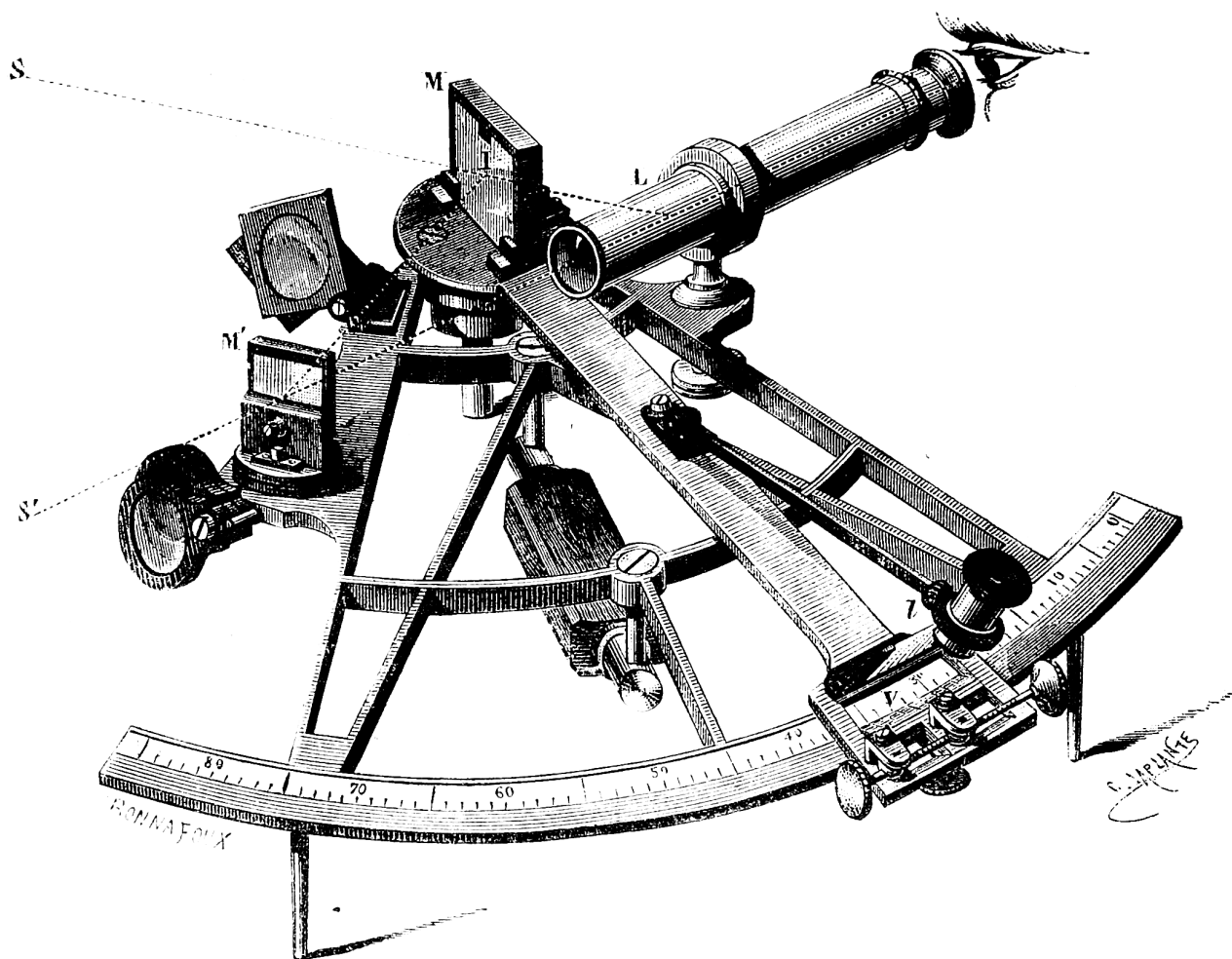




ALMANAQUE NÁUTICO PERSEIS 2005

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

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Introducción

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

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

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

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

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

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

UT	SOL			LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'3 PMG: 12 ^h 03 ^m 7			Edad: 19 ^d 9 PHE { 4 ^h : 55'0 12 ^h : 55'1 20 ^h : 55'3 SD: 14'9 PMG: 4 ^h 14 ^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	179	08.6	-23	00.7	298	23.8	+11	38.6	60 N	7 09	8 06	9 02	21 58	86	11 29 0
1	194	08.3		00.5	312	58.3 ¹⁵⁵		25.4 ¹³²	58	7 02	7 54	8 45	22 01	83	24 3
2	209	08.0		00.3	327	32.8 ¹⁵⁵	+11	12.2 ¹³²	56	6 56	44	31	05 79		20 6
3	224	07.7	-23	00.1	342	07.4 ¹⁵⁶	+10	59.0 ¹³²	54	50	36	19	08 76		16 8
4	239	07.4	-22	59.9	356	42.0 ¹⁵⁶		45.7 ¹³³	52	44	28	8 08	10 74		12 11
5	254	07.1	-22	59.7	11	16.6 ¹⁵⁶	+10	32.3 ¹³⁴	50	6 39	7 20	7 59	22 13	72	11 09 13
6	269	06.8	-22	59.5	25	51.3 ¹⁵⁷	+10	19.0 ¹³³	45	6 28	7 05	7 38	22 18	67	11 02 17
7	284	06.5		59.3	40	25.9 ¹⁵⁶	+10	05.5 ¹³⁵	40	18	6 52	22	23 62		10 56 21
8	299	06.2		59.1	55	00.6 ¹⁵⁷	+9	52.0 ¹³⁵	35	08	40	7 08	26 59		50 25
9	314	05.9		58.9	69	35.3 ¹⁵⁷		38.5 ¹³⁵	30	6 00	30	6 56	30 56		46 27
10	329	05.6		58.6	84	10.0 ¹⁵⁷		24.9 ¹³⁶	20	5 44	6 11	35	35 51		38 32
11	344	05.3	-22	58.4	98	44.7 ¹⁵⁷	+9	11.3 ¹³⁶	10 N	5 28	5 54	6 17	22 40	46	10 30 38
12	359	05.0	-22	58.2	113	19.5 ¹⁵⁸	+8	57.6 ¹³⁷	0	5 11	5 37	6 00	22 45	42	10 24 41
13	14	04.8		58.0	127	54.2 ¹⁵⁷		43.8 ¹³⁸	10 S	4 53	20	5 43	50 37		17 45
14	29	04.5		57.8	142	29.0 ¹⁵⁸		30.1 ¹³⁷	20	30	5 00	24	22 55	33	09 51
15	44	04.2		57.6	157	03.8 ¹⁵⁸		16.3 ¹³⁸	30	4 02	4 35	5 02	23 01	27	10 01 56
16	59	03.9		57.4	171	38.6 ¹⁵⁸	+8	02.4 ¹³⁹	35	3 44	20	4 50	04 24		9 56 59
17	74	03.6	-22	57.1	186	13.4 ¹⁵⁸	+7	48.5 ¹³⁹	40	3 21	4 02	4 35	23 07	22	9 50 63
18	89	03.3	-22	56.9	200	48.2 ¹⁵⁸	+7	34.6 ¹³⁹	45	2 51	3 40	4 17	23 12	17	9 44 66
19	104	03.0		56.7	215	23.0 ¹⁵⁸		20.6 ¹⁴⁰	50	2 07	3 11	3 55	17 12		36 71
20	119	02.7		56.5	229	57.9 ¹⁵⁹	+7	06.6 ¹⁴⁰	52	1 41	2 57	45	19 11		32 74
21	134	02.4		56.3	244	32.7 ¹⁵⁸	+6	52.5 ¹⁴¹	54	1 01	39	33	22 8		28 76
22	149	02.1		56.1	259	07.5 ¹⁵⁸		38.4 ¹⁴¹	56	** **	2 18	19	24 6		24 79
23	164	01.8		55.8	273	42.4 ¹⁵⁹		24.3 ¹⁴¹	58	** **	1 50	3 03	27 3		19 82
24	179	01.5	-22	55.6	288	17.2 ¹⁵⁸	+6	10.1 ¹⁴²	60 S	** **	1 06	2 43	23 31	0	9 13 86

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 17 ^h 14 ^m 2		Mag: -3.9 PMG: 10 ^h 31 ^m		Mag: +1.6 PMG: 9 ^h 26 ^m		Mag: -2.0 PMG: 6 ^h 22 ^m		Mag: -0.3 PMG: 1 ^h 04 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	100	44.6	202	31.9	-22	15.4	218	20.4	-20	51.5
1	115	47.1	217	31.0		15.8	233	21.0		51.9
2	130	49.5	232	30.1		16.1	248	21.7		52.2
3	145	52.0	247	29.2		16.5	263	22.4		52.6
4	160	54.5	262	28.3		16.8	278	23.0		52.9
5	175	56.9	277	27.4	-22	17.2	293	23.7	-20	53.3
6	190	59.4	292	26.5	-22	17.5	308	24.3	-20	53.6
7	206	01.9	307	25.6		17.9	323	25.0		53.9
8	221	04.3	322	24.7		18.2	338	25.7		54.3
9	236	06.8	337	23.9		18.6	353	26.3		54.6
10	251	09.3	352	23.0		18.9	8	27.0		55.0
11	266	11.7	7	22.1	-22	19.3	23	27.6	-20	55.3
12	281	14.2	22	21.2	-22	19.6	38	28.3	-20	55.6
13	296	16.7	37	20.3		20.0	53	28.9		56.0
14	311	19.1	52	19.4		20.3	68	29.6		56.3
15	326	21.6	67	18.5		20.6	83	30.2		56.7
16	341	24.0	82	17.6		21.0	98	30.9		57.0
17	356	26.5	97	16.7	-22	21.3	113	31.6	-20	57.3
18	11	29.0	112	15.8	-22	21.6	128	32.2	-20	57.7
19	26	31.4	127	14.9		22.0	143	32.9		58.0
20	41	33.9	142	14.0		22.3	158	33.5		58.4
21	56	36.4	157	13.1		22.7	173	34.2		58.7
22	71	38.8	172	12.1		23.0	188	34.8		59.0
23	86	41.3	187	11.2		23.3	203	35.5		59.4
24	101	43.8	202	10.3	-22	23.6	218	36.1	-20	59.7
Dif	—		-9		-3		+7		-3	
							+22		-1	
									+27	
									0	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16:3 PMG: 12 ^h 04 ^m 1			Edad: 20 ^d 9 PHE { SD: 15:1 PMG: 4 ^h 55 ^m R°: 42 ^m 4 ^h : 55:5 12 ^h : 55:7 20 ^h : 56:0											
	hG ☉	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	01.5	-22 55.6	288	17.2	+6 10.1	60 N	15 07	16 03	16 59	23 24	88	11 29	0	0
1	194	01.2	55.4	302	52.0 ¹⁵⁸	+5 55.9 ¹⁴²	58	23	14	17 07	24 85		27	3	3
2	209	01.0	55.2	317	26.9 ¹⁵⁹	41.7 ¹⁴²	56	38	24	13	24 82		26	5	5
3	224	00.7	54.9	332	01.7 ¹⁵⁸	27.4 ¹⁴³	54	15 50	33	19	24 79		24	8	8
4	239	00.4	54.7	346	36.6 ¹⁵⁹	+5 13.1 ¹⁴³	52	16 00	41	24	24 77		23	10	10
5	254	00.1	-22 54.5	1	11.4 ¹⁵⁸	+4 58.7 ¹⁴⁴	50	16 10	16 48	17 29	23 25	74	11 22	12	12
6	268	59.8	-22 54.3	15	46.2 ¹⁵⁸	+4 44.4 ¹⁴³	45	16 30	17 04	17 41	23 25	69	11 19	17	17
7	283	59.5	54.0	30	21.0 ¹⁵⁸	30.0 ¹⁴⁴	40	16 46	17	17 51	25 65		17	21	21
8	298	59.2	53.8	44	55.9 ¹⁵⁹	15.5 ¹⁴⁵	35	17 00	28	18 00	25 61		15	25	25
9	313	58.9	53.6	59	30.7 ¹⁵⁸	+4 01.1 ¹⁴⁴	30	12	38	08	26 57		13	28	28
10	328	58.6	53.3	74	05.5 ¹⁵⁸	+3 46.6 ¹⁴⁵	20	33	17 57	24	26 52		10	33	33
11	343	58.3	-22 53.1	88	40.2 ¹⁵⁷	+3 32.0 ¹⁴⁶	10 N	17 51	18 14	18 40	23 26	48	11 08	37	37
12	358	58.0	-22 52.9	103	15.0 ¹⁵⁸	+3 17.5 ¹⁴⁵	0	18 08	18 30	18 56	23 27	43	11 05	42	42
13	13	57.8	52.6	117	49.8 ¹⁵⁸	+3 02.9 ¹⁴⁶	10 S	25	18 48	19 15	27 38		02	47	47
14	28	57.5	52.4	132	24.5 ¹⁵⁷	+2 48.3 ¹⁴⁶	20	18 43	19 08	19 37	28 33		11 00	51	51
15	43	57.2	52.2	146	59.2 ¹⁵⁷	33.6 ¹⁴⁷	30	19 05	32	20 05	28 28		10 57	56	56
16	58	56.9	51.9	161	33.9 ¹⁵⁷	19.0 ¹⁴⁶	35	18	19 47	23	28 25		55	59	59
17	73	56.6	-22 51.7	176	08.6 ¹⁵⁷	+2 04.3 ¹⁴⁷	40	19 32	20 05	20 46	23 29	21	10 53	63	63
18	88	56.3	-22 51.5	190	43.3 ¹⁵⁷	+1 49.6 ¹⁴⁷	45	19 50	20 27	21 15	23 29	18	10 50	68	68
19	103	56.0	51.2	205	18.0 ¹⁵⁷	34.9 ¹⁴⁷	50	20 11	20 55	21 58	29 13		47	73	73
20	118	55.7	51.0	219	52.6 ¹⁵⁶	20.1 ¹⁴⁸	52	22	21 10	22 24	30 10		46	75	75
21	133	55.4	50.8	234	27.2 ¹⁵⁶	+1 05.3 ¹⁴⁸	54	34	27	23 02	30 8		44	78	78
22	148	55.2	50.5	249	01.8 ¹⁵⁶	+0 50.5 ¹⁴⁸	56	20 47	21 48	** **	30 6		43	80	80
23	163	54.9	50.3	263	36.3 ¹⁵⁵	35.7 ¹⁴⁸	58	21 03	22 15	** **	30 3		41	83	83
24	178	54.6	-22 50.0	278	10.8 ¹⁵⁵	+0 20.9 ¹⁴⁸	60 S	21 23	22 56	** **	23 31	**	10 39	86	86
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 17 ^h 10 ^m 3		Mag: -3.9 PMG: 10 ^h 32 ^m			Mag: +1.6 PMG: 9 ^h 25 ^m			Mag: -2.0 PMG: 6 ^h 18 ^m			Mag: -0.3 PMG: 1 ^h 00 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	°	'	°	°	'	°	'	°	'	°
0	101	43.8	202	10.3	-22 23.6	218	36.1	-20 59.7	265	12.4	-5 37.5	344	56.8	+21 08.9	
1	116	46.2	217	09.4	24.0	233	36.8	-21 00.0	280	14.6	37.5	359	59.4	08.9	
2	131	48.7	232	08.5	24.3	248	37.4	-21 00.4	295	16.9	37.6	15	02.1	08.9	
3	146	51.1	247	07.6	24.6	263	38.1	00.7	310	19.1	37.7	30	04.8	09.0	
4	161	53.6	262	06.7	25.0	278	38.8	01.0	325	21.4	37.8	45	07.4	09.0	
5	176	56.1	277	05.8	-22 25.3	293	39.4	-21 01.4	340	23.6	-5 37.9	60	10.1	+21 09.0	
6	191	58.5	292	04.9	-22 25.6	308	40.1	-21 01.7	355	25.9	-5 37.9	75	12.8	+21 09.1	
7	207	01.0	307	04.0	25.9	323	40.7	02.0	10	28.1	38.0	90	15.5	09.1	
8	222	03.5	322	03.1	26.2	338	41.4	02.4	25	30.4	38.1	105	18.1	09.2	
9	237	05.9	337	02.2	26.6	353	42.0	02.7	40	32.6	38.2	120	20.8	09.2	
10	252	08.4	352	01.3	26.9	8	42.7	03.0	55	34.9	38.3	135	23.5	09.2	
11	267	10.9	7	00.4	-22 27.2	23	43.3	-21 03.4	70	37.1	-5 38.3	150	26.1	+21 09.3	
12	282	13.3	21	59.5	-22 27.5	38	44.0	-21 03.7	85	39.4	-5 38.4	165	28.8	+21 09.3	
13	297	15.8	36	58.6	27.8	53	44.6	04.0	100	41.6	38.5	180	31.5	09.4	
14	312	18.3	51	57.7	28.1	68	45.3	04.4	115	43.9	38.6	195	34.2	09.4	
15	327	20.7	66	56.8	28.4	83	45.9	04.7	130	46.1	38.6	210	36.8	09.4	
16	342	23.2	81	55.9	28.8	98	46.6	05.0	145	48.4	38.7	225	39.5	09.5	
17	357	25.6	96	55.0	-22 29.1	113	47.2	-21 05.4	160	50.6	-5 38.8	240	42.2	+21 09.5	
18	12	28.1	111	54.0	-22 29.4	128	47.9	-21 05.7	175	52.9	-5 38.9	255	44.8	+21 09.6	
19	27	30.6	126	53.1	29.7	143	48.5	06.0	190	55.1	39.0	270	47.5	09.6	
20	42	33.0	141	52.2	30.0	158	49.2	06.4	205	57.4	39.0	285	50.2	09.6	
21	57	35.5	156	51.3	30.3	173	49.8	06.7	220	59.6	39.1	300	52.9	09.7	
22	72	38.0	171	50.4	30.6	188	50.5	07.0	236	01.9	39.2	315	55.5	09.7	
23	87	40.4	186	49.5	30.9	203	51.1	07.4	251	04.1	39.3	330	58.2	09.8	
24	102	42.9	201	48.6	-22 31.2	218	51.8	-21 07.7	266	06.4	-5 39.3	346	00.9	+21 09.8	
Dif	—		-9		-3	+7		-3	+22		-1	+27		0	

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16'3 PMG: 12 ^h 04 ^m 6				Edad: 21 ^d 9 PHE { 4 ^h : 56'2 12 ^h : 56'5 20 ^h : 56'8 PMG: 5 ^h 37 ^m R°: 43 ^m														
	hG ☉	Dec			hG ☾	Dif				Náutico	Civil		Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m		
0	178	54.6	-22	50.0	278	10.8	+0	20.9	60 N	7 09	8 05	9 01	** ** *			11 29	**		
1	193	54.3		49.8	292	45.3 ¹⁵⁵	+0	06.1 ¹⁴⁸	58	7 02	7 54	8 45	** ** *			30	3		
2	208	54.0		49.5	307	19.8 ¹⁵⁵	-0	08.8 ¹⁴⁹	56	6 55	44	31	** ** *			31	6		
3	223	53.7		49.3	321	54.2 ¹⁵⁴		23.7 ¹⁴⁹	54	49	35	18	** ** *			32			
4	238	53.4		49.1	336	28.6 ¹⁵⁴		38.6 ¹⁴⁹	52	44	27	8 08	** ** *			33	12		
5	253	53.1	-22	48.8	351	03.0 ¹⁵⁴	-0	53.5 ¹⁴⁹	50	6 39	7 20	7 58	** ** *			11 34	14		
6	268	52.9	-22	48.6	5	37.3 ¹⁵³	-1	08.4 ¹⁴⁹	45	6 28	7 05	7 38	** ** *			11 36	19		
7	283	52.6		48.3	20	11.6 ¹⁵³		23.3 ¹⁴⁹	40	18	6 52	22	** ** *			38	22		
8	298	52.3		48.1	34	45.9 ¹⁵³		38.3 ¹⁵⁰	35	09	40	7 08	** ** *			40	25		
9	313	52.0		47.8	49	20.1 ¹⁵²	-1	53.3 ¹⁵⁰	30	6 00	30	6 56	** ** *			41	29		
10	328	51.7		47.6	63	54.3 ¹⁵²	-2	08.2 ¹⁴⁹	20	5 45	6 12	36	** ** *			43	35		
11	343	51.4	-22	47.3	78	28.4 ¹⁵¹	-2	23.2 ¹⁵⁰	10 N	5 29	5 55	6 18	** ** *			11 45	39		
12	358	51.1	-22	47.1	93	02.5 ¹⁵¹	-2	38.2 ¹⁵⁰	0	5 12	5 38	6 01	** ** *			11 47	44		
13	13	50.8		46.8	107	36.6 ¹⁵¹	-2	53.2 ¹⁵⁰	10 S	4 54	21	5 44	** ** *			49	48		
14	28	50.6		46.6	122	10.5 ¹⁴⁹	-3	08.2 ¹⁵⁰	20	32	5 01	25	** ** *			51	53		
15	43	50.3		46.3	136	44.5 ¹⁵⁰		23.2 ¹⁵⁰	30	4 04	4 37	5 04	23 56 31			53	59		
16	58	50.0		46.1	151	18.4 ¹⁴⁹		38.2 ¹⁵⁰	35	3 45	22	4 51	53 28			54	63		
17	73	49.7	-22	45.8	165	52.2 ¹⁴⁸	-3	53.2 ¹⁵⁰	40	3 23	4 04	4 37	23 50 24			11 56	66		
18	88	49.4	-22	45.6	180	26.0 ¹⁴⁸	-4	08.2 ¹⁵⁰	45	2 54	3 42	4 19	23 47 19			11 58	70		
19	103	49.1		45.3	194	59.8 ¹⁴⁸		23.2 ¹⁵⁰	50	2 10	3 14	3 58	42 15			12 00	75		
20	118	48.8		45.0	209	33.5 ¹⁴⁷		38.2 ¹⁵⁰	52	1 45	2 59	47	40 13			01	77		
21	133	48.6		44.8	224	07.1 ¹⁴⁶	-4	53.2 ¹⁵⁰	54	1 07	42	35	38 10			02	80		
22	148	48.3		44.5	238	40.7 ¹⁴⁶	-5	08.3 ¹⁵¹	56	** ** *	2 21	22	36 7			03	83		
23	163	48.0		44.3	253	14.2 ¹⁴⁵		23.3 ¹⁵⁰	58	** ** *	1 54	3 06	33 4			04	87		
24	178	47.7	-22	44.0	267	47.7 ¹⁴⁵	-5	38.3 ¹⁵⁰	60 S	** ** *	1 13	2 46	23 30 1			12 05	91		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 17 ^h 06 ^m 3			Mag: -3.9 PMG: 10 ^h 33 ^m			Mag: +1.6 PMG: 9 ^h 24 ^m			Mag: -2.0 PMG: 6 ^h 15 ^m			Mag: -0.3 PMG: 0 ^h 56 ^m						
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'			
0	102	42.9	201	48.6	-22	31.2	218	51.8	-21	07.7	266	06.4	-5	39.3	346	00.9	+21	09.8	
1	117	45.4	216	47.7		31.5	233	52.4		08.0	281	08.6		39.4	1	03.6		09.8	
2	132	47.8	231	46.8		31.8	248	53.1		08.3	296	10.9		39.5	16	06.2		09.9	
3	147	50.3	246	45.9		32.1	263	53.7		08.7	311	13.1		39.6	31	08.9		09.9	
4	162	52.8	261	45.0		32.4	278	54.4		09.0	326	15.4		39.6	46	11.6		10.0	
5	177	55.2	276	44.0	-22	32.7	293	55.0	-21	09.3	341	17.6	-5	39.7	61	14.3	+21	10.0	
6	192	57.7	291	43.1	-22	33.0	308	55.7	-21	09.6	356	19.9	-5	39.8	76	16.9	+21	10.0	
7	208	00.1	306	42.2		33.3	323	56.3		10.0	11	22.1		39.9	91	19.6		10.1	
8	223	02.6	321	41.3		33.6	338	57.0		10.3	26	24.4		39.9	106	22.3		10.1	
9	238	05.1	336	40.4		33.9	353	57.6		10.6	41	26.6		40.0	121	24.9		10.2	
10	253	07.5	351	39.5		34.2	8	58.3		11.0	56	28.9		40.1	136	27.6		10.2	
11	268	10.0	6	38.6	-22	34.4	23	58.9	-21	11.3	71	31.2	-5	40.2	151	30.3	+21	10.2	
12	283	12.5	21	37.7	-22	34.7	38	59.5	-21	11.6	86	33.4	-5	40.2	166	33.0	+21	10.3	
13	298	14.9	36	36.8		35.0	54	00.2		11.9	101	35.7		40.3	181	35.6		10.3	
14	313	17.4	51	35.8		35.3	69	00.8		12.3	116	37.9		40.4	196	38.3		10.4	
15	328	19.9	66	34.9		35.6	84	01.5		12.6	131	40.2		40.5	211	41.0		10.4	
16	343	22.3	81	34.0		35.9	99	02.1		12.9	146	42.4		40.5	226	43.7		10.4	
17	358	24.8	96	33.1	-22	36.2	114	02.8	-21	13.2	161	44.7	-5	40.6	241	46.3	+21	10.5	
18	13	27.2	111	32.2	-22	36.4	129	03.4	-21	13.6	176	46.9	-5	40.7	256	49.0	+21	10.5	
19	28	29.7	126	31.3		36.7	144	04.1		13.9	191	49.2		40.8	271	51.7		10.6	
20	43	32.2	141	30.4		37.0	159	04.7		14.2	206	51.5		40.8	286	54.4		10.6	
21	58	34.6	156	29.4		37.3	174	05.4		14.5	221	53.7		40.9	301	57.0		10.6	
22	73	37.1	171	28.5		37.5	189	06.0		14.8	236	56.0		41.0	316	59.7		10.7	
23	88	39.6	186	27.6		37.8	204	06.7		15.2	251	58.2		41.1	332	02.4		10.7	
24	103	42.0	201	26.7	-22	38.1	219	07.3	-21	15.5	267	00.5	-5	41.1	347	05.1	+21	10.8	
Dif	—			-9			+6			+23			-1			+27			0

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16:3 PMG: 12 ^h 05 ^m 0				Edad: 22 ^d 9 PHE { SD: 15:5 PMG: 6 ^h 20 ^m													
	hG ☉		Dec		hG ☾		Dif											
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m			
0	178	47.7	-22	44.0	267	47.7	-5	38.3	60 N	15 10	16 06	17 02	0 52 94		11 28 1			
1	193	47.4		43.7	282	21.0 ¹⁴³	-5	53.3 ¹⁵⁰	58	26	17	09	49 90		33 4			
2	208	47.1		43.5	296	54.4 ¹⁴⁴	-6	08.3 ¹⁵⁰	56	40	27	15	46 86		37 8			
3	223	46.9		43.2	311	27.6 ¹⁴²		23.2 ¹⁴⁹	54	15 52	35	21	43 83		41 11			
4	238	46.6		43.0	326	00.8 ¹⁴²		38.2 ¹⁵⁰	52	16 03	43	26	41 80		45 13			
5	253	46.3	-22	42.7	340	34.0 ¹⁴²	-6	53.2 ¹⁵⁰	50	16 12	16 50	17 31	0 39 77		11 48 16			
6	268	46.0	-22	42.4	355	07.0 ¹⁴⁰	-7	08.2 ¹⁵⁰	45	16 32	17 06	17 42	0 34 72		11 55 21			
7	283	45.7		42.2	9	40.0 ¹⁴⁰		23.1 ¹⁴⁹	40	16 48	18	17 52	30 68		12 00 26			
8	298	45.4		41.9	24	12.9 ¹³⁹		38.0 ¹⁴⁹	35	17 02	30	18 01	26 64		05 30			
9	313	45.2		41.6	38	45.8 ¹³⁹	-7	53.0 ¹⁵⁰	30	14	40	10	23 61		10 32			
10	328	44.9		41.4	53	18.5 ¹³⁷	-8	07.9 ¹⁴⁹	20	34	17 58	25	18 55		18 37			
11	343	44.6	-22	41.1	67	51.2 ¹³⁷	-8	22.8 ¹⁴⁹	10 N	17 52	18 15	18 41	0 14 50		12 24 43			
12	358	44.3	-22	40.8	82	23.8 ¹³⁶	-8	37.6 ¹⁴⁸	0	18 09	18 31	18 57	0 10 45		12 31 47			
13	13	44.0		40.5	96	56.4 ¹³⁶	-8	52.5 ¹⁴⁹	10 S	26	18 49	19 16	05 41		37 52			
14	28	43.7		40.3	111	28.8 ¹³⁴	-9	07.3 ¹⁴⁸	20	18 44	19 08	19 37	0 01 36		44 57			
15	43	43.5		40.0	126	01.2 ¹³⁴		22.1 ¹⁴⁸	30	19 05	32	20 05	*** ** *		52 62			
16	58	43.2		39.7	140	33.5 ¹³³		36.9 ¹⁴⁸	35	18	19 47	23	*** ** *		12 57 65			
17	73	42.9	-22	39.5	155	05.7 ¹³²	-9	51.7 ¹⁴⁸	40	19 32	20 05	20 46	*** ** *		13 02 69			
18	88	42.6	-22	39.2	169	37.8 ¹³¹	-10	06.4 ¹⁴⁷	45	19 49	20 26	21 15	*** ** *		13 08 74			
19	103	42.3		38.9	184	09.8 ¹³⁰		21.2 ¹⁴⁸	50	20 11	20 54	21 57	23 57 18		15 80			
20	118	42.1		38.6	198	41.8 ¹³⁰		35.8 ¹⁴⁶	52	21	21 09	22 22	53 15		18 83			
21	133	41.8		38.4	213	13.6 ¹²⁸	-10	50.5 ¹⁴⁷	54	33	25	22 58	48 13		22 86			
22	148	41.5		38.1	227	45.4 ¹²⁸	-11	05.1 ¹⁴⁶	56	20 46	21 46	** ** *	43 10		26 89			
23	163	41.2		37.8	242	17.0 ¹²⁶		19.7 ¹⁴⁶	58	21 02	22 12	** ** *	37 6		31 93			
24	178	40.9	-22	37.5	256	48.6 ¹²⁶	-11	34.3 ¹⁴⁶	60 S	21 21	22 51	** ** *	23 31 1		13 36 97			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 17 ^h 02 ^m 4		Mag: -3.9 PMG: 10 ^h 35 ^m				Mag: +1.6 PMG: 9 ^h 23 ^m				Mag: -2.0 PMG: 6 ^h 11 ^m				Mag: -0.3 PMG: 0 ^h 52 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	103	42.0	201	26.7	-22	38.1	219	07.3	-21	15.5	267	00.5	-5	41.1	347	05.1	+21	10.8
1	118	44.5	216	25.8		38.4	234	07.9		15.8	282	02.7		41.2	2	07.7		10.8
2	133	47.0	231	24.9		38.6	249	08.6		16.1	297	05.0		41.3	17	10.4		10.8
3	148	49.4	246	23.9		38.9	264	09.2		16.4	312	07.3		41.4	32	13.1		10.9
4	163	51.9	261	23.0		39.2	279	09.9		16.8	327	09.5		41.4	47	15.8		10.9
5	178	54.4	276	22.1	-22	39.4	294	10.5	-21	17.1	342	11.8	-5	41.5	62	18.4	+21	11.0
6	193	56.8	291	21.2	-22	39.7	309	11.2	-21	17.4	357	14.0	-5	41.6	77	21.1	+21	11.0
7	208	59.3	306	20.3		40.0	324	11.8		17.7	12	16.3		41.6	92	23.8		11.0
8	224	01.7	321	19.4		40.2	339	12.5		18.0	27	18.6		41.7	107	26.5		11.1
9	239	04.2	336	18.4		40.5	354	13.1		18.4	42	20.8		41.8	122	29.1		11.1
10	254	06.7	351	17.5		40.8	9	13.7		18.7	57	23.1		41.9	137	31.8		11.2
11	269	09.1	6	16.6	-22	41.0	24	14.4	-21	19.0	72	25.3	-5	41.9	152	34.5	+21	11.2
12	284	11.6	21	15.7	-22	41.3	39	15.0	-21	19.3	87	27.6	-5	42.0	167	37.2	+21	11.3
13	299	14.1	36	14.8		41.5	54	15.7		19.6	102	29.9		42.1	182	39.8		11.3
14	314	16.5	51	13.9		41.8	69	16.3		20.0	117	32.1		42.2	197	42.5		11.3
15	329	19.0	66	12.9		42.0	84	16.9		20.3	132	34.4		42.2	212	45.2		11.4
16	344	21.5	81	12.0		42.3	99	17.6		20.6	147	36.6		42.3	227	47.9		11.4
17	359	23.9	96	11.1	-22	42.6	114	18.2	-21	20.9	162	38.9	-5	42.4	242	50.5	+21	11.5
18	14	26.4	111	10.2	-22	42.8	129	18.9	-21	21.2	177	41.2	-5	42.4	257	53.2	+21	11.5
19	29	28.9	126	09.3		43.1	144	19.5		21.5	192	43.4		42.5	272	55.9		11.5
20	44	31.3	141	08.3		43.3	159	20.2		21.9	207	45.7		42.6	287	58.6		11.6
21	59	33.8	156	07.4		43.6	174	20.8		22.2	222	48.0		42.7	303	01.2		11.6
22	74	36.2	171	06.5		43.8	189	21.4		22.5	237	50.2		42.7	318	03.9		11.7
23	89	38.7	186	05.6		44.0	204	22.1		22.8	252	52.5		42.8	333	06.6		11.7
24	104	41.2	201	04.7	-22	44.3	219	22.7	-21	23.1	267	54.8	-5	42.9	348	09.3	+21	11.7
Dif	—		-9		-3		+6		-3		+23		-1		+27		0	

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16 ^h 3 PMG: 12 ^h 05 ^m 5				Edad: 23 ^d 9 PHE { 4 ^h : 58 ^h 0 12 ^h : 58 ^h 3 20 ^h : 58 ^h 6 PMG: 7 ^h 06 ^m R°: 51 ^m											
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	178	40.9	-22	37.5	256	48.6	-11	34.3	60 N	7 08	8 04	9 00	2 26	102	11 29 2	
1	193	40.7		37.2	271	20.0 ¹²⁴	-11	48.8 ¹⁴⁵	58	7 01	7 53	8 43	19	97	37 7	
2	208	40.4		37.0	285	51.4 ¹²⁴	-12	03.3 ¹⁴⁵	56	6 55	43	30	12	93	45 11	
3	223	40.1		36.7	300	22.7 ¹²³		17.8 ¹⁴⁵	54	49	35	18	06	89	52 15	
4	238	39.8		36.4	314	53.8 ¹²¹		32.2 ¹⁴⁴	52	44	27	8 07	2 01	86	11 58 18	
5	253	39.5	-22	36.1	329	24.9 ¹²¹	-12	46.6 ¹⁴⁴	50	6 39	7 20	7 58	1 56	83	12 04 20	
6	268	39.3	-22	35.8	343	55.9 ¹²⁰	-13	00.9 ¹⁴³	45	6 28	7 05	7 38	1 46	77	12 16 26	
7	283	39.0		35.5	358	26.7 ¹¹⁸		15.2 ¹⁴³	40	18	6 52	22	38	72	26 30	
8	298	38.7		35.3	12	57.4 ¹¹⁷		29.5 ¹⁴³	35	09	41	7 09	30	69	35 34	
9	313	38.4		35.0	27	28.1 ¹¹⁷		43.7 ¹⁴²	30	6 01	31	6 57	24	65	42 38	
10	328	38.1		34.7	41	58.6 ¹¹⁵	-13	57.8 ¹⁴¹	20	5 45	6 12	36	13	59	12 55 43	
11	343	37.9	-22	34.4	56	29.0 ¹¹⁴	-14	11.9 ¹⁴¹	10 N	5 30	5 56	6 19	1 04	54	13 07 48	
12	358	37.6	-22	34.1	70	59.3 ¹¹³	-14	26.0 ¹⁴¹	0	5 13	5 39	6 02	0 55	50	13 18 52	
13	13	37.3		33.8	85	29.5 ¹¹²		40.0 ¹⁴⁰	10 S	4 55	22	5 45	46	45	29 57	
14	28	37.0		33.5	99	59.6 ¹¹¹	-14	53.9 ¹³⁹	20	33	5 02	27	37	40	41 61	
15	43	36.8		33.2	114	29.5 ¹⁰⁹	-15	07.8 ¹³⁹	30	4 05	4 38	5 05	27	35	13 54 67	
16	58	36.5		33.0	128	59.4 ¹⁰⁹		21.6 ¹³⁸	35	3 47	24	4 53	21	31	14 02 71	
17	73	36.2	-22	32.7	143	29.1 ¹⁰⁷	-15	35.4 ¹³⁸	40	3 25	4 06	4 39	0 14	28	14 11 74	
18	88	35.9	-22	32.4	157	58.7 ¹⁰⁶	-15	49.1 ¹³⁷	45	2 56	3 45	4 21	0 06	24	14 22 79	
19	103	35.6		32.1	172	28.2 ¹⁰⁵	-16	02.8 ¹³⁷	50	2 14	16	4 00	** ** *	**	35 85	
20	118	35.4		31.8	186	57.5 ¹⁰³		16.4 ¹³⁶	52	1 49	3 02	3 50	** ** *	**	41 88	
21	133	35.1		31.5	201	26.8 ¹⁰³		29.9 ¹³⁵	54	1 13	2 45	38	** ** *	**	48 91	
22	148	34.8		31.2	215	55.9 ¹⁰¹		43.3 ¹³⁴	56	** ** *	2 25	24	23 53	14	14 55 95	
23	163	34.5		30.9	230	24.9 ¹⁰⁰	-16	56.7 ¹³⁴	58	** ** *	1 59	3 09	43	10	15 04 99	
24	178	34.3	-22	30.6	244	53.7 ⁹⁸	-17	10.0 ¹³³	60 S	** ** *	1 19	2 50	23 32	5	15 13 106	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 16 ^h 58 ^m 5		Mag: -3.9 PMG: 10 ^h 36 ^m		Mag: +1.5 PMG: 9 ^h 22 ^m		Mag: -2.0 PMG: 6 ^h 07 ^m		Mag: -0.3 PMG: 0 ^h 47 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	104	41.2	201	04.7	-22	44.3	219	22.7	-21	23.1
1	119	43.6	216	03.7		44.5	234	23.4		23.4
2	134	46.1	231	02.8		44.8	249	24.0		23.7
3	149	48.6	246	01.9		45.0	264	24.6		24.1
4	164	51.0	261	01.0		45.3	279	25.3		24.4
5	179	53.5	276	00.0	-22	45.5	294	25.9	-21	24.7
6	194	56.0	290	59.1	-22	45.7	309	26.6	-21	25.0
7	209	58.4	305	58.2		46.0	324	27.2		25.3
8	225	00.9	320	57.3		46.2	339	27.8		25.6
9	240	03.3	335	56.4		46.4	354	28.5		25.9
10	255	05.8	350	55.4		46.7	9	29.1		26.2
11	270	08.3	5	54.5	-22	46.9	24	29.7	-21	26.5
12	285	10.7	20	53.6	-22	47.1	39	30.4	-21	26.9
13	300	13.2	35	52.7		47.4	54	31.0		27.2
14	315	15.7	50	51.7		47.6	69	31.7		27.5
15	330	18.1	65	50.8		47.8	84	32.3		27.8
16	345	20.6	80	49.9		48.0	99	32.9		28.1
17	0	23.1	95	49.0	-22	48.3	114	33.6	-21	28.4
18	15	25.5	110	48.0	-22	48.5	129	34.2	-21	28.7
19	30	28.0	125	47.1		48.7	144	34.8		29.0
20	45	30.5	140	46.2		48.9	159	35.5		29.3
21	60	32.9	155	45.3		49.2	174	36.1		29.6
22	75	35.4	170	44.3		49.4	189	36.8		29.9
23	90	37.8	185	43.4		49.6	204	37.4		30.2
24	105	40.3	200	42.5	-22	49.8	219	38.0	-21	30.6
Dif	—		-9		-2		+6		-3	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:3 PMG: 12 ^h 05 ^m 9			Edad: 24 ^d 9 PHE { 4 ^h : 58 ^m 9 12 ^h : 59 ^m 3 20 ^h : 59 ^m 6 SD: 16:0 PMG: 7 ^h 57 ^m R°: 57 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m
0	178	34.3	-22	30.6	244	53.7	-17	10.0	60 N	15 13	16 09	17 05	4 08 111	11 31 5
1	193	34.0		30.3	259	22.4	97	23.2	58	30	20	11	3 56 103	44 13
2	208	33.7		30.0	273	51.0	96	36.4	56	43	29	18	45 98	11 56 18
3	223	33.4		29.7	288	19.5	95	-17 49.5	54	15 55	38	23	35 94	12 07 22
4	238	33.2		29.4	302	47.8	93	-18 02.4	52	16 05	45	29	27 90	16 25
5	253	32.9	-22	29.1	317	16.0	92	-18 15.4	50	16 15	16 52	17 33	3 19 87	12 24 29
6	268	32.6	-22	28.8	331	44.1	91	-18 28.2	45	16 34	17 07	17 44	3 03 81	12 42 34
7	283	32.3		28.5	346	12.0	89	40.9	40	16 50	20	17 54	2 50 76	12 56 39
8	298	32.1		28.2	0	39.8	88	-18 53.6	35	17 03	31	18 03	39 72	13 09 42
9	313	31.8		27.9	15	07.5	87	-19 06.1	30	15	41	11	29 69	20 45
10	328	31.5		27.6	29	35.0	85	18.6	20	35	17 59	27	2 12 64	38 50
11	343	31.2	-22	27.3	44	02.4	84	-19 31.0	10 N	17 53	18 16	18 42	1 58 59	13 55 54
12	358	31.0	-22	27.0	58	29.6	82	-19 43.3	0	18 10	18 32	18 58	1 45 55	14 10 58
13	13	30.7		26.7	72	56.8	82	-19 55.5	10 S	26	18 49	19 16	31 51	26 61
14	28	30.4		26.3	87	23.7	79	-20 07.5	20	18 44	19 09	19 38	17 47	14 42 66
15	43	30.2		26.0	101	50.6	79	19.5	30	19 05	33	20 05	1 02 41	15 01 71
16	58	29.9		25.7	116	17.2	76	31.4	35	18	19 47	23	0 52 39	13 73
17	73	29.6	-22	25.4	130	43.8	76	-20 43.2	40	19 32	20 04	20 45	0 42 34	15 25 78
18	88	29.3	-22	25.1	145	10.2	74	-20 54.8	45	19 49	20 26	21 14	0 30 30	15 41 82
19	103	29.1		24.8	159	36.4	72	-21 06.4	50	20 10	20 53	21 55	15 25	16 00 87
20	118	28.8		24.5	174	02.6	72	17.8	52	20	21 07	22 19	08 22	09 90
21	133	28.5		24.2	188	28.5	69	29.1	54	32	24	22 53	0 01 18	19 94
22	148	28.2		23.8	202	54.4	69	40.3	56	20 45	21 44	** ** *	** ** **	30 99
23	163	28.0		23.5	217	20.0	66	-21 51.4	58	21 00	22 09	** ** *	23 53 19	43 105
24	178	27.7	-22	23.2	231	45.6	66	-22 02.4	60 S	21 19	22 46	** ** *	23 37 10	16 59 113
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 16 ^h 54 ^m 5		Mag: -3.9 PMG: 10 ^h 38 ^m		Mag: +1.5 PMG: 9 ^h 21 ^m		Mag: -2.1 PMG: 6 ^h 04 ^m		Mag: -0.3 PMG: 0 ^h 43 ^m					
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄					
h	°	'	°	'	°	'	°	'	°	'				
0	105	40.3	200	42.5	219	38.0	268	49.2	349	13.5				
1	120	42.8	215	41.6	234	38.7	283	51.4	4	16.2				
2	135	45.2	230	40.6	249	39.3	298	53.7	19	18.8				
3	150	47.7	245	39.7	264	39.9	313	56.0	34	21.5				
4	165	50.2	260	38.8	279	40.6	328	58.3	49	24.2				
5	180	52.6	275	37.8	294	41.2	344	00.5	64	26.9				
6	195	55.1	290	36.9	309	41.8	359	02.8	79	29.6				
7	210	57.6	305	36.0	324	42.5	14	05.1	94	32.2				
8	226	00.0	320	35.1	339	43.1	29	07.3	109	34.9				
9	241	02.5	335	34.1	354	43.7	44	09.6	124	37.6				
10	256	05.0	350	33.2	9	44.4	59	11.9	139	40.3				
11	271	07.4	5	32.3	24	45.0	74	14.2	154	42.9				
12	286	09.9	20	31.4	39	45.6	89	16.4	169	45.6				
13	301	12.3	35	30.4	54	46.3	104	18.7	184	48.3				
14	316	14.8	50	29.5	69	46.9	119	21.0	199	51.0				
15	331	17.3	65	28.6	84	47.5	134	23.3	214	53.7				
16	346	19.7	80	27.6	99	48.2	149	25.5	229	56.3				
17	1	22.2	95	26.7	114	48.8	164	27.8	244	59.0				
18	16	24.7	110	25.8	129	49.4	179	30.1	260	01.7				
19	31	27.1	125	24.8	144	50.1	194	32.4	275	04.4				
20	46	29.6	140	23.9	159	50.7	209	34.6	290	07.0				
21	61	32.1	155	23.0	174	51.3	224	36.9	305	09.7				
22	76	34.5	170	22.1	189	52.0	239	39.2	320	12.4				
23	91	37.0	185	21.1	204	52.6	254	41.5	335	15.1				
24	106	39.5	200	20.2	219	53.2	269	43.7	350	17.8				
Dif	—		-9		-2		+23		+27					

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'3 PMG: 12 ^h 06 ^m 4				Edad: 25 ^d 9 PHE { 4 ^h : 59'9 12 ^h : 60'1 20 ^h : 60'4 SD: 16'3 PMG: 8 ^h 54 ^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	178	27.7	-22	23.2	231	45.6	-22	02.4	60 N	7 07	8 03	8 58	5 59	115	11 36	15				
1	193	27.4		22.9	246	11.0	64	13.2	58	7 00	7 52	42	39	105	11 57	25				
2	208	27.2		22.6	260	36.2	62	23.9	56	6 54	42	28	23	98	12 14	31				
3	223	26.9		22.3	275	01.4	62	34.5	54	49	34	17	5	09	94	29	35			
4	238	26.6		21.9	289	26.3	59	45.0	52	43	26	8 06	4	57	90	41	39			
5	253	26.4	-22	21.6	303	51.1	58	-22	50	6 39	7 20	7 57	4	46	87	12	53	41		
6	268	26.1	-22	21.3	318	15.8	57	-23	45	6 28	7 04	7 38	4	24	82	13	16	47		
7	283	25.8		21.0	332	40.4	56	15.5	40	18	6 52	22	4	06	78		35	50		
8	298	25.5		20.7	347	04.7	53	25.4	35	09	41	7 09	3	51	75	13	51	53		
9	313	25.3		20.3	1	29.0	53	35.2	30	6 01	31	6 57		38	72	14	05	55		
10	328	25.0		20.0	15	53.1	51	44.8	20	5 46	6 13	37	3	16	68		28	59		
11	343	24.7	-22	19.7	30	17.1	50	-23	10 N	5 30	5 57	6 19	2	57	65	14	49	61		
12	358	24.5	-22	19.4	44	40.9	48	-24	0	5 14	5 40	6 03	2	40	61	15	08	64		
13	13	24.2		19.0	59	04.6	47	12.8	10 S	4 56	23	5 46		22	58		27	67		
14	28	23.9		18.7	73	28.1	45	21.8	20	35	5 04	28	2	04	54	15	48	69		
15	43	23.7		18.4	87	51.5	44	30.6	30	4 07	4 40	5 07	1	43	50	16	12	73		
16	58	23.4		18.1	102	14.8	43	39.3	35	3 49	25	4 55		31	47		26	75		
17	73	23.1	-22	17.7	116	37.9	41	-24	40	3 27	4 08	4 40	1	16	45	16	43	76		
18	88	22.9	-22	17.4	131	00.9	40	-24	45	2 59	3 47	4 23		1	00	40	17	03	79	
19	103	22.6		17.1	145	23.8	39	-25	50	2 17	19	4 02	0	40	34		27	84		
20	118	22.3		16.7	159	46.5	37	12.5	52	1 54	3 05	3 52		30	32		39	86		
21	133	22.1		16.4	174	09.1	36	20.4	54	1 19	2 49	41		19	29		17	53	89	
22	148	21.8		16.1	188	31.6	35	28.1	56	** ** *	29	28		0	07	24		18	09	93
23	163	21.5		15.7	202	53.9	33	35.6	58	** ** *	2 03	3 12		** ** *	**			28	98	
24	178	21.3	-22	15.4	217	16.1	32	-25	60 S	** ** *	1 26	2 54		23	47	29	18	52	107	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 16 ^h 50 ^m 6		Mag: -3.9 PMG: 10 ^h 39 ^m		Mag: +1.5 PMG: 9 ^h 20 ^m		Mag: -2.1 PMG: 6 ^h 00 ^m		Mag: -0.3 PMG: 0 ^h 39 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	106	39.5	200	20.2	-22	54.6	219	53.2	-21	37.8
1	121	41.9	215	19.3		54.8	234	53.9		38.1
2	136	44.4	230	18.3		55.0	249	54.5		38.4
3	151	46.8	245	17.4		55.2	264	55.1		38.7
4	166	49.3	260	16.5		55.4	279	55.8		39.0
5	181	51.8	275	15.5	-22	55.6	294	56.4	-21	39.3
6	196	54.2	290	14.6	-22	55.7	309	57.0	-21	39.6
7	211	56.7	305	13.7		55.9	324	57.6		39.9
8	226	59.2	320	12.7		56.1	339	58.3		40.2
9	242	01.6	335	11.8		56.3	354	58.9		40.5
10	257	04.1	350	10.9		56.4	9	59.5		40.8
11	272	06.6	5	09.9	-22	56.6	25	00.2	-21	41.1
12	287	09.0	20	09.0	-22	56.8	40	00.8	-21	41.4
13	302	11.5	35	08.1		57.0	55	01.4		41.7
14	317	13.9	50	07.1		57.1	70	02.1		42.0
15	332	16.4	65	06.2		57.3	85	02.7		42.3
16	347	18.9	80	05.3		57.5	100	03.3		42.6
17	2	21.3	95	04.3	-22	57.6	115	03.9	-21	42.9
18	17	23.8	110	03.4	-22	57.8	130	04.6	-21	43.1
19	32	26.3	125	02.5		58.0	145	05.2		43.4
20	47	28.7	140	01.5		58.1	160	05.8		43.7
21	62	31.2	155	00.6		58.3	175	06.5		44.0
22	77	33.7	169	59.7		58.4	190	07.1		44.3
23	92	36.1	184	58.7		58.6	205	07.7		44.6
24	107	38.6	199	57.8	-22	58.8	220	08.3	-21	44.9
Dif	—		-9		-2		+6		-3	
							+23		-1	
									+27	
									0	

UT	SOL				● LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16:3 PMG: 12 ^h 06 ^m 8				Edad: 26 ^d 9 PHE { 4 ^h : 60 ⁷ /7 12 ^h : 60 ⁹ /9 20 ^h : 61 ¹ /1 R°: 67 ^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	178	21.3	-22	15.4	217	16.1	-25	43.0	60 N	15 17	16 12	17 07	7 54	96	11 51	46		
1	193	21.0		15.1	231	38.2	31	50.2	58	33	23	14	24	88	12 22	52		
2	208	20.7		14.7	246	00.2	30	-25 57.2	56	46	32	20	7 01	85	12 45	56		
3	223	20.5		14.4	260	22.0	28	-26 04.0	54	15 58	40	26	6 43	82	13 04	58		
4	238	20.2		14.1	274	43.7	27	10.7	52	16 08	48	31	27	80	20	60		
5	253	19.9	-22	13.7	289	05.3	26	-26 17.1	50	16 17	16 55	17 36	6 13	79	13 34	61		
6	268	19.7	-22	13.4	303	26.8	25	-26 23.4	45	16 36	17 10	17 46	5 46	76	14 03	62		
7	283	19.4		13.0	317	48.2	24	29.4	40	16 52	22	17 56	24	74	25	64		
8	298	19.1		12.7	332	09.4	22	35.3	35	17 05	33	18 04	5 06	73	14 44	64		
9	313	18.9		12.4	346	30.6	22	41.0	30	17	17 43	12	4 50	72	15 00	65		
10	328	18.6		12.0	0	51.6	20	46.5	20	37	18 00	28	24	70	27	66		
11	343	18.4	-22	11.7	15	12.5	19	-26 51.8	10 N	17 54	18 17	18 43	4 02	68	15 50	67		
12	358	18.1	-22	11.3	29	33.4	19	-26 56.9	0	18 10	18 33	18 59	3 41	66	16 12	68		
13	13	17.8		11.0	43	54.1	17	-27 01.8	10 S	27	18 50	19 17	3 20	65	34	68		
14	28	17.6		10.6	58	14.8	17	06.5	20	18 45	19 09	19 38	2 58	63	16 57	69		
15	43	17.3		10.3	72	35.3	15	11.0	45	30	19 06	33	20 05	33	60	17 25	69	
16	58	17.0		09.9	86	55.7	14	15.3	43	35	18	19 47	23	18	59	41	69	
17	73	16.8	-22	09.6	101	16.1	14	-27 19.4	40	19 32	20 04	20 44	2 01	57	17 59	70		
18	88	16.5	-22	09.2	115	36.4	13	-27 23.3	45	19 49	20 25	21 13	1 40	55	18 22	70		
19	103	16.3		08.9	129	56.6	12	26.9	50	20 09	20 52	21 53	14	51	18 51	71		
20	118	16.0		08.5	144	16.7	11	30.4	52	19	21 06	22 16	1 02	49	19 05	71		
21	133	15.7		08.2	158	36.8	11	33.6	54	31	22	22 48	0 48	46	22	71		
22	148	15.5		07.8	172	56.7	9	36.7	56	44	21 41	** **	31	43	19 42	71		
23	163	15.2		07.5	187	16.6	9	39.5	58	20 59	22 06	** **	0 12	37	20 06	72		
24	178	14.9	-22	07.1	201	36.5	9	-27 42.1	60 S	21 17	22 41	** **	** **	**	20 39	72		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 16 ^h 46 ^m 7		Mag: -3.9 PMG: 10 ^h 41 ^m		Mag: +1.5 PMG: 9 ^h 19 ^m		Mag: -2.1 PMG: 5 ^h 57 ^m		Mag: -0.3 PMG: 0 ^h 34 ^m									
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄									
h	°	'	°	'	°	'	°	'	°	'								
0	107	38.6	199	57.8	-22	58.8	220	08.3	-21	44.9	270	38.5	-5	47.7	351	22.0	+21	14.6
1	122	41.1	214	56.9		58.9	235	09.0		45.2	285	40.7		47.8	6	24.7		14.7
2	137	43.5	229	55.9		59.1	250	09.6		45.5	300	43.0		47.8	21	27.4		14.7
3	152	46.0	244	55.0		59.2	265	10.2		45.8	315	45.3		47.9	36	30.1		14.8
4	167	48.4	259	54.1		59.4	280	10.8		46.1	330	47.6		48.0	51	32.7		14.8
5	182	50.9	274	53.1	-22	59.5	295	11.5	-21	46.3	345	49.9	-5	48.0	66	35.4	+21	14.8
6	197	53.4	289	52.2	-22	59.7	310	12.1	-21	46.6	0	52.2	-5	48.1	81	38.1	+21	14.9
7	212	55.8	304	51.3	-22	59.8	325	12.7		46.9	15	54.5		48.1	96	40.8		14.9
8	227	58.3	319	50.3	-23	00.0	340	13.3		47.2	30	56.7		48.2	111	43.5		15.0
9	243	00.8	334	49.4	-23	00.1	355	14.0		47.5	45	59.0		48.3	126	46.1		15.0
10	258	03.2	349	48.5		00.3	10	14.6		47.8	61	01.3		48.3	141	48.8		15.0
11	273	05.7	4	47.5	-23	00.4	25	15.2	-21	48.1	76	03.6	-5	48.4	156	51.5	+21	15.1
12	288	08.2	19	46.6	-23	00.6	40	15.8	-21	48.4	91	05.9	-5	48.5	171	54.2	+21	15.1
13	303	10.6	34	45.7		00.7	55	16.5		48.7	106	08.2		48.5	186	56.9		15.2
14	318	13.1	49	44.7		00.8	70	17.1		48.9	121	10.5		48.6	201	59.5		15.2
15	333	15.6	64	43.8		01.0	85	17.7		49.2	136	12.7		48.6	217	02.2		15.2
16	348	18.0	79	42.8		01.1	100	18.3		49.5	151	15.0		48.7	232	04.9		15.3
17	3	20.5	94	41.9	-23	01.3	115	19.0	-21	49.8	166	17.3	-5	48.8	247	07.6	+21	15.3
18	18	22.9	109	41.0	-23	01.4	130	19.6	-21	50.1	181	19.6	-5	48.8	262	10.3	+21	15.4
19	33	25.4	124	40.0		01.5	145	20.2		50.4	196	21.9		48.9	277	12.9		15.4
20	48	27.9	139	39.1		01.7	160	20.8		50.7	211	24.2		48.9	292	15.6		15.4
21	63	30.3	154	38.2		01.8	175	21.5		50.9	226	26.5		49.0	307	18.3		15.5
22	78	32.8	169	37.2		01.9	190	22.1		51.2	241	28.8		49.1	322	21.0		15.5
23	93	35.3	184	36.3		02.1	205	22.7		51.5	256	31.1		49.1	337	23.7		15.6
24	108	37.7	199	35.3	-23	02.2	220	23.3	-21	51.8	271	33.3	-5	49.2	352	26.3	+21	15.6
Dif	—		-9		-1		+6		-3		+23		-1		+27			

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'3 PMG: 12 ^h 07 ^m 2			Edad: 27 ^d 9 PHE { SD: 16'7 PMG: 11 ^h 03 ^m														
				R ^o : 68 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m		
0	178	14.9	-22	07.1	201	36.5	-27	42.1	60 N	7 06	8 01	8 56	9 30	47	12 37	96		
1	193	14.7		06.8	215	56.2	7	44.5	58	6 59	7 51	40	8 52	54	13 14	89		
2	208	14.4		06.4	230	16.0		46.7	56	53	41	27	26	57	13 41	85		
3	223	14.2		06.1	244	35.6	6	48.6	54	48	33	16	8 05	59	14 02	83		
4	238	13.9		05.7	258	55.2	6	50.3	52	43	26	8 05	7 47	60	20	81		
5	253	13.6	-22	05.4	273	14.8	6	-27 51.8	50	6 38	7 19	7 56	7 32	61	14 35	79		
6	268	13.4	-22	05.0	287	34.3	5	-27 53.1	45	6 27	7 04	7 37	7 02	63	15 05	77		
7	283	13.1		04.7	301	53.8	5	54.2	40	18	6 52	22	6 38	64	29	75		
8	298	12.9		04.3	316	13.2	4	55.0	35	09	41	7 09	19	65	15 48	74		
9	313	12.6		03.9	330	32.6	4	55.7	30	6 01	31	6 57	6 02	66	16 05	73		
10	328	12.4		03.6	344	52.0	4	56.1	20	5 46	6 13	37	5 34	67	33	71		
11	343	12.1	-22	03.2	359	11.4	4	-27 56.2	10 N	5 31	5 57	6 20	5 10	67	16 57	69		
12	358	11.8	-22	02.9	13	30.7	3	-27 56.2	0	5 15	5 41	6 04	4 47	68	17 20	67		
13	13	11.6		02.5	27	50.0	3	55.9	10 S	4 57	24	5 47	25	68	17 42	66		
14	28	11.3		02.1	42	09.3	3	55.4	20	36	5 05	29	4 01	69	18 06	64		
15	43	11.1		01.8	56	28.6	3	54.7	30	4 09	4 42	5 09	3 33	70	34	61		
16	58	10.8		01.4	70	47.9	3	53.7	35	3 51	27	4 56	3 17	70	18 50	60		
17	73	10.6	-22	01.0	85	07.1	2	-27 52.6	40	3 30	4 10	4 42	2 58	70	19 09	59		
18	88	10.3	-22	00.7	99	26.4	3	-27 51.2	45	3 02	3 49	4 26	2 35	70	19 32	56		
19	103	10.0	-22	00.3	113	45.7	3	49.5	50	2 21	22	4 05	2 05	71	20 02	52		
20	118	09.8	-21	59.9	128	05.0	3	47.7	52	1 58	3 08	3 55	1 51	71	16	50		
21	133	09.5		59.6	142	24.3	3	45.6	54	1 26	2 52	44	34	71	33	48		
22	148	09.3		59.2	156	43.6	3	43.3	56	** **	33	31	1 14	71	20 53	44		
23	163	09.0		58.8	171	03.0	4	40.8	58	** **	2 08	3 16	0 49	72	21 18	39		
24	178	08.8	-21	58.5	185	22.3	3	-27 38.0	60 S	** **	1 34	2 58	0 16	71	21 51	30		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 16 ^h 42 ^m 7			Mag: -3.9 PMG: 10 ^h 42 ^m			Mag: +1.5 PMG: 9 ^h 18 ^m			Mag: -2.1 PMG: 5 ^h 53 ^m			Mag: -0.4 PMG: 0 ^h 30 ^m					
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	108	37.7	199	35.3	-23	02.2	220	23.3	-21	51.8	271	33.3	-5	49.2	352	26.3		
1	123	40.2	214	34.4		02.3	235	24.0		52.1	286	35.6		49.2	7	29.0		
2	138	42.7	229	33.5		02.4	250	24.6		52.4	301	37.9		49.3	22	31.7		
3	153	45.1	244	32.5		02.6	265	25.2		52.6	316	40.2		49.4	37	34.4		
4	168	47.6	259	31.6		02.7	280	25.8		52.9	331	42.5		49.4	52	37.1		
5	183	50.1	274	30.7	-23	02.8	295	26.4	-21	53.2	346	44.8	-5	49.5	67	39.7		
6	198	52.5	289	29.7	-23	02.9	310	27.1	-21	53.5	1	47.1	-5	49.5	82	42.4		
7	213	55.0	304	28.8		03.1	325	27.7		53.8	16	49.4		49.6	97	45.1		
8	228	57.4	319	27.8		03.2	340	28.3		54.0	31	51.7		49.7	112	47.8		
9	243	59.9	334	26.9		03.3	355	28.9		54.3	46	54.0		49.7	127	50.4		
10	259	02.4	349	26.0		03.4	10	29.6		54.6	61	56.3		49.8	142	53.1		
11	274	04.8	4	25.0	-23	03.5	25	30.2	-21	54.9	76	58.5	-5	49.8	157	55.8		
12	289	07.3	19	24.1	-23	03.6	40	30.8	-21	55.2	92	00.8	-5	49.9	172	58.5		
13	304	09.8	34	23.1		03.8	55	31.4		55.4	107	03.1		50.0	188	01.2		
14	319	12.2	49	22.2		03.9	70	32.0		55.7	122	05.4		50.0	203	03.8		
15	334	14.7	64	21.3		04.0	85	32.7		56.0	137	07.7		50.1	218	06.5		
16	349	17.2	79	20.3		04.1	100	33.3		56.3	152	10.0		50.1	233	09.2		
17	4	19.6	94	19.4	-23	04.2	115	33.9	-21	56.6	167	12.3	-5	50.2	248	11.9		
18	19	22.1	109	18.4	-23	04.3	130	34.5	-21	56.8	182	14.6	-5	50.2	263	14.6		
19	34	24.6	124	17.5		04.4	145	35.1		57.1	197	16.9		50.3	278	17.2		
20	49	27.0	139	16.6		04.5	160	35.8		57.4	212	19.2		50.4	293	19.9		
21	64	29.5	154	15.6		04.6	175	36.4		57.7	227	21.5		50.4	308	22.6		
22	79	31.9	169	14.7		04.7	190	37.0		57.9	242	23.8		50.5	323	25.3		
23	94	34.4	184	13.7		04.8	205	37.6		58.2	257	26.1		50.5	338	28.0		
24	109	36.9	199	12.8	-23	04.9	220	38.2	-21	58.5	272	28.4	-5	50.6	353	30.6		
Dif	—			-9			-1			+6			-3			+23		
																-1		
																+27		
																0		

UT	SOL			● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16/3 PMG: 12 ^h 07 ^m 6			Edad: 28 ^d 9 PHE { 4 ^h : 61 ^m /5 12 ^h : 61 ^m /5 20 ^h : 61 ^m /5 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	178	08.8	-21 58.5	185	22.3	-27 38.0	29	60 N	15 21	16 16	17 10	10 17 15	14 13 120		
1	193	08.5	58.1	199	41.7	35.1	29	58	36	26	17	9 46 26	14 43 110		
2	208	08.3	57.7	214	01.2	31.9	32	56	15 49	35	23	23 32	15 06 103		
3	223	08.0	57.3	228	20.6	28.5	34	54	16 01	43	28	9 04 36	25 98		
4	238	07.7	57.0	242	40.1	24.8	37	52	11	50	33	8 47 41	41 94		
5	253	07.5	-21 56.6	256	59.7	-27 21.0	38	50	16 20	16 57	17 38	8 33 44	15 54 92		
6	268	07.2	-21 56.2	271	19.3	-27 16.9	41	45	16 39	17 12	17 48	8 05 48	16 22 86		
7	283	07.0	55.8	285	38.9	12.6	43	40	16 54	24	17 58	7 42 52	16 44 81		
8	298	06.7	55.5	299	58.6	08.1	45	35	17 07	35	18 06	24 54	17 02 78		
9	313	06.5	55.1	314	18.4	-27 03.4	47	30	18	17 44	14	7 08 57	18 75		
10	328	06.2	54.7	328	38.2	-26 58.4	50	20	38	18 02	29	6 41 60	17 44 71		
11	343	06.0	-21 54.3	342	58.1	-26 53.3	51	10 N	17 55	18 18	18 44	6 17 63	18 06 68		
12	358	05.7	-21 53.9	357	18.0	-26 47.9	54	0	18 11	18 34	19 00	5 55 66	18 27 64		
13	13	05.5	53.6	11	38.0	42.3	56	10 S	28	18 50	17	33 69	18 48 60		
14	28	05.2	53.2	25	58.1	36.6	57	20	18 45	19 09	19 38	5 10 71	19 10 56		
15	43	05.0	52.8	40	18.3	30.6	60	30	19 06	33	20 05	4 43 74	35 52		
16	58	04.7	52.4	54	38.5	24.3	63	35	18	19 47	22	27 76	19 50 50		
17	73	04.5	-21 52.0	68	58.8	-26 17.9	64	40	19 31	20 03	20 44	4 08 79	20 08 45		
18	88	04.2	-21 51.7	83	19.2	-26 11.3	66	45	19 48	20 24	21 11	3 45 82	20 28 42		
19	103	04.0	51.3	97	39.7	-26 04.5	68	50	20 08	20 51	21 51	16 86	20 54 36		
20	118	03.7	50.9	112	00.3	-25 57.5	70	52	18	21 04	22 13	3 02 88	21 06 33		
21	133	03.5	50.5	126	21.0	50.3	72	54	29	20	22 43	2 45 92	21 29		
22	148	03.2	50.1	140	41.8	42.8	75	56	42	21 39	** **	25 96	37 25		
23	163	03.0	49.7	155	02.7	35.2	76	58	20 56	22 02	** **	2 01 101	21 57 19		
24	178	02.7	-21 49.3	169	23.6	-25 27.4	78	60 S	21 14	22 35	** **	1 27 111	22 21 11		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 16 ^h 38 ^m 8		Mag: -3.9 PMG: 10 ^h 44 ^m			Mag: +1.5 PMG: 9 ^h 17 ^m			Mag: -2.1 PMG: 5 ^h 49 ^m			Mag: -0.4 PMG: 0 ^h 26 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	'	°	'	'	°	'	'	°	'
0	109	36.9	199	12.8	-23 04.9	220	38.2	-21 58.5	272	28.4	-5 50.6	353	30.6	+21 16.6	
1	124	39.3	214	11.9	05.0	235	38.8	58.8	287	30.7	50.7	8	33.3	16.6	
2	139	41.8	229	10.9	05.1	250	39.5	59.0	302	33.0	50.7	23	36.0	16.6	
3	154	44.3	244	10.0	05.2	265	40.1	59.3	317	35.3	50.8	38	38.7	16.7	
4	169	46.7	259	09.0	05.3	280	40.7	59.6	332	37.6	50.8	53	41.4	16.7	
5	184	49.2	274	08.1	-23 05.4	295	41.3	-21 59.9	347	39.9	-5 50.9	68	44.1	+21 16.8	
6	199	51.7	289	07.2	-23 05.5	310	41.9	-22 00.1	2	42.2	-5 50.9	83	46.7	+21 16.8	
7	214	54.1	304	06.2	05.6	325	42.6	00.4	17	44.5	51.0	98	49.4	16.9	
8	229	56.6	319	05.3	05.7	340	43.2	00.7	32	46.8	51.1	113	52.1	16.9	
9	244	59.1	334	04.3	05.8	355	43.8	01.0	47	49.1	51.1	128	54.8	16.9	
10	260	01.5	349	03.4	05.8	10	44.4	01.2	62	51.4	51.2	143	57.5	17.0	
11	275	04.0	4	02.5	-23 05.9	25	45.0	-22 01.5	77	53.7	-5 51.2	159	00.1	+21 17.0	
12	290	06.4	19	01.5	-23 06.0	40	45.6	-22 01.8	92	56.0	-5 51.3	174	02.8	+21 17.1	
13	305	08.9	34	00.6	06.1	55	46.3	02.0	107	58.3	51.3	189	05.5	17.1	
14	320	11.4	48	59.6	06.2	70	46.9	02.3	123	00.6	51.4	204	08.2	17.1	
15	335	13.8	63	58.7	06.3	85	47.5	02.6	138	02.9	51.4	219	10.9	17.2	
16	350	16.3	78	57.7	06.3	100	48.1	02.9	153	05.2	51.5	234	13.5	17.2	
17	5	18.8	93	56.8	-23 06.4	115	48.7	-22 03.1	168	07.5	-5 51.6	249	16.2	+21 17.3	
18	20	21.2	108	55.9	-23 06.5	130	49.3	-22 03.4	183	09.8	-5 51.6	264	18.9	+21 17.3	
19	35	23.7	123	54.9	06.6	145	50.0	03.7	198	12.1	51.7	279	21.6	17.3	
20	50	26.2	138	54.0	06.7	160	50.6	03.9	213	14.4	51.7	294	24.3	17.4	
21	65	28.6	153	53.0	06.7	175	51.2	04.2	228	16.7	51.8	309	26.9	17.4	
22	80	31.1	168	52.1	06.8	190	51.8	04.5	243	19.0	51.8	324	29.6	17.5	
23	95	33.6	183	51.2	06.9	205	52.4	04.7	258	21.3	51.9	339	32.3	17.5	
24	110	36.0	198	50.2	-23 06.9	220	53.0	-22 05.0	273	23.6	-5 51.9	354	35.0	+21 17.5	
Dif	—		-9	-1		+6	-3		+23		-1		+27		0

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16/3 PMG: 12 ^h 08 ^m 0			Edad: 0 ^d 5 SD: 16/7 PMG: 13 ^h 16 ^m	PHE { 4 ^h : 61/4 12 ^h : 61/3 20 ^h : 61/2 R°: 60 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	02.7	-21 49.3	169	23.6	-25 27.4	80	60 N	7 04	7 59	8 53	10 32	6	16 13	118	
1	193	02.5	48.9	183	44.7	19.4	80	58	6 58	49	38	10 12	13	33	110	
2	208	02.2	48.6	198	05.9	11.2	82	56	52	40	25	9 55	18	16 49	104	
3	223	02.0	48.2	212	27.2	-25 02.9	83	54	47	32	14	40 23		17 03	99	
4	238	01.7	47.8	226	48.6	-24 54.3	86	52	42	25	8 04	28 26		15 96		
5	253	01.5	-21 47.4	241	10.1	-24 45.6	87	50	6 37	7 18	7 55	9 17	29	17 26	92	
6	268	01.2	-21 47.0	255	31.7	-24 36.6	90	45	6 27	7 04	7 37	8 53	36	17 48	86	
7	283	01.0	46.6	269	53.5	27.5	91	40	18	6 51	21	34 41		18 05	81	
8	298	00.7	46.2	284	15.3	18.2	93	35	09	41	7 08	18 44		20 77		
9	313	00.5	45.8	298	37.3	-24 08.8	94	30	6 02	31	6 57	8 05	47	33 73		
10	328	00.2	45.4	312	59.4	-23 59.1	97	20	5 47	6 14	38	7 41	52	18 55	67	
11	343	00.0	-21 45.0	327	21.6	-23 49.3	98	10 N	5 32	5 58	6 20	7 20	57	19 14	62	
12	357	59.7	-21 44.6	341	43.9	-23 39.3	100	0	5 16	5 42	6 04	7 01	61	19 31	58	
13	12	59.5	44.2	356	06.4	29.2	101	10 S	4 59	25	5 48	6 42	65	19 48	54	
14	27	59.3	43.8	10	29.0	18.9	103	20	38	5 06	31	6 21	70	20 06	49	
15	42	59.0	43.4	24	51.7	-23 08.4	105	30	4 11	4 43	5 10	5 57	75	27 44		
16	57	58.8	43.0	39	14.6	-22 57.8	106	35	3 53	29	4 58	43 78		40 40		
17	72	58.5	-21 42.6	53	37.5	-22 47.0	108	40	3 32	4 12	4 44	5 27	81	20 53	37	
18	87	58.3	-21 42.2	68	00.6	-22 36.1	109	45	3 05	3 52	4 28	5 07	86	21 10	31	
19	102	58.0	41.8	82	23.9	25.0	111	50	2 25	25	4 08	4 42	93	30 25		
20	117	57.8	41.4	96	47.2	13.7	113	52	2 03	3 12	3 58	30 96		39 23		
21	132	57.5	41.0	111	10.7	-22 02.4	113	54	1 33	2 56	47	17 99		21 50	19	
22	147	57.3	40.6	125	34.4	-21 50.8	116	56	0 33	37	34	4 01	104	22 02	15	
23	162	57.1	40.2	139	58.1	39.1	117	58	** **	2 14	20	3 42	110	16 10		
24	177	56.8	-21 39.8	154	22.0	-21 27.3	118	60 S	** **	1 41	3 02	3 18	119	22 32	4	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 16 ^h 34 ^m 9		Mag: -3.9 PMG: 10 ^h 45 ^m		Mag: +1.5 PMG: 9 ^h 16 ^m		Mag: -2.1 PMG: 5 ^h 46 ^m		Mag: -0.4 PMG: 0 ^h 22 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	110	36.0	198 50.2	-23 06.9	220 53.0	-22 05.0	273 23.6	-5 51.9	354 35.0	+21 17.5
1	125	38.5	213 49.3	07.0	235 53.6	05.3	288 25.9	52.0	9 37.7	17.6
2	140	40.9	228 48.3	07.1	250 54.3	05.5	303 28.2	52.0	24 40.3	17.6
3	155	43.4	243 47.4	07.1	265 54.9	05.8	318 30.5	52.1	39 43.0	17.7
4	170	45.9	258 46.4	07.2	280 55.5	06.1	333 32.8	52.2	54 45.7	17.7
5	185	48.3	273 45.5	-23 07.3	295 56.1	-22 06.3	348 35.1	-5 52.2	69 48.4	+21 17.7
6	200	50.8	288 44.6	-23 07.3	310 56.7	-22 06.6	3 37.4	-5 52.3	84 51.1	+21 17.8
7	215	53.3	303 43.6	07.4	325 57.3	06.9	18 39.7	52.3	99 53.7	17.8
8	230	55.7	318 42.7	07.5	340 57.9	07.1	33 42.0	52.4	114 56.4	17.9
9	245	58.2	333 41.7	07.5	355 58.6	07.4	48 44.3	52.4	129 59.1	17.9
10	261	00.7	348 40.8	07.6	10 59.2	07.7	63 46.6	52.5	145 01.8	17.9
11	276	03.1	3 39.8	-23 07.6	25 59.8	-22 07.9	78 48.9	-5 52.5	160 04.5	+21 18.0
12	291	05.6	18 38.9	-23 07.7	41 00.4	-22 08.2	93 51.2	-5 52.6	175 07.1	+21 18.0
13	306	08.1	33 38.0	07.7	56 01.0	08.5	108 53.5	52.6	190 09.8	18.1
14	321	10.5	48 37.0	07.8	71 01.6	08.7	123 55.8	52.7	205 12.5	18.1
15	336	13.0	63 36.1	07.8	86 02.2	09.0	138 58.2	52.7	220 15.2	18.1
16	351	15.4	78 35.1	07.9	101 02.8	09.2	154 00.5	52.8	235 17.9	18.2
17	6	17.9	93 34.2	-23 07.9	116 03.5	-22 09.5	169 02.8	-5 52.9	250 20.6	+21 18.2
18	21	20.4	108 33.2	-23 08.0	131 04.1	-22 09.8	184 05.1	-5 52.9	265 23.2	+21 18.3
19	36	22.8	123 32.3	08.0	146 04.7	10.0	199 07.4	53.0	280 25.9	18.3
20	51	25.3	138 31.4	08.1	161 05.3	10.3	214 09.7	53.0	295 28.6	18.3
21	66	27.8	153 30.4	08.1	176 05.9	10.5	229 12.0	53.1	310 31.3	18.4
22	81	30.2	168 29.5	08.2	191 06.5	10.8	244 14.3	53.1	325 34.0	18.4
23	96	32.7	183 28.5	08.2	206 07.1	11.1	259 16.6	53.2	340 36.6	18.5
24	111	35.2	198 27.6	-23 08.3	221 07.7	-22 11.3	274 18.9	-5 53.2	355 39.3	+21 18.5
Dif	—		-9	-1	+6	-3	+23	-1	+27	0

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16'3 PMG: 12 ^h 08 ^m 4			Edad: 1 ^d 5 PHE SD: 16'6 PMG: 14 ^h 16 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m				
0	177	56.8	-21 39.8	154	22.0	-21 27.3	51	60 N	15 25	16 19	17 14	10 38 2	18 11 108					
1	192	56.6	39.4	168	46.1	15.4	119	58	40	29	20	25 7	23 103					
2	207	56.3	39.0	183	10.2	-21 03.3	121	56	15 53	38	26	13 12	33 99					
3	222	56.1	38.6	197	34.5	-20 51.0	123	54	16 04	46	31	10 03 16	42 95					
4	237	55.9	38.2	211	59.0	38.7	123	52	14	16 53	36	9 54 19	51 91					
5	252	55.6	-21 37.8	226	23.5	-20 26.2	125	50	16 22	17 00	17 40	9 46 22	18 58 88					
6	267	55.4	-21 37.3	240	48.2	-20 13.6	126	45	16 41	17 14	17 50	9 29 27	19 14 82					
7	282	55.1	36.9	255	13.1	-20 00.8	128	40	16 56	26	17 59	15 32	26 77					
8	297	54.9	36.5	269	38.1	-19 48.0	128	35	17 09	36	18 08	9 02 37	37 73					
9	312	54.6	36.1	284	03.2	35.0	130	30	20	17 46	15	8 52 39	19 46 70					
10	327	54.4	35.7	298	28.4	21.9	131	20	39	18 03	30	33 46	20 02 63					
11	342	54.2	-21 35.3	312	53.8	-19 08.7	132	10 N	17 56	18 19	18 45	8 17 51	20 16 58					
12	357	53.9	-21 34.9	327	19.3	-18 55.4	133	0	18 12	18 34	19 00	8 02 56	20 29 53					
13	12	53.7	34.4	341	45.0	42.0	134	10 S	28	18 51	18	7 47 60	42 48					
14	27	53.4	34.0	356	10.8	28.4	136	20	18 45	19 10	19 38	31 65	20 55 43					
15	42	53.2	33.6	10	36.7	14.8	136	30	19 05	32	20 05	12 71	21 11 37					
16	57	53.0	33.2	25	02.7	-18 01.1	137	35	17	19 46	22	7 01 75	20 33					
17	72	52.7	-21 32.8	39	28.9	-17 47.2	139	40	19 31	20 03	20 43	6 48 79	21 30 29					
18	87	52.5	-21 32.4	53	55.2	-17 33.3	139	45	19 47	20 23	21 10	6 33 84	21 41 25					
19	102	52.3	31.9	68	21.7	19.3	140	50	20 07	20 49	21 48	15 90	21 55 19					
20	117	52.0	31.5	82	48.2	-17 05.2	141	52	17	21 02	22 09	6 06 93	22 02 16					
21	132	51.8	31.1	97	14.9	-16 50.9	143	54	27	17	22 38	5 56 97	09 13					
22	147	51.5	30.7	111	41.8	36.6	143	56	40	36	23 27	45 101	17 10					
23	162	51.3	30.3	126	08.7	22.3	143	58	20 54	21 58	** **	32 106	26 6					
24	177	51.1	-21 29.8	140	35.8	-16 07.8	145	60 S	21 11	22 29	** **	5 17 112	22 36 2					
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 16 ^h 30 ^m 9		Mag: -3.9 PMG: 10 ^h 47 ^m			Mag: +1.5 PMG: 9 ^h 15 ^m			Mag: -2.1 PMG: 5 ^h 42 ^m			Mag: -0.4 PMG: 0 ^h 17 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	°	'	°	'	°	°	'	°	°	'	°				
0	111	35.2	198 27.6	-23 08.3	221 07.7	-22 11.3	274 18.9	-5 53.2	355 39.3	+21 18.5								
1	126	37.6	213 26.6	08.3	236 08.3	11.6	289 21.2	53.3	10 42.0	18.5								
2	141	40.1	228 25.7	08.3	251 09.0	11.8	304 23.5	53.3	25 44.7	18.6								
3	156	42.6	243 24.8	08.4	266 09.6	12.1	319 25.9	53.4	40 47.4	18.6								
4	171	45.0	258 23.8	08.4	281 10.2	12.4	334 28.2	53.4	55 50.0	18.7								
5	186	47.5	273 22.9	-23 08.4	296 10.8	-22 12.6	349 30.5	-5 53.5	70 52.7	+21 18.7								
6	201	49.9	288 21.9	-23 08.5	311 11.4	-22 12.9	4 32.8	-5 53.5	85 55.4	+21 18.7								
7	216	52.4	303 21.0	08.5	326 12.0	13.1	19 35.1	53.6	100 58.1	18.8								
8	231	54.9	318 20.0	08.5	341 12.6	13.4	34 37.4	53.6	116 00.8	18.8								
9	246	57.3	333 19.1	08.6	356 13.2	13.6	49 39.7	53.7	131 03.4	18.9								
10	261	59.8	348 18.2	08.6	11 13.8	13.9	64 42.0	53.7	146 06.1	18.9								
11	277	02.3	3 17.2	-23 08.6	26 14.4	-22 14.2	79 44.4	-5 53.8	161 08.8	+21 18.9								
12	292	04.7	18 16.3	-23 08.6	41 15.1	-22 14.4	94 46.7	-5 53.8	176 11.5	+21 19.0								
13	307	07.2	33 15.3	08.7	56 15.7	14.7	109 49.0	53.9	191 14.2	19.0								
14	322	09.7	48 14.4	08.7	71 16.3	14.9	124 51.3	53.9	206 16.9	19.1								
15	337	12.1	63 13.4	08.7	86 16.9	15.2	139 53.6	54.0	221 19.5	19.1								
16	352	14.6	78 12.5	08.7	101 17.5	15.4	154 55.9	54.0	236 22.2	19.2								
17	7 17.0	93 11.5	-23 08.8	116 18.1	-22 15.7	169 58.2	-5 54.1	251 24.9	+21 19.2									
18	22 19.5	108 10.6	-23 08.8	131 18.7	-22 15.9	185 00.5	-5 54.1	266 27.6	+21 19.2									
19	37 22.0	123 09.7	08.8	146 19.3	16.2	200 02.9	54.2	281 30.3	19.3									
20	52 24.4	138 08.7	08.8	161 19.9	16.4	215 05.2	54.2	296 32.9	19.3									
21	67 26.9	153 07.8	08.8	176 20.5	16.7	230 07.5	54.3	311 35.6	19.4									
22	82 29.4	168 06.8	08.8	191 21.1	17.0	245 09.8	54.3	326 38.3	19.4									
23	97 31.8	183 05.9	08.8	206 21.7	17.2	260 12.1	54.4	341 41.0	19.4									
24	112 34.3	198 04.9	-23 08.9	221 22.3	-22 17.5	275 14.4	-5 54.4	356 43.7	+21 19.5									
Dif	—		-9		0		+6		-3		+23		-1		+27		0	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'3			Edad: 2 ^d 5 PHE {	SD: 16'5			R°: 49 ^m	Náutico		Civil	Hora	R°	Hora	R°
	PMG: 12 ^h 08 ^m 8	hG ☉	Dec		hG ☾	Dif									
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	177	51.1	-21	29.8	140	35.8	-16 07.8	60 N	7 03	7 57	8 51	10 40	1	19 59	100
1	192	50.8		29.4	155	03.0	82 -15 53.2	58	6 57	47	36	32	5	20 06	96
2	207	50.6		29.0	169	30.4	84 38.6	56	51	38	23	25	8	12	92
3	222	50.4		28.6	183	57.8	84 23.9	54	46	31	12	19	11	17	89
4	237	50.1		28.1	198	25.4	86 -15 09.1	52	41	23	8 03	13	14	22	86
5	252	49.9	-21	27.7	212	53.1	87 -14 54.3	50	6 36	7 17	7 54	10 08	16	20 26	83
6	267	49.7	-21	27.3	227	21.0	89 -14 39.4	45	6 26	7 03	7 36	9 56	23	20 36	77
7	282	49.4		26.8	241	48.9	89 24.4	40	17	6 51	21	47	27	43	73
8	297	49.2		26.4	256	17.0	91 -14 09.3	35	09	40	7 08	39	30	50	68
9	312	49.0		26.0	270	45.2	92 -13 54.2	30	6 02	31	6 57	31	35	20 56	64
10	327	48.7		25.6	285	13.5	93 39.1	20	5 47	6 14	38	19	40	21 05	59
11	342	48.5	-21	25.1	299	41.9	94 -13 23.8	10 N	5 32	5 58	6 21	9 08	45	21 14	53
12	357	48.3	-21	24.7	314	10.5	96 -13 08.5	0	5 17	5 43	6 05	8 58	50	21 22	48
13	12	48.0		24.3	328	39.1	96 -12 53.2	10 S	5 00	26	5 49	47	55	30	43
14	27	47.8		23.8	343	07.9	98 37.8	20	4 39	5 08	32	36	61	38	39
15	42	47.6		23.4	357	36.8	99 22.3	30	4 13	4 45	12	23	67	48	32
16	57	47.3		23.0	12	05.7	99 -12 06.8	35	3 56	31	5 00	16	70	53	29
17	72	47.1	-21	22.5	26	34.8	101 -11 51.3	40	3 35	4 15	4 47	8 07	75	21 59	25
18	87	46.9	-21	22.1	41	04.0	102 -11 35.7	45	3 08	3 55	4 31	7 57	80	22 06	21
19	102	46.6		21.6	55	33.3	103 20.1	50	2 30	28	11	45	86	14	16
20	117	46.4		21.2	70	02.8	105 -11 04.4	52	2 08	15	4 01	39	89	18	13
21	132	46.2		20.8	84	32.3	105 -10 48.7	54	1 40	3 00	3 50	33	92	22	11
22	147	46.0		20.3	99	01.9	106 33.0	56	0 51	2 42	38	26	95	27	7
23	162	45.7		19.9	113	31.6	107 17.2	58	** **	2 19	24	18	99	32	4
24	177	45.5	-21	19.4	128	01.4	108 -10 01.3	60 S	** **	1 49	3 07	7 09	104	22 38	0
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 16 ^h 27 ^m 0		Mag: -3.9			Mag: +1.5			Mag: -2.1			Mag: -0.4			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°	
0	112	34.3	198	04.9	-23	08.9	221 22.3	-22 17.5	275	14.4	-5 54.4	356	43.7	+21 19.5	
1	127	36.8	213	04.0		08.9	236 23.0		290	16.8		11	46.3		
2	142	39.2	228	03.0		08.9	251 23.6		305	19.1		26	49.0		
3	157	41.7	243	02.1		08.9	266 24.2		320	21.4		41	51.7		
4	172	44.2	258	01.2		08.9	281 24.8		335	23.7		56	54.4		
5	187	46.6	273	00.2	-23	08.9	296 25.4	-22 18.7	350	26.0	-5 54.7	71	57.1	+21 19.7	
6	202	49.1	287	59.3	-23	08.9	311 26.0	-22 19.0	5	28.3	-5 54.7	86	59.8	+21 19.7	
7	217	51.5	302	58.3		08.9	326 26.6		20	30.7		102	02.4		
8	232	54.0	317	57.4		08.9	341 27.2		35	33.0		117	05.1		
9	247	56.5	332	56.4		08.9	356 27.8		50	35.3		132	07.8		
10	262	58.9	347	55.5		08.9	11 28.4		65	37.6		147	10.5		
11	278	01.4	2	54.6	-23	08.9	26 29.0	-22 20.2	80	39.9	-5 55.0	162	13.2	+21 19.9	
12	293	03.9	17	53.6	-23	08.9	41 29.6	-22 20.4	95	42.3	-5 55.0	177	15.8	+21 20.0	
13	308	06.3	32	52.7		08.9	56 30.2		110	44.6		192	18.5		
14	323	08.8	47	51.7		08.9	71 30.8		125	46.9		207	21.2		
15	338	11.3	62	50.8		08.9	86 31.4		140	49.2		222	23.9		
16	353	13.7	77	49.8		08.9	101 32.0		155	51.5		237	26.6		
17	8	16.2	92	48.9	-23	08.9	116 32.6	-22 21.7	170	53.9	-5 55.2	252	29.2	+21 20.2	
18	23	18.7	107	47.9	-23	08.8	131 33.2	-22 21.9	185	56.2	-5 55.3	267	31.9	+21 20.2	
19	38	21.1	122	47.0		08.8	146 33.9		200	58.5		282	34.6		
20	53	23.6	137	46.1		08.8	161 34.5		216	00.8		297	37.3		
21	68	26.0	152	45.1		08.8	176 35.1		231	03.2		312	40.0		
22	83	28.5	167	44.2		08.8	191 35.7		246	05.5		327	42.7		
23	98	31.0	182	43.2		08.8	206 36.3		261	07.8		342	45.3		
24	113	33.4	197	42.3	-23	08.8	221 36.9	-22 23.4	276	10.1	-5 55.6	357	48.0	+21 20.4	
Dif	—		-9		0		+6		-2		+23		0		

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna				
	SD: 16:3 PMG: 12 ^h 09 ^m 2			Edad: 3 ^d 5 PHE { 4 ^h : 59/4 12 ^h : 59/1 20 ^h : 58/8 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	177	45.5	-21	19.4	128	01.4	-10	01.3	60 N	15 30	16 23	17 17	10 41	0	21 39 95		
1	192	45.3		19.0	142	31.3 ¹⁰⁹	-9	45.5 ¹⁵⁸	58	44	33	23	37	3	42 91		
2	207	45.0		18.6	157	01.3 ¹¹⁰		29.6 ¹⁵⁹	56	15 56	41	29	33	7	44 87		
3	222	44.8		18.1	171	31.4 ¹¹¹	-9	13.7 ¹⁵⁹	54	16 07	49	34	30	9	46 84		
4	237	44.6		17.7	186	01.6 ¹¹²	-8	57.8 ¹⁵⁹	52	17	16 56	38	27	12	48 81		
5	252	44.4	-21	17.2	200	31.9 ¹¹³	-8	41.8 ¹⁶⁰	50	16 25	17 02	17 43	10 24	15	21 49 79		
6	267	44.1	-21	16.8	215	02.3 ¹¹⁴	-8	25.8 ¹⁶⁰	45	16 43	17 16	17 53	10 19	19	21 53 73		
7	282	43.9		16.3	229	32.8 ¹¹⁵	-8	09.8 ¹⁶⁰	40	16 58	28	18 01	14	23	56 69		
8	297	43.7		15.9	244	03.3 ¹¹⁵	-7	53.8 ¹⁶⁰	35	17 11	38	09	09	28	21 58 65		
9	312	43.4		15.5	258	34.0 ¹¹⁷		37.8 ¹⁶⁰	30	22	17 48	17	10 06	31	22 00 62		
10	327	43.2		15.0	273	04.7 ¹¹⁷		21.7 ¹⁶¹	20	41	18 04	31	9 59	37	04 56		
11	342	43.0	-21	14.6	287	35.5 ¹¹⁸	-7	05.7 ¹⁶⁰	10 N	17 57	18 20	18 46	9 53	42	22 07 51		
12	357	42.8	-21	14.1	302	06.4 ¹¹⁹	-6	49.6 ¹⁶¹	0	18 13	18 35	19 01	9 48	47	22 10 46		
13	12	42.5		13.7	316	37.4 ¹²⁰		33.5 ¹⁶¹	10 S	29	18 51	18	42	52	13 41		
14	27	42.3		13.2	331	08.5 ¹²¹		17.4 ¹⁶¹	20	18 46	19 10	19 38	37	57	17 35		
15	42	42.1		12.8	345	39.6 ¹²¹	-6	01.3 ¹⁶¹	30	19 05	32	20 04	30	63	20 30		
16	57	41.9		12.3	0	10.8 ¹²²	-5	45.1 ¹⁶²	35	17	19 46	21	26	67	22 27		
17	72	41.6	-21	11.8	14	42.1 ¹²³	-5	29.0 ¹⁶¹	40	19 30	20 02	20 41	9 22	70	22 24 23		
18	87	41.4	-21	11.4	29	13.4 ¹²³	-5	12.9 ¹⁶¹	45	19 46	20 22	21 08	9 17	75	22 27 19		
19	102	41.2		10.9	43	44.9 ¹²⁵	-4	56.8 ¹⁶¹	50	20 06	20 47	21 45	11	80	30 14		
20	117	41.0		10.5	58	16.3 ¹²⁴		40.6 ¹⁶²	52	15	21 00	22 05	08	83	31 12		
21	132	40.7		10.0	72	47.9 ¹²⁶		24.5 ¹⁶¹	54	25	15	22 32	05	86	33 9		
22	147	40.5		09.6	87	19.5 ¹²⁶	-4	08.4 ¹⁶¹	56	37	32	23 15	9 01	89	34 7		
23	162	40.3		09.1	101	51.2 ¹²⁷	-3	52.2 ¹⁶²	58	20 51	21 54	** **	8 57	93	36 4		
24	177	40.1	-21	08.7	116	23.0 ¹²⁸	-3	36.1 ¹⁶¹	60 S	21 08	22 23	** **	8 53	97	22 38 0		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 16 ^h 23 ^m 1		Mag: -3.9 PMG: 10 ^h 50 ^m			Mag: +1.5 PMG: 9 ^h 13 ^m			Mag: -2.1 PMG: 5 ^h 34 ^m			Mag: -0.4 PMG: 0 ^h 09 ^m					
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♎	Dec				
h	°	'	°	'	°	°	'	°	°	'	°	'	°	'			
0	113	33.4	197	42.3	-23	221	36.9	-22	276	10.1	-5	357	48.0	+21			
1	128	35.9	212	41.3		236	37.5		291	12.4		12	50.7				
2	143	38.4	227	40.4		251	38.1		306	14.8		27	53.4				
3	158	40.8	242	39.5		266	38.7		321	17.1		42	56.1				
4	173	43.3	257	38.5		281	39.3		336	19.4		57	58.7				
5	188	45.8	272	37.6	-23	296	39.9	-22	351	21.7	-5	73	01.4	+21			
6	203	48.2	287	36.6	-23	311	40.5	-22	6	24.1	-5	88	04.1	+21			
7	218	50.7	302	35.7		326	41.1		21	26.4		103	06.8				
8	233	53.1	317	34.7		341	41.7		36	28.7		118	09.5				
9	248	55.6	332	33.8		356	42.3		51	31.0		133	12.2				
10	263	58.1	347	32.8		11	42.9		66	33.4		148	14.8				
11	279	00.5	2	31.9	-23	26	43.5	-22	81	35.7	-5	163	17.5	+21			
12	294	03.0	17	31.0	-23	41	44.1	-22	96	38.0	-5	178	20.2	+21			
13	309	05.5	32	30.0		56	44.7		111	40.4		193	22.9				
14	324	07.9	47	29.1		71	45.3		126	42.7		208	25.6				
15	339	10.4	62	28.1		86	45.9		141	45.0		223	28.2				
16	354	12.9	77	27.2		101	46.5		156	47.3		238	30.9				
17	9	15.3	92	26.2	-23	116	47.1	-22	171	49.7	-5	253	33.6	+21			
18	24	17.8	107	25.3	-23	131	47.7	-22	186	52.0	-5	268	36.3	+21			
19	39	20.3	122	24.4		146	48.3		201	54.3		283	39.0				
20	54	22.7	137	23.4		161	48.9		216	56.6		298	41.6				
21	69	25.2	152	22.5		176	49.5		231	59.0		313	44.3				
22	84	27.6	167	21.5		191	50.1		247	01.3		328	47.0				
23	99	30.1	182	20.6		206	50.7		262	03.6		343	49.7				
24	114	32.6	197	19.6	-23	221	51.3	-22	277	06.0	-5	358	52.4	+21			
Dif	—		-9			+6			+23			0			+27		

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna											
	SD: 16:3 PMG: 12 ^h 09 ^m 5			Edad: 4 ^d 5 PHE { SD: 16:0 PMG: 16 ^h 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	177	40.1	-21	08.7	116	23.0	-3	36.1	60 N	7 01	7 55	8 48	10 41	**	23 14	92								
1	192	39.9		08.2	130	54.8 ¹²⁸		20.0 ¹⁶¹	58	6 55	45	33	40	3	13	87								
2	207	39.6		07.7	145	26.7 ¹²⁹	-3	03.9 ¹⁶¹	56	49	37	21	40	6	11	85								
3	222	39.4		07.3	159	58.7 ¹³⁰	-2	47.8 ¹⁶¹	54	44	29	11	39	9	10	82								
4	237	39.2		06.8	174	30.7 ¹³⁰		31.7 ¹⁶¹	52	40	22	8 01	39	11	09	79								
5	252	39.0	-21	06.4	189	02.7 ¹³⁰	-2	15.6 ¹⁶¹	50	6 35	7 16	7 53	10 39	13	23	08	77							
6	267	38.8	-21	05.9	203	34.8 ¹³¹	-1	59.6 ¹⁶⁰	45	6 26	7 02	7 35	10 38	19	23	06	71							
7	282	38.5		05.4	218	07.0 ¹³²		43.5 ¹⁶¹	40	17	6 50	20	37	23	05	66								
8	297	38.3		05.0	232	39.2 ¹³²		27.5 ¹⁶⁰	35	09	40	7 08	37	26	03	63								
9	312	38.1		04.5	247	11.5 ¹³³	-1	11.4 ¹⁶¹	30	6 01	31	6 57	37	29	02	60								
10	327	37.9		04.0	261	43.8 ¹³³	-0	55.4 ¹⁶⁰	20	5 47	6 14	38	36	35	23	00	54							
11	342	37.7	-21	03.6	276	16.2 ¹³⁴	-0	39.5 ¹⁵⁹	10 N	5 33	5 59	6 21	10 35	40	22	58	49							
12	357	37.4	-21	03.1	290	48.6 ¹³⁴	-0	23.5 ¹⁶⁰	0	5 18	5 44	6 06	10 35	44	22	56	45							
13	12	37.2		02.6	305	21.1 ¹³⁵	-0	07.6 ¹⁵⁹	10 S	5 01	28	5 50	34	50	54	40								
14	27	37.0		02.2	319	53.6 ¹³⁵	+0	08.4 ¹⁶⁰	20	4 41	5 09	33	34	54	52	35								
15	42	36.8		01.7	334	26.1 ¹³⁵		24.3 ¹⁵⁹	30	4 15	4 47	14	33	60	50	30								
16	57	36.6		01.2	348	58.7 ¹³⁶		40.1 ¹⁵⁸	35	3 58	33	5 02	33	63	49	26								
17	72	36.4	-21	00.8	3	31.4 ¹³⁷	+0	56.0 ¹⁵⁹	40	3 38	4 17	4 49	10 32	68	22	47	23							
18	87	36.1	-21	00.3	18	04.0 ¹³⁶	+1	11.8 ¹⁵⁸	45	3 11	3 57	4 33	10 32	72	22	46	19							
19	102	35.9	-20	59.8	32	36.7 ¹³⁷		27.6 ¹⁵⁸	50	2 34	32	13	31	77	44	14								
20	117	35.7		59.4	47	09.5 ¹³⁸		43.4 ¹⁵⁸	52	2 14	19	4 04	31	80	43	11								
21	132	35.5		58.9	61	42.3 ¹³⁸	+1	59.1 ¹⁵⁷	54	1 47	3 04	3 54	31	82	42	9								
22	147	35.3		58.4	76	15.1 ¹³⁸	+2	14.8 ¹⁵⁷	56	1 04	2 47	42	30	86	41	6								
23	162	35.1		57.9	90	47.9 ¹³⁸		30.5 ¹⁵⁷	58	** **	2 25	28	30	89	40	3								
24	177	34.8	-20	57.5	105	20.8 ¹³⁹	+2	46.1 ¹⁵⁶	60 S	** **	1 56	3 12	10 30	92	22	38	0							
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO											
	PMG: 16 ^h 19 ^m 1			Mag: -3.9 PMG: 10 ^h 51 ^m			Mag: +1.5 PMG: 9 ^h 12 ^m			Mag: -2.1 PMG: 5 ^h 31 ^m			Mag: -0.4 PMG: 0 ^h 04 ^m											
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♊	Dec	hG ♋	Dec	hG ♎	Dec													
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'						
0	114	32.6	197	19.6	-23	07.9	221	51.3	-22	29.1	277	06.0	-5	56.6	358	52.4	+21	21.4						
1	129	35.0	212	18.7		07.9	236	51.9		29.4	292	08.3		56.7	13	55.1		21.4						
2	144	37.5	227	17.8		07.8	251	52.5		29.6	307	10.6		56.7	28	57.7		21.5						
3	159	40.0	242	16.8		07.8	266	53.1		29.8	322	13.0		56.8	44	00.4		21.5						
4	174	42.4	257	15.9		07.7	281	53.7		30.1	337	15.3		56.8	59	03.1		21.6						
5	189	44.9	272	14.9	-23	07.7	296	54.3	-22	30.3	352	17.6	-5	56.9	74	05.8	+21	21.6						
6	204	47.4	287	14.0	-23	07.6	311	54.9	-22	30.5	7	20.0	-5	56.9	89	08.5	+21	21.6						
7	219	49.8	302	13.0		07.6	326	55.5		30.8	22	22.3		56.9	104	11.1		21.7						
8	234	52.3	317	12.1		07.5	341	56.1		31.0	37	24.6		57.0	119	13.8		21.7						
9	249	54.8	332	11.1		07.4	356	56.7		31.2	52	26.9		57.0	134	16.5		21.8						
10	264	57.2	347	10.2		07.4	11	57.3		31.5	67	29.3		57.1	149	19.2		21.8						
11	279	59.7	2	09.3	-23	07.3	26	57.9	-22	31.7	82	31.6	-5	57.1	164	21.9	+21	21.8						
12	295	02.1	17	08.3	-23	07.3	41	58.5	-22	31.9	97	33.9	-5	57.2	179	24.5	+21	21.9						
13	310	04.6	32	07.4		07.2	56	59.1		32.1	112	36.3		57.2	194	27.2		21.9						
14	325	07.1	47	06.4		07.1	71	59.7		32.4	127	38.6		57.2	209	29.9		22.0						
15	340	09.5	62	05.5		07.1	87	00.3		32.6	142	41.0		57.3	224	32.6		22.0						
16	355	12.0	77	04.6		07.0	102	00.9		32.8	157	43.3		57.3	239	35.3		22.0						
17	10	14.5	92	03.6	-23	06.9	117	01.5	-22	33.1	172	45.6	-5	57.4	254	38.0	+21	22.1						
18	25	16.9	107	02.7	-23	06.9	132	02.1	-22	33.3	187	48.0	-5	57.4	269	40.6	+21	22.1						
19	40	19.4	122	01.7		06.8	147	02.7		33.5	202	50.3		57.4	284	43.3		22.2						
20	55	21.9	137	00.8		06.7	162	03.3		33.7	217	52.6		57.5	299	46.0		22.2						
21	70	24.3	151	59.8		06.6	177	03.9		34.0	232	55.0		57.5	314	48.7		22.2						
22	85	26.8	166	58.9		06.6	192	04.5		34.2	247	57.3		57.6	329	51.4		22.3						
23	100	29.2	181	58.0		06.5	207	05.0		34.4	262	59.6		57.6	344	54.0		22.3						
24	115	31.7	196	57.0	-23	06.4	222	05.6	-22	34.7	278	02.0	-5	57.6	359	56.7	+21	22.4						
Dif	—			-9			+1			+6			-2			+23			0			+27		

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:3 PMG: 12 ^h 09 ^m 9			Edad: 5 ^d 5 PHE { 4 ^h : 57:5 12 ^h : 57:2 20 ^h : 56:9 R°: 44 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m
0	177	34.8	-20	57.5	105	20.8	+2	46.1	60 N	15 34	16 27	17 21	10 40	0
1	192	34.6		57.0	119	53.7 ¹³⁹	+3	01.7 ¹⁵⁶	58	15 48	36	26	43	4
2	207	34.4		56.5	134	26.6 ¹³⁹		17.3 ¹⁵⁶	56	16 00	45	32	46	6
3	222	34.2		56.0	148	59.6 ¹⁴⁰		32.8 ¹⁵⁵	54	11	52	37	48	10
4	237	34.0		55.6	163	32.5 ¹³⁹	+3	48.3 ¹⁵⁵	52	20	16 59	41	50	12
5	252	33.8	-20	55.1	178	05.5 ¹⁴⁰	+4	03.8 ¹⁵⁵	50	16 28	17 05	17 45	10 52	14
6	267	33.6	-20	54.6	192	38.6 ¹⁴¹	+4	19.2 ¹⁵⁴	45	16 46	17 19	17 55	10 57	19
7	282	33.3		54.1	207	11.6 ¹⁴⁰		34.6 ¹⁵⁴	40	17 00	30	18 03	11 00	23
8	297	33.1		53.6	221	44.7 ¹⁴¹	+4	49.9 ¹⁵³	35	13	40	11	03	27
9	312	32.9		53.2	236	17.8 ¹⁴¹	+5	05.2 ¹⁵³	30	23	17 49	19	06	30
10	327	32.7		52.7	250	50.9 ¹⁴¹		20.4 ¹⁵²	20	42	18 05	33	11	35
11	342	32.5	-20	52.2	265	24.0 ¹⁴¹	+5	35.6 ¹⁵²	10 N	17 58	18 21	18 46	11 15	40
12	357	32.3	-20	51.7	279	57.1 ¹⁴¹	+5	50.8 ¹⁵²	0	18 13	18 36	19 01	11 19	45
13	12	32.1		51.2	294	30.2 ¹⁴¹	+6	05.9 ¹⁵¹	10 S	29	18 52	18	24	48
14	27	31.9		50.8	309	03.4 ¹⁴²		21.0 ¹⁵¹	20	18 46	19 10	19 38	28	54
15	42	31.7		50.3	323	36.6 ¹⁴²		36.0 ¹⁵⁰	30	19 05	32	20 04	33	59
16	57	31.4		49.8	338	09.7 ¹⁴¹	+6	51.0 ¹⁵⁰	35	16	19 45	20	36	62
17	72	31.2	-20	49.3	352	42.9 ¹⁴²	+7	05.9 ¹⁴⁹	40	19 29	20 01	20 40	11 40	66
18	87	31.0	-20	48.8	7	16.1 ¹⁴²	+7	20.8 ¹⁴⁹	45	19 45	20 20	21 06	11 44	70
19	102	30.8		48.3	21	49.3 ¹⁴²		35.6 ¹⁴⁸	50	20 04	45	21 42	48	76
20	117	30.6		47.8	36	22.5 ¹⁴²	+7	50.4 ¹⁴⁸	52	13	20 57	22 01	51	78
21	132	30.4		47.3	50	55.7 ¹⁴²	+8	05.1 ¹⁴⁷	54	23	21 12	22 27	53	81
22	147	30.2		46.9	65	28.9 ¹⁴²		19.8 ¹⁴⁷	56	35	29	23 05	56	84
23	162	30.0		46.4	80	02.1 ¹⁴²		34.4 ¹⁴⁶	58	20 48	21 50	** **	11 59	87
24	177	29.8	-20	45.9	94	35.3 ¹⁴²	+8	48.9 ¹⁴⁵	60 S	21 04	22 17	** **	12 02	91
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 16 ^h 15 ^m 2		Mag: -3.9 PMG: 10 ^h 53 ^m		Mag: +1.5 PMG: 9 ^h 11 ^m		Mag: -2.1 PMG: 5 ^h 27 ^m		Mag: -0.4 PMG: 0 ^h 00 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	115	31.7	196	57.0	-23	06.4	278	02.0	-5	57.6				
1	130	34.2	211	56.1		06.3	293	04.3		57.7				
2	145	36.6	226	55.1		06.2	308	06.6		57.7				
3	160	39.1	241	54.2		06.2	323	09.0		57.8				
4	175	41.6	256	53.2		06.1	338	11.3		57.8				
5	190	44.0	271	52.3	-23	06.0	353	13.7	-5	57.8				
6	205	46.5	286	51.4	-23	05.9	8	16.0	-5	57.9				
7	220	49.0	301	50.4		05.8	23	18.3		57.9				
8	235	51.4	316	49.5		05.7	38	20.7		58.0				
9	250	53.9	331	48.5		05.6	53	23.0		58.0				
10	265	56.4	346	47.6		05.6	68	25.4		58.0				
11	280	58.8	1	46.7	-23	05.5	83	27.7	-5	58.1				
12	296	01.3	16	45.7	-23	05.4	98	30.0	-5	58.1				
13	311	03.7	31	44.8		05.3	113	32.4		58.2				
14	326	06.2	46	43.8		05.2	128	34.7		58.2				
15	341	08.7	61	42.9		05.1	143	37.1		58.2				
16	356	11.1	76	42.0		05.0	158	39.4		58.3				
17	11	13.6	91	41.0	-23	04.9	173	41.7	-5	58.3				
18	26	16.1	106	40.1	-23	04.8	188	44.1	-5	58.4				
19	41	18.5	121	39.1		04.7	203	46.4		58.4				
20	56	21.0	136	38.2		04.6	218	48.8		58.4				
21	71	23.5	151	37.3		04.5	233	51.1		58.5				
22	86	25.9	166	36.3		04.4	248	53.5		58.5				
23	101	28.4	181	35.4		04.3	263	55.8		58.5				
24	116	30.9	196	34.4	-23	04.2	278	58.1	-5	58.6				
Dif	—		-9		+1		+23		0					

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna	
	SD: 16:3			Edad: 6 ^d 5	PHE { 4 ^h : 56'6 12 ^h : 56'3 20 ^h : 56'1										
	PMG: 12 ^h 10 ^m 2					SD: 15:5		PMG: 18 ^h 14 ^m			R ^o : 45 ^m				
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	177	29.8	-20 45.9	94	35.3	+8 48.9		60 N	6 59	7 52	8 44	10 40	1	0 46	91
1	192	29.6	45.4	109	08.6 ¹⁴³	+9 03.4 ¹⁴⁵		58	53	43	31	47	4	40	87
2	207	29.4	44.9	123	41.8 ¹⁴²	17.9 ¹⁴⁵		56	48	35	19	52	9	36	83
3	222	29.2	44.4	138	15.0 ¹⁴²	32.2 ¹⁴³		54	43	27	8 08	10 58	11	32	80
4	237	28.9	43.9	152	48.2 ¹⁴²	+9 46.6 ¹⁴⁴		52	38	20	7 59	11 02	14	28	78
5	252	28.7	-20 43.4	167	21.3 ¹⁴¹	+10 00.8 ¹⁴²		50	6 34	7 14	7 51	11 06	16	0 25	75
6	267	28.5	-20 42.9	181	54.5 ¹⁴²	+10 15.0 ¹⁴²		45	6 25	7 01	7 34	11 16	20	0 17	70
7	282	28.3	42.4	196	27.7 ¹⁴²	29.2 ¹⁴²		40	16	6 50	19	23	25	11	66
8	297	28.1	41.9	211	00.9 ¹⁴²	43.3 ¹⁴¹		35	09	40	7 07	30	28	06	62
9	312	27.9	41.4	225	34.0 ¹⁴¹	+10 57.3 ¹⁴⁰		30	6 01	31	6 56	36	31	0 02	58
10	327	27.7	40.9	240	07.2 ¹⁴²	+11 11.2 ¹³⁹		20	5 47	6 14	38	46	36	** ** *	**
11	342	27.5	-20 40.4	254	40.3 ¹⁴¹	+11 25.1 ¹³⁹		10 N	5 33	5 59	6 22	11 55	41	** ** *	**
12	357	27.3	-20 39.9	269	13.4 ¹⁴¹	+11 39.0 ¹³⁹		0	5 19	5 44	6 07	12 04	44	** ** *	**
13	12	27.1	39.4	283	46.6 ¹⁴²	+11 52.7 ¹³⁷		10 S	5 02	29	5 51	12	49	** ** *	**
14	27	26.9	38.9	298	19.6 ¹⁴⁰	+12 06.4 ¹³⁷		20	4 42	5 11	35	22	53	** ** *	**
15	42	26.7	38.4	312	52.7 ¹⁴¹	20.0 ¹³⁶		30	17	4 49	15	32	59	23 50	33
16	57	26.5	37.9	327	25.8 ¹⁴¹	33.6 ¹³⁶		35	4 00	35	5 04	38	62	43	29
17	72	26.3	-20 37.4	341	58.8 ¹⁴⁰	+12 47.1 ¹³⁵		40	3 40	4 20	4 51	12 46	65	23 34	26
18	87	26.1	-20 36.9	356	31.8 ¹⁴⁰	+13 00.5 ¹³⁴		45	3 15	4 00	4 36	12 54	69	23 24	23
19	102	25.9	36.4	11	04.9 ¹⁴¹	13.9 ¹³⁴		50	2 39	3 35	17	13 04	75	13	17
20	117	25.7	35.9	25	37.8 ¹³⁹	27.1 ¹³²		52	2 19	23	4 07	09	77	07	15
21	132	25.5	35.4	40	10.8 ¹⁴⁰	40.4 ¹³³		54	1 54	3 09	3 57	14	80	23 01	12
22	147	25.3	34.9	54	43.7 ¹³⁹	+13 53.5 ¹³¹		56	1 16	2 52	46	20	83	22 54	10
23	162	25.1	34.4	69	16.7 ¹⁴⁰	+14 06.5 ¹³⁰		58	** ** *	31	32	26	87	47	6
24	177	24.9	-20 33.9	83	49.5 ¹³⁸	+14 19.5 ¹³⁰		60 S	** ** *	2 04	3 17	13 33	92	22 39	1

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 16 ^h 11 ^m 3		Mag: -3.9 PMG: 10 ^h 54 ^m			Mag: +1.5 PMG: 9 ^h 10 ^m			Mag: -2.1 PMG: 5 ^h 23 ^m			Mag: -0.4 PMG: 23 ^h 52 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°	
0	116	30.9	196	34.4	-23 04.2	222	19.9	-22 40.0	278	58.1	-5 58.6	1	01.1	+21 23.3	
1	131	33.3	211	33.5	04.1	237	20.5	40.2	294	00.5	58.6	16	03.7	23.4	
2	146	35.8	226	32.6	03.9	252	21.1	40.4	309	02.8	58.7	31	06.4	23.4	
3	161	38.2	241	31.6	03.8	267	21.7	40.6	324	05.2	58.7	46	09.1	23.4	
4	176	40.7	256	30.7	03.7	282	22.3	40.9	339	07.5	58.7	61	11.8	23.5	
5	191	43.2	271	29.7	-23 03.6	297	22.9	-22 41.1	354	09.9	-5 58.8	76	14.5	+21 23.5	
6	206	45.6	286	28.8	-23 03.5	312	23.4	-22 41.3	9	12.2	-5 58.8	91	17.1	+21 23.5	
7	221	48.1	301	27.9	03.4	327	24.0	41.5	24	14.6	58.8	106	19.8	23.6	
8	236	50.6	316	26.9	03.3	342	24.6	41.7	39	16.9	58.9	121	22.5	23.6	
9	251	53.0	331	26.0	03.1	357	25.2	41.9	54	19.3	58.9	136	25.2	23.7	
10	266	55.5	346	25.0	03.0	12	25.8	42.2	69	21.6	58.9	151	27.9	23.7	
11	281	58.0	1	24.1	-23 02.9	27	26.4	-22 42.4	84	23.9	-5 59.0	166	30.6	+21 23.7	
12	297	00.4	16	23.2	-23 02.8	42	27.0	-22 42.6	99	26.3	-5 59.0	181	33.2	+21 23.8	
13	312	02.9	31	22.2	02.7	57	27.6	42.8	114	28.6	59.1	196	35.9	23.8	
14	327	05.3	46	21.3	02.5	72	28.2	43.0	129	31.0	59.1	211	38.6	23.9	
15	342	07.8	61	20.3	02.4	87	28.8	43.2	144	33.3	59.1	226	41.3	23.9	
16	357	10.3	76	19.4	02.3	102	29.4	43.4	159	35.7	59.2	241	44.0	23.9	
17	12	12.7	91	18.5	-23 02.1	117	29.9	-22 43.6	174	38.0	-5 59.2	256	46.6	+21 24.0	
18	27	15.2	106	17.5	-23 02.0	132	30.5	-22 43.9	189	40.4	-5 59.2	271	49.3	+21 24.0	
19	42	17.7	121	16.6	01.9	147	31.1	44.1	204	42.7	59.3	286	52.0	24.1	
20	57	20.1	136	15.7	01.8	162	31.7	44.3	219	45.1	59.3	301	54.7	24.1	
21	72	22.6	151	14.7	01.6	177	32.3	44.5	234	47.4	59.3	316	57.4	24.1	
22	87	25.1	166	13.8	01.5	192	32.9	44.7	249	49.8	59.4	332	00.0	24.2	
23	102	27.5	181	12.8	01.3	207	33.5	44.9	264	52.1	59.4	347	02.7	24.2	
24	117	30.0	196	11.9	-23 01.2	222	34.1	-22 45.1	279	54.5	-5 59.4	2	05.4	+21 24.3	
Dif	—		-9	+1		+6	-2		+23		0		+27		0

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 16:3 PMG: 12 ^h 10 ^m 5			Edad: 7 ^d 5 PHE { 4 ^h : 55 ^m 8 12 ^h : 55 ^m 6 20 ^h : 55 ^m 4 R°: 47 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	h m	h m	h m			
0	177	24.9	-20	33.9	83	49.5	+14 19.5	60 N	15 39	16 31	17 24	10 41	2	2 17	92			
1	192	24.7		33.4	98	22.4 ¹³⁹	32.4 ¹²⁹	58	15 52		40	30	10 51	8	2 07 88			
2	207	24.5		32.9	112	55.2 ¹³⁸	45.3 ¹²⁹	56	16 04		48	35	11 01	10	1 59 84			
3	222	24.3		32.4	127	28.1 ¹³⁹	+14 58.0 ¹²⁷	54	14	16 55	40	09 14		52	80			
4	237	24.1		31.8	142	00.8 ¹³⁷	+15 10.7 ¹²⁷	52	23	17 02	44	16 17		46	76			
5	252	23.9	-20	31.3	156	33.6 ¹³⁸	+15 23.3 ¹²⁶	50	16 31	17 08	17 48	11 22	20	1 40	74			
6	267	23.7	-20	30.8	171	06.3 ¹³⁷	+15 35.9 ¹²⁶	45	16 49	17 21	17 57	11 36	25	1 27	69			
7	282	23.5		30.3	185	39.0 ¹³⁷	+15 48.3 ¹²⁴	40	17 03		32	18 05		48 28	17 65			
8	297	23.3		29.8	200	11.7 ¹³⁷	+16 00.7 ¹²⁴	35	15	42	13	11 58	31	08	62			
9	312	23.1		29.3	214	44.3 ¹³⁶	13.0 ¹²³	30	25	17 51	20	12 07	34	1 00	59			
10	327	22.9		28.8	229	16.9 ¹³⁶	25.2 ¹²²	20	43	18 07	34	22	39	0 47	54			
11	342	22.7	-20	28.3	243	49.5 ¹³⁶	+16 37.3 ¹²¹	10 N	17 59	18 22	18 47	12 36	42	0 36	49			
12	357	22.5	-20	27.7	258	22.0 ¹³⁵	+16 49.3 ¹²⁰	0	18 14	18 36	19 02	12 48	47	0 25	45			
13	12	22.3		27.2	272	54.5 ¹³⁵	+17 01.3 ¹²⁰	10 S	29	18 52	18	13 01	50	14	42			
14	27	22.1		26.7	287	27.0 ¹³⁵	13.1 ¹¹⁸	20	18 46	19 09	19 38	15 54		0 03	37			
15	42	21.9		26.2	301	59.4 ¹³⁴	24.9 ¹¹⁸	30	19 04		31	20 03		31 58	*** ** *			
16	57	21.7		25.7	316	31.8 ¹³⁴	36.6 ¹¹⁷	35	15	19 44	19	40	61		*** ** *			
17	72	21.5	-20	25.2	331	04.2 ¹³⁴	+17 48.2 ¹¹⁶	40	19 28	20 00	20 38	13 51	64		*** ** *			
18	87	21.3	-20	24.6	345	36.5 ¹³³	+17 59.8 ¹¹⁶	45	19 43	20 18	21 04	14 03	69	23 47	26			
19	102	21.2		24.1	0	08.8 ¹³³	+18 11.2 ¹¹⁴	50	20 02		43	39		19 73	30 22			
20	117	21.0		23.6	14	41.0 ¹³²	22.5 ¹¹³	52	11	20 55	21 57	26	76		22 19			
21	132	20.8		23.1	29	13.2 ¹³²	33.8 ¹¹³	54	21	21 09	22 21	34	79		13 17			
22	147	20.6		22.6	43	45.4 ¹³²	45.0 ¹¹²	56	32	25	22 56		43 83		23 04 13			
23	162	20.4		22.0	58	17.5 ¹³¹	+18 56.0 ¹¹⁰	58	20 45	21 45	** ** *	14 53	88	22 53	8			
24	177	20.2	-20	21.5	72	49.6 ¹³¹	+19 07.0 ¹¹⁰	60 S	21 00	22 11	** ** *	15 05	93	22 40	3			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 16 ^h 07 ^m 4		Mag: -3.9 PMG: 10 ^h 56 ^m				Mag: +1.5 PMG: 9 ^h 09 ^m				Mag: -2.1 PMG: 5 ^h 20 ^m				Mag: -0.4 PMG: 23 ^h 47 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	117	30.0	196	11.9	-23	01.2	222	34.1	-22	45.1	279	54.5	-5	59.4	2	05.4	+21	24.3
1	132	32.5	211	11.0		01.1	237	34.7		45.3	294	56.8		59.5	17	08.1		24.3
2	147	34.9	226	10.0		00.9	252	35.2		45.5	309	59.2		59.5	32	10.8		24.3
3	162	37.4	241	09.1		00.8	267	35.8		45.8	325	01.5		59.5	47	13.4		24.4
4	177	39.8	256	08.2		00.6	282	36.4		46.0	340	03.9		59.6	62	16.1		24.4
5	192	42.3	271	07.2	-23	00.5	297	37.0	-22	46.2	355	06.2	-5	59.6	77	18.8	+21	24.5
6	207	44.8	286	06.3	-23	00.4	312	37.6	-22	46.4	10	08.6	-5	59.6	92	21.5	+21	24.5
7	222	47.2	301	05.3		00.2	327	38.2		46.6	25	10.9		59.7	107	24.2		24.5
8	237	49.7	316	04.4	-23	00.1	342	38.8		46.8	40	13.3		59.7	122	26.8		24.6
9	252	52.2	331	03.5	-22	59.9	357	39.4		47.0	55	15.7		59.7	137	29.5		24.6
10	267	54.6	346	02.5		59.8	12	39.9		47.2	70	18.0		59.8	152	32.2		24.7
11	282	57.1	1	01.6	-22	59.6	27	40.5	-22	47.4	85	20.4	-5	59.8	167	34.9	+21	24.7
12	297	59.6	16	00.7	-22	59.5	42	41.1	-22	47.6	100	22.7	-5	59.8	182	37.6	+21	24.7
13	313	02.0	30	59.7		59.3	57	41.7		47.8	115	25.1		59.9	197	40.2		24.8
14	328	04.5	45	58.8		59.2	72	42.3		48.0	130	27.4		59.9	212	42.9		24.8
15	343	07.0	60	57.9		59.0	87	42.9		48.2	145	29.8	-5	59.9	227	45.6		24.9
16	358	09.4	75	56.9		58.8	102	43.5		48.4	160	32.1	-6	00.0	242	48.3		24.9
17	13	11.9	90	56.0	-22	58.7	117	44.1	-22	48.6	175	34.5	-6	00.0	257	51.0	+21	24.9
18	28	14.3	105	55.1	-22	58.5	132	44.6	-22	48.8	190	36.8	-6	00.0	272	53.6	+21	25.0
19	43	16.8	120	54.1		58.4	147	45.2		49.0	205	39.2	-6	00.1	287	56.3		25.0
20	58	19.3	135	53.2		58.2	162	45.8		49.2	220	41.6		00.1	302	59.0		25.0
21	73	21.7	150	52.3		58.0	177	46.4		49.4	235	43.9		00.1	318	01.7		25.1
22	88	24.2	165	51.3		57.9	192	47.0		49.7	250	46.3		00.2	333	04.4		25.1
23	103	26.7	180	50.4		57.7	207	47.6		49.9	265	48.6		00.2	348	07.0		25.2
24	118	29.1	195	49.4	-22	57.6	222	48.2	-22	50.1	280	51.0	-6	00.2	3	09.7	+21	25.2
Dif	—		-9		+2		+6		-2		+24		0		+27			

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16:3 PMG: 12 ^h 10 ^m 8			Edad: 8 ^d 5 SD: 15:1 PMG: 19 ^h 46 ^m	PHE { 4 ^h : 55:2 12 ^h : 55:0 20 ^h : 54:8 R°: 49 ^m	Náutico		Civil	Hora		R°	Hora	R°			
	hG ☉	Dec	hG ☾ Dif											Dec	Dif	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	177	20.2	-20 21.5	72	49.6	+19 07.0	109	60 N	6 56	7 49	8 41	10 43	6	3 49	93	
1	192	20.0	21.0	87	21.6 ¹³⁰	17.9	109	58	51	40	28	10 59	11	35	87	
2	207	19.8	20.5	101	53.6 ¹³⁰	28.7	108	56	46	32	16	11 11	16	23	82	
3	222	19.6	19.9	116	25.6 ¹³⁰	39.4	107	54	41	25	8 06	23	19	12	78	
4	237	19.4	19.4	130	57.5 ¹²⁹	+19 50.0	106	52	37	19	7 57	33	22	3 02	76	
5	252	19.2	-20 18.9	145	29.3 ¹²⁸	+20 00.5	105	50	6 33	7 13	7 49	11 42	24	2 54	73	
6	267	19.0	-20 18.4	160	01.1 ¹²⁸	+20 11.0	105	45	6 24	7 00	7 32	12 01	29	2 36	68	
7	282	18.9	17.8	174	32.9 ¹²⁸	21.3	103	40	16	6 49	18	16 33		22	64	
8	297	18.7	17.3	189	04.7 ¹²⁸	31.5	102	35	08	39	7 06	29 36		2 10	61	
9	312	18.5	16.8	203	36.4 ¹²⁷	41.6	101	30	6 01	30	6 56	12 41	38	1 59	58	
10	327	18.3	16.2	218	08.0 ¹²⁶	+20 51.6	100	20	5 47	14	38	13 01	42	41	54	
11	342	18.1	-20 15.7	232	39.6 ¹²⁶	+21 01.6	100	10 N	5 34	6 00	6 22	13 18	45	1 25	51	
12	357	17.9	-20 15.2	247	11.1 ¹²⁵	+21 11.4	98	0	5 19	5 45	6 07	13 35	48	1 10	48	
13	12	17.7	14.6	261	42.7 ¹²⁶	21.1	97	10 S	5 03	30	5 52	13 51	51	0 56	44	
14	27	17.5	14.1	276	14.1 ¹²⁴	30.7	96	20	4 44	5 12	36	14 09	54	40	40	
15	42	17.3	13.6	290	45.5 ¹²⁴	40.3	96	30	19	4 51	17	29 58		23	35	
16	57	17.2	13.0	305	16.9 ¹²⁴	49.7	94	35	4 03	38	5 06	41 61		12	34	
17	72	17.0	-20 12.5	319	48.2 ¹²³	+21 59.0	93	40	3 43	4 22	4 53	14 55	64	0 00	31	
18	87	16.8	-20 12.0	334	19.5 ¹²³	+22 08.2	92	45	3 18	4 03	4 38	15 12	67	** ** *	**	
19	102	16.6	11.4	348	50.7 ¹²²	17.3	91	50	2 43	3 39	20	32 72		23 52	28	
20	117	16.4	10.9	3	21.9 ¹²²	26.3	90	52	24	27	11	42 74		41	26	
21	132	16.2	10.4	17	53.0 ¹²¹	35.2	89	54	2 00	3 13	4 01	15 53	77	30	23	
22	147	16.0	09.8	32	24.1 ¹²¹	44.0	88	56	1 26	2 57	3 50	16 06	81	17	19	
23	162	15.9	09.3	46	55.2 ¹²¹	+22 52.7	87	58	** ** *	37	37	21 85		23 01	15	
24	177	15.7	-20 08.7	61	26.2 ¹²⁰	+23 01.2	85	60 S	** ** *	2 11	3 22	16 38	93	22 43	8	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 16 ^h 03 ^m 4		Mag: -3.9 PMG: 10 ^h 57 ^m			Mag: +1.5 PMG: 9 ^h 08 ^m			Mag: -2.1 PMG: 5 ^h 16 ^m			Mag: -0.4 PMG: 23 ^h 43 ^m				
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	118	29.1	195 49.4	-22 57.6	222 48.2	-22 50.1	280 51.0	-6 00.2	3 09.7	+21 25.2						
1	133	31.6	210 48.5	57.4	237 48.7	50.3	295 53.3	00.3	18 12.4	25.2						
2	148	34.1	225 47.6	57.2	252 49.3	50.5	310 55.7	00.3	33 15.1	25.3						
3	163	36.5	240 46.6	57.0	267 49.9	50.7	325 58.1	00.3	48 17.8	25.3						
4	178	39.0	255 45.7	56.9	282 50.5	50.9	341 00.4	00.4	63 20.4	25.4						
5	193	41.4	270 44.8	-22 56.7	297 51.1	-22 51.1	356 02.8	-6 00.4	78 23.1	+21 25.4						
6	208	43.9	285 43.8	-22 56.5	312 51.7	-22 51.3	11 05.1	-6 00.4	93 25.8	+21 25.4						
7	223	46.4	300 42.9	56.4	327 52.2	51.5	26 07.5	00.5	108 28.5	25.5						
8	238	48.8	315 42.0	56.2	342 52.8	51.7	41 09.9	00.5	123 31.2	25.5						
9	253	51.3	330 41.0	56.0	357 53.4	51.9	56 12.2	00.5	138 33.8	25.6						
10	268	53.8	345 40.1	55.8	12 54.0	52.0	71 14.6	00.6	153 36.5	25.6						
11	283	56.2	0 39.2	-22 55.6	27 54.6	-22 52.2	86 16.9	-6 00.6	168 39.2	+21 25.6						
12	298	58.7	15 38.2	-22 55.5	42 55.2	-22 52.4	101 19.3	-6 00.6	183 41.9	+21 25.7						
13	314	01.2	30 37.3	55.3	57 55.7	52.6	116 21.7	00.6	198 44.6	25.7						
14	329	03.6	45 36.4	55.1	72 56.3	52.8	131 24.0	00.7	213 47.2	25.8						
15	344	06.1	60 35.5	54.9	87 56.9	53.0	146 26.4	00.7	228 49.9	25.8						
16	359	08.6	75 34.5	54.7	102 57.5	53.2	161 28.8	00.7	243 52.6	25.8						
17	14	11.0	90 33.6	-22 54.5	117 58.1	-22 53.4	176 31.1	-6 00.8	258 55.3	+21 25.9						
18	29	13.5	105 32.7	-22 54.3	132 58.7	-22 53.6	191 33.5	-6 00.8	273 58.0	+21 25.9						
19	44	15.9	120 31.7	54.2	147 59.2	53.8	206 35.8	00.8	289 00.6	25.9						
20	59	18.4	135 30.8	54.0	162 59.8	54.0	221 38.2	00.8	304 03.3	26.0						
21	74	20.9	150 29.9	53.8	178 00.4	54.2	236 40.6	00.9	319 06.0	26.0						
22	89	23.3	165 28.9	53.6	193 01.0	54.4	251 42.9	00.9	334 08.7	26.1						
23	104	25.8	180 28.0	53.4	208 01.6	54.6	266 45.3	00.9	349 11.4	26.1						
24	119	28.3	195 27.1	-22 53.2	223 02.2	-22 54.8	281 47.7	-6 01.0	4 14.0	+21 26.1						
Dif	—		-9	+2	+6	-2	+24	0	+27	0						

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 16:3 PMG: 12 ^h 11 ^m 1			Edad: 9 ^d 5 PHE { SD: 14:9 PMG: 20 ^h 35 ^m 4 ^h : 54:7 12 ^h : 54:5 20 ^h : 54:4 R°: 50 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	h m	h m	h m	h m		
0	177	15.7	-20	08.7	61	26.2	+23	01.2	60 N	15 44	16 35	17 28	10 49	12	5 22	90		
1	192	15.5		08.2	75	57.1 ¹¹⁹		09.7 ⁸⁵	58	15 57		44	33	11 10	5 02	82		
2	207	15.3		07.7	90	28.0 ¹¹⁹		18.0 ⁸³	56	16 08		52	38	27 25	4 45	77		
3	222	15.1		07.1	104	58.8 ¹¹⁸		26.3 ⁸³	54	18	16 59	43	42 28		30	77		
4	237	14.9		06.6	119	29.7 ¹¹⁹		34.4 ⁸¹	52	27	17 05	47	11 55	31	18	71		
5	252	14.8	-20	06.0	134	00.4 ¹¹⁷	+23	42.4 ⁸⁰	50	16 34	17 11	17 51	12 06	33	4 07	69		
6	267	14.6	-20	05.5	148	31.1 ¹¹⁷	+23	50.3 ⁷⁹	45	16 51	17 24	18 00	12 30	37	3 44	65		
7	282	14.4		05.0	163	01.8 ¹¹⁷	+23	58.1 ⁷⁸	40	17 05		34	07	12 49	39	26 62		
8	297	14.2		04.4	177	32.4 ¹¹⁶	+24	05.8 ⁷⁷	35	17		44	15	13 05	41	3 11 59		
9	312	14.0		03.9	192	03.0 ¹¹⁶		13.3 ⁷⁵	30	27	17 52	22		19 43		2 57 58		
10	327	13.9		03.3	206	33.5 ¹¹⁵		20.8 ⁷⁵	20	17 45	18 08	35	13 43	46	35	54		
11	342	13.7	-20	02.8	221	04.0 ¹¹⁵	+24	28.1 ⁷³	10 N	18 00	18 22	18 48	14 03	48	2 16	51		
12	357	13.5	-20	02.2	235	34.4 ¹¹⁴	+24	35.3 ⁷²	0	18 15	18 37	19 02	14 23	50	1 58	49		
13	12	13.3		01.7	250	04.8 ¹¹⁴		42.4 ⁷¹	10 S	29	18 52	18	14 42	52	40	46		
14	27	13.1		01.1	264	35.1 ¹¹³		49.4 ⁷⁰	20	18 45	19 09	19 37	15 03	54	1 20	44		
15	42	13.0	-20	00.6	279	05.4 ¹¹³	+24	56.3 ⁶⁹	30	19 04	30	20 02	27 57		0 58	41		
16	57	12.8	-20	00.0	293	35.7 ¹¹³	+25	03.0 ⁶⁷	35	15	43	18	42 58		46	38		
17	72	12.6	-19	59.5	308	05.9 ¹¹²	+25	09.6 ⁶⁶	40	19 27	19 58	20 37	15 59	60	0 31	36		
18	87	12.4	-19	58.9	322	36.1 ¹¹²	+25	16.1 ⁶⁵	45	19 42	20 17	21 01	16 19	62	0 13	33		
19	102	12.2		58.4	337	06.2 ¹¹¹		22.5 ⁶⁴	50	20 00	40	35	44 66		** ** *	**		
20	117	12.1		57.8	351	36.3 ¹¹¹		28.8 ⁶³	52	09	20 52	21 53	16 56	68	** ** *	**		
21	132	11.9		57.3	6	06.3 ¹¹⁰		34.9 ⁶¹	54	18	21 05	22 16	17 10	71	23 53	34		
22	147	11.7		56.7	20	36.3 ¹¹⁰		40.9 ⁶⁰	56	29	21	22 47	27 73		36	31		
23	162	11.5		56.2	35	06.3 ¹¹⁰		46.8 ⁵⁹	58	42	21 40	** ** *	17 46	79	23 16	26		
24	177	11.4	-19	55.6	49	36.2 ¹⁰⁹	+25	52.6 ⁵⁸	60 S	20 56	22 04	** ** *	18 11	86	22 51	18		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 15 ^h 59 ^m 5			Mag: -3.9 PMG: 10 ^h 59 ^m			Mag: +1.5 PMG: 9 ^h 08 ^m			Mag: -2.1 PMG: 5 ^h 12 ^m			Mag: -0.3 PMG: 23 ^h 39 ^m					
	hG ♈			hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♎		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	119	28.3	195	27.1	-22	53.2	223	02.2	-22	54.8	281	47.7	-6	01.0	4	14.0	+21	26.1
1	134	30.7	210	26.1		53.0	238	02.7		55.0	296	50.0		01.0	19	16.7		26.2
2	149	33.2	225	25.2		52.8	253	03.3		55.2	311	52.4		01.0	34	19.4		26.2
3	164	35.7	240	24.3		52.6	268	03.9		55.4	326	54.8		01.1	49	22.1		26.3
4	179	38.1	255	23.4		52.4	283	04.5		55.6	341	57.1		01.1	64	24.7		26.3
5	194	40.6	270	22.4	-22	52.2	298	05.1	-22	55.7	356	59.5	-6	01.1	79	27.4	+21	26.3
6	209	43.1	285	21.5	-22	52.0	313	05.6	-22	55.9	12	01.9	-6	01.1	94	30.1	+21	26.4
7	224	45.5	300	20.6		51.8	328	06.2		56.1	27	04.2		01.2	109	32.8		26.4
8	239	48.0	315	19.6		51.6	343	06.8		56.3	42	06.6		01.2	124	35.5		26.5
9	254	50.4	330	18.7		51.4	358	07.4		56.5	57	09.0		01.2	139	38.1		26.5
10	269	52.9	345	17.8		51.2	13	08.0		56.7	72	11.3		01.2	154	40.8		26.5
11	284	55.4	0	16.8	-22	51.0	28	08.5	-22	56.9	87	13.7	-6	01.3	169	43.5	+21	26.6
12	299	57.8	15	15.9	-22	50.7	43	09.1	-22	57.1	102	16.1	-6	01.3	184	46.2	+21	26.6
13	315	00.3	30	15.0		50.5	58	09.7		57.3	117	18.4		01.3	199	48.9		26.6
14	330	02.8	45	14.1		50.3	73	10.3		57.4	132	20.8		01.4	214	51.5		26.7
15	345	05.2	60	13.1		50.1	88	10.9		57.6	147	23.2		01.4	229	54.2		26.7
16	0	07.7	75	12.2		49.9	103	11.4		57.8	162	25.5		01.4	244	56.9		26.8
17	15	10.2	90	11.3	-22	49.7	118	12.0	-22	58.0	177	27.9	-6	01.4	259	59.6	+21	26.8
18	30	12.6	105	10.4	-22	49.5	133	12.6	-22	58.2	192	30.3	-6	01.5	275	02.2	+21	26.8
19	45	15.1	120	09.4		49.2	148	13.2		58.4	207	32.7		01.5	290	04.9		26.9
20	60	17.6	135	08.5		49.0	163	13.8		58.6	222	35.0		01.5	305	07.6		26.9
21	75	20.0	150	07.6		48.8	178	14.3		58.8	237	37.4		01.5	320	10.3		27.0
22	90	22.5	165	06.6		48.6	193	14.9		58.9	252	39.8		01.6	335	13.0		27.0
23	105	24.9	180	05.7		48.3	208	15.5		59.1	267	42.1		01.6	350	15.6		27.0
24	120	27.4	195	04.8	-22	48.1	223	16.1	-22	59.3	282	44.5	-6	01.6	5	18.3	+21	27.1
Dif	—		-9		+2		+6		-2		+24		0		+27		0	

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'3 PMG: 12 ^h 11 ^m 4				Edad: 10 ^d 5 PHE { SD: 14'8 PMG: 21 ^h 25 ^m												
	hG ☉		Dec		hG ☾ Dif		Dec Dif			Náutico	Civil		Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	177	11.4	-19	55.6	49	36.2	+25	52.6	60 N	6 54	7 46	8 37	11 01	29	6 52	78	
1	192	11.2		55.1	64	06.0 ¹⁰⁸	+25	58.2	58	48	38	24	30	35	24	71	
2	207	11.0		54.5	78	35.9 ¹⁰⁹	+26	03.8	56	44	30	13	11 52	38	6 02	68	
3	222	10.8		53.9	93	05.7 ¹⁰⁸		09.2	54	39	23	8 04	12 10	41	5 44	66	
4	237	10.7		53.4	107	35.4 ¹⁰⁷		14.4	52	35	17	7 55	26	41	29	64	
5	252	10.5	-19	52.8	122	05.2 ¹⁰⁸	+26	19.6	50	6 31	7 11	7 47	12 39	43	5 16	62	
6	267	10.3	-19	52.3	136	34.9 ¹⁰⁷	+26	24.6	45	6 22	6 58	7 31	13 07	45	4 49	60	
7	282	10.1		51.7	151	04.5 ¹⁰⁶		29.5	40	15	48	17	28	47	28	58	
8	297	10.0		51.1	165	34.1 ¹⁰⁶		34.3	35	07	38	7 05	13 46	48	4 10	57	
9	312	09.8		50.6	180	03.7 ¹⁰⁶		38.9	30	6 01	30	6 55	14 02	48	3 55	56	
10	327	09.6		50.0	194	33.2 ¹⁰⁵		43.4	20	5 48	14	38	29	49	29	54	
11	342	09.4	-19	49.5	209	02.8 ¹⁰⁶	+26	47.8	10 N	5 34	6 00	6 22	14 51	51	3 07	52	
12	357	09.3	-19	48.9	223	32.2 ¹⁰⁴	+26	52.1	0	5 20	5 46	6 08	15 13	51	2 47	50	
13	12	09.1		48.3	238	01.7 ¹⁰⁵	+26	56.2	10 S	5 04	31	5 53	34	52	26	49	
14	27	08.9		47.8	252	31.1 ¹⁰⁴	+27	00.2	20	4 45	5 13	37	15 57	53	2 04	48	
15	42	08.8		47.2	267	00.5 ¹⁰⁴		04.1	30	21	4 52	19	16 24	54	1 39	45	
16	57	08.6		46.6	281	29.9 ¹⁰⁴		07.8	35	4 05	40	5 08	40	55	24	44	
17	72	08.4	-19	46.1	295	59.2 ¹⁰³	+27	11.4	40	3 46	4 25	4 56	16 59	55	1 07	42	
18	87	08.2	-19	45.5	310	28.5 ¹⁰³	+27	14.9	45	3 22	4 06	4 41	17 21	56	0 46	41	
19	102	08.1		44.9	324	57.8 ¹⁰³		18.2	35	2 48	3 43	23	17 50	57	20	37	
20	117	07.9		44.4	339	27.1 ¹⁰³		21.4	32	30	31	14	18 04	58	0 07	36	
21	132	07.7		43.8	353	56.3 ¹⁰²		24.5	31	2 07	18	4 05	21	58	** ** *	**	
22	147	07.6		43.2	8	25.5 ¹⁰²		27.5	30	1 36	3 02	3 54	18 40	60	** ** *	**	
23	162	07.4		42.7	22	54.7 ¹⁰²		30.3	28	** ** *	2 43	41	19 05	61	23 42	45	
24	177	07.2	-19	42.1	37	23.9 ¹⁰²	+27	33.0	27	** ** *	2 19	3 27	19 37	66	23 09	41	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 15 ^h 55 ^m 6		Mag: -3.9 PMG: 11 ^h 00 ^m		Mag: +1.5 PMG: 9 ^h 07 ^m		Mag: -2.2 PMG: 5 ^h 08 ^m		Mag: -0.3 PMG: 23 ^h 35 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	120	27.4	195	04.8	-22	48.1	223	16.1	-22	59.3
1	135	29.9	210	03.9		47.9	238	16.7		59.5
2	150	32.3	225	02.9		47.7	253	17.2		59.7
3	165	34.8	240	02.0		47.4	268	17.8	-22	59.9
4	180	37.3	255	01.1		47.2	283	18.4	-23	00.0
5	195	39.7	270	00.2	-22	47.0	298	19.0	-23	00.2
6	210	42.2	284	59.2	-22	46.7	313	19.5	-23	00.4
7	225	44.7	299	58.3		46.5	328	20.1		00.6
8	240	47.1	314	57.4		46.3	343	20.7		00.8
9	255	49.6	329	56.5		46.0	358	21.3		00.9
10	270	52.1	344	55.5		45.8	13	21.9		01.1
11	285	54.5	359	54.6	-22	45.6	28	22.4	-23	01.3
12	300	57.0	14	53.7	-22	45.3	43	23.0	-23	01.5
13	315	59.4	29	52.8		45.1	58	23.6		01.7
14	331	01.9	44	51.8		44.8	73	24.2		01.8
15	346	04.4	59	50.9		44.6	88	24.7		02.0
16	1	06.8	74	50.0		44.4	103	25.3		02.2
17	16	09.3	89	49.1	-22	44.1	118	25.9	-23	02.4
18	31	11.8	104	48.2	-22	43.9	133	26.5	-23	02.6
19	46	14.2	119	47.2		43.6	148	27.0		02.7
20	61	16.7	134	46.3		43.4	163	27.6		02.9
21	76	19.2	149	45.4		43.1	178	28.2		03.1
22	91	21.6	164	44.5		42.9	193	28.8		03.3
23	106	24.1	179	43.5		42.6	208	29.3		03.4
24	121	26.5	194	42.6	-22	42.4	223	29.9	-23	03.6
Dif	—		-9		+2		+6		-2	

