7		16.6
15	16	54.1	68	20.1		03.4	290	15.7		22.3	91	25.9		35.1	219	05.4		16.7
16	31	56.6	83	19.4		02.7	305	17.5		22.2	106	27.8		35.1	234	08.0		16.8
17	46	59.0	98	18.6	-19	02.1	320	19.3	+26	22.2	121	29.8	-22	35.0	249	10.7	+11	16.9
18	62	01.5	113	17.9	-19	01.4	335	21.1	+26	22.2	136	31.8	-22	35.0	264	13.3	+11	16.9
19	77	04.0	128	17.2		00.8	350	22.9		22.1	151	33.7		34.9	279	16.0		17.0
20	92	06.4	143	16.4	-19	00.1	5	24.7		22.1	166	35.7		34.9	294	18.6		17.1
21	107	08.9	158	15.7	-18	59.4	20	26.5		22.1	181	37.6		34.8	309	21.3		17.2
22	122	11.4	173	15.0		58.8	35	28.3		22.0	196	39.6		34.8	324	23.9		17.2
23	137	13.8	188	14.2		58.1	50	30.0		22.0	211	41.6		34.8	339	26.6		17.3
24	152	16.3	203	13.5	-18	57.5	65	31.8	+26	22.0	226	43.5	-22	34.7	354	29.2	+11	17.4
Dif	—		-7		+7		+18		0		+20		0		+27		+	

UT	SOL				LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16/2 PMG: 12 ^h 13 ^m 4				Edad: 15 ^d 8 PHE { SD: 15/3 PMG: 1 ^h 35 ^m											
	hG ☉		Dec		hG ☾		Dif				Civil		Náutico		Hora R°	
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	176	37.3	-10	08.2	337	00.9	-0	40.1	60 N	17 10	17 53	18 41	20 49 86	7 26	0	
1	191	37.4		07.2	351	35.2 ¹⁵³	-0	55.0 ¹⁴⁹	58	15	56	41	45 83	28	3	
2	206	37.5		06.3	6	09.6 ¹⁵⁴	-1	10.0 ¹⁵⁰	56	20	17 58	41	42 80	29	6	
3	221	37.6		05.4	20	44.0 ¹⁵⁴		24.9 ¹⁴⁹	54	24	18 00	41	40 76	30	8	
4	236	37.6		04.5	35	18.4 ¹⁵⁴		39.8 ¹⁴⁹	52	28	02	41	37 74	31	11	
5	251	37.7	-10	03.6	49	52.8 ¹⁵⁴	-1	54.7 ¹⁴⁹	50	17 31	18 04	18 41	20 35 72	7 32	13	
6	266	37.8	-10	02.7	64	27.3 ¹⁵⁵	-2	09.5 ¹⁴⁸	45	17 38	18 08	18 42	20 30 67	7 34	17	
7	281	37.9		01.8	79	01.7 ¹⁵⁴		24.4 ¹⁴⁹	40	44	12	43	26 63	36	21	
8	296	38.0	-10	00.8	93	36.2 ¹⁵⁵		39.2 ¹⁴⁸	35	50	15	45	23 59	37	25	
9	311	38.0	-9	59.9	108	10.7 ¹⁵⁵	-2	54.0 ¹⁴⁸	30	17 54	18	46	20 56	39	27	
10	326	38.1		59.0	122	45.2 ¹⁵⁵	-3	08.8 ¹⁴⁸	20	18 03	25	51	15 51	41	33	
11	341	38.2	-9	58.1	137	19.8 ¹⁵⁶	-3	23.5 ¹⁴⁷	10 N	18 10	18 31	18 56	20 11 46	7 43	37	
12	356	38.3	-9	57.2	151	54.3 ¹⁵⁵	-3	38.2 ¹⁴⁷	0	18 17	18 38	19 02	20 07 41	7 45	42	
13	11	38.4		56.3	166	28.9 ¹⁵⁶	-3	52.9 ¹⁴⁷	10 S	24	45	10	20 02 38	47	46	
14	26	38.5		55.4	181	03.4 ¹⁵⁵	-4	07.6 ¹⁴⁷	20	32	18 54	20	19 58 33	49	51	
15	41	38.6		54.4	195	38.0 ¹⁵⁶		22.2 ¹⁴⁶	30	40	19 05	34	53 28	51	56	
16	56	38.6		53.5	210	12.6 ¹⁵⁶		36.8 ¹⁴⁶	35	46	12	42	51 25	52	60	
17	71	38.7	-9	52.6	224	47.1 ¹⁵⁵	-4	51.4 ¹⁴⁶	40	18 51	19 19	19 53	19 48 21	7 54	63	
18	86	38.8	-9	51.7	239	21.7 ¹⁵⁶	-5	05.9 ¹⁴⁵	45	18 58	19 29	20 06	19 44 18	7 55	68	
19	101	38.9		50.8	253	56.3 ¹⁵⁶		20.4 ¹⁴⁵	50	19 07	41	23	40 13	57	73	
20	116	39.0		49.9	268	30.9 ¹⁵⁶		34.9 ¹⁴⁵	52	10	46	31	38 11	58	75	
21	131	39.1		48.9	283	05.5 ¹⁵⁶	-5	49.3 ¹⁴⁴	54	15	19 52	40	36 8	7 59	77	
22	146	39.2		48.0	297	40.1 ¹⁵⁶	-6	03.7 ¹⁴⁴	56	19	20 00	20 51	33 6	8 01	79	
23	161	39.2		47.1	312	14.7 ¹⁵⁶		18.0 ¹⁴³	58	25	07	21 03	31 3	02	83	
24	176	39.3	-9	46.2	326	49.3 ¹⁵⁶	-6	32.4 ¹⁴⁴	60 S	19 30	20 17	21 18	19 28 0	8 03	87	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 13 ^h 48 ^m 6		Mag: -3.9 PMG: 10 ^h 28 ^m		Mag: 0.0 PMG: 19 ^h 36 ^m		Mag: -2.0 PMG: 8 ^h 52 ^m		Mag: +0.2 PMG: 0 ^h 22 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	152	16.3	203	13.5	-18	57.5	65	31.8	+26	22.0	226	43.5	-22	34.7	354	29.2	+11	17.4
1	167	18.7	218	12.8		56.8	80	33.6		21.9	241	45.5		34.7	9	31.9		17.5
2	182	21.2	233	12.1		56.1	95	35.4		21.9	256	47.4		34.6	24	34.5		17.5
3	197	23.7	248	11.3		55.5	110	37.2		21.9	271	49.4		34.6	39	37.2		17.6
4	212	26.1	263	10.6		54.8	125	39.0		21.8	286	51.4		34.5	54	39.9		17.7
5	227	28.6	278	09.9	-18	54.1	140	40.8	+26	21.8	301	53.3	-22	34.5	69	42.5	+11	17.8
6	242	31.1	293	09.2	-18	53.5	155	42.6	+26	21.8	316	55.3	-22	34.4	84	45.2	+11	17.9
7	257	33.5	308	08.4		52.8	170	44.3		21.7	331	57.3		34.4	99	47.8		17.9
8	272	36.0	323	07.7		52.1	185	46.1		21.7	346	59.2		34.3	114	50.5		18.0
9	287	38.5	338	07.0		51.4	200	47.9		21.7	2	01.2		34.3	129	53.1		18.1
10	302	40.9	353	06.3		50.8	215	49.7		21.6	17	03.1		34.2	144	55.8		18.2
11	317	43.4	8	05.5	-18	50.1	230	51.5	+26	21.6	32	05.1	-22	34.2	159	58.4	+11	18.2
12	332	45.8	23	04.8	-18	49.4	245	53.2	+26	21.6	47	07.1	-22	34.2	175	01.1	+11	18.3
13	347	48.3	38	04.1		48.7	260	55.0		21.5	62	09.0		34.1	190	03.7		18.4
14	2	50.8	53	03.4		48.1	275	56.8		21.5	77	11.0		34.1	205	06.4		18.5
15	17	53.2	68	02.7		47.4	290	58.6		21.5	92	13.0		34.0	220	09.0		18.6
16	32	55.7	83	01.9		46.7	306	00.3		21.4	107	14.9		34.0	235	11.7		18.6
17	47	58.2	98	01.2	-18	46.0	321	02.1	+26	21.4	122	16.9	-22	33.9	250	14.3	+11	18.7
18	63	00.6	113	00.5	-18	45.3	336	03.9	+26	21.4	137	18.8	-22	33.9	265	17.0	+11	18.8
19	78	03.1	127	59.8		44.7	351	05.7		21.3	152	20.8		33.8	280	19.7		18.9
20	93	05.6	142	59.0		44.0	6	07.4		21.3	167	22.8		33.8	295	22.3		18.9
21	108	08.0	157	58.3		43.3	21	09.2		21.2	182	24.7		33.7	310	25.0		19.0
22	123	10.5	172	57.6		42.6	36	11.0		21.2	197	26.7		33.7	325	27.6		19.1
23	138	13.0	187	56.9		41.9	51	12.7		21.2	212	28.7		33.6	340	30.3		19.2
24	153	15.4	202	56.2	-18	41.2	66	14.5	+26	21.1	227	30.6	-22	33.6	355	32.9	+11	19.3
Dif	—		-7		+7		+18		0		+20		0		+27		+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 3			Edad: 16 ^d 8 PHE { SD: 15:1 PMG: 2 ^h 17 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	176	39.3	-9	46.2	326	49.3	-6 32.4	60 N	5 44	6 32	7 15	22 15	88	7 26	0
1	191	39.4		45.3	341	23.9 ¹⁵⁶	-6 46.6 ¹⁴²	58	45	30	10	08 84		31	3
2	206	39.5		44.4	355	58.5 ¹⁵⁶	-7 00.9 ¹⁴³	56	45	28	06	22 02	80	35	6
3	221	39.6		43.4	10	33.1 ¹⁵⁶	15.1 ¹⁴²	54	45	26	7 02	21 56	77	38	10
4	236	39.7		42.5	25	07.7 ¹⁵⁶	29.3 ¹⁴²	52	45	24	6 58	51 74		42	11
5	251	39.8	-9	41.6	39	42.3 ¹⁵⁶	-7 43.4 ¹⁴¹	50	5 45	6 22	6 55	21 47	71	7 45	14
6	266	39.9	-9	40.7	54	16.8 ¹⁵⁵	-7 57.5 ¹⁴¹	45	5 44	6 18	6 48	21 37	67	7 51	19
7	281	40.0		39.8	68	51.4 ¹⁵⁶	-8 11.5 ¹⁴⁰	40	43	14	42	29 63		7 57	23
8	296	40.0		38.8	83	26.0 ¹⁵⁶	25.5 ¹⁴⁰	35	42	11	37	22 59		8 02	26
9	311	40.1		37.9	98	00.5 ¹⁵⁵	39.4 ¹³⁹	30	40	08	32	16 56		06	29
10	326	40.2		37.0	112	35.1 ¹⁵⁶	-8 53.3 ¹³⁹	20	36	6 02	24	21 06	51	14	34
11	341	40.3	-9	36.1	127	09.6 ¹⁵⁵	-9 07.2 ¹³⁹	10 N	5 31	5 56	6 17	20 57	47	8 20	39
12	356	40.4	-9	35.2	141	44.1 ¹⁵⁵	-9 21.0 ¹³⁸	0	5 25	5 49	6 10	20 48	43	8 27	42
13	11	40.5		34.2	156	18.6 ¹⁵⁵	34.7 ¹³⁷	10 S	17	42	6 03	40 39		33	46
14	26	40.6		33.3	170	53.1 ¹⁵⁵	-9 48.5 ¹³⁸	20	5 07	33	5 55	31 35		40	50
15	41	40.7		32.4	185	27.6 ¹⁵⁵	-10 02.1 ¹³⁶	30	4 53	22	47	21 30		47	56
16	56	40.8		31.5	200	02.0 ¹⁵⁴	15.7 ¹³⁶	35	45	16	42	16 27		52	59
17	71	40.9	-9	30.5	214	36.4 ¹⁵⁴	-10 29.3 ¹³⁶	40	4 34	5 08	5 36	20 09	24	8 57	62
18	86	40.9	-9	29.6	229	10.9 ¹⁵⁵	-10 42.8 ¹³⁵	45	4 21	4 59	5 29	20 02	19	9 03	66
19	101	41.0		28.7	243	45.3 ¹⁵⁴	-10 56.2 ¹³⁴	50	4 05	47	21	19 53	15	10	71
20	116	41.1		27.8	258	19.6 ¹⁵³	-11 09.6 ¹³⁴	52	3 57	41	17	49 12		13	74
21	131	41.2		26.8	272	54.0 ¹⁵⁴	23.0 ¹³⁴	54	47	35	13	44 11		16	77
22	146	41.3		25.9	287	28.3 ¹⁵³	36.3 ¹³³	56	37	28	08	39 8		20	80
23	161	41.4		25.0	302	02.7 ¹⁵⁴	-11 49.5 ¹³²	58	24	20	5 03	34 4		25	83
24	176	41.5	-9	24.1	316	37.0 ¹⁵³	-12 02.7 ¹³²	60 S	3 10	4 11	4 57	19 28	0	9 30	87

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 13 ^h 44 ^m 7		Mag: -3.9 PMG: 10 ^h 29 ^m		Mag: +0.1 PMG: 19 ^h 33 ^m		Mag: -2.0 PMG: 8 ^h 49 ^m		Mag: +0.2 PMG: 0 ^h 18 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	153	15.4	202	56.2	-18 41.2	66 14.5	+26 21.1	227 30.6	-22 33.6	355 32.9	+11 19.3
1	168	17.9	217	55.5	40.5	81 16.3	21.1	242 32.6	33.6	10 35.6	19.3
2	183	20.3	232	54.7	39.9	96 18.1	21.1	257 34.6	33.5	25 38.2	19.4
3	198	22.8	247	54.0	39.2	111 19.8	21.0	272 36.5	33.5	40 40.9	19.5
4	213	25.3	262	53.3	38.5	126 21.6	21.0	287 38.5	33.4	55 43.5	19.6
5	228	27.7	277	52.6	-18 37.8	141 23.3	+26 21.0	302 40.5	-22 33.4	70 46.2	+11 19.6
6	243	30.2	292	51.9	-18 37.1	156 25.1	+26 20.9	317 42.4	-22 33.3	85 48.8	+11 19.7
7	258	32.7	307	51.2	36.4	171 26.9	20.9	332 44.4	33.3	100 51.5	19.8
8	273	35.1	322	50.5	35.7	186 28.6	20.9	347 46.4	33.2	115 54.2	19.9
9	288	37.6	337	49.7	35.0	201 30.4	20.8	2 48.3	33.2	130 56.8	19.9
10	303	40.1	352	49.0	34.3	216 32.1	20.8	17 50.3	33.1	145 59.5	20.0
11	318	42.5	7 48.3	-18 33.6	231 33.9	+26 20.8	32 52.3	-22 33.1	161 02.1	+11 20.1	
12	333	45.0	22 47.6	-18 32.9	246 35.7	+26 20.7	47 54.2	-22 33.0	176 04.8	+11 20.2	
13	348	47.4	37 46.9	32.2	261 37.4	20.7	62 56.2	33.0	191 07.4	20.3	
14	3 49.9	52 46.2	31.5	276 39.2	20.7	77 58.2	32.9	206 10.1		20.3	
15	18 52.4	67 45.5	30.8	291 40.9	20.6	93 00.1	32.9	221 12.7		20.4	
16	33 54.8	82 44.8	30.1	306 42.7	20.6	108 02.1	32.9	236 15.4		20.5	
17	48 57.3	97 44.0	-18 29.4	321 44.4	+26 20.5	123 04.1	-22 32.8	251 18.0	+11 20.6		
18	63 59.8	112 43.3	-18 28.7	336 46.2	+26 20.5	138 06.0	-22 32.8	266 20.7	+11 20.6		
19	79 02.2	127 42.6	28.0	351 47.9	20.5	153 08.0	32.7	281 23.3		20.7	
20	94 04.7	142 41.9	27.3	6 49.7	20.4	168 10.0	32.7	296 26.0		20.8	
21	109 07.2	157 41.2	26.6	21 51.4	20.4	183 11.9	32.6	311 28.7		20.9	
22	124 09.6	172 40.5	25.9	36 53.2	20.4	198 13.9	32.6	326 31.3		21.0	
23	139 12.1	187 39.8	25.2	51 54.9	20.3	213 15.9	32.5	341 34.0		21.0	
24	154 14.6	202 39.1	-18 24.5	66 56.7	+26 20.3	228 17.8	-22 32.5	356 36.6	+11 21.1		
Dif	—		-7	+7	+18	0	+20	0	+27	+	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16:2 PMG: 12 ^h 13 ^m 2			Edad: 17 ^d 8 PHE { SD: 15:0 PMG: 2 ^h 59 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	Rº	Hora	Rº
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	h m	m
0	176	41.5	-9 24.1	316	37.0	-12 02.7		60 N	17 15	17 58	18 46	23 43	90	7 26	1
1	191	41.6		331	11.2 ¹⁵²	15.8 ¹³¹		58	20	18 00	45	32 85		34	5
2	206	41.7		345	45.5 ¹⁵³	28.9 ¹³¹		56	24	02	45	22 80		41	9
3	221	41.8		0	19.7 ¹⁵²	41.9 ¹³⁰		54	28	04	45	13 77		48	1
4	236	41.9		14	53.9 ¹⁵²	-12 54.8 ¹²⁹		52	31	05	45	23 05	75	53	14
5	251	42.0	-9 19.4	29	28.0 ¹⁵¹	-13 07.7 ¹²⁹		50	17 34	18 07	18 44	22 58	72	7 59	16
6	266	42.1	-9 18.5	44	02.2 ¹⁵²	-13 20.5 ¹²⁸		45	17 41	18 11	18 45	22 44	66	8 10	21
7	281	42.2		58	36.3 ¹⁵¹	33.3 ¹²⁸		40	47	14	45	32 62		20	25
8	296	42.3		73	10.4 ¹⁵¹	46.0 ¹²⁷		35	51	17	46	21 60		28	28
9	311	42.4		87	44.4 ¹⁵⁰	-13 58.6 ¹²⁶		30	17 56	20	48	22 12	57	35	31
10	326	42.5		102	18.4 ¹⁵⁰	-14 11.2 ¹²⁶		20	18 03	26	51	21 57	52	48	35
11	341	42.6	-9 13.9	116	52.4 ¹⁵⁰	-14 23.7 ¹²⁵		10 N	18 10	18 31	18 56	21 44	48	8 59	39
12	356	42.6	-9 13.0	131	26.4 ¹⁵⁰	-14 36.1 ¹²⁴		0	18 16	18 37	19 02	21 31	45	9 09	43
13	11	42.7		146	00.3 ¹⁴⁹	-14 48.5 ¹²⁴		10 S	23	44	09	19 41		19	48
14	26	42.8		160	34.2 ¹⁴⁹	-15 00.8 ¹²³		20	30	18 52	19	21 06	37	30	52
15	41	42.9		175	08.0 ¹⁴⁸	13.0 ¹²²		30	38	19 03	32	20 51	33	43	57
16	56	43.0		189	41.8 ¹⁴⁸	25.2 ¹²²		35	43	09	40	43 29		51	59
17	71	43.1	-9 08.3	204	15.6 ¹⁴⁸	-15 37.3 ¹²¹		40	18 48	19 16	19 50	20 33	26	9 59	63
18	86	43.2	-9 07.4	218	49.3 ¹⁴⁷	-15 49.3 ¹²⁰		45	18 55	19 25	20 02	20 21	23	10 09	67
19	101	43.3		233	23.0 ¹⁴⁷	-16 01.3 ¹²⁰		50	19 03	36	18	08 18		21	72
20	116	43.4		247	56.7 ¹⁴⁷	13.2 ¹¹⁹		52	06	42	26	20 01	16	27	74
21	131	43.5		262	30.3 ¹⁴⁶	25.0 ¹¹⁸		54	10	48	34	19 55	13	33	77
22	146	43.6		277	03.8 ¹⁴⁵	36.7 ¹¹⁷		56	14	19 54	44	47 10		40	80
23	161	43.7		291	37.4 ¹⁴⁶	-16 48.4 ¹¹⁷		58	19	20 02	20 56	38 6		48	84
24	176	43.8	-9 01.8	306	10.9 ¹⁴⁵	-17 00.0 ¹¹⁶		60 S	19 25	20 10	21 10	19 28	2	10 57	89

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 13 ^h 40 ^m 8		Mag: -3.9 PMG: 10 ^h 30 ^m		Mag: +0.1 PMG: 19 ^h 30 ^m		Mag: -2.0 PMG: 8 ^h 46 ^m		Mag: +0.2 PMG: 0 ^h 14 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	154	14.6	202	39.1	-18	24.5	66	56.7	+26	20.3
1	169	17.0	217	38.4		23.8	81	58.4		20.3
2	184	19.5	232	37.7		23.0	97	00.2		20.2
3	199	21.9	247	37.0		22.3	112	01.9		20.2
4	214	24.4	262	36.3		21.6	127	03.7		20.2
5	229	26.9	277	35.6	-18	20.9	142	05.4	+26	20.1
6	244	29.3	292	34.8	-18	20.2	157	07.1	+26	20.1
7	259	31.8	307	34.1		19.5	172	08.9		20.0
8	274	34.3	322	33.4		18.8	187	10.6		20.0
9	289	36.7	337	32.7		18.0	202	12.4		20.0
10	304	39.2	352	32.0		17.3	217	14.1		19.9
11	319	41.7	7	31.3	-18	16.6	232	15.8	+26	19.9
12	334	44.1	22	30.6	-18	15.9	247	17.6	+26	19.9
13	349	46.6	37	29.9		15.2	262	19.3		19.8
14	4	49.1	52	29.2		14.4	277	21.0		19.8
15	19	51.5	67	28.5		13.7	292	22.8		19.8
16	34	54.0	82	27.8		13.0	307	24.5		19.7
17	49	56.4	97	27.1	-18	12.3	322	26.2	+26	19.7
18	64	58.9	112	26.4	-18	11.5	337	28.0	+26	19.6
19	80	01.4	127	25.7		10.8	352	29.7		19.6
20	95	03.8	142	25.0		10.1	7	31.4		19.6
21	110	06.3	157	24.3		09.4	22	33.1		19.5
22	125	08.8	172	23.6		08.6	37	34.9		19.5
23	140	11.2	187	22.9		07.9	52	36.6		19.5
24	155	13.7	202	22.2	-18	07.2	67	38.3	+26	19.4
Dif	—		-7	+7		+17	0		+20	0

UT	SOL			LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'2 PMG: 12 ^h 13 ^m 0			Edad: 18 ^d 8 PHE { 4 ^h : 54'5 12 ^h : 54'4 20 ^h : 54'3 SD: 14'9 PMG: 3 ^h 42 ^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	m	h m m	m	
0	176	43.8	-9	01.8	306	10.9	-17	00.0	60 N	5 39	6 27	7 09	** ** *	**	7 27	2	
1	191	43.9	-9	00.9	320	44.3 ¹⁴⁴	-17	11.5 ¹¹⁵	58	40	25	05	** ** *	**	39	8	
2	206	44.0	-9	00.0	335	17.7 ¹⁴⁴		23.0 ¹¹⁵	56	40	23	01	** ** *	**	50	11	
3	221	44.1	-8	59.0	349	51.1 ¹⁴⁴		34.3 ¹¹³	54	41	21	6 57	** ** *	**	7 59	15	
4	236	44.2		58.1	4	24.4 ¹⁴³		45.6 ¹¹³	52	41	20	54	** ** *	**	8 07	18	
5	251	44.3	-8	57.2	18	57.7 ¹⁴³	-17	56.8 ¹¹²	50	5 41	6 18	6 51	** ** *	**	8 15	20	
6	266	44.4	-8	56.2	33	30.9 ¹⁴²	-18	08.0 ¹¹²	45	5 41	6 15	6 44	23 50	66	8 31	25	
7	281	44.5		55.3	48	04.1 ¹⁴²		19.0 ¹¹⁰	40	40	12	39	34 62		45	28	
8	296	44.6		54.4	62	37.2 ¹⁴¹		30.0 ¹¹⁰	35	39	09	34	21 59		8 56	32	
9	311	44.7		53.4	77	10.3 ¹⁴¹		40.9 ¹⁰⁹	30	38	06	30	23 09	57	9 06	34	
10	326	44.8		52.5	91	43.3 ¹⁴⁰	-18	51.7 ¹⁰⁸	20	35	6 00	23	22 49	53	23	39	
11	341	44.9	-8	51.6	106	16.3 ¹⁴⁰	-19	02.4 ¹⁰⁷	10 N	5 30	5 55	6 16	22 32	50	9 38	43	
12	356	45.0	-8	50.6	120	49.3 ¹⁴⁰	-19	13.0 ¹⁰⁶	0	5 24	5 49	6 10	22 16	47	9 52	46	
13	11	45.1		49.7	135	22.2 ¹³⁹		23.6 ¹⁰⁶	10 S	17	42	6 03	22 00	44	10 07	49	
14	26	45.2		48.8	149	55.0 ¹³⁸		34.1 ¹⁰⁵	20	5 08	34	5 56	21 43	40	22	53	
15	41	45.3		47.8	164	27.8 ¹³⁸		44.5 ¹⁰⁴	30	4 55	24	48	24 36		40	57	
16	56	45.5		46.9	179	00.5 ¹³⁷	-19	54.8 ¹⁰³	35	47	18	44	21 12	35	10 50	59	
17	71	45.6	-8	46.0	193	33.2 ¹³⁷	-20	05.0 ¹⁰²	40	4 37	5 10	5 38	20 59	32	11 02	62	
18	86	45.7	-8	45.0	208	05.8 ¹³⁶	-20	15.1 ¹⁰¹	45	4 25	5 01	5 32	20 44	28	11 16	66	
19	101	45.8		44.1	222	38.4 ¹³⁶		25.2 ¹⁰¹	50	09	4 51	24	26 23		33	71	
20	116	45.9		43.2	237	10.9 ¹³⁵		35.1 ⁹⁹	52	4 01	45	21	17 21		41	74	
21	131	46.0		42.2	251	43.4 ¹³⁵		45.0 ⁹⁹	54	3 53	39	17	20 08	18	11 50	77	
22	146	46.1		41.3	266	15.8 ¹³⁴	-20	54.7 ⁹⁷	56	43	33	13	19 57	14	12 00	81	
23	161	46.2		40.4	280	48.2 ¹³⁴	-21	04.4 ⁹⁷	58	31	26	08	44 11		12	85	
24	176	46.3	-8	39.4	295	20.5 ¹³³	-21	14.0 ⁹⁶	60 S	3 17	4 17	5 03	19 30	4	12 26	90	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 13 ^h 36 ^m 9		Mag: -3.9 PMG: 10 ^h 31 ^m			Mag: +0.1 PMG: 19 ^h 27 ^m			Mag: -2.0 PMG: 8 ^h 43 ^m			Mag: +0.2 PMG: 0 ^h 09 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	155	13.7	202	22.2	-18	07.2	67	38.3	+26	19.4	229	05.2	-22	31.4	357	40.3	+11	23.0
1	170	16.2	217	21.5		06.4	82	40.1		19.4	244	07.1		31.3	12	43.0		23.0
2	185	18.6	232	20.8		05.7	97	41.8		19.4	259	09.1		31.3	27	45.6		23.1
3	200	21.1	247	20.2		05.0	112	43.5		19.3	274	11.1		31.2	42	48.3		23.2
4	215	23.5	262	19.5		04.2	127	45.2		19.3	289	13.0		31.2	57	50.9		23.3
5	230	26.0	277	18.8	-18	03.5	142	46.9	+26	19.2	304	15.0	-22	31.1	72	53.6	+11	23.3
6	245	28.5	292	18.1	-18	02.8	157	48.7	+26	19.2	319	17.0	-22	31.1	87	56.2	+11	23.4
7	260	30.9	307	17.4		02.0	172	50.4		19.2	334	19.0		31.0	102	58.9		23.5
8	275	33.4	322	16.7		01.3	187	52.1		19.1	349	20.9		31.0	118	01.5		23.6
9	290	35.9	337	16.0	-18	00.5	202	53.8		19.1	4	22.9		30.9	133	04.2		23.6
10	305	38.3	352	15.3	-17	59.8	217	55.5		19.1	19	24.9		30.9	148	06.9		23.7
11	320	40.8	7	14.6	-17	59.1	232	57.2	+26	19.0	34	26.9	-22	30.9	163	09.5	+11	23.8
12	335	43.3	22	13.9	-17	58.3	247	59.0	+26	19.0	49	28.8	-22	30.8	178	12.2	+11	23.9
13	350	45.7	37	13.2		57.6	263	00.7		19.0	64	30.8		30.8	193	14.8		24.0
14	5	48.2	52	12.5		56.8	278	02.4		18.9	79	32.8		30.7	208	17.5		24.0
15	20	50.7	67	11.8		56.1	293	04.1		18.9	94	34.8		30.7	223	20.1		24.1
16	35	53.1	82	11.2		55.3	308	05.8		18.8	109	36.8		30.6	238	22.8		24.2
17	50	55.6	97	10.5	-17	54.6	323	07.5	+26	18.8	124	38.7	-22	30.6	253	25.4	+11	24.3
18	65	58.0	112	09.8	-17	53.8	338	09.2	+26	18.8	139	40.7	-22	30.5	268	28.1	+11	24.3
19	81	00.5	127	09.1		53.1	353	10.9		18.7	154	42.7		30.5	283	30.7		24.4
20	96	03.0	142	08.4		52.3	8	12.7		18.7	169	44.7		30.4	298	33.4		24.5
21	111	05.4	157	07.7		51.6	23	14.4		18.7	184	46.6		30.4	313	36.0		24.6
22	126	07.9	172	07.0		50.8	38	16.1		18.6	199	48.6		30.3	328	38.7		24.6
23	141	10.4	187	06.3		50.1	53	17.8		18.6	214	50.6		30.3	343	41.4		24.7
24	156	12.8	202	05.7	-17	49.3	68	19.5	+26	18.5	229	52.6	-22	30.2	358	44.0	+11	24.8
Dif	—		-7			+7	+17			0	+20			0	+27			+1

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:2		Edad: 19 ^d 8 PHE { 4 ^h : 54:3 12 ^h : 54:2 20 ^h : 54:2						Civil			Hora R°		Hora R°	
	PMG: 12 ^h 12 ^m 8		SD: 14:8 PMG: 4 ^h 27 ^m R°: 47 ^m												
	hG ☉	Dec	hG ☾	Dif	Dec	Dif									
h	°	'	°		°	'	°	h m	h m	h m	h m	h m	m	h m	m
0	176	46.3	-8 39.4		295	20.5	-21 14.0	60 N	17 21	18 03	18 51	1 13	92	7 29	7
1	191	46.4		38.5	309	52.8 ¹³³	23.5	58	25	04	50	0 57	84	7 47	13
2	206	46.5		37.6	324	25.0 ¹³²	32.9	56	28	06	49	42	80	8 01	18
3	221	46.6		36.6	338	57.1 ¹³¹	42.2	54	32	08	48	30	76	14	22
4	236	46.7		35.7	353	29.2 ¹³¹	-21 51.4	52	35	09	48	20	73	25	25
5	251	46.8	-8 34.7		8	01.3 ¹³¹	-22 00.5	50	17 38	18 10	18 48	0 10	71	8 35	27
6	266	46.9	-8 33.8		22	33.2 ¹²⁹	-22 09.6	45	17 44	18 13	18 47	** ** *		8 56	31
7	281	47.0		32.9	37	05.2 ¹³⁰	18.5	40	49	16	48	** ** *		9 13	35
8	296	47.1		31.9	51	37.0 ¹²⁸	27.3	35	53	19	48	** ** *		28	37
9	311	47.2		31.0	66	08.8 ¹²⁸	36.0	30	17 57	21	49	** ** *		9 40	39
10	326	47.4		30.1	80	40.6 ¹²⁸	44.7	20	18 04	26	52	23 42	54	10 02	42
11	341	47.5	-8 29.1		95	12.3 ¹²⁷	-22 53.2	10 N	18 10	18 31	18 56	23 22	51	10 21	45
12	356	47.6	-8 28.2		109	43.9 ¹²⁶	-23 01.6	0	18 16	18 37	19 01	23 03	49	10 38	48
13	11	47.7		27.2	124	15.5 ¹²⁶	10.0	10 S	22	43	08	22 44	47	10 56	50
14	26	47.8		26.3	138	47.0 ¹²⁵	18.2	20	29	18 51	17	23 45		11 15	53
15	41	47.9		25.4	153	18.5 ¹²⁵	26.3	30	36	19 01	29	22 00	42	37	56
16	56	48.0		24.4	167	49.9 ¹²⁴	34.3	35	41	06	37	21 47	39	11 49	59
17	71	48.1	-8 23.5		182	21.2 ¹²³	-23 42.2	40	18 46	19 13	19 46	21 31	38	12 04	62
18	86	48.2	-8 22.5		196	52.5 ¹²³	-23 50.0	45	18 51	19 22	19 58	21 12	35	12 22	65
19	101	48.3		21.6	211	23.7 ¹²²	-23 57.7	50	18 58	32	20 13	20 49	31	44	69
20	116	48.4		20.7	225	54.9 ¹²²	-24 05.3	52	19 02	37	20	38	29	12 55	71
21	131	48.6		19.7	240	26.0 ¹²¹	12.8	54	05	43	29	26	26	13 07	74
22	146	48.7		18.8	254	57.1 ¹²¹	20.2	56	09	49	38	20 11	23	21	77
23	161	48.8		17.8	269	28.1 ¹²⁰	27.5	58	14	19 56	20 49	19 55	17	37	82
24	176	48.9	-8 16.9		283	59.0 ¹¹⁹	-24 34.6	60 S	19 19	20 04	21 02	19 34	11	13 56	90

UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO								
	PMG: 13 ^h 32 ^m 9		Mag: -3.9 PMG: 10 ^h 32 ^m		Mag: +0.1 PMG: 19 ^h 25 ^m		Mag: -2.0 PMG: 8 ^h 39 ^m		Mag: +0.2 PMG: 0 ^h 05 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'	°	'						
0	156	12.8	202	05.7	-17	49.3	68	19.5	+26	18.5	229	52.6	-22	30.2	358	44.0	+11	24.8
1	171	15.3	217	05.0		48.6	83	21.2		18.5	244	54.5		30.2	13	46.7		24.9
2	186	17.8	232	04.3		47.8	98	22.9		18.5	259	56.5		30.1	28	49.3		24.9
3	201	20.2	247	03.6		47.1	113	24.6		18.4	274	58.5		30.1	43	52.0		25.0
4	216	22.7	262	02.9		46.3	128	26.3		18.4	290	00.5		30.1	58	54.6		25.1
5	231	25.2	277	02.2	-17	45.6	143	28.0	+26	18.4	305	02.5	-22	30.0	73	57.3	+11	25.2
6	246	27.6	292	01.5	-17	44.8	158	29.7	+26	18.3	320	04.4	-22	30.0	88	59.9	+11	25.3
7	261	30.1	307	00.9		44.0	173	31.4		18.3	335	06.4		29.9	104	02.6		25.3
8	276	32.5	322	00.2		43.3	188	33.1		18.2	350	08.4		29.9	119	05.2		25.4
9	291	35.0	336	59.5		42.5	203	34.8		18.2	5	10.4		29.8	134	07.9		25.5
10	306	37.5	351	58.8		41.8	218	36.5		18.2	20	12.4		29.8	149	10.5		25.6
11	321	39.9	6	58.1	-17	41.0	233	38.2	+26	18.1	35	14.3	-22	29.7	164	13.2	+11	25.6
12	336	42.4	21	57.5	-17	40.2	248	39.9	+26	18.1	50	16.3	-22	29.7	179	15.8	+11	25.7
13	351	44.9	36	56.8		39.5	263	41.6		18.1	65	18.3		29.6	194	18.5		25.8
14	6	47.3	51	56.1		38.7	278	43.3		18.0	80	20.3		29.6	209	21.2		25.9
15	21	49.8	66	55.4		37.9	293	44.9		18.0	95	22.3		29.5	224	23.8		25.9
16	36	52.3	81	54.7		37.2	308	46.6		17.9	110	24.2		29.5	239	26.5		26.0
17	51	54.7	96	54.1	-17	36.4	323	48.3	+26	17.9	125	26.2	-22	29.4	254	29.1	+11	26.1
18	66	57.2	111	53.4	-17	35.6	338	50.0	+26	17.9	140	28.2	-22	29.4	269	31.8	+11	26.2
19	81	59.6	126	52.7		34.9	353	51.7		17.8	155	30.2		29.4	284	34.4		26.2
20	97	02.1	141	52.0		34.1	8	53.4		17.8	170	32.2		29.3	299	37.1		26.3
21	112	04.6	156	51.3		33.3	23	55.1		17.7	185	34.1		29.3	314	39.7		26.4
22	127	07.0	171	50.7		32.6	38	56.8		17.7	200	36.1		29.2	329	42.4		26.5
23	142	09.5	186	50.0		31.8	53	58.5		17.7	215	38.1		29.2	344	45.0		26.6
24	157	12.0	201	49.3	-17	31.0	69	00.1	+26	17.6	230	40.1	-22	29.1	359	47.7	+11	26.6
Dif	—		-7	+8		+17	0			+20	0			+27		+1		

UT	SOL			☾ LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna											
	SD: 16'1 PMG: 12 ^h 12 ^m 6			Edad: 20 ^d 8 PHE { 4 ^h : 54'2 12 ^h : 54'2 20 ^h : 54'3 SD: 14'8 342 02.2 PMG: 5 ^h 14 ^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	48.9	-8	16.9	283	59.0	-24	34.6	60 N	5	33	6	21	7	03	2	45									
1	191	49.0		16.0	298	29.9	119	41.7	58	34	20	6	59		21	80										
2	206	49.1		15.0	313	00.7	118	48.6	56	35	18	56		2	02											
3	221	49.2		14.1	327	31.5	118	-24	55.5	54	36	17	52	1	46											
4	236	49.3		13.1	342	02.2	117	-25	02.2	52	37	16	50		33											
5	251	49.4	-8	12.2	356	32.8	116	-25	08.8	50	5	37	6	14	1	21										
6	266	49.6	-8	11.2	11	03.4	116	-25	15.3	45	5	37	6	11	0	56										
7	281	49.7		10.3	25	34.0	116		21.7	40	37	09	36		36											
8	296	49.8		09.4	40	04.4	114		27.9	35	37	06	32		20											
9	311	49.9		08.4	54	34.9	115		34.1	30	36	6	04	28	0	06										
10	326	50.0		07.5	69	05.2	113		40.1	20	33	5	59	21	**	**										
11	341	50.1	-8	06.5	83	35.5	113	-25	46.0	10 N	5	29	5	54	**	**										
12	356	50.2	-8	05.6	98	05.8	113	-25	51.8	0	5	24	5	48	23	52										
13	11	50.3		04.6	112	36.0	112	-25	57.5	10 S	17	42	6	03	31	50										
14	26	50.5		03.7	127	06.1	111	-26	03.1	20	5	09	35	5	57	23										
15	41	50.6		02.8	141	36.2	111		08.5	30	4	57	25	50	22	42										
16	56	50.7		01.8	156	06.2	110		13.8	35	49	20	45		26											
17	71	50.8	-8	00.9	170	36.2	110	-26	19.0	40	4	40	5	13	22	09										
18	86	50.9	-7	59.9	185	06.2	110	-26	24.1	45	4	28	5	04	21	47										
19	101	51.0		59.0	199	36.0	108		29.1	50	13	4	54	28	20	41										
20	116	51.1		58.0	214	05.9	109		33.9	52	4	06	49	25	21	07										
21	131	51.3		57.1	228	35.6	107		38.6	54	3	58	44	21	20	52										
22	146	51.4		56.1	243	05.3	107		43.2	56	48	38	17		34											
23	161	51.5		55.2	257	35.0	107		47.7	58	37	31	13		20	12										
24	176	51.6	-7	54.3	272	04.6	106	-26	52.0	60 S	3	24	4	23	19	45										
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO													
	PMG: 13 ^h 29 ^m 0			Mag: -3.9 PMG: 10 ^h 33 ^m			Mag: +0.2 PMG: 19 ^h 22 ^m			Mag: -2.0 PMG: 8 ^h 36 ^m			Mag: +0.2 PMG: 0 ^h 01 ^m													
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec												
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°											
0	157	12.0		201	49.3	-17	31.0	69	00.1	+26	17.6	230	40.1	-22	29.1	359	47.7	+11	26.6							
1	172	14.4		216	48.6		30.2	84	01.8		17.6	245	42.1		29.1	14	50.3		26.7							
2	187	16.9		231	48.0		29.5	99	03.5		17.6	260	44.0		29.0	29	53.0		26.8							
3	202	19.4		246	47.3		28.7	114	05.2		17.5	275	46.0		29.0	44	55.7		26.9							
4	217	21.8		261	46.6		27.9	129	06.9		17.5	290	48.0		28.9	59	58.3		26.9							
5	232	24.3		276	46.0	-17	27.1	144	08.5	+26	17.4	305	50.0	-22	28.9	75	01.0	+11	27.0							
6	247	26.8		291	45.3	-17	26.4	159	10.2	+26	17.4	320	52.0	-22	28.8	90	03.6	+11	27.1							
7	262	29.2		306	44.6		25.6	174	11.9		17.4	335	54.0		28.8	105	06.3		27.2							
8	277	31.7		321	43.9		24.8	189	13.6		17.3	350	55.9		28.7	120	08.9		27.2							
9	292	34.1		336	43.3		24.0	204	15.3		17.3	5	57.9		28.7	135	11.6		27.3							
10	307	36.6		351	42.6		23.2	219	16.9		17.2	20	59.9		28.6	150	14.2		27.4							
11	322	39.1		6	41.9	-17	22.4	234	18.6	+26	17.2	36	01.9	-22	28.6	165	16.9	+11	27.5							
12	337	41.5		21	41.3	-17	21.7	249	20.3	+26	17.2	51	03.9	-22	28.6	180	19.5	+11	27.5							
13	352	44.0		36	40.6		20.9	264	22.0		17.1	66	05.9		28.5	195	22.2		27.6							
14	7	46.5		51	39.9		20.1	279	23.6		17.1	81	07.8		28.5	210	24.8		27.7							
15	22	48.9		66	39.2		19.3	294	25.3		17.0	96	09.8		28.4	225	27.5		27.8							
16	37	51.4		81	38.6		18.5	309	27.0		17.0	111	11.8		28.4	240	30.1		27.8							
17	52	53.9		96	37.9	-17	17.7	324	28.6	+26	17.0	126	13.8	-22	28.3	255	32.8	+11	27.9							
18	67	56.3		111	37.2	-17	16.9	339	30.3	+26	16.9	141	15.8	-22	28.3	270	35.5	+11	28.0							
19	82	58.8		126	36.6		16.1	354	32.0		16.9	156	17.8		28.2	285	38.1		28.1							
20	98	01.3		141	35.9		15.4	9	33.7		16.9	171	19.8		28.2	300	40.8		28.2							
21	113	03.7		156	35.2		14.6	24	35.3		16.8	186	21.7		28.1	315	43.4		28.2							
22	128	06.2		171	34.6		13.8	39	37.0		16.8	201	23.7		28.1	330	46.1		28.3							
23	143	08.6		186	33.9		13.0	54	38.7		16.7	216	25.7		28.0	345	48.7		28.4							
24	158	11.1		201	33.2	-17	12.2	69	40.3	+26	16.7	231	27.7	-22	28.0	0	51.4	+11	28.5							
Dif	—			-7			+8			+17			0			+20			0			-8973			+	

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 16 ^h 1			Edad: 21 ^d 8 PHE { 4 ^h : 54 ^h /3 12 ^h : 54 ^h /4 20 ^h : 54 ^h /5													
	PMG: 12 ^h 12 ^m 5			SD: 14 ^h 8					PMG: 6 ^h 04 ^m R°: 52 ^m								
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico		Hora	R°		Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	h m	m	h m	m	m
0	176	51.6	-7 54.3	272	04.6	-26 52.0	42	60 N	17 26	18 08	18 56	4 13	70	7 51	37		
1	191	51.7		53.3	286	34.2 ¹⁰⁶		58	29	09	54	3 41	65	8 23	42		
2	206	51.8		52.4	301	03.7 ¹⁰⁵		56	33	10	53	3 17	63	8 47	44		
3	221	52.0		51.4	315	33.2 ¹⁰⁵		54	36	11	52	2 57	62	9 07	45		
4	236	52.1		50.5	330	02.6 ¹⁰⁴		52	38	12	52	41	60	23	47		
5	251	52.2	-7 49.5	344	32.0 ¹⁰⁴	-27 11.8	37	50	17 41	18 13	18 51	2 27	60	9 37	48		
6	266	52.3	-7 48.6	359	01.3 ¹⁰³	-27 15.4	36	45	17 46	18 16	18 50	1 59	58	10 06	49		
7	281	52.4		47.6	13	30.6 ¹⁰³		40	51	18	50	37	56	29	49		
8	296	52.5		46.7	27	59.8 ¹⁰²		35	55	20	50	18	56	10 48	50		
9	311	52.7		45.7	42	29.0 ¹⁰²		30	17 59	23	50	1 03	54	11 04	50		
10	326	52.8		44.8	56	58.2 ¹⁰²		20	18 05	27	53	0 36	53	31	51		
11	341	52.9	-7 43.8	71	27.3 ¹⁰¹	-27 31.3	29	10 N	18 10	18 32	18 56	0 13	52	11 55	51		
12	356	53.0	-7 42.9	85	56.4 ¹⁰¹	-27 34.1	28	0	18 16	18 37	19 01	** ** *		12 16	52		
13	11	53.1		41.9	100	25.4 ¹⁰⁰		10 S	21	42	07	** ** *		12 38	53		
14	26	53.3		41.0	114	54.4 ¹⁰⁰		20	27	49	15	23 57	53	13 02	53		
15	41	53.4		40.0	129	23.3 ⁹⁹		30	34	18 58	27	29	54	29	53		
16	56	53.5		39.1	143	52.2 ⁹⁹		35	38	19 04	34	23 13	53	13 45	54		
17	71	53.6	-7 38.1	158	21.1 ⁹⁹	-27 46.1	21	40	18 43	19 10	19 43	22 54	53	14 04	54		
18	86	53.7	-7 37.2	172	49.9 ⁹⁸	-27 48.1	20	45	18 48	19 18	19 54	22 31	53	14 27	54		
19	101	53.9		36.2	187	18.7 ⁹⁸		50	54	28	20 08	22 01	54	14 56	55		
20	116	54.0		35.3	201	47.5 ⁹⁸		52	18 57	32	15	21 47	53	15 11	54		
21	131	54.1		34.3	216	16.2 ⁹⁷		54	19 01	38	23	30	54	28	54		
22	146	54.2		33.4	230	44.9 ⁹⁷		56	04	43	32	21 10	53	15 48	54		
23	161	54.3		32.4	245	13.6 ⁹⁷		58	08	50	42	20 44	54	16 13	55		
24	176	54.5	-7 31.5	259	42.2 ⁹⁶	-27 57.2	12	60 S	19 13	19 57	20 54	20 10	53	16 47	56		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 13 ^h 25 ^m 1		Mag: -3.9 PMG: 10 ^h 34 ^m		Mag: +0.2 PMG: 19 ^h 19 ^m		Mag: -2.0 PMG: 8 ^h 33 ^m		Mag: +0.2 PMG: 23 ^h 52 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	158	11.1	201 33.2	-17 12.2	69 40.3	+26 16.7	231 27.7	-22 28.0	0 51.4	+11 28.5
1	173	13.6	216 32.6	11.4	84 42.0	16.7	246 29.7	27.9	15 54.0	28.5
2	188	16.0	231 31.9	10.6	99 43.6	16.6	261 31.7	27.9	30 56.7	28.6
3	203	18.5	246 31.3	09.8	114 45.3	16.6	276 33.7	27.8	45 59.3	28.7
4	218	21.0	261 30.6	09.0	129 47.0	16.5	291 35.6	27.8	61 02.0	28.8
5	233	23.4	276 29.9	-17 08.2	144 48.6	+26 16.5	306 37.6	-22 27.8	76 04.6	+11 28.8
6	248	25.9	291 29.3	-17 07.4	159 50.3	+26 16.5	321 39.6	-22 27.7	91 07.3	+11 28.9
7	263	28.4	306 28.6	06.6	174 51.9	16.4	336 41.6	27.7	106 09.9	29.0
8	278	30.8	321 28.0	05.8	189 53.6	16.4	351 43.6	27.6	121 12.6	29.1
9	293	33.3	336 27.3	05.0	204 55.3	16.3	6 45.6	27.6	136 15.3	29.1
10	308	35.7	351 26.6	04.2	219 56.9	16.3	21 47.6	27.5	151 17.9	29.2
11	323	38.2	6 26.0	-17 03.4	234 58.6	+26 16.3	36 49.6	-22 27.5	166 20.6	+11 29.3
12	338	40.7	21 25.3	-17 02.6	250 00.2	+26 16.2	51 51.5	-22 27.4	181 23.2	+11 29.4
13	353	43.1	36 24.7	01.8	265 01.9	16.2	66 53.5	27.4	196 25.9	29.4
14	8 45.6	51 24.0	01.0	280 03.5	16.1	81 55.5	27.3	211 28.5	29.5	
15	23 48.1	66 23.3	-17 00.2	295 05.2	16.1	96 57.5	27.3	226 31.2	29.6	
16	38 50.5	81 22.7	-16 59.4	310 06.8	16.1	111 59.5	27.2	241 33.8	29.7	
17	53 53.0	96 22.0	-16 58.5	325 08.5	+26 16.0	127 01.5	-22 27.2	256 36.5	+11 29.7	
18	68 55.5	111 21.4	-16 57.7	340 10.1	+26 16.0	142 03.5	-22 27.1	271 39.1	+11 29.8	
19	83 57.9	126 20.7	56.9	355 11.8	15.9	157 05.5	27.1	286 41.8	29.9	
20	99 00.4	141 20.1	56.1	10 13.4	15.9	172 07.5	27.0	301 44.4	30.0	
21	114 02.9	156 19.4	55.3	25 15.1	15.8	187 09.5	27.0	316 47.1	30.0	
22	129 05.3	171 18.7	54.5	40 16.7	15.8	202 11.4	27.0	331 49.7	30.1	
23	144 07.8	186 18.1	53.7	55 18.4	15.8	217 13.4	26.9	346 52.4	30.2	
24	159 10.2	201 17.4	-16 52.9	70 20.0	+26 15.7	232 15.4	-22 26.9	1 55.0	+11 30.3	
Dif	—	-7	+8	+17	0	+20	0	+27	+	

UT	SOL			 LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna										
	SD: 16'1			Edad: 22 ^d 8 PHE { 4 ^h : 54'6 12 ^h : 54'7 20 ^h : 54'9																					
	PMG: 12 ^h 12 ^m 3			SD: 14'9 PMG: 6 ^h 56 ^m R°: 52 ^m																					
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°										
h	°	'	°	°	'	°	'	°	h	m	h	m		h	m	m									
0	176	54.5	-7	31.5		259	42.2	-27	57.2	11	60 N	5	28	6	16	6	58	5	23	40	8	28	70		
1	191	54.6		30.5		274	10.8	96	58.3	9	58	29	15		54	4	46	44		9	05	65			
2	206	54.7		29.6		288	39.4	96	59.2	7	56	31	13		51	4	20	46		31	63				
3	221	54.8		28.6		303	07.9	95	-27	59.9	9	54	32	12	48	3	59	47		9	52	62			
4	236	55.0		27.7		317	36.4	95	-28	00.5	6	52	32	11	45		41	49		10	10	60			
5	251	55.1	-7	26.7		332	04.9	95	-28	01.0	5	50	5	33	6	10	6	43		3	27	48	10	25	59
6	266	55.2	-7	25.8		346	33.4	95	-28	01.4	4	45	5	34	6	08	6	37		2	57	49	10	55	58
7	281	55.3		24.8		1	01.8	94	01.6	2	40	35	06		33		33	51		11	18	57			
8	296	55.4		23.9		15	30.3	95	01.7	1	35	34	04		29		2	14	51		38	56			
9	311	55.6		22.9		29	58.7	94	01.6	1	30	34	6	02	26		1	57	52		11	54	56		
10	326	55.7		22.0		44	27.0	93	01.4	2	20	32	5	57	20		29	52		12	22	55			
11	341	55.8	-7	21.0		58	55.4	94	-28	01.0	4	10 N	5	29	5	53	6	14		1	05	53	12	46	54
12	356	55.9	-7	20.1		73	23.7	93	-28	00.5	5	0	5	24	5	48	6	09		0	43	53	13	08	53
13	11	56.1		19.1		87	52.1	94	-27	59.9	6	10 S	18	42	6	04		0	21	53		31	51		
14	26	56.2		18.2		102	20.4	93	59.1	8	20	5	10	36	5	58		**	**	**		13	55	50	
15	41	56.3		17.2		116	48.6	92	58.2	9	30	4	58	27	51		**	**	**		14	22	50		
16	56	56.4		16.2		131	16.9	93	57.2	10	35	51	21	47			**	**	**		39	48			
17	71	56.6	-7	15.3		145	45.2	93	-27	56.0	12	40	4	42	5	15	5	43		23	47	61	14	58	47
18	86	56.7	-7	14.3		160	13.4	92	-27	54.6	14	45	4	31	5	07	5	38		23	24	63	15	21	46
19	101	56.8		13.4		174	41.7	93	53.1	15	50	17	4	58	31		22	55	65		15	51	43		
20	116	56.9		12.4		189	09.9	92	51.5	16	52	10	53	28			40	67		16	05	42			
21	131	57.1		11.5		203	38.1	92	49.8	17	54	4	02	48	25		24	68		22	40				
22	146	57.2		10.5		218	06.3	92	47.8	20	56	3	54	42	22		22	03	72		16	42	38		
23	161	57.3		09.6		232	34.5	92	45.8	20	58	43	36	18			21	38	75		17	08	34		
24	176	57.4	-7	08.6		247	02.7	92	-27	43.6	22	60 S	3	31	4	29	5	13		21	03	83	17	43	27

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 13 ^h 21 ^m 1		Mag: -3.9 PMG: 10 ^h 35 ^m			Mag: +0.2 PMG: 19 ^h 17 ^m			Mag: -2.0 PMG: 8 ^h 30 ^m			Mag: +0.2 PMG: 23 ^h 48 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'				
0	159	10.2	201	17.4	-16	52.9	70	20.0	+26	15.7	232	15.4	-22	26.9	1	55.0	+11	30.3
1	174	12.7	216	16.8		52.0	85	21.7		15.7	247	17.4		26.8	16	57.7		30.3
2	189	15.2	231	16.1		51.2	100	23.3		15.6	262	19.4		26.8	32	00.4		30.4
3	204	17.6	246	15.5		50.4	115	25.0		15.6	277	21.4		26.7	47	03.0		30.5
4	219	20.1	261	14.8		49.6	130	26.6		15.6	292	23.4		26.7	62	05.7		30.6
5	234	22.6	276	14.2	-16	48.8	145	28.2	+26	15.5	307	25.4	-22	26.6	77	08.3	+11	30.6
6	249	25.0	291	13.5	-16	48.0	160	29.9	+26	15.5	322	27.4	-22	26.6	92	11.0	+11	30.7
7	264	27.5	306	12.9		47.1	175	31.5		15.4	337	29.4		26.5	107	13.6		30.8
8	279	30.0	321	12.2		46.3	190	33.2		15.4	352	31.4		26.5	122	16.3		30.9
9	294	32.4	336	11.6		45.5	205	34.8		15.4	7	33.3		26.4	137	18.9		31.0
10	309	34.9	351	10.9		44.7	220	36.4		15.3	22	35.3		26.4	152	21.6		31.0
11	324	37.4	6	10.3	-16	43.8	235	38.1	+26	15.3	37	37.3	-22	26.3	167	24.2	+11	31.1
12	339	39.8	21	09.6	-16	43.0	250	39.7	+26	15.2	52	39.3	-22	26.3	182	26.9	+11	31.2
13	354	42.3	36	09.0		42.2	265	41.3		15.2	67	41.3		26.2	197	29.5		31.3
14	9	44.7	51	08.3		41.4	280	43.0		15.1	82	43.3		26.2	212	32.2		31.3
15	24	47.2	66	07.7		40.5	295	44.6		15.1	97	45.3		26.1	227	34.8		31.4
16	39	49.7	81	07.0		39.7	310	46.2		15.1	112	47.3		26.1	242	37.5		31.5
17	54	52.1	96	06.4	-16	38.9	325	47.9	+26	15.0	127	49.3	-22	26.1	257	40.1	+11	31.6
18	69	54.6	111	05.8	-16	38.1	340	49.5	+26	15.0	142	51.3	-22	26.0	272	42.8	+11	31.6
19	84	57.1	126	05.1		37.2	355	51.1		14.9	157	53.3		26.0	287	45.4		31.7
20	99	59.5	141	04.5		36.4	10	52.8		14.9	172	55.3		25.9	302	48.1		31.8
21	115	02.0	156	03.8		35.6	25	54.4		14.9	187	57.3		25.9	317	50.8		31.9
22	130	04.5	171	03.2		34.7	40	56.0		14.8	202	59.3		25.8	332	53.4		31.9
23	145	06.9	186	02.5		33.9	55	57.7		14.8	218	01.3		25.8	347	56.1		32.0
24	160	09.4	201	01.9	-16	33.1	70	59.3	+26	14.7	233	03.3	-22	25.7	2	58.7	+11	32.1
Dif	—		-6		+8		+16		0		+20		0		+27		+1	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna	Puesta de Luna	
	SD: 16 ^h 1			Edad: 23 ^d 8 PHE { 4 ^h : 55 ^m 1 12 ^h : 55 ^m 2 20 ^h : 55 ^m 4									
	PMG: 12 ^h 12 ^m 1												
	PMG: 7 ^h 48 ^m R°: 53 ^m												
hG ☉	Dec	hG ☾ Dif	Dec	Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	176	57.4	-7 08.6	247	02.7	-27 43.6	23	60 N	17 31	18 13	19 01	6 03 17	9 38 92
1	191	57.6	07.7	261	30.9	41.3	23	58	34	13	18 59	5 30 26	10 10 84
2	206	57.7	06.7	275	59.1	38.8	25	56	37	14	57	5 06 30	34 79
3	221	57.8	05.7	290	27.3	36.2	26	54	40	15	56	4 46 34	10 54 75
4	236	58.0	04.8	304	55.5	33.4	28	52	42	16	55	30 36	11 10 73
5	251	58.1	-7 03.8	319	23.7	-27 30.5	29	50	17 44	18 17	18 54	4 15 38	11 24 71
6	266	58.2	-7 02.9	333	51.9	-27 27.5	30	45	17 49	18 19	18 53	3 46 42	11 53 66
7	281	58.3	01.9	348	20.1	24.3	32	40	53	20	52	24 43	12 15 64
8	296	58.5	-7 01.0	2	48.3	20.9	34	35	17 57	22	52	3 05 45	34 62
9	311	58.6	-7 00.0	17	16.5	17.5	34	30	18 00	24	52	2 49 47	12 50 60
10	326	58.7	-6 59.0	31	44.7	13.8	37	20	06	28	53	2 21 49	13 17 57
11	341	58.8	-6 58.1	46	12.9	-27 10.1	37	10 N	18 11	18 32	18 56	1 58 51	13 40 54
12	356	59.0	-6 57.1	60	41.1	-27 06.2	39	0	18 15	18 36	19 00	1 36 52	14 01 52
13	11	59.1	56.2	75	09.4	-27 02.1	41	10 S	20	41	06	1 14 54	22 50
14	26	59.2	55.2	89	37.6	-26 58.0	41	20	26	48	14	0 50 56	14 45 48
15	41	59.4	54.3	104	05.8	53.6	44	30	32	18 56	24	23 58	15 12 44
16	56	59.5	53.3	118	34.1	49.2	44	35	35	19 01	31	0 06 60	27 43
17	71	59.6	-6 52.3	133	02.4	-26 44.5	47	40	18 40	19 07	19 40	** ** *	15 45 40
18	86	59.8	-6 51.4	147	30.7	-26 39.8	47	45	18 44	19 14	19 50	** ** *	16 07 37
19	101	59.9	50.4	161	59.0	34.9	49	50	50	23	20 04	** ** *	34 33
20	117	00.0	49.5	176	27.3	29.9	50	52	53	28	10	23 47 77	16 47 31
21	132	00.1	48.5	190	55.6	24.7	52	54	56	32	18	32 80	17 02 29
22	147	00.3	47.6	205	24.0	19.4	53	56	18 59	38	26	23 15 83	20 25
23	162	00.4	46.6	219	52.3	13.9	55	58	19 03	44	36	22 53 89	17 42 19
24	177	00.5	-6 45.6	234	20.7	-26 08.3	56	60 S	19 07	19 51	20 47	22 26 96	18 10 12

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 13 ^h 17 ^m 2		Mag: -3.9 PMG: 10 ^h 36 ^m		Mag: +0.2 PMG: 19 ^h 14 ^m		Mag: -2.0 PMG: 8 ^h 27 ^m		Mag: +0.2 PMG: 23 ^h 44 ^m	
	hG ♈	hG ♀ Dec	hG ♂ Dec	hG ♃ Dec	hG ♄ Dec	hG ♅ Dec	hG ♆ Dec	hG ♁ Dec		
h	°	°	°	°	°	°	°	°		
0	160	09.4	201 01.9	-16 33.1	70 59.3	+26 14.7	233 03.3	-22 25.7	2 58.7	+11 32.1
1	175	11.9	216 01.2	32.2	86 00.9	14.7	248 05.3	25.7	18 01.4	32.2
2	190	14.3	231 00.6	31.4	101 02.5	14.6	263 07.2	25.6	33 04.0	32.2
3	205	16.8	246 00.0	30.6	116 04.2	14.6	278 09.2	25.6	48 06.7	32.3
4	220	19.2	260 59.3	29.7	131 05.8	14.6	293 11.2	25.5	63 09.3	32.4
5	235	21.7	275 58.7	-16 28.9	146 07.4	+26 14.5	308 13.2	-22 25.5	78 12.0	+11 32.5
6	250	24.2	290 58.0	-16 28.0	161 09.0	+26 14.5	323 15.2	-22 25.4	93 14.6	+11 32.5
7	265	26.6	305 57.4	27.2	176 10.7	14.4	338 17.2	25.4	108 17.3	32.6
8	280	29.1	320 56.8	26.4	191 12.3	14.4	353 19.2	25.3	123 19.9	32.7
9	295	31.6	335 56.1	25.5	206 13.9	14.3	8 21.2	25.3	138 22.6	32.8
10	310	34.0	350 55.5	24.7	221 15.5	14.3	23 23.2	25.3	153 25.2	32.8
11	325	36.5	5 54.9	-16 23.8	236 17.1	+26 14.3	38 25.2	-22 25.2	168 27.9	+11 32.9
12	340	39.0	20 54.2	-16 23.0	251 18.7	+26 14.2	53 27.2	-22 25.2	183 30.5	+11 33.0
13	355	41.4	35 53.6	22.1	266 20.4	14.2	68 29.2	25.1	198 33.2	33.1
14	10	43.9	50 52.9	21.3	281 22.0	14.1	83 31.2	25.1	213 35.8	33.1
15	25	46.3	65 52.3	20.4	296 23.6	14.1	98 33.2	25.0	228 38.5	33.2
16	40	48.8	80 51.7	19.6	311 25.2	14.0	113 35.2	25.0	243 41.1	33.3
17	55	51.3	95 51.0	-16 18.8	326 26.8	+26 14.0	128 37.2	-22 24.9	258 43.8	+11 33.4
18	70	53.7	110 50.4	-16 17.9	341 28.4	+26 14.0	143 39.2	-22 24.9	273 46.4	+11 33.4
19	85	56.2	125 49.8	17.1	356 30.0	13.9	158 41.2	24.8	288 49.1	33.5
20	100	58.7	140 49.1	16.2	11 31.7	13.9	173 43.2	24.8	303 51.8	33.6
21	116	01.1	155 48.5	15.4	26 33.3	13.8	188 45.2	24.7	318 54.4	33.6
22	131	03.6	170 47.9	14.5	41 34.9	13.8	203 47.2	24.7	333 57.1	33.7
23	146	06.1	185 47.2	13.6	56 36.5	13.7	218 49.2	24.6	348 59.7	33.8
24	161	08.5	200 46.6	-16 12.8	71 38.1	+26 13.7	233 51.2	-22 24.6	4 02.4	+11 33.9
Dif	—	-6	+8	+16	0	+20	0	+27	+1	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16 ^h 1			Edad: 24 ^d 8	PHE { 4 ^h : 55 ^m 6 12 ^h : 55 ^m 9 20 ^h : 56 ^m 1	R°: 51 ^m		Náutico	Civil		Hora	R°	Hora	R°	
	PMG: 12 ^h 11 ^m 9					PMG: 8 ^h 41 ^m									
	hG ☉	Dec		hG ☾	Dif	Dec	Dif								
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	177	00.5	-6 45.6	234	20.7	-26 08.3		60 N	5 22	6 10	6 52	6 20 8	11 10 99		
1	192	00.7		248	49.1	-26 02.6	57	58	24	09	48	5 56 14	34 92		
2	207	00.8		263	17.6	-25 56.7	59	56	26	08	46	36 20	11 53 87		
3	222	00.9		277	46.0		60	54	27	08	43	20 23	12 09 83		
4	237	01.1		292	14.5	44.6	61	52	28	07	41	5 06 26	23 79		
5	252	01.2	-6 40.8	306	43.0	-25 38.3	63	50	5 29	6 06	6 39	4 53 29	12 35 76		
6	267	01.3	-6 39.9	321	11.5	-25 31.9	64	45	5 31	6 05	6 34	4 28 33	12 59 72		
7	282	01.5		335	40.1	25.3	66	40	32	03	30	4 07 37	13 19 68		
8	297	01.6		350	08.6	18.6	67	35	32	01	27	3 50 40	36 64		
9	312	01.7		4	37.2	11.8	68	30	32	6 00	23	36 42	13 50 62		
10	327	01.9		19	05.9	-25 04.8	70	20	30	5 56	18	3 10 46	14 14 57		
11	342	02.0	-6 35.1	33	34.5	-24 57.7	71	10 N	5 28	5 52	6 13	2 49 49	14 34 54		
12	357	02.1	-6 34.1	48	03.2	-24 50.5	72	0	5 24	5 48	6 09	2 28 52	14 53 51		
13	12	02.3		62	31.9	43.1	74	10 S	18	43	6 04	2 08 54	15 12 48		
14	27	02.4		77	00.7	35.6	75	20	10	36	5 59	1 46 58	33 44		
15	42	02.5		91	29.4	28.0	76	30	5 00	28	53	21 61	15 56 40		
16	57	02.7		105	58.2	20.2	78	35	4 53	23	49	1 06 63	16 10 37		
17	72	02.8	-6 29.3	120	27.1	-24 12.3	79	40	4 45	5 17	5 45	0 48 66	16 25 34		
18	87	02.9	-6 28.3	134	55.9	-24 04.2	81	45	4 34	5 10	5 40	0 27 69	16 44 30		
19	102	03.1		149	24.8	-23 56.1	81	50	21	5 01	35	0 00 74	17 07 25		
20	117	03.2		163	53.8	47.8	83	52	15	4 57	32	** ** *	18 23		
21	132	03.3		178	22.7	39.3	85	54	4 07	52	29	** ** *	31 19		
22	147	03.5		192	51.7	30.8	85	56	3 59	47	26	** ** *	17 45 16		
23	162	03.6		207	20.7	22.1	87	58	49	41	22	** ** *	18 01 12		
24	177	03.7	-6 22.6	221	49.8	-23 13.3	88	60 S	3 38	4 34	5 18	** ** *	18 22 5		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 13 ^h 13 ^m 3		Mag: -3.9 PMG: 10 ^h 37 ^m		Mag: +0.2 PMG: 19 ^h 11 ^m		Mag: -2.0 PMG: 8 ^h 23 ^m		Mag: +0.2 PMG: 23 ^h 40 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	161	08.5	200	46.6	-16	12.8	71	38.1	+26	13.7
1	176	11.0	215	46.0		11.9	86	39.7		13.6
2	191	13.5	230	45.3		11.1	101	41.3		13.6
3	206	15.9	245	44.7		10.2	116	42.9		13.6
4	221	18.4	260	44.1		09.4	131	44.5		13.5
5	236	20.8	275	43.5	-16	08.5	146	46.1	+26	13.5
6	251	23.3	290	42.8	-16	07.7	161	47.7	+26	13.4
7	266	25.8	305	42.2		06.8	176	49.3		13.4
8	281	28.2	320	41.6		05.9	191	50.9		13.3
9	296	30.7	335	40.9		05.1	206	52.5		13.3
10	311	33.2	350	40.3		04.2	221	54.1		13.3
11	326	35.6	5	39.7	-16	03.4	236	55.7	+26	13.2
12	341	38.1	20	39.1	-16	02.5	251	57.3	+26	13.2
13	356	40.6	35	38.4		01.6	266	58.9		13.1
14	11	43.0	50	37.8	-16	00.8	282	00.5		13.1
15	26	45.5	65	37.2	-15	59.9	297	02.1		13.0
16	41	48.0	80	36.6		59.0	312	03.7		13.0
17	56	50.4	95	35.9	-15	58.2	327	05.3	+26	12.9
18	71	52.9	110	35.3	-15	57.3	342	06.9	+26	12.9
19	86	55.3	125	34.7		56.4	357	08.5		12.8
20	101	57.8	140	34.1		55.6	12	10.1		12.8
21	117	00.3	155	33.4		54.7	27	11.7		12.8
22	132	02.7	170	32.8		53.8	42	13.3		12.7
23	147	05.2	185	32.2		52.9	57	14.9		12.7
24	162	07.7	200	31.6	-15	52.1	72	16.5	+26	12.6
Dif	—		-6	+9		+16	0	+20		0

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16 ^h 1		Edad: 25 ^d 8 PHE	4 ^h : 56 ^m 3 12 ^h : 56 ^m 6 20 ^h : 56 ^m 8		Civil			Náutico		Hora		R°		
	PMG: 12 ^h 11 ^m 6	PMG: 9 ^h 32 ^m		R°: 50 ^m	hG ☉	Dec			hG ☾	Dif	Dec	Dif	hG ☽	R°	hG ☽
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	177	03.7	-6	22.6	221	49.8	-23 13.3	60 N	17 36	18 17	19 06	6 28	3	12 49	100
1	192	03.9		21.6	236	18.9 ¹⁰¹	-23 04.3	58	39	18	03	6 10	9	13 06	94
2	207	04.0		20.6	250	48.1 ¹⁰²	-22 55.3	56	41	18	02	5 56	13	20 89	
3	222	04.2		19.7	265	17.2 ¹⁰¹	46.1	54	44	19	19 00	43	17	32 85	
4	237	04.3		18.7	279	46.4 ¹⁰²	36.7	52	46	19	18 59	32	20	42 83	
5	252	04.4	-6	17.7	294	15.7 ¹⁰³	-22 27.3	50	17 48	18 20	18 57	5 22	23	13 51	80
6	267	04.6	-6	16.8	308	45.0 ¹⁰³	-22 17.7	45	17 52	18 21	18 55	5 01	28	14 11	74
7	282	04.7		15.8	323	14.3 ¹⁰³	-22 08.0	40	55	23	54	4 44	32	27 70	
8	297	04.8		14.8	337	43.6 ¹⁰³	-21 58.2	35	17 59	24	53	30	35	40 66	
9	312	05.0		13.9	352	13.0 ¹⁰⁴	48.3	30	18 01	25	53	4 18	37	14 52	63
10	327	05.1		12.9	6	42.5 ¹⁰⁵	38.2 ¹⁰¹	20	06	28	54	3 56	43	15 11	58
11	342	05.3	-6	11.9	21	11.9 ¹⁰⁴	-21 28.0	10 N	18 11	18 32	18 56	3 38	46	15 28	54
12	357	05.4	-6	11.0	35	41.4 ¹⁰⁵	-21 17.7	0	18 15	18 36	19 00	3 20	50	15 44	50
13	12	05.5		10.0	50	11.0 ¹⁰⁶	-21 07.3	10 S	19	40	05	3 02	54	16 00	45
14	27	05.7		09.1	64	40.6 ¹⁰⁶	-20 56.7	20	24	46	12	2 44	58	17 41	41
15	42	05.8		08.1	79	10.2 ¹⁰⁶	46.1 ¹⁰⁶	30	30	54	22	22	63	36 36	
16	57	05.9		07.1	93	39.9 ¹⁰⁷	35.3 ¹⁰⁸	35	33	18 58	29	2 09	66	47 33	
17	72	06.1	-6	06.2	108	09.6 ¹⁰⁷	-20 24.4	40	18 36	19 04	19 36	1 54	69	16 59	30
18	87	06.2	-6	05.2	122	39.3 ¹⁰⁷	-20 13.4	45	18 41	19 11	19 46	1 36	74	17 14	25
19	102	06.4		04.2	137	09.1 ¹⁰⁸	-20 02.3	50	46	19	19 59	14	79	32 20	
20	117	06.5		03.3	151	38.9 ¹⁰⁸	-19 51.1	52	48	23	20 05	1 04	81	41 17	
21	132	06.6		02.3	166	08.7 ¹⁰⁸	39.7 ¹¹⁴	54	51	27	12	0 52	84	17 50	14
22	147	06.8		01.3	180	38.6 ¹⁰⁹	28.3 ¹¹⁴	56	54	32	20	38	89	18 01	11
23	162	06.9	-6	00.4	195	08.5 ¹⁰⁹	16.7 ¹¹⁶	58	18 57	38	29	22	93	13 7	
24	177	07.1	-5	59.4	209	38.5 ¹¹⁰	-19 05.0	60 S	19 01	19 44	20 39	0 02	100	18 27	2
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 13 ^h 09 ^m 3		Mag: -3.8 PMG: 10 ^h 38 ^m		Mag: +0.3 PMG: 19 ^h 09 ^m		Mag: -2.0 PMG: 8 ^h 20 ^m		Mag: +0.2 PMG: 23 ^h 35 ^m						
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	162	07.7	200	31.6	-15 52.1	72 16.5	234	39.3	-22 23.5	5 06.0	+11 35.7				
1	177	10.1	215	31.0	51.2	87 18.1	249	41.3	23.4	20 08.6	35.7				
2	192	12.6	230	30.3	50.3	102 19.6	264	43.3	23.4	35 11.3	35.8				
3	207	15.1	245	29.7	49.5	117 21.2	279	45.3	23.3	50 13.9	35.9				
4	222	17.5	260	29.1	48.6	132 22.8	294	47.3	23.3	65 16.6	36.0				
5	237	20.0	275	28.5	-15 47.7	147 24.4	309	49.3	-22 23.2	80 19.2	+11 36.0				
6	252	22.5	290	27.9	-15 46.8	162 26.0	324	51.3	-22 23.2	95 21.9	+11 36.1				
7	267	24.9	305	27.3	45.9	177 27.6	339	53.3	23.1	110 24.5	36.2				
8	282	27.4	320	26.6	45.1	192 29.2	354	55.3	23.1	125 27.2	36.2				
9	297	29.8	335	26.0	44.2	207 30.7	9 57.3	23.0	23.0	140 29.8	36.3				
10	312	32.3	350	25.4	43.3	222 32.3	24 59.3	23.0	23.0	155 32.5	36.4				
11	327	34.8	5 24.8	-15 42.4	237 33.9	+26 12.1	40 01.3	-22 22.9	22.9	170 35.1	+11 36.5				
12	342	37.2	20 24.2	-15 41.5	252 35.5	+26 12.1	55 03.3	-22 22.9	22.9	185 37.8	+11 36.5				
13	357	39.7	35 23.6	40.7	267 37.1	12.0	70 05.3	22.8	22.8	200 40.5	36.6				
14	12	42.2	50 22.9	39.8	282 38.7	12.0	85 07.3	22.8	22.8	215 43.1	36.7				
15	27	44.6	65 22.3	38.9	297 40.2	11.9	100 09.4	22.8	22.8	230 45.8	36.8				
16	42	47.1	80 21.7	38.0	312 41.8	11.9	115 11.4	22.7	22.7	245 48.4	36.8				
17	57	49.6	95 21.1	-15 37.1	327 43.4	+26 11.8	130 13.4	-22 22.7	22.7	260 51.1	+11 36.9				
18	72	52.0	110 20.5	-15 36.2	342 45.0	+26 11.8	145 15.4	-22 22.6	22.6	275 53.7	+11 37.0				
19	87	54.5	125 19.9	35.4	357 46.5	11.7	160 17.4	22.6	22.6	290 56.4	37.1				
20	102	56.9	140 19.3	34.5	12 48.1	11.7	175 19.4	22.5	22.5	305 59.0	37.1				
21	117	59.4	155 18.7	33.6	27 49.7	11.7	190 21.4	22.5	22.5	321 01.7	37.2				
22	133	01.9	170 18.0	32.7	42 51.3	11.6	205 23.4	22.4	22.4	336 04.3	37.3				
23	148	04.3	185 17.4	31.8	57 52.8	11.6	220 25.4	22.4	22.4	351 07.0	37.4				
24	163	06.8	200 16.8	-15 30.9	72 54.4	+26 11.5	235 27.4	-22 22.3	22.3	6 09.6	+11 37.4				
Dif	—		-6 +9		+16 0		+20 0		+27 +1						

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1 PMG: 12 ^h 11 ^m 4			Edad: 26 ^d 8 PHE { 4 ^h : 57/1 12 ^h : 57/4 20 ^h : 57/6 R°: 48 ^m										
	hG ☉ Dec		hG ☾ Dif Dec Dif		Náutico	Civil		Hora R°	Hora R°					
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	177	07.1	-5	59.4	209	38.5	-19 05.0	60 N	5 16	6 04	6 46	6 31 1	14 29 99	
1	192	07.2		58.4	224	08.5 ¹¹⁰	-18 53.2 ¹¹⁸	58	19	04	43	19 6	40 94	
2	207	07.3		57.5	238	38.5 ¹¹⁰	41.3 ¹¹⁹	56	21	03	41	09 9	49 90	
3	222	07.5		56.5	253	08.6 ¹¹¹	29.3 ¹²⁰	54	22	03	38	6 00 12	14 57 87	
4	237	07.6		55.5	267	38.7 ¹¹¹	17.2 ¹²¹	52	24	03	36	5 52 15	15 05 83	
5	252	07.8	-5	54.6	282	08.9 ¹¹²	-18 05.0 ¹²²	50	5 25	6 02	6 34	5 45 18	15 11 81	
6	267	07.9	-5	53.6	296	39.1 ¹¹²	-17 52.7 ¹²³	45	5 27	6 01	6 30	5 29 23	15 25 75	
7	282	08.1		52.6	311	09.3 ¹¹²	40.3 ¹²⁴	40	29	6 00	27	16 28	37 70	
8	297	08.2		51.7	325	39.5 ¹¹²	27.7 ¹²⁶	35	29	5 59	24	5 05 31	46 67	
9	312	08.3		50.7	340	09.8 ¹¹³	15.1 ¹²⁶	30	30	57	21	4 55 35	15 55 63	
10	327	08.5		49.7	354	40.2 ¹¹⁴	-17 02.4 ¹²⁷	20	29	54	17	39 39	16 09 58	
11	342	08.6	-5	48.7	9	10.5 ¹¹³	-16 49.6 ¹²⁸	10 N	5 27	5 51	6 12	4 24 44	16 22 53	
12	357	08.8	-5	47.8	23	40.9 ¹¹⁴	-16 36.7 ¹²⁹	0	5 23	5 47	6 08	4 10 49	16 34 48	
13	12	08.9		46.8	38	11.3 ¹¹⁴	23.6 ¹³¹	10 S	18	43	6 04	3 56 54	45 44	
14	27	09.0		45.8	52	41.8 ¹¹⁵	-16 10.5 ¹³¹	20	11	37	5 59	42 57	16 58 38	
15	42	09.2		44.9	67	12.3 ¹¹⁵	-15 57.3 ¹³²	30	5 01	30	54	25 63	17 12 33	
16	57	09.3		43.9	81	42.8 ¹¹⁵	44.0 ¹³³	35	4 55	25	51	15 66	20 30	
17	72	09.5	-5	42.9	96	13.4 ¹¹⁶	-15 30.6 ¹³⁴	40	4 47	5 20	5 47	3 03 70	17 29 26	
18	87	09.6	-5	42.0	110	44.0 ¹¹⁶	-15 17.1 ¹³⁵	45	4 37	5 13	5 43	2 50 74	17 39 22	
19	102	09.8		41.0	125	14.6 ¹¹⁶	-15 03.5 ¹³⁶	50	25	05	38	33 80	52 17	
20	117	09.9		40.0	139	45.3 ¹¹⁷	-14 49.9 ¹³⁶	52	19	5 01	36	25 83	17 58 14	
21	132	10.1		39.1	154	16.0 ¹¹⁷	36.1 ¹³⁸	54	12	4 57	33	16 87	18 04 12	
22	147	10.2		38.1	168	46.7 ¹¹⁷	22.3 ¹³⁸	56	4 04	52	30	2 07 89	12 8	
23	162	10.3		37.1	183	17.4 ¹¹⁷	-14 08.3 ¹⁴⁰	58	3 55	46	27	1 55 94	20 5	
24	177	10.5	-5	36.1	197	48.2 ¹¹⁸	-13 54.3 ¹⁴⁰	60 S	3 45	4 40	5 23	1 42 99	18 29 1	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 13 ^h 05 ^m 4		Mag: -3.8 PMG: 10 ^h 39 ^m		Mag: +0.3 PMG: 19 ^h 06 ^m		Mag: -2.0 PMG: 8 ^h 17 ^m		Mag: +0.2 PMG: 23 ^h 31 ^m					
	hG ♈ Dec		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec					
h	°	'	°	'	°	'	°	'	°	'				
0	163	06.8	200	16.8	-15 30.9	72 54.4	+26 11.5	235 27.4	-22 22.3	6 09.6	+11 37.4			
1	178	09.3	215	16.2	30.0	87 56.0	11.5	250 29.4	22.3	21 12.3	37.5			
2	193	11.7	230	15.6	29.1	102 57.6	11.4	265 31.4	22.2	36 14.9	37.6			
3	208	14.2	245	15.0	28.2	117 59.1	11.4	280 33.5	22.2	51 17.6	37.6			
4	223	16.7	260	14.4	27.3	133 00.7	11.3	295 35.5	22.1	66 20.2	37.7			
5	238	19.1	275	13.8	-15 26.4	148 02.3	+26 11.3	310 37.5	-22 22.1	81 22.9	+11 37.8			
6	253	21.6	290	13.2	-15 25.5	163 03.8	+26 11.2	325 39.5	-22 22.0	96 25.5	+11 37.9			
7	268	24.1	305	12.6	24.7	178 05.4	11.2	340 41.5	22.0	111 28.2	37.9			
8	283	26.5	320	12.0	23.8	193 07.0	11.1	355 43.5	21.9	126 30.8	38.0			
9	298	29.0	335	11.4	22.9	208 08.5	11.1	10 45.5	21.9	141 33.5	38.1			
10	313	31.4	350	10.8	22.0	223 10.1	11.0	25 47.5	21.9	156 36.1	38.2			
11	328	33.9	5	10.1	-15 21.1	238 11.7	+26 11.0	40 49.5	-22 21.8	171 38.8	+11 38.2			
12	343	36.4	20	09.5	-15 20.2	253 13.2	+26 10.9	55 51.6	-22 21.8	186 41.4	+11 38.3			
13	358	38.8	35	08.9	19.3	268 14.8	10.9	70 53.6	21.7	201 44.1	38.4			
14	13	41.3	50	08.3	18.4	283 16.4	10.8	85 55.6	21.7	216 46.7	38.5			
15	28	43.8	65	07.7	17.5	298 17.9	10.8	100 57.6	21.6	231 49.4	38.5			
16	43	46.2	80	07.1	16.6	313 19.5	10.7	115 59.6	21.6	246 52.0	38.6			
17	58	48.7	95	06.5	-15 15.7	328 21.0	+26 10.7	131 01.6	-22 21.5	261 54.6	+11 38.7			
18	73	51.2	110	05.9	-15 14.7	343 22.6	+26 10.6	146 03.6	-22 21.5	276 57.3	+11 38.7			
19	88	53.6	125	05.3	13.8	358 24.2	10.6	161 05.6	21.4	291 59.9	38.8			
20	103	56.1	140	04.7	12.9	13 25.7	10.6	176 07.7	21.4	307 02.6	38.9			
21	118	58.6	155	04.1	12.0	28 27.3	10.5	191 09.7	21.3	322 05.2	39.0			
22	134	01.0	170	03.5	11.1	43 28.8	10.5	206 11.7	21.3	337 07.9	39.0			
23	149	03.5	185	02.9	10.2	58 30.4	10.4	221 13.7	21.2	352 10.5	39.1			
24	164	05.9	200	02.3	-15 09.3	73 31.9	+26 10.4	236 15.7	-22 21.2	7 13.2	+11 39.2			
Dif	—		-6 +9		+16		0		+20		+26		+	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1 PMG: 12 ^h 11 ^m 2			Edad: 27 ^d 8 PHE { 4 ^h : 57 ^m 9 12 ^h : 58 ^m 1 20 ^h : 58 ^m 3 PMG: 11 ^h 10 ^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		
0	177	10.5	-5 36.1	197	48.2	-13 54.3	60 N	17 41	18 22	19 11	6 32 0	16 08 98			
1	192	10.6		212	19.0 ¹¹⁸	40.2 ¹⁴¹	58	43	22	08	25 4	14 94			
2	207	10.8	34.2	226	49.8 ¹¹⁸	26.0 ¹⁴²	56	45	23	06	18 8	19 91			
3	222	10.9	33.2	241	20.7 ¹¹⁹	-13 11.8 ¹⁴²	54	47	23	04	12 11	24 87			
4	237	11.1	32.3	255	51.6 ¹¹⁹	-12 57.4 ¹⁴⁴	52	49	23	02	07 13	28 84			
5	252	11.2	-5 31.3	270	22.5 ¹¹⁹	-12 43.0 ¹⁴⁴	50	17 51	18 23	19 01	6 03 15	16 32 82			
6	267	11.4	-5 30.3	284	53.4 ¹¹⁹	-12 28.5 ¹⁴⁵	45	17 55	18 24	18 58	5 52 21	16 40 76			
7	282	11.5	29.3	299	24.4 ¹²⁰	-12 13.9 ¹⁴⁶	40	17 58	25	56	44 25	47 71			
8	297	11.6	28.4	313	55.3 ¹¹⁹	-11 59.3 ¹⁴⁶	35	18 00	26	55	36 29	53 67			
9	312	11.8	27.4	328	26.3 ¹²⁰	44.5 ¹⁴⁸	30	03	27	54	30 32	16 58 64			
10	327	11.9	26.4	342	57.4 ¹²¹	29.7 ¹⁴⁸	20	07	29	55	18 38	17 07 58			
11	342	12.1	-5 25.5	357	28.4 ¹²⁰	-11 14.9 ¹⁴⁸	10 N	18 11	18 32	18 56	5 08 43	17 15 52			
12	357	12.2	-5 24.5	11	59.5 ¹²¹	-10 59.9 ¹⁵⁰	0	18 14	18 35	18 59	4 59 48	17 22 47			
13	12	12.4	23.5	26	30.6 ¹²¹	44.9 ¹⁵⁰	10 S	18	39	19 04	50 52	29 42			
14	27	12.5	22.5	41	01.7 ¹²¹	29.8 ¹⁵¹	20	22	45	10	39 58	36 38			
15	42	12.7	21.6	55	32.8 ¹²¹	-10 14.7 ¹⁵¹	30	27	51	20	28 63	45 31			
16	57	12.8	20.6	70	03.9 ¹²¹	-9 59.4 ¹⁵³	35	30	18 56	26	21 67	50 28			
17	72	13.0	-5 19.6	84	35.1 ¹²²	-9 44.2 ¹⁵²	40	18 33	19 01	19 33	4 13 71	17 55 24			
18	87	13.1	-5 18.7	99	06.2 ¹²¹	-9 28.8 ¹⁵⁴	45	18 37	19 07	19 42	4 04 76	18 01 20			
19	102	13.3	17.7	113	37.4 ¹²²	-9 13.4 ¹⁵⁴	50	42	15	19 54	3 53 82	09 15			
20	117	13.4	16.7	128	08.6 ¹²²	-8 57.9 ¹⁵⁵	52	44	18	20 00	48 84	12 13			
21	132	13.6	15.7	142	39.8 ¹²²	42.4 ¹⁵⁵	54	46	22	06	43 87	16 10			
22	147	13.7	14.8	157	11.0 ¹²²	26.8 ¹⁵⁶	56	49	27	14	36 91	20 7			
23	162	13.9	13.8	171	42.3 ¹²³	-8 11.2 ¹⁵⁶	58	52	32	22	29 94	25 3			
24	177	14.0	-5 12.8	186	13.5 ¹²²	-7 55.5 ¹⁵⁷	60 S	18 55	19 38	20 32	3 21 99	18 30 0			
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 13 ^h 01 ^m 5		Mag: -3.8 PMG: 10 ^h 40 ^m		Mag: +0.3 PMG: 19 ^h 04 ^m		Mag: -2.0 PMG: 8 ^h 14 ^m		Mag: +0.2 PMG: 23 ^h 27 ^m						
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	164	05.9	200	02.3	73	31.9	236	15.7	7	13.2					
1	179	08.4	215	01.7	88	33.5	251	17.7	22	15.8					
2	194	10.9	230	01.1	103	35.0	266	19.7	37	18.5					
3	209	13.3	245	00.5	118	36.6	281	21.8	52	21.1					
4	224	15.8	259	59.9	133	38.2	296	23.8	67	23.8					
5	239	18.3	274	59.3	148	39.7	311	25.8	82	26.4					
6	254	20.7	289	58.7	163	41.3	326	27.8	97	29.1					
7	269	23.2	304	58.2	178	42.8	341	29.8	112	31.7					
8	284	25.7	319	57.6	193	44.4	356	31.8	127	34.4					
9	299	28.1	334	57.0	208	45.9	11	33.9	142	37.0					
10	314	30.6	349	56.4	223	47.5	26	35.9	157	39.7					
11	329	33.0	4	55.8	238	49.0	41	37.9	172	42.3					
12	344	35.5	19	55.2	253	50.5	56	39.9	187	45.0					
13	359	38.0	34	54.6	268	52.1	71	41.9	202	47.6					
14	14	40.4	49	54.0	283	53.6	86	43.9	217	50.3					
15	29	42.9	64	53.4	298	55.2	101	46.0	232	52.9					
16	44	45.4	79	52.8	313	56.7	116	48.0	247	55.6					
17	59	47.8	94	52.2	328	58.3	131	50.0	262	58.2					
18	74	50.3	109	51.6	343	59.8	146	52.0	278	00.9					
19	89	52.8	124	51.0	359	01.4	161	54.0	293	03.5					
20	104	55.2	139	50.5	14	02.9	176	56.0	308	06.2					
21	119	57.7	154	49.9	29	04.4	191	58.1	323	08.8					
22	135	00.2	169	49.3	44	06.0	207	00.1	338	11.5					
23	150	02.6	184	48.7	59	07.5	222	02.1	353	14.1					
24	165	05.1	199	48.1	74	09.1	237	04.1	8	16.8					
Dif	—		-6	+9	+15	-1	+20	0	+26	+1					

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1			Edad: 28 ^d 8 PHE { 4 ^h : 58 ^m /6 12 ^h : 58 ^m /8 20 ^h : 59 ^m /0										
	PMG: 12 ^h 10 ^m 9			SD: 15 ^h 9 PMG: 11 ^h 58 ^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	177	14.0	-5 12.8	186	13.5	-7 55.5	60 N	5 10	5 58	6 40	6 32 0		17 46 99	
1	192	14.2	11.8	200	44.8 ¹²³	39.7 ¹⁵⁸	58	13	58	38	29 3		48 95	
2	207	14.3	10.9	215	16.0 ¹²²	23.9 ¹⁵⁸	56	15	58	35	26 6		50 91	
3	222	14.5	09.9	229	47.3 ¹²³	-7 08.1 ¹⁵⁸	54	17	58	34	23 10		51 88	
4	237	14.6	08.9	244	18.5 ¹²²	-6 52.2 ¹⁵⁹	52	19	58	32	20 13		52 86	
5	252	14.8	-5 08.0	258	49.8 ¹²³	-6 36.2 ¹⁶⁰	50	5 21	5 58	6 30	6 18 15		17 54 82	
6	267	14.9	-5 07.0	273	21.1 ¹²³	-6 20.2 ¹⁶⁰	45	5 24	5 58	6 27	6 13 20		17 56 77	
7	282	15.1	06.0	287	52.4 ¹²³	-6 04.2 ¹⁶⁰	40	26	57	24	09 24		17 58 73	
8	297	15.2	05.0	302	23.7 ¹²³	-5 48.1 ¹⁶¹	35	27	56	21	05 28		18 00 68	
9	312	15.4	04.1	316	54.9 ¹²²	31.9 ¹⁶²	30	27	55	19	6 02 32		02 64	
10	327	15.5	03.1	331	26.2 ¹²³	-5 15.8 ¹⁶¹	20	27	53	15	5 56 38		05 58	
11	342	15.7	-5 02.1	345	57.5 ¹²³	-4 59.5 ¹⁶³	10 N	5 26	5 50	6 11	5 51 43		18 07 53	
12	357	15.8	-5 01.1	0	28.8 ¹²³	-4 43.3 ¹⁶²	0	5 23	5 47	6 08	5 47 47		18 09 48	
13	12	16.0	-5 00.2	15	00.1 ¹²³	27.0 ¹⁶³	10 S	18	43	04	42 53		11 43	
14	27	16.1	-4 59.2	29	31.4 ¹²³	-4 10.7 ¹⁶³	20	12	38	6 00	37 58		14 37	
15	42	16.3	58.2	44	02.6 ¹²²	-3 54.3 ¹⁶⁴	30	5 03	31	5 55	31 64		16 32	
16	57	16.4	57.2	58	33.9 ¹²³	37.9 ¹⁶⁴	35	4 57	27	53	28 68		18 28	
17	72	16.6	-4 56.3	73	05.1 ¹²²	-3 21.5 ¹⁶⁴	40	4 50	5 22	5 49	5 24 72		18 19 25	
18	87	16.7	-4 55.3	87	36.4 ¹²³	-3 05.0 ¹⁶⁵	45	4 40	5 16	5 46	5 20 76		18 21 20	
19	102	16.9	54.3	102	07.6 ¹²²	-2 48.5 ¹⁶⁵	50	29	08	41	15 82		24 14	
20	117	17.0	53.3	116	38.9 ¹²³	32.0 ¹⁶⁵	52	23	05	39	12 85		25 12	
21	132	17.2	52.4	131	10.1 ¹²²	-2 15.5 ¹⁶⁵	54	17	5 01	37	10 87		26 9	
22	147	17.3	51.4	145	41.3 ¹²²	-1 58.9 ¹⁶⁶	56	09	4 56	34	07 90		27 7	
23	162	17.5	50.4	160	12.5 ¹²²	42.3 ¹⁶⁶	58	4 01	51	32	03 95		28 4	
24	177	17.6	-4 49.4	174	43.7 ¹²²	-1 25.7 ¹⁶⁶	60 S	3 51	4 45	5 28	5 00 98		18 30 0	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG 12 ^h 57 ^m 5		Mag: -3.8 PMG: 10 ^h 41 ^m			Mag: +0.3 PMG: 19 ^h 01 ^m			Mag: -2.0 PMG: 8 ^h 11 ^m			Mag: +0.2 PMG: 23 ^h 23 ^m		
	hG ♈		hG ♀ Dec			hG ♂ Dec			hG ♃ Dec			hG ♄ Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	165	05.1	199 48.1	-14 47.3	74 09.1	+26 09.2	237 04.1	-22 20.1	8 16.8	+11 40.9				
1	180	07.5	214 47.5	46.4	89 10.6	09.1	252 06.1	20.0	23 19.4	41.0				
2	195	10.0	229 46.9	45.4	104 12.1	09.1	267 08.2	20.0	38 22.1	41.1				
3	210	12.5	244 46.3	44.5	119 13.7	09.0	282 10.2	19.9	53 24.7	41.1				
4	225	14.9	259 45.8	43.6	134 15.2	09.0	297 12.2	19.9	68 27.4	41.2				
5	240	17.4	274 45.2	-14 42.6	149 16.7	+26 08.9	312 14.2	-22 19.8	83 30.0	41.3				
6	255	19.9	289 44.6	-14 41.7	164 18.3	+26 08.8	327 16.2	-22 19.8	98 32.6	41.4				
7	270	22.3	304 44.0	40.8	179 19.8	08.8	342 18.3	19.7	113 35.3	41.4				
8	285	24.8	319 43.4	39.9	194 21.3	08.7	357 20.3	19.7	128 37.9	41.5				
9	300	27.3	334 42.8	38.9	209 22.9	08.7	12 22.3	19.6	143 40.6	41.6				
10	315	29.7	349 42.2	38.0	224 24.4	08.6	27 24.3	19.6	158 43.2	41.6				
11	330	32.2	4 41.7	-14 37.1	239 25.9	+26 08.6	42 26.3	-22 19.5	173 45.9	41.7				
12	345	34.6	19 41.1	-14 36.1	254 27.5	+26 08.5	57 28.4	-22 19.5	188 48.5	41.8				
13	0	37.1	34 40.5	35.2	269 29.0	08.5	72 30.4	19.5	203 51.2	41.9				
14	15	39.6	49 39.9	34.3	284 30.5	08.4	87 32.4	19.4	218 53.8	41.9				
15	30	42.0	64 39.3	33.3	299 32.1	08.4	102 34.4	19.4	233 56.5	42.0				
16	45	44.5	79 38.8	32.4	314 33.6	08.3	117 36.5	19.3	248 59.1	42.1				
17	60	47.0	94 38.2	-14 31.4	329 35.1	+26 08.3	132 38.5	-22 19.3	264 01.8	42.1				
18	75	49.4	109 37.6	-14 30.5	344 36.6	+26 08.2	147 40.5	-22 19.2	279 04.4	42.2				
19	90	51.9	124 37.0	29.6	359 38.2	08.2	162 42.5	19.2	294 07.1	42.3				
20	105	54.4	139 36.4	28.6	14 39.7	08.1	177 44.5	19.1	309 09.7	42.4				
21	120	56.8	154 35.9	27.7	29 41.2	08.1	192 46.6	19.1	324 12.4	42.4				
22	135	59.3	169 35.3	26.7	44 42.7	08.0	207 48.6	19.0	339 15.0	42.5				
23	151	01.8	184 34.7	25.8	59 44.3	08.0	222 50.6	19.0	354 17.7	42.6				
24	166	04.2	199 34.1	-14 24.9	74 45.8	+26 07.9	237 52.6	-22 18.9	9 20.3	42.7				
Dif	—		-6	+9	+15		-1	+20		0	+26		+1	

UT	SOL			● LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1			Edad: 29 ^d 8 PHE { 4 ^h : 59/2 12 ^h : 59/3 20 ^h : 59/5 R°: 49 ^m												
	PMG: 12 ^h 10 ^m 7			SD: 16 ^h 1 PMG: 12 ^h 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	177	17.6	-4 49.4	174	43.7	-1 25.7		60 N	17 46	18 27	19 16	6 32	0	19 25	102	
1	192	17.8	48.4	189	14.8 ¹²¹	-1 09.1 ¹⁶⁶		58	48	27	13	32	4	23	98	
2	207	17.9	47.5	203	46.0 ¹²²	-0 52.5 ¹⁶⁶		56	50	27	10	32	8	21	94	
3	222	18.1	46.5	218	17.1 ¹²¹	35.8 ¹⁶⁷		54	51	27	08	33	10	19	91	
4	237	18.2	45.5	232	48.2 ¹²¹	19.1 ¹⁶⁷		52	53	26	06	33	12	18	87	
5	252	18.4	-4 44.5	247	19.3 ¹²¹	-0 02.4 ¹⁶⁷		50	17 54	18 26	19 04	6 33	15	19 16	85	
6	267	18.5	-4 43.6	261	50.3 ¹²⁰	+0 14.3 ¹⁶⁷		45	17 57	18 26	19 01	6 33	20	19 13	79	
7	282	18.7	42.6	276	21.4 ¹²¹	31.0 ¹⁶⁷		40	18 00	27	18 58	33	25	11	74	
8	297	18.9	41.6	290	52.4 ¹²⁰	+0 47.7 ¹⁶⁷		35	02	27	57	33	29	08	70	
9	312	19.0	40.6	305	23.4 ¹²⁰	+1 04.4 ¹⁶⁷		30	04	28	56	34	32	06	67	
10	327	19.2	39.7	319	54.4 ¹²⁰	21.1 ¹⁶⁷		20	08	30	55	34	38	03	60	
11	342	19.3	-4 38.7	334	25.3 ¹¹⁹	+1 37.9 ¹⁶⁸		10 N	18 11	18 32	18 56	6 34	44	19 00	55	
12	357	19.5	-4 37.7	348	56.2 ¹¹⁹	+1 54.6 ¹⁶⁷		0	18 14	18 35	18 59	6 34	49	18 57	50	
13	12	19.6	36.7	3	27.1 ¹¹⁹	+2 11.3 ¹⁶⁷		10 S	17	38	19 03	35	53	54	45	
14	27	19.8	35.7	17	57.9 ¹¹⁸	28.1 ¹⁶⁸		20	21	43	09	35	59	51	40	
15	42	19.9	34.8	32	28.8 ¹¹⁹	+2 44.8 ¹⁶⁷		30	25	49	17	35	66	48	33	
16	57	20.1	33.8	46	59.5 ¹¹⁷	+3 01.5 ¹⁶⁷		35	27	53	23	36	69	46	30	
17	72	20.3	-4 32.8	61	30.3 ¹¹⁸	+3 18.3 ¹⁶⁸		40	18 30	18 58	19 30	6 36	73	18 44	26	
18	87	20.4	-4 31.8	76	01.0 ¹¹⁷	+3 35.0 ¹⁶⁷		45	18 34	19 03	19 38	6 36	78	18 41	21	
19	102	20.6	30.9	90	31.7 ¹¹⁷	+3 51.7 ¹⁶⁷		50	37	10	50	37	83	38	16	
20	117	20.7	29.9	105	02.3 ¹¹⁶	+4 08.4 ¹⁶⁷		52	39	14	19 55	37	86	37	13	
21	132	20.9	28.9	119	32.9 ¹¹⁶	25.0 ¹⁶⁶		54	41	17	20 01	37	90	35	11	
22	147	21.0	27.9	134	03.5 ¹¹⁶	41.7 ¹⁶⁷		56	44	22	08	37	93	34	7	
23	162	21.2	26.9	148	34.0 ¹¹⁵	+4 58.4 ¹⁶⁷		58	46	26	16	38	96	32	4	
24	177	21.3	-4 26.0	163	04.5 ¹¹⁵	+5 15.0 ¹⁶⁶		60 S	18 49	19 32	20 25	6 38	100	18 30	0	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 12 ^h 53 ^m 6		Mag: -3.8 PMG: 10 ^h 42 ^m		Mag: +0.4 PMG: 18 ^h 59 ^m		Mag: -2.1 PMG: 8 ^h 07 ^m		Mag: +0.3 PMG: 23 ^h 19 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	166	04.2	199	34.1	-14	24.9	74	45.8	+26	07.9
1	181	06.7	214	33.5		23.9	89	47.3		07.9
2	196	09.1	229	33.0		23.0	104	48.8		07.8
3	211	11.6	244	32.4		22.0	119	50.3		07.7
4	226	14.1	259	31.8		21.1	134	51.9		07.7
5	241	16.5	274	31.2	-14	20.1	149	53.4	+26	07.6
6	256	19.0	289	30.7	-14	19.2	164	54.9	+26	07.6
7	271	21.5	304	30.1		18.2	179	56.4		07.5
8	286	23.9	319	29.5		17.3	194	57.9		07.5
9	301	26.4	334	29.0		16.3	209	59.4		07.4
10	316	28.9	349	28.4		15.4	225	01.0		07.4
11	331	31.3	4	27.8	-14	14.4	240	02.5	+26	07.3
12	346	33.8	19	27.2	-14	13.5	255	04.0	+26	07.3
13	1	36.3	34	26.7		12.5	270	05.5		07.2
14	16	38.7	49	26.1		11.6	285	07.0		07.2
15	31	41.2	64	25.5		10.6	300	08.5		07.1
16	46	43.6	79	25.0		09.7	315	10.0		07.0
17	61	46.1	94	24.4	-14	08.7	330	11.6	+26	07.0
18	76	48.6	109	23.8	-14	07.8	345	13.1	+26	06.9
19	91	51.0	124	23.2		06.8	0	14.6		06.9
20	106	53.5	139	22.7		05.9	15	16.1		06.8
21	121	56.0	154	22.1		04.9	30	17.6		06.8
22	136	58.4	169	21.5		03.9	45	19.1		06.7
23	152	00.9	184	21.0		03.0	60	20.6		06.7
24	167	03.4	199	20.4	-14	02.0	75	22.1	+26	06.6
Dif	—		-6	+10			+15	-1		
									+20	0
									+26	+1

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16 ¹ PMG: 12 ^h 10 ^m 4			Edad: 1 ^d 3 PHE { SD: 16 ² PMG: 13 ^h 35 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	177	21.3	-4	163	04.5	+5	15.0	5	04	5	53	6	32	1	21
1	192	21.5		177	34.9 ¹¹⁴		31.6 ¹⁶⁶	07	53		32	36	5	21	01
2	207	21.7		192	05.3 ¹¹⁴	+5	48.2 ¹⁶⁶	10	53		30	40	8	20	55
3	222	21.8		206	35.7 ¹¹⁴	+6	04.8 ¹⁶⁶	13	54		29	43	11		50
4	237	22.0		221	06.0 ¹¹³		21.3 ¹⁶⁵	15	54		27	45	15		45
5	252	22.1	-4	235	36.2 ¹¹²	+6	37.8 ¹⁶⁵	5	16	5	54	6	26	6	48
6	267	22.3	-4	250	06.4 ¹¹²	+6	54.3 ¹⁶⁵	5	20	5	54	6	23	6	53
7	282	22.4		264	36.6 ¹¹²	+7	10.8 ¹⁶⁵	22	54		21	6	58	27	25
8	297	22.6		279	06.7 ¹¹¹		27.2 ¹⁶⁴	24	53		19	7	02	31	18
9	312	22.8		293	36.7 ¹¹⁰		43.6 ¹⁶⁴	25	53		17	06	34		13
10	327	22.9		308	06.7 ¹¹⁰	+7	59.9 ¹⁶³	26	51		13	12	41	20	03
11	342	23.1	-4	322	36.7 ¹¹⁰	+8	16.2 ¹⁶³	5	25	5	49	6	10	7	18
12	357	23.2	-4	337	06.6 ¹⁰⁹	+8	32.5 ¹⁶³	5	22	5	46	6	07	7	23
13	12	23.4		351	36.4 ¹⁰⁸	+8	48.8 ¹⁶³	18	43		04	28	56		39
14	27	23.6		6	06.2 ¹⁰⁸	+9	05.0 ¹⁶²	13	39		01	34	61		31
15	42	23.7		20	35.9 ¹⁰⁷		21.1 ¹⁶¹	5	04	33	5	57	41	67	
16	57	23.9		35	05.5 ¹⁰⁶		37.2 ¹⁶¹	4	59	29	54	45	71		16
17	72	24.0	-4	49	35.1 ¹⁰⁶	+9	53.3 ¹⁶¹	4	52	5	24	5	52	7	49
18	87	24.2	-4	64	04.6 ¹⁰⁵	+10	09.3 ¹⁶⁰	4	43	5	19	5	48	7	54
19	102	24.3		78	34.1 ¹⁰⁵		25.3 ¹⁶⁰	32	12		45	8	00	87	18
20	117	24.5		93	03.5 ¹⁰⁴		41.2 ¹⁵⁹	27	08		43	03	89		50
21	132	24.7		107	32.9 ¹⁰⁴	+10	57.0 ¹⁵⁸	21	05		41	07	92		46
22	147	24.8		122	02.1 ¹⁰²	+11	12.8 ¹⁵⁸	14	5	01	39	10	96		41
23	162	25.0		136	31.3 ¹⁰²		28.6 ¹⁵⁸	4	06	4	56	36	14	100	
24	177	25.1	-4	151	00.5 ¹⁰²	+11	44.2 ¹⁵⁶	3	57	4	51	5	34	8	18

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 12 ^h 49 ^m 7		Mag: -3.8 PMG: 10 ^h 43 ^m		Mag: +0.4 PMG: 18 ^h 57 ^m		Mag: -2.1 PMG: 8 ^h 04 ^m		Mag: +0.3 PMG: 23 ^h 14 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	167	03.4	199	20.4	75	22.1	238	41.3	10	23.8
1	182	05.8	214	19.8	90	23.6	253	43.3	25	26.5
2	197	08.3	229	19.3	105	25.1	268	45.4	40	29.1
3	212	10.7	244	18.7	120	26.6	283	47.4	55	31.7
4	227	13.2	259	18.2	135	28.1	298	49.4	70	34.4
5	242	15.7	274	17.6	150	29.6	313	51.4	85	37.0
6	257	18.1	289	17.0	165	31.1	328	53.5	100	39.7
7	272	20.6	304	16.5	180	32.6	343	55.5	115	42.3
8	287	23.1	319	15.9	195	34.1	358	57.5	130	45.0
9	302	25.5	334	15.3	210	35.6	13	59.6	145	47.6
10	317	28.0	349	14.8	225	37.1	29	01.6	160	50.3
11	332	30.5	4	14.2	240	38.6	44	03.6	175	52.9
12	347	32.9	19	13.7	255	40.1	59	05.7	190	55.6
13	2	35.4	34	13.1	270	41.6	74	07.7	205	58.2
14	17	37.9	49	12.5	285	43.1	89	09.7	221	00.8
15	32	40.3	64	12.0	300	44.6	104	11.8	236	03.5
16	47	42.8	79	11.4	315	46.1	119	13.8	251	06.1
17	62	45.2	94	10.9	330	47.6	134	15.8	266	08.8
18	77	47.7	109	10.3	345	49.1	149	17.9	281	11.4
19	92	50.2	124	09.7	0	50.6	164	19.9	296	14.1
20	107	52.6	139	09.2	15	52.1	179	21.9	311	16.7
21	122	55.1	154	08.6	30	53.6	194	24.0	326	19.4
22	137	57.6	169	08.1	45	55.1	209	26.0	341	22.0
23	153	00.0	184	07.5	60	56.6	224	28.0	356	24.6
24	168	02.5	199	07.0	75	58.1	239	30.1	11	27.3
Dif	—		-6		+15		+20		+26	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16'1			Edad: 2 ^d 3 PHE { 4 ^h : 59'8 12 ^h : 59'8 20 ^h : 59'9 R°: 55 ^m												
	PMG: 12 ^h 10 ^m 2			SD: 16'3 PMG: 14 ^h 26 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	177	25.1	-4	02.5	151	00.5	+11 44.2	60 N	17 51	18 32	19 21	6 33	3	22 54	112	
1	192	25.3		01.5	165	29.5	+11 59.9	58	52	31	17	41	7	42	105	
2	207	25.5	-4	00.5	179	58.5	+12 15.4	56	54	31	14	48	12	32	100	
3	222	25.6	-3	59.5	194	27.5	30.9	54	55	30	12	6 54	15	23	96	
4	237	25.8		58.5	208	56.3	+12 46.3	52	56	30	09	7 00	18	15	92	
5	252	25.9	-3	57.6	223	25.1	+13 01.7	50	17 57	18 30	19 07	7 05	21	22 08	89	
6	267	26.1	-3	56.6	237	53.8	+13 16.9	45	18 00	18 29	19 03	7 16	27	21 53	82	
7	282	26.3		55.6	252	22.5	32.1	40	02	29	19 00	25	32	41	77	
8	297	26.4		54.6	266	51.0	+13 47.3	35	04	29	18 58	33	36	30	74	
9	312	26.6		53.6	281	19.5	+14 02.3	30	05	29	57	40	39	21	70	
10	327	26.8		52.6	295	47.9	17.3	20	08	30	56	7 53	44	21 05	65	
11	342	26.9	-3	51.7	310	16.3	+14 32.2	10 N	18 11	18 32	18 56	8 03	50	20 52	60	
12	357	27.1	-3	50.7	324	44.5	+14 47.0	0	18 13	18 34	18 58	8 14	54	20 39	56	
13	12	27.2		49.7	339	12.7	+15 01.7	10 S	16	37	19 02	24	59	26	52	
14	27	27.4		48.7	353	40.8	16.4	20	19	41	07	35	64	20 13	46	
15	42	27.6		47.7	8	08.8	30.9	30	23	47	15	48	70	19 57	42	
16	57	27.7		46.8	22	36.7	45.4	35	25	50	20	8 56	73	49	38	
17	72	27.9	-3	45.8	37	04.6	+15 59.8	40	18 27	18 54	19 26	9 04	77	19 38	35	
18	87	28.1	-3	44.8	51	32.4	+16 14.1	45	18 30	18 59	19 34	9 14	82	19 27	29	
19	102	28.2		43.8	66	00.0	28.3	50	33	19 06	45	27	88	13	23	
20	117	28.4		42.8	80	27.7	42.4	52	35	09	50	32	92	19 06	21	
21	132	28.5		41.8	94	55.2	+16 56.3	54	36	12	19 56	39	95	18 59	17	
22	147	28.7		40.9	109	22.6	+17 10.2	56	38	16	20 02	46	99	51	13	
23	162	28.9		39.9	123	50.0	24.0	58	40	20	09	9 54	104	42	8	
24	177	29.0	-3	38.9	138	17.2	+17 37.7	60 S	18 43	19 25	20 18	10 03	110	18 31	3	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 12 ^h 45 ^m 7		Mag: -3.8 PMG: 10 ^h 44 ^m		Mag: +0.4 PMG: 18 ^h 54 ^m		Mag: -2.1 PMG: 8 ^h 01 ^m		Mag: +0.3 PMG: 23 ^h 10 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	168	02.5	199	07.0	-13	38.8	75	58.1	+26	05.3
1	183	05.0	214	06.4		37.8	90	59.5		05.2
2	198	07.4	229	05.8		36.9	106	01.0		05.1
3	213	09.9	244	05.3		35.9	121	02.5		05.1
4	228	12.3	259	04.7		34.9	136	04.0		05.0
5	243	14.8	274	04.2	-13	33.9	151	05.5	+26	05.0
6	258	17.3	289	03.6	-13	32.9	166	07.0	+26	04.9
7	273	19.7	304	03.1		32.0	181	08.5		04.8
8	288	22.2	319	02.5		31.0	196	10.0		04.8
9	303	24.7	334	02.0		30.0	211	11.4		04.7
10	318	27.1	349	01.4		29.0	226	12.9		04.7
11	333	29.6	4	00.9	-13	28.0	241	14.4	+26	04.6
12	348	32.1	19	00.3	-13	27.1	256	15.9	+26	04.6
13	3	34.5	33	59.8		26.1	271	17.4		04.5
14	18	37.0	48	59.2		25.1	286	18.9		04.4
15	33	39.5	63	58.7		24.1	301	20.3		04.4
16	48	41.9	78	58.1		23.1	316	21.8		04.3
17	63	44.4	93	57.6	-13	22.1	331	23.3	+26	04.3
18	78	46.8	108	57.0	-13	21.2	346	24.8	+26	04.2
19	93	49.3	123	56.5		20.2	1	26.3		04.1
20	108	51.8	138	55.9		19.2	16	27.7		04.1
21	123	54.2	153	55.4		18.2	31	29.2		04.0
22	138	56.7	168	54.8		17.2	46	30.7		04.0
23	153	59.2	183	54.3		16.2	61	32.2		03.9
24	169	01.6	198	53.8	-13	15.2	76	33.6	+26	03.8
Dif	—		-6	+10		+15	-1	+20		0
										+26
										+1

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'1 PMG: 12 ^h 09 ^m 9			Edad: 3 ^d 3	PHE { 4 ^h : 59'9 12 ^h : 59'8 20 ^h : 59'8 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	177	29.0	-3	138	17.2	+17	37.7	60 N	4	58	5	47	6	28	6	36
1	192	29.2		152	44.4	+17	51.3	58	5	02	47	26	6	48	13	
2	207	29.4		167	11.5	+18	04.8	56	05	48	25	7	00	17		
3	222	29.5		181	38.5		18.1	54	08	49	24	09	22	23	59	91
4	237	29.7		196	05.5		31.4	52	10	49	23	18	25	47	88	
5	252	29.9	-3	210	32.3	+18	44.5	50	5	12	5	50	6	22	23	37
6	267	30.0	-3	224	59.0	+18	57.6	45	5	16	5	50	6	19	7	43
7	282	30.2		239	25.7	+19	10.5	40	19	51	18	7	57	38	22	58
8	297	30.3		253	52.3		23.3	35	21	51	16	8	09	41	44	73
9	312	30.5		268	18.8		35.9	30	23	50	14	19	44	31	71	
10	327	30.7		282	45.2	+19	48.5	20	24	50	12	37	49	22	10	66
11	342	30.8	-3	297	11.5	+20	00.9	10 N	5	24	5	48	6	09	8	53
12	357	31.0	-3	311	37.7	+20	13.2	0	5	22	5	46	6	07	9	08
13	12	31.2		326	03.9		25.4	10 S	19	43	04	23	61	21	18	56
14	27	31.3		340	29.9		37.4	20	13	39	6	01	39	66	20	59
15	42	31.5		354	55.9	+20	49.3	30	06	34	5	58	9	58	70	39
16	57	31.7		9	21.8	+21	01.1	35	5	01	31	56	10	09	74	27
17	72	31.8	-3	23	47.6	+21	12.8	40	4	54	5	26	5	54	10	21
18	87	32.0	-3	38	13.3	+21	24.3	45	4	46	5	21	5	51	10	36
19	102	32.2		52	38.9		35.7	50	36	15	48	10	55	88	36	33
20	117	32.3		67	04.4		46.9	52	31	12	46	11	04	91	27	29
21	132	32.5		81	29.9	+21	58.0	54	25	09	45	14	95	16	26	
22	147	32.7		95	55.2	+22	08.9	56	19	05	43	25	99	19	04	22
23	162	32.8		110	20.5		19.8	58	12	5	01	41	38	105	18	50
24	177	33.0	-3	124	45.7	+22	30.4	60 S	4	03	4	56	5	39	11	53
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 12 ^h 41 ^m 8		Mag: -3.8 PMG: 10 ^h 45 ^m			Mag: +0.4 PMG: 18 ^h 52 ^m			Mag: -2.1 PMG: 7 ^h 58 ^m			Mag: +0.3 PMG: 23 ^h 06 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°
0	169	01.6	198	53.8	-13	15.2	76	33.6	+26	03.8	240	19.0	-22	15.6	12	30.7
1	184	04.1	213	53.2		14.2	91	35.1		03.8	255	21.0		15.5	27	33.4
2	199	06.6	228	52.7		13.2	106	36.6		03.7	270	23.0		15.5	42	36.0
3	214	09.0	243	52.1		12.2	121	38.1		03.7	285	25.1		15.4	57	38.7
4	229	11.5	258	51.6		11.3	136	39.5		03.6	300	27.1		15.4	72	41.3
5	244	13.9	273	51.0	-13	10.3	151	41.0	+26	03.5	315	29.2	-22	15.3	87	43.9
6	259	16.4	288	50.5	-13	09.3	166	42.5	+26	03.5	330	31.2	-22	15.3	102	46.6
7	274	18.9	303	50.0		08.3	181	44.0		03.4	345	33.2		15.2	117	49.2
8	289	21.3	318	49.4		07.3	196	45.4		03.4	0	35.3		15.2	132	51.9
9	304	23.8	333	48.9		06.3	211	46.9		03.3	15	37.3		15.1	147	54.5
10	319	26.3	348	48.3		05.3	226	48.4		03.2	30	39.4		15.1	162	57.2
11	334	28.7	3	47.8	-13	04.3	241	49.8	+26	03.2	45	41.4	-22	15.1	177	59.8
12	349	31.2	18	47.2	-13	03.3	256	51.3	+26	03.1	60	43.5	-22	15.0	193	02.4
13	4	33.7	33	46.7		02.3	271	52.8		03.1	75	45.5		15.0	208	05.1
14	19	36.1	48	46.2		01.3	286	54.2		03.0	90	47.5		14.9	223	07.7
15	34	38.6	63	45.6	-13	00.3	301	55.7		02.9	105	49.6		14.9	238	10.4
16	49	41.1	78	45.1	-12	59.3	316	57.2		02.9	120	51.6		14.8	253	13.0
17	64	43.5	93	44.6	-12	58.3	331	58.6	+26	02.8	135	53.7	-22	14.8	268	15.6
18	79	46.0	108	44.0	-12	57.3	347	00.1	+26	02.7	150	55.7	-22	14.7	283	18.3
19	94	48.4	123	43.5		56.3	2	01.6		02.7	165	57.8		14.7	298	20.9
20	109	50.9	138	42.9		55.3	17	03.0		02.6	180	59.8		14.6	313	23.6
21	124	53.4	153	42.4		54.3	32	04.5		02.6	196	01.8		14.6	328	26.2
22	139	55.8	168	41.9		53.3	47	05.9		02.5	211	03.9		14.5	343	28.9
23	154	58.3	183	41.3		52.3	62	07.4		02.4	226	05.9		14.5	358	31.5
24	170	00.8	198	40.8	-12	51.3	77	08.9	+26	02.4	241	08.0	-22	14.5	13	34.1
Dif	—		-5		+10		+15		-1		+20		0		+26	
															+1	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:1 PMG: 12 ^h 09 ^m 7			Edad: 4 ^d 3 PHE { SD: 16:3 PMG: 16 ^h 20 ^m 4 ^h : 59/7 12 ^h : 59/7 20 ^h : 59/6 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	177	33.0	-3 15.3	124	45.7	+22 30.4	61	60 N	17 56	18 37	19 26	6 42 14	0 46 111	
1	192	33.2	14.3	139	10.8	40.9	105	58	57	36	22	7 01 23	27 102	
2	207	33.3	13.3	153	35.8	+22 51.3	104	56	58	35	19	17 29	0 12 96	
3	222	33.5	12.3	168	00.8	+23 01.5	102	54	17 59	34	15	31 33	*** ** *	
4	237	33.7	11.4	182	25.6	11.6	101	52	18 00	33	13	43 36	*** ** *	
5	252	33.8	-3 10.4	196	50.4	+23 21.5	99	50	18 01	18 33	19 10	7 54 38	*** ** *	
6	267	34.0	-3 09.4	211	15.1	57	98	45	18 02	18 32	19 06	8 16 44	*** ** *	
7	282	34.2	08.4	225	39.7	56	96	40	04	31	02	35 46	*** ** *	
8	297	34.3	07.4	240	04.3	56	95	35	05	31	19 00	8 50 49	23 57 69	
9	312	34.5	06.4	254	28.7	54	93	30	07	30	18 58	9 03 52	42 68	
10	327	34.7	05.5	268	53.1	54	91	20	09	31	56	26 56	23 16 66	
11	342	34.8	-3 04.5	283	17.5	54	90	10 N	18 11	18 32	18 56	9 47 58	22 54 64	
12	357	35.0	-3 03.5	297	41.7	52	88	0	18 13	18 34	18 58	10 05 61	22 34 62	
13	12	35.2	02.5	312	05.9	52	86	10 S	15	36	19 01	24 64	22 14 60	
14	27	35.4	01.5	326	30.0	51	85	20	17	39	05	10 45 66	21 52 58	
15	42	35.5	-3 00.5	340	54.0	50	83	30	20	44	12	11 08 70	27 55	
16	57	35.7	-2 59.5	355	17.9	49	82	35	22	47	17	23 71	21 12 54	
17	72	35.9	-2 58.6	9	41.8	49	79	40	18 24	18 51	19 23	11 39 74	20 55 51	
18	87	36.0	-2 57.6	24	05.6	48	78	45	18 26	18 56	19 30	11 58 78	20 34 49	
19	102	36.2	56.6	38	29.4	48	77	50	29	19 01	40	12 23 82	20 09 45	
20	117	36.4	55.6	52	53.1	47	74	52	30	04	45	35 84	19 56 43	
21	132	36.5	54.6	67	16.7	46	73	54	32	07	50	12 49 87	42 41	
22	147	36.7	53.6	81	40.3	46	71	56	33	11	19 56	13 04 92	26 36	
23	162	36.9	52.6	96	03.8	45	70	58	35	15	20 03	23 97	19 06 31	
24	177	37.0	-2 51.7	110	27.2	44	67	60 S	18 37	19 19	20 11	13 47 107	18 42 21	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 12 ^h 37 ^m 9		Mag: -3.8 PMG: 10 ^h 46 ^m		Mag: +0.4 PMG: 18 ^h 50 ^m		Mag: -2.1 PMG: 7 ^h 54 ^m		Mag: +0.3 PMG: 23 ^h 02 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	170	00.8	198 40.8	-12 51.3	77 08.9	+26 02.4	241 08.0	-22 14.5	13 34.1	+11 49.4
1	185	03.2	213 40.3	50.3	92 10.3	02.3	256 10.0	14.4	28 36.8	49.4
2	200	05.7	228 39.7	49.3	107 11.8	02.2	271 12.1	14.4	43 39.4	49.5
3	215	08.2	243 39.2	48.3	122 13.2	02.2	286 14.1	14.3	58 42.1	49.6
4	230	10.6	258 38.7	47.2	137 14.7	02.1	301 16.2	14.3	73 44.7	49.6
5	245	13.1	273 38.1	-12 46.2	152 16.2	+26 02.1	316 18.2	-22 14.2	88 47.3	+11 49.7
6	260	15.6	288 37.6	-12 45.2	167 17.6	+26 02.0	331 20.3	-22 14.2	103 50.0	+11 49.8
7	275	18.0	303 37.1	44.2	182 19.1	01.9	346 22.3	14.1	118 52.6	49.8
8	290	20.5	318 36.5	43.2	197 20.5	01.9	1 24.3	14.1	133 55.3	49.9
9	305	22.9	333 36.0	42.2	212 22.0	01.8	16 26.4	14.0	148 57.9	50.0
10	320	25.4	348 35.5	41.2	227 23.4	01.7	31 28.4	14.0	164 00.5	50.1
11	335	27.9	3 35.0	-12 40.2	242 24.9	+26 01.7	46 30.5	-22 13.9	179 03.2	+11 50.1
12	350	30.3	18 34.4	-12 39.2	257 26.3	+26 01.6	61 32.5	-22 13.9	194 05.8	+11 50.2
13	5	32.8	33 33.9	38.1	272 27.8	01.5	76 34.6	13.8	209 08.5	50.3
14	20	35.3	48 33.4	37.1	287 29.2	01.5	91 36.6	13.8	224 11.1	50.3
15	35	37.7	63 32.8	36.1	302 30.7	01.4	106 38.7	13.8	239 13.7	50.4
16	50	40.2	78 32.3	35.1	317 32.1	01.4	121 40.7	13.7	254 16.4	50.5
17	65	42.7	93 31.8	-12 34.1	332 33.6	+26 01.3	136 42.8	-22 13.7	269 19.0	+11 50.5
18	80	45.1	108 31.3	-12 33.1	347 35.0	+26 01.2	151 44.8	-22 13.6	284 21.7	+11 50.6
19	95	47.6	123 30.7	32.1	2 36.5	01.2	166 46.9	13.6	299 24.3	50.7
20	110	50.1	138 30.2	31.0	17 37.9	01.1	181 48.9	13.5	314 26.9	50.7
21	125	52.5	153 29.7	30.0	32 39.4	01.0	196 51.0	13.5	329 29.6	50.8
22	140	55.0	168 29.1	29.0	47 40.8	01.0	211 53.0	13.4	344 32.2	50.9
23	155	57.4	183 28.6	28.0	62 42.3	00.9	226 55.1	13.4	359 34.9	50.9
24	170	59.9	198 28.1	-12 27.0	77 43.7	+26 00.8	241 57.1	-22 13.3	14 37.5	+11 51.0
Dif	—		-5	+10	+15	-1	+20	0	+26	+1

UT	SOL			 LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'1 PMG: 12 ^h 09 ^m 4			Edad: 5 ^d 3 SD: 16'2 PMG: 17 ^h 21 ^m	PHE { 4 ^h : 59'5 12 ^h : 59'4 20 ^h : 59'2 R°: 62 ^m	Dec	Dif											
	hG ☉	Dec	hG ☾					Dif		Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	177	37.0	-2	51.7	110	27.2	+25	59.1	60 N	4 52	5 41	6 22	6 56	36	2 37	93		
1	192	37.2		50.7	124	50.6 44	+26	05.7 66	58	4 56	42	21	7 24	43	2 09	86		
2	207	37.4		49.7	139	14.0 44		12.1 64	56	5 00	43	20	7 46	47	1 48	82		
3	222	37.6		48.7	153	37.2 42		18.4 63	54	03	44	19	8 04	49	30	88		
4	237	37.7		47.7	168	00.5 43		24.4 60	52	05	45	18	19	52	15	78		
5	252	37.9	-2	46.7	182	23.7 42	+26	30.3 59	50	5 08	5 45	6 17	8 32	53	1 02	76		
6	267	38.1	-2	45.7	196	46.8 41	+26	36.0 57	45	5 13	5 47	6 16	9 00	55	0 36	72		
7	282	38.2		44.8	211	09.9 41		41.5 55	40	16	47	14	21	57	0 14	71		
8	297	38.4		43.8	225	33.0 41		46.8 53	35	19	48	13	39	58	** ** *	**		
9	312	38.6		42.8	239	56.0 40		51.9 51	30	20	48	12	9	55	59	** ** *	**	
10	327	38.8		41.8	254	18.9 39	+26	56.8 49	20	22	48	10	10	22	60	** ** *	**	
11	342	38.9	-2	40.8	268	41.9 40	+27	01.6 48	10 N	5 23	5 47	6 08	10	45	61	23	58 62	
12	357	39.1	-2	39.8	283	04.8 39	+27	06.2 46	0	5 21	5 45	6 06	11	06	62	23	36 62	
13	12	39.3		38.8	297	27.6 38		10.6 44	10 S	19	43	04	28	63	23	14	62	
14	27	39.4		37.9	311	50.5 39		14.8 42	20	14	40	6	02	11	51	64	22	50 62
15	42	39.6		36.9	326	13.3 38		18.8 40	30	07	35	5	59	12	18	65	22	62
16	57	39.8		35.9	340	36.1 38		22.6 38	35	5 02	32	58	34	66	22	06	61	
17	72	40.0	-2	34.9	354	58.8 37	+27	26.2 36	40	4 57	5 29	5	56	12	53	66	21	46 62
18	87	40.1	-2	33.9	9	21.6 38	+27	29.7 35	45	4 49	5 24	5	54	13	16	67	21	23 62
19	102	40.3		32.9	23	44.3 37		32.9 32	50	40	19	51	45	68	20	54	61	
20	117	40.5		31.9	38	07.0 37		36.0 31	52	35	16	50	13	59	69	39	61	
21	132	40.6		31.0	52	29.7 37		38.8 28	54	30	13	49	14	16	69	23	59	
22	147	40.8		30.0	66	52.4 37		41.5 27	56	24	09	47	14	36	70	20	02	60
23	162	41.0		29.0	81	15.0 36		44.0 25	58	17	06	45	15	00	73	19	37	58
24	177	41.2	-2	28.0	95	37.7 37	+27	46.3 23	60 S	4 09	5 01	5	44	15	34	76	19	03 55

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 12 ^h 33 ^m 9		Mag: -3.8 PMG: 10 ^h 47 ^m		Mag: +0.5 PMG: 18 ^h 47 ^m		Mag: -2.1 PMG: 7 ^h 51 ^m		Mag: +0.3 PMG: 22 ^h 57 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	170	59.9	198	28.1	-12	27.0	77	43.7	+26	00.8	241	57.1	-22	13.3	14	37.5	+11	51.0
1	186	02.4	213	27.6		25.9	92	45.2		00.8	256	59.2		13.3	29	40.1		51.1
2	201	04.8	228	27.1		24.9	107	46.6		00.7	272	01.2		13.2	44	42.8		51.1
3	216	07.3	243	26.5		23.9	122	48.1		00.6	287	03.3		13.2	59	45.4		51.2
4	231	09.8	258	26.0		22.9	137	49.5		00.6	302	05.3		13.2	74	48.1		51.3
5	246	12.2	273	25.5	-12	21.9	152	51.0	+26	00.5	317	07.4	-22	13.1	89	50.7	+11	51.3
6	261	14.7	288	25.0	-12	20.8	167	52.4	+26	00.4	332	09.4	-22	13.1	104	53.3	+11	51.4
7	276	17.2	303	24.4		19.8	182	53.8		00.4	347	11.5		13.0	119	56.0		51.5
8	291	19.6	318	23.9		18.8	197	55.3		00.3	2	13.5		13.0	134	58.6		51.5
9	306	22.1	333	23.4		17.8	212	56.7		00.3	17	15.6		12.9	150	01.3		51.6
10	321	24.5	348	22.9		16.7	227	58.2		00.2	32	17.6		12.9	165	03.9		51.7
11	336	27.0	3	22.4	-12	15.7	242	59.6	+26	00.1	47	19.7	-22	12.8	180	06.5	+11	51.7
12	351	29.5	18	21.8	-12	14.7	258	01.0	+26	00.1	62	21.8	-22	12.8	195	09.2	+11	51.8
13	6	31.9	33	21.3		13.7	273	02.5	+26	00.0	77	23.8		12.7	210	11.8		51.9
14	21	34.4	48	20.8		12.6	288	03.9	+25	59.9	92	25.9		12.7	225	14.4		51.9
15	36	36.9	63	20.3		11.6	303	05.4		59.9	107	27.9		12.6	240	17.1		52.0
16	51	39.3	78	19.8		10.6	318	06.8		59.8	122	30.0		12.6	255	19.7		52.1
17	66	41.8	93	19.2	-12	09.5	333	08.2	+25	59.7	137	32.0	-22	12.6	270	22.4	+11	52.1
18	81	44.3	108	18.7	-12	08.5	348	09.7	+25	59.7	152	34.1	-22	12.5	285	25.0	+11	52.2
19	96	46.7	123	18.2		07.5	3	11.1		59.6	167	36.1		12.5	300	27.6		52.3
20	111	49.2	138	17.7		06.5	18	12.5		59.5	182	38.2		12.4	315	30.3		52.3
21	126	51.7	153	17.2		05.4	33	14.0		59.5	197	40.2		12.4	330	32.9		52.4
22	141	54.1	168	16.7		04.4	48	15.4		59.4	212	42.3		12.3	345	35.5		52.5
23	156	56.6	183	16.1		03.4	63	16.8		59.3	227	44.4		12.3	0	38.2		52.5
24	171	59.0	198	15.6	-12	02.3	78	18.3	+25	59.2	242	46.4	-22	12.2	15	40.8	+11	52.6
Dif	—		-5		+10		+14		-1		+21		0		+26		+1	

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1			Edad: 6 ^d 3	PHE { 4 ^h : 59 ^m 1 12 ^h : 59 ^m 0 20 ^h : 58 ^m 8										
	PMG: 12 ^h 09 ^m 1					SD: 16 ^h 1			R°: 61 ^m						
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	177	41.2	-2 28.0	95	37.7	+27 46.3	21	60 N	18 01	18 42	19 31	7 32 76	4 10 54		
1	192	41.3	27.0	110	00.3	48.4	36	58	01	41	27	8 07 73	3 35 57		
2	207	41.5	26.0	124	23.0	50.3	19	56	02	39	23	33 71	3 10 58		
3	222	41.7	25.0	138	45.6	52.1	18	54	03	38	19	8 53 70	2 50 58		
4	237	41.9	24.0	153	08.3	53.6	15	52	03	37	16	9 11 68	33 59		
5	252	42.0	-2 23.1	167	30.9	+27 54.9	13	50	18 04	18 36	19 14	9 25 68	2 18 60		
6	267	42.2	-2 22.1	181	53.6	+27 56.1	12	45	18 05	18 34	19 09	9 55 67	1 48 61		
7	282	42.4	21.1	196	16.3	57.0	9	40	06	33	05	10 18 66	25 61		
8	297	42.6	20.1	210	39.0	57.8	8	35	07	32	02	37 65	1 06 61		
9	312	42.7	19.1	225	01.7	58.4	6	30	08	32	19 00	10 54 64	0 50 61		
10	327	42.9	18.1	239	24.4	58.8	4	20	09	31	18 57	11 22 63	0 22 62		
11	342	43.1	-2 17.1	253	47.1	+27 59.0	2	10 N	18 11	18 32	18 56	11 46 62	** ** *		
12	357	43.3	-2 16.1	268	09.9	+27 59.0	0	0	18 12	18 33	18 57	12 08 62	** ** *		
13	12	43.4	15.2	282	32.7	58.8	2	10 S	14	35	18 59	31 60	** ** *		
14	27	43.6	14.2	296	55.5	58.4	4	20	16	38	19 03	12 55 59	23 52 63		
15	42	43.8	13.2	311	18.3	57.9	5	30	18	42	10	13 23 58	24 66		
16	57	44.0	12.2	325	41.2	57.1	8	35	19	44	14	40 56	23 07 68		
17	72	44.1	-2 11.2	340	04.1	+27 56.2	9	40	18 21	18 48	19 20	13 59 55	22 48 69		
18	87	44.3	-2 10.2	354	27.0	+27 55.0	12	45	18 22	18 52	19 27	14 23 53	22 25 71		
19	102	44.5	09.2	8	50.0	53.7	13	50	25	57	35	14 53 51	21 55 74		
20	117	44.7	08.3	23	13.0	52.2	15	52	26	18 59	40	15 08 50	40 76		
21	132	44.8	07.3	37	36.0	50.5	17	54	27	19 02	45	25 48	22 78		
22	147	45.0	06.3	51	59.1	48.7	18	56	28	05	50	15 46 45	21 02 80		
23	162	45.2	05.3	66	22.3	46.6	21	58	29	09	19 57	16 13 41	20 35 86		
24	177	45.4	-2 04.3	80	45.5	+27 44.4	22	60 S	18 31	19 13	20 04	16 50 32	19 58 94		

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 12 ^h 30 ^m 0		Mag: -3.8 PMG: 10 ^h 47 ^m			Mag: +0.5 PMG: 18 ^h 45 ^m			Mag: -2.1 PMG: 7 ^h 48 ^m			Mag: +0.3 PMG: 22 ^h 53 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	171	59.0	198	15.6	-12 02.3	78	18.3	+25 59.2	242	46.4	-22 12.2	15	40.8	+11 52.6
1	187	01.5	213	15.1	01.3	93	19.7	59.2	257	48.5	12.2	30	43.5	52.7
2	202	04.0	228	14.6	-12 00.3	108	21.1	59.1	272	50.5	12.1	45	46.1	52.7
3	217	06.4	243	14.1	-11 59.2	123	22.6	59.0	287	52.6	12.1	60	48.7	52.8
4	232	08.9	258	13.6	58.2	138	24.0	59.0	302	54.6	12.1	75	51.4	52.9
5	247	11.4	273	13.1	-11 57.1	153	25.4	+25 58.9	317	56.7	-22 12.0	90	54.0	+11 52.9
6	262	13.8	288	12.6	-11 56.1	168	26.9	+25 58.8	332	58.7	-22 12.0	105	56.6	+11 53.0
7	277	16.3	303	12.0	55.1	183	28.3	58.8	348	00.8	11.9	120	59.3	53.1
8	292	18.8	318	11.5	54.0	198	29.7	58.7	3	02.9	11.9	136	01.9	53.1
9	307	21.2	333	11.0	53.0	213	31.1	58.6	18	04.9	11.8	151	04.6	53.2
10	322	23.7	348	10.5	52.0	228	32.6	58.6	33	07.0	11.8	166	07.2	53.3
11	337	26.2	3	10.0	-11 50.9	243	34.0	+25 58.5	48	09.0	-22 11.7	181	09.8	+11 53.3
12	352	28.6	18	09.5	-11 49.9	258	35.4	+25 58.4	63	11.1	-22 11.7	196	12.5	+11 53.4
13	7	31.1	33	09.0	48.8	273	36.8	58.4	78	13.2	11.6	211	15.1	53.5
14	22	33.5	48	08.5	47.8	288	38.3	58.3	93	15.2	11.6	226	17.7	53.5
15	37	36.0	63	08.0	46.8	303	39.7	58.2	108	17.3	11.5	241	20.4	53.6
16	52	38.5	78	07.5	45.7	318	41.1	58.1	123	19.3	11.5	256	23.0	53.7
17	67	40.9	93	06.9	-11 44.7	333	42.5	+25 58.1	138	21.4	-22 11.5	271	25.7	+11 53.7
18	82	43.4	108	06.4	-11 43.6	348	44.0	+25 58.0	153	23.5	-22 11.4	286	28.3	+11 53.8
19	97	45.9	123	05.9	42.6	3	45.4	57.9	168	25.5	11.4	301	30.9	53.9
20	112	48.3	138	05.4	41.5	18	46.8	57.9	183	27.6	11.3	316	33.6	53.9
21	127	50.8	153	04.9	40.5	33	48.2	57.8	198	29.6	11.3	331	36.2	54.0
22	142	53.3	168	04.4	39.4	48	49.6	57.7	213	31.7	11.2	346	38.8	54.1
23	157	55.7	183	03.9	38.4	63	51.1	57.7	228	33.8	11.2	1	41.5	54.1
24	172	58.2	198	03.4	-11 37.4	78	52.5	+25 57.6	243	35.8	-22 11.1	16	44.1	+11 54.2
Dif	—		-5 +10			+14 -1			+21 0			+26 +1		

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna						
	SD: 16'1 PMG: 12 ^h 08 ^m 8			Edad: 7 ^d 3	PHE {	4 ^h : 58'7 12 ^h : 58'6 20 ^h : 58'4													
	hG ☉	Dec		hG ☾		Dif		Dec	Dif		Náutico	Civil	Hora	R°	Hora	R°			
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m			
0	177	45.4	-2	04.3	80	45.5	+27	44.4	25	60 N	4	46	5	35	6	16			
1	192	45.5		03.3	95	08.7	42	41.9	25	58	50	36	15	9	20	92			
2	207	45.7		02.3	109	32.0	43	39.3	26	56	54	38	15	9	44	87			
3	222	45.9		01.3	123	55.4	44	36.6	27	54	4	58	39	14	10	03			
4	237	46.1	-2	00.4	138	18.8	44	33.6	30	52	5	01	40	14	19	81			
5	252	46.2	-1	59.4	152	42.3	45	+27	30.4	32	50	5	03	5	41	6	13		
6	267	46.4	-1	58.4	167	05.8	45	+27	27.1	33	45	5	09	5	43	6	12		
7	282	46.6		57.4	181	29.4	46	23.6	35	40	13	44	11	24	71	26	50		
8	297	46.8		56.4	195	53.1	47	19.9	37	35	16	45	10	42	69	2	07		
9	312	46.9		55.4	210	16.8	47	16.1	38	30	18	46	10	11	58	67	1	51	
10	327	47.1		54.4	224	40.6	48	12.0	41	20	21	46	08	12	25	63	24	56	
11	342	47.3	-1	53.4	239	04.5	49	+27	07.8	42	10 N	5	22	5	46	6	07	12	48
12	357	47.5	-1	52.5	253	28.4	49	+27	03.4	44	0	5	21	5	45	6	06	13	10
13	12	47.6		51.5	267	52.4	50	+26	58.9	45	10 S	19	43	04	31	55	0	16	61
14	27	47.8		50.5	282	16.5	51	54.2	47	20	15	40	02	13	54	52	**	**	**
15	42	48.0		49.5	296	40.7	52	49.3	49	30	09	37	6	00	14	21	49	**	**
16	57	48.2		48.5	311	04.9	52	44.2	51	35	5	04	34	5	59	36	47	**	**
17	72	48.4	-1	47.5	325	29.2	53	+26	39.0	52	40	4	59	5	31	5	58	14	54
18	87	48.5	-1	46.5	339	53.6	54	+26	33.6	54	45	4	52	5	27	5	56	15	16
19	102	48.7		45.5	354	18.1	55	28.0	56	50	43	22	54	44	36	23	09	81	81
20	117	48.9		44.5	8	42.7	56	22.3	57	52	39	19	53	15	58	33	22	56	83
21	132	49.1		43.6	23	07.4	57	16.4	59	54	34	17	52	16	13	31	40	87	87
22	147	49.2		42.6	37	32.1	57	10.4	60	56	29	14	51	31	27	22	92	92	92
23	162	49.4		41.6	51	57.0	59	+26	04.2	62	58	22	10	50	16	54	20	22	01
24	177	49.6	-1	40.6	66	21.9	59	+25	57.8	64	60 S	4	15	5	06	5	49	17	22

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 12 ^h 26 ^m 1		Mag: -3.8 PMG: 10 ^h 48 ^m			Mag: +0.5 PMG: 18 ^h 43 ^m			Mag: -2.1 PMG: 7 ^h 45 ^m			Mag: +0.3 PMG: 22 ^h 49 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'				
0	172	58.2	198	03.4	-11	37.4	78	52.5	+25	57.6	243	35.8	-22	11.1	16	44.1	+11	54.2
1	188	00.7	213	02.9		36.3	93	53.9		57.5	258	37.9		11.1	31	46.7		54.3
2	203	03.1	228	02.4		35.3	108	55.3		57.4	273	39.9		11.0	46	49.4		54.3
3	218	05.6	243	01.9		34.2	123	56.7		57.4	288	42.0		11.0	61	52.0		54.4
4	233	08.0	258	01.4		33.2	138	58.1		57.3	303	44.1		11.0	76	54.6		54.5
5	248	10.5	273	00.9	-11	32.1	153	59.6	+25	57.2	318	46.1	-22	10.9	91	57.3	+11	54.5
6	263	13.0	288	00.4	-11	31.1	169	01.0	+25	57.2	333	48.2	-22	10.9	106	59.9	+11	54.6
7	278	15.4	302	59.9		30.0	184	02.4		57.1	348	50.3		10.8	122	02.6		54.6
8	293	17.9	317	59.4		29.0	199	03.8		57.0	3	52.3		10.8	137	05.2		54.7
9	308	20.4	332	58.9		27.9	214	05.2		56.9	18	54.4		10.7	152	07.8		54.8
10	323	22.8	347	58.4		26.9	229	06.6		56.9	33	56.4		10.7	167	10.5		54.8
11	338	25.3	2	57.9	-11	25.8	244	08.0	+25	56.8	48	58.5	-22	10.6	182	13.1	+11	54.9
12	353	27.8	17	57.4	-11	24.8	259	09.5	+25	56.7	64	00.6	-22	10.6	197	15.7	+11	55.0
13	8	30.2	32	56.9		23.7	274	10.9		56.7	79	02.6		10.5	212	18.4		55.0
14	23	32.7	47	56.4		22.6	289	12.3		56.6	94	04.7		10.5	227	21.0		55.1
15	38	35.2	62	55.9		21.6	304	13.7		56.5	109	06.8		10.5	242	23.6		55.2
16	53	37.6	77	55.4		20.5	319	15.1		56.4	124	08.8		10.4	257	26.3		55.2
17	68	40.1	92	54.9	-11	19.5	334	16.5	+25	56.4	139	10.9	-22	10.4	272	28.9	+11	55.3
18	83	42.5	107	54.4	-11	18.4	349	17.9	+25	56.3	154	13.0	-22	10.3	287	31.5	+11	55.4
19	98	45.0	122	53.9		17.4	4	19.3		56.2	169	15.0		10.3	302	34.2		55.4
20	113	47.5	137	53.4		16.3	19	20.7		56.2	184	17.1		10.2	317	36.8		55.5
21	128	49.9	152	52.9		15.3	34	22.1		56.1	199	19.2		10.2	332	39.4		55.6
22	143	52.4	167	52.4		14.2	49	23.5		56.0	214	21.2		10.1	347	42.1		55.6
23	158	54.9	182	51.9		13.1	64	25.0		55.9	229	23.3		10.1	2	44.7		55.7
24	173	57.3	197	51.4	-11	12.1	79	26.4	+25	55.9	244	25.4	-22	10.0	17	47.3	+11	55.8
Dif	—		-5	+11			+14	-1			+21	0			+26	+1		

UT	SOL			☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16 ^d 1			Edad: 8 ^d 3 PHE { 4 ^h : 58 ^m /3 12 ^h : 58 ^m /1 20 ^h : 57 ^m /9 R°: 52 ^m												
	PMG: 12 ^h 08 ^m 5			SD: 15 ^h 9 PMG: 20 ^h 21 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	h m	m	
0	177	49.6	-1	66	21.9	+25	57.8	60 N	18 06	18 47	19 37	10 30	104	5 25	9	
1	192	49.8		80	46.9		51.3	58	06	45	32	10 52	98	5 02	16	
2	207	50.0		95	12.0		44.6	56	06	43	27	11 11	92	4 43	21	
3	222	50.1		109	37.2		37.8	54	07	42	23	26	88	27	25	
4	237	50.3		124	02.5		30.8	52	07	40	20	40	84	14	28	
5	252	50.5	-1	138	27.9	+25	23.7	50	18 07	18 39	19 17	11 51	82	4 01	31	
6	267	50.7	-1	152	53.4	+25	16.4	45	18 08	18 37	19 11	12 15	76	3 36	36	
7	282	50.9		167	19.0		09.0	40	08	35	07	35	72	3 16	40	
8	297	51.0		181	44.7	+25	01.4	35	09	34	03	12 51	68	2 59	43	
9	312	51.2		196	10.5	+24	53.6	30	09	33	19 01	13 05	65	45	45	
10	327	51.4		210	36.4		45.8	20	10	32	18 58	28	61	2 20	49	
11	342	51.6	-1	225	02.4	+24	37.8	10 N	18 11	18 32	18 56	13 49	57	1 58	53	
12	357	51.7	-1	239	28.4	+24	29.6	0	18 12	18 32	18 56	14 07	54	1 38	56	
13	12	51.9		253	54.6		21.3	10 S	13	34	18 58	26	50	1 17	59	
14	27	52.1		268	20.9		12.9	20	14	36	19 02	14 46	47	0 55	63	
15	42	52.3		282	47.3	+24	04.3	30	16	39	07	15 10	41	30	66	
16	57	52.5		297	13.8	+23	55.6	35	16	42	11	23	39	0 15	69	
17	72	52.6	-1	311	40.4	+23	46.8	40	18 17	18 44	19 16	15 39	35	**	** *	
18	87	52.8	-1	326	07.1	+23	37.8	45	18 19	18 48	19 23	15 57	32	**	** *	
19	102	53.0		340	33.9		28.7	50	20	53	31	16 20	26	**	** *	
20	117	53.2		355	00.8		19.5	52	21	55	35	31	23	**	** *	
21	132	53.4		9	27.8		10.1	54	22	18 57	39	44	20	**	** *	
22	147	53.5		23	54.9	+23	00.6	56	23	19 00	44	16 58	16	23	54 92	
23	162	53.7		38	22.2	+22	51.0	58	24	03	50	17 14	11	38	97	
24	177	53.9	-1	52	49.5	+22	41.3	60 S	18 25	19 06	19 57	17 34	5	23	19 103	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 12 ^h 22 ^m 1		Mag: -3.8 PMG: 10 ^h 49 ^m		Mag: +0.5 PMG: 18 ^h 40 ^m		Mag: -2.1 PMG: 7 ^h 41 ^m		Mag: +0.3 PMG: 22 ^h 45 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	173	57.3	197	51.4	-11	12.1	79	26.4	+25	55.9					
1	188	59.8	212	50.9		11.0	94	27.8		55.8					
2	204	02.3	227	50.4		10.0	109	29.2		55.7					
3	219	04.7	242	49.9		08.9	124	30.6		55.6					
4	234	07.2	257	49.4		07.8	139	32.0		55.6					
5	249	09.6	272	48.9	-11	06.8	154	33.4	+25	55.5					
6	264	12.1	287	48.4	-11	05.7	169	34.8	+25	55.4					
7	279	14.6	302	48.0		04.6	184	36.2		55.3					
8	294	17.0	317	47.5		03.6	199	37.6		55.3					
9	309	19.5	332	47.0		02.5	214	39.0		55.2					
10	324	22.0	347	46.5		01.5	229	40.4		55.1					
11	339	24.4	2	46.0	-11	00.4	244	41.8	+25	55.0					
12	354	26.9	17	45.5	-10	59.3	259	43.2	+25	55.0					
13	9	29.4	32	45.0		58.3	274	44.6		54.9					
14	24	31.8	47	44.5		57.2	289	46.0		54.8					
15	39	34.3	62	44.0		56.1	304	47.4		54.7					
16	54	36.8	77	43.5		55.1	319	48.8		54.7					
17	69	39.2	92	43.0	-10	54.0	334	50.2	+25	54.6					
18	84	41.7	107	42.6	-10	52.9	349	51.6	+25	54.5					
19	99	44.1	122	42.1		51.8	4	53.0		54.4					
20	114	46.6	137	41.6		50.8	19	54.4		54.4					
21	129	49.1	152	41.1		49.7	34	55.8		54.3					
22	144	51.5	167	40.6		48.6	49	57.1		54.2					
23	159	54.0	182	40.1		47.6	64	58.5		54.1					
24	174	56.5	197	39.6	-10	46.5	79	59.9	+25	54.1					
Dif	—		-5	+11		+14	-1		+21		0	+26		+1	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16 ^h 1			Edad: 9 ^d 3 PHE { 4 ^h : 57 ^m /8 12 ^h : 57 ^m /6 20 ^h : 57 ^m /5 R°: 49 ^m						Principio del crepúsculo			Salida de Luna		Puesta de Luna		
	PMG: 12 ^h 08 ^m 3			SD: 15 ^h 8 PMG: 21 ^h 13 ^m						Principio del crepúsculo			Salida de Luna		Puesta de Luna		
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	°	'	°	h	m	h	m	h	m	h	m
0	177	53.9	-1 16.9	52	49.5	+22	41.3	99	60 N	4	39	5	28	6	10	12	14
1	192	54.1	15.9	67	16.9	84	31.4	99	58	44	31	10	30	94	18	9	
2	207	54.3	14.9	81	44.4	85	21.5	99	56	49	32	09	43	90	5	04	
3	222	54.4	13.9	96	12.1	87	11.4	101	54	52	34	09	12	54	86	4	52
4	237	54.6	12.9	110	39.8	87	+22	01.2	52	56	35	09	13	04	83	42	19
5	252	54.8	-1 11.9	125	07.7	89	+21	50.9	50	4	59	5	37	6	09	13	13
6	267	55.0	-1 11.0	139	35.6	89	+21	40.4	45	5	05	5	39	6	08	13	31
7	282	55.2	10.0	154	03.7	91	29.9	105	40	09	41	08	47	70	3	56	
8	297	55.4	09.0	168	31.9	92	19.2	107	35	13	42	08	13	59	67	42	35
9	312	55.5	08.0	183	00.1	92	+21	08.5	30	16	43	07	14	10	64	30	38
10	327	55.7	07.0	197	28.5	94	+20	57.6	20	19	45	07	29	59	3	09	43
11	342	55.9	-1 06.0	211	57.0	95	+20	46.6	10 N	5	20	5	45	6	06	14	46
12	357	56.1	-1 05.0	226	25.6	96	+20	35.5	0	5	20	5	44	6	05	15	01
13	12	56.3	04.0	240	54.2	96	24.3	112	10 S	19	43	04	16	46	2	16	56
14	27	56.4	03.0	255	23.0	98	13.0	113	20	15	41	03	33	40	1	58	60
15	42	56.6	02.1	269	51.9	99	+20	01.7	30	10	38	02	15	51	36	36	65
16	57	56.8	01.1	284	20.9	100	+19	50.2	35	06	36	01	16	02	32	24	68
17	72	57.0	-1 00.1	298	50.0	101	+19	38.6	40	5	01	5	33	6	00	16	14
18	87	57.2	-0 59.1	313	19.2	102	+19	26.9	45	4	55	5	30	5	59	16	29
19	102	57.4	58.1	327	48.5	103	15.1	118	50	47	25	58	46	19	30	81	
20	117	57.5	57.1	342	17.9	104	+19	03.3	52	43	23	57	16	54	17	19	85
21	132	57.7	56.1	356	47.4	105	+18	51.3	54	38	21	56	17	04	13	0	07
22	147	57.9	55.1	11	17.0	106	39.3	120	56	33	18	55	14	10	**	**	**
23	162	58.1	54.2	25	46.6	106	27.2	121	58	27	15	54	25	7	**	**	**
24	177	58.3	-0 53.2	40	16.4	108	+18	15.0	60 S	4	21	5	12	5	53	17	39

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 12 ^h 18 ^m 2		Mag: -3.8 PMG: 10 ^h 50 ^m		Mag: +0.5 PMG: 18 ^h 38 ^m		Mag: -2.1 PMG: 7 ^h 38 ^m		Mag: +0.3 PMG: 22 ^h 41 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	174	56.5	197	39.6	-10	46.5	79	59.9	+25	54.1
1	189	58.9	212	39.1		45.4	95	01.3		54.0
2	205	01.4	227	38.7		44.3	110	02.7		53.9
3	220	03.9	242	38.2		43.3	125	04.1		53.8
4	235	06.3	257	37.7		42.2	140	05.5		53.8
5	250	08.8	272	37.2	-10	41.1	155	06.9	+25	53.7
6	265	11.3	287	36.7	-10	40.0	170	08.3	+25	53.6
7	280	13.7	302	36.2		39.0	185	09.7		53.5
8	295	16.2	317	35.8		37.9	200	11.1		53.5
9	310	18.6	332	35.3		36.8	215	12.4		53.4
10	325	21.1	347	34.8		35.7	230	13.8		53.3
11	340	23.6	2	34.3	-10	34.7	245	15.2	+25	53.2
12	355	26.0	17	33.8	-10	33.6	260	16.6	+25	53.1
13	10	28.5	32	33.3		32.5	275	18.0		53.1
14	25	31.0	47	32.9		31.4	290	19.4		53.0
15	40	33.4	62	32.4		30.4	305	20.8		52.9
16	55	35.9	77	31.9		29.3	320	22.2		52.8
17	70	38.4	92	31.4	-10	28.2	335	23.5	+25	52.8
18	85	40.8	107	30.9	-10	27.1	350	24.9	+25	52.7
19	100	43.3	122	30.5		26.0	5	26.3		52.6
20	115	45.8	137	30.0		24.9	20	27.7		52.5
21	130	48.2	152	29.5		23.9	35	29.1		52.4
22	145	50.7	167	29.0		22.8	50	30.5		52.4
23	160	53.1	182	28.6		21.7	65	31.8		52.3
24	175	55.6	197	28.1	-10	20.6	80	33.2	+25	52.2
Dif	—		-5		+11		+14		-1	
							+21		0	
									+26	
									+1	

ALMANAQUE NÁUTICO PERSEUS

UT	SOL			O LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16:1 PMG: 12 ^h 07 ^m 7			Edad: 11 ^d 3 PHE { 4 ^h : 56 ^m 8 12 ^h : 56 ^m 7 20 ^h : 56 ^m 5 R°: 43 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	02.7	-0 29.4	28	38.6	+12 59.9	60 N	4	33	5	22	6 04	15	29	89
1	193	02.8		28.5	43	10.6 ¹³⁰		38	25		04		34	86	
2	208	03.0		27.5	57	42.6 ¹³⁰		43	27		04		39	82	
3	223	03.2		26.5	72	14.8 ¹³²		47	29		04		43	80	
4	238	03.4		25.5	86	47.0 ¹³²	+12 04.0 ¹⁴¹	51	31		04		47	77	
5	253	03.6	-0 24.5	101	19.2 ¹³²	+11 50.0 ¹⁴⁰	50	4	54	5	32	6 04	15	50	75
6	268	03.8	-0 23.5	115	51.6 ¹³⁴	+11 35.9 ¹⁴¹	45	5	01	5	35	6 05	15	58	69
7	283	04.0		22.5	130	24.0 ¹³⁴		06	38		05		16	04	65
8	298	04.1		21.5	144	56.4 ¹³⁴	+11 07.5 ¹⁴²	10	40		05		10	61	
9	313	04.3		20.6	159	29.0 ¹³⁶	+10 53.2 ¹⁴³	13	41		05		14	59	
10	328	04.5		19.6	174	01.6 ¹³⁶		17	43		05		23	52	
11	343	04.7	-0 18.6	188	34.3 ¹³⁷	+10 24.6 ¹⁴⁴	10 N	5	19	5	44	6 05	16	30	48
12	358	04.9	-0 17.6	203	07.0 ¹³⁷	+10 10.3 ¹⁴³	0	5	20	5	44	6 04	16	36	44
13	13	05.1		16.6	217	39.8 ¹³⁸	+9 55.9 ¹⁴⁴	19	43		04		43	39	
14	28	05.2		15.6	232	12.7 ¹³⁹		16	42		04		50	34	
15	43	05.4		14.6	246	45.6 ¹³⁹		11	39		03		16	58	29
16	58	05.6		13.6	261	18.6 ¹⁴⁰	+9 12.5 ¹⁴⁵	08	37		03		17	03	25
17	73	05.8	-0 12.7	275	51.7 ¹⁴¹	+8 58.0 ¹⁴⁵	40	5	03	5	35	6 02	17	08	22
18	88	06.0	-0 11.7	290	24.8 ¹⁴¹	+8 43.5 ¹⁴⁵	45	4	58	5	32	6 01	17	14	18
19	103	06.2		10.7	304	57.9 ¹⁴¹		50	28		01		21	13	
20	118	06.4		09.7	319	31.2 ¹⁴³	+8 14.3 ¹⁴⁶	47	27		00		24	11	
21	133	06.5		08.7	334	04.4 ¹⁴²	+7 59.6 ¹⁴⁷	42	25	6	00		28	9	
22	148	06.7		07.7	348	37.8 ¹⁴⁴		38	22	5	59		32	6	
23	163	06.9		06.7	3	11.2 ¹⁴⁴		32	20		59		36	3	
24	178	07.1	-0 05.7	17	44.6 ¹⁴⁴	+7 15.6 ¹⁴⁷	60 S	4	26	5	17	5 58	17	41	0
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 12 ^h 10 ^m 4		Mag: -3.8 PMG: 10 ^h 51 ^m		Mag: +0.6 PMG: 18 ^h 34 ^m		Mag: -2.1 PMG: 7 ^h 31 ^m		Mag: +0.3 PMG: 22 ^h 32 ^m						
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	176	54.7	197	16.7	81	06.2	246	54.8	20	56.7					
1	191	57.2	212	16.3	96	07.6	261	56.9	35	59.4					
2	206	59.7	227	15.8	111	08.9	276	59.0	51	02.0					
3	222	02.1	242	15.3	126	10.3	292	01.1	66	04.6					
4	237	04.6	257	14.9	141	11.7	307	03.1	81	07.2					
5	252	07.1	272	14.4	156	13.0	322	05.2	96	09.9					
6	267	09.5	287	13.9	171	14.4	337	07.3	111	12.5					
7	282	12.0	302	13.5	186	15.8	352	09.4	126	15.1					
8	297	14.5	317	13.0	201	17.1	7	11.5	141	17.7					
9	312	16.9	332	12.5	216	18.5	22	13.6	156	20.4					
10	327	19.4	347	12.1	231	19.9	37	15.7	171	23.0					
11	342	21.8	2	11.6	246	21.2	52	17.7	186	25.6					
12	357	24.3	17	11.1	261	22.6	67	19.8	201	28.3					
13	12	26.8	32	10.7	276	23.9	82	21.9	216	30.9					
14	27	29.2	47	10.2	291	25.3	97	24.0	231	33.5					
15	42	31.7	62	09.7	306	26.7	112	26.1	246	36.1					
16	57	34.2	77	09.3	321	28.0	127	28.2	261	38.8					
17	72	36.6	92	08.8	336	29.4	142	30.3	276	41.4					
18	87	39.1	107	08.4	351	30.8	157	32.4	291	44.0					
19	102	41.6	122	07.9	6	32.1	172	34.4	306	46.6					
20	117	44.0	137	07.4	21	33.5	187	36.5	321	49.3					
21	132	46.5	152	07.0	36	34.8	202	38.6	336	51.9					
22	147	49.0	167	06.5	51	36.2	217	40.7	351	54.5					
23	162	51.4	182	06.1	66	37.5	232	42.8	6	57.1					
24	177	53.9	197	05.6	81	38.9	247	44.9	21	59.8					
Dif	—		-5	+11	+14	-1	+21	0	+26	+1					

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 4			Edad: 12 ^d 3 PHE { SD: 15 ^h 4 PMG: 23 ^h 30 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	Rº	Hora
h	°	'	°	°	'	°	'	h m	h m	h m	h m m	h m m	h m m	
0	178	07.1	-0 05.7	17	44.6	+7 15.6	60 N	18 15	18 57	19 47	16 58 87	5 39 0		
1	193	07.3		32	18.1 ¹⁴⁵	+7 00.9 ¹⁴⁷	58	15	54	41	17 00 83	36 3		
2	208	07.5	03.8	46	51.6 ¹⁴⁵	+6 46.2 ¹⁴⁷	56	14	52	36	01 81	33 6		
3	223	07.7	02.8	61	25.2 ¹⁴⁶	31.4 ¹⁴⁸	54	14	49	31	03 77	31 8		
4	238	07.8	01.8	75	58.8 ¹⁴⁶	16.6 ¹⁴⁸	52	14	48	27	04 75	28 11		
5	253	08.0	-0 00.8	90	32.5 ¹⁴⁷	+6 01.9 ¹⁴⁷	50	18 13	18 46	19 24	17 05 73	5 26 13		
6	268	08.2	+0 00.2	105	06.2 ¹⁴⁷	+5 47.1 ¹⁴⁸	45	18 13	18 42	19 17	17 07 68	5 22 17		
7	283	08.4	01.2	119	40.0 ¹⁴⁸	32.2 ¹⁴⁹	40	12	39	11	09 64	18 21		
8	298	08.6	02.2	134	13.8 ¹⁴⁸	17.4 ¹⁴⁸	35	12	37	07	11 60	14 26		
9	313	08.8	03.2	148	47.7 ¹⁴⁹	+5 02.6 ¹⁴⁸	30	12	36	19 03	13 56	12 28		
10	328	09.0	04.1	163	21.6 ¹⁴⁹	+4 47.7 ¹⁴⁹	20	11	33	18 59	15 51	06 34		
11	343	09.2	+0 05.1	177	55.5 ¹⁴⁹	+4 32.9 ¹⁴⁸	10 N	18 11	18 32	18 56	17 18 46	5 02 38		
12	358	09.3	+0 06.1	192	29.5 ¹⁵⁰	+4 18.0 ¹⁴⁹	0	18 11	18 31	18 55	17 20 42	4 57 43		
13	13	09.5	07.1	207	03.5 ¹⁵⁰	+4 03.1 ¹⁴⁹	10 S	11	32	56	22 37	53 47		
14	28	09.7	08.1	221	37.6 ¹⁵¹	+3 48.2 ¹⁴⁹	20	11	33	18 58	24 33	48 52		
15	43	09.9	09.1	236	11.6 ¹⁵⁰	33.3 ¹⁴⁹	30	11	35	19 02	27 27	43 57		
16	58	10.1	10.1	250	45.8 ¹⁵²	18.5 ¹⁴⁸	35	11	36	05	28 25	39 61		
17	73	10.3	+0 11.1	265	19.9 ¹⁵¹	+3 03.6 ¹⁴⁹	40	18 11	18 38	19 10	17 30 21	4 36 64		
18	88	10.5	+0 12.0	279	54.1 ¹⁵²	+2 48.7 ¹⁴⁹	45	18 11	18 40	19 15	17 32 17	4 32 68		
19	103	10.6	13.0	294	28.3 ¹⁵²	33.8 ¹⁴⁹	50	12	44	22	34 13	27 73		
20	118	10.8	14.0	309	02.6 ¹⁵³	18.9 ¹⁴⁹	52	12	45	25	35 11	24 76		
21	133	11.0	15.0	323	36.8 ¹⁵²	+2 04.0 ¹⁴⁹	54	12	47	29	37 8	22 78		
22	148	11.2	16.0	338	11.1 ¹⁵³	+1 49.1 ¹⁴⁹	56	12	49	33	38 5	19 81		
23	163	11.4	17.0	352	45.5 ¹⁵⁴	34.2 ¹⁴⁹	58	12	51	38	39 3	15 85		
24	178	11.6	+0 18.0	7	19.8 ¹⁵³	+1 19.3 ¹⁴⁹	60 S	18 13	18 54	19 44	17 41 **	4 12 88		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 12 ^h 06 ^m 4		Mag: -3.8 PMG: 10 ^h 52 ^m		Mag: +0.6 PMG: 18 ^h 32 ^m		Mag: -2.1 PMG: 7 ^h 28 ^m		Mag: +0.3 PMG: 22 ^h 28 ^m	
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	°	°	°	°	°	°	°	°	
0	177	53.9	197 05.6	-9 28.0	81 38.9	+25 48.2	247 44.9	-22 05.8	21 59.8	+12 01.8
1	192	56.3	212 05.1	26.9	96 40.3	48.2	262 47.0	05.7	37 02.4	01.8
2	207	58.8	227 04.7	25.8	111 41.6	48.1	277 49.1	05.7	52 05.0	01.9
3	223	01.3	242 04.2	24.7	126 43.0	48.0	292 51.2	05.6	67 07.6	01.9
4	238	03.7	257 03.8	23.6	141 44.3	47.9	307 53.3	05.6	82 10.3	02.0
5	253	06.2	272 03.3	-9 22.5	156 45.7	+25 47.8	322 55.3	-22 05.6	97 12.9	+12 02.1
6	268	08.7	287 02.8	-9 21.4	171 47.0	+25 47.7	337 57.4	-22 05.5	112 15.5	+12 02.1
7	283	11.1	302 02.4	20.3	186 48.4	47.6	352 59.5	05.5	127 18.1	02.2
8	298	13.6	317 01.9	19.2	201 49.7	47.6	8 01.6	05.4	142 20.8	02.2
9	313	16.1	332 01.5	18.1	216 51.1	47.5	23 03.7	05.4	157 23.4	02.3
10	328	18.5	347 01.0	16.9	231 52.4	47.4	38 05.8	05.3	172 26.0	02.4
11	343	21.0	2 00.6	-9 15.8	246 53.8	+25 47.3	53 07.9	-22 05.3	187 28.6	+12 02.4
12	358	23.5	17 00.1	-9 14.7	261 55.1	+25 47.2	68 10.0	-22 05.3	202 31.3	+12 02.5
13	13	25.9	31 59.6	13.6	276 56.5	47.1	83 12.1	05.2	217 33.9	02.5
14	28	28.4	46 59.2	12.5	291 57.9	47.0	98 14.2	05.2	232 36.5	02.6
15	43	30.8	61 58.7	11.4	306 59.2	46.9	113 16.3	05.1	247 39.1	02.7
16	58	33.3	76 58.3	10.3	322 00.5	46.9	128 18.4	05.1	262 41.7	02.7
17	73	35.8	91 57.8	-9 09.2	337 01.9	+25 46.8	143 20.5	-22 05.0	277 44.4	+12 02.8
18	88	38.2	106 57.4	-9 08.0	352 03.2	+25 46.7	158 22.6	-22 05.0	292 47.0	+12 02.8
19	103	40.7	121 56.9	06.9	7 04.6	46.6	173 24.6	04.9	307 49.6	02.9
20	118	43.2	136 56.5	05.8	22 05.9	46.5	188 26.7	04.9	322 52.2	03.0
21	133	45.6	151 56.0	04.7	37 07.3	46.4	203 28.8	04.9	337 54.9	03.0
22	148	48.1	166 55.6	03.6	52 08.6	46.3	218 30.9	04.8	352 57.5	03.1
23	163	50.6	181 55.1	02.5	67 10.0	46.2	233 33.0	04.8	8 00.1	03.1
24	178	53.0	196 54.6	-9 01.4	82 11.3	+25 46.1	248 35.1	-22 04.7	23 02.7	+12 03.2
Dif	—		-5	+11	+14	-1	+21	0	+26	+

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna								
	SD: 16 ^h 1			Edad: 13 ^d 3	PHE { 4 ^h : 55 ^m 8 12 ^h : 55 ^m 7 20 ^h : 55 ^m 5																
	PMG: 12 ^h 07 ^m 1					SD: 15 ^m 2		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	178	11.6	+0	18.0	7	19.8	+1	19.3	4	26	5	16	5	58	18	25	86	5	39	0	
1	193	11.8		18.9	21	54.2 ¹⁵⁴	+1	04.4 ¹⁴⁹	32	19	58		23	83		23	83		39	3	
2	208	12.0		19.9	36	28.6 ¹⁵⁴	+0	49.5 ¹⁴⁹	37	22	59		22	79		22	79		39	6	
3	223	12.1		20.9	51	03.0 ¹⁵⁴		34.7 ¹⁴⁸	42	24	5	59	20	77		20	77		39	8	
4	238	12.3		21.9	65	37.5 ¹⁵⁵		19.8 ¹⁴⁹	46	26	6	00	19	74		19	74		39	11	
5	253	12.5	+0	22.9	80	12.0 ¹⁵⁵	+0	05.0 ¹⁴⁸	4	50	5	28	6	00	18	18	71		5	39	13
6	268	12.7	+0	23.9	94	46.5 ¹⁵⁵	-0	09.9 ¹⁴⁹	4	57	5	32	6	01	18	15	67		5	39	18
7	283	12.9		24.9	109	21.0 ¹⁵⁵		24.7 ¹⁴⁸	5	03	34	01	13	62		13	62		39	22	
8	298	13.1		25.9	123	55.5 ¹⁵⁵		39.5 ¹⁴⁸	07	37	02		11	59		11	59		40	24	
9	313	13.3		26.8	138	30.0 ¹⁵⁵	-0	54.3 ¹⁴⁸	11	39	02		09	56		09	56		40	27	
10	328	13.5		27.8	153	04.6 ¹⁵⁶	-1	09.1 ¹⁴⁸	15	41	03		06	51		06	51		40	33	
11	343	13.6	+0	28.8	167	39.2 ¹⁵⁶	-1	23.9 ¹⁴⁸	5	18	5	43	6	03	18	04	46		5	40	37
12	358	13.8	+0	29.8	182	13.8 ¹⁵⁶	-1	38.7 ¹⁴⁸	5	19	5	43	6	04	18	02	41		5	40	42
13	13	14.0		30.8	196	48.3 ¹⁵⁵	-1	53.4 ¹⁴⁷	19	43	04		17	59		17	59		40	46	
14	28	14.2		31.8	211	23.0 ¹⁵⁷	-2	08.1 ¹⁴⁷	17	42	04		57	33		57	33		40	51	
15	43	14.4		32.8	225	57.6 ¹⁵⁶		22.8 ¹⁴⁷	13	40	04		54	28		54	28		40	56	
16	58	14.6		33.7	240	32.2 ¹⁵⁶		37.5 ¹⁴⁷	09	39	04		53	25		53	25		40	59	
17	73	14.8	+0	34.7	255	06.8 ¹⁵⁶	-2	52.2 ¹⁴⁷	5	06	5	37	6	04	17	51	22		5	40	63
18	88	15.0	+0	35.7	269	41.5 ¹⁵⁷	-3	06.8 ¹⁴⁶	5	00	5	35	6	04	17	49	18		5	40	67
19	103	15.1		36.7	284	16.1 ¹⁵⁶		21.5 ¹⁴⁷	4	54	32	04	47	13		47	13		40	72	
20	118	15.3		37.7	298	50.8 ¹⁵⁷		36.1 ¹⁴⁶	50	30	04		46	11		46	11		40	74	
21	133	15.5		38.7	313	25.5 ¹⁵⁷	-3	50.6 ¹⁴⁵	47	28	04		45	8		45	8		40	77	
22	148	15.7		39.7	328	00.1 ¹⁵⁶	-4	05.2 ¹⁴⁶	42	26	04		43	6		43	6		40	80	
23	163	15.9		40.7	342	34.8 ¹⁵⁷		19.7 ¹⁴⁵	37	24	03		42	3		42	3		40	83	
24	178	16.1	+0	41.6	357	09.4 ¹⁵⁶	-4	34.2 ¹⁴⁵	4	32	5	22	6	03	17	40	0		5	40	86
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO									
	PMG 12 ^h 02 ^m 5		Mag: -3.8 PMG: 10 ^h 53 ^m			Mag: +0.6 PMG: 18 ^h 30 ^m			Mag: -2.1 PMG: 7 ^h 25 ^m			Mag: +0.3 PMG: 22 ^h 24 ^m									
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec								
h	°	'	°	'	°	'	'	°	'	'	°	'	'	°	'	°	'	°	'	'	
0	178	53.0	196	54.6	-9	01.4	82	11.3	+25	46.1	248	35.1	-22	04.7	23	02.7	+12	03.2			
1	193	55.5	211	54.2	-9	00.2	97	12.7		46.1	263	37.2		04.7	38	05.4		03.3			
2	208	57.9	226	53.7	-8	59.1	112	14.0		46.0	278	39.3		04.6	53	08.0		03.3			
3	224	00.4	241	53.3		58.0	127	15.4		45.9	293	41.4		04.6	68	10.6		03.4			
4	239	02.9	256	52.8		56.9	142	16.7		45.8	308	43.5		04.6	83	13.2		03.4			
5	254	05.3	271	52.4	-8	55.8	157	18.1	+25	45.7	323	45.6	-22	04.5	98	15.8	+12	03.5			
6	269	07.8	286	51.9	-8	54.6	172	19.4	+25	45.6	338	47.7	-22	04.5	113	18.5	+12	03.6			
7	284	10.3	301	51.5		53.5	187	20.7		45.5	353	49.8		04.4	128	21.1		03.6			
8	299	12.7	316	51.0		52.4	202	22.1		45.4	8	51.9		04.4	143	23.7		03.7			
9	314	15.2	331	50.6		51.3	217	23.4		45.3	23	54.0		04.3	158	26.3		03.7			
10	329	17.7	346	50.1		50.2	232	24.8		45.2	38	56.1		04.3	173	28.9		03.8			
11	344	20.1	1	49.7	-8	49.0	247	26.1	+25	45.2	53	58.2	-22	04.3	188	31.6	+12	03.8			
12	359	22.6	16	49.2	-8	47.9	262	27.4	+25	45.1	69	00.3	-22	04.2	203	34.2	+12	03.9			
13	14	25.1	31	48.8		46.8	277	28.8		45.0	84	02.4		04.2	218	36.8		04.0			
14	29	27.5	46	48.3		45.7	292	30.1		44.9	99	04.5		04.1	233	39.4		04.0			
15	44	30.0	61	47.9		44.6	307	31.5		44.8	114	06.6		04.1	248	42.1		04.1			
16	59	32.4	76	47.5		43.4	322	32.8		44.7	129	08.7		04.0	263	44.7		04.1			
17	74	34.9	91	47.0	-8	42.3	337	34.1	+25	44.6	144	10.8	-22	04.0	278	47.3	+12	04.2			
18	89	37.4	106	46.6	-8	41.2	352	35.5	+25	44.5	159	12.9	-22	04.0	293	49.9	+12	04.3			
19	104	39.8	121	46.1		40.1	7	36.8		44.4	174	15.0		03.9	308	52.5		04.3			
20	119	42.3	136	45.7		38.9	22	38.1		44.3	189	17.1		03.9	323	55.2		04.4			
21	134	44.8	151	45.2		37.8	37	39.5		44.2	204	19.2		03.8	338	57.8		04.4			
22	149	47.2	166	44.8		36.7	52	40.8		44.2	219	21.3		03.8	354	00.4		04.5			
23	164	49.7	181	44.3		35.6	67	42.2		44.1	234	23.4		03.7	9	03.0		04.5			
24	179	52.2	196	43.9	-8	34.4	82	43.5	+25	44.0	249	25.5	-22	03.7	24	05.6	+12	04.6			
Dif	—		-4		+11	+13		-1	+21		0		+26		+						

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16 ^h 1			Edad: 14 ^d 3 PHE { 4 ^h : 55 ^m 4 12 ^h : 55 ^m 2 20 ^h : 55 ^m 1											
	PMG: 12 ^h 06 ^m 8			SD: 15 ^h 1 PMG: 0 ^h 12 ^m R°: 42 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	178	16.1	+0 41.6	357	09.4	-4 34.2	157	60 N	18 20	19 02	19 53	19 51 88	5 39 0		
1	193	16.3		11	44.1	-4 48.7	145	58	19	18 59	46	46 83	42 3		
2	208	16.5		26	18.8	-5 03.1	144	56	19	56	41	41 80	45 6		
3	223	16.6		40	53.4		156	54	18	53	36	37 77	47 9		
4	238	16.8		55	28.1		157	52	17	51	31	33 74	50 11		
5	253	17.0	+0 46.6	70	02.8	-5 46.2	143	50	18 17	18 49	19 27	19 29 72	5 52 13		
6	268	17.2	+0 47.6	84	37.4	-6 00.5	143	45	18 15	18 45	19 19	19 22 66	5 57 18		
7	283	17.4		99	12.1		157	40	14	41	13	15 63	6 01 22		
8	298	17.6		49.5	113	46.7	156	35	14	39	08	10 59	04 25		
9	313	17.8		50.5	128	21.4	157	30	13	37	19 05	19 05 56	07 28		
10	328	18.0		51.5	142	56.0	156	20	12	34	18 59	18 57 51	13 33		
11	343	18.2	+0 52.5	157	30.6	-7 11.6	141	10 N	18 11	18 32	18 56	18 50 47	6 17 38		
12	358	18.3	+0 53.5	172	05.2	-7 25.7	141	0	18 10	18 31	18 55	18 43 43	6 22 42		
13	13	18.5		54.5	186	39.8	156	10 S	09	30	55	37 38	26 46		
14	28	18.7		55.4	201	14.4	156	20	09	31	18 56	30 34	31 51		
15	43	18.9		56.4	215	49.0	156	30	08	32	19 00	22 29	36 56		
16	58	19.1		57.4	230	23.5	155	35	08	33	03	18 26	39 60		
17	73	19.3	+0 58.4	244	58.1	-8 35.6	139	40	18 08	18 35	19 06	18 13 22	6 43 63		
18	88	19.5	+0 59.4	259	32.6	-8 49.4	138	45	18 07	18 37	19 11	18 07 19	6 47 67		
19	103	19.7	+1 00.4	274	07.1	-9 03.2	138	50	07	39	17	18 00 14	52 72		
20	118	19.8		01.4	288	41.6	155	52	07	41	20	17 57 12	54 74		
21	133	20.0		02.3	303	16.1	155	54	07	42	24	53 10	6 57 77		
22	148	20.2		03.3	317	50.5	154	56	07	44	28	49 7	7 00 79		
23	163	20.4		04.3	332	25.0	155	58	07	46	32	45 4	03 83		
24	178	20.6	+1 05.3	346	59.4	-10 11.6	136	60 S	18 06	18 48	19 37	17 40 1	7 06 87		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG 11 ^h 58 ^m 6		Mag: -3.8 PMG: 10 ^h 53 ^m			Mag: +0.6 PMG: 18 ^h 27 ^m			Mag: -2.1 PMG: 7 ^h 21 ^m			Mag: +0.3 PMG: 22 ^h 20 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	179	52.2	196	43.9	-8 34.4	82	43.5	+25 44.0	249	25.5	-22 03.7	24	05.6	+12 04.6	
1	194	54.6	211	43.4	33.3	97	44.8	43.9	264	27.6	03.7	39	08.3	04.7	
2	209	57.1	226	43.0	32.2	112	46.2	43.8	279	29.7	03.6	54	10.9	04.7	
3	224	59.5	241	42.6	31.0	127	47.5	43.7	294	31.8	03.6	69	13.5	04.8	
4	240	02.0	256	42.1	29.9	142	48.8	43.6	309	33.9	03.5	84	16.1	04.8	
5	255	04.5	271	41.7	-8 28.8	157	50.2	+25 43.5	324	36.0	-22 03.5	99	18.7	+12 04.9	
6	270	06.9	286	41.2	-8 27.7	172	51.5	+25 43.4	339	38.1	-22 03.4	114	21.4	+12 05.0	
7	285	09.4	301	40.8	26.5	187	52.8	43.3	354	40.2	03.4	129	24.0	05.0	
8	300	11.9	316	40.3	25.4	202	54.2	43.2	9	42.3	03.4	144	26.6	05.1	
9	315	14.3	331	39.9	24.3	217	55.5	43.1	24	44.4	03.3	159	29.2	05.1	
10	330	16.8	346	39.5	23.1	232	56.8	43.0	39	46.5	03.3	174	31.8	05.2	
11	345	19.3	1	39.0	-8 22.0	247	58.1	+25 42.9	54	48.6	-22 03.2	189	34.5	+12 05.2	
12	0	21.7	16	38.6	-8 20.9	262	59.5	+25 42.8	69	50.7	-22 03.2	204	37.1	+12 05.3	
13	15	24.2	31	38.1	19.7	278	00.8	42.8	84	52.8	03.1	219	39.7	05.4	
14	30	26.7	46	37.7	18.6	293	02.1	42.7	99	54.9	03.1	234	42.3	05.4	
15	45	29.1	61	37.3	17.5	308	03.5	42.6	114	57.0	03.1	249	44.9	05.5	
16	60	31.6	76	36.8	16.3	323	04.8	42.5	129	59.2	03.0	264	47.5	05.5	
17	75	34.0	91	36.4	-8 15.2	338	06.1	+25 42.4	145	01.3	-22 03.0	279	50.2	+12 05.6	
18	90	36.5	106	35.9	-8 14.1	353	07.4	+25 42.3	160	03.4	-22 02.9	294	52.8	+12 05.6	
19	105	39.0	121	35.5	12.9	8	08.8	42.2	175	05.5	02.9	309	55.4	05.7	
20	120	41.4	136	35.1	11.8	23	10.1	42.1	190	07.6	02.8	324	58.0	05.8	
21	135	43.9	151	34.6	10.7	38	11.4	42.0	205	09.7	02.8	340	00.6	05.8	
22	150	46.4	166	34.2	09.5	53	12.7	41.9	220	11.8	02.8	355	03.3	05.9	
23	165	48.8	181	33.7	08.4	68	14.1	41.8	235	13.9	02.7	10	05.9	05.9	
24	180	51.3	196	33.3	-8 07.3	83	15.4	+25 41.7	250	16.0	-22 02.7	25	08.5	+12 06.0	
Dif	—		-4	+11		+13	-1		+21		0		+26		+1

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'0 PMG: 12 ^h 06 ^m 5			Edad: 15 ^d 3 PHE { 4 ^h : 55'0 12 ^h : 54'8 20 ^h : 54'7 SD: 15'0 PMG: 0 ^h 54 ^m R°: 42 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	20.6	+1 05.3	346	59.4	-10 11.6		60 N	4 19	5 10	5 52	21 19	89	5 39	0	
1	193	20.8	06.3	1	33.8 ¹⁵⁴	25.1 ¹³⁵		58	26	13	53	09	85	45	5	
2	208	21.0	07.3	16	08.2 ¹⁵⁴	38.6 ¹³⁵		56	32	16	54	21	01	80	51	8
3	223	21.2	08.3	30	42.5 ¹⁵³	-10 52.0 ¹³⁴		54	37	19	54	20	54	77	5 56	1
4	238	21.4	09.2	45	16.8 ¹⁵³	-11 05.4 ¹³⁴		52	41	21	55	47	74	6 01	13	
5	253	21.5	+1 10.2	59	51.1 ¹⁵³	-11 18.7 ¹³³		50	4 45	5 23	5 56	20 41	72	6 05	16	
6	268	21.7	+1 11.2	74	25.4 ¹⁵³	-11 32.0 ¹³³		45	4 53	5 28	5 57	20 28	67	6 15	20	
7	283	21.9	12.2	88	59.7 ¹⁵³	45.2 ¹³²		40	4 59	31	58	18	63	23	24	
8	298	22.1	13.2	103	33.9 ¹⁵²	-11 58.4 ¹³²		35	5 04	34	5 59	09	60	29	28	
9	313	22.3	14.2	118	08.1 ¹⁵²	-12 11.5 ¹³¹		30	08	36	6 00	20 01	57	35	31	
10	328	22.5	15.1	132	42.2 ¹⁵¹	24.5 ¹³⁰		20	14	39	01	19 48	52	46	35	
11	343	22.7	+1 16.1	147	16.4 ¹⁵²	-12 37.5 ¹³⁰		10 N	5 17	5 41	6 02	19 37	47	6 55	39	
12	358	22.9	+1 17.1	161	50.5 ¹⁵¹	-12 50.5 ¹³⁰		0	5 19	5 43	6 03	19 26	44	7 04	43	
13	13	23.1	18.1	176	24.6 ¹⁵¹	-13 03.3 ¹²⁸		10 S	19	43	04	15	40	12	48	
14	28	23.3	19.1	190	58.6 ¹⁵⁰	16.2 ¹²⁹		20	17	43	05	19 04	36	22	51	
15	43	23.4	20.1	205	32.6 ¹⁵⁰	28.9 ¹²⁷		30	14	42	05	18 51	32	32	57	
16	58	23.6	21.1	220	06.6 ¹⁵⁰	41.6 ¹²⁷		35	11	41	06	44	28	39	59	
17	73	23.8	+1 22.0	234	40.5 ¹⁴⁹	-13 54.2 ¹²⁶		40	5 08	5 39	6 06	18 35	26	7 46	62	
18	88	24.0	+1 23.0	249	14.5 ¹⁵⁰	-14 06.8 ¹²⁶		45	5 03	5 37	6 07	18 26	21	7 54	67	
19	103	24.2	24.0	263	48.3 ¹⁴⁸	19.3 ¹²⁵		50	4 57	35	07	14	17	8 04	72	
20	118	24.4	25.0	278	22.2 ¹⁴⁹	31.7 ¹²⁴		52	54	34	07	09	14	08	75	
21	133	24.6	26.0	292	56.0 ¹⁴⁸	44.1 ¹²⁴		54	51	32	07	18 03	12	14	77	
22	148	24.8	27.0	307	29.7 ¹⁴⁷	-14 56.4 ¹²³		56	47	31	08	17 56	9	19	80	
23	163	25.0	27.9	322	03.5 ¹⁴⁸	-15 08.7 ¹²³		58	42	29	08	49	5	26	83	
24	178	25.1	+1 28.9	336	37.2 ¹⁴⁷	-15 20.8 ¹²¹		60 S	4 37	5 27	6 08	17 41	1	8 33	88	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO			
	PMG 11 ^h 54 ^m 6		Mag: -3.8 PMG: 10 ^h 54 ^m		Mag: +0.7 PMG: 18 ^h 25 ^m		Mag: -2.1 PMG: 7 ^h 18 ^m		Mag: +0.3 PMG: 22 ^h 16 ^m			
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'		
0	180	51.3	196	33.3	-8 07.3	83 15.4	+25 41.7	250 16.0	-22 02.7	25 08.5	+12 06.0	
1	195	53.8	211	32.9	06.1	98 16.7	41.6	265 18.1	02.6	40 11.1	06.0	
2	210	56.2	226	32.4	05.0	113 18.0	41.5	280 20.2	02.6	55 13.7	06.1	
3	225	58.7	241	32.0	03.9	128 19.4	41.4	295 22.3	02.5	70 16.3	06.2	
4	241	01.1	256	31.6	02.7	143 20.7	41.3	310 24.4	02.5	85 19.0	06.2	
5	256	03.6	271	31.1	-8 01.6	158 22.0	+25 41.2	325 26.6	-22 02.5	100 21.6	+12 06.3	
6	271	06.1	286	30.7	-8 00.4	173 23.3	+25 41.1	340 28.7	-22 02.4	115 24.2	+12 06.3	
7	286	08.5	301	30.3	-7 59.3	188 24.7	41.0	355 30.8	02.4	130 26.8	06.4	
8	301	11.0	316	29.8	58.2	203 26.0	40.9	10 32.9	02.3	145 29.4	06.4	
9	316	13.5	331	29.4	57.0	218 27.3	40.8	25 35.0	02.3	160 32.0	06.5	
10	331	15.9	346	29.0	55.9	233 28.6	40.7	40 37.1	02.3	175 34.7	06.6	
11	346	18.4	1	28.5	-7 54.7	248 29.9	+25 40.6	55 39.2	-22 02.2	190 37.3	+12 06.6	
12	1	20.9	16	28.1	-7 53.6	263 31.3	+25 40.5	70 41.3	-22 02.2	205 39.9	+12 06.7	
13	16	23.3	31	27.7	52.5	278 32.6	40.5	85 43.4	02.1	220 42.5	06.7	
14	31	25.8	46	27.2	51.3	293 33.9	40.4	100 45.5	02.1	235 45.1	06.8	
15	46	28.3	61	26.8	50.2	308 35.2	40.3	115 47.7	02.0	250 47.7	06.8	
16	61	30.7	76	26.4	49.0	323 36.5	40.2	130 49.8	02.0	265 50.4	06.9	
17	76	33.2	91	25.9	-7 47.9	338 37.8	+25 40.1	145 51.9	-22 02.0	280 53.0	+12 07.0	
18	91	35.6	106	25.5	-7 46.8	353 39.2	+25 40.0	160 54.0	-22 01.9	295 55.6	+12 07.0	
19	106	38.1	121	25.1	45.6	8 40.5	39.9	175 56.1	01.9	310 58.2	07.1	
20	121	40.6	136	24.6	44.5	23 41.8	39.8	190 58.2	01.8	326 00.8	07.1	
21	136	43.0	151	24.2	43.3	38 43.1	39.7	206 00.3	01.8	341 03.4	07.2	
22	151	45.5	166	23.8	42.2	53 44.4	39.6	221 02.4	01.7	356 06.0	07.2	
23	166	48.0	181	23.3	41.0	68 45.7	39.5	236 04.6	01.7	11 08.7	07.3	
24	181	50.4	196	22.9	-7 39.9	83 47.0	+25 39.4	251 06.7	-22 01.7	26 11.3	+12 07.3	
Dif	—		-4 +11		+13 -1		+21 0		+26 +1			

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'0			Edad: 16 ^d 3 PHE { 4 ^h : 54'6 12 ^h : 54'5 20 ^h : 54'4										
	PMG: 12 ^h 06 ^m 2			SD: 14'9 PMG: 1 ^h 36 ^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	178	25.1	+1 28.9	336	37.2	-15 20.8		60 N	18 25	19 07	19 58	22 48 91	5 39 2	
1	193	25.3		351	10.8 ¹⁴⁶	32.9 ¹²¹		58	24	03	51	34 85	50 6	
2	208	25.5	30.9	5	44.4 ¹⁴⁶	45.0 ¹²¹		56	23	19 00	45	21 81	5 59 10	
3	223	25.7	31.9	20	18.0 ¹⁴⁶	-15 56.9 ¹¹⁹		54	22	18 57	40	11 77	6 07 14	
4	238	25.9	32.9	34	51.5 ¹⁴⁵	-16 08.8 ¹¹⁹		52	21	55	35	22 01 74	14 17	
5	253	26.1	+1 33.8	49	25.0 ¹⁴⁵	-16 20.6 ¹¹⁸		50	18 20	18 52	19 31	21 53 71	6 21 18	
6	268	26.3	+1 34.8	63	58.4 ¹⁴⁴	-16 32.4 ¹¹⁸		45	18 18	18 47	19 22	21 35 67	6 35 23	
7	283	26.5	35.8	78	31.9 ¹⁴⁵	44.0 ¹¹⁶		40	16	44	15	21 63	47 27	
8	298	26.7	36.8	93	05.2 ¹⁴³	-16 55.6 ¹¹⁶		35	15	40	10	21 09 59	6 57 30	
9	313	26.8	37.8	107	38.5 ¹⁴³	-17 07.2 ¹¹⁶		30	14	38	06	20 58 57	7 06 33	
10	328	27.0	38.8	122	11.8 ¹⁴³	18.6 ¹¹⁴		20	12	34	19 00	40 53	21 37	
11	343	27.2	+1 39.7	136	45.0 ¹⁴²	-17 30.0 ¹¹⁴		10 N	18 11	18 32	18 56	20 24 50	7 34 42	
12	358	27.4	+1 40.7	151	18.2 ¹⁴²	-17 41.3 ¹¹³		0	18 09	18 30	18 54	20 10 46	7 47 45	
13	13	27.6	41.7	165	51.3 ¹⁴¹	-17 52.5 ¹¹²		10 S	08	29	54	19 55 43	8 00 48	
14	28	27.8	42.7	180	24.4 ¹⁴¹	-18 03.6 ¹¹¹		20	07	29	55	40 39	13 53	
15	43	28.0	43.7	194	57.5 ¹⁴¹	14.7 ¹¹¹		30	06	30	18 57	23 35	29 57	
16	58	28.2	44.7	209	30.5 ¹⁴⁰	25.6 ¹⁰⁹		35	05	30	19 00	12 33	38 60	
17	73	28.4	+1 45.6	224	03.4 ¹³⁹	-18 36.5 ¹⁰⁹		40	18 04	18 31	19 03	19 01 29	8 48 63	
18	88	28.6	+1 46.6	238	36.3 ¹³⁹	-18 47.3 ¹⁰⁸		45	18 04	18 33	19 07	18 47 26	9 01 66	
19	103	28.7	47.6	253	09.2 ¹³⁹	-18 58.1 ¹⁰⁸		50	03	35	13	31 21	16 71	
20	118	28.9	48.6	267	42.0 ¹³⁸	-19 08.7 ¹⁰⁶		52	02	36	15	23 19	23 74	
21	133	29.1	49.6	282	14.7 ¹³⁷	19.3 ¹⁰⁶		54	02	37	18	15 16	31 77	
22	148	29.3	50.6	296	47.4 ¹³⁷	29.7 ¹⁰⁴		56	02	38	22	18 05 13	39 81	
23	163	29.5	51.5	311	20.1 ¹³⁷	40.1 ¹⁰⁴		58	01	40	26	17 54 9	9 49 85	
24	178	29.7	+1 52.5	325	52.7 ¹³⁶	-19 50.4 ¹⁰³		60 S	18 00	18 42	19 31	17 42 4	10 01 90	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 11 ^h 50 ^m 7		Mag: -3.8 PMG: 10 ^h 55 ^m		Mag: +0.7 PMG: 18 ^h 23 ^m		Mag: -2.2 PMG: 7 ^h 15 ^m		Mag: +0.3 PMG: 22 ^h 11 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	181	50.4	196	22.9	-7 39.9	83 47.0	+25 39.4	251 06.7	-22 01.7	26 11.3	+12 07.3
1	196	52.9	211	22.5	38.7	98 48.4	39.3	266 08.8	01.6	41 13.9	07.4
2	211	55.4	226	22.0	37.6	113 49.7	39.2	281 10.9	01.6	56 16.5	07.5
3	226	57.8	241	21.6	36.5	128 51.0	39.1	296 13.0	01.5	71 19.1	07.5
4	242	00.3	256	21.2	35.3	143 52.3	39.0	311 15.1	01.5	86 21.7	07.6
5	257	02.7	271	20.8	-7 34.2	158 53.6	+25 38.9	326 17.2	-22 01.5	101 24.4	+12 07.6
6	272	05.2	286	20.3	-7 33.0	173 54.9	+25 38.8	341 19.4	-22 01.4	116 27.0	+12 07.7
7	287	07.7	301	19.9	31.9	188 56.2	38.7	356 21.5	01.4	131 29.6	07.7
8	302	10.1	316	19.5	30.7	203 57.5	38.6	11 23.6	01.3	146 32.2	07.8
9	317	12.6	331	19.0	29.6	218 58.8	38.5	26 25.7	01.3	161 34.8	07.8
10	332	15.1	346	18.6	28.4	234 00.2	38.4	41 27.8	01.2	176 37.4	07.9
11	347	17.5	1	18.2	-7 27.3	249 01.5	+25 38.3	56 29.9	-22 01.2	191 40.0	+12 08.0
12	2	20.0	16	17.8	-7 26.1	264 02.8	+25 38.2	71 32.1	-22 01.2	206 42.6	+12 08.0
13	17	22.5	31	17.3	25.0	279 04.1	38.1	86 34.2	01.1	221 45.3	08.1
14	32	24.9	46	16.9	23.8	294 05.4	38.0	101 36.3	01.1	236 47.9	08.1
15	47	27.4	61	16.5	22.7	309 06.7	37.9	116 38.4	01.0	251 50.5	08.2
16	62	29.9	76	16.1	21.5	324 08.0	37.8	131 40.5	01.0	266 53.1	08.2
17	77	32.3	91	15.6	-7 20.4	339 09.3	+25 37.7	146 42.6	-22 01.0	281 55.7	+12 08.3
18	92	34.8	106	15.2	-7 19.2	354 10.6	+25 37.6	161 44.8	-22 00.9	296 58.3	+12 08.3
19	107	37.2	121	14.8	18.1	9 11.9	37.5	176 46.9	00.9	312 00.9	08.4
20	122	39.7	136	14.4	16.9	24 13.2	37.3	191 49.0	00.8	327 03.6	08.4
21	137	42.2	151	13.9	15.8	39 14.5	37.2	206 51.1	00.8	342 06.2	08.5
22	152	44.6	166	13.5	14.6	54 15.8	37.1	221 53.2	00.7	357 08.8	08.6
23	167	47.1	181	13.1	13.5	69 17.1	37.0	236 55.4	00.7	12 11.4	08.6
24	182	49.6	196	12.7	-7 12.3	84 18.4	+25 36.9	251 57.5	-22 00.7	27 14.0	+12 08.7
Dif	—		-4	+11		+13	-1	+21	0	+26	+1

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'0			Edad: 17 ^d 3 PHE { 4 ^h : 54'3 12 ^h : 54'3 20 ^h : 54'2													
	PMG: 12 ^h 05 ^m 9			SD: 14'8 PMG: 2 ^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	h	m
0	178	29.7	+1 52.5	325	52.7	-19 50.4	102	60 N	4 13	5 04	5 46	** ** *	23 59	82	5 41	5	
1	193	29.9	53.5	340	25.2 ¹³⁵	-20 00.6	102	58	20	08	47	23 59	82	5 56	11		
2	208	30.1	54.5	354	57.7 ¹³⁵	10.8	102	56	26	11	48	42	77	6 09	16		
3	223	30.3	55.5	9	30.1 ¹³⁴	20.8	100	54	31	14	49	28	73	21	18		
4	238	30.5	56.4	24	02.5 ¹³⁴	30.7	99	52	36	17	50	15	71	31	21		
5	253	30.6	+1 57.4	38	34.9 ¹³⁴	-20 40.6	99	50	4 41	5 19	5 51	23 04	69	6 39	24		
6	268	30.8	+1 58.4	53	07.2 ¹³³	-20 50.3	97	45	4 49	5 24	5 53	22 42	64	6 58	29		
7	283	31.0	+1 59.4	67	39.4 ¹³²	-21 00.0	97	40	4 56	28	55	24	61	7 14	32		
8	298	31.2	+2 00.4	82	11.6 ¹³²	-21 09.6	96	35	5 01	31	56	22 08	59	27	35		
9	313	31.4	01.4	96	43.7 ¹³¹	19.1	95	30	06	34	5 58	21 55	57	39	37		
10	328	31.6	02.3	111	15.8 ¹³¹	28.5	94	20	12	38	6 00	33	54	7 58	41		
11	343	31.8	+2 03.3	125	47.8 ¹³⁰	-21 37.7	92	10 N	5 16	5 40	6 01	21 14	51	8 16	44		
12	358	32.0	+2 04.3	140	19.8 ¹³⁰	-21 46.9	92	0	5 18	5 42	6 03	20 56	48	8 32	47		
13	13	32.2	05.3	154	51.7 ¹²⁹	-21 56.0	91	10 S	19	43	04	38	46	8 48	50		
14	28	32.4	06.3	169	23.6 ¹²⁹	-22 05.0	90	20	18	43	05	20 19	43	9 06	53		
15	43	32.5	07.2	183	55.4 ¹²⁸	13.9	89	30	15	43	07	19 58	39	26	57		
16	58	32.7	08.2	198	27.1 ¹²⁷	22.7	88	35	13	42	07	45	37	38	59		
17	73	32.9	+2 09.2	212	58.8 ¹²⁷	-22 31.4	87	40	5 10	5 41	6 08	19 30	35	9 51	62		
18	88	33.1	+2 10.2	227	30.5 ¹²⁷	-22 40.0	86	45	5 06	5 40	6 09	19 13	32	10 07	66		
19	103	33.3	11.2	242	02.1 ¹²⁶	48.5	85	50	5 00	38	10	18	52	28	27	71	
20	118	33.5	12.1	256	33.6 ¹²⁵	-22 56.9	84	52	4 58	37	11	42	25	37	72		
21	133	33.7	13.1	271	05.1 ¹²⁵	-23 05.2	83	54	54	36	11	31	22	10 48	75		
22	148	33.9	14.1	285	36.5 ¹²⁴	13.4	82	56	51	35	12	18	19	11 00	79		
23	163	34.1	15.1	300	07.9 ¹²⁴	21.5	81	58	47	33	12	18	03	15	14	84	
24	178	34.2	+2 16.1	314	39.2 ¹²³	-23 29.5	80	60 S	4 42	5 32	6 13	17 46	8	11 31	91		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 11 ^h 46 ^m 8		Mag: -3.8 PMG: 10 ^h 55 ^m		Mag: +0.7 PMG: 18 ^h 21 ^m		Mag: -2.2 PMG: 7 ^h 11 ^m		Mag: +0.3 PMG: 22 ^h 07 ^m		
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄		
h	°	'	°	'	°	'	°	'	°	'	
0	182	49.6	196	12.7	-7 12.3	84 18.4	+25 36.9	251 57.5	-22 00.7	27 14.0	+12 08.7
1	197	52.0	211	12.2	11.1	99 19.8	36.8	266 59.6	00.6	42 16.6	08.7
2	212	54.5	226	11.8	10.0	114 21.1	36.7	282 01.7	00.6	57 19.2	08.8
3	227	57.0	241	11.4	08.8	129 22.4	36.6	297 03.8	00.5	72 21.8	08.8
4	242	59.4	256	11.0	07.7	144 23.7	36.5	312 06.0	00.5	87 24.5	08.9
5	258	01.9	271	10.6	-7 06.5	159 25.0	+25 36.4	327 08.1	-22 00.5	102 27.1	+12 08.9
6	273	04.4	286	10.1	-7 05.4	174 26.3	+25 36.3	342 10.2	-22 00.4	117 29.7	+12 09.0
7	288	06.8	301	09.7	04.2	189 27.6	36.2	357 12.3	00.4	132 32.3	09.0
8	303	09.3	316	09.3	03.1	204 28.9	36.1	12 14.4	00.3	147 34.9	09.1
9	318	11.7	331	08.9	01.9	219 30.2	36.0	27 16.6	00.3	162 37.5	09.2
10	333	14.2	346	08.4	-7 00.7	234 31.5	35.9	42 18.7	00.2	177 40.1	09.2
11	348	16.7	1	08.0	-6 59.6	249 32.8	+25 35.8	57 20.8	-22 00.2	192 42.7	+12 09.3
12	3	19.1	16	07.6	-6 58.4	264 34.1	+25 35.7	72 22.9	-22 00.2	207 45.3	+12 09.3
13	18	21.6	31	07.2	57.3	279 35.4	35.6	87 25.1	00.1	222 48.0	09.4
14	33	24.1	46	06.8	56.1	294 36.7	35.5	102 27.2	-22 00.1	237 50.6	09.4
15	48	26.5	61	06.3	55.0	309 38.0	35.4	117 29.3	-22 00.0	252 53.2	09.5
16	63	29.0	76	05.9	53.8	324 39.3	35.3	132 31.4	00.0	267 55.8	09.5
17	78	31.5	91	05.5	-6 52.6	339 40.5	+25 35.2	147 33.6	-22 00.0	282 58.4	+12 09.6
18	93	33.9	106	05.1	-6 51.5	354 41.8	+25 35.1	162 35.7	-21 59.9	298 01.0	+12 09.6
19	108	36.4	121	04.7	50.3	9 43.1	35.0	177 37.8	59.9	313 03.6	09.7
20	123	38.8	136	04.3	49.2	24 44.4	34.8	192 39.9	59.8	328 06.2	09.8
21	138	41.3	151	03.8	48.0	39 45.7	34.7	207 42.1	59.8	343 08.8	09.8
22	153	43.8	166	03.4	46.8	54 47.0	34.6	222 44.2	59.8	358 11.4	09.9
23	168	46.2	181	03.0	45.7	69 48.3	34.5	237 46.3	59.7	13 14.1	09.9
24	183	48.7	196	02.6	-6 44.5	84 49.6	+25 34.4	252 48.4	-21 59.7	28 16.7	+12 10.0
Dif	—		-4 +12		+13 -1		+21 0		+26 +1		

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:0 PMG: 12 ^h 05 ^m 6			Edad: 18 ^d 3 PHE { 4 ^h : 54 ^m 2 12 ^h : 54 ^m 1 20 ^h : 54 ^m 1 R°: 49 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	h m	h m	h m	h m m		h m m		
0	178	34.2	+2 16.1	314	39.2	-23 29.5	79	60 N	18 30	19 12	20 04	0 19 90	5 46 12		
1	193	34.4		329	10.5 ¹²³	37.4	79	58	28	08	19 56	** ** *	6 07 19		
2	208	34.6	18.0	343	41.7 ¹²²	45.1	77	56	27	04	50	** ** *	25 23		
3	223	34.8	19.0	358	12.9 ¹²²	-23 52.8	77	54	25	19 01	44	** ** *	39 27		
4	238	35.0	20.0	12	44.0 ¹²¹	-24 00.4	76	52	24	18 58	39	** ** *	6 52 30		
5	253	35.2	+2 21.0	27	15.0 ¹²⁰	-24 07.8	74	50	18 23	18 55	19 34	** ** *	7 03 32		
6	268	35.4	+2 21.9	41	46.0 ¹²⁰	-24 15.1	73	45	18 20	18 50	19 25	23 46 60	7 27 36		
7	283	35.6	22.9	56	17.0 ¹²⁰	22.4	73	40	18	46	18	25 58	7 46 38		
8	298	35.8	23.9	70	47.9 ¹¹⁹	29.5	71	35	17	42	12	23 07 57	8 02 40		
9	313	36.0	24.9	85	18.7 ¹¹⁸	36.5	70	30	15	39	07	22 52 55	16 42		
10	328	36.1	25.9	99	49.5 ¹¹⁸	43.4	69	20	13	35	19 01	27 53	8 39 45		
11	343	36.3	+2 26.8	114	20.2 ¹¹⁷	-24 50.2	68	10 N	18 11	18 32	18 56	22 05 51	9 00 47		
12	358	36.5	+2 27.8	128	50.9 ¹¹⁷	-24 56.8	66	0	18 09	18 30	18 54	21 44 50	9 19 49		
13	13	36.7	28.8	143	21.6 ¹¹⁷	-25 03.4	66	10 S	07	28	52	24 49	38 52		
14	28	36.9	29.8	157	52.1 ¹¹⁵	09.8	64	20	05	27	53	21 02 47	9 59 53		
15	43	37.1	30.8	172	22.7 ¹¹⁶	16.2	64	30	03	27	55	20 37 45	10 23 56		
16	58	37.3	31.7	186	53.2 ¹¹⁵	22.4	62	35	02	28	18 57	22 44	37 58		
17	73	37.5	+2 32.7	201	23.6 ¹¹⁴	-25 28.5	61	40	18 01	18 28	19 00	20 05 42	10 53 60		
18	88	37.7	+2 33.7	215	54.0 ¹¹⁴	-25 34.4	59	45	18 00	18 29	19 03	19 45 40	11 13 62		
19	103	37.9	34.7	230	24.3 ¹¹³	40.3	59	50	17 58	31	08	20 37	38 65		
20	118	38.0	35.7	244	54.6 ¹¹³	46.0	57	52	58	31	11	19 07 36	11 49 68		
21	133	38.2	36.6	259	24.8 ¹¹²	51.7	57	54	57	32	13	18 53 33	12 03 70		
22	148	38.4	37.6	273	55.0 ¹¹²	-25 57.2	55	56	56	33	17	37 30	19 73		
23	163	38.6	38.6	288	25.1 ¹¹¹	-26 02.5	53	58	55	34	20	18 18 25	12 38 77		
24	178	38.8	+2 39.6	302	55.2 ¹¹¹	-26 07.8	53	60 S	17 54	18 36	19 25	17 54 18	13 02 85		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 11 ^h 42 ^m 8		Mag: -3.8 PMG: 10 ^h 56 ^m		Mag: +0.7 PMG: 18 ^h 19 ^m		Mag: -2.2 PMG: 7 ^h 08 ^m		Mag: +0.3 PMG: 22 ^h 03 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	183	48.7	196	02.6	-6 44.5	84 49.6	+25 34.4	252	48.4	-21 59.7	28 16.7	+12 10.0		
1	198	51.2	211	02.2	43.3	99 50.9	34.3	267	50.6	59.6	43 19.3	10.0		
2	213	53.6	226	01.7	42.2	114 52.2	34.2	282	52.7	59.6	58 21.9	10.1		
3	228	56.1	241	01.3	41.0	129 53.5	34.1	297	54.8	59.6	73 24.5	10.1		
4	243	58.6	256	00.9	39.9	144 54.8	34.0	312	56.9	59.5	88 27.1	10.2		
5	259	01.0	271	00.5	-6 38.7	159 56.1	+25 33.9	327	59.1	-21 59.5	103 29.7	+12 10.2		
6	274	03.5	286	00.1	-6 37.5	174 57.4	+25 33.8	343	01.2	-21 59.4	118 32.3	+12 10.3		
7	289	06.0	300	59.7	36.4	189 58.7	33.7	358	03.3	59.4	133 34.9	10.3		
8	304	08.4	315	59.3	35.2	205 00.0	33.6	13	05.4	59.3	148 37.5	10.4		
9	319	10.9	330	58.8	34.0	220 01.2	33.5	28	07.6	59.3	163 40.1	10.4		
10	334	13.3	345	58.4	32.9	235 02.5	33.3	43	09.7	59.3	178 42.7	10.5		
11	349	15.8	0 58.0		-6 31.7	250 03.8	+25 33.2	58	11.8	-21 59.2	193 45.4	+12 10.5		
12	4	18.3	15	57.6	-6 30.5	265 05.1	+25 33.1	73	14.0	-21 59.2	208 48.0	+12 10.6		
13	19	20.7	30	57.2	29.4	280 06.4	33.0	88	16.1	59.1	223 50.6	10.7		
14	34	23.2	45	56.8	28.2	295 07.7	32.9	103	18.2	59.1	238 53.2	10.7		
15	49	25.7	60	56.4	27.0	310 09.0	32.8	118	20.4	59.1	253 55.8	10.8		
16	64	28.1	75	55.9	25.9	325 10.3	32.7	133	22.5	59.0	268 58.4	10.8		
17	79	30.6	90	55.5	-6 24.7	340 11.5	+25 32.6	148	24.6	-21 59.0	284 01.0	+12 10.9		
18	94	33.1	105	55.1	-6 23.5	355 12.8	+25 32.5	163	26.7	-21 58.9	299 03.6	+12 10.9		
19	109	35.5	120	54.7	22.4	10 14.1	32.4	178	28.9	58.9	314 06.2	11.0		
20	124	38.0	135	54.3	21.2	25 15.4	32.3	193	31.0	58.9	329 08.8	11.0		
21	139	40.5	150	53.9	20.0	40 16.7	32.1	208	33.1	58.8	344 11.4	11.1		
22	154	42.9	165	53.5	18.9	55 18.0	32.0	223	35.3	58.8	359 14.0	11.1		
23	169	45.4	180	53.1	17.7	70 19.3	31.9	238	37.4	58.7	14 16.6	11.2		
24	184	47.8	195	52.6	-6 16.5	85 20.5	+25 31.8	253	39.5	-21 58.7	29 19.3	+12 11.2		
Dif	—		-4		+12	+13		-1		+21		0	+26	+

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'0 PMG: 12 ^h 05 ^m 3			Edad: 19 ^d 3 PHE { 4 ^h : 54'1 12 ^h : 54'2 20 ^h : 54'2 SD: 14'7 PMG: 3 ^h 56 ^m R°: 51 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	38.8	+2 39.6	302	55.2	-26 07.8		60 N	4 06	4 57	5 40	1 49	78	5 58	27	
1	193	39.0		40.6	317 25.2 ¹¹⁰	13.0	52	58	13	5 02	41	1 21	71	6 26	34	
2	208	39.2		41.5	331 55.2 ¹¹⁰	18.0	50	56	20	06	43	0 59	68	6 48	37	
3	223	39.4		42.5	346 25.2 ¹¹⁰	22.9	49	54	26	09	44	41	65	7 06	40	
4	238	39.6		43.5	0 55.1 ¹⁰⁹	27.6	47	52	31	12	46	26	64	22	41	
5	253	39.8	+2 44.5	15	24.9 ¹⁰⁸	-26 32.3	47	50	4 36	5 15	5 47	0 13	62	7 35	42	
6	268	39.9	+2 45.4	29	54.8 ¹⁰⁹	-26 36.8	45	45	4 45	5 20	5 50	** ** *		8 03	44	
7	283	40.1		46.4	44 24.5 ¹⁰⁷	41.2	44	40	53	25	52	** ** *		24	46	
8	298	40.3		47.4	58 54.3 ¹⁰⁸	45.5	43	35	4 58	28	54	** ** *		42	47	
9	313	40.5		48.4	73 24.0 ¹⁰⁷	49.7	42	30	5 03	31	55	23 47	53	8 58	48	
10	328	40.7		49.4	87 53.6 ¹⁰⁶	53.7	40	20	10	36	5 58	23 20	52	9 24	49	
11	343	40.9	+2 50.3	102	23.2 ¹⁰⁶	-26 57.6	39	10 N	5 15	5 39	6 00	22 56	52	9 47	50	
12	358	41.1	+2 51.3	116	52.8 ¹⁰⁶	-27 01.4	38	0	5 17	5 41	6 02	22 34	52	10 08	51	
13	13	41.3		52.3	131 22.3 ¹⁰⁵	05.0	36	10 S	19	43	04	22 13	51	30	51	
14	28	41.5		53.3	145 51.8 ¹⁰⁵	08.5	35	20	18	44	06	21 49	51	10 52	53	
15	43	41.6		54.2	160 21.2 ¹⁰⁴	11.9	34	30	16	44	08	22	51	11 19	54	
16	58	41.8		55.2	174 50.7 ¹⁰⁵	15.2	33	35	14	44	09	21 06	50	35	54	
17	73	42.0	+2 56.2	189	20.0 ¹⁰³	-27 18.3	31	40	5 12	5 43	6 10	20 47	50	11 53	55	
18	88	42.2	+2 57.2	203	49.4 ¹⁰⁴	-27 21.3	30	45	5 08	5 42	6 12	20 25	49	12 15	56	
19	103	42.4		58.1	218 18.7 ¹⁰³	24.2	29	50	03	41	13	19 57	48	43	58	
20	118	42.6	+2 59.1	232	48.0 ¹⁰³	26.9	27	52	5 01	40	14	43	47	12 57	58	
21	133	42.8	+3 00.1	247	17.2 ¹⁰²	29.5	26	54	4 58	40	15	26	47	13 13	59	
22	148	43.0		01.1	261 46.4 ¹⁰²	32.0	25	56	55	39	16	19 07	46	32	61	
23	163	43.2		02.1	276 15.6 ¹⁰²	34.3	23	58	52	38	17	18 43	44	13 55	63	
24	178	43.3	+3 03.0	290	44.8 ¹⁰²	-27 36.6	23	60 S	4 47	5 36	6 18	18 12	40	14 27	66	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG 11 ^h 38 ^m 9		Mag: -3.8 PMG: 10 ^h 57 ^m		Mag: +0.7 PMG: 18 ^h 17 ^m		Mag: -2.2 PMG: 7 ^h 04 ^m		Mag: +0.4 PMG: 21 ^h 59 ^m						
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	184	47.8	195	52.6	-6 16.5	85	20.5	+25 31.8	253	39.5	-21 58.7	29	19.3	+12 11.2	
1	199	50.3	210	52.2	15.4	100	21.8	31.7	268	41.7	58.7	44	21.9	11.3	
2	214	52.8	225	51.8	14.2	115	23.1	31.6	283	43.8	58.6	59	24.5	11.3	
3	229	55.2	240	51.4	13.0	130	24.4	31.5	298	45.9	58.6	74	27.1	11.4	
4	244	57.7	255	51.0	11.9	145	25.7	31.4	313	48.1	58.5	89	29.7	11.4	
5	260	00.2	270	50.6	-6 10.7	160	27.0	+25 31.3	328	50.2	-21 58.5	104	32.3	+12 11.5	
6	275	02.6	285	50.2	-6 09.5	175	28.2	+25 31.2	343	52.3	-21 58.5	119	34.9	+12 11.5	
7	290	05.1	300	49.8	08.3	190	29.5	31.0	358	54.5	58.4	134	37.5	11.6	
8	305	07.6	315	49.4	07.2	205	30.8	30.9	13	56.6	58.4	149	40.1	11.6	
9	320	10.0	330	49.0	06.0	220	32.1	30.8	28	58.7	58.3	164	42.7	11.7	
10	335	12.5	345	48.5	04.8	235	33.4	30.7	44	00.9	58.3	179	45.3	11.7	
11	350	14.9	0	48.1	-6 03.7	250	34.6	+25 30.6	59	03.0	-21 58.3	194	47.9	+12 11.8	
12	5	17.4	15	47.7	-6 02.5	265	35.9	+25 30.5	74	05.1	-21 58.2	209	50.5	+12 11.8	
13	20	19.9	30	47.3	01.3	280	37.2	30.4	89	07.3	58.2	224	53.1	11.9	
14	35	22.3	45	46.9	-6 00.1	295	38.5	30.3	104	09.4	58.1	239	55.7	12.0	
15	50	24.8	60	46.5	-5 59.0	310	39.8	30.1	119	11.6	58.1	254	58.3	12.0	
16	65	27.3	75	46.1	57.8	325	41.0	30.0	134	13.7	58.1	270	00.9	12.1	
17	80	29.7	90	45.7	-5 56.6	340	42.3	+25 29.9	149	15.8	-21 58.0	285	03.5	+12 12.1	
18	95	32.2	105	45.3	-5 55.4	355	43.6	+25 29.8	164	18.0	-21 58.0	300	06.2	+12 12.2	
19	110	34.7	120	44.9	54.3	10	44.9	29.7	179	20.1	57.9	315	08.8	12.2	
20	125	37.1	135	44.5	53.1	25	46.1	29.6	194	22.2	57.9	330	11.4	12.3	
21	140	39.6	150	44.1	51.9	40	47.4	29.5	209	24.4	57.9	345	14.0	12.3	
22	155	42.1	165	43.7	50.7	55	48.7	29.3	224	26.5	57.8	0	16.6	12.4	
23	170	44.5	180	43.2	49.6	70	50.0	29.2	239	28.7	57.8	15	19.2	12.4	
24	185	47.0	195	42.8	-5 48.4	85	51.3	+25 29.1	254	30.8	-21 57.7	30	21.8	+12 12.5	
Dif	—		-4	+12		+13	-1		+21		0		+26		+

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16'0 PMG: 12 ^h 05 ^m 0			Edad: 20 ^d 3 PHE { 4 ^h : 54'3 12 ^h : 54'3 20 ^h : 54'4 SD: 14'8 PMG: 4 ^h 47 ^m R°: 52 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	43.3	+3	03.0	290	44.8	-27 36.6	60 N	18 35	19 17	20 10	3 07 53	6 25 55		
1	193	43.5		04.0	305	13.9 ¹⁰¹	38.6	58	33	13	20 02	2 32 53	7 00 55		
2	208	43.7		05.0	319	43.0 ¹⁰¹	40.6	56	31	09	19 54	2 07 52	25 55		
3	223	43.9		06.0	334	12.0 ¹⁰⁰	42.4	54	29	05	48	1 46 53	7 46 54		
4	238	44.1		06.9	348	41.1 ¹⁰¹	44.1	52	28	19 02	43	30 52	8 03 54		
5	253	44.3	+3	07.9	3	10.1 ¹⁰⁰	-27 45.6	50	18 26	18 59	19 38	1 15 53	8 17 54		
6	268	44.5	+3	08.9	17	39.1 ¹⁰⁰	-27 47.1	45	18 23	18 53	19 28	0 46 52	8 47 54		
7	283	44.7		09.9	32	08.0 ⁹⁹	48.3	40	21	48	20	23 52	9 10 53		
8	298	44.9		10.8	46	37.0 ¹⁰⁰	49.5	35	18	44	14	0 04 52	29 53		
9	313	45.1		11.8	61	05.9 ⁹⁹	50.5	30	16	40	09	** ** *	9 46 53		
10	328	45.2		12.8	75	34.8 ⁹⁹	51.4	20	13	35	19 01	** ** *	10 13 53		
11	343	45.4	+3	13.8	90	03.7 ⁹⁹	-27 52.1	10 N	18 11	18 32	18 56	23 48 51	10 37 52		
12	358	45.6	+3	14.7	104	32.5 ⁹⁸	-27 52.7	0	18 08	18 29	18 53	23 26 52	10 59 52		
13	13	45.8		15.7	119	01.4 ⁹⁹	53.2	10 S	06	27	51	23 04 53	11 21 52		
14	28	46.0		16.7	133	30.2 ⁹⁸	53.5	20	04	26	51	22 40 54	11 45 51		
15	43	46.2		17.7	147	59.0 ⁹⁸	53.7	30	01	25	53	22 13 55	12 13 50		
16	58	46.4		18.6	162	27.8 ⁹⁸	53.8	35	18 00	25	54	21 56 56	29 50		
17	73	46.6	+3	19.6	176	56.6 ⁹⁸	-27 53.7	40	17 58	18 25	18 56	21 37 57	12 48 50		
18	88	46.8	+3	20.6	191	25.4 ⁹⁸	-27 53.5	45	17 56	18 25	18 59	21 14 58	13 11 49		
19	103	46.9		21.6	205	54.1 ⁹⁷	53.2	50	54	26	19 04	20 45 59	41 47		
20	118	47.1		22.5	220	22.9 ⁹⁸	52.7	52	53	27	06	30 61	13 55 47		
21	133	47.3		23.5	234	51.6 ⁹⁷	52.1	54	52	27	08	20 13 62	14 12 46		
22	148	47.5		24.5	249	20.4 ⁹⁸	51.3	56	51	28	11	19 53 63	33 44		
23	163	47.7		25.5	263	49.1 ⁹⁷	50.4	58	50	29	14	19 27 66	14 58 42		
24	178	47.9	+3	26.4	278	17.8 ⁹⁷	-27 49.4	60 S	17 48	18 30	19 18	18 52 71	15 33 38		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO				
	PMG: 11 ^h 35 ^m 0		Mag: -3.8 PMG: 10 ^h 57 ^m		Mag: +0.7 PMG: 18 ^h 15 ^m		Mag: -2.2 PMG: 7 ^h 01 ^m		Mag: +0.4 PMG: 21 ^h 55 ^m				
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'			
0	185	47.0	195	42.8	85	51.3	+25 29.1	254	30.8	-21 57.7	30 21.8	+12 12.5	
1	200	49.4	210	42.4	100	52.5	29.0	269	32.9	57.7	45 24.4	12.5	
2	215	51.9	225	42.0	115	53.8	28.9	284	35.1	57.7	60 27.0	12.6	
3	230	54.4	240	41.6	130	55.1	28.8	299	37.2	57.6	75 29.6	12.6	
4	245	56.8	255	41.2	145	56.3	28.7	314	39.3	57.6	90 32.2	12.7	
5	260	59.3	270	40.8	160	57.6	+25 28.5	329	41.5	-21 57.5	105 34.8	+12 12.7	
6	276	01.8	285	40.4	175	58.9	+25 28.4	344	43.6	-21 57.5	120 37.4	+12 12.8	
7	291	04.2	300	40.0	191	00.2	28.3	359	45.8	57.5	135 40.0	12.8	
8	306	06.7	315	39.6	206	01.4	28.2	14	47.9	57.4	150 42.6	12.9	
9	321	09.2	330	39.2	221	02.7	28.1	29	50.1	57.4	165 45.2	12.9	
10	336	11.6	345	38.8	236	04.0	28.0	44	52.2	57.3	180 47.8	13.0	
11	351	14.1	0	38.4	251	05.3	+25 27.9	59	54.3	-21 57.3	195 50.4	+12 13.0	
12	6	16.6	15	38.0	266	06.5	+25 27.7	74	56.5	-21 57.3	210 53.0	+12 13.1	
13	21	19.0	30	37.6	281	07.8	27.6	89	58.6	57.2	225 55.6	13.1	
14	36	21.5	45	37.2	296	09.1	27.5	105	00.8	57.2	240 58.2	13.2	
15	51	23.9	60	36.8	311	10.3	27.4	120	02.9	57.2	256 00.8	13.2	
16	66	26.4	75	36.4	326	11.6	27.3	135	05.0	57.1	271 03.4	13.3	
17	81	28.9	90	36.0	341	12.9	+25 27.2	150	07.2	-21 57.1	286 06.0	+12 13.3	
18	96	31.3	105	35.6	356	14.1	+25 27.0	165	09.3	-21 57.0	301 08.6	+12 13.4	
19	111	33.8	120	35.2	26.0	11 15.4	26.9	180	11.5	57.0	316 11.2	13.4	
20	126	36.3	135	34.8	24.8	26 16.7	26.8	195	13.6	57.0	331 13.8	13.5	
21	141	38.7	150	34.4	23.6	41 17.9	26.7	210	15.8	56.9	346 16.4	13.5	
22	156	41.2	165	34.0	22.4	56 19.2	26.6	225	17.9	56.9	1 19.0	13.6	
23	171	43.7	180	33.6	21.2	71 20.5	26.4	240	20.1	56.8	16 21.6	13.6	
24	186	46.1	195	33.2	-5 20.1	86 21.7	+25 26.3	255	22.2	-21 56.8	31 24.2	+12 13.7	
Dif	—		-4	+12		+13	-1		+21	0		+26	+1

UT	SOL			 LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'0			Edad: 21 ^d 3 PHE { 4 ^h : 54'6 12 ^h : 54'7 20 ^h : 54'9												
	PMG: 12 ^h 04 ^m 7			PMG: 5 ^h 39 ^m R°: 51 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	47.9	+3 26.4	278	17.8	-27 49.4	12	60 N	3 59	4 51	5 33	4 00	25	7 20	83	
1	193	48.1	27.4	292	46.5	97 48.2	13	58	4 07	4 56	36	3 25	32	7 55	75	
2	208	48.3	28.4	307	15.2	97 46.9	14	56	14	5 00	38	2 59	37	8 20	71	
3	223	48.4	29.3	321	43.9	97 45.5	15	54	21	04	40	39	39	40	68	
4	238	48.6	30.3	336	12.6	97 43.9	16	52	26	07	41	22	41	8 57	66	
5	253	48.8	+3 31.3	350	41.3	97 -27 42.2	17	50	4 31	5 10	5 43	2 08	41	9 11	65	
6	268	49.0	+3 32.3	5	10.0	97 -27 40.3	19	45	4 41	5 16	5 46	1 38	44	9 41	62	
7	283	49.2	33.2	19	38.7	97 38.3	20	40	49	21	48	1 15	46	10 03	60	
8	298	49.4	34.2	34	07.4	97 36.2	21	35	4 56	25	51	0 56	47	22	59	
9	313	49.6	35.2	48	36.1	97 33.9	23	30	5 01	29	53	40	48	10 39	57	
10	328	49.8	36.2	63	04.8	97 31.5	24	20	08	34	56	0 12	50	11 06	55	
11	343	50.0	+3 37.1	77	33.5	97 -27 29.0	25	10 N	5 13	5 38	5 59	** ** *	**	11 29	54	
12	358	50.1	+3 38.1	92	02.2	97 -27 26.3	27	0	5 17	5 41	6 01	** ** *	**	11 51	52	
13	13	50.3	39.1	106	30.9	97 23.5	28	10 S	18	43	04	23 57	53	12 13	50	
14	28	50.5	40.0	120	59.7	98 20.5	30	20	19	44	06	34	56	12 36	48	
15	43	50.7	41.0	135	28.4	97 17.4	31	30	17	45	09	23 08	59	13 03	46	
16	58	50.9	42.0	149	57.1	97 14.2	32	35	16	45	11	22 52	61	19	44	
17	73	51.1	+3 43.0	164	25.9	98 -27 10.8	34	40	5 14	5 45	6 12	22 34	63	13 38	42	
18	88	51.3	+3 43.9	178	54.6	97 -27 07.3	35	45	5 11	5 45	6 14	22 12	66	14 00	40	
19	103	51.5	44.9	193	23.4	98 -27 03.7	36	50	07	44	16	21 44	69	28	37	
20	118	51.6	45.9	207	52.2	98 -26 59.9	38	52	05	44	17	31	71	42	35	
21	133	51.8	46.8	222	21.0	98 56.0	39	54	5 02	43	19	21 15	74	14 58	32	
22	148	52.0	47.8	236	49.8	98 51.9	41	56	4 59	43	20	20 56	77	15 17	29	
23	163	52.2	48.8	251	18.7	99 47.7	42	58	56	42	21	33	82	15 40	25	
24	178	52.4	+3 49.8	265	47.5	98 -26 43.4	43	60 S	4 52	5 41	6 23	20 03	89	16 11	17	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 11 ^h 31 ^m 0		Mag: -3.8 PMG: 10 ^h 58 ^m		Mag: +0.8 PMG: 18 ^h 13 ^m		Mag: -2.2 PMG: 6 ^h 58 ^m		Mag: +0.4 PMG: 21 ^h 51 ^m	
	hG ♂	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	186	46.1	195	33.2	-5 20.1	86 21.7	+25 26.3	255 22.2	-21 56.8	31 24.2
1	201	48.6	210	32.8	18.9	101 23.0	26.2	270 24.3	56.8	46 26.8
2	216	51.1	225	32.4	17.7	116 24.3	26.1	285 26.5	56.7	61 29.4
3	231	53.5	240	32.0	16.5	131 25.5	26.0	300 28.6	56.7	76 32.0
4	246	56.0	255	31.6	15.3	146 26.8	25.9	315 30.8	56.6	91 34.6
5	261	58.4	270	31.2	-5 14.1	161 28.1	+25 25.7	330 32.9	-21 56.6	106 37.2
6	277	00.9	285	30.8	-5 13.0	176 29.3	+25 25.6	345 35.1	-21 56.6	121 39.8
7	292	03.4	300	30.4	11.8	191 30.6	25.5	0 37.2	56.5	136 42.4
8	307	05.8	315	30.0	10.6	206 31.8	25.4	15 39.4	56.5	151 45.0
9	322	08.3	330	29.6	09.4	221 33.1	25.3	30 41.5	56.4	166 47.6
10	337	10.8	345	29.2	08.2	236 34.4	25.1	45 43.7	56.4	181 50.2
11	352	13.2	0	28.8	-5 07.0	251 35.6	+25 25.0	60 45.8	-21 56.4	196 52.8
12	7	15.7	15	28.4	-5 05.9	266 36.9	+25 24.9	75 48.0	-21 56.3	211 55.4
13	22	18.2	30	28.0	04.7	281 38.2	24.8	90 50.1	56.3	226 58.0
14	37	20.6	45	27.6	03.5	296 39.4	24.7	105 52.3	56.3	242 00.6
15	52	23.1	60	27.2	02.3	311 40.7	24.5	120 54.4	56.2	257 03.2
16	67	25.5	75	26.8	-5 01.1	326 41.9	24.4	135 56.6	56.2	272 05.8
17	82	28.0	90	26.4	-4 59.9	341 43.2	+25 24.3	150 58.7	-21 56.1	287 08.4
18	97	30.5	105	26.0	-4 58.7	356 44.5	+25 24.2	166 00.9	-21 56.1	302 11.0
19	112	32.9	120	25.6	57.5	11 45.7	24.1	181 03.0	56.1	317 13.6
20	127	35.4	135	25.2	56.4	26 47.0	23.9	196 05.2	56.0	332 16.2
21	142	37.9	150	24.8	55.2	41 48.2	23.8	211 07.3	56.0	347 18.8
22	157	40.3	165	24.4	54.0	56 49.5	23.7	226 09.5	55.9	2 21.4
23	172	42.8	180	24.0	52.8	71 50.7	23.6	241 11.6	55.9	17 24.0
24	187	45.3	195	23.6	-4 51.6	86 52.0	+25 23.4	256 13.8	-21 55.9	32 26.6
Dif	—		-4 +12		+13 -1		+21 0		+26 0	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16°0			Edad: 22 ^d 3 PHE { 4 ^h : 55°0 12 ^h : 55°2 20 ^h : 55°4					Final del crepúsculo			Salida de Luna		Puesta de Luna	
	PMG: 12 ^h 04 ^m 4			SD: 15°0 PMG: 6 ^h 30 ^m R°: 51 ^m					Final del crepúsculo			Salida de Luna		Puesta de Luna	
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	178	52.4	+3 49.8	265	47.5	-26 43.4	44	60 N	18 40	19 23	20 16	4 25 10	8 43 94		
1	193	52.6		280	16.4	99 39.0	44	58	37	17	20 07	3 57 18	9 10 87		
2	208	52.8	51.7	294	45.2	98 34.4	46	56	35	13	19 59	36 23	31 82		
3	223	53.0	52.7	309	14.1	99 29.6	48	54	33	09	52	18 27	9 48 78		
4	238	53.2	53.6	323	43.1	100 24.8	48	52	31	05	46	3 03 29	10 03 75		
5	253	53.3	+3 54.6	338	12.0	99 -26 19.8	50	50	18 29	19 02	19 41	2 49 32	10 16 73		
6	268	53.5	+3 55.6	352	40.9	99 -26 14.6	52	45	18 26	18 55	19 30	2 22 36	10 43 68		
7	283	53.7	56.6	7 09.9	100 09.4	52	54	40	23	50	22	2 01 39	11 03 65		
8	298	53.9	57.5	21 38.9	100 -26 04.0	54	54	35	20	45	15	1 43 41	21 62		
9	313	54.1	58.5	36 07.9	100 -25 58.5	55	55	30	18	42	10	28 43	11 36 60		
10	328	54.3	+3 59.5	50 37.0	101 52.8	57	57	20	14	36	19 02	1 02 46	12 01 56		
11	343	54.5	+4 00.4	65 06.1	101 -25 47.0	58	58	10 N	18 11	18 32	18 56	0 39 49	12 23 53		
12	358	54.7	+4 01.4	79 35.2	101 -25 41.1	59	59	0	18 08	18 28	18 52	0 18 51	12 43 50		
13	13	54.8	02.4	94 04.3	101 35.0	61	61	10 S	05	26	50	** ** *	13 03 47		
14	28	55.0	03.3	108 33.4	101 28.8	62	62	20	18 02	24	49	** ** *	24 45		
15	43	55.2	04.3	123 02.6	102 22.5	63	63	30	17 59	22	50	** ** *	13 49 41		
16	58	55.4	05.3	137 31.8	102 16.0	65	65	35	57	22	51	23 53 63	14 03 39		
17	73	55.6	+4 06.2	152 01.0	102 -25 09.4	66	66	40	17 55	18 22	18 53	23 37 66	14 20 36		
18	88	55.8	+4 07.2	166 30.3	103 -25 02.7	67	67	45	17 53	18 22	18 56	23 18 70	14 40 32		
19	103	56.0	08.2	180 59.6	103 -24 55.9	68	68	50	50	22	18 59	22 53 76	15 05 28		
20	118	56.1	09.2	195 28.9	103 48.9	70	70	52	49	22	19 01	42 78	17 25		
21	133	56.3	10.1	209 58.2	103 41.8	71	71	54	47	22	03	29 80	30 23		
22	148	56.5	11.1	224 27.6	104 34.6	72	72	56	46	23	06	22 13 85	15 46 19		
23	163	56.7	12.1	238 57.0	104 27.2	74	74	58	44	23	09	21 55 90	16 05 14		
24	178	56.9	+4 13.0	253 26.4	104 -24 19.7	75	75	60 S	17 42	18 24	19 12	21 32 97	16 28 8		

UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO			
	PMG 11 ^h 27 ^m 1		Mag: -3.8 PMG: 10 ^h 59 ^m		Mag: +0.8 PMG: 18 ^h 11 ^m		Mag: -2.2 PMG: 6 ^h 54 ^m			Mag: +0.4 PMG: 21 ^h 46 ^m			
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	
0	187	45.3	195	23.6	-4 51.6	86 52.0	+25 23.4	256 13.8	-21 55.9	32 26.6	+12 14.8		
1	202	47.7	210	23.2	50.4	101 53.3	23.3	271 15.9	55.8	47 29.2	14.9		
2	217	50.2	225	22.8	49.2	116 54.5	23.2	286 18.1	55.8	62 31.8	14.9		
3	232	52.7	240	22.4	48.0	131 55.8	23.1	301 20.2	55.8	77 34.4	15.0		
4	247	55.1	255	22.0	46.8	146 57.0	23.0	316 22.4	55.7	92 37.0	15.0		
5	262	57.6	270	21.6	-4 45.7	161 58.3	+25 22.8	331 24.5	-21 55.7	107 39.6	+12 15.1		
6	278	00.0	285	21.3	-4 44.5	176 59.5	+25 22.7	346 26.7	-21 55.6	122 42.2	+12 15.1		
7	293	02.5	300	20.9	43.3	192 00.8	22.6	1 28.8	55.6	137 44.8	15.2		
8	308	05.0	315	20.5	42.1	207 02.0	22.5	16 31.0	55.6	152 47.4	15.2		
9	323	07.4	330	20.1	40.9	222 03.3	22.3	31 33.1	55.5	167 50.0	15.3		
10	338	09.9	345	19.7	39.7	237 04.6	22.2	46 35.3	55.5	182 52.6	15.3		
11	353	12.4	0 19.3	-4 38.5	252 05.8	+25 22.1	61 37.5	-21 55.5	197 55.2	+12 15.4			
12	8	14.8	15 18.9	-4 37.3	267 07.1	+25 22.0	76 39.6	-21 55.4	212 57.8	+12 15.4			
13	23	17.3	30 18.5	36.1	282 08.3	21.8	91 41.8	55.4	228 00.4	15.5			
14	38	19.8	45 18.1	34.9	297 09.6	21.7	106 43.9	55.3	243 03.0	15.5			
15	53	22.2	60 17.7	33.7	312 10.8	21.6	121 46.1	55.3	258 05.6	15.6			
16	68	24.7	75 17.3	32.5	327 12.1	21.5	136 48.2	55.3	273 08.1	15.6			
17	83	27.2	90 16.9	-4 31.4	342 13.3	+25 21.3	151 50.4	-21 55.2	288 10.7	+12 15.6			
18	98	29.6	105 16.5	-4 30.2	357 14.6	+25 21.2	166 52.5	-21 55.2	303 13.3	+12 15.7			
19	113	32.1	120 16.1	29.0	12 15.8	21.1	181 54.7	55.1	318 15.9	15.7			
20	128	34.5	135 15.7	27.8	27 17.1	21.0	196 56.9	55.1	333 18.5	15.8			
21	143	37.0	150 15.4	26.6	42 18.3	20.8	211 59.0	55.1	348 21.1	15.8			
22	158	39.5	165 15.0	25.4	57 19.6	20.7	227 01.2	55.0	3 23.7	15.9			
23	173	41.9	180 14.6	24.2	72 20.8	20.6	242 03.3	55.0	18 26.3	15.9			
24	188	44.4	195 14.2	-4 23.0	87 22.1	+25 20.5	257 05.5	-21 55.0	33 28.9	+12 16.0			
Dif	—		-4	+12		+13	-1		+22	0		+26	0

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG: 12 ^h 04 ^m 1			Edad: 23 ^d 3 SD: 15'1 PMG: 7 ^h 21 ^m	PHE { 4 ^h : 55'6 12 ^h : 55'9 20 ^h : 56'1 R°: 50 ^m									
	hG ☉	Dec	Dif			Náutico		Civil	Hora		R°	Hora	R°	
h	°	'	°	°	'	°	'	h	m	h	m	h	m	m
0	178	56.9	+4 13.0	253	26.4	-24 19.7	76	60 N	3 52	4 45	5 27	4 35	5	10 17 98
1	193	57.1	14.0	267	55.9 ¹⁰⁵	12.1	76	58	4 01	50	30	4 15	11	37 91
2	208	57.3	15.0	282	25.4 ¹⁰⁵	-24 04.4	77	56	08	55	32	3 59	15	10 53 86
3	223	57.5	15.9	296	54.9 ¹⁰⁵	-23 56.5	79	54	15	4 59	35	45	19	11 06 8
4	238	57.6	16.9	311	24.4 ¹⁰⁵	48.5	80	52	21	5 02	37	32	22	18 80
5	253	57.8	+4 17.9	325	54.0 ¹⁰⁶	-23 40.4	81	50	4 26	5 06	5 38	3 21	25	11 29 77
6	268	58.0	+4 18.8	340	23.7 ¹⁰⁷	-23 32.2	82	45	4 37	5 12	5 42	2 58	30	11 51 71
7	283	58.2	19.8	354	53.3 ¹⁰⁶	23.8	84	40	46	18	45	40	33	12 08 68
8	298	58.4	20.8	9	23.0 ¹⁰⁷	15.3	85	35	53	23	48	24	37	23 64
9	313	58.6	21.7	23	52.7 ¹⁰⁷	-23 06.7	86	30	4 58	26	50	2 11	39	36 61
10	328	58.8	22.7	38	22.5 ¹⁰⁸	-22 58.0	87	20	5 06	32	54	1 48	43	12 57 57
11	343	58.9	+4 23.7	52	52.3 ¹⁰⁸	-22 49.1	89	10 N	5 12	5 37	5 58	1 28	46	13 16 53
12	358	59.1	+4 24.6	67	22.1 ¹⁰⁸	-22 40.2	89	0	5 16	5 40	6 01	1 09	50	13 33 49
13	13	59.3	25.6	81	51.9 ¹⁰⁸	31.1	91	10 S	18	43	04	0 50	53	13 50 46
14	28	59.5	26.6	96	21.8 ¹⁰⁹	21.8	93	20	19	45	07	30	57	14 09 41
15	43	59.7	27.5	110	51.8 ¹¹⁰	12.5	93	30	19	46	10	0 07	60	30 37
16	58	59.9	28.5	125	21.7 ¹⁰⁹	-22 03.1	94	35	18	47	12	** ** *	**	42 34
17	74	00.1	+4 29.5	139	51.7 ¹¹⁰	-21 53.5	96	40	5 16	5 47	6 14	** ** *	**	14 56 31
18	89	00.3	+4 30.4	154	21.7 ¹¹⁰	-21 43.8	97	45	5 13	5 47	6 17	** ** *	**	15 12 27
19	104	00.4	31.4	168	51.8 ¹¹¹	34.0	98	50	10	47	20	** ** *	**	33 21
20	119	00.6	32.4	183	21.9 ¹¹¹	24.1	99	52	08	47	21	** ** *	**	42 20
21	134	00.8	33.3	197	52.0 ¹¹¹	14.0	101	54	06	47	22	23 49	84	15 53 16
22	149	01.0	34.3	212	22.2 ¹¹²	-21 03.9	101	56	04	47	24	38	87	16 05 13
23	164	01.2	35.3	226	52.4 ¹¹²	-20 53.6	103	58	5 01	46	26	25	91	19 9
24	179	01.4	+4 36.2	241	22.6 ¹¹²	-20 43.2	104	60 S	4 57	5 46	6 27	23 09	97	16 36 3

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 11 ^h 23 ^m 2		Mag: -3.8 PMG: 10 ^h 59 ^m		Mag: +0.8 PMG: 18 ^h 09 ^m		Mag: -2.2 PMG: 6 ^h 51 ^m		Mag: +0.4 PMG: 21 ^h 42 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	188	44.4	195	14.2	87	22.1	257	05.5	33	28.9
1	203	46.9	210	13.8	102	23.3	272	07.6	48	31.5
2	218	49.3	225	13.4	117	24.6	287	09.8	63	34.1
3	233	51.8	240	13.0	132	25.8	302	12.0	78	36.7
4	248	54.3	255	12.6	147	27.1	317	14.1	93	39.3
5	263	56.7	270	12.2	162	28.3	332	16.3	108	41.9
6	278	59.2	285	11.8	177	29.5	347	18.4	123	44.5
7	294	01.7	300	11.4	192	30.8	2	20.6	138	47.1
8	309	04.1	315	11.1	207	32.0	17	22.8	153	49.7
9	324	06.6	330	10.7	222	33.3	32	24.9	168	52.3
10	339	09.0	345	10.3	237	34.5	47	27.1	183	54.8
11	354	11.5	0	09.9	252	35.8	62	29.2	198	57.4
12	9	14.0	15	09.5	267	37.0	77	31.4	214	00.0
13	24	16.4	30	09.1	282	38.3	92	33.6	229	02.6
14	39	18.9	45	08.7	297	39.5	107	35.7	244	05.2
15	54	21.4	60	08.3	312	40.7	122	37.9	259	07.8
16	69	23.8	75	07.9	327	42.0	137	40.1	274	10.4
17	84	26.3	90	07.6	342	43.2	152	42.2	289	13.0
18	99	28.8	105	07.2	357	44.5	167	44.4	304	15.6
19	114	31.2	120	06.8	12	45.7	182	46.5	319	18.2
20	129	33.7	135	06.4	27	47.0	197	48.7	334	20.8
21	144	36.1	150	06.0	42	48.2	212	50.9	349	23.4
22	159	38.6	165	05.6	57	49.4	227	53.0	4	26.0
23	174	41.1	180	05.2	72	50.7	242	55.2	19	28.5
24	189	43.5	195	04.8	87	51.9	257	57.4	34	31.1
Dif	—		-4	+12	+12	-1	+22	0	+26	0

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna	Puesta de Luna				
	SD: 16'0 PMG: 12 ^h 03 ^m 8			Edad: 24 ^d 3 PHE { 4 ^h : 56'4 12 ^h : 56'7 20 ^h : 57'0 PMG: 8 ^h 11 ^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	01.4	+4	36.2	241	22.6	-20 43.2	60 N	18 45	19 28	20 22	4 40	2	11 55	97	
1	194	01.6		37.2	255	52.9 ¹¹³	32.7 ¹⁰⁵	58	42	22	12	26	7	12 08	92	
2	209	01.7		38.1	270	23.2 ¹¹³	22.1 ¹⁰⁶	56	39	17	20 04	14	11	19	88	
3	224	01.9		39.1	284	53.5 ¹¹³	11.4 ¹⁰⁷	54	37	13	19 57	4 04	14	29	88	
4	239	02.1		40.1	299	23.9 ¹¹⁴	-20 00.6 ¹⁰⁸	52	34	09	50	3 54	17	38	81	
5	254	02.3	+4	41.0	313	54.3 ¹¹⁴	-19 49.7 ¹⁰⁹	50	18 32	19 05	19 45	3 46	20	12 46	79	
6	269	02.5	+4	42.0	328	24.7 ¹¹⁴	-19 38.6 ¹¹¹	45	18 28	18 58	19 33	3 28	25	13 02	74	
7	284	02.7		43.0	342	55.1 ¹¹⁴	27.5 ¹¹¹	40	25	52	24	13	29	16	69	
8	299	02.8		43.9	357	25.6 ¹¹⁵	16.2 ¹¹³	35	22	47	17	3 01	32	27	65	
9	314	03.0		44.9	11	56.2 ¹¹⁶	-19 04.8 ¹¹⁴	30	19	43	11	2 50	35	37	62	
10	329	03.2		45.9	26	26.7 ¹¹⁵	-18 53.4 ¹¹⁴	20	14	37	19 02	31	40	13 54	57	
11	344	03.4	+4	46.8	40	57.3 ¹¹⁶	-18 41.8 ¹¹⁶	10 N	18 11	18 32	18 56	2 14	45	14 09	52	
12	359	03.6	+4	47.8	55	27.9 ¹¹⁶	-18 30.1 ¹¹⁷	0	18 07	18 28	18 52	1 59	48	14 22	48	
13	14	03.8		48.7	69	58.6 ¹¹⁷	18.3 ¹¹⁸	10 S	04	25	49	43	53	36	43	
14	29	04.0		49.7	84	29.3 ¹¹⁷	-18 06.4 ¹¹⁹	20	18 00	22	48	27	56	14 50	39	
15	44	04.1		50.7	99	00.0 ¹¹⁷	-17 54.4 ¹²⁰	30	17 56	20	48	1 07	62	15 07	33	
16	59	04.3		51.6	113	30.7 ¹¹⁷	42.3 ¹²¹	35	54	19	49	0 56	65	16	31	
17	74	04.5	+4	52.6	128	01.5 ¹¹⁸	-17 30.1 ¹²²	40	17 52	18 19	18 50	0 43	68	15 27	27	
18	89	04.7	+4	53.6	142	32.3 ¹¹⁸	-17 17.8 ¹²³	45	17 49	18 18	18 52	0 28	72	15 39	23	
19	104	04.9		54.5	157	03.1 ¹¹⁸	-17 05.4 ¹²⁴	50	46	18	55	09	78	15 54	18	
20	119	05.1		55.5	171	34.0 ¹¹⁹	-16 52.9 ¹²⁵	52	44	18	57	0 00	80	16 02	15	
21	134	05.3		56.4	186	04.9 ¹¹⁹	40.3 ¹²⁶	54	42	18	18 58	** ** *	**	09	13	
22	149	05.4		57.4	200	35.8 ¹¹⁹	27.7 ¹²⁶	56	41	18	19 01	** ** *	**	18	9	
23	164	05.6		58.4	215	06.7 ¹¹⁹	14.9 ¹²⁸	58	39	18	03	** ** *	**	28	6	
24	179	05.8	+4	59.3	229	37.7 ¹²⁰	-16 02.0 ¹²⁹	60 S	17 36	18 18	19 06	** ** *	**	16 39	2	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 11 ^h 19 ^m 2		Mag: -3.8 PMG: 11 ^h 00 ^m			Mag: +0.8 PMG: 18 ^h 07 ^m			Mag: -2.2 PMG: 6 ^h 47 ^m			Mag: +0.4 PMG: 21 ^h 38 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	189	43.5	195	04.8	-3	54.3	87	51.9	+25	17.4	257	57.4	-21	54.1	34	31.1
1	204	46.0	210	04.5		53.1	102	53.2		17.3	272	59.5		54.0	49	33.7
2	219	48.5	225	04.1		51.9	117	54.4		17.1	288	01.7		54.0	64	36.3
3	234	50.9	240	03.7		50.7	132	55.6		17.0	303	03.9		54.0	79	38.9
4	249	53.4	255	03.3		49.5	147	56.9		16.9	318	06.0		53.9	94	41.5
5	264	55.9	270	02.9	-3	48.3	162	58.1	+25	16.7	333	08.2	-21	53.9	109	44.1
6	279	58.3	285	02.5	-3	47.1	177	59.3	+25	16.6	348	10.4	-21	53.8	124	46.7
7	295	00.8	300	02.1		45.9	193	00.6		16.5	3	12.5		53.8	139	49.3
8	310	03.3	315	01.8		44.7	208	01.8		16.3	18	14.7		53.8	154	51.9
9	325	05.7	330	01.4		43.5	223	03.1		16.2	33	16.9		53.7	169	54.4
10	340	08.2	345	01.0		42.3	238	04.3		16.1	48	19.0		53.7	184	57.0
11	355	10.6	0	00.6	-3	41.1	253	05.5	+25	15.9	63	21.2	-21	53.7	199	59.6
12	10	13.1	15	00.2	-3	39.9	268	06.8	+25	15.8	78	23.4	-21	53.6	215	02.2
13	25	15.6	29	59.8		38.7	283	08.0		15.7	93	25.5		53.6	230	04.8
14	40	18.0	44	59.4		37.5	298	09.2		15.6	108	27.7		53.6	245	07.4
15	55	20.5	59	59.1		36.2	313	10.5		15.4	123	29.9		53.5	260	10.0
16	70	23.0	74	58.7		35.0	328	11.7		15.3	138	32.0		53.5	275	12.6
17	85	25.4	89	58.3	-3	33.8	343	12.9	+25	15.2	153	34.2	-21	53.4	290	15.2
18	100	27.9	104	57.9	-3	32.6	358	14.2	+25	15.0	168	36.4	-21	53.4	305	17.8
19	115	30.4	119	57.5		31.4	13	15.4		14.9	183	38.6		53.4	320	20.3
20	130	32.8	134	57.1		30.2	28	16.6		14.8	198	40.7		53.3	335	22.9
21	145	35.3	149	56.8		29.0	43	17.9		14.6	213	42.9		53.3	350	25.5
22	160	37.8	164	56.4		27.8	58	19.1		14.5	228	45.1		53.3	5	28.1
23	175	40.2	179	56.0		26.6	73	20.3		14.4	243	47.2		53.2	20	30.7
24	190	42.7	194	55.6	-3	25.4	88	21.6	+25	14.2	258	49.4	-21	53.2	35	33.3
Dif	—		-4	+12		+12	-1			+22	0			+26		0

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'0 PMG: 12 ^h 03 ^m 5			Edad: 25 ^d 3 PHE SD: 15'6 PMG: 8 ^h 59 ^m											
	hG ☉	Dec	Dif	hG ☾	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	179	05.8	+4	59.3	229	37.7	-16	02.0	60 N	3 44	4 38	5 21	4 42	1	13 32
1	194	06.0	+5	00.3	244	08.7 ¹²⁰	-15	49.0 ¹³⁰	58	3 54	44	24	33	5	40 93
2	209	06.2		01.2	258	39.7 ¹²⁰		36.0 ¹³⁰	56	4 02	49	27	25	9	47 90
3	224	06.4		02.2	273	10.7 ¹²⁰		22.8 ¹³²	54	10	54	30	18	11	54 86
4	239	06.5		03.2	287	41.8 ¹²¹	-15	09.5 ¹³³	52	16	4 58	32	11	15	13 59
5	254	06.7	+5	04.1	302	12.8 ¹²⁰	-14	56.2 ¹³³	50	4 22	5 01	5 34	4 06	16	14 05
6	269	06.9	+5	05.1	316	43.9 ¹²¹	-14	42.8 ¹³⁴	45	4 33	5 09	5 38	3 53	21	14 16
7	284	07.1		06.0	331	15.1 ¹²²		29.3 ¹³⁵	40	42	15	42	42	26	25 70
8	299	07.3		07.0	345	46.2 ¹²¹		15.6 ¹³⁷	35	50	20	45	33	30	32 67
9	314	07.5		08.0	0	17.4 ¹²²	-14	02.0 ¹³⁶	30	4 56	24	48	25	33	39 63
10	329	07.6		08.9	14	48.6 ¹²²	-13	48.2 ¹³⁸	20	5 05	30	53	3 11	38	14 51
11	344	07.8	+5	09.9	29	19.8 ¹²²	-13	34.3 ¹³⁹	10 N	5 11	5 35	5 57	2 59	43	15 01
12	359	08.0	+5	10.8	43	51.0 ¹²²	-13	20.4 ¹³⁹	0	5 15	5 39	6 00	2 47	48	15 10
13	14	08.2		11.8	58	22.2 ¹²²	-13	06.3 ¹⁴¹	10 S	18	43	04	36	52	19 43
14	29	08.4		12.8	72	53.5 ¹²³	-12	52.2 ¹⁴¹	20	20	45	07	23	57	29 38
15	44	08.6		13.7	87	24.7 ¹²²		38.0 ¹⁴²	30	20	48	11	09	63	40 32
16	59	08.7		14.7	101	56.0 ¹²³		23.8 ¹⁴²	35	19	48	14	2 01	66	47 28
17	74	08.9	+5	15.6	116	27.3 ¹²³	-12	09.4 ¹⁴⁴	40	5 18	5 49	6 16	1 51	70	15 54
18	89	09.1	+5	16.6	130	58.6 ¹²³	-11	55.0 ¹⁴⁴	45	5 16	5 50	6 19	1 40	74	16 02
19	104	09.3		17.6	145	29.9 ¹²³		40.5 ¹⁴⁵	50	13	50	23	27	79	12 16
20	119	09.5		18.5	160	01.3 ¹²⁴		25.9 ¹⁴⁶	52	11	51	24	20	83	17 13
21	134	09.7		19.5	174	32.6 ¹²³	-11	11.2 ¹⁴⁷	54	10	51	26	13	86	22 10
22	149	09.8		20.4	189	04.0 ¹²⁴	-10	56.5 ¹⁴⁷	56	08	51	28	1 05	89	27 8
23	164	10.0		21.4	203	35.3 ¹²³		41.7 ¹⁴⁸	58	05	51	30	0 56	93	34 4
24	179	10.2	+5	22.3	218	06.7 ¹²⁴	-10	26.8 ¹⁴⁹	60 S	5 02	5 51	6 32	0 46	97	16 41

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 11 ^h 15 ^m 3		Mag: -3.8 PMG: 11 ^h 01 ^m		Mag: +0.8 PMG: 18 ^h 05 ^m		Mag: -2.2 PMG: 6 ^h 44 ^m		Mag: +0.4 PMG: 21 ^h 34 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	190	42.7	194	55.6	-3	25.4	88	21.6	+25	14.2
1	205	45.1	209	55.2		24.2	103	22.8		14.1
2	220	47.6	224	54.8		23.0	118	24.0		13.9
3	235	50.1	239	54.5		21.8	133	25.3		13.8
4	250	52.5	254	54.1		20.6	148	26.5		13.7
5	265	55.0	269	53.7	-3	19.4	163	27.7	+25	13.5
6	280	57.5	284	53.3	-3	18.2	178	29.0	+25	13.4
7	295	59.9	299	52.9		17.0	193	30.2		13.3
8	311	02.4	314	52.5		15.8	208	31.4		13.1
9	326	04.9	329	52.2		14.6	223	32.6		13.0
10	341	07.3	344	51.8		13.4	238	33.9		12.9
11	356	09.8	359	51.4	-3	12.2	253	35.1	+25	12.7
12	11	12.2	14	51.0	-3	11.0	268	36.3	+25	12.6
13	26	14.7	29	50.6		09.8	283	37.6		12.5
14	41	17.2	44	50.3		08.5	298	38.8		12.3
15	56	19.6	59	49.9		07.3	313	40.0		12.2
16	71	22.1	74	49.5		06.1	328	41.2		12.0
17	86	24.6	89	49.1	-3	04.9	343	42.5	+25	11.9
18	101	27.0	104	48.7	-3	03.7	358	43.7	+25	11.8
19	116	29.5	119	48.3		02.5	13	44.9		11.6
20	131	32.0	134	48.0		01.3	28	46.1		11.5
21	146	34.4	149	47.6	-3	00.1	43	47.4		11.4
22	161	36.9	164	47.2	-2	58.9	58	48.6		11.2
23	176	39.4	179	46.8		57.7	73	49.8		11.1
24	191	41.8	194	46.4	-2	56.5	88	51.0	+25	10.9
Dif	—		-4		+12		+12		-1	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna							
	SD: 16'0 PMG: 12 ^h 03 ^m 2			Edad: 26 ^d 3 PHE { SD: 15'8 PMG: 9 ^h 46 ^m																	
	hG ☉	Dec		hG ☾	Dif	Dec			Dif				Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m				
0	179	10.2	+5	22.3	218	06.7	-10	26.8	60 N	18	50	19	33	20	28	4	43	1			
1	194	10.4		23.3	232	38.1 ¹²⁴	-10	11.9 ¹⁴⁹	58	46		27		18	38	4		13	94		
2	209	10.6		24.3	247	09.5 ¹²⁴	-9	56.9 ¹⁵⁰	56	43		21	09		34	7		17	90		
3	224	10.8		25.2	261	40.8 ¹²³		41.8 ¹⁵¹	54	40		17	20	01	29	10		20	87		
4	239	10.9		26.2	276	12.2 ¹²⁴		26.6 ¹⁵²	52	38		12	19	54	26	12		22	85		
5	254	11.1	+5	27.1	290	43.6 ¹²⁴	-9	11.4 ¹⁵²	50	18	36	19	09	19	48	4	22	15	15	25	82
6	269	11.3	+5	28.1	305	15.0 ¹²⁴	-8	56.1 ¹⁵³	45	18	31	19	01	19	36	4	14	21	15	30	77
7	284	11.5		29.0	319	46.4 ¹²⁴		40.8 ¹⁵³	40	27		18	54	27		08	25		35	71	
8	299	11.7		30.0	334	17.8 ¹²⁴		25.4 ¹⁵⁴	35	23		49		19		4	03	28		39	67
9	314	11.8		31.0	348	49.2 ¹²⁴	-8	09.9 ¹⁵⁵	30	20		44	13			3	58	32		42	64
10	329	12.0		31.9	3	20.6 ¹²⁴	-7	54.4 ¹⁵⁵	20	15		37	19	03		49	38		48	58	
11	344	12.2	+5	32.9	17	52.0 ¹²⁴	-7	38.8 ¹⁵⁶	10 N	18	11	18	32	18	56	3	42	43	15	53	52
12	359	12.4	+5	33.8	32	23.4 ¹²⁴	-7	23.2 ¹⁵⁶	0	18	06	18	27	18	51	3	35	47	15	57	48
13	14	12.6		34.8	46	54.8 ¹²⁴	-7	07.5 ¹⁵⁷	10 S	18	02	24		48		28	52		16	02	43
14	29	12.8		35.7	61	26.2 ¹²⁴	-6	51.7 ¹⁵⁸	20	17	58	20		46		20	58		07	37	
15	44	12.9		36.7	75	57.5 ¹²³		35.9 ¹⁵⁸	30	54		18		45		12	63		12	32	
16	59	13.1		37.6	90	28.9 ¹²⁴		20.0 ¹⁵⁹	35	51		17		46		07	67		15	29	
17	74	13.3	+5	38.6	105	00.3 ¹²⁴	-6	04.1 ¹⁵⁹	40	17	48	18	15	18	47	3	01	71	16	19	24
18	89	13.5	+5	39.5	119	31.6 ¹²³	-5	48.2 ¹⁵⁹	45	17	45	18	14	18	48	2	54	76	16	23	20
19	104	13.7		40.5	134	02.9 ¹²³		32.1 ¹⁶¹	50	41		13		51		46	82		28	15	
20	119	13.8		41.5	148	34.3 ¹²⁴	-5	16.1 ¹⁶⁰	52	39		13		52		43	83		30	12	
21	134	14.0		42.4	163	05.6 ¹²³	-5	00.0 ¹⁶¹	54	38		13		54		39	86		32	10	
22	149	14.2		43.4	177	36.9 ¹²³	-4	43.8 ¹⁶²	56	35		12		55		34	90		35	7	
23	164	14.4		44.3	192	08.1 ¹²²		27.6 ¹⁶²	58	33		12	18	58		29	93		38	4	
24	179	14.6	+5	45.3	206	39.4 ¹²³	-4	11.4 ¹⁶²	60 S	17	30	18	12	19	00	2	23	98	16	41	1

UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO						
	PMG 11 ^h 11 ^m 4		Mag: -3.8 PMG: 11 ^h 01 ^m		Mag: +0.8 PMG: 18 ^h 03 ^m		Mag: -2.2 PMG: 6 ^h 40 ^m		Mag: +0.4 PMG: 21 ^h 30 ^m							
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	°	°	°	°	°	°	°	°	°	°	°					
0	191	41.8	194	46.4	88	51.0	+25	10.9	259	41.6	-21	52.3	36	35.4	+12	19.2
1	206	44.3	209	46.1	103	52.3		10.8	274	43.8		52.3	51	37.9		19.2
2	221	46.7	224	45.7	118	53.5		10.7	289	46.0		52.3	66	40.5		19.3
3	236	49.2	239	45.3	133	54.7		10.5	304	48.2		52.2	81	43.1		19.3
4	251	51.7	254	44.9	148	55.9		10.4	319	50.3		52.2	96	45.7		19.4
5	266	54.1	269	44.5	163	57.1	+25	10.2	334	52.5	-21	52.2	111	48.3	+12	19.4
6	281	56.6	284	44.2	178	58.4	+25	10.1	349	54.7	-21	52.1	126	50.9	+12	19.5
7	296	59.1	299	43.8	193	59.6		10.0	4	56.9		52.1	141	53.4		19.5
8	312	01.5	314	43.4	209	00.8		09.8	19	59.1		52.0	156	56.0		19.5
9	327	04.0	329	43.0	224	02.0		09.7	35	01.2		52.0	171	58.6		19.6
10	342	06.5	344	42.6	239	03.3		09.5	50	03.4		52.0	187	01.2		19.6
11	357	08.9	359	42.3	254	04.5	+25	09.4	65	05.6	-21	51.9	202	03.8	+12	19.7
12	12	11.4	14	41.9	269	05.7	+25	09.3	80	07.8	-21	51.9	217	06.4	+12	19.7
13	27	13.9	29	41.5	284	06.9		09.1	95	10.0		51.9	232	08.9		19.8
14	42	16.3	44	41.1	299	08.1		09.0	110	12.1		51.8	247	11.5		19.8
15	57	18.8	59	40.8	314	09.3		08.8	125	14.3		51.8	262	14.1		19.8
16	72	21.2	74	40.4	329	10.6		08.7	140	16.5		51.8	277	16.7		19.9
17	87	23.7	89	40.0	344	11.8	+25	08.6	155	18.7	-21	51.7	292	19.3	+12	19.9
18	102	26.2	104	39.6	359	13.0	+25	08.4	170	20.9	-21	51.7	307	21.9	+12	20.0
19	117	28.6	119	39.2	14	14.2		08.3	185	23.1		51.7	322	24.4		20.0
20	132	31.1	134	38.9	29	15.4		08.1	200	25.2		51.6	337	27.0		20.0
21	147	33.6	149	38.5	44	16.7		08.0	215	27.4		51.6	352	29.6		20.1
22	162	36.0	164	38.1	59	17.9		07.8	230	29.6		51.6	7	32.2		20.1
23	177	38.5	179	37.7	74	19.1		07.7	245	31.8		51.5	22	34.8		20.2
24	192	41.0	194	37.4	89	20.3	+25	07.6	260	34.0	-21	51.5	37	37.3	+12	20.2
Dif	—	—	-4	+12	+12	-1			+22	0			+26	0		0

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'0 PMG: 12 ^h 02 ^m 9			Edad: 27 ^d 3 PHE	SD: 16'0 PMG: 10 ^h 34 ^m	R°: 48 ^m												
	hG ☉	Dec						Náutico	Civil		Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	h	m	h	m	h	m	m				
0	179	14.6	+5	45.3	206	39.4	-4 11.4	60 N	3 37	4 32	5 15	4 44	0	16 48 101				
1	194	14.7		46.2	221	10.6 ¹²²	-3 55.1 ¹⁶³	58	47	38	19	42	4	47 98				
2	209	14.9		47.2	235	41.9 ¹²³	38.8 ¹⁶³	56	3 56	44	22	41	7	47 94				
3	224	15.1		48.1	250	13.1 ¹²²	22.4 ¹⁶⁴	54	4 04	48	25	39	10	47 90				
4	239	15.3		49.1	264	44.3 ¹²²	-3 06.1 ¹⁶³	52	11	53	27	38	13	47 87				
5	254	15.5	+5	50.0	279	15.4 ¹²¹	-2 49.6 ¹⁶⁵	50	4 17	4 57	5 30	4 37	15	16 47 84				
6	269	15.6	+5	51.0	293	46.6 ¹²²	-2 33.2 ¹⁶⁴	45	4 29	5 05	5 35	4 35	20	16 47 78				
7	284	15.8		51.9	308	17.7 ¹²¹	16.7 ¹⁶⁵	40	39	11	39	33	25	46 74				
8	299	16.0		52.9	322	48.8 ¹²¹	-2 00.1 ¹⁶⁶	35	47	17	42	31	29	46 70				
9	314	16.2		53.8	337	19.8 ¹²⁰	-1 43.6 ¹⁶⁵	30	4 53	21	46	30	32	46 66				
10	329	16.4		54.8	351	50.9 ¹²¹	27.0 ¹⁶⁶	20	5 03	29	51	27	38	46 60				
11	344	16.5	+5	55.7	6	21.9 ¹²⁰	-1 10.4 ¹⁶⁶	10 N	5 10	5 34	5 55	4 25	43	16 45 55				
12	359	16.7	+5	56.7	20	52.8 ¹¹⁹	-0 53.8 ¹⁶⁶	0	5 15	5 39	6 00	4 22	49	16 45 49				
13	14	16.9		57.6	35	23.8 ¹²⁰	37.1 ¹⁶⁷	10 S	18	43	04	20	54	45 44				
14	29	17.1		58.6	49	54.7 ¹¹⁹	20.4 ¹⁶⁷	20	20	46	08	18	59	44 39				
15	44	17.3	+5	59.6	64	25.6 ¹¹⁹	-0 03.7 ¹⁶⁷	30	21	49	13	15	65	44 33				
16	59	17.4	+6	00.5	78	56.4 ¹¹⁸	+0 13.0 ¹⁶⁷	35	21	50	15	14	68	44 29				
17	74	17.6	+6	01.5	93	27.2 ¹¹⁸	+0 29.7 ¹⁶⁷	40	5 20	5 51	6 18	4 12	73	16 43 26				
18	89	17.8	+6	02.4	107	58.0 ¹¹⁸	+0 46.5 ¹⁶⁸	45	5 18	5 52	6 22	4 10	78	16 43 21				
19	104	18.0		03.4	122	28.7 ¹¹⁷	+1 03.2 ¹⁶⁷	50	16	53	26	08	83	43 15				
20	119	18.2		04.3	136	59.4 ¹¹⁷	20.0 ¹⁶⁸	52	15	54	28	06	86	42 13				
21	134	18.3		05.3	151	30.0 ¹¹⁶	36.8 ¹⁶⁸	54	13	54	30	05	89	42 11				
22	149	18.5		06.2	166	00.6 ¹¹⁶	+1 53.6 ¹⁶⁸	56	12	55	32	04	92	42 7				
23	164	18.7		07.2	180	31.2 ¹¹⁶	+2 10.4 ¹⁶⁸	58	10	55	34	02	96	42 4				
24	179	18.9	+6	08.1	195	01.7 ¹¹⁵	+2 27.2 ¹⁶⁸	60 S	5 07	5 55	6 37	4 01	100	16 42 0				
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 11 ^h 07 ^m 4		Mag: -3.8 PMG: 11 ^h 02 ^m		Mag: +0.9 PMG: 18 ^h 01 ^m		Mag: -2.2 PMG: 6 ^h 37 ^m		Mag: +0.4 PMG: 21 ^h 26 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	192	41.0	194	37.4	89	20.3	+25	07.6	260	34.0	-21	51.5	37	37.3	+12	20.2		
1	207	43.4	209	37.0		26.2		07.4	275	36.2		51.5	52	39.9		20.2		
2	222	45.9	224	36.6		25.0		07.3	290	38.4		51.4	67	42.5		20.3		
3	237	48.3	239	36.2		23.8		07.1	305	40.5		51.4	82	45.1		20.3		
4	252	50.8	254	35.9		22.6		07.0	320	42.7		51.3	97	47.7		20.4		
5	267	53.3	269	35.5	-2	21.4	164	26.4	+25	06.8	335	44.9	-21	51.3	112	50.2	+12	20.4
6	282	55.7	284	35.1	-2	20.2	179	27.6	+25	06.7	350	47.1	-21	51.3	127	52.8	+12	20.5
7	297	58.2	299	34.7		18.9	194	28.8		06.6	5	49.3		51.2	142	55.4		20.5
8	313	00.7	314	34.3		17.7	209	30.0		06.4	20	51.5		51.2	157	58.0		20.5
9	328	03.1	329	34.0		16.5	224	31.2		06.3	35	53.7		51.2	173	00.6		20.6
10	343	05.6	344	33.6		15.3	239	32.4		06.1	50	55.9		51.1	188	03.1		20.6
11	358	08.1	359	33.2	-2	14.1	254	33.7	+25	06.0	65	58.0	-21	51.1	203	05.7	+12	20.7
12	13	10.5	14	32.8	-2	12.9	269	34.9	+25	05.8	81	00.2	-21	51.1	218	08.3	+12	20.7
13	28	13.0	29	32.5		11.7	284	36.1		05.7	96	02.4		51.0	233	10.9		20.7
14	43	15.5	44	32.1		10.5	299	37.3		05.5	111	04.6		51.0	248	13.5		20.8
15	58	17.9	59	31.7		09.2	314	38.5		05.4	126	06.8		51.0	263	16.0		20.8
16	73	20.4	74	31.3		08.0	329	39.7		05.3	141	09.0		50.9	278	18.6		20.9
17	88	22.8	89	31.0	-2	06.8	344	40.9	+25	05.1	156	11.2	-21	50.9	293	21.2	+12	20.9
18	103	25.3	104	30.6	-2	05.6	359	42.1	+25	05.0	171	13.4	-21	50.9	308	23.8	+12	20.9
19	118	27.8	119	30.2		04.4	14	43.3		04.8	186	15.6		50.8	323	26.4		21.0
20	133	30.2	134	29.8		03.2	29	44.6		04.7	201	17.8		50.8	338	28.9		21.0
21	148	32.7	149	29.5		02.0	44	45.8		04.5	216	19.9		50.8	353	31.5		21.1
22	163	35.2	164	29.1	-2	00.7	59	47.0		04.4	231	22.1		50.7	8	34.1		21.1
23	178	37.6	179	28.7	-1	59.5	74	48.2		04.2	246	24.3		50.7	23	36.7		21.1
24	193	40.1	194	28.3	-1	58.3	89	49.4	+25	04.1	261	26.5	-21	50.7	38	39.2	+12	21.2
Dif	—		-4		+12		+12		-1		+22		0		+26		0	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG: 12 ^h 02 ^m 6			Edad: 28 ^d 3 PHE { 4 ^h : 59'8 12 ^h : 60'0 20 ^h : 60'2 R°: 52 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	179	18.9	+6 08.1	195	01.7	+2 27.2		60 N	18 54	19 38	20 34	4 44 1	18 29 107		
1	194	19.1		209	32.2 ¹¹⁵	+2 44.0 ¹⁶⁸		58	51	32	23	46 5	25 102		
2	209	19.2		224	02.6 ¹¹⁴	+3 00.8 ¹⁶⁸		56	47	26	14	48 8	21 98		
3	224	19.4		238	33.0 ¹¹⁴	17.6 ¹⁶⁸		54	44	21	20 06	49 12	17 95		
4	239	19.6		253	03.3 ¹¹³	34.5 ¹⁶⁹		52	41	16	19 58	51 14	14 91		
5	254	19.8	+6 12.8	267	33.6 ¹¹³	+3 51.3 ¹⁶⁸		50	18 39	19 12	19 52	4 52 17	18 11 89		
6	269	20.0	+6 13.8	282	03.8 ¹¹²	+4 08.1 ¹⁶⁸		45	18 33	19 03	19 39	4 55 22	18 05 82		
7	284	20.1		296	33.9 ¹¹¹	24.9 ¹⁶⁸		40	29	18 56	29	4 58 26	18 00 77		
8	299	20.3		311	04.1 ¹¹²	41.7 ¹⁶⁸		35	25	50	21	5 00 30	17 56 73		
9	314	20.5		325	34.1 ¹¹⁰	+4 58.5 ¹⁶⁸		30	21	46	14	02 34	52 69		
10	329	20.7		340	04.1 ¹¹⁰	+5 15.2 ¹⁶⁷		20	15	38	19 04	05 40	46 62		
11	344	20.8	+6 18.5	354	34.1 ¹¹⁰	+5 32.0 ¹⁶⁸		10 N	18 10	18 32	18 56	5 08 45	17 40 57		
12	359	21.0	+6 19.5	9	03.9 ¹⁰⁸	+5 48.7 ¹⁶⁷		0	18 06	18 27	18 51	5 11 50	17 34 52		
13	14	21.2		23	33.8 ¹⁰⁹	+6 05.5 ¹⁶⁸		10 S	18 01	22	47	14 55	29 47		
14	29	21.4		38	03.5 ¹⁰⁷	22.2 ¹⁶⁷		20	17 57	19	44	17 61	23 42		
15	44	21.6		52	33.2 ¹⁰⁷	38.8 ¹⁶⁶		30	52	15	43	20 68	17 35		
16	59	21.7		67	02.8 ¹⁰⁶	+6 55.5 ¹⁶⁷		35	49	14	43	22 72	13 32		
17	74	21.9	+6 24.2	81	32.4 ¹⁰⁶	+7 12.2 ¹⁶⁷		40	17 45	18 12	18 44	5 25 75	17 09 28		
18	89	22.1	+6 25.2	96	01.9 ¹⁰⁵	+7 28.8 ¹⁶⁶		45	17 41	18 11	18 45	5 28 80	17 04 23		
19	104	22.3		110	31.3 ¹⁰⁴	+7 45.3 ¹⁶⁵		50	37	09	47	31 86	16 58 18		
20	119	22.4		125	00.7 ¹⁰⁴	+8 01.9 ¹⁶⁶		52	35	09	48	32 90	55 16		
21	134	22.6		139	30.0 ¹⁰³	18.4 ¹⁶⁵		54	33	08	49	34 93	53 12		
22	149	22.8		153	59.2 ¹⁰²	34.9 ¹⁶⁵		56	30	07	50	36 96	49 9		
23	164	23.0		168	28.4 ¹⁰²	+8 51.4 ¹⁶⁵		58	28	07	52	38 100	46 5		
24	179	23.1	+6 30.8	182	57.5 ¹⁰¹	+9 07.8 ¹⁶⁴		60 S	17 24	18 06	18 54	5 41 104	16 42 1		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 11 ^h 03 ^m 5		Mag: -3.8 PMG: 11 ^h 02 ^m			Mag: +0.9 PMG: 17 ^h 59 ^m			Mag: -2.2 PMG: 6 ^h 33 ^m			Mag: +0.4 PMG: 21 ^h 22 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	'	°	°	'	°	°	'		
0	193	40.1	194	28.3	-1 58.3	89	49.4	+25 04.1	261	26.5	-21 50.7	38	39.2	+12 21.2	
1	208	42.6	209	28.0	57.1	104	50.6	03.9	276	28.7	50.6	53	41.8	21.2	
2	223	45.0	224	27.6	55.9	119	51.8	03.8	291	30.9	50.6	68	44.4	21.3	
3	238	47.5	239	27.2	54.7	134	53.0	03.6	306	33.1	50.6	83	47.0	21.3	
4	253	49.9	254	26.8	53.4	149	54.2	03.5	321	35.3	50.5	98	49.6	21.3	
5	268	52.4	269	26.5	-1 52.2	164	55.4	+25 03.3	336	37.5	-21 50.5	113	52.1	+12 21.4	
6	283	54.9	284	26.1	-1 51.0	179	56.6	+25 03.2	351	39.7	-21 50.5	128	54.7	+12 21.4	
7	298	57.3	299	25.7	49.8	194	57.8	03.0	6	41.9	50.4	143	57.3	21.5	
8	313	59.8	314	25.3	48.6	209	59.0	02.9	21	44.1	50.4	158	59.9	21.5	
9	329	02.3	329	25.0	47.4	225	00.3	02.7	36	46.3	50.4	174	02.4	21.5	
10	344	04.7	344	24.6	46.2	240	01.5	02.6	51	48.5	50.3	189	05.0	21.6	
11	359	07.2	359	24.2	-1 44.9	255	02.7	+25 02.4	66	50.7	-21 50.3	204	07.6	+12 21.6	
12	14	09.7	14	23.9	-1 43.7	270	03.9	+25 02.3	81	52.9	-21 50.3	219	10.2	+12 21.7	
13	29	12.1	29	23.5	42.5	285	05.1	02.1	96	55.0	50.2	234	12.7	21.7	
14	44	14.6	44	23.1	41.3	300	06.3	02.0	111	57.2	50.2	249	15.3	21.7	
15	59	17.1	59	22.7	40.1	315	07.5	01.8	126	59.4	50.2	264	17.9	21.8	
16	74	19.5	74	22.4	38.9	330	08.7	01.7	142	01.6	50.1	279	20.5	21.8	
17	89	22.0	89	22.0	-1 37.6	345	09.9	+25 01.5	157	03.8	-21 50.1	294	23.0	+12 21.8	
18	104	24.4	104	21.6	-1 36.4	0	11.1	+25 01.4	172	06.0	-21 50.1	309	25.6	+12 21.9	
19	119	26.9	119	21.2	35.2	15	12.3	01.2	187	08.2	50.0	324	28.2	21.9	
20	134	29.4	134	20.9	34.0	30	13.5	01.1	202	10.4	50.0	339	30.8	22.0	
21	149	31.8	149	20.5	32.8	45	14.7	00.9	217	12.6	50.0	354	33.3	22.0	
22	164	34.3	164	20.1	31.6	60	15.9	00.8	232	14.8	49.9	9	35.9	22.0	
23	179	36.8	179	19.8	30.3	75	17.1	00.6	247	17.0	49.9	24	38.5	22.1	
24	194	39.2	194	19.4	-1 29.1	90	18.3	+25 00.5	262	19.2	-21 49.9	39	41.1	+12 22.1	
Dif	—		-4 +12		+12 -1		-1		+22 0		+26 0		0		

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16/0 PMG: 12 ^h 02 ^m 3			Edad: 29 ^d 3 PHE { SD: 16/4 PMG: 12 ^h 14 ^m 4 ^h : 60/4 12 ^h : 60/5 20 ^h : 60/6 R°: 55 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico	Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	h	m	h	m	h	m	m	
0	179	23.1	+6 30.8	182	57.5	+9 07.8	60 N	3 30	4 26	5 09	4 45	2	20 16	113	
1	194	23.3	31.8	197	26.5	24.1	58	41	32	13	51	7	20 07	106	
2	209	23.5	32.7	211	55.4	40.5	56	50	38	17	4 56	11	19 59	101	
3	224	23.7	33.7	226	24.3	+9 56.8	54	3 58	43	20	5 01	14	52	97	
4	239	23.9	34.6	240	53.0	+10 13.0	52	4 06	48	23	05	17	45	94	
5	254	24.0	+6 35.5	255	21.7	+10 29.2	50	4 12	4 52	5 25	5 09	20	19 40	90	
6	269	24.2	+6 36.5	269	50.3	+10 45.3	45	4 25	5 01	5 31	5 17	26	19 27	85	
7	284	24.4	37.4	284	18.9	+11 01.4	40	36	08	36	24	30	17	80	
8	299	24.6	38.4	298	47.3	17.5	35	44	14	40	30	35	09	75	
9	314	24.7	39.3	313	15.7	33.4	30	4 51	19	43	36	37	19 01	72	
10	329	24.9	40.3	327	44.0	+11 49.4	20	5 01	27	49	45	44	18 48	66	
11	344	25.1	+6 41.2	342	12.2	+12 05.2	10 N	5 09	5 33	5 54	5 53	50	18 37	61	
12	359	25.3	+6 42.1	356	40.3	+12 21.0	0	5 14	5 38	5 59	6 01	54	18 26	56	
13	14	25.4	43.1	11	08.4	36.8	10 S	18	43	6 04	09	59	16	51	
14	29	25.6	44.0	25	36.3	+12 52.4	20	21	46	08	18	64	18 05	46	
15	44	25.8	45.0	40	04.2	+13 08.0	30	22	50	14	28	70	17 52	41	
16	59	26.0	45.9	54	32.0	23.6	35	22	52	17	34	74	45	37	
17	74	26.1	+6 46.8	68	59.7	+13 39.0	40	5 22	5 53	6 20	6 40	79	17 37	33	
18	89	26.3	+6 47.8	83	27.3	+13 54.4	45	5 21	5 55	6 24	6 48	84	17 27	28	
19	104	26.5	48.7	97	54.8	+14 09.7	50	19	57	29	6 57	90	16	22	
20	119	26.7	49.7	112	22.2	24.9	52	18	57	31	7 02	93	11	19	
21	134	26.8	50.6	126	49.5	40.1	54	17	58	33	07	96	17 05	16	
22	149	27.0	51.6	141	16.7	+14 55.1	56	16	59	36	12	100	16 58	12	
23	164	27.2	52.5	155	43.9	+15 10.1	58	14	5 59	39	18	105	51	8	
24	179	27.4	+6 53.4	170	10.9	+15 25.0	60 S	5 12	6 00	6 42	7 25	110	16 43	3	
UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO					
	PMG 10 ^h 59 ^m 6		Mag: -3.8 PMG: 11 ^h 03 ^m		Mag: +0.9 PMG: 17 ^h 57 ^m		Mag: -2.2 PMG: 6 ^h 30 ^m			Mag: +0.4 PMG: 21 ^h 18 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'			
0	194	39.2	194	19.4	-1 29.1	90	18.3	+25 00.5	262	19.2	-21 49.9	39	41.1	+12 22.1	
1	209	41.7	209	19.0	27.9	105	19.5	00.3	277	21.4	49.8	54	43.6	22.2	
2	224	44.2	224	18.6	26.7	120	20.7	+25 00.2	292	23.6	49.8	69	46.2	22.2	
3	239	46.6	239	18.3	25.5	135	21.9	+25 00.0	307	25.8	49.8	84	48.8	22.2	
4	254	49.1	254	17.9	24.2	150	23.1	+24 59.9	322	28.0	49.7	99	51.4	22.3	
5	269	51.5	269	17.5	-1 23.0	165	24.3	+24 59.7	337	30.2	-21 49.7	114	53.9	+12 22.3	
6	284	54.0	284	17.1	-1 21.8	180	25.5	+24 59.6	352	32.4	-21 49.7	129	56.5	+12 22.3	
7	299	56.5	299	16.8	20.6	195	26.7	59.4	7	34.6	49.6	144	59.1	22.4	
8	314	58.9	314	16.4	19.4	210	27.9	59.3	22	36.8	49.6	160	01.7	22.4	
9	330	01.4	329	16.0	18.2	225	29.1	59.1	37	39.0	49.6	175	04.2	22.5	
10	345	03.9	344	15.7	16.9	240	30.3	59.0	52	41.2	49.5	190	06.8	22.5	
11	0	06.3	359	15.3	-1 15.7	255	31.5	+24 58.8	67	43.4	-21 49.5	205	09.4	+12 22.5	
12	15	08.8	14	14.9	-1 14.5	270	32.7	+24 58.7	82	45.6	-21 49.5	220	12.0	+12 22.6	
13	30	11.3	29	14.5	13.3	285	33.9	58.5	97	47.8	49.4	235	14.5	22.6	
14	45	13.7	44	14.2	12.1	300	35.1	58.3	112	50.0	49.4	250	17.1	22.6	
15	60	16.2	59	13.8	10.8	315	36.3	58.2	127	52.3	49.4	265	19.7	22.7	
16	75	18.7	74	13.4	09.6	330	37.5	58.0	142	54.5	49.3	280	22.2	22.7	
17	90	21.1	89	13.1	-1 08.4	345	38.7	+24 57.9	157	56.7	-21 49.3	295	24.8	+12 22.8	
18	105	23.6	104	12.7	-1 07.2	0	39.9	+24 57.7	172	58.9	-21 49.3	310	27.4	+12 22.8	
19	120	26.0	119	12.3	06.0	15	41.1	57.6	188	01.1	49.2	325	30.0	22.8	
20	135	28.5	134	11.9	04.8	30	42.3	57.4	203	03.3	49.2	340	32.5	22.9	
21	150	31.0	149	11.6	03.5	45	43.5	57.3	218	05.5	49.2	355	35.1	22.9	
22	165	33.4	164	11.2	02.3	60	44.6	57.1	233	07.7	49.1	10	37.7	22.9	
23	180	35.9	179	10.8	-1 01.1	75	45.8	56.9	248	09.9	49.1	25	40.2	23.0	
24	195	38.4	194	10.5	-0 59.9	90	47.0	+24 56.8	263	12.1	-21 49.1	40	42.8	+12 23.0	
Dif	—		-4		+12	+12		-2	+22		0		+26		0

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna									
	SD: 16:0 PMG: 12 ^h 02 ^m 0			Edad: 30 ^d 3 PHE { 4 ^h : 60 ⁷ / 12 ^h : 60 ⁷ / 20 ^h : 60 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							
0	179	27.4	+6	53.4	170	10.9	+15	25.0	60 N	18	59	19	44	20	41	4	47	5	22	09	115		
1	194	27.5		54.4	184	37.9	80	39.8	58	55		36		29		4	58	10	21	53	108		
2	209	27.7		55.3	199	04.7	78	+15	54.5	56	51		30		19		5	07	15	40	102		
3	224	27.9		56.2	213	31.5	78	+16	09.1	54	48		25		10		15	19	29	97			
4	239	28.1		57.2	227	58.1	76		23.6	52	45		20	03		22	23		19	94			
5	254	28.2	+6	58.1	242	24.7	76	+16	38.0	50	18	42	19	15	19	56	5	29	25	21	10	91	
6	269	28.4	+6	59.1	256	51.2	75	+16	52.3	45	18	36	19	06	19	42	5	43	31	20	52	84	
7	284	28.6	+7	00.0	271	17.5	73	+17	06.5	40	31	18	58		31		5	54	37	37	80		
8	299	28.8	+7	00.9	285	43.8	73		20.6	35	26		52		22		6	05	40		24	76	
9	314	28.9		01.9	300	10.0	72		34.6	30	23		47		15		13	44	20	13	73		
10	329	29.1		02.8	314	36.1	71	+17	48.5	20	16		38	19	04		29	49	19	54	68		
11	344	29.3	+7	03.8	329	02.0	69	+18	02.3	10 N	18	10	18	32	18	56	6	43	53	19	38	64	
12	359	29.5	+7	04.7	343	27.9	69	+18	16.0	0	18	05	18	26	18	50	6	55	58	19	22	60	
13	14	29.6		05.6	357	53.7	68		29.5	10 S	18	00		21	46		7	08	63	19	07	56	
14	29	29.8		06.6	12	19.4	67		43.0	20	17	55		17	43		22	68		18	51	52	
15	44	30.0		07.5	26	45.0	66	+18	56.3	30	49		13	41		38	73		33	46			
16	59	30.1		08.4	41	10.4	64	+19	09.5	35	46		11	41		48	76		22	44			
17	74	30.3	+7	09.4	55	35.8	64	+19	22.5	40	17	42	18	09	18	41	7	59	80	18	10	40	
18	89	30.5	+7	10.3	70	01.1	63	+19	35.5	45	17	38	18	07	18	41	8	12	85	17	55	36	
19	104	30.7		11.2	84	26.3	62	+19	48.3	50	33		05	42		27	92		38	30			
20	119	30.8		12.2	98	51.4	61	+20	01.0	52	30		04	43		35	95		30	26			
21	134	31.0		13.1	113	16.4	60		13.5	54	28		03	44		43	99		21	23			
22	149	31.2		14.1	127	41.3	59		25.9	56	25		02	45		8	52	103	17	10	19		
23	164	31.4		15.0	142	06.1	58		38.2	58	22		01	47		9	03	109	16	59	13		
24	179	31.5	+7	15.9	156	30.8	57	+20	50.3	60 S	17	19	18	00	18	48	9	15	116	16	46	6	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO										
	PMG: 10 ^h 55 ^m 6			Mag: -3.8 PMG: 11 ^h 04 ^m			Mag: +0.9 PMG: 17 ^h 55 ^m			Mag: -2.2 PMG: 6 ^h 26 ^m			Mag: +0.4 PMG: 21 ^h 14 ^m										
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♃	Dec	hG ♄	Dec												
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'							
0	195	38.4	194	10.5	-0	59.9	90	47.0	+24	56.8	263	12.1	-21	49.1	40	42.8	+12	23.0					
1	210	40.8	209	10.1		58.7	105	48.2		56.6	278	14.3		49.1	55	45.4		23.1					
2	225	43.3	224	09.7		57.4	120	49.4		56.5	293	16.5		49.0	70	48.0		23.1					
3	240	45.8	239	09.4		56.2	135	50.6		56.3	308	18.7		49.0	85	50.5		23.1					
4	255	48.2	254	09.0		55.0	150	51.8		56.2	323	20.9		49.0	100	53.1		23.2					
5	270	50.7	269	08.6	-0	53.8	165	53.0	+24	56.0	338	23.1	-21	48.9	115	55.7	+12	23.2					
6	285	53.1	284	08.2	-0	52.6	180	54.2	+24	55.9	353	25.3	-21	48.9	130	58.2	+12	23.2					
7	300	55.6	299	07.9		51.3	195	55.4		55.7	8	27.6		48.9	146	00.8		23.3					
8	315	58.1	314	07.5		50.1	210	56.6		55.5	23	29.8		48.8	161	03.4		23.3					
9	331	00.5	329	07.1		48.9	225	57.8		55.4	38	32.0		48.8	176	05.9		23.3					
10	346	03.0	344	06.8		47.7	240	59.0		55.2	53	34.2		48.8	191	08.5		23.4					
11	1	05.5	359	06.4	-0	46.5	256	00.2	+24	55.1	68	36.4	-21	48.7	206	11.1	+12	23.4					
12	16	07.9	14	06.0	-0	45.2	271	01.3	+24	54.9	83	38.6	-21	48.7	221	13.6	+12	23.5					
13	31	10.4	29	05.7		44.0	286	02.5		54.7	98	40.8		48.7	236	16.2		23.5					
14	46	12.9	44	05.3		42.8	301	03.7		54.6	113	43.0		48.6	251	18.8		23.5					
15	61	15.3	59	04.9		41.6	316	04.9		54.4	128	45.2		48.6	266	21.4		23.6					
16	76	17.8	74	04.5		40.4	331	06.1		54.3	143	47.4		48.6	281	23.9		23.6					
17	91	20.3	89	04.2	-0	39.1	346	07.3	+24	54.1	158	49.7	-21	48.5	296	26.5	+12	23.6					
18	106	22.7	104	03.8	-0	37.9	1	08.5	+24	53.9	173	51.9	-21	48.5	311	29.1	+12	23.7					
19	121	25.2	119	03.4		36.7	16	09.7		53.8	188	54.1		48.5	326	31.6		23.7					
20	136	27.6	134	03.1		35.5	31	10.9		53.6	203	56.3		48.4	341	34.2		23.7					
21	151	30.1	149	02.7		34.3	46	12.0		53.5	218	58.5		48.4	356	36.8		23.8					
22	166	32.6	164	02.3		33.0	61	13.2		53.3	234	00.7		48.4	11	39.3		23.8					
23	181	35.0	179	02.0		31.8	76	14.4		53.1	249	02.9		48.4	26	41.9		23.8					
24	196	37.5	194	01.6	-0	30.6	91	15.6	+24	53.0	264	05.1	-21	48.3	41	44.5	+12	23.9					
Dif	—			-4			+12			-2			+22			0			+26			0	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'0 PMG: 12 ^h 01 ^m 8			Edad: 1 ^d 8 PHE { SD: 16'5 PMG: 14 ^h 08 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	179	31.5	+7 15.9	156	30.8	+20 50.3		60 N	3 22	4 19	5 03	4 52	12	**	**	**
1	194	31.7		16.9	170	55.4	56	+21 02.3	120	58	34	26	08	5 08	19	23 41 97
2	209	31.9		17.8	185	19.9	55		14.2	119	56	44	33	12	22 25	22 92
3	224	32.0		18.7	199	44.3	54		25.9	117	54	3 53	38	15	34 29	23 06 88
4	239	32.2		19.7	214	08.6	53		37.5	116	52	4 01	43	18	45 32	22 53 85
5	254	32.4	+7 20.6		228	32.9	53	+21 48.9	114	50	4 07	4 48	5 21	5 54	36	22 41 83
6	269	32.6	+7 21.5		242	57.0	51	+22 00.2	113	45	4 21	4 57	5 27	6 14	41	22 16 79
7	284	32.7		22.5	257	21.0	50		11.3	111	40	32	5 05	33	31 45	21 57 75
8	299	32.9		23.4	271	45.0	50		22.3	110	35	41	11	37	45 48	40 74
9	314	33.1		24.3	286	08.8	48		33.1	108	30	48	17	41	6 57 51	26 72
10	329	33.2		25.3	300	32.6	48		43.7	106	20	4 59	25	47	7 18 55	21 02 69
11	344	33.4	+7 26.2		314	56.3	47	+22 54.2	105	10 N	5 07	5 32	5 53	7 36	59	20 42 65
12	359	33.6	+7 27.1		329	19.9	46	+23 04.6	104	0	5 13	5 38	5 58	7 53	62	20 22 64
13	14	33.8		28.1	343	43.4	45		14.7	101	18	42	6 04	8 11	65	20 03 61
14	29	33.9		29.0	358	06.8	44		24.8	101	20	21	47	09	30 68	19 43 58
15	44	34.1		29.9	12	30.1	43		34.6	98	30	23	51	15	8 51 73	19 55
16	59	34.3		30.8	26	53.4	43		44.3	97	35	24	53	18	9 04 76	19 06 52
17	74	34.4	+7 31.8		41	16.5	41	+23 53.8	95	40	5 24	5 55	6 22	9 19	79	18 50 50
18	89	34.6	+7 32.7		55	39.6	41	+24 03.1	93	45	5 23	5 57	6 27	9 37	82	18 31 46
19	104	34.8		33.6	70	02.6	40		12.3	92	50	22	6 00	32	9 59 88	18 08 41
20	119	34.9		34.6	84	25.6	40		21.3	90	52	21	00	34	10 10 90	17 56 40
21	134	35.1		35.5	98	48.4	38		30.1	88	54	21	01	37	22 94	44 36
22	149	35.3		36.4	113	11.2	38		38.7	86	56	19	03	40	35 99	29 32
23	164	35.5		37.4	127	33.9	37		47.2	85	58	18	04	43	10 52 105	17 12 26
24	179	35.6	+7 38.3		141	56.5	36	+24 55.5	83	60 S	5 17	6 05	6 47	11 11 115	16 52 16	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 10 ^h 51 ^m 7		Mag: -3.8 PMG: 11 ^h 04 ^m		Mag: +0.9 PMG: 17 ^h 54 ^m		Mag: -2.3 PMG: 6 ^h 23 ^m		Mag: +0.4 PMG: 21 ^h 09 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	196	37.5	194	01.6	-0 30.6	91	15.6	+24 53.0	264	05.1	-21 48.3	41	44.5	+12 23.9	
1	211	40.0	209	01.2	29.4	106	16.8	52.8	279	07.4	48.3	56	47.0	23.9	
2	226	42.4	224	00.9	28.1	121	18.0	52.7	294	09.6	48.3	71	49.6	24.0	
3	241	44.9	239	00.5	26.9	136	19.2	52.5	309	11.8	48.2	86	52.2	24.0	
4	256	47.4	254	00.1	25.7	151	20.3	52.3	324	14.0	48.2	101	54.7	24.0	
5	271	49.8	268	59.7	-0 24.5	166	21.5	+24 52.2	339	16.2	-21 48.2	116	57.3	+12 24.1	
6	286	52.3	283	59.4	-0 23.3	181	22.7	+24 52.0	354	18.4	-21 48.1	131	59.9	+12 24.1	
7	301	54.8	298	59.0	22.0	196	23.9	51.9	9	20.7	48.1	147	02.4	24.1	
8	316	57.2	313	58.6	20.8	211	25.1	51.7	24	22.9	48.1	162	05.0	24.2	
9	331	59.7	328	58.3	19.6	226	26.3	51.5	39	25.1	48.0	177	07.6	24.2	
10	347	02.1	343	57.9	18.4	241	27.5	51.4	54	27.3	48.0	192	10.1	24.2	
11	2	04.6	358	57.5	-0 17.2	256	28.6	+24 51.2	69	29.5	-21 48.0	207	12.7	+12 24.3	
12	17	07.1	13	57.2	-0 15.9	271	29.8	+24 51.0	84	31.7	-21 48.0	222	15.3	+12 24.3	
13	32	09.5	28	56.8	14.7	286	31.0	50.9	99	34.0	47.9	237	17.8	24.3	
14	47	12.0	43	56.4	13.5	301	32.2	50.7	114	36.2	47.9	252	20.4	24.4	
15	62	14.5	58	56.1	12.3	316	33.4	50.6	129	38.4	47.9	267	22.9	24.4	
16	77	16.9	73	55.7	11.0	331	34.6	50.4	144	40.6	47.8	282	25.5	24.4	
17	92	19.4	88	55.3	-0 09.8	346	35.7	+24 50.2	159	42.8	-21 47.8	297	28.1	+12 24.5	
18	107	21.9	103	55.0	-0 08.6	1	36.9	+24 50.1	174	45.0	-21 47.8	312	30.6	+12 24.5	
19	122	24.3	118	54.6	07.4	16	38.1	49.9	189	47.3	47.7	327	33.2	24.5	
20	137	26.8	133	54.2	06.2	31	39.3	49.7	204	49.5	47.7	342	35.8	24.6	
21	152	29.3	148	53.8	04.9	46	40.5	49.6	219	51.7	47.7	357	38.3	24.6	
22	167	31.7	163	53.5	03.7	61	41.6	49.4	234	53.9	47.6	12	40.9	24.6	
23	182	34.2	178	53.1	02.5	76	42.8	49.2	249	56.1	47.6	27	43.5	24.7	
24	197	36.6	193	52.7	-0 01.3	91	44.0	+24 49.1	264	58.4	-21 47.6	42	46.0	+12 24.7	
Dif	—		-4	+12		+12	-2		+22		0	+26		0	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:0 PMG: 12 ^h 01 ^m 5			Edad: 2 ^d 8 PHE { 4 ^h : 60'5 12 ^h : 60'4 20 ^h : 60'2 R°: 64 ^m											
	hG ☉	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	35.6	+7 38.3	141	56.5	+24 55.5	81	60 N	19 04	19 49	20 47	5 04 28	0 04 106		
1	194	35.8		156	19.1	+25 03.6	81	58	18 59	41	35	27 37	*** ** *		
2	209	36.0		170	41.6	11.5	79	56	55	35	24	5 47 41	*** ** *		
3	224	36.1		185	04.1	19.2	77	54	51	29	15	6 03 45	*** ** *		
4	239	36.3		199	26.4	26.8	76	52	48	23	07	17 48	*** ** *		
5	254	36.5	+7 42.9	213	48.7	+25 34.1	73	50	18 45	19 19	20 00	6 30 49	*** ** *		
6	269	36.6	+7 43.9	228	11.0	+25 41.3	72	45	18 38	19 09	19 45	6 55 53	23 35 67		
7	284	36.8		242	33.2	48.3	70	40	33	19 00	33	7 16 55	23 12 67		
8	299	37.0		256	55.3	+25 55.1	68	35	28	18 54	24	33 57	22 54 66		
9	314	37.2		271	17.4	+26 01.7	66	30	24	48	17	7 48 58	38 66		
10	329	37.3		285	39.4	08.1	64	20	17	39	19 05	8 13 60	22 11 65		
11	344	37.5	+7 48.5	300	01.4	+26 14.3	62	10 N	18 10	18 32	18 56	8 35 62	21 47 65		
12	359	37.7	+7 49.4	314	23.4	+26 20.4	61	0	18 05	18 26	18 50	8 55 64	21 26 64		
13	14	37.8		328	45.3	26.2	58	10 S	17 59	20	45	9 16 66	21 04 64		
14	29	38.0		343	07.1	31.8	56	20	53	16	41	9 38 68	20 41 63		
15	44	38.2		357	28.9	37.3	55	30	47	11	39	10 04 69	20 14 62		
16	59	38.3		11	50.7	42.5	52	35	43	09	38	20 70	19 58 61		
17	74	38.5	+7 54.1	26	12.5	+26 47.6	51	40	17 39	18 06	18 38	10 38 71	19 40 60		
18	89	38.7	+7 55.0	40	34.2	+26 52.4	48	45	17 34	18 04	18 38	10 59 74	19 17 59		
19	104	38.8		54	55.9	+26 57.1	47	50	29	01	38	11 27 76	18 49 57		
20	119	39.0		69	17.5	+27 01.6	45	52	26	18 00	39	40 77	36 56		
21	134	39.2		83	39.2	05.8	42	54	23	17 59	40	11 56 79	20 54		
22	149	39.3		98	00.8	09.9	41	56	20	57	40	12 14 81	18 01 53		
23	164	39.5	+7 59.6	112	22.4	13.7	38	58	17	56	41	12 37 85	17 38 49		
24	179	39.7	+8 00.5	126	44.0	+27 17.4	37	60 S	17 13	17 55	18 43	13 06 92	17 08 43		

UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO				
	PMG: 10 ^h 47 ^m 8		Mag: -3.8 PMG: 11 ^h 05 ^m		Mag: +0.9 PMG: 17 ^h 52 ^m		Mag: -2.3 PMG: 6 ^h 19 ^m			Mag: +0.4 PMG: 21 ^h 05 ^m				
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'		
0	197	36.6	193	52.7	-0 01.3		91	44.0	+24 49.1	264	58.4	-21 47.6	42 46.0	+12 24.7
1	212	39.1	208	52.4	+0 00.0		106	45.2	48.9	280	00.6	47.6	57 48.6	24.7
2	227	41.6	223	52.0	+0 01.2		121	46.4	48.7	295	02.8	47.5	72 51.2	24.8
3	242	44.0	238	51.6	02.4		136	47.5	48.6	310	05.0	47.5	87 53.7	24.8
4	257	46.5	253	51.3	03.6		151	48.7	48.4	325	07.3	47.5	102 56.3	24.8
5	272	49.0	268	50.9	+0 04.8		166	49.9	+24 48.2	340	09.5	-21 47.4	117 58.8	+12 24.9
6	287	51.4	283	50.5	+0 06.1		181	51.1	+24 48.1	355	11.7	-21 47.4	133 01.4	+12 24.9
7	302	53.9	298	50.2	07.3		196	52.3	47.9	10	13.9	47.4	148 04.0	24.9
8	317	56.4	313	49.8	08.5		211	53.4	47.7	25	16.1	47.3	163 06.5	25.0
9	332	58.8	328	49.4	09.7		226	54.6	47.6	40	18.4	47.3	178 09.1	25.0
10	348	01.3	343	49.1	11.0		241	55.8	47.4	55	20.6	47.3	193 11.7	25.0
11	3	03.7	358	48.7	+0 12.2		256	57.0	+24 47.2	70	22.8	-21 47.3	208 14.2	+12 25.1
12	18	06.2	13	48.3	+0 13.4		271	58.2	+24 47.1	85	25.0	-21 47.2	223 16.8	+12 25.1
13	33	08.7	28	48.0	14.6		286	59.3	46.9	100	27.3	47.2	238 19.3	25.1
14	48	11.1	43	47.6	15.8		302	00.5	46.7	115	29.5	47.2	253 21.9	25.2
15	63	13.6	58	47.2	17.1		317	01.7	46.6	130	31.7	47.1	268 24.5	25.2
16	78	16.1	73	46.9	18.3		332	02.9	46.4	145	33.9	47.1	283 27.0	25.2
17	93	18.5	88	46.5	+0 19.5		347	04.0	+24 46.2	160	36.2	-21 47.1	298 29.6	+12 25.3
18	108	21.0	103	46.1	+0 20.7		2	05.2	+24 46.1	175	38.4	-21 47.0	313 32.1	+12 25.3
19	123	23.5	118	45.8	22.0		17	06.4	45.9	190	40.6	47.0	328 34.7	25.3
20	138	25.9	133	45.4	23.2		32	07.6	45.7	205	42.8	47.0	343 37.3	25.4
21	153	28.4	148	45.0	24.4		47	08.7	45.6	220	45.1	47.0	358 39.8	25.4
22	168	30.9	163	44.7	25.6		62	09.9	45.4	235	47.3	46.9	13 42.4	25.4
23	183	33.3	178	44.3	26.8		77	11.1	45.2	250	49.5	46.9	28 44.9	25.5
24	198	35.8	193	43.9	+0 28.1		92	12.3	+24 45.0	265	51.8	-21 46.9	43 47.5	+12 25.5
Dif	—		-4	+12		+12	-2		+22	0		+26		0

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'0 PMG: 12 ^h 01 ^m 2			Edad: 3 ^d 8 PHE { 4 ^h : 60'1 12 ^h : 59'9 20 ^h : 59'7 PMG: 16 ^h 15 ^m R ^o : 62 ^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	39.7	+8 00.5	126	43.9	+27 17.4	34	60 N	3 15	4 13	4 57	5 32	64	1 50	70			
1	194	39.8	01.5	141	05.5	20.8	33	58	27	20	5 02	6 04	65	1 18	69			
2	209	40.0	02.4	155	27.1	24.1	30	56	38	27	06	28	65	0 54	68			
3	224	40.2	03.3	169	48.6	27.1	29	54	47	33	10	6 48	65	34	68			
4	239	40.3	04.2	184	10.2	30.0	26	52	3 55	39	14	7 05	65	18	67			
5	254	40.5	+8 05.1	198	31.7	+27 32.6	26	50	4 02	4 43	5 17	7 19	65	0 04	67			
6	269	40.7	+8 06.1	212	53.3	+27 35.1	25	45	4 17	4 54	5 24	7 48	65	**	**	**		
7	284	40.8	07.0	227	14.8	37.3	22	40	29	5 02	29	8 11	64	**	**	**		
8	299	41.0	07.9	241	36.4	39.4	21	35	38	08	34	30	64	**	**	**		
9	314	41.2	08.8	255	57.9	41.2	18	30	46	14	39	8 46	64	23	44	57		
10	329	41.3	09.8	270	19.5	42.9	17	20	4 57	24	46	9 13	64	23	16	59		
11	344	41.5	+8 10.7	284	41.1	+27 44.3	14	10 N	5 06	5 31	5 52	9 37	64	22	52	61		
12	359	41.7	+8 11.6	299	02.7	+27 45.5	12	0	5 13	5 37	5 58	9 59	64	22	30	62		
13	14	41.8	12.5	313	24.4	46.6	11	10 S	18	42	6 04	10 22	63	22	08	63		
14	29	42.0	13.4	327	46.0	47.4	8	20	22	47	10	10 46	62	21	44	64		
15	44	42.2	14.4	342	07.7	48.0	6	30	24	52	16	11 13	62	21	16	66		
16	59	42.3	15.3	356	29.4	48.5	5	35	25	55	20	30	61	20	59	67		
17	74	42.5	+8 16.2	10	51.2	+27 48.7	2	40	5 26	5 57	6 24	11 49	61	20	40	68		
18	89	42.7	+8 17.1	25	12.9	+27 48.7	0	45	5 26	6 00	6 29	12 13	59	20	16	70		
19	104	42.8	18.0	39	34.7	48.6	1	50	25	03	35	43	58	19	46	72		
20	119	43.0	19.0	53	56.6	48.2	4	52	25	04	38	12 57	58	32	73			
21	134	43.2	19.9	68	18.5	47.7	5	54	24	05	41	13 15	56	19	14	75		
22	149	43.3	20.8	82	40.4	46.9	8	56	23	06	44	13 35	55	18	54	76		
23	164	43.5	21.7	97	02.4	46.0	9	58	22	08	48	14 02	52	18	27	80		
24	179	43.6	+8 22.6	111	24.5	+27 44.8	12	60 S	5 21	6 09	6 52	14 38	47	17	51	85		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 10 ^h 43 ^m 9		Mag: -3.8 PMG: 11 ^h 05 ^m			Mag: +1.0 PMG: 17 ^h 50 ^m			Mag: -2.3 PMG: 6 ^h 16 ^m			Mag: +0.4 PMG: 21 ^h 01 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	198	35.8	193	43.9	+0 28.1	92	12.3	+24 45.0	265	51.8	-21 46.9	43	47.5	+12 25.5				
1	213	38.2	208	43.5	29.3	107	13.4	44.9	280	54.0	46.8	58	50.1	25.5				
2	228	40.7	223	43.2	30.5	122	14.6	44.7	295	56.2	46.8	73	52.6	25.6				
3	243	43.2	238	42.8	31.7	137	15.8	44.5	310	58.4	46.8	88	55.2	25.6				
4	258	45.6	253	42.4	33.0	152	16.9	44.4	326	00.7	46.8	103	57.7	25.6				
5	273	48.1	268	42.1	+0 34.2	167	18.1	+24 44.2	341	02.9	-21 46.7	119	00.3	+12 25.7				
6	288	50.6	283	41.7	+0 35.4	182	19.3	+24 44.0	356	05.1	-21 46.7	134	02.9	+12 25.7				
7	303	53.0	298	41.3	36.6	197	20.5	43.9	11	07.4	46.7	149	05.4	25.7				
8	318	55.5	313	41.0	37.8	212	21.6	43.7	26	09.6	46.6	164	08.0	25.8				
9	333	58.0	328	40.6	39.1	227	22.8	43.5	41	11.8	46.6	179	10.5	25.8				
10	349	00.4	343	40.2	40.3	242	24.0	43.3	56	14.1	46.6	194	13.1	25.8				
11	4	02.9	358	39.9	+0 41.5	257	25.2	+24 43.2	71	16.3	-21 46.5	209	15.6	+12 25.9				
12	19	05.4	13	39.5	+0 42.7	272	26.3	+24 43.0	86	18.5	-21 46.5	224	18.2	+12 25.9				
13	34	07.8	28	39.1	44.0	287	27.5	42.8	101	20.7	46.5	239	20.8	25.9				
14	49	10.3	43	38.8	45.2	302	28.7	42.7	116	23.0	46.5	254	23.3	25.9				
15	64	12.7	58	38.4	46.4	317	29.8	42.5	131	25.2	46.4	269	25.9	26.0				
16	79	15.2	73	38.0	47.6	332	31.0	42.3	146	27.4	46.4	284	28.4	26.0				
17	94	17.7	88	37.7	+0 48.9	347	32.2	+24 42.1	161	29.7	-21 46.4	299	31.0	+12 26.0				
18	109	20.1	103	37.3	+0 50.1	2	33.3	+24 42.0	176	31.9	-21 46.3	314	33.5	+12 26.1				
19	124	22.6	118	36.9	51.3	17	34.5	41.8	191	34.1	46.3	329	36.1	26.1				
20	139	25.1	133	36.6	52.5	32	35.7	41.6	206	36.4	46.3	344	38.7	26.1				
21	154	27.5	148	36.2	53.7	47	36.8	41.4	221	38.6	46.3	359	41.2	26.2				
22	169	30.0	163	35.8	55.0	62	38.0	41.3	236	40.9	46.2	14	43.8	26.2				
23	184	32.5	178	35.5	56.2	77	39.2	41.1	251	43.1	46.2	29	46.3	26.2				
24	199	34.9	193	35.1	+0 57.4	92	40.4	+24 40.9	266	45.3	-21 46.2	44	48.9	+12 26.3				
Dif	—		-4 +12			+12 -2			+22		0		+26			0		

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG: 12 ^h 01 ^m 0			Edad: 4 ^d 8 PHE { 4 ^h : 59'5 12 ^h : 59'3 20 ^h : 59'0 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	43.6	+8 22.6	111	24.5	+27 44.8	60 N	19 09	19 55	20 54	6 36 97	3 00 30		
1	194	43.8	23.5	125	46.6 31	43.5 13	58	19 04	46	41	7 09 89	2 27 38		
2	209	44.0	24.5	140	08.7 31	41.9 16	56	18 59	39	29	33 85	2 02 43		
3	224	44.1	25.4	154	30.9 32	40.2 17	54	55	33	19	7 53 81	1 42 46		
4	239	44.3	26.3	168	53.2 33	38.3 19	52	51	27	11	8 10 78	25 48		
5	254	44.5	+8 27.2	183	15.5 33	+27 36.2 21	50	18 48	19 22	20 03	8 24 77	1 11 50		
6	269	44.6	+8 28.1	197	37.9 34	+27 33.9 23	45	18 41	19 11	19 48	8 53 73	0 42 52		
7	284	44.8	29.0	212	00.4 35	31.4 25	40	35	19 03	36	9 15 71	19 54		
8	299	45.0	30.0	226	22.9 35	28.7 27	35	30	18 55	26	34 69	0 00 56		
9	314	45.1	30.9	240	45.5 36	25.8 29	30	25	49	18	9 50 67	** ** **		
10	329	45.3	31.8	255	08.2 37	22.8 30	20	17	40	19 06	10 17 65	** ** **		
11	344	45.4	+8 32.7	269	30.9 37	+27 19.5 33	10 N	18 10	18 32	18 57	10 41 62	23 53 55		
12	359	45.6	+8 33.6	283	53.8 39	+27 16.1 34	0	18 04	18 25	18 49	11 03 60	23 32 58		
13	14	45.8	34.5	298	16.7 39	12.5 36	10 S	17 58	19	44	25 57	23 11 61		
14	29	45.9	35.5	312	39.7 40	08.7 38	20	52	14	40	11 48 55	22 48 64		
15	44	46.1	36.4	327	02.7 40	04.8 39	30	45	09	37	12 15 53	22 67		
16	59	46.3	37.3	341	25.9 42	+27 00.6 42	35	41	06	35	31 51	22 06 70		
17	74	46.4	+8 38.2	355	49.1 42	+26 56.3 43	40	17 36	18 03	18 35	12 50 48	21 48 73		
18	89	46.6	+8 39.1	10	12.5 44	+26 51.8 45	45	17 31	18 00	18 34	13 12 46	21 26 76		
19	104	46.7	40.0	24	35.9 44	47.1 47	50	24	17 57	34	41 41	20 58 81		
20	119	46.9	40.9	38	59.4 45	42.3 48	52	22	56	35	13 55 39	45 82		
21	134	47.1	41.9	53	23.1 47	37.3 50	54	18	54	35	14 11 36	29 86		
22	149	47.2	42.8	67	46.8 47	32.1 52	56	15	53	35	30 32	20 10 90		
23	164	47.4	43.7	82	10.6 48	26.7 54	58	11	51	36	14 54 26	19 47 96		
24	179	47.6	+8 44.6	96	34.5 49	+26 21.2 55	60 S	17 07	17 49	18 37	15 25 17	19 16 105		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 10 ^h 39 ^m 9		Mag: -3.8 PMG: 11 ^h 06 ^m		Mag: +1.0 PMG: 17 ^h 48 ^m		Mag: -2.3 PMG: 6 ^h 12 ^m		Mag: +0.4 PMG: 20 ^h 57 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	°	°	'	°	°	°	'				
0	199	34.9	193	35.1	+0 57.4	92	40.4	+24 40.9	266	45.3	-21 46.2	44	48.9	+12 26.3
1	214	37.4	208	34.7	58.6	107	41.5	40.7	281	47.6	46.1	59	51.4	26.3
2	229	39.9	223	34.4	+0 59.9	122	42.7	40.6	296	49.8	46.1	74	54.0	26.3
3	244	42.3	238	34.0	+1 01.1	137	43.9	40.4	311	52.0	46.1	89	56.5	26.3
4	259	44.8	253	33.6	02.3	152	45.0	40.2	326	54.3	46.1	104	59.1	26.4
5	274	47.2	268	33.3	+1 03.5	167	46.2	+24 40.0	341	56.5	-21 46.0	120	01.7	+12 26.4
6	289	49.7	283	32.9	+1 04.8	182	47.4	+24 39.9	356	58.7	-21 46.0	135	04.2	+12 26.4
7	304	52.2	298	32.5	06.0	197	48.5	39.7	12	01.0	46.0	150	06.8	26.5
8	319	54.6	313	32.2	07.2	212	49.7	39.5	27	03.2	45.9	165	09.3	26.5
9	334	57.1	328	31.8	08.4	227	50.9	39.3	42	05.5	45.9	180	11.9	26.5
10	349	59.6	343	31.4	09.6	242	52.0	39.2	57	07.7	45.9	195	14.4	26.6
11	5	02.0	358	31.1	+1 10.9	257	53.2	+24 39.0	72	09.9	-21 45.9	210	17.0	+12 26.6
12	20	04.5	13	30.7	+1 12.1	272	54.3	+24 38.8	87	12.2	-21 45.8	225	19.5	+12 26.6
13	35	07.0	28	30.3	13.3	287	55.5	38.6	102	14.4	45.8	240	22.1	26.6
14	50	09.4	43	30.0	14.5	302	56.7	38.5	117	16.7	45.8	255	24.6	26.7
15	65	11.9	58	29.6	15.8	317	57.8	38.3	132	18.9	45.8	270	27.2	26.7
16	80	14.4	73	29.2	17.0	332	59.0	38.1	147	21.1	45.7	285	29.8	26.7
17	95	16.8	88	28.9	+1 18.2	348	00.2	+24 37.9	162	23.4	-21 45.7	300	32.3	+12 26.8
18	110	19.3	103	28.5	+1 19.4	3	01.3	+24 37.7	177	25.6	-21 45.7	315	34.9	+12 26.8
19	125	21.7	118	28.1	20.6	18	02.5	37.6	192	27.9	45.6	330	37.4	26.8
20	140	24.2	133	27.8	21.9	33	03.7	37.4	207	30.1	45.6	345	40.0	26.9
21	155	26.7	148	27.4	23.1	48	04.8	37.2	222	32.3	45.6	0	42.5	26.9
22	170	29.1	163	27.0	24.3	63	06.0	37.0	237	34.6	45.6	15	45.1	26.9
23	185	31.6	178	26.6	25.5	78	07.1	36.8	252	36.8	45.5	30	47.6	26.9
24	200	34.1	193	26.3	+1 26.8	93	08.3	+24 36.7	267	39.1	-21 45.5	45	50.2	+12 27.0
Dif	—		-4 +12		+12 -2		-2		+22 0		0		+26 0	

UT	SOL			 LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'0 PMG: 12 ^h 00 ^m 7			Edad: 5 ^d 8 SD: 16'0 PMG: 18 ^h 16 ^m	PHE { 4 ^h : 58'8 12 ^h : 58'6 20 ^h : 58'3 R°: 54 ^m	Dif											
	hG ☉	Dec					hG ☾	Dif		Dec	Dif		Náutico	Civil	Hora	R°	Hora
h	o	'	o	o	'	o	o	'	o	h	m	h	m	h	m	h	m
0	179	47.6	+8 44.6	96	34.5	+26 21.2	60 N	3 07	4 06	4 51	8 13	105	3 30	13			
1	194	47.7		110	58.5	15.5	57	20	14	4 57	38	97	3 05	20			
2	209	47.9		125	22.6	51	58	32	22	5 01	8	58	91	2 45	25		
3	224	48.0		139	46.9	53	60	42	28	06	9	14	87	28	29		
4	239	48.2		154	11.2	+25 57.5	62	50	34	09	28	84	13	32			
5	254	48.4	+8 49.1	168	35.6	+25 51.1	64	3 58	4 39	5 13	9	41	81	2 01	34		
6	269	48.5	+8 50.1	183	00.1	+25 44.6	65	4 13	4 50	5 20	10	06	76	1 34	40		
7	284	48.7		197	24.8	57	66	25	4 59	26	26	72	1 13	44			
8	299	48.8		211	49.5	57	68	35	5 06	32	43	69	0 56	46			
9	314	49.0		226	14.4	59	70	43	12	36	10	57	67	41	48		
10	329	49.2		240	39.4	60	71	4 56	22	44	11	22	62	0 15	52		
11	344	49.3	+8 54.6	255	04.5	+25 09.8	73	5 05	5 30	5 51	11	43	59	** ** *	**		
12	359	49.5	+8 55.5	269	29.7	62	74	5 12	5 36	5 57	12	03	55	** ** *	**		
13	14	49.6		283	55.0	63	75	18	42	6 04	22	52		** ** *	**		
14	29	49.8		298	20.4	64	77	20	22	48	10	43	49	23	52	61	
15	44	50.0		312	45.9	65	79	25	53	17	13	08	43	29	66		
16	59	50.1	+8 59.1	327	11.6	67	80	27	56	22	22	41		16	68		
17	74	50.3	+9 00.1	341	37.4	68	81	5 28	5 59	6 26	13	38	38	23	01	71	
18	89	50.4	+9 01.0	356	03.2	68	83	5 28	6 02	6 32	13	58	34	22	42	76	
19	104	50.6		10	29.2	70	84	28	06	38	14	22	29	19	81		
20	119	50.8		24	55.4	72	85	28	07	41	34	26		22	07	85	
21	134	50.9		39	21.6	72	87	28	09	44	14	47	23	21	55	88	
22	149	51.1		53	47.9	73	88	27	10	48	15	02	19	40	92		
23	164	51.2		68	14.4	75	89	27	12	52	20	14		23	97		
24	179	51.4	+9 06.4	82	41.0	76	91	5 26	6 14	6 56	15	42	7	21	01	105	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG 10 ^h 36 ^m 0		Mag: -3.8 PMG: 11 ^h 07 ^m			Mag: +1.0 PMG: 17 ^h 46 ^m			Mag: -2.3 PMG: 6 ^h 08 ^m			Mag: +0.4 PMG: 20 ^h 53 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	o	'	o	o	'	o	o	'	o	o	'	o	o	'
0	200	34.1	193	26.3	+1 26.8	93	08.3	+24 36.7	267	39.1	-21 45.5	45	50.2	+12 27.0
1	215	36.5	208	25.9	28.0	108	09.5	36.5	282	41.3	45.5	60	52.7	27.0
2	230	39.0	223	25.5	29.2	123	10.6	36.3	297	43.6	45.4	75	55.3	27.0
3	245	41.5	238	25.2	30.4	138	11.8	36.1	312	45.8	45.4	90	57.8	27.1
4	260	43.9	253	24.8	31.6	153	13.0	36.0	327	48.0	45.4	106	00.4	27.1
5	275	46.4	268	24.4	+1 32.9	168	14.1	+24 35.8	342	50.3	-21 45.4	121	02.9	+12 27.1
6	290	48.9	283	24.1	+1 34.1	183	15.3	+24 35.6	357	52.5	-21 45.3	136	05.5	+12 27.1
7	305	51.3	298	23.7	35.3	198	16.4	35.4	12	54.8	45.3	151	08.0	27.2
8	320	53.8	313	23.3	36.5	213	17.6	35.2	27	57.0	45.3	166	10.6	27.2
9	335	56.2	328	23.0	37.8	228	18.8	35.0	42	59.3	45.3	181	13.1	27.2
10	350	58.7	343	22.6	39.0	243	19.9	34.9	58	01.5	45.2	196	15.7	27.3
11	6	01.2	358	22.2	+1 40.2	258	21.1	+24 34.7	73	03.8	-21 45.2	211	18.2	+12 27.3
12	21	03.6	13	21.9	+1 41.4	273	22.2	+24 34.5	88	06.0	-21 45.2	226	20.8	+12 27.3
13	36	06.1	28	21.5	42.6	288	23.4	34.3	103	08.2	45.2	241	23.3	27.3
14	51	08.6	43	21.1	43.9	303	24.5	34.1	118	10.5	45.1	256	25.9	27.4
15	66	11.0	58	20.8	45.1	318	25.7	34.0	133	12.7	45.1	271	28.4	27.4
16	81	13.5	73	20.4	46.3	333	26.9	33.8	148	15.0	45.1	286	31.0	27.4
17	96	16.0	88	20.0	+1 47.5	348	28.0	+24 33.6	163	17.2	-21 45.0	301	33.5	+12 27.5
18	111	18.4	103	19.7	+1 48.8	3	29.2	+24 33.4	178	19.5	-21 45.0	316	36.1	+12 27.5
19	126	20.9	118	19.3	50.0	18	30.3	33.2	193	21.7	45.0	331	38.6	27.5
20	141	23.3	133	18.9	51.2	33	31.5	33.0	208	24.0	45.0	346	41.2	27.5
21	156	25.8	148	18.6	52.4	48	32.7	32.9	223	26.2	44.9	1	43.7	27.6
22	171	28.3	163	18.2	53.6	63	33.8	32.7	238	28.5	44.9	16	46.3	27.6
23	186	30.7	178	17.8	54.9	78	35.0	32.5	253	30.7	44.9	31	48.8	27.6
24	201	33.2	193	17.5	+1 56.1	93	36.1	+24 32.3	268	33.0	-21 44.9	46	51.4	+12 27.7
Dif	—		-4 +12			+12 -2			+22 0			+26 0		

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15°9 PMG: 12 ^h 00 ^m 4			Edad: 6 ^d 8 PHE { 4 ^h : 58'1 12 ^h : 57'9 20 ^h : 57'6 R°: 50 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	179	51.4	+9 06.4	82	41.0	+23 22.5	60 N	19 14	20 00	21 01	9 58 101	3 43 5		
1	194	51.5	07.3	97	07.7	13.3	58	08	19 51	20 47	10 15 95	25 11		
2	209	51.7	08.2	111	34.5	+23 04.0	56	19 03	44	34	29 90	3 10 15		
3	224	51.9	09.1	126	01.5	+22 54.6	54	18 59	37	24	41 87	2 57 19		
4	239	52.0	10.0	140	28.5	45.0	52	55	31	15	10 52 84	45 23		
5	254	52.2	+9 10.9	154	55.7	+22 35.3	50	18 51	19 25	20 07	11 02 80	2 35 25		
6	269	52.3	+9 11.8	169	23.0	+22 25.5	45	18 43	19 14	19 51	11 22 75	2 14 30		
7	284	52.5	12.7	183	50.4	15.6	40	37	19 05	38	38 71	1 57 34		
8	299	52.7	13.6	198	17.9	+22 05.6	35	31	18 57	28	11 52 67	42 37		
9	314	52.8	14.5	212	45.6	+21 55.4	30	26	51	20	12 04 64	29 40		
10	329	53.0	15.4	227	13.3	45.2	20	18	40	19 06	24 59	1 07 45		
11	344	53.1	+9 16.3	241	41.2	+21 34.8	10 N	18 10	18 32	18 57	12 42 54	0 48 49		
12	359	53.3	+9 17.2	256	09.2	+21 24.3	0	18 04	18 25	18 49	12 58 50	0 30 56		
13	14	53.4	18.1	270	37.3	13.7	10 S	17 57	18	43	13 14 47	0 12 56		
14	29	53.6	19.0	285	05.5	+21 03.0	20	50	12	38	32 42	** ** *		
15	44	53.8	20.0	299	33.9	+20 52.3	30	42	07	34	13 51 37	** ** *		
16	59	53.9	20.9	314	02.3	41.4	35	38	04	33	14 03 34	** ** *		
17	74	54.1	+9 21.8	328	30.9	+20 30.4	40	17 33	18 00	18 32	14 16 31	** ** *		
18	89	54.2	+9 22.7	342	59.6	+20 19.3	45	17 27	17 57	18 31	14 32 26	23 58 74		
19	104	54.4	23.6	357	28.4	+20 08.1	50	20	53	30	14 51 21	40 80		
20	119	54.5	24.5	11	57.3	+19 56.8	52	17	51	30	15 00 18	32 82		
21	134	54.7	25.4	26	26.3	45.4	54	14	50	30	10 15	23 85		
22	149	54.8	26.3	40	55.4	33.9	56	10	48	31	21 12	12 89		
23	164	55.0	27.2	55	24.7	22.4	58	06	46	31	34 8	23 00 93		
24	179	55.2	+9 28.1	69	54.0	+19 10.7	60 S	17 01	17 43	18 31	15 49 3	22 46 98		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 10 ^h 32 ^m 1		Mag: -3.8 PMG: 11 ^h 07 ^m			Mag: +1.0 PMG: 17 ^h 44 ^m			Mag: -2.3 PMG: 6 ^h 05 ^m			Mag: +0.5 PMG: 20 ^h 49 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	201	33.2	193	17.5	+1 56.1	93	36.1	+24 32.3	268	33.0	-21 44.9	46	51.4	+12 27.7
1	216	35.7	208	17.1	57.3	108	37.3	32.1	283	35.2	44.8	61	53.9	27.7
2	231	38.1	223	16.7	58.5	123	38.4	31.9	298	37.5	44.8	76	56.5	27.7
3	246	40.6	238	16.3	+1 59.7	138	39.6	31.8	313	39.7	44.8	91	59.0	27.7
4	261	43.1	253	16.0	+2 01.0	153	40.7	31.6	328	42.0	44.8	107	01.6	27.8
5	276	45.5	268	15.6	+2 02.2	168	41.9	+24 31.4	343	44.2	-21 44.7	122	04.1	+12 27.8
6	291	48.0	283	15.2	+2 03.4	183	43.1	+24 31.2	358	46.5	-21 44.7	137	06.7	+12 27.8
7	306	50.5	298	14.9	04.6	198	44.2	31.0	13	48.7	44.7	152	09.2	27.8
8	321	52.9	313	14.5	05.9	213	45.4	30.8	28	51.0	44.6	167	11.8	27.9
9	336	55.4	328	14.1	07.1	228	46.5	30.6	43	53.3	44.6	182	14.3	27.9
10	351	57.8	343	13.8	08.3	243	47.7	30.5	58	55.5	44.6	197	16.8	27.9
11	7	00.3	358	13.4	+2 09.5	258	48.8	+24 30.3	73	57.8	-21 44.6	212	19.4	+12 28.0
12	22	02.8	13	13.0	+2 10.7	273	50.0	+24 30.1	89	00.0	-21 44.5	227	21.9	+12 28.0
13	37	05.2	28	12.7	12.0	288	51.1	29.9	104	02.3	44.5	242	24.5	28.0
14	52	07.7	43	12.3	13.2	303	52.3	29.7	119	04.5	44.5	257	27.0	28.0
15	67	10.2	58	11.9	14.4	318	53.4	29.5	134	06.8	44.5	272	29.6	28.1
16	82	12.6	73	11.6	15.6	333	54.6	29.3	149	09.0	44.4	287	32.1	28.1
17	97	15.1	88	11.2	+2 16.8	348	55.7	+24 29.2	164	11.3	-21 44.4	302	34.7	+12 28.1
18	112	17.6	103	10.8	+2 18.1	3	56.9	+24 29.0	179	13.5	-21 44.4	317	37.2	+12 28.1
19	127	20.0	118	10.5	19.3	18	58.0	28.8	194	15.8	44.4	332	39.8	28.2
20	142	22.5	133	10.1	20.5	33	59.2	28.6	209	18.1	44.3	347	42.3	28.2
21	157	25.0	148	09.7	21.7	49	00.3	28.4	224	20.3	44.3	2	44.9	28.2
22	172	27.4	163	09.3	22.9	64	01.5	28.2	239	22.6	44.3	17	47.4	28.2
23	187	29.9	178	09.0	24.2	79	02.7	28.0	254	24.8	44.3	32	49.9	28.3
24	202	32.3	193	08.6	+2 25.4	94	03.8	+24 27.8	269	27.1	-21 44.2	47	52.5	+12 28.3
Dif	—		-4	+12		+12	-2		+23		0	+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 2			Edad: 7 ^d 8 SD: 15°7 PMG: 20 ^h 00 ^m	PHE { 4 ^h : 57°4 12 ^h : 57°2 20 ^h : 57°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	m	
0	179	55.2	+9	28.1	69	54.0	+19	10.7	60 N	2 59	4 00	4 45	11 39	94	3 48	2	
1	194	55.3		29.0	84	23.5 ¹⁰⁵	+18	59.0 ¹¹⁷	58	3 13	08	51	50	90	36	6	
2	209	55.5		29.9	98	53.1 ¹⁰⁶		47.2 ¹¹⁸	56	25	16	4 56	11 59	87	25	10	
3	224	55.6		30.7	113	22.7 ¹⁰⁶		35.3 ¹¹⁹	54	36	23	5 01	12 08	83	16	13	
4	239	55.8		31.6	127	52.5 ¹⁰⁸		23.3 ¹²⁰	52	45	29	05	16	79	08	16	
5	254	55.9	+9	32.5	142	22.4 ¹⁰⁹	+18	11.2 ¹²¹	50	3 53	4 35	5 09	12 22	78	3 00	19	
6	269	56.1	+9	33.4	156	52.4 ¹¹⁰	+17	59.0 ¹²²	45	4 09	4 46	5 17	12 37	72	2 44	24	
7	284	56.2		34.3	171	22.5 ¹¹¹		46.8 ¹²²	40	22	4 55	23	49	67	31	28	
8	299	56.4		35.2	185	52.7 ¹¹²		34.5 ¹²³	35	32	5 03	29	12 59	64	19	32	
9	314	56.5		36.1	200	23.0 ¹¹³		22.1 ¹²⁴	30	41	10	34	13 08	60	2 09	35	
10	329	56.7		37.0	214	53.4 ¹¹⁴	+17	09.6 ¹²⁵	20	4 54	20	43	23	55	1 52	40	
11	344	56.8	+9	37.9	229	23.9 ¹¹⁵	+16	57.1 ¹²⁵	10 N	5 04	5 29	5 50	13 36	51	1 37	44	
12	359	57.0	+9	38.8	243	54.5 ¹¹⁶	+16	44.5 ¹²⁶	0	5 12	5 36	5 57	13 48	47	1 23	48	
13	14	57.2		39.7	258	25.2 ¹¹⁷		31.8 ¹²⁷	10 S	18	42	6 04	14 01	42	1 08	53	
14	29	57.3		40.6	272	56.0 ¹¹⁸		19.1 ¹²⁷	20	23	48	11	14	37	0 53	57	
15	44	57.5		41.5	287	26.9 ¹¹⁹	+16	06.3 ¹²⁸	30	27	54	19	28	33	35	62	
16	59	57.6		42.4	301	57.9 ¹²⁰	+15	53.4 ¹²⁹	35	28	5 58	23	37	29	24	66	
17	74	57.8	+9	43.3	316	29.0 ¹²¹	+15	40.5 ¹²⁹	40	5 29	6 01	6 28	14 47	25	0 12	70	
18	89	57.9	+9	44.2	331	00.2 ¹²²	+15	27.5 ¹³⁰	45	5 30	6 04	6 34	14 58	22	** ** *	**	
19	104	58.1		45.1	345	31.4 ¹²²		14.4 ¹³¹	50	31	08	41	15 12	16	** ** *	**	
20	119	58.2		46.0	0	02.8 ¹²⁴	+15	01.3 ¹³¹	52	31	10	44	18	14	** ** *	**	
21	134	58.4		46.9	14	34.3 ¹²⁵	+14	48.1 ¹³²	54	31	12	48	25	11	** ** *	**	
22	149	58.5		47.8	29	05.8 ¹²⁵		34.8 ¹³³	56	31	14	52	33	8	** ** *	**	
23	164	58.7		48.7	43	37.4 ¹²⁶		21.6 ¹³²	58	31	16	6 56	42	5	** ** *	**	
24	179	58.8	+9	49.6	58	09.1 ¹²⁷	+14	08.2 ¹³⁴	60 S	5 30	6 19	7 01	15 52	1	** ** *	**	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG 10 ^h 28 ^m 1		Mag: -3.8 PMG: 11 ^h 08 ^m			Mag: +1.0 PMG: 17 ^h 42 ^m			Mag: -2.3 PMG: 6 ^h 01 ^m			Mag: +0.5 PMG: 20 ^h 45 ^m					
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	202	32.3	193	08.6	+2	25.4	94	03.8	+24	27.8	269	27.1	-21	44.2	47	52.5	
1	217	34.8	208	08.2		26.6	109	05.0		27.7	284	29.3		44.2	62	55.0	
2	232	37.3	223	07.9		27.8	124	06.1		27.5	299	31.6		44.2	77	57.6	
3	247	39.7	238	07.5		29.0	139	07.3		27.3	314	33.9		44.2	93	00.1	
4	262	42.2	253	07.1		30.3	154	08.4		27.1	329	36.1		44.1	108	02.7	
5	277	44.7	268	06.8	+2	31.5	169	09.6	+24	26.9	344	38.4	-21	44.1	123	05.2	
6	292	47.1	283	06.4	+2	32.7	184	10.7	+24	26.7	359	40.6	-21	44.1	138	07.7	
7	307	49.6	298	06.0		33.9	199	11.9		26.5	14	42.9		44.1	153	10.3	
8	322	52.1	313	05.7		35.1	214	13.0		26.3	29	45.2		44.0	168	12.8	
9	337	54.5	328	05.3		36.4	229	14.1		26.1	44	47.4		44.0	183	15.4	
10	352	57.0	343	04.9		37.6	244	15.3		25.9	59	49.7		44.0	198	17.9	
11	7	59.4	358	04.5	+2	38.8	259	16.4	+24	25.8	74	51.9	-21	44.0	213	20.5	
12	23	01.9	13	04.2	+2	40.0	274	17.6	+24	25.6	89	54.2	-21	43.9	228	23.0	
13	38	04.4	28	03.8		41.2	289	18.7		25.4	104	56.5		43.9	243	25.5	
14	53	06.8	43	03.4		42.5	304	19.9		25.2	119	58.7		43.9	258	28.1	
15	68	09.3	58	03.1		43.7	319	21.0		25.0	135	01.0		43.9	273	30.6	
16	83	11.8	73	02.7		44.9	334	22.2		24.8	150	03.2		43.8	288	33.2	
17	98	14.2	88	02.3	+2	46.1	349	23.3	+24	24.6	165	05.5	-21	43.8	303	35.7	
18	113	16.7	103	02.0	+2	47.3	4	24.5	+24	24.4	180	07.8	-21	43.8	318	38.3	
19	128	19.2	118	01.6		48.6	19	25.6		24.2	195	10.0		43.8	333	40.8	
20	143	21.6	133	01.2		49.8	34	26.8		24.0	210	12.3		43.7	348	43.3	
21	158	24.1	148	00.8		51.0	49	27.9		23.8	225	14.6		43.7	3	45.9	
22	173	26.6	163	00.5		52.2	64	29.1		23.6	240	16.8		43.7	18	48.4	
23	188	29.0	178	00.1		53.4	79	30.2		23.4	255	19.1		43.7	33	51.0	
24	203	31.5	192	59.7	+2	54.6	94	31.4	+24	23.3	270	21.4	-21	43.6	48	53.5	
Dif	—		-4			+12	+11		-2		+23		0		+25		0

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'9 PMG: 12 ^h 00 ^m 0			Edad: 8 ^d 8 PHE { SD: 15'5 PMG: 20 ^h 45 ^m 4 ^h : 56'8 12 ^h : 56'6 20 ^h : 56'4 R°: 43 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	°	'	°	°	h m	h m	h m	h m m	h m m	h m m	
0	179	58.8	+9 49.6	58	09.1	+14 08.2	60 N	19 19	20 06	21 08	13 13 90		3 50 1	
1	194	59.0		72	40.9 ¹²⁸	+13 54.8 ¹³⁴	58	13	19 56	20 53	20 85		42 5	
2	209	59.1	51.3	87	12.8 ¹²⁹	41.3 ¹³⁵	56	08	48	40	26 82		35 8	
3	224	59.3	52.2	101	44.8 ¹³⁰	27.8 ¹³⁵	54	19 03	41	29	31 79		29 1	
4	239	59.4	53.1	116	16.9 ¹³¹	14.3 ¹³⁵	52	18 58	34	19	35 77		24 13	
5	254	59.6	+9 54.0	130	49.0 ¹³¹	+13 00.7 ¹³⁶	50	18 54	19 29	20 11	13 40 74		3 19 15	
6	269	59.7	+9 54.9	145	21.2 ¹³²	+12 47.0 ¹³⁷	45	18 46	19 17	19 54	13 49 69		3 08 20	
7	284	59.9	55.8	159	53.5 ¹³³	33.3 ¹³⁷	40	39	19 07	41	13 56 65		2 59 24	
8	300	00.0	56.7	174	25.9 ¹³⁴	19.6 ¹³⁷	35	33	18 59	30	14 03 61		51 27	
9	315	00.2	57.6	188	58.3 ¹³⁴	+12 05.8 ¹³⁸	30	27	52	21	08 58		44 30	
10	330	00.3	58.5	203	30.9 ¹³⁶	+11 52.0 ¹³⁸	20	18	41	19 07	18 53		32 36	
11	345	00.5	+9 59.3	218	03.5 ¹³⁶	+11 38.1 ¹³⁹	10 N	18 11	18 32	18 57	14 27 48		2 21 41	
12	0	00.6	+10 00.2	232	36.1 ¹³⁶	+11 24.2 ¹³⁹	0	18 03	18 24	18 49	14 35 43		2 11 45	
13	15	00.8	01.1	247	08.9 ¹³⁸	+11 10.2 ¹⁴⁰	10 S	17 56	17	42	43 39		2 01 49	
14	30	00.9	02.0	261	41.7 ¹³⁸	+10 56.2 ¹⁴⁰	20	49	11	37	14 51 35		1 50 54	
15	45	01.1	02.9	276	14.6 ¹³⁹	42.2 ¹⁴⁰	30	40	04	32	15 01 29		37 60	
16	60	01.2	03.8	290	47.6 ¹⁴⁰	28.2 ¹⁴⁰	35	35	18 01	30	06 26		30 63	
17	75	01.4	+10 04.7	305	20.6 ¹⁴⁰	+10 14.1 ¹⁴¹	40	17 30	17 57	18 29	15 12 23		1 22 66	
18	90	01.5	+10 05.6	319	53.7 ¹⁴¹	+9 59.9 ¹⁴²	45	17 24	17 54	18 28	15 20 18		1 12 70	
19	105	01.7	06.5	334	26.8 ¹⁴¹	45.8 ¹⁴¹	50	16	49	27	28 14		1 00 76	
20	120	01.8	07.3	349	00.0 ¹⁴²	31.6 ¹⁴²	52	13	47	26	32 12		0 54 79	
21	135	02.0	08.2	3	33.3 ¹⁴³	17.4 ¹⁴²	54	09	45	26	36 10		48 81	
22	150	02.1	09.1	18	06.7 ¹⁴⁴	+9 03.1 ¹⁴³	56	05	43	26	41 7		41 84	
23	165	02.3	10.0	32	40.1 ¹⁴⁴	+8 48.9 ¹⁴²	58	17 00	41	26	47 3		33 88	
24	180	02.4	+10 10.9	47	13.5 ¹⁴⁴	+8 34.6 ¹⁴³	60 S	16 55	17 38	18 26	15 53 0		0 24 92	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 10 ^h 24 ^m 2		Mag: -3.8 PMG: 11 ^h 08 ^m		Mag: +1.0 PMG: 17 ^h 41 ^m		Mag: -2.3 PMG: 5 ^h 58 ^m		Mag: +0.5 PMG: 20 ^h 41 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	203	31.5	192	59.7	+2 54.6	94	31.4	+24 23.3	270	21.4	-21 43.6	48	53.5	+12 28.9
1	218	33.9	207	59.4	55.9	109	32.5	23.1	285	23.6	43.6	63	56.0	28.9
2	233	36.4	222	59.0	57.1	124	33.6	22.9	300	25.9	43.6	78	58.6	29.0
3	248	38.9	237	58.6	58.3	139	34.8	22.7	315	28.2	43.6	94	01.1	29.0
4	263	41.3	252	58.2	+2 59.5	154	35.9	22.5	330	30.4	43.5	109	03.7	29.0
5	278	43.8	267	57.9	+3 00.7	169	37.1	+24 22.3	345	32.7	-21 43.5	124	06.2	+12 29.0
6	293	46.3	282	57.5	+3 02.0	184	38.2	+24 22.1	0	35.0	-21 43.5	139	08.7	+12 29.0
7	308	48.7	297	57.1	03.2	199	39.4	21.9	15	37.2	43.5	154	11.3	29.1
8	323	51.2	312	56.8	04.4	214	40.5	21.7	30	39.5	43.4	169	13.8	29.1
9	338	53.7	327	56.4	05.6	229	41.7	21.5	45	41.8	43.4	184	16.4	29.1
10	353	56.1	342	56.0	06.8	244	42.8	21.3	60	44.0	43.4	199	18.9	29.1
11	8	58.6	357	55.6	+3 08.0	259	43.9	+24 21.1	75	46.3	-21 43.4	214	21.4	+12 29.2
12	24	01.1	12	55.3	+3 09.3	274	45.1	+24 20.9	90	48.6	-21 43.4	229	24.0	+12 29.2
13	39	03.5	27	54.9	10.5	289	46.2	20.7	105	50.8	43.3	244	26.5	29.2
14	54	06.0	42	54.5	11.7	304	47.4	20.5	120	53.1	43.3	259	29.0	29.2
15	69	08.4	57	54.2	12.9	319	48.5	20.3	135	55.4	43.3	274	31.6	29.3
16	84	10.9	72	53.8	14.1	334	49.7	20.1	150	57.6	43.3	289	34.1	29.3
17	99	13.4	87	53.4	+3 15.3	349	50.8	+24 19.9	165	59.9	-21 43.2	304	36.7	+12 29.3
18	114	15.8	102	53.0	+3 16.6	4	51.9	+24 19.7	181	02.2	-21 43.2	319	39.2	+12 29.3
19	129	18.3	117	52.7	17.8	19	53.1	19.5	196	04.5	43.2	334	41.7	29.4
20	144	20.8	132	52.3	19.0	34	54.2	19.3	211	06.7	43.2	349	44.3	29.4
21	159	23.2	147	51.9	20.2	49	55.4	19.2	226	09.0	43.1	4	46.8	29.4
22	174	25.7	162	51.6	21.4	64	56.5	19.0	241	11.3	43.1	19	49.3	29.4
23	189	28.2	177	51.2	22.6	79	57.6	18.8	256	13.5	43.1	34	51.9	29.4
24	204	30.6	192	50.8	+3 23.9	94	58.8	+24 18.6	271	15.8	-21 43.1	49	54.4	+12 29.5
Dif	—		-4 +12		+11 -2		+23 0		+25 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 7				Edad: 9 ^d 8 PHE { 4 ^h : 56'2 12 ^h : 56'0 20 ^h : 55'9 PMG: 21 ^h 28 ^m R°: 42 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	180	02.4	+10	10.9	47	13.5	+8	34.6	60 N	2	51	3	53	4	40	14	43	86
1	195	02.6		11.8	61	47.1 ¹⁴⁶		20.2 ¹⁴⁴	58	3	06	4	03	46		45	83	47
2	210	02.7		12.7	76	20.6 ¹⁴⁵	+8	05.9 ¹⁴³	56	19		11	51		48	79	43	
3	225	02.9		13.5	90	54.3 ¹⁴⁷	+7	51.5 ¹⁴⁴	54	30		18	4	56	50	77	40	
4	240	03.0		14.4	105	28.0 ¹⁴⁷		37.1 ¹⁴⁴	52	40		25	5	01	52	74	37	
5	255	03.2	+10	15.3	120	01.7 ¹⁴⁷	+7	22.7 ¹⁴⁴	50	3	48	4	30	5	05	14	54	72
6	270	03.3	+10	16.2	134	35.5 ¹⁴⁸	+7	08.3 ¹⁴⁴	45	4	05	4	42	5	13	14	58	67
7	285	03.5		17.1	149	09.3 ¹⁴⁸	+6	53.8 ¹⁴⁵	40	19		4	52	20		15	01	63
8	300	03.6		18.0	163	43.2 ¹⁴⁹		39.4 ¹⁴⁴	35	29		5	00	26		04	59	18
9	315	03.8		18.8	178	17.2 ¹⁵⁰		24.9 ¹⁴⁵	30	38		07	32		06	57	14	29
10	330	03.9		19.7	192	51.2 ¹⁵⁰	+6	10.4 ¹⁴⁵	20	4	52	19		41		11	51	08
11	345	04.0	+10	20.6	207	25.2 ¹⁵⁰	+5	55.9 ¹⁴⁵	10 N	5	03	5	28	5	49	15	15	46
12	0	04.2	+10	21.5	221	59.3 ¹⁵¹	+5	41.3 ¹⁴⁶	0	5	11	5	35	5	56	15	18	42
13	15	04.3		22.4	236	33.4 ¹⁵¹		26.8 ¹⁴⁵	10 S	18		42	6	04		22	37	50
14	30	04.5		23.2	251	07.6 ¹⁵²	+5	12.2 ¹⁴⁶	20	23		49	11		26	32	44	
15	45	04.6		24.1	265	41.8 ¹⁵²	+4	57.7 ¹⁴⁵	30	28		56	20		30	27	37	
16	60	04.8		25.0	280	16.0 ¹⁵²		43.1 ¹⁴⁶	35	30		5	59	25		32	25	33
17	75	04.9	+10	25.9	294	50.3 ¹⁵³	+4	28.5 ¹⁴⁶	40	5	31	6	03	6	30	15	35	21
18	90	05.1	+10	26.8	309	24.6 ¹⁵³	+4	13.9 ¹⁴⁶	45	5	33	6	07	6	37	15	38	18
19	105	05.2		27.7	323	59.0 ¹⁵⁴	+3	59.3 ¹⁴⁶	50	34		11	44		42	13	16	
20	120	05.4		28.5	338	33.4 ¹⁵⁴		44.7 ¹⁴⁶	52	34		13	48		44	10	13	
21	135	05.5		29.4	353	07.8 ¹⁵⁴		30.1 ¹⁴⁶	54	34		16	52		46	8	09	
22	150	05.6		30.3	7	42.3 ¹⁵⁵		15.5 ¹⁴⁶	56	35		18	6	56	48	6	05	
23	165	05.8		31.2	22	16.8 ¹⁵⁵	+3	00.9 ¹⁴⁶	58	35		20	7	01	50	3	2	
24	180	05.9	+10	32.0	36	51.3 ¹⁵⁵	+2	46.3 ¹⁴⁶	60 S	5	35	6	23	7	06	15	53	0

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 10 ^h 20 ^m 3		Mag: -3.8 PMG: 11 ^h 09 ^m		Mag: +1.0 PMG: 17 ^h 39 ^m		Mag: -2.3 PMG: 5 ^h 54 ^m		Mag: +0.5 PMG: 20 ^h 37 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	204	30.6	192	50.8	+3	23.9	94	58.8	+24	18.6
1	219	33.1	207	50.4		25.1	109	59.9		18.4
2	234	35.5	222	50.1		26.3	125	01.1		18.2
3	249	38.0	237	49.7		27.5	140	02.2		18.0
4	264	40.5	252	49.3		28.7	155	03.3		17.8
5	279	42.9	267	48.9	+3	29.9	170	04.5	+24	17.6
6	294	45.4	282	48.6	+3	31.1	185	05.6	+24	17.4
7	309	47.9	297	48.2		32.4	200	06.8		17.2
8	324	50.3	312	47.8		33.6	215	07.9		17.0
9	339	52.8	327	47.5		34.8	230	09.0		16.8
10	354	55.3	342	47.1		36.0	245	10.2		16.6
11	9	57.7	357	46.7	+3	37.2	260	11.3	+24	16.4
12	25	00.2	12	46.3	+3	38.4	275	12.5	+24	16.2
13	40	02.7	27	46.0		39.7	290	13.6		16.0
14	55	05.1	42	45.6		40.9	305	14.7		15.8
15	70	07.6	57	45.2		42.1	320	15.9		15.6
16	85	10.0	72	44.8		43.3	335	17.0		15.4
17	100	12.5	87	44.5	+3	44.5	350	18.1	+24	15.2
18	115	15.0	102	44.1	+3	45.7	5	19.3	+24	15.0
19	130	17.4	117	43.7		46.9	20	20.4		14.8
20	145	19.9	132	43.3		48.2	35	21.6		14.6
21	160	22.4	147	43.0		49.4	50	22.7		14.4
22	175	24.8	162	42.6		50.6	65	23.8		14.1
23	190	27.3	177	42.2		51.8	80	25.0		13.9
24	205	29.8	192	41.8	+3	53.0	95	26.1	+24	13.7
Dif	—		-4		+12		+11		-2	

UT	SOL		LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 15'9		Edad: 10 ^d 8 PHE	SD: 15'2		R°: 41 ^m			Civil		Náutico	Hora	R°	Hora	R°			
	hG ☉	Dec		hG ☾	Dif				Dec	Dif								
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m					
0	180	05.9	+10	32.0	36	51.3	+2 46.3	60 N	19 24	20 11	21 16	16 09 85	3 51 0					
1	195	06.1		32.9	51	25.9 ¹⁵⁶	31.7 ¹⁴⁶	58	17	20 01	20 59	08 81	50 3					
2	210	06.2		33.8	66	00.4 ¹⁵⁵	17.1 ¹⁴⁶	56	12	19 53	45	07 79	49 6					
3	225	06.4		34.7	80	35.0 ¹⁵⁶	+2 02.4 ¹⁴⁷	54	06	45	34	07 75	48 9					
4	240	06.5		35.6	95	09.7 ¹⁵⁷	+1 47.8 ¹⁴⁶	52	19 02	38	24	06 73	48 10					
5	255	06.7	+10	36.4	109	44.3 ¹⁵⁶	+1 33.2 ¹⁴⁶	50	18 57	19 32	20 15	16 06 71	3 47 13					
6	270	06.8	+10	37.3	124	19.0 ¹⁵⁷	+1 18.6 ¹⁴⁶	45	18 48	19 19	19 57	16 05 66	3 46 17					
7	285	06.9		38.2	138	53.7 ¹⁵⁷	+1 04.0 ¹⁴⁶	40	41	09	43	04 62	45 21					
8	300	07.1		39.1	153	28.5 ¹⁵⁸	+0 49.4 ¹⁴⁶	35	34	19 01	32	03 59	44 24					
9	315	07.2		39.9	168	03.2 ¹⁵⁷	34.8 ¹⁴⁶	30	29	18 53	23	03 55	43 27					
10	330	07.4		40.8	182	38.0 ¹⁵⁸	20.2 ¹⁴⁶	20	19	42	19 08	02 50	41 33					
11	345	07.5	+10	41.7	197	12.8 ¹⁵⁸	+0 05.6 ¹⁴⁶	10 N	18 11	18 32	18 57	16 01 45	3 40 37					
12	0	07.7	+10	42.6	211	47.6 ¹⁵⁸	-0 08.9 ¹⁴⁵	0	18 03	18 24	18 48	16 00 41	3 38 42					
13	15	07.8		43.4	226	22.4 ¹⁵⁸	23.5 ¹⁴⁶	10 S	17 55	17	41	15 59 37	37 46					
14	30	07.9		44.3	240	57.3 ¹⁵⁹	38.0 ¹⁴⁵	20	47	09	35	58 33	35 51					
15	45	08.1		45.2	255	32.1 ¹⁵⁸	-0 52.6 ¹⁴⁶	30	38	18 02	30	57 28	34 55					
16	60	08.2		46.1	270	07.0 ¹⁵⁹	-1 07.1 ¹⁴⁵	35	33	17 59	28	57 24	33 59					
17	75	08.4	+10	46.9	284	41.9 ¹⁵⁹	-1 21.6 ¹⁴⁵	40	17 27	17 55	18 26	15 56 21	3 32 62					
18	90	08.5	+10	47.8	299	16.8 ¹⁵⁹	-1 36.1 ¹⁴⁵	45	17 20	17 50	18 24	15 56 17	3 30 67					
19	105	08.6		48.7	313	51.7 ¹⁵⁹	-1 50.6 ¹⁴⁵	50	12	45	23	55 13	29 71					
20	120	08.8		49.5	328	26.6 ¹⁵⁹	-2 05.0 ¹⁴⁴	52	09	43	22	54 11	28 73					
21	135	08.9		50.4	343	01.5 ¹⁵⁹	19.5 ¹⁴⁵	54	05	41	22	54 8	27 76					
22	150	09.1		51.3	357	36.4 ¹⁵⁹	33.9 ¹⁴⁴	56	17 00	38	21	54 6	26 79					
23	165	09.2		52.2	12	11.3 ¹⁵⁹	-2 48.3 ¹⁴⁴	58	16 55	36	21	53 3	25 82					
24	180	09.3	+10	53.0	26	46.3 ¹⁶⁰	-3 02.7 ¹⁴⁴	60 S	16 50	17 32	18 21	15 53 0	3 24 85					
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 10 ^h 16 ^m 3		Mag: -3.8 PMG: 11 ^h 09 ^m			Mag: +1.0 PMG: 17 ^h 37 ^m			Mag: -2.3 PMG: 5 ^h 50 ^m			Mag: +0.5 PMG: 20 ^h 33 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	205	29.8	192	41.8	+3	53.0	95	26.1	+24	13.7	272	10.5	-21	42.5	50	55.2	+12	30.0
1	220	32.2	207	41.5		54.2	110	27.2		13.5	287	12.7		42.5	65	57.8		30.0
2	235	34.7	222	41.1		55.4	125	28.4		13.3	302	15.0		42.5	81	00.3		30.0
3	250	37.1	237	40.7		56.6	140	29.5		13.1	317	17.3		42.5	96	02.8		30.1
4	265	39.6	252	40.3		57.9	155	30.6		12.9	332	19.6		42.4	111	05.4		30.1
5	280	42.1	267	40.0	+3	59.1	170	31.8	+24	12.7	347	21.9	-21	42.4	126	07.9	+12	30.1
6	295	44.5	282	39.6	+4	00.3	185	32.9	+24	12.5	2	24.2	-21	42.4	141	10.4	+12	30.1
7	310	47.0	297	39.2		01.5	200	34.0		12.3	17	26.4		42.4	156	13.0		30.1
8	325	49.5	312	38.8		02.7	215	35.2		12.1	32	28.7		42.3	171	15.5		30.2
9	340	51.9	327	38.5		03.9	230	36.3		11.9	47	31.0		42.3	186	18.0		30.2
10	355	54.4	342	38.1		05.1	245	37.4		11.7	62	33.3		42.3	201	20.6		30.2
11	10	56.9	357	37.7	+4	06.3	260	38.6	+24	11.5	77	35.6	-21	42.3	216	23.1	+12	30.2
12	25	59.3	12	37.3	+4	07.6	275	39.7	+24	11.3	92	37.9	-21	42.3	231	25.6	+12	30.3
13	41	01.8	27	37.0		08.8	290	40.8		11.1	107	40.1		42.2	246	28.2		30.3
14	56	04.3	42	36.6		10.0	305	42.0		10.9	122	42.4		42.2	261	30.7		30.3
15	71	06.7	57	36.2		11.2	320	43.1		10.7	137	44.7		42.2	276	33.2		30.3
16	86	09.2	72	35.8		12.4	335	44.2		10.5	152	47.0		42.2	291	35.7		30.3
17	101	11.6	87	35.4	+4	13.6	350	45.4	+24	10.3	167	49.3	-21	42.2	306	38.3	+12	30.4
18	116	14.1	102	35.1	+4	14.8	5	46.5	+24	10.1	182	51.6	-21	42.1	321	40.8	+12	30.4
19	131	16.6	117	34.7		16.0	20	47.6		09.8	197	53.9		42.1	336	43.3		30.4
20	146	19.0	132	34.3		17.2	35	48.8		09.6	212	56.1		42.1	351	45.9		30.4
21	161	21.5	147	33.9		18.5	50	49.9		09.4	227	58.4		42.1	6	48.4		30.4
22	176	24.0	162	33.6		19.7	65	51.0		09.2	243	00.7		42.0	21	50.9		30.5
23	191	26.4	177	33.2		20.9	80	52.2		09.0	258	03.0		42.0	36	53.4		30.5
24	206	28.9	192	32.8	+4	22.1	95	53.3	+24	08.8	273	05.3	-21	42.0	51	56.0	+12	30.5
Dif	—		-4		+12		+11		-2		+23		0		+25			0

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna									
	SD: 15 ^h 9 PMG: 11 ^h 59 ^m 3			Edad: 11 ^d 8 PHE SD: 15 ^h 1 PMG: 22 ^h 51 ^m																		
	hG ☉	Dec		hG ☾	Dif	Dec		Náutico	Civil		Hora	R°	Hora	R°								
h	°	'	°	°	'	°	°	h	m	h	m	h	m	m								
0	180	09.3	+10	53.0	26	46.3	-3	02.7	60 N	2	42	3	47	4	34	17	34	85	3	51	0	
1	195	09.5		53.9	41	21.2 ¹⁵⁹		17.1 ¹⁴⁴	58	2	59	3	57	40	29	82		53	3			
2	210	09.6		54.8	55	56.2 ¹⁶⁰		31.4 ¹⁴³	56	3	13	4	05	46	26	78		55	6			
3	225	09.8		55.6	70	31.1 ¹⁵⁹		-3	45.8 ¹⁴⁴	54	24	13	52	22	76		57					
4	240	09.9		56.5	85	06.0 ¹⁵⁹		-4	00.1 ¹⁴³	52	34	20	4	56	19	74		3	58	11		
5	255	10.0	+10	57.4	99	41.0 ¹⁶⁰		-4	14.4 ¹⁴³	50	3	43	4	26	5	01	17	17	71	4	00	13
6	270	10.2	+10	58.3	114	15.9 ¹⁵⁹		-4	28.6 ¹⁴²	45	4	01	4	39	5	10	17	11	66	4	03	18
7	285	10.3	+10	59.1	128	50.9 ¹⁶⁰		42.8 ¹⁴²	40	15	49	17	06	62	06	21						
8	300	10.5	+11	00.0	143	25.8 ¹⁵⁹		-4	57.0 ¹⁴²	35	27	4	58	24	17	02	58	08	25			
9	315	10.6	+11	00.9	158	00.7 ¹⁵⁹		-5	11.2 ¹⁴²	30	36	5	05	30	16	58	56	10	28			
10	330	10.7		01.7	172	35.7 ¹⁶⁰		25.4 ¹⁴²	20	4	51	17	40	52	50	14	32					
11	345	10.9	+11	02.6	187	10.6 ¹⁵⁹		-5	39.5 ¹⁴¹	10 N	5	02	5	27	5	48	16	46	46	4	17	37
12	0	11.0	+11	03.5	201	45.5 ¹⁵⁹		-5	53.6 ¹⁴¹	0	5	10	5	35	5	56	16	41	42	4	20	41
13	15	11.2		04.3	216	20.4 ¹⁵⁹		-6	07.6 ¹⁴⁰	10 S	18	42	6	04	36	38	23	45				
14	30	11.3		05.2	230	55.3 ¹⁵⁹		21.7 ¹⁴¹	20	24	50	12	31	33	26	50						
15	45	11.4		06.1	245	30.2 ¹⁵⁹		35.7 ¹⁴⁰	30	29	5	57	21	25	28	29	56					
16	60	11.6		06.9	260	05.0 ¹⁵⁸		-6	49.6 ¹³⁹	35	31	6	01	26	21	26	32	58				
17	75	11.7	+11	07.8	274	39.9 ¹⁵⁹		-7	03.6 ¹⁴⁰	40	5	33	6	05	6	32	16	17	23	4	34	62
18	90	11.8	+11	08.7	289	14.7 ¹⁵⁸		-7	17.5 ¹³⁹	45	5	35	6	09	6	39	16	13	18	4	37	66
19	105	12.0		09.5	303	49.6 ¹⁵⁹		31.3 ¹³⁸	50	37	14	47	08	13	40	71						
20	120	12.1		10.4	318	24.4 ¹⁵⁸		45.1 ¹³⁸	52	37	17	51	05	12	41	74						
21	135	12.3		11.2	332	59.2 ¹⁵⁸		-7	58.9 ¹³⁸	54	38	19	6	55	02	10	43	76				
22	150	12.4		12.1	347	34.0 ¹⁵⁸		-8	12.7 ¹³⁸	56	38	22	7	00	16	00	6	45	78			
23	165	12.5		13.0	2	08.7 ¹⁵⁷		26.4 ¹³⁷	58	39	24	05	15	56	4	47	82					
24	180	12.7	+11	13.8	16	43.5 ¹⁵⁸		-8	40.0 ¹³⁶	60 S	5	39	6	28	7	11	15	53	0	4	49	85
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO										
	PMG: 10 ^h 12 ^m 4		Mag: -3.8 PMG: 11 ^h 10 ^m			Mag: +1.1 PMG: 17 ^h 35 ^m			Mag: -2.3 PMG: 5 ^h 47 ^m			Mag: +0.5 PMG: 20 ^h 29 ^m										
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec									
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'								
0	206	28.9	192	32.8	+4	22.1	95	53.3	+24	08.8	273	05.3	-21	42.0	51	56.0	+12	30.5				
1	221	31.4	207	32.4		23.3	110	54.4		08.6	288	07.6		42.0	66	58.5		30.5				
2	236	33.8	222	32.1		24.5	125	55.6		08.4	303	09.9		42.0	82	01.0		30.5				
3	251	36.3	237	31.7		25.7	140	56.7		08.2	318	12.2		41.9	97	03.6		30.6				
4	266	38.8	252	31.3		26.9	155	57.8		08.0	333	14.4		41.9	112	06.1		30.6				
5	281	41.2	267	30.9	+4	28.1	170	59.0	+24	07.8	348	16.7	-21	41.9	127	08.6	+12	30.6				
6	296	43.7	282	30.5	+4	29.3	186	00.1	+24	07.6	3	19.0	-21	41.9	142	11.1	+12	30.6				
7	311	46.1	297	30.2		30.5	201	01.2		07.4	18	21.3		41.9	157	13.7		30.6				
8	326	48.6	312	29.8		31.8	216	02.3		07.1	33	23.6		41.8	172	16.2		30.6				
9	341	51.1	327	29.4		33.0	231	03.5		06.9	48	25.9		41.8	187	18.7		30.7				
10	356	53.5	342	29.0		34.2	246	04.6		06.7	63	28.2		41.8	202	21.3		30.7				
11	11	56.0	357	28.6	+4	35.4	261	05.7	+24	06.5	78	30.5	-21	41.8	217	23.8	+12	30.7				
12	26	58.5	12	28.3	+4	36.6	276	06.9	+24	06.3	93	32.8	-21	41.8	232	26.3	+12	30.7				
13	42	00.9	27	27.9		37.8	291	08.0		06.1	108	35.1		41.7	247	28.8		30.7				
14	57	03.4	42	27.5		39.0	306	09.1		05.9	123	37.4		41.7	262	31.4		30.8				
15	72	05.9	57	27.1		40.2	321	10.2		05.7	138	39.6		41.7	277	33.9		30.8				
16	87	08.3	72	26.7		41.4	336	11.4		05.5	153	41.9		41.7	292	36.4		30.8				
17	102	10.8	87	26.4	+4	42.6	351	12.5	+24	05.3	168	44.2	-21	41.7	307	38.9	+12	30.8				
18	117	13.2	102	26.0	+4	43.8	6	13.6	+24	05.0	183	46.5	-21	41.6	322	41.5	+12	30.8				
19	132	15.7	117	25.6		45.0	21	14.8		04.8	198	48.8		41.6	337	44.0		30.9				
20	147	18.2	132	25.2		46.2	36	15.9		04.6	213	51.1		41.6	352	46.5		30.9				
21	162	20.6	147	24.8		47.5	51	17.0		04.4	228	53.4		41.6	7	49.0		30.9				
22	177	23.1	162	24.5		48.7	66	18.1		04.2	243	55.7		41.5	22	51.6		30.9				
23	192	25.6	177	24.1		49.9	81	19.3		04.0	258	58.0		41.5	37	54.1		30.9				
24	207	28.0	192	23.7	+4	51.1	96	20.4	+24	03.8	274	00.3	-21	41.5	52	56.6	+12	30.9				
Dif	—		-4		+12	+11		-2	+23		0		+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 0				Edad: 12 ^d 8 PHE { 4 ^h : 54/8 12 ^h : 54/7 20 ^h : 54/6 R°: 44 ^m													
	hG ☉		Dec		hG ☾		Dif				Civil		Náutico		Hora R°		Hora R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	180	12.7	+11	13.8	16	43.5	-8	40.0	60 N	19	29	20	17	21	23	18	59 88	
1	195	12.8		14.7	31	18.2 ¹⁵⁷	-8	53.7 ¹³⁷	58	22	20	06	21	06	51	84	3 51 1	
2	210	12.9		15.6	45	52.9 ¹⁵⁷	-9	07.3 ¹³⁶	56	16	19	57	20	51	44	80	3 56 5	
3	225	13.1		16.4	60	27.6 ¹⁵⁷		20.8 ¹³⁵	54	10		49	39		38	77	4 01 8	
4	240	13.2		17.3	75	02.3 ¹⁵⁷		34.3 ¹³⁵	52	05		42	28		33	73	06 10	
5	255	13.3	+11	18.2	89	36.9 ¹⁵⁶	-9	47.8 ¹³⁵	50	19	01	19	35	20	19	18	28 71	
6	270	13.5	+11	19.0	104	11.5 ¹⁵⁶	-10	01.2 ¹³⁴	45	18	51	19	22	20	00	18	17 66	
7	285	13.6		19.9	118	46.1 ¹⁵⁶		14.5 ¹³³	40	43		11	19	45	08	62	4 21 19	
8	300	13.7		20.7	133	20.7 ¹⁵⁶		27.9 ¹³⁴	35	36	19	02	34		18	00 59	27 23	
9	315	13.9		21.6	147	55.2 ¹⁵⁵		41.1 ¹³²	30	30	18	55	24		17	54 56	33 26	
10	330	14.0		22.5	162	29.8 ¹⁵⁶	-10	54.3 ¹³²	20	20		42	19	09	42	51	38 29	
11	345	14.1	+11	23.3	177	04.2 ¹⁵⁴	-11	07.5 ¹³²	10 N	18	11	18	32	18	57	17	32 47	
12	0	14.3	+11	24.2	191	38.7 ¹⁵⁵	-11	20.6 ¹³¹	0	18	02	18	23	18	48	17	23 43	
13	15	14.4		25.0	206	13.1 ¹⁵⁴		33.7 ¹³¹	10 S	17	54		16	40	14	39	5 01 47	
14	30	14.6		25.9	220	47.5 ¹⁵⁴		46.7 ¹³⁰	20	46		08	34		17	04 35	08 47	
15	45	14.7		26.8	235	21.9 ¹⁵⁴	-11	59.7 ¹³⁰	30	36	18	00	28		17	04 35	16 51	
16	60	14.8		27.6	249	56.2 ¹⁵³	-12	12.6 ¹²⁹	35	30	17	56	26		16	53 30	25 56	
17	75	15.0	+11	28.5	264	30.5 ¹⁵³	-12	25.5 ¹²⁹	40	17	24	17	52	18	23	47	27	
18	90	15.1	+11	29.3	279	04.8 ¹⁵³	-12	38.3 ¹²⁸	45	17	17	17	47	18	21	16	40 24	
19	105	15.2		30.2	293	39.0 ¹⁵²	-12	51.1 ¹²⁸	50	08		42	19		16	31 21	5 36 62	
20	120	15.3		31.0	308	13.2 ¹⁵²	-13	03.8 ¹²⁷	52	04		39	18		21	16	51 71	
21	135	15.5		31.9	322	47.4 ¹⁵²		16.4 ¹²⁶	54	17	00	36	18		17	13	55 73	
22	150	15.6		32.8	337	21.5 ¹⁵¹		29.0 ¹²⁶	56	16	55	34	17		12	11	5 59 76	
23	165	15.7		33.6	351	55.6 ¹⁵¹		41.5 ¹²⁵	58	50		31	16		06	9	6 03 79	
24	180	15.9	+11	34.5	6	29.7 ¹⁵¹	-13	54.0 ¹²⁵	60 S	16	44	17	27	18	16	16	00 5	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 10 ^h 08 ^m 5		Mag: -3.8 PMG: 11 ^h 11 ^m				Mag: +1.1 PMG: 17 ^h 33 ^m				Mag: -2.3 PMG: 5 ^h 43 ^m				Mag: +0.5 PMG: 20 ^h 25 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	207	28.0	192	23.7	+4	51.1	96	20.4	+24	03.8	274	00.3	-21	41.5	52	56.6	+12	30.9
1	222	30.5	207	23.3		52.3	111	21.5		03.6	289	02.6		41.5	67	59.1		31.0
2	237	33.0	222	22.9		53.5	126	22.6		03.3	304	04.9		41.5	83	01.7		31.0
3	252	35.4	237	22.6		54.7	141	23.8		03.1	319	07.2		41.4	98	04.2		31.0
4	267	37.9	252	22.2		55.9	156	24.9		02.9	334	09.5		41.4	113	06.7		31.0
5	282	40.4	267	21.8	+4	57.1	171	26.0	+24	02.7	349	11.8	-21	41.4	128	09.2	+12	31.0
6	297	42.8	282	21.4	+4	58.3	186	27.1	+24	02.5	4	14.1	-21	41.4	143	11.8	+12	31.1
7	312	45.3	297	21.0	+4	59.5	201	28.3		02.3	19	16.4		41.4	158	14.3		31.1
8	327	47.7	312	20.7	+5	00.7	216	29.4		02.1	34	18.7		41.3	173	16.8		31.1
9	342	50.2	327	20.3		01.9	231	30.5		01.8	49	21.0		41.3	188	19.3		31.1
10	357	52.7	342	19.9		03.1	246	31.6		01.6	64	23.3		41.3	203	21.8		31.1
11	12	55.1	357	19.5	+5	04.3	261	32.8	+24	01.4	79	25.6	-21	41.3	218	24.4	+12	31.1
12	27	57.6	12	19.1	+5	05.5	276	33.9	+24	01.2	94	27.9	-21	41.3	233	26.9	+12	31.2
13	43	00.1	27	18.7		06.7	291	35.0		01.0	109	30.2		41.3	248	29.4		31.2
14	58	02.5	42	18.4		07.9	306	36.1		00.8	124	32.5		41.2	263	31.9		31.2
15	73	05.0	57	18.0		09.1	321	37.3		00.6	139	34.8		41.2	278	34.5		31.2
16	88	07.5	72	17.6		10.3	336	38.4		00.3	154	37.1		41.2	293	37.0		31.2
17	103	09.9	87	17.2	+5	11.6	351	39.5	+24	00.1	169	39.4	-21	41.2	308	39.5	+12	31.2
18	118	12.4	102	16.8	+5	12.8	6	40.6	+23	59.9	184	41.7	-21	41.2	323	42.0	+12	31.3
19	133	14.8	117	16.4		14.0	21	41.8		59.7	199	44.0		41.1	338	44.5		31.3
20	148	17.3	132	16.1		15.2	36	42.9		59.5	214	46.3		41.1	353	47.1		31.3
21	163	19.8	147	15.7		16.4	51	44.0		59.3	229	48.6		41.1	8	49.6		31.3
22	178	22.2	162	15.3		17.6	66	45.1		59.0	244	50.9		41.1	23	52.1		31.3
23	193	24.7	177	14.9		18.8	81	46.3		58.8	259	53.2		41.1	38	54.6		31.3
24	208	27.2	192	14.5	+5	20.0	96	47.4	+23	58.6	274	55.5	-21	41.0	53	57.1	+12	31.4
Dif	—		-4		+12		+11		-2		+23		0		+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 8				Edad: 13 ^d 8 PHE SD: 14'9 PMG: **h **m R°: **m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	180	15.9	+11	34.5	6	29.7	-13	54.0	60 N	2	34	3	40	4	28	20	27	90
1	195	16.0		35.3	21	03.7 ¹⁵⁰	-14	06.4 ¹²⁴	58	2	52	3	51		35	15	84	4
2	210	16.1		36.2	35	37.7 ¹⁵⁰		18.7 ¹²³	56	3	06	4	00		41	20	04	80
3	225	16.3		37.0	50	11.6 ¹⁴⁹		31.0 ¹²³	54		18		08		47	19	55	76
4	240	16.4		37.9	64	45.5 ¹⁴⁹		43.2 ¹²²	52		29		15		52	46	74	
5	255	16.5	+11	38.7	79	19.3 ¹⁴⁸	-14	55.3 ¹²¹	50	3	38	4	22	4	57	19	39	71
6	270	16.7	+11	39.6	93	53.2 ¹⁴⁹	-15	07.4 ¹²¹	45	3	57	4	35	5	06	19	23	67
7	285	16.8		40.4	108	26.9 ¹⁴⁷		19.4 ¹²⁰	40	4	12		46		15	19	10	63
8	300	16.9		41.3	123	00.7 ¹⁴⁸		31.4 ¹²⁰	35		24	4	55	21		18	59	60
9	315	17.1		42.1	137	34.3 ¹⁴⁶		43.3 ¹¹⁹	30		34	5	03	28		50	57	
10	330	17.2		43.0	152	08.0 ¹⁴⁷	-15	55.1 ¹¹⁸	20	4	49		15	38		33	53	
11	345	17.3	+11	43.9	166	41.6 ¹⁴⁶	-16	06.8 ¹¹⁷	10 N	5	01	5	26	5	47	18	19	49
12	0	17.4	+11	44.7	181	15.1 ¹⁴⁵	-16	18.5 ¹¹⁷	0	5	10	5	34	5	55	18	06	45
13	15	17.6		45.6	195	48.6 ¹⁴⁵		30.1 ¹¹⁶	10 S		18		42	6	04	17	53	42
14	30	17.7		46.4	210	22.1 ¹⁴⁵		41.6 ¹¹⁵	20		24		50	12		39	38	
15	45	17.8		47.3	224	55.5 ¹⁴⁴	-16	53.1 ¹¹⁵	30		30	5	58	22		23	34	
16	60	18.0		48.1	239	28.9 ¹⁴⁴	-17	04.5 ¹¹⁴	35		33	6	02	28		14	31	
17	75	18.1	+11	49.0	254	02.2 ¹⁴³	-17	15.8 ¹¹³	40	5	35	6	07	6	34	17	04	28
18	90	18.2	+11	49.8	268	35.4 ¹⁴²	-17	27.1 ¹¹³	45	5	37	6	12	6	42	16	52	24
19	105	18.3		50.7	283	08.7 ¹⁴³		38.2 ¹¹¹	50		40		17	50		37	20	
20	120	18.5		51.5	297	41.8 ¹⁴¹	-17	49.3 ¹¹¹	52		40		20	54		30	18	
21	135	18.6		52.4	312	15.0 ¹⁴²	-18	00.3 ¹¹⁰	54		41		22	6	59	23	15	
22	150	18.7		53.2	326	48.0 ¹⁴⁰		11.2 ¹⁰⁹	56		42		25	7	04	15	11	
23	165	18.9		54.0	341	21.1 ¹⁴¹		22.1 ¹⁰⁹	58		43		29	09		16	05	8
24	180	19.0	+11	54.9	355	54.0 ¹³⁹	-18	32.9 ¹⁰⁸	60 S	5	43	6	32	7	16	15	54	4

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 10 ^h 04 ^m 5		Mag: -3.8 PMG: 11 ^h 11 ^m		Mag: +1.1 PMG: 17 ^h 32 ^m		Mag: -2.3 PMG: 5 ^h 39 ^m		Mag: +0.5 PMG: 20 ^h 21 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	208	27.2	192	14.5	+5	20.0	274	55.5	-21	41.0
1	223	29.6	207	14.1		21.2	289	57.8		41.0
2	238	32.1	222	13.7		22.4	305	00.1		41.0
3	253	34.6	237	13.4		23.6	320	02.4		41.0
4	268	37.0	252	13.0		24.8	335	04.7		41.0
5	283	39.5	267	12.6	+5	26.0	350	07.0	-21	40.9
6	298	42.0	282	12.2	+5	27.2	5	09.3	-21	40.9
7	313	44.4	297	11.8		28.4	20	11.6		40.9
8	328	46.9	312	11.4		29.6	35	13.9		40.9
9	343	49.3	327	11.1		30.8	50	16.2		40.9
10	358	51.8	342	10.7		32.0	65	18.5		40.9
11	13	54.3	357	10.3	+5	33.2	80	20.9	-21	40.8
12	28	56.7	12	09.9	+5	34.4	95	23.2	-21	40.8
13	43	59.2	27	09.5		35.6	110	25.5		40.8
14	59	01.7	42	09.1		36.8	125	27.8		40.8
15	74	04.1	57	08.7		38.0	140	30.1		40.8
16	89	06.6	72	08.3		39.2	155	32.4		40.7
17	104	09.1	87	08.0	+5	40.4	170	34.7	-21	40.7
18	119	11.5	102	07.6	+5	41.6	185	37.0	-21	40.7
19	134	14.0	117	07.2		42.8	200	39.3		40.7
20	149	16.5	132	06.8		44.0	215	41.6		40.7
21	164	18.9	147	06.4		45.2	230	43.9		40.7
22	179	21.4	162	06.0		46.4	245	46.2		40.6
23	194	23.8	177	05.6		47.6	260	48.6		40.6
24	209	26.3	192	05.2	+5	48.8	275	50.9	-21	40.6
Dif	—		-4		+12		+23		0	
									+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 6			Edad: 14 ^d 8 PHE { 4 ^h : 54'3 12 ^h : 54'2 20 ^h : 54'1 SD: 14'8 PMG: 0 ^h 17 ^m R°: 46 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	180	19.0	+11 54.9	355	54.0	-18 32.9	60 N	19 34	20 23	21 31	21 57 90	3 54 4		
1	195	19.1	55.7	10	26.9 ¹³⁹	43.6 ¹⁰⁷	58	26	11	21 12	39 83	4 07 9		
2	210	19.2	56.6	24	59.8 ¹³⁹	-18 54.2 ¹⁰⁶	56	20	20 02	20 57	24 79	18 14		
3	225	19.4	57.4	39	32.6 ¹³⁸	-19 04.7 ¹⁰⁵	54	14	19 53	44	11 75	28 17		
4	240	19.5	58.3	54	05.4 ¹³⁸	15.1 ¹⁰⁴	52	09	46	33	21 00 72	37 20		
5	255	19.6	+11 59.1	68	38.1 ¹³⁷	-19 25.5 ¹⁰⁴	50	19 04	19 39	20 23	20 50 70	4 45 22		
6	270	19.7	+12 00.0	83	10.8 ¹³⁷	-19 35.8 ¹⁰³	45	18 53	19 25	20 03	20 30 65	5 02 27		
7	285	19.9	+12 00.8	97	43.4 ¹³⁶	46.0 ¹⁰²	40	45	13	19 48	20 13 62	16 31		
8	300	20.0	01.7	112	15.9 ¹³⁵	-19 56.1 ¹⁰¹	35	38	19 04	36	19 59 59	28 34		
9	315	20.1	02.5	126	48.4 ¹³⁵	-20 06.1 ¹⁰⁰	30	31	18 56	26	47 57	39 36		
10	330	20.2	03.4	141	20.9 ¹³⁵	16.0 ⁹⁹	20	20	43	19 10	26 53	5 57 40		
11	345	20.4	+12 04.2	155	53.3 ¹³⁴	-20 25.9 ⁹⁹	10 N	18 11	18 32	18 57	19 08 50	6 13 43		
12	0	20.5	+12 05.0	170	25.6 ¹³³	-20 35.6 ⁹⁷	0	18 02	18 23	18 48	18 51 48	6 28 46		
13	15	20.6	05.9	184	57.9 ¹³³	45.3 ⁹⁷	10 S	17 53	15	40	35 45	43 49		
14	30	20.7	06.7	199	30.1 ¹³²	-20 54.8 ⁹⁵	20	44	18 07	33	18 17 42	6 59 53		
15	45	20.9	07.6	214	02.3 ¹³²	-21 04.3 ⁹⁵	30	34	17 58	26	17 57 38	7 17 57		
16	60	21.0	08.4	228	34.4 ¹³¹	13.7 ⁹⁴	35	28	54	24	45 36	28 59		
17	75	21.1	+12 09.3	243	06.5 ¹³¹	-21 23.0 ⁹³	40	17 21	17 49	18 21	17 32 33	7 40 63		
18	90	21.2	+12 10.1	257	38.5 ¹³⁰	-21 32.2 ⁹²	45	17 14	17 44	18 18	17 16 30	7 55 66		
19	105	21.4	10.9	272	10.4 ¹²⁹	41.3 ⁹¹	50	05	38	16	16 57 25	8 13 71		
20	120	21.5	11.8	286	42.3 ¹²⁹	50.3 ⁹⁰	52	17 00	35	15	48 23	22 73		
21	135	21.6	12.6	301	14.2 ¹²⁹	-21 59.2 ⁸⁹	54	16 56	32	13	38 20	32 76		
22	150	21.7	13.5	315	46.0 ¹²⁸	-22 08.0 ⁸⁸	56	51	29	12	26 17	42 80		
23	165	21.9	14.3	330	17.7 ¹²⁷	16.7 ⁸⁷	58	45	26	11	16 13 13	8 55 84		
24	180	22.0	+12 15.1	344	49.4 ¹²⁷	-22 25.3 ⁸⁶	60 S	16 38	17 22	18 10	15 58 6	9 10 90		
UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO				
	PMG: 10 ^h 00 ^m 6		Mag: -3.8 PMG: 11 ^h 12 ^m		Mag: +1.1 PMG: 17 ^h 30 ^m		Mag: -2.3 PMG: 5 ^h 36 ^m			Mag: +0.5 PMG: 20 ^h 17 ^m				
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♎	Dec	hG ♊	Dec	hG ♋	Dec	hG ♏	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	209	26.3	192 05.2	+5 48.8	97 14.3	+23 53.3	275 50.9	-21 40.6	54 57.6	+12 31.7				
1	224	28.8	207 04.9	50.0	112 15.4	53.1	290 53.2	40.6	70 00.1	31.8				
2	239	31.2	222 04.5	51.2	127 16.5	52.9	305 55.5	40.6	85 02.6	31.8				
3	254	33.7	237 04.1	52.3	142 17.6	52.7	320 57.8	40.5	100 05.1	31.8				
4	269	36.2	252 03.7	53.5	157 18.7	52.4	336 00.1	40.5	115 07.7	31.8				
5	284	38.6	267 03.3	+5 54.7	172 19.9	+23 52.2	351 02.4	-21 40.5	130 10.2	+12 31.8				
6	299	41.1	282 02.9	+5 55.9	187 21.0	+23 52.0	6 04.7	-21 40.5	145 12.7	+12 31.8				
7	314	43.6	297 02.5	57.1	202 22.1	51.8	21 07.1	40.5	160 15.2	31.8				
8	329	46.0	312 02.1	58.3	217 23.2	51.5	36 09.4	40.5	175 17.7	31.9				
9	344	48.5	327 01.7	+5 59.5	232 24.3	51.3	51 11.7	40.4	190 20.2	31.9				
10	359	50.9	342 01.3	+6 00.7	247 25.4	51.1	66 14.0	40.4	205 22.7	31.9				
11	14	53.4	357 01.0	+6 01.9	262 26.6	+23 50.9	81 16.3	-21 40.4	220 25.3	+12 31.9				
12	29	55.9	12 00.6	+6 03.1	277 27.7	+23 50.6	96 18.6	-21 40.4	235 27.8	+12 31.9				
13	44	58.3	27 00.2	04.3	292 28.8	50.4	111 20.9	40.4	250 30.3	31.9				
14	60	00.8	41 59.8	05.5	307 29.9	50.2	126 23.3	40.4	265 32.8	31.9				
15	75	03.3	56 59.4	06.7	322 31.0	50.0	141 25.6	40.3	280 35.3	32.0				
16	90	05.7	71 59.0	07.9	337 32.1	49.7	156 27.9	40.3	295 37.8	32.0				
17	105	08.2	86 58.6	+6 09.1	352 33.3	+23 49.5	171 30.2	-21 40.3	310 40.3	+12 32.0				
18	120	10.7	101 58.2	+6 10.3	7 34.4	+23 49.3	186 32.5	-21 40.3	325 42.9	+12 32.0				
19	135	13.1	116 57.8	11.5	22 35.5	49.1	201 34.8	40.3	340 45.4	32.0				
20	150	15.6	131 57.4	12.7	37 36.6	48.8	216 37.2	40.3	355 47.9	32.0				
21	165	18.1	146 57.0	13.9	52 37.7	48.6	231 39.5	40.2	10 50.4	32.0				
22	180	20.5	161 56.6	15.0	67 38.8	48.4	246 41.8	40.2	25 52.9	32.1				
23	195	23.0	176 56.3	16.2	82 39.9	48.1	261 44.1	40.2	40 55.4	32.1				
24	210	25.4	191 55.9	+6 17.4	97 41.1	+23 47.9	276 46.4	-21 40.2	55 57.9	+12 32.1				
Dif	—	—	-4	+12	+11	-2	+23	0	+25	0				

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15 ^h 9 PMG: 11 ^h 58 ^m 4				Edad: 15 ^d 8 PHE { SD: 14 ^h 7 PMG: 1 ^h 03 ^m															
	hG ☉		Dec		hG ☾		Dif			Dif			Náutico		Civil		Hora		R°	
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	h	m
0	180	22.0	+12	15.1	344	49.4	-22	25.3	85	58	2 25	3 33	4 22	23 27	83		3 58	9		
1	195	22.1		16.0	359	21.0		33.8	84	58	2 44	45	30	23 02	76		4 16	17		
2	210	22.2		16.8	13	52.6		42.2	83	56	3 00	3 55	36	22 43	71		32	21		
3	225	22.4		17.6	28	24.1		50.5	82	54	13	4 03	42	26	69		45	24		
4	240	22.5		18.5	42	55.5		58.7	81	52	24	11	48	12	66		4 57	27		
5	255	22.6	+12	19.3	57	26.9		06.8	80	50	3 34	4 18	4 53	22 00	64		5 07	29		
6	270	22.7	+12	20.2	71	58.3		14.8	79	45	3 53	4 32	5 03	21 35	61		5 29	33		
7	285	22.8		21.0	86	29.6		22.7	78	40	4 09	43	12	21 15	59		5 47	36		
8	300	23.0		21.8	101	00.8		30.5	77	35	21	4 53	19	20 58	57		6 02	38		
9	315	23.1		22.7	115	32.0		38.2	76	30	31	5 01	26	44	55		15	40		
10	330	23.2		23.5	130	03.1		45.8	74	20	47	14	37	20 19	54		37	43		
11	345	23.3	+12	24.3	144	34.2		53.2	72	10 N	4 59	5 25	5 46	19 58	52		6 56	46		
12	0	23.4	+12	25.2	159	05.2		00.6	72	0	5 09	5 34	5 55	19 39	50		7 14	49		
13	15	23.6		26.0	173	36.2		07.8	72	10 S	18	42	6 04	19 20	47		32	51		
14	30	23.7		26.8	188	07.1		15.0	72	20	25	51	13	18 59	46		7 52	53		
15	45	23.8		27.7	202	38.0		22.0	70	30	31	5 59	24	35	43		8 14	57		
16	60	23.9		28.5	217	08.8		28.9	69	35	34	6 04	30	21	42		27	59		
17	75	24.0	+12	29.3	231	39.6		35.7	68	40	5 37	6 09	6 36	18 05	40		8 43	60		
18	90	24.2	+12	30.2	246	10.3		42.4	67	45	5 40	6 14	6 44	17 46	37		9 01	64		
19	105	24.3		31.0	260	40.9		49.0	66	50	42	20	53	22	34		24	67		
20	120	24.4		31.8	275	11.5		55.5	65	52	43	23	6 58	17 11	31		35	70		
21	135	24.5		32.7	289	42.1		01.8	63	54	44	26	7 03	16 58	29		9 48	72		
22	150	24.6		33.5	304	12.6		08.1	63	56	46	29	08	43	26		10 02	75		
23	165	24.8		34.3	318	43.1		14.2	61	58	47	33	14	26	21		19	80		
24	180	24.9	+12	35.2	333	13.5		20.2	60	60 S	5 48	6 36	7 20	16 04	15		10 40	87		
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG 9 ^h 56 ^m 7				Mag: -3.8 PMG: 11 ^h 13 ^m				Mag: +1.1 PMG: 17 ^h 28 ^m				Mag: -2.4 PMG: 5 ^h 32 ^m				Mag: +0.5 PMG: 20 ^h 13 ^m			
	hG ♀		Dec		hG ♀		Dec		hG ♂		Dec		hG ♀		Dec		hG ♀		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	210	25.4	191	55.9	+6	17.4	97	41.1	+23	47.9	276	46.4	-21	40.2	55	57.9	+12	32.1		
1	225	27.9	206	55.5		18.6	112	42.2		47.7	291	48.8		40.2	71	00.4		32.1		
2	240	30.4	221	55.1		19.8	127	43.3		47.5	306	51.1		40.2	86	03.0		32.1		
3	255	32.8	236	54.7		21.0	142	44.4		47.2	321	53.4		40.1	101	05.5		32.1		
4	270	35.3	251	54.3		22.2	157	45.5		47.0	336	55.7		40.1	116	08.0		32.1		
5	285	37.8	266	53.9	+6	23.4	172	46.6	+23	46.8	351	58.0	-21	40.1	131	10.5	+12	32.1		
6	300	40.2	281	53.5	+6	24.6	187	47.7	+23	46.6	7	00.4	-21	40.1	146	13.0	+12	32.2		
7	315	42.7	296	53.1		25.8	202	48.9		46.3	22	02.7		40.1	161	15.5		32.2		
8	330	45.2	311	52.7		27.0	217	50.0		46.1	37	05.0		40.1	176	18.0		32.2		
9	345	47.6	326	52.3		28.1	232	51.1		45.9	52	07.3		40.0	191	20.5		32.2		
10	0	50.1	341	51.9		29.3	247	52.2		45.6	67	09.6		40.0	206	23.0		32.2		
11	15	52.6	356	51.5	+6	30.5	262	53.3	+23	45.4	82	12.0	-21	40.0	221	25.6	+12	32.2		
12	30	55.0	11	51.1	+6	31.7	277	54.4	+23	45.2	97	14.3	-21	40.0	236	28.1	+12	32.2		
13	45	57.5	26	50.7		32.9	292	55.5		44.9	112	16.6		40.0	251	30.6		32.2		
14	60	59.9	41	50.3		34.1	307	56.6		44.7	127	18.9		40.0	266	33.1		32.3		
15	76	02.4	56	49.9		35.3	322	57.8		44.5	142	21.3		39.9	281	35.6		32.3		
16	91	04.9	71	49.5		36.5	337	58.9		44.3	157	23.6		39.9	296	38.1		32.3		
17	106	07.3	86	49.1	+6	37.7	353	00.0	+23	44.0	172	25.9	-21	39.9	311	40.6	+12	32.3		
18	121	09.8	101	48.8	+6	38.8	8	01.1	+23	43.8	187	28.2	-21	39.9	326	43.1	+12	32.3		
19	136	12.3	116	48.4		40.0	23	02.2		43.6	202	30.6		39.9	341	45.6		32.3		
20	151	14.7	131	48.0		41.2	38	03.3		43.3	217	32.9		39.9	356	48.1		32.3		
21	166	17.2	146	47.6		42.4	53	04.4		43.1	232	35.2		39.8	11	50.7		32.3		
22	181	19.7	161	47.2		43.6	68	05.5		42.9	247	37.5		39.8	26	53.2		32.4		
23	196	22.1	176	46.8		44.8	83	06.6		42.6	262	39.9		39.8	41	55.7		32.4		
24	211	24.6	191	46.4	+6	46.0	98	07.8	+23	42.4	277	42.2	-21	39.8	56	58.2	+12	32.4		
Dif	—				-4 +12				+11 -2				+23 0				+25 0			

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 9			Edad: 16 ^d 8 PHE { 4 ^h : 54 ⁰ 12 ^h : 54 ⁰ 20 ^h : 54 ⁰					Civil			Hora		Hora	
	PMG: 11 ^h 58 ^m 2			SD: 14 ^h 7								R°			
	hG ☉	Dec		hG ☾	Dif	Dec	Dif								
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m		h m m	
0	180	24.9	+12 35.2	333	13.5	-25 20.2		60 N	19 39	20 29	21 40	** ** *		4 07	21
1	195	25.0		347	43.8 ¹¹³	26.1	59	58	31	17	19	** ** *		33	28
2	210	25.1		2	14.2 ¹¹⁴	31.8	57	56	24	20 06	21 03	23 54	58	4 53	32
3	225	25.2		16	44.4 ¹¹²	37.5	57	54	18	19 57	20 49	35 57		5 09	35
4	240	25.3		31	14.7 ¹¹³	43.0	55	52	12	49	37	18 57		24	37
5	255	25.5	+12 39.3	45	44.8 ¹¹¹	-25 48.4	54	50	19 07	19 42	20 27	23 04	56	5 36	39
6	270	25.6	+12 40.1	60	15.0 ¹¹²	-25 53.7	53	45	18 56	19 27	20 06	22 36	55	6 02	41
7	285	25.7		74	45.0 ¹¹⁰	-25 58.9	52	40	47	16	19 50	22 14	54	23	43
8	300	25.8		89	15.1 ¹¹¹	-26 04.0	51	35	39	19 06	38	21 55	54	40	45
9	315	25.9		42.6	103 45.1 ¹¹⁰	08.9	49	30	32	18 57	27	39 54		6 55	46
10	330	26.0		43.5	118 15.0 ¹⁰⁹	13.7	48	20	21	44	19 10	21 13	52	7 20	48
11	345	26.2	+12 44.3	132	45.0 ¹¹⁰	-26 18.4	47	10 N	18 11	18 32	18 58	20 50	52	7 42	49
12	0	26.3	+12 45.1	147	14.8 ¹⁰⁸	-26 23.0	46	0	18 02	18 23	18 47	20 29	51	8 03	50
13	15	26.4		45.9	161 44.7 ¹⁰⁹	27.4	44	10 S	17 52	14	39	20 07	51	23	52
14	30	26.5		46.8	176 14.5 ¹⁰⁸	31.7	43	20	43	18 05	31	19 45	49	8 45	53
15	45	26.6		47.6	190 44.2 ¹⁰⁷	35.9	42	30	32	17 56	25	18 49		9 11	55
16	60	26.7		48.4	205 13.9 ¹⁰⁷	40.0	41	35	26	52	21	19 03	47	26	56
17	75	26.8	+12 49.2	219	43.6 ¹⁰⁷	-26 43.9	39	40	17 19	17 46	18 18	18 45	47	9 43	57
18	90	27.0	+12 50.1	234	13.3 ¹⁰⁷	-26 47.7	38	45	17 11	17 41	18 15	18 23	46	10 05	58
19	105	27.1		50.9	248 42.9 ¹⁰⁶	51.4	37	50	17 01	34	12	17 56	44	31	61
20	120	27.2		51.7	263 12.4 ¹⁰⁵	55.0	36	52	16 56	31	11	42 43		10 45	61
21	135	27.3		52.5	277 42.0 ¹⁰⁶	-26 58.4	34	54	51	28	09	27 42		11 00	63
22	150	27.4		53.4	292 11.5 ¹⁰⁵	-27 01.7	33	56	46	25	08	17 09	40	17	66
23	165	27.5		54.2	306 41.0 ¹⁰⁵	04.9	32	58	40	21	07	16 47	37	11 39	68
24	180	27.6	+12 55.0	321	10.4 ¹⁰⁴	-27 07.9	30	60 S	16 33	17 17	18 06	16 19	32	12 07	73

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 9 ^h 52 ^m 7		Mag: -3.8 PMG: 11 ^h 13 ^m		Mag: +1.1 PMG: 17 ^h 26 ^m		Mag: -2.4 PMG: 5 ^h 28 ^m		Mag: +0.5 PMG: 20 ^h 09 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	211	24.6	191 46.4	+6 46.0	98 07.8	+23 42.4	277 42.2	-21 39.8	56 58.2	+12 32.4
1	226	27.0	206 46.0	47.2	113 08.9	42.2	292 44.5	39.8	72 00.7	32.4
2	241	29.5	221 45.6	48.3	128 10.0	41.9	307 46.9	39.8	87 03.2	32.4
3	256	32.0	236 45.2	49.5	143 11.1	41.7	322 49.2	39.8	102 05.7	32.4
4	271	34.4	251 44.8	50.7	158 12.2	41.5	337 51.5	39.7	117 08.2	32.4
5	286	36.9	266 44.4	+6 51.9	173 13.3	+23 41.2	352 53.8	-21 39.7	132 10.7	+12 32.4
6	301	39.4	281 44.0	+6 53.1	188 14.4	+23 41.0	7 56.2	-21 39.7	147 13.2	+12 32.4
7	316	41.8	296 43.6	54.3	203 15.5	40.8	22 58.5	39.7	162 15.7	32.5
8	331	44.3	311 43.2	55.5	218 16.6	40.5	38 00.8	39.7	177 18.2	32.5
9	346	46.8	326 42.8	56.6	233 17.7	40.3	53 03.2	39.7	192 20.7	32.5
10	1	49.2	341 42.4	57.8	248 18.8	40.1	68 05.5	39.6	207 23.2	32.5
11	16	51.7	356 42.0	+6 59.0	263 20.0	+23 39.8	83 07.8	-21 39.6	222 25.8	+12 32.5
12	31	54.2	11 41.6	+7 00.2	278 21.1	+23 39.6	98 10.1	-21 39.6	237 28.3	+12 32.5
13	46	56.6	26 41.2	01.4	293 22.2	39.4	113 12.5	39.6	252 30.8	32.5
14	61	59.1	41 40.8	02.6	308 23.3	39.1	128 14.8	39.6	267 33.3	32.5
15	77	01.5	56 40.4	03.7	323 24.4	38.9	143 17.1	39.6	282 35.8	32.5
16	92	04.0	71 40.0	04.9	338 25.5	38.7	158 19.5	39.6	297 38.3	32.6
17	107	06.5	86 39.6	+7 06.1	353 26.6	+23 38.4	173 21.8	-21 39.5	312 40.8	+12 32.6
18	122	08.9	101 39.2	+7 07.3	8 27.7	+23 38.2	188 24.1	-21 39.5	327 43.3	+12 32.6
19	137	11.4	116 38.8	08.5	23 28.8	38.0	203 26.5	39.5	342 45.8	32.6
20	152	13.9	131 38.4	09.6	38 29.9	37.7	218 28.8	39.5	357 48.3	32.6
21	167	16.3	146 38.0	10.8	53 31.0	37.5	233 31.1	39.5	12 50.8	32.6
22	182	18.8	161 37.6	12.0	68 32.1	37.2	248 33.5	39.5	27 53.3	32.6
23	197	21.3	176 37.2	13.2	83 33.2	37.0	263 35.8	39.5	42 55.8	32.6
24	212	23.7	191 36.8	+7 14.4	98 34.4	+23 36.8	278 38.1	-21 39.4	57 58.3	+12 32.6
Dif	—		-4	+12	+11	-2	+23	0	+25	0

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 9 PMG: 11 ^h 58 ^m 1			Edad: 17 ^d 8 PHE { 4 ^h : 54 ^h 1 12 ^h : 54 ^h 1 20 ^h : 54 ^h 1 PMG: 2 ^h 41 ^m R°: 51 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	°	h	m	h	m	h	m	m	
0	180	27.6	+12 55.0	321	10.4	-27 07.9	60 N	2 16	3 27	4 17		0 50 62	4 28 45		
1	195	27.7		335	39.8 ¹⁰⁴	10.9	58	36	39	25		0 18 59	5 01 46		
2	210	27.9		350	09.2 ¹⁰⁴	13.6	56	2 53	49	32	** ** *		25 48		
3	225	28.0		4	38.6 ¹⁰⁴	16.3	54	3 07	3 58	38	** ** *		5 44 49		
4	240	28.1		19	07.9 ¹⁰³	18.8	52	19	4 06	44	** ** *		6 01 49		
5	255	28.2	+12 59.1	33	37.2 ¹⁰³	-27 21.2	50	3 29	4 13	4 49	** ** *		6 15 49		
6	270	28.3	+12 59.9	48	06.5 ¹⁰³	-27 23.5	45	3 50	4 28	5 00	23 31 47		6 43 50		
7	285	28.4	+13 00.7	62	35.7 ¹⁰²	25.6	40	4 06	40	09	23 08 48		7 06 50		
8	300	28.5		77	04.9 ¹⁰²	27.6	35	18	50	17	22 49 49		25 50		
9	315	28.6		91	34.2 ¹⁰³	29.5	30	29	4 59	24	33 49		7 41 51		
10	330	28.8		106	03.3 ¹⁰¹	31.3	20	46	5 12	35	22 05 50		8 08 51		
11	345	28.9	+13 04.0	120	32.5 ¹⁰²	-27 32.9	10 N	4 58	5 24	5 45	21 42 50		8 31 51		
12	0	29.0	+13 04.8	135	01.6 ¹⁰¹	-27 34.3	0	5 09	5 33	5 55	21 20 51		8 53 51		
13	15	29.1		149	30.8 ¹⁰²	35.7	10 S	18	42	6 04	20 58 51		9 15 51		
14	30	29.2		163	59.9 ¹⁰¹	36.9	20	25	5 51	14	34 52		9 38 52		
15	45	29.3		178	29.0 ¹⁰¹	38.0	30	32	6 00	25	20 07 53		10 06 51		
16	60	29.4		192	58.1 ¹⁰¹	38.9	35	35	05	31	19 50 54		22 51		
17	75	29.5	+13 08.9	207	27.1 ¹⁰⁰	-27 39.7	40	5 39	6 10	6 38	19 32 53		10 40 52		
18	90	29.6	+13 09.7	221	56.2 ¹⁰¹	-27 40.4	45	5 42	6 16	6 47	19 09 54		11 03 51		
19	105	29.7		236	25.2 ¹⁰⁰	41.0	50	45	23	6 57	18 40 55		32 51		
20	120	29.9		250	54.2 ¹⁰⁰	41.4	52	46	26	7 01	25 56		11 46 51		
21	135	30.0		265	23.2 ¹⁰⁰	41.6	54	48	29	06	18 09 56		12 03 50		
22	150	30.1		279	52.3 ¹⁰¹	41.8	56	49	33	12	17 49 57		23 49		
23	165	30.2		294	21.3 ¹⁰⁰	41.8	58	50	37	18	17 24 58		12 47 49		
24	180	30.3	+13 14.6	308	50.3 ¹⁰⁰	-27 41.7	60 S	5 52	6 41	7 25	16 51 59		13 20 48		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG 9 ^h 48 ^m 8		Mag: -3.8 PMG: 11 ^h 14 ^m			Mag: +1.1 PMG: 17 ^h 24 ^m			Mag: -2.4 PMG: 5 ^h 25 ^m			Mag: +0.5 PMG: 20 ^h 05 ^m			
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec			
h	°	'	°	°	°	'	°	°	°	'	°	°	°	'	
0	212	23.7	191	36.8	+7 14.4		98	34.4	+23 36.8	278	38.1	-21 39.4	57	58.3	+12 32.6
1	227	26.2	206	36.4		15.5	113	35.5	36.5	293	40.5	39.4	73	00.8	32.7
2	242	28.7	221	35.9		16.7	128	36.6	36.3	308	42.8	39.4	88	03.3	32.7
3	257	31.1	236	35.5		17.9	143	37.7	36.1	323	45.2	39.4	103	05.8	32.7
4	272	33.6	251	35.1		19.1	158	38.8	35.8	338	47.5	39.4	118	08.3	32.7
5	287	36.0	266	34.7	+7 20.3		173	39.9	+23 35.6	353	49.8	-21 39.4	133	10.8	+12 32.7
6	302	38.5	281	34.3	+7 21.4		188	41.0	+23 35.3	8	52.2	-21 39.4	148	13.3	+12 32.7
7	317	41.0	296	33.9		22.6	203	42.1	35.1	23	54.5	39.3	163	15.8	32.7
8	332	43.4	311	33.5		23.8	218	43.2	34.9	38	56.8	39.3	178	18.4	32.7
9	347	45.9	326	33.1		25.0	233	44.3	34.6	53	59.2	39.3	193	20.9	32.7
10	2	48.4	341	32.7		26.2	248	45.4	34.4	69	01.5	39.3	208	23.4	32.7
11	17	50.8	356	32.3	+7 27.3		263	46.5	+23 34.1	84	03.9	-21 39.3	223	25.9	+12 32.7
12	32	53.3	11	31.9	+7 28.5		278	47.6	+23 33.9	99	06.2	-21 39.3	238	28.4	+12 32.8
13	47	55.8	26	31.5		29.7	293	48.7	33.7	114	08.5	39.3	253	30.9	32.8
14	62	58.2	41	31.1		30.9	308	49.8	33.4	129	10.9	39.2	268	33.4	32.8
15	78	00.7	56	30.7		32.0	323	50.9	33.2	144	13.2	39.2	283	35.9	32.8
16	93	03.2	71	30.3		33.2	338	52.0	32.9	159	15.5	39.2	298	38.4	32.8
17	108	05.6	86	29.9	+7 34.4		353	53.1	+23 32.7	174	17.9	-21 39.2	313	40.9	+12 32.8
18	123	08.1	101	29.5	+7 35.6		8	54.3	+23 32.5	189	20.2	-21 39.2	328	43.4	+12 32.8
19	138	10.5	116	29.0		36.7	23	55.4	32.2	204	22.6	39.2	343	45.9	32.8
20	153	13.0	131	28.6		37.9	38	56.5	32.0	219	24.9	39.2	358	48.4	32.8
21	168	15.5	146	28.2		39.1	53	57.6	31.7	234	27.3	39.1	13	50.9	32.8
22	183	17.9	161	27.8		40.3	68	58.7	31.5	249	29.6	39.1	28	53.4	32.8
23	198	20.4	176	27.4		41.4	83	59.8	31.3	264	31.9	39.1	43	55.9	32.9
24	213	22.9	191	27.0	+7 42.6		99	00.9	+23 31.0	279	34.3	-21 39.1	58	58.4	+12 32.9
Dif	—		-4		+12		+11		-2	+23		0	+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 9				Edad: 18 ^d 8 PHE { 4 ^h : 54'2 12 ^h : 54'3 20 ^h : 54'4 SD: 14'8 PMG: 3 ^h 32 ^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
0	180	30.3	+13	14.6	308	50.3	-27	41.7	60 N	19 44	20 34	21 48	1 52 34		5 13 73				
1	195	30.4		15.4	323	19.2 ⁹⁹		41.4 ³	58	35	22	26	1 17 39		5 47 68				
2	210	30.5		16.2	337	48.2 ¹⁰⁰		41.0 ⁴	56	28	11	21 08	0 52 41		6 13 64				
3	225	30.6		17.1	352	17.2 ¹⁰⁰		40.5 ⁵	54	21	20 01	20 54	32 43		33 63				
4	240	30.7		17.9	6	46.2 ¹⁰⁰		39.8 ⁷	52	15	19 53	42	15 44		6 50 61				
5	255	30.8	+13	18.7	21	15.2 ¹⁰⁰	-27	39.0 ⁸	50	19 10	19 46	20 31	0 00 46		7 04 61				
6	270	30.9	+13	19.5	35	44.1 ⁹⁹	-27	38.1 ⁹	45	18 58	19 30	20 09	** ** *		7 33 59				
7	285	31.0		20.3	50	13.1 ¹⁰⁰		37.0 ¹¹	40	49	18	19 53	23 56 41		7 56 57				
8	300	31.1		21.1	64	42.1 ¹⁰⁰		35.8 ¹²	35	41	19 08	40	38 42		8 15 56				
9	315	31.2		21.9	79	11.1 ¹⁰⁰		34.5 ¹³	30	34	18 59	29	23 22 44		32 55				
10	330	31.3		22.7	93	40.1 ¹⁰⁰		33.0 ¹⁵	20	22	44	19 11	22 55 47		8 59 54				
11	345	31.5	+13	23.5	108	09.1 ¹⁰⁰	-27	31.4 ¹⁶	10 N	18 11	18 33	18 58	22 32 49		9 22 53				
12	0	31.6	+13	24.4	122	38.1 ¹⁰⁰	-27	29.6 ¹⁸	0	18 01	18 23	18 47	22 11 51		9 44 51				
13	15	31.7		25.2	137	07.1 ¹⁰⁰		27.8 ¹⁸	10 S	17 52	13	38	21 49 53		10 06 50				
14	30	31.8		26.0	151	36.1 ¹⁰⁰		25.8 ²⁰	20	41	18 04	30	26 55		30 48				
15	45	31.9		26.8	166	05.1 ¹⁰⁰		23.6 ²²	30	30	17 55	23	21 00 56		10 57 47				
16	60	32.0		27.6	180	34.1 ¹⁰⁰		21.3 ²³	35	23	49	19	20 44 58		11 13 46				
17	75	32.1	+13	28.4	195	03.2 ¹⁰¹	-27	18.9 ²⁴	40	17 16	17 44	18 16	20 25 60		11 32 44				
18	90	32.2	+13	29.2	209	32.2 ¹⁰⁰	-27	16.4 ²⁵	45	17 07	17 38	18 12	20 03 62		11 54 43				
19	105	32.3		30.0	224	01.3 ¹⁰¹		13.7 ²⁷	50	16 57	31	09	19 35 65		12 23 40				
20	120	32.4		30.8	238	30.4 ¹⁰¹		10.9 ²⁸	52	52	27	07	21 66		37 38				
21	135	32.5		31.6	252	59.5 ¹⁰¹		07.9 ³⁰	54	47	24	06	19 05 68		12 53 37				
22	150	32.6		32.4	267	28.6 ¹⁰¹		04.9 ³⁰	56	41	20	04	18 46 71		13 12 34				
23	165	32.7		33.2	281	57.7 ¹⁰¹	-27	01.7 ³²	58	35	16	02	18 22 75		13 36 30				
24	180	32.8	+13	34.0	296	26.8 ¹⁰¹	-26	58.3 ³⁴	60 S	16 27	17 12	18 01	17 50 82		14 08 24				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO				
	PMG: 9 ^h 44 ^m 9		Mag: -3.9 PMG: 11 ^h 15 ^m				Mag: +1.1 PMG: 17 ^h 23 ^m				Mag: -2.4 PMG: 5 ^h 21 ^m				Mag: +0.5 PMG: 20 ^h 01 ^m				
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	213	22.9	191	27.0	+7	42.6	99	00.9	+23	31.0	279	34.3	-21	39.1	58	58.4	+12	32.9	
1	228	25.3	206	26.6		43.8	114	02.0		30.8	294	36.6		39.1	74	00.9		32.9	
2	243	27.8	221	26.2		45.0	129	03.1		30.5	309	39.0		39.1	89	03.4		32.9	
3	258	30.3	236	25.8		46.1	144	04.2		30.3	324	41.3		39.1	104	05.9		32.9	
4	273	32.7	251	25.4		47.3	159	05.3		30.0	339	43.7		39.1	119	08.4		32.9	
5	288	35.2	266	25.0	+7	48.5	174	06.4	+23	29.8	354	46.0	-21	39.0	134	10.9	+12	32.9	
6	303	37.6	281	24.6	+7	49.6	189	07.5	+23	29.6	9	48.3	-21	39.0	149	13.4	+12	32.9	
7	318	40.1	296	24.1		50.8	204	08.6		29.3	24	50.7		39.0	164	15.9		32.9	
8	333	42.6	311	23.7		52.0	219	09.7		29.1	39	53.0		39.0	179	18.4		32.9	
9	348	45.0	326	23.3		53.2	234	10.8		28.8	54	55.4		39.0	194	20.9		32.9	
10	3	47.5	341	22.9		54.3	249	11.9		28.6	69	57.7		39.0	209	23.4		32.9	
11	18	50.0	356	22.5	+7	55.5	264	13.0	+23	28.3	85	00.1	-21	39.0	224	25.9	+12	33.0	
12	33	52.4	11	22.1	+7	56.7	279	14.1	+23	28.1	100	02.4	-21	39.0	239	28.4	+12	33.0	
13	48	54.9	26	21.7		57.8	294	15.2		27.8	115	04.8		38.9	254	30.9		33.0	
14	63	57.4	41	21.3	+7	59.0	309	16.3		27.6	130	07.1		38.9	269	33.4		33.0	
15	78	59.8	56	20.8	+8	00.2	324	17.4		27.4	145	09.5		38.9	284	35.9		33.0	
16	94	02.3	71	20.4		01.3	339	18.5		27.1	160	11.8		38.9	299	38.3		33.0	
17	109	04.8	86	20.0	+8	02.5	354	19.6	+23	26.9	175	14.2	-21	38.9	314	40.8	+12	33.0	
18	124	07.2	101	19.6	+8	03.7	9	20.7	+23	26.6	190	16.5	-21	38.9	329	43.3	+12	33.0	
19	139	09.7	116	19.2		04.9	24	21.8		26.4	205	18.9		38.9	344	45.8		33.0	
20	154	12.1	131	18.8		06.0	39	22.9		26.1	220	21.2		38.9	359	48.3		33.0	
21	169	14.6	146	18.4		07.2	54	24.0		25.9	235	23.6		38.8	14	50.8		33.0	
22	184	17.1	161	18.0		08.4	69	25.1		25.6	250	25.9		38.8	29	53.3		33.0	
23	199	19.5	176	17.5		09.5	84	26.2		25.4	265	28.3		38.8	44	55.8		33.0	
24	214	22.0	191	17.1	+8	10.7	99	27.3	+23	25.1	280	30.6	-21	38.8	59	58.3	+12	33.0	
Dif	—		-4		+12		+11		-2		+23		0		+25				

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 15°9 PMG: 11 ^h 57 ^m 7				Edad: 19 ^d 8 PHE { SD: 14°8 PMG: 4 ^h 23 ^m R°: 51 ^m 4 ^h : 54°5 12 ^h : 54°6 20 ^h : 54°8														
	hG ☉		Dec		hG ☾		Dif			Dec			Dif		Hora		R°		
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m
0	180	32.8	+13	34.0	296	26.8	-26	58.3	60 N	2 06	3 20	4 11	2 26	15	6 26	89			
1	195	32.9		34.8	310	56.0 ¹⁰²		54.8 ³⁵	58	29	33	19	1 56	23	6 55	82			
2	210	33.0		35.6	325	25.2 ¹⁰²		51.2 ³⁶	56	2 46	44	27	33	28	7 17	77			
3	225	33.1		36.4	339	54.4 ¹⁰²		47.5 ³⁷	54	3 01	3 53	34	1 15	30	36	7			
4	240	33.2		37.2	354	23.6 ¹⁰²		43.6 ³⁹	52	13	4 02	40	0 59	33	7 51	71			
5	255	33.3	+13	38.0	8	52.9 ¹⁰³	-26	39.6 ⁴⁰	50	3 24	4 09	4 45	0 46	35	8 05	68			
6	270	33.4	+13	38.8	23	22.1 ¹⁰²	-26	35.5 ⁴¹	45	3 46	4 25	4 57	0 18	38	8 32	65			
7	285	33.5		39.6	37	51.4 ¹⁰³		31.2 ⁴³	40	4 02	37	5 06	** ** *	**	8 53	62			
8	300	33.6		40.4	52	20.7 ¹⁰³		26.8 ⁴⁴	35	16	48	14	** ** *	**	9 11	60			
9	315	33.7		41.2	66	50.1 ¹⁰⁴		22.3 ⁴⁵	30	27	4 56	22	** ** *	**	27	58			
10	330	33.8		42.0	81	19.4 ¹⁰³		17.7 ⁴⁶	20	44	5 11	34	23 42	43	9 53	54			
11	345	33.9	+13	42.8	95	48.8 ¹⁰⁴	-26	12.9 ⁴⁸	10 N	4 57	5 23	5 44	23 21	47	10 15	52			
12	0	34.0	+13	43.6	110	18.2 ¹⁰⁴	-26	08.0 ⁴⁹	0	5 08	5 33	5 54	23 02	49	10 35	50			
13	15	34.1		44.4	124	47.7 ¹⁰⁵	-26	02.9 ⁵¹	10 S	18	43	6 04	22 42	52	10 56	48			
14	30	34.2		45.2	139	17.2 ¹⁰⁵	-25	57.8 ⁵¹	20	26	5 52	14	22 21	55	11 18	45			
15	45	34.3		46.0	153	46.7 ¹⁰⁵		52.5 ⁵³	30	33	6 01	26	21 56	59	44	42			
16	60	34.4		46.8	168	16.2 ¹⁰⁵		47.0 ⁵⁵	35	37	07	33	42	61	11 59	40			
17	75	34.5	+13	47.6	182	45.8 ¹⁰⁶	-25	41.5 ⁵⁵	40	5 40	6 12	6 40	21 25	64	12 16	37			
18	90	34.6	+13	48.4	197	15.4 ¹⁰⁶	-25	35.8 ⁵⁷	45	5 44	6 19	6 49	21 05	67	12 37	34			
19	105	34.7		49.2	211	45.0 ¹⁰⁶		30.0 ⁵⁸	50	48	26	7 00	20 40	71	13 03	30			
20	120	34.8		50.0	226	14.6 ¹⁰⁶		24.1 ⁵⁹	52	49	29	04	27	74	15	29			
21	135	34.9		50.8	240	44.3 ¹⁰⁷		18.0 ⁶¹	54	51	33	10	20 13	77	30	25			
22	150	35.0		51.6	255	14.0 ¹⁰⁷		11.8 ⁶²	56	53	36	16	19 57	80	13 46	23			
23	165	35.1		52.4	269	43.8 ¹⁰⁸	-25	05.5 ⁶³	58	54	41	22	37	85	14 06	18			
24	180	35.2	+13	53.2	284	13.6 ¹⁰⁸	-24	59.1 ⁶⁴	60 S	5 56	6 45	7 30	19 12	92	14 32	11			

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 9 ^h 40 ^m 9		Mag: -3.9 PMG: 11 ^h 15 ^m		Mag: +1.2 PMG: 17 ^h 21 ^m		Mag: -2.4 PMG: 5 ^h 17 ^m		Mag: +0.5 PMG: 19 ^h 57 ^m									
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄									
h	°	'	°	'	°	'	°	'	°	'								
0	214	22.0	191	17.1	+8	10.7	99	27.3	+23	25.1	280	30.6	-21	38.8	59	58.3	+12	33.0
1	229	24.5	206	16.7		11.9	114	28.4		24.9	295	33.0		38.8	75	00.8		33.1
2	244	26.9	221	16.3		13.0	129	29.5		24.6	310	35.3		38.8	90	03.3		33.1
3	259	29.4	236	15.9		14.2	144	30.6		24.4	325	37.7		38.8	105	05.8		33.1
4	274	31.9	251	15.5		15.3	159	31.7		24.1	340	40.0		38.8	120	08.3		33.1
5	289	34.3	266	15.0	+8	16.5	174	32.8	+23	23.9	355	42.4	-21	38.8	135	10.8	+12	33.1
6	304	36.8	281	14.6	+8	17.7	189	33.9	+23	23.6	10	44.7	-21	38.7	150	13.3	+12	33.1
7	319	39.3	296	14.2		18.8	204	35.0		23.4	25	47.1		38.7	165	15.8		33.1
8	334	41.7	311	13.8		20.0	219	36.1		23.2	40	49.4		38.7	180	18.3		33.1
9	349	44.2	326	13.4		21.2	234	37.2		22.9	55	51.8		38.7	195	20.8		33.1
10	4	46.6	341	13.0		22.3	249	38.3		22.7	70	54.1		38.7	210	23.3		33.1
11	19	49.1	356	12.5	+8	23.5	264	39.4	+23	22.4	85	56.5	-21	38.7	225	25.8	+12	33.1
12	34	51.6	11	12.1	+8	24.7	279	40.5	+23	22.2	100	58.9	-21	38.7	240	28.3	+12	33.1
13	49	54.0	26	11.7		25.8	294	41.6		21.9	116	01.2		38.7	255	30.8		33.1
14	64	56.5	41	11.3		27.0	309	42.7		21.7	131	03.6		38.6	270	33.2		33.1
15	79	59.0	56	10.9		28.1	324	43.8		21.4	146	05.9		38.6	285	35.7		33.1
16	95	01.4	71	10.4		29.3	339	44.9		21.2	161	08.3		38.6	300	38.2		33.2
17	110	03.9	86	10.0	+8	30.5	354	46.0	+23	20.9	176	10.6	-21	38.6	315	40.7	+12	33.2
18	125	06.4	101	09.6	+8	31.6	9	47.1	+23	20.7	191	13.0	-21	38.6	330	43.2	+12	33.2
19	140	08.8	116	09.2		32.8	24	48.2		20.4	206	15.3		38.6	345	45.7		33.2
20	155	11.3	131	08.8		33.9	39	49.3		20.1	221	17.7		38.6	0	48.2		33.2
21	170	13.8	146	08.3		35.1	54	50.4		19.9	236	20.1		38.6	15	50.7		33.2
22	185	16.2	161	07.9		36.3	69	51.5		19.6	251	22.4		38.6	30	53.2		33.2
23	200	18.7	176	07.5		37.4	84	52.6		19.4	266	24.8		38.5	45	55.7		33.2
24	215	21.1	191	07.1	+8	38.6	99	53.7	+23	19.1	281	27.1	-21	38.5	60	58.2	+12	33.2
Dif	—		-4		+12		+11		-2		+24		0		+25		0	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15'9			Edad: 20 ^d 8 PHE	SD: 14'9				Final del crepúsculo		Salida de Luna		Puesta de Luna		
	PMG: 11 ^h 57 ^m 6				PMG: 5 ^h 14 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	h m	m
0	180	35.2	+13 53.2	284	13.6	-24 59.1		60 N	19 49	20 40	21 58	2 41	7	7 55	94
1	195	35.3	54.0	298	43.4 ¹⁰⁸	52.6	65	58	40	27	33	19	13	8 17	87
2	210	35.4	54.8	313	13.3 ¹⁰⁹	45.9	67	56	32	16	21 15	2 01	18	34	83
3	225	35.5	55.6	327	43.2 ¹⁰⁹	39.1	68	54	25	20 06	20 59	1 45	22	8 49	79
4	240	35.6	56.4	342	13.1 ¹⁰⁹	32.2	69	52	19	19 57	46	32	25	9 02	76
5	255	35.7	+13 57.2	356	43.1 ¹¹⁰	-24 25.1	71	50	19 13	19 49	20 35	1 21	26	9 13	74
6	270	35.8	+13 58.0	11	13.1 ¹¹⁰	-24 18.0	73	45	19 01	19 33	20 12	0 56	31	9 37	68
7	285	35.9	58.8	25	43.1 ¹¹⁰	10.7	74	40	18 51	20	19 55	37	34	9 55	65
8	300	36.0	+13 59.6	40	13.2 ¹¹¹	-24 03.3	74	35	42	09	41	20	38	10 11	62
9	315	36.1	+14 00.3	54	43.3 ¹¹¹	-23 55.8	75	30	35	19 00	30	0 06	40	25	59
10	330	36.2	01.1	69	13.4 ¹¹¹	48.1	77	20	22	18 45	19 12	** ** *	**	10 47	56
11	345	36.3	+14 01.9	83	43.6 ¹¹²	-23 40.4	77	10 N	18 11	18 33	18 58	** ** *	**	11 07	52
12	0	36.3	+14 02.7	98	13.8 ¹¹²	-23 32.5	79	0	18 01	18 22	18 47	23 51	48	11 25	49
13	15	36.4	03.5	112	44.1 ¹¹³	24.5	80	10 S	17 51	12	37	34	51	11 44	45
14	30	36.5	04.3	127	14.4 ¹¹³	16.4	81	20	40	18 03	29	23 16	55	12 03	42
15	45	36.6	05.1	141	44.7 ¹¹³	-23 08.2	82	30	28	17 53	21	22 55	60	26	37
16	60	36.7	05.9	156	15.1 ¹¹⁴	-22 59.8	84	35	21	47	17	43	63	39	35
17	75	36.8	+14 06.7	170	45.5 ¹¹⁴	-22 51.4	84	40	17 13	17 41	18 13	22 29	66	12 53	32
18	90	36.9	+14 07.5	185	16.0 ¹¹⁵	-22 42.8	86	45	17 04	17 35	18 09	22 12	70	13 11	29
19	105	37.0	08.2	199	46.5 ¹¹⁵	34.1	87	50	16 53	27	05	21 51	75	33	24
20	120	37.1	09.0	214	17.0 ¹¹⁵	25.3	88	52	48	24	04	41	78	44	21
21	135	37.2	09.8	228	47.6 ¹¹⁶	16.4	89	54	43	20	02	30	81	13 55	19
22	150	37.3	10.6	243	18.2 ¹¹⁶	-22 07.4	90	56	37	16	18 00	17	84	14 09	14
23	165	37.4	11.4	257	48.8 ¹¹⁶	-21 58.2	92	58	30	12	17 58	21 02	89	24	11
24	180	37.5	+14 12.2	272	19.5 ¹¹⁷	-21 49.0	92	60 S	16 22	17 07	17 56	20 44	95	14 43	5
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 9 ^h 37 ^m 0		Mag: -3.9 PMG: 11 ^h 16 ^m			Mag: +1.2 PMG: 17 ^h 19 ^m			Mag: -2.4 PMG: 5 ^h 13 ^m			Mag: +0.5 PMG: 19 ^h 53 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	°	'	°	°	'	°	'	°	'	°
0	215	21.1	191	07.1	+8 38.6	99	53.7	+23 19.1	281	27.1	-21 38.5	60	58.2	+12 33.2	
1	230	23.6	206	06.7	39.7	114	54.8	18.9	296	29.5	38.5	76	00.7	33.2	
2	245	26.1	221	06.2	40.9	129	55.9	18.6	311	31.9	38.5	91	03.2	33.2	
3	260	28.5	236	05.8	42.1	144	56.9	18.4	326	34.2	38.5	106	05.6	33.2	
4	275	31.0	251	05.4	43.2	159	58.0	18.1	341	36.6	38.5	121	08.1	33.2	
5	290	33.5	266	05.0	+8 44.4	174	59.1	+23 17.9	356	38.9	-21 38.5	136	10.6	+12 33.2	
6	305	35.9	281	04.6	+8 45.5	190	00.2	+23 17.6	11	41.3	-21 38.5	151	13.1	+12 33.2	
7	320	38.4	296	04.1	46.7	205	01.3	17.4	26	43.7	38.5	166	15.6	33.2	
8	335	40.9	311	03.7	47.8	220	02.4	17.1	41	46.0	38.5	181	18.1	33.2	
9	350	43.3	326	03.3	49.0	235	03.5	16.9	56	48.4	38.4	196	20.6	33.2	
10	5 45.8	341	02.9	50.2	250	04.6	16.6	16.6	71	50.7	38.4	211	23.1	33.2	
11	20 48.2	356	02.4	+8 51.3	265	05.7	+23 16.4	16.4	86	53.1	-21 38.4	226	25.6	+12 33.2	
12	35 50.7	11 02.0	+8 52.5	280	06.8	+23 16.1	16.1	16.1	101	55.5	-21 38.4	241	28.1	+12 33.3	
13	50 53.2	26 01.6	53.6	295	07.9	15.8	15.8	15.8	116	57.8	38.4	256	30.5	33.3	
14	65 55.6	41 01.2	54.8	310	09.0	15.6	15.6	15.6	132	00.2	38.4	271	33.0	33.3	
15	80 58.1	56 00.7	55.9	325	10.1	15.3	15.3	15.3	147	02.6	38.4	286	35.5	33.3	
16	96 00.6	71 00.3	57.1	340	11.2	15.1	15.1	15.1	162	04.9	38.4	301	38.0	33.3	
17	111 03.0	85 59.9	+8 58.2	355	12.3	+23 14.8	14.8	14.8	177	07.3	-21 38.4	316	40.5	+12 33.3	
18	126 05.5	100 59.5	+8 59.4	10	13.4	+23 14.6	14.6	14.6	192	09.7	-21 38.4	331	43.0	+12 33.3	
19	141 08.0	115 59.0	+9 00.5	25	14.5	14.3	14.3	14.3	207	12.0	38.3	346	45.5	33.3	
20	156 10.4	130 58.6	01.7	40	15.6	14.1	14.1	14.1	222	14.4	38.3	1	48.0	33.3	
21	171 12.9	145 58.2	02.8	55	16.7	13.8	13.8	13.8	237	16.8	38.3	16	50.5	33.3	
22	186 15.4	160 57.7	04.0	70	17.7	13.5	13.5	13.5	252	19.1	38.3	31	52.9	33.3	
23	201 17.8	175 57.3	05.1	85	18.8	13.3	13.3	13.3	267	21.5	38.3	46	55.4	33.3	
24	216 20.3	190 56.9	+9 06.3	100	19.9	+23 13.0	13.0	13.0	282	23.9	-21 38.3	61	57.9	+12 33.3	
Dif	—		-4	+12	+11	-3	-3	-3	+24	0		+25	0		0

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 9 PMG: 11 ^h 57 ^m 4				Edad: 21 ^d 8 PHE { 4 ^h : 55 ^m 6 12 ^h : 55 ^m 8 20 ^h : 56 ^m 0 PMG: 6 ^h 02 ^m R°: 48 ^m												
	hG ☉		Dec		hG ☾		Dif								Hora R°		Hora R°
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	37.5	+14	12.2	272	19.5	-21	49.0	60 N	1 57	3 14	4 05	2 48	4	9 29	94	
1	195	37.6		13.0	286	50.2 ¹¹⁷		39.6 ⁹⁴	58	2 21	27	14	32	9	44	89	
2	210	37.6		13.7	301	21.0 ¹¹⁸		30.1 ⁹⁵	56	40	39	22	19	12	9 57	85	
3	225	37.7		14.5	315	51.8 ¹¹⁸		20.6 ⁹⁵	54	2 55	49	29	2 07	16	10 08	82	
4	240	37.8		15.3	330	22.6 ¹¹⁸		10.9 ⁹⁷	52	3 08	3 57	36	1 57	18	18	78	
5	255	37.9	+14	16.1	344	53.5 ¹¹⁹	-21	01.1 ⁹⁸	50	3 19	4 05	4 41	1 47	21	10 27	76	
6	270	38.0	+14	16.9	359	24.4 ¹¹⁹	-20	51.2 ⁹⁹	45	3 42	4 21	4 54	1 27	26	10 45	71	
7	285	38.1		17.7	13	55.3 ¹¹⁹		41.2 ¹⁰⁰	40	3 59	35	5 04	1 11	30	11 00	67	
8	300	38.2		18.4	28	26.3 ¹²⁰		31.1 ¹⁰¹	35	4 13	45	12	0 58	33	13	63	
9	315	38.3		19.2	42	57.3 ¹²⁰		20.9 ¹⁰²	30	25	4 54	20	46	36	24	60	
10	330	38.4		20.0	57	28.4 ¹²¹		10.5 ¹⁰⁴	20	43	5 10	33	25	41	43	55	
11	345	38.5	+14	20.8	71	59.5 ¹²¹	-20	00.1 ¹⁰⁴	10 N	4 57	5 22	5 44	0 08	44	11 59	51	
12	0	38.5	+14	21.6	86	30.6 ¹²¹	-19	49.6 ¹⁰⁵	0	5 08	5 33	5 54	** ** *	**	12 14	47	
13	15	38.6		22.3	101	01.8 ¹²²		39.0 ¹⁰⁶	10 S	18	43	6 04	** ** *	**	29	43	
14	30	38.7		23.1	115	33.0 ¹²²		28.2 ¹⁰⁸	20	26	5 52	15	** ** *	**	12 45	39	
15	45	38.8		23.9	130	04.2 ¹²²		17.4 ¹⁰⁸	30	34	6 03	27	23	55	60	13 03	34
16	60	38.9		24.7	144	35.5 ¹²³	-19	06.5 ¹⁰⁹	35	38	08	34	46	63	14	31	
17	75	39.0	+14	25.5	159	06.8 ¹²³	-18	55.4 ¹¹¹	40	5 42	6 14	6 42	23	35	67	13 25	28
18	90	39.1	+14	26.2	173	38.1 ¹²³	-18	44.3 ¹¹¹	45	5 46	6 21	6 51	23	22	71	13 40	23
19	105	39.2		27.0	188	09.5 ¹²⁴		33.1 ¹¹²	50	50	29	7 03	23	06	77	13 57	18
20	120	39.3		27.8	202	40.9 ¹²⁴		21.7 ¹¹⁴	52	52	32	08	22	59	79	14 05	16
21	135	39.3		28.6	217	12.4 ¹²⁵	-18	10.3 ¹¹⁴	54	54	36	13	51	82	14	13	
22	150	39.4		29.3	231	43.8 ¹²⁴	-17	58.8 ¹¹⁵	56	56	40	20	41	86	23	11	
23	165	39.5		30.1	246	15.3 ¹²⁵		47.2 ¹¹⁶	58	5 58	45	27	31	89	35	7	
24	180	39.6	+14	30.9	260	46.9 ¹²⁶	-17	35.5 ¹¹⁷	60 S	6 00	6 50	7 35	22	19	94	14 48	2

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 9 ^h 33 ^m 1		Mag: -3.9 PMG: 11 ^h 17 ^m		Mag: +1.2 PMG: 17 ^h 17 ^m		Mag: -2.4 PMG: 5 ^h 10 ^m		Mag: +0.5 PMG: 19 ^h 49 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	216	20.3	190	56.9	+9	06.3	100	19.9	+23	13.0
1	231	22.7	205	56.5		07.4	115	21.0		12.8
2	246	25.2	220	56.0		08.6	130	22.1		12.5
3	261	27.7	235	55.6		09.7	145	23.2		12.3
4	276	30.1	250	55.2		10.9	160	24.3		12.0
5	291	32.6	265	54.7	+9	12.0	175	25.4	+23	11.7
6	306	35.1	280	54.3	+9	13.2	190	26.5	+23	11.5
7	321	37.5	295	53.9		14.3	205	27.6		11.2
8	336	40.0	310	53.5		15.5	220	28.7		11.0
9	351	42.5	325	53.0		16.6	235	29.8		10.7
10	6	44.9	340	52.6		17.8	250	30.9		10.4
11	21	47.4	355	52.2	+9	18.9	265	31.9	+23	10.2
12	36	49.9	10	51.7	+9	20.1	280	33.0	+23	09.9
13	51	52.3	25	51.3		21.2	295	34.1		09.7
14	66	54.8	40	50.9		22.4	310	35.2		09.4
15	81	57.2	55	50.4		23.5	325	36.3		09.1
16	96	59.7	70	50.0		24.7	340	37.4		08.9
17	112	02.2	85	49.6	+9	25.8	355	38.5	+23	08.6
18	127	04.6	100	49.1	+9	26.9	10	39.6	+23	08.4
19	142	07.1	115	48.7		28.1	25	40.7		08.1
20	157	09.6	130	48.3		29.2	40	41.8		07.8
21	172	12.0	145	47.8		30.4	55	42.9		07.6
22	187	14.5	160	47.4		31.5	70	44.0		07.3
23	202	17.0	175	47.0		32.7	85	45.0		07.0
24	217	19.4	190	46.5	+9	33.8	100	46.1	+23	06.8
Dif	—		-4 +11		+11		-3		+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 3			Edad: 22 ^d 8 SD: 15'3 PMG: 6 ^h 50 ^m	PHE { 4 ^h : 56'3 12 ^h : 56'6 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	180	39.6	+14 30.9	260	46.9	-17 35.5	60 N	19 54	20 47	22 08	2 52 1	11 03 94		
1	195	39.7	31.7	275	18.4 ¹²⁵	23.7 ¹¹⁸	58	44	32	21 41	41 5	13 90		
2	210	39.8	32.4	289	50.0 ¹²⁶	-17 11.8 ¹¹⁹	56	36	20	21	31 9	22 86		
3	225	39.9	33.2	304	21.6 ¹²⁶	-16 59.8 ¹²⁰	54	29	10	21 04	23 12	30 82		
4	240	39.9	34.0	318	53.3 ¹²⁷	47.7 ¹²¹	52	22	20 01	20 51	15 15	36 80		
5	255	40.0	+14 34.8	333	25.0 ¹²⁷	-16 35.5 ¹²²	50	19 16	19 53	20 39	2 08 17	11 43 77		
6	270	40.1	+14 35.5	347	56.7 ¹²⁷	-16 23.2 ¹²³	45	19 03	19 36	20 16	1 53 23	11 56 72		
7	285	40.2	36.3	2	28.4 ¹²⁷	-16 10.9 ¹²³	40	18 53	22	19 58	41 27	12 07 67		
8	300	40.3	37.1	17	00.1 ¹²⁷	-15 58.4 ¹²⁵	35	44	11	43	31 30	16 64		
9	315	40.4	37.9	31	31.9 ¹²⁸	45.9 ¹²⁵	30	36	19 02	32	22 32	24 61		
10	330	40.4	38.6	46	03.7 ¹²⁸	33.3 ¹²⁶	20	23	18 46	19 13	1 06 38	38 55		
11	345	40.5	+14 39.4	60	35.6 ¹²⁹	-15 20.6 ¹²⁷	10 N	18 11	18 33	18 59	0 52 42	12 50 50		
12	0	40.6	+14 40.2	75	07.4 ¹²⁸	-15 07.8 ¹²⁸	0	18 01	18 22	18 47	0 39 46	13 01 46		
13	15	40.7	40.9	89	39.3 ¹²⁹	-14 54.9 ¹²⁹	10 S	17 50	12	37	25 51	12 42		
14	30	40.8	41.7	104	11.2 ¹²⁹	42.0 ¹²⁹	20	39	18 02	28	0 11 55	24 37		
15	45	40.9	42.5	118	43.1 ¹²⁹	28.9 ¹³¹	30	26	17 51	19	** ** *	37 32		
16	60	40.9	43.2	133	15.0 ¹²⁹	15.8 ¹³¹	35	19	45	15	** ** *	45 28		
17	75	41.0	+14 44.0	147	47.0 ¹³⁰	-14 02.6 ¹³²	40	17 11	17 39	18 11	** ** *	13 53 26		
18	90	41.1	+14 44.8	162	19.0 ¹³⁰	-13 49.3 ¹³³	45	17 01	17 32	18 07	** ** *	14 03 21		
19	105	41.2	45.5	176	51.0 ¹³⁰	35.9 ¹³⁴	50	16 50	24	02	** ** *	15 17		
20	120	41.3	46.3	191	23.0 ¹³⁰	22.5 ¹³⁴	52	45	20	18 00	** ** *	21 14		
21	135	41.4	47.1	205	55.0 ¹³⁰	-13 09.0 ¹³⁵	54	39	16	17 58	** ** *	27 11		
22	150	41.4	47.8	220	27.1 ¹³¹	-12 55.3 ¹³⁷	56	32	12	56	** ** *	34 8		
23	165	41.5	48.6	234	59.1 ¹³⁰	41.7 ¹³⁶	58	25	07	54	** ** *	42 5		
24	180	41.6	+14 49.4	249	31.2 ¹³¹	-12 27.9 ¹³⁸	60 S	16 17	17 02	17 51	23 53 94	14 50 1		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 9 ^h 29 ^m 1		Mag: -3.9 PMG: 11 ^h 17 ^m		Mag: +1.2 PMG: 17 ^h 16 ^m		Mag: -2.4 PMG: 5 ^h 06 ^m		Mag: +0.5 PMG: 19 ^h 45 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	217	19.4	190	46.5	100	46.1	283	20.8	62	57.6
1	232	21.9	205	46.1	115	47.2	298	23.1	78	00.0
2	247	24.4	220	45.7	130	48.3	313	25.5	93	02.5
3	262	26.8	235	45.2	145	49.4	328	27.9	108	05.0
4	277	29.3	250	44.8	160	50.5	343	30.3	123	07.5
5	292	31.7	265	44.3	175	51.6	358	32.7	138	10.0
6	307	34.2	280	43.9	190	52.7	13	35.0	153	12.5
7	322	36.7	295	43.5	205	53.8	28	37.4	168	14.9
8	337	39.1	310	43.0	220	54.8	43	39.8	183	17.4
9	352	41.6	325	42.6	235	55.9	58	42.2	198	19.9
10	7	44.1	340	42.2	250	57.0	73	44.5	213	22.4
11	22	46.5	355	41.7	265	58.1	88	46.9	228	24.9
12	37	49.0	10	41.3	280	59.2	103	49.3	243	27.4
13	52	51.5	25	40.8	296	00.3	118	51.7	258	29.8
14	67	53.9	40	40.4	311	01.4	133	54.1	273	32.3
15	82	56.4	55	40.0	326	02.5	148	56.4	288	34.8
16	97	58.8	70	39.5	341	03.6	163	58.8	303	37.3
17	113	01.3	85	39.1	356	04.6	179	01.2	318	39.8
18	128	03.8	100	38.6	11	05.7	194	03.6	333	42.2
19	143	06.2	115	38.2	26	06.8	209	06.0	348	44.7
20	158	08.7	130	37.8	56.6	41 07.9	01.5	224 08.4	37.9	3 47.2
21	173	11.2	145	37.3	57.7	56 09.0	01.2	239 10.7	37.9	18 49.7
22	188	13.6	160	36.9	+9 58.8	71 10.1	01.0	254 13.1	37.9	33 52.2
23	203	16.1	175	36.4	+10 00.0	86 11.2	00.7	269 15.5	37.9	48 54.6
24	218	18.6	190	36.0	+10 01.1	101 12.3	+23 00.4	284 17.9	-21 37.9	63 57.1
Dif	—		-4	+11	+11	-3	+24	0	+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 2				Edad: 23 ^d 8 PHE { 4 ^h : 57/2 12 ^h : 57/5 20 ^h : 57/8 SD: 15°5 PMG: 7 ^h 36 ^m R°: 46 ^m												
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	41.6	+14	49.4	249	31.2	-12	27.9	60 N	1 46	3 07	4 00	2 53	1	12 37	95	
1	195	41.7		50.1	264	03.3 ¹³¹		14.1 ¹³⁸	58	2 13	21	09	46	5	43	90	
2	210	41.8		50.9	278	35.4 ¹³¹	-12	00.2 ¹³⁹	56	33	33	18	40	8	48	87	
3	225	41.8		51.7	293	07.5 ¹³¹	-11	46.2 ¹⁴⁰	54	2 49	44	25	35	10	52	84	
4	240	41.9		52.4	307	39.6 ¹³¹		32.1 ¹⁴¹	52	3 03	3 53	32	30	13	12 56	81	
5	255	42.0	+14	53.2	322	11.7 ¹³¹	-11	18.0 ¹⁴¹	50	3 15	4 01	4 38	2 25	16	13 00	79	
6	270	42.1	+14	54.0	336	43.8 ¹³¹	-11	03.8 ¹⁴²	45	3 38	4 18	4 50	2 16	20	13 08	73	
7	285	42.2		54.7	351	16.0 ¹³²	-10	49.5 ¹⁴³	40	3 56	32	5 01	08	24	14	69	
8	300	42.2		55.5	5	48.1 ¹³¹		35.2 ¹⁴³	35	4 11	43	10	2 01	28	20	65	
9	315	42.3		56.2	20	20.3 ¹³²		20.8 ¹⁴⁴	30		22	4 53	1	54	32	25	61
10	330	42.4		57.0	34	52.4 ¹³¹	-10	06.3 ¹⁴⁵	20	41	5 08	31	44	36	33	56	
11	345	42.5	+14	57.8	49	24.6 ¹³²	-9	51.8 ¹⁴⁵	10 N	4 56	5 21	5 43	1 34	42	13 40	51	
12	0	42.5	+14	58.5	63	56.7 ¹³¹	-9	37.2 ¹⁴⁶	0	5 08	5 32	5 54	1 25	46	13 47	46	
13	15	42.6	+14	59.3	78	28.9 ¹³²		22.5 ¹⁴⁷	10 S	18	43	6 04	16	51	13 54	41	
14	30	42.7	+15	00.0	93	01.1 ¹³²	-9	07.8 ¹⁴⁷	20	27	5 53	16	1 06	56	14 01	36	
15	45	42.8	+15	00.8	107	33.2 ¹³¹	-8	53.0 ¹⁴⁸	30	35	6 04	29	0 55	62	09	31	
16	60	42.8		01.6	122	05.4 ¹³²		38.1 ¹⁴⁹	35	40	10	36	49	64	13	28	
17	75	42.9	+15	02.3	136	37.5 ¹³¹	-8	23.2 ¹⁴⁹	40	5 44	6 16	6 44	0 42	68	14 19	24	
18	90	43.0	+15	03.1	151	09.7 ¹³²	-8	08.2 ¹⁵⁰	45	5 48	6 23	6 54	0 33	73	14 24	20	
19	105	43.1		03.8	165	41.8 ¹³¹	-7	53.2 ¹⁵⁰	50	53	31	7 06	23	78	32	14	
20	120	43.2		04.6	180	13.9 ¹³¹		38.1 ¹⁵¹	52	55	35	11	18	81	35	12	
21	135	43.2		05.4	194	46.1 ¹³²		23.0 ¹⁵¹	54	57	39	17	13	83	38	10	
22	150	43.3		06.1	209	18.2 ¹³¹	-7	07.8 ¹⁵²	56	5 59	44	24	07	86	42	7	
23	165	43.4		06.9	223	50.3 ¹³¹	-6	52.5 ¹⁵³	58	6 02	48	31	0 00	90	47	4	
24	180	43.5	+15	07.6	238	22.4 ¹³¹	-6	37.2 ¹⁵³	60 S	6 04	6 54	7 39	** ** *	**	14 51	1	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 9 ^h 25 ^m 2		Mag: -3.9 PMG: 11 ^h 18 ^m		Mag: +1.2 PMG: 17 ^h 14 ^m		Mag: -2.4 PMG: 5 ^h 02 ^m		Mag: +0.5 PMG: 19 ^h 41 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	218	18.6	190	36.0	+10	01.1	101	12.3	+23	00.4	284	17.9	-21	37.9	63	57.1	+12	33.4
1	233	21.0	205	35.5		02.2	116	13.3	+23	00.2	299	20.3		37.9	78	59.6		33.4
2	248	23.5	220	35.1		03.4	131	14.4	+22	59.9	314	22.7		37.9	94	02.1		33.4
3	263	26.0	235	34.7		04.5	146	15.5		59.6	329	25.0		37.9	109	04.5		33.4
4	278	28.4	250	34.2		05.6	161	16.6		59.4	344	27.4		37.9	124	07.0		33.4
5	293	30.9	265	33.8	+10	06.8	176	17.7	+22	59.1	359	29.8	-21	37.9	139	09.5	+12	33.4
6	308	33.3	280	33.3	+10	07.9	191	18.8	+22	58.8	14	32.2	-21	37.9	154	12.0	+12	33.4
7	323	35.8	295	32.9		09.0	206	19.9		58.6	29	34.6		37.9	169	14.5		33.4
8	338	38.3	310	32.4		10.1	221	20.9		58.3	44	37.0		37.9	184	16.9		33.4
9	353	40.7	325	32.0		11.3	236	22.0		58.0	59	39.4		37.8	199	19.4		33.4
10	8	43.2	340	31.5		12.4	251	23.1		57.7	74	41.7		37.8	214	21.9		33.4
11	23	45.7	355	31.1	+10	13.5	266	24.2	+22	57.5	89	44.1	-21	37.8	229	24.4	+12	33.4
12	38	48.1	10	30.6	+10	14.7	281	25.3	+22	57.2	104	46.5	-21	37.8	244	26.8	+12	33.4
13	53	50.6	25	30.2		15.8	296	26.4		56.9	119	48.9		37.8	259	29.3		33.4
14	68	53.1	40	29.8		16.9	311	27.5		56.7	134	51.3		37.8	274	31.8		33.4
15	83	55.5	55	29.3		18.0	326	28.5		56.4	149	53.7		37.8	289	34.3		33.4
16	98	58.0	70	28.9		19.2	341	29.6		56.1	164	56.1		37.8	304	36.8		33.4
17	114	00.5	85	28.4	+10	20.3	356	30.7	+22	55.9	179	58.5	-21	37.8	319	39.2	+12	33.4
18	129	02.9	100	28.0	+10	21.4	11	31.8	+22	55.6	195	00.8	-21	37.8	334	41.7	+12	33.4
19	144	05.4	115	27.5		22.5	26	32.9		55.3	210	03.2		37.8	349	44.2		33.4
20	159	07.8	130	27.1		23.7	41	34.0		55.0	225	05.6		37.8	4	46.7		33.4
21	174	10.3	145	26.6		24.8	56	35.1		54.8	240	08.0		37.8	19	49.1		33.4
22	189	12.8	160	26.2		25.9	71	36.1		54.5	255	10.4		37.8	34	51.6		33.4
23	204	15.2	175	25.7		27.0	86	37.2		54.2	270	12.8		37.8	49	54.1		33.4
24	219	17.7	190	25.3	+10	28.2	101	38.3	+22	53.9	285	15.2	-21	37.8	64	56.6	+12	33.4
Dif	—		-4		+11		+11		-3		+24		0		+25			

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: 24 ^d 8 PHE { 4 ^h : 58'1 12 ^h : 58'4 20 ^h : 58'8 SD: 15'8 PMG: 8 ^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	h m m			
0	180	43.5	+15	07.6	238	22.4	-6	37.2	60 N	19 59	20 53	22 18	2 54	1	14 12 97			
1	195	43.5		08.4	252	54.5 ¹³¹		21.8 ¹⁵⁴	58	49	38	21 49	51	4	13 94			
2	210	43.6		09.1	267	26.5 ¹³⁰	-6	06.4 ¹⁵⁴	56	40	25	27	48	7	15 90			
3	225	43.7		09.9	281	58.6 ¹³¹	-5	50.9 ¹⁵⁵	54	32	14	21 10	45	10	16 8			
4	240	43.7		10.6	296	30.6 ¹³⁰		35.4 ¹⁵⁵	52	25	20 05	20 56	43	12	17 84			
5	255	43.8	+15	11.4	311	02.7 ¹³¹	-5	19.8 ¹⁵⁶	50	19 19	19 56	20 43	2 41	15	14 19 81			
6	270	43.9	+15	12.1	325	34.7 ¹³⁰	-5	04.2 ¹⁵⁶	45	19 06	19 38	20 19	2 36	20	14 21 76			
7	285	44.0		12.9	340	06.7 ¹³⁰	-4	48.6 ¹⁵⁶	40	18 55	24	20 00	32	24	23 71			
8	300	44.0		13.6	354	38.6 ¹²⁹		32.9 ¹⁵⁷	35	46	13	19 45	29	27	25 67			
9	315	44.1		14.4	9	10.6 ¹³⁰		17.1 ¹⁵⁸	30	38	19 03	33	26	31	26 64			
10	330	44.2		15.1	23	42.5 ¹²⁹	-4	01.3 ¹⁵⁸	20	24	18 47	19 14	20	37	29 57			
11	345	44.3	+15	15.9	38	14.4 ¹²⁹	-3	45.5 ¹⁵⁸	10 N	18 12	18 33	18 59	2 16	41	14 31 52			
12	0	44.3	+15	16.6	52	46.2 ¹²⁸	-3	29.6 ¹⁵⁹	0	18 00	18 22	18 47	2 11	47	14 33 48			
13	15	44.4		17.4	67	18.1 ¹²⁹	-3	13.7 ¹⁵⁹	10 S	17 49	11	36	07	51	35 43			
14	30	44.5		18.1	81	49.9 ¹²⁸	-2	57.7 ¹⁶⁰	20	38	18 01	27	2	02 57	37 38			
15	45	44.5		18.9	96	21.7 ¹²⁸		41.8 ¹⁵⁹	30	25	17 49	18	1	57 62	40 31			
16	60	44.6		19.6	110	53.4 ¹²⁷		25.7 ¹⁶¹	35	17	43	13	53	67	41 28			
17	75	44.7	+15	20.4	125	25.2 ¹²⁸	-2	09.7 ¹⁶⁰	40	17 08	17 37	18 09	1	50 70	14 43 24			
18	90	44.8	+15	21.1	139	56.8 ¹²⁶	-1	53.6 ¹⁶¹	45	16 58	17 29	18 04	1	46 74	14 44 20			
19	105	44.8		21.9	154	28.5 ¹²⁷		37.5 ¹⁶¹	50	46	21	17 59	41	80	46 15			
20	120	44.9		22.6	169	00.1 ¹²⁶		21.3 ¹⁶²	52	41	17	57	39	82	47 13			
21	135	45.0		23.4	183	31.7 ¹²⁶	-1	05.1 ¹⁶²	54	35	12	54	36	85	48 10			
22	150	45.0		24.1	198	03.2 ¹²⁵	-0	48.9 ¹⁶²	56	28	08	52	33	89	49 8			
23	165	45.1		24.9	212	34.7 ¹²⁵		32.7 ¹⁶²	58	20	17 03	50	30	92	51 4			
24	180	45.2	+15	25.6	227	06.2 ¹²⁵	-0	16.4 ¹⁶³	60 S	16 11	16 57	17 47	1	27 95	14 52 1			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 9 ^h 21 ^m 3		Mag: -3.9 PMG: 11 ^h 19 ^m				Mag: +1.2 PMG: 17 ^h 12 ^m				Mag: -2.4 PMG: 4 ^h 58 ^m				Mag: +0.6 PMG: 19 ^h 37 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	219	17.7	190	25.3	+10	28.2	101	38.3	+22	53.9	285	15.2	-21	37.8	64	56.6	+12	33.4
1	234	20.2	205	24.8		29.3	116	39.4		53.7	300	17.6		37.8	79	59.0		33.4
2	249	22.6	220	24.4		30.4	131	40.5		53.4	315	20.0		37.7	95	01.5		33.4
3	264	25.1	235	23.9		31.5	146	41.6		53.1	330	22.4		37.7	110	04.0		33.4
4	279	27.6	250	23.5		32.7	161	42.6		52.9	345	24.8		37.7	125	06.5		33.4
5	294	30.0	265	23.0	+10	33.8	176	43.7	+22	52.6	0	27.2	-21	37.7	140	08.9	+12	33.4
6	309	32.5	280	22.5	+10	34.9	191	44.8	+22	52.3	15	29.6	-21	37.7	155	11.4	+12	33.4
7	324	34.9	295	22.1		36.0	206	45.9		52.0	30	31.9		37.7	170	13.9		33.4
8	339	37.4	310	21.6		37.1	221	47.0		51.8	45	34.3		37.7	185	16.4		33.4
9	354	39.9	325	21.2		38.3	236	48.1		51.5	60	36.7		37.7	200	18.8		33.4
10	9	42.3	340	20.7		39.4	251	49.1		51.2	75	39.1		37.7	215	21.3		33.4
11	24	44.8	355	20.3	+10	40.5	266	50.2	+22	50.9	90	41.5	-21	37.7	230	23.8	+12	33.4
12	39	47.3	10	19.8	+10	41.6	281	51.3	+22	50.7	105	43.9	-21	37.7	245	26.2	+12	33.4
13	54	49.7	25	19.4		42.7	296	52.4		50.4	120	46.3		37.7	260	28.7		33.4
14	69	52.2	40	18.9		43.8	311	53.5		50.1	135	48.7		37.7	275	31.2		33.4
15	84	54.7	55	18.5		45.0	326	54.6		49.8	150	51.1		37.7	290	33.7		33.4
16	99	57.1	70	18.0		46.1	341	55.6		49.6	165	53.5		37.7	305	36.1		33.4
17	114	59.6	85	17.5	+10	47.2	356	56.7	+22	49.3	180	55.9	-21	37.7	320	38.6	+12	33.4
18	130	02.1	100	17.1	+10	48.3	11	57.8	+22	49.0	195	58.3	-21	37.7	335	41.1	+12	33.4
19	145	04.5	115	16.6		49.4	26	58.9		48.7	211	00.7		37.7	350	43.6		33.4
20	160	07.0	130	16.2		50.5	42	00.0		48.5	226	03.1		37.7	5	46.0		33.4
21	175	09.4	145	15.7		51.7	57	01.1		48.2	241	05.5		37.7	20	48.5		33.4
22	190	11.9	160	15.3		52.8	72	02.1		47.9	256	07.9		37.6	35	51.0		33.4
23	205	14.4	175	14.8		53.9	87	03.2		47.6	271	10.3		37.6	50	53.4		33.4
24	220	16.8	190	14.3	+10	55.0	102	04.3	+22	47.3	286	12.7	-21	37.6	65	55.9	+12	33.3
Dif	—		-5		+11		+11		-3		+24		0		+25		0	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 9			Edad: 25 ^d 8 PHE	SD: 16 ^h 0			R°: 49 ^m	Náutico		Civil	Hora	R°	Hora	R°
	PMG: 11 ^h 56 ^m 9														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif								
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	180	45.2	+15	227	06.2	-0	16.4	60 N	1 35	3 01	3 54	2 55	1	15 49	103
1	195	45.2		241	37.6 ¹²⁴	-0	00.1 ¹⁶³	58	2 04	16	4 04	55	4	47	98
2	210	45.3		256	09.0 ¹²⁴	+0	16.2 ¹⁶³	56	26	28	13	55	8	45	94
3	225	45.4		270	40.3 ¹²³		32.5 ¹⁶³	54	43	39	21	55	11	43	9
4	240	45.4		285	11.6 ¹²³	+0	48.9 ¹⁶⁴	52	2 58	49	28	55	14	41	89
5	255	45.5	+15	299	42.8 ¹²²	+1	05.2 ¹⁶³	50	3 10	3 57	4 34	2 56	15	15 40	85
6	270	45.6	+15	314	14.0 ¹²²	+1	21.6 ¹⁶⁴	45	3 35	4 15	4 48	2 56	21	15 37	79
7	285	45.6		328	45.2 ¹²²		38.0 ¹⁶⁴	40	3 53	29	4 59	56	25	34	75
8	300	45.7		343	16.2 ¹²⁰	+1	54.4 ¹⁶⁴	35	4 08	41	5 08	56	30	32	70
9	315	45.8		357	47.3 ¹²¹	+2	10.9 ¹⁶⁵	30	20	4 51	16	57	32	30	67
10	330	45.8		12	18.2 ¹¹⁹		27.3 ¹⁶⁴	20	40	5 07	30	57	39	26	61
11	345	45.9	+15	26	49.2 ¹²⁰	+2	43.8 ¹⁶⁵	10 N	4 55	5 20	5 42	2 57	44	15 23	56
12	0	46.0	+15	41	20.0 ¹¹⁸	+3	00.2 ¹⁶⁴	0	5 07	5 32	5 54	2 58	49	15 21	50
13	15	46.0		55	50.8 ¹¹⁸		16.7 ¹⁶⁵	10 S	18	43	6 05	58	54	18	45
14	30	46.1		70	21.6 ¹¹⁸		33.2 ¹⁶⁵	20	27	5 54	16	59	59	15	39
15	45	46.2		84	52.3 ¹¹⁷	+3	49.6 ¹⁶⁴	30	37	6 05	30	2 59	65	11	34
16	60	46.2		99	22.9 ¹¹⁶	+4	06.1 ¹⁶⁵	35	41	11	37	3 00	68	09	30
17	75	46.3	+15	113	53.5 ¹¹⁶	+4	22.6 ¹⁶⁵	40	5 46	6 18	6 46	3 00	73	15 07	26
18	90	46.4	+15	128	23.9 ¹¹⁴	+4	39.0 ¹⁶⁴	45	5 51	6 25	6 56	3 00	78	15 04	22
19	105	46.4		142	54.4 ¹¹⁵	+4	55.5 ¹⁶⁵	50	56	34	7 09	01	83	01	17
20	120	46.5		157	24.7 ¹¹³	+5	12.0 ¹⁶⁵	52	5 58	38	14	01	86	15 00	14
21	135	46.6		171	55.0 ¹¹³		28.4 ¹⁶⁴	54	6 00	42	20	01	89	14 58	11
22	150	46.6		186	25.2 ¹¹²	+5	44.9 ¹⁶⁵	56	03	47	27	02	92	57	8
23	165	46.7		200	55.4 ¹¹²	+6	01.3 ¹⁶⁴	58	05	52	35	02	96	55	4
24	180	46.8	+15	215	25.5 ¹¹¹	+6	17.8 ¹⁶⁵	60 S	6 08	6 58	7 44	3 02	100	14 53	1

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 9 ^h 17 ^m 4		Mag: -3.9 PMG: 11 ^h 19 ^m		Mag: +1.2 PMG: 17 ^h 10 ^m		Mag: -2.4 PMG: 4 ^h 54 ^m		Mag: +0.6 PMG: 19 ^h 33 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	220	16.8	190	14.3	+10	55.0	286	12.7	-21	37.6
1	235	19.3	205	13.9		56.1	301	15.1		37.6
2	250	21.8	220	13.4		57.2	316	17.5		37.6
3	265	24.2	235	13.0		58.3	331	19.9		37.6
4	280	26.7	250	12.5	+10	59.4	346	22.3		37.6
5	295	29.2	265	12.0	+11	00.5	1	24.7	-21	37.6
6	310	31.6	280	11.6	+11	01.7	16	27.1	-21	37.6
7	325	34.1	295	11.1		02.8	31	29.5		37.6
8	340	36.5	310	10.7		03.9	46	31.9		37.6
9	355	39.0	325	10.2		05.0	61	34.3		37.6
10	10	41.5	340	09.7		06.1	76	36.7		37.6
11	25	43.9	355	09.3	+11	07.2	91	39.1	-21	37.6
12	40	46.4	10	08.8	+11	08.3	106	41.5	-21	37.6
13	55	48.9	25	08.3		09.4	121	43.9		37.6
14	70	51.3	40	07.9		10.5	136	46.3		37.6
15	85	53.8	55	07.4		11.6	151	48.7		37.6
16	100	56.3	70	07.0		12.7	166	51.2		37.6
17	115	58.7	85	06.5	+11	13.8	181	53.6	-21	37.6
18	131	01.2	100	06.0	+11	14.9	196	56.0	-21	37.6
19	146	03.7	115	05.6		16.1	211	58.4		37.6
20	161	06.1	130	05.1		17.2	227	00.8		37.6
21	176	08.6	145	04.6		18.3	242	03.2		37.6
22	191	11.0	160	04.2		19.4	257	05.6		37.6
23	206	13.5	175	03.7		20.5	272	08.0		37.6
24	221	16.0	190	03.2	+11	21.6	287	10.4	-21	37.5
Dif	—		-5		+11		+24		0	
									+25	
									0	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15'9 PMG: 11 ^h 56 ^m 8			Edad: 26 ^d 8 PHE { 4 ^h : 60'0 12 ^h : 60'2 20 ^h : 60'5 SD: 16'3 PMG: 9 ^h 58 ^m R°: 54 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	180	46.8	+15 43.3	215	25.5	+6 17.8	60 N	20 04	20 59	22 30	2 56	2	17 32	109	
1	195	46.8	44.1	229	55.5 ¹¹⁰	34.2 ¹⁶⁴	58	19 53	43	21 57	2 59	6	25 105		
2	210	46.9	44.8	244	25.4 ¹⁰⁹	+6 50.6 ¹⁶⁴	56	44	30	34	3 03	9	19 100		
3	225	46.9	45.5	258	55.2 ¹⁰⁸	+7 07.0 ¹⁶⁴	54	36	18	15	06 13		14 96		
4	240	47.0	46.3	273	25.0 ¹⁰⁸	23.3 ¹⁶³	52	29	20 08	21 00	09 15		10 92		
5	255	47.1	+15 47.0	287	54.7 ¹⁰⁷	+7 39.7 ¹⁶⁴	50	19 22	19 59	20 47	3 11	18	17 05	90	
6	270	47.1	+15 47.7	302	24.3 ¹⁰⁶	+7 56.0 ¹⁶³	45	19 08	19 41	20 22	3 17	23	16 56	84	
7	285	47.2	48.5	316	53.8 ¹⁰⁵	+8 12.3 ¹⁶³	40	18 57	27	20 03	21 29		49 78		
8	300	47.3	49.2	331	23.3 ¹⁰⁵	28.6 ¹⁶³	35	47	15	19 47	26 32		42 75		
9	315	47.3	49.9	345	52.6 ¹⁰³	+8 44.8 ¹⁶²	30	39	19 04	35	29 36		37 70		
10	330	47.4	50.7	0	21.9 ¹⁰³	+9 01.0 ¹⁶²	20	24	18 48	19 15	36 41		27 64		
11	345	47.4	+15 51.4	14	51.1 ¹⁰²	+9 17.2 ¹⁶²	10 N	18 12	18 34	18 59	3 41	47	16 19	59	
12	0	47.5	+15 52.1	29	20.2 ¹⁰¹	+9 33.4 ¹⁶²	0	18 00	18 22	18 47	3 47	52	16 11	54	
13	15	47.6	52.8	43	49.2 ¹⁰⁰	+9 49.5 ¹⁶¹	10 S	17 49	18 11	36	52 57		16 03	49	
14	30	47.6	53.6	58	18.1 ⁹⁹	+10 05.5 ¹⁶⁰	20	37	17 59	26	3 58	62	15 54	44	
15	45	47.7	54.3	72	46.9 ⁹⁸	21.6 ¹⁶¹	30	23	48	16	4 04	69	45 38		
16	60	47.7	55.0	87	15.6 ⁹⁷	37.6 ¹⁶⁰	35	15	41	11	08 73		39 35		
17	75	47.8	+15 55.8	101	44.3 ⁹⁷	+10 53.5 ¹⁵⁹	40	17 06	17 34	18 07	4 13	76	15 33	31	
18	90	47.8	+15 56.5	116	12.8 ⁹⁵	+11 09.4 ¹⁵⁹	45	16 56	17 27	18 01	4 18	82	15 26	26	
19	105	47.9	57.2	130	41.3 ⁹⁵	25.3 ¹⁵⁹	50	43	17	17 56	24 88		18 20		
20	120	48.0	57.9	145	09.6 ⁹³	41.1 ¹⁵⁸	52	37	13	54	27 91		14 17		
21	135	48.0	58.7	159	37.9 ⁹³	+11 56.8 ¹⁵⁷	54	31	09	51	30 94		09 15		
22	150	48.1	+15 59.4	174	06.0 ⁹¹	+12 12.5 ¹⁵⁷	56	24	17 04	48	34 98		15 05	10	
23	165	48.1	+16 00.1	188	34.0 ⁹⁰	28.2 ¹⁵⁷	58	15	16 59	46	38 102		14 59	7	
24	180	48.2	+16 00.8	203	02.0 ⁹⁰	+12 43.8 ¹⁵⁶	60 S	16 06	16 53	17 43	4 42	107	14 54	2	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 9 ^h 13 ^m 4		Mag: -3.9 PMG: 11 ^h 20 ^m			Mag: +1.2 PMG: 17 ^h 09 ^m			Mag: -2.4 PMG: 4 ^h 51 ^m			Mag: +0.6 PMG: 19 ^h 29 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	'	°	°	'	°	°	'	°	'
0	221	16.0	190 03.2	+11 21.6	102 30.2	+22 40.6	287 10.4	-21 37.5	66 55.2	+12 33.3					
1	236	18.4	205 02.8	22.7	117 31.3	40.3	302 12.8	37.5	81 57.6	33.3					
2	251	20.9	220 02.3	23.8	132 32.4	40.1	317 15.2	37.5	97 00.1	33.3					
3	266	23.4	235 01.8	24.9	147 33.5	39.8	332 17.6	37.5	112 02.5	33.2					
4	281	25.8	250 01.4	26.0	162 34.5	39.5	347 20.0	37.5	127 05.0	33.2					
5	296	28.3	265 00.9	+11 27.1	177 35.6	+22 39.2	2 22.5	-21 37.5	142 07.5	+12 33.2					
6	311	30.8	280 00.4	+11 28.2	192 36.7	+22 38.9	17 24.9	-21 37.5	157 09.9	+12 33.2					
7	326	33.2	294 59.9	29.3	207 37.8	38.6	32 27.3	37.5	172 12.4	33.2					
8	341	35.7	309 59.5	30.4	222 38.8	38.4	47 29.7	37.5	187 14.9	33.2					
9	356	38.1	324 59.0	31.5	237 39.9	38.1	62 32.1	37.5	202 17.3	33.2					
10	11	40.6	339 58.5	32.6	252 41.0	37.8	77 34.5	37.5	217 19.8	33.2					
11	26	43.1	354 58.1	+11 33.7	267 42.1	+22 37.5	92 36.9	-21 37.5	232 22.3	+12 33.2					
12	41	45.5	9 57.6	+11 34.8	282 43.2	+22 37.2	107 39.3	-21 37.5	247 24.7	+12 33.2					
13	56	48.0	24 57.1	35.9	297 44.2	36.9	122 41.8	37.5	262 27.2	33.2					
14	71	50.5	39 56.6	36.9	312 45.3	36.6	137 44.2	37.5	277 29.7	33.2					
15	86	52.9	54 56.2	38.0	327 46.4	36.4	152 46.6	37.5	292 32.1	33.2					
16	101	55.4	69 55.7	39.1	342 47.5	36.1	167 49.0	37.5	307 34.6	33.2					
17	116	57.9	84 55.2	+11 40.2	357 48.5	+22 35.8	182 51.4	-21 37.5	322 37.1	+12 33.2					
18	132	00.3	99 54.8	+11 41.3	12 49.6	+22 35.5	197 53.8	-21 37.5	337 39.5	+12 33.2					
19	147	02.8	114 54.3	42.4	27 50.7	35.2	212 56.2	37.5	352 42.0	33.2					
20	162	05.3	129 53.8	43.5	42 51.8	34.9	227 58.7	37.5	7 44.4	33.2					
21	177	07.7	144 53.3	44.6	57 52.8	34.6	243 01.1	37.5	22 46.9	33.2					
22	192	10.2	159 52.9	45.7	72 53.9	34.3	258 03.5	37.5	37 49.4	33.1					
23	207	12.6	174 52.4	46.8	87 55.0	34.1	273 05.9	37.5	52 51.8	33.1					
24	222	15.1	189 51.9	+11 47.9	102 56.1	+22 33.8	288 08.3	-21 37.5	67 54.3	+12 33.1					
Dif	—		-5	+11	+11	-3	+24	0	+25	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 7			Edad: 27 ^d 8 PHE { 4 ^h : 60 ⁷ /7 12 ^h : 60 ⁹ /9 20 ^h : 61 ⁰ /0 PMG: 10 ^h 52 ^m R°: 57 ^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	h m m
0	180	48.2	+16 00.8	203	02.0	+12 43.8	60 N	1 23	2 54	3 49	2 58 3	19 21	117	
1	195	48.3	01.5	217	29.8 88	+12 59.3 155	58	1 56	3 10	4 00	3 05 9	19 10	109	
2	210	48.3	02.3	231	57.6 88	+13 14.7 154	56	2 19	23	09	12 13	18 59	104	
3	225	48.4	03.0	246	25.2 86	30.1 154	54	38	35	17	19 16	50	100	
4	240	48.4	03.7	260	52.7 85	+13 45.5 154	52	2 53	45	24	24 20	42	96	
5	255	48.5	+16 04.4	275	20.1 84	+14 00.7 152	50	3 06	3 53	4 31	3 29 23	18 35	92	
6	270	48.5	+16 05.2	289	47.4 83	+14 15.9 152	45	3 31	4 12	4 45	3 40 29	18 20	86	
7	285	48.6	05.9	304	14.6 82	31.0 151	40	3 50	27	4 56	50 33	18 07	81	
8	300	48.6	06.6	318	41.7 81	+14 46.1 151	35	4 06	39	5 06	3 58 37	17 57	77	
9	315	48.7	07.3	333	08.7 80	+15 01.0 149	30	18	4 49	14	4 05 41	47	74	
10	330	48.8	08.0	347	35.6 79	15.9 149	20	38	5 06	29	17 47	31	69	
11	345	48.8	+16 08.7	2	02.3 77	+15 30.7 148	10 N	4 54	5 20	5 42	4 28 52	17 18	63	
12	0	48.9	+16 09.5	16	29.0 77	+15 45.4 147	0	5 07	5 32	5 53	4 39 56	17 05	59	
13	15	48.9	10.2	30	55.5 75	+16 00.0 146	10 S	18	43	6 05	4 49 61	16 52	55	
14	30	49.0	10.9	45	22.0 75	+16 14.6 146	20	28	5 54	17	5 00 67	38	50	
15	45	49.0	11.6	59	48.3 73	29.0 144	30	38	6 06	31	13 73	23	44	
16	60	49.1	12.3	74	14.4 71	43.4 144	35	42	13	39	21 76	14	41	
17	75	49.1	+16 13.0	88	40.5 71	+16 57.6 142	40	5 47	6 20	6 48	5 29 81	16 04	37	
18	90	49.2	+16 13.8	103	06.5 70	+17 11.8 142	45	5 53	6 28	6 59	5 40 85	15 52	32	
19	105	49.2	14.5	117	32.3 68	25.8 140	50	5 58	37	7 12	52 92	38	26	
20	120	49.3	15.2	131	58.1 68	39.8 140	52	6 01	41	17	5 58 95	31	23	
21	135	49.3	15.9	146	23.7 66	+17 53.6 138	54	03	46	24	6 04 99	24	19	
22	150	49.4	16.6	160	49.2 65	+18 07.3 137	56	06	51	31	12 102	15	16	
23	165	49.4	17.3	175	14.5 63	21.0 137	58	09	6 56	40	20 108	15 06	11	
24	180	49.5	+16 18.0	189	39.8 63	+18 34.5 135	60 S	6 12	7 02	7 49	6 29 114	14 56	5	

UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO				
	PMG 9 ^h 09 ^m 5		Mag: -3.9 PMG: 11 ^h 21 ^m		Mag: +1.3 PMG: 17 ^h 07 ^m		Mag: -2.4 PMG: 4 ^h 47 ^m			Mag: +0.6 PMG: 19 ^h 25 ^m				
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'		
0	222	15.1	189	51.9	+11 47.9	102	56.1	+22 33.8	288	08.3	-21 37.5	67	54.3	+12 33.1
1	237	17.6	204	51.4	49.0	117	57.2	33.5	303	10.7	37.5	82	56.8	33.1
2	252	20.0	219	50.9	50.1	132	58.2	33.2	318	13.2	37.5	97	59.2	33.1
3	267	22.5	234	50.5	51.2	147	59.3	32.9	333	15.6	37.5	113	01.7	33.1
4	282	25.0	249	50.0	52.2	163	00.4	32.6	348	18.0	37.5	128	04.1	33.1
5	297	27.4	264	49.5	+11 53.3	178	01.5	+22 32.3	3	20.4	-21 37.5	143	06.6	+12 33.1
6	312	29.9	279	49.0	+11 54.4	193	02.5	+22 32.0	18	22.8	-21 37.5	158	09.1	+12 33.1
7	327	32.4	294	48.6	55.5	208	03.6	31.8	33	25.2	37.5	173	11.5	33.1
8	342	34.8	309	48.1	56.6	223	04.7	31.5	48	27.7	37.5	188	14.0	33.1
9	357	37.3	324	47.6	57.7	238	05.8	31.2	63	30.1	37.5	203	16.4	33.1
10	12	39.8	339	47.1	58.8	253	06.8	30.9	78	32.5	37.5	218	18.9	33.1
11	27	42.2	354	46.6	+11 59.8	268	07.9	+22 30.6	93	34.9	-21 37.5	233	21.4	+12 33.1
12	42	44.7	9	46.2	+12 00.9	283	09.0	+22 30.3	108	37.3	-21 37.5	248	23.8	+12 33.1
13	57	47.1	24	45.7	02.0	298	10.1	30.0	123	39.8	37.5	263	26.3	33.1
14	72	49.6	39	45.2	03.1	313	11.1	29.7	138	42.2	37.5	278	28.7	33.0
15	87	52.1	54	44.7	04.2	328	12.2	29.4	153	44.6	37.5	293	31.2	33.0
16	102	54.5	69	44.2	05.3	343	13.3	29.1	168	47.0	37.5	308	33.7	33.0
17	117	57.0	84	43.7	+12 06.4	358	14.4	+22 28.8	183	49.5	-21 37.5	323	36.1	+12 33.0
18	132	59.5	99	43.3	+12 07.4	13	15.4	+22 28.6	198	51.9	-21 37.5	338	38.6	+12 33.0
19	148	01.9	114	42.8	08.5	28	16.5	28.3	213	54.3	37.5	353	41.0	33.0
20	163	04.4	129	42.3	09.6	43	17.6	28.0	228	56.7	37.5	8	43.5	33.0
21	178	06.9	144	41.8	10.7	58	18.7	27.7	243	59.2	37.5	23	46.0	33.0
22	193	09.3	159	41.3	11.8	73	19.7	27.4	259	01.6	37.5	38	48.4	33.0
23	208	11.8	174	40.8	12.8	88	20.8	27.1	274	04.0	37.5	53	50.9	33.0
24	223	14.2	189	40.4	+12 13.9	103	21.9	+22 26.8	289	06.4	-21 37.5	68	53.3	+12 33.0
Dif	—		-5 +11		+11 -3		+24 0			+25 0				

UT	SOL				● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15'9 PMG: 11 ^h 56 ^m 7				Edad: 28 ^d 8 PHE { 4 ^h : 61'1 12 ^h : 61'2 20 ^h : 61'3 R°: 63 ^m													
	hG ☉		Dec		hG ☾		Dif				Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	'	h m	h m	h m	h m	h m	h m	h m	h m
0	180	49.5	+16	18.0	189	39.8	+18	34.5	60 N	20 09	21 05	22 43	3 01	9	21 18	114		
1	195	49.5		18.7	204	05.0	62	+18	47.9 ¹³⁴	58	19 58	20 48	22 06	14 16	20 59	106		
2	210	49.6		19.5	218	30.0	60	+19	01.1 ¹³²	56	48	34	21 40	25 21	43	100		
3	225	49.6		20.2	232	54.9	59		14.3 ¹³²	54	40	22	21	35 25	30	95		
4	240	49.7		20.9	247	19.7	58		27.3 ¹³⁰	52	32	12	21 05	44 28	18	92		
5	255	49.7	+16	21.6	261	44.3	56	+19	40.2 ¹²⁹	50	19 25	20 03	20 52	3 52 31	20 07	90		
6	270	49.8	+16	22.3	276	08.9	56	+19	53.0 ¹²⁸	45	19 11	19 44	20 25	4 09 37	19 46	84		
7	285	49.8		23.0	290	33.3	54	+20	05.7 ¹²⁷	40	18 59	29	20 05	23 42	28	81		
8	300	49.9		23.7	304	57.7	54		18.2 ¹²⁵	35	49	16	19 49	35 45	14	77		
9	315	49.9		24.4	319	21.9	52		30.6 ¹²⁴	30	40	19 06	36	4 46 48	19 01	75		
10	330	50.0		25.1	333	46.0	51		42.8 ¹²²	20	25	18 48	16	5 04 53	18 40	70		
11	345	50.0	+16	25.8	348	09.9	49	+20	54.9 ¹²¹	10 N	18 12	18 34	19 00	5 20 58	18 21	67		
12	0	50.1	+16	26.5	2	33.8	49	+21	06.9 ¹²⁰	0	18 00	18 22	18 47	5 35 62	18 04	63		
13	15	50.1		27.2	16	57.5	47		18.7 ¹¹⁸	10 S	17 48	18 10	35	5 50 66	17 47	60		
14	30	50.2		28.0	31	21.2	47		30.4 ¹¹⁷	20	36	17 59	25	6 07 70	28	57		
15	45	50.2		28.7	45	44.7	45		41.9 ¹¹⁵	30	21	46	15	26 75	17 07	52		
16	60	50.3		29.4	60	08.1	44	+21	53.3 ¹¹⁴	35	13	40	10	37 78	16 55	49		
17	75	50.3	+16	30.1	74	31.4	43	+22	04.6 ¹¹³	40	17 04	17 32	18 05	6 50 81	16 41	46		
18	90	50.4	+16	30.8	88	54.6	42	+22	15.6 ¹¹⁰	45	16 53	17 24	17 59	7 05 86	16 24	42		
19	105	50.4		31.5	103	17.6	40		26.6 ¹¹⁰	50	40	14	53	24 92	16 04	36		
20	120	50.5		32.2	117	40.6	40		37.3 ¹⁰⁷	52	34	10	50	33 95	15 54	34		
21	135	50.5		32.9	132	03.5	39		47.9 ¹⁰⁶	54	27	05	48	43 99	43	31		
22	150	50.6		33.6	146	26.2	37	+22	58.4 ¹⁰⁵	56	19	17 00	45	7 54 104	31	26		
23	165	50.6		34.3	160	48.9	37	+23	08.6 ¹⁰²	58	11	16 54	42	8 08 110	17	20		
24	180	50.6	+16	35.0	175	11.4	35	+23	18.7 ¹⁰¹	60 S	16 01	16 48	17 38	8 23 119	15 01	11		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 9 ^h 05 ^m 6		Mag: -3.9 PMG: 11 ^h 22 ^m				Mag: +1.3 PMG: 17 ^h 05 ^m				Mag: -2.4 PMG: 4 ^h 43 ^m				Mag: +0.6 PMG: 19 ^h 21 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	223	14.2	189	40.4	+12	13.9	103	21.9	+22	26.8	289	06.4	-21	37.5	68	53.3	+12	33.0
1	238	16.7	204	39.9		15.0	118	22.9		26.5	304	08.9		37.5	83	55.8		33.0
2	253	19.2	219	39.4		16.1	133	24.0		26.2	319	11.3		37.5	98	58.3		33.0
3	268	21.6	234	38.9		17.2	148	25.1		25.9	334	13.7		37.5	114	00.7		32.9
4	283	24.1	249	38.4		18.2	163	26.2		25.6	349	16.1		37.5	129	03.2		32.9
5	298	26.6	264	37.9	+12	19.3	178	27.2	+22	25.3	4	18.6	-21	37.5	144	05.6	+12	32.9
6	313	29.0	279	37.4	+12	20.4	193	28.3	+22	25.0	19	21.0	-21	37.5	159	08.1	+12	32.9
7	328	31.5	294	37.0		21.5	208	29.4		24.7	34	23.4		37.5	174	10.5		32.9
8	343	34.0	309	36.5		22.5	223	30.5		24.5	49	25.8		37.5	189	13.0		32.9
9	358	36.4	324	36.0		23.6	238	31.5		24.2	64	28.3		37.5	204	15.5		32.9
10	13	38.9	339	35.5		24.7	253	32.6		23.9	79	30.7		37.5	219	17.9		32.9
11	28	41.4	354	35.0	+12	25.8	268	33.7	+22	23.6	94	33.1	-21	37.5	234	20.4	+12	32.9
12	43	43.8	9	34.5	+12	26.8	283	34.7	+22	23.3	109	35.6	-21	37.5	249	22.8	+12	32.9
13	58	46.3	24	34.0		27.9	298	35.8		23.0	124	38.0		37.5	264	25.3		32.9
14	73	48.7	39	33.5		29.0	313	36.9		22.7	139	40.4		37.5	279	27.7		32.9
15	88	51.2	54	33.0		30.0	328	38.0		22.4	154	42.8		37.5	294	30.2		32.8
16	103	53.7	69	32.5		31.1	343	39.0		22.1	169	45.3		37.5	309	32.6		32.8
17	118	56.1	84	32.1	+12	32.2	358	40.1	+22	21.8	184	47.7	-21	37.5	324	35.1	+12	32.8
18	133	58.6	99	31.6	+12	33.3	13	41.2	+22	21.5	199	50.1	-21	37.5	339	37.6	+12	32.8
19	149	01.1	114	31.1		34.3	28	42.3		21.2	214	52.6		37.5	354	40.0		32.8
20	164	03.5	129	30.6		35.4	43	43.3		20.9	229	55.0		37.5	9	42.5		32.8
21	179	06.0	144	30.1		36.5	58	44.4		20.6	244	57.4		37.5	24	44.9		32.8
22	194	08.5	159	29.6		37.5	73	45.5		20.3	259	59.9		37.5	39	47.4		32.8
23	209	10.9	174	29.1		38.6	88	46.5		20.0	275	02.3		37.5	54	49.8		32.8
24	224	13.4	189	28.6	+12	39.7	103	47.6	+22	19.7	290	04.7	-21	37.5	69	52.3	+12	32.8
Dif	—		-5		+11		+11		-3		+24		0		+25		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 6			Edad: 0 ^d 5 SD: 16 ^h 7 PMG: 12 ^h 52 ^m	PHE { 4 ^h : 61 ^m 3 12 ^h : 61 ^m 3 20 ^h : 61 ^m 2 R°: 66 ^m	Dif		R°			R°					
	hG ☉	Dec		hG ☾		Dif		Dec	Dif		Náutico	Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	50.6	+16 35.0	175	11.4	+23 18.7	100	60 N	1 09	2 47	3 44	3 10	20	23 12	91	
1	195	50.7	35.7	189	33.8	28.7	34	58	1 47	3 04	3 55	30	28	22 45	85	
2	210	50.7	36.4	203	56.2	38.5	98	56	2 12	18	4 04	3 46	34	23	82	
3	225	50.8	37.1	218	18.4	48.1	96	54	32	30	13	4 00	39	22 05	80	
4	240	50.8	37.8	232	40.6	+23 57.5	94	52	2 48	41	21	12	42	21 50	79	
5	255	50.9	+16 38.5	247	02.6	+24 06.7	92	50	3 01	3 50	4 27	4 23	44	21 37	77	
6	270	50.9	+16 39.2	261	24.6	+24 15.8	91	45	3 28	4 09	4 42	4 46	49	21 10	75	
7	285	51.0	39.9	275	46.4	24.7	89	40	3 48	24	4 54	5 05	52	20 49	73	
8	300	51.0	40.6	290	08.2	33.4	87	35	4 03	37	5 04	20	55	31	72	
9	315	51.0	41.3	304	29.9	41.9	85	30	17	4 47	13	34	57	20 16	71	
10	330	51.1	42.0	318	51.5	50.2	83	20	37	5 05	28	5 57	60	19 50	69	
11	345	51.1	+16 42.7	333	13.0	+24 58.4	82	10 N	4 53	5 19	5 41	6 18	62	19 28	68	
12	0	51.2	+16 43.3	347	34.4	+25 06.3	79	0	5 06	5 32	5 53	6 37	65	19 07	67	
13	15	51.2	44.0	1	55.7	14.1	78	10 S	18	43	6 05	6 56	68	18 47	65	
14	30	51.3	44.7	16	17.0	21.7	76	20	29	5 55	18	7 17	70	18 25	63	
15	45	51.3	45.4	30	38.2	29.0	73	30	39	6 07	32	41	73	17 59	61	
16	60	51.3	46.1	44	59.3	36.2	72	35	44	14	41	7 55	75	44	60	
17	75	51.4	+16 46.8	59	20.4	+25 43.2	70	40	5 49	6 22	6 50	8 11	78	17 27	58	
18	90	51.4	+16 47.5	73	41.3	+25 50.0	68	45	5 55	6 30	7 01	8 31	81	17 06	56	
19	105	51.5	48.2	88	02.3	+25 56.6	66	50	6 01	40	14	8 56	85	16 40	52	
20	120	51.5	48.9	102	23.1	+26 03.0	64	52	04	44	21	9 08	87	28	50	
21	135	51.5	49.6	116	43.9	09.2	62	54	06	49	28	22	90	16 14	47	
22	150	51.6	50.3	131	04.6	15.2	60	56	09	6 54	35	38	94	15 57	44	
23	165	51.6	51.0	145	25.3	21.0	58	58	12	7 00	44	9 58	98	37	39	
24	180	51.7	+16 51.6	159	45.9	+26 26.5	55	60 S	6 16	7 07	7 54	10 22	108	15 12	30	

UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO				
	PMG 9 ^h 01 ^m 6		Mag: -3.9 PMG: 11 ^h 22 ^m		Mag: +1.3 PMG: 17 ^h 04 ^m		Mag: -2.4 PMG: 4 ^h 39 ^m			Mag: +0.6 PMG: 19 ^h 17 ^m				
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'		
0	224	13.4	189	28.6	+12 39.7	103	47.6	+22 19.7	290	04.7	-21 37.5	69	52.3	+12 32.8
1	239	15.9	204	28.1	40.7	118	48.7	19.4	305	07.2	37.5	84	54.7	32.8
2	254	18.3	219	27.6	41.8	133	49.8	19.1	320	09.6	37.5	99	57.2	32.7
3	269	20.8	234	27.1	42.9	148	50.8	18.8	335	12.0	37.5	114	59.6	32.7
4	284	23.2	249	26.6	43.9	163	51.9	18.5	350	14.5	37.5	130	02.1	32.7
5	299	25.7	264	26.1	+12 45.0	178	53.0	+22 18.2	5	16.9	-21 37.5	145	04.5	+12 32.7
6	314	28.2	279	25.6	+12 46.1	193	54.0	+22 17.9	20	19.3	-21 37.5	160	07.0	+12 32.7
7	329	30.6	294	25.1	47.1	208	55.1	17.6	35	21.8	37.5	175	09.4	32.7
8	344	33.1	309	24.6	48.2	223	56.2	17.3	50	24.2	37.5	190	11.9	32.7
9	359	35.6	324	24.1	49.2	238	57.2	17.0	65	26.7	37.5	205	14.4	32.7
10	14	38.0	339	23.6	50.3	253	58.3	16.7	80	29.1	37.5	220	16.8	32.7
11	29	40.5	354	23.1	+12 51.4	268	59.4	+22 16.4	95	31.5	-21 37.5	235	19.3	+12 32.7
12	44	43.0	9	22.6	+12 52.4	284	00.5	+22 16.1	110	34.0	-21 37.5	250	21.7	+12 32.7
13	59	45.4	24	22.1	53.5	299	01.5	15.8	125	36.4	37.5	265	24.2	32.6
14	74	47.9	39	21.6	54.6	314	02.6	15.5	140	38.8	37.5	280	26.6	32.6
15	89	50.4	54	21.1	55.6	329	03.7	15.2	155	41.3	37.5	295	29.1	32.6
16	104	52.8	69	20.6	56.7	344	04.7	14.9	170	43.7	37.5	310	31.5	32.6
17	119	55.3	84	20.1	+12 57.7	359	05.8	+22 14.6	185	46.2	-21 37.5	325	34.0	+12 32.6
18	134	57.7	99	19.6	+12 58.8	14	06.9	+22 14.3	200	48.6	-21 37.5	340	36.4	+12 32.6
19	150	00.2	114	19.1	+12 59.8	29	07.9	14.0	215	51.0	37.5	355	38.9	32.6
20	165	02.7	129	18.6	+13 00.9	44	09.0	13.7	230	53.5	37.5	10	41.3	32.6
21	180	05.1	144	18.1	02.0	59	10.1	13.4	245	55.9	37.5	25	43.8	32.6
22	195	07.6	159	17.6	03.0	74	11.2	13.1	260	58.4	37.5	40	46.2	32.5
23	210	10.1	174	17.1	04.1	89	12.2	12.8	276	00.8	37.5	55	48.7	32.5
24	225	12.5	189	16.6	+13 05.1	104	13.3	+22 12.5	291	03.3	-21 37.5	70	51.1	+12 32.5

Dif	—	-5	+11	+11	-3	+24	0	+25

UT	SOL				● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 5				Edad: 1 ^d 5 SD: 16 ^h 7 PMG: 13 ^h 58 ^m											
	hG ☉		Dec		hG ☾		Dif				Civil	Náutico	Hora	Rº	Hora	Rº
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	180	51.7	+16	51.6	159	45.9	+26	26.5	60 N	20 14	21 11	22 59	3 30 50	*** ** *		
1	195	51.7		52.3	174	06.5	16	31.9	58	20 02	20 54	22 15	3 58 55	*** ** *		
2	210	51.7		53.0	188	27.1	16	37.1	56	19 52	39	21 47	4 20 57	23 45 55		
3	225	51.8		53.7	202	47.5	14	42.0	54	43	27	27	39 58	25 57		
4	240	51.8		54.4	217	08.0	15	46.8	52	35	16	21 10	4 54 60	23 09 57		
5	255	51.9	+16	55.1	231	28.4	14	+26 51.3	50	19 28	20 06	20 56	5 07 61	22 54 59		
6	270	51.9	+16	55.8	245	48.8	14	+26 55.6	45	19 13	19 47	20 28	5 35 62	22 25 61		
7	285	51.9		56.5	260	09.1	13	+26 59.8	40	19 01	31	20 08	5 57 63	22 02 62		
8	300	52.0		57.1	274	29.5	14	+27 03.7	35	18 51	18	19 51	6 15 64	21 43 63		
9	315	52.0		57.8	288	49.8	13	07.4	30	41	19 07	38	31 64	21 27 63		
10	330	52.0		58.5	303	10.0	12	10.9	20	26	18 49	17	6 57 66	20 59 65		
11	345	52.1	+16	59.2	317	30.3	13	+27 14.1	10 N	18 12	18 35	19 00	7 20 66	20 36 65		
12	0	52.1	+16	59.9	331	50.5	12	+27 17.2	0	18 00	18 22	18 47	7 42 66	20 14 65		
13	15	52.2	+17	00.6	346	10.8	13	20.0	10 S	17 48	18 10	35	8 04 66	19 52 66		
14	30	52.2		01.2	0	31.0	12	22.7	20	35	17 58	24	27 67	28 67		
15	45	52.2		01.9	14	51.2	12	25.1	30	20	45	13	8 54 68	19 00 67		
16	60	52.3		02.6	29	11.5	13	27.3	35	11	38	08	9 10 68	18 44 67		
17	75	52.3	+17	03.3	43	31.7	12	+27 29.3	40	17 02	17 30	18 03	9 29 68	18 25 68		
18	90	52.3	+17	04.0	57	51.9	12	+27 31.0	45	16 50	17 21	17 57	9 52 68	18 02 68		
19	105	52.4		04.6	72	12.2	13	32.6	50	37	11	50	10 21 68	17 32 69		
20	120	52.4		05.3	86	32.4	12	33.9	52	30	07	47	35 69	18 69		
21	135	52.4		06.0	100	52.7	13	35.1	54	23	17 02	44	10 52 68	17 01 69		
22	150	52.5		06.7	115	13.0	13	36.0	56	15	16 56	41	11 12 68	16 41 70		
23	165	52.5		07.3	129	33.3	13	36.7	58	16 06	50	38	11 36 69	16 16 70		
24	180	52.5	+17	08.0	143	53.6	13	+27 37.2	60 S	15 56	16 44	17 34	12 10 68	15 42 71		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 8 ^h 57 ^m 7		Mag: -3.9 PMG: 11 ^h 23 ^m		Mag: +1.3 PMG: 17 ^h 02 ^m		Mag: -2.5 PMG: 4 ^h 35 ^m		Mag: +0.6 PMG: 19 ^h 13 ^m							
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄							
h	°	'	°	'	°	'	°	'	°	'						
0	225	12.5	189	16.6	+13	05.1	104	13.3	+22	12.5						
1	240	15.0	204	16.1		06.2	119	14.4		12.2						
2	255	17.5	219	15.6		07.2	134	15.4		11.9						
3	270	19.9	234	15.1		08.3	149	16.5		11.6						
4	285	22.4	249	14.6		09.3	164	17.6		11.3						
5	300	24.9	264	14.1	+13	10.4	179	18.6	+22	11.0						
6	315	27.3	279	13.6	+13	11.4	194	19.7	+22	10.7						
7	330	29.8	294	13.1		12.5	209	20.8		10.4						
8	345	32.2	309	12.6		13.5	224	21.8		10.1						
9	0	34.7	324	12.1		14.6	239	22.9		09.8						
10	15	37.2	339	11.6		15.6	254	24.0		09.4						
11	30	39.6	354	11.0	+13	16.7	269	25.1	+22	09.1						
12	45	42.1	9	10.5	+13	17.7	284	26.1	+22	08.8						
13	60	44.6	24	10.0		18.8	299	27.2		08.5						
14	75	47.0	39	09.5		19.8	314	28.3		08.2						
15	90	49.5	54	09.0		20.9	329	29.3		07.9						
16	105	52.0	69	08.5		21.9	344	30.4		07.6						
17	120	54.4	84	08.0	+13	23.0	359	31.5	+22	07.3						
18	135	56.9	99	07.5	+13	24.0	14	32.5	+22	07.0						
19	150	59.3	114	07.0		25.0	29	33.6		06.7						
20	166	01.8	129	06.5		26.1	44	34.7		06.4						
21	181	04.3	144	05.9		27.1	59	35.7		06.1						
22	196	06.7	159	05.4		28.2	74	36.8		05.8						
23	211	09.2	174	04.9		29.2	89	37.9		05.5						
24	226	11.7	189	04.4	+13	30.3	104	38.9	+22	05.1						
Dif	—		-5		+10		+11		-3							
							+24		0							
									+24							
									0							

UT	SOL			● LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 5			Edad: 2 ^d 5 PHE { 4 ^h : 60 ^m 7 12 ^h : 60 ^m 4 20 ^h : 60 ^m 2 R°: 63 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec		Dif		Náutico	Civil		Hora	R°			Hora
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	52.5	+17	08.0	143	53.6	+27	37.2	60 N	0 53	2 41	3 39	4 20	89	0 43	46	
1	195	52.6		08.7	158	14.0		37.5	58	1 37	2 59	3 50	4 53	83	0 10	52	
2	210	52.6		09.4	172	34.4		37.5	56	2 05	3 13	4 00	5 17	81	***	***	
3	225	52.6		10.1	186	54.8		37.4	54	26	26	09	37	78	***	***	
4	240	52.7		10.7	201	15.3		37.0	52	43	37	17	5 54	76	***	***	
5	255	52.7	+17	11.4	215	35.8	+27	36.5	50	2 57	3 46	4 24	6 08	76	23 53	41	
6	270	52.7	+17	12.1	229	56.4	+27	35.7	45	3 24	4 06	4 39	6 37	73	23 26	45	
7	285	52.8		12.8	244	17.0		34.7	40	3 45	22	4 52	7 00	71	23 04	49	
8	300	52.8		13.4	258	37.7		33.5	35	4 01	35	5 02	19	70	22 46	51	
9	315	52.8		14.1	272	58.4		32.1	30	15	4 45	11	7 35	69	30	54	
10	330	52.9		14.8	287	19.2		30.5	20	36	5 04	27	8 03	67	22 04	56	
11	345	52.9	+17	15.4	301	40.0	+27	28.7	10 N	4 53	5 18	5 40	8 26	66	21 41	59	
12	0	52.9	+17	16.1	316	00.9	+27	26.7	0	5 06	5 31	5 53	8 48	64	21 19	62	
13	15	53.0		16.8	330	21.9		24.5	10 S	18	44	6 05	9 10	63	20 58	64	
14	30	53.0		17.5	344	42.9		22.0	20	29	5 56	19	9 34	61	35	66	
15	45	53.0		18.1	359	04.0		19.4	30	40	6 08	34	10 02	58	20 07	70	
16	60	53.0		18.8	13	25.2		16.6	35	45	16	42	18	57	19 51	72	
17	75	53.1	+17	19.5	27	46.5	+27	13.6	40	5 51	6 23	6 52	10 37	55	19 33	74	
18	90	53.1	+17	20.1	42	07.9	+27	10.3	45	5 57	6 32	7 04	11 00	53	19 10	77	
19	105	53.1		20.8	56	29.3		06.9	50	6 03	42	17	29	49	18 41	81	
20	120	53.2		21.5	70	50.8	+27	03.3	52	06	47	24	11 44	47	27	83	
21	135	53.2		22.1	85	12.4	+26	59.5	54	09	52	31	12 00	45	18 10	86	
22	150	53.2		22.8	99	34.1		55.5	56	12	6 58	39	20	42	17 51	89	
23	165	53.3		23.5	113	55.9		51.3	58	16	7 04	48	12 45	36	17 26	95	
24	180	53.3	+17	24.1	128	17.8	+26	46.9	60 S	6 20	7 11	7 58	13 18	28	16 53	104	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 8 ^h 53 ^m 8		Mag: -3.9 PMG: 11 ^h 24 ^m			Mag: +1.3 PMG: 17 ^h 00 ^m			Mag: -2.5 PMG: 4 ^h 31 ^m			Mag: +0.6 PMG: 19 ^h 10 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	226	11.7	189	04.4	+13	30.3	104	38.9	+22	05.1	292	02.0	-21	37.6	71	49.9	+12	32.2
1	241	14.1	204	03.9		31.3	119	40.0		04.8	307	04.4		37.6	86	52.3		32.2
2	256	16.6	219	03.4		32.3	134	41.1		04.5	322	06.9		37.6	101	54.7		32.2
3	271	19.1	234	02.9		33.4	149	42.1		04.2	337	09.3		37.6	116	57.2		32.2
4	286	21.5	249	02.3		34.4	164	43.2		03.9	352	11.8		37.6	131	59.6		32.2
5	301	24.0	264	01.8	+13	35.4	179	44.3	+22	03.6	7	14.2	-21	37.6	147	02.1	+12	32.2
6	316	26.5	279	01.3	+13	36.5	194	45.3	+22	03.3	22	16.7	-21	37.6	162	04.5	+12	32.2
7	331	28.9	294	00.8		37.5	209	46.4		03.0	37	19.1		37.6	177	07.0		32.2
8	346	31.4	309	00.3		38.6	224	47.5		02.7	52	21.6		37.6	192	09.4		32.1
9	1	33.8	323	59.8		39.6	239	48.5		02.4	67	24.0		37.6	207	11.9		32.1
10	16	36.3	338	59.2		40.6	254	49.6		02.1	82	26.5		37.6	222	14.3		32.1
11	31	38.8	353	58.7	+13	41.7	269	50.7	+22	01.7	97	28.9	-21	37.6	237	16.7	+12	32.1
12	46	41.2	8	58.2	+13	42.7	284	51.7	+22	01.4	112	31.4	-21	37.6	252	19.2	+12	32.1
13	61	43.7	23	57.7		43.7	299	52.8		01.1	127	33.9		37.6	267	21.6		32.1
14	76	46.2	38	57.2		44.8	314	53.9		00.8	142	36.3		37.6	282	24.1		32.1
15	91	48.6	53	56.6		45.8	329	54.9		00.5	157	38.8		37.6	297	26.5		32.0
16	106	51.1	68	56.1		46.8	344	56.0	+22	00.2	172	41.2		37.6	312	29.0		32.0
17	121	53.6	83	55.6	+13	47.9	359	57.1	+21	59.9	187	43.7	-21	37.6	327	31.4	+12	32.0
18	136	56.0	98	55.1	+13	48.9	14	58.1	+21	59.6	202	46.1	-21	37.6	342	33.8	+12	32.0
19	151	58.5	113	54.6		49.9	29	59.2		59.3	217	48.6		37.7	357	36.3		32.0
20	167	01.0	128	54.0		51.0	45	00.3		58.9	232	51.0		37.7	12	38.7		32.0
21	182	03.4	143	53.5		52.0	60	01.3		58.6	247	53.5		37.7	27	41.2		32.0
22	197	05.9	158	53.0		53.0	75	02.4		58.3	262	56.0		37.7	42	43.6		32.0
23	212	08.3	173	52.5		54.0	90	03.4		58.0	277	58.4		37.7	57	46.0		31.9
24	227	10.8	188	51.9	+13	55.1	105	04.5	+21	57.7	293	00.9	-21	37.7	72	48.5	+12	31.9
Dif	—		-5 +10			+11 -3			+25 0			+24 0						

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 4			Edad: 3 ^d 5 PHE { 4 ^h : 60'0 12 ^h : 59'7 20 ^h : 59'4 R°: 57 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	m	h m	m	
0	180	53.3	+17	24.1	128	17.8	+26	46.9	60 N	20 18	21 18	23 21	5 49	107	1 29	19
1	195	53.3		24.8	142	39.8		42.4	58	20 06	20 59	22 25	6 16	99	1 02	26
2	210	53.3		25.4	157	01.9		37.6	56	19 56	44	21 54	38	93	0 40	32
3	225	53.4		26.1	171	24.0		32.7	54	47	31	32	6 55	89		22
4	240	53.4		26.8	185	46.3		27.6	52	39	20	15	7 10	86	0 06	39
5	255	53.4	+17	27.4	200	08.7	+26	22.3	50	19 31	20 10	21 00	7 24	83	**	**
6	270	53.4	+17	28.1	214	31.2	+26	16.8	45	19 16	19 49	20 32	7 50	78	**	**
7	285	53.5		28.8	228	53.9		11.1	40	19 03	33	20 10	8 11	75	23	53
8	300	53.5		29.4	243	16.6	+26	05.3	35	18 52	20	19 53	29	72		37
9	315	53.5		30.1	257	39.4	+25	59.3	30	43	19 09	40	8 44	69		24
10	330	53.5		30.7	272	02.4		53.1	20	27	18 50	18	9 10	65	23	00
11	345	53.6	+17	31.4	286	25.5	+25	46.8	10 N	18 13	18 35	19 01	9 32	62	22	40
12	0	53.6	+17	32.1	300	48.6	+25	40.3	0	18 00	18 22	18 47	9 52	59	22	21
13	15	53.6		32.7	315	12.0		33.6	10 S	17 47	18 09	35	10 13	56	22	02
14	30	53.6		33.4	329	35.4		26.7	20	34	17 57	23	10 35	52	21	41
15	45	53.7		34.0	343	58.9		19.7	30	18	43	12	11 00	48		17
16	60	53.7		34.7	358	22.6		12.5	35	17 09	36	07	15	46	21	03
17	75	53.7	+17	35.3	12	46.4	+25	05.2	40	16 59	17 28	18 01	11 32	43	20	47
18	90	53.7	+17	36.0	27	10.3	+24	57.7	45	16 48	17 19	17 54	11 53	39	20	27
19	105	53.8		36.7	41	34.4		50.1	50	34	09	48	12 18	34	20	02
20	120	53.8		37.3	55	58.6		42.3	52	27	17 04	45	31	31	19	50
21	135	53.8		38.0	70	22.9		34.3	54	20	16 59	41	12 45	28		36
22	150	53.8		38.6	84	47.3		26.2	56	11	53	38	13 02	23		20
23	165	53.9		39.3	99	11.9		18.0	58	16 02	47	34	21	19	19	01
24	180	53.9	+17	39.9	113	36.6	+24	09.6	60 S	15 52	16 39	17 30	13 46	11	18	37

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 8 ^h 49 ^m 8		Mag: -3.9 PMG: 11 ^h 25 ^m			Mag: +1.3 PMG: 16 ^h 58 ^m			Mag: -2.5 PMG: 4 ^h 27 ^m			Mag: +0.6 PMG: 19 ^h 06 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	227	10.8	188	51.9	+13	55.1	105	04.5	+21	57.7	293	00.9	-21	37.7	72	48.5	+12	31.9
1	242	13.3	203	51.4		56.1	120	05.6		57.4	308	03.3		37.7	87	50.9		31.9
2	257	15.7	218	50.9		57.1	135	06.6		57.1	323	05.8		37.7	102	53.4		31.9
3	272	18.2	233	50.4		58.1	150	07.7		56.7	338	08.3		37.7	117	55.8		31.9
4	287	20.7	248	49.8	+13	59.2	165	08.8		56.4	353	10.7		37.7	132	58.2		31.9
5	302	23.1	263	49.3	+14	00.2	180	09.8	+21	56.1	8	13.2	-21	37.7	148	00.7	+12	31.9
6	317	25.6	278	48.8	+14	01.2	195	10.9	+21	55.8	23	15.6	-21	37.7	163	03.1	+12	31.8
7	332	28.1	293	48.3		02.2	210	12.0		55.5	38	18.1		37.7	178	05.6		31.8
8	347	30.5	308	47.7		03.3	225	13.0		55.2	53	20.6		37.7	193	08.0		31.8
9	2	33.0	323	47.2		04.3	240	14.1		54.9	68	23.0		37.7	208	10.4		31.8
10	17	35.5	338	46.7		05.3	255	15.2		54.5	83	25.5		37.7	223	12.9		31.8
11	32	37.9	353	46.2	+14	06.3	270	16.2	+21	54.2	98	27.9	-21	37.7	238	15.3	+12	31.8
12	47	40.4	8	45.6	+14	07.3	285	17.3	+21	53.9	113	30.4	-21	37.7	253	17.8	+12	31.7
13	62	42.8	23	45.1		08.4	300	18.4		53.6	128	32.9		37.7	268	20.2		31.7
14	77	45.3	38	44.6		09.4	315	19.4		53.3	143	35.3		37.7	283	22.6		31.7
15	92	47.8	53	44.0		10.4	330	20.5		53.0	158	37.8		37.8	298	25.1		31.7
16	107	50.2	68	43.5		11.4	345	21.5		52.6	173	40.3		37.8	313	27.5		31.7
17	122	52.7	83	43.0	+14	12.4	0	22.6	+21	52.3	188	42.7	-21	37.8	328	30.0	+12	31.7
18	137	55.2	98	42.4	+14	13.5	15	23.7	+21	52.0	203	45.2	-21	37.8	343	32.4	+12	31.7
19	152	57.6	113	41.9		14.5	30	24.7		51.7	218	47.7		37.8	358	34.8		31.6
20	168	00.1	128	41.4		15.5	45	25.8		51.4	233	50.1		37.8	13	37.3		31.6
21	183	02.6	143	40.8		16.5	60	26.9		51.1	248	52.6		37.8	28	39.7		31.6
22	198	05.0	158	40.3		17.5	75	27.9		50.7	263	55.1		37.8	43	42.1		31.6
23	213	07.5	173	39.8		18.5	90	29.0		50.4	278	57.5		37.8	58	44.6		31.6
24	228	10.0	188	39.2	+14	19.5	105	30.1	+21	50.1	294	00.0	-21	37.8	73	47.0	+12	31.6
Dif	—		-5		+10		+11		-3		+25		0		+24		0	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 4			Edad: 4 ^d 5 SD: 16 ^h 1 PMG: 17 ^h 04 ^m	PHE { 4 ^h : 59 ^m 1 12 ^h : 58 ^m 9 20 ^h : 58 ^m 6 R°: 52 ^m										
	hG ☉	Dec	hG ☾			Dif		Dec	Dif		Náutico	Civil	Hora	R°	Hora
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	53.9	+17 39.9	113	36.6	+24 09.6	60 N	0 32	2 34	3 34	7 36	104	1 48	8	
1	195	53.9	40.6	128	01.4	+24 01.0	58	1 28	2 53	46	7 55	98	28	15	
2	210	53.9	41.2	142	26.4	+23 52.3	56	1 58	3 08	3 56	8 11	93	1 12	19	
3	225	53.9	41.9	156	51.4	43.5	54	2 20	21	4 05	24	90	0 58	23	
4	240	54.0	42.5	171	16.7	34.6	52	38	33	14	36	86	45	26	
5	255	54.0	+17 43.2	185	42.0	+23 25.5	50	2 52	3 43	4 21	8 47	83	0 34	29	
6	270	54.0	+17 43.8	200	07.5	+23 16.2	45	3 21	4 03	4 37	9 08	78	0 11	35	
7	285	54.0	44.5	214	33.1	+23 06.9	40	42	19	4 49	26	73	** ** *	**	
8	300	54.0	45.1	228	58.9	+22 57.4	35	3 59	33	5 00	41	69	** ** *	**	
9	315	54.1	45.8	243	24.8	47.8	30	4 13	4 44	10	9 53	67	** ** *	**	
10	330	54.1	46.4	257	50.8	38.0	20	35	5 02	26	10 15	62	23 49	42	
11	345	54.1	+17 47.1	272	16.9	+22 28.1	10 N	4 52	5 18	5 40	10 34	57	23 33	46	
12	0	54.1	+17 47.7	286	43.2	+22 18.1	0	5 06	5 31	5 53	10 51	54	23 17	51	
13	15	54.1	48.4	301	09.6	+22 08.0	10 S	18	44	6 06	11 09	49	23 02	55	
14	30	54.2	49.0	315	36.2	+21 57.8	20	30	5 56	19	27	45	22 45	59	
15	45	54.2	49.6	330	02.9	47.4	30	41	6 10	35	11 48	41	26	64	
16	60	54.2	50.3	344	29.7	37.0	35	47	17	44	12 01	37	14	68	
17	75	54.2	+17 50.9	358	56.6	+21 26.4	40	5 53	6 25	6 54	12 15	34	22 01	72	
18	90	54.2	+17 51.6	13	23.7	+21 15.7	45	5 59	6 34	7 06	12 32	29	21 45	77	
19	105	54.3	52.2	27	50.9	+21 04.9	50	6 06	45	20	12 52	24	26	82	
20	120	54.3	52.9	42	18.3	+20 54.0	52	09	50	27	13 02	21	17	85	
21	135	54.3	53.5	56	45.8	43.0	54	12	6 55	34	13	18	21 07	88	
22	150	54.3	54.1	71	13.4	31.9	56	16	7 01	43	25	15	20 55	92	
23	165	54.3	54.8	85	41.1	20.7	58	19	07	7 52	40	10	41	97	
24	180	54.3	+17 55.4	100	09.0	+20 09.4	60 S	6 23	7 15	8 03	13 57	4	20 25	103	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG 8 ^h 45 ^m 9		Mag: -3.9 PMG: 11 ^h 26 ^m		Mag: +1.3 PMG: 16 ^h 57 ^m		Mag: -2.5 PMG: 4 ^h 23 ^m		Mag: +0.6 PMG: 19 ^h 02 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	228	10.0	188	39.2	+14 19.5	105	30.1	+21 50.1	294	00.0	-21 37.8	73	47.0	+12 31.6	
1	243	12.4	203	38.7	20.6	120	31.1	49.8	309	02.5	37.8	88	49.5	31.5	
2	258	14.9	218	38.2	21.6	135	32.2	49.5	324	04.9	37.8	103	51.9	31.5	
3	273	17.3	233	37.6	22.6	150	33.2	49.1	339	07.4	37.8	118	54.3	31.5	
4	288	19.8	248	37.1	23.6	165	34.3	48.8	354	09.9	37.8	133	56.8	31.5	
5	303	22.3	263	36.6	+14 24.6	180	35.4	+21 48.5	9	12.3	-21 37.8	148	59.2	+12 31.5	
6	318	24.7	278	36.0	+14 25.6	195	36.4	+21 48.2	24	14.8	-21 37.8	164	01.6	+12 31.5	
7	333	27.2	293	35.5	26.6	210	37.5	47.9	39	17.3	37.9	179	04.1	31.5	
8	348	29.7	308	35.0	27.6	225	38.6	47.6	54	19.7	37.9	194	06.5	31.4	
9	3	32.1	323	34.4	28.6	240	39.6	47.2	69	22.2	37.9	209	08.9	31.4	
10	18	34.6	338	33.9	29.6	255	40.7	46.9	84	24.7	37.9	224	11.4	31.4	
11	33	37.1	353	33.3	+14 30.6	270	41.7	+21 46.6	99	27.2	-21 37.9	239	13.8	+12 31.4	
12	48	39.5	8	32.8	+14 31.6	285	42.8	+21 46.3	114	29.6	-21 37.9	254	16.2	+12 31.4	
13	63	42.0	23	32.3	32.7	300	43.9	45.9	129	32.1	37.9	269	18.7	31.4	
14	78	44.5	38	31.7	33.7	315	44.9	45.6	144	34.6	37.9	284	21.1	31.3	
15	93	46.9	53	31.2	34.7	330	46.0	45.3	159	37.0	37.9	299	23.6	31.3	
16	108	49.4	68	30.6	35.7	345	47.1	45.0	174	39.5	37.9	314	26.0	31.3	
17	123	51.8	83	30.1	+14 36.7	0	48.1	+21 44.7	189	42.0	-21 37.9	329	28.4	+12 31.3	
18	138	54.3	98	29.6	+14 37.7	15	49.2	+21 44.3	204	44.5	-21 37.9	344	30.9	+12 31.3	
19	153	56.8	113	29.0	38.7	30	50.2	44.0	219	46.9	37.9	359	33.3	31.3	
20	168	59.2	128	28.5	39.7	45	51.3	43.7	234	49.4	37.9	14	35.7	31.2	
21	184	01.7	143	27.9	40.7	60	52.4	43.4	249	51.9	38.0	29	38.2	31.2	
22	199	04.2	158	27.4	41.7	75	53.4	43.0	264	54.4	38.0	44	40.6	31.2	
23	214	06.6	173	26.8	42.7	90	54.5	42.7	279	56.8	38.0	59	43.0	31.2	
24	229	09.1	188	26.3	+14 43.7	105	55.6	+21 42.4	294	59.3	-21 38.0	74	45.5	+12 31.2	
Dif	—		-5		+10	+11		-3	+25		0	+24		0	

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 5 ^d 5	PHE {	4 ^h : 58 ^h /3 12 ^h : 58 ^h /0 20 ^h : 57 ^h /7 R°: 48 ^m								
	PMG: 11 ^h 56 ^m 4													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	180	54.3	+17 55.4	100	09.0	+20 09.4		60 N	20 23	21 24	** **	9 20 98	1 56 4	
1	195	54.4		114	37.0	+19 58.0	114	58	11	21 05	22 35	33 93	43 8	
2	210	54.4	56.7	129	05.1	46.5	115	56	20 00	20 49	22 02	44 89	31 12	
3	225	54.4	57.3	143	33.3	34.9	116	54	19 50	35	21 38	9 54 85	21 15	
4	240	54.4	58.0	158	01.7	23.2	117	52	42	23	20	10 02 82	11 19	
5	255	54.4	+17 58.6	172	30.2	+19 11.4	118	50	19 34	20 13	21 04	10 10 79	1 03 21	
6	270	54.4	+17 59.3	186	58.8	+18 59.5	119	45	19 18	19 52	20 35	10 26 74	0 46 26	
7	285	54.4	+17 59.9	201	27.6	47.6	119	40	19 05	35	20 13	39 70	31 31	
8	300	54.5	+18 00.5	215	56.4	35.5	121	35	18 54	22	19 55	10 50 66	19 34	
9	315	54.5	01.2	230	25.4	23.4	121	30	44	19 10	41	11 00 63	0 08 37	
10	330	54.5	01.8	244	54.5	+18 11.2	122	20	27	18 51	19	17 57	** ** *	
11	345	54.5	+18 02.4	259	23.8	+17 58.9	123	10 N	18 13	18 35	19 01	11 31 53	** ** *	
12	0	54.5	+18 03.1	273	53.1	+17 46.5	124	0	18 00	18 22	18 47	11 45 48	** ** *	
13	15	54.5	03.7	288	22.6	34.1	124	10 S	17 47	18 09	34	11 58 44	23 57 50	
14	30	54.5	04.3	302	52.2	21.6	125	20	33	17 56	22	12 12 40	44 56	
15	45	54.6	05.0	317	21.9	+17 09.0	126	30	17	42	11	29 34	30 61	
16	60	54.6	05.6	331	51.7	+16 56.3	127	35	17 08	35	18 05	38 31	22 64	
17	75	54.6	+18 06.2	346	21.7	+16 43.6	127	40	16 57	17 26	17 59	12 49 27	23 13 68	
18	90	54.6	+18 06.9	0	51.7	+16 30.8	128	45	16 45	17 17	17 52	13 01 24	23 02 72	
19	105	54.6	07.5	15	21.9	17.9	129	50	31	06	45	16 18	22 48 78	
20	120	54.6	08.1	29	52.2	+16 05.0	129	52	24	17 01	42	23 16	42 80	
21	135	54.6	08.7	44	22.5	+15 52.0	130	54	16	16 55	38	31 13	35 83	
22	150	54.6	09.4	58	53.0	38.9	131	56	16 08	49	35	40 10	27 86	
23	165	54.6	10.0	73	23.6	25.8	131	58	15 58	43	31	13 50 6	18 90	
24	180	54.7	+18 10.6	87	54.3	+15 12.6	132	60 S	15 47	16 35	17 27	14 01 2	22 08 94	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 8 ^h 42 ^m 0		Mag: -3.9 PMG: 11 ^h 27 ^m		Mag: +1.3 PMG: 16 ^h 55 ^m		Mag: -2.5 PMG: 4 ^h 19 ^m		Mag: +0.6 PMG: 18 ^h 58 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	229	09.1	188 26.3	+14 43.7	105 55.6	+21 42.4	294 59.3	-21 38.0	74 45.5	+12 31.2
1	244	11.6	203 25.8	44.7	120 56.6	42.1	310 01.8	38.0	89 47.9	31.2
2	259	14.0	218 25.2	45.7	135 57.7	41.8	325 04.3	38.0	104 50.3	31.1
3	274	16.5	233 24.7	46.7	150 58.7	41.4	340 06.7	38.0	119 52.7	31.1
4	289	19.0	248 24.1	47.6	165 59.8	41.1	355 09.2	38.0	134 55.2	31.1
5	304	21.4	263 23.6	+14 48.6	181 00.9	+21 40.8	10 11.7	-21 38.0	149 57.6	+12 31.1
6	319	23.9	278 23.0	+14 49.6	196 01.9	+21 40.5	25 14.2	-21 38.0	165 00.0	+12 31.1
7	334	26.3	293 22.5	50.6	211 03.0	40.1	40 16.7	38.0	180 02.5	31.0
8	349	28.8	308 21.9	51.6	226 04.0	39.8	55 19.1	38.0	195 04.9	31.0
9	4	31.3	323 21.4	52.6	241 05.1	39.5	70 21.6	38.0	210 07.3	31.0
10	19	33.7	338 20.8	53.6	256 06.2	39.2	85 24.1	38.1	225 09.8	31.0
11	34	36.2	353 20.3	+14 54.6	271 07.2	+21 38.8	100 26.6	-21 38.1	240 12.2	+12 31.0
12	49	38.7	8 19.7	+14 55.6	286 08.3	+21 38.5	115 29.0	-21 38.1	255 14.6	+12 31.0
13	64	41.1	23 19.2	56.6	301 09.3	38.2	130 31.5	38.1	270 17.1	30.9
14	79	43.6	38 18.6	57.6	316 10.4	37.9	145 34.0	38.1	285 19.5	30.9
15	94	46.1	53 18.1	58.6	331 11.5	37.5	160 36.5	38.1	300 21.9	30.9
16	109	48.5	68 17.5	+14 59.5	346 12.5	37.2	175 39.0	38.1	315 24.4	30.9
17	124	51.0	83 17.0	+15 00.5	1 13.6	+21 36.9	190 41.4	-21 38.1	330 26.8	+12 30.9
18	139	53.4	98 16.4	+15 01.5	16 14.6	+21 36.5	205 43.9	-21 38.1	345 29.2	+12 30.8
19	154	55.9	113 15.9	02.5	31 15.7	36.2	220 46.4	38.1	0 31.6	30.8
20	169	58.4	128 15.3	03.5	46 16.8	35.9	235 48.9	38.1	15 34.1	30.8
21	185	00.8	143 14.8	04.5	61 17.8	35.6	250 51.4	38.1	30 36.5	30.8
22	200	03.3	158 14.2	05.5	76 18.9	35.2	265 53.9	38.2	45 38.9	30.8
23	215	05.8	173 13.7	06.4	91 20.0	34.9	280 56.3	38.2	60 41.4	30.8
24	230	08.2	188 13.1	+15 07.4	106 21.0	+21 34.6	295 58.8	-21 38.2	75 43.8	+12 30.7
Dif	—		-5	+10	+11	-3	+25	0	+24	

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: 6 ^d 5 PHE { 4 ^h : 57 ^m 4 12 ^h : 57 ^m 1 20 ^h : 56 ^m 9 PMG: 18 ^h 44 ^m R°: 44 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m		
0	180	54.7	+18	10.6	87	54.3	+15	12.6	60 N	**	**	2	28	3	29	10	58	
1	195	54.7		11.3	102	25.1 ¹¹⁸	+14	59.4 ¹³²	58	1	17	2	47		41	11	06	
2	210	54.7		11.9	116	56.1 ¹²⁰		46.1 ¹³³	56	1	50	3	04	3	52	13	84	
3	225	54.7		12.5	131	27.1 ¹²⁰		32.7 ¹³⁴	54	2	14		17	4	02	19	81	
4	240	54.7		13.1	145	58.2 ¹²¹		19.3 ¹³⁴	52		33		29		10	24	78	
5	255	54.7	+18	13.8	160	29.4 ¹²²	+14	05.9 ¹³⁴	50	2	48	3	39	4	18	11	29	
6	270	54.7	+18	14.4	175	00.7 ¹²³	+13	52.4 ¹³⁵	45	3	18	4	00	4	34	11	40	
7	285	54.7		15.0	189	32.1 ¹²⁴		38.8 ¹³⁶	40		40		17		47	49	66	
8	300	54.7		15.6	204	03.7 ¹²⁶		25.2 ¹³⁶	35	3	57		31	4	59	11	56	
9	315	54.7		16.3	218	35.3 ¹²⁶	+13	11.5 ¹³⁷	30	4	11	4	42	5	08	12	03	
10	330	54.8		16.9	233	07.0 ¹²⁷	+12	57.8 ¹³⁷	20		34		02		25	14	54	
11	345	54.8	+18	17.5	247	38.8 ¹²⁸	+12	44.1 ¹³⁷	10 N	4	51	5	17	5	39	12	24	
12	0	54.8	+18	18.1	262	10.7 ¹²⁹	+12	30.3 ¹³⁸	0	5	06	5	31	5	53	12	33	
13	15	54.8		18.7	276	42.6 ¹²⁹		16.5 ¹³⁸	10 S		19		44		6	06	42	
14	30	54.8		19.4	291	14.7 ¹³¹	+12	02.6 ¹³⁹	20		30	5	57	20	12	52		
15	45	54.8		20.0	305	46.8 ¹³¹	+11	48.7 ¹³⁹	30		42	6	11		36	13		
16	60	54.8		20.6	320	19.1 ¹³³		34.8 ¹³⁹	35		48		18		45	09		
17	75	54.8	+18	21.2	334	51.4 ¹³³	+11	20.8 ¹⁴⁰	40	5	54	6	27	6	56	13		
18	90	54.8	+18	21.8	349	23.8 ¹³⁴	+11	06.8 ¹⁴⁰	45	6	01	6	36	7	08	13		
19	105	54.8		22.4	3	56.3 ¹³⁵	+10	52.8 ¹⁴⁰	50		08		48		23	34		
20	120	54.8		23.1	18	28.9 ¹³⁶		38.7 ¹⁴¹	52		12		53		30	39		
21	135	54.8		23.7	33	01.5 ¹³⁶		24.6 ¹⁴¹	54		15	6	58		38	44		
22	150	54.8		24.3	47	34.2 ¹³⁷	+10	10.5 ¹⁴¹	56		19	7	04		46	50		
23	165	54.8		24.9	62	07.0 ¹³⁸	+9	56.3 ¹⁴²	58		23		11	7	56	13		
24	180	54.8	+18	25.5	76	39.9 ¹³⁹	+9	42.1 ¹⁴²	60 S	6	27	7	19	8	07	14		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG 8 ^h 38 ^m 0			Mag: -3.9 PMG: 11 ^h 28 ^m			Mag: +1.3 PMG: 16 ^h 53 ^m			Mag: -2.5 PMG: 4 ^h 15 ^m			Mag: +0.6 PMG: 18 ^h 54 ^m					
	hG ♈		Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	230	08.2	188	13.1	+15	07.4	106	21.0	+21	34.6	295	58.8	-21	38.2	75	43.8	+12	30.7
1	245	10.7	203	12.6		08.4	121	22.1		34.2	311	01.3		38.2	90	46.2		30.7
2	260	13.2	218	12.0		09.4	136	23.1		33.9	326	03.8		38.2	105	48.6		30.7
3	275	15.6	233	11.4		10.4	151	24.2		33.6	341	06.3		38.2	120	51.1		30.7
4	290	18.1	248	10.9		11.3	166	25.3		33.3	356	08.8		38.2	135	53.5		30.7
5	305	20.6	263	10.3	+15	12.3	181	26.3	+21	32.9	11	11.3	-21	38.2	150	55.9	+12	30.6
6	320	23.0	278	09.8	+15	13.3	196	27.4	+21	32.6	26	13.7	-21	38.2	165	58.4	+12	30.6
7	335	25.5	293	09.2		14.3	211	28.4		32.3	41	16.2		38.2	181	00.8		30.6
8	350	27.9	308	08.7		15.3	226	29.5		31.9	56	18.7		38.2	196	03.2		30.6
9	5	30.4	323	08.1		16.2	241	30.5		31.6	71	21.2		38.3	211	05.6		30.6
10	20	32.9	338	07.5		17.2	256	31.6		31.3	86	23.7		38.3	226	08.1		30.5
11	35	35.3	353	07.0	+15	18.2	271	32.7	+21	31.0	101	26.2	-21	38.3	241	10.5	+12	30.5
12	50	37.8	8	06.4	+15	19.2	286	33.7	+21	30.6	116	28.7	-21	38.3	256	12.9	+12	30.5
13	65	40.3	23	05.9		20.1	301	34.8		30.3	131	31.2		38.3	271	15.3		30.5
14	80	42.7	38	05.3		21.1	316	35.8		30.0	146	33.6		38.3	286	17.8		30.5
15	95	45.2	53	04.7		22.1	331	36.9		29.6	161	36.1		38.3	301	20.2		30.4
16	110	47.7	68	04.2		23.1	346	38.0		29.3	176	38.6		38.3	316	22.6		30.4
17	125	50.1	83	03.6	+15	24.0	1	39.0	+21	29.0	191	41.1	-21	38.3	331	25.0	+12	30.4
18	140	52.6	98	03.0	+15	25.0	16	40.1	+21	28.6	206	43.6	-21	38.3	346	27.5	+12	30.4
19	155	55.1	113	02.5		26.0	31	41.1		28.3	221	46.1		38.3	1	29.9		30.4
20	170	57.5	128	01.9		26.9	46	42.2		28.0	236	48.6		38.4	16	32.3		30.3
21	186	00.0	143	01.3		27.9	61	43.3		27.6	251	51.1		38.4	31	34.7		30.3
22	201	02.4	158	00.8		28.9	76	44.3		27.3	266	53.6		38.4	46	37.2		30.3
23	216	04.9	173	00.2		29.8	91	45.4		27.0	281	56.1		38.4	61	39.6		30.3
24	231	07.4	187	59.7	+15	30.8	106	46.4	+21	26.6	296	58.5	-21	38.4	76	42.0	+12	30.3
Dif	—		-6		+10		+11		-3		+25		0		+24			

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8			Edad: 7 ^d 5	PHE {	4 ^h : 56 ^h /6 12 ^h : 56 ^h /4 20 ^h : 56 ^h /1									
	PMG: 11 ^h 56 ^m 3														
	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	+18 25.5	76	39.9	+9 42.1		60 N	20 28	21 31	** **	12 29 87	2 01 1		
1	195	54.8	26.1	91	12.9 ¹⁴⁰	27.9 ¹⁴²		58	15	21 10	22 47	33 83	1 56 4		
2	210	54.8	26.8	105	45.9 ¹⁴⁰	+9 13.6 ¹⁴³		56	20 04	20 53	22 09	37 80	52 7		
3	225	54.9	27.4	120	19.0 ¹⁴¹	+8 59.4 ¹⁴²		54	19 54	39	21 44	40 77	48 9		
4	240	54.9	28.0	134	52.2 ¹⁴²	45.1 ¹⁴³		52	45	27	24	42 75	44 12		
5	255	54.9	+18 28.6	149	25.4 ¹⁴²	+8 30.8 ¹⁴³		50	19 37	20 16	21 08	12 45 72	1 41 14		
6	270	54.9	+18 29.2	163	58.7 ¹⁴³	+8 16.4 ¹⁴⁴		45	19 20	19 55	20 38	12 50 68	1 33 19		
7	285	54.9	29.8	178	32.1 ¹⁴⁴	+8 02.1 ¹⁴³		40	19 07	37	20 15	55 63	27 23		
8	300	54.9	30.4	193	05.5 ¹⁴⁴	+7 47.7 ¹⁴⁴		35	18 55	23	19 57	12 58 60	22 26		
9	315	54.9	31.0	207	39.0 ¹⁴⁵	33.3 ¹⁴⁴		30	45	19 11	43	13 02 56	17 29		
10	330	54.9	31.6	222	12.6 ¹⁴⁶	18.9 ¹⁴⁴		20	28	18 52	20	08 51	09 34		
11	345	54.9	+18 32.2	236	46.2 ¹⁴⁶	+7 04.5 ¹⁴⁴		10 N	18 14	18 36	19 02	13 13 46	1 01 39		
12	0	54.9	+18 32.9	251	19.9 ¹⁴⁷	+6 50.0 ¹⁴⁵		0	18 00	18 22	18 47	13 17 43	0 54 44		
13	15	54.9	33.5	265	53.6 ¹⁴⁷	35.6 ¹⁴⁴		10 S	17 46	18 08	34	22 38	47 48		
14	30	54.9	34.1	280	27.4 ¹⁴⁸	21.1 ¹⁴⁵		20	32	17 55	22	27 33	40 52		
15	45	54.9	34.7	295	01.3 ¹⁴⁹	+6 06.6 ¹⁴⁵		30	16	41	10	33 28	31 58		
16	60	54.9	35.3	309	35.2 ¹⁴⁹	+5 52.2 ¹⁴⁴		35	17 06	33	18 04	36 25	26 61		
17	75	54.9	+18 35.9	324	09.1 ¹⁴⁹	+5 37.7 ¹⁴⁵		40	16 56	17 25	17 57	13 40 22	0 21 64		
18	90	54.9	+18 36.5	338	43.1 ¹⁵⁰	+5 23.2 ¹⁴⁵		45	16 43	17 15	17 50	13 44 18	0 14 69		
19	105	54.9	37.1	353	17.2 ¹⁵¹	+5 08.6 ¹⁴⁶		50	28	17 03	43	49 13	06 74		
20	120	54.9	37.7	7	51.3 ¹⁵¹	+4 54.1 ¹⁴⁵		52	21	16 58	39	52 11	0 02 76		
21	135	54.9	38.3	22	25.5 ¹⁵²	39.6 ¹⁴⁵		54	13	52	36	54 9	** ** *		
22	150	54.9	38.9	36	59.7 ¹⁵²	25.1 ¹⁴⁵		56	16 04	46	32	13 57 6	** ** *		
23	165	54.9	39.5	51	33.9 ¹⁵²	+4 10.5 ¹⁴⁶		58	15 54	39	28	14 00 3	** ** *		
24	180	54.9	+18 40.1	66	08.2 ¹⁵³	+3 56.0 ¹⁴⁵		60 S	15 42	16 31	17 23	14 04 0	** ** *		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG 8 ^h 34 ^m 1		Mag: -3.9 PMG: 11 ^h 28 ^m		Mag: +1.3 PMG: 16 ^h 52 ^m		Mag: -2.5 PMG: 4 ^h 11 ^m		Mag: +0.6 PMG: 18 ^h 50 ^m						
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	231	07.4	187	59.7	+15 30.8	106	46.4	+21 26.6	296	58.5	-21 38.4	76	42.0	+12 30.3	
1	246	09.8	202	59.1	31.8	121	47.5	26.3	312	01.0	38.4	91	44.4	30.2	
2	261	12.3	217	58.5	32.7	136	48.6	26.0	327	03.5	38.4	106	46.9	30.2	
3	276	14.8	232	58.0	33.7	151	49.6	25.6	342	06.0	38.4	121	49.3	30.2	
4	291	17.2	247	57.4	34.7	166	50.7	25.3	357	08.5	38.4	136	51.7	30.2	
5	306	19.7	262	56.8	+15 35.6	181	51.7	+21 25.0	12	11.0	-21 38.5	151	54.1	+12 30.2	
6	321	22.2	277	56.2	+15 36.6	196	52.8	+21 24.6	27	13.5	-21 38.5	166	56.6	+12 30.1	
7	336	24.6	292	55.7	37.6	211	53.8	24.3	42	16.0	38.5	181	59.0	30.1	
8	351	27.1	307	55.1	38.5	226	54.9	24.0	57	18.5	38.5	197	01.4	30.1	
9	6	29.5	322	54.5	39.5	241	56.0	23.6	72	21.0	38.5	212	03.8	30.1	
10	21	32.0	337	54.0	40.4	256	57.0	23.3	87	23.5	38.5	227	06.3	30.1	
11	36	34.5	352	53.4	+15 41.4	271	58.1	+21 23.0	102	26.0	-21 38.5	242	08.7	+12 30.0	
12	51	36.9	7	52.8	+15 42.4	286	59.1	+21 22.6	117	28.5	-21 38.5	257	11.1	+12 30.0	
13	66	39.4	22	52.3	43.3	302	00.2	22.3	132	31.0	38.5	272	13.5	30.0	
14	81	41.9	37	51.7	44.3	317	01.3	21.9	147	33.5	38.5	287	15.9	30.0	
15	96	44.3	52	51.1	45.2	332	02.3	21.6	162	36.0	38.6	302	18.4	29.9	
16	111	46.8	67	50.5	46.2	347	03.4	21.3	177	38.5	38.6	317	20.8	29.9	
17	126	49.3	82	50.0	+15 47.1	2	04.4	+21 20.9	192	41.0	-21 38.6	332	23.2	+12 29.9	
18	141	51.7	97	49.4	+15 48.1	17	05.5	+21 20.6	207	43.5	-21 38.6	347	25.6	+12 29.9	
19	156	54.2	112	48.8	49.1	32	06.5	20.3	222	46.0	38.6	2	28.0	29.9	
20	171	56.7	127	48.2	50.0	47	07.6	19.9	237	48.5	38.6	17	30.5	29.8	
21	186	59.1	142	47.7	51.0	62	08.7	19.6	252	51.0	38.6	32	32.9	29.8	
22	202	01.6	157	47.1	51.9	77	09.7	19.2	267	53.5	38.6	47	35.3	29.8	
23	217	04.0	172	46.5	52.9	92	10.8	18.9	282	56.0	38.6	62	37.7	29.8	
24	232	06.5	187	45.9	+15 53.8	107	11.8	+21 18.6	297	58.5	-21 38.7	77	40.1	+12 29.8	
Dif	—		-6 +10		+11 -3		+25 0		+24 0						