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 : 54 ^m 1 12 ^h : 54 ^m 0 20 ^h : 54 ^m 0			Final del crepúsculo			Salida de Luna		Puesta de Luna	
	PMG: 12 ^h 11 ^m 7								R°: 51 ^m						
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	h m	m
0	177	07.2	-19 42.1	37	23.9	+27 33.0	25	60 N	15 49	16 39	17 32	11 30 57	8 10 50		
1	192	07.1		51	53.0 ¹⁰¹	35.5	25	58	16 01	48	37	12 05 56	7 35 51		
2	207	06.9		66	22.1 ¹⁰¹	37.9	24	56	12	16 55	42	30 55	7 10 51		
3	222	06.7		80	51.2 ¹⁰¹	40.2	23	54	22	17 02	46	12 51 54	6 50 51		
4	237	06.6		95	20.3 ¹⁰¹	42.3	21	52	30	08	50	13 07 55	33 51		
5	252	06.4	-19 39.2	109	49.4 ¹⁰¹	+27 44.4	21	50	16 38	17 14	17 53	13 22 54	6 18 52		
6	267	06.2	-19 38.7	124	18.5 ¹⁰¹	+27 46.2	18	45	16 54	17 26	18 02	13 52 53	5 49 52		
7	282	06.1		138	47.5 ¹⁰⁰	48.0	18	40	17 07	37	10	14 15 53	26 52		
8	297	05.9		153	16.6 ¹⁰¹	49.6	16	35	19	46	17	34 53	5 07 52		
9	312	05.7		167	45.6 ¹⁰⁰	51.1	15	30	29	17 54	23	14 50 53	4 51 51		
10	327	05.6		182	14.6 ¹⁰⁰	52.4	13	20	17 46	18 09	36	15 18 52	4 23 52		
11	342	05.4	-19 35.8	196	43.6 ¹⁰⁰	+27 53.6	12	10 N	18 01	18 23	18 49	15 42 51	3 59 52		
12	357	05.2	-19 35.2	211	12.7 ¹⁰¹	+27 54.7	11	0	18 15	18 37	19 03	16 04 51	3 37 52		
13	12	05.1		225	41.6 ⁹⁹	55.6	9	10 S	30	18 52	18	26 51	3 15 52		
14	27	04.9		240	10.6 ¹⁰⁰	56.4	8	20	18 45	19 09	19 37	16 50 50	2 52 51		
15	42	04.7		254	39.6 ¹⁰⁰	57.1	7	30	19 03	29	20 01	17 18 49	24 51		
16	57	04.6		269	08.6 ¹⁰⁰	57.6	5	35	14	42	16	35 48	2 08 51		
17	72	04.4	-19 32.3	283	37.6 ¹⁰⁰	+27 58.0	4	40	19 26	19 57	20 35	17 54 48	1 49 50		
18	87	04.3	-19 31.7	298	06.6 ¹⁰⁰	+27 58.3	3	45	19 40	20 15	20 59	18 17 47	1 27 49		
19	102	04.1		312	35.6 ¹⁰⁰	58.4	1	50	19 58	38	21 31	18 47 46	0 57 49		
20	117	03.9		327	04.6 ¹⁰⁰	58.4	0	52	20 06	20 49	21 49	19 02 45	43 48		
21	132	03.8		341	33.5 ⁹⁹	58.2	2	54	15	21 02	22 10	19 44	27 47		
22	147	03.6		356	02.5 ¹⁰⁰	57.9	3	56	26	17	22 39	19 40 42	0 07 46		
23	162	03.5		10	31.5 ¹⁰⁰	57.5	4	58	38	35	23 28	20 06 40	** ** *		
24	177	03.3	-19 28.2	25	00.5 ¹⁰⁰	+27 56.9	6	60 S	20 52	21 58	** ** *	20 43 34	23 50 7		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 15 ^h 51 ^m 6		Mag: -3.9 PMG: 11 ^h 02 ^m		Mag: +1.5 PMG: 9 ^h 06 ^m		Mag: -2.2 PMG: 5 ^h 04 ^m		Mag: -0.3 PMG: 23 ^h 30 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	121	26.5	194	42.6	-22 42.4	223 29.9	-23 03.6	283 41.5	-6 02.2	6 22.6	+21 28.0
1	136	29.0	209	41.7	42.1	238 30.5	03.8	298 43.9	02.2	21 25.3	28.0
2	151	31.5	224	40.8	41.8	253 31.1	04.0	313 46.3	02.3	36 27.9	28.1
3	166	33.9	239	39.9	41.6	268 31.6	04.1	328 48.7	02.3	51 30.6	28.1
4	181	36.4	254	38.9	41.3	283 32.2	04.3	343 51.0	02.3	66 33.3	28.2
5	196	38.9	269	38.0	-22 41.1	298 32.8	-23 04.5	358 53.4	-6 02.3	81 36.0	+21 28.2
6	211	41.3	284	37.1	-22 40.8	313 33.4	-23 04.7	13 55.8	-6 02.3	96 38.7	+21 28.2
7	226	43.8	299	36.2	40.5	328 33.9	04.8	28 58.2	02.4	111 41.3	28.3
8	241	46.3	314	35.3	40.3	343 34.5	05.0	44 00.6	02.4	126 44.0	28.3
9	256	48.7	329	34.3	40.0	358 35.1	05.2	59 02.9	02.4	141 46.7	28.3
10	271	51.2	344	33.4	39.8	13 35.7	05.4	74 05.3	02.4	156 49.4	28.4
11	286	53.7	359	32.5	-22 39.5	28 36.2	-23 05.5	89 07.7	-6 02.5	171 52.0	+21 28.4
12	301	56.1	14 31.6	-22 39.2	43 36.8	-23 05.7	104 10.1	-6 02.5	186 54.7	+21 28.5	
13	316	58.6	29 30.7	38.9	58 37.4	05.9	119 12.5	02.5	201 57.4	28.5	
14	332	01.0	44 29.7	38.7	73 38.0	06.0	134 14.9	02.5	217 00.1	28.5	
15	347	03.5	59 28.8	38.4	88 38.5	06.2	149 17.2	02.5	232 02.7	28.6	
16	2	06.0	74 27.9	38.1	103 39.1	06.4	164 19.6	02.6	247 05.4	28.6	
17	17	08.4	89 27.0	-22 37.9	118 39.7	-23 06.6	179 22.0	-6 02.6	262 08.1	+21 28.7	
18	32	10.9	104 26.1	-22 37.6	133 40.3	-23 06.7	194 24.4	-6 02.6	277 10.8	+21 28.7	
19	47	13.4	119 25.2	37.3	148 40.8	06.9	209 26.8	02.6	292 13.5	28.7	
20	62	15.8	134 24.2	37.0	163 41.4	07.1	224 29.2	02.6	307 16.1	28.8	
21	77	18.3	149 23.3	36.7	178 42.0	07.2	239 31.6	02.7	322 18.8	28.8	
22	92	20.8	164 22.4	36.5	193 42.5	07.4	254 33.9	02.7	337 21.5	28.8	
23	107	23.2	179 21.5	36.2	208 43.1	07.6	269 36.3	02.7	352 24.2	28.9	
24	122	25.7	194 20.6	-22 35.9	223 43.7	-23 07.7	284 38.7	-6 02.7	7 26.8	+21 28.9	
Dif	—		-9	+3	+6	-2	+24	0	+27	0	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16:2 PMG: 12 ^h 11 ^m 9			Edad: 12 ^d 5 PHE { 4 ^h : 54:0 12 ^h : 54:0 20 ^h : 53:9 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	177	03.3	-19 28.2	25	00.5	+27 56.9	6	60 N	6 51	7 43	8 33	12 27	81	9 00	23	
1	192	03.1	27.6	39	29.6 ¹⁰¹	56.3	6	58	46	35	21	13 01	74	8 26	31	
2	207	03.0	27.1	53	58.6 ¹⁰⁰	55.4	9	56	41	27	10	25 70		8 01	34	
3	222	02.8	26.5	68	27.6 ¹⁰⁰	54.5	9	54	37	21	8 01	13 45	67	7 41	37	
4	237	02.7	25.9	82	56.7 ¹⁰¹	53.4	11	52	33	15	7 53	14 02	65	24	39	
5	252	02.5	-19 25.3	97	25.7 ¹⁰⁰	+27 52.1	13	50	6 29	7 09	7 45	14 16	64	7 10	40	
6	267	02.3	-19 24.7	111	54.8 ¹⁰¹	+27 50.8	13	45	6 21	6 57	7 29	14 45	61	6 41	42	
7	282	02.2	24.1	126	23.9 ¹⁰¹	49.3	15	40	14	47	16	15 08	59	6 18	44	
8	297	02.0	23.5	140	53.0 ¹⁰¹	47.6	17	35	07	37	7 05	27 57		5 59	45	
9	312	01.9	22.9	155	22.1 ¹⁰¹	45.9	17	30	6 00	29	6 55	15 43	56	42	47	
10	327	01.7	22.3	169	51.2 ¹⁰¹	44.0	19	20	5 47	14	38	16 10	54	5 15	48	
11	342	01.6	-19 21.8	184	20.4 ¹⁰²	+27 41.9	21	10 N	5 35	6 00	6 23	16 33	52	4 51	50	
12	357	01.4	-19 21.2	198	49.6 ¹⁰²	+27 39.8	23	0	5 21	5 46	6 08	16 55	50	4 29	51	
13	12	01.2	20.6	213	18.8 ¹⁰²	37.5	23	10 S	5 05	32	5 54	17 17	48	4 07	52	
14	27	01.1	20.0	227	48.0 ¹⁰²	35.0	25	20	4 47	5 15	39	17 40	47	3 43	53	
15	42	00.9	19.4	242	17.3 ¹⁰³	32.5	25	30	23	4 54	21	18 07	44	3 15	54	
16	57	00.8	18.8	256	46.5 ¹⁰²	29.8	27	35	4 08	42	5 10	23 43		2 59	55	
17	72	00.6	-19 18.2	271	15.8 ¹⁰³	+27 27.0	28	40	3 49	4 27	4 58	18 42	41	2 39	57	
18	87	00.5	-19 17.6	285	45.2 ¹⁰⁴	+27 24.0	30	45	3 25	4 09	4 44	19 04	39	2 16	58	
19	102	00.3	17.0	300	14.5 ¹⁰³	20.9	31	50	2 53	3 46	26	33 35		1 46	59	
20	117	00.2	16.4	314	43.9 ¹⁰⁴	17.7	32	52	35	35	18	19 47	33	31	61	
21	132	00.0	15.8	329	13.3 ¹⁰⁴	14.3	34	54	2 14	22	4 09	20 03	31	1 14	62	
22	146	59.9	15.2	343	42.8 ¹⁰⁵	10.8	35	56	1 45	3 07	3 58	22 28		0 53	64	
23	161	59.7	14.6	358	12.3 ¹⁰⁵	07.2	36	58	0 56	2 49	46	20 46	23	0 27	66	
24	176	59.6	-19 14.0	12	41.8 ¹⁰⁵	+27 03.5	37	60 S	** **	2 26	3 32	21 17	15	23 57	**	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 15 ^h 47 ^m 7			Mag: -3.9 PMG: 11 ^h 03 ^m			Mag: +1.4 PMG: 9 ^h 05 ^m			Mag: -2.2 PMG: 5 ^h 01 ^m			Mag: -0.3 PMG: 23 ^h 26 ^m			
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	
0	122	25.7	194 20.6	-22 35.9	223 43.7	-23 07.7	284 38.7	-6 02.7	22 29.5	229 41.1	02.7	22 29.5	229 41.1	02.7	22 29.5	
1	137	28.2	209 19.7	35.6	238 44.3	07.9	299 41.1	02.7	37 32.2	314 43.5	02.8	37 32.2	314 43.5	02.8	37 32.2	
2	152	30.6	224 18.7	35.3	253 44.8	08.1	329 45.9	02.8	52 34.9	329 45.9	02.8	52 34.9	329 45.9	02.8	52 34.9	
3	167	33.1	239 17.8	35.0	268 45.4	08.2	344 48.3	02.8	67 37.5	344 48.3	02.8	67 37.5	344 48.3	02.8	67 37.5	
4	182	35.5	254 16.9	34.8	283 46.0	08.4	359 50.6	-6 02.8	82 40.2	359 50.6	-6 02.8	82 40.2	359 50.6	-6 02.8	82 40.2	
5	197	38.0	269 16.0	-22 34.5	298 46.5	-23 08.6	14 53.0	-6 02.8	97 42.9	14 53.0	-6 02.8	97 42.9	14 53.0	-6 02.8	97 42.9	
6	212	40.5	284 15.1	-22 34.2	313 47.1	-23 08.7	29 55.4	02.9	112 45.6	29 55.4	02.9	112 45.6	29 55.4	02.9	112 45.6	
7	227	42.9	299 14.2	33.9	328 47.7	08.9	44 57.8	02.9	127 48.2	44 57.8	02.9	127 48.2	44 57.8	02.9	127 48.2	
8	242	45.4	314 13.3	33.6	343 48.3	09.1	60 00.2	02.9	142 50.9	60 00.2	02.9	142 50.9	60 00.2	02.9	142 50.9	
9	257	47.9	329 12.3	33.3	358 48.8	09.2	75 02.6	02.9	157 53.6	75 02.6	02.9	157 53.6	75 02.6	02.9	157 53.6	
10	272	50.3	344 11.4	33.0	13 49.4	09.4	90 05.0	-6 02.9	172 56.3	90 05.0	-6 02.9	172 56.3	90 05.0	-6 02.9	172 56.3	
11	287	52.8	359 10.5	-22 32.7	28 50.0	-23 09.5	105 07.4	-6 03.0	187 58.9	105 07.4	-6 03.0	187 58.9	105 07.4	-6 03.0	187 58.9	
12	302	55.3	14 09.6	-22 32.4	43 50.5	-23 09.7	120 09.8	03.0	203 01.6	120 09.8	03.0	203 01.6	120 09.8	03.0	203 01.6	
13	317	57.7	29 08.7	32.1	58 51.1	09.9	135 12.1	03.0	218 04.3	135 12.1	03.0	218 04.3	135 12.1	03.0	218 04.3	
14	333	00.2	44 07.8	31.8	73 51.7	10.0	150 14.5	03.0	233 07.0	150 14.5	03.0	233 07.0	150 14.5	03.0	233 07.0	
15	348	02.7	59 06.9	31.5	88 52.3	10.2	165 16.9	03.0	248 09.7	165 16.9	03.0	248 09.7	165 16.9	03.0	248 09.7	
16	3	05.1	74 06.0	31.2	103 52.8	10.4	180 19.3	-6 03.1	263 12.3	180 19.3	-6 03.1	263 12.3	180 19.3	-6 03.1	263 12.3	
17	18	07.6	89 05.0	-22 30.9	118 53.4	-23 10.5	195 21.7	-6 03.1	278 15.0	195 21.7	-6 03.1	278 15.0	195 21.7	-6 03.1	278 15.0	
18	33	10.0	104 04.1	-22 30.6	133 54.0	-23 10.7	210 24.1	03.1	293 17.7	210 24.1	03.1	293 17.7	210 24.1	03.1	293 17.7	
19	48	12.5	119 03.2	30.3	148 54.5	10.8	225 26.5	03.1	308 20.4	225 26.5	03.1	308 20.4	225 26.5	03.1	308 20.4	
20	63	15.0	134 02.3	30.0	163 55.1	11.0	240 28.9	03.1	323 23.0	240 28.9	03.1	323 23.0	240 28.9	03.1	323 23.0	
21	78	17.4	149 01.4	29.7	178 55.7	11.2	255 31.3	03.1	338 25.7	255 31.3	03.1	338 25.7	255 31.3	03.1	338 25.7	
22	93	19.9	164 00.5	29.4	193 56.2	11.3	270 33.7	03.2	353 28.4	270 33.7	03.2	353 28.4	270 33.7	03.2	353 28.4	
23	108	22.4	178 59.6	29.1	208 56.8	11.5	285 36.1	-6 03.2	8 31.1	285 36.1	-6 03.2	8 31.1	285 36.1	-6 03.2	8 31.1	
24	123	24.8	193 58.7	-22 28.8	223 57.4	-23 11.6										
Dif	—		-9	+3	+6	-2	+24	0	+27	0		+27	0			

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 16:2 PMG: 12 ^h 12 ^m 2			Edad: 13 ^d 5 PHE { 4 ^h : 54:0 12 ^h : 54:0 20 ^h : 54:0 PMG: 23 ^h 57 ^m R°: 48 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	h m	h m	h m	h m		
0	176	59.6	-19	14.0	12	41.8	+27	03.5	60 N	15 54	16 44	17 36	13 48	91	9 23	11		
1	191	59.4		13.4	27	11.3 ¹⁰⁵	+26	59.6	58	16 06		52	41	14 15	83	8 57	17	
2	206	59.3		12.8	41	40.9 ¹⁰⁶		55.6	56	16	16 59	45		35	78	35	23	
3	221	59.1		12.2	56	10.5 ¹⁰⁶		51.5	54	25	17 05	49		14 52	75	18	26	
4	236	59.0		11.6	70	40.2 ¹⁰⁷		47.2	52	34		11	53	15 07	72	8 03	28	
5	251	58.8	-19	11.0	85	09.9 ¹⁰⁷	+26	42.9	50	16 41	17 17	17 56	15 20	69	7 50	30		
6	266	58.7	-19	10.4	99	39.6 ¹⁰⁷	+26	38.4	45	16 57	17 29	18 04	15 46	65	7 23	35		
7	281	58.5		09.8	114	09.4 ¹⁰⁸		33.7	40	17 10		39	12	16 07	61	7 02	37	
8	296	58.4		09.2	128	39.2 ¹⁰⁸		29.0	35	21	48	18		24	59	6 44	40	
9	311	58.2		08.6	143	09.1 ¹⁰⁹		24.1	30	30	17 56	25		16 39	57	29	41	
10	326	58.1		08.0	157	39.0 ¹⁰⁹		19.1	20	17 47	18 10	37		17 04	53	6 03	45	
11	341	57.9	-19	07.4	172	09.0 ¹¹⁰	+26	14.0	10 N	18 02	18 24	18 50	17 25	51	5 41	47		
12	356	57.8	-19	06.8	186	39.0 ¹¹⁰	+26	08.7	0	18 16	18 38	19 03	17 45	48	5 20	49		
13	11	57.6		06.1	201	09.0 ¹¹⁰	+26	03.3	10 S	30	18 52	18		18 05	46	4 59	51	
14	26	57.5		05.5	215	39.1 ¹¹¹	+25	57.9	20	18 45	19 09	19 37		27	42	36	54	
15	41	57.3		04.9	230	09.2 ¹¹¹		52.2	30	19 02	29	20 00	18 51	39	4 09	57		
16	56	57.2		04.3	244	39.4 ¹¹²		46.5	35	13	41	15		19 06	37	3 54	58	
17	71	57.0	-19	03.7	259	09.6 ¹¹²	+25	40.6	40	19 24	19 55	20 33	19 23	34	3 36	60		
18	86	56.9	-19	03.1	273	39.9 ¹¹³	+25	34.7	45	19 38	20 13	20 56	19 43	30	3 14	63		
19	101	56.7		02.5	288	10.2 ¹¹³		28.6	50	19 55	35	21 28	20 08	26	2 45	68		
20	116	56.6		01.9	302	40.6 ¹¹⁴		22.4	52	20 03	46	21 44	20 24		32	69		
21	131	56.5		01.3	317	11.0 ¹¹⁴		16.0	54	12	20 58	22 04	34	21	2 16	71		
22	146	56.3	-19	00.7	331	41.5 ¹¹⁵		09.6	56	23	21 13	22 31	20 50	17	1 57	75		
23	161	56.2	-19	00.0	346	12.0 ¹¹⁵	+25	03.0	58	34	30	23 12	21 09	13	33	80		
24	176	56.0	-18	59.4	0	42.6 ¹¹⁶	+24	56.4	60 S	20 48	21 52	** **	21 32	6	1 02	88		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 15 ^h 43 ^m 8		Mag: -3.9 PMG: 11 ^h 05 ^m				Mag: +1.4 PMG: 9 ^h 04 ^m				Mag: -2.2 PMG: 4 ^h 57 ^m				Mag: -0.3 PMG: 23 ^h 22 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	123	24.8	193	58.7	-22	28.8	223	57.4	-23	11.6	285	36.1	-6	03.2	8	31.1	+21	29.8
1	138	27.3	208	57.8		28.4	238	57.9		11.8	300	38.5		03.2	23	33.7		29.9
2	153	29.8	223	56.8		28.1	253	58.5		11.9	315	40.9		03.2	38	36.4		29.9
3	168	32.2	238	55.9		27.8	268	59.1		12.1	330	43.2		03.2	53	39.1		30.0
4	183	34.7	253	55.0		27.5	283	59.6		12.3	345	45.6		03.2	68	41.8		30.0
5	198	37.2	268	54.1	-22	27.2	299	00.2	-23	12.4	0	48.0	-6	03.3	83	44.4	+21	30.0
6	213	39.6	283	53.2	-22	26.9	314	00.8	-23	12.6	15	50.4	-6	03.3	98	47.1	+21	30.1
7	228	42.1	298	52.3		26.5	329	01.4		12.7	30	52.8		03.3	113	49.8		30.1
8	243	44.5	313	51.4		26.2	344	01.9		12.9	45	55.2		03.3	128	52.5		30.1
9	258	47.0	328	50.5		25.9	359	02.5		13.0	60	57.6		03.3	143	55.1		30.2
10	273	49.5	343	49.6		25.6	14	03.1		13.2	76	00.0		03.3	158	57.8		30.2
11	288	51.9	358	48.7	-22	25.2	29	03.6	-23	13.3	91	02.4	-6	03.4	174	00.5	+21	30.3
12	303	54.4	13	47.8	-22	24.9	44	04.2	-23	13.5	106	04.8	-6	03.4	189	03.2	+21	30.3
13	318	56.9	28	46.9		24.6	59	04.8		13.7	121	07.2		03.4	204	05.8		30.3
14	333	59.3	43	46.0		24.3	74	05.3		13.8	136	09.6		03.4	219	08.5		30.4
15	349	01.8	58	45.0		23.9	89	05.9		14.0	151	12.0		03.4	234	11.2		30.4
16	4	04.3	73	44.1		23.6	104	06.5		14.1	166	14.4		03.4	249	13.9		30.4
17	19	06.7	88	43.2	-22	23.3	119	07.0	-23	14.3	181	16.8	-6	03.4	264	16.5	+21	30.5
18	34	09.2	103	42.3	-22	22.9	134	07.6	-23	14.4	196	19.2	-6	03.5	279	19.2	+21	30.5
19	49	11.6	118	41.4		22.6	149	08.2		14.6	211	21.6		03.5	294	21.9		30.6
20	64	14.1	133	40.5		22.3	164	08.7		14.7	226	24.0		03.5	309	24.5		30.6
21	79	16.6	148	39.6		21.9	179	09.3		14.9	241	26.4		03.5	324	27.2		30.6
22	94	19.0	163	38.7		21.6	194	09.9		15.0	256	28.8		03.5	339	29.9		30.7
23	109	21.5	178	37.8		21.3	209	10.4		15.2	271	31.2		03.5	354	32.6		30.7
24	124	24.0	193	36.9	-22	20.9	224	11.0	-23	15.3	286	33.6	-6	03.6	9	35.2	+21	30.7
Dif	—		-9		+3		+6		-2		+24		0		+27		0	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16/2 PMG: 12 ^h 12 ^m 4			Edad: 14 ^d 5 PHE { SD: 14/7 PMG: *** **m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	176	56.0	-18	59.4	0	42.6	+24	56.4	60 N	6 48	7 40	8 29	15 19	90	9 34	4
1	191	55.9		58.8	15	13.2		49.6	58	43	32	17		38 85	9 14	10
2	206	55.7		58.2	29	43.9		42.7	56	39	25	8 07	15 53	81	8 58	14
3	221	55.6		57.6	44	14.6		35.6	54	35	18	7 58	16 07	77		44 1
4	236	55.4		57.0	58	45.4		28.5	52	31	12	50		19 74		31 21
5	251	55.3	-18	56.3	73	16.2	+24	21.3	50	6 28	7 07	7 43	16 29	72	8 20	23
6	266	55.2	-18	55.7	87	47.1	+24	13.9	45	6 20	6 55	7 27	16 51	67	7 58	27
7	281	55.0		55.1	102	18.1	+24	06.4	40	13	45	14	17 08	63	39	32
8	296	54.9		54.5	116	49.1	+23	58.9	35	06	36	7 03	23 60		24	34
9	311	54.7		53.9	131	20.2		51.2	30	6 00	28	6 54	36 57		7 10	37
10	326	54.6		53.2	145	51.3		43.4	20	5 47	14	37	17 57	53	6 48	40
11	341	54.5	-18	52.6	160	22.5	+23	35.5	10 N	5 35	6 00	6 23	18 16	49	6 28	43
12	356	54.3	-18	52.0	174	53.7	+23	27.5	0	5 22	5 47	6 09	18 33	46	6 09	47
13	11	54.2		51.4	189	25.0		19.4	10 S	5 06	33	5 55	18 51	42	5 50	50
14	26	54.0		50.8	203	56.3		11.2	20	4 48	5 16	40	19 09	39	30	53
15	41	53.9		50.1	218	27.7	+23	02.9	30	25	4 56	22	30 34		5 06	57
16	56	53.8		49.5	232	59.2	+22	54.4	35	4 10	44	12	43 31		4 52	60
17	71	53.6	-18	48.9	247	30.7	+22	45.9	40	3 52	4 30	5 01	19 57	28	4 36	63
18	86	53.5	-18	48.3	262	02.3	+22	37.3	45	3 29	4 12	4 47	20 13	25	4 17	66
19	101	53.4		47.6	276	33.9		28.6	50	2 57	3 50	30	34 20		3 53	70
20	116	53.2		47.0	291	05.6		19.7	52	41	39	22	44 18		41	73
21	131	53.1		46.4	305	37.3		10.8	54	2 21	27	13	20 55	15	27	77
22	146	52.9		45.8	320	09.1	+22	01.8	56	1 54	3 12	4 03	21 07	12	3 12	80
23	161	52.8		45.1	334	41.0	+21	52.7	58	1 13	2 55	3 51	22 7		2 53	85
24	176	52.7	-18	44.5	349	12.9	+21	43.4	60 S	** **	2 33	3 37	21 38	3	2 30	92
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 15 ^h 39 ^m 8			Mag: -3.9 PMG: 11 ^h 06 ^m			Mag: +1.4 PMG: 9 ^h 03 ^m			Mag: -2.2 PMG: 4 ^h 53 ^m			Mag: -0.3 PMG: 23 ^h 17 ^m			
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	124	24.0	193	36.9	-22	20.9	224	11.0	-23	15.3	286	33.6	-6	03.6	9	35.2
1	139	26.4	208	36.0		20.6	239	11.6		15.5	301	36.0		03.6	24	37.9
2	154	28.9	223	35.1		20.2	254	12.1		15.6	316	38.4		03.6	39	40.6
3	169	31.4	238	34.2		19.9	269	12.7		15.8	331	40.8		03.6	54	43.3
4	184	33.8	253	33.3		19.5	284	13.3		15.9	346	43.2		03.6	69	45.9
5	199	36.3	268	32.4	-22	19.2	299	13.8	-23	16.1	1	45.6	-6	03.6	84	48.6
6	214	38.8	283	31.5	-22	18.9	314	14.4	-23	16.2	16	48.0	-6	03.6	99	51.3
7	229	41.2	298	30.6		18.5	329	14.9		16.4	31	50.4		03.6	114	54.0
8	244	43.7	313	29.7		18.2	344	15.5		16.5	46	52.8		03.7	129	56.6
9	259	46.1	328	28.8		17.8	359	16.1		16.7	61	55.2		03.7	144	59.3
10	274	48.6	343	27.9		17.5	14	16.6		16.8	76	57.6		03.7	160	02.0
11	289	51.1	358	27.0	-22	17.1	29	17.2	-23	16.9	92	00.0	-6	03.7	175	04.7
12	304	53.5	13	26.1	-22	16.7	44	17.8	-23	17.1	107	02.4	-6	03.7	190	07.3
13	319	56.0	28	25.2		16.4	59	18.3		17.2	122	04.8		03.7	205	10.0
14	334	58.5	43	24.3		16.0	74	18.9		17.4	137	07.2		03.7	220	12.7
15	350	00.9	58	23.4		15.7	89	19.5		17.5	152	09.6		03.8	235	15.3
16	5	03.4	73	22.5		15.3	104	20.0		17.7	167	12.0		03.8	250	18.0
17	20	05.9	88	21.6	-22	15.0	119	20.6	-23	17.8	182	14.4	-6	03.8	265	20.7
18	35	08.3	103	20.7	-22	14.6	134	21.2	-23	18.0	197	16.9	-6	03.8	280	23.4
19	50	10.8	118	19.8		14.2	149	21.7		18.1	212	19.3		03.8	295	26.0
20	65	13.3	133	18.9		13.9	164	22.3		18.2	227	21.7		03.8	310	28.7
21	80	15.7	148	18.0		13.5	179	22.8		18.4	242	24.1		03.8	325	31.4
22	95	18.2	163	17.1		13.1	194	23.4		18.5	257	26.5		03.8	340	34.1
23	110	20.6	178	16.2		12.8	209	24.0		18.7	272	28.9		03.8	355	36.7
24	125	23.1	193	15.3	-22	12.4	224	24.5	-23	18.8	287	31.3	-6	03.9	10	39.4
Dif	—		-9 +4		+6 -1		+24 0		0		+27 0					

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16/2 PMG: 12 ^h 12 ^m 6			Edad: 15 ^d 5 PHE { SD: 14/8 PMG: 0 ^h 45 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	176	52.7	-18 44.5	349	12.9	+21 43.4	93	60 N	15 59	16 48	17 40	16 49 89	9 38 2	2
1	191	52.5	43.9	3	44.9 ¹³⁰	34.1	93	58	16 10	16 56	44	17 03 84	24 6	6
2	206	52.4	43.2	18	16.9 ¹³⁰	24.7	94	56	20	17 03	48	14 80	12 10	
3	221	52.3	42.6	32	49.0 ¹³¹	15.2	95	54	29	09	52	24 77	9 01 13	
4	236	52.1	42.0	47	21.2 ¹³²	+21 05.6	96	52	37	15	56	33 74	8 52 15	
5	251	52.0	-18 41.3	61	53.4 ¹³²	+20 55.9	97	50	16 44	17 20	17 59	17 41 72	8 43 18	
6	266	51.9	-18 40.7	76	25.6 ¹³²	+20 46.1	98	45	16 59	17 31	18 07	17 58 66	8 25 23	
7	281	51.7	40.1	90	58.0 ¹³⁴	36.2	99	40	17 12	41	14	18 11 63	8 11 26	
8	296	51.6	39.4	105	30.3 ¹³³	26.3	99	35	23	50	20	23 59	7 58 30	
9	311	51.5	38.8	120	02.8 ¹³⁵	16.2	101	30	32	17 57	26	33 56	47 32	
10	326	51.3	38.2	134	35.3 ¹³⁵	+20 06.1	101	20	17 48	18 12	38	18 50 52	28 37	
11	341	51.2	-18 37.5	149	07.8 ¹³⁵	+19 55.9	102	10 N	18 03	18 25	18 50	19 05 47	7 11 41	
12	356	51.1	-18 36.9	163	40.4 ¹³⁶	+19 45.5	104	0	18 16	18 38	19 03	19 19 43	6 56 44	
13	11	51.0	36.3	178	13.1 ¹³⁷	35.1	104	10 S	30	18 52	18	33 39	40 48	
14	26	50.8	35.6	192	45.8 ¹³⁷	24.6	105	20	18 44	19 08	36	19 48 35	23 52	
15	41	50.7	35.0	207	18.5 ¹³⁷	14.1	105	30	19 01	28	19 59	20 04 31	6 03 57	
16	56	50.6	34.4	221	51.3 ¹³⁸	+19 03.4	107	35	11	39	20 13	14 28	5 52 59	
17	71	50.4	-18 33.7	236	24.2 ¹³⁹	+18 52.7	107	40	19 23	19 53	20 31	20 25 25	5 39 62	
18	86	50.3	-18 33.1	250	57.2 ¹⁴⁰	+18 41.8	109	45	19 36	20 10	20 53	20 38 21	5 23 67	
19	101	50.2	32.4	265	30.1 ¹³⁹	30.9	109	50	19 53	32	21 24	20 54 16	5 03 72	
20	116	50.0	31.8	280	03.2 ¹⁴¹	20.0	109	52	20 01	42	39	21 02 13	4 54 75	
21	131	49.9	31.2	294	36.3 ¹⁴¹	+18 08.9	111	54	09	20 54	21 59	10 11	44 77	
22	146	49.8	30.5	309	09.4 ¹⁴¹	+17 57.8	111	56	19	21 08	22 23	19 8	32 81	
23	161	49.7	29.9	323	42.6 ¹⁴²	46.5	113	58	30	25	22 59	29 5	18 85	
24	176	49.5	-18 29.2	338	15.8 ¹⁴²	+17 35.2	113	60 S	20 43	21 45	** **	21 41 1	4 02 90	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG 15 ^h 35 ^m 9		Mag: -3.9 PMG: 11 ^h 08 ^m			Mag: +1.4 PMG: 9 ^h 02 ^m			Mag: -2.2 PMG: 4 ^h 49 ^m			Mag: -0.3 PMG: 23 ^h 13 ^m		
	hG ♈	Dec	hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°
0	125	23.1	193	15.3	-22 12.4	224	24.5	-23 18.8	287	31.3	-6 03.9	10	39.4	+21 31.6
1	140	25.6	208	14.4	12.0	239	25.1	18.9	302	33.7	03.9	25	42.1	31.7
2	155	28.0	223	13.5	11.7	254	25.7	19.1	317	36.1	03.9	40	44.7	31.7
3	170	30.5	238	12.6	11.3	269	26.2	19.2	332	38.5	03.9	55	47.4	31.8
4	185	33.0	253	11.7	10.9	284	26.8	19.4	347	40.9	03.9	70	50.1	31.8
5	200	35.4	268	10.8	-22 10.5	299	27.3	-23 19.5	2	43.3	-6 03.9	85	52.8	+21 31.8
6	215	37.9	283	09.9	-22 10.2	314	27.9	-23 19.6	17	45.7	-6 03.9	100	55.4	+21 31.9
7	230	40.4	298	09.0	09.8	329	28.5	19.8	32	48.2	03.9	115	58.1	31.9
8	245	42.8	313	08.1	09.4	344	29.0	19.9	47	50.6	03.9	131	00.8	31.9
9	260	45.3	328	07.3	09.0	359	29.6	20.1	62	53.0	04.0	146	03.5	32.0
10	275	47.8	343	06.4	08.7	14	30.2	20.2	77	55.4	04.0	161	06.1	32.0
11	290	50.2	358	05.5	-22 08.3	29	30.7	-23 20.3	92	57.8	-6 04.0	176	08.8	+21 32.1
12	305	52.7	13	04.6	-22 07.9	44	31.3	-23 20.5	108	00.2	-6 04.0	191	11.5	+21 32.1
13	320	55.1	28	03.7	07.5	59	31.8	20.6	123	02.6	04.0	206	14.1	32.1
14	335	57.6	43	02.8	07.1	74	32.4	20.7	138	05.0	04.0	221	16.8	32.2
15	351	00.1	58	01.9	06.7	89	33.0	20.9	153	07.4	04.0	236	19.5	32.2
16	6	02.5	73	01.0	06.4	104	33.5	21.0	168	09.9	04.0	251	22.2	32.2
17	21	05.0	88	00.1	-22 06.0	119	34.1	-23 21.1	183	12.3	-6 04.0	266	24.8	+21 32.3
18	36	07.5	102	59.2	-22 05.6	134	34.6	-23 21.3	198	14.7	-6 04.0	281	27.5	+21 32.3
19	51	09.9	117	58.3	05.2	149	35.2	21.4	213	17.1	04.0	296	30.2	32.3
20	66	12.4	132	57.4	04.8	164	35.8	21.5	228	19.5	04.1	311	32.8	32.4
21	81	14.9	147	56.5	04.4	179	36.3	21.7	243	21.9	04.1	326	35.5	32.4
22	96	17.3	162	55.7	04.0	194	36.9	21.8	258	24.3	04.1	341	38.2	32.5
23	111	19.8	177	54.8	03.6	209	37.4	21.9	273	26.8	04.1	356	40.9	32.5
24	126	22.2	192	53.9	-22 03.2	224	38.0	-23 22.1	288	29.2	-6 04.1	11	43.5	+21 32.5
Dif	—		-9 +4			+6 -1			+24 0			+27 0		0

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'2 PMG: 12 ^h 12 ^m 8			Edad: 16 ^d 5 PHE { 4 ^h : 54'4 12 ^h : 54'5 20 ^h : 54'6 SD: 14'8 PMG: 1 ^h 30 ^m R°: 43 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora
h	°	'	°	°	'	°	°	h	m	h	m	h	m	m
0	176	49.5	-18 29.2	338	15.8	+17 35.2	60 N	6 45	7 36	8 25	18 18	86	9 40	0
1	191	49.4	28.6	352	49.1 ¹⁴³	23.9 ¹¹³	58	40	29	14	27	82	30	4
2	206	49.3	27.9	7	22.5 ¹⁴⁴	12.4 ¹¹⁵	56	36	22	8 04	34	79	22	7
3	221	49.2	27.3	21	55.9 ¹⁴⁴	+17 00.9 ¹¹⁵	54	32	16	7 55	41	76	14	10
4	236	49.0	26.6	36	29.3 ¹⁴⁴	+16 49.3 ¹¹⁶	52	29	10	47	47	74	07	13
5	251	48.9	-18 26.0	51	02.8 ¹⁴⁵	+16 37.6 ¹¹⁷	50	6 26	7 05	7 40	18 53	71	9 01	15
6	266	48.8	-18 25.4	65	36.3 ¹⁴⁵	+16 25.9 ¹¹⁷	45	6 18	6 54	7 25	19 04	66	8 48	19
7	281	48.7	24.7	80	09.9 ¹⁴⁶	14.1 ¹¹⁸	40	11	44	13	14	62	37	23
8	296	48.5	24.1	94	43.5 ¹⁴⁶	+16 02.2 ¹¹⁹	35	6 05	35	7 02	22	59	28	26
9	311	48.4	23.4	109	17.2 ¹⁴⁷	+15 50.3 ¹¹⁹	30	5 59	28	6 53	29	56	19	30
10	326	48.3	22.8	123	50.9 ¹⁴⁷	38.3 ¹²⁰	20	47	14	37	42	50	8 05	34
11	341	48.2	-18 22.1	138	24.7 ¹⁴⁸	+15 26.2 ¹²¹	10 N	5 35	6 01	6 23	19 52	46	7 52	39
12	356	48.0	-18 21.5	152	58.5 ¹⁴⁸	+15 14.0 ¹²²	0	5 22	5 47	6 09	20 02	42	7 40	43
13	11	47.9	20.8	167	32.4 ¹⁴⁹	+15 01.8 ¹²²	10 S	5 07	33	5 56	12	38	28	47
14	26	47.8	20.2	182	06.3 ¹⁴⁹	+14 49.5 ¹²³	20	4 50	5 18	41	23	33	15	51
15	41	47.7	19.5	196	40.2 ¹⁴⁹	37.2 ¹²³	30	27	4 58	24	35	29	7 00	56
16	56	47.6	18.9	211	14.2 ¹⁵⁰	24.8 ¹²⁴	35	4 12	46	14	42	26	6 51	59
17	71	47.4	-18 18.2	225	48.2 ¹⁵⁰	+14 12.3 ¹²⁵	40	3 55	4 32	5 03	20 50	22	6 41	63
18	86	47.3	-18 17.6	240	22.3 ¹⁵¹	+13 59.8 ¹²⁵	45	3 32	4 16	4 50	20 59	19	6 30	66
19	101	47.2	16.9	254	56.4 ¹⁵¹	47.2 ¹²⁶	50	3 02	3 54	33	21 10	14	15	72
20	116	47.1	16.2	269	30.6 ¹⁵²	34.5 ¹²⁷	52	2 46	44	25	15	12	09	74
21	131	47.0	15.6	284	04.8 ¹⁵²	21.8 ¹²⁷	54	27	32	17	21	9	6 01	77
22	146	46.8	14.9	298	39.0 ¹⁵²	+13 09.0 ¹²⁸	56	2 03	18	4 07	27	6	5 53	79
23	161	46.7	14.3	313	13.2 ¹⁵²	+12 56.2 ¹²⁸	58	1 27	3 01	3 56	34	3	43	83
24	176	46.6	-18 13.6	327	47.5 ¹⁵³	+12 43.3 ¹²⁹	60 S	** **	2 41	3 43	21 42	0	5 32	88
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 15 ^h 32 ^m 0		Mag: -3.9 PMG: 11 ^h 09 ^m			Mag: +1.4 PMG: 9 ^h 01 ^m			Mag: -2.2 PMG: 4 ^h 45 ^m			Mag: -0.3 PMG: 23 ^h 09 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	126	22.2	192 53.9	-22 03.2	224 38.0	-23 22.1	288 29.2	-6 04.1	11 43.5	+21 32.5				
1	141	24.7	207 53.0	02.8	239 38.6	22.2	303 31.6	04.1	26 46.2	32.6				
2	156	27.2	222 52.1	02.4	254 39.1	22.3	318 34.0	04.1	41 48.9	32.6				
3	171	29.6	237 51.2	02.0	269 39.7	22.5	333 36.4	04.1	56 51.5	32.6				
4	186	32.1	252 50.3	01.6	284 40.2	22.6	348 38.8	04.1	71 54.2	32.7				
5	201	34.6	267 49.4	-22 01.2	299 40.8	-23 22.7	3 41.3	-6 04.1	86 56.9	+21 32.7				
6	216	37.0	282 48.6	-22 00.8	314 41.4	-23 22.9	18 43.7	-6 04.1	101 59.6	+21 32.8				
7	231	39.5	297 47.7	-22 00.4	329 41.9	23.0	33 46.1	04.1	117 02.2	32.8				
8	246	42.0	312 46.8	-22 00.0	344 42.5	23.1	48 48.5	04.2	132 04.9	32.8				
9	261	44.4	327 45.9	-21 59.6	359 43.0	23.2	63 50.9	04.2	147 07.6	32.9				
10	276	46.9	342 45.0	59.2	14 43.6	23.4	78 53.3	04.2	162 10.2	32.9				
11	291	49.4	357 44.1	-21 58.8	29 44.2	-23 23.5	93 55.8	-6 04.2	177 12.9	+21 32.9				
12	306	51.8	12 43.2	-21 58.4	44 44.7	-23 23.6	108 58.2	-6 04.2	192 15.6	+21 33.0				
13	321	54.3	27 42.4	58.0	59 45.3	23.7	124 00.6	04.2	207 18.2	33.0				
14	336	56.7	42 41.5	57.5	74 45.8	23.9	139 03.0	04.2	222 20.9	33.0				
15	351	59.2	57 40.6	57.1	89 46.4	24.0	154 05.4	04.2	237 23.6	33.1				
16	7	01.7	72 39.7	56.7	104 46.9	24.1	169 07.9	04.2	252 26.3	33.1				
17	22	04.1	87 38.8	-21 56.3	119 47.5	-23 24.3	184 10.3	-6 04.2	267 28.9	+21 33.2				
18	37	06.6	102 37.9	-21 55.9	134 48.1	-23 24.4	199 12.7	-6 04.2	282 31.6	+21 33.2				
19	52	09.1	117 37.0	55.5	149 48.6	24.5	214 15.1	04.2	297 34.3	33.2				
20	67	11.5	132 36.2	55.0	164 49.2	24.6	229 17.5	04.2	312 36.9	33.3				
21	82	14.0	147 35.3	54.6	179 49.7	24.8	244 20.0	04.2	327 39.6	33.3				
22	97	16.5	162 34.4	54.2	194 50.3	24.9	259 22.4	04.2	342 42.3	33.3				
23	112	18.9	177 33.5	53.8	209 50.9	25.0	274 24.8	04.2	357 44.9	33.4				
24	127	21.4	192 32.6	-21 53.4	224 51.4	-23 25.1	289 27.2	-6 04.3	12 47.6	+21 33.4				
Dif	—		-9	+4	+6	-1	+24	0	+27	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 0			Edad: 17 ^d 5 PHE { 4 ^h : 54:8 12 ^h : 54:9 20 ^h : 55:0 PMG: 2 ^h 13 ^m R°: 41 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m				
0	176	46.6	-18	13.6	327	47.5	+12	43.3	60 N	16 04	16 52	17 44	19 44 86	9 40 0				
1	191	46.5		13.0	342	21.9 ¹⁵⁴		30.4 ¹²⁹	58	15	17 00	48	49 82	34 3				
2	206	46.4		12.3	356	56.2 ¹⁵³		17.4 ¹³⁰	56	25	06	52	53 79	29 6				
3	221	46.2		11.6	11	30.6 ¹⁵⁴	+12	04.3 ¹³¹	54	33	12	56	19 57 76	24				
4	236	46.1		11.0	26	05.0 ¹⁵⁴	+11	51.2 ¹³¹	52	41	18	17 59	20 01 73	20 11				
5	251	46.0	-18	10.3	40	39.5 ¹⁵⁵	+11	38.1 ¹³¹	50	16 48	17 23	18 02	20 04 71	9 16 13				
6	266	45.9	-18	09.7	55	14.0 ¹⁵⁵	+11	24.9 ¹³²	45	17 02	17 34	18 09	20 10 67	9 07 18				
7	281	45.8		09.0	69	48.5 ¹⁵⁵	+11	11.6 ¹³³	40	14	43	16	16 62	9 00 22				
8	296	45.7		08.3	84	23.1 ¹⁵⁶	+10	58.3 ¹³³	35	25	52	22	21 58	8 54 25				
9	311	45.5		07.7	98	57.6 ¹⁵⁵		45.0 ¹³³	30	34	17 59	28	25 55	49 27				
10	326	45.4		07.0	113	32.3 ¹⁵⁷		31.5 ¹³⁵	20	17 50	18 13	39	32 50	39 33				
11	341	45.3	-18	06.4	128	06.9 ¹⁵⁶	+10	18.1 ¹³⁴	10 N	18 03	18 25	18 51	20 38 46	8 31 37				
12	356	45.2	-18	05.7	142	41.5 ¹⁵⁶	+10	04.6 ¹³⁵	0	18 17	18 38	19 04	20 44 42	8 23 41				
13	11	45.1		05.0	157	16.2 ¹⁵⁷	+9	51.0 ¹³⁶	10 S	30	18 52	18	50 37	15 45				
14	26	45.0		04.4	171	50.9 ¹⁵⁷		37.5 ¹³⁵	20	18 44	19 07	35	20 56 33	8 06 50				
15	41	44.9		03.7	186	25.7 ¹⁵⁸		23.8 ¹³⁷	30	19 00	26	19 57	21 04 27	7 56 56				
16	56	44.7		03.0	201	00.4 ¹⁵⁷	+9	10.1 ¹³⁷	35	10	38	20 12	08 24	50 59				
17	71	44.6	-18	02.4	215	35.2 ¹⁵⁸	+8	56.4 ¹³⁷	40	19 21	19 51	20 29	21 12 21	7 44 62				
18	86	44.5	-18	01.7	230	10.0 ¹⁵⁸	+8	42.7 ¹³⁷	45	19 34	20 08	20 50	21 18 17	7 36 66				
19	101	44.4		01.0	244	44.8 ¹⁵⁸		28.9 ¹³⁸	50	50	29	21 20	24 12	27 71				
20	116	44.3	-18	00.4	259	19.6 ¹⁵⁸		15.0 ¹³⁹	52	19 58	39	35	27 10	23 73				
21	131	44.2	-17	59.7	273	54.5 ¹⁵⁹	+8	01.1 ¹³⁹	54	20 06	20 50	21 53	30 8	18 76				
22	146	44.1		59.0	288	29.4 ¹⁵⁹	+7	47.2 ¹³⁹	56	15	21 04	22 16	33 6	12 79				
23	161	44.0		58.4	303	04.2 ¹⁵⁸		33.2 ¹⁴⁰	58	26	20	22 48	37 3	06 82				
24	176	43.9	-17	57.7	317	39.1 ¹⁵⁹	+7	19.2 ¹⁴⁰	60 S	20 39	21 39	** **	21 42 **	7 00 85				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 15 ^h 28 ^m 0		Mag: -3.9 PMG: 11 ^h 10 ^m			Mag: +1.4 PMG: 9 ^h 00 ^m			Mag: -2.2 PMG: 4 ^h 41 ^m			Mag: -0.3 PMG: 23 ^h 05 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♅	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	127	21.4	192	32.6	-21	53.4	224	51.4	-23	25.1	289	27.2	-6	04.3	12	47.6	+21	33.4
1	142	23.9	207	31.8		52.9	239	52.0		25.2	304	29.6		04.3	27	50.3		33.5
2	157	26.3	222	30.9		52.5	254	52.5		25.4	319	32.1		04.3	42	53.0		33.5
3	172	28.8	237	30.0		52.1	269	53.1		25.5	334	34.5		04.3	57	55.6		33.5
4	187	31.2	252	29.1		51.6	284	53.6		25.6	349	36.9		04.3	72	58.3		33.6
5	202	33.7	267	28.2	-21	51.2	299	54.2	-23	25.7	4	39.3	-6	04.3	88	01.0	+21	33.6
6	217	36.2	282	27.4	-21	50.8	314	54.7	-23	25.9	19	41.8	-6	04.3	103	03.6	+21	33.6
7	232	38.6	297	26.5		50.4	329	55.3		26.0	34	44.2		04.3	118	06.3		33.7
8	247	41.1	312	25.6		49.9	344	55.9		26.1	49	46.6		04.3	133	09.0		33.7
9	262	43.6	327	24.7		49.5	359	56.4		26.2	64	49.0		04.3	148	11.6		33.7
10	277	46.0	342	23.8		49.0	14	57.0		26.3	79	51.5		04.3	163	14.3		33.8
11	292	48.5	357	23.0	-21	48.6	29	57.5	-23	26.4	94	53.9	-6	04.3	178	17.0	+21	33.8
12	307	51.0	12	22.1	-21	48.2	44	58.1	-23	26.6	109	56.3	-6	04.3	193	19.6	+21	33.9
13	322	53.4	27	21.2		47.7	59	58.6		26.7	124	58.7		04.3	208	22.3		33.9
14	337	55.9	42	20.3		47.3	74	59.2		26.8	140	01.2		04.3	223	25.0		33.9
15	352	58.3	57	19.5		46.9	89	59.8		26.9	155	03.6		04.3	238	27.6		34.0
16	8	00.8	72	18.6		46.4	105	00.3		27.0	170	06.0		04.3	253	30.3		34.0
17	23	03.3	87	17.7	-21	46.0	120	00.9	-23	27.2	185	08.5	-6	04.3	268	33.0	+21	34.0
18	38	05.7	102	16.8	-21	45.5	135	01.4	-23	27.3	200	10.9	-6	04.3	283	35.7	+21	34.1
19	53	08.2	117	16.0		45.1	150	02.0		27.4	215	13.3		04.3	298	38.3		34.1
20	68	10.7	132	15.1		44.6	165	02.5		27.5	230	15.7		04.3	313	41.0		34.1
21	83	13.1	147	14.2		44.2	180	03.1		27.6	245	18.2		04.3	328	43.7		34.2
22	98	15.6	162	13.3		43.7	195	03.6		27.7	260	20.6		04.3	343	46.3		34.2
23	113	18.1	177	12.5		43.3	210	04.2		27.8	275	23.0		04.3	358	49.0		34.3
24	128	20.5	192	11.6	-21	42.8	225	04.7	-23	28.0	290	25.5	-6	04.3	13	51.7	+21	34.3
Dif	—		-9		+4		+6		-1		+24		0		+27		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 2			Edad: 18 ^d 5 PHE { 4 ^h : 55:2 12 ^h : 55:3 20 ^h : 55:5 SD: 15:0 PMG: 2 ^h 54 ^m R°: 41 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m	m
0	176	43.9	-17	57.7		317	39.1	+7	19.2	60 N	6 41	7 32	8 21	21 10	86	9 40 **
1	191	43.7		57.0		332	14.0 ¹⁵⁹	+7	05.2 ¹⁴⁰	58	37	25	10	11	83	37 3
2	206	43.6		56.3		346	49.0 ¹⁶⁰	+6	51.1 ¹⁴¹	56	33	19	8 00	12	80	35 5
3	221	43.5		55.7		1	23.9 ¹⁵⁹		37.0 ¹⁴¹	54	30	13	7 52	13	77	33 8
4	236	43.4		55.0		15	58.8 ¹⁵⁹		22.9 ¹⁴¹	52	26	07	44	14	75	31 10
5	251	43.3	-17	54.3		30	33.8 ¹⁶⁰	+6	08.7 ¹⁴²	50	6 23	7 02	7 38	21 15	72	9 29 12
6	266	43.2	-17	53.7		45	08.7 ¹⁵⁹	+5	54.5 ¹⁴²	45	6 16	6 52	7 23	21 17	67	9 25 17
7	281	43.1		53.0		59	43.7 ¹⁶⁰		40.3 ¹⁴²	40	10	42	11	18	63	22 20
8	296	43.0		52.3		74	18.7 ¹⁶⁰		26.0 ¹⁴³	35	6 04	34	7 01	19	60	19 24
9	311	42.9		51.6		88	53.7 ¹⁶⁰	+5	11.7 ¹⁴³	30	5 58	27	6 52	20	57	16 27
10	326	42.8		51.0		103	28.6 ¹⁵⁹	+4	57.4 ¹⁴³	20	47	13	36	22	51	12 32
11	341	42.7	-17	50.3		118	03.6 ¹⁶⁰	+4	43.0 ¹⁴⁴	10 N	5 35	6 01	6 23	21 24	46	9 08 37
12	356	42.6	-17	49.6		132	38.6 ¹⁶⁰	+4	28.7 ¹⁴³	0	5 23	5 48	6 10	21 26	41	9 04 41
13	11	42.5		48.9		147	13.6 ¹⁶⁰	+4	14.3 ¹⁴⁴	10 S	5 08	34	5 56	27	37	9 00 46
14	26	42.4		48.2		161	48.6 ¹⁶⁰	+3	59.8 ¹⁴⁵	20	4 51	19	42	29	33	8 56 51
15	41	42.2		47.6		176	23.6 ¹⁶⁰		45.4 ¹⁴⁴	30	29	5 00	26	31	27	52 55
16	56	42.1		46.9		190	58.5 ¹⁵⁹		30.9 ¹⁴⁵	35	4 15	4 49	16	32	24	49 59
17	71	42.0	-17	46.2		205	33.5 ¹⁶⁰	+3	16.4 ¹⁴⁵	40	3 58	4 35	5 05	21 33	21	8 46 62
18	86	41.9	-17	45.5		220	08.5 ¹⁶⁰	+3	01.8 ¹⁴⁶	45	3 36	4 19	4 52	21 35	17	8 42 67
19	101	41.8		44.8		234	43.5 ¹⁶⁰	+2	47.3 ¹⁴⁵	50	3 07	3 58	37	36	13	38 71
20	116	41.7		44.2		249	18.4 ¹⁵⁹		32.7 ¹⁴⁶	52	2 52	48	29	37	11	36 74
21	131	41.6		43.5		263	53.4 ¹⁶⁰		18.1 ¹⁴⁶	54	34	36	21	38	8	34 76
22	146	41.5		42.8		278	28.3 ¹⁵⁹	+2	03.5 ¹⁴⁶	56	2 11	23	11	39	5	31 79
23	161	41.4		42.1		293	03.2 ¹⁵⁹	+1	48.9 ¹⁴⁶	58	1 39	3 07	4 01	40	3	28 83
24	176	41.3	-17	41.4		307	38.2 ¹⁶⁰	+1	34.3 ¹⁴⁶	60 S	** **	2 48	3 48	21 41	0	8 25 86

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 15 ^h 24 ^m 1		Mag: -3.9 PMG: 11 ^h 12 ^m			Mag: +1.4 PMG: 8 ^h 59 ^m			Mag: -2.2 PMG: 4 ^h 38 ^m			Mag: -0.3 PMG: 23 ^h 00 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°
0	128	20.5	192	11.6	-21	42.8		225	04.7	-23	28.0	290	25.5	-6
1	143	23.0	207	10.7		42.4		240	05.3		28.1	305	27.9	
2	158	25.5	222	09.8		41.9		255	05.9		28.2	320	30.3	
3	173	27.9	237	09.0		41.5		270	06.4		28.3	335	32.7	
4	188	30.4	252	08.1		41.0		285	07.0		28.4	350	35.2	
5	203	32.8	267	07.2	-21	40.6		300	07.5	-23	28.5	5	37.6	-6
6	218	35.3	282	06.4	-21	40.1		315	08.1	-23	28.6	20	40.0	-6
7	233	37.8	297	05.5		39.6		330	08.6		28.7	35	42.5	
8	248	40.2	312	04.6		39.2		345	09.2		28.9	50	44.9	
9	263	42.7	327	03.8		38.7		0	09.7		29.0	65	47.3	
10	278	45.2	342	02.9		38.3		15	10.3		29.1	80	49.8	
11	293	47.6	357	02.0	-21	37.8		30	10.8	-23	29.2	95	52.2	-6
12	308	50.1	12	01.1	-21	37.3		45	11.4	-23	29.3	110	54.6	-6
13	323	52.6	27	00.3		36.9		60	11.9		29.4	125	57.1	
14	338	55.0	41	59.4		36.4		75	12.5		29.5	140	59.5	
15	353	57.5	56	58.5		35.9		90	13.1		29.6	156	01.9	
16	8	59.9	71	57.7		35.5		105	13.6		29.7	171	04.4	
17	24	02.4	86	56.8	-21	35.0		120	14.2	-23	29.8	186	06.8	-6
18	39	04.9	101	55.9	-21	34.5		135	14.7	-23	29.9	201	09.2	-6
19	54	07.3	116	55.1		34.0		150	15.3		30.1	216	11.7	
20	69	09.8	131	54.2		33.6		165	15.8		30.2	231	14.1	
21	84	12.3	146	53.3		33.1		180	16.4		30.3	246	16.5	
22	99	14.7	161	52.5		32.6		195	16.9		30.4	261	19.0	
23	114	17.2	176	51.6		32.1		210	17.5		30.5	276	21.4	
24	129	19.7	191	50.7	-21	31.7		225	18.0	-23	30.6	291	23.9	-6
Dif	—		-9		+5			+6		-1		+24		0

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 12 ^h 13 ^m 3			Edad: 19 ^d 5 PHE { 4 ^h : 55:7 12 ^h : 55:9 20 ^h : 56:0 SD: 15:1 PMG: 3 ^h 35 ^m R°: 42 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif		Civil	Náutico	Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	176	41.3	-17 41.4	307	38.2	+1 34.3	60 N	16 09	16 57	17 48	22 36 90	9 39 0			
1	191	41.2		40.8	322	13.1 ¹⁵⁹		20	17 04	52	34 86	40 2			
2	206	41.1		40.1	336	48.0 ¹⁵⁹		29	10	56	32 83	40 6			
3	221	41.0		39.4	351	22.8 ¹⁵⁸		37	16	17 59	30 80	41 8			
4	236	40.9		38.7	5	57.7 ¹⁵⁹		44	21	18 02	29 77	41 10			
5	251	40.8	-17 38.0	20	32.5 ¹⁵⁸	+0 20.8 ¹⁴⁷	50	16 51	17 26	18 05	22 27 75	9 41 13			
6	266	40.7	-17 37.3	35	07.4 ¹⁵⁹	+0 06.1 ¹⁴⁷	45	17 05	17 37	18 12	22 24 69	9 42 17			
7	281	40.6		36.6	49	42.2 ¹⁵⁸		17	45	18	21 65	42 22			
8	296	40.5		35.9	64	16.9 ¹⁵⁷		27	17 53	24	19 61	43 25			
9	311	40.4		35.3	78	51.7 ¹⁵⁸		36	18 01	29	17 58	43 28			
10	326	40.3		34.6	93	26.4 ¹⁵⁷		17 51	14	40	13 53	44 33			
11	341	40.2	-17 33.9	108	01.1 ¹⁵⁷	-1 07.8 ¹⁴⁸	10 N	18 04	18 26	18 52	22 10 48	9 45 38			
12	356	40.1	-17 33.2	122	35.8 ¹⁵⁷	-1 22.6 ¹⁴⁸	0	18 17	18 39	19 04	22 07 44	9 45 43			
13	11	40.0		32.5	137	10.5 ¹⁵⁷		30	18 52	18	04 39	46 47			
14	26	39.9		31.8	151	45.1 ¹⁵⁶		43	19 07	34	22 02 34	47 51			
15	41	39.8		31.1	166	19.7 ¹⁵⁶		59	25	19 56	21 58 29	47 57			
16	56	39.7		30.4	180	54.3 ¹⁵⁶		09	36	20 10	56 26	48 60			
17	71	39.6	-17 29.7	195	28.8 ¹⁵⁵	-2 36.6 ¹⁴⁸	40	19 19	19 49	20 26	21 54 22	9 48 64			
18	86	39.5	-17 29.0	210	03.3 ¹⁵⁵	-2 51.4 ¹⁴⁸	45	19 32	20 05	20 47	21 52 18	9 49 68			
19	101	39.4		28.3	224	37.8 ¹⁵⁵		47	26	21 15	49 13	49 73			
20	116	39.4		27.6	239	12.2 ¹⁵⁴		55	35	30	48 11	50 75			
21	131	39.3		27.0	253	46.6 ¹⁵⁴		03	46	21 47	46 9	50 78			
22	146	39.2		26.3	268	21.0 ¹⁵⁴		12	20 59	22 09	44 7	50 81			
23	161	39.1		25.6	282	55.3 ¹⁵³		22	21 14	22 37	43 3	51 84			
24	176	39.0	-17 24.9	297	29.6 ¹⁵³	-4 20.3 ¹⁴⁸	60 S	20 34	21 32	23 27	21 41 0	9 51 88			

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 15 ^h 20 ^m 2		Mag: -3.9 PMG: 11 ^h 13 ^m		Mag: +1.4 PMG: 8 ^h 58 ^m		Mag: -2.2 PMG: 4 ^h 34 ^m		Mag: -0.3 PMG: 22 ^h 56 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	129	19.7	191	50.7	-21 31.7	225 18.0	-23 30.6	291 23.9	-6 04.4	14 55.7	+21 35.2
1	144	22.1	206	49.9	31.2	240 18.6	30.7	306 26.3	04.4	29 58.3	35.2
2	159	24.6	221	49.0	30.7	255 19.1	30.8	321 28.7	04.4	45 01.0	35.2
3	174	27.1	236	48.2	30.2	270 19.7	30.9	336 31.2	04.4	60 03.7	35.3
4	189	29.5	251	47.3	29.7	285 20.2	31.0	351 33.6	04.4	75 06.3	35.3
5	204	32.0	266	46.4	-21 29.2	300 20.8	-23 31.1	6 36.0	-6 04.4	90 09.0	+21 35.3
6	219	34.4	281	45.6	-21 28.8	315 21.3	-23 31.2	21 38.5	-6 04.4	105 11.7	+21 35.4
7	234	36.9	296	44.7	28.3	330 21.9	31.3	36 40.9	04.4	120 14.3	35.4
8	249	39.4	311	43.8	27.8	345 22.4	31.4	51 43.4	04.4	135 17.0	35.4
9	264	41.8	326	43.0	27.3	0 23.0	31.5	66 45.8	04.4	150 19.7	35.5
10	279	44.3	341	42.1	26.8	15 23.5	31.6	81 48.2	04.4	165 22.3	35.5
11	294	46.8	356	41.3	-21 26.3	30 24.1	-23 31.7	96 50.7	-6 04.4	180 25.0	+21 35.5
12	309	49.2	11 40.4	-21 25.8	45 24.6	-23 31.8	111 53.1	-6 04.4	195 27.6	+21 35.6	
13	324	51.7	26 39.5	25.3	60 25.2	31.9	126 55.6	04.3	210 30.3	35.6	
14	339	54.2	41 38.7	24.8	75 25.7	32.0	141 58.0	04.3	225 33.0	35.7	
15	354	56.6	56 37.8	24.3	90 26.3	32.1	157 00.4	04.3	240 35.6	35.7	
16	9	59.1	71 37.0	23.8	105 26.8	32.2	172 02.9	04.3	255 38.3	35.7	
17	25	01.6	86 36.1	-21 23.3	120 27.4	-23 32.3	187 05.3	-6 04.3	270 41.0	+21 35.8	
18	40	04.0	101 35.3	-21 22.8	135 27.9	-23 32.4	202 07.8	-6 04.3	285 43.6	+21 35.8	
19	55	06.5	116 34.4	22.3	150 28.5	32.5	217 10.2	04.3	300 46.3	35.8	
20	70	08.9	131 33.5	21.8	165 29.0	32.6	232 12.7	04.3	315 49.0	35.9	
21	85	11.4	146 32.7	21.3	180 29.6	32.7	247 15.1	04.3	330 51.6	35.9	
22	100	13.9	161 31.8	20.8	195 30.1	32.8	262 17.5	04.3	345 54.3	35.9	
23	115	16.3	176 31.0	20.3	210 30.7	32.9	277 20.0	04.3	0 57.0	36.0	
24	130	18.8	191 30.1	-21 19.8	225 31.2	-23 33.0	292 22.4	-6 04.3	15 59.6	+21 36.0	
Dif	—		-9	+5	+6	-1	+24	0	+27		

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16 ^h 2 PMG: 12 ^h 13 ^m 5				Edad: 20 ^d 5 PHE { SD: 15 ^h 3 PMG: 4 ^h 17 ^m															
	hG ☉		Dec		hG ☾		Dif			Dif			Náutico	Civil	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	h	m
0	176	39.0	-17	24.9	297	29.6	-4	20.3	60 N	6 38	7 28	8 16	** ** *		9 39	0				
1	191	38.9		24.2	312	03.8 ¹⁵²		35.1 ¹⁴⁸	58	34	22	8 06	** ** *		42	4				
2	206	38.8		23.5	326	38.0 ¹⁵²	-4	49.9 ¹⁴⁸	56	30	15	7 57	23 55	87	46	6				
3	221	38.7		22.8	341	12.1 ¹⁵¹	-5	04.7 ¹⁴⁸	54	27	10	49	50	84	49					
4	236	38.6		22.1	355	46.2 ¹⁵¹		19.5 ¹⁴⁸	52	24	05	41	46	81	51	12				
5	251	38.5	-17	21.4	10	20.3 ¹⁵¹	-5	34.2 ¹⁴⁷	50	6 21	7 00	7 35	23 42	78	9 54	14				
6	266	38.4	-17	20.7	24	54.3 ¹⁵⁰	-5	49.0 ¹⁴⁸	45	6 14	6 50	7 21	23 33	73	9 59	20				
7	281	38.3		20.0	39	28.2 ¹⁴⁹	-6	03.7 ¹⁴⁷	40	08	41	09	26	68	10 04	23				
8	296	38.2		19.3	54	02.1 ¹⁴⁹		18.5 ¹⁴⁸	35	6 03	33	7 00	20	65	08	27				
9	311	38.2		18.6	68	36.0 ¹⁴⁹		33.2 ¹⁴⁷	30	5 57	26	6 51	15	61	11	30				
10	326	38.1		17.9	83	09.7 ¹⁴⁷	-6	47.9 ¹⁴⁷	20	46	13	36	23 06	56	17	36				
11	341	38.0	-17	17.2	97	43.5 ¹⁴⁸	-7	02.6 ¹⁴⁷	10 N	5 35	6 01	6 23	22 58	51	10 23	40				
12	356	37.9	-17	16.5	112	17.2 ¹⁴⁷	-7	17.3 ¹⁴⁷	0	5 23	5 48	6 10	22 51	46	10 28	44				
13	11	37.8		15.8	126	50.8 ¹⁴⁶		32.0 ¹⁴⁷	10 S	5 09	35	5 57	43	42	33	49				
14	26	37.7		15.1	141	24.3 ¹⁴⁵	-7	46.7 ¹⁴⁷	20	4 53	20	44	36	37	38	54				
15	41	37.6		14.4	155	57.8 ¹⁴⁵	-8	01.3 ¹⁴⁶	30	31	5 02	28	27	32	44	60				
16	56	37.5		13.6	170	31.3 ¹⁴⁵		15.9 ¹⁴⁶	35	17	4 51	19	22	29	48	63				
17	71	37.4	-17	12.9	185	04.6 ¹⁴³	-8	30.5 ¹⁴⁶	40	4 01	4 38	5 08	22 16	26	10 52	66				
18	86	37.4	-17	12.2	199	37.9 ¹⁴³	-8	45.1 ¹⁴⁶	45	3 40	4 22	4 55	22 10	21	10 57	71				
19	101	37.3		11.5	214	11.2 ¹⁴³	-8	59.6 ¹⁴⁵	50	3 12	4 02	40	22 02	16	11 02	77				
20	116	37.2		10.8	228	44.4 ¹⁴²	-9	14.1 ¹⁴⁵	52	2 58	3 52	33	21 59	13	05	79				
21	131	37.1		10.1	243	17.5 ¹⁴¹		28.6 ¹⁴⁵	54	40	41	25	55	11	08	81				
22	146	37.0		09.4	257	50.5 ¹⁴⁰		43.1 ¹⁴⁵	56	2 19	28	16	51	8	11	85				
23	161	36.9		08.7	272	23.5 ¹⁴⁰	-9	57.6 ¹⁴⁵	58	1 50	3 13	4 06	46	4	15	88				
24	176	36.8	-17	08.0	286	56.4 ¹³⁹	-10	12.0 ¹⁴⁴	60 S	1 01	2 55	3 54	21 41	0	11 19	92				

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 15 ^h 16 ^m 2		Mag: -3.9 PMG: 11 ^h 15 ^m		Mag: +1.4 PMG: 8 ^h 58 ^m		Mag: -2.2 PMG: 4 ^h 30 ^m		Mag: -0.3 PMG: 22 ^h 52 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	130	18.8	191	30.1	-21	19.8	225	31.2	-23	33.0	292	22.4	-6	04.3	15	59.6	+21	36.0
1	145	21.3	206	29.3		19.3	240	31.8		33.1	307	24.9		04.3	31	02.3		36.0
2	160	23.7	221	28.4		18.8	255	32.3		33.2	322	27.3		04.3	46	04.9		36.1
3	175	26.2	236	27.6		18.3	270	32.9		33.3	337	29.8		04.3	61	07.6		36.1
4	190	28.7	251	26.7		17.8	285	33.4		33.4	352	32.2		04.3	76	10.3		36.1
5	205	31.1	266	25.9	-21	17.3	300	34.0	-23	33.5	7	34.7	-6	04.3	91	12.9	+21	36.2
6	220	33.6	281	25.0	-21	16.8	315	34.5	-23	33.6	22	37.1	-6	04.3	106	15.6	+21	36.2
7	235	36.0	296	24.1		16.3	330	35.1		33.7	37	39.6		04.3	121	18.3		36.3
8	250	38.5	311	23.3		15.7	345	35.6		33.7	52	42.0		04.3	136	20.9		36.3
9	265	41.0	326	22.4		15.2	0	36.2		33.8	67	44.4		04.3	151	23.6		36.3
10	280	43.4	341	21.6		14.7	15	36.7		33.9	82	46.9		04.3	166	26.3		36.4
11	295	45.9	356	20.7	-21	14.2	30	37.3	-23	34.0	97	49.3	-6	04.3	181	28.9	+21	36.4
12	310	48.4	11	19.9	-21	13.7	45	37.8	-23	34.1	112	51.8	-6	04.3	196	31.6	+21	36.4
13	325	50.8	26	19.0		13.2	60	38.4		34.2	127	54.2		04.3	211	34.2		36.5
14	340	53.3	41	18.2		12.6	75	38.9		34.3	142	56.7		04.3	226	36.9		36.5
15	355	55.8	56	17.3		12.1	90	39.5		34.4	157	59.1		04.2	241	39.6		36.5
16	10	58.2	71	16.5		11.6	105	40.0		34.5	173	01.6		04.2	256	42.2		36.6
17	26	00.7	86	15.6	-21	11.1	120	40.6	-23	34.6	188	04.0	-6	04.2	271	44.9	+21	36.6
18	41	03.2	101	14.8	-21	10.5	135	41.1	-23	34.7	203	06.5	-6	04.2	286	47.6	+21	36.6
19	56	05.6	116	14.0		10.0	150	41.7		34.7	218	08.9		04.2	301	50.2		36.7
20	71	08.1	131	13.1		09.5	165	42.2		34.8	233	11.4		04.2	316	52.9		36.7
21	86	10.5	146	12.3		09.0	180	42.7		34.9	248	13.8		04.2	331	55.5		36.7
22	101	13.0	161	11.4		08.4	195	43.3		35.0	263	16.3		04.2	346	58.2		36.8
23	116	15.5	176	10.6		07.9	210	43.8		35.1	278	18.7		04.2	2	00.9		36.8
24	131	17.9	191	09.7	-21	07.4	225	44.4	-23	35.2	293	21.2	-6	04.2	17	03.5	+21	36.8
Dif	—		-9		+5		+5		-1		+24		0		+27		0	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 12 ^h 13 ^m 6			Edad: 21 ^d 5 PHE { SD: 15:5 PMG: 5 ^h 01 ^m					Civil			Náutico		Hora R°	
	hG ☉	Dec		hG ☾	Dif	Dec			Dif						
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	176	36.8	-17 08.0	286	56.4	-10 12.0		60 N	16 14	17 02	17 52	0 06 96	9 39 0		
1	191	36.8	07.3	301	29.2 ¹³⁸	26.4 ¹⁴⁴		58	24	08	56	0 00 92	46 5		
2	206	36.7	06.6	316	01.9 ¹³⁷	40.7 ¹⁴³		56	33	14	17 59	** ** *	52 9		
3	221	36.6	05.9	330	34.6 ¹³⁷	-10 55.1 ¹⁴⁴		54	41	20	18 02	** ** *	9 58 12		
4	236	36.5	05.1	345	07.2 ¹³⁶	-11 09.3 ¹⁴²		52	48	25	05	** ** *	10 03 16		
5	251	36.4	-17 04.4	359	39.7 ¹³⁵	-11 23.6 ¹⁴³		50	16 54	17 29	18 08	** ** *	10 08 18		
6	266	36.3	-17 03.7	14	12.1 ¹³⁴	-11 37.8 ¹⁴²		45	17 08	17 39	18 14	** ** *	10 19 23		
7	281	36.3	03.0	28	44.4 ¹³³	-11 52.0 ¹⁴²		40	19	48	20	** ** *	27 28		
8	296	36.2	02.3	43	16.7 ¹³³	-12 06.1 ¹⁴¹		35	29	17 55	26	** ** *	35 31		
9	311	36.1	01.6	57	48.9 ¹³²	20.3 ¹⁴²		30	37	18 02	31	** ** *	41 34		
10	326	36.0	00.9	72	20.9 ¹³⁰	34.3 ¹⁴⁰		20	17 52	15	41	** ** *	10 53 39		
11	341	35.9	-17 00.1	86	52.9 ¹³⁰	-12 48.3 ¹⁴⁰		10 N	18 05	18 27	18 52	23 49 55	11 03 44		
12	356	35.8	-16 59.4	101	24.8 ¹²⁹	-13 02.3 ¹⁴⁰		0	18 17	18 39	19 04	23 37 51	11 12 49		
13	11	35.8	58.7	115	56.7 ¹²⁹	16.3 ¹⁴⁰		10 S	29	18 52	17	25 47	22 53		
14	26	35.7	58.0	130	28.4 ¹²⁷	30.1 ¹³⁸		20	43	19 06	34	23 13 42	32 58		
15	41	35.6	57.3	145	00.0 ¹²⁶	44.0 ¹³⁹		30	18 58	24	19 55	22 59 37	44 63		
16	56	35.5	56.6	159	31.6 ¹²⁶	-13 57.8 ¹³⁸		35	19 07	35	20 08	51 34	51 66		
17	71	35.4	-16 55.8	174	03.0 ¹²⁴	-14 11.5 ¹³⁷		40	19 17	19 47	20 24	22 42 30	11 58 70		
18	86	35.4	-16 55.1	188	34.4 ¹²⁴	-14 25.2 ¹³⁷		45	19 30	20 03	20 44	22 31 26	12 08 74		
19	101	35.3	54.4	203	05.6 ¹²²	38.8 ¹³⁶		50	44	22	21 11	18 21	19 80		
20	116	35.2	53.7	217	36.8 ¹²²	-14 52.4 ¹³⁶		52	51	32	25	12 18	24 83		
21	131	35.1	53.0	232	07.8 ¹²⁰	-15 05.9 ¹³⁵		54	19 59	42	21 41	22 06 15	29 87		
22	146	35.1	52.2	246	38.8 ¹²⁰	19.4 ¹³⁵		56	20 08	20 54	22 01	21 59 11	36 89		
23	161	35.0	51.5	261	09.6 ¹¹⁸	32.8 ¹³⁴		58	18	21 09	22 28	50 8	43 94		
24	176	34.9	-16 50.8	275	40.3 ¹¹⁷	-15 46.2 ¹³⁴		60 S	20 29	21 26	23 08	21 41 3	12 51 99		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 15 ^h 12 ^m 3		Mag: -3.9 PMG: 11 ^h 16 ^m			Mag: +1.4 PMG: 8 ^h 57 ^m			Mag: -2.2 PMG: 4 ^h 26 ^m			Mag: -0.3 PMG: 22 ^h 48 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	131	17.9	191	09.7	-21 07.4	225	44.4	-23 35.2	293	21.2	-6 04.2	17 03.5	+21 36.8		
1	146	20.4	206	08.9	06.8	240	44.9	35.3	308	23.6	04.2	32 06.2	36.9		
2	161	22.9	221	08.0	06.3	255	45.5	35.4	323	26.1	04.2	47 08.9	36.9		
3	176	25.3	236	07.2	05.8	270	46.0	35.4	338	28.5	04.2	62 11.5	37.0		
4	191	27.8	251	06.3	05.2	285	46.6	35.5	353	31.0	04.2	77 14.2	37.0		
5	206	30.3	266	05.5	-21 04.7	300	47.1	-23 35.6	8	33.5	-6 04.2	92 16.8	+21 37.0		
6	221	32.7	281	04.7	-21 04.1	315	47.7	-23 35.7	23	35.9	-6 04.2	107 19.5	+21 37.1		
7	236	35.2	296	03.8	03.6	330	48.2	35.8	38	38.4	04.1	122 22.2	37.1		
8	251	37.7	311	03.0	03.1	345	48.8	35.9	53	40.8	04.1	137 24.8	37.1		
9	266	40.1	326	02.1	02.5	0	49.3	35.9	68	43.3	04.1	152 27.5	37.2		
10	281	42.6	341	01.3	02.0	15	49.8	36.0	83	45.7	04.1	167 30.1	37.2		
11	296	45.0	356	00.4	-21 01.4	30	50.4	-23 36.1	98	48.2	-6 04.1	182 32.8	+21 37.2		
12	311	47.5	10	59.6	-21 00.9	45	50.9	-23 36.2	113	50.6	-6 04.1	197 35.5	+21 37.3		
13	326	50.0	25	58.8	-21 00.3	60	51.5	36.3	128	53.1	04.1	212 38.1	37.3		
14	341	52.4	40	57.9	-20 59.8	75	52.0	36.4	143	55.5	04.1	227 40.8	37.3		
15	356	54.9	55	57.1	59.2	90	52.6	36.4	158	58.0	04.1	242 43.4	37.4		
16	11	57.4	70	56.2	58.7	105	53.1	36.5	174	00.5	04.1	257 46.1	37.4		
17	26	59.8	85	55.4	-20 58.1	120	53.7	-23 36.6	189	02.9	-6 04.1	272 48.8	+21 37.4		
18	42	02.3	100	54.6	-20 57.6	135	54.2	-23 36.7	204	05.4	-6 04.1	287 51.4	+21 37.5		
19	57	04.8	115	53.7	57.0	150	54.8	36.8	219	07.8	04.0	302 54.1	37.5		
20	72	07.2	130	52.9	56.5	165	55.3	36.8	234	10.3	04.0	317 56.7	37.5		
21	87	09.7	145	52.1	55.9	180	55.8	36.9	249	12.7	04.0	332 59.4	37.6		
22	102	12.1	160	51.2	55.4	195	56.4	37.0	264	15.2	04.0	348 02.1	37.6		
23	117	14.6	175	50.4	54.8	210	56.9	37.1	279	17.7	04.0	3 04.7	37.6		
24	132	17.1	190	49.5	-20 54.3	225	57.5	-23 37.1	294	20.1	-6 04.0	18 07.4	+21 37.7		
Dif	—		-8	+5		+5	-1		+25	0		+27	0		

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna							
	SD: 16 ^h 2			Edad: 22 ^d 5	PHE { 4 ^h : 57 ^m 7 12 ^h : 58 ^m 0 20 ^h : 58 ^m 3															
	PMG: 12 ^h 13 ^m 7					SD: 15 ^h 7		PMG: 5 ^h 49 ^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	34.9	-16	275	40.3	-15	46.2	6	34	7	24	8	11	1	42	104	9	39	3	
1	191	34.8		290	11.0 ¹¹⁷	-15	59.5 ¹³³	30	18	8	01	32	97	9	51	9				
2	206	34.7		304	41.5 ¹¹⁵	-16	12.7 ¹³²	27	12	7	53	22	93	10	01	14				
3	221	34.7		319	11.9 ¹¹⁴		25.8 ¹³¹	24	07		45	14	89		10	18				
4	236	34.6		333	42.2 ¹¹³		38.9 ¹³¹	21	7	02	38	07	85		19	20				
5	251	34.5	-16	348	12.4 ¹¹²	-16	52.0 ¹³¹	6	19	6	57	7	32	1	00	83	10	26	23	
6	266	34.4	-16	2	42.5 ¹¹¹	-17	04.9 ¹²⁹	6	12	6	47	7	19	0	46	77	10	42	29	
7	281	34.4		17	12.5 ¹¹⁰		17.8 ¹²⁹	07	39	7	08	34	73	10	55	33				
8	296	34.3		31	42.4 ¹⁰⁹		30.6 ¹²⁸	6	01	32	6	58	25	68	11	06	37			
9	311	34.2		46	12.1 ¹⁰⁷		43.4 ¹²⁸	5	56	25	50	16	65		15	40				
10	326	34.1		60	41.8 ¹⁰⁷	-17	56.0 ¹²⁶	46	12	35	0	02	59	32	45					
11	341	34.1	-16	75	11.3 ¹⁰⁵	-18	08.6 ¹²⁶	5	35	6	00	6	22	**	**	**	11	47	49	
12	356	34.0	-16	89	40.7 ¹⁰⁴	-18	21.1 ¹²⁵	0	5	24	5	49	6	10	**	**	**	12	01	53
13	11	33.9		104	10.0 ¹⁰³		33.5 ¹²⁴	10	5	10	36	5	58	**	**	**		15	57	
14	26	33.9		118	39.1 ¹⁰¹		45.9 ¹²⁴	20	4	54	21	45	23	55	49	30	61			
15	41	33.8		133	08.2 ¹⁰¹	-18	58.1 ¹²²	30	33	5	04	30	36	44		47	67			
16	56	33.7		147	37.1 ⁹⁹	-19	10.3 ¹²²	35	20	4	53	21	25	41	12	57	70			
17	71	33.6	-16	162	05.9 ⁹⁸	-19	22.4 ¹²¹	40	4	04	4	40	5	10	23	12	38	13	08	74
18	86	33.6	-16	176	34.6 ⁹⁷	-19	34.4 ¹²⁰	45	3	44	4	25	4	58	22	57	34	13	22	78
19	101	33.5		191	03.1 ⁹⁵		46.3 ¹¹⁹	50	17	4	06	44	39	28		39	84			
20	116	33.4		205	31.5 ⁹⁴	-19	58.1 ¹¹⁸	52	3	03	3	56	37	30	26		47	86		
21	131	33.4		219	59.8 ⁹³	-20	09.8 ¹¹⁷	54	2	47	46	29	21	22	13	56	90			
22	146	33.3		234	28.0 ⁹²		21.5 ¹¹⁷	56	27	34	20	22	10	18	14	05	95			
23	161	33.2		248	56.1 ⁹¹		33.0 ¹¹⁵	58	2	00	19	4	11	21	58	13	17	100		
24	176	33.2	-16	263	24.0 ⁸⁹	-20	44.4 ¹¹⁴	60	1	20	3	02	3	59	21	44	6	14	30	107

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO										
	PMG: 15 ^h 08 ^m 4		Mag: -3.9 PMG: 11 ^h 17 ^m		Mag: +1.4 PMG: 8 ^h 56 ^m		Mag: -2.2 PMG: 4 ^h 22 ^m		Mag: -0.3 PMG: 22 ^h 43 ^m										
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec									
h	°	'	°	'	°	'	°	'	°	'									
0	132	17.1	190	49.5	-20	54.3	225	57.5	-23	37.1	294	20.1	-6	04.0	18	07.4	+21	37.7	
1	147	19.5	205	48.7		53.7	240	58.0		37.2	309	22.6		04.0	33	10.0		37.7	
2	162	22.0	220	47.9		53.1	255	58.6		37.3	324	25.0		04.0	48	12.7		37.7	
3	177	24.5	235	47.0		52.6	270	59.1		37.4	339	27.5		04.0	63	15.4		37.8	
4	192	26.9	250	46.2		52.0	285	59.7		37.5	354	30.0		04.0	78	18.0		37.8	
5	207	29.4	265	45.4	-20	51.5	301	00.2	-23	37.5	9	32.4	-6	03.9	93	20.7	+21	37.9	
6	222	31.9	280	44.5	-20	50.9	316	00.7	-23	37.6	24	34.9	-6	03.9	108	23.3	+21	37.9	
7	237	34.3	295	43.7		50.3	331	01.3		37.7	39	37.3		03.9	123	26.0		37.9	
8	252	36.8	310	42.9		49.8	346	01.8		37.8	54	39.8		03.9	138	28.7		38.0	
9	267	39.3	325	42.0		49.2	1	02.4		37.8	69	42.3		03.9	153	31.3		38.0	
10	282	41.7	340	41.2		48.6	16	02.9		37.9	84	44.7		03.9	168	34.0		38.0	
11	297	44.2	355	40.4	-20	48.0	31	03.5	-23	38.0	99	47.2	-6	03.9	183	36.6	+21	38.1	
12	312	46.6	10	39.6	-20	47.5	46	04.0	-23	38.1	114	49.7	-6	03.9	198	39.3	+21	38.1	
13	327	49.1	25	38.7		46.9	61	04.6		38.1	129	52.1		03.9	213	42.0		38.1	
14	342	51.6	40	37.9		46.3	76	05.1		38.2	144	54.6		03.9	228	44.6		38.2	
15	357	54.0	55	37.1		45.8	91	05.6		38.3	159	57.0		03.8	243	47.3		38.2	
16	12	56.5	70	36.2		45.2	106	06.2		38.3	174	59.5		03.8	258	49.9		38.2	
17	27	59.0	85	35.4	-20	44.6	121	06.7	-23	38.4	190	02.0	-6	03.8	273	52.6	+21	38.3	
18	43	01.4	100	34.6	-20	44.0	136	07.3	-23	38.5	205	04.4	-6	03.8	288	55.2	+21	38.3	
19	58	03.9	115	33.8		43.4	151	07.8		38.6	220	06.9		03.8	303	57.9		38.3	
20	73	06.4	130	32.9		42.9	166	08.4		38.6	235	09.4		03.8	319	00.6		38.4	
21	88	08.8	145	32.1		42.3	181	08.9		38.7	250	11.8		03.8	334	03.2		38.4	
22	103	11.3	160	31.3		41.7	196	09.4		38.8	265	14.3		03.8	349	05.9		38.4	
23	118	13.8	175	30.4		41.1	211	10.0		38.8	280	16.8		03.7	4	08.5		38.5	
24	133	16.2	190	29.6	-20	40.5	226	10.5	-23	38.9	295	19.2	-6	03.7	19	11.2	+21	38.5	
Dif	—		-8	+6		+5	-1		+25	0		+27	0						

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16 ^h 2			Edad: 23 ^d 5	PHE { 4 ^h : 58 ^m 5 12 ^h : 58 ^m 8 20 ^h : 59 ^m 1											
	PMG: 12 ^h 13 ^m 8					SD: 15 ^h 9			PMG: 6 ^h 41 ^m			R°: 58 ^m				
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	m	h m	m	
0	176	33.2	-16	33.3	263	24.0	-20	44.4	60 N	16 20	17 06	17 57	3 26	111	9 42	9
1	191	33.1		32.6	277	51.8	88	-20	55.7 ¹¹³	58	29	13	18 00	3 09	102	10 00
2	206	33.0		31.9	292	19.4	86	-21	06.9 ¹¹²	56	38	18	03	2 55	96	15 23
3	221	33.0		31.1	306	47.0	86		18.1 ¹¹²	54	45	23	06	43	91	28 27
4	236	32.9		30.4	321	14.4	84		29.1 ¹¹⁰	52	52	28	09	32	88	39 31
5	251	32.8	-16	29.6	335	41.6	82	-21	40.0 ¹⁰⁹	50	16 58	17 32	18 11	2 23	84	10 49
6	266	32.8	-16	28.9	350	08.8	82	-21	50.7 ¹⁰⁷	45	17 11	17 42	18 17	2 03	79	11 11
7	281	32.7		28.2	4	35.8	80	-22	01.4 ¹⁰⁷	40	22	50	22	1 47	74	28 43
8	296	32.6		27.4	19	02.7	79		12.0 ¹⁰⁶	35	31	17 57	27	33	71	43 46
9	311	32.6		26.7	33	29.4	77		22.4 ¹⁰⁴	30	39	18 04	32	21	69	11 55
10	326	32.5		26.0	47	56.0	76		32.7 ¹⁰³	20	17 53	16	42	1 01	64	12 17
11	341	32.4	-16	25.2	62	22.5	75	-22	42.9 ¹⁰²	10 N	18 06	18 27	18 53	0 44	60	12 36
12	356	32.4	-16	24.5	76	48.9	74	-22	53.0 ¹⁰¹	0	18 17	18 39	19 04	0 28	56	12 54
13	11	32.3		23.7	91	15.1	72	-23	03.0 ¹⁰⁰	10 S	29	18 51	17	0 12	53	13 12
14	26	32.2		23.0	105	41.2	71		12.8 ⁹⁸	20	42	19 05	33	** ** *	**	31 66
15	41	32.2		22.3	120	07.1	69		22.5 ⁹⁷	30	18 57	22	19 53	** ** *	**	13 54
16	56	32.1		21.5	134	32.9	68		32.1 ⁹⁶	35	19 06	33	20 06	** ** *	**	14 07
17	71	32.0	-16	20.8	148	58.6	67	-23	41.5 ⁹⁴	40	19 15	19 45	20 21	23 50	49	14 22
18	86	32.0	-16	20.0	163	24.2	66	-23	50.8 ⁹³	45	19 27	20 00	20 41	23 31	46	14 40
19	101	31.9		19.3	177	49.6	64	-24	00.0 ⁹²	50	41	19	21 07	23 07	41	15 03
20	116	31.9		18.5	192	14.9	63	-24	09.0 ⁹⁰	52	48	28	20	22 56	39	13 86
21	131	31.8		17.8	206	40.1	62		17.9 ⁸⁹	54	19 55	38	36	43	36	26 89
22	146	31.7		17.0	221	05.1	60		26.6 ⁸⁷	56	20 04	20 50	21 54	28	32	40 94
23	161	31.7		16.3	235	30.0	59		35.2 ⁸⁶	58	13	21 03	22 19	22 11	26	15 57
24	176	31.6	-16	15.6	249	54.8	58	-24	43.7 ⁸⁵	60 S	20 24	21 19	22 53	21 50	17	16 17
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 15 ^h 04 ^m 4			Mag: -3.9 PMG: 11 ^h 19 ^m			Mag: +1.4 PMG: 8 ^h 55 ^m			Mag: -2.2 PMG: 4 ^h 18 ^m			Mag: -0.3 PMG: 22 ^h 39 ^m			
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	133	16.2	190	29.6	-20	40.5	226	10.5	-23	38.9	295	19.2	-6	03.7	19	11.2
1	148	18.7	205	28.8		39.9	241	11.1		39.0	310	21.7		03.7	34	13.8
2	163	21.1	220	28.0		39.4	256	11.6		39.0	325	24.2		03.7	49	16.5
3	178	23.6	235	27.1		38.8	271	12.2		39.1	340	26.6		03.7	64	19.2
4	193	26.1	250	26.3		38.2	286	12.7		39.2	355	29.1		03.7	79	21.8
5	208	28.5	265	25.5	-20	37.6	301	13.2	-23	39.2	10	31.6	-6	03.7	94	24.5
6	223	31.0	280	24.7	-20	37.0	316	13.8	-23	39.3	25	34.0	-6	03.7	109	27.1
7	238	33.5	295	23.9		36.4	331	14.3		39.4	40	36.5		03.6	124	29.8
8	253	35.9	310	23.0		35.8	346	14.9		39.4	55	39.0		03.6	139	32.4
9	268	38.4	325	22.2		35.2	1	15.4		39.5	70	41.4		03.6	154	35.1
10	283	40.9	340	21.4		34.6	16	15.9		39.6	85	43.9		03.6	169	37.8
11	298	43.3	355	20.6	-20	34.0	31	16.5	-23	39.6	100	46.4	-6	03.6	184	40.4
12	313	45.8	10	19.8	-20	33.4	46	17.0	-23	39.7	115	48.9	-6	03.6	199	43.1
13	328	48.2	25	18.9		32.8	61	17.6		39.8	130	51.3		03.6	214	45.7
14	343	50.7	40	18.1		32.2	76	18.1		39.8	145	53.8		03.5	229	48.4
15	358	53.2	55	17.3		31.6	91	18.7		39.9	160	56.3		03.5	244	51.0
16	13	55.6	70	16.5		31.0	106	19.2		39.9	175	58.7		03.5	259	53.7
17	28	58.1	85	15.7	-20	30.4	121	19.7	-23	40.0	191	01.2	-6	03.5	274	56.4
18	44	00.6	100	14.8	-20	29.8	136	20.3	-23	40.1	206	03.7	-6	03.5	289	59.0
19	59	03.0	115	14.0		29.2	151	20.8		40.1	221	06.2		03.5	305	01.7
20	74	05.5	130	13.2		28.6	166	21.4		40.2	236	08.6		03.5	320	04.3
21	89	08.0	145	12.4		28.0	181	21.9		40.2	251	11.1		03.4	335	07.0
22	104	10.4	160	11.6		27.4	196	22.4		40.3	266	13.6		03.4	350	09.6
23	119	12.9	175	10.8		26.8	211	23.0		40.4	281	16.1		03.4	5	12.3
24	134	15.4	190	09.9	-20	26.2	226	23.5	-23	40.4	296	18.5	-6	03.4	20	14.9
Dif	—		-8	+6		+5	-1				+25		0		+27	0

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16:2 PMG: 12 ^h 13 ^m 9				Edad: 24 ^d 5 PHE { 4 ^h : 59/3 12 ^h : 59/6 20 ^h : 59/9 SD: 16:1 PMG: 7 ^h 39 ^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	31.6	-16	15.6	249	54.8	-24	43.7	60 N	6	30	7	20	8	06	5	17
1	191	31.6		14.8	264	19.4	56	-24	52.0	58	27		14	7	57	4	51
2	206	31.5		14.1	278	43.9	55	-25	00.2	82	24		08		49	31	90
3	221	31.4		13.3	293	08.3	54		08.2	80	21	7	03		42	14	86
4	236	31.4		12.6	307	32.5	52		16.0	78	18	6	59		35	4	00
5	251	31.3	-16	11.8	321	56.7	52	-25	23.7	77	6	16	6	55	7	29	3
6	266	31.3	-16	11.1	336	20.7	50	-25	31.3	76	6	10	6	45	7	16	3
7	281	31.2		10.3	350	44.5	48		38.6	73		05	37	7	06	3	01
8	296	31.1		09.6	5	08.3	48		45.9	73	6	00	30	6	56	2	44
9	311	31.1		08.8	19	31.9	46		52.9	70	5	55	24	48	30	69	12
10	326	31.0		08.1	33	55.4	45	-25	59.8	69		45	12	34	2	05	67
11	341	31.0	-16	07.3	48	18.8	44	-26	06.5	67	10 N	5	35	6	00	1	44
12	356	30.9	-16	06.6	62	42.1	43	-26	13.1	66	0	5	24	5	49	1	24
13	11	30.9		05.8	77	05.2	41		19.5	64	10 S	5	11	37	5	59	1
14	26	30.8		05.1	91	28.3	41		25.7	62	20	4	55	23	46	0	44
15	41	30.8		04.3	105	51.2	39		31.7	60	30	35	5	06	31	20	54
16	56	30.7		03.5	120	14.0	38		37.6	59	35	22	4	55	23	0	06
17	71	30.6	-16	02.8	134	36.7	37	-26	43.3	57	40	4	07	4	43	5	13
18	86	30.6	-16	02.0	148	59.3	36	-26	48.8	55	45	3	47	4	28	5	01
19	101	30.5		01.3	163	21.7	34		54.1	53	50	21		10	4	47	23
20	116	30.5	-16	00.5	177	44.1	34	-26	59.3	52	52	3	08	4	01	40	35
21	131	30.4	-15	59.8	192	06.4	33	-27	04.2	49	54	2	53	3	51	33	19
22	146	30.4		59.0	206	28.5	31		09.0	48	56		34	39	25	23	00
23	161	30.3		58.3	220	50.6	31		13.6	46	58	2	10	25	16	22	37
24	176	30.3	-15	57.5	235	12.6	30	-27	18.0	44	60 S	1	35	3	09	4	05

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 15 ^h 00 ^m 5		Mag: -3.9 PMG: 11 ^h 20 ^m		Mag: +1.4 PMG: 8 ^h 54 ^m		Mag: -2.2 PMG: 4 ^h 14 ^m		Mag: -0.3 PMG: 22 ^h 35 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	134	15.4	190	09.9	-20	26.2	226	23.5	-23	40.4
1	149	17.8	205	09.1		25.6	241	24.1		40.5
2	164	20.3	220	08.3		25.0	256	24.6		40.5
3	179	22.7	235	07.5		24.4	271	25.1		40.6
4	194	25.2	250	06.7		23.7	286	25.7		40.7
5	209	27.7	265	05.9	-20	23.1	301	26.2	-23	40.7
6	224	30.1	280	05.1	-20	22.5	316	26.8	-23	40.8
7	239	32.6	295	04.3		21.9	331	27.3		40.8
8	254	35.1	310	03.4		21.3	346	27.8		40.9
9	269	37.5	325	02.6		20.7	1	28.4		40.9
10	284	40.0	340	01.8		20.0	16	28.9		41.0
11	299	42.5	355	01.0	-20	19.4	31	29.5	-23	41.1
12	314	44.9	10	00.2	-20	18.8	46	30.0	-23	41.1
13	329	47.4	24	59.4		18.2	61	30.5		41.2
14	344	49.9	39	58.6		17.6	76	31.1		41.2
15	359	52.3	54	57.8		16.9	91	31.6		41.3
16	14	54.8	69	57.0		16.3	106	32.2		41.3
17	29	57.2	84	56.2	-20	15.7	121	32.7	-23	41.4
18	44	59.7	99	55.4	-20	15.0	136	33.2	-23	41.4
19	60	02.2	114	54.5		14.4	151	33.8		41.5
20	75	04.6	129	53.7		13.8	166	34.3		41.5
21	90	07.1	144	52.9		13.2	181	34.8		41.6
22	105	09.6	159	52.1		12.5	196	35.4		41.6
23	120	12.0	174	51.3		11.9	211	35.9		41.7
24	135	14.5	189	50.5	-20	11.3	226	36.5	-23	41.7
Dif	—		-8		+6		+5		-1	
							+25		0	
									+27	

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: 25 ^d 5 PHE { 4 ^h : 60'1 12 ^h : 60'3 20 ^h : 60'5 SD: 16'3 PMG: 8 ^h 41 ^m R°: 66 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	h m	m	h m	m	
0	176	30.3	-15	57.5	235	12.6	-27	18.0	60 N	16 25	17 11	18 01	7 03	69	10 17	69	
1	191	30.2		56.7	249	34.5	29	22.2	58	34	17	04	6 27	69	10 53	69	
2	206	30.2		56.0	263	56.2	27	26.2	56	42	22	07	6 01	68	11 19	69	
3	221	30.1		55.2	278	17.9	27	30.0	54	49	27	09	5 40	69	40	69	
4	236	30.1		54.5	292	39.5	26	33.6	52	16 55	32	12	23	68	11 57	69	
5	251	30.0	-15	53.7	307	01.0	25	-27 37.1	50	17 01	17 36	18 14	5 08	68	12 12	69	
6	266	30.0	-15	52.9	321	22.5	25	-27 40.3	45	17 14	17 45	18 20	4 38	68	12 42	69	
7	281	29.9		52.2	335	43.8	23	43.3	40	24	52	25	4 15	68	13 06	68	
8	296	29.9		51.4	350	05.1	23	46.2	35	33	17 59	29	3 56	67	25	68	
9	311	29.8		50.7	4	26.3	22	48.8	30	41	18 06	34	39	67	13 42	68	
10	326	29.8		49.9	18	47.4	21	51.2	20	17 54	17	43	3 12	66	14 10	67	
11	341	29.7	-15	49.1	33	08.5	21	-27 53.5	10 N	18 06	18 28	18 53	2 48	66	14 34	67	
12	356	29.7	-15	48.4	47	29.5	20	-27 55.5	0	18 18	18 39	19 04	2 26	66	14 57	66	
13	11	29.6		47.6	61	50.4	19	57.3	10 S	29	18 51	16	2 04	65	15 19	66	
14	26	29.6		46.8	76	11.3	19	-27 58.9	20	41	19 04	32	1 41	64	15 44	65	
15	41	29.5		46.1	90	32.1	18	-28 00.3	30	18 56	21	19 51	1 14	63	16 12	64	
16	56	29.5		45.3	104	52.8	17	01.5	35	19 04	31	20 04	0 58	62	28	64	
17	71	29.4	-15	44.5	119	13.5	17	-28 02.5	40	19 13	19 43	20 19	0 39	62	16 48	62	
18	86	29.4	-15	43.8	133	34.2	17	-28 03.2	45	19 25	19 57	20 38	0 17	60	17 11	62	
19	101	29.3		43.0	147	54.8	16	03.8	50	38	20 15	21 03	** ** *	**	41	60	
20	116	29.3		42.2	162	15.3	15	04.1	52	44	24	15	** ** *	**	17 56	59	
21	131	29.3		41.5	176	35.9	16	04.3	54	52	33	30	** ** *	**	18 13	57	
22	146	29.2		40.7	190	56.3	14	04.2	56	19 59	45	21 47	23 55	83	18 34	55	
23	161	29.2		39.9	205	16.8	15	03.9	58	20 08	20 58	22 10	23 29	86	19 00	52	
24	176	29.1	-15	39.2	219	37.2	14	-28 03.4	60 S	20 19	21 13	22 40	22 53	93	19 36	46	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 14 ^h 56 ^m 6		Mag: -3.9 PMG: 11 ^h 21 ^m			Mag: +1.4 PMG: 8 ^h 53 ^m			Mag: -2.2 PMG: 4 ^h 10 ^m			Mag: -0.3 PMG: 22 ^h 31 ^m					
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		hG ♅	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	135	14.5	189	50.5	-20	11.3	226	36.5	-23	41.7	297	18.0	-6	03.0	21	18.6	
1	150	17.0	204	49.7		10.6	241	37.0		41.8	312	20.5		03.0	36	21.3	
2	165	19.4	219	48.9		10.0	256	37.5		41.8	327	23.0		02.9	51	23.9	
3	180	21.9	234	48.1		09.3	271	38.1		41.9	342	25.4		02.9	66	26.6	
4	195	24.4	249	47.3		08.7	286	38.6		41.9	357	27.9		02.9	81	29.2	
5	210	26.8	264	46.5	-20	08.1	301	39.2	-23	42.0	12	30.4	-6	02.9	96	31.9	
6	225	29.3	279	45.7	-20	07.4	316	39.7	-23	42.0	27	32.9	-6	02.9	111	34.5	
7	240	31.7	294	44.9		06.8	331	40.2		42.1	42	35.4		02.9	126	37.2	
8	255	34.2	309	44.1		06.1	346	40.8		42.1	57	37.9		02.8	141	39.8	
9	270	36.7	324	43.3		05.5	1	41.3		42.2	72	40.3		02.8	156	42.5	
10	285	39.1	339	42.5		04.8	16	41.8		42.2	87	42.8		02.8	171	45.1	
11	300	41.6	354	41.7	-20	04.2	31	42.4	-23	42.3	102	45.3	-6	02.8	186	47.8	
12	315	44.1	9	40.9	-20	03.6	46	42.9	-23	42.3	117	47.8	-6	02.8	201	50.4	
13	330	46.5	24	40.1		02.9	61	43.5		42.4	132	50.3		02.7	216	53.1	
14	345	49.0	39	39.3		02.3	76	44.0		42.4	147	52.8		02.7	231	55.7	
15	0	51.5	54	38.5		01.6	91	44.5		42.4	162	55.3		02.7	246	58.4	
16	15	53.9	69	37.7		01.0	106	45.1		42.5	177	57.7		02.7	262	01.1	
17	30	56.4	84	36.9	-20	00.3	121	45.6	-23	42.5	193	00.2	-6	02.7	277	03.7	
18	45	58.9	99	36.1	-19	59.6	136	46.1	-23	42.6	208	02.7	-6	02.6	292	06.4	
19	61	01.3	114	35.3		59.0	151	46.7		42.6	223	05.2		02.6	307	09.0	
20	76	03.8	129	34.5		58.3	166	47.2		42.7	238	07.7		02.6	322	11.7	
21	91	06.2	144	33.7		57.7	181	47.8		42.7	253	10.2		02.6	337	14.3	
22	106	08.7	159	32.9		57.0	196	48.3		42.7	268	12.7		02.5	352	17.0	
23	121	11.2	174	32.2		56.4	211	48.8		42.8	283	15.2		02.5	7	19.6	
24	136	13.6	189	31.4	-19	55.7	226	49.4	-23	42.8	298	17.6	-6	02.5	22	22.3	
Dif	—		-8			+6	+5			0	+25			0	+27		

UT	SOL			● LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16 ^h 2			Edad: 26 ^d 5	PHE {	4 ^h : 60 ^m 7 12 ^h : 60 ^m 8 20 ^h : 61 ^m 0	SD: 16 ^d 5	PMG: 9 ^h 47 ^m		R°: 66 ^m								
	PMG: 12 ^h 14 ^m 1																	
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	°	'	°	°	'	°	h	m	h	m	h	m	h	m	
0	176	29.1	-15	39.2	219	37.2	-28	03.4	60 N	6	26	7	16	8	02	8	12	
1	191	29.1		38.4	233	57.6		02.7	58	23	10	7	53	7	36	36	12	
2	206	29.0		37.6	248	18.0		01.8	56	20	05	45	7	09	43	28	95	
3	221	29.0		36.9	262	38.3	-28	00.6	54	18	7	00	38	6	49	46	12	
4	236	29.0		36.1	276	58.7	-27	59.2	52	15	6	56	32	31	49	13	06	
5	251	28.9	-15	35.3	291	19.0	-27	57.7	50	6	13	6	52	7	26	6	16	
6	266	28.9	-15	34.5	305	39.3	-27	55.9	45	6	08	6	43	7	14	5	46	
7	281	28.8		33.8	319	59.6		53.9	40	6	03	35	7	03	23	57	14	
8	296	28.8		33.0	334	20.0		51.6	35	5	58	28	6	55	5	03	59	
9	311	28.7		32.2	348	40.3		49.2	30	54	22	47	4	46	61	14	50	
10	326	28.7		31.5	3	00.6		46.5	20	45	11	34	4	18	63	15	17	
11	341	28.7	-15	30.7	17	20.9	-27	43.7	10 N	5	35	6	00	6	22	3	54	
12	356	28.6	-15	29.9	31	41.2	-27	40.6	0	5	24	5	49	6	11	3	32	
13	11	28.6		29.1	46	01.6		37.3	10 S	5	12	37	5	59	3	09	68	
14	26	28.5		28.4	60	21.9		33.8	20	4	57	24	47	2	45	69	16	
15	41	28.5		27.6	74	42.3		30.0	30	37	5	08	33	17	71	17	16	
16	56	28.5		26.8	89	02.7		26.1	35	25	4	58	25	2	00	73	32	
17	71	28.4	-15	26.0	103	23.2	-27	21.9	40	4	10	4	46	5	15	1	41	
18	86	28.4	-15	25.2	117	43.6	-27	17.6	45	3	51	4	32	5	04	1	17	
19	101	28.4		24.5	132	04.1		13.0	50	26	14	4	51	4	51	0	47	
20	116	28.3		23.7	146	24.7		08.2	52	3	14	4	05	44	33	79	18	
21	131	28.3		22.9	160	45.2	-27	03.2	54	2	59	3	55	37	0	15	81	
22	146	28.2		22.1	175	05.9	-26	58.0	56	41	44	29			**	**	**	
23	161	28.2		21.4	189	26.5		52.5	58	2	19	31	21		**	**	**	
24	176	28.2	-15	20.6	203	47.2	-26	46.9	60 S	1	48	3	16	4	10	**	**	**

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 14 ^h 52 ^m 6		Mag: -3.9 PMG: 11 ^h 23 ^m			Mag: +1.4 PMG: 8 ^h 52 ^m			Mag: -2.3 PMG: 4 ^h 06 ^m			Mag: -0.3 PMG: 22 ^h 27 ^m						
	hG ♈		hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec				
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'				
0	136	13.6	189	31.4	-19	55.7	226	49.4	-23	42.8	298	17.6	-6	02.5	22	22.3		
1	151	16.1	204	30.6		55.0	241	49.9		42.9	313	20.1		02.5	37	24.9		
2	166	18.6	219	29.8		54.4	256	50.4		42.9	328	22.6		02.5	52	27.6		
3	181	21.0	234	29.0		53.7	271	51.0		42.9	343	25.1		02.4	67	30.2		
4	196	23.5	249	28.2		53.1	286	51.5		43.0	358	27.6		02.4	82	32.9		
5	211	26.0	264	27.4	-19	52.4	301	52.0	-23	43.0	13	30.1	-6	02.4	97	35.5		
6	226	28.4	279	26.6	-19	51.7	316	52.6	-23	43.1	28	32.6	-6	02.4	112	38.1		
7	241	30.9	294	25.8		51.1	331	53.1		43.1	43	35.1		02.4	127	40.8		
8	256	33.4	309	25.0		50.4	346	53.7		43.1	58	37.6		02.3	142	43.4		
9	271	35.8	324	24.2		49.7	1	54.2		43.2	73	40.1		02.3	157	46.1		
10	286	38.3	339	23.5		49.1	16	54.7		43.2	88	42.5		02.3	172	48.7		
11	301	40.7	354	22.7	-19	48.4	31	55.3	-23	43.3	103	45.0	-6	02.3	187	51.4		
12	316	43.2	9	21.9	-19	47.7	46	55.8	-23	43.3	118	47.5	-6	02.2	202	54.0		
13	331	45.7	24	21.1		47.0	61	56.3		43.3	133	50.0		02.2	217	56.7		
14	346	48.1	39	20.3		46.4	76	56.9		43.4	148	52.5		02.2	232	59.3		
15	1	50.6	54	19.5		45.7	91	57.4		43.4	163	55.0		02.2	248	02.0		
16	16	53.1	69	18.7		45.0	106	57.9		43.4	178	57.5		02.1	263	04.6		
17	31	55.5	84	18.0	-19	44.3	121	58.5	-23	43.5	194	00.0	-6	02.1	278	07.3		
18	46	58.0	99	17.2	-19	43.7	136	59.0	-23	43.5	209	02.5	-6	02.1	293	09.9		
19	62	00.5	114	16.4		43.0	151	59.5		43.5	224	05.0		02.1	308	12.6		
20	77	02.9	129	15.6		42.3	167	00.1		43.6	239	07.5		02.1	323	15.2		
21	92	05.4	144	14.8		41.6	182	00.6		43.6	254	10.0		02.0	338	17.9		
22	107	07.9	159	14.0		40.9	197	01.1		43.6	269	12.5		02.0	353	20.5		
23	122	10.3	174	13.3		40.3	212	01.7		43.7	284	15.0		02.0	8	23.2		
24	137	12.8	189	12.5	-19	39.6	227	02.2	-23	43.7	299	17.5	-6	02.0	23	25.8		
Dif	—		-8		+7		+5		0		+25		0		+26		0	

UT	SOL			● LUNA					Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16/2 PMG: 12 ^h 14 ^m 1			Edad: 27 ^d 5 PHE { 4 ^h : 61'1 12 ^h : 61'1 20 ^h : 61'2 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	h m	h m
0	176	28.2	-15	20.6	203	47.2	-26	46.9	60 N	16 30	17 16	18 06	8 38	9	13 18	121	
1	191	28.1		19.8	218	08.0	18	41.1	58	39	21	08	8 12	18	13 43	112	
2	206	28.1		19.0	232	28.8	18	35.0	56	46	26	11	7 52	24	14 03	105	
3	221	28.1		18.2	246	49.7	19	28.8	54	53	31	13	35	28	20	100	
4	236	28.0		17.4	261	10.6	19	22.4	52	16 59	35	15	20	32	34	96	
5	251	28.0	-15	16.7	275	31.6	20	-26 15.7	50	17 05	17 39	18 17	7 07	36	14 47	92	
6	266	28.0	-15	15.9	289	52.7	21	-26 08.9	45	17 17	17 47	18 22	6 41	41	15 12	87	
7	281	27.9		15.1	304	13.8	21	-26 01.8	40	26	17 55	27	20	45	32	82	
8	296	27.9		14.3	318	35.1	23	-25 54.6	35	35	18 01	31	6 02	49	15 49	78	
9	311	27.9		13.5	332	56.3	22	47.1	30	42	07	35	5 47	51	16 03	75	
10	326	27.8		12.7	347	17.7	24	39.5	20	17 55	18	44	5 21	56	28	70	
11	341	27.8	-15	12.0	1	39.1	24	-25 31.6	10 N	18 07	18 28	18 54	4 59	60	16 49	65	
12	356	27.8	-15	11.2	16	00.6	25	-25 23.6	0	18 18	18 39	19 04	4 38	63	17 08	62	
13	11	27.7		10.4	30	22.2	26	15.4	10 S	29	18 50	16	4 17	67	28	57	
14	26	27.7		09.6	44	43.9	27	-25 07.0	20	40	19 03	31	3 54	71	17 48	53	
15	41	27.7		08.8	59	05.7	28	-24 58.4	30	18 54	19	50	28	75	18 12	47	
16	56	27.7		08.0	73	27.5	28	49.6	35	19 02	29	20 02	3 13	77	26	44	
17	71	27.6	-15	07.2	87	49.5	30	-24 40.6	40	19 11	19 40	20 16	2 55	80	18 41	41	
18	86	27.6	-15	06.5	102	11.5	30	-24 31.5	45	19 22	19 54	20 34	2 33	85	19 00	36	
19	101	27.6		05.7	116	33.6	31	22.2	50	35	20 11	20 58	2 05	91	24	30	
20	116	27.5		04.9	130	55.9	33	12.6	52	41	20	21 10	1 52	93	35	27	
21	131	27.5		04.1	145	18.2	33	-24 03.0	54	48	29	24	36	97	19 47	24	
22	146	27.5		03.3	159	40.6	34	-23 53.1	56	19 55	40	21 41	1 18	101	20 02	19	
23	161	27.5		02.5	174	03.1	35	43.1	58	20 04	20 52	22 01	0 55	108	19	13	
24	176	27.4	-15	01.7	188	25.8	37	-23 32.9	60 S	20 13	21 06	22 29	0 26	118	20 39	6	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO								
	PMG: 14 ^h 48 ^m 7		Mag: -3.9 PMG: 11 ^h 24 ^m		Mag: +1.3 PMG: 8 ^h 52 ^m		Mag: -2.3 PMG: 4 ^h 02 ^m		Mag: -0.2 PMG: 22 ^h 22 ^m								
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec							
h	°	'	°	'	°	'	°	'	°	'							
0	137	12.8	189	12.5	227	02.2	299	17.5	23	25.8							
1	152	15.2	204	11.7	242	02.8	314	20.0	38	28.5							
2	167	17.7	219	10.9	257	03.3	329	22.5	53	31.1							
3	182	20.2	234	10.1	272	03.8	344	25.0	68	33.8							
4	197	22.6	249	09.4	287	04.4	359	27.5	83	36.4							
5	212	25.1	264	08.6	302	04.9	14	30.0	98	39.0							
6	227	27.6	279	07.8	317	05.4	29	32.5	113	41.7							
7	242	30.0	294	07.0	332	06.0	44	35.0	128	44.3							
8	257	32.5	309	06.2	347	06.5	59	37.5	143	47.0							
9	272	35.0	324	05.5	2	07.0	74	40.0	158	49.6							
10	287	37.4	339	04.7	17	07.6	89	42.5	173	52.3							
11	302	39.9	354	03.9	32	08.1	104	45.0	188	54.9							
12	317	42.3	9	03.1	47	08.6	119	47.5	203	57.6							
13	332	44.8	24	02.4	62	09.2	134	50.0	219	00.2							
14	347	47.3	39	01.6	77	09.7	149	52.5	234	02.9							
15	2	49.7	54	00.8	92	10.2	164	55.0	249	05.5							
16	17	52.2	69	00.0	107	10.8	179	57.5	264	08.2							
17	32	54.7	83	59.3	122	11.3	195	00.0	279	10.8							
18	47	57.1	98	58.5	137	11.8	210	02.5	294	13.4							
19	62	59.6	113	57.7	152	12.4	225	05.0	309	16.1							
20	78	02.1	128	56.9	167	12.9	240	07.5	324	18.7							
21	93	04.5	143	56.2	182	13.4	255	10.0	339	21.4							
22	108	07.0	158	55.4	197	14.0	270	12.5	354	24.0							
23	123	09.5	173	54.6	212	14.5	285	15.0	9	26.7							
24	138	11.9	188	53.9	227	15.0	300	17.5	24	29.3							
Dif	—		-8		+7		+25		+26								
					+5		0		0								

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16/2 PMG: 12 ^h 14 ^m 2			Edad: 28 ^d 5 PHE { 4 ^h : 61/1 12 ^h : 61/1 20 ^h : 61/0 R°: 58 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	h	m
0	176	27.4	-15	01.7	188	25.8	-23	32.9	60 N	6 22	7 11	7 56	8 47	3	15 19	115		
1	191	27.4		00.9	202	48.5		22.5	58	19	06	48	30	9		35	109	
2	206	27.4	-15	00.1	217	11.4		12.0	56	17	01	41	16	14	15 48	104		
3	221	27.3	-14	59.3	231	34.3	-23	01.3	54	14	6 56	34	8 03	19	16 00	99		
4	236	27.3		58.5	245	57.3	-22	50.4	52	12	52	28	7 52	23		10	96	
5	251	27.3	-14	57.8	260	20.5	-22	39.4	50	6 10	6 49	7 23	7 43	25	16 19	93		
6	266	27.3	-14	57.0	274	43.8	-22	28.2	45	6 06	6 40	7 11	7 22	31	16 39	85		
7	281	27.2		56.2	289	07.2		16.8	40	6 01	33	7 01	7 05	36	16 54	80		
8	296	27.2		55.4	303	30.7	-22	05.3	35	5 57	27	6 53	6 51	40	17 07	76		
9	311	27.2		54.6	317	54.3	-21	53.7	30	53	21	46	38	44		18	73	
10	326	27.2		53.8	332	18.0		41.9	20	44	10	33	6 17	49		38	66	
11	341	27.1	-14	53.0	346	41.8	-21	29.9	10 N	5 35	6 00	6 21	5 59	54	17 54	61		
12	356	27.1	-14	52.2	1	05.8		21 17.8	0	5 24	5 49	6 11	5 41	59	18 10	56		
13	11	27.1		51.4	15	29.8		21 05.6	10 S	5 13	38	6 00	24	63		25	51	
14	26	27.1		50.6	29	54.0		20 53.2	20	4 58	25	5 48	5 05	68		41	46	
15	41	27.1		49.8	44	18.3		40.7	30	39	09	35	4 43	74	18 59	41		
16	56	27.0		49.0	58	42.7		28.1	35	27	5 00	27	30	77	19 10	37		
17	71	27.0	-14	48.2	73	07.3	-20	15.3	40	4 13	4 48	5 18	4 15	82	19 22	33		
18	86	27.0	-14	47.4	87	31.9	-20	02.4	45	3 55	4 35	5 07	3 58	86	19 36	28		
19	101	27.0		46.6	101	56.7	-19	49.3	50	31	18	4 54	36	93	19 54	22		
20	116	26.9		45.8	116	21.5		36.1	52	19	09	48	25	96	20 02	19		
21	131	26.9		45.0	130	46.5		22.8	54	3 05	4 00	41	3 13	100		11	15	
22	146	26.9		44.2	145	11.7	-19	09.4	56	2 48	3 50	34	2 59	105		21	12	
23	161	26.9		43.4	159	36.9	-18	55.9	58	28	37	26	43	111		32	8	
24	176	26.9	-14	42.6	174	02.2	-18	42.2	60 S	2 00	3 23	4 16	2 24	117	20 45	3		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 14 ^h 44 ^m 8			Mag: -3.9 PMG: 11 ^h 25 ^m			Mag: +1.3 PMG: 8 ^h 51 ^m			Mag: -2.3 PMG: 3 ^h 58 ^m			Mag: -0.2 PMG: 22 ^h 18 ^m					
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	138	11.9	188	53.9	-19	22.9	227	15.0	-23	44.3	300	17.5	-6	01.3	24	29.3		
1	153	14.4	203	53.1		22.2	242	15.6		44.4	315	20.0		01.3	39	32.0		
2	168	16.8	218	52.3		21.5	257	16.1		44.4	330	22.5		01.3	54	34.6		
3	183	19.3	233	51.6		20.8	272	16.6		44.4	345	25.0		01.2	69	37.2		
4	198	21.8	248	50.8		20.0	287	17.2		44.4	0	27.5		01.2	84	39.9		
5	213	24.2	263	50.0	-19	19.3	302	17.7	-23	44.4	15	30.0	-6	01.2	99	42.5		
6	228	26.7	278	49.3	-19	18.6	317	18.2	-23	44.5	30	32.5	-6	01.2	114	45.2		
7	243	29.2	293	48.5		17.9	332	18.8		44.5	45	35.0		01.1	129	47.8		
8	258	31.6	308	47.7		17.2	347	19.3		44.5	60	37.5		01.1	144	50.5		
9	273	34.1	323	47.0		16.5	2	19.8		44.5	75	40.0		01.1	159	53.1		
10	288	36.6	338	46.2		15.8	17	20.4		44.5	90	42.5		01.0	174	55.7		
11	303	39.0	353	45.4	-19	15.0	32	20.9	-23	44.6	105	45.0	-6	01.0	189	58.4		
12	318	41.5	8	44.7	-19	14.3	47	21.4	-23	44.6	120	47.5	-6	01.0	205	01.0		
13	333	44.0	23	43.9		13.6	62	22.0		44.6	135	50.1		01.0	220	03.7		
14	348	46.4	38	43.1		12.9	77	22.5		44.6	150	52.6		00.9	235	06.3		
15	3	48.9	53	42.4		12.2	92	23.0		44.6	165	55.1		00.9	250	09.0		
16	18	51.3	68	41.6		11.4	107	23.6		44.6	180	57.6		00.9	265	11.6		
17	33	53.8	83	40.8	-19	10.7	122	24.1	-23	44.7	196	00.1	-6	00.8	280	14.2		
18	48	56.3	98	40.1	-19	10.0	137	24.6	-23	44.7	211	02.6	-6	00.8	295	16.9		
19	63	58.7	113	39.3		09.3	152	25.2		44.7	226	05.1		00.8	310	19.5		
20	79	01.2	128	38.6		08.5	167	25.7		44.7	241	07.6		00.8	325	22.2		
21	94	03.7	143	37.8		07.8	182	26.2		44.7	256	10.1		00.7	340	24.8		
22	109	06.1	158	37.0		07.1	197	26.8		44.7	271	12.6		00.7	355	27.5		
23	124	08.6	173	36.3		06.3	212	27.3		44.7	286	15.1		00.7	10	30.1		
24	139	11.1	188	35.5	-19	05.6	227	27.8	-23	44.8	301	17.7	-6	00.6	25	32.7		
Dif	—			-8			+7			+25			0			+26		
							0									0		

UT	SOL				● LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16°2 PMG: 12 ^h 14 ^m 2				Edad: 29 ^d 5 PHE { 4 ^h : 60'9 12 ^h : 60'8 20 ^h : 60'6 R°: 53 ^m													
	hG ☉		Dec		hG ☾		Dif							Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m			
0	176	26.9	-14	42.6	174	02.2	-18	42.2	60 N	16 36	17 21	18 10	8 50 1		17 14 108			
1	191	26.8		41.8	188	27.7	65	28.5	58	44	26	12	39 6		24 102			
2	206	26.8		41.0	202	53.3	66	14.6	56	51	30	15	30 10		32 98			
3	221	26.8		40.2	217	19.0	67	-18 00.6	54	16 57	35	17	22 13		39 95			
4	236	26.8		39.4	231	44.8	68	-17 46.5	52	17 03	39	18	15 16		46 91			
5	251	26.8	-14	38.6	246	10.8	70	-17 32.3	50	17 08	17 42	18 20	8 08 19		17 52 88			
6	266	26.8	-14	37.8	260	36.8	70	-17 17.9	45	17 19	17 50	18 25	7 53 25		18 04 82			
7	281	26.7		37.0	275	03.0	72	-17 03.5	40	29	17 57	29	41 30		14 77			
8	296	26.7		36.2	289	29.3	73	-16 49.0	35	37	18 03	33	31 34		23 73			
9	311	26.7		35.4	303	55.7	74	34.4	30	44	09	37	22 37		31 69			
10	326	26.7		34.6	318	22.2	75	19.7	20	17 56	19	45	7 06 44		44 62			
11	341	26.7	-14	33.8	332	48.8	76	-16 04.9	10 N	18 07	18 29	18 54	6 53 48		18 55 57			
12	356	26.7	-14	32.9	347	15.6	78	-15 50.0	0	18 18	18 39	19 04	6 40 54		19 06 52			
13	11	26.6		32.1	1	42.4	78	35.0	10 S	28	18 50	15	27 59		16 47			
14	26	26.6		31.3	16	09.4	80	20.0	20	39	19 02	29	6 13 64		27 42			
15	41	26.6		30.5	30	36.5	81	-15 04.8	30	18 52	18	48	5 57 70		40 35			
16	56	26.6		29.7	45	03.6	81	-14 49.6	35	19 00	27	19 59	47 75		47 32			
17	71	26.6	-14	28.9	59	30.9	83	-14 34.3	40	19 09	19 38	20 13	5 37 78		19 55 28			
18	86	26.6	-14	28.1	73	58.4	85	-14 18.9	45	19 19	19 51	20 31	5 24 84		20 04 23			
19	101	26.6		27.3	88	25.9	85	-14 03.5	50	31	20 08	20 54	09 90		16 17			
20	116	26.6		26.5	102	53.5	86	-13 48.0	52	37	16	21 05	5 01 93		21 14			
21	131	26.5		25.7	117	21.2	87	32.4	54	44	24	18	4 53 97		26 12			
22	146	26.5		24.9	131	49.0	88	16.7	56	51	35	34	44 100		33 8			
23	161	26.5		24.0	146	17.0	90	-13 01.0	58	19 59	20 46	21 53	34 105		40 5			
24	176	26.5	-14	23.2	160	45.0	90	-12 45.2	60 S	20 08	21 00	22 18	4 21 111		20 48 0			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 14 ^h 40 ^m 9		Mag: -3.9 PMG: 11 ^h 26 ^m				Mag: +1.3 PMG: 8 ^h 50 ^m				Mag: -2.3 PMG: 3 ^h 54 ^m				Mag: -0.2 PMG: 22 ^h 14 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	139	11.1	188	35.5	-19	05.6	227	27.8	-23	44.8	301	17.7	-6	00.6	25	32.7	+21	43.2
1	154	13.5	203	34.8		04.9	242	28.4		44.8	316	20.2		00.6	40	35.4		43.2
2	169	16.0	218	34.0		04.1	257	28.9		44.8	331	22.7		00.6	55	38.0		43.2
3	184	18.5	233	33.3		03.4	272	29.4		44.8	346	25.2		00.5	70	40.7		43.3
4	199	20.9	248	32.5		02.7	287	30.0		44.8	1	27.7		00.5	85	43.3		43.3
5	214	23.4	263	31.7	-19	01.9	302	30.5	-23	44.8	16	30.2	-6	00.5	100	45.9	+21	43.3
6	229	25.8	278	31.0	-19	01.2	317	31.0	-23	44.8	31	32.7	-6	00.4	115	48.6	+21	43.4
7	244	28.3	293	30.2	-19	00.5	332	31.6		44.8	46	35.2		00.4	130	51.2		43.4
8	259	30.8	308	29.5	-18	59.7	347	32.1		44.8	61	37.8		00.4	145	53.9		43.4
9	274	33.2	323	28.7		59.0	2	32.6		44.9	76	40.3		00.4	160	56.5		43.5
10	289	35.7	338	28.0		58.3	17	33.1		44.9	91	42.8		00.3	175	59.1		43.5
11	304	38.2	353	27.2	-18	57.5	32	33.7	-23	44.9	106	45.3	-6	00.3	191	01.8	+21	43.5
12	319	40.6	8	26.5	-18	56.8	47	34.2	-23	44.9	121	47.8	-6	00.3	206	04.4	+21	43.6
13	334	43.1	23	25.7		56.0	62	34.7		44.9	136	50.3		00.2	221	07.1		43.6
14	349	45.6	38	25.0		55.3	77	35.3		44.9	151	52.8		00.2	236	09.7		43.6
15	4	48.0	53	24.2		54.5	92	35.8		44.9	166	55.4		00.2	251	12.3		43.6
16	19	50.5	68	23.5		53.8	107	36.3		44.9	181	57.9		00.1	266	15.0		43.7
17	34	52.9	83	22.7	-18	53.0	122	36.9	-23	44.9	197	00.4	-6	00.1	281	17.6	+21	43.7
18	49	55.4	98	22.0	-18	52.3	137	37.4	-23	44.9	212	02.9	-6	00.1	296	20.3	+21	43.7
19	64	57.9	113	21.2		51.6	152	37.9		44.9	227	05.4	-6	00.0	311	22.9		43.8
20	80	00.3	128	20.5		50.8	167	38.5		44.9	242	07.9		00.0	326	25.5		43.8
21	95	02.8	143	19.7		50.1	182	39.0		44.9	257	10.5	-6	00.0	341	28.2		43.8
22	110	05.3	158	19.0		49.3	197	39.5		44.9	272	13.0	-5	59.9	356	30.8		43.9
23	125	07.7	173	18.2		48.5	212	40.1		45.0	287	15.5		59.9	11	33.4		43.9
24	140	10.2	188	17.5	-18	47.8	227	40.6	-23	45.0	302	18.0	-5	59.9	26	36.1	+21	43.9
Dif	—		-8		+7		+5		0		+25		0		+26		0	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna								
	SD: 16:2 PMG: 12 ^h 14 ^m 2			Edad: 1 ^d 1 PHE { SD: 16:5 PMG: 13 ^h 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	176	26.5	-14	23.2	160	45.0	-12	45.2	60 N	6 17	7 06	7 51	8 51	0	19 02	100					
1	191	26.5		22.4	175	13.2	92	29.4 ¹⁵⁸	58	15	7 01	43	45	4	06	96					
2	206	26.5		21.6	189	41.4	92	-12 13.5 ¹⁵⁹	56	13	6 57	36	40	7	10	93					
3	221	26.5		20.8	204	09.8	94	-11 57.5 ¹⁶⁰	54	11	53	30	35	10	14	89					
4	236	26.5		20.0	218	38.2	94	41.5 ¹⁶⁰	52	09	49	24	31	13	17	86					
5	251	26.5	-14	19.2	233	06.7	95	-11 25.4 ¹⁶¹	50	6 07	6 45	7 19	8 27	15	19 20	83					
6	266	26.5	-14	18.4	247	35.4	97	-11 09.3 ¹⁶¹	45	6 03	6 38	7 08	8 18	21	19 26	78					
7	281	26.4		17.5	262	04.1	97	-10 53.1 ¹⁶²	40	5 59	31	6 59	11	26	31	73					
8	296	26.4		16.7	276	32.9	98	36.9 ¹⁶²	35	55	25	51	8 05	30	36	69					
9	311	26.4		15.9	291	01.9	100	20.7 ¹⁶²	30	51	19	44	7 59	34	40	65					
10	326	26.4		15.1	305	30.9	100	-10 04.4 ¹⁶³	20	43	6 09	32	50	39	46	59					
11	341	26.4	-14	14.3	320	00.0	101	-9 48.1 ¹⁶³	10 N	5 34	5 59	6 21	7 41	45	19 52	54					
12	356	26.4	-14	13.5	334	29.2	102	-9 31.7 ¹⁶⁴	0	5 25	5 49	6 11	7 34	49	19 58	48					
13	11	26.4		12.6	348	58.5	103	-9 15.3 ¹⁶⁴	10 S	5 13	39	6 00	26	55	20	03	43				
14	26	26.4		11.8	3	27.8	103	-8 58.9 ¹⁶⁴	20	4 59	26	5 49	17	61	09	38					
15	41	26.4		11.0	17	57.3	105	42.4 ¹⁶⁵	30	41	11	36	07	67	15	32					
16	56	26.4		10.2	32	26.8	105	25.9 ¹⁶⁵	35	30	5 02	29	7 02	70	19	28					
17	71	26.4	-14	09.4	46	56.5	107	-8 09.4 ¹⁶⁵	40	4 16	4 51	5 20	6 55	75	20 23	24					
18	86	26.4	-14	08.6	61	26.2	107	-7 52.8 ¹⁶⁶	45	3 58	4 38	5 10	6 48	79	20 27	21					
19	101	26.4		07.7	75	56.0	108	36.2 ¹⁶⁶	50	36	22	4 58	39	85	33	15					
20	116	26.4		06.9	90	25.8	108	19.6 ¹⁶⁶	52	24	14	52	34	89	35	13					
21	131	26.4		06.1	104	55.8	110	-7 03.0 ¹⁶⁶	54	3 11	4 05	46	30	91	38	10					
22	146	26.4		05.3	119	25.8	110	-6 46.4 ¹⁶⁶	56	2 55	3 55	39	24	95	41	7					
23	161	26.3		04.5	133	55.9	111	29.7 ¹⁶⁷	58	36	43	31	19	98	45	3					
24	176	26.3	-14	03.6	148	26.1	112	-6 13.1 ¹⁶⁶	60 S	2 11	3 29	4 21	6 12	103	20 48	0					
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO								
	PMG 14 ^h 36 ^m 9			Mag: -3.9 PMG: 11 ^h 27 ^m			Mag: +1.3 PMG: 8 ^h 49 ^m			Mag: -2.3 PMG: 3 ^h 50 ^m			Mag: -0.2 PMG: 22 ^h 10 ^m								
	hG ♂		Dec	hG ♀		Dec	hG ♂		Dec	hG ♀		Dec	hG ♀		Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'					
0	140	10.2	188	17.5	-18	47.8	227	40.6	-23	45.0	302	18.0	-5	59.9	26	36.1	+21	43.9			
1	155	12.7	203	16.7		47.0	242	41.1		45.0	317	20.5		59.8	41	38.7		44.0			
2	170	15.1	218	16.0		46.3	257	41.7		45.0	332	23.1		59.8	56	41.4		44.0			
3	185	17.6	233	15.2		45.5	272	42.2		45.0	347	25.6		59.8	71	44.0		44.0			
4	200	20.1	248	14.5		44.8	287	42.7		45.0	2	28.1		59.7	86	46.6		44.0			
5	215	22.5	263	13.8	-18	44.0	302	43.2	-23	45.0	17	30.6	-5	59.7	101	49.3	+21	44.1			
6	230	25.0	278	13.0	-18	43.3	317	43.8	-23	45.0	32	33.1	-5	59.7	116	51.9	+21	44.1			
7	245	27.4	293	12.3		42.5	332	44.3		45.0	47	35.7		59.6	131	54.5		44.1			
8	260	29.9	308	11.5		41.7	347	44.8		45.0	62	38.2		59.6	146	57.2		44.2			
9	275	32.4	323	10.8		41.0	2	45.4		45.0	77	40.7		59.6	161	59.8		44.2			
10	290	34.8	338	10.1		40.2	17	45.9		45.0	92	43.2		59.5	177	02.5		44.2			
11	305	37.3	353	09.3	-18	39.4	32	46.4	-23	45.0	107	45.7	-5	59.5	192	05.1	+21	44.3			
12	320	39.8	8	08.6	-18	38.7	47	47.0	-23	45.0	122	48.3	-5	59.5	207	07.7	+21	44.3			
13	335	42.2	23	07.8		37.9	62	47.5		45.0	137	50.8		59.4	222	10.4		44.3			
14	350	44.7	38	07.1		37.1	77	48.0		45.0	152	53.3		59.4	237	13.0		44.3			
15	5	47.2	53	06.4		36.4	92	48.5		45.0	167	55.8		59.4	252	15.6		44.4			
16	20	49.6	68	05.6		35.6	107	49.1		45.0	182	58.4		59.3	267	18.3		44.4			
17	35	52.1	83	04.9	-18	34.8	122	49.6	-23	45.0	198	00.9	-5	59.3	282	20.9	+21	44.4			
18	50	54.6	98	04.1	-18	34.1	137	50.1	-23	45.0	213	03.4	-5	59.2	297	23.6	+21	44.5			
19	65	57.0	113	03.4		33.3	152	50.7		45.0	228	05.9		59.2	312	26.2		44.5			
20	80	59.5	128	02.7		32.5	167	51.2		44.9	243	08.5		59.2	327	28.8		44.5			
21	96	01.9	143	01.9		31.8	182	51.7		44.9	258	11.0		59.1	342	31.5		44.6			
22	111	04.4	158	01.2		31.0	197	52.3		44.9	273	13.5		59.1	357	34.1		44.6			
23	126	06.9	173	00.5		30.2	212	52.8		44.9	288	16.0		59.1	12	36.7		44.6			
24	141	09.3	187	59.7	-18	29.4	227	53.3	-23	44.9	303	18.6	-5	59.0	27	39.4	+21	44.6			
Dif	—			-7			+8			+25			0			+26			0		

UT	SOL				● LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 16:2 PMG: 12 ^h 14 ^m 2				Edad: 2 ^d 1 PHE { 4 ^h : 59:6 12 ^h : 59:3 20 ^h : 59:0 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	176	26.3	-14	03.6	148	26.1	-6	13.1	60 N	16 41	17 26	18 15	8 51	0	20 42	96				
1	191	26.3		02.8	162	56.3 ¹¹²	-5	56.4 ¹⁶⁷	58	48	30	17	49	3	42	93				
2	206	26.3		02.0	177	26.7 ¹¹⁴		39.7 ¹⁶⁷	56	16 55	35	18	47	6	43	89				
3	221	26.3		01.2	191	57.1 ¹¹⁴		23.0 ¹⁶⁷	54	17 01	38	20	45	10	43	86				
4	236	26.3	-14	00.3	206	27.5 ¹¹⁴	-5	06.3 ¹⁶⁷	52	07	42	22	44	12	43	83				
5	251	26.3	-13	59.5	220	58.1 ¹¹⁶	-4	49.6 ¹⁶⁷	50	17 12	17 45	18 23	8 42	15	20 43	81				
6	266	26.3	-13	58.7	235	28.7 ¹¹⁶	-4	32.9 ¹⁶⁷	45	17 22	17 53	18 27	8 39	20	20 44	75				
7	281	26.3		57.9	249	59.3 ¹¹⁶	-4	16.2 ¹⁶⁷	40	31	17 59	31	37	24	44	70				
8	296	26.3		57.1	264	30.0 ¹¹⁷	-3	59.4 ¹⁶⁸	35	39	18 05	35	35	27	45	66				
9	311	26.3		56.2	279	00.8 ¹¹⁸		42.7 ¹⁶⁷	30	46	10	38	33	31	45	62				
10	326	26.3		55.4	293	31.7 ¹¹⁹		26.0 ¹⁶⁷	20	17 57	20	46	29	37	45	57				
11	341	26.3	-13	54.6	308	02.6 ¹¹⁹	-3	09.3 ¹⁶⁷	10 N	18 08	18 29	18 54	8 26	42	20 46	51				
12	356	26.3	-13	53.7	322	33.6 ¹²⁰	-2	52.6 ¹⁶⁷	0	18 18	18 39	19 04	8 23	48	20 46	46				
13	11	26.3		52.9	337	04.6 ¹²⁰		35.9 ¹⁶⁷	10 S	28	18 49	15	21	52	46	42				
14	26	26.3		52.1	351	35.7 ¹²¹		19.2 ¹⁶⁷	20	38	19 01	28	18	57	47	36				
15	41	26.3		51.3	6	06.8 ¹²¹	-2	02.5 ¹⁶⁷	30	51	16	46	14	64	47	31				
16	56	26.3		50.4	20	38.0 ¹²²	-1	45.9 ¹⁶⁶	35	18 58	25	19 57	12	67	47	27				
17	71	26.3	-13	49.6	35	09.3 ¹²³	-1	29.2 ¹⁶⁷	40	19 06	19 35	20 10	8 10	71	20 47	24				
18	86	26.4	-13	48.8	49	40.6 ¹²³	-1	12.6 ¹⁶⁶	45	19 16	19 48	20 27	8 07	76	20 48	19				
19	101	26.4		48.0	64	11.9 ¹²³	-0	56.0 ¹⁶⁶	50	28	20 04	20 49	04	82	48	14				
20	116	26.4		47.1	78	43.3 ¹²⁴		39.4 ¹⁶⁶	52	33	11	21 00	03	84	48	12				
21	131	26.4		46.3	93	14.7 ¹²⁴		22.8 ¹⁶⁶	54	39	20	12	8 01	87	48	9				
22	146	26.4		45.5	107	46.2 ¹²⁵	-0	06.2 ¹⁶⁶	56	46	29	27	7 59	91	48	7				
23	161	26.4		44.6	122	17.7 ¹²⁵	+0	10.3 ¹⁶⁵	58	19 54	40	21 45	57	94	48	4				
24	176	26.4	-13	43.8	136	49.3 ¹²⁶	+0	26.8 ¹⁶⁵	60 S	20 02	20 53	22 08	7 55	98	20 48	0				
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 14 ^h 33 ^m 0				Mag: -3.9 PMG: 11 ^h 29 ^m				Mag: +1.3 PMG: 8 ^h 48 ^m				Mag: -2.3 PMG: 3 ^h 46 ^m				Mag: -0.2 PMG: 22 ^h 05 ^m			
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	141	09.3	187	59.7	-18	29.4	227	53.3	-23	44.9	303	18.6	-5	59.0	27	39.4	+21	44.6		
1	156	11.8	202	59.0		28.7	242	53.8		44.9	318	21.1		59.0	42	42.0		44.7		
2	171	14.3	217	58.3		27.9	257	54.4		44.9	333	23.6		59.0	57	44.6		44.7		
3	186	16.7	232	57.5		27.1	272	54.9		44.9	348	26.1		58.9	72	47.3		44.7		
4	201	19.2	247	56.8		26.3	287	55.4		44.9	3	28.7		58.9	87	49.9		44.8		
5	216	21.7	262	56.1	-18	25.5	302	56.0	-23	44.9	18	31.2	-5	58.8	102	52.5	+21	44.8		
6	231	24.1	277	55.3	-18	24.8	317	56.5	-23	44.9	33	33.7	-5	58.8	117	55.2	+21	44.8		
7	246	26.6	292	54.6		24.0	332	57.0		44.9	48	36.2		58.8	132	57.8		44.9		
8	261	29.0	307	53.9		23.2	347	57.6		44.9	63	38.8		58.7	148	00.4		44.9		
9	276	31.5	322	53.1		22.4	2	58.1		44.9	78	41.3		58.7	163	03.1		44.9		
10	291	34.0	337	52.4		21.6	17	58.6		44.9	93	43.8		58.7	178	05.7		44.9		
11	306	36.4	352	51.7	-18	20.8	32	59.1	-23	44.8	108	46.4	-5	58.6	193	08.3	+21	45.0		
12	321	38.9	7	51.0	-18	20.0	47	59.7	-23	44.8	123	48.9	-5	58.6	208	11.0	+21	45.0		
13	336	41.4	22	50.2		19.3	63	00.2		44.8	138	51.4		58.5	223	13.6		45.0		
14	351	43.8	37	49.5		18.5	78	00.7		44.8	153	54.0		58.5	238	16.2		45.1		
15	6	46.3	52	48.8		17.7	93	01.3		44.8	168	56.5		58.5	253	18.9		45.1		
16	21	48.8	67	48.1		16.9	108	01.8		44.8	183	59.0		58.4	268	21.5		45.1		
17	36	51.2	82	47.3	-18	16.1	123	02.3	-23	44.8	199	01.5	-5	58.4	283	24.1	+21	45.1		
18	51	53.7	97	46.6	-18	15.3	138	02.9	-23	44.8	214	04.1	-5	58.4	298	26.8	+21	45.2		
19	66	56.2	112	45.9		14.5	153	03.4		44.7	229	06.6		58.3	313	29.4		45.2		
20	81	58.6	127	45.2		13.7	168	03.9		44.7	244	09.1		58.3	328	32.0		45.2		
21	97	01.1	142	44.4		12.9	183	04.4		44.7	259	11.7		58.2	343	34.7		45.3		
22	112	03.5	157	43.7		12.1	198	05.0		44.7	274	14.2		58.2	358	37.3		45.3		
23	127	06.0	172	43.0		11.3	213	05.5		44.7	289	16.7		58.2	13	39.9		45.3		
24	142	08.5	187	42.3	-18	10.5	228	06.0	-23	44.7	304	19.3	-5	58.1	28	42.6	+21	45.4		
Dif	—				-7 +8				+5 0				+25 0				+26 0			

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 12 ^h 14 ^m 2			Edad: 3 ^d 1 PHE { SD: 16:0 PMG: 15 ^h 22 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora
h	°	'	°	'	°	'	°	h	m	h	m	h	m	m
0	176	26.4	-13	43.8	136	49.3	+0 26.8	60 N	6 13	7 02	7 46	8 51	**	22 18 95
1	191	26.4		43.0	151	20.9 ¹²⁶	43.3 ¹⁶⁵	58	11	6 57	39	52	3	15 90
2	206	26.4		42.1	165	52.6 ¹²⁷	+0 59.8 ¹⁶⁵	56	09	53	32	53	7	12 86
3	221	26.4		41.3	180	24.3 ¹²⁷	+1 16.2 ¹⁶⁴	54	07	49	26	55	9	09 83
4	236	26.4		40.5	194	56.0 ¹²⁷	32.6 ¹⁶⁴	52	06	45	21	56	11	06 81
5	251	26.4	-13	39.6	209	27.8 ¹²⁸	+1 49.0 ¹⁶⁴	50	6 04	6 42	7 16	8 57	14	22 04 78
6	266	26.4	-13	38.8	223	59.5 ¹²⁷	+2 05.4 ¹⁶⁴	45	6 01	6 35	7 05	8 59	19	21 59 72
7	281	26.4		38.0	238	31.4 ¹²⁹	21.7 ¹⁶³	40	5 57	29	6 57	9 01	23	54 69
8	296	26.4		37.1	253	03.2 ¹²⁸	37.9 ¹⁶²	35	53	23	49	02	27	51 64
9	311	26.4		36.3	267	35.1 ¹²⁹	+2 54.2 ¹⁶³	30	50	18	42	04	30	47 62
10	326	26.4		35.5	282	07.1 ¹³⁰	+3 10.4 ¹⁶²	20	42	6 08	31	06	36	42 55
11	341	26.5	-13	34.6	296	39.0 ¹²⁹	+3 26.6 ¹⁶²	10 N	5 34	5 59	6 21	9 08	42	21 37 51
12	356	26.5	-13	33.8	311	11.0 ¹³⁰	+3 42.7 ¹⁶¹	0	5 25	5 50	6 11	9 11	45	21 32 46
13	11	26.5		33.0	325	43.0 ¹³⁰	+3 58.8 ¹⁶¹	10 S	14	39	6 01	13	50	28 41
14	26	26.5		32.1	340	15.0 ¹³⁰	+4 14.8 ¹⁶⁰	20	5 01	27	5 50	15	56	23 36
15	41	26.5		31.3	354	47.1 ¹³¹	30.8 ¹⁶⁰	30	4 43	13	38	18	61	18 30
16	56	26.5		30.5	9	19.2 ¹³¹	+4 46.8 ¹⁶⁰	35	32	5 04	31	19	65	14 28
17	71	26.5	-13	29.6	23	51.3 ¹³¹	+5 02.7 ¹⁵⁹	40	4 19	4 54	5 23	9 21	69	21 11 24
18	86	26.5	-13	28.8	38	23.4 ¹³¹	+5 18.6 ¹⁵⁹	45	4 02	4 41	5 13	9 23	74	21 07 20
19	101	26.5		27.9	52	55.5 ¹³¹	34.4 ¹⁵⁸	50	3 40	25	5 01	26	79	02 15
20	116	26.6		27.1	67	27.7 ¹³²	+5 50.1 ¹⁵⁷	52	29	18	4 56	27	82	21 00 12
21	131	26.6		26.3	81	59.8 ¹³¹	+6 05.9 ¹⁵⁸	54	17	09	50	28	85	20 57 10
22	146	26.6		25.4	96	32.0 ¹³²	21.5 ¹⁵⁶	56	3 02	4 00	43	30	87	55 6
23	161	26.6		24.6	111	04.2 ¹³²	37.1 ¹⁵⁶	58	2 44	3 49	36	31	91	52 3
24	176	26.6	-13	23.7	125	36.4 ¹³²	+6 52.7 ¹⁵⁶	60 S	2 21	3 36	4 27	9 33	95	20 48 0