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 3			Edad: 8 ^d 5 SD: 15 ^h 3 PMG: 20 ^h 10 ^m				PHE { 4 ^h : 55 ^h 9 12 ^h : 55 ^h 7 20 ^h : 55 ^h 5 R°: 41 ^m			Hora		R°					
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m			
0	180	54.9	+18	40.1	66	08.2	+3 56.0	60 N	** **	2 21	3 24	13 56	85	2 02	0			
1	195	54.9		40.7	80	42.5 ¹⁵³	41.4 ¹⁴⁶	58	1 05	42	37	56	81	2 00	4			
2	210	54.9		41.3	95	16.9 ¹⁵⁴	26.9 ¹⁴⁵	56	1 43	2 59	48	57	78	1 59	6			
3	225	54.9		41.9	109	51.3 ¹⁵⁴	+3 12.4 ¹⁴⁵	54	2 08	3 13	3 58	57	75	57	9			
4	240	54.9		42.5	124	25.8 ¹⁵⁵	+2 57.8 ¹⁴⁶	52	28	25	4 07	57	73	56	11			
5	255	54.9	+18	43.1	139	00.3 ¹⁵⁵	+2 43.3 ¹⁴⁵	50	2 44	3 36	4 15	13 57	71	1 55	13			
6	270	54.9	+18	43.7	153	34.8 ¹⁵⁵	+2 28.7 ¹⁴⁶	45	3 15	3 58	4 32	13 58	65	1 52	17			
7	285	54.9		44.3	168	09.4 ¹⁵⁶	+2 14.2 ¹⁴⁵	40	37	4 15	45	58	62	50	21			
8	300	54.9		44.9	182	44.0 ¹⁵⁶	+1 59.7 ¹⁴⁵	35	3 55	29	4 57	58	58	48	24			
9	315	54.9		45.5	197	18.6 ¹⁵⁶	45.2 ¹⁴⁵	30	4 10	4 41	5 07	58	56	46	28			
10	330	54.9		46.1	211	53.2 ¹⁵⁶	30.6 ¹⁴⁶	20	33	5 01	24	59	50	43	33			
11	345	54.9	+18	46.7	226	27.9 ¹⁵⁷	+1 16.1 ¹⁴⁵	10 N	4 51	5 17	5 39	13 59	46	1 40	38			
12	0	54.9	+18	47.3	241	02.7 ¹⁵⁸	+1 01.6 ¹⁴⁵	0	5 06	5 31	5 53	14 00	41	1 38	41			
13	15	54.9		47.9	255	37.4 ¹⁵⁷	+0 47.1 ¹⁴⁵	10 S	19	44	6 06	00	37	35	46			
14	30	54.8		48.5	270	12.2 ¹⁵⁸	32.6 ¹⁴⁵	20	31	5 58	21	00	33	32	51			
15	45	54.8		49.1	284	47.0 ¹⁵⁸	18.2 ¹⁴⁴	30	43	6 12	37	01	27	29	56			
16	60	54.8		49.7	299	21.8 ¹⁵⁸	+0 03.7 ¹⁴⁵	35	49	20	47	01	25	27	59			
17	75	54.8	+18	50.2	313	56.6 ¹⁵⁸	-0 10.8 ¹⁴⁵	40	5 56	6 29	6 58	14 02	21	1 25	63			
18	90	54.8	+18	50.8	328	31.5 ¹⁵⁹	-0 25.2 ¹⁴⁴	45	6 03	6 39	7 10	14 02	17	1 23	66			
19	105	54.8		51.4	343	06.4 ¹⁵⁹	39.6 ¹⁴⁴	50	11	50	26	02	13	20	71			
20	120	54.8		52.0	357	41.3 ¹⁵⁹	-0 54.0 ¹⁴⁴	52	14	6 55	33	03	10	18	74			
21	135	54.8		52.6	12	16.2 ¹⁵⁹	-1 08.4 ¹⁴⁴	54	18	7 01	41	03	8	17	76			
22	150	54.8		53.2	26	51.1 ¹⁵⁹	22.8 ¹⁴⁴	56	22	08	7 50	03	6	15	79			
23	165	54.8		53.8	41	26.1 ¹⁶⁰	37.2 ¹⁴⁴	58	26	15	8 00	03	4	13	82			
24	180	54.8	+18	54.4	56	01.1 ¹⁶⁰	-1 51.5 ¹⁴³	60 S	6 30	7 22	8 12	14 04	0	1 11	86			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 8 ^h 30 ^m 2		Mag: -3.9 PMG: 11 ^h 29 ^m			Mag: +1.3 PMG: 16 ^h 50 ^m			Mag: -2.5 PMG: 4 ^h 07 ^m			Mag: +0.6 PMG: 18 ^h 46 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	232	06.5	187	45.9	+15	53.8	107	11.8	+21	18.6	297	58.5	-21	38.7	77	40.1	+12	29.8
1	247	09.0	202	45.4		54.8	122	12.9		18.2	313	01.0		38.7	92	42.6		29.7
2	262	11.4	217	44.8		55.7	137	13.9		17.9	328	03.5		38.7	107	45.0		29.7
3	277	13.9	232	44.2		56.7	152	15.0		17.6	343	06.0		38.7	122	47.4		29.7
4	292	16.4	247	43.6		57.6	167	16.1		17.2	358	08.5		38.7	137	49.8		29.7
5	307	18.8	262	43.0	+15	58.6	182	17.1	+21	16.9	13	11.0	-21	38.7	152	52.2	+12	29.6
6	322	21.3	277	42.5	+15	59.5	197	18.2	+21	16.5	28	13.5	-21	38.7	167	54.7	+12	29.6
7	337	23.8	292	41.9	+16	00.4	212	19.2		16.2	43	16.0		38.7	182	57.1		29.6
8	352	26.2	307	41.3		01.4	227	20.3		15.9	58	18.5		38.8	197	59.5		29.6
9	7	28.7	322	40.7		02.3	242	21.3		15.5	73	21.0		38.8	213	01.9		29.6
10	22	31.1	337	40.1		03.3	257	22.4		15.2	88	23.5		38.8	228	04.3		29.5
11	37	33.6	352	39.6	+16	04.2	272	23.5	+21	14.8	103	26.0	-21	38.8	243	06.8	+12	29.5
12	52	36.1	7	39.0	+16	05.2	287	24.5	+21	14.5	118	28.5	-21	38.8	258	09.2	+12	29.5
13	67	38.5	22	38.4		06.1	302	25.6		14.1	133	31.0		38.8	273	11.6		29.5
14	82	41.0	37	37.8		07.1	317	26.6		13.8	148	33.5		38.8	288	14.0		29.4
15	97	43.5	52	37.2		08.0	332	27.7		13.5	163	36.0		38.8	303	16.4		29.4
16	112	45.9	67	36.6		08.9	347	28.7		13.1	178	38.5		38.8	318	18.8		29.4
17	127	48.4	82	36.1	+16	09.9	2	29.8	+21	12.8	193	41.0	-21	38.9	333	21.3	+12	29.4
18	142	50.9	97	35.5	+16	10.8	17	30.9	+21	12.4	208	43.5	-21	38.9	348	23.7	+12	29.3
19	157	53.3	112	34.9		11.7	32	31.9		12.1	223	46.0		38.9	3	26.1		29.3
20	172	55.8	127	34.3		12.7	47	33.0		11.8	238	48.6		38.9	18	28.5		29.3
21	187	58.3	142	33.7		13.6	62	34.0		11.4	253	51.1		38.9	33	30.9		29.3
22	203	00.7	157	33.1		14.6	77	35.1		11.1	268	53.6		38.9	48	33.4		29.3
23	218	03.2	172	32.5		15.5	92	36.1		10.7	283	56.1		38.9	63	35.8		29.2
24	233	05.6	187	32.0	+16	16.4	107	37.2	+21	10.4	298	58.6	-21	38.9	78	38.2	+12	29.2
Dif	—		-6 +9			+11 -3			+25 0			+24 0						

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 4			Edad: 9 ^d 5 PHE { SD: 15 ^h 1 PMG: 20 ^h 51 ^m 4 ^h : 55 ^m 3 12 ^h : 55 ^m 2 20 ^h : 55 ^m 0 R°: 41 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	h m	
0	180	54.8	+18 54.4	56	01.1	-1 51.5	60 N	20 33	21 37	** **	15 21 84	2 02 1		
1	195	54.8	55.0	70	36.0 ¹⁵⁹	-2 05.9 ¹⁴⁴	58	19	21 15	23 00	17 81	04 3		
2	210	54.8	55.6	85	11.0 ¹⁶⁰	20.2 ¹⁴³	56	20 07	20 58	22 17	15 77	05 6		
3	225	54.8	56.1	99	46.0 ¹⁶⁰	34.5 ¹⁴³	54	19 57	43	21 50	12 75	06 8		
4	240	54.8	56.7	114	21.1 ¹⁶¹	-2 48.7 ¹⁴²	52	48	31	29	10 72	07 11		
5	255	54.8	+18 57.3	128	56.1 ¹⁶⁰	-3 03.0 ¹⁴³	50	19 40	20 20	21 13	15 08 70	2 08 13		
6	270	54.7	+18 57.9	143	31.1 ¹⁶⁰	-3 17.2 ¹⁴²	45	19 23	19 57	20 41	15 03 66	2 09 18		
7	285	54.7	58.5	158	06.1 ¹⁶⁰	31.4 ¹⁴²	40	19 09	39	20 18	15 00 61	11 21		
8	300	54.7	59.1	172	41.2 ¹⁶¹	45.6 ¹⁴²	35	18 57	25	19 59	14 56 58	12 25		
9	315	54.7	+18 59.6	187	16.2 ¹⁶⁰	-3 59.8 ¹⁴²	30	47	19 13	44	54 55	14 27		
10	330	54.7	+19 00.2	201	51.3 ¹⁶¹	-4 13.9 ¹⁴¹	20	29	18 53	21	49 50	16 32		
11	345	54.7	+19 00.8	216	26.3 ¹⁶⁰	-4 28.0 ¹⁴¹	10 N	18 14	18 36	19 02	14 45 45	2 18 37		
12	0	54.7	+19 01.4	231	01.4 ¹⁶¹	-4 42.1 ¹⁴¹	0	18 00	18 22	18 47	14 41 41	2 19 42		
13	15	54.7	02.0	245	36.4 ¹⁶⁰	-4 56.1 ¹⁴⁰	10 S	17 46	18 08	34	37 37	21 45		
14	30	54.7	02.6	260	11.5 ¹⁶¹	-5 10.2 ¹⁴¹	20	31	17 54	21	33 33	23 50		
15	45	54.7	03.1	274	46.5 ¹⁶⁰	24.2 ¹⁴⁰	30	14	40	09	28 28	25 55		
16	60	54.7	03.7	289	21.6 ¹⁶¹	38.1 ¹³⁹	35	17 05	32	18 02	26 25	26 58		
17	75	54.6	+19 04.3	303	56.6 ¹⁶⁰	-5 52.1 ¹⁴⁰	40	16 54	17 23	17 56	14 23 21	2 28 61		
18	90	54.6	+19 04.9	318	31.6 ¹⁶⁰	-6 06.0 ¹³⁹	45	16 41	17 13	17 48	14 19 18	2 29 66		
19	105	54.6	05.4	333	06.7 ¹⁶¹	19.8 ¹³⁸	50	25	17 01	40	15 14	31 71		
20	120	54.6	06.0	347	41.7 ¹⁶⁰	33.7 ¹³⁹	52	18	16 55	37	13 12	32 73		
21	135	54.6	06.6	2	16.7 ¹⁶⁰	-6 47.5 ¹³⁸	54	10	49	33	11 9	33 75		
22	150	54.6	07.2	16	51.7 ¹⁶⁰	-7 01.3 ¹³⁸	56	16 00	43	29	09 7	34 78		
23	165	54.6	07.7	31	26.7 ¹⁶⁰	15.0 ¹³⁷	58	15 50	36	25	07 3	35 81		
24	180	54.6	+19 08.3	46	01.7 ¹⁶⁰	-7 28.7 ¹³⁷	60 S	15 38	16 28	17 20	14 04 0	2 37 84		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 8 ^h 26 ^m 2		Mag: -3.9 PMG: 11 ^h 30 ^m		Mag: +1.4 PMG: 16 ^h 48 ^m		Mag: -2.5 PMG: 4 ^h 03 ^m		Mag: +0.6 PMG: 18 ^h 42 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	233	05.6	187	32.0	+16 16.4	107 37.2	+21 10.4	298 58.6	-21 38.9	78 38.2	+12 29.2
1	248	08.1	202	31.4	17.4	122 38.2	10.0	314 01.1	39.0	93 40.6	29.2
2	263	10.6	217	30.8	18.3	137 39.3	09.7	329 03.6	39.0	108 43.0	29.2
3	278	13.0	232	30.2	19.2	152 40.4	09.4	344 06.1	39.0	123 45.4	29.1
4	293	15.5	247	29.6	20.1	167 41.4	09.0	359 08.6	39.0	138 47.8	29.1
5	308	18.0	262	29.0	+16 21.1	182 42.5	+21 08.7	14 11.1	-21 39.0	153 50.3	+12 29.1
6	323	20.4	277	28.4	+16 22.0	197 43.5	+21 08.3	29 13.6	-21 39.0	168 52.7	+12 29.1
7	338	22.9	292	27.8	22.9	212 44.6	08.0	44 16.2	39.0	183 55.1	29.0
8	353	25.4	307	27.2	23.9	227 45.6	07.6	59 18.7	39.1	198 57.5	29.0
9	8	27.8	322	26.6	24.8	242 46.7	07.3	74 21.2	39.1	213 59.9	29.0
10	23	30.3	337	26.1	25.7	257 47.7	06.9	89 23.7	39.1	229 02.3	29.0
11	38	32.8	352	25.5	+16 26.6	272 48.8	+21 06.6	104 26.2	-21 39.1	244 04.7	+12 28.9
12	53	35.2	7	24.9	+16 27.6	287 49.9	+21 06.2	119 28.7	-21 39.1	259 07.2	+12 28.9
13	68	37.7	22	24.3	28.5	302 50.9	05.9	134 31.2	39.1	274 09.6	28.9
14	83	40.1	37	23.7	29.4	317 52.0	05.6	149 33.7	39.1	289 12.0	28.9
15	98	42.6	52	23.1	30.3	332 53.0	05.2	164 36.3	39.1	304 14.4	28.8
16	113	45.1	67	22.5	31.3	347 54.1	04.9	179 38.8	39.2	319 16.8	28.8
17	128	47.5	82	21.9	+16 32.2	2 55.1	+21 04.5	194 41.3	-21 39.2	334 19.2	+12 28.8
18	143	50.0	97	21.3	+16 33.1	17 56.2	+21 04.2	209 43.8	-21 39.2	349 21.6	+12 28.8
19	158	52.5	112	20.7	34.0	32 57.2	03.8	224 46.3	39.2	4 24.1	28.7
20	173	54.9	127	20.1	34.9	47 58.3	03.5	239 48.8	39.2	19 26.5	28.7
21	188	57.4	142	19.5	35.9	62 59.4	03.1	254 51.3	39.2	34 28.9	28.7
22	203	59.9	157	18.9	36.8	78 00.4	02.8	269 53.9	39.2	49 31.3	28.7
23	219	02.3	172	18.3	37.7	93 01.5	02.4	284 56.4	39.3	64 33.7	28.7
24	234	04.8	187	17.7	+16 38.6	108 02.5	+21 02.1	299 58.9	-21 39.3	79 36.1	+12 28.6
Dif	—		-6	+9		+11	-3	+25	0		+24

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: 10 ^d 5 PHE { SD: 15 ^h 0 PMG: 21 ^h 32 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	180	54.6	+19 08.3	46	01.7	-7 28.7	137	60 N	** *	2 15	3 19	16 45	86	2 03	0
1	195	54.6	08.9	60	36.6 ¹⁵⁹	42.4 ¹³⁷		58	0 52	37	33	38 82		07	4
2	210	54.5	09.5	75	11.6 ¹⁶⁰	-7 56.0 ¹³⁶		56	1 35	2 54	45	32 79		11	7
3	225	54.5	10.0	89	46.5 ¹⁵⁹	-8 09.6 ¹³⁶		54	2 02	3 09	3 55	27 76		14	10
4	240	54.5	10.6	104	21.4 ¹⁵⁹	23.1 ¹³⁵		52	23	22	4 04	22 73		18	12
5	255	54.5	+19 11.2	118	56.3 ¹⁵⁹	-8 36.6 ¹³⁵		50	2 40	3 33	4 12	16 18	71	2 21	14
6	270	54.5	+19 11.8	133	31.2 ¹⁵⁹	-8 50.1 ¹³⁵		45	3 11	3 55	4 30	16 09	65	2 27	19
7	285	54.5	12.3	148	06.1 ¹⁵⁹	-9 03.5 ¹³⁴		40	35	4 13	44	16 01	62	32	23
8	300	54.5	12.9	162	40.9 ¹⁵⁸	16.9 ¹³⁴		35	3 53	27	4 56	15 54	59	37	26
9	315	54.4	13.5	177	15.7 ¹⁵⁸	30.3 ¹³⁴		30	4 08	4 40	5 06	49 55		41	29
10	330	54.4	14.0	191	50.6 ¹⁵⁹	43.5 ¹³²		20	32	5 00	23	39 50		48	34
11	345	54.4	+19 14.6	206	25.3 ¹⁵⁷	-9 56.8 ¹³³		10 N	4 50	5 16	5 39	15 30	46	2 55	37
12	0	54.4	+19 15.2	221	00.1 ¹⁵⁸	-10 10.0 ¹³²		0	5 05	5 31	5 53	15 22	42	3 01	41
13	15	54.4	15.7	235	34.8 ¹⁵⁷	23.2 ¹³²		10 S	19	45	6 07	14 39		06	46
14	30	54.4	16.3	250	09.5 ¹⁵⁷	36.3 ¹³¹		20	32	5 58	22	15 06	34	13	50
15	45	54.4	16.9	264	44.2 ¹⁵⁷	-10 49.4 ¹³¹		30	44	6 13	39	14 56	30	20	55
16	60	54.3	17.4	279	18.9 ¹⁵⁷	-11 02.4 ¹³⁰		35	51	21	6 48	51 26		24	59
17	75	54.3	+19 18.0	293	53.5 ¹⁵⁶	-11 15.4 ¹³⁰		40	5 57	6 30	7 00	14 44	24	3 29	62
18	90	54.3	+19 18.6	308	28.1 ¹⁵⁶	-11 28.3 ¹²⁹		45	6 05	6 41	7 13	14 37	20	3 35	65
19	105	54.3	19.1	323	02.7 ¹⁵⁶	41.2 ¹²⁹		50	13	53	29	29 15		42	70
20	120	54.3	19.7	337	37.2 ¹⁵⁵	-11 54.0 ¹²⁸		52	17	6 58	36	25 13		45	72
21	135	54.3	20.3	352	11.7 ¹⁵⁵	-12 06.8 ¹²⁸		54	20	7 04	44	20 11		48	75
22	150	54.2	20.8	6	46.2 ¹⁵⁵	19.5 ¹²⁷		56	25	11	7 54	16 8		52	78
23	165	54.2	21.4	21	20.6 ¹⁵⁴	32.1 ¹²⁶		58	29	18	8 04	10 5		3 56	81
24	180	54.2	+19 21.9	35	55.1 ¹⁵⁵	-12 44.7 ¹²⁶		60 S	6 34	7 26	8 16	14 04	2	4 01	85

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 8 ^h 22 ^m 3		Mag: -3.9 PMG: 11 ^h 31 ^m		Mag: +1.4 PMG: 16 ^h 47 ^m		Mag: -2.5 PMG: 3 ^h 59 ^m		Mag: +0.6 PMG: 18 ^h 39 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	234	04.8	187	17.7	+16 38.6	108 02.5	+21 02.1	299 58.9	-21 39.3	79 36.1	+12 28.6
1	249	07.2	202	17.1	39.5	123 03.6	01.7	315 01.4	39.3	94 38.5	28.6
2	264	09.7	217	16.5	40.4	138 04.6	01.4	330 03.9	39.3	109 40.9	28.6
3	279	12.2	232	15.9	41.4	153 05.7	01.0	345 06.5	39.3	124 43.4	28.5
4	294	14.6	247	15.3	42.3	168 06.7	00.7	0 09.0	39.3	139 45.8	28.5
5	309	17.1	262	14.7	+16 43.2	183 07.8	+21 00.3	15 11.5	-21 39.3	154 48.2	+12 28.5
6	324	19.6	277	14.1	+16 44.1	198 08.9	+21 00.0	30 14.0	-21 39.4	169 50.6	+12 28.5
7	339	22.0	292	13.5	45.0	213 09.9	+20 59.6	45 16.5	39.4	184 53.0	28.4
8	354	24.5	307	12.9	45.9	228 11.0	59.3	60 19.0	39.4	199 55.4	28.4
9	9	27.0	322	12.3	46.8	243 12.0	58.9	75 21.6	39.4	214 57.8	28.4
10	24	29.4	337	11.7	47.7	258 13.1	58.6	90 24.1	39.4	230 00.2	28.4
11	39	31.9	352	11.1	+16 48.6	273 14.1	+20 58.2	105 26.6	-21 39.4	245 02.6	+12 28.3
12	54	34.4	7	10.5	+16 49.6	288 15.2	+20 57.9	120 29.1	-21 39.4	260 05.0	+12 28.3
13	69	36.8	22	09.9	50.5	303 16.2	57.5	135 31.7	39.5	275 07.5	28.3
14	84	39.3	37	09.3	51.4	318 17.3	57.2	150 34.2	39.5	290 09.9	28.3
15	99	41.7	52	08.7	52.3	333 18.3	56.8	165 36.7	39.5	305 12.3	28.2
16	114	44.2	67	08.1	53.2	348 19.4	56.5	180 39.2	39.5	320 14.7	28.2
17	129	46.7	82	07.4	+16 54.1	3 20.5	+20 56.1	195 41.7	-21 39.5	335 17.1	+12 28.2
18	144	49.1	97	06.8	+16 55.0	18 21.5	+20 55.8	210 44.3	-21 39.5	350 19.5	+12 28.2
19	159	51.6	112	06.2	55.9	33 22.6	55.4	225 46.8	39.5	5 21.9	28.1
20	174	54.1	127	05.6	56.8	48 23.6	55.1	240 49.3	39.6	20 24.3	28.1
21	189	56.5	142	05.0	57.7	63 24.7	54.7	255 51.8	39.6	35 26.7	28.1
22	204	59.0	157	04.4	58.6	78 25.7	54.4	270 54.4	39.6	50 29.1	28.1
23	220	01.5	172	03.8	+16 59.5	93 26.8	54.0	285 56.9	39.6	65 31.5	28.0
24	235	03.9	187	03.2	+17 00.4	108 27.8	+20 53.7	300 59.4	-21 39.6	80 34.0	+12 28.0
Dif	—		-6	+9		+11	-4	+25	0	+24	0

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 4			Edad: 11 ^d 5 PHE { 4 ^h : 54 ^h /5 12 ^h : 54 ^h /4 20 ^h : 54 ^h /3 R°: 45 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	h m	m		
0	180	54.2	+19	21.9	35	55.1	-12	44.7	60 N	20 37	21 44	** **	18 11	89	2 03	2
1	195	54.2		22.5	50	29.4 ¹⁵³	-12	57.3 ¹²⁶	58	23	21	23 18	18 00	84	11	6
2	210	54.2		23.1	65	03.8 ¹⁵⁴	-13	09.8 ¹²⁵	56	11	21 02	22 25	17 51	79	18	9
3	225	54.1		23.6	79	38.1 ¹⁵³		22.2 ¹²⁴	54	20 00	20 47	21 56	43	76	24	12
4	240	54.1		24.2	94	12.3 ¹⁵²		34.6 ¹²⁴	52	19 51	34	34	35	74	30	14
5	255	54.1	+19	24.7	108	46.6 ¹⁵³	-13	46.9 ¹²³	50	19 43	20 23	21 17	17 29	70	2 35	16
6	270	54.1	+19	25.3	123	20.8 ¹⁵²	-13	59.2 ¹²³	45	19 25	20 00	20 44	17 14	66	2 46	21
7	285	54.1		25.9	137	54.9 ¹⁵¹	-14	11.4 ¹²²	40	19 11	19 42	20	17 03	62	2 55	25
8	300	54.0		26.4	152	29.0 ¹⁵¹		23.6 ¹²²	35	18 58	27	20 01	16 53	59	3 03	28
9	315	54.0		27.0	167	03.1 ¹⁵¹		35.7 ¹²¹	30	48	19 14	19 46	44	56	10	31
10	330	54.0		27.5	181	37.1 ¹⁵⁰		47.7 ¹²⁰	20	30	18 54	22	29	52	22	35
11	345	54.0	+19	28.1	196	11.1 ¹⁵⁰	-14	59.6 ¹¹⁹	10 N	18 14	18 37	19 03	16 16	48	3 32	40
12	0	54.0	+19	28.6	210	45.1 ¹⁵⁰	-15	11.5 ¹¹⁹	0	18 00	18 22	18 47	16 04	45	3 42	44
13	15	53.9		29.2	225	19.0 ¹⁴⁹		23.4 ¹¹⁹	10 S	17 46	18 08	34	15 53	40	3 52	47
14	30	53.9		29.7	239	52.8 ¹⁴⁸		35.1 ¹¹⁷	20	31	17 54	21	40	37	4 03	51
15	45	53.9		30.3	254	26.6 ¹⁴⁸		46.8 ¹¹⁷	30	13	39	08	26	32	15	56
16	60	53.9		30.8	269	00.4 ¹⁴⁸	-15	58.5 ¹¹⁷	35	17 03	30	18 01	17	30	23	58
17	75	53.9	+19	31.4	283	34.1 ¹⁴⁷	-16	10.0 ¹¹⁵	40	16 52	17 21	17 54	15 08	27	4 31	62
18	90	53.8	+19	31.9	298	07.8 ¹⁴⁷	-16	21.5 ¹¹⁵	45	16 39	17 11	17 47	14 57	23	4 40	66
19	105	53.8		32.5	312	41.4 ¹⁴⁶		33.0 ¹¹⁵	50	22	16 58	38	44	18	52	71
20	120	53.8		33.0	327	15.0 ¹⁴⁶		44.3 ¹¹³	52	15	53	34	38	16	4 57	73
21	135	53.8		33.6	341	48.5 ¹⁴⁵	-16	55.6 ¹¹³	54	16 06	47	30	31	14	5 03	76
22	150	53.7		34.1	356	22.0 ¹⁴⁵	-17	06.8 ¹¹²	56	15 57	40	26	24	10	10	79
23	165	53.7		34.7	10	55.5 ¹⁴⁵		18.0 ¹¹²	58	46	32	22	15	7	17	83
24	180	53.7	+19	35.2	25	28.9 ¹⁴⁴	-17	29.0 ¹¹⁰	60 S	15 34	16 24	17 17	14 06	3	5 26	87

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 8 ^h 18 ^m 4		Mag: -3.9 PMG: 11 ^h 32 ^m		Mag: +1.4 PMG: 16 ^h 45 ^m		Mag: -2.5 PMG: 3 ^h 55 ^m		Mag: +0.6 PMG: 18 ^h 35 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♎	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	235	03.9	187	03.2	+17	00.4	108	27.8	+20	53.7	300	59.4	-21	39.6	80	34.0	+12	28.0
1	250	06.4	202	02.6		01.3	123	28.9		53.3	316	01.9		39.6	95	36.4		28.0
2	265	08.8	217	02.0		02.2	138	29.9		52.9	331	04.5		39.7	110	38.8		28.0
3	280	11.3	232	01.4		03.1	153	31.0		52.6	346	07.0		39.7	125	41.2		27.9
4	295	13.8	247	00.7		04.0	168	32.0		52.2	1	09.5		39.7	140	43.6		27.9
5	310	16.2	262	00.1	+17	04.9	183	33.1	+20	51.9	16	12.0	-21	39.7	155	46.0	+12	27.9
6	325	18.7	276	59.5	+17	05.8	198	34.2	+20	51.5	31	14.6	-21	39.7	170	48.4	+12	27.8
7	340	21.2	291	58.9		06.7	213	35.2		51.2	46	17.1		39.7	185	50.8		27.8
8	355	23.6	306	58.3		07.5	228	36.3		50.8	61	19.6		39.7	200	53.2		27.8
9	10	26.1	321	57.7		08.4	243	37.3		50.5	76	22.2		39.8	215	55.6		27.8
10	25	28.6	336	57.1		09.3	258	38.4		50.1	91	24.7		39.8	230	58.0		27.7
11	40	31.0	351	56.4	+17	10.2	273	39.4	+20	49.8	106	27.2	-21	39.8	246	00.4	+12	27.7
12	55	33.5	6	55.8	+17	11.1	288	40.5	+20	49.4	121	29.7	-21	39.8	261	02.8	+12	27.7
13	70	36.0	21	55.2		12.0	303	41.5		49.0	136	32.3		39.8	276	05.2		27.7
14	85	38.4	36	54.6		12.9	318	42.6		48.7	151	34.8		39.8	291	07.6		27.6
15	100	40.9	51	54.0		13.8	333	43.6		48.3	166	37.3		39.9	306	10.1		27.6
16	115	43.3	66	53.4		14.7	348	44.7		48.0	181	39.9		39.9	321	12.5		27.6
17	130	45.8	81	52.7	+17	15.5	3	45.7	+20	47.6	196	42.4	-21	39.9	336	14.9	+12	27.5
18	145	48.3	96	52.1	+17	16.4	18	46.8	+20	47.3	211	44.9	-21	39.9	351	17.3	+12	27.5
19	160	50.7	111	51.5		17.3	33	47.9		46.9	226	47.5		39.9	6	19.7		27.5
20	175	53.2	126	50.9		18.2	48	48.9		46.5	241	50.0		39.9	21	22.1		27.5
21	190	55.7	141	50.3		19.1	63	50.0		46.2	256	52.5		40.0	36	24.5		27.4
22	205	58.1	156	49.6		20.0	78	51.0		45.8	271	55.1		40.0	51	26.9		27.4
23	221	00.6	171	49.0		20.8	93	52.1		45.5	286	57.6		40.0	66	29.3		27.4
24	236	03.1	186	48.4	+17	21.7	108	53.1	+20	45.1	302	00.1	-21	40.0	81	31.7	+12	27.3
Dif	—		-6		+9		+11		-4		+25		0		+24			

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 12 ^d 5 PHE { 4 ^h : 54 ^m /2 12 ^h : 54 ^m /2 20 ^h : 54 ^m /1 R°: 47 ^m										
	PMG: 11 ^h 56 ^m .4			SD: 14 ^h 8 PMG: 23 ^h 00 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	h m	h m	h m	h m	m	h m	m
0	180	53.7	+19 35.2	25	28.9	-17 29.0	110	60 N	** **	2 08	3 15	19 40	89	2 05 4
1	195	53.7	35.8	40	02.2 ¹⁴³	40.0	110	58	0 35	32	29	24	83	17 8
2	210	53.6	36.3	54	35.5 ¹⁴³	-17 50.9	109	56	1 27	2 50	41	19 10	79	27 12
3	225	53.6	36.9	69	08.7 ¹⁴²	-18 01.8	109	54	1 57	3 05	3 52	18 59	75	36 16
4	240	53.6	37.4	83	41.9 ¹⁴²	12.5	107	52	2 18	18	4 01	49	72	44 18
5	255	53.6	+19 38.0	98	15.0 ¹⁴¹	-18 23.2	107	50	2 36	3 30	4 10	18 39	70	2 51 21
6	270	53.5	+19 38.5	112	48.1 ¹⁴¹	-18 33.8	106	45	3 09	3 53	4 27	18 20	66	3 07 25
7	285	53.5	39.1	127	21.1 ¹⁴⁰	44.4	106	40	33	4 11	42	18 05	62	20 29
8	300	53.5	39.6	141	54.1 ¹⁴⁰	-18 54.8	104	35	3 51	26	4 54	17 52	59	31 32
9	315	53.5	40.1	156	27.0 ¹³⁹	-19 05.2	104	30	4 07	38	5 05	40	57	41 34
10	330	53.4	40.7	170	59.9 ¹³⁹	15.5	103	20	31	4 59	23	21	53	3 57 39
11	345	53.4	+19 41.2	185	32.7 ¹³⁸	-19 25.7	102	10 N	4 50	5 16	5 38	17 04	50	4 12 42
12	0	53.4	+19 41.8	200	05.4 ¹³⁷	-19 35.8	101	0	5 05	5 31	5 53	16 49	46	4 26 45
13	15	53.4	42.3	214	38.1 ¹³⁷	45.9	101	10 S	19	45	6 07	33	44	39 49
14	30	53.3	42.8	229	10.8 ¹³⁷	-19 55.8	99	20	32	5 59	22	16 17	40	4 54 53
15	45	53.3	43.4	243	43.4 ¹³⁶	-20 05.7	99	30	45	6 14	40	15 58	37	5 11 57
16	60	53.3	43.9	258	15.9 ¹³⁵	15.5	98	35	52	23	6 50	47	34	21 59
17	75	53.3	+19 44.5	272	48.4 ¹³⁵	-20 25.2	97	40	5 59	6 32	7 01	15 35	31	5 33 62
18	90	53.2	+19 45.0	287	20.8 ¹³⁴	-20 34.8	96	45	6 07	6 43	7 15	15 20	28	5 46 66
19	105	53.2	45.5	301	53.2 ¹³⁴	44.3	95	50	15	6 55	31	15 02	24	6 03 70
20	120	53.2	46.1	316	25.5 ¹³³	-20 53.7	94	52	19	7 01	39	14 54	21	10 73
21	135	53.1	46.6	330	57.7 ¹³²	-21 03.0	93	54	23	07	47	45	18	19 76
22	150	53.1	47.1	345	29.9 ¹³²	12.3	93	56	27	14	7 57	34	16	29 79
23	165	53.1	47.7	0	02.0 ¹³¹	21.4	91	58	32	21	8 08	22	12	40 84
24	180	53.1	+19 48.2	14	34.1 ¹³¹	-21 30.5	91	60 S	6 37	7 30	8 20	14 09	6	6 53 89

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 8 ^h 14 ^m .4		Mag: -3.9 PMG: 11 ^h 33 ^m		Mag: +1.4 PMG: 16 ^h 43 ^m		Mag: -2.5 PMG: 3 ^h 51 ^m		Mag: +0.6 PMG: 18 ^h 31 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	236	03.1	186	48.4	+17 21.7	108	53.1	+20 45.1	302	00.1	-21 40.0	81	31.7	+12 27.3
1	251	05.5	201	47.8	22.6	123	54.2	44.8	317	02.7	40.0	96	34.1	27.3
2	266	08.0	216	47.1	23.5	138	55.2	44.4	332	05.2	40.0	111	36.5	27.3
3	281	10.5	231	46.5	24.4	153	56.3	44.0	347	07.7	40.1	126	38.9	27.3
4	296	12.9	246	45.9	25.2	168	57.3	43.7	2	10.3	40.1	141	41.3	27.2
5	311	15.4	261	45.3	+17 26.1	183	58.4	+20 43.3	17	12.8	-21 40.1	156	43.7	+12 27.2
6	326	17.8	276	44.6	+17 27.0	198	59.4	+20 43.0	32	15.3	-21 40.1	171	46.1	+12 27.2
7	341	20.3	291	44.0	27.9	214	00.5	42.6	47	17.9	40.1	186	48.5	27.1
8	356	22.8	306	43.4	28.7	229	01.5	42.2	62	20.4	40.1	201	50.9	27.1
9	11	25.2	321	42.8	29.6	244	02.6	41.9	77	22.9	40.2	216	53.3	27.1
10	26	27.7	336	42.1	30.5	259	03.6	41.5	92	25.5	40.2	231	55.7	27.1
11	41	30.2	351	41.5	+17 31.4	274	04.7	+20 41.2	107	28.0	-21 40.2	246	58.1	+12 27.0
12	56	32.6	6	40.9	+17 32.2	289	05.8	+20 40.8	122	30.6	-21 40.2	262	00.5	+12 27.0
13	71	35.1	21	40.3	33.1	304	06.8	40.4	137	33.1	40.2	277	02.9	27.0
14	86	37.6	36	39.6	34.0	319	07.9	40.1	152	35.6	40.2	292	05.3	26.9
15	101	40.0	51	39.0	34.8	334	08.9	39.7	167	38.2	40.3	307	07.7	26.9
16	116	42.5	66	38.4	35.7	349	10.0	39.4	182	40.7	40.3	322	10.1	26.9
17	131	45.0	81	37.7	+17 36.6	4	11.0	+20 39.0	197	43.3	-21 40.3	337	12.5	+12 26.9
18	146	47.4	96	37.1	+17 37.4	19	12.1	+20 38.6	212	45.8	-21 40.3	352	14.9	+12 26.8
19	161	49.9	111	36.5	38.3	34	13.1	38.3	227	48.3	40.3	7	17.3	26.8
20	176	52.3	126	35.8	39.2	49	14.2	37.9	242	50.9	40.3	22	19.7	26.8
21	191	54.8	141	35.2	40.0	64	15.2	37.5	257	53.4	40.4	37	22.1	26.7
22	206	57.3	156	34.6	40.9	79	16.3	37.2	272	56.0	40.4	52	24.5	26.7
23	221	59.7	171	33.9	41.8	94	17.3	36.8	287	58.5	40.4	67	26.9	26.7
24	237	02.2	186	33.3	+17 42.6	109	18.4	+20 36.5	303	01.0	-21 40.4	82	29.3	+12 26.7
Dif	—		-6	+9		+11	-4		+25		0	+24		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: 13 ^d 5 PHE { SD: 14 ^h 7 PMG: 23 ^h 47 ^m 4 ^h : 54 ⁰ 12 ^h : 54 ⁰ 20 ^h : 54 ⁰ R°: 50 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	180	53.1	+19 48.2	14	34.1	-21 30.5	90	60 N	20 42	21 51	** **	21 09 86	2 09 8	
1	195	53.0	48.7	29	06.1 ¹³⁰	39.5	90	58	27	26	** **	20 47 78	25 15	
2	210	53.0	49.3	43	38.1 ¹³⁰	48.3	88	56	15	21 07	22 34	29 74	39 19	
3	225	53.0	49.8	58	10.0 ¹²⁹	-21 57.1	88	54	20 04	20 51	22 02	14 71	2 52 21	
4	240	52.9	50.3	72	41.9 ¹²⁹	-22 05.8	87	52	19 54	38	21 39	20 01 68	3 02 25	
5	255	52.9	+19 50.9	87	13.7 ¹²⁸	-22 14.4	86	50	19 45	20 26	21 21	19 49 67	3 12 27	
6	270	52.9	+19 51.4	101	45.4 ¹²⁷	-22 22.9	85	45	19 27	20 02	20 47	19 26 62	3 32 31	
7	285	52.8	51.9	116	17.1 ¹²⁷	31.2	83	40	12	19 44	22	19 07 60	3 49 34	
8	300	52.8	52.4	130	48.7 ¹²⁶	39.5	83	35	19 00	28	20 03	18 51 58	4 03 37	
9	315	52.8	53.0	145	20.2 ¹²⁵	47.7	82	30	18 49	19 16	19 47	37 56	15 39	
10	330	52.7	53.5	159	51.7 ¹²⁵	-22 55.8	81	20	31	18 55	23	18 14 53	36 42	
11	345	52.7	+19 54.0	174	23.2 ¹²⁵	-23 03.8	80	10 N	18 15	18 37	19 04	17 54 51	4 54 45	
12	0	52.7	+19 54.6	188	54.6 ¹²⁴	-23 11.7	79	0	18 00	18 22	18 48	17 35 49	5 11 48	
13	15	52.6	55.1	203	25.9 ¹²³	19.4	77	10 S	17 45	18 08	33	17 17 47	28 51	
14	30	52.6	55.6	217	57.2 ¹²³	27.1	77	20	30	17 53	20	16 57 45	5 47 53	
15	45	52.6	56.1	232	28.4 ¹²²	34.7	76	30	12	38	07	35 41	6 08 56	
16	60	52.6	56.7	246	59.6 ¹²²	42.1	74	35	17 02	29	18 00	21 40	20 59	
17	75	52.5	+19 57.2	261	30.7 ¹²¹	-23 49.5	74	40	16 50	17 20	17 53	16 06 38	6 35 61	
18	90	52.5	+19 57.7	276	01.7 ¹²⁰	-23 56.8	73	45	16 37	17 09	17 45	15 48 35	6 52 64	
19	105	52.5	58.2	290	32.7 ¹²⁰	-24 03.9	71	50	20	16 56	36	26 31	7 13 69	
20	120	52.4	58.7	305	03.7 ¹²⁰	10.9	70	52	12	51	32	15 29	23 71	
21	135	52.4	59.3	319	34.6 ¹¹⁹	17.9	70	54	16 04	44	28	15 03 27	35 73	
22	150	52.3	+19 59.8	334	05.4 ¹¹⁸	24.7	68	56	15 54	37	24	14 50 23	7 48 77	
23	165	52.3	+20 00.3	348	36.2 ¹¹⁸	31.4	67	58	43	29	19	34 18	8 04 81	
24	180	52.3	+20 00.8	3	06.9 ¹¹⁷	-24 38.0	66	60 S	15 30	16 21	17 14	14 15 12	8 22 88	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 8 ^h 10 ^m 5		Mag: -3.9 PMG: 11 ^h 34 ^m		Mag: +1.4 PMG: 16 ^h 42 ^m		Mag: -2.5 PMG: 3 ^h 47 ^m		Mag: +0.6 PMG: 18 ^h 27 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	237	02.2	186	33.3	+17 42.6	109 18.4	+20 36.5	303 01.0	-21 40.4	82 29.3	+12 26.7
1	252	04.7	201	32.7	43.5	124 19.4	36.1	318 03.6	40.4	97 31.7	26.6
2	267	07.1	216	32.0	44.3	139 20.5	35.7	333 06.1	40.5	112 34.1	26.6
3	282	09.6	231	31.4	45.2	154 21.5	35.4	348 08.7	40.5	127 36.5	26.6
4	297	12.1	246	30.8	46.1	169 22.6	35.0	3 11.2	40.5	142 38.9	26.5
5	312	14.5	261	30.1	+17 46.9	184 23.6	+20 34.6	18 13.8	-21 40.5	157 41.3	+12 26.5
6	327	17.0	276	29.5	+17 47.8	199 24.7	+20 34.3	33 16.3	-21 40.5	172 43.7	+12 26.5
7	342	19.4	291	28.9	48.6	214 25.7	33.9	48 18.8	40.5	187 46.1	26.4
8	357	21.9	306	28.2	49.5	229 26.8	33.5	63 21.4	40.6	202 48.5	26.4
9	12	24.4	321	27.6	50.3	244 27.8	33.2	78 23.9	40.6	217 50.9	26.4
10	27	26.8	336	27.0	51.2	259 28.9	32.8	93 26.5	40.6	232 53.3	26.4
11	42	29.3	351	26.3	+17 52.0	274 30.0	+20 32.4	108 29.0	-21 40.6	247 55.7	+12 26.3
12	57	31.8	6	25.7	+17 52.9	289 31.0	+20 32.1	123 31.6	-21 40.6	262 58.1	+12 26.3
13	72	34.2	21	25.0	53.7	304 32.1	31.7	138 34.1	40.7	278 00.5	26.3
14	87	36.7	36	24.4	54.6	319 33.1	31.3	153 36.7	40.7	293 02.9	26.2
15	102	39.2	51	23.8	55.4	334 34.2	31.0	168 39.2	40.7	308 05.3	26.2
16	117	41.6	66	23.1	56.3	349 35.2	30.6	183 41.8	40.7	323 07.7	26.2
17	132	44.1	81	22.5	+17 57.1	4 36.3	+20 30.2	198 44.3	-21 40.7	338 10.1	+12 26.1
18	147	46.6	96	21.8	+17 58.0	19 37.3	+20 29.9	213 46.8	-21 40.7	353 12.5	+12 26.1
19	162	49.0	111	21.2	58.8	34 38.4	29.5	228 49.4	40.8	8 14.9	26.1
20	177	51.5	126	20.5	+17 59.7	49 39.4	29.1	243 51.9	40.8	23 17.3	26.0
21	192	53.9	141	19.9	+18 00.5	64 40.5	28.8	258 54.5	40.8	38 19.7	26.0
22	207	56.4	156	19.3	01.4	79 41.5	28.4	273 57.0	40.8	53 22.1	26.0
23	222	58.9	171	18.6	02.2	94 42.6	28.0	288 59.6	40.8	68 24.5	26.0
24	238	01.3	186	18.0	+18 03.1	109 43.6	+20 27.7	304 02.1	-21 40.9	83 26.9	+12 25.9
Dif	—		-6	+9		+11	-4	+25	0	+24	

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: 14 ^d 5 PHE SD: 14/7 PMG: **h **m R°: **m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	180	52.3	+20 00.8	3	06.9	-24 38.0	60 N	** **	2 02	3 10	22 35	69	2 17	17	
1	195	52.2	01.3	17	37.6 ¹¹⁷	44.4 ⁶⁴	58	** **	26	25	22 05	65	40	24	
2	210	52.2	01.9	32	08.2 ¹¹⁶	50.8 ⁶⁴	56	1 19	2 46	38	21 43	62	2 58	28	
3	225	52.2	02.4	46	38.8 ¹¹⁶	-24 57.1 ⁶³	54	1 51	3 02	49	25 60		3 13	32	
4	240	52.1	02.9	61	09.3 ¹¹⁵	-25 03.2 ⁶¹	52	2 14	15	3 59	21 09	60	27	34	
5	255	52.1	+20 03.4	75	39.8 ¹¹⁵	-25 09.2 ⁶⁰	50	2 32	3 27	4 07	20 56	58	3 39	35	
6	270	52.1	+20 03.9	90	10.2 ¹¹⁴	-25 15.1 ⁵⁹	45	3 06	3 51	4 25	20 28	57	4 03	39	
7	285	52.0	04.4	104	40.5 ¹¹³	20.9 ⁵⁸	40	30	4 09	40	20 07	56	23	41	
8	300	52.0	05.0	119	10.9 ¹¹⁴	26.6 ⁵⁷	35	3 50	24	4 53	19 49	55	40	42	
9	315	52.0	05.5	133	41.1 ¹¹²	32.2 ⁵⁶	30	4 05	37	5 04	33 55		4 54	44	
10	330	51.9	06.0	148	11.4 ¹¹³	37.6 ⁵⁴	20	30	4 58	22	19 07	53	5 18	46	
11	345	51.9	+20 06.5	162	41.5 ¹¹¹	-25 42.9 ⁵³	10 N	4 49	5 16	5 38	18 45	52	5 39	48	
12	0	51.8	+20 07.0	177	11.7 ¹¹²	-25 48.1 ⁵²	0	5 05	5 31	5 53	18 24	51	5 59	50	
13	15	51.8	07.5	191	41.7 ¹¹⁰	53.2 ⁵¹	10 S	20	5 45	6 08	18 04	49	6 19	51	
14	30	51.8	08.0	206	11.8 ¹¹¹	-25 58.2 ⁵⁰	20	33	6 00	23	17 42	48	6 40	53	
15	45	51.7	08.5	220	41.8 ¹¹⁰	-26 03.0 ⁴⁸	30	46	15	41	16 47		7 04	56	
16	60	51.7	09.0	235	11.7 ¹⁰⁹	07.7 ⁴⁷	35	5 53	24	6 51	17 01	46	19	57	
17	75	51.6	+20 09.6	249	41.6 ¹⁰⁹	-26 12.3 ⁴⁶	40	6 01	6 34	7 03	16 44	44	7 36	58	
18	90	51.6	+20 10.1	264	11.5 ¹⁰⁹	-26 16.8 ⁴⁵	45	6 09	6 45	7 17	16 23	43	7 56	60	
19	105	51.6	10.6	278	41.3 ¹⁰⁸	21.1 ⁴³	50	17	6 57	34	15 57	40	8 22	63	
20	120	51.5	11.1	293	11.1 ¹⁰⁸	25.4 ⁴³	52	21	7 03	42	44 39		34	64	
21	135	51.5	11.6	307	40.8 ¹⁰⁷	29.5 ⁴¹	54	26	10	7 50	30 37		8 48	67	
22	150	51.4	12.1	322	10.5 ¹⁰⁷	33.4 ³⁹	56	30	17	8 00	15 13	35	9 05	69	
23	165	51.4	12.6	336	40.2 ¹⁰⁷	37.3 ³⁹	58	35	25	12	14 52	32	25	72	
24	180	51.4	+20 13.1	351	09.8 ¹⁰⁶	-26 41.0 ³⁷	60 S	6 40	7 33	8 25	14 27	26	9 50	78	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG 8 ^h 06 ^m 6		Mag: -3.9 PMG: 11 ^h 35 ^m			Mag: +1.4 PMG: 16 ^h 40 ^m			Mag: -2.5 PMG: 3 ^h 43 ^m			Mag: +0.7 PMG: 18 ^h 23 ^m			
	hG ♈	Dec	hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	238	01.3	186 18.0	+18 03.1	109 43.6	+20 27.7	304 02.1	-21 40.9	83 26.9	+12 25.9					
1	253	03.8	201 17.3	03.9	124 44.7	27.3	319 04.7	40.9	98 29.3	25.9					
2	268	06.3	216 16.7	04.7	139 45.7	26.9	334 07.2	40.9	113 31.7	25.9					
3	283	08.7	231 16.0	05.6	154 46.8	26.6	349 09.8	40.9	128 34.1	25.8					
4	298	11.2	246 15.4	06.4	169 47.8	26.2	4 12.3	40.9	143 36.5	25.8					
5	313	13.7	261 14.7	+18 07.3	184 48.9	+20 25.8	19 14.9	-21 41.0	158 38.9	+12 25.8					
6	328	16.1	276 14.1	+18 08.1	199 49.9	+20 25.5	34 17.4	-21 41.0	173 41.3	+12 25.7					
7	343	18.6	291 13.4	08.9	214 51.0	25.1	49 20.0	41.0	188 43.6	25.7					
8	358	21.1	306 12.8	09.8	229 52.0	24.7	64 22.6	41.0	203 46.0	25.7					
9	13	23.5	321 12.1	10.6	244 53.1	24.4	79 25.1	41.0	218 48.4	25.6					
10	28	26.0	336 11.5	11.4	259 54.1	24.0	94 27.7	41.1	233 50.8	25.6					
11	43	28.4	351 10.8	+18 12.3	274 55.2	+20 23.6	109 30.2	-21 41.1	248 53.2	+12 25.6					
12	58	30.9	6 10.2	+18 13.1	289 56.2	+20 23.2	124 32.8	-21 41.1	263 55.6	+12 25.5					
13	73	33.4	21 09.5	13.9	304 57.3	22.9	139 35.3	41.1	278 58.0	25.5					
14	88	35.8	36 08.9	14.8	319 58.3	22.5	154 37.9	41.1	294 00.4	25.5					
15	103	38.3	51 08.2	15.6	334 59.4	22.1	169 40.4	41.1	309 02.8	25.4					
16	118	40.8	66 07.6	16.4	350 00.4	21.8	184 43.0	41.2	324 05.2	25.4					
17	133	43.2	81 06.9	+18 17.3	5 01.5	+20 21.4	199 45.5	-21 41.2	339 07.6	+12 25.4					
18	148	45.7	96 06.3	+18 18.1	20 02.5	+20 21.0	214 48.1	-21 41.2	354 10.0	+12 25.4					
19	163	48.2	111 05.6	18.9	35 03.6	20.6	229 50.7	41.2	9 12.4	25.3					
20	178	50.6	126 05.0	19.7	50 04.6	20.3	244 53.2	41.2	24 14.8	25.3					
21	193	53.1	141 04.3	20.6	65 05.7	19.9	259 55.8	41.3	39 17.2	25.3					
22	208	55.6	156 03.6	21.4	80 06.7	19.5	274 58.3	41.3	54 19.5	25.2					
23	223	58.0	171 03.0	22.2	95 07.8	19.2	290 00.9	41.3	69 21.9	25.2					
24	239	00.5	186 02.3	+18 23.0	110 08.8	+20 18.8	305 03.4	-21 41.3	84 24.3	+12 25.2					
Dif	—		-7	+8	+11	-4	+26	0	+24	0					

UT	SOL				☉ LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 6				Edad: 15 ^d 5 PHE { 4 ^h : 54 ⁰ 12 ^h : 54 ⁰ 20 ^h : 54 ⁰ PMG: 0 ^h 37 ^m R°: 51 ^m												
	hG ☉		Dec		hG ☾		Dif				Civil		Náutico		Hora R°		Hora R°
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	h m	h m	h m
0	180	51.4	+20	13.1	351	09.8	-26	41.0	60 N	20 46	21 57	** **	23 44	42	2 34	37	
1	195	51.3		13.6	5	39.4 ¹⁰⁶		44.6 ³⁶	58	31	31	** **	23 10	45	3 04	41	
2	210	51.3		14.1	20	09.0 ¹⁰⁶		48.1 ³⁵	56	18	21 11	22 43	22 45	47	26	43	
3	225	51.2		14.6	34	38.5 ¹⁰⁵		51.4 ³³	54	20 07	20 55	22 08	25	48	3 45	44	
4	240	51.2		15.1	49	08.0 ¹⁰⁵		54.7 ³³	52	19 57	41	21 44	22 09	48	4 01	45	
5	255	51.2	+20	15.6	63	37.4 ¹⁰⁴	-26	57.8 ³¹	50	19 48	20 29	21 25	21 54	49	4 14	46	
6	270	51.1	+20	16.1	78	06.8 ¹⁰⁴	-27	00.7 ²⁹	45	19 29	20 04	20 50	21 25	50	4 42	47	
7	285	51.1		16.6	92	36.2 ¹⁰⁴		03.5 ²⁸	40	14	19 45	25	21 03	49	5 04	48	
8	300	51.0		17.1	107	05.6 ¹⁰⁴		06.2 ²⁷	35	19 01	30	20 05	20 44	50	22	49	
9	315	51.0		17.6	121	34.9 ¹⁰³		08.8 ²⁶	30	18 50	19 17	19 49	28	50	5 38	49	
10	330	50.9		18.1	136	04.2 ¹⁰³		11.3 ²⁵	20	32	18 55	24	20 00	51	6 04	51	
11	345	50.9	+20	18.6	150	33.5 ¹⁰³	-27	13.6 ²³	10 N	18 15	18 38	19 04	19 37	51	6 27	51	
12	0	50.9	+20	19.1	165	02.8 ¹⁰³	-27	15.8 ²²	0	18 00	18 22	18 48	19 15	51	6 49	51	
13	15	50.8		19.6	179	32.0 ¹⁰²		17.8 ²⁰	10 S	17 45	18 08	33	18 53	52	7 10	52	
14	30	50.8		20.1	194	01.2 ¹⁰²		19.7 ¹⁹	20	29	17 53	20	30	52	7 33	52	
15	45	50.7		20.6	208	30.4 ¹⁰²		21.5 ¹⁸	30	11	37	18 06	18 03	52	8 00	52	
16	60	50.7		21.1	222	59.6 ¹⁰²		23.2 ¹⁷	35	17 01	28	17 59	17 47	52	16	52	
17	75	50.6	+20	21.6	237	28.7 ¹⁰¹	-27	24.7 ¹⁵	40	16 49	17 18	17 52	17 28	52	8 34	53	
18	90	50.6	+20	22.1	251	57.9 ¹⁰²	-27	26.1 ¹⁴	45	16 35	17 07	17 43	17 06	52	8 56	54	
19	105	50.6		22.6	266	27.0 ¹⁰¹		27.4 ¹³	50	18	16 54	34	16 37	52	9 25	53	
20	120	50.5		23.1	280	56.1 ¹⁰¹		28.5 ¹¹	52	10	48	30	23	52	38	55	
21	135	50.5		23.6	295	25.2 ¹⁰¹		29.5 ¹⁰	54	16 01	42	26	16 07	52	9 55	54	
22	150	50.4		24.1	309	54.2 ¹⁰⁰		30.3 ⁸	56	15 51	35	21	15 48	52	10 14	54	
23	165	50.4		24.6	324	23.3 ¹⁰¹		31.1 ⁸	58	39	26	16	15 24	52	10 37	55	
24	180	50.3	+20	25.0	338	52.3 ¹⁰⁰	-27	31.7 ⁶	60 S	15 26	16 17	17 11	14 53	51	11 08	57	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 8 ^h 02 ^m 6			Mag: -3.9 PMG: 11 ^h 36 ^m			Mag: +1.4 PMG: 16 ^h 38 ^m			Mag: -2.5 PMG: 3 ^h 39 ^m			Mag: +0.7 PMG: 18 ^h 19 ^m				
	hG ♈			hG ♀			hG ♂			hG ♃			hG ♄				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	239	00.5	186	02.3	+18	23.0	110	08.8	+20	18.8	305	03.4	-21	41.3	84	24.3	
1	254	02.9	201	01.7		23.8	125	09.9		18.4	320	06.0		41.4	99	26.7	
2	269	05.4	216	01.0		24.7	140	10.9		18.0	335	08.6		41.4	114	29.1	
3	284	07.9	231	00.4		25.5	155	12.0		17.7	350	11.1		41.4	129	31.5	
4	299	10.3	245	59.7		26.3	170	13.0		17.3	5	13.7		41.4	144	33.9	
5	314	12.8	260	59.0	+18	27.1	185	14.1	+20	16.9	20	16.2	-21	41.4	159	36.3	
6	329	15.3	275	58.4	+18	27.9	200	15.1	+20	16.5	35	18.8	-21	41.5	174	38.7	
7	344	17.7	290	57.7		28.8	215	16.2		16.2	50	21.4		41.5	189	41.1	
8	359	20.2	305	57.1		29.6	230	17.3		15.8	65	23.9		41.5	204	43.5	
9	14	22.7	320	56.4		30.4	245	18.3		15.4	80	26.5		41.5	219	45.8	
10	29	25.1	335	55.7		31.2	260	19.4		15.0	95	29.0		41.5	234	48.2	
11	44	27.6	350	55.1	+18	32.0	275	20.4	+20	14.7	110	31.6	-21	41.6	249	50.6	
12	59	30.0	5	54.4	+18	32.8	290	21.5	+20	14.3	125	34.2	-21	41.6	264	53.0	
13	74	32.5	20	53.7		33.6	305	22.5		13.9	140	36.7		41.6	279	55.4	
14	89	35.0	35	53.1		34.5	320	23.6		13.5	155	39.3		41.6	294	57.8	
15	104	37.4	50	52.4		35.3	335	24.6		13.2	170	41.9		41.6	310	00.2	
16	119	39.9	65	51.8		36.1	350	25.7		12.8	185	44.4		41.7	325	02.6	
17	134	42.4	80	51.1	+18	36.9	5	26.7	+20	12.4	200	47.0	-21	41.7	340	05.0	
18	149	44.8	95	50.4	+18	37.7	20	27.8	+20	12.0	215	49.5	-21	41.7	355	07.4	
19	164	47.3	110	49.8		38.5	35	28.8		11.7	230	52.1		41.7	10	09.7	
20	179	49.8	125	49.1		39.3	50	29.9		11.3	245	54.7		41.7	25	12.1	
21	194	52.2	140	48.4		40.1	65	30.9		10.9	260	57.2		41.8	40	14.5	
22	209	54.7	155	47.8		40.9	80	32.0		10.5	275	59.8		41.8	55	16.9	
23	224	57.2	170	47.1		41.7	95	33.0		10.1	291	02.4		41.8	70	19.3	
24	239	59.6	185	46.4	+18	42.5	110	34.1	+20	09.8	306	04.9	-21	41.8	85	21.7	
Dif	—			-7 +8			+11 -4			+26 0			+24 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 7			Edad: 16 ^d 5 PHE { 4 ^h : 54/1 12 ^h : 54/1 20 ^h : 54/2 PMG: 1 ^h 28 ^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	180	50.3	+20 25.0	338	52.3	-27 31.7	4	60 N	** **	1 56	3 06	** **	**	3 11	64
1	195	50.3	25.5	353	21.4 ¹⁰¹	32.1	4	58	** **	2 22	22	23 55	27	3 45	61
2	210	50.2	26.0	7	50.4 ¹⁰⁰	32.5	2	56	1 10	42	35	32 31		4 09	60
3	225	50.2	26.5	22	19.4 ¹⁰⁰	32.7	0	54	1 45	2 58	46	23 13	34	29	55
4	240	50.1	27.0	36	48.4 ¹⁰⁰	32.7	0	52	2 09	3 12	3 56	22 57	36	4 46	58
5	255	50.1	+20 27.5	51	17.4 ¹⁰⁰	-27 32.6	1	50	2 28	3 24	4 05	22 43	38	5 00	58
6	270	50.0	+20 28.0	65	46.4 ¹⁰⁰	-27 32.4	2	45	3 03	3 48	4 24	22 15	40	5 29	56
7	285	50.0	28.5	80	15.4 ¹⁰⁰	32.1	3	40	28	4 07	39	21 52	43	5 52	55
8	300	49.9	28.9	94	44.4 ¹⁰⁰	31.6	5	35	3 48	23	4 52	34 44		6 11	55
9	315	49.9	29.4	109	13.4 ¹⁰⁰	31.0	6	30	4 04	36	5 03	21 18	46	27	54
10	330	49.8	29.9	123	42.4 ¹⁰⁰	30.3	7	20	29	4 58	22	20 51	48	6 55	52
11	345	49.8	+20 30.4	138	11.4 ¹⁰⁰	-27 29.4	9	10 N	4 49	5 15	5 38	20 28	49	7 18	52
12	0	49.8	+20 30.9	152	40.4 ¹⁰⁰	-27 28.4	10	0	5 05	5 31	5 53	20 06	51	7 40	51
13	15	49.7	31.4	167	09.4 ¹⁰⁰	27.2	12	10 S	20	5 46	6 08	19 45	52	8 02	50
14	30	49.7	31.8	181	38.4 ¹⁰⁰	25.9	13	20	34	6 01	24	19 22	53	25	50
15	45	49.6	32.3	196	07.4 ¹⁰⁰	24.5	14	30	47	17	42	18 55	55	8 52	49
16	60	49.6	32.8	210	36.5 ¹⁰¹	23.0	15	35	5 54	25	6 53	39 56		9 08	48
17	75	49.5	+20 33.3	225	05.5 ¹⁰⁰	-27 21.3	17	40	6 02	6 35	7 05	18 20	58	9 27	46
18	90	49.5	+20 33.8	239	34.5 ¹⁰⁰	-27 19.5	18	45	6 10	6 46	7 19	17 58	60	9 50	45
19	105	49.4	34.2	254	03.6 ¹⁰¹	17.5	20	50	20	7 00	36	29 62		10 18	43
20	120	49.4	34.7	268	32.7 ¹⁰¹	15.5	20	52	24	06	44	17 15	64	33	42
21	135	49.3	35.2	283	01.7 ¹⁰⁰	13.3	22	54	28	12	7 53	16 59	65	10 49	40
22	150	49.3	35.7	297	30.8 ¹⁰¹	10.9	24	56	33	20	8 04	40 67		11 08	39
23	165	49.2	36.2	311	59.9 ¹⁰¹	08.4	25	58	38	28	15	16 16	70	11 32	36
24	180	49.1	+20 36.6	326	29.0 ¹⁰¹	-27 05.8	26	60 S	6 43	7 37	8 29	15 44	75	12 05	30

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 7 ^h 58 ^m 7		Mag: -3.9 PMG: 11 ^h 37 ^m		Mag: +1.4 PMG: 16 ^h 37 ^m		Mag: -2.6 PMG: 3 ^h 35 ^m		Mag: +0.7 PMG: 18 ^h 16 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	239	59.6	185	46.4	+18 42.5	110 34.1	+20 09.8	306 04.9	-21 41.8	85 21.7	+12 24.4			
1	255	02.1	200	45.7	43.3	125 35.1	09.4	321 07.5	41.9	100 24.1	24.3			
2	270	04.5	215	45.1	44.1	140 36.2	09.0	336 10.1	41.9	115 26.5	24.3			
3	285	07.0	230	44.4	44.9	155 37.2	08.6	351 12.6	41.9	130 28.8	24.3			
4	300	09.5	245	43.7	45.7	170 38.3	08.3	6 15.2	41.9	145 31.2	24.2			
5	315	11.9	260	43.1	+18 46.5	185 39.3	+20 07.9	21 17.8	-21 41.9	160 33.6	+12 24.2			
6	330	14.4	275	42.4	+18 47.3	200 40.4	+20 07.5	36 20.3	-21 42.0	175 36.0	+12 24.1			
7	345	16.9	290	41.7	48.1	215 41.4	07.1	51 22.9	42.0	190 38.4	24.1			
8	0	19.3	305	41.0	48.9	230 42.5	06.7	66 25.5	42.0	205 40.8	24.1			
9	15	21.8	320	40.4	49.7	245 43.5	06.4	81 28.1	42.0	220 43.2	24.0			
10	30	24.3	335	39.7	50.5	260 44.6	06.0	96 30.6	42.1	235 45.6	24.0			
11	45	26.7	350	39.0	+18 51.3	275 45.6	+20 05.6	111 33.2	-21 42.1	250 47.9	+12 24.0			
12	60	29.2	5	38.4	+18 52.1	290 46.6	+20 05.2	126 35.8	-21 42.1	265 50.3	+12 23.9			
13	75	31.7	20	37.7	52.9	305 47.7	04.8	141 38.3	42.1	280 52.7	23.9			
14	90	34.1	35	37.0	53.7	320 48.7	04.5	156 40.9	42.1	295 55.1	23.9			
15	105	36.6	50	36.3	54.4	335 49.8	04.1	171 43.5	42.2	310 57.5	23.8			
16	120	39.0	65	35.7	55.2	350 50.8	03.7	186 46.0	42.2	325 59.9	23.8			
17	135	41.5	80	35.0	+18 56.0	5	51.9	+20 03.3	201 48.6	-21 42.2	341 02.3	+12 23.8		
18	150	44.0	95	34.3	+18 56.8	20 52.9	+20 02.9	216 51.2	-21 42.2	356 04.6	+12 23.7			
19	165	46.4	110	33.6	57.6	35 54.0	02.6	231 53.8	42.3	11 07.0	23.7			
20	180	48.9	125	32.9	58.4	50 55.0	02.2	246 56.3	42.3	26 09.4	23.7			
21	195	51.4	140	32.3	+18 59.2	65 56.1	01.8	261 58.9	42.3	41 11.8	23.6			
22	210	53.8	155	31.6	+19 00.0	80 57.1	01.4	277 01.5	42.3	56 14.2	23.6			
23	225	56.3	170	30.9	+19 00.7	95 58.2	01.0	292 04.1	42.3	71 16.6	23.6			
24	240	58.8	185	30.2	+19 01.5	110 59.2	+20 00.6	307 06.6	-21 42.4	86 18.9	+12 23.5			
Dif	—		-7		+8	+10		+26		0	+24		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 ^h /3 12 ^h : 54 ^h /4 20 ^h : 54 ^h /5					Civil			Hora		Hora	
	PMG: 11 ^h 56 ^m 8			SD: 14 ^h 8					Náutico			R°		R°	
	hG ☉	Dec		hG ☾	Dif	Dec	Dif								
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	180	49.1	+20 36.6	326	29.0	-27 05.8	27	60 N	20 51	22 04	** **	0 26 20	4 15 85		
1	195	49.1	37.1	340	58.2 ¹⁰²	03.1	27	58	35	21 36	** **	** ** *	4 46 77		
2	210	49.0	37.6	355	27.3 ¹⁰¹	-27 00.2	29	56	21	21 16	22 52	** ** *	5 09 73		
3	225	49.0	38.1	9	56.5 ¹⁰²	-26 57.2	30	54	10	20 59	22 14	23 47 24	28 70		
4	240	48.9	38.5	24	25.7 ¹⁰²	54.1	31	52	20 00	44	21 48	33 27	44 68		
5	255	48.9	+20 39.0	38	54.9 ¹⁰²	-26 50.8	33	50	19 51	20 32	21 29	23 21 29	5 58 66		
6	270	48.8	+20 39.5	53	24.2 ¹⁰³	-26 47.4	34	45	19 31	20 07	20 53	22 55 34	6 25 63		
7	285	48.8	39.9	67	53.4 ¹⁰²	43.8	36	40	16	19 47	27	35 36	6 47 61		
8	300	48.7	40.4	82	22.7 ¹⁰³	40.2	36	35	19 03	32	20 07	18 39	7 06 58		
9	315	48.7	40.9	96	52.0 ¹⁰³	36.4	38	30	18 52	19 18	19 50	22 04 40	21 57		
10	330	48.6	41.4	111	21.4 ¹⁰⁴	32.5	39	20	32	18 56	25	21 39 44	7 47 55		
11	345	48.6	+20 41.8	125	50.7 ¹⁰³	-26 28.4	41	10 N	18 16	18 38	19 05	21 17 47	8 10 52		
12	0	48.5	+20 42.3	140	20.1 ¹⁰⁴	-26 24.2	42	0	18 00	18 22	18 48	20 57 50	8 31 50		
13	15	48.5	42.8	154	49.5 ¹⁰⁴	19.9	43	10 S	17 45	18 07	33	37 52	8 52 48		
14	30	48.4	43.2	169	19.0 ¹⁰⁵	15.5	44	20	29	17 52	19	20 15 55	9 15 45		
15	45	48.3	43.7	183	48.5 ¹⁰⁵	10.9	46	30	10	36	18 05	19 50 58	41 43		
16	60	48.3	44.2	198	18.0 ¹⁰⁵	06.2	47	35	17 00	27	17 58	35 60	9 56 41		
17	75	48.2	+20 44.6	212	47.5 ¹⁰⁵	-26 01.4	48	40	16 48	17 17	17 50	19 18 62	10 13 40		
18	90	48.2	+20 45.1	227	17.1 ¹⁰⁶	-25 56.5	49	45	16 33	17 06	17 42	18 58 65	10 35 37		
19	105	48.1	45.6	241	46.7 ¹⁰⁶	51.4	51	50	16	16 52	33	31 69	11 01 34		
20	120	48.1	46.0	256	16.3 ¹⁰⁶	46.2	52	52	16 07	46	28	19 71	15 31		
21	135	48.0	46.5	270	46.0 ¹⁰⁷	40.9	53	54	15 58	39	24	18 04 74	29 29		
22	150	48.0	46.9	285	15.7 ¹⁰⁷	35.5	54	56	48	32	19	17 47 77	11 47 25		
23	165	47.9	47.4	299	45.5 ¹⁰⁸	29.9	56	58	36	24	14	17 26 82	12 08 21		
24	180	47.8	+20 47.9	314	15.3 ¹⁰⁸	-25 24.2	57	60 S	15 22	16 14	17 08	16 59 89	12 35 14		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 7 ^h 54 ^m 8		Mag: -3.9 PMG: 11 ^h 39 ^m			Mag: +1.4 PMG: 16 ^h 35 ^m			Mag: -2.6 PMG: 3 ^h 31 ^m			Mag: +0.7 PMG: 18 ^h 12 ^m			
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♃	Dec	hG ♃	Dec	hG ♃	Dec	hG ♃	Dec
h	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°
0	240	58.8	185 30.2	+19 01.5	110 59.2	+20 00.6	307 06.6	-21 42.4	86 18.9	+12 23.5					
1	256	01.2	200 29.5	02.3	126 00.3	+20 00.3	322 09.2	42.4	101 21.3	23.5					
2	271	03.7	215 28.9	03.1	141 01.3	+19 59.9	337 11.8	42.4	116 23.7	23.4					
3	286	06.2	230 28.2	03.9	156 02.4	59.5	352 14.4	42.4	131 26.1	23.4					
4	301	08.6	245 27.5	04.6	171 03.4	59.1	7 16.9	42.5	146 28.5	23.4					
5	316	11.1	260 26.8	+19 05.4	186 04.5	+19 58.7	22 19.5	-21 42.5	161 30.9	+12 23.3					
6	331	13.5	275 26.1	+19 06.2	201 05.5	+19 58.3	37 22.1	-21 42.5	176 33.2	+12 23.3					
7	346	16.0	290 25.4	07.0	216 06.6	58.0	52 24.7	42.5	191 35.6	23.3					
8	1	18.5	305 24.8	07.7	231 07.6	57.6	67 27.2	42.5	206 38.0	23.2					
9	16	20.9	320 24.1	08.5	246 08.7	57.2	82 29.8	42.6	221 40.4	23.2					
10	31	23.4	335 23.4	09.3	261 09.7	56.8	97 32.4	42.6	236 42.8	23.2					
11	46	25.9	350 22.7	+19 10.1	276 10.8	+19 56.4	112 35.0	-21 42.6	251 45.2	+12 23.1					
12	61	28.3	5 22.0	+19 10.8	291 11.8	+19 56.0	127 37.5	-21 42.6	266 47.5	+12 23.1					
13	76	30.8	20 21.3	11.6	306 12.9	55.7	142 40.1	42.7	281 49.9	23.0					
14	91	33.3	35 20.6	12.4	321 13.9	55.3	157 42.7	42.7	296 52.3	23.0					
15	106	35.7	50 20.0	13.1	336 15.0	54.9	172 45.3	42.7	311 54.7	23.0					
16	121	38.2	65 19.3	13.9	351 16.0	54.5	187 47.9	42.7	326 57.1	22.9					
17	136	40.7	80 18.6	+19 14.7	6 17.1	+19 54.1	202 50.4	-21 42.8	341 59.4	+12 22.9					
18	151	43.1	95 17.9	+19 15.4	21 18.1	+19 53.7	217 53.0	-21 42.8	357 01.8	+12 22.9					
19	166	45.6	110 17.2	16.2	36 19.2	53.3	232 55.6	42.8	12 04.2	22.8					
20	181	48.0	125 16.5	17.0	51 20.2	52.9	247 58.2	42.8	27 06.6	22.8					
21	196	50.5	140 15.8	17.7	66 21.3	52.6	263 00.8	42.9	42 09.0	22.8					
22	211	53.0	155 15.1	18.5	81 22.3	52.2	278 03.3	42.9	57 11.3	22.7					
23	226	55.4	170 14.4	19.3	96 23.4	51.8	293 05.9	42.9	72 13.7	22.7					
24	241	57.9	185 13.7	+19 20.0	111 24.4	+19 51.4	308 08.5	-21 42.9	87 16.1	+12 22.6					
Dif	—	-7	+8	+10	-4	+26	0	+24	0						

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8			Edad: 18 ^d 5 PHE { 4 ^h : 54 ^m 6 12 ^h : 54 ^m 7 20 ^h : 54 ^m 8						Principio del crepúsculo			Salida de Luna		Puesta de Luna		
	PMG: 11 ^h 56 ^m 9			SD: 14 ^h 8 PMG: 3 ^h 09 ^m R°: 49 ^m						Principio del crepúsculo			Salida de Luna		Puesta de Luna		
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	°	'	°	h	m	h	m	m	h	m	m
0	180	47.8	+20 47.9	314	15.3	—	-25 24.2	58	60 N	** **	1 49	3 02	0 46	10	5 40	92	
1	195	47.8	—	328	45.1	108	—	18.4	58	** **	2 17	18	22	16	6 03	85	
2	210	47.7	—	343	15.0	109	—	12.4	60	1 01	38	32	0 03	21	22	81	
3	225	47.7	—	357	44.9	109	—	06.4	60	1 39	2 55	43	** **	** **	38	77	
4	240	47.6	—	12	14.8	109	-25 00.2	62	52	2 05	3 09	3 54	** **	** **	6 52	73	
5	255	47.6	+20 50.2	26	44.8	110	-24 53.9	63	50	2 25	3 21	4 03	23 50	22	7 04	71	
6	270	47.5	+20 50.6	41	14.8	110	-24 47.5	64	45	3 01	3 46	4 22	23 29	27	7 28	67	
7	285	47.4	—	55	44.9	111	—	40.9	66	27	4 06	37	23 11	31	7 48	63	
8	300	47.4	—	70	15.0	111	—	34.3	66	3 47	22	4 50	22 57	34	8 04	61	
9	315	47.3	—	84	45.1	111	—	27.5	68	4 03	35	5 02	44	37	18	58	
10	330	47.3	—	99	15.3	112	—	20.6	69	29	4 57	21	23	40	8 42	54	
11	345	47.2	+20 52.9	113	45.5	112	-24 13.6	70	10 N	4 49	5 15	5 38	22 04	44	9 02	52	
12	0	47.1	+20 53.4	128	15.8	113	-24 06.4	72	0	5 05	5 31	5 53	21 47	47	9 21	49	
13	15	47.1	—	142	46.1	113	-23 59.2	72	10 S	20	5 46	6 09	29	51	9 40	46	
14	30	47.0	—	157	16.4	113	—	51.8	74	20	34	6 01	25	21 10	54	10 00	43
15	45	47.0	—	171	46.8	114	—	44.3	75	30	48	18	43	20 48	59	24	38
16	60	46.9	—	186	17.3	115	—	36.7	76	35	5 56	27	6 54	35	61	37	36
17	75	46.8	+20 55.6	200	47.8	115	-23 29.0	77	40	6 03	6 37	7 07	20 20	65	10 53	33	
18	90	46.8	+20 56.1	215	18.3	115	-23 21.2	78	45	6 12	6 48	7 21	20 03	68	11 12	29	
19	105	46.7	—	229	48.9	116	—	13.3	79	22	7 02	39	19 40	73	35	25	
20	120	46.7	—	244	19.5	116	-23 05.2	81	52	26	08	47	30	75	46	23	
21	135	46.6	—	258	50.2	117	-22 57.0	82	54	30	15	7 56	18	78	11 58	20	
22	150	46.5	—	273	20.9	117	—	48.8	82	35	22	8 07	19 04	82	12 12	17	
23	165	46.5	—	287	51.6	117	—	40.4	84	41	31	19	18 48	86	29	13	
24	180	46.4	+20 58.7	302	22.4	118	-22 31.9	85	60 S	6 46	7 40	8 33	18 28	92	12 49	7	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	Mag: -3.9		Mag: -3.9		Mag: +1.4		Mag: -2.6		Mag: +0.7					
	PMG: 7 ^h 50 ^m 9		PMG: 11 ^h 40 ^m		PMG: 16 ^h 33 ^m		PMG: 3 ^h 27 ^m		PMG: 18 ^h 08 ^m					
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄					
h	°	'	°	'	°	'	°	'	°	'				
0	241	57.9	185	13.7	+19 20.0	111	24.4	+19 51.4	308	08.5	-21 42.9	87	16.1	+12 22.6
1	257	00.4	200	13.1	—	126	25.5	51.0	323	11.1	42.9	102	18.5	22.6
2	272	02.8	215	12.4	—	141	26.5	50.6	338	13.7	43.0	117	20.9	22.6
3	287	05.3	230	11.7	—	156	27.6	50.2	353	16.3	43.0	132	23.2	22.5
4	302	07.8	245	11.0	—	171	28.6	49.8	8	18.8	43.0	147	25.6	22.5
5	317	10.2	260	10.3	+19 23.8	186	29.7	+19 49.5	23	21.4	-21 43.0	162	28.0	+12 22.5
6	332	12.7	275	09.6	+19 24.6	201	30.7	+19 49.1	38	24.0	-21 43.1	177	30.4	+12 22.4
7	347	15.1	290	08.9	—	216	31.8	48.7	53	26.6	43.1	192	32.8	22.4
8	2	17.6	305	08.2	—	231	32.8	48.3	68	29.2	43.1	207	35.1	22.3
9	17	20.1	320	07.5	—	246	33.9	47.9	83	31.8	43.1	222	37.5	22.3
10	32	22.5	335	06.8	—	261	34.9	47.5	98	34.4	43.2	237	39.9	22.3
11	47	25.0	350	06.1	+19 28.3	276	36.0	+19 47.1	113	36.9	-21 43.2	252	42.3	+12 22.2
12	62	27.5	5	05.4	+19 29.1	291	37.0	+19 46.7	128	39.5	-21 43.2	267	44.7	+12 22.2
13	77	29.9	20	04.7	—	306	38.0	46.3	143	42.1	43.2	282	47.0	22.2
14	92	32.4	35	04.0	—	321	39.1	46.0	158	44.7	43.3	297	49.4	22.1
15	107	34.9	50	03.3	—	336	40.1	45.6	173	47.3	43.3	312	51.8	22.1
16	122	37.3	65	02.6	—	351	41.2	45.2	188	49.9	43.3	327	54.2	22.0
17	137	39.8	80	01.9	+19 32.8	6	42.2	+19 44.8	203	52.5	-21 43.3	342	56.5	+12 22.0
18	152	42.3	95	01.2	+19 33.5	21	43.3	+19 44.4	218	55.0	-21 43.4	357	58.9	+12 22.0
19	167	44.7	110	00.5	—	36	44.3	44.0	233	57.6	43.4	13	01.3	21.9
20	182	47.2	124	59.8	—	51	45.4	43.6	249	00.2	43.4	28	03.7	21.9
21	197	49.6	139	59.1	—	66	46.4	43.2	264	02.8	43.4	43	06.0	21.8
22	212	52.1	154	58.4	—	81	47.5	42.8	279	05.4	43.5	58	08.4	21.8
23	227	54.6	169	57.7	—	96	48.5	42.4	294	08.0	43.5	73	10.8	21.8
24	242	57.0	184	57.0	+19 38.0	111	49.6	+19 42.0	309	10.6	-21 43.5	88	13.2	+12 21.7
Dif	—		-7		+7	+10		-4	+26		0	+24		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 : 55 ^h /0 12 ^h : 55 ^h /2 20 ^h : 55 ^h /4								
	PMG: 11 ^h 57 ^m 0								SD: 15 ^h 0		PMG: 3 ^h 58 ^m		R°: 47 ^m	
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	180	46.4	+20 58.7	302	22.4	-22 31.9		60 N	20 55	22 10	** **	0 56 4	7 12 92	
1	195	46.3		316	53.3 ¹¹⁹	23.3 ⁸⁶		58	39	21 41	** **	38 10	28 87	
2	210	46.3	+20 59.6	331	24.2 ¹¹⁹	14.6 ⁸⁷		56	25	20	23 03	24 13	43 82	
3	225	46.2	+21 00.1	345	55.1 ¹¹⁹	-22 05.8 ⁸⁸		54	13	21 02	22 20	11 17	7 55 79	
4	240	46.2	00.5	0	26.1 ¹²⁰	-21 56.9 ⁸⁹		52	20 02	20 47	21 53	0 00 20	8 05 77	
5	255	46.1	+21 01.0	14	57.1 ¹²⁰	-21 47.8 ⁹¹		50	19 53	20 35	21 32	** ** *	8 15 74	
6	270	46.0	+21 01.4	29	28.2 ¹²¹	-21 38.7 ⁹¹		45	19 33	20 09	20 55	23 56 23	8 35 69	
7	285	46.0	01.9	43	59.3 ¹²¹	29.5 ⁹²		40	18	19 49	29	42 27	8 51 65	
8	300	45.9	02.3	58	30.5 ¹²²	20.1 ⁹⁴		35	19 04	33	20 08	31 30	9 05 61	
9	315	45.8	02.7	73	01.7 ¹²²	10.7 ⁹⁴		30	18 53	19 20	19 52	21 33	16 59	
10	330	45.8	03.2	87	32.9 ¹²²	-21 01.1 ⁹⁶		20	33	18 57	26	23 03 38	36 54	
11	345	45.7	+21 03.6	102	04.2 ¹²³	-20 51.5 ⁹⁶		10 N	18 16	18 39	19 05	22 48 42	9 54 50	
12	0	45.6	+21 04.1	116	35.6 ¹²⁴	-20 41.7 ⁹⁸		0	18 01	18 23	18 49	22 34 46	10 10 46	
13	15	45.6	04.5	131	07.0 ¹²⁴	31.9 ⁹⁸		10 S	17 45	18 07	33	20 49	26 43	
14	30	45.5	04.9	145	38.4 ¹²⁴	21.9 ¹⁰⁰		20	29	17 52	19	22 04 54	10 43 39	
15	45	45.4	05.4	160	09.9 ¹²⁵	11.9 ¹⁰⁰		30	17 10	36	18 05	21 47 59	11 02 35	
16	60	45.4	05.8	174	41.4 ¹²⁵	-20 01.7 ¹⁰²		35	16 59	26	17 57	36 62	13 32	
17	75	45.3	+21 06.2	189	12.9 ¹²⁵	-19 51.5 ¹⁰²		40	16 46	17 16	17 49	21 25 65	11 26 29	
18	90	45.2	+21 06.7	203	44.6 ¹²⁷	-19 41.2 ¹⁰³		45	16 32	17 04	17 41	21 11 69	11 41 25	
19	105	45.2	07.1	218	16.2 ¹²⁶	30.7 ¹⁰⁵		50	14	16 51	31	20 53 75	12 00 20	
20	120	45.1	07.5	232	47.9 ¹²⁷	20.2 ¹⁰⁵		52	16 05	44	27	45 77	09 17	
21	135	45.0	08.0	247	19.6 ¹²⁷	-19 09.6 ¹⁰⁶		54	15 56	37	22	36 80	18 15	
22	150	45.0	08.4	261	51.4 ¹²⁸	-18 58.8 ¹⁰⁸		56	45	30	17	26 83	29 12	
23	165	44.9	08.8	276	23.2 ¹²⁸	48.0 ¹⁰⁸		58	33	21	12	14 87	42 8	
24	180	44.8	+21 09.3	290	55.1 ¹²⁹	-18 37.1 ¹⁰⁹		60 S	15 19	16 11	17 05	20 00 92	12 56 4	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 7 ^h 46 ^m 9		Mag: -3.9 PMG: 11 ^h 41 ^m		Mag: +1.4 PMG: 16 ^h 32 ^m		Mag: -2.6 PMG: 3 ^h 23 ^m		Mag: +0.7 PMG: 18 ^h 04 ^m	
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	°	°	°	°	°	°	°	°	
0	242	57.0	184 57.0	+19 38.0	111 49.6	+19 42.0	309 10.6	-21 43.5	88 13.2	+12 21.7
1	257	59.5	199 56.3	38.7	126 50.6	41.6	324 13.2	43.5	103 15.5	21.7
2	273	02.0	214 55.6	39.5	141 51.7	41.3	339 15.8	43.6	118 17.9	21.7
3	288	04.4	229 54.9	40.2	156 52.7	40.9	354 18.4	43.6	133 20.3	21.6
4	303	06.9	244 54.2	40.9	171 53.8	40.5	9 21.0	43.6	148 22.7	21.6
5	318	09.4	259 53.5	+19 41.7	186 54.8	+19 40.1	24 23.5	-21 43.6	163 25.1	+12 21.5
6	333	11.8	274 52.8	+19 42.4	201 55.9	+19 39.7	39 26.1	-21 43.7	178 27.4	+12 21.5
7	348	14.3	289 52.1	43.1	216 56.9	39.3	54 28.7	43.7	193 29.8	21.5
8	3	16.8	304 51.3	43.9	231 58.0	38.9	69 31.3	43.7	208 32.2	21.4
9	18	19.2	319 50.6	44.6	246 59.0	38.5	84 33.9	43.7	223 34.5	21.4
10	33	21.7	334 49.9	45.3	262 00.1	38.1	99 36.5	43.8	238 36.9	21.3
11	48	24.1	349 49.2	+19 46.1	277 01.1	+19 37.7	114 39.1	-21 43.8	253 39.3	+12 21.3
12	63	26.6	4 48.5	+19 46.8	292 02.2	+19 37.3	129 41.7	-21 43.8	268 41.7	+12 21.3
13	78	29.1	19 47.8	47.5	307 03.2	36.9	144 44.3	43.8	283 44.0	21.2
14	93	31.5	34 47.1	48.2	322 04.3	36.5	159 46.9	43.9	298 46.4	21.2
15	108	34.0	49 46.4	49.0	337 05.3	36.1	174 49.5	43.9	313 48.8	21.1
16	123	36.5	64 45.7	49.7	352 06.3	35.7	189 52.1	43.9	328 51.2	21.1
17	138	38.9	79 45.0	+19 50.4	7 07.4	+19 35.3	204 54.7	-21 43.9	343 53.5	+12 21.1
18	153	41.4	94 44.2	+19 51.1	22 08.4	+19 34.9	219 57.3	-21 44.0	358 55.9	+12 21.0
19	168	43.9	109 43.5	51.9	37 09.5	34.6	234 59.9	44.0	13 58.3	21.0
20	183	46.3	124 42.8	52.6	52 10.5	34.2	250 02.5	44.0	29 00.7	20.9
21	198	48.8	139 42.1	53.3	67 11.6	33.8	265 05.1	44.1	44 03.0	20.9
22	213	51.3	154 41.4	54.0	82 12.6	33.4	280 07.7	44.1	59 05.4	20.9
23	228	53.7	169 40.7	54.7	97 13.7	33.0	295 10.3	44.1	74 07.8	20.8
24	243	56.2	184 40.0	+19 55.5	112 14.7	+19 32.6	310 12.9	-21 44.1	89 10.1	+12 20.8
Dif	—	—	-7	+7	+10	-4	+26	0	+24	0

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15 ^h 8 PMG: 11 ^h 57 ^m 1			Edad: 20 ^d 5 PHE SD: 15 ^h 1 PMG: 4 ^h 45 ^m R°: 46 ^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	180	44.8	+21	09.3	290	55.1	-18	37.1	60 N	** **	1 43	2 59	1 00	3	8 44	91		
1	195	44.8		09.7	305	27.0 ¹²⁹		26.1 ¹¹⁰	58	** **	2 12	3 15	0 48	7	8 55	87		
2	210	44.7		10.1	319	58.9 ¹²⁹		15.0 ¹¹¹	56	0 51	34	29	37	10	9 05	84		
3	225	44.6		10.6	334	30.9 ¹³⁰	-18	03.9 ¹¹¹	54	1 34	2 52	41	28	13	14	80		
4	240	44.6		11.0	349	02.9 ¹³⁰	-17	52.6 ¹¹³	52	2 01	3 06	3 51	20	15	22	77		
5	255	44.5	+21	11.4	3	34.9 ¹³⁰	-17	41.2 ¹¹⁴	50	2 21	3 19	4 01	0 12	18	9 29	74		
6	270	44.4	+21	11.8	18	07.0 ¹³¹	-17	29.8 ¹¹⁴	45	2 58	3 45	4 20	** **	**	9 44	69		
7	285	44.4		12.3	32	39.1 ¹³¹		18.2 ¹¹⁶	40	3 25	4 04	36	** **	**	9 56	65		
8	300	44.3		12.7	47	11.3 ¹³²	-17	06.6 ¹¹⁶	35	3 45	21	4 49	** **	**	10 06	62		
9	315	44.2		13.1	61	43.5 ¹³²	-16	54.9 ¹¹⁷	30	4 02	34	5 01	23	54	31	15	59	
10	330	44.2		13.5	76	15.7 ¹³²		43.1 ¹¹⁸	20	28	4 57	21	41	36	30	54		
11	345	44.1	+21	14.0	90	48.0 ¹³³	-16	31.3 ¹¹⁸	10 N	4 48	5 15	5 38	23	30	41	10	44	49
12	0	44.0	+21	14.4	105	20.3 ¹³³	-16	19.3 ¹²⁰	0	5 05	5 31	5 53	23	20	45	10	56	45
13	15	43.9		14.8	119	52.6 ¹³³	-16	07.3 ¹²⁰	10 S	21	5 47	6 09	23	09	50	11	09	41
14	30	43.9		15.2	134	25.0 ¹³⁴	-15	55.1 ¹²²	20	35	6 02	26	22	58	54	22	36	
15	45	43.8		15.7	148	57.4 ¹³⁴		42.9 ¹²²	30	49	19	45	46	59	37	31		
16	60	43.7		16.1	163	29.9 ¹³⁵		30.7 ¹²²	35	5 57	28	6 56	38	62	45	29		
17	75	43.7	+21	16.5	178	02.3 ¹³⁴	-15	18.3 ¹²⁴	40	6 05	6 38	7 08	22	30	65	11	55	25
18	90	43.6	+21	16.9	192	34.8 ¹³⁵	-15	05.9 ¹²⁴	45	6 14	6 50	7 23	22	20	70	12	06	22
19	105	43.5		17.3	207	07.3 ¹³⁵	-14	53.3 ¹²⁶	50	24	7 04	41	08	75	20	16		
20	120	43.4		17.8	221	39.9 ¹³⁶		40.7 ¹²⁶	52	28	10	50	22	02	78	26	14	
21	135	43.4		18.2	236	12.5 ¹³⁶		28.1 ¹²⁶	54	33	17	7 59	21	56	80	33	12	
22	150	43.3		18.6	250	45.1 ¹³⁶		15.3 ¹²⁸	56	38	25	8 10	49	83	41	9		
23	165	43.2		19.0	265	17.7 ¹³⁶	-14	02.5 ¹²⁸	58	43	34	22	41	87	12	50	5	
24	180	43.2	+21	19.4	279	50.4 ¹³⁷	-13	49.6 ¹²⁹	60 S	6 49	7 43	8 37	21	32	91	13	00	1

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO										
	PMG 7 ^h 43 ^m 0		Mag: -3.9 PMG: 11 ^h 42 ^m		Mag: +1.4 PMG: 16 ^h 30 ^m		Mag: -2.6 PMG: 3 ^h 19 ^m		Mag: +0.7 PMG: 18 ^h 00 ^m										
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec									
h	°	'	°	'	°	'	°	'	°	'									
0	243	56.2	184	40.0	+19	55.5	112	14.7	+19	32.6	310	12.9	-21	44.1	89	10.1	+12	20.8	
1	258	58.6	199	39.2		56.2	127	15.8		32.2	325	15.5		44.2	104	12.5		20.7	
2	274	01.1	214	38.5		56.9	142	16.8		31.8	340	18.0		44.2	119	14.9		20.7	
3	289	03.6	229	37.8		57.6	157	17.9		31.4	355	20.6		44.2	134	17.3		20.7	
4	304	06.0	244	37.1		58.3	172	18.9		31.0	10	23.2		44.2	149	19.6		20.6	
5	319	08.5	259	36.4	+19	59.0	187	20.0	+19	30.6	25	25.8	-21	44.3	164	22.0	+12	20.6	
6	334	11.0	274	35.7	+19	59.7	202	21.0	+19	30.2	40	28.4	-21	44.3	179	24.4	+12	20.5	
7	349	13.4	289	34.9	+20	00.4	217	22.1		29.8	55	31.0		44.3	194	26.7		20.5	
8	4	15.9	304	34.2		01.2	232	23.1		29.4	70	33.6		44.3	209	29.1		20.5	
9	19	18.4	319	33.5		01.9	247	24.2		29.0	85	36.3		44.4	224	31.5		20.4	
10	34	20.8	334	32.8		02.6	262	25.2		28.6	100	38.9		44.4	239	33.9		20.4	
11	49	23.3	349	32.1	+20	03.3	277	26.3	+19	28.2	115	41.5	-21	44.4	254	36.2	+12	20.3	
12	64	25.8	4	31.3	+20	04.0	292	27.3	+19	27.8	130	44.1	-21	44.5	269	38.6	+12	20.3	
13	79	28.2	19	30.6		04.7	307	28.3		27.4	145	46.7		44.5	284	41.0		20.3	
14	94	30.7	34	29.9		05.4	322	29.4		27.0	160	49.3		44.5	299	43.3		20.2	
15	109	33.1	49	29.2		06.1	337	30.4		26.6	175	51.9		44.5	314	45.7		20.2	
16	124	35.6	64	28.5		06.8	352	31.5		26.2	190	54.5		44.6	329	48.1		20.1	
17	139	38.1	79	27.7	+20	07.5	7	32.5	+19	25.8	205	57.1	-21	44.6	344	50.4	+12	20.1	
18	154	40.5	94	27.0	+20	08.2	22	33.6	+19	25.4	220	59.7	-21	44.6	359	52.8	+12	20.1	
19	169	43.0	109	26.3		08.9	37	34.6		25.0	236	02.3		44.6	14	55.2		20.0	
20	184	45.5	124	25.6		09.6	52	35.7		24.6	251	04.9		44.7	29	57.6		20.0	
21	199	47.9	139	24.8		10.3	67	36.7		24.2	266	07.5		44.7	44	59.9		19.9	
22	214	50.4	154	24.1		11.0	82	37.8		23.8	281	10.1		44.7	60	02.3		19.9	
23	229	52.9	169	23.4		11.7	97	38.8		23.4	296	12.7		44.8	75	04.7		19.9	
24	244	55.3	184	22.7	+20	12.4	112	39.9	+19	23.0	311	15.3	-21	44.8	90	07.0	+12	19.8	
Dif	—		-7		+7		+10		-4		+26		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 57 ^m 2			Edad: 21 ^d 5 PHE { 4 ^h : 56/2 12 ^h : 56/5 20 ^h : 56/8 SD: 15/3 PMG: 5 ^h 31 ^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	h m m
0	180	43.2	+21 19.4	279	50.4	-13 49.6	60 N	20 59	22 17	** **	1 03 1		10 15 91	
1	195	43.1	19.8	294	23.0 ¹³⁶	36.6 ¹³⁰	58	42	21 46	** **	0 55 4		22 87	
2	210	43.0	20.3	308	55.7 ¹³⁷	23.6 ¹³⁰	56	28	24	23 15	47 8		29 83	
3	225	42.9	20.7	323	28.5 ¹³⁸	-13 10.5 ¹³¹	54	16	21 06	22 26	41 11		34 81	
4	240	42.9	21.1	338	01.2 ¹³⁷	-12 57.3 ¹³²	52	20 05	20 50	21 57	35 13		39 78	
5	255	42.8	+21 21.5	352	34.0 ¹³⁸	-12 44.0 ¹³³	50	19 55	20 37	21 36	0 30 15		10 43 76	
6	270	42.7	+21 21.9	7	06.8 ¹³⁸	-12 30.7 ¹³³	45	19 35	20 11	20 58	0 19 20		10 53 70	
7	285	42.6	22.3	21	39.6 ¹³⁸	17.3 ¹³⁴	40	19	19 51	31	09 24		11 01 66	
8	300	42.6	22.7	36	12.4 ¹³⁸	-12 03.8 ¹³⁵	35	19 06	35	20 10	0 01 28		08 62	
9	315	42.5	23.1	50	45.3 ¹³⁹	-11 50.3 ¹³⁵	30	18 54	19 21	19 53	** ** *		14 59	
10	330	42.4	23.5	65	18.1 ¹³⁸	36.7 ¹³⁶	20	34	18 58	27	** ** *		24 54	
11	345	42.3	+21 24.0	79	51.0 ¹³⁹	-11 23.0 ¹³⁷	10 N	18 17	18 39	19 06	** ** *		11 33 49	
12	0	42.3	+21 24.4	94	23.9 ¹³⁹	-11 09.3 ¹³⁷	0	18 01	18 23	18 49	** ** *		11 41 45	
13	15	42.2	24.8	108	56.8 ¹³⁹	-10 55.5 ¹³⁸	10 S	17 45	18 07	33	23 59 49		50 40	
14	30	42.1	25.2	123	29.7 ¹³⁹	41.7 ¹³⁸	20	28	17 52	19	52 54		11 58 36	
15	45	42.0	25.6	138	02.7 ¹⁴⁰	27.8 ¹³⁹	30	17 09	35	18 04	45 59		12 08 30	
16	60	42.0	26.0	152	35.6 ¹³⁹	-10 13.8 ¹⁴⁰	35	16 58	26	17 57	40 63		14 27	
17	75	41.9	+21 26.4	167	08.5 ¹³⁹	-9 59.8 ¹⁴⁰	40	16 45	17 15	17 49	23 35 67		12 20 24	
18	90	41.8	+21 26.8	181	41.5 ¹⁴⁰	-9 45.7 ¹⁴¹	45	16 30	17 03	17 40	23 30 71		12 28 19	
19	105	41.7	27.2	196	14.5 ¹⁴⁰	31.5 ¹⁴²	50	12	16 49	30	23 76		36 15	
20	120	41.7	27.6	210	47.4 ¹³⁹	17.3 ¹⁴²	52	16 03	43	25	20 78		40 13	
21	135	41.6	28.0	225	20.4 ¹⁴⁰	-9 03.0 ¹⁴³	54	15 54	35	20	16 82		45 10	
22	150	41.5	28.4	239	53.4 ¹⁴⁰	-8 48.7 ¹⁴³	56	43	28	15	12 85		50 7	
23	165	41.4	28.8	254	26.4 ¹⁴⁰	34.3 ¹⁴⁴	58	30	19	09	08 88		12 55 5	
24	180	41.3	+21 29.2	268	59.4 ¹⁴⁰	-8 19.9 ¹⁴⁴	60 S	15 15	16 09	17 03	23 03 91		13 01 1	
UT	ARIES		VENUS			MARTE			JÚPITER		SATURNO			
	PMG: 7 ^h 39 ^m 1		Mag: -3.9 PMG: 11 ^h 43 ^m			Mag: +1.5 PMG: 16 ^h 28 ^m			Mag: -2.6 PMG: 3 ^h 14 ^m		Mag: +0.7 PMG: 17 ^h 57 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	244	55.3	184	22.7	+20 12.4	112	39.9	+19 23.0	311	15.3	-21 44.8	90	07.0	+12 19.8
1	259	57.8	199	21.9	13.1	127	40.9	22.6	326	17.9	44.8	105	09.4	19.8
2	275	00.2	214	21.2	13.8	142	42.0	22.2	341	20.5	44.8	120	11.8	19.7
3	290	02.7	229	20.5	14.5	157	43.0	21.8	356	23.1	44.9	135	14.1	19.7
4	305	05.2	244	19.7	15.1	172	44.1	21.4	11	25.7	44.9	150	16.5	19.6
5	320	07.6	259	19.0	+20 15.8	187	45.1	+19 21.0	26	28.3	-21 44.9	165	18.9	+12 19.6
6	335	10.1	274	18.3	+20 16.5	202	46.1	+19 20.6	41	30.9	-21 44.9	180	21.2	+12 19.6
7	350	12.6	289	17.6	17.2	217	47.2	20.2	56	33.6	45.0	195	23.6	19.5
8	5	15.0	304	16.8	17.9	232	48.2	19.8	71	36.2	45.0	210	26.0	19.5
9	20	17.5	319	16.1	18.6	247	49.3	19.4	86	38.8	45.0	225	28.3	19.4
10	35	20.0	334	15.4	19.3	262	50.3	19.0	101	41.4	45.1	240	30.7	19.4
11	50	22.4	349	14.6	+20 19.9	277	51.4	+19 18.5	116	44.0	-21 45.1	255	33.1	+12 19.4
12	65	24.9	4	13.9	+20 20.6	292	52.4	+19 18.1	131	46.6	-21 45.1	270	35.4	+12 19.3
13	80	27.4	19	13.2	21.3	307	53.5	17.7	146	49.2	45.1	285	37.8	19.3
14	95	29.8	34	12.4	22.0	322	54.5	17.3	161	51.8	45.2	300	40.2	19.2
15	110	32.3	49	11.7	22.7	337	55.6	16.9	176	54.4	45.2	315	42.5	19.2
16	125	34.7	64	11.0	23.4	352	56.6	16.5	191	57.0	45.2	330	44.9	19.1
17	140	37.2	79	10.2	+20 24.0	7	57.7	+19 16.1	206	59.7	-21 45.3	345	47.3	+12 19.1
18	155	39.7	94	09.5	+20 24.7	22	58.7	+19 15.7	222	02.3	-21 45.3	0	49.6	+12 19.1
19	170	42.1	109	08.8	25.4	37	59.8	15.3	237	04.9	45.3	15	52.0	19.0
20	185	44.6	124	08.0	26.1	53	00.8	14.9	252	07.5	45.3	30	54.4	19.0
21	200	47.1	139	07.3	26.7	68	01.9	14.5	267	10.1	45.4	45	56.7	18.9
22	215	49.5	154	06.6	27.4	83	02.9	14.1	282	12.7	45.4	60	59.1	18.9
23	230	52.0	169	05.8	28.1	98	03.9	13.7	297	15.3	45.4	76	01.5	18.8
24	245	54.5	184	05.1	+20 28.7	113	05.0	+19 13.3	312	17.9	-21 45.5	91	03.8	+12 18.8
Dif	—		-7 +7			+10 -4			+26 0			+24 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 3			Edad: 22 ^d 5	PHE { 4 ^h : 57'0 12 ^h : 57'3 20 ^h : 57'6 R°: 45 ^m										
	hG ☉	Dec		hG ☾		Dif		Dec	Dif		Náutico	Civil	Hora	R°	Hora
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	180	41.3	+21 29.2	268	59.4	-8 19.9	60 N	** *	1 37	2 55	1 04	1	11 46	93	
1	195	41.3	29.6	283	32.4 ¹⁴⁰	-8 05.4 ¹⁴⁵	58	** *	2 08	3 12	0 59	5	49 89		
2	210	41.2	30.0	298	05.3 ¹³⁹	-7 50.8 ¹⁴⁶	56	0 39	30	26	55	7	52 86		
3	225	41.1	30.4	312	38.3 ¹⁴⁰	36.2 ¹⁴⁶	54	1 28	2 49	39	52	10	55 82		
4	240	41.0	30.8	327	11.3 ¹⁴⁰	21.6 ¹⁴⁶	52	1 57	3 04	49	48	13	57 80		
5	255	41.0	+21 31.2	341	44.3 ¹⁴⁰	-7 06.9 ¹⁴⁷	50	2 18	3 17	3 59	0 45	15	11 59	77	
6	270	40.9	+21 31.6	356	17.3 ¹⁴⁰	-6 52.2 ¹⁴⁷	45	2 56	3 43	4 19	0 39	19	12 03	73	
7	285	40.8	32.0	10	50.2 ¹³⁹	37.4 ¹⁴⁸	40	3 23	4 03	35	33	24	07 68		
8	300	40.7	32.4	25	23.2 ¹⁴⁰	22.5 ¹⁴⁹	35	3 44	20	4 49	29	27	10 64		
9	315	40.6	32.8	39	56.1 ¹³⁹	-6 07.6 ¹⁴⁹	30	4 01	34	5 00	25	30	13 61		
10	330	40.6	33.2	54	29.1 ¹⁴⁰	-5 52.7 ¹⁴⁹	20	28	4 56	20	17	36	18 55		
11	345	40.5	+21 33.6	69	02.0 ¹³⁹	-5 37.7 ¹⁵⁰	10 N	4 48	5 15	5 38	0 11	40	12 22	50	
12	0	40.4	+21 34.0	83	34.9 ¹³⁹	-5 22.7 ¹⁵⁰	0	5 06	5 31	5 54	0 05	44	12 26	45	
13	15	40.3	34.4	98	07.8 ¹³⁹	-5 07.6 ¹⁵¹	10 S	21	5 47	6 10	** *	**	30 40		
14	30	40.2	34.7	112	40.7 ¹³⁹	-4 52.5 ¹⁵¹	20	36	6 03	26	** *	**	34 35		
15	45	40.2	35.1	127	13.6 ¹³⁹	37.4 ¹⁵¹	30	50	20	46	** *	**	38 30		
16	60	40.1	35.5	141	46.4 ¹³⁸	22.2 ¹⁵²	35	5 58	29	6 57	** *	**	41 27		
17	75	40.0	+21 35.9	156	19.3 ¹³⁹	-4 07.0 ¹⁵²	40	6 06	6 40	7 10	** *	**	12 44	23	
18	90	39.9	+21 36.3	170	52.1 ¹³⁸	-3 51.7 ¹⁵³	45	6 15	6 52	7 25	** *	**	12 47	19	
19	105	39.8	36.7	185	24.9 ¹³⁸	36.4 ¹⁵³	50	25	7 06	43	** *	**	51 14		
20	120	39.8	37.1	199	57.7 ¹³⁸	21.1 ¹⁵³	52	30	13	7 52	** *	**	53 12		
21	135	39.7	37.5	214	30.4 ¹³⁷	-3 05.7 ¹⁵⁴	54	35	20	8 02	** *	**	55 10		
22	150	39.6	37.9	229	03.1 ¹³⁷	-2 50.3 ¹⁵⁴	56	40	28	13	** *	**	12 57	7	
23	165	39.5	38.2	243	35.9 ¹³⁸	34.8 ¹⁵⁵	58	46	37	25	** *	**	13 00	3	
24	180	39.4	+21 38.6	258	08.5 ¹³⁶	-2 19.4 ¹⁵⁴	60 S	6 52	7 47	8 40	** *	**	13 02	1	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO			
	PMG 7 ^h 35 ^m 1		Mag: -3.9 PMG: 11 ^h 44 ^m		Mag: +1.5 PMG: 16 ^h 27 ^m		Mag: -2.6 PMG: 3 ^h 10 ^m		Mag: +0.7 PMG: 17 ^h 53 ^m			
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'		
0	245	54.5	184	05.1	+20 28.7	113 05.0	+19 13.3	312 17.9	-21 45.5	91 03.8	+12 18.8	
1	260	56.9	199	04.3	29.4	128 06.0	12.9	327 20.6	45.5	106 06.2	18.8	
2	275	59.4	214	03.6	30.1	143 07.1	12.5	342 23.2	45.5	121 08.5	18.7	
3	291	01.9	229	02.9	30.8	158 08.1	12.1	357 25.8	45.5	136 10.9	18.7	
4	306	04.3	244	02.1	31.4	173 09.2	11.7	12 28.4	45.6	151 13.3	18.6	
5	321	06.8	259	01.4	+20 32.1	188 10.2	+19 11.2	27 31.0	-21 45.6	166 15.6	+12 18.6	
6	336	09.2	274	00.6	+20 32.8	203 11.3	+19 10.8	42 33.6	-21 45.6	181 18.0	+12 18.5	
7	351	11.7	288	59.9	33.4	218 12.3	10.4	57 36.3	45.7	196 20.4	18.5	
8	6	14.2	303	59.2	34.1	233 13.4	10.0	72 38.9	45.7	211 22.7	18.5	
9	21	16.6	318	58.4	34.7	248 14.4	09.6	87 41.5	45.7	226 25.1	18.4	
10	36	19.1	333	57.7	35.4	263 15.5	09.2	102 44.1	45.7	241 27.5	18.4	
11	51	21.6	348	56.9	+20 36.1	278 16.5	+19 08.8	117 46.7	-21 45.8	256 29.8	+12 18.3	
12	66	24.0	3	56.2	+20 36.7	293 17.6	+19 08.4	132 49.3	-21 45.8	271 32.2	+12 18.3	
13	81	26.5	18	55.4	37.4	308 18.6	08.0	147 52.0	45.8	286 34.5	18.2	
14	96	29.0	33	54.7	38.0	323 19.6	07.6	162 54.6	45.9	301 36.9	18.2	
15	111	31.4	48	54.0	38.7	338 20.7	07.2	177 57.2	45.9	316 39.3	18.1	
16	126	33.9	63	53.2	39.4	353 21.7	06.7	192 59.8	45.9	331 41.6	18.1	
17	141	36.3	78	52.5	+20 40.0	8 22.8	+19 06.3	208 02.4	-21 45.9	346 44.0	+12 18.1	
18	156	38.8	93	51.7	+20 40.7	23 23.8	+19 05.9	223 05.1	-21 46.0	1 46.4	+12 18.0	
19	171	41.3	108	51.0	41.3	38 24.9	05.5	238 07.7	46.0	16 48.7	18.0	
20	186	43.7	123	50.2	42.0	53 25.9	05.1	253 10.3	46.0	31 51.1	17.9	
21	201	46.2	138	49.5	42.6	68 27.0	04.7	268 12.9	46.1	46 53.4	17.9	
22	216	48.7	153	48.7	43.3	83 28.0	04.3	283 15.5	46.1	61 55.8	17.8	
23	231	51.1	168	48.0	43.9	98 29.1	03.9	298 18.2	46.1	76 58.2	17.8	
24	246	53.6	183	47.2	+20 44.6	113 30.1	+19 03.5	313 20.8	-21 46.2	92 00.5	+12 17.8	
Dif	—		-7	+7		+10	-4	+26	0		+24	0

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8 PMG: 11 ^h 57 ^m 4			Edad: 23 ^d 5 SD: 15 ^h 7 PMG: 7 ^h 00 ^m	PHE { 4 ^h : 57 ⁹ 12 ^h : 58 ² 20 ^h : 58 ⁵ R°: 47 ^m											
	hG ☉	Dec				hG ☾			Dif	Dec	Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	39.4	+21 38.6	258	08.5	-2 19.4		60 N	21 03	22 24	** **	1 05	0	13 19	96	
1	195	39.3		272	41.2 ¹³⁷	-2 03.9 ¹⁵⁵		58	20 45	21 51	** **	04	4	18	93	
2	210	39.3		287	13.8 ¹³⁶	-1 48.3 ¹⁵⁶		56	31	28	23 31	02	8	18	89	
3	225	39.2		301	46.4 ¹³⁶	32.8 ¹⁵⁵		54	18	21 09	22 32	02	9	17	86	
4	240	39.1		316	18.9 ¹³⁵	17.2 ¹⁵⁶		52	20 07	20 53	22 02	01	12	17	83	
5	255	39.0	+21 40.5	330	51.4 ¹³⁵	-1 01.6 ¹⁵⁶		50	19 58	20 40	21 40	1 00	15	13 16	81	
6	270	38.9	+21 40.9	345	23.9 ¹³⁵	-0 45.9 ¹⁵⁷		45	19 37	20 13	21 00	0 58	20	13 16	75	
7	285	38.8		359	56.4 ¹³⁵	30.2 ¹⁵⁷		40	21	19 53	20 33	57	24	15	70	
8	300	38.8		14	28.8 ¹³⁴	-0 14.6 ¹⁵⁶		35	19 07	36	20 12	56	27	14	67	
9	315	38.7		29	01.1 ¹³³	+0 01.2 ¹⁵⁸		30	18 55	19 22	19 55	55	30	14	63	
10	330	38.6		43	33.5 ¹³⁴	16.9 ¹⁵⁷		20	35	18 59	28	53	36	13	57	
11	345	38.5	+21 42.8	58	05.7 ¹³²	+0 32.6 ¹⁵⁷		10 N	18 17	18 40	19 07	0 51	41	13 12	52	
12	0	38.4	+21 43.2	72	38.0 ¹³³	+0 48.4 ¹⁵⁸		0	18 01	18 23	18 49	0 49	47	13 11	47	
13	15	38.3		87	10.2 ¹³²	+1 04.2 ¹⁵⁸		10 S	17 45	18 08	34	48	51	10	43	
14	30	38.2		101	42.3 ¹³¹	20.0 ¹⁵⁸		20	28	17 52	19	46	56	09	38	
15	45	38.2		116	14.4 ¹³¹	35.8 ¹⁵⁸		30	17 08	34	18 04	44	62	08	32	
16	60	38.1		130	46.5 ¹³¹	+1 51.7 ¹⁵⁹		35	16 57	25	17 56	43	66	08	28	
17	75	38.0	+21 45.1	145	18.5 ¹³⁰	+2 07.5 ¹⁵⁸		40	16 44	17 14	17 48	0 42	69	13 07	25	
18	90	37.9	+21 45.4	159	50.4 ¹²⁹	+2 23.4 ¹⁵⁹		45	16 29	17 02	17 39	0 41	73	13 06	21	
19	105	37.8		174	22.3 ¹²⁹	39.2 ¹⁵⁸		50	10	16 48	28	39	79	05	16	
20	120	37.7		188	54.2 ¹²⁹	+2 55.1 ¹⁵⁹		52	16 01	41	24	38	82	05	13	
21	135	37.6		203	26.0 ¹²⁸	+3 11.0 ¹⁵⁹		54	15 52	34	19	38	84	05	10	
22	150	37.6		217	57.7 ¹²⁷	26.9 ¹⁵⁹		56	40	26	13	37	87	04	7	
23	165	37.5		232	29.4 ¹²⁷	42.8 ¹⁵⁹		58	27	17	08	36	90	03	5	
24	180	37.4	+21 47.7	247	01.0 ¹²⁶	+3 58.7 ¹⁵⁹		60 S	15 12	16 06	17 01	0 34	95	13 03	1	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 7 ^h 31 ^m 2		Mag: -3.9 PMG: 11 ^h 45 ^m		Mag: +1.5 PMG: 16 ^h 25 ^m		Mag: -2.6 PMG: 3 ^h 06 ^m		Mag: +0.7 PMG: 17 ^h 49 ^m					
	hG ♂		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	246	53.6	183	47.2	+20 44.6	113	30.1	+19 03.5	313	20.8	-21 46.2	92	00.5	+12 17.8
1	261	56.1	198	46.5	45.2	128	31.2	03.1	328	23.4	46.2	107	02.9	17.7
2	276	58.5	213	45.7	45.9	143	32.2	02.6	343	26.0	46.2	122	05.2	17.7
3	292	01.0	228	45.0	46.5	158	33.2	02.2	358	28.6	46.2	137	07.6	17.6
4	307	03.5	243	44.2	47.1	173	34.3	01.8	13	31.3	46.3	152	10.0	17.6
5	322	05.9	258	43.5	+20 47.8	188	35.3	+19 01.4	28	33.9	-21 46.3	167	12.3	+12 17.5
6	337	08.4	273	42.7	+20 48.4	203	36.4	+19 01.0	43	36.5	-21 46.3	182	14.7	+12 17.5
7	352	10.8	288	42.0	49.1	218	37.4	00.6	58	39.1	46.4	197	17.0	17.4
8	7	13.3	303	41.2	49.7	233	38.5	+19 00.2	73	41.8	46.4	212	19.4	17.4
9	22	15.8	318	40.5	50.3	248	39.5	+18 59.8	88	44.4	46.4	227	21.8	17.3
10	37	18.2	333	39.7	51.0	263	40.6	59.3	103	47.0	46.5	242	24.1	17.3
11	52	20.7	348	39.0	+20 51.6	278	41.6	+18 58.9	118	49.6	-21 46.5	257	26.5	+12 17.3
12	67	23.2	3 38.2	+20 52.3	52.3	293	42.7	+18 58.5	133	52.3	-21 46.5	272	28.8	+12 17.2
13	82	25.6	18 37.5	52.9	52.9	308	43.7	58.1	148	54.9	46.5	287	31.2	17.2
14	97	28.1	33 36.7	53.5	53.5	323	44.8	57.7	163	57.5	46.6	302	33.5	17.1
15	112	30.6	48 35.9	54.2	54.2	338	45.8	57.3	179	00.1	46.6	317	35.9	17.1
16	127	33.0	63 35.2	54.8	54.8	353	46.8	56.9	194	02.8	46.6	332	38.3	17.0
17	142	35.5	78 34.4	+20 55.4	55.4	8 47.9	+18 56.4	56.4	209	05.4	-21 46.7	347	40.6	+12 17.0
18	157	37.9	93 33.7	+20 56.1	56.1	23 48.9	+18 56.0	56.0	224	08.0	-21 46.7	2 43.0	+12 16.9	
19	172	40.4	108 32.9	56.7	56.7	38 50.0	55.6	55.6	239	10.7	46.7	17 45.3	16.9	
20	187	42.9	123 32.2	57.3	57.3	53 51.0	55.2	55.2	254	13.3	46.8	32 47.7	16.9	
21	202	45.3	138 31.4	57.9	57.9	68 52.1	54.8	54.8	269	15.9	46.8	47 50.1	16.8	
22	217	47.8	153 30.6	58.6	58.6	83 53.1	54.4	54.4	284	18.5	46.8	62 52.4	16.8	
23	232	50.3	168 29.9	59.2	59.2	98 54.2	54.0	54.0	299	21.2	46.9	77 54.8	16.7	
24	247	52.7	183 29.1	+20 59.8	59.8	113 55.2	+18 53.5	53.5	314	23.8	-21 46.9	92 57.1	+12 16.7	
Dif	—		-8 +6			+10 -4			+26 0			+24		

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8 PMG: 11 ^h 57 ^m 6			Edad: 24 ^d 5 PHE { 4 ^h : 58 ^m 8 12 ^h : 59 ^m 1 20 ^h : 59 ^m 4 PMG: 7 ^h 47 ^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	37.4	+21 47.7	247	01.0	+3 58.7	60 N	** **	1 31	2 52		1 05	2	14 55	103
1	195	37.3	48.0	261	32.5 ¹²⁵	+4 14.6 ¹⁵⁹	58	** **	2 03	3 09		08	5	51	98
2	210	37.2	48.4	276	04.0 ¹²⁵	30.5 ¹⁵⁹	56	0 24	27	24		10	8	47	94
3	225	37.1	48.8	290	35.4 ¹²⁴	+4 46.4 ¹⁵⁹	54	1 23	2 46	36		11	12	43	91
4	240	37.0	49.1	305	06.8 ¹²⁴	+5 02.3 ¹⁵⁹	52	1 53	3 01	47		13	14	40	88
5	255	36.9	+21 49.5	319	38.0 ¹²²	+5 18.2 ¹⁵⁹	50	2 15	3 15	3 57		1 15	16	14 37	85
6	270	36.8	+21 49.9	334	09.3 ¹²³	+5 34.1 ¹⁵⁹	45	2 54	3 41	4 18		1 18	21	14 31	79
7	285	36.8	50.2	348	40.4 ¹²¹	+5 50.0 ¹⁵⁹	40	3 22	4 02	34		21	26	25	75
8	300	36.7	50.6	3	11.5 ¹²¹	+6 05.9 ¹⁵⁹	35	3 43	19	4 48		23	30	21	70
9	315	36.6	51.0	17	42.5 ¹²⁰	21.7 ¹⁵⁸	30	4 00	33	5 00		25	33	17	67
10	330	36.5	51.3	32	13.4 ¹¹⁹	37.6 ¹⁵⁹	20	27	4 56	20		29	39	10	61
11	345	36.4	+21 51.7	46	44.2 ¹¹⁸	+6 53.5 ¹⁵⁹	10 N	4 48	5 15	5 38		1 32	44	14 04	55
12	0	36.3	+21 52.0	61	15.0 ¹¹⁸	+7 09.3 ¹⁵⁸	0	5 06	5 32	5 54		1 36	48	13 58	51
13	15	36.2	52.4	75	45.7 ¹¹⁷	25.1 ¹⁵⁸	10 S	21	5 48	6 10		39	53	53	45
14	30	36.1	52.8	90	16.3 ¹¹⁶	40.9 ¹⁵⁸	20	36	6 03	27		42	59	47	40
15	45	36.0	53.1	104	46.8 ¹¹⁵	+7 56.7 ¹⁵⁸	30	51	21	47		46	65	40	35
16	60	36.0	53.5	119	17.3 ¹¹⁵	+8 12.5 ¹⁵⁸	35	5 59	30	6 58		49	68	36	31
17	75	35.9	+21 53.8	133	47.6 ¹¹³	+8 28.2 ¹⁵⁷	40	6 08	6 41	7 11		1 51	73	13 32	27
18	90	35.8	+21 54.2	148	17.9 ¹¹³	+8 43.9 ¹⁵⁷	45	6 17	6 53	7 27		1 54	78	13 27	23
19	105	35.7	54.6	162	48.1 ¹¹²	+8 59.6 ¹⁵⁷	50	27	7 08	45		1 58	83	21	17
20	120	35.6	54.9	177	18.2 ¹¹¹	+9 15.3 ¹⁵⁷	52	32	15	7 54		2 00	85	18	15
21	135	35.5	55.3	191	48.2 ¹¹⁰	30.9 ¹⁵⁶	54	37	22	8 04		02	88	15	12
22	150	35.4	55.6	206	18.1 ¹⁰⁹	+9 46.5 ¹⁵⁶	56	42	30	16		04	92	11	9
23	165	35.3	56.0	220	47.9 ¹⁰⁸	+10 02.1 ¹⁵⁶	58	48	39	28		06	96	08	5
24	180	35.2	+21 56.3	235	17.6 ¹⁰⁷	+10 17.6 ¹⁵⁵	60 S	6 55	7 49	8 44		2 09	100	13 04	1
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG 7 ^h 27 ^m 3			Mag: -3.9 PMG: 11 ^h 47 ^m			Mag: +1.5 PMG: 16 ^h 23 ^m			Mag: -2.6 PMG: 3 ^h 02 ^m			Mag: +0.7 PMG: 17 ^h 45 ^m		
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	'	°	'	°	'	°	°	'	°
0	247	52.7	183 29.1	+20 59.8	113 55.2	+18 53.5	314 23.8	-21 46.9	92 57.1	+12 16.7					
1	262	55.2	198 28.4	+21 00.4	128 56.3	53.1	329 26.4	46.9	107 59.5	16.6					
2	277	57.7	213 27.6	01.1	143 57.3	52.7	344 29.1	46.9	123 01.8	16.6					
3	293	00.1	228 26.8	01.7	158 58.3	52.3	359 31.7	47.0	138 04.2	16.5					
4	308	02.6	243 26.1	02.3	173 59.4	51.9	14 34.3	47.0	153 06.5	16.5					
5	323	05.1	258 25.3	+21 02.9	189 00.4	+18 51.5	29 36.9	-21 47.0	168 08.9	+12 16.4					
6	338	07.5	273 24.6	+21 03.5	204 01.5	+18 51.0	44 39.6	-21 47.1	183 11.3	+12 16.4					
7	353	10.0	288 23.8	04.2	219 02.5	50.6	59 42.2	47.1	198 13.6	16.3					
8	8	12.4	303 23.0	04.8	234 03.6	50.2	74 44.8	47.1	213 16.0	16.3					
9	23	14.9	318 22.3	05.4	249 04.6	49.8	89 47.5	47.2	228 18.3	16.3					
10	38	17.4	333 21.5	06.0	264 05.7	49.4	104 50.1	47.2	243 20.7	16.2					
11	53	19.8	348 20.7	+21 06.6	279 06.7	+18 48.9	119 52.7	-21 47.2	258 23.0	+12 16.2					
12	68	22.3	3 20.0	+21 07.2	294 07.8	+18 48.5	134 55.4	-21 47.3	273 25.4	+12 16.1					
13	83	24.8	18 19.2	07.8	309 08.8	48.1	149 58.0	47.3	288 27.7	16.1					
14	98	27.2	33 18.4	08.4	324 09.9	47.7	165 00.6	47.3	303 30.1	16.0					
15	113	29.7	48 17.7	09.0	339 10.9	47.3	180 03.3	47.3	318 32.5	16.0					
16	128	32.2	63 16.9	09.7	354 11.9	46.9	195 05.9	47.4	333 34.8	15.9					
17	143	34.6	78 16.1	+21 10.3	9 13.0	+18 46.4	210 08.5	-21 47.4	348 37.2	+12 15.9					
18	158	37.1	93 15.4	+21 10.9	24 14.0	+18 46.0	225 11.2	-21 47.4	3 39.5	+12 15.8					
19	173	39.6	108 14.6	11.5	39 15.1	45.6	240 13.8	47.5	18 41.9	15.8					
20	188	42.0	123 13.8	12.1	54 16.1	45.2	255 16.4	47.5	33 44.2	15.7					
21	203	44.5	138 13.1	12.7	69 17.2	44.8	270 19.1	47.5	48 46.6	15.7					
22	218	46.9	153 12.3	13.3	84 18.2	44.3	285 21.7	47.6	63 48.9	15.6					
23	233	49.4	168 11.5	13.9	99 19.3	43.9	300 24.4	47.6	78 51.3	15.6					
24	248	51.9	183 10.8	+21 14.5	114 20.3	+18 43.5	315 27.0	-21 47.6	93 53.6	+12 15.6					
Dif	—		-8	+6	+10	-4	+26	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 57 ^m 7			Edad: 25 ^d 5 PHE SD: 16'2 PMG: 8 ^h 36 ^m R°: 55 ^m 4^h: 59'7 12^h: 60'0 20^h: 60'3					Civil			Náutico	Hora	R°	Hora	R°
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	h m	h m	h m	h m m	m	h m m	m
h	°	'	°	'	°	'	°	h	m	h	m	h	m	m		
0	180	35.2	+21	56.3	235	17.6	+10 17.6	60 N	21 06	22 30	** **	1 07	3	16 38 111		
1	195	35.1		56.7	249	47.3 ¹⁰⁷	33.2 ¹⁵⁶	58	20 49	21 56	** **	13	7	29 105		
2	210	35.0		57.0	264	16.8 ¹⁰⁵	+10 48.6 ¹⁵⁴	56	34	31	** **	18	11	21 100		
3	225	34.9		57.4	278	46.2 ¹⁰⁴	+11 04.1 ¹⁵⁵	54	21	21 12	22 38	23	14	14 96		
4	240	34.9		57.7	293	15.6 ¹⁰⁴	19.4 ¹⁵³	52	10	20 56	22 06	27	17	08 92		
5	255	34.8	+21	58.1	307	44.8 ¹⁰²	+11 34.8 ¹⁵⁴	50	20 00	20 42	21 43	1 31	20	16 02 90		
6	270	34.7	+21	58.4	322	13.9 ¹⁰¹	+11 50.1 ¹⁵³	45	19 39	20 15	21 03	1 39	26	15 50 83		
7	285	34.6		58.8	336	43.0 ¹⁰¹	+12 05.4 ¹⁵³	40	22	19 54	20 35	47	30	40 78		
8	300	34.5		59.1	351	11.9 ⁹⁹	20.6 ¹⁵²	35	19 08	37	20 13	53	34	31 74		
9	315	34.4		59.5	5	40.7 ⁹⁸	35.7 ¹⁵¹	30	18 56	23	19 56	1 58	38	24 70		
10	330	34.3	+21	59.8	20	09.4 ⁹⁷	+12 50.8 ¹⁵¹	20	36	19 00	29	2 08	43	15 11 65		
11	345	34.2	+22	00.2	34	38.0 ⁹⁶	+13 05.9 ¹⁵¹	10 N	18 18	18 41	19 07	2 16	49	14 59 60		
12	0	34.1	+22	00.5	49	06.5 ⁹⁵	+13 20.9 ¹⁵⁰	0	18 01	18 24	18 50	2 24	53	14 49 55		
13	15	34.0		00.9	63	34.9 ⁹⁴	35.8 ¹⁴⁹	10 S	17 45	18 08	34	32	58	38 51		
14	30	33.9		01.2	78	03.2 ⁹³	+13 50.7 ¹⁴⁹	20	28	17 51	19	41	63	27 46		
15	45	33.8		01.5	92	31.3 ⁹¹	+14 05.5 ¹⁴⁸	30	17 08	34	18 04	51	69	15 40		
16	60	33.7		01.9	106	59.4 ⁹¹	20.3 ¹⁴⁸	35	16 56	24	17 56	2 57	73	14 07 37		
17	75	33.6	+22	02.2	121	27.3 ⁸⁹	+14 35.0 ¹⁴⁷	40	16 43	17 13	17 47	3 04	76	13 59 33		
18	90	33.5	+22	02.6	135	55.1 ⁸⁸	+14 49.6 ¹⁴⁶	45	16 28	17 01	17 38	3 12	81	13 50 28		
19	105	33.4		02.9	150	22.8 ⁸⁷	+15 04.1 ¹⁴⁵	50	09	16 46	27	21	88	38 22		
20	120	33.3		03.3	164	50.4 ⁸⁶	18.6 ¹⁴⁵	52	16 00	39	22	25	91	33 19		
21	135	33.2		03.6	179	17.8 ⁸⁴	33.0 ¹⁴⁴	54	15 50	32	17	30	94	27 16		
22	150	33.2		03.9	193	45.2 ⁸⁴	+15 47.3 ¹⁴³	56	38	24	12	36	98	20 13		
23	165	33.1		04.3	208	12.4 ⁸²	+16 01.6 ¹⁴³	58	25	15	17 06	42	102	13 9		
24	180	33.0	+22	04.6	222	39.5 ⁸¹	+16 15.7 ¹⁴¹	60 S	15 10	16 04	16 59	3 49	107	13 05 4		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO										
	PMG: 7 ^h 23 ^m 3		Mag: -3.9 PMG: 11 ^h 48 ^m		Mag: +1.5 PMG: 16 ^h 22 ^m		Mag: -2.6 PMG: 2 ^h 58 ^m		Mag: +0.7 PMG: 17 ^h 42 ^m										
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec									
h	°	'	°	'	°	'	°	'	°	'									
0	248	51.9	183	10.8	+21	14.5	114	20.3	+18	43.5	315	27.0	-21	47.6	93	53.6	+12	15.6	
1	263	54.3	198	10.0		15.1	129	21.4		43.1	330	29.6		47.7	108	56.0		15.5	
2	278	56.8	213	09.2		15.7	144	22.4		42.7	345	32.3		47.7	123	58.3		15.5	
3	293	59.3	228	08.4		16.3	159	23.4		42.2	0	34.9		47.7	139	00.7		15.4	
4	309	01.7	243	07.7		16.9	174	24.5		41.8	15	37.5		47.8	154	03.0		15.4	
5	324	04.2	258	06.9	+21	17.5	189	25.5	+18	41.4	30	40.2	-21	47.8	169	05.4	+12	15.3	
6	339	06.7	273	06.1	+21	18.1	204	26.6	+18	41.0	45	42.8	-21	47.8	184	07.8	+12	15.3	
7	354	09.1	288	05.3		18.7	219	27.6		40.5	60	45.5		47.9	199	10.1		15.2	
8	9	11.6	303	04.6		19.2	234	28.7		40.1	75	48.1		47.9	214	12.5		15.2	
9	24	14.0	318	03.8		19.8	249	29.7		39.7	90	50.7		47.9	229	14.8		15.1	
10	39	16.5	333	03.0		20.4	264	30.8		39.3	105	53.4		48.0	244	17.2		15.1	
11	54	19.0	348	02.3	+21	21.0	279	31.8	+18	38.9	120	56.0	-21	48.0	259	19.5	+12	15.0	
12	69	21.4	3	01.5	+21	21.6	294	32.9	+18	38.4	135	58.7	-21	48.0	274	21.9	+12	15.0	
13	84	23.9	18	00.7		22.2	309	33.9		38.0	151	01.3		48.1	289	24.2		14.9	
14	99	26.4	32	59.9		22.8	324	34.9		37.6	166	03.9		48.1	304	26.6		14.9	
15	114	28.8	47	59.1		23.4	339	36.0		37.2	181	06.6		48.1	319	28.9		14.8	
16	129	31.3	62	58.4		23.9	354	37.0		36.7	196	09.2		48.2	334	31.3		14.8	
17	144	33.8	77	57.6	+21	24.5	9	38.1	+18	36.3	211	11.9	-21	48.2	349	33.6	+12	14.7	
18	159	36.2	92	56.8	+21	25.1	24	39.1	+18	35.9	226	14.5	-21	48.2	4	36.0	+12	14.7	
19	174	38.7	107	56.0		25.7	39	40.2		35.5	241	17.2		48.2	19	38.3		14.6	
20	189	41.2	122	55.3		26.3	54	41.2		35.0	256	19.8		48.3	34	40.7		14.6	
21	204	43.6	137	54.5		26.8	69	42.3		34.6	271	22.4		48.3	49	43.0		14.5	
22	219	46.1	152	53.7		27.4	84	43.3		34.2	286	25.1		48.3	64	45.4		14.5	
23	234	48.5	167	52.9		28.0	99	44.4		33.8	301	27.7		48.4	79	47.7		14.5	
24	249	51.0	182	52.1	+21	28.6	114	45.4	+18	33.3	316	30.4	-21	48.4	94	50.1	+12	14.4	
Dif	—		-8		+6		+10		-4		+26		0		+24		0		

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15 ^h 8 PMG: 11 ^h 57 ^m 9				Edad: 26 ^d 5 SD: 16 ^h 4 PMG: 9 ^h 31 ^m	PHE { 4 ^h : 60 ^s 5 12 ^h : 60 ^s 7 20 ^h : 60 ^s 9 R°: 59 ^m	Náutico	Civil		Hora	R°		Hora	R°						
	hG ☉	Dec	hG ☾	Dif																
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m			
0	180	33.0	+22	04.6	222	39.5	+16	15.7	60 N	** **	1 25	2 49	1 10	6	18 29	116				
1	195	32.9		04.9	237	06.4	79	29.8	58	** **	2 00	3 07	20	12	14 108					
2	210	32.8		05.3	251	33.3	79	43.8	56	** **	24	22	29	16	18 01	103				
3	225	32.7		05.6	266	00.0	77	+16 57.7	54	1 17	43	34	37	20	17 50	98				
4	240	32.6		05.9	280	26.6	76	+17 11.5	52	1 49	2 59	46	44	24	40	94				
5	255	32.5	+22	06.3	294	53.1	75	+17 25.2	50	2 12	3 13	3 56	1 51	26	17 32	91				
6	270	32.4	+22	06.6	309	19.4	73	+17 38.9	45	2 53	3 40	4 16	2 05	32	17 13	85				
7	285	32.3		06.9	323	45.6	72	+17 52.4	40	3 21	4 01	33	17	36	16 58	81				
8	300	32.2		07.3	338	11.7	71	+18 05.8	35	3 42	18	47	27	40	45	78				
9	315	32.1		07.6	352	37.7	70	19.1	30	4 00	32	4 59	36	43	34	75				
10	330	32.0		07.9	7	03.5	68	32.4	20	27	4 56	5 20	2 51	49	16 16	69				
11	345	31.9	+22	08.3	21	29.2	67	+18 45.5	10 N	4 48	5 15	5 38	3 05	53	15 59	65				
12	0	31.8	+22	08.6	35	54.8	66	+18 58.5	0	5 06	5 32	5 54	3 17	59	15 44	61				
13	15	31.7		08.9	50	20.2	64	+19 11.4	10 S	22	5 48	6 11	30	63	29	57				
14	30	31.6		09.3	64	45.6	64	24.2	20	37	6 04	28	3 44	68	15 13	53				
15	45	31.5		09.6	79	10.7	61	36.9	30	5 52	22	48	4 00	73	14 55	47				
16	60	31.4		09.9	93	35.8	61	+19 49.4	35	6 00	32	6 59	10	76	44	45				
17	75	31.3	+22	10.2	108	00.7	59	+20 01.9	40	6 09	6 43	7 13	4 20	81	14 32	41				
18	90	31.2	+22	10.6	122	25.5	58	+20 14.2	45	6 18	6 55	7 28	4 33	85	14 18	36				
19	105	31.1		10.9	136	50.2	57	26.4	50	29	7 10	47	49	91	14 00	31				
20	120	31.0		11.2	151	14.7	55	38.4	52	34	17	7 56	4 56	95	13 52	28				
21	135	30.9		11.5	165	39.1	54	+20 50.3	54	39	24	8 07	5 04	99	43	25				
22	150	30.8		11.9	180	03.4	53	+21 02.1	56	44	32	18	14	102	33	20				
23	165	30.7		12.2	194	27.6	52	13.8	58	50	42	31	24	108	22	14				
24	180	30.6	+22	12.5	208	51.6	50	+21 25.3	60 S	6 57	7 52	8 47	5 36	116	13 09	7				
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG 7 ^h 19 ^m 4				Mag: -4.0 PMG: 11 ^h 49 ^m				Mag: +1.5 PMG: 16 ^h 20 ^m				Mag: -2.6 PMG: 2 ^h 53 ^m				Mag: +0.7 PMG: 17 ^h 38 ^m			
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec								
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	249	51.0	182	52.1	+21	28.6	114	45.4	+18	33.3	316	30.4	-21	48.4	94	50.1	+12	14.4		
1	264	53.5	197	51.4		29.1	129	46.4		32.9	331	33.0		48.4	109	52.4		14.4		
2	279	55.9	212	50.6		29.7	144	47.5		32.5	346	35.7		48.5	124	54.8		14.3		
3	294	58.4	227	49.8		30.3	159	48.5		32.1	1	38.3		48.5	139	57.1		14.3		
4	310	00.9	242	49.0		30.9	174	49.6		31.6	16	41.0		48.5	154	59.5		14.2		
5	325	03.3	257	48.2	+21	31.4	189	50.6	+18	31.2	31	43.6	-21	48.6	170	01.8	+12	14.2		
6	340	05.8	272	47.4	+21	32.0	204	51.7	+18	30.8	46	46.2	-21	48.6	185	04.2	+12	14.1		
7	355	08.3	287	46.7		32.6	219	52.7		30.4	61	48.9		48.6	200	06.5		14.1		
8	10	10.7	302	45.9		33.1	234	53.8		29.9	76	51.5		48.7	215	08.8		14.0		
9	25	13.2	317	45.1		33.7	249	54.8		29.5	91	54.2		48.7	230	11.2		14.0		
10	40	15.7	332	44.3		34.3	264	55.8		29.1	106	56.8		48.7	245	13.5		13.9		
11	55	18.1	347	43.5	+21	34.8	279	56.9	+18	28.6	121	59.5	-21	48.8	260	15.9	+12	13.9		
12	70	20.6	2	42.7	+21	35.4	294	57.9	+18	28.2	137	02.1	-21	48.8	275	18.2	+12	13.8		
13	85	23.0	17	41.9		35.9	309	59.0		27.8	152	04.8		48.8	290	20.6		13.8		
14	100	25.5	32	41.2		36.5	325	00.0		27.4	167	07.4		48.9	305	22.9		13.7		
15	115	28.0	47	40.4		37.1	340	01.1		26.9	182	10.1		48.9	320	25.3		13.7		
16	130	30.4	62	39.6		37.6	355	02.1		26.5	197	12.7		48.9	335	27.6		13.6		
17	145	32.9	77	38.8	+21	38.2	10	03.2	+18	26.1	212	15.4	-21	49.0	350	30.0	+12	13.6		
18	160	35.4	92	38.0	+21	38.7	25	04.2	+18	25.6	227	18.0	-21	49.0	5	32.3	+12	13.5		
19	175	37.8	107	37.2		39.3	40	05.3		25.2	242	20.7		49.0	20	34.7		13.5		
20	190	40.3	122	36.4		39.8	55	06.3		24.8	257	23.3		49.1	35	37.0		13.4		
21	205	42.8	137	35.6		40.4	70	07.3		24.4	272	26.0		49.1	50	39.4		13.4		
22	220	45.2	152	34.8		40.9	85	08.4		23.9	287	28.6		49.1	65	41.7		13.3		
23	235	47.7	167	34.1		41.5	100	09.4		23.5	302	31.3		49.2	80	44.1		13.3		
24	250	50.1	182	33.3	+21	42.0	115	10.5	+18	23.1	317	33.9	-21	49.2	95	46.4	+12	13.2		
Dif	—				-8 +6				+10 -4				+26 0				+23 0			

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 15'8 PMG: 11 ^h 58 ^m 0			Edad: 27 ^d 5 PHE { 4 ^h : 61'1 12 ^h : 61'2 20 ^h : 61'3 R°: 65 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m	h m m			
0	180	30.6	+22	12.5	208	51.6	+21	25.3	60 N	21 10	22 37	** **	1 16 13	20 25 106				
1	195	30.5		12.8	223	15.5	49	36.7 ¹¹⁴	58	20 52	22 00	** **	32 21	20 02 98				
2	210	30.4		13.1	237	39.2	47	48.0 ¹¹³	56	36	21 35	** **	45 27	19 44 93				
3	225	30.3		13.5	252	02.9	47	+21 59.1 ¹¹¹	54	23	21 15	22 44	1 57 31	28 90				
4	240	30.2		13.8	266	26.4	45	+22 10.0 ¹⁰⁹	52	12	20 59	22 10	2 08 34	14 87				
5	255	30.1	+22	14.1	280	49.8	44	+22 20.9 ¹⁰⁹	50	20 02	20 45	21 46	2 17 37	19 03 84				
6	270	30.0	+22	14.4	295	13.0	42	+22 31.5 ¹⁰⁶	45	19 41	20 17	21 05	2 37 43	18 38 81				
7	285	29.9		14.7	309	36.1	41	42.0 ¹⁰⁵	40	24	19 56	20 37	2 53 47	19 78				
8	300	29.8		15.0	323	59.2	41	+22 52.4 ¹⁰⁴	35	19 09	39	20 15	3 07 50	18 03 75				
9	315	29.7		15.4	338	22.0	38	+23 02.6 ¹⁰²	30	18 57	24	19 57	19 53	17 49 73				
10	330	29.6		15.7	352	44.8	38	12.6 ¹⁰⁰	20	36	19 01	30	40 57	25 71				
11	345	29.5	+22	16.0	7	07.5	37	+23 22.5 ⁹⁹	10 N	18 18	18 41	19 08	3 58 61	17 04 68				
12	0	29.4	+22	16.3	21	30.0	35	+23 32.2 ⁹⁷	0	18 02	18 24	18 50	4 16 63	16 45 66				
13	15	29.3		16.6	35	52.4	34	41.8 ⁹⁶	10 S	17 45	18 08	34	33 67	26 63				
14	30	29.2		16.9	50	14.7	33	+23 51.1 ⁹³	20	28	17 51	19	4 52 70	16 06 60				
15	45	29.1		17.2	64	36.8	31	+24 00.3 ⁹²	30	17 08	34	18 03	5 13 75	15 42 57				
16	60	29.0		17.5	78	58.9	31	09.4 ⁹¹	35	16 56	24	17 55	26 77	29 55				
17	75	28.9	+22	17.9	93	20.9	30	+24 18.2 ⁸⁸	40	16 43	17 13	17 46	5 41 80	15 13 52				
18	90	28.8	+22	18.2	107	42.7	28	+24 26.9 ⁸⁷	45	16 27	17 00	17 37	5 58 84	14 54 49				
19	105	28.7		18.5	122	04.4	27	35.4 ⁸⁵	50	16 07	16 45	26	6 20 90	31 44				
20	120	28.6		18.8	136	26.1	27	43.8 ⁸⁴	52	15 58	38	21	31 92	20 42				
21	135	28.4		19.1	150	47.6	25	51.9 ⁸¹	54	48	31	16	43 95	14 08 38				
22	150	28.3		19.4	165	09.0	24	+24 59.9 ⁸⁰	56	36	22	10	6 56 101	13 53 34				
23	165	28.2		19.7	179	30.3	23	+25 07.6 ⁷⁷	58	23	13	17 04	7 12 107	36 29				
24	180	28.1	+22	20.0	193	51.5	22	+25 15.2 ⁷⁶	60 S	15 07	16 02	16 58	7 32 116	13 16 20				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 7 ^h 15 ^m 5		Mag: -4.0 PMG: 11 ^h 50 ^m				Mag: +1.5 PMG: 16 ^h 18 ^m				Mag: -2.6 PMG: 2 ^h 49 ^m				Mag: +0.7 PMG: 17 ^h 34 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	250	50.1	182	33.3	+21	42.0	115	10.5	+18	23.1	317	33.9	-21	49.2	95	46.4	+12	13.2
1	265	52.6	197	32.5		42.6	130	11.5		22.6	332	36.6		49.3	110	48.7		13.2
2	280	55.1	212	31.7		43.1	145	12.6		22.2	347	39.2		49.3	125	51.1		13.1
3	295	57.5	227	30.9		43.7	160	13.6		21.8	2	41.9		49.3	140	53.4		13.1
4	311	00.0	242	30.1		44.2	175	14.7		21.3	17	44.5		49.4	155	55.8		13.0
5	326	02.5	257	29.3	+21	44.8	190	15.7	+18	20.9	32	47.2	-21	49.4	170	58.1	+12	13.0
6	341	04.9	272	28.5	+21	45.3	205	16.7	+18	20.5	47	49.8	-21	49.4	186	00.5	+12	12.9
7	356	07.4	287	27.7		45.9	220	17.8		20.1	62	52.5		49.5	201	02.8		12.9
8	11	09.9	302	26.9		46.4	235	18.8		19.6	77	55.2		49.5	216	05.2		12.8
9	26	12.3	317	26.1		46.9	250	19.9		19.2	92	57.8		49.5	231	07.5		12.8
10	41	14.8	332	25.3		47.5	265	20.9		18.8	108	00.5		49.6	246	09.8		12.7
11	56	17.3	347	24.5	+21	48.0	280	22.0	+18	18.3	123	03.1	-21	49.6	261	12.2	+12	12.7
12	71	19.7	2	23.7	+21	48.6	295	23.0	+18	17.9	138	05.8	-21	49.6	276	14.5	+12	12.6
13	86	22.2	17	22.9		49.1	310	24.1		17.5	153	08.4		49.7	291	16.9		12.6
14	101	24.6	32	22.2		49.6	325	25.1		17.0	168	11.1		49.7	306	19.2		12.5
15	116	27.1	47	21.4		50.2	340	26.1		16.6	183	13.7		49.7	321	21.6		12.5
16	131	29.6	62	20.6		50.7	355	27.2		16.2	198	16.4		49.8	336	23.9		12.4
17	146	32.0	77	19.8	+21	51.2	10	28.2	+18	15.7	213	19.1	-21	49.8	351	26.2	+12	12.4
18	161	34.5	92	19.0	+21	51.8	25	29.3	+18	15.3	228	21.7	-21	49.8	6	28.6	+12	12.3
19	176	37.0	107	18.2		52.3	40	30.3		14.9	243	24.4		49.9	21	30.9		12.3
20	191	39.4	122	17.4		52.8	55	31.4		14.4	258	27.0		49.9	36	33.3		12.2
21	206	41.9	137	16.6		53.3	70	32.4		14.0	273	29.7		49.9	51	35.6		12.2
22	221	44.4	152	15.8		53.9	85	33.5		13.6	288	32.3		50.0	66	38.0		12.1
23	236	46.8	167	15.0		54.4	100	34.5		13.1	303	35.0		50.0	81	40.3		12.1
24	251	49.3	182	14.2	+21	54.9	115	35.5	+18	12.7	318	37.7	-21	50.0	96	42.6	+12	12.0
Dif	—		-8		+5		+10		-4		+27		0		+23		-1	

UT	SOL			● LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8 PMG: 11 ^h 58 ^m 2			Edad: 28 ^d 5 PHE { 4 ^h : 61 ^h 4 12 ^h : 61 ^h 4 20 ^h : 61 ^h 4 PMG: 11 ^h 35 ^m R°: 67 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif		Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	180	28.1	+22	20.0	193	51.5	+25	15.2	60 N	** **	1 19	2 46	1 29	33	22 11	69		
1	195	28.0		20.3	208	12.6		22.6	74	** **	1 56	3 04	1 53	41	21 40	70		
2	210	27.9		20.6	222	33.7		29.8	72	** **	2 21	20	2 12	46	21 17	69		
3	225	27.8		20.9	236	54.6		36.8	70	1 12	41	33	28	49	20 58	69		
4	240	27.7		21.2	251	15.4		43.6	68	1 46	2 57	44	42	51	41	70		
5	255	27.6	+22	21.5	265	36.2	+25	50.3	67	2 10	3 11	3 54	2 54	53	20 27	70		
6	270	27.5	+22	21.8	279	56.9	+25	56.7	64	2 51	3 39	4 15	3 20	56	19 59	69		
7	285	27.4		22.1	294	17.5	+26	02.9	62	3 19	4 00	32	40	58	37	69		
8	300	27.3		22.4	308	38.0		08.9	60	41	17	47	3 57	60	18	69		
9	315	27.2		22.7	322	58.4		14.7	58	3 59	32	4 59	4 12	61	19 02	69		
10	330	27.1		23.0	337	18.8		20.4	57	4 27	4 56	5 20	37	64	18 36	68		
11	345	27.0	+22	23.3	351	39.1	+26	25.8	54	4 48	5 15	5 38	4 59	65	18 12	68		
12	0	26.9	+22	23.6	5	59.3	+26	31.0	52	5 06	5 32	5 55	5 19	67	17 51	67		
13	15	26.8		23.9	20	19.5		36.0	50	22	5 48	6 11	5 40	68	29	67		
14	30	26.7		24.2	34	39.6		40.8	48	38	6 05	29	6 02	70	17 06	67		
15	45	26.5		24.5	48	59.6		45.3	45	5 53	23	6 49	28	72	16 39	66		
16	60	26.4		24.8	63	19.6		49.7	44	6 01	33	7 01	6 43	73	24	65		
17	75	26.3	+22	25.1	77	39.6	+26	53.8	41	6 10	6 44	7 14	7 01	74	16 05	65		
18	90	26.2	+22	25.4	91	59.5	+26	57.8	40	6 20	6 56	7 30	7 22	76	15 43	64		
19	105	26.1		25.7	106	19.3	+27	01.5	37	31	7 12	49	7 50	78	15	62		
20	120	26.0		26.0	120	39.1		05.0	35	35	18	7 59	8 03	79	15 02	61		
21	135	25.9		26.3	134	58.9		08.3	33	41	26	8 09	18	81	14 46	60		
22	150	25.8		26.5	149	18.6		11.4	31	46	35	21	37	83	27	58		
23	165	25.7		26.8	163	38.3		14.3	29	52	44	34	8 59	86	14 05	55		
24	180	25.6	+22	27.1	177	58.0	+27	16.9	26	6 59	7 55	8 50	9 28	92	13 36	50		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 7 ^h 11 ^m 5		Mag: -4.0 PMG: 11 ^h 52 ^m			Mag: +1.5 PMG: 16 ^h 16 ^m			Mag: -2.6 PMG: 2 ^h 45 ^m			Mag: +0.7 PMG: 17 ^h 30 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	251	49.3	182	14.2	+21	54.9	115	35.5	+18	12.7	318	37.7	-21	50.0	96	42.6	+12	12.0
1	266	51.8	197	13.4		55.4	130	36.6		12.3	333	40.3		50.1	111	45.0		11.9
2	281	54.2	212	12.6		56.0	145	37.6		11.8	348	43.0		50.1	126	47.3		11.9
3	296	56.7	227	11.8		56.5	160	38.7		11.4	3	45.6		50.1	141	49.7		11.8
4	311	59.1	242	11.0		57.0	175	39.7		11.0	18	48.3		50.2	156	52.0		11.8
5	327	01.6	257	10.2	+21	57.5	190	40.8	+18	10.5	33	51.0	-21	50.2	171	54.3	+12	11.7
6	342	04.1	272	09.4	+21	58.0	205	41.8	+18	10.1	48	53.6	-21	50.3	186	56.7	+12	11.7
7	357	06.5	287	08.5		58.6	220	42.9		09.6	63	56.3		50.3	201	59.0		11.6
8	12	09.0	302	07.7		59.1	235	43.9		09.2	78	58.9		50.3	217	01.4		11.6
9	27	11.5	317	06.9	+21	59.6	250	44.9		08.8	94	01.6		50.4	232	03.7		11.5
10	42	13.9	332	06.1	+22	00.1	265	46.0		08.3	109	04.3		50.4	247	06.1		11.5
11	57	16.4	347	05.3	+22	00.6	280	47.0	+18	07.9	124	06.9	-21	50.4	262	08.4	+12	11.4
12	72	18.9	2	04.5	+22	01.1	295	48.1	+18	07.5	139	09.6	-21	50.5	277	10.7	+12	11.4
13	87	21.3	17	03.7		01.6	310	49.1		07.0	154	12.3		50.5	292	13.1		11.3
14	102	23.8	32	02.9		02.2	325	50.2		06.6	169	14.9		50.5	307	15.4		11.3
15	117	26.3	47	02.1		02.7	340	51.2		06.1	184	17.6		50.6	322	17.7		11.2
16	132	28.7	62	01.3		03.2	355	52.3		05.7	199	20.2		50.6	337	20.1		11.2
17	147	31.2	77	00.5	+22	03.7	10	53.3	+18	05.3	214	22.9	-21	50.6	352	22.4	+12	11.1
18	162	33.6	91	59.7	+22	04.2	25	54.3	+18	04.8	229	25.6	-21	50.7	7	24.8	+12	11.1
19	177	36.1	106	58.9		04.7	40	55.4		04.4	244	28.2		50.7	22	27.1		11.0
20	192	38.6	121	58.1		05.2	55	56.4		04.0	259	30.9		50.8	37	29.4		11.0
21	207	41.0	136	57.3		05.7	70	57.5		03.5	274	33.6		50.8	52	31.8		10.9
22	222	43.5	151	56.5		06.2	85	58.5		03.1	289	36.2		50.8	67	34.1		10.9
23	237	46.0	166	55.6		06.7	100	59.6		02.6	304	38.9		50.9	82	36.5		10.8
24	252	48.4	181	54.8	+22	07.2	116	00.6	+18	02.2	319	41.6	-21	50.9	97	38.8	+12	10.7
Dif	—		-8		+5		+10		-4		+27		0		+23		-1	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 29 ^d 5 PHE { 4 ^h : 61 ^h 3 12 ^h : 61 ^h 2 20 ^h : 61 ^h 1 R°: 67 ^m											
	PMG: 11 ^h 58 ^m 4			SD: 16 ^h 7 PMG: 12 ^h 42 ^m					Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	h m	h m	h m	h m	m	h m	m	
0	180	25.6	+22 27.1	177	58.0	+27 16.9	24	60 N	21 13	22 43	** **	2 02 73	23 20 31		
1	195	25.5	27.4	192	17.7	19.3	24	58	20 54	22 04	** **	34 72	22 50 38		
2	210	25.4	27.7	206	37.3	21.5	22	56	39	21 38	** **	2 58 71	26 43		
3	225	25.3	28.0	220	56.9	23.5	20	54	25	18	22 49	3 17 71	22 07 46		
4	240	25.1	28.3	235	16.5	25.3	18	52	14	21 01	22 14	33 71	21 51 48		
5	255	25.0	+22 28.6	249	36.1	+27 26.8	15	50	20 04	20 47	21 49	3 47 71	21 37 50		
6	270	24.9	+22 28.8	263	55.7	+27 28.2	14	45	19 42	20 19	21 07	4 16 70	21 08 54		
7	285	24.8	29.1	278	15.3	29.3	11	40	25	19 57	20 38	38 70	20 46 56		
8	300	24.7	29.4	292	34.9	30.2	9	35	19 11	40	20 16	4 57 69	27 58		
9	315	24.6	29.7	306	54.5	30.8	6	30	18 58	25	19 58	5 13 69	20 11 60		
10	330	24.5	30.0	321	14.1	31.3	5	20	37	19 01	30	5 41 68	19 44 62		
11	345	24.4	+22 30.3	335	33.7	+27 31.5	2	10 N	18 19	18 42	19 09	6 04 68	19 20 64		
12	0	24.3	+22 30.5	349	53.3	+27 31.5	0	0	18 02	18 24	18 50	6 26 67	18 58 66		
13	15	24.2	30.8	4	13.0	31.3	2	10 S	17 45	18 08	34	6 48 67	36 68		
14	30	24.0	31.1	18	32.7	30.9	4	20	28	17 51	19	7 12 66	18 13 69		
15	45	23.9	31.4	32	52.4	30.3	6	30	17 07	33	18 03	40 64	17 45 71		
16	60	23.8	31.6	47	12.1	29.4	9	35	16 55	23	17 55	7 56 64	29 72		
17	75	23.7	+22 31.9	61	31.9	+27 28.3	11	40	16 42	17 12	17 46	8 15 63	17 10 73		
18	90	23.6	+22 32.2	75	51.7	+27 27.0	13	45	16 26	16 59	17 36	8 38 62	16 47 75		
19	105	23.5	32.5	90	11.6	25.5	15	50	16 06	44	25	9 08 59	17 78		
20	120	23.4	32.8	104	31.5	23.8	17	52	15 57	37	20	22 59	16 03 79		
21	135	23.3	33.0	118	51.4	21.9	19	54	47	29	15	9 39 57	15 46 81		
22	150	23.2	33.3	133	11.4	19.7	22	56	35	21	09	10 00 55	25 84		
23	165	23.1	33.6	147	31.5	17.3	24	58	21	11	17 03	10 25 52	15 00 87		
24	180	22.9	+22 33.8	161	51.6	+27 14.8	25	60 S	15 05	16 01	16 56	11 00 45	14 26 93		

UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO		
	PMG: 7 ^h 07 ^m 6		Mag: -4.0 PMG: 11 ^h 53 ^m		Mag: +1.5 PMG: 16 ^h 15 ^m		Mag: -2.6 PMG: 2 ^h 41 ^m			Mag: +0.7 PMG: 17 ^h 27 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'
0	252	48.4	181	54.8	+22 07.2	116 00.6	+18 02.2	319 41.6	-21 50.9	97 38.8	+12 10.7	
1	267	50.9	196	54.0	07.7	131 01.7	01.8	334 44.2	50.9	112 41.1	10.7	
2	282	53.4	211	53.2	08.2	146 02.7	01.3	349 46.9	51.0	127 43.5	10.6	
3	297	55.8	226	52.4	08.7	161 03.7	00.9	4 49.6	51.0	142 45.8	10.6	
4	312	58.3	241	51.6	09.2	176 04.8	+18 00.4	19 52.2	51.0	157 48.1	10.5	
5	328	00.8	256	50.8	+22 09.7	191 05.8	+18 00.0	34 54.9	-21 51.1	172 50.5	+12 10.5	
6	343	03.2	271	50.0	+22 10.2	206 06.9	+17 59.6	49 57.6	-21 51.1	187 52.8	+12 10.4	
7	358	05.7	286	49.2	10.6	221 07.9	59.1	65 00.2	51.1	202 55.2	10.4	
8	13	08.1	301	48.3	11.1	236 09.0	58.7	80 02.9	51.2	217 57.5	10.3	
9	28	10.6	316	47.5	11.6	251 10.0	58.2	95 05.6	51.2	232 59.8	10.3	
10	43	13.1	331	46.7	12.1	266 11.1	57.8	110 08.2	51.3	248 02.2	10.2	
11	58	15.5	346	45.9	+22 12.6	281 12.1	+17 57.4	125 10.9	-21 51.3	263 04.5	+12 10.2	
12	73	18.0	1	45.1	+22 13.1	296 13.1	+17 56.9	140 13.6	-21 51.3	278 06.8	+12 10.1	
13	88	20.5	16	44.3	13.6	311 14.2	56.5	155 16.3	51.4	293 09.2	10.1	
14	103	22.9	31	43.5	14.0	326 15.2	56.0	170 18.9	51.4	308 11.5	10.0	
15	118	25.4	46	42.6	14.5	341 16.3	55.6	185 21.6	51.4	323 13.9	10.0	
16	133	27.9	61	41.8	15.0	356 17.3	55.1	200 24.3	51.5	338 16.2	09.9	
17	148	30.3	76	41.0	+22 15.5	11 18.4	+17 54.7	215 26.9	-21 51.5	353 18.5	+12 09.8	
18	163	32.8	91	40.2	+22 16.0	26 19.4	+17 54.3	230 29.6	-21 51.5	8 20.9	+12 09.8	
19	178	35.3	106	39.4	16.4	41 20.5	53.8	245 32.3	51.6	23 23.2	09.7	
20	193	37.7	121	38.6	16.9	56 21.5	53.4	260 35.0	51.6	38 25.5	09.7	
21	208	40.2	136	37.7	17.4	71 22.5	52.9	275 37.6	51.7	53 27.9	09.6	
22	223	42.6	151	36.9	17.9	86 23.6	52.5	290 40.3	51.7	68 30.2	09.6	
23	238	45.1	166	36.1	18.3	101 24.6	52.0	305 43.0	51.7	83 32.5	09.5	
24	253	47.6	181	35.3	+22 18.8	116 25.7	+17 51.6	320 45.6	-21 51.8	98 34.9	+12 09.5	
Dif	—		-8	+5		+10	-4	+27	0		+23	-1

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna		
	SD: 15 ^h 8 PMG: 11 ^h 58 ^m 6				Edad: 1 ^d 2 PHE { SD: 16 ^h 6 PMG: 13 ^h 49 ^m R°: 62 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	180	22.9	+22	33.8	161	51.6	+27	14.8	28	60 N	** **	1 14	2 44	3 15	105	23 51	12	
1	195	22.8		34.1	176	11.8	12	12.0	28	58	** **	1 52	3 02	3 46	97	28	19	
2	210	22.7		34.4	190	32.0	12	09.0	30	56	** **	2 19	18	4 09	92	23 09	25	
3	225	22.6		34.7	204	52.3	13	05.8	32	54	1 07	39	31	28 88	22 53	29		
4	240	22.5		34.9	219	12.7	14	+27 02.4	34	52	1 43	2 56	43	44 85	39	33		
5	255	22.4	+22	35.2	233	33.2	15	+26 58.7	37	50	2 07	3 10	3 53	4 58 83	22 27	35		
6	270	22.3	+22	35.5	247	53.7	15	+26 54.9	38	45	2 50	3 38	4 15	5 26 79	22 02	40		
7	285	22.2		35.7	262	14.4	17	50.9	40	40	3 18	3 59	32	5 48 76	21 42	44		
8	300	22.0		36.0	276	35.1	17	46.7	42	35	41	4 17	46	6 06 74	25	48		
9	315	21.9		36.3	290	55.9	18	42.2	45	30	3 58	31	4 59	22 72	21 11	50		
10	330	21.8		36.5	305	16.7	18	37.6	46	20	4 26	4 55	5 20	6 49 69	20 46	54		
11	345	21.7	+22	36.8	319	37.7	20	+26 32.8	48	10 N	4 48	5 15	5 38	7 12 66	20 24	58		
12	0	21.6	+22	37.1	333	58.8	21	+26 27.8	50	0	5 06	5 33	5 55	7 33 64	20 04	61		
13	15	21.5		37.3	348	20.0	22	22.6	52	10 S	23	5 49	6 12	7 55 60	19 44	64		
14	30	21.4		37.6	2	41.2	22	17.1	55	20	38	6 06	29	8 18 57	19 22	67		
15	45	21.2		37.8	17	02.6	24	11.5	56	30	5 54	24	6 50	8 44 55	18 56	72		
16	60	21.1		38.1	31	24.1	25	+26 05.8	57	35	6 02	34	7 02	9 00 52	41	74		
17	75	21.0	+22	38.4	45	45.7	26	+25 59.8	60	40	6 11	6 45	7 15	9 18 50	18 23	78		
18	90	20.9	+22	38.6	60	07.3	26	+25 53.6	62	45	6 21	6 58	7 31	9 40 46	18 02	81		
19	105	20.8		38.9	74	29.1	28	47.3	63	50	32	7 13	7 51	10 07 42	17 35	87		
20	120	20.7		39.1	88	51.1	30	40.8	65	52	37	20	8 00	21 39	22	89		
21	135	20.6		39.4	103	13.1	30	34.0	68	54	42	28	11	36 36	17 07	93		
22	150	20.5		39.7	117	35.2	31	27.2	68	56	48	37	23	10 55 31	16 49	97		
23	165	20.3		39.9	131	57.5	33	20.1	71	58	6 54	46	37	11 17 26	16 27	103		
24	180	20.2	+22	40.2	146	19.9	34	+25 12.9	72	60 S	7 01	7 57	8 53	11 45 17	15 59	112		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 7 ^h 03 ^m 7		Mag: -4.0 PMG: 11 ^h 54 ^m				Mag: +1.5 PMG: 16 ^h 13 ^m				Mag: -2.6 PMG: 2 ^h 36 ^m				Mag: +0.7 PMG: 17 ^h 23 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	253	47.6	181	35.3	+22	18.8	116	25.7	+17	51.6	320	45.6	-21	51.8	98	34.9	+12	09.5
1	268	50.0	196	34.5		19.3	131	26.7		51.2	335	48.3		51.8	113	37.2		09.4
2	283	52.5	211	33.6		19.8	146	27.8		50.7	350	51.0		51.8	128	39.5		09.4
3	298	55.0	226	32.8		20.2	161	28.8		50.3	5	53.7		51.9	143	41.9		09.3
4	313	57.4	241	32.0		20.7	176	29.9		49.8	20	56.3		51.9	158	44.2		09.2
5	328	59.9	256	31.2	+22	21.2	191	30.9	+17	49.4	35	59.0	-21	52.0	173	46.5	+12	09.2
6	344	02.4	271	30.4	+22	21.6	206	31.9	+17	48.9	51	01.7	-21	52.0	188	48.9	+12	09.1
7	359	04.8	286	29.5		22.1	221	33.0		48.5	66	04.4		52.0	203	51.2		09.1
8	14	07.3	301	28.7		22.6	236	34.0		48.0	81	07.0		52.1	218	53.5		09.0
9	29	09.8	316	27.9		23.0	251	35.1		47.6	96	09.7		52.1	233	55.9		09.0
10	44	12.2	331	27.1		23.5	266	36.1		47.2	111	12.4		52.1	248	58.2		08.9
11	59	14.7	346	26.2	+22	23.9	281	37.2	+17	46.7	126	15.1	-21	52.2	264	00.5	+12	08.9
12	74	17.1	1	25.4	+22	24.4	296	38.2	+17	46.3	141	17.7	-21	52.2	279	02.9	+12	08.8
13	89	19.6	16	24.6		24.9	311	39.3		45.8	156	20.4		52.3	294	05.2		08.8
14	104	22.1	31	23.8		25.3	326	40.3		45.4	171	23.1		52.3	309	07.5		08.7
15	119	24.5	46	23.0		25.8	341	41.3		44.9	186	25.8		52.3	324	09.9		08.6
16	134	27.0	61	22.1		26.2	356	42.4		44.5	201	28.5		52.4	339	12.2		08.6
17	149	29.5	76	21.3	+22	26.7	11	43.4	+17	44.0	216	31.1	-21	52.4	354	14.5	+12	08.5
18	164	31.9	91	20.5	+22	27.1	26	44.5	+17	43.6	231	33.8	-21	52.4	9	16.9	+12	08.5
19	179	34.4	106	19.7		27.6	41	45.5		43.1	246	36.5		52.5	24	19.2		08.4
20	194	36.9	121	18.8		28.0	56	46.6		42.7	261	39.2		52.5	39	21.5		08.4
21	209	39.3	136	18.0		28.5	71	47.6		42.2	276	41.9		52.6	54	23.9		08.3
22	224	41.8	151	17.2		28.9	86	48.6		41.8	291	44.5		52.6	69	26.2		08.3
23	239	44.3	166	16.3		29.4	101	49.7		41.3	306	47.2		52.6	84	28.5		08.2
24	254	46.7	181	15.5	+22	29.8	116	50.7	+17	40.9	321	49.9	-21	52.7	99	30.8	+12	08.1
Dif	—		-8		+5		+10		-4		+27		0		+23		-1	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 2 ^d 2 PHE { 4 ^h : 60 ^h 3 12 ^h : 60 ^h 0 20 ^h : 59 ^h 8										
	PMG: 11 ^h 58 ^m 7			SD: 16 ^h 5 PMG: 14 ^h 51 ^m R°: 56 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	180	20.2	+22 40.2	146	19.9	+25 12.9	74	60 N	21 16	22 49	** **	5 00 110	** **	** **
1	195	20.1	40.4	160	42.4	+25 05.5	74	58	20 57	22 08	** **	23 102	23 47	11
2	210	20.0	40.7	175	05.1	+24 57.9	76	56	41	21 41	** **	41 97	34	15
3	225	19.9	40.9	189	27.8	50.1	78	54	27	20	22 55	5 56 93	22	19
4	240	19.8	41.2	203	50.7	42.2	79	52	16	21 03	22 17	6 09 90	12	21
5	255	19.6	+22 41.4	218	13.7	+24 34.2	80	50	20 05	20 49	21 52	6 21 87	23	02 25
6	270	19.5	+22 41.7	232	36.9	+24 25.9	83	45	19 44	20 21	21 09	6 45 81	22	42 31
7	285	19.4	41.9	247	00.1	17.5	84	40	26	19 59	20 40	7 04 77	26	35
8	300	19.3	42.2	261	23.5	09.0	85	35	19 12	41	20 18	20 73	13	38
9	315	19.2	42.4	275	47.1	+24 00.3	87	30	18 59	26	19 59	34 70	22	01 41
10	330	19.1	42.7	290	10.8	+23 51.4	89	20	38	19 02	31	7 58 65	21	40 46
11	345	19.0	+22 42.9	304	34.6	+23 42.4	90	10 N	18 19	18 42	19 09	8 18 61	21	22 51
12	0	18.8	+22 43.2	318	58.5	+23 33.2	92	0	18 02	18 25	18 51	8 37 57	21	05 55
13	15	18.7	43.4	333	22.6	23.9	93	10 S	17 46	18 08	34	8 55 54	20	48 59
14	30	18.6	43.7	347	46.8	14.5	94	20	28	17 51	19	9 15 50	29	64
15	45	18.5	43.9	2	11.2	+23 04.9	96	30	17 07	33	18 03	39 45	20	08 69
16	60	18.4	44.2	16	35.7	+22 55.1	98	35	16 55	23	17 55	9 52 42	19	55 72
17	75	18.3	+22 44.4	31	00.3	+22 45.2	99	40	16 41	17 12	17 46	10 08 38	19	41 75
18	90	18.1	+22 44.7	45	25.1	+22 35.2	100	45	16 25	16 59	17 36	10 26 34	19	23 81
19	105	18.0	44.9	59	50.0	25.1	101	50	16 05	43	25	10 49 29	19	02 86
20	120	17.9	45.1	74	15.0	14.8	103	52	15 56	36	20	11 00 26	18	51 90
21	135	17.8	45.4	88	40.2	+22 04.4	104	54	45	28	14	12 23	40	92
22	150	17.7	45.6	103	05.5	+21 53.9	105	56	33	20	08	26 19	26	97
23	165	17.5	45.9	117	31.0	43.2	107	58	19	16 10	17 02	11 43 13	18	10 103
24	180	17.4	+22 46.1	131	56.6	+21 32.4	108	60 S	15 03	15 59	16 55	12 02 7	17	51 109
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 6 ^h 59 ^m 7		Mag: -4.0 PMG: 11 ^h 56 ^m			Mag: +1.5 PMG: 16 ^h 11 ^m			Mag: -2.6 PMG: 2 ^h 32 ^m			Mag: +0.7 PMG: 17 ^h 19 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	254	46.7	181 15.5	+22 29.8	116 50.7	+17 40.9	321 49.9	-21 52.7	99 30.8	+12 08.1				
1	269	49.2	196 14.7	30.3	131 51.8	40.4	336 52.6	52.7	114 33.2	08.1				
2	284	51.6	211 13.9	30.7	146 52.8	40.0	351 55.3	52.7	129 35.5	08.0				
3	299	54.1	226 13.0	31.2	161 53.9	39.6	6 57.9	52.8	144 37.8	08.0				
4	314	56.6	241 12.2	31.6	176 54.9	39.1	22 00.6	52.8	159 40.2	07.9				
5	329	59.0	256 11.4	+22 32.0	191 56.0	+17 38.7	37 03.3	-21 52.9	174 42.5	+12 07.9				
6	345	01.5	271 10.5	+22 32.5	206 57.0	+17 38.2	52 06.0	-21 52.9	189 44.8	+12 07.8				
7	0	04.0	286 09.7	32.9	221 58.0	37.8	67 08.7	52.9	204 47.2	07.8				
8	15	06.4	301 08.9	33.3	236 59.1	37.3	82 11.3	53.0	219 49.5	07.7				
9	30	08.9	316 08.1	33.8	252 00.1	36.9	97 14.0	53.0	234 51.8	07.6				
10	45	11.4	331 07.2	34.2	267 01.2	36.4	112 16.7	53.0	249 54.1	07.6				
11	60	13.8	346 06.4	+22 34.7	282 02.2	+17 36.0	127 19.4	-21 53.1	264 56.5	+12 07.5				
12	75	16.3	1 05.6	+22 35.1	297 03.3	+17 35.5	142 22.1	-21 53.1	279 58.8	+12 07.5				
13	90	18.8	16 04.7	35.5	312 04.3	35.1	157 24.8	53.2	295 01.1	07.4				
14	105	21.2	31 03.9	35.9	327 05.4	34.6	172 27.4	53.2	310 03.5	07.4				
15	120	23.7	46 03.1	36.4	342 06.4	34.2	187 30.1	53.2	325 05.8	07.3				
16	135	26.1	61 02.2	36.8	357 07.4	33.7	202 32.8	53.3	340 08.1	07.3				
17	150	28.6	76 01.4	+22 37.2	12 08.5	+17 33.2	217 35.5	-21 53.3	355 10.5	+12 07.2				
18	165	31.1	91 00.6	+22 37.7	27 09.5	+17 32.8	232 38.2	-21 53.4	10 12.8	+12 07.1				
19	180	33.5	105 59.7	38.1	42 10.6	32.3	247 40.9	53.4	25 15.1	07.1				
20	195	36.0	120 58.9	38.5	57 11.6	31.9	262 43.6	53.4	40 17.4	07.0				
21	210	38.5	135 58.1	38.9	72 12.7	31.4	277 46.2	53.5	55 19.8	07.0				
22	225	40.9	150 57.2	39.3	87 13.7	31.0	292 48.9	53.5	70 22.1	06.9				
23	240	43.4	165 56.4	39.8	102 14.8	30.5	307 51.6	53.5	85 24.4	06.9				
24	255	45.9	180 55.6	+22 40.2	117 15.8	+17 30.1	322 54.3	-21 53.6	100 26.7	+12 06.8				
Dif	—		-8	+4	+10	-5	+27	0	+23	-1				

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna														
	SD: 15 ^h 8 PMG: 11 ^h 58 ^m 9			Edad: 3 ^d 2 PHE { 4 ^h : 59 ^h 5 12 ^h : 59 ^h 2 20 ^h : 58 ^h 9 R°: 51 ^m																							
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°												
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m											
0	180	17.4	+22	46.1	131	56.6	+21	32.4	60 N	** **	1 09	2 41	6 50	105	0 03	5											
1	195	17.3		46.3	146	22.4	68	21.5	58	** **	1 49	3 01	7 05	99	23 58	7											
2	210	17.2		46.6	160	48.2	68	+21 10.5	56	** **	2 16	16	18 94		49 10												
3	225	17.1		46.8	175	14.3	71	+20 59.4	54	1 03	37	30	29 90		41 13												
4	240	17.0		47.0	189	40.4	71	48.1	52	1 40	2 54	42	39 87		33 17												
5	255	16.8	+22	47.3	204	06.7	73	+20 36.8	50	2 05	3 08	3 52	7 48	84	23 27	19											
6	270	16.7	+22	47.5	218	33.2	75	+20 25.3	45	2 48	3 37	4 14	8 06	78	23 13	24											
7	285	16.6		47.8	232	59.8	76	13.7	40	3 18	3 59	31	21 73		23 01	28											
8	300	16.5		48.0	247	26.5	77	+20 02.0	35	40	4 16	46	33 70		22 51	31											
9	315	16.4		48.2	261	53.3	78	+19 50.2	30	3 58	31	4 58	8 44	67	42 35												
10	330	16.2		48.4	276	20.3	80	38.4	20	4 26	4 55	5 20	9 03	61	26 41												
11	345	16.1	+22	48.7	290	47.5	82	+19 26.4	10 N	4 48	5 15	5 38	9 19	57	22 13	45											
12	0	16.0	+22	48.9	305	14.7	82	+19 14.3	0	5 07	5 33	5 55	9 34	52	22 00	49											
13	15	15.9		49.1	319	42.1	84	+19 02.1	10 S	23	5 49	6 12	9 49	48	21 47	54											
14	30	15.8		49.4	334	09.7	86	+18 49.8	20	39	6 06	30	10 05	43	33 59												
15	45	15.7		49.6	348	37.3	86	37.5	30	5 55	25	6 51	24 37		17 64												
16	60	15.5		49.8	3	05.1	88	25.0	35	6 03	35	7 03	34 35		21 07	68											
17	75	15.4	+22	50.1	17	33.1	90	+18 12.5	40	6 12	6 46	7 16	10 46	31	20 56	72											
18	90	15.3	+22	50.3	32	01.1	90	+17 59.8	45	6 22	6 59	7 33	11 00	27	20 44	76											
19	105	15.2		50.5	46	29.3	92	47.1	50	33	7 15	7 53	18 21		28 82												
20	120	15.1		50.7	60	57.6	93	34.3	52	38	22	8 02	26 18		21 84												
21	135	14.9		51.0	75	26.1	95	21.5	54	44	30	13	35 15		12 88												
22	150	14.8		51.2	89	54.7	96	+17 08.5	56	50	38	25	45 12		20 03	92											
23	165	14.7		51.4	104	23.4	97	+16 55.5	58	6 56	48	39	11 56	8	19 53	95											
24	180	14.6	+22	51.6	118	52.2	98	+16 42.4	60 S	7 03	7 59	8 56	12 09	3	19 40	101											
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO														
	PMG: 6 ^h 55 ^m 8			Mag: -4.0 PMG: 11 ^h 57 ^m			Mag: +1.5 PMG: 16 ^h 10 ^m			Mag: -2.6 PMG: 2 ^h 28 ^m			Mag: +0.7 PMG: 17 ^h 16 ^m														
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec													
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'											
0	255	45.9	180	55.6	+22	40.2	117	15.8	+17	30.1	322	54.3	-21	53.6	100	26.7	+12	06.8									
1	270	48.3	195	54.7		40.6	132	16.8		29.6	337	57.0		53.6	115	29.1		06.7									
2	285	50.8	210	53.9		41.0	147	17.9		29.2	352	59.7		53.7	130	31.4		06.7									
3	300	53.2	225	53.0		41.4	162	18.9		28.7	8	02.4		53.7	145	33.7		06.6									
4	315	55.7	240	52.2		41.8	177	20.0		28.3	23	05.1		53.7	160	36.1		06.6									
5	330	58.2	255	51.4	+22	42.3	192	21.0	+17	27.8	38	07.7	-21	53.8	175	38.4	+12	06.5									
6	346	00.6	270	50.5	+22	42.7	207	22.1	+17	27.4	53	10.4	-21	53.8	190	40.7	+12	06.5									
7	1	03.1	285	49.7		43.1	222	23.1		26.9	68	13.1		53.9	205	43.0		06.4									
8	16	05.6	300	48.9		43.5	237	24.1		26.5	83	15.8		53.9	220	45.4		06.3									
9	31	08.0	315	48.0		43.9	252	25.2		26.0	98	18.5		53.9	235	47.7		06.3									
10	46	10.5	330	47.2		44.3	267	26.2		25.5	113	21.2		54.0	250	50.0		06.2									
11	61	13.0	345	46.3	+22	44.7	282	27.3	+17	25.1	128	23.9	-21	54.0	265	52.3	+12	06.2									
12	76	15.4	0	45.5	+22	45.1	297	28.3	+17	24.6	143	26.6	-21	54.1	280	54.7	+12	06.1									
13	91	17.9	15	44.7		45.5	312	29.4		24.2	158	29.3		54.1	295	57.0		06.1									
14	106	20.4	30	43.8		45.9	327	30.4		23.7	173	31.9		54.1	310	59.3		06.0									
15	121	22.8	45	43.0		46.3	342	31.5		23.3	188	34.6		54.2	326	01.6		05.9									
16	136	25.3	60	42.1		46.7	357	32.5		22.8	203	37.3		54.2	341	04.0		05.9									
17	151	27.7	75	41.3	+22	47.1	12	33.5	+17	22.4	218	40.0	-21	54.2	356	06.3	+12	05.8									
18	166	30.2	90	40.5	+22	47.5	27	34.6	+17	21.9	233	42.7	-21	54.3	11	08.6	+12	05.8									
19	181	32.7	105	39.6		47.9	42	35.6		21.4	248	45.4		54.3	26	10.9		05.7									
20	196	35.1	120	38.8		48.3	57	36.7		21.0	263	48.1		54.4	41	13.3		05.7									
21	211	37.6	135	37.9		48.7	72	37.7		20.5	278	50.8		54.4	56	15.6		05.6									
22	226	40.1	150	37.1		49.1	87	38.8		20.1	293	53.5		54.4	71	17.9		05.5									
23	241	42.5	165	36.3		49.5	102	39.8		19.6	308	56.2		54.5	86	20.2		05.5									
24	256	45.0	180	35.4	+22	49.9	117	40.9	+17	19.2	323	58.9	-21	54.5	101	22.6	+12	05.4									
Dif	—			-8			+4			+10			-5			+27			0			+23			-1		

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 : 58 ^h /5 12 ^h : 58 ^h /2 20 ^h : 57 ^h /9										
	PMG: 11 ^h 59 ^m 1					SD: 16 ^h 0			PMG: 16 ^h 38 ^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	14.6	+22 51.6	118	52.2	+16 42.4		60 N	21 19	22 54	** **	8 35 96	0 08 3		
1	195	14.5		133	21.2 ¹⁰⁰	29.2 ¹³²		58	20 59	22 11	** **	44 92	** ** *		
2	210	14.3	52.1	147	50.3 ¹⁰¹	16.0 ¹³²		56	43	21 44	** **	52 88	23 59 8		
3	225	14.2	52.3	162	19.5 ¹⁰²	+16 02.7 ¹³³		54	29	23	23 00	8 59 85	54 11		
4	240	14.1	52.5	176	48.8 ¹⁰³	+15 49.3 ¹³⁴		52	17	21 05	22 20	9 06 82	50 13		
5	255	14.0	+22 52.7	191	18.2 ¹⁰⁴	+15 35.9 ¹³⁴		50	20 07	20 51	21 55	9 12 79	23 46 15		
6	270	13.8	+22 52.9	205	47.8 ¹⁰⁶	+15 22.4 ¹³⁵		45	19 45	20 22	21 11	9 24 74	23 37 20		
7	285	13.7	53.2	220	17.5 ¹⁰⁷	+15 08.8 ¹³⁶		40	27	20 00	20 41	34 70	29 24		
8	300	13.6	53.4	234	47.3 ¹⁰⁸	+14 55.2 ¹³⁶		35	13	19 42	19	43 66	22 28		
9	315	13.5	53.6	249	17.2 ¹⁰⁹	41.5 ¹³⁷		30	19 00	27	20 01	9 51 62	17 31		
10	330	13.4	53.8	263	47.2 ¹¹⁰	27.8 ¹³⁷		20	18 39	19 03	19 32	10 04 57	23 07 36		
11	345	13.2	+22 54.0	278	17.4 ¹¹²	+14 14.0 ¹³⁸		10 N	18 20	18 43	19 10	10 16 51	22 58 41		
12	0	13.1	+22 54.2	292	47.6 ¹¹²	+14 00.1 ¹³⁹		0	18 03	18 25	18 51	10 26 48	22 49 46		
13	15	13.0	54.5	307	18.0 ¹¹⁴	+13 46.2 ¹³⁹		10 S	17 46	18 08	35	37 43	41 50		
14	30	12.9	54.7	321	48.5 ¹¹⁵	32.3 ¹³⁹		20	28	17 52	19	10 48 38	32 55		
15	45	12.8	54.9	336	19.0 ¹¹⁵	18.3 ¹⁴⁰		30	17 07	33	18 03	11 01 33	21 61		
16	60	12.6	55.1	350	49.7 ¹¹⁷	+13 04.3 ¹⁴⁰		35	16 55	23	17 54	09 29	15 64		
17	75	12.5	+22 55.3	5	20.5 ¹¹⁸	+12 50.2 ¹⁴¹		40	16 41	17 11	17 45	11 17 26	22 08 67		
18	90	12.4	+22 55.5	19	51.4 ¹¹⁹	+12 36.1 ¹⁴¹		45	16 25	16 58	17 35	11 27 21	22 00 72		
19	105	12.3	55.7	34	22.4 ¹²⁰	21.9 ¹⁴²		50	16 05	43	24	39 16	21 50 77		
20	120	12.1	55.9	48	53.5 ¹²¹	+12 07.7 ¹⁴²		52	15 55	36	19	44 14	45 80		
21	135	12.0	56.1	63	24.7 ¹²²	+11 53.5 ¹⁴²		54	44	28	13	50 11	40 83		
22	150	11.9	56.3	77	56.0 ¹²³	39.2 ¹⁴³		56	32	19	08	11 57 8	35 85		
23	165	11.8	56.5	92	27.4 ¹²⁴	24.9 ¹⁴³		58	18	16 09	17 01	12 04 5	28 89		
24	180	11.7	+22 56.8	106	58.9 ¹²⁵	+11 10.5 ¹⁴⁴		60 S	15 01	15 58	16 54	12 12 2	21 21 93		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 6 ^h 51 ^m 9		Mag: -4.0 PMG: 11 ^h 58 ^m		Mag: +1.5 PMG: 16 ^h 08 ^m		Mag: -2.7 PMG: 2 ^h 24 ^m		Mag: +0.7 PMG: 17 ^h 12 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	256	45.0	180	35.4	+22 49.9	117 40.9	+17 19.2	323 58.9	-21 54.5	101 22.6	+12 05.4
1	271	47.5	195	34.6	50.3	132 41.9	18.7	339 01.6	54.6	116 24.9	05.4
2	286	49.9	210	33.7	50.7	147 42.9	18.3	354 04.3	54.6	131 27.2	05.3
3	301	52.4	225	32.9	51.1	162 44.0	17.8	9 07.0	54.6	146 29.5	05.2
4	316	54.9	240	32.0	51.5	177 45.0	17.3	24 09.6	54.7	161 31.8	05.2
5	331	57.3	255	31.2	+22 51.8	192 46.1	+17 16.9	39 12.3	-21 54.7	176 34.2	+12 05.1
6	346	59.8	270	30.4	+22 52.2	207 47.1	+17 16.4	54 15.0	-21 54.8	191 36.5	+12 05.1
7	2	02.2	285	29.5	52.6	222 48.2	16.0	69 17.7	54.8	206 38.8	05.0
8	17	04.7	300	28.7	53.0	237 49.2	15.5	84 20.4	54.8	221 41.1	05.0
9	32	07.2	315	27.8	53.4	252 50.2	15.0	99 23.1	54.9	236 43.5	04.9
10	47	09.6	330	27.0	53.8	267 51.3	14.6	114 25.8	54.9	251 45.8	04.8
11	62	12.1	345	26.1	+22 54.1	282 52.3	+17 14.1	129 28.5	-21 55.0	266 48.1	+12 04.8
12	77	14.6	0	25.3	+22 54.5	297 53.4	+17 13.7	144 31.2	-21 55.0	281 50.4	+12 04.7
13	92	17.0	15	24.4	54.9	312 54.4	13.2	159 33.9	55.0	296 52.8	04.7
14	107	19.5	30	23.6	55.3	327 55.5	12.7	174 36.6	55.1	311 55.1	04.6
15	122	22.0	45	22.8	55.6	342 56.5	12.3	189 39.3	55.1	326 57.4	04.5
16	137	24.4	60	21.9	56.0	357 57.6	11.8	204 42.0	55.2	341 59.7	04.5
17	152	26.9	75	21.1	+22 56.4	12 58.6	+17 11.4	219 44.7	-21 55.2	357 02.0	+12 04.4
18	167	29.4	90	20.2	+22 56.8	27 59.6	+17 10.9	234 47.4	-21 55.2	12 04.4	+12 04.4
19	182	31.8	105	19.4	57.1	43 00.7	10.4	249 50.1	55.3	27 06.7	04.3
20	197	34.3	120	18.5	57.5	58 01.7	10.0	264 52.8	55.3	42 09.0	04.2
21	212	36.7	135	17.7	57.9	73 02.8	09.5	279 55.5	55.4	57 11.3	04.2
22	227	39.2	150	16.9	58.3	88 03.8	09.1	294 58.2	55.4	72 13.6	04.1
23	242	41.7	165	16.0	58.6	103 04.9	08.6	310 00.9	55.4	87 16.0	04.1
24	257	44.1	180	15.1	+22 59.0	118 05.9	+17 08.1	325 03.6	-21 55.5	102 18.3	+12 04.0
Dif	—		-8		+4	+10	-5	+27	0	+23	-1

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna		
	SD: 15 ^h 8 PMG: 11 ^h 59 ^m 3				Edad: 5 ^d 2 PHE { 4 ^h : 57 ^m 6 12 ^h : 57 ^m 3 20 ^h : 57 ^m 0 PMG: 17 ^h 24 ^m R°: 44 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	180	11.7	+22	56.8	106	58.9	+11	10.5	60 N	**	**	1	04	2	40	10	11	89
1	195	11.5		57.0	121	30.5 ¹²⁶	+10	56.1 ¹⁴⁴	58	**	**	1	47	2	59	16	86	0
2	210	11.4		57.2	136	02.2 ¹²⁷		41.7 ¹⁴⁴	56	**	**	2	14	3	15	20	83	**
3	225	11.3		57.4	150	34.0 ¹²⁸		27.3 ¹⁴⁴	54	0	58	36	29	24	80	**	**	**
4	240	11.2		57.6	165	05.8 ¹²⁸	+10	12.8 ¹⁴⁵	52	1	38	2	53	41	28	77	**	**
5	255	11.0	+22	57.8	179	37.8 ¹³⁰	+9	58.3 ¹⁴⁵	50	2	04	3	07	3	51	10	31	75
6	270	10.9	+22	58.0	194	09.8 ¹³⁰	+9	43.8 ¹⁴⁵	45	2	47	3	36	4	13	10	38	70
7	285	10.8		58.2	208	42.0 ¹³²		29.2 ¹⁴⁶	40	3	17	3	58	31	44	65	53	22
8	300	10.7		58.4	223	14.2 ¹³²	+9	14.6 ¹⁴⁶	35	40	4	16	46	49	62	50	26	
9	315	10.5		58.6	237	46.5 ¹³³	+9	00.0 ¹⁴⁶	30	3	58	31	4	58	10	53	59	48
10	330	10.4		58.8	252	18.9 ¹³⁴	+8	45.4 ¹⁴⁶	20	4	26	4	55	5	20	11	01	53
11	345	10.3	+22	59.0	266	51.3 ¹³⁴	+8	30.8 ¹⁴⁶	10 N	4	48	5	15	5	38	11	07	49
12	0	10.2	+22	59.2	281	23.9 ¹³⁶	+8	16.1 ¹⁴⁷	0	5	07	5	33	5	56	11	14	43
13	15	10.0		59.4	295	56.5 ¹³⁶	+8	01.4 ¹⁴⁷	10 S	24	5	50	6	13	20	39	31	47
14	30	09.9		59.6	310	29.2 ¹³⁷	+7	46.8 ¹⁴⁶	20	40	6	07	31	26	35	27	52	
15	45	09.8		59.7	325	01.9 ¹³⁷		32.0 ¹⁴⁸	30	5	56	25	6	52	34	29	22	57
16	60	09.7	+22	59.9	339	34.8 ¹³⁹		17.3 ¹⁴⁷	35	6	04	36	7	04	38	26	19	60
17	75	09.6	+23	00.1	354	07.7 ¹³⁹	+7	02.6 ¹⁴⁷	40	6	13	6	47	7	18	11	43	23
18	90	09.4	+23	00.3	8	40.7 ¹⁴⁰	+6	47.9 ¹⁴⁷	45	6	23	7	00	7	34	11	48	19
19	105	09.3		00.5	23	13.7 ¹⁴⁰		33.1 ¹⁴⁸	50	35	16	7	54	7	54	55	14	07
20	120	09.2		00.7	37	46.8 ¹⁴¹		18.3 ¹⁴⁸	52	40	23	8	04	11	58	12	05	76
21	135	09.1		00.9	52	20.0 ¹⁴²	+6	03.6 ¹⁴⁷	54	45	31	15	12	01	10	03	78	
22	150	08.9		01.1	66	53.3 ¹⁴³	+5	48.8 ¹⁴⁸	56	51	40	27	05	7	23	00	81	
23	165	08.8		01.3	81	26.6 ¹⁴³		34.0 ¹⁴⁸	58	6	58	7	50	41	09	4	22	57
24	180	08.7	+23	01.5	96	00.0 ¹⁴⁴	+5	19.2 ¹⁴⁸	60 S	7	05	8	01	8	58	12	14	0

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 6 ^h 47 ^m 9		Mag: -4.0 PMG: 12 ^h 00 ^m		Mag: +1.5 PMG: 16 ^h 06 ^m		Mag: -2.7 PMG: 2 ^h 19 ^m		Mag: +0.7 PMG: 17 ^h 08 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	257	44.1	180	15.1	+22	59.0	118	05.9	+17	08.1
1	272	46.6	195	14.3		59.4	133	07.0		07.7
2	287	49.1	210	13.4	+22	59.7	148	08.0		07.2
3	302	51.5	225	12.5	+23	00.1	163	09.0		06.8
4	317	54.0	240	11.7		00.5	178	10.1		06.3
5	332	56.5	255	10.8	+23	00.8	193	11.1	+17	05.8
6	347	58.9	270	09.9	+23	01.2	208	12.2	+17	05.4
7	3	01.4	285	09.1		01.5	223	13.2		04.9
8	18	03.8	300	08.2		01.9	238	14.3		04.4
9	33	06.3	315	07.3		02.3	253	15.3		04.0
10	48	08.8	330	06.5		02.6	268	16.4		03.5
11	63	11.2	345	05.6	+23	02.9	283	17.4	+17	03.1
12	78	13.7	0	04.8	+23	03.3	298	18.4	+17	02.6
13	93	16.2	15	03.9		03.6	313	19.5		02.1
14	108	18.6	30	03.1		04.0	328	20.5		01.7
15	123	21.1	45	02.2		04.3	343	21.6		01.2
16	138	23.6	60	01.4		04.7	358	22.6		00.7
17	153	26.0	75	00.5	+23	05.0	13	23.7	+17	00.3
18	168	28.5	89	59.7	+23	05.3	28	24.7	+16	59.8
19	183	31.0	104	58.8		05.7	43	25.7		59.3
20	198	33.4	119	57.9		06.0	58	26.8		58.9
21	213	35.9	134	57.1		06.4	73	27.8		58.4
22	228	38.3	149	56.2		06.7	88	28.9		57.9
23	243	40.8	164	55.4		07.0	103	29.9		57.5
24	258	43.3	179	54.5	+23	07.4	118	31.0	+16	57.0
Dif	—		-9		+3		+10		-5	

+27		0		+23		-1	

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 11 ^h 59 ^m 5			Edad: 6 ^d 2 SD: 15 ^h 5 PMG: 18 ^h 08 ^m	PHE { 4 ^h : 56 ^m 7 12 ^h : 56 ^m 4 20 ^h : 56 ^m 2 R°: 41 ^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	08.7	+23 01.5	96	00.0	+5 19.2	60 N	21 21	23 00	** **	11 40 87	0 12 1		
1	195	08.6		110	33.4 ¹⁴⁴	+5 04.4 ¹⁴⁸	58	21 01	22 15	** **	42 82	09 4		
2	210	08.4	01.8	125	06.9 ¹⁴⁵	+4 49.7 ¹⁴⁷	56	20 45	21 46	** **	43 80	07 6		
3	225	08.3	02.0	139	40.5 ¹⁴⁶	34.9 ¹⁴⁸	54	31	25	23 05	44 77	05 9		
4	240	08.2	02.2	154	14.1 ¹⁴⁶	20.1 ¹⁴⁸	52	19	21 07	22 23	45 74	03 11		
5	255	08.1	+23 02.4	168	47.7 ¹⁴⁶	+4 05.3 ¹⁴⁸	50	20 08	20 52	21 57	11 46 72	0 01 13		
6	270	07.9	+23 02.6	183	21.5 ¹⁴⁸	+3 50.5 ¹⁴⁸	45	19 46	20 23	21 13	11 48 67	** ** *		
7	285	07.8	02.8	197	55.2 ¹⁴⁷	35.7 ¹⁴⁸	40	28	20 01	20 43	49 63	** ** *		
8	300	07.7	03.0	212	29.1 ¹⁴⁹	20.9 ¹⁴⁸	35	14	19 43	20	51 59	** ** *		
9	315	07.5	03.1	227	02.9 ¹⁴⁸	+3 06.1 ¹⁴⁸	30	19 01	28	20 01	52 56	** ** *		
10	330	07.4	03.3	241	36.9 ¹⁵⁰	+2 51.3 ¹⁴⁸	20	18 39	19 04	19 33	54 51	** ** *		
11	345	07.3	+23 03.5	256	10.8 ¹⁴⁹	+2 36.6 ¹⁴⁷	10 N	18 21	18 44	19 11	11 56 46	** ** *		
12	0	07.2	+23 03.7	270	44.8 ¹⁵⁰	+2 21.8 ¹⁴⁸	0	18 03	18 26	18 52	11 57 42	** ** *		
13	15	07.0	03.9	285	18.9 ¹⁵¹	+2 07.1 ¹⁴⁷	10 S	17 46	18 09	35	11 59 38	** ** *		
14	30	06.9	04.0	299	53.0 ¹⁵¹	+1 52.3 ¹⁴⁸	20	28	17 52	19	12 01 33	** ** *		
15	45	06.8	04.2	314	27.1 ¹⁵¹	37.6 ¹⁴⁷	30	17 07	33	18 03	03 28	** ** *		
16	60	06.7	04.4	329	01.3 ¹⁵²	22.8 ¹⁴⁸	35	16 55	23	17 54	04 25	** ** *		
17	75	06.5	+23 04.6	343	35.5 ¹⁵²	+1 08.1 ¹⁴⁷	40	16 41	17 11	17 45	12 06 21	** ** *		
18	90	06.4	+23 04.7	358	09.8 ¹⁵³	+0 53.4 ¹⁴⁷	45	16 24	16 58	17 35	12 07 18	** ** *		
19	105	06.3	04.9	12	44.1 ¹⁵³	38.7 ¹⁴⁷	50	16 04	42	24	09 13	** ** *		
20	120	06.2	05.1	27	18.4 ¹⁵³	24.1 ¹⁴⁶	52	15 54	35	18	10 11	** ** *		
21	135	06.0	05.3	41	52.8 ¹⁵⁴	+0 09.4 ¹⁴⁷	54	43	27	13	11 9	** ** *		
22	150	05.9	05.4	56	27.2 ¹⁵⁴	-0 05.2 ¹⁴⁶	56	31	18	07	12 6	** ** *		
23	165	05.8	05.6	71	01.6 ¹⁵⁴	19.9 ¹⁴⁷	58	17	16 08	17 00	13 4	** ** *		
24	180	05.7	+23 05.8	85	36.1 ¹⁵⁵	-0 34.5 ¹⁴⁶	60 S	15 00	15 57	16 53	12 14 1	** ** *		
UT	ARIES		VENUS			MARTE			JÚPITER		SATURNO			
	PMG: 6 ^h 44 ^m 0		Mag: -4.0 PMG: 12 ^h 01 ^m			Mag: +1.5 PMG: 16 ^h 05 ^m			Mag: -2.7 PMG: 2 ^h 15 ^m		Mag: +0.7 PMG: 17 ^h 04 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec	hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	'	°	°	'	
0	258	43.3	179 54.5	+23 07.4		118 31.0	+16 57.0		326 08.5	-21 56.5	103 13.9	+12 02.6		
1	273	45.7	194 53.7	07.7		133 32.0	56.5		341 11.2	56.5	118 16.2	02.5		
2	288	48.2	209 52.8	08.0		148 33.1	56.1		356 13.9	56.5	133 18.6	02.4		
3	303	50.7	224 52.0	08.4		163 34.1	55.6		11 16.6	56.6	148 20.9	02.4		
4	318	53.1	239 51.1	08.7		178 35.1	55.1		26 19.3	56.6	163 23.2	02.3		
5	333	55.6	254 50.2	+23 09.0		193 36.2	+16 54.7		41 22.0	-21 56.7	178 25.5	+12 02.3		
6	348	58.1	269 49.4	+23 09.4		208 37.2	+16 54.2		56 24.7	-21 56.7	193 27.8	+12 02.2		
7	4	00.5	284 48.5	09.7		223 38.3	53.7		71 27.4	56.8	208 30.1	02.1		
8	19	03.0	299 47.7	10.0		238 39.3	53.3		86 30.1	56.8	223 32.5	02.1		
9	34	05.5	314 46.8	10.3		253 40.4	52.8		101 32.8	56.8	238 34.8	02.0		
10	49	07.9	329 45.9	10.7		268 41.4	52.3		116 35.6	56.9	253 37.1	02.0		
11	64	10.4	344 45.1	+23 11.0		283 42.5	+16 51.9		131 38.3	-21 56.9	268 39.4	+12 01.9		
12	79	12.8	359 44.2	+23 11.3		298 43.5	+16 51.4		146 41.0	-21 57.0	283 41.7	+12 01.8		
13	94	15.3	14 43.4	11.6		313 44.5	50.9		161 43.7	57.0	298 44.0	01.8		
14	109	17.8	29 42.5	11.9		328 45.6	50.5		176 46.4	57.0	313 46.3	01.7		
15	124	20.2	44 41.6	12.3		343 46.6	50.0		191 49.1	57.1	328 48.7	01.6		
16	139	22.7	59 40.8	12.6		358 47.7	49.5		206 51.8	57.1	343 51.0	01.6		
17	154	25.2	74 39.9	+23 12.9		13 48.7	+16 49.1		221 54.5	-21 57.2	358 53.3	+12 01.5		
18	169	27.6	89 39.1	+23 13.2		28 49.8	+16 48.6		236 57.2	-21 57.2	13 55.6	+12 01.5		
19	184	30.1	104 38.2	13.5		43 50.8	48.1		252 00.0	57.3	28 57.9	01.4		
20	199	32.6	119 37.3	13.8		58 51.9	47.7		267 02.7	57.3	44 00.2	01.3		
21	214	35.0	134 36.5	14.1		73 52.9	47.2		282 05.4	57.3	59 02.5	01.3		
22	229	37.5	149 35.6	14.5		88 53.9	46.7		297 08.1	57.4	74 04.9	01.2		
23	244	39.9	164 34.7	14.8		103 55.0	46.3		312 10.8	57.4	89 07.2	01.2		
24	259	42.4	179 33.9	+23 15.1		118 56.0	+16 45.8		327 13.5	-21 57.5	104 09.5	+12 01.1		
Dif	—		-9	+3		+10	-5		+27	0	+23	-1		

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8 PMG: 11 ^h 59 ^m 7			Edad: 7 ^d 2 PHE { SD: 15 ^h 3 PMG: 18 ^h 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	05.7	+23 05.8	85	36.1	-0 34.5	146	60 N	** **	1 00	2 38	13 07	85	0 13	0
1	195	05.5	06.0	100	10.6 ¹⁵⁵	-0 49.1	146	58	** **	1 45	2 58	04 82		13	4
2	210	05.4	06.1	114	45.1 ¹⁵⁵	-1 03.6	145	56	** **	2 13	3 14	03 78		13	7
3	225	05.3	06.3	129	19.6 ¹⁵⁵	18.2	146	54	0 54	34	28	13 01	75	14	9
4	240	05.1	06.5	143	54.2 ¹⁵⁶	32.7	145	52	1 36	2 52	40	12 59	73	14	11
5	255	05.0	+23 06.6	158	28.8 ¹⁵⁶	-1 47.2	145	50	2 02	3 07	3 51	12 58	71	0 14	13
6	270	04.9	+23 06.8	173	03.4 ¹⁵⁶	-2 01.7	145	45	2 47	3 36	4 13	12 55	66	0 15	18
7	285	04.8	07.0	187	38.0 ¹⁵⁶	16.2	145	40	3 17	3 58	31	52 62		15	22
8	300	04.6	07.1	202	12.7 ¹⁵⁷	30.6	144	35	39	4 16	45	50 59		16	25
9	315	04.5	07.3	216	47.4 ¹⁵⁷	45.0	144	30	3 58	31	4 58	48 56		16	28
10	330	04.4	07.5	231	22.0 ¹⁵⁶	-2 59.4	144	20	4 26	4 56	5 20	45 50		17	33
11	345	04.3	+23 07.6	245	56.7 ¹⁵⁷	-3 13.8	144	10 N	4 49	5 16	5 39	12 42	46	0 17	38
12	0	04.1	+23 07.8	260	31.5 ¹⁵⁸	-3 28.1	143	0	5 07	5 34	5 56	12 39	42	0 18	41
13	15	04.0	08.0	275	06.2 ¹⁵⁷	42.4	143	10 S	24	5 50	6 13	37 37		18	46
14	30	03.9	08.1	289	40.9 ¹⁵⁷	-3 56.7	143	20	40	6 08	32	34 33		19	50
15	45	03.7	08.3	304	15.7 ¹⁵⁸	-4 10.9	142	30	5 56	26	6 52	31 28		19	56
16	60	03.6	08.4	318	50.5 ¹⁵⁸	25.2	143	35	6 05	37	7 05	29 25		19	59
17	75	03.5	+23 08.6	333	25.2 ¹⁵⁷	-4 39.4	142	40	6 14	6 48	7 19	12 27	22	0 20	62
18	90	03.4	+23 08.8	348	00.0 ¹⁵⁸	-4 53.5	141	45	6 24	7 01	7 35	12 25	18	0 20	67
19	105	03.2	08.9	2	34.8 ¹⁵⁸	-5 07.6	141	50	36	17	7 56	22 14		21	71
20	120	03.1	09.1	17	09.6 ¹⁵⁸	21.7	141	52	41	25	8 05	21 11		21	73
21	135	03.0	09.2	31	44.4 ¹⁵⁸	35.8	141	54	47	33	16	20 9		21	76
22	150	02.8	09.4	46	19.2 ¹⁵⁸	-5 49.8	140	56	53	41	29	18 7		21	79
23	165	02.7	09.5	60	54.0 ¹⁵⁸	-6 03.8	140	58	6 59	7 51	8 43	17 3		22	81
24	180	02.6	+23 09.7	75	28.8 ¹⁵⁸	-6 17.8	140	60 S	7 06	8 03	9 00	12 15	0	0 22	85
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 6 ^h 40 ^m 1		Mag: -4.0 PMG: 12 ^h 02 ^m			Mag: +1.6 PMG: 16 ^h 03 ^m			Mag: -2.7 PMG: 2 ^h 11 ^m			Mag: +0.7 PMG: 17 ^h 01 ^m			
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°
0	259	42.4	179 33.9	+23 15.1	118 56.0	+16 45.8	327 13.5	-21 57.5	104 09.5	+12 01.1					
1	274	44.9	194 33.0	15.4	133 57.1	45.3	342 16.2	57.5	119 11.8	01.0					
2	289	47.3	209 32.2	15.7	148 58.1	44.8	357 18.9	57.5	134 14.1	01.0					
3	304	49.8	224 31.3	16.0	163 59.2	44.4	12 21.7	57.6	149 16.4	00.9					
4	319	52.3	239 30.4	16.3	179 00.2	43.9	27 24.4	57.6	164 18.7	00.8					
5	334	54.7	254 29.6	+23 16.6	194 01.3	+16 43.4	42 27.1	-21 57.7	179 21.1	+12 00.8					
6	349	57.2	269 28.7	+23 16.9	209 02.3	+16 43.0	57 29.8	-21 57.7	194 23.4	+12 00.7					
7	4	59.7	284 27.8	17.2	224 03.3	42.5	72 32.5	57.8	209 25.7	00.7					
8	20	02.1	299 27.0	17.5	239 04.4	42.0	87 35.2	57.8	224 28.0	00.6					
9	35	04.6	314 26.1	17.8	254 05.4	41.5	102 37.9	57.8	239 30.3	00.5					
10	50	07.1	329 25.2	18.1	269 06.5	41.1	117 40.7	57.9	254 32.6	00.5					
11	65	09.5	344 24.4	+23 18.4	284 07.5	+16 40.6	132 43.4	-21 57.9	269 34.9	+12 00.4					
12	80	12.0	359 23.5	+23 18.7	299 08.6	+16 40.1	147 46.1	-21 58.0	284 37.2	+12 00.3					
13	95	14.4	14 22.6	19.0	314 09.6	39.7	162 48.8	58.0	299 39.6	00.3					
14	110	16.9	29 21.8	19.3	329 10.7	39.2	177 51.5	58.0	314 41.9	00.2					
15	125	19.4	44 20.9	19.6	344 11.7	38.7	192 54.2	58.1	329 44.2	00.2					
16	140	21.8	59 20.0	19.8	359 12.7	38.2	207 56.9	58.1	344 46.5	+12 00.1					
17	155	24.3	74 19.2	+23 20.1	14 13.8	+16 37.8	222 59.7	-21 58.2	359 48.8	+12 00.0					
18	170	26.8	89 18.3	+23 20.4	29 14.8	+16 37.3	238 02.4	-21 58.2	14 51.1	+12 00.0					
19	185	29.2	104 17.4	20.7	44 15.9	36.8	253 05.1	58.3	29 53.4	+11 59.9					
20	200	31.7	119 16.6	21.0	59 16.9	36.3	268 07.8	58.3	44 55.7	59.8					
21	215	34.2	134 15.7	21.3	74 18.0	35.9	283 10.5	58.3	59 58.0	59.8					
22	230	36.6	149 14.8	21.6	89 19.0	35.4	298 13.3	58.4	75 00.4	59.7					
23	245	39.1	164 14.0	21.8	104 20.1	34.9	313 16.0	58.4	90 02.7	59.7					
24	260	41.6	179 13.1	+23 22.1	119 21.1	+16 34.4	328 18.7	-21 58.5	105 05.0	+11 59.6					
Dif	—		-9	+3	+10	-5	+27	0	+23	-1					

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15:7 PMG: 11 ^h 59 ^m 9			Edad: 8 ^d 2 SD: 15:1 PMG: 19 ^h 31 ^m	PHE { 4 ^h : 55/2 12 ^h : 55/1 20 ^h : 54/9 R°: 42 ^m									
	hG ☉	Dec				hG ☾			Dif	Dec	Dif	Civil	Náutico	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m	h m m	h m m	h m m
0	180	02.6	+23 09.7	75 28.8	-6 17.8		60 N	21 23	23 04	** **	14 32 85	0 13 1		
1	195	02.5	09.8	90 03.6 ¹⁵⁸	31.7 ¹³⁹		58	21 03	22 17	** **	26 82	17 4		
2	210	02.3	10.0	104 38.4 ¹⁵⁸	45.5 ¹³⁸		56	20 46	21 48	** **	21 78	20 7		
3	225	02.2	10.2	119 13.2 ¹⁵⁸	-6 59.4 ¹³⁹		54	32	26	23 09	16 76	23 9		
4	240	02.1	10.3	133 48.0 ¹⁵⁸	-7 13.2 ¹³⁸		52	20	21 09	22 26	12 73	25 12		
5	255	01.9	+23 10.5	148 22.8 ¹⁵⁸	-7 26.9 ¹³⁷		50	20 10	20 54	21 59	14 09 70	0 27 14		
6	270	01.8	+23 10.6	162 57.6 ¹⁵⁸	-7 40.7 ¹³⁸		45	19 47	20 25	21 14	14 01 65	0 33 18		
7	285	01.7	10.8	177 32.3 ¹⁵⁷	-7 54.4 ¹³⁷		40	29	20 02	20 44	13 54 62	37 22		
8	300	01.6	10.9	192 07.1 ¹⁵⁸	-8 08.0 ¹³⁶		35	15	19 44	21	49 58	41 25		
9	315	01.4	11.1	206 41.9 ¹⁵⁸	21.6 ¹³⁶		30	19 02	29	20 02	44 55	44 28		
10	330	01.3	11.2	221 16.6 ¹⁵⁷	35.1 ¹³⁵		20	18 40	19 04	19 34	35 51	50 33		
11	345	01.2	+23 11.3	235 51.4 ¹⁵⁸	-8 48.7 ¹³⁶		10 N	18 21	18 44	19 11	13 28 46	0 55 37		
12	0	01.0	+23 11.5	250 26.1 ¹⁵⁷	-9 02.1 ¹³⁴		0	18 04	18 26	18 52	13 21 42	0 59 42		
13	15	00.9	11.6	265 00.8 ¹⁵⁷	15.5 ¹³⁴		10 S	17 46	18 09	35	14 38	1 04 46		
14	30	00.8	11.8	279 35.5 ¹⁵⁷	28.9 ¹³⁴		20	28	17 52	19	13 07 34	09 50		
15	45	00.6	11.9	294 10.2 ¹⁵⁷	42.2 ¹³³		30	17 07	33	18 03	12 59 29	15 55		
16	60	00.5	12.1	308 44.8 ¹⁵⁶	-9 55.5 ¹³³		35	16 55	23	17 54	54 26	18 59		
17	75	00.4	+23 12.2	323 19.5 ¹⁵⁷	-10 08.8 ¹³³		40	16 41	17 11	17 45	12 49 23	1 22 62		
18	90	00.3	+23 12.4	337 54.1 ¹⁵⁶	-10 21.9 ¹³¹		45	16 24	16 58	17 35	12 43 19	1 27 65		
19	105	00.1	12.5	352 28.7 ¹⁵⁶	35.1 ¹³²		50	16 04	42	23	36 14	32 70		
20	120	00.0	12.6	7 03.3 ¹⁵⁶	-10 48.2 ¹³¹		52	15 54	35	18	32 13	34 73		
21	134	59.9	12.8	21 37.9 ¹⁵⁶	-11 01.2 ¹³⁰		54	43	27	13	29 10	37 75		
22	149	59.7	12.9	36 12.4 ¹⁵⁵	14.2 ¹³⁰		56	30	18	07	25 7	40 78		
23	164	59.6	13.1	50 47.0 ¹⁵⁶	27.1 ¹²⁹		58	15 16	16 07	17 00	20 5	43 82		
24	179	59.5	+23 13.2	65 21.5 ¹⁵⁵	-11 40.0 ¹²⁹		60 S	14 59	15 56	16 53	12 15 1	1 47 85		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 6 ^h 36 ^m 1		Mag: -4.0 PMG: 12 ^h 04 ^m		Mag: +1.6 PMG: 16 ^h 01 ^m		Mag: -2.7 PMG: 2 ^h 06 ^m		Mag: +0.7 PMG: 16 ^h 57 ^m					
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'				
0	260	41.6	179 13.1	+23 22.1	119 21.1	+16 34.4	328 18.7	-21 58.5	105 05.0	+11 59.6				
1	275	44.0	194 12.2	22.4	134 22.1	34.0	343 21.4	58.5	120 07.3	59.5				
2	290	46.5	209 11.3	22.7	149 23.2	33.5	358 24.1	58.6	135 09.6	59.5				
3	305	48.9	224 10.5	23.0	164 24.2	33.0	13 26.8	58.6	150 11.9	59.4				
4	320	51.4	239 09.6	23.2	179 25.3	32.5	28 29.6	58.6	165 14.2	59.3				
5	335	53.9	254 08.7	+23 23.5	194 26.3	+16 32.1	43 32.3	-21 58.7	180 16.5	+11 59.3				
6	350	56.3	269 07.9	+23 23.8	209 27.4	+16 31.6	58 35.0	-21 58.7	195 18.8	+11 59.2				
7	5	58.8	284 07.0	24.0	224 28.4	31.1	73 37.7	58.8	210 21.1	59.1				
8	21	01.3	299 06.1	24.3	239 29.5	30.6	88 40.4	58.8	225 23.4	59.1				
9	36	03.7	314 05.3	24.6	254 30.5	30.2	103 43.2	58.9	240 25.8	59.0				
10	51	06.2	329 04.4	24.9	269 31.5	29.7	118 45.9	58.9	255 28.1	59.0				
11	66	08.7	344 03.5	+23 25.1	284 32.6	+16 29.2	133 48.6	-21 58.9	270 30.4	+11 58.9				
12	81	11.1	359 02.6	+23 25.4	299 33.6	+16 28.7	148 51.3	-21 59.0	285 32.7	+11 58.8				
13	96	13.6	14 01.8	25.7	314 34.7	28.3	163 54.1	59.0	300 35.0	58.8				
14	111	16.0	29 00.9	25.9	329 35.7	27.8	178 56.8	59.1	315 37.3	58.7				
15	126	18.5	44 00.0	26.2	344 36.8	27.3	193 59.5	59.1	330 39.6	58.6				
16	141	21.0	58 59.1	26.4	359 37.8	26.8	209 02.2	59.2	345 41.9	58.6				
17	156	23.4	73 58.3	+23 26.7	14 38.9	+16 26.4	224 04.9	-21 59.2	0 44.2	+11 58.5				
18	171	25.9	88 57.4	+23 27.0	29 39.9	+16 25.9	239 07.7	-21 59.2	15 46.5	+11 58.4				
19	186	28.4	103 56.5	27.2	44 41.0	25.4	254 10.4	59.3	30 48.8	58.4				
20	201	30.8	118 55.7	27.5	59 42.0	24.9	269 13.1	59.3	45 51.1	58.3				
21	216	33.3	133 54.8	27.7	74 43.0	24.4	284 15.8	59.4	60 53.5	58.3				
22	231	35.8	148 53.9	28.0	89 44.1	24.0	299 18.6	59.4	75 55.8	58.2				
23	246	38.2	163 53.0	28.2	104 45.1	23.5	314 21.3	59.5	90 58.1	58.1				
24	261	40.7	178 52.2	+23 28.5	119 46.2	+16 23.0	329 24.0	-21 59.5	106 00.4	+11 58.1				
Dif	—	—	-9 +3	+10	-5	+27	0	+23	-1	—				

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 15 ^h 7 PMG: 12 ^h 00 ^m 1			Edad: 9 ^d 2 PHE { 4 ^h : 54 ^m 7 12 ^h : 54 ^m 6 20 ^h : 54 ^m 5 PMG: 20 ^h 13 ^m R°: 45 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec		Náutico	Civil		Hora	R°	Hora	R°			
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m		
0	179	59.5	+23	13.2	65	21.5	-11	40.0	60 N	0 56	2 37	15 57	88	0 14	1		
1	194	59.3		13.3	79	55.9 ¹⁵⁴	-11	52.8 ¹²⁸	58	1 43	2 57	48	82	21	5		
2	209	59.2		13.5	94	30.4 ¹⁵⁵	-12	05.6 ¹²⁸	56	2 12	3 13	39	79	27	8		
3	224	59.1		13.6	109	04.8 ¹⁵⁴		18.3 ¹²⁷	54	0 51	33	27	32	76	32	11	
4	239	59.0		13.7	123	39.2 ¹⁵⁴		31.0 ¹²⁷	52	1 34	2 51	40	25	73	37	14	
5	254	58.8	+23	13.9	138	13.6 ¹⁵⁴	-12	43.6 ¹²⁶	50	2 01	3 06	3 50	15 19	71	0 41	16	
6	269	58.7	+23	14.0	152	47.9 ¹⁵³	-12	56.1 ¹²⁵	45	2 46	3 35	4 13	15 06	66	0 51	20	
7	284	58.6		14.1	167	22.2 ¹⁵³	-13	08.6 ¹²⁵	40	3 16	3 58	31	14 56	62	0 59	24	
8	299	58.4		14.3	181	56.5 ¹⁵³		21.0 ¹²⁴	35	39	4 16	45	47	59	1 06	27	
9	314	58.3		14.4	196	30.7 ¹⁵²		33.4 ¹²⁴	30	3 58	31	4 58	39	56	12	30	
10	329	58.2		14.5	211	04.9 ¹⁵²		45.7 ¹²³	20	4 27	4 56	5 20	26	51	23	35	
11	344	58.0	+23	14.7	225	39.1 ¹⁵²	-13	58.0 ¹²³	10 N	4 49	5 16	5 39	14 14	47	1 32	39	
12	359	57.9	+23	14.8	240	13.2 ¹⁵¹	-14	10.2 ¹²²	0	5 08	5 34	5 56	14 03	44	1 41	43	
13	14	57.8		14.9	254	47.3 ¹⁵¹		22.3 ¹²¹	10 S	25	5 51	6 14	13 52	40	50	47	
14	29	57.6		15.0	269	21.4 ¹⁵¹		34.3 ¹²⁰	20	41	6 08	32	41	36	1 59	51	
15	44	57.5		15.2	283	55.4 ¹⁵⁰		46.3 ¹²⁰	30	5 57	27	6 53	28	31	2 10	56	
16	59	57.4		15.3	298	29.4 ¹⁵⁰	-14	58.3 ¹²⁰	35	6 06	37	7 05	20	29	17	58	
17	74	57.2	+23	15.4	313	03.3 ¹⁴⁹	-15	10.1 ¹¹⁸	40	6 15	6 49	7 20	13 12	26	2 24	62	
18	89	57.1	+23	15.5	327	37.3 ¹⁵⁰	-15	22.0 ¹¹⁹	45	6 25	7 02	7 36	13 02	22	2 32	66	
19	104	57.0		15.7	342	11.1 ¹⁴⁸		33.7 ¹¹⁷	50	37	18	7 57	12 50	18	42	71	
20	119	56.9		15.8	356	45.0 ¹⁴⁹		45.4 ¹¹⁷	52	42	26	8 06	45	15	47	73	
21	134	56.7		15.9	11	18.7 ¹⁴⁷	-15	57.0 ¹¹⁶	54	48	34	17	39	12	52	76	
22	149	56.6		16.0	25	52.5 ¹⁴⁸	-16	08.5 ¹¹⁵	56	6 54	43	30	32	10	2 58	79	
23	164	56.5		16.2	40	26.2 ¹⁴⁷		20.0 ¹¹⁵	58	7 00	7 53	8 45	25	6	3 05	82	
24	179	56.3	+23	16.3	54	59.9 ¹⁴⁷	-16	31.4 ¹¹⁴	60 S	7 08	8 04	9 02	12 16	3	3 12	87	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 6 ^h 32 ^m 2		Mag: -4.0 PMG: 12 ^h 05 ^m			Mag: +1.6 PMG: 16 ^h 00 ^m			Mag: -2.7 PMG: 2 ^h 02 ^m			Mag: +0.8 PMG: 16 ^h 53 ^m					
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'			
0	261	40.7	178	52.2	+23	28.5	119	46.2	+16	23.0	329	24.0	-21	59.5			
1	276	43.2	193	51.3		28.7	134	47.2		22.5	344	26.7		59.5			
2	291	45.6	208	50.4		29.0	149	48.3		22.1	359	29.5		59.6			
3	306	48.1	223	49.5		29.2	164	49.3		21.6	14	32.2		59.6			
4	321	50.5	238	48.7		29.5	179	50.4		21.1	29	34.9		59.7			
5	336	53.0	253	47.8	+23	29.7	194	51.4	+16	20.6	44	37.6	-21	59.7			
6	351	55.5	268	46.9	+23	30.0	209	52.4	+16	20.1	59	40.4	-21	59.8			
7	6	57.9	283	46.0		30.2	224	53.5		19.7	74	43.1		59.8			
8	22	00.4	298	45.1		30.5	239	54.5		19.2	89	45.8		59.9			
9	37	02.9	313	44.3		30.7	254	55.6		18.7	104	48.5		59.9			
10	52	05.3	328	43.4		30.9	269	56.6		18.2	119	51.3	-21	59.9			
11	67	07.8	343	42.5	+23	31.2	284	57.7	+16	17.7	134	54.0	-22	00.0			
12	82	10.3	358	41.6	+23	31.4	299	58.7	+16	17.3	149	56.7	-22	00.0			
13	97	12.7	13	40.8		31.7	314	59.8		16.8	164	59.4	-22	00.1			
14	112	15.2	28	39.9		31.9	330	00.8		16.3	180	02.2		00.1			
15	127	17.6	43	39.0		32.1	345	01.8		15.8	195	04.9		00.2			
16	142	20.1	58	38.1		32.4	0	02.9		15.3	210	07.6		00.2			
17	157	22.6	73	37.3	+23	32.6	15	03.9	+16	14.9	225	10.4	-22	00.2			
18	172	25.0	88	36.4	+23	32.8	30	05.0	+16	14.4	240	13.1	-22	00.3			
19	187	27.5	103	35.5		33.0	45	06.0		13.9	255	15.8		00.3			
20	202	30.0	118	34.6		33.3	60	07.1		13.4	270	18.5		00.4			
21	217	32.4	133	33.7		33.5	75	08.1		12.9	285	21.3		00.4			
22	232	34.9	148	32.9		33.7	90	09.2		12.4	300	24.0		00.5			
23	247	37.4	163	32.0		33.9	105	10.2		12.0	315	26.7		00.5			
24	262	39.8	178	31.1	+23	34.2	120	11.3	+16	11.5	330	29.5	-22	00.5			
Dif	—		-9			+2	+10			-5	+27			0	+23		-1

UT	SOL				LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7				Edad: 10 ^d 2 PHE { 4 ^h : 54/4 12 ^h : 54/3 20 ^h : 54/2 R°: 46 ^m													
	PMG: 12 ^h 00 ^m 4				SD: 14 ^h 8 PMG: 20 ^h 58 ^m													
	hG ☉		Dec		hG ☾ Dif		Dec Dif				Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m			
0	179	56.3	+23	16.3	54	59.9	-16	31.4	60 N	21 25	23 08	** **	17 25 89		0 15 4			
1	194	56.2		16.4	69	33.5 ¹⁴⁶		42.7 ¹¹³	58	21 04	22 19	** **	17 10 84		26 8			
2	209	56.1		16.5	84	07.0 ¹⁴⁵	-16	53.9 ¹¹²	56	20 48	21 50	** **	16 58 79		35 11			
3	224	55.9		16.6	98	40.6 ¹⁴⁶	-17	05.1 ¹¹²	54	34	28	23 13	48 75		43 15			
4	239	55.8		16.8	113	14.0 ¹⁴⁴		16.2 ¹¹¹	52	21	21 10	22 28	38 73		51 17			
5	254	55.7	+23	16.9	127	47.5 ¹⁴⁵	-17	27.3 ¹¹¹	50	20 11	20 55	22 00	16 30 70		0 57 20			
6	269	55.5	+23	17.0	142	20.9 ¹⁴⁴	-17	38.2 ¹⁰⁹	45	19 48	20 26	21 15	16 12 66		1 11 24			
7	284	55.4		17.1	156	54.2 ¹⁴³		49.1 ¹⁰⁹	40	30	20 03	20 45	15 58 62		23 28			
8	299	55.3		17.2	171	27.5 ¹⁴³	-17	59.9 ¹⁰⁸	35	15	19 45	22	46 59		33 31			
9	314	55.1		17.3	186	00.7 ¹⁴²	-18	10.6 ¹⁰⁷	30	19 02	30	20 03	35 56		42 33			
10	329	55.0		17.4	200	33.9 ¹⁴²		21.3 ¹⁰⁷	20	18 40	19 05	19 34	17 52		1 58 37			
11	344	54.9	+23	17.6	215	07.0 ¹⁴¹	-18	31.9 ¹⁰⁶	10 N	18 22	18 45	19 12	15 01 49		2 11 41			
12	359	54.7	+23	17.7	229	40.1 ¹⁴¹	-18	42.4 ¹⁰⁵	0	18 04	18 27	18 53	14 47 46		2 24 45			
13	14	54.6		17.8	244	13.1 ¹⁴⁰	-18	52.8 ¹⁰⁴	10 S	17 47	18 09	36	32 43		37 48			
14	29	54.5		17.9	258	46.1 ¹⁴⁰	-19	03.1 ¹⁰³	20	28	17 52	20	14 17 39		2 50 52			
15	44	54.3		18.0	273	19.1 ¹⁴⁰		13.4 ¹⁰³	30	17 07	33	18 03	13 59 36		3 06 56			
16	59	54.2		18.1	287	51.9 ¹³⁸		23.5 ¹⁰¹	35	16 55	23	17 55	49 33		15 59			
17	74	54.1	+23	18.2	302	24.8 ¹³⁹	-19	33.6 ¹⁰¹	40	16 41	17 11	17 45	13 38 30		3 26 62			
18	89	54.0	+23	18.3	316	57.5 ¹³⁷	-19	43.6 ¹⁰⁰	45	16 24	16 58	17 35	13 24 26		3 38 66			
19	104	53.8		18.4	331	30.2 ¹³⁷	-19	53.6 ¹⁰⁰	50	16 03	42	23	08 21		3 53 71			
20	119	53.7		18.5	346	02.9 ¹³⁷	-20	03.4 ⁹⁸	52	15 54	34	18	13 00 20		4 00 73			
21	134	53.6		18.6	0	35.5 ¹³⁶		13.1 ⁹⁷	54	43	26	12	12 51 17		08 76			
22	149	53.4		18.8	15	08.1 ¹³⁶		22.8 ⁹⁷	56	30	17	06	42 14		17 79			
23	164	53.3		18.9	29	40.6 ¹³⁵		32.4 ⁹⁶	58	15 15	16 07	17 00	31 10		27 83			
24	179	53.2	+23	19.0	44	13.0 ¹³⁴	-20	41.9 ⁹⁵	60 S	14 58	15 55	16 52	12 19 5		4 39 88			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 6 ^h 28 ^m 3		Mag: -4.0 PMG: 12 ^h 07 ^m				Mag: +1.6 PMG: 15 ^h 58 ^m				Mag: -2.7 PMG: 1 ^h 58 ^m				Mag: +0.8 PMG: 16 ^h 50 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	262	39.8	178	31.1	+23	34.2	120	11.3	+16	11.5	330	29.5	-22	00.5	106	55.7	+11	56.5
1	277	42.3	193	30.2		34.4	135	12.3		11.0	345	32.2		00.6	121	58.0		56.4
2	292	44.8	208	29.3		34.6	150	13.3		10.5	0	34.9		00.6	137	00.3		56.4
3	307	47.2	223	28.5		34.8	165	14.4		10.0	15	37.7		00.7	152	02.6		56.3
4	322	49.7	238	27.6		35.1	180	15.4		09.5	30	40.4		00.7	167	04.9		56.2
5	337	52.1	253	26.7	+23	35.3	195	16.5	+16	09.1	45	43.1	-22	00.8	182	07.2	+11	56.2
6	352	54.6	268	25.8	+23	35.5	210	17.5	+16	08.6	60	45.9	-22	00.8	197	09.5	+11	56.1
7	7	57.1	283	24.9		35.7	225	18.6		08.1	75	48.6		00.9	212	11.8		56.0
8	22	59.5	298	24.1		35.9	240	19.6		07.6	90	51.3		00.9	227	14.1		56.0
9	38	02.0	313	23.2		36.1	255	20.7		07.1	105	54.0		00.9	242	16.4		55.9
10	53	04.5	328	22.3		36.3	270	21.7		06.6	120	56.8		01.0	257	18.7		55.8
11	68	06.9	343	21.4	+23	36.5	285	22.8	+16	06.2	135	59.5	-22	01.0	272	21.0	+11	55.8
12	83	09.4	358	20.5	+23	36.8	300	23.8	+16	05.7	151	02.2	-22	01.1	287	23.3	+11	55.7
13	98	11.9	13	19.7		37.0	315	24.8		05.2	166	05.0		01.1	302	25.6		55.6
14	113	14.3	28	18.8		37.2	330	25.9		04.7	181	07.7		01.2	317	27.9		55.6
15	128	16.8	43	17.9		37.4	345	26.9		04.2	196	10.4		01.2	332	30.2		55.5
16	143	19.3	58	17.0		37.6	0	28.0		03.7	211	13.2		01.3	347	32.5		55.4
17	158	21.7	73	16.1	+23	37.8	15	29.0	+16	03.2	226	15.9	-22	01.3	2	34.8	+11	55.4
18	173	24.2	88	15.2	+23	38.0	30	30.1	+16	02.8	241	18.7	-22	01.3	17	37.1	+11	55.3
19	188	26.6	103	14.4		38.2	45	31.1		02.3	256	21.4		01.4	32	39.4		55.2
20	203	29.1	118	13.5		38.4	60	32.2		01.8	271	24.1		01.4	47	41.7		55.2
21	218	31.6	133	12.6		38.6	75	33.2		01.3	286	26.9		01.5	62	44.0		55.1
22	233	34.0	148	11.7		38.8	90	34.2		00.8	301	29.6		01.5	77	46.3		55.0
23	248	36.5	163	10.8		39.0	105	35.3	+16	00.3	316	32.3		01.6	92	48.6		55.0
24	263	39.0	178	09.9	+23	39.2	120	36.3	+15	59.8	331	35.1	-22	01.6	107	50.9	+11	54.9
Dif	—		-9		+2		+10		-5		+27		0		+23		-1	

UT	SOL			O LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7 PMG: 12 ^h 00 ^m 6			Edad: 11 ^d 2 PHE { 4 ^h : 54 ^m 1 12 ^h : 54 ^m 1 20 ^h : 54 ^m 0 PMG: 21 ^h 44 ^m 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	53.2	+23	19.0	44	13.0	-20	41.9	60 N	** *	0 53	2 36	18 54	87	0 19	6
1	194	53.0		19.1	58	45.4 ¹³⁴	-20	51.2 ⁹³	58	** *	1 41	2 56	34	80	34	12
2	209	52.9		19.2	73	17.7 ¹³³	-21	00.6 ⁹⁴	56	** *	2 11	3 13	17	76	46	17
3	224	52.8		19.3	87	50.0 ¹³³		09.8 ⁹²	54	0 48	33	27	18 03	72	0 58	19
4	239	52.6		19.4	102	22.2 ¹³²		18.9 ⁹¹	52	1 33	2 51	39	17 51	69	1 08	22
5	254	52.5	+23	19.5	116	54.4 ¹³²	-21	27.9 ⁹⁰	50	2 01	3 06	3 50	17 40	67	1 17	24
6	269	52.4	+23	19.6	131	26.5 ¹³¹	-21	36.9 ⁹⁰	45	2 46	3 35	4 13	17 18	63	1 35	30
7	284	52.2		19.7	145	58.5 ¹³⁰		45.7 ⁸⁸	40	3 16	3 58	31	17 00	60	1 51	32
8	299	52.1		19.8	160	30.5 ¹³⁰	-21	54.5 ⁸⁸	35	39	4 16	46	16 45	58	2 04	35
9	314	52.0		19.9	175	02.4 ¹²⁹	-22	03.1 ⁸⁶	30	3 58	31	4 59	31	57	15	38
10	329	51.8		20.0	189	34.3 ¹²⁹		11.7 ⁸⁶	20	4 27	4 56	5 20	16 09	54	35	41
11	344	51.7	+23	20.1	204	06.1 ¹²⁸	-22	20.1 ⁸⁴	10 N	4 49	5 16	5 39	15 50	51	2 52	45
12	359	51.6	+23	20.1	218	37.9 ¹²⁸	-22	28.5 ⁸⁴	0	5 08	5 34	5 57	15 33	48	3 09	47
13	14	51.4		20.2	233	09.6 ¹²⁷		36.8 ⁸³	10 S	25	5 51	6 14	15 15	46	25	50
14	29	51.3		20.3	247	41.2 ¹²⁶		44.9 ⁸¹	20	41	6 09	33	14 56	43	3 42	53
15	44	51.2		20.4	262	12.8 ¹²⁶	-22	53.0 ⁸¹	30	5 58	28	6 54	35	39	4 02	57
16	59	51.0		20.5	276	44.3 ¹²⁵	-23	01.0 ⁸⁰	35	6 06	38	7 06	22	38	14	59
17	74	50.9	+23	20.6	291	15.8 ¹²⁵	-23	08.8 ⁷⁸	40	6 16	6 50	7 20	14 08	35	4 28	61
18	89	50.8	+23	20.7	305	47.2 ¹²⁴	-23	16.6 ⁷⁸	45	6 26	7 03	7 37	13 50	33	4 44	64
19	104	50.6		20.8	320	18.6 ¹²⁴		24.2 ⁷⁶	50	38	19	7 58	29	29	5 04	69
20	119	50.5		20.9	334	49.9 ¹²³		31.8 ⁷⁶	52	43	27	8 08	20	26	13	72
21	134	50.4		21.0	349	21.1 ¹²²		39.3 ⁷⁵	54	49	35	19	13 08	24	24	74
22	149	50.2		21.1	3	52.3 ¹²²		46.6 ⁷³	56	6 55	44	31	12 56	20	36	78
23	164	50.1		21.1	18	23.4 ¹²¹	-23	53.8 ⁷²	58	7 01	7 54	8 46	41	16	5 50	82
24	179	50.0	+23	21.2	32	54.5 ¹²¹	-24	01.0 ⁷²	60 S	7 09	8 06	9 03	12 24	10	6 07	88

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG 6 ^h 24 ^m 3		Mag: -4.0 PMG: 12 ^h 08 ^m			Mag: +1.6 PMG: 15 ^h 56 ^m			Mag: -2.7 PMG: 1 ^h 53 ^m			Mag: +0.8 PMG: 16 ^h 46 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	263	39.0	178	09.9	+23	120	36.3	+15	331	35.1	-22	107	50.9	+11	54.9
1	278	41.4	193	09.1		135	37.4		346	37.8		122	53.2		54.8
2	293	43.9	208	08.2		150	38.4		1	40.5		137	55.5		54.8
3	308	46.4	223	07.3		165	39.5		16	43.3		152	57.8		54.7
4	323	48.8	238	06.4		180	40.5		31	46.0		168	00.1		54.6
5	338	51.3	253	05.5	+23	195	41.6	+15	46	48.7	-22	183	02.4	+11	54.6
6	353	53.8	268	04.6	+23	210	42.6	+15	61	51.5	-22	198	04.7	+11	54.5
7	8	56.2	283	03.8		225	43.7		76	54.2		213	07.0		54.4
8	23	58.7	298	02.9		240	44.7		91	57.0		228	09.3		54.4
9	39	01.1	313	02.0		255	45.7		106	59.7		243	11.6		54.3
10	54	03.6	328	01.1		270	46.8		122	02.4		258	13.9		54.2
11	69	06.1	343	00.2	+23	285	47.8	+15	137	05.2	-22	273	16.2	+11	54.2
12	84	08.5	357	59.3	+23	300	48.9	+15	152	07.9	-22	288	18.5	+11	54.1
13	99	11.0	12	58.4		315	49.9		167	10.6		303	20.8		54.0
14	114	13.5	27	57.6		330	51.0		182	13.4		318	23.1		54.0
15	129	15.9	42	56.7		345	52.0		197	16.1		333	25.4		53.9
16	144	18.4	57	55.8		0	53.1		212	18.9		348	27.7		53.8
17	159	20.9	72	54.9	+23	15	54.1	+15	227	21.6	-22	3	30.0	+11	53.8
18	174	23.3	87	54.0	+23	30	55.2	+15	242	24.3	-22	18	32.3	+11	53.7
19	189	25.8	102	53.1		45	56.2		257	27.1		33	34.6		53.6
20	204	28.2	117	52.2		60	57.2		272	29.8		48	36.9		53.5
21	219	30.7	132	51.4		75	58.3		287	32.6		63	39.2		53.5
22	234	33.2	147	50.5		90	59.3		302	35.3		78	41.5		53.4
23	249	35.6	162	49.6		106	00.4		317	38.0		93	43.8		53.3
24	264	38.1	177	48.7	+23	121	01.4	+15	332	40.8	-22	108	46.1	+11	53.3
Dif	—		-9	+2		+10	-5		+27	0		+23	-1		

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 12 ^d 2	PHE { 4 ^h : 54 ^h 0 12 ^h : 54 ^h 0 20 ^h : 54 ^h 0									
	PMG: 12 ^h 00 ^m 8					SD: 14 ^h 7			PMG: 22 ^h 33 ^m		R°: 50 ^m			
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	179	50.0	+23 21.2	32	54.5	-24 01.0	70	60 N	21 26	23 11	** **	20 21 75	0 25 14	
1	194	49.8	21.3	47	25.5 ¹²⁰	08.0	69	58	21 06	22 21	** **	19 54 69	0 46 21	
2	209	49.7	21.4	61	56.5 ¹²⁰	14.9	69	56	20 49	21 51	** **	33 66	1 03 25	
3	224	49.6	21.5	76	27.4 ¹¹⁹	21.7	68	54	35	29	23 16	15 64	17 29	
4	239	49.4	21.6	90	58.2 ¹¹⁸	28.4	67	52	22	21 11	22 29	19 00 63	30 31	
5	254	49.3	+23 21.7	105	29.0 ¹¹⁸	-24 35.0	66	50	20 12	20 56	22 02	18 47 62	1 41 33	
6	269	49.2	+23 21.7	119	59.7 ¹¹⁷	-24 41.5	65	45	19 49	20 26	21 16	18 21 59	2 05 36	
7	284	49.0	21.8	134	30.4 ¹¹⁷	47.9	64	40	31	20 04	20 46	18 00 57	23 39	
8	299	48.9	21.9	149	01.1 ¹¹⁷	-24 54.1	62	35	16	19 46	22	17 43 56	39 41	
9	314	48.8	22.0	163	31.6 ¹¹⁵	-25 00.3	62	30	19 03	30	20 04	28 55	2 53 42	
10	329	48.6	22.1	178	02.2 ¹¹⁶	06.3	60	20	18 41	19 06	19 35	17 03 53	3 16 45	
11	344	48.5	+23 22.1	192	32.6 ¹¹⁴	-25 12.2	59	10 N	18 22	18 45	19 12	16 41 52	3 37 47	
12	359	48.4	+23 22.2	207	03.0 ¹¹⁴	-25 18.0	58	0	18 04	18 27	18 53	16 21 50	3 56 49	
13	14	48.2	22.3	221	33.4 ¹¹⁴	23.7	57	10 S	17 47	18 10	36	16 01 49	4 15 51	
14	29	48.1	22.4	236	03.7 ¹¹³	29.2	55	20	29	17 53	20	15 39 47	35 53	
15	44	47.9	22.4	250	34.0 ¹¹³	34.7	55	30	17 07	34	18 04	14 46	4 59 56	
16	59	47.8	22.5	265	04.2 ¹¹²	40.0	53	35	16 55	23	17 55	15 00 44	5 13 57	
17	74	47.7	+23 22.6	279	34.4 ¹¹²	-25 45.2	52	40	16 41	17 11	17 45	14 43 43	5 29 59	
18	89	47.5	+23 22.7	294	04.5 ¹¹¹	-25 50.3	51	45	16 24	16 58	17 35	14 23 41	5 48 62	
19	104	47.4	22.7	308	34.6 ¹¹¹	-25 55.3	50	50	16 03	42	23	13 58 38	6 13 65	
20	119	47.3	22.8	323	04.6 ¹¹⁰	-26 00.1	48	52	15 53	34	18	46 36	25 66	
21	134	47.1	22.9	337	34.6 ¹¹⁰	04.9	48	54	42	26	12	32 34	38 69	
22	149	47.0	22.9	352	04.5 ¹⁰⁹	09.5	46	56	30	17	06	13 16 31	6 54 71	
23	164	46.9	23.0	6	34.4 ¹⁰⁹	14.0	45	58	15 15	16 07	17 00	12 57 28	7 12 76	
24	179	46.7	+23 23.1	21	04.2 ¹⁰⁸	-26 18.3	43	60 S	14 58	15 55	16 52	12 34 21	7 35 83	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 6 ^h 20 ^m 4		Mag: -4.0 PMG: 12 ^h 09 ^m			Mag: +1.6 PMG: 15 ^h 55 ^m			Mag: -2.7 PMG: 1 ^h 49 ^m			Mag: +0.8 PMG: 16 ^h 42 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	'	°	°	'	°	°	'	°
0	264	38.1	177 48.7	+23 43.5	121 01.4	+15 48.1	332 40.8	-22 02.7	108 46.1	+11 53.3				
1	279	40.6	192 47.8	43.6	136 02.5	47.6	347 43.5	02.7	123 48.4	53.2				
2	294	43.0	207 46.9	43.8	151 03.5	47.1	2 46.3	02.8	138 50.7	53.1				
3	309	45.5	222 46.0	44.0	166 04.6	46.6	17 49.0	02.8	153 53.0	53.1				
4	324	48.0	237 45.1	44.1	181 05.6	46.1	32 51.8	02.9	168 55.3	53.0				
5	339	50.4	252 44.3	+23 44.3	196 06.7	+15 45.7	47 54.5	-22 02.9	183 57.6	+11 52.9				
6	354	52.9	267 43.4	+23 44.4	211 07.7	+15 45.2	62 57.2	-22 02.9	198 59.9	+11 52.9				
7	9	55.4	282 42.5	44.6	226 08.8	44.7	78 00.0	03.0	214 02.2	52.8				
8	24	57.8	297 41.6	44.7	241 09.8	44.2	93 02.7	03.0	229 04.5	52.7				
9	40	00.3	312 40.7	44.9	256 10.8	43.7	108 05.5	03.1	244 06.8	52.7				
10	55	02.7	327 39.8	45.0	271 11.9	43.2	123 08.2	03.1	259 09.1	52.6				
11	70	05.2	342 38.9	+23 45.2	286 12.9	+15 42.7	138 11.0	-22 03.2	274 11.4	+11 52.5				
12	85	07.7	357 38.0	+23 45.4	301 14.0	+15 42.2	153 13.7	-22 03.2	289 13.7	+11 52.5				
13	100	10.1	12 37.1	45.5	316 15.0	41.7	168 16.4	03.3	304 16.0	52.4				
14	115	12.6	27 36.3	45.6	331 16.1	41.2	183 19.2	03.3	319 18.2	52.3				
15	130	15.1	42 35.4	45.8	346 17.1	40.7	198 21.9	03.4	334 20.5	52.2				
16	145	17.5	57 34.5	45.9	1 18.2	40.2	213 24.7	03.4	349 22.8	52.2				
17	160	20.0	72 33.6	+23 46.1	16 19.2	+15 39.7	228 27.4	-22 03.4	4 25.1	+11 52.1				
18	175	22.5	87 32.7	+23 46.2	31 20.3	+15 39.2	243 30.2	-22 03.5	19 27.4	+11 52.0				
19	190	24.9	102 31.8	46.4	46 21.3	38.8	258 32.9	03.5	34 29.7	52.0				
20	205	27.4	117 30.9	46.5	61 22.3	38.3	273 35.7	03.6	49 32.0	51.9				
21	220	29.9	132 30.0	46.7	76 23.4	37.8	288 38.4	03.6	64 34.3	51.8				
22	235	32.3	147 29.1	46.8	91 24.4	37.3	303 41.1	03.7	79 36.6	51.8				
23	250	34.8	162 28.2	46.9	106 25.5	36.8	318 43.9	03.7	94 38.9	51.7				
24	265	37.2	177 27.4	+23 47.1	121 26.5	+15 36.3	333 46.6	-22 03.8	109 41.2	+11 51.6				
Dif	—		-9	+2	+10	-5	+27	0	+23	-1				

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7			Edad: 13 ^d 2	PHE	R ^o : 52 ^m		Náutico	Civil		Hora	R ^o	Hora	R ^o	
	PMG: 12 ^h 01 ^m 0														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif								
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	h m	h m	
0	179	46.7	+23	21	04.2	-26	18.3	60 N	** **	0 50	2 36	21 36	51	0 39	
1	194	46.6		35	34.0 ¹⁰⁸		22.6 ⁴³	58	** **	1 41	2 56	21 03	52	1 07	
2	209	46.5		50	03.8 ¹⁰⁸		26.7 ⁴¹	56	** **	2 10	3 13	20 39	52	28 38	
3	224	46.3		64	33.5 ¹⁰⁷		30.7 ⁴⁰	54	0 46	33	27	19 52		1 46	
4	239	46.2		79	03.1 ¹⁰⁶		34.6 ³⁹	52	1 32	2 50	39	20 03	52	2 01	
5	254	46.1	+23	93	32.8 ¹⁰⁷	-26	38.3 ³⁷	50	2 00	3 06	3 50	19 49	52	2 14	
6	269	45.9	+23	108	02.4 ¹⁰⁶	-26	41.9 ³⁶	45	2 46	3 35	4 13	19 20	52	2 41	
7	284	45.8		122	31.9 ¹⁰⁵		45.4 ³⁵	40	3 16	3 58	31	18 57	52	3 02	
8	299	45.7		137	01.4 ¹⁰⁵		48.8 ³⁴	35	39	4 16	46	39 52		20 47	
9	314	45.5		151	30.9 ¹⁰⁵		52.0 ³²	30	3 58	31	4 59	18 23	52	3 35	
10	329	45.4		166	00.4 ¹⁰⁵		55.2 ³²	20	4 27	4 56	5 21	17 56	52	4 01	
11	344	45.3	+23	180	29.8 ¹⁰⁴	-26	58.1 ²⁹	10 N	4 50	5 17	5 40	17 33	51	4 24	
12	359	45.1	+23	194	59.1 ¹⁰³	-27	01.0 ²⁹	0	5 09	5 35	5 57	17 11	51	4 45	
13	14	45.0		209	28.5 ¹⁰⁴		03.7 ²⁷	10 S	26	5 52	6 15	16 50	51	5 06	
14	29	44.9		223	57.8 ¹⁰³		06.3 ²⁶	20	42	6 09	33	26 51		28 53	
15	44	44.7		238	27.1 ¹⁰³		08.8 ²⁵	30	5 58	28	6 54	16 00	50	5 55	
16	59	44.6		252	56.3 ¹⁰²		11.1 ²³	35	6 07	39	7 07	15 44	50	6 10	
17	74	44.5	+23	267	25.5 ¹⁰²	-27	13.3 ²²	40	6 16	6 50	7 21	15 26	50	6 28	
18	89	44.3	+23	281	54.7 ¹⁰²	-27	15.4 ²¹	45	6 27	7 04	7 38	15 04	49	6 50	
19	104	44.2		296	23.9 ¹⁰²		17.4 ²⁰	50	38	20	7 59	14 36	48	7 18	
20	119	44.0		310	53.1 ¹⁰²		19.2 ¹⁸	52	44	27	8 08	22 48		31 58	
21	134	43.9		325	22.2 ¹⁰¹		20.8 ¹⁶	54	49	36	20	14 06	48	7 47	
22	149	43.8		339	51.3 ¹⁰¹		22.4 ¹⁶	56	6 56	45	32	13 47	47	8 05	
23	164	43.6		354	20.4 ¹⁰¹		23.8 ¹⁴	58	7 02	7 55	8 47	13 25	45	28 61	
24	179	43.5	+23	8	49.4 ¹⁰⁰	-27	25.1 ¹³	60 S	7 10	8 07	9 04	12 55	43	8 58	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 6 ^h 16 ^m 5		Mag: -4.0 PMG: 12 ^h 11 ^m		Mag: +1.6 PMG: 15 ^h 53 ^m		Mag: -2.7 PMG: 1 ^h 45 ^m		Mag: +0.8 PMG: 16 ^h 39 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	265	37.2	177	27.4	121	26.5	333	46.6	109	41.2
1	280	39.7	192	26.5	136	27.6	348	49.4	124	43.5
2	295	42.2	207	25.6	151	28.6	3	52.1	139	45.8
3	310	44.6	222	24.7	166	29.7	18	54.9	154	48.1
4	325	47.1	237	23.8	181	30.7	33	57.6	169	50.4
5	340	49.6	252	22.9	196	31.8	49	00.4	184	52.7
6	355	52.0	267	22.0	211	32.8	64	03.1	199	55.0
7	10	54.5	282	21.1	226	33.9	79	05.9	214	57.2
8	25	57.0	297	20.2	241	34.9	94	08.6	229	59.5
9	40	59.4	312	19.3	256	35.9	109	11.4	245	01.8
10	56	01.9	327	18.4	271	37.0	124	14.1	260	04.1
11	71	04.4	342	17.6	286	38.0	139	16.9	275	06.4
12	86	06.8	357	16.7	301	39.1	154	19.6	290	08.7
13	101	09.3	12	15.8	316	40.1	169	22.4	305	11.0
14	116	11.7	27	14.9	331	41.2	184	25.1	320	13.3
15	131	14.2	42	14.0	346	42.2	199	27.9	335	15.6
16	146	16.7	57	13.1	1	43.3	214	30.6	350	17.9
17	161	19.1	72	12.2	16	44.3	229	33.4	5	20.2
18	176	21.6	87	11.3	31	45.4	244	36.1	20	22.5
19	191	24.1	102	10.4	46	46.4	259	38.9	35	24.8
20	206	26.5	117	09.5	61	47.4	274	41.6	50	27.0
21	221	29.0	132	08.6	76	48.5	289	44.4	65	29.3
22	236	31.5	147	07.7	91	49.5	304	47.1	80	31.6
23	251	33.9	162	06.9	106	50.6	319	49.9	95	33.9
24	266	36.4	177	06.0	121	51.6	334	52.6	110	36.2
Dif	—		-9	+1	+10	-5	+27	0	+23	-1

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna						
	SD: 15 ^h 7				Edad: 14 ^d 2 PHE { 4 ^h : 54 ^m 1 12 ^h : 54 ^m 1 20 ^h : 54 ^m 2 R°: ***m																	
	PMG: 12 ^h 01 ^m 2				PMG: ***m ***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	43.5	+23	24.5	8	49.4	-27	25.1	12	60 N	21	27	23	13	***	***	22	27	25	1 09 57		
1	194	43.4		24.6	23	18.4	100	26.3	10	58	21	07	22	22	***	***	21	55	32	1 42 56		
2	209	43.2		24.6	37	47.5	101	27.3	10	56	20	50	21	52	***	***		31	35	2 06 56		
3	224	43.1		24.7	52	16.5	100	28.2	9	54		36		30	23	18	21	11	38	26 55		
4	239	43.0		24.7	66	45.4	99	28.9	7	52		23	21	12	22	31	20	55	39	43 54		
5	254	42.8	+23	24.8	81	14.4	100	-27	29.5	6	50	20	12	20	57	22	03	20	41	41	2 57 54	
6	269	42.7	+23	24.8	95	43.4	100	-27	30.0	5	45	19	50	20	27	21	17	20	12	43	3 26 54	
7	284	42.6		24.9	110	12.3	99	30.4	4	40		32	20	05	20	46	19	49	46		3 48 54	
8	299	42.4		24.9	124	41.3	100	30.6	2	35		17	19	46		23		31	46		4 07 53	
9	314	42.3		25.0	139	10.2	99	30.7	1	30		19	04		31	20	04	19	15	47	23 53	
10	329	42.2		25.0	153	39.1	99	30.6	1	20		18	41	19	06	19	35	18	48	48	4 51 52	
11	344	42.0	+23	25.1	168	08.0	99	-27	30.4	2	10 N		18	22	18	46	19	13	18	24	50	5 14 52
12	359	41.9	+23	25.1	182	36.9	99	-27	30.1	3	0		18	05	18	27	18	54	18	02	52	5 36 51
13	14	41.8		25.1	197	05.8	99	29.6	5	10 S		17	47	18	10		37	17	41	52	5 58 51	
14	29	41.6		25.2	211	34.7	99	29.1	5	20		29	17	53		20		17	17	54	6 21 51	
15	44	41.5		25.2	226	03.6	99	28.3	8	30		17	08		34	18	04	16	50	55	6 48 50	
16	59	41.4		25.3	240	32.5	99	27.5	8	35		16	55		23	17	55		34	56	7 04 50	
17	74	41.2	+23	25.3	255	01.4	99	-27	26.5	10	40		16	41	17	12	17	46	16	16	56	7 23 49
18	89	41.1	+23	25.3	269	30.3	99	-27	25.3	12	45		16	24	16	58	17	35	15	53	58	7 46 47
19	104	40.9		25.4	283	59.2	99	24.1	12	50		16	03		42	24		24	60	24	60	8 14 47
20	119	40.8		25.4	298	28.1	99	22.7	14	52		15	54		35	18			15	10	61	29 45
21	134	40.7		25.5	312	57.0	99	21.1	16	54			42		26	13			14	54	61	8 45 45
22	149	40.5		25.5	327	25.9	99	19.5	16	56			30		17		06		34	63		9 05 43
23	164	40.4		25.5	341	54.8	99	17.7	18	58		15	15	16	07	17	00		14	10	66	9 29 41
24	179	40.3	+23	25.6	356	23.7	99	-27	15.7	20	60 S		14	57	15	55	16	52	13	38	69	10 01 38
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO							
	PMG: 6 ^h 12 ^m 6		Mag: -4.0 PMG: 12 ^h 12 ^m				Mag: +1.6 PMG: 15 ^h 51 ^m				Mag: -2.7 PMG: 1 ^h 40 ^m				Mag: +0.8 PMG: 16 ^h 35 ^m							
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	266	36.4	177	06.0	+23	50.0	121	51.6	+15	24.4	334	52.6	-22	04.9	110	36.2	+11	49.9				
1	281	38.9	192	05.1		50.1	136	52.7		23.9	349	55.4		04.9	125	38.5		49.9				
2	296	41.3	207	04.2		50.2	151	53.7		23.4	4	58.1		05.0	140	40.8		49.8				
3	311	43.8	222	03.3		50.3	166	54.8		22.9	20	00.9		05.0	155	43.1		49.7				
4	326	46.2	237	02.4		50.4	181	55.8		22.4	35	03.6		05.0	170	45.4		49.7				
5	341	48.7	252	01.5	+23	50.5	196	56.9	+15	21.9	50	06.4	-22	05.1	185	47.7	+11	49.6				
6	356	51.2	267	00.6	+23	50.6	211	57.9	+15	21.4	65	09.1	-22	05.1	200	49.9	+11	49.5				
7	11	53.6	281	59.7		50.7	226	59.0		20.9	80	11.9		05.2	215	52.2		49.4				
8	26	56.1	296	58.8		50.8	242	00.0		20.4	95	14.6		05.2	230	54.5		49.4				
9	41	58.6	311	57.9		50.9	257	01.0		19.9	110	17.4		05.3	245	56.8		49.3				
10	57	01.0	326	57.0		51.0	272	02.1		19.4	125	20.1		05.3	260	59.1		49.2				
11	72	03.5	341	56.1	+23	51.1	287	03.1	+15	18.9	140	22.9	-22	05.4	276	01.4	+11	49.2				
12	87	06.0	356	55.2	+23	51.2	302	04.2	+15	18.4	155	25.6	-22	05.4	291	03.7	+11	49.1				
13	102	08.4	11	54.3		51.2	317	05.2		17.9	170	28.4		05.5	306	06.0		49.0				
14	117	10.9	26	53.5		51.3	332	06.3		17.4	185	31.1		05.5	321	08.3		49.0				
15	132	13.3	41	52.6		51.4	347	07.3		16.9	200	33.9		05.6	336	10.6		48.9				
16	147	15.8	56	51.7		51.5	2	08.4		16.4	215	36.7		05.6	351	12.8		48.8				
17	162	18.3	71	50.8	+23	51.6	17	09.4	+15	15.9	230	39.4	-22	05.6	6	15.1	+11	48.7				
18	177	20.7	86	49.9	+23	51.7	32	10.5	+15	15.3	245	42.2	-22	05.7	21	17.4	+11	48.7				
19	192	23.2	101	49.0		51.8	47	11.5		14.8	260	44.9		05.7	36	19.7		48.6				
20	207	25.7	116	48.1		51.8	62	12.6		14.3	275	47.7		05.8	51	22.0		48.5				
21	222	28.1	131	47.2		51.9	77	13.6		13.8	290	50.4		05.8	66	24.3		48.5				
22	237	30.6	146	46.3		52.0	92	14.7		13.3	305	53.2		05.9	81	26.6		48.4				
23	252	33.1	161	45.4		52.1	107	15.7		12.8	320	55.9		05.9	96	28.9		48.3				
24	267	35.5	176	44.5	+23	52.2	122	16.7	+15	12.3	335	58.7	-22	06.0	111	31.1	+11	48.2				
Dif	—		-9		+1		+10		-5		+28		0		+23		-1					

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7			Edad: 15 ^d 2	PHE { 4 ^h : 54 ^m /3 12 ^h : 54 ^m /3 20 ^h : 54 ^m /4	SD: 14 ^h 8		R°: 51 ^m	R°		R°				
	PMG: 12 ^h 01 ^m 4					PMG: 0 ^h 15 ^m			Hora		Hora				
	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	40.3	+23 25.6	356	23.7	-27 15.7	20	60 N	** *	0 49	2 35	22 52	12	2 06	80
1	194	40.1	25.6	10	52.7 ¹⁰⁰	13.7	20	58	** *	1 40	2 56	27 18		2 38	74
2	209	40.0	25.6	25	21.6 ⁹⁹	11.5	22	56	** *	2 10	3 13	22 06	23	3 02	70
3	224	39.9	25.7	39	50.6 ¹⁰⁰	09.1	24	54	0 45	33	27	21 49	27	21	67
4	239	39.7	25.7	54	19.6 ¹⁰⁰	06.6	25	52	1 32	2 51	39	34	30	37	66
5	254	39.6	+23 25.7	68	48.5 ⁹⁹	-27 04.0	26	50	2 00	3 06	3 50	21 22	31	3 51	64
6	269	39.5	+23 25.8	83	17.5 ¹⁰⁰	-27 01.3	27	45	2 46	3 35	4 13	20 55	36	4 20	61
7	284	39.3	25.8	97	46.6 ¹⁰¹	-26 58.4	29	40	3 16	3 58	31	35	38	4 42	59
8	299	39.2	25.8	112	15.6 ¹⁰⁰	55.4	30	35	40	4 16	46	17	41	5 00	58
9	314	39.1	25.8	126	44.7 ¹⁰¹	52.3	31	30	3 58	32	4 59	20 02	42	16	57
10	329	38.9	25.9	141	13.7 ¹⁰⁰	49.0	33	20	4 27	4 57	5 21	19 36	46	5 43	54
11	344	38.8	+23 25.9	155	42.8 ¹⁰¹	-26 45.6	34	10 N	4 50	5 17	5 40	19 14	48	6 06	52
12	359	38.6	+23 25.9	170	12.0 ¹⁰²	-26 42.1	35	0	5 09	5 35	5 58	18 54	50	6 27	51
13	14	38.5	26.0	184	41.1 ¹⁰¹	38.4	37	10 S	26	5 52	6 15	33	52	6 49	49
14	29	38.4	26.0	199	10.3 ¹⁰²	34.6	38	20	42	6 10	34	18 11	55	7 12	47
15	44	38.2	26.0	213	39.5 ¹⁰²	30.7	39	30	5 59	29	6 55	17 45	58	38	45
16	59	38.1	26.0	228	08.7 ¹⁰²	26.6	41	35	6 08	39	7 07	30	59	7 54	43
17	74	38.0	+23 26.1	242	37.9 ¹⁰²	-26 22.4	42	40	6 17	6 51	7 22	17 12	62	8 12	41
18	89	37.8	+23 26.1	257	07.2 ¹⁰³	-26 18.1	43	45	6 27	7 05	7 38	16 51	64	8 33	40
19	104	37.7	26.1	271	36.5 ¹⁰³	13.7	44	50	39	21	7 59	24	68	9 01	36
20	119	37.6	26.1	286	05.9 ¹⁰⁴	09.1	46	52	44	28	8 09	16 11	69	14	34
21	134	37.4	26.1	300	35.2 ¹⁰³	-26 04.4	47	54	50	36	20	15 55	73	30	32
22	149	37.3	26.2	315	04.6 ¹⁰⁴	-25 59.6	48	56	6 56	45	33	37	76	9 48	29
23	164	37.2	26.2	329	34.1 ¹⁰⁵	54.6	50	58	7 03	7 56	8 48	15 16	79	10 10	25
24	179	37.0	+23 26.2	344	03.5 ¹⁰⁴	-25 49.5	51	60 S	7 11	8 07	9 05	14 47	87	10 39	18

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG 6 ^h 08 ^m 6		Mag: -3.9 PMG: 12 ^h 14 ^m		Mag: +1.6 PMG: 15 ^h 50 ^m		Mag: -2.7 PMG: 1 ^h 36 ^m		Mag: +0.8 PMG: 16 ^h 31 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	267	35.5	176	44.5	+23 52.2	122	16.7	+15 12.3	335	58.7	-22 06.0	111	31.1	+11 48.2	
1	282	38.0	191	43.6	52.2	137	17.8	11.8	351	01.5	06.0	126	33.4	48.2	
2	297	40.5	206	42.7	52.3	152	18.8	11.3	6	04.2	06.1	141	35.7	48.1	
3	312	42.9	221	41.8	52.4	167	19.9	10.8	21	07.0	06.1	156	38.0	48.0	
4	327	45.4	236	40.9	52.5	182	20.9	10.3	36	09.7	06.2	171	40.3	47.9	
5	342	47.8	251	40.0	+23 52.5	197	22.0	+15 09.8	51	12.5	-22 06.2	186	42.6	+11 47.9	
6	357	50.3	266	39.1	+23 52.6	212	23.0	+15 09.3	66	15.2	-22 06.3	201	44.9	+11 47.8	
7	12	52.8	281	38.2	52.7	227	24.1	08.8	81	18.0	06.3	216	47.2	47.7	
8	27	55.2	296	37.3	52.7	242	25.1	08.3	96	20.8	06.3	231	49.4	47.7	
9	42	57.7	311	36.5	52.8	257	26.2	07.8	111	23.5	06.4	246	51.7	47.6	
10	58	00.2	326	35.6	52.9	272	27.2	07.3	126	26.3	06.4	261	54.0	47.5	
11	73	02.6	341	34.7	+23 52.9	287	28.3	+15 06.8	141	29.0	-22 06.5	276	56.3	+11 47.4	
12	88	05.1	356	33.8	+23 53.0	302	29.3	+15 06.3	156	31.8	-22 06.5	291	58.6	+11 47.4	
13	103	07.6	11	32.9	53.1	317	30.3	05.8	171	34.5	06.6	307	00.9	47.3	
14	118	10.0	26	32.0	53.1	332	31.4	05.3	186	37.3	06.6	322	03.2	47.2	
15	133	12.5	41	31.1	53.2	347	32.4	04.8	201	40.1	06.7	337	05.4	47.2	
16	148	15.0	56	30.2	53.2	2	33.5	04.3	216	42.8	06.7	352	07.7	47.1	
17	163	17.4	71	29.3	+23 53.3	17	34.5	+15 03.8	231	45.6	-22 06.8	7	10.0	+11 47.0	
18	178	19.9	86	28.4	+23 53.3	32	35.6	+15 03.3	246	48.3	-22 06.8	22	12.3	+11 46.9	
19	193	22.3	101	27.5	53.4	47	36.6	02.8	261	51.1	06.9	37	14.6	46.9	
20	208	24.8	116	26.6	53.5	62	37.7	02.2	276	53.9	06.9	52	16.9	46.8	
21	223	27.3	131	25.7	53.5	77	38.7	01.7	291	56.6	07.0	67	19.2	46.7	
22	238	29.7	146	24.8	53.6	92	39.8	01.2	306	59.4	07.0	82	21.4	46.6	
23	253	32.2	161	23.9	53.6	107	40.8	00.7	322	02.1	07.0	97	23.7	46.6	
24	268	34.7	176	23.0	+23 53.7	122	41.9	+15 00.2	337	04.9	-22 07.1	112	26.0	+11 46.5	
Dif	—		-9 +1		+10 -5		-5		+28 0		0		+23 -1		-1

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7				Edad: 16 ^d 2	PHE { 4 ^h : 54 ^m 5 12 ^h : 54 ^m 6 20 ^h : 54 ^m 7	SD: 14 ^h 8	PMG: 1 ^h 06 ^m			R°: 50 ^m							
	hG ☉	Dec	hG ☾	Dif								Dec	Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m		
0	179	37.0	+23	26.2	344	03.5	-25	49.5	60 N	21 28	23 14	** **	23 04 6	3 26 91				
1	194	36.9		26.2	358	33.0 ¹⁰⁵		44.3	58	21 07	22 23	** **	22 45 11	3 52 83				
2	209	36.8		26.2	13	02.6 ¹⁰⁶		39.0	56	20 50	21 53	** **	29 16	4 12 79				
3	224	36.6		26.2	27	32.1 ¹⁰⁵		33.5	54	36	31	23 19	16 18	28 76				
4	239	36.5		26.3	42	01.8 ¹⁰⁷		27.9	52	24	21 13	22 31	22 04 21	43 73				
5	254	36.3	+23	26.3	56	31.4 ¹⁰⁶	-25	22.2	50	20 13	20 57	22 03	21 53 24	4 55 71				
6	269	36.2	+23	26.3	71	01.1 ¹⁰⁷	-25	16.4	45	19 50	20 28	21 17	21 31 28	5 21 66				
7	284	36.1		26.3	85	30.8 ¹⁰⁷		10.4	40	32	20 05	20 47	21 13 32	41 63				
8	299	35.9		26.3	100	00.6 ¹⁰⁸	-25	04.3	35	17	19 47	24	20 58 35	5 58 60				
9	314	35.8		26.3	114	30.4 ¹⁰⁸	-24	58.1	30	19 04	32	20 05	44 38	6 13 58				
10	329	35.7		26.3	129	00.2 ¹⁰⁸		51.8	20	18 42	19 07	19 36	22 41	37 55				
11	344	35.5	+23	26.3	143	30.1 ¹⁰⁹	-24	45.4	10 N	18 23	18 46	19 13	20 02 45	6 58 52				
12	359	35.4	+23	26.3	158	00.1 ¹¹⁰	-24	38.8	0	18 05	18 28	18 54	19 44 48	7 18 49				
13	14	35.3		26.4	172	30.0 ¹⁰⁹		32.1	10 S	17 48	18 11	37	25 52	38 46				
14	29	35.1		26.4	187	00.1 ¹¹¹		25.3	20	29	17 53	21	19 06 54	7 59 43				
15	44	35.0		26.4	201	30.1 ¹¹⁰		18.4	30	17 08	34	18 04	18 43 58	8 23 40				
16	59	34.9		26.4	216	00.2 ¹¹¹		11.3	35	16 56	24	17 56	29 61	37 38				
17	74	34.7	+23	26.4	230	30.4 ¹¹²	-24	04.2	40	16 41	17 12	17 46	18 14 64	8 53 35				
18	89	34.6	+23	26.4	245	00.6 ¹¹²	-23	56.9	45	16 25	16 58	17 36	17 55 67	9 13 31				
19	104	34.5		26.4	259	30.8 ¹¹²		49.5	50	16 04	42	24	32 72	37 27				
20	119	34.3		26.4	274	01.1 ¹¹³		42.0	52	15 54	35	19	20 75	9 48 26				
21	134	34.2		26.4	288	31.5 ¹¹⁴		34.4	54	43	27	13	17 08 77	10 02 22				
22	149	34.1		26.4	303	01.9 ¹¹⁴		26.7	56	30	18	07	16 53 81	17 19				
23	164	33.9		26.4	317	32.3 ¹¹⁴		18.8	58	15 15	16 07	17 00	35 86	35 14				
24	179	33.8	+23	26.4	332	02.8 ¹¹⁵	-23	10.8	60 S	14 58	15 56	16 52	16 14 92	10 57 8				
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 6 ^h 04 ^m 7			Mag: -3.9 PMG: 12 ^h 15 ^m			Mag: +1.6 PMG: 15 ^h 48 ^m			Mag: -2.7 PMG: 1 ^h 31 ^m			Mag: +0.8 PMG: 16 ^h 28 ^m					
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	268	34.7	176	23.0	+23	53.7	122	41.9	+15	00.2	337	04.9	-22	07.1	112	26.0		
1	283	37.1	191	22.1		53.7	137	42.9	+14	59.7	352	07.7		07.1	127	28.3		
2	298	39.6	206	21.2		53.7	152	44.0		59.2	7	10.4		07.2	142	30.6		
3	313	42.1	221	20.3		53.8	167	45.0		58.7	22	13.2		07.2	157	32.9		
4	328	44.5	236	19.4		53.8	182	46.1		58.2	37	15.9		07.3	172	35.1		
5	343	47.0	251	18.5	+23	53.9	197	47.1	+14	57.7	52	18.7	-22	07.3	187	37.4		
6	358	49.5	266	17.6	+23	53.9	212	48.1	+14	57.2	67	21.5	-22	07.4	202	39.7		
7	13	51.9	281	16.7		54.0	227	49.2		56.7	82	24.2		07.4	217	42.0		
8	28	54.4	296	15.8		54.0	242	50.2		56.2	97	27.0		07.5	232	44.3		
9	43	56.8	311	14.9		54.0	257	51.3		55.7	112	29.8		07.5	247	46.6		
10	58	59.3	326	14.1		54.1	272	52.3		55.1	127	32.5		07.6	262	48.8		
11	74	01.8	341	13.2	+23	54.1	287	53.4	+14	54.6	142	35.3	-22	07.6	277	51.1		
12	89	04.2	356	12.3	+23	54.1	302	54.4	+14	54.1	157	38.0	-22	07.7	292	53.4		
13	104	06.7	11	11.4		54.2	317	55.5		53.6	172	40.8		07.7	307	55.7		
14	119	09.2	26	10.5		54.2	332	56.5		53.1	187	43.6		07.7	322	58.0		
15	134	11.6	41	09.6		54.2	347	57.6		52.6	202	46.3		07.8	338	00.3		
16	149	14.1	56	08.7		54.3	2	58.6		52.1	217	49.1		07.8	353	02.5		
17	164	16.6	71	07.8	+23	54.3	17	59.7	+14	51.6	232	51.9	-22	07.9	8	04.8		
18	179	19.0	86	06.9	+23	54.3	33	00.7	+14	51.1	247	54.6	-22	07.9	23	07.1		
19	194	21.5	101	06.0		54.3	48	01.8		50.6	262	57.4		08.0	38	09.4		
20	209	24.0	116	05.1		54.4	63	02.8		50.1	278	00.2		08.0	53	11.7		
21	224	26.4	131	04.2		54.4	78	03.8		49.5	293	02.9		08.1	68	14.0		
22	239	28.9	146	03.3		54.4	93	04.9		49.0	308	05.7		08.1	83	16.2		
23	254	31.3	161	02.4		54.4	108	05.9		48.5	323	08.5		08.2	98	18.5		
24	269	33.8	176	01.5	+23	54.4	123	07.0	+14	48.0	338	11.2	-22	08.2	113	20.8		
Dif	—		-9		0		+10		-5		+28		0		+23			

UT	SOL			LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7			Edad: 17 ^d 2 PHE { 4 ^h : 54 ^m 9 12 ^h : 55 ^m 0 20 ^h : 55 ^m 1												
	PMG: 12 ^h 01 ^m 9			SD: 14 ^m 9 PMG: 1 ^h 56 ^m R°: 47 ^m												
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	'	°	h m	h m	h m	h m	m	h m	m
0	179	33.8	+23 26.4	332	02.8	−23 10.8	80	60 N	58	*** **	0 49	2 36	23 10	3	4 57	92
1	194	33.6	26.4	346	33.3 ¹¹⁵	−23 02.8	80	58	*** **	1 40	2 56	22 56	8	5 15	87	
2	209	33.5	26.4	1	03.9 ¹¹⁶	−22 54.6	82	56	*** **	2 10	3 13	45 11		31	82	
3	224	33.4	26.4	15	34.5 ¹¹⁶	46.3	83	54	0 45	33	27	34 14		44	79	
4	239	33.2	26.4	30	05.2 ¹¹⁷	37.9	84	52	1 32	2 51	40	25 17		5 56	75	
5	254	33.1	+23 26.4	44	35.9 ¹¹⁷	−22 29.4	85	50	2 00	3 06	3 51	22 17	19	6 06	73	
6	269	33.0	+23 26.4	59	06.7 ¹¹⁸	−22 20.8	86	45	2 46	3 36	4 13	21 59	24	6 27	68	
7	284	32.8	26.4	73	37.5 ¹¹⁸	12.0	88	40	3 17	3 58	31	45 28		44	65	
8	299	32.7	26.4	88	08.4 ¹¹⁹	−22 03.2	88	35	40	4 17	46	33 31		6 58	62	
9	314	32.6	26.4	102	39.3 ¹¹⁹	−21 54.2	90	30	3 59	32	4 59	22 34		7 11	59	
10	329	32.4	26.4	117	10.3 ¹²⁰	45.2	90	20	4 28	4 57	5 22	21 03	39	32	54	
11	344	32.3	+23 26.4	131	41.3 ¹²⁰	−21 36.1	91	10 N	4 50	5 17	5 41	20 47	43	7 50	51	
12	359	32.2	+23 26.3	146	12.4 ¹²¹	−21 26.8	93	0	5 09	5 36	5 58	20 32	46	8 07	47	
13	14	32.0	26.3	160	43.5 ¹²¹	17.4	94	10 S	26	5 53	6 16	17 50		24	44	
14	29	31.9	26.3	175	14.7 ¹²²	−21 08.0	94	20	43	6 10	34	20 00	54	8 42	40	
15	44	31.8	26.3	189	45.9 ¹²²	−20 58.4	96	30	5 59	29	6 55	19 41	59	9 03	35	
16	59	31.6	26.3	204	17.1 ¹²²	48.8	96	35	6 08	40	7 08	30 62		15	32	
17	74	31.5	+23 26.3	218	48.5 ¹²⁴	−20 39.0	98	40	6 17	6 51	7 22	19 18	64	9 28	30	
18	89	31.4	+23 26.3	233	19.8 ¹²³	−20 29.1	99	45	6 28	7 05	7 39	19 02	69	9 44	26	
19	104	31.2	26.3	247	51.3 ¹²⁵	19.2	99	50	40	21	8 00	18 44	74	10 04	21	
20	119	31.1	26.3	262	22.7 ¹²⁴	−20 09.1	101	52	45	29	10	35 76		14	18	
21	134	30.9	26.2	276	54.2 ¹²⁵	−19 59.0	101	54	51	37	21	25 79		24	16	
22	149	30.8	26.2	291	25.8 ¹²⁶	48.7	103	56	6 57	46	33	14 82		36	13	
23	164	30.7	26.2	305	57.4 ¹²⁶	38.4	103	58	7 04	7 56	8 48	18 01	87	10 49	10	
24	179	30.5	+23 26.2	320	29.1 ¹²⁷	−19 28.0	104	60 S	7 11	8 08	9 06	17 46	91	11 05	5	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 6 ^h 00 ^m 8		Mag: −3.9 PMG: 12 ^h 17 ^m		Mag: +1.6 PMG: 15 ^h 46 ^m		Mag: −2.7 PMG: 1 ^h 27 ^m		Mag: +0.8 PMG: 16 ^h 24 ^m						
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄						
h	°	'	°	°	'	°	°	'	°	°	'				
0	269	33.8	176	01.5	+23 54.4	123	07.0	+14 48.0	338	11.2	−22 08.2	113	20.8	+11 44.7	
1	284	36.3	191	00.6	54.5	138	08.0	47.5	353	14.0	08.3	128	23.1	44.7	
2	299	38.7	205	59.7	54.5	153	09.1	47.0	8	16.8	08.3	143	25.4	44.6	
3	314	41.2	220	58.8	54.5	168	10.1	46.5	23	19.5	08.4	158	27.6	44.5	
4	329	43.7	235	57.9	54.5	183	11.2	46.0	38	22.3	08.4	173	29.9	44.4	
5	344	46.1	250	57.0	+23 54.5	198	12.2	+14 45.5	53	25.0	−22 08.5	188	32.2	+11 44.4	
6	359	48.6	265	56.1	+23 54.5	213	13.3	+14 44.9	68	27.8	−22 08.5	203	34.5	+11 44.3	
7	14	51.1	280	55.2	54.5	228	14.3	44.4	83	30.6	08.6	218	36.8	44.2	
8	29	53.5	295	54.3	54.5	243	15.4	43.9	98	33.3	08.6	233	39.0	44.1	
9	44	56.0	310	53.4	54.6	258	16.4	43.4	113	36.1	08.6	248	41.3	44.1	
10	59	58.5	325	52.5	54.6	273	17.5	42.9	128	38.9	08.7	263	43.6	44.0	
11	75	00.9	340	51.6	+23 54.6	288	18.5	+14 42.4	143	41.6	−22 08.7	278	45.9	+11 43.9	
12	90	03.4	355	50.7	+23 54.6	303	19.6	+14 41.9	158	44.4	−22 08.8	293	48.2	+11 43.8	
13	105	05.8	10	49.8	54.6	318	20.6	41.4	173	47.2	08.8	308	50.5	43.8	
14	120	08.3	25	48.9	54.6	333	21.6	40.8	188	50.0	08.9	323	52.7	43.7	
15	135	10.8	40	48.0	54.6	348	22.7	40.3	203	52.7	08.9	338	55.0	43.6	
16	150	13.2	55	47.2	54.6	3	23.7	39.8	218	55.5	09.0	353	57.3	43.5	
17	165	15.7	70	46.3	+23 54.6	18	24.8	+14 39.3	233	58.3	−22 09.0	8	59.6	+11 43.5	
18	180	18.2	85	45.4	+23 54.6	33	25.8	+14 38.8	249	01.0	−22 09.1	24	01.8	+11 43.4	
19	195	20.6	100	44.5	54.6	48	26.9	38.3	264	03.8	09.1	39	04.1	43.3	
20	210	23.1	115	43.6	54.6	63	27.9	37.8	279	06.6	09.2	54	06.4	43.2	
21	225	25.6	130	42.7	54.5	78	29.0	37.3	294	09.3	09.2	69	08.7	43.2	
22	240	28.0	145	41.8	54.5	93	30.0	36.7	309	12.1	09.3	84	11.0	43.1	
23	255	30.5	160	40.9	54.5	108	31.1	36.2	324	14.9	09.3	99	13.2	43.0	
24	270	32.9	175	40.0	+23 54.5	123	32.1	+14 35.7	339	17.6	−22 09.4	114	15.5	+11 42.9	
Dif	—		−9		0	+10		−5	+28		0	+23		−1	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna						
	SD: 15 ^h 7 PMG: 12 ^h 02 ^m 1			Edad: 18 ^d 2 PHE { 4 ^h : 55 ^h 3 12 ^h : 55 ^h 4 20 ^h : 55 ^h 6 PMG: 2 ^h 43 ^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	179	30.5	+23	26.2	320	29.1	-19	28.0	60 N	21 28	23 14	** **	23 13	1	6 29 91					
1	194	30.4		26.2	335	00.8 ¹²⁷		17.4 ¹⁰⁶	58	21 07	22 23	** **	23 04	5	42 87					
2	209	30.3		26.2	349	32.5 ¹²⁷	-19	06.8 ¹⁰⁶	56	20 51	21 53	** **	22 56	8	6 53 83					
3	224	30.1		26.1	4	04.3 ¹²⁸	-18	56.1 ¹⁰⁷	54	36	31	23 18	48	12	7 03 79					
4	239	30.0		26.1	18	36.2 ¹²⁹		45.3 ¹⁰⁸	52	24	21 13	22 31	42	14	11 77					
5	254	29.9	+23	26.1	33	08.1 ¹²⁹	-18	34.4 ¹⁰⁹	50	20 13	20 58	22 03	22 36	16	7 19 74					
6	269	29.7	+23	26.1	47	40.0 ¹²⁹	-18	23.4 ¹¹⁰	45	19 51	20 28	21 18	22 23	21	7 35 69					
7	284	29.6		26.1	62	12.0 ¹³⁰		12.4 ¹¹⁰	40	33	20 05	20 47	13	24	7 49 64					
8	299	29.5		26.0	76	44.1 ¹³¹	-18	01.2 ¹¹²	35	17	19 47	24	22 04	28	8 00 61					
9	314	29.3		26.0	91	16.2 ¹³¹	-17	50.0 ¹¹²	30	19 04	32	20 05	21 56	31	10 58					
10	329	29.2		26.0	105	48.3 ¹³¹		38.6 ¹¹⁴	20	18 42	19 07	19 36	42	36	26 54					
11	344	29.1	+23	26.0	120	20.5 ¹³²	-17	27.2 ¹¹⁴	10 N	18 23	18 46	19 14	21 30	40	8 41 49					
12	359	28.9	+23	25.9	134	52.7 ¹³²	-17	15.7 ¹¹⁵	0	18 06	18 28	18 55	21 18	45	8 54 46					
13	14	28.8		25.9	149	24.9 ¹³²	-17	04.1 ¹¹⁶	10 S	17 48	18 11	37	21 07	48	9 08 41					
14	29	28.7		25.9	163	57.2 ¹³³	-16	52.5 ¹¹⁶	20	30	17 54	21	20 54	53	22 37					
15	44	28.5		25.9	178	29.6 ¹³⁴		40.7 ¹¹⁸	30	17 08	35	18 05	40	58	38 32					
16	59	28.4		25.8	193	02.0 ¹³⁴		28.9 ¹¹⁸	35	16 56	24	17 56	32	61	47 30					
17	74	28.3	+23	25.8	207	34.4 ¹³⁴	-16	17.0 ¹¹⁹	40	16 42	17 12	17 47	20 22	65	9 58 26					
18	89	28.1	+23	25.8	222	06.8 ¹³⁴	-16	05.0 ¹²⁰	45	16 25	16 59	17 36	20 11	69	10 10 23					
19	104	28.0		25.7	236	39.4 ¹³⁶	-15	53.0 ¹²⁰	50	16 04	43	24	19 58	74	25 18					
20	119	27.9		25.7	251	11.9 ¹³⁵		40.8 ¹²²	52	15 54	35	19	51	77	32 15					
21	134	27.7		25.7	265	44.5 ¹³⁶		28.6 ¹²²	54	43	27	13	44	80	40 13					
22	149	27.6		25.6	280	17.1 ¹³⁶		16.3 ¹²³	56	31	18	07	36	83	49 9					
23	164	27.5		25.6	294	49.8 ¹³⁷	-15	04.0 ¹²³	58	15 16	16 08	17 00	28	86	10 59 6					
24	179	27.3	+23	25.6	309	22.5 ¹³⁷	-14	51.5 ¹²⁵	60 S	14 58	15 56	16 53	19 17	91	11 10 2					
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 5 ^h 56 ^m 8			Mag: -3.9 PMG: 12 ^h 18 ^m			Mag: +1.6 PMG: 15 ^h 45 ^m			Mag: -2.7 PMG: 1 ^h 23 ^m			Mag: +0.8 PMG: 16 ^h 20 ^m							
	hG ♈			hG ♀		Dec	hG ♂		Dec	hG ♊		Dec	hG ♉		Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	270	32.9	175	40.0	+23	54.5	123	32.1	+14	35.7	339	17.6	-22	09.4	114	15.5	+11	42.9		
1	285	35.4	190	39.1		54.5	138	33.2		35.2	354	20.4		09.4	129	17.8		42.9		
2	300	37.9	205	38.2		54.5	153	34.2		34.7	9	23.2		09.5	144	20.1		42.8		
3	315	40.3	220	37.3		54.5	168	35.3		34.2	24	25.9		09.5	159	22.4		42.7		
4	330	42.8	235	36.4		54.5	183	36.3		33.6	39	28.7		09.5	174	24.6		42.6		
5	345	45.3	250	35.5	+23	54.4	198	37.4	+14	33.1	54	31.5	-22	09.6	189	26.9	+11	42.6		
6	0	47.7	265	34.6	+23	54.4	213	38.4	+14	32.6	69	34.3	-22	09.6	204	29.2	+11	42.5		
7	15	50.2	280	33.7		54.4	228	39.4		32.1	84	37.0		09.7	219	31.5		42.4		
8	30	52.7	295	32.8		54.4	243	40.5		31.6	99	39.8		09.7	234	33.7		42.3		
9	45	55.1	310	31.9		54.4	258	41.5		31.1	114	42.6		09.8	249	36.0		42.3		
10	60	57.6	325	31.0		54.3	273	42.6		30.6	129	45.3		09.8	264	38.3		42.2		
11	76	00.1	340	30.1	+23	54.3	288	43.6	+14	30.0	144	48.1	-22	09.9	279	40.6	+11	42.1		
12	91	02.5	355	29.2	+23	54.3	303	44.7	+14	29.5	159	50.9	-22	09.9	294	42.9	+11	42.0		
13	106	05.0	10	28.3		54.3	318	45.7		29.0	174	53.7		10.0	309	45.1		42.0		
14	121	07.4	25	27.4		54.2	333	46.8		28.5	189	56.4		10.0	324	47.4		41.9		
15	136	09.9	40	26.5		54.2	348	47.8		28.0	204	59.2		10.1	339	49.7		41.8		
16	151	12.4	55	25.6		54.2	3	48.9		27.5	220	02.0		10.1	354	52.0		41.7		
17	166	14.8	70	24.7	+23	54.1	18	49.9	+14	26.9	235	04.7	-22	10.2	9	54.2	+11	41.7		
18	181	17.3	85	23.8	+23	54.1	33	51.0	+14	26.4	250	07.5	-22	10.2	24	56.5	+11	41.6		
19	196	19.8	100	22.9		54.1	48	52.0		25.9	265	10.3		10.3	39	58.8		41.5		
20	211	22.2	115	22.0		54.0	63	53.1		25.4	280	13.1		10.3	55	01.1		41.4		
21	226	24.7	130	21.1		54.0	78	54.1		24.9	295	15.8		10.4	70	03.3		41.4		
22	241	27.2	145	20.2		54.0	93	55.2		24.4	310	18.6		10.4	85	05.6		41.3		
23	256	29.6	160	19.4		53.9	108	56.2		23.8	325	21.4		10.5	100	07.9		41.2		
24	271	32.1	175	18.5	+23	53.9	123	57.3	+14	23.3	340	24.2	-22	10.5	115	10.2	+11	41.1		
Dif	—		-9		0		+10		-5		+28		0		+23		-		4	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7			Edad: 19 ^d 2	PHE { 4 ^h : 55 ^m 8 12 ^h : 56 ^m 0 20 ^h : 56 ^m 2	SD: 15 ^h 2		R°: 44 ^m			Hora	R°	Hora	R°	
	PMG: 12 ^h 02 ^m 3					PMG: 3 ^h 29 ^m									
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil						
h	°	'	°	°	'	°	'	h	m	h	m	h	m	h	m
0	179	27.3	+23 25.6	309	22.5	-14 51.5	60 N	** **	0 50	2 36	23 14	1	8 00	90	
1	194	27.2	25.5	323	55.2 ¹³⁷	39.0 ¹²⁵	58	** **	1 41	2 57	09 4		09 85		
2	209	27.0	25.5	338	28.0 ¹³⁸	26.4 ¹²⁶	56	** **	2 11	3 14	04 7		16 82		
3	224	26.9	25.5	353	00.8 ¹³⁸	13.8 ¹²⁶	54	0 46	33	28	23 00	9	22 80		
4	239	26.8	25.4	7	33.6 ¹³⁸	-14 01.0 ¹²⁸	52	1 33	2 51	40	22 56	12	28 77		
5	254	26.6	+23 25.4	22	06.5 ¹³⁹	-13 48.3 ¹²⁷	50	2 01	3 07	3 51	22 52	14	8 33	74	
6	269	26.5	+23 25.4	36	39.4 ¹³⁹	-13 35.4 ¹²⁹	45	2 47	3 36	4 14	22 44	19	8 44	69	
7	284	26.4	25.3	51	12.3 ¹³⁹	22.5 ¹²⁹	40	3 17	3 59	32	37 23		8 53	65	
8	299	26.2	25.3	65	45.3 ¹⁴⁰	-13 09.5 ¹³⁰	35	40	4 17	4 47	32 26		9 01	62	
9	314	26.1	25.2	80	18.3 ¹⁴⁰	-12 56.4 ¹³¹	30	3 59	32	5 00	27 29		08 58		
10	329	26.0	25.2	94	51.3 ¹⁴⁰	43.3 ¹³¹	20	4 28	4 57	22	18 35		20 53		
11	344	25.8	+23 25.2	109	24.3 ¹⁴⁰	-12 30.1 ¹³²	10 N	4 51	5 18	5 41	22 10	39	9 30	48	
12	359	25.7	+23 25.1	123	57.4 ¹⁴¹	-12 16.8 ¹³³	0	5 10	5 36	5 59	22 03	43	9 40	44	
13	14	25.6	25.1	138	30.5 ¹⁴¹	-12 03.5 ¹³³	10 S	27	5 53	6 16	21 55	48	49 40		
14	29	25.4	25.0	153	03.7 ¹⁴²	-11 50.1 ¹³⁴	20	5 43	6 11	35	47 53		9 59	35	
15	44	25.3	25.0	167	36.8 ¹⁴¹	36.7 ¹³⁴	30	6 00	29	6 56	38 59		10 10	30	
16	59	25.2	24.9	182	10.0 ¹⁴²	23.2 ¹³⁵	35	08	40	7 08	33 62		17 27		
17	74	25.0	+23 24.9	196	43.2 ¹⁴²	-11 09.6 ¹³⁶	40	6 18	6 52	7 22	21 27	65	10 24	24	
18	89	24.9	+23 24.8	211	16.4 ¹⁴²	-10 56.0 ¹³⁶	45	6 28	7 05	7 39	21 20	70	10 33	19	
19	104	24.8	24.8	225	49.7 ¹⁴³	42.3 ¹³⁷	50	40	22	8 00	12 74		43 15		
20	119	24.6	24.7	240	22.9 ¹⁴²	28.6 ¹³⁷	52	45	29	10	08 77		47 13		
21	134	24.5	24.7	254	56.2 ¹⁴³	14.8 ¹³⁸	54	51	37	21	21 04	79	53 10		
22	149	24.4	24.6	269	29.5 ¹⁴³	-10 00.9 ¹³⁹	56	6 57	46	34	20 59	82	10 58	8	
23	164	24.2	24.6	284	02.8 ¹⁴³	-9 47.0 ¹³⁹	58	7 04	7 57	8 48	54 85		11 05	4	
24	179	24.1	+23 24.5	298	36.2 ¹⁴⁴	-9 33.1 ¹³⁹	60 S	7 11	8 08	9 06	20 48	89	11 12	1	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 5 ^h 52 ^m 9		Mag: -3.9 PMG: 12 ^h 20 ^m		Mag: +1.6 PMG: 15 ^h 43 ^m		Mag: -2.7 PMG: 1 ^h 18 ^m		Mag: +0.8 PMG: 16 ^h 17 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	271	32.1	175	18.5	+23 53.9	123 57.3	+14 23.3	340 24.2	-22 10.5	115 10.2	+11 41.1			
1	286	34.6	190	17.6	53.8	138 58.3	22.8	355 26.9	10.6	130 12.4	41.1			
2	301	37.0	205	16.7	53.8	153 59.3	22.3	10 29.7	10.6	145 14.7	41.0			
3	316	39.5	220	15.8	53.8	169 00.4	21.8	25 32.5	10.6	160 17.0	40.9			
4	331	41.9	235	14.9	53.7	184 01.4	21.2	40 35.3	10.7	175 19.3	40.8			
5	346	44.4	250	14.0	+23 53.7	199 02.5	+14 20.7	55 38.0	-22 10.7	190 21.5	+11 40.7			
6	1	46.9	265	13.1	+23 53.6	214 03.5	+14 20.2	70 40.8	-22 10.8	205 23.8	+11 40.7			
7	16	49.3	280	12.2	53.6	229 04.6	19.7	85 43.6	10.8	220 26.1	40.6			
8	31	51.8	295	11.3	53.5	244 05.6	19.2	100 46.4	10.9	235 28.4	40.5			
9	46	54.3	310	10.4	53.5	259 06.7	18.6	115 49.1	10.9	250 30.6	40.4			
10	61	56.7	325	09.5	53.4	274 07.7	18.1	130 51.9	11.0	265 32.9	40.4			
11	76	59.2	340	08.6	+23 53.4	289 08.8	+14 17.6	145 54.7	-22 11.0	280 35.2	+11 40.3			
12	92	01.7	355	07.7	+23 53.3	304 09.8	+14 17.1	160 57.5	-22 11.1	295 37.5	+11 40.2			
13	107	04.1	10	06.8	53.2	319 10.9	16.6	176 00.2	11.1	310 39.7	40.1			
14	122	06.6	25	05.9	53.2	334 11.9	16.0	191 03.0	11.2	325 42.0	40.1			
15	137	09.1	40	05.0	53.1	349 13.0	15.5	206 05.8	11.2	340 44.3	40.0			
16	152	11.5	55	04.1	53.1	4 14.0	15.0	221 08.6	11.3	355 46.6	39.9			
17	167	14.0	70	03.2	+23 53.0	19 15.1	+14 14.5	236 11.3	-22 11.3	10 48.8	+11 39.8			
18	182	16.4	85	02.3	+23 52.9	34 16.1	+14 14.0	251 14.1	-22 11.4	25 51.1	+11 39.7			
19	197	18.9	100	01.4	52.9	49 17.2	13.4	266 16.9	11.4	40 53.4	39.7			
20	212	21.4	115	00.5	52.8	64 18.2	12.9	281 19.7	11.5	55 55.7	39.6			
21	227	23.8	129	59.6	52.7	79 19.3	12.4	296 22.4	11.5	70 57.9	39.5			
22	242	26.3	144	58.7	52.7	94 20.3	11.9	311 25.2	11.6	86 00.2	39.4			
23	257	28.8	159	57.8	52.6	109 21.3	11.4	326 28.0	11.6	101 02.5	39.4			
24	272	31.2	174	57.0	+23 52.5	124 22.4	+14 10.8	341 30.8	-22 11.7	116 04.7	+11 39.3			
Dif	—		-9		-1	+10		-5	+28		0	+23		-1

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 : 56 ^h /4 12 ^h : 56 ^h /6 20 ^h : 56 ^h /8													
	PMG: 12 ^h 02 ^m 5				SD: 15 ^h 3 PMG: 4 ^h 13 ^m R°: 44 ^m													
	hG ☉		Dec		hG ☾ Dif		Dec Dif				Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m			
0	179	24.1	+23	24.5	298	36.2	-9	33.1	60 N	21 28	23 13	** **	23 15 1		9 30 90			
1	194	24.0		24.5	313	09.5 ¹⁴³		19.1 ¹⁴⁰	58	21 07	22 23	** **	13 4		34 87			
2	209	23.8		24.4	327	42.9 ¹⁴⁴	-9	05.0 ¹⁴¹	56	20 51	21 53	** **	11 7		38 83			
3	224	23.7		24.4	342	16.3 ¹⁴⁴	-8	50.9 ¹⁴¹	54	36	31	23 17	09 10		42 80			
4	239	23.6		24.3	356	49.7 ¹⁴⁴		36.7 ¹⁴²	52	24	21 13	22 31	08 12		45 77			
5	254	23.4	+23	24.3	11	23.1 ¹⁴⁴	-8	22.5 ¹⁴²	50	20 13	20 58	22 03	23 06 14		9 47 75			
6	269	23.3	+23	24.2	25	56.5 ¹⁴⁴	-8	08.3 ¹⁴²	45	19 51	20 28	21 18	23 03 19		9 53 70			
7	284	23.2		24.2	40	29.9 ¹⁴⁴	-7	54.0 ¹⁴³	40	33	20 06	20 47	23 00 23		9 58 66			
8	299	23.0		24.1	55	03.3 ¹⁴⁴		39.6 ¹⁴⁴	35	18	19 47	24	22 58 26		10 03 62			
9	314	22.9		24.1	69	36.8 ¹⁴⁵		25.2 ¹⁴⁴	30	19 05	32	20 06	56 30		06 59			
10	329	22.8		24.0	84	10.2 ¹⁴⁴	-7	10.8 ¹⁴⁴	20	18 43	19 07	19 37	53 34		13 53			
11	344	22.6	+23	23.9	98	43.7 ¹⁴⁵	-6	56.3 ¹⁴⁵	10 N	18 24	18 47	19 14	22 49 40		10 18 49			
12	359	22.5	+23	23.9	113	17.1 ¹⁴⁴	-6	41.8 ¹⁴⁵	0	18 06	18 29	18 55	22 46 45		10 24 43			
13	14	22.4		23.8	127	50.6 ¹⁴⁵		27.2 ¹⁴⁶	10 S	17 49	18 12	38	43 49		29 39			
14	29	22.2		23.8	142	24.0 ¹⁴⁴	-6	12.6 ¹⁴⁶	20	30	17 54	22	40 54		34 35			
15	44	22.1		23.7	156	57.5 ¹⁴⁵	-5	58.0 ¹⁴⁶	30	17 09	35	18 05	37 59		40 30			
16	59	22.0		23.6	171	30.9 ¹⁴⁴		43.3 ¹⁴⁷	35	16 57	25	17 57	35 62		44 26			
17	74	21.8	+23	23.6	186	04.4 ¹⁴⁵	-5	28.6 ¹⁴⁷	40	16 42	17 13	17 47	22 32 67		10 48 22			
18	89	21.7	+23	23.5	200	37.8 ¹⁴⁴	-5	13.8 ¹⁴⁸	45	16 26	17 00	17 37	22 30 70		10 52 19			
19	104	21.6		23.4	215	11.3 ¹⁴⁵	-4	59.0 ¹⁴⁸	50	16 05	16 43	25	26 76		10 58 14			
20	119	21.4		23.4	229	44.7 ¹⁴⁴		44.2 ¹⁴⁸	52	15 55	36	20	25 78		11 00 12			
21	134	21.3		23.3	244	18.2 ¹⁴⁵		29.3 ¹⁴⁹	54	44	28	14	23 81		03 9			
22	149	21.2		23.2	258	51.6 ¹⁴⁴	-4	14.4 ¹⁴⁹	56	31	19	08	21 84		06 7			
23	164	21.0		23.2	273	25.0 ¹⁴⁴	-3	59.5 ¹⁴⁹	58	15 17	16 08	17 01	19 87		09 4			
24	179	20.9	+23	23.1	287	58.4 ¹⁴⁴	-3	44.5 ¹⁵⁰	60 S	14 59	15 57	16 54	22 17 91		11 13 0			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 5 ^h 49 ^m 0		Mag: -3.9 PMG: 12 ^h 21 ^m				Mag: +1.6 PMG: 15 ^h 41 ^m				Mag: -2.7 PMG: 1 ^h 14 ^m				Mag: +0.8 PMG: 16 ^h 13 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♎		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	272	31.2	174	57.0	+23	52.5	124	22.4	+14	10.8	341	30.8	-22	11.7	116	04.7	+11	39.3
1	287	33.7	189	56.1		52.5	139	23.4		10.3	356	33.6		11.7	131	07.0		39.2
2	302	36.2	204	55.2		52.4	154	24.5		09.8	11	36.3		11.8	146	09.3		39.1
3	317	38.6	219	54.3		52.3	169	25.5		09.3	26	39.1		11.8	161	11.6		39.0
4	332	41.1	234	53.4		52.3	184	26.6		08.7	41	41.9		11.9	176	13.8		39.0
5	347	43.5	249	52.5	+23	52.2	199	27.6	+14	08.2	56	44.7	-22	11.9	191	16.1	+11	38.9
6	2	46.0	264	51.6	+23	52.1	214	28.7	+14	07.7	71	47.4	-22	11.9	206	18.4	+11	38.8
7	17	48.5	279	50.7		52.0	229	29.7		07.2	86	50.2		12.0	221	20.7		38.7
8	32	50.9	294	49.8		51.9	244	30.8		06.6	101	53.0		12.0	236	22.9		38.7
9	47	53.4	309	48.9		51.9	259	31.8		06.1	116	55.8		12.1	251	25.2		38.6
10	62	55.9	324	48.0		51.8	274	32.9		05.6	131	58.6		12.1	266	27.5		38.5
11	77	58.3	339	47.1	+23	51.7	289	33.9	+14	05.1	147	01.3	-22	12.2	281	29.7	+11	38.4
12	93	00.8	354	46.2	+23	51.6	304	35.0	+14	04.6	162	04.1	-22	12.2	296	32.0	+11	38.4
13	108	03.3	9	45.3		51.5	319	36.0		04.0	177	06.9		12.3	311	34.3		38.3
14	123	05.7	24	44.4		51.4	334	37.1		03.5	192	09.7		12.3	326	36.6		38.2
15	138	08.2	39	43.5		51.3	349	38.1		03.0	207	12.5		12.4	341	38.8		38.1
16	153	10.7	54	42.6		51.3	4	39.2		02.5	222	15.2		12.4	356	41.1		38.0
17	168	13.1	69	41.7	+23	51.2	19	40.2	+14	01.9	237	18.0	-22	12.5	11	43.4	+11	38.0
18	183	15.6	84	40.8	+23	51.1	34	41.3	+14	01.4	252	20.8	-22	12.5	26	45.6	+11	37.9
19	198	18.0	99	40.0		51.0	49	42.3		00.9	267	23.6		12.6	41	47.9		37.8
20	213	20.5	114	39.1		50.9	64	43.4	+14	00.4	282	26.4		12.6	56	50.2		37.7
21	228	23.0	129	38.2		50.8	79	44.4	+13	59.8	297	29.1		12.7	71	52.4		37.6
22	243	25.4	144	37.3		50.7	94	45.4		59.3	312	31.9		12.7	86	54.7		37.6
23	258	27.9	159	36.4		50.6	109	46.5		58.8	327	34.7		12.8	101	57.0		37.5
24	273	30.4	174	35.5	+23	50.5	124	47.5	+13	58.3	342	37.5	-22	12.8	116	59.3	+11	37.4
Dif	—		-9		-1		+10		-5		+28		0		+23		-8	

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna				
	SD: 15 ^h 7 ^m PMG: 12 ^h 02 ^m 7				Edad: 21 ^d 2 ^h PHE { SD: 15 ^h 5 ^m PMG: 4 ^h 57 ^m R°: 44 ^m															
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m		
0	179	20.9	+23	23.1	287	58.4	-3	44.5	60 N	** **	0 52	2 37	23 16	1	11 00	92				
1	194	20.8		23.0	302	31.8 ¹⁴⁴		29.5 ¹⁵⁰	58	** **	1 42	2 58	17 4		01 88					
2	209	20.7		23.0	317	05.2 ¹⁴⁴	-3	14.5 ¹⁵⁰	56	** **	2 12	3 15	18 7		01 85					
3	224	20.5		22.9	331	38.5 ¹⁴³	-2	59.4 ¹⁵¹	54	0 48	34	29	19 10		02 82					
4	239	20.4		22.8	346	11.9 ¹⁴⁴		44.4 ¹⁵⁰	52	1 34	2 52	41	20 12		02 79					
5	254	20.3	+23	22.8	0	45.2 ¹⁴³	-2	29.3 ¹⁵¹	50	2 02	3 07	3 52	23 20	15	11 02	77				
6	269	20.1	+23	22.7	15	18.5 ¹⁴³	-2	14.1 ¹⁵²	45	2 47	3 37	4 14	23 22	20	11 03	72				
7	284	20.0		22.6	29	51.8 ¹⁴³	-1	59.0 ¹⁵¹	40	3 18	4 00	32	23 24		04 67					
8	299	19.9		22.5	44	25.1 ¹⁴³		43.8 ¹⁵²	35	3 41	18	4 47	24 28		05 63					
9	314	19.7		22.5	58	58.4 ¹⁴³		28.6 ¹⁵²	30	4 00	33	5 00	26 30		05 60					
10	329	19.6		22.4	73	31.6 ¹⁴²	-1	13.4 ¹⁵²	20	29	4 58	23	27 37		06 55					
11	344	19.5	+23	22.3	88	04.8 ¹⁴²	-0	58.1 ¹⁵³	10 N	4 51	5 18	5 41	23 29	42	11 07	49				
12	359	19.3	+23	22.2	102	38.0 ¹⁴²	-0	42.8 ¹⁵³	0	5 10	5 36	5 59	23 31	46	11 07	45				
13	14	19.2		22.2	117	11.2 ¹⁴²		27.6 ¹⁵²	10 S	27	5 54	6 16	32 51		08 40					
14	29	19.1		22.1	131	44.3 ¹⁴¹	-0	12.2 ¹⁵⁴	20	5 43	6 11	35	34 56		09 35					
15	44	18.9		22.0	146	17.4 ¹⁴¹	+0	03.1 ¹⁵³	30	6 00	30	6 56	36 62		10 29					
16	59	18.8		21.9	160	50.4 ¹⁴⁰		18.4 ¹⁵³	35	09	40	7 09	37 65		10 27					
17	74	18.7	+23	21.8	175	23.5 ¹⁴¹	+0	33.8 ¹⁵⁴	40	6 18	6 52	7 23	23 39	69	11 10	24				
18	89	18.5	+23	21.8	189	56.5 ¹⁴⁰	+0	49.1 ¹⁵³	45	6 28	7 06	7 39	23 40	74	11 11	19				
19	104	18.4		21.7	204	29.5 ¹⁴⁰	+1	04.5 ¹⁵⁴	50	40	22	8 00	42 79		12 14					
20	119	18.3		21.6	219	02.4 ¹³⁹		19.9 ¹⁵⁴	52	45	29	10	43 81		12 12					
21	134	18.1		21.5	233	35.3 ¹³⁹		35.3 ¹⁵⁴	54	51	37	21	44 84		12 10					
22	149	18.0		21.4	248	08.1 ¹³⁸	+1	50.7 ¹⁵⁴	56	6 57	46	34	45 87		13 6					
23	164	17.9		21.3	262	40.9 ¹³⁸	+2	06.1 ¹⁵⁴	58	7 04	7 57	8 48	46 91		13 4					
24	179	17.8	+23	21.3	277	13.7 ¹³⁸	+2	21.5 ¹⁵⁴	60 S	7 11	8 08	9 06	23 48	94	11 13	1				
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG 5 ^h 45 ^m 0				Mag: -3.9 PMG: 12 ^h 22 ^m				Mag: +1.6 PMG: 15 ^h 40 ^m				Mag: -2.7 PMG: 1 ^h 09 ^m				Mag: +0.8 PMG: 16 ^h 10 ^m			
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	273	30.4			174	35.5	+23	50.5	124	47.5	+13	58.3	342	37.5	-22	12.8	116	59.3	+11	37.4
1	288	32.8			189	34.6		50.4	139	48.6		57.7	357	40.3		12.9	132	01.5		37.3
2	303	35.3			204	33.7		50.3	154	49.6		57.2	12	43.0		12.9	147	03.8		37.3
3	318	37.8			219	32.8		50.2	169	50.7		56.7	27	45.8		13.0	162	06.1		37.2
4	333	40.2			234	31.9		50.1	184	51.7		56.2	42	48.6		13.0	177	08.3		37.1
5	348	42.7			249	31.0	+23	50.0	199	52.8	+13	55.6	57	51.4	-22	13.1	192	10.6	+11	37.0
6	3	45.2			264	30.1	+23	49.9	214	53.8	+13	55.1	72	54.2	-22	13.1	207	12.9	+11	36.9
7	18	47.6			279	29.2		49.8	229	54.9		54.6	87	57.0		13.2	222	15.1		36.9
8	33	50.1			294	28.3		49.7	244	55.9		54.0	102	59.7		13.2	237	17.4		36.8
9	48	52.5			309	27.4		49.5	259	57.0		53.5	118	02.5		13.3	252	19.7		36.7
10	63	55.0			324	26.6		49.4	274	58.0		53.0	133	05.3		13.3	267	21.9		36.6
11	78	57.5			339	25.7	+23	49.3	289	59.1	+13	52.5	148	08.1	-22	13.3	282	24.2	+11	36.5
12	93	59.9			354	24.8	+23	49.2	305	00.1	+13	51.9	163	10.9	-22	13.4	297	26.5	+11	36.5
13	109	02.4			9	23.9		49.1	320	01.2		51.4	178	13.7		13.4	312	28.8		36.4
14	124	04.9			24	23.0		49.0	335	02.2		50.9	193	16.4		13.5	327	31.0		36.3
15	139	07.3			39	22.1		48.9	350	03.3		50.4	208	19.2		13.5	342	33.3		36.2
16	154	09.8			54	21.2		48.7	5	04.3		49.8	223	22.0		13.6	357	35.6		36.1
17	169	12.3			69	20.3	+23	48.6	20	05.4	+13	49.3	238	24.8	-22	13.6	12	37.8	+11	36.1
18	184	14.7			84	19.4	+23	48.5	35	06.4	+13	48.8	253	27.6	-22	13.7	27	40.1	+11	36.0
19	199	17.2			99	18.5		48.4	50	07.5		48.2	268	30.4		13.7	42	42.4		35.9
20	214	19.6			114	17.6		48.2	65	08.5		47.7	283	33.1		13.8	57	44.6		35.8
21	229	22.1			129	16.7		48.1	80	09.6		47.2	298	35.9		13.8	72	46.9		35.8
22	244	24.6			144	15.8		48.0	95	10.6		46.6	313	38.7		13.9	87	49.2		35.7
23	259	27.0			159	15.0		47.9	110	11.6		46.1	328	41.5		13.9	102	51.4		35.6
24	274	29.5			174	14.1	+23	47.7	125	12.7	+13	45.6	343	44.3	-22	14.0	117	53.7	+11	35.5
Dif	—				-9 -1				+10 -5				+28 0				+23 -1			

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 8 12 ^h : 58 ^m 0 20 ^h : 58 ^m 3												
	PMG: 12 ^h 02 ^m 9			SD: 15 ^h 7 PMG: 5 ^h 41 ^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	179 17.8	+23 21.3		277 13.7	+2 21.5			60 N	21 27	23 11	** ** *		23 17	2	12 32	97
1	194 17.6		21.2	291 46.4 ¹³⁷		37.0 ¹⁵⁵		58	21 07	22 22	** ** *		21 6		29 93	
2	209 17.5		21.1	306 19.1 ¹³⁷	+2 52.4 ¹⁵⁴			56	20 50	21 53	** ** *		25 10		26 89	
3	224 17.4		21.0	320 51.8 ¹³⁷	+3 07.9 ¹⁵⁵			54	36	31	23 15		29 12		24 8	
4	239 17.2		20.9	335 24.4 ¹³⁶		23.3 ¹⁵⁴		52	24	21 13	22 30		32 15		21 83	
5	254 17.1	+23 20.8		349 56.9 ¹³⁵	+3 38.7 ¹⁵⁴			50	20 13	20 58	22 03		23 35	18	12 19	81
6	269 17.0	+23 20.7		4 29.4 ¹³⁵	+3 54.2 ¹⁵⁵			45	19 51	20 28	21 18		23 42	23	12 15	75
7	284 16.8		20.6	19 01.8 ¹³⁴	+4 09.6 ¹⁵⁴			40	33	20 06	20 47		47 28		11 71	
8	299 16.7		20.5	33 34.2 ¹³⁴		25.1 ¹⁵⁵		35	18	19 48	24		52 31		08 67	
9	314 16.6		20.5	48 06.6 ¹³⁴		40.5 ¹⁵⁴		30	19 05	32	20 06		23 56	35	05 63	
10	329 16.4		20.4	62 38.9 ¹³³	+4 55.9 ¹⁵⁴			20	18 43	19 08	19 37		** ** *	**	12 01	57
11	344 16.3	+23 20.3		77 11.1 ¹³²	+5 11.4 ¹⁵⁵			10 N	18 24	18 47	19 14		** ** *	**	11 56	52
12	359 16.2	+23 20.2		91 43.2 ¹³¹	+5 26.8 ¹⁵⁴			0	18 07	18 29	18 55		** ** *	**	11 52	48
13	14 16.1		20.1	106 15.4 ¹³²		42.2 ¹⁵⁴		10 S	17 49	18 12	38		** ** *	**	48 43	
14	29 15.9		20.0	120 47.4 ¹³⁰	+5 57.6 ¹⁵⁴			20	31	17 55	22		** ** *	**	44 38	
15	44 15.8		19.9	135 19.4 ¹³⁰	+6 13.0 ¹⁵⁴			30	17 10	36	18 06		** ** *	**	39 33	
16	59 15.7		19.8	149 51.3 ¹²⁹		28.4 ¹⁵⁴		35	16 57	25	17 57		** ** *	**	37 29	
17	74 15.5	+23 19.7		164 23.2 ¹²⁹	+6 43.8 ¹⁵⁴			40	16 43	17 14	17 48		** ** *	**	11 34	25
18	89 15.4	+23 19.6		178 54.9 ¹²⁷	+6 59.1 ¹⁵³			45	16 26	17 00	17 37		** ** *	**	11 30	21
19	104 15.3		19.5	193 26.7 ¹²⁸	+7 14.4 ¹⁵³			50	16 06	16 44	26		** ** *	**	26 16	
20	119 15.1		19.4	207 58.3 ¹²⁶		29.8 ¹⁵⁴		52	15 56	37	21		** ** *	**	24 13	
21	134 15.0		19.3	222 29.9 ¹²⁶	+7 45.1 ¹⁵³			54	45	29	15		** ** *	**	22 11	
22	149 14.9		19.2	237 01.4 ¹²⁵	+8 00.3 ¹⁵²			56	32	20	09		** ** *	**	19 8	
23	164 14.8		19.1	251 32.8 ¹²⁴		15.6 ¹⁵³		58	18	16 09	17 02		** ** *	**	17 5	
24	179 14.6	+23 19.0		266 04.2 ¹²⁴	+8 30.8 ¹⁵²			60 S	15 00	15 58	16 55		** ** *	**	11 14	1
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 5 ^h 41 ^m 1		Mag: -3.9 PMG: 12 ^h 24 ^m			Mag: +1.6 PMG: 15 ^h 38 ^m			Mag: -2.7 PMG: 1 ^h 05 ^m			Mag: +0.8 PMG: 16 ^h 06 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /		
0	274 29.5		174 14.1	+23 47.7		125 12.7	+13 45.6		343 44.3	-22 14.0		117 53.7	+11 35.5			
1	289 32.0		189 13.2		47.6	140 13.7		45.1	358 47.1		14.0	132 56.0		35.4		
2	304 34.4		204 12.3		47.5	155 14.8		44.5	13 49.9		14.1	147 58.2		35.4		
3	319 36.9		219 11.4		47.3	170 15.8		44.0	28 52.6		14.1	163 00.5		35.3		
4	334 39.4		234 10.5		47.2	185 16.9		43.5	43 55.4		14.2	178 02.8		35.2		
5	349 41.8		249 09.6	+23 47.1		200 17.9	+13 42.9		58 58.2	-22 14.2		193 05.0	+11 35.1			
6	4 44.3		264 08.7	+23 46.9		215 19.0	+13 42.4		74 01.0	-22 14.3		208 07.3	+11 35.0			
7	19 46.8		279 07.8		46.8	230 20.0		41.9	89 03.8		14.3	223 09.6		35.0		
8	34 49.2		294 06.9		46.7	245 21.1		41.3	104 06.6		14.4	238 11.8		34.9		
9	49 51.7		309 06.0		46.5	260 22.1		40.8	119 09.3		14.4	253 14.1		34.8		
10	64 54.1		324 05.2		46.4	275 23.2		40.3	134 12.1		14.5	268 16.4		34.7		
11	79 56.6		339 04.3	+23 46.2		290 24.2	+13 39.8		149 14.9	-22 14.5		283 18.6	+11 34.6			
12	94 59.1		354 03.4	+23 46.1		305 25.3	+13 39.2		164 17.7	-22 14.6		298 20.9	+11 34.6			
13	110 01.5		9 02.5		45.9	320 26.3		38.7	179 20.5		14.6	313 23.2		34.5		
14	125 04.0		24 01.6		45.8	335 27.4		38.2	194 23.3		14.7	328 25.4		34.4		
15	140 06.5		39 00.7		45.6	350 28.4		37.6	209 26.1		14.7	343 27.7		34.3		
16	155 08.9		53 59.8		45.5	5 29.5		37.1	224 28.9		14.8	358 30.0		34.2		
17	170 11.4		68 58.9	+23 45.4		20 30.5	+13 36.6		239 31.6	-22 14.8		13 32.2	+11 34.2			
18	185 13.9		83 58.0	+23 45.2		35 31.6	+13 36.0		254 34.4	-22 14.9		28 34.5	+11 34.1			
19	200 16.3		98 57.1		45.0	50 32.6		35.5	269 37.2		14.9	43 36.7		34.0		
20	215 18.8		113 56.3		44.9	65 33.7		35.0	284 40.0		15.0	58 39.0		33.9		
21	230 21.2		128 55.4		44.7	80 34.7		34.4	299 42.8		15.0	73 41.3		33.8		
22	245 23.7		143 54.5		44.6	95 35.8		33.9	314 45.6		15.0	88 43.5		33.8		
23	260 26.2		158 53.6		44.4	110 36.8		33.4	329 48.4		15.1	103 45.8		33.7		
24	275 28.6		173 52.7	+23 44.3		125 37.9	+13 32.8		344 51.2	-22 15.1		118 48.1	+11 33.6			
Dif	—		-9		-1	+10		-5	+28		0	+23		-1		

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'7 PMG: 12 ^h 03 ^m 1			Edad: 23 ^d 2 PHE { 4 ^h : 58'6 12 ^h : 58'8 20 ^h : 59'1 SD: 15'9 PMG: 6 ^h 28 ^m R°: 51 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	179	14.6	+23	19.0	266	04.2	+8 30.8	60 N	** **	0 55	2 39	23 19	4	14 09	104
1	194	14.5		18.9	280	35.5 ¹²³	+8 46.1 ¹⁵³	58	** **	1 44	2 59	27 9		14 02	98
2	209	14.4		18.8	295	06.7 ¹²²	+9 01.2 ¹⁵¹	56	** **	2 13	3 16	35 13		13 55	95
3	224	14.2		18.7	309	37.8 ¹²¹	16.4 ¹⁵²	54	0 51	36	30	41 17		49 91	
4	239	14.1		18.6	324	08.8 ¹²⁰	31.5 ¹⁵¹	52	1 36	2 53	42	47 20		44 88	
5	254	14.0	+23	18.5	338	39.8 ¹²⁰	+9 46.6 ¹⁵¹	50	2 03	3 08	3 53	23 53	22	13 40	84
6	269	13.8	+23	18.4	353	10.7 ¹¹⁹	+10 01.7 ¹⁵¹	45	2 48	3 38	4 15	** **	** *	13 30	79
7	284	13.7		18.2	7	41.5 ¹¹⁸	16.7 ¹⁵⁰	40	3 19	4 00	33	** **	** *	22 74	
8	299	13.6		18.1	22	12.2 ¹¹⁷	31.7 ¹⁵⁰	35	3 42	18	4 48	** **	** *	15 70	
9	314	13.5		18.0	36	42.8 ¹¹⁶	+10 46.7 ¹⁵⁰	30	4 00	34	5 01	** **	** *	13 08	67
10	329	13.3		17.9	51	13.3 ¹¹⁵	+11 01.6 ¹⁴⁹	20	29	4 59	23	0 04	40	12 58	61
11	344	13.2	+23	17.8	65	43.8 ¹¹⁵	+11 16.5 ¹⁴⁹	10 N	4 52	5 19	5 42	0 11	44	12 48	56
12	359	13.1	+23	17.7	80	14.1 ¹¹³	+11 31.4 ¹⁴⁹	0	5 11	5 37	5 59	0 17	49	12 40	51
13	14	12.9		17.6	94	44.4 ¹¹³	+11 46.2 ¹⁴⁸	10 S	28	5 54	6 17	23 54		31 47	
14	29	12.8		17.5	109	14.5 ¹¹¹	+12 01.0 ¹⁴⁸	20	5 44	6 11	35	30 59		22 42	
15	44	12.7		17.4	123	44.6 ¹¹¹	15.7 ¹⁴⁷	30	6 00	30	6 56	38 65		12 36	
16	59	12.6		17.2	138	14.6 ¹¹⁰	30.4 ¹⁴⁷	35	09	41	7 09	42 69		12 06	33
17	74	12.4	+23	17.1	152	44.4 ¹⁰⁸	+12 45.0 ¹⁴⁶	40	6 18	6 52	7 23	0 48	72	11 59	29
18	89	12.3	+23	17.0	167	14.2 ¹⁰⁸	+12 59.6 ¹⁴⁶	45	6 28	7 06	7 39	0 54	77	11 51	25
19	104	12.2		16.9	181	43.9 ¹⁰⁷	+13 14.1 ¹⁴⁵	50	40	22	8 00	1 01	83	42 19	
20	119	12.0		16.8	196	13.5 ¹⁰⁶	28.5 ¹⁴⁴	52	45	29	10	04 86		37 17	
21	134	11.9		16.7	210	42.9 ¹⁰⁴	43.0 ¹⁴⁵	54	51	37	21	08 89		33 13	
22	149	11.8		16.5	225	12.3 ¹⁰⁴	+13 57.3 ¹⁴³	56	6 57	46	34	12 92		27 11	
23	164	11.7		16.4	239	41.5 ¹⁰²	+14 11.6 ¹⁴³	58	7 04	7 56	8 48	17 96		22 6	
24	179	11.5	+23	16.3	254	10.7 ¹⁰²	+14 25.8 ¹⁴²	60 S	7 11	8 08	9 05	1 22	101	11 15	2

UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO				
	PMG 5 ^h 37 ^m 2			Mag: -3.9 PMG: 12 ^h 25 ^m			Mag: +1.6 PMG: 15 ^h 36 ^m			Mag: -2.7 PMG: 1 ^h 00 ^m			Mag: +0.8 PMG: 16 ^h 02 ^m				
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°		
0	275	28.6		173	52.7	+23	125	37.9	+13	344	51.2	-22	15.1	118	48.1	+11	33.6
1	290	31.1		188	51.8		140	38.9		359	53.9		15.2	133	50.3		33.5
2	305	33.6		203	50.9		155	39.9		14	56.7		15.2	148	52.6		33.4
3	320	36.0		218	50.0		170	41.0		29	59.5		15.3	163	54.9		33.3
4	335	38.5		233	49.1		185	42.0		45	02.3		15.3	178	57.1		33.3
5	350	41.0		248	48.3	+23	200	43.1	+13	60	05.1	-22	15.4	193	59.4	+11	33.2
6	5	43.4		263	47.4	+23	215	44.1	+13	75	07.9	-22	15.4	209	01.7	+11	33.1
7	20	45.9		278	46.5		230	45.2		90	10.7		15.5	224	03.9		33.0
8	35	48.4		293	45.6		245	46.2		105	13.5		15.5	239	06.2		32.9
9	50	50.8		308	44.7		260	47.3		120	16.3		15.6	254	08.4		32.9
10	65	53.3		323	43.8		275	48.3		135	19.0		15.6	269	10.7		32.8
11	80	55.7		338	42.9	+23	290	49.4	+13	150	21.8	-22	15.7	284	13.0	+11	32.7
12	95	58.2		353	42.0	+23	305	50.4	+13	165	24.6	-22	15.7	299	15.2	+11	32.6
13	111	00.7		8	41.2		320	51.5		180	27.4		15.8	314	17.5		32.5
14	126	03.1		23	40.3		335	52.5		195	30.2		15.8	329	19.8		32.5
15	141	05.6		38	39.4		350	53.6		210	33.0		15.9	344	22.0		32.4
16	156	08.1		53	38.5		5	54.6		225	35.8		15.9	359	24.3		32.3
17	171	10.5		68	37.6	+23	20	55.7	+13	240	38.6	-22	16.0	14	26.5	+11	32.2
18	186	13.0		83	36.7	+23	35	56.7	+13	255	41.4	-22	16.0	29	28.8	+11	32.1
19	201	15.5		98	35.8		50	57.8		270	44.2		16.1	44	31.1		32.1
20	216	17.9		113	35.0		65	58.8		285	46.9		16.1	59	33.3		32.0
21	231	20.4		128	34.1		80	59.9		300	49.7		16.2	74	35.6		31.9
22	246	22.9		143	33.2		96	00.9		315	52.5		16.2	89	37.9		31.8
23	261	25.3		158	32.3		111	02.0		330	55.3		16.3	104	40.1		31.7
24	276	27.8		173	31.4	+23	126	03.0	+13	345	58.1	-22	16.3	119	42.4	+11	31.6
Dif	—			-9	-2		+10	-5		+28	0			+23	-1		

UT	SOL				 LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7				Edad: 24 ^d 2 PHE $\left\{ \begin{array}{l} 4^h: 59/3 \\ 12^h: 59/6 \\ 20^h: 59/8 \end{array} \right.$													
	PMG: 12 ^h 03 ^m 3				SD: 16 ^h 1 PMG: 7 ^h 19 ^m R°: 55 ^m													
	hG ☉ Dec				hG ☾ Dif Dec Dif						Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	179	11.5	+23	16.3	254	10.7	+14	25.8	60 N	21	27	23	08	**	**	23	23 9	
1	194	11.4		16.2	268	39.7 ¹⁰⁰		40.0 ¹⁴²	58	21	07	22	21	**	**	36	16 40	
2	209	11.3		16.1	283	08.6 ⁹⁹	+14	54.1 ¹⁴¹	56	20	50	21	52	**	**	48	20 30	
3	224	11.1		15.9	297	37.5 ⁹⁹	+15	08.2 ¹⁴¹	54	36	30	23	13	23	58	24 20		
4	239	11.0		15.8	312	06.2 ⁹⁷		22.1 ¹³⁹	52	24	21	12	22	29	**	**	** 12	
5	254	10.9	+23	15.7	326	34.8 ⁹⁶	+15	36.0 ¹³⁹	50	20	13	20	57	22	02	**	**	** 15
6	269	10.8	+23	15.6	341	03.3 ⁹⁵	+15	49.9 ¹³⁹	45	19	51	20	28	21	17	0	05 28	
7	284	10.6		15.5	355	31.6 ⁹³	+16	03.6 ¹³⁷	40	33		20	06	20	47	15	32 36	
8	299	10.5		15.3	9	59.9 ⁹³		17.3 ¹³⁷	35	18		19	48	24		23	36 25	
9	314	10.4		15.2	24	28.0 ⁹¹		30.9 ¹³⁶	30	19	05	33	20	06		31	39 14	
10	329	10.3		15.1	38	56.0 ⁹⁰		44.4 ¹³⁵	20	18	43	19	08	19	37	44	45 13	
11	344	10.1	+23	14.9	53	23.9 ⁸⁹	+16	57.9 ¹³⁵	10 N	18	24	18	47	19	15	0	55 50	
12	359	10.0	+23	14.8	67	51.7 ⁸⁸	+17	11.3 ¹³⁴	0	18	07	18	30	18	56	1	06 54	
13	14	09.9		14.7	82	19.4 ⁸⁷		24.5 ¹³²	10 S	17	50	18	13	39		17	59 18	
14	29	09.7		14.6	96	46.9 ⁸⁵		37.7 ¹³²	20	31		17	55	23		29	63 13	
15	44	09.6		14.4	111	14.3 ⁸⁴	+17	50.8 ¹³¹	30	17	10	37	18	06		43	69 12	
16	59	09.5		14.3	125	41.6 ⁸³	+18	03.8 ¹³⁰	35	16	58	26	17	58		1	51 72	
17	74	09.4	+23	14.2	140	08.8 ⁸²	+18	16.8 ¹³⁰	40	16	44	17	14	17	49	2	00 76	
18	89	09.2	+23	14.0	154	35.9 ⁸¹	+18	29.6 ¹²⁸	45	16	27	17	01	17	38	2	11 81	
19	104	09.1		13.9	169	02.8 ⁷⁹		42.3 ¹²⁷	50	16	07	16	45	27		24	87 12	
20	119	09.0		13.8	183	29.6 ⁷⁸	+18	54.9 ¹²⁶	52	15	57	38	21		30	90 11		
21	134	08.9		13.6	197	56.2 ⁷⁶	+19	07.4 ¹²⁵	54	46		30	16		37	93 46		
22	149	08.7		13.5	212	22.8 ⁷⁶		19.9 ¹²⁵	56	33		21	10		44	98 38		
23	164	08.6		13.4	226	49.2 ⁷⁴		32.2 ¹²³	58	19	16	11	17	03	2	53 102		
24	179	08.5	+23	13.2	241	15.5 ⁷³	+19	44.4 ¹²²	60 S	15	02	15	59	16	56	3	03 108	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 5 ^h 33 ^m 2		Mag: -3.9 PMG: 12 ^h 27 ^m		Mag: +1.6 PMG: 15 ^h 35 ^m		Mag: -2.7 PMG: 0 ^h 56 ^m		Mag: +0.8 PMG: 15 ^h 59 ^m	
	hG ♈	hG ♀ Dec	hG ♂ Dec	hG ♃ Dec	hG ♄ Dec	hG ♅ Dec	hG ♆ Dec	hG ♁ Dec		
h	°	'	°	'	°	'	°	'	°	'
0	276	27.8	173	31.4	+23	40.1	126	03.0	+13	20.0
1	291	30.2	188	30.5		39.9	141	04.1		19.5
2	306	32.7	203	29.6		39.7	156	05.1		18.9
3	321	35.2	218	28.8		39.5	171	06.2		18.4
4	336	37.6	233	27.9		39.3	186	07.2		17.8
5	351	40.1	248	27.0	+23	39.1	201	08.3	+13	17.3
6	6	42.6	263	26.1	+23	38.9	216	09.3	+13	16.8
7	21	45.0	278	25.2		38.7	231	10.3		16.2
8	36	47.5	293	24.3		38.5	246	11.4		15.7
9	51	50.0	308	23.5		38.3	261	12.4		15.2
10	66	52.4	323	22.6		38.1	276	13.5		14.6
11	81	54.9	338	21.7	+23	37.9	291	14.5	+13	14.1
12	96	57.3	353	20.8	+23	37.7	306	15.6	+13	13.5
13	111	59.8	8	19.9		37.5	321	16.6		13.0
14	127	02.3	23	19.0		37.3	336	17.7		12.5
15	142	04.7	38	18.2		37.1	351	18.7		11.9
16	157	07.2	53	17.3		36.9	6	19.8		11.4
17	172	09.7	68	16.4	+23	36.7	21	20.8	+13	10.8
18	187	12.1	83	15.5	+23	36.5	36	21.9	+13	10.3
19	202	14.6	98	14.6		36.3	51	22.9		09.8
20	217	17.1	113	13.7		36.1	66	24.0		09.2
21	232	19.5	128	12.9		35.9	81	25.0		08.7
22	247	22.0	143	12.0		35.7	96	26.1		08.1
23	262	24.5	158	11.1		35.4	111	27.1		07.6
24	277	26.9	173	10.2	+23	35.2	126	28.2	+13	07.1
Dif	—		-9		-2		+10		-5	
							+28		0	
									+23	
									-1	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'7 PMG: 12 ^h 03 ^m 5			Edad: 25 ^d 2 PHE { SD: 16'3 PMG: 8 ^h 14 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	179	08.5	+23	13.2	241	15.5	+19	44.4	60 N	58	0 59	2 40	23 32	21	17 43 111
1	194	08.4		13.1	255	41.7	+19	56.5	58	1 46	3 00	23 52	29	24 103	
2	209	08.2		13.0	270	07.7	+20	08.5	56	2 15	17	23 59	37	25 108	
3	224	08.1		12.8	284	33.6		20.3	54	0 54	37	31	23 59	44	26 108
4	239	08.0		12.7	298	59.4		32.1	52	1 38	2 55	43	0 07	28	43 89
5	254	07.9	+23	12.5	313	25.0	+20	43.7	50	2 05	3 10	3 54	0 15	31	16 32 87
6	269	07.7	+23	12.4	327	50.6	+20	55.3	45	2 50	3 39	4 16	0 33	36	16 11 81
7	284	07.6		12.2	342	15.9	+21	06.7	40	3 20	4 01	34	47	40	15 53 78
8	299	07.5		12.1	356	41.2		17.9	35	3 43	19	4 49	0 59	44	38 75
9	314	07.3		12.0	11	06.3		29.1	30	4 01	34	5 02	1 10	47	26 72
10	329	07.2		11.8	25	31.4		40.1	20	30	4 59	24	29	51	15 04 68
11	344	07.1	+23	11.7	39	56.2	+21	51.0	10 N	4 52	5 19	5 42	1 45	55	14 45 65
12	359	07.0	+23	11.5	54	21.0	+22	01.7	0	5 11	5 37	6 00	2 00	60	14 28 62
13	14	06.8		11.4	68	45.6		12.4	10 S	28	5 54	17	16	63	14 10 59
14	29	06.7		11.2	83	10.1		22.8	20	5 44	6 12	35	32	68	13 52 55
15	44	06.6		11.1	97	34.4		33.2	30	6 00	30	6 57	2 52	72	31 51
16	59	06.5		10.9	111	58.7		43.4	35	09	41	7 09	3 03	75	18 49
17	74	06.4	+23	10.8	126	22.8	+22	53.4	40	6 18	6 52	7 23	3 16	78	13 04 45
18	89	06.2	+23	10.6	140	46.8	+23	03.3	45	6 28	7 06	7 39	3 32	82	12 47 42
19	104	06.1		10.5	155	10.6		13.1	50	40	22	8 00	3 51	88	27 36
20	119	06.0		10.3	169	34.4		22.7	52	45	29	10	4 00	91	17 33
21	134	05.9		10.2	183	58.0		32.2	54	51	37	21	10	95	12 06 30
22	149	05.7		10.0	198	21.5		41.5	56	6 57	46	33	22	100	11 53 26
23	164	05.6		09.9	212	44.8		50.6	58	7 04	7 56	8 48	35	106	39 20
24	179	05.5	+23	09.7	227	08.1	+23	59.6	60 S	7 11	8 07	9 05	4 51	114	11 22 12

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 5 ^h 29 ^m 3		Mag: -3.9 PMG: 12 ^h 28 ^m		Mag: +1.6 PMG: 15 ^h 33 ^m		Mag: -2.7 PMG: 0 ^h 51 ^m		Mag: +0.8 PMG: 15 ^h 55 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	277	26.9	173	10.2	126	28.2	347	05.1	120	36.6
1	292	29.4	188	09.3	141	29.2	2	07.9	135	38.9
2	307	31.8	203	08.5	156	30.3	17	10.7	150	41.1
3	322	34.3	218	07.6	171	31.3	32	13.5	165	43.4
4	337	36.8	233	06.7	186	32.4	47	16.3	180	45.6
5	352	39.2	248	05.8	201	33.4	62	19.1	195	47.9
6	7	41.7	263	04.9	216	34.5	77	21.9	210	50.2
7	22	44.2	278	04.1	231	35.5	92	24.7	225	52.4
8	37	46.6	293	03.2	246	36.6	107	27.5	240	54.7
9	52	49.1	308	02.3	261	37.6	122	30.3	255	56.9
10	67	51.6	323	01.4	276	38.7	137	33.1	270	59.2
11	82	54.0	338	00.5	291	39.7	152	35.9	286	01.4
12	97	56.5	352	59.7	306	40.8	167	38.7	301	03.7
13	112	59.0	7	58.8	321	41.8	182	41.5	316	06.0
14	128	01.4	22	57.9	336	42.8	197	44.3	331	08.2
15	143	03.9	37	57.0	351	43.9	212	47.1	346	10.5
16	158	06.3	52	56.2	6	44.9	227	49.8	1	12.7
17	173	08.8	67	55.3	21	46.0	242	52.6	16	15.0
18	188	11.3	82	54.4	36	47.0	257	55.4	31	17.2
19	203	13.7	97	53.5	51	48.1	272	58.2	46	19.5
20	218	16.2	112	52.6	66	49.1	288	01.0	61	21.8
21	233	18.7	127	51.8	81	50.2	303	03.8	76	24.0
22	248	21.1	142	50.9	96	51.2	318	06.6	91	26.3
23	263	23.6	157	50.0	111	52.3	333	09.4	106	28.5
24	278	26.1	172	49.1	126	53.3	348	12.2	121	30.8
Dif	—		-9	-2	+10	-5	+28	0	+23	-1

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 26 ^d 2 PHE { 4 ^h : 60'6 12 ^h : 60'7 20 ^h : 60'8					Final del crepúsculo			Salida de Luna		Puesta de Luna	
	PMG: 12 ^h 03 ^m 7			SD: 16'5 PMG: 9 ^h 14 ^m R°: 66 ^m					Final del crepúsculo			Salida de Luna		Puesta de Luna	
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	h m	m
0	179	05.5	+23 09.7	227	08.1	+23 59.6	89	60 N	21 25	23 04	** **	23 53	51	19 34	89
1	194	05.4	09.6	241	31.2	+24 08.5	89	58	21 06	22 19	** **	** **	**	19 07	83
2	209	05.2	09.4	255	54.2	40	86	56	20 49	21 51	** **	0 08	35	18 45	81
3	224	05.1	09.3	270	17.1	39	85	54	35	29	23 09	22	39	27	79
4	239	05.0	09.1	284	39.8	37	84	52	23	21 12	22 28	35	41	18 12	78
5	254	04.9	+23 09.0	299	02.5	37	81	50	20 13	20 57	22 01	0 46	44	17 59	76
6	269	04.7	+23 08.8	313	25.0	35	80	45	19 51	20 28	21 17	1 09	48	17 32	74
7	284	04.6	08.6	327	47.5	35	79	40	33	20 05	20 47	27	52	17 11	73
8	299	04.5	08.5	342	09.8	33	76	35	18	19 48	24	43	54	16 53	72
9	314	04.4	08.3	356	32.0	32	75	30	19 05	33	20 06	1 57	56	38	71
10	329	04.2	08.2	10	54.1	31	73	20	18 43	19 08	19 37	2 20	59	16 12	69
11	344	04.1	+23 08.0	25	16.1	30	71	10 N	18 25	18 48	19 15	2 40	62	15 50	68
12	359	04.0	+23 07.8	39	38.0	29	70	0	18 07	18 30	18 56	3 00	64	15 30	66
13	14	03.9	07.7	53	59.8	28	67	10 S	17 50	18 13	39	19	66	15 09	64
14	29	03.8	07.5	68	21.5	27	66	20	32	17 56	23	3 40	69	14 47	63
15	44	03.6	07.3	82	43.1	26	64	30	17 11	37	18 07	4 04	72	22	60
16	59	03.5	07.2	97	04.6	25	62	35	16 59	27	17 59	18	74	14 07	59
17	74	03.4	+23 07.0	111	26.0	24	60	40	16 45	17 15	17 49	4 34	77	13 49	58
18	89	03.3	+23 06.8	125	47.3	23	58	45	16 28	17 02	17 39	4 54	79	13 29	55
19	104	03.1	06.7	140	08.5	22	56	50	16 08	16 46	28	5 19	83	13 03	52
20	119	03.0	06.5	154	29.6	21	54	52	15 58	39	22	31	86	12 50	50
21	134	02.9	06.3	168	50.7	21	53	54	47	31	17	5 45	88	36	48
22	149	02.8	06.2	183	11.7	20	50	56	35	22	11	6 02	91	12 19	45
23	164	02.7	06.0	197	32.6	19	48	58	21	12	17 04	21	96	11 59	40
24	179	02.5	+23 05.8	211	53.4	18	47	60 S	15 03	16 01	16 57	6 45	106	11 34	32
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 5 ^h 25 ^m 4		Mag: -3.9 PMG: 12 ^h 29 ^m			Mag: +1.6 PMG: 15 ^h 31 ^m			Mag: -2.7 PMG: 0 ^h 47 ^m			Mag: +0.8 PMG: 15 ^h 52 ^m			
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'			
0	278	26.1	172	49.1	+23 29.6	126	53.3	+12 54.1	348	12.2	-22 18.7	121	30.8	+11 27.7	
1	293	28.5	187	48.3	29.4	141	54.4	53.5	3	15.0	18.7	136	33.0	27.6	
2	308	31.0	202	47.4	29.1	156	55.4	53.0	18	17.8	18.8	151	35.3	27.5	
3	323	33.5	217	46.5	28.9	171	56.5	52.4	33	20.6	18.8	166	37.6	27.4	
4	338	35.9	232	45.6	28.6	186	57.5	51.9	48	23.4	18.9	181	39.8	27.3	
5	353	38.4	247	44.8	+23 28.4	201	58.6	+12 51.3	63	26.2	-22 18.9	196	42.1	+11 27.2	
6	8	40.8	262	43.9	+23 28.1	216	59.6	+12 50.8	78	29.0	-22 19.0	211	44.3	+11 27.2	
7	23	43.3	277	43.0	27.9	232	00.7	50.2	93	31.8	19.0	226	46.6	27.1	
8	38	45.8	292	42.1	27.6	247	01.7	49.7	108	34.6	19.1	241	48.8	27.0	
9	53	48.2	307	41.3	27.4	262	02.8	49.1	123	37.4	19.1	256	51.1	26.9	
10	68	50.7	322	40.4	27.1	277	03.8	48.6	138	40.2	19.1	271	53.3	26.8	
11	83	53.2	337	39.5	+23 26.9	292	04.9	+12 48.1	153	43.0	-22 19.2	286	55.6	+11 26.7	
12	98	55.6	352	38.6	+23 26.6	307	05.9	+12 47.5	168	45.8	-22 19.2	301	57.8	+11 26.7	
13	113	58.1	7	37.8	26.3	322	07.0	47.0	183	48.6	19.3	317	00.1	26.6	
14	129	00.6	22	36.9	26.1	337	08.0	46.4	198	51.4	19.3	332	02.4	26.5	
15	144	03.0	37	36.0	25.8	352	09.1	45.9	213	54.2	19.4	347	04.6	26.4	
16	159	05.5	52	35.1	25.5	7	10.1	45.3	228	57.0	19.4	2	06.9	26.3	
17	174	08.0	67	34.3	+23 25.3	22	11.2	+12 44.8	243	59.8	-22 19.5	17	09.1	+11 26.2	
18	189	10.4	82	33.4	+23 25.0	37	12.2	+12 44.2	259	02.6	-22 19.5	32	11.4	+11 26.2	
19	204	12.9	97	32.5	24.7	52	13.3	43.7	274	05.4	19.6	47	13.6	26.1	
20	219	15.3	112	31.6	24.5	67	14.3	43.1	289	08.2	19.6	62	15.9	26.0	
21	234	17.8	127	30.8	24.2	82	15.4	42.6	304	11.0	19.7	77	18.1	25.9	
22	249	20.3	142	29.9	23.9	97	16.4	42.0	319	13.8	19.7	92	20.4	25.8	
23	264	22.7	157	29.0	23.6	112	17.4	41.5	334	16.6	19.8	107	22.6	25.7	
24	279	25.2	172	28.2	+23 23.4	127	18.5	+12 41.0	349	19.4	-22 19.8	122	24.9	+11 25.6	
Dif	—		-9	-3		+10	-5		+28		0	+23		-1	

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15 ^h 7 PMG: 12 ^h 03 ^m 9				Edad: 27 ^d 2 PHE { 4 ^h : 60 ^o 9 12 ^h : 61 ^o 0 20 ^h : 61 ^o 0 PMG: 10 ^h 20 ^m R°: 67 ^m															
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m		
0	179	02.5	+23	05.8	211	53.4	+26	43.0	60 N	** **	1 04	2 42	** **	** **	21 03	47				
1	194	02.4		05.7	226	14.2	18	47.4	58	** **	1 49	3 02	0 21	55	20 30	52				
2	209	02.3		05.5	240	34.8	16	51.7	56	** **	2 17	19	0 43	58	20 06	55				
3	224	02.2		05.3	254	55.5	17	55.7	54	0 59	39	32	1 01	59	19 46	57				
4	239	02.1		05.1	269	16.0	15	+26 59.5	52	1 40	2 56	45	16	61	30	58				
5	254	01.9	+23	05.0	283	36.5	15	+27 03.1	50	2 07	3 11	3 55	1 30	61	19 15	60				
6	269	01.8	+23	04.8	297	56.9	14	+27 06.5	45	2 51	3 40	4 17	1 57	63	18 46	62				
7	284	01.7		04.6	312	17.3	14	09.7	40	3 21	4 02	35	2 19	64	24	62				
8	299	01.6		04.4	326	37.7	14	12.7	35	3 44	20	4 50	37	65	18 05	63				
9	314	01.4		04.3	340	57.9	12	15.5	30	4 02	4 35	5 03	2 53	65	17 49	64				
10	329	01.3		04.1	355	18.2	13	18.1	26	31	5 00	24	3 19	66	17 21	65				
11	344	01.2	+23	03.9	9	38.4	12	+27 20.5	10 N	4 53	5 20	5 43	3 42	67	16 58	66				
12	359	01.1	+23	03.7	23	58.5	11	+27 22.6	0	5 12	5 38	6 00	4 04	67	16 36	66				
13	14	01.0		03.6	38	18.6	11	24.5	10 S	28	5 55	17	25	68	16 13	68				
14	29	00.8		03.4	52	38.7	11	26.3	18	5 44	6 12	36	4 49	67	15 50	68				
15	44	00.7		03.2	66	58.8	11	27.8	15	6 00	30	6 57	5 16	68	22	69				
16	59	00.6		03.0	81	18.8	10	29.1	13	35	09	41	7 09	32	68	15 06	69			
17	74	00.5	+23	02.8	95	38.9	11	+27 30.2	11	40	6 18	6 52	7 23	5 51	68	14 47	69			
18	89	00.4	+23	02.6	109	58.9	10	+27 31.0	8	45	6 28	7 05	7 39	6 13	69	14 24	70			
19	104	00.2		02.5	124	18.8	9	31.7	7	50	40	21	7 59	42	69	13 55	70			
20	119	00.1		02.3	138	38.8	10	32.1	4	52	45	28	8 09	6 57	68	40	71			
21	134	00.0		02.1	152	58.8	10	32.3	2	54	50	36	20	7 13	69	24	71			
22	148	59.9		01.9	167	18.7	9	32.3	0	56	6 56	45	32	33	68	13 04	71			
23	163	59.8		01.7	181	38.7	10	32.1	2	58	7 03	7 55	8 47	7 57	69	12 39	72			
24	178	59.7	+23	01.5	195	58.7	10	+27 31.7	4	60 S	7 10	8 07	9 04	8 31	67	12 06	73			
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG 5 ^h 21 ^m 4				Mag: -3.9 PMG: 12 ^h 31 ^m				Mag: +1.6 PMG: 15 ^h 30 ^m				Mag: -2.7 PMG: 0 ^h 43 ^m				Mag: +0.8 PMG: 15 ^h 48 ^m			
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	279	25.2	172	28.2	+23	23.4	127	18.5	+12	41.0	349	19.4	-22	19.8	122	24.9	+11	25.6		
1	294	27.7	187	27.3		23.1	142	19.5		40.4	4	22.2		19.9	137	27.1		25.6		
2	309	30.1	202	26.4		22.8	157	20.6		39.9	19	25.0		19.9	152	29.4		25.5		
3	324	32.6	217	25.5		22.5	172	21.6		39.3	34	27.8		20.0	167	31.7		25.4		
4	339	35.1	232	24.7		22.3	187	22.7		38.8	49	30.6		20.0	182	33.9		25.3		
5	354	37.5	247	23.8	+23	22.0	202	23.7	+12	38.2	64	33.4	-22	20.1	197	36.2	+11	25.2		
6	9	40.0	262	22.9	+23	21.7	217	24.8	+12	37.7	79	36.2	-22	20.1	212	38.4	+11	25.1		
7	24	42.5	277	22.1		21.4	232	25.8		37.1	94	39.0		20.2	227	40.7		25.0		
8	39	44.9	292	21.2		21.1	247	26.9		36.6	109	41.8		20.2	242	42.9		25.0		
9	54	47.4	307	20.3		20.8	262	27.9		36.0	124	44.6		20.3	257	45.2		24.9		
10	69	49.8	322	19.5		20.6	277	29.0		35.5	139	47.4		20.3	272	47.4		24.8		
11	84	52.3	337	18.6	+23	20.3	292	30.0	+12	34.9	154	50.2	-22	20.4	287	49.7	+11	24.7		
12	99	54.8	352	17.7	+23	20.0	307	31.1	+12	34.4	169	53.0	-22	20.4	302	51.9	+11	24.6		
13	114	57.2	7	16.9		19.7	322	32.1		33.8	184	55.8		20.5	317	54.2		24.5		
14	129	59.7	22	16.0		19.4	337	33.2		33.3	199	58.6		20.5	332	56.4		24.4		
15	145	02.2	37	15.1		19.1	352	34.2		32.7	215	01.4		20.6	347	58.7		24.4		
16	160	04.6	52	14.3		18.8	7	35.3		32.2	230	04.2		20.6	3	00.9		24.3		
17	175	07.1	67	13.4	+23	18.5	22	36.3	+12	31.6	245	07.0	-22	20.7	18	03.2	+11	24.2		
18	190	09.6	82	12.5	+23	18.2	37	37.4	+12	31.1	260	09.8	-22	20.7	33	05.4	+11	24.1		
19	205	12.0	97	11.7		17.9	52	38.4		30.5	275	12.6		20.8	48	07.7		24.0		
20	220	14.5	112	10.8		17.6	67	39.5		30.0	290	15.4		20.8	63	09.9		23.9		
21	235	16.9	127	09.9		17.3	82	40.5		29.4	305	18.2		20.9	78	12.2		23.8		
22	250	19.4	142	09.1		17.0	97	41.6		28.9	320	21.0		20.9	93	14.4		23.8		
23	265	21.9	157	08.2		16.7	112	42.6		28.3	335	23.8		21.0	108	16.7		23.7		
24	280	24.3	172	07.3	+23	16.4	127	43.7	+12	27.8	350	26.6	-22	21.0	123	18.9	+11	23.6		
Dif	—		-9		-3		+10		-5		+28		0		+23		-1			

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7 PMG: 12 ^h 04 ^m 1			Edad: 28 ^d 2 PHE { 4 ^h : 61 ^o 0 12 ^h : 60 ^o 9 20 ^h : 60 ^o 9 R ^o : 64 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R ^o	Hora	R ^o
h	°	'	°	°	'	°	°	h m	h m	h m	h m m	h m m	h m m		
0	178	59.7	+23 01.5	195	58.7	+27 31.7	60 N	21 24	23 00	** **	0 44 92	21 50 19			
1	193	59.5		210	18.7	31.1	58	21 04	22 17	** **	1 16 87	22 28			
2	208	59.4		224	38.6	30.2	56	20 48	21 49	** **	1 41 83	21 01 33			
3	223	59.3		238	58.6	29.1	54	35	28	23 05	2 00 81	20 43 37			
4	238	59.2		253	18.7	27.9	52	23	21 11	22 26	17 79	28 40			
5	253	59.1	+23 00.6	267	38.7	26.4	50	20 12	20 56	22 00	2 31 78	20 15 42			
6	268	58.9	+23 00.4	281	58.8	24.6	45	19 50	20 27	21 16	3 00 76	19 48 47			
7	283	58.8	+23 00.2	296	18.9	22.7	40	33	20 05	20 46	23 74	26 51			
8	298	58.7	+23 00.0	310	39.0	20.6	35	18	19 47	24	42 72	19 08 53			
9	313	58.6	+22 59.8	324	59.1	18.2	30	19 05	32	20 06	3 58 71	18 53 55			
10	328	58.5		339	19.3	15.6	20	18 44	19 08	19 37	4 25 69	26 59			
11	343	58.4	+22 59.4	353	39.6	12.9	10 N	18 25	18 48	19 15	4 49 67	18 04 61			
12	358	58.2	+22 59.2	7	59.9	09.9	0	18 08	18 30	18 56	5 11 65	17 42 64			
13	13	58.1		22	20.2	06.7	10 S	17 51	18 13	40	33 64	17 21 66			
14	28	58.0		36	40.6	03.3	20	33	17 56	24	5 56 62	16 58 69			
15	43	57.9		51	01.0	26.9	30	12	38	18 08	6 24 59	31 72			
16	58	57.8		65	21.5	55.8	35	17 00	28	17 59	40 58	16 15 74			
17	73	57.7	+22 58.2	79	42.1	51.8	40	16 46	17 16	17 50	6 59 56	15 56 77			
18	88	57.5	+22 58.0	94	02.7	47.6	45	16 29	17 03	17 40	7 22 53	15 34 80			
19	103	57.4		108	23.4	43.2	50	09	16 47	29	7 51 50	15 05 84			
20	118	57.3		122	44.2	38.5	52	16 00	40	24	8 05 48	14 51 87			
21	133	57.2		137	05.0	33.7	54	15 49	32	18	22 45	35 89			
22	148	57.1		151	25.9	28.6	56	37	23	12	8 41 42	14 15 93			
23	163	57.0		165	46.9	23.4	58	22	14	17 06	9 06 37	13 51 99			
24	178	56.8	+22 56.8	180	08.0	18.0	60 S	15 06	16 02	16 59	9 38 28	13 19 107			
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 5 ^h 17 ^m 5		Mag: -3.9 PMG: 12 ^h 32 ^m		Mag: +1.7 PMG: 15 ^h 28 ^m		Mag: -2.7 PMG: 0 ^h 38 ^m		Mag: +0.8 PMG: 15 ^h 44 ^m						
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	280	24.3	172	07.3	127	43.7	350	26.6	123	18.9					
1	295	26.8	187	06.5	142	44.7	5	29.4	138	21.2					
2	310	29.3	202	05.6	157	45.8	20	32.2	153	23.4					
3	325	31.7	217	04.7	172	46.8	35	35.0	168	25.7					
4	340	34.2	232	03.9	187	47.9	50	37.8	183	27.9					
5	355	36.7	247	03.0	202	48.9	65	40.6	198	30.2					
6	10	39.1	262	02.1	217	50.0	80	43.4	213	32.4					
7	25	41.6	277	01.3	232	51.0	95	46.2	228	34.7					
8	40	44.1	292	00.4	247	52.1	110	49.0	243	36.9					
9	55	46.5	306	59.5	262	53.1	125	51.8	258	39.2					
10	70	49.0	321	58.7	277	54.1	140	54.6	273	41.4					
11	85	51.4	336	57.8	292	55.2	155	57.4	288	43.7					
12	100	53.9	351	57.0	307	56.2	171	00.2	303	45.9					
13	115	56.4	6	56.1	322	57.3	186	03.0	318	48.2					
14	130	58.8	21	55.2	337	58.3	201	05.8	333	50.4					
15	146	01.3	36	54.4	352	59.4	216	08.6	348	52.7					
16	161	03.8	51	53.5	8	00.4	231	11.4	3	54.9					
17	176	06.2	66	52.6	23	01.5	246	14.2	18	57.2					
18	191	08.7	81	51.8	38	02.5	261	17.0	33	59.4					
19	206	11.2	96	50.9	53	03.6	276	19.8	49	01.7					
20	221	13.6	111	50.1	68	04.6	291	22.6	64	03.9					
21	236	16.1	126	49.2	83	05.7	306	25.4	79	06.2					
22	251	18.6	141	48.3	98	06.7	321	28.2	94	08.4					
23	266	21.0	156	47.5	113	07.8	336	31.0	109	10.7					
24	281	23.5	171	46.6	128	08.8	351	33.8	124	12.9					
Dif	—		-9	-3	+10	-6	+28	0	+22	-1					

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna						
	SD: 15 ^h 7			Edad: 29 ^d 2	PHE	SD: 16 ^h 6		R°: 61 ^m	Náutico		Civil	Hora	R°	Hora	R°				
	PMG: 12 ^h 04 ^m 3																		
	hG ☉	Dec		hG ☾	Dif	Dec	Dif												
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m			
0	178	56.8	+22	56.8	180	08.0	+26	18.0	60 N	** **	1 09	2 45	2 16	112	22 09	8			
1	193	56.7		56.6	194	29.1	21	12.4	58	** **	1 52	3 04	2 43	103	21 50	14			
2	208	56.6		56.4	208	50.4	23	06.5	56	** **	2 20	20	3 04	98	34	19			
3	223	56.5		56.2	223	11.7	23	+26	00.5	54	1 03	41	34	21	94	20 23			
4	238	56.4		56.0	237	33.1	24	+25	54.3	52	1 43	2 58	46	36	90	21 08			
5	253	56.3	+22	55.8	251	54.7	26	+25	47.9	50	2 09	3 13	3 57	3 49	87	20 57			
6	268	56.1	+22	55.6	266	16.3	26	+25	41.3	45	2 52	3 41	4 18	4 16	82	20 35			
7	283	56.0		55.4	280	38.0	27		34.6	40	3 22	4 03	36	37	78	17 39			
8	298	55.9		55.2	294	59.8	28		27.6	35	3 45	21	4 51	4 54	75	20 01			
9	313	55.8		55.0	309	21.7	29		20.5	30	4 03	4 36	5 03	5 09	72	19 48			
10	328	55.7		54.7	323	43.7	30		13.2	20	31	5 00	25	34	69	25 51			
11	343	55.6	+22	54.5	338	05.9	32	+25	05.7	10 N	4 53	5 20	5 43	5 56	65	19 05			
12	358	55.5	+22	54.3	352	28.1	32	+24	58.0	0	5 12	5 38	6 01	6 16	62	18 46			
13	13	55.3		54.1	6	50.5	34		50.2	10 S	29	5 55	18	37	58	27 63			
14	28	55.2		53.9	21	12.9	34		42.2	20	5 44	6 12	36	6 58	55	18 07			
15	43	55.1		53.7	35	35.5	36		34.0	30	6 00	30	6 56	7 23	51	17 43			
16	58	55.0		53.5	49	58.2	37		25.6	35	09	41	7 09	38	48	29 75			
17	73	54.9	+22	53.2	64	21.0	38	+24	17.1	40	6 18	6 52	7 22	7 55	44	17 13			
18	88	54.8	+22	53.0	78	43.9	39	+24	08.4	45	6 28	7 05	7 39	8 15	41	16 54			
19	103	54.7		52.8	93	07.0	41	+23	59.6	50	39	21	7 59	41	35	29 89			
20	118	54.6		52.6	107	30.2	42		50.6	52	44	28	8 08	8 53	32	18 91			
21	133	54.4		52.4	121	53.4	42		41.4	54	50	36	19	9 07	29	16 04			
22	148	54.3		52.2	136	16.9	45		32.1	56	6 56	45	31	23	25	15 48			
23	163	54.2		51.9	150	40.4	45		22.6	58	7 02	7 54	8 45	9 43	18	30 105			
24	178	54.1	+22	51.7	165	04.1	47	+23	12.9	60 S	7 10	8 06	9 02	10 06	11	15 06			
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO						
	PMG 5 ^h 13 ^m 6			Mag: -3.9 PMG: 12 ^h 34 ^m			Mag: +1.7 PMG: 15 ^h 26 ^m			Mag: -2.7 PMG: 0 ^h 34 ^m			Mag: +0.8 PMG: 15 ^h 41 ^m						
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'			
0	281	23.5		171	46.6	+23	08.8	128	08.8	+12	14.5	351	33.8	-22	22.2	124	12.9		
1	296	25.9		186	45.8		08.4	143	09.9		13.9	6	36.6		22.2	139	15.2		
2	311	28.4		201	44.9		08.1	158	10.9		13.4	21	39.4		22.3	154	17.4		
3	326	30.9		216	44.1		07.8	173	12.0		12.8	36	42.2		22.3	169	19.7		
4	341	33.3		231	43.2		07.4	188	13.0		12.3	51	45.0		22.4	184	21.9		
5	356	35.8		246	42.3	+23	07.1	203	14.1	+12	11.7	66	47.8	-22	22.4	199	24.2		
6	11	38.3		261	41.5	+23	06.7	218	15.1	+12	11.2	81	50.6	-22	22.5	214	26.4		
7	26	40.7		276	40.6		06.4	233	16.2		10.6	96	53.4		22.5	229	28.7		
8	41	43.2		291	39.8		06.1	248	17.2		10.1	111	56.2		22.6	244	30.9		
9	56	45.7		306	38.9		05.7	263	18.3		09.5	126	59.0		22.6	259	33.1		
10	71	48.1		321	38.1		05.4	278	19.3		08.9	142	01.8		22.7	274	35.4		
11	86	50.6		336	37.2	+23	05.0	293	20.4	+12	08.4	157	04.6	-22	22.7	289	37.6		
12	101	53.1		351	36.3	+23	04.7	308	21.4	+12	07.8	172	07.4	-22	22.8	304	39.9		
13	116	55.5		6	35.5		04.3	323	22.5		07.3	187	10.3		22.8	319	42.1		
14	131	58.0		21	34.6		04.0	338	23.5		06.7	202	13.1		22.9	334	44.4		
15	147	00.4		36	33.8		03.6	353	24.6		06.2	217	15.9		22.9	349	46.6		
16	162	02.9		51	32.9		03.3	8	25.6		05.6	232	18.7		23.0	4	48.9		
17	177	05.4		66	32.1	+23	02.9	23	26.7	+12	05.1	247	21.5	-22	23.0	19	51.1		
18	192	07.8		81	31.2	+23	02.6	38	27.7	+12	04.5	262	24.3	-22	23.1	34	53.4		
19	207	10.3		96	30.4		02.2	53	28.8		03.9	277	27.1		23.1	49	55.6		
20	222	12.8		111	29.5		01.9	68	29.8		03.4	292	29.9		23.2	64	57.9		
21	237	15.2		126	28.7		01.5	83	30.9		02.8	307	32.7		23.2	80	00.1		
22	252	17.7		141	27.8		01.1	98	31.9		02.3	322	35.5		23.3	95	02.4		
23	267	20.2		156	26.9		00.8	113	32.9		01.7	337	38.3		23.3	110	04.6		
24	282	22.6		171	26.1	+23	00.4	128	34.0	+12	01.2	352	41.1	-22	23.3	125	06.8		
Dif	—			-9			-3	+10			-6			+28			0		
																	+22		
																	-1		

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 30 ^d 2 PHE { 4 ^h : 60'2 12 ^h : 60'0 20 ^h : 59'8 R°: 54 ^m											
	PMG: 12 ^h 04 ^m 5			SD: 16 ^h 4 PMG: 13 ^h 32 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m		h m m	
0	178	54.1	+22 51.7	165	04.1	+23 12.9	48	60 N	21 22	22 55	** **	4 08 110		22 17 4	m
1	193	54.0	51.5	179	27.9	+23 03.2	97	58	21 03	22 14	** **	26 104		22 04 9	
2	208	53.9	51.3	193	51.8	+22 53.2	100	56	20 47	21 47	** **	42 98		21 53 13	
3	223	53.8	51.0	208	15.8	43.2	100	54	33	26	23 01	4 55 94		43 16	
4	238	53.7	50.8	222	40.0	32.9	103	52	22	21 09	22 23	5 06 91		35 19	
5	253	53.5	+22 50.6	237	04.3	+22 22.6	103	50	20 11	20 55	21 58	5 16 88		21 27 21	
6	268	53.4	+22 50.4	251	28.8	+22 12.1	105	45	19 50	20 26	21 15	5 38 81		21 10 27	
7	283	53.3	50.2	265	53.3	+22 01.4	107	40	32	20 05	20 46	5 55 77		20 56 32	
8	298	53.2	49.9	280	18.0	+21 50.7	107	35	18	19 47	23	6 09 73		44 36	
9	313	53.1	49.7	294	42.9	39.8	109	30	19 05	32	20 05	21 71		34 38	
10	328	53.0	49.5	309	07.8	28.7	111	20	18 44	19 08	19 37	6 43 64		16 44	
11	343	52.9	+22 49.2	323	32.9	+21 17.6	111	10 N	18 25	18 48	19 15	7 01 60		20 00 49	
12	358	52.8	+22 49.0	337	58.2	+21 06.3	113	0	18 08	18 31	18 57	7 18 56		19 45 53	
13	13	52.7	48.8	352	23.5	+20 54.9	114	10 S	17 51	18 14	40	35 51		30 58	
14	28	52.5	48.6	6	49.0	43.3	116	20	33	17 57	25	7 53 47		19 14 63	
15	43	52.4	48.3	21	14.6	31.7	116	30	13	39	09	8 14 41		18 55 69	
16	58	52.3	48.1	35	40.4	19.9	118	35	17 01	29	18 00	26 38		44 72	
17	73	52.2	+22 47.9	50	06.3	+20 08.0	119	40	16 47	17 17	17 51	8 39 35		18 32 75	
18	88	52.1	+22 47.6	64	32.3	+19 56.0	120	45	16 31	17 04	17 41	8 56 30		18 17 80	
19	103	52.0	47.4	78	58.5	43.9	121	50	11	16 49	30	9 16 24		17 58 87	
20	118	51.9	47.2	93	24.8	31.7	122	52	16 01	42	25	25 22		49 90	
21	133	51.8	46.9	107	51.2	19.4	123	54	15 51	34	20	36 18		40 92	
22	148	51.7	46.7	122	17.7	+19 06.9	125	56	38	25	14	9 48 14		28 97	
23	163	51.6	46.4	136	44.4	+18 54.4	125	58	24	15	07	10 01 11		15 102	
24	178	51.4	+22 46.2	151	11.2	+18 41.8	126	60 S	15 08	16 04	17 00	10 17 5		17 00 108	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG 5 ^h 09 ^m 6		Mag: -3.9 PMG: 12 ^h 35 ^m			Mag: +1.7 PMG: 15 ^h 25 ^m			Mag: -2.7 PMG: 0 ^h 29 ^m			Mag: +0.8 PMG: 15 ^h 37 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°	'
0	282	22.6	171	26.1	+23 00.4	128	34.0	+12 01.2	352	41.1	-22 23.3	125	06.8	+11 19.4	
1	297	25.1	186	25.2	+23 00.1	143	35.0	+12 00.6	7	43.9	23.4	140	09.1	19.3	
2	312	27.6	201	24.4	+22 59.7	158	36.1	+12 00.0	22	46.7	23.4	155	11.3	19.2	
3	327	30.0	216	23.5	59.3	173	37.1	+11 59.5	37	49.5	23.5	170	13.6	19.2	
4	342	32.5	231	22.7	59.0	188	38.2	58.9	52	52.3	23.5	185	15.8	19.1	
5	357	34.9	246	21.8	+22 58.6	203	39.2	+11 58.4	67	55.1	-22 23.6	200	18.1	+11 19.0	
6	12	37.4	261	21.0	+22 58.2	218	40.3	+11 57.8	82	57.9	-22 23.6	215	20.3	+11 18.9	
7	27	39.9	276	20.1	57.9	233	41.3	57.2	98	00.7	23.7	230	22.6	18.8	
8	42	42.3	291	19.3	57.5	248	42.4	56.7	113	03.5	23.7	245	24.8	18.7	
9	57	44.8	306	18.4	57.1	263	43.4	56.1	128	06.3	23.8	260	27.0	18.6	
10	72	47.3	321	17.6	56.8	278	44.5	55.6	143	09.1	23.8	275	29.3	18.5	
11	87	49.7	336	16.7	+22 56.4	293	45.5	+11 55.0	158	11.9	-22 23.9	290	31.5	+11 18.5	
12	102	52.2	351	15.9	+22 56.0	308	46.6	+11 54.4	173	14.8	-22 23.9	305	33.8	+11 18.4	
13	117	54.7	6	15.0	55.6	323	47.6	53.9	188	17.6	24.0	320	36.0	18.3	
14	132	57.1	21	14.2	55.3	338	48.7	53.3	203	20.4	24.0	335	38.3	18.2	
15	147	59.6	36	13.3	54.9	353	49.7	52.8	218	23.2	24.1	350	40.5	18.1	
16	163	02.1	51	12.5	54.5	8	50.8	52.2	233	26.0	24.1	5	42.8	18.0	
17	178	04.5	66	11.7	+22 54.1	23	51.8	+11 51.6	248	28.8	-22 24.2	20	45.0	+11 17.9	
18	193	07.0	81	10.8	+22 53.7	38	52.9	+11 51.1	263	31.6	-22 24.2	35	47.2	+11 17.8	
19	208	09.4	96	10.0	53.4	53	53.9	50.5	278	34.4	24.3	50	49.5	17.7	
20	223	11.9	111	09.1	53.0	68	55.0	50.0	293	37.2	24.3	65	51.7	17.7	
21	238	14.4	126	08.3	52.6	83	56.0	49.4	308	40.0	24.4	80	54.0	17.6	
22	253	16.8	141	07.4	52.2	98	57.1	48.8	323	42.8	24.4	95	56.2	17.5	
23	268	19.3	156	06.6	51.8	113	58.1	48.3	338	45.6	24.5	110	58.5	17.4	
24	283	21.8	171	05.7	+22 51.4	128	59.2	+11 47.7	353	48.4	-22 24.5	126	00.7	+11 17.3	
Dif	—		-8		-4	+10		-6	+28		0	+22		-1	

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna													
	SD: 15 ^h 7 PMG: 12 ^h 04 ^m 7				Edad: 1 ^d 9 PHE { 4 ^h : 59 ^s 5 12 ^h : 59 ^s 2 20 ^h : 58 ^s 9 R°: 50 ^m																							
	hG ☉		Dec		hG ☾		Dif			Dif			Náutico	Civil	Hora	R°	Hora	R°										
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m										
0	178	51.4	+22	46.2	151	11.2	+18	41.8	60 N	** *	1 15	2 47	5 58	103	22	21	1											
1	193	51.3		46.0	165	38.2		29.1	58	** *	1 55	3 07	6 10	98		13	5											
2	208	51.2		45.7	180	05.3		16.2	56	** *	2 22	22	20	94	22	06	8											
3	223	51.1		45.5	194	32.5		82	54	1 09	2 43	36	29	90	21	59	12											
4	238	51.0		45.3	208	59.8		83	52	1 46	3 00	48	37	87		54	14											
5	253	50.9	+22	45.0	223	27.3		85	50	2 11	3 14	3 58	6 44	84	21	48	17											
6	268	50.8	+22	44.8	237	54.8		85	45	2 54	3 43	4 20	6 59	78	21	37	22											
7	283	50.7		44.5	252	22.6		88	40	3 24	4 05	37	7 12	73		28	26											
8	298	50.6		44.3	266	50.4		88	35	3 46	22	4 52	22	70	20	30												
9	313	50.5		44.0	281	18.4		90	30	4 04	4 37	5 04	32	66		12	34											
10	328	50.4		43.8	295	46.4		90	20	32	5 01	26	7 47	61	21	00	39											
11	343	50.3	+22	43.6	310	14.7		93	10 N	4 54	5 21	5 44	8 01	55	20	49	44											
12	358	50.2	+22	43.3	324	43.0		93	0	5 12	5 39	6 01	8 14	50	20	38	49											
13	13	50.0		43.1	339	11.4		94	10 S	29	5 55	18	26	47		28	53											
14	28	49.9		42.8	353	40.0		96	20	5 45	6 12	36	40	41		17	58											
15	43	49.8		42.6	8	08.7		97	30	6 00	30	6 56	8 55	36	20	04	64											
16	58	49.7		42.3	22	37.5		98	35	09	40	7 08	9 04	33	19	56	67											
17	73	49.6	+22	42.1	37	06.5		100	40	6 18	6 52	7 22	9 14	29	19	47	72											
18	88	49.5	+22	41.8	51	35.5		100	45	6 28	7 05	7 38	9 26	24	19	37	76											
19	103	49.4		41.6	66	04.7		102	50	39	20	7 58	40	19		25	81											
20	118	49.3		41.3	80	34.0		103	52	44	27	8 07	47	16		19	84											
21	133	49.2		41.1	95	03.3		103	54	49	35	18	9 54	14		12	88											
22	148	49.1		40.8	109	32.9		106	56	6 55	44	30	10 02	10	19	05	91											
23	163	49.0		40.6	124	02.5		106	58	7 01	7 53	8 44	12	6	18	57	95											
24	178	48.9	+22	40.3	138	32.2		107	60 S	7 09	8 04	9 00	10 22	2	18	48	99											
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO											
	PMG 5 ^h 05 ^m 7				Mag: -3.9 PMG: 12 ^h 36 ^m				Mag: +1.7 PMG: 15 ^h 23 ^m				Mag: -2.7 PMG: 0 ^h 25 ^m				Mag: +0.8 PMG: 15 ^h 34 ^m											
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec									
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'								
0	283	21.8			171	05.7	+22	51.4	128	59.2	+11	47.7	353	48.4	-22	24.5	126	00.7	+11	17.3								
1	298	24.2			186	04.9		51.0	144	00.2		47.2	8	51.2		24.6	141	02.9		17.2								
2	313	26.7			201	04.0		50.6	159	01.3		46.6	23	54.0		24.6	156	05.2		17.1								
3	328	29.2			216	03.2		50.2	174	02.3		46.0	38	56.8		24.7	171	07.4		17.0								
4	343	31.6			231	02.4		49.9	189	03.4		45.5	53	59.6		24.7	186	09.7		16.9								
5	358	34.1			246	01.5	+22	49.5	204	04.4	+11	44.9	69	02.4	-22	24.8	201	11.9	+11	16.9								
6	13	36.6			261	00.7	+22	49.1	219	05.5	+11	44.4	84	05.3	-22	24.8	216	14.2	+11	16.8								
7	28	39.0			275	59.8		48.7	234	06.5		43.8	99	08.1		24.9	231	16.4		16.7								
8	43	41.5			290	59.0		48.3	249	07.6		43.2	114	10.9		24.9	246	18.6		16.6								
9	58	43.9			305	58.1		47.9	264	08.6		42.7	129	13.7		25.0	261	20.9		16.5								
10	73	46.4			320	57.3		47.5	279	09.7		42.1	144	16.5		25.0	276	23.1		16.4								
11	88	48.9			335	56.5	+22	47.1	294	10.7	+11	41.5	159	19.3	-22	25.1	291	25.4	+11	16.3								
12	103	51.3			350	55.6	+22	46.7	309	11.8	+11	41.0	174	22.1	-22	25.1	306	27.6	+11	16.2								
13	118	53.8			5	54.8		46.3	324	12.8		40.4	189	24.9		25.1	321	29.9		16.1								
14	133	56.3			20	53.9		45.9	339	13.8		39.9	204	27.7		25.2	336	32.1		16.1								
15	148	58.7			35	53.1		45.4	354	14.9		39.3	219	30.5		25.2	351	34.3		16.0								
16	164	01.2			50	52.3		45.0	9	15.9		38.7	234	33.3		25.3	6	36.6		15.9								
17	179	03.7			65	51.4	+22	44.6	24	17.0	+11	38.2	249	36.1	-22	25.3	21	38.8	+11	15.8								
18	194	06.1			80	50.6	+22	44.2	39	18.0	+11	37.6	264	38.9	-22	25.4	36	41.1	+11	15.7								
19	209	08.6			95	49.7		43.8	54	19.1		37.0	279	41.7		25.4	51	43.3		15.6								
20	224	11.0			110	48.9		43.4	69	20.1		36.5	294	44.5		25.5	66	45.5		15.5								
21	239	13.5			125	48.1		43.0	84	21.2		35.9	309	47.4		25.5	81	47.8		15.4								
22	254	16.0			140	47.2		42.6	99	22.2		35.3	324	50.2		25.6	96	50.0		15.3								
23	269	18.4			155	46.4		42.2	114	23.3		34.8	339	53.0		25.6	111	52.3		15.2								
24	284	20.9			170	45.6	+22	41.7	129	24.3	+11	34.2	354	55.8	-22	25.7	126	54.5	+11	15.2								
Dif	—				-8				-4				+28				0				+22				-1			

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 : 58'6 12 ^h : 58'3 20 ^h : 58'0									
	PMG: 12 ^h 04 ^m 8	PMG: 15 ^h 16 ^m	R°: 46 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	178	48.9	+22 40.3	138	32.2	+13 14.3		60 N	21 20	22 50	** **	7 41 95	22 22 1	
1	193	48.8		153	02.0 ¹⁰⁸	+12 59.8 ¹⁴⁵		58	21 01	22 11	** **	48 91	18 4	
2	208	48.7	39.8	167	32.0 ¹¹⁰	45.3 ¹⁴⁵		56	20 45	21 45	** **	54 87	14 8	
3	223	48.6	39.5	182	02.0 ¹¹⁰	30.8 ¹⁴⁵		54	32	24	22 56	7 59 84	11 10	
4	238	48.5	39.3	196	32.2 ¹¹²	16.2 ¹⁴⁶		52	21	21 08	22 20	8 04 81	08 12	
5	253	48.4	+22 39.0	211	02.4 ¹¹²	+12 01.5 ¹⁴⁷		50	20 10	20 54	21 56	8 08 79	22 05 15	
6	268	48.3	+22 38.8	225	32.8 ¹¹⁴	+11 46.9 ¹⁴⁶		45	19 49	20 26	21 14	8 17 74	21 59 20	
7	283	48.1	38.5	240	03.3 ¹¹⁵	32.1 ¹⁴⁸		40	32	20 04	20 45	25 69	54 24	
8	298	48.0	38.3	254	33.8 ¹¹⁵	17.4 ¹⁴⁷		35	17	19 47	23	32 65	50 27	
9	313	47.9	38.0	269	04.5 ¹¹⁷	+11 02.6 ¹⁴⁸		30	19 05	32	20 05	38 61	46 30	
10	328	47.8	37.7	283	35.2 ¹¹⁷	+10 47.8 ¹⁴⁸		20	18 44	19 08	19 37	48 56	39 36	
11	343	47.7	+22 37.5	298	06.1 ¹¹⁹	+10 32.9 ¹⁴⁹		10 N	18 25	18 48	19 15	8 56 51	21 33 40	
12	358	47.6	+22 37.2	312	37.0 ¹¹⁹	+10 18.0 ¹⁴⁹		0	18 08	18 31	18 57	9 04 47	21 27 45	
13	13	47.5	37.0	327	08.1 ¹²¹	+10 03.1 ¹⁴⁹		10 S	17 52	18 14	41	13 41	21 50	
14	28	47.4	36.7	341	39.2 ¹²¹	+9 48.2 ¹⁴⁹		20	34	17 58	25	21 37	15 55	
15	43	47.3	36.4	356	10.4 ¹²²	33.2 ¹⁵⁰		30	14	40	09	31 31	08 60	
16	58	47.2	36.2	10	41.8 ¹²⁴	18.2 ¹⁵⁰		35	17 02	30	18 01	37 28	21 03 64	
17	73	47.1	+22 35.9	25	13.2 ¹²⁴	+9 03.2 ¹⁵⁰		40	16 48	17 18	17 52	9 43 25	20 59 67	
18	88	47.0	+22 35.6	39	44.7 ¹²⁵	+8 48.1 ¹⁵¹		45	16 32	17 06	17 42	9 50 21	20 53 72	
19	103	46.9	35.4	54	16.2 ¹²⁵	33.1 ¹⁵⁰		50	12	16 50	31	9 59 15	46 77	
20	118	46.8	35.1	68	47.9 ¹²⁷	18.0 ¹⁵¹		52	16 03	43	26	10 03 13	43 80	
21	133	46.7	34.8	83	19.6 ¹²⁷	+8 02.9 ¹⁵¹		54	15 52	35	21	08 10	40 82	
22	148	46.6	34.6	97	51.5 ¹²⁹	+7 47.8 ¹⁵¹		56	40	27	15	12 8	36 85	
23	163	46.5	34.3	112	23.4 ¹²⁹	32.6 ¹⁵²		58	27	17	09	18 4	32 88	
24	178	46.4	+22 34.0	126	55.4 ¹³⁰	+7 17.5 ¹⁵¹		60 S	15 10	16 06	17 02	10 24 1	20 27 92	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 5 ^h 01 ^m 8		Mag: -3.9			Mag: +1.7			Mag: -2.7			Mag: +0.8		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°
0	284	20.9	170	45.6	+22 41.7	129	24.3	+11 34.2	354	55.8	-22 25.7	126	54.5	+11 15.2
1	299	23.4	185	44.7	41.3	144	25.4	33.7	9	58.6	25.7	141	56.7	15.1
2	314	25.8	200	43.9	40.9	159	26.4	33.1	25	01.4	25.8	156	59.0	15.0
3	329	28.3	215	43.0	40.5	174	27.5	32.5	40	04.2	25.8	172	01.2	14.9
4	344	30.8	230	42.2	40.1	189	28.5	32.0	55	07.0	25.9	187	03.5	14.8
5	359	33.2	245	41.4	+22 39.6	204	29.6	+11 31.4	70	09.8	-22 25.9	202	05.7	+11 14.7
6	14	35.7	260	40.5	+22 39.2	219	30.6	+11 30.8	85	12.6	-22 26.0	217	07.9	+11 14.6
7	29	38.2	275	39.7	38.8	234	31.7	30.3	100	15.4	26.0	232	10.2	14.5
8	44	40.6	290	38.9	38.4	249	32.7	29.7	115	18.2	26.1	247	12.4	14.4
9	59	43.1	305	38.0	37.9	264	33.8	29.1	130	21.0	26.1	262	14.7	14.3
10	74	45.5	320	37.2	37.5	279	34.8	28.6	145	23.8	26.2	277	16.9	14.3
11	89	48.0	335	36.4	+22 37.1	294	35.9	+11 28.0	160	26.7	-22 26.2	292	19.1	+11 14.2
12	104	50.5	350	35.5	+22 36.7	309	36.9	+11 27.4	175	29.5	-22 26.3	307	21.4	+11 14.1
13	119	52.9	5	34.7	36.2	324	38.0	26.9	190	32.3	26.3	322	23.6	14.0
14	134	55.4	20	33.9	35.8	339	39.0	26.3	205	35.1	26.4	337	25.9	13.9
15	149	57.9	35	33.0	35.4	354	40.1	25.7	220	37.9	26.4	352	28.1	13.8
16	165	00.3	50	32.2	34.9	9	41.1	25.2	235	40.7	26.5	7	30.3	13.7
17	180	02.8	65	31.4	+22 34.5	24	42.2	+11 24.6	250	43.5	-22 26.5	22	32.6	+11 13.6
18	195	05.3	80	30.5	+22 34.0	39	43.2	+11 24.0	265	46.3	-22 26.6	37	34.8	+11 13.5
19	210	07.7	95	29.7	33.6	54	44.3	23.5	280	49.1	26.6	52	37.1	13.4
20	225	10.2	110	28.9	33.2	69	45.3	22.9	295	51.9	26.6	67	39.3	13.4
21	240	12.7	125	28.1	32.7	84	46.4	22.3	310	54.7	26.7	82	41.5	13.3
22	255	15.1	140	27.2	32.3	99	47.4	21.8	325	57.5	26.7	97	43.8	13.2
23	270	17.6	155	26.4	31.8	114	48.5	21.2	341	00.3	26.8	112	46.0	13.1
24	285	20.0	170	25.6	+22 31.4	129	49.5	+11 20.6	356	03.1	-22 26.8	127	48.2	+11 13.0
Dif	—		-8	-4		+10	-6		+28	0		+22	-1	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'7 PMG: 12 ^h 05 ^m 0			Edad: 3 ^d 9 SD: 15'8 PMG: 16 ^h 02 ^m	PHE { 4 ^h : 57'7 12 ^h : 57'4 20 ^h : 57'1 R°: 43 ^m										
	hG ☉	Dec		hG ☾		Dif		Dec	Dif		Náutico	Civil	Hora	R°	Hora
h	°	'	°	°	'	°	'	h	m	h	m	h	m	h	m
0	178	46.4	+22	34.0	126	55.4	+7 17.5	60 N	** **	1 21	2 50	9 16	90	22 23	1
1	193	46.3		33.7	141	27.4 ¹³⁰	+7 02.3 ¹⁵²	58	** **	1 59	3 09	19 86		22 4	
2	208	46.2		33.5	155	59.6 ¹³²	+6 47.1 ¹⁵²	56	** **	2 25	25	21 83		22 6	
3	223	46.1		33.2	170	31.8 ¹³²	31.9 ¹⁵²	54	1 14	2 46	38	23 80		21 9	
4	238	46.0		32.9	185	04.1 ¹³³	16.7 ¹⁵²	52	1 50	3 02	3 50	25 78		20 12	
5	253	45.9	+22	32.7	199	36.4 ¹³³	+6 01.5 ¹⁵²	50	2 14	3 16	4 00	9 27	75	22 20	13
6	268	45.8	+22	32.4	214	08.8 ¹³⁴	+5 46.3 ¹⁵²	45	2 56	3 44	4 21	9 31	70	22 19	18
7	283	45.7		32.1	228	41.3 ¹³⁵	31.1 ¹⁵²	40	3 25	4 06	38	34 66		18 22	
8	298	45.6		31.8	243	13.9 ¹³⁶	15.9 ¹⁵²	35	3 47	23	4 53	37 62		17 25	
9	313	45.5		31.6	257	46.5 ¹³⁶	+5 00.7 ¹⁵²	30	4 05	4 38	5 05	39 59		16 29	
10	328	45.4		31.3	272	19.2 ¹³⁷	+4 45.5 ¹⁵²	20	33	5 02	26	44 53		15 34	
11	343	45.3	+22	31.0	286	52.0 ¹³⁸	+4 30.3 ¹⁵²	10 N	4 55	5 22	5 44	9 47	49	22 13	39
12	358	45.2	+22	30.7	301	24.8 ¹³⁸	+4 15.0 ¹⁵³	0	5 13	5 39	6 01	9 51	44	22 12	43
13	13	45.1		30.4	315	57.7 ¹³⁹	+3 59.8 ¹⁵²	10 S	29	5 55	18	54 40		11 47	
14	28	45.0		30.2	330	30.6 ¹³⁹	44.6 ¹⁵²	20	5 45	6 12	36	9 58	35	10 52	
15	43	44.9		29.9	345	03.6 ¹⁴⁰	29.4 ¹⁵²	30	6 00	30	6 56	10 02	30	08 58	
16	58	44.8		29.6	359	36.7 ¹⁴¹	+3 14.2 ¹⁵²	35	09	40	7 08	05 26		07 61	
17	73	44.7	+22	29.3	14	09.8 ¹⁴¹	+2 59.0 ¹⁵²	40	6 17	6 51	7 21	10 08	22	22 06	65
18	88	44.6	+22	29.0	28	43.0 ¹⁴²	+2 43.8 ¹⁵²	45	6 27	7 04	7 37	10 11	18	22 05	69
19	103	44.5		28.8	43	16.2 ¹⁴²	28.6 ¹⁵²	50	38	19	7 57	14 14		03 74	
20	118	44.4		28.5	57	49.5 ¹⁴³	+2 13.5 ¹⁵¹	52	43	26	8 06	16 12		03 76	
21	133	44.3		28.2	72	22.8 ¹⁴³	+1 58.3 ¹⁵²	54	48	34	17	18 9		02 79	
22	148	44.2		27.9	86	56.2 ¹⁴⁴	43.2 ¹⁵¹	56	6 54	42	29	20 7		01 82	
23	163	44.1		27.6	101	29.6 ¹⁴⁴	28.0 ¹⁵²	58	7 00	7 52	42	22 4		22 00	85
24	178	44.0	+22	27.3	116	03.1 ¹⁴⁵	+1 12.9 ¹⁵¹	60 S	7 07	8 03	8 58	10 25	0	21 59	89
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG 4 ^h 57 ^m 8			Mag: -3.9 PMG: 12 ^h 39 ^m			Mag: +1.7 PMG: 15 ^h 20 ^m			Mag: -2.7 PMG: 0 ^h 16 ^m			Mag: +0.8 PMG: 15 ^h 26 ^m		
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	'	°	'	°	'	°	°	'	°
0	285	20.0		170	25.6	+22	31.4	129	49.5	+11	20.6	356	03.1	-22	26.8
1	300	22.5		185	24.7		31.0	144	50.6		20.1	11	06.0		26.9
2	315	25.0		200	23.9		30.5	159	51.6		19.5	26	08.8		26.9
3	330	27.4		215	23.1		30.1	174	52.7		18.9	41	11.6		27.0
4	345	29.9		230	22.3		29.6	189	53.7		18.4	56	14.4		27.0
5	0	32.4		245	21.4	+22	29.2	204	54.8	+11	17.8	71	17.2	-22	27.1
6	15	34.8		260	20.6	+22	28.7	219	55.8	+11	17.2	86	20.0	-22	27.1
7	30	37.3		275	19.8		28.3	234	56.9		16.7	101	22.8		27.2
8	45	39.8		290	19.0		27.8	249	57.9		16.1	116	25.6		27.2
9	60	42.2		305	18.1		27.3	264	58.9		15.5	131	28.4		27.3
10	75	44.7		320	17.3		26.9	280	00.0		15.0	146	31.2		27.3
11	90	47.1		335	16.5	+22	26.4	295	01.0	+11	14.4	161	34.0	-22	27.4
12	105	49.6		350	15.7	+22	26.0	310	02.1	+11	13.8	176	36.8	-22	27.4
13	120	52.1		5	14.8		25.5	325	03.1		13.2	191	39.6		27.5
14	135	54.5		20	14.0		25.1	340	04.2		12.7	206	42.5		27.5
15	150	57.0		35	13.2		24.6	355	05.2		12.1	221	45.3		27.6
16	165	59.5		50	12.4		24.1	10	06.3		11.5	236	48.1		27.6
17	181	01.9		65	11.5	+22	23.7	25	07.3	+11	11.0	251	50.9	-22	27.7
18	196	04.4		80	10.7	+22	23.2	40	08.4	+11	10.4	266	53.7	-22	27.7
19	211	06.9		95	09.9		22.7	55	09.4		09.8	281	56.5		27.8
20	226	09.3		110	09.1		22.3	70	10.5		09.3	296	59.3		27.8
21	241	11.8		125	08.3		21.8	85	11.5		08.7	312	02.1		27.8
22	256	14.3		140	07.4		21.3	100	12.6		08.1	327	04.9		27.9
23	271	16.7		155	06.6		20.9	115	13.6		07.5	342	07.7		27.9
24	286	19.2		170	05.8	+22	20.4	130	14.7	+11	07.0	357	10.5	-22	28.0
Dif	—			-8		-5		+10		-6		+28		0	
														+22	
															-1

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7			Edad: 4 ^d 9	PHE { 4 ^h : 56'8 12 ^h : 56'5 20 ^h : 56'2	PMG: 12 ^h 05 ^m 1			R°: 43 ^m							
	hG ☉	Dec				hG ☾				Dif	Dec	Dif	Civil	Náutico	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	h m	m	
0	178	44.0	+22 27.3	116	03.1	+1 12.9		60 N	21 17	22 44	** **	10 46 87	22 24 0			
1	193	43.9	27.0	130	36.6 ¹⁴⁵	+0 57.8 ¹⁵¹		58	20 59	22 08	** **	45 84	26 4			
2	208	43.8	26.8	145	10.1 ¹⁴⁵	42.7 ¹⁵¹		56	44	21 42	** **	44 81	28 7			
3	223	43.7	26.5	159	43.7 ¹⁴⁶	27.7 ¹⁵⁰		54	31	22	22 51	43 78	30 9			
4	238	43.6	26.2	174	17.3 ¹⁴⁶	+0 12.6 ¹⁵¹		52	19	21 06	22 17	43 75	32 12			
5	253	43.6	+22 25.9	188	51.0 ¹⁴⁷	-0 02.4 ¹⁵⁰		50	20 09	20 52	21 54	10 42 73	22 33 14			
6	268	43.5	+22 25.6	203	24.7 ¹⁴⁷	-0 17.4 ¹⁵⁰		45	19 48	20 25	21 12	10 41 68	22 37 18			
7	283	43.4	25.3	217	58.5 ¹⁴⁸	32.4 ¹⁵⁰		40	31	20 03	20 44	40 64	40 22			
8	298	43.3	25.0	232	32.3 ¹⁴⁸	-0 47.4 ¹⁵⁰		35	17	19 46	22	39 60	42 26			
9	313	43.2	24.7	247	06.1 ¹⁴⁸	-1 02.3 ¹⁴⁹		30	19 04	32	20 04	38 57	45 28			
10	328	43.1	24.4	261	39.9 ¹⁴⁸	17.3 ¹⁵⁰		20	18 44	19 08	19 37	37 52	49 33			
11	343	43.0	+22 24.1	276	13.8 ¹⁴⁹	-1 32.2 ¹⁴⁹		10 N	18 25	18 48	19 15	10 36 47	22 52 38			
12	358	42.9	+22 23.8	290	47.7 ¹⁴⁹	-1 47.0 ¹⁴⁸		0	18 09	18 31	18 57	10 35 42	22 55 43			
13	13	42.8	23.6	305	21.7 ¹⁵⁰	-2 01.9 ¹⁴⁹		10 S	17 52	18 15	41	34 38	22 58 47			
14	28	42.7	23.3	319	55.6 ¹⁴⁹	16.7 ¹⁴⁸		20	35	17 58	26	33 33	23 02 51			
15	43	42.6	23.0	334	29.6 ¹⁵⁰	31.5 ¹⁴⁸		30	14	41	10	32 28	06 56			
16	58	42.5	22.7	349	03.7 ¹⁵¹	-2 46.2 ¹⁴⁷		35	17 03	31	18 02	31 25	08 60			
17	73	42.4	+22 22.4	3	37.7 ¹⁵⁰	-3 01.0 ¹⁴⁸		40	16 49	17 20	17 53	10 30 22	23 11 63			
18	88	42.3	+22 22.1	18	11.8 ¹⁵¹	-3 15.7 ¹⁴⁷		45	16 33	17 07	17 44	10 29 18	23 14 67			
19	103	42.2	21.8	32	45.9 ¹⁵¹	30.3 ¹⁴⁶		50	14	16 52	33	28 14	17 73			
20	118	42.1	21.5	47	20.0 ¹⁵¹	45.0 ¹⁴⁷		52	16 05	45	28	28 11	19 75			
21	133	42.0	21.2	61	54.1 ¹⁵¹	-3 59.6 ¹⁴⁶		54	15 54	37	23	27 9	21 77			
22	148	41.9	20.9	76	28.3 ¹⁵²	-4 14.2 ¹⁴⁶		56	43	29	17	27 6	23 80			
23	163	41.9	20.6	91	02.4 ¹⁵¹	28.7 ¹⁴⁵		58	29	19	11	26 4	25 83			
24	178	41.8	+22 20.3	105	36.6 ¹⁵²	-4 43.2 ¹⁴⁵		60 S	15 13	16 09	17 04	10 25 1	23 28 86			

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 4 ^h 53 ^m 9		Mag: -3.9 PMG: 12 ^h 40 ^m		Mag: +1.7 PMG: 15 ^h 18 ^m		Mag: -2.7 PMG: 0 ^h 11 ^m		Mag: +0.8 PMG: 15 ^h 23 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	286	19.2	170	05.8	+22 20.4	130	14.7	+11 07.0	357	10.5	-22 28.0	128	41.9	+11 10.8
1	301	21.6	185	05.0	19.9	145	15.7	06.4	12	13.3	28.0	143	44.2	10.7
2	316	24.1	200	04.2	19.4	160	16.8	05.8	27	16.2	28.1	158	46.4	10.6
3	331	26.6	215	03.3	19.0	175	17.8	05.3	42	19.0	28.1	173	48.6	10.5
4	346	29.0	230	02.5	18.5	190	18.9	04.7	57	21.8	28.2	188	50.9	10.4
5	1	31.5	245	01.7	+22 18.0	205	19.9	+11 04.1	72	24.6	-22 28.2	203	53.1	+11 10.3
6	16	34.0	260	00.9	+22 17.5	220	21.0	+11 03.5	87	27.4	-22 28.3	218	55.3	+11 10.3
7	31	36.4	275	00.1	17.1	235	22.0	03.0	102	30.2	28.3	233	57.6	10.2
8	46	38.9	289	59.3	16.6	250	23.1	02.4	117	33.0	28.4	248	59.8	10.1
9	61	41.4	304	58.4	16.1	265	24.1	01.8	132	35.8	28.4	264	02.1	10.0
10	76	43.8	319	57.6	15.6	280	25.2	01.3	147	38.6	28.5	279	04.3	09.9
11	91	46.3	334	56.8	+22 15.1	295	26.2	+11 00.7	162	41.4	-22 28.5	294	06.5	+11 09.8
12	106	48.8	349	56.0	+22 14.6	310	27.3	+11 00.1	177	44.2	-22 28.6	309	08.8	+11 09.7
13	121	51.2	4	55.2	14.2	325	28.3	+10 59.5	192	47.0	28.6	324	11.0	09.6
14	136	53.7	19	54.4	13.7	340	29.4	59.0	207	49.9	28.7	339	13.2	09.5
15	151	56.1	34	53.6	13.2	355	30.4	58.4	222	52.7	28.7	354	15.5	09.4
16	166	58.6	49	52.7	12.7	10	31.5	57.8	237	55.5	28.8	9	17.7	09.3
17	182	01.1	64	51.9	+22 12.2	25	32.5	+10 57.3	252	58.3	-22 28.8	24	19.9	+11 09.2
18	197	03.5	79	51.1	+22 11.7	40	33.6	+10 56.7	268	01.1	-22 28.9	39	22.2	+11 09.2
19	212	06.0	94	50.3	11.2	55	34.6	56.1	283	03.9	28.9	54	24.4	09.1
20	227	08.5	109	49.5	10.7	70	35.7	55.5	298	06.7	28.9	69	26.6	09.0
21	242	10.9	124	48.7	10.2	85	36.7	55.0	313	09.5	29.0	84	28.9	08.9
22	257	13.4	139	47.9	09.7	100	37.8	54.4	328	12.3	29.0	99	31.1	08.8
23	272	15.9	154	47.1	09.2	115	38.8	53.8	343	15.1	29.1	114	33.3	08.7
24	287	18.3	169	46.2	+22 08.7	130	39.9	+10 53.2	358	17.9	-22 29.1	129	35.6	+11 08.6
Dif	—		-8	-5		+10	-6		+28		0	+22		-1

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7 PMG: 12 ^h 05 ^m 3				Edad: 5 ^d 9 PHE { 4 ^h : 56 ^h 0 12 ^h : 55 ^h 7 20 ^h : 55 ^h 5 R°: 42 ^m												
	hG ☉		Dec		hG ☾ Dif		Dec Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	41.8	+22	20.3	105	36.6	-4	43.2	60 N	**	**	1	27	2	53	12	13
1	193	41.7		20.0	120	10.8 ¹⁵²	-4	57.7 ¹⁴⁵	58	**	**	2	03	3	12	09	82
2	208	41.6		19.7	134	45.0 ¹⁵²	-5	12.1 ¹⁴⁴	56	**	**	29		27	05	79	35
3	223	41.5		19.4	149	19.2 ¹⁵²		26.5 ¹⁴⁴	54	1	20	2	48	40	12	01	77
4	238	41.4		19.0	163	53.5 ¹⁵³		40.8 ¹⁴³	52	1	53	3	05	3	52	11	58
5	253	41.3	+22	18.7	178	27.7 ¹⁵²	-5	55.1 ¹⁴³	50	2	17	3	18	4	02	11	55
6	268	41.2	+22	18.4	193	02.0 ¹⁵³	-6	09.4 ¹⁴³	45	2	58	3	46	4	23	11	49
7	283	41.1		18.1	207	36.2 ¹⁵²		23.6 ¹⁴²	40	3	27	4	07	40	44	62	23
8	298	41.0		17.8	222	10.5 ¹⁵³		37.8 ¹⁴²	35	3	49	25	4	54	39	59	08
9	313	40.9		17.5	236	44.7 ¹⁵²	-6	52.0 ¹⁴²	30	4	06	4	39	5	06	35	57
10	328	40.9		17.2	251	19.0 ¹⁵³	-7	06.1 ¹⁴¹	20	34	5	03	27	29	51	22	35
11	343	40.8	+22	16.9	265	53.3 ¹⁵³	-7	20.1 ¹⁴⁰	10 N	4	55	5	22	5	45	11	23
12	358	40.7	+22	16.6	280	27.6 ¹⁵³	-7	34.1 ¹⁴⁰	0	5	13	5	39	6	02	11	17
13	13	40.6		16.3	295	01.8 ¹⁵²	-7	48.1 ¹⁴⁰	10 S	29	5	56	18	12	38	45	47
14	28	40.5		16.0	309	36.1 ¹⁵³	-8	02.0 ¹³⁹	20	5	45	6	12	36	06	34	23
15	43	40.4		15.6	324	10.4 ¹⁵³		15.9 ¹³⁹	30	6	00	30	6	56	11	00	29
16	58	40.3		15.3	338	44.6 ¹⁵²		29.7 ¹³⁸	35	08	40	7	07	10	56	26	23
17	73	40.2	+22	15.0	353	18.9 ¹⁵³	-8	43.5 ¹³⁸	40	6	17	6	51	7	21	10	52
18	88	40.1	+22	14.7	7	53.2 ¹⁵³	-8	57.2 ¹³⁷	45	6	26	7	03	7	37	10	47
19	103	40.0		14.4	22	27.4 ¹⁵²	-9	10.9 ¹³⁷	50	37	18	7	56	42	14	44	44
20	118	40.0		14.1	37	01.7 ¹⁵³		24.5 ¹³⁶	52	42	25	8	05	39	12	44	44
21	133	39.9		13.8	51	35.9 ¹⁵²		38.1 ¹³⁶	54	47	33	15		36	10	44	44
22	148	39.8		13.4	66	10.1 ¹⁵²	-9	51.6 ¹³⁵	56	53	41	27		33	7	44	44
23	163	39.7		13.1	80	44.4 ¹⁵³	-10	05.1 ¹³⁵	58	6	59	7	50	40	30	4	44
24	178	39.6	+22	12.8	95	18.6 ¹⁵²	-10	18.5 ¹³⁴	60 S	7	06	8	01	8	56	10	26

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 4 ^h 50 ^m 0		Mag: -3.9 PMG: 12 ^h 42 ^m				Mag: +1.7 PMG: 15 ^h 16 ^m				Mag: -2.7 PMG: 0 ^h 07 ^m				Mag: +0.8 PMG: 15 ^h 19 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	287	18.3	169	46.2	+22	08.7	130	39.9	+10	53.2	358	17.9	-22	29.1	129	35.6	+11	08.6
1	302	20.8	184	45.4		08.2	145	40.9		52.7	13	20.7		29.2	144	37.8		08.5
2	317	23.2	199	44.6		07.7	160	42.0		52.1	28	23.6		29.2	159	40.0		08.4
3	332	25.7	214	43.8		07.2	175	43.0		51.5	43	26.4		29.3	174	42.3		08.3
4	347	28.2	229	43.0		06.7	190	44.1		50.9	58	29.2		29.3	189	44.5		08.2
5	2	30.6	244	42.2	+22	06.2	205	45.1	+10	50.4	73	32.0	-22	29.4	204	46.7	+11	08.1
6	17	33.1	259	41.4	+22	05.7	220	46.2	+10	49.8	88	34.8	-22	29.4	219	49.0	+11	08.0
7	32	35.6	274	40.6		05.2	235	47.2		49.2	103	37.6		29.5	234	51.2		07.9
8	47	38.0	289	39.8		04.7	250	48.2		48.6	118	40.4		29.5	249	53.4		07.9
9	62	40.5	304	39.0		04.2	265	49.3		48.1	133	43.2		29.6	264	55.7		07.8
10	77	43.0	319	38.2		03.7	280	50.3		47.5	148	46.0		29.6	279	57.9		07.7
11	92	45.4	334	37.4	+22	03.2	295	51.4	+10	46.9	163	48.8	-22	29.7	295	00.1	+11	07.6
12	107	47.9	349	36.6	+22	02.7	310	52.4	+10	46.3	178	51.6	-22	29.7	310	02.4	+11	07.5
13	122	50.4	4	35.8		02.2	325	53.5		45.8	193	54.5		29.8	325	04.6		07.4
14	137	52.8	19	34.9		01.6	340	54.5		45.2	208	57.3		29.8	340	06.8		07.3
15	152	55.3	34	34.1		01.1	355	55.6		44.6	224	00.1		29.8	355	09.1		07.2
16	167	57.7	49	33.3		00.6	10	56.6		44.0	239	02.9		29.9	10	11.3		07.1
17	183	00.2	64	32.5	+22	00.1	25	57.7	+10	43.5	254	05.7	-22	29.9	25	13.5	+11	07.0
18	198	02.7	79	31.7	+21	59.6	40	58.7	+10	42.9	269	08.5	-22	30.0	40	15.7	+11	06.9
19	213	05.1	94	30.9		59.1	55	59.8		42.3	284	11.3		30.0	55	18.0		06.8
20	228	07.6	109	30.1		58.5	71	00.8		41.7	299	14.1		30.1	70	20.2		06.7
21	243	10.1	124	29.3		58.0	86	01.9		41.2	314	16.9		30.1	85	22.4		06.6
22	258	12.5	139	28.5		57.5	101	02.9		40.6	329	19.7		30.2	100	24.7		06.6
23	273	15.0	154	27.7		57.0	116	04.0		40.0	344	22.5		30.2	115	26.9		06.5
24	288	17.5	169	26.9	+21	56.4	131	05.0	+10	39.4	359	25.3	-22	30.3	130	29.1	+11	06.4
Dif	—		-8		-5		+10		-6		+28		0		+22		-	

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 3 12 ^h : 55 ^m 1 20 ^h : 54 ^m 9	SD: 15 ^h 1	PMG: 18 ^h 10 ^m			R°: 44 ^m	Final del crepúsculo			Salida de Luna			Puesta de Luna				
	hG ☉	Dec	hG ☾	Dif								Dec	Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	h	m	m		
0	178	39.6	+22	12.8	95	18.6	-10	18.5	60 N	21	15	22	38	**	**	13	40	87	22	26	2	
1	193	39.5		12.5	109	52.8 ¹⁵²		31.9 ¹³⁴	58	20	57	22	04	**	**	31	84		35	7		
2	208	39.4		12.2	124	26.9 ¹⁵¹		45.2 ¹³³	56	42	21	39	**	**	24	80		43	10			
3	223	39.3		11.8	139	01.1 ¹⁵²	-10	58.5 ¹³³	54	29	20	22	46			18	76		50	13		
4	238	39.3		11.5	153	35.3 ¹⁵²	-11	11.7 ¹³²	52	18	21	04	22	14		12	74		22	57	15	
5	253	39.2	+22	11.2	168	09.4 ¹⁵¹	-11	24.8 ¹³¹	50	20	08	20	51	21	51	13	07	71		23	03	18
6	268	39.1	+22	10.9	182	43.5 ¹⁵¹	-11	37.9 ¹³¹	45	19	47	20	23	21	11	12	56	66		23	15	23
7	283	39.0		10.6	197	17.6 ¹⁵¹	-11	50.9 ¹³⁰	40	30	20	02	20	43		46	63		26	26		
8	298	38.9		10.2	211	51.7 ¹⁵¹	-12	03.9 ¹³⁰	35	16	19	45		21		38	60		35	30		
9	313	38.8		09.9	226	25.8 ¹⁵¹		16.8 ¹²⁹	30	19	04	31	20	04		32	56		43	32		
10	328	38.7		09.6	240	59.8 ¹⁵⁰		29.6 ¹²⁸	20	18	43	19	08	19	36	20	51		23	57	37	
11	343	38.7	+22	09.3	255	33.8 ¹⁵⁰	-12	42.4 ¹²⁸	10 N	18	26	18	48	19	15	12	09	48	**	**	**	**
12	358	38.6	+22	08.9	270	07.8 ¹⁵⁰	-12	55.1 ¹²⁷	0	18	09	18	31	18	57	12	00	43	**	**	**	**
13	13	38.5		08.6	284	41.8 ¹⁵⁰	-13	07.8 ¹²⁷	10 S	17	53	18	15	41		11	50	40	**	**	**	**
14	28	38.4		08.3	299	15.7 ¹⁴⁹		20.4 ¹²⁶	20	35	17	59		26		40	36		**	**	**	**
15	43	38.3		08.0	313	49.6 ¹⁴⁹		32.9 ¹²⁵	30	15		41	11			29	31		0	02	57	
16	58	38.2		07.6	328	23.5 ¹⁴⁹		45.4 ¹²⁵	35	17	04	32		18	03		22	28		08	59	
17	73	38.1	+22	07.3	342	57.4 ¹⁴⁹	-13	57.8 ¹²⁴	40	16	51	17	21	17	54	11	15	25		0	14	62
18	88	38.1	+22	07.0	357	31.2 ¹⁴⁸	-14	10.2 ¹²⁴	45	16	35	17	08	17	45	11	06	21		0	21	67
19	103	38.0		06.6	12	05.0 ¹⁴⁸		22.4 ¹²²	50	16		16	53	34		10	56	17		30	71	
20	118	37.9		06.3	26	38.8 ¹⁴⁸		34.7 ¹²³	52	16	07		47	30		51	15		34	73		
21	133	37.8		06.0	41	12.5 ¹⁴⁷		46.8 ¹²¹	54	15	57		39	25		46	12		38	76		
22	148	37.7		05.6	55	46.3 ¹⁴⁸	-14	58.9 ¹²¹	56		45	31		19		40	9		43	79		
23	163	37.6		05.3	70	19.9 ¹⁴⁶	-15	10.9 ¹²⁰	58		32		22	13		34	6		48	83		
24	178	37.6	+22	05.0	84	53.6 ¹⁴⁷	-15	22.8 ¹¹⁹	60 S	15	16	16	11	17	06	10	27	2		0	54	87

UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 4 ^h 46 ^m 1			Mag: -3.9 PMG: 12 ^h 43 ^m			Mag: +1.7 PMG: 15 ^h 15 ^m			Mag: -2.7 PMG: 0 ^h 02 ^m			Mag: +0.8 PMG: 15 ^h 16 ^m						
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'			
0	288	17.5	169	26.9	+21	56.4	131	05.0	+10	39.4	359	25.3	-22	30.3	130	29.1	+11	06.4	
1	303	19.9	184	26.1		55.9	146	06.1		38.9	14	28.2		30.3	145	31.4		06.3	
2	318	22.4	199	25.3		55.4	161	07.1		38.3	29	31.0		30.4	160	33.6		06.2	
3	333	24.9	214	24.5		54.9	176	08.2		37.7	44	33.8		30.4	175	35.8		06.1	
4	348	27.3	229	23.7		54.3	191	09.2		37.1	59	36.6		30.5	190	38.1		06.0	
5	3	29.8	244	22.9	+21	53.8	206	10.3	+10	36.5	74	39.4	-22	30.5	205	40.3	+11	05.9	
6	18	32.2	259	22.1	+21	53.3	221	11.3	+10	36.0	89	42.2	-22	30.6	220	42.5	+11	05.8	
7	33	34.7	274	21.3		52.7	236	12.4		35.4	104	45.0		30.6	235	44.8		05.7	
8	48	37.2	289	20.5		52.2	251	13.4		34.8	119	47.8		30.7	250	47.0		05.6	
9	63	39.6	304	19.7		51.7	266	14.5		34.2	134	50.6		30.7	265	49.2		05.5	
10	78	42.1	319	18.9		51.1	281	15.5		33.7	149	53.4		30.7	280	51.4		05.4	
11	93	44.6	334	18.1	+21	50.6	296	16.6	+10	33.1	164	56.2	-22	30.8	295	53.7	+11	05.3	
12	108	47.0	349	17.3	+21	50.1	311	17.6	+10	32.5	179	59.0	-22	30.8	310	55.9	+11	05.2	
13	123	49.5	4	16.6		49.5	326	18.7		31.9	195	01.9		30.9	325	58.1		05.2	
14	138	52.0	19	15.8		49.0	341	19.7		31.3	210	04.7		30.9	341	00.4		05.1	
15	153	54.4	34	15.0		48.4	356	20.8		30.8	225	07.5		31.0	356	02.6		05.0	
16	168	56.9	49	14.2		47.9	11	21.8		30.2	240	10.3		31.0	11	04.8		04.9	
17	183	59.3	64	13.4	+21	47.3	26	22.9	+10	29.6	255	13.1	-22	31.1	26	07.1	+11	04.8	
18	199	01.8	79	12.6	+21	46.8	41	23.9	+10	29.0	270	15.9	-22	31.1	41	09.3	+11	04.7	
19	214	04.3	94	11.8		46.3	56	25.0		28.5	285	18.7		31.2	56	11.5		04.6	
20	229	06.7	109	11.0		45.7	71	26.0		27.9	300	21.5		31.2	71	13.7		04.5	
21	244	09.2	124	10.2		45.2	86	27.1		27.3	315	24.3		31.3	86	16.0		04.4	
22	259	11.7	139	09.4		44.6	101	28.1		26.7	330	27.1		31.3	101	18.2		04.3	
23	274	14.1	154	08.6		44.1	116	29.2		26.1	345	29.9		31.4	116	20.4		04.2	
24	289	16.6	169	07.8	+21	43.5	131	30.2	+10	25.6	0	32.8	-22	31.4	131	22.7	+11	04.1	
Dif	—		-8		-5		+10		-6		-8972		0		+22		-1		

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15'7 PMG: 12 ^h 05 ^m 6			Edad: 7 ^d 9 PHE { SD: 14'9 PMG: 18 ^h 54 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	37.6	+22 05.0	84	53.6	-15 22.8		60 N	** **	1 33	2 57	15	07	90	22	28 5
1	193	37.5	04.6	99	27.2 ¹⁴⁶	34.7 ¹¹⁹		58	** **	2 07	3 15	14	55	84	42	10
2	208	37.4	04.3	114	00.8 ¹⁴⁶	46.5 ¹¹⁸		56	** **	32	30	44	79		22	53 15
3	223	37.3	04.0	128	34.3 ¹⁴⁵	-15 58.2 ¹¹⁷		54	1 25	2 51	42	34	76		23	03 18
4	238	37.2	03.6	143	07.8 ¹⁴⁵	-16 09.8 ¹¹⁶		52	1 57	3 07	3 54	26	73		12	21
5	253	37.1	+22 03.3	157	41.3 ¹⁴⁵	-16 21.4 ¹¹⁶		50	2 20	3 21	4 04	14	18	71	23	21 22
6	268	37.1	+22 03.0	172	14.7 ¹⁴⁴	-16 32.9 ¹¹⁵		45	3 00	3 48	4 24	14	02	66	23	38 27
7	283	37.0	02.6	186	48.1 ¹⁴⁴	44.3 ¹¹⁴		40	28	4 09	41	13	49	62	23	52 31
8	298	36.9	02.3	201	21.5 ¹⁴⁴	-16 55.7 ¹¹⁴		35	3 50	26	4 55	38	59		**	** ** *
9	313	36.8	01.9	215	54.8 ¹⁴³	-17 07.0 ¹¹³		30	4 07	4 40	5 07	28	57		**	** ** *
10	328	36.7	01.6	230	28.0 ¹⁴²	18.2 ¹¹²		20	35	5 03	28	13	11	53	**	** ** *
11	343	36.7	+22 01.3	245	01.3 ¹⁴³	-17 29.3 ¹¹¹		10 N	4 56	5 23	5 45	12	57	49	0	09 41
12	358	36.6	+22 00.9	259	34.5 ¹⁴²	-17 40.3 ¹¹⁰		0	5 14	5 40	6 02	12	43	46	0	21 44
13	13	36.5	00.6	274	07.6 ¹⁴¹	-17 51.3 ¹¹⁰		10 S	30	5 56	18	30	42		32	48
14	28	36.4	+22 00.2	288	40.7 ¹⁴¹	-18 02.2 ¹⁰⁹		20	5 45	6 12	36	16	38		45	51
15	43	36.3	+21 59.9	303	13.8 ¹⁴¹	13.0 ¹⁰⁸		30	6 00	29	6 55	12	00	34	0	59 56
16	58	36.3	59.5	317	46.8 ¹⁴⁰	23.7 ¹⁰⁷		35	08	39	7 07	11	50	32	1	07 59
17	73	36.2	+21 59.2	332	19.7 ¹³⁹	-18 34.4 ¹⁰⁷		40	6 16	6 50	7 20	11	40	28	1	16 63
18	88	36.1	+21 58.8	346	52.7 ¹⁴⁰	-18 44.9 ¹⁰⁵		45	6 26	7 02	7 36	11	27	25	1	28 66
19	103	36.0	58.5	1	25.5 ¹³⁸	-18 55.4 ¹⁰⁵		50	36	17	7 55	13	20		41	71
20	118	35.9	58.1	15	58.4 ¹³⁹	-19 05.8 ¹⁰⁴		52	41	24	8 04	11	06	17	47	74
21	133	35.9	57.8	30	31.1 ¹³⁷	16.1 ¹⁰³		54	46	31	14	10	58	15	1	54 77
22	148	35.8	57.5	45	03.9 ¹³⁸	26.3 ¹⁰²		56	51	39	25	49	12		2	02 80
23	163	35.7	57.1	59	36.6 ¹³⁷	36.5 ¹⁰²		58	6 57	49	38	40	8		11	84
24	178	35.6	+21 56.8	74	09.2 ¹³⁶	-19 46.5 ¹⁰⁰		60 S	7 04	7 59	8 54	10	29	3	2	21 89

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 4 ^h 42 ^m 1		Mag: -3.9 PMG: 12 ^h 44 ^m			Mag: +1.7 PMG: 15 ^h 13 ^m			Mag: -2.7 PMG: 23 ^h 53 ^m			Mag: +0.8 PMG: 15 ^h 12 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	289	16.6	169 07.8	+21 43.5		131 30.2	+10 25.6		15 32.8	-22 31.4		131 22.7	+11 04.1	
1	304	19.1	184 07.0	43.0		146 31.3	25.0		15 35.6	31.4		146 24.9	04.0	
2	319	21.5	199 06.3	42.4		161 32.3	24.4		30 38.4	31.5		161 27.1	03.9	
3	334	24.0	214 05.5	41.9		176 33.4	23.8		45 41.2	31.5		176 29.3	03.8	
4	349	26.5	229 04.7	41.3		191 34.4	23.2		60 44.0	31.6		191 31.6	03.7	
5	4	28.9	244 03.9	+21 40.7		206 35.5	+10 22.7		75 46.8	-22 31.6		206 33.8	+11 03.6	
6	19	31.4	259 03.1	+21 40.2		221 36.5	+10 22.1		90 49.6	-22 31.7		221 36.0	+11 03.6	
7	34	33.8	274 02.3	39.6		236 37.6	21.5		105 52.4	31.7		236 38.3	03.5	
8	49	36.3	289 01.5	39.1		251 38.6	20.9		120 55.2	31.8		251 40.5	03.4	
9	64	38.8	304 00.7	38.5		266 39.7	20.3		135 58.0	31.8		266 42.7	03.3	
10	79	41.2	319 00.0	37.9		281 40.7	19.7		151 00.8	31.9		281 44.9	03.2	
11	94	43.7	333 59.2	+21 37.4		296 41.8	+10 19.2		166 03.6	-22 31.9		296 47.2	+11 03.1	
12	109	46.2	348 58.4	+21 36.8		311 42.8	+10 18.6		181 06.5	-22 32.0		311 49.4	+11 03.0	
13	124	48.6	3	57.6		326 43.8	18.0		196 09.3	32.0		326 51.6	02.9	
14	139	51.1	18 56.8	35.7		341 44.9	17.4		211 12.1	32.1		341 53.9	02.8	
15	154	53.6	33 56.0	35.1		356 45.9	16.8		226 14.9	32.1		356 56.1	02.7	
16	169	56.0	48 55.2	34.5		11 47.0	16.3		241 17.7	32.1		11 58.3	02.6	
17	184	58.5	63 54.5	+21 34.0		26 48.0	+10 15.7		256 20.5	-22 32.2		27 00.5	+11 02.5	
18	200	01.0	78 53.7	+21 33.4		41 49.1	+10 15.1		271 23.3	-22 32.2		42 02.8	+11 02.4	
19	215	03.4	93 52.9	32.8		56 50.1	14.5		286 26.1	32.3		57 05.0	02.3	
20	230	05.9	108 52.1	32.3		71 51.2	13.9		301 28.9	32.3		72 07.2	02.2	
21	245	08.3	123 51.3	31.7		86 52.2	13.4		316 31.7	32.4		87 09.4	02.1	
22	260	10.8	138 50.6	31.1		101 53.3	12.8		331 34.5	32.4		102 11.7	02.0	
23	275	13.3	153 49.8	30.5		116 54.3	12.2		346 37.3	32.5		117 13.9	01.9	
24	290	15.7	168 49.0	+21 30.0		131 55.4	+10 11.6		1 40.1	-22 32.5		132 16.1	+11 01.8	
Dif	—		-8	-6		+10	-6		+28	0		+22	-1	

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	SD: 14 ^h 8				Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna				
	PMG: 12 ^h 05 ^m 7				PMG: 19 ^h 40 ^m					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	h m	h m				
0	178	35.6	+21	56.8	74	09.2	-19	46.5	60 N	21 12	22 32	** **	16 37 89	22 33 11				
1	193	35.5		56.4	88	41.8 ¹³⁶	-19	56.5 ¹⁰⁰	58	20 54	22 00	** **	19 82	22 52 17				
2	208	35.5		56.1	103	14.3 ¹³⁵	-20	06.4 ⁹⁹	56	39	21 36	** **	16 03 78	23 08 21				
3	223	35.4		55.7	117	46.8 ¹³⁵		16.2 ⁹⁸	54	27	18	22 41	15 50 74	21 25				
4	238	35.3		55.3	132	19.2 ¹³⁴		25.9 ⁹⁷	52	16	21 02	22 10	39 71	33 28				
5	253	35.2	+21	55.0	146	51.6 ¹³⁴	-20	35.5 ⁹⁶	50	20 06	20 49	21 48	15 29 69	23 43 30				
6	268	35.2	+21	54.6	161	24.0 ¹³⁴	-20	45.0 ⁹⁵	45	19 46	20 22	21 09	15 08 64	** ** *				
7	283	35.1		54.3	175	56.2 ¹³²	-20	54.4 ⁹⁴	40	29	20 01	20 41	14 51 61	** ** *				
8	298	35.0		53.9	190	28.5 ¹³³	-21	03.8 ⁹⁴	35	15	19 45	20	37 59	0 05 33				
9	313	34.9		53.6	205	00.6 ¹³¹		13.0 ⁹²	30	19 03	30	20 03	25 56	15 36				
10	328	34.9		53.2	219	32.8 ¹³²		22.2 ⁹²	20	18 43	19 07	19 36	14 04 53	34 40				
11	343	34.8	+21	52.9	234	04.8 ¹³⁰	-21	31.2 ⁹⁰	10 N	18 26	18 48	19 15	13 46 50	0 50 43				
12	358	34.7	+21	52.5	248	36.9 ¹³¹	-21	40.2 ⁹⁰	0	18 09	18 32	18 57	13 29 47	1 05 46				
13	13	34.6		52.1	263	08.8 ¹²⁹		49.1 ⁸⁹	10 S	17 53	16	42	13 12 45	20 50				
14	28	34.6		51.8	277	40.7 ¹²⁹	-21	57.8 ⁸⁷	20	36	18 00	27	12 54 42	36 53				
15	43	34.5		51.4	292	12.6 ¹²⁹	-22	06.5 ⁸⁷	30	16	17 42	12	34 38	1 55 57				
16	58	34.4		51.1	306	44.4 ¹²⁸		15.1 ⁸⁶	35	17 05	33	18 04	22 36	2 06 59				
17	73	34.3	+21	50.7	321	16.1 ¹²⁷	-22	23.6 ⁸⁵	40	16 52	17 22	17 56	12 08 34	2 19 62				
18	88	34.3	+21	50.3	335	47.8 ¹²⁷	-22	31.9 ⁸³	45	16 37	17 10	17 46	11 52 31	2 34 65				
19	103	34.2		50.0	350	19.5 ¹²⁷		40.2 ⁸³	50	18	16 55	36	33 26	2 52 70				
20	118	34.1		49.6	4	51.1 ¹²⁶		48.4 ⁸²	52	16 09	49	31	23 24	3 01 72				
21	133	34.0		49.3	19	22.6 ¹²⁵	-22	56.5 ⁸¹	54	15 59	41	26	13 21	11 75				
22	148	34.0		48.9	33	54.1 ¹²⁵	-23	04.4 ⁷⁹	56	48	33	21	11 01 18	22 79				
23	163	33.9		48.5	48	25.5 ¹²⁴		12.3 ⁷⁹	58	35	24	15	10 48 14	35 83				
24	178	33.8	+21	48.2	62	56.9 ¹²⁴	-23	20.1 ⁷⁸	60 S	15 19	16 14	17 09	10 32 8	3 50 89				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 4 ^h 38 ^m 2		Mag: -3.9 PMG: 12 ^h 45 ^m			Mag: +1.7 PMG: 15 ^h 11 ^m			Mag: -2.7 PMG: 23 ^h 49 ^m			Mag: +0.8 PMG: 15 ^h 09 ^m						
	hG ♈	Dec		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	290	15.7	168	49.0	+21	30.0	131	55.4	+10	11.6	1	40.1	-22	32.5	132	16.1	+11	01.8
1	305	18.2	183	48.2		29.4	146	56.4		11.0	16	43.0		32.6	147	18.4		01.7
2	320	20.7	198	47.4		28.8	161	57.5		10.4	31	45.8		32.6	162	20.6		01.7
3	335	23.1	213	46.7		28.2	176	58.5		09.9	46	48.6		32.7	177	22.8		01.6
4	350	25.6	228	45.9		27.6	191	59.6		09.3	61	51.4		32.7	192	25.0		01.5
5	5	28.1	243	45.1	+21	27.1	207	00.6	+10	08.7	76	54.2	-22	32.8	207	27.3	+11	01.4
6	20	30.5	258	44.3	+21	26.5	222	01.7	+10	08.1	91	57.0	-22	32.8	222	29.5	+11	01.3
7	35	33.0	273	43.5		25.9	237	02.7		07.5	106	59.8		32.8	237	31.7		01.2
8	50	35.4	288	42.8		25.3	252	03.8		06.9	122	02.6		32.9	252	33.9		01.1
9	65	37.9	303	42.0		24.7	267	04.8		06.4	137	05.4		32.9	267	36.2		01.0
10	80	40.4	318	41.2		24.1	282	05.9		05.8	152	08.2		33.0	282	38.4		00.9
11	95	42.8	333	40.4	+21	23.5	297	06.9	+10	05.2	167	11.0	-22	33.0	297	40.6	+11	00.8
12	110	45.3	348	39.7	+21	22.9	312	08.0	+10	04.6	182	13.8	-22	33.1	312	42.8	+11	00.7
13	125	47.8	3	38.9		22.4	327	09.0		04.0	197	16.6		33.1	327	45.1		00.6
14	140	50.2	18	38.1		21.8	342	10.1		03.4	212	19.5		33.2	342	47.3		00.5
15	155	52.7	33	37.3		21.2	357	11.1		02.8	227	22.3		33.2	357	49.5		00.4
16	170	55.2	48	36.6		20.6	12	12.2		02.3	242	25.1		33.3	12	51.7		00.3
17	185	57.6	63	35.8	+21	20.0	27	13.2	+10	01.7	257	27.9	-22	33.3	27	54.0	+11	00.2
18	201	00.1	78	35.0	+21	19.4	42	14.3	+10	01.1	272	30.7	-22	33.4	42	56.2	+11	00.1
19	216	02.6	93	34.3		18.8	57	15.3	+10	00.5	287	33.5		33.4	57	58.4	+11	00.0
20	231	05.0	108	33.5		18.2	72	16.4	+9	59.9	302	36.3		33.4	73	00.6	+10	59.9
21	246	07.5	123	32.7		17.6	87	17.4		59.3	317	39.1		33.5	88	02.9		59.8
22	261	09.9	138	31.9		17.0	102	18.5		58.8	332	41.9		33.5	103	05.1		59.7
23	276	12.4	153	31.2		16.4	117	19.5		58.2	347	44.7		33.6	118	07.3		59.6
24	291	14.9	168	30.4	+21	15.8	132	20.6	+9	57.6	2	47.5	-22	33.6	133	09.5	+10	59.6
Dif	—		-8			-6	+10		-6		+28		0		+22		-1	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7 PMG: 12 ^h 05 ^m 8			Edad: 9 ^d 9 PHE { SD: 14 ^h 8 PMG: 20 ^h 28 ^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	+21 48.2	62	56.9	-23 20.1	60 N	** **	1 39	3 00	18 06	81	22 44	23	
1	193	33.7	47.8	77	28.2 ¹²³	27.7	58	** **	2 12	18	17 41	74	23 09	30	
2	208	33.7	47.4	91	59.5 ¹²³	35.3	56	0 32	36	32	21 70		29 34		
3	223	33.6	47.1	106	30.7 ¹²²	42.8	54	1 31	2 54	45	17 04	68	23 46	36	
4	238	33.5	46.7	121	01.8 ¹²¹	50.1	52	2 01	3 10	3 56	16 50	66	** **	**	
5	253	33.5	+21 46.3	135	32.9 ¹²¹	-23 57.4	50	2 24	3 23	4 06	16 38	64	** **	**	
6	268	33.4	+21 46.0	150	04.0 ¹²¹	-24 04.5	45	3 03	3 50	4 26	16 12	61	0 05	34	
7	283	33.3	45.6	164	34.9 ¹¹⁹	11.5	40	30	4 10	42	15 52	59	23 37		
8	298	33.2	45.2	179	05.9 ¹²⁰	18.4	35	3 51	27	4 56	36 57		38 39		
9	313	33.2	44.8	193	36.8 ¹¹⁹	25.2	30	4 09	4 41	5 08	15 21	56	0 51	41	
10	328	33.1	44.5	208	07.6 ¹¹⁸	31.9	20	36	5 04	28	14 57	53	1 14	44	
11	343	33.0	+21 44.1	222	38.4 ¹¹⁸	-24 38.5	10 N	4 56	5 23	5 46	14 36	51	1 33	47	
12	358	33.0	+21 43.7	237	09.1 ¹¹⁷	-24 45.0	0	5 14	5 40	6 02	14 16	50	1 51	49	
13	13	32.9	43.4	251	39.8 ¹¹⁷	51.4	10 S	30	5 56	18	13 57	48	2 10	51	
14	28	32.8	43.0	266	10.4 ¹¹⁶	-24 57.6	20	44	6 12	35	36 46		29 54		
15	43	32.7	42.6	280	40.9 ¹¹⁵	-25 03.8	30	5 59	29	6 55	13 12	44	2 52	56	
16	58	32.7	42.2	295	11.4 ¹¹⁵	09.8	35	6 07	38	7 06	12 58	42	3 05	58	
17	73	32.6	+21 41.9	309	41.9 ¹¹⁵	-25 15.7	40	6 16	6 49	7 19	12 42	40	3 21	60	
18	88	32.5	+21 41.5	324	12.3 ¹¹⁴	-25 21.5	45	6 25	7 01	7 34	12 23	37	3 39	63	
19	103	32.5	41.1	338	42.7 ¹¹⁴	27.2	50	35	16	7 53	11 59	34	4 02	67	
20	118	32.4	40.7	353	13.0 ¹¹³	32.7	52	40	22	8 02	47 33		13 69		
21	133	32.3	40.3	7	43.2 ¹¹²	38.2	54	45	30	12	34 30		26 71		
22	148	32.3	40.0	22	13.5 ¹¹³	43.5	56	50	38	23	19 27		41 74		
23	163	32.2	39.6	36	43.6 ¹¹¹	48.7	58	6 56	47	36	11 02	23	4 58	79	
24	178	32.1	+21 39.2	51	13.7 ¹¹¹	-25 53.8	60 S	7 02	7 57	8 51	10 40	16	5 19	85	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG 4 ^h 34 ^m 3		Mag: -3.9 PMG: 12 ^h 47 ^m			Mag: +1.7 PMG: 15 ^h 10 ^m			Mag: -2.7 PMG: 23 ^h 44 ^m			Mag: +0.8 PMG: 15 ^h 05 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	291	14.9	168	30.4	+21 15.8	132	20.6	+9 57.6	2	47.5	-22 33.6	133	09.5	+10 59.6
1	306	17.3	183	29.6	15.2	147	21.6	57.0	17	50.3	33.7	148	11.8	59.5
2	321	19.8	198	28.9	14.6	162	22.7	56.4	32	53.1	33.7	163	14.0	59.4
3	336	22.3	213	28.1	14.0	177	23.7	55.8	47	56.0	33.8	178	16.2	59.3
4	351	24.7	228	27.3	13.4	192	24.8	55.2	62	58.8	33.8	193	18.4	59.2
5	6	27.2	243	26.6	+21 12.7	207	25.8	+9 54.7	78	01.6	-22 33.9	208	20.7	+10 59.1
6	21	29.7	258	25.8	+21 12.1	222	26.9	+9 54.1	93	04.4	-22 33.9	223	22.9	+10 59.0
7	36	32.1	273	25.0	11.5	237	27.9	53.5	108	07.2	34.0	238	25.1	58.9
8	51	34.6	288	24.3	10.9	252	29.0	52.9	123	10.0	34.0	253	27.3	58.8
9	66	37.1	303	23.5	10.3	267	30.0	52.3	138	12.8	34.0	268	29.6	58.7
10	81	39.5	318	22.7	09.7	282	31.1	51.7	153	15.6	34.1	283	31.8	58.6
11	96	42.0	333	22.0	+21 09.1	297	32.1	+9 51.1	168	18.4	-22 34.1	298	34.0	+10 58.5
12	111	44.4	348	21.2	+21 08.5	312	33.2	+9 50.5	183	21.2	-22 34.2	313	36.2	+10 58.4
13	126	46.9	3	20.4	07.8	327	34.2	50.0	198	24.0	34.2	328	38.5	58.3
14	141	49.4	18	19.7	07.2	342	35.3	49.4	213	26.8	34.3	343	40.7	58.2
15	156	51.8	33	18.9	06.6	357	36.3	48.8	228	29.6	34.3	358	42.9	58.1
16	171	54.3	48	18.2	06.0	12	37.4	48.2	243	32.4	34.4	13	45.1	58.0
17	186	56.8	63	17.4	+21 05.4	27	38.4	+9 47.6	258	35.3	-22 34.4	28	47.3	+10 57.9
18	201	59.2	78	16.6	+21 04.7	42	39.4	+9 47.0	273	38.1	-22 34.5	43	49.6	+10 57.8
19	217	01.7	93	15.9	04.1	57	40.5	46.4	288	40.9	34.5	58	51.8	57.7
20	232	04.2	108	15.1	03.5	72	41.5	45.8	303	43.7	34.5	73	54.0	57.6
21	247	06.6	123	14.4	02.9	87	42.6	45.3	318	46.5	34.6	88	56.2	57.5
22	262	09.1	138	13.6	02.2	102	43.6	44.7	333	49.3	34.6	103	58.5	57.4
23	277	11.6	153	12.8	01.6	117	44.7	44.1	348	52.1	34.7	119	00.7	57.3
24	292	14.0	168	12.1	+21 01.0	132	45.7	+9 43.5	3	54.9	-22 34.7	134	02.9	+10 57.2
Dif	—		-8	-6		+10	-6		+28	0		+22	-1	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 10 ^d 9 PHE	SD: 14 ^h 7				Final del crepúsculo		Salida de Luna		Puesta de Luna	
	PMG: 12 ^h 05 ^m 9				PMG: 21 ^h 18 ^m				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	h m m
0	178	32.1	+21 39.2	51	13.7	-25 53.8	50	60 N	21 08	22 26	** **	19 27 59	23 07 47	
1	193	32.1	38.8	65	43.8 ¹¹¹	-25 58.8	48	58	20 51	21 56	** **	18 55 58	23 39 49	
2	208	32.0	38.4	80	13.8 ¹¹⁰	-26 03.6	47	56	37	33	23 24	31 57	** ** *	
3	223	31.9	38.1	94	43.8 ¹¹⁰	08.3	46	54	25	15	22 35	18 12 56	** ** *	
4	238	31.9	37.7	109	13.7 ¹⁰⁹	12.9	45	52	14	21 00	22 07	17 56 55	0 01 37	
5	253	31.8	+21 37.3	123	43.6 ¹⁰⁹	-26 17.4	44	50	20 04	20 47	21 45	17 42 55	0 13 40	
6	268	31.7	+21 36.9	138	13.4 ¹⁰⁸	-26 21.8	42	45	19 44	20 20	21 07	17 13 55	0 39 42	
7	283	31.7	36.5	152	43.2 ¹⁰⁸	26.0	41	40	28	20 00	20 40	16 51 54	1 00 44	
8	298	31.6	36.1	167	13.0 ¹⁰⁸	30.1	40	35	15	19 44	19	33 53	17 45	
9	313	31.5	35.7	181	42.7 ¹⁰⁷	34.1	39	30	19 03	30	20 02	16 17 53	32 46	
10	328	31.5	35.4	196	12.4 ¹⁰⁷	38.0	37	20	18 43	19 07	19 36	15 50 53	1 58 47	
11	343	31.4	+21 35.0	210	42.0 ¹⁰⁶	-26 41.7	37	10 N	18 26	18 48	19 15	15 27 52	2 20 49	
12	358	31.3	+21 34.6	225	11.6 ¹⁰⁶	-26 45.4	34	0	18 10	18 32	18 58	15 06 51	2 40 51	
13	13	31.3	34.2	239	41.1 ¹⁰⁵	48.8	34	10 S	17 54	16	42	14 45 50	3 01 51	
14	28	31.2	33.8	254	10.6 ¹⁰⁵	52.2	32	20	37	18 00	28	14 22 50	23 53	
15	43	31.1	33.4	268	40.1 ¹⁰⁵	55.4	31	30	17	17 43	13	13 56 49	3 48 55	
16	58	31.1	33.0	283	09.5 ¹⁰⁴	-26 58.5	30	35	17 06	34	18 05	40 48	4 03 56	
17	73	31.0	+21 32.6	297	38.9 ¹⁰⁴	-27 01.5	29	40	16 53	17 23	17 57	13 22 48	4 21 56	
18	88	30.9	+21 32.2	312	08.3 ¹⁰⁴	-27 04.4	27	45	16 38	17 11	17 48	13 00 47	4 42 58	
19	103	30.9	31.8	326	37.6 ¹⁰³	07.1	26	50	20	16 57	38	12 33 45	5 09 60	
20	118	30.8	31.5	341	06.9 ¹⁰³	09.7	25	52	11	51	33	20 44	22 61	
21	133	30.8	31.1	355	36.2 ¹⁰³	12.2	23	54	16 01	43	28	12 04 44	37 62	
22	148	30.7	30.7	10	05.4 ¹⁰²	14.5	22	56	15 50	35	23	11 46 42	5 55 64	
23	163	30.6	30.3	24	34.6 ¹⁰²	16.7	21	58	38	27	17	11 25 39	6 17 66	
24	178	30.6	+21 29.9	39	03.8 ¹⁰²	-27 18.8	21	60 S	15 23	16 17	17 11	10 56 35	6 44 72	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO			
	PMG: 4 ^h 30 ^m 3		Mag: -3.9 PMG: 12 ^h 48 ^m		Mag: +1.7 PMG: 15 ^h 08 ^m		Mag: -2.7 PMG: 23 ^h 40 ^m		Mag: +0.8 PMG: 15 ^h 02 ^m			
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'		
0	292	14.0	168	12.1	132	45.7	+9 43.5	3	54.9	-22 34.7	134 02.9	+10 57.2
1	307	16.5	183	11.3	147	46.8	42.9	18	57.7	34.8	149 05.1	57.1
2	322	18.9	198	10.6	162	47.8	42.3	34	00.5	34.8	164 07.4	57.0
3	337	21.4	213	09.8	177	48.9	41.7	49	03.3	34.9	179 09.6	56.9
4	352	23.9	228	09.0	192	49.9	41.1	64	06.1	34.9	194 11.8	56.9
5	7	26.3	243	08.3	207	51.0	+9 40.6	79	08.9	-22 35.0	209 14.0	+10 56.8
6	22	28.8	258	07.5	222	52.0	+9 40.0	94	11.7	-22 35.0	224 16.2	+10 56.7
7	37	31.3	273	06.8	237	53.1	39.4	109	14.5	35.0	239 18.5	56.6
8	52	33.7	288	06.0	252	54.1	38.8	124	17.3	35.1	254 20.7	56.5
9	67	36.2	303	05.3	267	55.2	38.2	139	20.2	35.1	269 22.9	56.4
10	82	38.7	318	04.5	282	56.2	37.6	154	23.0	35.2	284 25.1	56.3
11	97	41.1	333	03.8	297	57.3	+9 37.0	169	25.8	-22 35.2	299 27.4	+10 56.2
12	112	43.6	348	03.0	312	58.3	+9 36.4	184	28.6	-22 35.3	314 29.6	+10 56.1
13	127	46.0	3	02.3	327	59.4	35.8	199	31.4	35.3	329 31.8	56.0
14	142	48.5	18	01.5	343	00.4	35.2	214	34.2	35.4	344 34.0	55.9
15	157	51.0	33	00.8	358	01.5	34.7	229	37.0	35.4	359 36.2	55.8
16	172	53.4	48	00.0	50.8	13 02.5	34.1	244	39.8	35.5	14 38.5	55.7
17	187	55.9	62	59.3	20 50.2	28 03.6	+9 33.5	259	42.6	-22 35.5	29 40.7	+10 55.6
18	202	58.4	77	58.5	+20 49.5	43 04.6	+9 32.9	274	45.4	-22 35.5	44 42.9	+10 55.5
19	218	00.8	92	57.8	48.9	58 05.7	32.3	289	48.2	35.6	59 45.1	55.4
20	233	03.3	107	57.0	48.2	73 06.7	31.7	304	51.0	35.6	74 47.3	55.3
21	248	05.8	122	56.3	47.6	88 07.8	31.1	319	53.8	35.7	89 49.6	55.2
22	263	08.2	137	55.5	46.9	103 08.8	30.5	334	56.6	35.7	104 51.8	55.1
23	278	10.7	152	54.8	46.3	118 09.9	29.9	349	59.4	35.8	119 54.0	55.0
24	293	13.2	167	54.0	+20 45.6	133 10.9	+9 29.3	5	02.2	-22 35.8	134 56.2	+10 54.9
Dif	—	-8	-6	+10	-6	+28	0	+22	-1			

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 ^h /1 12 ^h : 54 ^h /2 20 ^h : 54 ^h /3 Rº: 51 ^m										
	PMG: 12 ^h 06 ^m 0				SD: 14 ^h 7 PMG: 22 ^h 10 ^m									
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	Rº	Hora	Rº
h	°	'	°	°	'	°	'	h	m	h	m	h	m	m
0	178	30.6	+21	29.9	39	03.8	−27	18.8	60 N	1 46	3 04	20 26	33	23 54 3
1	193	30.5		29.5	53	33.0	102	20.7	58	2 17	21	19 53	37	** ** *
2	208	30.4		29.1	68	02.1	101	22.5	56	0 48	39	35	28 40	0 03 50
3	223	30.4		28.7	82	31.2	101	24.2	54	1 37	2 58	48	19 08	42 22 50
4	238	30.3		28.3	97	00.2	100	25.7	52	2 06	3 13	3 58	18 51	44 38 51
5	253	30.3	+21	27.9	111	29.3	101	−27	50	2 27	3 26	4 08	18 37	44 0 53 50
6	268	30.2	+21	27.5	125	58.3	100	−27	45	3 05	3 52	4 28	18 08	46 1 21 51
7	283	30.1		27.1	140	27.3	100	29.6	40	32	4 12	44	17 45	47 1 44 51
8	298	30.1		26.7	154	56.3	100	30.6	35	3 53	29	4 57	26 48	2 02 52
9	313	30.0		26.3	169	25.3	100	31.5	30	4 10	4 42	5 09	17 10	49 18 52
10	328	30.0		25.9	183	54.2	99	32.2	20	36	5 05	29	16 43	50 2 45 52
11	343	29.9	+21	25.5	198	23.1	99	−27	10 N	4 57	5 24	5 46	16 19	51 3 09 51
12	358	29.8	+21	25.1	212	52.0	99	−27	0	5 14	5 40	6 02	15 57	52 3 31 51
13	13	29.8		24.7	227	20.9	99	33.6	10 S	30	5 56	18	35 53	3 52 52
14	28	29.7		24.3	241	49.8	99	33.9	20	44	6 11	35	15 12	53 4 16 51
15	43	29.7		23.9	256	18.7	99	33.9	30	5 59	28	6 54	14 45	53 43 51
16	58	29.6		23.4	270	47.5	98	33.9	35	6 07	38	7 05	28 55	4 59 51
17	73	29.5	+21	23.0	285	16.4	99	−27	40	6 15	6 48	7 18	14 10	55 5 17 51
18	88	29.5	+21	22.6	299	45.2	98	−27	45	6 24	7 00	7 33	13 47	56 5 40 51
19	103	29.4		22.2	314	14.0	98	32.9	50	34	14	7 51	18 57	6 09 50
20	118	29.4		21.8	328	42.8	98	32.3	52	38	21	8 00	13 04	57 23 50
21	133	29.3		21.4	343	11.7	99	31.5	54	43	28	10	12 48	57 39 50
22	148	29.3		21.0	357	40.5	98	30.7	56	48	36	21	28 58	6 59 49
23	163	29.2		20.6	12	09.3	98	29.7	58	6 54	45	33	12 04	59 7 23 48
24	178	29.1	+21	20.2	26	38.1	98	−27	60 S	7 00	7 54	8 48	11 31	62 7 56 46

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO								
	PMG: 4 ^h 26 ^m 4		Mag: −3.9 PMG: 12 ^h 49 ^m		Mag: +1.7 PMG: 15 ^h 06 ^m		Mag: −2.7 PMG: 23 ^h 35 ^m		Mag: +0.8 PMG: 14 ^h 58 ^m								
	hG ♂	Dec	hG ♀	Dec	hG ♂	Dec	hG ♀	Dec	hG ♀	Dec							
h	°	'	°	'	°	'	°	'	°	'							
0	293	13.2	167	54.0	+20	45.6	133	10.9	+9	29.3	5 02.2	−22	35.8	134	56.2	+10	54.9
1	308	15.6	182	53.3		45.0	148	12.0		28.8	20 05.0		35.9	149	58.4		54.8
2	323	18.1	197	52.5		44.3	163	13.0		28.2	35 07.8		35.9	165	00.7		54.7
3	338	20.5	212	51.8		43.6	178	14.1		27.6	50 10.7		36.0	180	02.9		54.6
4	353	23.0	227	51.0		43.0	193	15.1		27.0	65 13.5		36.0	195	05.1		54.5
5	8	25.5	242	50.3	+20	42.3	208	16.2	+9	26.4	80 16.3	−22	36.0	210	07.3	+10	54.4
6	23	27.9	257	49.5	+20	41.7	223	17.2	+9	25.8	95 19.1	−22	36.1	225	09.5	+10	54.3
7	38	30.4	272	48.8		41.0	238	18.3		25.2	110 21.9		36.1	240	11.8		54.2
8	53	32.9	287	48.1		40.3	253	19.3		24.6	125 24.7		36.2	255	14.0		54.1
9	68	35.3	302	47.3		39.7	268	20.4		24.0	140 27.5		36.2	270	16.2		54.0
10	83	37.8	317	46.6		39.0	283	21.4		23.4	155 30.3		36.3	285	18.4		53.9
11	98	40.3	332	45.8	+20	38.4	298	22.5	+9	22.8	170 33.1	−22	36.3	300	20.6	+10	53.8
12	113	42.7	347	45.1	+20	37.7	313	23.5	+9	22.2	185 35.9	−22	36.4	315	22.9	+10	53.7
13	128	45.2	2	44.3		37.0	328	24.6		21.6	200 38.7		36.4	330	25.1		53.6
14	143	47.7	17	43.6		36.4	343	25.6		21.1	215 41.5		36.4	345	27.3		53.5
15	158	50.1	32	42.9		35.7	358	26.7		20.5	230 44.3		36.5	0	29.5		53.4
16	173	52.6	47	42.1		35.0	13	27.7		19.9	245 47.1		36.5	15	31.7		53.3
17	188	55.0	62	41.4	+20	34.3	28	28.8	+9	19.3	260 49.9	−22	36.6	30	34.0	+10	53.2
18	203	57.5	77	40.7	+20	33.7	43	29.8	+9	18.7	275 52.7	−22	36.6	45	36.2	+10	53.1
19	219	00.0	92	39.9		33.0	58	30.8		18.1	290 55.5		36.7	60	38.4		53.0
20	234	02.4	107	39.2		32.3	73	31.9		17.5	305 58.3		36.7	75	40.6		52.9
21	249	04.9	122	38.4		31.7	88	32.9		16.9	321 01.1		36.8	90	42.8		52.9
22	264	07.4	137	37.7		31.0	103	34.0		16.3	336 03.9		36.8	105	45.1		52.8
23	279	09.8	152	37.0		30.3	118	35.0		15.7	351 06.7		36.8	120	47.3		52.7
24	294	12.3	167	36.2	+20	29.6	133	36.1	+9	15.1	6 09.5	−22	36.9	135	49.5	+10	52.6
Dif	—		−7	−7			+10	−6			+28	0		+22	−1		

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 ^h 3 12 ^h : 54 ^h 4 20 ^h : 54 ^h 5 R°: 51 ^m														
	PMG: 12 ^h 06 ^m 1				SD: 14 ^h 8 PMG: 23 ^h 01 ^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	29.1	+21	20.2	26	38.1	-27	28.5	60 N	21 05	22 20	** **	20 59 15		23 57 **				
1	193	29.1		19.8	41	06.9	98	27.2	58	20 48	21 51	** **	30 22		0 28 69				
2	208	29.0		19.4	55	35.7	98	25.8	56	34	29	23 13	20 08 27		0 53 66				
3	223	29.0		18.9	70	04.5	98	24.3	54	22	21 12	22 30	19 50 30		1 12 65				
4	238	28.9		18.5	84	33.3	98	22.6	52	12	20 57	22 03	35 32		29 63				
5	253	28.9	+21	18.1	99	02.1	98	-27 20.8	50	20 03	20 44	21 42	19 21 35		1 43 62				
6	268	28.8	+21	17.7	113	30.9	98	-27 18.8	45	19 43	20 19	21 05	18 54 38		2 12 60				
7	283	28.7		17.3	127	59.8	99	16.7	40	27	19 59	20 38	32 41		35 58				
8	298	28.7		16.9	142	28.6	98	14.5	35	14	43	18	18 14 43		2 54 57				
9	313	28.6		16.4	156	57.4	98	12.1	30	19 02	29	20 01	17 59 44		3 10 56				
10	328	28.6		16.0	171	26.3	99	09.6	20	18 42	19 07	19 35	33 46		3 37 54				
11	343	28.5	+21	15.6	185	55.1	98	-27 07.0	10 N	18 25	18 48	19 15	17 10 49		4 00 53				
12	358	28.5	+21	15.2	200	24.0	99	-27 04.2	0	18 10	18 32	18 58	16 49 51		4 22 52				
13	13	28.4		14.8	214	52.9	99	-27 01.3	10 S	17 54	17	42	28 52		4 44 50				
14	28	28.4		14.4	229	21.8	99	-26 58.3	20	37	18 01	28	16 05 55		5 07 49				
15	43	28.3		13.9	243	50.7	99	55.1	30	19	17 44	14	15 38 58		34 47				
16	58	28.3		13.5	258	19.7	100	51.8	35	17 08	35	18 06	23 58		5 50 45				
17	73	28.2	+21	13.1	272	48.6	99	-26 48.4	40	16 55	17 25	17 58	15 05 60		6 08 44				
18	88	28.2	+21	12.7	287	17.6	100	-26 44.8	45	16 40	17 13	17 49	14 43 62		6 31 42				
19	103	28.1		12.2	301	46.6	100	41.1	50	22	16 59	40	15 66		6 59 39				
20	118	28.0		11.8	316	15.6	100	37.3	52	14	53	35	14 01 68		7 13 38				
21	133	28.0		11.4	330	44.6	100	33.3	40	54	16 04	46	30		29 36				
22	148	27.9		11.0	345	13.7	101	29.2	56	15 53	38	25	26 73		7 48 33				
23	163	27.9		10.5	359	42.7	100	25.0	58	41	29	20	13 03 77		8 11 29				
24	178	27.8	+21	10.1	14	11.8	101	-26 20.6	60 S	15 26	16 20	17 14	12 33 83		8 42 22				

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 4 ^h 22 ^m 5		Mag: -3.9 PMG: 12 ^h 50 ^m			Mag: +1.7 PMG: 15 ^h 05 ^m			Mag: -2.7 PMG: 23 ^h 31 ^m			Mag: +0.8 PMG: 14 ^h 54 ^m				
	hG ♈		hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec		
h	°	'	°	'	°	°	'	°	'	°	'	°	'	°	'	
0	294	12.3	167	36.2	+20	29.6	133	36.1	+9	15.1	6	09.5	-22	36.9	135	49.5
1	309	14.8	182	35.5		28.9	148	37.1		14.5	21	12.3		36.9	150	51.7
2	324	17.2	197	34.8		28.3	163	38.2		13.9	36	15.2		37.0	165	53.9
3	339	19.7	212	34.0		27.6	178	39.2		13.3	51	18.0		37.0	180	56.1
4	354	22.2	227	33.3		26.9	193	40.3		12.7	66	20.8		37.1	195	58.4
5	9	24.6	242	32.6	+20	26.2	208	41.3	+9	12.2	81	23.6	-22	37.1	211	00.6
6	24	27.1	257	31.8	+20	25.5	223	42.4	+9	11.6	96	26.4	-22	37.2	226	02.8
7	39	29.5	272	31.1		24.9	238	43.4		11.0	111	29.2		37.2	241	05.0
8	54	32.0	287	30.4		24.2	253	44.5		10.4	126	32.0		37.2	256	07.2
9	69	34.5	302	29.6		23.5	268	45.5		09.8	141	34.8		37.3	271	09.5
10	84	36.9	317	28.9		22.8	283	46.6		09.2	156	37.6		37.3	286	11.7
11	99	39.4	332	28.2	+20	22.1	298	47.6	+9	08.6	171	40.4	-22	37.4	301	13.9
12	114	41.9	347	27.4	+20	21.4	313	48.7	+9	08.0	186	43.2	-22	37.4	316	16.1
13	129	44.3	2	26.7		20.7	328	49.7		07.4	201	46.0		37.5	331	18.3
14	144	46.8	17	26.0		20.0	343	50.8		06.8	216	48.8		37.5	346	20.5
15	159	49.3	32	25.3		19.3	358	51.8		06.2	231	51.6		37.6	1	22.8
16	174	51.7	47	24.5		18.7	373	52.9		05.6	246	54.4		37.6	16	25.0
17	189	54.2	62	23.8	+20	18.0	388	53.9	+9	05.0	261	57.2	-22	37.6	31	27.2
18	204	56.7	77	23.1	+20	17.3	403	55.0	+9	04.4	277	00.0	-22	37.7	46	29.4
19	219	59.1	92	22.3		16.6	418	56.0		03.8	292	02.8		37.7	61	31.6
20	235	01.6	107	21.6		15.9	433	57.1		03.2	307	05.6		37.8	76	33.8
21	250	04.0	122	20.9		15.2	448	58.1		02.6	322	08.4		37.8	91	36.1
22	265	06.5	137	20.2		14.5	463	59.2		02.0	337	11.2		37.9	106	38.3
23	280	09.0	152	19.4		13.8	478	00.2		01.4	352	14.0		37.9	121	40.5
24	295	11.4	167	18.7	+20	13.1	493	01.3	+9	00.8	7	16.8	-22	38.0	136	42.7

Dif	—	-7	-7	+10	-6	+28	0	+22	-

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7				Edad: 13 ^d 9 PHE { 4 ^h : 54 ^m 6 12 ^h : 54 ^m 7 20 ^h : 54 ^m 8 Rº: 48 ^m												
	PMG: 12 ^h 06 ^m 2				SD: 14 ^h 9 PMG: 23 ^h 52 ^m												
	hG ☉		Dec		hG ☾ Dif		Dec Dif			Náutico	Civil		Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m		h m	m	
0	178	27.8	+21	10.1	14	11.8	-26	20.6	45	60 N	*** **	1 52	3 08	21 14	7	1 09	90
1	193	27.8		09.7	28	41.0 ¹⁰²		16.1	45	58	*** **	2 21	24	20 52	14	37	83
2	208	27.7		09.3	43	10.1 ¹⁰¹		11.5	46	56	1 00	2 43	38	35	17	1 59	78
3	223	27.7		08.8	57	39.3 ¹⁰²		06.7	48	54	1 43	3 01	3 50	20	21	2	17 74
4	238	27.6		08.4	72	08.5 ¹⁰²	-26	01.8	49	52	2 10	16	4 01	20 07	24	32	71
5	253	27.6	+21	08.0	86	37.8 ¹⁰³	-25	56.8	50	50	2 31	3 28	4 10	19 56	26	2 45	69
6	268	27.5	+21	07.5	101	07.0 ¹⁰²	-25	51.7	51	45	3 08	3 54	4 30	19 32	31	3 12	65
7	283	27.5		07.1	115	36.3 ¹⁰³		46.4	53	40	34	4 14	46	19 13	34	33	63
8	298	27.4		06.7	130	05.7 ¹⁰⁴		41.0	54	35	3 55	30	4 59	18 57	37	3 51	60
9	313	27.4		06.3	144	35.1 ¹⁰⁴		35.5	55	30	4 11	4 44	5 10	18 40	39	4 06	58
10	328	27.3		05.8	159	04.5 ¹⁰⁴		29.8	57	20	37	5 06	30	18 19	44	31	55
11	343	27.3	+21	05.4	173	33.9 ¹⁰⁴	-25	24.1	57	10 N	4 58	5 24	5 47	17 59	46	4 53	53
12	358	27.2	+21	05.0	188	03.4 ¹⁰⁵	-25	18.2	59	0	5 15	5 40	6 03	17 40	49	5 14	50
13	13	27.2		04.5	202	32.9 ¹⁰⁵		12.1	61	10 S	30	5 56	18	20	53	34	47
14	28	27.1		04.1	217	02.4 ¹⁰⁵	-25	06.0	61	20	44	6 11	35	17 00	55	5 56	45
15	43	27.1		03.7	231	32.0 ¹⁰⁶	-24	59.7	63	30	5 58	28	6 53	16 36	59	6 21	41
16	58	27.0		03.2	246	01.6 ¹⁰⁶		53.3	64	35	6 06	37	7 04	21	62	35	40
17	73	27.0	+21	02.8	260	31.3 ¹⁰⁷	-24	46.7	66	40	6 14	6 47	7 17	16 05	64	6 52	38
18	88	27.0	+21	02.3	275	01.0 ¹⁰⁷	-24	40.1	66	45	6 22	6 59	7 32	15 45	68	7 13	34
19	103	26.9		01.9	289	30.7 ¹⁰⁷		33.3	68	50	32	7 13	50	21	72	38	30
20	118	26.9		01.5	304	00.5 ¹⁰⁸		26.4	69	52	37	19	7 58	15 09	74	7 51	27
21	133	26.8		01.0	318	30.4 ¹⁰⁹		19.4	70	54	41	26	8 07	14 55	77	8 05	25
22	148	26.8		00.6	333	00.2 ¹⁰⁸		12.3	71	56	46	34	18	39	81	21	22
23	163	26.7	+21	00.1	347	30.1 ¹⁰⁹	-24	05.0	73	58	52	42	30	14 20	85	8 40	18
24	178	26.7	+20	59.7	2	00.1 ¹¹⁰	-23	57.6	74	60 S	6 58	7 52	8 45	13 56	92	9 04	11

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 4 ^h 18 ^m 5		Mag: -3.9 PMG: 12 ^h 51 ^m		Mag: +1.7 PMG: 15 ^h 03 ^m		Mag: -2.7 PMG: 23 ^h 27 ^m		Mag: +0.8 PMG: 14 ^h 51 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	295	11.4	167	18.7	+20	13.1	134	01.3	+9	00.8	7	16.8	-22	38.0	136	42.7	+10	50.2
1	310	13.9	182	18.0		12.4	149	02.3	+9	00.2	22	19.6		38.0	151	44.9		50.1
2	325	16.4	197	17.3		11.7	164	03.4	+8	59.6	37	22.4		38.0	166	47.1		50.0
3	340	18.8	212	16.6		11.0	179	04.4		59.0	52	25.2		38.1	181	49.4		49.9
4	355	21.3	227	15.8		10.3	194	05.5		58.4	67	28.0		38.1	196	51.6		49.8
5	10	23.8	242	15.1	+20	09.5	209	06.5	+8	57.9	82	30.8	-22	38.2	211	53.8	+10	49.7
6	25	26.2	257	14.4	+20	08.8	224	07.6	+8	57.3	97	33.6	-22	38.2	226	56.0	+10	49.6
7	40	28.7	272	13.7		08.1	239	08.6		56.7	112	36.4		38.3	241	58.2		49.5
8	55	31.2	287	12.9		07.4	254	09.7		56.1	127	39.2		38.3	257	00.4		49.4
9	70	33.6	302	12.2		06.7	269	10.7		55.5	142	42.0		38.4	272	02.7		49.3
10	85	36.1	317	11.5		06.0	284	11.8		54.9	157	44.8		38.4	287	04.9		49.2
11	100	38.5	332	10.8	+20	05.3	299	12.8	+8	54.3	172	47.6	-22	38.4	302	07.1	+10	49.1
12	115	41.0	347	10.1	+20	04.6	314	13.8	+8	53.7	187	50.4	-22	38.5	317	09.3	+10	49.0
13	130	43.5	2	09.4		03.9	329	14.9		53.1	202	53.2		38.5	332	11.5		48.9
14	145	45.9	17	08.6		03.1	344	15.9		52.5	217	56.0		38.6	347	13.7		48.8
15	160	48.4	32	07.9		02.4	359	17.0		51.9	232	58.8		38.6	2	15.9		48.7
16	175	50.9	47	07.2		01.7	14	18.0		51.3	248	01.6		38.7	17	18.2		48.6
17	190	53.3	62	06.5	+20	01.0	29	19.1	+8	50.7	263	04.4	-22	38.7	32	20.4	+10	48.5
18	205	55.8	77	05.8	+20	00.3	44	20.1	+8	50.1	278	07.2	-22	38.7	47	22.6	+10	48.4
19	220	58.3	92	05.1	+19	59.6	59	21.2		49.5	293	10.0		38.8	62	24.8		48.3
20	236	00.7	107	04.3		58.8	74	22.2		48.9	308	12.8		38.8	77	27.0		48.2
21	251	03.2	122	03.6		58.1	89	23.3		48.3	323	15.6		38.9	92	29.2		48.1
22	266	05.6	137	02.9		57.4	104	24.3		47.7	338	18.4		38.9	107	31.5		48.0
23	281	08.1	152	02.2		56.7	119	25.4		47.1	353	21.2		39.0	122	33.7		47.9
24	296	10.6	167	01.5	+19	55.9	134	26.4	+8	46.5	8	24.0	-22	39.0	137	35.9	+10	47.8
Dif	—		-7		-7		+10		-6		+28		0		+22		-	

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 14 ^d 9	PHE {	4 ^h : 54 ^h /9 12 ^h : 55 ^h /1 20 ^h : 55 ^h /2			Final del crepúsculo			Salida de Luna		Puesta de Luna	
	PMG: 12 ^h 06 ^m 3								R°: ***						
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	178	26.7	+20 59.7	2	00.1	-23 57.6	75	60 N	21 01	22 14	*** **	21 21 3	2 39 94		
1	193	26.6	59.3	16	30.1 ¹¹⁰	50.1	75	58	20 45	21 47	*** **	21 06 8	3 00 87		
2	208	26.6	58.8	31	00.1 ¹¹⁰	42.5	76	56	32	26	23 03	20 52 13	17 82		
3	223	26.5	58.4	45	30.2 ¹¹¹	34.8	77	54	20	21 09	22 24	41 15	31 79		
4	238	26.5	57.9	60	00.4 ¹¹²	27.0	78	52	10	20 54	21 58	31 18	43 77		
5	253	26.4	+20 57.5	74	30.5 ¹¹¹	-23 19.0	80	50	20 00	20 42	21 39	20 22 21	3 54 74		
6	268	26.4	+20 57.0	89	00.8 ¹¹³	-23 10.9	81	45	19 41	20 17	21 02	20 03 25	4 17 69		
7	283	26.4	56.6	103	31.0 ¹¹²	-23 02.7	82	40	26	19 57	20 37	19 47 30	36 64		
8	298	26.3	56.2	118	01.4 ¹¹⁴	-22 54.4	83	35	13	41	17	34 32	4 51 62		
9	313	26.3	55.7	132	31.7 ¹¹³	46.0	84	30	19 01	28	20 00	22 36	5 04 59		
10	328	26.2	55.3	147	02.1 ¹¹⁴	37.5	85	20	18 42	19 06	19 34	19 03 39	26 55		
11	343	26.2	+20 54.8	161	32.6 ¹¹⁵	-22 28.8	87	10 N	18 25	18 48	19 14	18 45 44	5 46 51		
12	358	26.1	+20 54.4	176	03.1 ¹¹⁵	-22 20.1	87	0	18 10	18 32	18 58	18 29 47	6 04 48		
13	13	26.1	53.9	190	33.7 ¹¹⁶	11.2	89	10 S	17 54	17	43	18 13 50	21 45		
14	28	26.1	53.5	205	04.3 ¹¹⁶	-22 02.3	89	20	38	18 02	29	17 55 55	6 41 41		
15	43	26.0	53.0	219	34.9 ¹¹⁶	-21 53.2	91	30	20	17 45	15	35 59	7 02 37		
16	58	26.0	52.6	234	05.6 ¹¹⁷	44.0	92	35	17 09	36	07	23 62	15 35		
17	73	25.9	+20 52.1	248	36.4 ¹¹⁸	-21 34.7	93	40	16 57	17 26	18 00	17 09 65	7 30 31		
18	88	25.9	+20 51.7	263	07.2 ¹¹⁸	-21 25.3	94	45	16 42	17 15	17 51	16 53 69	7 47 28		
19	103	25.8	51.2	277	38.1 ¹¹⁹	15.8	95	50	24	17 01	41	33 74	8 08 23		
20	118	25.8	50.8	292	09.0 ¹¹⁹	-21 06.2	96	52	16	16 55	37	23 77	18 21		
21	133	25.8	50.3	306	39.9 ¹¹⁹	-20 56.5	97	54	16 07	48	33	12 80	30 18		
22	148	25.7	49.8	321	10.9 ¹²⁰	46.7	98	56	15 56	41	28	16 00 83	43 14		
23	163	25.7	49.4	335	42.0 ¹²¹	36.8	99	58	44	32	22	15 45 88	8 58 10		
24	178	25.6	+20 48.9	350	13.1 ¹²¹	-20 26.8	100	60 S	15 30	16 23	17 17	15 28 93	9 15 5		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 4 ^h 14 ^m 6		Mag: -3.9 PMG: 12 ^h 53 ^m		Mag: +1.7 PMG: 15 ^h 01 ^m		Mag: -2.7 PMG: 23 ^h 22 ^m		Mag: +0.8 PMG: 14 ^h 47 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	296	10.6	167 01.5	+19 55.9	134 26.4	+8 46.5	8 24.0	-22 39.0	137 35.9	+10 47.8
1	311	13.0	182 00.8	55.2	149 27.5	45.9	23 26.8	39.1	152 38.1	47.7
2	326	15.5	197 00.1	54.5	164 28.5	45.3	38 29.6	39.1	167 40.3	47.6
3	341	18.0	211 59.4	53.8	179 29.6	44.7	53 32.4	39.1	182 42.5	47.5
4	356	20.4	226 58.7	53.0	194 30.6	44.1	68 35.2	39.2	197 44.7	47.4
5	11	22.9	241 57.9	+19 52.3	209 31.7	+8 43.5	83 38.0	-22 39.2	212 47.0	+10 47.3
6	26	25.4	256 57.2	+19 51.6	224 32.7	+8 42.9	98 40.8	-22 39.3	227 49.2	+10 47.2
7	41	27.8	271 56.5	50.8	239 33.8	42.3	113 43.6	39.3	242 51.4	47.1
8	56	30.3	286 55.8	50.1	254 34.8	41.7	128 46.4	39.4	257 53.6	47.0
9	71	32.8	301 55.1	49.4	269 35.9	41.1	143 49.2	39.4	272 55.8	46.9
10	86	35.2	316 54.4	48.6	284 36.9	40.5	158 52.0	39.4	287 58.0	46.8
11	101	37.7	331 53.7	+19 47.9	299 38.0	+8 39.9	173 54.8	-22 39.5	303 00.2	+10 46.7
12	116	40.1	346 53.0	+19 47.2	314 39.0	+8 39.3	188 57.6	-22 39.5	318 02.5	+10 46.6
13	131	42.6	1 52.3	46.4	329 40.1	38.7	204 00.4	39.6	333 04.7	46.5
14	146	45.1	16 51.6	45.7	344 41.1	38.1	219 03.2	39.6	348 06.9	46.4
15	161	47.5	31 50.9	44.9	359 42.2	37.5	234 06.0	39.7	3 09.1	46.3
16	176	50.0	46 50.2	44.2	14 43.2	36.9	249 08.8	39.7	18 11.3	46.2
17	191	52.5	61 49.5	+19 43.5	29 44.3	+8 36.3	264 11.6	-22 39.7	33 13.5	+10 46.1
18	206	54.9	76 48.8	+19 42.7	44 45.3	+8 35.7	279 14.4	-22 39.8	48 15.7	+10 46.0
19	221	57.4	91 48.1	42.0	59 46.4	35.1	294 17.2	39.8	63 17.9	45.9
20	236	59.9	106 47.4	41.2	74 47.4	34.5	309 20.0	39.9	78 20.2	45.8
21	252	02.3	121 46.7	40.5	89 48.4	33.9	324 22.8	39.9	93 22.4	45.7
22	267	04.8	136 46.0	39.7	104 49.5	33.3	339 25.6	40.0	108 24.6	45.6
23	282	07.3	151 45.3	39.0	119 50.5	32.7	354 28.4	40.0	123 26.8	45.5
24	297	09.7	166 44.6	+19 38.2	134 51.6	+8 32.1	9 31.2	-22 40.0	138 29.0	+10 45.4
Dif	—		-7	-7	+10	-6	+28	0	+22	-1

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 15 ^d 9	PHE { 4 ^h : 55 ^m 3 12 ^h : 55 ^m 5 20 ^h : 55 ^m 6	SD: 15 ^h 1		R°: 47 ^m	R°		R°			
	PMG: 12 ^h 06 ^m 3					PMG: 0 ^h 40 ^m			R°		R°			
	hG ☉		Dec	hG ☾ Dif		Dec Dif		Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	h m	h m	h m	h m m		h m m	
0	178	25.6	+20 48.9	350	13.1	-20 26.8	60 N	** **	1 59	3 12	21 24	2	4 13	92
1	193	25.6	48.5	4	44.2 ¹²¹	16.7 ¹⁰¹	58	** **	2 26	28	14	5	27	88
2	208	25.6	48.0	19	15.4 ¹²²	-20 06.4 ¹⁰³	56	1 10	2 47	41	21 05	9	39	84
3	223	25.5	47.6	33	46.6 ¹²²	-19 56.1 ¹⁰³	54	1 49	3 04	3 53	20 56	12	4 50	80
4	238	25.5	47.1	48	17.9 ¹²³	45.7 ¹⁰⁴	52	2 15	19	4 03	49	15	5 00	77
5	253	25.4	+20 46.7	62	49.3 ¹²⁴	-19 35.2 ¹⁰⁵	50	2 34	3 31	4 12	20 43	16	5 08	75
6	268	25.4	+20 46.2	77	20.7 ¹²⁴	-19 24.6 ¹⁰⁶	45	3 10	3 56	4 32	20 28	22	5 26	69
7	283	25.4	45.7	91	52.1 ¹²⁴	13.9 ¹⁰⁷	40	36	4 16	4 47	17	25	40	66
8	298	25.3	45.3	106	23.6 ¹²⁵	-19 03.1 ¹⁰⁸	35	3 56	31	5 00	20 06	29	5 53	62
9	313	25.3	44.8	120	55.1 ¹²⁵	-18 52.3 ¹⁰⁸	30	4 13	4 45	11	19 58	31	6 03	59
10	328	25.3	44.3	135	26.7 ¹²⁶	41.3 ¹¹⁰	20	38	5 07	31	42	37	21	55
11	343	25.2	+20 43.9	149	58.3 ¹²⁶	-18 30.2 ¹¹¹	10 N	4 58	5 25	5 47	19 29	41	6 37	50
12	358	25.2	+20 43.4	164	30.0 ¹²⁷	-18 19.1 ¹¹¹	0	5 15	5 41	6 03	19 16	45	6 52	46
13	13	25.1	43.0	179	01.7 ¹²⁷	-18 07.8 ¹¹³	10 S	30	5 56	18	19 03	50	7 06	43
14	28	25.1	42.5	193	33.5 ¹²⁸	-17 56.5 ¹¹³	20	44	6 11	34	18 50	54	22	38
15	43	25.1	42.0	208	05.3 ¹²⁸	45.1 ¹¹⁴	30	5 58	27	6 53	34	59	39	34
16	58	25.0	41.6	222	37.2 ¹²⁹	33.6 ¹¹⁵	35	6 05	36	7 03	25	62	7 50	30
17	73	25.0	+20 41.1	237	09.1 ¹²⁹	-17 22.0 ¹¹⁶	40	6 13	6 46	7 16	18 14	66	8 01	27
18	88	25.0	+20 40.6	251	41.1 ¹³⁰	-17 10.3 ¹¹⁷	45	6 21	6 57	7 30	18 02	70	8 15	23
19	103	24.9	40.2	266	13.1 ¹³⁰	-16 58.5 ¹¹⁸	50	31	7 11	48	17 47	75	31	19
20	118	24.9	39.7	280	45.1 ¹³⁰	46.7 ¹¹⁸	52	35	17	7 56	40	77	39	16
21	133	24.8	39.2	295	17.2 ¹³¹	34.8 ¹¹⁹	54	39	24	8 05	32	80	48	13
22	148	24.8	38.8	309	49.3 ¹³¹	22.8 ¹²⁰	56	44	31	15	23	83	8 57	11
23	163	24.8	38.3	324	21.5 ¹³²	-16 10.7 ¹²¹	58	49	40	27	13	87	9 08	7
24	178	24.7	+20 37.8	338	53.7 ¹³²	-15 58.5 ¹²²	60 S	6 55	7 49	8 41	17 01	92	9 20	3

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 4 ^h 10 ^m 7		Mag: -3.9 PMG: 12 ^h 54 ^m		Mag: +1.7 PMG: 15 ^h 00 ^m		Mag: -2.7 PMG: 23 ^h 18 ^m		Mag: +0.8 PMG: 14 ^h 44 ^m					
	hG ♈		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec					
h	°	'	°	'	°	'	°	'	°	'				
0	297	09.7	166	44.6	+19 38.2	134	51.6	+8 32.1	9	31.2	-22 40.0	138	29.0	+10 45.4
1	312	12.2	181	43.9	37.5	149	52.6	31.5	24	34.0	40.1	153	31.2	45.3
2	327	14.6	196	43.2	36.8	164	53.7	30.9	39	36.8	40.1	168	33.4	45.2
3	342	17.1	211	42.5	36.0	179	54.7	30.3	54	39.6	40.2	183	35.6	45.1
4	357	19.6	226	41.8	35.2	194	55.8	29.7	69	42.4	40.2	198	37.9	45.0
5	12	22.0	241	41.1	+19 34.5	209	56.8	+8 29.1	84	45.2	-22 40.3	213	40.1	+10 44.9
6	27	24.5	256	40.4	+19 33.7	224	57.9	+8 28.5	99	48.0	-22 40.3	228	42.3	+10 44.8
7	42	27.0	271	39.7	33.0	239	58.9	27.9	114	50.8	40.3	243	44.5	44.7
8	57	29.4	286	39.0	32.2	255	00.0	27.3	129	53.6	40.4	258	46.7	44.6
9	72	31.9	301	38.3	31.5	270	01.0	26.7	144	56.4	40.4	273	48.9	44.5
10	87	34.4	316	37.6	30.7	285	02.1	26.1	159	59.2	40.5	288	51.1	44.4
11	102	36.8	331	36.9	+19 30.0	300	03.1	+8 25.5	175	02.0	-22 40.5	303	53.3	+10 44.3
12	117	39.3	346	36.2	+19 29.2	315	04.2	+8 24.9	190	04.8	-22 40.6	318	55.6	+10 44.2
13	132	41.8	1	35.5	28.4	330	05.2	24.2	205	07.6	40.6	333	57.8	44.1
14	147	44.2	16	34.8	27.7	345	06.3	23.6	220	10.4	40.6	349	00.0	44.0
15	162	46.7	31	34.1	26.9	0	07.3	23.0	235	13.2	40.7	4	02.2	43.9
16	177	49.1	46	33.4	26.1	15	08.4	22.4	250	16.0	40.7	19	04.4	43.8
17	192	51.6	61	32.7	+19 25.4	30	09.4	+8 21.8	265	18.8	-22 40.8	34	06.6	+10 43.7
18	207	54.1	76	32.0	+19 24.6	45	10.5	+8 21.2	280	21.6	-22 40.8	49	08.8	+10 43.6
19	222	56.5	91	31.4	23.9	60	11.5	20.6	295	24.4	40.9	64	11.0	43.5
20	237	59.0	106	30.7	23.1	75	12.6	20.0	310	27.2	40.9	79	13.2	43.4
21	253	01.5	121	30.0	22.3	90	13.6	19.4	325	30.0	40.9	94	15.5	43.3
22	268	03.9	136	29.3	21.5	105	14.7	18.8	340	32.8	41.0	109	17.7	43.2
23	283	06.4	151	28.6	20.8	120	15.7	18.2	355	35.6	41.0	124	19.9	43.1
24	298	08.9	166	27.9	+19 20.0	135	16.7	+8 17.6	10	38.4	-22 41.1	139	22.1	+10 43.0
Dif	—		-7		-8	+10		-6	+28		0	+22		-1

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 16 ^d 9 PHE { 4 ^h : 55 ^m /8 12 ^h : 56 ^m /0 20 ^h : 56 ^m /1	Dec	Dif			Final del crepúsculo			Hora	R°	Hora	R°
	PMG: 12 ^h 06 ^m 4								Civil	Náutico					
	hG ☉	Dec		hG ☾	Dif	Dec	Dif								
h	°	'	°	°	'	°	'	h m	h m	h m	h m m	h m m	h m m	h m m	h m m
0	178	24.7	+20 37.8	338	53.7	-15 58.5	60 N	20 57	22 08	** **	21 26 1	5 45 91			
1	193	24.7	37.4	353	26.0 ¹³³	46.3 ¹²²	58	42	21 42	** **	19 5	5 55 86			
2	208	24.7	36.9	7	58.3 ¹³³	34.0 ¹²³	56	29	22	22 53	14 7	6 03 83			
3	223	24.6	36.4	22	30.6 ¹³³	21.6 ¹²⁴	54	17	21 05	22 18	08 10	10 80			
4	238	24.6	35.9	37	03.0 ¹³⁴	-15 09.1 ¹²⁵	52	20 07	20 51	21 54	21 04 12	17 77			
5	253	24.6	+20 35.5	51	35.4 ¹³⁴	-14 56.5 ¹²⁶	50	19 58	20 39	21 35	20 59 15	6 23 75			
6	268	24.5	+20 35.0	66	07.9 ¹³⁵	-14 43.9 ¹²⁶	45	19 40	20 15	21 00	20 50 19	6 35 70			
7	283	24.5	34.5	80	40.4 ¹³⁵	31.2 ¹²⁷	40	24	19 56	20 35	42 24	46 65			
8	298	24.5	34.0	95	12.9 ¹³⁵	18.5 ¹²⁷	35	12	40	20 15	35 27	6 55 62			
9	313	24.4	33.6	109	45.5 ¹³⁶	-14 05.6 ¹²⁹	30	19 00	27	19 59	29 30	7 02 59			
10	328	24.4	33.1	124	18.1 ¹³⁶	-13 52.7 ¹²⁹	20	18 41	19 05	34	19 35	16 53			
11	343	24.4	+20 32.6	138	50.8 ¹³⁷	-13 39.7 ¹³⁰	10 N	18 25	18 48	19 14	20 10 40	7 27 49			
12	358	24.3	+20 32.1	153	23.5 ¹³⁷	-13 26.7 ¹³⁰	0	18 10	18 32	18 58	20 01 45	7 38 45			
13	13	24.3	31.7	167	56.2 ¹³⁷	13.6 ¹³¹	10 S	17 55	17	43	19 53 48	7 49 40			
14	28	24.3	31.2	182	28.9 ¹³⁷	-13 00.4 ¹³²	20	39	18 02	29	44 53	8 00 36			
15	43	24.3	30.7	197	01.7 ¹³⁸	-12 47.2 ¹³²	30	21	17 46	16	33 59	13 30			
16	58	24.2	30.2	211	34.5 ¹³⁸	33.9 ¹³³	35	17 10	38	09	27 62	20 28			
17	73	24.2	+20 29.7	226	07.4 ¹³⁹	-12 20.5 ¹³⁴	40	16 58	17 28	18 01	19 20 65	8 28 25			
18	88	24.2	+20 29.3	240	40.3 ¹³⁹	-12 07.1 ¹³⁴	45	16 44	17 17	17 53	19 12 69	8 38 21			
19	103	24.1	28.8	255	13.2 ¹³⁹	-11 53.6 ¹³⁵	50	27	17 03	43	19 02 75	50 15			
20	118	24.1	28.3	269	46.1 ¹³⁹	40.0 ¹³⁶	52	19	16 57	39	18 57 77	8 55 13			
21	133	24.1	27.8	284	19.1 ¹⁴⁰	26.4 ¹³⁶	54	16 09	51	35	52 80	9 01 11			
22	148	24.0	27.3	298	52.1 ¹⁴⁰	-11 12.7 ¹³⁷	56	15 59	43	30	46 83	08 8			
23	163	24.0	26.8	313	25.1 ¹⁴⁰	-10 59.0 ¹³⁷	58	48	35	25	40 86	15 5			
24	178	24.0	+20 26.4	327	58.2 ¹⁴¹	-10 45.2 ¹³⁸	60 S	15 34	16 26	17 19	18 33 90	9 23 1			

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 4 ^h 06 ^m 7		Mag: -3.9 PMG: 12 ^h 55 ^m		Mag: +1.7 PMG: 14 ^h 58 ^m		Mag: -2.7 PMG: 23 ^h 13 ^m		Mag: +0.8 PMG: 14 ^h 40 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	298	08.9	166	27.9	+19 20.0	135	16.7	+8 17.6	10	38.4	-22 41.1	139	22.1	+10 43.0
1	313	11.3	181	27.2	19.2	150	17.8	17.0	25	41.2	41.1	154	24.3	42.9
2	328	13.8	196	26.5	18.5	165	18.8	16.4	40	44.0	41.2	169	26.5	42.8
3	343	16.2	211	25.8	17.7	180	19.9	15.8	55	46.7	41.2	184	28.7	42.7
4	358	18.7	226	25.2	16.9	195	20.9	15.2	70	49.5	41.2	199	30.9	42.6
5	13	21.2	241	24.5	+19 16.1	210	22.0	+8 14.6	85	52.3	-22 41.3	214	33.1	+10 42.5
6	28	23.6	256	23.8	+19 15.4	225	23.0	+8 14.0	100	55.1	-22 41.3	229	35.4	+10 42.4
7	43	26.1	271	23.1	14.6	240	24.1	13.4	115	57.9	41.4	244	37.6	42.3
8	58	28.6	286	22.4	13.8	255	25.1	12.8	131	00.7	41.4	259	39.8	42.2
9	73	31.0	301	21.7	13.0	270	26.2	12.2	146	03.5	41.5	274	42.0	42.1
10	88	33.5	316	21.1	12.2	285	27.2	11.6	161	06.3	41.5	289	44.2	42.0
11	103	36.0	331	20.4	+19 11.5	300	28.3	+8 11.0	176	09.1	-22 41.5	304	46.4	+10 41.9
12	118	38.4	346	19.7	+19 10.7	315	29.3	+8 10.3	191	11.9	-22 41.6	319	48.6	+10 41.8
13	133	40.9	1	19.0	09.9	330	30.4	09.7	206	14.7	41.6	334	50.8	41.7
14	148	43.4	16	18.3	09.1	345	31.4	09.1	221	17.5	41.7	349	53.0	41.5
15	163	45.8	31	17.6	08.3	0	32.5	08.5	236	20.3	41.7	4	55.2	41.4
16	178	48.3	46	17.0	07.5	15	33.5	07.9	251	23.1	41.7	19	57.5	41.3
17	193	50.7	61	16.3	+19 06.8	30	34.6	+8 07.3	266	25.9	-22 41.8	34	59.7	+10 41.2
18	208	53.2	76	15.6	+19 06.0	45	35.6	+8 06.7	281	28.7	-22 41.8	50	01.9	+10 41.1
19	223	55.7	91	14.9	05.2	60	36.7	06.1	296	31.5	41.9	65	04.1	41.0
20	238	58.1	106	14.3	04.4	75	37.7	05.5	311	34.3	41.9	80	06.3	40.9
21	254	00.6	121	13.6	03.6	90	38.8	04.9	326	37.1	42.0	95	08.5	40.8
22	269	03.1	136	12.9	02.8	105	39.8	04.3	341	39.8	42.0	110	10.7	40.7
23	284	05.5	151	12.2	02.0	120	40.8	03.7	356	42.6	42.0	125	12.9	40.6
24	299	08.0	166	11.5	+19 01.2	135	41.9	+8 03.1	11	45.4	-22 42.1	140	15.1	+10 40.5
Dif	—		-7 -8		+10 -6		+28 -0		+22 -1					

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'7 PMG: 12 ^h 06 ^m 4				Edad: 17 ^d 9 PHE { 4 ^h : 56'3 12 ^h : 56'5 20 ^h : 56'6 SD: 15'3 PMG: 2 ^h 12 ^m R°: 44 ^m												
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	24.0	+20	26.4	327	58.2	-10	45.2	60 N	** *	2	06	3	16	21	27	0
1	193	24.0		25.9	342	31.2 ¹⁴⁰		31.4 ¹³⁸	58	** *	31	32		24	3	21	87
2	208	23.9		25.4	357	04.3 ¹⁴¹		17.5 ¹³⁹	56	1	20	2	52	45	21	7	26
3	223	23.9		24.9	11	37.5 ¹⁴²	-10	03.5 ¹⁴⁰	54	1	55	3	08	3	56	18	10
4	238	23.9		24.4	26	10.6 ¹⁴¹	-9	49.5 ¹⁴⁰	52	2	19	22	4	06	16	12	34
5	253	23.8	+20	23.9	40	43.8 ¹⁴²	-9	35.5 ¹⁴⁰	50	2	38	3	34	4	15	21	14
6	268	23.8	+20	23.4	55	17.0 ¹⁴²	-9	21.4 ¹⁴¹	45	3	13	3	58	4	34	21	09
7	283	23.8		22.9	69	50.2 ¹⁴²	-9	07.2 ¹⁴²	40	38	4	17	4	49	06	22	51
8	298	23.8		22.5	84	23.4 ¹⁴²	-8	53.0 ¹⁴²	35	3	58	33	5	02	21	02	27
9	313	23.7		22.0	98	56.6 ¹⁴²		38.8 ¹⁴²	30	4	14	4	46	13	20	59	30
10	328	23.7		21.5	113	29.9 ¹⁴³		24.5 ¹⁴³	20	39	5	08	31	54	35	09	53
11	343	23.7	+20	21.0	128	03.2 ¹⁴³	-8	10.2 ¹⁴³	10 N	4	59	5	25	5	48	20	50
12	358	23.7	+20	20.5	142	36.5 ¹⁴³	-7	55.8 ¹⁴⁴	0	5	15	5	41	6	03	20	46
13	13	23.6		20.0	157	09.8 ¹⁴³		41.3 ¹⁴⁵	10 S	30	5	55	18	41	49	29	40
14	28	23.6		19.5	171	43.1 ¹⁴³		26.9 ¹⁴⁴	20	43	6	10	34	37	53	36	35
15	43	23.6		19.0	186	16.4 ¹⁴³	-7	12.4 ¹⁴⁵	30	5	57	26	6	52	32	59	43
16	58	23.6		18.5	200	49.8 ¹⁴⁴	-6	57.8 ¹⁴⁶	35	6	04	35	7	02	29	62	48
17	73	23.5	+20	18.0	215	23.1 ¹⁴³	-6	43.2 ¹⁴⁶	40	6	12	6	45	7	14	20	25
18	88	23.5	+20	17.5	229	56.5 ¹⁴⁴	-6	28.6 ¹⁴⁶	45	6	20	6	56	7	28	20	21
19	103	23.5		17.0	244	29.9 ¹⁴⁴	-6	13.9 ¹⁴⁷	50	29	7	09	45	17	75	9	05
20	118	23.5		16.5	259	03.3 ¹⁴⁴	-5	59.2 ¹⁴⁷	52	33	15	7	53	14	78	08	12
21	133	23.4		16.0	273	36.6 ¹⁴³		44.5 ¹⁴⁷	54	37	21	8	02	12	80	12	9
22	148	23.4		15.5	288	10.0 ¹⁴⁴		29.7 ¹⁴⁸	56	42	29	12		09	84	16	6
23	163	23.4		15.0	302	43.4 ¹⁴⁴	-5	14.9 ¹⁴⁸	58	47	37	24		06	87	20	4
24	178	23.4	+20	14.6	317	16.8 ¹⁴⁴	-5	00.0 ¹⁴⁹	60 S	6	53	7	46	8	37	20	03

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 4 ^h 02 ^m 8		Mag: -3.9 PMG: 12 ^h 56 ^m				Mag: +1.7 PMG: 14 ^h 56 ^m				Mag: -2.7 PMG: 23 ^h 09 ^m				Mag: +0.8 PMG: 14 ^h 37 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	299	08.0	166	11.5	+19	01.2	135	41.9	+8	03.1	11	45.4	-22	42.1	140	15.1	+10	40.5
1	314	10.5	181	10.9	+19	00.4	150	42.9		02.5	26	48.2		42.1	155	17.3		40.4
2	329	12.9	196	10.2	+18	59.6	165	44.0		01.9	41	51.0		42.2	170	19.5		40.3
3	344	15.4	211	09.5		58.8	180	45.0		01.3	56	53.8		42.2	185	21.8		40.2
4	359	17.9	226	08.9		58.0	195	46.1	+8	00.6	71	56.6		42.3	200	24.0		40.1
5	14	20.3	241	08.2	+18	57.2	210	47.1	+8	00.0	86	59.4	-22	42.3	215	26.2	+10	40.0
6	29	22.8	256	07.5	+18	56.4	225	48.2	+7	59.4	102	02.2	-22	42.3	230	28.4	+10	39.9
7	44	25.2	271	06.8		55.6	240	49.2		58.8	117	05.0		42.4	245	30.6		39.8
8	59	27.7	286	06.2		54.8	255	50.3		58.2	132	07.8		42.4	260	32.8		39.7
9	74	30.2	301	05.5		54.0	270	51.3		57.6	147	10.6		42.5	275	35.0		39.6
10	89	32.6	316	04.8		53.2	285	52.4		57.0	162	13.4		42.5	290	37.2		39.5
11	104	35.1	331	04.1	+18	52.4	300	53.4	+7	56.4	177	16.2	-22	42.5	305	39.4	+10	39.4
12	119	37.6	346	03.5	+18	51.6	315	54.5	+7	55.8	192	18.9	-22	42.6	320	41.6	+10	39.3
13	134	40.0	1	02.8		50.8	330	55.5		55.2	207	21.7		42.6	335	43.8		39.2
14	149	42.5	16	02.1		50.0	345	56.6		54.6	222	24.5		42.7	350	46.0		39.1
15	164	45.0	31	01.5		49.2	0	57.6		54.0	237	27.3		42.7	5	48.3		39.0
16	179	47.4	46	00.8		48.4	15	58.7		53.4	252	30.1		42.7	20	50.5		38.9
17	194	49.9	61	00.1	+18	47.6	30	59.7	+7	52.7	267	32.9	-22	42.8	35	52.7	+10	38.8
18	209	52.3	75	59.5	+18	46.8	46	00.8	+7	52.1	282	35.7	-22	42.8	50	54.9	+10	38.7
19	224	54.8	90	58.8		46.0	61	01.8		51.5	297	38.5		42.9	65	57.1		38.6
20	239	57.3	105	58.1		45.2	76	02.8		50.9	312	41.3		42.9	80	59.3		38.5
21	254	59.7	120	57.5		44.4	91	03.9		50.3	327	44.1		43.0	96	01.5		38.4
22	270	02.2	135	56.8		43.5	106	04.9		49.7	342	46.9		43.0	111	03.7		38.3
23	285	04.7	150	56.1		42.7	121	06.0		49.1	357	49.7		43.0	126	05.9		38.2
24	300	07.1	165	55.5	+18	41.9	136	07.0	+7	48.5	12	52.4	-22	43.1	141	08.1	+10	38.1
Dif	—		-7		-8		+10		-6		+28		0		+22		-	

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: 18 ^d 9 PHE { SD: 15/4 PMG: 2 ^h 56 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	Rº	Hora	Rº
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m	h m m
0	178	23.4	+20	14.6	317	16.8	-5	00.0	60 N	20 53	22 01	** **	21 27	1	8 46 91
1	193	23.3		14.1	331	50.2 ¹⁴⁴	-4	45.1 ¹⁴⁹	58	38	21 37	** **	27	4	48 87
2	208	23.3		13.6	346	23.6 ¹⁴⁴		30.2 ¹⁴⁹	56	25	18	22 45	28	6	49 84
3	223	23.3		13.1	0	57.0 ¹⁴⁴		15.3 ¹⁴⁹	54	14	21 02	22 13	28	9	50 81
4	238	23.3		12.5	15	30.4 ¹⁴⁴	-4	00.3 ¹⁵⁰	52	20 05	20 48	21 50	28	12	51 79
5	253	23.3	+20	12.0	30	03.8 ¹⁴⁴	-3	45.3 ¹⁵⁰	50	19 56	20 36	21 31	21 28	14	8 53 75
6	268	23.2	+20	11.5	44	37.2 ¹⁴⁴	-3	30.3 ¹⁵⁰	45	19 38	20 13	20 57	21 28	19	8 55 71
7	283	23.2		11.0	59	10.6 ¹⁴⁴		15.3 ¹⁵⁰	40	23	19 54	33	28	24	57 66
8	298	23.2		10.5	73	44.0 ¹⁴⁴	-3	00.2 ¹⁵¹	35	19 10	39	20 13	29	26	8 58 63
9	313	23.2		10.0	88	17.4 ¹⁴⁴	-2	45.1 ¹⁵¹	30	18 59	26	19 58	29	30	9 00 59
10	328	23.2		09.5	102	50.7 ¹⁴³		30.0 ¹⁵¹	20	41	19 05	33	29	36	02 54
11	343	23.1	+20	09.0	117	24.1 ¹⁴⁴	-2	14.8 ¹⁵²	10 N	18 25	18 47	19 14	21 29	41	9 05 48
12	358	23.1	+20	08.5	131	57.4 ¹⁴³	-1	59.7 ¹⁵¹	0	18 10	18 32	18 58	21 30	45	9 07 44
13	13	23.1		08.0	146	30.8 ¹⁴⁴		44.5 ¹⁵²	10 S	17 55	18	43	30	50	09 39
14	28	23.1		07.5	161	04.1 ¹⁴³		29.3 ¹⁵²	20	40	18 03	30	30	55	11 34
15	43	23.1		07.0	175	37.4 ¹⁴³	-1	14.1 ¹⁵²	30	22	17 47	17	31	60	13 29
16	58	23.0		06.5	190	10.7 ¹⁴³	-0	58.9 ¹⁵²	35	12	39	10	31	64	14 26
17	73	23.0	+20	06.0	204	43.9 ¹⁴²	-0	43.6 ¹⁵³	40	17 00	17 29	18 02	21 31	68	9 16 22
18	88	23.0	+20	05.5	219	17.2 ¹⁴³	-0	28.4 ¹⁵²	45	16 46	17 18	17 54	21 32	71	9 17 19
19	103	23.0		05.0	233	50.4 ¹⁴²	-0	13.1 ¹⁵³	50	29	05	45	32	77	19 14
20	118	23.0		04.5	248	23.7 ¹⁴³	+0	02.2 ¹⁵³	52	21	17 00	42	32	80	20 12
21	133	22.9		03.9	262	56.8 ¹⁴¹		17.5 ¹⁵³	54	12	16 53	37	32	83	21 10
22	148	22.9		03.4	277	30.0 ¹⁴²		32.8 ¹⁵³	56	16 02	46	33	33	85	22 7
23	163	22.9		02.9	292	03.2 ¹⁴²	+0	48.1 ¹⁵³	58	15 51	38	28	33	88	24 3
24	178	22.9	+20	02.4	306	36.3 ¹⁴¹	+1	03.4 ¹⁵³	60 S	15 38	16 29	17 22	21 33	92	9 25 0

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 3 ^h 58 ^m 9		Mag: -3.9 PMG: 12 ^h 57 ^m		Mag: +1.7 PMG: 14 ^h 54 ^m		Mag: -2.7 PMG: 23 ^h 04 ^m		Mag: +0.8 PMG: 14 ^h 33 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	300	07.1	165	55.5	+18	41.9	136	07.0	+7	48.5
1	315	09.6	180	54.8		41.1	151	08.1		47.9
2	330	12.1	195	54.2		40.3	166	09.1		47.3
3	345	14.5	210	53.5		39.5	181	10.2		46.7
4	0	17.0	225	52.8		38.6	196	11.2		46.0
5	15	19.5	240	52.2	+18	37.8	211	12.3	+7	45.4
6	30	21.9	255	51.5	+18	37.0	226	13.3	+7	44.8
7	45	24.4	270	50.9		36.2	241	14.4		44.2
8	60	26.8	285	50.2		35.4	256	15.4		43.6
9	75	29.3	300	49.5		34.5	271	16.5		43.0
10	90	31.8	315	48.9		33.7	286	17.5		42.4
11	105	34.2	330	48.2	+18	32.9	301	18.6	+7	41.8
12	120	36.7	345	47.6	+18	32.1	316	19.6	+7	41.2
13	135	39.2	0	46.9		31.2	331	20.7		40.6
14	150	41.6	15	46.3		30.4	346	21.7		39.9
15	165	44.1	30	45.6		29.6	1	22.7		39.3
16	180	46.6	45	44.9		28.8	16	23.8		38.7
17	195	49.0	60	44.3	+18	27.9	31	24.8	+7	38.1
18	210	51.5	75	43.6	+18	27.1	46	25.9	+7	37.5
19	225	54.0	90	43.0		26.3	61	26.9		36.9
20	240	56.4	105	42.3		25.4	76	28.0		36.3
21	255	58.9	120	41.7		24.6	91	29.0		35.7
22	271	01.3	135	41.0		23.8	106	30.1		35.1
23	286	03.8	150	40.4		22.9	121	31.1		34.4
24	301	06.3	165	39.7	+18	22.1	136	32.2	+7	33.8
Dif	—		-7		-8		+10		-6	
							+28		0	
									+22	
									-	

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7 PMG: 12 ^h 06 ^m 5				Edad: 19 ^d 9 PHE { 4 ^h : 57 ^m 3 12 ^h : 57 ^m 5 20 ^h : 57 ^m 7 SD: 15 ^h 6 PMG: 3 ^h 40 ^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	
0	178	22.9	+20	02.4	306	36.3	+1	03.4	60 N	** *	2	12	3	21	21	28	1	
1	193	22.9		01.9	321	09.4 ¹⁴¹		18.8 ¹⁵⁴	58	** *		37		36		31	5	
2	208	22.9		01.4	335	42.5 ¹⁴¹		34.1 ¹⁵³	56	1	29	2	56		48		34	9
3	223	22.8		00.9	350	15.5 ¹⁴⁰	+1	49.4 ¹⁵³	54	2	01	3	12	3	59		37	11
4	238	22.8	+20	00.3	4	48.5 ¹⁴⁰	+2	04.8 ¹⁵⁴	52		24		25	4	09		40	14
5	253	22.8	+19	59.8	19	21.5 ¹⁴⁰	+2	20.1 ¹⁵³	50	2	42	3	37	4	17	21	42	16
6	268	22.8	+19	59.3	33	54.5 ¹⁴⁰	+2	35.5 ¹⁵⁴	45	3	16	4	01	4	36	21	47	22
7	283	22.8		58.8	48	27.4 ¹³⁹	+2	50.8 ¹⁵³	40	3	41		19	4	50		52	25
8	298	22.8		58.3	63	00.2 ¹³⁸	+3	06.2 ¹⁵⁴	35	4	00		34	5	03		55	29
9	313	22.8		57.8	77	33.1 ¹³⁹		21.5 ¹⁵³	30		15	4	47		14	21	59	32
10	328	22.7		57.2	92	05.9 ¹³⁸		36.8 ¹⁵³	20		40	5	08		32	22	05	37
11	343	22.7	+19	56.7	106	38.7 ¹³⁸	+3	52.2 ¹⁵⁴	10 N	4	59	5	26	5	48	22	10	42
12	358	22.7	+19	56.2	121	11.4 ¹³⁷	+4	07.5 ¹⁵³	0	5	15	5	41	6	03	22	15	47
13	13	22.7		55.7	135	44.1 ¹³⁷		22.8 ¹⁵³	10 S		30	5	55		18		20	51
14	28	22.7		55.2	150	16.7 ¹³⁶		38.1 ¹⁵³	20		43	6	10		33		25	57
15	43	22.7		54.6	164	49.3 ¹³⁶	+4	53.5 ¹⁵⁴	30	5	56		25	6	51		31	63
16	58	22.7		54.1	179	21.9 ¹³⁶	+5	08.7 ¹⁵²	35	6	03		34	7	01		35	66
17	73	22.6	+19	53.6	193	54.4 ¹³⁵	+5	24.0 ¹⁵³	40	6	10	6	43	7	13	22	39	69
18	88	22.6	+19	53.1	208	26.8 ¹³⁴	+5	39.3 ¹⁵³	45	6	18	6	54	7	26	22	43	75
19	103	22.6		52.6	222	59.2 ¹³⁴	+5	54.6 ¹⁵³	50		27	7	07		43		49	80
20	118	22.6		52.0	237	31.6 ¹³⁴	+6	09.8 ¹⁵²	52		31		13	7	51		52	82
21	133	22.6		51.5	252	03.9 ¹³³		25.0 ¹⁵²	54		35		19	8	00		55	85
22	148	22.6		51.0	266	36.2 ¹³³		40.2 ¹⁵²	56		39		26		09	22	58	89
23	163	22.6		50.4	281	08.4 ¹³²	+6	55.4 ¹⁵²	58		44		34		21	23	01	93
24	178	22.6	+19	49.9	295	40.5 ¹³¹	+7	10.6 ¹⁵²	60 S	6	50	7	43	8	33	23	05	97
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 3 ^h 54 ^m 9		Mag: -3.9 PMG: 12 ^h 58 ^m				Mag: +1.7 PMG: 14 ^h 53 ^m				Mag: -2.7 PMG: 23 ^h 00 ^m				Mag: +0.8 PMG: 14 ^h 30 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	301	06.3	165	39.7	+18	22.1	136	32.2	+7	33.8	13	59.4	-22	44.1	142	01.1	+10	35.6
1	316	08.7	180	39.1		21.2	151	33.2		33.2	29	02.2		44.1	157	03.3		35.5
2	331	11.2	195	38.4		20.4	166	34.3		32.6	44	05.0		44.1	172	05.5		35.4
3	346	13.7	210	37.8		19.6	181	35.3		32.0	59	07.7		44.2	187	07.7		35.3
4	1	16.1	225	37.1		18.7	196	36.4		31.4	74	10.5		44.2	202	09.9		35.2
5	16	18.6	240	36.5	+18	17.9	211	37.4	+7	30.8	89	13.3	-22	44.3	217	12.1	+10	35.1
6	31	21.1	255	35.8	+18	17.0	226	38.4	+7	30.2	104	16.1	-22	44.3	232	14.3	+10	35.0
7	46	23.5	270	35.2		16.2	241	39.5		29.6	119	18.9		44.3	247	16.5		34.9
8	61	26.0	285	34.5		15.4	256	40.5		28.9	134	21.7		44.4	262	18.7		34.8
9	76	28.4	300	33.9		14.5	271	41.6		28.3	149	24.5		44.4	277	20.9		34.7
10	91	30.9	315	33.2		13.7	286	42.6		27.7	164	27.3		44.5	292	23.1		34.6
11	106	33.4	330	32.6	+18	12.8	301	43.7	+7	27.1	179	30.0	-22	44.5	307	25.3	+10	34.5
12	121	35.8	345	31.9	+18	12.0	316	44.7	+7	26.5	194	32.8	-22	44.5	322	27.5	+10	34.4
13	136	38.3	0	31.3		11.1	331	45.8		25.9	209	35.6		44.6	337	29.7		34.3
14	151	40.8	15	30.7		10.3	346	46.8		25.3	224	38.4		44.6	352	31.9		34.1
15	166	43.2	30	30.0		09.4	1	47.9		24.7	239	41.2		44.7	7	34.1		34.0
16	181	45.7	45	29.4		08.6	16	48.9		24.0	254	44.0		44.7	22	36.4		33.9
17	196	48.2	60	28.7	+18	07.7	31	50.0	+7	23.4	269	46.8	-22	44.7	37	38.6	+10	33.8
18	211	50.6	75	28.1	+18	06.9	46	51.0	+7	22.8	284	49.5	-22	44.8	52	40.8	+10	33.7
19	226	53.1	90	27.4		06.0	61	52.1		22.2	299	52.3		44.8	67	43.0		33.6
20	241	55.6	105	26.8		05.2	76	53.1		21.6	314	55.1		44.9	82	45.2		33.5
21	256	58.0	120	26.2		04.3	91	54.1		21.0	329	57.9		44.9	97	47.4		33.4
22	272	00.5	135	25.5		03.5	106	55.2		20.4	345	00.7		44.9	112	49.6		33.3
23	287	02.9	150	24.9		02.6	121	56.2		19.7	0	03.5		45.0	127	51.8		33.2
24	302	05.4	165	24.2	+18	01.7	136	57.3	+7	19.1	15	06.2	-22	45.0	142	54.0	+10	33.1
Dif	—		-6		-8		+10		-6		+28		0		+22		-	

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 7				Civil		Náutico	Hora	R°	Hora	R°
	PMG: 12 ^h 06 ^m 5				PMG: 4 ^h 26 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif								
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	178	22.6	+19 49.9	295	40.5	+7 10.6		60 N	20 48	21 55	** **	21 29 3	11 51 99		
1	193	22.6	49.4	310	12.6 ¹³¹	25.7 ¹⁵¹		58	34	32	23 30	36 8	45 94		
2	208	22.5	48.9	324	44.6 ¹³⁰	40.8 ¹⁵¹		56	22	21 13	22 36	43 11	39 91		
3	223	22.5	48.3	339	16.6 ¹³⁰	+7 55.9 ¹⁵¹		54	11	20 58	22 07	48 15	35 87		
4	238	22.5	47.8	353	48.5 ¹²⁹	+8 11.0 ¹⁵¹		52	20 02	45	21 45	54 17	30 85		
5	253	22.5	+19 47.3	8	20.4 ¹²⁹	+8 26.1 ¹⁵¹		50	19 53	20 33	21 27	21 58 20	11 27 81		
6	268	22.5	+19 46.7	22	52.1 ¹²⁷	+8 41.1 ¹⁵⁰		45	19 36	20 10	20 55	22 09 25	11 18 76		
7	283	22.5	46.2	37	23.9 ¹²⁸	+8 56.1 ¹⁵⁰		40	21	19 52	31	17 30	12 71		
8	298	22.5	45.7	51	55.5 ¹²⁶	+9 11.0 ¹⁴⁹		35	19 09	37	20 12	24 34	06 67		
9	313	22.5	45.2	66	27.1 ¹²⁶	25.9 ¹⁴⁹		30	18 58	25	19 56	31 36	11 01 64		
10	328	22.5	44.6	80	58.6 ¹²⁵	40.8 ¹⁴⁹		20	40	19 04	32	42 42	10 52 58		
11	343	22.5	+19 44.1	95	30.1 ¹²⁵	+9 55.7 ¹⁴⁹		10 N	18 25	18 47	19 13	22 52 47	10 44 53		
12	358	22.4	+19 43.6	110	01.5 ¹²⁴	+10 10.5 ¹⁴⁸		0	18 10	18 32	18 58	23 02 51	10 37 49		
13	13	22.4	43.0	124	32.8 ¹²³	25.3 ¹⁴⁸		10 S	17 56	18	44	11 56	29 45		
14	28	22.4	42.5	139	04.0 ¹²²	40.0 ¹⁴⁷		20	40	18 04	31	22 60	22 39		
15	43	22.4	42.0	153	35.2 ¹²²	+10 54.8 ¹⁴⁸		30	23	17 49	18	34 65	13 34		
16	58	22.4	41.4	168	06.2 ¹²⁰	+11 09.4 ¹⁴⁶		35	13	40	11	41 69	08 31		
17	73	22.4	+19 40.9	182	37.2 ¹²⁰	+11 24.0 ¹⁴⁶		40	17 01	17 31	18 04	23 48 73	10 02 28		
18	88	22.4	+19 40.3	197	08.2 ¹²⁰	+11 38.6 ¹⁴⁶		45	16 48	17 20	17 56	23 58 77	9 56 23		
19	103	22.4	39.8	211	39.0 ¹¹⁸	+11 53.1 ¹⁴⁵		50	32	08	48	** * *	48 18		
20	118	22.4	39.3	226	09.8 ¹¹⁸	+12 07.6 ¹⁴⁵		52	24	17 02	44	** * *	45 15		
21	133	22.4	38.7	240	40.5 ¹¹⁷	22.1 ¹⁴⁵		54	15	16 56	40	** * *	41 12		
22	148	22.4	38.2	255	11.1 ¹¹⁶	36.4 ¹⁴³		56	16 06	49	35	** * *	36 9		
23	163	22.4	37.6	269	41.6 ¹¹⁵	+12 50.8 ¹⁴⁴		58	15 55	41	31	** * *	32 5		
24	178	22.4	+19 37.1	284	12.0 ¹¹⁴	+13 05.0 ¹⁴²		60 S	15 42	16 33	17 26	** * *	9 26 2		

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 3 ^h 51 ^m 0		Mag: -3.9 PMG: 12 ^h 59 ^m			Mag: +1.7 PMG: 14 ^h 51 ^m			Mag: -2.7 PMG: 22 ^h 55 ^m			Mag: +0.8 PMG: 14 ^h 26 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	'	'
0	302	05.4	165	24.2	+18 01.7	136	57.3	+7 19.1	15	06.2	-22 45.0	142	54.0	+10 33.1
1	317	07.9	180	23.6	+18 00.9	151	58.3	18.5	30	09.0	45.1	157	56.2	33.0
2	332	10.3	195	23.0	+18 00.0	166	59.4	17.9	45	11.8	45.1	172	58.4	32.9
3	347	12.8	210	22.3	+17 59.2	182	00.4	17.3	60	14.6	45.1	188	00.6	32.8
4	2	15.3	225	21.7	58.3	197	01.5	16.7	75	17.4	45.2	203	02.8	32.7
5	17	17.7	240	21.1	+17 57.4	212	02.5	+7 16.1	90	20.2	-22 45.2	218	05.0	+10 32.6
6	32	20.2	255	20.4	+17 56.6	227	03.6	+7 15.4	105	23.0	-22 45.3	233	07.2	+10 32.5
7	47	22.7	270	19.8	55.7	242	04.6	14.8	120	25.7	45.3	248	09.4	32.4
8	62	25.1	285	19.2	54.9	257	05.7	14.2	135	28.5	45.3	263	11.6	32.3
9	77	27.6	300	18.5	54.0	272	06.7	13.6	150	31.3	45.4	278	13.8	32.2
10	92	30.0	315	17.9	53.1	287	07.7	13.0	165	34.1	45.4	293	16.0	32.1
11	107	32.5	330	17.3	+17 52.3	302	08.8	+7 12.4	180	36.9	-22 45.5	308	18.2	+10 32.0
12	122	35.0	345	16.6	+17 51.4	317	09.8	+7 11.8	195	39.7	-22 45.5	323	20.4	+10 31.9
13	137	37.4	0	16.0	50.5	332	10.9	11.1	210	42.4	45.5	338	22.6	31.8
14	152	39.9	15	15.4	49.6	347	11.9	10.5	225	45.2	45.6	353	24.8	31.6
15	167	42.4	30	14.7	48.8	2	13.0	09.9	240	48.0	45.6	8	27.0	31.5
16	182	44.8	45	14.1	47.9	17	14.0	09.3	255	50.8	45.7	23	29.2	31.4
17	197	47.3	60	13.5	+17 47.0	32	15.1	+7 08.7	270	53.6	-22 45.7	38	31.4	+10 31.3
18	212	49.8	75	12.8	+17 46.2	47	16.1	+7 08.1	285	56.3	-22 45.7	53	33.6	+10 31.2
19	227	52.2	90	12.2	45.3	62	17.2	07.4	300	59.1	45.8	68	35.8	31.1
20	242	54.7	105	11.6	44.4	77	18.2	06.8	316	01.9	45.8	83	38.0	31.0
21	257	57.2	120	10.9	43.5	92	19.3	06.2	331	04.7	45.9	98	40.2	30.9
22	272	59.6	135	10.3	42.7	107	20.3	05.6	346	07.5	45.9	113	42.4	30.8
23	288	02.1	150	09.7	41.8	122	21.3	05.0	1	10.3	45.9	128	44.6	30.7
24	303	04.5	165	09.1	+17 40.9	137	22.4	+7 04.4	16	13.0	-22 46.0	143	46.9	+10 30.6
Dif	—		-6 -9			+10 -6			+28 0			+22 -1		

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7 PMG: 12 ^h 06 ^m 5			Edad: 21 ^d 9 PHE { 4 ^h : 58 ^m 5 12 ^h : 58 ^m 7 20 ^h : 58 ^m 8 PMG: 5 ^h 14 ^m R°: 52 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	h	m	h	m	h	m	m	
0	178	22.4	+19 37.1	284	12.0	+13 05.0	60 N	** **	2 19	3 25	21 32	6	13 30	105	
1	193	22.4	36.6	298	42.3 ¹¹³	19.3 ¹⁴³	58	0 44	2 42	39	44 12		19 100		
2	208	22.4	36.0	313	12.6 ¹¹³	33.4 ¹⁴¹	56	1 37	3 00	3 52	21 54	16	10 95		
3	223	22.4	35.5	327	42.8 ¹¹²	+13 47.5 ¹⁴¹	54	2 07	16	4 02	22 03	20	13 02	91	
4	238	22.4	34.9	342	12.8 ¹¹⁰	+14 01.6 ¹⁴¹	52	29	29	12	11 23		12 55	87	
5	253	22.3	+19 34.4	356	42.8 ¹¹⁰	+14 15.6 ¹⁴⁰	50	2 46	3 40	4 20	22 18	26	12 48	85	
6	268	22.3	+19 33.9	11	12.7 ¹⁰⁹	+14 29.5 ¹³⁹	45	3 19	4 03	4 38	22 34	31	12 34	79	
7	283	22.3	33.3	25	42.5 ¹⁰⁸	43.4 ¹³⁹	40	3 43	21	4 52	47 36		23 74		
8	298	22.3	32.8	40	12.2 ¹⁰⁷	+14 57.2 ¹³⁸	35	4 02	36	5 04	22 58	39	13 71		
9	313	22.3	32.2	54	41.8 ¹⁰⁶	+15 10.9 ¹³⁷	30	17	4 49	15	23 07	43	12 05	67	
10	328	22.3	31.7	69	11.3 ¹⁰⁵	24.6 ¹³⁷	20	4 41	5 09	33	24 47		11 50	62	
11	343	22.3	+19 31.1	83	40.7 ¹⁰⁴	+15 38.2 ¹³⁶	10 N	5 00	5 26	5 49	23 39	51	11 37	58	
12	358	22.3	+19 30.6	98	10.0 ¹⁰³	+15 51.7 ¹³⁵	0	5 16	5 41	6 03	23 53	55	11 26	53	
13	13	22.3	30.0	112	39.2 ¹⁰²	+16 05.1 ¹³⁴	10 S	29	5 55	17	** ** *		14 49		
14	28	22.3	29.5	127	08.3 ¹⁰¹	18.5 ¹³⁴	20	42	6 09	32	** ** *		11 01	45	
15	43	22.3	28.9	141	37.4 ¹⁰¹	31.8 ¹³³	30	5 55	24	6 50	** ** *		10 47	39	
16	58	22.3	28.4	156	06.3 ⁹⁹	45.0 ¹³²	35	6 02	33	7 00	** ** *		39 36		
17	73	22.3	+19 27.8	170	35.1 ⁹⁸	+16 58.1 ¹³¹	40	6 09	6 42	7 11	** ** *		10 30	32	
18	88	22.3	+19 27.3	185	03.8 ⁹⁷	+17 11.2 ¹³¹	45	6 16	6 52	7 24	** ** *		10 19	28	
19	103	22.3	26.7	199	32.3 ⁹⁵	24.1 ¹²⁹	50	25	7 05	41	0 09	83	06 22		
20	118	22.3	26.2	214	00.8 ⁹⁵	37.0 ¹²⁹	52	29	10	48	14 87		10 00	19	
21	133	22.3	25.6	228	29.2 ⁹⁴	+17 49.8 ¹²⁸	54	33	16	7 57	20 90		9 53	16	
22	148	22.3	25.1	242	57.5 ⁹³	+18 02.5 ¹²⁷	56	37	23	8 06	27 93		45 13		
23	163	22.3	24.5	257	25.6 ⁹¹	15.1 ¹²⁶	58	42	31	17	34 98		37 9		
24	178	22.3	+19 24.0	271	53.7 ⁹¹	+18 27.7 ¹²⁶	60 S	6 47	7 39	8 29	0 42 103		9 28 3		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG 3 ^h 47 ^m 1			Mag: -3.9 PMG: 13 ^h 00 ^m			Mag: +1.7 PMG: 14 ^h 49 ^m			Mag: -2.7 PMG: 22 ^h 51 ^m			Mag: +0.8 PMG: 14 ^h 23 ^m		
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	303	04.5	165 09.1	+17 40.9	137 22.4	+7 04.4	16 13.0	-22 46.0	143 46.9	+10 30.6					
1	318	07.0	180 08.4	40.0	152 23.4	03.8	31 15.8	46.0	158 49.1	30.5					
2	333	09.5	195 07.8	39.1	167 24.5	03.1	46 18.6	46.1	173 51.3	30.4					
3	348	11.9	210 07.2	38.3	182 25.5	02.5	61 21.4	46.1	188 53.5	30.3					
4	3	14.4	225 06.6	37.4	197 26.6	01.9	76 24.2	46.1	203 55.7	30.2					
5	18	16.9	240 05.9	+17 36.5	212 27.6	+7 01.3	91 26.9	-22 46.2	218 57.9	+10 30.1					
6	33	19.3	255 05.3	+17 35.6	227 28.7	+7 00.7	106 29.7	-22 46.2	234 00.1	+10 30.0					
7	48	21.8	270 04.7	34.7	242 29.7	+7 00.1	121 32.5	46.2	249 02.3	29.9					
8	63	24.3	285 04.1	33.8	257 30.8	+6 59.4	136 35.3	46.3	264 04.5	29.8					
9	78	26.7	300 03.5	33.0	272 31.8	58.8	151 38.1	46.3	279 06.7	29.7					
10	93	29.2	315 02.8	32.1	287 32.8	58.2	166 40.8	46.4	294 08.9	29.5					
11	108	31.7	330 02.2	+17 31.2	302 33.9	+6 57.6	181 43.6	-22 46.4	309 11.1	+10 29.4					
12	123	34.1	345 01.6	+17 30.3	317 34.9	+6 57.0	196 46.4	-22 46.4	324 13.3	+10 29.3					
13	138	36.6	0 01.0	29.4	332 36.0	56.3	211 49.2	46.5	339 15.5	29.2					
14	153	39.0	15 00.4	28.5	347 37.0	55.7	226 52.0	46.5	354 17.7	29.1					
15	168	41.5	29 59.7	27.6	2 38.1	55.1	241 54.7	46.6	9 19.9	29.0					
16	183	44.0	44 59.1	26.7	17 39.1	54.5	256 57.5	46.6	24 22.1	28.9					
17	198	46.4	59 58.5	+17 25.8	32 40.2	+6 53.9	272 00.3	-22 46.6	39 24.3	+10 28.8					
18	213	48.9	74 57.9	+17 25.0	47 41.2	+6 53.3	287 03.1	-22 46.7	54 26.5	+10 28.7					
19	228	51.4	89 57.3	24.1	62 42.3	52.6	302 05.8	46.7	69 28.7	28.6					
20	243	53.8	104 56.6	23.2	77 43.3	52.0	317 08.6	46.7	84 30.9	28.5					
21	258	56.3	119 56.0	22.3	92 44.3	51.4	332 11.4	46.8	99 33.1	28.4					
22	273	58.8	134 55.4	21.4	107 45.4	50.8	347 14.2	46.8	114 35.3	28.3					
23	289	01.2	149 54.8	20.5	122 46.4	50.2	2 17.0	46.9	129 37.5	28.2					
24	304	03.7	164 54.2	+17 19.6	137 47.5	+6 49.6	17 19.7	-22 46.9	144 39.7	+10 28.1					
Dif	—		-6	-9	+10	-6	+28	0	+22	-1					

UT	SOL				LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 15 ^h 7				Edad: 22 ^d 9 PHE { 4 ^h : 59 ^o 0 12 ^h : 59 ^o 2 20 ^h : 59 ^o 4 R°: 56 ^m														
	PMG: 12 ^h 06 ^m 5				SD: 16 ^h 1 PMG: 6 ^h 06 ^m														
	hG ☉ Dec				hG ☾ Dif Dec Dif						Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m				
0	178	22.3	+19	24.0	271	53.7	+18	27.7	60 N	20 44	21 49	** **	21 38 14		15 15 109				
1	193	22.3		23.4	286	21.6 89		40.1 ¹²⁴	58	30	27	23 12	21 56 21		14 59 101				
2	208	22.3		22.9	300	49.5 89	+18	52.4 ¹²³	56	18	21 09	22 28	22 10 27		45 95				
3	223	22.3		22.3	315	17.2 87	+19	04.7 ¹²³	54	20 08	20 54	22 01	23 31		33 91				
4	238	22.3		21.7	329	44.8 86		16.8 ¹²¹	52	19 59	41	21 40	34 34		22 88				
5	253	22.3	+19	21.2	344	12.3 85	+19	28.8 ¹²⁰	50	19 51	20 30	21 23	22 44 37		14 13 85				
6	268	22.3	+19	20.6	358	39.7 84	+19	40.8 ¹²⁰	45	19 33	20 08	20 52	23 05 42		13 53 80				
7	283	22.3		20.1	13	06.9 82	+19	52.6 ¹¹⁸	40	19	19 50	28	23 45		37 76				
8	298	22.3		19.5	27	34.1 82	+20	04.3 ¹¹⁷	35	19 07	36	20 10	37 48		24 72				
9	313	22.3		19.0	42	01.1 80		15.9 ¹¹⁶	30	18 57	23	19 55	23 50 50		13 12 69				
10	328	22.3		18.4	56	28.0 79		27.4 ¹¹⁵	20	39	19 03	31	** ** *		12 52 65				
11	343	22.3	+19	17.8	70	54.8 78	+20	38.8 ¹¹⁴	10 N	18 24	18 47	19 13	** ** *		12 35 61				
12	358	22.3	+19	17.3	85	21.5 77	+20	50.1 ¹¹³	0	18 10	18 32	18 57	** ** *		12 19 58				
13	13	22.4		16.7	99	48.1 76	+21	01.2 ¹¹¹	10 S	17 56	18	44	0 07 59		12 03 54				
14	28	22.4		16.2	114	14.6 75		12.3 ¹¹¹	20	41	18 04	31	22 64		11 46 50				
15	43	22.4		15.6	128	40.9 73		23.2 ¹⁰⁹	30	24	17 50	19	39 69		26 46				
16	58	22.4		15.0	143	07.2 73		34.0 ¹⁰⁸	35	14	41	12	0 50 71		15 43				
17	73	22.4	+19	14.5	157	33.3 71	+21	44.7 ¹⁰⁷	40	17 03	17 32	18 05	1 01 76		11 02 40				
18	88	22.4	+19	13.9	171	59.3 70	+21	55.2 ¹⁰⁵	45	16 50	17 22	17 58	1 15 80		10 47 35				
19	103	22.4		13.3	186	25.1 68	+22	05.6 ¹⁰⁴	50	34	10	50	32 86		28 30				
20	118	22.4		12.8	200	50.9 68		15.9 ¹⁰³	52	27	17 05	46	41 88		19 28				
21	133	22.4		12.2	215	16.6 67		26.1 ¹⁰²	54	18	16 59	42	1 50 92		10 09 25				
22	148	22.4		11.6	229	42.1 65		36.1 ¹⁰⁰	56	16 09	52	38	2 00 96		9 58 21				
23	163	22.4		11.1	244	07.5 64		46.0 ⁹⁹	58	15 59	45	34	12 101		46 15				
24	178	22.4	+19	10.5	258	32.8 63	+22	55.8 ⁹⁸	60 S	15 46	16 36	17 29	2 25 109		9 31 8				
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO										
	PMG: 3 ^h 43 ^m 1		Mag: -3.9 PMG: 13 ^h 01 ^m		Mag: +1.7 PMG: 14 ^h 48 ^m		Mag: -2.7 PMG: 22 ^h 46 ^m		Mag: +0.8 PMG: 14 ^h 19 ^m										
	hG ♈		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec										
h	°	'	°	'	°	'	°	'	°	'									
0	304	03.7	164	54.2	137	47.5	17	19.7	144	39.7									
1	319	06.1	179	53.6	152	48.5	32	22.5	159	41.9									
2	334	08.6	194	53.0	167	49.6	47	25.3	174	44.1									
3	349	11.1	209	52.3	182	50.6	62	28.1	189	46.3									
4	4	13.5	224	51.7	197	51.7	77	30.8	204	48.5									
5	19	16.0	239	51.1	212	52.7	92	33.6	219	50.7									
6	34	18.5	254	50.5	227	53.8	107	36.4	234	52.9									
7	49	20.9	269	49.9	242	54.8	122	39.2	249	55.1									
8	64	23.4	284	49.3	257	55.8	137	42.0	264	57.3									
9	79	25.9	299	48.7	272	56.9	152	44.7	279	59.5									
10	94	28.3	314	48.1	287	57.9	167	47.5	295	01.7									
11	109	30.8	329	47.5	302	59.0	182	50.3	310	03.9									
12	124	33.3	344	46.9	318	00.0	197	53.1	325	06.1									
13	139	35.7	359	46.3	333	01.1	212	55.8	340	08.3									
14	154	38.2	14	45.6	348	02.1	227	58.6	355	10.5									
15	169	40.6	29	45.0	3	03.2	243	01.4	10	12.7									
16	184	43.1	44	44.4	18	04.2	258	04.2	25	14.9									
17	199	45.6	59	43.8	33	05.2	273	06.9	40	17.1									
18	214	48.0	74	43.2	48	06.3	288	09.7	55	19.3									
19	229	50.5	89	42.6	63	07.3	303	12.5	70	21.5									
20	244	53.0	104	42.0	78	08.4	318	15.3	85	23.7									
21	259	55.4	119	41.4	93	09.4	333	18.0	100	25.9									
22	274	57.9	134	40.8	108	10.5	348	20.8	115	28.1									
23	290	00.4	149	40.2	123	11.5	3	23.6	130	30.3									
24	305	02.8	164	39.6	138	12.6	18	26.3	145	32.5									
Dif	—		-6		+10		+28		+22										
							0												
									-1										

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15/7 PMG: 12 ^h 06 ^m 5				Edad: 23 ^d 9 PHE { 4 ^h : 59/5 12 ^h : 59/7 20 ^h : 59/8 PMG: 7 ^h 02 ^m R ^o : 62 ^m												
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R ^o	Hora	R ^o	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	22.4	+19	10.5	258	32.8	+22	55.8	60 N	** ** *	2	25	3	30	21	52	34
1	193	22.4		09.9	272	58.0	+23	05.4	58	1	01	2	47	43	22	17	42
2	208	22.4		09.4	287	23.1		14.9	56	1	45	3	05	3	55	37	46
3	223	22.4		08.8	301	48.0		24.3	54	2	13	19	4	06	22	54	48
4	238	22.4		08.2	316	12.9		33.5	52		33	32	15	23	08	51	15
5	253	22.5	+19	07.7	330	37.6	+23	42.5	50	2	50	3	43	4	23	23	21
6	268	22.5	+19	07.1	345	02.2	+23	51.4	45	3	22	4	06	4	40	23	47
7	283	22.5		06.5	359	26.7	+24	00.2	40	3	45	23	4	54	**	**	**
8	298	22.5		05.9	13	51.1		08.8	35	4	03	38	5	06	**	**	**
9	313	22.5		05.4	28	15.4		17.3	30		18	4	50	16	**	**	**
10	328	22.5		04.8	42	39.6		25.6	20	4	42	5	10	34	0	11	55
11	343	22.5	+19	04.2	57	03.6	+24	33.7	10 N	5	00	5	27	5	49	0	30
12	358	22.5	+19	03.7	71	27.6	+24	41.7	0	5	16	5	41	6	03	0	48
13	13	22.5		03.1	85	51.4		49.5	10 S		29	5	55	17	1	06	64
14	28	22.5		02.5	100	15.2	+24	57.2	20		42	6	08	32	26	66	36
15	43	22.5		01.9	114	38.8	+25	04.7	30	5	54	23	49	1	48	70	12
16	58	22.6		01.4	129	02.4		12.1	35	6	01	31	6	58	2	01	73
17	73	22.6	+19	00.8	143	25.8	+25	19.2	40	6	07	6	40	7	09	2	17
18	88	22.6	+19	00.2	157	49.2	+25	26.3	45	6	15	6	50	7	22	2	35
19	103	22.6	+18	59.6	172	12.4		33.1	50	23	7	02	38	2	58	83	10
20	118	22.6		59.0	186	35.5		39.8	52	26	08	45	3	09	86	47	41
21	133	22.6		58.5	200	58.6		46.3	54	30	14	7	54	22	89	34	38
22	148	22.6		57.9	215	21.5		52.6	56	34	20	8	03	36	93	19	34
23	163	22.6		57.3	229	44.4	+25	58.8	58	39	27	13	3	53	99	10	01
24	178	22.7	+18	56.7	244	07.2	+26	04.7	60 S	6	43	7	35	8	25	4	14

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 3 ^h 39 ^m 2		Mag: -3.9 PMG: 13 ^h 02 ^m		Mag: +1.7 PMG: 14 ^h 46 ^m		Mag: -2.7 PMG: 22 ^h 42 ^m		Mag: +0.8 PMG: 14 ^h 16 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	305	02.8	164	39.6	+16	57.8	138	12.6	+6	34.7
1	320	05.3	179	39.0		56.9	153	13.6		34.1
2	335	07.8	194	38.4		55.9	168	14.6		33.4
3	350	10.2	209	37.8		55.0	183	15.7		32.8
4	5	12.7	224	37.2		54.1	198	16.7		32.2
5	20	15.1	239	36.6	+16	53.2	213	17.8	+6	31.6
6	35	17.6	254	36.0	+16	52.3	228	18.8	+6	31.0
7	50	20.1	269	35.4		51.3	243	19.9		30.3
8	65	22.5	284	34.8		50.4	258	20.9		29.7
9	80	25.0	299	34.2		49.5	273	22.0		29.1
10	95	27.5	314	33.6		48.6	288	23.0		28.5
11	110	29.9	329	33.0	+16	47.6	303	24.0	+6	27.8
12	125	32.4	344	32.4	+16	46.7	318	25.1	+6	27.2
13	140	34.9	359	31.8		45.8	333	26.1		26.6
14	155	37.3	14	31.2		44.8	348	27.2		26.0
15	170	39.8	29	30.6		43.9	3	28.2		25.4
16	185	42.3	44	30.0		43.0	18	29.3		24.7
17	200	44.7	59	29.4	+16	42.1	33	30.3	+6	24.1
18	215	47.2	74	28.9	+16	41.1	48	31.4	+6	23.5
19	230	49.6	89	28.3		40.2	63	32.4		22.9
20	245	52.1	104	27.7		39.3	78	33.4		22.2
21	260	54.6	119	27.1		38.3	93	34.5		21.6
22	275	57.0	134	26.5		37.4	108	35.5		21.0
23	290	59.5	149	25.9		36.5	123	36.6		20.4
24	306	02.0	164	25.3	+16	35.5	138	37.6	+6	19.8
Dif	—		-6		-9		+10		-6	
									+28	
									0	
									+22	
									-	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'8			Edad: 24 ^d 9	PHE { 4 ^h : 59'9 12 ^h : 60'0 20 ^h : 60'1									
	PMG: 12 ^h 06 ^m 5					SD: 16'3			PMG: 8 ^h 04 ^m		R°: 64 ^m			
	hG ☉	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	22.7	+18 56.7	244	07.2	+26 04.7	58	60 N	20 39	21 42	** **	22 26 74	18 43 63	
1	193	22.7	56.1	258	29.8	10.5	58	58	26	21	22 59	22 59 71	18 11 64	
2	208	22.7	55.6	272	52.4	16.1	56	56	15	21 04	22 21	23 23 71	17 47 64	
3	223	22.7	55.0	287	14.9	21.6	55	54	20 05	20 50	21 55	42 70	27 65	
4	238	22.7	54.4	301	37.4	26.8	52	52	19 56	38	35	23 59 69	17 11 65	
5	253	22.7	+18 53.8	315	59.7	+26 31.9	51	50	19 48	20 27	21 19	** ** *	16 57 65	
6	268	22.7	+18 53.2	330	22.0	+26 36.8	49	45	19 31	20 05	20 49	** ** *	16 28 66	
7	283	22.8	52.6	344	44.1	41.5	47	40	17	19 48	26	0 08 57	16 06 65	
8	298	22.8	52.1	359	06.2	46.0	45	35	19 06	34	20 08	25 58	15 47 65	
9	313	22.8	51.5	13	28.3	50.3	43	30	18 56	22	19 53	0 40 60	31 65	
10	328	22.8	50.9	27	50.3	54.5	42	20	39	19 02	30	1 06 61	15 04 65	
11	343	22.8	+18 50.3	42	12.2	+26 58.4	39	10 N	18 24	18 46	19 12	1 28 63	14 41 65	
12	358	22.8	+18 49.7	56	34.0	+27 02.1	37	0	18 10	18 32	18 57	1 49 64	14 19 65	
13	13	22.8	49.1	70	55.8	05.7	36	10 S	17 56	18	44	2 10 65	13 57 65	
14	28	22.9	48.5	85	17.5	09.1	34	20	42	18 05	32	32 67	34 64	
15	43	22.9	47.9	99	39.1	12.2	31	30	25	17 51	20	2 58 68	13 07 63	
16	58	22.9	47.4	114	00.7	15.2	30	35	16	43	13	3 14 69	12 51 63	
17	73	22.9	+18 46.8	128	22.3	+27 18.0	28	40	17 05	17 34	18 07	3 32 70	12 32 63	
18	88	22.9	+18 46.2	142	43.8	+27 20.6	26	45	16 52	17 24	18 00	3 54 71	12 10 62	
19	103	22.9	45.6	157	05.2	22.9	23	50	37	12	17 52	4 21 74	11 42 60	
20	118	23.0	45.0	171	26.6	25.1	22	52	30	07	48	35 74	28 60	
21	133	23.0	44.4	185	48.0	27.1	20	54	22	17 01	45	4 51 75	11 12 59	
22	148	23.0	43.8	200	09.3	28.9	18	56	13	16 55	41	5 09 78	10 53 58	
23	163	23.0	43.2	214	30.6	30.4	15	58	16 02	48	37	5 32 80	10 30 55	
24	178	23.0	+18 42.6	228	51.8	+27 31.8	14	60 S	15 51	16 40	17 32	6 02 85	9 59 51	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 3 ^h 35 ^m 3		Mag: -3.9 PMG: 13 ^h 03 ^m		Mag: +1.7 PMG: 14 ^h 44 ^m		Mag: -2.7 PMG: 22 ^h 38 ^m		Mag: +0.8 PMG: 14 ^h 12 ^m	
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'
0	306	02.0	164 25.3	+16 35.5	138 37.6	+6 19.8	19 32.9	-22 48.7	146 25.2	+10 23.0
1	321	04.4	179 24.7	34.6	153 38.7	19.1	34 35.6	48.8	161 27.4	22.9
2	336	06.9	194 24.1	33.6	168 39.7	18.5	49 38.4	48.8	176 29.6	22.8
3	351	09.4	209 23.5	32.7	183 40.7	17.9	64 41.2	48.8	191 31.8	22.7
4	6	11.8	224 23.0	31.8	198 41.8	17.3	79 43.9	48.9	206 34.0	22.6
5	21	14.3	239 22.4	+16 30.8	213 42.8	+6 16.6	94 46.7	-22 48.9	221 36.2	+10 22.4
6	36	16.7	254 21.8	+16 29.9	228 43.9	+6 16.0	109 49.5	-22 48.9	236 38.4	+10 22.3
7	51	19.2	269 21.2	28.9	243 44.9	15.4	124 52.2	49.0	251 40.6	22.2
8	66	21.7	284 20.6	28.0	258 46.0	14.8	139 55.0	49.0	266 42.8	22.1
9	81	24.1	299 20.0	27.0	273 47.0	14.1	154 57.8	49.0	281 45.0	22.0
10	96	26.6	314 19.4	26.1	288 48.1	13.5	170 00.5	49.1	296 47.2	21.9
11	111	29.1	329 18.9	+16 25.2	303 49.1	+6 12.9	185 03.3	-22 49.1	311 49.4	+10 21.8
12	126	31.5	344 18.3	+16 24.2	318 50.1	+6 12.3	200 06.1	-22 49.2	326 51.6	+10 21.7
13	141	34.0	359 17.7	23.3	333 51.2	11.6	215 08.8	49.2	341 53.8	21.6
14	156	36.5	14 17.1	22.3	348 52.2	11.0	230 11.6	49.2	356 56.0	21.5
15	171	38.9	29 16.5	21.4	3 53.3	10.4	245 14.4	49.3	11 58.2	21.4
16	186	41.4	44 15.9	20.4	18 54.3	09.8	260 17.1	49.3	27 00.4	21.3
17	201	43.9	59 15.4	+16 19.5	33 55.4	+6 09.2	275 19.9	-22 49.3	42 02.6	+10 21.2
18	216	46.3	74 14.8	+16 18.5	48 56.4	+6 08.5	290 22.7	-22 49.4	57 04.8	+10 21.1
19	231	48.8	89 14.2	17.6	63 57.4	07.9	305 25.4	49.4	72 07.0	20.9
20	246	51.2	104 13.6	16.6	78 58.5	07.3	320 28.2	49.5	87 09.2	20.8
21	261	53.7	119 13.0	15.7	93 59.5	06.7	335 31.0	49.5	102 11.4	20.7
22	276	56.2	134 12.5	14.7	109 00.6	06.0	350 33.7	49.5	117 13.5	20.6
23	291	58.6	149 11.9	13.8	124 01.6	05.4	5 36.5	49.6	132 15.7	20.5
24	307	01.1	164 11.3	+16 12.8	139 02.7	+6 04.8	20 39.3	-22 49.6	147 17.9	+10 20.4
Dif	—	—	-6	-9	+10	-6	+28	0	+22	-1

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8 PMG: 12 ^h 06 ^m 4				Edad: 25 ^d 9 PHE { 4 ^h : 60 ^h /2 12 ^h : 60 ^h /2 20 ^h : 60 ^h /3 PMG: 9 ^h 08 ^m R°: 65 ^m												
	hG ☉		Dec		hG ☾ Dif		Dec Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	m	h m	m	h m	m
0	178	23.0	+18	42.6	228	51.8	+27	31.8	12	60 N	** **	2 31	3 34	23 40	104	19 46	28
1	193	23.1		42.0	243	13.0	22	33.0	10	58	1 15	2 52	48	** **	**	19 15	36
2	208	23.1		41.4	257	34.2	22	34.0	7	56	1 53	3 09	3 59	** **	**	18 51	41
3	223	23.1		40.8	271	55.4	22	34.7	10	54	2 18	23	4 09	** **	**	32	44
4	238	23.1		40.2	286	16.6	22	35.3	6	52	38	36	18	** **	**	16	47
5	253	23.1	+18	39.6	300	37.7	21	+27 35.7	4	50	2 54	3 46	4 25	0 13	69	18 02	49
6	268	23.2	+18	39.1	314	58.8	21	+27 35.8	1	45	3 25	4 08	4 42	0 42	68	17 34	52
7	283	23.2		38.5	329	19.9	21	35.8	0	40	3 47	25	4 56	1 05	68	17 11	55
8	298	23.2		37.9	343	41.0	21	35.5	3	35	4 05	39	5 07	23	68	16 52	57
9	313	23.2		37.3	358	02.1	21	35.1	4	30	20	4 51	17	1 40	67	36	58
10	328	23.2		36.7	12	23.2	21	34.4	7	20	4 43	5 11	34	2 07	66	16 09	61
11	343	23.3	+18	36.1	26	44.3	21	+27 33.5	9	10 N	5 01	5 27	5 49	2 31	65	15 46	62
12	358	23.3	+18	35.5	41	05.4	21	+27 32.5	10	0	5 16	5 41	6 03	2 53	65	15 24	64
13	13	23.3		34.9	55	26.4	20	31.2	13	10 S	29	5 54	17	3 15	64	15 02	66
14	28	23.3		34.3	69	47.6	22	29.7	15	20	41	6 08	31	3 39	63	14 38	68
15	43	23.4		33.7	84	08.7	21	28.0	17	30	53	22	47	4 06	62	14 10	70
16	58	23.4		33.1	98	29.8	21	26.1	19	35	5 59	30	6 57	23	61	13 54	71
17	73	23.4	+18	32.5	112	50.9	21	+27 24.0	21	40	6 06	6 38	7 07	4 42	60	13 35	73
18	88	23.4	+18	31.8	127	12.1	22	+27 21.8	22	45	6 13	6 48	7 20	5 05	59	13 12	74
19	103	23.5		31.2	141	33.3	22	19.3	25	50	20	7 00	35	35	56	12 42	78
20	118	23.5		30.6	155	54.5	22	16.6	27	52	24	05	42	5 49	56	28	78
21	133	23.5		30.0	170	15.8	23	13.7	29	54	27	11	50	6 06	54	12 11	80
22	148	23.5		29.4	184	37.1	23	10.6	31	56	31	17	7 59	27	51	11 51	82
23	163	23.6		28.8	198	58.4	23	07.3	33	58	35	24	8 09	6 52	48	11 25	87
24	178	23.6	+18	28.2	213	19.8	24	+27 03.7	36	60 S	6 40	7 32	8 21	7 27	42	10 50	94