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 14 ^h 29 ^m 1		Mag: -3.9 PMG: 11 ^h 30 ^m		Mag: +1.3 PMG: 8 ^h 47 ^m		Mag: -2.3 PMG: 3 ^h 42 ^m		Mag: -0.2 PMG: 22 ^h 01 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	142	08.5	187	42.3	-18 10.5	228	06.0	-23 44.7	304	19.3	-5 58.1	28	42.6	+21 45.4
1	157	10.9	202	41.5	09.7	243	06.6	44.7	319	21.8	58.1	43	45.2	45.4
2	172	13.4	217	40.8	08.9	258	07.1	44.6	334	24.3	58.0	58	47.8	45.4
3	187	15.9	232	40.1	08.1	273	07.6	44.6	349	26.9	58.0	73	50.5	45.4
4	202	18.3	247	39.4	07.3	288	08.1	44.6	4	29.4	58.0	88	53.1	45.5
5	217	20.8	262	38.7	-18 06.5	303	08.7	-23 44.6	19	31.9	-5 57.9	103	55.7	+21 45.5
6	232	23.3	277	37.9	-18 05.7	318	09.2	-23 44.6	34	34.5	-5 57.9	118	58.4	+21 45.5
7	247	25.7	292	37.2	04.9	333	09.7	44.6	49	37.0	57.8	134	01.0	45.6
8	262	28.2	307	36.5	04.1	348	10.3	44.5	64	39.5	57.8	149	03.6	45.6
9	277	30.6	322	35.8	03.3	3	10.8	44.5	79	42.1	57.8	164	06.2	45.6
10	292	33.1	337	35.1	02.5	18	11.3	44.5	94	44.6	57.7	179	08.9	45.6
11	307	35.6	352	34.4	-18 01.7	33	11.8	-23 44.5	109	47.2	-5 57.7	194	11.5	+21 45.7
12	322	38.0	7	33.6	-18 00.9	48	12.4	-23 44.5	124	49.7	-5 57.6	209	14.1	+21 45.7
13	337	40.5	22	32.9	-18 00.1	63	12.9	44.4	139	52.2	57.6	224	16.8	45.7
14	352	43.0	37	32.2	-17 59.3	78	13.4	44.4	154	54.8	57.6	239	19.4	45.8
15	7	45.4	52	31.5	58.5	93	14.0	44.4	169	57.3	57.5	254	22.0	45.8
16	22	47.9	67	30.8	57.6	108	14.5	44.4	184	59.8	57.5	269	24.7	45.8
17	37	50.4	82	30.1	-17 56.8	123	15.0	-23 44.4	200	02.4	-5 57.4	284	27.3	+21 45.8
18	52	52.8	97	29.4	-17 56.0	138	15.5	-23 44.3	215	04.9	-5 57.4	299	29.9	+21 45.9
19	67	55.3	112	28.7	55.2	153	16.1	44.3	230	07.5	57.4	314	32.5	45.9
20	82	57.8	127	27.9	54.4	168	16.6	44.3	245	10.0	57.3	329	35.2	45.9
21	98	00.2	142	27.2	53.6	183	17.1	44.3	260	12.5	57.3	344	37.8	46.0
22	113	02.7	157	26.5	52.8	198	17.7	44.2	275	15.1	57.2	359	40.4	46.0
23	128	05.1	172	25.8	51.9	213	18.2	44.2	290	17.6	57.2	14	43.1	46.0
24	143	07.6	187	25.1	-17 51.1	228	18.7	-23 44.2	305	20.2	-5 57.1	29	45.7	+21 46.1
Dif	—		-7		+8	+5		0	+25		0	+26		0

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 12 ^h 14 ^m 2			Edad: 4 ^d 1 PHE { 4 ^h : 57:7 12 ^h : 57:4 20 ^h : 57:1 R°: 46 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	h m	h m	h m
0	176	26.6	-13	23.7	125	36.4	+6 52.7	60 N	16 46	17 30	18 19	8 50	1	23 53	95
1	191	26.6		22.9	140	08.6 ¹³²	+7 08.2 ¹⁵⁵	58	16 53		35 21	8 55	4	45	90
2	206	26.6		22.1	154	40.9 ¹³³	23.7 ¹⁵⁵	56	17 00	39	22	9 00	7	38	87
3	221	26.6		21.2	169	13.1 ¹³²	39.1 ¹⁵⁴	54		05 42	24 04	10		32	83
4	236	26.7		20.4	183	45.4 ¹³³	+7 54.4 ¹⁵³	52		10 46	25 07	14		27	80
5	251	26.7	-13	19.5	198	17.6 ¹³²	+8 09.7 ¹⁵³	50	17 15	17 49	18 27	9 11	15	23 22	77
6	266	26.7	-13	18.7	212	49.9 ¹³³	+8 24.9 ¹⁵²	45	17 25	17 55	18 30	9 18	21	23 11	72
7	281	26.7		17.9	227	22.1 ¹³²	40.1 ¹⁵²	40		34 18	01 33	24	25	23 03	67
8	296	26.7		17.0	241	54.4 ¹³³	+8 55.2 ¹⁵¹	35		41 07	37 29	29		22 55	64
9	311	26.7		16.2	256	26.7 ¹³³	+9 10.2 ¹⁵⁰	30		47 12	40 34	32		49	60
10	326	26.8		15.3	270	58.9 ¹³²	25.2 ¹⁵⁰	20	17 58	21	47 42	37		37	55
11	341	26.8	-13	14.5	285	31.2 ¹³³	+9 40.1 ¹⁴⁹	10 N	18 08	18 30	18 55	9 50	41	22 28	50
12	356	26.8	-13	13.6	300	03.5 ¹³³	+9 55.0 ¹⁴⁹	0	18 18	18 39	19 04	9 56	46	22 18	47
13	11	26.8		12.8	314	35.8 ¹³³	+10 09.7 ¹⁴⁷	10 S		27 18	49 14	10 03	51	22 09	42
14	26	26.8		11.9	329	08.0 ¹³²	24.4 ¹⁴⁷	20		37 19	00 27	11 55		21 59	38
15	41	26.8		11.1	343	40.3 ¹³³	39.1 ¹⁴⁷	30		49 14	44 19	61		48	33
16	56	26.9		10.2	358	12.5 ¹³²	+10 53.7 ¹⁴⁶	35	18 56		23 19 54	24	64	42	29
17	71	26.9	-13	09.4	12	44.8 ¹³³	+11 08.2 ¹⁴⁵	40	19 04	19 33	20 07	10 30	68	21 35	26
18	86	26.9	-13	08.6	27	17.0 ¹³²	+11 22.6 ¹⁴⁴	45	19 13	19 45	20 24	10 37	72	21 27	21
19	101	26.9		07.7	41	49.3 ¹³³	37.0 ¹⁴⁴	50		24 20	00 44	45	77	17	16
20	116	26.9		06.9	56	21.5 ¹³²	+11 51.3 ¹⁴³	52		29 07	20 55	49	80	12	14
21	131	27.0		06.0	70	53.7 ¹³²	+12 05.5 ¹⁴²	54		35 15	21 07	53	83	07	11
22	146	27.0		05.2	85	25.9 ¹³²	19.6 ¹⁴¹	56		42 24	21 10 57	87		21 01	9
23	161	27.0		04.3	99	58.1 ¹³²	33.7 ¹⁴¹	58		49 35	37 11 02	91		20 55	5
24	176	27.0	-13	03.5	114	30.3 ¹³²	+12 47.7 ¹⁴⁰	60 S	19 57	20 47	21 58	11 08	95	20 48	1

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 14 ^h 25 ^m 1		Mag: -3.9 PMG: 11 ^h 31 ^m		Mag: +1.3 PMG: 8 ^h 46 ^m		Mag: -2.3 PMG: 3 ^h 38 ^m		Mag: -0.2 PMG: 21 ^h 57 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	143	07.6	187	25.1	-17	51.1	228	18.7	-23	44.2
1	158	10.1	202	24.4		50.3	243	19.2		44.2
2	173	12.5	217	23.7		49.5	258	19.8		44.2
3	188	15.0	232	23.0		48.7	273	20.3		44.1
4	203	17.5	247	22.3		47.8	288	20.8		44.1
5	218	19.9	262	21.6	-17	47.0	303	21.4	-23	44.1
6	233	22.4	277	20.9	-17	46.2	318	21.9	-23	44.0
7	248	24.9	292	20.2		45.4	333	22.4		44.0
8	263	27.3	307	19.4		44.5	348	22.9		44.0
9	278	29.8	322	18.7		43.7	3	23.5		44.0
10	293	32.2	337	18.0		42.9	18	24.0		43.9
11	308	34.7	352	17.3	-17	42.0	33	24.5	-23	43.9
12	323	37.2	7	16.6	-17	41.2	48	25.0	-23	43.9
13	338	39.6	22	15.9		40.4	63	25.6		43.9
14	353	42.1	37	15.2		39.6	78	26.1		43.8
15	8	44.6	52	14.5		38.7	93	26.6		43.8
16	23	47.0	67	13.8		37.9	108	27.2		43.8
17	38	49.5	82	13.1	-17	37.1	123	27.7	-23	43.7
18	53	52.0	97	12.4	-17	36.2	138	28.2	-23	43.7
19	68	54.4	112	11.7		35.4	153	28.7		43.7
20	83	56.9	127	11.0		34.5	168	29.3		43.6
21	98	59.4	142	10.3		33.7	183	29.8		43.6
22	114	01.8	157	09.6		32.9	198	30.3		43.6
23	129	04.3	172	08.9		32.0	213	30.9		43.5
24	144	06.7	187	08.2	-17	31.2	228	31.4	-23	43.5
Dif	—		-7		+8		+5		0	
							+25		0	
									+26	
									0	

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16:2 PMG: 12 ^h 14 ^m 2			Edad: 5 ^d 1 PHE { 4 ^h : 56:8 12 ^h : 56:5 20 ^h : 56:2 R°: 48 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m
0	176	27.0	-13	03.5	114	30.3	+12	47.7	60 N	6 08	6 57	7 41	8 51	1	***	***	***
1	191	27.0		02.6	129	02.5 ¹³²	+13	01.6 ¹³⁹	58	06	52	34	8 59	6	***	***	***
2	206	27.1		01.8	143	34.6 ¹³¹		15.4 ¹³⁸	56	05	49	27	9 07	10	***	***	***
3	221	27.1		00.9	158	06.8 ¹³²		29.2 ¹³⁸	54	04	45	22	14	13	***	***	***
4	236	27.1	-13	00.1	172	38.9 ¹³¹		42.9 ¹³⁷	52	02	42	17	21	15	***	***	***
5	251	27.1	-12	59.2	187	11.0 ¹³¹	+13	56.5 ¹³⁶	50	6 01	6 39	7 12	9 26	18	***	***	***
6	266	27.2	-12	58.4	201	43.1 ¹³¹	+14	10.0 ¹³⁵	45	5 58	6 32	7 02	9 39	23	***	***	***
7	281	27.2		57.5	216	15.2 ¹³¹		23.4 ¹³⁴	40	55	26	6 54	49	27	***	***	***
8	296	27.2		56.7	230	47.2 ¹³⁰		36.8 ¹³⁴	35	51	21	47	9 58	30	23	59	62
9	311	27.2		55.8	245	19.2 ¹³⁰	+14	50.1 ¹³³	30	48	16	41	10 06	33	49	60	
10	326	27.2		55.0	259	51.2 ¹³⁰	+15	03.2 ¹³¹	20	41	6 07	30	19	39	32	56	
11	341	27.3	-12	54.1	274	23.2 ¹³⁰	+15	16.3 ¹³¹	10 N	5 34	5 59	6 20	10 31	43	23	18	51
12	356	27.3	-12	53.2	288	55.2 ¹³⁰	+15	29.4 ¹³¹	0	5 25	5 50	6 11	10 42	47	23	05	47
13	11	27.3		52.4	303	27.1 ¹²⁹		42.3 ¹²⁹	10 S	15	40	6 01	10 54	51	22	51	44
14	26	27.3		51.5	317	59.1 ¹³⁰	+15	55.1 ¹²⁸	20	5 02	28	5 51	11 06	55	37	40	
15	41	27.4		50.7	332	30.9 ¹²⁸	+16	07.9 ¹²⁸	30	4 45	15	40	20	60	21	35	
16	56	27.4		49.8	347	02.8 ¹²⁹		20.5 ¹²⁶	35	34	5 06	33	28	63	11	33	
17	71	27.4	-12	49.0	1	34.6 ¹²⁸	+16	33.1 ¹²⁶	40	4 21	4 56	5 25	11 38	66	22	01	29
18	86	27.5	-12	48.1	16	06.5 ¹²⁹	+16	45.6 ¹²⁵	45	4 05	4 44	5 16	11 49	71	21	48	26
19	101	27.5		47.3	30	38.2 ¹²⁷	+16	58.0 ¹²⁴	50	3 45	29	05	12 02	77	33	21	
20	116	27.5		46.4	45	10.0 ¹²⁸	+17	10.3 ¹²³	52	34	22	5 00	09	79	26	18	
21	131	27.5		45.6	59	41.7 ¹²⁷		22.5 ¹²²	54	22	14	4 54	16	82	18	15	
22	146	27.6		44.7	74	13.4 ¹²⁷		34.6 ¹²¹	56	3 09	4 05	48	24	85	10	11	
23	161	27.6		43.8	88	45.1 ¹²⁷		46.6 ¹²⁰	58	2 52	3 55	41	33	90	21	00	7
24	176	27.6	-12	43.0	103	16.7 ¹²⁶	+17	58.6 ¹²⁰	60 S	2 31	3 43	4 32	12 43	95	20	49	2

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 14 ^h 21 ^m 2		Mag: -3.9 PMG: 11 ^h 32 ^m		Mag: +1.3 PMG: 8 ^h 46 ^m		Mag: -2.3 PMG: 3 ^h 34 ^m		Mag: -0.2 PMG: 21 ^h 53 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	144	06.7	187	08.2	-17	31.2	228	31.4	-23	43.5	306	21.2	-5	56.1	30	48.7	+21	46.7
1	159	09.2	202	07.5		30.4	243	31.9		43.5	321	23.8		56.1	45	51.3		46.8
2	174	11.7	217	06.8		29.5	258	32.4		43.4	336	26.3		56.0	60	54.0		46.8
3	189	14.1	232	06.1		28.7	273	33.0		43.4	351	28.9		56.0	75	56.6		46.8
4	204	16.6	247	05.5		27.8	288	33.5		43.4	6	31.4		55.9	90	59.2		46.8
5	219	19.1	262	04.8	-17	27.0	303	34.0	-23	43.3	21	34.0	-5	55.9	106	01.8	+21	46.9
6	234	21.5	277	04.1	-17	26.1	318	34.5	-23	43.3	36	36.5	-5	55.8	121	04.5	+21	46.9
7	249	24.0	292	03.4		25.3	333	35.1		43.3	51	39.1		55.8	136	07.1		46.9
8	264	26.5	307	02.7		24.4	348	35.6		43.2	66	41.6		55.7	151	09.7		47.0
9	279	28.9	322	02.0		23.6	3	36.1		43.2	81	44.2		55.7	166	12.3		47.0
10	294	31.4	337	01.3		22.7	18	36.7		43.1	96	46.7		55.6	181	15.0		47.0
11	309	33.9	352	00.6	-17	21.9	33	37.2	-23	43.1	111	49.3	-5	55.6	196	17.6	+21	47.0
12	324	36.3	6	59.9	-17	21.0	48	37.7	-23	43.1	126	51.8	-5	55.6	211	20.2	+21	47.1
13	339	38.8	21	59.2		20.2	63	38.2		43.0	141	54.4		55.5	226	22.8		47.1
14	354	41.2	36	58.5		19.3	78	38.8		43.0	156	56.9		55.5	241	25.5		47.1
15	9	43.7	51	57.8		18.5	93	39.3		42.9	171	59.5		55.4	256	28.1		47.2
16	24	46.2	66	57.2		17.6	108	39.8		42.9	187	02.0		55.4	271	30.7		47.2
17	39	48.6	81	56.5	-17	16.8	123	40.3	-23	42.9	202	04.6	-5	55.3	286	33.3	+21	47.2
18	54	51.1	96	55.8	-17	15.9	138	40.9	-23	42.8	217	07.1	-5	55.3	301	35.9	+21	47.2
19	69	53.6	111	55.1		15.1	153	41.4		42.8	232	09.7		55.2	316	38.6		47.3
20	84	56.0	126	54.4		14.2	168	41.9		42.7	247	12.2		55.2	331	41.2		47.3
21	99	58.5	141	53.7		13.4	183	42.5		42.7	262	14.8		55.1	346	43.8		47.3
22	115	01.0	156	53.0		12.5	198	43.0		42.7	277	17.3		55.1	1	46.4		47.3
23	130	03.4	171	52.4		11.6	213	43.5		42.6	292	19.9		55.0	16	49.1		47.4
24	145	05.9	186	51.7	-17	10.8	228	44.0	-23	42.6	307	22.5	-5	55.0	31	51.7	+21	47.4
Dif	—		-7		+9		+5		0		+26		0		+26			

ALMANAQUE NÁUTICO PERSEUS

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: 7 ^d 1	PHE { 4 ^h : 55:3 12 ^h : 55:1 20 ^h : 54:9 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	176	28.4	-12 22.3	91	45.5	+22 14.4	94	60 N	6 03	6 52	7 35	8 56	8	3 03	94	
1	191	28.5	21.4	106	16.3 ¹¹⁸	23.8	94	58	02	48	29	9 15	16	2 45	86	
2	206	28.5	20.6	120	46.9 ¹¹⁶	33.0	92	56	01	44	23	31	21	29	82	
3	221	28.5	19.7	135	17.6 ¹¹⁷	42.1	91	54	6 00	41	18	45	24	16	78	
4	236	28.6	18.8	149	48.2 ¹¹⁶	51.1	90	52	5 59	38	13	9 57	27	2 05	74	
5	251	28.6	-12 18.0	164	18.8 ¹¹⁶	+22 59.9	88	50	5 58	6 35	7 09	10 07	30	1 54	72	
6	266	28.6	-12 17.1	178	49.3 ¹¹⁵	+23 08.7	88	45	5 55	6 29	6 59	10 30	34	1 33	67	
7	281	28.7	16.2	193	19.8 ¹¹⁵	17.3	86	40	52	24	52	10 48	37	16	64	
8	296	28.7	15.3	207	50.2 ¹¹⁴	25.9	86	35	49	19	45	11 03	40	1 01	62	
9	311	28.8	14.5	222	20.7 ¹¹⁵	34.3	84	30	47	15	39	16	42	0 49	59	
10	326	28.8	13.6	236	51.0 ¹¹³	42.6	83	20	40	6 06	29	39	45	28	55	
11	341	28.8	-12 12.7	251	21.4 ¹¹⁴	+23 50.7	81	10 N	5 33	5 58	6 19	11 59	48	0 09	52	
12	356	28.9	-12 11.9	265	51.7 ¹¹³	+23 58.8	81	0	5 25	5 50	6 11	12 18	50	** ** *	**	
13	11	28.9	11.0	280	21.9 ¹¹²	+24 06.7	79	10 S	15	40	6 02	36	53	** ** *	**	
14	26	29.0	10.1	294	52.1 ¹¹²	14.6	79	20	5 03	30	5 52	12 56	55	** ** *	**	
15	41	29.0	09.3	309	22.3 ¹¹²	22.3	77	30	4 47	16	41	13 20	58	23 36	44	
16	56	29.0	08.4	323	52.4 ¹¹¹	29.8	75	35	37	5 08	35	34	59	21	43	
17	71	29.1	-12 07.5	338	22.5 ¹¹¹	+24 37.3	75	40	4 24	4 59	5 27	13 50	62	23 04	41	
18	86	29.1	-12 06.6	352	52.6 ¹¹¹	+24 44.6	73	45	4 09	4 47	5 19	14 09	65	22 44	39	
19	101	29.2	05.8	7	22.6 ¹¹⁰	51.8	72	50	3 49	33	08	33	69	20	34	
20	116	29.2	04.9	21	52.6 ¹¹⁰	+24 58.9	71	52	39	26	5 03	44	72	22 08	32	
21	131	29.3	04.0	36	22.6 ¹¹⁰	+25 05.9	70	54	28	19	4 58	14 58	74	21 54	30	
22	146	29.3	03.1	50	52.5 ¹⁰⁹	12.7	68	56	3 15	10	52	15 13	78	38	26	
23	161	29.3	02.3	65	22.4 ¹⁰⁹	19.5	68	58	2 59	4 00	45	31	83	21 19	22	
24	176	29.4	-12 01.4	79	52.2 ¹⁰⁸	+25 26.1	66	60 S	2 40	3 49	4 38	15 54	92	20 56	13	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG 14 ^h 13 ^m 3		Mag: -3.9 PMG: 11 ^h 34 ^m		Mag: +1.3 PMG: 8 ^h 44 ^m		Mag: -2.3 PMG: 3 ^h 26 ^m		Mag: -0.2 PMG: 21 ^h 45 ^m						
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	146	05.0	186	35.4	-16 49.9	228	56.7	-23 41.4	308	23.9	-5 53.8	32	54.6	+21 48.1	
1	161	07.5	201	34.7	49.0	243	57.2	41.4	323	26.4	53.8	47	57.2	48.1	
2	176	10.0	216	34.1	48.1	258	57.7	41.3	338	29.0	53.7	62	59.8	48.1	
3	191	12.4	231	33.4	47.2	273	58.2	41.3	353	31.5	53.7	78	02.4	48.1	
4	206	14.9	246	32.7	46.3	288	58.8	41.2	8	34.1	53.6	93	05.0	48.2	
5	221	17.3	261	32.0	-16 45.5	303	59.3	-23 41.2	23	36.7	-5 53.6	108	07.6	+21 48.2	
6	236	19.8	276	31.4	-16 44.6	318	59.8	-23 41.1	38	39.2	-5 53.5	123	10.3	+21 48.2	
7	251	22.3	291	30.7	43.7	334	00.4	41.0	53	41.8	53.4	138	12.9	48.2	
8	266	24.7	306	30.0	42.8	349	00.9	41.0	68	44.4	53.4	153	15.5	48.3	
9	281	27.2	321	29.4	41.9	4	01.4	40.9	83	46.9	53.3	168	18.1	48.3	
10	296	29.7	336	28.7	41.0	19	01.9	40.9	98	49.5	53.3	183	20.7	48.3	
11	311	32.1	351	28.0	-16 40.1	34	02.5	-23 40.8	113	52.1	-5 53.2	198	23.3	+21 48.3	
12	326	34.6	6	27.4	-16 39.2	49	03.0	-23 40.8	128	54.6	-5 53.2	213	26.0	+21 48.4	
13	341	37.1	21	26.7	38.3	64	03.5	40.7	143	57.2	53.1	228	28.6	48.4	
14	356	39.5	36	26.0	37.5	79	04.0	40.7	158	59.8	53.1	243	31.2	48.4	
15	11	42.0	51	25.4	36.6	94	04.6	40.6	174	02.3	53.0	258	33.8	48.5	
16	26	44.5	66	24.7	35.7	109	05.1	40.5	189	04.9	53.0	273	36.4	48.5	
17	41	46.9	81	24.1	-16 34.8	124	05.6	-23 40.5	204	07.5	-5 52.9	288	39.0	+21 48.5	
18	56	49.4	96	23.4	-16 33.9	139	06.1	-23 40.4	219	10.0	-5 52.9	303	41.6	+21 48.5	
19	71	51.8	111	22.7	33.0	154	06.7	40.4	234	12.6	52.8	318	44.3	48.6	
20	86	54.3	126	22.1	32.1	169	07.2	40.3	249	15.2	52.8	333	46.9	48.6	
21	101	56.8	141	21.4	31.2	184	07.7	40.2	264	17.7	52.7	348	49.5	48.6	
22	116	59.2	156	20.7	30.3	199	08.2	40.2	279	20.3	52.7	3	52.1	48.6	
23	132	01.7	171	20.1	29.4	214	08.8	40.1	294	22.9	52.6	18	54.7	48.7	
24	147	04.2	186	19.4	-16 28.5	229	09.3	-23 40.1	309	25.4	-5 52.6	33	57.3	+21 48.7	
Dif	—		-7 +9		+5 +1		+26 +1		+26 +1		+26				

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16:2 PMG: 12 ^h 14 ^m 0			Edad: 8 ^d 1 SD: 14:9 PMG: 19 ^h 20 ^m	PHE { 4 ^h : 54:7 12 ^h : 54:6 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
0	176	29.4	-12	01.4	79	52.2	+25	26.1	60 N	16 57	17 40	18 29	9 04	22	4 37	85
1	191	29.4	-12	00.5	94	22.0 ¹⁰⁸		32.5 ⁶⁴	58	17 03	44	30	31	29	4 11	77
2	206	29.5	-11	59.6	108	51.8 ¹⁰⁸		38.9 ⁶⁴	56	08	47	30	9 52	33	3 51	72
3	221	29.5		58.8	123	21.5 ¹⁰⁷		45.1 ⁶²	54	13	50	31	10 09	36	34	66
4	236	29.6		57.9	137	51.2 ¹⁰⁷		51.2 ⁶¹	52	18	53	32	24	38	19	67
5	251	29.6	-11	57.0	152	20.9 ¹⁰⁷	+25	57.2 ⁶⁰	50	17 22	17 55	18 33	10 37	40	3 06	66
6	266	29.7	-11	56.1	166	50.5 ¹⁰⁶	+26	03.0 ⁵⁸	45	17 31	18 01	18 35	11 04	42	2 40	63
7	281	29.7		55.3	181	20.1 ¹⁰⁶		08.7 ⁵⁶	40	38	06	38	25	44	20	60
8	296	29.8		54.4	195	49.7 ¹⁰⁶		14.3 ⁵⁷	35	45	10	40	43	45	2 03	58
9	311	29.8		53.5	210	19.2 ¹⁰⁵		19.7 ⁵⁴	30	17 50	15	43	11 58	47	1 48	57
10	326	29.8		52.6	224	48.7 ¹⁰⁵		25.1 ⁵⁴	20	18 00	23	49	12 24	49	23	54
11	341	29.9	-11	51.8	239	18.2 ¹⁰⁵	+26	30.3 ⁵²	10 N	18 09	18 30	18 55	12 47	49	1 01	53
12	356	29.9	-11	50.9	253	47.7 ¹⁰⁵	+26	35.3 ⁵⁰	0	18 17	18 38	19 03	13 08	51	0 41	51
13	11	30.0		50.0	268	17.1 ¹⁰⁴		40.3 ⁵⁰	10 S	26	47	12	29	52	22	48
14	26	30.0		49.1	282	46.5 ¹⁰⁴		45.1 ⁴⁸	20	35	18 58	24	13 51	54	0 00	47
15	41	30.1		48.2	297	15.8 ¹⁰³		49.8 ⁴⁷	30	46	19 10	40	14 18	55	** ** *	**
16	56	30.1		47.4	311	45.2 ¹⁰⁴		54.3 ⁴⁵	35	52	18	19 49	33	57	** ** *	**
17	71	30.2	-11	46.5	326	14.5 ¹⁰³	+26	58.7 ⁴⁴	40	18 59	19 27	20 01	14 52	57	23 45	48
18	86	30.2	-11	45.6	340	43.8 ¹⁰³	+27	03.0 ⁴³	45	19 07	19 38	20 16	15 14	58	23 23	46
19	101	30.3		44.7	355	13.0 ¹⁰²		07.1 ⁴¹	50	17	52	35	42	61	22 54	45
20	116	30.3		43.8	9	42.3 ¹⁰³		11.2 ³⁹	52	21	19 58	44	15 56	62	40	44
21	131	30.4		43.0	24	11.5 ¹⁰²		15.1 ⁴¹	54	27	20 05	20 55	16 12	63	24	42
22	146	30.4		42.1	38	40.7 ¹⁰²		18.8 ³⁷	56	32	14	21 08	31	65	22 04	41
23	161	30.5		41.2	53	09.8 ¹⁰¹		22.4 ³⁶	58	38	23	22	16 54	69	21 41	38
24	176	30.5	-11	40.3	67	39.0 ¹⁰²	+27	25.9 ³⁵	60 S	19 46	20 34	21 40	17 26	75	21 09	32

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 14 ^h 09 ^m 4		Mag: -3.9 PMG: 11 ^h 35 ^m		Mag: +1.3 PMG: 8 ^h 43 ^m		Mag: -2.3 PMG: 3 ^h 22 ^m		Mag: -0.2 PMG: 21 ^h 40 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	147	04.2	186	19.4	-16	28.5	229	09.3	-23	40.1	309	25.4	-5	52.6	33	57.3	+21	48.7
1	162	06.6	201	18.8		27.6	244	09.8		40.0	324	28.0		52.5	48	59.9		48.7
2	177	09.1	216	18.1		26.7	259	10.3		39.9	339	30.6		52.4	64	02.6		48.7
3	192	11.6	231	17.4		25.8	274	10.9		39.9	354	33.1		52.4	79	05.2		48.8
4	207	14.0	246	16.8		24.9	289	11.4		39.8	9	35.7		52.3	94	07.8		48.8
5	222	16.5	261	16.1	-16	24.0	304	11.9	-23	39.7	24	38.3	-5	52.3	109	10.4	+21	48.8
6	237	18.9	276	15.5	-16	23.1	319	12.4	-23	39.7	39	40.9	-5	52.2	124	13.0	+21	48.8
7	252	21.4	291	14.8		22.2	334	13.0		39.6	54	43.4		52.2	139	15.6		48.9
8	267	23.9	306	14.2		21.3	349	13.5		39.5	69	46.0		52.1	154	18.2		48.9
9	282	26.3	321	13.5		20.4	4	14.0		39.5	84	48.6		52.1	169	20.9		48.9
10	297	28.8	336	12.9		19.4	19	14.6		39.4	99	51.1		52.0	184	23.5		49.0
11	312	31.3	351	12.2	-16	18.5	34	15.1	-23	39.3	114	53.7	-5	52.0	199	26.1	+21	49.0
12	327	33.7	6	11.5	-16	17.6	49	15.6	-23	39.3	129	56.3	-5	51.9	214	28.7	+21	49.0
13	342	36.2	21	10.9		16.7	64	16.1		39.2	144	58.9		51.9	229	31.3		49.0
14	357	38.7	36	10.2		15.8	79	16.7		39.1	160	01.4		51.8	244	33.9		49.1
15	12	41.1	51	09.6		14.9	94	17.2		39.1	175	04.0		51.7	259	36.5		49.1
16	27	43.6	66	08.9		14.0	109	17.7		39.0	190	06.6		51.7	274	39.1		49.1
17	42	46.1	81	08.3	-16	13.1	124	18.2	-23	38.9	205	09.2	-5	51.6	289	41.7	+21	49.1
18	57	48.5	96	07.6	-16	12.1	139	18.8	-23	38.9	220	11.7	-5	51.6	304	44.4	+21	49.2
19	72	51.0	111	07.0		11.2	154	19.3		38.8	235	14.3		51.5	319	47.0		49.2
20	87	53.4	126	06.3		10.3	169	19.8		38.7	250	16.9		51.5	334	49.6		49.2
21	102	55.9	141	05.7		09.4	184	20.3		38.7	265	19.5		51.4	349	52.2		49.2
22	117	58.4	156	05.0		08.5	199	20.9		38.6	280	22.0		51.4	4	54.8		49.3
23	133	00.8	171	04.4		07.6	214	21.4		38.5	295	24.6		51.3	19	57.4		49.3
24	148	03.3	186	03.7	-16	06.6	229	21.9	-23	38.5	310	27.2	-5	51.2	35	00.0	+21	49.3
Dif	—		-7		+9		+5		+1		+26		+1		+26			0

ALMANAQUE NÁUTICO PERSEIS

UT	SOL			LUNA					Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 12 ^h 13 ^m 8			Edad: 10 ^d 1 PHE { SD: 14:7 PMG: 21 ^h 02 ^m 4 ^h : 54:1 12 ^h : 54:1 20 ^h : 54:0 R°: 51 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Civil			Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	m	h m	m
0	176	31.9	-11	19.1	55	14.8	+28	09.0	60 N	17 02	17 45	18 33	10 13	76	7 02	30
1	191	31.9		18.2	69	43.8 ¹⁰⁰		09.1	58	08	48	34	10 49	69	6 26	36
2	206	32.0		17.3	84	12.7 ⁹⁹		09.1	56	13	51	34	11 15	66	6 00	39
3	221	32.0		16.4	98	41.7 ¹⁰⁰		08.9	54	17	54	35		36 63	5 39	42
4	236	32.1		15.5	113	10.7 ¹⁰⁰		08.6	52	22	56	35	11 53	62	22	43
5	251	32.2	-11	14.6	127	39.6 ⁹⁹	+28	08.1	50	17 25	17 58	18 36	12 07	62	5 07	44
6	266	32.2	-11	13.7	142	08.6 ¹⁰⁰	+28	07.6	45	17 34	18 04	18 38	12 37	59	4 37	46
7	281	32.3		12.8	156	37.6 ¹⁰⁰		06.8	40	41	08	40	13 01	57	4 14	47
8	296	32.3		11.9	171	06.6 ¹⁰⁰		06.0	35	47	12	42	20	56	3 55	47
9	311	32.4		11.0	185	35.6 ¹⁰⁰		05.0	30	17 52	16	44	13 36	55	38	48
10	326	32.5		10.2	200	04.7 ¹⁰¹		03.9	20	18 01	23	49	14 04	53	3 10	50
11	341	32.5	-11	09.3	214	33.7 ¹⁰⁰	+28	02.6	10 N	18 09	18 31	18 55	14 28	52	2 46	50
12	356	32.6	-11	08.4	229	02.8 ¹⁰¹	+28	01.2	0	18 17	18 38	19 03	14 50	51	2 24	51
13	11	32.7		07.5	243	31.9 ¹⁰¹	+27	59.7	10 S	25	47	12	15 12	49	2 01	52
14	26	32.7		06.6	258	01.0 ¹⁰¹		58.0	20	34	18 56	23	15 36	48	1 37	53
15	41	32.8		05.7	272	30.1 ¹⁰¹		56.2	30	44	19 08	37	16 04	46	1 09	53
16	56	32.8		04.8	286	59.2 ¹⁰¹		54.3	35	49	16	47	20	45	0 52	54
17	71	32.9	-11	03.9	301	28.4 ¹⁰²	+27	52.2	40	18 56	19 24	19 58	16 39	43	0 33	54
18	86	33.0	-11	03.0	315	57.6 ¹⁰²	+27	50.0	45	19 04	19 35	20 12	17 03	41	0 09	55
19	101	33.0		02.1	330	26.8 ¹⁰²		47.7	50	13	48	30	32	38	** ** *	**
20	116	33.1		01.2	344	56.0 ¹⁰²		45.2	52	17	19 54	39	17 47	36	** ** *	**
21	131	33.2	-11	00.3	359	25.3 ¹⁰³		42.6	54	22	20 01	20 49	18 04	34	** ** *	**
22	146	33.2	-10	59.4	13	54.6 ¹⁰³		39.9	56	27	08	21 01	24	31	23 44	72
23	161	33.3		58.5	28	23.9 ¹⁰³		37.0	58	33	17	15	18 49	27	23 18	78
24	176	33.4	-10	57.6	42	53.2 ¹⁰³	+27	34.0	60 S	19 40	20 27	21 32	19 24	19	22 44	86

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 14 ^h 01 ^m 5		Mag: -3.9 PMG: 11 ^h 37 ^m		Mag: +1.3 PMG: 8 ^h 41 ^m		Mag: -2.3 PMG: 3 ^h 14 ^m		Mag: -0.2 PMG: 21 ^h 32 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	149	02.4	185	48.4	-15	44.4	229	34.5	-23	36.6	311	29.1	-5	49.9	36	02.6	+21	49.9
1	164	04.9	200	47.7		43.4	244	35.0		36.6	326	31.7		49.8	51	05.2		49.9
2	179	07.4	215	47.1		42.5	259	35.6		36.5	341	34.3		49.7	66	07.8		50.0
3	194	09.8	230	46.5		41.5	274	36.1		36.4	356	36.8		49.7	81	10.4		50.0
4	209	12.3	245	45.8		40.6	289	36.6		36.3	11	39.4		49.6	96	13.1		50.0
5	224	14.8	260	45.2	-15	39.7	304	37.1	-23	36.2	26	42.0	-5	49.6	111	15.7	+21	50.0
6	239	17.2	275	44.6	-15	38.7	319	37.7	-23	36.1	41	44.6	-5	49.5	126	18.3	+21	50.1
7	254	19.7	290	43.9		37.8	334	38.2		36.1	56	47.2		49.4	141	20.9		50.1
8	269	22.2	305	43.3		36.8	349	38.7		36.0	71	49.8		49.4	156	23.5		50.1
9	284	24.6	320	42.7		35.9	4	39.2		35.9	86	52.4		49.3	171	26.1		50.1
10	299	27.1	335	42.0		34.9	19	39.8		35.8	101	54.9		49.3	186	28.7		50.2
11	314	29.5	350	41.4	-15	34.0	34	40.3	-23	35.7	116	57.5	-5	49.2	201	31.3	+21	50.2
12	329	32.0		40.8	-15	33.0	49	40.8	-23	35.6	132	00.1	-5	49.1	216	33.9	+21	50.2
13	344	34.5	20	40.2		32.1	64	41.3		35.6	147	02.7		49.1	231	36.5		50.2
14	359	36.9	35	39.5		31.2	79	41.9		35.5	162	05.3		49.0	246	39.1		50.3
15	14	39.4	50	38.9		30.2	94	42.4		35.4	177	07.9		49.0	261	41.7		50.3
16	29	41.9	65	38.3		29.3	109	42.9		35.3	192	10.5		48.9	276	44.3		50.3
17	44	44.3	80	37.6	-15	28.3	124	43.4	-23	35.2	207	13.0	-5	48.8	291	46.9	+21	50.3
18	59	46.8	95	37.0	-15	27.4	139	44.0	-23	35.1	222	15.6	-5	48.8	306	49.5	+21	50.4
19	74	49.3	110	36.4		26.4	154	44.5		35.0	237	18.2		48.7	321	52.1		50.4
20	89	51.7	125	35.8		25.5	169	45.0		34.9	252	20.8		48.7	336	54.7		50.4
21	104	54.2	140	35.1		24.5	184	45.5		34.9	267	23.4		48.6	351	57.3		50.4
22	119	56.7	155	34.5		23.5	199	46.1		34.8	282	26.0		48.5	6	59.9		50.5
23	134	59.1	170	33.9		22.6	214	46.6		34.7	297	28.6		48.5	22	02.5		50.5
24	150	01.6	185	33.3	-15	21.6	229	47.1	-23	34.6	312	31.2	-5	48.4	37	05.1	+21	50.5
Dif	—		-6 +9		+5 +1		+26 +1		+26 +1		+26 +1		+26 +1		+26 +1		+26 +1	

UT	SOL			O LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'2 PMG: 12 ^h 13 ^m 7			Edad: 11 ^d 1 PHE { SD: 14'7 PMG: 21 ^h 53 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m
0	176	33.4	-10	57.6	42	53.2	+27	34.0	60 N	5 53	6 41	7 24	11 29	89	7 32 13
1	191	33.4		56.7	57	22.6 ¹⁰⁴		30.9 31	58	53	38	18	11 58	82	7 02 20
2	206	33.5		55.8	71	52.0 ¹⁰⁴		27.7 32	56	52	35	13	12 21	77	6 39 25
3	221	33.6		54.9	86	21.4 ¹⁰⁴		24.3 34	54	52	33	09	39	74	21 28
4	236	33.6		54.0	100	50.9 ¹⁰⁵		20.8 35	52	51	30	05	12 55	70	6 05 31
5	251	33.7	-10	53.1	115	20.4 ¹⁰⁵	+27	17.1 37	50	5 51	6 28	7 01	13 09	68	5 51 33
6	266	33.8	-10	52.2	129	49.9 ¹⁰⁵	+27	13.3 38	45	5 49	6 23	6 53	13 36	64	5 23 37
7	281	33.8		51.3	144	19.5 ¹⁰⁶		09.4 39	40	47	19	46	13 58	61	5 01 39
8	296	33.9		50.4	158	49.1 ¹⁰⁶		05.4 40	35	45	15	40	14 16	59	4 42 42
9	311	34.0		49.5	173	18.7 ¹⁰⁶	+27	01.2 42	30	43	11	35	31	57	26 43
10	326	34.0		48.6	187	48.4 ¹⁰⁷	+26	56.9 43	20	38	6 04	26	14 57	54	4 00 45
11	341	34.1	-10	47.7	202	18.1 ¹⁰⁷	+26	52.5 44	10 N	5 32	5 57	6 18	15 20	51	3 36 48
12	356	34.2	-10	46.8	216	47.8 ¹⁰⁷	+26	48.0 45	0	5 25	5 49	6 10	15 41	48	3 15 49
13	11	34.2		45.9	231	17.6 ¹⁰⁸		43.3 47	10 S	16	41	6 03	16 01	47	2 53 52
14	26	34.3		45.0	245	47.4 ¹⁰⁸		38.5 48	20	5 05	32	5 54	24	43	30 53
15	41	34.4		44.1	260	17.3 ¹⁰⁹		33.6 49	30	4 50	20	44	16 50	40	2 02 56
16	56	34.5		43.2	274	47.2 ¹⁰⁹		28.6 50	35	41	12	39	17 05	38	1 46 58
17	71	34.5	-10	42.3	289	17.2 ¹¹⁰	+26	23.4 52	40	4 30	5 04	5 32	17 22	36	1 27 60
18	86	34.6	-10	41.4	303	47.2 ¹¹⁰	+26	18.1 53	45	4 16	4 54	5 25	17 44	32	1 04 62
19	101	34.7		40.5	318	17.2 ¹¹⁰		12.7 54	50	3 58	41	15	18 10	29	0 35 65
20	116	34.7		39.6	332	47.3 ¹¹¹		07.2 55	52	49	35	11	23	26	21 67
21	131	34.8		38.7	347	17.4 ¹¹¹	+26	01.5 57	54	39	28	06	38	23	0 04 69
22	146	34.9		37.8	1	47.6 ¹¹²	+25	55.7 58	56	27	20	5 01	18 55	20	** ** **
23	161	35.0		36.9	16	17.8 ¹¹²		49.8 59	58	3 13	11	4 55	19 16	15	** ** **
24	176	35.0	-10	36.0	30	48.1 ¹¹³	+25	43.8 60	60 S	2 57	4 01	4 49	19 43	7	** ** **
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG 13 ^h 57 ^m 6			Mag: -3.9 PMG: 11 ^h 38 ^m			Mag: +1.3 PMG: 8 ^h 41 ^m			Mag: -2.3 PMG: 3 ^h 09 ^m			Mag: -0.2 PMG: 21 ^h 28 ^m		
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°
0	150	01.6	185	33.3	-15	21.6	229	47.1	-23	34.6	312	31.2	-5	48.4	37
1	165	04.0	200	32.7		20.7	244	47.6		34.5	327	33.8		48.4	52
2	180	06.5	215	32.0		19.7	259	48.2		34.4	342	36.4		48.3	67
3	195	09.0	230	31.4		18.8	274	48.7		34.3	357	38.9		48.2	82
4	210	11.4	245	30.8		17.8	289	49.2		34.2	12	41.5		48.2	97
5	225	13.9	260	30.2	-15	16.8	304	49.7	-23	34.1	27	44.1	-5	48.1	112
6	240	16.4	275	29.6	-15	15.9	319	50.3	-23	34.0	42	46.7	-5	48.0	127
7	255	18.8	290	28.9		14.9	334	50.8		34.0	57	49.3		48.0	142
8	270	21.3	305	28.3		14.0	349	51.3		33.9	72	51.9		47.9	157
9	285	23.8	320	27.7		13.0	4	51.8		33.8	87	54.5		47.9	172
10	300	26.2	335	27.1		12.0	19	52.4		33.7	102	57.1		47.8	187
11	315	28.7	350	26.5	-15	11.1	34	52.9	-23	33.6	117	59.7	-5	47.7	202
12	330	31.2	5	25.8	-15	10.1	49	53.4	-23	33.5	133	02.3	-5	47.7	217
13	345	33.6	20	25.2		09.1	64	53.9		33.4	148	04.9		47.6	232
14	0	36.1	35	24.6		08.2	79	54.5		33.3	163	07.5		47.5	247
15	15	38.5	50	24.0		07.2	94	55.0		33.2	178	10.1		47.5	262
16	30	41.0	65	23.4		06.2	109	55.5		33.1	193	12.6		47.4	277
17	45	43.5	80	22.8	-15	05.3	124	56.1	-23	33.0	208	15.2	-5	47.4	292
18	60	45.9	95	22.2	-15	04.3	139	56.6	-23	32.9	223	17.8	-5	47.3	307
19	75	48.4	110	21.5		03.3	154	57.1		32.8	238	20.4		47.2	322
20	90	50.9	125	20.9		02.4	169	57.6		32.7	253	23.0		47.2	337
21	105	53.3	140	20.3		01.4	184	58.2		32.6	268	25.6		47.1	352
22	120	55.8	155	19.7	-15	00.4	199	58.7		32.5	283	28.2		47.0	8
23	135	58.3	170	19.1	-14	59.5	214	59.2		32.4	298	30.8		47.0	23
24	151	00.7	185	18.5	-14	58.5	229	59.7	-23	32.3	313	33.4	-5	46.9	38
Dif	—		-6	+10			+5	+1			+26	+1		+26	0

UT	SOL				LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 12 ^h 13 ^m 6				Edad: 12 ^d 1 PHE { 4 ^h : 54:1 12 ^h : 54:1 20 ^h : 54:2 R°: 46 ^m											
	hG ☉		Dec		hG ☾		Dif				Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	176	35.0	-10	36.0	30	48.1	+25	43.8	60 N	17 07	17 50	18 38	12 58 93	7 45 5	5	
1	191	35.1		35.1	45	18.4 ¹¹³		37.7 ⁶¹	58	12		53	38	13 20 86	22	12
2	206	35.2		34.2	59	48.7 ¹¹³		31.4 ⁶³	56	17		55	38	38 81	7 04	16
3	221	35.3		33.3	74	19.2 ¹¹⁵		25.0 ⁶⁴	54	21	17 57	39	13 53 77	6 49	20	
4	236	35.3		32.4	88	49.6 ¹¹⁴		18.5 ⁶⁵	52	25	18 00	39	14 05 75	36	22	
5	251	35.4	-10	31.5	103	20.1 ¹¹⁵	+25	11.9 ⁶⁶	50	17 29	18 02	18 39	14 17 71	6 24	25	
6	266	35.5	-10	30.6	117	50.7 ¹¹⁶	+25	05.2 ⁶⁷	45	17 36	18 06	18 40	14 40 67	6 00	29	
7	281	35.6		29.7	132	21.3 ¹¹⁶	+24	58.3 ⁶⁹	40	43		10	42	14 59 63	5 40	33
8	296	35.6		28.8	146	52.0 ¹¹⁷		51.4 ⁶⁹	35	48		14	44	15 15 60	24	35
9	311	35.7		27.9	161	22.7 ¹¹⁷		44.3 ⁷¹	30	17 53		18	46	28 58	5 09	38
10	326	35.8		27.0	175	53.4 ¹¹⁷		37.1 ⁷²	20	18 02		24	50	15 51 53	4 45	42
11	341	35.9	-10	26.1	190	24.2 ¹¹⁸	+24	29.8 ⁷³	10 N	18 10	18 31	18 56	16 11 50	4 24	45	
12	356	35.9	-10	25.2	204	55.1 ¹¹⁹	+24	22.4 ⁷⁴	0	18 17	18 38	19 02	16 29 47	4 04	48	
13	11	36.0		24.3	219	26.0 ¹¹⁹		14.9 ⁷⁵	10 S	24		46	11	16 48 43	3 45	50
14	26	36.1		23.3	233	57.0 ¹²⁰	+24	07.2 ⁷⁷	20	32	18 55	21		17 07 40	3 23	54
15	41	36.2		22.4	248	28.0 ¹²⁰	+23	59.5 ⁷⁷	30	42	19 06	35		30 36	2 58	58
16	56	36.2		21.5	262	59.1 ¹²¹		51.6 ⁷⁹	35	47		13	44	43 33	44	60
17	71	36.3	-10	20.6	277	30.2 ¹²¹	+23	43.7 ⁷⁹	40	18 53	19 21	19 55	17 58 31	2 27	62	
18	86	36.4	-10	19.7	292	01.4 ¹²²	+23	35.6 ⁸¹	45	19 00	19 31	20 08	18 16 27	2 06	66	
19	101	36.5		18.8	306	32.6 ¹²²		27.4 ⁸²	50	09		43	26	39 21	1 40	71
20	116	36.5		17.9	321	03.9 ¹²³		19.1 ⁸³	52	13		49	34	18 49 20	28	73
21	131	36.6		17.0	335	35.3 ¹²⁴		10.8 ⁸³	54	18	19 56	44		19 01 17	1 13	76
22	146	36.7		16.1	350	06.7 ¹²⁴	+23	02.3 ⁸⁵	56	22	20 03	20 55		15 13	0 56	80
23	161	36.8		15.2	4	38.1 ¹²⁴	+22	53.7 ⁸⁶	58	28		11	21 08	31 9	36	85
24	176	36.9	-10	14.3	19	09.6 ¹²⁵	+22	45.0 ⁸⁷	60 S	19 34	20 21	21 23	19 50 3	0 10	92	

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 13 ^h 53 ^m 7		Mag: -3.9 PMG: 11 ^h 39 ^m				Mag: +1.2 PMG: 8 ^h 40 ^m				Mag: -2.3 PMG: 3 ^h 05 ^m				Mag: -0.2 PMG: 21 ^h 24 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	151	00.7	185	18.5	-14	58.5	229	59.7	-23	32.3	313	33.4	-5	46.9	38	07.5	+21	51.1
1	166	03.2	200	17.9		57.5	245	00.3		32.2	328	36.0		46.8	53	10.1		51.1
2	181	05.7	215	17.3		56.5	260	00.8		32.1	343	38.6		46.8	68	12.7		51.1
3	196	08.1	230	16.6		55.6	275	01.3		32.0	358	41.2		46.7	83	15.3		51.2
4	211	10.6	245	16.0		54.6	290	01.8		31.9	13	43.8		46.7	98	17.9		51.2
5	226	13.0	260	15.4	-14	53.6	305	02.4	-23	31.8	28	46.4	-5	46.6	113	20.5	+21	51.2
6	241	15.5	275	14.8	-14	52.6	320	02.9	-23	31.7	43	49.0	-5	46.5	128	23.1	+21	51.2
7	256	18.0	290	14.2		51.7	335	03.4		31.6	58	51.6		46.5	143	25.7		51.3
8	271	20.4	305	13.6		50.7	350	03.9		31.5	73	54.2		46.4	158	28.3		51.3
9	286	22.9	320	13.0		49.7	5	04.5		31.4	88	56.8		46.3	173	30.9		51.3
10	301	25.4	335	12.4		48.7	20	05.0		31.3	103	59.4		46.3	188	33.5		51.3
11	316	27.8	350	11.8	-14	47.7	35	05.5	-23	31.2	119	02.0	-5	46.2	203	36.1	+21	51.4
12	331	30.3	5	11.2	-14	46.8	50	06.0	-23	31.1	134	04.6	-5	46.1	218	38.7	+21	51.4
13	346	32.8	20	10.6		45.8	65	06.6		31.0	149	07.2		46.1	233	41.3		51.4
14	1	35.2	35	10.0		44.8	80	07.1		30.9	164	09.8		46.0	248	43.9		51.4
15	16	37.7	50	09.4		43.8	95	07.6		30.8	179	12.4		45.9	263	46.5		51.4
16	31	40.1	65	08.8		42.8	110	08.1		30.7	194	15.0		45.9	278	49.1		51.5
17	46	42.6	80	08.2	-14	41.8	125	08.7	-23	30.6	209	17.6	-5	45.8	293	51.7	+21	51.5
18	61	45.1	95	07.6	-14	40.9	140	09.2	-23	30.5	224	20.2	-5	45.7	308	54.3	+21	51.5
19	76	47.5	110	07.0		39.9	155	09.7		30.4	239	22.8		45.7	323	56.9		51.5
20	91	50.0	125	06.4		38.9	170	10.2		30.3	254	25.4		45.6	338	59.5		51.6
21	106	52.5	140	05.8		37.9	185	10.8		30.2	269	28.0		45.5	354	02.1		51.6
22	121	54.9	155	05.2		36.9	200	11.3		30.0	284	30.6		45.5	9	04.7		51.6
23	136	57.4	170	04.6		35.9	215	11.8		29.9	299	33.2		45.4	24	07.3		51.6
24	151	59.9	185	04.0	-14	34.9	230	12.3	-23	29.8	314	35.8	-5	45.3	39	09.9	+21	51.7
Dif	—		-6		+10		+5		+1		+26		+1		+26			

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'2 PMG: 12 ^h 13 ^m 5			Edad: 13 ^d 1 PHE { SD: 14'8 PMG: 23 ^h 27 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	176	36.9	-10	14.3	19	09.6	+22	45.0	89	60 N	5	48	6	36	7	18
1	191	36.9		13.3	33	41.2 ¹²⁶		36.1	89	58		48	33		13	46
2	206	37.0		12.4	48	12.8 ¹²⁶		27.2	89	56		48	31		09	14
3	221	37.1		11.5	62	44.5 ¹²⁷		18.2	90	54		48	29		05	15
4	236	37.2		10.6	77	16.2 ¹²⁷	+22	09.1	91	52		47	26	7	01	20
5	251	37.3	-10	09.7	91	48.0 ¹²⁸	+21	59.9	92	50	5	47	6	25	6	57
6	266	37.3	-10	08.8	106	19.8 ¹²⁸	+21	50.6	93	45	5	46	6	20	6	50
7	281	37.4		07.9	120	51.7 ¹²⁹		41.2	94	40		45	16		44	16
8	296	37.5		07.0	135	23.6 ¹²⁹		31.7	95	35		43	13		38	15
9	311	37.6		06.1	149	55.6 ¹³⁰		22.1	96	30		41	09		33	26
10	326	37.7		05.1	164	27.7 ¹³¹		12.4	97	20		37	6	03	25	16
11	341	37.8	-10	04.2	178	59.8 ¹³¹	+21	02.6	98	10 N	5	31	5	56	6	17
12	356	37.8	-10	03.3	193	31.9 ¹³¹	+20	52.7	99	0	5	25	5	49	6	10
13	11	37.9		02.4	208	04.2 ¹³³		42.7	100	10 S		17	41		6	03
14	26	38.0		01.5	222	36.4 ¹³²		32.6	101	20	5	06	32	5	55	17
15	41	38.1	-10	00.6	237	08.7 ¹³³		22.5	101	30	4	52	21		46	18
16	56	38.2	-9	59.7	251	41.1 ¹³⁴		12.2	103	35		43	14		41	16
17	71	38.3	-9	58.7	266	13.5 ¹³⁴	+20	01.9	103	40	4	33	5	06	5	34
18	86	38.3	-9	57.8	280	46.0 ¹³⁵	+19	51.4	105	45	4	19	4	57	5	27
19	101	38.4		56.9	295	18.5 ¹³⁵		40.9	105	50	4	02	44		19	18
20	116	38.5		56.0	309	51.1 ¹³⁶		30.3	106	52	3	54	39		15	19
21	131	38.6		55.1	324	23.8 ¹³⁷		19.6	107	54		44	32		10	18
22	146	38.7		54.2	338	56.4 ¹³⁶	+19	08.8	108	56		33	25		06	28
23	161	38.8		53.2	353	29.2 ¹³⁸	+18	57.9	109	58		20	17	5	00	40
24	176	38.9	-9	52.3	8	02.0 ¹³⁸	+18	47.0	109	60 S	3	05	4	07	4	54

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 13 ^h 49 ^m 7		Mag: -3.9 PMG: 11 ^h 40 ^m		Mag: +1.2 PMG: 8 ^h 39 ^m		Mag: -2.3 PMG: 3 ^h 01 ^m		Mag: -0.2 PMG: 21 ^h 20 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	151	59.9	185	04.0	-14	34.9	230	12.3	-23	29.8
1	167	02.3	200	03.4		33.9	245	12.9		29.7
2	182	04.8	215	02.8		32.9	260	13.4		29.6
3	197	07.3	230	02.2		31.9	275	13.9		29.5
4	212	09.7	245	01.6		31.0	290	14.4		29.4
5	227	12.2	260	01.0	-14	30.0	305	15.0	-23	29.3
6	242	14.6	275	00.4	-14	29.0	320	15.5	-23	29.2
7	257	17.1	289	59.8		28.0	335	16.0		29.1
8	272	19.6	304	59.2		27.0	350	16.5		28.9
9	287	22.0	319	58.6		26.0	5	17.1		28.8
10	302	24.5	334	58.0		25.0	20	17.6		28.7
11	317	27.0	349	57.4	-14	24.0	35	18.1	-23	28.6
12	332	29.4	4	56.8	-14	23.0	50	18.6	-23	28.5
13	347	31.9	19	56.2		22.0	65	19.2		28.4
14	2	34.4	34	55.6		21.0	80	19.7		28.3
15	17	36.8	49	55.0		20.0	95	20.2		28.2
16	32	39.3	64	54.4		19.0	110	20.7		28.0
17	47	41.8	79	53.9	-14	18.0	125	21.3	-23	27.9
18	62	44.2	94	53.3	-14	17.0	140	21.8	-23	27.8
19	77	46.7	109	52.7		16.0	155	22.3		27.7
20	92	49.1	124	52.1		15.0	170	22.8		27.6
21	107	51.6	139	51.5		14.0	185	23.4		27.5
22	122	54.1	154	50.9		13.0	200	23.9		27.3
23	137	56.5	169	50.3		12.0	215	24.4		27.2
24	152	59.0	184	49.7	-14	11.0	230	24.9	-23	27.1
Dif	—		-6 +10		+5 +1		+26 +1		+26 0	

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16'2 PMG: 12 ^h 13 ^m 3			Edad: 14 ^d 1 PHE { 4 ^h : 54'5 12 ^h : 54'6 20 ^h : 54'7 R°: ***m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	h	m	h	m	h	m	h	m
0	176	38.9	-9 52.3	8	02.0	+18 47.0	60 N	17 12	17 55	18 43	16 01 88	7 52	0		
1	191	38.9	51.4	22	34.8 ¹³⁸	35.9 ¹¹¹	58	17	57	43	11 84	41	4		
2	206	39.0	50.5	37	07.7 ¹³⁹	24.8 ¹¹¹	56	21	17 59	42	20 80	31	8		
3	221	39.1	49.6	51	40.6 ¹³⁹	13.6 ¹¹²	54	25	18 01	42	28 77	23	10		
4	236	39.2	48.7	66	13.6 ¹⁴⁰	+18 02.3 ¹¹³	52	29	03	42	35 74	15	13		
5	251	39.3	-9 47.7	80	46.6 ¹⁴⁰	+17 50.9 ¹¹⁴	50	17 32	18 05	18 42	16 41 72	7 08	15		
6	266	39.4	-9 46.8	95	19.7 ¹⁴¹	+17 39.5 ¹¹⁴	45	17 39	18 09	18 43	16 54 67	6 53	20		
7	281	39.5	45.9	109	52.9 ¹⁴²	28.0 ¹¹⁵	40	45	13	44	17 05 63	41	24		
8	296	39.5	45.0	124	26.0 ¹⁴¹	16.4 ¹¹⁶	35	50	16	45	15 59	30	28		
9	311	39.6	44.1	138	59.3 ¹⁴³	+17 04.7 ¹¹⁷	30	17 55	19	47	23 56	21	30		
10	326	39.7	43.2	153	32.5 ¹⁴²	+16 52.9 ¹¹⁸	20	18 03	25	51	37 51	6 05	35		
11	341	39.8	-9 42.2	168	05.9 ¹⁴⁴	+16 41.1 ¹¹⁸	10 N	18 10	18 31	18 56	17 49 47	5 51	39		
12	356	39.9	-9 41.3	182	39.2 ¹⁴³	+16 29.2 ¹¹⁹	0	18 17	18 38	19 02	18 00 43	5 38	43		
13	11	40.0	40.4	197	12.6 ¹⁴⁴	17.2 ¹²⁰	10 S	24	45	10	12 38	24	48		
14	26	40.1	39.5	211	46.1 ¹⁴⁵	+16 05.2 ¹²⁰	20	31	18 53	20	24 34	5 10	52		
15	41	40.2	38.6	226	19.6 ¹⁴⁵	+15 53.1 ¹²¹	30	40	19 04	33	37 30	4 53	57		
16	56	40.3	37.6	240	53.1 ¹⁴⁵	40.9 ¹²²	35	45	11	42	45 27	44	59		
17	71	40.4	-9 36.7	255	26.7 ¹⁴⁶	+15 28.6 ¹²³	40	18 50	19 18	19 52	18 54 23	4 32	64		
18	86	40.4	-9 35.8	270	00.3 ¹⁴⁶	+15 16.3 ¹²³	45	18 57	19 28	20 05	19 05 19	4 19	68		
19	101	40.5	34.9	284	34.0 ¹⁴⁷	+15 03.9 ¹²⁴	50	19 05	39	21	17 15	4 03	73		
20	116	40.6	34.0	299	07.7 ¹⁴⁷	+14 51.4 ¹²⁵	52	09	45	29	23 12	3 56	75		
21	131	40.7	33.0	313	41.4 ¹⁴⁷	38.9 ¹²⁵	54	13	51	38	30 9	47	78		
22	146	40.8	32.1	328	15.2 ¹⁴⁸	26.3 ¹²⁶	56	18	19 58	20 48	37 6	38	81		
23	161	40.9	31.2	342	49.1 ¹⁴⁹	13.6 ¹²⁷	58	23	20 05	21 01	45 3	27	85		
24	176	41.0	-9 30.3	357	22.9 ¹⁴⁸	+14 00.9 ¹²⁷	60 S	19 28	20 14	21 15	19 54 0	3 14	90		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 13 ^h 45 ^m 8		Mag: -3.9 PMG: 11 ^h 41 ^m			Mag: +1.2 PMG: 8 ^h 38 ^m			Mag: -2.4 PMG: 2 ^h 57 ^m			Mag: -0.1 PMG: 21 ^h 16 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	152	59.0	184	49.7	-14 11.0	230	24.9	-23 27.1	315	38.4	-5 43.7	40	12.1	+21 52.2	
1	168	01.5	199	49.2	10.0	245	25.5	27.0	330	41.0	43.6	55	14.7	52.2	
2	183	03.9	214	48.6	08.9	260	26.0	26.9	345	43.6	43.6	70	17.3	52.2	
3	198	06.4	229	48.0	07.9	275	26.5	26.8	0	46.2	43.5	85	19.9	52.3	
4	213	08.9	244	47.4	06.9	290	27.0	26.6	15	48.8	43.4	100	22.4	52.3	
5	228	11.3	259	46.8	-14 05.9	305	27.6	-23 26.5	30	51.4	-5 43.4	115	25.0	+21 52.3	
6	243	13.8	274	46.2	-14 04.9	320	28.1	-23 26.4	45	54.0	-5 43.3	130	27.6	+21 52.3	
7	258	16.2	289	45.6	03.9	335	28.6	26.3	60	56.7	43.2	145	30.2	52.4	
8	273	18.7	304	45.1	02.9	350	29.1	26.2	75	59.3	43.1	160	32.8	52.4	
9	288	21.2	319	44.5	01.9	5	29.7	26.0	91	01.9	43.1	175	35.4	52.4	
10	303	23.6	334	43.9	-14 00.9	20	30.2	25.9	106	04.5	43.0	190	38.0	52.4	
11	318	26.1	349	43.3	-13 59.9	35	30.7	-23 25.8	121	07.1	-5 42.9	205	40.6	+21 52.4	
12	333	28.6	4 42.7	-13 58.8	50 31.2	-23 25.7	136	09.7	-5 42.9	220	43.2	+21 52.5			
13	348	31.0	19 42.1	57.8	65 31.8	25.6	151	12.3	42.8	235	45.8	52.5			
14	3 33.5	34 41.6	56.8	80 32.3	25.4	166	14.9	42.7	250	48.3	52.5				
15	18 36.0	49 41.0	55.8	95 32.8	25.3	181	17.6	42.6	265	50.9	52.5				
16	33 38.4	64 40.4	54.8	110 33.3	25.2	196	20.2	42.6	280	53.5	52.6				
17	48 40.9	79 39.8	-13 53.8	125 33.9	-23 25.1	211	22.8	-5 42.5	295	56.1	+21 52.6				
18	63 43.4	94 39.2	-13 52.7	140 34.4	-23 24.9	226	25.4	-5 42.4	310	58.7	+21 52.6				
19	78 45.8	109 38.7	51.7	155 34.9	24.8	241	28.0	42.4	326	01.3	52.6				
20	93 48.3	124 38.1	50.7	170 35.4	24.7	256	30.6	42.3	341	03.9	52.6				
21	108 50.7	139 37.5	49.7	185 36.0	24.6	271	33.3	42.2	356	06.5	52.7				
22	123 53.2	154 36.9	48.7	200 36.5	24.4	286	35.9	42.1	11 09.0	52.7					
23	138 55.7	169 36.4	47.6	215 37.0	24.3	301	38.5	42.1	26 11.6	52.7					
24	153 58.1	184 35.8	-13 46.6	230 37.5	-23 24.2	316	41.1	-5 42.0	41 14.2	+21 52.7					
Dif	—	-6	+10	+5	+1	+26	+1	+26	0						

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'2			Edad: 15 ^d 1 PHE { 4 ^h : 54'9 12 ^h : 55'0 20 ^h : 55'1												
	PMG: 12 ^h 13 ^m 2			SD: 14'9 PMG: 0 ^h 11 ^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	176	41.0	-9 30.3	357	22.9	+14	00.9	60 N	5	42	6	30	7	13	17	29
1	191	41.1	29.3	11	56.8 ¹⁴⁹	+13	48.1 ¹²⁸	58	43	28	08	35	83	45	3	
2	206	41.2	28.4	26	30.8 ¹⁵⁰		35.2 ¹²⁹	56	43	26	04	40	80	39	6	
3	221	41.3	27.5	41	04.7 ¹⁴⁹		22.3 ¹²⁹	54	43	24	7	00	45	77	33	9
4	236	41.4	26.6	55	38.7 ¹⁵⁰	+13	09.3 ¹³⁰	52	43	22	6	57	49	75	28	11
5	251	41.5	-9 25.6	70	12.8 ¹⁵¹	+12	56.3 ¹³⁰	50	5	43	6	53	17	53	72	7
6	266	41.6	-9 24.7	84	46.9 ¹⁵¹	+12	43.2 ¹³¹	45	5	43	6	17	6	47	18	01
7	281	41.6	23.8	99	21.0 ¹⁵¹		30.1 ¹³¹	40	42	13	41	08	63	7	05	22
8	296	41.7	22.9	113	55.1 ¹⁵¹		16.9 ¹³²	35	41	10	36	14	59	6	58	25
9	311	41.8	21.9	128	29.3 ¹⁵²	+12	03.6 ¹³³	30	39	07	31	19	56	51	29	
10	326	41.9	21.0	143	03.5 ¹⁵²	+11	50.3 ¹³³	20	35	6	01	23	28	51	40	34
11	341	42.0	-9 20.1	157	37.7 ¹⁵²	+11	36.9 ¹³⁴	10 N	5	31	5	55	6	16	18	36
12	356	42.1	-9 19.2	172	12.0 ¹⁵³	+11	23.5 ¹³⁴	0	5	25	5	49	6	10	18	43
13	11	42.2	18.2	186	46.3 ¹⁵³	+11	10.0 ¹³⁵	10 S	17	42	6	03	50	38	12	46
14	26	42.3	17.3	201	20.6 ¹⁵³	+10	56.5 ¹³⁵	20	5	07	33	5	56	18	58	33
15	41	42.4	16.4	215	55.0 ¹⁵⁴		42.9 ¹³⁶	30	4	54	23	47	19	07	27	5
16	56	42.5	15.5	230	29.3 ¹⁵³		29.2 ¹³⁷	35	45	16	42	12	24	43	60	
17	71	42.6	-9 14.5	245	03.7 ¹⁵⁴	+10	15.5 ¹³⁷	40	4	35	5	09	5	37	19	17
18	86	42.7	-9 13.6	259	38.2 ¹⁵⁵	+10	01.8 ¹³⁷	45	4	23	5	00	5	30	19	24
19	101	42.8	12.7	274	12.6 ¹⁵⁴	+9	48.0 ¹³⁸	50	4	06	4	48	22	32	12	16
20	116	42.9	11.8	288	47.1 ¹⁵⁵		34.2 ¹³⁸	52	3	58	43	19	35	11	11	74
21	131	43.0	10.8	303	21.6 ¹⁵⁵		20.3 ¹³⁹	54	49	37	14	39	8	5	05	77
22	146	43.1	09.9	317	56.1 ¹⁵⁵	+9	06.4 ¹³⁹	56	39	30	10	43	6	4	59	80
23	161	43.2	09.0	332	30.6 ¹⁵⁵	+8	52.5 ¹³⁹	58	27	22	5	05	48	3	52	83
24	176	43.3	-9 08.0	347	05.2 ¹⁵⁶	+8	38.5 ¹⁴⁰	60 S	3	12	4	13	4	59	19	54

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 13 ^h 41 ^m 9		Mag: -3.9 PMG: 11 ^h 42 ^m		Mag: +1.2 PMG: 8 ^h 37 ^m		Mag: -2.4 PMG: 2 ^h 53 ^m		Mag: -0.1 PMG: 21 ^h 11 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	153	58.1	184	35.8	-13	46.6	230	37.5	-23	24.2
1	169	00.6	199	35.2		45.6	245	38.1		24.1
2	184	03.1	214	34.6		44.6	260	38.6		23.9
3	199	05.5	229	34.1		43.5	275	39.1		23.8
4	214	08.0	244	33.5		42.5	290	39.6		23.7
5	229	10.5	259	32.9	-13	41.5	305	40.2	-23	23.5
6	244	12.9	274	32.3	-13	40.5	320	40.7	-23	23.4
7	259	15.4	289	31.8		39.4	335	41.2		23.3
8	274	17.9	304	31.2		38.4	350	41.7		23.1
9	289	20.3	319	30.6		37.4	5	42.3		23.0
10	304	22.8	334	30.1		36.4	20	42.8		22.9
11	319	25.2	349	29.5	-13	35.3	35	43.3	-23	22.8
12	334	27.7	4	28.9	-13	34.3	50	43.9	-23	22.6
13	349	30.2	19	28.3		33.3	65	44.4		22.5
14	4	32.6	34	27.8		32.2	80	44.9		22.4
15	19	35.1	49	27.2		31.2	95	45.4		22.2
16	34	37.6	64	26.6		30.2	110	46.0		22.1
17	49	40.0	79	26.1	-13	29.1	125	46.5	-23	22.0
18	64	42.5	94	25.5	-13	28.1	140	47.0	-23	21.8
19	79	45.0	109	24.9		27.1	155	47.5		21.7
20	94	47.4	124	24.4		26.0	170	48.1		21.6
21	109	49.9	139	23.8		25.0	185	48.6		21.4
22	124	52.3	154	23.2		24.0	200	49.1		21.3
23	139	54.8	169	22.7		22.9	215	49.6		21.2
24	154	57.3	184	22.1	-13	21.9	230	50.2	-23	21.0
Dif	—		-6		+10		+5		+1	
							+26		+1	
									+26	
									0	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 12 ^h 13 ^m 0			Edad: 16 ^d 1 PHE { 4 ^h : 55:2 12 ^h : 55:4 20 ^h : 55:5 SD: 15:0 PMG: 0 ^h 53 ^m R°: 42 ^m					Civil			Náutico		Hora R°	
	hG ☉	Dec		hG ☾	Dif	Dec			Dif						
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	h m	h m	
0	176	43.3	-9 08.0	347	05.2	+8 38.5		60 N	17 17	18 00	18 48	18 56	87	7 52 **	
1	191	43.4	07.1	1	39.8 ¹⁵⁶	24.4 ¹⁴¹		58	22	02	47	18 58	84	48 2	
2	206	43.5	06.2	16	14.3 ¹⁵⁵	+8 10.3 ¹⁴¹		56	26	03	46	19 00	80	45 5	
3	221	43.6	05.3	30	48.9 ¹⁵⁶	+7 56.2 ¹⁴¹		54	29	05	46	02 77		42 8	
4	236	43.7	04.3	45	23.6 ¹⁵⁷	42.0 ¹⁴²		52	33	07	46	04 74		39 10	
5	251	43.8	-9 03.4	59	58.2 ¹⁵⁶	+7 27.8 ¹⁴²		50	17 35	18 08	18 46	19 05	73	7 37 12	
6	266	43.9	-9 02.5	74	32.9 ¹⁵⁷	+7 13.6 ¹⁴²		45	17 42	18 12	18 46	19 08	68	7 31 17	
7	281	44.0	01.5	89	07.5 ¹⁵⁶	+6 59.3 ¹⁴³		40	47	15	46	11 63		27 21	
8	296	44.1	-9 00.6	103	42.2 ¹⁵⁷	45.0 ¹⁴³		35	52	18	47	13 60		23 24	
9	311	44.2	-8 59.7	118	16.9 ¹⁵⁷	30.6 ¹⁴⁴		30	17 56	20	48	15 57		20 27	
10	326	44.3	58.8	132	51.6 ¹⁵⁷	16.3 ¹⁴³		20	18 04	26	52	19 51		14 32	
11	341	44.4	-8 57.8	147	26.3 ¹⁵⁷	+6 01.8 ¹⁴⁵		10 N	18 10	18 31	18 56	19 22	46	7 08 37	
12	356	44.5	-8 56.9	162	01.0 ¹⁵⁷	+5 47.4 ¹⁴⁴		0	18 16	18 37	19 02	19 25	42	7 03 42	
13	11	44.6	56.0	176	35.7 ¹⁵⁷	32.9 ¹⁴⁵		10 S	23	44	09	28 37		6 58 46	
14	26	44.7	55.0	191	10.4 ¹⁵⁷	18.4 ¹⁴⁵		20	30	18 52	18	31 32		53 50	
15	41	44.8	54.1	205	45.2 ¹⁵⁸	+5 03.8 ¹⁴⁶		30	38	19 02	31	34 28		46 56	
16	56	44.9	53.2	220	19.9 ¹⁵⁷	+4 49.3 ¹⁴⁵		35	42	08	39	36 25		43 59	
17	71	45.0	-8 52.2	234	54.6 ¹⁵⁷	+4 34.7 ¹⁴⁶		40	18 47	19 15	19 49	19 39	20	6 38 63	
18	86	45.1	-8 51.3	249	29.4 ¹⁵⁸	+4 20.0 ¹⁴⁷		45	18 54	19 24	20 01	19 41	17	6 34 67	
19	101	45.2	50.4	264	04.1 ¹⁵⁷	+4 05.4 ¹⁴⁶		50	19 01	35	16	44 13		28 72	
20	116	45.3	49.4	278	38.9 ¹⁵⁸	+3 50.7 ¹⁴⁷		52	05	40	24	46 10		25 74	
21	131	45.4	48.5	293	13.6 ¹⁵⁷	36.0 ¹⁴⁷		54	08	46	32	47 8		22 77	
22	146	45.5	47.6	307	48.4 ¹⁵⁸	21.3 ¹⁴⁷		56	13	52	42	49 5		19 79	
23	161	45.6	46.6	322	23.1 ¹⁵⁷	+3 06.5 ¹⁴⁸		58	17	19 59	20 54	51 2		15 83	
24	176	45.7	-8 45.7	336	57.8 ¹⁵⁷	+2 51.8 ¹⁴⁷		60 S	19 22	20 08	21 07	19 53	**	6 11 86	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG 13 ^h 37 ^m 9		Mag: -3.9 PMG: 11 ^h 43 ^m		Mag: +1.2 PMG: 8 ^h 36 ^m		Mag: -2.4 PMG: 2 ^h 49 ^m		Mag: -0.1 PMG: 21 ^h 07 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	154	57.3	184	22.1	230	50.2	317	44.0	42	16.2					
1	169	59.7	199	21.5	245	50.7	332	46.6	57	18.8					
2	185	02.2	214	21.0	260	51.2	347	49.2	72	21.4					
3	200	04.7	229	20.4	275	51.7	2	51.9	87	24.0					
4	215	07.1	244	19.9	290	52.3	17	54.5	102	26.6					
5	230	09.6	259	19.3	305	52.8	32	57.1	117	29.1					
6	245	12.1	274	18.7	320	53.3	47	59.7	132	31.7					
7	260	14.5	289	18.2	335	53.8	63	02.4	147	34.3					
8	275	17.0	304	17.6	350	54.4	78	05.0	162	36.9					
9	290	19.5	319	17.0	5	54.9	93	07.6	177	39.5					
10	305	21.9	334	16.5	20	55.4	108	10.2	192	42.0					
11	320	24.4	349	15.9	35	55.9	123	12.9	207	44.6					
12	335	26.8	4	15.4	50	56.5	138	15.5	222	47.2					
13	350	29.3	19	14.8	65	57.0	153	18.1	237	49.8					
14	5	31.8	34	14.3	80	57.5	168	20.7	252	52.4					
15	20	34.2	49	13.7	95	58.1	183	23.4	267	54.9					
16	35	36.7	64	13.1	110	58.6	198	26.0	282	57.5					
17	50	39.2	79	12.6	125	59.1	213	28.6	298	00.1					
18	65	41.6	94	12.0	140	59.6	228	31.2	313	02.7					
19	80	44.1	109	11.5	156	00.2	243	33.9	328	05.3					
20	95	46.6	124	10.9	171	00.7	258	36.5	343	07.8					
21	110	49.0	139	10.4	186	01.2	273	39.1	358	10.4					
22	125	51.5	154	09.8	201	01.7	288	41.8	373	13.0					
23	140	53.9	169	09.3	216	02.3	303	44.4	388	15.6					
24	155	56.4	184	08.7	231	02.8	318	47.0	403	18.2					
Dif	—		-6	+10	+5	+1	+26	+1	+26	0					

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'2			Edad: 17 ^d 1 PHE { 4 ^h : 55'7 12 ^h : 55'8 20 ^h : 56'0											
	PMG: 12 ^h 12 ^m 9				SD: 15'1			PMG: 1 ^h 35 ^m R°: 42 ^m							
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	176	45.7	-8	45.7	336	57.8	+2	51.8	60 N	5 37	6 25	7 07	20 23	89	7 51 **
1	191	45.8		44.8	351	32.6 ¹⁵⁸		37.0 ¹⁴⁸	58	38	23	7 03	22 85		50 3
2	206	45.9		43.8	6	07.3 ¹⁵⁷		22.2 ¹⁴⁸	56	38	21	6 59	20 83		50 5
3	221	46.0		42.9	20	42.0 ¹⁵⁷	+2	07.3 ¹⁴⁹	54	39	20	55	19 80		50 8
4	236	46.1		42.0	35	16.7 ¹⁵⁷	+1	52.5 ¹⁴⁸	52	39	18	52	18 77		49 11
5	251	46.2	-8	41.0	49	51.4 ¹⁵⁷	+1	37.6 ¹⁴⁹	50	5 39	6 17	6 49	20 18	74	7 49 12
6	266	46.4	-8	40.1	64	26.1 ¹⁵⁷	+1	22.8 ¹⁴⁸	45	5 40	6 14	6 43	20 16	69	7 48 18
7	281	46.5		39.2	79	00.8 ¹⁵⁷	+1	07.9 ¹⁴⁹	40	39	11	38	14 65		48 21
8	296	46.6		38.2	93	35.4 ¹⁵⁶	+0	53.0 ¹⁴⁹	35	38	08	33	13 61		47 25
9	311	46.7		37.3	108	10.1 ¹⁵⁷		38.0 ¹⁵⁰	30	37	05	29	12 58		47 28
10	326	46.8		36.3	122	44.7 ¹⁵⁶		23.1 ¹⁴⁹	20	34	6 00	22	10 52		46 33
11	341	46.9	-8	35.4	137	19.3 ¹⁵⁶	+0	08.2 ¹⁴⁹	10 N	5 30	5 54	6 16	20 08	48	7 45 38
12	356	47.0	-8	34.5	151	53.9 ¹⁵⁶	-0	06.8 ¹⁵⁰	0	5 24	5 49	6 10	20 07	43	7 45 42
13	11	47.1		33.5	166	28.5 ¹⁵⁶		21.8 ¹⁵⁰	10 S	17	42	6 03	05 39		44 47
14	26	47.2		32.6	181	03.1 ¹⁵⁶		36.7 ¹⁴⁹	20	5 08	34	5 57	03 34		43 52
15	41	47.3		31.7	195	37.6 ¹⁵⁵	-0	51.7 ¹⁵⁰	30	4 56	24	49	02 28		42 57
16	56	47.4		30.7	210	12.1 ¹⁵⁵	-1	06.7 ¹⁵⁰	35	48	18	44	20 01	25	42 60
17	71	47.5	-8	29.8	224	46.6 ¹⁵⁵	-1	21.7 ¹⁵⁰	40	4 38	5 11	5 39	19 59	22	7 41 64
18	86	47.6	-8	28.9	239	21.1 ¹⁵⁵	-1	36.7 ¹⁵⁰	45	4 26	5 03	5 33	19 58	18	7 41 68
19	101	47.7		27.9	253	55.6 ¹⁵⁵	-1	51.7 ¹⁵⁰	50	10	4 52	26	57 13		40 73
20	116	47.9		27.0	268	30.0 ¹⁵⁴	-2	06.7 ¹⁵⁰	52	4 03	47	22	56 11		39 76
21	131	48.0		26.0	283	04.4 ¹⁵⁴		21.7 ¹⁵⁰	54	3 54	41	19	55 8		39 78
22	146	48.1		25.1	297	38.8 ¹⁵⁴		36.7 ¹⁵⁰	56	45	35	14	54 6		38 81
23	161	48.2		24.2	312	13.1 ¹⁵³	-2	51.7 ¹⁵⁰	58	33	27	10	53 3		38 84
24	176	48.3	-8	23.2	326	47.4 ¹⁵³	-3	06.7 ¹⁵⁰	60 S	3 20	4 19	5 05	19 52	0	7 37 88

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 13 ^h 34 ^m 0		Mag: -3.9 PMG: 11 ^h 44 ^m		Mag: +1.2 PMG: 8 ^h 36 ^m		Mag: -2.4 PMG: 2 ^h 44 ^m		Mag: -0.1 PMG: 21 ^h 03 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	155	56.4	184	08.7	-12	56.8	231	02.8	-23	17.6
1	170	58.9	199	08.1		55.8	246	03.3		17.5
2	186	01.3	214	07.6		54.7	261	03.8		17.3
3	201	03.8	229	07.0		53.6	276	04.4		17.2
4	216	06.3	244	06.5		52.6	291	04.9		17.0
5	231	08.7	259	05.9	-12	51.5	306	05.4	-23	16.9
6	246	11.2	274	05.4	-12	50.5	321	05.9	-23	16.8
7	261	13.7	289	04.8		49.4	336	06.5		16.6
8	276	16.1	304	04.3		48.4	351	07.0		16.5
9	291	18.6	319	03.7		47.3	6	07.5		16.3
10	306	21.1	334	03.2		46.2	21	08.1		16.2
11	321	23.5	349	02.6	-12	45.2	36	08.6	-23	16.0
12	336	26.0	4	02.1	-12	44.1	51	09.1	-23	15.9
13	351	28.4	19	01.5		43.1	66	09.6		15.7
14	6	30.9	34	01.0		42.0	81	10.2		15.6
15	21	33.4	49	00.5		40.9	96	10.7		15.4
16	36	35.8	63	59.9		39.9	111	11.2		15.3
17	51	38.3	78	59.4	-12	38.8	126	11.7	-23	15.1
18	66	40.8	93	58.8	-12	37.8	141	12.3	-23	15.0
19	81	43.2	108	58.3		36.7	156	12.8		14.8
20	96	45.7	123	57.7		35.6	171	13.3		14.6
21	111	48.2	138	57.2		34.6	186	13.8		14.5
22	126	50.6	153	56.6		33.5	201	14.4		14.3
23	141	53.1	168	56.1		32.4	216	14.9		14.2
24	156	55.5	183	55.6	-12	31.4	231	15.4	-23	14.0
Dif	—		-5		+11		+5		+2	
							+26		+1	
									+26	
									0	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:1			Edad: 18 ^d 1 PHE { 4 ^h : 56:2 12 ^h : 56:3 20 ^h : 56:5											
	PMG: 12 ^h 12 ^m 7			SD: 15:3 PMG: 2 ^h 17 ^m R°: 43 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m	m	h m	m	
0	176	48.3	-8 23.2	326	47.4	-3 06.7	60 N	17 22	18 05	18 53	21 52	94	7 50	**	
1	191	48.4	22.3	341	21.7 ¹⁵³	21.7 ¹⁵⁰	58	26	06	52	47	90	53	3	
2	206	48.5	21.3	355	56.0 ¹⁵³	36.7 ¹⁵⁰	56	30	08	51	43	86	55	6	
3	221	48.6	20.4	10	30.2 ¹⁵²	-3 51.7 ¹⁵⁰	54	33	09	50	39	82	7 58	8	
4	236	48.7	19.5	25	04.4 ¹⁵²	-4 06.6 ¹⁴⁹	52	36	10	49	35	80	8 00	11	
5	251	48.8	-8 18.5	39	38.5 ¹⁵¹	-4 21.6 ¹⁵⁰	50	17 39	18 11	18 49	21 32	77	8 01	14	
6	266	49.0	-8 17.6	54	12.6 ¹⁵¹	-4 36.6 ¹⁵⁰	45	17 45	18 14	18 48	21 25	72	8 06	18	
7	281	49.1	16.6	68	46.7 ¹⁵¹	-4 51.6 ¹⁵⁰	40	50	17	48	19	67	09	22	
8	296	49.2	15.7	83	20.7 ¹⁵⁰	-5 06.5 ¹⁴⁹	35	54	19	49	14	64	12	26	
9	311	49.3	14.8	97	54.7 ¹⁵⁰	21.5 ¹⁵⁰	30	17 58	22	50	10	60	15	29	
10	326	49.4	13.8	112	28.7 ¹⁵⁰	36.4 ¹⁴⁹	20	18 04	27	52	21 02	55	19	35	
11	341	49.5	-8 12.9	127	02.6 ¹⁴⁹	-5 51.3 ¹⁴⁹	10 N	18 10	18 31	18 56	20 56	49	8 23	40	
12	356	49.6	-8 11.9	141	36.4 ¹⁴⁸	-6 06.2 ¹⁴⁹	0	18 16	18 37	19 01	20 50	45	8 27	44	
13	11	49.7	11.0	156	10.2 ¹⁴⁸	21.1 ¹⁴⁹	10 S	22	43	08	44	40	31	48	
14	26	49.9	10.0	170	44.0 ¹⁴⁸	36.0 ¹⁴⁹	20	28	18 50	17	37	36	35	53	
15	41	50.0	09.1	185	17.7 ¹⁴⁷	-6 50.8 ¹⁴⁸	30	35	19 00	28	30	31	39	59	
16	56	50.1	08.2	199	51.4 ¹⁴⁷	-7 05.6 ¹⁴⁸	35	40	05	36	26	27	42	62	
17	71	50.2	-8 07.2	214	25.0 ¹⁴⁶	-7 20.5 ¹⁴⁹	40	18 44	19 12	19 45	20 21	24	8 45	66	
18	86	50.3	-8 06.3	228	58.6 ¹⁴⁶	-7 35.3 ¹⁴⁸	45	18 50	19 20	19 57	20 16	20	8 49	70	
19	101	50.4	05.3	243	32.1 ¹⁴⁵	-7 50.0 ¹⁴⁷	50	18 57	31	20 11	10	14	53	75	
20	116	50.5	04.4	258	05.6 ¹⁴⁵	-8 04.8 ¹⁴⁸	52	19 00	35	19	07	12	55	78	
21	131	50.7	03.4	272	39.0 ¹⁴⁴	19.5 ¹⁴⁷	54	04	41	27	03	10	57	81	
22	146	50.8	02.5	287	12.3 ¹⁴³	34.2 ¹⁴⁷	56	07	47	36	20 00	7	8 59	84	
23	161	50.9	01.6	301	45.6 ¹⁴³	-8 48.9 ¹⁴⁷	58	12	19 54	47	19 56	4	9 02	87	
24	176	51.0	-8 00.6	316	18.9 ¹⁴³	-9 03.5 ¹⁴⁶	60 S	19 17	20 01	20 59	19 52	0	9 05	91	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 13 ^h 30 ^m 1		Mag: -3.9 PMG: 11 ^h 45 ^m		Mag: +1.2 PMG: 8 ^h 35 ^m		Mag: -2.4 PMG: 2 ^h 40 ^m		Mag: -0.1 PMG: 20 ^h 59 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	156	55.5	183 55.6	-12 31.4	231 15.4	-23 14.0	319 50.2	-5 36.6	44 20.0	+21 54.2
1	171	58.0	198 55.0	30.3	246 16.0	13.9	334 52.8	36.5	59 22.5	54.3
2	187	00.5	213 54.5	29.2	261 16.5	13.7	349 55.5	36.4	74 25.1	54.3
3	202	02.9	228 53.9	28.2	276 17.0	13.6	4 58.1	36.3	89 27.7	54.3
4	217	05.4	243 53.4	27.1	291 17.5	13.4	20 00.7	36.2	104 30.3	54.3
5	232	07.9	258 52.8	-12 26.0	306 18.1	-23 13.3	35 03.4	-5 36.2	119 32.8	+21 54.3
6	247	10.3	273 52.3	-12 25.0	321 18.6	-23 13.1	50 06.0	-5 36.1	134 35.4	+21 54.4
7	262	12.8	288 51.8	23.9	336 19.1	12.9	65 08.7	36.0	149 38.0	54.4
8	277	15.3	303 51.2	22.8	351 19.6	12.8	80 11.3	35.9	164 40.6	54.4
9	292	17.7	318 50.7	21.7	6 20.2	12.6	95 13.9	35.8	179 43.1	54.4
10	307	20.2	333 50.1	20.7	21 20.7	12.5	110 16.6	35.8	194 45.7	54.4
11	322	22.7	348 49.6	-12 19.6	36 21.2	-23 12.3	125 19.2	-5 35.7	209 48.3	+21 54.4
12	337	25.1	3 49.1	-12 18.5	51 21.7	-23 12.1	140 21.9	-5 35.6	224 50.8	+21 54.5
13	352	27.6	18 48.5	17.4	66 22.3	12.0	155 24.5	35.5	239 53.4	54.5
14	7	30.0	33 48.0	16.4	81 22.8	11.8	170 27.1	35.4	254 56.0	54.5
15	22	32.5	48 47.5	15.3	96 23.3	11.7	185 29.8	35.3	269 58.6	54.5
16	37	35.0	63 46.9	14.2	111 23.9	11.5	200 32.4	35.3	285 01.1	54.5
17	52	37.4	78 46.4	-12 13.1	126 24.4	-23 11.3	215 35.0	-5 35.2	300 03.7	+21 54.6
18	67	39.9	93 45.9	-12 12.1	141 24.9	-23 11.2	230 37.7	-5 35.1	315 06.3	+21 54.6
19	82	42.4	108 45.3	11.0	156 25.4	11.0	245 40.3	35.0	330 08.8	54.6
20	97	44.8	123 44.8	09.9	171 26.0	10.9	260 43.0	34.9	345 11.4	54.6
21	112	47.3	138 44.3	08.8	186 26.5	10.7	275 45.6	34.9	0 14.0	54.6
22	127	49.8	153 43.7	07.8	201 27.0	10.5	290 48.3	34.8	15 16.5	54.7
23	142	52.2	168 43.2	06.7	216 27.5	10.4	305 50.9	34.7	30 19.1	54.7
24	157	54.7	183 42.7	-12 05.6	231 28.1	-23 10.2	320 53.5	-5 34.6	45 21.7	+21 54.7

Dif	—	-5	+11	+5	+2	+26	+1	+26	0						

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'1 PMG: 12 ^h 12 ^m 5			Edad: 19 ^d 1 PHE { 4 ^h : 56'7 12 ^h : 56'8 20 ^h : 57'0 SD: 15'4 PMG: 3 ^h 00 ^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	176	51.0	-8	00.6	316	18.9	-9	03.5	60 N	5 31	6 19	7 01	23 26	101	7 49	1
1	191	51.1	-7	59.7	330	52.0 ¹⁴¹		18.2 ¹⁴⁷	58	33	18	6 57	17 95		7 56	4
2	206	51.2		58.7	345	25.2 ¹⁴²		32.7 ¹⁴⁵	56	34	17	54	09 90		8 01	8
3	221	51.3		57.8	359	58.2 ¹⁴⁰		-9 47.3 ¹⁴⁶	54	34	15	51	23 01	87	06	1
4	236	51.5		56.8	14	31.2 ¹⁴⁰		-10 01.8 ¹⁴⁵	52	35	14	48	22 55	83	11	13
5	251	51.6	-7	55.9	29	04.1 ¹³⁹		-10 16.3 ¹⁴⁵	50	5 36	6 13	6 45	22 49	81	8 15	16
6	266	51.7	-7	54.9	43	37.0 ¹³⁹		-10 30.8 ¹⁴⁵	45	5 36	6 10	6 40	22 37	74	8 24	21
7	281	51.8		54.0	58	09.8 ¹³⁸		45.2 ¹⁴⁴	40	36	08	35	26 71		31	26
8	296	51.9		53.1	72	42.5 ¹³⁷		-10 59.6 ¹⁴⁴	35	36	05	31	18 66		38	29
9	311	52.1		52.1	87	15.2 ¹³⁷		-11 13.9 ¹⁴³	30	35	6 03	27	22 10	63	44	32
10	326	52.2		51.2	101	47.8 ¹³⁶		28.3 ¹⁴⁴	20	33	5 58	21	21 57	58	8 54	37
11	341	52.3	-7	50.2	116	20.3 ¹³⁵		-11 42.5 ¹⁴²	10 N	5 29	5 54	6 15	21 45	54	9 03	42
12	356	52.4	-7	49.3	130	52.7 ¹³⁴		-11 56.8 ¹⁴³	0	5 24	5 48	6 09	21 35	49	9 11	47
13	11	52.5		48.3	145	25.1 ¹³⁴		-12 10.9 ¹⁴¹	10 S	18	42	6 04	24 45		19	51
14	26	52.6		47.4	159	57.4 ¹³³		25.1 ¹⁴²	20	5 09	35	5 57	13 40		28	56
15	41	52.8		46.4	174	29.6 ¹³²		39.2 ¹⁴¹	30	4 57	26	50	21 01	34	38	62
16	56	52.9		45.5	189	01.7 ¹³¹		-12 53.2 ¹⁴⁰	35	50	20	46	20 53	32	44	65
17	71	53.0	-7	44.5	203	33.8 ¹³¹		-13 07.2 ¹⁴⁰	40	4 40	5 14	5 41	20 45	28	9 51	69
18	86	53.1	-7	43.6	218	05.8 ¹³⁰		-13 21.2 ¹⁴⁰	45	4 29	5 05	5 36	20 36	23	9 59	73
19	101	53.2		42.6	232	37.7 ¹²⁹		35.1 ¹³⁹	50	14	4 55	29	24 19		10 08	79
20	116	53.4		41.7	247	09.5 ¹²⁸		-13 48.9 ¹³⁸	52	4 07	51	26	19 16		13	81
21	131	53.5		40.7	261	41.2 ¹²⁷		-14 02.7 ¹³⁸	54	3 59	45	23	13 13		18	84
22	146	53.6		39.8	276	12.9 ¹²⁷		16.5 ¹³⁸	56	50	39	19	07 9		23	88
23	161	53.7		38.8	290	44.5 ¹²⁶		30.2 ¹³⁷	58	39	33	15	20 00	5	29	92
24	176	53.8	-7	37.9	305	15.9 ¹²⁴		-14 43.8 ¹³⁶	60 S	3 27	4 25	5 10	19 52	1	10 36	97

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 13 ^h 26 ^m 1		Mag: -3.9 PMG: 11 ^h 46 ^m			Mag: +1.2 PMG: 8 ^h 34 ^m			Mag: -2.4 PMG: 2 ^h 36 ^m			Mag: -0.1 PMG: 20 ^h 55 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	157	54.7	183	42.7	-12	05.6	231	28.1	-23	10.2	320	53.5	-5	34.6	45	21.7	+21	54.7
1	172	57.2	198	42.1		04.5	246	28.6		10.0	335	56.2		34.5	60	24.3		54.7
2	187	59.6	213	41.6		03.4	261	29.1		09.9	350	58.8		34.5	75	26.8		54.7
3	203	02.1	228	41.1		02.3	276	29.7		09.7	6	01.5		34.4	90	29.4		54.8
4	218	04.5	243	40.5		01.3	291	30.2		09.5	21	04.1		34.3	105	32.0		54.8
5	233	07.0	258	40.0	-12	00.2	306	30.7	-23	09.4	36	06.8	-5	34.2	120	34.5	+21	54.8
6	248	09.5	273	39.5	-11	59.1	321	31.2	-23	09.2	51	09.4	-5	34.1	135	37.1	+21	54.8
7	263	11.9	288	38.9		58.0	336	31.8		09.0	66	12.0		34.0	150	39.7		54.8
8	278	14.4	303	38.4		56.9	351	32.3		08.9	81	14.7		34.0	165	42.2		54.9
9	293	16.9	318	37.9		55.8	6	32.8		08.7	96	17.3		33.9	180	44.8		54.9
10	308	19.3	333	37.4		54.8	21	33.4		08.5	111	20.0		33.8	195	47.4		54.9
11	323	21.8	348	36.8	-11	53.7	36	33.9	-23	08.4	126	22.6	-5	33.7	210	49.9	+21	54.9
12	338	24.3	3	36.3	-11	52.6	51	34.4	-23	08.2	141	25.3	-5	33.6	225	52.5	+21	54.9
13	353	26.7	18	35.8		51.5	66	34.9		08.0	156	27.9		33.5	240	55.1		54.9
14	8	29.2	33	35.3		50.4	81	35.5		07.9	171	30.6		33.5	255	57.6		55.0
15	23	31.6	48	34.7		49.3	96	36.0		07.7	186	33.2		33.4	271	00.2		55.0
16	38	34.1	63	34.2		48.2	111	36.5		07.5	201	35.8		33.3	286	02.8		55.0
17	53	36.6	78	33.7	-11	47.1	126	37.0	-23	07.4	216	38.5	-5	33.2	301	05.3	+21	55.0
18	68	39.0	93	33.2	-11	46.0	141	37.6	-23	07.2	231	41.1	-5	33.1	316	07.9	+21	55.0
19	83	41.5	108	32.6		45.0	156	38.1		07.0	246	43.8		33.0	331	10.5		55.1
20	98	44.0	123	32.1		43.9	171	38.6		06.8	261	46.4		33.0	346	13.0		55.1
21	113	46.4	138	31.6		42.8	186	39.2		06.7	276	49.1		32.9	1	15.6		55.1
22	128	48.9	153	31.1		41.7	201	39.7		06.5	291	51.7		32.8	16	18.2		55.1
23	143	51.4	168	30.5		40.6	216	40.2		06.3	306	54.4		32.7	31	20.7		55.1
24	158	53.8	183	30.0	-11	39.5	231	40.7	-23	06.2	321	57.0	-5	32.6	46	23.3	+21	55.1
Dif	—		-5		+11		+5		+2		+26		+1		+26			

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16 ^h PMG: 12 ^h 12 ^m 3			Edad: 20 ^d 1 PHE { 4 ^h : 57/2 12 ^h : 57/4 20 ^h : 57/6 PMG: 3 ^h 46 ^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	176	53.8	-7 37.9	305	15.9	-14 43.8	60 N	17 27	18 09	18 58	*** ** *	7 50	1	
1	191	54.0	36.9	319	47.3 ¹²⁴	-14 57.3 ¹³⁵	58	31	11	56	*** ** *	8 00	7	
2	206	54.1	36.0	334	18.7 ¹²⁴	-15 10.9 ¹³⁶	56	34	12	55	*** ** *	09	11	
3	221	54.2	35.0	348	49.9 ¹²²	24.3 ¹³⁴	54	37	13	54	*** ** *	17	15	
4	236	54.3	34.1	3	21.0 ¹²¹	37.7 ¹³⁴	52	40	14	53	*** ** *	24	19	
5	251	54.4	-7 33.1	17	52.0 ¹²⁰	-15 51.0 ¹³³	50	17 42	18 15	18 52	*** ** *	8 31	21	
6	266	54.6	-7 32.2	32	23.0 ¹²⁰	-16 04.3 ¹³³	45	17 47	18 17	18 51	23 51 77	8 45	27	
7	281	54.7	31.2	46	53.8 ¹¹⁸	17.5 ¹³²	40	52	19	50	37 72	8 57	31	
8	296	54.8	30.3	61	24.6 ¹¹⁸	30.6 ¹³¹	35	56	21	50	24 69	9 07	34	
9	311	54.9	29.3	75	55.2 ¹¹⁶	43.6 ¹³⁰	30	17 59	23	51	23 13 66	16	37	
10	326	55.1	28.4	90	25.8 ¹¹⁶	-16 56.6 ¹³⁰	20	18 05	27	53	22 55 61	31	43	
11	341	55.2	-7 27.4	104	56.3 ¹¹⁵	-17 09.5 ¹²⁹	10 N	18 10	18 32	18 56	22 39 57	9 45	47	
12	356	55.3	-7 26.5	119	26.6 ¹¹³	-17 22.3 ¹²⁸	0	18 16	18 36	19 01	22 24 53	9 58	51	
13	11	55.4	25.5	133	56.9 ¹¹³	35.1 ¹²⁸	10 S	21	42	07	22 09 50	10 10	55	
14	26	55.6	24.6	148	27.1 ¹¹²	-17 47.8 ¹²⁷	20	27	49	15	21 53 46	24	60	
15	41	55.7	23.6	162	57.2 ¹¹¹	-18 00.4 ¹²⁶	30	33	18 57	26	35 41	40	64	
16	56	55.8	22.7	177	27.1 ¹⁰⁹	12.9 ¹²⁵	35	37	19 03	33	25 38	10 49	68	
17	71	55.9	-7 21.7	191	57.0 ¹⁰⁹	-18 25.3 ¹²⁴	40	18 41	19 09	19 42	21 13 35	11 00	71	
18	86	56.0	-7 20.8	206	26.7 ¹⁰⁷	-18 37.7 ¹²⁴	45	18 47	19 17	19 53	20 59 31	11 12	76	
19	101	56.2	19.8	220	56.4 ¹⁰⁷	-18 49.9 ¹²²	50	53	26	20 07	43 24	27	82	
20	116	56.3	18.9	235	26.0 ¹⁰⁶	-19 02.1 ¹²²	52	56	31	13	35 22	34	85	
21	131	56.4	17.9	249	55.4 ¹⁰⁴	14.2 ¹²¹	54	18 59	36	21	26 19	42	88	
22	146	56.5	17.0	264	24.7 ¹⁰³	26.2 ¹²⁰	56	19 02	41	30	16 15	11 51	92	
23	161	56.7	16.0	278	54.0 ¹⁰³	38.1 ¹¹⁹	58	06	48	40	20 05 10	12 01	97	
24	176	56.8	-7 15.1	293	23.1 ¹⁰¹	-19 50.0 ¹¹⁹	60 S	19 11	19 55	20 52	19 53 4	12 13	103	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 13 ^h 22 ^m 2		Mag: -3.9 PMG: 11 ^h 46 ^m		Mag: +1.2 PMG: 8 ^h 33 ^m		Mag: -2.4 PMG: 2 ^h 32 ^m		Mag: -0.1 PMG: 20 ^h 51 ^m	
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	hG ♄	Dec	hG ♅	Dec
h	°	'	°	°	'	°	°	'	°	'
0	158	53.8	183 30.0	-11 39.5	231 40.7	-23 06.2	321 57.0	-5 32.6	46 23.3	+21 55.1
1	173	56.3	198 29.5	38.4	246 41.3	06.0	336 59.7	32.5	61 25.9	55.2
2	188	58.8	213 29.0	37.3	261 41.8	05.8	352 02.3	32.5	76 28.4	55.2
3	204	01.2	228 28.5	36.2	276 42.3	05.6	7 05.0	32.4	91 31.0	55.2
4	219	03.7	243 27.9	35.1	291 42.9	05.5	22 07.6	32.3	106 33.6	55.2
5	234	06.1	258 27.4	-11 34.0	306 43.4	-23 05.3	37 10.3	-5 32.2	121 36.1	+21 55.2
6	249	08.6	273 26.9	-11 32.9	321 43.9	-23 05.1	52 12.9	-5 32.1	136 38.7	+21 55.3
7	264	11.1	288 26.4	31.8	336 44.4	04.9	67 15.6	32.0	151 41.2	55.3
8	279	13.5	303 25.9	30.7	351 45.0	04.8	82 18.2	31.9	166 43.8	55.3
9	294	16.0	318 25.3	29.6	6 45.5	04.6	97 20.9	31.9	181 46.4	55.3
10	309	18.5	333 24.8	28.5	21 46.0	04.4	112 23.5	31.8	196 48.9	55.3
11	324	20.9	348 24.3	-11 27.4	36 46.6	-23 04.2	127 26.2	-5 31.7	211 51.5	+21 55.4
12	339	23.4	3 23.8	-11 26.3	51 47.1	-23 04.1	142 28.8	-5 31.6	226 54.1	+21 55.4
13	354	25.9	18 23.3	25.2	66 47.6	03.9	157 31.5	31.5	241 56.6	55.4
14	9	28.3	33 22.8	24.1	81 48.1	03.7	172 34.1	31.4	256 59.2	55.4
15	24	30.8	48 22.2	23.0	96 48.7	03.5	187 36.8	31.3	272 01.7	55.4
16	39	33.2	63 21.7	21.9	111 49.2	03.3	202 39.4	31.3	287 04.3	55.4
17	54	35.7	78 21.2	-11 20.8	126 49.7	-23 03.2	217 42.1	-5 31.2	302 06.9	+21 55.5
18	69	38.2	93 20.7	-11 19.7	141 50.3	-23 03.0	232 44.7	-5 31.1	317 09.4	+21 55.5
19	84	40.6	108 20.2	18.6	156 50.8	02.8	247 47.4	31.0	332 12.0	55.5
20	99	43.1	123 19.7	17.5	171 51.3	02.6	262 50.0	30.9	347 14.6	55.5
21	114	45.6	138 19.2	16.4	186 51.8	02.4	277 52.7	30.8	2 17.1	55.5
22	129	48.0	153 18.6	15.3	201 52.4	02.3	292 55.3	30.7	17 19.7	55.5
23	144	50.5	168 18.1	14.2	216 52.9	02.1	307 58.0	30.7	32 22.2	55.6
24	159	53.0	183 17.6	-11 13.1	231 53.4	-23 01.9	323 00.7	-5 30.6	47 24.8	+21 55.6
Dif	—		-5	+11	+5	+2	+27	+1	+26	0

UT	SOL			 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16 ^h 1			Edad: 21 ^d 1	PHE { 4 ^h : 57 ^m 8 12 ^h : 58 ^m 0 20 ^h : 58 ^m 2	SD: 15 ^h 7											
	PMG: 12 ^h 12 ^m 1						PMG: 4 ^h 36 ^m		R°: 55 ^m								
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	176	56.8	-7	15.1	293	23.1	-19	50.0	60 N	5	26	6	14	6	55	1	07
1	191	56.9		14.1	307	52.1	-20	01.7	58	27	13		52	0	52	100	8
2	206	57.1		13.1	322	21.0		13.3	56	29	12		49		39	94	20
3	221	57.2		12.2	336	49.8		24.8	54	30	11		46		28	90	32
4	236	57.3		11.2	351	18.5		36.3	52	31	10		44		18	86	43
5	251	57.4	-7	10.3	5	47.1	-20	47.6	50	5	32	6	09	6	41	0	10
6	266	57.6	-7	09.3	20	15.5	-20	58.8	45	5	33	6	07	6	36	**	**
7	281	57.7		08.4	34	43.9	-21	10.0	40	33	05		32		**	**	**
8	296	57.8		07.4	49	12.1		21.0	35	34	03		28		**	**	**
9	311	57.9		06.5	63	40.2		31.9	30	33	6	01	25		**	**	**
10	326	58.1		05.5	78	08.3		42.7	20	31	5	57	19		23	56	64
11	341	58.2	-7	04.6	92	36.2	-21	53.4	10 N	5	28	5	53	6	14	23	36
12	356	58.3	-7	03.6	107	03.9	-22	04.0	0	5	24	5	48	6	09	23	17
13	11	58.5		02.6	121	31.6		14.5	10 S	18	42		6	04	22	59	55
14	26	58.6		01.7	135	59.2		24.8	20	5	10	36	5	58		39	52
15	41	58.7	-7	00.7	150	26.6		35.1	30	4	59	27	52		16	49	44
16	56	58.8	-6	59.8	164	53.9		45.2	35	52	22		48		22	03	46
17	71	59.0	-6	58.8	179	21.2	-22	55.2	40	4	43	5	16	5	44	21	48
18	86	59.1	-6	57.9	193	48.2	-23	05.1	45	4	32	5	08	5	38	21	30
19	101	59.2		56.9	208	15.2		14.8	50	18	4	59	32		21	07	35
20	116	59.4		55.9	222	42.1		24.4	52	12	55		30		20	57	32
21	131	59.5		55.0	237	08.8		33.9	54	4	04	50	26		45	29	13
22	146	59.6		54.0	251	35.5		43.3	56	3	55	44	23		31	25	23
23	161	59.7		53.1	266	02.0	-23	52.6	58	45	38		19		20	15	20
24	176	59.9	-6	52.1	280	28.4	-24	01.7	60 S	3	34	4	31	5	15	19	57

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 13 ^h 18 ^m 3		Mag: -3.9 PMG: 11 ^h 47 ^m			Mag: +1.2 PMG: 8 ^h 32 ^m			Mag: -2.4 PMG: 2 ^h 28 ^m			Mag: -0.1 PMG: 20 ^h 47 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°		
0	159	53.0	183	17.6	-11	13.1	231	53.4	-23	01.9	323	00.7	-5	30.6	47	
1	174	55.4	198	17.1		12.0	246	54.0		01.7	338	03.3		30.5	62	
2	189	57.9	213	16.6		10.9	261	54.5		01.5	353	06.0		30.4	77	
3	205	00.4	228	16.1		09.8	276	55.0		01.3	8	08.6		30.3	92	
4	220	02.8	243	15.6		08.6	291	55.5		01.2	23	11.3		30.2	107	
5	235	05.3	258	15.1	-11	07.5	306	56.1	-23	01.0	38	13.9	-5	30.1	122	
6	250	07.7	273	14.6	-11	06.4	321	56.6	-23	00.8	53	16.6	-5	30.1	137	
7	265	10.2	288	14.1		05.3	336	57.1		00.6	68	19.2		30.0	152	
8	280	12.7	303	13.5		04.2	351	57.7		00.4	83	21.9		29.9	167	
9	295	15.1	318	13.0		03.1	6	58.2	-23	00.2	98	24.5		29.8	182	
10	310	17.6	333	12.5		02.0	21	58.7	-23	00.0	113	27.2		29.7	197	
11	325	20.1	348	12.0	-11	00.9	36	59.3	-22	59.9	128	29.9	-5	29.6	212	
12	340	22.5	3	11.5	-10	59.8	51	59.8	-22	59.7	143	32.5	-5	29.5	227	
13	355	25.0	18	11.0		58.6	67	00.3		59.5	158	35.2		29.4	242	
14	10	27.5	33	10.5		57.5	82	00.8		59.3	173	37.8		29.4	258	
15	25	29.9	48	10.0		56.4	97	01.4		59.1	188	40.5		29.3	273	
16	40	32.4	63	09.5		55.3	112	01.9		58.9	203	43.1		29.2	288	
17	55	34.9	78	09.0	-10	54.2	127	02.4	-22	58.7	218	45.8	-5	29.1	303	
18	70	37.3	93	08.5	-10	53.1	142	03.0	-22	58.5	233	48.5	-5	29.0	318	
19	85	39.8	108	08.0		51.9	157	03.5		58.4	248	51.1		28.9	333	
20	100	42.2	123	07.5		50.8	172	04.0		58.2	263	53.8		28.8	348	
21	115	44.7	138	07.0		49.7	187	04.6		58.0	278	56.4		28.7	3	
22	130	47.2	153	06.5		48.6	202	05.1		57.8	293	59.1		28.6	18	
23	145	49.6	168	06.0		47.5	217	05.6		57.6	309	01.8		28.6	33	
24	160	52.1	183	05.5	-10	46.4	232	06.1	-22	57.4	324	04.4	-5	28.5	48	
Dif	—		-5	+11			+5	+2			+27	+1			+26	0

UT	SOL		 LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:1		Edad: 22 ^d 1		PHE { 4 ^h : 58'4 12 ^h : 58'6 20 ^h : 58'8										
	PMG: 12 ^h 11 ^m 9		SD: 15:9			PMG: 5 ^h 31 ^m			R°: 59 ^m						
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m		
0	176	59.9	-6 52.1	280	28.4	-24 01.7	60 N	17 33	18 14	19 03	2 55 108		7 56 16		
1	192	00.0	51.2	294	54.7	10.7	58	36	15	19 01	32 97		8 20 26		
2	207	00.1	50.2	309	20.9	19.5	56	39	16	18 59	2 13 91		39 32		
3	222	00.3	49.2	323	47.0	28.2	54	41	17	57	1 58 86		8 55 36		
4	237	00.4	48.3	338	12.9	36.8	52	43	17	56	44 84		9 09 39		
5	252	00.5	-6 47.3	352	38.7	45.2	50	17 45	18 18	18 55	1 33 80		9 21 41		
6	267	00.7	-6 46.4	7	04.5	53.5	45	17 50	18 20	18 54	1 08 76		9 46 46		
7	282	00.8	45.4	21	30.1	01.6	40	54	21	53	0 49 73		10 06 49		
8	297	00.9	44.4	35	55.6	09.6	35	17 57	23	52	33 70		23 51		
9	312	01.1	43.5	50	21.0	17.5	30	18 00	24	52	0 19 68		10 38 53		
10	327	01.2	42.5	64	46.3	25.2	20	06	28	54	** ** *		11 03 55		
11	342	01.3	-6 41.6	79	11.4	32.7	10 N	18 11	18 32	18 56	** ** *		11 24 58		
12	357	01.5	-6 40.6	93	36.5	40.1	0	18 15	18 36	19 00	** ** *		11 44 61		
13	12	01.6	39.6	108	01.4	47.4	10 S	20	41	06	23 54 61		12 05 62		
14	27	01.7	38.7	122	26.3	54.5	20	25	47	13	31 59		26 65		
15	42	01.9	37.7	136	51.0	01.4	30	31	18 55	24	23 05 57		12 52 67		
16	57	02.0	36.8	151	15.7	08.2	35	34	19 00	30	22 49 57		13 06 69		
17	72	02.1	-6 35.8	165	40.2	14.8	40	18 38	19 06	19 39	22 31 55		13 24 71		
18	87	02.3	-6 34.8	180	04.6	21.2	45	18 43	19 13	19 49	22 09 54		13 45 73		
19	102	02.4	33.9	194	29.0	27.5	50	49	22	20 02	21 42 50		14 11 77		
20	117	02.5	32.9	208	53.2	33.7	52	51	26	08	29 48		24 79		
21	132	02.7	32.0	223	17.3	39.6	54	54	31	16	21 14 46		39 81		
22	147	02.8	31.0	237	41.4	45.4	56	18 57	36	24	20 56 43		14 56 84		
23	162	02.9	30.0	252	05.3	51.0	58	19 01	42	33	35 38		15 17 89		
24	177	03.1	-6 29.1	266	29.1	56.5	60 S	19 05	19 48	20 44	20 07 30		15 44 99		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 13 ^h 14 ^m 4		Mag: -3.9 PMG: 11 ^h 48 ^m		Mag: +1.2 PMG: 8 ^h 31 ^m		Mag: -2.4 PMG: 2 ^h 23 ^m		Mag: -0.1 PMG: 20 ^h 43 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	160	52.1	183 05.5	-10 46.4	232 06.1	-22 57.4	324 04.4	-5 28.5	48 26.2	+21 56.0
1	175	54.6	198 05.0	45.2	247 06.7	57.2	339 07.1	28.4	63 28.7	56.0
2	190	57.0	213 04.5	44.1	262 07.2	57.0	354 09.7	28.3	78 31.3	56.0
3	205	59.5	228 04.0	43.0	277 07.7	56.8	9 12.4	28.2	93 33.9	56.1
4	221	02.0	243 03.5	41.9	292 08.3	56.6	24 15.1	28.1	108 36.4	56.1
5	236	04.4	258 03.0	-10 40.8	307 08.8	-22 56.4	39 17.7	-5 28.0	123 39.0	+21 56.1
6	251	06.9	273 02.5	-10 39.6	322 09.3	-22 56.2	54 20.4	-5 27.9	138 41.5	+21 56.1
7	266	09.4	288 02.0	38.5	337 09.9	56.1	69 23.0	27.8	153 44.1	56.1
8	281	11.8	303 01.5	37.4	352 10.4	55.9	84 25.7	27.8	168 46.6	56.1
9	296	14.3	318 01.0	36.3	7 10.9	55.7	99 28.4	27.7	183 49.2	56.2
10	311	16.7	333 00.5	35.1	22 11.4	55.5	114 31.0	27.6	198 51.7	56.2
11	326	19.2	348 00.0	-10 34.0	37 12.0	-22 55.3	129 33.7	-5 27.5	213 54.3	+21 56.2
12	341	21.7	2 59.5	-10 32.9	52 12.5	-22 55.1	144 36.4	-5 27.4	228 56.9	+21 56.2
13	356	24.1	17 59.0	31.8	67 13.0	54.9	159 39.0	27.3	243 59.4	56.2
14	11	26.6	32 58.5	30.6	82 13.6	54.7	174 41.7	27.2	259 02.0	56.2
15	26	29.1	47 58.0	29.5	97 14.1	54.5	189 44.4	27.1	274 04.5	56.3
16	41	31.5	62 57.5	28.4	112 14.6	54.3	204 47.0	27.0	289 07.1	56.3
17	56	34.0	77 57.0	-10 27.3	127 15.2	-22 54.1	219 49.7	-5 26.9	304 09.6	+21 56.3
18	71	36.5	92 56.5	-10 26.1	142 15.7	-22 53.9	234 52.3	-5 26.9	319 12.2	+21 56.3
19	86	38.9	107 56.0	25.0	157 16.2	53.7	249 55.0	26.8	334 14.7	56.3
20	101	41.4	122 55.5	23.9	172 16.8	53.5	264 57.7	26.7	349 17.3	56.3
21	116	43.8	137 55.0	22.7	187 17.3	53.3	280 00.3	26.6	4 19.8	56.4
22	131	46.3	152 54.5	21.6	202 17.8	53.1	295 03.0	26.5	19 22.4	56.4
23	146	48.8	167 54.0	20.5	217 18.3	52.9	310 05.7	26.4	34 24.9	56.4
24	161	51.2	182 53.5	-10 19.4	232 18.9	-22 52.7	325 08.3	-5 26.3	49 27.5	+21 56.4
Dif	—		-5	+11	+5	+2	+27	+1	+26	

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'1 PMG: 12 ^h 11 ^m 7			Edad: 23 ^d 1 PHE { 4 ^h : 59'0 12 ^h : 59'1 20 ^h : 59'3 SD: 16'0 PMG: 6 ^h 30 ^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	177	03.1	-6 29.1	266	29.1	-26 56.5	60 N	5 20	6 08	6 50	4 43	84	8 12	47	
1	192	03.2	28.1	280	52.9 48	-27 01.8 53	58	22	07	47	4 09	78	8 46	53	
2	207	03.3	27.2	295	16.5 46	06.9 51	56	24	07	44	3 44	76	9 11	55	
3	222	03.5	26.2	309	40.1 46	11.9 50	54	25	06	41	24	74	31	55	
4	237	03.6	25.2	324	03.6 45	16.6 47	52	26	05	39	3 08	72	9 48	58	
5	252	03.7	-6 24.3	338	27.0 44	-27 21.2 46	50	5 27	6 05	6 37	2 53	72	10 02	59	
6	267	03.9	-6 23.3	352	50.3 43	-27 25.6 44	45	5 29	6 03	6 33	2 24	70	10 32	60	
7	282	04.0	22.3	7	13.5 42	29.8 42	40	30	02	29	2 02	68	10 55	61	
8	297	04.2	21.4	21	36.6 41	33.9 41	35	31	6 00	26	1 43	67	11 14	62	
9	312	04.3	20.4	35	59.7 41	37.8 39	30	31	5 59	23	27	66	31	61	
10	327	04.4	19.4	50	22.7 40	41.5 37	20	30	55	18	1 00	65	11 58	63	
11	342	04.6	-6 18.5	64	45.6 39	-27 45.0 35	10 N	5 27	5 52	6 13	0 37	63	12 22	63	
12	357	04.7	-6 17.5	79	08.4 38	-27 48.3 33	0	5 23	5 48	6 08	0 15	62	12 45	63	
13	12	04.8	16.6	93	31.2 38	51.4 31	10 S	18	43	6 04	** ** *	**	13 07	63	
14	27	05.0	15.6	107	53.9 37	54.4 30	20	11	37	5 59	** ** *	**	31	64	
15	42	05.1	14.6	122	16.5 36	57.1 27	30	5 00	29	53	** ** *	**	13 59	64	
16	57	05.3	13.7	136	39.1 36	-27 59.7 26	35	4 54	24	50	23 46	66	14 15	64	
17	72	05.4	-6 12.7	151	01.6 35	-28 02.0 23	40	4 46	5 18	5 46	23 26	67	14 35	63	
18	87	05.5	-6 11.7	165	24.0 34	-28 04.2 22	45	4 35	5 11	5 41	23 03	67	14 58	64	
19	102	05.7	10.8	179	46.4 34	06.2 20	50	22	5 03	36	22 32	69	15 28	64	
20	117	05.8	09.8	194	08.7 33	08.0 18	52	16	4 58	33	17	69	15 43	63	
21	132	06.0	08.8	208	31.0 33	09.6 16	54	09	54	30	22 00	69	16 00	63	
22	147	06.1	07.9	222	53.2 32	11.0 14	56	4 01	49	27	21 39	70	20	64	
23	162	06.2	06.9	237	15.4 32	12.3 13	58	3 51	43	24	21 13	71	16 46	63	
24	177	06.4	-6 05.9	251	37.5 31	-28 13.3 10	60 S	3 40	4 36	5 20	20 37	72	17 23	61	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 13 ^h 10 ^m 4		Mag: -3.9 PMG: 11 ^h 49 ^m		Mag: +1.2 PMG: 8 ^h 30 ^m		Mag: -2.4 PMG: 2 ^h 19 ^m		Mag: -0.1 PMG: 20 ^h 39 ^m						
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	161	51.2	182	53.5	-10 19.4	232	18.9	-22 52.7	325	08.3	-5 26.3	49	27.5	+21 56.4	
1	176	53.7	197	53.0	18.2	247	19.4	52.5	340	11.0	26.2	64	30.0	56.4	
2	191	56.2	212	52.5	17.1	262	19.9	52.3	355	13.7	26.1	79	32.6	56.4	
3	206	58.6	227	52.1	16.0	277	20.5	52.1	10	16.3	26.0	94	35.1	56.5	
4	222	01.1	242	51.6	14.8	292	21.0	51.9	25	19.0	25.9	109	37.7	56.5	
5	237	03.6	257	51.1	-10 13.7	307	21.5	-22 51.7	40	21.7	-5 25.9	124	40.2	+21 56.5	
6	252	06.0	272	50.6	-10 12.6	322	22.1	-22 51.5	55	24.3	-5 25.8	139	42.8	+21 56.5	
7	267	08.5	287	50.1	11.4	337	22.6	51.3	70	27.0	25.7	154	45.3	56.5	
8	282	11.0	302	49.6	10.3	352	23.1	51.1	85	29.7	25.6	169	47.9	56.5	
9	297	13.4	317	49.1	09.2	7	23.7	50.9	100	32.3	25.5	184	50.4	56.5	
10	312	15.9	332	48.6	08.0	22	24.2	50.7	115	35.0	25.4	199	53.0	56.6	
11	327	18.3	347	48.1	-10 06.9	37	24.7	-22 50.5	130	37.7	-5 25.3	214	55.5	+21 56.6	
12	342	20.8	2	47.6	-10 05.7	52	25.3	-22 50.3	145	40.3	-5 25.2	229	58.1	+21 56.6	
13	357	23.3	17	47.2	04.6	67	25.8	50.1	160	43.0	25.1	245	00.6	56.6	
14	12	25.7	32	46.7	03.5	82	26.3	49.9	175	45.7	25.0	260	03.2	56.6	
15	27	28.2	47	46.2	02.3	97	26.8	49.6	190	48.4	24.9	275	05.7	56.6	
16	42	30.7	62	45.7	01.2	112	27.4	49.4	205	51.0	24.8	290	08.3	56.7	
17	57	33.1	77	45.2	-10 00.1	127	27.9	-22 49.2	220	53.7	-5 24.8	305	10.8	+21 56.7	
18	72	35.6	92	44.7	-9 58.9	142	28.4	-22 49.0	235	56.4	-5 24.7	320	13.4	+21 56.7	
19	87	38.1	107	44.2	57.8	157	29.0	48.8	250	59.0	24.6	335	15.9	56.7	
20	102	40.5	122	43.8	56.6	172	29.5	48.6	266	01.7	24.5	350	18.5	56.7	
21	117	43.0	137	43.3	55.5	187	30.0	48.4	281	04.4	24.4	5	21.0	56.7	
22	132	45.5	152	42.8	54.4	202	30.6	48.2	296	07.0	24.3	20	23.6	56.8	
23	147	47.9	167	42.3	53.2	217	31.1	48.0	311	09.7	24.2	35	26.1	56.8	
24	162	50.4	182	41.8	-9 52.1	232	31.6	-22 47.8	326	12.4	-5 24.1	50	28.7	+21 56.8	
Dif	—		-5		+11	+5		+2	+27		+1	+25			

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16 ^h 1		Edad: 24 ^d 1 PHE { 4 ^h : 59 ^m 5 12 ^h : 59 ^m 7 20 ^h : 59 ^m 8															
	PMG: 12 ^h 11 ^m 5		SD: 16 ^h 2 PMG: 7 ^h 33 ^m R°: 63 ^m															
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	h m	h m	h m	h m	m	h m	m				
0	177	06.4	-6	05.9	251	37.5	-28 13.3	60 N	17 38	18 19	19 07	6 07 38	8 59 96					
1	192	06.5		05.0	265	59.6	14.1	58	40	20	05	5 27 47	9 39 87					
2	207	06.7		04.0	280	21.7	14.7	56	43	20	03	5 00 50	10 06 83					
3	222	06.8		03.0	294	43.7	15.2	54	45	20	01	4 38 53	28 80					
4	237	06.9		02.1	309	05.7	15.4	52	47	21	19 00	20 54	10 46 78					
5	252	07.1	-6	01.1	323	27.6	-28 15.4	50	17 49	18 21	18 59	4 05 55	11 01 77					
6	267	07.2	-6	00.1	337	49.5	-28 15.2	45	17 53	18 22	18 56	3 34 58	11 32 74					
7	282	07.4	-5	59.2	352	11.4	14.9	40	56	23	55	3 10 59	11 56 72					
8	297	07.5		58.2	6	33.3	14.3	35	17 59	24	54	2 50 60	12 16 70					
9	312	07.6		57.2	20	55.1	13.5	30	18 02	26	54	33 61	12 32 70					
10	327	07.8		56.3	35	16.9	12.6	20	06	29	54	2 05 62	13 01 67					
11	342	07.9	-5	55.3	49	38.7	-28 11.4	10 N	18 11	18 32	18 56	1 40 63	13 25 65					
12	357	08.1	-5	54.3	64	00.5	-28 10.0	0	18 15	18 36	19 00	1 17 64	13 48 63					
13	12	08.2		53.4	78	22.3	08.4	10 S	19	40	05	0 55 64	14 10 62					
14	27	08.3		52.4	92	44.1	06.7	20	23	46	12	30 66	14 35 59					
15	42	08.5		51.4	107	05.9	04.7	30	29	53	21	0 02 66	15 03 57					
16	57	08.6		50.5	121	27.6	02.5	35	32	18 57	28	** ** *	19 56					
17	72	08.8	-5	49.5	135	49.4	-28 00.1	40	18 35	19 03	19 35	** ** *	15 38 54					
18	87	08.9	-5	48.5	150	11.2	-27 57.5	45	18 39	19 09	19 45	** ** *	16 02 51					
19	102	09.1		47.6	164	32.9	54.8	50	44	17	19 57	23 41 83	32 47					
20	117	09.2		46.6	178	54.7	51.8	52	47	21	20 03	26 86	16 46 46					
21	132	09.3		45.6	193	16.5	48.6	54	49	26	10	23 09 89	17 03 43					
22	147	09.5		44.7	207	38.3	45.2	56	52	30	18	22 49 93	24 39					
23	162	09.6		43.7	222	00.2	41.6	58	55	36	27	22 24 98	17 49 34					
24	177	09.8	-5	42.7	236	22.0	-27 37.8	60 S	18 59	19 42	20 37	21 49 109	18 24 23					
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 13 ^h 06 ^m 5		Mag: -3.9 PMG: 11 ^h 50 ^m		Mag: +1.2 PMG: 8 ^h 30 ^m		Mag: -2.4 PMG: 2 ^h 15 ^m		Mag: -0.1 PMG: 20 ^h 35 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	162	50.4	182	41.8	-9	52.1	232	31.6	-22	47.8	326	12.4	-5	24.1	50	28.7	+21	56.8
1	177	52.8	197	41.3		50.9	247	32.2		47.6	341	15.1		24.0	65	31.2		56.8
2	192	55.3	212	40.9		49.8	262	32.7		47.4	356	17.7		23.9	80	33.7		56.8
3	207	57.8	227	40.4		48.6	277	33.2		47.1	11	20.4		23.8	95	36.3		56.8
4	223	00.2	242	39.9		47.5	292	33.8		46.9	26	23.1		23.7	110	38.8		56.8
5	238	02.7	257	39.4	-9	46.4	307	34.3	-22	46.7	41	25.7	-5	23.6	125	41.4	+21	56.9
6	253	05.2	272	38.9	-9	45.2	322	34.8	-22	46.5	56	28.4	-5	23.5	140	43.9	+21	56.9
7	268	07.6	287	38.4		44.1	337	35.4		46.3	71	31.1		23.4	155	46.5		56.9
8	283	10.1	302	38.0		42.9	352	35.9		46.1	86	33.8		23.4	170	49.0		56.9
9	298	12.6	317	37.5		41.8	7	36.4		45.9	101	36.4		23.3	185	51.6		56.9
10	313	15.0	332	37.0		40.6	22	37.0		45.7	116	39.1		23.2	200	54.1		56.9
11	328	17.5	347	36.5	-9	39.5	37	37.5	-22	45.4	131	41.8	-5	23.1	215	56.7	+21	57.0
12	343	20.0	2	36.0	-9	38.3	52	38.0	-22	45.2	146	44.5	-5	23.0	230	59.2	+21	57.0
13	358	22.4	17	35.6		37.2	67	38.6		45.0	161	47.1		22.9	246	01.7		57.0
14	13	24.9	32	35.1		36.0	82	39.1		44.8	176	49.8		22.8	261	04.3		57.0
15	28	27.3	47	34.6		34.9	97	39.6		44.6	191	52.5		22.7	276	06.8		57.0
16	43	29.8	62	34.1		33.7	112	40.2		44.4	206	55.2		22.6	291	09.4		57.0
17	58	32.3	77	33.7	-9	32.6	127	40.7	-22	44.2	221	57.8	-5	22.5	306	11.9	+21	57.0
18	73	34.7	92	33.2	-9	31.4	142	41.2	-22	43.9	237	00.5	-5	22.4	321	14.5	+21	57.1
19	88	37.2	107	32.7		30.3	157	41.8		43.7	252	03.2		22.3	336	17.0		57.1
20	103	39.7	122	32.2		29.1	172	42.3		43.5	267	05.9		22.2	351	19.5		57.1
21	118	42.1	137	31.7		28.0	187	42.8		43.3	282	08.5		22.1	6	22.1		57.1
22	133	44.6	152	31.3		26.8	202	43.4		43.1	297	11.2		22.0	21	24.6		57.1
23	148	47.1	167	30.8		25.7	217	43.9		42.9	312	13.9		21.9	36	27.2		57.1
24	163	49.5	182	30.3	-9	24.5	232	44.4	-22	42.6	327	16.6	-5	21.8	51	29.7	+21	57.2
Dif	—		-5		+11		+5		+2		+27		+1		+25		0	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'1 PMG: 12 ^h 11 ^m 2			Edad: 25 ^d 1 PHE { SD: 16'3 PMG: 8 ^h 36 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'		°	'	°	'	°	h	m	h	m	h	m	m	
0	177	09.8	-5 42.7	236	22.0	-27	37.8	60 N	5 14	6 02	6 44	6 45	12	10 35	117	
1	192	09.9		250	43.9	29	33.8	58	17	02	41	6 14	22	11 06	106	
2	207	10.1		265	05.8	29	29.6	56	19	02	39	5 50	29	29	100	
3	222	10.2		279	27.7	29	25.3	54	20	01	37	31	33	11 48	95	
4	237	10.4		293	49.7	30	20.7	52	22	01	35	14	38	12 04	91	
5	252	10.5	-5 37.9	308	11.7	30	-27 15.9	50	5 23	6 01	6 33	5 00	40	12 18	88	
6	267	10.6	-5 36.9	322	33.7	30	-27 10.9	45	5 26	6 00	6 29	4 32	45	12 46	82	
7	282	10.8		336	55.7	30	05.7	40	27	5 59	26	4 09	48	13 08	78	
8	297	10.9		351	17.8	31	-27 00.4	35	28	58	23	3 50	51	26	75	
9	312	11.1		5	40.0	32	-26 54.8	30	29	56	20	34	54	13 42	72	
10	327	11.2		20	02.2	32	49.0	20	28	54	16	3 07	57	14 08	68	
11	342	11.4	-5 32.1	34	24.4	32	-26 43.1	10 N	5 26	5 51	6 12	2 43	60	14 30	65	
12	357	11.5	-5 31.1	48	46.7	33	-26 36.9	0	5 23	5 47	6 08	2 21	63	14 51	61	
13	12	11.7		63	09.0	33	30.6	10 S	18	43	04	1 59	65	15 12	58	
14	27	11.8		77	31.4	34	24.1	20	11	37	6 00	36	68	15 34	54	
15	42	12.0		91	53.8	34	17.4	30	5 02	30	5 54	1 08	71	16 00	50	
16	57	12.1		106	16.3	35	10.5	35	4 56	26	51	0 52	73	15	47	
17	72	12.3	-5 26.2	120	38.9	36	-26 03.4	40	4 48	5 21	5 48	0 33	76	16 32	44	
18	87	12.4	-5 25.3	135	01.5	36	-25 56.1	45	4 38	5 14	5 44	0 10	79	16 53	40	
19	102	12.5		149	24.2	37	48.6	50	26	06	39	**	**	**	17 19	34
20	117	12.7		163	46.9	37	41.0	52	20	5 02	37	**	**	**	32	30
21	132	12.8		178	09.8	39	33.1	54	14	4 58	34	**	**	**	17 46	27
22	147	13.0		192	32.6	38	25.1	56	4 06	53	32	**	**	**	18 03	22
23	162	13.1		206	55.6	40	16.9	58	3 57	48	29	**	**	**	23	16
24	177	13.3	-5 19.4	221	18.6	40	-25 08.6	60 S	3 47	4 42	5 25	23 38	117	18 47	9	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 13 ^h 02 ^m 6		Mag: -3.9 PMG: 11 ^h 50 ^m		Mag: +1.1 PMG: 8 ^h 29 ^m		Mag: -2.4 PMG: 2 ^h 11 ^m		Mag: -0.1 PMG: 20 ^h 31 ^m						
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	163	49.5	182	30.3	-9 24.5	232	44.4	-22 42.6	327	16.6	-5 21.8	51	29.7	+21 57.2	
1	178	52.0	197	29.8		247	45.0	42.4	342	19.2	21.7	66	32.3	57.2	
2	193	54.5	212	29.4		262	45.5	42.2	357	21.9	21.6	81	34.8	57.2	
3	208	56.9	227	28.9		277	46.0	42.0	12	24.6	21.6	96	37.3	57.2	
4	223	59.4	242	28.4		292	46.6	41.8	27	27.3	21.5	111	39.9	57.2	
5	239	01.8	257	28.0	-9 18.8	307	47.1	-22 41.5	42	30.0	-5 21.4	126	42.4	+21 57.2	
6	254	04.3	272	27.5	-9 17.6	322	47.6	-22 41.3	57	32.6	-5 21.3	141	45.0	+21 57.2	
7	269	06.8	287	27.0		337	48.2	41.1	72	35.3	21.2	156	47.5	57.3	
8	284	09.2	302	26.5		352	48.7	40.9	87	38.0	21.1	171	50.0	57.3	
9	299	11.7	317	26.1		7	49.2	40.7	102	40.7	21.0	186	52.6	57.3	
10	314	14.2	332	25.6		22	49.8	40.4	117	43.4	20.9	201	55.1	57.3	
11	329	16.6	347	25.1	-9 11.8	37	50.3	-22 40.2	132	46.0	-5 20.8	216	57.7	+21 57.3	
12	344	19.1	2	24.7	-9 10.7	52	50.8	-22 40.0	147	48.7	-5 20.7	232	00.2	+21 57.3	
13	359	21.6	17	24.2		67	51.4	39.8	162	51.4	20.6	247	02.7	57.3	
14	14	24.0	32	23.7		82	51.9	39.5	177	54.1	20.5	262	05.3	57.4	
15	29	26.5	47	23.2		97	52.4	39.3	192	56.8	20.4	277	07.8	57.4	
16	44	28.9	62	22.8		112	53.0	39.1	207	59.4	20.3	292	10.4	57.4	
17	59	31.4	77	22.3	-9 04.9	127	53.5	-22 38.9	223	02.1	-5 20.2	307	12.9	+21 57.4	
18	74	33.9	92	21.8	-9 03.7	142	54.1	-22 38.6	238	04.8	-5 20.1	322	15.4	+21 57.4	
19	89	36.3	107	21.4		157	54.6	38.4	253	07.5	20.0	337	18.0	57.4	
20	104	38.8	122	20.9		172	55.1	38.2	268	10.2	19.9	352	20.5	57.5	
21	119	41.3	137	20.4	-9 00.2	187	55.7	38.0	283	12.8	19.8	7	23.1	57.5	
22	134	43.7	152	20.0	-8 59.0	202	56.2	37.7	298	15.5	19.7	22	25.6	57.5	
23	149	46.2	167	19.5		217	56.7	37.5	313	18.2	19.6	37	28.1	57.5	
24	164	48.7	182	19.0	-8 56.7	232	57.3	-22 37.3	328	20.9	-5 19.5	52	30.7	+21 57.5	
Dif	—		-5	+12		+5	+2		+27	+1		+25			0

UT	SOL			☉ LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1			Edad: 26 ^d 1 PHE 4^h: 60^h3 12^h: 60^h3 20^h: 60^h4												
	PMG: 12 ^h 11 ^m 0			SD: 16 ^h 4 PMG: 9 ^h 38 ^m R°: 58 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	h m	m	
0	177	13.3	-5 19.4	221	18.6	-25 08.6	41	60 N	17 43	18 24	19 13	6 57	4	12 32	116	
1	192	13.4	18.5	235	41.7	-25 00.0	86	58	45	24	10	36	12	12 52	109	
2	207	13.6	17.5	250	04.9	-24 51.3	87	56	47	24	07	19	17	13 09	103	
3	222	13.7	16.5	264	28.2	42.4	89	54	49	24	05	6 04	22	23 98		
4	237	13.9	15.5	278	51.5	33.3	91	52	51	24	03	5 52	25	35 94		
5	252	14.0	-5 14.6	293	15.0	-24 24.1	92	50	17 52	18 24	19 02	5 40	28	13 46	91	
6	267	14.2	-5 13.6	307	38.5	-24 14.7	94	45	17 55	18 25	18 59	5 17	34	14 08	85	
7	282	14.3	12.6	322	02.0	-24 05.1	96	40	17 58	25	57	4 57	39	26 80		
8	297	14.5	11.6	336	25.7	-23 55.3	98	35	18 01	26	56	41	43	41 76		
9	312	14.6	10.7	350	49.5	45.4	99	30	03	27	55	28	45	14 54	72	
10	327	14.8	09.7	5	13.3	35.4	100	20	07	29	55	4 04	51	15 16	66	
11	342	14.9	-5 08.7	19	37.2	-23 25.1	103	10 N	18 11	18 32	18 56	3 43	55	15 35	62	
12	357	15.1	-5 07.7	34	01.3	-23 14.7	104	0	18 14	18 35	18 59	3 24	59	15 52	58	
13	12	15.2	06.8	48	25.4	-23 04.2	105	10 S	18	39	19 03	3 04	64	16 10	53	
14	27	15.4	05.8	62	49.6	-22 53.4	108	20	22	44	10	2 44	67	28 48		
15	42	15.5	04.8	77	13.9	42.6	108	30	26	51	19	19	73	16 50	42	
16	57	15.7	03.9	91	38.3	31.6	110	35	29	18 55	25	2 05	76	17 02	39	
17	72	15.8	-5 02.9	106	02.7	-22 20.4	112	40	18 32	19 00	19 32	1 49	79	17 16	35	
18	87	16.0	-5 01.9	120	27.3	-22 09.1	113	45	18 36	19 06	19 41	1 29	84	17 33	30	
19	102	16.1	-5 00.9	134	52.0	-21 57.6	115	50	40	13	53	1 04	90	17 53	24	
20	117	16.3	-5 00.0	149	16.7	46.0	116	52	42	17	58	0 52	93	18 02	22	
21	132	16.4	-4 59.0	163	41.6	34.2	118	54	44	21	20 04	38	97	13 18		
22	147	16.6	58.0	178	06.6	22.3	119	56	47	25	12	22	102	25 14		
23	162	16.7	57.0	192	31.6	-21 10.2	121	58	50	30	20	0 02	108	39 9		
24	177	16.9	-4 56.1	206	56.8	-20 58.1	121	60 S	18 53	19 36	20 30	** ** *		18 56	3	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 12 ^h 58 ^m 6		Mag: -3.9 PMG: 11 ^h 51 ^m		Mag: +1.1 PMG: 8 ^h 28 ^m		Mag: -2.4 PMG: 2 ^h 06 ^m		Mag: -0.1 PMG: 20 ^h 27 ^m						
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	164	48.7	182	19.0	-8 56.7	232	57.3	-22 37.3	328	20.9	-5 19.5	52	30.7	+21 57.5	
1	179	51.1	197	18.6	55.6	247	57.8	37.1	343	23.6	19.4	67	33.2	57.5	
2	194	53.6	212	18.1	54.4	262	58.3	36.8	358	26.3	19.3	82	35.7	57.5	
3	209	56.1	227	17.6	53.2	277	58.9	36.6	13	28.9	19.2	97	38.3	57.6	
4	224	58.5	242	17.2	52.1	292	59.4	36.4	28	31.6	19.1	112	40.8	57.6	
5	240	01.0	257	16.7	-8 50.9	307	59.9	-22 36.1	43	34.3	-5 19.0	127	43.4	+21 57.6	
6	255	03.4	272	16.2	-8 49.7	323	00.5	-22 35.9	58	37.0	-5 18.9	142	45.9	+21 57.6	
7	270	05.9	287	15.8	48.6	338	01.0	35.7	73	39.7	18.8	157	48.4	57.6	
8	285	08.4	302	15.3	47.4	353	01.5	35.5	88	42.4	18.7	172	51.0	57.6	
9	300	10.8	317	14.9	46.2	8 02.1	35.2	35.2	103	45.0	18.6	187	53.5	57.6	
10	315	13.3	332	14.4	45.1	23 02.6	35.0	35.0	118	47.7	18.6	202	56.0	57.6	
11	330	15.8	347	13.9	-8 43.9	38 03.2	-22 34.8	34.8	133	50.4	-5 18.5	217	58.6	+21 57.7	
12	345	18.2	2 13.5	-8 42.7	53 03.7	-22 34.5	34.5	34.5	148	53.1	-5 18.4	233	01.1	+21 57.7	
13	0	20.7	17 13.0	41.6	68 04.2	34.3	34.3	34.3	163	55.8	18.3	248	03.6	57.7	
14	15	23.2	32 12.5	40.4	83 04.8	34.1	34.1	34.1	178	58.5	18.2	263	06.2	57.7	
15	30	25.6	47 12.1	39.2	98 05.3	33.8	33.8	33.8	194	01.2	18.1	278	08.7	57.7	
16	45	28.1	62 11.6	38.1	113 05.8	33.6	33.6	33.6	209	03.8	18.0	293	11.2	57.7	
17	60	30.6	77 11.2	-8 36.9	128 06.4	-22 33.4	33.4	33.4	224	06.5	-5 17.9	308	13.8	+21 57.7	
18	75	33.0	92 10.7	-8 35.7	143 06.9	-22 33.1	33.1	33.1	239	09.2	-5 17.8	323	16.3	+21 57.8	
19	90	35.5	107 10.2	34.5	158 07.4	32.9	32.9	32.9	254	11.9	17.7	338	18.8	57.8	
20	105	37.9	122 09.8	33.4	173 08.0	32.7	32.7	32.7	269	14.6	17.6	353	21.4	57.8	
21	120	40.4	137 09.3	32.2	188 08.5	32.4	32.4	32.4	284	17.3	17.5	8	23.9	57.8	
22	135	42.9	152 08.9	31.0	203 09.1	32.2	32.2	32.2	299	20.0	17.4	23	26.4	57.8	
23	150	45.3	167 08.4	29.9	218 09.6	32.0	32.0	32.0	314	22.6	17.3	38	29.0	57.8	
24	165	47.8	182 07.9	-8 28.7	233 10.1	-22 31.7	31.7	31.7	329	25.3	-5 17.2	53	31.5	+21 57.8	
Dif	—		-5 +12		+5 +2		+27 +1		+25 0						0