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 3 ^h 31 ^m 3		Mag: -3.9 PMG: 13 ^h 04 ^m		Mag: +1.7 PMG: 14 ^h 43 ^m		Mag: -2.7 PMG: 22 ^h 33 ^m		Mag: +0.8 PMG: 14 ^h 09 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	307	01.1	164	11.3	+16	12.8	139	02.7	+6	04.8	20	39.3	-22	49.6	147	17.9	+10	20.4
1	322	03.6	179	10.7		11.8	154	03.7		04.2	35	42.0		49.6	162	20.1		20.3
2	337	06.0	194	10.2		10.9	169	04.7		03.5	50	44.8		49.7	177	22.3		20.2
3	352	08.5	209	09.6		09.9	184	05.8		02.9	65	47.6		49.7	192	24.5		20.1
4	7	11.0	224	09.0		09.0	199	06.8		02.3	80	50.3		49.7	207	26.7		20.0
5	22	13.4	239	08.4	+16	08.0	214	07.9	+6	01.7	95	53.1	-22	49.8	222	28.9	+10	19.9
6	37	15.9	254	07.9	+16	07.0	229	08.9	+6	01.0	110	55.9	-22	49.8	237	31.1	+10	19.8
7	52	18.4	269	07.3		06.1	244	10.0	+6	00.4	125	58.6		49.8	252	33.3		19.7
8	67	20.8	284	06.7		05.1	259	11.0	+5	59.8	141	01.4		49.9	267	35.5		19.5
9	82	23.3	299	06.1		04.2	274	12.0		59.1	156	04.2		49.9	282	37.7		19.4
10	97	25.7	314	05.6		03.2	289	13.1		58.5	171	06.9		50.0	297	39.9		19.3
11	112	28.2	329	05.0	+16	02.2	304	14.1	+5	57.9	186	09.7	-22	50.0	312	42.1	+10	19.2
12	127	30.7	344	04.4	+16	01.3	319	15.2	+5	57.3	201	12.4	-22	50.0	327	44.3	+10	19.1
13	142	33.1	359	03.9	+16	00.3	334	16.2		56.6	216	15.2		50.1	342	46.5		19.0
14	157	35.6	14	03.3	+15	59.3	349	17.3		56.0	231	18.0		50.1	357	48.7		18.9
15	172	38.1	29	02.7		58.4	4	18.3		55.4	246	20.7		50.1	12	50.9		18.8
16	187	40.5	44	02.1		57.4	19	19.3		54.8	261	23.5		50.2	27	53.1		18.7
17	202	43.0	59	01.6	+15	56.4	34	20.4	+5	54.1	276	26.3	-22	50.2	42	55.3	+10	18.6
18	217	45.5	74	01.0	+15	55.5	49	21.4	+5	53.5	291	29.0	-22	50.2	57	57.5	+10	18.5
19	232	47.9	89	00.4		54.5	64	22.5		52.9	306	31.8		50.3	72	59.6		18.4
20	247	50.4	103	59.9		53.5	79	23.5		52.3	321	34.5		50.3	88	01.8		18.3
21	262	52.9	118	59.3		52.6	94	24.6		51.6	336	37.3		50.4	103	04.0		18.1
22	277	55.3	133	58.7		51.6	109	25.6		51.0	351	40.1		50.4	118	06.2		18.0
23	292	57.8	148	58.2		50.6	124	26.6		50.4	6	42.8		50.4	133	08.4		17.9
24	308	00.2	163	57.6	+15	49.6	139	27.7	+5	49.8	21	45.6	-22	50.5	148	10.6	+10	17.8
Dif	—		-6		-10		+10		-6		+28		0		+22		-	

UT	SOL				● LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna							
	SD: 15 ^h 8 PMG: 12 ^h 06 ^m 4				Edad: 26 ^d 9 PHE { 4 ^h : 60 ^h /3 12 ^h : 60 ^h /2 20 ^h : 60 ^h /2 R°: 62 ^m																			
	hG ☉		Dec		hG ☾		Dif				Dec		Dif		Civil		Náutico		Hora R°		Hora R°			
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	h	m	h	m		
0	178	23.6	+18	28.2	213	19.8	+27	03.7	60 N	20 34	21 36	** **	** **	** **	** **	** **	** **	20 14	11	19 51	19			
1	193	23.6		27.6	227	41.2	+27	00.0	58	22	16	22 47	0 10	97	34	91	32	24	19 51	19				
2	208	23.6		27.0	242	02.6	+26	56.1	56	11	21 00	22 13							32 24					
3	223	23.7		26.4	256	24.1		52.0	54	20 01	20 46	21 49	0 52	88			16	29						
4	238	23.7		25.8	270	45.6		47.8	52	19 53	34	31	1 08	85			19 03	31						
5	253	23.7	+18	25.2	285	07.2	+26	43.3	50	19 45	20 24	21 15	1 22	83			18 51	34						
6	268	23.7	+18	24.6	299	28.9	+26	38.6	45	19 29	20 03	20 45	1 50	79			18 26	40						
7	283	23.8		24.0	313	50.6		33.7	40	16	19 46	23	2 13	75			18 06	43						
8	298	23.8		23.3	328	12.4		28.6	35	19 04	32	20 06	3 13	73			17 49	47						
9	313	23.8		22.7	342	34.2		23.4	30	18 54	20	19 52	2 47	71			34	50						
10	328	23.8		22.1	356	56.1		17.9	20	38	19 01	29	3 13	68			17 10	53						
11	343	23.9	+18	21.5	11	18.1	+26	12.3	10 N	18 23	18 46	19 12	3 36	65			16 48	57						
12	358	23.9	+18	20.9	25	40.1	+26	06.4	0	18 10	18 32	18 57	3 58	62			16 28	61						
13	13	23.9		20.3	40	02.2	+26	00.4	10 S	17 57	19	44	4 19	60			16 08	64						
14	28	24.0		19.7	54	24.4	+25	54.2	20	43	18 06	32	4 42	57			15 46	67						
15	43	24.0		19.1	68	46.7		47.8	30	27	17 52	21	5 08	54			20	72						
16	58	24.0		18.4	83	09.0		41.2	35	17	44	15	24	51			15 05	74						
17	73	24.0	+18	17.8	97	31.4	+25	34.5	40	17 07	17 36	18 08	5 42	49			14 48	77						
18	88	24.1	+18	17.2	111	53.9	+25	27.6	45	16 54	17 26	18 02	6 04	45			14 26	82						
19	103	24.1		16.6	126	16.5		20.5	50	39	15	17 54	3 14	41			14 00	86						
20	118	24.1		16.0	140	39.2		13.2	52	32	10	51	6 45	38			13 46	90						
21	133	24.2		15.4	155	02.0	+25	05.7	54	25	17 04	47	7 00	35			31	93						
22	148	24.2		14.7	169	24.8	+24	58.1	56	16	16 58	44	18	31			13 13	98						
23	163	24.2		14.1	183	47.8		50.2	58	16 06	51	40	7 40	26			12 52	103						
24	178	24.3	+18	13.5	198	10.8	+24	42.3	60 S	15 55	16 44	17 35	8 09	16			12 24	112						
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO							
	PMG: 3 ^h 27 ^m 4				Mag: -3.9 PMG: 13 ^h 05 ^m				Mag: +1.7 PMG: 14 ^h 41 ^m				Mag: -2.7 PMG: 22 ^h 29 ^m				Mag: +0.8 PMG: 14 ^h 05 ^m							
	hG ♈		hG ♀		hG ♂		hG ♎		hG ♊		hG ♋		hG ♏		hG ♐		hG ♑		hG ♒					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	308	00.2	163	57.6	+15	49.6	139	27.7	+5	49.8	21	45.6	-22	50.5	148	10.6	+10	17.8						
1	323	02.7	178	57.0		48.7	154	28.7		49.1	36	48.3		50.5	163	12.8		17.7						
2	338	05.2	193	56.5		47.7	169	29.8		48.5	51	51.1		50.5	178	15.0		17.6						
3	353	07.6	208	55.9		46.7	184	30.8		47.9	66	53.9		50.6	193	17.2		17.5						
4	8	10.1	223	55.3		45.7	199	31.8		47.2	81	56.6		50.6	208	19.4		17.4						
5	23	12.6	238	54.8	+15	44.8	214	32.9	+5	46.6	96	59.4	-22	50.6	223	21.6	+10	17.3						
6	38	15.0	253	54.2	+15	43.8	229	33.9	+5	46.0	112	02.1	-22	50.7	238	23.8	+10	17.2						
7	53	17.5	268	53.7		42.8	244	35.0		45.4	127	04.9		50.7	253	26.0		17.1						
8	68	20.0	283	53.1		41.8	259	36.0		44.7	142	07.7		50.7	268	28.2		17.0						
9	83	22.4	298	52.5		40.8	274	37.1		44.1	157	10.4		50.8	283	30.4		16.9						
10	98	24.9	313	52.0		39.9	289	38.1		43.5	172	13.2		50.8	298	32.6		16.7						
11	113	27.4	328	51.4	+15	38.9	304	39.1	+5	42.8	187	15.9	-22	50.8	313	34.8	+10	16.6						
12	128	29.8	343	50.9	+15	37.9	319	40.2	+5	42.2	202	18.7	-22	50.9	328	36.9	+10	16.5						
13	143	32.3	358	50.3		36.9	334	41.2		41.6	217	21.5		50.9	343	39.1		16.4						
14	158	34.7	13	49.7		35.9	349	42.3		41.0	232	24.2		51.0	358	41.3		16.3						
15	173	37.2	28	49.2		35.0	4	43.3		40.3	247	27.0		51.0	13	43.5		16.2						
16	188	39.7	43	48.6		34.0	19	44.4		39.7	262	29.7		51.0	28	45.7		16.1						
17	203	42.1	58	48.1	+15	33.0	34	45.4	+5	39.1	277	32.5	-22	51.1	43	47.9	+10	16.0						
18	218	44.6	73	47.5	+15	32.0	49	46.4	+5	38.4	292	35.2	-22	51.1	58	50.1	+10	15.9						
19	233	47.1	88	47.0		31.0	64	47.5		37.8	307	38.0		51.1	73	52.3		15.8						
20	248	49.5	103	46.4		30.0	79	48.5		37.2	322	40.8		51.2	88	54.5		15.7						
21	263	52.0	118	45.8		29.0	94	49.6		36.6	337	43.5		51.2	103	56.7		15.6						
22	278	54.5	133	45.3		28.0	109	50.6		35.9	352	46.3		51.2	118	58.9		15.4						
23	293	56.9	148	44.7		27.1	124	51.6		35.3	7	49.0		51.3	134	01.1		15.3						
24	308	59.4	163	44.2	+15	26.1	139	52.7	+5	34.7	22	51.8	-22	51.3	149	03.3	+10	15.2						
Dif	—				-6				+10				+28				+22				-1			

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8 PMG: 12 ^h 06 ^m 4				Edad: 27 ^d 9 PHE { 4 ^h : 60 ^l 1 12 ^h : 60 ^l 0 20 ^h : 59 ^l 9 Rº: 57 ^m												
	hG ☉		Dec		hG ☾ Dif		Dec Dif			Náutico	Civil		Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	24.3	+18	13.5	198	10.8	+24	42.3	82	60 N	** **	2 38	3 39	1 24	112	20 25	6
1	193	24.3		12.9	212	34.0		34.1	82	58	1 26	2 58	3 52	1 47	104	20 10	10
2	208	24.3		12.3	226	57.2		25.8	83	56	2 00	3 14	4 03	2 05	99	19 56	16
3	223	24.4		11.7	241	20.5		17.3	85	54	24	27	12	20	94	45	19
4	238	24.4		11.0	255	44.0		+24 08.7	86	52	43	39	21	33	91	34	22
5	253	24.4	+18	10.4	270	07.5		+23 59.9	88	50	2 58	3 49	4 28	2 45	88	19 25	25
6	268	24.5	+18	09.8	284	31.2		+23 50.9	90	45	3 28	4 11	4 44	3 09	82	19 06	30
7	283	24.5		09.2	298	54.9		41.8	91	40	3 50	27	4 58	28	78	18 49	35
8	298	24.5		08.5	313	18.8		32.5	93	35	4 07	41	5 09	44	74	36	38
9	313	24.6		07.9	327	42.7		23.0	95	30	21	4 53	19	3 58	71	24	42
10	328	24.6		07.3	342	06.8		13.4	96	20	4 44	5 12	35	4 21	67	18 03	47
11	343	24.6	+18	06.7	356	31.0		+23 03.7	97	10 N	5 01	5 27	5 50	4 41	63	17 45	52
12	358	24.7	+18	06.0	10	55.3		+22 53.8	99	0	5 16	5 41	6 03	5 00	58	17 29	55
13	13	24.7		05.4	25	19.7		43.8	100	10 S	29	5 54	16	19	54	17 12	60
14	28	24.7		04.8	39	44.2		33.6	102	20	40	6 07	30	5 39	50	16 53	65
15	43	24.8		04.2	54	08.8		23.3	103	30	52	21	46	6 02	45	32	70
16	58	24.8		03.5	68	33.5		12.8	105	35	5 58	28	6 55	15	43	19	74
17	73	24.8	+18	02.9	82	58.4		+22 02.2	106	40	6 04	6 37	7 05	6 31	39	16 05	77
18	88	24.9	+18	02.3	97	23.3		+21 51.4	108	45	6 11	6 46	7 18	6 49	35	15 48	82
19	103	24.9		01.7	111	48.4		40.6	108	50	18	6 57	32	7 12	29	26	88
20	118	24.9		01.0	126	13.6		29.5	111	52	21	7 02	39	23	26	16	91
21	133	25.0	+18	00.4	140	38.9		18.4	111	54	25	08	47	35	23	15 04	95
22	148	25.0	+17	59.8	155	04.3		+21 07.1	113	56	28	14	7 56	7 49	19	14 51	99
23	163	25.1		59.1	169	29.9		+20 55.7	114	58	32	20	8 05	8 06	13	35	104
24	178	25.1	+17	58.5	183	55.5		+20 44.2	115	60 S	6 36	7 28	8 16	8 25	7	14 16	111

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 3 ^h 23 ^m 5		Mag: -3.9 PMG: 13 ^h 06 ^m		Mag: +1.7 PMG: 14 ^h 39 ^m		Mag: -2.7 PMG: 22 ^h 24 ^m		Mag: +0.8 PMG: 14 ^h 02 ^m	
	hG ♂		hG ♀ Dec		hG ♂ Dec		hG ♀ Dec		hG ♀ Dec	
h	°	'	°	'	°	'	°	'	°	'
0	308	59.4	163	44.2	+15	26.1	139	52.7	+5	34.7
1	324	01.9	178	43.6		25.1	154	53.7		34.0
2	339	04.3	193	43.1		24.1	169	54.8		33.4
3	354	06.8	208	42.5		23.1	184	55.8		32.8
4	9	09.2	223	42.0		22.1	199	56.8		32.2
5	24	11.7	238	41.4	+15	21.1	214	57.9	+5	31.5
6	39	14.2	253	40.9	+15	20.1	229	58.9	+5	30.9
7	54	16.6	268	40.3		19.1	245	00.0		30.3
8	69	19.1	283	39.8		18.1	260	01.0		29.6
9	84	21.6	298	39.2		17.1	275	02.1		29.0
10	99	24.0	313	38.7		16.1	290	03.1		28.4
11	114	26.5	328	38.1	+15	15.1	305	04.1	+5	27.7
12	129	29.0	343	37.6	+15	14.1	320	05.2	+5	27.1
13	144	31.4	358	37.0		13.1	335	06.2		26.5
14	159	33.9	13	36.5		12.1	350	07.3		25.9
15	174	36.4	28	35.9		11.1	5	08.3		25.2
16	189	38.8	43	35.4		10.1	20	09.3		24.6
17	204	41.3	58	34.8	+15	09.1	35	10.4	+5	24.0
18	219	43.7	73	34.3	+15	08.1	50	11.4	+5	23.3
19	234	46.2	88	33.8		07.1	65	12.5		22.7
20	249	48.7	103	33.2		06.1	80	13.5		22.1
21	264	51.1	118	32.7		05.1	95	14.5		21.4
22	279	53.6	133	32.1		04.1	110	15.6		20.8
23	294	56.1	148	31.6		03.1	125	16.6		20.2
24	309	58.5	163	31.0	+15	02.1	140	17.7	+5	19.6
Dif	—		-5 -10		+10 -6		+28 0		+22 -1	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 12 ^h 06 ^m 3			Edad: 28 ^d 9 PHE { 4 ^h : 59 ^m 7 12 ^h : 59 ^m 5 20 ^h : 59 ^m 3 R°: 52 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	178	25.1	+17 58.5	183	55.5	+20 44.2	68	60 N	20 30	21 29	** **	3 16 107	20 31 2	
1	193	25.1	57.9	198	21.3	32.5 ¹¹⁷	68	58	17	21 10	22 36	31 101	20 7	
2	208	25.2	57.2	212	47.2	20.8 ¹¹⁷	69	56	20 07	20 55	22 06	44 96	12 10	
3	223	25.2	56.6	227	13.2	+20 08.9 ¹¹⁹	70	54	19 58	42	21 43	3 54 93	20 04 13	
4	238	25.2	56.0	241	39.3	+19 56.9 ¹²⁰	71	52	49	30	26	4 04 90	19 56 17	
5	253	25.3	+17 55.3	256	05.5	+19 44.8 ¹²¹	72	50	19 42	20 20	21 11	4 13 86	19 50 19	
6	268	25.3	+17 54.7	270	31.9	+19 32.5 ¹²³	74	45	19 26	20 00	20 42	4 31 80	19 36 24	
7	283	25.4	54.1	284	58.4	20.2 ¹²³	75	40	13	19 44	21	46 75	24 29	
8	298	25.4	53.4	299	25.0	+19 07.7 ¹²⁵	76	35	19 03	30	20 04	4 58 72	14 33	
9	313	25.4	52.8	313	51.7	+18 55.2 ¹²⁵	77	30	18 53	19	19 50	5 09 68	19 06 36	
10	328	25.5	52.2	328	18.5	42.5 ¹²⁷	78	20	37	19 00	28	28 62	18 50 42	
11	343	25.5	+17 51.5	342	45.4	+18 29.7 ¹²⁸	79	10 N	18 23	18 45	19 11	5 44 57	18 37 47	
12	358	25.6	+17 50.9	357	12.5	+18 16.9 ¹²⁸	81	0	18 10	18 31	18 57	5 58 54	18 24 52	
13	13	25.6	50.3	11	39.7	+18 03.9 ¹³⁰	82	10 S	17 57	19	44	6 13 49	18 12 55	
14	28	25.7	49.6	26	06.9	+17 50.8 ¹³¹	82	20	43	18 06	33	29 44	17 58 61	
15	43	25.7	49.0	40	34.3	37.7 ¹³¹	84	30	28	17 53	22	47 39	42 67	
16	58	25.7	48.3	55	01.8	24.4 ¹³³	85	35	19	45	16	6 58 35	33 70	
17	73	25.8	+17 47.7	69	29.5	+17 11.1 ¹³³	87	40	17 09	17 37	18 10	7 10 31	17 22 74	
18	88	25.8	+17 47.1	83	57.2	+16 57.7 ¹³⁴	87	45	16 57	17 28	18 04	7 24 27	17 10 78	
19	103	25.9	46.4	98	25.1	44.2 ¹³⁵	89	50	42	17	17 57	41 21	16 54 85	
20	118	25.9	45.8	112	53.0	30.6 ¹³⁶	89	52	35	13	53	49 18	47 88	
21	133	25.9	45.1	127	21.1	16.9 ¹³⁷	91	54	28	07	50	7 58 15	39 91	
22	148	26.0	44.5	141	49.3	+16 03.1 ¹³⁸	92	56	20	17 01	47	8 08 12	30 94	
23	163	26.0	43.8	156	17.6	+15 49.3 ¹³⁸	93	58	16 10	16 55	43	19 8	19 99	
24	178	26.1	+17 43.2	170	46.0	+15 35.4 ¹³⁹	94	60 S	15 59	16 48	17 39	8 32 3	16 07 104	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG 3 ^h 19 ^m 6		Mag: -3.9 PMG: 13 ^h 06 ^m			Mag: +1.7 PMG: 14 ^h 38 ^m			Mag: -2.7 PMG: 22 ^h 20 ^m			Mag: +0.8 PMG: 13 ^h 58 ^m		
	hG ♈	hG ♀		Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	309	58.5	163 31.0	+15 02.1	140 17.7	+5 19.6	23 57.9	-22 52.1	149 55.9	+10 12.6				
1	325	01.0	178 30.5	+15 01.1	155 18.7	18.9	39 00.6	52.2	164 58.1	12.5				
2	340	03.5	193 30.0	+15 00.0	170 19.7	18.3	54 03.4	52.2	180 00.3	12.4				
3	355	05.9	208 29.4	+14 59.0	185 20.8	17.7	69 06.1	52.2	195 02.4	12.3				
4	10	08.4	223 28.9	58.0	200 21.8	17.0	84 08.9	52.3	210 04.6	12.2				
5	25	10.9	238 28.3	+14 57.0	215 22.9	+5 16.4	99 11.6	-22 52.3	225 06.8	+10 12.1				
6	40	13.3	253 27.8	+14 56.0	230 23.9	+5 15.8	114 14.4	-22 52.3	240 09.0	+10 12.0				
7	55	15.8	268 27.3	55.0	245 24.9	15.1	129 17.1	52.4	255 11.2	11.8				
8	70	18.2	283 26.7	54.0	260 26.0	14.5	144 19.9	52.4	270 13.4	11.7				
9	85	20.7	298 26.2	53.0	275 27.0	13.9	159 22.6	52.4	285 15.6	11.6				
10	100	23.2	313 25.7	51.9	290 28.1	13.2	174 25.4	52.5	300 17.8	11.5				
11	115	25.6	328 25.1	+14 50.9	305 29.1	+5 12.6	189 28.1	-22 52.5	315 20.0	+10 11.4				
12	130	28.1	343 24.6	+14 49.9	320 30.1	+5 12.0	204 30.8	-22 52.5	330 22.2	+10 11.3				
13	145	30.6	358 24.1	48.9	335 31.2	11.3	219 33.6	52.6	345 24.4	11.2				
14	160	33.0	13 23.5	47.9	350 32.2	10.7	234 36.3	52.6	0 26.5	11.1				
15	175	35.5	28 23.0	46.9	5 33.3	10.1	249 39.1	52.6	15 28.7	11.0				
16	190	38.0	43 22.4	45.8	20 34.3	09.4	264 41.8	52.7	30 30.9	10.9				
17	205	40.4	58 21.9	+14 44.8	35 35.3	+5 08.8	279 44.6	-22 52.7	45 33.1	+10 10.8				
18	220	42.9	73 21.4	+14 43.8	50 36.4	+5 08.2	294 47.3	-22 52.7	60 35.3	+10 10.6				
19	235	45.3	88 20.8	42.8	65 37.4	07.5	309 50.1	52.8	75 37.5	10.5				
20	250	47.8	103 20.3	41.8	80 38.5	06.9	324 52.8	52.8	90 39.7	10.4				
21	265	50.3	118 19.8	40.7	95 39.5	06.3	339 55.6	52.8	105 41.9	10.3				
22	280	52.7	133 19.3	39.7	110 40.5	05.6	354 58.3	52.9	120 44.1	10.2				
23	295	55.2	148 18.7	38.7	125 41.6	05.0	10 01.1	52.9	135 46.3	10.1				
24	310	57.7	163 18.2	+14 37.7	140 42.6	+5 04.4	25 03.8	-22 52.9	150 48.4	+10 10.0				
Dif	—		-5 -10		+10 -6		+27 0		+22 -1					

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna						
	SD: 15 ^h 8 PMG: 12 ^h 06 ^m 2			Edad: 0 ^d 6 PHE { 4 ^h : 59 ^l 1 12 ^h : 58 ^l 9 20 ^h : 58 ^l 7 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	26.1	+17	43.2	170	46.0	+15	35.4	60 N	0 39	2 44	3 44	5 03	100	20 33	1			
1	193	26.1		42.6	185	14.5	95	21.4	58	1 37	3 03	3 56	12 96		27	5			
2	208	26.2		41.9	199	43.1	96	+15 07.3	56	2 07	18	4 06	20 92		22	8			
3	223	26.2		41.3	214	11.8	97	+14 53.2	54	30	31	16	27 88		17	11			
4	238	26.3		40.6	228	40.7	99	39.0	52	2 47	43	24	34 85		13	13			
5	253	26.3	+17	40.0	243	09.6	99	+14 24.8	50	3 02	3 53	4 31	5 39	83	20 09	16			
6	268	26.3	+17	39.3	257	38.6	100	+14 10.4	45	3 31	4 13	4 47	5 51	77	20 00	21			
7	283	26.4		38.7	272	07.8	102	+13 56.0	40	3 52	29	4 59	6 01	72	19 53	25			
8	298	26.4		38.0	286	37.0	102	41.6	35	4 09	43	5 10	10 68		47	29			
9	313	26.5		37.4	301	06.4	104	27.1	30	23	4 54	20	17 65		42	32			
10	328	26.5		36.7	315	35.8	104	+13 12.5	20	4 45	5 12	36	30 59		32	38			
11	343	26.6	+17	36.1	330	05.4	106	+12 57.9	10 N	5 02	5 28	5 50	6 41	54	19 24	42			
12	358	26.6	+17	35.4	344	35.0	106	+12 43.2	0	5 16	5 41	6 03	6 52	49	19 16	47			
13	13	26.7		34.8	359	04.8	108	28.5	10 S	28	5 54	16	7 02	45	19 07	53			
14	28	26.7		34.1	13	34.6	108	+12 13.7	20	40	6 06	29	13 40		18 59	57			
15	43	26.8		33.5	28	04.5	109	+11 58.8	30	51	19	44	26 33		49	63			
16	58	26.8		32.8	42	34.6	111	44.0	35	5 56	27	6 53	33 30		43	66			
17	73	26.9	+17	32.2	57	04.7	111	+11 29.0	40	6 02	6 35	7 03	7 41	27	18 36	71			
18	88	26.9	+17	31.5	71	34.9	112	+11 14.1	45	6 08	6 44	7 15	7 51	22	18 28	75			
19	103	27.0		30.9	86	05.2	113	+10 59.1	50	15	54	29	8 02	17	19	81			
20	118	27.0		30.2	100	35.6	114	44.0	52	18	6 59	36	07 15		15	83			
21	133	27.1		29.6	115	06.1	115	29.0	54	22	7 04	43	13 12		10	86			
22	148	27.1		28.9	129	36.7	116	+10 13.8	56	25	10	7 52	20 8		18 04	90			
23	163	27.2		28.3	144	07.3	116	+9 58.7	58	29	17	8 01	27 5		17 58	93			
24	178	27.2	+17	27.6	158	38.1	118	+9 43.5	60 S	6 33	7 24	8 12	8 35	1	17 51	97			
UT	ARIES		VENUS			MARTE			JÚPITER				SATURNO						
	PMG 3 ^h 15 ^m 6		Mag: -3.9 PMG: 13 ^h 07 ^m			Mag: +1.7 PMG: 14 ^h 36 ^m			Mag: -2.7 PMG: 22 ^h 16 ^m				Mag: +0.8 PMG: 13 ^h 55 ^m						
	hG ♈		hG ♀ Dec			hG ♂ Dec			hG ♃ Dec				hG ♄ Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'			
0	310	57.7	163	18.2	+14	37.7	140	42.6	+5	04.4	25	03.8	-22	52.9	150	48.4	+10	10.0	
1	326	00.1	178	17.7		36.6	155	43.7		03.7	40	06.6		53.0	165	50.6		09.9	
2	341	02.6	193	17.1		35.6	170	44.7		03.1	55	09.3		53.0	180	52.8		09.8	
3	356	05.1	208	16.6		34.6	185	45.7		02.5	70	12.0		53.0	195	55.0		09.7	
4	11	07.5	223	16.1		33.6	200	46.8		01.9	85	14.8		53.1	210	57.2		09.6	
5	26	10.0	238	15.6	+14	32.5	215	47.8	+5	01.2	100	17.5	-22	53.1	225	59.4	+10	09.4	
6	41	12.5	253	15.0	+14	31.5	230	48.9	+5	00.6	115	20.3	-22	53.1	241	01.6	+10	09.3	
7	56	14.9	268	14.5		30.5	245	49.9	+5	00.0	130	23.0		53.2	256	03.8		09.2	
8	71	17.4	283	14.0		29.4	260	50.9	+4	59.3	145	25.8		53.2	271	06.0		09.1	
9	86	19.8	298	13.4		28.4	275	52.0		58.7	160	28.5		53.2	286	08.2		09.0	
10	101	22.3	313	12.9		27.4	290	53.0		58.0	175	31.3		53.3	301	10.3		08.9	
11	116	24.8	328	12.4	+14	26.3	305	54.1	+4	57.4	190	34.0	-22	53.3	316	12.5	+10	08.8	
12	131	27.2	343	11.9	+14	25.3	320	55.1	+4	56.8	205	36.7	-22	53.3	331	14.7	+10	08.7	
13	146	29.7	358	11.4		24.3	335	56.1		56.1	220	39.5		53.4	346	16.9		08.6	
14	161	32.2	13	10.8		23.2	350	57.2		55.5	235	42.2		53.4	1	19.1		08.5	
15	176	34.6	28	10.3		22.2	5	58.2		54.9	250	45.0		53.4	16	21.3		08.3	
16	191	37.1	43	09.8		21.2	20	59.2		54.2	265	47.7		53.5	31	23.5		08.2	
17	206	39.6	58	09.3	+14	20.1	36	00.3	+4	53.6	280	50.5	-22	53.5	46	25.7	+10	08.1	
18	221	42.0	73	08.7	+14	19.1	51	01.3	+4	53.0	295	53.2	-22	53.5	61	27.9	+10	08.0	
19	236	44.5	88	08.2		18.1	66	02.4		52.3	310	55.9		53.6	76	30.0		07.9	
20	251	47.0	103	07.7		17.0	81	03.4		51.7	325	58.7		53.6	91	32.2		07.8	
21	266	49.4	118	07.2		16.0	96	04.4		51.1	341	01.4		53.6	106	34.4		07.7	
22	281	51.9	133	06.7		14.9	111	05.5		50.4	356	04.2		53.7	121	36.6		07.6	
23	296	54.3	148	06.1		13.9	126	06.5		49.8	11	06.9		53.7	136	38.8		07.5	
24	311	56.8	163	05.6	+14	12.9	141	07.6	+4	49.2	26	09.6	-22	53.7	151	41.0	+10	07.4	
Dif	—		-5			-10	+10		-6		+27		0		+22		-		-1

UT	SOL				● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 12 ^h 06 ^m 1				Edad: 1 ^d 6 PHE { 4 ^h : 58 ^m 4 12 ^h : 58 ^m 1 20 ^h : 57 ^m 9 R°: 45 ^m											
	hG ☉		Dec		hG ☾		Dif				Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	178	27.2	+17	27.6	158	38.1	+9	43.5	60 N	20 24	21 23	23 11	6 43 94	20 34	1	
1	193	27.3		27.0	173	08.9 ¹¹⁸		28.3 ¹⁵²	58	13	21 05	22 26	48 90	32	4	
2	208	27.3		26.3	187	39.8 ¹¹⁹	+9	13.0 ¹⁵³	56	20 03	20 50	21 58	52 86	30	7	
3	223	27.4		25.6	202	10.8 ¹²⁰	+8	57.8 ¹⁵²	54	19 54	37	37	55 84	28	10	
4	238	27.4		25.0	216	41.9 ¹²¹		42.5 ¹⁵³	52	46	26	21	6 59 81	26	12	
5	253	27.5	+17	24.3	231	13.0 ¹²¹	+8	27.1 ¹⁵⁴	50	19 39	20 17	21 06	7 02 78	20 25	14	
6	268	27.5	+17	23.7	245	44.3 ¹²³	+8	11.8 ¹⁵³	45	19 24	19 57	20 39	7 08 73	20 21	19	
7	283	27.6		23.0	260	15.6 ¹²³	+7	56.4 ¹⁵⁴	40	11	41	18	13 69	18	24	
8	298	27.6		22.4	274	47.0 ¹²⁴		41.0 ¹⁵⁴	35	19 01	28	20 02	18 65	16	27	
9	313	27.7		21.7	289	18.4 ¹²⁴		25.6 ¹⁵⁴	30	18 52	19 17	19 48	22 61	14	30	
10	328	27.7		21.0	303	50.0 ¹²⁶	+7	10.2 ¹⁵⁴	20	36	18 59	27	29 56	10	35	
11	343	27.8	+17	20.4	318	21.6 ¹²⁶	+6	54.7 ¹⁵⁵	10 N	18 22	18 44	19 10	7 35 51	20 06	40	
12	358	27.8	+17	19.7	332	53.2 ¹²⁶	+6	39.3 ¹⁵⁴	0	18 10	18 31	18 56	7 41 46	20 03	45	
13	13	27.9		19.1	347	25.0 ¹²⁸		23.8 ¹⁵⁵	10 S	17 57	19	44	47 41	20 00	49	
14	28	28.0		18.4	1	56.8 ¹²⁸	+6	08.3 ¹⁵⁵	20	44	18 07	33	53 36	19 56	54	
15	43	28.0		17.7	16	28.7 ¹²⁹	+5	52.8 ¹⁵⁵	30	29	17 54	23	7 59 31	52	60	
16	58	28.1		17.1	31	00.6 ¹²⁹		37.3 ¹⁵⁵	35	20	47	17	8 03 28	49	64	
17	73	28.1	+17	16.4	45	32.6 ¹³⁰	+5	21.8 ¹⁵⁵	40	17 10	17 39	18 12	8 08 24	19 47	67	
18	88	28.2	+17	15.7	60	04.7 ¹³¹	+5	06.3 ¹⁵⁵	45	16 59	17 30	18 05	8 13 19	19 43	72	
19	103	28.2		15.1	74	36.8 ¹³¹	+4	50.8 ¹⁵⁵	50	45	20	17 59	19 15	40	76	
20	118	28.3		14.4	89	09.0 ¹³²		35.3 ¹⁵⁵	52	38	15	56	22 12	38	79	
21	133	28.3		13.7	103	41.3 ¹³³		19.7 ¹⁵⁶	54	31	10	53	25 10	36	82	
22	148	28.4		13.1	118	13.6 ¹³³	+4	04.2 ¹⁵⁵	56	23	17 05	50	28 7	34	85	
23	163	28.5		12.4	132	46.0 ¹³⁴	+3	48.7 ¹⁵⁵	58	14	16 58	46	32 4	31	88	
24	178	28.5	+17	11.7	147	18.4 ¹³⁴	+3	33.2 ¹⁵⁵	60 S	16 04	16 52	17 42	8 36 1	19 28	92	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 3 ^h 11 ^m 7		Mag: -3.8 PMG: 13 ^h 08 ^m		Mag: +1.7 PMG: 14 ^h 34 ^m		Mag: -2.7 PMG: 22 ^h 11 ^m		Mag: +0.8 PMG: 13 ^h 51 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	311	56.8	163	05.6	+14	12.9	141	07.6	+4	49.2
1	326	59.3	178	05.1		11.8	156	08.6		48.5
2	342	01.7	193	04.6		10.8	171	09.6		47.9
3	357	04.2	208	04.1		09.7	186	10.7		47.3
4	12	06.7	223	03.6		08.7	201	11.7		46.6
5	27	09.1	238	03.0	+14	07.7	216	12.7	+4	46.0
6	42	11.6	253	02.5	+14	06.6	231	13.8	+4	45.4
7	57	14.1	268	02.0		05.6	246	14.8		44.7
8	72	16.5	283	01.5		04.5	261	15.9		44.1
9	87	19.0	298	01.0		03.5	276	16.9		43.5
10	102	21.4	313	00.5		02.4	291	17.9		42.8
11	117	23.9	328	00.0	+14	01.4	306	19.0	+4	42.2
12	132	26.4	342	59.4	+14	00.3	321	20.0	+4	41.5
13	147	28.8	357	58.9	+13	59.3	336	21.1		40.9
14	162	31.3	12	58.4		58.2	351	22.1		40.3
15	177	33.8	27	57.9		57.2	6	23.1		39.6
16	192	36.2	42	57.4		56.1	21	24.2		39.0
17	207	38.7	57	56.9	+13	55.1	36	25.2	+4	38.4
18	222	41.2	72	56.4	+13	54.0	51	26.2	+4	37.7
19	237	43.6	87	55.9		53.0	66	27.3		37.1
20	252	46.1	102	55.4		51.9	81	28.3		36.5
21	267	48.6	117	54.8		50.9	96	29.4		35.8
22	282	51.0	132	54.3		49.8	111	30.4		35.2
23	297	53.5	147	53.8		48.8	126	31.4		34.6
24	312	55.9	162	53.3	+13	47.7	141	32.5	+4	33.9
Dif	—		-5 -10		+10 -6		+27 0		+22 -1	

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8 PMG: 12 ^h 06 ^m 1				Edad: 2 ^d 6 PHE { 4 ^h : 57 ^m 6 12 ^h : 57 ^m 3 20 ^h : 57 ^m 0 R°: 44 ^m													
	hG ☉		Dec		hG ☾ Dif		Dec Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	178	28.5	+17	11.7	147	18.4	+3	33.2	60 N	1 02	2 50	3 48	8 17	90	20 35	0		
1	193	28.6		11.1	161	50.9 ¹³⁵		17.7 ¹⁵⁵	58	1 47	3 08	4 00	18 86		36	4		
2	208	28.6		10.4	176	23.4 ¹³⁵	+3	02.1 ¹⁵⁶	56	2 14	23	10	18 84		37	6		
3	223	28.7		09.7	190	56.0 ¹³⁶	+2	46.6 ¹⁵⁵	54	35	35	19	19 81		38	9		
4	238	28.7		09.1	205	28.7 ¹³⁷		31.1 ¹⁵⁵	52	2 52	46	27	20 77		38	12		
5	253	28.8	+17	08.4	220	01.4 ¹³⁷	+2	15.6 ¹⁵⁵	50	3 06	3 56	4 34	8 20	76	20 39	14		
6	268	28.9	+17	07.7	234	34.1 ¹³⁷	+2	00.2 ¹⁵⁴	45	3 34	4 16	4 49	8 21	70	20 40	19		
7	283	28.9		07.1	249	06.9 ¹³⁸	+1	44.7 ¹⁵⁵	40	3 55	31	5 01	22 66		42	22		
8	298	29.0		06.4	263	39.7 ¹³⁸		29.2 ¹⁵⁵	35	4 11	44	12	23 62		43	26		
9	313	29.0		05.7	278	12.6 ¹³⁹	+1	13.8 ¹⁵⁴	30	24	4 55	21	23 60		44	29		
10	328	29.1		05.0	292	45.5 ¹³⁹	+0	58.3 ¹⁵⁵	20	4 46	5 13	37	25 53		45	35		
11	343	29.2	+17	04.4	307	18.5 ¹⁴⁰	+0	42.9 ¹⁵⁴	10 N	5 02	5 28	5 50	8 26	48	20 46	40		
12	358	29.2	+17	03.7	321	51.5 ¹⁴⁰	+0	27.5 ¹⁵⁴	0	5 16	5 41	6 03	8 27	44	20 48	43		
13	13	29.3		03.0	336	24.5 ¹⁴⁰	+0	12.1 ¹⁵⁴	10 S	28	5 53	15	28 39		49	48		
14	28	29.3		02.4	350	57.6 ¹⁴¹	-0	03.2 ¹⁵³	20	39	6 05	28	29 34		50	53		
15	43	29.4		01.7	5	30.7 ¹⁴¹		18.6 ¹⁵⁴	30	49	18	43	30 29		52	58		
16	58	29.5		01.0	20	03.9 ¹⁴²		33.9 ¹⁵³	35	5 55	25	6 52	31 26		53	61		
17	73	29.5	+17	00.3	34	37.1 ¹⁴²	-0	49.2 ¹⁵³	40	6 00	6 33	7 01	8 32	22	20 54	65		
18	88	29.6	+16	59.7	49	10.3 ¹⁴²	-1	04.5 ¹⁵³	45	6 06	6 41	7 13	8 32	19	20 55	69		
19	103	29.6		59.0	63	43.6 ¹⁴³		19.7 ¹⁵²	50	13	51	26	34 13		56	75		
20	118	29.7		58.3	78	16.8 ¹⁴²		35.0 ¹⁵³	52	15	6 56	33	34 12		57	77		
21	133	29.8		57.6	92	50.2 ¹⁴⁴	-1	50.2 ¹⁵²	54	18	7 01	40	35 9		58	79		
22	148	29.8		57.0	107	23.5 ¹⁴³	-2	05.3 ¹⁵¹	56	22	07	48	35 7		59	82		
23	163	29.9		56.3	121	56.9 ¹⁴⁴		20.5 ¹⁵²	58	25	13	7 57	36 4		20 59	86		
24	178	30.0	+16	55.6	136	30.3 ¹⁴⁴	-2	35.6 ¹⁵¹	60 S	6 29	7 19	8 07	8 37	0	21 00	90		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 3 ^h 07 ^m 8		Mag: -3.8 PMG: 13 ^h 09 ^m				Mag: +1.7 PMG: 14 ^h 33 ^m				Mag: -2.7 PMG: 22 ^h 07 ^m				Mag: +0.8 PMG: 13 ^h 48 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	312	55.9	162	53.3	+13	47.7	141	32.5	+4	33.9	27	15.3	-22	54.5	152	33.5	+10	04.7
1	327	58.4	177	52.8		46.6	156	33.5		33.3	42	18.1		54.5	167	35.7		04.6
2	343	00.9	192	52.3		45.6	171	34.5		32.6	57	20.8		54.6	182	37.9		04.5
3	358	03.3	207	51.8		44.5	186	35.6		32.0	72	23.5		54.6	197	40.1		04.4
4	13	05.8	222	51.3		43.5	201	36.6		31.4	87	26.3		54.6	212	42.3		04.3
5	28	08.3	237	50.8	+13	42.4	216	37.7	+4	30.7	102	29.0	-22	54.7	227	44.4	+10	04.1
6	43	10.7	252	50.3	+13	41.3	231	38.7	+4	30.1	117	31.7	-22	54.7	242	46.6	+10	04.0
7	58	13.2	267	49.8		40.3	246	39.7		29.5	132	34.5		54.7	257	48.8		03.9
8	73	15.7	282	49.3		39.2	261	40.8		28.8	147	37.2		54.8	272	51.0		03.8
9	88	18.1	297	48.8		38.2	276	41.8		28.2	162	39.9		54.8	287	53.2		03.7
10	103	20.6	312	48.3		37.1	291	42.8		27.5	177	42.7		54.8	302	55.4		03.6
11	118	23.0	327	47.8	+13	36.0	306	43.9	+4	26.9	192	45.4	-22	54.8	317	57.6	+10	03.5
12	133	25.5	342	47.3	+13	35.0	321	44.9	+4	26.3	207	48.1	-22	54.9	332	59.8	+10	03.4
13	148	28.0	357	46.8		33.9	336	46.0		25.6	222	50.9		54.9	348	01.9		03.3
14	163	30.4	12	46.3		32.8	351	47.0		25.0	237	53.6		54.9	3	04.1		03.2
15	178	32.9	27	45.8		31.8	6	48.0		24.4	252	56.3		55.0	18	06.3		03.0
16	193	35.4	42	45.3		30.7	21	49.1		23.7	267	59.1		55.0	33	08.5		02.9
17	208	37.8	57	44.8	+13	29.6	36	50.1	+4	23.1	283	01.8	-22	55.0	48	10.7	+10	02.8
18	223	40.3	72	44.3	+13	28.6	51	51.1	+4	22.4	298	04.5	-22	55.1	63	12.9	+10	02.7
19	238	42.8	87	43.8		27.5	66	52.2		21.8	313	07.3		55.1	78	15.1		02.6
20	253	45.2	102	43.3		26.4	81	53.2		21.2	328	10.0		55.1	93	17.2		02.5
21	268	47.7	117	42.8		25.4	96	54.2		20.5	343	12.7		55.2	108	19.4		02.4
22	283	50.2	132	42.3		24.3	111	55.3		19.9	358	15.4		55.2	123	21.6		02.3
23	298	52.6	147	41.8		23.2	126	56.3		19.3	13	18.2		55.2	138	23.8		02.2
24	313	55.1	162	41.3	+13	22.2	141	57.4	+4	18.6	28	20.9	-22	55.3	153	26.0	+10	02.0
Dif	—		-5		-11		+10		-6		+27		0		+22		-	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 12 ^h 06 ^m 0			Edad: 3 ^d 6 PHE	SD: 15 ^h 5 PMG: 15 ^h 21 ^m										
	hG ☉	Dec			hG ☾	Dif									
h	°	'	°	°	'	°	°	h m	h m	h m	h m	h m	h m	h m	m
0	178	30.0	+16 55.6	136	30.3	-2 35.6	60 N	20 19	21 16	22 55	9 47 89	20 35 1			
1	193	30.0	54.9	151	03.7 ¹⁴⁴	-2 50.7 ¹⁵¹	58	20 08	20 59	22 17	44 85	40 4			
2	208	30.1	54.2	165	37.2 ¹⁴⁵	-3 05.8 ¹⁵¹	56	19 59	45	21 51	42 81	43 8			
3	223	30.1	53.6	180	10.6 ¹⁴⁴	20.8 ¹⁵⁰	54	50	33	32	40 78	47 10			
4	238	30.2	52.9	194	44.1 ¹⁴⁵	35.8 ¹⁵⁰	52	42	22	16	37 76	50 13			
5	253	30.3	+16 52.2	209	17.6 ¹⁴⁵	-3 50.7 ¹⁴⁹	50	19 36	20 13	21 02	9 36 73	20 53 15			
6	268	30.3	+16 51.5	223	51.2 ¹⁴⁶	-4 05.7 ¹⁵⁰	45	19 21	19 54	20 35	9 31 69	20 59 20			
7	283	30.4	50.8	238	24.7 ¹⁴⁵	20.5 ¹⁴⁸	40	19 09	39	20 15	28 64	21 04 24			
8	298	30.5	50.2	252	58.3 ¹⁴⁶	35.4 ¹⁴⁹	35	18 59	26	19 59	25 61	09 27			
9	313	30.5	49.5	267	31.9 ¹⁴⁶	-4 50.2 ¹⁴⁸	30	50	19 16	46	23 57	13 29			
10	328	30.6	48.8	282	05.5 ¹⁴⁶	-5 05.0 ¹⁴⁸	20	35	18 58	25	18 52	20 34			
11	343	30.7	+16 48.1	296	39.1 ¹⁴⁶	-5 19.7 ¹⁴⁷	10 N	18 22	18 44	19 09	9 14 48	21 26 39			
12	358	30.7	+16 47.4	311	12.7 ¹⁴⁶	-5 34.4 ¹⁴⁷	0	18 09	18 31	18 56	9 11 43	21 31 44			
13	13	30.8	46.7	325	46.4 ¹⁴⁷	-5 49.1 ¹⁴⁷	10 S	17 57	19	44	07 39	37 48			
14	28	30.9	46.0	340	20.0 ¹⁴⁶	-6 03.7 ¹⁴⁶	20	45	18 07	34	9 03 35	43 53			
15	43	30.9	45.4	354	53.7 ¹⁴⁷	18.2 ¹⁴⁵	30	30	17 55	24	8 59 29	50 58			
16	58	31.0	44.7	9	27.4 ¹⁴⁷	32.8 ¹⁴⁶	35	22	48	18	57 26	54 61			
17	73	31.1	+16 44.0	24	01.0 ¹⁴⁶	-6 47.2 ¹⁴⁴	40	17 12	17 41	18 13	8 54 23	21 59 64			
18	88	31.1	+16 43.3	38	34.7 ¹⁴⁷	-7 01.7 ¹⁴⁵	45	17 01	17 32	18 07	8 51 19	22 04 69			
19	103	31.2	42.6	53	08.4 ¹⁴⁷	16.0 ¹⁴³	50	16 48	22	18 01	47 15	11 73			
20	118	31.3	41.9	67	42.1 ¹⁴⁷	30.4 ¹⁴⁴	52	41	18	17 59	46 12	14 76			
21	133	31.3	41.2	82	15.8 ¹⁴⁷	44.7 ¹⁴³	54	35	13	56	44 9	17 79			
22	148	31.4	40.6	96	49.5 ¹⁴⁷	-7 58.9 ¹⁴²	56	27	08	53	42 7	21 81			
23	163	31.5	39.9	111	23.2 ¹⁴⁷	-8 13.1 ¹⁴²	58	18	17 02	50	40 4	25 85			
24	178	31.6	+16 39.2	125	56.9 ¹⁴⁷	-8 27.2 ¹⁴¹	60 S	16 08	16 56	17 46	8 37 1	22 30 88			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 3 ^h 03 ^m 8		Mag: -3.8 PMG: 13 ^h 10 ^m			Mag: +1.7 PMG: 14 ^h 31 ^m			Mag: -2.7 PMG: 22 ^h 03 ^m			Mag: +0.8 PMG: 13 ^h 44 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	'	°	°	'	°	'
0	313	55.1	162 41.3	+13 22.2	141 57.4	+4 18.6	28 20.9	-22 55.3	153 26.0	+10 02.0					
1	328	57.5	177 40.8	21.1	156 58.4	18.0	43 23.6	55.3	168 28.2	01.9					
2	344	00.0	192 40.3	20.0	171 59.4	17.3	58 26.4	55.3	183 30.4	01.8					
3	359	02.5	207 39.8	18.9	187 00.5	16.7	73 29.1	55.3	198 32.6	01.7					
4	14	04.9	222 39.3	17.9	202 01.5	16.1	88 31.8	55.4	213 34.7	01.6					
5	29	07.4	237 38.8	+13 16.8	217 02.5	+4 15.4	103 34.5	-22 55.4	228 36.9	+10 01.5					
6	44	09.9	252 38.3	+13 15.7	232 03.6	+4 14.8	118 37.3	-22 55.4	243 39.1	+10 01.4					
7	59	12.3	267 37.8	14.6	247 04.6	14.2	133 40.0	55.5	258 41.3	01.3					
8	74	14.8	282 37.4	13.6	262 05.6	13.5	148 42.7	55.5	273 43.5	01.2					
9	89	17.3	297 36.9	12.5	277 06.7	12.9	163 45.4	55.5	288 45.7	01.0					
10	104	19.7	312 36.4	11.4	292 07.7	12.2	178 48.2	55.6	303 47.9	00.9					
11	119	22.2	327 35.9	+13 10.3	307 08.8	+4 11.6	193 50.9	-22 55.6	318 50.0	+10 00.8					
12	134	24.7	342 35.4	+13 09.3	322 09.8	+4 11.0	208 53.6	-22 55.6	333 52.2	+10 00.7					
13	149	27.1	357 34.9	08.2	337 10.8	10.3	223 56.4	55.7	348 54.4	00.6					
14	164	29.6	12 34.4	07.1	352 11.9	09.7	238 59.1	55.7	3 56.6	00.5					
15	179	32.0	27 33.9	06.0	7 12.9	09.0	254 01.8	55.7	18 58.8	00.4					
16	194	34.5	42 33.4	04.9	22 13.9	08.4	269 04.5	55.7	34 01.0	00.3					
17	209	37.0	57 32.9	+13 03.9	37 15.0	+4 07.8	284 07.3	-22 55.8	49 03.2	+10 00.1					
18	224	39.4	72 32.5	+13 02.8	52 16.0	+4 07.1	299 10.0	-22 55.8	64 05.3	+10 00.0					
19	239	41.9	87 32.0	01.7	67 17.0	06.5	314 12.7	55.8	79 07.5	+9 59.9					
20	254	44.4	102 31.5	+13 00.6	82 18.1	05.8	329 15.4	55.9	94 09.7	59.8					
21	269	46.8	117 31.0	+12 59.5	97 19.1	05.2	344 18.1	55.9	109 11.9	59.7					
22	284	49.3	132 30.5	58.4	112 20.1	04.6	359 20.9	55.9	124 14.1	59.6					
23	299	51.8	147 30.0	57.4	127 21.2	03.9	14 23.6	56.0	139 16.3	59.5					
24	314	54.2	162 29.5	+12 56.3	142 22.2	+4 03.3	29 26.3	-22 56.0	154 18.4	+9 59.4					
Dif	—		-5		-11	+10	-6	+27	0	+22	-1				

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna										
	SD: 15 ^h 8			Edad: 4 ^d 6	PHE {																		
	PMG: 12 ^h 05 ^m 8					SD: 15 ^h 3		SD: 15 ^h 3			SD: 15 ^h 3												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R°	Hora	R°									
h	°	'	°	°	'	°	'	h	m	h	m	m	m	m									
0	178	31.6	+16	39.2	125	56.9	-8	27.2	60 N	1	17	2	57	3	53	11	16	89	20	36	2		
1	193	31.6		38.5	140	30.6 ¹⁴⁷		41.3 ¹⁴¹	58	1	56	3	13	4	04		09	85		44	6		
2	208	31.7		37.8	155	04.3 ¹⁴⁷		-8	55.4 ¹⁴¹	56	2	21		27	14	11	03	82		51	9		
3	223	31.8		37.1	169	38.0 ¹⁴⁷		-9	09.3 ¹³⁹	54		41		39	22	10	58	78	20	57	12		
4	238	31.8		36.4	184	11.6 ¹⁴⁶		23.3 ¹⁴⁰	52	2	57		50		30		53	76	21	03	14		
5	253	31.9	+16	35.7	198	45.3 ¹⁴⁷		-9	37.1 ¹³⁸	50	3	10	3	59	4	37	10	49	73	21	08	17	
6	268	32.0	+16	35.0	213	19.0 ¹⁴⁷		-9	51.0 ¹³⁹	45	3	37	4	18	4	51	10	40	68	21	19	21	
7	283	32.0		34.3	227	52.7 ¹⁴⁷		-10	04.7 ¹³⁷	40	3	57		33	5	03		32	64		28	25	
8	298	32.1		33.6	242	26.3 ¹⁴⁶		18.4 ¹³⁷	35	4	13		46		13		26	60		36	28		
9	313	32.2		32.9	257	00.0 ¹⁴⁷		32.1 ¹³⁷	30		26	4	57		22		20	58		42	32		
10	328	32.3		32.3	271	33.6 ¹⁴⁶		45.7 ¹³⁶	20	4	47	5	14		37		10	53		21	54	37	
11	343	32.3	+16	31.6	286	07.2 ¹⁴⁶		-10	59.2 ¹³⁵	10 N	5	03		5	28	5	50	10	02	48	22	05	41
12	358	32.4	+16	30.9	300	40.8 ¹⁴⁶		-11	12.7 ¹³⁵	0	5	16		5	41	6	02	9	54	44	22	15	44
13	13	32.5		30.2	315	14.4 ¹⁴⁶		26.1 ¹³⁴	10 S		27		5	53		14		46	40		25	48	
14	28	32.6		29.5	329	48.0 ¹⁴⁶		39.4 ¹³³	20		38		6	04		27		38	35		36	52	
15	43	32.6		28.8	344	21.6 ¹⁴⁶		-11	52.7 ¹³³	30		48		16		41		28	31		48	57	
16	58	32.7		28.1	358	55.2 ¹⁴⁶		-12	05.9 ¹³²	35		53		23		50		23	28		22	55	60
17	73	32.8	+16	27.4	13	28.7 ¹⁴⁵		-12	19.1 ¹³²	40	5	58	6	31	6	59	9	17	24	23	03	64	
18	88	32.9	+16	26.7	28	02.2 ¹⁴⁵		-12	32.2 ¹³¹	45	6	04	6	39	7	10	9	10	20	23	13	67	
19	103	32.9		26.0	42	35.7 ¹⁴⁵		45.2 ¹³⁰	50		10		49		23		9	02	15	24	73		
20	118	33.0		25.3	57	09.2 ¹⁴⁵		-12	58.1 ¹²⁹	52		12		53		29		8	58	13	30	75	
21	133	33.1		24.6	71	42.7 ¹⁴⁵		-13	11.0 ¹²⁹	54		15	6	58		36		53	11		36	77	
22	148	33.2		23.9	86	16.1 ¹⁴⁴		23.9 ¹²⁹	56		18	7	03		44		49	8		42	81		
23	163	33.2		23.2	100	49.5 ¹⁴⁴		36.6 ¹²⁷	58		21		09	7	52		44	5		50	85		
24	178	33.3	+16	22.5	115	22.9 ¹⁴⁴		-13	49.3 ¹²⁷	60 S	6	25		7	15	8	02	8	38	1	23	58	90

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 2 ^h 59 ^m 9		Mag: -3.8 PMG: 13 ^h 10 ^m		Mag: +1.7 PMG: 14 ^h 30 ^m		Mag: -2.7 PMG: 21 ^h 58 ^m		Mag: +0.8 PMG: 13 ^h 41 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	314	54.2	162	29.5	+12	56.3	142	22.2	+4	03.3	29	26.3	-22	56.0	154	18.4	+9	59.4
1	329	56.7	177	29.1		55.2	157	23.3		02.6	44	29.0		56.0	169	20.6		59.3
2	344	59.1	192	28.6		54.1	172	24.3		02.0	59	31.8		56.0	184	22.8		59.1
3	0	01.6	207	28.1		53.0	187	25.3		01.4	74	34.5		56.1	199	25.0		59.0
4	15	04.1	222	27.6		51.9	202	26.4		00.7	89	37.2		56.1	214	27.2		58.9
5	30	06.5	237	27.1	+12	50.8	217	27.4	+4	00.1	104	39.9	-22	56.1	229	29.4	+9	58.8
6	45	09.0	252	26.6	+12	49.7	232	28.4	+3	59.4	119	42.7	-22	56.2	244	31.6	+9	58.7
7	60	11.5	267	26.2		48.7	247	29.5		58.8	134	45.4		56.2	259	33.7		58.6
8	75	13.9	282	25.7		47.6	262	30.5		58.2	149	48.1		56.2	274	35.9		58.5
9	90	16.4	297	25.2		46.5	277	31.5		57.5	164	50.8		56.3	289	38.1		58.4
10	105	18.9	312	24.7		45.4	292	32.6		56.9	179	53.5		56.3	304	40.3		58.3
11	120	21.3	327	24.2	+12	44.3	307	33.6	+3	56.2	194	56.3	-22	56.3	319	42.5	+9	58.1
12	135	23.8	342	23.8	+12	43.2	322	34.6	+3	55.6	209	59.0	-22	56.3	334	44.7	+9	58.0
13	150	26.3	357	23.3		42.1	337	35.7		55.0	225	01.7		56.4	349	46.9		57.9
14	165	28.7	12	22.8		41.0	352	36.7		54.3	240	04.4		56.4	4	49.0		57.8
15	180	31.2	27	22.3		39.9	7	37.7		53.7	255	07.1		56.4	19	51.2		57.7
16	195	33.6	42	21.8		38.8	22	38.8		53.0	270	09.9		56.5	34	53.4		57.6
17	210	36.1	57	21.4	+12	37.7	37	39.8	+3	52.4	285	12.6	-22	56.5	49	55.6	+9	57.5
18	225	38.6	72	20.9	+12	36.6	52	40.8	+3	51.8	300	15.3	-22	56.5	64	57.8	+9	57.4
19	240	41.0	87	20.4		35.5	67	41.9		51.1	315	18.0		56.5	80	00.0		57.2
20	255	43.5	102	19.9		34.4	82	42.9		50.5	330	20.7		56.6	95	02.1		57.1
21	270	46.0	117	19.5		33.3	97	44.0		49.8	345	23.4		56.6	110	04.3		57.0
22	285	48.4	132	19.0		32.2	112	45.0		49.2	0	26.2		56.6	125	06.5		56.9
23	300	50.9	147	18.5		31.1	127	46.0		48.6	15	28.9		56.7	140	08.7		56.8
24	315	53.4	162	18.0	+12	30.0	142	47.1	+3	47.9	30	31.6	-22	56.7	155	10.9	+9	56.7
Dif	—		-5		-11		+10		-6		+27		0		+22		-	

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna														
	SD: 15 ^h 8 PMG: 12 ^h 05 ^m 7			Edad: 5 ^d 6 PHE { 4 ^h : 55 ^h 3 12 ^h : 55 ^h 1 20 ^h : 55 ^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	h m	h m													
0	178	33.3	+16	22.5	115	22.9	-13	49.3	60 N	20 14	21 09	22 41	12 45	90	20 38	4											
1	193	33.4		21.8	129	56.3 ¹⁴⁴	-14	01.9 ¹²⁶	58	20 03	20 53	22 08	34	85	20 50	9											
2	208	33.5		21.1	144	29.6 ¹⁴³		14.5 ¹²⁶	56	19 54	40	21 44	25	80	21 00	13											
3	223	33.5		20.4	159	03.0 ¹⁴⁴		27.0 ¹²⁵	54	46	28	26	16	78	09	16											
4	238	33.6		19.7	173	36.3 ¹⁴³		39.4 ¹²⁴	52	39	18	21 10	09	74	17	19											
5	253	33.7	+16	19.0	188	09.5 ¹⁴²	-14	51.7 ¹²³	50	19 32	20 09	20 57	12 02	72	21 25	21											
6	268	33.8	+16	18.3	202	42.8 ¹⁴³	-15	04.0 ¹²³	45	19 18	19 51	20 32	11 48	67	21 40	26											
7	283	33.8		17.6	217	16.0 ¹⁴²		16.1 ¹²¹	40	19 07	36	20 12	36	63	21 53	30											
8	298	33.9		16.9	231	49.2 ¹⁴²		28.3 ¹²²	35	18 57	24	19 57	26	60	22 04	33											
9	313	34.0		16.2	246	22.3 ¹⁴¹		40.3 ¹²⁰	30	48	19 14	44	18	57	14	35											
10	328	34.1		15.5	260	55.5 ¹⁴²	-15	52.3 ¹²⁰	20	34	18 57	24	11 03	52	31	39											
11	343	34.2	+16	14.7	275	28.6 ¹⁴¹	-16	04.1 ¹¹⁸	10 N	18 21	18 43	19 09	10 50	49	22 46	42											
12	358	34.2	+16	14.0	290	01.6 ¹⁴⁰	-16	15.9 ¹¹⁸	0	18 09	18 31	18 56	10 38	45	22 59	46											
13	13	34.3		13.3	304	34.6 ¹⁴⁰		27.7 ¹¹⁸	10 S	17 57	19	45	26	41	23 13	50											
14	28	34.4		12.6	319	07.6 ¹⁴⁰		39.3 ¹¹⁶	20	45	18 08	34	10 13	38	28	53											
15	43	34.5		11.9	333	40.6 ¹⁴⁰	-16	50.9 ¹¹⁶	30	31	17 56	25	9 59	33	45	57											
16	58	34.6		11.2	348	13.5 ¹³⁹	-17	02.4 ¹¹⁵	35	23	50	20	51	30	23 55	60											
17	73	34.6	+16	10.5	2	46.4 ¹³⁹	-17	13.8 ¹¹⁴	40	17 14	17 42	18 15	9 41	28	** ** *	**											
18	88	34.7	+16	09.8	17	19.3 ¹³⁹	-17	25.1 ¹¹³	45	17 03	17 34	18 09	9 30	24	** ** *	**											
19	103	34.8		09.1	31	52.1 ¹³⁸		36.4 ¹¹³	50	16 51	25	04	17	19	** ** *	**											
20	118	34.9		08.4	46	24.9 ¹³⁸		47.5 ¹¹¹	52	45	21	18 01	11	17	** ** *	**											
21	133	35.0		07.7	60	57.6 ¹³⁷	-17	58.6 ¹¹¹	54	38	16	17 59	9 04	14	** ** *	**											
22	148	35.0		07.0	75	30.3 ¹³⁷	-18	09.6 ¹¹⁰	56	31	11	56	8 57	11	** ** *	**											
23	163	35.1		06.2	90	03.0 ¹³⁷		20.5 ¹⁰⁹	58	22	06	53	49	7	** ** *	**											
24	178	35.2	+16	05.5	104	35.6 ¹³⁶	-18	31.3 ¹⁰⁸	60 S	16 13	17 00	17 50	8 39	3	** ** *	**											
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO														
	PMG: 2 ^h 56 ^m 0			Mag: -3.8 PMG: 13 ^h 11 ^m			Mag: +1.7 PMG: 14 ^h 28 ^m			Mag: -2.7 PMG: 21 ^h 54 ^m			Mag: +0.8 PMG: 13 ^h 37 ^m														
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec																
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'											
0	315	53.4	162	18.0	+12	30.0	142	47.1	+3	47.9	30	31.6	-22	56.7	155	10.9	+9	56.7									
1	330	55.8	177	17.6		28.9	157	48.1		47.3	45	34.3		56.7	170	13.1		56.6									
2	345	58.3	192	17.1		27.8	172	49.1		46.6	60	37.0		56.8	185	15.2		56.5									
3	1	00.7	207	16.6		26.7	187	50.2		46.0	75	39.7		56.8	200	17.4		56.3									
4	16	03.2	222	16.1		25.6	202	51.2		45.3	90	42.5		56.8	215	19.6		56.2									
5	31	05.7	237	15.7	+12	24.5	217	52.2	+3	44.7	105	45.2	-22	56.8	230	21.8	+9	56.1									
6	46	08.1	252	15.2	+12	23.4	232	53.3	+3	44.1	120	47.9	-22	56.9	245	24.0	+9	56.0									
7	61	10.6	267	14.7		22.3	247	54.3		43.4	135	50.6		56.9	260	26.2		55.9									
8	76	13.1	282	14.3		21.2	262	55.3		42.8	150	53.3		56.9	275	28.3		55.8									
9	91	15.5	297	13.8		20.1	277	56.4		42.1	165	56.0		57.0	290	30.5		55.7									
10	106	18.0	312	13.3		19.0	292	57.4		41.5	180	58.7		57.0	305	32.7		55.6									
11	121	20.5	327	12.9	+12	17.9	307	58.4	+3	40.9	196	01.5	-22	57.0	320	34.9	+9	55.4									
12	136	22.9	342	12.4	+12	16.8	322	59.5	+3	40.2	211	04.2	-22	57.0	335	37.1	+9	55.3									
13	151	25.4	357	11.9		15.7	338	00.5		39.6	226	06.9		57.1	350	39.3		55.2									
14	166	27.9	12	11.5		14.6	353	01.5		38.9	241	09.6		57.1	5	41.5		55.1									
15	181	30.3	27	11.0		13.5	8	02.6		38.3	256	12.3		57.1	20	43.6		55.0									
16	196	32.8	42	10.5		12.4	23	03.6		37.6	271	15.0		57.2	35	45.8		54.9									
17	211	35.2	57	10.1	+12	11.3	38	04.6	+3	37.0	286	17.7	-22	57.2	50	48.0	+9	54.8									
18	226	37.7	72	09.6	+12	10.2	53	05.7	+3	36.4	301	20.5	-22	57.2	65	50.2	+9	54.7									
19	241	40.2	87	09.1		09.0	68	06.7		35.7	316	23.2		57.2	80	52.4		54.6									
20	256	42.6	102	08.7		07.9	83	07.7		35.1	331	25.9		57.3	95	54.6		54.4									
21	271	45.1	117	08.2		06.8	98	08.8		34.4	346	28.6		57.3	110	56.7		54.3									
22	286	47.6	132	07.7		05.7	113	09.8		33.8	1	31.3		57.3	125	58.9		54.2									
23	301	50.0	147	07.3		04.6	128	10.8		33.1	16	34.0		57.4	141	01.1		54.1									
24	316	52.5	162	06.8	+12	03.5	143	11.9	+3	32.5	31	36.7	-22	57.4	156	03.3	+9	54.0									
Dif	—			-5			-11			+10			-6			+27			0			+22			-		

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8 PMG: 12 ^h 05 ^m 6				Edad: 6 ^d 6 PHE { 4 ^h : 54 ^m 8 12 ^h : 54 ^m 7 20 ^h : 54 ^m 5 Rº: 48 ^m SD: 14 ^h 9 PMG: 17 ^h 34 ^m												
	hG ☉		Dec		hG ☾ Dif		Dec Dif			Náutico	Civil		Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	35.2	+16	05.5	104	35.6	-18	31.3	60 N	1 31	3 03	3 58	14 15	90	20 42	8	
1	193	35.3		04.8	119	08.2 ¹³⁶		42.1 ¹⁰⁸	58	2 04	19	4 09	13 59	84	20 59	14	
2	208	35.4		04.1	133	40.7 ¹³⁵	-18	52.7 ¹⁰⁶	56	28	32	18	45	80	21 13	19	
3	223	35.5		03.4	148	13.2 ¹³⁵	-19	03.3 ¹⁰⁶	54	2 46	44	26	34	75	25	2	
4	238	35.5		02.7	162	45.7 ¹³⁵		13.8 ¹⁰⁵	52	3 01	3 54	33	23	73	36	25	
5	253	35.6	+16	02.0	177	18.1 ¹³⁴	-19	24.2 ¹⁰⁴	50	3 14	4 02	4 40	13 14	71	21 46	27	
6	268	35.7	+16	01.3	191	50.5 ¹³⁴	-19	34.5 ¹⁰³	45	3 40	4 21	4 54	12 55	66	22 06	31	
7	283	35.8	+16	00.5	206	22.8 ¹³³		44.7 ¹⁰²	40	3 59	36	5 05	39	63	23	34	
8	298	35.9	+15	59.8	220	55.1 ¹³³	-19	54.8 ¹⁰¹	35	4 15	48	15	26	60	37	37	
9	313	36.0		59.1	235	27.3 ¹³²	-20	04.8 ¹⁰⁰	30	27	4 58	23	12 15	57	22 49	39	
10	328	36.0		58.4	249	59.5 ¹³²		14.7 ⁹⁹	20	4 47	5 15	38	11 55	54	23 10	43	
11	343	36.1	+15	57.7	264	31.7 ¹³²	-20	24.6 ⁹⁹	10 N	5 03	5 29	5 50	11 39	50	23 28	46	
12	358	36.2	+15	57.0	279	03.8 ¹³¹	-20	34.3 ⁹⁷	0	5 16	5 41	6 02	11 23	47	23 45	49	
13	13	36.3		56.2	293	35.8 ¹³⁰		44.0 ⁹⁷	10 S	27	5 52	14	11 07	44	***	***	***
14	28	36.4		55.5	308	07.9 ¹³¹	-20	53.5 ⁹⁵	20	37	6 03	26	10 51	41	***	***	***
15	43	36.5		54.8	322	39.8 ¹²⁹	-21	03.0 ⁹⁵	30	46	15	40	32	37	***	***	***
16	58	36.6		54.1	337	11.7 ¹²⁹		12.4 ⁹⁴	35	51	21	48	21	35	***	***	***
17	73	36.6	+15	53.4	351	43.6 ¹²⁹	-21	21.6 ⁹²	40	5 56	6 28	6 57	10 09	31	0 07	63	
18	88	36.7	+15	52.7	6	15.4 ¹²⁸	-21	30.8 ⁹²	45	6 01	6 36	7 07	9 54	28	0 20	67	
19	103	36.8		51.9	20	47.2 ¹²⁸		39.9 ⁹¹	50	07	45	20	36	24	37	71	
20	118	36.9		51.2	35	19.0 ¹²⁸		48.8 ⁸⁹	52	09	50	26	28	21	45	74	
21	133	37.0		50.5	49	50.6 ¹²⁶	-21	57.7 ⁸⁹	54	12	54	32	18	19	0 53	77	
22	148	37.1		49.8	64	22.3 ¹²⁷	-22	06.5 ⁸⁸	56	15	6 59	39	9 08	15	1 03	81	
23	163	37.2		49.0	78	53.9 ¹²⁶		15.2 ⁸⁷	58	17	7 04	48	8 56	11	15	84	
24	178	37.3	+15	48.3	93	25.4 ¹²⁵	-22	23.7 ⁸⁵	60 S	6 20	7 11	7 57	8 42	6	1 28	90	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 2 ^h 52 ^m 0		Mag: -3.8 PMG: 13 ^h 12 ^m		Mag: +1.7 PMG: 14 ^h 26 ^m		Mag: -2.7 PMG: 21 ^h 50 ^m		Mag: +0.8 PMG: 13 ^h 34 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	316	52.5	162	06.8	+12	03.5	143	11.9	+3	32.5	31	36.7	-22	57.4	156	03.3	+9	54.0
1	331	55.0	177	06.3		02.4	158	12.9		31.9	46	39.4		57.4	171	05.5		53.9
2	346	57.4	192	05.9		01.3	173	13.9		31.2	61	42.1		57.4	186	07.6		53.8
3	1	59.9	207	05.4	+12	00.1	188	15.0		30.6	76	44.8		57.5	201	09.8		53.7
4	17	02.4	222	04.9	+11	59.0	203	16.0		29.9	91	47.6		57.5	216	12.0		53.5
5	32	04.8	237	04.5	+11	57.9	218	17.0	+3	29.3	106	50.3	-22	57.5	231	14.2	+9	53.4
6	47	07.3	252	04.0	+11	56.8	233	18.1	+3	28.6	121	53.0	-22	57.6	246	16.4	+9	53.3
7	62	09.7	267	03.6		55.7	248	19.1		28.0	136	55.7		57.6	261	18.6		53.2
8	77	12.2	282	03.1		54.6	263	20.1		27.4	151	58.4		57.6	276	20.7		53.1
9	92	14.7	297	02.6		53.4	278	21.2		26.7	167	01.1		57.6	291	22.9		53.0
10	107	17.1	312	02.2		52.3	293	22.2		26.1	182	03.8		57.7	306	25.1		52.9
11	122	19.6	327	01.7	+11	51.2	308	23.2	+3	25.4	197	06.5	-22	57.7	321	27.3	+9	52.7
12	137	22.1	342	01.3	+11	50.1	323	24.3	+3	24.8	212	09.2	-22	57.7	336	29.5	+9	52.6
13	152	24.5	357	00.8		49.0	338	25.3		24.1	227	11.9		57.8	351	31.7		52.5
14	167	27.0	12	00.4		47.8	353	26.3		23.5	242	14.6		57.8	6	33.8		52.4
15	182	29.5	26	59.9		46.7	8	27.4		22.9	257	17.3		57.8	21	36.0		52.3
16	197	31.9	41	59.4		45.6	23	28.4		22.2	272	20.1		57.8	36	38.2		52.2
17	212	34.4	56	59.0	+11	44.5	38	29.4	+3	21.6	287	22.8	-22	57.9	51	40.4	+9	52.1
18	227	36.8	71	58.5	+11	43.4	53	30.5	+3	20.9	302	25.5	-22	57.9	66	42.6	+9	52.0
19	242	39.3	86	58.1		42.2	68	31.5		20.3	317	28.2		57.9	81	44.7		51.8
20	257	41.8	101	57.6		41.1	83	32.5		19.6	332	30.9		57.9	96	46.9		51.7
21	272	44.2	116	57.2		40.0	98	33.5		19.0	347	33.6		58.0	111	49.1		51.6
22	287	46.7	131	56.7		38.9	113	34.6		18.3	2	36.3		58.0	126	51.3		51.5
23	302	49.2	146	56.3		37.7	128	35.6		17.7	17	39.0		58.0	141	53.5		51.4
24	317	51.6	161	55.8	+11	36.6	143	36.6	+3	17.1	32	41.7	-22	58.1	156	55.7	+9	51.3
Dif	—		-5		-11		+10		-6		+27		0		+22		-	

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 12 ^h 05 ^m 4			Edad: 7 ^d 6 PHE { 4 ^h : 54 ^h /4 12 ^h : 54 ^h /4 20 ^h : 54 ^h /3 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	h m m
0	178	37.3	+15	48.3	93	25.4	-22	23.7	60 N	20 09	21 03	22 29	15 45 86	20 50 17
1	193	37.3		47.6	107	56.9 ¹²⁵		32.2 ⁸⁵	58	19 59	20 48	21 59	23 78	21 13 24
2	208	37.4		46.9	122	28.4 ¹²⁵		40.6 ⁸⁴	56		50	35	37	15 05 74
3	223	37.5		46.2	136	59.7 ¹²³		48.8 ⁸²	54	42	24	20	14 49 71	21 47 32
4	238	37.6		45.4	151	31.1 ¹²⁴	-22	57.0 ⁸²	52	35	14	21 05	36 68	22 01 34
5	253	37.7	+15	44.7	166	02.4 ¹²³	-23	05.0 ⁸⁰	50	19 29	20 06	20 53	14 25 66	22 13 35
6	268	37.8	+15	44.0	180	33.6 ¹²²	-23	13.0 ⁸⁰	45	19 15	19 48	20 28	14 01 62	22 37 39
7	283	37.9		43.3	195	04.8 ¹²²		20.8 ⁷⁸	40	19 04	34	20 09	13 42 60	22 57 41
8	298	38.0		42.5	209	36.0 ¹²²		28.6 ⁷⁸	35	18 55	22	19 55	26 58	23 14 43
9	313	38.1		41.8	224	07.1 ¹²¹		36.2 ⁷⁶	30	47	19 12	42	13 12 56	28 44
10	328	38.2		41.1	238	38.1 ¹²⁰		43.7 ⁷⁵	20	32	18 56	23	12 49 53	23 53 46
11	343	38.3	+15	40.4	253	09.1 ¹²⁰	-23	51.1 ⁷⁴	10 N	18 20	18 42	19 08	12 29 51	** ** *
12	358	38.3	+15	39.6	267	40.1 ¹²⁰	-23	58.4 ⁷³	0	18 09	18 30	18 55	12 10 49	** ** *
13	13	38.4		38.9	282	11.0 ¹¹⁹	-24	05.6 ⁷²	10 S	17 58	19	45	11 51 47	0 03 50
14	28	38.5		38.2	296	41.9 ¹¹⁹		12.7 ⁷¹	20	46	18 09	35	32 44	21 54
15	43	38.6		37.4	311	12.7 ¹¹⁸		19.7 ⁷⁰	30	32	17 57	26	11 09 42	43 56
16	58	38.7		36.7	325	43.4 ¹¹⁷		26.5 ⁶⁸	35	25	51	21	10 56 39	0 55 59
17	73	38.8	+15	36.0	340	14.1 ¹¹⁷	-24	33.3 ⁶⁸	40	17 16	17 44	18 16	10 40 38	1 10 61
18	88	38.9	+15	35.3	354	44.8 ¹¹⁷	-24	39.9 ⁶⁶	45	17 06	17 37	18 11	10 22 35	1 27 64
19	103	39.0		34.5	9	15.4 ¹¹⁶		46.4 ⁶⁵	50	16 53	28	06	10 00 31	48 69
20	118	39.1		33.8	23	46.0 ¹¹⁶		52.9 ⁶⁵	52	48	24	04	9 49 29	1 59 70
21	133	39.2		33.1	38	16.5 ¹¹⁵	-24	59.1 ⁶²	54	41	19	18 02	37 26	2 10 74
22	148	39.3		32.3	52	47.0 ¹¹⁵	-25	05.3 ⁶²	56	34	15	17 59	23 23	24 76
23	163	39.4		31.6	67	17.4 ¹¹⁴		11.4 ⁶¹	58	26	09	56	9 07 19	39 82
24	178	39.5	+15	30.9	81	47.8 ¹¹⁴	-25	17.3 ⁵⁹	60 S	16 17	17 04	17 54	8 48 12	2 58 88

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 2 ^h 48 ^m 1		Mag: -3.8 PMG: 13 ^h 13 ^m		Mag: +1.7 PMG: 14 ^h 25 ^m		Mag: -2.7 PMG: 21 ^h 45 ^m		Mag: +0.8 PMG: 13 ^h 30 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	317	51.6	161	55.8	+11	36.6	143	36.6	+3	17.1
1	332	54.1	176	55.4		35.5	158	37.7		16.4
2	347	56.6	191	54.9		34.4	173	38.7		15.8
3	2	59.0	206	54.4		33.2	188	39.7		15.1
4	18	01.5	221	54.0		32.1	203	40.8		14.5
5	33	04.0	236	53.5	+11	31.0	218	41.8	+3	13.8
6	48	06.4	251	53.1	+11	29.8	233	42.8	+3	13.2
7	63	08.9	266	52.6		28.7	248	43.9		12.5
8	78	11.3	281	52.2		27.6	263	44.9		11.9
9	93	13.8	296	51.7		26.4	278	45.9		11.3
10	108	16.3	311	51.3		25.3	293	47.0		10.6
11	123	18.7	326	50.8	+11	24.2	308	48.0	+3	10.0
12	138	21.2	341	50.4	+11	23.0	323	49.0	+3	09.3
13	153	23.7	356	49.9		21.9	338	50.1		08.7
14	168	26.1	11	49.5		20.8	353	51.1		08.0
15	183	28.6	26	49.1		19.6	8	52.1		07.4
16	198	31.1	41	48.6		18.5	23	53.2		06.7
17	213	33.5	56	48.2	+11	17.4	38	54.2	+3	06.1
18	228	36.0	71	47.7	+11	16.2	53	55.2	+3	05.5
19	243	38.5	86	47.3		15.1	68	56.2		04.8
20	258	40.9	101	46.8		14.0	83	57.3		04.2
21	273	43.4	116	46.4		12.8	98	58.3		03.5
22	288	45.8	131	45.9		11.7	113	59.3		02.9
23	303	48.3	146	45.5		10.6	129	00.4		02.2
24	318	50.8	161	45.1	+11	09.4	144	01.4	+3	01.6
Dif	—		-4		-11		+10		-6	
									+27	
									0	
									+22	
									-	
									-1	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8			Edad: 8 ^d 6	PHE { 4 ^h : 54 ^h /2 12 ^h : 54 ^h /2 20 ^h : 54 ^h /2	Principio del crepúsculo		Salida de Luna			Puesta de Luna				
	PMG: 12 ^h 05 ^m 3					Rº: 51 ^m									
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	Rº	Hora	Rº	
h	°	'	°	°	'	°	'	°	'	h	m	h	m	h	m
0	178	39.5	+15 30.9	81	47.8	-25 17.3	59	60 N	1 42	3 09	4 03	17 11	69	21 07	37
1	193	39.6	30.1	96	18.1 ¹¹³	23.2	59	58	2 12	24	13	16 41	65	21 37	41
2	208	39.7	29.4	110	48.4 ¹¹³	28.9	57	56	34	37	22	19 62		22 00	43
3	223	39.7	28.7	125	18.6 ¹¹²	34.5	56	54	2 52	48	29	16 00	61	19	44
4	238	39.8	27.9	139	48.8 ¹¹²	39.9	54	52	3 06	3 57	36	15 44	60	35	45
5	253	39.9	+15 27.2	154	19.0 ¹¹²	-25 45.3	54	50	3 18	4 06	4 43	15 31	59	22 48	47
6	268	40.0	+15 26.5	168	49.1 ¹¹¹	-25 50.5	52	45	3 43	4 23	4 56	15 03	58	23 16	48
7	283	40.1	25.7	183	19.1 ¹¹⁰	-25 55.7	52	40	4 02	38	5 07	14 42	56	38	49
8	298	40.2	25.0	197	49.2 ¹¹¹	-26 00.6	49	35	17	49	16	24 55		23 57	49
9	313	40.3	24.3	212	19.1 ¹⁰⁹	05.5	49	30	29	4 59	25	14 08	55	** ** *	**
10	328	40.4	23.5	226	49.1 ¹¹⁰	10.3	48	20	4 48	5 15	39	13 42	53	** ** *	**
11	343	40.5	+15 22.8	241	19.0 ¹⁰⁹	-26 14.9	46	10 N	5 03	5 29	5 51	13 20	52	0 14	48
12	358	40.6	+15 22.0	255	48.8 ¹⁰⁸	-26 19.4	45	0	5 16	5 40	6 02	12 59	51	0 34	49
13	13	40.7	21.3	270	18.6 ¹⁰⁸	23.8	44	10 S	26	5 51	13	38 50		0 53	52
14	28	40.8	20.6	284	48.4 ¹⁰⁸	28.1	43	20	36	6 02	25	12 16	49	1 15	53
15	43	40.9	19.8	299	18.1 ¹⁰⁷	32.2	41	30	45	13	38	11 51	46	39	56
16	58	41.0	19.1	313	47.8 ¹⁰⁷	36.2	40	35	49	19	46	35 46		1 54	57
17	73	41.1	+15 18.4	328	17.5 ¹⁰⁷	-26 40.1	39	40	5 54	6 26	6 54	11 18	45	2 11	58
18	88	41.2	+15 17.6	342	47.1 ¹⁰⁶	-26 43.9	38	45	5 59	6 34	7 04	10 57	43	2 31	60
19	103	41.3	16.9	357	16.7 ¹⁰⁶	47.5	36	50	6 04	42	16	31 41		2 57	63
20	118	41.4	16.1	11	46.2 ¹⁰⁵	51.0	35	52	06	46	22	18 40		3 09	65
21	133	41.5	15.4	26	15.7 ¹⁰⁵	54.4	34	54	08	50	28	10 03	38	24	66
22	148	41.6	14.6	40	45.2 ¹⁰⁵	-26 57.6	32	56	11	6 55	35	9 46	36	3 40	69
23	163	41.7	13.9	55	14.7 ¹⁰⁵	-27 00.8	32	58	13	7 00	43	26 32		4 01	72
24	178	41.8	+15 13.2	69	44.1 ¹⁰⁴	-27 03.7	29	60 S	6 16	7 06	7 52	9 00	26	4 26	79

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG		Mag: -3.8		Mag: +1.7		Mag: -2.7		Mag: +0.8					
	2 ^h 44 ^m 2		PMG: 13 ^h 13 ^m		PMG: 14 ^h 23 ^m		PMG: 21 ^h 41 ^m		PMG: 13 ^h 27 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	318	50.8	161	45.1	+11 09.4	144	01.4	+3 01.6	33	46.5	-22 58.7	157	48.0	+9 48.6
1	333	53.2	176	44.6	08.3	159	02.4	00.9	48	49.2	58.7	172	50.2	48.5
2	348	55.7	191	44.2	07.1	174	03.5	+3 00.3	63	51.9	58.8	187	52.4	48.3
3	3	58.2	206	43.7	06.0	189	04.5	+2 59.6	78	54.6	58.8	202	54.6	48.2
4	19	00.6	221	43.3	04.9	204	05.5	59.0	93	57.3	58.8	217	56.7	48.1
5	34	03.1	236	42.8	+11 03.7	219	06.6	+2 58.4	109	00.0	-22 58.8	232	58.9	+9 48.0
6	49	05.6	251	42.4	+11 02.6	234	07.6	+2 57.7	124	02.7	-22 58.9	248	01.1	+9 47.9
7	64	08.0	266	42.0	01.4	249	08.6	57.1	139	05.4	58.9	263	03.3	47.8
8	79	10.5	281	41.5	+11 00.3	264	09.6	56.4	154	08.1	58.9	278	05.5	47.7
9	94	13.0	296	41.1	+10 59.2	279	10.7	55.8	169	10.8	58.9	293	07.6	47.5
10	109	15.4	311	40.6	58.0	294	11.7	55.1	184	13.5	59.0	308	09.8	47.4
11	124	17.9	326	40.2	+10 56.9	309	12.7	+2 54.5	199	16.2	-22 59.0	323	12.0	+9 47.3
12	139	20.3	341	39.8	+10 55.7	324	13.8	+2 53.8	214	18.9	-22 59.0	338	14.2	+9 47.2
13	154	22.8	356	39.3	54.6	339	14.8	53.2	229	21.6	59.1	353	16.4	47.1
14	169	25.3	11	38.9	53.4	354	15.8	52.5	244	24.2	59.1	8	18.5	47.0
15	184	27.7	26	38.5	52.3	9	16.9	51.9	259	26.9	59.1	23	20.7	46.9
16	199	30.2	41	38.0	51.1	24	17.9	51.2	274	29.6	59.1	38	22.9	46.8
17	214	32.7	56	37.6	+10 50.0	39	18.9	+2 50.6	289	32.3	-22 59.2	53	25.1	+9 46.6
18	229	35.1	71	37.1	+10 48.8	54	19.9	+2 49.9	304	35.0	-22 59.2	68	27.3	+9 46.5
19	244	37.6	86	36.7	47.7	69	21.0	49.3	319	37.7	59.2	83	29.4	46.4
20	259	40.1	101	36.3	46.5	84	22.0	48.7	334	40.4	59.2	98	31.6	46.3
21	274	42.5	116	35.8	45.4	99	23.0	48.0	349	43.1	59.3	113	33.8	46.2
22	289	45.0	131	35.4	44.2	114	24.1	47.4	4	45.8	59.3	128	36.0	46.1
23	304	47.4	146	35.0	43.1	129	25.1	46.7	19	48.5	59.3	143	38.2	46.0
24	319	49.9	161	34.5	+10 41.9	144	26.1	+2 46.1	34	51.2	-22 59.3	158	40.3	+9 45.8
Dif	—		-4	-11		+10	-6		+27	0		+22	-1	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15/8 PMG: 12 ^h 05 ^m 1			Edad: 9 ^d 6 PHE SD: 14/8 PMG: 20 ^h 02 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	178	41.8	+15	13.2	69	44.1	-27	03.7	60 N	20 03	20 56	22 18	18 20	42	21 44	66
1	193	41.9		12.4	84	13.4 ¹⁰³		06.6 ²⁹	58	19 54	42	21 51	17 46	45	22 18	62
2	208	42.0		11.7	98	42.8 ¹⁰⁴		09.4 ²⁸	56		45	30		21	46	
3	223	42.1		10.9	113	12.1 ¹⁰³		12.0 ²⁶	54		38	19	14	17 01	47	
4	238	42.2		10.2	127	41.4 ¹⁰³		14.4 ²⁴	52		31	10	21 00	16 44	48	
5	253	42.3	+15	09.4	142	10.6 ¹⁰²	-27	16.8 ²⁴	50	19 25	20 02	20 48	16 30	48	23 35	57
6	268	42.4	+15	08.7	156	39.9 ¹⁰³	-27	19.0 ²²	45	19 12	19 45	20 25	16 01	49	***	***
7	283	42.5		08.0	171	09.1 ¹⁰²		21.1 ²¹	40	19 02	31	20 06	15 38	50	***	***
8	298	42.6		07.2	185	38.2 ¹⁰¹		23.1 ²⁰	35	18 53	20	19 52		19 50	***	***
9	313	42.7		06.5	200	07.4 ¹⁰²		24.9 ¹⁸	30		45	19 10	40	15 03	50	
10	328	42.8		05.7	214	36.5 ¹⁰¹		26.6 ¹⁷	20		31	18 54	21	14 35	51	
11	343	42.9	+15	05.0	229	05.6 ¹⁰¹	-27	28.2 ¹⁶	10 N	18 19	18 41	19 07	14 12	51	1 02	51
12	358	43.0	+15	04.2	243	34.7 ¹⁰¹	-27	29.6 ¹⁴	0	18 09	18 30	18 55	13 50	51	1 23	52
13	13	43.1		03.5	258	03.8 ¹⁰¹		30.9 ¹³	10 S	17 58	19	45	28 52		1 45	52
14	28	43.2		02.7	272	32.8 ¹⁰⁰		32.0 ¹¹	20		46	18 09	35	13 05	52	
15	43	43.4		02.0	287	01.8 ¹⁰⁰		33.1 ¹¹	30		34	17 58	27	12 37	53	
16	58	43.5		01.2	301	30.8 ¹⁰⁰		34.0 ⁹	35		26	52	22	21 53		
17	73	43.6	+15	00.5	315	59.8 ¹⁰⁰	-27	34.7 ⁷	40	17 18	17 46	18 18	12 03	52	3 09	53
18	88	43.7	+14	59.7	330	28.8 ¹⁰⁰	-27	35.4 ⁷	45	17 08	17 39	18 13	11 40	52	3 31	54
19	103	43.8		59.0	344	57.7 ⁹⁹		35.9 ⁵	50	16 56	30	09	11 12	52	4 00	54
20	118	43.9		58.2	359	26.6 ⁹⁹		36.2 ³	52		51	27	07	10 58	52	
21	133	44.0		57.5	13	55.6 ¹⁰⁰		36.5 ³	54		45	22	05	41 52		
22	148	44.1		56.7	28	24.5 ⁹⁹		36.6 ¹	56		38	18	02	10 22	52	
23	163	44.2		56.0	42	53.4 ⁹⁹		36.5 ¹	58		31	13	18 00	9 58	52	
24	178	44.3	+14	55.2	57	22.3 ⁹⁹	-27	36.4 ¹	60 S	16 22	17 08	17 57	9 26	51	5 45	56

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 2 ^h 40 ^m 2		Mag: -3.8 PMG: 13 ^h 14 ^m		Mag: +1.7 PMG: 14 ^h 21 ^m		Mag: -2.7 PMG: 21 ^h 37 ^m		Mag: +0.8 PMG: 13 ^h 23 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	319	49.9	161	34.5	+10	41.9	144	26.1	+2	46.1
1	334	52.4	176	34.1		40.8	159	27.2		45.4
2	349	54.8	191	33.7		39.6	174	28.2		44.8
3	4	57.3	206	33.2		38.5	189	29.2		44.1
4	19	59.8	221	32.8		37.3	204	30.2		43.5
5	35	02.2	236	32.4	+10	36.2	219	31.3	+2	42.8
6	50	04.7	251	31.9	+10	35.0	234	32.3	+2	42.2
7	65	07.2	266	31.5		33.9	249	33.3		41.5
8	80	09.6	281	31.1		32.7	264	34.4		40.9
9	95	12.1	296	30.6		31.6	279	35.4		40.2
10	110	14.6	311	30.2		30.4	294	36.4		39.6
11	125	17.0	326	29.8	+10	29.3	309	37.4	+2	38.9
12	140	19.5	341	29.4	+10	28.1	324	38.5	+2	38.3
13	155	21.9	356	28.9		26.9	339	39.5		37.7
14	170	24.4	11	28.5		25.8	354	40.5		37.0
15	185	26.9	26	28.1		24.6	9	41.6		36.4
16	200	29.3	41	27.6		23.5	24	42.6		35.7
17	215	31.8	56	27.2	+10	22.3	39	43.6	+2	35.1
18	230	34.3	71	26.8	+10	21.2	54	44.6	+2	34.4
19	245	36.7	86	26.4		20.0	69	45.7		33.8
20	260	39.2	101	25.9		18.8	84	46.7		33.1
21	275	41.7	116	25.5		17.7	99	47.7		32.5
22	290	44.1	131	25.1		16.5	114	48.8		31.8
23	305	46.6	146	24.7		15.4	129	49.8		31.2
24	320	49.1	161	24.2	+10	14.2	144	50.8	+2	30.5
Dif	—		-4		-12		+10		-6	

+27		0		+22		-1	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 10 ^d 6	PHE {	4 ^h : 54 ^m 3 12 ^h : 54 ^m 4 20 ^h : 54 ^m 5				R°: 51 ^m			Hora R°		Hora R°	
	PMG: 12 ^h 05 ^m 0					SD: 14 ^h 8				PMG: 20 ^h 54 ^m			R°: 51 ^m			
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	'	°	h	m	h	m	h	m	m
0	178	44.3	+14	55.2	57	22.3	-27	36.4	4	60 N	1 53	3 15	4 08	19 02	20	22 50 86
1	193	44.4		54.5	71	51.1		36.0	4	58	2 20	29	17	18 31	27	23 20 79
2	208	44.5		53.7	86	20.0		35.6	6	56	40	41	26	18 07	32	23 44 74
3	223	44.6		53.0	100	48.9		35.0	6	54	2 57	3 52	33	17 48	35	** ** *
4	238	44.7		52.2	115	17.7		34.3	7	52	3 11	4 01	40		32 37	** ** *
5	253	44.8	+14	51.4	129	46.6		33.5	8	50	3 22	4 09	4 46	17 18	38	** ** *
6	268	45.0	+14	50.7	144	15.4		32.5	10	45	3 46	4 26	4 58	16 50	41	0 04 56
7	283	45.1		49.9	158	44.3		31.4	11	40	4 04	40	5 09	28 43		27 55
8	298	45.2		49.2	173	13.1		30.1	13	35	18	4 51	18	16 09	45	0 46 55
9	313	45.3		48.4	187	42.0		28.7	14	30	30	5 00	26	15 53	46	1 02 54
10	328	45.4		47.7	202	10.8		27.2	15	20	4 49	16	39	26 48		29 54
11	343	45.5	+14	46.9	216	39.6		25.5	17	10 N	5 03	5 29	5 51	15 03	50	1 53 52
12	358	45.6	+14	46.2	231	08.5		23.7	18	0	5 15	5 40	6 02	14 41	52	2 15 51
13	13	45.7		45.4	245	37.3		21.8	19	10 S	25	5 51	12	14 20	53	2 37 50
14	28	45.8		44.6	260	06.2		19.7	21	20	35	6 01	23	13 57	54	3 00 50
15	43	45.9		43.9	274	35.1		17.5	22	30	43	11	36	30 56		27 49
16	58	46.0		43.1	289	03.9		15.2	23	35	47	17	43	13 14	57	3 43 48
17	73	46.2	+14	42.4	303	32.8		12.7	25	40	5 52	6 24	6 52	12 55	59	4 02 47
18	88	46.3	+14	41.6	318	01.7		10.1	26	45	5 56	6 31	7 01	12 32	61	4 25 45
19	103	46.4		40.8	332	30.6		07.4	27	50	6 01	39	13	12 04	63	4 54 43
20	118	46.5		40.1	346	59.5		04.5	29	52	03	43	18	11 50	64	5 08 42
21	133	46.6		39.3	1	28.4		01.5	30	54	05	47	24	33 66		24 41
22	148	46.7		38.6	15	57.3		01.5	31	56	07	51	31	11 14	68	5 44 38
23	163	46.8		37.8	30	26.3	100	55.1	33	58	09	6 56	38	10 50	71	6 08 36
24	178	46.9	+14	37.0	44	55.2		51.7	34	60 S	6 12	7 01	7 46	10 17	78	6 41 29

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG		Mag: -3.8			Mag: +1.7			Mag: -2.7			Mag: +0.8			
	2 ^h 36 ^m 3		PMG: 13 ^h 15 ^m			PMG: 14 ^h 20 ^m			PMG: 21 ^h 32 ^m			PMG: 13 ^h 20 ^m			
	hG ♈		hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec	
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°	
0	320	49.1	161	24.2	+10	14.2	144	50.8	+2	30.5	35	55.7	-22	59.9	
1	335	51.5	176	23.8		13.0	159	51.8		29.9	50	58.3	-23	00.0	
2	350	54.0	191	23.4		11.9	174	52.9		29.2	66	01.0		00.0	
3	5	56.4	206	23.0		10.7	189	53.9		28.6	81	03.7		00.0	
4	20	58.9	221	22.6		09.5	204	54.9		27.9	96	06.4	-23	00.0	
5	36	01.4	236	22.1	+10	08.4	219	56.0	+2	27.3	111	09.1	-23	00.1	
6	51	03.8	251	21.7	+10	07.2	234	57.0	+2	26.6	126	11.8	-23	00.1	
7	66	06.3	266	21.3		06.0	249	58.0		26.0	141	14.4		00.1	
8	81	08.8	281	20.9		04.9	264	59.0		25.3	156	17.1		00.1	
9	96	11.2	296	20.4		03.7	280	00.1		24.7	171	19.8		00.2	
10	111	13.7	311	20.0		02.5	295	01.1		24.0	186	22.5		00.2	
11	126	16.2	326	19.6	+10	01.4	310	02.1	+2	23.4	201	25.2	-23	00.2	
12	141	18.6	341	19.2	+10	00.2	325	03.1	+2	22.7	216	27.8	-23	00.2	
13	156	21.1	356	18.8	+9	59.0	340	04.2		22.1	231	30.5		00.3	
14	171	23.6	11	18.3		57.9	355	05.2		21.4	246	33.2		00.3	
15	186	26.0	26	17.9		56.7	10	06.2		20.8	261	35.9		00.3	
16	201	28.5	41	17.5		55.5	25	07.3		20.2	276	38.6		00.3	
17	216	30.9	56	17.1	+9	54.4	40	08.3	+2	19.5	291	41.2	-23	00.4	
18	231	33.4	71	16.7	+9	53.2	55	09.3	+2	18.9	306	43.9	-23	00.4	
19	246	35.9	86	16.3		52.0	70	10.3		18.2	321	46.6		00.4	
20	261	38.3	101	15.8		50.9	85	11.4		17.6	336	49.3		00.4	
21	276	40.8	116	15.4		49.7	100	12.4		16.9	351	52.0		00.5	
22	291	43.3	131	15.0		48.5	115	13.4		16.3	6	54.6		00.5	
23	306	45.7	146	14.6		47.3	130	14.4		15.6	21	57.3		00.5	
24	321	48.2	161	14.2	+9	46.2	145	15.5	+2	15.0	37	00.0	-23	00.5	
Dif	—		-4		-12	+10		-6	+27		0		+22		-1

UT	SOL			LUNA					Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 15 ^h 8			Edad: 11 ^d 6 PHE { 4 ^h : 54 ^m 6 12 ^h : 54 ^m 7 20 ^h : 54 ^m 8 R°: 50 ^m															
	PMG: 12 ^h 04 ^m 8			PMG: 21 ^h 45 ^m															
	hG ☉	Dec		hG ☾	Dif	Dec	Dif				Civil	Náutico		Hora	R°		Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m	
0	178	46.9	+14	37.0	44	55.2	-26	51.7	60 N	19	58	20	50	22	07	19	22	9	
1	193	47.1		36.3	59	24.2 ¹⁰⁰		48.1	36	58	49	36	21	43	18	58	16		
2	208	47.2		35.5	73	53.2 ¹⁰⁰		44.5	38	56	41	24	24	39	20		***		
3	223	47.3		34.7	88	22.2 ¹⁰⁰		40.7	36	54	34	14	21	08	23	24	0 03		
4	238	47.4		34.0	102	51.2 ¹⁰⁰		36.7	40	52	27	20	05	20	55	18	09		
5	253	47.5	+14	33.2	117	20.2 ¹⁰⁰	-26	32.6	41	50	19	21	19	58	20	44	17		
6	268	47.6	+14	32.5	131	49.3 ¹⁰¹	-26	28.4	42	45	19	09	19	41	20	21	17		
7	283	47.7		31.7	146	18.4 ¹⁰¹		24.1	43	40	18	59	28	20	03	17	11		
8	298	47.9		30.9	160	47.5 ¹⁰¹		19.6	45	35	50	17	19	49	16	54	39		
9	313	48.0		30.2	175	16.6 ¹⁰¹		15.0	46	30	43	19	08	38	39	42	1		
10	328	48.1		29.4	189	45.8 ¹⁰²		10.3	47	20	30	18	53	20	16	14	45		
11	343	48.2	+14	28.6	204	15.0 ¹⁰²	-26	05.4	49	10 N	18	19	18	40	19	06	15		
12	358	48.3	+14	27.9	218	44.2 ¹⁰²	-26	00.4	50	0	18	08	18	30	18	54	15		
13	13	48.4		27.1	233	13.4 ¹⁰²	-25	55.3	51	10 S	17	58	19	45	15	13	52		
14	28	48.5		26.3	247	42.7 ¹⁰³		50.1	52	20	47	18	10	36	14	51	55		
15	43	48.7		25.6	262	12.0 ¹⁰³		44.7	54	30	35	17	59	28	26	59	4		
16	58	48.8		24.8	276	41.3 ¹⁰³		39.2	55	35	28	54	24	24	14	11	61		
17	73	48.9	+14	24.0	291	10.6 ¹⁰³	-25	33.5	57	40	17	20	17	48	18	20	13		
18	88	49.0	+14	23.2	305	40.0 ¹⁰⁴	-25	27.8	57	45	17	10	17	41	18	16	13		
19	103	49.1		22.5	320	09.4 ¹⁰⁴		21.9	59	50	16	59	33	11	13	07	70		
20	118	49.2		21.7	334	38.8 ¹⁰⁴		15.8	61	52	54	29	09	09	12	54	72		
21	133	49.4		20.9	349	08.3 ¹⁰⁵		09.7	61	54	48	26	08	08	39	75	6		
22	148	49.5		20.2	3	37.8 ¹⁰⁵	-25	03.4	63	56	42	21	06	06	22	79	22		
23	163	49.6		19.4	18	07.4 ¹⁰⁶	-24	57.0	64	58	35	17	03	03	12	01	84		
24	178	49.7	+14	18.6	32	36.9 ¹⁰⁵	-24	50.5	65	60 S	16	27	17	12	18	01	11		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 2 ^h 32 ^m 4		Mag: -3.8 PMG: 13 ^h 15 ^m		Mag: +1.7 PMG: 14 ^h 18 ^m		Mag: -2.7 PMG: 21 ^h 28 ^m		Mag: +0.8 PMG: 13 ^h 16 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	321	48.2	161	14.2	+9	46.2	145	15.5	+2	15.0
1	336	50.7	176	13.8		45.0	160	16.5		14.3
2	351	53.1	191	13.3		43.8	175	17.5		13.7
3	6	55.6	206	12.9		42.6	190	18.6		13.0
4	21	58.1	221	12.5		41.5	205	19.6		12.4
5	37	00.5	236	12.1	+9	40.3	220	20.6	+2	11.7
6	52	03.0	251	11.7	+9	39.1	235	21.6	+2	11.1
7	67	05.4	266	11.3		37.9	250	22.7		10.4
8	82	07.9	281	10.9		36.8	265	23.7		09.8
9	97	10.4	296	10.5		35.6	280	24.7		09.1
10	112	12.8	311	10.0		34.4	295	25.7		08.5
11	127	15.3	326	09.6	+9	33.2	310	26.8	+2	07.8
12	142	17.8	341	09.2	+9	32.1	325	27.8	+2	07.2
13	157	20.2	356	08.8		30.9	340	28.8		06.5
14	172	22.7	11	08.4		29.7	355	29.8		05.9
15	187	25.2	26	08.0		28.5	10	30.9		05.2
16	202	27.6	41	07.6		27.3	25	31.9		04.6
17	217	30.1	56	07.2	+9	26.2	40	32.9	+2	03.9
18	232	32.5	71	06.8	+9	25.0	55	33.9	+2	03.3
19	247	35.0	86	06.4		23.8	70	35.0		02.6
20	262	37.5	101	05.9		22.6	85	36.0		02.0
21	277	39.9	116	05.5		21.4	100	37.0		01.3
22	292	42.4	131	05.1		20.3	115	38.0	+2	00.7
23	307	44.9	146	04.7		19.1	130	39.1	+2	00.0
24	322	47.3	161	04.3	+9	17.9	145	40.1	+1	59.4
Dif	—		-4		-12		+10		-6	

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UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8			Edad: 12 ^d 6 PHE { 4 ^h : 55 ^m 0 12 ^h : 55 ^m 1 20 ^h : 55 ^m 3 R°: 47 ^m											
	PMG: 12 ^h 04 ^m 6			SD: 15 ^h 0 PMG: 22 ^h 35 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	h	m	h	m	h	m	h	m
0	178	49.7	+14	32	36.9	-24	50.5	60 N	2 03	3 21	4 12	19 31	5	0 16	93
1	193	49.8		47	06.6 ¹⁰⁷		43.9	58	27	34	22	19 14	10	39	87
2	208	50.0		61	36.2 ¹⁰⁶		37.1	56	2 47	46	29	18 59	14	0 58	82
3	223	50.1		76	05.9 ¹⁰⁷		30.2	54	3 02	3 56	37	47 17		1 14	78
4	238	50.2		90	35.6 ¹⁰⁷		23.2	52	15	4 05	43	35 20		28	75
5	253	50.3	+14	105	05.4 ¹⁰⁸	-24	16.0	50	3 26	4 12	4 49	18 25	23	1 39	73
6	268	50.4	+14	119	35.2 ¹⁰⁸	-24	08.8	45	3 49	4 29	5 01	18 04	28	2 04	68
7	283	50.6		134	05.0 ¹⁰⁸	-24	01.4	40	4 06	42	11	17 47	32	24	64
8	298	50.7		148	34.9 ¹⁰⁹	-23	53.9	35	20	4 53	19	33 34		40	62
9	313	50.8		163	04.8 ¹⁰⁹		46.3	30	32	5 02	27	17 21	36	2 54	59
10	328	50.9		177	34.7 ¹⁰⁹		38.5	20	4 50	17	40	16 59	41	3 18	55
11	343	51.0	+14	192	04.7 ¹¹⁰	-23	30.7	10 N	5 04	5 29	5 51	16 40	45	3 38	52
12	358	51.2	+14	206	34.8 ¹¹¹	-23	22.7	0	5 15	5 40	6 01	16 23	48	3 57	49
13	13	51.3		221	04.8 ¹¹⁰		14.6	10 S	25	50	11	16 05	52	4 16	46
14	28	51.4		235	34.9 ¹¹¹	-23	06.4	20	33	5 59	22	15 46	56	36	43
15	43	51.5		250	05.1 ¹¹²	-22	58.0	30	41	6 10	34	25 59		4 59	39
16	58	51.6		264	35.3 ¹¹²		49.6	35	45	15	41	15 12	62	5 13	37
17	73	51.8	+14	279	05.5 ¹¹²	-22	41.0	40	5 49	6 21	6 49	14 57	65	5 29	33
18	88	51.9	+14	293	35.8 ¹¹³	-22	32.4	45	5 53	6 28	6 58	14 39	70	5 47	30
19	103	52.0		308	06.2 ¹¹⁴		23.6	50	57	36	7 09	17 74		6 10	26
20	118	52.1		322	36.5 ¹¹³		14.7	52	5 59	39	14	14 06	77	21	23
21	133	52.3		337	07.0 ¹¹⁵	-22	05.7	90	6 01	43	20	13 54	80	34	20
22	148	52.4		351	37.4 ¹¹⁴	-21	56.5	56	03	47	26	41 83		6 48	17
23	163	52.5	+14	6	07.9 ¹¹⁵		47.3	58	05	51	33	25 88		7 05	12
24	178	52.6	+14	20	38.5 ¹¹⁶	-21	38.0	60 S	6 07	6 56	7 41	13 05	94	7 25	6

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 2 ^h 28 ^m 4		Mag: -3.8 PMG: 13 ^h 16 ^m		Mag: +1.7 PMG: 14 ^h 16 ^m		Mag: -2.6 PMG: 21 ^h 24 ^m		Mag: +0.8 PMG: 13 ^h 13 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	322	47.3	161	04.3	+9	17.9	145	40.1	+1	59.4	38	04.2	-23	01.1	161	17.2	+9	37.6
1	337	49.8	176	03.9		16.7	160	41.1		58.7	53	06.8		01.1	176	19.4		37.5
2	352	52.3	191	03.5		15.5	175	42.1		58.1	68	09.5		01.2	191	21.6		37.4
3	7	54.7	206	03.1		14.3	190	43.2		57.4	83	12.2		01.2	206	23.7		37.3
4	22	57.2	221	02.7		13.1	205	44.2		56.8	98	14.8		01.2	221	25.9		37.2
5	37	59.7	236	02.3	+9	12.0	220	45.2	+1	56.1	113	17.5	-23	01.2	236	28.1	+9	37.0
6	53	02.1	251	01.9	+9	10.8	235	46.2	+1	55.5	128	20.2	-23	01.3	251	30.3	+9	36.9
7	68	04.6	266	01.5		09.6	250	47.3		54.8	143	22.8		01.3	266	32.4		36.8
8	83	07.0	281	01.1		08.4	265	48.3		54.2	158	25.5		01.3	281	34.6		36.7
9	98	09.5	296	00.7		07.2	280	49.3		53.5	173	28.2		01.3	296	36.8		36.6
10	113	12.0	311	00.3		06.0	295	50.3		52.9	188	30.8		01.3	311	39.0		36.5
11	128	14.4	325	59.9	+9	04.8	310	51.4	+1	52.2	203	33.5	-23	01.4	326	41.1	+9	36.3
12	143	16.9	340	59.5	+9	03.7	325	52.4	+1	51.6	218	36.2	-23	01.4	341	43.3	+9	36.2
13	158	19.4	355	59.1		02.5	340	53.4		50.9	233	38.8		01.4	356	45.5		36.1
14	173	21.8	10	58.7		01.3	355	54.4		50.2	248	41.5		01.4	11	47.7		36.0
15	188	24.3	25	58.3	+9	00.1	10	55.5		49.6	263	44.2		01.5	26	49.9		35.9
16	203	26.8	40	57.9	+8	58.9	25	56.5		48.9	278	46.8		01.5	41	52.0		35.8
17	218	29.2	55	57.5	+8	57.7	40	57.5	+1	48.3	293	49.5	-23	01.5	56	54.2	+9	35.7
18	233	31.7	70	57.1	+8	56.5	55	58.5	+1	47.6	308	52.2	-23	01.5	71	56.4	+9	35.5
19	248	34.2	85	56.7		55.3	70	59.6		47.0	323	54.8		01.5	86	58.6		35.4
20	263	36.6	100	56.3		54.1	86	00.6		46.3	338	57.5		01.6	102	00.7		35.3
21	278	39.1	115	55.9		52.9	101	01.6		45.7	354	00.2		01.6	117	02.9		35.2
22	293	41.5	130	55.5		51.7	116	02.6		45.0	9	02.8		01.6	132	05.1		35.1
23	308	44.0	145	55.1		50.6	131	03.7		44.4	24	05.5		01.6	147	07.3		35.0
24	323	46.5	160	54.7	+8	49.4	146	04.7	+1	43.7	39	08.1	-23	01.7	162	09.4	+9	34.9
Dif	—		-4		-12		+10		-7		+27		0		+22			-1

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 12 ^h 04 ^m 4			Edad: 13 ^d 6 PHE { 4 ^h : 55 ^m 4 12 ^h : 55 ^m 6 20 ^h : 55 ^m 8 R°: 47 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	h m	h m	h m	h m m	h m m	h m m	h m m	
0	178	52.6	+14 00.0	20	38.5	-21 38.0	60 N	19 52	20 43	21 57	19 36 2	1 49 95			
1	193	52.8	+13 59.2	35	09.0 ¹¹⁵	28.5 ⁹⁵	58	44	30	35	24 6	2 06 89			
2	208	52.9	58.4	49	39.7 ¹¹⁷	19.0 ⁹⁵	56	36	19	17	13 10	20 85			
3	223	53.0	57.6	64	10.4 ¹¹⁷	-21 09.3 ⁹⁷	54	29	10	21 02	19 04 13	32 8			
4	238	53.1	56.9	78	41.1 ¹¹⁷	-20 59.5 ⁹⁸	52	23	20 01	20 50	18 55 16	43 78			
5	253	53.3	+13 56.1	93	11.9 ¹¹⁸	-20 49.6 ⁹⁹	50	19 18	19 54	20 39	18 48 18	2 52 76			
6	268	53.4	+13 55.3	107	42.7 ¹¹⁸	-20 39.7 ⁹⁹	45	19 06	19 38	20 17	18 32 23	3 12 70			
7	283	53.5	54.5	122	13.5 ¹¹⁸	29.6 ¹⁰¹	40	18 56	25	20 00	19 27	28 66			
8	298	53.6	53.7	136	44.4 ¹¹⁹	19.4 ¹⁰²	35	48	15	19 47	18 07 31	42 62			
9	313	53.8	52.9	151	15.4 ¹²⁰	-20 09.1 ¹⁰³	30	41	19 06	36	17 57 34	3 53 60			
10	328	53.9	52.1	165	46.4 ¹²⁰	-19 58.7 ¹⁰⁴	20	28	18 51	18	40 39	4 13 55			
11	343	54.0	+13 51.4	180	17.4 ¹²⁰	-19 48.2 ¹⁰⁵	10 N	18 18	18 39	19 05	17 25 43	4 30 51			
12	358	54.1	+13 50.6	194	48.5 ¹²¹	-19 37.6 ¹⁰⁶	0	18 08	18 29	18 54	17 11 47	4 46 48			
13	13	54.3	49.8	209	19.6 ¹²¹	26.9 ¹⁰⁷	10 S	17 58	19	44	16 57 51	5 02 44			
14	28	54.4	49.0	223	50.8 ¹²²	16.1 ¹⁰⁸	20	48	10	36	42 55	19 40			
15	43	54.5	48.2	238	22.0 ¹²²	-19 05.2 ¹⁰⁹	30	36	18 00	29	24 60	38 35			
16	58	54.7	47.4	252	53.2 ¹²²	-18 54.2 ¹¹⁰	35	29	17 55	25	14 63	5 50 32			
17	73	54.8	+13 46.6	267	24.5 ¹²³	-18 43.2 ¹¹⁰	40	17 21	17 49	18 21	16 02 67	6 02 29			
18	88	54.9	+13 45.9	281	55.8 ¹²³	-18 32.0 ¹¹²	45	17 13	17 43	18 18	15 49 70	6 17 25			
19	103	55.0	45.1	296	27.2 ¹²⁴	20.7 ¹¹³	50	17 02	36	14	31 76	36 20			
20	118	55.2	44.3	310	58.7 ¹²⁵	-18 09.4 ¹¹³	52	16 57	32	12	23 79	44 18			
21	133	55.3	43.5	325	30.1 ¹²⁴	-17 57.9 ¹¹⁵	54	52	29	11	14 82	6 54 15			
22	148	55.4	42.7	340	01.6 ¹²⁵	46.4 ¹¹⁵	56	46	25	09	15 04 85	7 05 12			
23	163	55.6	41.9	354	33.2 ¹²⁶	34.7 ¹¹⁷	58	39	21	07	14 53 88	17 8			
24	178	55.7	+13 41.1	9	04.8 ¹²⁶	-17 23.0 ¹¹⁷	60 S	16 31	17 16	18 05	14 39 94	7 31 4			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 2 ^h 24 ^m 5		Mag: -3.8 PMG: 13 ^h 17 ^m			Mag: +1.7 PMG: 14 ^h 15 ^m			Mag: -2.6 PMG: 21 ^h 20 ^m			Mag: +0.8 PMG: 13 ^h 09 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	°	°	'	°	°	'	°	
0	323	46.5	160 54.7	+8 49.4	146 04.7	+1 43.7	39 08.1	-23 01.7	162 09.4	+9 34.9					
1	338	48.9	175 54.3	48.2	161 05.7	43.1	54 10.8	01.7	177 11.6	34.7					
2	353	51.4	190 53.9	47.0	176 06.7	42.4	69 13.5	01.7	192 13.8	34.6					
3	8 53.9	205 53.5	45.8	191 07.8	41.8	84 16.1	01.7	207 16.0	34.5						
4	23 56.3	220 53.1	44.6	206 08.8	41.1	99 18.8	01.8	222 18.2	34.4						
5	38 58.8	235 52.7	+8 43.4	221 09.8	+1 40.5	114 21.4	-23 01.8	237 20.3	+9 34.3						
6	54 01.3	250 52.3	+8 42.2	236 10.8	+1 39.8	129 24.1	-23 01.8	252 22.5	+9 34.2						
7	69 03.7	265 51.9	41.0	251 11.9	39.2	144 26.8	01.8	267 24.7	34.0						
8	84 06.2	280 51.5	39.8	266 12.9	38.5	159 29.4	01.8	282 26.9	33.9						
9	99 08.7	295 51.1	38.6	281 13.9	37.9	174 32.1	01.9	297 29.0	33.8						
10	114 11.1	310 50.7	37.4	296 14.9	37.2	189 34.8	01.9	312 31.2	33.7						
11	129 13.6	325 50.3	+8 36.2	311 15.9	+1 36.6	204 37.4	-23 01.9	327 33.4	+9 33.6						
12	144 16.0	340 49.9	+8 35.0	326 17.0	+1 35.9	219 40.1	-23 01.9	342 35.6	+9 33.5						
13	159 18.5	355 49.5	33.8	341 18.0	35.3	234 42.7	02.0	357 37.7	33.4						
14	174 21.0	10 49.1	32.6	356 19.0	34.6	249 45.4	02.0	12 39.9	33.2						
15	189 23.4	25 48.7	31.4	11 20.0	34.0	264 48.0	02.0	27 42.1	33.1						
16	204 25.9	40 48.3	30.2	26 21.1	33.3	279 50.7	02.0	42 44.3	33.0						
17	219 28.4	55 47.9	+8 29.0	41 22.1	+1 32.7	294 53.4	-23 02.0	57 46.4	+9 32.9						
18	234 30.8	70 47.6	+8 27.8	56 23.1	+1 32.0	309 56.0	-23 02.1	72 48.6	+9 32.8						
19	249 33.3	85 47.2	26.6	71 24.1	31.3	324 58.7	02.1	87 50.8	32.7						
20	264 35.8	100 46.8	25.4	86 25.1	30.7	340 01.3	02.1	102 53.0	32.5						
21	279 38.2	115 46.4	24.2	101 26.2	30.0	355 04.0	02.1	117 55.1	32.4						
22	294 40.7	130 46.0	23.0	116 27.2	29.4	10 06.6	02.2	132 57.3	32.3						
23	309 43.1	145 45.6	21.8	131 28.2	28.7	25 09.3	02.2	147 59.5	32.2						
24	324 45.6	160 45.2	+8 20.6	146 29.2	+1 28.1	40 12.0	-23 02.2	163 01.7	+9 32.1						
Dif	—		-4 -12	+10 -7		+27 0		+22 -1							

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15/8 PMG: 12 ^h 04 ^m 2			Edad: 14 ^d 6 PHE { SD: 15/2 PMG: *** **m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	178	55.7	+13	41.1	9	04.8	-17 23.0	60 N	2 12	3 26	4 17	19 38	1	3	24	93
1	193	55.8		40.3	23	36.4 ¹²⁶	-17 11.2 ¹¹⁸	58	35	39	26	30	5	35	88	
2	208	55.9		39.5	38	08.1 ¹²⁷	-16 59.3 ¹¹⁹	56	2 52	3 50	33	23	8	45	84	
3	223	56.1		38.7	52	39.8 ¹²⁷	47.3 ¹²⁰	54	3 07	4 00	40	17	10	3	53	82
4	238	56.2		38.0	67	11.5 ¹²⁷	35.2 ¹²¹	52	20	08	46	11	13	4	01	78
5	253	56.3	+13	37.2	81	43.3 ¹²⁸	-16 23.1 ¹²¹	50	3 30	4 16	4 52	19 06	16	4	08	76
6	268	56.5	+13	36.4	96	15.2 ¹²⁹	-16 10.8 ¹²³	45	3 52	4 31	5 03	18 55	20	4	22	71
7	283	56.6		35.6	110	47.0 ¹²⁸	-15 58.5 ¹²³	40	4 09	44	13	46	24	34	67	
8	298	56.7		34.8	125	18.9 ¹²⁹	46.1 ¹²⁴	35	22	4 54	21	38	28	44	63	
9	313	56.9		34.0	139	50.9 ¹³⁰	33.6 ¹²⁵	30	33	5 03	28	31	31	4	53	60
10	328	57.0		33.2	154	22.9 ¹³⁰	21.0 ¹²⁶	20	4 51	17	40	19	36	5	08	55
11	343	57.1	+13	32.4	168	54.9 ¹³⁰	-15 08.4 ¹²⁶	10 N	5 04	5 29	5 51	18 08	41	5	21	50
12	358	57.3	+13	31.6	183	26.9 ¹³⁰	-14 55.6 ¹²⁸	0	5 15	5 40	6 01	17 58	45	5	34	45
13	13	57.4		30.8	197	59.0 ¹³¹	42.8 ¹²⁸	10 S	24	49	11	48	49	46	41	
14	28	57.5		30.0	212	31.2 ¹³²	30.0 ¹²⁸	20	32	5 58	21	37	54	5	59	37
15	43	57.7		29.2	227	03.3 ¹³¹	17.0 ¹³⁰	30	40	6 08	32	24	60	6	13	32
16	58	57.8		28.4	241	35.5 ¹³²	-14 04.0 ¹³⁰	35	43	13	39	17	63	22	29	
17	73	57.9	+13	27.6	256	07.7 ¹³²	-13 50.9 ¹³¹	40	5 47	6 19	6 47	17 09	66	6	31	26
18	88	58.1	+13	26.8	270	40.0 ¹³³	-13 37.7 ¹³²	45	5 50	6 25	6 55	16 59	71	6	42	22
19	103	58.2		26.0	285	12.3 ¹³³	24.4 ¹³³	50	54	32	7 06	47	76	6	56	16
20	118	58.3		25.2	299	44.6 ¹³³	-13 11.1 ¹³³	52	56	35	10	42	78	7	02	14
21	133	58.5		24.4	314	17.0 ¹³⁴	-12 57.7 ¹³⁴	54	57	39	16	36	81	09	12	
22	148	58.6		23.6	328	49.4 ¹³⁴	44.3 ¹³⁴	56	5 59	43	22	29	84	17	8	
23	163	58.7		22.8	343	21.8 ¹³⁴	30.8 ¹³⁵	58	6 00	47	28	21	88	25	6	
24	178	58.9	+13	22.0	357	54.2 ¹³⁴	-12 17.2 ¹³⁶	60 S	6 02	6 51	7 36	16 13	92	7	35	1

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 2 ^h 20 ^m 6		Mag: -3.8 PMG: 13 ^h 17 ^m		Mag: +1.7 PMG: 14 ^h 13 ^m		Mag: -2.6 PMG: 21 ^h 15 ^m		Mag: +0.8 PMG: 13 ^h 06 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	324	45.6	160	45.2	+8	20.6	146	29.2	+1	28.1
1	339	48.1	175	44.8		19.4	161	30.3		27.4
2	354	50.5	190	44.4		18.2	176	31.3		26.8
3	9	53.0	205	44.0		17.0	191	32.3		26.1
4	24	55.5	220	43.6		15.8	206	33.3		25.5
5	39	57.9	235	43.3	+8	14.6	221	34.3	+1	24.8
6	55	00.4	250	42.9	+8	13.4	236	35.4	+1	24.2
7	70	02.9	265	42.5		12.2	251	36.4		23.5
8	85	05.3	280	42.1		11.0	266	37.4		22.9
9	100	07.8	295	41.7		09.8	281	38.4		22.2
10	115	10.3	310	41.3		08.6	296	39.5		21.6
11	130	12.7	325	40.9	+8	07.4	311	40.5	+1	20.9
12	145	15.2	340	40.5	+8	06.1	326	41.5	+1	20.3
13	160	17.6	355	40.2		04.9	341	42.5		19.6
14	175	20.1	10	39.8		03.7	356	43.5		18.9
15	190	22.6	25	39.4		02.5	11	44.6		18.3
16	205	25.0	40	39.0		01.3	26	45.6		17.6
17	220	27.5	55	38.6	+8	00.1	41	46.6	+1	17.0
18	235	30.0	70	38.2	+7	58.9	56	47.6	+1	16.3
19	250	32.4	85	37.9		57.7	71	48.6		15.7
20	265	34.9	100	37.5		56.5	86	49.7		15.0
21	280	37.4	115	37.1		55.3	101	50.7		14.4
22	295	39.8	130	36.7		54.1	116	51.7		13.7
23	310	42.3	145	36.3		52.8	131	52.7		13.1
24	325	44.8	160	35.9	+7	51.6	146	53.8	+1	12.4
Dif	—		-4		-12		+10		-7	
							+27		0	
									+22	
									-1	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15°8 PMG: 12 ^h 04 ^m 0			Edad: 15 ^d 6 PHE { SD: 15°4 PMG: 0 ^h 09 ^m 4 ^h : 56°5 12 ^h : 56°7 20 ^h : 56°9 R°: 45 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	178	58.9	+13 22.0	357	54.2	-12 17.2		60 N	19 47	20 36	21 48	19 39 1	4 57 91		
1	193	59.0		12	26.7 ¹³⁵	-12 03.5 ¹³⁷		58	38	24	27	35 4	5 03 88		
2	208	59.1		26	59.2 ¹³⁵	-11 49.8 ¹³⁷		56	31	14	21 10	31 7	09 85		
3	223	59.3		41	31.7 ¹³⁵	36.0 ¹³⁸		54	25	20 05	20 56	27 10	15 81		
4	238	59.4		56	04.3 ¹³⁶	22.2 ¹³⁸		52	19	19 57	44	24 12	19 79		
5	253	59.5	+13 18.0	70	36.8 ¹³⁵	-11 08.3 ¹³⁹		50	19 14	19 49	20 34	19 22 14	5 24 76		
6	268	59.7	+13 17.2	85	09.4 ¹³⁶	-10 54.3 ¹⁴⁰		45	19 03	19 34	20 13	19 15 20	5 33 71		
7	283	59.8		99	42.1 ¹³⁷	40.3 ¹⁴⁰		40	18 54	22	19 57	10 23	41 66		
8	299	00.0		114	14.7 ¹³⁶	26.2 ¹⁴¹		35	46	12	44	06 26	47 63		
9	314	00.1		128	47.4 ¹³⁷	-10 12.1 ¹⁴¹		30	39	19 04	33	19 02 30	5 53 60		
10	329	00.2		143	20.1 ¹³⁷	-9 57.9 ¹⁴²		20	27	18 50	17	18 55 35	6 03 54		
11	344	00.4	+13 13.2	157	52.8 ¹³⁷	-9 43.7 ¹⁴²		10 N	18 17	18 38	19 04	18 49 40	6 11 50		
12	359	00.5	+13 12.4	172	25.5 ¹³⁷	-9 29.4 ¹⁴³		0	18 07	18 29	18 53	18 43 45	6 19 45		
13	14	00.6		186	58.2 ¹³⁷	15.0 ¹⁴⁴		10 S	17 58	19	44	37 50	27 41		
14	29	00.8		201	31.0 ¹³⁸	-9 00.6 ¹⁴⁴		20	48	11	37	31 54	36 35		
15	44	00.9		216	03.8 ¹³⁸	-8 46.1 ¹⁴⁵		30	37	18 01	30	24 60	45 31		
16	59	01.1		230	36.6 ¹³⁸	31.6 ¹⁴⁵		35	31	17 57	26	20 63	51 27		
17	74	01.2	+13 08.4	245	09.4 ¹³⁸	-8 17.1 ¹⁴⁵		40	17 23	17 51	18 23	18 15 67	6 57 24		
18	89	01.3	+13 07.6	259	42.2 ¹³⁸	-8 02.5 ¹⁴⁶		45	17 15	17 45	18 20	18 10 71	7 04 20		
19	104	01.5		274	15.1 ¹³⁹	-7 47.8 ¹⁴⁷		50	05	38	16	03 77	12 15		
20	119	01.6		288	47.9 ¹³⁸	33.1 ¹⁴⁷		52	17 00	35	15	18 00 79	16 13		
21	134	01.7		303	20.8 ¹³⁹	18.4 ¹⁴⁷		54	16 55	32	14	17 57 82	21 10		
22	149	01.9		317	53.7 ¹³⁹	-7 03.6 ¹⁴⁸		56	49	28	12	53 85	25 8		
23	164	02.0		332	26.6 ¹³⁹	-6 48.8 ¹⁴⁸		58	43	25	11	49 88	31 4		
24	179	02.2	+13 02.8	346	59.5 ¹³⁹	-6 33.9 ¹⁴⁹		60 S	16 36	17 20	18 09	17 45 91	7 36 1		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 2 ^h 16 ^m 6		Mag: -3.8 PMG: 13 ^h 18 ^m		Mag: +1.7 PMG: 14 ^h 11 ^m		Mag: -2.6 PMG: 21 ^h 11 ^m		Mag: +0.8 PMG: 13 ^h 03 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	°	°	'	°	'	°	'
0	325	44.8	160	35.9	+7 51.6		146	53.8	+1 12.4	
1	340	47.2	175	35.6	50.4		161	54.8	11.8	
2	355	49.7	190	35.2	49.2		176	55.8	11.1	
3	10	52.1	205	34.8	48.0		191	56.8	10.5	
4	25	54.6	220	34.4	46.8		206	57.8	09.8	
5	40	57.1	235	34.0	+7 45.6		221	58.9	+1 09.1	
6	55	59.5	250	33.6	+7 44.4		236	59.9	+1 08.5	
7	71	02.0	265	33.3	43.1		252	00.9	07.8	
8	86	04.5	280	32.9	41.9		267	01.9	07.2	
9	101	06.9	295	32.5	40.7		282	02.9	06.5	
10	116	09.4	310	32.1	39.5		297	04.0	05.9	
11	131	11.9	325	31.7	+7 38.3		312	05.0	+1 05.2	
12	146	14.3	340	31.4	+7 37.1		327	06.0	+1 04.6	
13	161	16.8	355	31.0	35.8		342	07.0	03.9	
14	176	19.2	10	30.6	34.6		357	08.0	03.3	
15	191	21.7	25	30.2	33.4		12	09.1	02.6	
16	206	24.2	40	29.9	32.2		27	10.1	02.0	
17	221	26.6	55	29.5	+7 31.0		42	11.1	+1 01.3	
18	236	29.1	70	29.1	+7 29.8		57	12.1	+1 00.6	
19	251	31.6	85	28.7	28.5		72	13.1	+1 00.0	
20	266	34.0	100	28.3	27.3		87	14.1	+0 59.3	
21	281	36.5	115	28.0	26.1		102	15.2	58.7	
22	296	39.0	130	27.6	24.9		117	16.2	58.0	
23	311	41.4	145	27.2	23.7		132	17.2	57.4	
24	326	43.9	160	26.8	+7 22.4		147	18.2	+0 56.7	
Dif	—		-4		-12		+10		-7	

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna		
	SD: 15 ^h 8 PMG: 12 ^h 03 ^m 7				Edad: 16 ^d 6 PHE { 4 ^h : 57 ^h 0 12 ^h : 57 ^h 2 20 ^h : 57 ^h 4 R°: 44 ^m													
	hG ☉		Dec		hG ☾ Dif		Dec Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	179	02.2	+13	02.8	346	59.5	-6	33.9	60 N	2	21	3	32	4	22	19	40	0
1	194	02.3		01.9	1	32.4 ¹³⁹		19.0 ¹⁴⁹	58		42		44	30		39	4	31
2	209	02.5		01.1	16	05.3 ¹³⁹	-6	04.1 ¹⁴⁹	56	2	58	3	55	37		38	7	34
3	224	02.6	+13	00.3	30	38.2 ¹³⁹	-5	49.1 ¹⁵⁰	54	3	12	4	04	44		37	10	36
4	239	02.7	+12	59.5	45	11.1 ¹³⁹		34.1 ¹⁵⁰	52		24		12	49		36	13	38
5	254	02.9	+12	58.7	59	44.0 ¹³⁹	-5	19.1 ¹⁵⁰	50	3	34	4	19	4	54	19	36	14
6	269	03.0	+12	57.9	74	17.0 ¹⁴⁰	-5	04.0 ¹⁵¹	45	3	55	4	34	5	06	19	35	19
7	284	03.2		57.1	88	49.9 ¹³⁹	-4	48.9 ¹⁵¹	40	4	11		46	15		33	24	47
8	299	03.3		56.3	103	22.8 ¹³⁹		33.7 ¹⁵²	35		24	4	56	22		32	27	50
9	314	03.4		55.5	117	55.8 ¹⁴⁰		18.5 ¹⁵²	30		35	5	04	29		32	30	53
10	329	03.6		54.7	132	28.7 ¹³⁹	-4	03.3 ¹⁵²	20	4	51	18		41		30	36	6
11	344	03.7	+12	53.8	147	01.6 ¹³⁹	-3	48.1 ¹⁵²	10 N	5	04	5	29	5	51	19	29	40
12	359	03.9	+12	53.0	161	34.5 ¹³⁹	-3	32.8 ¹⁵³	0	5	15	5	39	6	00	19	28	45
13	14	04.0		52.2	176	07.5 ¹⁴⁰		17.5 ¹⁵³	10 S		23		48	10		27	49	08
14	29	04.2		51.4	190	40.4 ¹³⁹	-3	02.2 ¹⁵³	20		31	5	57	19		25	55	11
15	44	04.3		50.6	205	13.3 ¹³⁹	-2	46.9 ¹⁵³	30		38	6	06	30		24	61	16
16	59	04.4		49.8	219	46.2 ¹³⁹		31.5 ¹⁵⁴	35		41		11	37		23	64	18
17	74	04.6	+12	49.0	234	19.1 ¹³⁹	-2	16.1 ¹⁵⁴	40	5	44	6	16	6	44	19	22	68
18	89	04.7	+12	48.2	248	52.0 ¹³⁹	-2	00.7 ¹⁵⁴	45	5	47	6	22	6	52	19	21	72
19	104	04.9		47.3	263	24.8 ¹³⁸	-1	45.3 ¹⁵⁴	50		51		28	7	02	20	77	27
20	119	05.0		46.5	277	57.7 ¹³⁹		29.9 ¹⁵⁴	52		52		31	06		19	80	29
21	134	05.2		45.7	292	30.5 ¹³⁸	-1	14.4 ¹⁵⁵	54		53		35	11		19	82	31
22	149	05.3		44.9	307	03.4 ¹³⁹	-0	58.9 ¹⁵⁵	56		55		38	17		18	86	33
23	164	05.5		44.1	321	36.2 ¹³⁸		43.4 ¹⁵⁵	58		56		42	23		17	89	35
24	179	05.6	+12	43.3	336	09.0 ¹³⁸	-0	27.9 ¹⁵⁵	60 S	5	57	6	46	7	30	19	16	93
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 2 ^h 12 ^m 7		Mag: -3.8 PMG: 13 ^h 19 ^m				Mag: +1.7 PMG: 14 ^h 10 ^m				Mag: -2.6 PMG: 21 ^h 07 ^m				Mag: +0.8 PMG: 12 ^h 59 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	326	43.9	160	26.8	+7	22.4	147	18.2	+0	56.7	42	19.0	-23	03.2	164	46.1	+9	26.5
1	341	46.4	175	26.5		21.2	162	19.2		56.1	57	21.7		03.2	179	48.2		26.4
2	356	48.8	190	26.1		20.0	177	20.3		55.4	72	24.3		03.2	194	50.4		26.3
3	11	51.3	205	25.7		18.8	192	21.3		54.8	87	27.0		03.3	209	52.6		26.2
4	26	53.7	220	25.3		17.6	207	22.3		54.1	102	29.6		03.3	224	54.8		26.1
5	41	56.2	235	25.0	+7	16.3	222	23.3	+0	53.4	117	32.2	-23	03.3	239	56.9	+9	26.0
6	56	58.7	250	24.6	+7	15.1	237	24.3	+0	52.8	132	34.9	-23	03.3	254	59.1	+9	25.8
7	72	01.1	265	24.2		13.9	252	25.4		52.1	147	37.5		03.3	270	01.3		25.7
8	87	03.6	280	23.8		12.7	267	26.4		51.5	162	40.2		03.4	285	03.5		25.6
9	102	06.1	295	23.5		11.5	282	27.4		50.8	177	42.8		03.4	300	05.6		25.5
10	117	08.5	310	23.1		10.2	297	28.4		50.2	192	45.4		03.4	315	07.8		25.4
11	132	11.0	325	22.7	+7	09.0	312	29.4	+0	49.5	207	48.1	-23	03.4	330	10.0	+9	25.3
12	147	13.5	340	22.4	+7	07.8	327	30.4	+0	48.9	222	50.7	-23	03.4	345	12.2	+9	25.1
13	162	15.9	355	22.0		06.6	342	31.5		48.2	237	53.3		03.5	0	14.3		25.0
14	177	18.4	10	21.6		05.3	357	32.5		47.6	252	56.0		03.5	15	16.5		24.9
15	192	20.8	25	21.2		04.1	12	33.5		46.9	267	58.6		03.5	30	18.7		24.8
16	207	23.3	40	20.9		02.9	27	34.5		46.2	283	01.3		03.5	45	20.9		24.7
17	222	25.8	55	20.5	+7	01.7	42	35.5	+0	45.6	298	03.9	-23	03.5	60	23.0	+9	24.6
18	237	28.2	70	20.1	+7	00.4	57	36.6	+0	44.9	313	06.5	-23	03.6	75	25.2	+9	24.4
19	252	30.7	85	19.8	+6	59.2	72	37.6		44.3	328	09.2		03.6	90	27.4		24.3
20	267	33.2	100	19.4		58.0	87	38.6		43.6	343	11.8		03.6	105	29.6		24.2
21	282	35.6	115	19.0		56.7	102	39.6		43.0	358	14.4		03.6	120	31.7		24.1
22	297	38.1	130	18.6		55.5	117	40.6		42.3	13	17.1		03.6	135	33.9		24.0
23	312	40.6	145	18.3		54.3	132	41.6		41.7	28	19.7		03.7	150	36.1		23.9
24	327	43.0	160	17.9	+6	53.1	147	42.7	+0	41.0	43	22.3	-23	03.7	165	38.3	+9	23.7
Dif	—		-4		-12		+10		-7		+26		0		+22		-	

UT	SOL			☾ LUNA					Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 15'8 PMG: 12 ^h 03 ^m 5			Edad: 17 ^d 6 PHE { 4 ^h : 57'5 12 ^h : 57'7 20 ^h : 57'8 PMG: 1 ^h 38 ^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	05.6	+12	43.3	336	09.0	-0	27.9	60 N	19	41	20	30	21	39	19	40	
1	194	05.7		42.4	350	41.8 ¹³⁸	-0	12.4 ¹⁵⁵	58	33		18		19	43	4		
2	209	05.9		41.6	5	14.6 ¹³⁸	+0	03.1 ¹⁵⁵	56	26		08	21	04	45	8		
3	224	06.0		40.8	19	47.3 ¹³⁷		18.6 ¹⁵⁵	54	20	20	00	20	50	47	10		
4	239	06.2		40.0	34	20.0 ¹³⁷		34.2 ¹⁵⁶	52	15	19	52		39	49	13		
5	254	06.3	+12	39.2	48	52.8 ¹³⁸	+0	49.7 ¹⁵⁵	50	19	10	19	45	20	29	19	50	
6	269	06.5	+12	38.4	63	25.4 ¹³⁶	+1	05.3 ¹⁵⁶	45	18	59	19	31	20	09	19	54	
7	284	06.6		37.5	77	58.1 ¹³⁷		20.9 ¹⁵⁶	40	51		19		19	54	57	25	
8	299	06.8		36.7	92	30.7 ¹³⁶		36.4 ¹⁵⁵	35	43		10		41	19	59		
9	314	06.9		35.9	107	03.3 ¹³⁶	+1	52.0 ¹⁵⁶	30	37	19	02		31	20	02		
10	329	07.1		35.1	121	35.9 ¹³⁶	+2	07.6 ¹⁵⁶	20	26	18	48		15	06	37		
11	344	07.2	+12	34.3	136	08.5 ¹³⁶	+2	23.1 ¹⁵⁵	10 N	18	16	18	37	19	03	20	09	
12	359	07.4	+12	33.4	150	41.0 ¹³⁵	+2	38.7 ¹⁵⁶	0	18	07	18	28	18	53	20	13	
13	14	07.5		32.6	165	13.5 ¹³⁵	+2	54.3 ¹⁵⁶	10 S	17	58		19		44	16	52	
14	29	07.7		31.8	179	46.0 ¹³⁵	+3	09.8 ¹⁵⁵	20	49		11		37	20	57		
15	44	07.8		31.0	194	18.4 ¹³⁴		25.4 ¹⁵⁶	30	38	18	03		31	25	62		
16	59	08.0		30.1	208	50.8 ¹³⁴		40.9 ¹⁵⁵	35	32	17	58		28	27	66		
17	74	08.1	+12	29.3	223	23.1 ¹³³	+3	56.5 ¹⁵⁶	40	17	25	17	53	18	25	20	30	
18	89	08.3	+12	28.5	237	55.5 ¹³⁴	+4	12.0 ¹⁵⁵	45	17	17	17	47	18	22	20	33	
19	104	08.4		27.7	252	27.8 ¹³³		27.5 ¹⁵⁵	50	08		41		19	37	80		
20	119	08.5		26.9	267	00.0 ¹³²		43.0 ¹⁵⁵	52	17	03		38	18	39	83		
21	134	08.7		26.0	281	32.2 ¹³²	+4	58.5 ¹⁵⁵	54	16	59		35	17	41	85		
22	149	08.8		25.2	296	04.4 ¹³²	+5	14.0 ¹⁵⁵	56	53			32	16	44	88		
23	164	09.0		24.4	310	36.5 ¹³¹		29.5 ¹⁵⁵	58	47			28	14	46	92		
24	179	09.1	+12	23.6	325	08.6 ¹³¹	+5	44.9 ¹⁵⁴	60 S	16	41	17	24	18	13	20	49	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 2 ^h 08 ^m 8		Mag: -3.8 PMG: 13 ^h 19 ^m			Mag: +1.7 PMG: 14 ^h 08 ^m			Mag: -2.6 PMG: 21 ^h 03 ^m			Mag: +0.8 PMG: 12 ^h 56 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		hG ♅	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	327	43.0	160	17.9	+6	53.1	147	42.7	+0	41.0	43	22.3	-23	03.7	165	38.3		
1	342	45.5	175	17.5		51.8	162	43.7		40.4	58	25.0		03.7	180	40.4		
2	357	48.0	190	17.2		50.6	177	44.7		39.7	73	27.6		03.7	195	42.6		
3	12	50.4	205	16.8		49.4	192	45.7		39.0	88	30.2		03.7	210	44.8		
4	27	52.9	220	16.4		48.2	207	46.7		38.4	103	32.9		03.7	225	46.9		
5	42	55.3	235	16.1	+6	46.9	222	47.7	+0	37.7	118	35.5	-23	03.8	240	49.1		
6	57	57.8	250	15.7	+6	45.7	237	48.8	+0	37.1	133	38.1	-23	03.8	255	51.3		
7	73	00.3	265	15.3		44.5	252	49.8		36.4	148	40.7		03.8	270	53.5		
8	88	02.7	280	15.0		43.2	267	50.8		35.8	163	43.4		03.8	285	55.6		
9	103	05.2	295	14.6		42.0	282	51.8		35.1	178	46.0		03.8	300	57.8		
10	118	07.7	310	14.2		40.8	297	52.8		34.5	193	48.6		03.9	316	00.0		
11	133	10.1	325	13.9	+6	39.5	312	53.8	+0	33.8	208	51.3	-23	03.9	331	02.2		
12	148	12.6	340	13.5	+6	38.3	327	54.9	+0	33.1	223	53.9	-23	03.9	346	04.3		
13	163	15.1	355	13.1		37.1	342	55.9		32.5	238	56.5		03.9	1	06.5		
14	178	17.5	10	12.8		35.8	357	56.9		31.8	253	59.2		03.9	16	08.7		
15	193	20.0	25	12.4		34.6	12	57.9		31.2	269	01.8		04.0	31	10.9		
16	208	22.4	40	12.0		33.4	27	58.9		30.5	284	04.4		04.0	46	13.0		
17	223	24.9	55	11.7	+6	32.1	42	59.9	+0	29.9	299	07.0	-23	04.0	61	15.2		
18	238	27.4	70	11.3	+6	30.9	58	00.9	+0	29.2	314	09.7	-23	04.0	76	17.4		
19	253	29.8	85	11.0		29.7	73	02.0		28.6	329	12.3		04.0	91	19.5		
20	268	32.3	100	10.6		28.4	88	03.0		27.9	344	14.9		04.1	106	21.7		
21	283	34.8	115	10.2		27.2	103	04.0		27.2	359	17.5		04.1	121	23.9		
22	298	37.2	130	09.9		26.0	118	05.0		26.6	14	20.2		04.1	136	26.1		
23	313	39.7	145	09.5		24.7	133	06.0		25.9	29	22.8		04.1	151	28.2		
24	328	42.2	160	09.1	+6	23.5	148	07.0	+0	25.3	44	25.4	-23	04.1	166	30.4		
Dif	—		-4		-12		+10		-7		+26		0		+22		-1	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15/8 PMG: 12 ^h 03 ^m 3			Edad: 18 ^d 6 PHE { SD: 15/8 PMG: 2 ^h 24 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora
h	°	'	°	'	°	'	°	h	m	h	m	h	m	m
0	179	09.1	+12 23.6	325	08.6	+5 44.9	60 N	2 29	3 38	4 27	19 41	3	9 34	98
1	194	09.3	22.7	339	40.6 ¹³⁰	+6 00.4 ¹⁵⁵	58	2 48	49	35	47	7	29	94
2	209	09.5	21.9	354	12.6 ¹³⁰	15.8 ¹⁵⁴	56	3 04	3 59	41	53	10	25	90
3	224	09.6	21.1	8	44.5 ¹²⁹	31.2 ¹⁵⁴	54	17	4 08	47	19 57	14	21	87
4	239	09.8	20.3	23	16.4 ¹²⁹	+6 46.5 ¹⁵³	52	28	15	53	20 02	16	18	84
5	254	09.9	+12 19.4	37	48.3 ¹²⁹	+7 01.9 ¹⁵⁴	50	3 38	4 22	4 57	20 06	18	9 15	81
6	269	10.1	+12 18.6	52	20.1 ¹²⁸	+7 17.2 ¹⁵³	45	3 58	4 37	5 08	20 14	24	9 08	76
7	284	10.2	17.8	66	51.8 ¹²⁷	32.5 ¹⁵³	40	4 13	48	17	22	28	9 03	71
8	299	10.4	16.9	81	23.5 ¹²⁷	+7 47.8 ¹⁵³	35	26	4 57	24	28	32	8 58	67
9	314	10.5	16.1	95	55.1 ¹²⁶	+8 03.0 ¹⁵²	30	36	5 06	30	33	36	54	64
10	329	10.7	15.3	110	26.7 ¹²⁶	18.2 ¹⁵²	20	4 52	19	41	43	41	47	58
11	344	10.8	+12 14.5	124	58.3 ¹²⁶	+8 33.4 ¹⁵²	10 N	5 04	5 29	5 51	20 52	45	8 41	53
12	359	11.0	+12 13.6	139	29.7 ¹²⁴	+8 48.5 ¹⁵¹	0	5 14	5 39	6 00	21 00	50	8 35	48
13	14	11.1	12.8	154	01.1 ¹²⁴	+9 03.6 ¹⁵¹	10 S	22	47	09	08	54	29	44
14	29	11.3	12.0	168	32.5 ¹²⁴	18.7 ¹⁵¹	20	30	5 55	18	17	59	23	39
15	44	11.4	11.1	183	03.8 ¹²³	33.8 ¹⁵¹	30	36	6 04	28	27	65	16	33
16	59	11.6	10.3	197	35.0 ¹²²	+9 48.7 ¹⁴⁹	35	39	08	34	33	68	12	30
17	74	11.7	+12 09.5	212	06.2 ¹²²	+10 03.7 ¹⁵⁰	40	5 42	6 13	6 41	21 40	72	8 07	27
18	89	11.9	+12 08.7	226	37.3 ¹²¹	+10 18.6 ¹⁴⁹	45	5 44	6 19	6 49	21 48	76	8 02	22
19	104	12.0	07.8	241	08.3 ¹²⁰	33.5 ¹⁴⁹	50	47	25	6 58	21 57	83	7 56	17
20	119	12.2	07.0	255	39.3 ¹²⁰	+10 48.3 ¹⁴⁸	52	48	28	7 02	22 02	85	53	14
21	134	12.4	06.2	270	10.2 ¹¹⁹	+11 03.1 ¹⁴⁸	54	49	30	07	06	89	50	11
22	149	12.5	05.3	284	41.0 ¹¹⁸	17.8 ¹⁴⁷	56	50	34	12	12	92	47	8
23	164	12.7	04.5	299	11.7 ¹¹⁷	32.5 ¹⁴⁷	58	51	37	18	18	96	43	5
24	179	12.8	+12 03.7	313	42.4 ¹¹⁷	+11 47.2 ¹⁴⁷	60 S	5 52	6 41	7 25	22 25	101	7 38	2

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO			
	PMG: 2 ^h 04 ^m 8		Mag: -3.8 PMG: 13 ^h 20 ^m		Mag: +1.7 PMG: 14 ^h 07 ^m		Mag: -2.6 PMG: 20 ^h 59 ^m		Mag: +0.8 PMG: 12 ^h 52 ^m			
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'		
0	328	42.2	160	09.1	+6 23.5	148	07.0	+0 25.3	166	30.4	+9 21.0	
1	343	44.6	175	08.8	22.3	163	08.1	24.6	181	32.6	20.8	
2	358	47.1	190	08.4	21.0	178	09.1	24.0	196	34.8	20.7	
3	13	49.6	205	08.1	19.8	193	10.1	23.3	211	36.9	20.6	
4	28	52.0	220	07.7	18.6	208	11.1	22.6	226	39.1	20.5	
5	43	54.5	235	07.3	+6 17.3	223	12.1	+0 22.0	241	41.3	+9 20.4	
6	58	56.9	250	07.0	+6 16.1	238	13.1	+0 21.3	256	43.5	+9 20.3	
7	73	59.4	265	06.6	14.8	253	14.1	20.7	271	45.6	20.1	
8	89	01.9	280	06.3	13.6	268	15.2	20.0	286	47.8	20.0	
9	104	04.3	295	05.9	12.4	283	16.2	19.4	301	50.0	19.9	
10	119	06.8	310	05.5	11.1	298	17.2	18.7	316	52.1	19.8	
11	134	09.3	325	05.2	+6 09.9	313	18.2	+0 18.1	331	54.3	+9 19.7	
12	149	11.7	340	04.8	+6 08.6	328	19.2	+0 17.4	346	56.5	+9 19.6	
13	164	14.2	355	04.5	07.4	343	20.2	16.7	1	58.7	19.4	
14	179	16.7	10	04.1	06.2	358	21.2	16.1	17	00.8	19.3	
15	194	19.1	25	03.7	04.9	13	22.3	15.4	32	03.0	19.2	
16	209	21.6	40	03.4	03.7	28	23.3	14.8	47	05.2	19.1	
17	224	24.1	55	03.0	+6 02.4	43	24.3	+0 14.1	62	07.4	+9 19.0	
18	239	26.5	70	02.7	+6 01.2	58	25.3	+0 13.5	77	09.5	+9 18.9	
19	254	29.0	85	02.3	+6 00.0	73	26.3	12.8	92	11.7	18.7	
20	269	31.4	100	01.9	+5 58.7	88	27.3	12.1	107	13.9	18.6	
21	284	33.9	115	01.6	57.5	103	28.3	11.5	122	16.0	18.5	
22	299	36.4	130	01.2	56.2	118	29.4	10.8	137	18.2	18.4	
23	314	38.8	145	00.9	55.0	133	30.4	10.2	152	20.4	18.3	
24	329	41.3	160	00.5	+5 53.8	148	31.4	+0 09.5	167	22.6	+9 18.2	
Dif	—		-4	-12		+10	-7		+26	0	+22	-1

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8 PMG: 12 ^h 03 ^m 0			Edad: 19 ^d 6 PHE { 4 ^h : 58 ^h /4 12 ^h : 58 ^h /5 20 ^h : 58 ^h /6 PMG: 3 ^h 11 ^m R°: 51 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	179	12.8	+12 03.7	313	42.4	+11 47.2	60 N	19 35	20 23	21 30	19 44	4	11 12	104	
1	194	13.0	02.8	328	13.1 ¹¹⁷	+12 01.7 ¹⁴⁵	58	28	12	21 12	19 54	10	11 03	98	
2	209	13.1	02.0	342	43.6 ¹¹⁵	16.3 ¹⁴⁶	56	21	20 03	20 57	20 03	14	10 55	94	
3	224	13.3	01.2	357	14.1 ¹¹⁵	30.7 ¹⁴⁴	54	16	19 55	45	11 18		48	90	
4	239	13.4	+12 00.3	11	44.5 ¹¹⁴	45.2 ¹⁴⁵	52	11	47	34	18 21		42	86	
5	254	13.6	+11 59.5	26	14.8 ¹¹³	+12 59.5 ¹⁴³	50	19 06	19 41	20 24	20 24	24	10 36	84	
6	269	13.7	+11 58.7	40	45.0 ¹¹²	+13 13.8 ¹⁴³	45	18 56	19 27	20 05	20 38	29	10 24	78	
7	284	13.9	57.8	55	15.2 ¹¹²	28.1 ¹⁴³	40	48	16	19 51	20 50	33	14	73	
8	299	14.1	57.0	69	45.3 ¹¹¹	42.2 ¹⁴¹	35	41	19 07	39	21 00	37	10 05	70	
9	314	14.2	56.2	84	15.3 ¹¹⁰	+13 56.4 ¹⁴²	30	35	18 59	29	09 40		9 58	66	
10	329	14.4	55.3	98	45.2 ¹⁰⁹	+14 10.4 ¹⁴⁰	20	24	47	13	24 45		45	61	
11	344	14.5	+11 54.5	113	15.1 ¹⁰⁹	+14 24.4 ¹⁴⁰	10 N	18 15	18 36	19 01	21 37	50	9 34	56	
12	359	14.7	+11 53.6	127	44.8 ¹⁰⁷	+14 38.3 ¹³⁹	0	18 06	18 27	18 52	21 50	53	9 23	52	
13	14	14.8	52.8	142	14.5 ¹⁰⁷	+14 52.1 ¹³⁸	10 S	17 58	19	44	22 02	58	13	47	
14	29	15.0	52.0	156	44.1 ¹⁰⁶	+15 05.9 ¹³⁸	20	49	12	37	16 62		9 02	42	
15	44	15.2	51.1	171	13.6 ¹⁰⁵	19.6 ¹³⁷	30	39	18 04	32	32 67		8 49	37	
16	59	15.3	50.3	185	43.0 ¹⁰⁴	33.2 ¹³⁶	35	33	17 59	29	41 71		42	34	
17	74	15.5	+11 49.5	200	12.4 ¹⁰⁴	+15 46.8 ¹³⁶	40	17 27	17 55	18 26	22 52	74	8 34	30	
18	89	15.6	+11 48.6	214	41.6 ¹⁰²	+16 00.3 ¹³⁵	45	17 20	17 50	18 24	23 04	79	8 24	26	
19	104	15.8	47.8	229	10.8 ¹⁰²	13.6 ¹³³	50	11	44	22	20 84		13	20	
20	119	16.0	46.9	243	39.8 ¹⁰⁰	27.0 ¹³⁴	52	07	41	21	27 88		07	18	
21	134	16.1	46.1	258	08.8 ¹⁰⁰	40.2 ¹³²	54	17 02	39	20	35 91		8 01	15	
22	149	16.3	45.3	272	37.7 ⁹⁹	+16 53.3 ¹³¹	56	16 57	36	19	44 95		7 55	12	
23	164	16.4	44.4	287	06.5 ⁹⁸	+17 06.4 ¹³¹	58	51	32	18	23 54	101	48	7	
24	179	16.6	+11 43.6	301	35.2 ⁹⁷	+17 19.4 ¹³⁰	60 S	16 45	17 29	18 17	** ** *	**	7 40	3	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 2 ^h 00 ^m 9		Mag: -3.8 PMG: 13 ^h 20 ^m			Mag: +1.7 PMG: 14 ^h 05 ^m			Mag: -2.6 PMG: 20 ^h 54 ^m			Mag: +0.8 PMG: 12 ^h 49 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	'	°	°	'	°	
0	329	41.3	160 00.5	+5 53.8		148 31.4	+0 09.5		45 28.3	-23 04.6		167 22.6	+9 18.2		
1	344	43.8	175 00.2	52.5		163 32.4	08.9		60 30.9	04.6		182 24.7	18.0		
2	359	46.2	189 59.8	51.3		178 33.4	08.2		75 33.6	04.6		197 26.9	17.9		
3	14	48.7	204 59.5	50.0		193 34.4	07.5		90 36.2	04.6		212 29.1	17.8		
4	29	51.2	219 59.1	48.8		208 35.4	06.9		105 38.8	04.6		227 31.3	17.7		
5	44	53.6	234 58.7	+5 47.5		223 36.4	+0 06.2		120 41.4	-23 04.6		242 33.4	+9 17.6		
6	59	56.1	249 58.4	+5 46.3		238 37.5	+0 05.6		135 44.0	-23 04.7		257 35.6	+9 17.5		
7	74	58.5	264 58.0	45.1		253 38.5	04.9		150 46.6	04.7		272 37.8	17.3		
8	90	01.0	279 57.7	43.8		268 39.5	04.3		165 49.2	04.7		287 39.9	17.2		
9	105	03.5	294 57.3	42.6		283 40.5	03.6		180 51.9	04.7		302 42.1	17.1		
10	120	05.9	309 57.0	41.3		298 41.5	03.0		195 54.5	04.7		317 44.3	17.0		
11	135	08.4	324 56.6	+5 40.1		313 42.5	+0 02.3		210 57.1	-23 04.7		332 46.5	+9 16.9		
12	150	10.9	339 56.3	+5 38.8		328 43.5	+0 01.6		225 59.7	-23 04.8		347 48.6	+9 16.7		
13	165	13.3	354 55.9	37.6		343 44.5	01.0		241 02.3	04.8		2 50.8	16.6		
14	180	15.8	9 55.6	36.3		358 45.6	+0 00.3		256 04.9	04.8		17 53.0	16.5		
15	195	18.3	24 55.2	35.1		13 46.6	-0 00.3		271 07.5	04.8		32 55.1	16.4		
16	210	20.7	39 54.8	33.8		28 47.6	01.0		286 10.2	04.8		47 57.3	16.3		
17	225	23.2	54 54.5	+5 32.6		43 48.6	-0 01.6		301 12.8	-23 04.9		62 59.5	+9 16.2		
18	240	25.7	69 54.1	+5 31.3		58 49.6	-0 02.3		316 15.4	-23 04.9		78 01.7	+9 16.0		
19	255	28.1	84 53.8	30.1		73 50.6	03.0		331 18.0	04.9		93 03.8	15.9		
20	270	30.6	99 53.4	28.8		88 51.6	03.6		346 20.6	04.9		108 06.0	15.8		
21	285	33.0	114 53.1	27.6		103 52.6	04.3		1 23.2	04.9		123 08.2	15.7		
22	300	35.5	129 52.7	26.4		118 53.7	04.9		16 25.8	04.9		138 10.4	15.6		
23	315	38.0	144 52.4	25.1		133 54.7	05.6		31 28.4	05.0		153 12.5	15.5		
24	330	40.4	159 52.0	+5 23.9		148 55.7	-0 06.3		46 31.0	-23 05.0		168 14.7	+9 15.3		
Dif	—		-4		-12	+10		-7	+26		0		+22		-1

UT	SOL			LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8			Edad: 20 ^d 6	PHE	4 ^h : 58 ^m 7 12 ^h : 58 ^m 8 20 ^h : 58 ^m 9			R ^o : 55 ^m			Hora R ^o		Hora R ^o		
	PMG: 12 ^h 02 ^m 8															
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil						
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	179	16.6	+11	301	35.2	+17	19.4	60 N	2	37	3	43	4	32	19	48
1	194	16.8		316	03.8		32.2	58	2	55	3	54	39		20	04
2	209	16.9		330	32.3		45.0	56	3	10	4	04	45		17	23
3	224	17.1		345	00.7	+17	57.7	54	22		12		51		29	26
4	239	17.2		359	29.1	+18	10.3	52	33		19		4	56	39	30
5	254	17.4	+11	13	57.3	+18	22.8	50	3	42	4	26	5	00	20	48
6	269	17.6	+11	28	25.4	+18	35.2	45	4	01	4	39	5	10	21	07
7	284	17.7		42	53.4		47.5	40	16		50		18		23	42
8	299	17.9		57	21.4	+18	59.8	35	28		4	59	25		37	44
9	314	18.0		71	49.2	+19	11.9	30	37		5	07	32		21	49
10	329	18.2		86	17.0		23.9	20	4	53	19		42		22	09
11	344	18.4	+11	100	44.6	+19	35.8	10 N	5	04	5	30	5	51	22	27
12	359	18.5	+11	115	12.1	+19	47.5	0	5	14	5	38	5	59	22	43
13	14	18.7		129	39.6	+19	59.2	10 S	22		46		6	08	23	00
14	29	18.8		144	06.9	+20	10.8	20	28		5	54	16		18	65
15	44	19.0		158	34.2		22.3	30	34		6	02	26		39	69
16	59	19.2		173	01.3		33.6	35	36		06		32		23	52
17	74	19.3	+11	187	28.4	+20	44.8	40	5	39	6	11	6	38	**	**
18	89	19.5	+11	201	55.3	+20	55.9	45	5	41	6	15	6	45	**	**
19	104	19.7		216	22.2	+21	06.9	50	43		21		54		**	**
20	119	19.8		230	48.9		17.8	52	44		24		6	58	**	**
21	134	20.0		245	15.5		28.6	54	45		26		7	03	**	**
22	149	20.1		259	42.1		39.2	56	46		29		07		**	**
23	164	20.3		274	08.5	+21	49.7	58	47		32		13		**	**
24	179	20.5	+11	288	34.9	+22	00.1	60 S	5	47	6	36	7	19	0	06

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO								
	PMG: 1 ^h 57 ^m 0		Mag: -3.8 PMG: 13 ^h 21 ^m		Mag: +1.7 PMG: 14 ^h 03 ^m		Mag: -2.6 PMG: 20 ^h 50 ^m		Mag: +0.8 PMG: 12 ^h 45 ^m								
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec							
h	°	'	°	'	°	'	°	'	°	'							
0	330	40.4	159	52.0	+5	23.9	148	55.7	-0	06.3							
1	345	42.9	174	51.7		22.6	163	56.7		06.9							
2	0	45.4	189	51.3		21.4	178	57.7		07.6							
3	15	47.8	204	51.0		20.1	193	58.7		08.2							
4	30	50.3	219	50.6		18.9	208	59.7		08.9							
5	45	52.8	234	50.3	+5	17.6	224	00.7	-0	09.5							
6	60	55.2	249	49.9	+5	16.4	239	01.7	-0	10.2							
7	75	57.7	264	49.6		15.1	254	02.8		10.9							
8	91	00.1	279	49.2		13.9	269	03.8		11.5							
9	106	02.6	294	48.9		12.6	284	04.8		12.2							
10	121	05.1	309	48.5		11.4	299	05.8		12.8							
11	136	07.5	324	48.2	+5	10.1	314	06.8	-0	13.5							
12	151	10.0	339	47.8	+5	08.8	329	07.8	-0	14.1							
13	166	12.5	354	47.5		07.6	344	08.8		14.8							
14	181	14.9	9	47.1		06.3	359	09.8		15.5							
15	196	17.4	24	46.8		05.1	14	10.8		16.1							
16	211	19.9	39	46.4		03.8	29	11.8		16.8							
17	226	22.3	54	46.1	+5	02.6	44	12.9	-0	17.4							
18	241	24.8	69	45.8	+5	01.3	59	13.9	-0	18.1							
19	256	27.3	84	45.4	+5	00.1	74	14.9		18.7							
20	271	29.7	99	45.1	+4	58.8	89	15.9		19.4							
21	286	32.2	114	44.7		57.6	104	16.9		20.1							
22	301	34.6	129	44.4		56.3	119	17.9		20.7							
23	316	37.1	144	44.0		55.1	134	18.9		21.4							
24	331	39.6	159	43.7	+4	53.8	149	19.9	-0	22.0							
Dif	—		-3		-13		+10		-7		+26		0		+22		-1

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna			
	SD: 15 ^h 8 PMG: 12 ^h 02 ^m 5			Edad: 21 ^d 6 PHE { SD: 16 ^h 1 PMG: 4 ^h 57 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m	h	m	m
0	179	20.5	+11	23.3	288	34.9	+22	00.1	60 N	19 29	20 17	21 21	19 59	25		14 43	102	
1	194	20.6		22.5	303	01.1		10.3	58	22	20 06	21 04	20 21	33		21	94	
2	209	20.8		21.6	317	27.2		20.4	56	17	19 58	20 51	40	37		14 03	89	
3	224	21.0		20.8	331	53.3		30.4	54	11	50	39	20 55	41		13 48	85	
4	239	21.1		19.9	346	19.2		40.3	52	06	43	29	21 09	43		35	83	
5	254	21.3	+11	19.1	0	45.0	+22	50.0	50	19 02	19 37	20 20	21 20	46		13 24	80	
6	269	21.5	+11	18.2	15	10.8	+22	59.6	45	18 53	19 24	20 01	21 45	49		13 00	76	
7	284	21.6		17.4	29	36.4	+23	09.0	40	45	13	19 47	22 05	51		12 42	72	
8	299	21.8		16.5	44	02.0		18.3	35	38	19 05	36	21	54		26	70	
9	314	22.0		15.6	58	27.4		27.5	30	32	18 57	26	22 36	55		12 12	69	
10	329	22.1		14.8	72	52.8		36.5	20	22	45	12	23 00	58		11 49	65	
11	344	22.3	+11	13.9	87	18.0	+23	45.4	10 N	18 14	18 35	19 00	23 21	60		11 29	63	
12	359	22.5	+11	13.1	101	43.2	+23	54.1	0	18 06	18 27	18 51	23 41	62		11 11	59	
13	14	22.6		12.2	116	08.2	+24	02.7	10 S	17 58	19	44	** ** *	**		10 52	57	
14	29	22.8		11.4	130	33.2		11.1	20	50	12	38	** ** *	**		32	55	
15	44	23.0		10.5	144	58.0		19.4	30	40	05	33	** ** *	**		10 10	50	
16	59	23.1		09.7	159	22.8		27.5	35	35	18 01	30	** ** *	**		9 56	49	
17	74	23.3	+11	08.8	173	47.5	+24	35.5	40	17 29	17 56	18 28	0 06	74		9 41	46	
18	89	23.5	+11	08.0	188	12.1	+24	43.3	45	17 22	17 52	18 26	0 23	78		9 23	43	
19	104	23.6		07.1	202	36.6		51.0	50	14	47	24	44	84		9 00	38	
20	119	23.8		06.3	217	01.0	+24	58.5	52	10	44	24	0 55	86		8 50	35	
21	134	24.0		05.4	231	25.3	+25	05.8	54	05	42	23	1 06	89		38	32	
22	149	24.1		04.6	245	49.6		13.0	56	17 01	39	22	19	94		24	28	
23	164	24.3		03.7	260	13.7		20.0	58	16 56	36	22	35	99		8 08	23	
24	179	24.5	+11	02.8	274	37.8	+25	26.9	60 S	16 50	17 33	18 21	1 53	108		7 49	14	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 1 ^h 53 ^m 1		Mag: -3.8 PMG: 13 ^h 21 ^m		Mag: +1.7 PMG: 14 ^h 02 ^m		Mag: -2.6 PMG: 20 ^h 46 ^m		Mag: +0.8 PMG: 12 ^h 42 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	331	39.6	159	43.7	+4	53.8	149	19.9	-23	05.4								
1	346	42.0	174	43.3		52.5	164	20.9		05.4								
2	1	44.5	189	43.0		51.3	179	21.9		05.4								
3	16	47.0	204	42.6		50.0	194	22.9		05.4								
4	31	49.4	219	42.3		48.8	209	24.0		05.4								
5	46	51.9	234	41.9	+4	47.5	224	25.0	-0	25.3								
6	61	54.4	249	41.6	+4	46.3	239	26.0	-0	26.0								
7	76	56.8	264	41.3		45.0	254	27.0		26.6								
8	91	59.3	279	40.9		43.8	269	28.0		27.3								
9	107	01.8	294	40.6		42.5	284	29.0		28.0								
10	122	04.2	309	40.2		41.2	299	30.0		28.6								
11	137	06.7	324	39.9	+4	40.0	314	31.0	-0	29.3								
12	152	09.1	339	39.5	+4	38.7	329	32.0	-0	29.9								
13	167	11.6	354	39.2		37.5	344	33.0		30.6								
14	182	14.1	9	38.9		36.2	359	34.0		31.3								
15	197	16.5	24	38.5		34.9	14	35.0		31.9								
16	212	19.0	39	38.2		33.7	29	36.1		32.6								
17	227	21.5	54	37.8	+4	32.4	44	37.1	-0	33.2								
18	242	23.9	69	37.5	+4	31.2	59	38.1	-0	33.9								
19	257	26.4	84	37.1		29.9	74	39.1		34.5								
20	272	28.9	99	36.8		28.6	89	40.1		35.2								
21	287	31.3	114	36.5		27.4	104	41.1		35.9								
22	302	33.8	129	36.1		26.1	119	42.1		36.5								
23	317	36.3	144	35.8		24.9	134	43.1		37.2								
24	332	38.7	159	35.4	+4	23.6	149	44.1	-0	37.8								
Dif	—		-3		-13		+10		-7		+26		0		+22		-1	

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8 PMG: 12 ^h 02 ^m 2			Edad: 22 ^d 6 PHE { SD: 16 ^h 1 PMG: 5 ^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	179	24.5	+11	02.8	274	37.8	+25 26.9	60 N	2 44	3 49	4 37	20 24	56	16 25	75
1	194	24.6		02.0	289	01.8	33.6	58	3 01	3 59	43	20 54	59	15 55	73
2	209	24.8		01.1	303	25.7	49 40.1	56	15	4 08	49	21 17	60	32	7
3	224	25.0	+11	00.3	317	49.5	48 46.4	54	27	16	54	36	60	15	13
4	239	25.1	+10	59.4	332	13.3	48 52.6	52	37	23	4 59	21 52	61	14 58	69
5	254	25.3	+10	58.6	346	36.9	46 +25 58.7	50	3 46	4 29	5 03	22 06	61	14 44	69
6	269	25.5	+10	57.7	1	00.5	46 +26 04.5	45	4 04	4 42	5 13	22 34	62	14 16	68
7	284	25.6		56.8	15	24.0	45 10.2	40	18	4 52	20	22 56	63	13 54	67
8	299	25.8		56.0	29	47.5	45 15.7	35	29	5 01	27	23 15	62	36	66
9	314	26.0		55.1	44	10.8	43 21.0	30	39	08	33	31	62	13	21
10	329	26.2		54.3	58	34.2	44 26.2	20	4 53	20	43	23 58	63	12 54	65
11	344	26.3	+10	53.4	72	57.4	42 +26 31.2	10 N	5 05	5 30	5 51	** ** *	**	12 32	63
12	359	26.5	+10	52.5	87	20.6	42 +26 36.0	0	5 13	5 38	5 59	** ** *	**	12 10	63
13	14	26.7		51.7	101	43.7	41 40.6	10 S	21	45	6 07	0 01	64	11 49	62
14	29	26.8		50.8	116	06.7	40 45.0	20	27	5 52	15	23	65	27	60
15	44	27.0		50.0	130	29.7	40 49.3	30	32	6 00	24	0 48	68	11 00	59
16	59	27.2		49.1	144	52.6	39 53.4	35	34	04	29	1 03	69	10 45	58
17	74	27.4	+10	48.2	159	15.5	39 +26 57.2	40	5 36	6 08	6 35	1 20	71	10 27	57
18	89	27.5	+10	47.4	173	38.3	38 +27 01.0	45	5 38	6 12	6 42	1 41	73	10 06	55
19	104	27.7		46.5	188	01.1	38 04.5	50	40	17	50	2 08	75	9 38	53
20	119	27.9		45.7	202	23.8	37 07.8	52	40	19	54	21	77	25	52
21	134	28.0		44.8	216	46.5	37 11.0	54	41	22	6 58	35	80	9 10	50
22	149	28.2		43.9	231	09.1	36 14.0	56	41	24	7 03	2 53	82	8 52	48
23	164	28.4		43.1	245	31.7	36 16.7	58	42	27	08	3 14	86	31	43
24	179	28.6	+10	42.2	259	54.2	35 +27 19.3	60 S	5 42	6 30	7 13	3 41	93	8 03	37

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 1 ^h 49 ^m 1		Mag: -3.8 PMG: 13 ^h 22 ^m		Mag: +1.7 PMG: 14 ^h 00 ^m		Mag: -2.6 PMG: 20 ^h 42 ^m		Mag: +0.8 PMG: 12 ^h 38 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	332	38.7	159	35.4	+4 23.6	149 44.1	-0 37.8	48 35.9	-23 05.7	169 58.9	+9 09.7				
1	347	41.2	174	35.1	22.3	164 45.1	38.5	63 38.5	05.7	185 01.1	09.6				
2	2	43.6	189	34.8	21.1	179 46.1	39.2	78 41.1	05.8	200 03.3	09.5				
3	17	46.1	204	34.4	19.8	194 47.1	39.8	93 43.7	05.8	215 05.4	09.4				
4	32	48.6	219	34.1	18.6	209 48.1	40.5	108 46.3	05.8	230 07.6	09.2				
5	47	51.0	234	33.7	+4 17.3	224 49.1	-0 41.1	123 48.9	-23 05.8	245 09.8	+9 09.1				
6	62	53.5	249	33.4	+4 16.0	239 50.1	-0 41.8	138 51.5	-23 05.8	260 12.0	+9 09.0				
7	77	56.0	264	33.1	14.8	254 51.2	42.4	153 54.0	05.8	275 14.1	08.9				
8	92	58.4	279	32.7	13.5	269 52.2	43.1	168 56.6	05.9	290 16.3	08.8				
9	108	00.9	294	32.4	12.3	284 53.2	43.8	183 59.2	05.9	305 18.5	08.7				
10	123	03.4	309	32.0	11.0	299 54.2	44.4	199 01.8	05.9	320 20.6	08.5				
11	138	05.8	324	31.7	+4 09.7	314 55.2	-0 45.1	214 04.4	-23 05.9	335 22.8	+9 08.4				
12	153	08.3	339	31.4	+4 08.5	329 56.2	-0 45.7	229 07.0	-23 05.9	350 25.0	+9 08.3				
13	168	10.7	354	31.0	07.2	344 57.2	46.4	244 09.6	05.9	5 27.1	08.2				
14	183	13.2	9	30.7	05.9	359 58.2	47.1	259 12.2	05.9	20 29.3	08.1				
15	198	15.7	24	30.3	04.7	14 59.2	47.7	274 14.8	06.0	35 31.5	08.0				
16	213	18.1	39	30.0	03.4	30 00.2	48.4	289 17.3	06.0	50 33.7	07.8				
17	228	20.6	54	29.7	+4 02.1	45 01.2	-0 49.0	304 19.9	-23 06.0	65 35.8	+9 07.7				
18	243	23.1	69	29.3	+4 00.9	60 02.2	-0 49.7	319 22.5	-23 06.0	80 38.0	+9 07.6				
19	258	25.5	84	29.0	+3 59.6	75 03.2	50.4	334 25.1	06.0	95 40.2	07.5				
20	273	28.0	99	28.6	58.4	90 04.2	51.0	349 27.7	06.0	110 42.3	07.4				
21	288	30.5	114	28.3	57.1	105 05.2	51.7	4 30.3	06.0	125 44.5	07.3				
22	303	32.9	129	28.0	55.8	120 06.2	52.3	19 32.9	06.1	140 46.7	07.1				
23	318	35.4	144	27.6	54.6	135 07.2	53.0	34 35.5	06.1	155 48.9	07.0				
24	333	37.9	159	27.3	+3 53.3	150 08.2	-0 53.7	49 38.0	-23 06.1	170 51.0	+9 06.9				
Dif	—		-3		-13	+10		-7		+26		0		+22	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'8 PMG: 12 ^h 02 ^m 0			Edad: 23 ^d 6 PHE { 4 ^h : 59'4 12 ^h : 59'4 20 ^h : 59'5 SD: 16'2 PMG: 6 ^h 58 ^m R°: 63 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	179	28.6	+10 42.2	259	54.2	+27 19.3	24	60 N	19 23	20 10	21 13	21 20 93	17 40 38	
1	194	28.7	41.3	274	16.7	21.7	23	58	17	20 00	20 57	21 53 86	17 08 44	
2	209	28.9	40.5	288	39.2	24.0	20	56	12	19 52	44	22 17 82	16 43 48	
3	224	29.1	39.6	303	01.6	26.0	20	54	07	45	33	36 80	24 50	
4	239	29.2	38.7	317	24.0	27.8	18	52	19 02	38	23	22 53 77	16 07 52	
5	254	29.4	+10 37.9	331	46.4	+27 29.5	17	50	18 58	19 32	20 15	23 07 76	15 53 53	
6	269	29.6	+10 37.0	346	08.7	+27 30.9	14	45	18 49	19 20	19 57	23 36 73	15 24 55	
7	284	29.8	36.2	0	31.1	32.2	13	40	42	10	44	23 59 70	15 01 57	
8	299	29.9	35.3	14	53.4	33.2	10	35	36	19 02	33	*** ** *	14 42 58	
9	314	30.1	34.4	29	15.6	34.1	9	30	30	18 55	24	*** ** *	14 26 59	
10	329	30.3	33.6	43	37.9	34.8	7	20	21	43	19 10	*** ** *	13 59 60	
11	344	30.5	+10 32.7	58	00.2	+27 35.3	5	10 N	18 13	18 34	18 59	0 21 63	13 35 62	
12	359	30.6	+10 31.8	72	22.4	+27 35.6	3	0	18 05	18 26	18 51	0 43 63	13 13 63	
13	14	30.8	31.0	86	44.6	35.7	1	10 S	17 58	19	44	1 05 63	12 51 63	
14	29	31.0	30.1	101	06.9	35.6	1	20	50	12	38	28 63	12 27 65	
15	44	31.2	29.2	115	29.1	35.3	3	30	41	06	34	1 56 62	11 59 66	
16	59	31.3	28.4	129	51.3	34.9	4	35	36	18 02	32	2 12 62	43 66	
17	74	31.5	+10 27.5	144	13.5	+27 34.2	7	40	17 31	17 58	18 30	2 31 62	11 24 67	
18	89	31.7	+10 26.6	158	35.8	+27 33.3	9	45	17 24	17 54	18 28	2 54 62	11 01 68	
19	104	31.9	25.7	172	58.0	32.3	10	50	16	49	27	3 23 61	10 31 70	
20	119	32.0	24.9	187	20.3	31.0	13	52	13	47	27	38 60	17 70	
21	134	32.2	24.0	201	42.5	29.6	14	54	09	45	26	3 55 60	10 00 71	
22	149	32.4	23.1	216	04.8	28.0	16	56	05	43	26	4 15 59	9 40 72	
23	164	32.6	22.3	230	27.1	26.1	19	58	17 00	40	26	4 40 58	9 14 74	
24	179	32.7	+10 21.4	244	49.4	+27 24.1	20	60 S	16 54	17 37	18 26	5 14 55	8 40 77	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 1 ^h 45 ^m 2		Mag: -3.8 PMG: 13 ^h 22 ^m			Mag: +1.7 PMG: 13 ^h 59 ^m			Mag: -2.6 PMG: 20 ^h 38 ^m			Mag: +0.8 PMG: 12 ^h 35 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	333	37.9	159	27.3	+3 53.3	150	08.2	-0 53.7	49	38.0	-23 06.1	170	51.0	+9 06.9
1	348	40.3	174	27.0	52.0	165	09.3	54.3	64	40.6	06.1	185	53.2	06.8
2	3	42.8	189	26.6	50.8	180	10.3	55.0	79	43.2	06.1	200	55.4	06.7
3	18	45.2	204	26.3	49.5	195	11.3	55.6	94	45.8	06.1	215	57.5	06.5
4	33	47.7	219	26.0	48.2	210	12.3	56.3	109	48.4	06.1	230	59.7	06.4
5	48	50.2	234	25.6	+3 47.0	225	13.3	-0 56.9	124	51.0	-23 06.2	246	01.9	+9 06.3
6	63	52.6	249	25.3	+3 45.7	240	14.3	-0 57.6	139	53.5	-23 06.2	261	04.0	+9 06.2
7	78	55.1	264	24.9	44.4	255	15.3	58.3	154	56.1	06.2	276	06.2	06.1
8	93	57.6	279	24.6	43.2	270	16.3	58.9	169	58.7	06.2	291	08.4	06.0
9	109	00.0	294	24.3	41.9	285	17.3	-0 59.6	185	01.3	06.2	306	10.6	05.8
10	124	02.5	309	23.9	40.6	300	18.3	-1 00.2	200	03.9	06.2	321	12.7	05.7
11	139	05.0	324	23.6	+3 39.4	315	19.3	-1 00.9	215	06.5	-23 06.2	336	14.9	+9 05.6
12	154	07.4	339	23.3	+3 38.1	330	20.3	-1 01.6	230	09.0	-23 06.3	351	17.1	+9 05.5
13	169	09.9	354	22.9	36.8	345	21.3	02.2	245	11.6	06.3	6	19.2	05.4
14	184	12.4	9	22.6	35.5	0	22.3	02.9	260	14.2	06.3	21	21.4	05.3
15	199	14.8	24	22.3	34.3	15	23.3	03.5	275	16.8	06.3	36	23.6	05.1
16	214	17.3	39	21.9	33.0	30	24.3	04.2	290	19.4	06.3	51	25.8	05.0
17	229	19.7	54	21.6	+3 31.7	45	25.3	-1 04.9	305	21.9	-23 06.3	66	27.9	+9 04.9
18	244	22.2	69	21.3	+3 30.5	60	26.3	-1 05.5	320	24.5	-23 06.3	81	30.1	+9 04.8
19	259	24.7	84	20.9	29.2	75	27.3	06.2	335	27.1	06.4	96	32.3	04.7
20	274	27.1	99	20.6	27.9	90	28.3	06.8	350	29.7	06.4	111	34.4	04.5
21	289	29.6	114	20.3	26.7	105	29.3	07.5	5	32.3	06.4	126	36.6	04.4
22	304	32.1	129	19.9	25.4	120	30.3	08.2	20	34.8	06.4	141	38.8	04.3
23	319	34.5	144	19.6	24.1	135	31.3	08.8	35	37.4	06.4	156	40.9	04.2
24	334	37.0	159	19.3	+3 22.9	150	32.3	-1 09.5	50	40.0	-23 06.4	171	43.1	+9 04.1
Dif	—		-3		-13	+10		-7	+26		0	+22		-1

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8 PMG: 12 ^h 01 ^m 7			Edad: 24 ^d 6 SD: 16 ^h 2 PMG: 8 ^h 01 ^m	PHE { 4 ^h : 59 ^s 5 12 ^h : 59 ^s 5 20 ^h : 59 ^s 4 R°: 61 ^m										
	hG ☉	Dec	Dif			Náutico		Civil	Hora		R°	Hora	R°		
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	179	32.7	+10	21.4	244	49.4	+27	24.1	60 N	2 52	3 54	4 41	22 53	108	18 18
1	194	32.9		20.5	259	11.7		21.9	58	3 07	4 04	48	23 19	100	17 52
2	209	33.1		19.7	273	34.1		19.5	56	20	12	53	39	94	31 29
3	224	33.3		18.8	287	56.5		16.9	54	31	20	4 58	23 56	90	17 14
4	239	33.4		17.9	302	18.9		14.1	52	41	26	5 02	** ** *	**	16 59
5	254	33.6	+10	17.0	316	41.3	+27	11.2	50	3 50	4 32	5 06	** ** *	**	16 46
6	269	33.8	+10	16.2	331	03.8	+27	08.0	45	4 07	4 44	5 15	** ** *	**	16 19
7	284	34.0		15.3	345	26.3		04.7	40	20	4 54	22	** ** *	**	15 58
8	299	34.2		14.4	359	48.9	+27	01.1	35	31	5 02	28	0 17	70	40 50
9	314	34.3		13.6	14	11.5	+26	57.4	30	40	09	34	0 33	68	15 25
10	329	34.5		12.7	28	34.1		53.5	20	4 54	20	43	1 01	65	14 59
11	344	34.7	+10	11.8	42	56.8	+26	49.4	10 N	5 05	5 30	5 51	1 24	64	14 37
12	359	34.9	+10	10.9	57	19.6	+26	45.1	0	5 13	5 37	5 58	1 46	62	14 16
13	14	35.0		10.1	71	42.3		40.6	10 S	20	44	6 06	2 08	60	13 54
14	29	35.2		09.2	86	05.2		36.0	20	25	51	13	31	58	32 66
15	44	35.4		08.3	100	28.1		31.2	30	30	5 58	22	2 58	56	13 05
16	59	35.6		07.4	114	51.0		26.2	35	32	6 01	27	3 14	54	12 49
17	74	35.8	+10	06.6	129	14.0	+26	21.0	40	5 33	6 05	6 32	3 33	52	12 31
18	89	35.9	+10	05.7	143	37.1	+26	15.6	45	5 35	6 09	6 39	3 56	49	12 09
19	104	36.1		04.8	158	00.3		10.0	50	36	13	46	4 24	45	11 41
20	119	36.3		03.9	172	23.5	+26	04.3	52	36	15	50	38	43	27 83
21	134	36.5		03.1	186	46.7	+25	58.4	54	36	17	53	4 55	40	11 11
22	149	36.7		02.2	201	10.1		52.3	56	37	20	6 58	5 14	37	10 52
23	164	36.8		01.3	215	33.5		46.1	58	37	22	7 02	5 38	31	10 28
24	179	37.0	+10	00.4	229	56.9	+25	39.6	60 S	5 37	6 25	7 08	6 09	23	9 57

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 1 ^h 41 ^m 3		Mag: -3.8 PMG: 13 ^h 23 ^m		Mag: +1.7 PMG: 13 ^h 57 ^m		Mag: -2.6 PMG: 20 ^h 34 ^m		Mag: +0.8 PMG: 12 ^h 31 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	334	37.0	159	19.3	+3	22.9	150	32.3	-1	09.5
1	349	39.5	174	18.9		21.6	165	33.3		10.1
2	4	41.9	189	18.6		20.3	180	34.3		10.8
3	19	44.4	204	18.3		19.0	195	35.3		11.5
4	34	46.9	219	17.9		17.8	210	36.3		12.1
5	49	49.3	234	17.6	+3	16.5	225	37.3	-1	12.8
6	64	51.8	249	17.3	+3	15.2	240	38.3	-1	13.4
7	79	54.2	264	16.9		14.0	255	39.3		14.1
8	94	56.7	279	16.6		12.7	270	40.3		14.8
9	109	59.2	294	16.3		11.4	285	41.3		15.4
10	125	01.6	309	15.9		10.1	300	42.3		16.1
11	140	04.1	324	15.6	+3	08.9	315	43.3	-1	16.7
12	155	06.6	339	15.3	+3	07.6	330	44.4	-1	17.4
13	170	09.0	354	14.9		06.3	345	45.4		18.1
14	185	11.5	9	14.6		05.1	0	46.4		18.7
15	200	14.0	24	14.3		03.8	15	47.4		19.4
16	215	16.4	39	14.0		02.5	30	48.4		20.0
17	230	18.9	54	13.6	+3	01.2	45	49.4	-1	20.7
18	245	21.4	69	13.3	+3	00.0	60	50.4	-1	21.4
19	260	23.8	84	13.0	+2	58.7	75	51.4		22.0
20	275	26.3	99	12.6		57.4	90	52.4		22.7
21	290	28.7	114	12.3		56.1	105	53.4		23.3
22	305	31.2	129	12.0		54.9	120	54.4		24.0
23	320	33.7	144	11.6		53.6	135	55.4		24.7
24	335	36.1	159	11.3	+2	52.3	150	56.4	-1	25.3
Dif	—		-3		-13		+10		-7	
							+26		0	
									+22	
									-1	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 15'8 PMG: 12 ^h 01 ^m 4			Edad: 25 ^d 6 PHE { SD: 16'2 PMG: 9 ^h 02 ^m					4 ^h : 59'4 12 ^h : 59'4 20 ^h : 59'3 R°: 57 ^m								
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m	
0	179	37.0	+10	00.4	229	56.9	+25	39.6	60 N	19 17	20 04	21 05	***	***	***	18 34	7
1	194	37.2	+9	59.5	244	20.5	46	33.0	58	12	19 54	20 50	***	***	***	15	14
2	209	37.4		58.7	258	44.1	46	26.3	56	06	47	38	***	***	***	18 00	18
3	224	37.6		57.8	273	07.8	47	19.3	70	19 02	40	27	***	***	***	17 47	21
4	239	37.7		56.9	287	31.6	48	12.2	71	18 58	33	18	0 10	87		35	25
5	254	37.9	+9	56.0	301	55.5	49	+25	04.9	73	18 54	19 28	20 10	0 23	84	17 24	28
6	269	38.1	+9	55.2	316	19.4	49	+24	57.5	74	18 46	19 16	19 53	0 49	79	17 02	34
7	284	38.3		54.3	330	43.4	50	49.9	76	39	19 07	40	1 09	76		16 45	37
8	299	38.5		53.4	345	07.5	51	42.1	78	33	18 59	30	27	72		30	40
9	314	38.7		52.5	359	31.7	52	34.2	79	28	52	21	1 41	70		16 17	43
10	329	38.8		51.6	13	56.0	53	26.1	81	19	42	19 08	2 06	66		15 54	49
11	344	39.0	+9	50.8	28	20.4	54	+24	17.9	82	18 12	18 33	18 58	2 28	61	15 34	53
12	359	39.2	+9	49.9	42	44.9	55	+24	09.5	84	18 05	18 26	18 50	2 48	58	15 16	57
13	14	39.4		49.0	57	09.4	55	+24	00.9	86	17 58	19	44	3 08	55	14 58	60
14	29	39.6		48.1	71	34.1	57	+23	52.2	87	51	13	39	29	52	38	64
15	44	39.7		47.2	85	58.8	57	43.4	88	30	42	07	35	3 54	47	14	70
16	59	39.9		46.4	100	23.6	58	34.4	90	35	38	03	33	4 08	45	14 01	72
17	74	40.1	+9	45.5	114	48.6	60	+23	25.2	92	17 33	18 00	18 32	4 25	41	13 45	76
18	89	40.3	+9	44.6	129	13.6	60	+23	15.9	93	17 27	17 56	18 30	4 45	37	13 26	80
19	104	40.5		43.7	143	38.7	61	+23	06.4	95	19	52	30	5 09	33	13 02	86
20	119	40.7		42.8	158	03.9	62	+22	56.8	96	16	50	30	21	30	12 50	89
21	134	40.8		41.9	172	29.2	63	47.1	97	54	12	48	30	35	26	37	93
22	149	41.0		41.1	186	54.6	64	37.2	99	56	08	46	30	5 51	22	22	97
23	164	41.2		40.2	201	20.1	65	27.2	100	58	17 04	44	30	6 09	17	12 04	102
24	179	41.4	+9	39.3	215	45.7	66	+22	17.1	101	16 59	17 42	18 30	6 32	10	11 42	110

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 1 ^h 37 ^m 3		Mag: -3.8 PMG: 13 ^h 24 ^m		Mag: +1.7 PMG: 13 ^h 55 ^m		Mag: -2.6 PMG: 20 ^h 30 ^m		Mag: +0.8 PMG: 12 ^h 28 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	335	36.1	159	11.3	+2	52.3	150	56.4	-1	25.3	51	41.7	-23	06.7	172	35.2	+9	01.2
1	350	38.6	174	11.0		51.0	165	57.4		26.0	66	44.3		06.8	187	37.4		01.1
2	5	41.1	189	10.7		49.8	180	58.4		26.6	81	46.9		06.8	202	39.5		01.0
3	20	43.5	204	10.3		48.5	195	59.4		27.3	96	49.4		06.8	217	41.7		00.9
4	35	46.0	219	10.0		47.2	211	00.4		28.0	111	52.0		06.8	232	43.9		00.8
5	50	48.5	234	09.7	+2	45.9	226	01.4	-1	28.6	126	54.6	-23	06.8	247	46.0	+9	00.7
6	65	50.9	249	09.3	+2	44.7	241	02.4	-1	29.3	141	57.1	-23	06.8	262	48.2	+9	00.5
7	80	53.4	264	09.0		43.4	256	03.4		29.9	156	59.7		06.8	277	50.4		00.4
8	95	55.9	279	08.7		42.1	271	04.4		30.6	172	02.3		06.8	292	52.6		00.3
9	110	58.3	294	08.3		40.8	286	05.4		31.3	187	04.8		06.9	307	54.7		00.2
10	126	00.8	309	08.0		39.6	301	06.3		31.9	202	07.4		06.9	322	56.9	+9	00.1
11	141	03.2	324	07.7	+2	38.3	316	07.3	-1	32.6	217	10.0	-23	06.9	337	59.1	+8	59.9
12	156	05.7	339	07.4	+2	37.0	331	08.3	-1	33.2	232	12.5	-23	06.9	353	01.2	+8	59.8
13	171	08.2	354	07.0		35.7	346	09.3		33.9	247	15.1		06.9	8	03.4		59.7
14	186	10.6	9	06.7		34.5	1	10.3		34.6	262	17.7		06.9	23	05.6		59.6
15	201	13.1	24	06.4		33.2	16	11.3		35.2	277	20.2		06.9	38	07.7		59.5
16	216	15.6	39	06.1		31.9	31	12.3		35.9	292	22.8		06.9	53	09.9		59.4
17	231	18.0	54	05.7	+2	30.6	46	13.3	-1	36.5	307	25.3	-23	07.0	68	12.1	+8	59.2
18	246	20.5	69	05.4	+2	29.4	61	14.3	-1	37.2	322	27.9	-23	07.0	83	14.2	+8	59.1
19	261	23.0	84	05.1		28.1	76	15.3		37.9	337	30.5		07.0	98	16.4		59.0
20	276	25.4	99	04.7		26.8	91	16.3		38.5	352	33.0		07.0	113	18.6		58.9
21	291	27.9	114	04.4		25.5	106	17.3		39.2	7	35.6		07.0	128	20.8		58.8
22	306	30.3	129	04.1		24.2	121	18.3		39.8	22	38.2		07.0	143	22.9		58.6
23	321	32.8	144	03.8		23.0	136	19.3		40.5	37	40.7		07.0	158	25.1		58.5
24	336	35.3	159	03.4	+2	21.7	151	20.3	-1	41.2	52	43.3	-23	07.0	173	27.3	+8	58.4
Dif	—		-3 -13		+10 -7						+26 0				+22 -1			

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8 PMG: 12 ^h 01 ^m 1			Edad: 26 ^d 6 PHE { 4 ^h : 59 ^m 2 12 ^h : 59 ^m 1 20 ^h : 59 ^m 0 R°: 54 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	h	m	h	m	h	m	h	m
0	179	41.4	+9 39.3	215	45.7	+22 17.1	60 N	2 59	4 00	4 46	0 41	107	18 41	3	
1	194	41.6		230	11.4	+22 06.8	58	3 13	09	52	0 59	101	29	8	
2	209	41.8		244	37.2	+21 56.3	56	26	17	4 57	1 13	96	18	12	
3	224	41.9		259	03.1	+21 45.8	54	36	24	5 02	26	92	08	16	
4	239	42.1		273	29.1	+21 35.1	52	45	30	06	37	89	18 00	18	
5	254	42.3	+9 34.9	287	55.3	+21 24.3	50	3 53	4 35	5 09	1 47	86	17 52	21	
6	269	42.5	+9 34.0	302	21.5	+21 13.4	45	4 10	4 47	5 17	2 08	80	17 36	26	
7	284	42.7		316	47.8	+21 02.3	40	23	4 56	24	25	75	22	31	
8	299	42.9		331	14.2	+20 51.1	35	33	5 04	30	39	71	10	35	
9	314	43.1		345	40.7	+20 39.8	30	41	10	35	2 51	68	17 00	38	
10	329	43.2		0	07.3	+20 28.4	20	4 55	21	43	3 12	63	16 43	43	
11	344	43.4	+9 29.5	14	34.0	+20 16.8	10 N	5 05	5 30	5 51	3 29	59	16 27	48	
12	359	43.6	+9 28.7	29	00.9	+20 05.2	0	5 12	5 37	5 58	3 46	54	16 13	52	
13	14	43.8		43	27.8	+19 53.4	10 S	19	43	6 05	4 03	50	15 58	57	
14	29	44.0		57	54.8	+19 41.5	20	24	49	12	21	45	42	61	
15	44	44.2		72	21.9	+19 29.5	30	28	55	20	41	40	24	67	
16	59	44.4		86	49.2	+19 17.4	35	29	5 59	24	4 53	37	13	70	
17	74	44.5	+9 24.2	101	16.5	+19 05.2	40	5 30	6 02	6 29	5 06	34	15 01	74	
18	89	44.7	+9 23.3	115	43.9	+18 52.8	45	5 31	6 05	6 35	5 22	29	14 46	79	
19	104	44.9		130	11.5	+18 40.4	50	32	09	42	42	23	28	85	
20	119	45.1		144	39.1	+18 27.9	52	32	11	45	5 51	21	19	88	
21	134	45.3		159	06.8	+18 15.3	54	32	13	49	6 01	18	14 10	91	
22	149	45.5		173	34.7	+18 02.5	56	32	15	53	13	14	13 59	95	
23	164	45.7		188	02.6	+17 49.7	58	32	17	6 57	26	10	46	100	
24	179	45.9	+9 18.0	202	30.7	+17 36.8	60 S	5 31	6 19	7 02	6 42	4	13 32	105	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 1 ^h 33 ^m 4		Mag: -3.8 PMG: 13 ^h 24 ^m		Mag: +1.7 PMG: 13 ^h 54 ^m		Mag: -2.6 PMG: 20 ^h 26 ^m		Mag: +0.8 PMG: 12 ^h 24 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	336	35.3	159	03.4	151	20.3	52	43.3	173	27.3
1	351	37.7	174	03.1	166	21.3	67	45.8	188	29.4
2	6	40.2	189	02.8	181	22.3	82	48.4	203	31.6
3	21	42.7	204	02.5	196	23.3	97	51.0	218	33.8
4	36	45.1	219	02.1	211	24.3	112	53.5	233	35.9
5	51	47.6	234	01.8	226	25.3	127	56.1	248	38.1
6	66	50.1	249	01.5	241	26.3	142	58.6	263	40.3
7	81	52.5	264	01.2	256	27.3	158	01.2	278	42.5
8	96	55.0	279	00.8	271	28.3	173	03.7	293	44.6
9	111	57.5	294	00.5	286	29.3	188	06.3	308	46.8
10	126	59.9	309	00.2	301	30.3	203	08.9	323	49.0
11	142	02.4	323	59.8	316	31.3	218	11.4	338	51.1
12	157	04.8	338	59.5	331	32.3	233	14.0	353	53.3
13	172	07.3	353	59.2	346	33.3	248	16.5	8	55.5
14	187	09.8	8	58.9	1	34.3	263	19.1	23	57.6
15	202	12.2	23	58.5	16	35.3	278	21.6	38	59.8
16	217	14.7	38	58.2	31	36.3	293	24.2	54	02.0
17	232	17.2	53	57.9	46	37.3	308	26.7	69	04.1
18	247	19.6	68	57.6	61	38.3	323	29.3	84	06.3
19	262	22.1	83	57.2	76	39.3	338	31.9	99	08.5
20	277	24.6	98	56.9	91	40.3	353	34.4	114	10.7
21	292	27.0	113	56.6	106	41.2	8	37.0	129	12.8
22	307	29.5	128	56.3	121	42.2	23	39.5	144	15.0
23	322	32.0	143	55.9	136	43.2	38	42.1	159	17.2
24	337	34.4	158	55.6	151	44.2	53	44.6	174	19.3
Dif	—		-3	-13	+10	-7	+26	0	+22	-1

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 27 ^d 6 PHE { 4 ^h : 58 ^h /9 12 ^h : 58 ^h /7 20 ^h : 58 ^h /6 R°: 49 ^m											
	PMG: 12 ^h 00 ^m 8			PMG: 10 ^h 53 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	m	h m m	m
0	179	45.9	+9 18.0	202	30.7	+17 36.8		60 N	19 12	19 57	20 57	2 28 102	18 44 2		
1	194	46.0		216	58.8 ⁹¹	23.8 ¹³⁰		58	06	49	43	40 96	37 5		
2	209	46.2	16.2	231	27.0 ⁹²	+17 10.7 ¹³¹		56	19 01	41	31	49 93	30 9		
3	224	46.4	15.3	245	55.4 ⁹⁴	+16 57.5 ¹³²		54	18 57	35	21	2 58 89	24 11		
4	239	46.6	14.4	260	23.8 ⁹⁴	44.2 ¹³³		52	53	29	13	3 06 86	18 14		
5	254	46.8	+9 13.5	274	52.3 ⁹⁵	+16 30.9 ¹³³		50	18 50	19 24	20 05	3 13 83	18 13 17		
6	269	47.0	+9 12.7	289	20.9 ⁹⁶	+16 17.4 ¹³⁵		45	18 42	19 13	19 49	3 28 77	18 02 22		
7	284	47.2	11.8	303	49.7 ⁹⁸	+16 03.9 ¹³⁵		40	36	19 04	37	40 73	17 53 26		
8	299	47.4	10.9	318	18.5 ⁹⁸	+15 50.3 ¹³⁶		35	30	18 56	27	50 69	45 30		
9	314	47.5	10.0	332	47.4 ⁹⁹	36.6 ¹³⁷		30	26	50	19	3 59 66	38 33		
10	329	47.7	09.1	347	16.4 ¹⁰⁰	22.8 ¹³⁸		20	18	40	19 06	4 15 59	26 39		
11	344	47.9	+9 08.2	1	45.5 ¹⁰¹	+15 09.0 ¹³⁸		10 N	18 11	18 32	18 57	4 28 55	17 15 44		
12	359	48.1	+9 07.3	16	14.7 ¹⁰²	+14 55.1 ¹³⁹		0	18 04	18 25	18 49	4 40 51	17 05 48		
13	14	48.3	06.4	30	44.0 ¹⁰³	41.1 ¹⁴⁰		10 S	17 58	19	44	4 53 45	16 55 53		
14	29	48.5	05.5	45	13.3 ¹⁰³	27.1 ¹⁴⁰		20	51	13	39	5 06 41	43 59		
15	44	48.7	04.6	59	42.8 ¹⁰⁵	+14 12.9 ¹⁴²		30	44	08	36	21 35	31 64		
16	59	48.9	03.7	74	12.4 ¹⁰⁶	+13 58.8 ¹⁴¹		35	39	05	34	30 32	23 68		
17	74	49.1	+9 02.8	88	42.0 ¹⁰⁶	+13 44.5 ¹⁴³		40	17 34	18 02	18 33	5 40 28	16 15 71		
18	89	49.3	+9 01.9	103	11.7 ¹⁰⁷	+13 30.2 ¹⁴³		45	17 29	17 59	18 33	5 51 24	16 05 76		
19	104	49.4	01.0	117	41.5 ¹⁰⁸	15.8 ¹⁴⁴		50	22	55	32	6 05 19	15 53 82		
20	119	49.6	+9 00.1	132	11.4 ¹⁰⁹	+13 01.4 ¹⁴⁴		52	19	53	33	12 15	47 85		
21	134	49.8	+8 59.2	146	41.4 ¹¹⁰	+12 46.9 ¹⁴⁵		54	16	52	33	19 13	41 87		
22	149	50.0	58.4	161	11.5 ¹¹¹	32.4 ¹⁴⁵		56	12	50	33	27 10	34 91		
23	164	50.2	57.5	175	41.7 ¹¹²	17.8 ¹⁴⁶		58	08	48	34	36 6	26 95		
24	179	50.4	+8 56.6	190	11.9 ¹¹²	+12 03.1 ¹⁴⁷		60 S	17 04	17 46	18 34	6 46 2	15 17 99		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 1 ^h 29 ^m 5		Mag: -3.8 PMG: 13 ^h 25 ^m			Mag: +1.7 PMG: 13 ^h 52 ^m			Mag: -2.6 PMG: 20 ^h 22 ^m			Mag: +0.8 PMG: 12 ^h 21 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	337	34.4	158 55.6	+1 51.0	151 44.2	-1 57.0	53 44.6	-23 07.3	174 19.3	+8 55.6					
1	352	36.9	173 55.3	49.7	166 45.2	57.7	68 47.2	07.3	189 21.5	55.5					
2	7	39.3	188 55.0	48.4	181 46.2	58.3	83 49.7	07.3	204 23.7	55.3					
3	22	41.8	203 54.7	47.1	196 47.2	59.0	98 52.3	07.3	219 25.8	55.2					
4	37	44.3	218 54.3	45.9	211 48.2	-1 59.7	113 54.8	07.4	234 28.0	55.1					
5	52	46.7	233 54.0	+1 44.6	226 49.2	-2 00.3	128 57.4	-23 07.4	249 30.2	+8 55.0					
6	67	49.2	248 53.7	+1 43.3	241 50.2	-2 01.0	143 59.9	-23 07.4	264 32.3	+8 54.9					
7	82	51.7	263 53.4	42.0	256 51.2	01.6	159 02.5	07.4	279 34.5	54.8					
8	97	54.1	278 53.0	40.7	271 52.2	02.3	174 05.0	07.4	294 36.7	54.6					
9	112	56.6	293 52.7	39.4	286 53.2	03.0	189 07.6	07.4	309 38.9	54.5					
10	127	59.1	308 52.4	38.2	301 54.2	03.6	204 10.1	07.4	324 41.0	54.4					
11	143	01.5	323 52.1	+1 36.9	316 55.2	-2 04.3	219 12.7	-23 07.4	339 43.2	+8 54.3					
12	158	04.0	338 51.7	+1 35.6	331 56.2	-2 04.9	234 15.2	-23 07.4	354 45.4	+8 54.2					
13	173	06.5	353 51.4	34.3	346 57.2	05.6	249 17.8	07.5	9 47.5	54.0					
14	188	08.9	8 51.1	33.0	1 58.1	06.3	264 20.3	07.5	24 49.7	53.9					
15	203	11.4	23 50.8	31.8	16 59.1	06.9	279 22.9	07.5	39 51.9	53.8					
16	218	13.8	38 50.4	30.5	32 00.1	07.6	294 25.4	07.5	54 54.0	53.7					
17	233	16.3	53 50.1	+1 29.2	47 01.1	-2 08.2	309 27.9	-23 07.5	69 56.2	+8 53.6					
18	248	18.8	68 49.8	+1 27.9	62 02.1	-2 08.9	324 30.5	-23 07.5	84 58.4	+8 53.5					
19	263	21.2	83 49.5	26.6	77 03.1	09.6	339 33.0	07.5	100 00.5	53.3					
20	278	23.7	98 49.2	25.3	92 04.1	10.2	354 35.6	07.5	115 02.7	53.2					
21	293	26.2	113 48.8	24.1	107 05.1	10.9	9 38.1	07.5	130 04.9	53.1					
22	308	28.6	128 48.5	22.8	122 06.1	11.5	24 40.7	07.6	145 07.1	53.0					
23	323	31.1	143 48.2	21.5	137 07.1	12.2	39 43.2	07.6	160 09.2	52.9					
24	338	33.6	158 47.9	+1 20.2	152 08.1	-2 12.9	54 45.8	-23 07.6	175 11.4	+8 52.7					
Dif	—		-3	-13	+10	-7	+25	0	+22	-1					

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 15'8 PMG: 12 ^h 00 ^m 5			Edad: 28 ^d 6 PHE { 4 ^h : 58'4 12 ^h : 58'2 20 ^h : 58'0 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	179	50.4	+8 56.6	190	11.9	+12 03.1	60 N	3 05	4 05	4 51	4 10	96	18 46	1			
1	194	50.6		55.7	204	42.2 ¹¹³		19	14	4 56	16	92	42	4			
2	209	50.8		54.8	219	12.6 ¹¹⁴		31	21	5 01	22	88	39	7			
3	224	51.0		53.9	233	43.1 ¹¹⁵		41	28	05	27	85	35	10			
4	239	51.2		53.0	248	13.6 ¹¹⁵	+11 04.0 ¹⁴⁸	49	33	09	32	82	32	13			
5	254	51.4	+8 52.1	52.1	262	44.3 ¹¹⁷	+10 49.1 ¹⁴⁹	3 57	4 38	5 12	4 36	80	18 30	15			
6	269	51.5	+8 51.2	51.2	277	15.0 ¹¹⁷	+10 34.2 ¹⁴⁹	4 13	4 49	5 20	4 45	74	18 24	20			
7	284	51.7		50.3	291	45.8 ¹¹⁸	19.2 ¹⁵⁰	25	4 58	26	53	69	19	24			
8	299	51.9		49.4	306	16.6 ¹¹⁸	+10 04.2 ¹⁵⁰	35	5 05	31	4 59	66	15	27			
9	314	52.1		48.5	320	47.6 ¹²⁰	+9 49.1 ¹⁵¹	43	12	36	5 05	62	11	31			
10	329	52.3		47.6	335	18.6 ¹²⁰	34.0 ¹⁵¹	4 55	22	44	14	57	18 05	36			
11	344	52.5	+8 46.7	46.7	349	49.7 ¹²¹	+9 18.9 ¹⁵¹	5 05	5 30	5 51	5 23	51	17 59	41			
12	359	52.7	+8 45.8	45.8	4	20.8 ¹²¹	+9 03.8 ¹⁵¹	5 12	5 36	5 57	5 31	47	17 53	46			
13	14	52.9		44.9	18	52.0 ¹²²	+8 48.6 ¹⁵²	18	42	6 03	38	43	48	50			
14	29	53.1		44.0	33	23.3 ¹²³	33.3 ¹⁵³	20	22	48	10	47	37	42	55		
15	44	53.3		43.1	47	54.7 ¹²⁴	18.1 ¹⁵²	25	53	17	5 56	32	35	61			
16	59	53.5		42.2	62	26.1 ¹²⁴	+8 02.8 ¹⁵³	27	56	21	6 02	28	31	65			
17	74	53.7	+8 41.3	41.3	76	57.6 ¹²⁵	+7 47.5 ¹⁵³	5 27	5 59	6 26	6 08	25	17 26	69			
18	89	53.9	+8 40.4	40.4	91	29.1 ¹²⁵	+7 32.2 ¹⁵³	5 28	6 02	6 32	6 15	21	17 21	73			
19	104	54.0		39.5	106	00.7 ¹²⁶	16.8 ¹⁵⁴	28	05	38	24	15	15	78			
20	119	54.2		38.6	120	32.4 ¹²⁷	+7 01.5 ¹⁵³	28	07	41	27	14	12	80			
21	134	54.4		37.7	135	04.1 ¹²⁷	+6 46.1 ¹⁵⁴	28	08	44	32	10	08	84			
22	149	54.6		36.8	149	35.9 ¹²⁸	30.7 ¹⁵⁴	27	10	48	37	7	05	86			
23	164	54.8		35.9	164	07.8 ¹²⁹	+6 15.2 ¹⁵⁵	27	12	52	42	4	17 01	90			
24	179	55.0	+8 35.0	35.0	178	39.7 ¹²⁹	+5 59.8 ¹⁵⁴	5 26	6 14	6 56	6 48	1	16 56	94			
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO				
	PMG 1 ^h 25 ^m 5			Mag: -3.8 PMG: 13 ^h 25 ^m			Mag: +1.7 PMG: 13 ^h 51 ^m			Mag: -2.6 PMG: 20 ^h 18 ^m			Mag: +0.8 PMG: 12 ^h 17 ^m				
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	338	33.6	158	47.9	+1 20.2	152	08.1	-2 12.9	54	45.8	-23 07.6	175	11.4	+8 52.7			
1	353	36.0	173	47.5		167	09.1	13.5	69	48.3	07.6	190	13.6	52.6			
2	8	38.5	188	47.2		176	10.1	14.2	84	50.8	07.6	205	15.7	52.5			
3	23	40.9	203	46.9		164	11.1	14.8	99	53.4	07.6	220	17.9	52.4			
4	38	43.4	218	46.6		15.1	12.0	15.5	114	55.9	07.6	235	20.1	52.3			
5	53	45.9	233	46.3	+1 13.8	227	13.0	-2 16.2	129	58.5	-23 07.6	250	22.2	+8 52.2			
6	68	48.3	248	45.9	+1 12.5	242	14.0	-2 16.8	145	01.0	-23 07.6	265	24.4	+8 52.0			
7	83	50.8	263	45.6		11.2	15.0	17.5	160	03.5	07.6	280	26.6	51.9			
8	98	53.3	278	45.3		09.9	16.0	18.2	175	06.1	07.7	295	28.7	51.8			
9	113	55.7	293	45.0		08.6	17.0	18.8	190	08.6	07.7	310	30.9	51.7			
10	128	58.2	308	44.7		07.4	18.0	19.5	205	11.2	07.7	325	33.1	51.6			
11	144	00.7	323	44.3	+1 06.1	317	19.0	-2 20.1	220	13.7	-23 07.7	340	35.3	+8 51.4			
12	159	03.1	338	44.0	+1 04.8	332	20.0	-2 20.8	235	16.2	-23 07.7	355	37.4	+8 51.3			
13	174	05.6	353	43.7		03.5	21.0	21.5	250	18.8	07.7	10	39.6	51.2			
14	189	08.1	8	43.4		02.2	22.0	22.1	265	21.3	07.7	25	41.8	51.1			
15	204	10.5	23	43.0	+1 00.9	17	22.9	22.8	280	23.9	07.7	40	43.9	51.0			
16	219	13.0	38	42.7	+0 59.7	32	23.9	23.4	295	26.4	07.7	55	46.1	50.9			
17	234	15.4	53	42.4	+0 58.4	47	24.9	-2 24.1	310	28.9	-23 07.7	70	48.3	+8 50.7			
18	249	17.9	68	42.1	+0 57.1	62	25.9	-2 24.8	325	31.5	-23 07.8	85	50.4	+8 50.6			
19	264	20.4	83	41.8		55.8	26.9	25.4	340	34.0	07.8	100	52.6	50.5			
20	279	22.8	98	41.4		54.5	27.9	26.1	355	36.5	07.8	115	54.8	50.4			
21	294	25.3	113	41.1		53.2	28.9	26.7	10	39.1	07.8	130	56.9	50.3			
22	309	27.8	128	40.8		51.9	29.9	27.4	25	41.6	07.8	145	59.1	50.1			
23	324	30.2	143	40.5		50.7	30.9	28.1	40	44.2	07.8	161	01.3	50.0			
24	339	32.7	158	40.2	+0 49.4	152	31.9	-2 28.7	55	46.7	-23 07.8	176	03.4	+8 49.9			
Dif	—			-3	-13	+10			-7	+25			0	+22			-1

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15'8 PMG: 12 ^h 00 ^m 2			Edad: 29 ^d 6 PHE { 4 ^h : 57'8 12 ^h : 57'6 20 ^h : 57'4 R°: 45 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	h	m	h	m	h	m	m	
0	179	55.0	+8 35.0	178	39.7	+5 59.8	60 N	19 06	19 51	20 49	5 46 92	18 47 0			
1	194	55.2		193	11.6 ¹²⁹	44.3 ¹⁵⁵	58	19 01	43	36	48 89	46 4	0		
2	209	55.4		207	43.6 ¹³⁰	28.9 ¹⁵⁴	56	18 56	36	25	50 85	46 7			
3	224	55.6		222	15.7 ¹³¹	+5 13.4 ¹⁵⁵	54	52	29	16	52 83	45 10			
4	239	55.8		236	47.8 ¹³¹	+4 57.9 ¹⁵⁵	52	49	24	07	54 80	45 12			
5	254	56.0	+8 30.5	251	20.0 ¹³²	+4 42.4 ¹⁵⁵	50	18 45	19 19	20 00	5 56 77	18 45 14			
6	269	56.2	+8 29.6	265	52.2 ¹³²	+4 26.9 ¹⁵⁵	45	18 38	19 09	19 45	5 59 72	18 44 19			
7	284	56.4		280	24.5 ¹³³	+4 11.4 ¹⁵⁵	40	33	19 00	34	6 02 68	43 23			
8	299	56.6		294	56.8 ¹³³	+3 55.9 ¹⁵⁵	35	28	18 54	24	05 63	42 27			
9	314	56.8		309	29.2 ¹³⁴	40.3 ¹⁵⁶	30	23	48	16	07 60	42 29			
10	329	57.0		324	01.6 ¹³⁴	24.8 ¹⁵⁵	20	16	38	19 04	11 55	41 35			
11	344	57.2	+8 25.0	338	34.1 ¹³⁵	+3 09.3 ¹⁵⁵	10 N	18 09	18 31	18 55	6 14 50	18 40 40			
12	359	57.4	+8 24.1	353	06.6 ¹³⁵	+2 53.8 ¹⁵⁵	0	18 03	18 24	18 49	6 18 45	18 39 45			
13	14	57.6		7	39.1 ¹³⁵	38.2 ¹⁵⁶	10 S	17 58	19	43	21 40	38 49			
14	29	57.8		22	11.7 ¹³⁶	22.7 ¹⁵⁵	20	51	14	39	24 36	37 54			
15	44	57.9		36	44.4 ¹³⁷	+2 07.2 ¹⁵⁵	30	45	09	37	28 30	36 60			
16	59	58.1		51	17.0 ¹³⁶	+1 51.7 ¹⁵⁵	35	41	06	36	30 27	36 62			
17	74	58.3	+8 19.6	65	49.7 ¹³⁷	+1 36.2 ¹⁵⁵	40	17 36	18 04	18 35	6 33 23	18 35 66			
18	89	58.5	+8 18.7	80	22.5 ¹³⁸	+1 20.7 ¹⁵⁵	45	17 31	18 01	18 35	6 36 19	18 34 71			
19	104	58.7		94	55.3 ¹³⁸	+1 05.2 ¹⁵⁵	50	25	17 58	35	39 14	33 76			
20	119	58.9		109	28.1 ¹³⁸	+0 49.8 ¹⁵⁴	52	23	57	36	41 11	32 79			
21	134	59.1		124	00.9 ¹³⁸	34.3 ¹⁵⁵	54	19	55	36	42 10	32 81			
22	149	59.3		138	33.8 ¹³⁹	18.9 ¹⁵⁴	56	16	54	37	44 7	31 84			
23	164	59.5		153	06.7 ¹³⁹	+0 03.4 ¹⁵⁵	58	12	52	38	46 4	31 87			
24	179	59.7	+8 13.3	167	39.6 ¹³⁹	-0 12.0 ¹⁵⁴	60 S	17 08	17 51	18 39	6 49 0	18 30 91			

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 1 ^h 21 ^m 6		Mag: -3.8 PMG: 13 ^h 26 ^m		Mag: +1.7 PMG: 13 ^h 49 ^m		Mag: -2.6 PMG: 20 ^h 13 ^m		Mag: +0.8 PMG: 12 ^h 14 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	339	32.7	158	40.2	+0 49.4	152 31.9	-2 28.7	55 46.7	-23 07.8	176 03.4	+8 49.9
1	354	35.2	173	39.8	48.1	167 32.8	29.4	70 49.2	07.8	191 05.6	49.8
2	9	37.6	188	39.5	46.8	182 33.8	30.0	85 51.8	07.8	206 07.8	49.7
3	24	40.1	203	39.2	45.5	197 34.8	30.7	100 54.3	07.8	221 10.0	49.6
4	39	42.5	218	38.9	44.2	212 35.8	31.4	115 56.8	07.8	236 12.1	49.4
5	54	45.0	233	38.6	+0 42.9	227 36.8	-2 32.0	130 59.4	-23 07.9	251 14.3	+8 49.3
6	69	47.5	248	38.2	+0 41.7	242 37.8	-2 32.7	146 01.9	-23 07.9	266 16.5	+8 49.2
7	84	49.9	263	37.9	40.4	257 38.8	33.3	161 04.4	07.9	281 18.6	49.1
8	99	52.4	278	37.6	39.1	272 39.8	34.0	176 07.0	07.9	296 20.8	49.0
9	114	54.9	293	37.3	37.8	287 40.8	34.7	191 09.5	07.9	311 23.0	48.8
10	129	57.3	308	37.0	36.5	302 41.8	35.3	206 12.0	07.9	326 25.1	48.7
11	144	59.8	323	36.6	+0 35.2	317 42.7	-2 36.0	221 14.6	-23 07.9	341 27.3	+8 48.6
12	160	02.3	338	36.3	+0 33.9	332 43.7	-2 36.7	236 17.1	-23 07.9	356 29.5	+8 48.5
13	175	04.7	353	36.0	32.7	347 44.7	37.3	251 19.6	07.9	11 31.6	48.4
14	190	07.2	8	35.7	31.4	2 45.7	38.0	266 22.1	07.9	26 33.8	48.3
15	205	09.7	23	35.4	30.1	17 46.7	38.6	281 24.7	07.9	41 36.0	48.1
16	220	12.1	38	35.0	28.8	32 47.7	39.3	296 27.2	08.0	56 38.2	48.0
17	235	14.6	53	34.7	+0 27.5	47 48.7	-2 40.0	311 29.7	-23 08.0	71 40.3	+8 47.9
18	250	17.0	68	34.4	+0 26.2	62 49.7	-2 40.6	326 32.3	-23 08.0	86 42.5	+8 47.8
19	265	19.5	83	34.1	24.9	77 50.6	41.3	341 34.8	08.0	101 44.7	47.7
20	280	22.0	98	33.8	23.7	92 51.6	41.9	356 37.3	08.0	116 46.8	47.5
21	295	24.4	113	33.4	22.4	107 52.6	42.6	11 39.8	08.0	131 49.0	47.4
22	310	26.9	128	33.1	21.1	122 53.6	43.3	26 42.4	08.0	146 51.2	47.3
23	325	29.4	143	32.8	19.8	137 54.6	43.9	41 44.9	08.0	161 53.3	47.2
24	340	31.8	158	32.5	+0 18.5	152 55.6	-2 44.6	56 47.4	-23 08.0	176 55.5	+8 47.1
Dif	—		-3	-13		+10	-7	+25	0	+22	-1

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8 PMG: 11 ^h 59 ^m 9			Edad: 1 ^d 2 PHE { 4 ^h : 57 ^m 2 12 ^h : 56 ^m 9 20 ^h : 56 ^m 7 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	179	59.7	+8 13.3	167	39.6	-0 12.0	60 N	3 12	4 11	4 56	7 18	90	18 47	1		
1	194	59.9		182	12.6 ¹⁴⁰	27.4 ¹⁵⁴	58	25	18	5 00	17 86		50	4		
2	210	00.1		196	45.6 ¹⁴⁰	42.8 ¹⁵⁴	56	36	25	05	15 84		53	7		
3	225	00.3		211	18.6 ¹⁴⁰	-0 58.1 ¹⁵³	54	45	31	09	15 80		55	10		
4	240	00.5		225	51.7 ¹⁴¹	-1 13.5 ¹⁵⁴	52	3 53	37	12	14 77		57	12		
5	255	00.7	+8 08.7	240	24.8 ¹⁴¹	-1 28.8 ¹⁵³	50	4 01	4 42	5 15	7 13	75	18 59	14		
6	270	00.9	+8 07.8	254	57.9 ¹⁴¹	-1 44.1 ¹⁵³	45	4 15	4 52	5 22	7 11	70	19 03	19		
7	285	01.1	06.9	269	31.0 ¹⁴¹	-1 59.4 ¹⁵³	40	27	5 00	28	10 65		06	23		
8	300	01.3	06.0	284	04.1 ¹⁴¹	-2 14.6 ¹⁵²	35	36	07	33	08 63		09	27		
9	315	01.5	05.1	298	37.3 ¹⁴²	29.8 ¹⁵²	30	44	13	37	07 59		11	30		
10	330	01.7	04.2	313	10.5 ¹⁴²	-2 45.0 ¹⁵²	20	4 56	22	44	06 53		16	35		
11	345	01.9	+8 03.3	327	43.7 ¹⁴²	-3 00.2 ¹⁵²	10 N	5 05	5 30	5 51	7 04	48	19 20	39		
12	0	02.1	+8 02.4	342	16.9 ¹⁴²	-3 15.4 ¹⁵²	0	5 11	5 36	5 57	7 03	44	19 24	44		
13	15	02.3	01.4	356	50.1 ¹⁴²	30.5 ¹⁵¹	10 S	17	41	6 02	01 40		27	49		
14	30	02.5	+8 00.5	11	23.4 ¹⁴³	-3 45.5 ¹⁵⁰	20	20	46	08	7 00	34	31	53		
15	45	02.7	+7 59.6	25	56.6 ¹⁴²	-4 00.6 ¹⁵¹	30	23	51	15	6 58	29	36	58		
16	60	02.9	58.7	40	29.9 ¹⁴³	15.6 ¹⁵⁰	35	24	53	19	57 26		38	62		
17	75	03.1	+7 57.8	55	03.2 ¹⁴³	-4 30.6 ¹⁵⁰	40	5 24	5 56	6 23	6 56	23	19 41	66		
18	90	03.3	+7 56.9	69	36.5 ¹⁴³	-4 45.5 ¹⁴⁹	45	5 25	5 58	6 28	6 55	18	19 45	69		
19	105	03.5	56.0	84	09.8 ¹⁴³	-5 00.4 ¹⁴⁹	50	24	6 01	34	53 14		49	75		
20	120	03.7	55.1	98	43.1 ¹⁴³	15.3 ¹⁴⁹	52	24	03	36	52 12		51	77		
21	135	03.9	54.2	113	16.5 ¹⁴⁴	30.1 ¹⁴⁸	54	23	04	39	52 9		53	80		
22	150	04.1	53.2	127	49.8 ¹⁴³	44.9 ¹⁴⁸	56	22	05	43	51 7		55	83		
23	165	04.3	52.3	142	23.1 ¹⁴³	-5 59.7 ¹⁴⁸	58	21	07	46	50 4		19 58	86		
24	180	04.5	+7 51.4	156	56.5 ¹⁴⁴	-6 14.4 ¹⁴⁷	60 S	5 20	6 08	6 50	6 49	1	20 01	90		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG 1 ^h 17 ^m 7		Mag: -3.8 PMG: 13 ^h 26 ^m		Mag: +1.7 PMG: 13 ^h 47 ^m		Mag: -2.5 PMG: 20 ^h 09 ^m		Mag: +0.8 PMG: 12 ^h 11 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	340	31.8	158	32.5	+0 18.5	152 55.6	-2 44.6	56 47.4	-23 08.0	176 55.5	+8 47.1
1	355	34.3	173	32.2	17.2	167 56.6	45.2	71 49.9	08.0	191 57.7	47.0
2	10	36.8	188	31.9	15.9	182 57.6	45.9	86 52.5	08.0	206 59.8	46.8
3	25	39.2	203	31.5	14.6	197 58.5	46.6	101 55.0	08.1	222 02.0	46.7
4	40	41.7	218	31.2	13.4	212 59.5	47.2	116 57.5	08.1	237 04.2	46.6
5	55	44.1	233	30.9	+0 12.1	228 00.5	-2 47.9	132 00.0	-23 08.1	252 06.3	+8 46.5
6	70	46.6	248	30.6	+0 10.8	243 01.5	-2 48.5	147 02.6	-23 08.1	267 08.5	+8 46.4
7	85	49.1	263	30.3	09.5	258 02.5	49.2	162 05.1	08.1	282 10.7	46.2
8	100	51.5	278	29.9	08.2	273 03.5	49.9	177 07.6	08.1	297 12.9	46.1
9	115	54.0	293	29.6	06.9	288 04.5	50.5	192 10.1	08.1	312 15.0	46.0
10	130	56.5	308	29.3	05.6	303 05.4	51.2	207 12.7	08.1	327 17.2	45.9
11	145	58.9	323	29.0	+0 04.3	318 06.4	-2 51.9	222 15.2	-23 08.1	342 19.4	+8 45.8
12	161	01.4	338	28.7	+0 03.1	333 07.4	-2 52.5	237 17.7	-23 08.1	357 21.5	+8 45.7
13	176	03.9	353	28.3	01.8	348 08.4	53.2	252 20.2	08.1	12 23.7	45.5
14	191	06.3	8	28.0	+0 00.5	3 09.4	53.8	267 22.8	08.1	27 25.9	45.4
15	206	08.8	23	27.7	-0 00.8	18 10.4	54.5	282 25.3	08.2	42 28.0	45.3
16	221	11.3	38	27.4	02.1	33 11.4	55.2	297 27.8	08.2	57 30.2	45.2
17	236	13.7	53	27.1	-0 03.4	48 12.3	-2 55.8	312 30.3	-23 08.2	72 32.4	+8 45.1
18	251	16.2	68	26.8	-0 04.7	63 13.3	-2 56.5	327 32.8	-23 08.2	87 34.5	+8 44.9
19	266	18.6	83	26.4	06.0	78 14.3	57.1	342 35.4	08.2	102 36.7	44.8
20	281	21.1	98	26.1	07.2	93 15.3	57.8	357 37.9	08.2	117 38.9	44.7
21	296	23.6	113	25.8	08.5	108 16.3	58.5	12 40.4	08.2	132 41.0	44.6
22	311	26.0	128	25.5	09.8	123 17.3	59.1	27 42.9	08.2	147 43.2	44.5
23	326	28.5	143	25.2	11.1	138 18.3	-2 59.8	42 45.4	08.2	162 45.4	44.4
24	341	31.0	158	24.8	-0 12.4	153 19.2	-3 00.4	57 47.9	-23 08.2	177 47.6	+8 44.2
Dif	—		-3 -13		+10 -7		+25 0		+22 -1		

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 15'9 PMG: 11 ^h 59 ^m 5			Edad: 2 ^d 2 PHE { 4 ^h : 56'5 12 ^h : 56'2 20 ^h : 56'0 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	180	04.5	+7	51.4	156	56.5	-6 14.4	60 N	19 00	19 44	20 41	8 48 90	18 48 2					
1	195	04.7		50.5	171	29.8 ¹⁴³	29.0 ¹⁴⁶	58	18 55	37	29	43 86	18 54 6					
2	210	04.9		49.6	186	03.2 ¹⁴⁴	43.7 ¹⁴⁷	56	51	30	19	39 82	19 00 8					
3	225	05.1		48.7	200	36.5 ¹⁴³	-6 58.3 ¹⁴⁶	54	47	24	10	35 79	05 11					
4	240	05.3		47.8	215	09.9 ¹⁴⁴	-7 12.8 ¹⁴⁵	52	44	19	20 02	31 77	09 14					
5	255	05.5	+7	46.8	229	43.2 ¹⁴³	-7 27.3 ¹⁴⁵	50	18 41	19 15	19 55	8 28 74	19 13 16					
6	270	05.7	+7	45.9	244	16.6 ¹⁴⁴	-7 41.7 ¹⁴⁴	45	18 35	19 05	19 41	8 21 69	19 22 21					
7	285	05.9		45.0	258	49.9 ¹⁴³	-7 56.1 ¹⁴⁴	40	29	18 57	30	15 65	29 25					
8	300	06.1		44.1	273	23.3 ¹⁴⁴	-8 10.4 ¹⁴³	35	25	51	21	11 61	36 28					
9	315	06.3		43.2	287	56.6 ¹⁴³	24.7 ¹⁴³	30	21	45	14	8 06 59	41 31					
10	330	06.5		42.3	302	30.0 ¹⁴⁴	39.0 ¹⁴³	20	14	36	19 02	7 59 53	51 36					
11	345	06.7	+7	41.4	317	03.3 ¹⁴³	-8 53.2 ¹⁴²	10 N	18 08	18 29	18 54	7 52 49	19 59 41					
12	0	06.9	+7	40.4	331	36.6 ¹⁴³	-9 07.3 ¹⁴¹	0	18 03	18 24	18 48	7 47 44	20 08 44					
13	15	07.1		39.5	346	10.0 ¹⁴⁴	21.4 ¹⁴¹	10 S	17 57	19	43	41 40	16 48					
14	30	07.3		38.6	0	43.3 ¹⁴³	35.4 ¹⁴⁰	20	52	14	40	34 36	24 53					
15	45	07.5		37.7	15	16.6 ¹⁴³	-9 49.4 ¹⁴⁰	30	46	10	38	27 31	34 58					
16	60	07.7		36.8	29	49.9 ¹⁴³	-10 03.3 ¹³⁹	35	42	08	37	23 28	40 61					
17	75	07.9	+7	35.9	44	23.1 ¹⁴²	-10 17.2 ¹³⁹	40	17 38	18 05	18 37	7 19 24	20 47 64					
18	90	08.1	+7	34.9	58	56.4 ¹⁴³	-10 31.0 ¹³⁸	45	17 34	18 03	18 37	7 13 20	20 54 69					
19	105	08.3		34.0	73	29.7 ¹⁴³	44.7 ¹³⁷	50	28	01	38	07 15	21 04 74					
20	120	08.5		33.1	88	02.9 ¹⁴²	-10 58.4 ¹³⁷	52	26	18 00	39	04 13	08 76					
21	135	08.7		32.2	102	36.1 ¹⁴²	-11 12.0 ¹³⁶	54	23	17 59	39	7 01 11	13 79					
22	150	08.9		31.3	117	09.3 ¹⁴²	25.6 ¹³⁶	56	20	57	40	6 58 8	18 82					
23	165	09.1		30.4	131	42.5 ¹⁴²	39.1 ¹³⁵	58	17	56	42	54 5	24 86					
24	180	09.3	+7	29.4	146	15.7 ¹⁴²	-11 52.5 ¹³⁴	60 S	17 13	17 55	18 43	6 50 1	21 31 90					
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 1 ^h 13 ^m 7		Mag: -3.8 PMG: 13 ^h 27 ^m			Mag: +1.7 PMG: 13 ^h 46 ^m			Mag: -2.5 PMG: 20 ^h 05 ^m			Mag: +0.8 PMG: 12 ^h 07 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	341	31.0	158	24.8	-0	12.4	153	19.2	-3	00.4	57	47.9	-23	08.2	177	47.6	+8	44.2
1	356	33.4	173	24.5		13.7	168	20.2		01.1	72	50.5		08.2	192	49.7		44.1
2	11	35.9	188	24.2		15.0	183	21.2		01.8	87	53.0		08.2	207	51.9		44.0
3	26	38.4	203	23.9		16.3	198	22.2		02.4	102	55.5		08.3	222	54.1		43.9
4	41	40.8	218	23.6		17.6	213	23.2		03.1	117	58.0		08.3	237	56.2		43.8
5	56	43.3	233	23.3	-0	18.8	228	24.2	-3	03.7	133	00.5	-23	08.3	252	58.4	+8	43.6
6	71	45.8	248	22.9	-0	20.1	243	25.1	-3	04.4	148	03.0	-23	08.3	268	00.6	+8	43.5
7	86	48.2	263	22.6		21.4	258	26.1		05.1	163	05.6		08.3	283	02.7		43.4
8	101	50.7	278	22.3		22.7	273	27.1		05.7	178	08.1		08.3	298	04.9		43.3
9	116	53.1	293	22.0		24.0	288	28.1		06.4	193	10.6		08.3	313	07.1		43.2
10	131	55.6	308	21.7		25.3	303	29.1		07.0	208	13.1		08.3	328	09.2		43.1
11	146	58.1	323	21.3	-0	26.6	318	30.1	-3	07.7	223	15.6	-23	08.3	343	11.4	+8	42.9
12	162	00.5	338	21.0	-0	27.9	333	31.0	-3	08.4	238	18.1	-23	08.3	358	13.6	+8	42.8
13	177	03.0	353	20.7		29.1	348	32.0		09.0	253	20.6		08.3	13	15.7		42.7
14	192	05.5	8	20.4		30.4	3	33.0		09.7	268	23.2		08.3	28	17.9		42.6
15	207	07.9	23	20.1		31.7	18	34.0		10.3	283	25.7		08.3	43	20.1		42.5
16	222	10.4	38	19.8		33.0	33	35.0		11.0	298	28.2		08.4	58	22.3		42.3
17	237	12.9	53	19.4	-0	34.3	48	36.0	-3	11.7	313	30.7	-23	08.4	73	24.4	+8	42.2
18	252	15.3	68	19.1	-0	35.6	63	36.9	-3	12.3	328	33.2	-23	08.4	88	26.6	+8	42.1
19	267	17.8	83	18.8		36.9	78	37.9		13.0	343	35.7		08.4	103	28.8		42.0
20	282	20.2	98	18.5		38.2	93	38.9		13.7	358	38.2		08.4	118	30.9		41.9
21	297	22.7	113	18.2		39.5	108	39.9		14.3	13	40.7		08.4	133	33.1		41.8
22	312	25.2	128	17.8		40.7	123	40.9		15.0	28	43.2		08.4	148	35.3		41.6
23	327	27.6	143	17.5		42.0	138	41.8		15.6	43	45.8		08.4	163	37.4		41.5
24	342	30.1	158	17.2	-0	43.3	153	42.8	-3	16.3	58	48.3	-23	08.4	178	39.6	+8	41.4
Dif	—		-3		-13		+10		-7		+25		0		+22		-1	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'9 PMG: 11 ^h 59 ^m 2			Edad: 3 ^d 2 SD: 15'2 PMG: 14 ^h 41 ^m	PHE { 4 ^h : 55'8 12 ^h : 55'6 20 ^h : 55'4 R°: 46 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico	Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	09.3	+7 29.4	146	15.7	-11 52.5	134	60 N	3 19	4 16	5 00	10 18	90	18 50	3
1	195	09.6	28.5	160	48.9	-12 05.9	134	58	31	23	05	09	86	19 00	7
2	210	09.8	27.6	175	22.0	19.2	133	56	41	30	09	10 01	82	08	12
3	225	10.0	26.7	189	55.1	32.4	132	54	50	35	12	9 54	79	16	15
4	240	10.2	25.8	204	28.2	45.6	132	52	3 57	40	15	48	76	23	17
5	255	10.4	+7 24.8	219	01.3	-12 58.7	131	50	4 04	4 45	5 18	9 42	74	19 29	20
6	270	10.6	+7 23.9	233	34.4	-13 11.7	130	45	4 18	4 54	5 25	9 30	69	19 43	24
7	285	10.8	23.0	248	07.4	24.7	130	40	29	5 02	30	20	65	19 54	28
8	300	11.0	22.1	262	40.4	37.6	129	35	38	09	34	12	61	20 04	31
9	315	11.2	21.2	277	13.4	-13 50.4	128	30	45	14	38	9 05	58	12	34
10	330	11.4	20.2	291	46.4	-14 03.1	127	20	4 57	23	45	8 52	53	27	39
11	345	11.6	+7 19.3	306	19.3	-14 15.8	127	10 N	5 05	5 29	5 51	8 41	49	20 40	42
12	0	11.8	+7 18.4	320	52.3	-14 28.4	126	0	5 11	5 35	5 56	8 31	45	20 52	46
13	15	12.0	17.5	335	25.1	41.0	126	10 S	16	40	6 01	21	41	21 04	50
14	30	12.2	16.6	349	58.0	-14 53.4	124	20	19	44	07	8 10	37	17	54
15	45	12.4	15.6	4	30.8	-15 05.8	124	30	21	49	13	7 58	32	32	59
16	60	12.6	14.7	19	03.6	18.1	123	35	21	51	16	51	29	41	61
17	75	12.8	+7 13.8	33	36.4	-15 30.3	122	40	5 21	5 53	6 20	7 43	26	21 51	64
18	90	13.0	+7 12.9	48	09.2	-15 42.5	122	45	5 21	5 55	6 24	7 33	23	22 03	68
19	105	13.2	12.0	62	41.9	-15 54.6	121	50	20	57	30	22	18	18	72
20	120	13.4	11.0	77	14.6	-16 06.6	120	52	19	58	32	17	16	24	76
21	135	13.6	10.1	91	47.2	18.5	119	54	18	5 59	35	12	13	32	78
22	150	13.9	09.2	106	19.8	30.3	118	56	17	6 00	38	7 06	9	40	82
23	165	14.1	08.3	120	52.4	42.0	117	58	16	01	41	6 59	6	22 50	86
24	180	14.3	+7 07.3	135	25.0	-16 53.7	117	60 S	5 15	6 03	6 44	6 51	2	23 01	91

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 1 ^h 09 ^m 8		Mag: -3.8 PMG: 13 ^h 27 ^m		Mag: +1.7 PMG: 13 ^h 44 ^m		Mag: -2.5 PMG: 20 ^h 01 ^m		Mag: +0.8 PMG: 12 ^h 04 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	342	30.1	158	17.2	-0 43.3	153	42.8	-3 16.3	178	39.6
1	357	32.6	173	16.9	44.6	168	43.8	17.0	193	41.8
2	12	35.0	188	16.6	45.9	183	44.8	17.6	208	43.9
3	27	37.5	203	16.3	47.2	198	45.8	18.3	223	46.1
4	42	40.0	218	15.9	48.5	213	46.7	18.9	238	48.3
5	57	42.4	233	15.6	-0 49.8	228	47.7	-3 19.6	253	50.4
6	72	44.9	248	15.3	-0 51.1	243	48.7	-3 20.3	268	52.6
7	87	47.4	263	15.0	52.3	258	49.7	20.9	283	54.8
8	102	49.8	278	14.7	53.6	273	50.7	21.6	298	57.0
9	117	52.3	293	14.4	54.9	288	51.7	22.2	313	59.1
10	132	54.7	308	14.0	56.2	303	52.6	22.9	329	61.3
11	147	57.2	323	13.7	-0 57.5	318	53.6	-3 23.6	344	63.5
12	162	59.7	338	13.4	-0 58.8	333	54.6	-3 24.2	359	65.6
13	178	02.1	353	13.1	-1 00.1	348	55.6	24.9	14	07.8
14	193	04.6	8	12.8	01.4	3	56.6	25.5	29	10.0
15	208	07.1	23	12.4	02.6	18	57.5	26.2	44	12.1
16	223	09.5	38	12.1	03.9	33	58.5	26.9	59	14.3
17	238	12.0	53	11.8	-1 05.2	48	59.5	-3 27.5	74	16.5
18	253	14.5	68	11.5	-1 06.5	64	00.5	-3 28.2	89	18.6
19	268	16.9	83	11.2	07.8	79	01.5	28.8	104	20.8
20	283	19.4	98	10.9	09.1	94	02.4	29.5	119	23.0
21	298	21.8	113	10.5	10.4	109	03.4	30.2	134	25.1
22	313	24.3	128	10.2	11.7	124	04.4	30.8	149	27.3
23	328	26.8	143	09.9	13.0	139	05.4	31.5	164	29.5
24	343	29.2	158	09.6	-1 14.2	154	06.3	-3 32.1	179	31.7
Dif	—		-3	-13	+10	-7	+25	0	+22	-1

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 15°9 PMG: 11 ^h 58 ^m 9			Edad: 4 ^d 2 PHE { SD: 15°1 PMG: 15 ^h 27 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	h m	h m				
0	180	14.3	+7	07.3	135	25.0	-16 53.7	60 N	18 54	19 38	20 34	11 48 92	18 53 6					
1	195	14.5		06.4	149	57.5 ¹³⁵	-17 05.3 ¹¹⁶	58	49	31	22	35 85	19 07 12					
2	210	14.7		05.5	164	30.0 ¹³⁵	16.8 ¹¹⁵	56	46	25	13	23 81	20 16					
3	225	14.9		04.6	179	02.4 ¹³⁴	28.2 ¹¹⁴	54	43	19	20 04	13 77	31 19					
4	240	15.1		03.7	193	34.8 ¹³⁴	39.5 ¹¹³	52	40	14	19 57	11 04 74	40 22					
5	255	15.3	+7	02.7	208	07.2 ¹³⁴	-17 50.8 ¹¹³	50	18 37	19 10	19 50	10 56 72	19 49 24					
6	270	15.5	+7	01.8	222	39.5 ¹³³	-18 01.9 ¹¹¹	45	18 31	19 01	19 37	10 39 67	20 07 29					
7	285	15.7	+7	00.9	237	11.8 ¹³³	13.0 ¹¹¹	40	26	18 54	27	25 63	22 33					
8	300	15.9	+7	00.0	251	44.1 ¹³³	24.0 ¹¹⁰	35	22	48	18	13 60	35 35					
9	315	16.1	+6	59.0	266	16.3 ¹³²	34.9 ¹⁰⁹	30	19	43	11	10 03 58	20 46 38					
10	330	16.3		58.1	280	48.5 ¹³²	45.7 ¹⁰⁸	20	12	35	19 01	9 45 54	21 06 41					
11	345	16.5	+6	57.2	295	20.7 ¹³²	-18 56.4 ¹⁰⁷	10 N	18 07	18 28	18 53	9 30 50	21 22 45					
12	0	16.7	+6	56.3	309	52.8 ¹³¹	-19 07.0 ¹⁰⁶	0	18 02	18 23	18 47	9 16 47	21 38 48					
13	15	17.0		55.3	324	24.8 ¹³⁰	17.6 ¹⁰⁶	10 S	17 57	18	43	9 02 43	21 54 51					
14	30	17.2		54.4	338	56.9 ¹³¹	28.0 ¹⁰⁴	20	52	14	40	8 47 40	22 11 54					
15	45	17.4		53.5	353	28.9 ¹³⁰	38.3 ¹⁰³	30	47	11	39	30 36	31 57					
16	60	17.6		52.6	8	00.8 ¹²⁹	48.6 ¹⁰³	35	44	09	38	20 33	42 60					
17	75	17.8	+6	51.6	22	32.7 ¹²⁹	-19 58.7 ¹⁰¹	40	17 40	18 07	18 39	8 09 30	22 55 63					
18	90	18.0	+6	50.7	37	04.6 ¹²⁹	-20 08.8 ¹⁰¹	45	17 36	18 05	18 39	7 56 26	23 11 66					
19	105	18.2		49.8	51	36.4 ¹²⁸	18.8 ¹⁰⁰	50	31	04	41	40 22	30 71					
20	120	18.4		48.8	66	08.2 ¹²⁸	28.6 ⁹⁸	52	29	03	42	33 19	40 73					
21	135	18.6		47.9	80	39.9 ¹²⁷	38.4 ⁹⁸	54	26	02	43	25 16	23 50 76					
22	150	18.8		47.0	95	11.6 ¹²⁷	48.1 ⁹⁷	56	24	01	44	15 14	** ** *					
23	165	19.0		46.1	109	43.3 ¹²⁷	-20 57.6 ⁹⁵	58	21	18 00	46	7 05 10	** ** *					
24	180	19.2	+6	45.1	124	14.9 ¹²⁶	-21 07.1 ⁹⁵	60 S	17 18	17 59	18 48	6 53 5	** ** *					
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 1 ^h 05 ^m 9		Mag: -3.8 PMG: 13 ^h 28 ^m			Mag: +1.7 PMG: 13 ^h 43 ^m			Mag: -2.5 PMG: 19 ^h 57 ^m			Mag: +0.8 PMG: 12 ^h 00 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	343	29.2	158	09.6	-1	14.2	154	06.3	-3	32.1	59	48.4	-23	08.6	179	31.7	+8	38.6
1	358	31.7	173	09.3		15.5	169	07.3		32.8	74	50.9		08.6	194	33.8		38.4
2	13	34.2	188	09.0		16.8	184	08.3		33.5	89	53.4		08.6	209	36.0		38.3
3	28	36.6	203	08.6		18.1	199	09.3		34.1	104	55.9		08.6	224	38.2		38.2
4	43	39.1	218	08.3		19.4	214	10.3		34.8	119	58.4		08.6	239	40.3		38.1
5	58	41.6	233	08.0	-1	20.7	229	11.2	-3	35.4	135	00.9	-23	08.6	254	42.5	+8	38.0
6	73	44.0	248	07.7	-1	22.0	244	12.2	-3	36.1	150	03.4	-23	08.6	269	44.7	+8	37.8
7	88	46.5	263	07.4		23.3	259	13.2		36.8	165	05.9		08.6	284	46.8		37.7
8	103	49.0	278	07.0		24.6	274	14.2		37.4	180	08.4		08.6	299	49.0		37.6
9	118	51.4	293	06.7		25.8	289	15.1		38.1	195	10.9		08.6	314	51.2		37.5
10	133	53.9	308	06.4		27.1	304	16.1		38.7	210	13.4		08.6	329	53.3		37.4
11	148	56.3	323	06.1	-1	28.4	319	17.1	-3	39.4	225	15.8	-23	08.6	344	55.5	+8	37.3
12	163	58.8	338	05.8	-1	29.7	334	18.1	-3	40.1	240	18.3	-23	08.6	359	57.7	+8	37.1
13	179	01.3	353	05.5		31.0	349	19.1		40.7	255	20.8		08.6	14	59.8		37.0
14	194	03.7	8	05.1		32.3	4	20.0		41.4	270	23.3		08.7	30	02.0		36.9
15	209	06.2	23	04.8		33.6	19	21.0		42.0	285	25.8		08.7	45	04.2		36.8
16	224	08.7	38	04.5		34.9	34	22.0		42.7	300	28.3		08.7	60	06.4		36.7
17	239	11.1	53	04.2	-1	36.2	49	23.0	-3	43.4	315	30.8	-23	08.7	75	08.5	+8	36.5
18	254	13.6	68	03.9	-1	37.4	64	23.9	-3	44.0	330	33.3	-23	08.7	90	10.7	+8	36.4
19	269	16.1	83	03.5		38.7	79	24.9		44.7	345	35.8		08.7	105	12.9		36.3
20	284	18.5	98	03.2		40.0	94	25.9		45.3	0	38.3		08.7	120	15.0		36.2
21	299	21.0	113	02.9		41.3	109	26.9		46.0	15	40.8		08.7	135	17.2		36.1
22	314	23.5	128	02.6		42.6	124	27.8		46.7	30	43.3		08.7	150	19.4		36.0
23	329	25.9	143	02.3		43.9	139	28.8		47.3	45	45.8		08.7	165	21.5		35.8
24	344	28.4	158	02.0	-1	45.2	154	29.8	-3	48.0	60	48.3	-23	08.7	180	23.7	+8	35.7
Dif	—		-3		-13		+10		-7		+25		0		+22		-1	

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'9 PMG: 11 ^h 58 ^m 5			Edad: 5 ^d 2 SD: 14'9 PMG: 16 ^h 14 ^m	PHE { 4 ^h : 54'8 12 ^h : 54'6 20 ^h : 54'5 Rº: 49 ^m										
	hG ☉	Dec		hG ☾		Dif		Dec	Dif		Náutico	Civil	Hora	Rº	Hora
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	19.2	+6 45.1	124	14.9	-21 07.1	94	60 N	3 25	4 21	5 05	13 20	89	18 59	13
1	195	19.5		138	46.5 ¹²⁶	16.5	94	58	36	28	09	13 00	82	19 19	20
2	210	19.7		153	18.0 ¹²⁵	25.8	93	56	46	34	13	12 44	77	36	24
3	225	19.9		167	49.5 ¹²⁵	34.9	91	54	3 54	39	16	30	74	19 50	27
4	240	20.1		182	20.9 ¹²⁴	44.0	91	52	4 01	44	19	18	71	20 02	30
5	255	20.3	+6 40.5	196	52.3 ¹²⁴	-21 53.0	90	50	4 08	4 48	5 21	12 08	69	20 13	32
6	270	20.5	+6 39.6	211	23.6 ¹²³	-22 01.8	88	45	4 21	4 57	5 27	11 46	64	20 36	36
7	285	20.7		225	55.0 ¹²⁴	10.6	88	40	31	5 04	32	28	62	20 55	38
8	300	20.9		240	26.2 ¹²²	19.2	86	35	40	10	36	13	60	21 10	41
9	315	21.1		254	57.4 ¹²²	27.8	86	30	47	15	39	11 01	57	24	42
10	330	21.3		269	28.6 ¹²²	36.2	84	20	4 57	23	45	10 39	54	21 47	45
11	345	21.5	+6 34.9	283	59.7 ¹²¹	-22 44.6	84	10 N	5 05	5 29	5 51	10 20	51	22 07	47
12	0	21.8	+6 34.0	298	30.8 ¹²¹	-22 52.8	82	0	5 10	5 34	5 55	10 03	48	22 26	49
13	15	22.0		313	01.9 ¹²¹	-23 00.9	81	10 S	14	39	6 00	9 45	46	22 45	51
14	30	22.2		327	32.9 ¹²⁰	08.9	80	20	17	43	05	27	43	23 05	54
15	45	22.4		342	03.8 ¹¹⁹	16.8	79	30	19	46	10	9 06	39	28	57
16	60	22.6		356	34.7 ¹¹⁹	24.6	78	35	19	48	13	8 53	38	42	58
17	75	22.8	+6 29.3	11	05.6 ¹¹⁹	-23 32.3	77	40	5 18	5 50	6 17	8 39	35	23 58	60
18	90	23.0	+6 28.4	25	36.4 ¹¹⁸	-23 39.9	76	45	5 17	5 51	6 21	8 22	33	*** ** *	*** ** *
19	105	23.2		40	07.2 ¹¹⁸	47.3	74	50	16	53	25	8 02	28	*** ** *	*** ** *
20	120	23.4		54	37.9 ¹¹⁷	-23 54.7	74	52	15	54	27	7 52	26	*** ** *	*** ** *
21	135	23.7		69	08.6 ¹¹⁷	-24 01.9	72	54	14	54	30	41	23	*** ** *	*** ** *
22	150	23.9		83	39.3 ¹¹⁷	09.1	72	56	12	55	32	29	20	0 02	79
23	165	24.1		98	09.9 ¹¹⁶	16.1	70	58	11	56	35	7 15	15	16	84
24	180	24.3	+6 22.8	112	40.4 ¹¹⁵	-24 23.0	69	60 S	5 09	5 57	6 38	6 58	9	0 32	90

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG 1 ^h 01 ^m 9		Mag: -3.8 PMG: 13 ^h 28 ^m		Mag: +1.7 PMG: 13 ^h 41 ^m		Mag: -2.5 PMG: 19 ^h 53 ^m		Mag: +0.8 PMG: 11 ^h 57 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	344	28.4	158	02.0	-1 45.2	154	29.8	-3 48.0	60	48.3	-23 08.7	180	23.7	+8 35.7	
1	359	30.8	173	01.6	46.5	169	30.8	48.6	75	50.8	08.7	195	25.9	35.6	
2	14	33.3	188	01.3	47.7	184	31.7	49.3	90	53.3	08.7	210	28.0	35.5	
3	29	35.8	203	01.0	49.0	199	32.7	50.0	105	55.7	08.7	225	30.2	35.4	
4	44	38.2	218	00.7	50.3	214	33.7	50.6	120	58.2	08.7	240	32.4	35.2	
5	59	40.7	233	00.4	-1 51.6	229	34.7	-3 51.3	136	00.7	-23 08.7	255	34.5	+8 35.1	
6	74	43.2	248	00.0	-1 52.9	244	35.7	-3 51.9	151	03.2	-23 08.7	270	36.7	+8 35.0	
7	89	45.6	262	59.7	54.2	259	36.6	52.6	166	05.7	08.7	285	38.9	34.9	
8	104	48.1	277	59.4	55.5	274	37.6	53.3	181	08.2	08.8	300	41.1	34.8	
9	119	50.6	292	59.1	56.8	289	38.6	53.9	196	10.7	08.8	315	43.2	34.7	
10	134	53.0	307	58.8	58.0	304	39.5	54.6	211	13.2	08.8	330	45.4	34.5	
11	149	55.5	322	58.5	-1 59.3	319	40.5	-3 55.2	226	15.7	-23 08.8	345	47.6	+8 34.4	
12	164	57.9	337	58.1	-2 00.6	334	41.5	-3 55.9	241	18.1	-23 08.8	0	49.7	+8 34.3	
13	180	00.4	352	57.8	01.9	349	42.5	56.6	256	20.6	08.8	15	51.9	34.2	
14	195	02.9	7 57.5		03.2	4 43.4		57.2	271	23.1	08.8	30	54.1	34.1	
15	210	05.3	22 57.2		04.5	19 44.4		57.9	286	25.6	08.8	45	56.2	33.9	
16	225	07.8	37 56.9		05.8	34 45.4		58.5	301	28.1	08.8	60	58.4	33.8	
17	240	10.3	52 56.5	-2 07.1	49 46.4	-3 59.2	49 46.4	-3 59.2	316	30.6	-23 08.8	76	00.6	+8 33.7	
18	255	12.7	67 56.2	-2 08.3	64 47.3	-3 59.9	64 47.3	-3 59.9	331	33.1	-23 08.8	91	02.7	+8 33.6	
19	270	15.2	82 55.9	09.6	79 48.3	-4 00.5	79 48.3	-4 00.5	346	35.5	08.8	106	04.9	33.5	
20	285	17.7	97 55.6	10.9	94 49.3	01.2	94 49.3	01.2	1 38.0		08.8	121	07.1	33.4	
21	300	20.1	112 55.3	12.2	109 50.3	01.8	109 50.3	01.8	16 40.5		08.8	136	09.3	33.2	
22	315	22.6	127 55.0	13.5	124 51.2	02.5	124 51.2	02.5	31 43.0		08.8	151	11.4	33.1	
23	330	25.1	142 54.6	14.8	139 52.2	03.2	139 52.2	03.2	46 45.5		08.8	166	13.6	33.0	
24	345	27.5	157 54.3	-2 16.1	154 53.2	-4 03.8	154 53.2	-4 03.8	61 48.0	-23 08.8		181	15.8	+8 32.9	
Dif	—		-3	-13	+10	-7	+10	-7	+25	0		+22		-1	

UT	SOL		 LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 9		Edad: 6 ^d 2	PHE { 4 ^h : 54/4 12 ^h : 54/4 20 ^h : 54/3	PMG: 17 ^h 03 ^m	R°: 51 ^m									
	hG ☉	Dec							hG ☾	Dif	Dec	Dif	Civil	Náutico	Hora
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	24.3	+6	22.8	112	40.4	-24	23.0	68	60 N	18 48	19 31	20 26	14 49	77
1	195	24.5		21.9	127	11.0 ¹¹⁶		29.8	68	58	44		25	16	22 71
2	210	24.7		21.0	141	41.4 ¹¹⁴		36.4	66	56	41		19	20 07	14 01 68
3	225	24.9		20.0	156	11.9 ¹¹⁵		43.0	66	54	38	14	19 59	13 44 65	17 39
4	240	25.1		19.1	170	42.3 ¹¹⁴		49.4	64	52	35	10	52	29 64	32 41
5	255	25.3	+6	18.2	185	12.6 ¹¹³	-24	55.7	63	50	18 33	19 06	19 46	13 17 62	20 45 42
6	270	25.6	+6	17.2	199	42.9 ¹¹³	-25	01.9	62	45	18 27	18 57	19 33	12 50 60	21 12 44
7	285	25.8		16.3	214	13.2 ¹¹³		08.0	61	40	23		51	23	30 58
8	300	26.0		15.4	228	43.4 ¹¹²		14.0	60	35	19		45	15	12 13 56
9	315	26.2		14.4	243	13.6 ¹¹²		19.8	58	30	16	40	19 09	11 58 55	22 06 48
10	330	26.4		13.5	257	43.8 ¹¹²		25.5	57	20	11	33	18 59	33 53	32 49
11	345	26.6	+6	12.6	272	13.9 ¹¹¹	-25	31.1	56	10 N	18 06	18 27	18 52	11 11 52	22 54 50
12	0	26.8	+6	11.6	286	44.0 ¹¹¹	-25	36.6	55	0	18 01	18 22	18 46	10 51 50	23 15 51
13	15	27.0		10.7	301	14.0 ¹¹⁰		42.0	54	10 S	17 57		18	43	31 49
14	30	27.3		09.8	315	44.0 ¹¹⁰		47.2	52	20	53	15	40	10 10 47	23 59 52
15	45	27.5		08.8	330	14.0 ¹¹⁰		52.4	52	30	48	12	40	9 45 45	** ** *
16	60	27.7		07.9	344	43.9 ¹⁰⁹	-25	57.4	50	35	45	10	40	31 44	** ** *
17	75	27.9	+6	06.9	359	13.8 ¹⁰⁹	-26	02.2	48	40	17 42	18 09	18 40	9 14 42	** ** *
18	90	28.1	+6	06.0	13	43.6 ¹⁰⁸	-26	07.0	48	45	17 38	18 08	18 42	8 55 39	0 17 63
19	105	28.3		05.1	28	13.4 ¹⁰⁸		11.6	46	50	34	06	44	30 37	41 66
20	120	28.5		04.1	42	43.2 ¹⁰⁸		16.1	45	52	32	06	45	18 35	0 53 67
21	135	28.7		03.2	57	13.0 ¹⁰⁸		20.5	44	54	30	05	46	8 04 33	1 06 70
22	150	29.0		02.3	71	42.7 ¹⁰⁷		24.8	43	56	28	05	48	7 49 30	21 73
23	165	29.2		01.3	86	12.4 ¹⁰⁷		28.9	41	58	25	04	50	30 26	1 40 77
24	180	29.4	+6	00.4	100	42.0 ¹⁰⁶	-26	32.9	40	60 S	17 22	18 04	18 52	7 07 20	2 02 84

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG		Mag: -3.8		Mag: +1.7		Mag: -2.5		Mag: +0.8	
	0 ^h 58 ^m 0		PMG: 13 ^h 29 ^m		PMG: 13 ^h 40 ^m		PMG: 19 ^h 50 ^m		PMG: 11 ^h 53 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	345	27.5	157	54.3	-2	16.1	154	53.2	-4	03.8
1	0	30.0	172	54.0		17.4	169	54.2		04.5
2	15	32.4	187	53.7		18.6	184	55.1		05.1
3	30	34.9	202	53.4		19.9	199	56.1		05.8
4	45	37.4	217	53.0		21.2	214	57.1		06.5
5	60	39.8	232	52.7	-2	22.5	229	58.0	-4	07.1
6	75	42.3	247	52.4	-2	23.8	244	59.0	-4	07.8
7	90	44.8	262	52.1		25.1	260	00.0		08.4
8	105	47.2	277	51.8		26.4	275	01.0		09.1
9	120	49.7	292	51.4		27.7	290	01.9		09.8
10	135	52.2	307	51.1		28.9	305	02.9		10.4
11	150	54.6	322	50.8	-2	30.2	320	03.9	-4	11.1
12	165	57.1	337	50.5	-2	31.5	335	04.8	-4	11.7
13	180	59.6	352	50.2		32.8	350	05.8		12.4
14	196	02.0	7	49.8		34.1	5	06.8		13.1
15	211	04.5	22	49.5		35.4	20	07.8		13.7
16	226	06.9	37	49.2		36.7	35	08.7		14.4
17	241	09.4	52	48.9	-2	37.9	50	09.7	-4	15.0
18	256	11.9	67	48.6	-2	39.2	65	10.7	-4	15.7
19	271	14.3	82	48.2		40.5	80	11.6		16.4
20	286	16.8	97	47.9		41.8	95	12.6		17.0
21	301	19.3	112	47.6		43.1	110	13.6		17.7
22	316	21.7	127	47.3		44.4	125	14.6		18.3
23	331	24.2	142	47.0		45.7	140	15.5		19.0
24	346	26.7	157	46.6	-2	46.9	155	16.5	-4	19.7
Dif	—		-3		-13		+10		-7	
							+25		0	
									+22	
									-1	

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'9 PMG: 11 ^h 57 ^m 9			Edad: 7 ^d 2 SD: 14'8 PMG: 17 ^h 54 ^m	PHE { 4 ^h : 54'3 12 ^h : 54'2 20 ^h : 54'3 R°: 51 ^m										
	hG ☉	Dec		hG ☾		Dif		Dec	Dif		Náutico	Civil	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m
0	180	29.4	+6	00.4	100	42.0	-26	32.9	60 N	3 31	4 26	5 10	16 06	53	19 39 54
1	195	29.6	+5	59.5	115	11.6 ¹⁰⁶		36.8 ³⁹	58	41	32	13	15 33	53	20 12 54
2	210	29.8		58.5	129	41.2 ¹⁰⁶		40.5 ³⁷	56	50	38	16	15 09	53	37 53
3	225	30.0		57.6	144	10.8 ¹⁰⁶		44.1 ³⁶	54	3 58	43	19	14 49	53	20 56 55
4	240	30.2		56.7	158	40.3 ¹⁰⁵		47.6 ³⁵	52	4 05	47	22	33	53	21 13 53
5	255	30.5	+5	55.7	173	09.8 ¹⁰⁵	-26	51.0 ³⁴	50	4 11	4 51	5 24	14 19	53	21 27 53
6	270	30.7	+5	54.8	187	39.3 ¹⁰⁵	-26	54.3 ³³	45	4 24	4 59	5 29	13 50	53	21 56 53
7	285	30.9		53.8	202	08.7 ¹⁰⁴	-26	57.4 ³¹	40	34	5 06	34	28	52	22 19 52
8	300	31.1		52.9	216	38.1 ¹⁰⁴	-27	00.4 ³⁰	35	41	12	37	13 09	52	37 53
9	315	31.3		52.0	231	07.5 ¹⁰⁴		03.2 ²⁸	30	48	16	40	12 53	52	22 54 52
10	330	31.5		51.0	245	36.9 ¹⁰⁴		05.9 ²⁷	20	4 58	24	46	26	52	23 21 52
11	345	31.7	+5	50.1	260	06.2 ¹⁰³	-27	08.5 ²⁶	10 N	5 05	5 29	5 50	12 03	51	23 44 52
12	0	32.0	+5	49.2	274	35.5 ¹⁰³	-27	11.0 ²⁵	0	5 10	5 34	5 55	11 41	52	** ** *
13	15	32.2		48.2	289	04.8 ¹⁰³		13.3 ²³	10 S	13	38	5 59	11 20	51	** ** *
14	30	32.4		47.3	303	34.1 ¹⁰³		15.5 ²²	20	15	41	6 03	10 57	50	** ** *
15	45	32.6		46.3	318	03.4 ¹⁰³		17.6 ²¹	30	16	44	08	30	50	0 25 54
16	60	32.8		45.4	332	32.6 ¹⁰²		19.6 ²⁰	35	16	45	10	10 15	49	40 55
17	75	33.0	+5	44.5	347	01.8 ¹⁰²	-27	21.4 ¹⁸	40	5 15	5 46	6 13	9 56	49	0 58 55
18	90	33.2	+5	43.5	1	31.0 ¹⁰²	-27	23.1 ¹⁷	45	5 14	5 48	6 17	9 34	49	1 20 56
19	105	33.5		42.6	16	00.2 ¹⁰²		24.6 ¹⁵	50	11	49	21	9 07	47	1 47 58
20	120	33.7		41.6	30	29.3 ¹⁰¹		26.0 ¹⁴	52	10	49	23	8 53	47	2 00 59
21	135	33.9		40.7	44	58.5 ¹⁰²		27.3 ¹³	54	09	50	25	37	46	16 59
22	150	34.1		39.8	59	27.6 ¹⁰¹		28.5 ¹²	56	07	50	27	8 19	45	34 61
23	165	34.3		38.8	73	56.7 ¹⁰¹		29.5 ¹⁰	58	05	51	30	7 56	43	2 57 62
24	180	34.5	+5	37.9	88	25.8 ¹⁰¹	-27	30.4 ⁹	60 S	5 03	5 51	6 32	7 27	39	3 26 66

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO										
	PMG 0 ^h 54 ^m 1		Mag: -3.8 PMG: 13 ^h 29 ^m		Mag: +1.7 PMG: 13 ^h 38 ^m		Mag: -2.5 PMG: 19 ^h 46 ^m		Mag: +0.8 PMG: 11 ^h 50 ^m										
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec									
h	°	'	°	'	°	'	°	'	°	'									
0	346	26.7	157	46.6	-2	46.9	155	16.5	-4	19.7	182	07.8	+8	30.0					
1	1	29.1	172	46.3		48.2	170	17.5		20.3	197	10.0		29.9					
2	16	31.6	187	46.0		49.5	185	18.4		21.0	212	12.2		29.8					
3	31	34.0	202	45.7		50.8	200	19.4		21.6	107	54.9		29.7					
4	46	36.5	217	45.4		52.1	215	20.4		22.3	122	57.3		29.6					
5	61	39.0	232	45.0	-2	53.4	230	21.3	-4	22.9	137	59.8	-23	08.9	257	18.7	+8	29.5	
6	76	41.4	247	44.7	-2	54.7	245	22.3	-4	23.6	153	02.3	-23	09.0	272	20.8	+8	29.3	
7	91	43.9	262	44.4		55.9	260	23.3		24.3	168	04.8		09.0	287	23.0		29.2	
8	106	46.4	277	44.1		57.2	275	24.2		24.9	183	07.2		09.0	302	25.2		29.1	
9	121	48.8	292	43.8		58.5	290	25.2		25.6	198	09.7		09.0	317	27.3		29.0	
10	136	51.3	307	43.4	-2	59.8	305	26.2		26.2	213	12.2		09.0	332	29.5		28.9	
11	151	53.8	322	43.1	-3	01.1	320	27.2	-4	26.9	228	14.6	-23	09.0	347	31.7	+8	28.7	
12	166	56.2	337	42.8	-3	02.4	335	28.1	-4	27.6	243	17.1	-23	09.0	2	33.8	+8	28.6	
13	181	58.7	352	42.5		03.7	350	29.1		28.2	258	19.6		09.0	17	36.0		28.5	
14	197	01.2	7	42.2		04.9	5	30.1		28.9	273	22.0		09.0	32	38.2		28.4	
15	212	03.6	22	41.8		06.2	20	31.0		29.5	288	24.5		09.0	47	40.3		28.3	
16	227	06.1	37	41.5		07.5	35	32.0		30.2	303	27.0		09.0	62	42.5		28.2	
17	242	08.5	52	41.2	-3	08.8	50	33.0	-4	30.9	318	29.5	-23	09.0	77	44.7	+8	28.0	
18	257	11.0	67	40.9	-3	10.1	65	33.9	-4	31.5	333	31.9	-23	09.0	92	46.9	+8	27.9	
19	272	13.5	82	40.6		11.4	80	34.9		32.2	348	34.4		09.0	107	49.0		27.8	
20	287	15.9	97	40.2		12.6	95	35.9		32.8	3	36.9		09.0	122	51.2		27.7	
21	302	18.4	112	39.9		13.9	110	36.8		33.5	18	39.3		09.0	137	53.4		27.6	
22	317	20.9	127	39.6		15.2	125	37.8		34.1	33	41.8		09.0	152	55.5		27.4	
23	332	23.3	142	39.3		16.5	140	38.8		34.8	48	44.3		09.0	167	57.7		27.3	
24	347	25.8	157	38.9	-3	17.8	155	39.7	-4	35.5	63	46.7	-23	09.0	182	59.9	+8	27.2	
Dif	—		-3	-13		+10	-7			+25	0			+22		-1			