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16 ^h 1			Edad: 27 ^d 1	PHE { 4 ^h : 60 ^h /4 12 ^h : 60 ^h /4 20 ^h : 60 ^h /3												
	PMG: 12 ^h 10 ^m 8					SD: 16 ^h 4		PMG: 10 ^h 36 ^m			R ^o : 55 ^m						
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R ^o	Hora	R ^o		
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m		
0	177	16.9	-4	56.1		206	56.8	-20	58.1	5	08	5	56	6	38	7 01 1	14 28 111
1	192	17.0		55.1	62	221	22.0	45.7	124	11	56	36	6	48	6	41 104	
2	207	17.2		54.1	64	235	47.4	33.3	124	14	57	34	36	11	14 52 100		
3	222	17.3		53.1	64	250	12.8	20.7	126	16	57	32	26	15	15 01 96		
4	237	17.5		52.2	65	264	38.3	-20	08.0	18	57	30	17	18	09 93		
5	252	17.6	-4	51.2	67	279	04.0	-19	55.1	5	57	6	29	6	08 21	15 17 89	
6	267	17.8	-4	50.2	67	293	29.7	-19	42.2	5	56	6	25	5	51 27	15 33 83	
7	282	18.0		49.2	69	307	55.6	29.1	131	24	56	23	36	32	46 77		
8	297	18.1		48.3	69	322	21.5	15.8	133	26	55	20	24	36	15 57 73		
9	312	18.3		47.3	70	336	47.5	-19	02.5	27	54	18	5	13 40	16 06 70		
10	327	18.4		46.3	72	351	13.7	-18	49.0	27	52	14	4	55 45	22 64		
11	342	18.6	-4	45.3	72	5	39.9	-18	35.4	5	50	6	11	4	38 51	16 37 58	
12	357	18.7	-4	44.3	73	20	06.2	-18	21.8	5	47	6	07	4	23 55	16 50 53	
13	12	18.9		43.4	75	34	32.7	-18	07.9	18	43	04	4	08 59	17 03 48		
14	27	19.0		42.4	75	48	59.2	-17	54.0	12	38	6	00	3	51 65	16 43	
15	42	19.2		41.4	76	63	25.8	40.0	140	5	03	32	5	56	32 71	32 37	
16	57	19.3		40.4	77	77	52.5	25.9	141	4	58	28	53	21	75	41 33	
17	72	19.5	-4	39.5	78	92	19.3	-17	11.6	4	50	5	23	5	50	3 08 79	17 51 29
18	87	19.6	-4	38.5	80	106	46.3	-16	57.3	4	41	5	17	5	47	2 53 84	18 03 24
19	102	19.8		37.5	80	121	13.3	42.9	144	30	10	42	34	90	17 19		
20	117	20.0		36.5	81	135	40.4	28.3	146	24	06	40	25	94	24 16		
21	132	20.1		35.6	82	150	07.6	-16	13.7	18	5	02	38	15	97	31 13	
22	147	20.3		34.6	83	164	34.9	-15	59.0	11	4	58	36	2	04 101	39 10	
23	162	20.4		33.6	83	179	02.2	44.1	149	4	03	53	33	1	50 107	48 6	
24	177	20.6	-4	32.6	85	193	29.7	-15	29.2	3	53	4	47	5	30	1 35 113	18 59 1

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO										
	PMG: 12 ^h 54 ^m 7		Mag: -3.9 PMG: 11 ^h 52 ^m		Mag: +1.1 PMG: 8 ^h 27 ^m		Mag: -2.4 PMG: 2 ^h 02 ^m		Mag: -0.1 PMG: 20 ^h 22 ^m										
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec									
h	°	'	°	'	°	'	°	'	°	'									
0	165	47.8	182	07.9	-8	28.7	233	10.1	-22	31.7	329	25.3	-5	17.2	53	31.5	+21	57.8	
1	180	50.3	197	07.5		27.5	248	10.7		31.5	344	28.0		17.1	68	34.0		57.9	
2	195	52.7	212	07.0		26.3	263	11.2		31.2	359	30.7		17.0	83	36.6		57.9	
3	210	55.2	227	06.6		25.2	278	11.7		31.0	14	33.4		16.9	98	39.1		57.9	
4	225	57.7	242	06.1		24.0	293	12.3		30.8	29	36.1		16.8	113	41.6		57.9	
5	241	00.1	257	05.7	-8	22.8	308	12.8	-22	30.5	44	38.8	-5	16.7	128	44.2	+21	57.9	
6	256	02.6	272	05.2	-8	21.6	323	13.3	-22	30.3	59	41.5	-5	16.6	143	46.7	+21	57.9	
7	271	05.1	287	04.7		20.5	338	13.9		30.1	74	44.2		16.5	158	49.2		57.9	
8	286	07.5	302	04.3		19.3	353	14.4		29.8	89	46.8		16.4	173	51.8		58.0	
9	301	10.0	317	03.8		18.1	8	15.0		29.6	104	49.5		16.3	188	54.3		58.0	
10	316	12.4	332	03.4		16.9	23	15.5		29.3	119	52.2		16.2	203	56.8		58.0	
11	331	14.9	347	02.9	-8	15.8	38	16.0	-22	29.1	134	54.9	-5	16.1	218	59.4	+21	58.0	
12	346	17.4	2	02.5	-8	14.6	53	16.6	-22	28.9	149	57.6	-5	16.0	234	01.9	+21	58.0	
13	1	19.8	17	02.0		13.4	68	17.1		28.6	165	00.3		15.9	249	04.4		58.0	
14	16	22.3	32	01.6		12.2	83	17.6		28.4	180	03.0		15.8	264	06.9		58.0	
15	31	24.8	47	01.1		11.0	98	18.2		28.1	195	05.7		15.7	279	09.5		58.0	
16	46	27.2	62	00.7		09.9	113	18.7		27.9	210	08.4		15.6	294	12.0		58.1	
17	61	29.7	77	00.2	-8	08.7	128	19.3	-22	27.6	225	11.1	-5	15.5	309	14.5	+21	58.1	
18	76	32.2	91	59.8	-8	07.5	143	19.8	-22	27.4	240	13.7	-5	15.4	324	17.1	+21	58.1	
19	91	34.6	106	59.3		06.3	158	20.3		27.2	255	16.4		15.3	339	19.6		58.1	
20	106	37.1	121	58.8		05.2	173	20.9		26.9	270	19.1		15.2	354	22.1		58.1	
21	121	39.5	136	58.4		04.0	188	21.4		26.7	285	21.8		15.1	9	24.7		58.1	
22	136	42.0	151	57.9		02.8	203	22.0		26.4	300	24.5		15.0	24	27.2		58.1	
23	151	44.5	166	57.5		01.6	218	22.5		26.2	315	27.2		14.9	39	29.7		58.2	
24	166	46.9	181	57.0	-8	00.4	233	23.0	-22	25.9	330	29.9	-5	14.8	54	32.2	+21	58.2	
Dif	—		-5	+12		+5	+2			+27		+1			+25				0

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16'1 PMG: 12 ^h 10 ^m 5			Edad: 28 ^d 1 PHE { 4 ^h : 60'2 12 ^h : 60'1 20 ^h : 60'0 R°: 50 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	177	20.6	-4 32.6	193	29.7	-15 29.2	60 N	17 48	18 29	19 18	7 02 0		16 19 103		
1	192	20.7		207	57.3 ⁸⁶	-15 14.2 ¹⁵⁰	58	49	29	14	6 54 4		25 100		
2	207	20.9		222	25.0 ⁸⁷	-14 59.1 ¹⁵¹	56	51	28	11	47 8		32 95		
3	222	21.0		236	52.7 ⁸⁷	44.0 ¹⁵¹	54	53	28	09	41 11		37 92		
4	237	21.2		251	20.6 ⁸⁹	28.7 ¹⁵³	52	54	28	07	35 14		42 89		
5	252	21.4	-4 27.7	265	48.5 ⁸⁹	-14 13.4 ¹⁵³	50	17 55	18 28	19 05	6 29 17		16 46 86		
6	267	21.5	-4 26.8	280	16.5 ⁹⁰	-13 58.0 ¹⁵⁴	45	17 58	18 27	19 01	6 18 22		16 56 80		
7	282	21.7		294	44.6 ⁹¹	42.5 ¹⁵⁵	40	18 01	28	18 59	08 27		17 03 75		
8	297	21.8		309	12.8 ⁹²	26.9 ¹⁵⁶	35	03	28	57	6 00 31		10 71		
9	312	22.0		323	41.1 ⁹³	-13 11.3 ¹⁵⁶	30	04	28	56	5 53 34		16 67		
10	327	22.1		338	09.5 ⁹⁴	-12 55.6 ¹⁵⁷	20	08	30	55	40 41		26 61		
11	342	22.3	-4 21.9	352	38.0 ⁹⁵	-12 39.8 ¹⁵⁸	10 N	18 11	18 32	18 56	5 29 46		17 35 55		
12	357	22.5	-4 20.9	7	06.5 ⁹⁵	-12 24.0 ¹⁵⁸	0	18 14	18 34	18 59	5 18 51		17 43 50		
13	12	22.6		19	21 35.1 ⁹⁶	-12 08.1 ¹⁵⁹	10 S	17	38	19 02	5 07 57		51 45		
14	27	22.8		36	03.9 ⁹⁸	-11 52.2 ¹⁵⁹	20	20	42	08	4 56 62		17 59 40		
15	42	22.9		50	32.6 ⁹⁷	36.1 ¹⁶¹	30	24	48	16	43 68		18 09 33		
16	57	23.1		65	01.5 ⁹⁹	20.1 ¹⁶⁰	35	26	52	22	36 71		14 30		
17	72	23.2	-4 16.0	79	30.5 ¹⁰⁰	-11 03.9 ¹⁶²	40	18 29	18 56	19 29	4 27 76		18 20 26		
18	87	23.4	-4 15.0	93	59.5 ¹⁰⁰	-10 47.8 ¹⁶¹	45	18 32	19 02	19 37	4 17 81		18 27 22		
19	102	23.6		108	28.6 ¹⁰¹	31.5 ¹⁶³	50	36	09	48	4 04 88		36 16		
20	117	23.7		122	57.8 ¹⁰²	-10 15.2 ¹⁶³	52	38	12	53	3 59 90		40 13		
21	132	23.9		137	27.0 ¹⁰²	-9 58.9 ¹⁶³	54	40	15	19 59	52 94		44 10		
22	147	24.0		151	56.4 ¹⁰⁴	42.5 ¹⁶⁴	56	42	20	20 06	45 97		49 7		
23	162	24.2		166	25.8 ¹⁰⁴	26.1 ¹⁶⁴	58	44	24	13	37 101		18 54 4		
24	177	24.4	-4 09.1	180	55.2 ¹⁰⁴	-9 09.6 ¹⁶⁵	60 S	18 47	19 29	20 22	3 28 106		19 00 0		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG 12 ^h 50 ^m 8		Mag: -3.9 PMG: 11 ^h 53 ^m			Mag: +1.1 PMG: 8 ^h 26 ^m			Mag: -2.4 PMG: 1 ^h 58 ^m			Mag: -0.1 PMG: 20 ^h 18 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°
0	166	46.9	181	57.0	-8 00.4	233	23.0	-22 25.9	330	29.9	-5 14.8	54	32.2	+21 58.2	
1	181	49.4	196	56.6	-7 59.2	248	23.6	25.7	345	32.6	14.7	69	34.8	58.2	
2	196	51.9	211	56.1	58.1	263	24.1	25.4	0	35.3	14.6	84	37.3	58.2	
3	211	54.3	226	55.7	56.9	278	24.6	25.2	15	38.0	14.5	99	39.8	58.2	
4	226	56.8	241	55.2	55.7	293	25.2	25.0	30	40.7	14.4	114	42.3	58.2	
5	241	59.3	256	54.8	-7 54.5	308	25.7	-22 24.7	45	43.4	-5 14.3	129	44.9	+21 58.2	
6	257	01.7	271	54.3	-7 53.3	323	26.3	-22 24.5	60	46.1	-5 14.1	144	47.4	+21 58.2	
7	272	04.2	286	53.9	52.1	338	26.8	24.2	75	48.8	14.0	159	49.9	58.3	
8	287	06.7	301	53.5	51.0	353	27.3	24.0	90	51.5	13.9	174	52.5	58.3	
9	302	09.1	316	53.0	49.8	8	27.9	23.7	105	54.1	13.8	189	55.0	58.3	
10	317	11.6	331	52.6	48.6	23	28.4	23.5	120	56.8	13.7	204	57.5	58.3	
11	332	14.0	346	52.1	-7 47.4	38	29.0	-22 23.2	135	59.5	-5 13.6	220	00.0	+21 58.3	
12	347	16.5	1	51.7	-7 46.2	53	29.5	-22 23.0	151	02.2	-5 13.5	235	02.6	+21 58.3	
13	2	19.0	16	51.2	45.0	68	30.0	22.7	166	04.9	13.4	250	05.1	58.3	
14	17	21.4	31	50.8	43.8	83	30.6	22.5	181	07.6	13.3	265	07.6	58.3	
15	32	23.9	46	50.3	42.7	98	31.1	22.2	196	10.3	13.2	280	10.1	58.4	
16	47	26.4	61	49.9	41.5	113	31.7	22.0	211	13.0	13.1	295	12.7	58.4	
17	62	28.8	76	49.4	-7 40.3	128	32.2	-22 21.7	226	15.7	-5 13.0	310	15.2	+21 58.4	
18	77	31.3	91	49.0	-7 39.1	143	32.7	-22 21.5	241	18.4	-5 12.9	325	17.7	+21 58.4	
19	92	33.8	106	48.5	37.9	158	33.3	21.2	256	21.1	12.8	340	20.2	58.4	
20	107	36.2	121	48.1	36.7	173	33.8	21.0	271	23.8	12.7	355	22.8	58.4	
21	122	38.7	136	47.7	35.5	188	34.4	20.7	286	26.5	12.6	10	25.3	58.4	
22	137	41.2	151	47.2	34.3	203	34.9	20.5	301	29.2	12.5	25	27.8	58.4	
23	152	43.6	166	46.8	33.1	218	35.4	20.2	316	31.9	12.4	40	30.3	58.5	
24	167	46.1	181	46.3	-7 32.0	233	36.0	-22 19.9	331	34.6	-5 12.3	55	32.8	+21 58.5	
Dif	—		-4	+12		+5	+2		+27	+1		+25		0	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'1 PMG: 12 ^h 10 ^m 2			Edad: 29 ^d 1 PHE { SD: 16'3 PMG: 12 ^h 21 ^m	4 ^h : 59'9 12 ^h : 59'7 20 ^h : 59'5 R°: 48 ^m										
	hG ☉	Dec				hG ☾		Dif	Dec		Dif	Náutico	Civil	Hora	R°
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	177	24.4	-4	09.1	180	55.2	-9	09.6	60 N	5 02	5 50	6 32	7 02	0	18 02 100
1	192	24.5		08.1	195	24.8 ¹⁰⁶	-8	53.1 ¹⁶⁵	58	05	51	30	6 58	4	05 95
2	207	24.7		07.2	209	54.4 ¹⁰⁶		36.6 ¹⁶⁵	56	08	51	28	55	6	07 92
3	222	24.8		06.2	224	24.1 ¹⁰⁷		20.0 ¹⁶⁶	54	11	52	27	52	9	09 88
4	237	25.0		05.2	238	53.8 ¹⁰⁷	-8	03.4 ¹⁶⁶	52	13	52	26	49	12	11 85
5	252	25.2	-4	04.2	253	23.7 ¹⁰⁹	-7	46.8 ¹⁶⁶	50	5 15	5 52	6 24	6 46	15	18 12 83
6	267	25.3	-4	03.2	267	53.5 ¹⁰⁸	-7	30.1 ¹⁶⁷	45	5 19	5 53	6 22	6 40	20	18 16 77
7	282	25.5		02.3	282	23.5 ¹¹⁰	-7	13.4 ¹⁶⁷	40	21	53	20	35	25	18 73
8	297	25.6		01.3	296	53.5 ¹¹⁰	-6	56.6 ¹⁶⁸	35	23	52	18	31	29	21 68
9	312	25.8	-4	00.3	311	23.6 ¹¹¹		39.9 ¹⁶⁷	30	24	52	16	27	32	23 65
10	327	26.0	-3	59.3	325	53.7 ¹¹¹		23.1 ¹⁶⁸	20	25	51	13	21	38	27 58
11	342	26.1	-3	58.3	340	23.9 ¹¹²	-6	06.3 ¹⁶⁸	10 N	5 24	5 49	6 10	6 15	43	18 30 53
12	357	26.3	-3	57.4	354	54.2 ¹¹³	-5	49.5 ¹⁶⁸	0	5 22	5 46	6 07	6 09	49	18 33 47
13	12	26.4		56.4	9	24.5 ¹¹³		32.6 ¹⁶⁹	10 S	19	43	04	6 04	54	36 42
14	27	26.6		55.4	23	54.8 ¹¹³	-5	15.8 ¹⁶⁸	20	13	39	6 01	5 58	59	39 37
15	42	26.8		54.4	38	25.2 ¹¹⁴	-4	58.9 ¹⁶⁹	30	5 05	33	5 57	51	66	42 31
16	57	26.9		53.4	52	55.7 ¹¹⁵		42.0 ¹⁶⁹	35	4 59	29	55	47	70	44 28
17	72	27.1	-3	52.4	67	26.2 ¹¹⁵	-4	25.1 ¹⁶⁹	40	4 53	5 25	5 52	5 43	73	18 46 24
18	87	27.2	-3	51.5	81	56.8 ¹¹⁶	-4	08.2 ¹⁶⁹	45	4 44	5 20	5 49	5 38	78	18 49 19
19	102	27.4		50.5	96	27.4 ¹¹⁶	-3	51.3 ¹⁶⁹	50	34	13	46	32	84	52 14
20	117	27.6		49.5	110	58.1 ¹¹⁷		34.4 ¹⁶⁹	52	28	10	44	29	87	53 12
21	132	27.7		48.5	125	28.8 ¹¹⁷		17.5 ¹⁶⁹	54	23	06	42	26	90	54 10
22	147	27.9		47.5	139	59.6 ¹¹⁸	-3	00.6 ¹⁶⁹	56	16	5 02	40	22	93	56 6
23	162	28.1		46.6	154	30.4 ¹¹⁸	-2	43.7 ¹⁶⁹	58	4 08	4 58	38	18	97	18 58 3
24	177	28.2	-3	45.6	169	01.3 ¹¹⁹	-2	26.8 ¹⁶⁹	60 S	3 59	4 53	5 35	5 14	101	19 00 **
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 12 ^h 46 ^m 8			Mag: -3.9 PMG: 11 ^h 53 ^m			Mag: +1.1 PMG: 8 ^h 25 ^m			Mag: -2.4 PMG: 1 ^h 53 ^m			Mag: -0.1 PMG: 20 ^h 14 ^m		
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	167	46.1		181	46.3	-7	233	36.0	-22	331	34.6	-5	55	32.8	+21
1	182	48.5		196	45.9		248	36.5		346	37.3		70	35.4	
2	197	51.0		211	45.4		263	37.1		1	40.0		85	37.9	
3	212	53.5		226	45.0		278	37.6		16	42.7		100	40.4	
4	227	55.9		241	44.6		293	38.1		31	45.4		115	42.9	
5	242	58.4		256	44.1	-7	308	38.7	-22	46	48.1	-5	130	45.5	+21
6	258	00.9		271	43.7	-7	323	39.2	-22	61	50.8	-5	145	48.0	+21
7	273	03.3		286	43.2		338	39.8		76	53.5		160	50.5	
8	288	05.8		301	42.8		353	40.3		91	56.2		175	53.0	
9	303	08.3		316	42.4		8	40.9		106	58.9		190	55.5	
10	318	10.7		331	41.9		23	41.4		122	01.6		205	58.1	
11	333	13.2		346	41.5	-7	38	41.9	-22	137	04.3	-5	221	00.6	+21
12	348	15.6		1	41.0	-7	53	42.5	-22	152	07.0	-5	236	03.1	+21
13	3	18.1		16	40.6		68	43.0		167	09.7		251	05.6	
14	18	20.6		31	40.2		83	43.6		182	12.4		266	08.2	
15	33	23.0		46	39.7		98	44.1		197	15.1		281	10.7	
16	48	25.5		61	39.3		113	44.6		212	17.8		296	13.2	
17	63	28.0		76	38.8	-7	128	45.2	-22	227	20.5	-5	311	15.7	+21
18	78	30.4		91	38.4	-7	143	45.7	-22	242	23.2	-5	326	18.2	+21
19	93	32.9		106	38.0		158	46.3		257	25.9		341	20.7	
20	108	35.4		121	37.5		173	46.8		272	28.6		356	23.3	
21	123	37.8		136	37.1		188	47.4		287	31.3		11	25.8	
22	138	40.3		151	36.7		203	47.9		302	34.0		26	28.3	
23	153	42.8		166	36.2		218	48.4		317	36.7		41	30.8	
24	168	45.2		181	35.8	-7	233	49.0	-22	332	39.4	-5	56	33.3	+21
Dif	—			-4	+12		+5	+3		+27	+1		+25		0

UT	SOL		● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16°1 PMG: 12 ^h 10 ^m 0		Edad: 30 ^d 1 PHE { 4 ^h : 59/3 12 ^h : 59/1 20 ^h : 58/8 R°: 47 ^m												
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	177	28.2	-3	45.6	169	01.3	-2 26.8	60 N	17 53	18 34	19 23	7 02 **	19 42	97	
1	192	28.4		44.6	183	32.2 ¹¹⁹	-2 09.8 ¹⁷⁰	58	54	33	19	02 3	40	94	
2	207	28.5		43.6	198	03.1 ¹¹⁹	-1 52.9 ¹⁶⁹	56	55	32	16	01 6	39	89	
3	222	28.7		42.6	212	34.1 ¹²⁰	36.0 ¹⁶⁹	54	56	32	13	01 9	37	87	
4	237	28.9		41.6	227	05.1 ¹²⁰	19.1 ¹⁶⁹	52	58	31	10	01 12	36	84	
5	252	29.0	-3	40.7	241	36.2 ¹²¹	-1 02.2 ¹⁶⁹	50	17 59	18 31	19 08	7 01 14	19 35	81	
6	267	29.2	-3	39.7	256	07.3 ¹²¹	-0 45.4 ¹⁶⁸	45	18 01	18 30	19 04	7 00 20	19 33	75	
7	282	29.4		38.7	270	38.4 ¹²¹	28.5 ¹⁶⁹	40	03	30	19 01	00 24	31	70	
8	297	29.5		37.7	285	09.5 ¹²¹	-0 11.7 ¹⁶⁸	35	04	30	18 59	7 00 27	29	67	
9	312	29.7		36.7	299	40.7 ¹²²	+0 05.2 ¹⁶⁹	30	06	30	57	6 59 31	28	63	
10	327	29.9		35.8	314	12.0 ¹²³	22.0 ¹⁶⁸	20	08	30	56	59 37	25	57	
11	342	30.0	-3	34.8	328	43.2 ¹²²	+0 38.8 ¹⁶⁸	10 N	18 11	18 32	18 56	6 58 43	19 23	51	
12	357	30.2	-3	33.8	343	14.5 ¹²³	+0 55.6 ¹⁶⁸	0	18 13	18 34	18 58	6 58 47	19 20	47	
13	12	30.3		32.8	357	45.8 ¹²³	+1 12.3 ¹⁶⁷	10 S	16	37	19 01	58 52	18	42	
14	27	30.5		31.8	12	17.2 ¹²⁴	29.0 ¹⁶⁷	20	19	41	06	57 58	16	37	
15	42	30.7		30.8	26	48.5 ¹²³	+1 45.7 ¹⁶⁷	30	22	46	14	57 64	13	31	
16	57	30.8		29.9	41	19.9 ¹²⁴	+2 02.4 ¹⁶⁷	35	24	49	19	57 67	12	28	
17	72	31.0	-3	28.9	55	51.3 ¹²⁴	+2 19.1 ¹⁶⁷	40	18 26	18 53	19 25	6 56 72	19 10	24	
18	87	31.2	-3	27.9	70	22.8 ¹²⁵	+2 35.7 ¹⁶⁶	45	18 29	18 58	19 33	6 56 76	19 08	20	
19	102	31.3		26.9	84	54.2 ¹²⁴	+2 52.3 ¹⁶⁶	50	32	19 04	43	56 82	06	14	
20	117	31.5		25.9	99	25.7 ¹²⁵	+3 08.8 ¹⁶⁵	52	33	07	48	56 84	05	12	
21	132	31.7		24.9	113	57.2 ¹²⁵	25.4 ¹⁶⁶	54	35	10	19 54	56 87	04	9	
22	147	31.8		24.0	128	28.7 ¹²⁵	41.8 ¹⁶⁴	56	36	14	20 00	55 91	02	7	
23	162	32.0		23.0	143	00.3 ¹²⁶	+3 58.3 ¹⁶⁵	58	38	18	07	55 94	19 01	3	
24	177	32.2	-3	22.0	157	31.8 ¹²⁵	+4 14.7 ¹⁶⁴	60 S	18 41	19 23	20 15	6 55 98	18 59	0	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 12 ^h 42 ^m 9		Mag: -3.9 PMG: 11 ^h 54 ^m			Mag: +1.1 PMG: 8 ^h 24 ^m			Mag: -2.4 PMG: 1 ^h 49 ^m			Mag: 0.0 PMG: 20 ^h 10 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°
0	168	45.2	181	35.8	-7 03.3	233	49.0	-22 13.7	332	39.4	-5 09.8	56	33.3	+21 58.8	
1	183	47.7	196	35.4	02.1	248	49.5	13.5	347	42.1	09.7	71	35.9	58.8	
2	198	50.1	211	34.9	-7 00.9	263	50.1	13.2	2	44.8	09.6	86	38.4	58.8	
3	213	52.6	226	34.5	-6 59.7	278	50.6	13.0	17	47.5	09.5	101	40.9	58.8	
4	228	55.1	241	34.1	58.5	293	51.1	12.7	32	50.2	09.4	116	43.4	58.8	
5	243	57.5	256	33.6	-6 57.3	308	51.7	-22 12.4	47	52.9	-5 09.3	131	45.9	+21 58.8	
6	259	00.0	271	33.2	-6 56.1	323	52.2	-22 12.2	62	55.6	-5 09.2	146	48.4	+21 58.8	
7	274	02.5	286	32.7	54.9	338	52.8	11.9	77	58.3	09.1	161	51.0	58.8	
8	289	04.9	301	32.3	53.7	353	53.3	11.6	93	01.0	09.0	176	53.5	58.8	
9	304	07.4	316	31.9	52.5	8	53.9	11.4	108	03.7	08.9	191	56.0	58.9	
10	319	09.9	331	31.4	51.3	23	54.4	11.1	123	06.4	08.8	206	58.5	58.9	
11	334	12.3	346	31.0	-6 50.1	38	55.0	-22 10.8	138	09.1	-5 08.6	222	01.0	+21 58.9	
12	349	14.8	1	30.6	-6 48.9	53	55.5	-22 10.6	153	11.8	-5 08.5	237	03.5	+21 58.9	
13	4	17.2	16	30.2	47.7	68	56.0	10.3	168	14.5	08.4	252	06.1	58.9	
14	19	19.7	31	29.7	46.5	83	56.6	10.0	183	17.3	08.3	267	08.6	58.9	
15	34	22.2	46	29.3	45.3	98	57.1	09.8	198	20.0	08.2	282	11.1	58.9	
16	49	24.6	61	28.9	44.1	113	57.7	09.5	213	22.7	08.1	297	13.6	58.9	
17	64	27.1	76	28.4	-6 42.9	128	58.2	-22 09.2	228	25.4	-5 08.0	312	16.1	+21 58.9	
18	79	29.6	91	28.0	-6 41.6	143	58.8	-22 09.0	243	28.1	-5 07.9	327	18.6	+21 59.0	
19	94	32.0	106	27.6	40.4	158	59.3	08.7	258	30.8	07.8	342	21.2	59.0	
20	109	34.5	121	27.1	39.2	173	59.8	08.4	273	33.5	07.7	357	23.7	59.0	
21	124	37.0	136	26.7	38.0	189	00.4	08.1	288	36.2	07.6	12	26.2	59.0	
22	139	39.4	151	26.3	36.8	204	00.9	07.9	303	38.9	07.5	27	28.7	59.0	
23	154	41.9	166	25.8	35.6	219	01.5	07.6	318	41.6	07.4	42	31.2	59.0	
24	169	44.4	181	25.4	-6 34.4	234	02.0	-22 07.3	333	44.3	-5 07.3	57	33.7	+21 59.0	
Dif	—		-4	+12		+5	+3		+27	+1		+25		0	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'1 PMG: 12 ^h 09 ^m 7			Edad: 1 ^d 6 PHE { 4 ^h : 58'6 12 ^h : 58'3 20 ^h : 58'0 R°: 47 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	177	32.2	-3	157	31.8	+4	14.7	60 N	4 56	5 44	6 26	7 01	0	21	19	98
1	192	32.3		172	03.4 ¹²⁶		31.1 ¹⁶⁴	58	5 00	45	24	05	3		14	92
2	207	32.5		186	34.9 ¹²⁵	+4	47.4 ¹⁶³	56	03	46	23	07	7		08	89
3	222	32.7		201	06.5 ¹²⁶	+5	03.7 ¹⁶³	54	06	47	22	10	10		04	85
4	237	32.8		215	38.1 ¹²⁶		20.0 ¹⁶³	52	08	48	21	13	12		21	00
5	252	33.0	-3	230	09.7 ¹²⁶	+5	36.2 ¹⁶²	50	5 11	5 48	6 20	7 15	15		20	56
6	267	33.2	-3	244	41.3 ¹²⁶	+5	52.3 ¹⁶¹	45	5 15	5 49	6 18	7 20	20		20	48
7	282	33.3		259	13.0 ¹²⁷	+6	08.4 ¹⁶¹	40	18	49	16	24	24		41	70
8	297	33.5		273	44.6 ¹²⁶		24.5 ¹⁶¹	35	20	50	15	27	28		36	65
9	312	33.7		288	16.2 ¹²⁶		40.5 ¹⁶⁰	30	22	50	13	30	32		31	62
10	327	33.8		302	47.9 ¹²⁷	+6	56.5 ¹⁶⁰	20	23	49	11	36	37		22	57
11	342	34.0	-3	317	19.5 ¹²⁶	+7	12.4 ¹⁵⁹	10 N	5 23	5 48	6 09	7 41	42		20	14
12	357	34.2	-3	331	51.2 ¹²⁷	+7	28.2 ¹⁵⁸	0	5 22	5 46	6 06	7 45	47		20	07
13	12	34.3		346	22.8 ¹²⁶		44.0 ¹⁵⁸	10 S	19	43	04	50	51		20	00
14	27	34.5		0	54.5 ¹²⁷	+7	59.8 ¹⁵⁸	20	14	39	6 01	7 55	57		19	53
15	42	34.7		15	26.1 ¹²⁶	+8	15.4 ¹⁵⁶	30	06	34	5 58	8 01	62		44	33
16	57	34.8		29	57.7 ¹²⁶		31.1 ¹⁵⁷	35	5 01	31	57	04	66		40	29
17	72	35.0	-3	44	29.4 ¹²⁷	+8	46.6 ¹⁵⁵	40	4 55	5 27	5 54	8 08	70		19	34
18	87	35.2	-3	59	01.0 ¹²⁶	+9	02.1 ¹⁵⁵	45	4 47	5 22	5 52	8 12	75		19	28
19	102	35.3		73	32.7 ¹²⁷		17.6 ¹⁵⁵	50	37	16	49	18	80		20	16
20	117	35.5		88	04.3 ¹²⁶		33.0 ¹⁵⁴	52	33	13	48	20	83		17	13
21	132	35.7		102	35.9 ¹²⁶	+9	48.3 ¹⁵³	54	27	10	46	23	86		13	10
22	147	35.8	-3	117	07.5 ¹²⁶	+10	03.5 ¹⁵²	56	21	07	44	26	89		09	7
23	162	36.0	-2	131	39.1 ¹²⁶		18.7 ¹⁵²	58	14	5 03	42	29	93		19	04
24	177	36.2	-2	146	10.7 ¹²⁶	+10	33.8 ¹⁵¹	60 S	4 05	4 58	5 40	8 33	98		18	59

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 12 ^h 39 ^m 0		Mag: -3.9 PMG: 11 ^h 55 ^m		Mag: +1.1 PMG: 8 ^h 24 ^m		Mag: -2.4 PMG: 1 ^h 45 ^m		Mag: 0.0 PMG: 20 ^h 06 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	169	44.4	181	25.4	-6	34.4	234	02.0	-22	07.3
1	184	46.8	196	25.0		33.2	249	02.6		07.1
2	199	49.3	211	24.6		32.0	264	03.1		06.8
3	214	51.7	226	24.1		30.8	279	03.7		06.5
4	229	54.2	241	23.7		29.6	294	04.2		06.2
5	244	56.7	256	23.3	-6	28.4	309	04.7	-22	06.0
6	259	59.1	271	22.8	-6	27.2	324	05.3	-22	05.7
7	275	01.6	286	22.4		26.0	339	05.8		05.4
8	290	04.1	301	22.0		24.8	354	06.4		05.2
9	305	06.5	316	21.6		23.5	9	06.9		04.9
10	320	09.0	331	21.1		22.3	24	07.5		04.6
11	335	11.5	346	20.7	-6	21.1	39	08.0	-22	04.3
12	350	13.9	1	20.3	-6	19.9	54	08.6	-22	04.1
13	5	16.4	16	19.9		18.7	69	09.1		03.8
14	20	18.8	31	19.4		17.5	84	09.7		03.5
15	35	21.3	46	19.0		16.3	99	10.2		03.2
16	50	23.8	61	18.6		15.1	114	10.8		02.9
17	65	26.2	76	18.2	-6	13.9	129	11.3	-22	02.7
18	80	28.7	91	17.7	-6	12.7	144	11.8	-22	02.4
19	95	31.2	106	17.3		11.4	159	12.4		02.1
20	110	33.6	121	16.9		10.2	174	12.9		01.8
21	125	36.1	136	16.5		09.0	189	13.5		01.6
22	140	38.6	151	16.0		07.8	204	14.0		01.3
23	155	41.0	166	15.6		06.6	219	14.6		01.0
24	170	43.5	181	15.2	-6	05.4	234	15.1	-22	00.7
Dif	—		-4		+12		+5		+3	
							+27		+1	
									+25	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1 PMG: 12 ^h 09 ^m 4			Edad: 2 ^d 6 PHE { 4 ^h : 57 ^m 7 12 ^h : 57 ^m 4 20 ^h : 57 ^m 2 PMG: 14 ^h 43 ^m R°: 48 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif		Civil	Náutico	Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	177	36.2	-2 58.4	146	10.7	+10 33.8	150	60 N	17 57	18 39	19 28	7 01 0	22 57 98		
1	192	36.4	57.4	160	42.3 ¹²⁶	+10 48.8	150	58	59	38	24	08 5	46 93		
2	207	36.5	56.4	175	13.9 ¹²⁶	+11 03.8	150	56	17 59	36	20	14 9	37 89		
3	222	36.7	55.4	189	45.4 ¹²⁵	18.7 ¹⁴⁹	148	54	18 00	36	17	20 12	29 85		
4	237	36.9	54.4	204	17.0 ¹²⁶	33.5 ¹⁴⁸	148	52	01	35	14	25 14	22 82		
5	252	37.0	-2 53.4	218	48.5 ¹²⁵	+11 48.3	148	50	18 02	18 34	19 12	7 30 17	22 16 79		
6	267	37.2	-2 52.4	233	20.0 ¹²⁵	+12 03.0 ¹⁴⁷	147	45	18 03	18 33	19 07	7 40 22	22 02 73		
7	282	37.4	51.5	247	51.5 ¹²⁵	17.6 ¹⁴⁶	146	40	05	32	03	48 27	21 51 69		
8	297	37.5	50.5	262	23.0 ¹²⁵	32.1 ¹⁴⁵	145	35	06	31	19 01	7 55 30	41 65		
9	312	37.7	49.5	276	54.5 ¹²⁵	+12 46.6 ¹⁴⁵	145	30	07	31	18 59	8 02 33	33 62		
10	327	37.9	48.5	291	25.9 ¹²⁴	+13 00.9 ¹⁴³	143	20	09	31	57	13 38	19 57		
11	342	38.1	-2 47.5	305	57.4 ¹²⁵	+13 15.2 ¹⁴²	142	10 N	18 11	18 32	18 56	8 23 43	21 06 53		
12	357	38.2	-2 46.5	320	28.8 ¹²⁴	+13 29.4 ¹⁴¹	141	0	18 13	18 33	18 57	8 32 48	20 55 48		
13	12	38.4	45.5	335	00.2 ¹²⁴	43.5 ¹⁴¹	141	10 S	15	36	19 00	41 52	43 44		
14	27	38.6	44.6	349	31.6 ¹²⁴	+13 57.6 ¹⁴¹	141	20	17	39	05	8 52 56	31 40		
15	42	38.7	43.6	4	02.9 ¹²³	+14 11.5 ¹³⁹	139	30	19	43	11	9 03 62	17 34		
16	57	38.9	42.6	18	34.2 ¹²³	25.4 ¹³⁹	139	35	21	46	16	10 65	20 09 31		
17	72	39.1	-2 41.6	33	05.5 ¹²³	+14 39.2 ¹³⁸	138	40	18 23	18 50	19 22	9 18 69	19 59 29		
18	87	39.3	-2 40.6	47	36.8 ¹²³	+14 52.9 ¹³⁷	137	45	18 25	18 54	19 29	9 27 74	19 49 24		
19	102	39.4	39.6	62	08.1 ¹²³	+15 06.5 ¹³⁶	136	50	27	19 00	38	38 79	36 19		
20	117	39.6	38.6	76	39.3 ¹²²	20.0 ¹³⁵	135	52	28	02	43	43 82	30 16		
21	132	39.8	37.6	91	10.5 ¹²²	33.5 ¹³⁵	135	54	30	05	48	49 85	23 14		
22	147	39.9	36.7	105	41.7 ¹²²	+15 46.8 ¹³³	133	56	31	09	19 54	9 55 89	16 10		
23	162	40.1	35.7	120	12.9 ¹²²	+16 00.1 ¹³³	133	58	33	12	20 01	10 02 93	19 08 6		
24	177	40.3	-2 34.7	134	44.0 ¹²¹	+16 13.2 ¹³¹	131	60 S	18 35	19 17	20 08	10 11 98	18 59 1		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 12 ^h 35 ^m 0		Mag: -3.9 PMG: 11 ^h 55 ^m			Mag: +1.1 PMG: 8 ^h 23 ^m			Mag: -2.4 PMG: 1 ^h 40 ^m			Mag: 0.0 PMG: 20 ^h 02 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	'	°	°	'	°	'	°	'	
0	170	43.5	181 15.2	-6 05.4	234 15.1	-22 00.7	334 49.3	-5 04.7	58 34.0	+21 59.3					
1	185	46.0	196 14.8	04.2	249 15.7	00.4	349 52.1	04.6	73 36.5	59.3					
2	200	48.4	211 14.4	02.9	264 16.2	-22 00.2	4 54.8	04.5	88 39.0	59.3					
3	215	50.9	226 13.9	01.7	279 16.8	-21 59.9	19 57.5	04.4	103 41.5	59.3					
4	230	53.3	241 13.5	-6 00.5	294 17.3	59.6	35 00.2	04.2	118 44.0	59.3					
5	245	55.8	256 13.1	-5 59.3	309 17.9	-21 59.3	50 02.9	-5 04.1	133 46.5	+21 59.3					
6	260	58.3	271 12.7	-5 58.1	324 18.4	-21 59.0	65 05.6	-5 04.0	148 49.0	+21 59.3					
7	276	00.7	286 12.3	56.9	339 19.0	58.7	80 08.3	03.9	163 51.5	59.3					
8	291	03.2	301 11.8	55.7	354 19.5	58.5	95 11.0	03.8	178 54.0	59.3					
9	306	05.7	316 11.4	54.4	9 20.0	58.2	110 13.8	03.7	193 56.6	59.4					
10	321	08.1	331 11.0	53.2	24 20.6	57.9	125 16.5	03.6	208 59.1	59.4					
11	336	10.6	346 10.6	-5 52.0	39 21.1	-21 57.6	140 19.2	-5 03.5	224 01.6	+21 59.4					
12	351	13.1	1 10.2	-5 50.8	54 21.7	-21 57.3	155 21.9	-5 03.4	239 04.1	+21 59.4					
13	6 15.5	16 09.7	49.6	69 22.2	57.0	170 24.6	03.3	254 06.6	59.4						
14	21 18.0	31 09.3	48.4	84 22.8	56.8	185 27.3	03.2	269 09.1	59.4						
15	36 20.4	46 08.9	47.1	99 23.3	56.5	200 30.0	03.0	284 11.6	59.4						
16	51 22.9	61 08.5	45.9	114 23.9	56.2	215 32.8	02.9	299 14.1	59.4						
17	66 25.4	76 08.1	-5 44.7	129 24.4	-21 55.9	230 35.5	-5 02.8	314 16.6	+21 59.4						
18	81 27.8	91 07.6	-5 43.5	144 25.0	-21 55.6	245 38.2	-5 02.7	329 19.1	+21 59.4						
19	96 30.3	106 07.2	42.3	159 25.5	55.3	260 40.9	02.6	344 21.6	59.5						
20	111 32.8	121 06.8	41.1	174 26.1	55.0	275 43.6	02.5	359 24.1	59.5						
21	126 35.2	136 06.4	39.8	189 26.6	54.8	290 46.3	02.4	14 26.6	59.5						
22	141 37.7	151 06.0	38.6	204 27.2	54.5	305 49.0	02.3	29 29.1	59.5						
23	156 40.2	166 05.6	37.4	219 27.7	54.2	320 51.8	02.2	44 31.6	59.5						
24	171 42.6	181 05.1	-5 36.2	234 28.3	-21 53.9	335 54.5	-5 02.1	59 34.1	+21 59.5						
Dif	—	-4	+12	+5	+3	+27	+1	+25	0						

ALMANAQUE NÁUTICO PERSEIS

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16 ^h 1 PMG: 12 ^h 08 ^m 9			Edad: 4 ^d 6 PHE { SD: 15 ^h 3 PMG: 16 ^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	h m m				
0	177	44.4	-2	11.0	123	01.4	+20	58.8	60 N	18 02	18 44	19 33	7 04 5	0 35 99				
1	192	44.6		10.0	137	31.7 ¹¹³	+21	09.4 ¹⁰⁶	58	03	42	28	20 13	19 91				
2	207	44.8		09.0	152	01.9 ¹¹²		19.8 ¹⁰⁴	56	04	41	24	35 17	0 06 86				
3	222	45.0		08.0	166	32.2 ¹¹³		30.2 ¹⁰⁴	54	04	39	21	47 22	** ** *				
4	237	45.1		07.0	181	02.3 ¹¹¹		40.4 ¹⁰²	52	05	38	18	7 58 24	** ** *				
5	252	45.3	-2	06.1	195	32.5 ¹¹²	+21	50.5 ¹⁰¹	50	18 05	18 37	19 15	8 08 27	** ** *				
6	267	45.5	-2	05.1	210	02.6 ¹¹¹	+22	00.5 ¹⁰⁰	45	18 06	18 35	19 09	8 28 32	** ** *				
7	282	45.7		04.1	224	32.6 ¹¹⁰		10.3 ⁹⁸	40	07	34	05	45 35	** ** *				
8	297	45.8		03.1	239	02.7 ¹¹¹		20.1 ⁹⁸	35	08	33	02	8 59 38	23 50 61				
9	312	46.0		02.1	253	32.7 ¹¹⁰		29.7 ⁹⁶	30	08	32	19 00	9 11 41	36 59				
10	327	46.2		01.1	268	02.6 ¹⁰⁹		39.2 ⁹⁵	20	10	32	18 57	33 44	23 12 56				
11	342	46.4	-2	00.1	282	32.5 ¹⁰⁹	+22	48.6 ⁹⁴	10 N	18 11	18 32	18 56	9 51 48	22 52 53				
12	357	46.5	-1	59.1	297	02.4 ¹⁰⁹	+22	57.8 ⁹²	0	18 12	18 33	18 57	10 09 50	22 33 51				
13	12	46.7		58.2	311	32.3 ¹⁰⁹	+23	07.0 ⁹²	10 S	14	35	18 59	26 54	22 14 48				
14	27	46.9		57.2	326	02.1 ¹⁰⁸		16.0 ⁹⁰	20	15	37	19 03	10 45 57	21 53 47				
15	42	47.1		56.2	340	31.8 ¹⁰⁷		24.9 ⁸⁹	30	17	41	09	11 07 60	30 43				
16	57	47.2		55.2	355	01.6 ¹⁰⁸		33.7 ⁸⁸	35	18	43	13	20 62	16 41				
17	72	47.4	-1	54.2	9	31.3 ¹⁰⁷	+23	42.3 ⁸⁶	40	18 19	18 47	19 18	11 35 65	21 00 39				
18	87	47.6	-1	53.2	24	00.9 ¹⁰⁶	+23	50.9 ⁸⁶	45	18 21	18 50	19 25	11 53 68	20 42 35				
19	102	47.8		52.2	38	30.6 ¹⁰⁷	+23	59.3 ⁸⁴	50	23	55	34	12 15 73	18 32				
20	117	48.0		51.2	53	00.2 ¹⁰⁶	+24	07.5 ⁸²	52	24	18 58	38	25 76	20 07 29				
21	132	48.1		50.3	67	29.7 ¹⁰⁵		15.7 ⁸²	54	25	19 00	43	38 79	19 55 26				
22	147	48.3		49.3	81	59.2 ¹⁰⁵		23.7 ⁸⁰	56	26	03	48	12 52 83	40 22				
23	162	48.5		48.3	96	28.7 ¹⁰⁵		31.6 ⁷⁹	58	27	07	19 54	13 08 89	23 17				
24	177	48.7	-1	47.3	110	58.2 ¹⁰⁵	+24	39.4 ⁷⁸	60 S	18 29	19 10	20 01	13 28 97	19 03 8				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 12 ^h 27 ^m 2		Mag: -3.9 PMG: 11 ^h 57 ^m			Mag: +1.1 PMG: 8 ^h 21 ^m			Mag: -2.4 PMG: 1 ^h 32 ^m			Mag: 0.0 PMG: 19 ^h 54 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	172	41.8	180	55.2	-5	06.8	234	41.5	-21	46.9	336	59.7	-4	59.4	60	34.2	+21	59.7
1	187	44.2	195	54.8		05.6	249	42.0		46.6	352	02.4		59.3	75	36.7		59.7
2	202	46.7	210	54.4		04.4	264	42.6		46.3	7	05.2		59.2	90	39.2		59.7
3	217	49.2	225	54.0		03.1	279	43.1		46.0	22	07.9		59.1	105	41.6		59.7
4	232	51.6	240	53.6		01.9	294	43.7		45.7	37	10.6		59.0	120	44.1		59.8
5	247	54.1	255	53.2	-5	00.7	309	44.2	-21	45.4	52	13.3	-4	58.8	135	46.6	+21	59.8
6	262	56.5	270	52.7	-4	59.5	324	44.8	-21	45.1	67	16.0	-4	58.7	150	49.1	+21	59.8
7	277	59.0	285	52.3		58.2	339	45.3		44.8	82	18.8		58.6	165	51.6		59.8
8	293	01.5	300	51.9		57.0	354	45.9		44.5	97	21.5		58.5	180	54.1		59.8
9	308	03.9	315	51.5		55.8	9	46.4		44.2	112	24.2		58.4	195	56.6		59.8
10	323	06.4	330	51.1		54.6	24	47.0		43.9	127	26.9		58.3	210	59.1		59.8
11	338	08.9	345	50.7	-4	53.3	39	47.6	-21	43.6	142	29.6	-4	58.2	226	01.6	+21	59.8
12	353	11.3	0	50.3	-4	52.1	54	48.1	-21	43.3	157	32.4	-4	58.1	241	04.1	+21	59.8
13	8	13.8	15	49.9		50.9	69	48.7		43.0	172	35.1		58.0	256	06.6		59.8
14	23	16.3	30	49.5		49.6	84	49.2		42.7	187	37.8		57.8	271	09.1		59.8
15	38	18.7	45	49.1		48.4	99	49.8		42.4	202	40.5		57.7	286	11.6		59.8
16	53	21.2	60	48.7		47.2	114	50.3		42.1	217	43.3		57.6	301	14.1		59.9
17	68	23.7	75	48.3	-4	45.9	129	50.9	-21	41.8	232	46.0	-4	57.5	316	16.6	+21	59.9
18	83	26.1	90	47.9	-4	44.7	144	51.4	-21	41.5	247	48.7	-4	57.4	331	19.1	+21	59.9
19	98	28.6	105	47.4		43.5	159	52.0		41.2	262	51.4		57.3	346	21.6		59.9
20	113	31.0	120	47.0		42.3	174	52.5		40.8	277	54.1		57.2	1	24.1		59.9
21	128	33.5	135	46.6		41.0	189	53.1		40.5	292	56.9		57.1	16	26.6		59.9
22	143	36.0	150	46.2		39.8	204	53.6		40.2	307	59.6		56.9	31	29.1		59.9
23	158	38.4	165	45.8		38.6	219	54.2		39.9	323	02.3		56.8	46	31.6		59.9
24	173	40.9	180	45.4	-4	37.3	234	54.7	-21	39.6	338	05.0	-4	56.7	61	34.1	+21	59.9
Dif	—		-4		+12		+6		+3		+27		+1		+25		0	

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16:1 PMG: 12 ^h 08 ^m 6			Edad: 5 ^d 6 SD: 15:1 PMG: 17 ^h 11 ^m	PHE { 4 ^h : 55:4 12 ^h : 55:2 20 ^h : 55:0 R°: 52 ^m											
	hG ☉	Dec		hG ☾		Dif		Dec	Dif		Náutico	Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	177	48.7	-1 47.3	110	58.2	+24	39.4	60 N	4 43	5 32	6 14	7 09	15	2 14	92	
1	192	48.8		125	27.6 ¹⁰⁴		47.0 ⁷⁶	58	48	34	13	33	23	1 50	84	
2	207	49.0		139	57.0 ¹⁰⁴	+24	54.5 ⁷⁵	56	52	36	13	7 52	28	32	78	
3	222	49.2		154	26.3 ¹⁰³	+25	01.9 ⁷⁴	54	56	37	12	8 09	31	16	75	
4	237	49.4		168	55.7 ¹⁰⁴		09.2 ⁷³	52	4 59	38	12	22	34	1 02	72	
5	252	49.5	-1 42.3	183	25.0 ¹⁰³	+25	16.3 ⁷¹	50	5 02	5 39	6 12	8 35	36	0 50	70	
6	267	49.7	-1 41.4	197	54.2 ¹⁰²	+25	23.3 ⁷⁰	45	5 07	5 42	6 11	9 00	40	0 26	66	
7	282	49.9		212	23.4 ¹⁰²		30.1 ⁶⁸	40	12	43	10	20	42	0 06	63	
8	297	50.1		226	52.6 ¹⁰²		36.9 ⁶⁸	35	15	44	09	37	44	** ** *	**	
9	312	50.3		241	21.8 ¹⁰²		43.5 ⁶⁶	30	17	45	09	9 52	45	** ** *	**	
10	327	50.4		255	50.9 ¹⁰¹		49.9 ⁶⁴	20	20	46	08	10 17	48	** ** *	**	
11	342	50.6	-1 36.4	270	20.1 ¹⁰²	+25	56.3 ⁶⁴	10 N	5 21	5 46	6 06	10 39	50	23 45	53	
12	357	50.8	-1 35.4	284	49.1 ¹⁰⁰	+26	02.5 ⁶²	0	5 21	5 45	6 05	10 59	52	23 24	52	
13	12	51.0		299	18.2 ¹⁰¹		08.5 ⁶⁰	10 S	19	43	04	11 20	53	23 02	51	
14	27	51.2		313	47.2 ¹⁰⁰		14.4 ⁵⁹	20	15	41	03	11 42	55	22 40	49	
15	42	51.3		328	16.2 ¹⁰⁰		20.2 ⁵⁸	30	09	37	01	12 07	58	22 13	48	
16	57	51.5		342	45.2 ¹⁰⁰		25.9 ⁵⁷	35	05	35	6 00	22	59	21 57	47	
17	72	51.7	-1 30.5	357	14.1 ⁹⁹	+26	31.4 ⁵⁵	40	5 00	5 32	5 59	12 40	60	21 39	46	
18	87	51.9	-1 29.5	11	43.1 ¹⁰⁰	+26	36.8 ⁵⁴	45	4 53	5 28	5 57	13 01	63	21 17	44	
19	102	52.0		26	12.0 ⁹⁹		42.1 ⁵³	50	45	23	55	28	66	20 50	41	
20	117	52.2		40	40.9 ⁹⁹		47.2 ⁵¹	52	40	21	55	41	68	36	40	
21	132	52.4		55	09.7 ⁹⁸		52.2 ⁵⁰	54	36	18	54	13 57	69	21	37	
22	147	52.6		69	38.6 ⁹⁹	+26	57.0 ⁴⁸	56	30	15	53	14 15	72	20 02	35	
23	162	52.8		84	07.4 ⁹⁸	+27	01.7 ⁴⁷	58	24	12	52	14 37	77	19 40	31	
24	177	52.9	-1 23.6	98	36.2 ⁹⁸	+27	06.3 ⁴⁶	60 S	4 17	5 08	5 50	15 05	86	19 11	22	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 12 ^h 23 ^m 2		Mag: -3.9 PMG: 11 ^h 57 ^m		Mag: +1.1 PMG: 8 ^h 20 ^m		Mag: -2.4 PMG: 1 ^h 27 ^m		Mag: 0.0 PMG: 19 ^h 50 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	173	40.9	180	45.4	-4	37.3	338	05.0	-4	56.7
1	188	43.4	195	45.0		36.1	353	07.8		56.6
2	203	45.8	210	44.6		34.9	8	10.5		56.5
3	218	48.3	225	44.2		33.6	23	13.2		56.4
4	233	50.8	240	43.8		32.4	38	15.9		56.3
5	248	53.2	255	43.4	-4	31.2	53	18.7	-4	56.1
6	263	55.7	270	43.0	-4	29.9	68	21.4	-4	56.0
7	278	58.2	285	42.6		28.7	83	24.1		55.9
8	294	00.6	300	42.2		27.5	98	26.8		55.8
9	309	03.1	315	41.8		26.2	113	29.6		55.7
10	324	05.5	330	41.4		25.0	128	32.3		55.6
11	339	08.0	345	41.0	-4	23.8	143	35.0	-4	55.5
12	354	10.5	0	40.6	-4	22.5	158	37.7	-4	55.4
13	9	12.9	15	40.2		21.3	173	40.5		55.2
14	24	15.4	30	39.8		20.1	188	43.2		55.1
15	39	17.9	45	39.4		18.8	203	45.9		55.0
16	54	20.3	60	39.0		17.6	218	48.6		54.9
17	69	22.8	75	38.5	-4	16.4	233	51.4	-4	54.8
18	84	25.3	90	38.1	-4	15.1	248	54.1	-4	54.7
19	99	27.7	105	37.7		13.9	263	56.8		54.6
20	114	30.2	120	37.3		12.7	278	59.6		54.4
21	129	32.7	135	36.9		11.4	294	02.3		54.3
22	144	35.1	150	36.5		10.2	309	05.0		54.2
23	159	37.6	165	36.1		9.0	324	07.7		54.1
24	174	40.0	180	35.7	-4	07.7	339	10.5	-4	54.0
Dif	—		-4	+12		+6	+3	+27		+1
										+25
										0

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1			Edad: 6 ^d 6	PHE { 4 ^h : 54/8 12 ^h : 54/7 20 ^h : 54/5									
	PMG: 12 ^h 08 ^m 3					SD: 15 ^h 0			PMG: 18 ^h 03 ^m		R°: 52 ^m			
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	177	52.9	-1 23.6	98	36.2	+27 06.3	45	60 N	18 07	18 49	19 38	7 24 35	3 46 73	
1	192	53.1	22.6	113	05.0	98	10.8	58	08	47	33	7 56 41	3 14 67	
2	207	53.3	21.6	127	33.7	97	15.1	43	08	45	29	8 20 44	2 50 65	
3	222	53.5	20.6	142	02.5	98	19.2	41	08	43	25	40 45	31 62	
4	237	53.7	19.6	156	31.2	97	23.2	40	08	42	21	8 56 47	14 62	
5	252	53.8	-1 18.6	170	59.9	97	+27 27.1	39	50	18 08	18 40	19 18	9 11 47	2 00 61
6	267	54.0	-1 17.6	185	28.6	97	+27 30.9	38	45	18 09	18 38	19 12	9 40 48	1 32 58
7	282	54.2	16.6	199	57.3	97	34.5	36	40	09	36	07	10 02 50	1 09 58
8	297	54.4	15.7	214	26.0	97	37.9	34	35	09	35	04	21 50	0 51 56
9	312	54.6	14.7	228	54.6	96	41.3	34	30	10	33	19 01	10 37 51	35 56
10	327	54.7	13.7	243	23.3	97	44.5	32	20	10	32	18 58	11 05 51	0 08 55
11	342	54.9	-1 12.7	257	51.9	96	+27 47.5	30	10 N	18 11	18 32	18 56	11 29 51	** * *
12	357	55.1	-1 11.7	272	20.6	97	+27 50.4	28	0	18 12	18 32	18 56	11 51 52	** * *
13	12	55.3	10.7	286	49.2	96	53.2	29	10 S	12	33	18 58	12 13 52	23 53 52
14	27	55.5	09.7	301	17.8	96	55.8	26	20	13	35	19 01	12 37 53	29 52
15	42	55.6	08.7	315	46.4	96	+27 58.3	25	30	15	39	06	13 05 53	23 01 52
16	57	55.8	07.8	330	15.0	96	+28 00.7	24	35	15	41	10	21 54	22 44 53
17	72	56.0	-1 06.8	344	43.7	97	+28 02.9	22	40	18 16	18 43	19 15	13 40 54	22 25 52
18	87	56.2	-1 05.8	359	12.3	96	+28 05.0	21	45	18 17	18 47	19 21	14 04 54	22 01 53
19	102	56.4	04.8	13	40.9	96	06.9	19	50	19	51	29	34 54	21 31 52
20	117	56.6	03.8	28	09.5	96	08.7	17	52	19	53	33	14 49 54	21 16 52
21	132	56.7	02.8	42	38.1	96	10.4	18	54	20	55	37	15 06 55	20 58 53
22	147	56.9	01.8	57	06.7	96	11.9	15	56	21	18 58	42	27 55	37 53
23	162	57.1	-1 00.8	71	35.3	96	13.3	14	58	22	19 01	48	15 54 55	20 11 52
24	177	57.3	-0 59.8	86	03.9	96	+28 14.5	12	60 S	18 22	19 04	19 55	16 31 57	19 33 51

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 12 ^h 19 ^m 3		Mag: -3.9 PMG: 11 ^h 58 ^m		Mag: +1.0 PMG: 8 ^h 19 ^m		Mag: -2.4 PMG: 1 ^h 23 ^m		Mag: 0.0 PMG: 19 ^h 46 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	174	40.0	180	35.7	-4 07.7	235	08.1	-21 32.2	339	10.5	-4 54.0	62	33.9	+22 00.1
1	189	42.5	195	35.3	06.5	250	08.6	31.9	354	13.2	53.9	77	36.3	00.1
2	204	45.0	210	34.9	05.2	265	09.2	31.6	9	15.9	53.8	92	38.8	00.1
3	219	47.4	225	34.5	04.0	280	09.7	31.2	24	18.6	53.6	107	41.3	00.1
4	234	49.9	240	34.1	02.8	295	10.3	30.9	39	21.4	53.5	122	43.8	00.1
5	249	52.4	255	33.7	-4 01.5	310	10.8	-21 30.6	54	24.1	-4 53.4	137	46.3	+22 00.1
6	264	54.8	270	33.3	-4 00.3	325	11.4	-21 30.3	69	26.8	-4 53.3	152	48.8	+22 00.1
7	279	57.3	285	32.9	-3 59.1	340	12.0	30.0	84	29.6	53.2	167	51.3	00.1
8	294	59.8	300	32.5	57.8	355	12.5	29.7	99	32.3	53.1	182	53.8	00.2
9	310	02.2	315	32.1	56.6	10	13.1	29.4	114	35.0	53.0	197	56.2	00.2
10	325	04.7	330	31.7	55.3	25	13.6	29.0	129	37.7	52.8	212	58.7	00.2
11	340	07.1	345	31.3	-3 54.1	40	14.2	-21 28.7	144	40.5	-4 52.7	228	01.2	+22 00.2
12	355	09.6	0	30.9	-3 52.9	55	14.7	-21 28.4	159	43.2	-4 52.6	243	03.7	+22 00.2
13	10	12.1	15	30.5	51.6	70	15.3	28.1	174	45.9	52.5	258	06.2	00.2
14	25	14.5	30	30.1	50.4	85	15.9	27.8	189	48.7	52.4	273	08.7	00.2
15	40	17.0	45	29.7	49.2	100	16.4	27.4	204	51.4	52.3	288	11.2	00.2
16	55	19.5	60	29.3	47.9	115	17.0	27.1	219	54.1	52.2	303	13.6	00.2
17	70	21.9	75	29.0	-3 46.7	130	17.5	-21 26.8	234	56.9	-4 52.0	318	16.1	+22 00.2
18	85	24.4	90	28.6	-3 45.4	145	18.1	-21 26.5	249	59.6	-4 51.9	333	18.6	+22 00.2
19	100	26.9	105	28.2	44.2	160	18.7	26.2	265	02.3	51.8	348	21.1	00.2
20	115	29.3	120	27.8	43.0	175	19.2	25.8	280	05.0	51.7	3	23.6	00.2
21	130	31.8	135	27.4	41.7	190	19.8	25.5	295	07.8	51.6	18	26.1	00.2
22	145	34.3	150	27.0	40.5	205	20.3	25.2	310	10.5	51.5	33	28.6	00.3
23	160	36.7	165	26.6	39.2	220	20.9	24.9	325	13.2	51.3	48	31.0	00.3
24	175	39.2	180	26.2	-3 38.0	235	21.4	-21 24.6	340	16.0	-4 51.2	63	33.5	+22 00.3
Dif	—		-4	+12		+6	+3		+27	+1		+25		0

UT	SOL			☾ LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'1			Edad: 7 ^d 6	PHE { 4 ^h : 54'4 12 ^h : 54'3 20 ^h : 54'3													
	PMG: 12 ^h 08 ^m 0					SD: 14'8				PMG: 18 ^h 55 ^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	177	57.3	-0	59.8	86	03.9	+28	14.5	60 N	4	37	5	26	6	08	7	59	
1	192	57.5		58.9	100	32.5		15.6	58	42	29		08	8	37	63	4	59
2	207	57.6		57.9	115	01.1		16.6	56	47	30		07	9	04	61	3	55
3	222	57.8		56.9	129	29.8		17.4	54	51	32		07	25	59		33	4
4	237	58.0		55.9	143	58.4		18.1	52	54	34		07	43	58		16	48
5	252	58.2	-0	54.9	158	27.0	+28	18.6	50	4	57	5	35	6	07	9	58	57
6	267	58.4	-0	53.9	172	55.7	+28	19.0	45	5	04	5	38	6	07	10	28	56
7	282	58.5		52.9	187	24.4		19.3	40	08	40		07	10	52	55	2	30
8	297	58.7		51.9	201	53.0		19.4	35	12	41		07	11	11	55	1	47
9	312	58.9		50.9	216	21.7		19.4	30	15	42		06	28	54		31	50
10	327	59.1		50.0	230	50.4		19.2	20	18	44		06	11	56	53	1	03
11	342	59.3	-0	49.0	245	19.2	+28	18.9	10 N	5	20	5	44	6	05	12	20	52
12	357	59.5	-0	48.0	259	47.9	+28	18.5	0	5	20	5	44	6	05	12	43	51
13	12	59.6		47.0	274	16.7		17.9	10 S	19	43		04	13	05		0	16
14	27	59.8		46.0	288	45.4		17.2	20	16	41		03	30	49		***	52
15	43	00.0		45.0	303	14.2		16.4	30	10	38		02	13	58	48		***
16	58	00.2		44.0	317	43.0		15.4	35	07	36		02	14	15	47		***
17	73	00.4	-0	43.0	332	11.9	+28	14.3	40	5	02	5	34	6	01	14	34	46
18	88	00.6	-0	42.0	346	40.7	+28	13.0	45	4	56	5	30	6	00	14	58	44
19	103	00.7		41.1	1	09.6		11.6	50	48	26		5	59	15	28	43	22
20	118	00.9		40.1	15	38.5		10.1	52	44	24		58	15	43	41	22	54
21	133	01.1		39.1	30	07.4		08.5	54	40	22		57	16	01	39	22	60
22	148	01.3		38.1	44	36.4		06.7	56	35	20		57	16	01	39	21	51
23	163	01.5		37.1	59	05.4		04.7	58	29	17		56	22	37		30	66
24	178	01.7	-0	36.1	73	34.4	+28	02.7	60 S	4	23	5	13	56	22	37	21	03
														56	16	49	33	72
														55	17	28	25	81

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 12 ^h 15 ^m 4		Mag: -3.9 PMG: 11 ^h 59 ^m		Mag: +1.0 PMG: 8 ^h 18 ^m		Mag: -2.4 PMG: 1 ^h 19 ^m		Mag: 0.0 PMG: 19 ^h 43 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	175	39.2	180	26.2	-3	38.0	235	21.4	-21	24.6
1	190	41.6	195	25.8		36.7	250	22.0		24.2
2	205	44.1	210	25.4		35.5	265	22.6		23.9
3	220	46.6	225	25.0		34.3	280	23.1		23.6
4	235	49.0	240	24.6		33.0	295	23.7		23.3
5	250	51.5	255	24.2	-3	31.8	310	24.2	-21	22.9
6	265	54.0	270	23.8	-3	30.5	325	24.8	-21	22.6
7	280	56.4	285	23.4		29.3	340	25.4		22.3
8	295	58.9	300	23.0		28.1	355	25.9		22.0
9	311	01.4	315	22.6		26.8	10	26.5		21.6
10	326	03.8	330	22.2		25.6	25	27.0		21.3
11	341	06.3	345	21.8	-3	24.3	40	27.6	-21	21.0
12	356	08.8	0	21.4	-3	23.1	55	28.2	-21	20.7
13	11	11.2	15	21.0		21.8	70	28.7		20.3
14	26	13.7	30	20.6		20.6	85	29.3		20.0
15	41	16.1	45	20.2		19.4	100	29.8		19.7
16	56	18.6	60	19.9		18.1	115	30.4		19.4
17	71	21.1	75	19.5	-3	16.9	130	31.0	-21	19.0
18	86	23.5	90	19.1	-3	15.6	145	31.5	-21	18.7
19	101	26.0	105	18.7		14.4	160	32.1		18.4
20	116	28.5	120	18.3		13.1	175	32.6		18.0
21	131	30.9	135	17.9		11.9	190	33.2		17.7
22	146	33.4	150	17.5		10.7	205	33.8		17.4
23	161	35.9	165	17.1		09.4	220	34.3		17.1
24	176	38.3	180	16.7	-3	08.2	235	34.9	-21	16.7
Dif	—		-4		+12		+6		+3	
							+27		+1	
									+25	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:1 PMG: 12 ^h 07 ^m 7			Edad: 8 ^d 6 PHE { SD: 14:8 PMG: 19 ^h 46 ^m 4 ^h : 54/2 12 ^h : 54/2 20 ^h : 54/2 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	01.7	-0 36.1	73	34.4	+28 02.7	60 N	18 12	18 54	19 44	9 06 88	5 39 17		
1	193	01.8	35.1	88	03.4 ¹⁰⁰	+28 00.5	58	12	51	38	9 40 79	5 05 25		
2	208	02.0	34.1	102	32.5 ¹⁰¹	+27 58.1	56	12	49	33	10 05 74	4 40 30		
3	223	02.2	33.1	117	01.6 ¹⁰¹	55.6	54	12	47	29	24 71	20 33		
4	238	02.4	32.2	131	30.7 ¹⁰¹	53.0	52	12	45	25	41 68	4 04 35		
5	253	02.6	-0 31.2	145	59.9 ¹⁰²	+27 50.3	50	18 11	18 44	19 22	10 55 67	3 49 37		
6	268	02.8	-0 30.2	160	29.1 ¹⁰²	+27 47.4	45	18 11	18 40	19 15	11 24 63	3 20 40		
7	283	02.9	29.2	174	58.3 ¹⁰²	44.4	40	11	38	10	11 47 60	2 57 42		
8	298	03.1	28.2	189	27.6 ¹⁰³	41.3	35	11	36	06	12 06 58	38 44		
9	313	03.3	27.2	203	56.9 ¹⁰³	38.0	30	11	35	19 03	22 56	2 21 46		
10	328	03.5	26.2	218	26.2 ¹⁰³	34.6	20	11	33	18 58	12 49 54	1 54 47		
11	343	03.7	-0 25.2	232	55.6 ¹⁰⁴	+27 31.1	10 N	18 11	18 32	18 56	13 12 52	1 30 49		
12	358	03.9	-0 24.3	247	25.0 ¹⁰⁴	+27 27.5	0	18 11	18 32	18 56	13 34 49	1 08 50		
13	13	04.0	23.3	261	54.5 ¹⁰⁵	23.7	10 S	11	32	57	13 56 47	0 45 52		
14	28	04.2	22.3	276	24.0 ¹⁰⁵	19.8	20	12	34	18 59	14 19 45	0 21 54		
15	43	04.4	21.3	290	53.5 ¹⁰⁵	15.7	30	12	36	19 04	14 46 42	** ** *		
16	58	04.6	20.3	305	23.1 ¹⁰⁶	11.5	35	13	38	07	15 02 40	** ** *		
17	73	04.8	-0 19.3	319	52.7 ¹⁰⁶	+27 07.2	40	18 13	18 40	19 12	15 20 38	** ** *		
18	88	05.0	-0 18.3	334	22.4 ¹⁰⁷	+27 02.8	45	18 14	18 43	19 17	15 42 36	23 54 64		
19	103	05.2	17.3	348	52.1 ¹⁰⁷	+26 58.3	50	14	47	25	16 11 31	26 69		
20	118	05.3	16.3	3	21.8 ¹⁰⁷	53.6	52	15	48	28	24 30	23 12 72		
21	133	05.5	15.4	17	51.6 ¹⁰⁸	48.8	54	15	50	32	40 27	22 57 74		
22	148	05.7	14.4	32	21.5 ¹⁰⁹	43.8	56	15	53	37	16 59 23	38 78		
23	163	05.9	13.4	46	51.4 ¹⁰⁹	38.8	58	16	55	42	17 22 18	22 15 84		
24	178	06.1	-0 12.4	61	21.3 ¹⁰⁹	+26 33.6	60 S	18 16	18 58	19 48	17 53 9	21 45 92		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 12 ^h 11 ^m 4		Mag: -3.9 PMG: 11 ^h 59 ^m			Mag: +1.0 PMG: 8 ^h 17 ^m			Mag: -2.4 PMG: 1 ^h 14 ^m			Mag: 0.0 PMG: 19 ^h 39 ^m		
h	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec	hG ♆	Dec
0	176	38.3	180	16.7	235	34.9	341	21.6	64	33.1	245	02.8	260	05.3
1	191	40.8	195	16.3	250	35.4	356	24.3	79	35.6	260	05.3	275	07.8
2	206	43.3	210	15.9	265	36.0	11	27.0	94	38.0	275	07.8	290	10.2
3	221	45.7	225	15.5	280	36.6	26	29.8	109	40.5	290	10.2	305	12.7
4	236	48.2	240	15.1	295	37.1	41	32.5	124	43.0	305	12.7	320	15.2
5	251	50.6	255	14.7	310	37.7	56	35.2	139	45.5	320	15.2	335	17.7
6	266	53.1	270	14.4	325	38.3	71	38.0	154	47.9	335	17.7	350	20.1
7	281	55.6	285	14.0	340	38.8	86	40.7	169	50.4	350	20.1	5	22.6
8	296	58.0	300	13.6	355	39.4	101	43.4	184	52.9	5	22.6	20	25.1
9	312	00.5	315	13.2	10	39.9	116	46.2	199	55.4	20	25.1	35	27.6
10	327	03.0	330	12.8	25	40.5	131	48.9	214	57.9	35	27.6	50	30.0
11	342	05.4	345	12.4	40	41.1	146	51.6	230	00.3	50	30.0	65	32.5
12	357	07.9	0	12.0	55	41.6	161	54.4	245	02.8	+22	00.5		
13	12	10.4	15	11.6	70	42.2	176	57.1	260	05.3	+22	00.5		
14	27	12.8	30	11.2	85	42.8	191	59.9	275	07.8	+22	00.5		
15	42	15.3	45	10.8	100	43.3	207	02.6	290	10.2	+22	00.5		
16	57	17.7	60	10.4	115	43.9	222	05.3	305	12.7	+22	00.5		
17	72	20.2	75	10.1	130	44.4	237	08.1	320	15.2	+22	00.5		
18	87	22.7	90	09.7	145	45.0	252	10.8	335	17.7	+22	00.5		
19	102	25.1	105	09.3	160	45.6	267	13.5	350	20.1	+22	00.5		
20	117	27.6	120	08.9	175	46.1	282	16.3	5	22.6	+22	00.5		
21	132	30.1	135	08.5	190	46.7	297	19.0	20	25.1	+22	00.5		
22	147	32.5	150	08.1	205	47.3	312	21.7	35	27.6	+22	00.5		
23	162	35.0	165	07.7	220	47.8	327	24.5	50	30.0	+22	00.5		
24	177	37.5	180	07.3	235	48.4	342	27.2	65	32.5	+22	00.5		
Dif	—		-4 +12			+6 +3			+27 +1			+25 0		

UT	SOL			LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'1			Edad: 9 ^d 6	PHE { 4 ^h : 54'2 12 ^h : 54'2 20 ^h : 54'2	R°: 47 ^m	Náutico		Civil	Hora		R°	Hora	R°	
	PMG: 12 ^h 07 ^m 4														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif								
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	178	06.1	-0 12.4	61	21.3	+26 33.6	53	60 N	4	30	5	20	6	02	10 34 93
1	193	06.3	11.4	75	51.3 ¹¹⁰	28.3	53	58		36	23	02	10	59	85 30 14
2	208	06.4	10.4	90	21.3 ¹¹⁰	22.9	54	56		41	25	02	11	19	80 5 10 18
3	223	06.6	09.4	104	51.4 ¹¹¹	17.3	56	54		45	27	02		35	77 4 53 22
4	238	06.8	08.4	119	21.5 ¹¹¹	11.7	56	52		49	29	03	11	49	74 3 39 25
5	253	07.0	-0 07.5	133	51.7 ¹¹²	+26 05.9	58	50		4	53	5	31	6	03 12 02 70
6	268	07.2	-0 06.5	148	21.9 ¹¹²	+26 00.0	59	45		5	00	5	34	6	03 12 27 66
7	283	07.4	05.5	162	52.2 ¹¹³	+25 53.9	61	40		05	37	04	12	47	63 3 39 35
8	298	07.6	04.5	177	22.5 ¹¹³	47.8	61	35		09	39	04	13	04	60 2 27 37
9	313	07.7	03.5	191	52.9 ¹¹⁴	41.5	63	30		12	40	04		18	58 3 07 39
10	328	07.9	02.5	206	23.3 ¹¹⁴	35.1	64	20		17	42	04	13	43	53 2 41 43
11	343	08.1	-0 01.5	220	53.8 ¹¹⁵	+25 28.6	65	10 N		5	19	5	43	6	04 14 04 50
12	358	08.3	-0 00.5	235	24.3 ¹¹⁵	+25 22.0	66	0		5	20	5	44	6	04 14 23 48
13	13	08.5	+0 00.4	249	54.9 ¹¹⁶	15.2	68	10 S		19	43	04	14	43	44 37 51
14	28	08.7	01.4	264	25.5 ¹¹⁶	08.4	68	20		16	42	04	15	04	41 1 15 54
15	43	08.9	02.4	278	56.2 ¹¹⁷	+25 01.4	70	30		12	40	03		28	37 0 49 57
16	58	09.0	03.4	293	26.9 ¹¹⁷	+24 54.3	71	35		08	38	03		42	35 33 60
17	73	09.2	+0 04.4	307	57.7 ¹¹⁸	+24 47.1	72	40		5	04	5	36	6	03 15 58 32
18	88	09.4	+0 05.4	322	28.6 ¹¹⁹	+24 39.8	73	45		4	59	5	33	6	02 16 18 28
19	103	09.6	06.4	336	59.5 ¹¹⁹	32.4	74	50		51	30	02		42	24 *** ** **
20	118	09.8	07.4	351	30.4 ¹¹⁹	24.9	75	52		48	28	02	16	54	21 *** ** **
21	133	10.0	08.3	6	01.4 ¹²⁰	17.2	77	54		44	26	01	17	07	18 *** ** **
22	148	10.2	09.3	20	32.5 ¹²¹	09.5	77	56		39	24	01		22	15 23 56 82
23	163	10.4	10.3	35	03.6 ¹²¹	+24 01.6	79	58		34	21	01	17	40	10 39 86
24	178	10.5	+0 11.3	49	34.8 ¹²²	+23 53.6	80	60 S		4	28	5	18	6	00 18 02 4

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 12 ^h 07 ^m 5		Mag: -3.9 PMG: 12 ^h 00 ^m		Mag: +1.0 PMG: 8 ^h 16 ^m		Mag: -2.5 PMG: 1 ^h 10 ^m		Mag: 0.0 PMG: 19 ^h 35 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	177	37.5	180	07.3	235	48.4	342	27.2	65	32.5
1	192	39.9	195	06.9	250	49.0	357	30.0	80	35.0
2	207	42.4	210	06.6	265	49.5	12	32.7	95	37.5
3	222	44.9	225	06.2	280	50.1	27	35.4	110	39.9
4	237	47.3	240	05.8	295	50.7	42	38.2	125	42.4
5	252	49.8	255	05.4	310	51.2	57	40.9	140	44.9
6	267	52.2	270	05.0	325	51.8	72	43.7	155	47.4
7	282	54.7	285	04.6	340	52.3	87	46.4	170	49.8
8	297	57.2	300	04.2	355	52.9	102	49.1	185	52.3
9	312	59.6	315	03.8	10	53.5	117	51.9	200	54.8
10	328	02.1	330	03.5	25	54.0	132	54.6	215	57.2
11	343	04.6	345	03.1	40	54.6	147	57.3	230	59.7
12	358	07.0	0	02.7	55	55.2	163	00.1	246	02.2
13	13	09.5	15	02.3	70	55.7	178	02.8	261	04.7
14	28	12.0	30	01.9	85	56.3	193	05.6	276	07.1
15	43	14.4	45	01.5	100	56.9	208	08.3	291	09.6
16	58	16.9	60	01.1	115	57.4	223	11.0	306	12.1
17	73	19.4	75	00.7	130	58.0	238	13.8	321	14.5
18	88	21.8	90	00.4	145	58.6	253	16.5	336	17.0
19	103	24.3	105	00.0	160	59.1	268	19.3	351	19.5
20	118	26.7	119	59.6	175	59.7	283	22.0	6	21.9
21	133	29.2	134	59.2	191	00.3	298	24.7	21	24.4
22	148	31.7	149	58.8	206	00.8	313	27.5	36	26.9
23	163	34.1	164	58.4	221	01.4	328	30.2	51	29.4
24	178	36.6	179	58.0	236	02.0	343	33.0	66	31.8
Dif	—		-4	+12	+6	+3	+27	+1	+25	0

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:1 PMG: 12 ^h 07 ^m 1			Edad: 10 ^d 6 PHE { 4 ^h : 54/3 12 ^h : 54/3 20 ^h : 54/4 R°: 45 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	°	'	°	°	h m	h m	h m	h m m	h m m	h m m	
0	178	10.5	+0 11.3	49	34.8	+23 53.6	60 N	18 17	18 59	19 49	12 07 91	6 02 2		
1	193	10.7		64	06.0 ¹²²	45.6 ⁸⁰	58	16	56	43	24 86	5 44 8		
2	208	10.9		78	37.3 ¹²³	37.4 ⁸²	56	16	53	38	39 82	28 12		
3	223	11.1		93	08.6 ¹²³	29.1 ⁸³	54	15	51	33	12 52 78	15 16		
4	238	11.3		107	40.0 ¹²⁴	20.7 ⁸⁴	52	15	49	29	13 03 75	5 04 18		
5	253	11.5	+0 16.2	122	11.4 ¹²⁴	+23 12.2 ⁸⁵	50	18 15	18 47	19 25	13 12 73	4 53 21		
6	268	11.7	+0 17.2	136	42.9 ¹²⁵	+23 03.6 ⁸⁶	45	18 14	18 43	19 18	13 33 67	4 32 25		
7	283	11.8		151	14.5 ¹²⁶	+22 54.9 ⁸⁷	40	13	40	12	13 50 63	4 14 29		
8	298	12.0		165	46.1 ¹²⁶	46.0 ⁸⁹	35	13	38	07	14 04 60	3 59 33		
9	313	12.2		180	17.7 ¹²⁶	37.1 ⁸⁹	30	12	36	19 04	16 57	46 35		
10	328	12.4		194	49.4 ¹²⁷	28.1 ⁹⁰	20	11	33	18 59	36 53	24 39		
11	343	12.6	+0 22.2	209	21.2 ¹²⁸	+22 19.0 ⁹¹	10 N	18 11	18 32	18 56	14 54 49	3 05 43		
12	358	12.8	+0 23.2	223	53.0 ¹²⁸	+22 09.8 ⁹²	0	18 10	18 31	18 55	15 11 45	2 47 46		
13	13	13.0		238	24.9 ¹²⁹	+22 00.4 ⁹⁴	10 S	10	31	55	27 42	28 50		
14	28	13.2		252	56.8 ¹²⁹	+21 51.0 ⁹⁴	20	10	32	18 57	15 45 38	2 09 53		
15	43	13.3		267	28.8 ¹³⁰	41.5 ⁹⁵	30	10	34	19 01	16 05 33	1 46 57		
16	58	13.5		282	00.8 ¹³⁰	31.9 ⁹⁶	35	10	35	04	17 30	33 60		
17	73	13.7	+0 28.1	296	32.9 ¹³¹	+21 22.2 ⁹⁷	40	18 10	18 37	19 08	16 30 28	1 17 63		
18	88	13.9	+0 29.1	311	05.1 ¹³²	+21 12.4 ⁹⁸	45	18 10	18 39	19 13	16 46 24	0 58 67		
19	103	14.1		325	37.3 ¹³²	+21 02.5 ⁹⁹	50	10	42	20	17 06 18	35 72		
20	118	14.3		340	09.5 ¹³²	+20 52.5 ¹⁰⁰	52	10	44	23	15 16	24 75		
21	133	14.5		354	41.8 ¹³³	42.4 ¹⁰¹	54	10	45	27	25 13	0 11 78		
22	148	14.7		9	14.2 ¹³⁴	32.2 ¹⁰²	56	10	47	31	37 10	** ** *		
23	163	14.8		23	46.6 ¹³⁴	21.9 ¹⁰³	58	10	49	36	17 50 6	** ** *		
24	178	15.0	+0 35.0	38	19.0 ¹³⁴	+20 11.5 ¹⁰⁴	60 S	18 10	18 52	19 41	18 06 1	** ** *		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 12 ^h 03 ^m 6		Mag: -3.9 PMG: 12 ^h 00 ^m			Mag: +1.0 PMG: 8 ^h 16 ^m			Mag: -2.5 PMG: 1 ^h 06 ^m			Mag: 0.0 PMG: 19 ^h 31 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	178	36.6	179	58.0	-2 08.2	236	02.0	-21 00.5	343	33.0	-4 42.8	66	31.8	+22 00.7
1	193	39.1	194	57.7	07.0	251	02.5	-21 00.1	358	35.7	42.7	81	34.3	00.7
2	208	41.5	209	57.3	05.7	266	03.1	-20 59.8	13	38.4	42.6	96	36.8	00.7
3	223	44.0	224	56.9	04.5	281	03.7	59.4	28	41.2	42.4	111	39.2	00.7
4	238	46.5	239	56.5	03.2	296	04.2	59.1	43	43.9	42.3	126	41.7	00.7
5	253	48.9	254	56.1	-2 02.0	311	04.8	-20 58.7	58	46.7	-4 42.2	141	44.2	+22 00.7
6	268	51.4	269	55.7	-2 00.7	326	05.4	-20 58.4	73	49.4	-4 42.1	156	46.6	+22 00.7
7	283	53.8	284	55.3	-1 59.5	341	05.9	58.0	88	52.2	42.0	171	49.1	00.7
8	298	56.3	299	55.0	58.2	356	06.5	57.7	103	54.9	41.8	186	51.6	00.7
9	313	58.8	314	54.6	57.0	11	07.1	57.3	118	57.6	41.7	201	54.0	00.7
10	329	01.2	329	54.2	55.7	26	07.6	57.0	134	00.4	41.6	216	56.5	00.7
11	344	03.7	344	53.8	-1 54.5	41	08.2	-20 56.6	149	03.1	-4 41.5	231	59.0	+22 00.7
12	359	06.2	359	53.4	-1 53.2	56	08.8	-20 56.3	164	05.9	-4 41.4	247	01.4	+22 00.7
13	14	08.6	14	53.0	52.0	71	09.3	55.9	179	08.6	41.3	262	03.9	00.7
14	29	11.1	29	52.6	50.7	86	09.9	55.6	194	11.3	41.1	277	06.4	00.7
15	44	13.6	44	52.3	49.5	101	10.5	55.2	209	14.1	41.0	292	08.8	00.7
16	59	16.0	59	51.9	48.2	116	11.0	54.9	224	16.8	40.9	307	11.3	00.7
17	74	18.5	74	51.5	-1 47.0	131	11.6	-20 54.5	239	19.6	-4 40.8	322	13.8	+22 00.7
18	89	21.0	89	51.1	-1 45.7	146	12.2	-20 54.2	254	22.3	-4 40.7	337	16.2	+22 00.7
19	104	23.4	104	50.7	44.5	161	12.8	53.8	269	25.1	40.5	352	18.7	00.7
20	119	25.9	119	50.3	43.2	176	13.3	53.5	284	27.8	40.4	7	21.2	00.7
21	134	28.3	134	50.0	42.0	191	13.9	53.1	299	30.5	40.3	22	23.6	00.7
22	149	30.8	149	49.6	40.7	206	14.5	52.8	314	33.3	40.2	37	26.1	00.7
23	164	33.3	164	49.2	39.4	221	15.0	52.4	329	36.0	40.1	52	28.6	00.8
24	179	35.7	179	48.8	-1 38.2	236	15.6	-20 52.1	344	38.8	-4 39.9	67	31.0	+22 00.8
Dif	—		-4	+13		+6	+4		+27		+1	+25		

UT	SOL			O LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16 ^h 1			Edad: 11 ^d 6 PHE { 4 ^h : 54 ^m 5 12 ^h : 54 ^m 6 20 ^h : 54 ^m 8 R°: 43 ^m													
	PMG: 12 ^h 06 ^m 8			SD: 14 ^h 8 PMG: 22 ^h 07 ^m													
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	°	'	°	h	m	h	m	h	m	h	m
0	178	15.0	+0 35.0	38	19.0	+20 11.5	60 N		4 24	5 14	5 56	13 38	90	6 04	1		
1	193	15.2		52	51.5 ¹³⁵	+20 01.1 ¹⁰⁴	58		30	17	56	13 50	85	5 52	4		
2	208	15.4		67	24.1 ¹³⁶	+19 50.5 ¹⁰⁶	56		35	20	57	14 01	81	40	9		
3	223	15.6		81	56.7 ¹³⁶	39.9 ¹⁰⁶	54		40	22	57	10 78		31	1		
4	238	15.8		96	29.3 ¹³⁶	29.2 ¹⁰⁷	52		44	24	58	18 75		22	14		
5	253	16.0	+0 39.9	111	02.0 ¹³⁷	+19 18.4 ¹⁰⁸	50		4 48	5 26	5 58	14 25	73	5 14	17		
6	268	16.2	+0 40.9	125	34.8 ¹³⁸	+19 07.5 ¹⁰⁹	45		4 56	5 30	5 59	14 40	68	4 57	22		
7	283	16.3		140	07.6 ¹³⁸	+18 56.5 ¹¹⁰	40		5 02	33	6 00	14 53	63	43	26		
8	298	16.5		154	40.4 ¹³⁸	45.4 ¹¹¹	35		06	36	01	15 04	60	32	28		
9	313	16.7		169	13.3 ¹³⁹	34.3 ¹¹¹	30		10	38	01	13 57	21	32			
10	328	16.9		183	46.2 ¹³⁹	23.0 ¹¹³	20		15	40	02	29 52		4 03	36		
11	343	17.1	+0 45.9	198	19.2 ¹⁴⁰	+18 11.7 ¹¹³	10 N		5 18	5 42	6 03	15 43	47	3 48	40		
12	358	17.3	+0 46.8	212	52.2 ¹⁴⁰	+18 00.3 ¹¹⁴	0		5 19	5 43	6 04	15 56	43	3 33	44		
13	13	17.5		227	25.3 ¹⁴¹	+17 48.8 ¹¹⁵	10 S		19	43	04	16 09	39	18	48		
14	28	17.7		241	58.4 ¹⁴¹	37.3 ¹¹⁵	20		17	42	04	23 35		3 02	52		
15	43	17.9		256	31.6 ¹⁴²	25.6 ¹¹⁷	30		13	41	05	38 30		2 43	58		
16	58	18.0		271	04.8 ¹⁴²	13.9 ¹¹⁷	35		10	40	05	47 27		33	60		
17	73	18.2	+0 51.8	285	38.1 ¹⁴³	+17 02.1 ¹¹⁸	40		5 06	5 38	6 05	16 58	23	2 20	64		
18	88	18.4	+0 52.8	300	11.4 ¹⁴³	+16 50.2 ¹¹⁹	45		5 01	5 36	6 05	17 10	19	2 05	68		
19	103	18.6		314	44.7 ¹⁴³	38.3 ¹¹⁹	50		4 55	33	05	24 15		1 47	73		
20	118	18.8		329	18.1 ¹⁴⁴	26.2 ¹²¹	52		52	31	05	31 12		39	75		
21	133	19.0		343	51.5 ¹⁴⁴	14.1 ¹²¹	54		48	30	05	38 10		29	78		
22	148	19.2		358	25.0 ¹⁴⁵	+16 01.9 ¹²²	56		44	28	05	47 7		18	82		
23	163	19.4		57.7	12 58.5 ¹⁴⁵	+15 49.7 ¹²²	58		39	26	05	17 56	4	1 05	86		
24	178	19.5	+0 58.7	27	32.0 ¹⁴⁵	+15 37.4 ¹²³	60 S		4 34	5 23	6 05	18 07	**	0 50	91		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO				
	PMG 11 ^h 59 ^m 6			Mag: -3.9 PMG: 12 ^h 01 ^m			Mag: +1.0 PMG: 8 ^h 15 ^m			Mag: -2.5 PMG: 1 ^h 01 ^m			Mag: 0.0 PMG: 19 ^h 27 ^m				
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°		
0	179	35.7	179 48.8	-1 38.2	236	15.6	-20 52.1	344	38.8	-4 39.9	67	31.0	+22 00.8				
1	194	38.2	194 48.4	36.9	251	16.2	51.7	359	41.5	39.8	82	33.5	00.8				
2	209	40.7	209 48.0	35.7	266	16.7	51.3	14	44.3	39.7	97	36.0	00.8				
3	224	43.1	224 47.7	34.4	281	17.3	51.0	29	47.0	39.6	112	38.4	00.8				
4	239	45.6	239 47.3	33.2	296	17.9	50.6	44	49.7	39.5	127	40.9	00.8				
5	254	48.1	254 46.9	-1 31.9	311	18.4	-20 50.3	59	52.5	-4 39.3	142	43.3	+22 00.8				
6	269	50.5	269 46.5	-1 30.7	326	19.0	-20 49.9	74	55.2	-4 39.2	157	45.8	+22 00.8				
7	284	53.0	284 46.1	29.4	341	19.6	49.6	89	58.0	39.1	172	48.3	00.8				
8	299	55.5	299 45.7	28.2	356	20.2	49.2	105	00.7	39.0	187	50.7	00.8				
9	314	57.9	314 45.4	26.9	11	20.7	48.9	120	03.5	38.9	202	53.2	00.8				
10	330	00.4	329 45.0	25.6	26	21.3	48.5	135	06.2	38.7	217	55.7	00.8				
11	345	02.8	344 44.6	-1 24.4	41	21.9	-20 48.1	150	09.0	-4 38.6	232	58.1	+22 00.8				
12	0	05.3	359 44.2	-1 23.1	56	22.4	-20 47.8	165	11.7	-4 38.5	248	00.6	+22 00.8				
13	15	07.8	14 43.8	21.9	71	23.0	47.4	180	14.4	38.4	263	03.0	00.8				
14	30	10.2	29 43.5	20.6	86	23.6	47.1	195	17.2	38.3	278	05.5	00.8				
15	45	12.7	44 43.1	19.4	101	24.2	46.7	210	19.9	38.1	293	08.0	00.8				
16	60	15.2	59 42.7	18.1	116	24.7	46.3	225	22.7	38.0	308	10.4	00.8				
17	75	17.6	74 42.3	-1 16.9	131	25.3	-20 46.0	240	25.4	-4 37.9	323	12.9	+22 00.8				
18	90	20.1	89 41.9	-1 15.6	146	25.9	-20 45.6	255	28.2	-4 37.8	338	15.3	+22 00.8				
19	105	22.6	104 41.5	14.4	161	26.4	45.3	270	30.9	37.7	353	17.8	00.8				
20	120	25.0	119 41.2	13.1	176	27.0	44.9	285	33.7	37.5	8	20.3	00.8				
21	135	27.5	134 40.8	11.8	191	27.6	44.5	300	36.4	37.4	23	22.7	00.8				
22	150	29.9	149 40.4	10.6	206	28.2	44.2	315	39.2	37.3	38	25.2	00.8				
23	165	32.4	164 40.0	09.3	221	28.7	43.8	330	41.9	37.2	53	27.6	00.8				
24	180	34.9	179 39.6	-1 08.1	236	29.3	-20 43.5	345	44.6	-4 37.1	68	30.1	+22 00.8				
Dif	—		-4	+13	+6		+4	+27		+1	+25		0				

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16:0 PMG: 12 ^h 06 ^m 5		Edad: 12 ^d 6 PHE { 4 ^h : 54 ^m 9 12 ^h : 55 ^m 0 20 ^h : 55 ^m 2 R°: 42 ^m						Civil		Náutico	Hora	R°	Hora	R°
	hG ☉	Dec	hG ☾	Dif	Dec	Dif									
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m	
0	178	19.5	+0 58.7	27 32.0	+15 37.4	124	60 N	18 22	19 04	19 55	15 08 88	6 05	**		
1	193	19.7	+0 59.7	42 05.6 ¹⁴⁶	25.0 ¹²⁴		58	21	19 00	48	15 84	5 56	3		
2	208	19.9	+1 00.6	56 39.2 ¹⁴⁶	+15 12.5 ¹²⁵		56	20	18 57	42	22 81	49	6		
3	223	20.1	01.6	71 12.9 ¹⁴⁷	+15 00.0 ¹²⁵		54	19	55	37	28 77	42	9		
4	238	20.3	02.6	85 46.5 ¹⁴⁶	+14 47.4 ¹²⁶		52	18	52	33	33 75	36	12		
5	253	20.5	+1 03.6	100 20.3 ¹⁴⁸	+14 34.7 ¹²⁷		50	18 18	18 50	19 29	15 38 72	5 31	13		
6	268	20.7	+1 04.6	114 54.0 ¹⁴⁷	+14 21.9 ¹²⁸		45	18 16	18 46	19 20	15 48 68	5 19	18		
7	283	20.9	05.6	129 27.8 ¹⁴⁸	+14 09.1 ¹²⁸		40	15	42	14	15 56 64	09	22		
8	298	21.1	06.5	144 01.6 ¹⁴⁸	+13 56.3 ¹²⁸		35	14	39	09	16 04 59	5 00	26		
9	313	21.2	07.5	158 35.5 ¹⁴⁹	43.3 ¹³⁰		30	13	37	05	10 57	4 53	28		
10	328	21.4	08.5	173 09.4 ¹⁴⁹	30.3 ¹³⁰		20	12	34	19 00	21 51	39	34		
11	343	21.6	+1 09.5	187 43.3 ¹⁴⁹	+13 17.3 ¹³⁰		10 N	18 11	18 32	18 56	16 30 47	4 28	38		
12	358	21.8	+1 10.5	202 17.3 ¹⁵⁰	+13 04.1 ¹³²		0	18 10	18 30	18 54	16 39 43	4 17	43		
13	13	22.0	11.5	216 51.3 ¹⁵⁰	+12 50.9 ¹³²		10 S	09	30	54	48 38	4 06	47		
14	28	22.2	12.5	231 25.3 ¹⁵⁰	37.7 ¹³²		20	08	30	56	16 58 33	3 54	52		
15	43	22.4	13.4	245 59.3 ¹⁵⁰	24.4 ¹³³		30	07	31	18 59	17 08 28	41	56		
16	58	22.6	14.4	260 33.4 ¹⁵¹	+12 11.0 ¹³⁴		35	07	32	19 02	14 26	33	59		
17	73	22.8	+1 15.4	275 07.5 ¹⁵¹	+11 57.6 ¹³⁴		40	18 07	18 34	19 05	17 21 22	3 24	63		
18	88	22.9	+1 16.4	289 41.6 ¹⁵¹	+11 44.1 ¹³⁵		45	18 06	18 35	19 09	17 29 18	3 13	67		
19	103	23.1	17.4	304 15.7 ¹⁵¹	30.5 ¹³⁶		50	06	38	15	39 13	3 00	73		
20	118	23.3	18.4	318 49.9 ¹⁵²	16.9 ¹³⁶		52	05	39	18	43 11	2 54	75		
21	133	23.5	19.4	333 24.1 ¹⁵²	+11 03.3 ¹³⁶		54	05	40	22	48 9	47	78		
22	148	23.7	20.3	347 58.3 ¹⁵²	+10 49.6 ¹³⁷		56	05	42	26	17 54 5	40	81		
23	163	23.9	21.3	2 32.5 ¹⁵²	35.8 ¹³⁸		58	05	44	30	18 00 2	31	85		
24	178	24.1	+1 22.3	17 06.8 ¹⁵³	+10 22.0 ¹³⁸		60 S	18 04	18 46	19 35	18 06 0	2 21	89		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 11 ^h 55 ^m 7		Mag: -3.9 PMG: 12 ^h 02 ^m		Mag: +1.0 PMG: 8 ^h 14 ^m		Mag: -2.5 PMG: 0 ^h 57 ^m		Mag: 0.0 PMG: 19 ^h 23 ^m	
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'
0	180	34.9	179 39.6	-1 08.1	236 29.3	-20 43.5	345 44.6	-4 37.1	68 30.1	+22 00.8
1	195	37.3	194 39.3	06.8	251 29.9	43.1	0 47.4	36.9	83 32.6	00.8
2	210	39.8	209 38.9	05.6	266 30.4	42.7	15 50.1	36.8	98 35.0	00.8
3	225	42.3	224 38.5	04.3	281 31.0	42.4	30 52.9	36.7	113 37.5	00.8
4	240	44.7	239 38.1	03.1	296 31.6	42.0	45 55.6	36.6	128 39.9	00.8
5	255	47.2	254 37.7	-1 01.8	311 32.2	-20 41.6	60 58.4	-4 36.5	143 42.4	+22 00.9
6	270	49.7	269 37.4	-1 00.5	326 32.7	-20 41.3	76 01.1	-4 36.3	158 44.9	+22 00.9
7	285	52.1	284 37.0	-0 59.3	341 33.3	40.9	91 03.9	36.2	173 47.3	00.9
8	300	54.6	299 36.6	58.0	356 33.9	40.5	106 06.6	36.1	188 49.8	00.9
9	315	57.1	314 36.2	56.8	11 34.5	40.2	121 09.4	36.0	203 52.2	00.9
10	330	59.5	329 35.8	55.5	26 35.0	39.8	136 12.1	35.8	218 54.7	00.9
11	346	02.0	344 35.5	-0 54.3	41 35.6	-20 39.4	151 14.9	-4 35.7	233 57.1	+22 00.9
12	1	04.4	359 35.1	-0 53.0	56 36.2	-20 39.1	166 17.6	-4 35.6	248 59.6	+22 00.9
13	16	06.9	14 34.7	51.7	71 36.7	38.7	181 20.4	35.5	264 02.1	00.9
14	31	09.4	29 34.3	50.5	86 37.3	38.3	196 23.1	35.4	279 04.5	00.9
15	46	11.8	44 33.9	49.2	101 37.9	38.0	211 25.8	35.2	294 07.0	00.9
16	61	14.3	59 33.6	48.0	116 38.5	37.6	226 28.6	35.1	309 09.4	00.9
17	76	16.8	74 33.2	-0 46.7	131 39.0	-20 37.2	241 31.3	-4 35.0	324 11.9	+22 00.9
18	91	19.2	89 32.8	-0 45.5	146 39.6	-20 36.9	256 34.1	-4 34.9	339 14.3	+22 00.9
19	106	21.7	104 32.4	44.2	161 40.2	36.5	271 36.8	34.8	354 16.8	00.9
20	121	24.2	119 32.0	43.0	176 40.8	36.1	286 39.6	34.6	9 19.2	00.9
21	136	26.6	134 31.7	41.7	191 41.3	35.8	301 42.3	34.5	24 21.7	00.9
22	151	29.1	149 31.3	40.4	206 41.9	35.4	316 45.1	34.4	39 24.2	00.9
23	166	31.6	164 30.9	39.2	221 42.5	35.0	331 47.8	34.3	54 26.6	00.9
24	181	34.0	179 30.5	-0 37.9	236 43.1	-20 34.7	346 50.6	-4 34.2	69 29.1	+22 00.9
Dif	—	—	-4	+13	+6	+4	+27	+1	+25	0

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16:0			Edad: 13 ^d 6 PHE	SD: 15:1										
	PMG: 12 ^h 06 ^m 2				PMG: 23 ^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	178	24.1	+1 22.3	17	06.8	+10 22.0	60 N	4	17	5	08	5	49	16	36 88
1	193	24.3		31	41.1 ¹⁵³	+10 08.1 ¹³⁹	58		24		11	51		39 85	5 59 3
2	208	24.5		46	15.4 ¹⁵³	+9 54.2 ¹³⁹	56		30		14	52		43 81	55 5
3	223	24.7		60	49.7 ¹⁵³	40.2 ¹⁴⁰	54		35		17	53		45 79	51 8
4	238	24.8		75	24.0 ¹⁵³	26.2 ¹⁴⁰	52		39		20	53		48 76	48 10
5	253	25.0	+1 27.2	89	58.3 ¹⁵³	+9 12.1 ¹⁴¹	50	4	43	5	22	5	54	16	50 74 5 44 13
6	268	25.2	+1 28.2	104	32.7 ¹⁵⁴	+8 58.0 ¹⁴¹	45	4	52	5	26	5	56	16	56 68 5 37 18
7	283	25.4		119	07.1 ¹⁵⁴	43.8 ¹⁴²	40	4	58		30	57		17	00 64 31 22
8	298	25.6		133	41.5 ¹⁵⁴	29.6 ¹⁴²	35	5	03		33	58		03	61 26 25
9	313	25.8		148	15.9 ¹⁵⁴	15.4 ¹⁴²	30		07		35	5	59	07	57 21 28
10	328	26.0		162	50.3 ¹⁵⁴	+8 01.1 ¹⁴³	20		13		39	6	01	12	52 13 33
11	343	26.2	+1 33.1	177	24.7 ¹⁵⁴	+7 46.7 ¹⁴⁴	10 N	5	17	5	41	6	02	17	17 47 5 06 38
12	358	26.4	+1 34.1	191	59.1 ¹⁵⁴	+7 32.4 ¹⁴³	0	5	18	5	42	6	03	17	22 42 5 00 42
13	13	26.5		206	33.6 ¹⁵⁵	17.9 ¹⁴⁵	10 S		19		43	04		26	38 4 53 46
14	28	26.7		221	08.0 ¹⁵⁴	+7 03.5 ¹⁴⁴	20		17		43	05		31	33 46 51
15	43	26.9		235	42.5 ¹⁵⁵	+6 49.0 ¹⁴⁵	30		14		42	06		36	28 37 57
16	58	27.1		250	16.9 ¹⁵⁴	34.4 ¹⁴⁶	35		12		41	06		40	24 32 60
17	73	27.3	+1 39.0	264	51.4 ¹⁵⁵	+6 19.8 ¹⁴⁶	40	5	08	5	40	6	07	17	43 21 4 27 63
18	88	27.5	+1 40.0	279	25.9 ¹⁵⁵	+6 05.2 ¹⁴⁶	45	5	04	5	38	6	07	17	47 17 4 20 68
19	103	27.7		294	00.4 ¹⁵⁵	+5 50.6 ¹⁴⁶	50	4	58		36	08		52	12 13 72
20	118	27.9		308	34.8 ¹⁵⁴	35.9 ¹⁴⁷	52		55		35	08		54	10 09 75
21	133	28.1		323	09.3 ¹⁵⁵	21.2 ¹⁴⁷	54		52		33	09		57	8 05 78
22	148	28.3		337	43.8 ¹⁵⁵	+5 06.4 ¹⁴⁸	56		48		32	09		17	59 6 4 01 80
23	163	28.4		352	18.3 ¹⁵⁵	+4 51.6 ¹⁴⁸	58		44		30	09		18	02 3 3 56 84
24	178	28.6	+1 45.9	6	52.7 ¹⁵⁴	+4 36.8 ¹⁴⁸	60 S	4	39	5	28	6	10	18	06 ** 3 50 88

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 11 ^h 51 ^m 8		Mag: -4.0 PMG: 12 ^h 02 ^m		Mag: +1.0 PMG: 8 ^h 13 ^m		Mag: -2.5 PMG: 0 ^h 52 ^m		Mag: 0.0 PMG: 19 ^h 19 ^m					
	hG ♈		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec					
h	°	'	°	°	'	°	°	'	°	°	'			
0	181	34.0	179	30.5	-0 37.9	236	43.1	-20 34.7	346	50.6	-4 34.2			
1	196	36.5	194	30.1	36.7	251	43.6	34.3	1	53.3	34.0			
2	211	38.9	209	29.8	35.4	266	44.2	33.9	16	56.1	33.9			
3	226	41.4	224	29.4	34.2	281	44.8	33.5	31	58.8	33.8			
4	241	43.9	239	29.0	32.9	296	45.4	33.2	47	01.6	33.7			
5	256	46.3	254	28.6	-0 31.6	311	45.9	-20 32.8	62	04.3	-4 33.5			
6	271	48.8	269	28.3	-0 30.4	326	46.5	-20 32.4	77	07.1	-4 33.4			
7	286	51.3	284	27.9	29.1	341	47.1	32.1	92	09.8	33.3			
8	301	53.7	299	27.5	27.9	356	47.7	31.7	107	12.6	33.2			
9	316	56.2	314	27.1	26.6	11	48.2	31.3	122	15.3	33.1			
10	331	58.7	329	26.7	25.4	26	48.8	30.9	137	18.1	32.9			
11	347	01.1	344	26.4	-0 24.1	41	49.4	-20 30.6	152	20.8	-4 32.8			
12	2	03.6	359	26.0	-0 22.8	56	50.0	-20 30.2	167	23.6	-4 32.7			
13	17	06.0	14	25.6	21.6	71	50.6	29.8	182	26.3	32.6			
14	32	08.5	29	25.2	20.3	86	51.1	29.4	197	29.1	32.5			
15	47	11.0	44	24.8	19.1	101	51.7	29.1	212	31.8	32.3			
16	62	13.4	59	24.5	17.8	116	52.3	28.7	227	34.6	32.2			
17	77	15.9	74	24.1	-0 16.5	131	52.9	-20 28.3	242	37.3	-4 32.1			
18	92	18.4	89	23.7	-0 15.3	146	53.4	-20 27.9	257	40.1	-4 32.0			
19	107	20.8	104	23.3	14.0	161	54.0	27.6	272	42.8	31.8			
20	122	23.3	119	23.0	12.8	176	54.6	27.2	287	45.6	31.7			
21	137	25.8	134	22.6	11.5	191	55.2	26.8	302	48.3	31.6			
22	152	28.2	149	22.2	10.3	206	55.7	26.4	317	51.1	31.5			
23	167	30.7	164	21.8	09.0	221	56.3	26.0	332	53.8	31.4			
24	182	33.2	179	21.4	-0 07.7	236	56.9	-20 25.7	347	56.6	-4 31.2			
Dif	—		-4		+13	+6		+4	+27		+1	+25		

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG: 12 ^h 05 ^m 9			Edad: 14 ^d 6 PHE { 4 ^h : 55'9 12 ^h : 56'0 20 ^h : 56'2 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	178	28.6	+1	45.9	6	52.7	+4 36.8	60 N	18 27	19 09	20 00	18 04 90	6 03	**
1	193	28.8		46.9	21	27.2 ¹⁵⁵	22.0 ¹⁴⁸	58	25	05	19 53	04 86	02	2
2	208	29.0		47.9	36	01.7 ¹⁵⁵	+4 07.1 ¹⁴⁹	56	24	19 02	47	04 83	6 00	6
3	223	29.2		48.9	50	36.1 ¹⁵⁴	+3 52.2 ¹⁴⁹	54	23	18 59	41	04 80	5 59	8
4	238	29.4		49.8	65	10.6 ¹⁵⁵	37.2 ¹⁵⁰	52	22	56	36	04 77	58	10
5	253	29.6	+1	50.8	79	45.0 ¹⁵⁴	+3 22.3 ¹⁴⁹	50	18 21	18 53	19 32	18 04 75	5 57	12
6	268	29.8	+1	51.8	94	19.5 ¹⁵⁵	+3 07.3 ¹⁵⁰	45	18 19	18 48	19 23	18 04 69	5 55	17
7	283	30.0		52.8	108	53.9 ¹⁵⁴	+2 52.3 ¹⁵⁰	40	17	44	16	04 65	53	21
8	298	30.2		53.8	123	28.3 ¹⁵⁴	37.2 ¹⁵¹	35	16	41	11	04 61	51	24
9	313	30.3		54.7	138	02.8 ¹⁵⁵	22.2 ¹⁵⁰	30	14	38	06	04 58	49	28
10	328	30.5		55.7	152	37.2 ¹⁵⁴	+2 07.1 ¹⁵¹	20	12	34	19 00	04 52	46	34
11	343	30.7	+1	56.7	167	11.5 ¹⁵³	+1 52.0 ¹⁵¹	10 N	18 11	18 32	18 56	18 04 47	5 44	38
12	358	30.9	+1	57.7	181	45.9 ¹⁵⁴	+1 36.9 ¹⁵¹	0	18 09	18 30	18 54	18 04 43	5 42	42
13	13	31.1		58.7	196	20.3 ¹⁵⁴	21.8 ¹⁵¹	10 S	08	29	53	04 38	39	47
14	28	31.3	+1	59.7	210	54.6 ¹⁵³	+1 06.6 ¹⁵²	20	06	28	54	04 34	37	52
15	43	31.5	+2	00.6	225	28.9 ¹⁵³	+0 51.4 ¹⁵²	30	05	29	57	04 28	34	57
16	58	31.7		01.6	240	03.2 ¹⁵³	36.2 ¹⁵²	35	04	29	18 59	04 25	32	61
17	73	31.9	+2	02.6	254	37.5 ¹⁵³	+0 21.0 ¹⁵²	40	18 03	18 30	19 02	18 04 22	5 30	65
18	88	32.1	+2	03.6	269	11.8 ¹⁵³	+0 05.8 ¹⁵²	45	18 02	18 32	19 06	18 04 18	5 28	69
19	103	32.2		04.6	283	46.0 ¹⁵²	-0 09.4 ¹⁵²	50	01	33	11	04 13	25	74
20	118	32.4		05.5	298	20.2 ¹⁵²	24.7 ¹⁵³	52	01	34	14	04 11	24	76
21	133	32.6		06.5	312	54.4 ¹⁵²	39.9 ¹⁵²	54	00	35	17	05 8	23	79
22	148	32.8		07.5	327	28.6 ¹⁵²	-0 55.2 ¹⁵³	56	18 00	37	20	05 5	21	82
23	163	33.0		08.5	342	02.8 ¹⁵²	-1 10.4 ¹⁵²	58	17 59	38	24	05 2	20	85
24	178	33.2	+2	09.5	356	36.9 ¹⁵¹	-1 25.7 ¹⁵³	60 S	17 58	18 40	19 29	18 05 **	5 18	88
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 11 ^h 47 ^m 9		Mag: -4.0 PMG: 12 ^h 03 ^m			Mag: +1.0 PMG: 8 ^h 12 ^m			Mag: -2.5 PMG: 0 ^h 48 ^m			Mag: 0.0 PMG: 19 ^h 15 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	'	'	°	'	°	'	'	°	'	'
0	182	33.2	179	21.4	-0 07.7	236 56.9	-20 25.7	347 56.6	-4 31.2	70 27.9	+22 00.9			
1	197	35.6	194	21.1	06.5	251 57.5	25.3	2 59.3	31.1	85 30.4	00.9			
2	212	38.1	209	20.7	05.2	266 58.1	24.9	18 02.1	31.0	100 32.8	00.9			
3	227	40.5	224	20.3	04.0	281 58.6	24.5	33 04.8	30.9	115 35.3	00.9			
4	242	43.0	239	19.9	02.7	296 59.2	24.1	48 07.6	30.7	130 37.7	01.0			
5	257	45.5	254	19.6	-0 01.5	311 59.8	-20 23.8	63 10.3	-4 30.6	145 40.2	+22 01.0			
6	272	47.9	269	19.2	-0 00.2	327 00.4	-20 23.4	78 13.1	-4 30.5	160 42.6	+22 01.0			
7	287	50.4	284	18.8	+0 01.1	342 00.9	23.0	93 15.8	30.4	175 45.0	01.0			
8	302	52.9	299	18.4	02.3	357 01.5	22.6	108 18.6	30.3	190 47.5	01.0			
9	317	55.3	314	18.0	03.6	12 02.1	22.2	123 21.3	30.1	205 49.9	01.0			
10	332	57.8	329	17.7	04.8	27 02.7	21.9	138 24.1	30.0	220 52.4	01.0			
11	348	00.3	344	17.3	+0 06.1	42 03.3	-20 21.5	153 26.8	-4 29.9	235 54.8	+22 01.0			
12	3 02.7	359 16.9	+0 07.4	57 03.8	-20 21.1	168 29.6	-4 29.8	250 57.3	+22 01.0					
13	18 05.2	14 16.5	08.6	72 04.4	20.7	183 32.3	29.6	265 59.7	01.0					
14	33 07.6	29 16.2	09.9	87 05.0	20.3	198 35.1	29.5	281 02.2	01.0					
15	48 10.1	44 15.8	11.1	102 05.6	20.0	213 37.8	29.4	296 04.6	01.0					
16	63 12.6	59 15.4	12.4	117 06.2	19.6	228 40.6	29.3	311 07.1	01.0					
17	78 15.0	74 15.0	+0 13.6	132 06.7	-20 19.2	243 43.3	-4 29.2	326 09.5	+22 01.0					
18	93 17.5	89 14.6	+0 14.9	147 07.3	-20 18.8	258 46.1	-4 29.0	341 12.0	+22 01.0					
19	108 20.0	104 14.3	16.2	162 07.9	18.4	273 48.8	28.9	356 14.4	01.0					
20	123 22.4	119 13.9	17.4	177 08.5	18.0	288 51.6	28.8	11 16.9	01.0					
21	138 24.9	134 13.5	18.7	192 09.1	17.6	303 54.4	28.7	26 19.3	01.0					
22	153 27.4	149 13.1	19.9	207 09.6	17.3	318 57.1	28.5	41 21.7	01.0					
23	168 29.8	164 12.8	21.2	222 10.2	16.9	333 59.9	28.4	56 24.2	01.0					
24	183 32.3	179 12.4	+0 22.5	237 10.8	-20 16.5	349 02.6	-4 28.3	71 26.6	+22 01.0					
Dif	—		-4	+13		+6	+4	+28	+1			+24		0

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'0 PMG: 12 ^h 05 ^m 6			Edad: 15 ^d 6 PHE { 4 ^h : 56'4 12 ^h : 56'6 20 ^h : 56'7 SD: 15'3 PMG: 0 ^h 14 ^m R°: 43 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m			
0	178	33.2	+2	09.5	356	36.9	-1 25.7	60 N	4 10	5 01	5 43	19 34	94	6 02	0			
1	193	33.4		10.4	11	11.0 ¹⁵¹	41.0 ¹⁵³	58	17	05	45	30	90	04	3			
2	208	33.6		11.4	25	45.0 ¹⁵⁰	-1 56.3 ¹⁵³	56	24	09	46	27	86	06	5			
3	223	33.8		12.4	40	19.0 ¹⁵⁰	-2 11.6 ¹⁵³	54	30	12	48	24	83	07	8			
4	238	34.0		13.4	54	53.0 ¹⁵⁰	26.9 ¹⁵³	52	34	15	49	21	80	08	11			
5	253	34.1	+2	14.4	69	27.0 ¹⁵⁰	-2 42.2 ¹⁵³	50	4 39	5 17	5 50	19 19	77	6 09	13			
6	268	34.3	+2	15.3	84	00.9 ¹⁴⁹	-2 57.5 ¹⁵³	45	4 48	5 23	5 52	19 13	72	6 12	18			
7	283	34.5		16.3	98	34.8 ¹⁴⁹	-3 12.8 ¹⁵³	40	4 55	27	54	09	68	14	22			
8	298	34.7		17.3	113	08.7 ¹⁴⁹	28.0 ¹⁵²	35	5 00	30	55	05	64	15	26			
9	313	34.9		18.3	127	42.5 ¹⁴⁸	43.3 ¹⁵³	30	05	33	57	19 02	60	17	29			
10	328	35.1		19.3	142	16.3 ¹⁴⁸	-3 58.6 ¹⁵³	20	11	37	5 59	18 56	55	20	34			
11	343	35.3	+2	20.2	156	50.0 ¹⁴⁷	-4 13.9 ¹⁵³	10 N	5 15	5 40	6 01	18 51	50	6 22	39			
12	358	35.5	+2	21.2	171	23.7 ¹⁴⁷	-4 29.2 ¹⁵³	0	5 18	5 42	6 02	18 47	45	6 24	44			
13	13	35.7		22.2	185	57.4 ¹⁴⁷	44.5 ¹⁵³	10 S	19	43	04	42	41	26	49			
14	28	35.9		23.2	200	31.0 ¹⁴⁶	-4 59.7 ¹⁵²	20	18	43	05	38	35	29	53			
15	43	36.0		24.2	215	04.6 ¹⁴⁶	-5 15.0 ¹⁵³	30	15	43	07	32	30	31	60			
16	58	36.2		25.1	229	38.1 ¹⁴⁵	30.2 ¹⁵²	35	13	43	08	29	27	33	63			
17	73	36.4	+2	26.1	244	11.6 ¹⁴⁵	-5 45.5 ¹⁵³	40	5 10	5 42	6 09	18 26	23	6 35	66			
18	88	36.6	+2	27.1	258	45.0 ¹⁴⁴	-6 00.7 ¹⁵²	45	5 07	5 41	6 10	18 22	19	6 37	70			
19	103	36.8		28.1	273	18.4 ¹⁴⁴	15.9 ¹⁵²	50	5 01	39	11	17	14	39	76			
20	118	37.0		29.1	287	51.7 ¹⁴³	31.1 ¹⁵²	52	4 59	38	12	15	12	40	79			
21	133	37.2		30.0	302	25.0 ¹⁴³	-6 46.2 ¹⁵¹	54	56	37	12	13	9	42	81			
22	148	37.4		31.0	316	58.3 ¹⁴³	-7 01.4 ¹⁵²	56	52	36	13	10	6	43	84			
23	163	37.6		32.0	331	31.4 ¹⁴¹	16.5 ¹⁵¹	58	49	35	14	07	3	45	87			
24	178	37.8	+2	33.0	346	04.6 ¹⁴²	-7 31.6 ¹⁵¹	60 S	4 44	5 33	6 15	18 04	**	6 46	92			
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG 11 ^h 43 ^m 9			Mag: -4.0 PMG: 12 ^h 03 ^m			Mag: +1.0 PMG: 8 ^h 11 ^m			Mag: -2.5 PMG: 0 ^h 44 ^m			Mag: 0.0 PMG: 19 ^h 11 ^m					
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°			
0	183	32.3	179	12.4	+0	22.5	237	10.8	-20	16.5	349	02.6	-4	28.3	71	26.6	+22	01.0
1	198	34.8	194	12.0		23.7	252	11.4		16.1	4	05.4		28.2	86	29.1		01.0
2	213	37.2	209	11.6		25.0	267	12.0		15.7	19	08.1		28.1	101	31.5		01.0
3	228	39.7	224	11.3		26.2	282	12.5		15.3	34	10.9		27.9	116	34.0		01.0
4	243	42.1	239	10.9		27.5	297	13.1		14.9	49	13.6		27.8	131	36.4		01.0
5	258	44.6	254	10.5	+0	28.7	312	13.7	-20	14.6	64	16.4	-4	27.7	146	38.9	+22	01.0
6	273	47.1	269	10.1	+0	30.0	327	14.3	-20	14.2	79	19.1	-4	27.6	161	41.3	+22	01.0
7	288	49.5	284	09.7		31.3	342	14.9		13.8	94	21.9		27.4	176	43.7		01.0
8	303	52.0	299	09.4		32.5	357	15.5		13.4	109	24.6		27.3	191	46.2		01.0
9	318	54.5	314	09.0		33.8	12	16.0		13.0	124	27.4		27.2	206	48.6		01.0
10	333	56.9	329	08.6		35.0	27	16.6		12.6	139	30.1		27.1	221	51.1		01.0
11	348	59.4	344	08.2	+0	36.3	42	17.2	-20	12.2	154	32.9	-4	26.9	236	53.5	+22	01.0
12	4	01.9	359	07.9	+0	37.6	57	17.8	-20	11.8	169	35.6	-4	26.8	251	56.0	+22	01.0
13	19	04.3	14	07.5		38.8	72	18.4		11.4	184	38.4		26.7	266	58.4		01.0
14	34	06.8	29	07.1		40.1	87	18.9		11.1	199	41.2		26.6	282	00.8		01.0
15	49	09.2	44	06.7		41.3	102	19.5		10.7	214	43.9		26.5	297	03.3		01.0
16	64	11.7	59	06.4		42.6	117	20.1		10.3	229	46.7		26.3	312	05.7		01.0
17	79	14.2	74	06.0	+0	43.8	132	20.7	-20	09.9	244	49.4	-4	26.2	327	08.2	+22	01.0
18	94	16.6	89	05.6	+0	45.1	147	21.3	-20	09.5	259	52.2	-4	26.1	342	10.6	+22	01.0
19	109	19.1	104	05.2		46.4	162	21.9		09.1	274	54.9		26.0	357	13.0		01.0
20	124	21.6	119	04.8		47.6	177	22.4		08.7	289	57.7		25.8	12	15.5		01.0
21	139	24.0	134	04.5		48.9	192	23.0		08.3	305	00.4		25.7	27	17.9		01.0
22	154	26.5	149	04.1		50.1	207	23.6		07.9	320	03.2		25.6	42	20.4		01.0
23	169	29.0	164	03.7		51.4	222	24.2		07.5	335	05.9		25.5	57	22.8		01.0
24	184	31.4	179	03.3	+0	52.7	237	24.8	-20	07.1	350	08.7	-4	25.3	72	25.2	+22	01.0
Dif	—		-4	+13		+6	+4		+28	+1		+24						

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:0 PMG: 12 ^h 05 ^m 3			Edad: 16 ^d 6 PHE { 4 ^h : 56/9 12 ^h : 57/1 20 ^h : 57/2 PMG: 0 ^h 57 ^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	178	37.8	+2 33.0	346	04.6	-7 31.6	151	60 N	18 32	19 14	20 06	21 08 100	6 02 **	
1	193	37.9	34.0	0	37.6 ¹⁴⁰	-7 46.7 ¹⁵¹	151	58	30	10	19 58	21 00 95	07 3	
2	208	38.1	34.9	15	10.7 ¹⁴¹	-8 01.8 ¹⁵¹	151	56	28	06	51	20 53 91	11 7	
3	223	38.3	35.9	29	43.6 ¹³⁹	16.8 ¹⁵⁰	150	54	27	19 02	45	47 87	15 10	
4	238	38.5	36.9	44	16.5 ¹³⁹	31.9 ¹⁵¹	151	52	25	18 59	40	41 84	19 13	
5	253	38.7	+2 37.9	58	49.3 ¹³⁸	-8 46.9 ¹⁵⁰	150	50	18 24	18 57	19 35	20 36 81	6 22 16	
6	268	38.9	+2 38.8	73	22.1 ¹³⁸	-9 01.8 ¹⁴⁹	149	45	18 21	18 51	19 26	20 25 76	6 30 20	
7	283	39.1	39.8	87	54.8 ¹³⁷	16.8 ¹⁵⁰	150	40	19	46	18	17 70	36 25	
8	298	39.3	40.8	102	27.5 ¹³⁷	31.7 ¹⁴⁹	149	35	17	43	12	09 67	41 29	
9	313	39.5	41.8	117	00.1 ¹³⁶	-9 46.6 ¹⁴⁹	149	30	16	40	08	20 02 64	46 31	
10	328	39.7	42.8	131	32.6 ¹³⁵	-10 01.4 ¹⁴⁸	148	20	13	35	19 01	19 51 58	6 54 37	
11	343	39.9	+2 43.7	146	05.1 ¹³⁵	-10 16.2 ¹⁴⁸	148	10 N	18 11	18 32	18 56	19 41 53	7 01 42	
12	358	40.0	+2 44.7	160	37.4 ¹³³	-10 31.0 ¹⁴⁸	148	0	18 09	18 29	18 53	19 32 48	7 08 47	
13	13	40.2	45.7	175	09.8 ¹³⁴	-10 45.7 ¹⁴⁷	147	10 S	07	28	52	23 44	15 51	
14	28	40.4	46.7	189	42.0 ¹³²	-11 00.4 ¹⁴⁷	147	20	05	27	52	13 40	22 56	
15	43	40.6	47.6	204	14.2 ¹³²	15.1 ¹⁴⁷	147	30	03	26	54	19 02 34	31 61	
16	58	40.8	48.6	218	46.3 ¹³¹	29.7 ¹⁴⁶	146	35	01	27	56	18 56 31	36 65	
17	73	41.0	+2 49.6	233	18.3 ¹³⁰	-11 44.3 ¹⁴⁶	146	40	18 00	18 27	18 58	18 49 27	7 41 69	
18	88	41.2	+2 50.6	247	50.3 ¹³⁰	-11 58.8 ¹⁴⁵	145	45	17 59	18 28	19 02	18 41 22	7 47 74	
19	103	41.4	51.6	262	22.2 ¹²⁹	-12 13.3 ¹⁴⁵	145	50	57	29	07	31 17	55 79	
20	118	41.6	52.5	276	54.0 ¹²⁸	27.7 ¹⁴⁴	144	52	56	30	09	27 14	7 59 82	
21	133	41.8	53.5	291	25.7 ¹²⁷	42.1 ¹⁴⁴	144	54	55	30	12	22 12	8 03 85	
22	148	41.9	54.5	305	57.4 ¹²⁷	-12 56.4 ¹⁴³	143	56	54	31	15	16 9	07 89	
23	163	42.1	55.5	320	29.0 ¹²⁶	-13 10.7 ¹⁴³	143	58	53	32	18	10 5	12 92	
24	178	42.3	+2 56.4	335	00.4 ¹²⁴	-13 25.0 ¹⁴³	143	60 S	17 52	18 34	19 22	18 03 1	8 18 97	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 11 ^h 40 ^m 0		Mag: -4.0 PMG: 12 ^h 04 ^m			Mag: +1.0 PMG: 8 ^h 10 ^m			Mag: -2.5 PMG: 0 ^h 39 ^m			Mag: 0.0 PMG: 19 ^h 07 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°
0	184	31.4	179	03.3	+0 52.7	237	24.8	-20 07.1	350	08.7	-4 25.3	72	25.2	+22 01.0
1	199	33.9	194	03.0	53.9	252	25.4	06.7	5	11.4	25.2	87	27.7	01.0
2	214	36.4	209	02.6	55.2	267	25.9	06.3	20	14.2	25.1	102	30.1	01.0
3	229	38.8	224	02.2	56.4	282	26.5	05.9	35	17.0	25.0	117	32.6	01.0
4	244	41.3	239	01.8	57.7	297	27.1	05.6	50	19.7	24.9	132	35.0	01.0
5	259	43.7	254	01.5	+0 59.0	312	27.7	-20 05.2	65	22.5	-4 24.7	147	37.4	+22 01.0
6	274	46.2	269	01.1	+1 00.2	327	28.3	-20 04.8	80	25.2	-4 24.6	162	39.9	+22 01.0
7	289	48.7	284	00.7	01.5	342	28.9	04.4	95	28.0	24.5	177	42.3	01.0
8	304	51.1	299	00.3	02.7	357	29.5	04.0	110	30.7	24.4	192	44.7	01.0
9	319	53.6	314	00.0	04.0	12	30.0	03.6	125	33.5	24.2	207	47.2	01.0
10	334	56.1	328	59.6	05.2	27	30.6	03.2	140	36.2	24.1	222	49.6	01.0
11	349	58.5	343	59.2	+1 06.5	42	31.2	-20 02.8	155	39.0	-4 24.0	237	52.1	+22 01.0
12	5	01.0	358	58.8	+1 07.8	57	31.8	-20 02.4	170	41.8	-4 23.9	252	54.5	+22 01.0
13	20	03.5	13	58.4	09.0	72	32.4	02.0	185	44.5	23.7	267	56.9	01.0
14	35	05.9	28	58.1	10.3	87	33.0	01.6	200	47.3	23.6	282	59.4	01.0
15	50	08.4	43	57.7	11.5	102	33.6	01.2	215	50.0	23.5	298	01.8	01.0
16	65	10.8	58	57.3	12.8	117	34.1	00.8	230	52.8	23.4	313	04.2	01.0
17	80	13.3	73	56.9	+1 14.0	132	34.7	-20 00.4	245	55.5	-4 23.2	328	06.7	+22 01.0
18	95	15.8	88	56.6	+1 15.3	147	35.3	-20 00.0	260	58.3	-4 23.1	343	09.1	+22 01.0
19	110	18.2	103	56.2	16.6	162	35.9	-19 59.6	276	01.0	23.0	358	11.6	01.0
20	125	20.7	118	55.8	17.8	177	36.5	59.2	291	03.8	22.9	13	14.0	01.0
21	140	23.2	133	55.4	19.1	192	37.1	58.8	306	06.6	22.8	28	16.4	01.0
22	155	25.6	148	55.1	20.3	207	37.7	58.4	321	09.3	22.6	43	18.9	01.0
23	170	28.1	163	54.7	21.6	222	38.2	58.0	336	12.1	22.5	58	21.3	01.0
24	185	30.6	178	54.3	+1 22.9	237	38.8	-19 57.6	351	14.8	-4 22.4	73	23.7	+22 01.0
Dif	—		-4	+13		+6	+4		+28		+1	+24		0

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'0			Edad: 17 ^d 6 PHE { 4 ^h : 57'4 12 ^h : 57'6 20 ^h : 57'7												
	PMG: 12 ^h 05 ^m 0			SD: 15'6 PMG: 1 ^h 43 ^m R°: 50 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m		h m m		
0	178	42.3	+2 56.4	335	00.4	-13 25.0		60 N	4 03	4 55	5 37	22 48 108	6 01	1		
1	193	42.5	57.4	349	31.9 ¹²⁵	39.1 ¹⁴¹		58	11	5 00	39	35 100	10	6		
2	208	42.7	58.4	4	03.2 ¹²³	-13 53.3 ¹⁴²		56	18	04	41	24 94	18	10		
3	223	42.9	+2 59.4	18	34.4 ¹²²	-14 07.3 ¹⁴⁰		54	24	07	43	14 90	25	14		
4	238	43.1	+3 00.3	33	05.6 ¹²²	21.4 ¹⁴¹		52	29	10	44	22 05 87	32	16		
5	253	43.3	+3 01.3	47	36.7 ¹²¹	-14 35.3 ¹³⁹		50	4 34	5 13	5 45	21 57 84	6 38	19		
6	268	43.5	+3 02.3	62	07.7 ¹²⁰	-14 49.2 ¹³⁹		45	4 44	5 19	5 48	21 41 77	6 50	25		
7	283	43.6	03.3	76	38.6 ¹¹⁹	-15 03.0 ¹³⁸		40	51	23	51	27 73	7 01	29		
8	298	43.8	04.2	91	09.4 ¹¹⁸	16.8 ¹³⁸		35	4 57	27	53	16 69	10	32		
9	313	44.0	05.2	105	40.1 ¹¹⁷	30.5 ¹³⁷		30	5 02	30	54	21 06 66	17	37		
10	328	44.2	06.2	120	10.8 ¹¹⁷	44.1 ¹³⁶		20	09	35	5 57	20 49 61	31	42		
11	343	44.4	+3 07.2	134	41.3 ¹¹⁵	-15 57.7 ¹³⁶		10 N	5 14	5 39	6 00	20 34 57	7 43	46		
12	358	44.6	+3 08.1	149	11.8 ¹¹⁵	-16 11.2 ¹³⁵		0	5 17	5 41	6 02	20 20 53	7 55	50		
13	13	44.8	09.1	163	42.1 ¹¹³	24.6 ¹³⁴		10 S	18	43	04	20 07 48	8 06	55		
14	28	45.0	10.1	178	12.4 ¹¹³	38.0 ¹³⁴		20	18	44	06	19 53 44	18	60		
15	43	45.2	11.1	192	42.6 ¹¹²	-16 51.2 ¹³²		30	17	44	08	36 39	32	65		
16	58	45.4	12.0	207	12.7 ¹¹¹	-17 04.4 ¹³²		35	15	44	10	27 36	41	68		
17	73	45.5	+3 13.0	221	42.7 ¹¹⁰	-17 17.5 ¹³¹		40	5 13	5 44	6 11	19 16 32	8 50	72		
18	88	45.7	+3 14.0	236	12.5 ¹⁰⁸	-17 30.6 ¹³¹		45	5 09	5 43	6 13	19 03 29	9 01	76		
19	103	45.9	15.0	250	42.3 ¹⁰⁸	43.5 ¹²⁹		50	05	42	14	18 48 23	14	83		
20	118	46.1	15.9	265	12.0 ¹⁰⁷	-17 56.4 ¹²⁹		52	02	42	15	41 20	21	85		
21	133	46.3	16.9	279	41.6 ¹⁰⁶	-18 09.2 ¹²⁸		54	5 00	41	16	34 16	28	88		
22	148	46.5	17.9	294	11.1 ¹⁰⁵	21.9 ¹²⁷		56	4 57	40	17	25 13	36	92		
23	163	46.7	18.9	308	40.5 ¹⁰⁴	34.5 ¹²⁶		58	53	39	18	15 8	44	98		
24	178	46.9	+3 19.8	323	09.8 ¹⁰³	-18 47.1 ¹²⁶		60 S	4 49	5 38	6 20	18 04 2	9 55	103		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG 11 ^h 36 ^m 1		Mag: -4.0 PMG: 12 ^h 05 ^m		Mag: +1.0 PMG: 8 ^h 09 ^m		Mag: -2.5 PMG: 0 ^h 35 ^m		Mag: +0.1 PMG: 19 ^h 03 ^m		
	hG ♂	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	185	30.6	178 54.3	+1 22.9	237 38.8	-19 57.6	351 14.8	-4 22.4	73 23.7	+22 01.0	
1	200	33.0	193 53.9	24.1	252 39.4	57.2	6 17.6	22.3	88 26.2	01.0	
2	215	35.5	208 53.6	25.4	267 40.0	56.8	21 20.3	22.1	103 28.6	01.0	
3	230	38.0	223 53.2	26.6	282 40.6	56.4	36 23.1	22.0	118 31.0	01.0	
4	245	40.4	238 52.8	27.9	297 41.2	56.0	51 25.8	21.9	133 33.5	01.0	
5	260	42.9	253 52.4	+1 29.1	312 41.8	-19 55.6	66 28.6	-4 21.8	148 35.9	+22 01.0	
6	275	45.3	268 52.0	+1 30.4	327 42.3	-19 55.2	81 31.4	-4 21.6	163 38.3	+22 01.0	
7	290	47.8	283 51.7	31.7	342 42.9	54.8	96 34.1	21.5	178 40.8	01.0	
8	305	50.3	298 51.3	32.9	357 43.5	54.4	111 36.9	21.4	193 43.2	01.0	
9	320	52.7	313 50.9	34.2	12 44.1	54.0	126 39.6	21.3	208 45.6	01.0	
10	335	55.2	328 50.5	35.4	27 44.7	53.6	141 42.4	21.1	223 48.1	01.0	
11	350	57.7	343 50.2	+1 36.7	42 45.3	-19 53.2	156 45.1	-4 21.0	238 50.5	+22 01.0	
12	6	00.1	358 49.8	+1 37.9	57 45.9	-19 52.8	171 47.9	-4 20.9	253 52.9	+22 01.0	
13	21	02.6	13 49.4	39.2	72 46.5	52.3	186 50.7	20.8	268 55.4	01.0	
14	36	05.1	28 49.0	40.5	87 47.1	51.9	201 53.4	20.6	283 57.8	01.0	
15	51	07.5	43 48.7	41.7	102 47.6	51.5	216 56.2	20.5	299 00.2	01.0	
16	66	10.0	58 48.3	43.0	117 48.2	51.1	231 58.9	20.4	314 02.7	01.0	
17	81	12.5	73 47.9	+1 44.2	132 48.8	-19 50.7	247 01.7	-4 20.3	329 05.1	+22 01.0	
18	96	14.9	88 47.5	+1 45.5	147 49.4	-19 50.3	262 04.4	-4 20.2	344 07.5	+22 01.0	
19	111	17.4	103 47.1	46.8	162 50.0	49.9	277 07.2	20.0	359 10.0	01.0	
20	126	19.8	118 46.8	48.0	177 50.6	49.5	292 10.0	19.9	14 12.4	01.0	
21	141	22.3	133 46.4	49.3	192 51.2	49.1	307 12.7	19.8	29 14.8	01.0	
22	156	24.8	148 46.0	50.5	207 51.8	48.7	322 15.5	19.7	44 17.2	01.0	
23	171	27.2	163 45.6	51.8	222 52.4	48.3	337 18.2	19.5	59 19.7	01.0	
24	186	29.7	178 45.3	+1 53.0	237 52.9	-19 47.9	352 21.0	-4 19.4	74 22.1	+22 01.0	
Dif	—		-4	+13	+6		+4	+28	+1	+24	0

UT	SOL			LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16:0 PMG: 12 ^h 04 ^m 7			Edad: 18 ^d 6 PHE { 4 ^h : 57/9 12 ^h : 58/0 20 ^h : 58/2 PMG: 2 ^h 33 ^m R°: 53 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	178	46.9	+3	19.8	323	09.8	-18	47.1	60 N	18 37	19 19	20 12	** ** *	6 02	3	
1	193	47.1		20.8	337	39.0 ¹⁰²	-18	59.5 ¹²⁴	58	34	14	20 03	** ** *	16	10	
2	208	47.2		21.8	352	08.1 ¹⁰¹	-19	11.8 ¹²³	56	32	10	19 56	23 58 94	28	16	
3	223	47.4		22.8	6	37.1 ¹⁰⁰		24.1 ¹²³	54	30	06	50	44 89	39	20	
4	238	47.6		23.7	21	06.0 ⁹⁹		36.3 ¹²²	52	29	03	44	32 85	48	23	
5	253	47.8	+3	24.7	35	34.8 ⁹⁸	-19	48.3 ¹²⁰	50	18 27	19 00	19 39	23 21 82	6 57	26	
6	268	48.0	+3	25.7	50	03.5 ⁹⁷	-20	00.3 ¹²⁰	45	18 24	18 54	19 29	22 58 77	7 15	32	
7	283	48.2		26.7	64	32.1 ⁹⁶		12.1 ¹¹⁸	40	21	48	21	40 73	30	36	
8	298	48.4		27.6	79	00.6 ⁹⁵		23.9 ¹¹⁸	35	19	44	14	25 70	42	40	
9	313	48.6		28.6	93	28.9 ⁹³		35.6 ¹¹⁷	30	17	41	09	22 12 68	7 54	42	
10	328	48.8		29.6	107	57.2 ⁹³		47.1 ¹¹⁵	20	13	36	19 01	21 50 63	8 13	47	
11	343	49.0	+3	30.6	122	25.4 ⁹²	-20	58.5 ¹¹⁴	10 N	18 11	18 32	18 56	21 31 60	8 29	51	
12	358	49.1	+3	31.5	136	53.4 ⁹⁰	-21	09.9 ¹¹⁴	0	18 08	18 29	18 53	21 13 57	8 45	55	
13	13	49.3		32.5	151	21.4 ⁹⁰		21.1 ¹¹²	10 S	05	26	51	20 55 54	9 01	58	
14	28	49.5		33.5	165	49.2 ⁸⁸		32.2 ¹¹¹	20	03	25	50	37 50	18	62	
15	43	49.7		34.4	180	16.9 ⁸⁷		43.2 ¹¹⁰	30	18 00	24	52	15 46	37	67	
16	58	49.9		35.4	194	44.6 ⁸⁷	-21	54.1 ¹⁰⁹	35	17 59	24	53	20 03 43	9 49	70	
17	73	50.1	+3	36.4	209	12.1 ⁸⁵	-22	04.9 ¹⁰⁸	40	17 57	18 24	18 55	19 48 41	10 02	73	
18	88	50.3	+3	37.4	223	39.5 ⁸⁴	-22	15.5 ¹⁰⁶	45	17 55	18 24	18 58	19 32 36	10 17	78	
19	103	50.5		38.3	238	06.8 ⁸³		26.0 ¹⁰⁵	50	53	25	19 02	11 31	37	83	
20	118	50.7		39.3	252	34.0 ⁸²		36.5 ¹⁰⁵	52	52	25	04	19 01 29	46	86	
21	133	50.8		40.3	267	01.1 ⁸¹		46.7 ¹⁰²	54	50	26	07	18 50 25	10 56	90	
22	148	51.0		41.2	281	28.1 ⁸⁰	-22	56.9 ¹⁰²	56	49	26	09	38 21	11 08	94	
23	163	51.2		42.2	295	55.0 ⁷⁹	-23	06.9 ¹⁰⁰	58	48	27	12	23 16	22	100	
24	178	51.4	+3	43.2	310	21.8 ⁷⁸	-23	16.8 ⁹⁹	60 S	17 46	18 28	19 16	18 06 8	11 38	108	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 11 ^h 32 ^m 1		Mag: -4.0 PMG: 12 ^h 05 ^m		Mag: +0.9 PMG: 8 ^h 08 ^m		Mag: -2.5 PMG: 0 ^h 31 ^m		Mag: +0.1 PMG: 18 ^h 59 ^m	
	hG ♈	hG ♀	Dec		hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	186	29.7	178	45.3	+1	53.0	237	52.9	-19	47.9
1	201	32.2	193	44.9		54.3	252	53.5		47.5
2	216	34.6	208	44.5		55.6	267	54.1		47.0
3	231	37.1	223	44.1		56.8	282	54.7		46.6
4	246	39.6	238	43.8		58.1	297	55.3		46.2
5	261	42.0	253	43.4	+1	59.3	312	55.9	-19	45.8
6	276	44.5	268	43.0	+2	00.6	327	56.5	-19	45.4
7	291	46.9	283	42.6		01.8	342	57.1		45.0
8	306	49.4	298	42.2		03.1	357	57.7		44.6
9	321	51.9	313	41.9		04.3	12	58.3		44.2
10	336	54.3	328	41.5		05.6	27	58.8		43.8
11	351	56.8	343	41.1	+2	06.9	42	59.4	-19	43.3
12	6	59.3	358	40.7	+2	08.1	58	00.0	-19	42.9
13	22	01.7	13	40.4		09.4	73	00.6		42.5
14	37	04.2	28	40.0		10.6	88	01.2		42.1
15	52	06.7	43	39.6		11.9	103	01.8		41.7
16	67	09.1	58	39.2		13.1	118	02.4		41.3
17	82	11.6	73	38.8	+2	14.4	133	03.0	-19	40.9
18	97	14.1	88	38.5	+2	15.7	148	03.6	-19	40.5
19	112	16.5	103	38.1		16.9	163	04.2		40.0
20	127	19.0	118	37.7		18.2	178	04.8		39.6
21	142	21.4	133	37.3		19.4	193	05.4		39.2
22	157	23.9	148	37.0		20.7	208	06.0		38.8
23	172	26.4	163	36.6		21.9	223	06.5		38.4
24	187	28.8	178	36.2	+2	23.2	238	07.1	-19	38.0
Dif	—	—	-4	+13		+6	+4	+28		+1
										+24
										0

UT	SOL			LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'0 PMG: 12 ^h 04 ^m 4			Edad: 19 ^d 6 PHE { 4 ^h : 58'3 12 ^h : 58'4 20 ^h : 58'5 SD: 15'9 PMG: 3 ^h 26 ^m R°: 58 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico		Civil	Hora		R°	Hora	R°		
h	°	'	°	°	'	°	'	°	'	h	m	h	m	h	m	h	m	
0	178	51.4	+3	43.2	310	21.8	77	-23	16.8	98	60 N	3 56	4 49	5 31	0 36	110	6 05	11
1	193	51.6		44.2	324	48.5	77		26.6	98	58	4 05	54	34	0 15	100	26	21
2	208	51.8		45.1	339	15.1	76		36.2	96	56	12	4 58	36	**	**	44	26
3	223	52.0		46.1	353	41.5	74		45.8	96	54	19	5 02	38	**	**	6 59	31
4	238	52.2		47.1	8	07.9	74	-23	55.1	93	52	24	05	39	**	**	7 11	35
5	253	52.4	+3	48.0	22	34.1	72	-24	04.4	93	50	4 29	5 08	5 41	**	**	7 23	37
6	268	52.5	+3	49.0	37	00.3	72	-24	13.5	91	45	4 40	5 15	5 44	**	**	7 47	42
7	283	52.7		50.0	51	26.3	70		22.4	89	40	48	20	47	23	53	70	45
8	298	52.9		51.0	65	52.3	70		31.2	88	35	4 54	24	50	35	68	22	48
9	313	53.1		51.9	80	18.1	68		39.9	87	30	5 00	28	52	23	20	66	50
10	328	53.3		52.9	94	43.9	68		48.5	86	20	08	33	55	22	53	65	53
11	343	53.5	+3	53.9	109	09.5	66	-24	56.8	83	10 N	5 13	5 37	5 58	22	31	62	57
12	358	53.7	+3	54.8	123	35.0	65	-25	05.1	83	0	5 16	5 40	6 01	22	10	61	59
13	13	53.9		55.8	138	00.5	65		13.2	81	10 S	18	43	04	21	49	59	62
14	28	54.0		56.8	152	25.8	63		21.1	79	20	19	44	07	27	57	10	20
15	43	54.2		57.7	166	51.1	63		28.9	78	30	18	46	09	21	01	55	68
16	58	54.4		58.7	181	16.2	61		36.5	76	35	17	46	11	20	46	53	69
17	73	54.6	+3	59.7	195	41.3	61	-25	44.0	75	40	5 15	5 46	6 13	20	29	51	72
18	88	54.8	+4	00.7	210	06.2	59	-25	51.3	73	45	5 12	5 46	6 15	20	08	49	75
19	103	55.0		01.6	224	31.1	59	-25	58.5	72	50	08	45	18	19	42	45	79
20	118	55.2		02.6	238	55.9	58	-26	05.5	70	52	06	45	19	30	42	12	82
21	133	55.4		03.6	253	20.5	56		12.4	69	54	04	45	20	19	15	40	85
22	148	55.5		04.5	267	45.1	56		19.0	66	56	5 01	44	21	18	59	36	89
23	163	55.7		05.5	282	09.6	55		25.6	66	58	4 58	44	23	39	30	13	94
24	178	55.9	+4	06.5	296	34.0	54	-26	31.9	63	60 S	4 54	5 43	6 24	18	14	20	105