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'9 PMG: 11 ^h 57 ^m 5		Edad: 8 ^d 2 SD: 14'8 PMG: 18 ^h 45 ^m		PHE { 4 ^h : 54'3 12 ^h : 54'3 20 ^h : 54'4 R°: 51 ^m									
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	180	34.5	+5 37.9	88	25.8	-27 30.4	60 N	18 41	19 25	20 19	16 59 28	20 33 78		
1	195	34.7		102	54.9 ¹⁰¹	31.2	58	38	19	09	26 34	21 06 72		
2	210	35.0		117	24.0 ¹⁰¹	31.8	56	35	14	20 00	16 02 37	30 69		
3	225	35.2		131	53.1 ¹⁰¹	32.3	54	33	09	19 53	15 42 39	21 49 67		
4	240	35.4		146	22.1 ¹⁰⁰	32.6	52	30	05	47	26 41	22 06 64		
5	255	35.6	+5 33.2	160	51.2 ¹⁰¹	-27 32.9	50	18 28	19 01	19 41	15 12 42	22 20 63		
6	270	35.8	+5 32.2	175	20.2 ¹⁰⁰	-27 33.0	45	18 24	18 53	19 29	14 43 44	22 49 60		
7	285	36.0		189	49.2 ¹⁰⁰	32.9	40	20	47	20	20 46	23 11 59		
8	300	36.3		204	18.3 ¹⁰¹	32.8	35	17	42	12	14 01 47	30 57		
9	315	36.5		218	47.3 ¹⁰⁰	32.4	30	14	38	19 06	13 45 48	23 46 56		
10	330	36.7		233	16.3 ¹⁰⁰	32.0	20	09	31	18 57	13 18 49	*** ** *		
11	345	36.9	+5 27.5	247	45.3 ¹⁰⁰	-27 31.4	10 N	18 05	18 26	18 50	12 54 51	*** ** *		
12	0	37.1	+5 26.6	262	14.4 ¹⁰¹	-27 30.7	0	18 01	18 22	18 46	12 33 51	0 06 51		
13	15	37.3		276	43.4 ¹⁰⁰	29.9	10 S	17 57	18	43	12 11 52	28 51		
14	30	37.6		291	12.4 ¹⁰⁰	28.9	20	53	15	41	11 47 53	0 51 51		
15	45	37.8		305	41.4 ¹⁰⁰	27.8	30	49	13	41	20 54	1 19 49		
16	60	38.0		320	10.4 ¹⁰⁰	26.6	35	46	12	41	11 04 55	35 49		
17	75	38.2	+5 21.9	334	39.5 ¹⁰¹	-27 25.2	40	17 44	18 11	18 42	10 45 56	1 53 49		
18	90	38.4	+5 20.9	349	08.5 ¹⁰⁰	-27 23.7	45	17 41	18 10	18 44	10 23 57	2 16 48		
19	105	38.6		3	37.5 ¹⁰⁰	22.1	50	37	09	47	9 54 58	45 47		
20	120	38.9		18	06.5 ¹⁰⁰	20.3	52	35	09	48	40 59	2 59 47		
21	135	39.1		32	35.6 ¹⁰¹	18.4	54	34	09	50	23 60	3 15 46		
22	150	39.3		47	04.6 ¹⁰⁰	16.3	56	32	09	52	9 04 61	35 45		
23	165	39.5		61	33.7 ¹⁰¹	14.2	58	29	09	54	8 39 64	3 59 43		
24	180	39.7	+5 15.3	76	02.8 ¹⁰¹	-27 11.9	60 S	17 27	18 08	18 57	8 06 67	4 32 40		
UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO				
	PMG: 0 ^h 50 ^m 1		Mag: -3.8 PMG: 13 ^h 30 ^m		Mag: +1.7 PMG: 13 ^h 36 ^m		Mag: -2.5 PMG: 19 ^h 42 ^m			Mag: +0.9 PMG: 11 ^h 46 ^m				
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	347	25.8	157	38.9	-3 17.8	155	39.7	-4 35.5	63	46.7	-23 09.0	182	59.9	+8 27.2
1	2	28.3	172	38.6	19.1	170	40.7	36.1	78	49.2	09.0	198	02.0	27.1
2	17	30.7	187	38.3	20.3	185	41.7	36.8	93	51.6	09.0	213	04.2	27.0
3	32	33.2	202	38.0	21.6	200	42.6	37.4	108	54.1	09.0	228	06.4	26.9
4	47	35.7	217	37.7	22.9	215	43.6	38.1	123	56.6	09.0	243	08.5	26.7
5	62	38.1	232	37.3	-3 24.2	230	44.6	-4 38.8	138	59.0	-23 09.0	258	10.7	+8 26.6
6	77	40.6	247	37.0	-3 25.5	245	45.5	-4 39.4	154	01.5	-23 09.0	273	12.9	+8 26.5
7	92	43.0	262	36.7	26.8	260	46.5	40.1	169	04.0	09.0	288	15.1	26.4
8	107	45.5	277	36.4	28.0	275	47.5	40.7	184	06.4	09.0	303	17.2	26.3
9	122	48.0	292	36.0	29.3	290	48.4	41.4	199	08.9	09.0	318	19.4	26.1
10	137	50.4	307	35.7	30.6	305	49.4	42.1	214	11.4	09.0	333	21.6	26.0
11	152	52.9	322	35.4	-3 31.9	320	50.4	-4 42.7	229	13.8	-23 09.0	348	23.7	+8 25.9
12	167	55.4	337	35.1	-3 33.2	335	51.3	-4 43.4	244	16.3	-23 09.0	3	25.9	+8 25.8
13	182	57.8	352	34.8	34.5	350	52.3	44.0	259	18.7	09.1	18	28.1	25.7
14	198	00.3	7	34.4	35.7	5	53.3	44.7	274	21.2	09.1	33	30.2	25.6
15	213	02.8	22	34.1	37.0	20	54.2	45.3	289	23.7	09.1	48	32.4	25.4
16	228	05.2	37	33.8	38.3	35	55.2	46.0	304	26.1	09.1	63	34.6	25.3
17	243	07.7	52	33.5	-3 39.6	50	56.1	-4 46.7	319	28.6	-23 09.1	78	36.8	+8 25.2
18	258	10.2	67	33.1	-3 40.9	65	57.1	-4 47.3	334	31.0	-23 09.1	93	38.9	+8 25.1
19	273	12.6	82	32.8	42.2	80	58.1	48.0	349	33.5	09.1	108	41.1	25.0
20	288	15.1	97	32.5	43.4	95	59.0	48.6	4	36.0	09.1	123	43.3	24.8
21	303	17.5	112	32.2	44.7	111	00.0	49.3	19	38.4	09.1	138	45.4	24.7
22	318	20.0	127	31.8	46.0	126	01.0	50.0	34	40.9	09.1	153	47.6	24.6
23	333	22.5	142	31.5	47.3	141	01.9	50.6	49	43.3	09.1	168	49.8	24.5
24	348	24.9	157	31.2	-3 48.6	156	02.9	-4 51.3	64	45.8	-23 09.1	183	51.9	+8 24.4
Dif	—		-3	-13	+10	-7			+25	0		+22	-1	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15'9 PMG: 11 ^h 57 ^m 2			Edad: 9 ^d 2	PHE { 4 ^h : 54'5 12 ^h : 54'5 20 ^h : 54'7 R°: 50 ^m													
	hG ☉	Dec		hG ☾		Dif		Dec	Dif		Náutico	Civil	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m		
0	180	39.7	+5	15.3	76	02.8	-27	11.9	60 N	3 37	4 31	5 14	17 27	13	21 51	91		
1	195	39.9		14.3	90	31.8 ¹⁰⁰		09.4 ²⁵	58	47	37	18	17 00	20	22 18	83		
2	210	40.2		13.4	105	00.9 ¹⁰¹		06.9 ²⁵	56	3 55	42	20	16 39	24	39	78		
3	225	40.4		12.4	119	30.0 ¹⁰¹		04.1 ²⁸	54	4 02	47	23	21	28	22 56	75		
4	240	40.6		11.5	133	59.1 ¹⁰¹	-27	01.3 ²⁸	52	09	51	25	16 07	30	23 10	73		
5	255	40.8	+5	10.5	148	28.3 ¹⁰²	-26	58.3 ³⁰	50	4 15	4 54	5 27	15 54	32	23 23	70		
6	270	41.0	+5	09.6	162	57.4 ¹⁰¹	-26	55.2 ³¹	45	4 26	5 02	5 32	15 27	36	23 49	66		
7	285	41.2		08.7	177	26.6 ¹⁰²		52.0 ³²	40	36	08	35	15 06	39	** ** *	**		
8	300	41.5		07.7	191	55.7 ¹⁰¹		48.7 ³³	35	43	13	39	14 48	41	** ** *	**		
9	315	41.7		06.8	206	24.9 ¹⁰²		45.2 ³⁵	30	49	17	41	33	43	** ** *	**		
10	330	41.9		05.8	220	54.1 ¹⁰²		41.5 ³⁷	20	4 58	24	46	14 07	46	0 13	54		
11	345	42.1	+5	04.9	235	23.4 ¹⁰³	-26	37.8 ³⁷	10 N	5 05	5 29	5 50	13 45	48	0 36	52		
12	0	42.3	+5	03.9	249	52.6 ¹⁰²	-26	33.9 ³⁹	0	5 09	5 33	5 54	13 24	50	0 57	51		
13	15	42.6		03.0	264	21.9 ¹⁰³		29.9 ⁴⁰	10 S	12	36	5 58	13 03	52	1 19	49		
14	30	42.8		02.0	278	51.2 ¹⁰³		25.7 ⁴²	20	14	39	6 01	12 40	55	1 42	47		
15	45	43.0		01.1	293	20.5 ¹⁰³		21.4 ⁴³	30	14	41	05	12 14	58	2 08	46		
16	60	43.2	+5	00.1	307	49.8 ¹⁰³		17.0 ⁴⁴	35	13	42	08	11 59	59	24	44		
17	75	43.4	+4	59.2	322	19.2 ¹⁰⁴	-26	12.5 ⁴⁵	40	5 12	5 43	6 10	11 41	61	2 42	43		
18	90	43.6	+4	58.3	336	48.5 ¹⁰³	-26	07.8 ⁴⁷	45	5 10	5 44	6 13	11 20	63	3 04	40		
19	105	43.9		57.3	351	17.9 ¹⁰⁴	-26	03.1 ⁴⁷	50	07	45	17	10 52	67	32	37		
20	120	44.1		56.4	5	47.4 ¹⁰⁵	-25	58.1 ⁵⁰	52	06	45	18	39	69	3 46	35		
21	135	44.3		55.4	20	16.8 ¹⁰⁴		53.1 ⁵⁰	54	04	45	20	23	72	4 01	34		
22	150	44.5		54.5	34	46.3 ¹⁰⁵		47.9 ⁵²	56	02	45	22	10 05	74	20	30		
23	165	44.7		53.5	49	15.8 ¹⁰⁵		42.6 ⁵³	58	5 00	45	24	9 43	78	4 42	27		
24	180	45.0	+4	52.6	63	45.4 ¹⁰⁶	-25	37.2 ⁵⁴	60 S	4 57	5 45	6 26	9 13	86	5 12	19		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG 0 ^h 46 ^m 2			Mag: -3.8 PMG: 13 ^h 30 ^m			Mag: +1.7 PMG: 13 ^h 35 ^m			Mag: -2.5 PMG: 19 ^h 38 ^m			Mag: +0.9 PMG: 11 ^h 43 ^m					
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	348	24.9	157	31.2	-3	48.6	156	02.9	-4	51.3	64	45.8	-23	09.1	183	51.9	+8	24.4
1	3	27.4	172	30.9		49.8	171	03.9		51.9	79	48.2		09.1	198	54.1		24.3
2	18	29.9	187	30.5		51.1	186	04.8		52.6	94	50.7		09.1	213	56.3		24.1
3	33	32.3	202	30.2		52.4	201	05.8		53.2	109	53.2		09.1	228	58.4		24.0
4	48	34.8	217	29.9		53.7	216	06.8		53.9	124	55.6		09.1	244	00.6		23.9
5	63	37.3	232	29.6	-3	55.0	231	07.7	-4	54.6	139	58.1	-23	09.1	259	02.8	+8	23.8
6	78	39.7	247	29.2	-3	56.2	246	08.7	-4	55.2	155	00.5	-23	09.1	274	05.0	+8	23.7
7	93	42.2	262	28.9		57.5	261	09.6		55.9	170	03.0		09.1	289	07.1		23.5
8	108	44.6	277	28.6	-3	58.8	276	10.6		56.5	185	05.4		09.1	304	09.3		23.4
9	123	47.1	292	28.3	-4	00.1	291	11.6		57.2	200	07.9		09.1	319	11.5		23.3
10	138	49.6	307	27.9		01.4	306	12.5		57.8	215	10.3		09.1	334	13.6		23.2
11	153	52.0	322	27.6	-4	02.6	321	13.5	-4	58.5	230	12.8	-23	09.1	349	15.8	+8	23.1
12	168	54.5	337	27.3	-4	03.9	336	14.5	-4	59.2	245	15.2	-23	09.1	4	18.0	+8	23.0
13	183	57.0	352	27.0		05.2	351	15.4	-4	59.8	260	17.7		09.1	19	20.1		22.8
14	198	59.4	7	26.6		06.5	6	16.4	-5	00.5	275	20.1		09.1	34	22.3		22.7
15	214	01.9	22	26.3		07.8	21	17.3		01.1	290	22.6		09.1	49	24.5		22.6
16	229	04.4	37	26.0		09.0	36	18.3		01.8	305	25.0		09.1	64	26.6		22.5
17	244	06.8	52	25.7	-4	10.3	51	19.3	-5	02.4	320	27.5	-23	09.1	79	28.8	+8	22.4
18	259	09.3	67	25.3	-4	11.6	66	20.2	-5	03.1	335	29.9	-23	09.1	94	31.0	+8	22.2
19	274	11.8	82	25.0		12.9	81	21.2		03.8	350	32.4		09.1	109	33.2		22.1
20	289	14.2	97	24.7		14.2	96	22.1		04.4	5	34.8		09.1	124	35.3		22.0
21	304	16.7	112	24.4		15.4	111	23.1		05.1	20	37.3		09.1	139	37.5		21.9
22	319	19.1	127	24.0		16.7	126	24.1		05.7	35	39.7		09.1	154	39.7		21.8
23	334	21.6	142	23.7		18.0	141	25.0		06.4	50	42.2		09.1	169	41.8		21.7
24	349	24.1	157	23.4	-4	19.3	156	26.0	-5	07.1	65	44.6	-23	09.1	184	44.0	+8	21.5
Dif	—		-3		-13		+10		-7		+25		0		+22		-1	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 9			Edad: 10 ^d 2 PHE	SD: 14 ^h 9				Final del crepúsculo		Salida de Luna		Puesta de Luna		
	PMG: 11 ^h 56 ^m 8				PMG: 20 ^h 26 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	Rº	Hora	Rº	
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	h m	m
0	180	45.0	+4 52.6	63	45.4	-25 37.2	56	60 N	18 35	19 18	20 12	17 40	6	23 22	94
1	195	45.2	51.6	78	14.9 ¹⁰⁵	31.6	56	58	33	13	20 02	20 12		41	88
2	210	45.4	50.7	92	44.5 ¹⁰⁶	25.9	57	56	30	08	19 54	17 03	17	23 57	84
3	225	45.6	49.7	107	14.1 ¹⁰⁶	20.1	58	54	28	04	47	16 49	20	** ** *	** ** *
4	240	45.8	48.8	121	43.8 ¹⁰⁷	14.2	59	52	26	19 00	41	37	22	** ** *	** ** *
5	255	46.1	+4 47.8	136	13.5 ¹⁰⁷	-25 08.1	61	50	18 24	18 57	19 36	16 26	25	** ** *	** ** *
6	270	46.3	+4 46.9	150	43.2 ¹⁰⁷	-25 01.9	62	45	18 20	18 50	19 25	16 03	30	** ** *	** ** *
7	285	46.5	45.9	165	12.9 ¹⁰⁷	-24 55.6	63	40	17	44	16	15 45	33	0 10	63
8	300	46.7	45.0	179	42.7 ¹⁰⁸	49.2	64	35	14	39	09	29	36	27	61
9	315	46.9	44.0	194	12.5 ¹⁰⁸	42.7	65	30	11	35	19 03	15 16	38	0 42	58
10	330	47.2	43.1	208	42.4 ¹⁰⁹	36.0	67	20	07	29	18 55	14 53	42	1 07	55
11	345	47.4	+4 42.1	223	12.3 ¹⁰⁹	-24 29.2	68	10 N	18 03	18 24	18 49	14 33	46	1 28	52
12	0	47.6	+4 41.2	237	42.2 ¹⁰⁹	-24 22.3	69	0	18 00	18 21	18 45	14 14	49	1 48	50
13	15	47.8	40.2	252	12.1 ¹⁰⁹	15.2	71	10 S	17 57	18	42	13 55	52	2 08	47
14	30	48.0	39.3	266	42.1 ¹¹⁰	08.1	71	20	54	16	41	35	55	29	44
15	45	48.3	38.3	281	12.1 ¹¹⁰	-24 00.8	73	30	50	14	42	13 12	59	2 54	40
16	60	48.5	37.4	295	42.2 ¹¹¹	-23 53.4	74	35	48	13	43	12 58	62	3 08	39
17	75	48.7	+4 36.4	310	12.3 ¹¹¹	-23 45.9	75	40	17 46	18 13	18 44	12 42	65	3 25	36
18	90	48.9	+4 35.5	324	42.4 ¹¹¹	-23 38.2	77	45	17 43	18 12	18 46	12 23	68	3 44	33
19	105	49.1	34.5	339	12.6 ¹¹²	30.5	77	50	40	12	50	11 59	73	4 09	29
20	120	49.4	33.6	353	42.8 ¹¹²	22.6	79	52	39	12	51	48	75	21	26
21	135	49.6	32.6	8	13.0 ¹¹²	14.6	80	54	37	12	53	35	78	35	23
22	150	49.8	31.7	22	43.3 ¹¹³	-23 06.5	81	56	35	12	56	19	82	4 50	20
23	165	50.0	30.7	37	13.6 ¹¹³	-22 58.3	82	58	34	13	18 58	11 01	86	5 09	15
24	180	50.2	+4 29.8	51	44.0 ¹¹⁴	-22 49.9	84	60 S	17 31	18 13	19 01	10 39	93	5 31	10
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 0 ^h 42 ^m 3		Mag: -3.8 PMG: 13 ^h 31 ^m			Mag: +1.7 PMG: 13 ^h 33 ^m			Mag: -2.5 PMG: 19 ^h 34 ^m			Mag: +0.9 PMG: 11 ^h 39 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	349	24.1	157	23.4	-4 19.3	156	26.0	-5 07.1	65	44.6	-23 09.1	184	44.0	+8 21.5	
1	4	26.5	172	23.1	20.6	171	26.9	07.7	80	47.1	09.1	199	46.2	21.4	
2	19	29.0	187	22.7	21.8	186	27.9	08.4	95	49.5	09.1	214	48.3	21.3	
3	34	31.5	202	22.4	23.1	201	28.9	09.0	110	52.0	09.1	229	50.5	21.2	
4	49	33.9	217	22.1	24.4	216	29.8	09.7	125	54.4	09.1	244	52.7	21.1	
5	64	36.4	232	21.8	-4 25.7	231	30.8	-5 10.3	140	56.9	-23 09.1	259	54.9	+8 21.0	
6	79	38.9	247	21.4	-4 26.9	246	31.7	-5 11.0	155	59.3	-23 09.1	274	57.0	+8 20.8	
7	94	41.3	262	21.1	28.2	261	32.7	11.7	171	01.8	09.1	289	59.2	20.7	
8	109	43.8	277	20.8	29.5	276	33.7	12.3	186	04.2	09.1	305	01.4	20.6	
9	124	46.3	292	20.4	30.8	291	34.6	13.0	201	06.7	09.1	320	03.5	20.5	
10	139	48.7	307	20.1	32.0	306	35.6	13.6	216	09.1	09.1	335	05.7	20.4	
11	154	51.2	322	19.8	-4 33.3	321	36.5	-5 14.3	231	11.5	-23 09.1	350	07.9	+8 20.2	
12	169	53.6	337	19.5	-4 34.6	336	37.5	-5 14.9	246	14.0	-23 09.1	5	10.0	+8 20.1	
13	184	56.1	352	19.1	35.9	351	38.5	15.6	261	16.4	09.1	20	12.2	20.0	
14	199	58.6	7	18.8	37.2	6	39.4	16.3	276	18.9	09.1	35	14.4	19.9	
15	215	01.0	22	18.5	38.4	21	40.4	16.9	291	21.3	09.1	50	16.6	19.8	
16	230	03.5	37	18.1	39.7	36	41.3	17.6	306	23.8	09.1	65	18.7	19.7	
17	245	06.0	52	17.8	-4 41.0	51	42.3	-5 18.2	321	26.2	-23 09.1	80	20.9	+8 19.5	
18	260	08.4	67	17.5	-4 42.3	66	43.3	-5 18.9	336	28.6	-23 09.1	95	23.1	+8 19.4	
19	275	10.9	82	17.2	43.5	81	44.2	19.5	351	31.1	09.1	110	25.2	19.3	
20	290	13.4	97	16.8	44.8	96	45.2	20.2	6	33.5	09.1	125	27.4	19.2	
21	305	15.8	112	16.5	46.1	111	46.1	20.8	21	36.0	09.1	140	29.6	19.1	
22	320	18.3	127	16.2	47.4	126	47.1	21.5	36	38.4	09.1	155	31.7	19.0	
23	335	20.8	142	15.8	48.6	141	48.0	22.2	51	40.8	09.1	170	33.9	18.8	
24	350	23.2	157	15.5	-4 49.9	156	49.0	-5 22.8	66	43.3	-23 09.2	185	36.1	+8 18.7	
Dif	—		-3		-13	+10		-7	+24		0	+22		-1	

UT	SOL			O LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 15'9 PMG: 11 ^h 56 ^m 5			Edad: 11 ^d 2 PHE { SD: 15'0 PMG: 21 ^h 14 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº		
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	
0	180	50.2	+4	29.8	51	44.0	-22	49.9	60 N	3	43	4	36	5	19	17	46
1	195	50.5		28.8	66	14.4 ¹¹⁴		41.5 ⁸⁴	58	3	52	42	22		32	7	
2	210	50.7		27.9	80	44.8 ¹¹⁴		32.9 ⁸⁶	56	4	00	46	24		20	11	
3	225	50.9		26.9	95	15.2 ¹¹⁴		24.3 ⁸⁶	54		07	50	26		17	09	
4	240	51.1		26.0	109	45.8 ¹¹⁶		15.5 ⁸⁸	52		13	54	28		16	59	
5	255	51.3	+4	25.0	124	16.3 ¹¹⁵	-22	06.6 ⁸⁹	50	4	18	4	57	5	30	16	51
6	270	51.6	+4	24.1	138	46.9 ¹¹⁶	-21	57.6 ⁹⁰	45	4	29	5	04	5	34	16	33
7	285	51.8		23.1	153	17.5 ¹¹⁶		48.4 ⁹²	40		38	10	37		18	29	
8	300	52.0		22.2	167	48.2 ¹¹⁷		39.2 ⁹²	35		45	15	40		16	05	
9	315	52.2		21.2	182	18.9 ¹¹⁷		29.9 ⁹³	30		50	18	43		15	54	
10	330	52.4		20.3	196	49.6 ¹¹⁷		20.4 ⁹⁵	20	4	59	24	47		35	40	
11	345	52.7	+4	19.3	211	20.4 ¹¹⁸	-21	10.8 ⁹⁶	10 N	5	04	5	29	5	50	15	19
12	0	52.9	+4	18.4	225	51.2 ¹¹⁸	-21	01.2 ⁹⁶	0	5	08	5	32	5	53	15	03
13	15	53.1		17.4	240	22.0 ¹¹⁸	-20	51.4 ⁹⁸	10 S		11	35	56		14	47	
14	30	53.3		16.5	254	52.9 ¹¹⁹		41.5 ⁹⁹	20	12	37	5	59	5	30	56	
15	45	53.5		15.5	269	23.9 ¹²⁰		31.6 ⁹⁹	30	11	39	6	03		11	60	
16	60	53.8		14.6	283	54.8 ¹¹⁹		21.5 ¹⁰¹	35	10	40	05		14	00	62	
17	75	54.0	+4	13.6	298	25.8 ¹²⁰	-20	11.3 ¹⁰²	40	5	09	5	40	6	07	13	47
18	90	54.2	+4	12.7	312	56.9 ¹²¹	-20	01.0 ¹⁰³	45	5	06	5	40	6	09	13	31
19	105	54.4		11.7	327	28.0 ¹²¹	-19	50.6 ¹⁰⁴	50	03	40	12		12	75	38	
20	120	54.6		10.8	341	59.1 ¹²¹		40.1 ¹⁰⁵	52	5	01	40	14		13	03	
21	135	54.9		09.8	356	30.2 ¹²¹		29.5 ¹⁰⁶	54	4	59	40	15		12	53	
22	150	55.1		08.8	11	01.4 ¹²²		18.8 ¹⁰⁷	56		57	40	17		41	84	
23	165	55.3		07.9	25	32.7 ¹²³	-19	08.0 ¹⁰⁸	58		54	39	18		27	89	
24	180	55.5	+4	06.9	40	03.9 ¹²²	-18	57.1 ¹⁰⁹	60 S	4	51	5	39	6	20	12	12

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 0 ^h 38 ^m 3		Mag: -3.8 PMG: 13 ^h 31 ^m		Mag: +1.7 PMG: 13 ^h 32 ^m		Mag: -2.5 PMG: 19 ^h 30 ^m		Mag: +0.9 PMG: 11 ^h 36 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	350	23.2	157	15.5	-4	49.9	156	49.0	-5	22.8
1	5	25.7	172	15.2		51.2	171	50.0		23.5
2	20	28.1	187	14.9		52.5	186	50.9		24.1
3	35	30.6	202	14.5		53.7	201	51.9		24.8
4	50	33.1	217	14.2		55.0	216	52.8		25.4
5	65	35.5	232	13.9	-4	56.3	231	53.8	-5	26.1
6	80	38.0	247	13.5	-4	57.6	246	54.7	-5	26.8
7	95	40.5	262	13.2	-4	58.8	261	55.7		27.4
8	110	42.9	277	12.9	-5	00.1	276	56.7		28.1
9	125	45.4	292	12.5		01.4	291	57.6		28.7
10	140	47.9	307	12.2		02.6	306	58.6		29.4
11	155	50.3	322	11.9	-5	03.9	321	59.5	-5	30.0
12	170	52.8	337	11.6	-5	05.2	337	00.5	-5	30.7
13	185	55.2	352	11.2		06.5	352	01.4		31.4
14	200	57.7	7	10.9		07.7	7	02.4		32.0
15	216	00.2	22	10.6		09.0	22	03.3		32.7
16	231	02.6	37	10.2		10.3	37	04.3		33.3
17	246	05.1	52	09.9	-5	11.6	52	05.3	-5	34.0
18	261	07.6	67	09.6	-5	12.8	67	06.2	-5	34.6
19	276	10.0	82	09.2		14.1	82	07.2		35.3
20	291	12.5	97	08.9		15.4	97	08.1		35.9
21	306	15.0	112	08.6		16.6	112	09.1		36.6
22	321	17.4	127	08.2		17.9	127	10.0		37.3
23	336	19.9	142	07.9		19.2	142	11.0		37.9
24	351	22.4	157	07.6	-5	20.5	157	11.9	-5	38.6
Dif	—		-3	-13		+10	-7			+24
										0
										+22
										-1

UT	SOL		☉ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 15°9 PMG: 11 ^h 56 ^m 1		Edad: 12 ^d 2 PHE { 4 ^h : 55°9 12 ^h : 56°1 20 ^h : 56°3 R°: 46 ^m															
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m				
0	180	55.5	+4	06.9	40	03.9	-18 57.1	60 N	18 29	19 12	20 04	17 49 2	0 56 94					
1	195	55.8		06.0	54	35.3 ¹²⁴	46.1 ¹¹⁰	58	27	07	19 56	39 6	1 09 89					
2	210	56.0		05.0	69	06.6 ¹²³	35.0 ¹¹¹	56	25	19 03	48	31 9	21 85					
3	225	56.2		04.1	83	38.0 ¹²⁴	23.8 ¹¹²	54	23	18 59	42	24 11	31 81					
4	240	56.4		03.1	98	09.4 ¹²⁴	12.5 ¹¹³	52	21	55	36	17 14	40 78					
5	255	56.6	+4	02.2	112	40.8 ¹²⁴	-18 01.2 ¹¹³	50	18 20	18 52	19 31	17 11 16	1 48 76					
6	270	56.9	+4	01.2	127	12.3 ¹²⁵	-17 49.7 ¹¹⁵	45	18 16	18 46	19 21	16 58 21	2 04 71					
7	285	57.1	+4	00.3	141	43.9 ¹²⁶	38.1 ¹¹⁶	40	13	40	13	47 25	18 67					
8	300	57.3	+3	59.3	156	15.4 ¹²⁵	26.5 ¹¹⁶	35	11	36	06	37 29	30 63					
9	315	57.5		58.4	170	47.0 ¹²⁶	14.7 ¹¹⁸	30	09	33	19 01	29 32	40 60					
10	330	57.8		57.4	185	18.6 ¹²⁶	-17 02.9 ¹¹⁸	20	05	27	18 53	15 37	2 57 55					
11	345	58.0	+3	56.4	199	50.3 ¹²⁷	-16 51.0 ¹¹⁹	10 N	18 02	18 23	18 48	16 02 42	3 12 51					
12	0	58.2	+3	55.5	214	22.0 ¹²⁷	-16 39.0 ¹²⁰	0	17 59	18 20	18 44	15 50 46	3 26 46					
13	15	58.4		54.5	228	53.7 ¹²⁷	26.9 ¹²¹	10 S	57	18	42	38 51	40 42					
14	30	58.6		53.6	243	25.5 ¹²⁸	14.7 ¹²²	20	54	16	42	26 54	3 54 38					
15	45	58.9		52.6	257	57.2 ¹²⁷	-16 02.4 ¹²³	30	51	15	43	11 60	4 11 33					
16	60	59.1		51.7	272	29.1 ¹²⁹	-15 50.0 ¹²⁴	35	49	15	44	15 02 64	21 30					
17	75	59.3	+3	50.7	287	00.9 ¹²⁸	-15 37.6 ¹²⁴	40	17 48	18 15	18 46	14 53 66	4 31 27					
18	90	59.5	+3	49.8	301	32.8 ¹²⁹	-15 25.1 ¹²⁵	45	17 45	18 15	18 49	14 41 71	4 44 23					
19	105	59.8		48.8	316	04.7 ¹²⁹	-15 12.4 ¹²⁷	50	43	15	53	27 77	5 00 18					
20	121	00.0		47.8	330	36.6 ¹²⁹	-14 59.7 ¹²⁷	52	42	15	55	21 79	07 16					
21	136	00.2		46.9	345	08.6 ¹³⁰	47.0 ¹²⁷	54	41	16	18 57	13 82	15 13					
22	151	00.4		45.9	359	40.6 ¹³⁰	34.1 ¹²⁹	56	39	16	19 00	14 05 85	24 10					
23	166	00.6		45.0	14	12.6 ¹³⁰	21.2 ¹²⁹	58	38	17	03	13 56 89	34 6					
24	181	00.9	+3	44.0	28	44.6 ¹³⁰	-14 08.2 ¹³⁰	60 S	17 36	18 18	19 06	13 45 93	5 45 3					
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 0 ^h 34 ^m 4		Mag: -3.8 PMG: 13 ^h 32 ^m			Mag: +1.7 PMG: 13 ^h 30 ^m			Mag: -2.5 PMG: 19 ^h 26 ^m			Mag: +0.9 PMG: 11 ^h 32 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	351	22.4	157	07.6	-5	20.5	157	11.9	-5	38.6	67	41.7	-23	09.2	186	28.2	+8	15.9
1	6	24.8	172	07.2		21.7	172	12.9		39.2	82	44.2		09.2	201	30.3		15.8
2	21	27.3	187	06.9		23.0	187	13.8		39.9	97	46.6		09.2	216	32.5		15.7
3	36	29.7	202	06.6		24.3	202	14.8		40.5	112	49.0		09.2	231	34.7		15.5
4	51	32.2	217	06.2		25.5	217	15.7		41.2	127	51.5		09.2	246	36.8		15.4
5	66	34.7	232	05.9	-5	26.8	232	16.7	-5	41.8	142	53.9	-23	09.2	261	39.0	+8	15.3
6	81	37.1	247	05.6	-5	28.1	247	17.7	-5	42.5	157	56.3	-23	09.2	276	41.2	+8	15.2
7	96	39.6	262	05.2		29.3	262	18.6		43.2	172	58.7		09.2	291	43.4		15.1
8	111	42.1	277	04.9		30.6	277	19.6		43.8	188	01.2		09.2	306	45.5		15.0
9	126	44.5	292	04.6		31.9	292	20.5		44.5	203	03.6		09.2	321	47.7		14.8
10	141	47.0	307	04.2		33.2	307	21.5		45.1	218	06.0		09.2	336	49.9		14.7
11	156	49.5	322	03.9	-5	34.4	322	22.4	-5	45.8	233	08.4	-23	09.2	351	52.0	+8	14.6
12	171	51.9	337	03.6	-5	35.7	337	23.4	-5	46.4	248	10.9	-23	09.2	6	54.2	+8	14.5
13	186	54.4	352	03.2		37.0	352	24.3		47.1	263	13.3		09.2	21	56.4		14.4
14	201	56.9	7	02.9		38.2	7	25.3		47.7	278	15.7		09.2	36	58.6		14.2
15	216	59.3	22	02.6		39.5	22	26.2		48.4	293	18.2		09.2	52	00.7		14.1
16	232	01.8	37	02.2		40.8	37	27.2		49.1	308	20.6		09.2	67	02.9		14.0
17	247	04.2	52	01.9	-5	42.0	52	28.1	-5	49.7	323	23.0	-23	09.2	82	05.1	+8	13.9
18	262	06.7	67	01.6	-5	43.3	67	29.1	-5	50.4	338	25.4	-23	09.2	97	07.2	+8	13.8
19	277	09.2	82	01.2		44.6	82	30.0		51.0	353	27.9		09.2	112	09.4		13.7
20	292	11.6	97	00.9		45.8	97	31.0		51.7	8	30.3		09.2	127	11.6		13.5
21	307	14.1	112	00.5		47.1	112	31.9		52.3	23	32.7		09.1	142	13.7		13.4
22	322	16.6	127	00.2		48.4	127	32.9		53.0	38	35.1		09.1	157	15.9		13.3
23	337	19.0	141	59.9		49.6	142	33.8		53.6	53	37.5		09.1	172	18.1		13.2
24	352	21.5	156	59.5	-5	50.9	157	34.8	-5	54.3	68	40.0	-23	09.1	187	20.3	+8	13.1
Dif	—		-3		-13		+10		-7		+24		0		+22		-1	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 9 PMG: 11 ^h 55 ^m 8			Edad: 13 ^d 2 PHE { 4 ^h : 56 ^m 5 12 ^h : 56 ^m 7 20 ^h : 57 ^m 0 PMG: 22 ^h 47 ^m R°: 46 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora
h	°	'	°	°	'	°	°	h	m	h	m	h	m	m
0	181	00.9	+3 44.0	28	44.6	-14 08.2	60 N	3 48	4 41	5 24	17 51	1	2 30	92
1	196	01.1	43.1	43	16.7 ¹³¹	-13 55.1 ¹³¹	58	3 57	46	26	45	4	38	89
2	211	01.3	42.1	57	48.8 ¹³¹	41.9 ¹³²	56	4 04	50	28	40	7	46	85
3	226	01.5	41.1	72	20.9 ¹³¹	28.7 ¹³²	54	11	54	30	35	11	52	82
4	241	01.8	40.2	86	53.1 ¹³²	15.4 ¹³³	52	16	4 58	32	31	13	2 58	79
5	256	02.0	+3 39.2	101	25.2 ¹³¹	-13 02.0 ¹³⁴	50	4 21	5 01	5 33	17 27	15	3 04	76
6	271	02.2	+3 38.3	115	57.4 ¹³²	-12 48.5 ¹³⁵	45	4 32	5 07	5 37	17 19	20	3 15	72
7	286	02.4	37.3	130	29.6 ¹³²	35.0 ¹³⁵	40	40	12	39	12	24	25	67
8	301	02.6	36.4	145	01.9 ¹³³	21.4 ¹³⁶	35	46	16	42	06	28	33	63
9	316	02.9	35.4	159	34.1 ¹³²	-12 07.7 ¹³⁷	30	51	20	44	17 01	31	40	60
10	331	03.1	34.4	174	06.4 ¹³³	-11 53.9 ¹³⁸	20	4 59	25	47	16 52	36	3 52	55
11	346	03.3	+3 33.5	188	38.7 ¹³³	-11 40.1 ¹³⁸	10 N	5 04	5 29	5 50	16 44	41	4 03	50
12	1	03.5	+3 32.5	203	11.0 ¹³³	-11 26.3 ¹³⁸	0	5 08	5 32	5 53	16 36	46	4 12	46
13	16	03.8	31.6	217	43.3 ¹³³	-11 12.3 ¹⁴⁰	10 S	10	34	55	29	50	22	41
14	31	04.0	30.6	232	15.7 ¹³⁴	-10 58.3 ¹⁴⁰	20	10	36	5 58	20	55	32	37
15	46	04.2	29.7	246	48.0 ¹³³	44.2 ¹⁴¹	30	09	37	6 00	11	61	44	31
16	61	04.4	28.7	261	20.4 ¹³⁴	30.1 ¹⁴¹	35	07	37	02	16 06	63	51	28
17	76	04.7	+3 27.7	275	52.8 ¹³⁴	-10 15.9 ¹⁴²	40	5 05	5 37	6 04	15 59	68	4 58	25
18	91	04.9	+3 26.8	290	25.2 ¹³⁴	-10 01.6 ¹⁴³	45	5 02	5 36	6 06	15 52	72	5 07	21
19	106	05.1	25.8	304	57.6 ¹³⁴	-9 47.3 ¹⁴³	50	4 58	36	08	44	77	18	15
20	121	05.3	24.9	319	30.0 ¹³⁴	32.9 ¹⁴⁴	52	56	36	09	40	79	23	13
21	136	05.5	23.9	334	02.5 ¹³⁵	18.5 ¹⁴⁴	54	54	35	10	35	82	28	11
22	151	05.8	22.9	348	34.9 ¹³⁴	-9 04.0 ¹⁴⁵	56	51	35	11	30	85	34	8
23	166	06.0	22.0	3	07.4 ¹³⁵	-8 49.5 ¹⁴⁵	58	48	34	13	25	88	40	5
24	181	06.2	+3 21.0	17	39.9 ¹³⁵	-8 34.9 ¹⁴⁶	60 S	4 45	5 33	6 14	15 18	93	5 48	1

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 0 ^h 30 ^m 5		Mag: -3.8 PMG: 13 ^h 32 ^m		Mag: +1.7 PMG: 13 ^h 29 ^m		Mag: -2.5 PMG: 19 ^h 22 ^m		Mag: +0.9 PMG: 11 ^h 29 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	352	21.5	156	59.5	-5	50.9	157	34.8	-5	54.3	68	40.0	-23	09.1	187	20.3	+8	13.1
1	7	24.0	171	59.2		52.2	172	35.7		55.0	83	42.4		09.1	202	22.4		13.0
2	22	26.4	186	58.9		53.4	187	36.7		55.6	98	44.8		09.1	217	24.6		12.8
3	37	28.9	201	58.5		54.7	202	37.6		56.3	113	47.2		09.1	232	26.8		12.7
4	52	31.3	216	58.2		56.0	217	38.6		56.9	128	49.7		09.1	247	28.9		12.6
5	67	33.8	231	57.8	-5	57.2	232	39.5	-5	57.6	143	52.1	-23	09.1	262	31.1	+8	12.5
6	82	36.3	246	57.5	-5	58.5	247	40.5	-5	58.2	158	54.5	-23	09.1	277	33.3	+8	12.4
7	97	38.7	261	57.2	-5	59.8	262	41.4		58.9	173	56.9		09.1	292	35.5		12.3
8	112	41.2	276	56.8	-6	01.0	277	42.4	-5	59.5	188	59.3		09.1	307	37.6		12.1
9	127	43.7	291	56.5		02.3	292	43.3	-6	00.2	204	01.8		09.1	322	39.8		12.0
10	142	46.1	306	56.2		03.6	307	44.3		00.8	219	04.2		09.1	337	42.0		11.9
11	157	48.6	321	55.8	-6	04.8	322	45.2	-6	01.5	234	06.6	-23	09.1	352	44.1	+8	11.8
12	172	51.1	336	55.5	-6	06.1	337	46.2	-6	02.2	249	09.0	-23	09.1	7	46.3	+8	11.7
13	187	53.5	351	55.1		07.3	352	47.1		02.8	264	11.4		09.1	22	48.5		11.5
14	202	56.0	6	54.8		08.6	7	48.1		03.5	279	13.8		09.1	37	50.7		11.4
15	217	58.5	21	54.5		09.9	22	49.0		04.1	294	16.3		09.1	52	52.8		11.3
16	233	00.9	36	54.1		11.1	37	50.0		04.8	309	18.7		09.1	67	55.0		11.2
17	248	03.4	51	53.8	-6	12.4	52	50.9	-6	05.4	324	21.1	-23	09.1	82	57.2	+8	11.1
18	263	05.8	66	53.4	-6	13.7	67	51.9	-6	06.1	339	23.5	-23	09.1	97	59.3	+8	11.0
19	278	08.3	81	53.1		14.9	82	52.8		06.7	354	25.9		09.1	113	01.5		10.8
20	293	10.8	96	52.8		16.2	97	53.8		07.4	9	28.3		09.1	128	03.7		10.7
21	308	13.2	111	52.4		17.4	112	54.7		08.0	24	30.8		09.1	143	05.8		10.6
22	323	15.7	126	52.1		18.7	127	55.7		08.7	39	33.2		09.1	158	08.0		10.5
23	338	18.2	141	51.7		20.0	142	56.6		09.3	54	35.6		09.1	173	10.2		10.4
24	353	20.6	156	51.4	-6	21.2	157	57.6	-6	10.0	69	38.0	-23	09.1	188	12.4	+8	10.3
Dif	—		-3	-13		+9	-7			+24	0			+22		-1		

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 9			Edad: 14 ^d 2 PHE	SD: 15 ^h 5										
	PMG: 11 ^h 55 ^m 4				PMG: 23 ^h 33 ^m										
	hG ☉	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	06.2	+3 21.0	17	39.9	-8 34.9		60 N	18 23	19 05	19 57	17 52	1	4 02	93
1	196	06.4	20.1	32	12.3 ¹³⁴	20.2 ¹⁴⁷		58	21	19 01	49	49	5	07	89
2	211	06.7	19.1	46	44.8 ¹³⁵	-8 05.5 ¹⁴⁷		56	19	18 57	43	47	8	11	86
3	226	06.9	18.1	61	17.3 ¹³⁵	-7 50.8 ¹⁴⁷		54	18	54	36	46	10	14	83
4	241	07.1	17.2	75	49.8 ¹³⁵	35.9 ¹⁴⁹		52	16	50	31	44	12	17	81
5	256	07.3	+3 16.2	90	22.3 ¹³⁵	-7 21.1 ¹⁴⁸		50	18 15	18 48	19 26	17 42	15	4 20	78
6	271	07.6	+3 15.3	104	54.8 ¹³⁵	-7 06.2 ¹⁴⁹		45	18 12	18 42	19 17	17 39	20	4 27	72
7	286	07.8	14.3	119	27.3 ¹³⁵	-6 51.2 ¹⁵⁰		40	10	37	09	36	24	32	68
8	301	08.0	13.3	133	59.8 ¹³⁵	36.2 ¹⁵⁰		35	08	33	19 03	34	27	36	64
9	316	08.2	12.4	148	32.3 ¹³⁵	21.2 ¹⁵⁰		30	06	30	18 58	32	30	40	61
10	331	08.4	11.4	163	04.8 ¹³⁵	-6 06.1 ¹⁵¹		20	03	25	51	28	36	47	55
11	346	08.7	+3 10.5	177	37.3 ¹³⁵	-5 51.0 ¹⁵¹		10 N	18 01	18 22	18 46	17 25	41	4 53	50
12	1	08.9	+3 09.5	192	09.8 ¹³⁵	-5 35.8 ¹⁵²		0	17 59	18 19	18 43	17 22	46	4 58	45
13	16	09.1	08.5	206	42.3 ¹³⁵	20.6 ¹⁵²		10 S	57	18	42	19	50	5 03	41
14	31	09.3	07.6	221	14.8 ¹³⁵	-5 05.4 ¹⁵²		20	54	16	42	15	56	09	36
15	46	09.6	06.6	235	47.3 ¹³⁵	-4 50.1 ¹⁵³		30	52	16	44	12	61	15	31
16	61	09.8	05.7	250	19.7 ¹³⁴	34.7 ¹⁵⁴		35	51	16	45	09	65	19	27
17	76	10.0	+3 04.7	264	52.2 ¹³⁵	-4 19.4 ¹⁵³		40	17 49	18 16	18 48	17 07	69	5 23	24
18	91	10.2	+3 03.7	279	24.7 ¹³⁵	-4 04.0 ¹⁵⁴		45	17 48	18 17	18 51	17 04	73	5 28	19
19	106	10.5	02.8	293	57.1 ¹³⁴	-3 48.6 ¹⁵⁴		50	46	18	56	17 01	78	33	15
20	121	10.7	01.8	308	29.6 ¹³⁵	33.1 ¹⁵⁵		52	45	19	58	16 59	81	36	12
21	136	10.9	+3 00.9	323	02.0 ¹³⁴	17.6 ¹⁵⁵		54	44	19	59 01	57	84	39	10
22	151	11.1	+2 59.9	337	34.4 ¹³⁴	-3 02.1 ¹⁵⁵		56	43	20	04	55	87	42	7
23	166	11.4	58.9	352	06.8 ¹³⁴	-2 46.6 ¹⁵⁵		58	42	21	07	53	90	45	4
24	181	11.6	+2 58.0	6	39.2 ¹³⁴	-2 31.0 ¹⁵⁶		60 S	17 41	18 22	19 11	16 51	94	5 49	1
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 0 ^h 26 ^m 6		Mag: -3.8 PMG: 13 ^h 33 ^m			Mag: +1.7 PMG: 13 ^h 27 ^m			Mag: -2.5 PMG: 19 ^h 18 ^m			Mag: +0.9 PMG: 11 ^h 26 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	353	20.6	156 51.4	-6 21.2	157 57.6	-6 10.0	69 38.0	-23 09.1	188 12.4	8 38.4	+8 10.3				
1	8 23.1	171 51.1	22.5	172 58.5	10.7	84 40.4	09.1	203 14.5	10.1						
2	23 25.6	186 50.7	23.8	187 59.4	11.3	99 42.8	09.1	218 16.7	10.0						
3	38 28.0	201 50.4	25.0	203 00.4	12.0	114 45.2	09.1	233 18.9	09.9						
4	53 30.5	216 50.0	26.3	218 01.3	12.6	129 47.6	09.1	248 21.0	09.8						
5	68 32.9	231 49.7	-6 27.5	233 02.3	-6 13.3	144 50.1	-23 09.1	263 23.2	+8 09.7						
6	83 35.4	246 49.4	-6 28.8	248 03.2	-6 13.9	159 52.5	-23 09.1	278 25.4	+8 09.6						
7	98 37.9	261 49.0	30.1	263 04.2	14.6	174 54.9	09.1	293 27.6	09.4						
8	113 40.3	276 48.7	31.3	278 05.1	15.2	189 57.3	09.1	308 29.7	09.3						
9	128 42.8	291 48.3	32.6	293 06.1	15.9	204 59.7	09.1	323 31.9	09.2						
10	143 45.3	306 48.0	33.8	308 07.0	16.5	220 02.1	09.1	338 34.1	09.1						
11	158 47.7	321 47.6	-6 35.1	323 08.0	-6 17.2	235 04.5	-23 09.1	353 36.2	+8 09.0						
12	173 50.2	336 47.3	-6 36.3	338 08.9	-6 17.8	250 06.9	-23 09.1	8 38.4	+8 08.9						
13	188 52.7	351 47.0	37.6	353 09.9	18.5	265 09.3	09.1	23 40.6	08.7						
14	203 55.1	6 46.6	38.9	8 10.8	19.1	280 11.7	09.1	38 42.8	08.6						
15	218 57.6	21 46.3	40.1	23 11.7	19.8	295 14.2	09.1	53 44.9	08.5						
16	234 00.1	36 45.9	41.4	38 12.7	20.5	310 16.6	09.1	68 47.1	08.4						
17	249 02.5	51 45.6	-6 42.6	53 13.6	-6 21.1	325 19.0	-23 09.1	83 49.3	+8 08.3						
18	264 05.0	66 45.2	-6 43.9	68 14.6	-6 21.8	340 21.4	-23 09.1	98 51.4	+8 08.2						
19	279 07.4	81 44.9	45.2	83 15.5	22.4	355 23.8	09.1	113 53.6	08.0						
20	294 09.9	96 44.5	46.4	98 16.5	23.1	10 26.2	09.1	128 55.8	07.9						
21	309 12.4	111 44.2	47.7	113 17.4	23.7	25 28.6	09.1	143 58.0	07.8						
22	324 14.8	126 43.9	48.9	128 18.4	24.4	40 31.0	09.1	159 00.1	07.7						
23	339 17.3	141 43.5	50.2	143 19.3	25.0	55 33.4	09.1	174 02.3	07.6						
24	354 19.8	156 43.2	-6 51.4	158 20.2	-6 25.7	70 35.8	-23 09.1	189 04.5	+8 07.5						
Dif	—	-3	-13	+9	-7	+24	0	+22	-1						

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 9 PMG: 11 ^h 55 ^m 1			Edad: 15 ^d 2 PHE { 4 ^h : 57 ^m 8 12 ^h : 58 ^m 0 20 ^h : 58 ^m 2 R°: ***												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m	m
0	181	11.6	+2 58.0	6	39.2	-2 31.0	60 N	3 54	4 46	5 28	17 53	1	5 35	95		
1	196	11.8		21	11.6 ¹³⁴	-2 15.4 ¹⁵⁶	58	4 02	51	30	54	4	36	91		
2	211	12.0		35	43.9 ¹³³	-1 59.8 ¹⁵⁶	56	09	54	32	55	7	37	87		
3	226	12.3		50	16.3 ¹³⁴	44.1 ¹⁵⁷	54	15	4 58	34	56	10	37	85		
4	241	12.5		64	48.6 ¹³³	28.5 ¹⁵⁶	52	20	5 01	35	56	14	38	81		
5	256	12.7	+2 53.2	79	20.9 ¹³³	-1 12.8 ¹⁵⁷	50	4 25	5 04	5 36	17 57	16	5 38	79		
6	271	12.9	+2 52.2	93	53.1 ¹³²	-0 57.1 ¹⁵⁷	45	4 34	5 09	5 39	17 59	20	5 39	74		
7	286	13.1		108	25.4 ¹³³	41.3 ¹⁵⁸	40	42	14	41	18 00	25	40	69		
8	301	13.4		122	57.6 ¹³²	25.6 ¹⁵⁷	35	48	18	43	01 29		40	66		
9	316	13.6		137	29.8 ¹³²	-0 09.8 ¹⁵⁸	30	4 53	21	45	02 32		41	62		
10	331	13.8		152	02.0 ¹³²	+0 05.9 ¹⁵⁷	20	5 00	25	47	04 38		42	56		
11	346	14.0	+2 47.4	166	34.2 ¹³²	+0 21.7 ¹⁵⁸	10 N	5 04	5 29	5 50	18 06	43	5 43	51		
12	1	14.3	+2 46.4	181	06.3 ¹³¹	+0 37.5 ¹⁵⁸	0	5 07	5 31	5 52	18 08	47	5 43	47		
13	16	14.5		195	38.4 ¹³¹	+0 53.3 ¹⁵⁸	10 S	08	33	54	09 52		44	42		
14	31	14.7		210	10.5 ¹³¹	+1 09.1 ¹⁵⁸	20	08	34	56	11 57		45	37		
15	46	14.9		224	42.5 ¹³⁰	25.0 ¹⁵⁹	30	06	34	58	13 63		46	31		
16	61	15.2		239	14.5 ¹³⁰	40.8 ¹⁵⁸	35	05	34	5 59	14 67		46	28		
17	76	15.4	+2 41.6	253	46.5 ¹³⁰	+1 56.6 ¹⁵⁸	40	5 02	5 33	6 00	18 16	70	5 47	24		
18	91	15.6	+2 40.6	268	18.4 ¹²⁹	+2 12.5 ¹⁵⁹	45	4 59	5 33	6 02	18 17	75	5 47	20		
19	106	15.8		282	50.3 ¹²⁹	28.3 ¹⁵⁸	50	54	32	04	19 81		48	15		
20	121	16.1		297	22.2 ¹²⁹	+2 44.1 ¹⁵⁸	52	52	31	04	20 83		48	13		
21	136	16.3		311	54.0 ¹²⁸	+3 00.0 ¹⁵⁹	54	49	30	05	21 86		49	10		
22	151	16.5		326	25.8 ¹²⁸	+3 15.8 ¹⁵⁸	56	46	29	06	22 89		49	7		
23	166	16.7		340	57.6 ¹²⁸	31.6 ¹⁵⁸	58	42	28	07	23 93		49	5		
24	181	17.0	+2 34.9	355	29.3 ¹²⁷	+3 47.5 ¹⁵⁹	60 S	4 38	5 27	6 08	18 25	97	5 50	1		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO			
	PMG 0 ^h 22 ^m 6			Mag: -3.8 PMG: 13 ^h 33 ^m			Mag: +1.7 PMG: 13 ^h 26 ^m			Mag: -2.5 PMG: 19 ^h 15 ^m			Mag: +0.9 PMG: 11 ^h 22 ^m			
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	
0	354	19.8		156	43.2	-6 51.4	158	20.2	-6 25.7	70	35.8	-23 09.1	189	04.5	+8 07.5	
1	9	22.2		171	42.8	52.7	173	21.2	26.3	85	38.2	09.1	204	06.6	07.3	
2	24	24.7		186	42.5	53.9	188	22.1	27.0	100	40.6	09.1	219	08.8	07.2	
3	39	27.2		201	42.1	55.2	203	23.1	27.6	115	43.0	09.1	234	11.0	07.1	
4	54	29.6		216	41.8	56.5	218	24.0	28.3	130	45.4	09.1	249	13.2	07.0	
5	69	32.1		231	41.4	-6 57.7	233	25.0	-6 28.9	145	47.8	-23 09.1	264	15.3	+8 06.9	
6	84	34.5		246	41.1	-6 59.0	248	25.9	-6 29.6	160	50.2	-23 09.1	279	17.5	+8 06.7	
7	99	37.0		261	40.7	-7 00.2	263	26.8	30.2	175	52.6	09.1	294	19.7	06.6	
8	114	39.5		276	40.4	01.5	278	27.8	30.9	190	55.0	09.0	309	21.9	06.5	
9	129	41.9		291	40.0	02.7	293	28.7	31.6	205	57.4	09.0	324	24.0	06.4	
10	144	44.4		306	39.7	04.0	308	29.7	32.2	220	59.8	09.0	339	26.2	06.3	
11	159	46.9		321	39.3	-7 05.2	323	30.6	-6 32.9	236	02.3	-23 09.0	354	28.4	+8 06.2	
12	174	49.3		336	39.0	-7 06.5	338	31.5	-6 33.5	251	04.7	-23 09.0	9	30.5	+8 06.0	
13	189	51.8		351	38.7	07.7	353	32.5	34.2	266	07.1	09.0	24	32.7	05.9	
14	204	54.3		6	38.3	09.0	8	33.4	34.8	281	09.5	09.0	39	34.9	05.8	
15	219	56.7		21	38.0	10.2	23	34.4	35.5	296	11.9	09.0	54	37.1	05.7	
16	234	59.2		36	37.6	11.5	38	35.3	36.1	311	14.3	09.0	69	39.2	05.6	
17	250	01.7		51	37.3	-7 12.7	53	36.3	-6 36.8	326	16.7	-23 09.0	84	41.4	+8 05.5	
18	265	04.1		66	36.9	-7 14.0	68	37.2	-6 37.4	341	19.0	-23 09.0	99	43.6	+8 05.3	
19	280	06.6		81	36.6	15.2	83	38.1	38.1	356	21.4	09.0	114	45.7	05.2	
20	295	09.0		96	36.2	16.5	98	39.1	38.7	11	23.8	09.0	129	47.9	05.1	
21	310	11.5		111	35.9	17.8	113	40.0	39.4	26	26.2	09.0	144	50.1	05.0	
22	325	14.0		126	35.5	19.0	128	41.0	40.0	41	28.6	09.0	159	52.3	04.9	
23	340	16.4		141	35.2	20.3	143	41.9	40.7	56	31.0	09.0	174	54.4	04.8	
24	355	18.9		156	34.8	-7 21.5	158	42.8	-6 41.3	71	33.4	-23 09.0	189	56.6	+8 04.6	
Dif	—			-3	-13		+9	-7		+24	0		+22	-1		

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15'9			Edad: 16 ^d 2 PHE { 4 ^h : 58'4 12 ^h : 58'6 20 ^h : 58'7											
	PMG: 11 ^h 54 ^m 7			SD: 15'9 PMG: 0 ^h 19 ^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	181	17.0	+2 34.9	355	29.3	+3 47.5	60 N	18 17	18 59	19 51	17 54	2	7 10	99	
1	196	17.2	33.9	10	01.0 ¹²⁷	+4 03.3 ¹⁵⁸	58	16	55	43	17 58	6	07	94	
2	211	17.4	32.9	24	32.6 ¹²⁶	19.1 ¹⁵⁸	56	14	52	37	18 02	10	04	91	
3	226	17.6	32.0	39	04.2 ¹²⁶	34.9 ¹⁵⁸	54	13	48	31	06 13		7 02	87	
4	241	17.8	31.0	53	35.7 ¹²⁵	+4 50.7 ¹⁵⁸	52	12	46	26	10 15		6 59	85	
5	256	18.1	+2 30.0	68	07.2 ¹²⁵	+5 06.5 ¹⁵⁸	50	18 11	18 43	19 22	18 13	18	6 57	82	
6	271	18.3	+2 29.1	82	38.6 ¹²⁴	+5 22.2 ¹⁵⁷	45	18 08	18 38	19 13	18 19	24	6 53	76	
7	286	18.5	28.1	97	10.0 ¹²⁴	38.0 ¹⁵⁸	40	07	34	06	25 28		49	72	
8	301	18.7	27.2	111	41.4 ¹²⁴	+5 53.7 ¹⁵⁷	35	05	30	19 00	30 31		46	68	
9	316	19.0	26.2	126	12.7 ¹²³	+6 09.4 ¹⁵⁷	30	04	28	18 56	34 35		43	64	
10	331	19.2	25.2	140	43.9 ¹²²	25.1 ¹⁵⁷	20	01	24	49	42 40		38	58	
11	346	19.4	+2 24.3	155	15.1 ¹²²	+6 40.8 ¹⁵⁷	10 N	18 00	18 21	18 45	18 49	45	6 34	53	
12	1	19.6	+2 23.3	169	46.2 ¹²¹	+6 56.4 ¹⁵⁶	0	17 58	18 19	18 43	18 55	50	6 30	48	
13	16	19.9	22.3	184	17.3 ¹²¹	+7 12.1 ¹⁵⁷	10 S	56	17	42	19 01	55	26	43	
14	31	20.1	21.4	198	48.3 ¹²⁰	27.7 ¹⁵⁶	20	55	17	42	08 60		22	38	
15	46	20.3	20.4	213	19.3 ¹²⁰	43.2 ¹⁵⁵	30	53	17	45	16 66		17	33	
16	61	20.5	19.4	227	50.2 ¹¹⁹	+7 58.8 ¹⁵⁶	35	52	17	47	21 69		14	30	
17	76	20.8	+2 18.5	242	21.1 ¹¹⁹	+8 14.3 ¹⁵⁵	40	17 51	18 18	18 50	19 26	73	6 11	26	
18	91	21.0	+2 17.5	256	51.8 ¹¹⁷	+8 29.8 ¹⁵⁵	45	17 50	18 19	18 54	19 32	78	6 07	22	
19	106	21.2	16.5	271	22.6 ¹¹⁸	+8 45.2 ¹⁵⁴	50	49	21	18 59	40 83		03	16	
20	121	21.4	15.6	285	53.2 ¹¹⁶	+9 00.6 ¹⁵⁴	52	48	22	19 01	43 87		6 01	14	
21	136	21.7	14.6	300	23.8 ¹¹⁶	16.0 ¹⁵⁴	54	48	23	04	47 90		5 59	11	
22	151	21.9	13.6	314	54.4 ¹¹⁶	31.3 ¹⁵³	56	47	24	08	51 93		56	9	
23	166	22.1	12.7	329	24.8 ¹¹⁴	+9 46.6 ¹⁵³	58	46	25	11	19 56	97	54	5	
24	181	22.3	+2 11.7	343	55.2 ¹¹⁴	+10 01.9 ¹⁵³	60 S	17 45	18 27	19 16	20 02	101	5 51	1	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 0 ^h 18 ^m 7		Mag: -3.9 PMG: 13 ^h 34 ^m			Mag: +1.7 PMG: 13 ^h 24 ^m			Mag: -2.5 PMG: 19 ^h 11 ^m			Mag: +0.9 PMG: 11 ^h 19 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	355	18.9	156	34.8	-7 21.5	158	42.8	-6 41.3	71	33.4	-23 09.0	189	56.6	+8 04.6	
1	10	21.4	171	34.5	22.8	173	43.8	42.0	86	35.8	09.0	204	58.8	04.5	
2	25	23.8	186	34.1	24.0	188	44.7	42.6	101	38.2	09.0	220	00.9	04.4	
3	40	26.3	201	33.8	25.2	203	45.7	43.3	116	40.6	09.0	235	03.1	04.3	
4	55	28.8	216	33.4	26.5	218	46.6	43.9	131	43.0	09.0	250	05.3	04.2	
5	70	31.2	231	33.0	-7 27.7	233	47.5	-6 44.6	146	45.4	-23 09.0	265	07.5	+8 04.1	
6	85	33.7	246	32.7	-7 29.0	248	48.5	-6 45.2	161	47.8	-23 09.0	280	09.6	+8 03.9	
7	100	36.2	261	32.3	30.2	263	49.4	45.9	176	50.2	09.0	295	11.8	03.8	
8	115	38.6	276	32.0	31.5	278	50.4	46.5	191	52.6	09.0	310	14.0	03.7	
9	130	41.1	291	31.6	32.7	293	51.3	47.2	206	55.0	09.0	325	16.2	03.6	
10	145	43.5	306	31.3	34.0	308	52.2	47.8	221	57.4	09.0	340	18.3	03.5	
11	160	46.0	321	30.9	-7 35.2	323	53.2	-6 48.5	236	59.8	-23 09.0	355	20.5	+8 03.4	
12	175	48.5	336	30.6	-7 36.5	338	54.1	-6 49.1	252	02.2	-23 09.0	10	22.7	+8 03.2	
13	190	50.9	351	30.2	37.7	353	55.0	49.8	267	04.6	09.0	25	24.8	03.1	
14	205	53.4	6	29.9	39.0	8	56.0	50.5	282	07.0	09.0	40	27.0	03.0	
15	220	55.9	21	29.5	40.2	23	56.9	51.1	297	09.3	08.9	55	29.2	02.9	
16	235	58.3	36	29.2	41.5	38	57.9	51.8	312	11.7	08.9	70	31.4	02.8	
17	251	00.8	51	28.8	-7 42.7	53	58.8	-6 52.4	327	14.1	-23 08.9	85	33.5	+8 02.7	
18	266	03.3	66	28.5	-7 44.0	68	59.7	-6 53.1	342	16.5	-23 08.9	100	35.7	+8 02.5	
19	281	05.7	81	28.1	45.2	84	00.7	53.7	357	18.9	08.9	115	37.9	02.4	
20	296	08.2	96	27.7	46.4	99	01.6	54.4	12	21.3	08.9	130	40.0	02.3	
21	311	10.6	111	27.4	47.7	114	02.5	55.0	27	23.7	08.9	145	42.2	02.2	
22	326	13.1	126	27.0	48.9	129	03.5	55.7	42	26.1	08.9	160	44.4	02.1	
23	341	15.6	141	26.7	50.2	144	04.4	56.3	57	28.5	08.9	175	46.6	02.0	
24	356	18.0	156	26.3	-7 51.4	159	05.3	-6 57.0	72	30.8	-23 08.9	190	48.7	+8 01.8	
Dif	—		-4		-12	+9		-7	+24		0	+22		-1	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 9			Edad: 17 ^d 2	PHE { 4 ^h : 58 ^m 9 12 ^h : 59 ^m 0 20 ^h : 59 ^m 1												
	PMG: 11 ^h 54 ^m 3					SD: 16 ^h 0				PMG: 1 ^h 07 ^m			R ^o : 50 ^m				
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Náutico	Civil		Hora	R ^o	Hora	R ^o	
h	°	'	°	°	'	°	°	'	°	h	m	h	m	h	m	m	
0	181	22.3	+2	11.7	343	55.2	+10	01.9	60 N	4	00	4	51	5	33	17 56 4	8 49 104
1	196	22.6		10.7	358	25.6 ¹¹⁴		17.1 ¹⁵²	58	07		55		35	18 04 10	41 99	
2	211	22.8		09.8	12	55.8 ¹¹²		32.3 ¹⁵²	56	13	4	58		36	12 13	35 94	
3	226	23.0		08.8	27	26.0 ¹¹²	+10	47.4 ¹⁵¹	54	19	5	02		37	19 17	29 9	
4	241	23.2		07.8	41	56.2 ¹¹²	+11	02.5 ¹⁵¹	52	24		04		38	25 20	24 88	
5	256	23.5	+2	06.9	56	26.2 ¹¹⁰	+11	17.5 ¹⁵⁰	50	4	28	5	07	5	39	18 31 22	8 19 85
6	271	23.7	+2	05.9	70	56.2 ¹¹⁰	+11	32.5 ¹⁵⁰	45	4	37	5	12	5	41	18 43 27	8 09 79
7	286	23.9		04.9	85	26.1 ¹⁰⁹	+11	47.4 ¹⁴⁹	40	44		16		43	18 53 32	8 01 74	
8	301	24.1		04.0	99	55.9 ¹⁰⁸	+12	02.2 ¹⁴⁸	35	49		19		44	19 01 36	7 54 70	
9	316	24.3		03.0	114	25.7 ¹⁰⁸		17.0 ¹⁴⁸	30	4	54	22		46	09 39	47 67	
10	331	24.6		02.0	128	55.4 ¹⁰⁷		31.8 ¹⁴⁸	20	5	00	26		48	22 45	36 62	
11	346	24.8	+2	01.1	143	25.0 ¹⁰⁶	+12	46.5 ¹⁴⁷	10 N	5	04	5	29	5	50	19 34 49	7 27 56
12	1	25.0	+2	00.1	157	54.5 ¹⁰⁵	+13	01.1 ¹⁴⁶	0	5	06	5	30	5	51	19 45 53	7 18 52
13	16	25.2	+1	59.1	172	23.9 ¹⁰⁴		15.7 ¹⁴⁶	10 S	07		32		53	19 56 58	09 48	
14	31	25.5		58.2	186	53.3 ¹⁰⁴		30.2 ¹⁴⁵	20	06		32		54	20 08 63	7 00 42	
15	46	25.7		57.2	201	22.6 ¹⁰³		44.6 ¹⁴⁴	30	04		32		55	22 68	6 50 36	
16	61	25.9		56.2	215	51.8 ¹⁰²	+13	58.9 ¹⁴³	35	5	02	31		56	30 71	44 33	
17	76	26.1	+1	55.3	230	20.9 ¹⁰¹	+14	13.2 ¹⁴³	40	4	59	5	30	5	57	20 39 76	6 37 29
18	91	26.4	+1	54.3	244	49.9 ¹⁰⁰	+14	27.5 ¹⁴³	45	4	55	5	29	5	58	20 50 80	6 29 25
19	106	26.6		53.3	259	18.9 ¹⁰⁰		41.6 ¹⁴¹	50	49		27		59	21 03 86	19 20	
20	121	26.8		52.4	273	47.8 ⁹⁹	+14	55.7 ¹⁴¹	52	47		26		6	00	10 89	15 17
21	136	27.0		51.4	288	16.6 ⁹⁸	+15	09.7 ¹⁴⁰	54	44		25		00	17 92	10 14	
22	151	27.3		50.4	302	45.3 ⁹⁷		23.6 ¹³⁹	56	40		24		01	24 97	6 05 10	
23	166	27.5		49.5	317	13.9 ⁹⁶		37.4 ¹³⁸	58	37		23		02	33 101	5 59 7	
24	181	27.7	+1	48.5	331	42.4 ⁹⁵	+15	51.2 ¹³⁸	60 S	4	32	5	21	6	02	21 43 107	5 52 3

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG		Mag: -3.9		Mag: +1.7		Mag: -2.4		Mag: +0.9	
	0 ^h 14 ^m 8		PMG: 13 ^h 35 ^m		PMG: 13 ^h 23 ^m		PMG: 19 ^h 07 ^m		PMG: 11 ^h 15 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	356	18.0	156	26.3	159	05.3	72	30.8	190	48.7
1	11	20.5	171	26.0	174	06.3	87	33.2	205	50.9
2	26	23.0	186	25.6	189	07.2	102	35.6	220	53.1
3	41	25.4	201	25.2	204	08.2	117	38.0	235	55.3
4	56	27.9	216	24.9	219	09.1	132	40.4	250	57.4
5	71	30.4	231	24.5	234	10.0	147	42.8	265	59.6
6	86	32.8	246	24.2	249	11.0	162	45.2	281	01.8
7	101	35.3	261	23.8	264	11.9	177	47.6	296	03.9
8	116	37.8	276	23.5	279	12.8	192	49.9	311	06.1
9	131	40.2	291	23.1	294	13.8	207	52.3	326	08.3
10	146	42.7	306	22.7	309	14.7	222	54.7	341	10.5
11	161	45.1	321	22.4	324	15.6	237	57.1	356	12.6
12	176	47.6	336	22.0	339	16.6	252	59.5	11	14.8
13	191	50.1	351	21.7	354	17.5	268	01.9	26	17.0
14	206	52.5	6	21.3	9	18.4	283	04.2	41	19.2
15	221	55.0	21	20.9	24	19.4	298	06.6	56	21.3
16	236	57.5	36	20.6	39	20.3	313	09.0	71	23.5
17	251	59.9	51	20.2	54	21.2	328	11.4	86	25.7
18	267	02.4	66	19.9	69	22.2	343	13.8	101	27.9
19	282	04.9	81	19.5	84	23.1	358	16.2	116	30.0
20	297	07.3	96	19.1	99	24.0	13	18.5	131	32.2
21	312	09.8	111	18.8	114	25.0	28	20.9	146	34.4
22	327	12.2	126	18.4	129	25.9	43	23.3	161	36.5
23	342	14.7	141	18.1	144	26.8	58	25.7	176	38.7
24	357	17.2	156	17.7	159	27.8	73	28.1	191	40.9
Dif	—		-4		+9		+24		+22	
			-12		-6		0		-1	

UT	SOL			O LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna			
	SD: 15:9 PMG: 11 ^h 54 ^m 0			Edad: 18 ^d 2 PHE { 4 ^h : 59/2 12 ^h : 59/3 20 ^h : 59/3 PMG: 1 ^h 57 ^m R°: 55 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif											
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	m	h m	m			
0	181	27.7	+1	48.5	331	42.4	+15	51.2	60 N	18 11	18 53	19 44	18 00	9	10 33 108			
1	196	27.9		47.5	346	10.8 94	+16	04.8 136	58	10	49	37	14 15		20 102			
2	211	28.2		46.6	0	39.2 94		18.4 136	56	09	46	31	25 20		09 97			
3	226	28.4		45.6	15	07.4 92		31.9 135	54	08	43	26	36 23		10 00 92			
4	241	28.6		44.6	29	35.6 92		45.3 134	52	07	41	21	45 27		9 52 88			
5	256	28.8	+1	43.7	44	03.7 91	+16	58.6 133	50	18 06	18 39	19 17	18 53 30		9 44 86			
6	271	29.0	+1	42.7	58	31.7 90	+17	11.8 132	45	18 05	18 34	19 09	19 10 36		9 28 80			
7	286	29.3		41.7	72	59.5 88		25.0 132	40	03	30	19 02	25 39		15 76			
8	301	29.5		40.8	87	27.4 89		38.0 130	35	02	27	18 57	37 43		9 04 72			
9	316	29.7		39.8	101	55.1 87	+17	50.9 129	30	01	25	53	19 48 46		8 54 69			
10	331	29.9		38.8	116	22.7 86	+18	03.8 129	20	18 00	22	47	20 07 50		38 64			
11	346	30.2	+1	37.9	130	50.2 85	+18	16.5 127	10 N	17 58	18 19	18 44	20 23 54		8 23 60			
12	1	30.4	+1	36.9	145	17.6 84	+18	29.1 126	0	17 57	18 18	18 42	20 38 58		8 10 55			
13	16	30.6		35.9	159	45.0 84		41.6 125	10 S	56	17	42	20 54 61		7 57 51			
14	31	30.8		34.9	174	12.2 82	+18	54.1 125	20	55	17	43	21 11 65		42 48			
15	46	31.1		34.0	188	39.4 82	+19	06.4 123	30	54	18	46	30 70		26 42			
16	61	31.3		33.0	203	06.4 80		18.6 122	35	54	19	48	41 73		17 39			
17	76	31.5	+1	32.0	217	33.4 80	+19	30.6 120	40	17 53	18 20	18 52	21 55 75		7 06 36			
18	91	31.7	+1	31.1	232	00.3 79	+19	42.6 120	45	17 53	18 22	18 56	22 10 80		6 54 31			
19	106	32.0		30.1	246	27.0 77	+19	54.5 119	50	52	24	19 02	29 86		39 25			
20	121	32.2		29.1	260	53.7 77	+20	06.2 117	52	52	25	05	39 88		32 23			
21	136	32.4		28.2	275	20.3 76		17.8 116	54	51	26	08	22 49 92		24 20			
22	151	32.6		27.2	289	46.8 75		29.3 115	56	51	28	12	23 01 96		15 16			
23	166	32.8		26.2	304	13.2 74		40.7 114	58	50	30	16	14 102		6 06 11			
24	181	33.1	+1	25.3	318	39.5 73	+20	52.0 113	60 S	17 50	18 32	19 21	23 30 110		5 55 5			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 0 ^h 10 ^m 8		Mag: -3.9 PMG: 13 ^h 35 ^m			Mag: +1.7 PMG: 13 ^h 21 ^m			Mag: -2.4 PMG: 19 ^h 03 ^m			Mag: +0.9 PMG: 11 ^h 12 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°			
0	357	17.2	156	17.7	-8	21.2	159	27.8	-7	12.6	73	28.1	-23	08.8	191	40.9	+7	59.1
1	12	19.6	171	17.3		22.4	174	28.7		13.2	88	30.4		08.8	206	43.1		58.9
2	27	22.1	186	17.0		23.6	189	29.6		13.9	103	32.8		08.8	221	45.2		58.8
3	42	24.6	201	16.6		24.9	204	30.6		14.5	118	35.2		08.8	236	47.4		58.7
4	57	27.0	216	16.2		26.1	219	31.5		15.2	133	37.6		08.8	251	49.6		58.6
5	72	29.5	231	15.9	-8	27.4	234	32.4	-7	15.8	148	40.0	-23	08.8	266	51.8	+7	58.5
6	87	32.0	246	15.5	-8	28.6	249	33.4	-7	16.4	163	42.3	-23	08.8	281	53.9	+7	58.4
7	102	34.4	261	15.2		29.8	264	34.3		17.1	178	44.7		08.8	296	56.1		58.2
8	117	36.9	276	14.8		31.1	279	35.2		17.7	193	47.1		08.8	311	58.3		58.1
9	132	39.4	291	14.4		32.3	294	36.2		18.4	208	49.5		08.8	327	00.5		58.0
10	147	41.8	306	14.1		33.5	309	37.1		19.0	223	51.8		08.8	342	02.6		57.9
11	162	44.3	321	13.7	-8	34.8	324	38.0	-7	19.7	238	54.2	-23	08.8	357	04.8	+7	57.8
12	177	46.7	336	13.3	-8	36.0	339	38.9	-7	20.3	253	56.6	-23	08.7	12	07.0	+7	57.7
13	192	49.2	351	13.0		37.2	354	39.9		21.0	268	59.0		08.7	27	09.1		57.5
14	207	51.7	6	12.6		38.5	9	40.8		21.6	284	01.3		08.7	42	11.3		57.4
15	222	54.1	21	12.2		39.7	24	41.7		22.3	299	03.7		08.7	57	13.5		57.3
16	237	56.6	36	11.9		40.9	39	42.7		22.9	314	06.1		08.7	72	15.7		57.2
17	252	59.1	51	11.5	-8	42.2	54	43.6	-7	23.6	329	08.5	-23	08.7	87	17.8	+7	57.1
18	268	01.5	66	11.1	-8	43.4	69	44.5	-7	24.2	344	10.8	-23	08.7	102	20.0	+7	57.0
19	283	04.0	81	10.8		44.6	84	45.5		24.9	359	13.2		08.7	117	22.2		56.8
20	298	06.5	96	10.4		45.8	99	46.4		25.5	14	15.6		08.7	132	24.4		56.7
21	313	08.9	111	10.0		47.1	114	47.3		26.2	29	17.9		08.7	147	26.5		56.6
22	328	11.4	126	09.7		48.3	129	48.2		26.8	44	20.3		08.7	162	28.7		56.5
23	343	13.9	141	09.3		49.5	144	49.2		27.5	59	22.7		08.7	177	30.9		56.4
24	358	16.3	156	08.9	-8	50.8	159	50.1	-7	28.1	74	25.1	-23	08.7	192	33.1	+7	56.3
Dif	—		-4		-12		+9		-6		+24		0		+22		-1	

UT	SOL			LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15/9 PMG: 11 ^h 53 ^m 6			Edad: 19 ^d 2 PHE { 4 ^h : 59/4 12 ^h : 59/4 20 ^h : 59/4 PMG: 2 ^h 52 ^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	181	33.1	+1 25.3	318	39.5	+20 52.0		60 N	4 05	4 56	5 38	18 09	20	12 21	106			
1	196	33.3		333	05.7	+21 03.1	111	58	12	4 59	39	29 27		12 02	98			
2	211	33.5		347	31.8		14.1	110	18	5 02	40	45 33		11 46	92			
3	226	33.7		1	57.8		24.9	108	23	05	41	18 59	37	32	89			
4	241	34.0		16	23.7		35.7	108	27	08	41	19 12	39	20	86			
5	256	34.2	+1 20.4	30	49.5	+21 46.3	106	50	4 31	5 10	5 42	19 23	41	11 10	83			
6	271	34.4	+1 19.4	45	15.3	+21 56.8	105	45	4 40	5 14	5 44	19 46	45	10 48	78			
7	286	34.6		59	40.9	+22 07.1	103	40	46	18	45	20 04	49	31	74			
8	301	34.9		74	06.5		17.3	102	51	21	46	20 51		16	72			
9	316	35.1		88	31.9		27.4	101	4 55	23	47	34 52		10 03	70			
10	331	35.3		102	57.3		37.3	99	5 01	26	48	20 57	56	9 42	65			
11	346	35.5	+1 14.6	117	22.6	+22 47.1	98	10 N	5 04	5 28	5 49	21 17	59	9 23	62			
12	1	35.7	+1 13.6	131	47.8	+22 56.7	96	0	5 06	5 30	5 50	21 36	61	9 05	60			
13	16	36.0		146	12.8	+23 06.2	95	10 S	06	30	51	21 55	63	8 48	56			
14	31	36.2		160	37.9		15.5	93	20	05	30	22 16	65	30	53			
15	46	36.4		175	02.8		24.7	92	30	5 01	29	53	40 68	8 08	49			
16	61	36.6		189	27.6		33.8	91	35	4 59	28	53	22 54	70	7 56	46		
17	76	36.9	+1 08.8	203	52.4	+23 42.7	89	40	4 55	5 27	5 54	23 10	73	7 42	43			
18	91	37.1	+1 07.8	218	17.0	+23 51.4	87	45	4 51	5 25	5 54	23 30	75	7 25	40			
19	106	37.3		232	41.6	+24 00.0	86	50	45	23	55	23 55	79	7 04	35			
20	121	37.5		247	06.1	+24 08.4	84	52	42	22	55	** ** *	**	6 55	32			
21	136	37.8		261	30.5		16.7	83	54	39	20	55	** ** *	**	44	29		
22	151	38.0		275	54.8		24.8	81	56	35	19	56	** ** *	**	31	25		
23	166	38.2		290	19.1		32.7	79	58	31	17	56	** ** *	**	17	19		
24	181	38.4	+1 02.0	304	43.3	+24 40.5	78	60 S	4 26	5 15	5 56	** ** *	**	6 00	12			
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG 0 ^h 06 ^m 9			Mag: -3.9 PMG: 13 ^h 36 ^m			Mag: +1.7 PMG: 13 ^h 20 ^m			Mag: -2.4 PMG: 18 ^h 59 ^m			Mag: +0.9 PMG: 11 ^h 08 ^m					
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°			
0	358	16.3	156 08.9	-8 50.8		159 50.1	-7 28.1		74 25.1	-23 08.7		192 33.1	+7 56.3					
1	13	18.8	171 08.6	52.0		174 51.0	28.8		89 27.4	08.7		207 35.2	56.2					
2	28	21.2	186 08.2	53.2		189 52.0	29.4		104 29.8	08.7		222 37.4	56.0					
3	43	23.7	201 07.8	54.4		204 52.9	30.1		119 32.2	08.7		237 39.6	55.9					
4	58	26.2	216 07.4	55.7		219 53.8	30.7		134 34.5	08.7		252 41.8	55.8					
5	73	28.6	231 07.1	-8 56.9		234 54.7	-7 31.4		149 36.9	-23 08.7		267 43.9	+7 55.7					
6	88	31.1	246 06.7	-8 58.1		249 55.7	-7 32.0		164 39.3	-23 08.6		282 46.1	+7 55.6					
7	103	33.6	261 06.3	-8 59.4		264 56.6	32.7		179 41.7	08.6		297 48.3	55.5					
8	118	36.0	276 06.0	-9 00.6		279 57.5	33.3		194 44.0	08.6		312 50.4	55.3					
9	133	38.5	291 05.6	01.8		294 58.4	33.9		209 46.4	08.6		327 52.6	55.2					
10	148	41.0	306 05.2	03.0		309 59.4	34.6		224 48.8	08.6		342 54.8	55.1					
11	163	43.4	321 04.8	-9 04.3		325 00.3	-7 35.2		239 51.1	-23 08.6		357 57.0	+7 55.0					
12	178	45.9	336 04.5	-9 05.5		340 01.2	-7 35.9		254 53.5	-23 08.6		12 59.1	+7 54.9					
13	193	48.3	351 04.1	06.7		355 02.2	36.5		269 55.9	08.6		28 01.3	54.8					
14	208	50.8	6 03.7	07.9		10 03.1	37.2		284 58.2	08.6		43 03.5	54.6					
15	223	53.3	21 03.4	09.2		25 04.0	37.8		300 00.6	08.6		58 05.7	54.5					
16	238	55.7	36 03.0	10.4		40 04.9	38.5		315 03.0	08.6		73 07.8	54.4					
17	253	58.2	51 02.6	-9 11.6		55 05.9	-7 39.1		330 05.3	-23 08.6		88 10.0	+7 54.3					
18	269	00.7	66 02.2	-9 12.8		70 06.8	-7 39.8		345 07.7	-23 08.6		103 12.2	+7 54.2					
19	284	03.1	81 01.9	14.1		85 07.7	40.4		0 10.0	08.6		118 14.4	54.1					
20	299	05.6	96 01.5	15.3		100 08.6	41.1		15 12.4	08.6		133 16.5	54.0					
21	314	08.1	111 01.1	16.5		115 09.6	41.7		30 14.8	08.6		148 18.7	53.8					
22	329	10.5	126 00.7	17.7		130 10.5	42.4		45 17.1	08.5		163 20.9	53.7					
23	344	13.0	141 00.4	18.9		145 11.4	43.0		60 19.5	08.5		178 23.1	53.6					
24	359	15.5	156 00.0	-9 20.2		160 12.3	-7 43.7		75 21.9	-23 08.5		193 25.2	+7 53.5					
Dif	—			-4	-12	+9	-6		+24	0		+22	-1					

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 : 59'4 12 ^h : 59'4 20 ^h : 59'4										
	PMG: 11 ^h 53 ^m 3					SD: 16'2			PMG: 3 ^h 50 ^m			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
0	181	38.4	+1 02.0	304	43.3	+24 40.5	77	60 N	18 05	18 47	19 37	18 29	45	14 07	85
1	196	38.6	+1 01.0	319	07.4	48.2	77	58	04	43	31	18 56	50	13 40	80
2	211	38.9	+1 00.0	333	31.4	+24 55.6	74	56	04	41	25	19 18	52	18	78
3	226	39.1	+0 59.1	347	55.3	+25 02.9	73	54	03	38	20	36	54	13 01	77
4	241	39.3	58.1	2	19.2	10.1	72	52	02	36	16	19 51	55	12 46	74
5	256	39.5	+0 57.1	16	43.0	+25 17.0	69	50	18 02	18 34	19 12	20 04	56	12 33	73
6	271	39.8	+0 56.1	31	06.7	+25 23.8	68	45	18 01	18 30	19 05	20 31	58	12 06	71
7	286	40.0	55.2	45	30.4	30.5	67	40	18 00	27	18 59	20 53	59	11 45	69
8	301	40.2	54.2	59	54.0	36.9	64	35	17 59	25	54	21 11	60	28	67
9	316	40.4	53.2	74	17.5	43.2	63	30	59	23	50	26	61	11 13	66
10	331	40.6	52.3	88	40.9	49.3	61	20	58	20	45	21 53	61	10 47	65
11	346	40.9	+0 51.3	103	04.3	+25 55.3	60	10 N	17 57	18 18	18 42	22 16	62	10 25	64
12	1	41.1	+0 50.3	117	27.7	+26 01.0	57	0	17 57	18 17	18 41	22 37	63	10 05	62
13	16	41.3	49.4	131	51.0	06.6	56	10 S	56	17	41	22 58	63	9 44	61
14	31	41.5	48.4	146	14.2	12.0	54	20	56	18	43	23 21	64	9 23	58
15	46	41.8	47.4	160	37.3	17.2	52	30	55	19	47	23 48	64	8 57	57
16	61	42.0	46.4	175	00.5	22.3	51	35	55	20	50	** ** *	**	42	56
17	76	42.2	+0 45.5	189	23.5	+26 27.2	49	40	17 55	18 22	18 54	** ** *	**	8 25	54
18	91	42.4	+0 44.5	203	46.5	+26 31.8	46	45	17 55	18 24	18 59	** ** *	**	8 05	51
19	106	42.6	43.5	218	09.5	36.3	45	50	55	27	19 05	** ** *	**	7 39	48
20	121	42.9	42.6	232	32.4	40.7	44	52	55	28	08	0 07	81	27	46
21	136	43.1	41.6	246	55.3	44.8	41	54	55	30	12	21	83	7 13	44
22	151	43.3	40.6	261	18.1	48.8	40	56	55	32	16	37	87	6 56	41
23	166	43.5	39.6	275	40.9	52.5	37	58	55	34	21	0 56	92	36	37
24	181	43.8	+0 38.7	290	03.7	+26 56.1	36	60 S	17 55	18 36	19 26	1 20	100	6 12	29

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 0 ^h 03 ^m 0		Mag: -3.9 PMG: 13 ^h 36 ^m		Mag: +1.7 PMG: 13 ^h 18 ^m		Mag: -2.4 PMG: 18 ^h 56 ^m		Mag: +0.9 PMG: 11 ^h 05 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	359	15.5	156	00.0	160	12.3	75	21.9	193	25.2
1	14	17.9	170	59.6	175	13.3	90	24.2	208	27.4
2	29	20.4	185	59.2	190	14.2	105	26.6	223	29.6
3	44	22.8	200	58.9	205	15.1	120	29.0	238	31.8
4	59	25.3	215	58.5	220	16.0	135	31.3	253	33.9
5	74	27.8	230	58.1	235	16.9	150	33.7	268	36.1
6	89	30.2	245	57.7	250	17.9	165	36.0	283	38.3
7	104	32.7	260	57.3	265	18.8	180	38.4	298	40.5
8	119	35.2	275	57.0	280	19.7	195	40.8	313	42.6
9	134	37.6	290	56.6	295	20.6	210	43.1	328	44.8
10	149	40.1	305	56.2	310	21.6	225	45.5	343	47.0
11	164	42.6	320	55.8	325	22.5	240	47.8	358	49.2
12	179	45.0	335	55.5	340	23.4	255	50.2	13	51.3
13	194	47.5	350	55.1	355	24.3	270	52.6	28	53.5
14	209	50.0	5	54.7	10	25.3	285	54.9	43	55.7
15	224	52.4	20	54.3	25	26.2	300	57.3	58	57.9
16	239	54.9	35	53.9	40	27.1	315	59.6	74	00.0
17	254	57.3	50	53.6	55	28.0	331	02.0	89	02.2
18	269	59.8	65	53.2	70	28.9	346	04.3	104	04.4
19	285	02.3	80	52.8	85	29.9	1	06.7	119	06.6
20	300	04.7	95	52.4	100	30.8	16	09.0	134	08.7
21	315	07.2	110	52.0	115	31.7	31	11.4	149	10.9
22	330	09.7	125	51.6	130	32.6	46	13.8	164	13.1
23	345	12.1	140	51.3	145	33.5	61	16.1	179	15.3
24	0	14.6	155	50.9	160	34.5	76	18.5	194	17.4
Dif	—		-4	-12	+9	-6	+24	0	+22	-1

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'9 PMG: 11 ^h 52 ^m 9			Edad: 21 ^d 2 PHE { SD: 16'2 PMG: 4 ^h 52 ^m R°: 62 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	181	43.8	+0	38.7	290	03.7	+26 56.1	60 N	4 10	5 01	5 43	19 14	82	15 32	48
1	196	44.0		37.7	304	26.4	+26 59.5	58	17	04	43	19 46	78	15 00	52
2	211	44.2		36.7	318	49.1	+27 02.7	56	22	07	44	20 10	75	14 36	54
3	226	44.4		35.7	333	11.8	05.8	54	27	09	44	30 73		16 56	
4	241	44.6		34.8	347	34.4	08.6	52	31	11	45	20 46	72	14 00	57
5	256	44.9	+0	33.8	1	57.0	+27 11.3	50	4 35	5 13	5 45	21 00	71	13 46	57
6	271	45.1	+0	32.8	16	19.6	+27 13.7	45	4 42	5 17	5 46	21 29	69	13 17	59
7	286	45.3		31.9	30	42.2	16.0	40	48	20	47	21 52	68	12 54	60
8	301	45.5		30.9	45	04.7	18.1	35	53	22	47	22 11	66	35	61
9	316	45.7		29.9	59	27.2	20.0	30	4 56	24	48	27 66		12 19	61
10	331	46.0		28.9	73	49.8	21.7	20	5 01	27	49	22 54	64	11 52	62
11	346	46.2	+0	28.0	88	12.3	+27 23.2	10 N	5 04	5 28	5 49	23 18	62	11 29	62
12	1	46.4	+0	27.0	102	34.8	+27 24.5	0	5 05	5 29	5 50	23 40	61	11 07	62
13	16	46.6		26.0	116	57.3	25.6	10 S	05	29	50	** ** *	**	10 45	63
14	31	46.9		25.1	131	19.7	26.6	20	5 03	28	50	** ** *	**	10 21	63
15	46	47.1		24.1	145	42.2	27.3	30	4 59	27	50	** ** *	**	9 54	63
16	61	47.3		23.1	160	04.7	27.9	35	56	25	50	0 04	65	38	63
17	76	47.5	+0	22.1	174	27.2	+27 28.3	40	4 52	5 24	5 50	0 23	64	9 19	64
18	91	47.7	+0	21.2	188	49.7	+27 28.5	45	4 47	5 21	5 50	0 45	65	8 56	64
19	106	48.0		20.2	203	12.2	28.5	50	40	18	50	1 14	65	27	65
20	121	48.2		19.2	217	34.7	28.3	52	37	17	50	28 66		8 13	64
21	136	48.4		18.2	231	57.2	27.9	54	34	15	50	1 44	66	7 57	64
22	151	48.6		17.3	246	19.8	27.3	56	29	13	50	2 04	66	37	64
23	166	48.8		16.3	260	42.4	26.5	58	25	11	50	2 28	66	7 13	64
24	181	49.1	+0	15.3	275	04.9	+27 25.6	60 S	4 19	5 09	5 50	3 00	67	6 41	63

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 23 ^h 55 ^m 1		Mag: -3.9 PMG: 13 ^h 37 ^m		Mag: +1.7 PMG: 13 ^h 17 ^m		Mag: -2.4 PMG: 18 ^h 52 ^m		Mag: +0.9 PMG: 11 ^h 01 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	0	14.6	155	50.9	-9	49.4	160	34.5	-7	59.2
1	15	17.1	170	50.5		50.6	175	35.4	-7	59.8
2	30	19.5	185	50.1		51.8	190	36.3	-8	00.4
3	45	22.0	200	49.7		53.0	205	37.2		01.1
4	60	24.5	215	49.3		54.2	220	38.1		01.7
5	75	26.9	230	49.0	-9	55.4	235	39.1	-8	02.4
6	90	29.4	245	48.6	-9	56.6	250	40.0	-8	03.0
7	105	31.8	260	48.2		57.8	265	40.9		03.7
8	120	34.3	275	47.8	-9	59.1	280	41.8		04.3
9	135	36.8	290	47.4	-10	00.3	295	42.7		05.0
10	150	39.2	305	47.0		01.5	310	43.7		05.6
11	165	41.7	320	46.7	-10	02.7	325	44.6	-8	06.2
12	180	44.2	335	46.3	-10	03.9	340	45.5	-8	06.9
13	195	46.6	350	45.9		05.1	355	46.4		07.5
14	210	49.1	5	45.5		06.3	10	47.3		08.2
15	225	51.6	20	45.1		07.5	25	48.3		08.8
16	240	54.0	35	44.7		08.7	40	49.2		09.5
17	255	56.5	50	44.3	-10	09.9	55	50.1	-8	10.1
18	270	58.9	65	43.9	-10	11.1	70	51.0	-8	10.8
19	286	01.4	80	43.5		12.3	85	51.9		11.4
20	301	03.9	95	43.2		13.5	100	52.8		12.0
21	316	06.3	110	42.8		14.7	115	53.8		12.7
22	331	08.8	125	42.4		16.0	130	54.7		13.3
23	346	11.3	140	42.0		17.2	145	55.6		14.0
24	1	13.7	155	41.6	-10	18.4	160	56.5	-8	14.6
Dif	—		-4		-12		+9		-6	
							+24		0	
									+22	
									-1	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna						
	SD: 15°9			Edad: 22 ^d 2	PHE {	4 ^h : 59/2 12 ^h : 59/2 20 ^h : 59/1			Final del crepúsculo			Salida de Luna		Puesta de Luna						
	PMG: 11 ^h 52 ^m 6								R°: 61 ^m											
	hG ☉	Dec							hG ☾	Dif	Dec	Dif	Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	m	h m	m					
0	181	49.1	+0	15.3	275	04.9	+27	25.6	12	60 N	17 59	18 40	19 30	20 36	102	16 20	21			
1	196	49.3		14.4	289	27.5	36	24.4	13	58	59	38	24	21 04	94	15 52	29			
2	211	49.5		13.4	303	50.2	37	23.1	15	56	58	35	19	25	90	30	34			
3	226	49.7		12.4	318	12.8	36	21.6	15	54	58	33	15	43	86	15	12	37		
4	241	49.9		11.4	332	35.5	37	19.9	17	52	58	31	11	21	58	83	14	57	39	
5	256	50.2	+0	10.5	346	58.2	37	+27	18.0	19	50	17 57	18 30	19 08	22 11	81	14	43	42	
6	271	50.4	+0	09.5	1	21.0	38	+27	15.9	21	45	17 57	18 26	19 01	22 38	76	14	16	46	
7	286	50.6		08.5	15	43.8	38	13.6	23	40	57	24	18 55	23 00	72	13	54	49		
8	301	50.8		07.5	30	06.6	38	11.2	24	35	56	22	51	17	70		36	51		
9	316	51.0		06.6	44	29.5	39	08.5	27	30	56	20	48	33	67	13	20	53		
10	331	51.3		05.6	58	52.4	39	05.7	28	20	56	18	44	23	58	65	12	54	55	
11	346	51.5	+0	04.6	73	15.3	39	+27	02.7	30	10 N	17 56	18 17	18 41	***	***	***	12	31	58
12	1	51.7	+0	03.6	87	38.4	41	+26	59.5	32	0	17 56	18 16	18 40	***	***	***	12	09	60
13	16	51.9		02.7	102	01.4	40	56.1	34	20 S	56	17	41	0	01	61	11	48	62	
14	31	52.1		01.7	116	24.5	41	52.6	35	10	56	18	44	25	59	11	24	65		
15	46	52.4	+0	00.7	130	47.7	42	48.9	37	30	56	20	48	0	52	57	10	57	68	
16	61	52.6	-0	00.2	145	10.9	42	44.9	40	35	57	22	51	1	09	55	41	69		
17	76	52.8	-0	01.2	159	34.2	43	+26	40.9	40	40	17 57	18 24	18 56	1	27	55	10	23	71
18	91	53.0	-0	02.2	173	57.5	43	+26	36.6	43	45	17 57	18 27	19 01	1	50	52	10	00	74
19	106	53.2		03.2	188	20.9	44	32.1	45	50	58	30	08	2	19	49	9	32	76	
20	121	53.5		04.1	202	44.4	45	27.5	46	52	58	32	12	34	47		17	79		
21	136	53.7		05.1	217	07.9	45	22.7	48	54	58	34	16	2	50	46	9	01	81	
22	151	53.9		06.1	231	31.5	46	17.8	49	56	59	36	20	3	10	42	8	41	85	
23	166	54.1		07.1	245	55.1	46	12.6	52	58	59	38	25	3	34	39	8	17	89	
24	181	54.3	-0	08.0	260	18.9	48	+26	07.3	53	60 S	17 59	18 41	19 31	4	07	31	7	44	97

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 23 ^h 51 ^m 2		Mag: -3.9 PMG: 13 ^h 38 ^m		Mag: +1.7 PMG: 13 ^h 15 ^m		Mag: -2.4 PMG: 18 ^h 48 ^m		Mag: +0.9 PMG: 10 ^h 58 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	1	13.7	155	41.6	160	56.5	77	14.9	195	09.6	
1	16	16.2	170	41.2	175	57.4	92	17.2	210	11.8	
2	31	18.7	185	40.8	190	58.3	107	19.6	225	14.0	
3	46	21.1	200	40.4	205	59.3	122	21.9	240	16.2	
4	61	23.6	215	40.0	221	00.2	137	24.2	255	18.3	
5	76	26.1	230	39.6	236	01.1	152	26.6	270	20.5	
6	91	28.5	245	39.3	251	02.0	167	28.9	285	22.7	
7	106	31.0	260	38.9	266	02.9	182	31.3	300	24.9	
8	121	33.4	275	38.5	281	03.8	197	33.6	315	27.1	
9	136	35.9	290	38.1	296	04.7	212	36.0	330	29.2	
10	151	38.4	305	37.7	311	05.7	227	38.3	345	31.4	
11	166	40.8	320	37.3	326	06.6	242	40.7	0	33.6	
12	181	43.3	335	36.9	341	07.5	257	43.0	15	35.8	
13	196	45.8	350	36.5	356	08.4	272	45.3	30	37.9	
14	211	48.2	5	36.1	11	09.3	287	47.7	45	40.1	
15	226	50.7	20	35.7	26	10.2	302	50.0	60	42.3	
16	241	53.2	35	35.3	37.6	41	11.1	317	52.4	75	44.5
17	256	55.6	50	34.9	56	12.1	332	54.7	90	46.6	
18	271	58.1	65	34.5	71	13.0	347	57.0	105	48.8	
19	287	00.6	80	34.1	86	13.9	2	59.4	120	51.0	
20	302	03.0	95	33.7	101	14.8	18	01.7	135	53.2	
21	317	05.5	110	33.3	116	15.7	33	04.1	150	55.3	
22	332	07.9	125	32.9	131	16.6	48	06.4	165	57.5	
23	347	10.4	140	32.5	146	17.5	63	08.7	180	59.7	
24	2	12.9	155	32.1	161	18.4	78	11.1	196	01.9	
Dif	—		-4	-12	+9	-6	+23	0	+22	-1	

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 9			Edad: 23 ^d 2	PHE { 4 ^h : 59 ^m 0 12 ^h : 58 ^m 9 20 ^h : 58 ^m 8	Principio del crepúsculo		Salida de Luna			Puesta de Luna			
	PMG: 11 ^h 52 ^m 2					R°: 58 ^m								
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	h m	h m	h m	h m m		h m m	
0	181	54.3	-0 08.0	260	18.9	+26 07.3		4 16	5 06	5 47	22 18 106		16 41 10	
1	196	54.5	09.0	274	42.7	48 +26 01.8	55	21	08	47	38 99		21 15	
2	211	54.8	10.0	289	06.5	48 +25 56.2	56	26	11	48	22 55 93		16 04 20	
3	226	55.0	11.0	303	30.5	50 50.4	58	31	13	48	23 09 89		15 49 24	
4	241	55.2	11.9	317	54.5	50 44.4	60	34	14	48	21 86		36 28	
5	256	55.4	-0 12.9	332	18.6	51 +25 38.2	62	4 38	5 16	5 48	23 32 83		15 25 30	
6	271	55.6	-0 13.9	346	42.8	52 +25 31.9	63	4 45	5 19	5 48	23 54 78		15 02 35	
7	286	55.9	14.8	1	07.1	53 25.4	65	50	22	49	** ** *		14 43 39	
8	301	56.1	15.8	15	31.4	53 18.8	66	54	24	49	** ** *		27 42	
9	316	56.3	16.8	29	55.9	55 12.0	68	4 57	25	49	** ** *		14 13 45	
10	331	56.5	17.8	44	20.4	55 +25 05.0	70	5 01	27	49	** ** *		13 49 50	
11	346	56.7	-0 18.7	58	45.0	56 +24 57.9	71	5 04	5 28	5 49	0 20 62		13 29 53	
12	1	57.0	-0 19.7	73	09.7	57 +24 50.6	73	5 04	5 28	5 49	0 41 59		13 09 57	
13	16	57.2	20.7	87	34.4	57 43.2	74	03	28	49	1 02 55		12 50 60	
14	31	57.4	21.7	101	59.3	59 35.6	76	5 01	26	48	24 52		29 64	
15	46	57.6	22.6	116	24.3	60 27.8	78	4 56	24	48	1 49 49		12 05 68	
16	61	57.8	23.6	130	49.3	60 20.0	78	53	22	48	2 04 47		11 50 71	
17	76	58.0	-0 24.6	145	14.5	62 +24 11.9	81	4 49	5 20	5 47	2 22 43		11 34 73	
18	91	58.3	-0 25.6	159	39.7	62 +24 03.7	82	4 43	5 17	5 47	2 42 41		11 14 77	
19	106	58.5	26.5	174	05.0	63 +23 55.4	83	36	14	46	3 08 36		10 48 83	
20	121	58.7	27.5	188	30.4	64 46.9	85	32	12	46	21 33		36 86	
21	136	58.9	28.5	202	55.9	65 38.3	86	28	10	45	36 29		22 89	
22	151	59.1	29.5	217	21.5	66 29.5	88	24	08	45	3 52 26		10 06 93	
23	166	59.3	30.4	231	47.3	68 20.6	89	18	05	45	4 13 20		9 46 99	
24	181	59.6	-0 31.4	246	13.1	68 +23 11.6	90	4 12	5 03	5 44	4 38 12		9 21 107	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 23 ^h 47 ^m 2		Mag: -3.9 PMG: 13 ^h 38 ^m		Mag: +1.7 PMG: 13 ^h 14 ^m		Mag: -2.4 PMG: 18 ^h 44 ^m		Mag: +0.9 PMG: 10 ^h 54 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	2	12.9	155	32.1	-10	47.1	161	18.4	-8	30.0
1	17	15.3	170	31.7		48.3	176	19.4		30.7
2	32	17.8	185	31.3		49.5	191	20.3		31.3
3	47	20.3	200	30.9		50.7	206	21.2		32.0
4	62	22.7	215	30.5		51.9	221	22.1		32.6
5	77	25.2	230	30.1	-10	53.1	236	23.0	-8	33.2
6	92	27.7	245	29.7	-10	54.3	251	23.9	-8	33.9
7	107	30.1	260	29.3		55.5	266	24.8		34.5
8	122	32.6	275	28.9		56.7	281	25.7		35.2
9	137	35.1	290	28.5		57.9	296	26.6		35.8
10	152	37.5	305	28.1	-10	59.1	311	27.5		36.5
11	167	40.0	320	27.7	-11	00.2	326	28.5	-8	37.1
12	182	42.4	335	27.3	-11	01.4	341	29.4	-8	37.7
13	197	44.9	350	26.9		02.6	356	30.3		38.4
14	212	47.4	5	26.5		03.8	11	31.2		39.0
15	227	49.8	20	26.1		05.0	26	32.1		39.7
16	242	52.3	35	25.7		06.2	41	33.0		40.3
17	257	54.8	50	25.3	-11	07.4	56	33.9	-8	40.9
18	272	57.2	65	24.9	-11	08.6	71	34.8	-8	41.6
19	287	59.7	80	24.5		09.7	86	35.7		42.2
20	303	02.2	95	24.1		10.9	101	36.6		42.9
21	318	04.6	110	23.7		12.1	116	37.5		43.5
22	333	07.1	125	23.3		13.3	131	38.5		44.1
23	348	09.6	140	22.9		14.5	146	39.4		44.8
24	3	12.0	155	22.5	-11	15.7	161	40.3	-8	45.4
Dif	—		-4		-12		+9		-6	
								+23		0
										+22
										-1

UT	SOL			 LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna			
	SD: 15'9 PMG: 11 ^h 51 ^m 9			Edad: 24 ^d 2 PHE { 4 ^h : 58'7 12 ^h : 58'6 20 ^h : 58'5 SD: 16'0 PMG: 7 ^h 53 ^m R°: 53 ^m															
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m	h	m	m	
0	181	59.6	-0	31.4	246	13.1	+23	11.6	60 N	17 53	18 34	19 24	***	***	***	16	51	4	
1	196	59.8		32.4	260	38.9	+23	02.4	58	53	32	18	***	***	***	36	10		
2	212	00.0		33.3	275	04.9	+22	53.1	93	56	53	30	14	***	***	24	14		
3	227	00.2		34.3	289	31.0		43.6	95	54	53	28	10	***	***	13	17		
4	242	00.4		35.3	303	57.2		34.0	96	52	53	27	06	***	***	16	04	20	
5	257	00.7	-0	36.3	318	23.5	+22	24.3	97	50	17 53	18 25	19 03	***	***	15	55	23	
6	272	00.9	-0	37.2	332	49.9	+22	14.5	98	45	17 53	18 22	18 57	***	***	15	37	28	
7	287	01.1		38.2	347	16.4	+22	04.5	100	40	53	20	52	0 12	74	22	32		
8	302	01.3		39.2	1	43.0	+21	54.4	101	35	54	19	48	27	70	15	09	36	
9	317	01.5		40.2	16	09.7		44.2	102	30	54	18	45	0 40	68	14	58	39	
10	332	01.7		41.1	30	36.5		33.8	104	20	54	16	42	1 03	62	39	44		
11	347	02.0	-0	42.1	45	03.3	+21	23.3	105	10 N	17 55	18 16	18 40	1 22	58	14	22	48	
12	2	02.2	-0	43.1	59	30.3	+21	12.8	105	0	17 55	18 16	18 40	1 40	54	14	06	52	
13	17	02.4		44.1	73	57.4	+21	02.0	108	10 S	56	17	41	1 57	51	13	50	56	
14	32	02.6		45.0	88	24.6	+20	51.2	108	20	57	19	44	2 16	47	33	61		
15	47	02.8		46.0	102	51.9		40.3	109	30	58	21	49	38	42	13	66		
16	62	03.0		47.0	117	19.3		29.2	111	35	58	23	53	2 51	38	13	01	69	
17	77	03.3	-0	48.0	131	46.8	+20	18.1	111	40	17 59	18 26	18 58	3 05	35	12	47	73	
18	92	03.5	-0	48.9	146	14.3	+20	06.8	113	45	18 00	18 29	19 04	3 23	31	12	31	78	
19	107	03.7		49.9	160	42.0	+19	55.4	114	50	01	33	11	44	25	11	84		
20	122	03.9		50.9	175	09.8		43.9	115	52	01	35	15	3	54	23	12	02	86
21	137	04.1		51.9	189	37.7		32.3	116	54	02	37	20	4	05	20	11	51	90
22	152	04.3		52.8	204	05.7		20.6	117	56	03	40	24	18	16	39	93		
23	167	04.5		53.8	218	33.8	+19	08.8	118	58	03	43	30	33	11	25	98		
24	182	04.8	-0	54.8	233	01.9	+18	56.9	119	60 S	18 04	18 46	19 36	4 50	6	11	08	104	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 23 ^h 43 ^m 3		Mag: -3.9 PMG: 13 ^h 39 ^m		Mag: +1.7 PMG: 13 ^h 13 ^m		Mag: -2.4 PMG: 18 ^h 41 ^m		Mag: +0.9 PMG: 10 ^h 51 ^m	
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'
0	3	12.0	155	22.5	-11	15.7	161	40.3	-8	45.4
1	18	14.5	170	22.1		16.9	176	41.2		46.1
2	33	16.9	185	21.6		18.0	191	42.1		46.7
3	48	19.4	200	21.2		19.2	206	43.0		47.3
4	63	21.9	215	20.8		20.4	221	43.9		48.0
5	78	24.3	230	20.4	-11	21.6	236	44.8	-8	48.6
6	93	26.8	245	20.0	-11	22.8	251	45.7	-8	49.3
7	108	29.3	260	19.6		24.0	266	46.6		49.9
8	123	31.7	275	19.2		25.1	281	47.5		50.5
9	138	34.2	290	18.8		26.3	296	48.4		51.2
10	153	36.7	305	18.4		27.5	311	49.3		51.8
11	168	39.1	320	18.0	-11	28.7	326	50.2	-8	52.5
12	183	41.6	335	17.5	-11	29.9	341	51.2	-8	53.1
13	198	44.0	350	17.1		31.0	356	52.1		53.7
14	213	46.5	5	16.7		32.2	11	53.0		54.4
15	228	49.0	20	16.3		33.4	26	53.9		55.0
16	243	51.4	35	15.9		34.6	41	54.8		55.7
17	258	53.9	50	15.5	-11	35.7	56	55.7	-8	56.3
18	273	56.4	65	15.1	-11	36.9	71	56.6	-8	56.9
19	288	58.8	80	14.7		38.1	86	57.5		57.6
20	304	01.3	95	14.2		39.3	101	58.4		58.2
21	319	03.8	110	13.8		40.4	116	59.3		58.8
22	334	06.2	125	13.4		41.6	132	00.2	-8	59.5
23	349	08.7	140	13.0		42.8	147	01.1	-9	00.1
24	4	11.2	155	12.6	-11	44.0	162	02.0	-9	00.8
Dif	—		-4		-12		+9		-6	
							+23		0	
									+22	
										-1

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'9 PMG: 11 ^h 51 ^m 5			Edad: 25 ^d 2 PHE { 4 ^h : 58'4 12 ^h : 58'3 20 ^h : 58'1 SD: 15'9 PMG: 8 ^h 46 ^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	182	04.8	-0	233	01.9	+18	56.9	4	21	5	10	5	52	0	04
1	197	05.0		247	30.2	93	44.9	26	13	52		17	96	46	6
2	212	05.2		261	58.6	94	32.8	31	15	52		28	92	38	9
3	227	05.4		276	27.0	94	20.5	35	16	51		39	87	30	13
4	242	05.6		290	55.6	96	+18	38	18	51		47	85	24	15
5	257	05.8	-0	305	24.2	96	+17	4	41	5	19	5	51	0	55
6	272	06.1	-1	319	53.0	98	+17	4	47	5	22	5	51	1	12
7	287	06.3		334	21.8	98	30.8	52	24	51		26	72	15	54
8	302	06.5		348	50.8	100	18.2	56	25	50		37	69	45	31
9	317	06.7		3	19.8	100	+17	4	58	26	50	1	48	64	37
10	332	06.9		17	48.9	101	+16	5	02	28	50	2	05	59	23
11	347	07.1	-1	32	18.1	102	+16	5	04	5	28	5	49	2	20
12	2	07.3	-1	46	47.4	103	+16	5	04	5	28	5	48	2	34
13	17	07.6		61	16.8	104	13.6	5	02	27	48	2	48	46	54
14	32	07.8		75	46.3	105	+16	4	59	25	47	3	03	41	34
15	47	08.0		90	15.9	106	+15	54	22	45		20	36	19	64
16	62	08.2		104	45.6	107	33.9	50	19	45		29	33	10	67
17	77	08.4	-1	119	15.3	107	+15	4	45	5	17	5	44	3	40
18	92	08.6	-1	133	45.1	108	+15	4	39	5	14	5	43	3	54
19	107	08.8		148	15.1	110	+14	31	09	42		4	09	20	35
20	122	09.1		162	45.1	110	40.0	27	07	41		17	17	28	84
21	137	09.3		177	15.2	111	26.3	23	05	40		25	14	21	86
22	152	09.5		191	45.3	111	+14	18	02	40		34	11	12	90
23	167	09.7		206	15.6	113	+13	12	5	00	39	44	8	13	03
24	182	09.9	-1	220	45.9	113	+13	4	06	4	56	5	38	4	56

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 23 ^h 39 ^m 4		Mag: -3.9 PMG: 13 ^h 40 ^m		Mag: +1.7 PMG: 13 ^h 11 ^m		Mag: -2.4 PMG: 18 ^h 37 ^m		Mag: +0.9 PMG: 10 ^h 47 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	4	11.2	155	12.6	-11	44.0	162	02.0	-9	00.8	80	02.9	-23	07.5	197	46.4	+7	39.7
1	19	13.6	170	12.2		45.1	177	02.9		01.4	95	05.2		07.5	212	48.6		39.6
2	34	16.1	185	11.8		46.3	192	03.8		02.0	110	07.5		07.5	227	50.7		39.5
3	49	18.5	200	11.3		47.5	207	04.7		02.7	125	09.8		07.5	242	52.9		39.4
4	64	21.0	215	10.9		48.7	222	05.6		03.3	140	12.1		07.5	257	55.1		39.2
5	79	23.5	230	10.5	-11	49.8	237	06.5	-9	04.0	155	14.5	-23	07.5	272	57.3	+7	39.1
6	94	25.9	245	10.1	-11	51.0	252	07.4	-9	04.6	170	16.8	-23	07.5	287	59.5	+7	39.0
7	109	28.4	260	09.7		52.2	267	08.3		05.2	185	19.1		07.5	303	01.6		38.9
8	124	30.9	275	09.2		53.3	282	09.2		05.9	200	21.4		07.4	318	03.8		38.8
9	139	33.3	290	08.8		54.5	297	10.1		06.5	215	23.7		07.4	333	06.0		38.7
10	154	35.8	305	08.4		55.7	312	11.0		07.1	230	26.1		07.4	348	08.2		38.6
11	169	38.3	320	08.0	-11	56.9	327	11.9	-9	07.8	245	28.4	-23	07.4	3	10.4	+7	38.4
12	184	40.7	335	07.6	-11	58.0	342	12.8	-9	08.4	260	30.7	-23	07.4	18	12.5	+7	38.3
13	199	43.2	350	07.1	-11	59.2	357	13.7		09.1	275	33.0		07.4	33	14.7		38.2
14	214	45.7	5	06.7	-12	00.4	12	14.6		09.7	290	35.3		07.4	48	16.9		38.1
15	229	48.1	20	06.3		01.5	27	15.5		10.3	305	37.6		07.4	63	19.1		38.0
16	244	50.6	35	05.9		02.7	42	16.4		11.0	320	40.0		07.4	78	21.3		37.9
17	259	53.0	50	05.5	-12	03.9	57	17.3	-9	11.6	335	42.3	-23	07.3	93	23.4	+7	37.8
18	274	55.5	65	05.0	-12	05.0	72	18.2	-9	12.2	350	44.6	-23	07.3	108	25.6	+7	37.6
19	289	58.0	80	04.6		06.2	87	19.1		12.9	5	46.9		07.3	123	27.8		37.5
20	305	00.4	95	04.2		07.3	102	20.0		13.5	20	49.2		07.3	138	30.0		37.4
21	320	02.9	110	03.8		08.5	117	20.9		14.2	35	51.5		07.3	153	32.1		37.3
22	335	05.4	125	03.3		09.7	132	21.8		14.8	50	53.8		07.3	168	34.3		37.2
23	350	07.8	140	02.9		10.8	147	22.7		15.4	65	56.2		07.3	183	36.5		37.1
24	5	10.3	155	02.5	-12	12.0	162	23.6	-9	16.1	80	58.5	-23	07.3	198	38.7	+7	37.0
Dif	—		-4	-12			+9	-6			+23	0		+22		-1		

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16'0 PMG: 11 ^h 51 ^m 2		Edad: 26 ^d 2 PHE { 4 ^h : 58'0 12 ^h : 57'8 20 ^h : 57'7 PMG: 9 ^h 36 ^m R°: 46 ^m															
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m					
0	182	09.9	-1 18.2	220	45.9	+13 45.0	60 N	17 47	18 28	19 17	1 45 95	16 57 2						
1	197	10.1		235	16.3 ¹¹⁴	31.1 ¹³⁹	58	47	26	12	1 53 91	52 5						
2	212	10.3		249	46.8 ¹¹⁵	17.1 ¹⁴⁰	56	48	25	08	2 00 88	47 8						
3	227	10.6		264	17.4 ¹¹⁶	+13 03.1 ¹⁴⁰	54	48	23	05	06 85	43 11						
4	242	10.8		278	48.0 ¹¹⁶	+12 49.0 ¹⁴¹	52	48	22	19 01	12 82	39 13						
5	257	11.0	-1 23.0	293	18.8 ¹¹⁸	+12 34.8 ¹⁴²	50	17 49	18 21	18 59	2 17 80	16 36 15						
6	272	11.2	-1 24.0	307	49.6 ¹¹⁸	+12 20.6 ¹⁴²	45	17 49	18 19	18 53	2 28 74	16 28 20						
7	287	11.4		322	20.4 ¹¹⁸	+12 06.4 ¹⁴²	40	50	17	49	38 69	21 25						
8	302	11.6		336	51.4 ¹²⁰	+11 52.1 ¹⁴³	35	51	16	45	46 65	16 28						
9	317	11.8		351	22.4 ¹²⁰	37.7 ¹⁴⁴	30	51	15	43	2 52 63	11 31						
10	332	12.0		5	53.5 ¹²¹	23.3 ¹⁴⁴	20	52	14	40	3 04 57	16 02 36						
11	347	12.3	-1 28.9	20	24.7 ¹²²	+11 08.9 ¹⁴⁴	10 N	17 53	18 14	18 39	3 15 51	15 54 42						
12	2	12.5	-1 29.8	34	55.9 ¹²²	+10 54.4 ¹⁴⁵	0	17 54	18 15	18 39	3 24 47	15 47 46						
13	17	12.7		49	27.2 ¹²³	39.8 ¹⁴⁶	10 S	56	17	41	34 42	40 50						
14	32	12.9		63	58.6 ¹²⁴	25.3 ¹⁴⁵	20	57	19	45	44 38	32 55						
15	47	13.1		78	30.0 ¹²⁴	+10 10.6 ¹⁴⁷	30	17 59	23	50	3 56 32	23 61						
16	62	13.3		93	01.5 ¹²⁵	+9 56.0 ¹⁴⁶	35	18 00	25	18 55	4 02 29	17 65						
17	77	13.5	-1 34.7	107	33.1 ¹²⁶	+9 41.3 ¹⁴⁷	40	18 01	18 28	19 00	4 10 25	15 11 68						
18	92	13.7	-1 35.7	122	04.7 ¹²⁶	+9 26.5 ¹⁴⁸	45	18 02	18 32	19 06	4 18 22	15 04 73						
19	107	14.0		136	36.4 ¹²⁷	+9 11.8 ¹⁴⁷	50	04	36	15	29 16	14 55 78						
20	122	14.2		151	08.2 ¹²⁸	+8 57.0 ¹⁴⁸	52	05	39	19	34 14	52 80						
21	137	14.4		165	40.0 ¹²⁸	42.1 ¹⁴⁹	54	06	41	24	39 11	47 83						
22	152	14.6		180	11.9 ¹²⁹	27.3 ¹⁴⁸	56	07	44	29	45 8	42 87						
23	167	14.8		194	43.8 ¹²⁹	+8 12.4 ¹⁴⁹	58	08	47	35	52 5	37 90						
24	182	15.0	-1 41.5	209	15.8 ¹³⁰	+7 57.4 ¹⁵⁰	60 S	18 09	18 51	19 42	4 59 1	14 31 93						
UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO								
	PMG: 23 ^h 35 ^m 4		Mag: -3.9 PMG: 13 ^h 40 ^m		Mag: +1.7 PMG: 13 ^h 10 ^m		Mag: -2.4 PMG: 18 ^h 33 ^m			Mag: +1.0 PMG: 10 ^h 44 ^m								
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃		Dec	hG ♄		Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'						
0	5	10.3	155	02.5	-12	12.0	162	23.6	-9	16.1	80	58.5	-23	07.3	198	38.7	+7	37.0
1	20	12.8	170	02.1		13.2	177	24.5		16.7	96	00.8		07.3	213	40.9		36.9
2	35	15.2	185	01.6		14.3	192	25.4		17.3	111	03.1		07.2	228	43.0		36.7
3	50	17.7	200	01.2		15.5	207	26.3		18.0	126	05.4		07.2	243	45.2		36.6
4	65	20.1	215	00.8		16.6	222	27.2		18.6	141	07.7		07.2	258	47.4		36.5
5	80	22.6	230	00.4	-12	17.8	237	28.1	-9	19.2	156	10.0	-23	07.2	273	49.6	+7	36.4
6	95	25.1	244	59.9	-12	19.0	252	29.0	-9	19.9	171	12.3	-23	07.2	288	51.8	+7	36.3
7	110	27.5	259	59.5		20.1	267	29.9		20.5	186	14.7		07.2	303	53.9		36.2
8	125	30.0	274	59.1		21.3	282	30.8		21.1	201	17.0		07.2	318	56.1		36.1
9	140	32.5	289	58.7		22.4	297	31.7		21.8	216	19.3		07.2	333	58.3		35.9
10	155	34.9	304	58.2		23.6	312	32.6		22.4	231	21.6		07.2	349	00.5		35.8
11	170	37.4	319	57.8	-12	24.8	327	33.5	-9	23.1	246	23.9	-23	07.1	4	02.7	+7	35.7
12	185	39.9	334	57.4	-12	25.9	342	34.4	-9	23.7	261	26.2	-23	07.1	19	04.8	+7	35.6
13	200	42.3	349	56.9		27.1	357	35.3		24.3	276	28.5		07.1	34	07.0		35.5
14	215	44.8	4	56.5		28.2	12	36.2		25.0	291	30.8		07.1	49	09.2		35.4
15	230	47.3	19	56.1		29.4	27	37.1		25.6	306	33.1		07.1	64	11.4		35.3
16	245	49.7	34	55.6		30.5	42	38.0		26.2	321	35.4		07.1	79	13.6		35.2
17	260	52.2	49	55.2	-12	31.7	57	38.9	-9	26.9	336	37.7	-23	07.1	94	15.7	+7	35.0
18	275	54.6	64	54.8	-12	32.9	72	39.8	-9	27.5	351	40.0	-23	07.1	109	17.9	+7	34.9
19	290	57.1	79	54.4		34.0	87	40.7		28.1	6	42.3		07.1	124	20.1		34.8
20	305	59.6	94	53.9		35.2	102	41.6		28.8	21	44.7		07.0	139	22.3		34.7
21	321	02.0	109	53.5		36.3	117	42.5		29.4	36	47.0		07.0	154	24.5		34.6
22	336	04.5	124	53.1		37.5	132	43.4		30.0	51	49.3		07.0	169	26.6		34.5
23	351	07.0	139	52.6		38.6	147	44.2		30.7	66	51.6		07.0	184	28.8		34.4
24	6	09.4	154	52.2	-12	39.8	162	45.1	-9	31.3	81	53.9	-23	07.0	199	31.0	+7	34.2
Dif	—		-4		-12		+9		-6		+23		0		+22		-1	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna														
	SD: 16:0 PMG: 11 ^h 50 ^m 8			Edad: 27 ^d 2 PHE { SD: 15:7 PMG: 10 ^h 22 ^m																							
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº												
h	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m												
0	182	15.0	-1	41.5	209	15.8	+7 57.4	60 N	4 26	5 15	5 57	3 20	92	16 59	1												
1	197	15.2		42.5	223	47.8 ¹³⁰	42.5 ¹⁴⁹	58	31	17	56	24	88	57	4												
2	212	15.4		43.5	238	19.9 ¹³¹	27.5 ¹⁵⁰	56	35	19	56	28	85	55	7												
3	227	15.6		44.5	252	52.1 ¹³²	+7 12.5 ¹⁵⁰	54	38	20	55	31	82	54	9												
4	242	15.9		45.4	267	24.3 ¹³²	+6 57.5 ¹⁵⁰	52	41	21	55	34	79	52	12												
5	257	16.1	-1	46.4	281	56.5 ¹³²	+6 42.4 ¹⁵¹	50	4 44	5 22	5 54	3 37	76	16 51	14												
6	272	16.3	-1	47.4	296	28.8 ¹³³	+6 27.3 ¹⁵¹	45	4 50	5 24	5 53	3 42	72	16 48	19												
7	287	16.5		48.3	311	01.2 ¹³⁴	+6 12.2 ¹⁵¹	40	54	26	53	47	67	46	23												
8	302	16.7		49.3	325	33.6 ¹³⁴	+5 57.1 ¹⁵¹	35	4 57	27	52	51	63	44	26												
9	317	16.9		50.3	340	06.0 ¹³⁴	42.0 ¹⁵¹	30	5 00	27	51	3 55	60	42	29												
10	332	17.1		51.3	354	38.5 ¹³⁵	26.9 ¹⁵¹	20	02	28	50	4 01	54	38	35												
11	347	17.3	-1	52.2	9	11.1 ¹³⁶	+5 11.7 ¹⁵²	10 N	5 03	5 28	5 49	4 06	50	16 36	39												
12	2	17.5	-1	53.2	23	43.7 ¹³⁶	+4 56.5 ¹⁵²	0	5 03	5 27	5 48	4 11	45	16 33	44												
13	17	17.8		54.2	38	16.3 ¹³⁶	41.3 ¹⁵²	10 S	5 01	25	46	16	41	30	49												
14	32	18.0		55.2	52	49.0 ¹³⁷	26.2 ¹⁵¹	20	4 57	23	45	22	35	27	54												
15	47	18.2		56.1	67	21.7 ¹³⁷	+4 11.0 ¹⁵²	30	51	19	43	28	30	24	59												
16	62	18.4		57.1	81	54.4 ¹³⁷	+3 55.7 ¹⁵³	35	47	17	42	31	27	22	62												
17	77	18.6	-1	58.1	96	27.2 ¹³⁸	+3 40.5 ¹⁵²	40	4 42	5 14	5 41	4 35	24	16 19	67												
18	92	18.8	-1	59.1	111	00.0 ¹³⁸	+3 25.3 ¹⁵²	45	4 35	5 10	5 39	4 40	19	16 17	70												
19	107	19.0	-2	00.0	125	32.9 ¹³⁹	+3 10.1 ¹⁵²	50	26	05	37	45	15	13	76												
20	122	19.2	-2	01.0	140	05.8 ¹³⁹	+2 54.8 ¹⁵³	52	22	03	36	48	12	12	78												
21	137	19.4		02.0	154	38.7 ¹³⁹	39.6 ¹⁵²	54	18	5 00	35	50	10	10	81												
22	152	19.6		02.9	169	11.7 ¹⁴⁰	24.4 ¹⁵²	56	12	4 57	34	53	7	09	83												
23	167	19.8		03.9	183	44.7 ¹⁴⁰	+2 09.1 ¹⁵³	58	4 06	54	33	4 57	4	07	86												
24	182	20.1	-2	04.9	198	17.7 ¹⁴⁰	+1 53.9 ¹⁵²	60 S	3 59	4 50	5 32	5 00	1	16 04	91												
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO														
	PMG: 23 ^h 31 ^m 5			Mag: -3.9 PMG: 13 ^h 41 ^m			Mag: +1.6 PMG: 13 ^h 08 ^m			Mag: -2.4 PMG: 18 ^h 30 ^m			Mag: +1.0 PMG: 10 ^h 40 ^m														
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec																
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'											
0	6	09.4	154	52.2	-12	39.8	162	45.1	-9	31.3	81	53.9	-23	07.0	199	31.0	+7	34.2									
1	21	11.9	169	51.7		40.9	177	46.0		31.9	96	56.2		07.0	214	33.2		34.1									
2	36	14.4	184	51.3		42.1	192	46.9		32.6	111	58.5		07.0	229	35.4		34.0									
3	51	16.8	199	50.9		43.2	207	47.8		33.2	127	00.8		07.0	244	37.5		33.9									
4	66	19.3	214	50.4		44.4	222	48.7		33.8	142	03.1		06.9	259	39.7		33.8									
5	81	21.7	229	50.0	-12	45.5	237	49.6	-9	34.5	157	05.4	-23	06.9	274	41.9	+7	33.7									
6	96	24.2	244	49.6	-12	46.7	252	50.5	-9	35.1	172	07.7	-23	06.9	289	44.1	+7	33.6									
7	111	26.7	259	49.1		47.8	267	51.4		35.7	187	10.0		06.9	304	46.3		33.5									
8	126	29.1	274	48.7		49.0	282	52.3		36.4	202	12.3		06.9	319	48.4		33.3									
9	141	31.6	289	48.3		50.1	297	53.2		37.0	217	14.6		06.9	334	50.6		33.2									
10	156	34.1	304	47.8		51.2	312	54.1		37.6	232	16.9		06.9	349	52.8		33.1									
11	171	36.5	319	47.4	-12	52.4	327	55.0	-9	38.3	247	19.2	-23	06.9	4	55.0	+7	33.0									
12	186	39.0	334	46.9	-12	53.5	342	55.9	-9	38.9	262	21.5	-23	06.8	19	57.2	+7	32.9									
13	201	41.5	349	46.5		54.7	357	56.8		39.5	277	23.8		06.8	34	59.3		32.8									
14	216	43.9	4	46.1		55.8	12	57.6		40.2	292	26.1		06.8	50	01.5		32.7									
15	231	46.4	19	45.6		57.0	27	58.5		40.8	307	28.4		06.8	65	03.7		32.6									
16	246	48.9	34	45.2		58.1	42	59.4		41.4	322	30.7		06.8	80	05.9		32.4									
17	261	51.3	49	44.7	-12	59.3	58	00.3	-9	42.1	337	33.0	-23	06.8	95	08.1	+7	32.3									
18	276	53.8	64	44.3	-13	00.4	73	01.2	-9	42.7	352	35.3	-23	06.8	110	10.2	+7	32.2									
19	291	56.2	79	43.9		01.5	88	02.1		43.3	7	37.6		06.8	125	12.4		32.1									
20	306	58.7	94	43.4		02.7	103	03.0		44.0	22	39.9		06.7	140	14.6		32.0									
21	322	01.2	109	43.0		03.8	118	03.9		44.6	37	42.2		06.7	155	16.8		31.9									
22	337	03.6	124	42.5		05.0	133	04.8		45.2	52	44.5		06.7	170	19.0		31.8									
23	352	06.1	139	42.1		06.1	148	05.7		45.9	67	46.8		06.7	185	21.2		31.7									
24	7	08.6	154	41.6	-13	07.2	163	06.6	-9	46.5	82	49.1	-23	06.7	200	23.3	+7	31.5									
Dif	—			-4			-11			+9			-6			+23			0			+22			-		

UT	SOL		● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16'0		Edad: 28 ^d 2 PHE { 4 ^h : 57'0 12 ^h : 56'8 20 ^h : 56'7 R°: 44 ^m													
	PMG: 11 ^h 50 ^m 5		SD: 15'6 PMG: 11 ^h 07 ^m													
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m		
0	182	20.1	-2	04.9	198	17.7	+1 53.9	60 N	17 41	18 22	19 11	4 52	90	17 00	0	
1	197	20.3		05.9	212	50.7 ¹⁴⁰	38.7 ¹⁵²	58	42	21	06	52	86	01	4	
2	212	20.5		06.8	227	23.8 ¹⁴¹	23.5 ¹⁵²	56	42	19	19 03	53	82	02	7	
3	227	20.7		07.8	241	56.9 ¹⁴¹	+1 08.2 ¹⁵³	54	43	18	18 59	53	80	03	10	
4	242	20.9		08.8	256	30.1 ¹⁴²	+0 53.0 ¹⁵²	52	44	17	57	53	77	04	12	
5	257	21.1	-2	09.8	271	03.2 ¹⁴¹	+0 37.8 ¹⁵²	50	17 44	18 16	18 54	4 53	75	17 05	14	
6	272	21.3	-2	10.7	285	36.4 ¹⁴²	+0 22.6 ¹⁵²	45	17 46	18 15	18 49	4 54	70	17 07	19	
7	287	21.5		11.7	300	09.6 ¹⁴²	+0 07.4 ¹⁵²	40	47	14	45	54	66	09	23	
8	302	21.7		12.7	314	42.8 ¹⁴²	-0 07.7 ¹⁵¹	35	48	13	42	54	62	10	26	
9	317	21.9		13.6	329	16.1 ¹⁴³	22.9 ¹⁵²	30	49	13	40	55	58	11	30	
10	332	22.1		14.6	343	49.4 ¹⁴³	38.1 ¹⁵²	20	51	12	38	55	53	13	35	
11	347	22.3	-2	15.6	358	22.7 ¹⁴³	-0 53.2 ¹⁵¹	10 N	17 52	18 13	18 37	4 56	48	17 15	40	
12	2	22.6	-2	16.6	12	56.0 ¹⁴³	-1 08.3 ¹⁵¹	0	17 54	18 14	18 38	4 56	44	17 17	44	
13	17	22.8		17.5	27	29.3 ¹⁴³	23.4 ¹⁵¹	10 S	55	16	41	57	39	19	48	
14	32	23.0		18.5	42	02.6 ¹⁴³	38.5 ¹⁵¹	20	17 57	19	45	57	35	21	53	
15	47	23.2		19.5	56	36.0 ¹⁴⁴	-1 53.6 ¹⁵¹	30	18 00	24	52	58	29	23	59	
16	62	23.4		20.5	71	09.3 ¹⁴³	-2 08.6 ¹⁵⁰	35	01	26	18 56	58	26	24	62	
17	77	23.6	-2	21.4	85	42.7 ¹⁴⁴	-2 23.7 ¹⁵¹	40	18 03	18 30	19 02	4 59	22	17 26	65	
18	92	23.8	-2	22.4	100	16.1 ¹⁴⁴	-2 38.7 ¹⁵⁰	45	18 05	18 34	19 09	4 59	19	17 27	70	
19	107	24.0		23.4	114	49.5 ¹⁴⁴	-2 53.6 ¹⁴⁹	50	07	39	18	5	00	14	29	75
20	122	24.2		24.3	129	22.9 ¹⁴⁴	-3 08.6 ¹⁵⁰	52	08	42	23	00	12	30	77	
21	137	24.4		25.3	143	56.3 ¹⁴⁴	23.5 ¹⁴⁹	54	09	45	28	00	10	31	80	
22	152	24.6		26.3	158	29.8 ¹⁴⁵	38.4 ¹⁴⁹	56	11	48	33	00	7	32	83	
23	167	24.8		27.3	173	03.2 ¹⁴⁴	-3 53.3 ¹⁴⁹	58	12	52	40	01	4	33	86	
24	182	25.0	-2	28.2	187	36.6 ¹⁴⁴	-4 08.2 ¹⁴⁹	60 S	18 14	18 56	19 47	5 01	1	17 35	89	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 23 ^h 27 ^m 6		Mag: -3.9 PMG: 13 ^h 42 ^m		Mag: +1.6 PMG: 13 ^h 07 ^m		Mag: -2.4 PMG: 18 ^h 26 ^m		Mag: +1.0 PMG: 10 ^h 37 ^m							
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec							
h	°	'	°	°	'	°	'	°	'							
0	7	08.6	154	41.6	-13 07.2	163	06.6	-9 46.5	82	49.1						
1	22	11.0	169	41.2	08.4	178	07.4	47.1	97	51.4						
2	37	13.5	184	40.8	09.5	193	08.3	47.8	112	53.7						
3	52	16.0	199	40.3	10.7	208	09.2	48.4	127	56.0						
4	67	18.4	214	39.9	11.8	223	10.1	49.0	142	58.3						
5	82	20.9	229	39.4	-13 12.9	238	11.0	-9 49.7	158	00.6						
6	97	23.4	244	39.0	-13 14.1	253	11.9	-9 50.3	173	02.9						
7	112	25.8	259	38.5	15.2	268	12.8	50.9	188	05.2						
8	127	28.3	274	38.1	16.3	283	13.7	51.6	203	07.4						
9	142	30.7	289	37.6	17.5	298	14.6	52.2	218	09.7						
10	157	33.2	304	37.2	18.6	313	15.4	52.8	233	12.0						
11	172	35.7	319	36.7	-13 19.7	328	16.3	-9 53.5	248	14.3						
12	187	38.1	334	36.3	-13 20.9	343	17.2	-9 54.1	263	16.6						
13	202	40.6	349	35.8	22.0	358	18.1	54.7	278	18.9						
14	217	43.1	4	35.4	23.1	13	19.0	55.4	293	21.2						
15	232	45.5	19	34.9	24.3	28	19.9	56.0	308	23.5						
16	247	48.0	34	34.5	25.4	43	20.8	56.6	323	25.8						
17	262	50.5	49	34.0	-13 26.5	58	21.6	-9 57.2	338	28.1						
18	277	52.9	64	33.6	-13 27.7	73	22.5	-9 57.9	353	30.4						
19	292	55.4	79	33.1	28.8	88	23.4	58.5	8	32.7						
20	307	57.8	94	32.7	29.9	103	24.3	59.1	23	34.9						
21	323	00.3	109	32.2	31.0	118	25.2	-9 59.8	38	37.2						
22	338	02.8	124	31.8	32.2	133	26.1	-10 00.4	53	39.5						
23	353	05.2	139	31.3	33.3	148	27.0	01.0	68	41.8						
24	8	07.7	154	30.9	-13 34.4	163	27.8	-10 01.7	83	44.1						
Dif	—	—	-4	-11	+9	-6	+23	0	+22	-1						

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'0 PMG: 11 ^h 50 ^m 2			Edad: 29 ^d 2 PHE { 4 ^h : 56'5 12 ^h : 56'3 20 ^h : 56'1 R°: 44 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	182	25.0	-2 28.2	187	36.6	-4 08.2	60 N	4 31	5 20	6 01	6 22	89	17 00	2	
1	197	25.2	29.2	202	10.1 ¹⁴⁵	23.0 ¹⁴⁸	58	35	21	00	18 86	05 5			
2	212	25.5	30.2	216	43.5 ¹⁴⁴	37.8 ¹⁴⁸	56	39	22	6 00	15 83	09 8			
3	227	25.7	31.2	231	17.0 ¹⁴⁵	-4 52.5 ¹⁴⁷	54	42	23	5 59	13 79	13 1			
4	242	25.9	32.1	245	50.4 ¹⁴⁴	-5 07.3 ¹⁴⁸	52	45	24	58	10 77	16 14			
5	257	26.1	-2 33.1	260	23.9 ¹⁴⁵	-5 21.9 ¹⁴⁶	50	4 47	5 25	5 57	6 08 74	17 19 16			
6	272	26.3	-2 34.1	274	57.3 ¹⁴⁴	-5 36.6 ¹⁴⁷	45	4 52	5 27	5 56	6 04 69	17 26 20			
7	287	26.5	35.0	289	30.8 ¹⁴⁵	-5 51.2 ¹⁴⁶	40	56	28	55	6 00 65	32 24			
8	302	26.7	36.0	304	04.2 ¹⁴⁴	-6 05.8 ¹⁴⁶	35	4 59	28	53	5 56 62	36 28			
9	317	26.9	37.0	318	37.7 ¹⁴⁵	20.4 ¹⁴⁶	30	5 01	28	52	53 59	41 30			
10	332	27.1	38.0	333	11.1 ¹⁴⁴	34.9 ¹⁴⁵	20	03	28	50	48 53	48 36			
11	347	27.3	-2 38.9	347	44.5 ¹⁴⁴	-6 49.3 ¹⁴⁴	10 N	5 03	5 28	5 49	5 44 48	17 55 40			
12	2 27.5	-2 39.9	2 18.0 ¹⁴⁵	2 18.0 ¹⁴⁵	-7 03.8 ¹⁴⁵	0	0	5 02	5 26	5 47	5 40 44	18 01 44			
13	17 27.7	40.9	16 51.4 ¹⁴⁴	16 51.4 ¹⁴⁴	18.1 ¹⁴³	10 S	10 S	5 00	24	45	36 40	07 49			
14	32 27.9	41.8	31 24.8 ¹⁴⁴	31 24.8 ¹⁴⁴	32.5 ¹⁴⁴	20	20	4 55	21	43	32 35	14 53			
15	47 28.1	42.8	45 58.2 ¹⁴⁴	45 58.2 ¹⁴⁴	-7 46.8 ¹⁴³	30	30	49	17	40	27 30	22 58			
16	62 28.3	43.8	60 31.6 ¹⁴⁴	60 31.6 ¹⁴⁴	-8 01.0 ¹⁴²	35	35	44	14	39	24 27	26 61			
17	77 28.5	-2 44.8	75 05.0 ¹⁴⁴	75 05.0 ¹⁴⁴	-8 15.2 ¹⁴²	40	40	4 38	5 10	5 37	5 21 24	18 31 65			
18	92 28.7	-2 45.7	89 38.4 ¹⁴⁴	89 38.4 ¹⁴⁴	-8 29.4 ¹⁴²	45	45	4 31	5 06	5 35	5 18 19	18 37 69			
19	107 28.9	46.7	104 11.7 ¹⁴³	104 11.7 ¹⁴³	43.5 ¹⁴¹	50	50	22	5 00	33	14 14	44 74			
20	122 29.1	47.7	118 45.1 ¹⁴⁴	118 45.1 ¹⁴⁴	-8 57.6 ¹⁴¹	52	52	17	4 58	32	12 12	47 77			
21	137 29.4	48.6	133 18.4 ¹⁴³	133 18.4 ¹⁴³	-9 11.6 ¹⁴⁰	54	54	12	55	30	10 10	51 79			
22	152 29.6	49.6	147 51.7 ¹⁴³	147 51.7 ¹⁴³	25.6 ¹⁴⁰	56	56	06	52	29	07 8	55 82			
23	167 29.8	50.6	162 25.1 ¹⁴⁴	162 25.1 ¹⁴⁴	39.5 ¹³⁹	58	58	4 00	48	28	05 4	18 59 86			
24	182 30.0	-2 51.6	176 58.3 ¹⁴²	176 58.3 ¹⁴²	-9 53.3 ¹³⁸	60 S	60 S	3 52	4 44	5 26	5 02 1	19 04 90			
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG 23 ^h 23 ^m 6			Mag: -3.9 PMG: 13 ^h 42 ^m			Mag: +1.6 PMG: 13 ^h 05 ^m			Mag: -2.4 PMG: 18 ^h 22 ^m			Mag: +1.0 PMG: 10 ^h 33 ^m		
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	8 07.7	154 30.9	-13 34.4	154 30.9	-13 34.4	163 27.8	-10 01.7	83 44.1	-23 06.4	201 15.7	+7 28.8				
1	23 10.2	169 30.4	35.5	169 30.4	35.5	178 28.7	02.3	98 46.4	06.4	216 17.9	28.7				
2	38 12.6	184 30.0	36.7	184 30.0	36.7	193 29.6	02.9	113 48.7	06.3	231 20.1	28.6				
3	53 15.1	199 29.5	37.8	199 29.5	37.8	208 30.5	03.5	128 51.0	06.3	246 22.2	28.5				
4	68 17.6	214 29.0	38.9	214 29.0	38.9	223 31.4	04.2	143 53.2	06.3	261 24.4	28.4				
5	83 20.0	229 28.6	-13 40.0	229 28.6	-13 40.0	238 32.3	-10 04.8	158 55.5	-23 06.3	276 26.6	+7 28.3				
6	98 22.5	244 28.1	-13 41.2	244 28.1	-13 41.2	253 33.2	-10 05.4	173 57.8	-23 06.3	291 28.8	+7 28.2				
7	113 25.0	259 27.7	42.3	259 27.7	42.3	268 34.0	06.1	189 00.1	06.3	306 31.0	28.1				
8	128 27.4	274 27.2	43.4	274 27.2	43.4	283 34.9	06.7	204 02.4	06.3	321 33.2	27.9				
9	143 29.9	289 26.8	44.5	289 26.8	44.5	298 35.8	07.3	219 04.7	06.2	336 35.3	27.8				
10	158 32.3	304 26.3	45.7	304 26.3	45.7	313 36.7	08.0	234 07.0	06.2	351 37.5	27.7				
11	173 34.8	319 25.8	-13 46.8	319 25.8	-13 46.8	328 37.6	-10 08.6	249 09.2	-23 06.2	6 39.7	+7 27.6				
12	188 37.3	334 25.4	-13 47.9	334 25.4	-13 47.9	343 38.5	-10 09.2	264 11.5	-23 06.2	21 41.9	+7 27.5				
13	203 39.7	349 24.9	49.0	349 24.9	49.0	358 39.3	09.8	279 13.8	06.2	36 44.1	27.4				
14	218 42.2	4 24.5	50.1	4 24.5	50.1	13 40.2	10.5	294 16.1	06.2	51 46.2	27.3				
15	233 44.7	19 24.0	51.2	19 24.0	51.2	28 41.1	11.1	309 18.4	06.2	66 48.4	27.2				
16	248 47.1	34 23.5	52.4	34 23.5	52.4	43 42.0	11.7	324 20.7	06.1	81 50.6	27.0				
17	263 49.6	49 23.1	-13 53.5	49 23.1	-13 53.5	58 42.9	-10 12.4	339 22.9	-23 06.1	96 52.8	+7 26.9				
18	278 52.1	64 22.6	-13 54.6	64 22.6	-13 54.6	73 43.7	-10 13.0	354 25.2	-23 06.1	111 55.0	+7 26.8				
19	293 54.5	79 22.2	55.7	79 22.2	55.7	88 44.6	13.6	9 27.5	06.1	126 57.2	26.7				
20	308 57.0	94 21.7	56.8	94 21.7	56.8	103 45.5	14.2	24 29.8	06.1	141 59.3	26.6				
21	323 59.4	109 21.2	57.9	109 21.2	57.9	118 46.4	14.9	39 32.1	06.1	157 01.5	26.5				
22	339 01.9	124 20.8	-13 59.1	124 20.8	-13 59.1	133 47.3	15.5	54 34.4	06.1	172 03.7	26.4				
23	354 04.4	139 20.3	-14 00.2	139 20.3	-14 00.2	148 48.2	16.1	69 36.6	06.0	187 05.9	26.3				
24	9 06.8	154 19.8	-14 01.3	154 19.8	-14 01.3	163 49.0	-10 16.7	84 38.9	-23 06.0	202 08.1	+7 26.2				
Dif	—	-5	-11	-5	-11	+9	-6	+23	0	+22	-1				

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 16'0			Edad: 30 ^d 2 PHE { 4 ^h : 55'9 12 ^h : 55'8 20 ^h : 55'6					Civil			R°		R°				
	PMG: 11 ^h 49 ^m 8			SD: 15'3 PMG: 12 ^h 35 ^m R°: 45 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif					Hora	R°	Hora	R°			
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m		h m m				
0	182	30.0	-2 51.6	176	58.3	-9 53.3		60 N	17 35	18 16	19 05	7 51 90		17 02 3				
1	197	30.2		191	31.6 ¹⁴³	-10 07.1 ¹³⁸		58	36	15	19 01	44 86		10 7				
2	212	30.4		206	04.9 ¹⁴³	20.9 ¹³⁸		56	37	14	18 57	38 82		17 11				
3	227	30.6		220	38.1 ¹⁴²	34.6 ¹³⁷		54	38	13	54	32 79		24 16				
4	242	30.8		235	11.3 ¹⁴²	-10 48.2 ¹³⁶		52	39	13	52	27 76		30 16				
5	257	31.0	-2 56.4	249	44.5 ¹⁴²	-11 01.8 ¹³⁶		50	17 40	18 12	18 50	7 22 74		17 35 18				
6	272	31.2	-2 57.4	264	17.7 ¹⁴²	-11 15.3 ¹³⁵		45	17 42	18 11	18 45	7 13 69		17 46 23				
7	287	31.4		278	50.9 ¹⁴²	28.8 ¹³⁵		40	44	11	42	7 05 64		17 56 27				
8	302	31.6	-2 59.3	293	24.0 ¹⁴¹	42.2 ¹³⁴		35	45	10	40	6 58 61		18 04 30				
9	317	31.8	-3 00.3	307	57.1 ¹⁴¹	-11 55.5 ¹³³		30	46	10	38	52 58		11 33				
10	332	32.0		322	30.2 ¹⁴¹	-12 08.8 ¹³³		20	49	11	36	41 54		24 38				
11	347	32.2	-3 02.2	337	03.3 ¹⁴¹	-12 22.0 ¹³²		10 N	17 51	18 12	18 36	6 32 49		18 35 42				
12	2	32.4	-3 03.2	351	36.3 ¹⁴⁰	-12 35.2 ¹³²		0	17 53	18 14	18 38	6 24 45		18 45 46				
13	17	32.6		6	09.3 ¹⁴⁰	-12 48.2 ¹³⁰		10 S	55	16	41	16 40		18 56 49				
14	32	32.8		20	42.3 ¹⁴⁰	-13 01.3 ¹³¹		20	17 58	20	46	6 07 36		19 07 54				
15	47	33.0		35	15.2 ¹³⁹	14.2 ¹²⁹		30	18 01	25	53	5 57 31		20 58				
16	62	33.2		49	48.2 ¹⁴⁰	27.1 ¹²⁹		35	03	28	18 58	51 29		27 61				
17	77	33.4	-3 08.1	64	21.1 ¹³⁹	-13 39.9 ¹²⁸		40	18 05	18 32	19 04	5 45 25		19 36 64				
18	92	33.6	-3 09.0	78	53.9 ¹³⁸	-13 52.7 ¹²⁸		45	18 07	18 37	19 12	5 37 22		19 46 68				
19	107	33.8		93	26.8 ¹³⁹	-14 05.4 ¹²⁷		50	10	43	22	28 17		19 58 74				
20	122	34.0		107	59.6 ¹³⁸	18.0 ¹²⁶		52	11	45	26	24 15		20 04 76				
21	137	34.2		122	32.4 ¹³⁸	30.5 ¹²⁵		54	13	49	32	20 12		10 79				
22	152	34.4		137	05.1 ¹³⁷	43.0 ¹²⁵		56	15	52	38	15 9		17 82				
23	167	34.6		151	37.8 ¹³⁷	-14 55.4 ¹²⁴		58	16	18 56	45	09 6		25 86				
24	182	34.8	-3 14.8	166	10.5 ¹³⁷	-15 07.7 ¹²³		60 S	18 18	19 01	19 53	5 03 2		20 34 91				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 23 ^h 19 ^m 7		Mag: -3.9 PMG: 13 ^h 43 ^m			Mag: +1.6 PMG: 13 ^h 04 ^m			Mag: -2.4 PMG: 18 ^h 19 ^m			Mag: +1.0 PMG: 10 ^h 30 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	9	06.8	154	19.8	-14	01.3	163	49.0	-10	16.7	84	38.9	-23	06.0	202	08.1	+7	26.2
1	24	09.3	169	19.4		02.4	178	49.9		17.4	99	41.2		06.0	217	10.3		26.0
2	39	11.8	184	18.9		03.5	193	50.8		18.0	114	43.5		06.0	232	12.4		25.9
3	54	14.2	199	18.4		04.6	208	51.7		18.6	129	45.8		06.0	247	14.6		25.8
4	69	16.7	214	18.0		05.7	223	52.6		19.3	144	48.0		06.0	262	16.8		25.7
5	84	19.2	229	17.5	-14	06.8	238	53.4	-10	19.9	159	50.3	-23	06.0	277	19.0	+7	25.6
6	99	21.6	244	17.0	-14	08.0	253	54.3	-10	20.5	174	52.6	-23	05.9	292	21.2	+7	25.5
7	114	24.1	259	16.6		09.1	268	55.2		21.1	189	54.9		05.9	307	23.4		25.4
8	129	26.6	274	16.1		10.2	283	56.1		21.8	204	57.1		05.9	322	25.5		25.3
9	144	29.0	289	15.6		11.3	298	57.0		22.4	219	59.4		05.9	337	27.7		25.1
10	159	31.5	304	15.2		12.4	313	57.8		23.0	235	01.7		05.9	352	29.9		25.0
11	174	33.9	319	14.7	-14	13.5	328	58.7	-10	23.6	250	04.0	-23	05.9	7	32.1	+7	24.9
12	189	36.4	334	14.2	-14	14.6	343	59.6	-10	24.3	265	06.3	-23	05.9	22	34.3	+7	24.8
13	204	38.9	349	13.8		15.7	359	00.5		24.9	280	08.5		05.8	37	36.5		24.7
14	219	41.3	4	13.3		16.8	14	01.3		25.5	295	10.8		05.8	52	38.7		24.6
15	234	43.8	19	12.8		17.9	29	02.2		26.2	310	13.1		05.8	67	40.8		24.5
16	249	46.3	34	12.4		19.0	44	03.1		26.8	325	15.4		05.8	82	43.0		24.4
17	264	48.7	49	11.9	-14	20.1	59	04.0	-10	27.4	340	17.6	-23	05.8	97	45.2	+7	24.3
18	279	51.2	64	11.4	-14	21.2	74	04.9	-10	28.0	355	19.9	-23	05.8	112	47.4	+7	24.1
19	294	53.7	79	10.9		22.3	89	05.7		28.7	10	22.2		05.8	127	49.6		24.0
20	309	56.1	94	10.5		23.4	104	06.6		29.3	25	24.5		05.7	142	51.8		23.9
21	324	58.6	109	10.0		24.5	119	07.5		29.9	40	26.7		05.7	157	53.9		23.8
22	340	01.0	124	09.5		25.6	134	08.4		30.5	55	29.0		05.7	172	56.1		23.7
23	355	03.5	139	09.0		26.7	149	09.2		31.2	70	31.3		05.7	187	58.3		23.6
24	10	06.0	154	08.6	-14	27.8	164	10.1	-10	31.8	85	33.5	-23	05.7	203	00.5	+7	23.5
Dif	—		-5		-11	+9		-6	+23		0		+22		-1			

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'0 PMG: 11 ^h 49 ^m 5			Edad: 1 ^d 7 PHE { SD: 15'1 PMG: 13 ^h 20 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	182	34.8	-3	14.8	166	10.5	-15 07.7	60 N	4 36	5 25	6 06	9 21	92	17 05	5
1	197	35.0		15.8	180	43.2 ¹³⁷	19.9 ¹²²	58	40	26	05	10	86	17	10
2	212	35.2		16.8	195	15.8 ¹³⁶	32.1 ¹²²	56	43	26	03	9 00	82	28	14
3	227	35.4		17.8	209	48.4 ¹³⁶	44.2 ¹²¹	54	46	27	02	8 51	79	37	18
4	242	35.6		18.7	224	20.9 ¹³⁵	-15 56.2 ¹²⁰	52	48	28	01	43	76	46	20
5	257	35.8	-3	19.7	238	53.4 ¹³⁵	-16 08.1 ¹¹⁹	50	4 51	5 28	6 00	8 36	74	17 53	23
6	272	36.0	-3	20.7	253	25.9 ¹³⁵	-16 20.0 ¹¹⁹	45	4 55	5 29	5 58	8 22	68	18 09	28
7	287	36.2		21.6	267	58.4 ¹³⁵	31.7 ¹¹⁷	40	4 58	29	56	8 09	65	23	31
8	302	36.4		22.6	282	30.8 ¹³⁴	43.4 ¹¹⁷	35	5 00	30	55	7 59	61	34	34
9	317	36.6		23.6	297	03.1 ¹³³	-16 55.0 ¹¹⁶	30	02	30	53	50	58	18 44	37
10	332	36.8		24.5	311	35.4 ¹³³	-17 06.5 ¹¹⁵	20	03	29	51	35	53	19 02	40
11	347	37.0	-3	25.5	326	07.7 ¹³³	-17 18.0 ¹¹⁵	10 N	5 03	5 28	5 49	7 21	50	19 17	44
12	2	37.2	-3	26.5	340	40.0 ¹³³	-17 29.3 ¹¹³	0	5 02	5 26	5 46	7 09	46	19 31	47
13	17	37.4		27.4	355	12.2 ¹³²	40.6 ¹¹³	10 S	4 58	23	44	6 56	43	19 45	51
14	32	37.6		28.4	9	44.4 ¹³²	-17 51.8 ¹¹²	20	53	19	41	43	39	20 01	54
15	47	37.8		29.4	24	16.5 ¹³¹	-18 02.9 ¹¹¹	30	46	14	38	28	35	18	58
16	62	38.0		30.4	38	48.6 ¹³¹	13.9 ¹¹⁰	35	41	11	36	20	32	28	61
17	77	38.2	-3	31.3	53	20.7 ¹³¹	-18 24.8 ¹⁰⁹	40	4 35	5 07	5 34	6 10	29	20 40	64
18	92	38.4	-3	32.3	67	52.7 ¹³⁰	-18 35.6 ¹⁰⁸	45	4 27	5 02	5 32	5 59	25	20 54	68
19	107	38.6		33.3	82	24.6 ¹²⁹	46.4 ¹⁰⁸	50	17	4 56	28	45	20	21 12	72
20	122	38.8		34.2	96	56.6 ¹³⁰	-18 57.0 ¹⁰⁶	52	12	53	27	39	18	20	74
21	137	39.0		35.2	111	28.5 ¹²⁹	-19 07.6 ¹⁰⁶	54	07	50	25	32	15	29	77
22	152	39.2		36.2	126	00.3 ¹²⁸	18.1 ¹⁰⁵	56	4 01	46	24	24	12	39	81
23	167	39.4		37.1	140	32.1 ¹²⁸	28.4 ¹⁰³	58	3 53	42	22	15	9	21 51	85
24	182	39.6	-3	38.1	155	03.9 ¹²⁸	-19 38.7 ¹⁰³	60 S	3 45	4 37	5 20	5 05	4	22 05	90

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 23 ^h 15 ^m 8		Mag: -3.9 PMG: 13 ^h 44 ^m		Mag: +1.6 PMG: 13 ^h 03 ^m		Mag: -2.4 PMG: 18 ^h 15 ^m		Mag: +1.0 PMG: 10 ^h 26 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	10	06.0	154	08.6	-14	27.8	164	10.1	-10	31.8
1	25	08.4	169	08.1		28.9	179	11.0		32.4
2	40	10.9	184	07.6		30.0	194	11.9		33.0
3	55	13.4	199	07.1		31.1	209	12.7		33.7
4	70	15.8	214	06.7		32.2	224	13.6		34.3
5	85	18.3	229	06.2	-14	33.3	239	14.5	-10	34.9
6	100	20.8	244	05.7	-14	34.4	254	15.4	-10	35.5
7	115	23.2	259	05.2		35.5	269	16.2		36.2
8	130	25.7	274	04.8		36.6	284	17.1		36.8
9	145	28.2	289	04.3		37.7	299	18.0		37.4
10	160	30.6	304	03.8		38.8	314	18.9		38.0
11	175	33.1	319	03.3	-14	39.9	329	19.7	-10	38.7
12	190	35.5	334	02.8	-14	41.0	344	20.6	-10	39.3
13	205	38.0	349	02.4		42.1	359	21.5		39.9
14	220	40.5	4	01.9		43.2	14	22.4		40.5
15	235	42.9	19	01.4		44.2	29	23.2		41.2
16	250	45.4	34	00.9		45.3	44	24.1		41.8
17	265	47.9	49	00.4	-14	46.4	59	25.0	-10	42.4
18	280	50.3	63	59.9	-14	47.5	74	25.8	-10	43.0
19	295	52.8	78	59.5		48.6	89	26.7		43.6
20	310	55.3	93	59.0		49.7	104	27.6		44.3
21	325	57.7	108	58.5		50.8	119	28.5		44.9
22	341	00.2	123	58.0		51.9	134	29.3		45.5
23	356	02.6	138	57.5		53.0	149	30.2		46.1
24	11	05.1	153	57.0	-14	54.0	164	31.1	-10	46.8
Dif	—		-5		-11		+9		-6	
							+23		0	
									+22	
									-1	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG: 11 ^h 49 ^m 2			Edad: 2 ^d 7 PHE { 4 ^h : 55'0 12 ^h : 54'8 20 ^h : 54'7 R°: 48 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	182	39.6	-3 38.1	155	03.9	-19 38.7		60 N	17 29	18 10	18 58	10 53 90	17 10 10		
1	197	39.8		169	35.6 ¹²⁷	48.9 ¹⁰²		58	30	09	55	36 84	27 17		
2	212	40.0	40.0	184	07.3 ¹²⁷	-19 59.0 ¹⁰¹		56	32	09	52	22 79	42 21		
3	227	40.2	41.0	198	38.9 ¹²⁶	-20 09.0 ¹⁰⁰		54	33	08	49	10 10 75	17 55 22		
4	242	40.4	42.0	213	10.5 ¹²⁶	18.9 ⁹⁹		52	34	08	47	9 59 73	18 06 27		
5	257	40.6	-3 42.9	227	42.0 ¹²⁵	-20 28.6 ⁹⁷		50	17 36	18 08	18 45	9 50 70	18 16 29		
6	272	40.8	-3 43.9	242	13.5 ¹²⁵	-20 38.3 ⁹⁷		45	17 38	18 07	18 41	9 30 66	18 37 33		
7	287	41.0	44.9	256	45.0 ¹²⁵	47.9 ⁹⁶		40	40	07	39	14 62	18 54 36		
8	302	41.2	45.8	271	16.4 ¹²⁴	-20 57.4 ⁹⁵		35	42	07	37	9 00 60	19 08 39		
9	317	41.4	46.8	285	47.8 ¹²⁴	-21 06.8 ⁹⁴		30	44	08	35	8 48 58	21 40		
10	332	41.6	47.8	300	19.1 ¹²³	16.1 ⁹³		20	47	09	35	28 55	19 42 44		
11	347	41.8	-3 48.7	314	50.4 ¹²³	-21 25.3 ⁹²		10 N	17 50	18 11	18 35	8 11 51	20 01 46		
12	2	42.0	-3 49.7	329	21.7 ¹²³	-21 34.4 ⁹¹		0	17 52	18 13	18 37	7 55 48	20 18 49		
13	17	42.2	50.7	343	52.9 ¹²²	43.4 ⁹⁰		10 S	55	16	41	39 45	36 51		
14	32	42.4	51.6	358	24.0 ¹²¹	-21 52.3 ⁸⁹		20	17 58	21	46	22 42	20 55 54		
15	47	42.6	52.6	12	55.2 ¹²²	-22 01.1 ⁸⁸		30	18 02	26	18 54	7 03 38	21 16 58		
16	62	42.7	53.6	27	26.2 ¹²⁰	09.7 ⁸⁶		35	04	30	19 00	6 52 36	29 59		
17	77	42.9	-3 54.5	41	57.3 ¹²¹	-22 18.3 ⁸⁶		40	18 07	18 34	19 06	6 39 33	21 44 62		
18	92	43.1	-3 55.5	56	28.2 ¹¹⁹	-22 26.7 ⁸⁴		45	18 10	18 39	19 14	6 24 30	22 02 64		
19	107	43.3	56.5	70	59.2 ¹²⁰	35.1 ⁸⁴		50	13	46	25	6 05 26	24 68		
20	122	43.5	57.4	85	30.1 ¹¹⁹	43.3 ⁸²		52	15	49	30	5 57 23	34 71		
21	137	43.7	58.4	100	00.9 ¹¹⁸	51.5 ⁸²		54	17	52	36	47 20	22 46 73		
22	152	43.9	-3 59.4	114	31.8 ¹¹⁹	-22 59.5 ⁸⁰		56	19	18 56	43	36 17	23 00 76		
23	167	44.1	-4 00.3	129	02.5 ¹¹⁷	-23 07.4 ⁷⁹		58	21	19 01	50	24 13	16 81		
24	182	44.3	-4 01.3	143	33.3 ¹¹⁸	-23 15.2 ⁷⁸		60 S	18 23	19 06	19 59	5 09 8	23 35 88		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 23 ^h 11 ^m 8		Mag: -3.9 PMG: 13 ^h 45 ^m			Mag: +1.6 PMG: 13 ^h 01 ^m			Mag: -2.3 PMG: 18 ^h 11 ^m			Mag: +1.0 PMG: 10 ^h 23 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	'	°	°	'	°	°	'	°	
0	11	05.1	153	57.0	-14 54.0	164	31.1	-10 46.8	86	28.0	-23 05.3	203	52.9	+7 20.8	
1	26	07.6	168	56.6	55.1	179	31.9	47.4	101	30.2	05.3	218	55.1	20.7	
2	41	10.0	183	56.1	56.2	194	32.8	48.0	116	32.5	05.3	233	57.3	20.6	
3	56	12.5	198	55.6	57.3	209	33.7	48.6	131	34.8	05.2	248	59.5	20.5	
4	71	15.0	213	55.1	58.4	224	34.6	49.3	146	37.0	05.2	264	01.7	20.4	
5	86	17.4	228	54.6	-14 59.5	239	35.4	-10 49.9	161	39.3	-23 05.2	279	03.9	+7 20.3	
6	101	19.9	243	54.1	-15 00.5	254	36.3	-10 50.5	176	41.6	-23 05.2	294	06.1	+7 20.2	
7	116	22.4	258	53.6	01.6	269	37.2	51.1	191	43.8	05.2	309	08.2	20.0	
8	131	24.8	273	53.1	02.7	284	38.0	51.7	206	46.1	05.2	324	10.4	19.9	
9	146	27.3	288	52.7	03.8	299	38.9	52.4	221	48.3	05.1	339	12.6	19.8	
10	161	29.8	303	52.2	04.9	314	39.8	53.0	236	50.6	05.1	354	14.8	19.7	
11	176	32.2	318	51.7	-15 05.9	329	40.6	-10 53.6	251	52.9	-23 05.1	9	17.0	+7 19.6	
12	191	34.7	333	51.2	-15 07.0	344	41.5	-10 54.2	266	55.1	-23 05.1	24	19.2	+7 19.5	
13	206	37.1	348	50.7	08.1	359	42.4	54.9	281	57.4	05.1	39	21.4	19.4	
14	221	39.6	3	50.2	09.2	14	43.2	55.5	296	59.7	05.1	54	23.5	19.3	
15	236	42.1	18	49.7	10.2	29	44.1	56.1	312	01.9	05.0	69	25.7	19.2	
16	251	44.5	33	49.2	11.3	44	45.0	56.7	327	04.2	05.0	84	27.9	19.0	
17	266	47.0	48	48.7	-15 12.4	59	45.8	-10 57.3	342	06.4	-23 05.0	99	30.1	+7 18.9	
18	281	49.5	63	48.2	-15 13.5	74	46.7	-10 58.0	357	08.7	-23 05.0	114	32.3	+7 18.8	
19	296	51.9	78	47.7	14.5	89	47.6	58.6	12	10.9	05.0	129	34.5	18.7	
20	311	54.4	93	47.2	15.6	104	48.4	59.2	27	13.2	05.0	144	36.7	18.6	
21	326	56.9	108	46.7	16.7	119	49.3	-10 59.8	42	15.5	04.9	159	38.8	18.5	
22	341	59.3	123	46.2	17.8	134	50.2	-11 00.4	57	17.7	04.9	174	41.0	18.4	
23	357	01.8	138	45.8	18.8	149	51.0	01.1	72	20.0	04.9	189	43.2	18.3	
24	12	04.3	153	45.3	-15 19.9	164	51.9	-11 01.7	87	22.2	-23 04.9	204	45.4	+7 18.2	
Dif	—		-5 -11		+9 -6				+23 0				+22 -1		

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna						
	SD: 16'0 PMG: 11 ^h 48 ^m 9			Edad: 3 ^d 7 PHE { 4 ^h : 54'6 12 ^h : 54'5 20 ^h : 54'4 R°: 50 ^m															
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m		
0	182	44.3	-4	01.3	143	33.3	-23	15.2	60 N	4	41	5	29	6	11	12	23	83	
1	197	44.5		02.3	158	03.9		22.9	58		44		30		09	12	00	76	
2	212	44.7		03.2	172	34.6		30.5	56		47		30		07	11	41	72	
3	227	44.9		04.2	187	05.2		37.9	54		50		31		06		25	70	
4	242	45.1		05.2	201	35.8		45.3	52		52		31		05		12	67	
5	257	45.3	-4	06.1	216	06.3	-23	52.5	50	4	54	5	31	6	03	11	00	65	
6	272	45.5	-4	07.1	230	36.8	-23	59.7	72	4	57	5	31	6	01	10	36	62	
7	287	45.7		08.1	245	07.2	-24	06.7	70	5	00		31	5	58		16	60	
8	302	45.9		09.0	259	37.6		13.6	69		02		31	56		10	00	58	
9	317	46.1		10.0	274	08.0		20.3	67		03		31	55		9	46	57	
10	332	46.2		11.0	288	38.3		27.0	67		04		29	51		23	54		
11	347	46.4	-4	11.9	303	08.6	-24	33.5	65	10 N	5	03	5	27	5	48	9	02	52
12	2	46.6	-4	12.9	317	38.8	-24	40.0	65	0	5	01	5	25	5	46	8	43	50
13	17	46.8		13.9	332	09.0		46.3	63	10 S	4	57		22		43		24	48
14	32	47.0		14.8	346	39.2		52.5	62	20	52		17	39		8	04	46	
15	47	47.2		15.8	1	09.3	-24	58.5	60	30	43		12	36		7	41	43	
16	62	47.4		16.8	15	39.4	-25	04.5	60	35	38		08	33		28	41		
17	77	47.6	-4	17.7	30	09.5	-25	10.3	58	40	4	31	5	04	5	31	7	12	40
18	92	47.8	-4	18.7	44	39.5	-25	16.0	57	45	4	23	4	58	5	28	6	54	36
19	107	48.0		19.7	59	09.5		21.6	56	50	12		51	24		31	33		
20	122	48.2		20.6	73	39.5		27.1	55	52	07		48	22		20	31		
21	137	48.4		21.6	88	09.4		32.4	53	54	4	01	45	21		6	07	29	
22	152	48.6		22.5	102	39.3		37.6	52	56	3	55		41	19	5	53	26	
23	167	48.7		23.5	117	09.1		42.7	51	58	47		36	16		37	21		
24	182	48.9	-4	24.5	131	38.9	-25	47.7	50	60 S	3	38	4	31	5	14	5	17	15
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO				
	PMG: 23 ^h 07 ^m 9		Mag: -3.9 PMG: 13 ^h 45 ^m				Mag: +1.6 PMG: 13 ^h 00 ^m				Mag: -2.3 PMG: 18 ^h 08 ^m				Mag: +1.0 PMG: 10 ^h 19 ^m				
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	12	04.3	153	45.3	-15	19.9	164	51.9	-11	01.7	87	22.2	-23	04.9	204	45.4	+7	18.2	
1	27	06.7	168	44.8		21.0	179	52.8		02.3	102	24.5		04.9	219	47.6		18.1	
2	42	09.2	183	44.3		22.0	194	53.6		02.9	117	26.7		04.9	234	49.8		17.9	
3	57	11.6	198	43.8		23.1	209	54.5		03.5	132	29.0		04.8	249	52.0		17.8	
4	72	14.1	213	43.3		24.2	224	55.4		04.2	147	31.3		04.8	264	54.2		17.7	
5	87	16.6	228	42.8	-15	25.2	239	56.2	-11	04.8	162	33.5	-23	04.8	279	56.3	+7	17.6	
6	102	19.0	243	42.3	-15	26.3	254	57.1	-11	05.4	177	35.8	-23	04.8	294	58.5	+7	17.5	
7	117	21.5	258	41.8		27.4	269	58.0		06.0	192	38.0		04.8	310	00.7		17.4	
8	132	24.0	273	41.3		28.4	284	58.8		06.6	207	40.3		04.8	325	02.9		17.3	
9	147	26.4	288	40.8		29.5	299	59.7		07.3	222	42.5		04.7	340	05.1		17.2	
10	162	28.9	303	40.3		30.6	315	00.6		07.9	237	44.8		04.7	355	07.3		17.1	
11	177	31.4	318	39.8	-15	31.6	330	01.4	-11	08.5	252	47.0	-23	04.7	10	09.5	+7	17.0	
12	192	33.8	333	39.3	-15	32.7	345	02.3	-11	09.1	267	49.3	-23	04.7	25	11.7	+7	16.8	
13	207	36.3	348	38.8		33.7	0	03.2		09.7	282	51.5		04.7	40	13.8		16.7	
14	222	38.7	3	38.3		34.8	15	04.0		10.4	297	53.8		04.6	55	16.0		16.6	
15	237	41.2	18	37.8		35.9	30	04.9		11.0	312	56.0		04.6	70	18.2		16.5	
16	252	43.7	33	37.3		36.9	45	05.7		11.6	327	58.3		04.6	85	20.4		16.4	
17	267	46.1	48	36.7	-15	38.0	60	06.6	-11	12.2	343	00.5	-23	04.6	100	22.6	+7	16.3	
18	282	48.6	63	36.2	-15	39.0	75	07.5	-11	12.8	358	02.8	-23	04.6	115	24.8	+7	16.2	
19	297	51.1	78	35.7		40.1	90	08.3		13.4	13	05.0		04.6	130	27.0		16.1	
20	312	53.5	93	35.2		41.2	105	09.2		14.1	28	07.3		04.5	145	29.2		16.0	
21	327	56.0	108	34.7		42.2	120	10.1		14.7	43	09.5		04.5	160	31.3		15.9	
22	342	58.5	123	34.2		43.3	135	10.9		15.3	58	11.8		04.5	175	33.5		15.7	
23	358	00.9	138	33.7		44.3	150	11.8		15.9	73	14.0		04.5	190	35.7		15.6	
24	13	03.4	153	33.2	-15	45.4	165	12.6	-11	16.5	88	16.3	-23	04.5	205	37.9	+7	15.5	
Dif	—		-5		-11		+9		-6		+23		0		+22		-1		

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16'0 PMG: 11 ^h 48 ^m 6			Edad: 4 ^d 7 SD: 14'8 PMG: 15 ^h 45 ^m	PHE { 4 ^h : 54'3 12 ^h : 54'2 20 ^h : 54'2 R°: 51 ^m											
	hG ☉	Dec				hG ☾			Dif	Dec	Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	182	48.9	-4	24.5	131	38.9	-25	47.7	60 N	17 23	18 04	18 52	13 46	63	17 41	43
1	197	49.1		25.4	146	08.7 ¹⁰⁸		52.6 ⁴⁹	58	25	04	49	13 16	61	18 11	45
2	212	49.3		26.4	160	38.5 ¹⁰⁸	-25	57.3 ⁴⁷	56	27	04	47	12 53	59		34 47
3	227	49.5		27.4	175	08.2 ¹⁰⁷	-26	01.9 ⁴⁶	54	28	03	44	35 58		18 53	47
4	242	49.7		28.3	189	37.9 ¹⁰⁷		06.4 ⁴⁵	52	30	03	42	19 57		19 09	48
5	257	49.9	-4	29.3	204	07.6 ¹⁰⁷	-26	10.7 ⁴³	50	17 31	18 03	18 41	12 05	57	19 22	49
6	272	50.1	-4	30.3	218	37.3 ¹⁰⁷	-26	15.0 ⁴³	45	17 34	18 04	18 38	11 38	55	19 50	50
7	287	50.3		31.2	233	06.9 ¹⁰⁶		19.1 ⁴¹	40	37	04	35	11 16	55	20 13	49
8	302	50.5		32.2	247	36.5 ¹⁰⁶		23.0 ³⁹	35	39	05	34	10 58	54		31 50
9	317	50.7		33.2	262	06.0 ¹⁰⁵		26.9 ³⁹	30	42	05	33	43 53		20 47	50
10	332	50.8		34.1	276	35.6 ¹⁰⁶		30.6 ³⁷	20	45	07	33	10 17	52	21 13	51
11	347	51.0	-4	35.1	291	05.1 ¹⁰⁵	-26	34.2 ³⁶	10 N	17 49	18 10	18 34	9 54	52	21 36	51
12	2	51.2	-4	36.0	305	34.6 ¹⁰⁵	-26	37.7 ³⁵	0	17 52	18 13	18 37	9 33	51	21 58	51
13	17	51.4		37.0	320	04.1 ¹⁰⁵		41.0 ³³	10 S	55	16	41	9 12	50	22 19	51
14	32	51.6		38.0	334	33.5 ¹⁰⁴		44.2 ³²	20	17 59	21	47	8 50	49	22 42	51
15	47	51.8		38.9	349	02.9 ¹⁰⁴		47.3 ³¹	30	18 03	27	18 56	24 48		23 09	51
16	62	52.0		39.9	3	32.3 ¹⁰⁴		50.2 ²⁹	35	06	31	19 01	8 09	47		25 51
17	77	52.2	-4	40.9	18	01.7 ¹⁰⁴	-26	53.1 ²⁹	40	18 09	18 36	19 08	7 52	46	23 43	51
18	92	52.4	-4	41.8	32	31.1 ¹⁰⁴	-26	55.7 ²⁶	45	18 12	18 42	19 17	7 30	45	** ** *	**
19	107	52.5		42.8	47	00.5 ¹⁰⁴	-26	58.3 ²⁶	50	16	49	29	7 04	43	** ** *	**
20	122	52.7		43.7	61	29.8 ¹⁰³	-27	00.7 ²⁴	52	18	53	34	6 51	42	** ** *	**
21	137	52.9		44.7	75	59.1 ¹⁰³		03.0 ²³	54	20	18 56	40	36	41	** ** *	**
22	152	53.1		45.7	90	28.4 ¹⁰³		05.2 ²²	56	23	19 01	47	6 19	39	0 16	66
23	167	53.3		46.6	104	57.7 ¹⁰³		07.3 ²¹	58	25	06	19 55	5 58	36	0 37	69
24	182	53.5	-4	47.6	119	27.0 ¹⁰³	-27	09.2 ¹⁹	60 S	18 28	19 11	20 05	5 32	31	1 03	74

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 23 ^h 04 ^m 0		Mag: -3.9 PMG: 13 ^h 46 ^m		Mag: +1.6 PMG: 12 ^h 58 ^m		Mag: -2.3 PMG: 18 ^h 04 ^m		Mag: +1.0 PMG: 10 ^h 16 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	13	03.4	153	33.2	-15	45.4	165	12.6	-11	16.5
1	28	05.9	168	32.7		46.4	180	13.5		17.2
2	43	08.3	183	32.2		47.5	195	14.4		17.8
3	58	10.8	198	31.7		48.5	210	15.2		18.4
4	73	13.2	213	31.2		49.6	225	16.1		19.0
5	88	15.7	228	30.7	-15	50.7	240	17.0	-11	19.6
6	103	18.2	243	30.1	-15	51.7	255	17.8	-11	20.2
7	118	20.6	258	29.6		52.8	270	18.7		20.9
8	133	23.1	273	29.1		53.8	285	19.5		21.5
9	148	25.6	288	28.6		54.9	300	20.4		22.1
10	163	28.0	303	28.1		55.9	315	21.2		22.7
11	178	30.5	318	27.6	-15	56.9	330	22.1	-11	23.3
12	193	33.0	333	27.1	-15	58.0	345	23.0	-11	23.9
13	208	35.4	348	26.6	-15	59.0	0	23.8		24.6
14	223	37.9	3	26.0	-16	00.1	15	24.7		25.2
15	238	40.4	18	25.5		01.1	30	25.5		25.8
16	253	42.8	33	25.0		02.2	45	26.4		26.4
17	268	45.3	48	24.5	-16	03.2	60	27.3	-11	27.0
18	283	47.7	63	24.0	-16	04.3	75	28.1	-11	27.6
19	298	50.2	78	23.5		05.3	90	29.0		28.3
20	313	52.7	93	23.0		06.3	105	29.8		28.9
21	328	55.1	108	22.4		07.4	120	30.7		29.5
22	343	57.6	123	21.9		08.4	135	31.5		30.1
23	359	00.1	138	21.4		09.5	150	32.4		30.7
24	14	02.5	153	20.9	-16	10.5	165	33.3	-11	31.3
Dif	—		-5	-10		+9	-6		+22	0
									+22	-1

ALMANAQUE NÁUTICO PERSEIS

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG: 11 ^h 48 ^m 0		Edad: 6 ^d 7 PHE { 4 ^h : 54'2 12 ^h : 54'3 20 ^h : 54'3 R°: 50 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	182	57.9	-5	10.6	107	08.1	-27 15.7	60 N	17 17	17 58	18 46	15 26 19	19 32 85	
1	197	58.1		11.6	121	37.3 ¹⁰²	14.3	14 58	19	58	44	14 58 25	20 01 78	
2	212	58.3		12.6	136	06.6 ¹⁰³	12.8	15 56	21	58	41	35 29	23 74	
3	227	58.5		13.5	150	35.9 ¹⁰³	11.2	16 54	23	59	40	17 32	41 71	
4	242	58.7		14.5	165	05.1 ¹⁰²	09.4	18 52	25	59	38	14 02 34	20 56 69	
5	257	58.8	-5	15.4	179	34.4 ¹⁰³	-27 07.5	19 50	17 27	17 59	18 37	13 48 36	21 09 67	
6	272	59.0	-5	16.4	194	03.7 ¹⁰³	-27 05.5	20 45	17 31	18 00	18 34	13 21 39	21 36 63	
7	287	59.2		17.3	208	33.1 ¹⁰⁴	03.4	21 40	34	01	32	12 59 41	21 58 60	
8	302	59.4		18.3	223	02.4 ¹⁰³	-27 01.1	23 35	37	02	31	41 43	22 16 58	
9	317	59.6		19.3	237	31.7 ¹⁰³	-26 58.7	24 30	39	03	31	12 25 45	31 57	
10	332	59.8		20.2	252	01.1 ¹⁰⁴	56.1	26 20	44	06	31	11 59 47	22 57 54	
11	347	59.9	-5	21.2	266	30.5 ¹⁰⁴	-26 53.4	27 10 N	17 47	18 09	18 33	11 36 49	23 19 51	
12	3	00.1	-5	22.1	280	59.9 ¹⁰⁴	-26 50.6	28 0	17 51	18 12	18 36	11 15 50	23 39 50	
13	18	00.3		23.1	295	29.3 ¹⁰⁴	47.7	29 10 S	55	16	41	10 54 51	** ** *	
14	33	00.5		24.1	309	58.8 ¹⁰⁵	44.7	30 20	17 59	22	48	31 53	** ** *	
15	48	00.7		25.0	324	28.3 ¹⁰⁵	41.5	32 30	18 04	29	18 57	10 04 56	0 00 47	
16	63	00.8		26.0	338	57.8 ¹⁰⁵	38.2	33 35	07	33	19 03	9 49 57	16 46	
17	78	01.0	-5	26.9	353	27.3 ¹⁰⁵	-26 34.7	35 40	18 11	18 38	19 11	9 30 59	0 34 45	
18	93	01.2	-5	27.9	7	56.8 ¹⁰⁵	-26 31.1	36 45	18 15	18 44	19 20	9 08 61	0 57 43	
19	108	01.4		28.8	22	26.4 ¹⁰⁶	27.5	36 50	19	52	32	8 41 62	1 25 41	
20	123	01.6		29.8	36	56.0 ¹⁰⁶	23.6	39 52	22	18 56	38	27 64	39 39	
21	138	01.8		30.7	51	25.6 ¹⁰⁶	19.7	39 54	24	19 00	45	8 11 66	1 55 38	
22	153	01.9		31.7	65	55.2 ¹⁰⁶	15.6	41 56	27	05	19 52	7 52 69	2 14 35	
23	168	02.1		32.7	80	24.9 ¹⁰⁷	11.4	42 58	30	10	20 01	7 29 72	2 37 32	
24	183	02.3	-5	33.6	94	54.6 ¹⁰⁷	-26 07.1	43 60 S	18 33	19 16	20 11	6 59 78	3 07 27	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 22 ^h 56 ^m 1		Mag: -3.9 PMG: 13 ^h 48 ^m			Mag: +1.6 PMG: 12 ^h 56 ^m			Mag: -2.3 PMG: 17 ^h 57 ^m			Mag: +1.0 PMG: 10 ^h 09 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	15	01.7	153	08.3	-16	35.2	165	53.8	-11	46.1	90	03.8	-23	03.6
1	30	04.1	168	07.8		36.3	180	54.6		46.7	105	06.1		03.5
2	45	06.6	183	07.2		37.3	195	55.5		47.3	120	08.3		03.5
3	60	09.1	198	06.7		38.3	210	56.3		47.9	135	10.5		03.5
4	75	11.5	213	06.2		39.3	225	57.2		48.5	150	12.8		03.5
5	90	14.0	228	05.6	-16	40.3	240	58.0	-11	49.1	165	15.0	-23	03.5
6	105	16.5	243	05.1	-16	41.4	255	58.9	-11	49.7	180	17.2	-23	03.4
7	120	18.9	258	04.6		42.4	270	59.7		50.3	195	19.5		03.4
8	135	21.4	273	04.0		43.4	286	00.6		50.9	210	21.7		03.4
9	150	23.8	288	03.5		44.4	301	01.4		51.6	225	23.9		03.4
10	165	26.3	303	03.0		45.4	316	02.3		52.2	240	26.2		03.4
11	180	28.8	318	02.4	-16	46.4	331	03.1	-11	52.8	255	28.4	-23	03.3
12	195	31.2	333	01.9	-16	47.5	346	04.0	-11	53.4	270	30.6	-23	03.3
13	210	33.7	348	01.3		48.5	1	04.8		54.0	285	32.9		03.3
14	225	36.2	3	00.8		49.5	16	05.7		54.6	300	35.1		03.3
15	240	38.6	18	00.3		50.5	31	06.5		55.2	315	37.3		03.3
16	255	41.1	32	59.7		51.5	46	07.3		55.8	330	39.5		03.2
17	270	43.6	47	59.2	-16	52.5	61	08.2	-11	56.4	345	41.8	-23	03.2
18	285	46.0	62	58.7	-16	53.5	76	09.0	-11	57.0	0	44.0	-23	03.2
19	300	48.5	77	58.1		54.5	91	09.9		57.7	15	46.2		03.2
20	315	51.0	92	57.6		55.5	106	10.7		58.3	30	48.4		03.2
21	330	53.4	107	57.0		56.6	121	11.6		58.9	45	50.7		03.1
22	345	55.9	122	56.5		57.6	136	12.4	-11	59.5	60	52.9		03.1
23	0	58.3	137	56.0		58.6	151	13.3	-12	00.1	75	55.1		03.1
24	16	00.8	152	55.4	-16	59.6	166	14.1	-12	00.7	90	57.4	-23	03.1
Dif	—		-5	-10		+8	-6	-6	+22		0	+22		-1

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna		
	SD: 16'0 PMG: 11 ^h 47 ^m 7			Edad: 7 ^d 7 PHE { SD: 14'8 PMG: 18 ^h 17 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	183	02.3	-5	33.6	94	54.6	-26 07.1	60 N	4 51	5 39	6 21	15 45	9	20 57	91	
1	198	02.5		34.6	109	24.3 ¹⁰⁷	-26 02.6 ⁴⁵	58	53	39	18			23 14	21 19	85
2	213	02.7		35.5	123	54.0 ¹⁰⁷	-25 58.0 ⁴⁶	56	55	38	16	15	04	20		37 80
3	228	02.8		36.5	138	23.8 ¹⁰⁸	53.3 ⁴⁷	54	57	38	13	14	49	23	21 52	76
4	243	03.0		37.4	152	53.6 ¹⁰⁸	48.5 ⁴⁸	52	4 59	38	11			36 25	22 05	73
5	258	03.2	-5	38.4	167	23.5 ¹⁰⁹	-25 43.6 ⁴⁹	50	5 00	5 37	6 10	14	24	28	22 16	71
6	273	03.4	-5	39.4	181	53.3 ¹⁰⁸	-25 38.5 ⁵¹	45	5 02	5 36	6 06	14	00	32	22 39	67
7	288	03.5		40.3	196	23.2 ¹⁰⁹	33.3 ⁵²	40	04	35	02	13	40	35	22 58	64
8	303	03.7		41.3	210	53.2 ¹¹⁰	28.0 ⁵³	35	05	34	6 00			24 37	23 14	61
9	318	03.9		42.2	225	23.1 ¹⁰⁹	22.5 ⁵⁵	30	05	33	5 57	13	10	39	28 58	
10	333	04.1		43.2	239	53.1 ¹¹⁰	17.0 ⁵⁵	20	05	30	52	12	46	43	23 51	54
11	348	04.3	-5	44.1	254	23.1 ¹¹⁰	-25 11.3 ⁵⁷	10 N	5 03	5 27	5 48	12	25	46	***	***
12	3	04.4	-5	45.1	268	53.2 ¹¹¹	-25 05.5 ⁵⁸	0	5 00	5 24	5 44	12	05	49	***	***
13	18	04.6		46.0	283	23.3 ¹¹¹	-24 59.6 ⁵⁹	10 S	4 55	19	40	11	45	52	0 00	47
14	33	04.8		47.0	297	53.4 ¹¹¹	53.5 ⁶¹	20	48	14	36			24 55	22 45	
15	48	05.0		47.9	312	23.6 ¹¹²	47.4 ⁶¹	30	38	07	31	11	00	58	0 47	42
16	63	05.1		48.9	326	53.8 ¹¹²	41.1 ⁶³	35	32	5 02	28	10	46	59	1 02	40
17	78	05.3	-5	49.9	341	24.1 ¹¹³	-24 34.7 ⁶⁴	40	4 25	4 57	5 24	10	29	62	1 19	38
18	93	05.5	-5	50.8	355	54.3 ¹¹²	-24 28.2 ⁶⁵	45	4 15	4 51	5 20	10	09	65	1 40	35
19	108	05.7		51.8	10	24.6 ¹¹³	21.5 ⁶⁷	50	4 03	43	15			9 43	2 06	31
20	123	05.8		52.7	24	55.0 ¹¹⁴	14.8 ⁶⁷	52	3 57	39	13			31 72	18	30
21	138	06.0		53.7	39	25.4 ¹¹⁴	07.9 ⁶⁹	54	50	34	11			17 74	33	26
22	153	06.2		54.6	53	55.8 ¹¹⁴	-24 00.9 ⁷⁰	56	43	30	08			9 01	2 49	24
23	168	06.4		55.6	68	26.2 ¹¹⁴	-23 53.8 ⁷¹	58	34	24	05			8 41	3 09	20
24	183	06.6	-5	56.5	82	56.7 ¹¹⁵	-23 46.6 ⁷²	60 S	3 24	4 18	5 02	8	17	88	3 34	13

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 22 ^h 52 ^m 2		Mag: -3.9 PMG: 13 ^h 49 ^m		Mag: +1.6 PMG: 12 ^h 54 ^m		Mag: -2.3 PMG: 17 ^h 54 ^m		Mag: +1.0 PMG: 10 ^h 05 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	16	00.8	152	55.4	-16	59.6	166	14.1	-12	00.7
1	31	03.3	167	54.9	-17	00.6	181	15.0		01.3
2	46	05.7	182	54.3		01.6	196	15.8		01.9
3	61	08.2	197	53.8		02.6	211	16.7		02.5
4	76	10.7	212	53.2		03.6	226	17.5		03.1
5	91	13.1	227	52.7	-17	04.6	241	18.4	-12	03.7
6	106	15.6	242	52.1	-17	05.6	256	19.2	-12	04.4
7	121	18.1	257	51.6		06.6	271	20.0		05.0
8	136	20.5	272	51.1		07.6	286	20.9		05.6
9	151	23.0	287	50.5		08.6	301	21.7		06.2
10	166	25.5	302	50.0		09.6	316	22.6		06.8
11	181	27.9	317	49.4	-17	10.6	331	23.4	-12	07.4
12	196	30.4	332	48.9	-17	11.6	346	24.3	-12	08.0
13	211	32.8	347	48.3		12.6	1	25.1		08.6
14	226	35.3	2	47.8		13.6	16	26.0		09.2
15	241	37.8	17	47.2		14.6	31	26.8		09.8
16	256	40.2	32	46.7		15.6	46	27.6		10.4
17	271	42.7	47	46.1	-17	16.6	61	28.5	-12	11.0
18	286	45.2	62	45.6	-17	17.5	76	29.3	-12	11.6
19	301	47.6	77	45.0		18.5	91	30.2		12.3
20	316	50.1	92	44.5		19.5	106	31.0		12.9
21	331	52.6	107	43.9		20.5	121	31.9		13.5
22	346	55.0	122	43.4		21.5	136	32.7		14.1
23	1	57.5	137	42.8		22.5	151	33.5		14.7
24	16	59.9	152	42.3	-17	23.5	166	34.4	-12	15.3
Dif	—		-5	-10			+8	-6		
									+22	0
										+22
										-1

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:0 PMG: 11 ^h 47 ^m 4		Edad: 8 ^d 7 PHE { 4 ^h : 54/8 12 ^h : 55/0 20 ^h : 55/2 R°: 47 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	183	06.6	-5 56.5	82	56.7	-23 46.6	73	60 N	17 11	17 52	18 40	15 54 4	22 28 92	
1	198	06.7	57.5	97	27.3 ¹¹⁶	39.3	73	58	14	53	38	37 10	44 87	
2	213	06.9	58.4	111	57.8 ¹¹⁵	31.8	75	56	16	53	36	24 13	22 57 83	
3	228	07.1	-5 59.4	126	28.5 ¹¹⁷	24.3	75	54	19	54	35	12 16	23 08 80	
4	243	07.3	-6 00.3	140	59.1 ¹¹⁶	16.6	77	52	21	54	33	15 01 19	18 77	
5	258	07.4	-6 01.3	155	29.8 ¹¹⁷	-23 08.8	78	50	17 23	17 55	18 32	14 52 21	23 27 74	
6	273	07.6	-6 02.2	170	00.5 ¹¹⁷	-23 00.9	79	45	17 27	17 56	18 30	14 32 26	23 46 69	
7	288	07.8	03.2	184	31.3 ¹¹⁸	-22 52.9	80	40	31	58	29	15 30	** ** *	
8	303	07.9	04.1	199	02.1 ¹¹⁸	44.8	81	35	34	17 59	29	14 01 34	** ** *	
9	318	08.1	05.1	213	32.9 ¹¹⁸	36.6	82	30	37	18 01	28	13 49 36	** ** *	
10	333	08.3	06.0	228	03.8 ¹¹⁹	28.2	84	20	42	04	29	29 40	** ** *	
11	348	08.5	-6 07.0	242	34.7 ¹¹⁹	-22 19.8	84	10 N	17 46	18 07	18 32	13 11 43	0 10 51	
12	3	08.6	-6 08.0	257	05.6 ¹²⁰	-22 11.2	86	0	17 51	18 11	18 36	12 54 47	0 29 48	
13	18	08.8	08.9	271	36.6 ¹²⁰	-22 02.6	86	10 S	17 55	16	41	37 50	0 47 45	
14	33	09.0	09.9	286	07.7 ¹²¹	-21 53.8	88	20	18 00	22	48	12 19 54	1 07 41	
15	48	09.2	10.8	300	38.7 ¹²⁰	44.9	89	30	06	30	18 58	11 58 58	29 38	
16	63	09.3	11.8	315	09.8 ¹²¹	35.9	90	35	09	35	19 05	45 61	42 35	
17	78	09.5	-6 12.7	329	41.0 ¹²²	-21 26.8	91	40	18 13	18 40	19 13	11 31 64	1 57 33	
18	93	09.7	-6 13.7	344	12.2 ¹²²	-21 17.6	92	45	18 17	18 47	19 23	11 14 68	2 15 29	
19	108	09.9	14.6	358	43.4 ¹²²	-21 08.3	93	50	23	18 56	36	10 53 73	37 24	
20	123	10.0	15.6	13	14.6 ¹²²	-20 58.9	94	52	25	19 00	42	43 75	48 22	
21	138	10.2	16.5	27	45.9 ¹²³	49.4	95	54	28	04	49	31 79	2 59 20	
22	153	10.4	17.5	42	17.3 ¹²⁴	39.8	96	56	31	09	19 57	18 82	3 13 16	
23	168	10.5	18.4	56	48.6 ¹²³	30.1	97	58	34	15	20 06	10 03 86	29 12	
24	183	10.7	-6 19.4	71	20.0 ¹²⁴	-20 20.3	98	60 S	18 38	19 22	20 17	9 45 92	3 47 7	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 22 ^h 48 ^m 3		Mag: -3.9 PMG: 13 ^h 50 ^m		Mag: +1.6 PMG: 12 ^h 53 ^m		Mag: -2.3 PMG: 17 ^h 50 ^m		Mag: +1.0 PMG: 10 ^h 02 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	16	59.9	152 42.3	-17 23.5	166 34.4	-12 15.3	91	50.7	-23 02.6	209 08.2	+7 05.1			
1	32	02.4	167 41.7	24.5	181 35.2	15.9	106	52.9	02.5	224 10.4	05.0			
2	47	04.9	182 41.1	25.5	196 36.1	16.5	121	55.1	02.5	239 12.6	04.9			
3	62	07.3	197 40.6	26.4	211 36.9	17.1	136	57.3	02.5	254 14.8	04.8			
4	77	09.8	212 40.0	27.4	226 37.7	17.7	151	59.5	02.5	269 17.0	04.7			
5	92	12.3	227 39.5	-17 28.4	241 38.6	-12 18.3	167	01.8	-23 02.5	284 19.2	+7 04.6			
6	107	14.7	242 38.9	-17 29.4	256 39.4	-12 18.9	182	04.0	-23 02.4	299 21.4	+7 04.5			
7	122	17.2	257 38.4	30.4	271 40.3	19.5	197	06.2	02.4	314 23.6	04.4			
8	137	19.7	272 37.8	31.4	286 41.1	20.1	212	08.4	02.4	329 25.8	04.3			
9	152	22.1	287 37.3	32.3	301 41.9	20.7	227	10.6	02.4	344 28.0	04.2			
10	167	24.6	302 36.7	33.3	316 42.8	21.3	242	12.8	02.4	359 30.2	04.1			
11	182	27.1	317 36.1	-17 34.3	331 43.6	-12 21.9	257	15.1	-23 02.3	14 32.4	+7 04.0			
12	197	29.5	332 35.6	-17 35.3	346 44.5	-12 22.5	272	17.3	-23 02.3	29 34.6	+7 03.8			
13	212	32.0	347 35.0	36.3	1 45.3	23.1	287	19.5	02.3	44 36.8	03.7			
14	227	34.4	2 34.5	37.2	16 46.1	23.8	302	21.7	02.3	59 38.9	03.6			
15	242	36.9	17 33.9	38.2	31 47.0	24.4	317	23.9	02.2	74 41.1	03.5			
16	257	39.4	32 33.3	39.2	46 47.8	25.0	332	26.1	02.2	89 43.3	03.4			
17	272	41.8	47 32.8	-17 40.2	61 48.7	-12 25.6	347	28.3	-23 02.2	104 45.5	+7 03.3			
18	287	44.3	62 32.2	-17 41.1	76 49.5	-12 26.2	2	30.6	-23 02.2	119 47.7	+7 03.2			
19	302	46.8	77 31.6	42.1	91 50.3	26.8	17	32.8	02.2	134 49.9	03.1			
20	317	49.2	92 31.1	43.1	106 51.2	27.4	32	35.0	02.1	149 52.1	03.0			
21	332	51.7	107 30.5	44.1	121 52.0	28.0	47	37.2	02.1	164 54.3	02.9			
22	347	54.2	122 30.0	45.0	136 52.8	28.6	62	39.4	02.1	179 56.5	02.8			
23	2	56.6	137 29.4	46.0	151 53.7	29.2	77	41.6	02.1	194 58.7	02.7			
24	17	59.1	152 28.8	-17 47.0	166 54.5	-12 29.8	92	43.8	-23 02.0	210 00.9	+7 02.6			
Dif	—		-6 -10	+8 -6			+22		0	+22	-1			

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16'0 PMG: 11 ^h 47 ^m 2			Edad: 9 ^d 7 PHE { SD: 15'0 PMG: 19 ^h 52 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº		
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m
0	183	10.7	-6	19.4	71	20.0	-20	20.3	60 N	4 55	5 44	6 25	15 58	3	***	***	***
1	198	10.9		20.3	85	51.5 ¹²⁵		10.4	99	58	43	22	47	7	***	***	***
2	213	11.1		21.3	100	23.0 ¹²⁵	-20	00.4	100	56	4 59	42	20	37	10	***	***
3	228	11.2		22.2	114	54.5 ¹²⁵	-19	50.3	101	54	5 01	42	17	28	13	***	***
4	243	11.4		23.2	129	26.0 ¹²⁵		40.1	102	52	02	41	15	20	16	***	***
5	258	11.6	-6	24.1	143	57.6 ¹²⁶	-19	29.8	103	50	5 03	5 40	6 13	15 13	18	***	***
6	273	11.7	-6	25.0	158	29.2 ¹²⁶	-19	19.4	104	45	5 05	5 39	6 08	14 58	23	***	***
7	288	11.9		26.0	173	00.9 ¹²⁷	-19	08.9	105	40	06	37	04	45	27	0 02	65
8	303	12.1		26.9	187	32.6 ¹²⁷	-18	58.3	106	35	06	36	6 01	35	30	15	61
9	318	12.2		27.9	202	04.3 ¹²⁷		47.6	107	30	06	34	5 58	25	33	26	59
10	333	12.4		28.8	216	36.1 ¹²⁸		36.8	108	20	05	31	53	14 09	37	0 45	54
11	348	12.6	-6	29.8	231	07.9 ¹²⁸	-18	25.9	109	10 N	5 03	5 27	5 48	13 54	42	1 01	50
12	3	12.7	-6	30.7	245	39.7 ¹²⁸	-18	14.9	110	0	4 59	5 23	5 44	13 41	46	1 17	46
13	18	12.9		31.7	260	11.5 ¹²⁸	-18	03.9	110	10 S	54	18	39	27	50	32	43
14	33	13.1		32.6	274	43.4 ¹²⁹	-17	52.7	112	20	46	12	34	13 13	54	1 48	39
15	48	13.3		33.6	289	15.3 ¹²⁹		41.5	112	30	36	5 04	28	12 56	59	2 07	34
16	63	13.4		34.5	303	47.3 ¹³⁰		30.1	114	35	29	4 59	25	46	62	17	32
17	78	13.6	-6	35.5	318	19.3 ¹³⁰	-17	18.7	114	40	4 21	4 54	5 21	12 35	66	2 30	28
18	93	13.8	-6	36.4	332	51.3 ¹³⁰	-17	07.2	115	45	4 11	4 47	5 17	12 22	70	2 44	24
19	108	13.9		37.4	347	23.3 ¹³⁰	-16	55.6	116	50	3 58	38	11	12 06	75	3 01	20
20	123	14.1		38.3	1	55.4 ¹³¹		43.9	117	52	52	34	09	11 58	77	10	17
21	138	14.3		39.3	16	27.5 ¹³¹		32.1	118	54	45	29	06	50	80	19	14
22	153	14.4		40.2	30	59.6 ¹³¹		20.2	119	56	37	24	5 03	40	83	29	12
23	168	14.6		41.2	45	31.8 ¹³²	-16	08.3	119	58	27	18	4 59	29	87	41	8
24	183	14.8	-6	42.1	60	03.9 ¹³¹	-15	56.2	121	60 S	3 16	4 12	4 56	11 17	91	3 54	4

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 22 ^h 44 ^m 3		Mag: -3.9 PMG: 13 ^h 51 ^m		Mag: +1.6 PMG: 12 ^h 52 ^m		Mag: -2.3 PMG: 17 ^h 46 ^m		Mag: +1.0 PMG: 9 ^h 58 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	17	59.1	152	28.8	-17	47.0	166	54.5	-12	29.8	92	43.8	-23	02.0	210	00.9	+7	02.6
1	33	01.6	167	28.3		47.9	181	55.4		30.4	107	46.0		02.0	225	03.1		02.5
2	48	04.0	182	27.7		48.9	196	56.2		31.0	122	48.2		02.0	240	05.3		02.4
3	63	06.5	197	27.1		49.9	211	57.0		31.6	137	50.5		02.0	255	07.5		02.2
4	78	08.9	212	26.6		50.8	226	57.9		32.2	152	52.7		02.0	270	09.7		02.1
5	93	11.4	227	26.0	-17	51.8	241	58.7	-12	32.8	167	54.9	-23	01.9	285	11.9	+7	02.0
6	108	13.9	242	25.4	-17	52.8	256	59.5	-12	33.4	182	57.1	-23	01.9	300	14.1	+7	01.9
7	123	16.3	257	24.8		53.7	272	00.4		34.0	197	59.3		01.9	315	16.3		01.8
8	138	18.8	272	24.3		54.7	287	01.2		34.6	213	01.5		01.9	330	18.5		01.7
9	153	21.3	287	23.7		55.7	302	02.0		35.2	228	03.7		01.8	345	20.7		01.6
10	168	23.7	302	23.1		56.6	317	02.9		35.8	243	05.9		01.8	0	22.9		01.5
11	183	26.2	317	22.6	-17	57.6	332	03.7	-12	36.4	258	08.1	-23	01.8	15	25.0	+7	01.4
12	198	28.7	332	22.0	-17	58.6	347	04.5	-12	37.0	273	10.3	-23	01.8	30	27.2	+7	01.3
13	213	31.1	347	21.4	-17	59.5	2	05.4		37.6	288	12.5		01.8	45	29.4		01.2
14	228	33.6	2	20.9	-18	00.5	17	06.2		38.2	303	14.7		01.7	60	31.6		01.1
15	243	36.1	17	20.3		01.4	32	07.0		38.8	318	17.0		01.7	75	33.8		01.0
16	258	38.5	32	19.7		02.4	47	07.9		39.4	333	19.2		01.7	90	36.0		00.9
17	273	41.0	47	19.1	-18	03.3	62	08.7	-12	40.0	348	21.4	-23	01.7	105	38.2	+7	00.8
18	288	43.4	62	18.6	-18	04.3	77	09.5	-12	40.6	3	23.6	-23	01.6	120	40.4	+7	00.7
19	303	45.9	77	18.0		05.3	92	10.4		41.2	18	25.8		01.6	135	42.6		00.5
20	318	48.4	92	17.4		06.2	107	11.2		41.8	33	28.0		01.6	150	44.8		00.4
21	333	50.8	107	16.8		07.2	122	12.0		42.4	48	30.2		01.6	165	47.0		00.3
22	348	53.3	122	16.3		08.1	137	12.9		43.0	63	32.4		01.5	180	49.2		00.2
23	3	55.8	137	15.7		09.1	152	13.7		43.6	78	34.6		01.5	195	51.4	+7	00.1
24	18	58.2	152	15.1	-18	10.0	167	14.5	-12	44.2	93	36.8	-23	01.5	210	53.6	+7	00.0
Dif	—		-6		-10		+8		-6		+22		0		+22		-	

UT	SOL		LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16:0		Edad: 10 ^d 7	PHE {	4 ^h : 56:0 12 ^h : 56:3 20 ^h : 56:6	Civil			Náutico	Hora	R°	Hora	R°		
	PMG: 11 ^h 46 ^m 9	PMG: 20 ^h 38 ^m				R°: 45 ^m									
	hG ☉	Dec	hG ☾	Dif	Dec	Dif		h m	h m	h m	h m m	h m m	h m m		
0	183	14.8	-6	42.1	60	03.9	-15	56.2	60 N	17 05	17 46	18 34	16 01	2 00	92
1	198	14.9		43.0	74	36.1 ¹³²		44.1 ¹²¹	58	08	47	33	15 54	5	11 87
2	213	15.1		44.0	89	08.4 ¹³³		31.9 ¹²²	56	11	48	31	47	8	20 83
3	228	15.3		44.9	103	40.6 ¹³²		19.6 ¹²³	54	14	49	30	41	11	28 80
4	243	15.4		45.9	118	12.9 ¹³³		-15 07.2 ¹²⁴	52	16	50	29	36	13	35 78
5	258	15.6	-6	46.8	132	45.2 ¹³³		-14 54.8 ¹²⁴	50	17 19	17 51	18 28	15 31	16	0 41 76
6	273	15.8	-6	47.8	147	17.5 ¹³³		-14 42.3 ¹²⁵	45	17 23	17 53	18 27	15 21	20	0 55 70
7	288	15.9		48.7	161	49.9 ¹³⁴		29.6 ¹²⁷	40	28	55	26	12	25	1 07 65
8	303	16.1		49.7	176	22.2 ¹³³		17.0 ¹²⁶	35	31	57	26	15 05	28	16 63
9	318	16.2		50.6	190	54.6 ¹³⁴		-14 04.2 ¹²⁸	30	35	17 58	26	14 58	31	25 59
10	333	16.4		51.5	205	27.0 ¹³⁴		-13 51.3 ¹²⁹	20	40	18 02	28	46	37	39 54
11	348	16.6	-6	52.5	219	59.5 ¹³⁵		-13 38.4 ¹²⁹	10 N	17 45	18 06	18 31	14 36	41	1 51 50
12	3	16.7	-6	53.4	234	31.9 ¹³⁴		-13 25.4 ¹³⁰	0	17 50	18 11	18 35	14 27	45	2 03 45
13	18	16.9		54.4	249	04.4 ¹³⁵		-13 12.3 ¹³¹	10 S	17 55	16	41	17	50	15 41
14	33	17.1		55.3	263	36.8 ¹³⁴		-12 59.2 ¹³¹	20	18 01	23	18 49	14 07	54	27 37
15	48	17.2		56.3	278	09.3 ¹³⁵		46.0 ¹³²	30	07	31	19 00	13 55	60	41 31
16	63	17.4		57.2	292	41.8 ¹³⁵		32.7 ¹³³	35	11	36	07	48	63	49 29
17	78	17.6	-6	58.2	307	14.4 ¹³⁶		-12 19.3 ¹³⁴	40	18 15	18 42	19 15	13 41	66	2 58 25
18	93	17.7	-6	59.1	321	46.9 ¹³⁵		-12 05.9 ¹³⁴	45	18 20	18 50	19 26	13 32	70	3 08 22
19	108	17.9	-7	00.0	336	19.5 ¹³⁶		-11 52.4 ¹³⁵	50	26	18 59	40	21	75	21 17
20	123	18.0	-7	01.0	350	52.0 ¹³⁵		38.8 ¹³⁶	52	28	19 03	46	15	79	27 14
21	138	18.2		01.9	5	24.6 ¹³⁶		25.2 ¹³⁶	54	32	08	19 54	10	81	33 12
22	153	18.4		02.9	19	57.2 ¹³⁶		-11 11.5 ¹³⁷	56	35	14	20 02	13 03	84	41 8
23	168	18.5		03.8	34	29.8 ¹³⁶		-10 57.7 ¹³⁸	58	39	20	12	12 56	88	49 5
24	183	18.7	-7	04.8	49	02.4 ¹³⁶		-10 43.8 ¹³⁹	60 S	18 43	19 27	20 24	12 48	92	3 58 2

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 22 ^h 40 ^m 4		Mag: -3.9 PMG: 13 ^h 52 ^m		Mag: +1.6 PMG: 12 ^h 50 ^m		Mag: -2.3 PMG: 17 ^h 43 ^m		Mag: +1.0 PMG: 9 ^h 55 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	18	58.2	152	15.1	-18	10.0	167	14.5	-12	44.2
1	34	00.7	167	14.5		11.0	182	15.4		44.8
2	49	03.2	182	13.9		11.9	197	16.2		45.4
3	64	05.6	197	13.4		12.9	212	17.0		46.0
4	79	08.1	212	12.8		13.8	227	17.8		46.6
5	94	10.5	227	12.2	-18	14.8	242	18.7	-12	47.2
6	109	13.0	242	11.6	-18	15.7	257	19.5	-12	47.8
7	124	15.5	257	11.0		16.7	272	20.3		48.4
8	139	17.9	272	10.5		17.6	287	21.2		49.0
9	154	20.4	287	09.9		18.6	302	22.0		49.6
10	169	22.9	302	09.3		19.5	317	22.8		50.2
11	184	25.3	317	08.7	-18	20.4	332	23.7	-12	50.8
12	199	27.8	332	08.1	-18	21.4	347	24.5	-12	51.4
13	214	30.3	347	07.5		22.3	2	25.3		52.0
14	229	32.7	2	07.0		23.3	17	26.1		52.6
15	244	35.2	17	06.4		24.2	32	27.0		53.2
16	259	37.7	32	05.8		25.1	47	27.8		53.8
17	274	40.1	47	05.2	-18	26.1	62	28.6	-12	54.4
18	289	42.6	62	04.6	-18	27.0	77	29.4	-12	55.0
19	304	45.0	77	04.0		28.0	92	30.3		55.6
20	319	47.5	92	03.4		28.9	107	31.1		56.2
21	334	50.0	107	02.9		29.8	122	31.9		56.8
22	349	52.4	122	02.3		30.8	137	32.8		57.4
23	4	54.9	137	01.7		31.7	152	33.6		58.0
24	19	57.4	152	01.1	-18	32.6	167	34.4	-12	58.6
Dif	—		-6	-9		+8	-6	+22		0
									+22	-1

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16:0			Edad: 11 ^d 7 PHE { 4 ^h : 56'8 12 ^h : 57'1 20 ^h : 57'4 Rº: 46 ^m												
	PMG: 11 ^h 46 ^m 6			SD: 15:4 PMG: 21 ^h 23 ^m												
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Náutico	Civil		Hora	Rº	Hora	Rº
h	°	'	°	°	'	°	°	'	°	h	m	h	m	h	m	m
0	183	18.7	-7 04.8	49	02.4	-10 43.8	60 N	5 00	5 48	6 30	16 03	1	1 32	91		
1	198	18.9	05.7	63	35.0 ¹³⁶	29.9 ¹³⁹	58	02	47	27	15 59	4	38	88		
2	213	19.0	06.6	78	07.6 ¹³⁶	16.0 ¹³⁹	56	03	46	24	55	8	43	85		
3	228	19.2	07.6	92	40.2 ¹³⁶	-10 01.9 ¹⁴¹	54	04	45	21	52	10	48	8		
4	243	19.3	08.5	107	12.8 ¹³⁶	-9 47.8 ¹⁴¹	52	05	44	18	49	13	53	79		
5	258	19.5	-7 09.5	121	45.5 ¹³⁷	-9 33.7 ¹⁴¹	50	5 06	5 43	6 16	15 47	15	1 57	76		
6	273	19.7	-7 10.4	136	18.1 ¹³⁶	-9 19.5 ¹⁴²	45	5 07	5 41	6 11	15 41	20	2 05	72		
7	288	19.8	11.3	150	50.8 ¹³⁷	-9 05.2 ¹⁴³	40	08	39	07	37	24	12	67		
8	303	20.0	12.3	165	23.4 ¹³⁶	-8 50.8 ¹⁴⁴	35	08	37	6 03	33	27	19	63		
9	318	20.1	13.2	179	56.0 ¹³⁶	36.5 ¹⁴³	30	08	35	5 59	29	31	24	60		
10	333	20.3	14.2	194	28.7 ¹³⁷	22.0 ¹⁴⁵	20	06	31	54	23	36	33	55		
11	348	20.5	-7 15.1	209	01.3 ¹³⁶	-8 07.5 ¹⁴⁵	10 N	5 03	5 27	5 48	15 17	41	2 41	50		
12	3	20.6	-7 16.0	223	33.9 ¹³⁶	-7 52.9 ¹⁴⁶	0	4 58	5 23	5 43	15 12	46	2 48	46		
13	18	20.8	17.0	238	06.6 ¹³⁷	38.3 ¹⁴⁶	10 S	52	17	38	07	50	2 56	41		
14	33	20.9	17.9	252	39.2 ¹³⁶	23.7 ¹⁴⁶	20	44	10	33	15	01	55	3	04	36
15	48	21.1	18.9	267	11.8 ¹³⁶	-7 08.9 ¹⁴⁸	30	33	5 02	26	14	55	61	12	31	
16	63	21.2	19.8	281	44.4 ¹³⁶	-6 54.2 ¹⁴⁷	35	26	4 57	22	51	64	18	27		
17	78	21.4	-7 20.7	296	17.0 ¹³⁶	-6 39.4 ¹⁴⁸	40	4 18	4 50	5 18	14	47	68	3	23	24
18	93	21.6	-7 21.7	310	49.6 ¹³⁶	-6 24.5 ¹⁴⁹	45	4 07	4 43	5 13	14	42	73	3	30	20
19	108	21.7	22.6	325	22.2 ¹³⁶	-6 09.6 ¹⁴⁹	50	3 53	34	07	36	78	38	15		
20	123	21.9	23.6	339	54.8 ¹³⁶	-5 54.6 ¹⁵⁰	52	47	29	04	34	80	41	13		
21	138	22.0	24.5	354	27.3 ¹³⁵	39.6 ¹⁵⁰	54	39	24	5 01	31	82	45	11		
22	153	22.2	25.4	8	59.9 ¹³⁶	24.5 ¹⁵¹	56	30	19	4 58	27	86	49	8		
23	168	22.4	26.4	23	32.4 ¹³⁵	-5 09.5 ¹⁵⁰	58	20	13	54	24	89	3	54	5	
24	183	22.5	-7 27.3	38	04.9 ¹³⁵	-4 54.3 ¹⁵²	60 S	3 09	4 05	4 50	14	20	92	4	00	1

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 22 ^h 36 ^m 5		Mag: -3.9 PMG: 13 ^h 52 ^m		Mag: +1.6 PMG: 12 ^h 49 ^m		Mag: -2.3 PMG: 17 ^h 39 ^m		Mag: +1.0 PMG: 9 ^h 51 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	19	57.4	152	01.1	-18	32.6	167	34.4	-12	58.6
1	34	59.8	167	00.5		33.6	182	35.2		59.2
2	50	02.3	181	59.9		34.5	197	36.1	-12	59.8
3	65	04.8	196	59.3		35.4	212	36.9	-13	00.4
4	80	07.2	211	58.7		36.3	227	37.7		00.9
5	95	09.7	226	58.1	-18	37.3	242	38.5	-13	01.5
6	110	12.1	241	57.5	-18	38.2	257	39.4	-13	02.1
7	125	14.6	256	56.9		39.1	272	40.2		02.7
8	140	17.1	271	56.4		40.1	287	41.0		03.3
9	155	19.5	286	55.8		41.0	302	41.8		03.9
10	170	22.0	301	55.2		41.9	317	42.7		04.5
11	185	24.5	316	54.6	-18	42.8	332	43.5	-13	05.1
12	200	26.9	331	54.0	-18	43.7	347	44.3	-13	05.7
13	215	29.4	346	53.4		44.7	2	45.1		06.3
14	230	31.9	1	52.8		45.6	17	45.9		06.9
15	245	34.3	16	52.2		46.5	32	46.8		07.5
16	260	36.8	31	51.6		47.4	47	47.6		08.1
17	275	39.3	46	51.0	-18	48.3	62	48.4	-13	08.7
18	290	41.7	61	50.4	-18	49.3	77	49.2	-13	09.3
19	305	44.2	76	49.8		50.2	92	50.1		09.9
20	320	46.6	91	49.2		51.1	107	50.9		10.5
21	335	49.1	106	48.6		52.0	122	51.7		11.1
22	350	51.6	121	48.0		52.9	137	52.5		11.6
23	5	54.0	136	47.4		53.8	152	53.3		12.2
24	20	56.5	151	46.8	-18	54.8	167	54.2	-13	12.8
Dif	—		-6		-9		+8		-6	

Náutico		Civil		Salida de Sol		Salida de Luna		Puesta de Luna	
h	m	h	m	h	m	h	m	h	m
5	00	5	48	6	30	16	03	1	32
02	47	27	15	59	4	38	88		
03	46	24	55	8	43	85			
04	45	21	52	10	48	82			
05	44	18	49	13	53	79			
5	06	5	43	6	16	15	47	15	1
5	07	5	41	6	11	15	41	20	2
08	39	07	37	24	12	67			
08	37	6	03	33	27	19	63		
08	35	5	59	29	31	24	60		
06	31	54	23	36	33	55			
5	03	5	27	5	48	15	17	41	2
4	58	5	23	5	43	15	12	46	2
52	17	38	07	50	2	56	41		
44	10	33	15	01	55	3	04	36	
33	5	02	26	14	55	61	12	31	
26	4	57	22	51	64	18	27		
4	18	4	50	5	18	14	47	68	3
4	07	4	43	5	13	14	42	73	3
3	53	34	07	36	78	3	30	20	
47	29	04	34	80	41	13			
39	24	5	01	31	82	45	11		
30	19	4	58	27	86	49	8		
20	13	54	24	89	3	54	5		
3	09	4	05	4	50	14	20	92	4

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:0			Edad: 12 ^d 7 PHE { 4 ^h : 57:7 12 ^h : 57:9 20 ^h : 58:2 R°: 47 ^m										
	PMG: 11 ^h 46 ^m 4			SD: 15:7 PMG: 22 ^h 09 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	m	h m	m
0	183	22.5	-7 27.3	38	04.9	-4 54.3		60 N	16 59	17 41	18 29	16 04 1	3 03 94	
1	198	22.7	28.2	52	37.5 ¹³⁶	39.1 ¹⁵²		58	17 03	42	27	03 5	06 90	
2	213	22.8	29.2	67	09.9 ¹³⁴	23.9 ¹⁵²		56	06	43	26	03 8	08 87	
3	228	23.0	30.1	81	42.4 ¹³⁵	-4 08.7 ¹⁵²		54	09	45	25	02 11	10 84	
4	243	23.1	31.1	96	14.9 ¹³⁵	-3 53.4 ¹⁵³		52	12	46	25	02 13	12 81	
5	258	23.3	-7 32.0	110	47.3 ¹³⁴	-3 38.0 ¹⁵⁴		50	17 14	17 47	18 24	16 02 15	3 13 79	
6	273	23.4	-7 32.9	125	19.7 ¹³⁴	-3 22.6 ¹⁵⁴		45	17 20	17 49	18 23	16 01 20	3 17 73	
7	288	23.6	33.9	139	52.1 ¹³⁴	-3 07.2 ¹⁵⁴		40	25	52	23	01 24	19 69	
8	303	23.8	34.8	154	24.5 ¹³⁴	-2 51.8 ¹⁵⁴		35	29	54	23	00 28	22 65	
9	318	23.9	35.7	168	56.8 ¹³³	36.3 ¹⁵⁵		30	32	17 56	24	16 00 31	24 62	
10	333	24.1	36.7	183	29.1 ¹³³	20.8 ¹⁵⁵		20	39	18 01	26	15 59 37	28 55	
11	348	24.2	-7 37.6	198	01.4 ¹³³	-2 05.3 ¹⁵⁵		10 N	17 44	18 05	18 30	15 58 42	3 31 51	
12	3	24.4	-7 38.5	212	33.6 ¹³²	-1 49.7 ¹⁵⁶		0	17 50	18 11	18 35	15 58 47	3 34 46	
13	18	24.5	39.5	227	05.9 ¹³³	34.1 ¹⁵⁶		10 S	17 55	16	41	57 52	37 41	
14	33	24.7	40.4	241	38.1 ¹³²	18.5 ¹⁵⁶		20	18 01	24	18 50	56 57	40 36	
15	48	24.8	41.4	256	10.2 ¹³¹	-1 02.9 ¹⁵⁶		30	08	33	19 01	56 63	43 31	
16	63	25.0	42.3	270	42.4 ¹³²	-0 47.2 ¹⁵⁷		35	12	38	09	55 67	45 28	
17	78	25.1	-7 43.2	285	14.5 ¹³¹	-0 31.5 ¹⁵⁷		40	18 17	18 45	19 18	15 55 70	3 47 24	
18	93	25.3	-7 44.2	299	46.5 ¹³⁰	-0 15.8 ¹⁵⁷		45	18 22	18 53	19 29	15 55 74	3 50 20	
19	108	25.4	45.1	314	18.6 ¹³¹	-0 00.1 ¹⁵⁷		50	29	19 02	43	54 80	53 15	
20	123	25.6	46.0	328	50.5 ¹²⁹	+0 15.7 ¹⁵⁸		52	32	07	50	54 82	54 13	
21	138	25.7	47.0	343	22.5 ¹³⁰	31.4 ¹⁵⁷		54	35	12	19 58	53 86	56 10	
22	153	25.9	47.9	357	54.4 ¹²⁹	+0 47.2 ¹⁵⁸		56	39	18	20 07	53 89	57 8	
23	168	26.0	48.8	12	26.3 ¹²⁹	+1 03.0 ¹⁵⁸		58	43	25	18	53 92	3 59 4	
24	183	26.2	-7 49.8	26	58.1 ¹²⁸	+1 18.8 ¹⁵⁸		60 S	18 48	19 33	20 30	15 52 96	4 01 1	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 22 ^h 32 ^m 5		Mag: -3.9 PMG: 13 ^h 53 ^m		Mag: +1.6 PMG: 12 ^h 48 ^m		Mag: -2.3 PMG: 17 ^h 36 ^m		Mag: +1.0 PMG: 9 ^h 48 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	20	56.5	151	46.8	-18	54.8	167	54.2	-13	12.8				
1	35	59.0	166	46.2	55.7	182	55.0	13.4	110	24.4				
2	51	01.4	181	45.6	56.6	197	55.8	14.0	125	26.6				
3	66	03.9	196	45.0	57.5	212	56.6	14.6	140	28.8				
4	81	06.4	211	44.4	58.4	227	57.4	15.2	155	31.0				
5	96	08.8	226	43.8	-18	59.3	242	58.3	-13	15.8				
6	111	11.3	241	43.2	-19	00.2	257	59.1	-13	16.4				
7	126	13.8	256	42.6	01.1	272	59.9	17.0	200	37.5				
8	141	16.2	271	42.0	02.0	288	00.7	17.6	215	39.7				
9	156	18.7	286	41.4	02.9	303	01.5	18.2	230	41.9				
10	171	21.1	301	40.7	03.8	318	02.4	18.8	245	44.1				
11	186	23.6	316	40.1	-19	04.7	333	03.2	-13	19.3				
12	201	26.1	331	39.5	-19	05.6	348	04.0	-13	19.9				
13	216	28.5	346	38.9	06.5	3	04.8	20.5	290	50.6				
14	231	31.0	1	38.3	07.4	18	05.6	21.1	305	52.8				
15	246	33.5	16	37.7	08.3	33	06.4	21.7	320	55.0				
16	261	35.9	31	37.1	09.2	48	07.3	22.3	335	57.2				
17	276	38.4	46	36.5	-19	10.1	63	08.1	-13	22.9				
18	291	40.9	61	35.9	-19	11.0	78	08.9	-13	23.5				
19	306	43.3	76	35.3	11.9	93	09.7	24.1	21	03.7				
20	321	45.8	91	34.7	12.8	108	10.5	24.7	36	05.9				
21	336	48.2	106	34.0	13.7	123	11.3	25.2	51	08.1				
22	351	50.7	121	33.4	14.6	138	12.2	25.8	66	10.3				
23	6	53.2	136	32.8	15.5	153	13.0	26.4	81	12.5				
24	21	55.6	151	32.2	-19	16.4	168	13.8	-13	27.0				
Dif	—		-6	-9	+8	-6	+22	0	+22	-1				

UT	SOL			LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16:0			Edad: 13 ^d 7 PHE { 4 ^h : 58:5 12 ^h : 58:7 20 ^h : 59:0														
	PMG: 11 ^h 46 ^m 1			PMG: 22 ^h 56 ^m Rº: 51 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	Rº	Hora	Rº			
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m		
0	183	26.2	-7	26	58.1	+1	18.8	60 N	5 05	5 53	6 35	16 05	2	4	37	98		
1	198	26.4		41	29.9 ¹²⁸		34.6 ¹⁵⁸	58	06	52	31	08	6		36	94		
2	213	26.5		56	01.6 ¹²⁷	+1	50.5 ¹⁵⁹	56	07	50	28	11	9		35	90		
3	228	26.7		70	33.3 ¹²⁷	+2	06.3 ¹⁵⁸	54	08	49	25	13	12		34	87		
4	243	26.8		85	05.0 ¹²⁷		22.2 ¹⁵⁹	52	09	48	22	15	15		33	84		
5	258	27.0	-7	99	36.6 ¹²⁶	+2	38.0 ¹⁵⁸	50	5 09	5 47	6 19	16 17	17	4	32	81		
6	273	27.1	-7	114	08.1 ¹²⁵	+2	53.9 ¹⁵⁹	45	5 10	5 44	6 13	16 21	23	4	30	76		
7	288	27.3		128	39.6 ¹²⁵	+3	09.8 ¹⁵⁹	40	10	41	09	25	27		28	72		
8	303	27.4		143	11.1 ¹²⁵		25.6 ¹⁵⁸	35	10	39	04	28	31		27	67		
9	318	27.6		157	42.5 ¹²⁴		41.5 ¹⁵⁹	30	09	37	6 01	31	34		26	64		
10	333	27.7	-7	172	13.8 ¹²³	+3	57.4 ¹⁵⁹	20	06	32	5 54	36	40		23	59		
11	348	27.8	-8	186	45.1 ¹²³	+4	13.2 ¹⁵⁸	10 N	5 03	5 27	5 48	16 40	45	4	22	52		
12	3	28.0	-8	201	16.3 ¹²²	+4	29.1 ¹⁵⁹	0	4 58	5 22	5 43	16 45	49	4	20	48		
13	18	28.1		215	47.5 ¹²²	+4	45.0 ¹⁵⁹	10 S	51	16	37	49	54		18	43		
14	33	28.3		230	18.6 ¹²¹	+5	00.8 ¹⁵⁸	20	43	09	31	53	60		16	38		
15	48	28.4		244	49.7 ¹²¹		16.7 ¹⁵⁹	30	31	5 00	24	16 59	65		14	32		
16	63	28.6		259	20.7 ¹²⁰		32.5 ¹⁵⁸	35	23	4 54	20	17 02	69		13	29		
17	78	28.7	-8	273	51.6 ¹¹⁹	+5	48.3 ¹⁵⁸	40	4 14	4 47	5 15	17 05	73	4	11	26		
18	93	28.9	-8	288	22.5 ¹¹⁹	+6	04.1 ¹⁵⁸	45	4 03	4 39	5 09	17 09	78	4	10	21		
19	108	29.0		302	53.3 ¹¹⁸		19.9 ¹⁵⁸	50	3 48	29	03	14	84		08	16		
20	123	29.2		317	24.0 ¹¹⁷		35.7 ¹⁵⁸	52	41	25	5 00	16	87		07	13		
21	138	29.3		331	54.7 ¹¹⁷	+6	51.5 ¹⁵⁸	54	33	19	4 56	19	89		06	11		
22	153	29.5		346	25.3 ¹¹⁶	+7	07.2 ¹⁵⁷	56	24	13	53	22	92		05	8		
23	168	29.6		0	55.8 ¹¹⁵		23.0 ¹⁵⁸	58	14	4 07	48	25	96		03	5		
24	183	29.8	-8	15	26.3 ¹¹⁵	+7	38.7 ¹⁵⁷	60 S	3 01	3 59	4 44	17 28	101	4	02	2		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 22 ^h 28 ^m 6		Mag: -3.9 PMG: 13 ^h 54 ^m			Mag: +1.6 PMG: 12 ^h 46 ^m			Mag: -2.3 PMG: 17 ^h 32 ^m			Mag: +1.0 PMG: 9 ^h 44 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°		
0	21	55.6	151	32.2	-19	16.4	168	13.8	-13	27.0	96	14.7	-22	59.7	213	31.9	+6	52.5
1	36	58.1	166	31.6		17.3	183	14.6		27.6	111	16.8		59.7	228	34.1		52.4
2	52	00.6	181	31.0		18.2	198	15.4		28.2	126	19.0		59.7	243	36.3		52.3
3	67	03.0	196	30.4		19.1	213	16.2		28.8	141	21.2		59.6	258	38.5		52.2
4	82	05.5	211	29.7		20.0	228	17.1		29.4	156	23.4		59.6	273	40.7		52.1
5	97	08.0	226	29.1	-19	20.9	243	17.9	-13	30.0	171	25.6	-22	59.6	288	42.9	+6	52.0
6	112	10.4	241	28.5	-19	21.7	258	18.7	-13	30.5	186	27.7	-22	59.6	303	45.1	+6	51.9
7	127	12.9	256	27.9		22.6	273	19.5		31.1	201	29.9		59.5	318	47.3		51.8
8	142	15.4	271	27.3		23.5	288	20.3		31.7	216	32.1		59.5	333	49.5		51.7
9	157	17.8	286	26.7		24.4	303	21.1		32.3	231	34.3		59.5	348	51.7		51.6
10	172	20.3	301	26.0		25.3	318	21.9		32.9	246	36.5		59.5	3	54.0		51.5
11	187	22.7	316	25.4	-19	26.2	333	22.7	-13	33.5	261	38.6	-22	59.4	18	56.2	+6	51.4
12	202	25.2	331	24.8	-19	27.1	348	23.6	-13	34.1	276	40.8	-22	59.4	33	58.4	+6	51.2
13	217	27.7	346	24.2		27.9	3	24.4		34.7	291	43.0		59.4	49	00.6		51.1
14	232	30.1	1	23.6		28.8	18	25.2		35.2	306	45.2		59.4	64	02.8		51.0
15	247	32.6	16	22.9		29.7	33	26.0		35.8	321	47.4		59.3	79	05.0		50.9
16	262	35.1	31	22.3		30.6	48	26.8		36.4	336	49.5		59.3	94	07.2		50.8
17	277	37.5	46	21.7	-19	31.5	63	27.6	-13	37.0	351	51.7	-22	59.3	109	09.4	+6	50.7
18	292	40.0	61	21.1	-19	32.3	78	28.4	-13	37.6	6	53.9	-22	59.3	124	11.6	+6	50.6
19	307	42.5	76	20.4		33.2	93	29.2		38.2	21	56.1		59.2	139	13.8		50.5
20	322	44.9	91	19.8		34.1	108	30.0		38.8	36	58.2		59.2	154	16.0		50.4
21	337	47.4	106	19.2		35.0	123	30.9		39.4	52	00.4		59.2	169	18.2		50.3
22	352	49.8	121	18.6		35.8	138	31.7		39.9	67	02.6		59.1	184	20.4		50.2
23	7	52.3	136	17.9		36.7	153	32.5		40.5	82	04.8		59.1	199	22.6		50.1
24	22	54.8	151	17.3	-19	37.6	168	33.3	-13	41.1	97	06.9	-22	59.1	214	24.8	+6	50.0
Dif	—		-6		-9		+8		-6		+22		0		+22		-	

UT	SOL			☉ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna				
	SD: 16:0 PMG: 11 ^h 45 ^m 9			Edad: 14: ^d 7 PHE { 4 ^h : 59/2 12 ^h : 59/4 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			
0	183	29.8	-8	12.1	15	26.3	+7	38.7	60 N	16 53	17 35	18 23	16 07	4	6 15 104			
1	198	29.9		13.0	29	56.7 ¹¹⁴	+7	54.3 ¹⁵⁶	58	16 57		37 22	14 8		10 98			
2	213	30.1		14.0	44	27.0 ¹¹³	+8	10.0 ¹⁵⁷	56	17 01		39 21	20 12		05 95			
3	228	30.2		14.9	58	57.3 ¹¹³		25.6 ¹⁵⁶	54	04		40 21	25 16	6 01	91			
4	243	30.3		15.8	73	27.5 ¹¹²		41.2 ¹⁵⁶	52	07		41 20	30 18	5 57	88			
5	258	30.5	-8	16.7	87	57.6 ¹¹¹	+8	56.8 ¹⁵⁶	50	17 10	17 43	18 20	16 34	22	5 53 86			
6	273	30.6	-8	17.7	102	27.6 ¹¹⁰	+9	12.3 ¹⁵⁵	45	17 16	17 46	18 20	16 44	27	5 46 79			
7	288	30.8		18.6	116	57.5 ¹⁰⁹		27.8 ¹⁵⁵	40	22		49 20	52 31		40 74			
8	303	30.9		19.5	131	27.4 ¹⁰⁹		43.3 ¹⁵⁵	35	26		51 21	16 59	35	34 71			
9	318	31.1		20.5	145	57.2 ¹⁰⁸	+9	58.7 ¹⁵⁴	30	30		54 22	17 05	38	30 67			
10	333	31.2		21.4	160	26.9 ¹⁰⁷	+10	14.1 ¹⁵⁴	20	37	17 59		25 16	44	22 61			
11	348	31.4	-8	22.3	174	56.5 ¹⁰⁶	+10	29.4 ¹⁵³	10 N	17 43	18 04	18 29	17 25	49	5 14 57			
12	3	31.5	-8	23.2	189	26.0 ¹⁰⁵	+10	44.7 ¹⁵³	0	17 49	18 10	18 34	17 34	54	5 08 51			
13	18	31.6		24.2	203	55.5 ¹⁰⁵	+11	00.0 ¹⁵³	10 S	17 55		17 41	43 58		5 01 47			
14	33	31.8		25.1	218	24.9 ¹⁰⁴	+11	15.2 ¹⁵²	20	18 02	24	18 50	17 53	63	4 54 42			
15	48	31.9		26.0	232	54.2 ¹⁰³		30.3 ¹⁵¹	30	10	34	19 03	18 04	69	46 36			
16	63	32.1		26.9	247	23.4 ¹⁰²	+11	45.4 ¹⁵¹	35	14	40	11	11 72		42 32			
17	78	32.2	-8	27.9	261	52.5 ¹⁰¹	+12	00.5 ¹⁵¹	40	18 19	18 47	19 20	18 18	77	4 37 28			
18	93	32.3	-8	28.8	276	21.5 ¹⁰⁰	+12	15.5 ¹⁵⁰	45	18 25	18 55	19 32	18 27	81	4 31 24			
19	108	32.5		29.7	290	50.4 ⁹⁹		30.4 ¹⁴⁹	50	32	19 06		47 38	87	24 18			
20	123	32.6		30.6	305	19.3 ⁹⁹	+12	45.3 ¹⁴⁹	52	35	11	19 55	43 90		20 16			
21	138	32.8		31.6	319	48.0 ⁹⁷	+13	00.1 ¹⁴⁸	54	39	17	20 03	48 94		17 13			
22	153	32.9		32.5	334	16.7 ⁹⁷		14.9 ¹⁴⁸	56	43	23	13	18 54	98	13 10			
23	168	33.1		33.4	348	45.2 ⁹⁵		29.6 ¹⁴⁷	58	48	30	24	19 01	102	08 7			
24	183	33.2	-8	34.3	3	13.7 ⁹⁵	+13	44.2 ¹⁴⁶	60 S	18 53	19 38	20 37	19 09	107	4 04 2			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 22 ^h 24 ^m 7		Mag: -3.9 PMG: 13 ^h 55 ^m			Mag: +1.6 PMG: 12 ^h 45 ^m			Mag: -2.3 PMG: 17 ^h 29 ^m			Mag: +1.0 PMG: 9 ^h 41 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	22	54.8	151	17.3	-19	37.6	168	33.3	-13	41.1	97	06.9	-22	59.1	214	24.8	+6	50.0
1	37	57.2	166	16.7		38.4	183	34.1		41.7	112	09.1		59.1	229	27.0		49.9
2	52	59.7	181	16.1		39.3	198	34.9		42.3	127	11.3		59.0	244	29.2		49.8
3	68	02.2	196	15.4		40.2	213	35.7		42.9	142	13.5		59.0	259	31.4		49.7
4	83	04.6	211	14.8		41.1	228	36.5		43.5	157	15.6		59.0	274	33.6		49.6
5	98	07.1	226	14.2	-19	41.9	243	37.3	-13	44.0	172	17.8	-22	59.0	289	35.8	+6	49.5
6	113	09.6	241	13.6	-19	42.8	258	38.1	-13	44.6	187	20.0	-22	58.9	304	38.0	+6	49.4
7	128	12.0	256	12.9		43.7	273	39.0		45.2	202	22.2		58.9	319	40.2		49.3
8	143	14.5	271	12.3		44.5	288	39.8		45.8	217	24.3		58.9	334	42.4		49.2
9	158	17.0	286	11.7		45.4	303	40.6		46.4	232	26.5		58.8	349	44.6		49.1
10	173	19.4	301	11.0		46.2	318	41.4		47.0	247	28.7		58.8	4	46.8		49.0
11	188	21.9	316	10.4	-19	47.1	333	42.2	-13	47.5	262	30.8	-22	58.8	19	49.0	+6	48.9
12	203	24.3	331	09.8	-19	48.0	348	43.0	-13	48.1	277	33.0	-22	58.8	34	51.2	+6	48.8
13	218	26.8	346	09.1		48.8	3	43.8		48.7	292	35.2		58.7	49	53.4		48.7
14	233	29.3	1	08.5		49.7	18	44.6		49.3	307	37.4		58.7	64	55.6		48.6
15	248	31.7	16	07.9		50.6	33	45.4		49.9	322	39.5		58.7	79	57.8		48.5
16	263	34.2	31	07.2		51.4	48	46.2		50.5	337	41.7		58.7	95	00.0		48.4
17	278	36.7	46	06.6	-19	52.3	63	47.0	-13	51.0	352	43.9	-22	58.6	110	02.3	+6	48.3
18	293	39.1	61	06.0	-19	53.1	78	47.8	-13	51.6	7	46.0	-22	58.6	125	04.5	+6	48.2
19	308	41.6	76	05.3		54.0	93	48.6		52.2	22	48.2		58.6	140	06.7		48.1
20	323	44.1	91	04.7		54.8	108	49.4		52.8	37	50.4		58.5	155	08.9		48.0
21	338	46.5	106	04.1		55.7	123	50.2		53.4	52	52.5		58.5	170	11.1		47.9
22	353	49.0	121	03.4		56.5	138	51.0		54.0	67	54.7		58.5	185	13.3		47.8
23	8	51.4	136	02.8		57.4	153	51.9		54.5	82	56.9		58.5	200	15.5		47.7
24	23	53.9	151	02.2	-19	58.2	168	52.7	-13	55.1	97	59.0	-22	58.4	215	17.7	+6	47.6
Dif	—		-6		-9		+8		-6		+22		0		+22		-1	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'0 PMG: 11 ^h 45 ^m 7			Edad: 15 ^d 7 PHE { 4 ^h : 59'8 12 ^h : 59'9 20 ^h : 60'0 R°: ***m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	183	33.2	-8	34.3	3	13.7	+13	44.2	60 N	5	10	5	58	6	40	16	11
1	198	33.3		35.3	17	42.1	+13	58.8	58	10		56		36	22	14	
2	213	33.5		36.2	32	10.3	+14	13.3	56	11		54		32	32	18	
3	228	33.6		37.1	46	38.5		27.7	54	12		53		28	41	21	
4	243	33.7		38.0	61	06.6		42.1	52	12		51		25	48	25	
5	258	33.9	-8	38.9	75	34.6	+14	56.4	50	5	12	5	50	6	22	16	56
6	273	34.0	-8	39.9	90	02.5	+15	10.5	45	5	12	5	46	6	16	17	11
7	288	34.2		40.8	104	30.3		24.7	40	12		43		11	23	38	
8	303	34.3		41.7	118	58.0		38.7	35	11		41		06	34	41	
9	318	34.4		42.6	133	25.6	+15	52.6	30	10		38		6	02	17	43
10	333	34.6		43.6	147	53.1	+16	06.5	20	07		33		5	55	18	00
11	348	34.7	-8	44.5	162	20.4	+16	20.3	10 N	5	03	5	27	5	48	18	14
12	3	34.9	-8	45.4	176	47.7	+16	34.0	0	4	57	5	21	5	42	18	28
13	18	35.0		46.3	191	14.9	+16	47.6	10 S	50		15		36	41	62	
14	33	35.1		47.2	205	42.0	+17	01.1	20	41		5	07	29	18	56	
15	48	35.3		48.2	220	09.0		14.5	30	29		4	57	22	19	13	
16	63	35.4		49.1	234	35.9		27.8	35	21		51		17	23	75	
17	78	35.5	-8	50.0	249	02.6	+17	41.0	40	4	11	4	44	5	12	19	35
18	93	35.7	-8	50.9	263	29.3	+17	54.1	45	3	59	4	36	5	06	19	48
19	108	35.8		51.8	277	55.9	+18	07.1	50	44		25		4	59	20	05
20	123	35.9		52.8	292	22.3		20.0	52	36		20		55	13	92	
21	138	36.1		53.7	306	48.7		32.8	54	28		14		52	22	95	
22	153	36.2		54.6	321	14.9		45.5	56	18		08		47	32	99	
23	168	36.3		55.5	335	41.1	+18	58.1	58	3	07	4	01	43	43	105	
24	183	36.5	-8	56.4	350	07.1	+19	10.5	60 S	2	53	3	52	4	38	20	56

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 22 ^h 20 ^m 7		Mag: -3.9 PMG: 13 ^h 56 ^m		Mag: +1.6 PMG: 12 ^h 44 ^m		Mag: -2.3 PMG: 17 ^h 26 ^m		Mag: +1.0 PMG: 9 ^h 37 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	23	53.9	151	02.2	-19	58.2	168	52.7	-13	55.1
1	38	56.4	166	01.5		59.1	183	53.5		55.7
2	53	58.8	181	00.9	-19	59.9	198	54.3		56.3
3	69	01.3	196	00.2	-20	00.8	213	55.1		56.9
4	84	03.8	210	59.6		01.6	228	55.9		57.4
5	99	06.2	225	59.0	-20	02.5	243	56.7	-13	58.0
6	114	08.7	240	58.3	-20	03.3	258	57.5	-13	58.6
7	129	11.2	255	57.7		04.2	273	58.3		59.2
8	144	13.6	270	57.0		05.0	288	59.1	-13	59.8
9	159	16.1	285	56.4		05.9	303	59.9	-14	00.3
10	174	18.6	300	55.7		06.7	319	00.7		00.9
11	189	21.0	315	55.1	-20	07.5	334	01.5	-14	01.5
12	204	23.5	330	54.5	-20	08.4	349	02.3	-14	02.1
13	219	25.9	345	53.8		09.2	4	03.1		02.7
14	234	28.4	0	53.2		10.1	19	03.9		03.2
15	249	30.9	15	52.5		10.9	34	04.7		03.8
16	264	33.3	30	51.9		11.7	49	05.5		04.4
17	279	35.8	45	51.2	-20	12.6	64	06.3	-14	05.0
18	294	38.3	60	50.6	-20	13.4	79	07.1	-14	05.6
19	309	40.7	75	49.9		14.2	94	07.9		06.1
20	324	43.2	90	49.3		15.1	109	08.7		06.7
21	339	45.7	105	48.6		15.9	124	09.5		07.3
22	354	48.1	120	48.0		16.7	139	10.3		07.9
23	9	50.6	135	47.3		17.6	154	11.1		08.5
24	24	53.1	150	46.7	-20	18.4	169	11.9	-14	09.0
Dif	—		-6		-8		+8		-6	
									+22	
									0	
									+22	
									-1	

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:0 PMG: 11 ^h 45 ^m 5			Edad: 16 ^d 7 PHE { 4 ^h : 60':1 12 ^h : 60':2 20 ^h : 60':2 PMG: 0 ^h 41 ^m R ^o : 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	183	36.5	-8 56.4	350	07.1	+19 10.5	60 N	16 47	17 30	18 18	16 19	16	9 48	111	
1	198	36.6	57.4	4	33.0	22.8 ¹²³	58	52	32	17	36	23	32	103	
2	213	36.7	58.3	18	58.9	35.1 ¹²³	56	16 56	34	17	16 50	29	18	98	
3	228	36.9	-8 59.2	33	24.6	47.2 ¹²¹	54	17 00	36	16	17 02	33	9 06	94	
4	243	37.0	-9 00.1	47	50.2	+19 59.1 ¹¹⁹	52	03	37	16	13 36		8 56	90	
5	258	37.1	-9 01.0	62	15.7	+20 11.0 ¹¹⁹	50	17 06	17 39	18 16	17 23	38	8 47	87	
6	273	37.3	-9 01.9	76	41.1	+20 22.7 ¹¹⁷	45	17 13	17 43	18 17	17 44	43	8 27	82	
7	288	37.4	02.9	91	06.5	34.3 ¹¹⁶	40	19	46	17	18 01	47	8 12	77	
8	303	37.5	03.8	105	31.7	45.8 ¹¹⁵	35	23	49	18	15 50		7 59	74	
9	318	37.7	04.7	119	56.8	+20 57.1 ¹¹³	30	28	52	20	28 52		47	72	
10	333	37.8	05.6	134	21.8	+21 08.3 ¹¹²	20	35	17 58	23	18 49	56	27	68	
11	348	37.9	-9 06.5	148	46.7	+21 19.4 ¹¹¹	10 N	17 42	18 04	18 28	19 08	59	7 10	64	
12	3	38.1	-9 07.4	163	11.5	+21 30.3 ¹⁰⁹	0	17 49	18 10	18 34	19 26	61	6 55	60	
13	18	38.2	08.4	177	36.1	41.1 ¹⁰⁸	10 S	17 55	17	42	19 43	65	39	56	
14	33	38.3	09.3	192	00.7	+21 51.8 ¹⁰⁷	20	18 03	25	18 51	20 02	68	22	53	
15	48	38.5	10.2	206	25.2	+22 02.3 ¹⁰⁵	30	11	35	19 04	25 71		6 03	48	
16	63	38.6	11.1	220	49.6	12.7 ¹⁰⁴	35	16	42	13	38 73		5 52	45	
17	78	38.7	-9 12.0	235	13.9	+22 22.9 ¹⁰²	40	18 21	18 49	19 23	20 53	76	5 39	42	
18	93	38.8	-9 12.9	249	38.1	+22 32.9 ¹⁰⁰	45	18 28	18 58	19 35	21 11	80	5 24	38	
19	108	39.0	13.9	264	02.2	42.9 ¹⁰⁰	50	35	19 09	51	34 84		5 06	32	
20	123	39.1	14.8	278	26.2	+22 52.6 ⁹⁷	52	39	15	19 59	45 87		4 57	30	
21	138	39.2	15.7	292	50.1	+23 02.2 ⁹⁶	54	43	21	20 08	21 57	90	48	26	
22	153	39.4	16.6	307	14.0	11.7 ⁹⁵	56	47	27	18	22 11	94	37	22	
23	168	39.5	17.5	321	37.7	21.0 ⁹³	58	52	35	30	28 99		25	17	
24	183	39.6	-9 18.4	336	01.3	+23 30.1 ⁹¹	60 S	18 58	19 44	20 44	22 48	108	4 11	10	

UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO				
	PMG: 22 ^h 16 ^m 8		Mag: -3.9 PMG: 13 ^h 57 ^m		Mag: +1.6 PMG: 12 ^h 43 ^m		Mag: -2.3 PMG: 17 ^h 22 ^m			Mag: +1.0 PMG: 9 ^h 34 ^m				
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'		
0	24	53.1	150	46.7	-20 18.4	169	11.9	-14 09.0	98	51.0	-22 57.8	216	10.6	+6 45.1
1	39	55.5	165	46.0	19.2	184	12.7	09.6	113	53.2	57.7	231	12.8	45.0
2	54	58.0	180	45.4	20.0	199	13.5	10.2	128	55.3	57.7	246	15.0	44.9
3	70	00.4	195	44.7	20.9	214	14.3	10.8	143	57.5	57.7	261	17.2	44.8
4	85	02.9	210	44.1	21.7	229	15.1	11.3	158	59.6	57.6	276	19.5	44.7
5	100	05.4	225	43.4	-20 22.5	244	15.9	-14 11.9	174	01.8	-22 57.6	291	21.7	+6 44.6
6	115	07.8	240	42.8	-20 23.3	259	16.7	-14 12.5	189	04.0	-22 57.6	306	23.9	+6 44.5
7	130	10.3	255	42.1	24.2	274	17.5	13.1	204	06.1	57.5	321	26.1	44.4
8	145	12.8	270	41.5	25.0	289	18.3	13.7	219	08.3	57.5	336	28.3	44.3
9	160	15.2	285	40.8	25.8	304	19.1	14.2	234	10.4	57.5	351	30.5	44.2
10	175	17.7	300	40.2	26.6	319	19.9	14.8	249	12.6	57.5	6	32.7	44.1
11	190	20.2	315	39.5	-20 27.5	334	20.7	-14 15.4	264	14.7	-22 57.4	21	34.9	+6 44.0
12	205	22.6	330	38.9	-20 28.3	349	21.5	-14 16.0	279	16.9	-22 57.4	36	37.1	+6 43.9
13	220	25.1	345	38.2	29.1	4	22.3	16.5	294	19.1	57.4	51	39.3	43.8
14	235	27.5	0	37.5	29.9	19	23.1	17.1	309	21.2	57.3	66	41.5	43.7
15	250	30.0	15	36.9	30.7	34	23.8	17.7	324	23.4	57.3	81	43.7	43.6
16	265	32.5	30	36.2	31.5	49	24.6	18.3	339	25.5	57.3	96	45.9	43.5
17	280	34.9	45	35.6	-20 32.4	64	25.4	-14 18.8	354	27.7	-22 57.3	111	48.2	+6 43.4
18	295	37.4	60	34.9	-20 33.2	79	26.2	-14 19.4	9	29.8	-22 57.2	126	50.4	+6 43.3
19	310	39.9	75	34.2	34.0	94	27.0	20.0	24	32.0	57.2	141	52.6	43.2
20	325	42.3	90	33.6	34.8	109	27.8	20.6	39	34.2	57.2	156	54.8	43.1
21	340	44.8	105	32.9	35.6	124	28.6	21.1	54	36.3	57.1	171	57.0	43.0
22	355	47.3	120	32.3	36.4	139	29.4	21.7	69	38.5	57.1	186	59.2	42.9
23	10	49.7	135	31.6	37.2	154	30.2	22.3	84	40.6	57.1	202	01.4	42.8
24	25	52.2	150	30.9	-20 38.0	169	31.0	-14 22.9	99	42.8	-22 57.0	217	03.6	+6 42.7
Dif	—		-7	-8		+8	-6		+22	0		+22	-1	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna		
	SD: 16:0			Edad: 17 ^d 7 PHE { 4 ^h : 60:3 12 ^h : 60:3 20 ^h : 60:2														
	PMG: 11 ^h 45 ^m 3			SD: 16:4 PMG: 1 ^h 40 ^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 m	m	h m m	m		
0	183	39.6	-9 18.4	336	01.3	+23 30.1	90		60 N	5 14	6 02	6 45	16 35 36	11 39 96				
1	198	39.7	19.3	350	24.9	39.1	90		58	15	6 00	40	16 59 43	11 15 90				
2	213	39.9	20.3	4	48.3	44	88		56	15	5 58	36	17 19 46	10 56 86				
3	228	40.0	21.2	19	11.7	44	+23 56.6	87	54	15	56	32	35 49	40 83				
4	243	40.1	22.1	33	35.0	43	+24 05.0	84	52	15	54	29	17 49 51	26 81				
5	258	40.3	-9 23.0	47	58.2	42	+24 13.4	84	50	5 15	5 53	6 25	18 01 53	10 14 79				
6	273	40.4	-9 23.9	62	21.3	41	+24 21.5	81	45	5 15	5 49	6 19	18 27 55	9 49 76				
7	288	40.5	24.8	76	44.3	40	29.5	80	40	14	45	13	18 48 57	29 74				
8	303	40.6	25.7	91	07.3	40	37.3	78	35	13	42	08	19 05 58	9 13 72				
9	318	40.8	26.6	105	30.2	39	44.9	76	30	11	39	6 03	20 59	8 59 70				
10	333	40.9	27.5	119	53.0	38	52.4	75	20	08	33	5 56	19 45 61	35 67				
11	348	41.0	-9 28.5	134	15.7	37	+24 59.7	73	10 N	5 03	5 27	5 49	20 07 63	8 14 65				
12	3	41.1	-9 29.4	148	38.3	36	+25 06.8	71	0	4 57	5 21	5 42	20 27 64	7 55 63				
13	18	41.3	30.3	163	00.9	36	13.7	69	10 S	49	14	35	20 48 65	35 61				
14	33	41.4	31.2	177	23.4	35	20.4	67	20	39	5 05	28	21 10 67	7 15 58				
15	48	41.5	32.1	191	45.9	35	27.0	66	30	26	4 55	19	36 68	6 51 56				
16	63	41.6	33.0	206	08.3	34	33.4	64	35	18	49	15	21 51 69	37 54				
17	78	41.8	-9 33.9	220	30.6	33	+25 39.6	62	40	4 08	4 41	5 09	22 09 70	6 21 52				
18	93	41.9	-9 34.8	234	52.9	33	+25 45.6	60	45	3 55	4 32	5 02	22 31 71	6 02 49				
19	108	42.0	35.7	249	15.1	32	51.4	58	50	39	21	4 55	22 58 72	5 38 45				
20	123	42.1	36.6	263	37.2	31	+25 57.0	56	52	31	15	51	23 12 73	27 42				
21	138	42.2	37.6	277	59.3	31	+26 02.5	55	54	22	09	47	27 74	5 14 40				
22	153	42.4	38.5	292	21.3	30	07.8	53	56	12	4 02	42	23 45 76	4 59 36				
23	168	42.5	39.4	306	43.3	30	12.8	50	58	3 00	3 55	37	** ** *	42 31				
24	183	42.6	-9 40.3	321	05.3	30	+26 17.7	49	60 S	2 46	3 46	4 32	** ** *	4 21 22				

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG 22 ^h 12 ^m 9		Mag: -3.9 PMG: 13 ^h 59 ^m		Mag: +1.6 PMG: 12 ^h 41 ^m		Mag: -2.3 PMG: 17 ^h 19 ^m		Mag: +1.0 PMG: 9 ^h 30 ^m		
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄		
h	°	'	°	°	'	°	°	'	°	°	'
0	25	52.2	150 30.9	-20 38.0	169 31.0	-14 22.9	99 42.8	-22 57.0	217 03.6	+6 42.7	
1	40	54.7	165 30.3	38.8	184 31.8	23.4	114 44.9	57.0	232 05.8	42.6	
2	55	57.1	180 29.6	39.6	199 32.6	24.0	129 47.1	57.0	247 08.0	42.5	
3	70	59.6	195 29.0	40.4	214 33.4	24.6	144 49.2	57.0	262 10.2	42.4	
4	86	02.0	210 28.3	41.2	229 34.2	25.2	159 51.4	56.9	277 12.4	42.3	
5	101	04.5	225 27.6	-20 42.0	244 35.0	-14 25.7	174 53.5	-22 56.9	292 14.7	+6 42.2	
6	116	07.0	240 27.0	-20 42.8	259 35.7	-14 26.3	189 55.7	-22 56.9	307 16.9	+6 42.1	
7	131	09.4	255 26.3	43.6	274 36.5	26.9	204 57.8	56.8	322 19.1	42.0	
8	146	11.9	270 25.6	44.4	289 37.3	27.4	220 00.0	56.8	337 21.3	41.9	
9	161	14.4	285 25.0	45.2	304 38.1	28.0	235 02.2	56.8	352 23.5	41.8	
10	176	16.8	300 24.3	46.0	319 38.9	28.6	250 04.3	56.7	7 25.7	41.7	
11	191	19.3	315 23.6	-20 46.8	334 39.7	-14 29.2	265 06.5	-22 56.7	22 27.9	+6 41.6	
12	206	21.8	330 23.0	-20 47.6	349 40.5	-14 29.7	280 08.6	-22 56.7	37 30.1	+6 41.5	
13	221	24.2	345 22.3	48.4	4 41.3	30.3	295 10.8	56.7	52 32.3	41.4	
14	236	26.7	0 21.6	49.2	19 42.1	30.9	310 12.9	56.6	67 34.5	41.3	
15	251	29.2	15 21.0	50.0	34 42.9	31.5	325 15.1	56.6	82 36.7	41.2	
16	266	31.6	30 20.3	50.8	49 43.7	32.0	340 17.2	56.6	97 39.0	41.1	
17	281	34.1	45 19.6	-20 51.6	64 44.4	-14 32.6	355 19.4	-22 56.5	112 41.2	+6 41.0	
18	296	36.5	60 18.9	-20 52.4	79 45.2	-14 33.2	10 21.5	-22 56.5	127 43.4	+6 40.9	
19	311	39.0	75 18.3	53.2	94 46.0	33.7	25 23.7	56.5	142 45.6	40.8	
20	326	41.5	90 17.6	54.0	109 46.8	34.3	40 25.8	56.4	157 47.8	40.7	
21	341	43.9	105 16.9	54.8	124 47.6	34.9	55 27.9	56.4	172 50.0	40.6	
22	356	46.4	120 16.3	55.5	139 48.4	35.4	70 30.1	56.4	187 52.2	40.5	
23	11	48.9	135 15.6	56.3	154 49.2	36.0	85 32.2	56.4	202 54.4	40.4	
24	26	51.3	150 14.9	-20 57.1	169 50.0	-14 36.6	100 34.4	-22 56.3	217 56.6	+6 40.3	
Dif	—		-7	-8	+8		-6	+22	0	+22	-1

UT	SOL			LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1			Edad: 18 ^d 7 PHE { 4 ^h : 60'2 12 ^h : 60'1 20 ^h : 60'0						Final del crepúsculo			Salida de Luna		Puesta de Luna	
	PMG: 11 ^h 45 ^m 1			PMG: 2 ^h 43 ^m R°: 64 ^m						Final del crepúsculo			Salida de Luna		Puesta de Luna	
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m	h m m
0	183	42.6	-9 40.3	321	05.3	+26 17.7	29	60 N	16 42	17 24	18 12	17 11 72	13 15 62			
1	198	42.7		335	27.2	22.4	47	58	47	27	12	17 42 71	12 45 63			
2	213	42.9		349	49.0	26.9	45	56	51	29	12	18 05 70	22 63			
3	228	43.0	43.0	4	10.9	31.2	43	54	55	31	12	24 69	12 03 64			
4	243	43.1	43.9	18	32.7	35.3	41	52	16 59	33	12	40 69	11 47 64			
5	258	43.2	-9 44.8	32	54.4	+26 39.2	39	50	17 02	17 35	18 12	18 54 68	11 33 64			
6	273	43.3	-9 45.7	47	16.1	+26 42.9	37	45	17 10	17 39	18 13	19 22 68	11 05 65			
7	288	43.5	46.6	61	37.8	46.5	36	40	16	43	15	19 45 66	10 43 64			
8	303	43.6	47.5	75	59.5	49.8	33	35	21	47	16	20 03 66	10 25 64			
9	318	43.7	48.4	90	21.1	52.9	31	30	26	50	18	19 66	10 09 64			
10	333	43.8	49.3	104	42.8	55.9	30	20	34	17 56	22	20 46 65	9 42 65			
11	348	43.9	-9 50.2	119	04.4	+26 58.6	27	10 N	17 41	18 03	18 27	21 10 64	9 19 64			
12	3	44.0	-9 51.2	133	25.9	+27 01.1	25	0	17 48	18 09	18 34	21 31 64	8 58 64			
13	18	44.2	52.1	147	47.5	03.5	24	10 S	17 56	17	42	21 53 63	36 64			
14	33	44.3	53.0	162	09.1	05.6	21	20	18 03	26	18 52	22 17 61	8 13 64			
15	48	44.4	53.9	176	30.6	07.6	20	30	12	37	19 06	22 44 60	7 47 63			
16	63	44.5	54.8	190	52.2	09.3	17	35	17	44	15	23 00 60	31 63			
17	78	44.6	-9 55.7	205	13.8	+27 10.9	16	40	18 23	18 51	19 25	23 19 59	7 13 62			
18	93	44.8	-9 56.6	219	35.3	+27 12.2	13	45	18 30	19 01	19 38	23 42 57	6 51 61			
19	108	44.9	57.5	233	56.9	13.4	12	50	39	13	19 55	*** ** *	23 60			
20	123	45.0	58.4	248	18.4	14.3	9	52	43	19	20 03	*** ** *	6 09 60			
21	138	45.1	-9 59.3	262	40.0	15.1	8	54	47	25	13	*** ** *	5 54 59			
22	153	45.2	-10 00.2	277	01.6	15.6	5	56	52	32	24	*** ** *	35 58			
23	168	45.3	01.1	291	23.2	16.0	4	58	18 57	40	36	0 07 78	5 13 56			
24	183	45.4	-10 02.0	305	44.8	+27 16.1	1	60 S	19 03	19 49	20 52	0 36 82	4 43 53			

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 22 ^h 08 ^m 9		Mag: -3.9 PMG: 14 ^h 00 ^m		Mag: +1.6 PMG: 12 ^h 40 ^m		Mag: -2.2 PMG: 17 ^h 15 ^m		Mag: +1.0 PMG: 9 ^h 27 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	26	51.3	150	14.9	-20	57.1	169	50.0	-14	36.6
1	41	53.8	165	14.2		57.9	184	50.7		37.2
2	56	56.3	180	13.6		58.7	199	51.5		37.7
3	71	58.7	195	12.9	-20	59.5	214	52.3		38.3
4	87	01.2	210	12.2	-21	00.2	229	53.1		38.9
5	102	03.7	225	11.5	-21	01.0	244	53.9	-14	39.4
6	117	06.1	240	10.9	-21	01.8	259	54.7	-14	40.0
7	132	08.6	255	10.2		02.6	274	55.5		40.6
8	147	11.0	270	09.5		03.4	289	56.2		41.1
9	162	13.5	285	08.8		04.1	304	57.0		41.7
10	177	16.0	300	08.1		04.9	319	57.8		42.3
11	192	18.4	315	07.5	-21	05.7	334	58.6	-14	42.8
12	207	20.9	330	06.8	-21	06.5	349	59.4	-14	43.4
13	222	23.4	345	06.1		07.2	5	00.2		44.0
14	237	25.8	0	05.4		08.0	20	01.0		44.6
15	252	28.3	15	04.7		08.8	35	01.7		45.1
16	267	30.8	30	04.1		09.5	50	02.5		45.7
17	282	33.2	45	03.4	-21	10.3	65	03.3	-14	46.3
18	297	35.7	60	02.7	-21	11.1	80	04.1	-14	46.8
19	312	38.1	75	02.0		11.8	95	04.9		47.4
20	327	40.6	90	01.3		12.6	110	05.7		48.0
21	342	43.1	105	00.6		13.4	125	06.4		48.5
22	357	45.5	120	00.0		14.1	140	07.2		49.1
23	12	48.0	134	59.3		14.9	155	08.0		49.7
24	27	50.5	149	58.6	-21	15.7	170	08.8	-14	50.2
Dif	—		-7	-8			+8	-6		
									+21	0
									+22	-1

UT	SOL				LUNA							Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'1 PMG: 11 ^h 44 ^m 9				Edad: 19 ^d 7 PHE { 4 ^h : 59'9 12 ^h : 59'8 20 ^h : 59'6 SD: 16'3 PMG: 3 ^h 47 ^m R°: 62 ^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	45.4	-10	02.0	305	44.8	+27	16.1	0	60 N	5 19	6 07	6 50	18 23	99	14 17	29		
1	198	45.6		02.9	320	06.5		16.1	2	58	19	05	45	18 53	91	13 48	36		
2	213	45.7		03.8	334	28.1		15.9	5	56	19	02	40	19 15	87	25	40		
3	228	45.8		04.7	348	49.8		15.4	2	54	19	6 00	36	33	84	13 07	43		
4	243	45.9		05.6	3	11.6		14.8	6	52	19	5 58	32	19 49	81	12 51	46		
5	258	46.0	-10	06.5	17	33.3	+27	14.0	8	50	5 18	5 56	6 29	20 02	79	12 37	48		
6	273	46.1	-10	07.4	31	55.1	+27	13.0	10	45	5 17	5 51	6 21	20 30	75	12 10	50		
7	288	46.2		08.3	46	16.9		11.7	13	40	16	47	15	20 51	73	11 47	54		
8	303	46.4		09.2	60	38.8		10.3	14	35	14	44	09	21 09	71	29	55		
9	318	46.5		10.1	75	00.7		08.7	16	30	13	40	6 05	25	68	11 13	57		
10	333	46.6		11.0	89	22.7		06.9	18	20	08	34	5 56	21 51	65	10 47	58		
11	348	46.7	-10	11.9	103	44.7	+27	04.9	20	10 N	5 03	5 27	5 49	22 14	62	10 23	61		
12	3	46.8	-10	12.8	118	06.7	+27	02.7	22	0	4 56	5 21	5 42	22 35	60	10 02	62		
13	18	46.9		13.7	132	28.8	+27	00.4	23	10 S	48	13	34	22 56	57	9 40	64		
14	33	47.0		14.6	146	51.0	+26	57.8	26	20	38	5 04	26	23 18	55	9 17	65		
15	48	47.1		15.5	161	13.2		55.1	27	30	24	4 53	17	23 44	52	8 50	67		
16	63	47.2		16.4	175	35.5		52.1	30	35	15	46	12	** ** *	**	34	68		
17	78	47.4	-10	17.3	189	57.8	+26	49.0	31	40	4 04	4 38	5 06	** ** *	**	8 15	70		
18	93	47.5	-10	18.2	204	20.2	+26	45.7	33	45	3 51	4 28	4 59	** ** *	**	7 52	72		
19	108	47.6		19.1	218	42.7		42.2	35	50	34	16	50	0 10	56	23	75		
20	123	47.7		20.0	233	05.2		38.5	37	52	26	11	47	25	54	7 09	76		
21	138	47.8		20.9	247	27.8		34.6	39	54	16	4 04	42	0 41	53	6 53	78		
22	153	47.9		21.8	261	50.5		30.6	40	56	3 05	3 57	37	1 01	51	33	80		
23	168	48.0		22.7	276	13.2		26.3	43	58	2 53	49	32	25	48	6 09	83		
24	183	48.1	-10	23.6	290	36.1	+26	21.9	44	60 S	2 37	3 39	4 26	1 58	42	5 36	90		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 22 ^h 05 ^m 0		Mag: -3.9 PMG: 14 ^h 01 ^m		Mag: +1.6 PMG: 12 ^h 39 ^m		Mag: -2.2 PMG: 17 ^h 12 ^m		Mag: +1.0 PMG: 9 ^h 23 ^m									
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄									
h	°	'	°	'	°	'	°	'	°	'								
0	27	50.5	149	58.6	-21	15.7	170	08.8	-14	50.2	101	25.9	-22	55.6	218	49.7	+6	37.9
1	42	52.9	164	57.9		16.4	185	09.6		50.8	116	28.0		55.5	233	51.9		37.8
2	57	55.4	179	57.2		17.2	200	10.3		51.4	131	30.1		55.5	248	54.1		37.7
3	72	57.9	194	56.5		17.9	215	11.1		51.9	146	32.3		55.5	263	56.3		37.6
4	88	00.3	209	55.8		18.7	230	11.9		52.5	161	34.4		55.4	278	58.6		37.5
5	103	02.8	224	55.1	-21	19.4	245	12.7	-14	53.0	176	36.6	-22	55.4	294	00.8	+6	37.4
6	118	05.3	239	54.5	-21	20.2	260	13.5	-14	53.6	191	38.7	-22	55.4	309	03.0	+6	37.3
7	133	07.7	254	53.8		21.0	275	14.2		54.2	206	40.8		55.4	324	05.2		37.2
8	148	10.2	269	53.1		21.7	290	15.0		54.7	221	43.0		55.3	339	07.4		37.1
9	163	12.6	284	52.4		22.5	305	15.8		55.3	236	45.1		55.3	354	09.6		37.0
10	178	15.1	299	51.7		23.2	320	16.6		55.9	251	47.2		55.3	9	11.8		36.9
11	193	17.6	314	51.0	-21	24.0	335	17.4	-14	56.4	266	49.4	-22	55.2	24	14.0	+6	36.8
12	208	20.0	329	50.3	-21	24.7	350	18.1	-14	57.0	281	51.5	-22	55.2	39	16.3	+6	36.7
13	223	22.5	344	49.6		25.5	5	18.9		57.6	296	53.7		55.2	54	18.5		36.6
14	238	25.0	359	48.9		26.2	20	19.7		58.1	311	55.8		55.1	69	20.7		36.5
15	253	27.4	14	48.2		27.0	35	20.5		58.7	326	57.9		55.1	84	22.9		36.4
16	268	29.9	29	47.5		27.7	50	21.3		59.3	342	00.1		55.1	99	25.1		36.3
17	283	32.4	44	46.9	-21	28.5	65	22.0	-14	59.8	357	02.2	-22	55.0	114	27.3	+6	36.2
18	298	34.8	59	46.2	-21	29.2	80	22.8	-15	00.4	12	04.3	-22	55.0	129	29.5	+6	36.1
19	313	37.3	74	45.5		29.9	95	23.6		00.9	27	06.5		55.0	144	31.8		36.0
20	328	39.8	89	44.8		30.7	110	24.4		01.5	42	08.6		54.9	159	34.0		35.9
21	343	42.2	104	44.1		31.4	125	25.1		02.1	57	10.7		54.9	174	36.2		35.9
22	358	44.7	119	43.4		32.2	140	25.9		02.6	72	12.9		54.9	189	38.4		35.8
23	13	47.1	134	42.7		32.9	155	26.7		03.2	87	15.0		54.8	204	40.6		35.7
24	28	49.6	149	42.0	-21	33.6	170	27.5	-15	03.8	102	17.1	-22	54.8	219	42.8	+6	35.6
Dif	—		-7		-7		+8		-6		+21		0		+22		-1	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16'1 PMG: 11 ^h 44 ^m 7			Edad: 20 ^d 7 SD: 16'2 PMG: 4 ^h 49 ^m					PHE { 4 ^h : 59'5 12 ^h : 59'3 20 ^h : 59'2 R°: 60 ^m							
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	m	h m	m	
0	183	48.1	-10	23.6	290	36.1	+26	21.9	60 N	16 36	17 19	18 07	20 02	105	14 46	13
1	198	48.2		24.5	304	59.0	39	17.3	58	41	22	07	24	98	24	19
2	213	48.3		25.4	319	22.0	40	12.6	56	46	24	07	42	93	14	05
3	228	48.4		26.2	333	45.0	40	07.6	54	51	27	08	20	57	89	13
4	243	48.5		27.1	348	08.2	42	+26	02.5	51	29	08	21	10	86	37
5	258	48.7	-10	28.0	2	31.4	42	+25	57.2	53	50	16 58	17 31	18 09	21 21	83
6	273	48.8	-10	28.9	16	54.7	43	+25	51.7	55	45	17 06	17 36	18 10	21 45	77
7	288	48.9		29.8	31	18.2	45	46.1	56	40	13	40	12	22	04	73
8	303	49.0		30.7	45	41.7	45	40.3	58	35	19	44	14	20	70	24
9	318	49.1		31.6	60	05.3	46	34.3	60	30	24	48	16	33	68	12
10	333	49.2		32.5	74	29.0	47	28.2	61	20	33	17 55	21	22	56	63
11	348	49.3	-10	33.4	88	52.8	48	+25	21.9	63	10 N	17 41	18 02	18 27	23 16	60
12	3	49.4	-10	34.3	103	16.6	48	+25	15.4	65	0	17 48	18 09	18 34	23	35
13	18	49.5		35.2	117	40.6	50	08.8	66	10 S	17 56	17	42	23	53	
14	33	49.6		36.1	132	04.7	51	+25	02.0	68	20	18 04	27	18	53	**
15	48	49.7		37.0	146	28.9	52	+24	55.1	69	30	14	38	19	07	**
16	63	49.8		37.9	160	53.2	53	48.0	71	35	19	45	17	0	00	49
17	78	49.9	-10	38.7	175	17.5	53	+24	40.7	73	40	18 26	18 54	19 28	0	18
18	93	50.0	-10	39.6	189	42.0	55	+24	33.3	74	45	18 33	19 04	19 41	0	39
19	108	50.1		40.5	204	06.6	56	25.7	76	50	42	17	19 59	1	06	39
20	123	50.2		41.4	218	31.3	57	18.0	77	52	46	23	20 08	19	37	25
21	138	50.3		42.3	232	56.1	58	10.1	79	54	51	29	18	34	34	8
22	153	50.4		43.2	247	21.0	59	+24	02.1	80	56	18 56	37	29	1	52
23	168	50.5		44.1	261	46.1	61	+23	54.0	81	58	19 02	45	43	2	13
24	183	50.6	-10	45.0	276	11.2	61	+23	45.7	83	60 S	19 08	19 55	20 59	2	40