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 11 ^h 28 ^m 2		Mag: -4.0 PMG: 12 ^h 06 ^m		Mag: +0.9 PMG: 8 ^h 07 ^m		Mag: -2.5 PMG: 0 ^h 26 ^m		Mag: +0.1 PMG: 18 ^h 56 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	187	28.8	178	36.2	+2	23.2	238	07.1	-19	38.0	353	27.2	-4	16.4	75	20.4	+22	00.9
1	202	31.3	193	35.8		24.4	253	07.7		37.5	8	29.9		16.3	90	22.8		00.9
2	217	33.8	208	35.4		25.7	268	08.3		37.1	23	32.7		16.2	105	25.2		00.9
3	232	36.2	223	35.1		27.0	283	08.9		36.7	38	35.5		16.1	120	27.6		00.9
4	247	38.7	238	34.7		28.2	298	09.5		36.3	53	38.2		15.9	135	30.1		00.9
5	262	41.2	253	34.3	+2	29.5	313	10.1	-19	35.9	68	41.0	-4	15.8	150	32.5	+22	00.9
6	277	43.6	268	33.9	+2	30.7	328	10.7	-19	35.5	83	43.7	-4	15.7	165	34.9	+22	00.9
7	292	46.1	283	33.5		32.0	343	11.3		35.0	98	46.5		15.6	180	37.3		00.9
8	307	48.6	298	33.2		33.2	358	11.9		34.6	113	49.2		15.4	195	39.7		00.9
9	322	51.0	313	32.8		34.5	373	12.5		34.2	128	52.0		15.3	210	42.2		00.9
10	337	53.5	328	32.4		35.7	388	13.1		33.8	143	54.8		15.2	225	44.6		00.9
11	352	55.9	343	32.0	+2	37.0	403	13.7	-19	33.4	158	57.5	-4	15.1	240	47.0	+22	00.9
12	7	58.4	358	31.7	+2	38.2	58	14.3	-19	32.9	174	00.3	-4	14.9	255	49.4	+22	00.9
13	23	00.9	13	31.3		39.5	73	14.9		32.5	189	03.0		14.8	270	51.9		00.9
14	38	03.3	28	30.9		40.8	88	15.4		32.1	204	05.8		14.7	285	54.3		00.9
15	53	05.8	43	30.5		42.0	103	16.0		31.7	219	08.6		14.6	300	56.7		00.9
16	68	08.3	58	30.1		43.3	118	16.6		31.3	234	11.3		14.4	315	59.1		00.9
17	83	10.7	73	29.8	+2	44.5	133	17.2	-19	30.8	249	14.1	-4	14.3	331	01.6	+22	00.9
18	98	13.2	88	29.4	+2	45.8	148	17.8	-19	30.4	264	16.8	-4	14.2	346	04.0	+22	00.9
19	113	15.7	103	29.0		47.0	163	18.4		30.0	279	19.6		14.1	1	06.4		00.9
20	128	18.1	118	28.6		48.3	178	19.0		29.6	294	22.4		13.9	16	08.8		00.9
21	143	20.6	133	28.2		49.5	193	19.6		29.2	309	25.1		13.8	31	11.2		00.9
22	158	23.0	148	27.9		50.8	208	20.2		28.7	324	27.9		13.7	46	13.7		00.9
23	173	25.5	163	27.5		52.0	223	20.8		28.3	339	30.6		13.6	61	16.1		00.9
24	188	28.0	178	27.1	+2	53.3	238	21.4	-19	27.9	354	33.4	-4	13.4	76	18.5	+22	00.9
Dif	—		-4		+13		+6		+4		+28		+1		+24		0	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG: 12 ^h 04 ^m 1			Edad: 20 ^d 6 PHE { 4 ^h : 58'7 12 ^h : 58'8 20 ^h : 58'9 PMG: 4 ^h 24 ^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	178	55.9	+4 06.5	296	34.0	-26 31.9	60 N	18 41	19 24	20 18	2 26 96		6 16 33		
1	193	56.1		310	58.4	38.1	58	39	19	09	1 55 86		6 47 42		
2	208	56.3	08.4	325	22.6	52	56	36	14	20 01	32 81		7 10 47		
3	223	56.5	09.4	339	46.8	52	54	34	10	19 54	1 13 78		30 49		
4	238	56.7	10.3	354	10.9	51	52	32	06	48	0 57 76		7 46 51		
5	253	56.9	+4 11.3	8	34.9	50	50	18 30	19 03	19 43	0 43 75		8 00 53		
6	268	57.0	+4 12.3	22	58.8	49	45	18 26	18 56	19 31	0 15 72		8 29 55		
7	283	57.2	13.2	37	22.6	48	40	23	51	23	** ** *		8 51 57		
8	298	57.4	14.2	51	46.4	48	35	20	46	16	** ** *		9 10 58		
9	313	57.6	15.2	66	10.1	47	30	18	42	10	** ** *		26 59		
10	328	57.8	16.1	80	33.7	46	20	14	36	19 02	23 58 62		9 53 60		
11	343	58.0	+4 17.1	94	57.2	45	10 N	18 11	18 32	18 56	23 33 63		10 17 61		
12	358	58.2	+4 18.1	109	20.7	45	0	18 07	18 28	18 52	23 11 62		10 39 62		
13	13	58.4	19.0	123	44.2	45	10 S	04	25	50	22 48 63		11 01 62		
14	28	58.5	20.0	138	07.5	43	20	18 01	23	49	22 24 63		24 64		
15	43	58.7	21.0	152	30.8	43	30	17 58	22	49	21 56 62		11 52 64		
16	58	58.9	21.9	166	54.0	42	35	56	21	50	39 63		12 08 65		
17	73	59.1	+4 22.9	181	17.2	42	40	17 54	18 21	18 52	21 20 62		12 27 66		
18	88	59.3	+4 23.9	195	40.3	41	45	17 51	18 20	18 54	20 57 62		12 50 66		
19	103	59.5	24.8	210	03.4	41	50	48	20	18 58	27 61		13 19 68		
20	118	59.7	25.8	224	26.4	40	52	47	20	19 00	20 12 61		34 68		
21	133	59.9	26.8	238	49.4	40	54	45	21	02	19 55 61		13 51 68		
22	149	00.0	27.7	253	12.3	39	56	44	21	04	35 60		14 11 70		
23	164	00.2	28.7	267	35.2	39	58	42	21	07	19 09 59		14 36 71		
24	179	00.4	+4 29.7	281	58.0	38	60 S	17 40	18 22	19 10	18 34 57		15 11 74		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 11 ^h 24 ^m 3		Mag: -4.0 PMG: 12 ^h 06 ^m			Mag: +0.9 PMG: 8 ^h 06 ^m			Mag: -2.5 PMG: 0 ^h 22 ^m			Mag: +0.1 PMG: 18 ^h 52 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	'	°	°	'	°	°	'	°	
0	188	28.0	178	27.1	+2 53.3	238	21.4	-19 27.9	354	33.4	-4 13.4	76	18.5	+22 00.9	
1	203	30.4	193	26.7	54.6	253	22.0	27.5	9	36.2	13.3	91	20.9	00.9	
2	218	32.9	208	26.3	55.8	268	22.6	27.0	24	38.9	13.2	106	23.3	00.9	
3	233	35.4	223	26.0	57.1	283	23.2	26.6	39	41.7	13.1	121	25.8	00.9	
4	248	37.8	238	25.6	58.3	298	23.8	26.2	54	44.4	12.9	136	28.2	00.8	
5	263	40.3	253	25.2	+2 59.6	313	24.4	-19 25.8	69	47.2	-4 12.8	151	30.6	+22 00.8	
6	278	42.8	268	24.8	+3 00.8	328	25.0	-19 25.3	84	50.0	-4 12.7	166	33.0	+22 00.8	
7	293	45.2	283	24.4	02.1	343	25.6	24.9	99	52.7	12.6	181	35.4	00.8	
8	308	47.7	298	24.1	03.3	358	26.2	24.5	114	55.5	12.4	196	37.8	00.8	
9	323	50.2	313	23.7	04.6	13	26.8	24.1	129	58.2	12.3	211	40.3	00.8	
10	338	52.6	328	23.3	05.8	28	27.4	23.6	145	01.0	12.2	226	42.7	00.8	
11	353	55.1	343	22.9	+3 07.1	43	28.0	-19 23.2	160	03.8	-4 12.1	241	45.1	+22 00.8	
12	8	57.5	358	22.5	+3 08.3	58	28.6	-19 22.8	175	06.5	-4 12.0	256	47.5	+22 00.8	
13	24	00.0	13	22.2	09.6	73	29.2	22.3	190	09.3	11.8	271	49.9	00.8	
14	39	02.5	28	21.8	10.8	88	29.8	21.9	205	12.0	11.7	286	52.4	00.8	
15	54	04.9	43	21.4	12.1	103	30.4	21.5	220	14.8	11.6	301	54.8	00.8	
16	69	07.4	58	21.0	13.3	118	31.0	21.1	235	17.6	11.5	316	57.2	00.8	
17	84	09.9	73	20.6	+3 14.6	133	31.6	-19 20.6	250	20.3	-4 11.3	331	59.6	+22 00.8	
18	99	12.3	88	20.3	+3 15.8	148	32.1	-19 20.2	265	23.1	-4 11.2	347	02.0	+22 00.8	
19	114	14.8	103	19.9	17.1	163	32.7	19.8	280	25.8	11.1	2	04.4	00.8	
20	129	17.3	118	19.5	18.4	178	33.3	19.3	295	28.6	11.0	17	06.9	00.8	
21	144	19.7	133	19.1	19.6	193	33.9	18.9	310	31.4	10.8	32	09.3	00.8	
22	159	22.2	148	18.7	20.9	208	34.5	18.5	325	34.1	10.7	47	11.7	00.8	
23	174	24.7	163	18.4	22.1	223	35.1	18.1	340	36.9	10.6	62	14.1	00.8	
24	189	27.1	178	18.0	+3 23.4	238	35.7	-19 17.6	355	39.6	-4 10.5	77	16.5	+22 00.8	
Dif	—		-4 +13		+6 +4		+28 +1				+24				

UT	SOL			☾ LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16'0 PMG: 12 ^h 03 ^m 8			Edad: 21 ^d 6 PHE { 4 ^h : 59'0 12 ^h : 59'1 20 ^h : 59'1 SD: 16'0 PMG: 5 ^h 26 ^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	179	00.4	+4	29.7	281	58.0	38	-28	12.0	19	60 N	3	49	4	42	5	25		
1	194	00.6		30.6	296	20.8	38		13.9	17	58	3	58		48	28	3	21	
2	209	00.8		31.6	310	43.6	38		15.6	16	56	4	06		53	31	2	53	
3	224	01.0		32.6	325	06.3	37		17.1	15	54	13	4	57	33	31	2	53	
4	239	01.2		33.5	339	29.0	37		18.4	13	52	19	5	01	35	2	13	59	
5	254	01.3	+4	34.5	353	51.6	36	-28	19.5	11	50	4	25	5	04	5	37	1	58
6	269	01.5	+4	35.5	8	14.3	37	-28	20.4	9	45	4	36	5	11	5	41	1	27
7	284	01.7		36.4	22	36.9	36		21.2	8	40		45		17	44	1	03	
8	299	01.9		37.4	36	59.5	36		21.7	5	35		52	21	47	0	43	62	
9	314	02.1		38.3	51	22.0	35		22.0	3	30	4	57	25	49	0	26	62	
10	329	02.3		39.3	65	44.6	36		22.2	2	20	5	06	32	54	**	**	**	
11	344	02.5	+4	40.3	80	07.1	35	-28	22.2	0	10 N	5	12	5	36	5	57	**	**
12	359	02.6	+4	41.2	94	29.6	35	-28	21.9	3	0	5	16	5	40	6	01	**	**
13	14	02.8		42.2	108	52.1	35		21.5	4	10 S		18	43	04	23	51	63	
14	29	03.0		43.2	123	14.6	35		20.9	6	20	19	45	07	23	27	65	28	
15	44	03.2		44.1	137	37.1	35		20.0	9	30	19	47	11	22	58	69	12	
16	59	03.4		45.1	151	59.6	35		19.0	10	35	18	47	13	42	69	13	13	
17	74	03.6	+4	46.1	166	22.1	35	-28	17.8	12	40	5	17	5	48	6	15	22	
18	89	03.8	+4	47.0	180	44.6	35	-28	16.4	14	45	5	14	5	48	6	18	21	
19	104	03.9		48.0	195	07.1	35		14.8	16	50	11	48	21	28	78	14	27	
20	119	04.1		48.9	209	29.6	35		13.0	18	52	09	48	22	21	13	79	42	
21	134	04.3		49.9	223	52.1	35		11.0	20	54	07	48	24	20	56	81	14	
22	149	04.5		50.9	238	14.6	35		08.8	22	56	05	48	25	35	84	15	21	
23	164	04.7		51.8	252	37.2	36		06.5	23	58	5	02	48	27	20	08	90	
24	179	04.9	+4	52.8	266	59.7	35	-28	03.9	26	60 S	4	59	5	48	6	29	19	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 11 ^h 20 ^m 3		Mag: -4.0 PMG: 12 ^h 07 ^m		Mag: +0.9 PMG: 8 ^h 05 ^m		Mag: -2.5 PMG: 0 ^h 17 ^m		Mag: +0.1 PMG: 18 ^h 48 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	189	27.1	178	18.0	+3	23.4	238	35.7	-19	17.6	355	39.6	-4	10.5	77	16.5	+22	00.8
1	204	29.6	193	17.6		24.6	253	36.3		17.2	10	42.4		10.3	92	18.9		00.8
2	219	32.0	208	17.2		25.9	268	36.9		16.8	25	45.2		10.2	107	21.3		00.8
3	234	34.5	223	16.8		27.1	283	37.5		16.3	40	47.9		10.1	122	23.8		00.8
4	249	37.0	238	16.4		28.4	298	38.1		15.9	55	50.7		10.0	137	26.2		00.8
5	264	39.4	253	16.1	+3	29.6	313	38.7	-19	15.5	70	53.4	-4	09.8	152	28.6	+22	00.8
6	279	41.9	268	15.7	+3	30.9	328	39.3	-19	15.0	85	56.2	-4	09.7	167	31.0	+22	00.8
7	294	44.4	283	15.3		32.1	343	39.9		14.6	100	59.0		09.6	182	33.4		00.8
8	309	46.8	298	14.9		33.4	358	40.5		14.2	116	01.7		09.5	197	35.8		00.8
9	324	49.3	313	14.5		34.6	13	41.1		13.7	131	04.5		09.3	212	38.2		00.8
10	339	51.8	328	14.2		35.9	28	41.7		13.3	146	07.2		09.2	227	40.7		00.8
11	354	54.2	343	13.8	+3	37.1	43	42.3	-19	12.9	161	10.0	-4	09.1	242	43.1	+22	00.7
12	9	56.7	358	13.4	+3	38.4	58	42.9	-19	12.4	176	12.8	-4	09.0	257	45.5	+22	00.7
13	24	59.2	13	13.0		39.6	73	43.5		12.0	191	15.5		08.8	272	47.9		00.7
14	40	01.6	28	12.6		40.9	88	44.1		11.6	206	18.3		08.7	287	50.3		00.7
15	55	04.1	43	12.2		42.1	103	44.7		11.1	221	21.0		08.6	302	52.7		00.7
16	70	06.5	58	11.9		43.4	118	45.3		10.7	236	23.8		08.5	317	55.1		00.7
17	85	09.0	73	11.5	+3	44.6	133	45.9	-19	10.3	251	26.6	-4	08.3	332	57.5	+22	00.7
18	100	11.5	88	11.1	+3	45.9	148	46.5	-19	09.8	266	29.3	-4	08.2	348	00.0	+22	00.7
19	115	13.9	103	10.7		47.1	163	47.2		09.4	281	32.1		08.1	3	02.4		00.7
20	130	16.4	118	10.3		48.4	178	47.8		08.9	296	34.9		08.0	18	04.8		00.7
21	145	18.9	133	09.9		49.6	193	48.4		08.5	311	37.6		07.8	33	07.2		00.7
22	160	21.3	148	09.6		50.9	208	49.0		08.1	326	40.4		07.7	48	09.6		00.7
23	175	23.8	163	09.2		52.1	223	49.6		07.6	341	43.1		07.6	63	12.0		00.7
24	190	26.3	178	08.8	+3	53.3	238	50.2	-19	07.2	356	45.9	-4	07.5	78	14.4	+22	00.7
Dif	—		-4	+12			+6	+4			+28	+1			+24			0

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:0 PMG: 12 ^h 03 ^m 5			Edad: 22 ^d 6 PHE { 4 ^h : 59/2 12 ^h : 59/3 20 ^h : 59/4 PMG: 6 ^h 28 ^m R°: 61 ^m					Civil		Náutico	Hora	R°	Hora	R°
	hG ☉	Dec		hG ☾	Dif	Dec			Dif						
h	°	'	°	°	'	°	°	h m	h m	h m	h m m	h m m	h m m	h m m	
0	179	04.9	+4 52.8	266	59.7	-28 03.9	60 N	18 46	19 30	20 24	4 52 16	8 10 111			
1	194	05.1		281	22.3	-28 01.1	58	43	24	14	4 16 28	8 45 100			
2	209	05.2		295	44.9	-27 58.2	56	40	19	20 06	3 50 34	9 11 93			
3	224	05.4		310	07.6	55.0	54	38	14	19 58	29 39	31 89			
4	239	05.6		324	30.2	51.7	52	36	10	52	3 12 41	9 48 85			
5	254	05.8	+4 57.6	338	52.9	-27 48.2	50	18 33	19 06	19 46	2 57 44	10 03 82			
6	269	06.0	+4 58.6	353	15.6	-27 44.4	45	18 29	18 59	19 34	2 27 48	10 32 78			
7	284	06.2	+4 59.5	7	38.4	40.5	40	25	53	25	2 04 51	10 55 75			
8	299	06.4	+5 00.5	22	01.2	36.4	35	22	48	18	1 45 52	11 14 72			
9	314	06.5		36	24.0	32.1	30	19	43	12	28 55	30 70			
10	329	06.7		50	46.8	27.7	20	15	37	19 03	1 00 57	11 58 66			
11	344	06.9	+5 03.4	65	09.8	-27 23.0	10 N	18 11	18 32	18 56	0 36 59	12 21 63			
12	359	07.1	+5 04.3	79	32.7	-27 18.1	0	18 07	18 28	18 52	0 13 62	12 43 60			
13	14	07.3		93	55.7	13.1	10 S	18 03	24	49	*** ** *	13 05 57			
14	29	07.5		108	18.8	07.9	20	17 59	22	47	*** ** *	28 54			
15	44	07.6		122	41.9	-27 02.5	30	55	19	47	*** ** *	13 55 50			
16	59	07.8		137	05.0	-26 56.9	35	53	18	48	23 51 73	14 10 49			
17	74	08.0	+5 09.1	151	28.2	-26 51.1	40	17 50	18 17	18 49	23 34 76	14 29 45			
18	89	08.2	+5 10.1	165	51.5	-26 45.1	45	17 47	18 17	18 51	23 13 80	14 51 41			
19	104	08.4		180	14.8	39.0	50	44	16	54	22 46 86	15 18 37			
20	119	08.6		194	38.2	32.7	52	42	16	55	32 89	32 34			
21	134	08.7		209	01.6	26.2	54	41	16	57	22 17 93	15 47 31			
22	149	08.9		223	25.2	19.5	56	39	16	18 59	21 59 98	16 06 26			
23	164	09.1		237	48.7	12.6	58	37	16	19 01	38 103	28 20			
24	179	09.3	+5 15.8	252	12.4	-26 05.6	60 S	17 34	18 16	19 04	21 09 114	16 56 11			

UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO				
	PMG: 11 ^h 16 ^m 4		Mag: -4.0 PMG: 12 ^h 08 ^m		Mag: +0.9 PMG: 8 ^h 04 ^m		Mag: -2.5 PMG: 0 ^h 13 ^m			Mag: +0.1 PMG: 18 ^h 44 ^m				
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	'			
0	190	26.3	178	08.8	+3 53.3	238	50.2	-19 07.2	356	45.9	-4 07.5	78	14.4	+22 00.7
1	205	28.7	193	08.4	54.6	253	50.8	06.8	11	48.7	07.3	93	16.8	00.7
2	220	31.2	208	08.0	55.8	268	51.4	06.3	26	51.4	07.2	108	19.2	00.7
3	235	33.7	223	07.6	57.1	283	52.0	05.9	41	54.2	07.1	123	21.7	00.7
4	250	36.1	238	07.3	58.3	298	52.6	05.4	56	56.9	07.0	138	24.1	00.7
5	265	38.6	253	06.9	+3 59.6	313	53.2	-19 05.0	71	59.7	-4 06.8	153	26.5	+22 00.7
6	280	41.0	268	06.5	+4 00.8	328	53.8	-19 04.6	87	02.5	-4 06.7	168	28.9	+22 00.7
7	295	43.5	283	06.1	02.1	343	54.4	04.1	102	05.2	06.6	183	31.3	00.7
8	310	46.0	298	05.7	03.3	358	55.0	03.7	117	08.0	06.5	198	33.7	00.7
9	325	48.4	313	05.3	04.6	13	55.6	03.2	132	10.7	06.3	213	36.1	00.7
10	340	50.9	328	05.0	05.8	28	56.2	02.8	147	13.5	06.2	228	38.5	00.7
11	355	53.4	343	04.6	+4 07.1	43	56.8	-19 02.4	162	16.3	-4 06.1	243	40.9	+22 00.7
12	10	55.8	358	04.2	+4 08.3	58	57.4	-19 01.9	177	19.0	-4 06.0	258	43.3	+22 00.6
13	25	58.3	13	03.8	09.6	73	58.0	01.5	192	21.8	05.8	273	45.7	00.6
14	41	00.8	28	03.4	10.8	88	58.6	01.0	207	24.6	05.7	288	48.1	00.6
15	56	03.2	43	03.0	12.1	103	59.2	00.6	222	27.3	05.6	303	50.6	00.6
16	71	05.7	58	02.6	13.3	118	59.8	-19 00.2	237	30.1	05.5	318	53.0	00.6
17	86	08.2	73	02.3	+4 14.5	134	00.4	-18 59.7	252	32.8	-4 05.3	333	55.4	+22 00.6
18	101	10.6	88	01.9	+4 15.8	149	01.0	-18 59.3	267	35.6	-4 05.2	348	57.8	+22 00.6
19	116	13.1	103	01.5	17.0	164	01.6	58.8	282	38.4	05.1	4	00.2	00.6
20	131	15.5	118	01.1	18.3	179	02.2	58.4	297	41.1	05.0	19	02.6	00.6
21	146	18.0	133	00.7	19.5	194	02.8	57.9	312	43.9	04.8	34	05.0	00.6
22	161	20.5	148	00.3	20.8	209	03.4	57.5	327	46.6	04.7	49	07.4	00.6
23	176	22.9	162	59.9	22.0	224	04.1	57.0	342	49.4	04.6	64	09.8	00.6
24	191	25.4	177	59.6	+4 23.3	239	04.7	-18 56.6	357	52.2	-4 04.5	79	12.2	+22 00.6
Dif	—		-4 +12		+6 +4		+28 +1			+24 0				0

UT	SOL			☾ LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna				
	SD: 16'0 PMG: 12 ^h 03 ^m 2			Edad: 23 ^d 6 PHE { 4 ^h : 59'4 12 ^h : 59'5 20 ^h : 59'5 PMG: 7 ^h 29 ^m R°: 58 ^m																
	hG ☉	Dec		hG ☾	Dif		Dec	Dif		Náutico	Civil		Hora	R°		Hora	R°			
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m		
0	179	09.3	+5	15.8	252	12.4	-26	05.6	72	60 N	3	42	4	36	5	19	5	08	5	
1	194	09.5		16.8	266	36.1	47	-25	58.4	74	58	3	52	42	22		4	44	13	
2	209	09.7		17.7	280	59.9	48		51.0	74	56	4	00	47	25		24	20		
3	224	09.8		18.7	295	23.7	48		43.5	75	54		08	52	28		4	08	24	
4	239	10.0		19.7	309	47.7	50		35.8	77	52		14	4	56	30	3	53	28	
5	254	10.2	+5	20.6	324	11.7	50	-25	27.9	79	50	4	20	5	00	5	32	3	41	31
6	269	10.4	+5	21.6	338	35.7	50	-25	19.8	81	45	4	32	5	07	5	37	3	15	37
7	284	10.6		22.5	352	59.9	52		11.6	82	40		41	14	41		2	55	40	
8	299	10.8		23.5	7	24.1	52	-25	03.2	84	35		49	19	44		37	44		
9	314	10.9		24.4	21	48.5	54	-24	54.6	86	30	4	55	23	47		2	23	46	
10	329	11.1		25.4	36	12.8	53		45.9	87	20	5	04	30	52		1	57	52	
11	344	11.3	+5	26.4	50	37.3	55	-24	37.0	89	10 N	5	10	5	35	5	56	1	35	56
12	359	11.5	+5	27.3	65	01.9	56	-24	28.0	90	0	5	15	5	39	6	00	1	15	59
13	14	11.7		28.3	79	26.5	56		18.8	92	10 S	18		43	04		0	54	62	
14	29	11.9		29.2	93	51.3	58	-24	09.4	94	20	20		46	08		32	66		
15	44	12.0		30.2	108	16.1	58	-23	59.9	95	30	20		48	12		0	07	70	
16	59	12.2		31.1	122	41.0	59		50.2	97	35	20		49	14		**	**	**	
17	74	12.4	+5	32.1	137	06.0	60	-23	40.4	98	40	5	19	5	50	6	17	**	**	**
18	89	12.6	+5	33.1	151	31.0	60	-23	30.4	100	45	5	17	5	51	6	20	**	**	**
19	104	12.8		34.0	165	56.2	62		20.3	101	50	14		51	24		**	**	**	
20	119	13.0		35.0	180	21.5	63	-23	10.0	103	52	13		52	25		**	**	**	
21	134	13.1		35.9	194	46.8	63	-22	59.6	104	54	11		52	27		23	50	95	
22	149	13.3		36.9	209	12.2	64		49.1	105	56	09		52	29		37	99		
23	164	13.5		37.8	223	37.8	66		38.3	108	58	07		52	32		21	105		
24	179	13.7	+5	38.8	238	03.4	66	-22	27.5	108	60 S	5	04	5	52	6	34	23	03	111

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 11 ^h 12 ^m 5		Mag: -4.0 PMG: 12 ^h 08 ^m		Mag: +0.9 PMG: 8 ^h 03 ^m		Mag: -2.5 PMG: 0 ^h 08 ^m		Mag: +0.1 PMG: 18 ^h 40 ^m									
	hG ♊	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	191	25.4	177	59.6	+4	23.3	239	04.7	-18	56.6	357	52.2	-4	04.5	79	12.2	+22	00.6
1	206	27.9	192	59.2		24.5	254	05.3		56.2	12	54.9		04.4	94	14.6		00.6
2	221	30.3	207	58.8		25.8	269	05.9		55.7	27	57.7		04.2	109	17.0		00.6
3	236	32.8	222	58.4		27.0	284	06.5		55.3	43	00.5		04.1	124	19.4		00.6
4	251	35.3	237	58.0		28.2	299	07.1		54.8	58	03.2		04.0	139	21.8		00.6
5	266	37.7	252	57.6	+4	29.5	314	07.7	-18	54.4	73	06.0	-4	03.9	154	24.2	+22	00.6
6	281	40.2	267	57.2	+4	30.7	329	08.3	-18	53.9	88	08.7	-4	03.7	169	26.6	+22	00.6
7	296	42.6	282	56.8		32.0	344	08.9		53.5	103	11.5		03.6	184	29.0		00.6
8	311	45.1	297	56.5		33.2	359	09.5		53.0	118	14.3		03.5	199	31.5		00.6
9	326	47.6	312	56.1		34.5	14	10.1		52.6	133	17.0		03.4	214	33.9		00.5
10	341	50.0	327	55.7		35.7	29	10.7		52.1	148	19.8		03.2	229	36.3		00.5
11	356	52.5	342	55.3	+4	36.9	44	11.3	-18	51.7	163	22.5	-4	03.1	244	38.7	+22	00.5
12	11	55.0	357	54.9	+4	38.2	59	11.9	-18	51.2	178	25.3	-4	03.0	259	41.1	+22	00.5
13	26	57.4	12	54.5		39.4	74	12.5		50.8	193	28.1		02.9	274	43.5		00.5
14	41	59.9	27	54.1		40.7	89	13.2		50.3	208	30.8		02.7	289	45.9		00.5
15	57	02.4	42	53.7		41.9	104	13.8		49.9	223	33.6		02.6	304	48.3		00.5
16	72	04.8	57	53.4		43.2	119	14.4		49.4	238	36.4		02.5	319	50.7		00.5
17	87	07.3	72	53.0	+4	44.4	134	15.0	-18	49.0	253	39.1	-4	02.4	334	53.1	+22	00.5
18	102	09.8	87	52.6	+4	45.6	149	15.6	-18	48.5	268	41.9	-4	02.2	349	55.5	+22	00.5
19	117	12.2	102	52.2		46.9	164	16.2		48.1	283	44.6		02.1	4	57.9		00.5
20	132	14.7	117	51.8		48.1	179	16.8		47.6	298	47.4		02.0	20	00.3		00.5
21	147	17.1	132	51.4		49.4	194	17.4		47.2	313	50.2		01.9	35	02.7		00.5
22	162	19.6	147	51.0		50.6	209	18.0		46.7	328	52.9		01.7	50	05.1		00.5
23	177	22.1	162	50.6		51.8	224	18.6		46.3	343	55.7		01.6	65	07.5		00.5
24	192	24.5	177	50.2	+4	53.1	239	19.2	-18	45.8	358	58.4	-4	01.5	80	09.9	+22	00.5
Dif	—		-4		+12		+6		+4		+28		+1		+24		0	

UT	SOL			☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna				
	SD: 16'0 PMG: 12 ^h 02 ^m 9			Edad: 24 ^d 6 PHE { 4 ^h : 59'5 12 ^h : 59'5 20 ^h : 59'5 SD: 16'2 PMG: 8 ^h 27 ^m R°: 54 ^m						Civil		Náutico	Hora	R°	Hora	R°		
	hG ☉	Dec		hG ☾	Dif	Dec	Dif											
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m	h	m
0	179	13.7	+5 38.8	238	03.4	-22 27.5	67	60 N	18 51	19 35	20 30	5 13	2	11 55	110			
1	194	13.9		252	29.1	16.5	110	58	48	29	20	4 57	8	12 10	104			
2	209	14.0		266	54.9	-22 05.4	111	56	44	23	11	44	12	23	99			
3	224	14.2		281	20.8	-21 54.1	113	54	42	18	20 03	32	16	35	94			
4	239	14.4		295	46.8	42.7	114	52	39	14	19 56	21	19	44	91			
5	254	14.6	+5 43.6	310	12.9	-21 31.2	115	50	18 37	19 10	19 50	4 12	22	12 53	88			
6	269	14.8	+5 44.5	324	39.0	-21 19.5	117	45	18 32	19 01	19 37	3 52	28	13 12	81			
7	284	15.0		339	05.3	-21 07.7	118	40	27	18 55	27	35	33	27	76			
8	299	15.1		353	31.7	-20 55.8	119	35	24	49	19	21	37	39	72			
9	314	15.3		7	58.1	43.7	121	30	21	45	13	3 09	40	13 50	69			
10	329	15.5		22	24.7	31.5	122	20	15	37	19 03	2 49	45	14 09	63			
11	344	15.7	+5 49.3	36	51.3	-20 19.2	123	10 N	18 10	18 32	18 56	2 31	50	14 25	58			
12	359	15.9	+5 50.2	51	18.0	-20 06.8	124	0	18 06	18 27	18 51	2 14	54	14 40	53			
13	14	16.0		65	44.8	-19 54.2	126	10 S	18 02	23	48	1 56	60	14 55	48			
14	29	16.2		80	11.8	41.6	126	20	17 58	20	45	38	64	15 11	43			
15	44	16.4		94	38.8	28.8	128	30	53	17	45	17	69	29	37			
16	59	16.6		109	05.9	15.9	129	35	50	16	45	1 04	73	39	34			
17	74	16.8	+5 55.0	123	33.1	-19 02.9	130	40	17 47	18 14	18 46	0 50	77	15 51	30			
18	89	16.9	+5 55.9	138	00.3	-18 49.7	132	45	17 44	18 13	18 47	0 33	82	16 05	25			
19	104	17.1		152	27.7	36.5	132	50	40	12	49	12	88	21	20			
20	119	17.3		166	55.2	23.1	134	52	38	11	50	0 01	91	29	17			
21	134	17.5		181	22.7	-18 09.7	134	54	36	11	52	** ** *	**	38	14			
22	149	17.7	+5 59.7	195	50.4	-17 56.1	136	56	34	11	54	** ** *	**	47	11			
23	164	17.8	+6 00.7	210	18.1	42.5	136	58	31	10	56	** ** *	**	16 58	7			
24	179	18.0	+6 01.6	224	45.9	-17 28.7	138	60 S	17 28	18 10	18 58	** ** *	**	17 11	1			
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 11 ^h 08 ^m 5			Mag: -4.0 PMG: 12 ^h 09 ^m			Mag: +0.9 PMG: 8 ^h 02 ^m			Mag: -2.5 PMG: 0 ^h 04 ^m			Mag: +0.1 PMG: 18 ^h 36 ^m					
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	192	24.5	177 50.2	+4 53.1	239 19.2	-18 45.8	358 58.4	-4 01.5	80 09.9	+22 00.5								
1	207	27.0	192 49.9	54.3	254 19.8	45.4	14 01.2	01.4	95 12.3	00.5								
2	222	29.5	207 49.5	55.6	269 20.5	44.9	29 04.0	01.2	110 14.7	00.5								
3	237	31.9	222 49.1	56.8	284 21.1	44.5	44 06.7	01.1	125 17.1	00.5								
4	252	34.4	237 48.7	58.1	299 21.7	44.0	59 09.5	01.0	140 19.5	00.4								
5	267	36.9	252 48.3	+4 59.3	314 22.3	-18 43.6	74 12.3	-4 00.9	155 21.9	+22 00.4								
6	282	39.3	267 47.9	+5 00.5	329 22.9	-18 43.1	89 15.0	-4 00.7	170 24.3	+22 00.4								
7	297	41.8	282 47.5	01.8	344 23.5	42.7	104 17.8	00.6	185 26.7	00.4								
8	312	44.3	297 47.1	03.0	359 24.1	42.2	119 20.5	00.5	200 29.1	00.4								
9	327	46.7	312 46.7	04.2	14 24.7	41.8	134 23.3	00.4	215 31.5	00.4								
10	342	49.2	327 46.3	05.5	29 25.3	41.3	149 26.1	00.2	230 33.9	00.4								
11	357	51.6	342 46.0	+5 06.7	44 25.9	-18 40.8	164 28.8	-4 00.1	245 36.3	+22 00.4								
12	12	54.1	357 45.6	+5 08.0	59 26.6	-18 40.4	179 31.6	-4 00.0	260 38.7	+22 00.4								
13	27	56.6	12 45.2	09.2	74 27.2	39.9	194 34.3	-3 59.9	275 41.1	00.4								
14	42	59.0	27 44.8	10.4	89 27.8	39.5	209 37.1	59.7	290 43.5	00.4								
15	58	01.5	42 44.4	11.7	104 28.4	39.0	224 39.9	59.6	305 45.9	00.4								
16	73	04.0	57 44.0	12.9	119 29.0	38.6	239 42.6	59.5	320 48.3	00.4								
17	88	06.4	72 43.6	+5 14.2	134 29.6	-18 38.1	254 45.4	-3 59.4	335 50.7	+22 00.4								
18	103	08.9	87 43.2	+5 15.4	149 30.2	-18 37.6	269 48.2	-3 59.2	350 53.1	+22 00.4								
19	118	11.4	102 42.8	16.6	164 30.8	37.2	284 50.9	59.1	5 55.5	00.4								
20	133	13.8	117 42.4	17.9	179 31.4	36.7	299 53.7	59.0	20 57.9	00.4								
21	148	16.3	132 42.0	19.1	194 32.1	36.3	314 56.4	58.9	36 00.3	00.3								
22	163	18.7	147 41.6	20.3	209 32.7	35.8	329 59.2	58.8	51 02.7	00.3								
23	178	21.2	162 41.2	21.6	224 33.3	35.4	345 02.0	58.6	66 05.0	00.3								
24	193	23.7	177 40.9	+5 22.8	239 33.9	-18 34.9	0 04.7	-3 58.5	81 07.4	+22 00.3								
Dif	—			-4	+12	+6	+5	-8972	+1	+24	0							

UT	SOL			☾ LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16/0 PMG: 12 ^h 02 ^m 7			Edad: 25 ^d 6 PHE { 4 ^h : 59/5 12 ^h : 59/4 20 ^h : 59/4 PMG: 9 ^h 21 ^m R°: 50 ^m														
	hG ☉	Dec		hG ☾	Dif		Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	179	18.0	+6	01.6	224	45.9	-17	28.7	60 N	3	34	4	30	5	13	5	15	0
1	194	18.2		02.6	239	13.9	90	14.9 ¹³⁸	58		45	36	17	5	05	4	13	54
2	209	18.4		03.5	253	41.9	90	-17 00.9 ¹⁴⁰	56	3	54	42	20	4	56	8	14	02
3	224	18.6		04.5	268	09.9	90	-16 46.9 ¹⁴⁰	54	4	02	47	23	48	11		09	91
4	239	18.7		05.4	282	38.1	92	32.7 ¹⁴²	52		09	51	26	40	15		15	88
5	254	18.9	+6	06.4	297	06.4	93	-16 18.5 ¹⁴²	50	4	15	4	55	5	28	4	34	17
6	269	19.1	+6	07.3	311	34.7	93	-16 04.1 ¹⁴⁴	45	4	28	5	03	5	33	4	20	23
7	284	19.3		08.3	326	03.1	94	-15 49.7 ¹⁴⁴	40		38	10	38	4	08	28		43
8	299	19.5		09.2	340	31.7	96	35.2 ¹⁴⁵	35		46	16	41	3	58	32		51
9	314	19.6		10.2	355	00.3	96	20.6 ¹⁴⁶	30	4	52	21	45	49	36		14	59
10	329	19.8		11.1	9	28.9	96	-15 05.9 ¹⁴⁷	20	5	02	28	50	34	41		15	12
11	344	20.0	+6	12.1	23	57.7	98	-14 51.2 ¹⁴⁷	10 N	5	09	5	34	5	55	3	21	46
12	359	20.2	+6	13.0	38	26.5	98	-14 36.4 ¹⁴⁸	0	5	14	5	39	5	59	3	08	51
13	14	20.4		14.0	52	55.5 ¹⁰⁰		21.4 ¹⁵⁰	10 S		18	43	6	04	2	56	56	
14	29	20.5		14.9	67	24.5 ¹⁰⁰	-14	06.4 ¹⁵⁰	20		20	46	08	42	61		15	54
15	44	20.7		15.9	81	53.5 ¹⁰⁰	-13	51.4 ¹⁵⁰	30		21	49	13	26	68		16	06
16	59	20.9		16.8	96	22.7 ¹⁰²		36.2 ¹⁵²	35		21	51	16	17	71		13	30
17	74	21.1	+6	17.8	110	51.9 ¹⁰²	-13	21.0 ¹⁵²	40	5	21	5	52	6	19	2	07	75
18	89	21.2	+6	18.7	125	21.2 ¹⁰³	-13	05.8 ¹⁵²	45	5	19	5	53	6	23	1	55	80
19	104	21.4		19.7	139	50.6 ¹⁰⁴	-12	50.4 ¹⁵⁴	50		17	55	27	40	86		41	16
20	119	21.6		20.6	154	20.1 ¹⁰⁵		35.0 ¹⁵⁴	52		16	55	29	32	90		46	14
21	134	21.8		21.5	168	49.6 ¹⁰⁵		19.5 ¹⁵⁵	54		15	56	31	25	92		52	10
22	149	22.0		22.5	183	19.2 ¹⁰⁶	-12	04.0 ¹⁵⁵	56		13	56	33	16	96		16	58
23	164	22.1		23.4	197	48.9 ¹⁰⁷	-11	48.4 ¹⁵⁶	58		11	57	36	1	06	100	17	05
24	179	22.3	+6	24.4	212	18.6 ¹⁰⁷	-11	32.7 ¹⁵⁷	60 S	5	09	5	57	6	39	0	54	106
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 11 ^h 04 ^m 6			Mag: -4.0 PMG: 12 ^h 10 ^m			Mag: +0.9 PMG: 8 ^h 01 ^m			Mag: -2.5 PMG: 23 ^h 55 ^m			Mag: +0.1 PMG: 18 ^h 33 ^m					
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	193	23.7	177	40.9	+5	22.8	239	33.9	-18	34.9	0	04.7	-3	58.5	81	07.4	+22	00.3
1	208	26.1	192	40.5		24.1	254	34.5		34.4	15	07.5		58.4	96	09.8		00.3
2	223	28.6	207	40.1		25.3	269	35.1		34.0	30	10.3		58.3	111	12.2		00.3
3	238	31.1	222	39.7		26.5	284	35.7		33.5	45	13.0		58.1	126	14.6		00.3
4	253	33.5	237	39.3		27.8	299	36.3		33.1	60	15.8		58.0	141	17.0		00.3
5	268	36.0	252	38.9	+5	29.0	314	37.0	-18	32.6	75	18.5	-3	57.9	156	19.4	+22	00.3
6	283	38.5	267	38.5	+5	30.2	329	37.6	-18	32.1	90	21.3	-3	57.8	171	21.8	+22	00.3
7	298	40.9	282	38.1		31.5	344	38.2		31.7	105	24.1		57.6	186	24.2		00.3
8	313	43.4	297	37.7		32.7	359	38.8		31.2	120	26.8		57.5	201	26.6		00.3
9	328	45.9	312	37.3		33.9	374	39.4		30.8	135	29.6		57.4	216	29.0		00.3
10	343	48.3	327	36.9		35.2	389	40.0		30.3	150	32.3		57.3	231	31.4		00.3
11	358	50.8	342	36.5	+5	36.4	404	40.6	-18	29.8	165	35.1	-3	57.1	246	33.8	+22	00.3
12	13	53.2	357	36.1	+5	37.6	59	41.3	-18	29.4	180	37.9	-3	57.0	261	36.2	+22	00.3
13	28	55.7	12	35.7		38.9	74	41.9		28.9	195	40.6		56.9	276	38.6		00.2
14	43	58.2	27	35.3		40.1	89	42.5		28.4	210	43.4		56.8	291	41.0		00.2
15	59	00.6	42	34.9		41.3	104	43.1		28.0	225	46.2		56.6	306	43.4		00.2
16	74	03.1	57	34.5		42.6	119	43.7		27.5	240	48.9		56.5	321	45.8		00.2
17	89	05.6	72	34.1	+5	43.8	134	44.3	-18	27.1	255	51.7	-3	56.4	336	48.1	+22	00.2
18	104	08.0	87	33.8	+5	45.0	149	44.9	-18	26.6	270	54.4	-3	56.3	351	50.5	+22	00.2
19	119	10.5	102	33.4		46.3	164	45.6		26.1	285	57.2		56.1	6	52.9		00.2
20	134	13.0	117	33.0		47.5	179	46.2		25.7	301	00.0		56.0	21	55.3		00.2
21	149	15.4	132	32.6		48.7	194	46.8		25.2	316	02.7		55.9	36	57.7		00.2
22	164	17.9	147	32.2		50.0	209	47.4		24.7	331	05.5		55.8	52	00.1		00.2
23	179	20.4	162	31.8		51.2	224	48.0		24.3	346	08.2		55.6	67	02.5		00.2
24	194	22.8	177	31.4	+5	52.4	239	48.6	-18	23.8	1	11.0	-3	55.5	82	04.9	+22	00.2
Dif	—		-4		+12		+6		+5		+28		+1		+24		0	

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:0 PMG: 12 ^h 02 ^m 4			Edad: 26 ^d 6 PHE { SD: 16:2 PMG: 10 ^h 11 ^m 4 ^h : 59:3 12 ^h : 59:2 20 ^h : 59:1 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	179	22.3	+6 24.4	212	18.6	-11 32.7	60 N	18 56	19 40	20 36	5 15 **	15 28	99		
1	194	22.5		226	48.4 ¹⁰⁸	17.0 ¹⁵⁷	58	52	33	25	09 3	33	95		
2	209	22.7		241	18.3 ¹⁰⁹	-11 01.2 ¹⁵⁸	56	49	27	16	5 04 7	36	92		
3	224	22.8		255	48.2 ¹⁰⁹	-10 45.4 ¹⁵⁸	54	45	22	07	4 59 10	40	88		
4	239	23.0		270	18.2 ¹¹⁰	29.5 ¹⁵⁹	52	42	17	20 00	55 12	43	85		
5	254	23.2	+6 29.1	284	48.3 ¹¹¹	-10 13.6 ¹⁵⁹	50	18 40	19 13	19 53	4 51 15	15 46	82		
6	269	23.4	+6 30.1	299	18.4 ¹¹¹	-9 57.6 ¹⁶⁰	45	18 34	19 04	19 40	4 43 20	15 52	77		
7	284	23.6		313	48.6 ¹¹²	41.6 ¹⁶⁰	40	29	18 57	30	36 25	15 57	72		
8	299	23.7		328	18.9 ¹¹³	25.5 ¹⁶¹	35	25	51	21	30 29	16 01	68		
9	314	23.9		342	49.2 ¹¹³	-9 09.4 ¹⁶¹	30	22	46	14	25 32	05	64		
10	329	24.1		357	19.6 ¹¹⁴	-8 53.2 ¹⁶²	20	16	38	19 04	15 38	12	58		
11	344	24.3	+6 34.8	11	50.0 ¹¹⁴	-8 37.0 ¹⁶²	10 N	18 10	18 32	18 56	4 07 44	16 17	53		
12	359	24.4	+6 35.7	26	20.5 ¹¹⁵	-8 20.8 ¹⁶²	0	18 06	18 26	18 51	3 59 49	16 23	47		
13	14	24.6		40	51.0 ¹¹⁵	-8 04.5 ¹⁶³	10 S	18 01	22	47	52 53	28	42		
14	29	24.8		55	21.6 ¹¹⁶	-7 48.2 ¹⁶³	20	17 56	18	44	43 59	33	38		
15	44	25.0		69	52.3 ¹¹⁷	31.9 ¹⁶³	30	51	15	42	34 65	39	32		
16	59	25.1		84	23.0 ¹¹⁷	-7 15.5 ¹⁶⁴	35	48	13	42	28 69	43	28		
17	74	25.3	+6 40.4	98	53.7 ¹¹⁷	-6 59.1 ¹⁶⁴	40	17 44	18 11	18 43	3 22 73	16 47	24		
18	89	25.5	+6 41.4	113	24.5 ¹¹⁸	-6 42.6 ¹⁶⁵	45	17 40	18 10	18 43	3 15 77	16 52	19		
19	104	25.7		127	55.4 ¹¹⁹	26.2 ¹⁶⁴	50	35	08	45	06 83	16 57	14		
20	119	25.8		142	26.3 ¹¹⁹	-6 09.7 ¹⁶⁵	52	33	07	46	3 02 86	17 00	11		
21	134	26.0		156	57.2 ¹¹⁹	-5 53.2 ¹⁶⁵	54	31	06	47	2 57 89	02	9		
22	149	26.2		171	28.2 ¹²⁰	36.6 ¹⁶⁶	56	28	06	48	52 93	05	6		
23	164	26.4		185	59.3 ¹²¹	20.1 ¹⁶⁵	58	26	05	50	46 97	08	3		
24	179	26.5	+6 47.0	200	30.3 ¹²⁰	-5 03.5 ¹⁶⁶	60 S	17 22	18 04	18 52	2 40 101	17 12	0		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 11 ^h 00 ^m 7		Mag: -4.0 PMG: 12 ^h 10 ^m		Mag: +0.9 PMG: 8 ^h 00 ^m		Mag: -2.5 PMG: 23 ^h 51 ^m		Mag: +0.1 PMG: 18 ^h 29 ^m	
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'
0	194	22.8	177 31.4	+5 52.4	239 48.6	-18 23.8	1 11.0	-3 55.5	82 04.9	+22 00.2
1	209	25.3	192 31.0	53.7	254 49.3	23.3	16 13.8	55.4	97 07.3	00.2
2	224	27.7	207 30.6	54.9	269 49.9	22.9	31 16.5	55.3	112 09.7	00.2
3	239	30.2	222 30.2	56.1	284 50.5	22.4	46 19.3	55.2	127 12.1	00.2
4	254	32.7	237 29.8	57.3	299 51.1	21.9	61 22.1	55.0	142 14.5	00.1
5	269	35.1	252 29.4	+5 58.6	314 51.7	-18 21.5	76 24.8	-3 54.9	157 16.8	+22 00.1
6	284	37.6	267 29.0	+5 59.8	329 52.3	-18 21.0	91 27.6	-3 54.8	172 19.2	+22 00.1
7	299	40.1	282 28.6	+6 01.0	344 53.0	20.5	106 30.3	54.7	187 21.6	00.1
8	314	42.5	297 28.2	02.3	359 53.6	20.1	121 33.1	54.5	202 24.0	00.1
9	329	45.0	312 27.8	03.5	14 54.2	19.6	136 35.9	54.4	217 26.4	00.1
10	344	47.5	327 27.4	04.7	29 54.8	19.1	151 38.6	54.3	232 28.8	00.1
11	359	49.9	342 27.0	+6 06.0	44 55.4	-18 18.7	166 41.4	-3 54.2	247 31.2	+22 00.1
12	14	52.4	357 26.6	+6 07.2	59 56.0	-18 18.2	181 44.1	-3 54.0	262 33.6	+22 00.1
13	29	54.8	12 26.2	08.4	74 56.7	17.7	196 46.9	53.9	277 36.0	00.1
14	44	57.3	27 25.8	09.6	89 57.3	17.3	211 49.7	53.8	292 38.3	00.1
15	59	59.8	42 25.4	10.9	104 57.9	16.8	226 52.4	53.7	307 40.7	00.1
16	75	02.2	57 25.0	12.1	119 58.5	16.3	241 55.2	53.5	322 43.1	00.1
17	90	04.7	72 24.6	+6 13.3	134 59.1	-18 15.8	256 57.9	-3 53.4	337 45.5	+22 00.1
18	105	07.2	87 24.2	+6 14.5	149 59.8	-18 15.4	272 00.7	-3 53.3	352 47.9	+22 00.0
19	120	09.6	102 23.8	15.8	165 00.4	14.9	287 03.5	53.2	7 50.3	00.0
20	135	12.1	117 23.4	17.0	180 01.0	14.4	302 06.2	53.0	22 52.7	00.0
21	150	14.6	132 23.0	18.2	195 01.6	14.0	317 09.0	52.9	37 55.1	00.0
22	165	17.0	147 22.6	19.5	210 02.2	13.5	332 11.8	52.8	52 57.4	00.0
23	180	19.5	162 22.2	20.7	225 02.9	13.0	347 14.5	52.7	67 59.8	00.0
24	195	22.0	177 21.8	+6 21.9	240 03.5	-18 12.6	2 17.3	-3 52.6	83 02.2	+22 00.0
Dif	—		-4 +12		+6 +5		+28 +1		+24 0	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16 ^h 0 PMG: 12 ^h 02 ^m 1			Edad: 27 ^d 6 PHE { SD: 16 ^h 1 PMG: 10 ^h 59 ^m R ^c : 47 ^m 4 ^h : 59 ^h 0 12 ^h : 58 ^h 9 20 ^h : 58 ^h 7											
	hG ☉	Dec		hG ☾	Dif	Dec		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	°	h	m	h	m	h	m	m	
0	179	26.5	+6 47.0	200	30.3	-5 03.5	60 N	3 27	4 23	5 07		5 14	0	17 07 98	
1	194	26.7	48.0	215	01.4 ¹²¹	-4 46.9 ¹⁶⁶	58	38	30	11		12	3	08 93	
2	209	26.9	48.9	229	32.6 ¹²²	30.3 ¹⁶⁶	56	48	36	15		11	5	08 90	
3	224	27.1	49.8	244	03.8 ¹²²	-4 13.7 ¹⁶⁶	54	3 56	42	18		09	9	08 87	
4	239	27.2	50.8	258	35.0 ¹²²	-3 57.0 ¹⁶⁷	52	4 04	46	21		07	12	08 84	
5	254	27.4	+6 51.7	273	06.3 ¹²³	-3 40.4 ¹⁶⁶	50	4 10	4 51	5 24		5 06	14	17 08 81	
6	269	27.6	+6 52.7	287	37.6 ¹²³	-3 23.7 ¹⁶⁷	45	4 24	5 00	5 30		5 03	19	17 09 75	
7	284	27.8	53.6	302	08.9 ¹²³	-3 07.1 ¹⁶⁶	40	34	07	35		5 01	23	09 71	
8	299	27.9	54.5	316	40.3 ¹²⁴	-2 50.4 ¹⁶⁷	35	43	13	39		4 59	27	09 67	
9	314	28.1	55.5	331	11.7 ¹²⁴	33.7 ¹⁶⁷	30	4 50	18	42		57	30	09 63	
10	329	28.3	56.4	345	43.1 ¹²⁴	17.0 ¹⁶⁷	20	5 00	26	49		53	37	10 57	
11	344	28.5	+6 57.4	0	14.6 ¹²⁵	-2 00.4 ¹⁶⁶	10 N	5 08	5 33	5 54		4 51	41	17 10 52	
12	359	28.6	+6 58.3	14	46.1 ¹²⁵	-1 43.7 ¹⁶⁷	0	5 14	5 38	5 59		4 48	47	17 10 47	
13	14	28.8	+6 59.2	29	17.6 ¹²⁵	27.0 ¹⁶⁷	10 S	18	43	6 04		45	52	10 42	
14	29	29.0	+7 00.2	43	49.1 ¹²⁵	-1 10.3 ¹⁶⁷	20	21	47	09		42	57	11 36	
15	44	29.2	01.1	58	20.7 ¹²⁶	-0 53.6 ¹⁶⁷	30	22	50	14		39	63	11 30	
16	59	29.3	02.1	72	52.3 ¹²⁶	37.0 ¹⁶⁶	35	23	52	17		37	67	11 27	
17	74	29.5	+7 03.0	87	23.9 ¹²⁶	-0 20.3 ¹⁶⁷	40	5 22	5 54	6 21		4 35	71	17 11 23	
18	89	29.7	+7 03.9	101	55.5 ¹²⁶	-0 03.7 ¹⁶⁶	45	5 22	5 56	6 25		4 32	76	17 11 19	
19	104	29.9	04.9	116	27.2 ¹²⁷	+0 13.0 ¹⁶⁷	50	20	58	30		29	82	11 14	
20	119	30.0	05.8	130	58.9 ¹²⁷	29.6 ¹⁶⁶	52	19	58	32		28	84	11 12	
21	134	30.2	06.7	145	30.5 ¹²⁶	+0 46.2 ¹⁶⁶	54	18	5 59	35		26	87	11 9	
22	149	30.4	07.7	160	02.2 ¹²⁷	+1 02.8 ¹⁶⁶	56	17	6 00	37		25	90	11 6	
23	164	30.6	08.6	174	34.0 ¹²⁸	19.4 ¹⁶⁶	58	15	01	40		23	94	11 3	
24	179	30.7	+7 09.6	189	05.7 ¹²⁷	+1 36.0 ¹⁶⁶	60 S	5 14	6 02	6 44		4 21	98	17 12 **	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 10 ^h 56 ^m 7			Mag: -4.0 PMG: 12 ^h 11 ^m			Mag: +0.9 PMG: 7 ^h 59 ^m			Mag: -2.5 PMG: 23 ^h 46 ^m			Mag: +0.1 PMG: 18 ^h 25 ^m		
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	195	22.0	177	21.8	+6 21.9	240	03.5	-18 12.6	2	17.3	-3 52.6	83	02.2	+22 00.0	
1	210	24.4	192	21.4	23.1	255	04.1	12.1	17	20.0	52.4	98	04.6	00.0	
2	225	26.9	207	21.0	24.4	270	04.7	11.6	32	22.8	52.3	113	07.0	00.0	
3	240	29.3	222	20.6	25.6	285	05.3	11.1	47	25.6	52.2	128	09.4	00.0	
4	255	31.8	237	20.2	26.8	300	06.0	10.7	62	28.3	52.1	143	11.8	00.0	
5	270	34.3	252	19.8	+6 28.0	315	06.6	-18 10.2	77	31.1	-3 51.9	158	14.1	+22 00.0	
6	285	36.7	267	19.4	+6 29.3	330	07.2	-18 09.7	92	33.8	-3 51.8	173	16.5	+22 00.0	
7	300	39.2	282	19.0	30.5	345	07.8	09.2	107	36.6	51.7	188	18.9	+21 59.9	
8	315	41.7	297	18.6	31.7	0	08.4	08.8	122	39.4	51.6	203	21.3	59.9	
9	330	44.1	312	18.2	32.9	15	09.1	08.3	137	42.1	51.4	218	23.7	59.9	
10	345	46.6	327	17.8	34.1	30	09.7	07.8	152	44.9	51.3	233	26.1	59.9	
11	0	49.1	342	17.4	+6 35.4	45	10.3	-18 07.3	167	47.6	-3 51.2	248	28.5	+21 59.9	
12	15	51.5	357	17.0	+6 36.6	60	10.9	-18 06.9	182	50.4	-3 51.1	263	30.8	+21 59.9	
13	30	54.0	12	16.6	37.8	75	11.5	06.4	197	53.2	51.0	278	33.2	59.9	
14	45	56.4	27	16.1	39.0	90	12.2	05.9	212	55.9	50.8	293	35.6	59.9	
15	60	58.9	42	15.7	40.3	105	12.8	05.4	227	58.7	50.7	308	38.0	59.9	
16	76	01.4	57	15.3	41.5	120	13.4	05.0	243	01.4	50.6	323	40.4	59.9	
17	91	03.8	72	14.9	+6 42.7	135	14.0	-18 04.5	258	04.2	-3 50.5	338	42.8	+21 59.9	
18	106	06.3	87	14.5	+6 43.9	150	14.7	-18 04.0	273	07.0	-3 50.3	353	45.1	+21 59.9	
19	121	08.8	102	14.1	45.1	165	15.3	03.5	288	09.7	50.2	8	47.5	59.9	
20	136	11.2	117	13.7	46.4	180	15.9	03.0	303	12.5	50.1	23	49.9	59.8	
21	151	13.7	132	13.3	47.6	195	16.5	02.6	318	15.2	50.0	38	52.3	59.8	
22	166	16.2	147	12.9	48.8	210	17.1	02.1	333	18.0	49.8	53	54.7	59.8	
23	181	18.6	162	12.5	50.0	225	17.8	01.6	348	20.8	49.7	68	57.1	59.8	
24	196	21.1	177	12.1	+6 51.2	240	18.4	-18 01.1	3	23.5	-3 49.6	83	59.4	+21 59.8	
Dif	—		-4	+12		+6	+5		+28		+1		+24		0

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 16'0			Edad: 28 ^d 6	PHE { 4 ^h : 58'5 12 ^h : 58'4 20 ^h : 58'2	Civil			R°		R°							
	PMG: 12 ^h 01 ^m 8					Náutico			Hora		Hora							
	hG ☉	Dec				hG ☾			Dif	Dec	Dif							
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m			
0	179	30.7	+7	09.6	189	05.7	+1 36.0	60 N	19 01	19 46	20 43	5 14	**	18 45	97			
1	194	30.9		10.5	203	37.4 ¹²⁷	+1 52.5 ¹⁶⁵	58	18 57	38	31	15	3	41	93			
2	209	31.1		11.4	218	09.2 ¹²⁸	+2 09.1 ¹⁶⁶	56	53	32	21	16	7	38	89			
3	224	31.2		12.4	232	41.0 ¹²⁸	25.6 ¹⁶⁵	54	49	26	12	18	9	35	86			
4	239	31.4		13.3	247	12.8 ¹²⁸	42.1 ¹⁶⁵	52	46	21	20 04	19	12	32	83			
5	254	31.6	+7	14.2	261	44.5 ¹²⁷	+2 58.5 ¹⁶⁴	50	18 43	19 16	19 57	5 20	14	18 29	81			
6	269	31.8	+7	15.2	276	16.3 ¹²⁸	+3 15.0 ¹⁶⁵	45	18 37	19 07	19 43	5 22	20	18 24	75			
7	284	31.9		16.1	290	48.1 ¹²⁸	31.4 ¹⁶⁴	40	31	18 59	32	24	24	20	70			
8	299	32.1		17.0	305	19.9 ¹²⁸	+3 47.8 ¹⁶⁴	35	27	53	23	26	27	16	66			
9	314	32.3		18.0	319	51.7 ¹²⁸	+4 04.1 ¹⁶³	30	23	47	16	27	31	12	63			
10	329	32.5		18.9	334	23.6 ¹²⁹	20.4 ¹⁶³	20	16	39	19 05	30	37	07	56			
11	344	32.6	+7	19.8	348	55.4 ¹²⁸	+4 36.7 ¹⁶³	10 N	18 10	18 32	18 56	5 32	42	18 02	51			
12	359	32.8	+7	20.8	3	27.2 ¹²⁸	+4 52.9 ¹⁶²	0	18 05	18 26	18 50	5 35	46	17 57	47			
13	14	33.0		21.7	17	59.0 ¹²⁸	+5 09.2 ¹⁶³	10 S	18 00	21	46	37	51	52	42			
14	29	33.1		22.6	32	30.8 ¹²⁸	25.3 ¹⁶¹	20	17 54	17	42	39	57	47	37			
15	44	33.3		23.6	47	02.6 ¹²⁸	41.5 ¹⁶²	30	48	12	40	42	63	41	32			
16	59	33.5		24.5	61	34.4 ¹²⁸	+5 57.6 ¹⁶¹	35	45	10	40	44	66	38	28			
17	74	33.7	+7	25.4	76	06.2 ¹²⁸	+6 13.6 ¹⁶⁰	40	17 41	18 08	18 39	5 46	70	17 34	25			
18	89	33.8	+7	26.4	90	38.0 ¹²⁸	+6 29.6 ¹⁶⁰	45	17 37	18 06	18 40	5 48	75	17 30	20			
19	104	34.0		27.3	105	09.8 ¹²⁸	+6 45.6 ¹⁶⁰	50	31	04	41	51	80	25	15			
20	119	34.2		28.2	119	41.6 ¹²⁸	+7 01.5 ¹⁵⁹	52	29	03	42	52	83	23	12			
21	134	34.3		29.2	134	13.4 ¹²⁸	17.4 ¹⁵⁹	54	26	02	42	53	87	20	10			
22	149	34.5		30.1	148	45.1 ¹²⁷	33.2 ¹⁵⁸	56	23	18 01	43	55	89	17	7			
23	164	34.7		31.0	163	16.9 ¹²⁸	+7 49.0 ¹⁵⁸	58	20	17 59	45	57	93	14	4			
24	179	34.8	+7	32.0	177	48.6 ¹²⁷	+8 04.7 ¹⁵⁷	60 S	17 16	17 58	18 46	5 59	97	17 11	**			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 10 ^h 52 ^m 8		Mag: -4.0 PMG: 12 ^h 12 ^m			Mag: +0.8 PMG: 7 ^h 58 ^m			Mag: -2.5 PMG: 23 ^h 42 ^m			Mag: +0.1 PMG: 18 ^h 21 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	196	21.1	177	12.1	+6	51.2	240	18.4	-18	01.1	3	23.5	-3	49.6	83	59.4	+21	59.8
1	211	23.6	192	11.7		52.5	255	19.0		00.7	18	26.3		49.5	99	01.8		59.8
2	226	26.0	207	11.3		53.7	270	19.6	-18	00.2	33	29.0		49.4	114	04.2		59.8
3	241	28.5	222	10.9		54.9	285	20.3	-17	59.7	48	31.8		49.2	129	06.6		59.8
4	256	30.9	237	10.5		56.1	300	20.9		59.2	63	34.6		49.1	144	09.0		59.8
5	271	33.4	252	10.1	+6	57.3	315	21.5	-17	58.7	78	37.3	-3	49.0	159	11.3	+21	59.8
6	286	35.9	267	09.7	+6	58.6	330	22.1	-17	58.3	93	40.1	-3	48.9	174	13.7	+21	59.8
7	301	38.3	282	09.2	+6	59.8	345	22.8		57.8	108	42.8		48.7	189	16.1		59.8
8	316	40.8	297	08.8	+7	01.0	0	23.4		57.3	123	45.6		48.6	204	18.5		59.7
9	331	43.3	312	08.4		02.2	15	24.0		56.8	138	48.4		48.5	219	20.9		59.7
10	346	45.7	327	08.0		03.4	30	24.6		56.3	153	51.1		48.4	234	23.2		59.7
11	1	48.2	342	07.6	+7	04.6	45	25.3	-17	55.9	168	53.9	-3	48.2	249	25.6	+21	59.7
12	16	50.7	357	07.2	+7	05.9	60	25.9	-17	55.4	183	56.6	-3	48.1	264	28.0	+21	59.7
13	31	53.1	12	06.8		07.1	75	26.5		54.9	198	59.4		48.0	279	30.4		59.7
14	46	55.6	27	06.4		08.3	90	27.1		54.4	214	02.2		47.9	294	32.8		59.7
15	61	58.0	42	06.0		09.5	105	27.8		53.9	229	04.9		47.8	309	35.1		59.7
16	77	00.5	57	05.6		10.7	120	28.4		53.4	244	07.7		47.6	324	37.5		59.7
17	92	03.0	72	05.2	+7	11.9	135	29.0	-17	53.0	259	10.4	-3	47.5	339	39.9	+21	59.7
18	107	05.4	87	04.8	+7	13.2	150	29.6	-17	52.5	274	13.2	-3	47.4	354	42.3	+21	59.7
19	122	07.9	102	04.3		14.4	165	30.3		52.0	289	16.0		47.3	9	44.6		59.6
20	137	10.4	117	03.9		15.6	180	30.9		51.5	304	18.7		47.1	24	47.0		59.6
21	152	12.8	132	03.5		16.8	195	31.5		51.0	319	21.5		47.0	39	49.4		59.6
22	167	15.3	147	03.1		18.0	210	32.1		50.5	334	24.2		46.9	54	51.8		59.6
23	182	17.8	162	02.7		19.2	225	32.8		50.1	349	27.0		46.8	69	54.2		59.6
24	197	20.2	177	02.3	+7	20.4	240	33.4	-17	49.6	4	29.8	-3	46.7	84	56.5	+21	59.6
Dif	—		-4		+12		+6		+5		+28		+1		+24		0	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG: 12 ^h 01 ^m 5			Edad: 0 ^d 1 SD: 15'8 PMG: 12 ^h 32 ^m	PHE { 4 ^h : 58'0 12 ^h : 57'7 20 ^h : 57'5 Rº: 48 ^m	Náutico		Civil	Hora		Rº	Hora	Rº	
	hG ☉	Dec	hG ☾ Dif											Dec
h	°	'	°	°	'	°	h	m	h	m	h	m	h	m
0	179	34.8	+7 32.0	177	48.6	+8 04.7	60 N	3 19	4 17	5 01	5 13	0	20 22	99
1	194	35.0		192	20.3 ¹²⁷	20.4 ¹⁵⁷	58	32	24	06	18	4	14	94
2	209	35.2		206	52.0 ¹²⁷	36.0 ¹⁵⁶	56	42	31	10	23	7	07	90
3	224	35.4		221	23.7 ¹²⁷	+8 51.6 ¹⁵⁶	54	51	36	13	27	10	20 01	86
4	239	35.5		235	55.4 ¹²⁷	+9 07.1 ¹⁵⁵	52	3 59	42	17	31	13	19 55	83
5	254	35.7	+7 36.6	250	27.1 ¹²⁷	+9 22.5 ¹⁵⁴	50	4 06	4 46	5 20	5 34	16	19 50	80
6	269	35.9	+7 37.5	264	58.7 ¹²⁶	+9 37.9 ¹⁵⁴	45	4 20	4 56	5 26	5 42	21	19 39	74
7	284	36.0		279	30.4 ¹²⁷	+9 53.3 ¹⁵⁴	40	31	5 04	31	48	25	30	69
8	299	36.2		294	02.0 ¹²⁶	+10 08.6 ¹⁵³	35	40	10	36	53	29	22	66
9	314	36.4		308	33.6 ¹²⁶	23.8 ¹⁵²	30	47	16	40	5 58	33	15	63
10	329	36.5		323	05.2 ¹²⁶	38.9 ¹⁵¹	20	4 59	25	47	6 07	38	19 03	58
11	344	36.7	+7 42.2	337	36.7 ¹²⁵	+10 54.0 ¹⁵¹	10 N	5 07	5 32	5 53	6 14	43	18 53	53
12	359	36.9	+7 43.1	352	08.2 ¹²⁵	+11 09.0 ¹⁵⁰	0	5 13	5 37	5 58	6 21	48	18 44	48
13	14	37.1		6	39.7 ¹²⁵	24.0 ¹⁵⁰	10 S	18	42	6 04	28	52	34	44
14	29	37.2		21	11.2 ¹²⁵	38.8 ¹⁴⁸	20	21	47	09	36	57	24	39
15	44	37.4		35	42.7 ¹²⁵	+11 53.7 ¹⁴⁹	30	24	51	15	45	63	13	33
16	59	37.6		50	14.1 ¹²⁴	+12 08.4 ¹⁴⁷	35	24	54	19	50	66	18 06	31
17	74	37.7	+7 47.8	64	45.5 ¹²⁴	+12 23.1 ¹⁴⁷	40	5 24	5 56	6 23	6 56	70	17 59	27
18	89	37.9	+7 48.7	79	16.9 ¹²⁴	+12 37.7 ¹⁴⁶	45	5 24	5 58	6 28	7 03	75	17 50	23
19	104	38.1		93	48.2 ¹²³	+12 52.2 ¹⁴⁵	50	23	6 01	33	11	81	40	17
20	119	38.2		108	19.6 ¹²⁴	+13 06.6 ¹⁴⁴	52	23	02	36	15	83	35	15
21	134	38.4		122	50.8 ¹²²	21.0 ¹⁴⁴	54	22	03	38	20	86	30	12
22	149	38.6		137	22.1 ¹²³	35.3 ¹⁴³	56	21	04	41	24	90	24	9
23	164	38.7		151	53.3 ¹²²	+13 49.5 ¹⁴²	58	20	05	45	30	93	18	4
24	179	38.9	+7 54.2	166	24.5 ¹²²	+14 03.6 ¹⁴¹	60 S	5 18	6 06	6 48	7 36	98	17 10	1
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 10 ^h 48 ^m 9		Mag: -3.9 PMG: 12 ^h 12 ^m		Mag: +0.8 PMG: 7 ^h 57 ^m		Mag: -2.5 PMG: 23 ^h 38 ^m		Mag: +0.1 PMG: 18 ^h 17 ^m					
	hG ♈		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec					
h	°	'	°	'	°	'	°	'	°	'				
0	197	20.2	177	02.3	240	33.4	4	29.8	84	56.5				
1	212	22.7	192	01.9	255	34.0	19	32.5	99	58.9				
2	227	25.2	207	01.5	270	34.7	34	35.3	115	01.3				
3	242	27.6	222	01.1	285	35.3	49	38.0	130	03.7				
4	257	30.1	237	00.6	300	35.9	64	40.8	145	06.0				
5	272	32.5	252	00.2	315	36.5	79	43.6	160	08.4				
6	287	35.0	266	59.8	330	37.2	94	46.3	175	10.8				
7	302	37.5	281	59.4	345	37.8	109	49.1	190	13.2				
8	317	39.9	296	59.0	360	38.4	124	51.8	205	15.5				
9	332	42.4	311	58.6	375	39.1	139	54.6	220	17.9				
10	347	44.9	326	58.2	390	39.7	154	57.4	235	20.3				
11	2	47.3	341	57.7	405	40.3	170	00.1	250	22.7				
12	17	49.8	356	57.3	420	40.9	185	02.9	265	25.0				
13	32	52.3	11	56.9	435	41.6	200	05.6	280	27.4				
14	47	54.7	26	56.5	450	42.2	215	08.4	295	29.8				
15	62	57.2	41	56.1	465	42.8	230	11.1	310	32.2				
16	77	59.7	56	55.7	480	43.5	245	13.9	325	34.5				
17	93	02.1	71	55.3	495	44.1	260	16.7	340	36.9				
18	108	04.6	86	54.8	510	44.7	275	19.4	355	39.3				
19	123	07.0	101	54.4	525	45.3	290	22.2	10	41.7				
20	138	09.5	116	54.0	540	46.0	305	24.9	25	44.0				
21	153	12.0	131	53.6	555	46.6	320	27.7	40	46.4				
22	168	14.4	146	53.2	570	47.2	335	30.5	55	48.8				
23	183	16.9	161	52.8	585	47.9	350	33.2	70	51.2				
24	198	19.4	176	52.3	600	48.5	5	36.0	85	53.5				
Dif	—		-4		+12		+28		+1					

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16:0 PMG: 12 ^h 01 ^m 3			Edad: 1 ^d 1 PHE { SD: 15:6 PMG: 13 ^h 20 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m		
0	179	38.9	+7	54.2	166	24.5	+14	03.6	60 N	19 06	19 51	20 50	5 13	1	22 01	101
1	194	39.1		55.2	180	55.7 ¹²²		17.7 ¹⁴¹	58	19 01	43	37	22	6	21 48	94
2	209	39.2		56.1	195	26.8 ¹²¹		31.6 ¹³⁹	56	18 57	36	26	30	10	37	88
3	224	39.4		57.0	209	57.9 ¹²¹		45.5 ¹³⁹	54	53	30	16	37	14	27	84
4	239	39.6		57.9	224	29.0 ¹²¹	+14	59.3 ¹³⁸	52	49	25	08	44	16	18	81
5	254	39.7	+7	58.9	239	00.0 ¹²⁰	+15	13.0 ¹³⁷	50	18 46	19 20	20 01	5 50	19	21 10	78
6	269	39.9	+7	59.8	253	31.0 ¹²⁰	+15	26.6 ¹³⁶	45	18 39	19 09	19 46	6 03	24	20 53	73
7	284	40.1	+8	00.7	268	02.0 ¹²⁰		40.2 ¹³⁶	40	33	19 01	34	13	29	39	69
8	299	40.2		01.6	282	32.9 ¹¹⁹	+15	53.6 ¹³⁴	35	28	18 54	25	22	33	28	65
9	314	40.4		02.6	297	03.8 ¹¹⁹	+16	07.0 ¹³⁴	30	24	49	17	31	35	18	62
10	329	40.6		03.5	311	34.7 ¹¹⁹		20.2 ¹³²	20	17	39	19 05	45	40	20 01	57
11	344	40.7	+8	04.4	326	05.5 ¹¹⁸	+16	33.4 ¹³²	10 N	18 10	18 32	18 56	6 57	45	19 46	53
12	359	40.9	+8	05.3	340	36.2 ¹¹⁷	+16	46.5 ¹³¹	0	18 05	18 25	18 50	7 09	49	19 32	50
13	14	41.1		06.2	355	07.0 ¹¹⁸	+16	59.5 ¹³⁰	10 S	17 59	20	45	20	53	18	46
14	29	41.2		07.2	9	37.7 ¹¹⁷	+17	12.4 ¹²⁹	20	53	15	41	33	58	19 03	42
15	44	41.4		08.1	24	08.3 ¹¹⁶		25.2 ¹²⁸	30	46	10	38	48	62	18 46	38
16	59	41.6		09.0	38	39.0 ¹¹⁷		37.8 ¹²⁶	35	42	08	37	7 56	66	37	34
17	74	41.7	+8	09.9	53	09.5 ¹¹⁵	+17	50.4 ¹²⁶	40	17 38	18 05	18 37	8 06	70	18 26	31
18	89	41.9	+8	10.9	67	40.1 ¹¹⁶	+18	02.9 ¹²⁵	45	17 33	18 02	18 36	8 18	74	18 13	26
19	104	42.1		11.8	82	10.6 ¹¹⁵		15.3 ¹²⁴	50	27	18 00	37	32	79	17 57	21
20	119	42.2		12.7	96	41.0 ¹¹⁴		27.6 ¹²³	52	24	17 58	37	38	83	50	18
21	134	42.4		13.6	111	11.4 ¹¹⁴		39.8 ¹²²	54	21	57	38	46	85	42	15
22	149	42.6		14.5	125	41.8 ¹¹⁴	+18	51.9 ¹²¹	56	18	56	39	8 54	90	33	11
23	164	42.7		15.5	140	12.2 ¹¹⁴	+19	03.9 ¹²⁰	58	15	54	39	9 03	95	22	8
24	179	42.9	+8	16.4	154	42.4 ¹¹²	+19	15.7 ¹¹⁸	60 S	17 11	17 53	18 41	9 14	100	17 11	1

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 10 ^h 44 ^m 9		Mag: -3.9 PMG: 12 ^h 13 ^m		Mag: +0.8 PMG: 7 ^h 56 ^m		Mag: -2.5 PMG: 23 ^h 33 ^m		Mag: +0.1 PMG: 18 ^h 14 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	198	19.4	176	52.3	+7	49.5	240	48.5	-17	37.8	5	36.0	-3	43.7	85	53.5	+21	59.4
1	213	21.8	191	51.9		50.7	255	49.1		37.4	20	38.7		43.6	100	55.9		59.4
2	228	24.3	206	51.5		51.9	270	49.8		36.9	35	41.5		43.5	115	58.3		59.4
3	243	26.8	221	51.1		53.1	285	50.4		36.4	50	44.2		43.4	131	00.6		59.4
4	258	29.2	236	50.7		54.3	300	51.0		35.9	65	47.0		43.2	146	03.0		59.3
5	273	31.7	251	50.3	+7	55.5	315	51.7	-17	35.4	80	49.8	-3	43.1	161	05.4	+21	59.3
6	288	34.1	266	49.8	+7	56.7	330	52.3	-17	34.9	95	52.5	-3	43.0	176	07.8	+21	59.3
7	303	36.6	281	49.4		57.9	345	52.9		34.4	110	55.3		42.9	191	10.1		59.3
8	318	39.1	296	49.0	+7	59.1	0	53.5		33.9	125	58.0		42.8	206	12.5		59.3
9	333	41.5	311	48.6	+8	00.3	15	54.2		33.4	141	00.8		42.6	221	14.9		59.3
10	348	44.0	326	48.2		01.5	30	54.8		32.9	156	03.6		42.5	236	17.2		59.3
11	3	46.5	341	47.7	+8	02.7	45	55.4	-17	32.4	171	06.3	-3	42.4	251	19.6	+21	59.3
12	18	48.9	356	47.3	+8	03.9	60	56.1	-17	31.9	186	09.1	-3	42.3	266	22.0	+21	59.3
13	33	51.4	11	46.9		05.1	75	56.7		31.4	201	11.8		42.1	281	24.3		59.3
14	48	53.9	26	46.5		06.3	90	57.3		30.9	216	14.6		42.0	296	26.7		59.2
15	63	56.3	41	46.1		07.5	105	58.0		30.4	231	17.3		41.9	311	29.1		59.2
16	78	58.8	56	45.6		08.7	120	58.6		29.9	246	20.1		41.8	326	31.5		59.2
17	94	01.3	71	45.2	+8	09.9	135	59.2	-17	29.5	261	22.9	-3	41.7	341	33.8	+21	59.2
18	109	03.7	86	44.8	+8	11.1	150	59.9	-17	29.0	276	25.6	-3	41.5	356	36.2	+21	59.2
19	124	06.2	101	44.4		12.3	166	00.5		28.5	291	28.4		41.4	11	38.6		59.2
20	139	08.6	116	44.0		13.5	181	01.1		28.0	306	31.1		41.3	26	40.9		59.2
21	154	11.1	131	43.5		14.7	196	01.8		27.5	321	33.9		41.2	41	43.3		59.2
22	169	13.6	146	43.1		15.9	211	02.4		27.0	336	36.6		41.1	56	45.7		59.2
23	184	16.0	161	42.7		17.1	226	03.0		26.5	351	39.4		40.9	71	48.0		59.1
24	199	18.5	176	42.3	+8	18.3	241	03.7	-17	26.0	6	42.2	-3	40.8	86	50.4	+21	59.1
Dif	—		-4		+12		+6		+5		+28		+1		+24		0	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16 ^h 0 PMG: 12 ^h 01 ^m 0			Edad: 2 ^d 1 PHE { SD: 15 ^h 4 PMG: 14 ^h 10 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h	m	h	m	h	m	m	
0	179	42.9	+8	16.4	154	42.4	+19 15.7	60 N	3 12	4 10	4 55	5 14	3	23 42 98	
1	194	43.1		17.3	169	12.7 ¹¹³	27.5 ¹¹⁸	58	25	18	5 00	28	10	22 89	
2	209	43.2		18.2	183	42.9 ¹¹²	39.2 ¹¹⁷	56	36	25	05	40	15	23 05 84	
3	224	43.4		19.1	198	13.1 ¹¹²	+19 50.7 ¹¹⁵	54	45	31	09	5 51	18	22 51 80	
4	239	43.6		20.1	212	43.2 ¹¹¹	+20 02.2 ¹¹⁵	52	3 53	37	12	6 00	22	39 77	
5	254	43.7	+8	21.0	227	13.3 ¹¹¹	+20 13.5 ¹¹³	50	4 01	4 42	5 15	6 09	24	22 28 75	
6	269	43.9	+8	21.9	241	43.3 ¹¹⁰	+20 24.7 ¹¹²	45	4 16	4 52	5 22	6 27	30	22 06 70	
7	284	44.0		22.8	256	13.3 ¹¹⁰	35.8 ¹¹¹	40	27	5 01	28	42	33	21 48 67	
8	299	44.2		23.7	270	43.2 ¹⁰⁹	46.8 ¹¹⁰	35	37	07	33	6 55	36	33 64	
9	314	44.4		24.6	285	13.1 ¹⁰⁹	+20 57.7 ¹⁰⁹	30	45	13	38	7 06	39	21 20 62	
10	329	44.5		25.6	299	43.0 ¹⁰⁹	+21 08.4 ¹⁰⁷	20	4 57	23	45	25	43	20 58 58	
11	344	44.7	+8	26.5	314	12.8 ¹⁰⁸	+21 19.1 ¹⁰⁷	10 N	5 06	5 30	5 52	7 42	47	20 39 55	
12	359	44.9	+8	27.4	328	42.6 ¹⁰⁸	+21 29.6 ¹⁰⁵	0	5 13	5 37	5 58	7 58	50	20 22 51	
13	14	45.0		28.3	343	12.3 ¹⁰⁷	40.0 ¹⁰⁴	10 S	18	42	6 04	8 13	54	20 04 49	
14	29	45.2		29.2	357	42.0 ¹⁰⁷	+21 50.3 ¹⁰³	20	22	48	10	31	57	19 45 46	
15	44	45.4		30.1	12	11.7 ¹⁰⁷	+22 00.5 ¹⁰²	30	25	53	17	8 50	62	24 41	
16	59	45.5		31.1	26	41.3 ¹⁰⁶	10.6 ¹⁰¹	35	26	55	21	9 02	65	19 11 39	
17	74	45.7	+8	32.0	41	10.8 ¹⁰⁵	+22 20.5 ⁹⁹	40	5 26	5 58	6 25	9 16	67	18 57 36	
18	89	45.8	+8	32.9	55	40.3 ¹⁰⁵	+22 30.3 ⁹⁸	45	5 27	6 01	6 30	9 32	71	18 39 33	
19	104	46.0		33.8	70	09.8 ¹⁰⁵	40.0 ⁹⁷	50	26	04	36	9 51	77	18 28	
20	119	46.2		34.7	84	39.3 ¹⁰⁵	49.6 ⁹⁶	52	26	05	39	10 01	80	18 08 26	
21	134	46.3		35.6	99	08.7 ¹⁰⁴	+22 59.0 ⁹⁴	54	25	06	42	11	84	17 57 22	
22	149	46.5		36.6	113	38.0 ¹⁰³	+23 08.3 ⁹³	56	25	08	45	24	87	44 19	
23	164	46.7		37.5	128	07.3 ¹⁰³	17.5 ⁹²	58	24	09	49	38	92	30 13	
24	179	46.8	+8	38.4	142	36.6 ¹⁰³	+23 26.6 ⁹¹	60 S	5 23	6 11	6 53	10 54	101	17 12 6	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG 10 ^h 41 ^m 0		Mag: -3.9 PMG: 12 ^h 14 ^m			Mag: +0.8 PMG: 7 ^h 55 ^m			Mag: -2.5 PMG: 23 ^h 29 ^m			Mag: +0.1 PMG: 18 ^h 10 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	199	18.5	176	42.3	+8 18.3	241	03.7	-17 26.0	6 42.2	-3 40.8	86 50.4	+21 59.1			
1	214	21.0	191	41.9	19.5	256	04.3	25.5	21 44.9	40.7	101 52.8	59.1			
2	229	23.4	206	41.4	20.7	271	05.0	25.0	36 47.7	40.6	116 55.1	59.1			
3	244	25.9	221	41.0	21.9	286	05.6	24.5	51 50.4	40.5	131 57.5	59.1			
4	259	28.4	236	40.6	23.1	301	06.2	24.0	66 53.2	40.3	146 59.9	59.1			
5	274	30.8	251	40.2	+8 24.3	316	06.9	-17 23.5	81 55.9	-3 40.2	162 02.2	+21 59.1			
6	289	33.3	266	39.7	+8 25.5	331	07.5	-17 23.0	96 58.7	-3 40.1	177 04.6	+21 59.1			
7	304	35.8	281	39.3	26.7	346	08.1	22.5	112 01.5	40.0	192 07.0	59.1			
8	319	38.2	296	38.9	27.9	1	08.8	22.0	127 04.2	39.8	207 09.3	59.1			
9	334	40.7	311	38.5	29.1	16	09.4	21.5	142 07.0	39.7	222 11.7	59.0			
10	349	43.1	326	38.0	30.3	31	10.0	21.0	157 09.7	39.6	237 14.1	59.0			
11	4 45.6		341	37.6	+8 31.5	46	10.7	-17 20.5	172 12.5	-3 39.5	252 16.4	+21 59.0			
12	19 48.1		356	37.2	+8 32.7	61	11.3	-17 20.0	187 15.2	-3 39.4	267 18.8	+21 59.0			
13	34 50.5		11 36.8		33.9	76	11.9	19.5	202 18.0	39.2	282 21.2	59.0			
14	49 53.0		26 36.3		35.1	91	12.6	19.0	217 20.7	39.1	297 23.5	59.0			
15	64 55.5		41 35.9		36.3	106	13.2	18.5	232 23.5	39.0	312 25.9	59.0			
16	79 57.9		56 35.5		37.4	121	13.9	18.0	247 26.3	38.9	327 28.3	59.0			
17	95 00.4		71 35.0	+8 38.6	136 14.5	-17 17.5			262 29.0	-3 38.8	342 30.6	+21 59.0			
18	110 02.9		86 34.6	+8 39.8	151 15.1	-17 17.0			277 31.8	-3 38.6	357 33.0	+21 58.9			
19	125 05.3		101 34.2		41.0	166 15.8	16.5		292 34.5	38.5	12 35.3	58.9			
20	140 07.8		116 33.8		42.2	181 16.4	16.0		307 37.3	38.4	27 37.7	58.9			
21	155 10.2		131 33.3		43.4	196 17.0	15.5		322 40.0	38.3	42 40.1	58.9			
22	170 12.7		146 32.9		44.6	211 17.7	15.0		337 42.8	38.2	57 42.4	58.9			
23	185 15.2		161 32.5		45.8	226 18.3	14.5		352 45.5	38.0	72 44.8	58.9			
24	200 17.6		176 32.1	+8 47.0	241 19.0	-17 14.0			7 48.3	-3 37.9	87 47.2	+21 58.9			
Dif	—		-4		+12	+6		+5	+28		+1		+24		0

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG: 12 ^h 00 ^m 7			Edad: 3 ^d 1 PHE { 4 ^h : 55'9 12 ^h : 55'7 20 ^h : 55'5 R°: 52 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	179	46.8	+8	38.4	142	36.6	+23 26.6	60 N	19 11	19 57	20 56	5 17 10	** ** *	
1	194	47.0		39.3	157	05.8 ¹⁰²	35.6	58	06	48	43	38 18	** ** *	
2	209	47.1		40.2	171	35.0 ¹⁰²	44.4	56	19 01	41	31	5 55 23	** ** *	
3	224	47.3		41.1	186	04.2 ¹⁰²	+23 53.1	54	18 57	34	21	6 09 27	** ** *	
4	239	47.5		42.0	200	33.3 ¹⁰¹	+24 01.6	52	53	28	12	22 30	23 56 68	
5	254	47.6	+8	43.0	215	02.4 ¹⁰¹	+24 10.0	50	18 49	19 23	20 05	6 33 32	23 43 66	
6	269	47.8	+8	43.9	229	31.4 ¹⁰⁰	+24 18.3	45	18 42	19 12	19 49	6 57 36	23 16 63	
7	284	48.0		44.8	244	00.4 ¹⁰⁰	26.5	40	35	19 03	37	7 15 40	22 55 61	
8	299	48.1		45.7	258	29.4 ¹⁰⁰	34.6	35	30	18 56	27	31 42	37 59	
9	314	48.3		46.6	272	58.3 ⁹⁹	42.5	30	25	50	19	7 45 44	22 22 58	
10	329	48.4		47.5	287	27.2 ⁹⁹	50.2	20	17	40	19 06	8 08 48	21 56 56	
11	344	48.6	+8	48.4	301	56.1 ⁹⁹	+24 57.9	10 N	18 10	18 32	18 57	8 29 50	21 34 54	
12	359	48.8	+8	49.3	316	24.9 ⁹⁸	+25 05.4	0	18 04	18 25	18 49	8 48 52	21 13 53	
13	14	48.9		50.2	330	53.7 ⁹⁸	12.8	10 S	17 58	19	44	9 07 55	20 53 50	
14	29	49.1		51.2	345	22.4 ⁹⁷	20.0	20	51	13	39	28 57	31 49	
15	44	49.2		52.1	359	51.2 ⁹⁸	27.1	30	44	08	36	9 52 60	20 05 47	
16	59	49.4		53.0	14	19.8 ⁹⁶	34.1	35	40	05	34	10 07 61	19 50 45	
17	74	49.6	+8	53.9	28	48.5 ⁹⁷	+25 40.9	40	17 35	18 02	18 34	10 23 64	19 33 43	
18	89	49.7	+8	54.8	43	17.1 ⁹⁶	+25 47.6	45	17 29	17 59	18 33	10 43 67	19 12 41	
19	104	49.9		55.7	57	45.7 ⁹⁶	+25 54.1	50	23	56	33	11 08 71	18 46 37	
20	119	50.0		56.6	72	14.3 ⁹⁶	+26 00.6	52	20	54	33	21 73	34 35	
21	134	50.2		57.5	86	42.8 ⁹⁵	06.8	54	17	52	33	35 75	19 33	
22	149	50.4		58.4	101	11.4 ⁹⁶	13.0	56	13	51	34	11 51 79	18 03 29	
23	164	50.5	+8	59.3	115	39.9 ⁹⁵	19.0	58	09	49	34	12 10 86	17 43 23	
24	179	50.7	+9	00.2	130	08.3 ⁹⁴	+26 24.9	60 S	17 05	17 47	18 35	12 35 95	17 18 14	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 10 ^h 37 ^m 1		Mag: -3.9 PMG: 12 ^h 14 ^m		Mag: +0.8 PMG: 7 ^h 54 ^m		Mag: -2.5 PMG: 23 ^h 24 ^m		Mag: +0.1 PMG: 18 ^h 06 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	200	17.6	176	32.1	+8	47.0	241	19.0	-17	14.0	7	48.3	-3	37.9	87	47.2	+21	58.9
1	215	20.1	191	31.6		48.2	256	19.6		13.4	22	51.1		37.8	102	49.5		58.9
2	230	22.6	206	31.2		49.4	271	20.2		12.9	37	53.8		37.7	117	51.9		58.9
3	245	25.0	221	30.8		50.6	286	20.9		12.4	52	56.6		37.6	132	54.3		58.8
4	260	27.5	236	30.3		51.7	301	21.5		11.9	67	59.3		37.4	147	56.6		58.8
5	275	30.0	251	29.9	+8	52.9	316	22.2	-17	11.4	83	02.1	-3	37.3	162	59.0	+21	58.8
6	290	32.4	266	29.5	+8	54.1	331	22.8	-17	10.9	98	04.8	-3	37.2	178	01.3	+21	58.8
7	305	34.9	281	29.0		55.3	346	23.4		10.4	113	07.6		37.1	193	03.7		58.8
8	320	37.4	296	28.6		56.5	1	24.1		09.9	128	10.3		37.0	208	06.1		58.8
9	335	39.8	311	28.2		57.7	16	24.7		09.4	143	13.1		36.8	223	08.4		58.8
10	350	42.3	326	27.7	+8	58.9	31	25.3		08.9	158	15.9		36.7	238	10.8		58.8
11	5	44.7	341	27.3	+9	00.1	46	26.0	-17	08.4	173	18.6	-3	36.6	253	13.1	+21	58.8
12	20	47.2	356	26.9	+9	01.2	61	26.6	-17	07.9	188	21.4	-3	36.5	268	15.5	+21	58.7
13	35	49.7	11	26.5		02.4	76	27.3		07.4	203	24.1		36.4	283	17.9		58.7
14	50	52.1	26	26.0		03.6	91	27.9		06.9	218	26.9		36.2	298	20.2		58.7
15	65	54.6	41	25.6		04.8	106	28.6		06.4	233	29.6		36.1	313	22.6		58.7
16	80	57.1	56	25.2		06.0	121	29.2		05.9	248	32.4		36.0	328	24.9		58.7
17	95	59.5	71	24.7	+9	07.2	136	29.8	-17	05.3	263	35.1	-3	35.9	343	27.3	+21	58.7
18	111	02.0	86	24.3	+9	08.3	151	30.5	-17	04.8	278	37.9	-3	35.8	358	29.7	+21	58.7
19	126	04.5	101	23.9		09.5	166	31.1		04.3	293	40.6		35.7	13	32.0		58.7
20	141	06.9	116	23.4		10.7	181	31.8		03.8	308	43.4		35.5	28	34.4		58.7
21	156	09.4	131	23.0		11.9	196	32.4		03.3	323	46.1		35.4	43	36.7		58.6
22	171	11.9	146	22.5		13.1	211	33.0		02.8	338	48.9		35.3	58	39.1		58.6
23	186	14.3	161	22.1		14.3	226	33.7		02.3	353	51.7		35.2	73	41.5		58.6
24	201	16.8	176	21.7	+9	15.4	241	34.3	-17	01.8	8	54.4	-3	35.1	88	43.8	+21	58.6
Dif	—		-4	+12		+6	+5		+28		+1				+24			

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16:0 PMG: 12 ^h 00 ^m 5			Edad: 4 ^d 1 PHE { 4 ^h : 55:3 12 ^h : 55:1 20 ^h : 55:0 Rº: 53 ^m	hG ☾ Dif	Dec		Dif							
	hG ☉	Dec							Náutico		Civil	Hora	Rº	Hora	Rº
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	179	50.7	+9 00.2	130	08.3	+26 24.9	60 N	3 04	4 04	4 49	5 27	24	1 20	86	
1	194	50.8		144	36.8	95 30.6	58	18	12	4 55	5 56	32	0 51	77	
2	209	51.0	02.1	159	05.2	94 36.2	56	29	20	5 00	6 18	37	29	73	
3	224	51.1	03.0	173	33.6	94 41.6	54	39	26	04	36	40	0 11	70	
4	239	51.3	03.9	188	01.9	93 46.9	52	48	32	08	6 52	41	** ** *	**	
5	254	51.5	+9 04.8	202	30.3	94 +26 52.1	50	3 56	4 37	5 11	7 05	43	** * *	**	
6	269	51.6	+9 05.7	216	58.6	93 +26 57.1	45	4 12	4 48	5 19	7 33	45	** * *	**	
7	284	51.8	06.6	231	26.9	93 +27 02.0	40	24	4 57	25	7 55	47	23 56	54	
8	299	51.9	07.5	245	55.2	93 06.7	35	34	5 05	31	8 13	48	36	54	
9	314	52.1	08.4	260	23.5	93 11.3	30	42	11	35	29	49	23 20	53	
10	329	52.2	09.3	274	51.8	93 15.8	20	4 55	21	44	8 56	50	22 52	53	
11	344	52.4	+9 10.2	289	20.0	92 +27 20.1	10 N	5 05	5 29	5 51	9 19	51	22 28	53	
12	359	52.6	+9 11.1	303	48.2	92 +27 24.2	0	5 12	5 36	5 57	9 40	53	22 06	52	
13	14	52.7	12.0	318	16.5	93 28.3	10 S	18	42	6 04	10 02	54	21 43	53	
14	29	52.9	12.9	332	44.7	92 32.2	20	22	48	10	25	55	21 20	51	
15	44	53.0	13.8	347	12.9	92 35.9	30	26	54	18	10 52	56	20 52	51	
16	59	53.2	14.7	1	41.1	92 39.5	35	27	5 57	22	11 08	57	35	51	
17	74	53.3	+9 15.6	16	09.2	91 +27 42.9	40	5 28	6 00	6 27	11 27	58	20 16	51	
18	89	53.5	+9 16.5	30	37.4	92 +27 46.3	45	5 29	6 03	6 33	11 50	59	19 53	50	
19	104	53.7	17.4	45	05.6	92 49.4	50	29	07	39	12 19	61	23	49	
20	119	53.8	18.3	59	33.7	91 52.4	52	29	08	42	34	61	19 09	48	
21	134	54.0	19.2	74	01.9	92 55.3	54	29	10	46	12 50	63	18 52	47	
22	149	54.1	20.1	88	30.1	92 +27 58.1	56	29	12	49	13 10	65	32	45	
23	164	54.3	21.1	102	58.2	91 +28 00.7	58	28	14	53	13 36	66	18 06	43	
24	179	54.4	+9 22.0	117	26.4	92 +28 03.1	60 S	5 27	6 16	6 58	14 10	73	17 32	37	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG 10 ^h 33 ^m 1		Mag: -3.9 PMG: 12 ^h 15 ^m		Mag: +0.8 PMG: 7 ^h 53 ^m		Mag: -2.5 PMG: 23 ^h 20 ^m		Mag: +0.1 PMG: 18 ^h 02 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	201	16.8	176	21.7	+9 15.4	241	34.3	-17 01.8	8	54.4	-3 35.1	88	43.8	+21 58.6	
1	216	19.2	191	21.2	16.6	256	35.0	01.3	23	57.2	34.9	103	46.2	58.6	
2	231	21.7	206	20.8	17.8	271	35.6	00.8	38	59.9	34.8	118	48.5	58.6	
3	246	24.2	221	20.4	19.0	286	36.3	-17 00.3	54	02.7	34.7	133	50.9	58.6	
4	261	26.6	236	19.9	20.2	301	36.9	-16 59.7	69	05.4	34.6	148	53.3	58.6	
5	276	29.1	251	19.5	+9 21.3	316	37.5	-16 59.2	84	08.2	-3 34.5	163	55.6	+21 58.5	
6	291	31.6	266	19.1	+9 22.5	331	38.2	-16 58.7	99	10.9	-3 34.3	178	58.0	+21 58.5	
7	306	34.0	281	18.6	23.7	346	38.8	58.2	114	13.7	34.2	194	00.3	58.5	
8	321	36.5	296	18.2	24.9	1	39.5	57.7	129	16.4	34.1	209	02.7	58.5	
9	336	39.0	311	17.7	26.1	16	40.1	57.2	144	19.2	34.0	224	05.0	58.5	
10	351	41.4	326	17.3	27.2	31	40.8	56.7	159	21.9	33.9	239	07.4	58.5	
11	6	43.9	341	16.9	+9 28.4	46	41.4	-16 56.2	174	24.7	-3 33.7	254	09.7	+21 58.5	
12	21	46.4	356	16.4	+9 29.6	61	42.0	-16 55.7	189	27.4	-3 33.6	269	12.1	+21 58.5	
13	36	48.8	11	16.0	30.8	76	42.7	55.1	204	30.2	33.5	284	14.5	58.4	
14	51	51.3	26	15.6	31.9	91	43.3	54.6	219	33.0	33.4	299	16.8	58.4	
15	66	53.7	41	15.1	33.1	106	44.0	54.1	234	35.7	33.3	314	19.2	58.4	
16	81	56.2	56	14.7	34.3	121	44.6	53.6	249	38.5	33.2	329	21.5	58.4	
17	96	58.7	71	14.2	+9 35.5	136	45.3	-16 53.1	264	41.2	-3 33.0	344	23.9	+21 58.4	
18	112	01.1	86	13.8	+9 36.7	151	45.9	-16 52.6	279	44.0	-3 32.9	359	26.2	+21 58.4	
19	127	03.6	101	13.3	37.8	166	46.6	52.1	294	46.7	32.8	14	28.6	58.4	
20	142	06.1	116	12.9	39.0	181	47.2	51.5	309	49.5	32.7	29	30.9	58.4	
21	157	08.5	131	12.5	40.2	196	47.8	51.0	324	52.2	32.6	44	33.3	58.3	
22	172	11.0	146	12.0	41.3	211	48.5	50.5	339	55.0	32.4	59	35.7	58.3	
23	187	13.5	161	11.6	42.5	226	49.1	50.0	354	57.7	32.3	74	38.0	58.3	
24	202	15.9	176	11.1	+9 43.7	241	49.8	-16 49.5	10	00.5	-3 32.2	89	40.4	+21 58.3	
Dif	—		-4	+12		+6	+5		+28		+1		+24		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 2			Edad: 5 ^d 1 PHE { 4 ^h : 54'8 12 ^h : 54'7 20 ^h : 54'6 R°: 52 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	179	54.4	+9	22.0	117	26.4	+28 03.1	60 N	19 16	20 02	21 03	5 51	55	2 46	54
1	194	54.6		22.9	131	54.5	05.4	58	10	19 53	20 49	6 28	55	2 08	55
2	209	54.8		23.8	146	22.7	07.6	56	05	45	36	6 55	54	1 42	55
3	224	54.9		24.7	160	50.8	09.6	54	19 00	38	26	7 16	54	21	55
4	239	55.1		25.6	175	19.0	11.4	52	18 56	32	17	33	54	1 04	54
5	254	55.2	+9	26.5	189	47.2	+28 13.2	50	18 52	19 26	20 08	7 48	54	0 49	54
6	269	55.4	+9	27.4	204	15.4	+28 14.8	45	18 44	19 15	19 52	8 18	54	0 19	54
7	284	55.5		28.3	218	43.5	16.2	40	37	19 05	39	8 42	53	** ** *	**
8	299	55.7		29.2	233	11.7	17.5	35	32	18 58	29	9 01	54	** ** *	**
9	314	55.8		30.1	247	39.9	18.6	30	27	51	20	18	53	** ** *	**
10	329	56.0		31.0	262	08.2	19.7	20	18	40	19 07	9 46	53	23 45	50
11	344	56.1	+9	31.9	276	36.4	+28 20.5	10 N	18 10	18 32	18 57	10 10	53	23 21	50
12	359	56.3	+9	32.7	291	04.6	+28 21.3	0	18 04	18 25	18 49	10 33	52	22 58	52
13	14	56.4		33.6	305	32.9	21.8	10 S	17 57	18	43	10 56	51	36	52
14	29	56.6		34.5	320	01.2	22.3	20	50	12	38	11 20	51	22 11	54
15	44	56.8		35.4	334	29.5	22.6	30	42	06	34	11 48	51	21 43	55
16	59	56.9		36.3	348	57.8	22.7	35	37	18 03	32	12 05	51	26	56
17	74	57.1	+9	37.2	3	26.1	+28 22.7	40	17 32	17 59	18 31	12 25	50	21 07	56
18	89	57.2	+9	38.1	17	54.5	+28 22.6	45	17 26	17 56	18 30	12 49	49	20 43	57
19	104	57.4		39.0	32	22.8	22.3	50	19	52	29	13 20	47	20 12	59
20	119	57.5		39.9	46	51.2	21.9	52	16	50	29	35	47	19 57	60
21	134	57.7		40.8	61	19.7	21.4	54	12	48	29	13 53	46	39	61
22	149	57.8		41.7	75	48.1	20.7	56	08	46	29	14 15	44	19 17	63
23	164	58.0		42.6	90	16.6	19.8	58	17 04	44	29	14 42	42	18 49	66
24	179	58.1	+9	43.5	104	45.1	+28 18.9	60 S	16 59	17 41	18 29	15 23	36	18 09	72

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 10 ^h 29 ^m 2		Mag: -3.9 PMG: 12 ^h 16 ^m		Mag: +0.8 PMG: 7 ^h 52 ^m		Mag: -2.5 PMG: 23 ^h 16 ^m		Mag: +0.1 PMG: 17 ^h 58 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	202	15.9	176	11.1	+9 43.7	241	49.8	-16 49.5	10 00.5	-3 32.2
1	217	18.4	191	10.7	44.9	256	50.4	49.0	25 03.2	32.1
2	232	20.8	206	10.3	46.0	271	51.1	48.4	40 06.0	32.0
3	247	23.3	221	09.8	47.2	286	51.7	47.9	55 08.7	31.9
4	262	25.8	236	09.4	48.4	301	52.4	47.4	70 11.5	31.7
5	277	28.2	251	08.9	+9 49.5	316	53.0	-16 46.9	85 14.2	-3 31.6
6	292	30.7	266	08.5	+9 50.7	331	53.7	-16 46.4	100 17.0	-3 31.5
7	307	33.2	281	08.0	51.9	346	54.3	45.9	115 19.7	31.4
8	322	35.6	296	07.6	53.1	1	55.0	45.3	130 22.5	31.3
9	337	38.1	311	07.1	54.2	16	55.6	44.8	145 25.2	31.2
10	352	40.6	326	06.7	55.4	31	56.2	44.3	160 28.0	31.0
11	7	43.0	341	06.3	+9 56.6	46	56.9	-16 43.8	175 30.7	-3 30.9
12	22	45.5	356	05.8	+9 57.7	61	57.5	-16 43.3	190 33.5	-3 30.8
13	37	48.0	11	05.4	+9 58.9	76	58.2	42.8	205 36.2	30.7
14	52	50.4	26	04.9	+10 00.1	91	58.8	42.2	220 39.0	30.6
15	67	52.9	41	04.5	01.2	106	59.5	41.7	235 41.7	30.4
16	82	55.3	56	04.0	02.4	122	00.1	41.2	250 44.5	30.3
17	97	57.8	71	03.6	+10 03.6	137	00.8	-16 40.7	265 47.2	-3 30.2
18	113	00.3	86	03.1	+10 04.7	152	01.4	-16 40.2	280 50.0	-3 30.1
19	128	02.7	101	02.7	05.9	167	02.1	39.6	295 52.7	30.0
20	143	05.2	116	02.2	07.1	182	02.7	39.1	310 55.5	29.9
21	158	07.7	131	01.8	08.2	197	03.4	38.6	325 58.2	29.7
22	173	10.1	146	01.3	09.4	212	04.0	38.1	341 01.0	29.6
23	188	12.6	161	00.9	10.6	227	04.7	37.6	356 03.7	29.5
24	203	15.1	176	00.4	+10 11.7	242	05.3	-16 37.0	11 06.5	-3 29.4
Dif	—		-4		+12	+6		+5	+28	+1

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 9 PMG: 12 ^h 00 ^m 0			Edad: 6 ^d 1 PHE { 4 ^h : 54 ^m 5 12 ^h : 54 ^m 4 20 ^h : 54 ^m 3 PMG: 17 ^h 38 ^m R°: 50 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°			
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	179	58.1	+9	43.5	104	45.1	+28	18.9	60 N	2	56	3	57	4	43	6	46	82
1	194	58.3		44.4	119	13.6	95	17.8	58	3	11	4	06		49	7	23	74
2	209	58.4		45.3	133	42.2	96	16.5	56		23		14		54	7	49	70
3	224	58.6		46.2	148	10.7	95	15.1	54		34		21		4	59	8	10
4	239	58.7		47.1	162	39.4	97	13.6	52		43		27		5	03	27	65
5	254	58.9	+9	48.0	177	08.0	96	+28	50	3	51	4	33		5	07	8	42
6	269	59.0	+9	48.9	191	36.7	97	+28	45	4	08	4	45		5	15	9	12
7	284	59.2		49.8	206	05.4	97	08.2	40		21	4	54		22		35	59
8	299	59.3		50.7	220	34.2	98	06.1	35		31	5	02		28		9	55
9	314	59.5		51.5	235	03.0	98	03.9	30		40		09		33		10	11
10	329	59.6		52.4	249	31.8	98	+28	20	4	53		20		42		10	39
11	344	59.8	+9	53.3	264	00.7	99	+27	10 N	5	03	5	28		5	50	11	03
12	359	59.9	+9	54.2	278	29.6	99	+27	0	5	11	5	36		5	57	11	25
13	15	00.1		55.1	292	58.6	100	53.7	10 S		18		42		6	04	11	47
14	30	00.2		56.0	307	27.5	99	50.8	20		23		49		11		12	11
15	45	00.4		56.9	321	56.6	101	47.8	30		27		55		19		39	45
16	60	00.5		57.8	336	25.7	101	44.6	35		29	5	58		24		12	56
17	75	00.7	+9	58.7	350	54.8	101	+27	40	5	30	6	02		6	29	13	15
18	90	00.8	+9	59.6	5	23.9	101	+27	45	5	31	6	05		6	35	13	38
19	105	01.0	+10	00.5	19	53.2	103	34.4	50		32		10		42		14	07
20	120	01.1		01.3	34	22.4	102	30.7	52		32		11		46		22	34
21	135	01.3		02.2	48	51.7	103	26.9	54		32		13		49		39	31
22	150	01.4		03.1	63	21.1	104	22.9	56		32		15		53		14	59
23	165	01.6		04.0	77	50.5	104	18.9	58		32		18	6	58		15	24
24	180	01.7	+10	04.9	92	19.9	104	+27	60 S	5	32	6	20		7	03	15	59

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG 10 ^h 25 ^m 3		Mag: -3.9 PMG: 12 ^h 16 ^m			Mag: +0.8 PMG: 7 ^h 51 ^m			Mag: -2.5 PMG: 23 ^h 11 ^m			Mag: +0.1 PMG: 17 ^h 55 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	203	15.1	176	00.4	+10	11.7	242	05.3	-16	37.0	11	06.5	-3	29.4
1	218	17.5	191	00.0		12.9	257	06.0		36.5	26	09.2		29.3
2	233	20.0	205	59.5		14.0	272	06.6		36.0	41	12.0		29.2
3	248	22.5	220	59.1		15.2	287	07.3		35.5	56	14.7		29.0
4	263	24.9	235	58.6		16.4	302	07.9		34.9	71	17.5		28.9
5	278	27.4	250	58.2	+10	17.5	317	08.6	-16	34.4	86	20.2	-3	28.8
6	293	29.8	265	57.7	+10	18.7	332	09.2	-16	33.9	101	23.0	-3	28.7
7	308	32.3	280	57.3		19.8	347	09.9		33.4	116	25.7		28.6
8	323	34.8	295	56.8		21.0	2	10.5		32.9	131	28.5		28.5
9	338	37.2	310	56.4		22.2	17	11.2		32.3	146	31.2		28.3
10	353	39.7	325	55.9		23.3	32	11.8		31.8	161	34.0		28.2
11	8	42.2	340	55.5	+10	24.5	47	12.5	-16	31.3	176	36.7	-3	28.1
12	23	44.6	355	55.0	+10	25.6	62	13.1	-16	30.8	191	39.5	-3	28.0
13	38	47.1	10	54.6		26.8	77	13.8		30.2	206	42.2		27.9
14	53	49.6	25	54.1		28.0	92	14.4		29.7	221	45.0		27.8
15	68	52.0	40	53.6		29.1	107	15.1		29.2	236	47.7		27.6
16	83	54.5	55	53.2		30.3	122	15.7		28.7	251	50.5		27.5
17	98	57.0	70	52.7	+10	31.4	137	16.4	-16	28.1	266	53.2	-3	27.4
18	113	59.4	85	52.3	+10	32.6	152	17.0	-16	27.6	281	56.0	-3	27.3
19	129	01.9	100	51.8		33.7	167	17.7		27.1	296	58.7		27.2
20	144	04.3	115	51.4		34.9	182	18.4		26.6	312	01.5		27.1
21	159	06.8	130	50.9		36.0	197	19.0		26.0	327	04.2		27.0
22	174	09.3	145	50.5		37.2	212	19.7		25.5	342	06.9		26.8
23	189	11.7	160	50.0		38.3	227	20.3		25.0	357	09.7		26.7
24	204	14.2	175	49.5	+10	39.5	242	21.0	-16	24.4	12	12.4	-3	26.6
Dif	—		-5 +12			+7 +5			+27 +1			+23 0		

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 15'9			Edad: 7 ^d 1	PHE { 4 ^h : 54'3 12 ^h : 54'2 20 ^h : 54'2	Latitud			Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	PMG: 11 ^h 59 ^m 8									PMG: 18 ^h 28 ^m			R°: 47 ^m			
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	h m	m	
0	180	01.7	+10 04.9	92	19.9	+27 14.7	44	60 N	19 21	20 08	21 11	8 08	92	4 04	9	
1	195	01.9	05.8	106	49.4 ¹⁰⁵	10.3	44	58	14	19 58	20 55	37	84	3 35	17	
2	210	02.0	06.7	121	19.0 ¹⁰⁶	05.9	44	56	09	50	42	8 59	79	3 12	23	
3	225	02.2	07.6	135	48.6 ¹⁰⁶	+27 01.3	46	54	04	42	31	9 17	75	2 54	22	
4	240	02.3	08.4	150	18.2 ¹⁰⁶	+26 56.6	47	52	19 00	36	21	32	72	38	29	
5	255	02.5	+10 09.3	164	47.9 ¹⁰⁷	+26 51.8	48	50	18 55	19 30	20 12	9 46	69	2 25	31	
6	270	02.6	+10 10.2	179	17.7 ¹⁰⁸	+26 46.8	50	45	18 47	19 18	19 55	10 13	65	1 57	35	
7	285	02.8	11.1	193	47.5 ¹⁰⁸	41.7	51	40	39	19 08	41	34	62	35	38	
8	300	02.9	12.0	208	17.3 ¹⁰⁸	36.5	52	35	33	18 59	31	10 52	59	17	40	
9	315	03.1	12.9	222	47.3 ¹¹⁰	31.2	53	30	28	52	22	11 07	57	1 01	42	
10	330	03.2	13.8	237	17.2 ¹⁰⁹	25.7	55	20	19	41	19 07	33	54	0 35	44	
11	345	03.4	+10 14.6	251	47.3 ¹¹¹	+26 20.2	55	10 N	18 11	18 32	18 57	11 55	51	0 11	48	
12	0	03.5	+10 15.5	266	17.3 ¹¹⁰	+26 14.5	57	0	18 03	18 24	18 49	12 16	48	***	***	
13	15	03.7	16.4	280	47.5 ¹¹²	08.7	58	10 S	17 56	17	42	36	46	***	***	
14	30	03.8	17.3	295	17.7 ¹¹²	+26 02.7	60	20	48	10	36	12 58	43	23 59	53	
15	45	03.9	18.2	309	47.9 ¹¹²	+25 56.7	60	30	39	04	32	13 24	39	35	57	
16	60	04.1	19.1	324	18.2 ¹¹³	50.5	62	35	35	18 00	30	39	37	20	60	
17	75	04.2	+10 19.9	338	48.6 ¹¹⁴	+25 44.2	63	40	17 29	17 56	18 28	13 56	34	23 04	62	
18	90	04.4	+10 20.8	353	19.0 ¹¹⁴	+25 37.8	64	45	17 23	17 52	18 26	14 17	31	22 44	66	
19	105	04.5	21.7	7	49.5 ¹¹⁵	31.3	65	50	15	48	25	43	26	18	71	
20	120	04.7	22.6	22	20.1 ¹¹⁶	24.7	66	52	11	46	25	14 56	24	22 06	74	
21	135	04.8	23.5	36	50.6 ¹¹⁵	17.9	68	54	08	44	25	15 10	21	21 52	77	
22	150	05.0	24.3	51	21.3 ¹¹⁷	11.1	68	56	17 03	41	24	27	17	36	80	
23	165	05.1	25.2	65	52.0 ¹¹⁷	+25 04.1	70	58	16 59	39	24	15 47	12	21 16	86	
24	180	05.3	+10 26.1	80	22.8 ¹¹⁸	+24 57.0	71	60 S	16 53	17 36	18 24	16 12	5	20 51	93	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG		Mag: -3.9		Mag: +0.8		Mag: -2.5		Mag: +0.1						
	10 ^h 21 ^m 4		PMG: 12 ^h 17 ^m		PMG: 7 ^h 50 ^m		PMG: 23 ^h 07 ^m		PMG: 17 ^h 51 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	204	14.2	175	49.5	+10 39.5	242	21.0	-16 24.4	12	12.4	-3 26.6	91	33.1	+21 57.7	
1	219	16.7	190	49.1	40.7	257	21.6	23.9	27	15.2	26.5	106	35.5	57.7	
2	234	19.1	205	48.6	41.8	272	22.3	23.4	42	17.9	26.4	121	37.8	57.7	
3	249	21.6	220	48.2	43.0	287	22.9	22.9	57	20.7	26.3	136	40.2	57.6	
4	264	24.1	235	47.7	44.1	302	23.6	22.3	72	23.4	26.1	151	42.5	57.6	
5	279	26.5	250	47.2	+10 45.3	317	24.2	-16 21.8	87	26.2	-3 26.0	166	44.8	+21 57.6	
6	294	29.0	265	46.8	+10 46.4	332	24.9	-16 21.3	102	28.9	-3 25.9	181	47.2	+21 57.6	
7	309	31.4	280	46.3	47.6	347	25.5	20.8	117	31.7	25.8	196	49.5	57.6	
8	324	33.9	295	45.9	48.7	2	26.2	20.2	132	34.4	25.7	211	51.9	57.6	
9	339	36.4	310	45.4	49.9	17	26.9	19.7	147	37.2	25.6	226	54.2	57.6	
10	354	38.8	325	44.9	51.0	32	27.5	19.2	162	39.9	25.5	241	56.6	57.5	
11	9	41.3	340	44.5	+10 52.2	47	28.2	-16 18.6	177	42.7	-3 25.3	256	58.9	+21 57.5	
12	24	43.8	355	44.0	+10 53.3	62	28.8	-16 18.1	192	45.4	-3 25.2	272	01.3	+21 57.5	
13	39	46.2	10	43.6	54.4	77	29.5	17.6	207	48.1	25.1	287	03.6	57.5	
14	54	48.7	25	43.1	55.6	92	30.1	17.0	222	50.9	25.0	302	05.9	57.5	
15	69	51.2	40	42.6	56.7	107	30.8	16.5	237	53.6	24.9	317	08.3	57.5	
16	84	53.6	55	42.2	57.9	122	31.4	16.0	252	56.4	24.8	332	10.6	57.5	
17	99	56.1	70	41.7	+10 59.0	137	32.1	-16 15.5	267	59.1	-3 24.7	347	13.0	+21 57.4	
18	114	58.6	85	41.3	+11 00.2	152	32.8	-16 14.9	283	01.9	-3 24.5	2	15.3	+21 57.4	
19	130	01.0	100	40.8	01.3	167	33.4	14.4	298	04.6	24.4	17	17.6	57.4	
20	145	03.5	115	40.3	02.5	182	34.1	13.9	313	07.4	24.3	32	20.0	57.4	
21	160	05.9	130	39.9	03.6	197	34.7	13.3	328	10.1	24.2	47	22.3	57.4	
22	175	08.4	145	39.4	04.7	212	35.4	12.8	343	12.9	24.1	62	24.7	57.4	
23	190	10.9	160	38.9	05.9	227	36.0	12.3	358	15.6	24.0	77	27.0	57.4	
24	205	13.3	175	38.5	+11 07.0	242	36.7	-16 11.7	13	18.3	-3 23.8	92	29.3	+21 57.3	
Dif	—		-5		+11	+7		+5	+27		+1	+23		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 5				Edad: 8 ^d 1 PHE { SD: 14'8 PMG: 19 ^h 15 ^m R°: 45 ^m 4 ^h : 54'2 12 ^h : 54'3 20 ^h : 54'3													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	180	05.3	+10	26.1	80	22.8	+24	57.0	60 N	2 48	3 51	4 37	9 40	92	4 13	3		
1	195	05.4		27.0	94	53.6 ¹¹⁸		49.8	58	3 04	4 00	44	10 01	86	3 52	9		
2	210	05.5		27.9	109	24.5 ¹¹⁹		42.5	56	17	09	49	18 81		35	14		
3	225	05.7		28.8	123	55.5 ¹²⁰		35.1	54	28	16	54	32 77		20	1		
4	240	05.8		29.6	138	26.5 ¹²⁰		27.5	52	38	23	4 59	44 75		3 07	21		
5	255	06.0	+10	30.5	152	57.5 ¹²⁰	+24	19.9	50	3 46	4 29	5 03	10 55	72	2 56	23		
6	270	06.1	+10	31.4	167	28.7 ¹²²	+24	12.1	45	4 04	4 41	5 12	11 18	67	2 32	28		
7	285	06.3		32.3	181	59.9 ¹²²	+24	04.3	40	17	51	19	36 63		2 13	31		
8	300	06.4		33.1	196	31.1 ¹²²	+23	56.3	35	28	4 59	26	11 51	60	1 57	34		
9	315	06.6		34.0	211	02.4 ¹²³		48.2	30	37	5 06	31	12 04	58	43	37		
10	330	06.7		34.9	225	33.8 ¹²⁴		40.0	20	4 52	18	40	27 53		1 19	41		
11	345	06.8	+10	35.8	240	05.2 ¹²⁴	+23	31.8	10 N	5 02	5 27	5 49	12 46	49	0 59	44		
12	0	07.0	+10	36.7	254	36.7 ¹²⁵	+23	23.4	0	5 11	5 35	5 56	13 04	46	0 39	47		
13	15	07.1		37.5	269	08.2 ¹²⁵		14.9	10 S	18	42	6 04	22 42		0 20	50		
14	30	07.3		38.4	283	39.8 ¹²⁶	+23	06.3	20	23	49	11	13 41	39	***	***	***	
15	45	07.4		39.3	298	11.5 ¹²⁷	+22	57.6	30	28	5 56	20	14 03	34	***	***	***	
16	60	07.6		40.2	312	43.2 ¹²⁷		48.8	35	30	6 00	25	16 32		***	***	***	
17	75	07.7	+10	41.0	327	15.0 ¹²⁸	+22	39.9	40	5 32	6 04	6 31	14 30	29	***	***	***	
18	90	07.8	+10	41.9	341	46.8 ¹²⁸	+22	30.9	45	5 34	6 08	6 38	14 48	25	23 50	67		
19	105	08.0		42.8	356	18.7 ¹²⁹		21.8	50	35	12	45	15 09	20	29	73		
20	120	08.1		43.7	10	50.7 ¹³⁰		12.6	52	35	15	49	20 17		20	75		
21	135	08.3		44.5	25	22.7 ¹³⁰	+22	03.3	54	36	17	53	31 15		23 09	78		
22	150	08.4		45.4	39	54.7 ¹³⁰	+21	53.9	94	36	19	6 57	44 11		22 56	82		
23	165	08.5		46.3	54	26.8 ¹³¹		44.4	58	36	22	7 02	15 59	7	42	85		
24	180	08.7	+10	47.2	68	59.0 ¹³²	+21	34.9	95	5 36	6 25	7 08	16 17	2	22 24	92		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG		Mag: -3.9				Mag: +0.8				Mag: -2.5				Mag: +0.1			
	10 ^h 17 ^m 4		PMG: 12 ^h 18 ^m				PMG: 7 ^h 49 ^m				PMG: 23 ^h 03 ^m				PMG: 17 ^h 47 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	205	13.3	175	38.5	+11	07.0	242	36.7	-16	11.7	13	18.3	-3	23.8	92	29.3	+21	57.3
1	220	15.8	190	38.0		08.2	257	37.4		11.2	28	21.1		23.7	107	31.7		57.3
2	235	18.3	205	37.5		09.3	272	38.0		10.7	43	23.8		23.6	122	34.0		57.3
3	250	20.7	220	37.1		10.5	287	38.7		10.1	58	26.6		23.5	137	36.4		57.3
4	265	23.2	235	36.6		11.6	302	39.3		09.6	73	29.3		23.4	152	38.7		57.3
5	280	25.7	250	36.1	+11	12.7	317	40.0	-16	09.1	88	32.1	-3	23.3	167	41.0	+21	57.3
6	295	28.1	265	35.7	+11	13.9	332	40.6	-16	08.5	103	34.8	-3	23.2	182	43.4	+21	57.3
7	310	30.6	280	35.2		15.0	347	41.3		08.0	118	37.6		23.1	197	45.7		57.2
8	325	33.1	295	34.7		16.2	2	42.0		07.5	133	40.3		22.9	212	48.1		57.2
9	340	35.5	310	34.3		17.3	17	42.6		06.9	148	43.0		22.8	227	50.4		57.2
10	355	38.0	325	33.8		18.4	32	43.3		06.4	163	45.8		22.7	242	52.7		57.2
11	10	40.4	340	33.3	+11	19.6	47	43.9	-16	05.9	178	48.5	-3	22.6	257	55.1	+21	57.2
12	25	42.9	355	32.9	+11	20.7	62	44.6	-16	05.3	193	51.3	-3	22.5	272	57.4	+21	57.2
13	40	45.4	10	32.4		21.8	77	45.3		04.8	208	54.0		22.4	287	59.8		57.1
14	55	47.8	25	31.9		23.0	92	45.9		04.2	223	56.8		22.3	303	02.1		57.1
15	70	50.3	40	31.4		24.1	107	46.6		03.7	238	59.5		22.1	318	04.4		57.1
16	85	52.8	55	31.0		25.2	122	47.2		03.2	254	02.2		22.0	333	06.8		57.1
17	100	55.2	70	30.5	+11	26.4	137	47.9	-16	02.6	269	05.0	-3	21.9	348	09.1	+21	57.1
18	115	57.7	85	30.0	+11	27.5	152	48.6	-16	02.1	284	07.7	-3	21.8	3	11.4	+21	57.1
19	131	00.2	100	29.6		28.6	167	49.2		01.6	299	10.5		21.7	18	13.8		57.1
20	146	02.6	115	29.1		29.8	182	49.9		01.0	314	13.2		21.6	33	16.1		57.0
21	161	05.1	130	28.6		30.9	197	50.5	-16	00.5	329	16.0		21.5	48	18.5		57.0
22	176	07.6	145	28.1		32.0	212	51.2	-15	59.9	344	18.7		21.3	63	20.8		57.0
23	191	10.0	160	27.7		33.2	227	51.9		59.4	359	21.4		21.2	78	23.1		57.0
24	206	12.5	175	27.2	+11	34.3	242	52.5	-15	58.9	14	24.2	-3	21.1	93	25.5	+21	57.0
Dif	—		-5		+11		+7		+5		+27		+1		+23		0	

UT	SOL		LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15'9 PMG: 11 ^h 59 ^m 3		Edad: 9 ^d 1 PHE { 4 ^h : 54'4 12 ^h : 54'5 20 ^h : 54'6 PMG: 20 ^h 00 ^m R°: 44 ^m													
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	180	08.7	+10	47.2	68	59.0	+21 34.9	60 N	19 26	20 13	21 18	11 12 90	4 16 1			
1	195	08.8		48.0	83	31.3 ¹³³	25.2 ⁹⁷	58	19	20 03	21 01	27 85	4 01 6			
2	210	09.0		48.9	98	03.5 ¹³²	15.4 ⁹⁸	56	13	19 54	20 47	39 81	3 49 9			
3	225	09.1		49.8	112	35.9 ¹³⁴	+21 05.6 ⁹⁸	54	08	46	35	49 78	37 13			
4	240	09.3		50.6	127	08.3 ¹³⁴	+20 55.6 ¹⁰⁰	52	19 03	39	25	11 59 74	28 15			
5	255	09.4	+10	51.5	141	40.7 ¹³⁴	+20 45.6 ¹⁰⁰	50	18 59	19 33	20 16	12 07 72	3 19 17			
6	270	09.5	+10	52.4	156	13.2 ¹³⁵	+20 35.4 ¹⁰²	45	18 49	19 20	19 58	12 25 67	3 00 22			
7	285	09.7		53.3	170	45.8 ¹³⁶	25.2 ¹⁰²	40	42	10	44	39 63	2 44 27			
8	300	09.8		54.1	185	18.4 ¹³⁶	14.9 ¹⁰³	35	35	19 01	32	12 51 60	31 30			
9	315	09.9		55.0	199	51.1 ¹³⁷	+20 04.5 ¹⁰⁴	30	29	18 54	23	13 02 56	20 32			
10	330	10.1		55.9	214	23.8 ¹³⁷	+19 54.0 ¹⁰⁵	20	19	42	19 08	20 51	2 00 37			
11	345	10.2	+10	56.7	228	56.6 ¹³⁸	+19 43.4 ¹⁰⁶	10 N	18 11	18 32	18 57	13 35 48	1 43 41			
12	0	10.4	+10	57.6	243	29.4 ¹³⁸	+19 32.7 ¹⁰⁷	0	18 03	18 24	18 48	13 50 43	1 26 45			
13	15	10.5		58.5	258	02.3 ¹³⁹	22.0 ¹⁰⁷	10 S	17 55	16	41	14 04 40	1 10 48			
14	30	10.6	+10	59.3	272	35.2 ¹³⁹	11.1 ¹⁰⁹	20	47	09	35	20 35	0 52 53			
15	45	10.8	+11	00.2	287	08.1 ¹³⁹	+19 00.2 ¹⁰⁹	30	37	18 02	30	37 31	32 57			
16	60	10.9		01.1	301	41.2 ¹⁴¹	+18 49.2 ¹¹⁰	35	32	17 58	27	48 28	20 60			
17	75	11.1	+11	02.0	316	14.2 ¹⁴⁰	+18 38.1 ¹¹¹	40	17 26	17 54	18 25	14 59 25	0 06 63			
18	90	11.2	+11	02.8	330	47.3 ¹⁴¹	+18 26.9 ¹¹²	45	17 19	17 49	18 23	15 13 21	** ** *			
19	105	11.3		03.7	345	20.5 ¹⁴²	15.7 ¹¹²	50	11	44	21	29 16	** ** *			
20	120	11.5		04.6	359	53.7 ¹⁴²	+18 04.4 ¹¹³	52	07	42	21	37 14	** ** *			
21	135	11.6		05.4	14	27.0 ¹⁴³	+17 52.9 ¹¹⁵	54	17 03	39	20	46 11	** ** *			
22	150	11.7		06.3	29	00.3 ¹⁴³	41.4 ¹¹⁵	56	16 58	37	20	15 55 8	** ** *			
23	165	11.9		07.2	43	33.6 ¹⁴³	29.9 ¹¹⁵	58	53	34	19	16 06 5	** ** *			
24	180	12.0	+11	08.0	58	07.0 ¹⁴⁴	+17 18.2 ¹¹⁷	60 S	16 48	17 31	18 19	16 19 0	23 56 89			

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 10 ^h 13 ^m 5		Mag: -3.9 PMG: 12 ^h 19 ^m		Mag: +0.8 PMG: 7 ^h 48 ^m		Mag: -2.5 PMG: 22 ^h 58 ^m		Mag: +0.1 PMG: 17 ^h 44 ^m	
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'
0	206	12.5	175 27.2	+11 34.3	242 52.5	-15 58.9	14 24.2	-3 21.1	93 25.5	+21 57.0
1	221	14.9	190 26.7	35.4	257 53.2	58.3	29 26.9	21.0	108 27.8	57.0
2	236	17.4	205 26.2	36.6	272 53.8	57.8	44 29.7	20.9	123 30.1	57.0
3	251	19.9	220 25.8	37.7	287 54.5	57.3	59 32.4	20.8	138 32.5	56.9
4	266	22.3	235 25.3	38.8	302 55.2	56.7	74 35.1	20.7	153 34.8	56.9
5	281	24.8	250 24.8	+11 39.9	317 55.8	-15 56.2	89 37.9	-3 20.6	168 37.1	+21 56.9
6	296	27.3	265 24.3	+11 41.1	332 56.5	-15 55.6	104 40.6	-3 20.4	183 39.5	+21 56.9
7	311	29.7	280 23.9	42.2	347 57.1	55.1	119 43.4	20.3	198 41.8	56.9
8	326	32.2	295 23.4	43.3	2 57.8	54.6	134 46.1	20.2	213 44.1	56.9
9	341	34.7	310 22.9	44.5	17 58.5	54.0	149 48.9	20.1	228 46.5	56.8
10	356	37.1	325 22.4	45.6	32 59.1	53.5	164 51.6	20.0	243 48.8	56.8
11	11	39.6	340 22.0	+11 46.7	47 59.8	-15 52.9	179 54.3	-3 19.9	258 51.1	+21 56.8
12	26	42.0	355 21.5	+11 47.8	63 00.5	-15 52.4	194 57.1	-3 19.8	273 53.5	+21 56.8
13	41	44.5	10 21.0	49.0	78 01.1	51.9	209 59.8	19.7	288 55.8	56.8
14	56	47.0	25 20.5	50.1	93 01.8	51.3	225 02.6	19.5	303 58.1	56.8
15	71	49.4	40 20.0	51.2	108 02.4	50.8	240 05.3	19.4	319 00.5	56.8
16	86	51.9	55 19.6	52.3	123 03.1	50.2	255 08.0	19.3	334 02.8	56.7
17	101	54.4	70 19.1	+11 53.5	138 03.8	-15 49.7	270 10.8	-3 19.2	349 05.1	+21 56.7
18	116	56.8	85 18.6	+11 54.6	153 04.4	-15 49.1	285 13.5	-3 19.1	4 07.5	+21 56.7
19	131	59.3	100 18.1	55.7	168 05.1	48.6	300 16.3	19.0	19 09.8	56.7
20	147	01.8	115 17.6	56.8	183 05.8	48.1	315 19.0	18.9	34 12.1	56.7
21	162	04.2	130 17.2	57.9	198 06.4	47.5	330 21.7	18.8	49 14.5	56.7
22	177	06.7	145 16.7	+11 59.1	213 07.1	47.0	345 24.5	18.7	64 16.8	56.6
23	192	09.2	160 16.2	+12 00.2	228 07.8	46.4	0 27.2	18.5	79 19.1	56.6
24	207	11.6	175 15.7	+12 01.3	243 08.4	-15 45.9	15 29.9	-3 18.4	94 21.5	+21 56.6
Dif	—		-5	+11	+7	+5	+27	+1	+23	0

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna			
	SD: 15 ^h 9 PMG: 11 ^h 59 ^m 1				Edad: 10 ^d 1 PHE { SD: 14 ^h 9 PMG: 20 ^h 44 ^m R°: 42 ^m 4 ^h : 54 ^m 7 12 ^h : 54 ^m 9 20 ^h : 55 ^m 0														
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m	
0	180	12.0	+11	08.0	58	07.0	+17	18.2	60 N	2	39	3	44	4	32	12	42	88	
1	195	12.2		08.9	72	40.4 ¹⁴⁴	+17	06.5 ¹¹⁷	58	2	56	3	54	38		12	52	84	
2	210	12.3		09.8	87	13.9 ¹⁴⁵	+16	54.7 ¹¹⁸	56	3	10	4	03	44		13	00	80	
3	225	12.4		10.6	101	47.4 ¹⁴⁵		42.8 ¹¹⁹	54	22	11	50		07	77	50	10		
4	240	12.6		11.5	116	21.0 ¹⁴⁶		30.9 ¹¹⁹	52	32	18	55		13	75	43	12		
5	255	12.7	+11	12.3	130	54.6 ¹⁴⁶	+16	18.8 ¹²¹	50	3	41	4	24	4	59	13	19	73	
6	270	12.8	+11	13.2	145	28.2 ¹⁴⁶	+16	06.7 ¹²¹	45	4	00	4	38	5	09	13	32	67	
7	285	13.0		14.1	160	01.9 ¹⁴⁷	+15	54.6 ¹²¹	40	14	48	16		42	63		11	23	
8	300	13.1		14.9	174	35.6 ¹⁴⁷		42.3 ¹²³	35	26	4	57	23	51	59	3	01	27	
9	315	13.2		15.8	189	09.4 ¹⁴⁸		30.0 ¹²³	30	35	5	04	29	13	58	57	2	52	30
10	330	13.4		16.7	203	43.2 ¹⁴⁸		17.6 ¹²⁴	20	4	50	16	39	14	11	52		37	34
11	345	13.5	+11	17.5	218	17.0 ¹⁴⁸	+15	05.2 ¹²⁴	10 N	5	01	5	26	5	48	14	23	46	
12	0	13.7	+11	18.4	232	50.8 ¹⁴⁸	+14	52.6 ¹²⁶	0	5	10	5	35	5	56	14	33	43	
13	15	13.8		19.2	247	24.7 ¹⁴⁹		40.0 ¹²⁶	10 S	18	42	6	04	44	38	1	58	47	
14	30	13.9		20.1	261	58.7 ¹⁵⁰		27.4 ¹²⁶	20	24	50	12		14	55	34	45	51	
15	45	14.1		21.0	276	32.6 ¹⁴⁹		14.7 ¹²⁷	30	29	5	57	22	15	08	29	29	56	
16	60	14.2		21.8	291	06.6 ¹⁵⁰	+14	01.9 ¹²⁸	35	32	6	01	27	16	25	20	59		
17	75	14.3	+11	22.7	305	40.6 ¹⁵⁰	+13	49.0 ¹²⁹	40	5	34	6	05	6	33	15	24	22	
18	90	14.5	+11	23.5	320	14.7 ¹⁵¹	+13	36.1 ¹²⁹	45	5	36	6	10	6	40	15	34	18	
19	105	14.6		24.4	334	48.8 ¹⁵¹		23.1 ¹³⁰	50	38	15	48		45	14	42	72		
20	120	14.7		25.3	349	22.9 ¹⁵¹	+13	10.0 ¹³¹	52	38	18	52		51	11	35	74		
21	135	14.9		26.1	3	57.0 ¹⁵¹	+12	56.9 ¹³¹	54	39	20	6	57	15	57	9	27	77	
22	150	15.0		27.0	18	31.2 ¹⁵²		43.7 ¹³²	56	40	23	7	01	16	03	6	18	80	
23	165	15.1		27.8	33	05.4 ¹⁵²		30.5 ¹³²	58	40	26	07		11	3	0	07	85	
24	180	15.3	+11	28.7	47	39.6 ¹⁵²	+12	17.2 ¹³³	60 S	5	41	6	29	7	12	16	19	**	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO				
	PMG: 10 ^h 09 ^m 6		Mag: -3.9 PMG: 12 ^h 19 ^m				Mag: +0.7 PMG: 7 ^h 47 ^m				Mag: -2.5 PMG: 22 ^h 54 ^m				Mag: +0.1 PMG: 17 ^h 40 ^m				
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	207	11.6	175	15.7	+12	01.3	243	08.4	-15	45.9	15	29.9	-3	18.4	94	21.5	+21	56.6	
1	222	14.1	190	15.2		02.4	258	09.1		45.3	30	32.7		18.3	109	23.8		56.6	
2	237	16.5	205	14.7		03.5	273	09.8		44.8	45	35.4		18.2	124	26.1		56.6	
3	252	19.0	220	14.3		04.7	288	10.4		44.3	60	38.2		18.1	139	28.5		56.6	
4	267	21.5	235	13.8		05.8	303	11.1		43.7	75	40.9		18.0	154	30.8		56.5	
5	282	23.9	250	13.3	+12	06.9	318	11.7	-15	43.2	90	43.6	-3	17.9	169	33.1	+21	56.5	
6	297	26.4	265	12.8	+12	08.0	333	12.4	-15	42.6	105	46.4	-3	17.8	184	35.5	+21	56.5	
7	312	28.9	280	12.3		09.1	348	13.1		42.1	120	49.1		17.7	199	37.8		56.5	
8	327	31.3	295	11.8		10.2	3	13.7		41.5	135	51.9		17.5	214	40.1		56.5	
9	342	33.8	310	11.4		11.3	18	14.4		41.0	150	54.6		17.4	229	42.4		56.5	
10	357	36.3	325	10.9		12.5	33	15.1		40.4	165	57.3		17.3	244	44.8		56.4	
11	12	38.7	340	10.4	+12	13.6	48	15.7	-15	39.9	181	00.1	-3	17.2	259	47.1	+21	56.4	
12	27	41.2	355	09.9	+12	14.7	63	16.4	-15	39.4	196	02.8	-3	17.1	274	49.4	+21	56.4	
13	42	43.6	10	09.4		15.8	78	17.1		38.8	211	05.5		17.0	289	51.8		56.4	
14	57	46.1	25	08.9		16.9	93	17.7		38.3	226	08.3		16.9	304	54.1		56.4	
15	72	48.6	40	08.4		18.0	108	18.4		37.7	241	11.0		16.8	319	56.4		56.4	
16	87	51.0	55	07.9		19.1	123	19.1		37.2	256	13.8		16.7	334	58.8		56.4	
17	102	53.5	70	07.5	+12	20.2	138	19.7	-15	36.6	271	16.5	-3	16.5	350	01.1	+21	56.3	
18	117	56.0	85	07.0	+12	21.4	153	20.4	-15	36.1	286	19.2	-3	16.4	5	03.4	+21	56.3	
19	132	58.4	100	06.5		22.5	168	21.1		35.5	301	22.0		16.3	20	05.7		56.3	
20	148	00.9	115	06.0		23.6	183	21.7		35.0	316	24.7		16.2	35	08.1		56.3	
21	163	03.4	130	05.5		24.7	198	22.4		34.4	331	27.4		16.1	50	10.4		56.3	
22	178	05.8	145	05.0		25.8	213	23.1		33.9	346	30.2		16.0	65	12.7		56.3	
23	193	08.3	160	04.5		26.9	228	23.8		33.3	1	32.9		15.9	80	15.1		56.2	
24	208	10.8	175	04.0	+12	28.0	243	24.4	-15	32.8	16	35.6	-3	15.8	95	17.4	+21	56.2	
Dif	—		-5		+11		+7		+5		+27		+1		+23		0		