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 22 ^h 01 ^m 1		Mag: -3.9 PMG: 14 ^h 02 ^m		Mag: +1.6 PMG: 12 ^h 38 ^m		Mag: -2.2 PMG: 17 ^h 08 ^m		Mag: +1.1 PMG: 9 ^h 20 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	28	49.6	149	42.0	-21	33.6	170	27.5	-15	03.8
1	43	52.1	164	41.3		34.4	185	28.2		04.3
2	58	54.5	179	40.6		35.1	200	29.0		04.9
3	73	57.0	194	39.9		35.8	215	29.8		05.4
4	88	59.5	209	39.2		36.6	230	30.6		06.0
5	104	01.9	224	38.5	-21	37.3	245	31.3	-15	06.6
6	119	04.4	239	37.8	-21	38.0	260	32.1	-15	07.1
7	134	06.9	254	37.1		38.8	275	32.9		07.7
8	149	09.3	269	36.4		39.5	290	33.7		08.2
9	164	11.8	284	35.7		40.2	305	34.4		08.8
10	179	14.3	299	35.0		41.0	320	35.2		09.4
11	194	16.7	314	34.3	-21	41.7	335	36.0	-15	09.9
12	209	19.2	329	33.6	-21	42.4	350	36.8	-15	10.5
13	224	21.6	344	32.9		43.1	5	37.5		11.0
14	239	24.1	359	32.2		43.9	20	38.3		11.6
15	254	26.6	14	31.5		44.6	35	39.1		12.2
16	269	29.0	29	30.8		45.3	50	39.8		12.7
17	284	31.5	44	30.0	-21	46.0	65	40.6	-15	13.3
18	299	34.0	59	29.3	-21	46.8	80	41.4	-15	13.8
19	314	36.4	74	28.6		47.5	95	42.2		14.4
20	329	38.9	89	27.9		48.2	110	42.9		15.0
21	344	41.4	104	27.2		48.9	125	43.7		15.5
22	359	43.8	119	26.5		49.6	140	44.5		16.1
23	14	46.3	134	25.8		50.3	155	45.2		16.6
24	29	48.8	149	25.1	-21	51.1	170	46.0	-15	17.2
Dif	—		-7		-7		+8		-6	
							+21		0	
									+22	
									-1	

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'1 PMG: 11 ^h 44 ^m 5			Edad: 21 ^d 7 PHE { 4 ^h : 59'0 12 ^h : 58'8 20 ^h : 58'6 SD: 16'1 PMG: 5 ^h 49 ^m R°: 54 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	183	50.6	-10	45.0	276	11.2	+23	45.7	60 N	5 23	6 12	6 55	21 47	101	14 59	6
1	198	50.7		45.9	290	36.4	62	37.2	58	23	09	49	22 02	96	43	11
2	213	50.8		46.8	305	01.8	64	28.6	56	23	06	44	15	91	30	15
3	228	50.9		47.6	319	27.2	64	19.9	54	22	04	40	26	87	18	19
4	243	51.0		48.5	333	52.8	66	11.0	52	22	01	36	36	84	14	08
5	258	51.1	-10	49.4	348	18.4	66	+23	50	5 21	5 59	6 32	22 44	82	13 58	25
6	273	51.2	-10	50.3	2	44.2	68	+22	45	5 20	5 54	6 24	23 02	77	13 39	30
7	288	51.3		51.2	17	10.1	69	43.6	40	18	50	17	17	72	23	34
8	303	51.4		52.1	31	36.1	70	34.2	35	16	46	11	30	68	13	09
9	318	51.5		53.0	46	02.2	71	24.7	30	14	42	6 06	41	65	12	57
10	333	51.6		53.9	60	28.5	73	15.0	20	09	35	5 57	23 59	60	37	45
11	348	51.7	-10	54.7	74	54.8	73	+22	10 N	5 03	5 28	5 49	** ** *	**	12 19	49
12	3	51.8	-10	55.6	89	21.3	75	+21	0	4 56	5 20	5 41	** ** *	**	12 02	53
13	18	51.9		56.5	103	47.8	75	45.3	10 S	47	12	33	** ** *	**	11 45	57
14	33	52.0		57.4	118	14.5	77	35.2	20	36	5 02	25	0 13	48	27	61
15	48	52.1		58.3	132	41.3	78	24.9	30	21	4 51	15	36	44	11	06
16	63	52.2	-10	59.2	147	08.2	79	14.5	35	12	43	10	0 49	41	10	53
17	78	52.3	-11	00.1	161	35.2	80	+21	40	4 01	4 35	5 03	1 05	37	10	39
18	93	52.4	-11	00.9	176	02.3	81	+20	45	3 47	4 25	4 56	1 23	33	10	22
19	108	52.5		01.8	190	29.6	83	42.7	50	29	12	46	45	29	10	00
20	123	52.6		02.7	204	56.9	83	31.8	52	21	4 06	42	1 56	26	9	50
21	138	52.7		03.6	219	24.4	85	20.9	54	3 11	3 59	38	2 08	23	38	90
22	153	52.8		04.5	233	51.9	85	+20	56	2 59	52	32	22	19	25	93
23	168	52.9		05.4	248	19.6	87	+19	58	45	43	27	38	14	9	10
24	183	53.0	-11	06.2	262	47.4	88	+19	60 S	2 29	3 33	4 20	2 57	8	8	51

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 21 ^h 57 ^m 1		Mag: -3.9 PMG: 14 ^h 03 ^m		Mag: +1.6 PMG: 12 ^h 36 ^m		Mag: -2.2 PMG: 17 ^h 05 ^m		Mag: +1.1 PMG: 9 ^h 16 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	29	48.8	149	25.1	170	46.0	103	08.3	220	36.0
1	44	51.2	164	24.4	185	46.8	118	10.4	235	38.2
2	59	53.7	179	23.7	200	47.6	133	12.5	250	40.4
3	74	56.1	194	23.0	215	48.3	148	14.7	265	42.6
4	89	58.6	209	22.3	230	49.1	163	16.8	280	44.8
5	105	01.1	224	21.5	245	49.9	178	18.9	295	47.1
6	120	03.5	239	20.8	260	50.6	193	21.1	310	49.3
7	135	06.0	254	20.1	275	51.4	208	23.2	325	51.5
8	150	08.5	269	19.4	290	52.2	223	25.3	340	53.7
9	165	10.9	284	18.7	305	52.9	238	27.4	355	55.9
10	180	13.4	299	18.0	320	53.7	253	29.6	10	58.1
11	195	15.9	314	17.3	335	54.5	268	31.7	26	00.4
12	210	18.3	329	16.5	350	55.2	283	33.8	41	02.6
13	225	20.8	344	15.8	5	56.0	298	35.9	56	04.8
14	240	23.3	359	15.1	20	56.8	313	38.0	71	07.0
15	255	25.7	14	14.4	35	57.5	328	40.2	86	09.2
16	270	28.2	29	13.7	50	58.3	343	42.3	101	11.5
17	285	30.6	44	13.0	65	59.1	358	44.4	116	13.7
18	300	33.1	59	12.2	80	59.8	13	46.5	131	15.9
19	315	35.6	74	11.5	96	00.6	28	48.7	146	18.1
20	330	38.0	89	10.8	111	01.4	43	50.8	161	20.3
21	345	40.5	104	10.1	126	02.1	58	52.9	176	22.5
22	0	43.0	119	09.4	141	02.9	73	55.0	191	24.8
23	15	45.4	134	08.7	156	03.7	88	57.2	206	27.0
24	30	47.9	149	07.9	171	04.4	103	59.3	221	29.2
Dif	—		-7		+8		+21		+22	

UT	SOL		 LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:1		Edad: 22 ^d 7 PHE { 4 ^h : 58'4 12 ^h : 58'2 20 ^h : 58'0											
	PMG: 11 ^h 44 ^m 4		SD: 15:9		PMG: 6 ^h 43 ^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 53.0	-11 06.2	262 47.4		+19 47.4		60 N	16 30	17 13	18 02	23 28 96	15 05 3		
1	198 53.1	07.1	277 15.3	89	36.0	114	58	36	17	02	38 91	14 54 8		
2	213 53.1	08.0	291 43.3	90	24.6	114	56	41	20	03	46 87	45 11		
3	228 53.2	08.9	306 11.4	91	13.0	116	54	46	23	04	23 53 85	37 14		
4	243 53.3	09.8	320 39.6	92	+19 01.3	117	52	51	25	04	** ** *	30 16		
5	258 53.4	-11 10.7	335 08.0	94	+18 49.6	117	50	16 54	17 27	18 05	** ** *	14 23 19		
6	273 53.5	-11 11.5	349 36.4	94	+18 37.7	119	45	17 03	17 33	18 07	** ** *	14 09 24		
7	288 53.6	12.4	4 04.9	95	25.8	119	40	10	38	09	** ** *	13 57 28		
8	303 53.7	13.3	18 33.6	97	13.7	121	35	16	42	11	** ** *	47 31		
9	318 53.8	14.2	33 02.3	97	+18 01.6	121	30	22	46	14	** ** *	38 34		
10	333 53.9	15.1	47 31.2	99	+17 49.4	122	20	31	17 54	19	** ** *	22 40		
11	348 54.0	-11 15.9	62 00.1	99	+17 37.1	123	10 N	17 40	18 01	18 26	0 16 55	13 08 45		
12	3 54.1	-11 16.8	76 29.2	101	+17 24.7	124	0	17 48	18 09	18 33	0 31 51	12 55 49		
13	18 54.2	17.7	90 58.4	102	+17 12.3	124	10 S	17 56	17	42	0 46 46	42 54		
14	33 54.2	18.6	105 27.6	102	+16 59.7	126	20	18 05	27	18 54	1 01 43	28 58		
15	48 54.3	19.4	119 57.0	104	47.1	126	30	15	40	19 09	20 37	12 64		
16	63 54.4	20.3	134 26.4	104	34.4	127	35	21	47	19	30 34	12 03 66		
17	78 54.5	-11 21.2	148 56.0	106	+16 21.6	128	40	18 28	18 56	19 30	1 42 31	11 52 70		
18	93 54.6	-11 22.1	163 25.7	107	+16 08.7	129	45	18 36	19 07	19 45	1 56 27	11 39 75		
19	108 54.7	23.0	177 55.4	107	+15 55.8	129	50	45	20	20 03	2 14 21	23 81		
20	123 54.8	23.8	192 25.3	109	42.8	130	52	50	26	13	22 18	16 83		
21	138 54.9	24.7	206 55.2	109	29.7	131	54	18 55	34	23	31 15	11 08 86		
22	153 55.0	25.6	221 25.2	110	16.6	131	56	19 00	42	35	41 12	10 58 90		
23	168 55.0	26.5	235 55.4	112	+15 03.4	132	58	06	19 51	20 50	2 52 9	48 94		
24	183 55.1	-11 27.3	250 25.6	112	+14 50.1	133	60 S	19 13	20 01	21 07	3 05 4	10 36 98		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 21 ^h 53 ^m 2		Mag: -3.9 PMG: 14 ^h 04 ^m		Mag: +1.6 PMG: 12 ^h 35 ^m		Mag: -2.2 PMG: 17 ^h 02 ^m		Mag: +1.1 PMG: 9 ^h 13 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	30 47.9	149 07.9	-22 07.9		171 04.4	-15 30.5	103 59.3	-22 53.2	221 29.2	+6 30.9
1	45 50.4	164 07.2	08.6		186 05.2	31.1	119 01.4	53.2	236 31.4	30.8
2	60 52.8	179 06.5	09.3		201 05.9	31.6	134 03.5	53.1	251 33.6	30.7
3	75 55.3	194 05.8	09.9		216 06.7	32.2	149 05.6	53.1	266 35.8	30.6
4	90 57.7	209 05.0	10.6		231 07.5	32.7	164 07.8	53.1	281 38.1	30.5
5	106 00.2	224 04.3	-22 11.3		246 08.2	-15 33.3	179 09.9	-22 53.0	296 40.3	+6 30.4
6	121 02.7	239 03.6	-22 12.0		261 09.0	-15 33.8	194 12.0	-22 53.0	311 42.5	+6 30.3
7	136 05.1	254 02.9	12.7		276 09.8	34.4	209 14.1	53.0	326 44.7	30.2
8	151 07.6	269 02.2	13.4		291 10.5	34.9	224 16.2	52.9	341 46.9	30.1
9	166 10.1	284 01.4	14.0		306 11.3	35.5	239 18.4	52.9	356 49.2	30.0
10	181 12.5	299 00.7	14.7		321 12.0	36.0	254 20.5	52.8	11 51.4	29.9
11	196 15.0	314 00.0	-22 15.4		336 12.8	-15 36.6	269 22.6	-22 52.8	26 53.6	+6 29.8
12	211 17.5	328 59.3	-22 16.1		351 13.6	-15 37.1	284 24.7	-22 52.8	41 55.8	+6 29.8
13	226 19.9	343 58.5	16.8		6 14.3	37.7	299 26.8	52.7	56 58.0	29.7
14	241 22.4	358 57.8	17.4		21 15.1	38.2	314 28.9	52.7	72 00.3	29.6
15	256 24.9	13 57.1	18.1		36 15.8	38.8	329 31.1	52.7	87 02.5	29.5
16	271 27.3	28 56.3	18.8		51 16.6	39.3	344 33.2	52.6	102 04.7	29.4
17	286 29.8	43 55.6	-22 19.5		66 17.4	-15 39.9	359 35.3	-22 52.6	117 06.9	+6 29.3
18	301 32.2	58 54.9	-22 20.1		81 18.1	-15 40.4	14 37.4	-22 52.6	132 09.1	+6 29.2
19	316 34.7	73 54.2	20.8		96 18.9	41.0	29 39.5	52.5	147 11.4	29.1
20	331 37.2	88 53.4	21.5		111 19.6	41.5	44 41.6	52.5	162 13.6	29.0
21	346 39.6	103 52.7	22.1		126 20.4	42.1	59 43.8	52.5	177 15.8	28.9
22	1 42.1	118 52.0	22.8		141 21.2	42.6	74 45.9	52.4	192 18.0	28.8
23	16 44.6	133 51.2	23.5		156 21.9	43.2	89 48.0	52.4	207 20.2	28.7
24	31 47.0	148 50.5	-22 24.1		171 22.7	-15 43.7	104 50.1	-22 52.4	222 22.5	+6 28.6
Dif	—	-7	-7		+8	-6	+21	0	+22	-1

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16'1			Edad: 23 ^d 7	PHE { 4 ^h : 57/9 12 ^h : 57/7 20 ^h : 57/5												
	PMG: 11 ^h 44 ^m 3																
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	183	55.1	-11 27.3	250	25.6	+14 50.1		60 N	5 28	6 17	7 00	** ** *	**	15 08	2		
1	198	55.2	28.2	264	55.9 ¹¹³	36.8 ¹³³		58	27	13	6 54	** ** *	**	15 02	5		
2	213	55.3	29.1	279	26.3 ¹¹⁴	23.4 ¹³⁴		56	27	10	49	** ** *	**	14 56	8		
3	228	55.4	30.0	293	56.8 ¹¹⁵	+14 09.9 ¹³⁵		54	26	07	44	** ** *	**	51	1		
4	243	55.5	30.8	308	27.4 ¹¹⁶	+13 56.4 ¹³⁵		52	25	05	39	0 00	81	46	14		
5	258	55.6	-11 31.7	322	58.0 ¹¹⁶	+13 42.8 ¹³⁶		50	5 24	6 02	6 35	0 06	79	14 42	16		
6	273	55.6	-11 32.6	337	28.8 ¹¹⁸	+13 29.2 ¹³⁶		45	5 22	5 57	6 27	0 19	73	14 33	20		
7	288	55.7	33.5	351	59.6 ¹¹⁸	15.5 ¹³⁷		40	20	52	19	29	69	25	25		
8	303	55.8	34.3	6	30.5 ¹¹⁹	+13 01.8 ¹³⁷		35	18	47	13	38	65	18	29		
9	318	55.9	35.2	21	01.5 ¹²⁰	+12 48.0 ¹³⁸		30	15	43	6 07	46	62	12	32		
10	333	56.0	36.1	35	32.6 ¹²¹	34.1 ¹³⁹		20	09	35	5 58	0 59	57	14 02	37		
11	348	56.1	-11 37.0	50	03.7 ¹²¹	+12 20.2 ¹³⁹		10 N	5 03	5 28	5 49	1 11	51	13 53	42		
12	3	56.1	-11 37.8	64	35.0 ¹²³	+12 06.3 ¹³⁹		0	4 55	5 20	5 41	1 22	47	13 44	46		
13	18	56.2	38.7	79	06.3 ¹²³	+11 52.3 ¹⁴⁰		10 S	46	11	33	32	43	36	50		
14	33	56.3	39.6	93	37.7 ¹²⁴	38.2 ¹⁴¹		20	34	5 01	24	44	38	26	56		
15	48	56.4	40.4	108	09.2 ¹²⁵	24.1 ¹⁴¹		30	19	4 49	13	1 57	33	16	60		
16	63	56.5	41.3	122	40.7 ¹²⁵	+11 10.0 ¹⁴¹		35	4 10	41	07	2 04	30	09	64		
17	78	56.6	-11 42.2	137	12.3 ¹²⁶	+10 55.8 ¹⁴²		40	3 58	4 32	5 00	2 13	26	13 02	68		
18	93	56.6	-11 43.0	151	44.0 ¹²⁷	+10 41.6 ¹⁴²		45	3 43	4 21	4 52	2 23	22	12 54	72		
19	108	56.7	43.9	166	15.7 ¹²⁷	27.4 ¹⁴²		50	25	08	43	35	17	44	77		
20	123	56.8	44.8	180	47.6 ¹²⁹	+10 13.1 ¹⁴³		52	15	4 01	38	40	15	39	80		
21	138	56.9	45.7	195	19.5 ¹²⁹	+9 58.7 ¹⁴⁴		54	3 05	3 54	33	46	12	34	82		
22	153	57.0	46.5	209	51.4 ¹²⁹	44.4 ¹⁴³		56	2 53	46	28	2 53	9	28	86		
23	168	57.0	47.4	224	23.4 ¹³⁰	30.0 ¹⁴⁴		58	38	37	21	3 01	5	22	89		
24	183	57.1	-11 48.3	238	55.5 ¹³¹	+9 15.6 ¹⁴⁴		60 S	2 21	3 26	4 14	3 09	2	12 14	93		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 21 ^h 49 ^m 3		Mag: -3.9 PMG: 14 ^h 05 ^m			Mag: +1.6 PMG: 12 ^h 34 ^m			Mag: -2.2 PMG: 16 ^h 58 ^m			Mag: +1.1 PMG: 9 ^h 09 ^m					
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'			
0	31	47.0	148	50.5	-22 24.1			171	22.7	-15 43.7	104	50.1	-22 52.4	222 22.5	+6 28.6		
1	46	49.5	163	49.8	24.8			186	23.4	44.3	119	52.2	52.3	237 24.7	28.5		
2	61	52.0	178	49.0	25.5			201	24.2	44.8	134	54.3	52.3	252 26.9	28.4		
3	76	54.4	193	48.3	26.1			216	24.9	45.4	149	56.4	52.2	267 29.1	28.3		
4	91	56.9	208	47.6	26.8			231	25.7	45.9	164	58.6	52.2	282 31.3	28.2		
5	106	59.4	223	46.8	-22 27.4			246	26.5	-15 46.5	180	00.7	-22 52.2	297 33.6	+6 28.1		
6	122	01.8	238	46.1	-22 28.1			261	27.2	-15 47.0	195	02.8	-22 52.1	312 35.8	+6 28.0		
7	137	04.3	253	45.4	28.7			276	28.0	47.6	210	04.9	52.1	327 38.0	27.9		
8	152	06.7	268	44.6	29.4			291	28.7	48.1	225	07.0	52.1	342 40.2	27.8		
9	167	09.2	283	43.9	30.1			306	29.5	48.7	240	09.1	52.0	357 42.4	27.8		
10	182	11.7	298	43.2	30.7			321	30.2	49.2	255	11.2	52.0	12 44.7	27.7		
11	197	14.1	313	42.4	-22 31.4			336	31.0	-15 49.7	270	13.3	-22 52.0	27 46.9	+6 27.6		
12	212	16.6	328	41.7	-22 32.0			351	31.8	-15 50.3	285	15.5	-22 51.9	42 49.1	+6 27.5		
13	227	19.1	343	41.0	32.7			6	32.5	50.8	300	17.6	51.9	57 51.3	27.4		
14	242	21.5	358	40.2	33.3			21	33.3	51.4	315	19.7	51.9	72 53.5	27.3		
15	257	24.0	13	39.5	34.0			36	34.0	51.9	330	21.8	51.8	87 55.8	27.2		
16	272	26.5	28	38.7	34.6			51	34.8	52.5	345	23.9	51.8	102 58.0	27.1		
17	287	28.9	43	38.0	-22 35.3			66	35.5	-15 53.0	0	26.0	-22 51.7	118 00.2	+6 27.0		
18	302	31.4	58	37.3	-22 35.9			81	36.3	-15 53.6	15	28.1	-22 51.7	133 02.4	+6 26.9		
19	317	33.8	73	36.5	36.6			96	37.0	54.1	30	30.2	51.7	148 04.7	26.8		
20	332	36.3	88	35.8	37.2			111	37.8	54.7	45	32.3	51.6	163 06.9	26.7		
21	347	38.8	103	35.0	37.8			126	38.5	55.2	60	34.5	51.6	178 09.1	26.6		
22	2	41.2	118	34.3	38.5			141	39.3	55.7	75	36.6	51.6	193 11.3	26.5		
23	17	43.7	133	33.6	39.1			156	40.0	56.3	90	38.7	51.5	208 13.5	26.4		
24	32	46.2	148	32.8	-22 39.8			171	40.8	-15 56.8	105	40.8	-22 51.5	223 15.8	+6 26.3		
Dif	—		-7		-7	+8		-5		+21		0		+22		-1	

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1			Edad: 24 ^d 7	PHE {	4 ^h : 57 ^h 3 12 ^h : 57 ^h 1 20 ^h : 56 ^h 9			Final del crepúsculo			Salida de Luna		Puesta de Luna	
	PMG: 11 ^h 44 ^m 1								SD: 15 ^h 6			PMG: 8 ^h 20 ^m			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	
0	183	57.1	-11 48.3	238	55.5	+9 15.6		60 N	16 25	17 08	17 57	1 04 90		15 10 1	
1	198	57.2		49.1	253	27.7 ¹³²	+9 01.1 ¹⁴⁵	58	31		12 58	09 87		07 4	
2	213	57.3		50.0	267	59.9 ¹³²	+8 46.6 ¹⁴⁵	56	37	15	17 59	13 84		04 8	
3	228	57.3		50.9	282	32.2 ¹³³	32.1 ¹⁴⁵	54	42	18	18 00	18 80		02 10	
4	243	57.4		51.7	297	04.5 ¹³³	17.5 ¹⁴⁶	52	46	21	01	21 78		15 00 12	
5	258	57.5	-11 52.6	311	36.9 ¹³⁴	+8 02.9 ¹⁴⁶		50	16 51	17 24	18 02	1 25 75		14 58 14	
6	273	57.6	-11 53.5	326	09.4 ¹³⁵	+7 48.3 ¹⁴⁶		45	17 00	17 30	18 04	1 32 71		14 53 19	
7	288	57.7		54.3	340	41.9 ¹³⁵	33.7 ¹⁴⁶	40	07	35	07	38 66		50 23	
8	303	57.7		55.2	355	14.4 ¹³⁵	19.1 ¹⁴⁶	35	14	40	09	43 63		47 26	
9	318	57.8		56.1	9	47.1 ¹³⁷	+7 04.4 ¹⁴⁷	30	20	44	12	48 59		44 29	
10	333	57.9		56.9	24	19.7 ¹³⁶	+6 49.7 ¹⁴⁷	20	30	17 52	18	1 56 54		39 35	
11	348	58.0	-11 57.8	38	52.5 ¹³⁸	+6 35.0 ¹⁴⁷		10 N	17 39	18 00	18 25	2 02 50		14 35 39	
12	3	58.0	-11 58.7	53	25.2 ¹³⁷	+6 20.2 ¹⁴⁸		0	17 48	18 09	18 33	2 09 44		14 30 44	
13	18	58.1	-11 59.5	67	58.1 ¹³⁹	+6 05.5 ¹⁴⁷		10 S	17 56	18	43	15 40		26 49	
14	33	58.2	-12 00.4	82	30.9 ¹³⁸	+5 50.7 ¹⁴⁸		20	18 06	28	18 55	22 35		22 53	
15	48	58.3		01.3	97	03.9 ¹⁴⁰	36.0 ¹⁴⁷	30	16	41	19 11	30 30		16 59	
16	63	58.3		02.1	111	36.8 ¹³⁹	21.2 ¹⁴⁸	35	23	49	21	34 27		13 62	
17	78	58.4	-12 03.0	126	09.8 ¹⁴⁰	+5 06.3 ¹⁴⁹		40	18 30	18 59	19 33	2 39 24		14 10 66	
18	93	58.5	-12 03.8	140	42.9 ¹⁴¹	+4 51.5 ¹⁴⁸		45	18 38	19 10	19 48	2 45 19		14 06 70	
19	108	58.6		04.7	155	16.0 ¹⁴¹	36.7 ¹⁴⁸	50	49	24	20 08	52 15		14 01 75	
20	123	58.6		05.6	169	49.1 ¹⁴¹	21.9 ¹⁴⁸	52	53	30	17	55 13		13 59 77	
21	138	58.7		06.4	184	22.3 ¹⁴²	+4 07.0 ¹⁴⁹	54	18 59	38	28	2 58 11		56 80	
22	153	58.8		07.3	198	55.5 ¹⁴²	+3 52.2 ¹⁴⁸	56	19 05	46	41	3 02 8		54 82	
23	168	58.8		08.2	213	28.7 ¹⁴²	37.3 ¹⁴⁹	58	11	19 56	20 57	06 5		51 86	
24	183	58.9	-12 09.0	228	02.0 ¹⁴³	+3 22.4 ¹⁴⁹		60 S	19 19	20 07	21 15	3 11 1		13 47 90	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 21 ^h 45 ^m 3		Mag: -4.0 PMG: 14 ^h 07 ^m		Mag: +1.5 PMG: 12 ^h 33 ^m		Mag: -2.2 PMG: 16 ^h 55 ^m		Mag: +1.1 PMG: 9 ^h 06 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	32	46.2	148	32.8	-22	39.8	171	40.8	-15	56.8
1	47	48.6	163	32.1		40.4	186	41.5		57.4
2	62	51.1	178	31.3		41.0	201	42.3		57.9
3	77	53.6	193	30.6		41.7	216	43.0		58.5
4	92	56.0	208	29.8		42.3	231	43.8		59.0
5	107	58.5	223	29.1	-22	42.9	246	44.5	-15	59.6
6	123	01.0	238	28.3	-22	43.6	261	45.3	-16	00.1
7	138	03.4	253	27.6		44.2	276	46.0		00.6
8	153	05.9	268	26.9		44.8	291	46.8		01.2
9	168	08.3	283	26.1		45.5	306	47.5		01.7
10	183	10.8	298	25.4		46.1	321	48.3		02.3
11	198	13.3	313	24.6	-22	46.7	336	49.0	-16	02.8
12	213	15.7	328	23.9	-22	47.3	351	49.8	-16	03.3
13	228	18.2	343	23.1		48.0	6	50.5		03.9
14	243	20.7	358	22.4		48.6	21	51.3		04.4
15	258	23.1	373	21.6		49.2	36	52.0		05.0
16	273	25.6	388	20.9		49.8	51	52.8		05.5
17	288	28.1	403	20.1	-22	50.5	66	53.5	-16	06.1
18	303	30.5	418	19.4	-22	51.1	81	54.3	-16	06.6
19	318	33.0	433	18.6		51.7	96	55.0		07.1
20	333	35.4	448	17.9		52.3	111	55.8		07.7
21	348	37.9	463	17.1		52.9	126	56.5		08.2
22	3	40.4	478	16.4		53.6	141	57.3		08.8
23	18	42.8	493	15.6		54.2	156	58.0		09.3
24	33	45.3	508	14.9	-22	54.8	171	58.8	-16	09.8
Dif	—		-7		-6		+7		-5	
								+21		0
									+22	
										-1

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'1 PMG: 11 ^h 44 ^m 0			Edad: 25 ^d 7 PHE { 4 ^h : 56'8 12 ^h : 56'6 20 ^h : 56'4 SD: 15'5 PMG: 9 ^h 04 ^m R°: 43 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m	
0	183	58.9	-12	09.0	228	02.0	+3	22.4	60 N	5	33	6	21	7	05	2	34	89
1	198	59.0		09.9	242	35.3 ¹⁴³	+3	07.6 ¹⁴⁸	58	32	17	6	59		36	85	11	5
2	213	59.1		10.7	257	08.7 ¹⁴⁴	+2	52.7 ¹⁴⁹	56	30	14	53		37	82	12	7	
3	228	59.1		11.6	271	42.1 ¹⁴⁴		37.8 ¹⁴⁹	54	29	11	48		38	79	12	9	
4	243	59.2		12.5	286	15.5 ¹⁴⁴		22.9 ¹⁴⁹	52	28	08	43		39	77	12	12	
5	258	59.3	-12	13.3	300	48.9 ¹⁴⁴	+2	08.1 ¹⁴⁸	50	5	27	6	05	6	39	2	40	74
6	273	59.3	-12	14.2	315	22.4 ¹⁴⁵	+1	53.2 ¹⁴⁹	45	5	25	5	59	6	29	2	43	68
7	288	59.4		15.0	329	55.9 ¹⁴⁵		38.3 ¹⁴⁹	40	22	54	21		44	65	13	22	
8	303	59.5		15.9	344	29.4 ¹⁴⁵		23.4 ¹⁴⁹	35	19	49	15		46	61	13	26	
9	318	59.5		16.7	359	03.0 ¹⁴⁶	+1	08.6 ¹⁴⁸	30	16	44	6	09	47	58	13	29	
10	333	59.6		17.6	13	36.6 ¹⁴⁶	+0	53.7 ¹⁴⁹	20	10	36	5	59	50	52	14	34	
11	348	59.7	-12	18.5	28	10.2 ¹⁴⁶	+0	38.9 ¹⁴⁸	10 N	5	03	5	28	5	49	2	52	47
12	3	59.7	-12	19.3	42	43.8 ¹⁴⁶	+0	24.0 ¹⁴⁹	0	4	55	5	19	5	41	2	53	44
13	18	59.8		20.2	57	17.5 ¹⁴⁷	+0	09.2 ¹⁴⁸	10 S	45	10	32		55	39	15	47	
14	33	59.9		21.0	71	51.1 ¹⁴⁶	-0	05.6 ¹⁴⁸	20	33	5	00	22	2	57	35	15	52
15	48	59.9		21.9	86	24.8 ¹⁴⁷		20.5 ¹⁴⁹	30	17	4	46	11	3	00	29	15	58
16	64	00.0		22.7	100	58.5 ¹⁴⁷		35.3 ¹⁴⁸	35	4	07	38	5	05	01	26	15	61
17	79	00.1	-12	23.6	115	32.2 ¹⁴⁷	-0	50.1 ¹⁴⁸	40	3	55	4	29	4	58	3	03	22
18	94	00.1	-12	24.4	130	06.0 ¹⁴⁸	-1	04.8 ¹⁴⁷	45	3	40	4	18	4	49	3	04	19
19	109	00.2		25.3	144	39.7 ¹⁴⁷		19.6 ¹⁴⁸	50	20	4	04	39		07	14	16	73
20	124	00.3		26.2	159	13.5 ¹⁴⁸		34.3 ¹⁴⁷	52	3	10	3	57	34	08	11	16	76
21	139	00.3		27.0	173	47.3 ¹⁴⁸	-1	49.1 ¹⁴⁸	54	2	59	49	29		09	9	16	79
22	154	00.4		27.9	188	21.0 ¹⁴⁷	-2	03.8 ¹⁴⁷	56	46	41	23		10	7	16	82	
23	169	00.5		28.7	202	54.8 ¹⁴⁸		18.5 ¹⁴⁷	58	31	31	16		11	4	17	84	
24	184	00.5	-12	29.6	217	28.7 ¹⁴⁹	-2	33.2 ¹⁴⁷	60 S	2	12	3	20	4	09	3	12	1

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 21 ^h 41 ^m 4		Mag: -4.0 PMG: 14 ^h 08 ^m		Mag: +1.5 PMG: 12 ^h 31 ^m		Mag: -2.2 PMG: 16 ^h 52 ^m		Mag: +1.1 PMG: 9 ^h 02 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	33	45.3	148	14.9	-22	54.8	171	58.8	-16	09.8	106	31.3	-22	50.6	224	09.1	+6	24.1
1	48	47.8	163	14.1		55.4	186	59.5		10.4	121	33.4		50.6	239	11.4		24.0
2	63	50.2	178	13.4		56.0	202	00.3		10.9	136	35.5		50.5	254	13.6		23.9
3	78	52.7	193	12.6		56.6	217	01.0		11.4	151	37.6		50.5	269	15.8		23.8
4	93	55.2	208	11.8		57.2	232	01.7		12.0	166	39.7		50.5	284	18.0		23.7
5	108	57.6	223	11.1	-22	57.8	247	02.5	-16	12.5	181	41.8	-22	50.4	299	20.3	+6	23.6
6	124	00.1	238	10.3	-22	58.4	262	03.2	-16	13.1	196	43.9	-22	50.4	314	22.5	+6	23.5
7	139	02.6	253	09.6		59.0	277	04.0		13.6	211	46.0		50.3	329	24.7		23.4
8	154	05.0	268	08.8	-22	59.6	292	04.7		14.1	226	48.1		50.3	344	26.9		23.3
9	169	07.5	283	08.1	-23	00.3	307	05.5		14.7	241	50.2		50.3	359	29.2		23.3
10	184	09.9	298	07.3		00.9	322	06.2		15.2	256	52.3		50.2	14	31.4		23.2
11	199	12.4	313	06.6	-23	01.5	337	06.9	-16	15.7	271	54.4	-22	50.2	29	33.6	+6	23.1
12	214	14.9	328	05.8	-23	02.1	352	07.7	-16	16.3	286	56.5	-22	50.1	44	35.8	+6	23.0
13	229	17.3	343	05.0		02.7	7	08.4		16.8	301	58.6		50.1	59	38.1		22.9
14	244	19.8	358	04.3		03.3	22	09.2		17.4	317	00.7		50.1	74	40.3		22.8
15	259	22.3	13	03.5		03.9	37	09.9		17.9	332	02.8		50.0	89	42.5		22.7
16	274	24.7	28	02.8		04.4	52	10.7		18.4	347	04.9		50.0	104	44.7		22.6
17	289	27.2	43	02.0	-23	05.0	67	11.4	-16	19.0	2	07.0	-22	50.0	119	47.0	+6	22.5
18	304	29.7	58	01.2	-23	05.6	82	12.1	-16	19.5	17	09.1	-22	49.9	134	49.2	+6	22.4
19	319	32.1	73	00.5		06.2	97	12.9		20.0	32	11.2		49.9	149	51.4		22.3
20	334	34.6	87	59.7		06.8	112	13.6		20.6	47	13.3		49.8	164	53.6		22.2
21	349	37.1	102	59.0		07.4	127	14.4		21.1	62	15.4		49.8	179	55.9		22.1
22	4	39.5	117	58.2		08.0	142	15.1		21.6	77	17.5		49.8	194	58.1		22.0
23	19	42.0	132	57.4		08.6	157	15.8		22.2	92	19.6		49.7	210	00.3		22.0
24	34	44.4	147	56.7	-23	09.2	172	16.6	-16	22.7	107	21.7	-22	49.7	225	02.5	+6	21.9
Dif	—		-8		-6		+7		-5		+21		0		+22		-1	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16 ^h 1 PMG: 11 ^h 43 ^m 9			Edad: 26 ^d 7 PHE { 4 ^h : 56 ^s 3 12 ^h : 56 ^s 1 20 ^h : 55 ^s 9 PMG: 9 ^h 47 ^m R°: 43 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	h m	h m	h m	h m		
0	184	00.5	-12	29.6	217	28.7	-2	33.2	60 N	16 19	17 03	17 52	4 03	87	15 12	2		
1	199	00.6		30.4	232	02.5 ¹⁴⁸	-2	47.8 ¹⁴⁶	58	26	07	53	4 01	84	16	4		
2	214	00.7		31.3	246	36.3 ¹⁴⁸	-3	02.4 ¹⁴⁶	56	32	11	54	3 59	81	19	7		
3	229	00.7		32.1	261	10.1 ¹⁴⁸		17.0 ¹⁴⁶	54	38	14	56	57	78	21	1		
4	244	00.8		33.0	275	43.9 ¹⁴⁸		31.6 ¹⁴⁶	52	42	17	57	56	75	24	13		
5	259	00.9	-12	33.8	290	17.8 ¹⁴⁹	-3	46.2 ¹⁴⁶	50	16 47	17 20	17 58	3 54	74	15 26	15		
6	274	00.9	-12	34.7	304	51.6 ¹⁴⁸	-4	00.7 ¹⁴⁵	45	16 57	17 27	18 01	3 51	69	15 31	20		
7	289	01.0		35.5	319	25.4 ¹⁴⁸		15.2 ¹⁴⁵	40	17 05	32	04	49	64	35	24		
8	304	01.0		36.4	333	59.3 ¹⁴⁹		29.7 ¹⁴⁵	35	12	38	07	47	61	39	27		
9	319	01.1		37.2	348	33.1 ¹⁴⁸		44.2 ¹⁴⁵	30	18	42	10	45	58	42	30		
10	334	01.2		38.1	3	07.0 ¹⁴⁹	-4	58.6 ¹⁴⁴	20	29	17 51	17	42	52	48	35		
11	349	01.2	-12	38.9	17	40.8 ¹⁴⁸	-5	13.0 ¹⁴⁴	10 N	17 38	18 00	18 25	3 39	48	15 53	39		
12	4	01.3	-12	39.8	32	14.6 ¹⁴⁸	-5	27.4 ¹⁴⁴	0	17 47	18 09	18 33	3 37	43	15 57	44		
13	19	01.3		40.6	46	48.5 ¹⁴⁹		41.7 ¹⁴³	10 S	17 57	18	43	34	39	16 02	48		
14	34	01.4		41.5	61	22.3 ¹⁴⁸	-5	56.0 ¹⁴³	20	18 06	29	18 56	32	34	07	52		
15	49	01.5		42.3	75	56.1 ¹⁴⁸	-6	10.2 ¹⁴²	30	18	43	19 12	29	29	13	57		
16	64	01.5		43.2	90	29.9 ¹⁴⁸		24.5 ¹⁴³	35	25	18 51	23	27	26	16	61		
17	79	01.6	-12	44.0	105	03.7 ¹⁴⁸	-6	38.7 ¹⁴²	40	18 32	19 01	19 36	3 25	23	16 20	64		
18	94	01.6	-12	44.9	119	37.5 ¹⁴⁸	-6	52.8 ¹⁴¹	45	18 41	19 13	19 51	3 23	19	16 24	68		
19	109	01.7		45.7	134	11.3 ¹⁴⁸	-7	06.9 ¹⁴¹	50	52	27	20 12	21	14	29	74		
20	124	01.7		46.6	148	45.0 ¹⁴⁷		21.0 ¹⁴¹	52	18 57	35	22	19	13	32	75		
21	139	01.8		47.4	163	18.8 ¹⁴⁸		35.0 ¹⁴⁰	54	19 03	42	34	18	10	35	78		
22	154	01.9		48.3	177	52.5 ¹⁴⁷	-7	49.0 ¹⁴⁰	56	09	19 51	20 47	17	7	38	80		
23	169	01.9		49.1	192	26.3 ¹⁴⁸	-8	03.0 ¹⁴⁰	58	16	20 02	21 04	15	5	41	84		
24	184	02.0	-12	49.9	207	00.0 ¹⁴⁷	-8	16.9 ¹³⁹	60 S	19 24	20 13	21 24	3 13	2	16 45	87		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 21 ^h 37 ^m 5		Mag: -4.0 PMG: 14 ^h 09 ^m				Mag: +1.5 PMG: 12 ^h 30 ^m				Mag: -2.2 PMG: 16 ^h 48 ^m				Mag: +1.1 PMG: 8 ^h 58 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	34	44.4	147	56.7	-23	09.2	172	16.6	-16	22.7	107	21.7	-22	49.7	225	02.5	+6	21.9
1	49	46.9	162	55.9		09.8	187	17.3		23.2	122	23.8		49.6	240	04.8		21.8
2	64	49.4	177	55.1		10.3	202	18.1		23.8	137	25.9		49.6	255	07.0		21.7
3	79	51.8	192	54.4		10.9	217	18.8		24.3	152	28.0		49.6	270	09.2		21.6
4	94	54.3	207	53.6		11.5	232	19.5		24.8	167	30.1		49.5	285	11.4		21.5
5	109	56.8	222	52.8	-23	12.1	247	20.3	-16	25.4	182	32.2	-22	49.5	300	13.7	+6	21.4
6	124	59.2	237	52.1	-23	12.7	262	21.0	-16	25.9	197	34.3	-22	49.5	315	15.9	+6	21.3
7	140	01.7	252	51.3		13.3	277	21.8		26.4	212	36.3		49.4	330	18.1		21.2
8	155	04.2	267	50.5		13.8	292	22.5		27.0	227	38.4		49.4	345	20.4		21.1
9	170	06.6	282	49.8		14.4	307	23.2		27.5	242	40.5		49.3	0	22.6		21.0
10	185	09.1	297	49.0		15.0	322	24.0		28.0	257	42.6		49.3	15	24.8		20.9
11	200	11.5	312	48.2	-23	15.6	337	24.7	-16	28.6	272	44.7	-22	49.3	30	27.0	+6	20.9
12	215	14.0	327	47.5	-23	16.1	352	25.4	-16	29.1	287	46.8	-22	49.2	45	29.3	+6	20.8
13	230	16.5	342	46.7		16.7	7	26.2		29.6	302	48.9		49.2	60	31.5		20.7
14	245	18.9	357	45.9		17.3	22	26.9		30.2	317	51.0		49.1	75	33.7		20.6
15	260	21.4	12	45.2		17.9	37	27.6		30.7	332	53.1		49.1	90	36.0		20.5
16	275	23.9	27	44.4		18.4	52	28.4		31.2	347	55.2		49.1	105	38.2		20.4
17	290	26.3	42	43.6	-23	19.0	67	29.1	-16	31.8	2	57.3	-22	49.0	120	40.4	+6	20.3
18	305	28.8	57	42.9	-23	19.6	82	29.9	-16	32.3	17	59.4	-22	49.0	135	42.6	+6	20.2
19	320	31.3	72	42.1		20.1	97	30.6		32.8	33	01.5		48.9	150	44.9		20.1
20	335	33.7	87	41.3		20.7	112	31.3		33.3	48	03.6		48.9	165	47.1		20.0
21	350	36.2	102	40.5		21.3	127	32.1		33.9	63	05.6		48.9	180	49.3		19.9
22	5	38.7	117	39.8		21.8	142	32.8		34.4	78	07.7		48.8	195	51.6		19.8
23	20	41.1	132	39.0		22.4	157	33.5		34.9	93	09.8		48.8	210	53.8		19.8
24	35	43.6	147	38.2	-23	22.9	172	34.3	-16	35.5	108	11.9	-22	48.8	225	56.0	+6	19.7
Dif	—		-8		-6		+7		-5		+21		0		+22		-1	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16 ^h 1 PMG: 11 ^h 43 ^m 8			Edad: 27 ^d 7 PHE { 4 ^h : 55 ^m 8 12 ^h : 55 ^m 6 20 ^h : 55 ^m 5 R°: 45 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h	m	h	m	h	m	m	
0	184	02.0	-12 49.9	207	00.0	-8 16.9	60 N	5 37	6 26	7 10	5 30	89	15 14	2	
1	199	02.0	50.8	221	33.7 ¹⁴⁷	30.8 ¹³⁹	58	36	22	7 03	25 84	20	7		
2	214	02.1	51.6	236	07.4 ¹⁴⁷	44.6 ¹³⁸	56	34	18	6 57	20 81	26	10		
3	229	02.1	52.5	250	41.0 ¹⁴⁶	-8 58.4 ¹³⁸	54	33	14	51	15 78	32	12		
4	244	02.2	53.3	265	14.7 ¹⁴⁷	-9 12.1 ¹³⁷	52	32	11	46	11 76	37	15		
5	259	02.2	-12 54.2	279	48.3 ¹⁴⁶	-9 25.8 ¹³⁷	50	5 30	6 08	6 42	5 08	73	15 41	17	
6	274	02.3	-12 55.0	294	21.9 ¹⁴⁶	-9 39.4 ¹³⁶	45	5 27	6 02	6 32	5 00	68	15 51	22	
7	289	02.4	55.8	308	55.5 ¹⁴⁶	-9 53.0 ¹³⁶	40	24	5 56	24	4 53	64	15 59	26	
8	304	02.4	56.7	323	29.1 ¹⁴⁶	-10 06.6 ¹³⁶	35	21	51	17	48 60	16 06	29		
9	319	02.5	57.5	338	02.6 ¹⁴⁵	20.1 ¹³⁵	30	18	46	6 10	43 57	12	32		
10	334	02.5	58.4	352	36.1 ¹⁴⁵	33.5 ¹³⁴	20	11	37	5 59	34 53	23	36		
11	349	02.6	-12 59.2	7	09.6 ¹⁴⁵	-10 46.9 ¹³⁴	10 N	5 03	5 28	5 50	4 27	48	16 32	41	
12	4	02.6	-13 00.1	21	43.1 ¹⁴⁵	-11 00.2 ¹³³	0	4 55	5 19	5 40	4 20	44	16 41	45	
13	19	02.7	00.9	36	16.5 ¹⁴⁴	13.5 ¹³³	10 S	44	5 10	31	13 40	50	49		
14	34	02.7	01.7	50	50.0 ¹⁴⁵	26.7 ¹³²	20	32	4 58	21	4 06	36	16 59	53	
15	49	02.8	02.6	65	23.4 ¹⁴⁴	39.9 ¹³²	30	15	45	09	3 58	31	17 10	58	
16	64	02.8	03.4	79	56.7 ¹⁴³	-11 53.0 ¹³¹	35	4 04	36	5 03	53 28	17	60		
17	79	02.9	-13 04.3	94	30.1 ¹⁴⁴	-12 06.0 ¹³⁰	40	3 52	4 26	4 55	3 48	25	17 24	64	
18	94	02.9	-13 05.1	109	03.4 ¹⁴³	-12 19.0 ¹³⁰	45	3 36	4 14	4 46	3 42	21	17 32	68	
19	109	03.0	05.9	123	36.6 ¹⁴²	31.9 ¹²⁹	50	15	4 00	35	35 16	43	73		
20	124	03.0	06.8	138	09.9 ¹⁴³	44.8 ¹²⁹	52	3 05	3 52	30	32 13	47	76		
21	139	03.1	07.6	152	43.1 ¹⁴²	-12 57.6 ¹²⁸	54	2 53	45	24	28 11	53	78		
22	154	03.1	08.4	167	16.3 ¹⁴²	-13 10.3 ¹²⁷	56	40	36	18	24 9	17 58	82		
23	169	03.2	09.3	181	49.4 ¹⁴¹	23.0 ¹²⁷	58	23	25	11	20 5	18 05	85		
24	184	03.2	-13 10.1	196	22.6 ¹⁴²	-13 35.6 ¹²⁶	60 S	2 03	3 13	4 03	3 15	2	18 12	90	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 21 ^h 33 ^m 6			Mag: -4.0 PMG: 14 ^h 10 ^m			Mag: +1.5 PMG: 12 ^h 29 ^m			Mag: -2.2 PMG: 16 ^h 45 ^m			Mag: +1.1 PMG: 8 ^h 55 ^m		
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°
0	35	43.6	147 38.2	-23 22.9	172 34.3	-16 35.5	108 11.9	-22 48.8	225 56.0	+6 19.7					
1	50	46.0	162 37.5	23.5	187 35.0	36.0	123 14.0	48.7	240 58.2	19.6					
2	65	48.5	177 36.7	24.1	202 35.7	36.5	138 16.1	48.7	256 00.5	19.5					
3	80	51.0	192 35.9	24.6	217 36.5	37.1	153 18.2	48.6	271 02.7	19.4					
4	95	53.4	207 35.1	25.2	232 37.2	37.6	168 20.3	48.6	286 04.9	19.3					
5	110	55.9	222 34.4	-23 25.7	247 37.9	-16 38.1	183 22.4	-22 48.6	301 07.2	+6 19.2					
6	125	58.4	237 33.6	-23 26.3	262 38.7	-16 38.6	198 24.4	-22 48.5	316 09.4	+6 19.1					
7	141	00.8	252 32.8	26.8	277 39.4	39.2	213 26.5	48.5	331 11.6	19.0					
8	156	03.3	267 32.0	27.4	292 40.1	39.7	228 28.6	48.4	346 13.8	18.9					
9	171	05.8	282 31.3	27.9	307 40.9	40.2	243 30.7	48.4	1 16.1	18.8					
10	186	08.2	297 30.5	28.5	322 41.6	40.7	258 32.8	48.4	16 18.3	18.8					
11	201	10.7	312 29.7	-23 29.0	337 42.3	-16 41.3	273 34.9	-22 48.3	31 20.5	+6 18.7					
12	216	13.1	327 28.9	-23 29.6	352 43.0	-16 41.8	288 37.0	-22 48.3	46 22.8	+6 18.6					
13	231	15.6	342 28.1	30.1	7 43.8	42.3	303 39.1	48.2	61 25.0	18.5					
14	246	18.1	357 27.4	30.7	22 44.5	42.9	318 41.1	48.2	76 27.2	18.4					
15	261	20.5	12 26.6	31.2	37 45.2	43.4	333 43.2	48.2	91 29.5	18.3					
16	276	23.0	27 25.8	31.8	52 46.0	43.9	348 45.3	48.1	106 31.7	18.2					
17	291	25.5	42 25.0	-23 32.3	67 46.7	-16 44.4	3 47.4	-22 48.1	121 33.9	+6 18.1					
18	306	27.9	57 24.2	-23 32.8	82 47.4	-16 45.0	18 49.5	-22 48.0	136 36.1	+6 18.0					
19	321	30.4	72 23.5	33.4	97 48.2	45.5	33 51.6	48.0	151 38.4	17.9					
20	336	32.9	87 22.7	33.9	112 48.9	46.0	48 53.7	47.9	166 40.6	17.9					
21	351	35.3	102 21.9	34.5	127 49.6	46.5	63 55.7	47.9	181 42.8	17.8					
22	6	37.8	117 21.1	35.0	142 50.3	47.1	78 57.8	47.9	196 45.1	17.7					
23	21	40.3	132 20.3	35.5	157 51.1	47.6	93 59.9	47.8	211 47.3	17.6					
24	36	42.7	147 19.6	-23 36.1	172 51.8	-16 48.1	109 02.0	-22 47.8	226 49.5	+6 17.5					
Dif	—		-8	-5	+7	-5	+21	0	+22	-1					

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 16:1 PMG: 11 ^h 43 ^m 7			Edad: 28 ^d 7 PHE { SD: 15:1 PMG: 11 ^h 15 ^m R°: 46 ^m 4 ^h : 55/3 12 ^h : 55/2 20 ^h : 55/1														
	hG ☉	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	03.2	-13	10.1	196	22.6	-13	35.6	60 N	16 14	16 58	17 47	6 59 90	15 16 5				
1	199	03.3		10.9	210	55.6 ¹⁴⁰	-13	48.2 ¹²⁶	58	21	17 03	49	49 86	27 9				
2	214	03.3		11.8	225	28.7 ¹⁴¹	-14	00.7 ¹²⁵	56	28	07	50	41 81	36 13				
3	229	03.4		12.6	240	01.7 ¹⁴⁰		13.1 ¹²⁴	54	33	10	52	33 78	44 16				
4	244	03.4		13.5	254	34.7 ¹⁴⁰		25.4 ¹²³	52	39	14	53	27 75	52 18				
5	259	03.5	-13	14.3	269	07.6 ¹³⁹	-14	37.7 ¹²³	50	16 43	17 17	17 55	6 21 73	15 58 21				
6	274	03.5	-13	15.1	283	40.5 ¹³⁹	-14	49.9 ¹²²	45	16 54	17 24	17 58	6 08 68	16 13 25				
7	289	03.5		16.0	298	13.4 ¹³⁹	-15	02.0 ¹²¹	40	17 02	30	18 02	5 57 64	25 29				
8	304	03.6		16.8	312	46.2 ¹³⁸		14.1 ¹²¹	35	10	36	05	48 61	35 32				
9	319	03.6		17.6	327	19.0 ¹³⁸		26.1 ¹²⁰	30	16	41	09	40 58	44 35				
10	334	03.7		18.5	341	51.8 ¹³⁸		38.0 ¹¹⁹	20	27	50	16	27 53	16 59 40				
11	349	03.7	-13	19.3	356	24.5 ¹³⁷	-15	49.9 ¹¹⁹	10 N	17 38	17 59	18 24	5 15 49	17 13 43				
12	4	03.8	-13	20.1	10	57.1 ¹³⁶	-16	01.6 ¹¹⁷	0	17 47	18 08	18 33	5 04 46	17 26 46				
13	19	03.8		21.0	25	29.8 ¹³⁷		13.3 ¹¹⁷	10 S	17 57	19	44	4 53 42	39 49				
14	34	03.9		21.8	40	02.4 ¹³⁶		24.9 ¹¹⁶	20	18 07	30	18 57	42 38	17 52 54				
15	49	03.9		22.6	54	34.9 ¹³⁵		36.5 ¹¹⁶	30	19	44	19 14	29 33	18 08 58				
16	64	03.9		23.4	69	07.4 ¹³⁵		47.9 ¹¹⁴	35	26	18 53	25	21 31	17 61				
17	79	04.0	-13	24.3	83	39.9 ¹³⁵	-16	59.3 ¹¹⁴	40	18 35	19 03	19 38	4 13 27	18 28 64				
18	94	04.0	-13	25.1	98	12.3 ¹³⁴	-17	10.6 ¹¹³	45	18 44	19 16	19 55	4 03 23	18 40 68				
19	109	04.1		25.9	112	44.7 ¹³⁴		21.8 ¹¹²	50	18 55	31	20 16	3 51 19	18 56 72				
20	124	04.1		26.8	127	17.0 ¹³³		33.0 ¹¹²	52	19 01	39	27	45 17	19 03 75				
21	139	04.2		27.6	141	49.3 ¹³³		44.0 ¹¹⁰	54	07	47	39	39 14	11 77				
22	154	04.2		28.4	156	21.6 ¹³³	-17	55.0 ¹¹⁰	56	13	19 56	20 54	33 11	20 81				
23	169	04.2		29.2	170	53.8 ¹³²	-18	05.9 ¹⁰⁹	58	21	20 07	21 11	25 8	30 85				
24	184	04.3	-13	30.1	185	25.9 ¹³¹	-18	16.7 ¹⁰⁸	60 S	19 29	20 20	21 33	3 17 3	19 42 90				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 21 ^h 29 ^m 6		Mag: -4.0 PMG: 14 ^h 11 ^m			Mag: +1.5 PMG: 12 ^h 28 ^m			Mag: -2.2 PMG: 16 ^h 42 ^m			Mag: +1.1 PMG: 8 ^h 51 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	36	42.7	147	19.6	-23	36.1	172	51.8	-16	48.1	109	02.0	-22	47.8	226	49.5	+6	17.5
1	51	45.2	162	18.8		36.6	187	52.5		48.6	124	04.1		47.7	241	51.8		17.4
2	66	47.6	177	18.0		37.1	202	53.2		49.2	139	06.2		47.7	256	54.0		17.3
3	81	50.1	192	17.2		37.7	217	54.0		49.7	154	08.2		47.7	271	56.2		17.2
4	96	52.6	207	16.4		38.2	232	54.7		50.2	169	10.3		47.6	286	58.5		17.1
5	111	55.0	222	15.6	-23	38.7	247	55.4	-16	50.7	184	12.4	-22	47.6	302	00.7	+6	17.0
6	126	57.5	237	14.9	-23	39.2	262	56.2	-16	51.2	199	14.5	-22	47.5	317	02.9	+6	17.0
7	142	00.0	252	14.1		39.8	277	56.9		51.8	214	16.6		47.5	332	05.2		16.9
8	157	02.4	267	13.3		40.3	292	57.6		52.3	229	18.7		47.5	347	07.4		16.8
9	172	04.9	282	12.5		40.8	307	58.3		52.8	244	20.7		47.4	2	09.6		16.7
10	187	07.4	297	11.7		41.3	322	59.1		53.3	259	22.8		47.4	17	11.8		16.6
11	202	09.8	312	10.9	-23	41.9	337	59.8	-16	53.9	274	24.9	-22	47.3	32	14.1	+6	16.5
12	217	12.3	327	10.1	-23	42.4	353	00.5	-16	54.4	289	27.0	-22	47.3	47	16.3	+6	16.4
13	232	14.7	342	09.4		42.9	8	01.2		54.9	304	29.1		47.3	62	18.5		16.3
14	247	17.2	357	08.6		43.4	23	01.9		55.4	319	31.1		47.2	77	20.8		16.2
15	262	19.7	12	07.8		43.9	38	02.7		55.9	334	33.2		47.2	92	23.0		16.1
16	277	22.1	27	07.0		44.4	53	03.4		56.5	349	35.3		47.1	107	25.2		16.1
17	292	24.6	42	06.2	-23	45.0	68	04.1	-16	57.0	4	37.4	-22	47.1	122	27.5	+6	16.0
18	307	27.1	57	05.4	-23	45.5	83	04.8	-16	57.5	19	39.5	-22	47.0	137	29.7	+6	15.9
19	322	29.5	72	04.6		46.0	98	05.6		58.0	34	41.5		47.0	152	31.9		15.8
20	337	32.0	87	03.8		46.5	113	06.3		58.5	49	43.6		47.0	167	34.2		15.7
21	352	34.5	102	03.0		47.0	128	07.0		59.1	64	45.7		46.9	182	36.4		15.6
22	7	36.9	117	02.3		47.5	143	07.7	-16	59.6	79	47.8		46.9	197	38.6		15.5
23	22	39.4	132	01.5		48.0	158	08.5	-17	00.1	94	49.9		46.8	212	40.9		15.4
24	37	41.9	147	00.7	-23	48.5	173	09.2	-17	00.6	109	51.9	-22	46.8	227	43.1	+6	15.3
Dif	—		-8		-5		+7		-5		+21		0		+22		-1	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16 ^h 1			Edad: 0 ^d 0	PHE {										
	PMG: 11 ^h 43 ^m 7					SD: 15 ^h 0		SD: 12 ^h 01 ^m			R ^o : 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	184	04.3	-13 30.1	185	25.9	-18 16.7		60 N	5 42	6 31	7 15	8 29	90	15 21	9
1	199	04.3		199	58.0 ¹³¹	27.4 ¹⁰⁷		58	40	26	08	15	84	36	14
2	214	04.4		214	30.1 ¹³¹	38.0 ¹⁰⁶		56	38	22	7 01	8 02	80	15 49	18
3	229	04.4		229	02.1 ¹³⁰	48.5 ¹⁰⁵		54	36	18	6 55	7 51	77	16 00	22
4	244	04.4		243	34.1 ¹³⁰	-18 59.0 ¹⁰⁵		52	35	15	50	42	74	10	25
5	259	04.5	-13 34.2	258	06.0 ¹²⁹	-19 09.3 ¹⁰³		50	5 33	6 11	6 45	7 34	71	16 19	27
6	274	04.5	-13 35.0	272	37.9 ¹²⁹	-19 19.6 ¹⁰³		45	5 30	6 04	6 35	7 16	66	16 38	31
7	289	04.5		287	09.8 ¹²⁹	29.8 ¹⁰²		40	26	5 58	26	7 01	63	16 54	34
8	304	04.6		301	41.6 ¹²⁸	39.9 ¹⁰¹		35	23	52	18	6 49	60	17 07	37
9	319	04.6		316	13.3 ¹²⁷	49.8 ⁹⁹		30	19	47	12	38	58	19	39
10	334	04.7		330	45.0 ¹²⁷	-19 59.7 ⁹⁹		20	12	38	6 00	20	54	39	42
11	349	04.7	-13 39.2	345	16.6 ¹²⁶	-20 09.5 ⁹⁸		10 N	5 03	5 28	5 50	6 04	51	17 56	46
12	4	04.7	-13 40.0	359	48.3 ¹²⁷	-20 19.3 ⁹⁸		0	4 54	5 19	5 40	5 50	47	18 12	49
13	19	04.8		14	19.8 ¹²⁵	28.9 ⁹⁶		10 S	43	5 09	30	35	44	28	52
14	34	04.8		28	51.3 ¹²⁵	38.4 ⁹⁵		20	30	4 57	20	20	40	18	46
15	49	04.8		43	22.8 ¹²⁵	47.8 ⁹⁴		30	13	43	08	5 02	37	19	06
16	64	04.9		57	54.2 ¹²⁴	-20 57.1 ⁹³		35	4 02	34	5 01	4 52	34	18	60
17	79	04.9	-13 44.1	72	25.6 ¹²⁴	-21 06.3 ⁹²		40	3 49	4 24	4 52	4 40	32	19	32
18	94	04.9	-13 44.9	86	56.9 ¹²³	-21 15.4 ⁹¹		45	3 32	4 11	4 43	4 26	28	19	48
19	109	05.0		101	28.2 ¹²³	24.5 ⁹¹		50	10	3 56	31	10	23	20	08
20	124	05.0		115	59.4 ¹²²	33.4 ⁸⁹		52	3 00	48	26	4 02	21	18	72
21	139	05.0		130	30.6 ¹²²	42.2 ⁸⁸		54	2 48	40	20	3 53	19	28	75
22	154	05.1		145	01.7 ¹²¹	50.9 ⁸⁷		56	33	30	13	44	15	41	78
23	169	05.1		159	32.8 ¹²¹	-21 59.5 ⁸⁶		58	2 15	20	4 06	33	11	20	55
24	184	05.1	-13 49.8	174	03.9 ¹²¹	-22 08.0 ⁸⁵		60 S	1 53	3 07	3 57	3 20	7	21	12

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 21 ^h 25 ^m 7		Mag: -4.0 PMG: 14 ^h 13 ^m		Mag: +1.5 PMG: 12 ^h 27 ^m		Mag: -2.2 PMG: 16 ^h 38 ^m		Mag: +1.1 PMG: 8 ^h 48 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	37	41.9	147	00.7	-23 48.5	173 09.2	-17 00.6	109 51.9	-22 46.8	227 43.1	+6 15.3
1	52	44.3	161	59.9	49.0	188 09.9	01.1	124 54.0	46.8	242 45.3	15.3
2	67	46.8	176	59.1	49.5	203 10.6	01.7	139 56.1	46.7	257 47.6	15.2
3	82	49.2	191	58.3	50.0	218 11.3	02.2	154 58.2	46.7	272 49.8	15.1
4	97	51.7	206	57.5	50.5	233 12.1	02.7	170 00.2	46.6	287 52.0	15.0
5	112	54.2	221	56.7	-23 51.0	248 12.8	-17 03.2	185 02.3	-22 46.6	302 54.3	+6 14.9
6	127	56.6	236	55.9	-23 51.5	263 13.5	-17 03.7	200 04.4	-22 46.5	317 56.5	+6 14.8
7	142	59.1	251	55.1	52.0	278 14.2	04.2	215 06.5	46.5	332 58.7	14.7
8	158	01.6	266	54.3	52.5	293 14.9	04.8	230 08.5	46.5	348 01.0	14.6
9	173	04.0	281	53.5	53.0	308 15.7	05.3	245 10.6	46.4	3 03.2	14.5
10	188	06.5	296	52.7	53.5	323 16.4	05.8	260 12.7	46.4	18 05.5	14.5
11	203	09.0	311	52.0	-23 54.0	338 17.1	-17 06.3	275 14.8	-22 46.3	33 07.7	+6 14.4
12	218	11.4	326	51.2	-23 54.5	353 17.8	-17 06.8	290 16.9	-22 46.3	48 09.9	+6 14.3
13	233	13.9	341	50.4	55.0	8 18.5	07.3	305 18.9	46.3	63 12.2	14.2
14	248	16.4	356	49.6	55.5	23 19.2	07.9	320 21.0	46.2	78 14.4	14.1
15	263	18.8	11 48.8	56.0	56.0	38 20.0	08.4	335 23.1	46.2	93 16.6	14.0
16	278	21.3	26 48.0	56.5	56.5	53 20.7	08.9	350 25.1	46.1	108 18.9	13.9
17	293	23.7	41 47.2	-23 57.0	68 21.4	-17 09.4		5 27.2	-22 46.1	123 21.1	+6 13.8
18	308	26.2	56 46.4	-23 57.4	83 22.1	-17 09.9		20 29.3	-22 46.0	138 23.3	+6 13.7
19	323	28.7	71 45.6	57.9	98 22.8	10.4		35 31.4	46.0	153 25.6	13.7
20	338	31.1	86 44.8	58.4	113 23.5	11.0		50 33.4	46.0	168 27.8	13.6
21	353	33.6	101 44.0	58.9	128 24.3	11.5		65 35.5	45.9	183 30.0	13.5
22	8	36.1	116 43.2	59.4	143 25.0	12.0		80 37.6	45.9	198 32.3	13.4
23	23	38.5	131 42.4	-23 59.8	158 25.7	12.5		95 39.7	45.8	213 34.5	13.3
24	38	41.0	146 41.6	-24 00.3	173 26.4	-17 13.0		110 41.7	-22 45.8	228 36.7	+6 13.2
Dif	—		-8	-5	+7	-5		+21	0	+22	-1

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:1 PMG: 11 ^h 43 ^m 6			Edad: 1 ^d 0 SD: 14:9 PMG: 12 ^h 49 ^m	PHE { 4 ^h : 54/6 12 ^h : 54/5 20 ^h : 54/4 R°: 49 ^m										
	hG ☉	Dec				hG ☾			Dif	Dec	Dif	Civil	Náutico	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	184	05.1	-13 49.8	174	03.9	-22 08.0		60 N	16 08	16 53	17 42	9 59 86	15 30 17		
1	199	05.2		188	34.9 ¹²⁰		16.4 ⁸⁴	58	16	16 58	44	39 79	15 50 24		
2	214	05.2	51.5	203	05.8 ¹¹⁹	24.7 ⁸³		56	23	17 02	46	22 75	16 07 28		
3	229	05.2	52.3	217	36.7 ¹¹⁹	32.9 ⁸²		54	29	06	48	9 08 72	22 31		
4	244	05.3	53.1	232	07.6 ¹¹⁹	40.9 ⁸⁰		52	35	10	50	8 56 69	35 33		
5	259	05.3	-13 53.9	246	38.4 ¹¹⁸	-22 48.9 ⁸⁰		50	16 40	17 14	17 52	8 45 67	16 46 35		
6	274	05.3	-13 54.7	261	09.2 ¹¹⁸	-22 56.8 ⁷⁹		45	16 51	17 21	17 56	8 22 64	17 09 38		
7	289	05.4	55.5	275	39.9 ¹¹⁷	-23 04.5 ⁷⁷		40	17 00	28	18 00	8 04 61	28 41		
8	304	05.4	56.4	290	10.6 ¹¹⁷	12.1 ⁷⁶		35	07	34	03	7 49 59	44 42		
9	319	05.4	57.2	304	41.2 ¹¹⁶	19.7 ⁷⁶		30	14	39	07	36 57	17 58 44		
10	334	05.4	58.0	319	11.8 ¹¹⁶	27.1 ⁷⁴		20	26	49	15	7 14 54	18 21 46		
11	349	05.5	-13 58.8	333	42.3 ¹¹⁵	-23 34.4 ⁷³		10 N	17 37	17 59	18 24	6 55 51	18 42 48		
12	4	05.5	-13 59.6	348	12.8 ¹¹⁵	-23 41.6 ⁷²		0	17 47	18 08	18 33	6 37 49	19 01 50		
13	19	05.5	-14 00.4	2	43.3 ¹¹⁵	48.6 ⁷⁰		10 S	17 57	19	44	19 47	20 51		
14	34	05.5	01.2	17	13.7 ¹¹⁴	-23 55.6 ⁷⁰		20	18 08	31	18 58	6 00 45	19 40 54		
15	49	05.6	02.1	31	44.1 ¹¹⁴	-24 02.5 ⁶⁹		30	21	46	19 16	5 39 41	20 04 56		
16	64	05.6	02.9	46	14.5 ¹¹⁴	09.2 ⁶⁷		35	28	18 55	27	26 40	18 57		
17	79	05.6	-14 03.7	60	44.7 ¹¹²	-24 15.8 ⁶⁶		40	18 37	19 06	19 41	5 12 37	20 34 59		
18	94	05.7	-14 04.5	75	15.0 ¹¹³	-24 22.3 ⁶⁵		45	18 47	19 19	19 58	4 54 35	20 53 62		
19	109	05.7	05.3	89	45.2 ¹¹²	28.7 ⁶⁴		50	18 59	35	20 21	33 31	21 18 64		
20	124	05.7	06.1	104	15.4 ¹¹²	35.0 ⁶³		52	19 05	43	32	23 29	30 65		
21	139	05.7	06.9	118	45.5 ¹¹¹	41.1 ⁶¹		54	11	19 51	20 45	4 12 26	43 68		
22	154	05.8	07.7	133	15.7 ¹¹²	47.1 ⁶⁰		56	18	20 01	21 00	3 59 23	21 59 70		
23	169	05.8	08.5	147	45.7 ¹¹⁰	53.0 ⁵⁹		58	26	13	19	44 19	22 17 74		
24	184	05.8	-14 09.4	162	15.7 ¹¹⁰	-24 58.8 ⁵⁸		60 S	19 34	20 26	21 43	3 27 13	22 40 80		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 21 ^h 21 ^m 8		Mag: -4.0 PMG: 14 ^h 14 ^m		Mag: +1.5 PMG: 12 ^h 26 ^m		Mag: -2.2 PMG: 16 ^h 35 ^m		Mag: +1.1 PMG: 8 ^h 44 ^m						
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	°	'	°	°	'	°	'	°	'						
0	38	41.0	146	41.6	-24 00.3	173	26.4	-17 13.0	110	41.7	-22 45.8	228	36.7	+6 13.2	
1	53	43.5	161	40.8	00.8	188	27.1	13.5	125	43.8	45.7	243	39.0	13.1	
2	68	45.9	176	40.0	01.3	203	27.8	14.0	140	45.9	45.7	258	41.2	13.0	
3	83	48.4	191	39.2	01.8	218	28.6	14.6	155	47.9	45.7	273	43.5	13.0	
4	98	50.9	206	38.4	02.2	233	29.3	15.1	170	50.0	45.6	288	45.7	12.9	
5	113	53.3	221	37.6	-24 02.7	248	30.0	-17 15.6	185	52.1	-22 45.6	303	47.9	+6 12.8	
6	128	55.8	236	36.8	-24 03.2	263	30.7	-17 16.1	200	54.2	-22 45.5	318	50.2	+6 12.7	
7	143	58.2	251	36.0	03.6	278	31.4	16.6	215	56.2	45.5	333	52.4	12.6	
8	159	00.7	266	35.2	04.1	293	32.1	17.1	230	58.3	45.4	348	54.6	12.5	
9	174	03.2	281	34.4	04.6	308	32.8	17.6	246	00.4	45.4	3	56.9	12.4	
10	189	05.6	296	33.6	05.0	323	33.5	18.1	261	02.4	45.4	18	59.1	12.3	
11	204	08.1	311	32.8	-24 05.5	338	34.3	-17 18.6	276	04.5	-22 45.3	34	01.3	+6 12.3	
12	219	10.6	326	32.0	-24 06.0	353	35.0	-17 19.2	291	06.6	-22 45.3	49	03.6	+6 12.2	
13	234	13.0	341	31.2	06.4	8	35.7	19.7	306	08.6	45.2	64	05.8	12.1	
14	249	15.5	356	30.4	06.9	23	36.4	20.2	321	10.7	45.2	79	08.1	12.0	
15	264	18.0	11	29.5	07.4	38	37.1	20.7	336	12.8	45.1	94	10.3	11.9	
16	279	20.4	26	28.7	07.8	53	37.8	21.2	351	14.9	45.1	109	12.5	11.8	
17	294	22.9	41	27.9	-24 08.3	68	38.5	-17 21.7	6	16.9	-22 45.1	124	14.8	+6 11.7	
18	309	25.3	56	27.1	-24 08.7	83	39.2	-17 22.2	21	19.0	-22 45.0	139	17.0	+6 11.6	
19	324	27.8	71	26.3	09.2	98	39.9	22.7	36	21.1	45.0	154	19.2	11.6	
20	339	30.3	86	25.5	09.6	113	40.7	23.2	51	23.1	44.9	169	21.5	11.5	
21	354	32.7	101	24.7	10.1	128	41.4	23.7	66	25.2	44.9	184	23.7	11.4	
22	9	35.2	116	23.9	10.6	143	42.1	24.3	81	27.3	44.8	199	26.0	11.3	
23	24	37.7	131	23.1	11.0	158	42.8	24.8	96	29.3	44.8	214	28.2	11.2	
24	39	40.1	146	22.3	-24 11.5	173	43.5	-17 25.3	111	31.4	-22 44.7	229	30.4	+6 11.1	
Dif	—	—	-8	-5	+7	-5	+21	0	+22	-1	-1	-1	-1	-1	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'1 PMG: 11 ^h 43 ^m 6			Edad: 2 ^d 0 PHE { SD: 14'8 PMG: 13 ^h 38 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	184	05.8	-14	09.4	162	15.7	-24	58.8	5	46	6	35	7	20	11	25
1	199	05.8		10.2	176	45.7 ¹¹⁰	-25	04.5 ⁵⁷	44	30		12	10	58	67	16
2	214	05.9		11.0	191	15.7 ¹¹⁰		10.1 ⁵⁶	42	26	7	05		37	64	35
3	229	05.9		11.8	205	45.6 ¹⁰⁹		15.5 ⁵⁴	40	22	6	59	20	62	16	53
4	244	05.9		12.6	220	15.5 ¹⁰⁹		20.8 ⁵³	38	18	54		10	05	61	17
5	259	05.9	-14	13.4	234	45.4 ¹⁰⁹	-25	26.0 ⁵²	5	36	6	15	6	48	9	52
6	274	05.9	-14	14.2	249	15.2 ¹⁰⁸	-25	31.0 ⁵⁰	5	32	6	07	6	37	9	26
7	289	06.0		15.0	263	45.0 ¹⁰⁸		36.0 ⁵⁰	28	6	00	28	9	05	57	18
8	304	06.0		15.8	278	14.7 ¹⁰⁷		40.8 ⁴⁸	24	5	54	20	8	48	56	26
9	319	06.0		16.6	292	44.5 ¹⁰⁸		45.5 ⁴⁷	20	49	13		33	55		18
10	334	06.0		17.4	307	14.2 ¹⁰⁷		50.0 ⁴⁵	12	38	6	01	8	08	53	19
11	349	06.0	-14	18.2	321	43.9 ¹⁰⁷	-25	54.5 ⁴⁵	5	04	5	29	5	50	7	46
12	4	06.1	-14	19.0	336	13.5 ¹⁰⁶	-25	58.8 ⁴³	4	54	5	19	5	40	7	26
13	19	06.1		19.8	350	43.1 ¹⁰⁶	-26	03.0 ⁴²	43	5	08	30	7	06	50	20
14	34	06.1		20.6	5	12.7 ¹⁰⁶		07.1 ⁴¹	29	4	56	19	6	45	48	20
15	49	06.1		21.4	19	42.3 ¹⁰⁶		11.0 ³⁹	11	41		5	06	20	46	21
16	64	06.1		22.3	34	11.8 ¹⁰⁵		14.8 ³⁸	59	32	4	58	6	06	45	15
17	79	06.2	-14	23.1	48	41.3 ¹⁰⁵	-26	18.5 ³⁷	46	4	21	4	50	5	49	21
18	94	06.2	-14	23.9	63	10.8 ¹⁰⁵	-26	22.1 ³⁶	3	28	4	08	4	40	5	29
19	109	06.2		24.7	77	40.3 ¹⁰⁵		25.5 ³⁴	3	06	3	52	28	5	04	39
20	124	06.2		25.5	92	09.8 ¹⁰⁵		28.8 ³³	55	44		22	4	52	38	35
21	139	06.2		26.3	106	39.2 ¹⁰⁴		32.0 ³²	42	35	16		38	36	22	51
22	154	06.2		27.1	121	08.6 ¹⁰⁴		35.0 ³⁰	26	25	09		22	34	23	09
23	169	06.3		27.9	135	38.0 ¹⁰⁴		37.9 ²⁹	2	08	14	4	01	4	03	30
24	184	06.3	-14	28.7	150	07.4 ¹⁰⁴	-26	40.7 ²⁸	1	43	3	00	3	52	3	40

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 21 ^h 17 ^m 8		Mag: -4.0 PMG: 14 ^h 15 ^m		Mag: +1.5 PMG: 12 ^h 25 ^m		Mag: -2.2 PMG: 16 ^h 32 ^m		Mag: +1.1 PMG: 8 ^h 41 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	39	40.1	146	22.3	-24	11.5	173	43.5	-17	25.3
1	54	42.6	161	21.5		11.9	188	44.2		25.8
2	69	45.1	176	20.7		12.4	203	44.9		26.3
3	84	47.5	191	19.9		12.8	218	45.6		26.8
4	99	50.0	206	19.1		13.2	233	46.3		27.3
5	114	52.5	221	18.3	-24	13.7	248	47.0	-17	27.8
6	129	54.9	236	17.4	-24	14.1	263	47.7	-17	28.3
7	144	57.4	251	16.6		14.6	278	48.4		28.8
8	159	59.8	266	15.8		15.0	293	49.2		29.3
9	175	02.3	281	15.0		15.5	308	49.9		29.8
10	190	04.8	296	14.2		15.9	323	50.6		30.3
11	205	07.2	311	13.4	-24	16.3	338	51.3	-17	30.8
12	220	09.7	326	12.6	-24	16.8	353	52.0	-17	31.4
13	235	12.2	341	11.8		17.2	8	52.7		31.9
14	250	14.6	356	11.0		17.6	23	53.4		32.4
15	265	17.1	11	10.1		18.1	38	54.1		32.9
16	280	19.6	26	09.3		18.5	53	54.8		33.4
17	295	22.0	41	08.5	-24	18.9	68	55.5	-17	33.9
18	310	24.5	56	07.7	-24	19.4	83	56.2	-17	34.4
19	325	27.0	71	06.9		19.8	98	56.9		34.9
20	340	29.4	86	06.1		20.2	113	57.6		35.4
21	355	31.9	101	05.3		20.6	128	58.3		35.9
22	10	34.3	116	04.5		21.1	143	59.0		36.4
23	25	36.8	131	03.6		21.5	158	59.7		36.9
24	40	39.3	146	02.8	-24	21.9	174	00.4	-17	37.4
Dif	—		-8		-4		+7		-5	

h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	39	40.1	146	22.3	-24	11.5	173	43.5	-17	25.3	111	31.4	-22	44.7	229	30.4
1	54	42.6	161	21.5		11.9	188	44.2		25.8	126	33.5		44.7	244	32.7
2	69	45.1	176	20.7		12.4	203	44.9		26.3	141	35.5		44.7	259	34.9
3	84	47.5	191	19.9		12.8	218	45.6		26.8	156	37.6		44.6	274	37.2
4	99	50.0	206	19.1		13.2	233	46.3		27.3	171	39.7		44.6	289	39.4
5	114	52.5	221	18.3	-24	13.7	248	47.0	-17	27.8	186	41.7	-22	44.5	304	41.6
6	129	54.9	236	17.4	-24	14.1	263	47.7	-17	28.3	201	43.8	-22	44.5	319	43.9
7	144	57.4	251	16.6		14.6	278	48.4		28.8	216	45.8		44.4	334	46.1
8	159	59.8	266	15.8		15.0	293	49.2		29.3	231	47.9		44.4	349	48.4
9	175	02.3	281	15.0		15.5	308	49.9		29.8	246	50.0		44.3	4	50.6
10	190	04.8	296	14.2		15.9	323	50.6		30.3	261	52.0		44.3	19	52.8
11	205	07.2	311	13.4	-24	16.3	338	51.3	-17	30.8	276	54.1	-22	44.3	34	55.1
12	220	09.7	326	12.6	-24	16.8	353	52.0	-17	31.4	291	56.2	-22	44.2	49	57.3
13	235	12.2	341	11.8		17.2	8	52.7		31.9	306	58.2		44.2	64	59.5
14	250	14.6	356	11.0		17.6	23	53.4		32.4	322	00.3		44.1	80	01.8
15	265	17.1	11	10.1		18.1	38	54.1		32.9	337	02.4		44.1	95	04.0
16	280	19.6	26	09.3		18.5	53	54.8		33.4	352	04.4		44.0	110	06.3
17	295	22.0	41	08.5	-24	18.9	68	55.5	-17	33.9	7	06.5	-22	44.0	125	08.5
18	310	24.5	56	07.7	-24	19.4	83	56.2	-17	34.4	22	08.5	-22	43.9	140	10.7
19	325	27.0	71	06.9		19.8	98	56.9		34.9	37	10.6		43.9	155	13.0
20	340	29.4	86	06.1		20.2	113	57.6		35.4	52	12.7		43.9	170	15.2
21	355	31.9	101	05.3		20.6	128	58.3		35.9	67	14.7		43.8	185	17.5
22	10	34.3	116	04.5		21.1	143	59.0		36.4	82	16.8		43.8	200	19.7
23	25	36.8	131	03.6		21.5	158	59.7		36.9	97	18.8		43.7	215	22.0
24	40	39.3	146	02.8	-24	21.9	174	00.4	-17	37.4	112	20.9	-22	43.7	230	24.2
Dif	—		-8		-4		+7		-5		+21		0		+22	

UT	SOL		● LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16:1		Edad: 3 ^d 0		PHE {	4 ^h : 54:1										
	PMG: 11 ^h 43 ^m 6		SD: 14:7			12 ^h : 54:1										
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m	m		
0	184	06.3	-14	28.7	150	07.4	-26 40.7	60 N	16 03	16 48	17 38	12 36 47	16 21 59			
1	199	06.3		29.5	164	36.7 ¹⁰³	43.4	58	11	54	40	12 05 48	16 52 58			
2	214	06.3		30.3	179	06.1 ¹⁰⁴	45.9	56	19	16 58	42	11 41 49	17 16 56			
3	229	06.3		31.1	193	35.4 ¹⁰³	48.3	54	25	17 03	45	22 50	35 56			
4	244	06.3		31.9	208	04.7 ¹⁰³	50.6	52	31	07	47	11 06 50	17 51 55			
5	259	06.3	-14	32.7	222	34.1 ¹⁰⁴	-26 52.7	50	16 36	17 10	17 48	10 52 50	18 05 55			
6	274	06.4	-14	33.5	237	03.4 ¹⁰³	-26 54.7	45	16 48	17 18	17 53	10 24 50	18 33 54			
7	289	06.4		34.2	251	32.6 ¹⁰²	56.6	40	16 57	25	17 57	10 02 50	18 56 53			
8	304	06.4		35.0	266	01.9 ¹⁰³	-26 58.4	35	17 05	32	18 02	9 44 50	19 14 53			
9	319	06.4		35.8	280	31.2 ¹⁰³	-27 00.0	30	13	37	06	28 51	30 53			
10	334	06.4		36.6	295	00.5 ¹⁰³	-27 01.5	20	25	48	14	9 01 51	19 57 52			
11	349	06.4	-14	37.4	309	29.7 ¹⁰²	-27 02.8	10 N	17 36	17 58	18 23	8 38 51	20 20 51			
12	4	06.4	-14	38.2	323	59.0 ¹⁰³	-27 04.1	0	17 47	18 08	18 33	8 17 51	20 41 51			
13	19	06.4		39.0	338	28.2 ¹⁰²	05.2	10 S	17 58	19	45	7 56 50	21 03 50			
14	34	06.5		39.8	352	57.5 ¹⁰³	06.1	20	18 09	32	18 59	33 50	26 49			
15	49	06.5		40.6	7	26.7 ¹⁰²	07.0	30	23	48	19 18	7 06 51	21 53 48			
16	64	06.5		41.4	21	55.9 ¹⁰²	07.7	35	30	18 57	30	6 51 50	22 09 47			
17	79	06.5	-14	42.2	36	25.2 ¹⁰³	-27 08.2	40	18 39	19 08	19 44	6 33 50	22 27 47			
18	94	06.5	-14	43.0	50	54.4 ¹⁰²	-27 08.7	45	18 50	19 22	20 02	6 11 50	22 49 46			
19	109	06.5		43.8	65	23.7 ¹⁰³	09.0	50	19 02	39	25	5 43 50	23 17 45			
20	124	06.5		44.6	79	52.9 ¹⁰²	09.2	52	08	47	37	30 49	31 44			
21	139	06.5		45.4	94	22.2 ¹⁰³	09.2	54	15	19 56	20 51	5 14 49	23 47 42			
22	154	06.5		46.2	108	51.5 ¹⁰³	09.2	56	22	20 06	21 07	4 56 48	*** ** **			
23	169	06.5		46.9	123	20.7 ¹⁰²	09.0	58	30	18	27	33 48	*** ** **			
24	184	06.6	-14	47.7	137	50.0 ¹⁰³	-27 08.6	60 S	19 40	20 33	21 53	4 05 46	0 00 59			

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 21 ^h 13 ^m 9		Mag: -4.0 PMG: 14 ^h 17 ^m		Mag: +1.5 PMG: 12 ^h 23 ^m		Mag: -2.2 PMG: 16 ^h 28 ^m		Mag: +1.1 PMG: 8 ^h 37 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	40	39.3	146	02.8	-24	21.9	174	00.4	-17	37.4
1	55	41.7	161	02.0		22.3	189	01.1		37.9
2	70	44.2	176	01.2		22.8	204	01.8		38.4
3	85	46.7	191	00.4		23.2	219	02.5		38.9
4	100	49.1	205	59.6		23.6	234	03.2		39.4
5	115	51.6	220	58.7	-24	24.0	249	03.9	-17	39.9
6	130	54.1	235	57.9	-24	24.4	264	04.6	-17	40.4
7	145	56.5	250	57.1		24.8	279	05.3		40.9
8	160	59.0	265	56.3		25.2	294	06.0		41.4
9	176	01.5	280	55.5		25.7	309	06.7		41.9
10	191	03.9	295	54.7		26.1	324	07.4		42.4
11	206	06.4	310	53.8	-24	26.5	339	08.1	-17	42.9
12	221	08.8	325	53.0	-24	26.9	354	08.8	-17	43.4
13	236	11.3	340	52.2		27.3	9	09.5		43.9
14	251	13.8	355	51.4		27.7	24	10.2		44.4
15	266	16.2	10	50.6		28.1	39	10.9		44.9
16	281	18.7	25	49.7		28.5	54	11.6		45.4
17	296	21.2	40	48.9	-24	28.9	69	12.3	-17	45.9
18	311	23.6	55	48.1	-24	29.3	84	13.0	-17	46.4
19	326	26.1	70	47.3		29.7	99	13.7		46.9
20	341	28.6	85	46.5		30.1	114	14.4		47.4
21	356	31.0	100	45.6		30.5	129	15.1		47.9
22	11	33.5	115	44.8		30.9	144	15.8		48.4
23	26	35.9	130	44.0		31.3	159	16.5		48.9
24	41	38.4	145	43.2	-24	31.7	174	17.2	-17	49.4
Dif	—		-8		-4		+7		-5	
							+21		0	
									+22	
									-	

ALMANAQUE NÁUTICO PERSEIS

UT	SOL		 LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16 ^h 1		Edad: 5 ^d 0	PHE { 4 ^h : 54'1 12 ^h : 54'2 20 ^h : 54'2	SD: 14'7	PMG: 16 ^h 10 ^m			R°: 48 ^m						
	hG ☉	Dec								hG ☾	Dif	Dec	Dif	Civil	Náutico
h	°	'	°	'	°	'	°	h m	h m	h m	h m	m	h m	m	
0	184	06.6	-15	06.6	125	37.3	-26 21.8	60 N	15 58	16 44	17 34	13 47	13	18 39 87	
1	199	06.6		07.3	140	07.1 ¹⁰⁸	18.3 ³⁵	58	16 07	49	36	23 19		19 03 81	
2	214	06.6		08.1	154	36.9 ¹⁰⁸	14.6 ³⁷	56	14	54	39	13 04	22	22 76	
3	229	06.6		08.9	169	06.7 ¹⁰⁸	10.8 ³⁸	54	21	16 59	41	12 48	25	37 74	
4	244	06.6		09.7	183	36.6 ¹⁰⁹	06.9 ³⁹	52	27	17 03	43	34 28		19 51 71	
5	259	06.6	-15	10.5	198	06.5 ¹⁰⁹	-26 02.9 ⁴⁰	50	16 33	17 07	17 46	12 22	30	20 03 69	
6	274	06.6	-15	11.2	212	36.4 ¹⁰⁹	-25 58.7 ⁴²	45	16 45	17 16	17 51	11 56	34	20 28 64	
7	289	06.6		12.0	227	06.4 ¹¹⁰	54.5 ⁴²	40	16 55	23	17 55	36 37		20 47 62	
8	304	06.6		12.8	241	36.3 ¹⁰⁹	50.1 ⁴⁴	35	17 04	30	18 00	19 39		21 04 59	
9	319	06.6		13.6	256	06.4 ¹¹¹	45.5 ⁴⁶	30	11	36	04	11 04	41	18 57	
10	334	06.6		14.3	270	36.4 ¹¹⁰	40.9 ⁴⁶	20	24	47	13	10 40	43	21 42 53	
11	349	06.6	-15	15.1	285	06.5 ¹¹¹	-25 36.2 ⁴⁷	10 N	17 36	17 58	18 23	10 18	46	22 02 51	
12	4	06.6	-15	15.9	299	36.7 ¹¹²	-25 31.3 ⁴⁹	0	17 47	18 08	18 33	9 58	49	22 22 47	
13	19	06.6		16.7	314	06.9 ¹¹²	26.3 ⁵⁰	10 S	17 58	20	18 46	38 51		22 41 45	
14	34	06.6		17.4	328	37.1 ¹¹²	21.2 ⁵¹	20	18 10	33	19 00	9 16	53	23 01 42	
15	49	06.6		18.2	343	07.3 ¹¹²	15.9 ⁵³	30	24	49	20	8 51	56	24 39	
16	64	06.6		19.0	357	37.6 ¹¹³	10.6 ⁵³	35	32	18 59	32	36 58		28 34	
17	79	06.6	-15	19.7	12	07.9 ¹¹³	-25 05.1 ⁵⁵	40	18 41	19 11	19 47	8 19	60	23 54 34	
18	94	06.6	-15	20.5	26	38.3 ¹¹⁴	-24 59.5 ⁵⁶	45	18 52	19 25	20 05	7 58	63	*** ** *	
19	109	06.5		21.3	41	08.7 ¹¹⁴	53.8 ⁵⁷	50	19 06	43	30	32 67		0 02 34	
20	124	06.5		22.1	55	39.2 ¹¹⁵	48.0 ⁵⁸	52	12	19 51	42	19 69		15 32	
21	139	06.5		22.8	70	09.7 ¹¹⁵	42.1 ⁵⁹	54	19	20 01	20 56	7 05	70	29 31	
22	154	06.5		23.6	84	40.2 ¹¹⁵	36.0 ⁶¹	56	27	11	21 14	6 48	73	0 47 27	
23	169	06.5		24.4	99	10.8 ¹¹⁶	29.8 ⁶²	58	35	24	21 35	27 78		1 08 23	
24	184	06.5	-15	25.1	113	41.4 ¹¹⁶	-24 23.6 ⁶²	60 S	19 45	20 39	22 05	6 01	84	1 34 18	

UT	ARIES	VENUS		MARTE		JÚPITER		SATURNO	
	PMG 21 ^h 06 ^m 0	Mag: -4.0 PMG: 14 ^h 19 ^m		Mag: +1.5 PMG: 12 ^h 21 ^m		Mag: -2.2 PMG: 16 ^h 22 ^m		Mag: +1.1 PMG: 8 ^h 30 ^m	
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	°	'	°	'	°	'	°	'
0	42	37.6	145 23.4	-24 40.8	174 33.9	-18 01.2	113 59.5	-22 41.5	232 11.9
1	57	40.0	160 22.6	41.1	189 34.5	01.7	129 01.6	41.4	247 14.1
2	72	42.5	175 21.7	41.5	204 35.2	02.2	144 03.6	41.4	262 16.4
3	87	44.9	190 20.9	41.8	219 35.9	02.7	159 05.7	41.3	277 18.6
4	102	47.4	205 20.1	42.2	234 36.6	03.2	174 07.7	41.3	292 20.9
5	117	49.9	220 19.2	-24 42.6	249 37.3	-18 03.7	189 09.8	-22 41.2	307 23.1
6	132	52.3	235 18.4	-24 42.9	264 38.0	-18 04.2	204 11.8	-22 41.2	322 25.4
7	147	54.8	250 17.6	43.3	279 38.7	04.7	219 13.9	41.1	337 27.6
8	162	57.3	265 16.8	43.6	294 39.4	05.2	234 15.9	41.1	352 29.9
9	177	59.7	280 15.9	44.0	309 40.1	05.7	249 18.0	41.1	7 32.1
10	193	02.2	295 15.1	44.3	324 40.7	06.1	264 20.0	41.0	22 34.3
11	208	04.7	310 14.3	-24 44.7	339 41.4	-18 06.6	279 22.1	-22 41.0	37 36.6
12	223	07.1	325 13.4	-24 45.0	354 42.1	-18 07.1	294 24.1	-22 40.9	52 38.8
13	238	09.6	340 12.6	45.4	9 42.8	07.6	309 26.2	40.9	67 41.1
14	253	12.1	355 11.8	45.7	24 43.5	08.1	324 28.2	40.8	82 43.3
15	268	14.5	10 10.9	46.1	39 44.2	08.6	339 30.3	40.8	97 45.6
16	283	17.0	25 10.1	46.4	54 44.9	09.1	354 32.3	40.7	112 47.8
17	298	19.4	40 09.3	-24 46.8	69 45.6	-18 09.6	9 34.4	-22 40.7	127 50.1
18	313	21.9	55 08.5	-24 47.1	84 46.2	-18 10.0	24 36.4	-22 40.6	142 52.3
19	328	24.4	70 07.6	47.4	99 46.9	10.5	39 38.4	40.6	157 54.6
20	343	26.8	85 06.8	47.8	114 47.6	11.0	54 40.5	40.5	172 56.8
21	358	29.3	100 06.0	48.1	129 48.3	11.5	69 42.5	40.5	187 59.1
22	13	31.8	115 05.1	48.5	144 49.0	12.0	84 44.6	40.4	203 01.3
23	28	34.2	130 04.3	48.8	159 49.7	12.5	99 46.6	40.4	218 03.6
24	43	36.7	145 03.5	-24 49.1	174 50.4	-18 13.0	114 48.7	-22 40.3	233 05.8
Dif	—	—	-8	-3	+7	-5	+20	0	+22
									-1

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16 ^h 1			Edad: 6 ^d 0	PHE { 4 ^h : 54 ^m 3 12 ^h : 54 ^m 4 20 ^h : 54 ^m 6			Hora	R°		Hora	R°			
	PMG: 11 ^h 43 ^m 6														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil						
h	°	'	°	°	'	°	'	h	m	h	m	h	m	h	m
0	184	06.5	-15 25.1	113	41.4	-24 23.6	64	5 55	6 45	7 31	14 00	6	20 06	90	
1	199	06.5	25.9	128	12.1 ¹¹⁷	17.2	64	58	52	39	22	13 42	11	24 84	
2	214	06.5	26.7	142	42.8 ¹¹⁷	10.7	65	56	49	34	14	26 16		38 80	
3	229	06.5	27.4	157	13.5 ¹¹⁷	-24 04.1	66	54	47	29	07	13 19		20 51 77	
4	244	06.5	28.2	171	44.3 ¹¹⁸	-23 57.3	68	52	45	25	7 01	13 02	21	21 02 74	
5	259	06.4	-15 29.0	186	15.1 ¹¹⁸	-23 50.5	68	50	5 42	6 21	6 55	12 52	23	21 12 71	
6	274	06.4	-15 29.7	200	46.0 ¹¹⁹	-23 43.5	70	45	5 37	6 12	6 43	12 30	28	21 32 67	
7	289	06.4	30.5	215	16.9 ¹¹⁹	36.5	70	40	32	6 04	33	12 13	31	21 49 63	
8	304	06.4	31.3	229	47.9 ¹²⁰	29.3	72	35	28	5 58	24	11 58	34	22 03 60	
9	319	06.4	32.0	244	18.9 ¹²⁰	22.0	73	30	23	52	16	45	37	15 57	
10	334	06.4	32.8	258	49.9 ¹²⁰	14.7	73	20	14	40	6 03	23	41	35 53	
11	349	06.4	-15 33.6	273	21.0 ¹²¹	-23 07.2	75	10 N	5 04	5 30	5 51	11 04	44	22 53 49	
12	4	06.4	-15 34.3	287	52.1 ¹²¹	-22 59.6	76	0	4 54	5 19	5 40	10 47	46	23 09 46	
13	19	06.3	35.1	302	23.3 ¹²²	51.9	77	10 S	41	5 07	29	29	50	26 42	
14	34	06.3	35.9	316	54.5 ¹²²	44.1	78	20	26	4 54	17	10 09	54	23 43 39	
15	49	06.3	36.6	331	25.8 ¹²³	36.1	80	30	4 07	37	5 03	9 47	57	*** ** **	
16	64	06.3	37.4	345	57.1 ¹²³	28.1	80	35	3 55	27	4 55	34	60	*** ** **	
17	79	06.3	-15 38.1	0	28.5 ¹²⁴	-22 20.0	81	40	3 40	4 16	4 45	9 19	62	*** ** **	
18	94	06.3	-15 38.9	14	59.9 ¹²⁴	-22 11.8	82	45	3 21	4 02	4 34	9 01	66	0 13 31	
19	109	06.3	39.7	29	31.3 ¹²⁴	-22 03.4	84	50	2 57	3 44	21	8 39	70	36 27	
20	124	06.2	40.4	44	02.8 ¹²⁵	-21 55.0	84	52	44	35	15	28	72	0 47 25	
21	139	06.2	41.2	58	34.3 ¹²⁵	46.5	85	54	30	26	08	15	76	1 00 22	
22	154	06.2	41.9	73	05.9 ¹²⁶	37.8	87	56	2 13	15	4 00	8 01	79	14 19	
23	169	06.2	42.7	87	37.5 ¹²⁶	29.1	87	58	1 51	3 02	3 51	7 45	83	31 15	
24	184	06.2	-15 43.5	102	09.2 ¹²⁷	-21 20.3	88	60 S	1 22	2 47	3 41	7 25	88	1 52 9	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 21 ^h 02 ^m 1		Mag: -4.0 PMG: 14 ^h 21 ^m		Mag: +1.5 PMG: 12 ^h 20 ^m		Mag: -2.2 PMG: 16 ^h 19 ^m		Mag: +1.1 PMG: 8 ^h 26 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	43	36.7	145	03.5	-24	49.1	114	48.7	-22	40.3
1	58	39.2	160	02.6		49.5	129	50.7		40.3
2	73	41.6	175	01.8		49.8	144	52.8		40.2
3	88	44.1	190	01.0		50.1	159	54.8		40.2
4	103	46.5	205	00.1		50.5	174	56.8		40.1
5	118	49.0	219	59.3	-24	50.8	189	58.9	-22	40.1
6	133	51.5	234	58.5	-24	51.1	205	00.9	-22	40.0
7	148	53.9	249	57.6		51.4	220	03.0		40.0
8	163	56.4	264	56.8		51.8	235	05.0		39.9
9	178	58.9	279	55.9		52.1	250	07.0		39.9
10	194	01.3	294	55.1		52.4	265	09.1		39.9
11	209	03.8	309	54.3	-24	52.7	280	11.1	-22	39.8
12	224	06.3	324	53.4	-24	53.1	295	13.2	-22	39.8
13	239	08.7	339	52.6		53.4	310	15.2		39.7
14	254	11.2	354	51.8		53.7	325	17.3		39.7
15	269	13.7	9	50.9		54.0	340	19.3		39.6
16	284	16.1	24	50.1		54.3	355	21.3		39.6
17	299	18.6	39	49.3	-24	54.6	10	23.4	-22	39.5
18	314	21.0	54	48.4	-24	55.0	25	25.4	-22	39.5
19	329	23.5	69	47.6		55.3	40	27.5		39.4
20	344	26.0	84	46.8		55.6	55	29.5		39.4
21	359	28.4	99	45.9		55.9	70	31.5		39.3
22	14	30.9	114	45.1		56.2	85	33.6		39.3
23	29	33.4	129	44.2		56.5	100	35.6		39.2
24	44	35.8	144	43.4	-24	56.8	115	37.7	-22	39.2
Dif	—		-8		-3		+7		+20	
									0	
									+23	
									-1	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16 ^h 1			Edad: 7 ^d 0	PHE { 4 ^h : 54'7 12 ^h : 54'9 20 ^h : 55'1	Latitud			Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	PMG: 11 ^h 43 ^m 6									PMG: 17 ^h 44 ^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	m	h m m	m	
0	184	06.2	-15 43.5	102	09.2	-21 20.3	90	60 N	15 53	16 39	17 29	14 06 4	21 36 88			
1	199	06.2	44.2	116	40.9 ¹²⁷	11.3	90	58	16 02	45	32	13 53 8	48 84			
2	214	06.1	45.0	131	12.6 ¹²⁷	-21 02.3	91	56	10	51	35	42 11	21 58 81			
3	229	06.1	45.7	145	44.4 ¹²⁸	-20 53.2	93	54	17	16 56	38	32 14	22 08 77			
4	244	06.1	46.5	160	16.3 ¹²⁹	43.9	93	52	24	17 00	40	23 17	16 75			
5	259	06.1	-15 47.3	174	48.1 ¹²⁸	-20 34.6	93	50	16 30	17 04	17 43	13 15 19	22 23 73			
6	274	06.1	-15 48.0	189	20.0 ¹²⁹	-20 25.2	94	45	16 42	17 13	17 48	12 58 24	22 39 68			
7	289	06.0	48.8	203	52.0 ¹³⁰	15.7	95	40	16 53	21	53	44 28	22 52 63			
8	304	06.0	49.5	218	24.0 ¹³⁰	-20 06.1	96	35	17 02	28	17 58	32 31	23 03 60			
9	319	06.0	50.3	232	56.0 ¹³⁰	-19 56.4	97	30	10	35	18 03	22 33	12 58			
10	334	06.0	51.0	247	28.1 ¹³¹	46.6	98	20	23	46	13	12 04 38	28 53			
11	349	06.0	-15 51.8	262	00.2 ¹³¹	-19 36.7	99	10 N	17 36	17 57	18 23	11 48 42	23 42 49			
12	4	05.9	-15 52.5	276	32.4 ¹³²	-19 26.7	100	0	17 47	18 09	18 34	11 33 46	23 55 45			
13	19	05.9	53.3	291	04.6 ¹³²	16.6	101	10 S	17 59	21	18 46	19 49	** ** *	** ** *		
14	34	05.9	54.0	305	36.8 ¹³²	-19 06.4	102	20	18 11	34	19 02	11 03 53	** ** *	** ** *		
15	49	05.9	54.8	320	09.1 ¹³³	-18 56.2	102	30	26	18 51	22	10 44 58	0 03 35			
16	64	05.8	55.5	334	41.4 ¹³³	45.8	104	35	34	19 01	34	34 60	15 32			
17	79	05.8	-15 56.3	349	13.7 ¹³³	-18 35.4	104	40	18 44	19 13	19 50	10 21 64	0 28 29			
18	94	05.8	-15 57.0	3	46.1 ¹³⁴	-18 24.9	105	45	18 55	19 28	20 09	10 07 67	0 44 25			
19	109	05.8	57.8	18	18.6 ¹³⁵	14.3	106	50	19 09	46	34	9 49 72	1 03 21			
20	124	05.7	58.5	32	51.0 ¹³⁴	-18 03.6	107	52	16	19 55	20 47	40 75	12 18			
21	139	05.7	-15 59.3	47	23.5 ¹³⁵	-17 52.8	108	54	23	20 05	21 02	31 77	22 16			
22	154	05.7	-16 00.0	61	56.0 ¹³⁵	41.9	109	56	31	17	21	20 81	33 13			
23	169	05.7	-16 00.8	76	28.6 ¹³⁶	31.0	109	58	40	30	21 44	9 08 84	1 46 9			
24	184	05.6	-16 01.5	91	01.2 ¹³⁶	-17 19.9	111	60 S	19 51	20 46	22 17	8 53 89	2 01 5			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG		Mag: -4.0			Mag: +1.5			Mag: -2.1			Mag: +1.1				
	20 ^h 58 ^m 2		PMG: 14 ^h 22 ^m			PMG: 12 ^h 19 ^m			PMG: 16 ^h 15 ^m			PMG: 8 ^h 23 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	°	'	°	°	'	°	'	°	'	°	'
0	44	35.8	144	43.4	-24 56.8	175	06.7	-18 24.5	115	37.7	-22 39.2	233	59.8	+6 01.0		
1	59	38.3	159	42.6	57.1	190	07.4	25.0	130	39.7	39.1	249	02.1	01.0		
2	74	40.8	174	41.7	57.4	205	08.0	25.5	145	41.7	39.1	264	04.3	00.9		
3	89	43.2	189	40.9	57.7	220	08.7	26.0	160	43.8	39.0	279	06.6	00.8		
4	104	45.7	204	40.0	58.0	235	09.4	26.5	175	45.8	39.0	294	08.8	00.7		
5	119	48.2	219	39.2	-24 58.3	250	10.1	-18 26.9	190	47.8	-22 38.9	309	11.1	+6 00.6		
6	134	50.6	234	38.4	-24 58.6	265	10.8	-18 27.4	205	49.9	-22 38.9	324	13.3	+6 00.6		
7	149	53.1	249	37.5	58.9	280	11.4	27.9	220	51.9	38.8	339	15.6	00.5		
8	164	55.5	264	36.7	59.2	295	12.1	28.4	235	54.0	38.8	354	17.8	00.4		
9	179	58.0	279	35.8	59.5	310	12.8	28.8	250	56.0	38.7	9	20.1	00.3		
10	195	00.5	294	35.0	-24 59.8	325	13.5	29.3	265	58.0	38.7	24	22.3	00.2		
11	210	02.9	309	34.2	-25 00.1	340	14.1	-18 29.8	281	00.1	-22 38.6	39	24.6	+6 00.1		
12	225	05.4	324	33.3	-25 00.4	355	14.8	-18 30.3	296	02.1	-22 38.6	54	26.8	+6 00.1		
13	240	07.9	339	32.5	00.7	10	15.5	30.7	311	04.1	38.5	69	29.1	+6 00.0		
14	255	10.3	354	31.6	01.0	25	16.2	31.2	326	06.2	38.5	84	31.4	+5 59.9		
15	270	12.8	9	30.8	01.2	40	16.8	31.7	341	08.2	38.4	99	33.6	59.8		
16	285	15.3	24	30.0	01.5	55	17.5	32.2	356	10.2	38.4	114	35.9	59.7		
17	300	17.7	39	29.1	-25 01.8	70	18.2	-18 32.6	11	12.3	-22 38.3	129	38.1	+5 59.7		
18	315	20.2	54	28.3	-25 02.1	85	18.9	-18 33.1	26	14.3	-22 38.3	144	40.4	+5 59.6		
19	330	22.7	69	27.4	02.4	100	19.5	33.6	41	16.3	38.2	159	42.6	59.5		
20	345	25.1	84	26.6	02.7	115	20.2	34.1	56	18.4	38.2	174	44.9	59.4		
21	0	27.6	99	25.8	02.9	130	20.9	34.5	71	20.4	38.1	189	47.1	59.3		
22	15	30.0	114	24.9	03.2	145	21.5	35.0	86	22.4	38.1	204	49.4	59.3		
23	30	32.5	129	24.1	03.5	160	22.2	35.5	101	24.5	38.0	219	51.6	59.2		
24	45	35.0	144	23.2	-25 03.8	175	22.9	-18 36.0	116	26.5	-22 38.0	234	53.9	+5 59.1		
Dif	—		-8		-3	+7		-5	+20		0	+23		-1		

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16 ^h 1			Edad: 8 ^d 0	PHE { 4 ^h : 55 ^h /3 12 ^h : 55 ^h /5 20 ^h : 55 ^h /7											
	PMG: 11 ^h 43 ^m 6					SD: 15 ^h 0		PMG: 18 ^h 29 ^m			R ^o : 44 ^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	184	05.6	−16 01.5	91	01.2	−17 19.9		60 N	5 59	6 49	7 36	14 10	2	23 04	89	
1	199	05.6	02.3	105	33.8 ¹³⁶	−17 08.8 ¹¹¹		58	56	43	26	14 01	6	12	85	
2	214	05.6	03.0	120	06.5 ¹³⁷	−16 57.6 ¹¹²		56	53	38	18	13 53	9	19	82	
3	229	05.6	03.8	134	39.2 ¹³⁷	46.3 ¹¹³		54	50	33	11	46	12	25	79	
4	244	05.5	04.5	149	11.9 ¹³⁷	34.9 ¹¹⁴		52	48	28	7 04	40 14		31	76	
5	259	05.5	−16 05.3	163	44.7 ¹³⁸	−16 23.5 ¹¹⁴		50	5 45	6 24	6 58	13 34	16	23 36	74	
6	274	05.5	−16 06.0	178	17.4 ¹³⁷	−16 12.0 ¹¹⁵		45	5 40	6 15	6 46	13 22	21	23 47	68	
7	289	05.4	06.7	192	50.3 ¹³⁹	−16 00.4 ¹¹⁶		40	34	07	35	12 24		23 55	65	
8	304	05.4	07.5	207	23.1 ¹³⁸	−15 48.7 ¹¹⁷		35	29	6 00	26	13 03	28	*** **	***	
9	319	05.4	08.2	221	56.0 ¹³⁹	36.9 ¹¹⁸		30	25	5 53	18	12 55	31	*** **	***	
10	334	05.4	09.0	236	28.9 ¹³⁹	25.0 ¹¹⁹		20	15	41	6 04	42 35		*** **	***	
11	349	05.3	−16 09.7	251	01.8 ¹³⁹	−15 13.1 ¹¹⁹		10 N	5 05	5 30	5 52	12 30	40	*** **	***	
12	4	05.3	−16 10.5	265	34.7 ¹³⁹	−15 01.1 ¹²⁰		0	4 54	5 19	5 40	12 19	44	*** **	***	
13	19	05.3	11.2	280	07.7 ¹⁴⁰	−14 49.1 ¹²⁰		10 S	41	5 06	28	12 08	48	0 08	41	
14	34	05.2	11.9	294	40.7 ¹⁴⁰	36.9 ¹²²		20	25	4 53	16	11 56	52	22	37	
15	49	05.2	12.7	309	13.7 ¹⁴⁰	24.7 ¹²²		30	4 05	36	5 01	42 58		38	32	
16	64	05.2	13.4	323	46.8 ¹⁴¹	−14 12.4 ¹²³		35	3 53	25	4 53	34 61		47	29	
17	79	05.1	−16 14.2	338	19.9 ¹⁴¹	−14 00.0 ¹²⁴		40	3 37	4 13	4 43	11 25	64	0 57	26	
18	94	05.1	−16 14.9	352	52.9 ¹⁴⁰	−13 47.6 ¹²⁴		45	3 18	3 59	4 31	11 14	68	1 09	22	
19	109	05.1	15.6	7	26.0 ¹⁴¹	35.0 ¹²⁶		50	2 52	40	17	11 01	73	24	17	
20	124	05.0	16.4	21	59.2 ¹⁴²	22.5 ¹²⁵		52	39	31	11	10 55	75	30	16	
21	139	05.0	17.1	36	32.3 ¹⁴¹	−13 09.8 ¹²⁷		54	24	21	4 04	48 78		38	12	
22	154	05.0	17.9	51	05.5 ¹⁴²	−12 57.1 ¹²⁷		56	2 06	3 10	3 56	41 81		46	10	
23	169	04.9	18.6	65	38.7 ¹⁴²	44.3 ¹²⁸		58	1 42	2 57	46	32 85		1 55	7	
24	184	04.9	−16 19.3	80	11.9 ¹⁴²	−12 31.4 ¹²⁹		60 S	1 09	2 41	3 36	10 22	89	2 06	3	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 20 ^h 54 ^m 2		Mag: −4.0 PMG: 14 ^h 23 ^m			Mag: +1.5 PMG: 12 ^h 18 ^m			Mag: −2.1 PMG: 16 ^h 12 ^m			Mag: +1.1 PMG: 8 ^h 19 ^m				
	hG ♈		hG ♀			hG ♂			hG ♃			hG ♄				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	45	35.0	144	23.2	−25	03.8	175	22.9	−18	36.0	116	26.5	−22	38.0	234	53.9
1	60	37.4	159	22.4		04.0	190	23.6		36.4	131	28.5		37.9	249	56.1
2	75	39.9	174	21.5		04.3	205	24.2		36.9	146	30.6		37.9	264	58.4
3	90	42.4	189	20.7		04.6	220	24.9		37.4	161	32.6		37.8	280	00.6
4	105	44.8	204	19.9		04.9	235	25.6		37.9	176	34.6		37.8	295	02.9
5	120	47.3	219	19.0	−25	05.1	250	26.2	−18	38.3	191	36.7	−22	37.7	310	05.2
6	135	49.8	234	18.2	−25	05.4	265	26.9	−18	38.8	206	38.7	−22	37.7	325	07.4
7	150	52.2	249	17.3		05.7	280	27.6		39.3	221	40.7		37.6	340	09.7
8	165	54.7	264	16.5		05.9	295	28.3		39.7	236	42.8		37.6	355	11.9
9	180	57.1	279	15.6		06.2	310	28.9		40.2	251	44.8		37.5	10	14.2
10	195	59.6	294	14.8		06.5	325	29.6		40.7	266	46.8		37.5	25	16.4
11	211	02.1	309	14.0	−25	06.7	340	30.3	−18	41.2	281	48.9	−22	37.4	40	18.7
12	226	04.5	324	13.1	−25	07.0	355	30.9	−18	41.6	296	50.9	−22	37.4	55	20.9
13	241	07.0	339	12.3		07.2	10	31.6		42.1	311	52.9		37.3	70	23.2
14	256	09.5	354	11.4		07.5	25	32.3		42.6	326	55.0		37.3	85	25.5
15	271	11.9	9	10.6		07.8	40	32.9		43.0	341	57.0		37.2	100	27.7
16	286	14.4	24	09.7		08.0	55	33.6		43.5	356	59.0		37.2	115	30.0
17	301	16.9	39	08.9	−25	08.3	70	34.3	−18	44.0	12	01.1	−22	37.1	130	32.2
18	316	19.3	54	08.0	−25	08.5	85	34.9	−18	44.4	27	03.1	−22	37.1	145	34.5
19	331	21.8	69	07.2		08.8	100	35.6		44.9	42	05.1		37.0	160	36.7
20	346	24.3	84	06.4		09.0	115	36.3		45.4	57	07.1		37.0	175	39.0
21	1	26.7	99	05.5		09.3	130	36.9		45.8	72	09.2		36.9	190	41.2
22	16	29.2	114	04.7		09.5	145	37.6		46.3	87	11.2		36.9	205	43.5
23	31	31.6	129	03.8		09.8	160	38.3		46.8	102	13.2		36.8	220	45.8
24	46	34.1	144	03.0	−25	10.0	175	38.9	−18	47.2	117	15.3	−22	36.8	235	48.0
Dif	—		−8			−3	+7			−5	+20		+1		+23	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna			
	SD: 16:1 PMG: 11 ^h 43 ^m 7			Edad: 9 ^d 0 PHE { 4 ^h : 56:0 12 ^h : 56:2 20 ^h : 56:5 R°: 45 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif				Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	h	m
0	184	04.9	-16	19.3	80	11.9	-12	31.4	60 N	15 48	16 35	17 25	14 12	1	***	***	***	***
1	199	04.9		20.1	94	45.1 ¹⁴²		18.5 ¹²⁹	58	15 58	41	29	07	4	***	***	***	***
2	214	04.8		20.8	109	18.3 ¹⁴²	-12	05.5 ¹³⁰	56	16 06	47	32	14 02	8	***	***	***	***
3	229	04.8		21.5	123	51.5 ¹⁴²	-11	52.4 ¹³¹	54	14	52	35	13 58	10	***	***	***	***
4	244	04.8		22.3	138	24.8 ¹⁴³		39.3 ¹³¹	52	21	16 57	37	54	13	***	***	***	***
5	259	04.7	-16	23.0	152	58.1 ¹⁴³	-11	26.1 ¹³²	50	16 27	17 01	17 40	13 50	15	***	***	***	***
6	274	04.7	-16	23.7	167	31.3 ¹⁴²	-11	12.8 ¹³³	45	16 40	17 11	17 46	13 43	19	***	***	***	***
7	289	04.7		24.5	182	04.6 ¹⁴³	-10	59.5 ¹³³	40	16 51	19	52	36	24	***	***	***	***
8	304	04.6		25.2	196	37.9 ¹⁴³		46.1 ¹³⁴	35	17 00	27	17 57	31	27	0 03	61		
9	319	04.6		25.9	211	11.2 ¹⁴³		32.7 ¹³⁴	30	08	33	18 02	26	30	10	58		
10	334	04.5		26.7	225	44.5 ¹⁴³		19.2 ¹³⁵	20	23	46	12	17	36	21	53		
11	349	04.5	-16	27.4	240	17.8 ¹⁴³	-10	05.6 ¹³⁶	10 N	17 35	17 57	18 22	13 10	40	0 31	48		
12	4	04.5	-16	28.1	254	51.1 ¹⁴³	-9	52.0 ¹³⁶	0	17 47	18 09	18 34	13 03	44	0 40	44		
13	19	04.4		28.8	269	24.5 ¹⁴⁴		38.3 ¹³⁷	10 S	17 59	21	18 47	12 56	48	0 49	40		
14	34	04.4		29.6	283	57.8 ¹⁴³		24.6 ¹³⁷	20	18 12	36	19 03	48	54	0 59	35		
15	49	04.3		30.3	298	31.1 ¹⁴³	-9	10.8 ¹³⁸	30	27	18 53	24	40	58	1 10	30		
16	64	04.3		31.0	313	04.4 ¹⁴³	-8	56.9 ¹³⁹	35	36	19 04	37	35	61	16	27		
17	79	04.3	-16	31.8	327	37.7 ¹⁴³	-8	43.0 ¹³⁹	40	18 46	19 16	19 52	12 29	65	1 23	24		
18	94	04.2	-16	32.5	342	11.1 ¹⁴⁴	-8	29.0 ¹⁴⁰	45	18 58	19 31	20 12	12 22	70	1 31	20		
19	109	04.2		33.2	356	44.4 ¹⁴³		15.0 ¹⁴⁰	50	19 13	50	39	14	75	41	15		
20	124	04.1		33.9	11	17.7 ¹⁴³	-8	00.9 ¹⁴¹	52	19	19 59	20 52	10	77	46	13		
21	139	04.1		34.7	25	51.0 ¹⁴³	-7	46.8 ¹⁴¹	54	27	20 10	21 08	06	80	50	11		
22	154	04.1		35.4	40	24.3 ¹⁴³		32.6 ¹⁴²	56	35	22	28	12 02	82	1 56	8		
23	169	04.0		36.1	54	57.6 ¹⁴³		18.4 ¹⁴²	58	45	36	21 53	11 57	85	2 02	5		
24	184	04.0	-16	36.8	69	30.9 ¹⁴³	-7	04.1 ¹⁴³	60 S	19 56	20 53	22 31	11 51	89	2 09	2		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 20 ^h 50 ^m 3		Mag: -4.0 PMG: 14 ^h 25 ^m				Mag: +1.5 PMG: 12 ^h 17 ^m				Mag: -2.1 PMG: 16 ^h 09 ^m				Mag: +1.1 PMG: 8 ^h 16 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	46	34.1	144	03.0	-25	10.0	175	38.9	-18	47.2	117	15.3	-22	36.8	235	48.0	+5	57.2
1	61	36.6	159	02.1		10.3	190	39.6		47.7	132	17.3		36.7	250	50.3		57.1
2	76	39.0	174	01.3		10.5	205	40.3		48.2	147	19.3		36.7	265	52.5		57.0
3	91	41.5	189	00.4		10.7	220	40.9		48.6	162	21.3		36.6	280	54.8		57.0
4	106	44.0	203	59.6		11.0	235	41.6		49.1	177	23.4		36.5	295	57.0		56.9
5	121	46.4	218	58.7	-25	11.2	250	42.3	-18	49.6	192	25.4	-22	36.5	310	59.3	+5	56.8
6	136	48.9	233	57.9	-25	11.5	265	42.9	-18	50.0	207	27.4	-22	36.4	326	01.6	+5	56.7
7	151	51.4	248	57.1		11.7	280	43.6		50.5	222	29.4		36.4	341	03.8		56.7
8	166	53.8	263	56.2		11.9	295	44.2		51.0	237	31.5		36.3	356	06.1		56.6
9	181	56.3	278	55.4		12.2	310	44.9		51.4	252	33.5		36.3	11	08.3		56.5
10	196	58.8	293	54.5		12.4	325	45.6		51.9	267	35.5		36.2	26	10.6		56.4
11	212	01.2	308	53.7	-25	12.6	340	46.2	-18	52.4	282	37.6	-22	36.2	41	12.8	+5	56.3
12	227	03.7	323	52.8	-25	12.9	355	46.9	-18	52.8	297	39.6	-22	36.1	56	15.1	+5	56.3
13	242	06.1	338	52.0		13.1	10	47.6		53.3	312	41.6		36.1	71	17.4		56.2
14	257	08.6	353	51.1		13.3	25	48.2		53.8	327	43.6		36.0	86	19.6		56.1
15	272	11.1	8	50.3		13.5	40	48.9		54.2	342	45.7		36.0	101	21.9		56.0
16	287	13.5	23	49.4		13.8	55	49.5		54.7	357	47.7		35.9	116	24.1		56.0
17	302	16.0	38	48.6	-25	14.0	70	50.2	-18	55.1	12	49.7	-22	35.9	131	26.4	+5	55.9
18	317	18.5	53	47.7	-25	14.2	85	50.9	-18	55.6	27	51.7	-22	35.8	146	28.7	+5	55.8
19	332	20.9	68	46.9		14.4	100	51.5		56.1	42	53.8		35.8	161	30.9		55.7
20	347	23.4	83	46.0		14.7	115	52.2		56.5	57	55.8		35.7	176	33.2		55.6
21	2	25.9	98	45.2		14.9	130	52.8		57.0	72	57.8		35.7	191	35.4		55.6
22	17	28.3	113	44.3		15.1	145	53.5		57.4	87	59.8		35.6	206	37.7		55.5
23	32	30.8	128	43.5		15.3	160	54.2		57.9	103	01.8		35.6	221	40.0		55.4
24	47	33.2	143	42.6	-25	15.5	175	54.8	-18	58.4	118	03.9	-22	35.5	236	42.2	+5	55.3
Dif	—		-8		-2		+7		-5		+20		+1		+23		-	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1			Edad: 10 ^d 0 PHE { 4 ^h : 56 ^m 8 12 ^h : 57 ^m 1 20 ^h : 57 ^m 4 R°: 45 ^m												
	PMG: 11 ^h 43 ^m 8			SD: 15 ^h 4 PMG: 19 ^h 58 ^m												
	hG ☉		Dec	hG ☾ Dif		Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	184	04.0	-16 36.8	69	30.9	-7 04.1		60 N	6 03	6 54	7 41	14 13	2	0 33	90	
1	199	03.9		84	04.2 ¹⁴³	-6 49.8 ¹⁴³		58	6 00	47	31	11	5	37	87	
2	214	03.9		98	37.5 ¹⁴³		35.4 ¹⁴⁴	56	5 57	42	23	10	7	41	83	
3	229	03.8		113	10.7 ¹⁴²		21.0 ¹⁴⁴	54	54	36	15	08	10	44	81	
4	244	03.8		127	44.0 ¹⁴³	-6 06.5 ¹⁴⁵		52	51	31	08	07	12	47	78	
5	259	03.7	-16 40.5	142	17.2 ¹⁴²	-5 52.0 ¹⁴⁵		50	5 48	6 27	7 02	14 05	15	0 50	75	
6	274	03.7	-16 41.2	156	50.4 ¹⁴²	-5 37.4 ¹⁴⁶		45	5 42	6 17	6 48	14 02	20	0 55	71	
7	289	03.7		171	23.6 ¹⁴²		22.8 ¹⁴⁶	40	36	09	37	14 00	24	1 00	66	
8	304	03.6		185	56.8 ¹⁴²	-5 08.2 ¹⁴⁶		35	31	6 01	28	13 58	27	04	63	
9	319	03.6		200	30.0 ¹⁴²	-4 53.5 ¹⁴⁷		30	26	5 55	20	56	30	08	59	
10	334	03.5		215	03.1 ¹⁴¹		38.7 ¹⁴⁸	20	16	42	6 05	53	36	14	53	
11	349	03.5	-16 44.8	229	36.2 ¹⁴¹	-4 24.0 ¹⁴⁷		10 N	5 05	5 30	5 52	13 50	40	1 19	49	
12	4	03.4	-16 45.5	244	09.4 ¹⁴²	-4 09.1 ¹⁴⁹		0	4 54	5 19	5 40	13 47	45	1 24	44	
13	19	03.4		258	42.4 ¹⁴⁰	-3 54.3 ¹⁴⁸		10 S	40	5 06	28	44	50	29	40	
14	34	03.3		273	15.5 ¹⁴¹		39.4 ¹⁴⁹	20	24	4 52	15	42	54	34	35	
15	49	03.3		287	48.5 ¹⁴⁰		24.5 ¹⁴⁹	30	4 04	34	5 00	38	61	40	30	
16	64	03.2		302	21.5 ¹⁴⁰	-3 09.5 ¹⁵⁰		35	3 50	24	4 51	36	64	43	27	
17	79	03.2	-16 49.1	316	54.5 ¹⁴⁰	-2 54.5 ¹⁵⁰		40	3 35	4 11	4 41	13 34	68	1 47	23	
18	94	03.1	-16 49.8	331	27.5 ¹⁴⁰	-2 39.5 ¹⁵⁰		45	3 15	3 56	4 29	13 32	71	1 51	20	
19	109	03.1		346	00.4 ¹³⁹		24.4 ¹⁵¹	50	2 48	37	14	29	77	56	15	
20	124	03.0		0	33.3 ¹³⁹	-2 09.3 ¹⁵¹		52	34	27	07	27	80	1 59	12	
21	139	03.0		15	06.1 ¹³⁸	-1 54.2 ¹⁵¹		54	2 18	17	4 00	26	82	2 01	10	
22	154	02.9		29	38.9 ¹³⁸		39.0 ¹⁵²	56	1 59	3 05	3 51	24	85	04	8	
23	169	02.9		44	11.7 ¹³⁸		23.8 ¹⁵²	58	1 33	2 51	42	22	88	07	5	
24	184	02.8	-16 54.1	58	44.5 ¹³⁸	-1 08.6 ¹⁵²		60 S	0 56	2 34	3 31	13 20	92	2 11	1	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG 20 ^h 46 ^m 4		Mag: -4.0 PMG: 14 ^h 26 ^m			Mag: +1.5 PMG: 12 ^h 16 ^m			Mag: -2.1 PMG: 16 ^h 06 ^m			Mag: +1.1 PMG: 8 ^h 12 ^m				
	hG ♈		hG ♀ Dec			hG ♂ Dec			hG ♃ Dec			hG ♄ Dec				
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	
0	47	33.2	143 42.6	-25 15.5		175 54.8	-18 58.4		118 03.9	-22 35.5		236 42.2	+5 55.3			
1	62	35.7	158 41.8		15.7	190 55.5	58.8		133 05.9	35.5		251 44.5	55.3			
2	77	38.2	173 40.9		16.0	205 56.1	59.3		148 07.9	35.4		266 46.7	55.2			
3	92	40.6	188 40.1		16.2	220 56.8	-18 59.7		163 09.9	35.4		281 49.0	55.1			
4	107	43.1	203 39.2		16.4	235 57.5	-19 00.2		178 12.0	35.3		296 51.3	55.0			
5	122	45.6	218 38.4	-25 16.6		250 58.1	-19 00.7		193 14.0	-22 35.2		311 53.5	+5 54.9			
6	137	48.0	233 37.6	-25 16.8		265 58.8	-19 01.1		208 16.0	-22 35.2		326 55.8	+5 54.9			
7	152	50.5	248 36.7		17.0	280 59.4	01.6		223 18.0	35.1		341 58.0	54.8			
8	167	53.0	263 35.9		17.2	296 00.1	02.0		238 20.0	35.1		357 00.3	54.7			
9	182	55.4	278 35.0		17.4	311 00.8	02.5		253 22.1	35.0		12 02.6	54.6			
10	197	57.9	293 34.2		17.6	326 01.4	03.0		268 24.1	35.0		27 04.8	54.6			
11	213	00.4	308 33.3	-25 17.8		341 02.1	-19 03.4		283 26.1	-22 34.9		42 07.1	+5 54.5			
12	228	02.8	323 32.5	-25 18.0		356 02.7	-19 03.9		298 28.1	-22 34.9		57 09.3	+5 54.4			
13	243	05.3	338 31.6		18.2	11 03.4	04.3		313 30.2	34.8		72 11.6	54.3			
14	258	07.7	353 30.8		18.4	26 04.0	04.8		328 32.2	34.8		87 13.9	54.3			
15	273	10.2	8 29.9		18.6	41 04.7	05.2		343 34.2	34.7		102 16.1	54.2			
16	288	12.7	23 29.1		18.8	56 05.3	05.7		358 36.2	34.7		117 18.4	54.1			
17	303	15.1	38 28.2	-25 19.0		71 06.0	-19 06.2		13 38.2	-22 34.6		132 20.6	+5 54.0			
18	318	17.6	53 27.4	-25 19.2		86 06.7	-19 06.6		28 40.3	-22 34.6		147 22.9	+5 54.0			
19	333	20.1	68 26.5		19.4	101 07.3	07.1		43 42.3	34.5		162 25.2	53.9			
20	348	22.5	83 25.7		19.6	116 08.0	07.5		58 44.3	34.5		177 27.4	53.8			
21	3	25.0	98 24.8		19.8	131 08.6	08.0		73 46.3	34.4		192 29.7	53.7			
22	18	27.5	113 24.0		20.0	146 09.3	08.4		88 48.3	34.3		207 32.0	53.6			
23	33	29.9	128 23.1		20.1	161 09.9	08.9		103 50.3	34.3		222 34.2	53.6			
24	48	32.4	143 22.3	-25 20.3		176 10.6	-19 09.3		118 52.4	-22 34.2		237 36.5	+5 53.5			
Dif	—		-8 -2			+7 -5			+20 +1		+23		-1			

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna						
	SD: 16:1 PMG: 11 ^h 43 ^m 9			Edad: 11 ^d 0 PHE { 4 ^h : 57:7 12 ^h : 58:0 20 ^h : 58:4 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	184	02.8	-16 54.1	58	44.5	-1 08.6		60 N	15 43	16 31	17 21	14 15 2	2 03 94						
1	199	02.8		73	17.2 ¹³⁷	-0 53.4 ¹⁵²		58	15 53	37	25	16 6	04 90						
2	214	02.7		87	49.9 ¹³⁷	38.1 ¹⁵³		56	16 02	43	28	17 9	04 87						
3	229	02.7		102	22.5 ¹³⁶	22.8 ¹⁵³		54	10	49	32	18 12	05 83						
4	244	02.6		116	55.1 ¹³⁶	-0 07.5 ¹⁵³		52	17	54	35	19 14	05 81						
5	259	02.6	-16 57.6	131	27.6 ¹³⁵	+0 07.9 ¹⁵⁴		50	16 24	16 59	17 37	14 20 16	2 05 79						
6	274	02.5	-16 58.3	146	00.1 ¹³⁵	+0 23.2 ¹⁵³		45	16 37	17 09	17 44	14 22 21	2 06 73						
7	289	02.4		160	32.6 ¹³⁵	38.6 ¹⁵⁴		40	49	17	50	24 25	06 69						
8	304	02.4	-16 59.8	175	05.0 ¹³⁴	+0 54.0 ¹⁵⁴		35	16 58	25	17 55	25 29	07 64						
9	319	02.3	-17 00.5	189	37.4 ¹³⁴	+1 09.4 ¹⁵⁴		30	17 07	32	18 01	26 33	07 61						
10	334	02.3		204	09.7 ¹³³	24.9 ¹⁵⁵		20	22	45	11	29 37	07 56						
11	349	02.2	-17 01.9	218	42.0 ¹³³	+1 40.3 ¹⁵⁴		10 N	17 35	17 57	18 22	14 30 43	2 08 51						
12	4	02.2	-17 02.6	233	14.2 ¹³²	+1 55.8 ¹⁵⁵		0	17 47	18 09	18 34	14 32 48	2 08 47						
13	19	02.1		247	46.3 ¹³¹	+2 11.3 ¹⁵⁵		10 S	18 00	22	18 48	34 53	09 41						
14	34	02.1		262	18.4 ¹³¹	26.7 ¹⁵⁴		20	13	37	19 04	36 58	09 37						
15	49	02.0		276	50.5 ¹³¹	42.2 ¹⁵⁵		30	29	18 55	26	39 63	10 31						
16	64	01.9		291	22.5 ¹³⁰	+2 57.8 ¹⁵⁶		35	38	19 06	39	40 67	10 28						
17	79	01.9	-17 06.1	305	54.4 ¹²⁹	+3 13.3 ¹⁵⁵		40	18 49	19 19	19 55	14 42 70	2 10 25						
18	94	01.8	-17 06.8	320	26.3 ¹²⁹	+3 28.8 ¹⁵⁵		45	19 01	19 34	20 16	14 43 76	2 11 20						
19	109	01.8		334	58.1 ¹²⁸	44.3 ¹⁵⁵		50	16	19 54	44	46 80	11 15						
20	124	01.7		349	29.8 ¹²⁷	+3 59.9 ¹⁵⁶		52	23	20 04	20 58	47 83	11 13						
21	139	01.6		4	01.5 ¹²⁷	+4 15.4 ¹⁵⁵		54	31	14	21 15	48 86	11 11						
22	154	01.6		18	33.1 ¹²⁶	30.9 ¹⁵⁵		56	40	27	21 35	49 89	12 7						
23	169	01.5		33	04.7 ¹²⁶	+4 46.5 ¹⁵⁶		58	19 50	42	22 03	50 93	12 5						
24	184	01.5	-17 11.0	47	36.2 ¹²⁵	+5 02.0 ¹⁵⁵		60 S	20 01	20 59	22 48	14 52 97	2 12 1						
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 20 ^h 42 ^m 4		Mag: -4.0 PMG: 14 ^h 27 ^m			Mag: +1.5 PMG: 12 ^h 15 ^m			Mag: -2.1 PMG: 16 ^h 02 ^m			Mag: +1.1 PMG: 8 ^h 08 ^m							
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec						
h	°	'	°	'	°	'	'	°	'	'	°	'	'	°					
0	48	32.4	143	22.3	-25	20.3		176	10.6	-19	09.3	118	52.4	-22	34.2	237	36.5	+5	53.5
1	63	34.8	158	21.4		20.5		191	11.2		09.8	133	54.4		34.2	252	38.7		53.4
2	78	37.3	173	20.6		20.7		206	11.9		10.2	148	56.4		34.1	267	41.0		53.3
3	93	39.8	188	19.7		20.9		221	12.5		10.7	163	58.4		34.1	282	43.3		53.3
4	108	42.2	203	18.9		21.1		236	13.2		11.2	179	00.4		34.0	297	45.5		53.2
5	123	44.7	218	18.0	-25	21.2		251	13.8	-19	11.6	194	02.5	-22	34.0	312	47.8	+5	53.1
6	138	47.2	233	17.1	-25	21.4		266	14.5	-19	12.1	209	04.5	-22	33.9	327	50.1	+5	53.0
7	153	49.6	248	16.3		21.6		281	15.1		12.5	224	06.5		33.9	342	52.3		53.0
8	168	52.1	263	15.4		21.8		296	15.8		13.0	239	08.5		33.8	357	54.6		52.9
9	183	54.6	278	14.6		21.9		311	16.4		13.4	254	10.5		33.8	12	56.8		52.8
10	198	57.0	293	13.7		22.1		326	17.1		13.9	269	12.5		33.7	27	59.1		52.7
11	213	59.5	308	12.9	-25	22.3		341	17.7	-19	14.3	284	14.6	-22	33.6	43	01.4	+5	52.7
12	229	02.0	323	12.0	-25	22.5		356	18.4	-19	14.8	299	16.6	-22	33.6	58	03.6	+5	52.6
13	244	04.4	338	11.2		22.6		11	19.0		15.2	314	18.6		33.5	73	05.9		52.5
14	259	06.9	353	10.3		22.8		26	19.7		15.7	329	20.6		33.5	88	08.2		52.4
15	274	09.3	8	09.5		23.0		41	20.3		16.1	344	22.6		33.4	103	10.4		52.4
16	289	11.8	23	08.6		23.1		56	21.0		16.6	359	24.6		33.4	118	12.7		52.3
17	304	14.3	38	07.8	-25	23.3		71	21.6	-19	17.0	14	26.6	-22	33.3	133	15.0	+5	52.2
18	319	16.7	53	06.9	-25	23.5		86	22.3	-19	17.5	29	28.7	-22	33.3	148	17.2	+5	52.1
19	334	19.2	68	06.1		23.6		101	22.9		17.9	44	30.7		33.2	163	19.5		52.1
20	349	21.7	83	05.2		23.8		116	23.6		18.4	59	32.7		33.2	178	21.7		52.0
21	4	24.1	98	04.4		23.9		131	24.2		18.8	74	34.7		33.1	193	24.0		51.9
22	19	26.6	113	03.5		24.1		146	24.9		19.3	89	36.7		33.0	208	26.3		51.8
23	34	29.1	128	02.7		24.3		161	25.5		19.7	104	38.7		33.0	223	28.5		51.8
24	49	31.5	143	01.8	-25	24.4		176	26.2	-19	20.2	119	40.7	-22	32.9	238	30.8	+5	51.7
Dif	—		-9		-2			+6		-5		+20		+1		+23		-1	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16:2 PMG: 11 ^h 44 ^m 0			Edad: 12 ^d 0 PHE { 4 ^h : 58:7 12 ^h : 59:0 20 ^h : 59:3 Rº: 52 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m		
0	184	01.5	-17	11.0	47	36.2	+5	02.0	60 N	6 07	6 58	7 46	14 17	3	3 37	99		
1	199	01.4		11.7	62	07.6		124	58	04	52	36	22	7	34	95		
2	214	01.3		12.4	76	38.9		123	56	6 00	45	27	26	11	31	91		
3	229	01.3		13.1	91	10.2		123	54	5 57	40	19	30	14	28	88		
4	244	01.2		13.8	105	41.4		122	52	54	35	12	33	17	26	85		
5	259	01.2	-17	14.5	120	12.5		121	50	5 51	6 30	7 05	14 36	20	3 24	82		
6	274	01.1	-17	15.2	134	43.6		121	45	5 45	6 20	6 51	14 43	25	3 19	77		
7	289	01.0		15.9	149	14.6		120	40	39	11	40	49	29	15	72		
8	304	01.0		16.6	163	45.5		119	35	33	6 03	30	54	33	11	69		
9	319	00.9		17.3	178	16.3		118	30	27	5 56	21	14	59	36	08	65	
10	334	00.8		18.0	192	47.0		117	20	17	43	6 06	15	06	42	3	03	59
11	349	00.8	-17	18.7	207	17.7		117	10 N	5 06	5 31	5 53	15 13	47	2 59	54		
12	4	00.7	-17	19.4	221	48.2		115	0	4 54	5 19	5 40	15 20	51	2 55	49		
13	19	00.6		20.1	236	18.7		115	10 S	40	5 06	5 28	27	56	50	45		
14	34	00.6		20.8	250	49.1		114	20	23	4 51	5 14	34	61	46	39		
15	49	00.5		21.5	265	19.4		113	30	4 02	33	4 59	42	67	41	34		
16	64	00.4		22.2	279	49.7		113	35	3 48	22	49	47	70	38	30		
17	79	00.4	-17	22.9	294	19.8		111	40	3 32	4 09	4 39	15 52	75	2 35	26		
18	94	00.3	-17	23.6	308	49.8		110	45	3 11	3 53	4 26	15 59	79	2 31	22		
19	109	00.2		24.2	323	19.8		110	50	2 44	33	11	16	06	86	26	17	
20	124	00.2		24.9	337	49.7		109	52	30	24	4 04	10	88	24	15		
21	139	00.1		25.6	352	19.4		107	54	2 13	13	3 56	14	91	22	12		
22	154	00.0		26.3	6	49.1		107	56	1 52	3 00	47	18	95	19	10		
23	169	00.0		27.0	21	18.7		106	58	1 24	2 45	37	23	99	17	5		
24	183	59.9	-17	27.7	35	48.1		104	60 S	0 39	2 28	3 26	16 29	103	2 13	3		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG 20 ^h 38 ^m 5			Mag: -4.0 PMG: 14 ^h 29 ^m			Mag: +1.5 PMG: 12 ^h 14 ^m			Mag: -2.1 PMG: 15 ^h 59 ^m			Mag: +1.1 PMG: 8 ^h 05 ^m					
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	49	31.5	143	01.8	-25	24.4	176	26.2	-19	20.2	119	40.7	-22	32.9	238	30.8		
1	64	34.0	158	01.0		24.6	191	26.8		20.6	134	42.8		32.9	253	33.1		
2	79	36.5	173	00.1		24.7	206	27.5		21.1	149	44.8		32.8	268	35.3		
3	94	38.9	187	59.3		24.9	221	28.1		21.5	164	46.8		32.8	283	37.6		
4	109	41.4	202	58.4		25.0	236	28.8		21.9	179	48.8		32.7	298	39.9		
5	124	43.8	217	57.6	-25	25.2	251	29.4	-19	22.4	194	50.8	-22	32.7	313	42.1		
6	139	46.3	232	56.7	-25	25.3	266	30.0	-19	22.8	209	52.8	-22	32.6	328	44.4		
7	154	48.8	247	55.9		25.5	281	30.7		23.3	224	54.8		32.6	343	46.7		
8	169	51.2	262	55.0		25.6	296	31.3		23.7	239	56.8		32.5	358	48.9		
9	184	53.7	277	54.2		25.7	311	32.0		24.2	254	58.9		32.4	13	51.2		
10	199	56.2	292	53.3		25.9	326	32.6		24.6	270	00.9		32.4	28	53.5		
11	214	58.6	307	52.5	-25	26.0	341	33.3	-19	25.1	285	02.9	-22	32.3	43	55.7		
12	230	01.1	322	51.6	-25	26.2	356	33.9	-19	25.5	300	04.9	-22	32.3	58	58.0		
13	245	03.6	337	50.7		26.3	11	34.6		26.0	315	06.9		32.2	74	00.3		
14	260	06.0	352	49.9		26.4	26	35.2		26.4	330	08.9		32.2	89	02.5		
15	275	08.5	7	49.0		26.6	41	35.8		26.8	345	10.9		32.1	104	04.8		
16	290	10.9	22	48.2		26.7	56	36.5		27.3	0	12.9		32.1	119	07.1		
17	305	13.4	37	47.3	-25	26.9	71	37.1	-19	27.7	15	14.9	-22	32.0	134	09.3		
18	320	15.9	52	46.5	-25	27.0	86	37.8	-19	28.2	30	16.9	-22	31.9	149	11.6		
19	335	18.3	67	45.6		27.1	101	38.4		28.6	45	19.0		31.9	164	13.9		
20	350	20.8	82	44.8		27.2	116	39.1		29.1	60	21.0		31.8	179	16.1		
21	5	23.3	97	43.9		27.4	131	39.7		29.5	75	23.0		31.8	194	18.4		
22	20	25.7	112	43.1		27.5	146	40.3		29.9	90	25.0		31.7	209	20.7		
23	35	28.2	127	42.2		27.6	161	41.0		30.4	105	27.0		31.7	224	22.9		
24	50	30.7	142	41.4	-25	27.7	176	41.6	-19	30.8	120	29.0	-22	31.6	239	25.2		
Dif	—			-9			+6			-4			+20			+1		
				-1			+6			-4			+23			-1		

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16'2 PMG: 11 ^h 44 ^m 1			Edad: 13 ^d 0 PHE { SD: 16'2 PMG: 22 ^h 24 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	h m	h m	h m
0	183	59.9	-17	27.7	35	48.1	+11 10.7	60 N	15 39	16 27	17 18	14 20	6	5 16	107
1	198	59.8		28.4	50	17.5 ¹⁰⁴	25.7 ¹⁵⁰	58	49	34	22	29	11	09	101
2	213	59.8		29.1	64	46.8 ¹⁰³	40.7 ¹⁵⁰	56	15 59	40	25	37	15	5 02	97
3	228	59.7		29.8	79	15.9 ¹⁰¹	+11 55.6 ¹⁴⁹	54	16 07	46	29	44	18	4 56	94
4	243	59.6		30.4	93	45.0 ¹⁰¹	+12 10.5 ¹⁴⁹	52	14	51	32	50	22	51	90
5	258	59.6	-17	31.1	108	14.0 ¹⁰⁰	+12 25.3 ¹⁴⁸	50	16 21	16 56	17 35	14 56	24	4 46	87
6	273	59.5	-17	31.8	122	42.8 ⁹⁸	+12 40.1 ¹⁴⁸	45	16 35	17 07	17 42	15 08	30	4 36	81
7	288	59.4		32.5	137	11.6 ⁹⁸	+12 54.8 ¹⁴⁷	40	47	16	48	18	35	27	77
8	303	59.3		33.2	151	40.2 ⁹⁶	+13 09.4 ¹⁴⁶	35	16 57	24	17 54	27	38	20	72
9	318	59.3		33.9	166	08.8 ⁹⁶	24.0 ¹⁴⁶	30	17 06	31	18 00	35	41	13	70
10	333	59.2		34.5	180	37.2 ⁹⁴	38.6 ¹⁴⁶	20	21	44	11	15 48	47	4 02	64
11	348	59.1	-17	35.2	195	05.5 ⁹³	+13 53.1 ¹⁴⁵	10 N	17 35	17 57	18 22	16 00	52	3 53	58
12	3	59.0	-17	35.9	209	33.7 ⁹²	+14 07.5 ¹⁴⁴	0	17 48	18 09	18 35	16 11	57	3 44	53
13	18	59.0		36.6	224	01.8 ⁹¹	21.9 ¹⁴⁴	10 S	18 01	23	18 49	23	60	35	49
14	33	58.9		37.3	238	29.8 ⁹⁰	36.2 ¹⁴³	20	14	38	19 06	35	65	25	44
15	48	58.8		38.0	252	57.7 ⁸⁹	+14 50.4 ¹⁴²	30	31	18 57	28	49	71	15	38
16	63	58.7		38.6	267	25.4 ⁸⁷	+15 04.5 ¹⁴¹	35	40	19 08	41	16 57	75	08	35
17	78	58.7	-17	39.3	281	53.1 ⁸⁷	+15 18.6 ¹⁴¹	40	18 51	19 21	19 58	17 07	78	3 01	32
18	93	58.6	-17	40.0	296	20.6 ⁸⁵	+15 32.6 ¹⁴⁰	45	19 04	19 37	20 20	17 18	83	2 53	27
19	108	58.5		40.7	310	48.0 ⁸⁴	+15 46.5 ¹³⁹	50	19	19 58	20 48	32	89	43	22
20	123	58.4		41.3	325	15.3 ⁸³	+16 00.4 ¹³⁹	52	27	20 08	21 03	38	92	39	18
21	138	58.4		42.0	339	42.4 ⁸¹	14.2 ¹³⁸	54	35	19	21	45	96	34	16
22	153	58.3		42.7	354	09.5 ⁸¹	27.8 ¹³⁶	56	44	32	21 43	17 53	100	29	12
23	168	58.2		43.4	8	36.4 ⁷⁹	41.4 ¹³⁶	58	19 55	20 48	22 14	18 02	105	22	9
24	183	58.1	-17	44.0	23	03.2 ⁷⁸	+16 54.9 ¹³⁵	60 S	20 07	21 06	23 12	18 12	111	2 16	3

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 20 ^h 34 ^m 6		Mag: -4.0 PMG: 14 ^h 30 ^m		Mag: +1.5 PMG: 12 ^h 13 ^m		Mag: -2.1 PMG: 15 ^h 56 ^m		Mag: +1.1 PMG: 8 ^h 01 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	50	30.7	142	41.4	-25	27.7	120	29.0	-22	31.6
1	65	33.1	157	40.5		27.9	135	31.0		31.6
2	80	35.6	172	39.7		28.0	150	33.0		31.5
3	95	38.1	187	38.8		28.1	165	35.0		31.4
4	110	40.5	202	38.0		28.2	180	37.0		31.4
5	125	43.0	217	37.1	-25	28.4	195	39.0	-22	31.3
6	140	45.4	232	36.3	-25	28.5	210	41.0	-22	31.3
7	155	47.9	247	35.4		28.6	225	43.1		31.2
8	170	50.4	262	34.6		28.7	240	45.1		31.2
9	185	52.8	277	33.7		28.8	255	47.1		31.1
10	200	55.3	292	32.8		28.9	270	49.1		31.1
11	215	57.8	307	32.0	-25	29.0	285	51.1	-22	31.0
12	231	00.2	322	31.1	-25	29.1	300	53.1	-22	30.9
13	246	02.7	337	30.3		29.3	315	55.1		30.9
14	261	05.2	352	29.4		29.4	330	57.1		30.8
15	276	07.6	7	28.6		29.5	345	59.1		30.8
16	291	10.1	22	27.7		29.6	1	01.1		30.7
17	306	12.5	37	26.9	-25	29.7	16	03.1	-22	30.7
18	321	15.0	52	26.0	-25	29.8	31	05.1	-22	30.6
19	336	17.5	67	25.2		29.9	46	07.1		30.5
20	351	19.9	82	24.3		30.0	61	09.1		30.5
21	6	22.4	97	23.5		30.1	76	11.1		30.4
22	21	24.9	112	22.6		30.2	91	13.1		30.4
23	36	27.3	127	21.8		30.3	106	15.1		30.3
24	51	29.8	142	20.9	-25	30.4	121	17.1	-22	30.3
Dif	—		-9		-1		+20		+1	
					+6				+23	
					-4				-1	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'2 PMG: 11 ^h 44 ^m 2			Edad: 14 ^d 0 PHE { 4 ^h : 60'3 12 ^h : 60'5 20 ^h : 60'7 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	183	58.1	-17	23	03.2	+16	54.9	60 N	6	12	7	03	7	51	14	26
1	198	58.1		37	29.9	+17	08.4	58	08	6	56	40		40	19	6
2	213	58.0		51	56.5		21.7	56	04	49	31	14	52	24	39	101
3	228	57.9		66	22.9		34.9	54	6	00	43	23	15	02	28	30
4	243	57.8		80	49.3	+17	48.0	52	5	57	38	15	12	31	21	93
5	258	57.7	-17	95	15.5	+18	01.1	50	5	54	6	33	7	08	15	20
6	273	57.7	-17	109	41.6	+18	14.0	45	5	47	6	22	6	54	15	38
7	288	57.6		124	07.5		26.8	40	41	13	42	15	53	43	44	79
8	303	57.5		138	33.3		39.6	35	35	6	05	32	16	05	47	32
9	318	57.4		152	59.1	+18	52.2	30	29	5	58	23	16	50	23	72
10	333	57.3		167	24.6	+19	04.7	20	18	44	6	07	35	54	5	06
11	348	57.3	-17	181	50.1	+19	17.1	10 N	5	06	5	32	5	54	16	52
12	3	57.2	-17	196	15.4	+19	29.3	0	4	54	5	19	5	41	17	08
13	18	57.1		210	40.7		41.5	10 S	40	5	05	28	23	66	24	55
14	33	57.0		225	05.8	+19	53.5	20	22	4	50	5	14	17	40	69
15	48	56.9		239	30.7	+20	05.5	30	4	00	31	4	57	18	00	74
16	63	56.8		253	55.6		17.3	35	3	47	20	48	12	76	43	43
17	78	56.8	-17	268	20.3	+20	28.9	40	3	30	4	07	4	37	18	25
18	93	56.7	-17	282	44.9	+20	40.5	45	3	08	3	50	4	24	18	41
19	108	56.6		297	09.4	+20	51.9	50	2	39	30	08	19	01	89	3
20	123	56.5		311	33.7	+21	03.2	52	25	20	4	01	10	92	2	57
21	138	56.4		325	58.0		14.3	54	2	07	3	09	3	53	21	95
22	153	56.3		340	22.1		25.3	56	1	45	2	55	43	33	100	41
23	168	56.2	-17	354	46.1		36.2	58	1	14	40	33	19	47	105	31
24	183	56.2	-18	9	09.9	+21	46.9	60 S	0	16	2	21	3	21	20	03

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 20 ^h 30 ^m 6		Mag: -4.0 PMG: 14 ^h 31 ^m			Mag: +1.5 PMG: 12 ^h 12 ^m			Mag: -2.1 PMG: 15 ^h 53 ^m			Mag: +1.1 PMG: 7 ^h 57 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°
0	51	29.8	142	20.9	-25	30.4	176	56.9	-19	41.3	121	17.1	-22	30.3
1	66	32.3	157	20.1		30.5	191	57.6		41.7	136	19.2		30.2
2	81	34.7	172	19.2		30.5	206	58.2		42.2	151	21.2		30.1
3	96	37.2	187	18.4		30.6	221	58.8		42.6	166	23.2		30.1
4	111	39.7	202	17.5		30.7	236	59.5		43.0	181	25.2		30.0
5	126	42.1	217	16.6	-25	30.8	252	00.1	-19	43.5	196	27.2	-22	30.0
6	141	44.6	232	15.8	-25	30.9	267	00.7	-19	43.9	211	29.2	-22	29.9
7	156	47.0	247	14.9		31.0	282	01.4		44.3	226	31.2		29.9
8	171	49.5	262	14.1		31.1	297	02.0		44.8	241	33.2		29.8
9	186	52.0	277	13.2		31.1	312	02.6		45.2	256	35.2		29.7
10	201	54.4	292	12.4		31.2	327	03.2		45.6	271	37.2		29.7
11	216	56.9	307	11.5	-25	31.3	342	03.9	-19	46.1	286	39.2	-22	29.6
12	231	59.4	322	10.7	-25	31.4	357	04.5	-19	46.5	301	41.2	-22	29.6
13	247	01.8	337	09.8		31.5	12	05.1		46.9	316	43.2		29.5
14	262	04.3	352	09.0		31.5	27	05.8		47.4	331	45.2		29.5
15	277	06.8	7	08.1		31.6	42	06.4		47.8	346	47.2		29.4
16	292	09.2	22	07.3		31.7	57	07.0		48.2	1	49.2		29.3
17	307	11.7	37	06.4	-25	31.8	72	07.7	-19	48.6	16	51.2	-22	29.3
18	322	14.2	52	05.6	-25	31.8	87	08.3	-19	49.1	31	53.2	-22	29.2
19	337	16.6	67	04.7		31.9	102	08.9		49.5	46	55.2		29.2
20	352	19.1	82	03.9		32.0	117	09.6		49.9	61	57.2		29.1
21	7	21.5	97	03.0		32.0	132	10.2		50.4	76	59.2		29.0
22	22	24.0	112	02.2		32.1	147	10.8		50.8	92	01.2		29.0
23	37	26.5	127	01.3		32.2	162	11.4		51.2	107	03.2		28.9
24	52	28.9	142	00.5	-25	32.2	177	12.1	-19	51.6	122	05.2	-22	28.9
Dif	—		-9	-1		+6	-4			+20	+1		+23	

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16°2 PMG: 11 ^h 44 ^m 3			Edad: 15 ^d 0 PHE { 4 ^h : 60°8 12 ^h : 61°0 20 ^h : 61°0 R°: ***m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	183	56.2	-18 00.1	9	09.9	+21 46.9	106	60 N	15 34	16 23	17 14	14 39 27	8 55 108	
1	198	56.1	00.8	23	33.7	+21 57.5	106	58	45	30	18	14 59 34	36 100	
2	213	56.0	01.4	37	57.3	+22 07.9	104	56	15 55	37	22	15 16 39	20 95	
3	228	55.9	02.1	52	20.8	18.2	103	54	16 04	43	26	30 43	8 06 9	
4	243	55.8	02.7	66	44.2	28.3	101	52	11	48	29	43 45	7 54 88	
5	258	55.7	-18 03.4	81	07.5	+22 38.3	100	50	16 18	16 53	17 33	15 54 48	7 43 86	
6	273	55.6	-18 04.1	95	30.7	+22 48.1	98	45	16 33	17 05	17 40	16 17 52	7 21 81	
7	288	55.5	04.7	109	53.7	+22 57.8	97	40	45	14	47	36 54	7 03 78	
8	303	55.4	05.4	124	16.7	+23 07.3	95	35	16 56	22	53	16 52 56	6 48 75	
9	318	55.4	06.0	138	39.5	16.7	94	30	17 05	30	17 59	17 06 58	35 73	
10	333	55.3	06.7	153	02.2	25.9	92	20	21	44	18 10	29 61	6 13 70	
11	348	55.2	-18 07.4	167	24.9	+23 34.9	90	10 N	17 35	17 57	18 22	17 50 63	5 54 66	
12	3	55.1	-18 08.0	181	47.4	+23 43.8	89	0	17 48	18 10	18 35	18 09 66	5 36 64	
13	18	55.0	08.7	196	09.8	+23 52.4	86	10 S	18 01	23	18 49	29 67	19 60	
14	33	54.9	09.3	210	32.1	+24 01.0	86	20	16	39	19 07	18 49 70	5 00 57	
15	48	54.8	10.0	224	54.3	09.3	83	30	32	18 58	29	19 14 72	4 38 54	
16	63	54.7	10.6	239	16.4	17.5	82	35	42	19 10	19 44	28 74	26 51	
17	78	54.6	-18 11.3	253	38.4	+24 25.5	80	40	18 53	19 24	20 01	19 45 75	4 11 49	
18	93	54.5	-18 11.9	268	00.3	+24 33.3	78	45	19 06	19 40	20 23	20 05 77	3 54 45	
19	108	54.4	12.6	282	22.1	40.9	76	50	23	20 02	20 53	30 81	33 40	
20	123	54.3	13.2	296	43.8	48.4	75	52	30	12	21 08	42 83	23 37	
21	138	54.2	13.9	311	05.4	+24 55.7	73	54	39	24	27	20 56 85	3 12 34	
22	153	54.1	14.5	325	27.0	+25 02.8	71	56	48	37	21 51	21 13 87	2 59 30	
23	168	54.1	15.2	339	48.4	09.7	69	58	19 59	20 54	22 25	32 92	44 25	
24	183	54.0	-18 15.8	354	09.8	+25 16.4	67	60 S	20 12	21 13	** **	21 57 99	2 27 17	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 20 ^h 26 ^m 7		Mag: -4.0 PMG: 14 ^h 33 ^m			Mag: +1.4 PMG: 12 ^h 11 ^m			Mag: -2.1 PMG: 15 ^h 50 ^m			Mag: +1.1 PMG: 7 ^h 54 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	°	'	°	°	'	°	°	'	
0	52	28.9	142	00.5	-25 32.2	177	12.1	-19 51.6	122	05.2	-22 28.9	241	14.2	+5 46.4
1	67	31.4	156	59.6	32.3	192	12.7	52.1	137	07.2	28.8	256	16.5	46.4
2	82	33.9	171	58.8	32.4	207	13.3	52.5	152	09.2	28.8	271	18.8	46.3
3	97	36.3	186	57.9	32.4	222	14.0	52.9	167	11.2	28.7	286	21.0	46.2
4	112	38.8	201	57.1	32.5	237	14.6	53.3	182	13.2	28.6	301	23.3	46.2
5	127	41.3	216	56.2	-25 32.5	252	15.2	-19 53.8	197	15.2	-22 28.6	316	25.6	+5 46.1
6	142	43.7	231	55.4	-25 32.6	267	15.8	-19 54.2	212	17.2	-22 28.5	331	27.9	+5 46.0
7	157	46.2	246	54.5	32.6	282	16.5	54.6	227	19.2	28.5	346	30.1	45.9
8	172	48.7	261	53.7	32.7	297	17.1	55.1	242	21.2	28.4	1	32.4	45.9
9	187	51.1	276	52.8	32.7	312	17.7	55.5	257	23.2	28.4	16	34.7	45.8
10	202	53.6	291	52.0	32.8	327	18.3	55.9	272	25.2	28.3	31	37.0	45.7
11	217	56.0	306	51.1	-25 32.8	342	19.0	-19 56.3	287	27.2	-22 28.2	46	39.2	+5 45.7
12	232	58.5	321	50.2	-25 32.9	357	19.6	-19 56.7	302	29.2	-22 28.2	61	41.5	+5 45.6
13	248	01.0	336	49.4	32.9	12	20.2	57.2	317	31.2	28.1	76	43.8	45.5
14	263	03.4	351	48.5	33.0	27	20.8	57.6	332	33.1	28.1	91	46.1	45.5
15	278	05.9	6	47.7	33.0	42	21.5	58.0	347	35.1	28.0	106	48.4	45.4
16	293	08.4	21	46.8	33.1	57	22.1	58.4	2	37.1	27.9	121	50.6	45.3
17	308	10.8	36	46.0	-25 33.1	72	22.7	-19 58.9	17	39.1	-22 27.9	136	52.9	+5 45.2
18	323	13.3	51	45.1	-25 33.2	87	23.3	-19 59.3	32	41.1	-22 27.8	151	55.2	+5 45.2
19	338	15.8	66	44.3	33.2	102	24.0	-19 59.7	47	43.1	27.8	166	57.5	45.1
20	353	18.2	81	43.4	33.2	117	24.6	-20 00.1	62	45.1	27.7	181	59.7	45.0
21	8	20.7	96	42.6	33.3	132	25.2	00.5	77	47.1	27.6	197	02.0	45.0
22	23	23.1	111	41.7	33.3	147	25.8	01.0	92	49.1	27.6	212	04.3	44.9
23	38	25.6	126	40.9	33.3	162	26.4	01.4	107	51.1	27.5	227	06.6	44.8
24	53	28.1	141	40.0	-25 33.4	177	27.1	-20 01.8	122	53.1	-22 27.5	242	08.8	+5 44.8
Dif	—		-9	0		+6	-4		+20		+1	+23		-1

UT	SOL				LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna						
	SD: 16/2 PMG: 11 ^h 44 ^m 5				Edad: 16 ^d 0 PHE { 4 ^h : 61/1 12 ^h : 61/1 20 ^h : 61/1 SD: 16/6 PMG: 0 ^h 24 ^m R°: 66 ^m																		
	hG ☉		Dec		hG ☾		Dif		Dec			Dif			Náutico	Civil	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m			
0	183	54.0	-18	15.8	354	09.8	+25	16.4	65	58	60 N	6	16	7	07	7	56	15	06	59	10	43	81
1	198	53.9		16.5	8	31.1	23	22.9	65	58		11	7	00	45		33	62		10	16	78	
2	213	53.8		17.1	22	52.3	22	29.2	63	56		07	6	53	35		15	55	63	9	55	76	
3	228	53.7		17.8	37	13.4	21	35.4	62	54		04		47	26		16	13	63		37	75	
4	243	53.6		18.4	51	34.5	21	41.3	59	52		6	00	41	19		28	64		22	74		
5	258	53.5	-18	19.1	65	55.5	20	+25	47.1	58	50	5	57	6	36	7	12	16	42	64	9	09	74
6	273	53.4	-18	19.7	80	16.4	19	+25	52.6	55	45	5	49	6	25	6	57	17	09	65	8	42	72
7	288	53.3		20.4	94	37.3	19	+25	58.0	54	40	43		15	44		30	66		21	71		
8	303	53.2		21.0	108	58.0	17	+26	03.2	52	35	36	6	07	34		17	48	66	8	03	71	
9	318	53.1		21.7	123	18.8	18		08.1	49	30	30	5	59	24		18	04	66	7	48	70	
10	333	53.0		22.3	137	39.5	17		12.9	48	20	19		45	6	08	30	67		23	68		
11	348	52.9	-18	22.9	152	00.1	16	+26	17.4	45	10 N	5	07	5	32	5	54	18	53	67	7	00	68
12	3	52.8	-18	23.6	166	20.6	15	+26	21.8	44	0	4	54	5	19	5	41	19	15	66	6	40	66
13	18	52.7		24.2	180	41.2	16		26.0	42	10 S	39		5	05	27		36	66	6	19	66	
14	33	52.6		24.9	195	01.6	14		29.9	39	20	4	22	4	49	5	13	19	59	66	5	57	64
15	48	52.5		25.5	209	22.1	15		33.6	37	30	3	59	30	4	56	20	26	66		32	62	
16	63	52.4		26.2	223	42.5	14		37.2	36	35	45		19	46		20	42	66		17	61	
17	78	52.3	-18	26.8	238	02.8	13	+26	40.5	33	40	3	27	4	05	4	35	21	00	66	5	00	60
18	93	52.2	-18	27.4	252	23.2	14	+26	43.6	31	45	3	05	3	48	4	22	21	22	66	4	39	58
19	108	52.1		28.1	266	43.5	13		46.5	29	50	2	35	27	4	06	21	51	65		13	55	
20	123	52.0		28.7	281	03.7	12		49.2	27	52	20		16	3	58	22	05	64		4	00	54
21	138	51.9		29.3	295	24.0	13		51.7	25	54	2	01	3	05	49		21	64		3	46	52
22	153	51.8		30.0	309	44.2	12		54.0	23	56	1	37	2	51	40		22	40	64		29	50
23	168	51.7		30.6	324	04.4	12		56.1	21	58	1	03	35	29		23	04	62		3	09	46
24	183	51.5	-18	31.3	338	24.6	12	+26	57.9	18	60 S	** **		2	15	3	16	23	36	59	2	44	39

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 20 ^h 22 ^m 8		Mag: -4.1 PMG: 14 ^h 34 ^m				Mag: +1.4 PMG: 12 ^h 10 ^m				Mag: -2.1 PMG: 15 ^h 46 ^m				Mag: +1.1 PMG: 7 ^h 50 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	53	28.1	141	40.0	-25	33.4	177	27.1	-20	01.8	122	53.1	-22	27.5	242	08.8	+5	44.8
1	68	30.5	156	39.2		33.4	192	27.7		02.2	137	55.1		27.4	257	11.1		44.7
2	83	33.0	171	38.3		33.4	207	28.3		02.6	152	57.1		27.3	272	13.4		44.6
3	98	35.5	186	37.5		33.5	222	28.9		03.1	167	59.1		27.3	287	15.7		44.5
4	113	37.9	201	36.6		33.5	237	29.6		03.5	183	01.1		27.2	302	17.9		44.5
5	128	40.4	216	35.8	-25	33.5	252	30.2	-20	03.9	198	03.1	-22	27.2	317	20.2	+5	44.4
6	143	42.9	231	34.9	-25	33.5	267	30.8	-20	04.3	213	05.1	-22	27.1	332	22.5	+5	44.3
7	158	45.3	246	34.1		33.6	282	31.4		04.7	228	07.1		27.1	347	24.8		44.3
8	173	47.8	261	33.2		33.6	297	32.0		05.2	243	09.1		27.0	2	27.1		44.2
9	188	50.3	276	32.4		33.6	312	32.7		05.6	258	11.0		26.9	17	29.3		44.1
10	203	52.7	291	31.6		33.6	327	33.3		06.0	273	13.0		26.9	32	31.6		44.1
11	218	55.2	306	30.7	-25	33.7	342	33.9	-20	06.4	288	15.0	-22	26.8	47	33.9	+5	44.0
12	233	57.6	321	29.9	-25	33.7	357	34.5	-20	06.8	303	17.0	-22	26.8	62	36.2	+5	43.9
13	249	00.1	336	29.0		33.7	12	35.1		07.2	318	19.0		26.7	77	38.5		43.9
14	264	02.6	351	28.2		33.7	27	35.7		07.7	333	21.0		26.6	92	40.7		43.8
15	279	05.0	6	27.3		33.7	42	36.4		08.1	348	23.0		26.6	107	43.0		43.7
16	294	07.5	21	26.5		33.7	57	37.0		08.5	3	25.0		26.5	122	45.3		43.6
17	309	10.0	36	25.6	-25	33.7	72	37.6	-20	08.9	18	27.0	-22	26.5	137	47.6	+5	43.6
18	324	12.4	51	24.8	-25	33.7	87	38.2	-20	09.3	33	29.0	-22	26.4	152	49.8	+5	43.5
19	339	14.9	66	23.9		33.8	102	38.8		09.7	48	31.0		26.3	167	52.1		43.4
20	354	17.4	81	23.1		33.8	117	39.5		10.2	63	33.0		26.3	182	54.4		43.4
21	9	19.8	96	22.2		33.8	132	40.1		10.6	78	34.9		26.2	197	56.7		43.3
22	24	22.3	111	21.4		33.8	147	40.7		11.0	93	36.9		26.2	212	59.0		43.2
23	39	24.8	126	20.5		33.8	162	41.3		11.4	108	38.9		26.1	228	01.2		43.2
24	54	27.2	141	19.7	-25	33.8	177	41.9	-20	11.8	123	40.9	-22	26.0	243	03.5	+5	43.1
Dif	—		-8		0		+6		-4		+20		+1		+23		-1	

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16°2				Edad: 17 ^d 0 PHE { 4 ^h : 61'0 12 ^h : 60'9 20 ^h : 60'8												
	PMG: 11 ^h 44 ^m 6				SD: 16°6 PMG: 1 ^h 30 ^m R°: 66 ^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	51.5	-18	31.3	338	24.6	+26	57.9	60 N	15 30	16 19	17 11	16 05 94		12 04 42		
1	198	51.4		31.9	352	44.8	+26	59.6	58	41	27	15	35 88		11 34 47		
2	213	51.3		32.5	7	05.0	+27	01.0	56	15 52	34	20	16 58 84		11 11 51		
3	228	51.2		33.2	21	25.2		02.2	54	16 00	40	23	17 16 82		10 52 53		
4	243	51.1		33.8	35	45.4		03.2	52	08	46	27	32 80		36 55		
5	258	51.0	-18	34.4	50	05.5	+27	04.0	50	16 16	16 51	17 30	17 46 78		10 23 55		
6	273	50.9	-18	35.1	64	25.7	+27	04.6	45	16 31	17 03	17 38	18 14 75		9 54 59		
7	288	50.8		35.7	78	45.9		05.0	40	43	13	45	36 73		32 60		
8	303	50.7		36.3	93	06.2		05.2	35	16 54	21	52	18 54 72		9 14 61		
9	318	50.6		37.0	107	26.4		05.1	30	17 04	29	17 58	19 10 70		8 58 62		
10	333	50.5		37.6	121	46.6		04.9	20	20	43	18 10	19 37 68		31 64		
11	348	50.4	-18	38.2	136	06.9	+27	04.4	10 N	17 35	17 57	18 22	20 00 65		8 08 64		
12	3	50.3	-18	38.8	150	27.2	+27	03.8	0	17 48	18 10	18 35	20 21 64		7 46 66		
13	18	50.2		39.5	164	47.6		02.9	10 S	18 02	24	18 50	20 42 62		25 66		
14	33	50.0		40.1	179	07.9		01.8	20	17	18 40	19 08	21 05 60		7 01 68		
15	48	49.9		40.7	193	28.4	+27	00.5	30	34	19 00	31	32 57		6 34 69		
16	63	49.8		41.4	207	48.8	+26	59.0	35	44	12	19 46	21 48 55		18 70		
17	78	49.7	-18	42.0	222	09.3	+26	57.3	40	18 56	19 26	20 04	22 06 53		6 00 70		
18	93	49.6	-18	42.6	236	29.8	+26	55.3	45	19 09	19 43	20 27	22 28 51		5 37 71		
19	108	49.5		43.2	250	50.4		53.2	50	26	20 05	20 58	22 56 47		5 08 73		
20	123	49.4		43.9	265	11.1		50.9	52	34	16	21 14	23 09 45		4 54 73		
21	138	49.3		44.5	279	31.8		48.4	54	43	28	34	25 42		38 74		
22	153	49.2		45.1	293	52.5		45.6	56	19 53	20 43	21 59	23 44 38		4 19 75		
23	168	49.0		45.7	308	13.4		42.7	58	20 04	21 00	22 38	** ** *		3 55 76		
24	183	48.9	-18	46.3	322	34.2	+26	39.5	60 S	20 17	21 21	** ** *	** ** *		3 23 79		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO								
	PMG: 20 ^h 18 ^m 8		Mag: -4.1 PMG: 14 ^h 36 ^m		Mag: +1.4 PMG: 12 ^h 09 ^m		Mag: -2.1 PMG: 15 ^h 43 ^m		Mag: +1.1 PMG: 7 ^h 47 ^m								
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄								
h	°	'	°	'	°	'	°	'	°	'							
0	54	27.2	141	19.7	-25	33.8	177	41.9	-20	11.8							
1	69	29.7	156	18.8		33.8	192	42.5		12.2							
2	84	32.1	171	18.0		33.8	207	43.1		12.6							
3	99	34.6	186	17.1		33.8	222	43.8		13.0							
4	114	37.1	201	16.3		33.8	237	44.4		13.5							
5	129	39.5	216	15.4	-25	33.8	252	45.0	-20	13.9							
6	144	42.0	231	14.6	-25	33.8	267	45.6	-20	14.3							
7	159	44.5	246	13.7		33.8	282	46.2		14.7							
8	174	46.9	261	12.9		33.7	297	46.8		15.1							
9	189	49.4	276	12.1		33.7	312	47.4		15.5							
10	204	51.9	291	11.2		33.7	327	48.1		15.9							
11	219	54.3	306	10.4	-25	33.7	342	48.7	-20	16.3							
12	234	56.8	321	09.5	-25	33.7	357	49.3	-20	16.7							
13	249	59.3	336	08.7		33.7	12	49.9		17.1							
14	265	01.7	351	07.8		33.7	27	50.5		17.6							
15	280	04.2	6	07.0		33.7	42	51.1		18.0							
16	295	06.6	21	06.1		33.6	57	51.7		18.4							
17	310	09.1	36	05.3	-25	33.6	72	52.3	-20	18.8							
18	325	11.6	51	04.4	-25	33.6	87	53.0	-20	19.2							
19	340	14.0	66	03.6		33.6	102	53.6		19.6							
20	355	16.5	81	02.7		33.6	117	54.2		20.0							
21	10	19.0	96	01.9		33.5	132	54.8		20.4							
22	25	21.4	111	01.1		33.5	147	55.4		20.8							
23	40	23.9	126	00.2		33.5	162	56.0		21.2							
24	55	26.4	140	59.4	-25	33.4	177	56.6	-20	21.6							
Dif	—		-8		0		+6		-4								
									+20								
									+1								
									+23								
									-1								

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16'2			Edad: 18 ^d 0	PHE	4 ^h : 60'6		R ^o : 63 ^m		Náutico			Civil		Hora		R ^o		
	PMG: 11 ^h 44 ^m 8																		
	hG ☉	Dec		hG ☾	Dif	Dec	Dif												
h	°	'	°	°	'	°	'	°		h	m	h	m	h	m	h	m		
0	183	48.9	-18	46.3	322	34.2	+26	39.5	60 N	6	20	7	12	8	01	17	39		
1	198	48.8		47.0	336	55.2	20	36.2	58	15		7	04	7	49	18	03		
2	213	48.7		47.6	351	16.2	20	32.7	56	11		6	57		39	22	95		
3	228	48.6		48.2	5	37.3	21	28.9	54	07		50		30	38	91	11		
4	243	48.5		48.8	19	58.5	22	25.0	52	03		44		22	18	52	88		
5	258	48.4	-18	49.5	34	19.7	22	+26	50	6	00	6	39	7	15	19	04		
6	273	48.2	-18	50.1	48	41.1	24	+26	45	5	52	6	27	6	59	19	29		
7	288	48.1		50.7	63	02.5	24	12.1	40	45		17		47	19	49	76		
8	303	48.0		51.3	77	24.0	25	07.4	35	38		09		36	20	06	73		
9	318	47.9		51.9	91	45.6	26	+26	30	32		6	01	26	20	71	10		
10	333	47.8		52.5	106	07.3	27	+25	20	20		5	46	6	10	20	45		
11	348	47.7	-18	53.2	120	29.0	27	+25	10 N	5	07	5	33	5	55	21	05		
12	3	47.5	-18	53.8	134	50.9	29	+25	0	4	54	5	19	5	41	21	25		
13	18	47.4		54.4	149	12.9	30	41.1	10 S	39		5	05	27	21	44	56		
14	33	47.3		55.0	163	34.9	30	35.3	20	4	21	4	49	5	12	22	05		
15	48	47.2		55.6	177	57.1	32	29.3	30	3	58	29		4	55	29	48		
16	63	47.1		56.2	192	19.3	32	23.1	35	43		17		45	43	45	28		
17	78	46.9	-18	56.8	206	41.7	34	+25	40	3	25	4	03	4	33	22	59		
18	93	46.8	-18	57.5	221	04.2	35	+25	45	3	02	3	46	4	20	23	19		
19	108	46.7		58.1	235	26.8	36	+25	50	2	31	24		4	03	43	33		
20	123	46.6		58.7	249	49.5	37	+24	52	2	15	13		3	55	23	54		
21	138	46.5		59.3	264	12.3	38	49.6	54	1	55	3	01	46	**	**	**		
22	153	46.3	-18	59.9	278	35.2	39	42.4	56	1	30	2	46	36	**	**	**		
23	168	46.2	-19	00.5	292	58.2	40	35.1	58	0	51	29		25	0	06	34		
24	183	46.1	-19	01.1	307	21.4	42	+24	60 S	**	**	2	08	3	11	0	35		

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 20 ^h 14 ^m 9		Mag: -4.1 PMG: 14 ^h 37 ^m			Mag: +1.4 PMG: 12 ^h 08 ^m			Mag: -2.1 PMG: 15 ^h 40 ^m			Mag: +1.1 PMG: 7 ^h 43 ^m					
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'			
0	55	26.4	140	59.4	-25	33.4	177	56.6	-20	21.6	124	28.6	-22	24.6			
1	70	28.8	155	58.5		33.4	192	57.2		22.0	139	30.6		24.5			
2	85	31.3	170	57.7		33.4	207	57.8		22.4	154	32.6		24.4			
3	100	33.8	185	56.8		33.4	222	58.4		22.8	169	34.6		24.4			
4	115	36.2	200	56.0		33.3	237	59.0		23.3	184	36.6		24.3			
5	130	38.7	215	55.1	-25	33.3	252	59.7	-20	23.7	199	38.5	-22	24.3			
6	145	41.1	230	54.3	-25	33.3	268	00.3	-20	24.1	214	40.5	-22	24.2			
7	160	43.6	245	53.5		33.2	283	00.9		24.5	229	42.5		24.1			
8	175	46.1	260	52.6		33.2	298	01.5		24.9	244	44.5		24.1			
9	190	48.5	275	51.8		33.1	313	02.1		25.3	259	46.5		24.0			
10	205	51.0	290	50.9		33.1	328	02.7		25.7	274	48.5		24.0			
11	220	53.5	305	50.1	-25	33.1	343	03.3	-20	26.1	289	50.4	-22	23.9			
12	235	55.9	320	49.2	-25	33.0	358	03.9	-20	26.5	304	52.4	-22	23.8			
13	250	58.4	335	48.4		33.0	13	04.5		26.9	319	54.4		23.8			
14	266	00.9	350	47.6		32.9	28	05.1		27.3	334	56.4		23.7			
15	281	03.3	5	46.7		32.9	43	05.7		27.7	349	58.4		23.6			
16	296	05.8	20	45.9		32.8	58	06.3		28.1	5	00.4		23.6			
17	311	08.3	35	45.0	-25	32.8	73	06.9	-20	28.5	20	02.3	-22	23.5			
18	326	10.7	50	44.2	-25	32.7	88	07.5	-20	28.9	35	04.3	-22	23.5			
19	341	13.2	65	43.3		32.7	103	08.1		29.3	50	06.3		23.4			
20	356	15.6	80	42.5		32.6	118	08.7		29.7	65	08.3		23.3			
21	11	18.1	95	41.7		32.6	133	09.3		30.1	80	10.3		23.3			
22	26	20.6	110	40.8		32.5	148	10.0		30.5	95	12.3		23.2			
23	41	23.0	125	40.0		32.4	163	10.6		30.9	110	14.2		23.1			
24	56	25.5	140	39.1	-25	32.4	178	11.2	-20	31.3	125	16.2	-22	23.1			
Dif	—		-8		0		+6		-4		+20		+1		+23		-1

UT	SOL			LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna			
	SD: 16/2			Edad: 19 ^d 0 PHE $\left\{ \begin{array}{l} 4^h: 60/1 \\ 12^h: 59/8 \\ 20^h: 59/6 \end{array} \right.$						Civil			Náutico		Hora R°			
	PMG: 11 ^h 45 ^m 0			SD: 16/4 PMG: 3 ^h 39 ^m R°: 58 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif											
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	m	h m	m			
0	183	46.1	-19	01.1	307	21.4	+24	27.5	60 N	15 26	16 15	17 08	19 26 105	13 04	9			
1	198	46.0		01.7	321	44.7		19.9	58	38	24	13	43 99	12 47	14			
2	213	45.9		02.3	336	08.0		12.0	79	48	31	17	19 57 94	32	19			
3	228	45.7		02.9	350	31.6	+24	04.0	80	15 57	37	21	20 09 91	19	23			
4	243	45.6		03.5	4	55.2	+23	55.8	82	16 06	43	25	20 87	12 08	26			
5	258	45.5	-19	04.1	19	18.9	+23	47.5	83	16 13	16 49	17 28	20 29 85	11 58	28			
6	273	45.4	-19	04.8	33	42.8	+23	39.0	85	16 29	17 01	17 37	20 49 79	11 37	33			
7	288	45.2		05.4	48	06.8		30.4	86	42	11	44	21 05 75	20	37			
8	303	45.1		06.0	62	30.9		21.6	88	16 53	20	51	19 70	11 05	41			
9	318	45.0		06.6	76	55.1		12.7	89	17 03	28	17 57	31 67	10 52	44			
10	333	44.9		07.2	91	19.5	+23	03.7	90	20	43	18 10	21 51 62	31	48			
11	348	44.7	-19	07.8	105	44.0	+22	54.5	92	10 N	17 35	17 57	18 22	22 08 58	10 12 52			
12	3	44.6	-19	08.4	120	08.6	+22	45.1	94	0	17 49	18 11	18 36	22 24 54	9 54 56			
13	18	44.5		09.0	134	33.4		35.6	95	10 S	18 03	25	18 51	40 50	36 60			
14	33	44.3		09.6	148	58.2		26.0	96	20	18	18 42	19 10	22 57 46	9 16 65			
15	48	44.2		10.2	163	23.2		16.3	97	30	36	19 02	33	23 17 40	8 54 69			
16	63	44.1		10.8	177	48.4	+22	06.4	99	35	46	14	19 49	28 38	41 72			
17	78	44.0	-19	11.4	192	13.6	+21	56.4	100	40	18 58	19 29	20 07	23 42 33	8 25 76			
18	93	43.8	-19	12.0	206	39.0	+21	46.2	102	45	19 12	19 46	20 30	23 57 29	8 07 80			
19	108	43.7		12.6	221	04.5		35.9	103	50	29	20 09	21 02	** ** *	7 44 86			
20	123	43.6		13.2	235	30.1		25.5	104	52	38	20	19	** ** *	33 88			
21	138	43.4		13.8	249	55.9		15.0	105	54	47	33	21 40	0 07 27	20 92			
22	153	43.3		14.3	264	21.8	+21	04.4	106	56	19 57	20 48	22 08	22 23	7 06 96			
23	168	43.2		14.9	278	47.8	+20	53.6	108	58	20 09	21 06	22 53	0 40 18	6 49 101			
24	183	43.1	-19	15.5	293	14.0	+20	42.8	108	60 S	20 23	21 28	** ** *	1 02 11	6 28 108			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG		Mag: -4.1			Mag: +1.4			Mag: -2.1			Mag: +1.1						
	20 ^h 11 ^m 0		PMG: 14 ^h 38 ^m			PMG: 12 ^h 07 ^m			PMG: 15 ^h 37 ^m			PMG: 7 ^h 39 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	56	25.5	140	39.1	-25	32.4	178	11.2	-20	31.3	125	16.2	-22	23.1	244	53.1	+5	39.9
1	71	28.0	155	38.3		32.3	193	11.8		31.7	140	18.2		23.0	259	55.4		39.8
2	86	30.4	170	37.5		32.3	208	12.4		32.1	155	20.2		23.0	274	57.7		39.8
3	101	32.9	185	36.6		32.2	223	13.0		32.5	170	22.2		22.9	290	00.0		39.7
4	116	35.4	200	35.8		32.1	238	13.6		32.9	185	24.1		22.8	305	02.3		39.6
5	131	37.8	215	34.9	-25	32.1	253	14.2	-20	33.3	200	26.1	-22	22.8	320	04.6	+5	39.6
6	146	40.3	230	34.1	-25	32.0	268	14.8	-20	33.7	215	28.1	-22	22.7	335	06.8	+5	39.5
7	161	42.8	245	33.3		31.9	283	15.4		34.1	230	30.1		22.6	350	09.1		39.4
8	176	45.2	260	32.4		31.9	298	16.0		34.5	245	32.1		22.6	5	11.4		39.4
9	191	47.7	275	31.6		31.8	313	16.6		34.9	260	34.0		22.5	20	13.7		39.3
10	206	50.1	290	30.7		31.7	328	17.2		35.3	275	36.0		22.5	35	16.0		39.2
11	221	52.6	305	29.9	-25	31.6	343	17.8	-20	35.6	290	38.0	-22	22.4	50	18.3	+5	39.2
12	236	55.1	320	29.1	-25	31.6	358	18.4	-20	36.0	305	40.0	-22	22.3	65	20.6	+5	39.1
13	251	57.5	335	28.2		31.5	13	19.0		36.4	320	42.0		22.3	80	22.9		39.1
14	267	00.0	350	27.4		31.4	28	19.6		36.8	335	43.9		22.2	95	25.1		39.0
15	282	02.5	5	26.5		31.3	43	20.2		37.2	350	45.9		22.1	110	27.4		38.9
16	297	04.9	20	25.7		31.3	58	20.8		37.6	5	47.9		22.1	125	29.7		38.9
17	312	07.4	35	24.9	-25	31.2	73	21.4	-20	38.0	20	49.9	-22	22.0	140	32.0	+5	38.8
18	327	09.9	50	24.0	-25	31.1	88	22.0	-20	38.4	35	51.8	-22	21.9	155	34.3	+5	38.7
19	342	12.3	65	23.2		31.0	103	22.6		38.8	50	53.8		21.9	170	36.6		38.7
20	357	14.8	80	22.4		30.9	118	23.2		39.2	65	55.8		21.8	185	38.9		38.6
21	12	17.3	95	21.5		30.8	133	23.8		39.6	80	57.8		21.8	200	41.2		38.5
22	27	19.7	110	20.7		30.8	148	24.4		40.0	95	59.8		21.7	215	43.5		38.5
23	42	22.2	125	19.8		30.7	163	25.0		40.4	111	01.7		21.6	230	45.7		38.4
24	57	24.6	140	19.0	-25	30.6	178	25.6	-20	40.8	126	03.7	-22	21.6	245	48.0	+5	38.3
Dif	—		-8		+1		+6		-4		+20		+1		+23		-1	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16:2 PMG: 11 ^h 45 ^m 2			Edad: 20 ^d 0 PHE { 4 ^h : 59/3 12 ^h : 59/1 20 ^h : 58/8 PMG: 4 ^h 37 ^m R°: 53 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	183	43.1	-19	15.5	293	14.0	+20 42.8	60 N	6 24	7 16	8 06	21 11	98	13 13	4
1	198	42.9		16.1	307	40.3	31.8 ¹¹⁰	58	19	08	7 54	22 94		13 01	9
2	213	42.8		16.7	322	06.7	20.7 ¹¹¹	56	14	7 00	43	31 90		12 51	12
3	228	42.7		17.3	336	33.2	20 09.5 ¹¹²	54	10	6 54	34	40 86		42	16
4	243	42.5		17.9	350	59.9	+19 58.1 ¹¹⁴	52	06	48	26	47 83		34	18
5	258	42.4	-19	18.5	5	26.7	+19 46.7 ¹¹⁴	50	6 02	6 42	7 18	21 54	80	12 26	21
6	273	42.3	-19	19.1	19	53.6	+19 35.2 ¹¹⁵	45	5 54	6 30	7 02	22 08	75	12 10	27
7	288	42.1		19.7	34	20.6	23.6 ¹¹⁶	40	47	20	6 49	20 70		11 57	31
8	303	42.0		20.3	48	47.8	+19 11.8 ¹¹⁸	35	40	11	38	29 67		46	34
9	318	41.9		20.9	63	15.1	+19 00.0 ¹¹⁸	30	33	6 02	28	38 64		36	38
10	333	41.7		21.4	77	42.5	+18 48.1 ¹¹⁹	20	21	5 47	6 11	22 53	58	19	43
11	348	41.6	-19	22.0	92	10.0	+18 36.0 ¹²¹	10 N	5 08	5 34	5 56	23 06	53	11 04	48
12	3	41.4	-19	22.6	106	37.7	+18 23.9 ¹²¹	0	4 54	5 20	5 42	23 18	49	10 50	52
13	18	41.3		23.2	121	05.5	+18 11.7 ¹²²	10 S	39	5 05	27	30 45		36	56
14	33	41.2		23.8	135	33.4	+17 59.4 ¹²³	20	4 20	4 48	5 12	43 40		21	60
15	48	41.0		24.4	150	01.4	47.0 ¹²⁴	30	3 57	28	4 54	23 57	35	10 03	66
16	63	40.9		25.0	164	29.5	34.6 ¹²⁴	35	41	16	44	** ** *		9 53	69
17	78	40.8	-19	25.5	178	57.8	+17 22.0 ¹²⁶	40	3 23	4 01	4 32	** ** *		9 41	73
18	93	40.6	-19	26.1	193	26.2	+17 09.4 ¹²⁶	45	3 00	3 43	4 18	** ** *		9 27	77
19	108	40.5		26.7	207	54.7	+16 56.7 ¹²⁷	50	2 27	21	4 00	0 16	23	10	83
20	123	40.4		27.3	222	23.3	43.9 ¹²⁸	52	2 11	3 10	3 52	24 22		9 01	86
21	138	40.2		27.9	236	52.0	31.0 ¹²⁹	54	1 50	2 57	43	34 19		8 52	89
22	153	40.1		28.5	251	20.9	18.1 ¹²⁹	56	1 22	42	33	45 15		42	92
23	168	39.9		29.0	265	49.8	+16 05.0 ¹³¹	58	0 37	24	21	0 58	11	30	97
24	183	39.8	-19	29.6	280	18.9	+15 51.9 ¹³¹	60 S	** ** *	2 02	3 07	1 13	5	8 16	102

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 20 ^h 07 ^m 1		Mag: -4.1 PMG: 14 ^h 40 ^m		Mag: +1.4 PMG: 12 ^h 06 ^m		Mag: -2.1 PMG: 15 ^h 34 ^m		Mag: +1.1 PMG: 7 ^h 36 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	57	24.6	140	19.0	-25	30.6	178	25.6	-22	21.6					
1	72	27.1	155	18.2		30.5	193	26.2		21.5					
2	87	29.6	170	17.3		30.4	208	26.7		21.4					
3	102	32.0	185	16.5		30.3	223	27.3		21.4					
4	117	34.5	200	15.7		30.2	238	27.9		21.3					
5	132	37.0	215	14.8	-25	30.1	253	28.5	-20	21.2					
6	147	39.4	230	14.0	-25	30.0	268	29.1	-20	21.2					
7	162	41.9	245	13.2		29.9	283	29.7		21.1					
8	177	44.4	260	12.3		29.8	298	30.3		21.1					
9	192	46.8	275	11.5		29.7	313	30.9		21.0					
10	207	49.3	290	10.7		29.6	328	31.5		20.9					
11	222	51.7	305	09.8	-25	29.5	343	32.1	-20	20.9					
12	237	54.2	320	09.0	-25	29.4	358	32.7	-20	20.8					
13	252	56.7	335	08.2		29.3	373	33.3		20.7					
14	267	59.1	350	07.3		29.2	388	33.9		20.7					
15	283	01.6	5	06.5		29.1	403	34.5		20.6					
16	298	04.1	20	05.7		29.0	418	35.1		20.5					
17	313	06.5	35	04.8	-25	28.9	433	35.7	-20	20.5					
18	328	09.0	50	04.0	-25	28.8	448	36.3	-20	20.4					
19	343	11.5	65	03.2		28.6	463	36.8		20.3					
20	358	13.9	80	02.3		28.5	478	37.4		20.3					
21	13	16.4	95	01.5		28.4	493	38.0		20.2					
22	28	18.9	110	00.7		28.3	508	38.6		20.1					
23	43	21.3	124	59.8		28.2	523	39.2		20.1					
24	58	23.8	139	59.0	-25	28.1	538	39.8	-20	20.0					
Dif	—		-8		+1		+6		-4		+20		+1	+23	-1

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16°2 PMG: 11 ^h 45 ^m 5			Edad: 21 ^d 0 PHE { 4 ^h : 58'5 12 ^h : 58'3 20 ^h : 58'0 PMG: 5 ^h 30 ^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	183	39.8	-19 29.6	280	18.9	+15 51.9	60 N	15 22	16 12	17 05	22 49 92		13 17 3		
1	198	39.7	30.2	294	48.1 ¹⁰²	38.8 ¹³¹	58	34	21	10	22 56 88		10 6		
2	213	39.5	30.8	309	17.4 ¹⁰³	25.6 ¹³²	56	45	28	15	23 01 85		13 03 10		
3	228	39.4	31.4	323	46.8 ¹⁰⁴	+15 12.3 ¹³³	54	15 55	35	19	06 82		12 58 12		
4	243	39.2	31.9	338	16.3 ¹⁰⁵	+14 58.9 ¹³⁴	52	16 03	41	23	10 80		52 15		
5	258	39.1	-19 32.5	352	45.9 ¹⁰⁶	+14 45.5 ¹³⁴	50	16 11	16 47	17 27	23 14 77		12 47 17		
6	273	38.9	-19 33.1	7	15.7 ¹⁰⁸	+14 32.0 ¹³⁵	45	16 27	16 59	17 35	23 23 72		12 37 22		
7	288	38.8	33.7	21	45.5 ¹⁰⁸	18.5 ¹³⁵	40	41	17 10	43	30 68		28 26		
8	303	38.7	34.2	36	15.4 ¹⁰⁹	+14 04.8 ¹³⁷	35	16 52	19	50	36 64		20 30		
9	318	38.5	34.8	50	45.5 ¹¹¹	+13 51.2 ¹³⁶	30	17 02	28	17 57	42 60		14 32		
10	333	38.4	35.4	65	15.6 ¹¹¹	37.5 ¹³⁷	20	19	43	18 10	51 55		12 02 38		
11	348	38.2	-19 36.0	79	45.8 ¹¹²	+13 23.7 ¹³⁸	10 N	17 35	17 57	18 23	23 59 50		11 52 42		
12	3	38.1	-19 36.5	94	16.2 ¹¹⁴	+13 09.9 ¹³⁸	0	17 49	18 11	18 37	*** ** *		11 42 47		
13	18	37.9	37.1	108	46.6 ¹¹⁴	+12 56.0 ¹³⁹	10 S	18 04	26	18 52	*** ** *		32 52		
14	33	37.8	37.7	123	17.1 ¹¹⁵	42.1 ¹³⁹	20	19	18 43	19 11	*** ** *		21 57		
15	48	37.6	38.2	137	47.7 ¹¹⁶	28.1 ¹⁴⁰	30	37	19 04	35	*** ** *		09 62		
16	63	37.5	38.8	152	18.5 ¹¹⁸	14.1 ¹⁴⁰	35	18 48	16	19 51	0 06 31		11 02 65		
17	78	37.4	-19 39.4	166	49.3 ¹¹⁸	+12 00.1 ¹⁴⁰	40	19 00	19 31	20 10	0 15 28		10 54 69		
18	93	37.2	-19 40.0	181	20.2 ¹¹⁹	+11 46.0 ¹⁴¹	45	19 15	19 49	20 34	0 26 24		10 44 74		
19	108	37.1	40.5	195	51.2 ¹²⁰	31.8 ¹⁴²	50	33	20 13	21 07	39 19		33 79		
20	123	36.9	41.1	210	22.2 ¹²⁰	17.7 ¹⁴¹	52	41	24	25	46 16		27 82		
21	138	36.8	41.7	224	53.4 ¹²²	+11 03.4 ¹⁴³	54	19 51	37	21 47	0 53 13		21 85		
22	153	36.6	42.2	239	24.7 ¹²³	+10 49.2 ¹⁴²	56	20 01	20 53	22 17	1 00 10		14 88		
23	168	36.5	42.8	253	56.0 ¹²³	34.9 ¹⁴³	58	14	21 11	23 14	09 6		10 07 91		
24	183	36.3	-19 43.4	268	27.4 ¹²⁴	+10 20.6 ¹⁴³	60 S	20 28	21 35	** ** *	1 18 3		9 58 96		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 20 ^h 03 ^m 1		Mag: -4.1 PMG: 14 ^h 41 ^m			Mag: +1.4 PMG: 12 ^h 05 ^m			Mag: -2.1 PMG: 15 ^h 31 ^m			Mag: +1.1 PMG: 7 ^h 32 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	58	23.8	139 59.0	-25 28.1	178 39.8	-20 50.1	126 51.1	-22 20.0	246 43.0	+5 36.8					
1	73	26.2	154 58.2	27.9	193 40.4	50.4	141 53.1	20.0	261 45.3	36.8					
2	88	28.7	169 57.3	27.8	208 41.0	50.8	156 55.0	19.9	276 47.6	36.7					
3	103	31.2	184 56.5	27.7	223 41.6	51.2	171 57.0	19.8	291 49.9	36.6					
4	118	33.6	199 55.7	27.6	238 42.2	51.6	186 59.0	19.8	306 52.2	36.6					
5	133	36.1	214 54.8	-25 27.4	253 42.8	-20 52.0	202 01.0	-22 19.7	321 54.5	+5 36.5					
6	148	38.6	229 54.0	-25 27.3	268 43.3	-20 52.3	217 02.9	-22 19.6	336 56.8	+5 36.5					
7	163	41.0	244 53.2	27.2	283 43.9	52.7	232 04.9	19.6	351 59.1	36.4					
8	178	43.5	259 52.4	27.0	298 44.5	53.1	247 06.9	19.5	7 01.4	36.3					
9	193	46.0	274 51.5	26.9	313 45.1	53.5	262 08.8	19.4	22 03.7	36.3					
10	208	48.4	289 50.7	26.8	328 45.7	53.9	277 10.8	19.4	37 06.0	36.2					
11	223	50.9	304 49.9	-25 26.6	343 46.3	-20 54.3	292 12.8	-22 19.3	52 08.2	+5 36.1					
12	238	53.4	319 49.0	-25 26.5	358 46.9	-20 54.6	307 14.8	-22 19.2	67 10.5	+5 36.1					
13	253	55.8	334 48.2	26.4	13 47.5	55.0	322 16.7	19.2	82 12.8	36.0					
14	268	58.3	349 47.4	26.2	28 48.0	55.4	337 18.7	19.1	97 15.1	36.0					
15	284	00.7	4 46.6	26.1	43 48.6	55.8	352 20.7	19.0	112 17.4	35.9					
16	299	03.2	19 45.7	26.0	58 49.2	56.1	7 22.6	19.0	127 19.7	35.8					
17	314	05.7	34 44.9	-25 25.8	73 49.8	-20 56.5	22 24.6	-22 18.9	142 22.0	+5 35.8					
18	329	08.1	49 44.1	-25 25.7	88 50.4	-20 56.9	37 26.6	-22 18.8	157 24.3	+5 35.7					
19	344	10.6	64 43.2	25.5	103 51.0	57.3	52 28.6	18.8	172 26.6	35.7					
20	359	13.1	79 42.4	25.4	118 51.6	57.7	67 30.5	18.7	187 28.9	35.6					
21	14	15.5	94 41.6	25.2	133 52.1	58.0	82 32.5	18.6	202 31.2	35.5					
22	29	18.0	109 40.8	25.1	148 52.7	58.4	97 34.5	18.6	217 33.5	35.5					
23	44	20.5	124 39.9	24.9	163 53.3	58.8	112 36.4	18.5	232 35.8	35.4					
24	59	22.9	139 39.1	-25 24.8	178 53.9	-20 59.2	127 38.4	-22 18.4	247 38.1	+5 35.3					
Dif	—		-8	+1	+6	-4	+20	+1	+23	-1					

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16:2			Edad: 22 ^d 0	PHE { 4 ^h : 57:7 12 ^h : 57:5 20 ^h : 57:2										
	PMG: 11 ^h 45 ^m 7					SD: 15:8		PMG: 6 ^h 18 ^m			R ^o : 45 ^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	36.3	-19 43.4	268	27.4	+10 20.6		60 N	6 27	7 20	8 11	** ** *		13 20	2
1	198	36.2		282	58.9 ¹²⁵	+10 06.2 ¹⁴⁴		58	22	12	7 58	** ** *		16	5
2	213	36.0		297	30.5 ¹²⁶	+9 51.8 ¹⁴⁴		56	17	7 04	47	** ** *		13	7
3	228	35.9		312	02.2 ¹²⁷		37.4 ¹⁴⁴	54	13	6 57	38	** ** *		10	10
4	243	35.7		326	33.9 ¹²⁷		22.9 ¹⁴⁵	52	09	51	29	** ** *		07	13
5	258	35.6	-19 46.2	341	05.8 ¹²⁹	+9 08.5 ¹⁴⁴		50	6 05	6 45	7 21	** ** *		13 04	15
6	273	35.4	-19 46.7	355	37.6 ¹²⁸	+8 54.0 ¹⁴⁵		45	5 56	6 32	7 05	** ** *		12 59	19
7	288	35.3		10	09.6 ¹³⁰		39.4 ¹⁴⁶	40	49	22	6 51	** ** *		54	24
8	303	35.1		24	41.7 ¹³¹		24.9 ¹⁴⁵	35	42	12	40	** ** *		50	27
9	318	35.0		39	13.8 ¹³¹	+8 10.3 ¹⁴⁶		30	35	6 04	29	** ** *		46	30
10	333	34.8		53	46.0 ¹³²	+7 55.7 ¹⁴⁶		20	22	5 49	6 12	** ** *		40	35
11	348	34.7	-19 49.5	68	18.2 ¹³²	+7 41.1 ¹⁴⁶		10 N	5 09	5 34	5 57	** ** *		12 34	40
12	3	34.5	-19 50.1	82	50.5 ¹³³	+7 26.4 ¹⁴⁷		0	4 55	5 20	5 42	0 07 46		12 29	44
13	18	34.4		97	22.9 ¹³⁴	+7 11.8 ¹⁴⁶		10 S	39	5 05	27	15 41		24	49
14	33	34.2		111	55.4 ¹³⁵	+6 57.1 ¹⁴⁷		20	4 20	4 48	5 12	23 36		18	54
15	48	34.1		126	27.9 ¹³⁵		42.4 ¹⁴⁷	30	3 55	27	4 54	32 31		11	59
16	63	33.9		141	00.5 ¹³⁶		27.7 ¹⁴⁷	35	40	15	43	37 28		07	63
17	78	33.7	-19 52.9	155	33.1 ¹³⁶	+6 13.0 ¹⁴⁷		40	3 21	4 00	4 31	0 43 24		12 03	66
18	93	33.6	-19 53.4	170	05.8 ¹³⁷	+5 58.3 ¹⁴⁷		45	2 57	3 41	4 16	0 50 20		11 58	70
19	108	33.4		184	38.5 ¹³⁷		43.5 ¹⁴⁸	50	24	18	3 58	0 58 15		52	75
20	123	33.3		199	11.4 ¹³⁹		28.8 ¹⁴⁷	52	2 06	3 06	50	1 02 13		49	77
21	138	33.1		213	44.2 ¹³⁸	+5 14.0 ¹⁴⁸		54	1 44	2 53	40	06 11		46	80
22	153	33.0		228	17.1 ¹³⁹	+4 59.2 ¹⁴⁸		56	1 14	38	29	10 9		42	83
23	168	32.8		242	50.1 ¹⁴⁰		44.5 ¹⁴⁷	58	0 17	2 19	17	15 6		38	87
24	183	32.6	-19 56.7	257	23.1 ¹⁴⁰	+4 29.7 ¹⁴⁸		60 S	** ** *	1 55	3 03	1 21 2		11 34	90

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 19 ^h 59 ^m 2		Mag: -4.1 PMG: 14 ^h 42 ^m		Mag: +1.4 PMG: 12 ^h 04 ^m		Mag: -2.1 PMG: 15 ^h 27 ^m		Mag: +1.1 PMG: 7 ^h 28 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	59	22.9	139 39.1	-25 24.8	178 53.9	-20 59.2	127 38.4	-22 18.4	247 38.1	+5 35.3
1	74	25.4	154 38.3	24.6	193 54.5	59.5	142 40.4	18.4	262 40.4	35.3
2	89	27.9	169 37.5	24.5	208 55.1	-20 59.9	157 42.3	18.3	277 42.7	35.2
3	104	30.3	184 36.6	24.3	223 55.7	-21 00.3	172 44.3	18.2	292 45.0	35.2
4	119	32.8	199 35.8	24.2	238 56.2	00.7	187 46.3	18.2	307 47.3	35.1
5	134	35.2	214 35.0	-25 24.0	253 56.8	-21 01.0	202 48.2	-22 18.1	322 49.6	+5 35.0
6	149	37.7	229 34.2	-25 23.9	268 57.4	-21 01.4	217 50.2	-22 18.0	337 51.9	+5 35.0
7	164	40.2	244 33.3	23.7	283 58.0	01.8	232 52.2	18.0	352 54.2	34.9
8	179	42.6	259 32.5	23.5	298 58.6	02.2	247 54.1	17.9	7 56.5	34.9
9	194	45.1	274 31.7	23.4	313 59.1	02.5	262 56.1	17.8	22 58.8	34.8
10	209	47.6	289 30.9	23.2	328 59.7	02.9	277 58.1	17.8	38 01.0	34.7
11	224	50.0	304 30.1	-25 23.1	344 00.3	-21 03.3	293 00.0	-22 17.7	53 03.3	+5 34.7
12	239	52.5	319 29.2	-25 22.9	359 00.9	-21 03.6	308 02.0	-22 17.6	68 05.6	+5 34.6
13	254	55.0	334 28.4	22.7	14 01.5	04.0	323 04.0	17.6	83 07.9	34.6
14	269	57.4	349 27.6	22.6	29 02.1	04.4	338 05.9	17.5	98 10.2	34.5
15	284	59.9	4 26.8	22.4	44 02.6	04.8	353 07.9	17.4	113 12.5	34.4
16	300	02.3	19 25.9	22.2	59 03.2	05.1	8 09.9	17.4	128 14.8	34.4
17	315	04.8	34 25.1	-25 22.0	74 03.8	-21 05.5	23 11.8	-22 17.3	143 17.1	+5 34.3
18	330	07.3	49 24.3	-25 21.9	89 04.4	-21 05.9	38 13.8	-22 17.2	158 19.4	+5 34.3
19	345	09.7	64 23.5	21.7	104 05.0	06.2	53 15.8	17.2	173 21.7	34.2
20	0	12.2	79 22.7	21.5	119 05.5	06.6	68 17.7	17.1	188 24.0	34.1
21	15	14.7	94 21.8	21.3	134 06.1	07.0	83 19.7	17.0	203 26.3	34.1
22	30	17.1	109 21.0	21.2	149 06.7	07.4	98 21.7	17.0	218 28.6	34.0
23	45	19.6	124 20.2	21.0	164 07.3	07.7	113 23.6	16.9	233 30.9	34.0
24	60	22.1	139 19.4	-25 20.8	179 07.8	-21 08.1	128 25.6	-22 16.8	248 33.2	+5 33.9
Dif	—		-8	+2	+6	-4	+20	+1	+23	-1

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 16:2 PMG: 11 ^h 45 ^m 9			Edad: 23 ^d 0 PHE { 4 ^h : 57:0 12 ^h : 56:8 20 ^h : 56:5 PMG: 7 ^h 03 ^m R°: 43 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m	
0	183	32.6	-19	56.7	257	23.1	+4 29.7	60 N	15 18	16 09	17 02	0 21	89	13 22	1		
1	198	32.5		57.3	271	56.2 ¹⁴¹	14.9 ¹⁴⁸	58	31	18	07	24	85	21	4		
2	213	32.3		57.8	286	29.3 ¹⁴¹	+4 00.1 ¹⁴⁸	56	42	26	12	26	82	20	8		
3	228	32.2		58.4	301	02.5 ¹⁴²	+3 45.3 ¹⁴⁸	54	15 52	33	17	28	79	20	10		
4	243	32.0		58.9	315	35.7 ¹⁴²	30.5 ¹⁴⁸	52	16 01	39	21	30	76	20	12		
5	258	31.9	-19	59.5	330	09.0 ¹⁴³	+3 15.7 ¹⁴⁸	50	16 09	16 45	17 25	0 31	74	13 19	14		
6	273	31.7	-20	00.0	344	42.3 ¹⁴³	+3 01.0 ¹⁴⁷	45	16 26	16 58	17 34	0 35	69	13 18	19		
7	288	31.5	-20	00.6	359	15.6 ¹⁴³	+2 46.2 ¹⁴⁸	40	39	17 09	42	38	65	18	22		
8	303	31.4		01.1	13	49.0 ¹⁴⁴	31.4 ¹⁴⁸	35	16 51	18	49	40	61	17	26		
9	318	31.2		01.6	28	22.4 ¹⁴⁴	16.6 ¹⁴⁸	30	17 01	27	17 56	42	58	16	29		
10	333	31.1		02.2	42	55.9 ¹⁴⁵	+2 01.8 ¹⁴⁸	20	19	43	18 10	46	53	15	34		
11	348	30.9	-20	02.7	57	29.4 ¹⁴⁵	+1 47.1 ¹⁴⁷	10 N	17 35	17 57	18 23	0 49	48	13 14	39		
12	3	30.7	-20	03.3	72	02.9 ¹⁴⁵	+1 32.3 ¹⁴⁸	0	17 50	18 12	18 37	0 53	43	13 13	44		
13	18	30.6		03.8	86	36.5 ¹⁴⁶	17.5 ¹⁴⁸	10 S	18 04	27	18 53	56	39	13	47		
14	33	30.4		04.4	101	10.1 ¹⁴⁶	+1 02.8 ¹⁴⁷	20	20	18 44	19 13	0 59	34	12	52		
15	48	30.2		04.9	115	43.8 ¹⁴⁷	+0 48.0 ¹⁴⁸	30	39	19 06	37	1 03	29	10	58		
16	63	30.1		05.4	130	17.4 ¹⁴⁶	33.3 ¹⁴⁷	35	18 50	18	19 53	05	26	10	60		
17	78	29.9	-20	06.0	144	51.1 ¹⁴⁷	+0 18.6 ¹⁴⁷	40	19 03	19 34	20 13	1 07	23	13 09	64		
18	93	29.8	-20	06.5	159	24.8 ¹⁴⁷	+0 03.9 ¹⁴⁷	45	19 17	19 52	20 37	1 10	19	13 08	68		
19	108	29.6		07.1	173	58.6 ¹⁴⁸	-0 10.8 ¹⁴⁷	50	36	20 16	21 12	13	15	07	73		
20	123	29.4		07.6	188	32.4 ¹⁴⁸	25.5 ¹⁴⁷	52	44	28	30	15	12	06	76		
21	138	29.3		08.1	203	06.2 ¹⁴⁸	40.1 ¹⁴⁶	54	19 54	42	21 53	17	9	06	78		
22	153	29.1		08.7	217	40.0 ¹⁴⁸	-0 54.8 ¹⁴⁷	56	20 05	20 58	22 26	19	7	05	81		
23	168	28.9		09.2	232	13.8 ¹⁴⁸	-1 09.4 ¹⁴⁶	58	18	21 17	** **	21	4	05	83		
24	183	28.8	-20	09.7	246	47.7 ¹⁴⁹	-1 24.0 ¹⁴⁶	60 S	20 33	21 42	** **	1 23	1	13 04	87		

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 19 ^h 55 ^m 3		Mag: -4.1 PMG: 14 ^h 44 ^m			Mag: +1.4 PMG: 12 ^h 03 ^m			Mag: -2.1 PMG: 15 ^h 24 ^m			Mag: +1.1 PMG: 7 ^h 25 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	60	22.1	139	19.4	-25	20.8	179	07.8	-21	08.1	128	25.6	-22	16.8	248	33.2
1	75	24.5	154	18.6		20.6	194	08.4		08.5	143	27.6		16.8	263	35.5
2	90	27.0	169	17.7		20.4	209	09.0		08.8	158	29.5		16.7	278	37.8
3	105	29.5	184	16.9		20.3	224	09.6		09.2	173	31.5		16.6	293	40.1
4	120	31.9	199	16.1		20.1	239	10.2		09.6	188	33.4		16.6	308	42.4
5	135	34.4	214	15.3	-25	19.9	254	10.7	-21	09.9	203	35.4	-22	16.5	323	44.7
6	150	36.8	229	14.5	-25	19.7	269	11.3	-21	10.3	218	37.4	-22	16.4	338	47.0
7	165	39.3	244	13.7		19.5	284	11.9		10.7	233	39.3		16.4	353	49.3
8	180	41.8	259	12.8		19.3	299	12.5		11.0	248	41.3		16.3	8	51.6
9	195	44.2	274	12.0		19.1	314	13.0		11.4	263	43.3		16.2	23	53.9
10	210	46.7	289	11.2		18.9	329	13.6		11.8	278	45.2		16.2	38	56.2
11	225	49.2	304	10.4	-25	18.7	344	14.2	-21	12.1	293	47.2	-22	16.1	53	58.5
12	240	51.6	319	09.6	-25	18.5	359	14.8	-21	12.5	308	49.1	-22	16.0	69	00.8
13	255	54.1	334	08.8		18.3	14	15.3		12.8	323	51.1		16.0	84	03.1
14	270	56.6	349	08.0		18.1	29	15.9		13.2	338	53.1		15.9	99	05.4
15	285	59.0	4	07.1		17.9	44	16.5		13.6	353	55.0		15.8	114	07.7
16	301	01.5	19	06.3		17.7	59	17.1		13.9	8	57.0		15.8	129	10.0
17	316	03.9	34	05.5	-25	17.5	74	17.6	-21	14.3	23	59.0	-22	15.7	144	12.3
18	331	06.4	49	04.7	-25	17.3	89	18.2	-21	14.7	39	00.9	-22	15.6	159	14.6
19	346	08.9	64	03.9		17.1	104	18.8		15.0	54	02.9		15.6	174	16.9
20	1	11.3	79	03.1		16.9	119	19.4		15.4	69	04.8		15.5	189	19.2
21	16	13.8	94	02.3		16.7	134	19.9		15.7	84	06.8		15.4	204	21.5
22	31	16.3	109	01.4		16.5	149	20.5		16.1	99	08.8		15.4	219	23.8
23	46	18.7	124	00.6		16.3	164	21.1		16.5	114	10.7		15.3	234	26.1
24	61	21.2	138	59.8	-25	16.1	179	21.6	-21	16.8	129	12.7	-22	15.2	249	28.4
Dif	—		-8		+2		+6		-4		+20		+1		+23	

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 11 ^h 46 ^m 2			Edad: 24 ^d 0	PHE { 4 ^h : 56'3 12 ^h : 56'1 20 ^h : 55'9	R ^o : 43 ^m		Náutico	Civil		Hora	R°	Hora	R°
	hG ☉	Dec												
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	183	28.8	-20 09.7	246	47.7	-1 24.0	146	60 N	6 31	7 24	8 16	1 50 86	13 23 2	
1	198	28.6	10.3	261	21.6 ¹⁴⁹	38.6 ¹⁴⁶		58	26	15	8 03	49 83	25 5	
2	213	28.4	10.8	275	55.5 ¹⁴⁹	-1 53.2 ¹⁴⁶		56	21	07	7 51	48 80	28 7	
3	228	28.3	11.3	290	29.4 ¹⁴⁹	-2 07.7 ¹⁴⁵		54	16	7 00	41	47 77	30 10	
4	243	28.1	11.9	305	03.4 ¹⁵⁰	22.2 ¹⁴⁵		52	12	6 54	32	46 75	32 12	
5	258	27.9	-20 12.4	319	37.3 ¹⁴⁹	-2 36.7 ¹⁴⁵		50	6 08	6 48	7 24	1 45 73	13 33 15	
6	273	27.8	-20 12.9	334	11.3 ¹⁵⁰	-2 51.2 ¹⁴⁵		45	5 59	6 35	7 07	1 44 67	13 37 19	
7	288	27.6	13.5	348	45.3 ¹⁵⁰	-3 05.7 ¹⁴⁵		40	51	24	6 53	43 63	40 23	
8	303	27.4	14.0	3	19.2 ¹⁴⁹	20.1 ¹⁴⁴		35	43	14	41	41 60	43 26	
9	318	27.3	14.5	17	53.2 ¹⁵⁰	34.5 ¹⁴⁴		30	36	6 05	31	40 57	45 29	
10	333	27.1	15.0	32	27.2 ¹⁵⁰	-3 48.9 ¹⁴⁴		20	23	5 50	6 13	39 52	49 35	
11	348	26.9	-20 15.6	47	01.3 ¹⁵¹	-4 03.2 ¹⁴³		10 N	5 09	5 35	5 57	1 37 47	13 53 39	
12	3	26.7	-20 16.1	61	35.3 ¹⁵⁰	-4 17.6 ¹⁴⁴		0	4 55	5 21	5 43	1 36 43	13 57 42	
13	18	26.6	16.6	76	09.3 ¹⁵⁰	31.9 ¹⁴³		10 S	39	5 05	28	35 38	14 00 47	
14	33	26.4	17.2	90	43.3 ¹⁵⁰	-4 46.1 ¹⁴²		20	4 19	4 48	5 12	33 34	04 51	
15	48	26.2	17.7	105	17.4 ¹⁵¹	-5 00.3 ¹⁴²		30	3 54	26	4 53	32 29	08 57	
16	63	26.1	18.2	119	51.4 ¹⁵⁰	14.5 ¹⁴²		35	39	4 13	42	31 26	10 60	
17	78	25.9	-20 18.7	134	25.4 ¹⁵⁰	-5 28.7 ¹⁴²		40	3 19	3 58	4 29	1 30 23	14 13 63	
18	93	25.7	-20 19.2	148	59.5 ¹⁵¹	-5 42.8 ¹⁴¹		45	2 54	3 39	4 14	1 29 19	14 16 68	
19	108	25.5	19.8	163	33.5 ¹⁵⁰	-5 56.9 ¹⁴¹		50	20	15	3 56	28 14	20 72	
20	123	25.4	20.3	178	07.6 ¹⁵¹	-6 11.0 ¹⁴¹		52	2 02	3 03	47	27 12	22 74	
21	138	25.2	20.8	192	41.6 ¹⁵⁰	25.0 ¹⁴⁰		54	1 38	2 50	37	26 10	24 77	
22	153	25.0	21.3	207	15.6 ¹⁵⁰	39.0 ¹⁴⁰		56	1 05	34	26	26 7	26 80	
23	168	24.9	21.9	221	49.6 ¹⁵⁰	-6 53.0 ¹⁴⁰		58	** **	2 14	3 14	25 4	28 84	
24	183	24.7	-20 22.4	236	23.6 ¹⁵⁰	-7 06.9 ¹³⁹		60 S	** **	1 49	2 59	1 24 1	14 31 87	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO	
	PMG: 19 ^h 51 ^m 3			Mag: -4.1 PMG: 14 ^h 45 ^m			Mag: +1.4 PMG: 12 ^h 02 ^m			Mag: -2.1 PMG: 15 ^h 21 ^m			Mag: +1.1 PMG: 7 ^h 21 ^m	
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	61	21.2	138 59.8	-25 16.1	179 21.6	-21 16.8	129 12.7	-22 15.2	249 28.4	+5 32.5				
1	76	23.7	153 59.0	15.9	194 22.2	17.2	144 14.6	15.1	264 30.7	32.4				
2	91	26.1	168 58.2	15.7	209 22.8	17.5	159 16.6	15.1	279 33.1	32.4				
3	106	28.6	183 57.4	15.4	224 23.4	17.9	174 18.6	15.0	294 35.4	32.3				
4	121	31.1	198 56.6	15.2	239 23.9	18.3	189 20.5	14.9	309 37.7	32.3				
5	136	33.5	213 55.8	-25 15.0	254 24.5	-21 18.6	204 22.5	-22 14.9	324 40.0	+5 32.2				
6	151	36.0	228 55.0	-25 14.8	269 25.1	-21 19.0	219 24.4	-22 14.8	339 42.3	+5 32.1				
7	166	38.4	243 54.1	14.6	284 25.6	19.3	234 26.4	14.7	354 44.6	32.1				
8	181	40.9	258 53.3	14.4	299 26.2	19.7	249 28.4	14.7	9 46.9	32.0				
9	196	43.4	273 52.5	14.1	314 26.8	20.1	264 30.3	14.6	24 49.2	32.0				
10	211	45.8	288 51.7	13.9	329 27.4	20.4	279 32.3	14.5	39 51.5	31.9				
11	226	48.3	303 50.9	-25 13.7	344 27.9	-21 20.8	294 34.2	-22 14.5	54 53.8	+5 31.9				
12	241	50.8	318 50.1	-25 13.5	359 28.5	-21 21.1	309 36.2	-22 14.4	69 56.1	+5 31.8				
13	256	53.2	333 49.3	13.2	14 29.1	21.5	324 38.2	14.3	84 58.4	31.7				
14	271	55.7	348 48.5	13.0	29 29.6	21.8	339 40.1	14.2	100 00.7	31.7				
15	286	58.2	3 47.7	12.8	44 30.2	22.2	354 42.1	14.2	115 03.0	31.6				
16	302	00.6	18 46.9	12.5	59 30.8	22.5	9 44.0	14.1	130 05.3	31.6				
17	317	03.1	33 46.1	-25 12.3	74 31.3	-21 22.9	24 46.0	-22 14.0	145 07.6	+5 31.5				
18	332	05.6	48 45.3	-25 12.1	89 31.9	-21 23.3	39 47.9	-22 14.0	160 09.9	+5 31.5				
19	347	08.0	63 44.5	11.8	104 32.5	23.6	54 49.9	13.9	175 12.2	31.4				
20	2	10.5	78 43.7	11.6	119 33.0	24.0	69 51.9	13.8	190 14.5	31.3				
21	17	12.9	93 42.9	11.4	134 33.6	24.3	84 53.8	13.8	205 16.8	31.3				
22	32	15.4	108 42.0	11.1	149 34.2	24.7	99 55.8	13.7	220 19.1	31.2				
23	47	17.9	123 41.2	10.9	164 34.7	25.0	114 57.7	13.6	235 21.4	31.2				
24	62	20.3	138 40.4	-25 10.7	179 35.3	-21 25.4	129 59.7	-22 13.6	250 23.8	+5 31.1				
Dif	—		-8	+2	+6	-4	+20	+1	+23	-1				

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 16:2 PMG: 11 ^h 46 ^m 5			Edad: 25 ^d 0 PHE { 4 ^h : 55:7 12 ^h : 55:6 20 ^h : 55:4 Rº: 44 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	Rº	Hora	Rº			
h	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	h m	h m	h m			
0	183	24.7	-20	22.4	236	23.6	-7 06.9	60 N	15 14	16 06	16 59	3 16	87	13 25	2			
1	198	24.5		22.9	250	57.7 ¹⁵¹	20.8 ¹³⁹	58	28	15	17 05	12	83	30	6			
2	213	24.3		23.4	265	31.7 ¹⁵⁰	34.6 ¹³⁸	56	39	23	10	08	80	35	9			
3	228	24.2		23.9	280	05.6 ¹⁴⁹	-7 48.4 ¹³⁸	54	50	31	15	04	77	40	12			
4	243	24.0		24.4	294	39.6 ¹⁵⁰	-8 02.1 ¹³⁷	52	15 59	37	19	3 01	74	44	14			
5	258	23.8	-20	25.0	309	13.6 ¹⁵⁰	-8 15.8 ¹³⁷	50	16 07	16 43	17 23	2 58	72	13 48	16			
6	273	23.6	-20	25.5	323	47.5 ¹⁴⁹	-8 29.5 ¹³⁷	45	16 24	16 57	17 33	2 51	68	13 56	21			
7	288	23.5		26.0	338	21.5 ¹⁵⁰	43.1 ¹³⁶	40	38	17 08	41	46	63	14 03	25			
8	303	23.3		26.5	352	55.4 ¹⁴⁹	-8 56.7 ¹³⁶	35	16 50	18	49	41	60	09	28			
9	318	23.1		27.0	7	29.3 ¹⁴⁹	-9 10.2 ¹³⁵	30	17 01	27	17 56	37	57	14	31			
10	333	22.9		27.5	22	03.2 ¹⁴⁹	23.7 ¹³⁵	20	19	43	18 10	31	51	24	35			
11	348	22.7	-20	28.0	36	37.1 ¹⁴⁹	-9 37.1 ¹³⁴	10 N	17 35	17 57	18 23	2 24	48	14 32	40			
12	3	22.6	-20	28.6	51	11.0 ¹⁴⁹	-9 50.5 ¹³⁴	0	17 50	18 12	18 38	2 19	43	14 39	44			
13	18	22.4		29.1	65	44.8 ¹⁴⁸	-10 03.8 ¹³³	10 S	18 05	28	18 54	13	39	47	48			
14	33	22.2		29.6	80	18.6 ¹⁴⁸	17.1 ¹³³	20	22	18 46	19 14	07	35	14 55	52			
15	48	22.0		30.1	94	52.4 ¹⁴⁸	30.3 ¹³²	30	41	19 07	39	2 01	30	15 05	57			
16	63	21.8		30.6	109	26.2 ¹⁴⁸	43.5 ¹³²	35	18 52	21	19 56	1 57	27	10	60			
17	78	21.7	-20	31.1	123	59.9 ¹⁴⁷	-10 56.7 ¹³²	40	19 05	19 36	20 15	1 53	23	15 16	64			
18	93	21.5	-20	31.6	138	33.7 ¹⁴⁸	-11 09.7 ¹³⁰	45	19 20	19 55	20 41	1 48	20	15 24	67			
19	108	21.3		32.1	153	07.4 ¹⁴⁷	22.7 ¹³⁰	50	39	20 20	21 16	42	15	32	73			
20	123	21.1		32.6	167	41.1 ¹⁴⁷	35.7 ¹³⁰	52	48	32	21 35	39	13	36	75			
21	138	20.9		33.1	182	14.7 ¹⁴⁶	-11 48.6 ¹²⁹	54	19 58	20 46	22 00	36	11	41	77			
22	153	20.8		33.6	196	48.3 ¹⁴⁶	-12 01.5 ¹²⁹	56	20 09	21 03	22 36	33	8	46	80			
23	168	20.6		34.1	211	21.9 ¹⁴⁶	14.3 ¹²⁸	58	23	23	** **	29	6	52	83			
24	183	20.4	-20	34.6	225	55.5 ¹⁴⁶	-12 27.0 ¹²⁷	60 S	20 38	21 50	** **	1 25	2	15 58	87			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 19 ^h 47 ^m 4		Mag: -4.1 PMG: 14 ^h 46 ^m				Mag: +1.4 PMG: 12 ^h 01 ^m				Mag: -2.1 PMG: 15 ^h 18 ^m				Mag: +1.1 PMG: 7 ^h 17 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	62	20.3	138	40.4	-25	10.7	179	35.3	-21	25.4	129	59.7	-22	13.6	250	23.8	+5	31.1
1	77	22.8	153	39.6		10.4	194	35.9		25.7	145	01.6		13.5	265	26.1		31.1
2	92	25.3	168	38.8		10.2	209	36.4		26.1	160	03.6		13.4	280	28.4		31.0
3	107	27.7	183	38.0		09.9	224	37.0		26.4	175	05.5		13.3	295	30.7		30.9
4	122	30.2	198	37.2		09.7	239	37.6		26.8	190	07.5		13.3	310	33.0		30.9
5	137	32.7	213	36.4	-25	09.4	254	38.1	-21	27.1	205	09.5	-22	13.2	325	35.3	+5	30.8
6	152	35.1	228	35.6	-25	09.2	269	38.7	-21	27.5	220	11.4	-22	13.1	340	37.6	+5	30.8
7	167	37.6	243	34.8		08.9	284	39.3		27.8	235	13.4		13.1	355	39.9		30.7
8	182	40.0	258	34.0		08.7	299	39.8		28.2	250	15.3		13.0	10	42.2		30.7
9	197	42.5	273	33.2		08.4	314	40.4		28.5	265	17.3		12.9	25	44.5		30.6
10	212	45.0	288	32.4		08.2	329	41.0		28.9	280	19.2		12.9	40	46.8		30.6
11	227	47.4	303	31.6	-25	07.9	344	41.5	-21	29.2	295	21.2	-22	12.8	55	49.1	+5	30.5
12	242	49.9	318	30.8	-25	07.7	359	42.1	-21	29.6	310	23.1	-22	12.7	70	51.4	+5	30.4
13	257	52.4	333	30.0		07.4	14	42.6		29.9	325	25.1		12.6	85	53.7		30.4
14	272	54.8	348	29.2		07.2	29	43.2		30.3	340	27.1		12.6	100	56.0		30.3
15	287	57.3	3	28.4		06.9	44	43.8		30.6	355	29.0		12.5	115	58.4		30.3
16	302	59.8	18	27.6		06.6	59	44.3		31.0	10	31.0		12.4	131	00.7		30.2
17	318	02.2	33	26.8	-25	06.4	74	44.9	-21	31.3	25	32.9	-22	12.4	146	03.0	+5	30.2
18	333	04.7	48	26.0	-25	06.1	89	45.4	-21	31.7	40	34.9	-22	12.3	161	05.3	+5	30.1
19	348	07.2	63	25.2		05.8	104	46.0		32.0	55	36.8		12.2	176	07.6		30.0
20	3	09.6	78	24.4		05.6	119	46.6		32.3	70	38.8		12.2	191	09.9		30.0
21	18	12.1	93	23.6		05.3	134	47.1		32.7	85	40.7		12.1	206	12.2		29.9
22	33	14.5	108	22.9		05.0	149	47.7		33.0	100	42.7		12.0	221	14.5		29.9
23	48	17.0	123	22.1		04.8	164	48.3		33.4	115	44.6		11.9	236	16.8		29.8
24	63	19.5	138	21.3	-25	04.5	179	48.8	-21	33.7	130	46.6	-22	11.9	251	19.1	+5	29.8
Dif	—		-8		+3		+6		-3		+20		+1		+23		-1	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16:2 PMG: 11 ^h 46 ^m 8			Edad: 26 ^d 0 PHE { 4 ^h : 55:2 12 ^h : 55:1 20 ^h : 54:9 PMG: 9 ^h 13 ^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	183	20.4	-20	225	55.5	-12	27.0	60 N	6	35	7	28	8	20	4	43	89
1	198	20.2		240	29.1 ¹⁴⁶		39.7 ¹²⁷	58	29	19		8	07	35	84	36	9
2	213	20.0		255	02.6 ¹⁴⁵	-12	52.3 ¹²⁶	56	24	11		7	55	28	80	44	12
3	228	19.8		269	36.0 ¹⁴⁴	-13	04.8 ¹²⁵	54	19	7	03	45		21	77	52	15
4	243	19.7		284	09.5 ¹⁴⁵		17.3 ¹²⁵	52	15	6	57	35		15	75	13	58
5	258	19.5	-20	298	42.9 ¹⁴⁴	-13	29.8 ¹²⁵	50	6	10	6	51	7	27	4	10	72
6	273	19.3	-20	313	16.3 ¹⁴⁴	-13	42.1 ¹²³	45	6	01	6	37	7	10	3	59	67
7	288	19.1		327	49.6 ¹⁴³	-13	54.4 ¹²³	40	5	53	26	6	56	49	63	28	28
8	303	18.9		342	23.0 ¹⁴⁴	-14	06.7 ¹²³	35	45	16		43		41	60	37	31
9	318	18.7		356	56.2 ¹⁴²		18.8 ¹²¹	30	38	6	07	33		34	57	45	34
10	333	18.6		11	29.5 ¹⁴³		30.9 ¹²¹	20	24	5	51	6	14	22	53	14	59
11	348	18.4	-20	26	02.7 ¹⁴²	-14	43.0 ¹²¹	10 N	5	10	5	36	5	58	3	12	48
12	3	18.2	-20	40	35.9 ¹⁴²	-14	54.9 ¹¹⁹	0	4	55	5	21	5	43	3	02	45
13	18	18.0		55	09.0 ¹⁴¹	-15	06.8 ¹¹⁹	10 S	39	5	05		28	2	52	41	35
14	33	17.8		69	42.1 ¹⁴¹		18.7 ¹¹⁹	20	4	19	4	47	5	11	42	37	15
15	48	17.6		84	15.1 ¹⁴⁰		30.4 ¹¹⁷	30	3	54	26	4	52	31	32	16	02
16	63	17.4		98	48.2 ¹⁴¹		42.1 ¹¹⁷	35	37	4	12	41		24	29	10	60
17	78	17.2	-20	113	21.1 ¹³⁹	-15	53.7 ¹¹⁶	40	3	18	3	57	4	28	2	16	27
18	93	17.1	-20	127	54.1 ¹⁴⁰	-16	05.3 ¹¹⁶	45	2	52	3	38	4	13	2	08	22
19	108	16.9		142	27.0 ¹³⁹		16.7 ¹¹⁴	50	2	17	13	3	54	1	57	18	45
20	123	16.7		156	59.8 ¹³⁸		28.1 ¹¹⁴	52	1	57	3	01	45	52	16	51	74
21	138	16.5		171	32.6 ¹³⁸		39.4 ¹¹³	54	1	33	2	47	35	47	13	16	58
22	153	16.3		186	05.4 ¹³⁸	-16	50.7 ¹¹³	56	0	56	30	23		41	11	17	06
23	168	16.1		200	38.1 ¹³⁷	-17	01.8 ¹¹¹	58	** **	** **	2	09	3	10	35	7	15
24	183	15.9	-20	215	10.8 ¹³⁷	-17	12.9 ¹¹¹	60 S	** **	** **	1	43	2	55	1	27	4

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 19 ^h 43 ^m 5		Mag: -4.1 PMG: 14 ^h 47 ^m		Mag: +1.4 PMG: 12 ^h 00 ^m		Mag: -2.1 PMG: 15 ^h 15 ^m		Mag: +1.1 PMG: 7 ^h 14 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	63	19.5	138	21.3	-25	04.5	179	48.8	-21	33.7
1	78	21.9	153	20.5		04.2	194	49.4		34.1
2	93	24.4	168	19.7		04.0	209	49.9		34.4
3	108	26.9	183	18.9		03.7	224	50.5		34.8
4	123	29.3	198	18.1		03.4	239	51.1		35.1
5	138	31.8	213	17.3	-25	03.1	254	51.6	-21	35.4
6	153	34.3	228	16.5	-25	02.9	269	52.2	-21	35.8
7	168	36.7	243	15.7		02.6	284	52.7		36.1
8	183	39.2	258	14.9		02.3	299	53.3		36.5
9	198	41.7	273	14.1		02.0	314	53.8		36.8
10	213	44.1	288	13.3		01.7	329	54.4		37.2
11	228	46.6	303	12.5	-25	01.4	344	55.0	-21	37.5
12	243	49.0	318	11.8	-25	01.2	359	55.5	-21	37.8
13	258	51.5	333	11.0		00.9	14	56.1		38.2
14	273	54.0	348	10.2		00.6	29	56.6		38.5
15	288	56.4	3	09.4	-25	00.3	44	57.2		38.8
16	303	58.9	18	08.6	-25	00.0	59	57.7		39.2
17	319	01.4	33	07.8	-24	59.7	74	58.3	-21	39.5
18	334	03.8	48	07.0	-24	59.4	89	58.9	-21	39.9
19	349	06.3	63	06.2		59.1	104	59.4		40.2
20	4	08.8	78	05.4		58.8	120	00.0		40.5
21	19	11.2	93	04.7		58.5	135	00.5		40.9
22	34	13.7	108	03.9		58.2	150	01.1		41.2
23	49	16.1	123	03.1		57.9	165	01.6		41.5
24	64	18.6	138	02.3	-24	57.6	180	02.2	-21	41.9
Dif	—		-8		+3		+6		-3	
								+20		+1
									+23	-1

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16:2 PMG: 11 ^h 47 ^m 1			Edad: 27 ^d 0 PHE { 4 ^h : 54:8 12 ^h : 54:7 20 ^h : 54:6 PMG: 9 ^h 58 ^m R°: 47 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m	h m m			
0	183	15.9	-20	46.5	215	10.8	-17	12.9	60 N	15 11	16 03	16 57	6 12 89	13 31 8				
1	198	15.7		47.0	229	43.4 ¹³⁶		23.9 ¹¹⁰	58	25	13	17 03	5 59 84	45 12				
2	213	15.5		47.5	244	16.0 ¹³⁶		34.8 ¹⁰⁹	56	37	21	08	48 80	13 56 17				
3	228	15.3		48.0	258	48.5 ¹³⁵		45.7 ¹⁰⁹	54	47	29	13	38 77	14 07 19				
4	243	15.2		48.5	273	21.0 ¹³⁵		-17 56.4 ¹⁰⁷	52	15 57	36	18	30 73	16 22				
5	258	15.0	-20	48.9	287	53.5 ¹³⁵		-18 07.1 ¹⁰⁷	50	16 05	16 42	17 22	5 22 71	14 24 25				
6	273	14.8	-20	49.4	302	25.9 ¹³⁴		-18 17.7 ¹⁰⁶	45	16 23	16 55	17 32	5 06 66	14 42 29				
7	288	14.6		49.9	316	58.3 ¹³⁴		28.2 ¹⁰⁵	40	37	17 07	40	4 52 63	14 56 32				
8	303	14.4		50.4	331	30.6 ¹³³		38.7 ¹⁰⁵	35	16 50	17	48	41 60	15 08 35				
9	318	14.2		50.9	346	02.8 ¹³²		49.0 ¹⁰³	30	17 00	26	17 56	31 58	19 37				
10	333	14.0		51.4	0	35.1 ¹³³		-18 59.3 ¹⁰³	20	19	43	18 10	15 53	37 42				
11	348	13.8	-20	51.8	15	07.2 ¹³¹		-19 09.4 ¹⁰¹	10 N	17 35	17 58	18 24	4 00 50	15 54 44				
12	3	13.6	-20	52.3	29	39.3 ¹³¹		-19 19.5 ¹⁰¹	0	17 51	18 13	18 39	3 47 46	16 09 47				
13	18	13.4		52.8	44	11.4 ¹³¹		29.5 ¹⁰⁰	10 S	18 06	29	18 55	33 43	24 50				
14	33	13.2		53.3	58	43.4 ¹³⁰		39.4 ⁹⁹	20	23	18 47	19 16	19 39	40 54				
15	48	13.0		53.8	73	15.4 ¹³⁰		49.2 ⁹⁸	30	42	19 09	41	3 03 35	16 59 58				
16	63	12.8		54.2	87	47.3 ¹²⁹		-19 58.9 ⁹⁷	35	18 54	23	19 58	2 53 33	17 10 60				
17	78	12.6	-20	54.7	102	19.2 ¹²⁹		-20 08.6 ⁹⁷	40	19 07	19 39	20 18	2 43 30	17 23 62				
18	93	12.4	-20	55.2	116	51.0 ¹²⁸		-20 18.1 ⁹⁵	45	19 23	19 58	20 44	2 30 27	17 38 66				
19	108	12.2		55.7	131	22.8 ¹²⁸		27.5 ⁹⁴	50	42	20 23	21 21	15 22	17 56 71				
20	123	12.0		56.1	145	54.5 ¹²⁷		36.9 ⁹⁴	52	19 51	36	21 41	08 20	18 05 73				
21	138	11.8		56.6	160	26.2 ¹²⁷		46.1 ⁹²	54	20 02	20 50	22 07	2 00 17	15 75				
22	153	11.6		57.1	174	57.9 ¹²⁷		-20 55.3 ⁹²	56	13	21 08	22 47	1 52 14	26 79				
23	168	11.4		57.5	189	29.4 ¹²⁵		-21 04.4 ⁹¹	58	27	29	** **	42 10	39 83				
24	183	11.2	-20	58.0	204	01.0 ¹²⁶		-21 13.3 ⁸⁹	60 S	20 43	21 57	** **	1 31 5	18 54 88				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 19 ^h 39 ^m 5		Mag: -4.1 PMG: 14 ^h 49 ^m				Mag: +1.4 PMG: 11 ^h 59 ^m				Mag: -2.1 PMG: 15 ^h 12 ^m				Mag: +1.1 PMG: 7 ^h 10 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♎		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	64	18.6	138	02.3	-24	57.6	180	02.2	-21	41.9	131	33.4	-22	10.2	252	14.6	+5	28.5
1	79	21.1	153	01.5		57.3	195	02.7		42.2	146	35.3		10.1	267	16.9		28.4
2	94	23.5	168	00.7		57.0	210	03.3		42.6	161	37.3		10.0	282	19.2		28.4
3	109	26.0	182	59.9		56.7	225	03.8		42.9	176	39.2		09.9	297	21.5		28.3
4	124	28.5	197	59.2		56.4	240	04.4		43.2	191	41.2		09.9	312	23.9		28.3
5	139	30.9	212	58.4	-24	56.1	255	04.9	-21	43.6	206	43.1	-22	09.8	327	26.2	+5	28.2
6	154	33.4	227	57.6	-24	55.8	270	05.5	-21	43.9	221	45.1	-22	09.7	342	28.5	+5	28.2
7	169	35.9	242	56.8		55.5	285	06.0		44.2	236	47.0		09.6	357	30.8		28.1
8	184	38.3	257	56.0		55.2	300	06.6		44.6	251	49.0		09.6	12	33.1		28.0
9	199	40.8	272	55.3		54.9	315	07.2		44.9	266	50.9		09.5	27	35.4		28.0
10	214	43.3	287	54.5		54.6	330	07.7		45.2	281	52.9		09.4	42	37.7		27.9
11	229	45.7	302	53.7	-24	54.3	345	08.3	-21	45.6	296	54.8	-22	09.4	57	40.1	+5	27.9
12	244	48.2	317	52.9	-24	53.9	0	08.8	-21	45.9	311	56.8	-22	09.3	72	42.4	+5	27.8
13	259	50.6	332	52.1		53.6	15	09.4		46.2	326	58.7		09.2	87	44.7		27.8
14	274	53.1	347	51.4		53.3	30	09.9		46.6	342	00.7		09.1	102	47.0		27.7
15	289	55.6	2	50.6		53.0	45	10.5		46.9	357	02.6		09.1	117	49.3		27.7
16	304	58.0	17	49.8		52.7	60	11.0		47.2	12	04.6		09.0	132	51.6		27.6
17	320	00.5	32	49.0	-24	52.4	75	11.6	-21	47.5	27	06.5	-22	08.9	147	53.9	+5	27.6
18	335	03.0	47	48.2	-24	52.0	90	12.1	-21	47.9	42	08.5	-22	08.8	162	56.3	+5	27.5
19	350	05.4	62	47.5		51.7	105	12.7		48.2	57	10.4		08.8	177	58.6		27.5
20	5	07.9	77	46.7		51.4	120	13.2		48.5	72	12.3		08.7	193	00.9		27.4
21	20	10.4	92	45.9		51.1	135	13.8		48.9	87	14.3		08.6	208	03.2		27.4
22	35	12.8	107	45.1		50.7	150	14.3		49.2	102	16.2		08.6	223	05.5		27.3
23	50	15.3	122	44.4		50.4	165	14.9		49.5	117	18.2		08.5	238	07.8		27.3
24	65	17.8	137	43.6	-24	50.1	180	15.4	-21	49.8	132	20.1	-22	08.4	253	10.2	+5	27.2
Dif	—		-8		+3		+6		-3		+19		+1		+23		-1	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'2 PMG: 11 ^h 47 ^m 4			Edad: 28 ^d 0 PHE { 4 ^h : 54'5 12 ^h : 54'4 20 ^h : 54'3 R°: 48 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	183	11.2	-20	58.0	204	01.0	-21	13.3	60 N	6 38	7 32	8 25	7 41	87	13 39	14
1	198	11.0		58.5	218	32.4 ¹²⁴		22.2 ⁸⁹	58	32	23	8 11	23	81	13 57	21
2	213	10.8		59.0	233	03.9 ¹²⁵		30.9 ⁸⁷	56	27	14	7 59	7 08	76	14 13	24
3	228	10.6		59.4	247	35.2 ¹²³		39.6 ⁸⁷	54	22	06	48	6 55	73	26	28
4	243	10.4	-20	59.9	262	06.6 ¹²⁴		48.2 ⁸⁶	52	17	7 00	39	43	71	38	30
5	258	10.2	-21	00.4	276	37.9 ¹²³	-21	56.6 ⁸⁴	50	6 13	6 53	7 30	6 33	69	14 49	31
6	273	10.0	-21	00.8	291	09.1 ¹²²	-22	05.0 ⁸⁴	45	6 03	6 40	7 12	6 12	65	15 11	35
7	288	09.8		01.3	305	40.3 ¹²²		13.3 ⁸³	40	5 55	28	6 58	5 55	62	28	39
8	303	09.6		01.8	320	11.4 ¹²¹		21.4 ⁸¹	35	47	18	45	41	59	43	41
9	318	09.4		02.2	334	42.5 ¹²¹		29.5 ⁸¹	30	39	6 09	34	29	57	15 56	42
10	333	09.2		02.7	349	13.5 ¹²⁰		37.4 ⁷⁹	20	25	5 52	6 16	5 08	54	16 19	45
11	348	09.0	-21	03.2	3	44.5 ¹²⁰	-22	45.3 ⁷⁹	10 N	5 11	5 37	5 59	4 50	51	16 38	47
12	3	08.8	-21	03.6	18	15.5 ¹²⁰	-22	53.0 ⁷⁷	0	4 56	5 22	5 44	4 33	48	16 56	50
13	18	08.6		04.1	32	46.3 ¹¹⁸	-23	00.6 ⁷⁶	10 S	39	5 06	28	4 16	46	17 14	52
14	33	08.4		04.5	47	17.2 ¹¹⁹		08.2 ⁷⁶	20	4 19	4 47	5 11	3 58	44	34	54
15	48	08.2		05.0	61	48.0 ¹¹⁸		15.6 ⁷⁴	30	3 53	25	4 52	38	40	17 57	56
16	63	08.0		05.5	76	18.7 ¹¹⁷		22.9 ⁷³	35	36	4 12	40	26	38	18 10	58
17	78	07.8	-21	05.9	90	49.4 ¹¹⁷	-23	30.1 ⁷²	40	3 16	3 56	4 27	3 13	35	18 25	60
18	93	07.6	-21	06.4	105	20.1 ¹¹⁷	-23	37.2 ⁷¹	45	2 50	3 36	4 12	2 57	32	18 44	62
19	108	07.4		06.8	119	50.7 ¹¹⁶		44.1 ⁶⁹	50	2 13	3 11	3 52	37	28	19 07	65
20	123	07.2		07.3	134	21.3 ¹¹⁶		51.0 ⁶⁹	52	1 53	2 58	43	28	26	18	67
21	138	07.0		07.8	148	51.8 ¹¹⁵	-23	57.7 ⁶⁷	54	1 27	44	33	17	24	30	70
22	153	06.8		08.2	163	22.3 ¹¹⁵	-24	04.4 ⁶⁷	56	0 47	26	21	2	06	20	72
23	168	06.6		08.7	177	52.7 ¹¹⁴		10.9 ⁶⁵	58	** **	2 05	3 07	1 52	16	20 02	76
24	183	06.4	-21	09.1	192	23.1 ¹¹⁴	-24	17.3 ⁶⁴	60 S	** **	1 37	2 51	1 36	11	20 22	83

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 19 ^h 35 ^m 6		Mag: -4.1 PMG: 14 ^h 50 ^m		Mag: +1.4 PMG: 11 ^h 59 ^m		Mag: -2.0 PMG: 15 ^h 09 ^m		Mag: +1.1 PMG: 7 ^h 06 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	65	17.8	137	43.6	-24	50.1	180	15.4	-21	49.8
1	80	20.2	152	42.8		49.7	195	15.9		50.2
2	95	22.7	167	42.0		49.4	210	16.5		50.5
3	110	25.1	182	41.3		49.1	225	17.0		50.8
4	125	27.6	197	40.5		48.7	240	17.6		51.2
5	140	30.1	212	39.7	-24	48.4	255	18.1	-21	51.5
6	155	32.5	227	38.9	-24	48.1	270	18.7	-21	51.8
7	170	35.0	242	38.2		47.7	285	19.2		52.1
8	185	37.5	257	37.4		47.4	300	19.8		52.5
9	200	39.9	272	36.6		47.1	315	20.3		52.8
10	215	42.4	287	35.9		46.7	330	20.9		53.1
11	230	44.9	302	35.1	-24	46.4	345	21.4	-21	53.4
12	245	47.3	317	34.3	-24	46.0	0	22.0	-21	53.7
13	260	49.8	332	33.5		45.7	15	22.5		54.1
14	275	52.2	347	32.8		45.3	30	23.0		54.4
15	290	54.7	2	32.0		45.0	45	23.6		54.7
16	305	57.2	17	31.2		44.6	60	24.1		55.0
17	320	59.6	32	30.5	-24	44.3	75	24.7	-21	55.4
18	336	02.1	47	29.7	-24	43.9	90	25.2	-21	55.7
19	351	04.6	62	28.9		43.6	105	25.8		56.0
20	6	07.0	77	28.2		43.2	120	26.3		56.3
21	21	09.5	92	27.4		42.9	135	26.9		56.6
22	36	12.0	107	26.6		42.5	150	27.4		57.0
23	51	14.4	122	25.9		42.2	165	27.9		57.3
24	66	16.9	137	25.1	-24	41.8	180	28.5	-21	57.6
Dif	—		-8	+3		+5	-3	+19		+1

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'2			Edad: 29 ^d 0 PHE	SD: 14'8				R°: 51 ^m					
	PMG: 11 ^h 47 ^m 7				PMG: 11 ^h 33 ^m									
	hG ☉	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	06.4	-21 09.1	192	23.1	-24 17.3	63	60 N	15 08	16 01	16 55	9 08 76	13 53 28	
1	198	06.2	09.6	206	53.4 ¹¹³	23.6	62	58	22	11	17 01	8 44 71	14 18 33	
2	213	06.0	10.0	221	23.7 ¹¹³	29.8	60	56	35	19	07	24 68	37 37	
3	228	05.8	10.5	235	54.0 ¹¹³	35.8	60	54	45	27	12	8 08 66	14 54 38	
4	243	05.6	10.9	250	24.2 ¹¹²	41.8	60	52	15 55	34	17	7 54 64	15 08 40	
5	258	05.4	-21 11.4	264	54.4 ¹¹²	-24 47.6	58	50	16 03	16 40	17 21	7 42 62	15 20 42	
6	273	05.1	-21 11.8	279	24.5 ¹¹¹	-24 53.3	57	45	16 22	16 54	17 31	7 17 60	15 46 44	
7	288	04.9	12.3	293	54.6 ¹¹¹	-24 58.9	56	40	36	17 06	40	6 57 58	16 07 45	
8	303	04.7	12.7	308	24.7 ¹¹¹	-25 04.4	55	35	16 49	17	48	40 57	24 46	
9	318	04.5	13.2	322	54.7 ¹¹⁰	09.7	53	30	17 00	26	17 55	26 55	16 38 47	
10	333	04.3	13.6	337	24.7 ¹¹⁰	15.0	53	20	19	43	18 10	6 02 53	17 04 48	
11	348	04.1	-21 14.1	351	54.6 ¹⁰⁹	-25 20.1	51	10 N	17 36	17 58	18 24	5 41 52	17 25 50	
12	3	03.9	-21 14.5	6	24.5 ¹⁰⁹	-25 25.1	50	0	17 51	18 14	18 39	5 21 51	17 46 50	
13	18	03.7	15.0	20	54.4 ¹⁰⁹	29.9	48	10 S	18 07	30	18 57	5 02 49	18 06 52	
14	33	03.5	15.4	35	24.2 ¹⁰⁸	34.7	48	20	24	18 48	19 17	4 42 46	28 52	
15	48	03.3	15.9	49	54.0 ¹⁰⁸	39.3	46	30	44	19 11	19 43	18 44	18 53 54	
16	63	03.1	16.3	64	23.8 ¹⁰⁸	43.8	45	35	18 56	25	20 00	4 04 43	19 08 55	
17	78	02.8	-21 16.7	78	53.6 ¹⁰⁸	-25 48.2	44	40	19 09	19 41	20 21	3 48 41	19 25 56	
18	93	02.6	-21 17.2	93	23.3 ¹⁰⁷	-25 52.5	43	45	19 25	20 01	20 47	3 29 39	19 46 57	
19	108	02.4	17.6	107	53.0 ¹⁰⁷	-25 56.6	41	50	45	27	21 25	3 05 36	20 12 59	
20	123	02.2	18.1	122	22.6 ¹⁰⁶	-26 00.6	40	52	19 54	40	21 46	2 54 34	25 59	
21	138	02.0	18.5	136	52.2 ¹⁰⁶	04.5	39	54	20 05	20 55	22 14	41 32	40 60	
22	153	01.8	18.9	151	21.8 ¹⁰⁶	08.2	37	56	17	21 13	23 00	26 30	20 57 62	
23	168	01.6	19.4	165	51.4 ¹⁰⁶	11.9	37	58	31	21 35	** ** *	2 08 27	21 18 64	
24	183	01.4	-21 19.8	180	20.9 ¹⁰⁵	-26 15.4	35	60 S	20 48	22 05	** ** *	1 47 21	21 45 67	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 19 ^h 31 ^m 7		Mag: -4.1 PMG: 14 ^h 51 ^m		Mag: +1.4 PMG: 11 ^h 58 ^m		Mag: -2.0 PMG: 15 ^h 06 ^m		Mag: +1.1 PMG: 7 ^h 03 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	66	16.9	137	25.1	-24	41.8	180	28.5	-21	57.6
1	81	19.4	152	24.3		41.4	195	29.0		57.9
2	96	21.8	167	23.6		41.1	210	29.6		58.2
3	111	24.3	182	22.8		40.7	225	30.1		58.6
4	126	26.7	197	22.1		40.4	240	30.6		58.9
5	141	29.2	212	21.3	-24	40.0	255	31.2	-21	59.2
6	156	31.7	227	20.5	-24	39.6	270	31.7	-21	59.5
7	171	34.1	242	19.8		39.3	285	32.3	-21	59.8
8	186	36.6	257	19.0		38.9	300	32.8	-22	00.1
9	201	39.1	272	18.2		38.5	315	33.4		00.5
10	216	41.5	287	17.5		38.2	330	33.9		00.8
11	231	44.0	302	16.7	-24	37.8	345	34.4	-22	01.1
12	246	46.5	317	16.0	-24	37.4	0	35.0	-22	01.4
13	261	48.9	332	15.2		37.0	15	35.5		01.7
14	276	51.4	347	14.5		36.7	30	36.1		02.0
15	291	53.9	2	13.7		36.3	45	36.6		02.3
16	306	56.3	17	12.9		35.9	60	37.1		02.7
17	321	58.8	32	12.2	-24	35.5	75	37.7	-22	03.0
18	337	01.2	47	11.4	-24	35.1	90	38.2	-22	03.3
19	352	03.7	62	10.7		34.8	105	38.7		03.6
20	7	06.2	77	09.9		34.4	120	39.3		03.9
21	22	08.6	92	09.2		34.0	135	39.8		04.2
22	37	11.1	107	08.4		33.6	150	40.4		04.5
23	52	13.6	122	07.7		33.2	165	40.9		04.8
24	67	16.0	137	06.9	-24	32.8	180	41.4	-22	05.2
Dif	—		-8	+4		+4	+5	-3		+19
										+1
										+23
										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 1				Edad: 0 ^d 3 PHE { 4 ^h : 54'1 12 ^h : 54'0 20 ^h : 54'0 R°: 51 ^m																			
	hG ☉		Dec		hG ☾ Dif		Dec Dif			Náutico	Civil		Hora	R°	Hora	R°								
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m							
0	183	01.4	-21	19.8	180	20.9	-26	15.4	60 N	6 42	7 36	8 29	10 24	55	14 21	51								
1	198	01.1		20.3	194	50.5 ¹⁰⁶		18.7	58	35	26	15	9 55	54	14 51	51								
2	213	00.9		20.7	209	20.0 ¹⁰⁵		22.0	56	30	17	8 02	32	54	15 14	51								
3	228	00.7		21.1	223	49.4 ¹⁰⁴		25.1	54	25	09	7 51	9 14	53	32	52								
4	243	00.5		21.6	238	18.9 ¹⁰⁵		28.1	52	20	7 02	42	8 58	53	15 48	52								
5	258	00.3	-21	22.0	252	48.3 ¹⁰⁴	-26	31.0	50	6 15	6 56	7 33	8 44	53	16 02	51								
6	273	00.1	-21	22.4	267	17.7 ¹⁰⁴	-26	33.7	45	6 05	6 42	7 15	8 17	52	16 30	51								
7	287	59.8		22.9	281	47.1 ¹⁰⁴		36.3	40	5 56	30	7 00	7 55	52	16 52	51								
8	302	59.6		23.3	296	16.5 ¹⁰⁴		38.8	35	48	20	6 47	37	52	17 10	51								
9	317	59.4		23.7	310	45.8 ¹⁰³		41.2	30	41	6 10	36	7 21	52	25	52								
10	332	59.2		24.2	325	15.2 ¹⁰⁴		43.4	20	26	5 53	17	6 55	52	17 52	51								
11	347	59.0	-21	24.6	339	44.5 ¹⁰³	-26	45.5	10 N	5 12	5 38	6 00	6 33	51	18 15	51								
12	2	58.8	-21	25.0	354	13.8 ¹⁰³	-26	47.5	0	4 56	5 22	5 44	6 12	50	18 36	51								
13	17	58.5		25.5	8	43.1 ¹⁰³		49.3	10 S	39	5 06	29	5 51	50	18 58	50								
14	32	58.3		25.9	23	12.4 ¹⁰³		51.0	20	4 19	4 47	5 11	28	50	19 20	51								
15	47	58.1		26.3	37	41.7 ¹⁰³		52.6	30	3 52	25	4 52	5 02	50	19 47	50								
16	62	57.9		26.7	52	11.0 ¹⁰³		54.1	35	36	4 11	40	4 47	49	20 03	49								
17	77	57.7	-21	27.2	66	40.3 ¹⁰³	-26	55.4	40	3 15	3 55	4 26	4 29	49	20 21	49								
18	92	57.5	-21	27.6	81	09.5 ¹⁰²	-26	56.6	45	2 48	3 35	4 10	4 08	48	20 43	48								
19	107	57.2		28.0	95	38.8 ¹⁰³		57.6	50	2 10	3 09	3 51	3 41	47	21 11	48								
20	122	57.0		28.4	110	08.0 ¹⁰²		58.6	52	1 49	2 56	41	28	46	24	48								
21	137	56.8		28.9	124	37.3 ¹⁰³	-26	59.4	54	1 22	41	30	3 13	45	40	47								
22	152	56.6		29.3	139	06.5 ¹⁰²	-27	00.0	56	0 36	23	18	2 56	44	21 59	46								
23	167	56.4		29.7	153	35.8 ¹⁰³	-27	00.6	58	** **	2 01	3 04	35	42	22 22	44								
24	182	56.1	-21	30.1	168	05.0 ¹⁰²	-27	01.0	60 S	** **	1 31	2 48	2 08	39	22 52	42								
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO							
	PMG 19 ^h 27 ^m 7				Mag: -4.1 PMG: 14 ^h 52 ^m				Mag: +1.4 PMG: 11 ^h 57 ^m				Mag: -2.0 PMG: 15 ^h 03 ^m				Mag: +1.1 PMG: 6 ^h 59 ^m							
h	hG ♈		Dec		hG ♉		Dec		hG ♊		Dec		hG ♋		Dec		hG ♌		Dec					
0	67	16.0	137	06.9	-24	32.8	180	41.4	-22	05.2	133	53.3	-22	04.8	255	01.5	+5	24.8						
1	82	18.5	152	06.2		32.5	195	42.0		05.5	148	55.2		04.8	270	03.8		24.7						
2	97	21.0	167	05.4		32.1	210	42.5		05.8	163	57.2		04.7	285	06.2		24.7						
3	112	23.4	182	04.6		31.7	225	43.0		06.1	178	59.1		04.6	300	08.5		24.6						
4	127	25.9	197	03.9		31.3	240	43.6		06.4	194	01.1		04.5	315	10.8		24.6						
5	142	28.4	212	03.1	-24	30.9	255	44.1	-22	06.7	209	03.0	-22	04.4	330	13.1	+5	24.5						
6	157	30.8	227	02.4	-24	30.5	270	44.6	-22	07.0	224	04.9	-22	04.4	345	15.5	+5	24.5						
7	172	33.3	242	01.6		30.1	285	45.2		07.3	239	06.9		04.3	0	17.8		24.5						
8	187	35.7	257	00.9		29.7	300	45.7		07.6	254	08.8		04.2	15	20.1		24.4						
9	202	38.2	272	00.2		29.3	315	46.2		07.9	269	10.7		04.1	30	22.4		24.4						
10	217	40.7	286	59.4		28.9	330	46.8		08.2	284	12.7		04.1	45	24.8		24.3						
11	232	43.1	301	58.7	-24	28.5	345	47.3	-22	08.6	299	14.6	-22	04.0	60	27.1	+5	24.3						
12	247	45.6	316	57.9	-24	28.1	0	47.8	-22	08.9	314	16.6	-22	03.9	75	29.4	+5	24.2						
13	262	48.1	331	57.2		27.7	15	48.4		09.2	329	18.5		03.8	90	31.7		24.2						
14	277	50.5	346	56.4		27.3	30	48.9		09.5	344	20.4		03.8	105	34.1		24.1						
15	292	53.0	1	55.7		26.9	45	49.4		09.8	359	22.4		03.7	120	36.4		24.1						
16	307	55.5	16	54.9		26.5	60	50.0		10.1	14	24.3		03.6	135	38.7		24.0						
17	322	57.9	31	54.2	-24	26.1	75	50.5	-22	10.4	29	26.2	-22	03.5	150	41.0	+5	24.0						
18	338	00.4	46	53.4	-24	25.7	90	51.0	-22	10.7	44	28.2	-22	03.5	165	43.4	+5	23.9						
19	353	02.9	61	52.7		25.3	105	51.6		11.0	59	30.1		03.4	180	45.7		23.9						
20	8	05.3	76	52.0		24.9	120	52.1		11.3	74	32.0		03.3	195	48.0		23.8						
21	23	07.8	91	51.2		24.4	135	52.6		11.6	89	34.0		03.2	210	50.3		23.8						
22	38	10.2	106	50.5		24.0	150	53.2		11.9	104	35.9		03.1	225	52.7		23.7						
23	53	12.7	121	49.7		23.6	165	53.7		12.2	119	37.8		03.1	240	55.0		23.7						
24	68	15.2	136	49.0	-24	23.2	180	54.2	-22	12.5	134	39.8	-22	03.0	255	57.3	+5	23.6						
Dif	—				-7				+4				+19				+1				+23			

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 11 ^h 48 ^m 4			Edad: 1 ^d 3 PHE { 4 ^h : 54:0 12 ^h : 53:9 20 ^h : 53:9 PMG: 13 ^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		
0	182	56.1	-21 30.1	168	05.0	-27 01.0	60 N	15 05	15 59	16 53	11 19 31		15 12 73		
1	197	55.9		182	34.3 ¹⁰³		58	20	16 09	17 00	10 49 35		15 42 69		
2	212	55.7	31.0	197	03.5 ¹⁰²	01.4	56	32	18	05	26 38		16 05 66		
3	227	55.5	31.4	211	32.8 ¹⁰³	01.4	54	44	26	11	10 07 40		24 63		
4	242	55.3	31.8	226	02.0 ¹⁰²	01.3	52	15 53	33	15	9 51 42		40 62		
5	257	55.0	-21 32.2	240	31.3 ¹⁰³	-27 01.1	50	16 02	16 39	17 20	9 37 43		16 53 61		
6	272	54.8	-21 32.6	255	00.5 ¹⁰²	-27 00.7	45	16 21	16 54	17 30	9 09 45		17 21 59		
7	287	54.6	33.1	269	29.8 ¹⁰³	-27 00.2	40	36	17 06	39	8 47 46		17 43 57		
8	302	54.4	33.5	283	59.1 ¹⁰³	-26 59.5	35	16 49	16	47	29 47		18 01 56		
9	317	54.1	33.9	298	28.4 ¹⁰³	58.8	30	17 00	26	17 55	8 13 48		17 54		
10	332	53.9	34.3	312	57.7 ¹⁰³	57.9	20	19	43	18 10	7 47 48		18 43 53		
11	347	53.7	-21 34.7	327	27.0 ¹⁰³	-26 56.9	10 N	17 36	17 59	18 25	7 24 49		19 06 51		
12	2	53.5	-21 35.1	341	56.4 ¹⁰⁴	-26 55.7	0	17 52	18 14	18 40	7 02 51		19 27 50		
13	17	53.2	35.5	356	25.7 ¹⁰³	54.4	10 S	18 08	31	18 58	6 41 51		19 48 49		
14	32	53.0	35.9	10	55.1 ¹⁰⁴	53.0	20	26	18 50	19 18	6 18 52		20 11 47		
15	47	52.8	36.4	25	24.5 ¹⁰⁴	51.5	30	46	19 13	19 45	5 52 53		37 45		
16	62	52.6	36.8	39	53.9 ¹⁰⁴	49.8	35	18 58	27	20 02	36 54		20 52 44		
17	77	52.3	-21 37.2	54	23.3 ¹⁰⁴	-26 48.0	40	19 11	19 43	20 23	5 18 54		21 10 42		
18	92	52.1	-21 37.6	68	52.8 ¹⁰⁵	-26 46.1	45	19 28	20 04	20 51	4 56 55		21 31 41		
19	107	51.9	38.0	83	22.2 ¹⁰⁴	44.0	50	48	30	21 29	28 56		21 59 37		
20	122	51.7	38.4	97	51.7 ¹⁰⁵	41.9	52	19 57	43	21 51	4 14 57		22 12 36		
21	137	51.4	38.8	112	21.2 ¹⁰⁵	39.6	54	20 08	20 59	22 21	3 58 58		27 34		
22	152	51.2	39.2	126	50.7 ¹⁰⁵	37.1	56	21	21 17	23 14	40 59		22 45 31		
23	167	51.0	39.6	141	20.3 ¹⁰⁶	34.6	58	35	21 40	** ** *	3 17 60		23 06 28		
24	182	50.8	-21 40.0	155	49.9 ¹⁰⁶	-26 31.9	60 S	20 52	22 12	** ** *	2 47 63		23 34 23		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 19 ^h 23 ^m 8		Mag: -4.1 PMG: 14 ^h 53 ^m		Mag: +1.4 PMG: 11 ^h 56 ^m		Mag: -2.0 PMG: 14 ^h 59 ^m		Mag: +1.1 PMG: 6 ^h 55 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	68	15.2	136	49.0	-24 23.2	180	54.2	-22 12.5	134	39.8	-22 03.0	255	57.3	+5 23.6
1	83	17.6	151	48.2	22.8	195	54.8	12.8	149	41.7	02.9	270	59.7	23.6
2	98	20.1	166	47.5	22.4	210	55.3	13.1	164	43.6	02.8	286	02.0	23.5
3	113	22.6	181	46.8	21.9	225	55.8	13.4	179	45.6	02.8	301	04.3	23.5
4	128	25.0	196	46.0	21.5	240	56.4	13.7	194	47.5	02.7	316	06.6	23.5
5	143	27.5	211	45.3	-24 21.1	255	56.9	-22 14.0	209	49.4	-22 02.6	331	09.0	+5 23.4
6	158	30.0	226	44.6	-24 20.7	270	57.4	-22 14.3	224	51.4	-22 02.5	346	11.3	+5 23.4
7	173	32.4	241	43.8	20.3	285	57.9	14.6	239	53.3	02.5	1	13.6	23.3
8	188	34.9	256	43.1	19.8	300	58.5	14.9	254	55.2	02.4	16	15.9	23.3
9	203	37.3	271	42.3	19.4	315	59.0	15.2	269	57.2	02.3	31	18.3	23.2
10	218	39.8	286	41.6	19.0	330	59.5	15.5	284	59.1	02.2	46	20.6	23.2
11	233	42.3	301	40.9	-24 18.6	346	00.1	-22 15.8	300	01.0	-22 02.1	61	22.9	+5 23.1
12	248	44.7	316	40.1	-24 18.1	1	00.6	-22 16.1	315	03.0	-22 02.1	76	25.3	+5 23.1
13	263	47.2	331	39.4	17.7	16	01.1	16.4	330	04.9	02.0	91	27.6	23.0
14	278	49.7	346	38.7	17.3	31	01.6	16.7	345	06.8	01.9	106	29.9	23.0
15	293	52.1	1	37.9	16.8	46	02.2	17.0	0	08.8	01.8	121	32.2	22.9
16	308	54.6	16	37.2	16.4	61	02.7	17.3	15	10.7	01.8	136	34.6	22.9
17	323	57.1	31	36.5	-24 16.0	76	03.2	-22 17.6	30	12.6	-22 01.7	151	36.9	+5 22.9
18	338	59.5	46	35.7	-24 15.5	91	03.7	-22 17.9	45	14.6	-22 01.6	166	39.2	+5 22.8
19	354	02.0	61	35.0	15.1	106	04.3	18.2	60	16.5	01.5	181	41.6	22.8
20	9	04.5	76	34.3	14.6	121	04.8	18.5	75	18.4	01.4	196	43.9	22.7
21	24	06.9	91	33.6	14.2	136	05.3	18.8	90	20.4	01.4	211	46.2	22.7
22	39	09.4	106	32.8	13.8	151	05.9	19.1	105	22.3	01.3	226	48.6	22.6
23	54	11.8	121	32.1	13.3	166	06.4	19.4	120	24.2	01.2	241	50.9	22.6
24	69	14.3	136	31.4	-24 12.9	181	06.9	-22 19.6	135	26.2	-22 01.1	256	53.2	+5 22.5
Dif	—		-7 +4		+5 -3		+19 -3		+19 +1		+23 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 8			Edad: 2 ^d 3 PHE { 4 ^h : 54'0 12 ^h : 54'0 20 ^h : 54'0 R°: 49 ^m																	
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°						
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m				
0	182	50.8	-21	40.0	155	49.9	-26	31.9	28	60 N	6 45	7 40	8 34	11 50	16	16 25	85				
1	197	50.5		40.4	170	19.5 ¹⁰⁶		29.1	30	58	38	29	19	24	22	16 51	78				
2	212	50.3		40.8	184	49.1 ¹⁰⁶		26.1	30	56	33	20	8 06	11 04	26	17 11	74				
3	227	50.1		41.2	199	18.8 ¹⁰⁷		23.1	30	54	27	12	7 55	10 47	29	27	72				
4	242	49.8		41.6	213	48.5 ¹⁰⁷		19.9	32	52	22	7 05	45	33	31	42	69				
5	257	49.6	-21	42.0	228	18.2 ¹⁰⁷	-26	16.6	33	50	6 18	6 58	7 36	10 20	33	17 54	67				
6	272	49.4	-21	42.4	242	48.0 ¹⁰⁸	-26	13.1	35	45	6 07	6 44	7 17	9 54	36	18 20	63				
7	287	49.2		42.8	257	17.8 ¹⁰⁸		09.6	37	40	5 58	32	7 02	33	39	40	60				
8	302	48.9		43.2	271	47.6 ¹⁰⁸		05.9	37	35	50	21	6 49	16	41	18 57	58				
9	317	48.7		43.6	286	17.5 ¹⁰⁹	-26	02.1	38	30	42	6 12	38	9 01	42	19 11	57				
10	332	48.5		44.0	300	47.4 ¹⁰⁹	-25	58.2	39	20	27	5 54	18	8 35	45	36	53				
11	347	48.2	-21	44.4	315	17.3 ¹⁰⁹	-25	54.1	41	10 N	5 13	5 39	6 01	8 13	48	19 57	51				
12	2	48.0	-21	44.8	329	47.3 ¹¹⁰	-25	50.0	41	0	4 57	5 23	5 45	7 53	49	20 17	48				
13	17	47.8		45.2	344	17.3 ¹¹⁰		45.7	43	10 S	39	5 06	29	32	51	37	45				
14	32	47.5		45.6	358	47.3 ¹¹⁰		41.2	45	20	4 19	4 47	5 12	7 10	54	20 58	43				
15	47	47.3		46.0	13	17.4 ¹¹¹		36.7	45	30	3 52	24	4 51	6 45	55	21 22	40				
16	62	47.1		46.4	27	47.5 ¹¹¹		32.1	46	35	35	4 10	39	30	57	36	38				
17	77	46.8	-21	46.8	42	17.7 ¹¹²	-25	27.3	48	40	3 14	3 54	4 26	6 12	59	21 52	36				
18	92	46.6	-21	47.2	56	47.9 ¹¹²	-25	22.4	49	45	2 46	3 33	4 09	5 51	61	22 12	32				
19	107	46.4		47.6	71	18.1 ¹¹²		17.4	50	50	2 08	3 07	3 49	24	65	36	29				
20	122	46.1		47.9	85	48.4 ¹¹³		12.3	51	52	1 46	2 54	39	5 11	66	22 48	27				
21	137	45.9		48.3	100	18.7 ¹¹³		07.0	53	54	1 16	38	29	4 56	68	23 01	24				
22	152	45.7		48.7	114	49.1 ¹¹⁴	-25	01.7	53	56	0 22	2 20	16	39	70	16	22				
23	167	45.4		49.1	129	19.5 ¹¹⁴	-24	56.2	55	58	** **	1 56	3 02	4 17	75	34	18				
24	182	45.2	-21	49.5	143	50.0 ¹¹⁵	-24	50.6	56	60 S	** **	1 25	2 44	3 50	80	23 57	11				
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO								
	PMG 19 ^h 19 ^m 9			Mag: -4.2 PMG: 14 ^h 55 ^m			Mag: +1.4 PMG: 11 ^h 55 ^m			Mag: -2.0 PMG: 14 ^h 56 ^m			Mag: +1.1 PMG: 6 ^h 51 ^m								
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'			
0	69	14.3	136	31.4	-24	12.9	181	06.9	-22	19.6	135	26.2	-22	01.1	256	53.2	+5	22.5			
1	84	16.8	151	30.6		12.4	196	07.4		19.9	150	28.1		01.1	271	55.6		22.5			
2	99	19.2	166	29.9		12.0	211	08.0		20.2	165	30.0		01.0	286	57.9		22.4			
3	114	21.7	181	29.2		11.5	226	08.5		20.5	180	31.9		00.9	302	00.2		22.4			
4	129	24.2	196	28.5		11.1	241	09.0		20.8	195	33.9		00.8	317	02.5		22.3			
5	144	26.6	211	27.7	-24	10.6	256	09.5	-22	21.1	210	35.8	-22	00.7	332	04.9	+5	22.3			
6	159	29.1	226	27.0	-24	10.2	271	10.1	-22	21.4	225	37.7	-22	00.7	347	07.2	+5	22.3			
7	174	31.6	241	26.3		09.7	286	10.6		21.7	240	39.7		00.6	2	09.5		22.2			
8	189	34.0	256	25.6		09.3	301	11.1		22.0	255	41.6		00.5	17	11.9		22.2			
9	204	36.5	271	24.8		08.8	316	11.6		22.3	270	43.5		00.4	32	14.2		22.1			
10	219	39.0	286	24.1		08.4	331	12.1		22.6	285	45.5		00.4	47	16.5		22.1			
11	234	41.4	301	23.4	-24	07.9	346	12.7	-22	22.8	300	47.4	-22	00.3	62	18.9	+5	22.0			
12	249	43.9	316	22.7	-24	07.5	1	13.2	-22	23.1	315	49.3	-22	00.2	77	21.2	+5	22.0			
13	264	46.3	331	22.0		07.0	16	13.7		23.4	330	51.2	-22	00.1	92	23.5		21.9			
14	279	48.8	346	21.2		06.5	31	14.2		23.7	345	53.2	-22	00.0	107	25.9		21.9			
15	294	51.3	1	20.5		06.1	46	14.8		24.0	0	55.1	-22	00.0	122	28.2		21.9			
16	309	53.7	16	19.8		05.6	61	15.3		24.3	15	57.0	-21	59.9	137	30.5		21.8			
17	324	56.2	31	19.1	-24	05.2	76	15.8	-22	24.6	30	59.0	-21	59.8	152	32.9	+5	21.8			
18	339	58.7	46	18.4	-24	04.7	91	16.3	-22	24.9	46	00.9	-21	59.7	167	35.2	+5	21.7			
19	355	01.1	61	17.6		04.2	106	16.8		25.2	61	02.8		59.6	182	37.5		21.7			
20	10	03.6	76	16.9		03.8	121	17.4		25.4	76	04.7		59.6	197	39.9		21.6			
21	25	06.1	91	16.2		03.3	136	17.9		25.7	91	06.7		59.5	212	42.2		21.6			
22	40	08.5	106	15.5		02.8	151	18.4		26.0	106	08.6		59.4	227	44.5		21.5			
23	55	11.0	121	14.8		02.4	166	18.9		26.3	121	10.5		59.3	242	46.9		21.5			
24	70	13.5	136	14.1	-24	01.9	181	19.4	-22	26.6	136	12.5	-21	59.2	257	49.2	+5	21.5			
Dif	—			-7			+5			-3			+19			+1			+23		