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 15:9 PMG: 11 ^h 58 ^m 9			Edad: 11 ^d 1 PHE { 4 ^h : 55/2 12 ^h : 55/4 20 ^h : 55/5 R°: 42 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m	h m m	h m m	
0	180	15.3	+11	28.7	47	39.6	+12	17.2	60 N	19 31	20 19	21 26	14 10 88	4 17	**		
1	195	15.4		29.6	62	13.8 ¹⁵²	+12	03.9 ¹³³	58	23	20 08	21 08	16 84	11	2		
2	210	15.5		30.4	76	48.1 ¹⁵³	+11	50.4 ¹³⁵	56	17	19 59	20 53	20 81	05	6		
3	225	15.7		31.3	91	22.4 ¹⁵³		37.0 ¹³⁴	54	11	50	40	24 78	4	00	8	
4	240	15.8		32.1	105	56.7 ¹⁵³		23.4 ¹³⁶	52	06	43	30	28 75	3	55	11	
5	255	15.9	+11	33.0	120	31.0 ¹⁵³	+11	09.8 ¹³⁶	50	19 02	19 37	20 20	14 32 72	3	51	13	
6	270	16.1	+11	33.8	135	05.3 ¹⁵³	+10	56.2 ¹³⁶	45	18 52	19 23	20 01	14 39 68	3	42	17	
7	285	16.2		34.7	149	39.7 ¹⁵⁴		42.5 ¹³⁷	40	44	12	19 46	45 63	34	22		
8	300	16.3		35.6	164	14.1 ¹⁵⁴		28.8 ¹³⁷	35	37	19 03	34	50 60	28	25		
9	315	16.4		36.4	178	48.5 ¹⁵⁴		15.0 ¹³⁸	30	30	18 55	25	14 55 56	22	28		
10	330	16.6		37.3	193	22.9 ¹⁵⁴	+10	01.1 ¹³⁹	20	20	42	19 09	15 03 51	11	34		
11	345	16.7	+11	38.1	207	57.3 ¹⁵⁴	+9	47.2 ¹³⁹	10 N	18 11	18 32	18 57	15 09 47	3	02	38	
12	0	16.8	+11	39.0	222	31.8 ¹⁵⁵	+9	33.2 ¹⁴⁰	0	18 02	18 23	18 48	15 16 42	2	54	42	
13	15	17.0		39.8	237	06.2 ¹⁵⁴		19.2 ¹⁴⁰	10 S	17 54	15	40	22 38	45	47		
14	30	17.1		40.7	251	40.7 ¹⁵⁵	+9	05.2 ¹⁴⁰	20	45	08	33	29 33	36	51		
15	45	17.2		41.5	266	15.1 ¹⁵⁴	+8	51.1 ¹⁴¹	30	35	18 00	28	37 27	25	57		
16	60	17.4		42.4	280	49.6 ¹⁵⁵		36.9 ¹⁴²	35	30	17 55	25	41 25	19	60		
17	75	17.5	+11	43.2	295	24.1 ¹⁵⁵	+8	22.7 ¹⁴²	40	17 23	17 51	18 22	15 46 21	2	12	63	
18	90	17.6	+11	44.1	309	58.6 ¹⁵⁵	+8	08.4 ¹⁴³	45	17 16	17 46	18 20	15 52 17	2	04	67	
19	105	17.7		44.9	324	33.1 ¹⁵⁵	+7	54.2 ¹⁴²	50	07	40	18	15 59 12	1	54	72	
20	120	17.9		45.8	339	07.6 ¹⁵⁵		39.8 ¹⁴⁴	52	17 03	38	17	16 02 10	49	75		
21	135	18.0		46.6	353	42.2 ¹⁵⁶		25.4 ¹⁴⁴	54	16 58	35	16	06 8	44	78		
22	150	18.1		47.5	8	16.7 ¹⁵⁵	+7	11.0 ¹⁴⁴	56	54	32	15	09 6	38	81		
23	165	18.3		48.3	22	51.2 ¹⁵⁵	+6	56.5 ¹⁴⁵	58	48	29	14	14 2	32	84		
24	180	18.4	+11	49.2	37	25.7 ¹⁵⁵	+6	42.0 ¹⁴⁵	60 S	16 42	17 25	18 14	16 18 **	1	25	87	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 10 ^h 05 ^m 6		Mag: -3.9 PMG: 12 ^h 20 ^m		Mag: +0.7 PMG: 7 ^h 46 ^m		Mag: -2.4 PMG: 22 ^h 49 ^m		Mag: +0.2 PMG: 17 ^h 36 ^m	
	hG ♈		hG ♎	Dec	hG ♂	Dec	hG ♊	Dec	hG ♋	Dec
h	°	'	°	'	°	'	°	'	°	'
0	208	10.8	175	04.0	+12	28.0	243	24.4	-15	32.8
1	223	13.2	190	03.5		29.1	258	25.1		32.2
2	238	15.7	205	03.0		30.2	273	25.8		31.7
3	253	18.1	220	02.5		31.3	288	26.4		31.1
4	268	20.6	235	02.1		32.4	303	27.1		30.6
5	283	23.1	250	01.6	+12	33.5	318	27.8	-15	30.0
6	298	25.5	265	01.1	+12	34.6	333	28.4	-15	29.5
7	313	28.0	280	00.6		35.7	348	29.1		28.9
8	328	30.5	295	00.1		36.8	3	29.8		28.4
9	343	32.9	309	59.6		37.9	18	30.4		27.8
10	358	35.4	324	59.1		39.0	33	31.1		27.3
11	13	37.9	339	58.6	+12	40.1	48	31.8	-15	26.7
12	28	40.3	354	58.1	+12	41.2	63	32.5	-15	26.2
13	43	42.8	9	57.6		42.3	78	33.1		25.6
14	58	45.3	24	57.1		43.4	93	33.8		25.1
15	73	47.7	39	56.6		44.5	108	34.5		24.5
16	88	50.2	54	56.1		45.6	123	35.1		24.0
17	103	52.6	69	55.6	+12	46.7	138	35.8	-15	23.4
18	118	55.1	84	55.1	+12	47.8	153	36.5	-15	22.9
19	133	57.6	99	54.6		48.9	168	37.1		22.3
20	149	00.0	114	54.1		50.0	183	37.8		21.8
21	164	02.5	129	53.6		51.1	198	38.5		21.2
22	179	05.0	144	53.1		52.2	213	39.2		20.7
23	194	07.4	159	52.6		53.3	228	39.8		20.1
24	209	09.9	174	52.1	+12	54.4	243	40.5	-15	19.5
Dif	—		-5 +11		+7 +6		+27 +1		+23 0	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna								
	SD: 15 ^h 9 PMG: 11 ^h 58 ^m 7			Edad: 12 ^d 1 PHE { SD: 15 ^h 2 PMG: 22 ^h 08 ^m																	
	hG ☉	Dec		hG ☾	Dif	Dec		Náutico	Civil		Hora	R°	Hora	R°							
h	°	'	°	°	'	°	°	h	m	h	m	h	m	m							
0	180	18.4	+11	49.2	37	25.7	+6	42.0	60 N	2	31	3	38	4	26	15	38	89	4	16	**
1	195	18.5		50.0	52	00.2 ¹⁵⁵		27.5 ¹⁴⁵	58	2	49	49	33	40	85				13	2	
2	210	18.6		50.9	66	34.8 ¹⁵⁶	+6	12.9 ¹⁴⁶	56	3	04	3	58	40	82				11	5	
3	225	18.8		51.7	81	09.3 ¹⁵⁵	+5	58.3 ¹⁴⁶	54	16	4	06	45	42	80				08	8	
4	240	18.9		52.6	95	43.8 ¹⁵⁵		43.6 ¹⁴⁷	52	27	14	50	43	77	06				06	10	
5	255	19.0	+11	53.4	110	18.3 ¹⁵⁵	+5	28.9 ¹⁴⁷	50	3	37	4	20	4	55	15	44	75	4	04	12
6	270	19.2	+11	54.3	124	52.8 ¹⁵⁵	+5	14.1 ¹⁴⁸	45	3	56	4	34	5	05	15	47	69	3	59	17
7	285	19.3		55.1	139	27.3 ¹⁵⁵	+4	59.4 ¹⁴⁷	40	4	11	45	13	48	65				56	21	
8	300	19.4		56.0	154	01.8 ¹⁵⁵		44.6 ¹⁴⁸	35	23	4	54	21	50	61				53	24	
9	315	19.5		56.8	168	36.3 ¹⁵⁵		29.7 ¹⁴⁹	30	33	5	02	27	51	58				50	27	
10	330	19.7		57.7	183	10.8 ¹⁵⁵	+4	14.8 ¹⁴⁹	20	4	48	15	37	54	52				45	33	
11	345	19.8	+11	58.5	197	45.3 ¹⁵⁵	+3	59.9 ¹⁴⁹	10 N	5	00	5	25	5	47	15	56	47	3	40	38
12	0	19.9	+11	59.4	212	19.7 ¹⁵⁴	+3	45.0 ¹⁴⁹	0	5	10	5	34	5	55	15	58	43	3	36	42
13	15	20.0	+12	00.2	226	54.2 ¹⁵⁵		30.0 ¹⁵⁰	10 S	18	42	6	04	16	00	38			32	46	
14	30	20.2		01.1	241	28.6 ¹⁵⁴	+3	15.0 ¹⁵⁰	20	24	50	13	02	33	27	52			27	52	
15	45	20.3		01.9	256	03.0 ¹⁵⁴	+3	00.0 ¹⁵⁰	30	30	5	58	23	04	28	22	57				
16	60	20.4		02.7	270	37.4 ¹⁵⁴	+2	44.9 ¹⁵¹	35	33	6	03	28	06	25	19	60				
17	75	20.5	+12	03.6	285	11.8 ¹⁵⁴	+2	29.9 ¹⁵⁰	40	5	36	6	07	6	35	16	07	22	3	15	64
18	90	20.7	+12	04.4	299	46.1 ¹⁵³	+2	14.7 ¹⁵²	45	5	38	6	12	6	43	16	09	18	3	11	68
19	105	20.8		05.3	314	20.5 ¹⁵⁴	+1	59.6 ¹⁵¹	50	41	18	52	11	13	06	74					
20	120	20.9		06.1	328	54.8 ¹⁵³		44.5 ¹⁵¹	52	41	21	6	56	12	11	04	76				
21	135	21.0		07.0	343	29.1 ¹⁵³		29.3 ¹⁵²	54	42	24	7	00	14	7	3	02	78			
22	150	21.2		07.8	358	03.4 ¹⁵³	+1	14.1 ¹⁵²	56	43	27	05	15	5	2	59	81				
23	165	21.3		08.6	12	37.6 ¹⁵²	+0	58.9 ¹⁵²	58	44	30	11	16	2	56	84					
24	180	21.4	+12	09.5	27	11.9 ¹⁵³	+0	43.6 ¹⁵³	60 S	5	45	6	34	7	17	16	17	0	2	52	88

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 10 ^h 01 ^m 7		Mag: -3.9 PMG: 12 ^h 21 ^m		Mag: +0.7 PMG: 7 ^h 45 ^m		Mag: -2.4 PMG: 22 ^h 45 ^m		Mag: +0.2 PMG: 17 ^h 32 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	209	09.9	174	52.1	+12	54.4	243	40.5	-15	19.5	17	41.3	-3	13.2	96	13.2	+21	55.8
1	224	12.4	189	51.6		55.5	258	41.2		19.0	32	44.0		13.0	111	15.5		55.8
2	239	14.8	204	51.1		56.6	273	41.9		18.4	47	46.7		12.9	126	17.8		55.8
3	254	17.3	219	50.6		57.7	288	42.5		17.9	62	49.5		12.8	141	20.1		55.8
4	269	19.7	234	50.1		58.8	303	43.2		17.3	77	52.2		12.7	156	22.5		55.7
5	284	22.2	249	49.6	+12	59.9	318	43.9	-15	16.8	92	54.9	-3	12.6	171	24.8	+21	55.7
6	299	24.7	264	49.1	+13	01.0	333	44.5	-15	16.2	107	57.7	-3	12.5	186	27.1	+21	55.7
7	314	27.1	279	48.6		02.1	348	45.2		15.7	123	00.4		12.4	201	29.4		55.7
8	329	29.6	294	48.1		03.1	3	45.9		15.1	138	03.1		12.3	216	31.8		55.7
9	344	32.1	309	47.6		04.2	18	46.6		14.6	153	05.9		12.2	231	34.1		55.7
10	359	34.5	324	47.1		05.3	33	47.2		14.0	168	08.6		12.1	246	36.4		55.6
11	14	37.0	339	46.6	+13	06.4	48	47.9	-15	13.4	183	11.3	-3	12.0	261	38.7	+21	55.6
12	29	39.5	354	46.1	+13	07.5	63	48.6	-15	12.9	198	14.0	-3	11.9	276	41.0	+21	55.6
13	44	41.9	9	45.6		08.6	78	49.3		12.3	213	16.8		11.7	291	43.4		55.6
14	59	44.4	24	45.1		09.7	93	49.9		11.8	228	19.5		11.6	306	45.7		55.6
15	74	46.9	39	44.6		10.8	108	50.6		11.2	243	22.2		11.5	321	48.0		55.6
16	89	49.3	54	44.1		11.8	123	51.3		10.7	258	25.0		11.4	336	50.3		55.5
17	104	51.8	69	43.6	+13	12.9	138	52.0	-15	10.1	273	27.7	-3	11.3	351	52.6	+21	55.5
18	119	54.2	84	43.0	+13	14.0	153	52.6	-15	09.5	288	30.4	-3	11.2	6	55.0	+21	55.5
19	134	56.7	99	42.5		15.1	168	53.3		09.0	303	33.2		11.1	21	57.3		55.5
20	149	59.2	114	42.0		16.2	183	54.0		08.4	318	35.9		11.0	36	59.6		55.5
21	165	01.6	129	41.5		17.3	198	54.7		07.9	333	38.6		10.9	52	01.9		55.4
22	180	04.1	144	41.0		18.3	213	55.3		07.3	348	41.3		10.8	67	04.2		55.4
23	195	06.6	159	40.5		19.4	228	56.0		06.7	3	44.1		10.7	82	06.6		55.4
24	210	09.0	174	40.0	+13	20.5	243	56.7	-15	06.2	18	46.8	-3	10.6	97	08.9	+21	55.4
Dif	—		-5		+11		+7		+6		+27		+1		+23		0	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 9			Edad: 13 ^d 1 PHE	4 ^h : 56 ^h /4 12 ^h : 56 ^h /6 20 ^h : 56 ^h /8 R°: 45 ^m										
	PMG: 11 ^h 58 ^m 5														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	180	21.4	+12 09.5	27	11.9	+0 43.6	60 N	19 36	20 25	21 34	17 07 94	4 15 **			
1	195	21.5	10.3	41	46.1 ¹⁵²	28.4 ¹⁵²	58	28	13	21 15	05 90	15 3			
2	210	21.7	11.2	56	20.2 ¹⁵¹	+0 13.1 ¹⁵³	56	21	20 03	20 59	03 86	16 5			
3	225	21.8	12.0	70	54.4 ¹⁵²	-0 02.2 ¹⁵³	54	15	19 55	45	02 82	16 8			
4	240	21.9	12.8	85	28.5 ¹⁵¹	17.5 ¹⁵³	52	10	47	34	17 00 80	16 10			
5	255	22.0	+12 13.7	100	02.6 ¹⁵¹	-0 32.8 ¹⁵³	50	19 05	19 40	20 24	16 59 77	4 16 13			
6	270	22.2	+12 14.5	114	36.6 ¹⁵⁰	-0 48.2 ¹⁵⁴	45	18 54	19 26	20 04	16 56 72	4 16 18			
7	285	22.3	15.4	129	10.6 ¹⁵⁰	-1 03.5 ¹⁵³	40	46	14	19 49	53 68	17 21			
8	300	22.4	16.2	143	44.6 ¹⁵⁰	18.9 ¹⁵⁴	35	38	19 05	36	51 64	17 25			
9	315	22.5	17.0	158	18.6 ¹⁵⁰	34.3 ¹⁵⁴	30	32	18 57	26	49 60	17 29			
10	330	22.6	17.9	172	52.5 ¹⁴⁹	-1 49.7 ¹⁵⁴	20	20	43	19 10	46 54	18 34			
11	345	22.8	+12 18.7	187	26.4 ¹⁴⁹	-2 05.1 ¹⁵⁴	10 N	18 11	18 32	18 58	16 43 50	4 18 39			
12	0	22.9	+12 19.6	202	00.2 ¹⁴⁸	-2 20.5 ¹⁵⁴	0	18 02	18 23	18 48	16 41 44	4 18 44			
13	15	23.0	20.4	216	34.0 ¹⁴⁸	35.9 ¹⁵⁴	10 S	17 53	14	39	38 40	18 49			
14	30	23.1	21.2	231	07.7 ¹⁴⁷	-2 51.3 ¹⁵⁴	20	44	18 06	32	35 36	19 53			
15	45	23.3	22.1	245	41.4 ¹⁴⁷	-3 06.7 ¹⁵⁴	30	33	17 58	26	32 30	19 59			
16	60	23.4	22.9	260	15.1 ¹⁴⁷	22.1 ¹⁵⁴	35	27	53	23	31 26	19 62			
17	75	23.5	+12 23.7	274	48.7 ¹⁴⁶	-3 37.5 ¹⁵⁴	40	17 20	17 48	18 20	16 29 22	4 19 66			
18	90	23.6	+12 24.6	289	22.3 ¹⁴⁶	-3 52.9 ¹⁵⁴	45	17 13	17 43	18 17	16 27 18	4 19 71			
19	105	23.7	25.4	303	55.8 ¹⁴⁵	-4 08.4 ¹⁵⁵	50	17 03	36	14	24 13	20 75			
20	120	23.9	26.2	318	29.3 ¹⁴⁵	23.8 ¹⁵⁴	52	16 59	34	13	23 11	20 78			
21	135	24.0	27.1	333	02.7 ¹⁴⁴	39.2 ¹⁵⁴	54	54	31	12	21 9	20 81			
22	150	24.1	27.9	347	36.1 ¹⁴⁴	-4 54.6 ¹⁵⁴	56	49	27	11	20 6	20 84			
23	165	24.2	28.7	2	09.4 ¹⁴³	-5 10.0 ¹⁵⁴	58	43	24	10	18 3	20 87			
24	180	24.3	+12 29.6	16	42.7 ¹⁴³	-5 25.4 ¹⁵⁴	60 S	16 36	17 20	18 09	16 17 **	4 20 91			

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 9 ^h 57 ^m 8		Mag: -3.9 PMG: 12 ^h 22 ^m		Mag: +0.7 PMG: 7 ^h 44 ^m		Mag: -2.4 PMG: 22 ^h 41 ^m		Mag: +0.2 PMG: 17 ^h 29 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	210	09.0	174	40.0	+13 20.5	243 56.7	-15 06.2	18 46.8	-3 10.6	97 08.9	+21 55.4
1	225	11.5	189	39.5	21.6	258 57.4	05.6	33 49.5	10.5	112 11.2	55.4
2	240	14.0	204	39.0	22.7	273 58.0	05.1	48 52.3	10.4	127 13.5	55.4
3	255	16.4	219	38.5	23.7	288 58.7	04.5	63 55.0	10.3	142 15.8	55.3
4	270	18.9	234	37.9	24.8	303 59.4	03.9	78 57.7	10.1	157 18.2	55.3
5	285	21.3	249	37.4	+13 25.9	319 00.1	-15 03.4	94 00.5	-3 10.0	172 20.5	+21 55.3
6	300	23.8	264	36.9	+13 27.0	334 00.7	-15 02.8	109 03.2	-3 09.9	187 22.8	+21 55.3
7	315	26.3	279	36.4	28.0	349 01.4	02.3	124 05.9	09.8	202 25.1	55.3
8	330	28.7	294	35.9	29.1	4 02.1	01.7	139 08.6	09.7	217 27.4	55.2
9	345	31.2	309	35.4	30.2	19 02.8	01.1	154 11.4	09.6	232 29.7	55.2
10	0	33.7	324	34.9	31.3	34 03.4	-15 00.6	169 14.1	09.5	247 32.1	55.2
11	15	36.1	339	34.4	+13 32.4	49 04.1	-15 00.0	184 16.8	-3 09.4	262 34.4	+21 55.2
12	30	38.6	354	33.8	+13 33.4	64 04.8	-14 59.5	199 19.5	-3 09.3	277 36.7	+21 55.2
13	45	41.1	9	33.3	34.5	79 05.5	58.9	214 22.3	09.2	292 39.0	55.2
14	60	43.5	24	32.8	35.6	94 06.2	58.3	229 25.0	09.1	307 41.3	55.1
15	75	46.0	39	32.3	36.6	109 06.8	57.8	244 27.7	09.0	322 43.6	55.1
16	90	48.5	54	31.8	37.7	124 07.5	57.2	259 30.5	08.9	337 46.0	55.1
17	105	50.9	69	31.3	+13 38.8	139 08.2	-14 56.7	274 33.2	-3 08.8	352 48.3	+21 55.1
18	120	53.4	84	30.7	+13 39.9	154 08.9	-14 56.1	289 35.9	-3 08.7	7 50.6	+21 55.1
19	135	55.8	99	30.2	40.9	169 09.5	55.5	304 38.6	08.6	22 52.9	55.0
20	150	58.3	114	29.7	42.0	184 10.2	55.0	319 41.4	08.5	37 55.2	55.0
21	166	00.8	129	29.2	43.1	199 10.9	54.4	334 44.1	08.3	52 57.5	55.0
22	181	03.2	144	28.7	44.1	214 11.6	53.8	349 46.8	08.2	67 59.9	55.0
23	196	05.7	159	28.1	45.2	229 12.3	53.3	4 49.5	08.1	83 02.2	55.0
24	211	08.2	174	27.6	+13 46.3	244 12.9	-14 52.7	19 52.3	-3 08.0	98 04.5	+21 55.0
Dif	—		-5		+11	+7	+6	+27	+1	+23	

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 3			Edad: 14 ^d 1 PHE { 4 ^h : 57 ^m 1 12 ^h : 57 ^m 3 20 ^h : 57 ^m 5 PMG: 23 ^h 36 ^m R°: 49 ^m														
	hG ☉	Dec		hG ☾	Dif		Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	180	24.3	+12	29.6	16	42.7	-5	25.4	60 N	2	22	3	31	4	20	18	41	99
1	195	24.5		30.4	31	15.9 ¹⁴²		40.8 ¹⁵⁴	58		41	43		28		35	94	18
2	210	24.6		31.2	45	49.1 ¹⁴²	-5	56.2 ¹⁵⁴	56	2	57	3	53	35		29	91	21
3	225	24.7		32.1	60	22.2 ¹⁴¹	-6	11.6 ¹⁵⁴	54	3	11	4	01	41		24	88	24
4	240	24.8		32.9	74	55.2 ¹⁴⁰		26.9 ¹⁵³	52		22	09		46		20	84	26
5	255	24.9	+12	33.7	89	28.2 ¹⁴⁰	-6	42.3 ¹⁵⁴	50	3	32	4	16	4	51	18	16	81
6	270	25.1	+12	34.6	104	01.1 ¹³⁹	-6	57.6 ¹⁵³	45	3	52	4	30	5	02	18	08	75
7	285	25.2		35.4	118	34.0 ¹³⁹	-7	12.9 ¹⁵³	40	4	08		42	11		18	01	70
8	300	25.3		36.2	133	06.8 ¹³⁸		28.2 ¹⁵³	35		20	4	52	18		17	55	67
9	315	25.4		37.1	147	39.5 ¹³⁷		43.5 ¹⁵³	30		30	5	00	25		49	64	46
10	330	25.5		37.9	162	12.2 ¹³⁷	-7	58.8 ¹⁵³	20		47	13		36		40	58	52
11	345	25.6	+12	38.7	176	44.8 ¹³⁶	-8	14.0 ¹⁵²	10 N	4	59	5	24	5	46	17	33	52
12	0	25.8	+12	39.5	191	17.3 ¹³⁵	-8	29.3 ¹⁵³	0	5	09	5	34	5	55	17	25	48
13	15	25.9		40.4	205	49.7 ¹³⁴		44.5 ¹⁵²	10 S		18		42	6	04	18	43	07
14	30	26.0		41.2	220	22.1 ¹³⁴	-8	59.6 ¹⁵¹	20		25	5	51	13		11	38	12
15	45	26.1		42.0	234	54.5 ¹³⁴	-9	14.8 ¹⁵²	30		31	6	00	24		17	02	33
16	60	26.2		42.9	249	26.7 ¹³²		29.9 ¹⁵¹	35		34		04	30		16	57	30
17	75	26.3	+12	43.7	263	58.9 ¹³²	-9	45.0 ¹⁵¹	40	5	37	6	09	6	37	16	51	26
18	90	26.5	+12	44.5	278	31.0 ¹³¹	-10	00.1 ¹⁵¹	45	5	40	6	15	6	45	16	45	21
19	105	26.6		45.3	293	03.0 ¹³⁰		15.1 ¹⁵⁰	50		43		21	55		37	16	35
20	120	26.7		46.2	307	34.9 ¹²⁹		30.1 ¹⁵⁰	52		44		24	6	59	34	13	38
21	135	26.8		47.0	322	06.8 ¹²⁹	-10	45.1 ¹⁵⁰	54		46		27	7	04	30	11	41
22	150	26.9		47.8	336	38.6 ¹²⁸	-11	00.0 ¹⁴⁹	56		47		30	09		26	8	44
23	165	27.0		48.6	351	10.3 ¹²⁷	-11	14.9 ¹⁴⁹	58		48		34	15		21	4	47
24	180	27.1	+12	49.5	5	41.9 ¹²⁶	-11	29.7 ¹⁴⁸	60 S	5	49	6	38	7	22	16	16	0

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 9 ^h 53 ^m 8		Mag: -3.9 PMG: 12 ^h 23 ^m		Mag: +0.7 PMG: 7 ^h 43 ^m		Mag: -2.4 PMG: 22 ^h 36 ^m		Mag: +0.2 PMG: 17 ^h 25 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	211	08.2	174	27.6	+13	46.3	244	12.9	-14	52.7
1	226	10.6	189	27.1		47.3	259	13.6		52.1
2	241	13.1	204	26.6		48.4	274	14.3		51.6
3	256	15.6	219	26.1		49.5	289	15.0		51.0
4	271	18.0	234	25.5		50.5	304	15.7		50.4
5	286	20.5	249	25.0	+13	51.6	319	16.3	-14	49.9
6	301	22.9	264	24.5	+13	52.7	334	17.0	-14	49.3
7	316	25.4	279	24.0		53.7	349	17.7		48.8
8	331	27.9	294	23.4		54.8	4	18.4		48.2
9	346	30.3	309	22.9		55.8	19	19.1		47.6
10	1	32.8	324	22.4		56.9	34	19.7		47.1
11	16	35.3	339	21.9	+13	58.0	49	20.4	-14	46.5
12	31	37.7	354	21.4	+13	59.0	64	21.1	-14	45.9
13	46	40.2	9	20.8	+14	00.1	79	21.8		45.4
14	61	42.7	24	20.3		01.1	94	22.5		44.8
15	76	45.1	39	19.8		02.2	109	23.2		44.2
16	91	47.6	54	19.2		03.3	124	23.8		43.7
17	106	50.1	69	18.7	+14	04.3	139	24.5	-14	43.1
18	121	52.5	84	18.2	+14	05.4	154	25.2	-14	42.5
19	136	55.0	99	17.7		06.4	169	25.9		42.0
20	151	57.4	114	17.1		07.5	184	26.6		41.4
21	166	59.9	129	16.6		08.5	199	27.2		40.8
22	182	02.4	144	16.1		09.6	214	27.9		40.2
23	197	04.8	159	15.6		10.6	229	28.6		39.7
24	212	07.3	174	15.0	+14	11.7	244	29.3	-14	39.1
Dif	—		-5 +11		+7 +6		+27 +1		+23 0	

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 9			Edad: 15 ^d 1 PHE { 4 ^h : 57 ^m 7 12 ^h : 57 ^m 9 20 ^h : 58 ^m 1 R°: ***m										
	PMG: 11 ^h 58 ^m 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
0	180	27.1	+12 49.5	5	41.9	-11 29.7		60 N	19 41	20 31	21 43	20 20 108	4 13 1	
1	195	27.3	50.3	20	13.5 ¹²⁶	44.6 ¹⁴⁹		58	32	18	22	09 101	21 5	
2	210	27.4	51.1	34	44.9 ¹²⁴	-11 59.3 ¹⁴⁷		56	25	20 08	21 05	20 00 96	27 9	
3	225	27.5	51.9	49	16.3 ¹²⁴	-12 14.0 ¹⁴⁷		54	19	19 59	20 51	19 52 91	33 12	
4	240	27.6	52.8	63	47.6 ¹²³	28.7 ¹⁴⁷		52	13	51	39	44 88	38 16	
5	255	27.7	+12 53.6	78	18.8 ¹²²	-12 43.4 ¹⁴⁷		50	19 08	19 44	20 28	19 37 85	4 43 18	
6	270	27.8	+12 54.4	92	49.9 ¹²¹	-12 58.0 ¹⁴⁶		45	18 57	19 28	20 07	19 23 79	4 54 23	
7	285	27.9	55.2	107	20.9 ¹²⁰	-13 12.5 ¹⁴⁵		40	48	16	19 51	11 74	5 02 28	
8	300	28.1	56.0	121	51.8 ¹¹⁹	27.0 ¹⁴⁵		35	40	19 06	38	19 02 70	10 31	
9	315	28.2	56.9	136	22.7 ¹¹⁹	41.4 ¹⁴⁴		30	33	18 58	28	18 53 67	17 34	
10	330	28.3	57.7	150	53.4 ¹¹⁷	-13 55.8 ¹⁴⁴		20	21	44	19 11	38 61	28 40	
11	345	28.4	+12 58.5	165	24.1 ¹¹⁷	-14 10.1 ¹⁴³		10 N	18 11	18 33	18 58	18 25 57	5 38 45	
12	0	28.5	+12 59.3	179	54.6 ¹¹⁵	-14 24.4 ¹⁴³		0	18 01	18 23	18 47	18 13 52	5 48 50	
13	15	28.6	+13 00.1	194	25.1 ¹¹⁵	38.6 ¹⁴²		10 S	17 52	14	39	18 01 48	5 57 55	
14	30	28.7	01.0	208	55.5 ¹¹⁴	-14 52.7 ¹⁴¹		20	42	18 05	31	17 49 43	6 08 59	
15	45	28.8	01.8	223	25.7 ¹¹²	-15 06.8 ¹⁴¹		30	31	17 56	24	35 37	19 65	
16	60	28.9	02.6	237	55.9 ¹¹²	20.8 ¹⁴⁰		35	25	51	21	27 34	26 69	
17	75	29.1	+13 03.4	252	26.0 ¹¹¹	-15 34.8 ¹⁴⁰		40	17 18	17 46	18 17	17 17 31	6 34 72	
18	90	29.2	+13 04.2	266	56.0 ¹¹⁰	-15 48.6 ¹³⁸		45	17 09	17 40	18 14	17 06 27	6 43 77	
19	105	29.3	05.1	281	25.8 ¹⁰⁸	-16 02.5 ¹³⁹		50	16 59	33	11	16 53 21	6 54 83	
20	120	29.4	05.9	295	55.6 ¹⁰⁸	16.2 ¹³⁷		52	55	30	09	47 18	7 00 85	
21	135	29.5	06.7	310	25.3 ¹⁰⁷	29.9 ¹³⁷		54	50	27	08	41 15	05 89	
22	150	29.6	07.5	324	54.8 ¹⁰⁵	43.5 ¹³⁶		56	44	23	07	34 11	12 93	
23	165	29.7	08.3	339	24.3 ¹⁰⁵	-16 57.0 ¹³⁵		58	38	19	05	25 7	19 97	
24	180	29.8	+13 09.1	353	53.7 ¹⁰⁴	-17 10.4 ¹³⁴		60 S	16 31	17 15	18 04	16 16 2	7 27 103	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 9 ^h 49 ^m 9		Mag: -3.9 PMG: 12 ^h 23 ^m		Mag: +0.7 PMG: 7 ^h 42 ^m		Mag: -2.4 PMG: 22 ^h 32 ^m		Mag: +0.2 PMG: 17 ^h 21 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	212	07.3	174	15.0	+14	11.7	244	29.3	-14	39.1	20	57.6	-3	05.5	99	00.0	+21	54.5
1	227	09.8	189	14.5		12.8	259	30.0		38.5	36	00.4		05.4	114	02.3		54.5
2	242	12.2	204	14.0		13.8	274	30.7		38.0	51	03.1		05.3	129	04.6		54.5
3	257	14.7	219	13.4		14.9	289	31.3		37.4	66	05.8		05.2	144	06.9		54.4
4	272	17.2	234	12.9		15.9	304	32.0		36.8	81	08.5		05.1	159	09.2		54.4
5	287	19.6	249	12.4	+14	17.0	319	32.7	-14	36.3	96	11.2	-3	05.0	174	11.5	+21	54.4
6	302	22.1	264	11.8	+14	18.0	334	33.4	-14	35.7	111	14.0	-3	04.9	189	13.8	+21	54.4
7	317	24.6	279	11.3		19.1	349	34.1		35.1	126	16.7		04.8	204	16.2		54.4
8	332	27.0	294	10.8		20.1	4	34.8		34.6	141	19.4		04.7	219	18.5		54.3
9	347	29.5	309	10.2		21.1	19	35.4		34.0	156	22.1		04.6	234	20.8		54.3
10	2	31.9	324	09.7		22.2	34	36.1		33.4	171	24.8		04.5	249	23.1		54.3
11	17	34.4	339	09.2	+14	23.2	49	36.8	-14	32.8	186	27.6	-3	04.4	264	25.4	+21	54.3
12	32	36.9	354	08.6	+14	24.3	64	37.5	-14	32.3	201	30.3	-3	04.3	279	27.7	+21	54.3
13	47	39.3	9	08.1		25.3	79	38.2		31.7	216	33.0		04.2	294	30.0		54.2
14	62	41.8	24	07.6		26.4	94	38.9		31.1	231	35.7		04.1	309	32.3		54.2
15	77	44.3	39	07.0		27.4	109	39.6		30.6	246	38.4		04.0	324	34.6		54.2
16	92	46.7	54	06.5		28.5	124	40.2		30.0	261	41.2		03.9	339	36.9		54.2
17	107	49.2	69	05.9	+14	29.5	139	40.9	-14	29.4	276	43.9	-3	03.8	354	39.2	+21	54.2
18	122	51.7	84	05.4	+14	30.5	154	41.6	-14	28.8	291	46.6	-3	03.7	9	41.5	+21	54.1
19	137	54.1	99	04.9		31.6	169	42.3		28.3	306	49.3		03.6	24	43.9		54.1
20	152	56.6	114	04.3		32.6	184	43.0		27.7	321	52.0		03.5	39	46.2		54.1
21	167	59.0	129	03.8		33.7	199	43.7		27.1	336	54.8		03.4	54	48.5		54.1
22	183	01.5	144	03.3		34.7	214	44.4		26.5	351	57.5		03.3	69	50.8		54.1
23	198	04.0	159	02.7		35.7	229	45.0		26.0	7	00.2		03.2	84	53.1		54.0
24	213	06.4	174	02.2	+14	36.8	244	45.7	-14	25.4	22	02.9	-3	03.1	99	55.4	+21	54.0
Dif	—		-5 +10		+7 +6		+27 +1		+23 0									

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna												
	SD: 15'9 PMG: 11 ^h 57 ^m 9				Edad: 16 ^d 1 PHE { SD: 15'9 PMG: 0 ^h 25 ^m R°: 54 ^m																							
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°												
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m									
0	180	29.8	+13	09.1	353	53.7	-17	10.4	60 N	2	12	3	24	4	14	22	08	113	4	14	2							
1	195	29.9		10.0	8	22.9 ¹⁰²		23.8 ¹³⁴	58	34	37	23	21	50	104		26	8										
2	210	30.0		10.8	22	52.1 ¹⁰²		37.0 ¹³²	56	2	51	47	30	36	97		36	14										
3	225	30.2		11.6	37	21.1 ¹⁰⁰	-17	50.2 ¹³²	54	3	05	3	56	36	23	93	45	18										
4	240	30.3		12.4	51	50.0 ⁹⁹	-18	03.3 ¹³¹	52	17	4	05	42	12	89		4	54	20									
5	255	30.4	+13	13.2	66	18.9 ⁹⁹	-18	16.4 ¹³¹	50	3	27	4	12	4	47	21	02	86	5	01	24							
6	270	30.5	+13	14.0	80	47.6 ⁹⁷	-18	29.3 ¹²⁹	45	3	48	4	27	4	59	20	42	80	5	17	30							
7	285	30.6		14.8	95	16.2 ⁹⁶		42.1 ¹²⁸	40	4	04	39	5	08	25	76		30	34									
8	300	30.7		15.6	109	44.7 ⁹⁵	-18	54.9 ¹²⁸	35	17	49	16	12	72	41	38												
9	315	30.8		16.5	124	13.1 ⁹⁴	-19	07.5 ¹²⁶	30	28	4	58	23	20	00	69	5	51	41									
10	330	30.9		17.3	138	41.3 ⁹²		20.1 ¹²⁶	20	45	5	12	35	19	39	65	6	08	46									
11	345	31.0	+13	18.1	153	09.5 ⁹²	-19	32.6 ¹²⁵	10 N	4	58	5	23	5	45	19	22	60	6	23	51							
12	0	31.1	+13	18.9	167	37.6 ⁹¹	-19	44.9 ¹²³	0	5	09	5	33	5	55	19	05	57	6	38	54							
13	15	31.2		19.7	182	05.5 ⁸⁹	-19	57.2 ¹²³	10 S	18	42	6	04	18	49	53	6	52	58									
14	30	31.3		20.5	196	33.3 ⁸⁸	-20	09.3 ¹²¹	20	25	5	11	14	32	49	7	07	63										
15	45	31.4		21.3	211	01.0 ⁸⁷		21.4 ¹²¹	30	33	6	01	25	12	45	24	68											
16	60	31.6		22.1	225	28.6 ⁸⁶		33.3 ¹¹⁹	35	36	06	32	18	01	42	35	71											
17	75	31.7	+13	22.9	239	56.1 ⁸⁵	-20	45.2 ¹¹⁹	40	5	39	6	11	6	39	17	48	38	7	46	75							
18	90	31.8	+13	23.8	254	23.5 ⁸⁴	-20	56.9 ¹¹⁷	45	5	43	6	17	6	47	17	33	34	8	00	80							
19	105	31.9		24.6	268	50.8 ⁸³	-21	08.5 ¹¹⁶	50	46	24	6	58	14	29	17	86											
20	120	32.0		25.4	283	17.9 ⁸¹		20.0 ¹¹⁵	52	47	27	7	02	17	05	26	25	89										
21	135	32.1		26.2	297	45.0 ⁸¹		31.4 ¹¹⁴	54	49	30	07	16	56	22	34	93											
22	150	32.2		27.0	312	11.9 ⁷⁹		42.6 ¹¹²	56	50	34	13	45	18	45	96												
23	165	32.3		27.8	326	38.7 ⁷⁸	-21	53.8 ¹¹²	58	52	38	20	32	13	8	56	103											
24	180	32.4	+13	28.6	341	05.4 ⁷⁷	-22	04.8 ¹¹⁰	60 S	5	53	6	42	7	27	16	18	5	9	10	110							
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO											
	PMG: 9 ^h 46 ^m 0				Mag: -3.9 PMG: 12 ^h 24 ^m				Mag: +0.7 PMG: 7 ^h 41 ^m				Mag: -2.4 PMG: 22 ^h 28 ^m				Mag: +0.2 PMG: 17 ^h 18 ^m											
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec									
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'								
0	213	06.4	174	02.2	+14	36.8	244	45.7	-14	25.4	22	02.9	-3	03.1	99	55.4	+21	54.0										
1	228	08.9	189	01.6		37.8	259	46.4		24.8	37	05.6		03.0	114	57.7		54.0										
2	243	11.4	204	01.1		38.9	274	47.1		24.2	52	08.3		02.9	130	00.0		54.0										
3	258	13.8	219	00.5		39.9	289	47.8		23.7	67	11.1		02.8	145	02.3		54.0										
4	273	16.3	234	00.0		40.9	304	48.5		23.1	82	13.8		02.7	160	04.6		53.9										
5	288	18.8	248	59.5	+14	42.0	319	49.2	-14	22.5	97	16.5	-3	02.6	175	06.9	+21	53.9										
6	303	21.2	263	58.9	+14	43.0	334	49.9	-14	21.9	112	19.2	-3	02.5	190	09.2	+21	53.9										
7	318	23.7	278	58.4		44.0	349	50.5		21.4	127	21.9		02.4	205	11.5		53.9										
8	333	26.2	293	57.8		45.1	4	51.2		20.8	142	24.6		02.3	220	13.8		53.9										
9	348	28.6	308	57.3		46.1	19	51.9		20.2	157	27.4		02.2	235	16.1		53.8										
10	3	31.1	323	56.7		47.1	34	52.6		19.6	172	30.1		02.1	250	18.4		53.8										
11	18	33.5	338	56.2	+14	48.2	49	53.3	-14	19.1	187	32.8	-3	02.0	265	20.7	+21	53.8										
12	33	36.0	353	55.7	+14	49.2	64	54.0	-14	18.5	202	35.5	-3	01.9	280	23.0	+21	53.8										
13	48	38.5	8	55.1		50.2	79	54.7		17.9	217	38.2		01.8	295	25.4		53.8										
14	63	40.9	23	54.6		51.2	94	55.4		17.3	232	40.9		01.7	310	27.7		53.7										
15	78	43.4	38	54.0		52.3	109	56.0		16.8	247	43.7		01.6	325	30.0		53.7										
16	93	45.9	53	53.5		53.3	124	56.7		16.2	262	46.4		01.5	340	32.3		53.7										
17	108	48.3	68	52.9	+14	54.3	139	57.4	-14	15.6	277	49.1	-3	01.4	355	34.6	+21	53.7										
18	123	50.8	83	52.4	+14	55.4	154	58.1	-14	15.0	292	51.8	-3	01.3	10	36.9	+21	53.7										
19	138	53.3	98	51.8		56.4	169	58.8		14.5	307	54.5		01.2	25	39.2		53.6										
20	153	55.7	113	51.3		57.4	184	59.5		13.9	322	57.2		01.1	40	41.5		53.6										
21	168	58.2	128	50.7		58.4	200	00.2		13.3	337	59.9		01.0	55	43.8		53.6										
22	184	00.7	143	50.2	+14	59.5	215	00.9		12.7	353	02.7		00.9	70	46.1		53.6										
23	199	03.1	158	49.6	+15	00.5	230	01.6		12.1	8	05.4		00.8	85	48.4		53.6										
24	214	05.6	173	49.1	+15	01.5	245	02.3	-14	11.6	23	08.1	-3	00.7	100	50.7	+21	53.5										
Dif	—				-5				+7				+27				+1				+23				0			

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 9			Edad: 17 ^d 1	PHE {	4 ^h : 58 ^m 8 12 ^h : 58 ^m 9 20 ^h : 59 ^m 0			Final del crepúsculo			Salida de Luna		Puesta de Luna	
	PMG: 11 ^h 57 ^m 8								R°: 58 ^m						
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	180	32.4	+13 28.6	341	05.4	76	-22 04.8	109	60 N	19 46	20 37	21 52	** ** *	4 16	7
1	195	32.5	29.4	355	32.0	76	15.7	109	58	37	24	29	23 34	95	34 17
2	210	32.6	30.2	9	58.5	75	26.4	107	56	29	13	21 11	23 13	89	4 50 22
3	225	32.7	31.0	24	24.8	73	37.1	107	54	23	20 03	20 56	22 56	84	5 03 27
4	240	32.8	31.8	38	51.1	73	47.6	105	52	17	19 54	43	41	82	14 31
5	255	32.9	+13 32.6	53	17.2	71	-22 58.0	104	50	19 11	19 47	20 32	22 28	80	5 25 33
6	270	33.0	+13 33.4	67	43.2	70	-23 08.2	102	45	18 59	19 31	20 10	22 02	75	5 47 39
7	285	33.1	34.2	82	09.1	69	18.3	101	40	50	19	19 54	21 41	73	6 04 43
8	300	33.2	35.0	96	34.9	68	28.3	100	35	41	19 08	40	24	70	19 46
9	315	33.3	35.8	111	00.6	67	38.1	98	30	34	18 59	29	21 09	69	32 49
10	330	33.4	36.6	125	26.2	66	47.8	97	20	22	45	19 12	20 44	66	6 54 53
11	345	33.5	+13 37.4	139	51.7	65	-23 57.4	96	10 N	18 11	18 33	18 58	20 22	64	7 14 56
12	0	33.6	+13 38.2	154	17.1	64	-24 06.8	94	0	18 01	18 22	18 47	20 02	61	7 32 59
13	15	33.7	39.0	168	42.3	62	16.1	93	10 S	17 51	13	38	19 42	59	7 50 62
14	30	33.8	39.8	183	07.5	62	25.2	91	20	41	18 04	30	19 21	56	8 10 65
15	45	33.9	40.6	197	32.5	60	34.1	89	30	29	17 54	22	18 57	53	32 70
16	60	34.0	41.4	211	57.5	60	43.0	89	35	23	49	18	43	51	8 46 72
17	75	34.1	+13 42.2	226	22.3	58	-24 51.6	86	40	17 15	17 43	18 15	18 26	49	9 01 75
18	90	34.2	+13 43.0	240	47.0	57	-25 00.1	85	45	17 06	17 37	18 11	18 07	45	9 20 78
19	105	34.3	43.8	255	11.6	56	08.5	84	50	16 56	29	07	17 43	40	43 83
20	120	34.4	44.6	269	36.2	56	16.7	82	52	51	26	06	31	38	9 54 86
21	135	34.5	45.4	284	00.6	54	24.7	80	54	45	23	04	18	35	10 07 89
22	150	34.6	46.2	298	24.9	53	32.6	79	56	40	19	02	17 03	30	21 94
23	165	34.7	47.0	312	49.2	53	40.3	77	58	33	15	18 01	16 45	25	10 39 100
24	180	34.8	+13 47.8	327	13.3	51	-25 47.9	76	60 S	16 25	17 10	17 59	16 23	15	11 00 110

UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO				
	PMG: 9 ^h 42 ^m 0		Mag: -3.9 PMG: 12 ^h 25 ^m		Mag: +0.7 PMG: 7 ^h 39 ^m		Mag: -2.4 PMG: 22 ^h 23 ^m			Mag: +0.2 PMG: 17 ^h 14 ^m				
	hG ♈		hG ♀		hG ♂		hG ♃			hG ♄				
h	°	'	°	°	'	°	°	'	°	°	'			
0	214	05.6	173 49.1	+15 01.5	245 02.3	-14 11.6	23 08.1	-3 00.7	100 50.7	+21 53.5				
1	229	08.0	188 48.5	02.5	260 02.9	11.0	38 10.8	00.6	115 53.0	53.5				
2	244	10.5	203 48.0	03.5	275 03.6	10.4	53 13.5	00.5	130 55.3	53.5				
3	259	13.0	218 47.4	04.6	290 04.3	09.8	68 16.2	00.4	145 57.6	53.5				
4	274	15.4	233 46.9	05.6	305 05.0	09.3	83 18.9	00.3	160 59.9	53.5				
5	289	17.9	248 46.3	+15 06.6	320 05.7	-14 08.7	98 21.7	-3 00.2	176 02.2	+21 53.4				
6	304	20.4	263 45.8	+15 07.6	335 06.4	-14 08.1	113 24.4	-3 00.1	191 04.5	+21 53.4				
7	319	22.8	278 45.2	08.6	350 07.1	07.5	128 27.1	-3 00.0	206 06.8	53.4				
8	334	25.3	293 44.6	09.7	5 07.8	06.9	143 29.8	-2 59.9	221 09.1	53.4				
9	349	27.8	308 44.1	10.7	20 08.5	06.4	158 32.5	59.8	236 11.4	53.3				
10	4	30.2	323 43.5	11.7	35 09.2	05.8	173 35.2	59.7	251 13.7	53.3				
11	19	32.7	338 43.0	+15 12.7	50 09.9	-14 05.2	188 37.9	-2 59.6	266 16.0	+21 53.3				
12	34	35.2	353 42.4	+15 13.7	65 10.5	-14 04.6	203 40.6	-2 59.5	281 18.3	+21 53.3				
13	49	37.6	8 41.9	14.7	80 11.2	04.0	218 43.4	59.4	296 20.6	53.3				
14	64	40.1	23 41.3	15.7	95 11.9	03.4	233 46.1	59.3	311 22.9	53.2				
15	79	42.5	38 40.8	16.8	110 12.6	02.9	248 48.8	59.2	326 25.2	53.2				
16	94	45.0	53 40.2	17.8	125 13.3	02.3	263 51.5	59.1	341 27.5	53.2				
17	109	47.5	68 39.6	+15 18.8	140 14.0	-14 01.7	278 54.2	-2 59.0	356 29.8	+21 53.2				
18	124	49.9	83 39.1	+15 19.8	155 14.7	-14 01.1	293 56.9	-2 58.9	11 32.1	+21 53.2				
19	139	52.4	98 38.5	20.8	170 15.4	-14 00.5	308 59.6	58.8	26 34.4	53.1				
20	154	54.9	113 38.0	21.8	185 16.1	-14 00.0	324 02.3	58.7	41 36.7	53.1				
21	169	57.3	128 37.4	22.8	200 16.8	-13 59.4	339 05.0	58.6	56 39.0	53.1				
22	184	59.8	143 36.8	23.8	215 17.5	58.8	354 07.8	58.5	71 41.3	53.1				
23	200	02.3	158 36.3	24.8	230 18.2	58.2	9 10.5	58.4	86 43.6	53.0				
24	215	04.7	173 35.7	+15 25.8	245 18.9	-13 57.6	24 13.2	-2 58.3	101 45.9	+21 53.0				
Dif	—		-6	+10	+7		+6	+27		+1	+23		0	

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 9				Edad: 18 ^d 1 PHE { 4 ^h : 59 ^m 1 12 ^h : 59 ^m 2 20 ^h : 59 ^m 3											
	PMG: 11 ^h 57 ^m 6				SD: 16 ^d 1 PMG: 2 ^h 17 ^m R°: 61 ^m											
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	m	h m	m
0	180	34.8	+13	47.8	327	13.3	-25	47.9	60 N	2 03	3 18	4 09	0 01	106	4 23	24
1	195	34.9		48.6	341	37.3	-25	55.3	58	26	31	18	**	**	4 51	34
2	210	35.0		49.4	356	01.3	-26	02.5	56	44	42	25	**	**	5 12	40
3	225	35.1		50.2	10	25.2		09.5	54	2 59	3 52	32	**	**	30	44
4	240	35.2		51.0	24	48.9		16.4	52	3 12	4 00	38	**	**	45	47
5	255	35.3	+13	51.8	39	12.6	-26	23.1	50	3 22	4 08	4 44	23	48	5 58	49
6	270	35.4	+13	52.6	53	36.2	-26	29.7	45	3 44	4 24	4 55	23	17	6 26	51
7	285	35.5		53.4	67	59.7		36.0	40	4 01	36	5 05	22	54	6 47	54
8	300	35.6		54.2	82	23.1		42.2	35	15	47	14		34	7 05	56
9	315	35.7		55.0	96	46.5		48.3	30	26	4 56	21	22	18	21	57
10	330	35.8		55.8	111	09.7		54.1	20	44	5 10	33	21	50	7 47	59
11	345	35.9	+13	56.6	125	32.9	-26	59.7	10 N	4 57	5 22	5 44	21	26	8 10	61
12	0	36.0	+13	57.4	139	56.0	-27	05.2	0	5 08	5 33	5 54	21	03	8 31	63
13	15	36.1		58.2	154	19.1		10.5	10 S	18	43	6 04	20	41	8 52	64
14	30	36.2		59.0	168	42.0		15.6	20	26	5 52	15	20	17	9 15	66
15	45	36.3	+13	59.7	183	04.9		20.6	30	34	6 02	26	19	50	42	67
16	60	36.4	+14	00.5	197	27.8		25.3	35	37	07	33	34	60	9 58	68
17	75	36.5	+14	01.3	211	50.5	-27	29.9	40	5 41	6 13	6 41	19	15	10 16	69
18	90	36.6	+14	02.1	226	13.2	-27	34.2	45	5 45	6 19	6 50	18	52	10 38	71
19	105	36.7		02.9	240	35.9		38.4	50	49	27	7 01	23	57	11 06	74
20	120	36.8		03.7	254	58.5		42.4	52	50	30	06	18	09	20	75
21	135	36.9		04.5	269	21.0		46.2	54	52	34	11	17	53	36	77
22	150	37.0		05.3	283	43.5		49.8	56	54	38	17	33	53	11 55	79
23	165	37.1		06.1	298	05.9		53.2	58	56	42	24	17	10	12 19	82
24	180	37.2	+14	06.8	312	28.3	-27	56.5	60 S	5 58	6 47	7 32	16	38	12 50	89

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 9 ^h 38 ^m 1		Mag: -3.9 PMG: 12 ^h 26 ^m		Mag: +0.7 PMG: 7 ^h 38 ^m		Mag: -2.4 PMG: 22 ^h 19 ^m		Mag: +0.2 PMG: 17 ^h 10 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	215	04.7	173	35.7	+15	25.8	245	18.9	-13	57.6
1	230	07.2	188	35.2		26.9	260	19.6		57.0
2	245	09.6	203	34.6		27.9	275	20.2		56.5
3	260	12.1	218	34.0		28.9	290	20.9		55.9
4	275	14.6	233	33.5		29.9	305	21.6		55.3
5	290	17.0	248	32.9	+15	30.9	320	22.3	-13	54.7
6	305	19.5	263	32.3	+15	31.9	335	23.0	-13	54.1
7	320	22.0	278	31.8		32.9	350	23.7		53.5
8	335	24.4	293	31.2		33.9	5	24.4		53.0
9	350	26.9	308	30.6		34.9	20	25.1		52.4
10	5	29.4	323	30.1		35.9	35	25.8		51.8
11	20	31.8	338	29.5	+15	36.9	50	26.5	-13	51.2
12	35	34.3	353	28.9	+15	37.9	65	27.2	-13	50.6
13	50	36.8	8	28.4		38.9	80	27.9		50.0
14	65	39.2	23	27.8		39.9	95	28.6		49.4
15	80	41.7	38	27.2		40.9	110	29.3		48.9
16	95	44.1	53	26.7		41.9	125	30.0		48.3
17	110	46.6	68	26.1	+15	42.9	140	30.7	-13	47.7
18	125	49.1	83	25.5	+15	43.9	155	31.4	-13	47.1
19	140	51.5	98	25.0		44.8	170	32.1		46.5
20	155	54.0	113	24.4		45.8	185	32.8		45.9
21	170	56.5	128	23.8		46.8	200	33.5		45.3
22	185	58.9	143	23.2		47.8	215	34.2		44.8
23	201	01.4	158	22.7		48.8	230	34.9		44.2
24	216	03.9	173	22.1	+15	49.8	245	35.6	-13	43.6
Dif	—		-6		+10		+7		+6	

UT	SOL		LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 9		Edad: 19 ^d 1 PHE	SD: 16 ^h 2		R°: 64 ^m			Final del crepúsculo		Salida de Luna		Puesta de Luna	
	PMG: 11 ^h 57 ^m 4	PMG: 3 ^h 18 ^m		Civil	Náutico				Hora	R°	Hora	R°		
	hG ☉	Dec	hG ☾	Dif	Dec	Dif								
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	180	37.2	+14 06.8		312	28.3	-27 56.5	60 N	19 51	20 43	22 01	1 47 67	4 47 66	
1	195	37.2			326	50.6	-27 59.5	58	41	29	21 36	1 09 66	5 25 67	
2	210	37.3	08.4		341	12.9	-28 02.3	56	33	17	17	0 42 66	5 52 67	
3	225	37.4	09.2		355	35.2	05.0	54	26	20 07	21 01	20 67	6 14 66	
4	240	37.5	10.0		9	57.4	07.4	52	20	19 58	20 48	0 03 66	32 65	
5	255	37.6	+14 10.8		24	19.6	-28 09.7	50	19 14	19 50	20 36	** ** *	6 47 66	
6	270	37.7	+14 11.6		38	41.7	-28 11.7	45	19 02	19 34	20 14	** ** *	7 17 66	
7	285	37.8	12.4		53	03.8	13.6	40	18 52	21	19 56	23 59 54	7 41 65	
8	300	37.9	13.1		67	25.9	15.3	35	43	10	42	39 56	8 01 65	
9	315	38.0	13.9		81	48.0	16.7	30	35	19 01	31	23 22 58	18 65	
10	330	38.1	14.7		96	10.0	18.0	20	22	18 45	19 12	22 54 59	8 46 65	
11	345	38.2	+14 15.5		110	32.0	-28 19.1	10 N	18 11	18 33	18 58	22 29 62	9 11 64	
12	0	38.3	+14 16.3		124	54.0	-28 19.9	0	18 01	18 22	18 47	22 07 62	9 34 63	
13	15	38.4	17.1		139	16.0	20.6	10 S	17 51	12	37	21 44 64	9 56 63	
14	30	38.4	17.8		153	38.0	21.1	20	40	18 02	29	21 20 65	10 21 62	
15	45	38.5	18.6		168	00.0	21.4	30	27	17 52	20	20 51 68	10 49 61	
16	60	38.6	19.4		182	22.0	21.4	35	20	47	16	34 69	11 06 61	
17	75	38.7	+14 20.2		196	44.0	-28 21.3	40	17 12	17 41	18 12	20 15 69	11 25 60	
18	90	38.8	+14 21.0		211	05.9	-28 21.0	45	17 03	17 34	18 08	19 51 71	11 49 59	
19	105	38.9	21.7		225	27.9	20.5	50	16 52	26	04	20 74	12 20 57	
20	120	39.0	22.5		239	49.9	19.7	52	47	22	02	19 05 75	35 56	
21	135	39.1	23.3		254	11.9	18.8	54	41	19	18 00	18 48 76	12 53 55	
22	150	39.2	24.1		268	33.9	17.7	56	35	15	17 58	18 26 79	13 14 53	
23	165	39.2	24.9		282	55.9	16.4	58	28	10	56	17 59 82	13 41 50	
24	180	39.3	+14 25.6		297	17.9	-28 14.8	60 S	16 20	17 05	17 54	17 21 89	14 19 43	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 9 ^h 34 ^m 2		Mag: -3.9 PMG: 12 ^h 27 ^m		Mag: +0.7 PMG: 7 ^h 37 ^m		Mag: -2.4 PMG: 22 ^h 15 ^m		Mag: +0.2 PMG: 17 ^h 07 ^m					
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♎	Dec	hG ♊	Dec	hG ♋	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'		
0	216	03.9	173 22.1	+15 49.8	245 35.6	-13 43.6	25 18.2	-2 56.0	102 41.0	+21 52.5				
1	231	06.3	188 21.5	50.8	260 36.3	43.0	40 20.9	55.9	117 43.3	52.5				
2	246	08.8	203 21.0	51.8	275 36.9	42.4	55 23.6	55.8	132 45.6	52.5				
3	261	11.3	218 20.4	52.8	290 37.6	41.8	70 26.3	55.7	147 47.9	52.4				
4	276	13.7	233 19.8	53.8	305 38.3	41.2	85 29.0	55.6	162 50.2	52.4				
5	291	16.2	248 19.2	+15 54.8	320 39.0	-13 40.6	100 31.7	-2 55.5	177 52.5	+21 52.4				
6	306	18.6	263 18.7	+15 55.7	335 39.7	-13 40.1	115 34.4	-2 55.4	192 54.8	+21 52.4				
7	321	21.1	278 18.1	56.7	350 40.4	39.5	130 37.1	55.3	207 57.1	52.4				
8	336	23.6	293 17.5	57.7	5 41.1	38.9	145 39.8	55.2	222 59.4	52.3				
9	351	26.0	308 16.9	58.7	20 41.8	38.3	160 42.5	55.1	238 01.6	52.3				
10	6	28.5	323 16.3	+15 59.7	35 42.5	37.7	175 45.2	55.0	253 03.9	52.3				
11	21	31.0	338 15.8	+16 00.7	50 43.2	-13 37.1	190 47.9	-2 55.0	268 06.2	+21 52.3				
12	36	33.4	353 15.2	+16 01.6	65 43.9	-13 36.5	205 50.6	-2 54.9	283 08.5	+21 52.2				
13	51	35.9	8 14.6	02.6	80 44.6	35.9	220 53.3	54.8	298 10.8	52.2				
14	66	38.4	23 14.0	03.6	95 45.3	35.3	235 56.0	54.7	313 13.1	52.2				
15	81	40.8	38 13.5	04.6	110 46.0	34.7	250 58.7	54.6	328 15.4	52.2				
16	96	43.3	53 12.9	05.6	125 46.7	34.2	266 01.4	54.5	343 17.7	52.2				
17	111	45.8	68 12.3	+16 06.5	140 47.4	-13 33.6	281 04.1	-2 54.4	358 20.0	+21 52.1				
18	126	48.2	83 11.7	+16 07.5	155 48.1	-13 33.0	296 06.8	-2 54.3	13 22.3	+21 52.1				
19	141	50.7	98 11.1	08.5	170 48.8	32.4	311 09.5	54.2	28 24.6	52.1				
20	156	53.1	113 10.5	09.5	185 49.5	31.8	326 12.2	54.1	43 26.9	52.1				
21	171	55.6	128 10.0	10.4	200 50.2	31.2	341 14.9	54.0	58 29.1	52.0				
22	186	58.1	143 09.4	11.4	215 50.9	30.6	356 17.6	53.9	73 31.4	52.0				
23	202	00.5	158 08.8	12.4	230 51.6	30.0	11 20.3	53.8	88 33.7	52.0				
24	217	03.0	173 08.2	+16 13.4	245 52.3	-13 29.4	26 23.0	-2 53.7	103 36.0	+21 52.0				
Dif	—	—	-6	+10	+7	+6	+27	+1	+23	0				

UT	SOL			LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna											
	SD: 15 ^h 9 PMG: 11 ^h 57 ^m 3			Edad: 20 ^d 1 SD: 16 ^h 2 PMG: 4 ^h 22 ^m	PHE { 4 ^h : 59 ^h 4 12 ^h : 59 ^h 4 20 ^h : 59 ^h 4 R°: 62 ^m	Dec	Dif					Hora	R°	Hora	R°										
	hG ☉	Dec	hG ☾						Dif	Náutico						Civil									
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m									
0	180	39.3	+14	25.6		297	17.9	-28	14.8	17	58	1	53	3	11	4	03								
1	195	39.4		26.4		311	40.0	31	13.1	19	58	2	18		25	13									
2	210	39.5		27.2		326	02.1	31	11.2	19	56		37		37	21									
3	225	39.6		28.0		340	24.2	31	09.1	21	54		2	53	47	28									
4	240	39.7		28.7		354	46.3	31	06.8	23	52		3	06	3	56	34								
5	255	39.8	+14	29.5		9	08.5	32	-28	04.3	25	50		3	18	4	04								
6	270	39.9	+14	30.3		23	30.7	32	-28	01.6	27	45		3	41	4	20								
7	285	39.9		31.1		37	52.9	32	-27	58.7	29	40		3	58	34	5	03							
8	300	40.0		31.8		52	15.2	33		55.6	31	35		4	12	44	11								
9	315	40.1		32.6		66	37.5	33		52.3	33	30		24	4	54	19								
10	330	40.2		33.4		80	59.9	34		48.8	35	20		42	5	09	32								
11	345	40.3	+14	34.2		95	22.3	34	-27	45.2	36	10 N		4	56	5	22	5	43						
12	0	40.4	+14	34.9		109	44.7	34	-27	41.3	39	0		5	08	5	33	5	04						
13	15	40.5		35.7		124	07.2	35		37.2	41	10 S		18		43	6	04							
14	30	40.5		36.5		138	29.8	36		33.0	42	20		26	5	53	15								
15	45	40.6		37.3		152	52.4	36		28.6	44	30		35	6	03	28								
16	60	40.7		38.0		167	15.1	37		23.9	47	35		39		09	35								
17	75	40.8	+14	38.8		181	37.8	37	-27	19.1	48	40		5	43	6	15	6	43						
18	90	40.9	+14	39.6		196	00.6	38	-27	14.1	50	45		5	47	6	22	6	52						
19	105	41.0		40.3		210	23.5	39		08.9	52	50		51	30	7	04								
20	120	41.1		41.1		224	46.4	39	-27	03.6	53	52		53		33	09								
21	135	41.1		41.9		239	09.4	40	-26	58.0	56	54		55		37	15								
22	150	41.2		42.6		253	32.4	40		52.3	57	56		57		41	21								
23	165	41.3		43.4		267	55.6	42		46.4	59	58		5	59	46	28								
24	180	41.4	+14	44.2		282	18.8	42	-26	40.3	61	60 S		6	02	6	51	7	36						
18	ARIES			VENUS			MARTE			JÚPITER			SATURNO												
	PMG: 9 ^h 30 ^m 2			Mag: -3.9 PMG: 12 ^h 28 ^m			Mag: +0.6 PMG: 7 ^h 36 ^m			Mag: -2.4 PMG: 22 ^h 10 ^m			Mag: +0.2 PMG: 17 ^h 03 ^m												
	hG ♈			hG ♀			hG ♂			hG ♃			hG ♄												
	Dec			Dec			Dec			Dec			Dec												
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'								
0	217	03.0		173	08.2	+16	245	52.3	-13	29.4		26	23.0	-2	53.7		103	36.0	+21	52.0					
1	232	05.5		188	07.6		260	53.0		28.8		41	25.7		53.6		118	38.3		51.9					
2	247	07.9		203	07.0		275	53.7		28.2		56	28.4		53.5		133	40.6		51.9					
3	262	10.4		218	06.5		290	54.4		27.7		71	31.1		53.5		148	42.9		51.9					
4	277	12.9		233	05.9		305	55.1		27.1		86	33.8		53.4		163	45.2		51.9					
5	292	15.3		248	05.3	+16	320	55.8	-13	26.5		101	36.5	-2	53.3		178	47.5	+21	51.9					
6	307	17.8		263	04.7	+16	335	56.5	-13	25.9		116	39.2	-2	53.2		193	49.8	+21	51.8					
7	322	20.3		278	04.1		350	57.2		25.3		131	41.9		53.1		208	52.0		51.8					
8	337	22.7		293	03.5		5	57.9		24.7		146	44.6		53.0		223	54.3		51.8					
9	352	25.2		308	02.9		20	58.6		24.1		161	47.3		52.9		238	56.6		51.8					
10	7	27.6		323	02.3		35	59.4		23.5		176	50.0		52.8		253	58.9		51.7					
11	22	30.1		338	01.8	+16	51	00.1	-13	22.9		191	52.7	-2	52.7		269	01.2	+21	51.7					
12	37	32.6		353	01.2	+16	66	00.8	-13	22.3		206	55.4	-2	52.6		284	03.5	+21	51.7					
13	52	35.0		8	00.6		81	01.5		21.7		221	58.1		52.5		299	05.8		51.7					
14	67	37.5		23	00.0		96	02.2		21.1		237	00.8		52.4		314	08.1		51.7					
15	82	40.0		37	59.4		111	02.9		20.5		252	03.5		52.3		329	10.4		51.6					
16	97	42.4		52	58.8		126	03.6		19.9		267	06.2		52.2		344	12.6		51.6					
17	112	44.9		67	58.2	+16	141	04.3	-13	19.3		282	08.9	-2	52.2		359	14.9	+21	51.6					
18	127	47.4		82	57.6	+16	156	05.0	-13	18.7		297	11.6	-2	52.1		14	17.2	+21	51.6					
19	142	49.8		97	57.0		171	05.7		18.2		312	14.3		52.0		29	19.5		51.5					
20	157	52.3		112	56.4		186	06.4		17.6		327	17.0		51.9		44	21.8		51.5					
21	172	54.8		127	55.8		201	07.1		17.0		342	19.7		51.8		59	24.1		51.5					
22	187	57.2		142	55.2		216	07.8		16.4		357	22.4		51.7		74	26.4		51.5					
23	202	59.7		157	54.7		231	08.5		15.8		12	25.1		51.6		89	28.6		51.4					
24	218	02.1		172	54.1	+16	246	09.2	-13	15.2		27	27.8	-2	51.5		104	30.9	+21	51.4					
Dif	—			-6			+10			+7			+6			+27			+1			+23		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 2			Edad: 21 ^d 1 PHE { 4 ^h : 59/4 12 ^h : 59/4 20 ^h : 59/3 SD: 16°2 PMG: 5 ^h 24 ^m R°: 58 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	m	h m	m	
0	180	41.4	+14	44.2	282	18.8	-26	40.3	60 N	19 56	20 49	22 11	3 17	8	7 40	114
1	195	41.5		44.9	296	42.1	43	34.0	58	46	34	21 44	2 50	16	8 06	105
2	210	41.5		45.7	311	05.4	43	27.6	56	37	22	23	28	23	28	98
3	225	41.6		46.5	325	28.9	45	20.9	54	30	11	21 06	2 10	28	8 45	93
4	240	41.7		47.2	339	52.4	45	14.1	52	23	20 02	20 52	1 55	31	9 00	89
5	255	41.8	+14	48.0	354	16.0	46	-26 07.1	50	19 17	19 54	20 41	1 42	34	9 13	86
6	270	41.9	+14	48.8	8	39.7	47	-26 00.0	45	19 04	19 37	20 17	1 15	39	9 39	80
7	285	42.0		49.5	23	03.4	47	-25 52.7	40	18 54	23	19 59	0 53	43	10 00	76
8	300	42.0		50.3	37	27.3	49	45.2	35	45	12	44	35	47	17	73
9	315	42.1		51.1	51	51.3	50	37.5	30	37	19 02	32	0 20	49	32	70
10	330	42.2		51.8	66	15.3	50	29.7	20	23	18 46	19 13	** ** *	**	10 57	65
11	345	42.3	+14	52.6	80	39.4	51	-25 21.7	10 N	18 11	18 33	18 59	** ** *	**	11 18	61
12	0	42.4	+14	53.4	95	03.6	52	-25 13.6	0	18 01	18 22	18 47	** ** *	**	11 38	58
13	15	42.4		54.1	109	27.9	53	-25 05.3	10 S	17 50	12	37	23 51	59	11 58	54
14	30	42.5		54.9	123	52.3	54	-24 56.8	20	39	18 01	27	31	64	12 19	50
15	45	42.6		55.6	138	16.8	55	48.1	30	26	17 50	19	23 08	70	44	45
16	60	42.7		56.4	152	41.4	56	39.4	35	18	45	14	22 55	72	12 58	42
17	75	42.8	+14	57.2	167	06.1	57	-24 30.4	40	17 10	17 38	18 10	22 40	76	13 14	39
18	90	42.8	+14	57.9	181	30.9	58	-24 21.3	45	17 00	17 31	18 06	22 21	81	13 34	34
19	105	42.9		58.7	195	55.8	59	12.0	50	16 49	23	18 01	21 58	87	13 58	29
20	120	43.0	+14	59.5	210	20.8	60	-24 02.6	52	43	19	17 59	47	90	14 10	25
21	135	43.1	+15	00.2	224	45.9	61	-23 53.1	54	37	15	57	34	94	23	22
22	150	43.1		01.0	239	11.1	62	43.4	56	31	10	55	20	98	38	18
23	165	43.2		01.7	253	36.4	63	33.5	58	23	06	52	21 02	104	14 56	12
24	180	43.3	+15	02.5	268	01.7	63	-23 23.5	60 S	16 15	17 00	17 50	20 41	112	15 17	6

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 9 ^h 26 ^m 3		Mag: -3.9 PMG: 12 ^h 29 ^m		Mag: +0.6 PMG: 7 ^h 35 ^m		Mag: -2.4 PMG: 22 ^h 06 ^m		Mag: +0.2 PMG: 16 ^h 59 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	218	02.1	172	54.1	+16	36.5	246	09.2	-13	15.2	27	27.8	-2	51.5	104	30.9	+21	51.4
1	233	04.6	187	53.5		37.5	261	09.9		14.6	42	30.5		51.4	119	33.2		51.4
2	248	07.1	202	52.9		38.4	276	10.6		14.0	57	33.2		51.3	134	35.5		51.4
3	263	09.5	217	52.3		39.4	291	11.3		13.4	72	35.9		51.2	149	37.8		51.3
4	278	12.0	232	51.7		40.3	306	12.0		12.8	87	38.6		51.2	164	40.1		51.3
5	293	14.5	247	51.1	+16	41.3	321	12.7	-13	12.2	102	41.3	-2	51.1	179	42.4	+21	51.3
6	308	16.9	262	50.5	+16	42.3	336	13.4	-13	11.6	117	44.0	-2	51.0	194	44.7	+21	51.3
7	323	19.4	277	49.9		43.2	351	14.1		11.0	132	46.7		50.9	209	46.9		51.3
8	338	21.9	292	49.3		44.2	6	14.8		10.4	147	49.4		50.8	224	49.2		51.2
9	353	24.3	307	48.7		45.1	21	15.5		09.8	162	52.1		50.7	239	51.5		51.2
10	8	26.8	322	48.1		46.1	36	16.3		09.2	177	54.7		50.6	254	53.8		51.2
11	23	29.2	337	47.5	+16	47.0	51	17.0	-13	08.6	192	57.4	-2	50.5	269	56.1	+21	51.2
12	38	31.7	352	46.9	+16	47.9	66	17.7	-13	08.0	208	00.1	-2	50.4	284	58.4	+21	51.1
13	53	34.2	7	46.3		48.9	81	18.4		07.4	223	02.8		50.3	300	00.6		51.1
14	68	36.6	22	45.7		49.8	96	19.1		06.8	238	05.5		50.2	315	02.9		51.1
15	83	39.1	37	45.1		50.8	111	19.8		06.2	253	08.2		50.2	330	05.2		51.1
16	98	41.6	52	44.5		51.7	126	20.5		05.6	268	10.9		50.1	345	07.5		51.0
17	113	44.0	67	43.9	+16	52.7	141	21.2	-13	05.0	283	13.6	-2	50.0	0	09.8	+21	51.0
18	128	46.5	82	43.3	+16	53.6	156	21.9	-13	04.4	298	16.3	-2	49.9	15	12.1	+21	51.0
19	143	49.0	97	42.7		54.6	171	22.6		03.8	313	19.0		49.8	30	14.3		51.0
20	158	51.4	112	42.1		55.5	186	23.3		03.2	328	21.7		49.7	45	16.6		50.9
21	173	53.9	127	41.4		56.4	201	24.0		02.6	343	24.4		49.6	60	18.9		50.9
22	188	56.4	142	40.8		57.4	216	24.7		02.0	358	27.1		49.5	75	21.2		50.9
23	203	58.8	157	40.2		58.3	231	25.4		01.4	13	29.8		49.4	90	23.5		50.9
24	219	01.3	172	39.6	+16	59.3	246	26.2	-13	00.8	28	32.4	-2	49.4	105	25.8	+21	50.9
Dif	—		-6		+9		+7		+6		+27		+1		+23		0	

UT	SOL			☾ LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 9 PMG: 11 ^h 57 ^m 1			Edad: 22 ^d 1 SD: 16 ^h 1 PMG: 6 ^h 22 ^m	PHE { 4 ^h : 59 ^m 3 12 ^h : 59 ^m 2 20 ^h : 59 ^m 2 R°: 55 ^m	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°	
	hG ☉	Dec	hG ☾													
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	43.3	+15	02.5	268	01.7	-23	23.5	60 N	1 42	3 05	3 58	3 25	2	9 34	109
1	195	43.4		03.2	282	27.2	65	13.4	58	2 10	19	4 08	3 06	9	9 51	103
2	210	43.4		04.0	296	52.8	66	-23	03.1	56	30	32	16	2 51	14	10 06
3	225	43.5		04.8	311	18.5	67	-22	52.7	54	2 47	42	24	38	18	18 94
4	240	43.6		05.5	325	44.3	68	42.1	52	3 01	3 52	30	26	21	29	90
5	255	43.7	+15	06.3	340	10.2	69	-22	31.4	50	3 13	4 00	4 36	2 16	24	10 39
6	270	43.8	+15	07.0	354	36.2	70	-22	20.6	45	3 37	4 17	4 49	1 54	30	10 59
7	285	43.8		07.8	9	02.3	71	-22	09.6	40	3 55	31	5 00	36	35	11 16
8	300	43.9		08.5	23	28.5	72	-21	58.5	35	4 10	42	09	22	38	30 71
9	315	44.0		09.3	37	54.9	74	47.3	30	22	4 52	17	1 09	41	11 42	68
10	330	44.1		10.0	52	21.3	74	36.0	20	41	5 08	31	0 46	47	12 02	62
11	345	44.1	+15	10.8	66	47.8	75	-21	24.5	10 N	4 55	5 21	5 43	0 27	51	12 19
12	0	44.2	+15	11.5	81	14.4	76	-21	12.9	0	5 07	5 32	5 54	0 09	55	12 36
13	15	44.3		12.3	95	41.2	78	-21	01.2	10 S	18	43	6 04	**	**	12 52
14	30	44.3		13.1	110	08.0	78	-20	49.3	20	27	5 53	16	**	**	13 09
15	45	44.4		13.8	124	34.9	79	37.4	30	36	6 04	29	29	**	**	29 38
16	60	44.5		14.6	139	02.0	81	25.3	35	40	10	36	36	**	**	40 35
17	75	44.6	+15	15.3	153	29.1	81	-20	13.1	40	5 45	6 17	6 45	23	56	13 53
18	90	44.6	+15	16.1	167	56.3	82	-20	00.8	45	5 49	6 24	6 55	23	42	14 08
19	105	44.7		16.8	182	23.7	84	-19	48.3	50	54	32	7 07	25	85	27 21
20	120	44.8		17.6	196	51.1	84	35.8	52	56	36	12	17	88	35	19
21	135	44.9		18.3	211	18.7	86	23.2	54	5 58	40	18	23	08	91	45 15
22	150	44.9		19.1	225	46.3	86	-19	10.4	56	6 01	45	25	22	58	14 56
23	165	45.0		19.8	240	14.1	88	-18	57.5	58	03	50	33	46	100	15 08
24	180	45.1	+15	20.5	254	41.9	88	-18	44.6	60 S	6 06	6 55	7 41	22	33	15 23

UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 9 ^h 22 ^m 4			Mag: -3.9 PMG: 12 ^h 30 ^m			Mag: +0.6 PMG: 7 ^h 34 ^m			Mag: -2.4 PMG: 22 ^h 02 ^m			Mag: +0.2 PMG: 16 ^h 56 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	°	'	°	'	°	'	°	'							
0	219	01.3	172	39.6	+16	59.3	246	26.2	-13	00.8	28	32.4	-2	49.4	105	25.8		
1	234	03.7	187	39.0	+17	00.2	261	26.9	-13	00.2	43	35.1		49.3	120	28.0		
2	249	06.2	202	38.4		01.1	276	27.6	-12	59.6	58	37.8		49.2	135	30.3		
3	264	08.7	217	37.8		02.1	291	28.3		59.0	73	40.5		49.1	150	32.6		
4	279	11.1	232	37.2		03.0	306	29.0		58.4	88	43.2		49.0	165	34.9		
5	294	13.6	247	36.6	+17	03.9	321	29.7	-12	57.8	103	45.9	-2	48.9	180	37.2		
6	309	16.1	262	36.0	+17	04.9	336	30.4	-12	57.2	118	48.6	-2	48.8	195	39.5		
7	324	18.5	277	35.4		05.8	351	31.1		56.6	133	51.3		48.7	210	41.7		
8	339	21.0	292	34.8		06.7	6	31.8		56.0	148	54.0		48.6	225	44.0		
9	354	23.5	307	34.1		07.7	21	32.5		55.4	163	56.7		48.6	240	46.3		
10	9	25.9	322	33.5		08.6	36	33.2		54.8	178	59.4		48.5	255	48.6		
11	24	28.4	337	32.9	+17	09.5	51	34.0	-12	54.2	194	02.0	-2	48.4	270	50.9		
12	39	30.9	352	32.3	+17	10.5	66	34.7	-12	53.6	209	04.7	-2	48.3	285	53.1		
13	54	33.3	7	31.7		11.4	81	35.4		53.0	224	07.4		48.2	300	55.4		
14	69	35.8	22	31.1		12.3	96	36.1		52.4	239	10.1		48.1	315	57.7		
15	84	38.2	37	30.5		13.2	111	36.8		51.8	254	12.8		48.0	331	00.0		
16	99	40.7	52	29.9		14.2	126	37.5		51.2	269	15.5		47.9	346	02.3		
17	114	43.2	67	29.2	+17	15.1	141	38.2	-12	50.6	284	18.2	-2	47.9	1	04.5		
18	129	45.6	82	28.6	+17	16.0	156	38.9	-12	50.0	299	20.9	-2	47.8	16	06.8		
19	144	48.1	97	28.0		16.9	171	39.6		49.4	314	23.5		47.7	31	09.1		
20	159	50.6	112	27.4		17.9	186	40.3		48.8	329	26.2		47.6	46	11.4		
21	174	53.0	127	26.8		18.8	201	41.1		48.2	344	28.9		47.5	61	13.7		
22	189	55.5	142	26.2		19.7	216	41.8		47.6	359	31.6		47.4	76	15.9		
23	204	58.0	157	25.5		20.6	231	42.5		47.0	14	34.3		47.3	91	18.2		
24	220	00.4	172	24.9	+17	21.6	246	43.2	-12	46.4	29	37.0	-2	47.2	106	20.5		
Dif	—			-6			+9			+7			+27			+1		

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 9			Edad: 23 ^d 1	PHE {	4 ^h : 59 ^m 1 12 ^h : 59 ^m 0 20 ^h : 58 ^m 9									
	PMG: 11 ^h 56 ^m 9								SD: 16 ^h 1		SD: 16 ^h 1		SD: 16 ^h 1		SD: 16 ^h 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
0	180	45.1	+15 20.5	254	41.9	-18 44.6	89	60 N	20 00	20 55	22 22	3 27	0	11 23	103
1	195	45.1		269	09.8		131	58	19 50	40	21 52	15	5	34	98
2	210	45.2		283	37.9		131	56	41	27	30	3 05	9	43	94
3	225	45.3		298	06.0	-18 05.1	133	54	34	16	21 12	2 56	12	52	90
4	240	45.4		312	34.3	-17 51.7	134	52	27	20 06	20 57	47	16	11 59	87
5	255	45.4	+15 24.3	327	02.6	-17 38.3	134	50	19 20	19 57	20 45	2 40	18	12 06	84
6	270	45.5	+15 25.0	341	31.0	-17 24.7	136	45	19 07	19 39	20 20	2 24	24	12 20	78
7	285	45.6		355	59.5	-17 11.1	136	40	18 56	25	20 01	11	29	31	73
8	300	45.6		10	28.2	-16 57.4	137	35	46	13	19 46	2 00	32	41	69
9	315	45.7		24	56.9		139	30	38	19 03	34	1 50	36	12 50	65
10	330	45.8		39	25.7		139	20	24	18 47	19 14	33	41	13 04	60
11	345	45.8	+15 28.7	53	54.6	-16 15.6	140	10 N	18 12	18 34	18 59	1 18	47	13 17	54
12	0	45.9	+15 29.5	68	23.5	-16 01.6	140	0	18 00	18 22	18 47	1 04	51	13 29	49
13	15	46.0		82	52.6	-15 47.4	142	10 S	17 49	11	36	0 50	56	41	44
14	30	46.0		97	21.8		142	20	37	18 00	26	35	61	13 53	40
15	45	46.1		111	51.0		143	30	24	17 49	17	18	66	14 07	34
16	60	46.2		126	20.4	-15 04.5	144	35	16	43	13	0 07	71	15	30
17	75	46.2	+15 33.2	140	49.8	-14 50.0	145	40	17 08	17 36	18 08	** ** *	**	14 24	27
18	90	46.3	+15 33.9	155	19.3	-14 35.5	145	45	16 57	17 28	18 03	** ** *	**	14 35	22
19	105	46.4		169	48.9		146	50	45	19	17 58	** ** *	**	48	16
20	120	46.4		184	18.5	-14 06.2	147	52	39	15	56	** ** *	**	14 54	14
21	135	46.5		198	48.3	-13 51.4	148	54	33	11	53	** ** *	**	15 00	11
22	150	46.6		213	18.1		148	56	26	06	51	** ** *	**	07	8
23	165	46.6		227	48.0		149	58	18	17 01	48	** ** *	**	15	5
24	180	46.7	+15 38.4	242	18.0	-13 06.8	149	60 S	16 10	16 55	17 45	** ** *	**	15 24	1

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO			
	PMG: 9 ^h 18 ^m 4		Mag: -3.9 PMG: 12 ^h 31 ^m		Mag: +0.6 PMG: 7 ^h 33 ^m		Mag: -2.4 PMG: 21 ^h 58 ^m		Mag: +0.2 PMG: 16 ^h 52 ^m			
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'		
0	220	00.4	172	24.9	+17 21.6		29	37.0	-2 47.2	106	20.5	
1	235	02.9	187	24.3	22.5		44	39.7	47.2	121	22.8	
2	250	05.4	202	23.7	23.4		59	42.4	47.1	136	25.1	
3	265	07.8	217	23.1	24.3		74	45.0	47.0	151	27.3	
4	280	10.3	232	22.4	25.2		89	47.7	46.9	166	29.6	
5	295	12.7	247	21.8	+17 26.1		104	50.4	-2 46.8	181	31.9	
6	310	15.2	262	21.2	+17 27.1		119	53.1	-2 46.7	196	34.2	
7	325	17.7	277	20.6	28.0		134	55.8	46.6	211	36.4	
8	340	20.1	292	20.0	28.9	6 48.9	41.5	49 58.5	46.6	226	38.7	
9	355	22.6	307	19.3	29.8	21 49.6	40.9	165 01.2	46.5	241	41.0	
10	10	25.1	322	18.7	30.7	36 50.3	40.3	180 03.8	46.4	256	43.3	
11	25	27.5	337	18.1	+17 31.6	51 51.0	-12 39.7	195 06.5	-2 46.3	271	45.6	
12	40	30.0	352	17.5	+17 32.5	66 51.7	-12 39.1	210 09.2	-2 46.2	286	47.8	
13	55	32.5	7	16.8	33.4	81 52.5	38.5	225 11.9	46.1	301	50.1	
14	70	34.9	22	16.2	34.4	96 53.2	37.9	240 14.6	46.0	316	52.4	
15	85	37.4	37	15.6	35.3	111 53.9	37.3	255 17.3	46.0	331	54.7	
16	100	39.8	52	15.0	36.2	126 54.6	36.7	270 19.9	45.9	346	56.9	
17	115	42.3	67	14.3	+17 37.1	141 55.3	-12 36.1	285 22.6	-2 45.8	1	59.2	
18	130	44.8	82	13.7	+17 38.0	156 56.0	-12 35.5	300 25.3	-2 45.7	17	01.5	
19	145	47.2	97	13.1	38.9	171 56.7	34.9	315 28.0	45.6	32	03.8	
20	160	49.7	112	12.5	39.8	186 57.5	34.3	330 30.7	45.5	47	06.0	
21	175	52.2	127	11.8	40.7	201 58.2	33.7	345 33.4	45.4	62	08.3	
22	190	54.6	142	11.2	41.6	216 58.9	33.0	0 36.0	45.4	77	10.6	
23	205	57.1	157	10.6	42.5	231 59.6	32.4	15 38.7	45.3	92	12.9	
24	220	59.6	172	09.9	+17 43.4	247 00.3	-12 31.8	30 41.4	-2 45.2	107	15.1	
Dif	—		-6	+9		+7	+6	+27	+1	+23		0

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15'9 PMG: 11 ^h 56 ^m 8			Edad: 24 ^d 1 PHE { SD: 16'0 PMG: 8 ^h 07 ^m R°: 47 ^m 4 ^h : 58'8 12 ^h : 58'7 20 ^h : 58'6										
	hG ☉	Dec		hG ☾	Dif			Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	h	m	h	m	h	m	m
0	180	46.7	+15 38.4	242	18.0	-13 06.8	60 N	1 31	2 58	3 52	3 27	0	13 06	98
1	195	46.8	39.1	256	48.1 ¹¹¹	-12 51.8 ¹⁵⁰	58	2 01	3 13	4 03	20	4	12	93
2	210	46.8	39.8	271	18.3 ¹¹²	36.7 ¹⁵¹	56	24	26	12	14	7	17	90
3	225	46.9	40.6	285	48.5 ¹¹²	21.6 ¹⁵¹	54	41	38	19	08	10	22	86
4	240	47.0	41.3	300	18.8 ¹¹³	-12 06.4 ¹⁵²	52	2 56	47	27	3 03	13	26	84
5	255	47.0	+15 42.0	314	49.1 ¹¹³	-11 51.2 ¹⁵²	50	3 08	3 56	4 33	2 58	15	13 30	81
6	270	47.1	+15 42.8	329	19.6 ¹¹⁵	-11 35.9 ¹⁵³	45	3 33	4 14	4 46	2 48	21	13 38	75
7	285	47.2	43.5	343	50.1 ¹¹⁵	20.5 ¹⁵⁴	40	3 52	28	4 58	40	24	44	71
8	300	47.2	44.2	358	20.7 ¹¹⁶	-11 05.1 ¹⁵⁴	35	4 07	40	5 07	32	29	50	67
9	315	47.3	45.0	12	51.3 ¹¹⁶	-10 49.7 ¹⁵⁴	30	20	4 50	15	26	32	13 55	63
10	330	47.3	45.7	27	22.0 ¹¹⁷	34.2 ¹⁵⁵	20	39	5 07	30	14	38	14 04	57
11	345	47.4	+15 46.4	41	52.8 ¹¹⁸	-10 18.6 ¹⁵⁶	10 N	4 54	5 20	5 42	2 05	43	14 11	52
12	0	47.5	+15 47.2	56	23.6 ¹¹⁸	-10 03.0 ¹⁵⁶	0	5 07	5 32	5 53	1 55	48	14 18	47
13	15	47.5	47.9	70	54.5 ¹¹⁹	-9 47.4 ¹⁵⁶	10 S	18	43	6 05	46	53	25	42
14	30	47.6	48.6	85	25.5 ¹²⁰	31.7 ¹⁵⁷	20	28	5 54	17	36	58	33	36
15	45	47.7	49.4	99	56.5 ¹²⁰	16.0 ¹⁵⁷	30	37	6 05	30	24	64	41	31
16	60	47.7	50.1	114	27.6 ¹²¹	-9 00.2 ¹⁵⁸	35	42	12	38	18	67	45	28
17	75	47.8	+15 50.8	128	58.8 ¹²²	-8 44.4 ¹⁵⁸	40	5 46	6 19	6 47	1 10	72	14 51	24
18	90	47.8	+15 51.5	143	30.0 ¹²²	-8 28.6 ¹⁵⁸	45	5 51	6 26	6 57	1 01	76	14 57	19
19	105	47.9	52.3	158	01.2 ¹²²	-8 12.8 ¹⁵⁸	50	57	35	7 10	0 50	82	15 04	14
20	120	48.0	53.0	172	32.5 ¹²³	-7 56.9 ¹⁵⁹	52	5 59	39	15	45	85	08	11
21	135	48.0	53.7	187	03.9 ¹²⁴	40.9 ¹⁶⁰	54	6 01	44	22	39	88	11	9
22	150	48.1	54.5	201	35.3 ¹²⁴	25.0 ¹⁵⁹	56	04	48	29	33	92	15	7
23	165	48.1	55.2	216	06.8 ¹²⁵	-7 09.0 ¹⁶⁰	58	07	6 54	37	26	95	20	3
24	180	48.2	+15 55.9	230	38.3 ¹²⁵	-6 53.0 ¹⁶⁰	60 S	6 10	7 00	7 46	0 18	100	15 25	**
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG 9 ^h 14 ^m 5		Mag: -3.9 PMG: 12 ^h 32 ^m			Mag: +0.6 PMG: 7 ^h 32 ^m			Mag: -2.4 PMG: 21 ^h 53 ^m			Mag: +0.2 PMG: 16 ^h 48 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	220	59.6	172 09.9	+17 43.4	247 00.3	-12 31.8	30	41.4	-2 45.2	107 15.1	+21 49.7			
1	236	02.0	187 09.3	44.3	262 01.0	31.2	45	44.1	45.1	122 17.4	49.6			
2	251	04.5	202 08.7	45.2	277 01.7	30.6	60	46.8	45.0	137 19.7	49.6			
3	266	07.0	217 08.0	46.1	292 02.5	30.0	75	49.4	44.9	152 22.0	49.6			
4	281	09.4	232 07.4	47.0	307 03.2	29.4	90	52.1	44.9	167 24.2	49.6			
5	296	11.9	247 06.8	+17 47.9	322 03.9	-12 28.8	105	54.8	-2 44.8	182 26.5	+21 49.5			
6	311	14.3	262 06.1	+17 48.8	337 04.6	-12 28.2	120	57.5	-2 44.7	197 28.8	+21 49.5			
7	326	16.8	277 05.5	49.7	352 05.3	27.6	136	00.2	44.6	212 31.1	49.5			
8	341	19.3	292 04.9	50.6	7 06.0	27.0	151	02.8	44.5	227 33.3	49.5			
9	356	21.7	307 04.2	51.5	22 06.8	26.4	166	05.5	44.4	242 35.6	49.4			
10	11	24.2	322 03.6	52.4	37 07.5	25.7	181	08.2	44.4	257 37.9	49.4			
11	26	26.7	337 03.0	+17 53.3	52 08.2	-12 25.1	196	10.9	-2 44.3	272 40.2	+21 49.4			
12	41	29.1	352 02.3	+17 54.2	67 08.9	-12 24.5	211	13.6	-2 44.2	287 42.4	+21 49.4			
13	56	31.6	7 01.7	55.1	82 09.6	23.9	226	16.2	44.1	302 44.7	49.3			
14	71	34.1	22 01.1	55.9	97 10.3	23.3	241	18.9	44.0	317 47.0	49.3			
15	86	36.5	37 00.4	56.8	112 11.1	22.7	256	21.6	43.9	332 49.2	49.3			
16	101	39.0	51 59.8	57.7	127 11.8	22.1	271	24.3	43.9	347 51.5	49.3			
17	116	41.5	66 59.2	+17 58.6	142 12.5	-12 21.5	286	27.0	-2 43.8	2 53.8	+21 49.2			
18	131	43.9	81 58.5	+17 59.5	157 13.2	-12 20.9	301	29.6	-2 43.7	17 56.1	+21 49.2			
19	146	46.4	96 57.9	+18 00.4	172 13.9	20.3	316	32.3	43.6	32 58.3	49.2			
20	161	48.8	111 57.2	01.3	187 14.7	19.6	331	35.0	43.5	48 00.6	49.2			
21	176	51.3	126 56.6	02.2	202 15.4	19.0	346	37.7	43.4	63 02.9	49.1			
22	191	53.8	141 56.0	03.0	217 16.1	18.4	1	40.3	43.4	78 05.1	49.1			
23	206	56.2	156 55.3	03.9	232 16.8	17.8	16	43.0	43.3	93 07.4	49.1			
24	221	58.7	171 54.7	+18 04.8	247 17.5	-12 17.2	31	45.7	-2 43.2	108 09.7	+21 49.1			
Dif	—		-6	+9	+7	+6	+27		+1	+23		0		

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 15°9		Edad: 25 ^d 1 PHE { 4 ^h : 58'5 12 ^h : 58'4 20 ^h : 58'2						Civil		Náutico		Hora R°					
	PMG: 11 ^h 56 ^m 7		SD: 15°9 PMG: 8 ^h 54 ^m R°: 46 ^m															
	hG ☉	Dec	hG ☾	Dif	Dec	Dif												
h	°	'	°	'	°	'	°	h m	h m	h m	h m	m	h m	m				
0	180	48.2	+15	55.9	230	38.3	-6 53.0	60 N	20 05	21 01	22 34	3 27	**	14 44 95				
1	195	48.3		56.6	245	09.9 ¹²⁶	36.9 ¹⁶¹	58	19 55	20 45	22 00	24	2	45 92				
2	210	48.3		57.4	259	41.5 ¹²⁶	20.8 ¹⁶¹	56	45	31	21 36	21	5	47 88				
3	225	48.4		58.1	274	13.1 ¹²⁶	-6 04.7 ¹⁶¹	54	37	20	17	18	9	48 85				
4	240	48.4		58.8	288	44.8 ¹²⁷	-5 48.6 ¹⁶¹	52	30	10	21 02	16	11	50 81				
5	255	48.5	+15	59.5	303	16.6 ¹²⁸	-5 32.5 ¹⁶¹	50	19 23	20 01	20 49	3 13	14	14 51 79				
6	270	48.5	+16	00.3	317	48.4 ¹²⁸	-5 16.3 ¹⁶²	45	19 09	19 42	20 23	3 09	18	14 53 74				
7	285	48.6		01.0	332	20.2 ¹²⁸	-5 00.2 ¹⁶¹	40	18 58	27	20 04	04	24	55 69				
8	300	48.7		01.7	346	52.1 ¹²⁹	-4 44.0 ¹⁶²	35	48	15	19 48	3 01	27	57 65				
9	315	48.7		02.4	1	24.0 ¹²⁹	27.8 ¹⁶²	30	39	19 05	35	2 58	30	14 58 62				
10	330	48.8		03.1	15	55.9 ¹²⁹	-4 11.6 ¹⁶²	20	25	18 48	15	52	36	15 01 56				
11	345	48.8	+16	03.9	30	27.9 ¹³⁰	-3 55.3 ¹⁶³	10 N	18 12	18 34	19 00	2 48	41	15 03 51				
12	0	48.9	+16	04.6	44	59.9 ¹³⁰	-3 39.1 ¹⁶²	0	18 00	18 22	18 47	2 43	46	15 05 46				
13	15	48.9		05.3	59	31.9 ¹³⁰	22.9 ¹⁶²	10 S	17 49	18 10	36	39	51	07 41				
14	30	49.0		06.0	74	04.0 ¹³¹	-3 06.6 ¹⁶³	20	36	17 59	25	34	56	09 36				
15	45	49.1		06.7	88	36.1 ¹³¹	-2 50.3 ¹⁶³	30	22	47	16	28	63	12 30				
16	60	49.1		07.5	103	08.2 ¹³¹	34.1 ¹⁶²	35	14	41	11	25	66	13 27				
17	75	49.2	+16	08.2	117	40.4 ¹³²	-2 17.8 ¹⁶³	40	17 05	17 34	18 06	2 22	69	15 15 22				
18	90	49.2	+16	08.9	132	12.6 ¹³²	-2 01.5 ¹⁶³	45	16 55	17 26	18 01	2 17	75	15 16 19				
19	105	49.3		09.6	146	44.8 ¹³²	-1 45.2 ¹⁶³	50	42	16	17 55	12	80	18 14				
20	120	49.3		10.3	161	17.0 ¹³²	29.0 ¹⁶²	52	36	12	52	10	83	19 12				
21	135	49.4		11.0	175	49.3 ¹³³	-1 12.7 ¹⁶³	54	29	08	50	07	86	20 9				
22	150	49.4		11.8	190	21.6 ¹³³	-0 56.4 ¹⁶³	56	22	17 03	47	05	88	22 5				
23	165	49.5		12.5	204	53.9 ¹³³	40.2 ¹⁶²	58	14	16 57	44	2 01	92	23 2				
24	180	49.5	+16	13.2	219	26.2 ¹³³	-0 23.9 ¹⁶³	60 S	16 04	16 51	17 41	1 58	96	15 24 **				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 9 ^h 10 ^m 6		Mag: -3.9 PMG: 12 ^h 33 ^m			Mag: +0.6 PMG: 7 ^h 30 ^m			Mag: -2.4 PMG: 21 ^h 49 ^m			Mag: +0.2 PMG: 16 ^h 45 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	221	58.7	171	54.7	+18	04.8	247	17.5	-12	17.2	31	45.7	-2	43.2	108	09.7	+21	49.1
1	237	01.2	186	54.0		05.7	262	18.3		16.6	46	48.4		43.1	123	12.0		49.0
2	252	03.6	201	53.4		06.6	277	19.0		16.0	61	51.0		43.0	138	14.2		49.0
3	267	06.1	216	52.7		07.4	292	19.7		15.4	76	53.7		43.0	153	16.5		49.0
4	282	08.6	231	52.1		08.3	307	20.4		14.8	91	56.4		42.9	168	18.8		48.9
5	297	11.0	246	51.5	+18	09.2	322	21.1	-12	14.1	106	59.1	-2	42.8	183	21.0	+21	48.9
6	312	13.5	261	50.8	+18	10.1	337	21.8	-12	13.5	122	01.8	-2	42.7	198	23.3	+21	48.9
7	327	15.9	276	50.2		10.9	352	22.6		12.9	137	04.4		42.6	213	25.6		48.9
8	342	18.4	291	49.5		11.8	7	23.3		12.3	152	07.1		42.5	228	27.9		48.8
9	357	20.9	306	48.9		12.7	22	24.0		11.7	167	09.8		42.5	243	30.1		48.8
10	12	23.3	321	48.2		13.6	37	24.7		11.1	182	12.4		42.4	258	32.4		48.8
11	27	25.8	336	47.6	+18	14.4	52	25.5	-12	10.5	197	15.1	-2	42.3	273	34.7	+21	48.8
12	42	28.3	351	46.9	+18	15.3	67	26.2	-12	09.9	212	17.8	-2	42.2	288	36.9	+21	48.7
13	57	30.7	6	46.3		16.2	82	26.9		09.2	227	20.5		42.1	303	39.2		48.7
14	72	33.2	21	45.6		17.1	97	27.6		08.6	242	23.1		42.1	318	41.5		48.7
15	87	35.7	36	45.0		17.9	112	28.3		08.0	257	25.8		42.0	333	43.7		48.7
16	102	38.1	51	44.3		18.8	127	29.1		07.4	272	28.5		41.9	348	46.0		48.6
17	117	40.6	66	43.7	+18	19.7	142	29.8	-12	06.8	287	31.2	-2	41.8	3	48.3	+21	48.6
18	132	43.1	81	43.0	+18	20.5	157	30.5	-12	06.2	302	33.8	-2	41.7	18	50.5	+21	48.6
19	147	45.5	96	42.4		21.4	172	31.2		05.6	317	36.5		41.7	33	52.8		48.6
20	162	48.0	111	41.7		22.3	187	31.9		04.9	332	39.2		41.6	48	55.1		48.5
21	177	50.4	126	41.1		23.1	202	32.7		04.3	347	41.9		41.5	63	57.3		48.5
22	192	52.9	141	40.4		24.0	217	33.4		03.7	2	44.5		41.4	78	59.6		48.5
23	207	55.4	156	39.8		24.9	232	34.1		03.1	17	47.2		41.3	94	01.9		48.4
24	222	57.8	171	39.1	+18	25.7	247	34.8	-12	02.5	32	49.9	-2	41.3	109	04.1	+21	48.4
Dif	—		-6 +9		+7 +6		+27 +1		+23 0									

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15'9 PMG: 11 ^h 56 ^m 7				Edad: 26 ^d 1 PHE { SD: 15'8 PMG: 9 ^h 40 ^m R°: 46 ^m 4 ^h : 58'1 12 ^h : 57'9 20 ^h : 57'8															
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m				
0	180	49.5	+16	13.2	219	26.2	-0	23.9	60 N	1	18	2	52	3	26	**				
1	195	49.6		13.9	233	58.5 ¹³³	-0	07.6 ¹⁶³	58	1	53	3	08	3	26	3				
2	210	49.6		14.6	248	30.9 ¹³⁴	+0	08.6 ¹⁶²	56	2	17		21	4	07	6				
3	225	49.7		15.3	263	03.2 ¹³³		24.8 ¹⁶²	54		35		33	15	27	8				
4	240	49.8		16.0	277	35.6 ¹³⁴		41.1 ¹⁶³	52	2	51		43	23	27	11				
5	255	49.8	+16	16.8	292	08.0 ¹³⁴	+0	57.3 ¹⁶²	50	3	04	3	52	4	29	13				
6	270	49.9	+16	17.5	306	40.4 ¹³⁴	+1	13.5 ¹⁶²	45	3	30	4	11	4	44	19				
7	285	49.9		18.2	321	12.8 ¹³⁴		29.7 ¹⁶²	40	3	49		26	4	55	22				
8	300	50.0		18.9	335	45.2 ¹³⁴	+1	45.9 ¹⁶²	35	4	05		38	5	05	26				
9	315	50.0		19.6	350	17.7 ¹³⁵	+2	02.0 ¹⁶¹	30		18	4	48		14	28				
10	330	50.1		20.3	4	50.1 ¹³⁴		18.1 ¹⁶¹	20		38	5	05		29	28				
11	345	50.1	+16	21.0	19	22.5 ¹³⁴	+2	34.3 ¹⁶²	10 N	4	54	5	19	5	41	39				
12	0	50.2	+16	21.7	33	55.0 ¹³⁵	+2	50.4 ¹⁶¹	0	5	07	5	32	5	53	46				
13	15	50.2		22.4	48	27.4 ¹³⁴	+3	06.4 ¹⁶⁰	10 S		18		43	6	05	50				
14	30	50.3		23.2	62	59.9 ¹³⁵		22.5 ¹⁶¹	20		28	5	54		17	30				
15	45	50.3		23.9	77	32.3 ¹³⁴		38.5 ¹⁶⁰	30		38	6	07		31	61				
16	60	50.4		24.6	92	04.8 ¹³⁵	+3	54.5 ¹⁶⁰	35		43		13		40	31				
17	75	50.4	+16	25.3	106	37.2 ¹³⁴	+4	10.5 ¹⁶⁰	40	5	48	6	20	6	49	69				
18	90	50.5	+16	26.0	121	09.7 ¹³⁵	+4	26.4 ¹⁵⁹	45	5	53	6	28	7	00	73				
19	105	50.5		26.7	135	42.1 ¹³⁴		42.3 ¹⁵⁹	50	5	59		38		13	32				
20	120	50.6		27.4	150	14.6 ¹³⁵	+4	58.2 ¹⁵⁹	52	6	02		42		19	33				
21	135	50.6		28.1	164	47.0 ¹³⁴	+5	14.1 ¹⁵⁹	54		04		47		25	33				
22	150	50.7		28.8	179	19.4 ¹³⁴		29.9 ¹⁵⁸	56		07		52		33	33				
23	165	50.7		29.5	193	51.8 ¹³⁴	+5	45.7 ¹⁵⁸	58		10	6	58		41	33				
24	180	50.7	+16	30.2	208	24.2 ¹³⁴	+6	01.4 ¹⁵⁷	60 S	6	13	7	04	7	51	95				
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 9 ^h 06 ^m 6				Mag: -3.9 PMG: 12 ^h 34 ^m				Mag: +0.6 PMG: 7 ^h 29 ^m				Mag: -2.4 PMG: 21 ^h 45 ^m				Mag: +0.2 PMG: 16 ^h 41 ^m			
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	222	57.8			171	39.1	+18	25.7	247	34.8	-12	02.5	32	49.9	-2	41.3	109	04.1	+21	48.4
1	238	00.3			186	38.5		26.6	262	35.6		01.9	47	52.5		41.2	124	06.4		48.4
2	253	02.8			201	37.8		27.4	277	36.3		01.3	62	55.2		41.1	139	08.7		48.4
3	268	05.2			216	37.2		28.3	292	37.0	-12	00.6	77	57.9		41.0	154	11.0		48.3
4	283	07.7			231	36.5		29.2	307	37.7	-12	00.0	93	00.5		40.9	169	13.2		48.3
5	298	10.2			246	35.9	+18	30.0	322	38.5	-11	59.4	108	03.2	-2	40.9	184	15.5	+21	48.3
6	313	12.6			261	35.2	+18	30.9	337	39.2	-11	58.8	123	05.9	-2	40.8	199	17.8	+21	48.3
7	328	15.1			276	34.5		31.7	352	39.9		58.2	138	08.6		40.7	214	20.0		48.2
8	343	17.5			291	33.9		32.6	7	40.6		57.6	153	11.2		40.6	229	22.3		48.2
9	358	20.0			306	33.2		33.4	22	41.3		56.9	168	13.9		40.5	244	24.5		48.2
10	13	22.5			321	32.6		34.3	37	42.1		56.3	183	16.6		40.5	259	26.8		48.2
11	28	24.9			336	31.9	+18	35.1	52	42.8	-11	55.7	198	19.2	-2	40.4	274	29.1	+21	48.1
12	43	27.4			351	31.2	+18	36.0	67	43.5	-11	55.1	213	21.9	-2	40.3	289	31.3	+21	48.1
13	58	29.9			6	30.6		36.8	82	44.2		54.5	228	24.6		40.2	304	33.6		48.1
14	73	32.3			21	29.9		37.7	97	45.0		53.9	243	27.2		40.2	319	35.9		48.0
15	88	34.8			36	29.3		38.5	112	45.7		53.2	258	29.9		40.1	334	38.1		48.0
16	103	37.3			51	28.6		39.4	127	46.4		52.6	273	32.6		40.0	349	40.4		48.0
17	118	39.7			66	27.9	+18	40.2	142	47.1	-11	52.0	288	35.2	-2	39.9	4	42.7	+21	48.0
18	133	42.2			81	27.3	+18	41.1	157	47.9	-11	51.4	303	37.9	-2	39.8	19	44.9	+21	47.9
19	148	44.7			96	26.6		41.9	172	48.6		50.8	318	40.6		39.8	34	47.2		47.9
20	163	47.1			111	26.0		42.8	187	49.3		50.2	333	43.2		39.7	49	49.5		47.9
21	178	49.6			126	25.3		43.6	202	50.0		49.5	348	45.9		39.6	64	51.7		47.9
22	193	52.0			141	24.6		44.5	217	50.8		48.9	3	48.6		39.5	79	54.0		47.8
23	208	54.5			156	24.0		45.3	232	51.5		48.3	18	51.2		39.5	94	56.3		47.8
24	223	57.0			171	23.3	+18	46.2	247	52.2	-11	47.7	33	53.9	-2	39.4	109	58.5	+21	47.8
Dif	—				-7				+9				+27				+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 6			Edad: 27 ^d 1 PHE { 4 ^h : 57'6 12 ^h : 57'5 20 ^h : 57'3 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	50.7	+16 30.2	208 24.2	+6 01.4		60 N	20 10	21 07	22 48	3 25 0	17 54 97		
1	195	50.8		222 56.6 ¹³⁴	17.1 ¹⁵⁷		58	19 59	20 50	22 09	29 3	48 92		
2	210	50.8	31.6	237 29.0 ¹³⁴	32.8 ¹⁵⁷		56	49	36	21 43	32 7	42 88		
3	225	50.9	32.3	252 01.4 ¹³⁴	+6 48.4 ¹⁵⁶		54	41	24	23	35 10	37 85		
4	240	50.9	33.0	266 33.7 ¹³³	+7 04.0 ¹⁵⁶		52	33	13	21 07	38 12	33 82		
5	255	51.0	+16 33.7	281 06.1 ¹³⁴	+7 19.6 ¹⁵⁶		50	19 26	20 04	20 53	3 40 15	17 29 79		
6	270	51.0	+16 34.4	295 38.4 ¹³³	+7 35.1 ¹⁵⁵		45	19 12	19 45	20 26	3 46 20	17 20 74		
7	285	51.1	35.1	310 10.7 ¹³³	+7 50.5 ¹⁵⁴		40	19 00	30	20 06	50 25	13 69		
8	300	51.1	35.8	324 43.0 ¹³³	+8 06.0 ¹⁵⁵		35	18 49	17	19 50	54 28	07 65		
9	315	51.2	36.5	339 15.3 ¹³³	21.3 ¹⁵³		30	41	19 06	37	3 58 31	17 02 61		
10	330	51.2	37.2	353 47.5 ¹³²	36.6 ¹⁵³		20	25	18 49	16	4 04 37	16 52 56		
11	345	51.2	+16 37.9	8 19.7 ¹³²	+8 51.9 ¹⁵³		10 N	18 12	18 34	19 00	4 10 41	16 44 51		
12	0	51.3	+16 38.6	22 51.9 ¹³²	+9 07.1 ¹⁵²		0	18 00	18 22	18 47	4 15 46	16 37 46		
13	15	51.3	39.3	37 24.1 ¹³²	22.3 ¹⁵²		10 S	17 48	18 10	35	20 51	29 42		
14	30	51.4	40.0	51 56.3 ¹³²	37.4 ¹⁵¹		20	35	17 58	25	26 55	21 38		
15	45	51.4	40.7	66 28.4 ¹³¹	+9 52.5 ¹⁵¹		30	21	46	14	32 62	12 32		
16	60	51.5	41.4	81 00.5 ¹³¹	+10 07.5 ¹⁵⁰		35	12	39	09	36 65	07 29		
17	75	51.5	+16 42.1	95 32.6 ¹³¹	+10 22.4 ¹⁴⁹		40	17 03	17 31	18 04	4 40 69	16 01 25		
18	90	51.6	+16 42.8	110 04.7 ¹³¹	+10 37.3 ¹⁴⁹		45	16 52	17 23	17 58	4 45 74	15 54 21		
19	105	51.6	43.5	124 36.7 ¹³⁰	+10 52.1 ¹⁴⁸		50	39	13	52	51 79	46 16		
20	120	51.6	44.2	139 08.7 ¹³⁰	+11 06.9 ¹⁴⁸		52	32	09	49	54 82	42 13		
21	135	51.7	44.9	153 40.7 ¹³⁰	21.6 ¹⁴⁷		54	26	17 04	47	4 57 85	38 11		
22	150	51.7	45.6	168 12.6 ¹²⁹	36.3 ¹⁴⁷		56	18	16 59	44	5 01 87	33 8		
23	165	51.8	46.3	182 44.5 ¹²⁹	+11 50.9 ¹⁴⁶		58	16 09	53	40	5 04 92	28 4		
24	180	51.8	+16 47.0	197 16.4 ¹²⁹	+12 05.4 ¹⁴⁵		60 S	15 59	16 46	17 37	5 09 96	15 23 0		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 9 ^h 02 ^m 7		Mag: -3.9 PMG: 12 ^h 35 ^m		Mag: +0.6 PMG: 7 ^h 28 ^m		Mag: -2.4 PMG: 21 ^h 41 ^m		Mag: +0.2 PMG: 16 ^h 38 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	223 57.0	171 23.3	+18 46.2		247 52.2	-11 47.7	33 53.9	-2 39.4	109 58.5	+21 47.8
1	238 59.4	186 22.6	47.0		262 53.0	47.1	48 56.6	39.3	125 00.8	47.7
2	254 01.9	201 22.0	47.8		277 53.7	46.4	63 59.2	39.2	140 03.0	47.7
3	269 04.4	216 21.3	48.7		292 54.4	45.8	79 01.9	39.1	155 05.3	47.7
4	284 06.8	231 20.6	49.5		307 55.1	45.2	94 04.6	39.1	170 07.6	47.7
5	299 09.3	246 20.0	+18 50.3		322 55.9	-11 44.6	109 07.2	-2 39.0	185 09.8	+21 47.6
6	314 11.8	261 19.3	+18 51.2		337 56.6	-11 44.0	124 09.9	-2 38.9	200 12.1	+21 47.6
7	329 14.2	276 18.6	52.0		352 57.3	43.3	139 12.6	38.8	215 14.4	47.6
8	344 16.7	291 18.0	52.9		7 58.0	42.7	154 15.2	38.8	230 16.6	47.6
9	359 19.1	306 17.3	53.7		22 58.8	42.1	169 17.9	38.7	245 18.9	47.5
10	14 21.6	321 16.6	54.5		37 59.5	41.5	184 20.6	38.6	260 21.2	47.5
11	29 24.1	336 15.9	+18 55.4		53 00.2	-11 40.9	199 23.2	-2 38.5	275 23.4	+21 47.5
12	44 26.5	351 15.3	+18 56.2		68 01.0	-11 40.2	214 25.9	-2 38.5	290 25.7	+21 47.4
13	59 29.0	6 14.6	57.0		83 01.7	39.6	229 28.5	38.4	305 27.9	47.4
14	74 31.5	21 13.9	57.8		98 02.4	39.0	244 31.2	38.3	320 30.2	47.4
15	89 33.9	36 13.3	58.7		113 03.1	38.4	259 33.9	38.2	335 32.5	47.4
16	104 36.4	51 12.6	+18 59.5		128 03.9	37.8	274 36.5	38.2	350 34.7	47.3
17	119 38.9	66 11.9	+19 00.3		143 04.6	-11 37.1	289 39.2	-2 38.1	5 37.0	+21 47.3
18	134 41.3	81 11.2	+19 01.2		158 05.3	-11 36.5	304 41.9	-2 38.0	20 39.2	+21 47.3
19	149 43.8	96 10.6	02.0		173 06.1	35.9	319 44.5	37.9	35 41.5	47.3
20	164 46.3	111 09.9	02.8		188 06.8	35.3	334 47.2	37.9	50 43.8	47.2
21	179 48.7	126 09.2	03.6		203 07.5	34.7	349 49.8	37.8	65 46.0	47.2
22	194 51.2	141 08.5	04.5		218 08.3	34.0	4 52.5	37.7	80 48.3	47.2
23	209 53.6	156 07.9	05.3		233 09.0	33.4	19 55.2	37.6	95 50.5	47.1
24	224 56.1	171 07.2	+19 06.1		248 09.7	-11 32.8	34 57.8	-2 37.6	110 52.8	+21 47.1
Dif	—	-7	+8		+7	+6	+27	+1	+23	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: 28 ^d 1 PHE { 4 ^h : 57 ^m 1 12 ^h : 57 ^m 0 20 ^h : 56 ^m 8 PMG: 11 ^h 12 ^m R ^o : 48 ^m															
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m		
0	180	51.8	+16	47.0	197	16.4	+12	05.4	60 N	1 04	2 45	3 42	3 25	0	19 31	99				
1	195	51.8		47.6	211	48.2 ¹²⁸		19.8 ¹⁴⁴	58	1 43	3 02	3 53	32	5	20 93					
2	210	51.9		48.3	226	20.0 ¹²⁸		34.2 ¹⁴⁴	56	2 10	16	4 03	39	9	10 89					
3	225	51.9		49.0	240	51.8 ¹²⁸	+12	48.5 ¹⁴³	54	30	29	12	45	12	19 02 85					
4	240	52.0		49.7	255	23.5 ¹²⁷	+13	02.8 ¹⁴³	52	46	39	19	50	15	18 55 81					
5	255	52.0	+16	50.4	269	55.2 ¹²⁷	+13	16.9 ¹⁴¹	50	2 59	3 48	4 26	3 55	17	18 48 79					
6	270	52.0	+16	51.1	284	26.9 ¹²⁷	+13	31.0 ¹⁴¹	45	3 26	4 08	4 41	4 06	22	18 34 73					
7	285	52.1		51.8	298	58.5 ¹²⁶		45.1 ¹⁴¹	40	3 47	23	4 53	15	26	22 69					
8	300	52.1		52.5	313	30.1 ¹²⁶	+13	59.0 ¹³⁹	35	4 03	36	5 03	22	31	12 65					
9	315	52.2		53.2	328	01.6 ¹²⁵	+14	12.9 ¹³⁹	30	16	4 47	12	29	33	18 03 63					
10	330	52.2		53.9	342	33.1 ¹²⁵		26.7 ¹³⁸	20	37	5 04	27	41	38	17 48 58					
11	345	52.2	+16	54.5	357	04.6 ¹²⁵	+14	40.4 ¹³⁷	10 N	4 53	5 19	5 41	4 51	43	17 35 53					
12	0	52.3	+16	55.2	11	36.0 ¹²⁴	+14	54.1 ¹³⁷	0	5 06	5 31	5 53	5 01	48	17 23 49					
13	15	52.3		55.9	26	07.4 ¹²⁴	+15	07.6 ¹³⁵	10 S	18	43	6 05	11	52	17 11 45					
14	30	52.4		56.6	40	38.7 ¹²³		21.1 ¹³⁵	20	29	5 55	18	21	57	16 59 40					
15	45	52.4		57.3	55	10.0 ¹²³		34.5 ¹³⁴	30	39	6 08	33	34	62	44 35					
16	60	52.4		58.0	69	41.3 ¹²³	+15	47.8 ¹³³	35	44	15	41	41	65	36 32					
17	75	52.5	+16	58.6	84	12.5 ¹²²	+16	01.1 ¹³³	40	5 50	6 22	6 51	5 49	69	16 26 29					
18	90	52.5	+16	59.3	98	43.6 ¹²¹	+16	14.2 ¹³¹	45	5 56	6 31	7 02	5 59	73	16 15 25					
19	105	52.5	+17	00.0	113	14.8 ¹²²		27.3 ¹³¹	50	6 02	41	15	6 10	79	16 02 19					
20	120	52.6	+17	00.7	127	45.8 ¹²⁰		40.2 ¹²⁹	52	05	45	22	16	82	15 55 17					
21	135	52.6		01.4	142	16.8 ¹²⁰	+16	53.1 ¹²⁹	54	07	50	29	22	85	49 13					
22	150	52.7		02.1	156	47.8 ¹²⁰	+17	05.9 ¹²⁸	56	10	6 55	36	28	89	41 10					
23	165	52.7		02.7	171	18.7 ¹¹⁹		18.6 ¹²⁷	58	14	7 01	45	36	93	32 6					
24	180	52.7	+17	03.4	185	49.6 ¹¹⁹	+17	31.2 ¹²⁶	60 S	6 17	7 08	7 55	6 45	98	15 23 1					
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 8 ^h 58 ^m 8				Mag: -3.9 PMG: 12 ^h 36 ^m				Mag: +0.6 PMG: 7 ^h 27 ^m				Mag: -2.4 PMG: 21 ^h 36 ^m				Mag: +0.2 PMG: 16 ^h 34 ^m			
	hG ♈		hG ♀		hG ♂		hG ♎		hG ♊		hG ♋		hG ♏		hG ♐		hG ♑			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	224	56.1	171	07.2	+19	06.1	248	09.7	-11	32.8	34	57.8	-2	37.6	110	52.8	+21	47.1		
1	239	58.6	186	06.5		06.9	263	10.4		32.2	50	00.5		37.5	125	55.1		47.1		
2	255	01.0	201	05.8		07.7	278	11.2		31.6	65	03.1		37.4	140	57.3		47.1		
3	270	03.5	216	05.2		08.6	293	11.9		30.9	80	05.8		37.3	155	59.6		47.0		
4	285	06.0	231	04.5		09.4	308	12.6		30.3	95	08.5		37.3	171	01.8		47.0		
5	300	08.4	246	03.8	+19	10.2	323	13.4	-11	29.7	110	11.1	-2	37.2	186	04.1	+21	47.0		
6	315	10.9	261	03.1	+19	11.0	338	14.1	-11	29.1	125	13.8	-2	37.1	201	06.4	+21	46.9		
7	330	13.4	276	02.4		11.8	353	14.8		28.4	140	16.4		37.0	216	08.6		46.9		
8	345	15.8	291	01.8		12.6	8	15.6		27.8	155	19.1		37.0	231	10.9		46.9		
9	0	18.3	306	01.1		13.4	23	16.3		27.2	170	21.7		36.9	246	13.1		46.9		
10	15	20.8	321	00.4		14.3	38	17.0		26.6	185	24.4		36.8	261	15.4		46.8		
11	30	23.2	335	59.7	+19	15.1	53	17.8	-11	26.0	200	27.1	-2	36.7	276	17.7	+21	46.8		
12	45	25.7	350	59.0	+19	15.9	68	18.5	-11	25.3	215	29.7	-2	36.7	291	19.9	+21	46.8		
13	60	28.1	5	58.3		16.7	83	19.2		24.7	230	32.4		36.6	306	22.2		46.7		
14	75	30.6	20	57.7		17.5	98	19.9		24.1	245	35.0		36.5	321	24.4		46.7		
15	90	33.1	35	57.0		18.3	113	20.7		23.5	260	37.7		36.4	336	26.7		46.7		
16	105	35.5	50	56.3		19.1	128	21.4		22.8	275	40.3		36.4	351	28.9		46.7		
17	120	38.0	65	55.6	+19	19.9	143	22.1	-11	22.2	290	43.0	-2	36.3	6	31.2	+21	46.6		
18	135	40.5	80	54.9	+19	20.7	158	22.9	-11	21.6	305	45.7	-2	36.2	21	33.5	+21	46.6		
19	150	42.9	95	54.2		21.5	173	23.6		21.0	320	48.3		36.2	36	35.7		46.6		
20	165	45.4	110	53.5		22.3	188	24.3		20.3	335	51.0		36.1	51	38.0		46.5		
21	180	47.9	125	52.9		23.1	203	25.1		19.7	350	53.6		36.0	66	40.2		46.5		
22	195	50.3	140	52.2		23.9	218	25.8		19.1	5	56.3		35.9	81	42.5		46.5		
23	210	52.8	155	51.5		24.7	233	26.5		18.5	20	58.9		35.9	96	44.7		46.5		
24	225	55.2	170	50.8	+19	25.5	248	27.3	-11	17.8	36	01.6	-2	35.8	111	47.0	+21	46.4		
Dif	—				-7				+8				+27				+1			

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: 29 ^d 1 PHE SD: 15 ^h 4 PMG: 12 ^h 00 ^m					4 ^h : 56 ^h 6 12 ^h : 56 ^h 4 20 ^h : 56 ^h 2 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	180	52.7	+17 03.4	185	49.6	+17 31.2	60 N	20 15	21 14	23 06	3 25 3	21 10 100			
1	195	52.8	04.1	200	20.5 ¹¹⁹	43.7 ¹²⁵	58	20 04	20 56	22 18	37 8	20 53 92			
2	210	52.8	04.8	214	51.2 ¹¹⁷	+17 56.2 ¹²⁵	56	19 53	41	21 50	48 12	39 87			
3	225	52.8	05.5	229	22.0 ¹¹⁸	+18 08.5 ¹²³	54	44	28	29	3 57 16	27 83			
4	240	52.9	06.1	243	52.7 ¹¹⁷	20.7 ¹²²	52	37	17	21 12	4 05 19	16 80			
5	255	52.9	+17 06.8	258	23.3 ¹¹⁶	+18 32.8 ¹²¹	50	19 29	20 07	20 57	4 12 22	20 07 77			
6	270	52.9	+17 07.5	272	53.9 ¹¹⁶	+18 44.9 ¹²¹	45	19 14	19 48	20 29	4 28 27	19 47 71			
7	285	53.0	08.2	287	24.4 ¹¹⁵	+18 56.8 ¹¹⁹	40	19 02	32	20 09	41 32	31 67			
8	300	53.0	08.8	301	54.9 ¹¹⁵	+19 08.6 ¹¹⁸	35	18 51	19	19 52	4 53 34	17 65			
9	315	53.0	09.5	316	25.4 ¹¹⁵	20.3 ¹¹⁷	30	42	19 08	39	5 02 38	19 06 62			
10	330	53.1	10.2	330	55.7 ¹¹³	32.0 ¹¹⁷	20	26	18 50	17	19 42	18 46 57			
11	345	53.1	+17 10.9	345	26.1 ¹¹⁴	+19 43.5 ¹¹⁵	10 N	18 13	18 35	19 01	5 34 46	18 28 54			
12	0	53.1	+17 11.5	359	56.4 ¹¹³	+19 54.9 ¹¹⁴	0	18 00	18 22	18 47	5 49 49	18 12 51			
13	15	53.2	12.2	14	26.6 ¹¹²	+20 06.2 ¹¹³	10 S	17 47	18 09	35	6 03 53	17 56 48			
14	30	53.2	12.9	28	56.8 ¹¹²	17.4 ¹¹²	20	34	17 57	24	18 58	39 44			
15	45	53.2	13.6	43	26.9 ¹¹¹	28.5 ¹¹¹	30	19	44	13	36 62	19 40			
16	60	53.3	14.2	57	57.0 ¹¹¹	39.5 ¹¹⁰	35	11	37	08	46 65	17 08 37			
17	75	53.3	+17 14.9	72	27.0 ¹¹⁰	+20 50.4 ¹⁰⁹	40	17 01	17 29	18 02	6 58 68	16 55 34			
18	90	53.3	+17 15.6	86	57.0 ¹¹⁰	+21 01.1 ¹⁰⁷	45	16 49	17 21	17 56	7 12 73	16 40 30			
19	105	53.3	16.3	101	26.9 ¹⁰⁹	11.8 ¹⁰⁷	50	35	10	49	29 79	21 25			
20	120	53.4	16.9	115	56.8 ¹⁰⁹	22.3 ¹⁰⁵	52	29	06	46	38 81	12 22			
21	135	53.4	17.6	130	26.6 ¹⁰⁸	32.7 ¹⁰⁴	54	22	17 01	43	47 84	16 02 19			
22	150	53.4	18.3	144	56.4 ¹⁰⁸	43.1 ¹⁰⁴	56	14	16 55	40	7 57 89	15 51 15			
23	165	53.5	18.9	159	26.2 ¹⁰⁸	+21 53.3 ¹⁰²	58	16 05	49	37	8 09 94	38 11			
24	180	53.5	+17 19.6	173	55.8 ¹⁰⁶	+22 03.3 ¹⁰⁰	60 S	15 55	16 42	17 33	8 23 100	15 24 3			
UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO					
	PMG 8 ^h 54 ^m 9	Mag: -3.9 PMG: 12 ^h 37 ^m	Mag: +0.6 PMG: 7 ^h 26 ^m	Mag: -2.4 PMG: 21 ^h 32 ^m	Mag: +0.2 PMG: 16 ^h 30 ^m										
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'					
0	225	55.2	170 50.8	+19 25.5	248 27.3	-11 17.8	36 01.6	-2 35.8	111 47.0	+21 46.4					
1	240	57.7	185 50.1	26.3	263 28.0	17.2	51 04.2	35.7	126 49.3	46.4					
2	256	00.2	200 49.4	27.1	278 28.8	16.6	66 06.9	35.6	141 51.5	46.4					
3	271	02.6	215 48.7	27.9	293 29.5	16.0	81 09.6	35.6	156 53.8	46.3					
4	286	05.1	230 48.0	28.7	308 30.2	15.3	96 12.2	35.5	171 56.0	46.3					
5	301	07.6	245 47.3	+19 29.5	323 31.0	-11 14.7	111 14.9	-2 35.4	186 58.3	+21 46.3					
6	316	10.0	260 46.7	+19 30.3	338 31.7	-11 14.1	126 17.5	-2 35.4	202 00.5	+21 46.3					
7	331	12.5	275 46.0	31.1	353 32.4	13.5	141 20.2	35.3	217 02.8	46.2					
8	346	15.0	290 45.3	31.9	8 33.2	12.8	156 22.8	35.2	232 05.1	46.2					
9	1	17.4	305 44.6	32.7	23 33.9	12.2	171 25.5	35.1	247 07.3	46.2					
10	16	19.9	320 43.9	33.5	38 34.6	11.6	186 28.1	35.1	262 09.6	46.1					
11	31	22.4	335 43.2	+19 34.3	53 35.4	-11 11.0	201 30.8	-2 35.0	277 11.8	+21 46.1					
12	46	24.8	350 42.5	+19 35.1	68 36.1	-11 10.3	216 33.4	-2 34.9	292 14.1	+21 46.1					
13	61	27.3	5 41.8	35.8	83 36.8	09.7	231 36.1	34.9	307 16.3	46.1					
14	76	29.7	20 41.1	36.6	98 37.6	09.1	246 38.7	34.8	322 18.6	46.0					
15	91	32.2	35 40.4	37.4	113 38.3	08.5	261 41.4	34.7	337 20.8	46.0					
16	106	34.7	50 39.7	38.2	128 39.0	07.8	276 44.0	34.7	352 23.1	46.0					
17	121	37.1	65 39.0	+19 39.0	143 39.8	-11 07.2	291 46.7	-2 34.6	7 25.3	+21 45.9					
18	136	39.6	80 38.3	+19 39.8	158 40.5	-11 06.6	306 49.3	-2 34.5	22 27.6	+21 45.9					
19	151	42.1	95 37.6	40.5	173 41.3	05.9	321 52.0	34.4	37 29.9	45.9					
20	166	44.5	110 36.9	41.3	188 42.0	05.3	336 54.6	34.4	52 32.1	45.9					
21	181	47.0	125 36.2	42.1	203 42.7	04.7	351 57.3	34.3	67 34.4	45.8					
22	196	49.5	140 35.5	42.9	218 43.5	04.1	6 59.9	34.2	82 36.6	45.8					
23	211	51.9	155 34.8	43.7	233 44.2	03.4	22 02.6	34.2	97 38.9	45.8					
24	226	54.4	170 34.1	+19 44.4	248 44.9	-11 02.8	37 05.2	-2 34.1	112 41.1	+21 45.7					
Dif	—		-7	+8	+7	+6	+27		+1	+23	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: 0 ^d 6 SD: 15 ^h 3 PMG: 12 ^h 51 ^m	PHE { 4 ^h : 56 ^h 0 12 ^h : 55 ^h 9 20 ^h : 55 ^h 7 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	180	53.5	+17	19.6	173	55.8	+22	03.3	60 N	0 46	2 38	3 37	3 28	6	22	50	93
1	195	53.5		20.3	188	25.5		13.3	58	1 34	2 56	49	3 45	14		25	84
2	210	53.6		20.9	202	55.0		23.1	56	2 02	3 11	3 59	4 00	19	22	06	79
3	225	53.6		21.6	217	24.6		32.9	54	24	24	4 08	13	23	21	50	75
4	240	53.6		22.3	231	54.0		42.5	52	41	35	16	24	26		36	72
5	255	53.6	+17	22.9	246	23.5	+22	51.9	50	2 55	3 45	4 23	4 34	29	21	24	70
6	270	53.7	+17	23.6	260	52.8	+23	01.3	45	3 23	4 05	4 38	4 55	34	20	58	67
7	285	53.7		24.3	275	22.2		10.5	40	3 44	21	4 51	5 13	37		38	64
8	300	53.7		24.9	289	51.5		19.6	35	4 00	34	5 01	27	40		22	62
9	315	53.8		25.6	304	20.7		28.6	30	14	4 45	11	5 40	42	20	08	60
10	330	53.8		26.3	318	49.9		37.5	20	36	5 03	27	6 01	46	19	43	57
11	345	53.8	+17	26.9	333	19.0	+23	46.2	10 N	4 52	5 18	5 40	6 20	49	19	22	55
12	0	53.8	+17	27.6	347	48.1	+23	54.8	0	5 06	5 31	5 53	6 38	52	19	03	52
13	15	53.9		28.2	2	17.2	+24	03.3	10 S	18	44	6 06	6 56	55	18	44	50
14	30	53.9		28.9	16	46.2		11.7	20	29	5 56	19	7 16	57	18	23	48
15	45	53.9		29.6	31	15.2		19.9	30	40	6 09	34	38	61	17	59	45
16	60	53.9		30.2	45	44.1		28.0	35	46	16	43	7 51	64		45	43
17	75	54.0	+17	30.9	60	12.9	+24	36.0	40	5 51	6 24	6 53	8 06	66	17	29	40
18	90	54.0	+17	31.5	74	41.8	+24	43.8	45	5 58	6 33	7 04	8 25	69	17	10	37
19	105	54.0		32.2	89	10.6		51.5	50	6 04	43	18	48	74	16	46	33
20	120	54.0		32.9	103	39.3	+24	59.1	52	07	48	25	8 59	76		34	31
21	135	54.1		33.5	118	08.0	+25	06.5	54	10	53	32	9 11	80		21	28
22	150	54.1		34.2	132	36.7		13.8	56	14	6 59	40	26	83	16	06	24
23	165	54.1		34.8	147	05.3		21.0	58	17	7 05	7 49	9 43	89	15	49	18
24	180	54.1	+17	35.5	161	33.9	+25	28.0	60 S	6 21	7 12	8 00	10 03	99	15	27	10

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 8 ^h 50 ^m 9		Mag: -3.9 PMG: 12 ^h 38 ^m		Mag: +0.5 PMG: 7 ^h 25 ^m		Mag: -2.4 PMG: 21 ^h 28 ^m		Mag: +0.2 PMG: 16 ^h 27 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	226	54.4	170	34.1	+19	44.4	248	44.9	-11	02.8	37	05.2	-2	34.1	112	41.1	+21	45.7
1	241	56.9	185	33.4		45.2	263	45.7		02.2	52	07.9		34.0	127	43.4		45.7
2	256	59.3	200	32.7		46.0	278	46.4		01.5	67	10.5		34.0	142	45.6		45.7
3	272	01.8	215	32.0		46.8	293	47.2		00.9	82	13.2		33.9	157	47.9		45.6
4	287	04.2	230	31.3		47.5	308	47.9	-11	00.3	97	15.8		33.8	172	50.1		45.6
5	302	06.7	245	30.6	+19	48.3	323	48.6	-10	59.7	112	18.5	-2	33.8	187	52.4	+21	45.6
6	317	09.2	260	29.9	+19	49.1	338	49.4	-10	59.0	127	21.1	-2	33.7	202	54.6	+21	45.6
7	332	11.6	275	29.2		49.9	353	50.1		58.4	142	23.8		33.6	217	56.9		45.5
8	347	14.1	290	28.5		50.6	8	50.8		57.8	157	26.4		33.5	232	59.1		45.5
9	2	16.6	305	27.8		51.4	23	51.6		57.1	172	29.1		33.5	248	01.4		45.5
10	17	19.0	320	27.1		52.2	38	52.3		56.5	187	31.7		33.4	263	03.6		45.4
11	32	21.5	335	26.4	+19	52.9	53	53.1	-10	55.9	202	34.3	-2	33.3	278	05.9	+21	45.4
12	47	24.0	350	25.7	+19	53.7	68	53.8	-10	55.3	217	37.0	-2	33.3	293	08.1	+21	45.4
13	62	26.4	5	25.0		54.5	83	54.5		54.6	232	39.6		33.2	308	10.4		45.4
14	77	28.9	20	24.3		55.2	98	55.3		54.0	247	42.3		33.1	323	12.6		45.3
15	92	31.4	35	23.6		56.0	113	56.0		53.4	262	44.9		33.1	338	14.9		45.3
16	107	33.8	50	22.9		56.8	128	56.8		52.7	277	47.6		33.0	353	17.1		45.3
17	122	36.3	65	22.1	+19	57.5	143	57.5	-10	52.1	292	50.2	-2	32.9	8	19.4	+21	45.2
18	137	38.7	80	21.4	+19	58.3	158	58.2	-10	51.5	307	52.9	-2	32.9	23	21.6	+21	45.2
19	152	41.2	95	20.7		59.0	173	59.0		50.9	322	55.5		32.8	38	23.9		45.2
20	167	43.7	110	20.0	+19	59.8	188	59.7		50.2	337	58.1		32.7	53	26.1		45.1
21	182	46.1	125	19.3	+20	00.6	204	00.5		49.6	353	00.8		32.7	68	28.4		45.1
22	197	48.6	140	18.6		01.3	219	01.2		49.0	8	03.4		32.6	83	30.6		45.1
23	212	51.1	155	17.9		02.1	234	02.0		48.3	23	06.1		32.5	98	32.9		45.1
24	227	53.5	170	17.2	+20	02.8	249	02.7	-10	47.7	38	08.7	-2	32.5	113	35.1	+21	45.0
Dif	—		-7		+8		+7		+6		+26		+1		+23			

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15:8 PMG: 11 ^h 56 ^m 4			Edad: 1 ^d 6 SD: 15:1 PMG: 13 ^h 43 ^m	PHE { 4 ^h : 55:5 12 ^h : 55:3 20 ^h : 55:2 R°: 53 ^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	180	54.1	+17 35.5	161 33.9	+25 28.0	69	60 N	20 20	21 20	23 32	3 34 17	** ** *	** ** *	
1	195	54.2	36.1	176 02.5	34.9	69	58	20 08	21 01	22 28	3 59 26	23 49 65	23 49 65	
2	210	54.2	36.8	190 31.0	41.7	68	56	19 57	20 46	21 57	4 19 31	25 63	25 63	
3	225	54.2	37.5	204 59.5	48.3	66	54	48	32	34	36 34	23 05 61	23 05 61	
4	240	54.2	38.1	219 27.9	+25 54.8	65	52	40	21	16	4 50 37	22 48 61	22 48 61	
5	255	54.2	+17 38.8	233 56.3	+26 01.1	63	50	19 32	20 11	21 02	5 03 38	22 34 60	22 34 60	
6	270	54.3	+17 39.4	248 24.7	+26 07.3	62	45	19 17	19 50	20 33	5 29 42	22 05 58	22 05 58	
7	285	54.3	40.1	262 53.1	13.4	61	40	19 04	34	20 11	5 50 44	21 42 58	21 42 58	
8	300	54.3	40.7	277 21.4	19.3	59	35	18 53	20	19 54	6 07 46	24 56	24 56	
9	315	54.3	41.4	291 49.7	25.1	58	30	43	19 09	40	22 47	21 08 56	21 08 56	
10	330	54.4	42.0	306 17.9	30.8	57	20	27	18 50	18	6 47 50	20 40 55	20 40 55	
11	345	54.4	+17 42.7	320 46.2	+26 36.3	55	10 N	18 13	18 35	19 01	7 09 52	20 17 54	20 17 54	
12	0	54.4	+17 43.3	335 14.4	+26 41.6	53	0	18 00	18 22	18 47	7 30 53	19 55 54	19 55 54	
13	15	54.4	44.0	349 42.6	46.9	53	10 S	17 47	18 09	34	7 51 54	34 52	34 52	
14	30	54.4	44.6	4 10.7	52.0	51	20	33	17 56	23	8 13 56	19 11 51	19 11 51	
15	45	54.5	45.3	18 38.9	+26 56.9	49	30	18	43	12	39 58	18 44 49	18 44 49	
16	60	54.5	45.9	33 07.0	+27 01.7	48	35	17 09	36	06	8 55 59	28 49	28 49	
17	75	54.5	+17 46.6	47 35.1	+27 06.4	47	40	16 59	17 27	18 00	9 12 61	18 09 48	18 09 48	
18	90	54.5	+17 47.2	62 03.1	+27 10.9	45	45	16 47	17 18	17 54	9 34 63	17 47 46	17 47 46	
19	105	54.5	47.9	76 31.2	15.2	43	50	32	08	47	10 02 65	19 44	19 44	
20	120	54.6	48.5	90 59.2	19.5	43	52	26	17 03	44	15 67	17 05 43	17 05 43	
21	135	54.6	49.2	105 27.3	23.6	41	54	18	16 57	40	31 69	16 49 41	16 49 41	
22	150	54.6	49.8	119 55.3	27.5	39	56	10	52	37	10 49 72	30 39	30 39	
23	165	54.6	50.4	134 23.3	31.3	38	58	16 01	45	33	11 12 76	16 07 35	16 07 35	
24	180	54.6	+17 51.1	148 51.2	+27 34.9	36	60 S	15 50	16 38	17 29	11 42 85	15 37 26	15 37 26	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 8 ^h 47 ^m 0		Mag: -3.9 PMG: 12 ^h 39 ^m		Mag: +0.5 PMG: 7 ^h 23 ^m		Mag: -2.4 PMG: 21 ^h 24 ^m		Mag: +0.2 PMG: 16 ^h 23 ^m	
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	°	°	°	°	°	°	°	°	
0	227	53.5	170 17.2	+20 02.8	249 02.7	-10 47.7	38 08.7	-2 32.5	113 35.1	
1	242	56.0	185 16.5	03.6	264 03.4	47.1	53 11.4	32.4	128 37.4	
2	257	58.5	200 15.8	04.3	279 04.2	46.4	68 14.0	32.3	143 39.6	
3	273	00.9	215 15.0	05.1	294 04.9	45.8	83 16.6	32.3	158 41.9	
4	288	03.4	230 14.3	05.8	309 05.7	45.2	98 19.3	32.2	173 44.1	
5	303	05.8	245 13.6	+20 06.6	324 06.4	-10 44.5	113 21.9	-2 32.1	188 46.4	
6	318	08.3	260 12.9	+20 07.3	339 07.1	-10 43.9	128 24.6	-2 32.1	203 48.6	
7	333	10.8	275 12.2	08.1	354 07.9	43.3	143 27.2	32.0	218 50.9	
8	348	13.2	290 11.5	08.8	9 08.6	42.6	158 29.9	31.9	233 53.1	
9	3	15.7	305 10.7	09.6	24 09.4	42.0	173 32.5	31.9	248 55.4	
10	18	18.2	320 10.0	10.3	39 10.1	41.4	188 35.1	31.8	263 57.6	
11	33	20.6	335 09.3	+20 11.1	54 10.9	-10 40.8	203 37.8	-2 31.7	278 59.9	
12	48	23.1	350 08.6	+20 11.8	69 11.6	-10 40.1	218 40.4	-2 31.7	294 02.1	
13	63	25.6	5 07.9	12.6	84 12.3	39.5	233 43.1	31.6	309 04.4	
14	78	28.0	20 07.2	13.3	99 13.1	38.9	248 45.7	31.5	324 06.6	
15	93	30.5	35 06.4	14.0	114 13.8	38.2	263 48.3	31.5	339 08.9	
16	108	33.0	50 05.7	14.8	129 14.6	37.6	278 51.0	31.4	354 11.1	
17	123	35.4	65 05.0	+20 15.5	144 15.3	-10 37.0	293 53.6	-2 31.3	9 13.4	
18	138	37.9	80 04.3	+20 16.3	159 16.1	-10 36.3	308 56.2	-2 31.3	24 15.6	
19	153	40.3	95 03.6	17.0	174 16.8	35.7	323 58.9	31.2	39 17.9	
20	168	42.8	110 02.8	17.7	189 17.6	35.1	339 01.5	31.2	54 20.1	
21	183	45.3	125 02.1	18.5	204 18.3	34.4	354 04.2	31.1	69 22.4	
22	198	47.7	140 01.4	19.2	219 19.0	33.8	9 06.8	31.0	84 24.6	
23	213	50.2	155 00.7	19.9	234 19.8	33.2	24 09.4	31.0	99 26.8	
24	228	52.7	170 00.0	+20 20.7	249 20.5	-10 32.5	39 12.1	-2 30.9	114 29.1	
Dif	—	—	-7 +7	+7	+7 +6	+26	+1	+22	0	

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15'8 PMG: 11 ^h 56 ^m 3				Edad: 2 ^d 6 PHE { 4 ^h : 55'0 12 ^h : 54'9 20 ^h : 54'8 R°: 53 ^m															
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m		
0	180	54.6	+17	51.1	148	51.2	+27	34.9	60 N	0 20	2 32	3 32	3 51	42	0 23	69				
1	195	54.6		51.7	163	19.2	90	38.4	58	1 24	2 51	44	4 25	46	**	**	**			
2	210	54.7		52.4	177	47.2	90	41.8	56	1 55	3 07	3 55	4 50	47	**	**	**			
3	225	54.7		53.0	192	15.1	89	45.0	54	2 18	20	4 04	5 10	49	**	**	**			
4	240	54.7		53.7	206	43.1	90	48.1	52	36	31	12	27	49	23	49	46			
5	255	54.7	+17	54.3	221	11.0	89	+27 51.0	50	2 51	3 41	4 20	5 41	50	23	34	47			
6	270	54.7	+17	54.9	235	38.9	89	+27 53.8	45	3 20	4 02	4 36	6 11	50	23	03	49			
7	285	54.7		55.6	250	06.9	90	56.4	40	41	18	4 49	34	51	22	40	49			
8	300	54.8		56.2	264	34.8	89	+27 58.9	35	3 58	32	5 00	6 53	51	20	50				
9	315	54.8		56.9	279	02.7	89	+28 01.2	30	4 12	4 43	09	7 09	52	22	04	50			
10	330	54.8		57.5	293	30.6	89	03.4	20	34	5 02	26	7 37	52	21	35	52			
11	345	54.8	+17	58.1	307	58.6	90	+28 05.5	10 N	4 52	5 18	5 40	8 01	52	21	11	52			
12	0	54.8	+17	58.8	322	26.5	89	+28 07.4	0	5 06	5 31	5 53	8 23	53	20	49	52			
13	15	54.8	+17	59.4	336	54.4	89	09.1	10 S	18	44	6 06	8 45	53	26	53				
14	30	54.8	+18	00.0	351	22.4	90	10.8	20	30	5 57	20	9 09	54	20	02	53			
15	45	54.9	+18	00.7	5	50.3	89	12.2	30	41	6 10	35	37	54	19	33	54			
16	60	54.9		01.3	20	18.3	90	13.5	35	47	18	44	9 54	53	19	17	54			
17	75	54.9	+18	02.0	34	46.3	90	+28 14.7	40	5 53	6 26	6 55	10 13	54	18	57	55			
18	90	54.9	+18	02.6	49	14.3	90	+28 15.8	45	6 00	6 35	7 07	10 37	53	18	33	55			
19	105	54.9		03.2	63	42.3	90	16.6	50	07	46	21	11 07	54	18	03	55			
20	120	54.9		03.9	78	10.3	90	17.4	52	10	51	28	22	54	17	48	55			
21	135	54.9		04.5	92	38.3	90	18.0	54	13	6 56	36	11 40	53	30	56				
22	150	54.9		05.1	107	06.3	90	18.4	56	17	7 02	44	12 01	53	17	09	56			
23	165	55.0		05.8	121	34.4	91	18.7	58	20	09	7 53	12 28	53	16	42	57			
24	180	55.0	+18	06.4	136	02.5	91	+28 18.9	60 S	6 25	7 16	8 04	13 07	51	16	03	58			
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG 8 ^h 43 ^m 1				Mag: -3.9 PMG: 12 ^h 41 ^m				Mag: +0.5 PMG: 7 ^h 22 ^m				Mag: -2.4 PMG: 21 ^h 19 ^m				Mag: +0.2 PMG: 16 ^h 20 ^m			
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	228	52.7	170	00.0	+20	20.7	249	20.5	-10	32.5	39	12.1	-2	30.9	114	29.1	+21	44.3		
1	243	55.1	184	59.2		21.4	264	21.3		31.9	54	14.7		30.8	129	31.3		44.3		
2	258	57.6	199	58.5		22.1	279	22.0		31.3	69	17.3		30.8	144	33.6		44.2		
3	274	00.1	214	57.8		22.9	294	22.8		30.6	84	20.0		30.7	159	35.8		44.2		
4	289	02.5	229	57.1		23.6	309	23.5		30.0	99	22.6		30.6	174	38.1		44.2		
5	304	05.0	244	56.3	+20	24.3	324	24.3	-10	29.4	114	25.3	-2	30.6	189	40.3	+21	44.1		
6	319	07.5	259	55.6	+20	25.0	339	25.0	-10	28.7	129	27.9	-2	30.5	204	42.6	+21	44.1		
7	334	09.9	274	54.9		25.8	354	25.8		28.1	144	30.5		30.4	219	44.8		44.1		
8	349	12.4	289	54.2		26.5	9	26.5		27.5	159	33.2		30.4	234	47.1		44.0		
9	4	14.8	304	53.4		27.2	24	27.2		26.8	174	35.8		30.3	249	49.3		44.0		
10	19	17.3	319	52.7		27.9	39	28.0		26.2	189	38.4		30.3	264	51.5		44.0		
11	34	19.8	334	52.0	+20	28.7	54	28.7	-10	25.6	204	41.1	-2	30.2	279	53.8	+21	44.0		
12	49	22.2	349	51.2	+20	29.4	69	29.5	-10	24.9	219	43.7	-2	30.1	294	56.0	+21	43.9		
13	64	24.7	4	50.5		30.1	84	30.2		24.3	234	46.3		30.1	309	58.3		43.9		
14	79	27.2	19	49.8		30.8	99	31.0		23.6	249	49.0		30.0	325	00.5		43.9		
15	94	29.6	34	49.1		31.5	114	31.7		23.0	264	51.6		29.9	340	02.8		43.8		
16	109	32.1	49	48.3		32.3	129	32.5		22.4	279	54.2		29.9	355	05.0		43.8		
17	124	34.6	64	47.6	+20	33.0	144	33.2	-10	21.7	294	56.9	-2	29.8	10	07.3	+21	43.8		
18	139	37.0	79	46.9	+20	33.7	159	34.0	-10	21.1	309	59.5	-2	29.8	25	09.5	+21	43.7		
19	154	39.5	94	46.1		34.4	174	34.7		20.5	325	02.1		29.7	40	11.7		43.7		
20	169	42.0	109	45.4		35.1	189	35.5		19.8	340	04.8		29.6	55	14.0		43.7		
21	184	44.4	124	44.7		35.8	204	36.2		19.2	355	07.4		29.6	70	16.2		43.6		
22	199	46.9	139	43.9		36.5	219	37.0		18.6	10	10.0		29.5	85	18.5		43.6		
23	214	49.3	154	43.2		37.2	234	37.7		17.9	25	12.7		29.5	100	20.7		43.6		
24	229	51.8	169	42.5	+20	38.0	249	38.5	-10	17.3	40	15.3	-2	29.4	115	23.0	+21	43.6		
Dif	—				-7 +7				+7 +6				+26 +1				+22 0			