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 11 ^h 49 ^m 2			Edad: 3 ^d 3 PHE { 4 ^h : 54'/12 ^h : 54'/1 20 ^h : 54'/2 R°: 46 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	182	45.2	-21 49.5	143	50.0	-24 50.6		60 N	15 02	15 57	16 52	12 06 8	17 50 88		
1	197	45.0		158	20.5 ¹¹⁵	44.9	57	58	18	16 07	16 58	11 46 14	18 09 83		
2	212	44.7		172	51.0 ¹¹⁵	39.1	58	56	31	16	17 04	30 17	25 79		
3	227	44.5		187	21.6 ¹¹⁶	33.2	59	54	42	24	09	16 20	39 75		
4	242	44.3		201	52.3 ¹¹⁷	27.1	61	52	15 52	32	14	11 04 23	18 51 72		
5	257	44.0	-21 51.4	216	23.0 ¹¹⁷	-24 21.0	61	50	16 01	16 38	17 19	10 53 25	19 01 70		
6	272	43.8	-21 51.8	230	53.7 ¹¹⁷	-24 14.7	63	45	16 20	16 53	17 30	10 30 30	19 23 65		
7	287	43.6		245	24.5 ¹¹⁸	08.3	64	40	35	17 05	39	10 12 33	40 62		
8	302	43.3		259	55.3 ¹¹⁸	-24 01.9	64	35	16 48	16	47	9 57 35	19 55 59		
9	317	43.1		274	26.2 ¹¹⁹	-23 55.3	66	30	17 00	26	17 55	43 38	20 08 56		
10	332	42.8		288	57.1 ¹¹⁹	48.6	67	20	19	43	18 10	20 42	29 53		
11	347	42.6	-21 53.7	303	28.1 ¹²⁰	-23 41.7	69	10 N	17 37	17 59	18 25	9 01 44	20 48 49		
12	2	42.4	-21 54.1	317	59.1 ¹²⁰	-23 34.8	69	0	17 53	18 15	18 41	8 42 47	21 05 46		
13	17	42.1		332	30.2 ¹²¹	27.8	70	10 S	18 09	32	18 59	23 50	22 43		
14	32	41.9		347	01.3 ¹²¹	20.7	71	20	27	18 51	19 20	8 04 52	21 41 39		
15	47	41.7		1	32.4 ¹²¹	13.4	73	30	47	19 14	19 47	7 40 57	22 02 35		
16	62	41.4		16	03.7 ¹²³	-23 06.1	73	35	18 59	29	20 04	27 58	14 33		
17	77	41.2	-21 56.0	30	34.9 ¹²²	-22 58.6	75	40	19 13	19 45	20 26	7 11 61	22 28 30		
18	92	40.9	-21 56.3	45	06.2 ¹²³	-22 51.1	75	45	19 30	20 06	20 54	6 52 65	22 44 27		
19	107	40.7		59	37.6 ¹²⁴	43.4	77	50	19 51	33	21 33	29 68	23 05 22		
20	122	40.5		74	09.0 ¹²⁴	35.6	78	52	20 00	20 47	21 56	17 71	15 20		
21	137	40.2		88	40.5 ¹²⁵	27.8	78	54	12	21 03	22 27	6 04 74	25 18		
22	152	40.0		103	12.0 ¹²⁵	19.8	80	56	24	22	** **	5 49 77	38 14		
23	167	39.7		117	43.6 ¹²⁶	11.8	80	58	39	21 46	** **	32 81	23 52 11		
24	182	39.5	-21 58.6	132	15.2 ¹²⁶	-22 03.6	82	60 S	20 57	22 19	** **	5 10 87	** **	**	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 19 ^h 15 ^m 9		Mag: -4.2 PMG: 14 ^h 56 ^m		Mag: +1.3 PMG: 11 ^h 54 ^m		Mag: -2.0 PMG: 14 ^h 53 ^m		Mag: +1.1 PMG: 6 ^h 48 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	70	13.5	136	14.1	-24 01.9	181	19.4	-22 26.6	136	12.5	-21 59.2	257	49.2	+5 21.5
1	85	15.9	151	13.3	01.4	196	20.0	26.9	151	14.4	59.2	272	51.5	21.4
2	100	18.4	166	12.6	00.9	211	20.5	27.1	166	16.3	59.1	287	53.9	21.4
3	115	20.8	181	11.9	-24 00.5	226	21.0	27.4	181	18.2	59.0	302	56.2	21.3
4	130	23.3	196	11.2	-24 00.0	241	21.5	27.7	196	20.2	58.9	317	58.5	21.3
5	145	25.8	211	10.5	-23 59.5	256	22.0	-22 28.0	211	22.1	-21 58.8	333	00.9	+5 21.2
6	160	28.2	226	09.8	-23 59.0	271	22.6	-22 28.3	226	24.0	-21 58.8	348	03.2	+5 21.2
7	175	30.7	241	09.1	58.6	286	23.1	28.6	241	25.9	58.7	3	05.6	21.2
8	190	33.2	256	08.4	58.1	301	23.6	28.8	256	27.9	58.6	18	07.9	21.1
9	205	35.6	271	07.7	57.6	316	24.1	29.1	271	29.8	58.5	33	10.2	21.1
10	220	38.1	286	06.9	57.1	331	24.6	29.4	286	31.7	58.4	48	12.6	21.0
11	235	40.6	301	06.2	-23 56.6	346	25.1	-22 29.7	301	33.7	-21 58.4	63	14.9	+5 21.0
12	250	43.0	316	05.5	-23 56.1	1	25.7	-22 30.0	316	35.6	-21 58.3	78	17.2	+5 20.9
13	265	45.5	331	04.8	55.7	16	26.2	30.2	331	37.5	58.2	93	19.6	20.9
14	280	48.0	346	04.1	55.2	31	26.7	30.5	346	39.4	58.1	108	21.9	20.9
15	295	50.4	1	03.4	54.7	46	27.2	30.8	1	41.4	58.1	123	24.2	20.8
16	310	52.9	16	02.7	54.2	61	27.7	31.1	16	43.3	58.0	138	26.6	20.8
17	325	55.3	31	02.0	-23 53.7	76	28.2	-22 31.4	31	45.2	-21 57.9	153	28.9	+5 20.7
18	340	57.8	46	01.3	-23 53.2	91	28.8	-22 31.6	46	47.1	-21 57.8	168	31.3	+5 20.7
19	356	00.3	61	00.6	52.7	106	29.3	31.9	61	49.1	57.7	183	33.6	20.6
20	11	02.7	75	59.9	52.2	121	29.8	32.2	76	51.0	57.6	198	35.9	20.6
21	26	05.2	90	59.2	51.7	136	30.3	32.5	91	52.9	57.6	213	38.3	20.6
22	41	07.7	105	58.5	51.2	151	30.8	32.7	106	54.8	57.5	228	40.6	20.5
23	56	10.1	120	57.8	50.7	166	31.3	33.0	121	56.8	57.4	243	42.9	20.5
24	71	12.6	135	57.1	-23 50.2	181	31.9	-22 33.3	136	58.7	-21 57.3	258	45.3	+5 20.4
Dif	—		-7		+5	+5		-3	+19		+1	+23		0

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'2			Edad: 4 ^d 3	PHE { 4 ^h : 54'3 12 ^h : 54'4 20 ^h : 54'5											
	PMG: 11 ^h 49 ^m 6					SD: 14'8		PMG: 15 ^h 40 ^m			R°: 45 ^m					
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	182	39.5	-21	132	15.2	-22	03.6	83	60 N	6 48	7 43	8 38	12 14	4	19 18	88
1	197	39.3		146	46.9 ¹²⁷	-21	55.3	83	58	41	33	22	12 00	8	32	83
2	212	39.0		161	18.6 ¹²⁷		47.0	83	56	35	23	8 09	11 47	13	44	79
3	227	38.8	-21	175	50.4 ¹²⁸		38.5	85	54	30	15	7 58	36	16	19	54
4	242	38.5	-22	190	22.2 ¹²⁸		30.0	85	52	25	08	47	27	18	20	03
5	257	38.3	-22	204	54.0 ¹²⁸	-21	21.3	87	50	6 20	7 01	7 38	11 18	20	20	11
6	272	38.1	-22	219	26.0 ¹³⁰	-21	12.6	87	45	6 09	6 46	7 19	11 00	24	20	28
7	287	37.8		233	57.9 ¹²⁹	-21	03.7	89	40	6 00	34	7 04	10 45	28	42	62
8	302	37.6		248	29.9 ¹³⁰	-20	54.8	89	35	5 52	23	6 51	32	31	20	54
9	317	37.3		263	02.0 ¹³¹		45.8	90	30	44	6 13	39	21	34	21	04
10	332	37.1		277	34.1 ¹³¹		36.6	92	20	28	5 56	19	10 02	38	22	52
11	347	36.8	-22	292	06.3 ¹³²	-20	27.4	92	10 N	5 13	5 40	6 02	9 45	42	21	37
12	2	36.6	-22	306	38.5 ¹³²	-20	18.1	93	0	4 58	5 24	5 46	9 29	45	21	51
13	17	36.3		321	10.8 ¹³³	-20	08.7	94	10 S	40	5 07	29	9 13	49	22	05
14	32	36.1		335	43.1 ¹³³	-19	59.2	95	20	4 19	4 47	5 12	8 56	53	20	37
15	47	35.9		350	15.4 ¹³³		49.7	95	30	3 51	24	4 51	37	56	37	32
16	62	35.6		4	47.8 ¹³⁴		40.0	97	35	34	4 10	39	25	60	47	29
17	77	35.4	-22	19	20.3 ¹³⁵	-19	30.2	98	40	3 13	3 53	4 25	8 12	62	22	58
18	92	35.1	-22	33	52.8 ¹³⁵	-19	20.4	98	45	2 45	3 32	4 09	7 57	65	23	11
19	107	34.9		48	25.3 ¹³⁵		10.5	99	50	2 05	3 05	3 48	37	71	27	18
20	122	34.6		62	57.9 ¹³⁶	-19	00.5 ¹⁰⁰		52	1 42	2 52	38	28	73	35	16
21	137	34.4		77	30.5 ¹³⁶	-18	50.4 ¹⁰¹		54	1 11	36	27	18	75	43	13
22	152	34.1		92	03.2 ¹³⁷		40.2 ¹⁰²		56	** ** *	2 17	3 14	7 06	79	23	52
23	167	33.9		106	35.9 ¹³⁷		29.9 ¹⁰³		58	** ** *	1 53	2 59	6 53	82	** ** *	11
24	182	33.6	-22	121	08.7 ¹³⁸	-18	19.6 ¹⁰³		60 S	** ** *	1 19	2 42	6 37	87	0	08

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 19 ^h 12 ^m 0		Mag: -4.2 PMG: 14 ^h 57 ^m		Mag: +1.3 PMG: 11 ^h 53 ^m		Mag: -2.0 PMG: 14 ^h 50 ^m		Mag: +1.1 PMG: 6 ^h 44 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	71	12.6	135	57.1	-23	50.2	181	31.9	-22	33.3
1	86	15.1	150	56.4		49.7	196	32.4		33.6
2	101	17.5	165	55.7		49.2	211	32.9		33.8
3	116	20.0	180	55.0		48.7	226	33.4		34.1
4	131	22.5	195	54.3		48.2	241	33.9		34.4
5	146	24.9	210	53.6	-23	47.7	256	34.4	-22	34.7
6	161	27.4	225	52.9	-23	47.2	271	34.9	-22	34.9
7	176	29.8	240	52.2		46.7	286	35.4		35.2
8	191	32.3	255	51.5		46.2	301	36.0		35.5
9	206	34.8	270	50.8		45.7	316	36.5		35.8
10	221	37.2	285	50.1		45.2	331	37.0		36.0
11	236	39.7	300	49.4	-23	44.7	346	37.5	-22	36.3
12	251	42.2	315	48.7	-23	44.2	1	38.0	-22	36.6
13	266	44.6	330	48.0		43.7	16	38.5		36.8
14	281	47.1	345	47.3		43.1	31	39.0		37.1
15	296	49.6	0	46.7		42.6	46	39.5		37.4
16	311	52.0	15	46.0		42.1	61	40.1		37.7
17	326	54.5	30	45.3	-23	41.6	76	40.6	-22	37.9
18	341	56.9	45	44.6	-23	41.1	91	41.1	-22	38.2
19	356	59.4	60	43.9		40.6	106	41.6		38.5
20	12	01.9	75	43.2		40.0	121	42.1		38.7
21	27	04.3	90	42.5		39.5	136	42.6		39.0
22	42	06.8	105	41.8		39.0	151	43.1		39.3
23	57	09.3	120	41.1		38.5	166	43.6		39.5
24	72	11.7	135	40.5	-23	37.9	181	44.1	-22	39.8
Dif	—		-7	+5			+5	-3		
								+19		+1
										+23

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 11 ^h 50 ^m 0			Edad: 5 ^d 3 SD: 14:9 PMG: 16 ^h 25 ^m	PHE { 4 ^h : 54:6 12 ^h : 54:8 20 ^h : 55:0 Rº: 43 ^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	182	33.6	-22 07.2	121	08.7	-18 19.6	60 N	15 00	15 55	16 50	12 18 3	20 46 86		
1	197	33.4	07.5	135	41.5 ¹³⁸	-18 09.2 ¹⁰⁴	58	16	16 06	16 57	08 7	20 55 82		
2	212	33.1	07.9	150	14.4 ¹³⁹	-17 58.6 ¹⁰⁶	56	29	15	17 03	12 00 9	21 03 79		
3	227	32.9	08.2	164	47.3 ¹³⁹	48.1 ¹⁰⁵	54	41	23	09	11 52 12	10 76		
4	242	32.7	08.6	179	20.2 ¹³⁹	37.4 ¹⁰⁷	52	15 51	31	14	45 14	16 74		
5	257	32.4	-22 08.9	193	53.2 ¹⁴⁰	-17 26.6 ¹⁰⁸	50	16 00	16 38	17 18	11 38 17	21 22 71		
6	272	32.2	-22 09.3	208	26.2 ¹⁴⁰	-17 15.8 ¹⁰⁸	45	16 19	16 52	17 29	11 24 22	21 34 67		
7	287	31.9	09.6	222	59.3 ¹⁴¹	-17 04.9 ¹⁰⁹	40	35	17 05	39	13 25	44 63		
8	302	31.7	10.0	237	32.4 ¹⁴¹	-16 53.9 ¹¹⁰	35	16 48	16	47	11 03 28	21 53 59		
9	317	31.4	10.3	252	05.5 ¹⁴¹	42.9 ¹¹⁰	30	17 00	26	17 55	10 55 30	22 01 56		
10	332	31.2	10.7	266	38.7 ¹⁴²	31.7 ¹¹²	20	20	17 44	18 11	40 35	14 51		
11	347	30.9	-22 11.0	281	11.9 ¹⁴²	-16 20.5 ¹¹²	10 N	17 37	18 00	18 26	10 27 39	22 25 47		
12	2	30.7	-22 11.4	295	45.2 ¹⁴³	-16 09.2 ¹¹³	0	17 54	18 16	18 42	10 14 44	22 35 43		
13	17	30.4	11.7	310	18.5 ¹⁴³	-15 57.9 ¹¹³	10 S	18 10	33	19 00	10 02 47	46 39		
14	32	30.2	12.0	324	51.8 ¹⁴³	46.4 ¹¹⁵	20	28	18 52	21	9 49 51	22 57 35		
15	47	29.9	12.4	339	25.2 ¹⁴⁴	34.9 ¹¹⁵	30	18 49	19 16	19 49	33 57	23 09 30		
16	62	29.7	12.7	353	58.6 ¹⁴⁴	23.3 ¹¹⁶	35	19 01	30	20 06	25 59	16 28		
17	77	29.4	-22 13.1	8	32.0 ¹⁴⁴	-15 11.7 ¹¹⁶	40	19 15	19 48	20 28	9 14 63	23 25 24		
18	92	29.2	-22 13.4	23	05.5 ¹⁴⁵	-15 00.0 ¹¹⁷	45	19 32	20 09	20 57	9 02 67	23 34 20		
19	107	28.9	13.7	37	39.0 ¹⁴⁵	-14 48.2 ¹¹⁸	50	19 53	36	21 37	8 48 71	45 16		
20	122	28.6	14.1	52	12.5 ¹⁴⁵	36.3 ¹¹⁹	52	20 03	20 50	22 01	41 74	51 13		
21	137	28.4	14.4	66	46.1 ¹⁴⁶	24.4 ¹¹⁹	54	15	21 06	22 34	33 77	23 56 12		
22	152	28.1	14.7	81	19.7 ¹⁴⁶	12.4 ¹²⁰	56	28	26	** ** *	25 79	** ** *		
23	167	27.9	15.1	95	53.3 ¹⁴⁶	-14 00.4 ¹²⁰	58	20 43	21 51	** ** *	15 83	0 03 7		
24	182	27.6	-22 15.4	110	26.9 ¹⁴⁶	-13 48.2 ¹²²	60 S	21 01	22 27	** ** *	8 04 87	0 15 3		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 19 ^h 08 ^m 1		Mag: -4.2 PMG: 14 ^h 58 ^m			Mag: +1.3 PMG: 11 ^h 53 ^m			Mag: -2.0 PMG: 14 ^h 47 ^m			Mag: +1.1 PMG: 6 ^h 40 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	°	'	°	°	'	°	'	°	'
0	72	11.7	135	40.5	-23 37.9	181	44.1	-22 39.8	137	44.8	-21 55.4	259	41.4	+5 19.4
1	87	14.2	150	39.8	37.4	196	44.6	40.1	152	46.7	55.3	274	43.8	19.4
2	102	16.7	165	39.1	36.9	211	45.1	40.3	167	48.7	55.2	289	46.1	19.4
3	117	19.1	180	38.4	36.4	226	45.7	40.6	182	50.6	55.1	304	48.5	19.3
4	132	21.6	195	37.7	35.8	241	46.2	40.9	197	52.5	55.1	319	50.8	19.3
5	147	24.1	210	37.0	-23 35.3	256	46.7	-22 41.1	212	54.4	-21 55.0	334	53.2	+5 19.2
6	162	26.5	225	36.4	-23 34.8	271	47.2	-22 41.4	227	56.4	-21 54.9	349	55.5	+5 19.2
7	177	29.0	240	35.7	34.2	286	47.7	41.7	242	58.3	54.8	4	57.8	19.2
8	192	31.4	255	35.0	33.7	301	48.2	41.9	258	00.2	54.7	20	00.2	19.1
9	207	33.9	270	34.3	33.2	316	48.7	42.2	273	02.1	54.6	35	02.5	19.1
10	222	36.4	285	33.6	32.6	331	49.2	42.4	288	04.0	54.6	50	04.9	19.0
11	237	38.8	300	33.0	-23 32.1	346	49.7	-22 42.7	303	06.0	-21 54.5	65	07.2	+5 19.0
12	252	41.3	315	32.3	-23 31.5	1	50.2	-22 43.0	318	07.9	-21 54.4	80	09.6	+5 19.0
13	267	43.8	330	31.6	31.0	16	50.7	43.2	333	09.8	54.3	95	11.9	18.9
14	282	46.2	345	30.9	30.5	31	51.2	43.5	348	11.7	54.2	110	14.2	18.9
15	297	48.7	0	30.2	29.9	46	51.7	43.7	3	13.6	54.2	125	16.6	18.8
16	312	51.2	15	29.6	29.4	61	52.2	44.0	18	15.5	54.1	140	18.9	18.8
17	327	53.6	30	28.9	-23 28.8	76	52.8	-22 44.3	33	17.5	-21 54.0	155	21.3	+5 18.8
18	342	56.1	45	28.2	-23 28.3	91	53.3	-22 44.5	48	19.4	-21 53.9	170	23.6	+5 18.7
19	357	58.6	60	27.5	27.7	106	53.8	44.8	63	21.3	53.8	185	26.0	18.7
20	13	01.0	75	26.9	27.2	121	54.3	45.0	78	23.2	53.7	200	28.3	18.6
21	28	03.5	90	26.2	26.6	136	54.8	45.3	93	25.1	53.7	215	30.7	18.6
22	43	05.9	105	25.5	26.1	151	55.3	45.6	108	27.1	53.6	230	33.0	18.6
23	58	08.4	120	24.9	25.5	166	55.8	45.8	123	29.0	53.5	245	35.4	18.5
24	73	10.9	135	24.2	-23 25.0	181	56.3	-22 46.1	138	30.9	-21 53.4	260	37.7	+5 18.5
Dif	—		-7		+5	+5		-3	+19		+1	+23		0

UT	SOL				 LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 11 ^h 50 ^m 4				Edad: 6 ^d 3 PHE { 4 ^h : 55:1 12 ^h : 55:3 20 ^h : 55:5 PMG: 17 ^h 08 ^m R°: 43 ^m													
	hG ☉		Dec		hG ☾ Dif		Dec		Dif			Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	'	°	h m	h m	h m	m	h m m	m	
0	182	27.6	-22	15.4	110	26.9	-13	48.2	122	58	60 N	6 51	7 46	8 41	12 21	2	22 12	86
1	197	27.4		15.7	125	00.6 ¹⁴⁷		36.0 ¹²²	122	58		44	35	26	15	5	17	83
2	212	27.1		16.1	139	34.3 ¹⁴⁷		23.8 ¹²²	122	56		38	26	12	09	8	22	80
3	227	26.9		16.4	154	08.1 ¹⁴⁸	-13	11.5 ¹²³	123	54		32	18	8	00	10	26	77
4	242	26.6		16.7	168	41.8 ¹⁴⁷	-12	59.1 ¹²⁴	124	52		27	10	7	50	13	30	74
5	257	26.4	-22	17.1	183	15.6 ¹⁴⁸	-12	46.6 ¹²⁵	125	50		6 22	7 03	7 41	11 55	15	22 33	73
6	272	26.1	-22	17.4	197	49.4 ¹⁴⁸	-12	34.1 ¹²⁵	125	45		6 11	6 48	7 22	11 46	19	22 41	67
7	287	25.9		17.7	212	23.2 ¹⁴⁸		21.6 ¹²⁵	125	40		6 02	36	7 06	38	23	47	63
8	302	25.6		18.0	226	57.1 ¹⁴⁹	-12	08.9 ¹²⁷	127	35		5 53	25	6 52	31	27	52	60
9	317	25.4		18.4	241	31.0 ¹⁴⁹	-11	56.2 ¹²⁷	127	30		45	6 15	41	25	30	22 57	57
10	332	25.1		18.7	256	04.9 ¹⁴⁹		43.5 ¹²⁷	127	20		30	5 57	21	15	35	23 05	51
11	347	24.8	-22	19.0	270	38.8 ¹⁴⁹	-11	30.7 ¹²⁸	128	10 N		5 14	5 41	6 03	11 06	39	23 12	47
12	2	24.6	-22	19.3	285	12.7 ¹⁴⁹	-11	17.8 ¹²⁹	129	0		4 58	5 24	5 47	10 58	43	23 18	43
13	17	24.3		19.7	299	46.6 ¹⁴⁹	-11	04.9 ¹²⁹	129	10 S		40	5 07	30	49	47	25	38
14	32	24.1		20.0	314	20.6 ¹⁵⁰	-10	51.9 ¹³⁰	130	20		4 19	4 48	5 12	40	52	32	34
15	47	23.8		20.3	328	54.6 ¹⁵⁰		38.9 ¹³⁰	130	30		3 51	24	4 51	30	56	39	29
16	62	23.6		20.6	343	28.6 ¹⁵⁰		25.8 ¹³¹	131	35		34	4 10	39	24	59	44	26
17	77	23.3	-22	21.0	358	02.6 ¹⁵⁰	-10	12.7 ¹³¹	131	40		3 12	3 53	4 25	10 17	63	23 49	22
18	92	23.0	-22	21.3	12	36.6 ¹⁵⁰	-9	59.5 ¹³²	132	45		2 44	3 31	4 08	10 09	67	23 54	19
19	107	22.8		21.6	27	10.6 ¹⁵⁰		46.2 ¹³³	133	50		2 03	3 04	3 47	9 59	72	** ** *	**
20	122	22.5		21.9	41	44.7 ¹⁵¹		32.9 ¹³³	133	52		1 39	2 50	37	55	74	** ** *	**
21	137	22.3		22.2	56	18.7 ¹⁵⁰		19.6 ¹³³	133	54		1 06	34	25	50	76	** ** *	**
22	152	22.0		22.6	70	52.8 ¹⁵¹	-9	06.2 ¹³⁴	134	56	** ** *	** ** *	2 14	3 12	44	79	0 03	8
23	167	21.8		22.9	85	26.9 ¹⁵¹	-8	52.7 ¹³⁵	135	58	** ** *	** ** *	1 49	2 57	38	82	10	6
24	182	21.5	-22	23.2	100	00.9 ¹⁵⁰	-8	39.2 ¹³⁵	135	60 S	** ** *	** ** *	1 13	2 39	9 31	86	0 18	2

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 19 ^h 04 ^m 1		Mag: -4.2 PMG: 14 ^h 59 ^m				Mag: +1.3 PMG: 11 ^h 52 ^m				Mag: -2.0 PMG: 14 ^h 44 ^m				Mag: +1.1 PMG: 6 ^h 36 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	73	10.9	135	24.2	-23	25.0	181	56.3	-22	46.1	138	30.9	-21	53.4	260	37.7	+5	18.5
1	88	13.3	150	23.5		24.4	196	56.8		46.3	153	32.8		53.3	275	40.0		18.4
2	103	15.8	165	22.8		23.9	211	57.3		46.6	168	34.7		53.2	290	42.4		18.4
3	118	18.3	180	22.2		23.3	226	57.8		46.9	183	36.7		53.2	305	44.7		18.4
4	133	20.7	195	21.5		22.8	241	58.3		47.1	198	38.6		53.1	320	47.1		18.3
5	148	23.2	210	20.8	-23	22.2	256	58.8	-22	47.4	213	40.5	-21	53.0	335	49.4	+5	18.3
6	163	25.7	225	20.2	-23	21.7	271	59.3	-22	47.6	228	42.4	-21	52.9	350	51.8	+5	18.2
7	178	28.1	240	19.5		21.1	286	59.8		47.9	243	44.3		52.8	5	54.1		18.2
8	193	30.6	255	18.8		20.5	302	00.3		48.1	258	46.2		52.7	20	56.5		18.2
9	208	33.0	270	18.2		20.0	317	00.8		48.4	273	48.2		52.7	35	58.8		18.1
10	223	35.5	285	17.5		19.4	332	01.3		48.6	288	50.1		52.6	51	01.2		18.1
11	238	38.0	300	16.9	-23	18.8	347	01.8	-22	48.9	303	52.0	-21	52.5	66	03.5	+5	18.1
12	253	40.4	315	16.2	-23	18.3	2	02.3	-22	49.1	318	53.9	-21	52.4	81	05.9	+5	18.0
13	268	42.9	330	15.5		17.7	17	02.8		49.4	333	55.8		52.3	96	08.2		18.0
14	283	45.4	345	14.9		17.1	32	03.3		49.6	348	57.7		52.2	111	10.6		17.9
15	298	47.8	0	14.2		16.6	47	03.8		49.9	3	59.7		52.2	126	12.9		17.9
16	313	50.3	15	13.5		16.0	62	04.3		50.1	19	01.6		52.1	141	15.2		17.9
17	328	52.8	30	12.9	-23	15.4	77	04.8	-22	50.4	34	03.5	-21	52.0	156	17.6	+5	17.8
18	343	55.2	45	12.2	-23	14.9	92	05.3	-22	50.7	49	05.4	-21	51.9	171	19.9	+5	17.8
19	358	57.7	60	11.6		14.3	107	05.8		50.9	64	07.3		51.8	186	22.3		17.8
20	14	00.2	75	10.9		13.7	122	06.3		51.2	79	09.2		51.7	201	24.6		17.7
21	29	02.6	90	10.3		13.1	137	06.8		51.4	94	11.2		51.7	216	27.0		17.7
22	44	05.1	105	09.6		12.6	152	07.3		51.6	109	13.1		51.6	231	29.3		17.6
23	59	07.5	120	08.9		12.0	167	07.8		51.9	124	15.0		51.5	246	31.7		17.6
24	74	10.0	135	08.3	-23	11.4	182	08.3	-22	52.1	139	16.9	-21	51.4	261	34.0	+5	17.6
Dif	—		-7		+6		+5		-3		+19		+1		+23		0	

UT	SOL				 LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna				
	SD: 16:2				Edad: 7 ^d 3	PHE {	4 ^h : 55:8														
	PMG: 11 ^h 50 ^m 8						12 ^h : 56:0														
	PMG: 17 ^h 51 ^m						20 ^h : 56:3														
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	182	21.5	-22	23.2	100	00.9	-8	39.2	60 N	14	58	15	53	16	49	12	23	1	23	38	89
1	197	21.2		23.5	114	35.0 ¹⁵¹		25.6 ¹³⁶	58	15	14	16	04	16	56	20	4	40	85		
2	212	21.0		23.8	129	09.1 ¹⁵¹	-8	12.0 ¹³⁶	56		28		14	17	02	17	7	42	81		
3	227	20.7		24.1	143	43.2 ¹⁵¹	-7	58.4 ¹³⁶	54		39		22	08		14	10	43	79		
4	242	20.5		24.4	158	17.3 ¹⁵¹		44.7 ¹³⁷	52		50		30	13		12	12	44	77		
5	257	20.2	-22	24.7	172	51.4 ¹⁵¹	-7	31.0 ¹³⁷	50	15	59	16	37	17	18	12	10	23	46	74	
6	272	19.9	-22	25.1	187	25.5 ¹⁵¹	-7	17.2 ¹³⁸	45	16	19	16	52	17	29	12	05	23	48	69	
7	287	19.7		25.4	201	59.6 ¹⁵¹	-7	03.4 ¹³⁸	40		35		17	05	39	12	01	50	65		
8	302	19.4		25.7	216	33.6 ¹⁵⁰	-6	49.5 ¹³⁹	35	16	48		16	47		11	58	52	62		
9	317	19.2		26.0	231	07.7 ¹⁵¹		35.6 ¹³⁹	30	17	00		26	17	56	55	29	54	58		
10	332	18.9		26.3	245	41.8 ¹⁵¹		21.6 ¹⁴⁰	20		20		17	44	18	11	50	56	53		
11	347	18.6	-22	26.6	260	15.9 ¹⁵¹	-6	07.6 ¹⁴⁰	10 N	17	38	18	00	18	27	11	45	23	59	48	
12	2	18.4	-22	26.9	274	49.9 ¹⁵⁰	-5	53.6 ¹⁴⁰	0	17	54	18	17	18	43	11	41	***	***	***	
13	17	18.1		27.2	289	24.0 ¹⁵¹		39.5 ¹⁴¹	10 S	18	11		34	19	01		36	***	***	***	
14	32	17.9		27.5	303	58.0 ¹⁵⁰		25.4 ¹⁴¹	20		29		18	54	23	32	52	***	***	***	
15	47	17.6		27.8	318	32.1 ¹⁵¹	-5	11.2 ¹⁴²	30	18	50	19	18	19	51	26	58	***	***	***	
16	62	17.3		28.1	333	06.1 ¹⁵⁰	-4	57.0 ¹⁴²	35	19	03		32	20	08	23	61	***	***	***	
17	77	17.1	-22	28.4	347	40.1 ¹⁵⁰	-4	42.8 ¹⁴²	40	19	17	19	50	20	30	11	20	***	***	***	
18	92	16.8	-22	28.7	2	14.1 ¹⁵⁰	-4	28.5 ¹⁴³	45	19	34	20	11	20	59	11	16	***	***	***	
19	107	16.5		29.0	16	48.1 ¹⁵⁰	-4	14.2 ¹⁴³	50	19	56		39	21	41	11	73	0	01	14	
20	122	16.3		29.3	31	22.1 ¹⁵⁰	-3	59.9 ¹⁴³	52	20	06	20	53	22	05	09	75	04	12		
21	137	16.0		29.6	45	56.0 ¹⁴⁹		45.5 ¹⁴⁴	54		17	21	10	22	40	06	78	08	10		
22	152	15.7		29.9	60	30.0 ¹⁵⁰		31.1 ¹⁴⁴	56		31		30	***	***	03	81	11	8		
23	167	15.5		30.2	75	03.9 ¹⁴⁹		16.7 ¹⁴⁴	58	20	46	21	56	***	***	11	00	84	16	4	
24	182	15.2	-22	30.5	89	37.8 ¹⁴⁹	-3	02.2 ¹⁴⁵	60 S	21	05	22	34	***	***	10	57	87	0	20	2

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 19 ^h 00 ^m 2		Mag: -4.2 PMG: 15 ^h 00 ^m				Mag: +1.3 PMG: 11 ^h 51 ^m				Mag: -2.0 PMG: 14 ^h 41 ^m				Mag: +1.1 PMG: 6 ^h 33 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	74	10.0	135	08.3	-23	11.4	182	08.3	-22	52.1	139	16.9	-21	51.4	261	34.0	+5	17.6
1	89	12.5	150	07.6		10.8	197	08.8		52.4	154	18.8		51.3	276	36.4		17.5
2	104	14.9	165	07.0		10.3	212	09.3		52.6	169	20.7		51.2	291	38.7		17.5
3	119	17.4	180	06.3		09.7	227	09.8		52.9	184	22.6		51.1	306	41.1		17.5
4	134	19.9	195	05.7		09.1	242	10.3		53.1	199	24.6		51.1	321	43.4		17.4
5	149	22.3	210	05.0	-23	08.5	257	10.8	-22	53.4	214	26.5	-21	51.0	336	45.8	+5	17.4
6	164	24.8	225	04.4	-23	07.9	272	11.3	-22	53.6	229	28.4	-21	50.9	351	48.1	+5	17.3
7	179	27.3	240	03.7		07.3	287	11.8		53.9	244	30.3		50.8	6	50.5		17.3
8	194	29.7	255	03.1		06.8	302	12.3		54.1	259	32.2		50.7	21	52.8		17.3
9	209	32.2	270	02.4		06.2	317	12.8		54.4	274	34.1		50.6	36	55.2		17.2
10	224	34.7	285	01.8		05.6	332	13.3		54.6	289	36.0		50.6	51	57.5		17.2
11	239	37.1	300	01.1	-23	05.0	347	13.8	-22	54.9	304	38.0	-21	50.5	66	59.9	+5	17.2
12	254	39.6	315	00.5	-23	04.4	2	14.3	-22	55.1	319	39.9	-21	50.4	82	02.2	+5	17.1
13	269	42.0	329	59.8		03.8	17	14.8		55.3	334	41.8		50.3	97	04.6		17.1
14	284	44.5	344	59.2		03.2	32	15.3		55.6	349	43.7		50.2	112	07.0		17.1
15	299	47.0	359	58.5		02.6	47	15.8		55.8	4	45.6		50.1	127	09.3		17.0
16	314	49.4	14	57.9		02.0	62	16.3		56.1	19	47.5		50.1	142	11.7		17.0
17	329	51.9	29	57.3	-23	01.4	77	16.8	-22	56.3	34	49.4	-21	50.0	157	14.0	+5	16.9
18	344	54.4	44	56.6	-23	00.8	92	17.3	-22	56.5	49	51.4	-21	49.9	172	16.4	+5	16.9
19	359	56.8	59	56.0	-23	00.2	107	17.8		56.8	64	53.3		49.8	187	18.7		16.9
20	14	59.3	74	55.3	-22	59.6	122	18.3		57.0	79	55.2		49.7	202	21.1		16.8
21	30	01.8	89	54.7		59.0	137	18.8		57.3	94	57.1		49.6	217	23.4		16.8
22	45	04.2	104	54.0		58.4	152	19.2		57.5	109	59.0		49.5	232	25.8		16.8
23	60	06.7	119	53.4		57.8	167	19.7		57.7	125	00.9		49.5	247	28.1		16.7
24	75	09.1	134	52.8	-22	57.2	182	20.2	-22	58.0	140	02.8	-21	49.4	262	30.5	+5	16.7
Dif	—		-6		+6		+5		-2		+19		+1		+24			

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'2			Edad: 8 ^d 3	PHE {											
	PMG: 11 ^h 51 ^m 2					SD: 15'4		4 ^h : 56'6 12 ^h : 56'9 20 ^h : 57'2								
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	Rº	Hora	Rº	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	182	15.2	-22	89	37.8	-3	02.2	60 N	6 53	7 49	8 45	12 24	2	***	***	***
1	197	15.0		104	11.6 ¹⁴⁸	-2	47.7 ¹⁴⁵	58	47	38	29	24 5		***	***	***
2	212	14.7		118	45.5 ¹⁴⁹		33.2 ¹⁴⁵	56	40	29	15	24 8		***	***	***
3	227	14.4		133	19.3 ¹⁴⁸		18.7 ¹⁴⁵	54	35	20	8 03	24 10		***	***	***
4	242	14.2		147	53.1 ¹⁴⁸	-2	04.1 ¹⁴⁶	52	29	12	7 53	24 13		***	***	***
5	257	13.9	-22	162	26.9 ¹⁴⁸	-1	49.5 ¹⁴⁶	50	6 24	7 05	7 43	12 24	15	***	***	***
6	272	13.6	-22	177	00.6 ¹⁴⁷	-1	34.8 ¹⁴⁷	45	6 13	6 50	7 24	12 24	20	***	***	***
7	287	13.4		191	34.3 ¹⁴⁷		20.2 ¹⁴⁶	40	6 04	37	7 08	24 24		***	***	***
8	302	13.1		206	08.0 ¹⁴⁷	-1	05.5 ¹⁴⁷	35	5 55	26	6 54	24 27		***	***	***
9	317	12.8		220	41.7 ¹⁴⁷	-0	50.8 ¹⁴⁷	30	46	6 16	42	24 30		***	***	***
10	332	12.6		235	15.3 ¹⁴⁶		36.0 ¹⁴⁸	20	31	5 58	22	24 35		***	***	***
11	347	12.3	-22	249	48.8 ¹⁴⁵	-0	21.3 ¹⁴⁷	10 N	5 15	5 42	6 04	12 24	40	***	***	***
12	2	12.0	-22	264	22.4 ¹⁴⁶	-0	06.5 ¹⁴⁸	0	4 59	5 25	5 47	12 24	44	0 01	44	
13	17	11.8		278	55.9 ¹⁴⁵	+0	08.3 ¹⁴⁸	10 S	41	5 08	31	24 49		03	40	
14	32	11.5		293	29.3 ¹⁴⁴		23.1 ¹⁴⁸	20	4 19	4 48	5 12	24 54		06	34	
15	47	11.2		308	02.8 ¹⁴⁵		37.9 ¹⁴⁸	30	3 51	24	4 51	24 59		08	29	
16	62	11.0		322	36.2 ¹⁴⁴	+0	52.8 ¹⁴⁹	35	33	4 10	39	24 63		10	26	
17	77	10.7	-22	337	09.5 ¹⁴³	+1	07.6 ¹⁴⁸	40	3 11	3 52	4 25	12 24	66	0 11	23	
18	92	10.4	-22	351	42.8 ¹⁴³	+1	22.5 ¹⁴⁹	45	2 42	3 31	4 07	12 24	71	0 13	19	
19	107	10.2		6	16.0 ¹⁴²		37.4 ¹⁴⁹	50	2 01	3 03	3 46	24 76		15	15	
20	122	09.9		20	49.2 ¹⁴²	+1	52.3 ¹⁴⁹	52	1 36	2 49	36	24 78		16	13	
21	137	09.6		35	22.4 ¹⁴²	+2	07.2 ¹⁴⁹	54	1 01	32	24	24 81		18	9	
22	152	09.4		49	55.5 ¹⁴¹		22.1 ¹⁴⁹	56	*** **	2 12	3 11	24 84		19	7	
23	167	09.1		64	28.5 ¹⁴⁰		37.1 ¹⁵⁰	58	*** **	1 46	2 55	24 87		20	5	
24	182	08.8	-22	79	01.5 ¹⁴⁰	+2	52.0 ¹⁴⁹	60 S	*** **	1 08	2 37	12 24	91	0 22	1	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 18 ^h 56 ^m 3		Mag: -4.2 PMG: 15 ^h 01 ^m			Mag: +1.3 PMG: 11 ^h 50 ^m			Mag: -2.0 PMG: 14 ^h 38 ^m			Mag: +1.1 PMG: 6 ^h 29 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	75	09.1	134	52.8	-22	57.2	182	20.2	-22	58.0	140	02.8	-21	49.4	262	30.5
1	90	11.6	149	52.1		56.6	197	20.7		58.2	155	04.7		49.3	277	32.8
2	105	14.1	164	51.5		56.0	212	21.2		58.5	170	06.7		49.2	292	35.2
3	120	16.5	179	50.9		55.4	227	21.7		58.7	185	08.6		49.1	307	37.5
4	135	19.0	194	50.2		54.8	242	22.2		58.9	200	10.5		49.0	322	39.9
5	150	21.5	209	49.6	-22	54.2	257	22.7	-22	59.2	215	12.4	-21	48.9	337	42.2
6	165	23.9	224	48.9	-22	53.6	272	23.2	-22	59.4	230	14.3	-21	48.9	352	44.6
7	180	26.4	239	48.3		53.0	287	23.7		59.6	245	16.2		48.8	7	47.0
8	195	28.9	254	47.7		52.3	302	24.2	-22	59.9	260	18.1		48.7	22	49.3
9	210	31.3	269	47.0		51.7	317	24.7	-23	00.1	275	20.0		48.6	37	51.7
10	225	33.8	284	46.4		51.1	332	25.2		00.4	290	21.9		48.5	52	54.0
11	240	36.3	299	45.8	-22	50.5	347	25.7	-23	00.6	305	23.9	-21	48.4	67	56.4
12	255	38.7	314	45.2	-22	49.9	2	26.2	-23	00.8	320	25.8	-21	48.3	82	58.7
13	270	41.2	329	44.5		49.3	17	26.6		01.1	335	27.7		48.3	98	01.1
14	285	43.6	344	43.9		48.7	32	27.1		01.3	350	29.6		48.2	113	03.4
15	300	46.1	359	43.3		48.0	47	27.6		01.5	5	31.5		48.1	128	05.8
16	315	48.6	14	42.6		47.4	62	28.1		01.8	20	33.4		48.0	143	08.2
17	330	51.0	29	42.0	-22	46.8	77	28.6	-23	02.0	35	35.3	-21	47.9	158	10.5
18	345	53.5	44	41.4	-22	46.2	92	29.1	-23	02.2	50	37.2	-21	47.8	173	12.9
19	0	56.0	59	40.8		45.5	107	29.6		02.4	65	39.1		47.7	188	15.2
20	15	58.4	74	40.1		44.9	122	30.1		02.7	80	41.1		47.7	203	17.6
21	31	00.9	89	39.5		44.3	137	30.6		02.9	95	43.0		47.6	218	19.9
22	46	03.4	104	38.9		43.7	152	31.1		03.1	110	44.9		47.5	233	22.3
23	61	05.8	119	38.3		43.0	167	31.5		03.4	125	46.8		47.4	248	24.6
24	76	08.3	134	37.6	-22	42.4	182	32.0	-23	03.6	140	48.7	-21	47.3	263	27.0
Dif	—		-6		+6		+5		-2		+19		+1		+24	

UT	SOL		LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16'2		Edad: 9 ^d 3	PHE { 4 ^h : 57'5 12 ^h : 57'8 20 ^h : 58'1	SD: 15'6				Final del crepúsculo		Salida de Luna		Puesta de Luna					
	PMG: 11 ^h 51 ^m 6				PMG: 19 ^h 20 ^m				Rº: 48 ^m									
	hG ☉	Dec	hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	Rº	Hora	Rº					
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m					
0	182	08.8	-22	37.4	79	01.5	+2 52.0	60 N	14 56	15 52	16 48	12 26 3	1 07 93					
1	197	08.6		37.7	93	34.5 ¹⁴⁰	+3 07.0 ¹⁵⁰	58	15 13	16 03	16 55	29 6	05 89					
2	212	08.3		38.0	108	07.4 ¹³⁹	22.0 ¹⁵⁰	56	27	13	17 02	32 9	03 86					
3	227	08.0		38.3	122	40.2 ¹³⁸	36.9 ¹⁴⁹	54	39	22	07	34 13	02 83					
4	242	07.7		38.5	137	13.0 ¹³⁸	+3 51.9 ¹⁵⁰	52	49	29	13	37 15	01 80					
5	257	07.5	-22	38.8	151	45.7 ¹³⁷	+4 06.9 ¹⁵⁰	50	15 59	16 37	17 18	12 39 17	1 00 77					
6	272	07.2	-22	39.1	166	18.4 ¹³⁷	+4 21.9 ¹⁵⁰	45	16 18	16 52	17 29	12 44 22	0 57 73					
7	287	06.9		39.4	180	50.9 ¹³⁵	36.8 ¹⁴⁹	40	35	17 05	39	48 26	55 68					
8	302	06.7		39.6	195	23.5 ¹³⁶	+4 51.8 ¹⁵⁰	35	16 48	16	48	51 30	54 64					
9	317	06.4		39.9	209	55.9 ¹³⁴	+5 06.8 ¹⁵⁰	30	17 00	26	17 56	54 33	52 61					
10	332	06.1		40.2	224	28.3 ¹³⁴	21.8 ¹⁵⁰	20	21	17 44	18 12	12 59 39	49 56					
11	347	05.8	-22	40.4	239	00.7 ¹³⁴	+5 36.8 ¹⁵⁰	10 N	17 38	18 01	18 27	13 04 43	0 47 51					
12	2	05.6	-22	40.7	253	32.9 ¹³²	+5 51.7 ¹⁴⁹	0	17 55	18 18	18 44	13 08 48	0 45 46					
13	17	05.3		41.0	268	05.1 ¹³²	+6 06.7 ¹⁵⁰	10 S	18 12	35	19 02	13 52	43 41					
14	32	05.0		41.3	282	37.2 ¹³¹	21.7 ¹⁵⁰	20	31	18 55	24	18 57	40 37					
15	47	04.8		41.5	297	09.3 ¹³¹	36.6 ¹⁴⁹	30	18 52	19 19	19 52	23 63	37 32					
16	62	04.5		41.8	311	41.2 ¹²⁹	+6 51.6 ¹⁵⁰	35	19 05	34	20 10	27 66	36 28					
17	77	04.2	-22	42.0	326	13.1 ¹²⁹	+7 06.5 ¹⁴⁹	40	19 19	19 52	20 33	13 30 71	0 34 25					
18	92	03.9	-22	42.3	340	44.9 ¹²⁸	+7 21.4 ¹⁴⁹	45	19 36	20 13	21 02	13 35 74	0 32 21					
19	107	03.7		42.6	355	16.7 ¹²⁸	36.3 ¹⁴⁹	50	19 58	42	21 45	40 80	30 15					
20	122	03.4		42.8	9	48.3 ¹²⁶	+7 51.2 ¹⁴⁹	52	20 08	20 56	22 10	42 83	29 13					
21	137	03.1		43.1	24	19.9 ¹²⁶	+8 06.1 ¹⁴⁹	54	20	21 13	22 47	45 86	27 11					
22	152	02.8		43.4	38	51.4 ¹²⁵	21.0 ¹⁴⁹	56	34	21 34	** **	48 89	26 8					
23	167	02.6		43.6	53	22.8 ¹²⁴	35.8 ¹⁴⁸	58	20 49	22 00	** **	51 93	25 5					
24	182	02.3	-22	43.9	67	54.1 ¹²³	+8 50.6 ¹⁴⁸	60 S	21 09	22 41	** **	13 55 96	0 23 2					
UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO								
	PMG 18 ^h 52 ^m 3		Mag: -4.2 PMG: 15 ^h 02 ^m		Mag: +1.3 PMG: 11 ^h 49 ^m		Mag: -2.0 PMG: 14 ^h 35 ^m		Mag: +1.1 PMG: 6 ^h 25 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'	°							
0	76	08.3	134	37.6	-22	42.4	182	32.0	-23	03.6	140	48.7	-21	47.3	263	27.0	+5	15.9
1	91	10.8	149	37.0		41.8	197	32.5		03.8	155	50.6		47.2	278	29.4		15.8
2	106	13.2	164	36.4		41.1	212	33.0		04.1	170	52.5		47.1	293	31.7		15.8
3	121	15.7	179	35.8		40.5	227	33.5		04.3	185	54.4		47.0	308	34.1		15.8
4	136	18.1	194	35.2		39.9	242	34.0		04.5	200	56.3		47.0	323	36.4		15.7
5	151	20.6	209	34.5	-22	39.2	257	34.5	-23	04.7	215	58.2	-21	46.9	338	38.8	+5	15.7
6	166	23.1	224	33.9	-22	38.6	272	35.0	-23	05.0	231	00.1	-21	46.8	353	41.2	+5	15.7
7	181	25.5	239	33.3		38.0	287	35.5		05.2	246	02.1		46.7	8	43.5		15.6
8	196	28.0	254	32.7		37.3	302	35.9		05.4	261	04.0		46.6	23	45.9		15.6
9	211	30.5	269	32.1		36.7	317	36.4		05.6	276	05.9		46.5	38	48.2		15.6
10	226	32.9	284	31.5		36.1	332	36.9		05.9	291	07.8		46.4	53	50.6		15.5
11	241	35.4	299	30.8	-22	35.4	347	37.4	-23	06.1	306	09.7	-21	46.4	68	52.9	+5	15.5
12	256	37.9	314	30.2	-22	34.8	2	37.9	-23	06.3	321	11.6	-21	46.3	83	55.3	+5	15.5
13	271	40.3	329	29.6		34.1	17	38.4		06.5	336	13.5		46.2	98	57.7		15.4
14	286	42.8	344	29.0		33.5	32	38.9		06.8	351	15.4		46.1	114	00.0		15.4
15	301	45.2	359	28.4		32.9	47	39.3		07.0	6	17.3		46.0	129	02.4		15.4
16	316	47.7	14	27.8		32.2	62	39.8		07.2	21	19.2		45.9	144	04.7		15.3
17	331	50.2	29	27.2	-22	31.6	77	40.3	-23	07.4	36	21.1	-21	45.8	159	07.1	+5	15.3
18	346	52.6	44	26.6	-22	30.9	92	40.8	-23	07.7	51	23.0	-21	45.7	174	09.5	+5	15.3
19	1	55.1	59	26.0		30.3	107	41.3		07.9	66	25.0		45.7	189	11.8		15.2
20	16	57.6	74	25.3		29.6	122	41.8		08.1	81	26.9		45.6	204	14.2		15.2
21	32	00.0	89	24.7		29.0	137	42.3		08.3	96	28.8		45.5	219	16.5		15.2
22	47	02.5	104	24.1		28.3	152	42.7		08.5	111	30.7		45.4	234	18.9		15.1
23	62	05.0	119	23.5		27.7	167	43.2		08.8	126	32.6		45.3	249	21.3		15.1
24	77	07.4	134	22.9	-22	27.0	182	43.7	-23	09.0	141	34.5	-21	45.2	264	23.6	+5	15.1
Dif	—		-6	+6		+5	-2		+19	+1		+24		0				

UT	SOL			LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16:2 PMG: 11 ^h 52 ^m 1			Edad: 10 ^d 3 SD: 15:9 PMG: 20 ^h 08 ^m	PHE { 4 ^h : 58'4 12 ^h : 58'8 20 ^h : 59'1 Rº: 54 ^m													
	hG ☉	Dec	hG ☾			Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº		
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	182	02.3	–22	43.9	67	54.1	+8	50.6	60 N	6 56	7 52	8 48	12 29	4	2	40	99	
1	197	02.0		44.1	82	25.3 ¹²²	+9	05.4 ¹⁴⁸	58	49	41	32	35	9	34	95		
2	212	01.8		44.4	96	56.5 ¹²²		20.2 ¹⁴⁸	56	43	31	18	41	13	29	92		
3	227	01.5		44.7	111	27.5 ¹²⁰		34.9 ¹⁴⁷	54	37	22	8 06	47	15	25	88		
4	242	01.2		44.9	125	58.5 ¹²⁰	+9	49.7 ¹⁴⁸	52	31	15	7 55	52	18	21	85		
5	257	00.9	–22	45.2	140	29.4 ¹¹⁹	+10	04.4 ¹⁴⁷	50	6 26	7 08	7 46	12 56	21	2 17	83		
6	272	00.7	–22	45.4	155	00.1 ¹¹⁷	+10	19.0 ¹⁴⁶	45	6 15	6 52	7 26	13 06	26	2 10	76		
7	287	00.4		45.7	169	30.8 ¹¹⁷		33.7 ¹⁴⁷	40	6 05	39	7 09	14	31	2 03	72		
8	302	00.1		45.9	184	01.4 ¹¹⁶	+10	48.3 ¹⁴⁶	35	5 56	28	6 56	21	34	1 58	68		
9	316	59.8		46.2	198	31.9 ¹¹⁵	+11	02.9 ¹⁴⁶	30	48	6 18	44	27	38	53	65		
10	331	59.6		46.4	213	02.2 ¹¹³		17.4 ¹⁴⁵	20	32	5 59	23	38	43	45	59		
11	346	59.3	–22	46.7	227	32.5 ¹¹³	+11	31.9 ¹⁴⁵	10 N	5 16	5 43	6 05	13 47	48	1 38	54		
12	1	59.0	–22	47.0	242	02.7 ¹¹²	+11	46.4 ¹⁴⁵	0	5 00	5 26	5 48	13 56	53	1 31	50		
13	16	58.7		47.2	256	32.8 ¹¹¹	+12	00.8 ¹⁴⁴	10 S	4 41	5 08	31	14 05	57	24	45		
14	31	58.4		47.4	271	02.7 ¹⁰⁹		15.2 ¹⁴⁴	20	4 19	4 49	5 13	15	62	17	40		
15	46	58.2		47.7	285	32.6 ¹⁰⁹		29.5 ¹⁴³	30	3 51	24	4 52	26	68	09	35		
16	61	57.9		47.9	300	02.3 ¹⁰⁷		43.8 ¹⁴³	35	33	4 10	39	33	71	1 04	32		
17	76	57.6	–22	48.2	314	32.0 ¹⁰⁷	+12	58.1 ¹⁴³	40	3 11	3 52	4 24	14 41	74	0 59	28		
18	91	57.3	–22	48.4	329	01.5 ¹⁰⁵	+13	12.3 ¹⁴²	45	2 42	3 30	4 07	14 49	80	0 53	23		
19	106	57.1		48.7	343	30.9 ¹⁰⁴		26.4 ¹⁴¹	50	1 59	3 02	3 45	15 00	85	45	19		
20	121	56.8		48.9	358	00.2 ¹⁰³		40.5 ¹⁴¹	52	1 34	2 47	35	05	88	42	16		
21	136	56.5		49.2	12	29.4 ¹⁰²	+13	54.6 ¹⁴¹	54	0 57	31	23	11	91	38	14		
22	151	56.2		49.4	26	58.5 ¹⁰¹	+14	08.6 ¹⁴⁰	56	** ** *	2 10	3 10	17	95	34	10		
23	166	55.9		49.7	41	27.5 ¹⁰⁰		22.5 ¹³⁹	58	** ** *	1 43	2 54	24	99	30	7		
24	181	55.7	–22	49.9	55	56.3 ⁹⁸	+14	36.4 ¹³⁹	60 S	** ** *	1 03	2 35	15 31	105	0 25	3		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 18 ^h 48 ^m .4		Mag: –4.2 PMG: 15 ^h 03 ^m			Mag: +1.3 PMG: 11 ^h 49 ^m			Mag: –2.0 PMG: 14 ^h 32 ^m			Mag: +1.1 PMG: 6 ^h 21 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		hG ♅	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	77	07.4	134	22.9	–22	27.0	182	43.7	–23	09.0	141	34.5	–21	45.2	264	23.6	+5	15.1
1	92	09.9	149	22.3		26.3	197	44.2		09.2	156	36.4		45.1	279	26.0		15.0
2	107	12.4	164	21.7		25.7	212	44.7		09.4	171	38.3		45.0	294	28.4		15.0
3	122	14.8	179	21.1		25.0	227	45.2		09.6	186	40.2		45.0	309	30.7		15.0
4	137	17.3	194	20.5		24.4	242	45.6		09.9	201	42.1		44.9	324	33.1		15.0
5	152	19.7	209	19.9	–22	23.7	257	46.1	–23	10.1	216	44.0	–21	44.8	339	35.4	+5	14.9
6	167	22.2	224	19.3	–22	23.1	272	46.6	–23	10.3	231	45.9	–21	44.7	354	37.8	+5	14.9
7	182	24.7	239	18.7		22.4	287	47.1		10.5	246	47.8		44.6	9	40.2		14.9
8	197	27.1	254	18.1		21.7	302	47.6		10.7	261	49.7		44.5	24	42.5		14.8
9	212	29.6	269	17.5		21.1	317	48.1		10.9	276	51.6		44.4	39	44.9		14.8
10	227	32.1	284	16.9		20.4	332	48.5		11.2	291	53.6		44.3	54	47.2		14.8
11	242	34.5	299	16.3	–22	19.7	347	49.0	–23	11.4	306	55.5	–21	44.2	69	49.6	+5	14.7
12	257	37.0	314	15.7	–22	19.1	2	49.5	–23	11.6	321	57.4	–21	44.2	84	52.0	+5	14.7
13	272	39.5	329	15.1		18.4	17	50.0		11.8	336	59.3		44.1	99	54.3		14.7
14	287	41.9	344	14.5		17.7	32	50.5		12.0	352	01.2		44.0	114	56.7		14.6
15	302	44.4	359	13.9		17.1	47	50.9		12.2	7	03.1		43.9	129	59.1		14.6
16	317	46.9	14	13.3		16.4	62	51.4		12.4	22	05.0		43.8	145	01.4		14.6
17	332	49.3	29	12.8	–22	15.7	77	51.9	–23	12.7	37	06.9	–21	43.7	160	03.8	+5	14.5
18	347	51.8	44	12.2	–22	15.1	92	52.4	–23	12.9	52	08.8	–21	43.6	175	06.2	+5	14.5
19	2	54.2	59	11.6		14.4	107	52.9		13.1	67	10.7		43.5	190	08.5		14.5
20	17	56.7	74	11.0		13.7	122	53.3		13.3	82	12.6		43.5	205	10.9		14.5
21	32	59.2	89	10.4		13.0	137	53.8		13.5	97	14.5		43.4	220	13.3		14.4
22	48	01.6	104	09.8		12.4	152	54.3		13.7	112	16.4		43.3	235	15.6		14.4
23	63	04.1	119	09.2		11.7	167	54.8		13.9	127	18.3		43.2	250	18.0		14.4
24	78	06.6	134	08.6	–22	11.0	182	55.3	–23	14.1	142	20.2	–21	43.1	265	20.3	+5	14.3
Dif	—		–6		+7		+5		–2		+19		+1		+24		0	

UT	SOL			LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 16:2 PMG: 11 ^h 52 ^m 5			Edad: 11 ^d 3 PHE { 4 ^h : 59/4 12 ^h : 59/7 20 ^h : 60/0 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	
0	181	55.7	-22 49.9	55	56.3	+14 36.4		60 N	14	55	15	51	16	48	12	33	8	
1	196	55.4	50.1	70	25.1	+14 50.2	138	58	15	12	16	03	16	55	44	14	09	
2	211	55.1	50.4	84	53.7	+15 03.9	137	56	26	12	17	01	12	54	18	4	01	
3	226	54.8	50.6	99	22.1	17.6	137	54	38	21	07		13	02	23	3	53	
4	241	54.6	50.9	113	50.5	31.2	136	52	49	29	13		10	26		46	90	
5	256	54.3	-22 51.1	128	18.8	+15 44.8	136	50	15	58	16	36	17	18	13	17	28	
6	271	54.0	-22 51.3	142	46.9	+15 58.2	134	45	16	18	16	52	17	29	13	32	34	
7	286	53.7	51.6	157	14.9	+16 11.7	135	40	35	17	05		39	45	38	15	77	
8	301	53.4	51.8	171	42.7	25.0	133	35	16	48	16		48	13	55	42	3	
9	316	53.2	52.0	186	10.5	38.2	132	30	17	00	27	17	56	14	05	44	2	
10	331	52.9	52.3	200	38.1	+16 51.4	132	20	21	17	45	18	12	21	49	44	64	
11	346	52.6	-22 52.5	215	05.6	+17 04.5	131	10 N	17	39	18	02	18	28	14	35	54	
12	1	52.3	-22 52.7	229	32.9	+17 17.5	130	0	17	56	18	19	18	45	14	49	58	
13	16	52.0	53.0	244	00.2	30.4	129	10 S	18	13	36	19	03	15	02	62	2	
14	31	51.8	53.2	258	27.3	43.3	129	20	32	18	56	25		17	66	1	57	
15	46	51.5	53.4	272	54.2	+17 56.0	127	30	18	53	19	21	19	54	34	71	44	
16	61	51.2	53.7	287	21.0	+18 08.7	127	35	19	06	36	20	12	44	74	36	37	
17	76	50.9	-22 53.9	301	47.7	+18 21.2	125	40	19	21	19	53	20	35	15	55	78	
18	91	50.6	-22 54.1	316	14.3	+18 33.7	125	45	19	38	20	15	21	04	16	09	82	
19	106	50.3	54.3	330	40.7	46.1	124	50	20	00	44	21	48	25	89	1	04	
20	121	50.1	54.6	345	07.0	+18 58.4	123	52	11	20	59	22	14	33	91	0	58	
21	136	49.8	54.8	359	33.2	+19 10.5	121	54	23	21	16	22	53	42	95	52	18	
22	151	49.5	55.0	13	59.2	22.6	121	56	36	21	37	** **	**	16	52	99	44	
23	166	49.2	55.2	28	25.1	34.6	120	58	20	52	22	05	** **	17	03	104	37	
24	181	48.9	-22 55.5	42	50.9	+19 46.4	118	60 S	21	12	22	47	** **	17	16	111	0	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 18 ^h 44 ^m 5		Mag: -4.2 PMG: 15 ^h 04 ^m		Mag: +1.3 PMG: 11 ^h 48 ^m		Mag: -2.0 PMG: 14 ^h 29 ^m		Mag: +1.1 PMG: 6 ^h 18 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	78	06.6	134	08.6	-22	11.0	182	55.3	-23	14.1
1	93	09.0	149	08.0		10.3	197	55.7		14.3
2	108	11.5	164	07.4		09.6	212	56.2		14.6
3	123	14.0	179	06.9		09.0	227	56.7		14.8
4	138	16.4	194	06.3		08.3	242	57.2		15.0
5	153	18.9	209	05.7	-22	07.6	257	57.7	-23	15.2
6	168	21.3	224	05.1	-22	06.9	272	58.1	-23	15.4
7	183	23.8	239	04.5		06.2	287	58.6		15.6
8	198	26.3	254	03.9		05.5	302	59.1		15.8
9	213	28.7	269	03.4		04.9	317	59.6		16.0
10	228	31.2	284	02.8		04.2	333	00.0		16.2
11	243	33.7	299	02.2	-22	03.5	348	00.5	-23	16.4
12	258	36.1	314	01.6	-22	02.8	3	01.0	-23	16.6
13	273	38.6	329	01.1		02.1	18	01.5		16.8
14	288	41.1	344	00.5		01.4	33	02.0		17.0
15	303	43.5	358	59.9	-22	00.7	48	02.4		17.2
16	318	46.0	13	59.3	-22	00.0	63	02.9		17.4
17	333	48.5	28	58.7	-21	59.3	78	03.4	-23	17.6
18	348	50.9	43	58.2	-21	58.6	93	03.9	-23	17.8
19	3	53.4	58	57.6		57.9	108	04.3		18.0
20	18	55.8	73	57.0		57.2	123	04.8		18.3
21	33	58.3	88	56.5		56.5	138	05.3		18.5
22	49	00.8	103	55.9		55.8	153	05.8		18.7
23	64	03.2	118	55.3		55.1	168	06.2		18.9
24	79	05.7	133	54.7	-21	54.4	183	06.7	-23	19.1
Dif	—		-6	+7		+5	-2	+19		+1
										+24
										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 0			Edad: 12 ^d 3 PHE { 4 ^h : 60:3 12 ^h : 60:5 20 ^h : 60:8 Rº: 65 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Náutico	Civil		Hora	Rº	Hora	Rº
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	181	48.9	-22 55.5	42	50.9	+19 46.4		60 N	6 58	7 55	8 51	12 41	19	6 07	111	
1	196	48.6	55.7	57	16.5	+19 58.1	117	58	51	43	34	12 58	25	5 51	104	
2	211	48.4	55.9	71	42.0	+20 09.8	117	56	45	33	20	13 12	31	38	98	
3	226	48.1	56.1	86	07.3	63	115	54	39	25	8 08	25	34	26	94	
4	241	47.8	56.3	100	32.6	63	114	52	33	17	7 57	36	37	16	90	
5	256	47.5	-22 56.6	114	57.6	60	112	50	6 28	7 09	7 48	13 45	40	5 07	88	
6	271	47.2	-22 56.8	129	22.6	60	112	45	6 17	6 54	7 27	14 06	44	4 47	83	
7	286	46.9	57.0	143	47.4	58	110	40	6 07	41	7 11	23	48	32	78	
8	301	46.7	57.2	158	12.0	56	109	35	5 58	29	6 57	37	51	19	75	
9	316	46.4	57.4	172	36.6	56	108	30	49	19	45	14 49	54	4 07	73	
10	331	46.1	57.6	187	01.0	54	106	20	33	6 00	24	15 10	58	3 48	68	
11	346	45.8	-22 57.9	201	25.2	52	105	10 N	5 17	5 44	6 06	15 29	61	3 31	64	
12	1	45.5	-22 58.1	215	49.3	51	104	0	5 01	5 27	5 49	15 47	63	3 15	61	
13	16	45.2	58.3	230	13.3	50	102	10 S	4 42	5 09	32	16 04	67	3 00	57	
14	31	45.0	58.5	244	37.2	49	101	20	4 20	4 49	5 13	23	70	2 43	53	
15	46	44.7	58.7	259	00.9	47	100	30	3 51	25	4 52	45	73	24	49	
16	61	44.4	58.9	273	24.5	46	98	35	33	4 10	39	16 58	76	13	46	
17	76	44.1	-22 59.1	287	48.0	45	96	40	3 11	3 52	4 25	17 13	78	2 00	43	
18	91	43.8	-22 59.3	302	11.3	43	95	45	2 41	3 30	4 07	17 31	82	1 46	38	
19	106	43.5	59.5	316	34.5	42	94	50	1 58	3 01	3 45	17 54	86	28	33	
20	121	43.2	-22 59.8	330	57.6	41	92	52	1 32	2 47	35	18 04	89	19	30	
21	136	43.0	-23 00.0	345	20.5	39	90	54	0 52	29	23	17 91	91	1 10	26	
22	151	42.7	-23 00.2	359	43.3	38	89	56	** **	2 08	3 09	31 95	95	0 59	23	
23	166	42.4	00.4	14	06.0	37	87	58	** **	1 41	2 53	18 47	101	47	18	
24	181	42.1	-23 00.6	28	28.6	36	86	60 S	** **	0 58	2 33	19 07	110	0 33	11	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 18 ^h 40 ^m 6		Mag: -4.2 PMG: 15 ^h 05 ^m			Mag: +1.3 PMG: 11 ^h 47 ^m			Mag: -2.0 PMG: 14 ^h 26 ^m			Mag: +1.1 PMG: 6 ^h 14 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'		
0	79	05.7	133	54.7	-21 54.4	183	06.7	-23 19.1	143	05.9	-21 40.9	266	17.2	+5 13.6		
1	94	08.2	148	54.2	53.7	198	07.2	19.3	158	07.8	40.9	281	19.5	13.6		
2	109	10.6	163	53.6	53.0	213	07.7	19.5	173	09.7	40.8	296	21.9	13.6		
3	124	13.1	178	53.0	52.3	228	08.1	19.7	188	11.6	40.7	311	24.3	13.5		
4	139	15.6	193	52.5	51.6	243	08.6	19.9	203	13.5	40.6	326	26.6	13.5		
5	154	18.0	208	51.9	-21 50.9	258	09.1	-23 20.1	218	15.4	-21 40.5	341	29.0	+5 13.5		
6	169	20.5	223	51.3	-21 50.2	273	09.6	-23 20.3	233	17.3	-21 40.4	356	31.4	+5 13.5		
7	184	23.0	238	50.8	49.5	288	10.0	20.4	248	19.2	40.3	11	33.7	13.4		
8	199	25.4	253	50.2	48.8	303	10.5	20.6	263	21.1	40.2	26	36.1	13.4		
9	214	27.9	268	49.7	48.1	318	11.0	20.8	278	23.0	40.1	41	38.5	13.4		
10	229	30.3	283	49.1	47.4	333	11.4	21.0	293	24.9	40.0	56	40.9	13.3		
11	244	32.8	298	48.5	-21 46.7	348	11.9	-23 21.2	308	26.8	-21 40.0	71	43.2	+5 13.3		
12	259	35.3	313	48.0	-21 45.9	3	12.4	-23 21.4	323	28.7	-21 39.9	86	45.6	+5 13.3		
13	274	37.7	328	47.4	45.2	18	12.9	21.6	338	30.6	39.8	101	48.0	13.3		
14	289	40.2	343	46.9	44.5	33	13.3	21.8	353	32.5	39.7	116	50.3	13.2		
15	304	42.7	358	46.3	43.8	48	13.8	22.0	8	34.4	39.6	131	52.7	13.2		
16	319	45.1	13	45.7	43.1	63	14.3	22.2	23	36.3	39.5	146	55.1	13.2		
17	334	47.6	28	45.2	-21 42.4	78	14.7	-23 22.4	38	38.2	-21 39.4	161	57.5	+5 13.1		
18	349	50.1	43	44.6	-21 41.6	93	15.2	-23 22.6	53	40.1	-21 39.3	176	59.8	+5 13.1		
19	4	52.5	58	44.1	40.9	108	15.7	22.8	68	42.0	39.2	192	02.2	13.1		
20	19	55.0	73	43.5	40.2	123	16.2	23.0	83	43.9	39.1	207	04.6	13.1		
21	34	57.5	88	43.0	39.5	138	16.6	23.2	98	45.8	39.0	222	06.9	13.0		
22	49	59.9	103	42.4	38.7	153	17.1	23.4	113	47.7	39.0	237	09.3	13.0		
23	65	02.4	118	41.9	38.0	168	17.6	23.6	128	49.6	38.9	252	11.7	13.0		
24	80	04.8	133	41.3	-21 37.3	183	18.0	-23 23.7	143	51.5	-21 38.8	267	14.1	+5 13.0		
Dif	—		-6		+7	+5		-2	+19		+1	+24		0		

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16°2 PMG: 11 ^h 53 ^m 4			Edad: 13 ^d 3 PHE	SD: 16°6 PMG: 23 ^h 06 ^m										
	hG ☉	Dec			hG ☾	Dif			Dec	Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	m	m	m
0	181	42.1	-23	00.6	28	28.6	+23	52.3	60 N	14 54	15 51	16 47	13 00	41	7 58 98
1	196	41.8		00.8	42	51.0	+24	00.7	58	15 11	16 02	16 54	23	47	35 92
2	211	41.5		01.0	57	13.3		08.9	56	25	12	17 01	43	50	16 88
3	226	41.2		01.2	71	35.5		17.0	54	38	21	07	13	59	53
4	241	40.9		01.4	85	57.6		24.9	52	48	29	13	14	13	55
5	256	40.7	-23	01.6	100	19.6	+24	32.6	50	15 58	16 36	17 18	14	25	56
6	271	40.4	-23	01.8	114	41.4	+24	40.1	45	16 18	16 52	17 29	14	50	59
7	286	40.1		02.0	129	03.1		47.5	40	35	17 05	39	15	11	61
8	301	39.8		02.2	143	24.8	+24	54.7	35	16 49	17	48	28	62	34 74
9	316	39.5		02.4	157	46.3	+25	01.7	30	17 01	27	17 57	15	43	63
10	331	39.2		02.6	172	07.7		08.5	20	22	17 46	18 13	16	08	64
11	346	38.9	-23	02.8	186	29.0	+25	15.2	10 N	17 40	18 03	18 29	16	30	66
12	1	38.6	-23	03.0	200	50.2	+25	21.6	0	17 57	18 20	18 46	16	50	67
13	16	38.4		03.2	215	11.3		27.9	10 S	18 14	37	19 04	17	11	68
14	31	38.1		03.3	229	32.3		33.9	20	33	18 58	27	33	69	36 62
15	46	37.8		03.5	243	53.2		39.8	30	18 55	19 22	19 55	17	58	71
16	61	37.5		03.7	258	14.0		45.5	35	19 08	37	20 14	18	14	71
17	76	37.2	-23	03.9	272	34.7	+25	51.0	40	19 22	19 55	20 37	18	31	73
18	91	36.9	-23	04.1	286	55.3	+25	56.3	45	19 40	20 17	21 06	18	53	73
19	106	36.6		04.3	301	15.9	+26	01.4	50	20 02	20 46	21 51	19	20	75
20	121	36.3		04.5	315	36.3		06.3	52	13	21 01	22 17	33	76	1 49 45
21	136	36.0		04.7	329	56.7		11.0	54	25	19	22 58	19	48	77
22	151	35.7		04.9	344	17.0		15.5	56	39	21 40	** **	20	06	78
23	166	35.5		05.0	358	37.3		19.8	58	20 55	22 08	** **	28	80	1 05 33
24	181	35.2	-23	05.2	12	57.4	+26	23.9	60 S	21 15	22 53	** **	20	57	82

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 18 ^h 36 ^m 6		Mag: -4.2 PMG: 15 ^h 06 ^m		Mag: +1.3 PMG: 11 ^h 46 ^m		Mag: -2.0 PMG: 14 ^h 23 ^m		Mag: +1.1 PMG: 6 ^h 10 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	80	04.8	133	41.3	-21	37.3	183	18.0	-23	23.7
1	95	07.3	148	40.8		36.6	198	18.5		23.9
2	110	09.8	163	40.2		35.8	213	19.0		24.1
3	125	12.2	178	39.7		35.1	228	19.5		24.3
4	140	14.7	193	39.1		34.4	243	19.9		24.5
5	155	17.2	208	38.6	-21	33.7	258	20.4	-23	24.7
6	170	19.6	223	38.0	-21	32.9	273	20.9	-23	24.9
7	185	22.1	238	37.5		32.2	288	21.3		25.1
8	200	24.6	253	36.9		31.5	303	21.8		25.3
9	215	27.0	268	36.4		30.7	318	22.3		25.4
10	230	29.5	283	35.8		30.0	333	22.7		25.6
11	245	32.0	298	35.3	-21	29.3	348	23.2	-23	25.8
12	260	34.4	313	34.8	-21	28.5	3 23.7	-23	26.0	324 14.3
13	275	36.9	328	34.2		27.8	18 24.1		26.2	339 16.2
14	290	39.3	343	33.7		27.0	33 24.6		26.4	354 18.1
15	305	41.8	358	33.1		26.3	48 25.1		26.6	9 20.0
16	320	44.3	13 32.6			25.6	63 25.5		26.7	24 21.9
17	335	46.7	28 32.1	-21	24.8		78 26.0	-23	26.9	39 23.8
18	350	49.2	43 31.5	-21	24.1		93 26.5	-23	27.1	54 25.7
19	5 51.7		58 31.0		23.3		108 26.9		27.3	69 27.6
20	20 54.1		73 30.4		22.6		123 27.4		27.5	84 29.5
21	35 56.6		88 29.9		21.8		138 27.9		27.7	99 31.4
22	50 59.1		103 29.4		21.1		153 28.3		27.8	114 33.2
23	66 01.5		118 28.8		20.4		168 28.8		28.0	129 35.1
24	81 04.0		133 28.3	-21	19.6		183 29.3	-23	28.2	144 37.0
Dif	—		-5	+7		+5	-2		+19	+1

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16/2 PMG: 11 ^h 53 ^m 9			Edad: 14 ^d 3 PHE { 4 ^h : 61 ^m 4 12 ^h : 61 ^m 5 20 ^h : 61 ^m 5 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	181	35.2	-23	05.2	12	57.4	+26	23.9	60 N	7	01	7	57	8	54	13	41	
1	196	34.9		05.4	27	17.5		27.8	58	6	53		46		37	14	10	
2	211	34.6		05.6	41	37.5		31.5	56		47		36		23		33	
3	226	34.3		05.8	55	57.5		34.9	54		41		27		8	10	14	
4	241	34.0		06.0	70	17.4		38.2	52		35		19		7	59	15	
5	256	33.7	-23	06.1	84	37.3	+26	41.2	50	6	30	7	11	7	50	15	21	
6	271	33.4	-23	06.3	98	57.1	+26	44.1	45	6	18	6	55	7	29	15	49	
7	286	33.1		06.5	113	16.8		46.7	40	6	08		42	7	13	16	12	
8	301	32.8		06.7	127	36.5		49.1	35	5	59		31	6	59		30	
9	316	32.5		06.9	141	56.2		51.3	30		50		20		47	16	46	
10	331	32.3		07.0	156	15.8		53.3	20		34	6	02	26		17	12	
11	346	32.0	-23	07.2	170	35.4	+26	55.0	10 N	5	18	5	45	6	07	17	36	
12	1	31.7	-23	07.4	184	55.0	+26	56.6	0	5	01	5	28	5	50	17	57	
13	16	31.4		07.6	199	14.5		57.9	10 S	4	43	5	10		33	18	19	
14	31	31.1		07.7	213	34.1		59.0	20	4	20	4	50	5	14	18	42	
15	46	30.8		07.9	227	53.6	+26	59.9	30	3	52		25	4	52	19	09	
16	61	30.5		08.1	242	13.0	+27	00.6	35		33	4	10		40		25	
17	76	30.2	-23	08.3	256	32.5	+27	01.1	40	3	11	3	52	4	25	19	44	
18	91	29.9	-23	08.4	270	52.0	+27	01.3	45	2	41	3	30	4	07	20	06	
19	106	29.6		08.6	285	11.4		01.3	50	1	57	3	01	3	45		35	
20	121	29.3		08.8	299	30.9		01.1	52	1	30	2	46		34	20	49	
21	136	29.0		08.9	313	50.3		00.7	54	0	49		29		22	21	05	
22	151	28.7		09.1	328	09.8	+27	00.1	56	**	**	2	07	3	08		24	
23	166	28.4		09.3	342	29.3	+26	59.3	58	**	**	1	39	2	52	21	48	
24	181	28.1	-23	09.4	356	48.8	+26	58.2	60 S	**	**	0	54	2	32	22	19	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 18 ^h 32 ^m 7		Mag: -4.2 PMG: 15 ^h 07 ^m				Mag: +1.3 PMG: 11 ^h 46 ^m				Mag: -2.0 PMG: 14 ^h 20 ^m				Mag: +1.0 PMG: 6 ^h 06 ^m			
	hG ☿		hG ♀	Dec			hG ♂	Dec			hG ♃	Dec			hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	81	04.0	133	28.3	-21	19.6	183	29.3	-23	28.2	144	37.0	-21	36.6	268	11.1	+5	12.3
1	96	06.4	148	27.8		18.9	198	29.7		28.4	159	38.9		36.5	283	13.4		12.3
2	111	08.9	163	27.2		18.1	213	30.2		28.6	174	40.8		36.4	298	15.8		12.3
3	126	11.4	178	26.7		17.4	228	30.7		28.7	189	42.7		36.3	313	18.2		12.3
4	141	13.8	193	26.2		16.6	243	31.1		28.9	204	44.6		36.2	328	20.6		12.2
5	156	16.3	208	25.7	-21	15.9	258	31.6	-23	29.1	219	46.5	-21	36.1	343	22.9	+5	12.2
6	171	18.8	223	25.1	-21	15.1	273	32.1	-23	29.3	234	48.4	-21	36.0	358	25.3	+5	12.2
7	186	21.2	238	24.6		14.3	288	32.5		29.5	249	50.3		35.9	13	27.7		12.2
8	201	23.7	253	24.1		13.6	303	33.0		29.6	264	52.2		35.8	28	30.1		12.1
9	216	26.2	268	23.6		12.8	318	33.5		29.8	279	54.1		35.7	43	32.5		12.1
10	231	28.6	283	23.0		12.1	333	33.9		30.0	294	56.0		35.6	58	34.8		12.1
11	246	31.1	298	22.5	-21	11.3	348	34.4	-23	30.2	309	57.9	-21	35.5	73	37.2	+5	12.1
12	261	33.6	313	22.0	-21	10.6	3	34.8	-23	30.3	324	59.8	-21	35.5	88	39.6	+5	12.0
13	276	36.0	328	21.5		09.8	18	35.3		30.5	340	01.7		35.4	103	42.0		12.0
14	291	38.5	343	20.9		09.0	33	35.8		30.7	355	03.6		35.3	118	44.4		12.0
15	306	40.9	358	20.4		08.3	48	36.2		30.9	10	05.5		35.2	133	46.7		12.0
16	321	43.4	13	19.9		07.5	63	36.7		31.0	25	07.4		35.1	148	49.1		11.9
17	336	45.9	28	19.4	-21	06.7	78	37.2	-23	31.2	40	09.3	-21	35.0	163	51.5	+5	11.9
18	351	48.3	43	18.9	-21	06.0	93	37.6	-23	31.4	55	11.2	-21	34.9	178	53.9	+5	11.9
19	6	50.8	58	18.3		05.2	108	38.1		31.6	70	13.1		34.8	193	56.3		11.9
20	21	53.3	73	17.8		04.5	123	38.5		31.7	85	15.0		34.7	208	58.6		11.8
21	36	55.7	88	17.3		03.7	138	39.0		31.9	100	16.8		34.6	224	01.0		11.8
22	51	58.2	103	16.8		02.9	153	39.5		32.1	115	18.7		34.5	239	03.4		11.8
23	67	00.7	118	16.3		02.1	168	39.9		32.3	130	20.6		34.4	254	05.8		11.8
24	82	03.1	133	15.8	-21	01.4	183	40.4	-23	32.4	145	22.5	-21	34.3	269	08.2	+5	11.7
Dif	—		-5 +8		+8		+5 -2		-2		+19		+1		+24		0	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16:2 PMG: 11 ^h 54 ^m 4			Edad: 15 ^d 3 PHE { SD: 16:7 PMG: 0 ^h 13 ^m											
	hG ☉	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	28.1	-23 09.4	356	48.8	+26 58.2	13	60 N	14 53	15 50	16 47	15 01	107	10 38	29
1	196	27.9	09.6	11	08.3	56.9	15	58	15 10	16 02	16 54	28	100	10 10	36
2	211	27.6	09.8	25	27.8	55.4	15	56	25	12	17 01	15 50	95	9 49	40
3	226	27.3	09.9	39	47.3	53.7	17	54	37	21	07	16 07	92	31	44
4	241	27.0	10.1	54	06.9	51.8	19	52	48	29	13	22	89	16	46
5	256	26.7	-23 10.3	68	26.5	+26 49.6	22	50	15 58	16 36	17 18	16 35	86	9 02	49
6	271	26.4	-23 10.4	82	46.2	+26 47.3	23	45	16 19	16 52	17 29	17 02	82	8 35	53
7	286	26.1	10.6	97	05.9	44.7	26	40	35	17 06	40	23	79	8 14	55
8	301	25.8	10.7	111	25.6	41.9	28	35	16 49	17	49	41	76	7 56	57
9	316	25.5	10.9	125	45.4	38.9	30	30	17 01	28	17 58	17 56	74	40	59
10	331	25.2	11.0	140	05.2	35.7	32	20	22	17 46	18 14	18 22	70	7 14	61
11	346	24.9	-23 11.2	154	25.1	+26 32.3	34	10 N	17 41	18 04	18 30	18 44	67	6 51	64
12	1	24.6	-23 11.4	168	45.0	+26 28.6	37	0	17 58	18 21	18 47	19 05	63	6 29	67
13	16	24.3	11.5	183	05.0	24.8	38	10 S	18 16	39	19 06	25	61	6 08	68
14	31	24.0	11.7	197	25.0	20.7	41	20	34	18 59	28	19 47	58	5 45	70
15	46	23.7	11.8	211	45.1	16.5	42	30	18 56	19 24	19 57	20 13	54	18	73
16	61	23.4	12.0	226	05.3	12.0	45	35	19 09	39	20 15	28	51	5 02	74
17	76	23.1	-23 12.1	240	25.6	+26 07.4	46	40	19 24	19 57	20 38	20 45	49	4 44	76
18	91	22.8	-23 12.3	254	45.9	+26 02.5	49	45	19 42	20 19	21 08	21 06	45	4 22	78
19	106	22.5	12.4	269	06.3	+25 57.4	51	50	20 04	20 48	21 53	32	40	3 53	81
20	121	22.2	12.6	283	26.8	52.1	53	52	15	21 03	22 20	45	37	39	83
21	136	21.9	12.7	297	47.4	46.7	54	54	27	21	23 04	21 59	35	23	85
22	151	21.6	12.9	312	08.1	41.0	57	56	41	21 43	** **	22 16	30	3 04	88
23	166	21.3	13.0	326	28.8	35.1	59	58	20 57	22 12	** **	22 36	25	2 40	92
24	181	21.1	-23 13.2	340	49.7	+25 29.1	60	60 S	21 18	22 59	** **	23 01	18	2 09	98

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 18 ^h 28 ^m 8		Mag: -4.3 PMG: 15 ^h 07 ^m		Mag: +1.3 PMG: 11 ^h 45 ^m		Mag: -2.0 PMG: 14 ^h 17 ^m		Mag: +1.0 PMG: 6 ^h 02 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	82	03.1	133	15.8	-21 01.4	183	40.4	-23 32.4	145	22.5	-21 34.3	269	08.2	+5 11.7
1	97	05.6	148	15.2	-21 00.6	198	40.9	32.6	160	24.4	34.2	284	10.5	11.7
2	112	08.1	163	14.7	-20 59.8	213	41.3	32.8	175	26.3	34.1	299	12.9	11.7
3	127	10.5	178	14.2	59.1	228	41.8	32.9	190	28.2	34.1	314	15.3	11.7
4	142	13.0	193	13.7	58.3	243	42.2	33.1	205	30.1	34.0	329	17.7	11.7
5	157	15.4	208	13.2	-20 57.5	258	42.7	-23 33.3	220	32.0	-21 33.9	344	20.1	+5 11.6
6	172	17.9	223	12.7	-20 56.7	273	43.2	-23 33.4	235	33.9	-21 33.8	359	22.4	+5 11.6
7	187	20.4	238	12.2	56.0	288	43.6	33.6	250	35.8	33.7	14	24.8	11.6
8	202	22.8	253	11.7	55.2	303	44.1	33.8	265	37.7	33.6	29	27.2	11.6
9	217	25.3	268	11.2	54.4	318	44.5	34.0	280	39.6	33.5	44	29.6	11.5
10	232	27.8	283	10.7	53.6	333	45.0	34.1	295	41.5	33.4	59	32.0	11.5
11	247	30.2	298	10.2	-20 52.8	348	45.5	-23 34.3	310	43.4	-21 33.3	74	34.4	+5 11.5
12	262	32.7	313	09.7	-20 52.1	3	45.9	-23 34.5	325	45.3	-21 33.2	89	36.7	+5 11.5
13	277	35.2	328	09.2	51.3	18	46.4	34.6	340	47.1	33.1	104	39.1	11.4
14	292	37.6	343	08.7	50.5	33	46.8	34.8	355	49.0	33.0	119	41.5	11.4
15	307	40.1	358	08.2	49.7	48	47.3	34.9	10	50.9	32.9	134	43.9	11.4
16	322	42.6	13	07.7	48.9	63	47.8	35.1	25	52.8	32.8	149	46.3	11.4
17	337	45.0	28	07.1	-20 48.1	78	48.2	-23 35.3	40	54.7	-21 32.7	164	48.7	+5 11.4
18	352	47.5	43	06.7	-20 47.4	93	48.7	-23 35.4	55	56.6	-21 32.6	179	51.0	+5 11.3
19	7	49.9	58	06.2	46.6	108	49.1	35.6	70	58.5	32.5	194	53.4	11.3
20	22	52.4	73	05.7	45.8	123	49.6	35.8	86	00.4	32.4	209	55.8	11.3
21	37	54.9	88	05.2	45.0	138	50.0	35.9	101	02.3	32.4	224	58.2	11.3
22	52	57.3	103	04.7	44.2	153	50.5	36.1	116	04.2	32.3	240	00.6	11.2
23	67	59.8	118	04.2	43.4	168	51.0	36.3	131	06.1	32.2	255	03.0	11.2
24	83	02.3	133	03.7	-20 42.6	183	51.4	-23 36.4	146	08.0	-21 32.1	270	05.3	+5 11.2
Dif	—		-5 +8		+5 -2		+19		+1		+24		0	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16:2 PMG: 11 ^h 54 ^m 8			Edad: 16 ^d 3 PHE { 4 ^h : 61/2 12 ^h : 61/1 20 ^h : 60/9 PMG: 1 ^h 20 ^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
0	181	21.1	-23	13.2	340	49.7	+25	29.1	60 N	7	02	7	59	8	56	16	48
1	196	20.8		13.3	355	10.6		22.8	58	6	55		48	39		17	08
2	211	20.5		13.5	9	31.6		16.4	56		48		37	25		25	99
3	226	20.2		13.6	23	52.8		09.8	54		42		28	12		39	95
4	241	19.9		13.8	38	14.0	+25	03.0	52		37		20	8	01	17	51
5	256	19.6	-23	13.9	52	35.3	+24	56.0	50	6	31	7	13	7	51	18	01
6	271	19.3	-23	14.0	66	56.8	+24	48.8	45	6	20	6	57	7	31	18	24
7	286	19.0		14.2	81	18.3		41.4	40		10		44	14		42	78
8	301	18.7		14.3	95	40.0		33.9	35	6	00		32	7	00	18	57
9	316	18.4		14.5	110	01.7		26.1	30	5	52		21	6	48	19	10
10	331	18.1		14.6	124	23.6		18.2	20		35		6	03	27	32	66
11	346	17.8	-23	14.7	138	45.6	+24	10.2	10 N	5	19	5	46	6	08	19	51
12	1	17.5	-23	14.9	153	07.7	+24	01.9	0	5	02	5	29	5	51	20	08
13	16	17.2		15.0	167	30.0	+23	53.5	10 S	4	44	5	11		34	26	55
14	31	16.9		15.1	181	52.3		44.9	20	4	21	4	50	5	15	20	45
15	46	16.6		15.3	196	14.8		36.2	30	3	52		26	4	53	21	07
16	61	16.3		15.4	210	37.4		27.3	35		34		4	10	40	19	43
17	76	16.0	-23	15.5	225	00.1	+23	18.2	40	3	11	3	52	4	25	21	34
18	91	15.7	-23	15.7	239	22.9	+23	09.0	45	2	41	3	30	4	07	21	51
19	106	15.4		15.8	253	45.9	+22	59.6	50	1	56	3	01	3	45	22	12
20	121	15.1		15.9	268	09.0		50.1	52	1	29	2	46		34	22	26
21	136	14.8		16.1	282	32.2		40.4	54	0	46		28	22		34	22
22	151	14.5		16.2	296	55.6		30.5	56	** ** *	2	06		3	08	22	46
23	166	14.2		16.3	311	19.1		20.5	58	** ** *	1	37		2	52	23	01
24	181	13.9	-23	16.5	325	42.7	+22	10.4	60 S	** ** *	0	50		2	31	23	19

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 18 ^h 24 ^m 8		Mag: -4.3 PMG: 15 ^h 08 ^m		Mag: +1.3 PMG: 11 ^h 44 ^m		Mag: -2.0 PMG: 14 ^h 14 ^m		Mag: +1.0 PMG: 5 ^h 59 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	83	02.3	133	03.7	-20	42.6	183	51.4	-23	36.4
1	98	04.7	148	03.2		41.8	198	51.9		36.6
2	113	07.2	163	02.7		41.0	213	52.3		36.7
3	128	09.7	178	02.2		40.2	228	52.8		36.9
4	143	12.1	193	01.7		39.4	243	53.2		37.1
5	158	14.6	208	01.2	-20	38.6	258	53.7	-23	37.2
6	173	17.1	223	00.7	-20	37.8	273	54.2	-23	37.4
7	188	19.5	238	00.2		37.0	288	54.6		37.5
8	203	22.0	252	59.7		36.3	303	55.1		37.7
9	218	24.4	267	59.3		35.5	318	55.5		37.8
10	233	26.9	282	58.8		34.6	333	56.0		38.0
11	248	29.4	297	58.3	-20	33.8	348	56.4	-23	38.2
12	263	31.8	312	57.8	-20	33.0	3	56.9	-23	38.3
13	278	34.3	327	57.3		32.2	18	57.3		38.5
14	293	36.8	342	56.8		31.4	33	57.8		38.6
15	308	39.2	357	56.3		30.6	48	58.2		38.8
16	323	41.7	12	55.9		29.8	63	58.7		38.9
17	338	44.2	27	55.4	-20	29.0	78	59.2	-23	39.1
18	353	46.6	42	54.9	-20	28.2	93	59.6	-23	39.2
19	8	49.1	57	54.4		27.4	109	00.1		39.4
20	23	51.6	72	53.9		26.6	124	00.5		39.6
21	38	54.0	87	53.5		25.8	139	01.0		39.7
22	53	56.5	102	53.0		25.0	154	01.4		39.9
23	68	58.9	117	52.5		24.2	169	01.9		40.0
24	84	01.4	132	52.0	-20	23.3	184	02.3	-23	40.2
Dif	—		-5		+8		+5		-2	
									+19	
									+1	
									+24	
									0	

UT	SOL				LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16:3 PMG: 11 ^h 55 ^m 3				Edad: 17 ^d 3 PHE { 4 ^h : 60:7 12 ^h : 60:4 20 ^h : 60:1 PMG: 2 ^h 23 ^m R°: 57 ^m													
	hG ☉ Dec		hG ☾ Dif Dec Dif					Civil			Náutico	Hora R°	Hora R°					
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m			
0	181	13.9	-23	16.5	325	42.7	+22	10.4	60 N	14 53	15 50	16 47	18 40 105	11 20 6				
1	196	13.6		16.6	340	06.4	47	+22 00.1 ¹⁰³	58	15 10	16 02	16 55	18 53 100	11 06 11				
2	211	13.3		16.7	354	30.3	49	+21 49.7 ¹⁰⁴	56	25	12	17 01	19 04 95	10 54 15				
3	226	13.0		16.8	8	54.3	50	39.1 ¹⁰⁶	54	38	21	07	14 91	43 19				
4	241	12.7		17.0	23	18.5	52	28.4 ¹⁰⁷	52	49	29	13	22 89	34 22				
5	256	12.4	-23	17.1	37	42.7	52	+21 17.6 ¹⁰⁸	50	15 58	16 37	17 18	19 30 86	10 25 25				
6	271	12.1	-23	17.2	52	07.1	54	+21 06.6 ¹¹⁰	45	16 19	16 53	17 30	19 47 80	10 07 30				
7	286	11.8		17.3	66	31.7	56	+20 55.5 ¹¹¹	40	36	17 06	40	20 00 75	9 52 35				
8	301	11.5		17.4	80	56.4	57	44.3 ¹¹²	35	16 50	18	50	12 71	40 38				
9	316	11.2		17.6	95	21.2	58	33.0 ¹¹³	30	17 02	28	17 58	21 68	29 41				
10	331	10.9		17.7	109	46.1	59	21.5 ¹¹⁵	20	23	17 47	18 15	38 63	9 10 46				
11	346	10.6	-23	17.8	124	11.2	61	+20 09.9 ¹¹⁶	10 N	17 42	18 05	18 31	20 53 58	8 53 51				
12	1	10.3	-23	17.9	138	36.4	62	+19 58.2 ¹¹⁷	0	17 59	18 22	18 48	21 07 53	8 37 56				
13	16	10.0		18.0	153	01.8	64	46.4 ¹¹⁸	10 S	18 17	18 40	19 07	21 48	21 60				
14	31	09.7		18.2	167	27.3	65	34.5 ¹¹⁹	20	35	19 00	29	35 44	8 04 65				
15	46	09.4		18.3	181	52.9	66	22.4 ¹²¹	30	18 57	25	19 58	21 52 38	7 44 70				
16	61	09.1		18.4	196	18.6	67	+19 10.3 ¹²¹	35	19 10	40	20 17	22 02 34	32 74				
17	76	08.8	-23	18.5	210	44.5	69	+18 58.0 ¹²³	40	19 25	19 58	20 40	22 12 32	7 19 77				
18	91	08.5	-23	18.6	225	10.5	70	+18 45.6 ¹²⁴	45	19 43	20 21	21 10	22 25 27	7 03 82				
19	106	08.2		18.7	239	36.7	72	33.1 ¹²⁵	50	20 06	20 50	21 55	41 21	6 43 88				
20	121	07.9		18.8	254	03.0	73	20.6 ¹²⁵	52	17	21 05	22 23	48 19	34 91				
21	136	07.6		18.9	268	29.4	74	+18 07.9 ¹²⁷	54	29	23	23 08	22 56 16	23 95				
22	151	07.3		19.1	282	55.9	75	+17 55.1 ¹²⁸	56	20 43	21 45	** ** *	23 05 12	6 11 99				
23	166	06.9		19.2	297	22.6	77	42.3 ¹²⁸	58	21 00	22 15	** ** *	15 9	5 57 103				
24	181	06.6	-23	19.3	311	49.4	78	+17 29.3 ¹³⁰	60 S	21 20	23 03	** ** *	23 27 4	5 40 110				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 18 ^h 20 ^m 9		Mag: -4.3 PMG: 15 ^h 09 ^m				Mag: +1.3 PMG: 11 ^h 43 ^m				Mag: -2.0 PMG: 14 ^h 11 ^m				Mag: +1.0 PMG: 5 ^h 55 ^m			
	hG ♈ Dec		hG ♀ Dec				hG ♂ Dec				hG ♃ Dec				hG ♄ Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	84	01.4	132	52.0	-20	23.3	184	02.3	-23	40.2	146	53.3	-21	29.8	271	02.6		
1	99	03.9	147	51.6		22.5	199	02.8		40.3	161	55.2		29.7	286	05.0		
2	114	06.3	162	51.1		21.7	214	03.2		40.5	176	57.1		29.6	301	07.4		
3	129	08.8	177	50.6		20.9	229	03.7		40.6	191	59.0		29.5	316	09.8		
4	144	11.3	192	50.1		20.1	244	04.1		40.8	207	00.9		29.4	331	12.2		
5	159	13.7	207	49.7	-20	19.3	259	04.6	-23	40.9	222	02.8	-21	29.3	346	14.6		
6	174	16.2	222	49.2	-20	18.4	274	05.0	-23	41.1	237	04.7	-21	29.2	1	17.0		
7	189	18.7	237	48.7		17.6	289	05.5		41.2	252	06.6		29.1	16	19.4		
8	204	21.1	252	48.3		16.8	304	05.9		41.4	267	08.5		29.0	31	21.8		
9	219	23.6	267	47.8		16.0	319	06.4		41.5	282	10.3		28.9	46	24.1		
10	234	26.1	282	47.3		15.2	334	06.8		41.6	297	12.2		28.8	61	26.5		
11	249	28.5	297	46.9	-20	14.3	349	07.3	-23	41.8	312	14.1	-21	28.7	76	28.9		
12	264	31.0	312	46.4	-20	13.5	4	07.8	-23	41.9	327	16.0	-21	28.6	91	31.3		
13	279	33.4	327	45.9		12.7	19	08.2		42.1	342	17.9		28.5	106	33.7		
14	294	35.9	342	45.5		11.9	34	08.7		42.2	357	19.8		28.4	121	36.1		
15	309	38.4	357	45.0		11.0	49	09.1		42.4	12	21.7		28.3	136	38.5		
16	324	40.8	12	44.5		10.2	64	09.6		42.5	27	23.6		28.2	151	40.9		
17	339	43.3	27	44.1	-20	09.4	79	10.0	-23	42.7	42	25.4	-21	28.1	166	43.3		
18	354	45.8	42	43.6	-20	08.6	94	10.5	-23	42.8	57	27.3	-21	28.0	181	45.7		
19	9	48.2	57	43.2		07.7	109	10.9		43.0	72	29.2		27.9	196	48.1		
20	24	50.7	72	42.7		06.9	124	11.4		43.1	87	31.1		27.9	211	50.5		
21	39	53.2	87	42.2		06.1	139	11.8		43.2	102	33.0		27.8	226	52.8		
22	54	55.6	102	41.8		05.2	154	12.2		43.4	117	34.9		27.7	241	55.2		
23	69	58.1	117	41.3		04.4	169	12.7		43.5	132	36.8		27.6	256	57.6		
24	85	00.6	132	40.9	-20	03.6	184	13.1	-23	43.7	147	38.7	-21	27.5	272	00.0		
Dif	—		-5 +8				+5 -1				+19 +1				+24 0			

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'3 PMG: 11 ^h 55 ^m 8			Edad: 18 ^d 3 PHE { 4 ^h : 59'9 12 ^h : 59'6 20 ^h : 59'3 PMG: 3 ^h 20 ^m R°: 52 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	181	06.6	-23	19.3	311	49.4	+17	29.3	60 N	7	04	8	01	8	59	20	25
1	196	06.3		19.4	326	16.4		16.3	58	6	57	7	49	41		33	93
2	211	06.0		19.5	340	43.4	+17	03.2	56		50		39	26		39	90
3	226	05.7		19.6	355	10.6	+16	49.9	54		44		30	14		45	87
4	241	05.4		19.7	9	38.0		36.6	52		38		22	8	03	51	84
5	256	05.1	-23	19.8	24	05.4	+16	23.3	50	6	33	7	14	7	53	20	56
6	271	04.8	-23	19.9	38	33.0	+16	09.8	45	6	21	6	58	7	32	21	07
7	286	04.5		20.0	53	00.7	+15	56.3	40		11		45	16		15	71
8	301	04.2		20.1	67	28.5		42.7	35	6	02		33	7	01	23	67
9	316	03.9		20.2	81	56.4		29.0	30	5	53		23	6	49	29	64
10	331	03.6		20.3	96	24.5		15.2	20		36		6	04	28	41	58
11	346	03.3	-23	20.4	110	52.7	+15	01.4	10 N	5	20	5	47	6	09	21	51
12	1	03.0	-23	20.5	125	21.0	+14	47.5	0	5	03	5	30	5	52	22	00
13	16	02.7		20.6	139	49.4		33.5	10 S	4	44	5	11		35	09	44
14	31	02.4		20.7	154	18.0		19.5	20	4	22	4	51	5	16	19	39
15	46	02.1		20.8	168	46.6	+14	05.5	30	3	53		26	4	54	30	33
16	61	01.8		20.9	183	15.4	+13	51.3	35		34		4	11	41	36	30
17	76	01.5	-23	21.0	197	44.3	+13	37.1	40	3	11	3	53	4	26	22	44
18	91	01.2	-23	21.1	212	13.3	+13	22.9	45	2	41	3	30	4	08	22	52
19	106	00.9		21.2	226	42.4	+13	08.6	50	1	56	3	01	3	45	23	02
20	121	00.6		21.3	241	11.7	+12	54.2	52	1	28	2	46		34	07	14
21	136	00.3		21.4	255	41.0		39.8	54	0	43		28	22		12	12
22	151	00.0		21.4	270	10.4		25.3	56	** ** *	2	06		3	08	17	9
23	165	59.7		21.5	284	40.0	+12	10.8	58	** ** *	1	36		2	51	24	5
24	180	59.3	-23	21.6	299	09.6	+11	56.3	60 S	** ** *	0	48		2	31	23	31

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 18 ^h 17 ^m 0		Mag: -4.3 PMG: 15 ^h 10 ^m			Mag: +1.3 PMG: 11 ^h 43 ^m			Mag: -2.0 PMG: 14 ^h 08 ^m			Mag: +1.0 PMG: 5 ^h 51 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	85	00.6	132	40.9	-20	03.6	184	13.1	-23	43.7	147	38.7	-21	27.5		
1	100	03.0	147	40.4		02.7	199	13.6		43.8	162	40.6		27.4		
2	115	05.5	162	40.0		01.9	214	14.0		43.9	177	42.4		27.3		
3	130	07.9	177	39.5		01.1	229	14.5		44.1	192	44.3		27.2		
4	145	10.4	192	39.1	-20	00.2	244	14.9		44.2	207	46.2		27.1		
5	160	12.9	207	38.6	-19	59.4	259	15.4	-23	44.4	222	48.1	-21	27.0		
6	175	15.3	222	38.2	-19	58.5	274	15.8	-23	44.5	237	50.0	-21	26.9		
7	190	17.8	237	37.7		57.7	289	16.3		44.6	252	51.9		26.8		
8	205	20.3	252	37.3		56.9	304	16.7		44.8	267	53.8		26.7		
9	220	22.7	267	36.8		56.0	319	17.2		44.9	282	55.6		26.6		
10	235	25.2	282	36.4		55.2	334	17.6		45.0	297	57.5		26.5		
11	250	27.7	297	35.9	-19	54.3	349	18.1	-23	45.2	312	59.4	-21	26.4		
12	265	30.1	312	35.5	-19	53.5	4	18.5	-23	45.3	328	01.3	-21	26.3		
13	280	32.6	327	35.0		52.6	19	19.0		45.5	343	03.2		26.2		
14	295	35.1	342	34.6		51.8	34	19.4		45.6	358	05.1		26.1		
15	310	37.5	357	34.1		51.0	49	19.9		45.7	13	07.0		26.0		
16	325	40.0	12	33.7		50.1	64	20.3		45.9	28	08.9		25.9		
17	340	42.4	27	33.3	-19	49.3	79	20.8	-23	46.0	43	10.7	-21	25.8		
18	355	44.9	42	32.8	-19	48.4	94	21.2	-23	46.1	58	12.6	-21	25.7		
19	10	47.4	57	32.4		47.6	109	21.6		46.3	73	14.5		25.6		
20	25	49.8	72	31.9		46.7	124	22.1		46.4	88	16.4		25.5		
21	40	52.3	87	31.5		45.9	139	22.5		46.5	103	18.3		25.4		
22	55	54.8	102	31.1		45.0	154	23.0		46.7	118	20.2		25.3		
23	70	57.2	117	30.6		44.1	169	23.4		46.8	133	22.0		25.2		
24	85	59.7	132	30.2	-19	43.3	184	23.9	-23	46.9	148	23.9	-21	25.1		
Dif	—		-4		+8		+4		-1		+19		+1		+24	

UT	SOL			LUNA					Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16:3 PMG: 11 ^h 56 ^m 3			Edad: 19 ^d 3 PHE { 4 ^h : 58/9 12 ^h : 58/6 20 ^h : 58/3 PMG: 4 ^h 12 ^m R°: 47 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif				Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	m	h m	m	h m	m
0	180	59.3	-23	21.6	299	09.6	+ 11	56.3	60 N	14 53	15 51	16 48	22 02	92	11 29	3		
1	195	59.0		21.7	313	39.4 ¹⁰⁸		41.7 ¹⁴⁶	58	15 11	16 02	16 55	06 88		24	6		
2	210	58.7		21.8	328	09.3 ¹⁰⁹		27.1 ¹⁴⁶	56	25	13	17 02	09 85		20	9		
3	225	58.4		21.9	342	39.2 ¹⁰⁹	+ 11	12.4 ¹⁴⁷	54	38	22	08	12 82		16	11		
4	240	58.1		22.0	357	09.3 ¹¹¹	+ 10	57.7 ¹⁴⁷	52	49	30	14	15 79		12	14		
5	255	57.8	-23	22.1	11	39.5 ¹¹²	+ 10	43.0 ¹⁴⁷	50	15 59	16 37	17 19	22 17	77	11 09	16		
6	270	57.5	-23	22.1	26	09.7 ¹¹²	+ 10	28.2 ¹⁴⁸	45	16 20	16 53	17 31	22 22	72	11 02	21		
7	285	57.2		22.2	40	40.1 ¹¹⁴	+ 10	13.4 ¹⁴⁸	40	36	17 07	41	26 68		10 56	25		
8	300	56.9		22.3	55	10.6 ¹¹⁵	+ 9	58.5 ¹⁴⁹	35	16 51	19	50	30 64		50	29		
9	315	56.6		22.4	69	41.1 ¹¹⁵		43.6 ¹⁴⁹	30	17 03	29	17 59	33 61		46	32		
10	330	56.3		22.5	84	11.8 ¹¹⁷		28.7 ¹⁴⁹	20	24	17 48	18 16	39 55		38	37		
11	345	56.0	-23	22.5	98	42.5 ¹¹⁷	+ 9	13.8 ¹⁴⁹	10 N	17 43	18 05	18 32	22 44	50	10 30	42		
12	0	55.7	-23	22.6	113	13.3 ¹¹⁸	+ 8	58.9 ¹⁴⁹	0	18 00	18 23	18 49	22 48	46	10 23	47		
13	15	55.4		22.7	127	44.2 ¹¹⁹		43.9 ¹⁵⁰	10 S	18	18 41	19 08	53 41		16	52		
14	30	55.1		22.8	142	15.2 ¹²⁰		28.9 ¹⁵⁰	20	37	19 01	30	22 58	36	09	56		
15	45	54.8		22.9	156	46.3 ¹²¹	+ 8	13.9 ¹⁵⁰	30	18 59	26	19 59	23 03	31	10 00	63		
16	60	54.5		22.9	171	17.5 ¹²²	+ 7	58.8 ¹⁵¹	35	19 12	19 41	20 18	06 28		9 55	66		
17	75	54.1	-23	23.0	185	48.7 ¹²²	+ 7	43.8 ¹⁵⁰	40	19 27	20 00	20 41	23 10	24	9 50	69		
18	90	53.8	-23	23.1	200	20.1 ¹²⁴	+ 7	28.7 ¹⁵¹	45	19 45	20 22	21 12	23 14	20	9 43	74		
19	105	53.5		23.2	214	51.5 ¹²⁴	+ 7	13.6 ¹⁵¹	50	20 07	20 52	21 57	19 15		35	79		
20	120	53.2		23.2	229	23.0 ¹²⁵	+ 6	58.5 ¹⁵¹	52	18	21 07	22 25	21 13		31	82		
21	135	52.9		23.3	243	54.5 ¹²⁵		43.4 ¹⁵¹	54	30	25	23 11	24 10		27	84		
22	150	52.6		23.4	258	26.2 ¹²⁷		28.3 ¹⁵¹	56	20 45	21 47	** **	26 8		23	87		
23	165	52.3		23.4	272	57.9 ¹²⁷	+ 6	13.1 ¹⁵²	58	21 01	22 17	** **	29 5		17	91		
24	180	52.0	-23	23.5	287	29.7 ¹²⁸	+ 5	58.0 ¹⁵¹	60 S	21 22	23 07	** **	23 33	1	9 12	94		
UT	ARIES		VENUS			MARTE			JÚPITER				SATURNO					
	PMG: 18 ^h 13 ^m 0		Mag: -4.3 PMG: 15 ^h 10 ^m			Mag: +1.3 PMG: 11 ^h 42 ^m			Mag: -2.0 PMG: 14 ^h 05 ^m				Mag: +1.0 PMG: 5 ^h 47 ^m					
	hG ♈		hG ♀		Dec	hG ♂		Dec	hG ♃		Dec		hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	85	59.7	132	30.2	-19	43.3	184	23.9	-23	46.9	148	23.9	-21	25.1	272	57.5	+5	09.8
1	101	02.2	147	29.7		42.4	199	24.3		47.0	163	25.8		25.0	287	59.9		09.8
2	116	04.6	162	29.3		41.6	214	24.8		47.2	178	27.7		24.9	303	02.3		09.8
3	131	07.1	177	28.9		40.7	229	25.2		47.3	193	29.6		24.8	318	04.7		09.8
4	146	09.5	192	28.4		39.9	244	25.6		47.4	208	31.5		24.7	333	07.1		09.8
5	161	12.0	207	28.0	-19	39.0	259	26.1	-23	47.6	223	33.4	-21	24.6	348	09.5	+5	09.8
6	176	14.5	222	27.6	-19	38.2	274	26.5	-23	47.7	238	35.2	-21	24.5	3	11.9	+5	09.7
7	191	16.9	237	27.2		37.3	289	27.0		47.8	253	37.1		24.4	18	14.3		09.7
8	206	19.4	252	26.7		36.4	304	27.4		48.0	268	39.0		24.3	33	16.7		09.7
9	221	21.9	267	26.3		35.6	319	27.9		48.1	283	40.9		24.2	48	19.1		09.7
10	236	24.3	282	25.9		34.7	334	28.3		48.2	298	42.8		24.1	63	21.5		09.7
11	251	26.8	297	25.4	-19	33.8	349	28.8	-23	48.3	313	44.7	-21	24.0	78	23.9	+5	09.7
12	266	29.3	312	25.0	-19	33.0	4	29.2	-23	48.5	328	46.6	-21	23.9	93	26.3	+5	09.6
13	281	31.7	327	24.6		32.1	19	29.6		48.6	343	48.4		23.8	108	28.7		09.6
14	296	34.2	342	24.2		31.2	34	30.1		48.7	358	50.3		23.7	123	31.1		09.6
15	311	36.7	357	23.7		30.4	49	30.5		48.8	13	52.2		23.6	138	33.5		09.6
16	326	39.1	12	23.3		29.5	64	31.0		49.0	28	54.1		23.5	153	35.9		09.6
17	341	41.6	27	22.9	-19	28.6	79	31.4	-23	49.1	43	56.0	-21	23.4	168	38.3	+5	09.6
18	356	44.0	42	22.5	-19	27.8	94	31.8	-23	49.2	58	57.9	-21	23.3	183	40.7	+5	09.6
19	11	46.5	57	22.1		26.9	109	32.3		49.3	73	59.7		23.2	198	43.1		09.5
20	26	49.0	72	21.6		26.0	124	32.7		49.4	89	01.6		23.1	213	45.5		09.5
21	41	51.4	87	21.2		25.2	139	33.2		49.6	104	03.5		23.0	228	47.9		09.5
22	56	53.9	102	20.8		24.3	154	33.6		49.7	119	05.4		22.9	243	50.3		09.5
23	71	56.4	117	20.4		23.4	169	34.1		49.8	134	07.3		22.8	258	52.7		09.5
24	86	58.8	132	20.0	-19	22.5	184	34.5	-23	49.9	149	09.2	-21	22.7	273	55.1	+5	09.5
Dif	—		-4		+9		+4		-1		+19		+1		+24		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 8			Edad: 20 ^d 3 PHE { 4 ^h : 58'0 12 ^h : 57'7 20 ^h : 57'4 PMG: 4 ^h 59 ^m R°: 45 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	52.0	-23	23.5	287	29.7	+5 58.0	60 N	7 06	8 02	9 00	23 34	88	11 32	1
1	195	51.7		23.6	302	01.6 ¹²⁹	42.8 ¹⁵²	58	6 58	7 51	8 43	34 85		30	5
2	210	51.4		23.6	316	33.5 ¹²⁹	27.7 ¹⁵¹	56	51	41	28	34 82		29	7
3	225	51.1		23.7	331	05.5 ¹³⁰	+5 12.5 ¹⁵²	54	45	31	15	34 79		27	10
4	240	50.8		23.8	345	37.6 ¹³¹	+4 57.4 ¹⁵¹	52	40	23	8 04	34 76		26	13
5	255	50.5	-23	23.8	0	09.7 ¹³¹	+4 42.2 ¹⁵²	50	6 34	7 16	7 54	23 34	74	11 25	15
6	270	50.2	-23	23.9	14	41.9 ¹³²	+4 27.0 ¹⁵²	45	6 22	7 00	7 34	23 34	69	11 23	19
7	285	49.8		24.0	29	14.1 ¹³²	+4 11.9 ¹⁵¹	40	12	6 46	17	34 65		21	23
8	300	49.5		24.0	43	46.5 ¹³⁴	+3 56.7 ¹⁵²	35	6 03	34	7 03	34 61		19	27
9	315	49.2		24.1	58	18.9 ¹³⁴	41.5 ¹⁵²	30	5 54	24	6 50	34 58		18	29
10	330	48.9		24.2	72	51.3 ¹³⁴	26.4 ¹⁵¹	20	37	6 05	29	34 53		15	35
11	345	48.6	-23	24.2	87	23.8 ¹³⁵	+3 11.2 ¹⁵²	10 N	5 21	5 48	6 10	23 34	48	11 12	40
12	0	48.3	-23	24.3	101	56.3 ¹³⁵	+2 56.1 ¹⁵¹	0	5 04	5 30	5 53	23 34	43	11 10	45
13	15	48.0		24.3	116	29.0 ¹³⁷	40.9 ¹⁵²	10 S	4 45	5 12	35	34 39		08	49
14	30	47.7		24.4	131	01.6 ¹³⁶	25.8 ¹⁵¹	20	4 23	4 52	5 16	34 34		05	54
15	45	47.4		24.4	145	34.3 ¹³⁷	+2 10.7 ¹⁵¹	30	3 54	27	4 54	34 29		03	59
16	60	47.1		24.5	160	07.1 ¹³⁸	+1 55.6 ¹⁵¹	35	35	4 12	41	34 26		11 01	62
17	75	46.8	-23	24.6	174	39.9 ¹³⁸	+1 40.5 ¹⁵¹	40	3 12	3 53	4 26	23 34	23	10 59	66
18	90	46.5	-23	24.6	189	12.8 ¹³⁹	+1 25.4 ¹⁵¹	45	2 41	3 31	4 08	23 34	19	10 57	70
19	105	46.1		24.7	203	45.7 ¹³⁹	+1 10.3 ¹⁵¹	50	1 56	3 01	3 46	34 15		54	76
20	120	45.8		24.7	218	18.6 ¹³⁹	+0 55.3 ¹⁵⁰	52	1 28	2 46	35	34 12		53	78
21	135	45.5		24.8	232	51.6 ¹⁴⁰	40.2 ¹⁵¹	54	0 42	28	23	34 10		51	81
22	150	45.2		24.8	247	24.7 ¹⁴¹	25.2 ¹⁵⁰	56	** ** *	2 06	3 08	34 8		50	83
23	165	44.9		24.9	261	57.7 ¹⁴⁰	+0 10.2 ¹⁵⁰	58	** ** *	1 36	2 52	34 5		48	87
24	180	44.6	-23	24.9	276	30.9 ¹⁴²	-0 04.8 ¹⁵⁰	60 S	** ** *	0 46	2 31	23 34	2	10 46	90

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 18 ^h 09 ^m 1		Mag: -4.3 PMG: 15 ^h 11 ^m		Mag: +1.3 PMG: 11 ^h 41 ^m		Mag: -2.0 PMG: 14 ^h 02 ^m		Mag: +1.0 PMG: 5 ^h 43 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	86	58.8	132	20.0	-19	22.5	184	34.5	-23	49.9	273	55.1	+5	09.5	
1	102	01.3	147	19.5		21.7	199	34.9		50.1	164	11.0		09.5	
2	117	03.8	162	19.1		20.8	214	35.4		50.2	179	12.9		09.4	
3	132	06.2	177	18.7		19.9	229	35.8		50.3	194	14.8		09.4	
4	147	08.7	192	18.3		19.0	244	36.3		50.4	209	16.7		09.4	
5	162	11.2	207	17.9	-19	18.2	259	36.7	-23	50.5	224	18.6	-21	09.4	
6	177	13.6	222	17.5	-19	17.3	274	37.1	-23	50.6	239	20.5	-21	09.4	
7	192	16.1	237	17.1		16.4	289	37.6		50.8	254	22.3		09.4	
8	207	18.5	252	16.7		15.5	304	38.0		50.9	269	24.2		09.4	
9	222	21.0	267	16.3		14.6	319	38.5		51.0	284	26.1		09.3	
10	237	23.5	282	15.8		13.8	334	38.9		51.1	299	28.0		09.3	
11	252	25.9	297	15.4	-19	12.9	349	39.3	-23	51.2	314	29.9	-21	09.3	
12	267	28.4	312	15.0	-19	12.0	4	39.8	-23	51.3	329	31.7	-21	09.3	
13	282	30.9	327	14.6		11.1	19	40.2		51.5	344	33.6		09.3	
14	297	33.3	342	14.2		10.2	34	40.7		51.6	359	35.5		09.3	
15	312	35.8	357	13.8		09.3	49	41.1		51.7	14	37.4		09.3	
16	327	38.3	12	13.4		08.5	64	41.5		51.8	29	39.3		09.2	
17	342	40.7	27	13.0	-19	07.6	79	42.0	-23	51.9	44	41.2	-21	09.2	
18	357	43.2	42	12.6	-19	06.7	94	42.4	-23	52.0	59	43.0	-21	09.2	
19	12	45.6	57	12.2		05.8	109	42.8		52.1	74	44.9		09.2	
20	27	48.1	72	11.8		04.9	124	43.3		52.3	89	46.8		09.2	
21	42	50.6	87	11.4		04.0	139	43.7		52.4	104	48.7		09.2	
22	57	53.0	102	11.0		03.1	154	44.2		52.5	119	50.6		09.2	
23	72	55.5	117	10.6		02.2	169	44.6		52.6	134	52.4		09.2	
24	87	58.0	132	10.2	-19	01.3	184	45.0	-23	52.7	149	54.3	-21	09.1	
Dif	—		-4		+9		+4		-1		+19		+1		+24

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16:3 PMG: 11 ^h 57 ^m 3				Edad: 21 ^d 3 PHE { 4 ^h : 57 ¹ 12 ^h : 56 ⁸ 20 ^h : 56 ⁵ PMG: 5 ^h 44 ^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	180	44.6	-23	24.9	276	30.9	-0	04.8	60 N	14 54	15 51	16 48	*** ** *	*** ** *	11 33	2		
1	195	44.3		25.0	291	04.0 ¹⁴¹		19.7 ¹⁴⁹	58	15 11	16 03	16 56	*** ** *	*** ** *	35	5		
2	210	44.0		25.0	305	37.2 ¹⁴²		34.7 ¹⁵⁰	56	26	13	17 02	*** ** *	*** ** *	36	8		
3	225	43.7		25.1	320	10.4 ¹⁴²	-0	49.6 ¹⁴⁹	54	39	22	09	*** ** *	*** ** *	37	11		
4	240	43.4		25.1	334	43.7 ¹⁴³	-1	04.5 ¹⁴⁹	52	15 50	31	14	*** ** *	*** ** *	39	12		
5	255	43.1	-23	25.2	349	17.0 ¹⁴³	-1	19.4 ¹⁴⁹	50	16 00	16 38	17 20	*** ** *	*** ** *	11 40	14		
6	270	42.8	-23	25.2	3	50.3 ¹⁴³	-1	34.2 ¹⁴⁸	45	16 20	16 54	17 31	*** ** *	*** ** *	11 42	19		
7	285	42.4		25.2	18	23.7 ¹⁴⁴	-1	49.1 ¹⁴⁹	40	37	17 08	42	*** ** *	*** ** *	44	23		
8	300	42.1		25.3	32	57.1 ¹⁴⁴	-2	03.9 ¹⁴⁸	35	16 51	20	17 51	*** ** *	*** ** *	46	26		
9	315	41.8		25.3	47	30.5 ¹⁴⁴		18.6 ¹⁴⁷	30	17 04	30	18 00	*** ** *	*** ** *	47	30		
10	330	41.5		25.4	62	03.9 ¹⁴⁴		33.4 ¹⁴⁸	20	25	17 49	17	*** ** *	*** ** *	50	35		
11	345	41.2	-23	25.4	76	37.4 ¹⁴⁵	-2	48.1 ¹⁴⁷	10 N	17 44	18 06	18 33	*** ** *	*** ** *	11 52	40		
12	0	40.9	-23	25.5	91	10.9 ¹⁴⁵	-3	02.8 ¹⁴⁷	0	18 01	18 24	18 50	*** ** *	*** ** *	11 55	43		
13	15	40.6		25.5	105	44.4 ¹⁴⁵		17.4 ¹⁴⁶	10 S	19	18 42	19 09	*** ** *	*** ** *	57	48		
14	30	40.3		25.5	120	17.9 ¹⁴⁵		32.1 ¹⁴⁷	20	18 38	19 02	19 31	*** ** *	*** ** *	11 59	53		
15	45	40.0		25.6	134	51.5 ¹⁴⁶	-3	46.6 ¹⁴⁵	30	19 00	27	20 01	*** ** *	*** ** *	12 02	58		
16	60	39.7		25.6	149	25.0 ¹⁴⁵	-4	01.2 ¹⁴⁶	35	13	19 42	19	*** ** *	*** ** *	03	61		
17	75	39.3	-23	25.6	163	58.6 ¹⁴⁶	-4	15.7 ¹⁴⁵	40	19 28	20 01	20 42	23 57	23	12 05	64		
18	90	39.0	-23	25.7	178	32.2 ¹⁴⁶	-4	30.2 ¹⁴⁵	45	19 46	20 23	21 13	23 53	20	12 07	69		
19	105	38.7		25.7	193	05.8 ¹⁴⁶		44.7 ¹⁴⁵	50	20 08	20 53	21 59	49 15		10	73		
20	120	38.4		25.7	207	39.5 ¹⁴⁷	-4	59.1 ¹⁴⁴	52	19	21 08	22 27	46 13		11	75		
21	135	38.1		25.8	222	13.1 ¹⁴⁶	-5	13.4 ¹⁴³	54	32	26	23 14	44 11		12	78		
22	150	37.8		25.8	236	46.8 ¹⁴⁷		27.8 ¹⁴⁴	56	20 46	21 49	** ** *	42 8		13	81		
23	165	37.5		25.8	251	20.5 ¹⁴⁷		42.1 ¹⁴³	58	21 03	22 19	** ** *	39 5		15	84		
24	180	37.2	-23	25.9	265	54.1 ¹⁴⁶	-5	56.3 ¹⁴²	60 S	21 23	23 10	** ** *	23 36	2	12 16	88		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 18 ^h 05 ^m 2		Mag: -4.3 PMG: 15 ^h 12 ^m				Mag: +1.3 PMG: 11 ^h 41 ^m				Mag: -2.0 PMG: 13 ^h 59 ^m				Mag: +1.0 PMG: 5 ^h 40 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	87	58.0	132	10.2	-19	01.3	184	45.0	-23	52.7	149	54.3	-21	20.3	274	52.8	+5	09.1
1	103	00.4	147	09.8	-19	00.4	199	45.5		52.8	164	56.2		20.2	289	55.2		09.1
2	118	02.9	162	09.4	-18	59.5	214	45.9		52.9	179	58.1		20.1	304	57.6		09.1
3	133	05.4	177	09.0		58.6	229	46.3		53.0	195	00.0		20.0	320	00.0		09.1
4	148	07.8	192	08.6		57.7	244	46.8		53.1	210	01.9		19.9	335	02.4		09.1
5	163	10.3	207	08.3	-18	56.9	259	47.2	-23	53.2	225	03.7	-21	19.8	350	04.8	+5	09.1
6	178	12.8	222	07.9	-18	56.0	274	47.7	-23	53.4	240	05.6	-21	19.7	5	07.2	+5	09.1
7	193	15.2	237	07.5		55.1	289	48.1		53.5	255	07.5		19.6	20	09.6		09.1
8	208	17.7	252	07.1		54.2	304	48.5		53.6	270	09.4		19.5	35	12.0		09.0
9	223	20.1	267	06.7		53.3	319	49.0		53.7	285	11.3		19.4	50	14.4		09.0
10	238	22.6	282	06.3		52.4	334	49.4		53.8	300	13.1		19.3	65	16.8		09.0
11	253	25.1	297	05.9	-18	51.5	349	49.8	-23	53.9	315	15.0	-21	19.2	80	19.2	+5	09.0
12	268	27.5	312	05.5	-18	50.6	4	50.3	-23	54.0	330	16.9	-21	19.1	95	21.6	+5	09.0
13	283	30.0	327	05.1		49.6	19	50.7		54.1	345	18.8		19.0	110	24.1		09.0
14	298	32.5	342	04.8		48.7	34	51.1		54.2	0	20.7		18.9	125	26.5		09.0
15	313	34.9	357	04.4		47.8	49	51.6		54.3	15	22.5		18.8	140	28.9		09.0
16	328	37.4	12	04.0		46.9	64	52.0		54.4	30	24.4		18.7	155	31.3		08.9
17	343	39.9	27	03.6	-18	46.0	79	52.4	-23	54.5	45	26.3	-21	18.6	170	33.7	+5	08.9
18	358	42.3	42	03.2	-18	45.1	94	52.9	-23	54.6	60	28.2	-21	18.5	185	36.1	+5	08.9
19	13	44.8	57	02.8		44.2	109	53.3		54.7	75	30.1		18.4	200	38.5		08.9
20	28	47.3	72	02.5		43.3	124	53.7		54.8	90	31.9		18.3	215	40.9		08.9
21	43	49.7	87	02.1		42.4	139	54.2		54.9	105	33.8		18.2	230	43.3		08.9
22	58	52.2	102	01.7		41.5	154	54.6		55.0	120	35.7		18.1	245	45.7		08.9
23	73	54.6	117	01.3		40.6	169	55.1		55.1	135	37.6		18.0	260	48.1		08.9
24	88	57.1	132	01.0	-18	39.7	184	55.5	-23	55.2	150	39.5	-21	17.9	275	50.6	+5	08.9
Dif	—		-4		+9		+4		-1		+19		+1		+24		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 8			Edad: 22 ^d 3 PHE { SD: 15:4 PMG: 6 ^h 28 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m		
0	180	37.2	-23	25.9	265	54.1	-5	56.3	60 N	7 07	8 04	9 02	1 02	88	11 35	2		
1	195	36.9		25.9	280	27.8 ¹⁴⁷	-6	10.5 ¹⁴²	58	6 59	7 52	8 44	0 59	84	40	5		
2	210	36.6		25.9	295	01.5 ¹⁴⁷		24.7 ¹⁴²	56	53	42	29	56	80	44	9		
3	225	36.2		25.9	309	35.2 ¹⁴⁷		38.8 ¹⁴¹	54	46	33	17	53	77	48	1		
4	240	35.9		26.0	324	08.9 ¹⁴⁷	-6	52.9 ¹⁴¹	52	41	24	8 05	50	75	51	14		
5	255	35.6	-23	26.0	338	42.6 ¹⁴⁷	-7	07.0 ¹⁴¹	50	6 35	7 17	7 56	0 48	73	11 54	16		
6	270	35.3	-23	26.0	353	16.3 ¹⁴⁷	-7	21.0 ¹⁴⁰	45	6 24	7 01	7 35	0 43	68	12 01	21		
7	285	35.0		26.0	7	50.0 ¹⁴⁷		34.9 ¹³⁹	40	13	6 47	18	39	63	07	25		
8	300	34.7		26.1	22	23.8 ¹⁴⁸	-7	48.8 ¹³⁹	35	6 04	36	7 04	35	60	12	28		
9	315	34.4		26.1	36	57.5 ¹⁴⁷	-8	02.7 ¹³⁹	30	5 55	25	6 51	32	57	17	30		
10	330	34.1		26.1	51	31.2 ¹⁴⁷		16.5 ¹³⁸	20	39	6 06	30	27	52	25	35		
11	345	33.8	-23	26.1	66	04.9 ¹⁴⁷	-8	30.3 ¹³⁸	10 N	5 22	5 49	6 11	0 22	47	12 32	39		
12	0	33.5	-23	26.2	80	38.6 ¹⁴⁷	-8	44.0 ¹³⁷	0	5 05	5 31	5 54	0 17	44	12 38	44		
13	15	33.1		26.2	95	12.3 ¹⁴⁷	-8	57.6 ¹³⁶	10 S	4 46	5 13	36	13	39	45	47		
14	30	32.8		26.2	109	46.0 ¹⁴⁷	-9	11.2 ¹³⁶	20	4 24	4 53	5 17	08	35	12 52	52		
15	45	32.5		26.2	124	19.7 ¹⁴⁷		24.8 ¹³⁶	30	3 54	28	4 55	03	30	13 00	57		
16	60	32.2		26.2	138	53.3 ¹⁴⁶		38.3 ¹³⁵	35	36	4 13	42	0 00	27	04	60		
17	75	31.9	-23	26.2	153	27.0 ¹⁴⁷	-9	51.7 ¹³⁴	40	3 13	3 54	4 27	** ** *	**	13 09	64		
18	90	31.6	-23	26.3	168	00.6 ¹⁴⁶	-10	05.1 ¹³⁴	45	2 42	3 32	4 09	** ** *	**	13 16	67		
19	105	31.3		26.3	182	34.3 ¹⁴⁷		18.5 ¹³⁴	50	1 56	3 02	3 47	** ** *	**	23 72			
20	120	31.0		26.3	197	07.9 ¹⁴⁶		31.8 ¹³³	52	1 28	2 47	36	23	59	15	26		
21	135	30.7		26.3	211	41.5 ¹⁴⁶		45.0 ¹³²	54	0 41	29	23	55	12	30	77		
22	150	30.3		26.3	226	15.1 ¹⁴⁶	-10	58.2 ¹³²	56	** ** *	2 06	3 09	50	9	34	80		
23	165	30.0		26.3	240	48.7 ¹⁴⁶	-11	11.3 ¹³¹	58	** ** *	1 36	2 52	44	6	39	83		
24	180	29.7	-23	26.3	255	22.3 ¹⁴⁶	-11	24.3 ¹³⁰	60 S	** ** *	0 45	2 32	23	38	2	13 44		
UT	ARIES PMG: 18 ^h 01 ^m 2		VENUS Mag: -4.3 PMG: 15 ^h 12 ^m			MARTE Mag: +1.3 PMG: 11 ^h 40 ^m			JÚPITER Mag: -2.0 PMG: 13 ^h 56 ^m			SATURNO Mag: +1.0 PMG: 5 ^h 36 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	88	57.1	132	01.0	-18	39.7	184	55.5	-23	55.2	150	39.5	-21	17.9	275	50.6	+5	08.9
1	103	59.6	147	00.6		38.7	199	55.9		55.3	165	41.3		17.8	290	53.0		08.8
2	119	02.0	162	00.2		37.8	214	56.4		55.4	180	43.2		17.7	305	55.4		08.8
3	134	04.5	176	59.8		36.9	229	56.8		55.5	195	45.1		17.6	320	57.8		08.8
4	149	07.0	191	59.5		36.0	244	57.2		55.6	210	47.0		17.5	336	00.2		08.8
5	164	09.4	206	59.1	-18	35.1	259	57.7	-23	55.7	225	48.8	-21	17.4	351	02.6	+5	08.8
6	179	11.9	221	58.7	-18	34.2	274	58.1	-23	55.8	240	50.7	-21	17.3	6	05.0	+5	08.8
7	194	14.4	236	58.3		33.3	289	58.5		55.9	255	52.6		17.2	21	07.4		08.8
8	209	16.8	251	58.0		32.3	304	58.9		56.0	270	54.5		17.1	36	09.8		08.8
9	224	19.3	266	57.6		31.4	319	59.4		56.1	285	56.4		17.0	51	12.2		08.8
10	239	21.7	281	57.2		30.5	334	59.8		56.2	300	58.2		16.9	66	14.7		08.8
11	254	24.2	296	56.9	-18	29.6	350	00.2	-23	56.3	316	00.1	-21	16.8	81	17.1	+5	08.7
12	269	26.7	311	56.5	-18	28.7	5	00.7	-23	56.4	331	02.0	-21	16.7	96	19.5	+5	08.7
13	284	29.1	326	56.1		27.7	20	01.1		56.5	346	03.9		16.6	111	21.9		08.7
14	299	31.6	341	55.8		26.8	35	01.5		56.6	1	05.8		16.5	126	24.3		08.7
15	314	34.1	356	55.4		25.9	50	02.0		56.7	16	07.6		16.4	141	26.7		08.7
16	329	36.5	11	55.1		25.0	65	02.4		56.8	31	09.5		16.3	156	29.1		08.7
17	344	39.0	26	54.7	-18	24.0	80	02.8	-23	56.8	46	11.4	-21	16.2	171	31.5	+5	08.7
18	359	41.5	41	54.3	-18	23.1	95	03.3	-23	56.9	61	13.3	-21	16.1	186	34.0	+5	08.7
19	14	43.9	56	54.0		22.2	110	03.7		57.0	76	15.1		16.0	201	36.4		08.7
20	29	46.4	71	53.6		21.3	125	04.1		57.1	91	17.0		15.9	216	38.8		08.7
21	44	48.9	86	53.3		20.3	140	04.6		57.2	106	18.9		15.8	231	41.2		08.6
22	59	51.3	101	52.9		19.4	155	05.0		57.3	121	20.8		15.7	246	43.6		08.6
23	74	53.8	116	52.5		18.5	170	05.4		57.4	136	22.7		15.6	261	46.0		08.6
24	89	56.2	131	52.2	-18	17.5	185	05.9	-23	57.5	151	24.5	-21	15.4	276	48.4	+5	08.6
Dif	—		-4		+9		+4		-1		+19		+1		+24			

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16:3 PMG: 11 ^h 58 ^m 3			Edad: 23 ^d 3 PHE { 4 ^h : 55/6 12 ^h : 55/4 20 ^h : 55/2 SD: 15:2 PMG: 7 ^h 11 ^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	
0	180	29.7	-23 26.3	255	22.3	-11 24.3		60 N	14 54	15 52	16 49	2 30 88		11 37 4	
1	195	29.4	26.3	269	55.8 ¹⁴⁵	37.3 ¹³⁰		58	15 12	16 04	16 57	23 83		45 8	
2	210	29.1	26.4	284	29.4 ¹⁴⁶	-11 50.3 ¹³⁰		56	27	14	17 03	16 80		53 10	
3	225	28.8	26.4	299	02.9 ¹⁴⁵	-12 03.2 ¹²⁹		54	39	23	10	10 78		11 59 14	
4	240	28.5	26.4	313	36.4 ¹⁴⁵	16.0 ¹²⁸		52	15 51	32	15	05 75		12 05 16	
5	255	28.2	-23 26.4	328	09.9 ¹⁴⁵	-12 28.7 ¹²⁷		50	16 00	16 39	17 21	2 01 72		12 10 19	
6	270	27.9	-23 26.4	342	43.3 ¹⁴⁴	-12 41.4 ¹²⁷		45	16 21	16 55	17 32	1 51 67		12 22 23	
7	285	27.5	26.4	357	16.7 ¹⁴⁴	-12 54.0 ¹²⁶		40	38	17 09	43	42 64		32 27	
8	300	27.2	26.4	11	50.2 ¹⁴⁵	-13 06.6 ¹²⁶		35	16 52	21	17 52	35 60		40 30	
9	315	26.9	26.4	26	23.5 ¹⁴³	19.1 ¹²⁵		30	17 05	31	18 01	29 57		12 47 33	
10	330	26.6	26.4	40	56.9 ¹⁴⁴	31.5 ¹²⁴		20	26	17 50	18	19 52		13 00 37	
11	345	26.3	-23 26.4	55	30.2 ¹⁴³	-13 43.9 ¹²⁴		10 N	17 45	18 07	18 34	1 09 48		13 11 41	
12	0	26.0	-23 26.4	70	03.5 ¹⁴³	-13 56.2 ¹²³		0	18 02	18 25	18 51	1 01 44		13 22 45	
13	15	25.7	26.4	84	36.8 ¹⁴³	-14 08.4 ¹²²		10 S	20	18 43	19 10	0 52 40		32 49	
14	30	25.4	26.4	99	10.1 ¹⁴³	20.6 ¹²²		20	18 39	19 03	19 32	43 36		44 52	
15	45	25.1	26.4	113	43.3 ¹⁴²	32.7 ¹²¹		30	19 01	28	20 02	33 31		13 57 57	
16	60	24.7	26.4	128	16.5 ¹⁴²	44.7 ¹²⁰		35	14	19 44	20	27 29		14 04 60	
17	75	24.4	-23 26.4	142	49.6 ¹⁴¹	-14 56.6 ¹¹⁹		40	19 29	20 02	20 44	0 20 26		14 13 63	
18	90	24.1	-23 26.4	157	22.8 ¹⁴²	-15 08.5 ¹¹⁹		45	19 47	20 24	21 14	0 13 21		14 23 67	
19	105	23.8	26.4	171	55.8 ¹⁴⁰	20.3 ¹¹⁸		50	20 10	20 54	22 00	0 04 17		35 72	
20	120	23.5	26.4	186	28.9 ¹⁴¹	32.0 ¹¹⁷		52	20	21 09	22 28	*** ** *		41 74	
21	135	23.2	26.4	201	01.9 ¹⁴⁰	43.7 ¹¹⁷		54	33	27	23 15	*** ** *		47 77	
22	150	22.9	26.4	215	34.9 ¹⁴⁰	-15 55.3 ¹¹⁶		56	20 47	21 50	*** **	23 59 13		14 54 81	
23	165	22.6	26.3	230	07.9 ¹⁴⁰	-16 06.8 ¹¹⁵		58	21 04	22 20	*** **	50 10		15 02 84	
24	180	22.2	-23 26.3	244	40.8 ¹³⁹	-16 18.2 ¹¹⁴		60 S	21 24	23 11	*** **	23 40 5		15 12 88	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 17 ^h 57 ^m 3		Mag: -4.3 PMG: 15 ^h 13 ^m			Mag: +1.3 PMG: 11 ^h 39 ^m			Mag: -2.0 PMG: 13 ^h 53 ^m			Mag: +1.0 PMG: 5 ^h 32 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°	
0	89	56.2	131	52.2	-18 17.5	185	05.9	-23 57.5	151	24.5	-21 15.4	276	48.4	+5 08.6	
1	104	58.7	146	51.8	16.6	200	06.3	57.6	166	26.4	15.3	291	50.8	08.6	
2	120	01.2	161	51.5	15.7	215	06.7	57.7	181	28.3	15.2	306	53.3	08.6	
3	135	03.6	176	51.1	14.8	230	07.1	57.7	196	30.2	15.1	321	55.7	08.6	
4	150	06.1	191	50.8	13.8	245	07.6	57.8	211	32.0	15.0	336	58.1	08.6	
5	165	08.6	206	50.4	-18 12.9	260	08.0	-23 57.9	226	33.9	-21 14.9	352	00.5	+5 08.6	
6	180	11.0	221	50.1	-18 12.0	275	08.4	-23 58.0	241	35.8	-21 14.8	7	02.9	+5 08.6	
7	195	13.5	236	49.7	11.0	290	08.9	58.1	256	37.7	14.7	22	05.3	08.6	
8	210	16.0	251	49.4	10.1	305	09.3	58.2	271	39.5	14.6	37	07.7	08.5	
9	225	18.4	266	49.0	09.1	320	09.7	58.3	286	41.4	14.5	52	10.2	08.5	
10	240	20.9	281	48.7	08.2	335	10.1	58.4	301	43.3	14.4	67	12.6	08.5	
11	255	23.3	296	48.3	-18 07.3	350	10.6	-23 58.4	316	45.2	-21 14.3	82	15.0	+5 08.5	
12	270	25.8	311	48.0	-18 06.3	5	11.0	-23 58.5	331	47.1	-21 14.2	97	17.4	+5 08.5	
13	285	28.3	326	47.6	05.4	20	11.4	58.6	346	48.9	14.1	112	19.8	08.5	
14	300	30.7	341	47.3	04.5	35	11.9	58.7	1	50.8	14.0	127	22.2	08.5	
15	315	33.2	356	46.9	03.5	50	12.3	58.8	16	52.7	13.9	142	24.7	08.5	
16	330	35.7	11	46.6	02.6	65	12.7	58.9	31	54.6	13.8	157	27.1	08.5	
17	345	38.1	26	46.3	-18 01.6	80	13.1	-23 58.9	46	56.4	-21 13.7	172	29.5	+5 08.5	
18	0	40.6	41	45.9	-18 00.7	95	13.6	-23 59.0	61	58.3	-21 13.6	187	31.9	+5 08.5	
19	15	43.1	56	45.6	-17 59.7	110	14.0	59.1	77	00.2	13.5	202	34.3	08.5	
20	30	45.5	71	45.2	58.8	125	14.4	59.2	92	02.1	13.4	217	36.7	08.5	
21	45	48.0	86	44.9	57.9	140	14.9	59.3	107	03.9	13.3	232	39.2	08.4	
22	60	50.5	101	44.6	56.9	155	15.3	59.3	122	05.8	13.2	247	41.6	08.4	
23	75	52.9	116	44.2	56.0	170	15.7	59.4	137	07.7	13.1	262	44.0	08.4	
24	90	55.4	131	43.9	-17 55.0	185	16.1	-23 59.5	152	09.6	-21 13.0	277	46.4	+5 08.4	
Dif	—		-3 +9			+4 -1			+19 +1		+24		0		

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16 ^h 3			Edad: 24 ^d 3 PHE { 4 ^h : 55 ^h 0 12 ^h : 54 ^h 8 20 ^h : 54 ^h 7											
	PMG: 11 ^h 58 ^m 8			SD: 15 ^h 0 PMG: 7 ^h 56 ^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
0	180	22.2	-23	26.3	244	40.8	-16 18.2	7 08	8 05	9 03	3 58	89	11 41	6	
1	195	21.9		26.3	259	13.7 ¹³⁹	29.6 ¹¹⁴	7 00	7 53	8 45	46	84	11 53	11	
2	210	21.6		26.3	273	46.6 ¹³⁹	40.8 ¹¹²	6 54	43	30	36	80	12 03	15	
3	225	21.3		26.3	288	19.4 ¹³⁸	-16 52.0 ¹¹²	47	34	18	28	76	13	18	
4	240	21.0		26.3	302	52.1 ¹³⁷	-17 03.2 ¹¹²	42	25	8 06	20	74	21	21	
5	255	20.7	-23	26.3	317	24.9 ¹³⁸	-17 14.2 ¹¹⁰	6 36	7 18	7 57	3 13	71	12 29	23	
6	270	20.4	-23	26.3	331	57.6 ¹³⁷	-17 25.2 ¹¹⁰	6 25	7 02	7 36	2 58	66	12 45	28	
7	285	20.1		26.2	346	30.2 ¹³⁶	36.0 ¹⁰⁸	14	6 48	19	46	62	12 59	30	
8	300	19.8		26.2	1	02.9 ¹³⁷	46.8 ¹⁰⁸	6 05	37	7 05	35	60	13 10	34	
9	315	19.4		26.2	15	35.4 ¹³⁵	-17 57.5 ¹⁰⁷	5 56	26	6 52	26	57	20	36	
10	330	19.1		26.2	30	08.0 ¹³⁶	-18 08.2 ¹⁰⁷	40	6 07	31	2 11	53	37	40	
11	345	18.8	-23	26.2	44	40.5 ¹³⁵	-18 18.7 ¹⁰⁵	5 23	5 50	6 12	1 57	49	13 52	44	
12	0	18.5	-23	26.2	59	12.9 ¹³⁴	-18 29.2 ¹⁰⁵	5 06	5 32	5 55	1 45	46	14 07	46	
13	15	18.2		26.1	73	45.3 ¹³⁴	39.6 ¹⁰⁴	4 47	5 14	37	32	43	21	50	
14	30	17.9		26.1	88	17.7 ¹³⁴	-18 49.8 ¹⁰²	4 25	4 54	5 18	19	39	36	53	
15	45	17.6		26.1	102	50.0 ¹³³	-19 00.1 ¹⁰³	3 55	29	4 56	1 04	35	14 54	57	
16	60	17.3		26.1	117	22.3 ¹³³	10.2 ¹⁰¹	37	4 14	43	0 56	31	15 04	60	
17	75	16.9	-23	26.1	131	54.5 ¹³²	-19 20.2 ¹⁰⁰	3 14	3 55	4 28	0 46	29	15 16	62	
18	90	16.6	-23	26.0	146	26.7 ¹³²	-19 30.1 ⁹⁹	2 43	3 33	4 10	0 34	25	15 30	66	
19	105	16.3		26.0	160	58.9 ¹³²	40.0 ⁹⁹	1 57	3 03	3 48	21	20	47	71	
20	120	16.0		26.0	175	31.0 ¹³¹	49.7 ⁹⁷	1 29	2 48	37	14	18	15 55	73	
21	135	15.7		26.0	190	03.0 ¹³⁰	-19 59.4 ⁹⁷	0 42	30	24	0 07	16	16 04	76	
22	150	15.4		25.9	204	35.0 ¹³⁰	-20 09.0 ⁹⁶	** ** *	2 07	3 10	** ** *	**	15	78	
23	165	15.1		25.9	219	07.0 ¹³⁰	18.5 ⁹⁵	** ** *	1 37	2 53	** ** *	**	26	83	
24	180	14.8	-23	25.9	233	38.9 ¹²⁹	-20 27.9 ⁹⁴	** ** *	0 46	2 33	23 45	9	16 40	88	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 17 ^h 53 ^m 4		Mag: -4.3 PMG: 15 ^h 13 ^m		Mag: +1.3 PMG: 11 ^h 39 ^m		Mag: -2.0 PMG: 13 ^h 50 ^m		Mag: +1.0 PMG: 5 ^h 28 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	90	55.4	131	43.9	185	16.1	152	09.6	277	46.4
1	105	57.8	146	43.6	200	16.6	167	11.4	292	48.8
2	121	00.3	161	43.2	215	17.0	182	13.3	307	51.3
3	136	02.8	176	42.9	230	17.4	197	15.2	322	53.7
4	151	05.2	191	42.6	245	17.8	212	17.1	337	56.1
5	166	07.7	206	42.2	260	18.3	227	18.9	352	58.5
6	181	10.2	221	41.9	275	18.7	242	20.8	8	00.9
7	196	12.6	236	41.6	290	19.1	257	22.7	23	03.3
8	211	15.1	251	41.2	305	19.5	272	24.6	38	05.8
9	226	17.6	266	40.9	320	20.0	287	26.4	53	08.2
10	241	20.0	281	40.6	335	20.4	302	28.3	68	10.6
11	256	22.5	296	40.3	350	20.8	317	30.2	83	13.0
12	271	25.0	311	39.9	5	21.3	332	32.1	98	15.4
13	286	27.4	326	39.6	20	21.7	347	33.9	113	17.9
14	301	29.9	341	39.3	35	22.1	2	35.8	128	20.3
15	316	32.3	356	39.0	50	22.5	17	37.7	143	22.7
16	331	34.8	11	38.6	65	23.0	32	39.6	158	25.1
17	346	37.3	26	38.3	80	23.4	47	41.4	173	27.5
18	1	39.7	41	38.0	95	23.8	62	43.3	188	30.0
19	16	42.2	56	37.7	110	24.2	77	45.2	203	32.4
20	31	44.7	71	37.4	125	24.6	92	47.1	218	34.8
21	46	47.1	86	37.0	140	25.1	107	48.9	233	37.2
22	61	49.6	101	36.7	155	25.5	122	50.8	248	39.7
23	76	52.1	116	36.4	170	25.9	137	52.7	263	42.1
24	91	54.5	131	36.1	185	26.3	152	54.6	278	44.5
Dif	—		-3		+10		+19		+1	

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16/3 PMG: 11 ^h 59 ^m 3				Edad: 25 ^d 3 PHE { 4 ^h : 54/6 12 ^h : 54/4 20 ^h : 54/3 PMG: 8 ^h 42 ^m R°: 48 ^m													
	hG ☉		Dec		hG ☾		Dif				Civil		Náutico		Hora R°		Hora R°	
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	h m	h m	h m	
0	180	14.8	-23	25.9	233	38.9	-20	27.9	60 N	14 56	15 53	16 50	5 27	87	11 47	12		
1	195	14.5		25.8	248	10.8 ¹²⁹		37.1	58	15 13	16 05	16 58	5 10	82	12 04	17		
2	210	14.1		25.8	262	42.6 ¹²⁸		46.3	56	28	15	17 05	4 56	78	18	22		
3	225	13.8		25.8	277	14.4 ¹²⁸	-20	55.5	54	41	24	11	44	74	31	22		
4	240	13.5		25.7	291	46.1 ¹²⁷	-21	04.5	52	15 52	33	16	34	71	42	27		
5	255	13.2	-23	25.7	306	17.8 ¹²⁷	-21	13.4	50	16 02	16 40	17 22	4 24	69	12 52	29		
6	270	12.9	-23	25.7	320	49.4 ¹²⁶	-21	22.2	45	16 22	16 56	17 33	4 04	65	13 13	33		
7	285	12.6		25.6	335	21.0 ¹²⁶		30.9	40	39	17 10	44	3 48	62	29	37		
8	300	12.3		25.6	349	52.6 ¹²⁶		39.5	35	16 53	22	17 53	35	59	44	38		
9	315	12.0		25.6	4	24.1 ¹²⁵		48.0	30	17 06	32	18 02	23	57	13 56	41		
10	330	11.6		25.5	18	55.5 ¹²⁴	-21	56.5	20	27	17 51	19	3 04	53	14 17	44		
11	345	11.3	-23	25.5	33	26.9 ¹²⁴	-22	04.8	10 N	17 46	18 08	18 35	2 46	51	14 36	46		
12	0	11.0	-23	25.5	47	58.2 ¹²³	-22	13.0	0	18 03	18 26	18 52	2 31	47	14 53	49		
13	15	10.7		25.4	62	29.6 ¹²⁴		21.1	10 S	21	18 44	19 11	2 15	44	15 11	51		
14	30	10.4		25.4	77	00.8 ¹²²		29.1	20	18 40	19 04	19 33	1 58	42	29	54		
15	45	10.1		25.3	91	32.0 ¹²²		37.0	30	19 02	29	20 03	39	38	15 51	57		
16	60	09.8		25.3	106	03.2 ¹²²		44.8	35	15	19 44	21	27	36	16 04	58		
17	75	09.5	-23	25.2	120	34.3 ¹²¹	-22	52.5	40	19 30	20 03	20 44	1 15	33	16 18	61		
18	90	09.2	-23	25.2	135	05.4 ¹²¹	-23	00.1	45	19 48	20 25	21 15	0 59	31	16 36	63		
19	105	08.8		25.2	149	36.4 ¹²⁰		07.6	50	20 10	20 55	22 01	41	26	16 58	67		
20	120	08.5		25.1	164	07.3 ¹¹⁹		15.0	52	21	21 10	22 29	32	24	17 08	69		
21	135	08.2		25.1	178	38.3 ¹²⁰		22.2	54	34	28	23 15	23	21	20	71		
22	150	07.9		25.0	193	09.1 ¹¹⁸		29.4	56	20 48	21 50	** **	12	18	33	75		
23	165	07.6		25.0	207	40.0 ¹¹⁹		36.5	58	21 05	22 20	** **	0 00	14	17 49	79		
24	180	07.3	-23	24.9	222	10.8 ¹¹⁸	-23	43.4	60 S	21 25	23 11	** **	23 54	17	18 08	85		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 17 ^h 49 ^m 4		Mag: -4.3 PMG: 15 ^h 14 ^m				Mag: +1.3 PMG: 11 ^h 38 ^m				Mag: -2.0 PMG: 13 ^h 47 ^m				Mag: +1.0 PMG: 5 ^h 24 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	91	54.5	131	36.1	-17	32.1	185	26.3	-24	01.3	152	54.6	-21	10.4	278	44.5	+5	08.3
1	106	57.0	146	35.8		31.1	200	26.8		01.3	167	56.4		10.3	293	46.9		08.3
2	121	59.5	161	35.5		30.1	215	27.2		01.4	182	58.3		10.2	308	49.3		08.3
3	137	01.9	176	35.1		29.2	230	27.6		01.5	198	00.2		10.1	323	51.8		08.3
4	152	04.4	191	34.8		28.2	245	28.0		01.5	213	02.1		10.0	338	54.2		08.2
5	167	06.8	206	34.5	-17	27.2	260	28.5	-24	01.6	228	03.9	-21	09.9	353	56.6	+5	08.2
6	182	09.3	221	34.2	-17	26.3	275	28.9	-24	01.7	243	05.8	-21	09.8	8	59.0	+5	08.2
7	197	11.8	236	33.9		25.3	290	29.3		01.7	258	07.7		09.7	24	01.5		08.2
8	212	14.2	251	33.6		24.3	305	29.7		01.8	273	09.5		09.6	39	03.9		08.2
9	227	16.7	266	33.3		23.3	320	30.2		01.9	288	11.4		09.5	54	06.3		08.2
10	242	19.2	281	33.0		22.4	335	30.6		01.9	303	13.3		09.4	69	08.7		08.2
11	257	21.6	296	32.7	-17	21.4	350	31.0	-24	02.0	318	15.2	-21	09.3	84	11.2	+5	08.2
12	272	24.1	311	32.4	-17	20.4	5	31.4	-24	02.0	333	17.0	-21	09.2	99	13.6	+5	08.2
13	287	26.6	326	32.1		19.5	20	31.8		02.1	348	18.9		09.1	114	16.0		08.2
14	302	29.0	341	31.8		18.5	35	32.3		02.2	3	20.8		09.0	129	18.4		08.2
15	317	31.5	356	31.5		17.5	50	32.7		02.2	18	22.7		08.9	144	20.9		08.2
16	332	33.9	11	31.2		16.5	65	33.1		02.3	33	24.5		08.7	159	23.3		08.2
17	347	36.4	26	30.9	-17	15.6	80	33.5	-24	02.3	48	26.4	-21	08.6	174	25.7	+5	08.2
18	2	38.9	41	30.6	-17	14.6	95	34.0	-24	02.4	63	28.3	-21	08.5	189	28.1	+5	08.2
19	17	41.3	56	30.3		13.6	110	34.4		02.5	78	30.1		08.4	204	30.6		08.2
20	32	43.8	71	30.0		12.6	125	34.8		02.5	93	32.0		08.3	219	33.0		08.2
21	47	46.3	86	29.7		11.6	140	35.2		02.6	108	33.9		08.2	234	35.4		08.2
22	62	48.7	101	29.4		10.7	155	35.6		02.6	123	35.8		08.1	249	37.8		08.2
23	77	51.2	116	29.1		09.7	170	36.1		02.7	138	37.6		08.0	264	40.3		08.2
24	92	53.7	131	28.8	-17	08.7	185	36.5	-24	02.8	153	39.5	-21	07.9	279	42.7	+5	08.2
Dif	—		-3		+10		+4		-1		+19		+1		+24			

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'3 PMG: 11 ^h 59 ^m 8			Edad: 26 ^d 3 PHE { SD: 14'8 PMG: 9 ^h 30 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m		
0	180	07.3	-23	24.9	222	10.8	-23	43.4	60 N	7 09	8 06	9 03	6 54	81	11 59	22		
1	195	07.0		24.9	236	41.5 ¹¹⁷		50.2 ⁶⁸	58	7 01	7 54	8 46	32	74	12 21	29		
2	210	06.7		24.8	251	12.2 ¹¹⁷	-23	57.0 ⁶⁶	56	6 54	44	31	6 14	70	40	32		
3	225	06.3		24.8	265	42.9 ¹¹⁷	-24	03.6 ⁶⁶	54		48	35	5 58	68	12 56	34		
4	240	06.0		24.7	280	13.5 ¹¹⁶		10.1 ⁶⁵	52		43	26	8 07	45	13 09	37		
5	255	05.7	-23	24.7	294	44.0 ¹¹⁵	-24	16.5 ⁶⁴	50	6 37	7 19	7 57	5 33	65	13 21	38		
6	270	05.4	-23	24.6	309	14.5 ¹¹⁵	-24	22.7 ⁶²	45	6 25	7 03	7 37	5 09	61	13 46	41		
7	285	05.1		24.6	323	45.0 ¹¹⁵		28.9 ⁶²	40		15	6 49	4 50	59	14 06	42		
8	300	04.8		24.5	338	15.5 ¹¹⁵		34.9 ⁶⁰	35	6 06		37	34	57	22	44		
9	315	04.5		24.4	352	45.8 ¹¹³		40.9 ⁶⁰	30	5 57	27	6 53	4 20	56	14 37	45		
10	330	04.2		24.4	7	16.2 ¹¹⁴		46.7 ⁵⁸	20		40	6 08	3 57	53	15 01	47		
11	345	03.9	-23	24.3	21	46.5 ¹¹³	-24	52.4 ⁵⁷	10 N	5 24	5 51	6 13	3 37	51	15 22	49		
12	0	03.5	-23	24.3	36	16.8 ¹¹³	-24	58.0 ⁵⁶	0	5 07	5 33	5 56	3 18	50	15 42	50		
13	15	03.2		24.2	50	47.0 ¹¹²	-25	03.4 ⁵⁴	10 S	4 48	5 15	5 38	2 59	48	16 02	51		
14	30	02.9		24.2	65	17.2 ¹¹²		08.8 ⁵⁴	20	4 26	4 55	5 19	40	45	23	53		
15	45	02.6		24.1	79	47.3 ¹¹¹		14.0 ⁵²	30	3 57		30	17	43	16 48	54		
16	60	02.3		24.0	94	17.4 ¹¹¹		19.1 ⁵¹	35		38	4 15	2 03	42	17 02	56		
17	75	02.0	-23	24.0	108	47.5 ¹¹¹	-25	24.1 ⁵⁰	40	3 15	3 56	4 29	1 48	39	17 19	57		
18	90	01.7	-23	23.9	123	17.5 ¹¹⁰	-25	29.0 ⁴⁹	45	2 44	3 34	4 11	1 30	37	17 39	59		
19	105	01.4		23.8	137	47.5 ¹¹⁰		33.7 ⁴⁷	50	1 58	3 04	3 49	1 07	34	18 05	60		
20	120	01.1		23.8	152	17.5 ¹¹⁰		38.4 ⁴⁷	52	1 31	2 49		0 56	32		62		
21	135	00.7		23.7	166	47.4 ¹⁰⁹		42.9 ⁴⁵	54	0 44		31	44	29	31	63		
22	150	00.4		23.6	181	17.3 ¹⁰⁹		47.3 ⁴⁴	56	** ** *	2 09	3 11	30	27	18 48	65		
23	165	00.1		23.6	195	47.2 ¹⁰⁹		51.5 ⁴²	58	** ** *	1 39	2 54	0 14	22	19 08	68		
24	179	59.8	-23	23.5	210	17.0 ¹⁰⁸	-25	55.7 ⁴²	60 S	** ** *	0 48	2 34	** ** *	**	19 33	72		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 17 ^h 45 ^m 5		Mag: -4.3 PMG: 15 ^h 14 ^m				Mag: +1.3 PMG: 11 ^h 37 ^m				Mag: -2.0 PMG: 13 ^h 44 ^m				Mag: +1.0 PMG: 5 ^h 20 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	92	53.7	131	28.8	-17	08.7	185	36.5	-24	02.8	153	39.5	-21	07.9	279	42.7	+5	08.2
1	107	56.1	146	28.5		07.7	200	36.9		02.8	168	41.4		07.8	294	45.1		08.2
2	122	58.6	161	28.2		06.7	215	37.3		02.9	183	43.3		07.7	309	47.5		08.2
3	138	01.1	176	27.9		05.8	230	37.7		02.9	198	45.1		07.6	324	50.0		08.2
4	153	03.5	191	27.6		04.8	245	38.2		03.0	213	47.0		07.5	339	52.4		08.1
5	168	06.0	206	27.3	-17	03.8	260	38.6	-24	03.0	228	48.9	-21	07.4	354	54.8	+5	08.1
6	183	08.4	221	27.0	-17	02.8	275	39.0	-24	03.1	243	50.7	-21	07.3	9	57.2	+5	08.1
7	198	10.9	236	26.7		01.8	290	39.4		03.2	258	52.6		07.2	24	59.7		08.1
8	213	13.4	251	26.5	-17	00.8	305	39.8		03.2	273	54.5		07.0	40	02.1		08.1
9	228	15.8	266	26.2	-16	59.8	320	40.3		03.3	288	56.4		06.9	55	04.5		08.1
10	243	18.3	281	25.9		58.9	335	40.7		03.3	303	58.2		06.8	70	07.0		08.1
11	258	20.8	296	25.6	-16	57.9	350	41.1	-24	03.4	319	00.1	-21	06.7	85	09.4	+5	08.1
12	273	23.2	311	25.3	-16	56.9	5	41.5	-24	03.4	334	02.0	-21	06.6	100	11.8	+5	08.1
13	288	25.7	326	25.0		55.9	20	41.9		03.5	349	03.8		06.5	115	14.2		08.1
14	303	28.2	341	24.7		54.9	35	42.4		03.5	4	05.7		06.4	130	16.7		08.1
15	318	30.6	356	24.5		53.9	50	42.8		03.6	19	07.6		06.3	145	19.1		08.1
16	333	33.1	11	24.2		52.9	65	43.2		03.6	34	09.5		06.2	160	21.5		08.1
17	348	35.6	26	23.9	-16	51.9	80	43.6	-24	03.7	49	11.3	-21	06.1	175	24.0	+5	08.1
18	3	38.0	41	23.6	-16	50.9	95	44.0	-24	03.7	64	13.2	-21	06.0	190	26.4	+5	08.1
19	18	40.5	56	23.3		49.9	110	44.5		03.8	79	15.1		05.9	205	28.8		08.1
20	33	42.9	71	23.1		48.9	125	44.9		03.8	94	16.9		05.8	220	31.2		08.1
21	48	45.4	86	22.8		48.0	140	45.3		03.9	109	18.8		05.6	235	33.7		08.1
22	63	47.9	101	22.5		47.0	155	45.7		03.9	124	20.7		05.5	250	36.1		08.1
23	78	50.3	116	22.2		46.0	170	46.1		04.0	139	22.5		05.4	265	38.5		08.1
24	93	52.8	131	22.0	-16	45.0	185	46.5	-24	04.0	154	24.4	-21	05.3	280	41.0	+5	08.1
Dif	—		-3		+10		+4		-1		+19		+1		+24			

UT	SOL				● LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna			
	SD: 16:3 PMG: 12 ^h 00 ^m 3				Edad: 27 ^d 3 PHE { 4 ^h : 54/0 12 ^h : 54/0 20 ^h : 54/0 PMG: 10 ^h 20 ^m R°: 51 ^m														
	hG ☉		Dec		hG ☾		Dif							Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m
0	179	59.8	-23	23.5	210	17.0	-25	55.7	60 N	14	57	15	55	16	52		8	15	62
1	194	59.5		23.4	224	46.8 ¹⁰⁸	-25	59.7 ⁴⁰	58	15	15	16	06	16	59		7	46	60
2	209	59.2		23.4	239	16.6 ¹⁰⁸	-26	03.6 ³⁹	56	29		17		17	06		24	58	
3	224	58.9		23.3	253	46.3 ¹⁰⁷		07.4 ³⁸	54	42		26		12		7	06	57	
4	239	58.6		23.2	268	16.0 ¹⁰⁷		11.0 ³⁶	52	15	53	34		18		6	51	56	
5	254	58.3	-23	23.2	282	45.7 ¹⁰⁷	-26	14.5 ³⁵	50	16	03	16	41	17	23		6	38	56
6	269	57.9	-23	23.1	297	15.3 ¹⁰⁶	-26	17.9 ³⁴	45	16	24	16	57	17	35		6	10	55
7	284	57.6		23.0	311	44.9 ¹⁰⁶		21.2 ³³	40	40		17	11		45		5	49	54
8	299	57.3		22.9	326	14.5 ¹⁰⁶		24.3 ³¹	35	16	55		23	17	54		31	54	
9	314	57.0		22.9	340	44.1 ¹⁰⁶		27.4 ³¹	30	17	07		33	18	03		5	16	53
10	329	56.7		22.8	355	13.6 ¹⁰⁵		30.3 ²⁹	20	28		17	52		20		4	50	53
11	344	56.4	-23	22.7	9	43.2 ¹⁰⁶	-26	33.0 ²⁷	10 N	17	47	18	09	18	36		4	28	52
12	359	56.1	-23	22.6	24	12.7 ¹⁰⁵	-26	35.7 ²⁷	0	18	04	18	27	18	53		4	08	50
13	14	55.8		22.5	38	42.1 ¹⁰⁴		38.2 ²⁵	10 S	22		18	45	19	12		3	47	50
14	29	55.5		22.5	53	11.6 ¹⁰⁵		40.6 ²⁴	20	18	41	19	05	19	34		25	49	
15	44	55.1		22.4	67	41.0 ¹⁰⁴		42.8 ²²	30	19	03		30	20	03		3	00	47
16	59	54.8		22.3	82	10.5 ¹⁰⁵		45.0 ²²	35	16		19	45		22		2	45	47
17	74	54.5	-23	22.2	96	39.9 ¹⁰⁴	-26	47.0 ²⁰	40	19	31	20	03	20	45		2	27	47
18	89	54.2	-23	22.1	111	09.2 ¹⁰³	-26	48.9 ¹⁹	45	19	49	20	26	21	16		2	07	45
19	104	53.9		22.1	125	38.6 ¹⁰⁴		50.6 ¹⁷	50	20	11	20	56	22	01		1	41	43
20	119	53.6		22.0	140	08.0 ¹⁰⁴		52.2 ¹⁶	52	22		21	11	22	29		28	42	
21	134	53.3		21.9	154	37.3 ¹⁰³		53.7 ¹⁵	54	34		29		23	14		1	13	41
22	149	53.0		21.8	169	06.6 ¹⁰³		55.1 ¹⁴	56	20	48	21	51	** **			0	57	39
23	164	52.7		21.7	183	36.0 ¹⁰⁴		56.3 ¹²	58	21	05	22	20	** **			36	37	
24	179	52.4	-23	21.6	198	05.3 ¹⁰³	-26	57.4 ¹¹	60 S	21	25	23	10	** **			0	11	33

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 17 ^h 41 ^m 6		Mag: -4.4 PMG: 15 ^h 15 ^m		Mag: +1.3 PMG: 11 ^h 37 ^m		Mag: -2.0 PMG: 13 ^h 41 ^m		Mag: +1.0 PMG: 5 ^h 16 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	93	52.8	131	22.0	-16	45.0	185	46.5	-24	04.0
1	108	55.3	146	21.7		44.0	200	47.0		04.1
2	123	57.7	161	21.4		43.0	215	47.4		04.1
3	139	00.2	176	21.1		42.0	230	47.8		04.2
4	154	02.7	191	20.9		41.0	245	48.2		04.2
5	169	05.1	206	20.6	-16	40.0	260	48.6	-24	04.2
6	184	07.6	221	20.3	-16	39.0	275	49.1	-24	04.3
7	199	10.1	236	20.1		38.0	290	49.5		04.3
8	214	12.5	251	19.8		37.0	305	49.9		04.4
9	229	15.0	266	19.5		36.0	320	50.3		04.4
10	244	17.4	281	19.3		35.0	335	50.7		04.5
11	259	19.9	296	19.0	-16	34.0	350	51.1	-24	04.5
12	274	22.4	311	18.7	-16	33.0	5	51.6	-24	04.5
13	289	24.8	326	18.5		31.9	20	52.0		04.6
14	304	27.3	341	18.2		30.9	35	52.4		04.6
15	319	29.8	356	18.0		29.9	50	52.8		04.7
16	334	32.2	11	17.7		28.9	65	53.2		04.7
17	349	34.7	26	17.4	-16	27.9	80	53.6	-24	04.7
18	4	37.2	41	17.2	-16	26.9	95	54.1	-24	04.8
19	19	39.6	56	16.9		25.9	110	54.5		04.8
20	34	42.1	71	16.7		24.9	125	54.9		04.9
21	49	44.6	86	16.4		23.9	140	55.3		04.9
22	64	47.0	101	16.2		22.9	155	55.7		04.9
23	79	49.5	116	15.9		21.9	170	56.1		05.0
24	94	51.9	131	15.6	-16	20.9	185	56.5	-24	05.0
Dif	—		-3		+10		+4		0	

0	14	15	29	7	6	16	24	5	18	19	20	21	22	23	24
15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46
47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62
63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78
79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94
95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110
111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126
127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142
143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158
159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174
175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190
191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206
207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222
223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238
239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254
255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270
271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286
287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302
303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318
319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334
335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350
351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366
367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382
383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398
399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414
415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430
431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446
447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462
463	464	465	466	467	468	469	470	471	472	473	474	475	476	477	478
479	480	481	482	483	484	485	486	487	488	489	490	491	492	493	494
495	496	497	498	499	500	501	502	503	504	505	506	507	508	509	510
511	512	513	514	515	516	517	518	519	520	521	522	523	524	525	526
527	528	529	530	531	532	533	534	535	536	537	538	539	540	541	542
543	544	545	546	547	548	549	550	551	552	553	554	555	556	557	558
559	560	561	562	563	564	565	566	567	568	569	570	571	572	573	574
575	576	577	578	579	580	581	582	583	584	585	586	587	588	589	590
591	592	593	594	595	596	597	598	599	600	601	602	603	604	605	606
607	608	609	610	611	612	613	614	615	616	617	618	619	620	621	622
623	624	625	626	627	628	629	630	631	632	633	634	635	636	637	638
639	640	641	642	643	644	645	646	647	648	649	650	651	652	653	654
655	656														

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16:3 PMG: 12 ^h 00 ^m 8			Edad: 28 ^d 3 PHE { SD: 14:7 PMG: 11 ^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	52.4	-23	21.6	198	05.3	-26	57.4	60 N	7 09	8 06	9 04	9 17	37	13 05	68
1	194	52.0		21.5	212	34.6 ¹⁰³		58.4	58	7 02	7 54	8 46	8 46	41	36	64
2	209	51.7		21.4	227	03.9 ¹⁰³		59.2	56	6 55	44	32	22	43	13 59	62
3	224	51.4		21.4	241	33.2 ¹⁰³	-26	59.9	54	49	35	19	8 03	45	14 18	60
4	239	51.1		21.3	256	02.5 ¹⁰³	-27	00.5	52	43	27	8 08	7 47	46	34	59
5	254	50.8	-23	21.2	270	31.7 ¹⁰²	-27	01.0	50	6 38	7 20	7 58	7 34	45	14 48	58
6	269	50.5	-23	21.1	285	01.0 ¹⁰³	-27	01.3	45	6 26	7 03	7 37	7 05	48	15 16	57
7	284	50.2		21.0	299	30.3 ¹⁰³		01.5	40	16	6 50	21	6 43	48	38	56
8	299	49.9		20.9	313	59.6 ¹⁰³		01.6	35	6 07	38	7 06	25	48	15 56	55
9	314	49.6		20.8	328	28.8 ¹⁰²		01.5	30	5 58	28	6 54	6 09	49	16 12	54
10	329	49.3		20.7	342	58.1 ¹⁰³		01.3	20	41	6 09	33	5 43	49	16 39	52
11	344	48.9	-23	20.6	357	27.4 ¹⁰³	-27	01.0	10 N	5 25	5 52	6 14	5 20	50	17 02	51
12	359	48.6	-23	20.5	11	56.7 ¹⁰³	-27	00.5	0	5 08	5 34	5 57	4 58	51	17 23	50
13	14	48.3		20.4	26	26.0 ¹⁰³	-26	59.9	10 S	4 49	5 16	39	37	51	17 44	49
14	29	48.0		20.3	40	55.3 ¹⁰³		59.2	20	4 27	4 56	5 21	4 14	52	18 07	48
15	44	47.7		20.2	55	24.6 ¹⁰³		58.4	30	3 58	31	4 59	3 47	53	33	47
16	59	47.4		20.1	69	53.9 ¹⁰³		57.4	35	39	4 16	46	32	52	18 49	45
17	74	47.1	-23	20.0	84	23.2 ¹⁰³	-26	56.3	40	3 16	3 58	4 31	3 14	52	19 07	44
18	89	46.8	-23	19.9	98	52.5 ¹⁰³	-26	55.0	45	2 45	3 35	4 13	2 52	53	19 29	43
19	104	46.5		19.8	113	21.9 ¹⁰⁴		53.7	50	2 00	3 05	3 50	24	53	19 56	41
20	119	46.2		19.7	127	51.2 ¹⁰³		52.2	52	1 32	2 50	39	2 10	54	20 10	39
21	134	45.9		19.6	142	20.6 ¹⁰⁴		50.6	54	0 47	33	27	1 54	55	25	38
22	149	45.5		19.5	156	50.0 ¹⁰⁴		48.8	56	** ** *	2 10	3 13	36	55	20 44	35
23	164	45.2		19.4	171	19.4 ¹⁰⁴		46.9	58	** ** *	1 41	2 56	1 13	55	21 06	33
24	179	44.9	-23	19.3	185	48.8 ¹⁰⁴	-26	44.9	60 S	** ** *	0 51	2 36	0 44	56	21 35	27

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 17 ^h 37 ^m 6		Mag: -4.4 PMG: 15 ^h 15 ^m		Mag: +1.3 PMG: 11 ^h 36 ^m		Mag: -2.0 PMG: 13 ^h 38 ^m		Mag: +1.0 PMG: 5 ^h 13 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	94	51.9	131	15.6	-16	20.9	185	56.5	-24	05.0
1	109	54.4	146	15.4		19.8	200	57.0		05.0
2	124	56.9	161	15.1		18.8	215	57.4		05.1
3	139	59.3	176	14.9		17.8	230	57.8		05.1
4	155	01.8	191	14.6		16.8	245	58.2		05.2
5	170	04.3	206	14.4	-16	15.8	260	58.6	-24	05.2
6	185	06.7	221	14.1	-16	14.8	275	59.0	-24	05.2
7	200	09.2	236	13.9		13.7	290	59.5		05.3
8	215	11.7	251	13.7		12.7	305	59.9		05.3
9	230	14.1	266	13.4		11.7	321	00.3		05.3
10	245	16.6	281	13.2		10.7	336	00.7		05.3
11	260	19.1	296	12.9	-16	09.7	351	01.1	-24	05.4
12	275	21.5	311	12.7	-16	08.7	6	01.5	-24	05.4
13	290	24.0	326	12.4		07.6	21	01.9		05.4
14	305	26.4	341	12.2		06.6	36	02.4		05.5
15	320	28.9	356	12.0		05.6	51	02.8		05.5
16	335	31.4	11	11.7		04.6	66	03.2		05.5
17	350	33.8	26	11.5	-16	03.6	81	03.6	-24	05.6
18	5	36.3	41	11.2	-16	02.5	96	04.0	-24	05.6
19	20	38.8	56	11.0		01.5	111	04.4		05.6
20	35	41.2	71	10.8	-16	00.5	126	04.8		05.6
21	50	43.7	86	10.5	-15	59.5	141	05.2		05.7
22	65	46.2	101	10.3		58.4	156	05.7		05.7
23	80	48.6	116	10.1		57.4	171	06.1		05.7
24	95	51.1	131	09.8	-15	56.4	186	06.5	-24	05.7
Dif	—		-2 +10		+4 0		+19 +1		+24 0	

UT	SOL				● LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16:3 PMG: 12 ^h 01 ^m 3				Edad: 29 ^d 3 PHE { 4 ^h : 53/9 12 ^h : 54/0 20 ^h : 54/0 PMG: 12 ^h 01 ^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	179	44.9	-23	19.3	185	48.8	-26	44.9	60 N	14 59	15 57	16 53	9 54	19	14 13	83		
1	194	44.6		19.2	200	18.2 ¹⁰⁴		42.8	58	15 16	16 08	17 01	27	25	14 40	77		
2	209	44.3		19.1	214	47.7 ¹⁰⁵		40.5	56	31	18	07	9 05	29	15 01	73		
3	224	44.0		18.9	229	17.2 ¹⁰⁵		38.1	54	44	27	13	8 48	31	18	70		
4	239	43.7		18.8	243	46.7 ¹⁰⁵		35.6	52	15 55	35	19	33	33	33	68		
5	254	43.4	-23	18.7	258	16.2 ¹⁰⁵	-26	33.0	50	16 04	16 43	17 24	8 19	36	15 46	66		
6	269	43.1	-23	18.6	272	45.7 ¹⁰⁵	-26	30.2	45	16 25	16 59	17 36	7 53	38	16 13	62		
7	284	42.8		18.5	287	15.3 ¹⁰⁶		27.3	40	42	17 12	46	31	41	34	59		
8	299	42.5		18.4	301	44.9 ¹⁰⁶		24.3	35	16 56	24	17 56	7 13	43	16 51	58		
9	314	42.2		18.3	316	14.5 ¹⁰⁶		21.1	30	17 08	34	18 04	6 58	44	17 06	56		
10	329	41.8		18.2	330	44.2 ¹⁰⁷		17.9	20	29	17 53	21	32	47	31	54		
11	344	41.5	-23	18.0	345	13.9 ¹⁰⁷	-26	14.5	10 N	17 48	18 10	18 37	6 10	48	17 53	51		
12	359	41.2	-23	17.9	359	43.6 ¹⁰⁷	-26	11.0	0	18 05	18 28	18 54	5 49	50	18 13	49		
13	14	40.9		17.8	14	13.3 ¹⁰⁷		07.3	10 S	22	18 46	19 13	28	51	33	47		
14	29	40.6		17.7	28	43.1 ¹⁰⁸	-26	03.5	20	18 41	19 06	19 35	5 06	53	18 55	44		
15	44	40.3		17.6	43	12.9 ¹⁰⁸	-25	59.6	30	19 03	31	20 04	4 40	55	19 20	41		
16	59	40.0		17.4	57	42.7 ¹⁰⁸		55.6	35	16	19 46	23	24	57	34	40		
17	74	39.7	-23	17.3	72	12.6 ¹⁰⁹	-25	51.5	40	19 31	20 04	20 46	4 06	58	19 51	38		
18	89	39.4	-23	17.2	86	42.5 ¹⁰⁹	-25	47.2	45	19 49	20 26	21 16	3 45	60	20 12	35		
19	104	39.1		17.1	101	12.4 ¹⁰⁹		42.8	50	20 11	20 56	22 01	17	63	37	31		
20	119	38.8		17.0	115	42.4 ¹¹⁰		38.3	52	22	21 11	22 28	3 04	64	20 49	29		
21	134	38.5		16.8	130	12.4 ¹¹⁰		33.7	54	34	29	23 12	2 49	65	21 03	27		
22	149	38.2		16.7	144	42.4 ¹¹⁰		29.0	56	20 49	21 51	** **	31	67	19	24		
23	164	37.9		16.6	159	12.5 ¹¹¹		24.1	58	21 05	22 20	** **	2 08	71	21 39	19		
24	179	37.5	-23	16.5	173	42.6 ¹¹¹	-25	19.1	60 S	21 25	23 08	** **	1 40	76	22 02	15		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 17 ^h 33 ^m 7			Mag: -4.4 PMG: 15 ^h 16 ^m			Mag: +1.3 PMG: 11 ^h 35 ^m			Mag: -2.0 PMG: 13 ^h 35 ^m			Mag: +1.0 PMG: 5 ^h 09 ^m					
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	95	51.1	131	09.8	-15	56.4	186	06.5	-24	05.7	155	54.1	-21	00.1	282	37.8		
1	110	53.5	146	09.6		55.4	201	06.9		05.8	170	56.0	-21	00.0	297	40.3		
2	125	56.0	161	09.4		54.3	216	07.3		05.8	185	57.9	-20	59.9	312	42.7		
3	140	58.5	176	09.1		53.3	231	07.7		05.8	200	59.7		59.8	327	45.2		
4	156	00.9	191	08.9		52.3	246	08.1		05.8	216	01.6		59.7	342	47.6		
5	171	03.4	206	08.7	-15	51.2	261	08.5	-24	05.9	231	03.5	-20	59.6	357	50.0		
6	186	05.9	221	08.5	-15	50.2	276	09.0	-24	05.9	246	05.3	-20	59.4	12	52.5		
7	201	08.3	236	08.2		49.2	291	09.4		05.9	261	07.2		59.3	27	54.9		
8	216	10.8	251	08.0		48.1	306	09.8		05.9	276	09.1		59.2	42	57.4		
9	231	13.3	266	07.8		47.1	321	10.2		06.0	291	10.9		59.1	57	59.8		
10	246	15.7	281	07.6		46.1	336	10.6		06.0	306	12.8		59.0	73	02.3		
11	261	18.2	296	07.3	-15	45.0	351	11.0	-24	06.0	321	14.7	-20	58.9	88	04.7		
12	276	20.7	311	07.1	-15	44.0	6	11.4	-24	06.0	336	16.5	-20	58.8	103	07.1		
13	291	23.1	326	06.9		43.0	21	11.8		06.0	351	18.4		58.7	118	09.6		
14	306	25.6	341	06.7		41.9	36	12.3		06.1	6	20.3		58.6	133	12.0		
15	321	28.0	356	06.4		40.9	51	12.7		06.1	21	22.1		58.4	148	14.5		
16	336	30.5	11	06.2		39.9	66	13.1		06.1	36	24.0		58.3	163	16.9		
17	351	33.0	26	06.0	-15	38.8	81	13.5	-24	06.1	51	25.9	-20	58.2	178	19.3		
18	6	35.4	41	05.8	-15	37.8	96	13.9	-24	06.1	66	27.7	-20	58.1	193	21.8		
19	21	37.9	56	05.6		36.8	111	14.3		06.2	81	29.6		58.0	208	24.2		
20	36	40.4	71	05.4		35.7	126	14.7		06.2	96	31.5		57.9	223	26.7		
21	51	42.8	86	05.1		34.7	141	15.1		06.2	111	33.3		57.8	238	29.1		
22	66	45.3	101	04.9		33.6	156	15.5		06.2	126	35.2		57.7	253	31.6		
23	81	47.8	116	04.7		32.6	171	16.0		06.2	141	37.1		57.6	268	34.0		
24	96	50.2	131	04.5	-15	31.6	186	16.4	-24	06.2	156	38.9	-20	57.4	283	36.4		
Dif	—		-2		+10		+4		0		+19		+1		+24		0	

UT	SOL			● LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'3			Edad: 0 ^d 5	PHE { 4 ^h : 54'0 12 ^h : 54'1 20 ^h : 54'1	SD: 14'7										
	PMG: 12 ^h 01 ^m 7					PMG: 12 ^h 50 ^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
0	179	37.5	-23	16.5	173	42.6	-25	19.1	51	60 N	7 10	8 06	9 03	10 13	10	15
1	194	37.2		16.3	188	12.8 ¹¹²		14.0	51	58	7 02	7 55	8 46	9 52	15	15
2	209	36.9		16.2	202	43.0 ¹¹²		08.8	52	56	6 55	44	32	34	20	16
3	224	36.6		16.1	217	13.3 ¹¹³	-25	03.5	53	54	49	35	19	19	23	28
4	239	36.3		15.9	231	43.6 ¹¹³	-24	58.0	55	52	44	27	8 08	9 06	26	41
5	254	36.0	-23	15.8	246	13.9 ¹¹³	-24	52.4	56	50	6 39	7 20	7 58	8 55	27	16
6	269	35.7	-23	15.7	260	44.3 ¹¹⁴	-24	46.8	56	45	6 27	7 04	7 38	8 31	32	17
7	284	35.4		15.5	275	14.7 ¹¹⁴		41.0	58	40	17	6 51	21	8 12	35	33
8	299	35.1		15.4	289	45.2 ¹¹⁵		35.0	60	35	6 07	39	7 07	7 56	37	17
9	314	34.8		15.3	304	15.7 ¹¹⁵		29.0	60	30	5 59	28	6 55	42	39	18
10	329	34.5		15.1	318	46.2 ¹¹⁵		22.9	61	20	42	6 10	34	7 19	42	25
11	344	34.2	-23	15.0	333	16.8 ¹¹⁶	-24	16.6	63	10 N	5 26	5 53	6 15	6 58	45	18
12	359	33.9	-23	14.9	347	47.5 ¹¹⁷	-24	10.3	63	0	5 09	5 35	5 58	6 39	48	19
13	14	33.6		14.7	2	18.2 ¹¹⁷	-24	03.8	65	10 S	4 50	5 17	41	6 19	51	20
14	29	33.3		14.6	16	48.9 ¹¹⁷	-23	57.2	66	20	4 28	4 57	22	5 59	53	19
15	44	32.9		14.5	31	19.7 ¹¹⁸		50.5	67	30	3 59	32	5 00	35	56	20
16	59	32.6		14.3	45	50.6 ¹¹⁹		43.7	68	35	41	4 17	4 47	21	58	14
17	74	32.3	-23	14.2	60	21.4 ¹¹⁸	-23	36.8	69	40	3 18	3 59	4 32	5 04	61	20
18	89	32.0	-23	14.0	74	52.4 ¹²⁰	-23	29.7	71	45	2 47	3 37	4 14	4 45	64	20
19	104	31.7		13.9	89	23.4 ¹²⁰		22.6	71	50	2 02	3 07	3 52	20	68	21
20	119	31.4		13.7	103	54.4 ¹²⁰		15.4	72	52	1 35	2 52	41	4 08	70	18
21	134	31.1		13.6	118	25.5 ¹²¹		08.0	74	54	0 51	34	29	3 54	73	30
22	149	30.8		13.5	132	56.6 ¹²¹	-23	00.6	74	56	** ** *	2 13	3 15	38	76	43
23	164	30.5		13.3	147	27.8 ¹²²	-22	53.0	76	58	** ** *	1 43	2 58	3 19	80	21
24	179	30.2	-23	13.2	161	59.1 ¹²³	-22	45.4	76	60 S	** ** *	0 55	2 38	2 56	86	22

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 17 ^h 29 ^m 8		Mag: -4.4 PMG: 15 ^h 16 ^m		Mag: +1.3 PMG: 11 ^h 35 ^m		Mag: -2.0 PMG: 13 ^h 32 ^m		Mag: +1.0 PMG: 5 ^h 05 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	96	50.2	131	04.5	186	16.4	156	38.9	283	36.4
1	111	52.7	146	04.3	201	16.8	171	40.8	298	38.9
2	126	55.2	161	04.1	216	17.2	186	42.7	313	41.3
3	141	57.6	176	03.9	231	17.6	201	44.5	328	43.8
4	157	00.1	191	03.7	246	18.0	216	46.4	343	46.2
5	172	02.5	206	03.5	261	18.4	231	48.3	358	48.7
6	187	05.0	221	03.3	276	18.8	246	50.1	13	51.1
7	202	07.5	236	03.1	291	19.2	261	52.0	28	53.6
8	217	09.9	251	02.9	306	19.6	276	53.9	43	56.0
9	232	12.4	266	02.6	321	20.1	291	55.7	58	58.4
10	247	14.9	281	02.4	336	20.5	306	57.6	74	00.9
11	262	17.3	296	02.2	351	20.9	321	59.5	89	03.3
12	277	19.8	311	02.0	6	21.3	337	01.3	104	05.8
13	292	22.3	326	01.8	18.0	21	21.7	06.4	119	08.2
14	307	24.7	341	01.6	16.9	36	22.1	06.4	134	10.7
15	322	27.2	356	01.4	15.9	51	22.5	06.4	149	13.1
16	337	29.7	11	01.2	14.8	66	22.9	06.4	164	15.6
17	352	32.1	26	01.1	-15	13.8	81	23.3	-24	06.4
18	7	34.6	41	00.9	-15	12.7	96	23.7	-24	06.4
19	22	37.0	56	00.7	11.7	111	24.2	06.4	82	14.4
20	37	39.5	71	00.5	10.6	126	24.6	06.4	97	16.2
21	52	42.0	86	00.3	09.6	141	25.0	06.4	112	18.1
22	67	44.4	101	00.1	08.5	156	25.4	06.4	127	20.0
23	82	46.9	115	59.9	07.5	171	25.8	06.4	142	21.8
24	97	49.4	130	59.7	-15	06.4	186	26.2	-24	06.4
Dif	—		-2		+10		+4		0	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 16:3 PMG: 12 ^h 02 ^m 2			Edad: 1 ^d 5 PHE { 4 ^h : 54/2 12 ^h : 54/2 20 ^h : 54/3 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	179	30.2	-23	13.2	161	59.1	-22	45.4	60 N	15 01	15 59	16 55	10 23	5	17 04	87	
1	194	29.9		13.0	176	30.4 ¹²³		37.6 ⁷⁸	58	18	16 10	17 02	10 07	10	19	83	
2	209	29.6		12.9	191	01.7 ¹²³		29.7 ⁷⁹	56	33	20	09	9 54	13	32	79	
3	224	29.3		12.7	205	33.1 ¹²⁴		21.8 ⁷⁹	54	45	29	15	42	17	43	76	
4	239	29.0		12.6	220	04.6 ¹²⁵		13.7 ⁸¹	52	15 56	37	21	32	19	17 53	73	
5	254	28.7	-23	12.4	234	36.1 ¹²⁵	-22	05.5 ⁸²	50	16 06	16 44	17 26	9 22	22	18 01	71	
6	269	28.4	-23	12.3	249	07.6 ¹²⁵	-21	57.3 ⁸²	45	16 27	17 00	17 37	9 03	26	18 20	66	
7	284	28.1		12.1	263	39.2 ¹²⁶		48.9 ⁸⁴	40	43	14	48	8 47	29	35	62	
8	299	27.8		12.0	278	10.9 ¹²⁷		40.5 ⁸⁴	35	16 57	25	17 57	33	33	48	59	
9	314	27.5		11.8	292	42.6 ¹²⁷		31.9 ⁸⁶	30	17 09	36	18 06	21	35	18 59	56	
10	329	27.2		11.7	307	14.3 ¹²⁷		23.2 ⁸⁷	20	30	17 54	22	8 01	39	19 18	52	
11	344	26.9	-23	11.5	321	46.1 ¹²⁸	-21	14.5 ⁸⁷	10 N	17 49	18 12	18 38	7 43	43	19 34	48	
12	359	26.6	-23	11.3	336	18.0 ¹²⁹	-21	05.6 ⁸⁹	0	18 06	18 28	18 55	7 27	45	19 49	45	
13	14	26.2		11.2	350	49.9 ¹²⁹	-20	56.7 ⁸⁹	10 S	23	18 46	19 13	7 10	49	20 04	41	
14	29	25.9		11.0	5	21.9 ¹³⁰		47.7 ⁹⁰	20	18 42	19 07	19 36	6 52	53	20 37		
15	44	25.6		10.9	19	53.9 ¹³⁰		38.5 ⁹²	30	19 04	31	20 05	31	57	38	33	
16	59	25.3		10.7	34	26.0 ¹³¹		29.3 ⁹²	35	17	19 46	23	19	59	20 49	30	
17	74	25.0	-23	10.6	48	58.1 ¹³¹	-20	20.0 ⁹³	40	19 32	20 04	20 46	6 05	62	21 01	27	
18	89	24.7	-23	10.4	63	30.3 ¹³²	-20	10.6 ⁹⁴	45	19 49	20 27	21 16	5 49	65	21 15	24	
19	104	24.4		10.2	78	02.5 ¹³²	-20	01.1 ⁹⁵	50	20 12	20 56	22 00	28	70	32	20	
20	119	24.1		10.1	92	34.8 ¹³³	-19	51.5 ⁹⁶	52	22	21 11	22 27	18	73	40	17	
21	134	23.8		09.9	107	07.1 ¹³³		41.9 ⁹⁶	54	34	28	23 10	5 07	75	49	15	
22	149	23.5		09.7	121	39.5 ¹³⁴		32.1 ⁹⁸	56	20 48	21 50	** **	4 54	79	21 59	12	
23	164	23.2		09.6	136	11.9 ¹³⁴		22.3 ⁹⁸	58	21 05	22 19	** **	39	83	22 11	8	
24	179	22.9	-23	09.4	150	44.4 ¹³⁵	-19	12.4 ⁹⁹	60 S	21 25	23 05	** **	4 22	88	22 24	4	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 17 ^h 25 ^m 8		Mag: -4.4 PMG: 15 ^h 16 ^m		Mag: +1.3 PMG: 11 ^h 34 ^m		Mag: -2.0 PMG: 13 ^h 29 ^m		Mag: +1.0 PMG: 5 ^h 01 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	97	49.4	130	59.7	-15	06.4	186	26.2	-24	06.4
1	112	51.8	145	59.5		05.4	201	26.6		06.5
2	127	54.3	160	59.3		04.3	216	27.0		06.5
3	142	56.8	175	59.1		03.2	231	27.4		06.5
4	157	59.2	190	58.9		02.2	246	27.8		06.5
5	173	01.7	205	58.8	-15	01.1	261	28.2	-24	06.5
6	188	04.2	220	58.6	-15	00.1	276	28.6	-24	06.5
7	203	06.6	235	58.4	-14	59.0	291	29.1		06.5
8	218	09.1	250	58.2		58.0	306	29.5		06.5
9	233	11.5	265	58.0		56.9	321	29.9		06.5
10	248	14.0	280	57.8		55.8	336	30.3		06.5
11	263	16.5	295	57.7	-14	54.8	351	30.7	-24	06.5
12	278	18.9	310	57.5	-14	53.7	6	31.1	-24	06.5
13	293	21.4	325	57.3		52.7	21	31.5		06.5
14	308	23.9	340	57.1		51.6	36	31.9		06.5
15	323	26.3	355	56.9		50.5	51	32.3		06.5
16	338	28.8	10	56.8		49.5	66	32.7		06.5
17	353	31.3	25	56.6	-14	48.4	81	33.1	-24	06.4
18	8	33.7	40	56.4	-14	47.3	96	33.5	-24	06.4
19	23	36.2	55	56.2		46.3	111	33.9		06.4
20	38	38.6	70	56.1		45.2	126	34.3		06.4
21	53	41.1	85	55.9		44.1	141	34.8		06.4
22	68	43.6	100	55.7		43.1	156	35.2		06.4
23	83	46.0	115	55.6		42.0	171	35.6		06.4
24	98	48.5	130	55.4	-14	40.9	186	36.0	-24	06.4
Dif	—		-2		+11		+4		0	
							+19		+1	
									+24	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'3 PMG: 12 ^h 02 ^m 7			Edad: 2 ^d 5 PHE { 4 ^h : 54'4 12 ^h : 54'5 20 ^h : 54'6 R°: 43 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora
h	°	'	°	°	'	°	°	h m	h m	h m	h m m	h m m	h m m	
0	179	22.9	-23 09.4	150	44.4	-19 12.4	60 N	7 10	8 06	9 03	10 28 3	18 31 86		
1	194	22.6	09.2	165	16.9 ¹³⁵	-19 02.3 ¹⁰¹	58	7 02	7 55	8 46	17 7	42 82		
2	209	22.3	09.1	179	49.5 ¹³⁶	-18 52.3 ¹⁰⁰	56	6 56	45	32	10 07 10	51 78		
3	224	22.0	08.9	194	22.1 ¹³⁶	42.1 ¹⁰²	54	50	36	19	9 59 12	18 59 76		
4	239	21.7	08.7	208	54.8 ¹³⁷	31.8 ¹⁰³	52	44	28	8 08	51 15	19 06 73		
5	254	21.4	-23 08.6	223	27.6 ¹³⁸	-18 21.5 ¹⁰³	50	6 39	7 20	7 59	9 44 17	19 12 71		
6	269	21.1	-23 08.4	238	00.3 ¹³⁷	-18 11.0 ¹⁰⁵	45	6 27	7 04	7 38	9 29 22	19 26 66		
7	284	20.8	08.2	252	33.2 ¹³⁹	-18 00.5 ¹⁰⁵	40	17	6 51	22	16 26	37 62		
8	299	20.5	08.1	267	06.0 ¹³⁸	-17 50.0 ¹⁰⁵	35	6 08	40	7 08	9 06 28	47 59		
9	314	20.2	07.9	281	38.9 ¹³⁹	39.3 ¹⁰⁷	30	5 59	29	6 55	8 56 32	19 55 56		
10	329	19.9	07.7	296	11.9 ¹⁴⁰	28.6 ¹⁰⁷	20	43	6 11	34	40 36	20 10 51		
11	344	19.6	-23 07.5	310	44.9 ¹⁴⁰	-17 17.8 ¹⁰⁸	10 N	5 27	5 53	6 16	8 26 40	20 22 47		
12	359	19.3	-23 07.4	325	18.0 ¹⁴¹	-17 06.9 ¹⁰⁹	0	5 10	5 36	5 59	8 12 44	20 34 43		
13	14	19.0	07.2	339	51.1 ¹⁴¹	-16 55.9 ¹¹⁰	10 S	4 52	5 19	42	7 59 48	45 39		
14	29	18.7	07.0	354	24.2 ¹⁴¹	44.9 ¹¹⁰	20	29	4 58	23	45 51	20 57 35		
15	44	18.4	06.8	8	57.4 ¹⁴²	33.7 ¹¹²	30	4 00	34	5 01	28 56	21 11 31		
16	59	18.1	06.6	23	30.7 ¹⁴³	22.5 ¹¹²	35	3 42	19	4 48	18 59	19 28		
17	74	17.8	-23 06.5	38	03.9 ¹⁴²	-16 11.3 ¹¹²	40	3 19	4 01	4 33	7 07 63	21 28 25		
18	89	17.5	-23 06.3	52	37.3 ¹⁴⁴	-16 00.0 ¹¹³	45	2 49	3 38	4 16	6 54 66	21 39 21		
19	104	17.2	06.1	67	10.6 ¹⁴³	-15 48.6 ¹¹⁴	50	2 05	3 09	3 53	38 71	52 16		
20	119	16.9	05.9	81	44.0 ¹⁴⁴	37.1 ¹¹⁵	52	1 38	2 54	43	31 73	21 57 14		
21	134	16.6	05.7	96	17.5 ¹⁴⁵	25.5 ¹¹⁶	54	0 56	37	31	22 76	22 04 12		
22	149	16.3	05.6	110	51.0 ¹⁴⁵	13.9 ¹¹⁶	56	** ** *	2 15	17	13 79	11 9		
23	164	16.0	05.4	125	24.5 ¹⁴⁵	-15 02.3 ¹¹⁶	58	** ** *	1 46	3 00	6 02 83	19 6		
24	179	15.7	-23 05.2	139	58.1 ¹⁴⁶	-14 50.5 ¹¹⁸	60 S	** ** *	1 01	2 40	5 50 86	22 28 3		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 17 ^h 21 ^m 9		Mag: -4.4 PMG: 15 ^h 16 ^m		Mag: +1.3 PMG: 11 ^h 33 ^m		Mag: -2.0 PMG: 13 ^h 26 ^m		Mag: +1.0 PMG: 4 ^h 57 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	98	48.5	130 55.4	-14 40.9	186 36.0	-24 06.4	158 08.4	-20 52.1	285 33.9	+5 08.4
1	113	51.0	145 55.2	39.9	201 36.4	06.4	173 10.3	51.9	300 36.4	08.4
2	128	53.4	160 55.1	38.8	216 36.8	06.4	188 12.2	51.8	315 38.8	08.4
3	143	55.9	175 54.9	37.7	231 37.2	06.4	203 14.0	51.7	330 41.3	08.5
4	158	58.4	190 54.7	36.7	246 37.6	06.4	218 15.9	51.6	345 43.7	08.5
5	174	00.8	205 54.6	-14 35.6	261 38.0	-24 06.4	233 17.8	-20 51.5	0 46.2	+5 08.5
6	189	03.3	220 54.4	-14 34.5	276 38.4	-24 06.4	248 19.6	-20 51.4	15 48.7	+5 08.5
7	204	05.8	235 54.2	33.5	291 38.8	06.4	263 21.5	51.3	30 51.1	08.5
8	219	08.2	250 54.1	32.4	306 39.2	06.3	278 23.3	51.2	45 53.6	08.5
9	234	10.7	265 53.9	31.3	321 39.6	06.3	293 25.2	51.0	60 56.0	08.5
10	249	13.1	280 53.7	30.2	336 40.0	06.3	308 27.1	50.9	75 58.5	08.5
11	264	15.6	295 53.6	-14 29.2	351 40.4	-24 06.3	323 28.9	-20 50.8	91 00.9	+5 08.5
12	279	18.1	310 53.4	-14 28.1	6 40.8	-24 06.3	338 30.8	-20 50.7	106 03.4	+5 08.5
13	294	20.5	325 53.3	27.0	21 41.3	06.3	353 32.7	50.6	121 05.8	08.5
14	309	23.0	340 53.1	26.0	36 41.7	06.3	8 34.5	50.5	136 08.3	08.5
15	324	25.5	355 53.0	24.9	51 42.1	06.3	23 36.4	50.4	151 10.7	08.5
16	339	27.9	10 52.8	23.8	66 42.5	06.2	38 38.3	50.2	166 13.2	08.6
17	354	30.4	25 52.6	-14 22.7	81 42.9	-24 06.2	53 40.1	-20 50.1	181 15.6	+5 08.6
18	9	32.9	40 52.5	-14 21.6	96 43.3	-24 06.2	68 42.0	-20 50.0	196 18.1	+5 08.6
19	24	35.3	55 52.3	20.6	111 43.7	06.2	83 43.8	49.9	211 20.6	08.6
20	39	37.8	70 52.2	19.5	126 44.1	06.2	98 45.7	49.8	226 23.0	08.6
21	54	40.3	85 52.0	18.4	141 44.5	06.2	113 47.6	49.7	241 25.5	08.6
22	69	42.7	100 51.9	17.3	156 44.9	06.1	128 49.4	49.6	256 27.9	08.6
23	84	45.2	115 51.7	16.3	171 45.3	06.1	143 51.3	49.4	271 30.4	08.6
24	99	47.6	130 51.6	-14 15.2	186 45.7	-24 06.1	158 53.2	-20 49.3	286 32.8	+5 08.6
Dif	—		-2 +11		+4		0	+19 +1	+25	

UT	SOL				● LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 16:3 PMG: 12 ^h 03 ^m 2				Edad: 3 ^d 5 PHE { SD: 14:9 PMG: 15 ^h 06 ^m 4 ^h : 54/8 12 ^h : 54/9 20 ^h : 55/1 Rº: 43 ^m															
	hG ☉		Dec		hG ☾		Dif				Civil			Náutico		Hora Rº		Hora Rº		
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	m	h m	m				
0	179	15.7	-23	05.2	139	58.1	-14	50.5	60 N	15 04	16 01	16 57	10 31	2	19 57	85				
1	194	15.4		05.0	154	31.7 ¹⁴⁶		38.7 ¹¹⁸	58	21	12	17 04	24	5	20 04	81				
2	209	15.1		04.8	169	05.3 ¹⁴⁶		26.8 ¹¹⁹	56	35	22	11	17	8	09	79				
3	224	14.8		04.6	183	39.0 ¹⁴⁷		14.9 ¹¹⁹	54	47	31	17	11	11	15	75				
4	239	14.5		04.4	198	12.7 ¹⁴⁷	-14	02.9 ¹²⁰	52	15 58	39	22	06	13	19	73				
5	254	14.2	-23	04.3	212	46.5 ¹⁴⁸	-13	50.8 ¹²¹	50	16 08	16 46	17 28	10 01	15	20 23	71				
6	269	13.9	-23	04.1	227	20.3 ¹⁴⁸	-13	38.7 ¹²¹	45	16 28	17 02	17 39	9 51	19	20 32	66				
7	284	13.6		03.9	241	54.1 ¹⁴⁸		26.5 ¹²²	40	45	15	49	42	23	39	63				
8	299	13.3		03.7	256	27.9 ¹⁴⁸		14.3 ¹²²	35	16 59	27	17 58	34	27	46	58				
9	314	13.0		03.5	271	01.8 ¹⁴⁹	-13	01.9 ¹²⁴	30	17 11	37	18 07	28	29	20 51	56				
10	329	12.7		03.3	285	35.8 ¹⁵⁰	-12	49.6 ¹²³	20	32	17 56	23	16	34	21 01	50				
11	344	12.4	-23	03.1	300	09.7 ¹⁴⁹	-12	37.1 ¹²⁵	10 N	17 50	18 13	18 39	9 06	38	21 09	46				
12	359	12.1	-23	02.9	314	43.7 ¹⁵⁰	-12	24.7 ¹²⁴	0	18 07	18 29	18 56	8 56	43	21 17	42				
13	14	11.8		02.7	329	17.7 ¹⁵⁰	-12	12.1 ¹²⁶	10 S	24	18 47	19 14	47	46	24	38				
14	29	11.5		02.5	343	51.7 ¹⁵⁰	-11	59.5 ¹²⁶	20	18 43	19 07	19 36	36	51	32	34				
15	44	11.2		02.3	358	25.8 ¹⁵¹		46.9 ¹²⁶	30	19 04	32	20 05	24	56	42	28				
16	59	10.9		02.1	12	59.9 ¹⁵¹		34.2 ¹²⁷	35	17	19 47	23	17	59	47	26				
17	74	10.6	-23	01.9	27	34.0 ¹⁵¹	-11	21.4 ¹²⁸	40	19 32	20 05	20 46	8 10	62	21 53	22				
18	89	10.3	-23	01.7	42	08.2 ¹⁵²	-11	08.6 ¹²⁸	45	19 50	20 27	21 16	8 00	66	22 00	18				
19	104	10.0		01.5	56	42.4 ¹⁵²	-10	55.7 ¹²⁹	50	20 12	20 56	22 00	7 49	71	08	14				
20	119	09.7		01.3	71	16.6 ¹⁵²		42.8 ¹²⁹	52	22	21 10	22 26	44	73	11	13				
21	134	09.4		01.1	85	50.8 ¹⁵²		29.9 ¹²⁹	54	34	28	23 06	38	76	16	10				
22	149	09.1		00.9	100	25.0 ¹⁵²		16.8 ¹³¹	56	20 48	21 49	** **	32	78	20	8				
23	164	08.8		00.7	114	59.3 ¹⁵³	-10	03.8 ¹³⁰	58	21 04	22 17	** **	25	81	25	5				
24	179	08.6	-23	00.5	129	33.6 ¹⁵³	-9	50.7 ¹³¹	60 S	21 24	23 01	** **	7 16	86	22 31	1				
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 17 ^h 18 ^m 0				Mag: -4.4 PMG: 15 ^h 17 ^m				Mag: +1.3 PMG: 11 ^h 33 ^m				Mag: -2.0 PMG: 13 ^h 23 ^m				Mag: +1.0 PMG: 4 ^h 53 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	99	47.6	130	51.6	-14	15.2	186	45.7	-24	06.1	158	53.2	-20	49.3	286	32.8	+5	08.6		
1	114	50.1	145	51.4		14.1	201	46.1		06.1	173	55.0		49.2	301	35.3		08.6		
2	129	52.6	160	51.3		13.0	216	46.5		06.1	188	56.9		49.1	316	37.7		08.6		
3	144	55.0	175	51.2		11.9	231	46.9		06.1	203	58.7		49.0	331	40.2		08.7		
4	159	57.5	190	51.0		10.9	246	47.3		06.0	219	00.6		48.9	346	42.7		08.7		
5	175	00.0	205	50.9	-14	09.8	261	47.7	-24	06.0	234	02.5	-20	48.8	1	45.1	+5	08.7		
6	190	02.4	220	50.7	-14	08.7	276	48.1	-24	06.0	249	04.3	-20	48.6	16	47.6	+5	08.7		
7	205	04.9	235	50.6		07.6	291	48.5		06.0	264	06.2		48.5	31	50.0		08.7		
8	220	07.4	250	50.4		06.5	306	48.9		06.0	279	08.0		48.4	46	52.5		08.7		
9	235	09.8	265	50.3		05.4	321	49.3		05.9	294	09.9		48.3	61	55.0		08.7		
10	250	12.3	280	50.2		04.4	336	49.7		05.9	309	11.8		48.2	76	57.4		08.7		
11	265	14.8	295	50.0	-14	03.3	351	50.2	-24	05.9	324	13.6	-20	48.1	91	59.9	+5	08.7		
12	280	17.2	310	49.9	-14	02.2	6	50.6	-24	05.9	339	15.5	-20	48.0	107	02.3	+5	08.7		
13	295	19.7	325	49.7	-14	01.1	21	51.0		05.8	354	17.4		47.8	122	04.8		08.8		
14	310	22.1	340	49.6	-14	00.0	36	51.4		05.8	9	19.2		47.7	137	07.2		08.8		
15	325	24.6	355	49.5	-13	58.9	51	51.8		05.8	24	21.1		47.6	152	09.7		08.8		
16	340	27.1	10	49.3		57.8	66	52.2		05.8	39	22.9		47.5	167	12.2		08.8		
17	355	29.5	25	49.2	-13	56.8	81	52.6	-24	05.7	54	24.8	-20	47.4	182	14.6	+5	08.8		
18	10	32.0	40	49.1	-13	55.7	96	53.0	-24	05.7	69	26.7	-20	47.3	197	17.1	+5	08.8		
19	25	34.5	55	48.9		54.6	111	53.4		05.7	84	28.5		47.1	212	19.5		08.8		
20	40	36.9	70	48.8		53.5	126	53.8		05.7	99	30.4		47.0	227	22.0		08.8		
21	55	39.4	85	48.7		52.4	141	54.2		05.6	114	32.3		46.9	242	24.5		08.8		
22	70	41.9	100	48.6		51.3	156	54.6		05.6	129	34.1		46.8	257	26.9		08.8		
23	85	44.3	115	48.4		50.2	171	55.0		05.6	144	36.0		46.7	272	29.4		08.9		
24	100	46.8	130	48.3	-13	49.1	186	55.4	-24	05.6	159	37.8	-20	46.6	287	31.8	+5	08.9		
Dif	—		-1		+11		+4		0		+19		+1		+25		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	48.0	48.1	48.1	48.0	47.8	47.6	47.3	47.1	46.9	46.9	46.9	47.0
2 - β Cas	<i>Caph</i>	2.3	357	36.1	36.3	36.4	36.3	36.0	35.6	35.2	34.9	34.7	34.7	34.8	34.9
3 - γ Peg	<i>Algenib</i>	2.8	356	35.2	35.3	35.3	35.2	35.1	34.8	34.6	34.4	34.3	34.2	34.2	34.3
4 - α Phe	<i>Ankaa</i>	2.4	353	19.7	19.8	19.8	19.8	19.6	19.4	19.1	18.8	18.6	18.6	18.6	18.8
5 - α Cas	<i>Schedar</i>	2.2	349	45.6	45.8	45.9	45.9	45.6	45.3	44.9	44.6	44.3	44.3	44.3	44.4
6 - β Cet	<i>Diphda</i>	2.0	348	60.0	60.1	60.1	60.1	59.9	59.7	59.5	59.2	59.1	59.0	59.0	59.1
7 - γ Cas	<i>Navi</i>	1.6	345	42.2	42.4	42.5	42.5	42.2	41.9	41.4	41.1	40.8	40.7	40.7	40.9
8 - β And	<i>Mirach</i>	2.1	342	27.2	27.3	27.4	27.3	27.2	26.9	26.7	26.4	26.2	26.1	26.1	26.1
9 - α Eri	<i>Achernar</i>	0.5	335	29.5	29.8	29.9	30.0	29.9	29.6	29.3	28.9	28.6	28.5	28.6	28.7
10 - γ And	<i>Almak</i>	2.3	328	53.9	54.1	54.2	54.2	54.1	53.8	53.5	53.2	53.0	52.8	52.8	52.8
12 - α Ari	<i>Hamal</i>	2.0	328	5.4	5.5	5.6	5.6	5.5	5.3	5.1	4.8	4.6	4.5	4.4	4.4
11 - α UMi	<i>Polaris</i>	2.0	319	36.9	49.9	60.7	66.7	65.1	56.3	43.3	28.3	14.8	5.4	1.3	4.4
13 - θ Eri	<i>Acamar</i>	3.3	315	21.1	21.3	21.5	21.6	21.6	21.4	21.2	20.9	20.7	20.5	20.4	20.4
14 - α Cet	<i>Menkar</i>	2.5	314	19.2	19.3	19.4	19.5	19.4	19.3	19.1	18.8	18.6	18.4	18.3	18.3
15 - β Per	<i>Algol</i>	2.1	312	49.3	49.4	49.6	49.6	49.6	49.4	49.1	48.8	48.5	48.3	48.2	48.1
16 - α Per	<i>Mirfak</i>	1.8	308	46.1	46.3	46.5	46.6	46.5	46.3	46.0	45.7	45.4	45.1	44.9	44.9
17 - η Tau	<i>Alcyone</i>	2.9	302	60.2	60.3	60.4	60.5	60.5	60.3	60.1	59.9	59.6	59.4	59.3	59.2
18 - γ Eri	<i>Zaurak</i>	3.0	300	23.6	23.7	23.8	23.9	23.9	23.8	23.6	23.4	23.2	23.0	22.8	22.8
19 - α Tau	<i>Aldebaran</i>	0.9	290	53.9	53.9	54.0	54.1	54.2	54.1	53.9	53.7	53.4	53.2	53.0	52.9
20 - β Ori	<i>Rigel</i>	0.1	281	15.7	15.8	15.9	16.0	16.1	16.0	15.9	15.7	15.5	15.2	15.1	14.9
21 - α Aur	<i>Capella</i>	0.1	280	40.1	40.2	40.4	40.6	40.6	40.6	40.4	40.1	39.7	39.4	39.1	39.0
22 - γ Ori	<i>Bellatrix</i>	1.6	278	36.1	36.2	36.3	36.4	36.5	36.4	36.3	36.1	35.8	35.6	35.4	35.3
23 - β Tau	<i>Elnath</i>	1.7	278	17.5	17.6	17.7	17.8	17.9	17.8	17.6	17.4	17.1	16.9	16.7	16.5
24 - δ Ori	<i>Mintaka</i>	2.2	276	53.3	53.4	53.5	53.6	53.6	53.6	53.5	53.3	53.0	52.8	52.6	52.5
25 - ε Ori	<i>Alnilam</i>	1.7	275	50.2	50.3	50.4	50.5	50.6	50.5	50.4	50.2	50.0	49.8	49.6	49.4
26 - ζ Ori	<i>Alnitak</i>	1.9	274	42.1	42.1	42.2	42.4	42.4	42.4	42.3	42.1	41.9	41.6	41.4	41.3
27 - κ Ori	<i>Saiph</i>	2.1	272	57.5	57.5	57.7	57.8	57.9	57.8	57.7	57.5	57.3	57.1	56.9	56.7
28 - α Ori	<i>Betelgeuse</i>	0.4	271	5.4	5.5	5.6	5.7	5.8	5.7	5.6	5.4	5.2	5.0	4.8	4.6
29 - β Aur	<i>Menkalinan</i>	1.9	269	57.6	57.6	57.8	57.9	58.0	58.0	57.9	57.6	57.3	57.0	56.7	56.5
30 - β CMa	<i>Mirzam</i>	2.0	264	13.7	13.8	13.9	14.0	14.1	14.1	14.1	13.9	13.7	13.5	13.2	13.1
31 - α Car	<i>Canopus</i>	-0.7	263	57.5	57.6	57.8	58.1	58.3	58.4	58.3	58.2	57.9	57.6	57.3	57.1
32 - γ Gem	<i>Alhena</i>	1.9	260	26.8	26.9	26.9	27.1	27.2	27.2	27.1	26.9	26.7	26.4	26.2	26.0
33 - α CMa	<i>Sirius</i>	-1.5	258	37.0	37.0	37.1	37.3	37.4	37.4	37.3	37.2	37.0	36.8	36.5	36.4
34 - ε CMa	<i>Adhara</i>	1.5	255	15.4	15.4	15.5	15.7	15.8	15.9	15.8	15.7	15.5	15.3	15.0	14.8
35 - δ CMa	<i>Wezen</i>	1.9	252	48.7	48.8	48.9	49.0	49.2	49.2	49.2	49.0	48.8	48.6	48.4	48.2
36 - η CMa	<i>Aludra</i>	2.5	248	53.3	53.3	53.4	53.6	53.7	53.8	53.8	53.7	53.5	53.2	53.0	52.8
37 - α Gem	<i>Castor</i>	2.0	246	12.7	12.7	12.8	12.9	13.0	13.0	13.0	12.8	12.6	12.4	12.1	11.8
38 - α CMi	<i>Procyon</i>	0.4	245	3.7	3.6	3.7	3.8	3.9	4.0	3.9	3.8	3.6	3.4	3.2	2.9
39 - β Gem	<i>Pollux</i>	1.1	243	32.3	32.3	32.3	32.5	32.6	32.6	32.6	32.4	32.2	32.0	31.7	31.5
40 - ζ Pup	<i>Naos</i>	2.3	239	1.5	1.5	1.6	1.8	2.0	2.1	2.1	2.0	1.8	1.6	1.3	1.1
41 - γ Vel	<i>Regor</i>	1.8	237	32.8	32.8	32.9	33.1	33.3	33.5	33.5	33.4	33.2	33.0	32.7	32.4
42 - ε Car	<i>Avior</i>	1.9	234	19.2	19.3	19.4	19.7	20.0	20.2	20.3	20.3	20.1	19.8	19.4	19.0
43 - δ Velorum		2.0	228	45.6	45.6	45.7	45.9	46.2	46.4	46.5	46.4	46.3	46.0	45.6	45.3
44 - ζ Hydrae		3.1	226	2.2	2.2	2.2	2.3	2.4	2.4	2.4	2.4	2.2	2.1	1.8	1.6
45 - λ Vel	<i>Suhail</i>	2.2	222	55.2	55.1	55.2	55.3	55.5	55.6	55.7	55.7	55.5	55.3	55.0	54.7
46 - β Car	<i>Miaplacidus</i>	1.7	221	40.1	40.0	40.2	40.6	41.0	41.4	41.7	41.8	41.6	41.2	40.6	40.1
47 - ι Car	<i>Aspidiske</i>	2.3	220	39.9	39.8	39.9	40.2	40.4	40.7	40.8	40.9	40.7	40.4	40.1	39.7
48 - α Lyn	<i>Elvashak</i>	3.1	219	36.3	36.1	36.1	36.2	36.4	36.5	36.5	36.4	36.3	36.1	35.8	35.5
49 - α Hyd	<i>Alphard</i>	2.0	217	59.8	59.7	59.7	59.8	59.9	60.0	60.0	60.0	59.9	59.7	59.5	59.2
50 - α Leo	<i>Regulus</i>	1.4	207	47.6	47.4	47.4	47.5	47.5	47.6	47.7	47.6	47.6	47.4	47.2	46.9

ESTRELLAS, 2008
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	8.3	8.2	8.1	8.1	8.1	8.1	8.2	8.4	8.5	8.6	8.6	8.7
2 - β Cas	<i>Caph</i>	2.3	+59	12.0	11.9	11.7	11.6	11.6	11.6	11.6	11.8	12.0	12.1	12.3	12.3
3 - γ Peg	<i>Algenib</i>	2.8	+15	13.8	13.7	13.7	13.7	13.7	13.8	13.9	14.0	14.1	14.2	14.2	14.2
4 - α Phe	<i>Ankaa</i>	2.4	-42	15.9	15.9	15.8	15.6	15.5	15.3	15.2	15.2	15.3	15.4	15.5	15.6
5 - α Cas	<i>Schedar</i>	2.2	+56	35.2	35.1	35.0	34.9	34.8	34.8	34.9	35.0	35.2	35.4	35.5	35.6
6 - β Cet	<i>Diphda</i>	2.0	-17	56.6	56.6	56.6	56.5	56.4	56.2	56.1	56.1	56.1	56.1	56.2	56.2
7 - γ Cas	<i>Navi</i>	1.6	+60	46.0	45.9	45.8	45.7	45.6	45.5	45.6	45.7	45.9	46.1	46.2	46.3
8 - β And	<i>Mirach</i>	2.1	+35	40.0	40.0	39.9	39.8	39.8	39.8	39.9	40.0	40.1	40.2	40.3	40.4
9 - α Eri	<i>Achernar</i>	0.5	-57	12.0	11.9	11.8	11.6	11.5	11.3	11.2	11.2	11.2	11.4	11.5	11.6
10 - γ And	<i>Almak</i>	2.3	+42	22.4	22.3	22.3	22.2	22.1	22.1	22.2	22.3	22.4	22.5	22.6	22.7
12 - α Ari	<i>Hamal</i>	2.0	+23	30.2	30.2	30.1	30.1	30.1	30.1	30.2	30.3	30.4	30.4	30.5	30.5
11 - α UMi	<i>Polaris</i>	2.0	+89	18.4	18.4	18.3	18.2	18.0	17.9	17.9	17.9	18.0	18.2	18.3	18.5
13 - θ Eri	<i>Acamar</i>	3.3	-40	16.5	16.5	16.5	16.3	16.2	16.0	15.9	15.8	15.8	15.9	16.0	16.2
14 - α Cet	<i>Menkar</i>	2.5	+4	7.3	7.3	7.3	7.3	7.4	7.4	7.5	7.6	7.7	7.7	7.7	7.6
15 - β Per	<i>Algol</i>	2.1	+40	59.5	59.5	59.4	59.3	59.3	59.2	59.3	59.3	59.4	59.5	59.6	59.6
16 - α Per	<i>Mirfak</i>	1.8	+49	53.7	53.7	53.6	53.6	53.5	53.4	53.4	53.4	53.5	53.6	53.7	53.8
17 - η Tau	<i>Alcyone</i>	2.9	+24	8.0	8.0	7.9	7.9	7.9	7.9	7.9	8.0	8.0	8.1	8.1	8.1
18 - γ Eri	<i>Zaurak</i>	3.0	-13	29.1	29.2	29.2	29.1	29.1	28.9	28.8	28.7	28.7	28.7	28.8	28.9
19 - α Tau	<i>Aldebaran</i>	0.9	+16	31.6	31.6	31.6	31.6	31.6	31.6	31.7	31.7	31.8	31.8	31.8	31.8
20 - β Ori	<i>Rigel</i>	0.1	-8	11.5	11.6	11.6	11.6	11.5	11.4	11.3	11.3	11.2	11.2	11.3	11.4
21 - α Aur	<i>Capella</i>	0.1	+46	0.6	0.6	0.6	0.6	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.5
22 - γ Ori	<i>Bellatrix</i>	1.6	+6	21.5	21.4	21.4	21.4	21.5	21.5	21.6	21.6	21.6	21.6	21.6	21.5
23 - β Tau	<i>Elnath</i>	1.7	+28	37.0	37.0	37.0	37.0	37.0	36.9	36.9	36.9	36.9	37.0	37.0	37.0
24 - δ Ori	<i>Mintaka</i>	2.2	-0	17.5	17.6	17.6	17.6	17.6	17.5	17.4	17.4	17.3	17.3	17.4	17.5
25 - ϵ Ori	<i>Alnilam</i>	1.7	-1	11.8	11.8	11.8	11.8	11.8	11.7	11.7	11.6	11.5	11.6	11.6	11.7
26 - ζ Ori	<i>Alnitak</i>	1.9	-1	56.3	56.3	56.3	56.3	56.3	56.2	56.1	56.1	56.0	56.1	56.1	56.2
27 - κ Ori	<i>Saiph</i>	2.1	-9	40.0	40.1	40.1	40.1	40.0	39.9	39.8	39.8	39.7	39.7	39.8	39.9
28 - α Ori	<i>Betelgeuse</i>	0.4	+7	24.6	24.5	24.5	24.5	24.5	24.6	24.6	24.7	24.7	24.7	24.6	24.6
29 - β Aur	<i>Menkalinan</i>	1.9	+44	57.0	57.1	57.1	57.1	57.0	57.0	56.9	56.9	56.8	56.8	56.9	56.9
30 - β CMa	<i>Mirzam</i>	2.0	-17	57.6	57.7	57.7	57.7	57.7	57.6	57.5	57.4	57.3	57.3	57.4	57.5
31 - α Car	<i>Canopus</i>	-0.7	-52	42.0	42.2	42.2	42.2	42.1	42.0	41.8	41.7	41.6	41.6	41.7	41.9
32 - γ Gem	<i>Alhena</i>	1.9	+16	23.6	23.6	23.6	23.6	23.6	23.6	23.6	23.6	23.6	23.6	23.6	23.5
33 - α CMa	<i>Sirius</i>	-1.5	-16	43.6	43.7	43.8	43.8	43.7	43.6	43.5	43.4	43.4	43.4	43.5	43.6
34 - ϵ CMa	<i>Adhara</i>	1.5	-28	59.0	59.1	59.2	59.2	59.1	59.0	58.9	58.8	58.7	58.7	58.8	58.9
35 - δ CMa	<i>Wezen</i>	1.9	-26	24.3	24.5	24.5	24.5	24.5	24.4	24.3	24.2	24.1	24.1	24.2	24.3
36 - η CMa	<i>Aludra</i>	2.5	-29	19.1	19.2	19.3	19.3	19.3	19.2	19.1	19.0	18.9	18.9	19.0	19.1
37 - α Gem	<i>Castor</i>	2.0	+31	52.3	52.3	52.3	52.3	52.3	52.3	52.3	52.2	52.2	52.1	52.1	52.1
38 - α CMi	<i>Procyon</i>	0.4	+5	12.3	12.2	12.2	12.2	12.2	12.2	12.3	12.3	12.3	12.3	12.2	12.1
39 - β Gem	<i>Pollux</i>	1.1	+28	0.4	0.4	0.4	0.5	0.5	0.4	0.4	0.4	0.3	0.3	0.2	0.2
40 - ζ Pup	<i>Naos</i>	2.3	-40	1.5	1.7	1.8	1.8	1.8	1.7	1.6	1.5	1.4	1.3	1.4	1.5
41 - γ Vel	<i>Regor</i>	1.8	-47	21.6	21.7	21.9	21.9	21.9	21.8	21.7	21.5	21.4	21.4	21.5	21.6
42 - ϵ Car	<i>Avior</i>	1.9	-59	32.0	32.2	32.4	32.4	32.4	32.4	32.2	32.1	31.9	31.9	31.9	32.1
43 - δ Velorum		2.0	-54	44.2	44.4	44.5	44.6	44.6	44.6	44.5	44.3	44.2	44.1	44.2	44.3
44 - ζ Hydrae		3.1	+5	54.9	54.8	54.8	54.8	54.8	54.8	54.8	54.9	54.9	54.8	54.7	54.7
45 - λ Vel	<i>Suhail</i>	2.2	-43	27.8	28.0	28.1	28.2	28.2	28.2	28.1	28.0	27.8	27.8	27.8	27.9
46 - β Car	<i>Miaplacidus</i>	1.7	-69	44.9	45.1	45.2	45.4	45.4	45.4	45.3	45.1	45.0	44.9	44.9	45.0
47 - ι Car	<i>Aspidiske</i>	2.3	-59	18.4	18.6	18.8	18.9	18.9	18.9	18.8	18.6	18.5	18.4	18.4	18.5
48 - α Lyn	<i>Elvashak</i>	3.1	+34	21.4	21.4	21.5	21.5	21.6	21.5	21.5	21.4	21.4	21.3	21.2	21.1
49 - α Hyd	<i>Alphard</i>	2.0	-8	41.6	41.7	41.8	41.8	41.8	41.8	41.7	41.7	41.6	41.6	41.7	41.8
50 - α Leo	<i>Regulus</i>	1.4	+11	55.6	55.5	55.5	55.5	55.6	55.6	55.6	55.6	55.6	55.5	55.4	55.3

Nº	NOMBRE	Mag		Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
			°	/	/	/	/	/	/	/	/	/	/	/	/
51 - μ	Velorum	2.7	198	12.9	12.7	12.7	12.8	12.9	13.1	13.2	13.3	13.3	13.1	12.8	12.5
52 - ν	Hydrae	3.1	197	29.3	29.2	29.1	29.1	29.2	29.3	29.4	29.4	29.4	29.2	29.0	28.8
53 - β	UMa Merak	2.4	194	24.5	24.2	24.1	24.2	24.3	24.6	24.7	24.8	24.7	24.6	24.3	23.9
54 - α	UMa Dubhe	1.8	193	55.9	55.6	55.5	55.6	55.8	56.1	56.3	56.4	56.3	56.2	55.8	55.4
55 - β	Leo Denebola	2.1	182	37.6	37.4	37.3	37.3	37.4	37.4	37.5	37.6	37.6	37.5	37.3	37.1
56 - γ	Crv Gienah	2.6	175	56.5	56.3	56.1	56.1	56.1	56.2	56.3	56.3	56.4	56.3	56.1	55.9
57 - α	Cru Acrux	1.4	173	14.1	13.7	13.5	13.5	13.6	13.8	14.0	14.3	14.4	14.3	14.0	13.6
58 - γ	Cru Gacrux	1.6	172	5.6	5.3	5.1	5.0	5.1	5.3	5.5	5.6	5.8	5.7	5.5	5.1
59 - γ	Cen Muhlifain	2.2	169	30.4	30.1	29.9	29.9	29.9	30.0	30.1	30.3	30.4	30.3	30.1	29.8
60 - β	Cru Mimosa	1.3	167	57.0	56.6	56.4	56.3	56.4	56.5	56.7	56.9	57.1	57.0	56.8	56.4
61 - ε	UMa Alioth	1.8	166	23.9	23.5	23.3	23.3	23.3	23.5	23.7	23.9	24.0	24.0	23.9	23.6
62 - α^2	CVn Cor Caroli	2.9	165	53.7	53.4	53.2	53.2	53.2	53.3	53.4	53.5	53.6	53.6	53.5	53.2
63 - ε	Vir Vindemiatrix	2.8	164	21.1	20.9	20.8	20.7	20.7	20.7	20.8	20.9	20.9	20.9	20.8	20.6
64 - ζ	UMa Mizar	2.3	158	56.0	55.6	55.4	55.3	55.3	55.5	55.7	55.9	56.1	56.1	56.0	55.7
65 - α	Vir Spica	1.0	158	35.6	35.4	35.2	35.1	35.1	35.1	35.2	35.3	35.3	35.3	35.2	35.0
66 - η	UMa Alkaid	1.9	153	2.0	1.6	1.4	1.3	1.3	1.4	1.6	1.7	1.9	2.0	1.9	1.7
67 - β	Cen Hadar	0.6	148	54.1	53.7	53.4	53.1	53.1	53.1	53.3	53.5	53.8	53.8	53.7	53.4
68 - θ	Cen Menkent	2.1	148	12.6	12.3	12.1	11.9	11.9	11.9	12.0	12.1	12.2	12.2	12.1	11.9
69 - α	Boo Arcturus	0.0	145	59.5	59.2	59.0	58.9	58.9	58.9	59.0	59.1	59.2	59.2	59.2	59.0
70 - α^1	Cen Rigil Kentaurus	0.0	139	57.9	57.5	57.1	56.8	56.7	56.8	56.9	57.2	57.4	57.5	57.4	57.1
71 - α^2	Lib Zubenelgenubi	2.8	137	10.1	9.9	9.6	9.5	9.4	9.4	9.4	9.5	9.6	9.7	9.6	9.5
72 - β	UMi Kochab	2.1	137	19.8	19.1	18.6	18.2	18.2	18.5	19.0	19.5	20.1	20.5	20.6	20.4
73 - β	Lib Zubeneschamali	2.6	130	38.4	38.2	37.9	37.8	37.7	37.6	37.7	37.7	37.8	37.9	37.9	37.7
74 - α	CrB Alphecca	2.2	126	14.6	14.4	14.1	13.9	13.8	13.8	13.9	14.0	14.1	14.2	14.3	14.1
75 - α	Ser Unukalhai	2.7	123	50.1	49.8	49.6	49.4	49.3	49.3	49.3	49.4	49.5	49.6	49.6	49.5
76 - α	Sco Antares	0.9	112	31.6	31.3	31.1	30.8	30.7	30.6	30.6	30.6	30.8	30.9	30.9	30.8
77 - α	TrA Atria	1.9	107	37.7	37.1	36.5	36.0	35.6	35.4	35.4	35.6	36.0	36.3	36.5	36.3
78 - ε	Scorpii	2.3	107	19.9	19.6	19.3	19.1	18.9	18.7	18.7	18.8	18.9	19.1	19.1	19.0
79 - η	Oph Sabik	2.4	102	17.5	17.3	17.1	16.8	16.7	16.5	16.5	16.5	16.7	16.8	16.8	16.8
80 - α	Her Rasalgethi	3.1	101	14.9	14.7	14.5	14.3	14.1	14.0	14.0	14.1	14.2	14.3	14.4	14.3
81 - λ	Sco Shaula	1.6	96	27.9	27.6	27.3	27.0	26.8	26.6	26.6	26.6	26.8	26.9	27.0	26.9
82 - α	Oph Rasalhague	2.1	96	10.6	10.4	10.1	9.9	9.7	9.6	9.6	9.6	9.7	9.9	10.0	9.9
83 - θ	Sco Sargas	1.9	95	31.8	31.5	31.2	30.9	30.6	30.4	30.4	30.4	30.6	30.7	30.8	30.8
84 - γ	Dra Eltanin	2.2	90	48.5	48.3	48.0	47.7	47.5	47.3	47.4	47.5	47.7	48.0	48.2	48.3
85 - ε	Sgr Kaus Australis	1.9	83	49.6	49.4	49.1	48.8	48.6	48.4	48.3	48.3	48.4	48.6	48.7	48.7
86 - α	Lyr Vega	0.0	80	42.2	42.0	41.8	41.5	41.3	41.1	41.1	41.1	41.3	41.5	41.6	41.7
87 - σ	Sgr Nunki	2.0	76	3.7	3.6	3.3	3.1	2.8	2.6	2.5	2.5	2.6	2.7	2.8	2.8
88 - α	Aql Altair	0.8	62	12.6	12.5	12.3	12.1	11.8	11.6	11.5	11.5	11.5	11.7	11.8	11.8
89 - γ	Cyg Sadr	2.2	54	22.6	22.6	22.4	22.1	21.9	21.6	21.5	21.4	21.5	21.7	21.9	22.0
90 - α	Pav Peacock	1.9	53	26.1	25.9	25.7	25.3	24.9	24.5	24.3	24.2	24.3	24.5	24.7	24.8
91 - α	Cyg Deneb	1.3	49	34.9	34.8	34.6	34.4	34.1	33.8	33.7	33.6	33.7	33.9	34.1	34.2
92 - α	Cep Alderamin	2.4	40	19.2	19.2	19.1	18.7	18.4	18.0	17.7	17.6	17.7	18.0	18.3	18.6
93 - ε	Peg Enif	0.7	33	51.5	51.4	51.3	51.1	50.9	50.7	50.5	50.4	50.4	50.4	50.5	50.6
94 - δ	Cap Deneb Algedi	2.9	33	7.9	7.8	7.7	7.5	7.3	7.1	6.8	6.7	6.7	6.8	6.9	6.9
95 - α	Gru Al Na'ir	1.7	27	49.0	49.0	48.9	48.7	48.4	48.1	47.8	47.6	47.6	47.7	47.8	48.0
96 - β	Gruis	2.1	19	12.9	12.9	12.8	12.6	12.4	12.1	11.8	11.5	11.5	11.5	11.7	11.8
97 - α	PsA Fomalhaut	1.2	15	28.6	28.6	28.6	28.4	28.2	28.0	27.7	27.5	27.4	27.5	27.6	27.7
98 - β	Peg Scheat	2.4	13	57.7	57.7	57.7	57.6	57.3	57.1	56.8	56.6	56.6	56.6	56.7	56.8
99 - α	Peg Markab	2.5	13	42.7	42.7	42.7	42.5	42.3	42.1	41.9	41.7	41.6	41.6	41.7	41.8

ESTRELLAS, 2008
Posiciones aparentes379
DECLINACIÓN

Nº	NOMBRE	Mag		Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
			°	/	/	/	/	/	/	/	/	/	/	/	/
51 - μ	Velorum	2.7	-49	27.6	27.8	28.0	28.1	28.2	28.2	28.1	28.0	27.9	27.8	27.8	27.8
52 - ν	Hydrae	3.1	-16	14.2	14.3	14.4	14.4	14.4	14.4	14.4	14.3	14.3	14.2	14.3	14.4
53 - β	UMa Merak	2.4	+56	20.1	20.1	20.2	20.3	20.4	20.4	20.4	20.3	20.1	20.0	19.8	19.7
54 - α	UMa Dubhe	1.8	+61	42.1	42.2	42.3	42.5	42.5	42.6	42.5	42.4	42.2	42.0	41.9	41.8
55 - β	Leo Denebola	2.1	+14	31.4	31.4	31.4	31.4	31.5	31.5	31.5	31.5	31.5	31.4	31.3	31.2
56 - γ	Crv Gienah	2.6	-17	35.2	35.3	35.4	35.5	35.5	35.5	35.5	35.4	35.4	35.4	35.4	35.5
57 - α	Cru Acrux	1.4	-63	8.4	8.6	8.7	8.9	9.1	9.1	9.1	9.1	8.9	8.8	8.7	8.7
58 - γ	Cru Gacrux	1.6	-57	9.3	9.5	9.6	9.8	9.9	10.0	10.0	9.9	9.8	9.7	9.6	9.6
59 - γ	Cen Muhlifain	2.2	-49	0.1	0.2	0.4	0.5	0.7	0.7	0.7	0.6	0.5	0.4	0.4	0.4
60 - β	Cru Mimosas	1.3	-59	43.8	43.9	44.1	44.3	44.4	44.5	44.5	44.4	44.3	44.2	44.1	44.1
61 - ϵ	UMa Alioth	1.8	+55	54.6	54.6	54.7	54.8	54.9	55.0	55.0	55.0	54.8	54.7	54.5	54.3
62 - α^2	CVn Cor Caroli	2.9	+38	16.2	16.1	16.2	16.3	16.4	16.5	16.5	16.5	16.4	16.2	16.1	15.9
63 - ϵ	Vir Vindemiatrix	2.8	+10	54.8	54.7	54.7	54.7	54.7	54.8	54.8	54.8	54.8	54.7	54.6	54.5
64 - ζ	UMa Mizar	2.3	+54	52.6	52.6	52.7	52.8	52.9	53.0	53.0	53.0	52.9	52.7	52.5	52.4
65 - α	Vir Spica	1.0	-11	12.3	12.4	12.4	12.5	12.5	12.5	12.5	12.4	12.4	12.4	12.4	12.5
66 - η	UMa Alkaid	1.9	+49	16.0	16.0	16.0	16.1	16.3	16.4	16.4	16.4	16.3	16.2	16.0	15.8
67 - β	Cen Hadar	0.6	-60	24.5	24.6	24.8	24.9	25.1	25.2	25.2	25.2	25.1	25.0	24.9	24.8
68 - θ	Cen Menkent	2.1	-36	24.5	24.6	24.7	24.8	24.9	25.0	25.0	24.9	24.9	24.8	24.8	24.8
69 - α	Boo Arcturus	0.0	+19	8.2	8.1	8.1	8.1	8.2	8.3	8.3	8.3	8.3	8.2	8.1	8.0
70 - α^1	Cen Rigil Kentaurus	0.0	-60	52.0	52.0	52.1	52.3	52.4	52.5	52.6	52.6	52.5	52.4	52.3	52.2
71 - α^2	Lib Zubenelgenubi	2.8	-16	4.6	4.7	4.7	4.8	4.8	4.8	4.8	4.8	4.7	4.7	4.7	4.8
72 - β	UMi Kochab	2.1	+74	6.9	6.9	6.9	7.0	7.2	7.3	7.4	7.4	7.3	7.2	7.0	6.8
73 - β	Lib Zubeneshamali	2.6	-9	24.9	24.9	25.0	25.0	25.0	25.0	25.0	24.9	24.9	24.9	24.9	25.0
74 - α	CrB Alphecca	2.2	+26	41.0	40.9	40.9	40.9	41.0	41.1	41.2	41.3	41.2	41.2	41.1	40.9
75 - α	Ser Unukalhai	2.7	+6	23.8	23.7	23.7	23.7	23.8	23.8	23.9	23.9	23.9	23.9	23.9	23.8
76 - α	Sco Antares	0.9	-26	27.0	27.1	27.1	27.1	27.2	27.2	27.2	27.2	27.2	27.2	27.1	27.1
77 - α	TrA Atria	1.9	-69	2.4	2.4	2.4	2.5	2.6	2.7	2.8	2.9	2.9	2.9	2.7	2.6
78 - ϵ	Scorpii	2.3	-34	18.5	18.5	18.5	18.6	18.6	18.7	18.7	18.7	18.7	18.7	18.6	18.6
79 - η	Oph Sabik	2.4	-15	44.2	44.2	44.3	44.3	44.3	44.2	44.2	44.2	44.2	44.2	44.2	44.2
80 - α	Her Rasalgethi	3.1	+14	22.7	22.6	22.5	22.6	22.6	22.7	22.8	22.9	22.9	22.9	22.8	22.7
81 - λ	Sco Shaula	1.6	-37	6.6	6.6	6.6	6.6	6.6	6.7	6.7	6.8	6.8	6.8	6.7	6.7
82 - α	Oph Rasalhague	2.1	+12	33.1	33.0	32.9	33.0	33.0	33.1	33.2	33.3	33.3	33.3	33.3	33.2
83 - θ	Sco Sargas	1.9	-43	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.4	0.4	0.3	0.3
84 - γ	Dra Eltanin	2.2	+51	29.0	28.9	28.8	28.9	29.0	29.2	29.3	29.4	29.5	29.5	29.4	29.2
85 - ϵ	Sgr Kaus Australis	1.9	-34	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	23.0	23.0	22.9	22.9
86 - α	Lyr Vega	0.0	+38	47.3	47.1	47.1	47.1	47.2	47.4	47.5	47.6	47.7	47.7	47.7	47.5
87 - σ	Sgr Nunki	2.0	-26	17.3	17.3	17.3	17.2	17.2	17.2	17.2	17.2	17.2	17.2	17.2	17.2
88 - α	Aql Altair	0.8	+8	53.3	53.2	53.2	53.2	53.3	53.4	53.5	53.6	53.6	53.6	53.6	53.6
89 - γ	Cyg Sadr	2.2	+40	16.9	16.8	16.7	16.6	16.7	16.8	17.0	17.2	17.3	17.4	17.4	17.3
90 - α	Pav Peacock	1.9	-56	42.7	42.6	42.4	42.3	42.3	42.3	42.4	42.5	42.6	42.6	42.6	42.6
91 - α	Cyg Deneb	1.3	+45	18.5	18.4	18.3	18.2	18.3	18.4	18.6	18.8	18.9	19.0	19.0	18.9
92 - α	Cep Alderamin	2.4	+62	37.3	37.1	37.0	36.9	36.9	37.0	37.2	37.4	37.6	37.7	37.7	37.7
93 - ϵ	Peg Enif	0.7	+9	54.7	54.6	54.6	54.6	54.7	54.8	54.9	55.0	55.1	55.1	55.1	55.1
94 - δ	Cap Deneb Algedi	2.9	-16	5.6	5.5	5.5	5.4	5.3	5.3	5.2	5.2	5.2	5.2	5.2	5.2
95 - α	Gru Al Na'ir	1.7	-46	55.5	55.4	55.3	55.1	55.0	55.0	54.9	55.0	55.1	55.2	55.2	55.2
96 - β	Gruis	2.1	-46	50.8	50.6	50.5	50.4	50.2	50.2	50.1	50.2	50.3	50.4	50.4	50.4
97 - α	PsA Fomalhaut	1.2	-29	34.9	34.9	34.8	34.7	34.6	34.5	34.4	34.4	34.4	34.5	34.5	34.6
98 - β	Peg Scheat	2.4	+28	7.7	7.6	7.5	7.5	7.5	7.6	7.7	7.9	8.0	8.1	8.1	8.1
99 - α	Peg Markab	2.5	+15	15.0	14.9	14.9	14.9	14.9	15.0	15.1	15.2	15.3	15.4	15.4	15.4

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

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

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, 2008

TABLA I

h.L.Υ	Corr.	h.L.Υ	Corr.	h.L.Υ	Corr.	h.L.Υ	Corr.	h.L.Υ	Corr.	h.L.Υ	Corr.	h.L.Υ	Corr.
° /	'	° /	'	° /	'	° /	'	° /	'	° /	'	° /	'
0 00	-31.8	26 00	-40.5	52 00	-41.0	78 00	-33.1	104 00	-18.6	130 00	-0.3	156 00	+18.0
0 30	-32.1	26 30	-40.6	52 30	-40.9	78 30	-32.9	104 30	-18.3	130 30	+0.1	156 30	+18.4
1 00	-32.3	27 00	-40.7	53 00	-40.8	79 00	-32.7	105 00	-17.9	131 00	+0.4	157 00	+18.7
1 30	-32.5	27 30	-40.7	53 30	-40.7	79 30	-32.5	105 30	-17.6	131 30	+0.8	157 30	+19.0
2 00	-32.8	28 00	-40.8	54 00	-40.6	80 00	-32.2	106 00	-17.3	132 00	+1.2	158 00	+19.4
2 30	-33.0	28 30	-40.9	54 30	-40.5	80 30	-32.0	106 30	-16.9	132 30	+1.5	158 30	+19.7
3 00	-33.2	29 00	-41.0	55 00	-40.5	81 00	-31.7	107 00	-16.6	133 00	+1.9	159 00	+20.0
3 30	-33.4	29 30	-41.0	55 30	-40.4	81 30	-31.5	107 30	-16.3	133 30	+2.2	159 30	+20.3
4 00	-33.6	30 00	-41.1	56 00	-40.3	82 00	-31.3	108 00	-15.9	134 00	+2.6	160 00	+20.6
4 30	-33.9	30 30	-41.2	56 30	-40.2	82 30	-31.0	108 30	-15.6	134 30	+3.0	160 30	+21.0
5 00	-34.1	31 00	-41.2	57 00	-40.1	83 00	-30.8	109 00	-15.3	135 00	+3.3	161 00	+21.3
5 30	-34.3	31 30	-41.3	57 30	-40.0	83 30	-30.5	109 30	-14.9	135 30	+3.7	161 30	+21.6
6 00	-34.5	32 00	-41.4	58 00	-39.9	84 00	-30.3	110 00	-14.6	136 00	+4.1	162 00	+21.9
6 30	-34.7	32 30	-41.4	58 30	-39.7	84 30	-30.0	110 30	-14.2	136 30	+4.4	162 30	+22.2
7 00	-34.9	33 00	-41.5	59 00	-39.6	85 00	-29.8	111 00	-13.9	137 00	+4.8	163 00	+22.5
7 30	-35.1	33 30	-41.5	59 30	-39.5	85 30	-29.5	111 30	-13.6	137 30	+5.2	163 30	+22.8
8 00	-35.3	34 00	-41.5	60 00	-39.4	86 00	-29.3	112 00	-13.2	138 00	+5.5	164 00	+23.1
8 30	-35.5	34 30	-41.6	60 30	-39.3	86 30	-29.0	112 30	-12.9	138 30	+5.9	164 30	+23.4
9 00	-35.7	35 00	-41.6	61 00	-39.1	87 00	-28.7	113 00	-12.5	139 00	+6.2	165 00	+23.7
9 30	-35.9	35 30	-41.6	61 30	-39.0	87 30	-28.5	113 30	-12.2	139 30	+6.6	165 30	+24.0
10 00	-36.0	36 00	-41.7	62 00	-38.9	88 00	-28.2	114 00	-11.8	140 00	+7.0	166 00	+24.3
10 30	-36.2	36 30	-41.7	62 30	-38.7	88 30	-27.9	114 30	-11.5	140 30	+7.3	166 30	+24.6
11 00	-36.4	37 00	-41.7	63 00	-38.6	89 00	-27.7	115 00	-11.1	141 00	+7.7	167 00	+24.9
11 30	-36.6	37 30	-41.7	63 30	-38.5	89 30	-27.4	115 30	-10.8	141 30	+8.0	167 30	+25.2
12 00	-36.8	38 00	-41.8	64 00	-38.3	90 00	-27.1	116 00	-10.4	142 00	+8.4	168 00	+25.5
12 30	-36.9	38 30	-41.8	64 30	-38.2	90 30	-26.8	116 30	-10.1	142 30	+8.7	168 30	+25.8
13 00	-37.1	39 00	-41.8	65 00	-38.0	91 00	-26.5	117 00	-9.7	143 00	+9.1	169 00	+26.1
13 30	-37.3	39 30	-41.8	65 30	-37.9	91 30	-26.3	117 30	-9.3	143 30	+9.5	169 30	+26.4
14 00	-37.4	40 00	-41.8	66 00	-37.7	92 00	-26.0	118 00	-9.0	144 00	+9.8	170 00	+26.6
14 30	-37.6	40 30	-41.8	66 30	-37.5	92 30	-25.7	118 30	-8.6	144 30	+10.2	170 30	+26.9
15 00	-37.8	41 00	-41.8	67 00	-37.4	93 00	-25.4	119 00	-8.3	145 00	+10.5	171 00	+27.2
15 30	-37.9	41 30	-41.8	67 30	-37.2	93 30	-25.1	119 30	-7.9	145 30	+10.9	171 30	+27.5
16 00	-38.1	42 00	-41.8	68 00	-37.1	94 00	-24.8	120 00	-7.6	146 00	+11.2	172 00	+27.7
16 30	-38.2	42 30	-41.8	68 30	-36.9	94 30	-24.5	120 30	-7.2	146 30	+11.6	172 30	+28.0
17 00	-38.4	43 00	-41.8	69 00	-36.7	95 00	-24.2	121 00	-6.8	147 00	+11.9	173 00	+28.3
17 30	-38.5	43 30	-41.7	69 30	-36.5	95 30	-23.9	121 30	-6.5	147 30	+12.3	173 30	+28.6
18 00	-38.6	44 00	-41.7	70 00	-36.4	96 00	-23.6	122 00	-6.1	148 00	+12.6	174 00	+28.8
18 30	-38.8	44 30	-41.7	70 30	-36.2	96 30	-23.3	122 30	-5.8	148 30	+13.0	174 30	+29.1
19 00	-38.9	45 00	-41.7	71 00	-36.0	97 00	-23.0	123 00	-5.4	149 00	+13.3	175 00	+29.3
19 30	-39.0	45 30	-41.6	71 30	-35.8	97 30	-22.7	123 30	-5.0	149 30	+13.7	175 30	+29.6
20 00	-39.2	46 00	-41.6	72 00	-35.6	98 00	-22.4	124 00	-4.7	150 00	+14.0	176 00	+29.9
20 30	-39.3	46 30	-41.6	72 30	-35.4	98 30	-22.1	124 30	-4.3	150 30	+14.4	176 30	+30.1
21 00	-39.4	47 00	-41.5	73 00	-35.2	99 00	-21.8	125 00	-3.9	151 00	+14.7	177 00	+30.4
21 30	-39.5	47 30	-41.5	73 30	-35.0	99 30	-21.5	125 30	-3.6	151 30	+15.0	177 30	+30.6
22 00	-39.7	48 00	-41.4	74 00	-34.8	100 00	-21.2	126 00	-3.2	152 00	+15.4	178 00	+30.9
22 30	-39.8	48 30	-41.4	74 30	-34.6	100 30	-20.9	126 30	-2.9	152 30	+15.7	178 30	+31.1
23 00	-39.9	49 00	-41.3	75 00	-34.4	101 00	-20.5	127 00	-2.5	153 00	+16.1	179 00	+31.3
23 30	-40.0	49 30	-41.3	75 30	-34.2	101 30	-20.2	127 30	-2.1	153 30	+16.4	179 30	+31.6
24 00	-40.1	50 00	-41.2	76 00	-34.0	102 00	-19.9	128 00	-1.8	154 00	+16.7	180 00	+31.8
24 30	-40.2	50 30	-41.2	76 30	-33.8	102 30	-19.6	128 30	-1.4	154 30	+17.1	180 30	+32.1
25 00	-40.3	51 00	-41.1	77 00	-33.6	103 00	-19.3	129 00	-1.0	155 00	+17.4	181 00	+32.3
25 30	-40.4	51 30	-41.0	77 30	-33.4	103 30	-18.9	129 30	-0.7	155 30	+17.7	181 30	+32.5
26 00	-40.5	52 00	-41.0	78 00	-33.1	104 00	-18.6	130 00	-0.3	156 00	+18.0	182 00	+32.8

DETERMINACIÓN DE LA LATITUD
POR LA OBSERVACIÓN DE UNA ALTURA DE LA POLAR, 2008

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TABLA I

h.L.Υ	Corr.	h.L.Υ	Corr.	h.L.Υ	Corr.	h.L.Υ	Corr.	h.L.Υ	Corr.	h.L.Υ	Corr.	h.L.Υ	Corr.
° /	'	° /	'	° /	'	° /	'	° /	'	° /	'	° /	'
182 00	+32.8	208 00	+40.8	234 00	+40.6	260 00	+32.2	286 00	+17.3	312 00	-1.2	338 00	-19.4
182 30	+33.0	208 30	+40.9	234 30	+40.5	260 30	+32.0	286 30	+16.9	312 30	-1.5	338 30	-19.7
183 00	+33.2	209 00	+41.0	235 00	+40.5	261 00	+31.7	287 00	+16.6	313 00	-1.9	339 00	-20.0
183 30	+33.4	209 30	+41.0	235 30	+40.4	261 30	+31.5	287 30	+16.3	313 30	-2.2	339 30	-20.3
184 00	+33.6	210 00	+41.1	236 00	+40.3	262 00	+31.3	288 00	+15.9	314 00	-2.6	340 00	-20.6
184 30	+33.9	210 30	+41.2	236 30	+40.2	262 30	+31.0	288 30	+15.6	314 30	-3.0	340 30	-21.0
185 00	+34.1	211 00	+41.2	237 00	+40.1	263 00	+30.8	289 00	+15.3	315 00	-3.3	341 00	-21.3
185 30	+34.3	211 30	+41.3	237 30	+40.0	263 30	+30.5	289 30	+14.9	315 30	-3.7	341 30	-21.6
186 00	+34.5	212 00	+41.4	238 00	+39.9	264 00	+30.3	290 00	+14.6	316 00	-4.1	342 00	-21.9
186 30	+34.7	212 30	+41.4	238 30	+39.7	264 30	+30.0	290 30	+14.2	316 30	-4.4	342 30	-22.2
187 00	+34.9	213 00	+41.5	239 00	+39.6	265 00	+29.8	291 00	+13.9	317 00	-4.8	343 00	-22.5
187 30	+35.1	213 30	+41.5	239 30	+39.5	265 30	+29.5	291 30	+13.6	317 30	-5.2	343 30	-22.8
188 00	+35.3	214 00	+41.5	240 00	+39.4	266 00	+29.3	292 00	+13.2	318 00	-5.5	344 00	-23.1
188 30	+35.5	214 30	+41.6	240 30	+39.3	266 30	+29.0	292 30	+12.9	318 30	-5.9	344 30	-23.4
189 00	+35.7	215 00	+41.6	241 00	+39.1	267 00	+28.7	293 00	+12.5	319 00	-6.2	345 00	-23.7
189 30	+35.9	215 30	+41.6	241 30	+39.0	267 30	+28.5	293 30	+12.2	319 30	-6.6	345 30	-24.0
190 00	+36.0	216 00	+41.7	242 00	+38.9	268 00	+28.2	294 00	+11.8	320 00	-7.0	346 00	-24.3
190 30	+36.2	216 30	+41.7	242 30	+38.7	268 30	+27.9	294 30	+11.5	320 30	-7.3	346 30	-24.6
191 00	+36.4	217 00	+41.7	243 00	+38.6	269 00	+27.7	295 00	+11.1	321 00	-7.7	347 00	-24.9
191 30	+36.6	217 30	+41.7	243 30	+38.5	269 30	+27.4	295 30	+10.8	321 30	-8.0	347 30	-25.2
192 00	+36.8	218 00	+41.8	244 00	+38.3	270 00	+27.1	296 00	+10.4	322 00	-8.4	348 00	-25.5
192 30	+36.9	218 30	+41.8	244 30	+38.2	270 30	+26.8	296 30	+10.1	322 30	-8.7	348 30	-25.8
193 00	+37.1	219 00	+41.8	245 00	+38.0	271 00	+26.5	297 00	+9.7	323 00	-9.1	349 00	-26.1
193 30	+37.3	219 30	+41.8	245 30	+37.9	271 30	+26.3	297 30	+9.3	323 30	-9.5	349 30	-26.4
194 00	+37.4	220 00	+41.8	246 00	+37.7	272 00	+26.0	298 00	+9.0	324 00	-9.8	350 00	-26.6
194 30	+37.6	220 30	+41.8	246 30	+37.5	272 30	+25.7	298 30	+8.6	324 30	-10.2	350 30	-26.9
195 00	+37.8	221 00	+41.8	247 00	+37.4	273 00	+25.4	299 00	+8.3	325 00	-10.5	351 00	-27.2
195 30	+37.9	221 30	+41.8	247 30	+37.2	273 30	+25.1	299 30	+7.9	325 30	-10.9	351 30	-27.5
196 00	+38.1	222 00	+41.8	248 00	+37.1	274 00	+24.8	300 00	+7.6	326 00	-11.2	352 00	-27.7
196 30	+38.2	222 30	+41.8	248 30	+36.9	274 30	+24.5	300 30	+7.2	326 30	-11.6	352 30	-28.0
197 00	+38.4	223 00	+41.8	249 00	+36.7	275 00	+24.2	301 00	+6.8	327 00	-11.9	353 00	-28.3
197 30	+38.5	223 30	+41.7	249 30	+36.5	275 30	+23.9	301 30	+6.5	327 30	-12.3	353 30	-28.6
198 00	+38.6	224 00	+41.7	250 00	+36.4	276 00	+23.6	302 00	+6.1	328 00	-12.6	354 00	-28.8
198 30	+38.8	224 30	+41.7	250 30	+36.2	276 30	+23.3	302 30	+5.8	328 30	-13.0	354 30	-29.1
199 00	+38.9	225 00	+41.7	251 00	+36.0	277 00	+23.0	303 00	+5.4	329 00	-13.3	355 00	-29.3
199 30	+39.0	225 30	+41.6	251 30	+35.8	277 30	+22.7	303 30	+5.0	329 30	-13.7	355 30	-29.6
200 00	+39.2	226 00	+41.6	252 00	+35.6	278 00	+22.4	304 00	+4.7	330 00	-14.0	356 00	-29.9
200 30	+39.3	226 30	+41.6	252 30	+35.4	278 30	+22.1	304 30	+4.3	330 30	-14.4	356 30	-30.1
201 00	+39.4	227 00	+41.5	253 00	+35.2	279 00	+21.8	305 00	+3.9	331 00	-14.7	357 00	-30.4
201 30	+39.5	227 30	+41.5	253 30	+35.0	279 30	+21.5	305 30	+3.6	331 30	-15.0	357 30	-30.6
202 00	+39.7	228 00	+41.4	254 00	+34.8	280 00	+21.2	306 00	+3.2	332 00	-15.4	358 00	-30.9
202 30	+39.8	228 30	+41.4	254 30	+34.6	280 30	+20.9	306 30	+2.9	332 30	-15.7	358 30	-31.1
203 00	+39.9	229 00	+41.3	255 00	+34.4	281 00	+20.5	307 00	+2.5	333 00	-16.1	359 00	-31.3
203 30	+40.0	229 30	+41.3	255 30	+34.2	281 30	+20.2	307 30	+2.1	333 30	-16.4	359 30	-31.6
204 00	+40.1	230 00	+41.2	256 00	+34.0	282 00	+19.9	308 00	+1.8	334 00	-16.7	360 00	-31.8
204 30	+40.2	230 30	+41.2	256 30	+33.8	282 30	+19.6	308 30	+1.4	334 30	-17.1		
205 00	+40.3	231 00	+41.1	257 00	+33.6	283 00	+19.3	309 00	+1.0	335 00	-17.4		
205 30	+40.4	231 30	+41.0	257 30	+33.4	283 30	+18.9	309 30	+0.7	335 30	-17.7		
206 00	+40.5	232 00	+41.0	258 00	+33.1	284 00	+18.6	310 00	+0.3	336 00	-18.0		
206 30	+40.6	232 30	+40.9	258 30	+32.9	284 30	+18.3	310 30	-0.1	336 30	-18.4		
207 00	+40.7	233 00	+40.8	259 00	+32.7	285 00	+17.9	311 00	-0.4	337 00	-18.7		
207 30	+40.7	233 30	+40.7	259 30	+32.5	285 30	+17.6	311 30	-0.8	337 30	-19.0		
208 00	+40.8	234 00	+40.6	260 00	+32.2	286 00	+17.3	312 00	-1.2	338 00	-19.4		

DETERMINACIÓN DE LA LATITUD
POR LA OBSERVACIÓN DE UNA ALTURA DE LA POLAR, 2008

TABLA II

(SIEMPRE POSITIVA)

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

TABLA III

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

Dic 32 corresponde al 1 de enero del año siguiente

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

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

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

**CORRECCIONES PARA OBTENER LA ALTURA VERDADERA
DEL SOL (LIMBO INFERIOR), PLANETA O ESTRELLA, 2008**

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TABLA A				TABLA B = SOL (LIMBO INFERIOR)											
Depresión del horizonte				Semidiámetro, refracción y paralaje										Correc. adicional (2008)	
Elevación del observador	Corrección	Elevación del observador	Corrección	Altura apte. ⊙	Corrección	Altura apte. ⊙	Corrección	Altura apte. ⊙	Corrección	Altura apte. ⊙	Corrección				
				° /	'	° /	'	° /	'	° /	'	° /	'	Ene 1	+0'3
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 23	+0'2
1.7	-2.4	13.1	-6.5	6 21	+8.3	8 54	+10.3	13 44	+12.3	27 12	+14.3			Feb 27	+0'1
1.9	-2.5	13.6	-6.6	6 27	+8.4	9 05	+10.4	14 06	+12.4	28 32	+14.4			Mar 22	0'0
2.0	-2.6	14.0	-6.7	6 33	+8.5	9 15	+10.5	14 29	+12.5	29 59	+14.5			Abr 12	-0'1
2.2	-2.7	14.4	-6.8	6 40	+8.6	9 26	+10.6	14 53	+12.6	31 34	+14.6			May 6	-0'2
2.3	-2.8	14.8	-6.9	6 46	+8.7	9 37	+10.7	15 18	+12.7	33 19	+14.7			Jun 11	-0'3
2.5	-2.9	15.3	-7.0	6 53	+8.8	9 47	+10.8	15 45	+12.8	35 16	+14.8			Jul 27	-0'2
2.7	-3.0	15.7	-7.1	7 00	+8.9	10 00	+10.9	16 13	+12.9	37 25	+14.9			Sep 1	-0'1
2.9	-3.1	16.2	-7.2	7 06	+9.0	10 12	+11.0	16 43	+13.0	39 49	+15.0			Sep 25	0'0
3.1	-3.2	16.6	-7.3	7 14	+9.1	10 25	+11.1	17 14	+13.1	42 30	+15.1			Oct 17	+0'1
3.3	-3.3	17.1	-7.4	7 21	+9.2	10 38	+11.2	17 47	+13.2	45 30	+15.2			Nov 9	+0'2
3.5	-3.4	17.6	-7.5	7 28	+9.3	10 52	+11.3	18 23	+13.3	48 53	+15.3			Dic 14	+0'3
3.7	-3.5	18.0	-7.6	7 36	+9.4	11 06	+11.4	19 01	+13.4	52 43	+15.4			Dic 31	
3.9	-3.6	18.5	-7.7	7 44	+9.5	11 21	+11.5	19 41	+13.5	57 01	+15.5				
4.2	-3.7	19.0	-7.8	7 52	+9.6	11 36	+11.6	20 24	+13.6	61 51	+15.6				
4.4	-3.8	19.5	-7.9	8 00	+9.7	11 52	+11.7	21 10	+13.7	67 16	+15.7				
4.7	-3.9	20.0	-8.0	8 08	+9.8	12 09	+11.8	21 59	+13.8	73 14	+15.8				
4.9	-4.0	20.5	-8.1	8 17	+9.9	12 26	+11.9	22 53	+13.9	79 42	+15.9				
5.2	-4.1	21.0	-8.2	8 26	+10.0	12 44	+12.0	23 50	+14.0	86 30	+16.0				
5.4	-4.2	21.5	-8.3	8 35	+10.1	13 03	+12.1	24 52	+14.1	90 00					
5.7	-4.3	22.1	-8.4	8 45		13 23		25 59							
6.0	-4.4	22.6	-8.5												
6.2	-4.5	23.1	-8.6												
6.5	-4.6	23.7	-8.7												
6.8	-4.7	24.2	-8.8												
7.1	-4.8	24.8	-8.9												
7.4	-4.9	25.4	-9.0												
7.7	-5.0	25.9	-9.1												
8.0	-5.1	26.5	-9.2												
8.4	-5.2	27.1	-9.3												
8.7	-5.3	27.7	-9.4												
9.0	-5.4	28.3	-9.5												
9.4	-5.5	28.9	-9.6												
9.7	-5.6	29.5	-9.7												
10.1	-5.7	30.1	-9.8												
10.4	-5.8	30.7	-9.9												
10.8	-5.9	31.3	-10.0												
11.2	-6.0	32.0	-10.1												
11.6	-6.1	32.6	-10.2												
11.9	-6.2	33.3	-10.3												
12.3	-6.3	33.9	-10.4												
12.7		34.6													

TABLA C = PLANETAS Y ESTRELLAS											
Refracción						Paralaje (2008)					
Altura apte.	Corrección	Altura apte.	Corrección	Fechas		Venus para cualquier altura	Marte				
° /	'	° /	'				Altura aparente				
							< 30°	> 30° < 60°	> 60°		
6 30	-7.8	14 00	-3.8	Ene	1		+0'1	+0'2	+0'2	+0'1	
6 40	-7.6	15 00	-3.6								
6 50	-7.5	16 00	-3.3	Ene	19		+0'1	+0'2	+0'1	+0'1	
7 00	-7.3	17 00	-3.1								
7 15	-7.1	18 00	-3.0	Feb	17		+0'1	+0'2	+0'1	+0'1	
7 30	-6.9	19 00	-2.8								
7 45	-6.7	20 00	-2.6	Feb	26		+0'1	+0'2	+0'1	+0'1	
8 00	-6.5	21 00	-2.5								
8 15	-6.3	22 00	-2.4	Jun	25		+0'1	+0'2	+0'1	0'0	
8 30	-6.2	24 00	-2.2								
8 45	-6.0	26 00	-2.0	Dic	18		+0'1	+0'1	0'0	0'0	
9 00	-5.9	28 00	-1.8								
9 20	-5.7	32 00	-1.6	Dic	31		+0'2	+0'1	0'0	0'0	
9 40	-5.5	36 00	-1.3								
10 00	-5.3	40 00	-1.2								
10 30	-5.1	45 00	-1.0								
11 00	-4.8	50 00	-0.8								
11 30	-4.6	60 00	-0.6								
12 00	-4.5	70 00	-0.4								
12 30	-4.3	80 00	-0.2								
13 00	-4.1	90 00	0.0								

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