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8			Edad: 3 ^d 6	PHE { 4 ^h : 54/6 12 ^h : 54/5 20 ^h : 54/4										
	PMG: 11 ^h 56 ^m 3					SD: 14 ^h 9			PMG: 15 ^h 29 ^m		R°: 51 ^m				
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	m	h m m	m
0	180	55.0	+18 06.4	136	02.5	+28 18.9	0	60 N	20 25	21 27	** **	4 33 73	1 32 35		
1	195	55.0	07.0	150	30.6	18.9	0	58	12	21 07	22 39	5 11 67	0 54 41		
2	210	55.0	07.6	164	58.7	18.8	1	56	20 01	20 50	22 04	37 65	28 43		
3	225	55.0	08.3	179	26.9	18.5	3	54	19 51	36	21 40	5 59 62	0 06 45		
4	240	55.0	08.9	193	55.0	18.1	4	52	43	25	21	6 16 61	** ** *	** ** *	
5	255	55.0	+18 09.5	208	23.2	+28 17.6	5	50	19 35	20 14	21 06	6 31 60	** ** *	** ** *	
6	270	55.0	+18 10.2	222	51.5	+28 16.9	7	45	19 19	19 53	20 36	7 01 59	23 52 38		
7	285	55.0	10.8	237	19.7	16.0	9	40	19 06	36	20 14	25 57	29 41		
8	300	55.1	11.4	251	48.0	15.1	9	35	18 54	22	19 56	7 44 57	23 10 43		
9	315	55.1	12.0	266	16.3	13.9	12	30	44	19 11	42	8 01 55	22 54 45		
10	330	55.1	12.7	280	44.7	12.7	12	20	28	18 51	19	29 54	27 47		
11	345	55.1	+18 13.3	295	13.1	+28 11.3	14	10 N	18 13	18 36	19 02	8 53 53	22 03 49		
12	0	55.1	+18 13.9	309	41.5	+28 09.7	16	0	18 00	18 22	18 47	9 16 51	21 41 51		
13	15	55.1	14.5	324	09.9	08.1	16	10 S	17 47	18 09	34	9 38 51	21 19 52		
14	30	55.1	15.2	338	38.4	06.2	19	20	32	17 56	22	10 03 49	20 55 54		
15	45	55.1	15.8	353	06.9	04.3	19	30	16	42	11	31 47	27 57		
16	60	55.1	16.4	7	35.5	+28 02.2	21	35	17 07	34	18 05	10 47 47	20 11 58		
17	75	55.1	+18 17.0	22	04.1	+28 00.0	22	40	16 57	17 26	17 58	11 07 45	19 52 59		
18	90	55.1	+18 17.7	36	32.8	+27 57.6	24	45	16 44	17 16	17 52	11 30 44	19 28 62		
19	105	55.2	18.3	51	01.5	55.1	25	50	30	05	44	12 01 40	18 58 65		
20	120	55.2	18.9	65	30.2	52.4	27	52	23	17 00	41	16 39	43 67		
21	135	55.2	19.5	79	59.0	49.7	27	54	15	16 54	37	33 37	26 69		
22	150	55.2	20.1	94	27.8	46.8	29	56	16 06	48	34	12 54 34	18 05 72		
23	165	55.2	20.8	108	56.7	43.7	31	58	15 56	41	30	13 21 30	17 39 76		
24	180	55.2	+18 21.4	123	25.6	+27 40.5	32	60 S	15 45	16 34	17 25	13 58 21	17 01 86		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 8 ^h 39 ^m 1		Mag: -3.9 PMG: 12 ^h 42 ^m		Mag: +0.5 PMG: 7 ^h 21 ^m		Mag: -2.4 PMG: 21 ^h 15 ^m		Mag: +0.2 PMG: 16 ^h 16 ^m	
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	°	°	°	°	°	°	°	°	
0	229	51.8	169 42.5	+20 38.0	249 38.5	-10 17.3	40 15.3	-2 29.4	115 23.0	+21 43.6
1	244	54.3	184 41.7	38.7	264 39.2	16.7	55 17.9	29.3	130 25.2	43.5
2	259	56.7	199 41.0	39.4	279 40.0	16.0	70 20.5	29.3	145 27.4	43.5
3	274	59.2	214 40.3	40.1	294 40.7	15.4	85 23.2	29.2	160 29.7	43.5
4	290	01.7	229 39.5	40.8	309 41.5	14.7	100 25.8	29.1	175 31.9	43.4
5	305	04.1	244 38.8	+20 41.5	324 42.2	-10 14.1	115 28.4	-2 29.1	190 34.2	+21 43.4
6	320	06.6	259 38.1	+20 42.2	339 43.0	-10 13.5	130 31.1	-2 29.0	205 36.4	+21 43.4
7	335	09.1	274 37.3	42.9	354 43.7	12.8	145 33.7	29.0	220 38.7	43.3
8	350	11.5	289 36.6	43.6	9 44.5	12.2	160 36.3	28.9	235 40.9	43.3
9	5	14.0	304 35.8	44.3	24 45.2	11.6	175 38.9	28.8	250 43.1	43.3
10	20	16.5	319 35.1	45.0	39 46.0	10.9	190 41.6	28.8	265 45.4	43.2
11	35	18.9	334 34.4	+20 45.7	54 46.7	-10 10.3	205 44.2	-2 28.7	280 47.6	+21 43.2
12	50	21.4	349 33.6	+20 46.4	69 47.5	-10 09.6	220 46.8	-2 28.7	295 49.9	+21 43.2
13	65	23.8	4 32.9	47.1	84 48.2	09.0	235 49.5	28.6	310 52.1	43.1
14	80	26.3	19 32.1	47.8	99 49.0	08.4	250 52.1	28.5	325 54.3	43.1
15	95	28.8	34 31.4	48.5	114 49.7	07.7	265 54.7	28.5	340 56.6	43.1
16	110	31.2	49 30.7	49.2	129 50.5	07.1	280 57.3	28.4	355 58.8	43.0
17	125	33.7	64 29.9	+20 49.9	144 51.2	-10 06.5	296 00.0	-2 28.4	11 01.1	+21 43.0
18	140	36.2	79 29.2	+20 50.6	159 52.0	-10 05.8	311 02.6	-2 28.3	26 03.3	+21 43.0
19	155	38.6	94 28.4	51.2	174 52.7	05.2	326 05.2	28.2	41 05.5	43.0
20	170	41.1	109 27.7	51.9	189 53.5	04.5	341 07.8	28.2	56 07.8	42.9
21	185	43.6	124 26.9	52.6	204 54.2	03.9	356 10.5	28.1	71 10.0	42.9
22	200	46.0	139 26.2	53.3	219 55.0	03.3	11 13.1	28.1	86 12.3	42.9
23	215	48.5	154 25.5	54.0	234 55.7	02.6	26 15.7	28.0	101 14.5	42.8
24	230	51.0	169 24.7	+20 54.7	249 56.5	-10 02.0	41 18.3	-2 28.0	116 16.7	+21 42.8
Dif	—	—	-7	+7	+8	+6	+26	+1	+22	0

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15/8 PMG: 11 ^h 56 ^m 3				Edad: 4 ^d 6 PHE { 4 ^h : 54/4 12 ^h : 54/3 20 ^h : 54/2 Rº: 48 ^m													
	hG ☉		Dec		hG ☾ Dif		Dec Dif			Náutico	Civil		Hora	Rº	Hora	Rº		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	180	55.2	+18	21.4	123	25.6	+27	40.5	60 N	**	**	2	25	3	27	5	46	
1	195	55.2		22.0	137	54.6 ¹⁰⁰		37.2	58	1	13	2	45	40	6	18		
2	210	55.2		22.6	152	23.6 ¹⁰⁰		33.8	56	1	48	3	02	3	51	6	42	
3	225	55.2		23.2	166	52.6 ¹⁰⁰		30.2	54	2	12	16		4	01	7	01	
4	240	55.2		23.8	181	21.8 ¹⁰²		26.5	52	31		28	09			17	70	
5	255	55.2	+18	24.5	195	50.9 ¹⁰¹	+27	22.6	50	2	46	3	38	4	17	7	31	
6	270	55.2	+18	25.1	210	20.1 ¹⁰²	+27	18.7	45	3	16	3	59	4	33	8	00	
7	285	55.2		25.7	224	49.4 ¹⁰³		14.6	40	39		4	16	47		22	61	
8	300	55.2		26.3	239	18.8 ¹⁰⁴		10.3	35	3	56	30		4	58	41	58	
9	315	55.2		26.9	253	48.1 ¹⁰³		06.0	30	4	11	4	42	5	08	8	56	
10	330	55.2		27.5	268	17.6 ¹⁰⁵	+27	01.5	20	33		5	01	25		9	23	
11	345	55.2	+18	28.1	282	47.1 ¹⁰⁵	+26	56.9	10 N	4	51	5	17	5	39	9	46	
12	0	55.2	+18	28.7	297	16.6 ¹⁰⁵	+26	52.2	0	5	06	5	31	5	53	10	07	
13	15	55.2		29.4	311	46.2 ¹⁰⁶		47.3	10 S	19		44		6	06	29	47	
14	30	55.2		30.0	326	15.9 ¹⁰⁷		42.3	20	31		5	57	20		10	52	
15	45	55.2		30.6	340	45.6 ¹⁰⁷		37.2	30	42		6	11	37		11	18	
16	60	55.2		31.2	355	15.4 ¹⁰⁸		32.0	35	48		19		46		34	39	
17	75	55.2	+18	31.8	9	45.3 ¹⁰⁹	+26	26.6	40	5	55	6	28	6	56	11	52	
18	90	55.2	+18	32.4	24	15.2 ¹⁰⁹	+26	21.1	45	6	02	6	37	7	09	12	14	
19	105	55.2		33.0	38	45.1 ¹⁰⁹		15.5	50	09		48	24			41	30	
20	120	55.3		33.6	53	15.2 ¹¹¹		09.8	52	12		54	31			12	55	
21	135	55.3		34.2	67	45.3 ¹¹¹	+26	04.0	54	16		6	59	39		13	10	
22	150	55.3		34.8	82	15.4 ¹¹¹	+25	58.0	56	20		7	05	48		28	21	
23	165	55.3		35.4	96	45.6 ¹¹²		52.0	58	24		12		7	58	13	51	
24	180	55.3	+18	36.0	111	15.9 ¹¹³	+25	45.8	60 S	6	28	7	20	8	09	14	19	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 8 ^h 35 ^m 2		Mag: -3.9 PMG: 12 ^h 43 ^m				Mag: +0.5 PMG: 7 ^h 20 ^m				Mag: -2.4 PMG: 21 ^h 11 ^m				Mag: +0.2 PMG: 16 ^h 12 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	230	51.0	169	24.7	+20	54.7	249	56.5	-10	02.0	41	18.3	-2	28.0	116	16.7	+21	42.8
1	245	53.4	184	24.0		55.4	264	57.2		01.4	56	21.0		27.9	131	19.0		42.8
2	260	55.9	199	23.2		56.1	279	58.0		00.7	71	23.6		27.8	146	21.2		42.7
3	275	58.3	214	22.5		56.7	294	58.7	-10	00.1	86	26.2		27.8	161	23.5		42.7
4	291	00.8	229	21.7		57.4	309	59.5	-9	59.4	101	28.8		27.7	176	25.7		42.7
5	306	03.3	244	21.0	+20	58.1	325	00.2	-9	58.8	116	31.5	-2	27.7	191	27.9	+21	42.6
6	321	05.7	259	20.2	+20	58.8	340	01.0	-9	58.2	131	34.1	-2	27.6	206	30.2	+21	42.6
7	336	08.2	274	19.5	+20	59.5	355	01.7		57.5	146	36.7		27.5	221	32.4		42.6
8	351	10.7	289	18.7	+21	00.1	10	02.5		56.9	161	39.3		27.5	236	34.7		42.5
9	6	13.1	304	18.0		00.8	25	03.3		56.2	176	42.0		27.4	251	36.9		42.5
10	21	15.6	319	17.2		01.5	40	04.0		55.6	191	44.6		27.4	266	39.1		42.5
11	36	18.1	334	16.5	+21	02.2	55	04.8	-9	55.0	206	47.2	-2	27.3	281	41.4	+21	42.4
12	51	20.5	349	15.7	+21	02.8	70	05.5	-9	54.3	221	49.8	-2	27.3	296	43.6	+21	42.4
13	66	23.0	4	15.0		03.5	85	06.3		53.7	236	52.4		27.2	311	45.8		42.4
14	81	25.4	19	14.2		04.2	100	07.0		53.0	251	55.1		27.1	326	48.1		42.3
15	96	27.9	34	13.5		04.8	115	07.8		52.4	266	57.7		27.1	341	50.3		42.3
16	111	30.4	49	12.7		05.5	130	08.5		51.8	282	00.3		27.0	356	52.6		42.3
17	126	32.8	64	12.0	+21	06.2	145	09.3	-9	51.1	297	02.9	-2	27.0	11	54.8	+21	42.2
18	141	35.3	79	11.2	+21	06.9	160	10.0	-9	50.5	312	05.5	-2	26.9	26	57.0	+21	42.2
19	156	37.8	94	10.5		07.5	175	10.8		49.8	327	08.2		26.9	41	59.3		42.2
20	171	40.2	109	09.7		08.2	190	11.6		49.2	342	10.8		26.8	57	01.5		42.2
21	186	42.7	124	09.0		08.9	205	12.3		48.6	357	13.4		26.7	72	03.7		42.1
22	201	45.2	139	08.2		09.5	220	13.1		47.9	12	16.0		26.7	87	06.0		42.1
23	216	47.6	154	07.5		10.2	235	13.8		47.3	27	18.6		26.6	102	08.2		42.1
24	231	50.1	169	06.7	+21	10.8	250	14.6	-9	46.6	42	21.3	-2	26.6	117	10.4	+21	42.0
Dif	—		-8		+7		+8		+6		+26		+1		+22			

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8				Edad: 5 ^d 6	PHE { 4 ^h : 54/2 12 ^h : 54/2 20 ^h : 54/2	Final del crepúsculo				Salida de Luna		Puesta de Luna					
	PMG: 11 ^h 56 ^m 3						PMG: 17 ^h 08 ^m				R°: 46 ^m							
	hG ☉		Dec		hG ☾		Dif				Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	m		
0	180	55.3	+18	36.0	111	15.9	+25	45.8	60 N	20 30	21 33	** **	7 16 92	2 21 6				
1	195	55.3		36.7	125	46.2 ¹¹³		39.5 ⁶³	58	16	21 12	22 51	39 85	1 57 12				
2	210	55.3		37.3	140	16.7 ¹¹⁵		33.0 ⁶⁵	56	20 05	20 55	22 12	7 58 80	38 17				
3	225	55.3		37.9	154	47.1 ¹¹⁴		26.5 ⁶⁵	54	19 55	40	21 46	8 14 76	22 20				
4	240	55.3		38.5	169	17.7 ¹¹⁶		19.8 ⁶⁷	52	46	28	26	27 74	1 08 23				
5	255	55.2	+18	39.1	183	48.2 ¹¹⁵	+25	13.1 ⁶⁷	50	19 38	20 17	21 10	8 39 71	0 56 26				
6	270	55.2	+18	39.7	198	18.9 ¹¹⁷	+25	06.2 ⁶⁹	45	19 21	19 55	20 39	9 04 66	0 30 31				
7	285	55.2		40.3	212	49.6 ¹¹⁷	+24	59.2 ⁷⁰	40	19 07	38	20 16	23 62	0 10 34				
8	300	55.2		40.9	227	20.4 ¹¹⁸		52.1 ⁷¹	35	18 56	24	19 58	39 60	** ** *				
9	315	55.2		41.5	241	51.3 ¹¹⁹		44.9 ⁷²	30	46	19 12	43	9 53 57	** ** *				
10	330	55.2		42.1	256	22.2 ¹¹⁹		37.6 ⁷³	20	29	18 52	20	10 17 53	23 56 38				
11	345	55.2	+18	42.7	270	53.2 ¹²⁰	+24	30.1 ⁷⁵	10 N	18 14	18 36	19 02	10 38 49	23 37 42				
12	0	55.2	+18	43.3	285	24.2 ¹²⁰	+24	22.6 ⁷⁵	0	18 00	18 22	18 47	10 57 46	23 20 45				
13	15	55.2		43.9	299	55.4 ¹²²		14.9 ⁷⁷	10 S	17 46	18 08	34	11 16 43	23 02 49				
14	30	55.2		44.5	314	26.5 ¹²¹	+24	07.2 ⁷⁷	20	32	17 55	22	11 36 40	22 43 52				
15	45	55.2		45.1	328	57.8 ¹²³	+23	59.3 ⁷⁹	30	15	41	09	12 00 36	21 57				
16	60	55.2		45.7	343	29.1 ¹²³		51.4 ⁷⁹	35	17 06	33	18 03	13 34	22 08 59				
17	75	55.2	+18	46.3	358	00.5 ¹²⁴	+23	43.3 ⁸¹	40	16 55	17 24	17 57	12 29 31	21 53 63				
18	90	55.2	+18	46.9	12	31.9 ¹²⁴	+23	35.1 ⁸²	45	16 42	17 14	17 50	12 48 27	21 35 67				
19	105	55.2		47.4	27	03.4 ¹²⁵		26.9 ⁸²	50	27	17 02	42	13 11 22	13 71				
20	120	55.2		48.0	41	35.0 ¹²⁶		18.5 ⁸⁴	52	20	16 57	38	22 20	21 02 74				
21	135	55.2		48.6	56	06.6 ¹²⁶		10.0 ⁸⁵	54	12	51	35	35 17	20 50 77				
22	150	55.2		49.2	70	38.3 ¹²⁷	+23	01.4 ⁸⁶	56	16 03	45	31	13 49 14	36 81				
23	165	55.2		49.8	85	10.1 ¹²⁸	+22	52.8 ⁸⁶	58	15 52	38	27	14 06 9	20 19 86				
24	180	55.2	+18	50.4	99	41.9 ¹²⁸	+22	44.0 ⁸⁸	60 S	15 41	16 30	17 22	14 27 3	19 59 92				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 8 ^h 31 ^m 3		Mag: -3.9 PMG: 12 ^h 44 ^m				Mag: +0.5 PMG: 7 ^h 19 ^m				Mag: -2.4 PMG: 21 ^h 07 ^m				Mag: +0.2 PMG: 16 ^h 09 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	231	50.1	169	06.7	+21	10.8	250	14.6	-9	46.6	42	21.3	-2	26.6	117	10.4	+21	42.0
1	246	52.6	184	05.9		11.5	265	15.3		46.0	57	23.9		26.5	132	12.7		42.0
2	261	55.0	199	05.2		12.2	280	16.1		45.3	72	26.5		26.5	147	14.9		42.0
3	276	57.5	214	04.4		12.8	295	16.8		44.7	87	29.1		26.4	162	17.2		41.9
4	291	59.9	229	03.7		13.5	310	17.6		44.1	102	31.7		26.4	177	19.4		41.9
5	307	02.4	244	02.9	+21	14.1	325	18.4	-9	43.4	117	34.3	-2	26.3	192	21.6	+21	41.9
6	322	04.9	259	02.2	+21	14.8	340	19.1	-9	42.8	132	37.0	-2	26.2	207	23.9	+21	41.8
7	337	07.3	274	01.4		15.4	355	19.9		42.1	147	39.6		26.2	222	26.1		41.8
8	352	09.8	289	00.6		16.1	10	20.6		41.5	162	42.2		26.1	237	28.3		41.8
9	7	12.3	303	59.9		16.7	25	21.4		40.9	177	44.8		26.1	252	30.6		41.7
10	22	14.7	318	59.1		17.4	40	22.1		40.2	192	47.4		26.0	267	32.8		41.7
11	37	17.2	333	58.4	+21	18.0	55	22.9	-9	39.6	207	50.0	-2	26.0	282	35.0	+21	41.7
12	52	19.7	348	57.6	+21	18.7	70	23.7	-9	38.9	222	52.7	-2	25.9	297	37.3	+21	41.6
13	67	22.1	3	56.8		19.3	85	24.4		38.3	237	55.3		25.9	312	39.5		41.6
14	82	24.6	18	56.1		20.0	100	25.2		37.6	252	57.9		25.8	327	41.7		41.6
15	97	27.1	33	55.3		20.6	115	25.9		37.0	268	00.5		25.8	342	44.0		41.5
16	112	29.5	48	54.5		21.3	130	26.7		36.4	283	03.1		25.7	357	46.2		41.5
17	127	32.0	63	53.8	+21	21.9	145	27.4	-9	35.7	298	05.7	-2	25.7	12	48.4	+21	41.5
18	142	34.4	78	53.0	+21	22.6	160	28.2	-9	35.1	313	08.3	-2	25.6	27	50.7	+21	41.4
19	157	36.9	93	52.3		23.2	175	29.0		34.4	328	11.0		25.5	42	52.9		41.4
20	172	39.4	108	51.5		23.9	190	29.7		33.8	343	13.6		25.5	57	55.1		41.4
21	187	41.8	123	50.7		24.5	205	30.5		33.1	358	16.2		25.4	72	57.4		41.3
22	202	44.3	138	50.0		25.1	220	31.2		32.5	13	18.8		25.4	87	59.6		41.3
23	217	46.8	153	49.2		25.8	235	32.0		31.9	28	21.4		25.3	103	01.8		41.3
24	232	49.2	168	48.4	+21	26.4	250	32.8	-9	31.2	43	24.0	-2	25.3	118	04.1	+21	41.2
Dif	—		-8		+6		+8		+6		+26		+1		+22		0	

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna						
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 3				Edad: 6 ^d 6 PHE { 4 ^h : 54 ^m 2 12 ^h : 54 ^m 3 20 ^h : 54 ^m 3 PMG: 17 ^h 54 ^m R°: 44 ^m																
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°					
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m				
0	180	55.2	+18	50.4	99	41.9	+22	44.0	60 N	**	**	2	19	3	22	8	48				
1	195	55.2		51.0	114	13.8 ¹²⁹		35.1 ⁸⁹	58	1	01	40	36	9	04	85	2	09			
2	210	55.2		51.6	128	45.8 ¹³⁰		26.1 ⁹⁰	56	1	40	2	57	47	18	81	1	55			
3	225	55.2		52.2	143	17.8 ¹³⁰		17.1 ⁹⁰	54	2	06	3	12	3	57	30	77	42	15		
4	240	55.2		52.8	157	49.9 ¹³¹	+22	07.9 ⁹²	52		26	24	4	06	41	74	31	18			
5	255	55.2	+18	53.4	172	22.0 ¹³¹	+21	58.7 ⁹²	50	2	42	3	35	4	14	9	50	72	1	22	
6	270	55.1	+18	54.0	186	54.2 ¹³²	+21	49.3 ⁹⁴	45	3	13	3	57	4	31	10	10	66	1	01	
7	285	55.1		54.5	201	26.5 ¹³³		39.9 ⁹⁴	40		36	4	14	45	25	63	0	44	28	24	
8	300	55.1		55.1	215	58.8 ¹³³		30.3 ⁹⁶	35	3	54	28	4	56	39	59	30	31	40	31	
9	315	55.1		55.7	230	31.2 ¹³⁴		20.7 ⁹⁶	30	4	09	4	40	5	07	10	50	57	0	17	
10	330	55.1		56.3	245	03.7 ¹³⁵		11.0 ⁹⁷	20		32	5	00	24	11	10	52	**	**	**	
11	345	55.1	+18	56.9	259	36.2 ¹³⁵	+21	01.2 ⁹⁸	10 N	4	50	5	17	5	39	11	27	48	**	**	**
12	0	55.1	+18	57.5	274	08.7 ¹³⁵	+20	51.3 ⁹⁹	0	5	06	5	31	5	53	11	43	44	**	**	**
13	15	55.1		58.1	288	41.4 ¹³⁷		41.3 ¹⁰⁰	10 S		19	44	6	07	11	59	41	23	51	47	
14	30	55.1		58.6	303	14.1 ¹³⁷		31.2 ¹⁰¹	20	31	5	58	21		12	16	37	35	52	52	
15	45	55.1		59.2	317	46.8 ¹³⁷		21.1 ¹⁰¹	30	43	6	12	38		36	31	18	56			
16	60	55.1	+18	59.8	332	19.6 ¹³⁸		10.8 ¹⁰³	35	50	20	47		12	47	29	23	07	59		
17	75	55.1	+19	00.4	346	52.5 ¹³⁹	+20	00.5 ¹⁰³	40	5	56	6	29	6	58	13	00	26	22	56	62
18	90	55.0	+19	01.0	1	25.4 ¹³⁹	+19	50.1 ¹⁰⁴	45	6	04	6	39	7	11	13	15	22	22	42	66
19	105	55.0		01.6	15	58.4 ¹⁴⁰		39.6 ¹⁰⁵	50	11	51	27		33	18	24	72				
20	120	55.0		02.1	30	31.4 ¹⁴⁰		29.0 ¹⁰⁶	52	15	6	56	34	42	15	16	74				
21	135	55.0		02.7	45	04.5 ¹⁴¹		18.3 ¹⁰⁷	54	19	7	02	42	13	52	12	22	07	77		
22	150	55.0		03.3	59	37.6 ¹⁴¹	+19	07.6 ¹⁰⁷	56	23	09	7	51	14	03	9	21	57	80		
23	165	55.0		03.9	74	10.8 ¹⁴²	+18	56.8 ¹⁰⁸	58	27	16	8	02	15	6	45	84				
24	180	55.0	+19	04.5	88	44.1 ¹⁴³	+18	45.9 ¹⁰⁹	60 S	6	32	7	24	8	13	14	30	0	21	31	89

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 8 ^h 27 ^m 3		Mag: -3.9 PMG: 12 ^h 45 ^m		Mag: +0.5 PMG: 7 ^h 17 ^m		Mag: -2.4 PMG: 21 ^h 03 ^m		Mag: +0.2 PMG: 16 ^h 05 ^m									
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄									
h	°	'	°	'	°	'	°	'	°	'								
0	232	49.2	168	48.4	+21	26.4	250	32.8	-9	31.2	43	24.0	-2	25.3	118	04.1	+21	41.2
1	247	51.7	183	47.7		27.0	265	33.5		30.6	58	26.6		25.2	133	06.3		41.2
2	262	54.2	198	46.9		27.7	280	34.3		29.9	73	29.2		25.2	148	08.5		41.2
3	277	56.6	213	46.1		28.3	295	35.0		29.3	88	31.9		25.1	163	10.8		41.1
4	292	59.1	228	45.4		28.9	310	35.8		28.6	103	34.5		25.1	178	13.0		41.1
5	308	01.6	243	44.6	+21	29.6	325	36.6	-9	28.0	118	37.1	-2	25.0	193	15.2	+21	41.1
6	323	04.0	258	43.8	+21	30.2	340	37.3	-9	27.4	133	39.7	-2	25.0	208	17.5	+21	41.0
7	338	06.5	273	43.1		30.8	355	38.1		26.7	148	42.3		24.9	223	19.7		41.0
8	353	08.9	288	42.3		31.5	10	38.8		26.1	163	44.9		24.9	238	21.9		41.0
9	8	11.4	303	41.5		32.1	25	39.6		25.4	178	47.5		24.8	253	24.2		40.9
10	23	13.9	318	40.7		32.7	40	40.4		24.8	193	50.1		24.8	268	26.4		40.9
11	38	16.3	333	40.0	+21	33.3	55	41.1	-9	24.1	208	52.7	-2	24.7	283	28.6	+21	40.9
12	53	18.8	348	39.2	+21	34.0	70	41.9	-9	23.5	223	55.3	-2	24.7	298	30.9	+21	40.8
13	68	21.3	3	38.4		34.6	85	42.6		22.8	238	58.0		24.6	313	33.1		40.8
14	83	23.7	18	37.7		35.2	100	43.4		22.2	254	00.6		24.5	328	35.3		40.8
15	98	26.2	33	36.9		35.8	115	44.2		21.6	269	03.2		24.5	343	37.5		40.7
16	113	28.7	48	36.1		36.5	130	44.9		20.9	284	05.8		24.4	358	39.8		40.7
17	128	31.1	63	35.3	+21	37.1	145	45.7	-9	20.3	299	08.4	-2	24.4	13	42.0	+21	40.7
18	143	33.6	78	34.6	+21	37.7	160	46.5	-9	19.6	314	11.0	-2	24.3	28	44.2	+21	40.6
19	158	36.0	93	33.8		38.3	175	47.2		19.0	329	13.6		24.3	43	46.5		40.6
20	173	38.5	108	33.0		38.9	190	48.0		18.3	344	16.2		24.2	58	48.7		40.6
21	188	41.0	123	32.2		39.5	205	48.7		17.7	359	18.8		24.2	73	50.9		40.5
22	203	43.4	138	31.5		40.2	220	49.5		17.0	14	21.4		24.1	88	53.2		40.5
23	218	45.9	153	30.7		40.8	235	50.3		16.4	29	24.0		24.1	103	55.4		40.5
24	233	48.4	168	29.9	+21	41.4	250	51.0	-9	15.7	44	26.6	-2	24.0	118	57.6	+21	40.4
Dif	—		-8		+6		+8		+6		+26		+1		+22		0	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'8 PMG: 11 ^h 56 ^m 3			Edad: 7 ^d 6 PHE { 4 ^h : 54'4 12 ^h : 54'5 20 ^h : 54'6 R°: 42 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m
0	180	55.0	+19 04.5	88	44.1	+18 45.9	60 N	20 34	21 40	** **	10 18 87	2 28 1		
1	195	55.0	05.0	103	17.4 ¹⁴³	34.9 ¹¹⁰	58	21	21 17	23 06	29 83	16 5		
2	210	55.0	05.6	117	50.7 ¹⁴³	23.8 ¹¹¹	56	20 09	20 59	22 20	39 79	2 06 8		
3	225	54.9	06.2	132	24.2 ¹⁴⁵	12.7 ¹¹¹	54	19 58	45	21 52	47 77	1 57 1		
4	240	54.9	06.8	146	57.6 ¹⁴⁴	+18 01.5 ¹¹²	52	49	32	31	10 55 73	49 13		
5	255	54.9	+19 07.3	161	31.1 ¹⁴⁵	+17 50.2 ¹¹³	50	19 41	20 21	21 14	11 02 71	1 41 16		
6	270	54.9	+19 07.9	176	04.7 ¹⁴⁶	+17 38.8 ¹¹⁴	45	19 24	19 58	20 42	11 16 66	1 25 21		
7	285	54.9	08.5	190	38.3 ¹⁴⁶	27.3 ¹¹⁵	40	19 09	40	18	28 62	12 24		
8	300	54.9	09.1	205	11.9 ¹⁴⁶	15.8 ¹¹⁵	35	18 57	26	20 00	38 59	1 01 27		
9	315	54.9	09.6	219	45.6 ¹⁴⁷	+17 04.2 ¹¹⁶	30	47	19 13	19 45	11 47 56	0 51 30		
10	330	54.9	10.2	234	19.4 ¹⁴⁸	+16 52.5 ¹¹⁷	20	29	18 53	21	12 02 51	34 35		
11	345	54.8	+19 10.8	248	53.2 ¹⁴⁸	+16 40.8 ¹¹⁷	10 N	18 14	18 36	19 03	12 15 46	0 19 39		
12	0	54.8	+19 11.4	263	27.0 ¹⁴⁸	+16 29.0 ¹¹⁸	0	18 00	18 22	18 47	12 27 43	0 05 43		
13	15	54.8	11.9	278	00.9 ¹⁴⁹	17.1 ¹¹⁹	10 S	17 46	18 08	34	40 38	** ** *		
14	30	54.8	12.5	292	34.8 ¹⁴⁹	+16 05.2 ¹¹⁹	20	31	17 54	21	12 53 34	** ** *		
15	45	54.8	13.1	307	08.8 ¹⁵⁰	+15 53.1 ¹²¹	30	14	39	08	13 07 29	** ** *		
16	60	54.8	13.6	321	42.8 ¹⁵⁰	41.0 ¹²¹	35	17 04	31	18 02	16 26	** ** *		
17	75	54.7	+19 14.2	336	16.8 ¹⁵⁰	+15 28.9 ¹²¹	40	16 53	17 22	17 55	13 26 23	23 58 62		
18	90	54.7	+19 14.8	350	50.9 ¹⁵¹	+15 16.7 ¹²²	45	16 40	17 12	17 48	13 37 19	23 48 66		
19	105	54.7	15.3	5	25.0 ¹⁵¹	+15 04.4 ¹²³	50	24	17 00	40	51 14	36 71		
20	120	54.7	15.9	19	59.2 ¹⁵²	+14 52.0 ¹²⁴	52	17	16 54	36	13 57 12	30 74		
21	135	54.7	16.5	34	33.4 ¹⁵²	39.6 ¹²⁴	54	16 08	48	32	14 04 9	24 76		
22	150	54.7	17.0	49	07.6 ¹⁵²	27.1 ¹²⁵	56	15 59	42	28	12 6	17 79		
23	165	54.7	17.6	63	41.9 ¹⁵³	14.5 ¹²⁶	58	49	35	23	21 3	09 83		
24	180	54.6	+19 18.2	78	16.2 ¹⁵³	+14 01.9 ¹²⁶	60 S	15 36	16 26	17 19	14 30 0	23 00 87		

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 8 ^h 23 ^m 4		Mag: -3.9 PMG: 12 ^h 47 ^m			Mag: +0.5 PMG: 7 ^h 16 ^m			Mag: -2.3 PMG: 20 ^h 59 ^m			Mag: +0.2 PMG: 16 ^h 02 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	233	48.4	168	29.9	+21 41.4	250	51.0	-9 15.7	44	26.6	-2 24.0	118	57.6	+21 40.4
1	248	50.8	183	29.1	42.0	265	51.8	15.1	59	29.2	24.0	133	59.9	40.4
2	263	53.3	198	28.4	42.6	280	52.6	14.5	74	31.8	23.9	149	02.1	40.4
3	278	55.8	213	27.6	43.2	295	53.3	13.8	89	34.4	23.9	164	04.3	40.3
4	293	58.2	228	26.8	43.8	310	54.1	13.2	104	37.1	23.8	179	06.5	40.3
5	309	00.7	243	26.0	+21 44.4	325	54.9	-9 12.5	119	39.7	-2 23.8	194	08.8	+21 40.3
6	324	03.2	258	25.2	+21 45.0	340	55.6	-9 11.9	134	42.3	-2 23.7	209	11.0	+21 40.2
7	339	05.6	273	24.5	45.6	355	56.4	11.2	149	44.9	23.7	224	13.2	40.2
8	354	08.1	288	23.7	46.2	10	57.1	10.6	164	47.5	23.6	239	15.5	40.2
9	9	10.5	303	22.9	46.8	25	57.9	09.9	179	50.1	23.6	254	17.7	40.1
10	24	13.0	318	22.1	47.4	40	58.7	09.3	194	52.7	23.5	269	19.9	40.1
11	39	15.5	333	21.3	+21 48.0	55	59.4	-9 08.6	209	55.3	-2 23.5	284	22.1	+21 40.1
12	54	17.9	348	20.6	+21 48.6	71	00.2	-9 08.0	224	57.9	-2 23.4	299	24.4	+21 40.0
13	69	20.4	3	19.8	49.2	86	01.0	07.3	240	00.5	23.4	314	26.6	40.0
14	84	22.9	18	19.0	49.8	101	01.7	06.7	255	03.1	23.4	329	28.8	40.0
15	99	25.3	33	18.2	50.4	116	02.5	06.1	270	05.7	23.3	344	31.1	39.9
16	114	27.8	48	17.4	51.0	131	03.3	05.4	285	08.3	23.3	359	33.3	39.9
17	129	30.3	63	16.7	+21 51.6	146	04.0	-9 04.8	300	10.9	-2 23.2	14	35.5	+21 39.9
18	144	32.7	78	15.9	+21 52.2	161	04.8	-9 04.1	315	13.5	-2 23.2	29	37.7	+21 39.8
19	159	35.2	93	15.1	52.8	176	05.6	03.5	330	16.1	23.1	44	40.0	39.8
20	174	37.7	108	14.3	53.4	191	06.3	02.8	345	18.7	23.1	59	42.2	39.7
21	189	40.1	123	13.5	54.0	206	07.1	02.2	0	21.3	23.0	74	44.4	39.7
22	204	42.6	138	12.7	54.6	221	07.9	01.5	15	23.9	23.0	89	46.6	39.7
23	219	45.0	153	11.9	55.2	236	08.6	00.9	30	26.5	22.9	104	48.9	39.6
24	234	47.5	168	11.2	+21 55.7	251	09.4	-9 00.2	45	29.1	-2 22.9	119	51.1	+21 39.6
Dif	—		-8	+6		+8	+6		+26	0		+22		

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15'8 PMG: 11 ^h 56 ^m .4				Edad: 8 ^d 6 PHE { SD: 14'9 PMG: 19 ^h 20 ^m R°: 41 ^m 4 ^h : 54'8 12 ^h : 54'9 20 ^h : 55'1													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	180	54.6	+19	18.2	78	16.2	+14	01.9	60 N	**	**	2	12	3	18	11	45	87
1	195	54.6		18.7	92	50.5 ¹⁵³	+13	49.2 ¹²⁷	58	0	46	35	32			52	83	21
2	210	54.6		19.3	107	24.9 ¹⁵⁴		36.5 ¹²⁷	56	1	32	2	53	43		11	58	79
3	225	54.6		19.9	121	59.3 ¹⁵⁴		23.7 ¹²⁸	54	2	00	3	08	3	54	12	04	76
4	240	54.6		20.4	136	33.7 ¹⁵⁴	+13	10.8 ¹²⁹	52		21	20		4	03	08	74	2
5	255	54.5	+19	21.0	151	08.2 ¹⁵⁵	+12	57.9 ¹²⁹	50	2	38	3	32	4	11	12	13	71
6	270	54.5	+19	21.6	165	42.7 ¹⁵⁵	+12	44.9 ¹³⁰	45	3	10	3	54	4	29	12	22	67
7	285	54.5		22.1	180	17.2 ¹⁵⁵		31.9 ¹³⁰	40		34	4	12	43		30	62	36
8	300	54.5		22.7	194	51.8 ¹⁵⁶		18.8 ¹³¹	35	3	52	27	4	55		37	58	28
9	315	54.5		23.2	209	26.3 ¹⁵⁵	+12	05.7 ¹³¹	30	4	08	39	5	05		43	55	21
10	330	54.5		23.8	224	00.9 ¹⁵⁶	+11	52.5 ¹³²	20		31	4	59	23		12	53	50
11	345	54.4	+19	24.4	238	35.5 ¹⁵⁶	+11	39.2 ¹³³	10 N	4	50	5	16	5	39	13	01	46
12	0	54.4	+19	24.9	253	10.2 ¹⁵⁷	+11	25.9 ¹³³	0	5	05	5	31	5	53	13	10	41
13	15	54.4		25.5	267	44.8 ¹⁵⁶	+11	12.5 ¹³⁴	10 S		19	45	6	07		18	37	38
14	30	54.4		26.0	282	19.5 ¹⁵⁷	+10	59.1 ¹³⁴	20		32	5	59	22		27	32	27
15	45	54.4		26.6	296	54.2 ¹⁵⁷		45.6 ¹³⁵	30	45	6	14	39			36	28	14
16	60	54.3		27.1	311	29.0 ¹⁵⁸		32.1 ¹³⁵	35		51	22	6	49		42	25	0
17	75	54.3	+19	27.7	326	03.7 ¹⁵⁷	+10	18.5 ¹³⁶	40	5	58	6	31	7	00	13	49	21
18	90	54.3	+19	28.2	340	38.5 ¹⁵⁸	+10	04.8 ¹³⁷	45	6	05	6	41	7	13	13	56	17
19	105	54.3		28.8	355	13.2 ¹⁵⁷	+9	51.2 ¹³⁶	50		14	53	29			14	05	13
20	120	54.2		29.4	9	48.0 ¹⁵⁸		37.4 ¹³⁸	52	17	6	59	37			09	10	**
21	135	54.2		29.9	24	22.8 ¹⁵⁸		23.7 ¹³⁷	54	21	7	05	45			13	9	**
22	150	54.2		30.5	38	57.6 ¹⁵⁸	+9	09.8 ¹³⁹	56	26		12	7	55		18	6	**
23	165	54.2		31.0	53	32.5 ¹⁵⁹	+8	55.9 ¹³⁹	58	30		19	8	05		24	2	**
24	180	54.2	+19	31.6	68	07.3 ¹⁵⁸	+8	42.0 ¹³⁹	60 S	6	35	7	28	8	18	14	30	**
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 8 ^h 19 ^m 5		Mag: -3.9 PMG: 12 ^h 48 ^m				Mag: +0.5 PMG: 7 ^h 15 ^m				Mag: -2.3 PMG: 20 ^h 54 ^m				Mag: +0.2 PMG: 15 ^h 58 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	234	47.5	168	11.2	+21	55.7	251	09.4	-9	00.2	45	29.1	-2	22.9	119	51.1	+21	39.6
1	249	50.0	183	10.4		56.3	266	10.2	-8	59.6	60	31.7		22.8	134	53.3		39.6
2	264	52.4	198	09.6		56.9	281	10.9		58.9	75	34.3		22.8	149	55.5		39.5
3	279	54.9	213	08.8		57.5	296	11.7		58.3	90	36.9		22.7	164	57.8		39.5
4	294	57.4	228	08.0		58.1	311	12.5		57.6	105	39.5		22.7	180	00.0		39.5
5	309	59.8	243	07.2	+21	58.7	326	13.2	-8	57.0	120	42.1	-2	22.6	195	02.2	+21	39.4
6	325	02.3	258	06.4	+21	59.2	341	14.0	-8	56.3	135	44.7	-2	22.6	210	04.5	+21	39.4
7	340	04.8	273	05.6	+21	59.8	356	14.8		55.7	150	47.3		22.5	225	06.7		39.4
8	355	07.2	288	04.9	+22	00.4	11	15.5		55.0	165	49.9		22.5	240	08.9		39.3
9	10	09.7	303	04.1		01.0	26	16.3		54.4	180	52.5		22.5	255	11.1		39.3
10	25	12.1	318	03.3		01.6	41	17.1		53.7	195	55.1		22.4	270	13.4		39.3
11	40	14.6	333	02.5	+22	02.1	56	17.8	-8	53.1	210	57.7	-2	22.4	285	15.6	+21	39.2
12	55	17.1	348	01.7	+22	02.7	71	18.6	-8	52.4	226	00.3	-2	22.3	300	17.8	+21	39.2
13	70	19.5	3	00.9		03.3	86	19.4		51.8	241	02.9		22.3	315	20.0		39.2
14	85	22.0	18	00.1		03.8	101	20.1		51.1	256	05.5		22.2	330	22.3		39.1
15	100	24.5	32	59.3		04.4	116	20.9		50.5	271	08.0		22.2	345	24.5		39.1
16	115	26.9	47	58.5		05.0	131	21.7		49.8	286	10.6		22.1	0	26.7		39.1
17	130	29.4	62	57.7	+22	05.6	146	22.4	-8	49.2	301	13.2	-2	22.1	15	28.9	+21	39.0
18	145	31.9	77	56.9	+22	06.1	161	23.2	-8	48.6	316	15.8	-2	22.0	30	31.2	+21	39.0
19	160	34.3	92	56.1		06.7	176	24.0		47.9	331	18.4		22.0	45	33.4		39.0
20	175	36.8	107	55.3		07.3	191	24.8		47.3	346	21.0		22.0	60	35.6		38.9
21	190	39.3	122	54.6		07.8	206	25.5		46.6	1	23.6		21.9	75	37.8		38.9
22	205	41.7	137	53.8		08.4	221	26.3		46.0	16	26.2		21.9	90	40.0		38.8
23	220	44.2	152	53.0		08.9	236	27.1		45.3	31	28.8		21.8	105	42.3		38.8
24	235	46.6	167	52.2	+22	09.5	251	27.8	-8	44.7	46	31.4	-2	21.8	120	44.5	+21	38.8
Dif	—		-8		+6		+8		+6		+26		0		+22		0	

UT	SOL				LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 4				Edad: 9 ^d 6 PHE { SD: 15 ^h 0 PMG: 20 ^h 01 ^m													
	hG ☉		Dec		hG ☾		Dif							Hora		Rº		
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m		
0	180	54.2	+19	31.6	68	07.3	+8	42.0	60 N	20 39	21 46	** **	13 12 87		2 28 **			
1	195	54.1		32.1	82	42.2 ¹⁵⁹		28.1 ¹³⁹	58	25	23	23 26	15 83		24 2			
2	210	54.1		32.7	97	17.0 ¹⁵⁸	+8	14.0 ¹⁴¹	56	12	21 04	22 28	17 81		20 5			
3	225	54.1		33.2	111	51.9 ¹⁵⁹	+8	00.0 ¹⁴⁰	54	20 02	20 48	21 58	20 77		16 8			
4	240	54.1		33.8	126	26.7 ¹⁵⁸	+7	45.9 ¹⁴¹	52	19 52	35	36	22 75		13 10			
5	255	54.0	+19	34.3	141	01.6 ¹⁵⁹	+7	31.7 ¹⁴²	50	19 44	20 24	21 18	13 24 73		2 10 12			
6	270	54.0	+19	34.9	155	36.5 ¹⁵⁹	+7	17.6 ¹⁴¹	45	19 26	20 00	20 45	13 29 67		2 04 16			
7	285	54.0		35.4	170	11.4 ¹⁵⁹	+7	03.3 ¹⁴³	40	19 11	19 42	21	32 64		1 58 21			
8	300	54.0		36.0	184	46.2 ¹⁵⁸	+6	49.1 ¹⁴²	35	18 59	27	20 02	35 60		54 24			
9	315	53.9		36.5	199	21.1 ¹⁵⁹		34.7 ¹⁴⁴	30	48	19 15	19 46	38 57		49 28			
10	330	53.9		37.0	213	56.0 ¹⁵⁹		20.4 ¹⁴³	20	30	18 54	22	43 51		42 33			
11	345	53.9	+19	37.6	228	30.9 ¹⁵⁹	+6	06.0 ¹⁴⁴	10 N	18 14	18 37	19 03	13 47 46		1 36 37			
12	0	53.9	+19	38.1	243	05.7 ¹⁵⁸	+5	51.6 ¹⁴⁴	0	18 00	18 22	18 47	13 51 42		1 30 41			
13	15	53.8		38.7	257	40.6 ¹⁵⁹		37.1 ¹⁴⁵	10 S	17 46	18 08	34	55 37		23 46			
14	30	53.8		39.2	272	15.5 ¹⁵⁹		22.6 ¹⁴⁵	20	30	17 54	20	13 59 33		17 50			
15	45	53.8		39.8	286	50.3 ¹⁵⁸	+5	08.1 ¹⁴⁵	30	13	38	08	14 04 27		09 56			
16	60	53.8		40.3	301	25.2 ¹⁵⁹	+4	53.5 ¹⁴⁶	35	17 03	30	18 01	07 24		05 59			
17	75	53.7	+19	40.8	316	00.0 ¹⁵⁸	+4	38.9 ¹⁴⁶	40	16 51	17 21	17 54	14 10 21		1 00 62			
18	90	53.7	+19	41.4	330	34.8 ¹⁵⁸	+4	24.3 ¹⁴⁶	45	16 38	17 10	17 46	14 13 17		0 54 67			
19	105	53.7		41.9	345	09.7 ¹⁵⁹	+4	09.6 ¹⁴⁷	50	22	16 58	37	18 12		47 72			
20	120	53.7		42.5	359	44.5 ¹⁵⁸	+3	54.9 ¹⁴⁷	52	14	52	34	19 11		44 74			
21	135	53.6		43.0	14	19.3 ¹⁵⁸		40.2 ¹⁴⁷	54	16 05	46	30	22 7		40 77			
22	150	53.6		43.5	28	54.0 ¹⁵⁷		25.4 ¹⁴⁸	56	15 56	39	25	24 5		36 80			
23	165	53.6		44.1	43	28.8 ¹⁵⁸	+3	10.6 ¹⁴⁸	58	45	31	21	26 3		32 82			
24	180	53.5	+19	44.6	58	03.5 ¹⁵⁷	+2	55.8 ¹⁴⁸	60 S	15 32	16 23	17 15	14 29 **		0 27 86			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 8 ^h 15 ^m 5		Mag: -3.9 PMG: 12 ^h 49 ^m				Mag: +0.4 PMG: 7 ^h 14 ^m				Mag: -2.3 PMG: 20 ^h 50 ^m				Mag: +0.2 PMG: 15 ^h 55 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	235	46.6	167	52.2	+22	09.5	251	27.8	-8	44.7	46	31.4	-2	21.8	120	44.5	+21	38.8
1	250	49.1	182	51.4		10.1	266	28.6		44.0	61	34.0		21.7	135	46.7		38.7
2	265	51.6	197	50.6		10.6	281	29.4		43.4	76	36.6		21.7	150	48.9		38.7
3	280	54.0	212	49.8		11.2	296	30.1		42.7	91	39.2		21.6	165	51.2		38.7
4	295	56.5	227	49.0		11.7	311	30.9		42.1	106	41.8		21.6	180	53.4		38.6
5	310	59.0	242	48.2	+22	12.3	326	31.7	-8	41.4	121	44.4	-2	21.6	195	55.6	+21	38.6
6	326	01.4	257	47.4	+22	12.8	341	32.5	-8	40.8	136	46.9	-2	21.5	210	57.8	+21	38.6
7	341	03.9	272	46.6		13.4	356	33.2		40.1	151	49.5		21.5	226	00.1		38.5
8	356	06.4	287	45.8		13.9	11	34.0		39.5	166	52.1		21.4	241	02.3		38.5
9	11	08.8	302	45.0		14.5	26	34.8		38.8	181	54.7		21.4	256	04.5		38.5
10	26	11.3	317	44.2		15.0	41	35.5		38.2	196	57.3		21.3	271	06.7		38.4
11	41	13.8	332	43.4	+22	15.6	56	36.3	-8	37.5	211	59.9	-2	21.3	286	08.9	+21	38.4
12	56	16.2	347	42.6	+22	16.1	71	37.1	-8	36.9	227	02.5	-2	21.3	301	11.2	+21	38.4
13	71	18.7	2	41.8		16.7	86	37.9		36.2	242	05.1		21.2	316	13.4		38.3
14	86	21.1	17	41.0		17.2	101	38.6		35.6	257	07.7		21.2	331	15.6		38.3
15	101	23.6	32	40.2		17.8	116	39.4		34.9	272	10.3		21.1	346	17.8		38.2
16	116	26.1	47	39.4		18.3	131	40.2		34.3	287	12.8		21.1	1	20.1		38.2
17	131	28.5	62	38.6	+22	18.9	146	40.9	-8	33.6	302	15.4	-2	21.0	16	22.3	+21	38.2
18	146	31.0	77	37.8	+22	19.4	161	41.7	-8	32.9	317	18.0	-2	21.0	31	24.5	+21	38.1
19	161	33.5	92	37.0		19.9	176	42.5		32.3	332	20.6		21.0	46	26.7		38.1
20	176	35.9	107	36.2		20.5	191	43.3		31.6	347	23.2		20.9	61	28.9		38.1
21	191	38.4	122	35.4		21.0	206	44.0		31.0	2	25.8		20.9	76	31.2		38.0
22	206	40.9	137	34.6		21.6	221	44.8		30.3	17	28.4		20.8	91	33.4		38.0
23	221	43.3	152	33.8		22.1	236	45.6		29.7	32	30.9		20.8	106	35.6		38.0
24	236	45.8	167	32.9	+22	22.6	251	46.4	-8	29.0	47	33.5	-2	20.7	121	37.8	+21	37.9
Dif	—		-8		+5		+8		+7		+26		0		+22		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 5			Edad: 10 ^d 6 PHE { SD: 15/2 PMG: 20 ^h 43 ^m 4 ^h : 55/9 12 ^h : 56/2 20 ^h : 56/4 R°: 44 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	53.5	+19	44.6	58	03.5	+2 55.8	60 N	** **	2 06	3 13	14 39	90	2 27	**
1	195	53.5		45.2	72	38.3 ¹⁵⁸	41.0 ¹⁴⁸	58	0 27	30	28	38 87		26	2
2	210	53.5		45.7	87	13.0 ¹⁵⁷	26.1 ¹⁴⁹	56	1 24	2 48	40	38 83		25	5
3	225	53.5		46.2	101	47.6 ¹⁵⁶	+2 11.2 ¹⁴⁹	54	1 54	3 04	3 51	37 81		24	8
4	240	53.4		46.8	116	22.3 ¹⁵⁷	+1 56.3 ¹⁴⁹	52	2 17	17	4 00	37 78		23	10
5	255	53.4	+19	47.3	130	56.9 ¹⁵⁶	+1 41.3 ¹⁵⁰	50	2 34	3 29	4 09	14 37	75	2 22	13
6	270	53.4	+19	47.8	145	31.6 ¹⁵⁷	+1 26.3 ¹⁵⁰	45	3 08	3 52	4 27	14 36	70	2 20	18
7	285	53.3		48.4	160	06.1 ¹⁵⁵	+1 11.3 ¹⁵⁰	40	32	4 10	41	36 65		19	21
8	300	53.3		48.9	174	40.7 ¹⁵⁶	+0 56.3 ¹⁵⁰	35	3 51	25	4 54	35 62		18	24
9	315	53.3		49.4	189	15.2 ¹⁵⁵	41.3 ¹⁵⁰	30	4 06	38	5 04	35 58		17	27
10	330	53.3		50.0	203	49.7 ¹⁵⁵	26.2 ¹⁵¹	20	31	4 59	23	34 53		15	33
11	345	53.2	+19	50.5	218	24.2 ¹⁵⁵	+0 11.1 ¹⁵¹	10 N	4 50	5 16	5 38	14 33	48	2 13	38
12	0	53.2	+19	51.0	232	58.6 ¹⁵⁴	-0 04.0 ¹⁵¹	0	5 05	5 31	5 53	14 33	43	2 11	42
13	15	53.2		51.6	247	33.0 ¹⁵⁴	19.1 ¹⁵¹	10 S	19	45	6 07	32 39		09	47
14	30	53.1		52.1	262	07.4 ¹⁵⁴	34.2 ¹⁵¹	20	33	5 59	23	32 34		07	52
15	45	53.1		52.6	276	41.7 ¹⁵³	-0 49.3 ¹⁵¹	30	46	6 15	40	31 29		05	57
16	60	53.1		53.1	291	16.0 ¹⁵³	-1 04.5 ¹⁵²	35	5 52	23	6 50	31 25		04	60
17	75	53.0	+19	53.7	305	50.3 ¹⁵³	-1 19.7 ¹⁵²	40	6 00	6 33	7 02	14 31	21	2 02	65
18	90	53.0	+19	54.2	320	24.5 ¹⁵²	-1 34.9 ¹⁵²	45	6 07	6 43	7 16	14 30	18	2 01	68
19	105	53.0		54.7	334	58.7 ¹⁵²	-1 50.1 ¹⁵²	50	16	6 56	32	30 13		1 59	73
20	120	52.9		55.2	349	32.8 ¹⁵¹	-2 05.3 ¹⁵²	52	20	7 02	40	30 10		58	76
21	135	52.9		55.8	4	06.9 ¹⁵¹	20.5 ¹⁵²	54	24	08	48	29 9		57	78
22	150	52.9		56.3	18	40.9 ¹⁵⁰	35.7 ¹⁵²	56	28	15	7 58	29 6		56	81
23	165	52.8		56.8	33	14.9 ¹⁵⁰	-2 51.0 ¹⁵³	58	33	23	8 09	29 2		54	85
24	180	52.8	+19	57.3	47	48.9 ¹⁵⁰	-3 06.2 ¹⁵²	60 S	6 38	7 31	8 22	14 28	0	1 53	88

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 8 ^h 11 ^m 6		Mag: -3.9 PMG: 12 ^h 50 ^m		Mag: +0.4 PMG: 7 ^h 13 ^m		Mag: -2.3 PMG: 20 ^h 46 ^m		Mag: +0.2 PMG: 15 ^h 51 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	236	45.8	167	32.9	+22 22.6	251	46.4	-8 29.0	121	37.8
1	251	48.2	182	32.1	23.2	266	47.1	28.4	136	40.0
2	266	50.7	197	31.3	23.7	281	47.9	27.7	151	42.3
3	281	53.2	212	30.5	24.2	296	48.7	27.1	166	44.5
4	296	55.6	227	29.7	24.8	311	49.5	26.4	181	46.7
5	311	58.1	242	28.9	+22 25.3	326	50.2	-8 25.8	196	48.9
6	327	00.6	257	28.1	+22 25.8	341	51.0	-8 25.1	211	51.1
7	342	03.0	272	27.3	26.3	356	51.8	24.5	226	53.4
8	357	05.5	287	26.5	26.9	11	52.5	23.8	241	55.6
9	12	08.0	302	25.7	27.4	26	53.3	23.2	256	57.8
10	27	10.4	317	24.9	27.9	41	54.1	22.5	272	00.0
11	42	12.9	332	24.1	+22 28.4	56	54.9	-8 21.9	287	02.2
12	57	15.4	347	23.3	+22 29.0	71	55.6	-8 21.2	302	04.5
13	72	17.8	2	22.4	29.5	86	56.4	20.6	317	06.7
14	87	20.3	17	21.6	30.0	101	57.2	19.9	332	08.9
15	102	22.7	32	20.8	30.5	116	58.0	19.3	347	11.1
16	117	25.2	47	20.0	31.0	131	58.8	18.6	2	13.3
17	132	27.7	62	19.2	+22 31.5	146	59.5	-8 18.0	17	15.6
18	147	30.1	77	18.4	+22 32.1	162	00.3	-8 17.3	32	17.8
19	162	32.6	92	17.6	32.6	177	01.1	16.6	47	20.0
20	177	35.1	107	16.8	33.1	192	01.9	16.0	62	22.2
21	192	37.5	122	15.9	33.6	207	02.6	15.3	77	24.4
22	207	40.0	137	15.1	34.1	222	03.4	14.7	92	26.6
23	222	42.5	152	14.3	34.6	237	04.2	14.0	107	28.9
24	237	44.9	167	13.5	+22 35.1	252	05.0	-8 13.4	122	31.1
Dif	—		-8	+5		+8	+7		+26	0

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 5			Edad: 11 ^d 6 PHE { SD: 15 ^h 4 PMG: 21 ^h 27 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	Rº	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	h m	h m
0	180	52.8	+19	57.3	47	48.9	-3 06.2	60 N	20 44	21 53	** **	16 09	96	2 26
1	195	52.8		57.9	62	22.8 ¹⁴⁹	21.5 ¹⁵³	58	29	28	** **	05 92		28 3
2	210	52.7		58.4	76	56.6 ¹⁴⁸	36.7 ¹⁵²	56	16	21 08	22 37	16 01	88	30 6
3	225	52.7		58.9	91	30.4 ¹⁴⁸	-3 52.0 ¹⁵³	54	20 05	20 52	22 04	15 58	85	32 8
4	240	52.7		59.4	106	04.2 ¹⁴⁸	-4 07.3 ¹⁵³	52	19 55	39 21	41	55 82		33 11
5	255	52.6	+19	59.9	120	37.9 ¹⁴⁷	-4 22.5 ¹⁵²	50	19 46	20 27	21 22	15 52	79	2 35
6	270	52.6	+20	00.5	135	11.5 ¹⁴⁶	-4 37.8 ¹⁵³	45	19 28	20 03	20 48	15 46	74	2 38
7	285	52.6		01.0	149	45.1 ¹⁴⁶	-4 53.1 ¹⁵³	40	13	19 44	23	41 69		40 23
8	300	52.5		01.5	164	18.6 ¹⁴⁵	-5 08.3 ¹⁵²	35	19 00	29	20 04	37 65		42 26
9	315	52.5		02.0	178	52.0 ¹⁴⁴	23.6 ¹⁵³	30	18 50	19 16	19 48	33 62		44 30
10	330	52.5		02.5	193	25.4 ¹⁴⁴	38.8 ¹⁵²	20	31	18 55	23	27 56		48 35
11	345	52.4	+20	03.1	207	58.8 ¹⁴⁴	-5 54.1 ¹⁵³	10 N	18 15	18 37	19 04	15 21	51	2 51
12	0	52.4	+20	03.6	222	32.1 ¹⁴³	-6 09.3 ¹⁵²	0	18 00	18 22	18 48	15 16	46	2 53
13	15	52.3		04.1	237	05.3 ¹⁴²	24.6 ¹⁵³	10 S	17 45	18 08	33	11 42		56 49
14	30	52.3		04.6	251	38.4 ¹⁴¹	39.8 ¹⁵²	20	30	17 53	20	06 36		2 59
15	45	52.3		05.1	266	11.5 ¹⁴¹	-6 55.0 ¹⁵²	30	12	38	07	15 00	31	3 02
16	60	52.2		05.6	280	44.5 ¹⁴⁰	-7 10.2 ¹⁵²	35	17 02	29	18 00	14 56	28	04 64
17	75	52.2	+20	06.1	295	17.4 ¹³⁹	-7 25.4 ¹⁵²	40	16 50	17 19	17 52	14 52	25	3 07
18	90	52.2	+20	06.7	309	50.3 ¹³⁹	-7 40.6 ¹⁵²	45	16 36	17 08	17 44	14 48	20	3 09
19	105	52.1		07.2	324	23.1 ¹³⁸	-7 55.8 ¹⁵²	50	19	16 56	35	43 14		12 77
20	120	52.1		07.7	338	55.8 ¹³⁷	-8 10.9 ¹⁵¹	52	11	50	32	40 13		14 79
21	135	52.0		08.2	353	28.4 ¹³⁶	26.1 ¹⁵²	54	16 03	43	27	38 9		15 82
22	150	52.0		08.7	8	01.0 ¹³⁶	41.2 ¹⁵¹	56	15 53	36	23	35 6		17 85
23	165	52.0		09.2	22	33.5 ¹³⁵	-8 56.3 ¹⁵¹	58	41	28	18	31 4		19 89
24	180	51.9	+20	09.7	37	05.9 ¹³⁴	-9 11.3 ¹⁵⁰	60 S	15 28	16 19	17 12	14 28	0	3 21

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 8 ^h 07 ^m 7		Mag: -3.9 PMG: 12 ^h 52 ^m		Mag: +0.4 PMG: 7 ^h 11 ^m		Mag: -2.3 PMG: 20 ^h 42 ^m		Mag: +0.2 PMG: 15 ^h 48 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	237	44.9	167	13.5	252	05.0	48	35.5	122	31.1
1	252	47.4	182	12.7	267	05.7	63	38.1	137	33.3
2	267	49.8	197	11.9	282	06.5	78	40.7	152	35.5
3	282	52.3	212	11.1	297	07.3	93	43.3	167	37.7
4	297	54.8	227	10.2	312	08.1	108	45.8	182	39.9
5	312	57.2	242	09.4	327	08.8	123	48.4	197	42.2
6	327	59.7	257	08.6	342	09.6	138	51.0	212	44.4
7	343	02.2	272	07.8	357	10.4	153	53.6	227	46.6
8	358	04.6	287	07.0	372	11.2	168	56.2	242	48.8
9	13	07.1	302	06.2	387	12.0	183	58.7	257	51.0
10	28	09.6	317	05.3	402	12.7	199	01.3	272	53.2
11	43	12.0	332	04.5	417	13.5	214	03.9	287	55.5
12	58	14.5	347	03.7	432	14.3	229	06.5	302	57.7
13	73	17.0	2	02.9	447	15.1	244	09.0	317	59.9
14	88	19.4	17	02.1	462	15.9	259	11.6	333	02.1
15	103	21.9	32	01.3	477	16.6	274	14.2	348	04.3
16	118	24.3	47	00.4	492	17.4	289	16.8	3	06.5
17	133	26.8	61	59.6	507	18.2	304	19.3	18	08.8
18	148	29.3	76	58.8	522	19.0	319	21.9	33	11.0
19	163	31.7	91	58.0	537	19.7	334	24.5	48	13.2
20	178	34.2	106	57.1	552	20.5	349	27.1	63	15.4
21	193	36.7	121	56.3	567	21.3	4	29.6	78	17.6
22	208	39.1	136	55.5	582	22.1	19	32.2	93	19.8
23	223	41.6	151	54.7	597	22.9	34	34.8	108	22.1
24	238	44.1	166	53.9	612	23.6	49	37.4	123	24.3
Dif	—		-8		+5		+26		+22	

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 6				Edad: 12 ^d 6 PHE { SD: 15 ^h 6 PMG: 22 ^h 14 ^m R°: 52 ^m														
	hG ☉		Dec		hG ☾		Dif			Dif			Náutico	Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m
0	180	51.9	+20	09.7	37	05.9	−9	11.3	60 N	** **	2 00	3 09	17 45	105	2 25	0			
1	195	51.9		10.2	51	38.2 ¹³³		26.4 ¹⁵¹	58	** **	25	24	37 99		31	4			
2	210	51.8		10.7	66	10.4 ¹³²		41.4 ¹⁵⁰	56	1 16	2 44	37	29 94		36	7			
3	225	51.8		11.2	80	42.6 ¹³²	−9	56.4 ¹⁵⁰	54	1 49	3 00	48	23 90		40	1			
4	240	51.8		11.7	95	14.7 ¹³¹	−10	11.4 ¹⁵⁰	52	2 12	14	3 58	17 87		44	14			
5	255	51.7	+20	12.3	109	46.7 ¹³⁰	−10	26.3 ¹⁴⁹	50	2 31	3 26	4 06	17 11	84	2 48	16			
6	270	51.7	+20	12.8	124	18.6 ¹²⁹	−10	41.3 ¹⁵⁰	45	3 05	3 50	4 25	17 00	78	2 56	21			
7	285	51.6		13.3	138	50.4 ¹²⁸	−10	56.1 ¹⁴⁸	40	30	4 09	40	16 50	73	3 03	26			
8	300	51.6		13.8	153	22.1 ¹²⁷	−11	11.0 ¹⁴⁹	35	3 49	24	4 52	42 69		08	30			
9	315	51.6		14.3	167	53.7 ¹²⁶		25.8 ¹⁴⁸	30	4 05	37	5 03	35 66		14	33			
10	330	51.5		14.8	182	25.3 ¹²⁶		40.6 ¹⁴⁸	20	30	4 58	22	23 60		23	38			
11	345	51.5	+20	15.3	196	56.7 ¹²⁴	−11	55.3 ¹⁴⁷	10 N	4 49	5 16	5 38	16 12	55	3 30	44			
12	0	51.4	+20	15.8	211	28.1 ¹²⁴	−12	10.0 ¹⁴⁷	0	5 05	5 31	5 53	16 02	51	3 38	48			
13	15	51.4		16.3	225	59.3 ¹²²		24.7 ¹⁴⁷	10 S	20	5 46	6 08	15 53	46	45	53			
14	30	51.4		16.8	240	30.5 ¹²²		39.3 ¹⁴⁶	20	33	6 00	24	42 42		3	53	58		
15	45	51.3		17.3	255	01.5 ¹²⁰	−12	53.9 ¹⁴⁶	30	47	16	41	31 35		4	02	64		
16	60	51.3		17.8	269	32.5 ¹²⁰	−13	08.5 ¹⁴⁶	35	5 54	25	6 52	24 32		08	67			
17	75	51.2	+20	18.3	284	03.3 ¹¹⁸	−13	23.0 ¹⁴⁵	40	6 01	6 34	7 04	15 17	28	4	14	71		
18	90	51.2	+20	18.8	298	34.1 ¹¹⁸	−13	37.4 ¹⁴⁴	45	6 09	6 45	7 18	15 08	24	4	21	75		
19	105	51.1		19.3	313	04.7 ¹¹⁶	−13	51.8 ¹⁴⁴	50	18	6 58	35	14 57	19	29	82			
20	120	51.1		19.8	327	35.3 ¹¹⁶	−14	06.1 ¹⁴³	52	22	7 04	43	53 15		33	84			
21	135	51.0		20.3	342	05.7 ¹¹⁴		20.4 ¹⁴³	54	26	11	7 52	47 13		37	88			
22	150	51.0		20.8	356	36.1 ¹¹⁴		34.6 ¹⁴²	56	31	18	8 02	41 10		42	91			
23	165	51.0		21.3	11	06.3 ¹¹²	−14	48.8 ¹⁴²	58	36	26	13	35 6		48	95			
24	180	50.9	+20	21.8	25	36.4 ¹¹¹	−15	02.9 ¹⁴¹	60 S	6 41	7 35	8 26	14 28	1	4	54	99		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 8 ^h 03 ^m 7		Mag: −3.9 PMG: 12 ^h 53 ^m		Mag: +0.4 PMG: 7 ^h 10 ^m		Mag: −2.3 PMG: 20 ^h 38 ^m		Mag: +0.2 PMG: 15 ^h 44 ^m									
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄									
h	°	'	°	'	°	'	°	'	°	'								
0	238	44.1	166	53.9	+22	47.0	252	23.6	−7	57.7	49	37.4	−2	18.9	123	24.3	+21	36.2
1	253	46.5	181	53.0		47.5	267	24.4		57.0	64	39.9		18.9	138	26.5		36.1
2	268	49.0	196	52.2		47.9	282	25.2		56.4	79	42.5		18.8	153	28.7		36.1
3	283	51.5	211	51.4		48.4	297	26.0		55.7	94	45.1		18.8	168	30.9		36.1
4	298	53.9	226	50.6		48.9	312	26.8		55.1	109	47.6		18.8	183	33.1		36.0
5	313	56.4	241	49.7	+22	49.4	327	27.5	−7	54.4	124	50.2	−2	18.7	198	35.3	+21	36.0
6	328	58.8	256	48.9	+22	49.8	342	28.3	−7	53.8	139	52.8	−2	18.7	213	37.6	+21	36.0
7	344	01.3	271	48.1		50.3	357	29.1		53.1	154	55.4		18.6	228	39.8		35.9
8	359	03.8	286	47.3		50.8	12	29.9		52.4	169	57.9		18.6	243	42.0		35.9
9	14	06.2	301	46.4		51.3	27	30.7		51.8	185	00.5		18.6	258	44.2		35.8
10	29	08.7	316	45.6		51.7	42	31.5		51.1	200	03.1		18.5	273	46.4		35.8
11	44	11.2	331	44.8	+22	52.2	57	32.2	−7	50.5	215	05.6	−2	18.5	288	48.6	+21	35.8
12	59	13.6	346	44.0	+22	52.7	72	33.0	−7	49.8	230	08.2	−2	18.5	303	50.8	+21	35.7
13	74	16.1	1	43.1		53.1	87	33.8		49.2	245	10.8		18.4	318	53.0		35.7
14	89	18.6	16	42.3		53.6	102	34.6		48.5	260	13.3		18.4	333	55.3		35.7
15	104	21.0	31	41.5		54.1	117	35.4		47.8	275	15.9		18.4	348	57.5		35.6
16	119	23.5	46	40.6		54.5	132	36.1		47.2	290	18.5		18.3	3	59.7		35.6
17	134	25.9	61	39.8	+22	55.0	147	36.9	−7	46.5	305	21.1	−2	18.3	19	01.9	+21	35.6
18	149	28.4	76	39.0	+22	55.5	162	37.7	−7	45.9	320	23.6	−2	18.3	34	04.1	+21	35.5
19	164	30.9	91	38.2		55.9	177	38.5		45.2	335	26.2		18.2	49	06.3		35.5
20	179	33.3	106	37.3		56.4	192	39.3		44.6	350	28.8		18.2	64	08.5		35.4
21	194	35.8	121	36.5		56.8	207	40.1		43.9	5	31.3		18.2	79	10.7		35.4
22	209	38.3	136	35.7		57.3	222	40.8		43.3	20	33.9		18.1	94	13.0		35.4
23	224	40.7	151	34.8		57.7	237	41.6		42.6	35	36.5		18.1	109	15.2		35.3
24	239	43.2	166	34.0	+22	58.2	252	42.4	−7	41.9	50	39.0	−2	18.1	124	17.4	+21	35.3
Dif	—		−8		+5		+8		+7		+26		0		+22		0	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 15'8 PMG: 11 ^h 56 ^m 6			Edad: 13 ^d 6 PHE { 4 ^h : 58'3 12 ^h : 58'6 20 ^h : 58'8 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	180	50.9	+20	21.8	25	36.4	-15	02.9	60 N	20 48	22 00	** **	19 30	113	2 25	2		
1	195	50.9		22.2	40	06.4 ¹¹⁰		17.0 ¹⁴¹	58	32	21 33	** **	16	104	35	7		
2	210	50.8		22.7	54	36.3 ¹⁰⁹		31.0 ¹⁴⁰	56	19	21 13	22 46	19 03	99	43	12		
3	225	50.8		23.2	69	06.1 ¹⁰⁸		44.9 ¹³⁹	54	20 08	20 56	22 10	18 53	94	51	15		
4	240	50.7		23.7	83	35.8 ¹⁰⁷	-15	58.8 ¹³⁹	52	19 58	42	21 45	44	90	2 58	18		
5	255	50.7	+20	24.2	98	05.3 ¹⁰⁵	-16	12.6 ¹³⁸	50	19 49	20 30	21 26	18 35	87	3 04	21		
6	270	50.6	+20	24.7	112	34.8 ¹⁰⁵	-16	26.3 ¹³⁷	45	19 30	20 05	20 51	18 18	81	3 17	27		
7	285	50.6		25.2	127	04.1 ¹⁰³		40.0 ¹³⁷	40	15	19 46	25	18 03	77	29	31		
8	300	50.6		25.7	141	33.3 ¹⁰²	-16	53.6 ¹³⁶	35	19 02	31	20 06	17 51	73	38	35		
9	315	50.5		26.2	156	02.4 ¹⁰¹	-17	07.1 ¹³⁵	30	18 51	19 17	19 49	41	69	3 47	38		
10	330	50.5		26.7	170	31.4 ¹⁰⁰		20.5 ¹³⁴	20	32	18 56	24	23	64	4 01	44		
11	345	50.4	+20	27.2	185	00.3 ⁹⁹	-17	33.9 ¹³⁴	10 N	18 15	18 38	19 04	17 07	60	4 14	48		
12	0	50.4	+20	27.6	199	29.0 ⁹⁷	-17	47.1 ¹³²	0	18 00	18 22	18 48	16 53	56	4 26	53		
13	15	50.3		28.1	213	57.6 ⁹⁶	-18	00.3 ¹³²	10 S	17 45	18 08	33	39	51	38	57		
14	30	50.3		28.6	228	26.1 ⁹⁵		13.4 ¹³¹	20	29	17 53	20	24	47	4 51	62		
15	45	50.2		29.1	242	54.5 ⁹⁴		26.5 ¹³¹	30	11	37	18 06	16 06	43	5 06	67		
16	60	50.2		29.6	257	22.7 ⁹²		39.4 ¹²⁹	35	17 00	28	17 59	15 56	39	15	70		
17	75	50.1	+20	30.1	271	50.9 ⁹²	-18	52.3 ¹²⁹	40	16 48	17 18	17 51	15 45	36	5 25	74		
18	90	50.1	+20	30.5	286	18.9 ⁹⁰	-19	05.0 ¹²⁷	45	16 34	17 07	17 43	15 32	31	5 36	80		
19	105	50.0		31.0	300	46.7 ⁸⁸		17.7 ¹²⁷	50	17	16 54	34	16	25	5 81	85		
20	120	50.0		31.5	315	14.5 ⁸⁸		30.2 ¹²⁵	52	09	47	30	08	23	5 57	89		
21	135	49.9		32.0	329	42.1 ⁸⁶		42.7 ¹²⁵	54	16 00	41	25	15 00	19	6 05	92		
22	150	49.9		32.5	344	09.6 ⁸⁵	-19	55.1 ¹²⁴	56	15 50	34	20	14 51	15	13	97		
23	165	49.8		33.0	358	37.0 ⁸⁴	-20	07.3 ¹²²	58	38	25	15	41	10	23	101		
24	180	49.8	+20	33.4	13	04.2 ⁸²	-20	19.5 ¹²²	60 S	15 25	16 16	17 10	14 29	3	6 33	108		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 7 ^h 59 ^m 8		Mag: -3.9 PMG: 12 ^h 54 ^m				Mag: +0.4 PMG: 7 ^h 09 ^m				Mag: -2.3 PMG: 20 ^h 34 ^m				Mag: +0.2 PMG: 15 ^h 41 ^m			
	hG ♈		hG ♀	Dec			hG ♂	Dec			hG ♃	Dec			hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	239	43.2	166	34.0	+22	58.2	252	42.4	-7	41.9	50	39.0	-2	18.1	124	17.4	+21	35.3
1	254	45.7	181	33.2		58.6	267	43.2		41.3	65	41.6		18.0	139	19.6		35.3
2	269	48.1	196	32.3		59.1	282	44.0		40.6	80	44.2		18.0	154	21.8		35.2
3	284	50.6	211	31.5	+22	59.5	297	44.8		40.0	95	46.7		18.0	169	24.0		35.2
4	299	53.1	226	30.7	+23	00.0	312	45.5		39.3	110	49.3		17.9	184	26.2		35.1
5	314	55.5	241	29.9	+23	00.4	327	46.3	-7	38.7	125	51.9	-2	17.9	199	28.4	+21	35.1
6	329	58.0	256	29.0	+23	00.9	342	47.1	-7	38.0	140	54.4	-2	17.9	214	30.7	+21	35.1
7	345	00.4	271	28.2		01.3	357	47.9		37.3	155	57.0		17.8	229	32.9		35.0
8	0	02.9	286	27.4		01.8	12	48.7		36.7	170	59.5		17.8	244	35.1		35.0
9	15	05.4	301	26.5		02.2	27	49.5		36.0	186	02.1		17.8	259	37.3		34.9
10	30	07.8	316	25.7		02.7	42	50.3		35.4	201	04.7		17.8	274	39.5		34.9
11	45	10.3	331	24.8	+23	03.1	57	51.0	-7	34.7	216	07.2	-2	17.7	289	41.7	+21	34.9
12	60	12.8	346	24.0	+23	03.6	72	51.8	-7	34.1	231	09.8	-2	17.7	304	43.9	+21	34.8
13	75	15.2	1	23.2		04.0	87	52.6		33.4	246	12.4		17.7	319	46.1		34.8
14	90	17.7	16	22.3		04.4	102	53.4		32.7	261	14.9		17.6	334	48.3		34.8
15	105	20.2	31	21.5		04.9	117	54.2		32.1	276	17.5		17.6	349	50.5		34.7
16	120	22.6	46	20.7		05.3	132	55.0		31.4	291	20.0		17.6	4	52.8		34.7
17	135	25.1	61	19.8	+23	05.7	147	55.7	-7	30.8	306	22.6	-2	17.5	19	55.0	+21	34.6
18	150	27.6	76	19.0	+23	06.2	162	56.5	-7	30.1	321	25.2	-2	17.5	34	57.2	+21	34.6
19	165	30.0	91	18.2		06.6	177	57.3		29.5	336	27.7		17.5	49	59.4		34.6
20	180	32.5	106	17.3		07.0	192	58.1		28.8	351	30.3		17.4	65	01.6		34.5
21	195	34.9	121	16.5		07.5	207	58.9		28.1	6	32.9		17.4	80	03.8		34.5
22	210	37.4	136	15.6		07.9	222	59.7		27.5	21	35.4		17.4	95	06.0		34.5
23	225	39.9	151	14.8		08.3	238	00.5		26.8	36	38.0		17.4	110	08.2		34.4
24	240	42.3	166	14.0	+23	08.7	253	01.3	-7	26.2	51	40.5	-2	17.3	125	10.4	+21	34.4
Dif	—		-8		+4		+8		+7		+26		0		+22		0	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna		
	SD: 15 ^s 8			Edad: 14 ^d 6 PHE { 4 ^h : 59/0 12 ^h : 59/3 20 ^h : 59/5												
	PMG: 11 ^h 56 ^m 7			SD: 16 ^s 1												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	Rº	Hora	Rº	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m	
0	180	49.8	+20 33.4	13	04.2	-20 19.5		60 N	** **	1 53	3 05	21 23	114	2 27	5	
1	195	49.7	33.9	27	31.3	81 31.5 ¹²⁰		58	** **	2 20	20	21 00	103	42	13	
2	210	49.7	34.4	41	58.3	80 43.5 ¹²⁰		56	1 07	40	34	20 42	96	2 55	18	
3	225	49.6	34.9	56	25.2	79 -20 55.3 ¹¹⁸		54	1 43	2 57	45	27 92		3 06	23	
4	240	49.6	35.3	70	51.9	77 -21 07.0 ¹¹⁷		52	2 08	3 11	3 55	14 88		16	27	
5	255	49.5	+20 35.8	85	18.5	76 -21 18.7 ¹¹⁷		50	2 27	3 23	4 04	20 02	86	3 25	30	
6	270	49.5	+20 36.3	99	45.0	75 -21 30.1 ¹¹⁴		45	3 02	3 48	4 23	19 39	80	3 44	36	
7	285	49.4	36.8	114	11.4	74 41.5 ¹¹⁴		40	28	4 07	38	20 76		4 00	40	
8	300	49.4	37.3	128	37.6	72 -21 52.8 ¹¹³		35	3 48	23	4 51	19 04	73	13	43	
9	315	49.3	37.7	143	03.7	71 -22 03.9 ¹¹¹		30	4 04	36	5 02	18 50	71	25	46	
10	330	49.3	38.2	157	29.6	69 14.9 ¹¹⁰		20	29	4 57	21	27 67		4 45	51	
11	345	49.2	+20 38.7	171	55.5	69 -22 25.8 ¹⁰⁹		10 N	4 49	5 15	5 38	18 07	64	5 02	55	
12	0	49.2	+20 39.1	186	21.2	67 -22 36.5 ¹⁰⁷		0	5 05	5 31	5 53	17 49	61	5 19	58	
13	15	49.1	39.6	200	46.8	66 47.2 ¹⁰⁷		10 S	20	5 46	6 08	30 58		35	62	
14	30	49.1	40.1	215	12.2	64 -22 57.6 ¹⁰⁴		20	34	6 01	24	17 11	54	5 53	66	
15	45	49.0	40.6	229	37.5	63 -23 08.0 ¹⁰⁴		30	48	17	43	16 49	50	6 13	71	
16	60	49.0	41.0	244	02.7	62 18.2 ¹⁰²		35	5 55	26	6 53	35 49		25	74	
17	75	48.9	+20 41.5	258	27.8	61 -23 28.3 ¹⁰¹		40	6 03	6 36	7 05	16 21	45	6 39	77	
18	90	48.8	+20 42.0	272	52.8	60 -23 38.2 ⁹⁹		45	6 11	6 47	7 20	16 03	41	6 56	81	
19	105	48.8	42.4	287	17.6	58 48.0 ⁹⁸		50	20	7 00	37	15 41	36	7 16	87	
20	120	48.7	42.9	301	42.3	57 -23 57.7 ⁹⁷		52	24	07	45	31 33		26	90	
21	135	48.7	43.4	316	06.9	56 -24 07.1 ⁹⁴		54	29	13	7 54	19 30		37	93	
22	150	48.6	43.8	330	31.3	54 16.5 ⁹⁴		56	34	21	8 05	15 06	25	7 50	98	
23	165	48.6	44.3	344	55.7	54 25.7 ⁹²		58	39	29	17	14 51	19	8 04	105	
24	180	48.5	+20 44.8	359	19.9	52 -24 34.7 ⁹⁰		60 S	6 45	7 38	8 30	14 32	11	8 21	114	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG 7 ^h 55 ^m 9		Mag: -3.9 PMG: 12 ^h 56 ^m		Mag: +0.4 PMG: 7 ^h 08 ^m		Mag: -2.3 PMG: 20 ^h 30 ^m		Mag: +0.2 PMG: 15 ^h 37 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	240	42.3	166	14.0	+23 08.7	253	01.3	-7 26.2	51	40.5	-2 17.3	125	10.4	+21 34.4	
1	255	44.8	181	13.1	09.2	268	02.0	25.5	66	43.1	17.3	140	12.6	34.3	
2	270	47.3	196	12.3	09.6	283	02.8	24.9	81	45.7	17.3	155	14.8	34.3	
3	285	49.7	211	11.5	10.0	298	03.6	24.2	96	48.2	17.2	170	17.1	34.3	
4	300	52.2	226	10.6	10.4	313	04.4	23.5	111	50.8	17.2	185	19.3	34.2	
5	315	54.7	241	09.8	+23 10.9	328	05.2	-7 22.9	126	53.3	-2 17.2	200	21.5	+21 34.2	
6	330	57.1	256	08.9	+23 11.3	343	06.0	-7 22.2	141	55.9	-2 17.1	215	23.7	+21 34.1	
7	345	59.6	271	08.1	11.7	358	06.8	21.6	156	58.4	17.1	230	25.9	34.1	
8	1	02.0	286	07.2	12.1	13	07.5	20.9	172	01.0	17.1	245	28.1	34.1	
9	16	04.5	301	06.4	12.5	28	08.3	20.2	187	03.6	17.1	260	30.3	34.0	
10	31	07.0	316	05.6	12.9	43	09.1	19.6	202	06.1	17.0	275	32.5	34.0	
11	46	09.4	331	04.7	+23 13.4	58	09.9	-7 18.9	217	08.7	-2 17.0	290	34.7	+21 34.0	
12	61	11.9	346	03.9	+23 13.8	73	10.7	-7 18.3	232	11.2	-2 17.0	305	36.9	+21 33.9	
13	76	14.4	1	03.0	14.2	88	11.5	17.6	247	13.8	16.9	320	39.1	33.9	
14	91	16.8	16	02.2	14.6	103	12.3	17.0	262	16.3	16.9	335	41.3	33.8	
15	106	19.3	31	01.4	15.0	118	13.1	16.3	277	18.9	16.9	350	43.6	33.8	
16	121	21.8	46	00.5	15.4	133	13.9	15.6	292	21.5	16.9	5	45.8	33.8	
17	136	24.2	60	59.7	+23 15.8	148	14.6	-7 15.0	307	24.0	-2 16.8	20	48.0	+21 33.7	
18	151	26.7	75	58.8	+23 16.2	163	15.4	-7 14.3	322	26.6	-2 16.8	35	50.2	+21 33.7	
19	166	29.2	90	58.0	16.6	178	16.2	13.7	337	29.1	16.8	50	52.4	33.6	
20	181	31.6	105	57.1	17.0	193	17.0	13.0	352	31.7	16.8	65	54.6	33.6	
21	196	34.1	120	56.3	17.4	208	17.8	12.3	7	34.2	16.7	80	56.8	33.6	
22	211	36.5	135	55.4	17.8	223	18.6	11.7	22	36.8	16.7	95	59.0	33.5	
23	226	39.0	150	54.6	18.2	238	19.4	11.0	37	39.3	16.7	111	01.2	33.5	
24	241	41.5	165	53.8	+23 18.6	253	20.2	-7 10.4	52	41.9	-2 16.6	126	03.4	+21 33.5	
Dif	—		-8	+4		+8	+7		+26		0	+22		0	

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15'8 PMG: 11 ^h 56 ^m 8			Edad: 15 ^d 6 PHE { 4 ^h : 59'6 12 ^h : 59'8 20 ^h : 59'9 PMG: 0 ^h 03 ^m R°: 62 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	180	48.5	+20 44.8	359	19.9	-24 34.7	51	60 N	20 52	22 06	** ** *	23 17	88	2 32	15
1	195	48.5	45.2	13	44.0	43.6	89	58	36	21 38	** ** *	22 43	82	2 55	26
2	210	48.4	45.7	28	07.9	52.4	88	56	23	17	22 56	22 18	79	3 13	33
3	225	48.3	46.2	42	31.8	00.9	85	54	11	21 00	22 16	21 59	76	29	37
4	240	48.3	46.6	56	55.5	09.3	84	52	20 01	20 45	21 50	42 75		43	40
5	255	48.2	+20 47.1	71	19.2	17.6	83	50	19 51	20 33	21 30	21 28	74	3 55	43
6	270	48.2	+20 47.5	85	42.7	25.7	81	45	19 32	20 08	20 54	20 59	72	4 20	47
7	285	48.1	48.0	100	06.1	33.6	79	40	17	19 48	27	36 71		40	50
8	300	48.1	48.5	114	29.4	41.3	77	35	19 03	32	20 07	17 70		4 56	54
9	315	48.0	48.9	128	52.6	48.9	76	30	18 52	19 19	19 51	20 01	69	5 11	55
10	330	48.0	49.4	143	15.6	56.3	74	20	33	18 57	25	19 34	68	36	58
11	345	47.9	+20 49.8	157	38.6	03.6	73	10 N	18 16	18 39	19 05	19 11	66	5 57	61
12	0	47.8	+20 50.3	172	01.5	10.6	70	0	18 00	18 23	18 48	18 50	64	6 17	63
13	15	47.8	50.8	186	24.3	17.5	69	10 S	17 45	18 07	33	28 64		37	66
14	30	47.7	51.2	200	46.9	24.2	67	20	29	17 52	19	18 05	62	6 59	68
15	45	47.7	51.7	215	09.5	30.7	65	30	17 10	36	18 05	17 39	60	7 24	70
16	60	47.6	52.1	229	32.0	37.1	64	35	16 59	27	17 58	24 58		39	72
17	75	47.5	+20 52.6	243	54.3	43.2	61	40	16 47	17 17	17 50	17 06	57	7 56	74
18	90	47.5	+20 53.0	258	16.6	49.2	60	45	16 33	17 05	17 42	16 44	55	8 17	77
19	105	47.4	53.5	272	38.8	55.0	58	50	15	16 52	32	17 52		43	81
20	120	47.4	53.9	287	00.9	00.5	55	52	16 07	45	28	16 04	50	8 56	82
21	135	47.3	54.4	301	23.0	05.9	54	54	15 57	39	23	15 49	48	9 10	86
22	150	47.2	54.8	315	44.9	11.2	53	56	47	31	18	31 45		28	88
23	165	47.2	55.3	330	06.8	16.2	50	58	35	23	13	15 10	40	9 49	93
24	180	47.1	+20 55.7	344	28.6	21.0	48	60 S	15 21	16 13	17 07	14 43	30	10 15	104

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 7 ^h 51 ^m 9		Mag: -3.9 PMG: 12 ^h 57 ^m		Mag: +0.4 PMG: 7 ^h 06 ^m		Mag: -2.3 PMG: 20 ^h 26 ^m		Mag: +0.2 PMG: 15 ^h 33 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	241	41.5	165 53.8	+23 18.6	253 20.2	-7 10.4	52 41.9	-2 16.6	126 03.4	+21 33.5
1	256	43.9	180 52.9	19.0	268 21.0	09.7	67 44.4	16.6	141 05.6	33.4
2	271	46.4	195 52.1	19.4	283 21.8	09.0	82 47.0	16.6	156 07.8	33.4
3	286	48.9	210 51.2	19.8	298 22.5	08.4	97 49.5	16.6	171 10.0	33.3
4	301	51.3	225 50.4	20.2	313 23.3	07.7	112 52.1	16.5	186 12.2	33.3
5	316	53.8	240 49.5	+23 20.6	328 24.1	-7 07.1	127 54.6	-2 16.5	201 14.4	+21 33.3
6	331	56.3	255 48.7	+23 21.0	343 24.9	-7 06.4	142 57.2	-2 16.5	216 16.6	+21 33.2
7	346	58.7	270 47.8	21.4	358 25.7	05.7	157 59.7	16.5	231 18.9	33.2
8	2	01.2	285 47.0	21.8	13 26.5	05.1	173 02.3	16.4	246 21.1	33.1
9	17	03.7	300 46.1	22.2	28 27.3	04.4	188 04.8	16.4	261 23.3	33.1
10	32	06.1	315 45.3	22.6	43 28.1	03.8	203 07.4	16.4	276 25.5	33.1
11	47	08.6	330 44.4	+23 22.9	58 28.9	-7 03.1	218 09.9	-2 16.4	291 27.7	+21 33.0
12	62	11.0	345 43.6	+23 23.3	73 29.7	-7 02.4	233 12.5	-2 16.3	306 29.9	+21 33.0
13	77	13.5	0 42.7	23.7	88 30.5	01.8	248 15.0	16.3	321 32.1	32.9
14	92	16.0	15 41.9	24.1	103 31.2	01.1	263 17.6	16.3	336 34.3	32.9
15	107	18.4	30 41.0	24.5	118 32.0	-7 00.5	278 20.1	16.3	351 36.5	32.9
16	122	20.9	45 40.2	24.9	133 32.8	-6 59.8	293 22.7	16.2	6 38.7	32.8
17	137	23.4	60 39.3	+23 25.2	148 33.6	-6 59.1	308 25.2	-2 16.2	21 40.9	+21 32.8
18	152	25.8	75 38.5	+23 25.6	163 34.4	-6 58.5	323 27.8	-2 16.2	36 43.1	+21 32.7
19	167	28.3	90 37.6	26.0	178 35.2	57.8	338 30.3	16.2	51 45.3	32.7
20	182	30.8	105 36.8	26.4	193 36.0	57.2	353 32.9	16.1	66 47.5	32.7
21	197	33.2	120 35.9	26.7	208 36.8	56.5	8 35.4	16.1	81 49.7	32.6
22	212	35.7	135 35.1	27.1	223 37.6	55.8	23 38.0	16.1	96 51.9	32.6
23	227	38.2	150 34.2	27.5	238 38.4	55.2	38 40.5	16.1	111 54.1	32.6
24	242	40.6	165 33.4	+23 27.9	253 39.2	-6 54.5	53 43.1	-2 16.0	126 56.3	+21 32.5
Dif	—		-8	+4	+8	+7	+25	0	+22	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 9			Edad: 16 ^d 6 PHE { 4 ^h : 60/0 12 ^h : 60/1 20 ^h : 60/2 PMG: 1 ^h 05 ^m 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	180	47.1	+20 55.7	344	28.6	-27 21.0	46	60 N	** **	1 47	3 01	** **	**	2 47	49	
1	195	47.1	56.2	358	50.3	27 25.6	46	58	** **	2 15	17	** **	**	3 21	55	
2	210	47.0	56.6	13	11.9	26 30.1	45	56	0 57	36	31	23 37	51	3 46	58	
3	225	46.9	57.1	27	33.5	26 34.3	42	54	1 37	2 54	42	23 15	53	4 06	59	
4	240	46.9	57.5	41	55.0	25 38.3	40	52	2 03	3 08	3 53	22 57	55	23	60	
5	255	46.8	+20 58.0	56	16.4	24 -27 42.2	39	50	2 23	3 21	4 02	22 42	56	4 38	61	
6	270	46.8	+20 58.4	70	37.8	24 -27 45.8	36	45	3 00	3 46	4 21	22 11	59	5 07	63	
7	285	46.7	58.9	84	59.1	23 49.3	35	40	26	4 05	37	21 47	60	30	64	
8	300	46.6	59.3	99	20.4	23 52.5	32	35	3 46	21	4 50	27	61	5 50	63	
9	315	46.6	+20 59.8	113	41.6	22 55.5	30	30	4 03	35	5 02	21 10	62	6 06	64	
10	330	46.5	+21 00.2	128	02.8	22 -27 58.3	28	20	28	4 57	21	20 42	63	34	65	
11	345	46.4	+21 00.7	142	23.9	21 -28 01.0	27	10 N	4 49	5 15	5 38	20 17	64	6 58	65	
12	0	46.4	+21 01.1	156	45.0	21 -28 03.4	24	0	5 05	5 31	5 53	19 54	66	7 20	66	
13	15	46.3	01.5	171	06.0	20 05.6	22	10 S	20	5 46	6 09	32	66	7 43	65	
14	30	46.3	02.0	185	27.0	20 07.6	20	20	35	6 02	25	19 07	67	8 07	65	
15	45	46.2	02.4	199	48.0	20 09.4	18	30	49	18	44	18 39	68	34	66	
16	60	46.1	02.9	214	09.0	20 11.0	16	35	5 56	27	6 55	22	68	8 51	66	
17	75	46.1	+21 03.3	228	29.9	19 -28 12.3	13	40	6 04	6 37	7 07	18 03	68	9 10	66	
18	90	46.0	+21 03.7	242	50.8	19 -28 13.5	12	45	6 13	6 49	7 22	17 39	69	9 34	66	
19	105	45.9	04.2	257	11.6	18 14.4	9	50	22	7 03	39	17 09	70	10 04	65	
20	120	45.9	04.6	271	32.5	19 15.2	8	52	27	09	48	16 54	71	18	66	
21	135	45.8	05.1	285	53.3	18 15.7	5	54	31	16	7 57	37	71	36	65	
22	150	45.7	05.5	300	14.1	18 16.0	3	56	36	23	8 08	16 16	72	10 56	65	
23	165	45.7	05.9	314	35.0	19 16.2	2	58	41	32	20	15 50	73	11 22	65	
24	180	45.6	+21 06.4	328	55.8	18 -28 16.1	1	60 S	6 47	7 41	8 34	15 13	75	11 59	62	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 7 ^h 48 ^m 0		Mag: -3.9 PMG: 12 ^h 59 ^m		Mag: +0.4 PMG: 7 ^h 05 ^m		Mag: -2.3 PMG: 20 ^h 22 ^m		Mag: +0.2 PMG: 15 ^h 30 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	242	40.6	165 33.4	+23 27.9	253 39.2	-6 54.5	53 43.1	-2 16.0	126 56.3	+21 32.5
1	257	43.1	180 32.5	28.2	268 40.0	53.9	68 45.6	16.0	141 58.5	32.5
2	272	45.5	195 31.7	28.6	283 40.8	53.2	83 48.2	16.0	157 00.7	32.4
3	287	48.0	210 30.8	29.0	298 41.5	52.5	98 50.7	16.0	172 02.9	32.4
4	302	50.5	225 29.9	29.3	313 42.3	51.9	113 53.3	15.9	187 05.1	32.4
5	317	52.9	240 29.1	+23 29.7	328 43.1	-6 51.2	128 55.8	-2 15.9	202 07.3	+21 32.3
6	332	55.4	255 28.2	+23 30.1	343 43.9	-6 50.6	143 58.3	-2 15.9	217 09.5	+21 32.3
7	347	57.9	270 27.4	30.4	358 44.7	49.9	159 00.9	15.9	232 11.8	32.2
8	3	00.3	285 26.5	30.8	13 45.5	49.2	174 03.4	15.9	247 14.0	32.2
9	18	02.8	300 25.7	31.1	28 46.3	48.6	189 06.0	15.8	262 16.2	32.2
10	33	05.3	315 24.8	31.5	43 47.1	47.9	204 08.5	15.8	277 18.4	32.1
11	48	07.7	330 24.0	+23 31.9	58 47.9	-6 47.3	219 11.1	-2 15.8	292 20.6	+21 32.1
12	63	10.2	345 23.1	+23 32.2	73 48.7	-6 46.6	234 13.6	-2 15.8	307 22.8	+21 32.0
13	78	12.7	0 22.2	32.6	88 49.5	45.9	249 16.1	15.7	322 25.0	32.0
14	93	15.1	15 21.4	32.9	103 50.3	45.3	264 18.7	15.7	337 27.2	32.0
15	108	17.6	30 20.5	33.3	118 51.1	44.6	279 21.2	15.7	352 29.4	31.9
16	123	20.0	45 19.7	33.6	133 51.9	43.9	294 23.8	15.7	7 31.6	31.9
17	138	22.5	60 18.8	+23 34.0	148 52.7	-6 43.3	309 26.3	-2 15.7	22 33.8	+21 31.8
18	153	25.0	75 18.0	+23 34.3	163 53.5	-6 42.6	324 28.9	-2 15.6	37 36.0	+21 31.8
19	168	27.4	90 17.1	34.7	178 54.3	42.0	339 31.4	15.6	52 38.2	31.8
20	183	29.9	105 16.2	35.0	193 55.1	41.3	354 33.9	15.6	67 40.4	31.7
21	198	32.4	120 15.4	35.4	208 55.8	40.6	9 36.5	15.6	82 42.6	31.7
22	213	34.8	135 14.5	35.7	223 56.6	40.0	24 39.0	15.5	97 44.8	31.6
23	228	37.3	150 13.7	36.1	238 57.4	39.3	39 41.6	15.5	112 47.0	31.6
24	243	39.8	165 12.8	+23 36.4	253 58.2	-6 38.7	54 44.1	-2 15.5	127 49.2	+21 31.6
Dif	—		-9	+4	+8	+7	+25	0	+22	0

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'8 PMG: 11 ^h 57 ^m 0			Edad: 17 ^d 6 PHE { 4 ^h : 60'2 12 ^h : 60'2 20 ^h : 60'2 SD: 16'4 PMG: 2 ^h 10 ^m R°: 65 ^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	45.6	+21 06.4	328	55.8	-28 16.1	3	60 N	20 56	22 13	** **	0 45 37	3 36 99	
1	195	45.5	06.8	343	16.6	18 15.8	3	58	40	21 43	** **	0 05 46	4 16 89	
2	210	45.5	07.2	357	37.4	18 15.2	6	56	26	21	23 07	** **	4 44 84	
3	225	45.4	07.7	11	58.3	19 14.5	7	54	14	21 03	22 22	** **	5 05 82	
4	240	45.3	08.1	26	19.1	18 13.6	9	52	20 03	20 48	21 55	23 52 37	23 80	
5	255	45.3	+21 08.5	40	39.9	18 -28 12.4	12	50	19 54	20 36	21 34	23 38 40	5 39 78	
6	270	45.2	+21 09.0	55	00.8	19 -28 11.1	13	45	19 34	20 10	20 56	23 10 44	6 10 75	
7	285	45.1	09.4	69	21.7	19 09.5	16	40	18	19 50	30	22 47 48	34 73	
8	300	45.1	09.8	83	42.6	19 07.7	18	35	19 05	34	20 09	28 51	6 53 72	
9	315	45.0	10.2	98	03.5	19 05.7	20	30	18 53	19 20	19 52	22 12 53	7 10 70	
10	330	44.9	10.7	112	24.5	20 03.5	22	20	33	18 58	26	21 45 57	7 39 67	
11	345	44.9	+21 11.1	126	45.5	20 -28 01.1	24	10 N	18 16	18 39	19 06	21 21 60	8 03 66	
12	0	44.8	+21 11.5	141	06.5	20 -27 58.5	26	0	18 01	18 23	18 49	21 00 62	8 26 64	
13	15	44.7	12.0	155	27.6	21 55.7	28	10 S	17 45	18 07	33	20 38 65	8 48 63	
14	30	44.7	12.4	169	48.7	21 52.7	30	20	28	17 52	19	20 14 68	9 12 61	
15	45	44.6	12.8	184	09.8	21 49.4	33	30	17 09	35	18 05	19 47 71	40 58	
16	60	44.5	13.2	198	31.0	22 46.0	34	35	16 58	26	17 57	30 74	9 57 56	
17	75	44.5	+21 13.7	212	52.3	23 -27 42.4	36	40	16 46	17 16	17 49	19 11 76	10 16 54	
18	90	44.4	+21 14.1	227	13.6	23 -27 38.5	39	45	16 31	17 04	17 40	18 48 80	10 40 51	
19	105	44.3	14.5	241	34.9	23 34.5	40	50	13	16 50	30	19 84	11 09 48	
20	120	44.3	14.9	255	56.3	24 30.2	43	52	16 04	44	26	18 05 86	24 45	
21	135	44.2	15.4	270	17.8	25 25.8	44	54	15 55	37	21	17 48 89	11 41 43	
22	150	44.1	15.8	284	39.4	26 21.1	47	56	44	29	16	28 93	12 01 39	
23	165	44.0	16.2	299	01.0	26 16.3	48	58	32	20	11	17 03 99	12 27 33	
24	180	44.0	+21 16.6	313	22.6	26 -27 11.3	50	60 S	15 18	16 10	17 05	16 28 110	13 01 23	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 7 ^h 44 ^m 1		Mag: -3.9 PMG: 13 ^h 00 ^m			Mag: +0.4 PMG: 7 ^h 04 ^m			Mag: -2.3 PMG: 20 ^h 18 ^m			Mag: +0.2 PMG: 15 ^h 26 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	'	°	°	'	°	°	'	°
0	243	39.8	165 12.8	+23 36.4	253 58.2	-6 38.7	54 44.1	-2 15.5	127 49.2	+21 31.6				
1	258	42.2	180 12.0	36.7	268 59.0	38.0	69 46.6	15.5	142 51.4	31.5				
2	273	44.7	195 11.1	37.1	283 59.8	37.3	84 49.2	15.5	157 53.6	31.5				
3	288	47.2	210 10.2	37.4	299 00.6	36.7	99 51.7	15.4	172 55.8	31.4				
4	303	49.6	225 09.4	37.8	314 01.4	36.0	114 54.3	15.4	187 58.0	31.4				
5	318	52.1	240 08.5	+23 38.1	329 02.2	-6 35.3	129 56.8	-2 15.4	203 00.2	+21 31.4				
6	333	54.5	255 07.7	+23 38.4	344 03.0	-6 34.7	144 59.3	-2 15.4	218 02.4	+21 31.3				
7	348	57.0	270 06.8	38.8	359 03.8	34.0	160 01.9	15.4	233 04.6	31.3				
8	3	59.5	285 05.9	39.1	14 04.6	33.4	175 04.4	15.3	248 06.8	31.2				
9	19	01.9	300 05.1	39.4	29 05.4	32.7	190 06.9	15.3	263 09.0	31.2				
10	34	04.4	315 04.2	39.8	44 06.2	32.0	205 09.5	15.3	278 11.2	31.2				
11	49	06.9	330 03.3	+23 40.1	59 07.0	-6 31.4	220 12.0	-2 15.3	293 13.4	+21 31.1				
12	64	09.3	345 02.5	+23 40.4	74 07.8	-6 30.7	235 14.5	-2 15.3	308 15.6	+21 31.1				
13	79	11.8	0 01.6	40.7	89 08.6	30.0	250 17.1	15.2	323 17.8	31.0				
14	94	14.3	15 00.8	41.1	104 09.4	29.4	265 19.6	15.2	338 20.0	31.0				
15	109	16.7	29 59.9	41.4	119 10.2	28.7	280 22.2	15.2	353 22.2	31.0				
16	124	19.2	44 59.0	41.7	134 11.0	28.1	295 24.7	15.2	8 24.4	30.9				
17	139	21.7	59 58.2	+23 42.0	149 11.8	-6 27.4	310 27.2	-2 15.2	23 26.6	+21 30.9				
18	154	24.1	74 57.3	+23 42.4	164 12.6	-6 26.7	325 29.8	-2 15.2	38 28.8	+21 30.8				
19	169	26.6	89 56.4	42.7	179 13.4	26.1	340 32.3	15.1	53 31.0	30.8				
20	184	29.0	104 55.6	43.0	194 14.2	25.4	355 34.8	15.1	68 33.2	30.8				
21	199	31.5	119 54.7	43.3	209 15.0	24.7	10 37.4	15.1	83 35.4	30.7				
22	214	34.0	134 53.8	43.6	224 15.8	24.1	25 39.9	15.1	98 37.6	30.7				
23	229	36.4	149 53.0	43.9	239 16.6	23.4	40 42.4	15.1	113 39.8	30.6				
24	244	38.9	164 52.1	+23 44.3	254 17.4	-6 22.8	55 45.0	-2 15.0	128 42.0	+21 30.6				
Dif	—		-9	+3	+8	+7	+25	0	+22					

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: 18 ^d 6 PHE { 4 ^h : 60 ^l 1 12 ^h : 60 ^l 1 20 ^h : 60 ^l 0 PMG: 3 ^h 15 ^m R°: 61 ^m																		
	hG ☉		Dec		hG ☾		Dif		Dec			Dif			Náutico	Civil	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m		
0	180	44.0	+21	16.6	313	22.6	-27	11.3	53	60 N	** **	1	41	2	57	1	22	12	5	15	116		
1	195	43.9		17.0	327	44.4	28	06.0	53	58	** **	2	10	3	14	0	51	22	5	45	106		
2	210	43.8		17.5	342	06.2	28	-27	00.6	54	56	0	47	33	28	28	28	6	08	99			
3	225	43.8		17.9	356	28.1	29	-26	55.0	56	54	1	32	2	50	40	0	08	34	27	94		
4	240	43.7		18.3	10	50.1	30		49.2	58	52	1	59	3	05	3	51	** **	**	43	90		
5	255	43.6	+21	18.7	25	12.2	31	-26	43.2	60	50	2	20	3	18	4	00	** **	**	6	57	87	
6	270	43.5	+21	19.1	39	34.3	31	-26	37.0	62	45	2	58	3	44	4	20	23	54	33	7	25	81
7	285	43.5		19.5	53	56.5	32		30.6	64	40	3	24	4	04	36	35	38	7	47	77		
8	300	43.4		20.0	68	18.8	33		24.0	66	35	3	45	20	4	49	19	42	8	05	74		
9	315	43.3		20.4	82	41.3	35		17.3	67	30	4	02	34	5	01	23	05	45	20	72		
10	330	43.3		20.8	97	03.8	35		10.4	69	20	28	4	56	21	22	42	49	8	46	68		
11	345	43.2	+21	21.2	111	26.3	35	-26	03.2	72	10 N	4	48	5	15	5	38	22	21	54	9	09	64
12	0	43.1	+21	21.6	125	49.0	37	-25	56.0	72	0	5	06	5	31	5	54	22	02	58	9	30	60
13	15	43.0		22.0	140	11.8	38		48.5	75	10 S	21	5	47	6	09	21	43	62	9	51	56	
14	30	43.0		22.4	154	34.7	39		40.8	77	20	35	6	02	26	21	22	66	10	13	53		
15	45	42.9		22.8	168	57.7	40		33.0	78	30	50	19	45	20	58	71	38	49				
16	60	42.8		23.2	183	20.8	41		25.0	80	35	5	57	28	6	56	44	74	10	53	46		
17	75	42.7	+21	23.7	197	44.0	42	-25	16.9	81	40	6	05	6	39	7	09	20	27	78	11	10	43
18	90	42.7	+21	24.1	212	07.3	43	-25	08.5	84	45	6	14	6	51	7	24	20	08	82	11	31	39
19	105	42.6		24.5	226	30.7	44	-25	00.0	85	50	24	7	05	42	19	43	88	11	57	33		
20	120	42.5		24.9	240	54.2	45	-24	51.3	87	52	29	11	7	50	31	91	12	09	31			
21	135	42.4		25.3	255	17.8	46		42.5	88	54	33	18	8	00	17	95	24	26				
22	150	42.4		25.7	269	41.5	47		33.5	90	56	38	26	11	19	01	100	12	40	22			
23	165	42.3		26.1	284	05.3	48		24.4	91	58	44	35	23	18	42	106	13	00	16			
24	180	42.2	+21	26.5	298	29.3	50	-24	15.0	94	60 S	6	50	7	45	8	38	18	18	114	13	24	9
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO						
	PMG 7 ^h 40 ^m 1				Mag: -3.9 PMG: 13 ^h 01 ^m				Mag: +0.3 PMG: 7 ^h 02 ^m				Mag: -2.3 PMG: 20 ^h 14 ^m				Mag: +0.2 PMG: 15 ^h 23 ^m						
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	244	38.9	164	52.1	+23	44.3	254	17.4	-6	22.8	55	45.0	-2	15.0	128	42.0	+21	30.6					
1	259	41.4	179	51.2		44.6	269	18.2		22.1	70	47.5		15.0	143	44.2		30.6					
2	274	43.8	194	50.4		44.9	284	19.0		21.4	85	50.0		15.0	158	46.4		30.5					
3	289	46.3	209	49.5		45.2	299	19.8		20.8	100	52.6		15.0	173	48.6		30.5					
4	304	48.8	224	48.7		45.5	314	20.6		20.1	115	55.1		15.0	188	50.8		30.4					
5	319	51.2	239	47.8	+23	45.8	329	21.4	-6	19.4	130	57.6	-2	15.0	203	53.0	+21	30.4					
6	334	53.7	254	46.9	+23	46.1	344	22.2	-6	18.8	146	00.1	-2	14.9	218	55.2	+21	30.3					
7	349	56.2	269	46.1		46.4	359	23.0		18.1	161	02.7		14.9	233	57.4		30.3					
8	4	58.6	284	45.2		46.7	14	23.8		17.5	176	05.2		14.9	248	59.5		30.3					
9	20	01.1	299	44.3		47.0	29	24.6		16.8	191	07.7		14.9	264	01.7		30.2					
10	35	03.5	314	43.5		47.3	44	25.4		16.1	206	10.3		14.9	279	03.9		30.2					
11	50	06.0	329	42.6	+23	47.6	59	26.2	-6	15.5	221	12.8	-2	14.9	294	06.1	+21	30.1					
12	65	08.5	344	41.7	+23	47.9	74	27.0	-6	14.8	236	15.3	-2	14.8	309	08.3	+21	30.1					
13	80	10.9	359	40.8		48.2	89	27.8		14.1	251	17.9		14.8	324	10.5		30.1					
14	95	13.4	14	40.0		48.5	104	28.6		13.5	266	20.4		14.8	339	12.7		30.0					
15	110	15.9	29	39.1		48.8	119	29.4		12.8	281	22.9		14.8	354	14.9		30.0					
16	125	18.3	44	38.2		49.1	134	30.2		12.2	296	25.4		14.8	9	17.1		29.9					
17	140	20.8	59	37.4	+23	49.4	149	31.0	-6	11.5	311	28.0	-2	14.8	24	19.3	+21	29.9					
18	155	23.3	74	36.5	+23	49.7	164	31.8	-6	10.8	326	30.5	-2	14.7	39	21.5	+21	29.9					
19	170	25.7	89	35.6		50.0	179	32.6		10.2	341	33.0		14.7	54	23.7		29.8					
20	185	28.2	104	34.8		50.3	194	33.4		09.5	356	35.6		14.7	69	25.9		29.8					
21	200	30.7	119	33.9		50.6	209	34.2		08.8	11	38.1		14.7	84	28.1		29.7					
22	215	33.1	134	33.0		50.9	224	35.0		08.2	26	40.6		14.7	99	30.3		29.7					
23	230	35.6	149	32.2		51.1	239	35.8		07.5	41	43.1		14.7	114	32.5		29.7					
24	245	38.0	164	31.3	+23	51.4	254	36.6	-6	06.8	56	45.7	-2	14.6	129	34.7	+21	29.6					
Dif	—				-9 +3				+8 +7				+25 0				+22 0						

UT	SOL			LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 15 ^h 8 PMG: 11 ^h 57 ^m 2			Edad: 19 ^d 6 PHE { 4 ^h : 59 ^m 9 12 ^h : 59 ^m 8 20 ^h : 59 ^m 7 SD: 16 ^h 3 PMG: 4 ^h 16 ^m R°: 57 ^m						Civil			Náutico			Hora R°		
	hG ☉	Dec		hG ☾	Dif	Dec	Dif											
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m	h m m		
0	180	42.2	+21 26.5	298	29.3	-24 15.0	94	60 N	21 00	22 19	** **	1 34 4	7 11 113					
1	195	42.1	26.9	312	53.3	-24 05.6	94	58	20 43	21 48	** **	1 13 11	31 106					
2	210	42.1	27.3	327	17.5	-23 55.9	97	56	29	25	23 20	0 56 17	7 47 100					
3	225	42.0	27.7	341	41.8	46.2	97	54	17	21 07	22 28	42 20	8 01 96					
4	240	41.9	28.1	356	06.2	36.2	100	52	20 06	20 51	21 59	29 24	13 92					
5	255	41.8	+21 28.5	10	30.7	-23 26.1	101	50	19 56	20 38	21 37	0 18 27	8 24 89					
6	270	41.7	+21 28.9	24	55.4	-23 15.9	102	45	19 36	20 12	20 59	** ** *	8 46 83					
7	285	41.7	29.3	39	20.1	-23 05.5	104	40	20	19 52	32	** ** *	9 04 77					
8	300	41.6	29.7	53	45.0	-22 55.0	105	35	19 06	35	20 11	** ** *	19 73					
9	315	41.5	30.1	68	10.0	44.4	106	30	18 54	19 21	19 54	23 50 38	32 70					
10	330	41.4	30.5	82	35.1	33.6	108	20	34	18 58	27	31 44	9 54 64					
11	345	41.4	+21 30.9	97	00.3	-22 22.6	110	10 N	18 17	18 40	19 06	23 15 48	10 13 59					
12	0	41.3	+21 31.3	111	25.6	-22 11.6	110	0	18 01	18 23	18 49	23 00 53	10 30 56					
13	15	41.2	31.7	125	51.1	-22 00.3	113	10 S	17 45	18 07	33	22 45 57	10 47 52					
14	30	41.1	32.1	140	16.7	-21 49.0	113	20	28	17 52	19	28 63	11 06 46					
15	45	41.0	32.5	154	42.4	37.5	115	30	17 09	35	18 04	22 09 68	27 41					
16	60	41.0	32.9	169	08.2	25.9	116	35	16 58	25	17 56	21 58 72	39 38					
17	75	40.9	+21 33.3	183	34.1	-21 14.2	117	40	16 45	17 15	17 48	21 45 76	11 53 34					
18	90	40.8	+21 33.7	198	00.2	-21 02.4	118	45	16 30	17 03	17 39	21 30 81	12 10 29					
19	105	40.7	34.1	212	26.4	-20 50.4	120	50	11	16 48	29	11 87	30 23					
20	120	40.6	34.5	226	52.6	38.3	121	52	16 03	42	24	21 02 90	40 20					
21	135	40.6	34.9	241	19.1	26.1	122	54	15 53	35	20	20 52 94	12 50 18					
22	150	40.5	35.2	255	45.6	13.8	123	56	42	27	14	41 97	13 02 14					
23	165	40.4	35.6	270	12.2	-20 01.4	124	58	29	18	09	28 102	16 9					
24	180	40.3	+21 36.0	284	39.0	-19 48.8	126	60 S	15 14	16 08	17 02	20 12 109	13 33 2					

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 7 ^h 36 ^m 2		Mag: -3.9 PMG: 13 ^h 03 ^m		Mag: +0.3 PMG: 7 ^h 01 ^m		Mag: -2.3 PMG: 20 ^h 10 ^m		Mag: +0.2 PMG: 15 ^h 19 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	245	38.0	164	31.3	+23 51.4	254	36.6	-6 06.8	56	45.7	-2 14.6	129	34.7	+21 29.6
1	260	40.5	179	30.4	51.7	269	37.4	06.2	71	48.2	14.6	144	36.9	29.6
2	275	43.0	194	29.5	52.0	284	38.2	05.5	86	50.7	14.6	159	39.1	29.5
3	290	45.4	209	28.7	52.3	299	39.0	04.9	101	53.2	14.6	174	41.3	29.5
4	305	47.9	224	27.8	52.6	314	39.8	04.2	116	55.8	14.6	189	43.5	29.4
5	320	50.4	239	26.9	+23 52.8	329	40.6	-6 03.5	131	58.3	-2 14.6	204	45.7	+21 29.4
6	335	52.8	254	26.1	+23 53.1	344	41.4	-6 02.9	147	00.8	-2 14.6	219	47.9	+21 29.4
7	350	55.3	269	25.2	53.4	359	42.2	02.2	162	03.3	14.5	234	50.1	29.3
8	5	57.8	284	24.3	53.7	14	43.0	01.5	177	05.9	14.5	249	52.3	29.3
9	21	00.2	299	23.4	53.9	29	43.8	00.9	192	08.4	14.5	264	54.4	29.2
10	36	02.7	314	22.6	54.2	44	44.6	-6 00.2	207	10.9	14.5	279	56.6	29.2
11	51	05.1	329	21.7	+23 54.5	59	45.4	-5 59.5	222	13.4	-2 14.5	294	58.8	+21 29.2
12	66	07.6	344	20.8	+23 54.8	74	46.2	-5 58.9	237	15.9	-2 14.5	310	01.0	+21 29.1
13	81	10.1	359	19.9	55.0	89	47.1	58.2	252	18.5	14.5	325	03.2	29.1
14	96	12.5	14	19.1	55.3	104	47.9	57.6	267	21.0	14.5	340	05.4	29.0
15	111	15.0	29	18.2	55.6	119	48.7	56.9	282	23.5	14.4	355	07.6	29.0
16	126	17.5	44	17.3	55.8	134	49.5	56.2	297	26.0	14.4	10	09.8	28.9
17	141	19.9	59	16.5	+23 56.1	149	50.3	-5 55.6	312	28.6	-2 14.4	25	12.0	+21 28.9
18	156	22.4	74	15.6	+23 56.4	164	51.1	-5 54.9	327	31.1	-2 14.4	40	14.2	+21 28.9
19	171	24.9	89	14.7	56.6	179	51.9	54.2	342	33.6	14.4	55	16.4	28.8
20	186	27.3	104	13.8	56.9	194	52.7	53.6	357	36.1	14.4	70	18.6	28.8
21	201	29.8	119	13.0	57.1	209	53.5	52.9	12	38.6	14.4	85	20.8	28.7
22	216	32.3	134	12.1	57.4	224	54.3	52.2	27	41.2	14.3	100	23.0	28.7
23	231	34.7	149	11.2	57.7	239	55.1	51.6	42	43.7	14.3	115	25.2	28.7
24	246	37.2	164	10.3	+23 57.9	254	55.9	-5 50.9	57	46.2	-2 14.3	130	27.4	+21 28.6
Dif	—		-9	+3		+8	+7		+25		0	+22		0

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 : 59 ^m 5 12 ^h : 59 ^m 4 20 ^h : 59 ^m 2											
	PMG: 11 ^h 57 ^m 4				SD: 16 ^h 2 PMG: 5 ^h 13 ^m					R ^o : 52 ^m						
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R ^o	Hora	R ^o
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	m	h m m	m
0	180	40.3	+21	36.0	284	39.0	-19	48.8	60 N	** **	1 35	2 54	1 38	1	9 04	105
1	195	40.2		36.4	299	05.9	79	36.2	58	** **	2 06	3 11	24	6	17	100
2	210	40.2		36.8	313	32.9	80	23.4	56	0 34	29	25	13	10	27	96
3	225	40.1		37.2	328	00.0	81	-19 10.5	54	1 26	2 48	38	1 02	14	37	91
4	240	40.0		37.6	342	27.2	82	-18 57.6	52	1 55	3 03	49	0 53	17	45	88
5	255	39.9	+21	38.0	356	54.5	83	-18 44.5	50	2 17	3 16	3 58	0 45	20	9 53	85
6	270	39.8	+21	38.3	11	22.0	85	-18 31.3	45	2 56	3 42	4 18	0 27	26	10 09	79
7	285	39.8		38.7	25	49.6	86	18.0	40	3 23	4 03	35	13	30	21	75
8	300	39.7		39.1	40	17.2	86	-18 04.7	35	3 44	19	4 48	0 01	34	32	71
9	315	39.6		39.5	54	45.0	88	-17 51.2	30	4 01	33	5 00	** **	**	42	67
10	330	39.5		39.9	69	12.9	89	37.6	20	27	4 56	20	** **	**	10 58	61
11	345	39.4	+21	40.3	83	40.9	90	-17 24.0	10 N	4 48	5 15	5 38	** **	**	11 12	56
12	0	39.3	+21	40.6	98	09.1	92	-17 10.2	0	5 06	5 32	5 54	23 53	49	11 26	50
13	15	39.3		41.0	112	37.3	92	-16 56.4	10 S	21	5 47	6 10	42	54	39	46
14	30	39.2		41.4	127	05.6	93	42.5	20	36	6 03	27	31	58	11 52	41
15	45	39.1		41.8	141	34.1	95	28.5	30	51	20	46	17	65	12 08	35
16	60	39.0		42.2	156	02.6	95	14.4	35	5 58	30	6 57	10	68	17	32
17	75	38.9	+21	42.5	170	31.3	97	-16 00.3	40	6 07	6 40	7 10	23 01	72	12 27	28
18	90	38.8	+21	42.9	185	00.0	97	-15 46.0	45	6 16	6 52	7 25	22 51	77	12 39	24
19	105	38.8		43.3	199	28.9	99	31.7	50	26	7 07	44	38	83	12 53	18
20	120	38.7		43.7	213	57.8	99	17.3	52	31	13	7 53	32	86	13 00	15
21	135	38.6		44.0	228	26.9	101	-15 02.9	54	35	21	8 03	26	89	08	12
22	150	38.5		44.4	242	56.1	102	-14 48.4	56	41	29	14	18	93	16	9
23	165	38.4		44.8	257	25.3	102	33.8	58	47	37	27	10	97	25	5
24	180	38.3	+21	45.2	271	54.7	104	-14 19.1	60 S	6 53	7 48	8 41	22 01	101	13 35	1

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 7 ^h 32 ^m 3		Mag: -3.9 PMG: 13 ^h 04 ^m		Mag: +0.3 PMG: 7 ^h 00 ^m		Mag: -2.3 PMG: 20 ^h 06 ^m		Mag: +0.2 PMG: 15 ^h 16 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	246	37.2	164	10.3	+23	57.9	254	55.9	-5	50.9	57	46.2	-2	14.3	130	27.4	+21	28.6
1	261	39.6	179	09.5		58.2	269	56.7		50.3	72	48.7		14.3	145	29.5		28.6
2	276	42.1	194	08.6		58.4	284	57.5		49.6	87	51.2		14.3	160	31.7		28.5
3	291	44.6	209	07.7		58.7	299	58.3		48.9	102	53.7		14.3	175	33.9		28.5
4	306	47.0	224	06.8		58.9	314	59.1		48.3	117	56.3		14.3	190	36.1		28.4
5	321	49.5	239	05.9	+23	59.2	329	59.9	-5	47.6	132	58.8	-2	14.3	205	38.3	+21	28.4
6	336	52.0	254	05.1	+23	59.4	345	00.7	-5	46.9	148	01.3	-2	14.3	220	40.5	+21	28.4
7	351	54.4	269	04.2		59.7	0	01.6		46.3	163	03.8		14.2	235	42.7		28.3
8	6	56.9	284	03.3	+23	59.9	15	02.4		45.6	178	06.3		14.2	250	44.9		28.3
9	21	59.4	299	02.4	+24	00.2	30	03.2		44.9	193	08.9		14.2	265	47.1		28.2
10	37	01.8	314	01.6		00.4	45	04.0		44.3	208	11.4		14.2	280	49.3		28.2
11	52	04.3	329	00.7	+24	00.6	60	04.8	-5	43.6	223	13.9	-2	14.2	295	51.5	+21	28.2
12	67	06.8	343	59.8	+24	00.9	75	05.6	-5	42.9	238	16.4	-2	14.2	310	53.7	+21	28.1
13	82	09.2	358	58.9		01.1	90	06.4		42.3	253	18.9		14.2	325	55.9		28.1
14	97	11.7	13	58.1		01.4	105	07.2		41.6	268	21.4		14.2	340	58.0		28.0
15	112	14.1	28	57.2		01.6	120	08.0		41.0	283	23.9		14.2	356	00.2		28.0
16	127	16.6	43	56.3		01.8	135	08.8		40.3	298	26.5		14.1	11	02.4		27.9
17	142	19.1	58	55.4	+24	02.1	150	09.6	-5	39.6	313	29.0	-2	14.1	26	04.6	+21	27.9
18	157	21.5	73	54.5	+24	02.3	165	10.4	-5	39.0	328	31.5	-2	14.1	41	06.8	+21	27.9
19	172	24.0	88	53.7		02.5	180	11.2		38.3	343	34.0		14.1	56	09.0		27.8
20	187	26.5	103	52.8		02.8	195	12.0		37.6	358	36.5		14.1	71	11.2		27.8
21	202	28.9	118	51.9		03.0	210	12.9		37.0	13	39.0		14.1	86	13.4		27.7
22	217	31.4	133	51.0		03.2	225	13.7		36.3	28	41.5		14.1	101	15.6		27.7
23	232	33.9	148	50.1		03.5	240	14.5		35.6	43	44.1		14.1	116	17.8		27.6
24	247	36.3	163	49.3	+24	03.7	255	15.3	-5	35.0	58	46.6	-2	14.1	131	20.0	+21	27.6
Dif	—		-9		+2		+8		+7		+25		0		+22		0	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8			Edad: 21 ^d 6 PHE { 4 ^h : 59 ^m 1 12 ^h : 58 ^m 9 20 ^h : 58 ^m 7					Final del crepúsculo			Salida de Luna		Puesta de Luna		
	PMG: 11 ^h 57 ^m 5			SD: 16 ^h 1					Civil			Hora		R°		
	hG ☉	Dec		hG ☾	Dif	Dec	Dif									
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	m	m	
0	180	38.3	+21 45.2	271	54.7	-14 19.1		60 N	21 04	22 26	** **		1 39 0	10 49 99		
1	195	38.2	45.5	286	24.1 ¹⁰⁴	-14 04.4 ¹⁴⁷		58	20 47	21 53	** **		30 4	10 57 94		
2	210	38.2	45.9	300	53.7 ¹⁰⁶	-13 49.6 ¹⁴⁸		56	32	29	23 39		23 7	11 03 90		
3	225	38.1	46.3	315	23.3 ¹⁰⁶	34.7 ¹⁴⁹		54	19	21 10	22 34		16 11	08 88		
4	240	38.0	46.7	329	53.1 ¹⁰⁸	19.8 ¹⁴⁹		52	20 08	20 54	22 03		10 14	13 85		
5	255	37.9	+21 47.0	344	22.9 ¹⁰⁸	-13 04.8 ¹⁵⁰		50	19 58	20 41	21 41		1 05 16	11 18 82		
6	270	37.8	+21 47.4	358	52.8 ¹⁰⁹	-12 49.8 ¹⁵⁰		45	19 38	20 14	21 01		0 53 22	11 28 76		
7	285	37.7	47.8	13	22.8 ¹¹⁰	34.7 ¹⁵¹		40	21	19 53	20 34		43 26	36 71		
8	300	37.6	48.1	27	52.9 ¹¹¹	19.5 ¹⁵²		35	19 07	37	20 12		35 30	43 67		
9	315	37.6	48.5	42	23.1 ¹¹²	-12 04.4 ¹⁵¹		30	18 55	19 22	19 55		28 33	49 63		
10	330	37.5	48.9	56	53.3 ¹¹²	-11 49.1 ¹⁵³		20	35	18 59	28		15 39	11 59 58		
11	345	37.4	+21 49.2	71	23.7 ¹¹⁴	-11 33.8 ¹⁵³		10 N	18 17	18 40	19 07		0 03 44	12 08 52		
12	0	37.3	+21 49.6	85	54.1 ¹¹⁴	-11 18.5 ¹⁵³		0	18 01	18 23	18 49	** ** *		12 16 48		
13	15	37.2	50.0	100	24.6 ¹¹⁵	-11 03.1 ¹⁵⁴		10 S	17 45	18 08	34	** ** *		25 42		
14	30	37.1	50.3	114	55.2 ¹¹⁶	-10 47.6 ¹⁵⁵		20	28	17 52	19	** ** *		33 38		
15	45	37.0	50.7	129	25.9 ¹¹⁷	32.2 ¹⁵⁴		30	17 08	34	18 04	** ** *		43 32		
16	60	36.9	51.1	143	56.6 ¹¹⁷	16.7 ¹⁵⁵		35	16 57	25	17 56	** ** *		49 28		
17	75	36.8	+21 51.4	158	27.4 ¹¹⁸	-10 01.1 ¹⁵⁶		40	16 44	17 14	17 47	** ** *		12 55 25		
18	90	36.8	+21 51.8	172	58.3 ¹¹⁹	-9 45.5 ¹⁵⁶		45	16 28	17 02	17 38	** ** *		13 03 20		
19	105	36.7	52.1	187	29.3 ¹²⁰	29.9 ¹⁵⁶		50	10	16 47	28	** ** *		11 15		
20	120	36.6	52.5	202	00.3 ¹²⁰	-9 14.2 ¹⁵⁷		52	16 01	40	23	23 58 83		15 13		
21	135	36.5	52.9	216	31.4 ¹²¹	-8 58.5 ¹⁵⁷		54	15 51	33	18	55 85		20 10		
22	150	36.4	53.2	231	02.6 ¹²²	42.8 ¹⁵⁷		56	40	25	13	51 88		25 6		
23	165	36.3	53.6	245	33.9 ¹²³	27.0 ¹⁵⁸		58	27	16	07	47 92		30 4		
24	180	36.2	+21 53.9	260	05.2 ¹²³	-8 11.2 ¹⁵⁸		60 S	15 11	16 06	17 00	23 42 96		13 36 0		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 7 ^h 28 ^m 4		Mag: -3.9 PMG: 13 ^h 05 ^m			Mag: +0.3 PMG: 6 ^h 59 ^m			Mag: -2.3 PMG: 20 ^h 02 ^m			Mag: +0.2 PMG: 15 ^h 12 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	247	36.3	163	49.3	+24 03.7	255	15.3	-5 35.0	58	46.6	-2 14.1	131	20.0	+21 27.6		
1	262	38.8	178	48.4	03.9	270	16.1	34.3	73	49.1	14.1	146	22.1	27.6		
2	277	41.3	193	47.5	04.1	285	16.9	33.6	88	51.6	14.1	161	24.3	27.5		
3	292	43.7	208	46.6	04.4	300	17.7	33.0	103	54.1	14.0	176	26.5	27.5		
4	307	46.2	223	45.7	04.6	315	18.5	32.3	118	56.6	14.0	191	28.7	27.4		
5	322	48.6	238	44.9	+24 04.8	330	19.3	-5 31.6	133	59.1	-2 14.0	206	30.9	+21 27.4		
6	337	51.1	253	44.0	+24 05.0	345	20.1	-5 31.0	149	01.6	-2 14.0	221	33.1	+21 27.3		
7	352	53.6	268	43.1	05.2	0	20.9	30.3	164	04.1	14.0	236	35.3	27.3		
8	7	56.0	283	42.2	05.5	15	21.8	29.7	179	06.7	14.0	251	37.5	27.3		
9	22	58.5	298	41.3	05.7	30	22.6	29.0	194	09.2	14.0	266	39.7	27.2		
10	38	01.0	313	40.5	05.9	45	23.4	28.3	209	11.7	14.0	281	41.9	27.2		
11	53	03.4	328	39.6	+24 06.1	60	24.2	-5 27.7	224	14.2	-2 14.0	296	44.0	+21 27.1		
12	68	05.9	343	38.7	+24 06.3	75	25.0	-5 27.0	239	16.7	-2 14.0	311	46.2	+21 27.1		
13	83	08.4	358	37.8	06.5	90	25.8	26.3	254	19.2	14.0	326	48.4	27.1		
14	98	10.8	13	36.9	06.7	105	26.6	25.7	269	21.7	14.0	341	50.6	27.0		
15	113	13.3	28	36.1	06.9	120	27.4	25.0	284	24.2	14.0	356	52.8	27.0		
16	128	15.7	43	35.2	07.2	135	28.2	24.3	299	26.7	13.9	11	55.0	26.9		
17	143	18.2	58	34.3	+24 07.4	150	29.1	-5 23.7	314	29.2	-2 13.9	26	57.2	+21 26.9		
18	158	20.7	73	33.4	+24 07.6	165	29.9	-5 23.0	329	31.7	-2 13.9	41	59.4	+21 26.8		
19	173	23.1	88	32.5	07.8	180	30.7	22.3	344	34.2	13.9	57	01.6	26.8		
20	188	25.6	103	31.6	08.0	195	31.5	21.7	359	36.7	13.9	72	03.7	26.8		
21	203	28.1	118	30.8	08.2	210	32.3	21.0	14	39.3	13.9	87	05.9	26.7		
22	218	30.5	133	29.9	08.4	225	33.1	20.3	29	41.8	13.9	102	08.1	26.7		
23	233	33.0	148	29.0	08.6	240	33.9	19.7	44	44.3	13.9	117	10.3	26.6		
24	248	35.5	163	28.1	+24 08.8	255	34.7	-5 19.0	59	46.8	-2 13.9	132	12.5	+21 26.6		
Dif	—	—	-9	+2	+2	+8	+7		+25	0		+22		0		

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8 PMG: 11 ^h 57 ^m 7				Edad: 22 ^d 6 PHE { 4 ^h : 58 ^m 5 12 ^h : 58 ^m 3 20 ^h : 58 ^m 2 PMG: 6 ^h 53 ^m R°: 45 ^m												
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	36.2	+21	53.9	260	05.2	-8	11.2	60 N	** **	1 29	2 51	1 39	**	12 28	95	
1	195	36.1		54.3	274	36.6 ¹²⁴	-7	55.4 ¹⁵⁸	58	** **	2 02	3 08	34	3	31	91	
2	210	36.0		54.7	289	08.0 ¹²⁴		39.6 ¹⁵⁸	56	0 16	26	23	30	6	33	88	
3	225	36.0		55.0	303	39.5 ¹²⁵		23.7 ¹⁵⁹	54	1 21	2 45	36	27	9	36	84	
4	240	35.9		55.4	318	11.1 ¹²⁶	-7	07.8 ¹⁵⁹	52	1 52	3 01	47	24	11	38	81	
5	255	35.8	+21	55.7	332	42.7 ¹²⁶	-6	51.9 ¹⁵⁹	50	2 14	3 14	3 57	1 21	14	12 40	78	
6	270	35.7	+21	56.1	347	14.4 ¹²⁷	-6	35.9 ¹⁶⁰	45	2 54	3 41	4 17	1 15	19	12 44	73	
7	285	35.6		56.4	1	46.1 ¹²⁷		20.0 ¹⁵⁹	40	3 21	4 02	34	09	24	47	69	
8	300	35.5		56.8	16	17.9 ¹²⁸	-6	04.0 ¹⁶⁰	35	3 43	18	4 48	05	27	50	65	
9	315	35.4		57.1	30	49.7 ¹²⁸	-5	48.0 ¹⁶⁰	30	4 00	33	5 00	1 01	30	52	62	
10	330	35.3		57.5	45	21.6 ¹²⁹		32.0 ¹⁶⁰	20	27	4 56	20	0 54	36	12 57	55	
11	345	35.2	+21	57.8	59	53.6 ¹³⁰	-5	16.0 ¹⁶⁰	10 N	4 48	5 15	5 38	0 47	42	13 00	51	
12	0	35.1	+21	58.2	74	25.5 ¹²⁹	-5	00.0 ¹⁶⁰	0	5 06	5 32	5 54	0 42	46	13 04	45	
13	15	35.0		58.5	88	57.6 ¹³¹	-4	43.9 ¹⁶¹	10 S	22	5 48	6 10	36	51	07	41	
14	30	34.9		58.9	103	29.7 ¹³¹		27.9 ¹⁶⁰	20	37	6 04	27	29	57	11	35	
15	45	34.8		59.2	118	01.8 ¹³¹	-4	11.8 ¹⁶¹	30	5 52	21	47	22	62	15	30	
16	60	34.8		59.6	132	34.0 ¹³²	-3	55.7 ¹⁶¹	35	6 00	31	6 59	18	66	17	27	
17	75	34.7	+21	59.9	147	06.2 ¹³²	-3	39.7 ¹⁶⁰	40	6 08	6 42	7 12	0 13	70	13 20	22	
18	90	34.6	+22	00.3	161	38.5 ¹³³	-3	23.6 ¹⁶¹	45	6 17	6 54	7 27	0 08	74	13 23	18	
19	105	34.5		00.6	176	10.8 ¹³³	-3	07.5 ¹⁶¹	50	28	7 09	46	0 01	80	26	14	
20	120	34.4		01.0	190	43.1 ¹³³	-2	51.4 ¹⁶¹	52	32	15	7 55	** **	**	28	11	
21	135	34.3		01.3	205	15.5 ¹³⁴		35.3 ¹⁶¹	54	37	23	8 05	** **	**	30	8	
22	150	34.2		01.6	219	47.9 ¹³⁴		19.2 ¹⁶¹	56	43	31	16	** **	**	31	6	
23	165	34.1		02.0	234	20.3 ¹³⁴	-2	03.2 ¹⁶⁰	58	49	40	30	** **	**	34	2	
24	180	34.0	+22	02.3	248	52.8 ¹³⁵	-1	47.1 ¹⁶¹	60 S	6 55	7 50	8 45	** **	**	13 36	**	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG 7 ^h 24 ^m 4		Mag: -3.8 PMG: 13 ^h 07 ^m			Mag: +0.3 PMG: 6 ^h 57 ^m			Mag: -2.3 PMG: 19 ^h 58 ^m			Mag: +0.2 PMG: 15 ^h 09 ^m					
	hG ♈		hG ♀ Dec			hG ♂ Dec			hG ♃ Dec			hG ♄ Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	248	35.5	163	28.1	+24	08.8	255	34.7	-5	19.0	59	46.8	-2	13.9	132	12.5	
1	263	37.9	178	27.2		09.0	270	35.5		18.3	74	49.3		13.9	147	14.7	
2	278	40.4	193	26.3		09.2	285	36.4		17.7	89	51.8		13.9	162	16.9	
3	293	42.9	208	25.5		09.4	300	37.2		17.0	104	54.3		13.9	177	19.1	
4	308	45.3	223	24.6		09.5	315	38.0		16.3	119	56.8		13.9	192	21.3	
5	323	47.8	238	23.7	+24	09.7	330	38.8	-5	15.7	134	59.3	-2	13.9	207	23.4	
6	338	50.2	253	22.8	+24	09.9	345	39.6	-5	15.0	150	01.8	-2	13.9	222	25.6	
7	353	52.7	268	21.9		10.1	0	40.4		14.4	165	04.3		13.9	237	27.8	
8	8	55.2	283	21.0		10.3	15	41.2		13.7	180	06.8		13.9	252	30.0	
9	23	57.6	298	20.1		10.5	30	42.1		13.0	195	09.3		13.8	267	32.2	
10	39	00.1	313	19.3		10.7	45	42.9		12.4	210	11.8		13.8	282	34.4	
11	54	02.6	328	18.4	+24	10.9	60	43.7	-5	11.7	225	14.3	-2	13.8	297	36.6	
12	69	05.0	343	17.5	+24	11.0	75	44.5	-5	11.0	240	16.8	-2	13.8	312	38.7	
13	84	07.5	358	16.6		11.2	90	45.3		10.4	255	19.3		13.8	327	40.9	
14	99	10.0	13	15.7		11.4	105	46.1		09.7	270	21.8		13.8	342	43.1	
15	114	12.4	28	14.8		11.6	120	46.9		09.0	285	24.3		13.8	357	45.3	
16	129	14.9	43	14.0		11.8	135	47.7		08.4	300	26.8		13.8	12	47.5	
17	144	17.3	58	13.1	+24	11.9	150	48.6	-5	07.7	315	29.3	-2	13.8	27	49.7	
18	159	19.8	73	12.2	+24	12.1	165	49.4	-5	07.0	330	31.8	-2	13.8	42	51.9	
19	174	22.3	88	11.3		12.3	180	50.2		06.4	345	34.3		13.8	57	54.1	
20	189	24.7	103	10.4		12.5	195	51.0		05.7	0	36.8		13.8	72	56.2	
21	204	27.2	118	09.5		12.6	210	51.8		05.0	15	39.3		13.8	87	58.4	
22	219	29.7	133	08.6		12.8	225	52.6		04.4	30	41.8		13.8	103	00.6	
23	234	32.1	148	07.8		13.0	240	53.5		03.7	45	44.3		13.8	118	02.8	
24	249	34.6	163	06.9	+24	13.1	255	54.3	-5	03.0	60	46.8	-2	13.8	133	05.0	
Dif	—		-9 +2			+8 +7			+25 0			+22 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 8			Edad: 23 ^d 6 PHE { 4 ^h : 58'0 12 ^h : 57'8 20 ^h : 57'6 SD: 15'8 PMG: 7 ^h 38 ^m R°: 45 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	m	h m	m
0	180	34.0	+22	02.3	248	52.8	-1	47.1	60 N	21 08	22 32	** **	1 38	**	14 03 93
1	195	33.9		02.7	263	25.3 ¹³⁵		31.0 ¹⁶¹	58	20 50	21 57	** **	37	3	02 89
2	210	33.8		03.0	277	57.8 ¹³⁵	-1	14.9 ¹⁶¹	56	35	33	** **	36	6	01 86
3	225	33.7		03.3	292	30.4 ¹³⁶	-0	58.9 ¹⁶⁰	54	22	21 13	22 40	36	8	14 00 83
4	240	33.6		03.7	307	03.0 ¹³⁶		42.8 ¹⁶¹	52	10	20 57	22 07	35	11	13 59 80
5	255	33.5	+22	04.0	321	35.6 ¹³⁶	-0	26.8 ¹⁶⁰	50	20 00	20 43	21 44	1 35	13	13 58 78
6	270	33.4	+22	04.4	336	08.2 ¹³⁶	-0	10.7 ¹⁶¹	45	19 40	20 16	21 04	1 34	18	13 57 72
7	285	33.3		04.7	350	40.9 ¹³⁷	+0	05.3 ¹⁶⁰	40	23	19 55	20 35	33	22	56 67
8	300	33.2		05.0	5	13.6 ¹³⁷		21.3 ¹⁶⁰	35	19 09	38	20 14	32	26	55 63
9	315	33.1		05.4	19	46.3 ¹³⁷		37.3 ¹⁶⁰	30	18 56	24	19 56	31	30	54 60
10	330	33.0		05.7	34	19.0 ¹³⁷	+0	53.3 ¹⁶⁰	20	36	19 00	29	30	35	52 55
11	345	33.0	+22	06.0	48	51.8 ¹³⁸	+1	09.3 ¹⁶⁰	10 N	18 18	18 41	19 08	1 29	40	13 51 49
12	0	32.9	+22	06.4	63	24.5 ¹³⁷	+1	25.2 ¹⁵⁹	0	18 01	18 24	18 50	1 28	45	13 49 45
13	15	32.8		06.7	77	57.3 ¹³⁸		41.2 ¹⁶⁰	10 S	17 45	18 08	34	27	49	48 40
14	30	32.7		07.0	92	30.1 ¹³⁸	+1	57.1 ¹⁵⁹	20	28	17 51	19	26	54	46 35
15	45	32.6		07.4	107	02.9 ¹³⁸	+2	13.0 ¹⁵⁹	30	17 08	34	18 03	24	61	45 29
16	60	32.5		07.7	121	35.7 ¹³⁸		28.9 ¹⁵⁹	35	16 56	24	17 55	24	64	44 26
17	75	32.4	+22	08.0	136	08.5 ¹³⁸	+2	44.7 ¹⁵⁸	40	16 43	17 13	17 47	1 23	68	13 42 23
18	90	32.3	+22	08.4	150	41.4 ¹³⁹	+3	00.6 ¹⁵⁹	45	16 27	17 01	17 37	1 22	73	13 41 19
19	105	32.2		08.7	165	14.2 ¹³⁸		16.4 ¹⁵⁸	50	16 08	16 46	27	21	78	40 13
20	120	32.1		09.0	179	47.0 ¹³⁸		32.1 ¹⁵⁷	52	15 59	39	22	21	80	39 11
21	135	32.0		09.3	194	19.9 ¹³⁹	+3	47.9 ¹⁵⁸	54	49	32	17	20	83	38 9
22	150	31.9		09.7	208	52.7 ¹³⁸	+4	03.6 ¹⁵⁷	56	38	23	11	19	87	37 6
23	165	31.8		10.0	223	25.6 ¹³⁹		19.3 ¹⁵⁷	58	24	14	17 05	19	89	36 3
24	180	31.7	+22	10.3	237	58.4 ¹³⁸	+4	35.0 ¹⁵⁷	60 S	15 09	16 03	16 59	1 18	94	13 35 0

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 7 ^h 20 ^m 5		Mag: -3.8 PMG: 13 ^h 08 ^m		Mag: +0.3 PMG: 6 ^h 56 ^m		Mag: -2.3 PMG: 19 ^h 54 ^m		Mag: +0.2 PMG: 15 ^h 05 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	249	34.6	163	06.9	+24	13.1	255	54.3	-5	03.0	60	46.8	-2	13.8	133	05.0	+21	25.5
1	264	37.1	178	06.0		13.3	270	55.1		02.4	75	49.3		13.8	148	07.2		25.5
2	279	39.5	193	05.1		13.5	285	55.9		01.7	90	51.8		13.8	163	09.4		25.5
3	294	42.0	208	04.2		13.6	300	56.7		01.0	105	54.3		13.8	178	11.5		25.4
4	309	44.5	223	03.3		13.8	315	57.5	-5	00.4	120	56.8		13.8	193	13.7		25.4
5	324	46.9	238	02.4	+24	14.0	330	58.3	-4	59.7	135	59.3	-2	13.8	208	15.9	+21	25.3
6	339	49.4	253	01.5	+24	14.1	345	59.2	-4	59.1	151	01.8	-2	13.8	223	18.1	+21	25.3
7	354	51.8	268	00.7		14.3	1	00.0		58.4	166	04.3		13.8	238	20.3		25.2
8	9	54.3	282	59.8		14.4	16	00.8		57.7	181	06.8		13.8	253	22.5		25.2
9	24	56.8	297	58.9		14.6	31	01.6		57.1	196	09.3		13.8	268	24.7		25.1
10	39	59.2	312	58.0		14.7	46	02.4		56.4	211	11.8		13.8	283	26.8		25.1
11	55	01.7	327	57.1	+24	14.9	61	03.2	-4	55.7	226	14.3	-2	13.8	298	29.0	+21	25.1
12	70	04.2	342	56.2	+24	15.1	76	04.1	-4	55.1	241	16.8	-2	13.8	313	31.2	+21	25.0
13	85	06.6	357	55.3		15.2	91	04.9		54.4	256	19.3		13.8	328	33.4		25.0
14	100	09.1	12	54.4		15.4	106	05.7		53.7	271	21.8		13.8	343	35.6		24.9
15	115	11.6	27	53.6		15.5	121	06.5		53.1	286	24.3		13.8	358	37.8		24.9
16	130	14.0	42	52.7		15.7	136	07.3		52.4	301	26.7		13.8	13	39.9		24.8
17	145	16.5	57	51.8	+24	15.8	151	08.2	-4	51.7	316	29.2	-2	13.8	28	42.1	+21	24.8
18	160	19.0	72	50.9	+24	15.9	166	09.0	-4	51.1	331	31.7	-2	13.8	43	44.3	+21	24.8
19	175	21.4	87	50.0		16.1	181	09.8		50.4	346	34.2		13.8	58	46.5		24.7
20	190	23.9	102	49.1		16.2	196	10.6		49.7	1	36.7		13.8	73	48.7		24.7
21	205	26.3	117	48.2		16.4	211	11.4		49.1	16	39.2		13.7	88	50.9		24.6
22	220	28.8	132	47.3		16.5	226	12.2		48.4	31	41.7		13.7	103	53.0		24.6
23	235	31.3	147	46.4		16.7	241	13.1		47.7	46	44.2		13.7	118	55.2		24.5
24	250	33.7	162	45.6	+24	16.8	256	13.9	-4	47.1	61	46.7	-2	13.7	133	57.4	+21	24.5
Dif	—		-9		+2		+8		+7		+25		0		+22		0	

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8				Edad: 24 ^d 6 PHE { 4 ^h : 57 ^m 4 12 ^h : 57 ^m 2 20 ^h : 57 ^m 1 SD: 15 ^h 7 PMG: 8 ^h 23 ^m R°: 46 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	180	31.7	+22	10.3	237	58.4	+4	35.0	60 N	** **	1 23	2 48	1 37	0	15 36	94		
1	195	31.6		10.7	252	31.3 ¹³⁹	+4	50.6 ¹⁵⁶	58	** **	1 58	3 06	40	3	31	90		
2	210	31.5		11.0	267	04.1 ¹³⁸	+5	06.2 ¹⁵⁶	56	** **	2 23	21	42	6	27	86		
3	225	31.4		11.3	281	37.0 ¹³⁹		21.7 ¹⁵⁵	54	1 16	42	34	44	9	23	83		
4	240	31.3		11.6	296	09.8 ¹³⁸		37.3 ¹⁵⁶	52	1 48	2 58	45	46	12	19	80		
5	255	31.2	+22	11.9	310	42.7 ¹³⁹	+5	52.8 ¹⁵⁵	50	2 11	3 12	3 55	1 48	14	15 16	77		
6	270	31.1	+22	12.3	325	15.5 ¹³⁸	+6	08.2 ¹⁵⁴	45	2 52	3 40	4 16	1 52	19	15 09	72		
7	285	31.0		12.6	339	48.4 ¹³⁹		23.6 ¹⁵⁴	40	3 20	4 01	33	55	23	15 03	68		
8	300	30.9		12.9	354	21.2 ¹³⁸		39.0 ¹⁵⁴	35	42	18	47	1 58	27	14 58	64		
9	315	30.8		13.2	8	54.0 ¹³⁸	+6	54.3 ¹⁵³	30	3 59	32	4 59	2 01	30	54	61		
10	330	30.7		13.6	23	26.8 ¹³⁸	+7	09.6 ¹⁵³	20	4 27	4 56	5 20	05	35	47	55		
11	345	30.6	+22	13.9	37	59.6 ¹³⁸	+7	24.9 ¹⁵³	10 N	4 48	5 15	5 38	2 09	40	14 40	50		
12	0	30.5	+22	14.2	52	32.3 ¹³⁷	+7	40.1 ¹⁵²	0	5 06	5 32	5 54	2 13	45	14 34	46		
13	15	30.4		14.5	67	05.1 ¹³⁸	+7	55.2 ¹⁵¹	10 S	22	5 48	6 11	16	50	28	41		
14	30	30.3		14.8	81	37.8 ¹³⁷	+8	10.4 ¹⁵²	20	37	6 04	28	20	55	21	37		
15	45	30.2		15.1	96	10.6 ¹³⁸		25.4 ¹⁵⁰	30	5 53	22	6 48	25	61	14	31		
16	60	30.1		15.5	110	43.3 ¹³⁷		40.4 ¹⁵⁰	35	6 01	32	7 00	28	64	10	28		
17	75	30.0	+22	15.8	125	16.0 ¹³⁷	+8	55.4 ¹⁵⁰	40	6 09	6 43	7 13	2 31	67	14 05	24		
18	90	29.9	+22	16.1	139	48.6 ¹³⁶	+9	10.3 ¹⁴⁹	45	6 19	6 56	7 29	2 35	72	14 00	20		
19	105	29.8		16.4	154	21.3 ¹³⁷		25.2 ¹⁴⁹	50	29	7 10	48	39	77	13 53	15		
20	120	29.7		16.7	168	53.9 ¹³⁶		40.0 ¹⁴⁸	52	34	17	7 57	41	80	50	13		
21	135	29.6		17.0	183	26.5 ¹³⁶	+9	54.8 ¹⁴⁸	54	39	25	8 07	43	83	47	10		
22	150	29.5		17.3	197	59.1 ¹³⁶	+10	09.5 ¹⁴⁷	56	45	33	19	46	86	43	7		
23	165	29.4		17.6	212	31.7 ¹³⁶		24.1 ¹⁴⁶	58	51	42	32	48	90	39	4		
24	180	29.3	+22	17.9	227	04.2 ¹³⁵	+10	38.7 ¹⁴⁶	60 S	6 58	7 53	8 48	2 52	93	13 35	0		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 7 ^h 16 ^m 6		Mag: -3.8 PMG: 13 ^h 10 ^m				Mag: +0.3 PMG: 6 ^h 55 ^m				Mag: -2.3 PMG: 19 ^h 50 ^m				Mag: +0.2 PMG: 15 ^h 02 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	250	33.7	162	45.6	+24	16.8	256	13.9	-4	47.1	61	46.7	-2	13.7	133	57.4	+21	24.5
1	265	36.2	177	44.7		16.9	271	14.7		46.4	76	49.2		13.7	148	59.6		24.4
2	280	38.7	192	43.8		17.1	286	15.5		45.7	91	51.7		13.7	164	01.8		24.4
3	295	41.1	207	42.9		17.2	301	16.3		45.1	106	54.2		13.7	179	04.0		24.4
4	310	43.6	222	42.0		17.3	316	17.2		44.4	121	56.7		13.8	194	06.1		24.3
5	325	46.1	237	41.1	+24	17.5	331	18.0	-4	43.7	136	59.1	-2	13.8	209	08.3	+21	24.3
6	340	48.5	252	40.2	+24	17.6	346	18.8	-4	43.1	152	01.6	-2	13.8	224	10.5	+21	24.2
7	355	51.0	267	39.3		17.7	1	19.6		42.4	167	04.1		13.8	239	12.7		24.2
8	10	53.4	282	38.4		17.9	16	20.4		41.7	182	06.6		13.8	254	14.9		24.1
9	25	55.9	297	37.6		18.0	31	21.3		41.1	197	09.1		13.8	269	17.1		24.1
10	40	58.4	312	36.7		18.1	46	22.1		40.4	212	11.6		13.8	284	19.2		24.0
11	56	00.8	327	35.8	+24	18.2	61	22.9	-4	39.8	227	14.1	-2	13.8	299	21.4	+21	24.0
12	71	03.3	342	34.9	+24	18.4	76	23.7	-4	39.1	242	16.6	-2	13.8	314	23.6	+21	24.0
13	86	05.8	357	34.0		18.5	91	24.5		38.4	257	19.1		13.8	329	25.8		23.9
14	101	08.2	12	33.1		18.6	106	25.4		37.8	272	21.5		13.8	344	28.0		23.9
15	116	10.7	27	32.2		18.7	121	26.2		37.1	287	24.0		13.8	359	30.2		23.8
16	131	13.2	42	31.3		18.8	136	27.0		36.4	302	26.5		13.8	14	32.3		23.8
17	146	15.6	57	30.4	+24	19.0	151	27.8	-4	35.8	317	29.0	-2	13.8	29	34.5	+21	23.7
18	161	18.1	72	29.5	+24	19.1	166	28.6	-4	35.1	332	31.5	-2	13.8	44	36.7	+21	23.7
19	176	20.6	87	28.6		19.2	181	29.5		34.4	347	34.0		13.8	59	38.9		23.6
20	191	23.0	102	27.8		19.3	196	30.3		33.8	2	36.5		13.8	74	41.1		23.6
21	206	25.5	117	26.9		19.4	211	31.1		33.1	17	38.9		13.8	89	43.2		23.6
22	221	27.9	132	26.0		19.5	226	31.9		32.4	32	41.4		13.8	104	45.4		23.5
23	236	30.4	147	25.1		19.6	241	32.7		31.8	47	43.9		13.8	119	47.6		23.5
24	251	32.9	162	24.2	+24	19.7	256	33.6	-4	31.1	62	46.4	-2	13.8	134	49.8	+21	23.4
Dif	—		-9		+1		+8		+7		+25		0		+22		0	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 25 ^d 6 PHE { 4 ^h : 56 ^h /9 12 ^h : 56 ^h /7 20 ^h : 56 ^h /5										
	PMG: 11 ^h 58 ^m 1			SD: 15/5 PMG: 9 ^h 09 ^m R°: 46 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	180	29.3	+22 17.9	227	04.2	+10 38.7		60 N	21 11	22 39	** **	1 37 0	17 10 97	
1	195	29.2		241	36.7 ¹³⁵	+10 53.3 ¹⁴⁶		58	20 53	22 02	** **	43 4	17 01 91	
2	210	29.0	18.6	256	09.2 ¹³⁵	+11 07.8 ¹⁴⁵		56	37	21 36	** **	48 8	16 53 87	
3	225	28.9	18.9	270	41.6 ¹³⁴	22.2 ¹⁴⁴		54	24	16	22 46	53 11	46 83	
4	240	28.8	19.2	285	14.1 ¹³⁵	36.5 ¹⁴³		52	13	21 00	22 11	1 58 13	39 81	
5	255	28.7	+22 19.5	299	46.4 ¹³³	+11 50.8 ¹⁴³		50	20 02	20 46	21 47	2 02 16	16 33 78	
6	270	28.6	+22 19.8	314	18.8 ¹³⁴	+12 05.1 ¹⁴³		45	19 41	20 18	21 06	2 11 21	16 21 72	
7	285	28.5	20.1	328	51.1 ¹³³	19.2 ¹⁴¹		40	24	19 56	20 37	18 26	11 68	
8	300	28.4	20.4	343	23.4 ¹³³	33.3 ¹⁴¹		35	19 10	39	20 15	25 29	16 02 64	
9	315	28.3	20.7	357	55.7 ¹³³	+12 47.4 ¹⁴¹		30	18 58	25	19 58	31 32	15 55 61	
10	330	28.2	21.0	12	27.9 ¹³²	+13 01.3 ¹³⁹		20	37	19 01	30	40 38	42 55	
11	345	28.1	+22 21.3	27	00.1 ¹³²	+13 15.2 ¹³⁹		10 N	18 19	18 41	19 08	2 49 42	15 30 52	
12	0	28.0	+22 21.6	41	32.2 ¹³¹	+13 29.1 ¹³⁹		0	18 02	18 24	18 50	2 58 46	15 20 47	
13	15	27.9	21.9	56	04.3 ¹³¹	42.8 ¹³⁷		10 S	17 45	18 08	34	3 06 51	15 09 43	
14	30	27.8	22.2	70	36.4 ¹³¹	+13 56.5 ¹³⁷		20	28	17 51	19	15 55	14 58 38	
15	45	27.7	22.5	85	08.5 ¹³¹	+14 10.1 ¹³⁶		30	17 07	34	18 03	26 60	45 34	
16	60	27.6	22.8	99	40.4 ¹²⁹	23.7 ¹³⁶		35	16 56	24	17 55	32 64	38 30	
17	75	27.5	+22 23.1	114	12.4 ¹³⁰	+14 37.2 ¹³⁵		40	16 42	17 12	17 46	3 38 68	14 29 27	
18	90	27.4	+22 23.4	128	44.3 ¹²⁹	+14 50.5 ¹³³		45	16 26	17 00	17 37	3 47 72	14 20 22	
19	105	27.3	23.7	143	16.2 ¹²⁹	+15 03.9 ¹³⁴		50	16 07	16 45	26	3 56 78	08 18	
20	120	27.2	24.0	157	48.0 ¹²⁸	17.1 ¹³²		52	15 58	38	21	4 01 80	14 03 15	
21	135	27.1	24.3	172	19.8 ¹²⁸	30.3 ¹³²		54	47	30	16	06 83	13 57 12	
22	150	26.9	24.6	186	51.5 ¹²⁷	43.3 ¹³⁰		56	36	22	10	12 86	50 9	
23	165	26.8	24.9	201	23.2 ¹²⁷	+15 56.3 ¹³⁰		58	22	12	17 04	18 91	43 5	
24	180	26.7	+22 25.2	215	54.9 ¹²⁷	+16 09.3 ¹³⁰		60 S	15 06	16 02	16 57	4 25 96	13 35 0	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 7 ^h 12 ^m 6		Mag: -3.8 PMG: 13 ^h 11 ^m			Mag: +0.3 PMG: 6 ^h 53 ^m			Mag: -2.2 PMG: 19 ^h 46 ^m			Mag: +0.2 PMG: 14 ^h 59 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	251	32.9	162	24.2	+24 19.7	256	33.6	-4 31.1	62	46.4	-2 13.8	134	49.8	+21 23.4
1	266	35.3	177	23.3	19.8	271	34.4	30.4	77	48.9	13.8	149	52.0	23.4
2	281	37.8	192	22.4	20.0	286	35.2	29.8	92	51.4	13.8	164	54.1	23.3
3	296	40.3	207	21.5	20.1	301	36.0	29.1	107	53.8	13.8	179	56.3	23.3
4	311	42.7	222	20.6	20.2	316	36.9	28.4	122	56.3	13.8	194	58.5	23.2
5	326	45.2	237	19.7	+24 20.3	331	37.7	-4 27.8	137	58.8	-2 13.8	210	00.7	+21 23.2
6	341	47.7	252	18.8	+24 20.4	346	38.5	-4 27.1	153	01.3	-2 13.8	225	02.9	+21 23.1
7	356	50.1	267	18.0	20.5	1	39.3	26.4	168	03.8	13.8	240	05.0	23.1
8	11	52.6	282	17.1	20.6	16	40.2	25.8	183	06.3	13.8	255	07.2	23.1
9	26	55.1	297	16.2	20.7	31	41.0	25.1	198	08.7	13.8	270	09.4	23.0
10	41	57.5	312	15.3	20.8	46	41.8	24.4	213	11.2	13.8	285	11.6	23.0
11	57	00.0	327	14.4	+24 20.9	61	42.6	-4 23.8	228	13.7	-2 13.8	300	13.8	+21 22.9
12	72	02.4	342	13.5	+24 20.9	76	43.4	-4 23.1	243	16.2	-2 13.8	315	15.9	+21 22.9
13	87	04.9	357	12.6	21.0	91	44.3	22.4	258	18.7	13.8	330	18.1	22.8
14	102	07.4	12	11.7	21.1	106	45.1	21.8	273	21.2	13.8	345	20.3	22.8
15	117	09.8	27	10.8	21.2	121	45.9	21.1	288	23.6	13.8	0	22.5	22.7
16	132	12.3	42	09.9	21.3	136	46.7	20.4	303	26.1	13.8	15	24.7	22.7
17	147	14.8	57	09.0	+24 21.4	151	47.6	-4 19.8	318	28.6	-2 13.9	30	26.8	+21 22.7
18	162	17.2	72	08.2	+24 21.5	166	48.4	-4 19.1	333	31.1	-2 13.9	45	29.0	+21 22.6
19	177	19.7	87	07.3	21.6	181	49.2	18.5	348	33.5	13.9	60	31.2	22.6
20	192	22.2	102	06.4	21.6	196	50.0	17.8	3	36.0	13.9	75	33.4	22.5
21	207	24.6	117	05.5	21.7	211	50.9	17.1	18	38.5	13.9	90	35.6	22.5
22	222	27.1	132	04.6	21.8	226	51.7	16.5	33	41.0	13.9	105	37.7	22.4
23	237	29.5	147	03.7	21.9	241	52.5	15.8	48	43.5	13.9	120	39.9	22.4
24	252	32.0	162	02.8	+24 22.0	256	53.3	-4 15.1	63	45.9	-2 13.9	135	42.1	+21 22.3
Dif	—		-9	+1		+8	+7		+25	0		+22		

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15'8 PMG: 11 ^h 58 ^m 3				Edad: 26 ^d 6 PHE { SD: 15'4 PMG: 9 ^h 55 ^m R°: 49 ^m 4 ^h : 56'4 12 ^h : 56'2 20 ^h : 56'0													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	180	26.7	+22	25.2	215	54.9	+16	09.3	60 N	** **	1 17	2 45	1 37	2	18 47	98		
1	195	26.6		25.5	230	26.5 ¹²⁶		22.1 ¹²⁸	58	** **	1 55	3 04	47	7	32	92		
2	210	26.5		25.8	244	58.0 ¹²⁵		34.8 ¹²⁷	56	** **	2 20	19	1 56	11	20	86		
3	225	26.4		26.1	259	29.5 ¹²⁵	+16	47.5 ¹²⁷	54	1 11	40	32	2 04	15	09	83		
4	240	26.3		26.3	274	01.0 ¹²⁵	+17	00.1 ¹²⁶	52	1 45	2 57	44	11	18	18 00	79		
5	255	26.2	+22	26.6	288	32.4 ¹²⁴	+17	12.6 ¹²⁵	50	2 09	3 11	3 54	2 18	20	17 51	77		
6	270	26.1	+22	26.9	303	03.8 ¹²⁴	+17	25.0 ¹²⁴	45	2 50	3 38	4 15	2 32	25	17 33	72		
7	285	26.0		27.2	317	35.1 ¹²³		37.3 ¹²³	40	3 19	4 00	32	44	29	19	67		
8	300	25.9		27.5	332	06.4 ¹²³	+17	49.5 ¹²²	35	41	17	46	2 54	32	17 06	64		
9	315	25.8		27.8	346	37.6 ¹²²	+18	01.7 ¹²²	30	3 59	32	4 59	3 03	35	16 56	61		
10	330	25.7		28.1	1	08.8 ¹²²		13.7 ¹²⁰	20	4 27	4 55	5 20	18	40	37	57		
11	345	25.5	+22	28.4	15	39.9 ¹²¹	+18	25.7 ¹²⁰	10 N	4 48	5 15	5 38	3 31	45	16 22	52		
12	0	25.4	+22	28.6	30	10.9 ¹²⁰	+18	37.5 ¹¹⁸	0	5 06	5 32	5 55	3 44	48	16 07	49		
13	15	25.3		28.9	44	41.9 ¹²⁰	+18	49.3 ¹¹⁸	10 S	22	5 49	6 11	3 57	52	15 52	46		
14	30	25.2		29.2	59	12.9 ¹²⁰	+19	00.9 ¹¹⁶	20	38	6 05	29	4 10	57	36	42		
15	45	25.1		29.5	73	43.8 ¹¹⁹		12.5 ¹¹⁶	30	5 53	23	6 49	26	62	19	37		
16	60	25.0		29.8	88	14.7 ¹¹⁹		24.0 ¹¹⁵	35	6 02	33	7 01	36	64	15 08	35		
17	75	24.9	+22	30.1	102	45.5 ¹¹⁸	+19	35.3 ¹¹³	40	6 10	6 44	7 14	4 46	68	14 56	32		
18	90	24.8	+22	30.3	117	16.2 ¹¹⁷	+19	46.6 ¹¹³	45	6 20	6 57	7 30	4 59	72	14 42	28		
19	105	24.7		30.6	131	46.9 ¹¹⁷	+19	57.8 ¹¹²	50	31	7 12	50	5 14	78	26	22		
20	120	24.6		30.9	146	17.5 ¹¹⁶	+20	08.8 ¹¹⁰	52	36	19	7 59	21	81	18	20		
21	135	24.5		31.2	160	48.1 ¹¹⁶		19.8 ¹¹⁰	54	41	27	8 10	29	84	14 09	17		
22	150	24.3		31.5	175	18.7 ¹¹⁶		30.7 ¹⁰⁹	56	47	35	21	38	88	13 59	13		
23	165	24.2		31.7	189	49.1 ¹¹⁴		41.4 ¹⁰⁷	58	6 53	45	35	5 49	92	48	9		
24	180	24.1	+22	32.0	204	19.6 ¹¹⁵	+20	52.1 ¹⁰⁷	60 S	7 00	7 56	8 51	6 01	98	13 35	3		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 7 ^h 08 ^m 7		Mag: -3.8 PMG: 13 ^h 13 ^m		Mag: +0.3 PMG: 6 ^h 52 ^m		Mag: -2.2 PMG: 19 ^h 42 ^m		Mag: +0.2 PMG: 14 ^h 55 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	252	32.0	162	02.8	+24	22.0	256	53.3	-4	15.1
1	267	34.5	177	01.9		22.0	271	54.2		14.5
2	282	36.9	192	01.0		22.1	286	55.0		13.8
3	297	39.4	207	00.1		22.2	301	55.8		13.1
4	312	41.9	221	59.2		22.3	316	56.6		12.5
5	327	44.3	236	58.3	+24	22.3	331	57.5	-4	11.8
6	342	46.8	251	57.4	+24	22.4	346	58.3	-4	11.1
7	357	49.3	266	56.6		22.5	1	59.1		10.5
8	12	51.7	281	55.7		22.6	16	59.9		09.8
9	27	54.2	296	54.8		22.6	32	00.8		09.1
10	42	56.7	311	53.9		22.7	47	01.6		08.5
11	57	59.1	326	53.0	+24	22.8	62	02.4	-4	07.8
12	73	01.6	341	52.1	+24	22.8	77	03.3	-4	07.1
13	88	04.0	356	51.2		22.9	92	04.1		06.5
14	103	06.5	11	50.3		22.9	107	04.9		05.8
15	118	09.0	26	49.4		23.0	122	05.7		05.1
16	133	11.4	41	48.5		23.1	137	06.6		04.5
17	148	13.9	56	47.6	+24	23.1	152	07.4	-4	03.8
18	163	16.4	71	46.7	+24	23.2	167	08.2	-4	03.1
19	178	18.8	86	45.8		23.2	182	09.0		02.5
20	193	21.3	101	45.0		23.3	197	09.9		01.8
21	208	23.8	116	44.1		23.3	212	10.7		01.2
22	223	26.2	131	43.2		23.4	227	11.5	-4	00.5
23	238	28.7	146	42.3		23.4	242	12.4	-3	59.8
24	253	31.2	161	41.4	+24	23.5	257	13.2	-3	59.2
Dif	—		-9 +1		+8 +7		+25 0		+22 0	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8 PMG: 11 ^h 58 ^m 5			Edad: 27 ^d 6 PHE { SD: 15 ^h 2 PMG: 10 ^h 44 ^m 4 ^h : 55 ^m 9 12 ^h : 55 ^m 7 20 ^h : 55 ^m 6 R°: 51 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	h m	m
0	180	24.1	+22 32.0	204	19.6	+20 52.1		60 N	21 14	22 45	** **	1 39 5	20 25 96		
1	195	24.0		218	49.9 ¹¹³	+21 02.6 ¹⁰⁵		58	20 55	22 06	** **	1 54 12	20 04 87		
2	210	23.9	32.6	233	20.3 ¹¹⁴	13.0 ¹⁰⁴		56	40	21 39	** **	2 07 17	19 46 82		
3	225	23.8	32.8	247	50.5 ¹¹²	23.4 ¹⁰⁴		54	26	19	22 51	19 20	32 77		
4	240	23.7	33.1	262	20.7 ¹¹²	33.6 ¹⁰²		52	14	21 02	22 15	29 23	19 75		
5	255	23.6	+22 33.4	276	50.9 ¹¹²	+21 43.7 ¹⁰¹		50	20 04	20 48	21 50	2 38 26	19 08 72		
6	270	23.5	+22 33.7	291	21.0 ¹¹¹	+21 53.7 ¹⁰⁰		45	19 43	20 19	21 08	2 57 31	18 45 68		
7	285	23.3	33.9	305	51.0 ¹¹⁰	+22 03.5 ⁹⁸		40	25	19 58	20 39	3 13 34	26 65		
8	300	23.2	34.2	320	21.0 ¹¹⁰	13.3 ⁹⁸		35	19 11	40	20 17	26 38	18 10 63		
9	315	23.1	34.5	334	51.0 ¹¹⁰	23.0 ⁹⁷		30	18 59	26	19 59	38 40	17 57 60		
10	330	23.0	34.7	349	20.8 ¹⁰⁸	32.5 ⁹⁵		20	37	19 02	31	3 58 44	34 57		
11	345	22.9	+22 35.0	3	50.7 ¹⁰⁹	+22 41.9 ⁹⁴		10 N	18 19	18 42	19 09	4 16 47	17 14 55		
12	0	22.8	+22 35.3	18	20.4 ¹⁰⁷	+22 51.2 ⁹³		0	18 02	18 25	18 51	4 32 51	16 56 52		
13	15	22.7	35.5	32	50.2 ¹⁰⁸	+23 00.4 ⁹²		10 S	17 45	18 08	34	4 49 53	38 49		
14	30	22.6	35.8	47	19.8 ¹⁰⁶	09.5 ⁹¹		20	28	17 51	19	5 07 57	16 18 46		
15	45	22.5	36.1	61	49.5 ¹⁰⁷	18.4 ⁸⁹		30	17 07	33	18 03	28 61	15 56 43		
16	60	22.3	36.3	76	19.0 ¹⁰⁵	27.3 ⁸⁹		35	16 55	23	17 55	40 63	43 40		
17	75	22.2	+22 36.6	90	48.6 ¹⁰⁶	+23 36.0 ⁸⁷		40	16 42	17 12	17 46	5 54 66	15 28 38		
18	90	22.1	+22 36.9	105	18.0 ¹⁰⁴	+23 44.5 ⁸⁵		45	16 26	16 59	17 36	6 11 70	15 10 34		
19	105	22.0	37.1	119	47.4 ¹⁰⁴	+23 53.0 ⁸⁵		50	16 06	44	25	32 75	14 48 30		
20	120	21.9	37.4	134	16.8 ¹⁰⁴	+24 01.3 ⁸³		52	15 57	37	20	42 77	38 27		
21	135	21.8	37.7	148	46.1 ¹⁰³	09.6 ⁸³		54	46	29	15	6 53 81	26 24		
22	150	21.7	37.9	163	15.4 ¹⁰³	17.6 ⁸⁰		56	34	20	09	7 06 85	14 12 21		
23	165	21.5	38.2	177	44.6 ¹⁰²	25.6 ⁸⁰		58	20	11	17 03	21 90	13 57 15		
24	180	21.4	+22 38.5	192	13.8 ¹⁰²	+24 33.4 ⁷⁸		60 S	15 04	16 00	16 56	7 39 98	13 38 7		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 7 ^h 04 ^m 8			Mag: -3.8 PMG: 13 ^h 14 ^m			Mag: +0.2 PMG: 6 ^h 51 ^m			Mag: -2.2 PMG: 19 ^h 38 ^m			Mag: +0.2 PMG: 14 ^h 52 ^m		
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♃	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec
h	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°
0	253	31.2	161 41.4	+24 23.5	257 13.2	-3 59.2		64 45.3	-2 14.1	136 34.4	+21 14.1	136 34.4	+21 14.1	136 34.4	+21 14.1
1	268	33.6	176 40.5	23.5	272 14.0	58.5		79 47.8	14.1	151 36.5	21.2	151 36.5	21.2	151 36.5	21.2
2	283	36.1	191 39.6	23.6	287 14.8	57.8		94 50.3	14.1	166 38.7	21.1	166 38.7	21.1	166 38.7	21.1
3	298	38.5	206 38.7	23.6	302 15.7	57.2		109 52.7	14.1	181 40.9	21.1	181 40.9	21.1	181 40.9	21.1
4	313	41.0	221 37.8	23.7	317 16.5	56.5		124 55.2	14.1	196 43.1	21.1	196 43.1	21.1	196 43.1	21.1
5	328	43.5	236 36.9	+24 23.7	332 17.3	-3 55.8		139 57.7	-2 14.1	211 45.2	+21 21.0	211 45.2	+21 21.0	211 45.2	+21 21.0
6	343	45.9	251 36.0	+24 23.7	347 18.2	-3 55.2		155 00.1	-2 14.1	226 47.4	+21 21.0	226 47.4	+21 21.0	226 47.4	+21 21.0
7	358	48.4	266 35.1	23.8	2 19.0	54.5		170 02.6	14.1	241 49.6	20.9	241 49.6	20.9	241 49.6	20.9
8	13	50.9	281 34.2	23.8	17 19.8	53.8		185 05.1	14.1	256 51.8	20.9	256 51.8	20.9	256 51.8	20.9
9	28	53.3	296 33.3	23.9	32 20.7	53.2		200 07.5	14.2	271 53.9	20.8	271 53.9	20.8	271 53.9	20.8
10	43	55.8	311 32.5	23.9	47 21.5	52.5		215 10.0	14.2	286 56.1	20.8	286 56.1	20.8	286 56.1	20.8
11	58	58.3	326 31.6	+24 23.9	62 22.3	-3 51.8		230 12.5	-2 14.2	301 58.3	+21 20.7	301 58.3	+21 20.7	301 58.3	+21 20.7
12	74	00.7	341 30.7	+24 24.0	77 23.1	-3 51.2		245 14.9	-2 14.2	317 00.5	+21 20.7	317 00.5	+21 20.7	317 00.5	+21 20.7
13	89	03.2	356 29.8	24.0	92 24.0	50.5		260 17.4	14.2	332 02.6	20.6	332 02.6	20.6	332 02.6	20.6
14	104	05.7	11 28.9	24.0	107 24.8	49.8		275 19.9	14.2	347 04.8	20.6	347 04.8	20.6	347 04.8	20.6
15	119	08.1	26 28.0	24.1	122 25.6	49.2		290 22.3	14.2	2 07.0	20.5	2 07.0	20.5	2 07.0	20.5
16	134	10.6	41 27.1	24.1	137 26.5	48.5		305 24.8	14.2	17 09.2	20.5	17 09.2	20.5	17 09.2	20.5
17	149	13.0	56 26.2	+24 24.1	152 27.3	-3 47.9		320 27.3	-2 14.2	32 11.3	+21 20.5	32 11.3	+21 20.5	32 11.3	+21 20.5
18	164	15.5	71 25.3	+24 24.1	167 28.1	-3 47.2		335 29.7	-2 14.3	47 13.5	+21 20.4	47 13.5	+21 20.4	47 13.5	+21 20.4
19	179	18.0	86 24.4	24.2	182 29.0	46.5		350 32.2	14.3	62 15.7	20.4	62 15.7	20.4	62 15.7	20.4
20	194	20.4	101 23.5	24.2	197 29.8	45.9		5 34.7	14.3	77 17.9	20.3	77 17.9	20.3	77 17.9	20.3
21	209	22.9	116 22.6	24.2	212 30.6	45.2		20 37.1	14.3	92 20.0	20.3	92 20.0	20.3	92 20.0	20.3
22	224	25.4	131 21.7	24.2	227 31.5	44.5		35 39.6	14.3	107 22.2	20.2	107 22.2	20.2	107 22.2	20.2
23	239	27.8	146 20.8	24.3	242 32.3	43.9		50 42.1	14.3	122 24.4	20.2	122 24.4	20.2	122 24.4	20.2
24	254	30.3	161 20.0	+24 24.3	257 33.1	-3 43.2		65 44.5	-2 14.3	137 26.6	+21 20.1	137 26.6	+21 20.1	137 26.6	+21 20.1
Dif	—	—	-9	0	+8	+7		+25	0	+22	0	+22	0	+22	0

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8 PMG: 11 ^h 58 ^m 7				Edad: 28 ^d 6 PHE { 4 ^h : 55 ^h 4 12 ^h : 55 ^h 3 20 ^h : 55 ^h 1 PMG: 11 ^h 35 ^m R°: 53 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	180	21.4	+22	38.5	192	13.8	+24	33.4	60 N	** **	1 12	2 43	1 44	12	22 01	79		
1	195	21.3		38.7	206	42.9		41.1	58	** **	1 51	3 02	2 06	20	21 31	72		
2	210	21.2		39.0	221	12.0		48.7	56	** **	2 18	17	24	26	21 08	69		
3	225	21.1		39.2	235	41.0	+24	56.2	54	1 06	38	31	39	29	20 49	67		
4	240	21.0		39.5	250	10.0	+25	03.5	52	1 42	2 55	42	2 52	32	34	65		
5	255	20.9	+22	39.7	264	38.9	+25	10.7	50	2 07	3 09	3 53	3 04	34	20 20	64		
6	270	20.7	+22	40.0	279	07.8	+25	17.7	45	2 49	3 37	4 14	3 28	38	19 53	61		
7	285	20.6		40.3	293	36.7		24.7	40	3 18	3 59	32	3 47	42	31	60		
8	300	20.5		40.5	308	05.5		31.5	35	40	4 17	46	4 04	43	19 13	58		
9	315	20.4		40.8	322	34.3		38.1	30	3 58	31	4 59	18	45	18 57	58		
10	330	20.3		41.0	337	03.0		44.7	20	4 26	4 55	5 20	4 42	48	31	56		
11	345	20.2	+22	41.3	351	31.7	+25	51.1	10 N	4 48	5 15	5 38	5 03	50	18 09	54		
12	0	20.1	+22	41.5	6	00.3	+25	57.3	0	5 07	5 33	5 55	5 23	52	17 48	53		
13	15	19.9		41.8	20	28.9	+26	03.5	10 S	23	5 49	6 12	5 42	55	27	51		
14	30	19.8		42.0	34	57.5		09.4	20	38	6 06	30	6 04	56	17 04	50		
15	45	19.7		42.3	49	26.1		15.3	30	5 54	24	6 50	29	59	16 39	47		
16	60	19.6		42.5	63	54.6		21.0	35	6 03	34	7 02	6 43	61	23	47		
17	75	19.5	+22	42.8	78	23.0	+26	26.6	40	6 12	6 45	7 16	7 00	63	16 06	45		
18	90	19.4	+22	43.0	92	51.5	+26	32.0	45	6 21	6 58	7 32	7 21	65	15 44	43		
19	105	19.2		43.3	107	19.9		37.3	50	32	7 14	7 52	47	68	18	40		
20	120	19.1		43.5	121	48.2		42.5	52	37	21	8 01	7 59	71	15 05	38		
21	135	19.0		43.8	136	16.6		47.5	50	43	29	12	8 14	73	14 50	36		
22	150	18.9		44.0	150	44.9		52.4	49	49	37	24	31	76	33	32		
23	165	18.8		44.3	165	13.2	+26	57.1	58	6 55	47	37	8 51	82	14 12	27		
24	180	18.7	+22	44.5	179	41.4	+27	01.8	60 S	7 02	7 58	8 54	9 17	91	13 45	19		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 7 ^h 00 ^m 8		Mag: -3.8 PMG: 13 ^h 15 ^m				Mag: +0.2 PMG: 6 ^h 49 ^m				Mag: -2.2 PMG: 19 ^h 34 ^m				Mag: +0.2 PMG: 14 ^h 48 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	254	30.3	161	20.0	+24	24.3	257	33.1	-3	43.2	65	44.5	-2	14.3	137	26.6	+21	20.1
1	269	32.8	176	19.1		24.3	272	34.0		42.5	80	47.0		14.3	152	28.7		20.1
2	284	35.2	191	18.2		24.3	287	34.8		41.9	95	49.5		14.3	167	30.9		20.0
3	299	37.7	206	17.3		24.3	302	35.6		41.2	110	51.9		14.4	182	33.1		20.0
4	314	40.1	221	16.4		24.3	317	36.5		40.5	125	54.4		14.4	197	35.3		19.9
5	329	42.6	236	15.5	+24	24.4	332	37.3	-3	39.9	140	56.8	-2	14.4	212	37.4	+21	19.9
6	344	45.1	251	14.6	+24	24.4	347	38.1	-3	39.2	155	59.3	-2	14.4	227	39.6	+21	19.8
7	359	47.5	266	13.7		24.4	2	39.0		38.5	171	01.8		14.4	242	41.8		19.8
8	14	50.0	281	12.8		24.4	17	39.8		37.9	186	04.2		14.4	257	44.0		19.8
9	29	52.5	296	11.9		24.4	32	40.6		37.2	201	06.7		14.4	272	46.1		19.7
10	44	54.9	311	11.0		24.4	47	41.5		36.5	216	09.1		14.5	287	48.3		19.7
11	59	57.4	326	10.1	+24	24.4	62	42.3	-3	35.9	231	11.6	-2	14.5	302	50.5	+21	19.6
12	74	59.9	341	09.2	+24	24.4	77	43.1	-3	35.2	246	14.1	-2	14.5	317	52.7	+21	19.6
13	90	02.3	356	08.4		24.4	92	44.0		34.6	261	16.5		14.5	332	54.8		19.5
14	105	04.8	11	07.5		24.4	107	44.8		33.9	276	19.0		14.5	347	57.0		19.5
15	120	07.3	26	06.6		24.4	122	45.6		33.2	291	21.4		14.5	2	59.2		19.4
16	135	09.7	41	05.7		24.4	137	46.5		32.6	306	23.9		14.5	18	01.3		19.4
17	150	12.2	56	04.8	+24	24.4	152	47.3	-3	31.9	321	26.4	-2	14.5	33	03.5	+21	19.3
18	165	14.6	71	03.9	+24	24.4	167	48.1	-3	31.2	336	28.8	-2	14.6	48	05.7	+21	19.3
19	180	17.1	86	03.0		24.4	182	49.0		30.6	351	31.3		14.6	63	07.9		19.2
20	195	19.6	101	02.1		24.4	197	49.8		29.9	6	33.7		14.6	78	10.0		19.2
21	210	22.0	116	01.2		24.4	212	50.6		29.2	21	36.2		14.6	93	12.2		19.1
22	225	24.5	131	00.3		24.4	227	51.5		28.6	36	38.7		14.6	108	14.4		19.1
23	240	27.0	145	59.4		24.4	242	52.3		27.9	51	41.1		14.6	123	16.6		19.1
24	255	29.4	160	58.5	+24	24.3	257	53.1	-3	27.2	66	43.6	-2	14.6	138	18.7	+21	19.0
Dif	—		-9		0		+8		+7		+25		0		+22		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 9			Edad: 29 ^d 6 PHE { 4 ^h : 55°0 12 ^h : 54°9 20 ^h : 54°7 R°: 53 ^m										
	hG ☉	Dec			hG ☾	Dif			Dec	Dif	Civil	Náutico	Hora	R°
h	°	'	°	'	°	'	°	h	m	h	m	h	m	m
0	180	18.7	+22	44.5	179	41.4	+27 01.8	60 N	21 17	22 51	** **	1 56	31	23 20 47
1	195	18.5		44.7	194	09.7	06.2	58	20 58	22 09	** **	2 26	38	22 43 50
2	210	18.4		45.0	208	37.9	10.5	56	42	21 42	** **	2 50	40	22 17 50
3	225	18.3		45.2	223	06.1	14.7	54	28	21	22 57	3 08	43	21 56 51
4	240	18.2		45.5	237	34.3	18.8	52	16	21 04	22 18	24 45		39 51
5	255	18.1	+22	45.7	252	02.4	+27 22.6	50	20 06	20 50	21 53	3 38	46	21 24 52
6	270	18.0	+22	45.9	266	30.5	+27 26.4	45	19 44	20 21	21 10	4 06	48	20 54 52
7	285	17.8		46.2	280	58.6	30.0	40	27	19 59	20 40	29 48		31 52
8	300	17.7		46.4	295	26.7	33.5	35	19 12	42	18	4 47	50	20 11 53
9	315	17.6		46.7	309	54.8	36.8	30	18 59	27	20 00	5 03	50	19 55 52
10	330	17.5		46.9	324	22.9	40.0	20	38	19 02	19 32	30 51		27 53
11	345	17.4	+22	47.1	338	50.9	+27 43.0	10 N	18 20	18 43	19 10	5 53	52	19 03 53
12	0	17.2	+22	47.4	353	19.0	+27 45.9	0	18 03	18 25	18 51	6 15	53	18 41 52
13	15	17.1		47.6	7	47.0	48.7	10 S	17 46	18 08	35	6 37	53	18 18 53
14	30	17.0		47.8	22	15.0	51.3	20	28	17 51	19	7 00	55	17 54 53
15	45	16.9		48.1	36	43.1	53.7	30	17 07	33	18 03	28 55		26 53
16	60	16.8		48.3	51	11.1	56.0	35	16 55	23	17 55	7 44	56	17 10 52
17	75	16.7	+22	48.5	65	39.1	+27 58.2	40	16 41	17 12	17 45	8 03	56	16 51 52
18	90	16.5	+22	48.8	80	07.1	+28 00.2	45	16 25	16 59	17 36	8 26	57	16 27 52
19	105	16.4		49.0	94	35.1	02.1	50	16 05	43	24	8 55	58	15 58 51
20	120	16.3		49.2	109	03.1	03.8	52	15 56	36	19	9 10	58	43 51
21	135	16.2		49.5	123	31.1	05.4	54	45	28	14	27 59		26 50
22	150	16.1		49.7	137	59.1	06.9	56	33	19	08	9 47	60	15 05 50
23	165	15.9		49.9	152	27.1	08.2	58	19	16 10	17 02	10 13	61	14 39 49
24	180	15.8	+22	50.1	166	55.2	+28 09.3	60 S	15 02	15 58	16 54	10 48	65	14 04 46

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 6 ^h 56 ^m 9		Mag: -3.8 PMG: 13 ^h 17 ^m		Mag: +0.2 PMG: 6 ^h 48 ^m		Mag: -2.2 PMG: 19 ^h 30 ^m		Mag: +0.2 PMG: 14 ^h 45 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	255	29.4	160	58.5	+24	24.3	257	53.1	-3	27.2	66	43.6	-2	14.6	138	18.7	+21	19.0
1	270	31.9	175	57.7		24.3	272	54.0		26.6	81	46.0		14.7	153	20.9		19.0
2	285	34.4	190	56.8		24.3	287	54.8		25.9	96	48.5		14.7	168	23.1		18.9
3	300	36.8	205	55.9		24.3	302	55.6		25.3	111	50.9		14.7	183	25.2		18.9
4	315	39.3	220	55.0		24.3	317	56.5		24.6	126	53.4		14.7	198	27.4		18.8
5	330	41.8	235	54.1	+24	24.3	332	57.3	-3	23.9	141	55.8	-2	14.7	213	29.6	+21	18.8
6	345	44.2	250	53.2	+24	24.3	347	58.2	-3	23.3	156	58.3	-2	14.7	228	31.8	+21	18.7
7	0	46.7	265	52.3		24.2	2	59.0		22.6	172	00.8		14.8	243	33.9		18.7
8	15	49.1	280	51.4		24.2	17	59.8		21.9	187	03.2		14.8	258	36.1		18.6
9	30	51.6	295	50.5		24.2	33	00.7		21.3	202	05.7		14.8	273	38.3		18.6
10	45	54.1	310	49.6		24.2	48	01.5		20.6	217	08.1		14.8	288	40.4		18.5
11	60	56.5	325	48.7	+24	24.1	63	02.3	-3	19.9	232	10.6	-2	14.8	303	42.6	+21	18.5
12	75	59.0	340	47.8	+24	24.1	78	03.2	-3	19.3	247	13.0	-2	14.8	318	44.8	+21	18.4
13	91	01.5	355	47.0		24.1	93	04.0		18.6	262	15.5		14.9	333	47.0		18.4
14	106	03.9	10	46.1		24.1	108	04.9		17.9	277	17.9		14.9	348	49.1		18.3
15	121	06.4	25	45.2		24.0	123	05.7		17.3	292	20.4		14.9	3	51.3		18.3
16	136	08.9	40	44.3		24.0	138	06.5		16.6	307	22.8		14.9	18	53.5		18.2
17	151	11.3	55	43.4	+24	24.0	153	07.4	-3	16.0	322	25.3	-2	14.9	33	55.6	+21	18.2
18	166	13.8	70	42.5	+24	23.9	168	08.2	-3	15.3	337	27.7	-2	14.9	48	57.8	+21	18.2
19	181	16.3	85	41.6		23.9	183	09.0		14.6	352	30.2		15.0	64	00.0		18.1
20	196	18.7	100	40.7		23.9	198	09.9		14.0	7	32.6		15.0	79	02.2		18.1
21	211	21.2	115	39.8		23.8	213	10.7		13.3	22	35.1		15.0	94	04.3		18.0
22	226	23.6	130	38.9		23.8	228	11.6		12.6	37	37.5		15.0	109	06.5		18.0
23	241	26.1	145	38.0		23.7	243	12.4		12.0	52	40.0		15.0	124	08.7		17.9
24	256	28.6	160	37.2	+24	23.7	258	13.2	-3	11.3	67	42.4	-2	15.0	139	10.8	+21	17.9
Dif	—		-9		0		+8		+7		+25		0		+22		0	

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8 PMG: 11 ^h 59 ^m 0				Edad: 1 ^d 1 PHE { 4 ^h : 54 ^m 6 12 ^h : 54 ^m 5 20 ^h : 54 ^m 4 R°: 52 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	180	15.8	+22	50.1	166	55.2	+28	09.3	11	60 N	** *	1 07	2 41	2 27	63	** *	** *	
1	195	15.7		50.4	181	23.2		10.4	8	58	** *	1 48	3 00	3 04	60	23 33	28	
2	210	15.6		50.6	195	51.2		11.2	7	56	** *	2 16	16	30	59	23 07	33	
3	225	15.5		50.8	210	19.3		11.9	7	54	1 01	37	30	3 51	58	22 47	36	
4	240	15.3		51.0	224	47.3		12.5	6	52	1 39	2 54	41	4 09	57	30	38	
5	255	15.2	+22	51.3	239	15.4	+28	13.0	5	50	2 05	3 08	3 52	4 24	56	22 16	39	
6	270	15.1	+22	51.5	253	43.5	+28	13.3	3	45	2 48	3 37	4 14	4 54	56	21 46	42	
7	285	15.0		51.7	268	11.6		13.4	1	40	3 17	3 59	31	5 17	56	23	44	
8	300	14.9		51.9	282	39.7		13.4	0	35	40	4 16	46	37	54	21 04	45	
9	315	14.7		52.2	297	07.9		13.3	1	30	3 58	31	4 58	5 53	55	20 47	47	
10	330	14.6		52.4	311	36.0		13.0	3	20	4 26	4 55	5 20	6 21	54	20 20	48	
11	345	14.5	+22	52.6	326	04.2	+28	12.6	4	10 N	4 48	5 15	5 38	6 45	53	19 56	50	
12	0	14.4	+22	52.8	340	32.4	+28	12.0	6	0	5 07	5 33	5 55	7 08	52	19 33	52	
13	15	14.2		53.0	355	00.6		11.3	7	10 S	23	5 50	6 12	30	52	19 11	53	
14	30	14.1		53.2	9	28.9		10.4	9	20	39	6 06	30	7 55	50	18 47	54	
15	45	14.0		53.5	23	57.2		09.4	10	30	5 55	25	6 51	8 23	50	19	56	
16	60	13.9		53.7	38	25.5		08.3	11	35	6 04	35	7 03	40	49	18 02	57	
17	75	13.8	+22	53.9	52	53.8	+28	07.0	13	40	6 13	6 46	7 17	8 59	48	17 43	58	
18	90	13.6	+22	54.1	67	22.2	+28	05.6	14	45	6 23	7 00	7 33	9 23	47	17 19	60	
19	105	13.5		54.3	81	50.6		04.1	15	50	34	15	7 53	9 53	45	16 49	62	
20	120	13.4		54.5	96	19.0		02.4	17	52	39	22	8 03	10 08	44	34	63	
21	135	13.3		54.8	110	47.5	+28	00.6	18	54	44	30	13	26	43	16 16	65	
22	150	13.1		55.0	125	16.0	+27	58.6	20	56	50	39	26	10 47	41	15 55	67	
23	165	13.0		55.2	139	44.6		56.5	21	58	6 57	7 49	40	11 14	38	15 28	70	
24	180	12.9	+22	55.4	154	13.2	+27	54.2	23	60 S	7 04	8 00	8 56	11 53	30	14 50	77	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 6 ^h 53 ^m 0		Mag: -3.8 PMG: 13 ^h 18 ^m				Mag: +0.2 PMG: 6 ^h 47 ^m				Mag: -2.2 PMG: 19 ^h 26 ^m				Mag: +0.2 PMG: 14 ^h 41 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	256	28.6	160	37.2	+24	23.7	258	13.2	-3	11.3	67	42.4	-2	15.0	139	10.8	+21	17.9
1	271	31.0	175	36.3		23.7	273	14.1		10.6	82	44.9		15.1	154	13.0		17.8
2	286	33.5	190	35.4		23.6	288	14.9		10.0	97	47.3		15.1	169	15.2		17.8
3	301	36.0	205	34.5		23.6	303	15.8		09.3	112	49.8		15.1	184	17.3		17.7
4	316	38.4	220	33.6		23.5	318	16.6		08.7	127	52.2		15.1	199	19.5		17.7
5	331	40.9	235	32.7	+24	23.5	333	17.4	-3	08.0	142	54.7	-2	15.1	214	21.7	+21	17.6
6	346	43.4	250	31.8	+24	23.4	348	18.3	-3	07.3	157	57.1	-2	15.2	229	23.9	+21	17.6
7	1	45.8	265	30.9		23.4	3	19.1		06.7	172	59.6		15.2	244	26.0		17.5
8	16	48.3	280	30.0		23.3	18	20.0		06.0	188	02.0		15.2	259	28.2		17.5
9	31	50.8	295	29.1		23.3	33	20.8		05.3	203	04.5		15.2	274	30.4		17.4
10	46	53.2	310	28.3		23.2	48	21.6		04.7	218	06.9		15.2	289	32.5		17.4
11	61	55.7	325	27.4	+24	23.2	63	22.5	-3	04.0	233	09.4	-2	15.2	304	34.7	+21	17.3
12	76	58.1	340	26.5	+24	23.1	78	23.3	-3	03.3	248	11.8	-2	15.3	319	36.9	+21	17.3
13	92	00.6	355	25.6		23.1	93	24.2		02.7	263	14.3		15.3	334	39.0		17.2
14	107	03.1	10	24.7		23.0	108	25.0		02.0	278	16.7		15.3	349	41.2		17.2
15	122	05.5	25	23.8		22.9	123	25.8		01.4	293	19.2		15.3	4	43.4		17.1
16	137	08.0	40	22.9		22.9	138	26.7	-3	00.7	308	21.6		15.3	19	45.5		17.1
17	152	10.5	55	22.0	+24	22.8	153	27.5	-3	00.0	323	24.1	-2	15.4	34	47.7	+21	17.1
18	167	12.9	70	21.1	+24	22.7	168	28.4	-2	59.4	338	26.5	-2	15.4	49	49.9	+21	17.0
19	182	15.4	85	20.3		22.7	183	29.2		58.7	353	28.9		15.4	64	52.1		17.0
20	197	17.9	100	19.4		22.6	198	30.0		58.0	8	31.4		15.4	79	54.2		16.9
21	212	20.3	115	18.5		22.5	213	30.9		57.4	23	33.8		15.4	94	56.4		16.9
22	227	22.8	130	17.6		22.5	228	31.7		56.7	38	36.3		15.5	109	58.6		16.8
23	242	25.3	145	16.7		22.4	243	32.6		56.1	53	38.7		15.5	125	00.7		16.8
24	257	27.7	160	15.8	+24	22.3	258	33.4	-2	55.4	68	41.2	-2	15.5	140	02.9	+21	16.7
Dif	—		-9		-1		+8		+7		+24		0		+22		0	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15°8 PMG: 11 ^h 59 ^m 2			Edad: 2 ^d 1 SD: 14°8 PMG: 14 ^h 13 ^m											PHE { 4 ^h : 54'3 12 ^h : 54'3 20 ^h : 54'2 R°: 49 ^m
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	m	h m	m
0	180	12.9	+22 55.4	154	13.2	+27 54.2	60 N	21 20	22 56	** **	3 30 85	0 07 20			
1	195	12.8	55.6	168	41.8 ⁹⁶	51.8 ²⁴	58	21 00	22 13	** **	4 04 77	** ** *			
2	210	12.7	55.8	183	10.5 ⁹⁷	49.3 ²⁵	56	20 44	21 45	** **	29 73	23 40 20			
3	225	12.5	56.0	197	39.2 ⁹⁷	46.7 ²⁶	54	30	23	23 02	4 49 70	23 23			
4	240	12.4	56.2	212	07.9 ⁹⁷	43.9 ²⁸	52	18	21 06	22 21	5 06 67	23 08 26			
5	255	12.3	+22 56.4	226	36.7 ⁹⁸	+27 40.9 ³⁰	50	20 07	20 51	21 55	5 20 66	22 55 29			
6	270	12.2	+22 56.6	241	05.5 ⁹⁸	+27 37.9 ³⁰	45	19 45	20 22	21 12	5 50 62	22 28 33			
7	285	12.0	56.8	255	34.4 ⁹⁹	34.7 ³²	40	28	20 00	20 42	6 13 59	22 07 36			
8	300	11.9	57.0	270	03.4 ¹⁰⁰	31.4 ³³	35	13	19 43	19	31 58	21 49 39			
9	315	11.8	57.2	284	32.3 ⁹⁹	27.9 ³⁵	30	19 00	28	20 01	6 48 56	34 41			
10	330	11.7	57.4	299	01.4 ¹⁰¹	24.3 ³⁶	20	18 39	19 03	19 32	7 15 54	21 08 44			
11	345	11.5	+22 57.7	313	30.5 ¹⁰¹	+27 20.6 ³⁷	10 N	18 20	18 43	19 10	7 38 52	20 46 46			
12	0	11.4	+22 57.9	327	59.6 ¹⁰¹	+27 16.7 ³⁹	0	18 03	18 25	18 52	8 00 50	20 25 49			
13	15	11.3	58.1	342	28.8 ¹⁰²	12.7 ⁴⁰	10 S	17 46	18 09	35	22 48	20 04 51			
14	30	11.2	58.3	356	58.0 ¹⁰²	08.6 ⁴¹	20	28	17 52	19	8 45 47	19 41 54			
15	45	11.1	58.5	11	27.3 ¹⁰³	+27 04.4 ⁴²	30	17 07	33	18 03	9 13 43	19 15 57			
16	60	10.9	58.7	25	56.7 ¹⁰⁴	+27 00.0 ⁴⁴	35	16 55	23	17 54	29 42	18 59 59			
17	75	10.8	+22 58.9	40	26.1 ¹⁰⁴	+26 55.5 ⁴⁵	40	16 41	17 11	17 45	9 47 40	18 41 61			
18	90	10.7	+22 59.1	54	55.5 ¹⁰⁴	+26 50.9 ⁴⁶	45	16 25	16 58	17 35	10 10 37	18 19 64			
19	105	10.6	59.2	69	25.1 ¹⁰⁶	46.1 ⁴⁸	50	16 04	43	24	38 34	17 51 68			
20	120	10.4	59.4	83	54.6 ¹⁰⁵	41.2 ⁴⁹	52	15 55	35	19	10 52 32	37 70			
21	135	10.3	59.6	98	24.3 ¹⁰⁷	36.2 ⁵⁰	54	44	27	13	11 09 28	21 73			
22	150	10.2	+22 59.8	112	54.0 ¹⁰⁷	31.1 ⁵¹	56	32	19	07	28 25	17 02 77			
23	165	10.1	+23 00.0	127	23.7 ¹⁰⁷	25.9 ⁵²	58	17	16 09	17 01	11 52 20	16 38 83			
24	180	09.9	+23 00.2	141	53.6 ¹⁰⁹	+26 20.5 ⁵⁴	60 S	15 01	15 57	16 54	12 23 12	16 07 91			
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG 6 ^h 49 ^m 0		Mag: -3.8 PMG: 13 ^h 20 ^m		Mag: +0.2 PMG: 6 ^h 45 ^m		Mag: -2.2 PMG: 19 ^h 22 ^m		Mag: +0.2 PMG: 14 ^h 38 ^m						
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	257	27.7	160	15.8	+24 22.3	258	33.4	-2 55.4	68	41.2	-2 15.5	140	02.9	+21 16.7	
1	272	30.2	175	14.9	22.3	273	34.3	54.7	83	43.6	15.5	155	05.1	16.7	
2	287	32.6	190	14.0	22.2	288	35.1	54.1	98	46.0	15.6	170	07.2	16.6	
3	302	35.1	205	13.1	22.1	303	35.9	53.4	113	48.5	15.6	185	09.4	16.6	
4	317	37.6	220	12.3	22.0	318	36.8	52.7	128	50.9	15.6	200	11.6	16.5	
5	332	40.0	235	11.4	+24 22.0	333	37.6	-2 52.1	143	53.4	-2 15.6	215	13.7	+21 16.5	
6	347	42.5	250	10.5	+24 21.9	348	38.5	-2 51.4	158	55.8	-2 15.6	230	15.9	+21 16.4	
7	2	45.0	265	09.6	21.8	3	39.3	50.8	173	58.3	15.7	245	18.1	16.4	
8	17	47.4	280	08.7	21.7	18	40.2	50.1	189	00.7	15.7	260	20.2	16.3	
9	32	49.9	295	07.8	21.6	33	41.0	49.4	204	03.1	15.7	275	22.4	16.3	
10	47	52.4	310	06.9	21.6	48	41.8	48.8	219	05.6	15.7	290	24.6	16.2	
11	62	54.8	325	06.0	+24 21.5	63	42.7	-2 48.1	234	08.0	-2 15.7	305	26.7	+21 16.2	
12	77	57.3	340	05.2	+24 21.4	78	43.5	-2 47.4	249	10.5	-2 15.8	320	28.9	+21 16.1	
13	92	59.7	355	04.3	21.3	93	44.4	46.8	264	12.9	15.8	335	31.1	16.1	
14	108	02.2	10	03.4	21.2	108	45.2	46.1	279	15.3	15.8	350	33.2	16.0	
15	123	04.7	25	02.5	21.1	123	46.1	45.5	294	17.8	15.8	5	35.4	16.0	
16	138	07.1	40	01.6	21.0	138	46.9	44.8	309	20.2	15.9	20	37.6	15.9	
17	153	09.6	55	00.7	+24 20.9	153	47.8	-2 44.1	324	22.6	-2 15.9	35	39.7	+21 15.9	
18	168	12.1	69	59.8	+24 20.8	168	48.6	-2 43.5	339	25.1	-2 15.9	50	41.9	+21 15.8	
19	183	14.5	84	59.0	20.7	183	49.4	42.8	354	27.5	15.9	65	44.1	15.8	
20	198	17.0	99	58.1	20.7	198	50.3	42.1	9	30.0	16.0	80	46.2	15.7	
21	213	19.5	114	57.2	20.6	213	51.1	41.5	24	32.4	16.0	95	48.4	15.7	
22	228	21.9	129	56.3	20.5	228	52.0	40.8	39	34.8	16.0	110	50.6	15.6	
23	243	24.4	144	55.4	20.4	243	52.8	40.2	54	37.3	16.0	125	52.7	15.6	
24	258	26.9	159	54.5	+24 20.3	258	53.7	-2 39.5	69	39.7	-2 16.1	140	54.9	+21 15.6	
Dif	—		-9	-1		+8	+7		+24	0		+22		0	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8 PMG: 11 ^h 59 ^m 4			Edad: 3 ^d 1 PHE { 4 ^h : 54 ^m 2 12 ^h : 54 ^m 1 20 ^h : 54 ^m 1 R°: 47 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	09.9	+23 00.2	141	53.6	+26 20.5	55	60 N	** *	1 02	2 39	4 55	92	0 27	8	
1	195	09.8	00.4	156	23.4 ¹⁰⁸	15.0	55	58	** *	1 46	2 59	5 21	84	0 01	15	
2	210	09.7	00.6	170	53.4 ¹¹⁰	09.4	56	56	** *	2 14	3 15	42	79	** *	**	
3	225	09.6	00.8	185	23.4 ¹¹⁰	+26 03.6	58	54	0 57	35	29	5 59	75	23 46	17	
4	240	09.4	01.0	199	53.5 ¹¹¹	+25 57.8	58	52	1 37	2 52	41	6 13	73	34	20	
5	255	09.3	+23 01.2	214	23.6 ¹¹¹	+25 51.8	60	50	2 03	3 07	3 51	6 26	70	23 24	21	
6	270	09.2	+23 01.4	228	53.8 ¹¹²	+25 45.7	61	45	2 47	3 36	4 13	6 52	65	23 01	27	
7	285	09.1	01.6	243	24.0 ¹¹²	39.5	62	40	3 17	3 58	31	7 12	62	22 43	30	
8	300	08.9	01.7	257	54.4 ¹¹⁴	33.2	63	35	39	4 16	46	29	60	28	33	
9	315	08.8	01.9	272	24.8 ¹¹⁴	26.7	65	30	3 58	31	4 58	7 44	57	22 15	35	
10	330	08.7	02.1	286	55.2 ¹¹⁴	20.2	65	20	4 26	4 55	5 20	8 09	53	21 52	39	
11	345	08.6	+23 02.3	301	25.7 ¹¹⁵	+25 13.5	67	10 N	4 49	5 16	5 39	8 30	51	21 32	43	
12	0	08.4	+23 02.5	315	56.3 ¹¹⁶	+25 06.7	68	0	5 07	5 33	5 56	8 50	48	21 14	46	
13	15	08.3	02.7	330	27.0 ¹¹⁷	+24 59.9	68	10 S	24	5 50	6 13	9 10	45	20 55	49	
14	30	08.2	02.9	344	57.7 ¹¹⁷	52.9	70	20	40	6 07	31	32	41	35	53	
15	45	08.0	03.0	359	28.5 ¹¹⁸	45.7	72	30	5 56	26	6 52	9 56	38	20 12	57	
16	60	07.9	03.2	13	59.4 ¹¹⁹	38.5	72	35	6 04	36	7 04	10 11	35	19 58	59	
17	75	07.8	+23 03.4	28	30.3 ¹¹⁹	+24 31.2	73	40	6 14	6 47	7 18	10 27	33	19 42	62	
18	90	07.7	+23 03.6	43	01.3 ¹²⁰	+24 23.7	75	45	6 24	7 01	7 34	10 47	29	19 23	66	
19	105	07.5	03.8	57	32.4 ¹²¹	16.2	75	50	35	16	7 55	11 12	25	18 59	71	
20	120	07.4	03.9	72	03.5 ¹²¹	08.5	77	52	40	24	8 04	24	22	47	74	
21	135	07.3	04.1	86	34.7 ¹²²	+24 00.8	77	54	46	32	15	37	20	34	77	
22	150	07.2	04.3	101	06.0 ¹²³	+23 52.9	79	56	52	41	27	11 53	16	19	80	
23	165	07.0	04.5	115	37.3 ¹²³	45.0	79	58	6 58	7 50	42	12 12	11	18 01	85	
24	180	06.9	+23 04.7	130	08.7 ¹²⁴	+23 36.9	81	60 S	7 05	8 02	8 59	12 35	4	17 38	92	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO			
	PMG 6 ^h 45 ^m 1			Mag: -3.8 PMG: 13 ^h 21 ^m			Mag: +0.2 PMG: 6 ^h 44 ^m			Mag: -2.2 PMG: 19 ^h 18 ^m			Mag: +0.2 PMG: 14 ^h 34 ^m			
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	'
0	258	26.9	159 54.5	+24 20.3	258 53.7	-2 39.5	69 39.7	-2 16.1	140 54.9	+21 15.6						
1	273	29.3	174 53.6	20.2	273 54.5	38.8	84 42.1	16.1	155 57.1	15.5						
2	288	31.8	189 52.8	20.0	288 55.4	38.2	99 44.6	16.1	170 59.2	15.5						
3	303	34.2	204 51.9	19.9	303 56.2	37.5	114 47.0	16.1	186 01.4	15.4						
4	318	36.7	219 51.0	19.8	318 57.1	36.8	129 49.4	16.1	201 03.6	15.4						
5	333	39.2	234 50.1	+24 19.7	333 57.9	-2 36.2	144 51.9	-2 16.2	216 05.7	+21 15.3						
6	348	41.6	249 49.2	+24 19.6	348 58.8	-2 35.5	159 54.3	-2 16.2	231 07.9	+21 15.3						
7	3	44.1	264 48.3	19.5	3	59.6	34.9	174 56.7	16.2	246 10.1	15.2					
8	18	46.6	279 47.4	19.4	19	00.4	34.2	189 59.2	16.2	261 12.2	15.2					
9	33	49.0	294 46.6	19.3	34	01.3	33.5	205 01.6	16.3	276 14.4	15.1					
10	48	51.5	309 45.7	19.2	49	02.1	32.9	220 04.0	16.3	291 16.6	15.1					
11	63	54.0	324 44.8	+24 19.1	64	03.0	-2 32.2	235 06.5	-2 16.3	306 18.7	+21 15.0					
12	78	56.4	339 43.9	+24 18.9	79	03.8	-2 31.6	250 08.9	-2 16.3	321 20.9	+21 15.0					
13	93	58.9	354 43.0	18.8	94	04.7	30.9	265 11.3	16.4	336 23.1	14.9					
14	109	01.4	9 42.1	18.7	109	05.5	30.2	280 13.8	16.4	351 25.2	14.9					
15	124	03.8	24 41.3	18.6	124	06.4	29.6	295 16.2	16.4	6 27.4	14.8					
16	139	06.3	39 40.4	18.5	139	07.2	28.9	310 18.6	16.4	21 29.6	14.8					
17	154	08.7	54 39.5	+24 18.3	154	08.1	-2 28.2	325 21.1	-2 16.5	36 31.7	+21 14.7					
18	169	11.2	69 38.6	+24 18.2	169	08.9	-2 27.6	340 23.5	-2 16.5	51 33.9	+21 14.7					
19	184	13.7	84 37.7	18.1	184	09.8	26.9	355 25.9	16.5	66 36.0	14.6					
20	199	16.1	99 36.8	18.0	199	10.6	26.3	10 28.4	16.6	81 38.2	14.6					
21	214	18.6	114 36.0	17.8	214	11.5	25.6	25 30.8	16.6	96 40.4	14.5					
22	229	21.1	129 35.1	17.7	229	12.3	24.9	40 33.2	16.6	111 42.5	14.5					
23	244	23.5	144 34.2	17.6	244	13.2	24.3	55 35.7	16.6	126 44.7	14.4					
24	259	26.0	159 33.3	+24 17.5	259	14.0	-2 23.6	70 38.1	-2 16.7	141 46.9	+21 14.4					
Dif	—		-9	-1	+8	+7	+24	0	+22	0						

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 4 ^d 1	PHE { 4 ^h : 54'1 12 ^h : 54'1 20 ^h : 54'1	Puesta de Sol			Hora		R°				
	PMG: 11 ^h 59 ^m 6					R°: 44 ^m			Civil		Náutico		R°		
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		h m	h m	h m	h m m	h m m	h m m	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	R°
0	180	06.9	+23 04.7	130	08.7	+23 36.9	82	60 N	21 22	23 01	** **	6 27 90	0 35 3		
1	195	06.8	04.8	144	40.2 ¹²⁵	28.7	82	58	21 02	22 16	** **	6 45 85	16 9		
2	210	06.7	05.0	159	11.7 ¹²⁵	20.5	84	56	20 45	21 47	** **	7 01 80	0 00 13		
3	225	06.5	05.2	173	43.3 ¹²⁶	12.1	84	54	32	25	23 06	14 77	** **	** *	
4	240	06.4	05.4	188	15.0 ¹²⁷	+23 03.6	85	52	19	21 08	22 24	26 73	23 54	14	
5	255	06.3	+23 05.5	202	46.8 ¹²⁸	+22 55.0	86	50	20 09	20 53	21 57	7 36 71	23 45	17	
6	270	06.1	+23 05.7	217	18.6 ¹²⁸	+22 46.4	86	45	19 47	20 24	21 13	7 57 66	23 28	21	
7	285	06.0	05.9	231	50.5 ¹²⁹	37.6	88	40	29	20 02	20 43	8 14 63	13 26		
8	300	05.9	06.0	246	22.4 ¹²⁹	28.8	88	35	14	19 44	20	29 59	23 01	28	
9	315	05.8	06.2	260	54.4 ¹³⁰	19.8	90	30	19 01	29	20 02	8 41 57	22 50	31	
10	330	05.6	06.4	275	26.5 ¹³¹	10.7	91	20	18 39	19 04	19 33	9 02 52	31 36		
11	345	05.5	+23 06.6	289	58.7 ¹³²	+22 01.6	91	10 N	18 21	18 44	19 11	9 21 48	22 15	40	
12	0	05.4	+23 06.7	304	30.9 ¹³²	+21 52.4	92	0	18 03	18 26	18 52	9 38 45	22 00	43	
13	15	05.2	06.9	319	03.2 ¹³³	43.0	94	10 S	17 46	18 09	35	9 55 41	21 44	48	
14	30	05.1	07.1	333	35.5 ¹³³	33.6	94	20	28	17 52	19	10 13 38	28 51		
15	45	05.0	07.2	348	08.0 ¹³⁵	24.1	95	30	17 07	33	18 03	34 33	21 09	56	
16	60	04.9	07.4	2	40.4 ¹³⁴	14.5	96	35	16 55	23	17 54	10 46 31	20 57	59	
17	75	04.7	+23 07.6	17	13.0 ¹³⁶	+21 04.8	97	40	16 41	17 11	17 45	11 00 27	20 44	62	
18	90	04.6	+23 07.7	31	45.6 ¹³⁶	+20 55.1	97	45	16 24	16 58	17 35	11 16 24	20 29	66	
19	105	04.5	07.9	46	18.3 ¹³⁷	45.2	99	50	16 04	42	23	37 18	10 71		
20	120	04.3	08.0	60	51.0 ¹³⁷	35.3	99	52	15 54	35	18	46 17	20 01	74	
21	135	04.2	08.2	75	23.8 ¹³⁸	25.2 ¹⁰¹		54	43	27	13	11 57 14	19 51	76	
22	150	04.1	08.4	89	56.7 ¹³⁹	15.1 ¹⁰¹		56	31	18	07	12 09 10	39	80	
23	165	04.0	08.5	104	29.6 ¹³⁹	+20 04.9 ¹⁰²		58	15 16	16 08	17 00	23 6	26	84	
24	180	03.8	+23 08.7	119	02.6 ¹⁴⁰	+19 54.6 ¹⁰³		60 S	14 59	15 56	16 53	12 39 2	19 10	89	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 6 ^h 41 ^m 2		Mag: -3.8 PMG: 13 ^h 23 ^m			Mag: +0.2 PMG: 6 ^h 43 ^m			Mag: -2.2 PMG: 19 ^h 14 ^m			Mag: +0.2 PMG: 14 ^h 31 ^m			
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'			
0	259	26.0	159 33.3	+24 17.5	259 14.0	-2 23.6	70 38.1	-2 16.7	141 46.9	+21 14.4					
1	274	28.5	174 32.4	17.3	274 14.9	23.0	85 40.5	16.7	156 49.0	14.3					
2	289	30.9	189 31.6	17.2	289 15.7	22.3	100 42.9	16.7	171 51.2	14.3					
3	304	33.4	204 30.7	17.1	304 16.6	21.6	115 45.4	16.7	186 53.4	14.2					
4	319	35.9	219 29.8	16.9	319 17.4	21.0	130 47.8	16.8	201 55.5	14.2					
5	334	38.3	234 28.9	+24 16.8	334 18.3	-2 20.3	145 50.2	-2 16.8	216 57.7	+21 14.1					
6	349	40.8	249 28.0	+24 16.6	349 19.1	-2 19.7	160 52.7	-2 16.8	231 59.9	+21 14.1					
7	4	43.2	264 27.1	16.5	4 20.0	19.0	175 55.1	16.9	247 02.0	14.0					
8	19	45.7	279 26.3	16.4	19 20.8	18.3	190 57.5	16.9	262 04.2	14.0					
9	34	48.2	294 25.4	16.2	34 21.7	17.7	205 59.9	16.9	277 06.3	13.9					
10	49	50.6	309 24.5	16.1	49 22.5	17.0	221 02.4	16.9	292 08.5	13.9					
11	64	53.1	324 23.6	+24 15.9	64 23.4	-2 16.3	236 04.8	-2 17.0	307 10.7	+21 13.8					
12	79	55.6	339 22.7	+24 15.8	79 24.2	-2 15.7	251 07.2	-2 17.0	322 12.8	+21 13.8					
13	94	58.0	354 21.9	15.6	94 25.1	15.0	266 09.6	17.0	337 15.0	13.7					
14	110	00.5	9 21.0	15.5	109 25.9	14.4	281 12.1	17.0	352 17.2	13.7					
15	125	03.0	24 20.1	15.3	124 26.8	13.7	296 14.5	17.1	7 19.3	13.6					
16	140	05.4	39 19.2	15.2	139 27.6	13.0	311 16.9	17.1	22 21.5	13.6					
17	155	07.9	54 18.4	+24 15.0	154 28.5	-2 12.4	326 19.3	-2 17.1	37 23.7	+21 13.5					
18	170	10.4	69 17.5	+24 14.9	169 29.3	-2 11.7	341 21.8	-2 17.2	52 25.8	+21 13.5					
19	185	12.8	84 16.6	14.7	184 30.2	11.1	356 24.2	17.2	67 28.0	13.4					
20	200	15.3	99 15.7	14.6	199 31.0	10.4	11 26.6	17.2	82 30.1	13.4					
21	215	17.7	114 14.8	14.4	214 31.9	09.7	26 29.0	17.2	97 32.3	13.3					
22	230	20.2	129 14.0	14.3	229 32.7	09.1	41 31.5	17.3	112 34.5	13.3					
23	245	22.7	144 13.1	14.1	244 33.6	08.4	56 33.9	17.3	127 36.6	13.2					
24	260	25.1	159 12.2	+24 13.9	259 34.4	-2 07.8	71 36.3	-2 17.3	142 38.8	+21 13.2					
Dif	—		-9	-1	+9	+7	+24	0	+22	0					

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7			Edad: 5 ^d 1	PHE { 4 ^h : 54 ^h 1 12 ^h : 54 ^h 2 20 ^h : 54 ^h 3	R°: 42 ^m										
	PMG: 11 ^h 59 ^m 8							SD: 14 ^h 7			PMG: 16 ^h 33 ^m					
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	03.8	+23 08.7	119	02.6	+19 54.6	103	60 N	** **	0 58	2 38	7 57	88	0 38	1	
1	195	03.7	08.8	133	35.7 ¹⁴¹	44.3 ¹⁰³		58	** **	1 44	2 57	8 10	83	25	5	
2	210	03.6	09.0	148	08.8 ¹⁴¹	33.8 ¹⁰⁵		56	** **	2 12	3 14	21	79	13	9	
3	225	03.4	09.2	162	42.0 ¹⁴²	23.3 ¹⁰⁵		54	0 53	34	28	31	76	0 03	12	
4	240	03.3	09.3	177	15.2 ¹⁴²	12.7 ¹⁰⁶		52	1 35	2 52	40	39	73	** **	**	
5	255	03.2	+23 09.5	191	48.5 ¹⁴³	+19 02.0 ¹⁰⁷		50	2 02	3 06	3 51	8 47	71	** **	**	
6	270	03.1	+23 09.6	206	21.9 ¹⁴⁴	+18 51.3 ¹⁰⁷		45	2 46	3 36	4 13	9 03	66	23 49	19	
7	285	02.9	09.8	220	55.3 ¹⁴⁴	40.4 ¹⁰⁹		40	3 16	3 58	31	17	61	39	22	
8	300	02.8	09.9	235	28.8 ¹⁴⁵	29.5 ¹⁰⁹		35	39	4 16	45	28	58	29	26	
9	315	02.7	10.1	250	02.3 ¹⁴⁵	18.5 ¹¹⁰		30	3 58	31	4 58	38	55	21	29	
10	330	02.5	10.2	264	35.9 ¹⁴⁶	+18 07.5 ¹¹⁰		20	4 26	4 56	5 20	9 54	51	23 07	34	
11	345	02.4	+23 10.4	279	09.5 ¹⁴⁶	+17 56.3 ¹¹²		10 N	4 49	5 16	5 39	10 09	46	22 55	38	
12	0	02.3	+23 10.5	293	43.2 ¹⁴⁷	+17 45.1 ¹¹²		0	5 08	5 34	5 56	10 23	42	22 43	42	
13	15	02.1	10.7	308	17.0 ¹⁴⁸	33.8 ¹¹³		10 S	24	5 51	6 13	36	39	32	45	
14	30	02.0	10.8	322	50.8 ¹⁴⁸	22.5 ¹¹³		20	40	6 08	32	10 51	34	19	50	
15	45	01.9	11.0	337	24.6 ¹⁴⁸	+17 11.1 ¹¹⁴		30	5 57	26	6 53	11 07	30	22 05	54	
16	60	01.8	11.1	351	58.5 ¹⁴⁹	+16 59.6 ¹¹⁵		35	6 05	37	7 05	17	26	21 56	58	
17	75	01.6	+23 11.3	6	32.5 ¹⁵⁰	+16 48.0 ¹¹⁶		40	6 14	6 48	7 19	11 27	24	21 46	62	
18	90	01.5	+23 11.4	21	06.5 ¹⁵⁰	+16 36.4 ¹¹⁶		45	6 25	7 02	7 35	11 40	20	21 35	65	
19	105	01.4	11.6	35	40.6 ¹⁵¹	24.7 ¹¹⁷		50	36	18	7 56	11 55	16	21	70	
20	120	01.2	11.7	50	14.7 ¹⁵¹	12.9 ¹¹⁸		52	41	25	8 06	12 03	12	15	72	
21	135	01.1	11.9	64	48.8 ¹⁵¹	+16 01.1 ¹¹⁸		54	47	33	17	11	10	21 07	76	
22	150	01.0	12.0	79	23.0 ¹⁵²	+15 49.2 ¹¹⁹		56	6 53	42	29	19	8	20 59	79	
23	165	00.8	12.2	93	57.3 ¹⁵³	37.2 ¹²⁰		58	7 00	7 52	8 43	29	4	50	82	
24	180	00.7	+23 12.3	108	31.6 ¹⁵³	+15 25.2 ¹²⁰		60 S	7 07	8 03	9 01	12 41	0	20 39	87	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 6 ^h 37 ^m 2		Mag: -3.8 PMG: 13 ^h 24 ^m		Mag: +0.2 PMG: 6 ^h 41 ^m		Mag: -2.2 PMG: 19 ^h 10 ^m		Mag: +0.2 PMG: 14 ^h 27 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	260	25.1	159	12.2	+24 13.9		259	34.4	-2 07.8		71	36.3	-2 17.3		142	38.8	+21 13.2	
1	275	27.6	174	11.3	13.8		274	35.3	07.1		86	38.7	17.4		157	41.0	13.1	
2	290	30.1	189	10.4	13.6		289	36.2	06.4		101	41.1	17.4		172	43.1	13.1	
3	305	32.5	204	09.6	13.4		304	37.0	05.8		116	43.6	17.4		187	45.3	13.0	
4	320	35.0	219	08.7	13.3		319	37.9	05.1		131	46.0	17.5		202	47.4	13.0	
5	335	37.5	234	07.8	+24 13.1		334	38.7	-2 04.5		146	48.4	-2 17.5		217	49.6	+21 12.9	
6	350	39.9	249	06.9	+24 12.9		349	39.6	-2 03.8		161	50.8	-2 17.5		232	51.8	+21 12.9	
7	5	42.4	264	06.1	12.8		4	40.4	03.1		176	53.2	17.5		247	53.9	12.8	
8	20	44.8	279	05.2	12.6		19	41.3	02.5		191	55.7	17.6		262	56.1	12.8	
9	35	47.3	294	04.3	12.4		34	42.1	01.8		206	58.1	17.6		277	58.3	12.7	
10	50	49.8	309	03.4	12.3		49	43.0	01.2		222	00.5	17.6		293	00.4	12.7	
11	65	52.2	324	02.6	+24 12.1		64	43.8	-2 00.5		237	02.9	-2 17.7		308	02.6	+21 12.6	
12	80	54.7	339	01.7	+24 11.9		79	44.7	-1 59.9		252	05.3	-2 17.7		323	04.7	+21 12.6	
13	95	57.2	354	00.8	11.7		94	45.5	59.2		267	07.8	17.7		338	06.9	12.5	
14	110	59.6	8 59.9	11.6	10.9		109	46.4	58.5		282	10.2	17.8		353	09.1	12.5	
15	126	02.1	23 59.1	11.4	124		47.3	57.9			297	12.6	17.8		8	11.2	12.4	
16	141	04.6	38 58.2	11.2	139		48.1	57.2			312	15.0	17.8		23	13.4	12.4	
17	156	07.0	53 57.3	+24 11.0	154		49.0	-1 56.6			327	17.4	-2 17.9		38	15.5	+21 12.3	
18	171	09.5	68 56.4	+24 10.8	169		49.8	-1 55.9			342	19.9	-2 17.9		53	17.7	+21 12.3	
19	186	12.0	83 55.6	10.7	184		50.7	55.2			357	22.3	17.9		68	19.9	12.2	
20	201	14.4	98 54.7	10.5	199		51.5	54.6			12	24.7	18.0		83	22.0	12.2	
21	216	16.9	113 53.8	10.3	214		52.4	53.9			27	27.1	18.0		98	24.2	12.1	
22	231	19.3	128 52.9	10.1	229		53.2	53.3			42	29.5	18.0		113	26.3	12.1	
23	246	21.8	143 52.1	09.9	244		54.1	52.6			57	31.9	18.1		128	28.5	12.0	
24	261	24.3	158 51.2	+24 09.7	259		55.0	-1 51.9			72	34.4	-2 18.1		143	30.7	+21 12.0	
Dif	—		-9	-2	+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 7			Edad: 6 ^d 1	PHE { 4 ^h : 54/3 12 ^h : 54/4 20 ^h : 54/6										
	PMG: 12 ^h 00 ^m 1					PMG: 17 ^h 15 ^m			R°: 41 ^m						
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	180	00.7	+23 12.3	108	31.6	+15 25.2		60 N	21 24	23 06	** **	9 25 85	0 39 0		
1	195	00.6	12.4	123	05.9 ¹⁵³	13.1 ¹²¹		58	21 04	22 18	** **	33 81	30 3		
2	210	00.5	12.6	137	40.3 ¹⁵⁴	+15 00.9 ¹²²		56	20 47	21 49	** **	40 78	22 6		
3	225	00.3	12.7	152	14.7 ¹⁵⁴	+14 48.7 ¹²²		54	33	27	23 10	47 75	15 9		
4	240	00.2	12.9	166	49.2 ¹⁵⁵	36.4 ¹²³		52	21	21 09	22 26	52 73	08 12		
5	255	00.1	+23 13.0	181	23.7 ¹⁵⁵	+14 24.1 ¹²³		50	20 10	20 54	21 59	9 58 70	0 02 14		
6	269	59.9	+23 13.1	195	58.3 ¹⁵⁶	+14 11.7 ¹²⁴		45	19 48	20 25	21 14	10 09 65	** ** *		
7	284	59.8	13.3	210	32.8 ¹⁵⁵	+13 59.2 ¹²⁵		40	30	20 03	20 44	18 61	** ** *		
8	299	59.7	13.4	225	07.5 ¹⁵⁷	46.7 ¹²⁵		35	15	19 44	21	26 58	23 55 24		
9	314	59.5	13.6	239	42.1 ¹⁵⁶	34.2 ¹²⁵		30	19 02	29	20 03	33 55	50 27		
10	329	59.4	13.7	254	16.8 ¹⁵⁷	21.5 ¹²⁷		20	18 40	19 05	19 34	45 50	41 32		
11	344	59.3	+23 13.8	268	51.6 ¹⁵⁸	+13 08.8 ¹²⁷		10 N	18 21	18 44	19 11	10 55 46	23 33 36		
12	359	59.1	+23 14.0	283	26.4 ¹⁵⁸	+12 56.1 ¹²⁷		0	18 04	18 26	18 52	11 05 41	23 25 41		
13	14	59.0	14.1	298	01.2 ¹⁵⁸	43.3 ¹²⁸		10 S	17 46	18 09	36	15 37	17 45		
14	29	58.9	14.2	312	36.0 ¹⁵⁸	30.5 ¹²⁸		20	28	17 52	19	25 33	23 09 49		
15	44	58.7	14.4	327	10.9 ¹⁵⁹	17.5 ¹³⁰		30	17 07	33	18 03	37 27	22 59 55		
16	59	58.6	14.5	341	45.8 ¹⁵⁹	+12 04.6 ¹²⁹		35	16 55	23	17 54	43 25	54 58		
17	74	58.5	+23 14.6	356	20.7 ¹⁵⁹	+11 51.6 ¹³⁰		40	16 41	17 11	17 45	11 51 21	22 48 61		
18	89	58.4	+23 14.7	10	55.7 ¹⁶⁰	+11 38.5 ¹³¹		45	16 24	16 58	17 35	12 00 17	22 40 65		
19	104	58.2	14.9	25	30.7 ¹⁶⁰	25.4 ¹³¹		50	16 03	42	23	11 12	31 70		
20	119	58.1	15.0	40	05.7 ¹⁶⁰	+11 12.3 ¹³¹		52	15 54	34	18	15 11	27 73		
21	134	58.0	15.1	54	40.8 ¹⁶¹	+10 59.0 ¹³³		54	43	26	13	21 8	23 75		
22	149	57.8	15.3	69	15.8 ¹⁶⁰	45.8 ¹³²		56	30	17	06	27 6	18 77		
23	164	57.7	15.4	83	50.9 ¹⁶¹	32.5 ¹³³		58	15 16	16 07	17 00	33 3	12 81		
24	179	57.6	+23 15.5	98	26.0 ¹⁶¹	+10 19.1 ¹³⁴		60 S	14 58	15 56	16 52	12 41 **	22 06 84		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 6 ^h 33 ^m 3			Mag: -3.8 PMG: 13 ^h 25 ^m			Mag: +0.2 PMG: 6 ^h 40 ^m			Mag: -2.2 PMG: 19 ^h 07 ^m			Mag: +0.2 PMG: 14 ^h 24 ^m		
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	'	°	'	°	'	°	°	'	°
0	261	24.3	158 51.2	+24 09.7	259 55.0	-1 51.9		72 34.4	-2 18.1	143 30.7	+21 12.0				
1	276	26.7	173 50.3	09.5	274 55.8	51.3		87 36.8	18.1	158 32.8	11.9				
2	291	29.2	188 49.4	09.3	289 56.7	50.6		102 39.2	18.2	173 35.0	11.9				
3	306	31.7	203 48.6	09.1	304 57.5	50.0		117 41.6	18.2	188 37.2	11.8				
4	321	34.1	218 47.7	08.9	319 58.4	49.3		132 44.0	18.2	203 39.3	11.8				
5	336	36.6	233 46.8	+24 08.7	334 59.2	-1 48.7		147 46.4	-2 18.3	218 41.5	+21 11.7				
6	351	39.1	248 46.0	+24 08.5	350 00.1	-1 48.0		162 48.8	-2 18.3	233 43.6	+21 11.7				
7	6	41.5	263 45.1	08.3	5 01.0	47.3		177 51.3	18.3	248 45.8	11.6				
8	21	44.0	278 44.2	08.1	20 01.8	46.7		192 53.7	18.4	263 48.0	11.6				
9	36	46.5	293 43.3	07.9	35 02.7	46.0		207 56.1	18.4	278 50.1	11.5				
10	51	48.9	308 42.5	07.7	50 03.5	45.4		222 58.5	18.4	293 52.3	11.5				
11	66	51.4	323 41.6	+24 07.5	65 04.4	-1 44.7		238 00.9	-2 18.5	308 54.4	+21 11.4				
12	81	53.8	338 40.7	+24 07.3	80 05.2	-1 44.0		253 03.3	-2 18.5	323 56.6	+21 11.4				
13	96	56.3	353 39.9	07.1	95 06.1	43.4		268 05.7	18.5	338 58.8	11.3				
14	111	58.8	8 39.0	06.9	110 07.0	42.7		283 08.1	18.6	354 00.9	11.3				
15	127	01.2	23 38.1	06.7	125 07.8	42.1		298 10.5	18.6	9 03.1	11.2				
16	142	03.7	38 37.2	06.5	140 08.7	41.4		313 13.0	18.6	24 05.2	11.2				
17	157	06.2	53 36.4	+24 06.3	155 09.5	-1 40.8		328 15.4	-2 18.7	39 07.4	+21 11.1				
18	172	08.6	68 35.5	+24 06.1	170 10.4	-1 40.1		343 17.8	-2 18.7	54 09.5	+21 11.1				
19	187	11.1	83 34.6	05.9	185 11.2	39.4		358 20.2	18.7	69 11.7	11.0				
20	202	13.6	98 33.8	05.6	200 12.1	38.8		13 22.6	18.8	84 13.9	11.0				
21	217	16.0	113 32.9	05.4	215 13.0	38.1		28 25.0	18.8	99 16.0	10.9				
22	232	18.5	128 32.0	05.2	230 13.8	37.5		43 27.4	18.8	114 18.2	10.9				
23	247	20.9	143 31.2	05.0	245 14.7	36.8		58 29.8	18.9	129 20.3	10.8				
24	262	23.4	158 30.3	+24 04.8	260 15.5	-1 36.2		73 32.2	-2 18.9	144 22.5	+21 10.8				
Dif	—		-9	-2	+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 7				Edad: 7 ^d 1 PHE { 4 ^h : 54 ^m 7 12 ^h : 54 ^m 9 20 ^h : 55 ^m 1 R°: 41 ^m											
	PMG: 12 ^h 00 ^m 3				SD: 14 ^h 9 PMG: 17 ^h 56 ^m					Náutico	Civil		Hora	R°	Hora	R°
	hG ☉	Dec			hG ☾	Dif										
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	179	57.6	+23	15.5	98	26.0	+10	19.1	60 N	** **	0 54	2 36	10 50 84	0 39 **		
1	194	57.4		15.6	113	01.2 ¹⁶²	+10	05.7 ¹³⁴	58	** **	1 42	2 57	54 81	33 3		
2	209	57.3		15.8	127	36.3 ¹⁶¹	+9	52.3 ¹³⁴	56	** **	2 11	3 13	10 58 78	28 6		
3	224	57.2		15.9	142	11.5 ¹⁶²		38.8 ¹³⁵	54	0 50	33	27	11 02 75	24 8		
4	239	57.0		16.0	156	46.7 ¹⁶²		25.3 ¹³⁵	52	1 34	2 51	40	05 73	20 10		
5	254	56.9	+23	16.1	171	21.9 ¹⁶²	+9	11.7 ¹³⁶	50	2 01	3 06	3 50	11 08 70	0 16 12		
6	269	56.8	+23	16.2	185	57.2 ¹⁶³	+8	58.1 ¹³⁶	45	2 46	3 35	4 13	11 14 66	0 08 17		
7	284	56.6		16.4	200	32.4 ¹⁶²		44.4 ¹³⁷	40	3 16	3 58	31	19 62	0 01 21		
8	299	56.5		16.5	215	07.7 ¹⁶³		30.7 ¹³⁷	35	39	4 16	45	24 58	** ** *		
9	314	56.4		16.6	229	43.0 ¹⁶³		16.9 ¹³⁸	30	3 58	31	4 58	28 55	** ** *		
10	329	56.2		16.7	244	18.2 ¹⁶²	+8	03.1 ¹³⁸	20	4 27	4 56	5 20	35 49	** ** *		
11	344	56.1	+23	16.8	258	53.5 ¹⁶³	+7	49.3 ¹³⁸	10 N	4 49	5 16	5 39	11 41 44	** ** *		
12	359	56.0	+23	17.0	273	28.9 ¹⁶⁴	+7	35.4 ¹³⁹	0	5 08	5 34	5 57	11 46 41	** ** *		
13	14	55.8		17.1	288	04.2 ¹⁶³		21.5 ¹³⁹	10 S	25	5 51	6 14	52 36	** ** *		
14	29	55.7		17.2	302	39.5 ¹⁶³	+7	07.6 ¹³⁹	20	41	6 08	32	11 58 31	23 58 50		
15	44	55.6		17.3	317	14.8 ¹⁶³	+6	53.6 ¹⁴⁰	30	5 57	27	6 53	12 04 27	54 55		
16	59	55.4		17.4	331	50.2 ¹⁶⁴		39.6 ¹⁴⁰	35	6 06	38	7 06	08 24	52 58		
17	74	55.3	+23	17.5	346	25.5 ¹⁶³	+6	25.5 ¹⁴¹	40	6 15	6 49	7 20	12 12 21	23 49 62		
18	89	55.2	+23	17.6	1	00.9 ¹⁶⁴	+6	11.4 ¹⁴¹	45	6 25	7 03	7 36	12 17 17	23 45 66		
19	104	55.0		17.8	15	36.2 ¹⁶³	+5	57.3 ¹⁴¹	50	37	19	7 57	23 12	41 71		
20	119	54.9		17.9	30	11.5 ¹⁶³		43.2 ¹⁴¹	52	42	26	8 07	26 10	40 73		
21	134	54.8		18.0	44	46.9 ¹⁶⁴		29.0 ¹⁴²	54	48	34	18	29 8	38 75		
22	149	54.6		18.1	59	22.2 ¹⁶³		14.7 ¹⁴³	56	6 54	43	30	33 5	35 79		
23	164	54.5		18.2	73	57.6 ¹⁶⁴	+5	00.5 ¹⁴²	58	7 01	7 53	8 45	36 2	33 82		
24	179	54.4	+23	18.3	88	32.9 ¹⁶³	+4	46.2 ¹⁴³	60 S	7 08	8 05	9 02	12 40 **	23 30 85		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 6 ^h 29 ^m 4		Mag: -3.8 PMG: 13 ^h 27 ^m		Mag: +0.1 PMG: 6 ^h 39 ^m		Mag: -2.2 PMG: 19 ^h 03 ^m		Mag: +0.2 PMG: 14 ^h 20 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	262	23.4	158	30.3	+24	04.8	73	32.2	-2	18.9
1	277	25.9	173	29.4		04.6	88	34.6		18.9
2	292	28.3	188	28.6		04.3	103	37.1		19.0
3	307	30.8	203	27.7		04.1	118	39.5		19.0
4	322	33.3	218	26.8		03.9	133	41.9		19.0
5	337	35.7	233	26.0	+24	03.7	148	44.3	-2	19.1
6	352	38.2	248	25.1	+24	03.4	163	46.7	-2	19.1
7	7	40.7	263	24.2		03.2	178	49.1		19.2
8	22	43.1	278	23.4		03.0	193	51.5		19.2
9	37	45.6	293	22.5		02.7	208	53.9		19.2
10	52	48.1	308	21.6		02.5	223	56.3		19.3
11	67	50.5	323	20.8	+24	02.3	238	58.7	-2	19.3
12	82	53.0	338	19.9	+24	02.0	254	01.1	-2	19.3
13	97	55.4	353	19.0		01.8	269	03.5		19.4
14	112	57.9	8	18.2		01.6	284	05.9		19.4
15	128	00.4	23	17.3		01.3	299	08.3		19.5
16	143	02.8	38	16.4		01.1	314	10.7		19.5
17	158	05.3	53	15.6	+24	00.9	329	13.1	-2	19.5
18	173	07.8	68	14.7	+24	00.6	344	15.5	-2	19.6
19	188	10.2	83	13.9		00.4	359	18.0		19.6
20	203	12.7	98	13.0	+24	00.1	14	20.4		19.6
21	218	15.2	113	12.1	+23	59.9	29	22.8		19.7
22	233	17.6	128	11.3		59.6	44	25.2		19.7
23	248	20.1	143	10.4		59.4	59	27.6		19.8
24	263	22.6	158	09.5	+23	59.1	74	30.0	-2	19.8
Dif	—		-9		-2		+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 7 PMG: 12 ^h 00 ^m 5			Edad: 8 ^d 1 PHE { SD: 15 ^h 0 PMG: 18 ^h 37 ^m					Civil			Náutico			Hora R°			
	hG ☉	Dec		hG ☾	Dif	Dec			Dif									
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	m	h m	m	
0	179	54.4	+23	18.3	88	32.9	+4	46.2	60 N	21 25	23 09	** **	12 14	87	0 38	**		
1	194	54.2		18.4	103	08.3 ¹⁶⁴		31.9 ¹⁴³	58	21 05	22 20	** **	15	83	36	2		
2	209	54.1		18.5	117	43.6 ¹⁶³		17.5 ¹⁴⁴	56	20 48	21 51	** **	16	80	34	5		
3	224	54.0		18.6	132	18.9 ¹⁶³	+4	03.2 ¹⁴³	54	34	28	23 14	17	77	32			
4	239	53.8		18.7	146	54.2 ¹⁶³	+3	48.8 ¹⁴⁴	52	22	21 11	22 28	18	74	30	10		
5	254	53.7	+23	18.8	161	29.5 ¹⁶³	+3	34.3 ¹⁴⁵	50	20 11	20 56	22 01	12 18	72	0 28	12		
6	269	53.6	+23	18.9	176	04.8 ¹⁶³	+3	19.9 ¹⁴⁴	45	19 49	20 26	21 16	12 20	67	0 25	16		
7	284	53.4		19.0	190	40.1 ¹⁶³	+3	05.4 ¹⁴⁵	40	31	20 03	20 45	21	63	22	20		
8	299	53.3		19.1	205	15.3 ¹⁶²	+2	50.9 ¹⁴⁵	35	16	19 45	22	22	59	19	24		
9	314	53.2		19.2	219	50.6 ¹⁶³		36.3 ¹⁴⁶	30	19 03	30	20 03	23	56	17	26		
10	329	53.0		19.3	234	25.8 ¹⁶²		21.8 ¹⁴⁵	20	18 41	19 05	19 34	24	51	13	32		
11	344	52.9	+23	19.4	249	01.0 ¹⁶²	+2	07.2 ¹⁴⁶	10 N	18 22	18 45	19 12	12 25	46	0 09	36		
12	359	52.8	+23	19.5	263	36.2 ¹⁶²	+1	52.6 ¹⁴⁶	0	18 04	18 27	18 53	12 27	41	0 06	40		
13	14	52.6		19.6	278	11.4 ¹⁶²		37.9 ¹⁴⁷	10 S	17 47	18 10	36	28	37	0 02	45		
14	29	52.5		19.7	292	46.6 ¹⁶²		23.3 ¹⁴⁶	20	28	17 52	20	29	33	** **	**		
15	44	52.4		19.8	307	21.7 ¹⁶¹	+1	08.6 ¹⁴⁷	30	17 07	34	18 03	31	27	** **	**		
16	59	52.2		19.9	321	56.8 ¹⁶¹	+0	53.9 ¹⁴⁷	35	16 55	23	17 55	32	24	** **	**		
17	74	52.1	+23	20.0	336	31.9 ¹⁶¹	+0	39.2 ¹⁴⁷	40	16 41	17 11	17 45	12 33	21	** **	**		
18	89	52.0	+23	20.1	351	06.9 ¹⁶⁰	+0	24.5 ¹⁴⁷	45	16 24	16 58	17 35	12 34	17	** **	**		
19	104	51.8		20.2	5	42.0 ¹⁶¹	+0	09.8 ¹⁴⁷	50	16 03	42	23	35	13	** **	**		
20	119	51.7		20.3	20	17.0 ¹⁶⁰	-0	05.0 ¹⁴⁸	52	15 53	34	18	36	10	** **	**		
21	134	51.6		20.4	34	51.9 ¹⁵⁹		19.8 ¹⁴⁸	54	42	26	12	37	8	** **	**		
22	149	51.4		20.5	49	26.9 ¹⁶⁰		34.6 ¹⁴⁸	56	30	17	06	38	5	** **	**		
23	164	51.3		20.6	64	01.8 ¹⁵⁹	-0	49.4 ¹⁴⁸	58	15 15	16 07	17 00	38	3	** **	**		
24	179	51.2	+23	20.7	78	36.6 ¹⁵⁸	-1	04.2 ¹⁴⁸	60 S	14 58	15 55	16 52	12 39	0	** **	**		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 6 ^h 25 ^m 4		Mag: -3.8 PMG: 13 ^h 28 ^m				Mag: +0.1 PMG: 6 ^h 37 ^m				Mag: -2.2 PMG: 18 ^h 59 ^m				Mag: +0.2 PMG: 14 ^h 17 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♎		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	263	22.6	158	09.5	+23	59.1	260	36.2	-1	20.4	74	30.0	-2	19.8	145	14.3	+21	09.5
1	278	25.0	173	08.7		58.9	275	37.1		19.7	89	32.4		19.8	160	16.5		09.5
2	293	27.5	188	07.8		58.6	290	37.9		19.1	104	34.8		19.9	175	18.6		09.4
3	308	29.9	203	07.0		58.4	305	38.8		18.4	119	37.2		19.9	190	20.8		09.4
4	323	32.4	218	06.1		58.1	320	39.7		17.8	134	39.6		19.9	205	22.9		09.3
5	338	34.9	233	05.2	+23	57.9	335	40.5	-1	17.1	149	42.0	-2	20.0	220	25.1	+21	09.3
6	353	37.3	248	04.4	+23	57.6	350	41.4	-1	16.5	164	44.4	-2	20.0	235	27.2	+21	09.2
7	8	39.8	263	03.5		57.4	5	42.3		15.8	179	46.8		20.1	250	29.4		09.2
8	23	42.3	278	02.7		57.1	20	43.1		15.1	194	49.2		20.1	265	31.6		09.1
9	38	44.7	293	01.8		56.8	35	44.0		14.5	209	51.6		20.1	280	33.7		09.1
10	53	47.2	308	00.9		56.6	50	44.9		13.8	224	54.0		20.2	295	35.9		09.0
11	68	49.7	323	00.1	+23	56.3	65	45.7	-1	13.2	239	56.4	-2	20.2	310	38.0	+21	09.0
12	83	52.1	337	59.2	+23	56.0	80	46.6	-1	12.5	254	58.8	-2	20.3	325	40.2	+21	08.9
13	98	54.6	352	58.4		55.8	95	47.4		11.9	270	01.2		20.3	340	42.3		08.9
14	113	57.0	7	57.5		55.5	110	48.3		11.2	285	03.6		20.3	355	44.5		08.8
15	128	59.5	22	56.6		55.2	125	49.2		10.6	300	06.0		20.4	10	46.6		08.8
16	144	02.0	37	55.8		55.0	140	50.0		09.9	315	08.4		20.4	25	48.8		08.7
17	159	04.4	52	54.9	+23	54.7	155	50.9	-1	09.2	330	10.8	-2	20.5	40	51.0	+21	08.7
18	174	06.9	67	54.1	+23	54.4	170	51.8	-1	08.6	345	13.2	-2	20.5	55	53.1	+21	08.6
19	189	09.4	82	53.2		54.2	185	52.6		07.9	0	15.6		20.5	70	55.3		08.6
20	204	11.8	97	52.4		53.9	200	53.5		07.3	15	17.9		20.6	85	57.4		08.5
21	219	14.3	112	51.5		53.6	215	54.4		06.6	30	20.3		20.6	100	59.6		08.5
22	234	16.8	127	50.7		53.3	230	55.2		06.0	45	22.7		20.7	116	01.7		08.4
23	249	19.2	142	49.8		53.1	245	56.1		05.3	60	25.1		20.7	131	03.9		08.3
24	264	21.7	157	48.9	+23	52.8	260	57.0	-1	04.7	75	27.5	-2	20.7	146	06.0	+21	08.3
Dif	—		-9		-3		+9		+7		+24		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 00 ^m 7				Edad: 9 ^d 1 PHE { SD: 15 ^h 2 PMG: 19 ^h 18 ^m 4 ^h : 55 ^h 9 12 ^h : 56 ^h 2 20 ^h : 56 ^h 5 R ^o : 45 ^m															
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m		
0	179	51.2	+23	20.7	78	36.6	-1	04.2	60 N	** **	0 52	2 36	13 41	91	0 37	**				
1	194	51.0		20.8	93	11.5 ¹⁵⁹		19.0 ¹⁴⁸	58	** **	1 41	2 56	38 87		38	2				
2	209	50.9		20.9	107	46.3 ¹⁵⁸		33.9 ¹⁴⁹	56	** **	2 11	3 13	36 84		39	5				
3	224	50.8		21.0	122	21.0 ¹⁵⁷	-1	48.7 ¹⁴⁸	54	0 47	33	27	34 81		39	8				
4	239	50.6		21.0	136	55.7 ¹⁵⁷	-2	03.6 ¹⁴⁹	52	1 33	2 51	39	32 78		40	10				
5	254	50.5	+23	21.1	151	30.4 ¹⁵⁷	-2	18.4 ¹⁴⁸	50	2 00	3 06	3 50	13 30	76	0 40	13				
6	269	50.4	+23	21.2	166	05.0 ¹⁵⁶	-2	33.3 ¹⁴⁹	45	2 46	3 35	4 13	13 27	70	0 41	17				
7	284	50.2		21.3	180	39.6 ¹⁵⁶	-2	48.2 ¹⁴⁹	40	3 16	3 58	31	24 65		42	21				
8	299	50.1		21.4	195	14.2 ¹⁵⁶	-3	03.1 ¹⁴⁹	35	39	4 16	46	21 62		43	24				
9	314	50.0		21.5	209	48.7 ¹⁵⁵		18.0 ¹⁴⁹	30	3 58	31	4 59	19 59		43	28				
10	329	49.8		21.6	224	23.1 ¹⁵⁴		32.9 ¹⁴⁹	20	4 27	4 56	5 21	15 53		45	33				
11	344	49.7	+23	21.6	238	57.5 ¹⁵⁴	-3	47.8 ¹⁴⁹	10 N	4 49	5 16	5 39	13 11	49	0 45	38				
12	359	49.6	+23	21.7	253	31.9 ¹⁵⁴	-4	02.7 ¹⁴⁹	0	5 08	5 34	5 57	13 08	44	0 46	43				
13	14	49.4		21.8	268	06.2 ¹⁵³		17.6 ¹⁴⁹	10 S	25	5 52	6 14	05 39		47	47				
14	29	49.3		21.9	282	40.4 ¹⁵²		32.6 ¹⁵⁰	20	41	6 09	33	13 02	34	48	52				
15	44	49.2		22.0	297	14.6 ¹⁵²	-4	47.5 ¹⁴⁹	30	5 58	28	6 54	12 58	29	49	58				
16	59	49.0		22.1	311	48.8 ¹⁵²	-5	02.4 ¹⁴⁹	35	6 07	38	7 06	56 26		50	60				
17	74	48.9	+23	22.1	326	22.9 ¹⁵¹	-5	17.3 ¹⁴⁹	40	6 16	6 50	7 21	12 54	22	0 51	64				
18	89	48.8	+23	22.2	340	56.9 ¹⁵⁰	-5	32.2 ¹⁴⁹	45	6 26	7 03	7 37	12 51	18	0 52	68				
19	104	48.6		22.3	355	30.8 ¹⁴⁹	-5	47.1 ¹⁴⁹	50	38	20	7 58	48 13		52	74				
20	119	48.5		22.4	10	04.7 ¹⁴⁹	-6	02.0 ¹⁴⁹	52	43	27	8 08	46 11		53	76				
21	134	48.4		22.4	24	38.6 ¹⁴⁹		16.9 ¹⁴⁹	54	49	35	19	45 8		53	79				
22	149	48.2		22.5	39	12.3 ¹⁴⁷		31.8 ¹⁴⁹	56	6 55	44	32	43 6		54	81				
23	164	48.1		22.6	53	46.0 ¹⁴⁷	-6	46.7 ¹⁴⁹	58	7 02	7 54	8 46	41 3		55	84				
24	179	48.0	+23	22.7	68	19.7 ¹⁴⁷	-7	01.6 ¹⁴⁹	60 S	7 09	8 06	9 04	12 39	**	0 55	88				
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 6 ^h 21 ^m 5				Mag: -3.8 PMG: 13 ^h 30 ^m				Mag: +0.1 PMG: 6 ^h 36 ^m				Mag: -2.2 PMG: 18 ^h 55 ^m				Mag: +0.2 PMG: 14 ^h 14 ^m			
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	264	21.7	157	48.9	+23	52.8	260	57.0	-1	04.7	75	27.5	-2	20.7	146	06.0	+21	08.3		
1	279	24.2	172	48.1		52.5	275	57.8		04.0	90	29.9		20.8	161	08.2		08.2		
2	294	26.6	187	47.2		52.2	290	58.7		03.4	105	32.3		20.8	176	10.4		08.2		
3	309	29.1	202	46.4		51.9	305	59.6		02.7	120	34.7		20.9	191	12.5		08.1		
4	324	31.5	217	45.5		51.7	321	00.4		02.1	135	37.1		20.9	206	14.7		08.1		
5	339	34.0	232	44.7	+23	51.4	336	01.3	-1	01.4	150	39.5	-2	21.0	221	16.8	+21	08.0		
6	354	36.5	247	43.8	+23	51.1	351	02.2	-1	00.7	165	41.9	-2	21.0	236	19.0	+21	08.0		
7	9	38.9	262	43.0		50.8	6	03.0	-1	00.1	180	44.3		21.0	251	21.1		07.9		
8	24	41.4	277	42.1		50.5	21	03.9	-0	59.4	195	46.7		21.1	266	23.3		07.9		
9	39	43.9	292	41.3		50.2	36	04.8		58.8	210	49.1		21.1	281	25.4		07.8		
10	54	46.3	307	40.4		49.9	51	05.6		58.1	225	51.5		21.2	296	27.6		07.8		
11	69	48.8	322	39.6	+23	49.6	66	06.5	-0	57.5	240	53.9	-2	21.2	311	29.8	+21	07.7		
12	84	51.3	337	38.7	+23	49.4	81	07.4	-0	56.8	255	56.3	-2	21.3	326	31.9	+21	07.7		
13	99	53.7	352	37.8		49.1	96	08.2		56.2	270	58.6		21.3	341	34.1		07.6		
14	114	56.2	7	37.0		48.8	111	09.1		55.5	286	01.0		21.3	356	36.2		07.6		
15	129	58.7	22	36.1		48.5	126	10.0		54.9	301	03.4		21.4	11	38.4		07.5		
16	145	01.1	37	35.3		48.2	141	10.9		54.2	316	05.8		21.4	26	40.5		07.5		
17	160	03.6	52	34.4	+23	47.9	156	11.7	-0	53.6	331	08.2	-2	21.5	41	42.7	+21	07.4		
18	175	06.0	67	33.6	+23	47.6	171	12.6	-0	52.9	346	10.6	-2	21.5	56	44.8	+21	07.4		
19	190	08.5	82	32.7		47.3	186	13.5		52.2	1	13.0		21.6	71	47.0		07.3		
20	205	11.0	97	31.9		47.0	201	14.3		51.6	16	15.4		21.6	86	49.1		07.3		
21	220	13.4	112	31.0		46.7	216	15.2		50.9	31	17.8		21.6	101	51.3		07.2		
22	235	15.9	127	30.2		46.4	231	16.1		50.3	46	20.2		21.7	116	53.5		07.1		
23	250	18.4	142	29.3		46.1	246	16.9		49.6	61	22.5		21.7	131	55.6		07.1		
24	265	20.8	157	28.5	+23	45.7	261	17.8	-0	49.0	76	24.9	-2	21.8	146	57.8	+21	07.0		
Dif	—				-9 -3				+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 7			Edad: 10 ^d 1 PHE	SD: 15 ^h 4				R°: 49 ^m							
	PMG: 12 ^h 00 ^m 9				PMG: 20 ^h 03 ^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	48.0	+23 22.7	68	19.7	-7 01.6		60 N	21 27	23 12	** **	15 12 99	0 36	0	0	
1	194	47.8	22.7	82	53.3 ¹⁴⁶	16.4 ¹⁴⁸		58	21 06	22 22	** **	05 94	40	4		
2	209	47.7	22.8	97	26.8 ¹⁴⁵	31.3 ¹⁴⁹		56	20 49	21 52	** **	15 00 89	44	6		
3	224	47.5	22.9	112	00.2 ¹⁴⁴	-7 46.1 ¹⁴⁸		54	35	30	23 16	14 55 86	47	10		
4	239	47.4	23.0	126	33.5 ¹⁴³	-8 00.9 ¹⁴⁸		52	23	21 12	22 30	50 83	50	12		
5	254	47.3	+23 23.0	141	06.8 ¹⁴³	-8 15.7 ¹⁴⁸		50	20 12	20 56	22 02	14 46 80	0 53	14		
6	269	47.1	+23 23.1	155	40.0 ¹⁴²	-8 30.5 ¹⁴⁸		45	19 49	20 27	21 16	14 37 74	0 58	20		
7	284	47.0	23.2	170	13.1 ¹⁴¹	-8 45.3 ¹⁴⁸		40	31	20 04	20 46	29 70	1 03	24		
8	299	46.9	23.2	184	46.2 ¹⁴¹	-9 00.1 ¹⁴⁸		35	16	19 46	23	23 66	07	28		
9	314	46.7	23.3	199	19.2 ¹⁴⁰	14.8 ¹⁴⁷		30	19 03	31	20 04	18 62	11	31		
10	329	46.6	23.4	213	52.1 ¹³⁹	29.5 ¹⁴⁷		20	18 41	19 06	19 35	08 57	18	36		
11	344	46.5	+23 23.4	228	24.9 ¹³⁸	-9 44.2 ¹⁴⁷		10 N	18 22	18 45	19 12	14 00 52	1 23	41		
12	359	46.3	+23 23.5	242	57.6 ¹³⁷	-9 58.9 ¹⁴⁷		0	18 05	18 27	18 53	13 52 48	1 29	45		
13	14	46.2	23.6	257	30.2 ¹³⁶	-10 13.5 ¹⁴⁶		10 S	17 47	18 10	36	44 43	34	50		
14	29	46.1	23.6	272	02.8 ¹³⁶	28.2 ¹⁴⁷		20	29	17 53	20	36 39	40	55		
15	44	45.9	23.7	286	35.2 ¹³⁴	42.8 ¹⁴⁶		30	17 07	34	18 04	27 33	47	60		
16	59	45.8	23.7	301	07.6 ¹³⁴	-10 57.3 ¹⁴⁵		35	16 55	23	17 55	22 29	50	64		
17	74	45.7	+23 23.8	315	39.9 ¹³³	-11 11.9 ¹⁴⁶		40	16 41	17 11	17 46	13 16 26	1 55	67		
18	89	45.5	+23 23.9	330	12.1 ¹³²	-11 26.4 ¹⁴⁵		45	16 24	16 58	17 35	13 09 22	2 00	72		
19	104	45.4	23.9	344	44.2 ¹³¹	40.9 ¹⁴⁵		50	16 03	42	23	13 01 16	06	78		
20	119	45.3	24.0	359	16.2 ¹³⁰	-11 55.3 ¹⁴⁴		52	15 53	34	18	12 57 14	09	80		
21	134	45.1	24.0	13	48.1 ¹²⁹	-12 09.7 ¹⁴⁴		54	42	26	12	53 11	12	83		
22	149	45.0	24.1	28	19.9 ¹²⁸	24.1 ¹⁴⁴		56	30	17	06	49 8	15	87		
23	164	44.8	24.2	42	51.6 ¹²⁷	38.4 ¹⁴³		58	15 15	16 07	17 00	44 4	19	90		
24	179	44.7	+23 24.2	57	23.2 ¹²⁶	-12 52.7 ¹⁴³		60 S	14 57	15 55	16 52	12 38 1	2 23	95		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG		Mag: -3.8		Mag: +0.1		Mag: -2.2		Mag: +0.2					
	6 ^h 17 ^m 6		PMG: 13 ^h 31 ^m		PMG: 6 ^h 34 ^m		PMG: 18 ^h 51 ^m		PMG: 14 ^h 10 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	265	20.8	157	28.5	+23 45.7	261	17.8	-0 49.0	76	24.9	-2 21.8	146	57.8	+21 07.0
1	280	23.3	172	27.7	45.4	276	18.7	48.3	91	27.3	21.8	161	59.9	07.0
2	295	25.8	187	26.8	45.1	291	19.5	47.7	106	29.7	21.9	177	02.1	06.9
3	310	28.2	202	26.0	44.8	306	20.4	47.0	121	32.1	21.9	192	04.2	06.9
4	325	30.7	217	25.1	44.5	321	21.3	46.4	136	34.5	21.9	207	06.4	06.8
5	340	33.1	232	24.3	+23 44.2	336	22.2	-0 45.7	151	36.9	-2 22.0	222	08.5	+21 06.8
6	355	35.6	247	23.4	+23 43.9	351	23.0	-0 45.1	166	39.3	-2 22.0	237	10.7	+21 06.7
7	10	38.1	262	22.6	43.6	6	23.9	44.4	181	41.6	22.1	252	12.8	06.7
8	25	40.5	277	21.7	43.2	21	24.8	43.8	196	44.0	22.1	267	15.0	06.6
9	40	43.0	292	20.9	42.9	36	25.6	43.1	211	46.4	22.2	282	17.1	06.6
10	55	45.5	307	20.0	42.6	51	26.5	42.5	226	48.8	22.2	297	19.3	06.5
11	70	47.9	322	19.2	+23 42.3	66	27.4	-0 41.8	241	51.2	-2 22.3	312	21.5	+21 06.5
12	85	50.4	337	18.3	+23 42.0	81	28.3	-0 41.2	256	53.6	-2 22.3	327	23.6	+21 06.4
13	100	52.9	352	17.5	41.6	96	29.1	40.5	271	56.0	22.4	342	25.8	06.4
14	115	55.3	7	16.7	41.3	111	30.0	39.8	286	58.3	22.4	357	27.9	06.3
15	130	57.8	22	15.8	41.0	126	30.9	39.2	302	00.7	22.4	12	30.1	06.2
16	146	00.3	37	15.0	40.7	141	31.7	38.5	317	03.1	22.5	27	32.2	06.2
17	161	02.7	52	14.1	+23 40.3	156	32.6	-0 37.9	332	05.5	-2 22.5	42	34.4	+21 06.1
18	176	05.2	67	13.3	+23 40.0	171	33.5	-0 37.2	347	07.9	-2 22.6	57	36.5	+21 06.1
19	191	07.6	82	12.4	39.7	186	34.4	36.6	2	10.3	22.6	72	38.7	06.0
20	206	10.1	97	11.6	39.4	201	35.2	35.9	17	12.6	22.7	87	40.8	06.0
21	221	12.6	112	10.8	39.0	216	36.1	35.3	32	15.0	22.7	102	43.0	05.9
22	236	15.0	127	09.9	38.7	231	37.0	34.6	47	17.4	22.8	117	45.1	05.9
23	251	17.5	142	09.1	38.4	246	37.8	34.0	62	19.8	22.8	132	47.3	05.8
24	266	20.0	157	08.2	+23 38.0	261	38.7	-0 33.3	77	22.2	-2 22.9	147	49.4	+21 05.8
Dif	—		-8	-3		+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 7			Edad: 11 ^d 1	PHE { 4 ^h : 57 ^h /7 12 ^h : 58 ^h /0 20 ^h : 58 ^h /3									
	PMG: 12 ^h 01 ^m 1					SD: 15 ^h 7		PMG: 20 ^h 52 ^m			R°: 54 ^m			
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	h	m	h	m	h	m	m
0	179	44.7	+23 24.2	57	23.2	-12 52.7	60 N	** **	0 50	2 35	16 51	108	0 36	1
1	194	44.6	24.3	71	54.7 ¹²⁵	-13 07.0 ¹⁴³	58	** **	1 40	2 56	39	102	44	5
2	209	44.4	24.3	86	26.1 ¹²⁴	21.2 ¹⁴²	56	** **	2 10	3 13	29	97	50	10
3	224	44.3	24.4	100	57.3 ¹²²	35.4 ¹⁴²	54	0 46	32	27	21	92	0 57	12
4	239	44.2	24.4	115	28.5 ¹²²	-13 49.5 ¹⁴¹	52	1 32	2 50	39	13	88	1 02	16
5	254	44.0	+23 24.5	129	59.6 ¹²¹	-14 03.6 ¹⁴¹	50	2 00	3 06	3 50	16 06	85	1 07	18
6	269	43.9	+23 24.5	144	30.6 ¹²⁰	-14 17.6 ¹⁴⁰	45	2 46	3 35	4 13	15 51	79	1 18	24
7	284	43.8	24.6	159	01.4 ¹¹⁸	31.6 ¹⁴⁰	40	3 16	3 58	31	39	75	27	28
8	299	43.6	24.7	173	32.2 ¹¹⁸	45.5 ¹³⁹	35	39	4 16	46	29	71	35	32
9	314	43.5	24.7	188	02.8 ¹¹⁶	-14 59.4 ¹³⁹	30	3 58	31	4 59	20	67	42	35
10	329	43.4	24.8	202	33.3 ¹¹⁵	-15 13.2 ¹³⁸	20	4 27	4 56	5 21	15 05	62	1 54	40
11	344	43.2	+23 24.8	217	03.7 ¹¹⁴	-15 27.0 ¹³⁸	10 N	4 50	5 17	5 40	14 52	57	2 04	46
12	359	43.1	+23 24.8	231	34.0 ¹¹³	-15 40.7 ¹³⁷	0	5 09	5 35	5 57	14 40	52	2 14	50
13	14	43.0	24.9	246	04.2 ¹¹²	-15 54.4 ¹³⁷	10 S	26	5 52	6 15	27	49	24	54
14	29	42.8	24.9	260	34.3 ¹¹¹	-16 07.9 ¹³⁵	20	42	6 09	33	15	43	35	59
15	44	42.7	25.0	275	04.2 ¹⁰⁹	21.5 ¹³⁶	30	5 58	28	6 55	14 00	38	47	65
16	59	42.6	25.0	289	34.0 ¹⁰⁸	34.9 ¹³⁴	35	6 07	39	7 07	13 51	36	2 54	68
17	74	42.4	+23 25.1	304	03.7 ¹⁰⁷	-16 48.3 ¹³⁴	40	6 17	6 51	7 21	13 42	31	3 02	72
18	89	42.3	+23 25.1	318	33.3 ¹⁰⁶	-17 01.6 ¹³³	45	6 27	7 04	7 38	13 31	27	3 12	77
19	104	42.1	25.2	333	02.7 ¹⁰⁴	14.9 ¹³³	50	39	20	7 59	17	22	24	82
20	119	42.0	25.2	347	32.0 ¹⁰³	28.1 ¹³²	52	44	28	8 09	11	19	29	85
21	134	41.9	25.2	2	01.2 ¹⁰²	41.2 ¹³¹	54	50	36	20	13 04	16	35	89
22	149	41.7	25.3	16	30.3 ¹⁰¹	-17 54.2 ¹³⁰	56	6 56	45	32	12 57	12	42	92
23	164	41.6	25.3	30	59.2 ⁹⁹	-18 07.2 ¹³⁰	58	7 03	7 55	8 47	48	8	49	97
24	179	41.5	+23 25.4	45	28.0 ⁹⁸	-18 20.1 ¹²⁹	60 S	7 10	8 07	9 05	12 39	2	3 58	102

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG		Mag: -3.8		Mag: +0.1		Mag: -2.1		Mag: +0.2	
	6 ^h 13 ^m 6		PMG: 13 ^h 32 ^m		PMG: 6 ^h 33 ^m		PMG: 18 ^h 48 ^m		PMG: 14 ^h 07 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	266	20.0	157 08.2	+23 38.0	261 38.7	-0 33.3	77 22.2	-2 22.9	147 49.4	+21 05.8
1	281	22.4	172 07.4	37.7	276 39.6	32.7	92 24.6	22.9	162 51.6	05.7
2	296	24.9	187 06.6	37.3	291 40.5	32.0	107 26.9	23.0	177 53.7	05.7
3	311	27.4	202 05.7	37.0	306 41.3	31.4	122 29.3	23.0	192 55.9	05.6
4	326	29.8	217 04.9	36.7	321 42.2	30.7	137 31.7	23.1	207 58.0	05.6
5	341	32.3	232 04.0	+23 36.3	336 43.1	-0 30.1	152 34.1	-2 23.1	223 00.2	+21 05.5
6	356	34.8	247 03.2	+23 36.0	351 44.0	-0 29.4	167 36.5	-2 23.1	238 02.4	+21 05.5
7	11	37.2	262 02.4	35.6	6 44.8	28.8	182 38.8	23.2	253 04.5	05.4
8	26	39.7	277 01.5	35.3	21 45.7	28.1	197 41.2	23.2	268 06.7	05.3
9	41	42.1	292 00.7	34.9	36 46.6	27.5	212 43.6	23.3	283 08.8	05.3
10	56	44.6	306 59.9	34.6	51 47.5	26.8	227 46.0	23.3	298 11.0	05.2
11	71	47.1	321 59.0	+23 34.2	66 48.3	-0 26.2	242 48.4	-2 23.4	313 13.1	+21 05.2
12	86	49.5	336 58.2	+23 33.9	81 49.2	-0 25.5	257 50.7	-2 23.4	328 15.3	+21 05.1
13	101	52.0	351 57.3	33.5	96 50.1	24.9	272 53.1	23.5	343 17.4	05.1
14	116	54.5	6 56.5	33.2	111 51.0	24.2	287 55.5	23.5	358 19.6	05.0
15	131	56.9	21 55.7	32.8	126 51.8	23.6	302 57.9	23.6	13 21.7	05.0
16	146	59.4	36 54.8	32.5	141 52.7	22.9	318 00.3	23.6	28 23.9	04.9
17	162	01.9	51 54.0	+23 32.1	156 53.6	-0 22.3	333 02.6	-2 23.7	43 26.0	+21 04.9
18	177	04.3	66 53.2	+23 31.8	171 54.5	-0 21.6	348 05.0	-2 23.7	58 28.2	+21 04.8
19	192	06.8	81 52.3	31.4	186 55.3	21.0	3 07.4	23.8	73 30.3	04.8
20	207	09.2	96 51.5	31.0	201 56.2	20.3	18 09.8	23.8	88 32.5	04.7
21	222	11.7	111 50.7	30.7	216 57.1	19.7	33 12.1	23.9	103 34.6	04.7
22	237	14.2	126 49.8	30.3	231 58.0	19.0	48 14.5	23.9	118 36.8	04.6
23	252	16.6	141 49.0	30.0	246 58.8	18.4	63 16.9	24.0	133 38.9	04.5
24	267	19.1	156 48.2	+23 29.6	261 59.7	-0 17.7	78 19.3	-2 24.0	148 41.1	+21 04.5
Dif	—		-8	-4	+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 7			Edad: 12 ^d 1	PHE {	4 ^h : 58 ^h /6 12 ^h : 58 ^h /9 20 ^h : 59 ^h /2 R°: 60 ^m									
	PMG: 12 ^h 01 ^m 3								PMG: 21 ^h 46 ^m						
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	'	°	h m	h m	h m	h m	h m	m
0	179	41.5	+23	25.4	45	28.0	–18	20.1	60 N	21 27	23 14	** **	18 39	115	0 37 3
1	194	41.3		25.4	59	56.7		32.9	58	21 07	22 23	** **	21 105		0 49 9
2	209	41.2		25.4	74	25.2		45.6	56	20 50	21 53	** **	18 06	98	1 00 14
3	224	41.1		25.5	88	53.6	–18	58.2	54	36	30	23 18	17 53	94	09 19
4	239	40.9		25.5	103	21.9	–19	10.7	52	23	21 12	22 31	41 90		18 22
5	254	40.8	+23	25.6	117	50.0	–19	23.2	50	20 12	20 57	22 03	17 31	87	1 25 25
6	269	40.7	+23	25.6	132	18.1	–19	35.6	45	19 50	20 27	21 17	17 10	82	1 42 30
7	284	40.5		25.6	146	45.9	–19	47.8	40	32	20 05	20 46	16 54	77	1 55 35
8	299	40.4		25.7	161	13.7	–20	00.0	35	17	19 46	23	40 73		2 07 38
9	314	40.3		25.7	175	41.3	–20	12.1	30	19 04	31	20 05	27 71		17 42
10	329	40.1		25.7	190	08.7		24.0	20	18 42	19 06	19 35	16 07	66	34 47
11	344	40.0	+23	25.8	204	36.1	–20	35.9	10 N	18 23	18 46	19 13	15 49	62	2 50 51
12	359	39.8	+23	25.8	219	03.3	–20	47.7	0	18 05	18 28	18 54	15 32	59	3 04 55
13	14	39.7		25.8	233	30.3	–20	59.4	10 S	17 48	18 10	37	15 16	55	18 60
14	29	39.6		25.8	247	57.2	–21	10.9	20	29	17 53	21	14 58	51	34 64
15	44	39.4		25.9	262	24.0		22.4	30	17 08	34	18 04	38 47		3 52 69
16	59	39.3		25.9	276	50.6		33.7	35	16 55	24	17 55	27 43		4 02 72
17	74	39.2	+23	25.9	291	17.1	–21	44.9	40	16 41	17 12	17 46	14 13	41	4 14 76
18	89	39.0	+23	26.0	305	43.5	–21	56.0	45	16 24	16 58	17 35	13 58	36	4 29 80
19	104	38.9		26.0	320	09.7	–22	07.0	50	16 04	42	24	39 30		46 86
20	119	38.8		26.0	334	35.7		17.9	52	15 54	35	18	30 27		4 54 90
21	134	38.6		26.0	349	01.7		28.6	54	43	26	13	20 24		5 04 93
22	149	38.5		26.1	3	27.5		39.3	56	30	17	06	13 09	19	14 98
23	164	38.4		26.1	17	53.1	–22	49.8	58	15 15	16 07	17 00	12 56	14	26 103
24	179	38.2	+23	26.1	32	18.6	–23	00.1	60 S	14 58	15 55	16 52	12 41	7	5 40 111

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 6 ^h 09 ^m 7		Mag: –3.8 PMG: 13 ^h 34 ^m		Mag: +0.1 PMG: 6 ^h 32 ^m		Mag: –2.1 PMG: 18 ^h 44 ^m		Mag: +0.2 PMG: 14 ^h 03 ^m	
	hG ♈		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec	
h	°	'	°	'	°	'	°	'	°	'
0	267	19.1	156	48.2	261	59.7	78	19.3	148	41.1
1	282	21.6	171	47.3	277	00.6	93	21.6	163	43.2
2	297	24.0	186	46.5	292	01.5	108	24.0	178	45.4
3	312	26.5	201	45.7	307	02.4	123	26.4	193	47.5
4	327	29.0	216	44.8	322	03.2	138	28.8	208	49.7
5	342	31.4	231	44.0	337	04.1	153	31.1	223	51.8
6	357	33.9	246	43.2	352	05.0	168	33.5	238	54.0
7	12	36.4	261	42.4	7	05.9	183	35.9	253	56.1
8	27	38.8	276	41.5	22	06.7	198	38.3	268	58.3
9	42	41.3	291	40.7	37	07.6	213	40.6	284	00.4
10	57	43.7	306	39.9	52	08.5	228	43.0	299	02.6
11	72	46.2	321	39.0	67	09.4	243	45.4	314	04.7
12	87	48.7	336	38.2	82	10.2	258	47.7	329	06.9
13	102	51.1	351	37.4	97	11.1	273	50.1	344	09.0
14	117	53.6	6	36.6	112	12.0	288	52.5	359	11.2
15	132	56.1	21	35.7	127	12.9	303	54.9	14	13.3
16	147	58.5	36	34.9	142	13.8	318	57.2	29	15.5
17	163	01.0	51	34.1	157	14.6	333	59.6	44	17.6
18	178	03.5	66	33.3	172	15.5	349	02.0	59	19.8
19	193	05.9	81	32.4	187	16.4	4	04.3	74	21.9
20	208	08.4	96	31.6	202	17.3	19	06.7	89	24.1
21	223	10.9	111	30.8	217	18.2	34	09.1	104	26.2
22	238	13.3	126	30.0	232	19.0	49	11.5	119	28.4
23	253	15.8	141	29.1	247	19.9	64	13.8	134	30.5
24	268	18.2	156	28.3	262	20.8	79	16.2	149	32.7
Dif	—		–8		–4		+9		+22	
									–1	
									+22	
									–1	

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7				Edad: 13 ^d 1 PHE { 4 ^h : 59 ^m 5 12 ^h : 59 ^m 7 20 ^h : 60 ^m 0												
	PMG: 12 ^h 01 ^m 6				SD: 16 ^h 2 PMG: 22 ^h 46 ^m R°: 64 ^m												
	hG ☉		Dec		hG ☾		Dif				Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m
0	179	38.2	+23	26.1	32	18.6	-23	00.1	60 N	** **	0 49	2 36	20 34	106	0 40	9	
1	194	38.1		26.1	46	44.0	64	10.4	58	** **	1 40	2 56	20 06	95	0 58	19	
2	209	38.0		26.1	61	09.2	62	20.5	56	** **	2 10	3 13	19 44	90	1 14	25	
3	224	37.8		26.2	75	34.3	61	30.4	54	0 45	33	27	27 85		28	29	
4	239	37.7		26.2	89	59.3	60	40.3	52	1 32	2 51	40	19 11	84	40	33	
5	254	37.5	+23	26.2	104	24.1	58	-23 50.0	50	2 00	3 06	3 50	18 58	82	1 50	36	
6	269	37.4	+23	26.2	118	48.7	56	-23 59.5	45	2 46	3 36	4 13	18 32	77	2 12	42	
7	284	37.3		26.2	133	13.3	56	-24 08.9	40	3 16	3 58	31	18 11	74	30	46	
8	299	37.1		26.3	147	37.7	54	18.2	35	40	4 16	46	17 53	73	45	49	
9	314	37.0		26.3	162	01.9	52	27.3	30	3 58	32	4 59	38 71		2 59	51	
10	329	36.9		26.3	176	26.1	52	36.2	20	4 27	4 57	5 21	17 13	68	3 21	55	
11	344	36.7	+23	26.3	190	50.1	50	-24 45.0	10 N	4 50	5 17	5 40	16 51	66	3 41	58	
12	359	36.6	+23	26.3	205	13.9	48	-24 53.7	0	5 09	5 35	5 58	16 31	64	3 59	62	
13	14	36.5		26.3	219	37.6	47	-25 02.2	10 S	26	5 53	6 15	16 11	61	4 18	64	
14	29	36.3		26.3	234	01.2	46	10.5	20	42	6 10	34	15 49	59	4 38	67	
15	44	36.2		26.4	248	24.7	45	18.7	30	5 59	29	6 55	25 56		5 01	71	
16	59	36.1		26.4	262	48.0	43	26.7	35	6 08	39	7 08	15 10	54	14	74	
17	74	35.9	+23	26.4	277	11.2	42	-25 34.6	40	6 17	6 51	7 22	14 54	51	5 30	76	
18	89	35.8	+23	26.4	291	34.3	41	-25 42.2	45	6 27	7 05	7 39	14 34	49	5 49	80	
19	104	35.7		26.4	305	57.3	40	49.7	50	39	21	7 59	14 09	45	6 12	85	
20	119	35.5		26.4	320	20.1	38	-25 57.1	52	45	28	8 09	13 57	42	24	87	
21	134	35.4		26.4	334	42.8	37	-26 04.3	54	50	37	20	44 39		37	91	
22	149	35.2		26.4	349	05.4	36	11.2	56	6 56	46	33	28 35		6 52	95	
23	164	35.1		26.4	3	27.8	34	18.1	58	7 03	7 56	8 48	13 10	29	7 09	102	
24	179	35.0	+23	26.4	17	50.2	34	-26 24.7	60 S	7 11	8 08	9 05	12 48	19	7 31	112	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 6 ^h 05 ^m 8		Mag: -3.8 PMG: 13 ^h 35 ^m		Mag: +0.1 PMG: 6 ^h 30 ^m		Mag: -2.1 PMG: 18 ^h 40 ^m		Mag: +0.2 PMG: 14 ^h 00 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	268	18.2	156	28.3	+23	20.5	262	20.8	-0	02.2
1	283	20.7	171	27.5		20.1	277	21.7		01.5
2	298	23.2	186	26.7		19.7	292	22.6		00.9
3	313	25.6	201	25.8		19.3	307	23.4	-0	00.2
4	328	28.1	216	25.0		18.9	322	24.3	+0	00.4
5	343	30.6	231	24.2	+23	18.5	337	25.2	+0	01.1
6	358	33.0	246	23.4	+23	18.1	352	26.1	+0	01.7
7	13	35.5	261	22.6		17.7	7	27.0		02.4
8	28	38.0	276	21.7		17.3	22	27.8		03.0
9	43	40.4	291	20.9		16.9	37	28.7		03.7
10	58	42.9	306	20.1		16.5	52	29.6		04.3
11	73	45.4	321	19.3	+23	16.1	67	30.5	+0	04.9
12	88	47.8	336	18.5	+23	15.7	82	31.4	+0	05.6
13	103	50.3	351	17.6		15.3	97	32.3		06.2
14	118	52.7	6	16.8		14.9	112	33.1		06.9
15	133	55.2	21	16.0		14.5	127	34.0		07.5
16	148	57.7	36	15.2		14.1	142	34.9		08.2
17	164	00.1	51	14.4	+23	13.6	157	35.8	+0	08.8
18	179	02.6	66	13.5	+23	13.2	172	36.7	+0	09.5
19	194	05.1	81	12.7		12.8	187	37.5		10.1
20	209	07.5	96	11.9		12.4	202	38.4		10.8
21	224	10.0	111	11.1		12.0	217	39.3		11.4
22	239	12.5	126	10.3		11.6	232	40.2		12.1
23	254	14.9	141	09.5		11.1	247	41.1		12.7
24	269	17.4	156	08.7	+23	10.7	262	42.0	+0	13.3
Dif	—		-8		-4		+9		+6	
							+24		-1	
									+21	
									-1	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15:7 PMG: 12 ^h 01 ^m 8			Edad: 14 ^d 1 PHE { SD: 16:4 PMG: 23 ^h 50 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	Rº	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	179	35.0	+23	26.4	17	50.2	-26 24.7	60 N	21 28	23 15	** **	22 20 60	0 49 30	
1	194	34.8		26.4	32	12.4	32 31.1	58	21 07	22 23	** **	21 41 64	1 17 41	
2	209	34.7		26.4	46	34.5	31 37.4	56	20 50	21 53	** **	21 14 65	39 46	
3	224	34.6		26.4	60	56.6	31 43.5	54	36	31	23 19	20 52 66	1 57 49	
4	239	34.4		26.4	75	18.5	29 49.4	52	24	21 13	22 31	35 66	2 13 51	
5	254	34.3	+23	26.4	89	40.2	27 -26 55.1	50	20 13	20 58	22 03	20 20 66	2 26 53	
6	269	34.2	+23	26.4	104	01.9	27 -27 00.6	45	19 50	20 28	21 18	19 49 67	2 54 56	
7	284	34.0		26.4	118	23.5	26 06.0	40	32	20 05	20 47	25 67	3 16 58	
8	299	33.9		26.4	132	45.0	25 11.1	35	17	19 47	24	19 06 67	34 60	
9	314	33.8		26.4	147	06.4	24 16.0	30	19 04	32	20 05	18 49 67	3 50 61	
10	329	33.6		26.4	161	27.7	23 20.8	20	18 42	19 07	19 36	18 21 67	4 16 63	
11	344	33.5	+23	26.4	175	48.9	22 -27 25.3	10 N	18 23	18 46	19 13	17 57 67	4 39 65	
12	359	33.4	+23	26.4	190	10.0	21 -27 29.7	0	18 05	18 28	18 54	17 35 66	5 01 65	
13	14	33.2		26.4	204	31.1	21 33.8	10 S	17 48	18 11	37	17 12 67	22 67	
14	29	33.1		26.4	218	52.0	19 37.7	20	29	17 53	21	16 48 67	5 45 68	
15	44	33.0		26.4	233	12.9	19 41.5	30	17 08	35	18 04	21 66	6 12 70	
16	59	32.8		26.4	247	33.7	18 45.0	35	16 56	24	17 56	16 04 66	28 70	
17	74	32.7	+23	26.4	261	54.4	17 -27 48.3	40	16 42	17 12	17 46	15 45 66	6 46 72	
18	89	32.6	+23	26.4	276	15.0	16 -27 51.5	45	16 25	16 59	17 36	15 23 64	7 09 73	
19	104	32.4		26.4	290	35.6	16 54.4	50	16 04	42	24	14 54 63	37 75	
20	119	32.3		26.4	304	56.1	15 57.1	52	15 54	35	19	39 63	7 51 76	
21	134	32.1		26.4	319	16.6	15 -27 59.6	54	43	27	13	23 61	8 08 76	
22	149	32.0		26.4	333	37.0	14 -28 01.8	56	30	18	07	14 03 61	27 78	
23	164	31.9		26.3	347	57.3	13 03.9	58	15 15	16 07	17 00	13 39 58	8 51 81	
24	179	31.7	+23	26.3	2	17.6	13 -28 05.8	60 S	14 58	15 56	16 53	13 07 54	9 23 85	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 6 ^h 01 ^m 9		Mag: -3.8 PMG: 13 ^h 36 ^m		Mag: +0.1 PMG: 6 ^h 29 ^m		Mag: -2.1 PMG: 18 ^h 36 ^m		Mag: +0.2 PMG: 13 ^h 56 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	269	17.4	156	08.7	262	42.0	80	13.0	150	24.3
1	284	19.9	171	07.8	277	42.8	95	15.3	165	26.4
2	299	22.3	186	07.0	292	43.7	110	17.7	180	28.6
3	314	24.8	201	06.2	307	44.6	125	20.0	195	30.7
4	329	27.2	216	05.4	322	45.5	140	22.4	210	32.8
5	344	29.7	231	04.6	337	46.4	155	24.8	225	35.0
6	359	32.2	246	03.8	352	47.3	170	27.1	240	37.1
7	14	34.6	261	03.0	7	48.1	185	29.5	255	39.3
8	29	37.1	276	02.2	22	49.0	200	31.9	270	41.4
9	44	39.6	291	01.3	37	49.9	215	34.2	285	43.6
10	59	42.0	306	00.5	52	50.8	230	36.6	300	45.7
11	74	44.5	320	59.7	67	51.7	245	38.9	315	47.9
12	89	47.0	335	58.9	82	52.6	260	41.3	330	50.0
13	104	49.4	350	58.1	97	53.5	275	43.6	345	52.2
14	119	51.9	5	57.3	112	54.3	290	46.0	0	54.3
15	134	54.3	20	56.5	127	55.2	305	48.4	15	56.5
16	149	56.8	35	55.7	142	56.1	320	50.7	30	58.6
17	164	59.3	50	54.9	157	57.0	335	53.1	46	00.8
18	180	01.7	65	54.1	172	57.9	350	55.4	61	02.9
19	195	04.2	80	53.3	187	58.8	5	57.8	76	05.1
20	210	06.7	95	52.5	202	59.7	21	00.2	91	07.2
21	225	09.1	110	51.7	218	00.5	36	02.5	106	09.4
22	240	11.6	125	50.8	233	01.4	51	04.9	121	11.5
23	255	14.1	140	50.0	248	02.3	66	07.2	136	13.6
24	270	16.5	155	49.2	263	03.2	81	09.6	151	15.8
Dif	—		-8		-4		+24		+21	
					+9		-1		-	

UT	SOL				LUNA							Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7 PMG: 12 ^h 02 ^m 0				Edad: 15 ^d 1 PHE { 4 ^h : 60 ^m 7 12 ^h : 60 ^m 8 20 ^h : 60 ^m 9 R°: ***															
	hG ☉		Dec		hG ☾		Dif		Dec		Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	179	31.7	+23	26.3	2	17.6	-28	05.8	16		60 N	** *	0 49	2 36	23 20	21	1 19	80		
1	194	31.6		26.3	16	37.8	12	07.4	16		58	** *	1 41	2 56	22 45	31	1 58	76		
2	209	31.5		26.3	30	58.0	12	08.8	14		56	** *	2 11	3 13	22 19	38	2 25	75		
3	224	31.3		26.3	45	18.2	12	10.0	12		54	0 45	33	28	21 58	42	2 46	75		
4	239	31.2		26.3	59	38.3	11	11.0	10		52	1 32	2 51	40	41 45	3 04	74			
5	254	31.1	+23	26.3	73	58.4	11	-28 11.8	8		50	2 00	3 06	3 51	21 26	48	3 19	73		
6	269	30.9	+23	26.2	88	18.4	10	-28 12.3	5		45	2 46	3 36	4 13	20 56	52	3 50	72		
7	284	30.8		26.2	102	38.4	10	12.7	4		40	3 17	3 59	31	32 55	4 14	71			
8	299	30.7		26.2	116	58.4	10	12.8	1		35	40	4 17	4 47	20 13	57	34	70		
9	314	30.5		26.2	131	18.4	10	12.7	1		30	3 59	32	5 00	19 56	59	4 51	69		
10	329	30.4		26.2	145	38.4	10	12.3	4		20	4 28	4 57	22	28 62	5 19	69			
11	344	30.3	+23	26.2	159	58.3	9	-28 11.8	5		10 N	4 51	5 18	5 41	19 04	64	5 44	67		
12	359	30.1	+23	26.1	174	18.3	10	-28 11.0	8		0	5 10	5 36	5 58	18 41	66	6 06	67		
13	14	30.0		26.1	188	38.2	9	10.1	9		10 S	27	5 53	6 16	18 19	68	29	66		
14	29	29.9		26.1	202	58.2	10	08.9	12		20	43	6 10	34	17 55	70	6 53	65		
15	44	29.7		26.1	217	18.1	9	07.4	15		30	5 59	29	6 56	27 72	7 22	63			
16	59	29.6		26.0	231	38.0	9	05.8	16		35	6 08	40	7 08	17 10	74	38	63		
17	74	29.5	+23	26.0	245	58.0	10	-28 03.9	19		40	6 18	6 52	7 22	16 51	75	7 58	61		
18	89	29.3	+23	26.0	260	18.0	10	-28 01.9	20		45	6 28	7 05	7 39	16 27	78	8 22	59		
19	104	29.2		26.0	274	38.0	10	-27 59.6	23		50	40	21	8 00	15 57	81	8 52	57		
20	119	29.1		25.9	288	58.0	10	57.0	26		52	45	29	10	42 83	9 07	55			
21	134	28.9		25.9	303	18.0	10	54.3	27		54	51	37	21	24 86	24	54			
22	149	28.8		25.9	317	38.0	10	51.4	29		56	6 57	46	34	15 04	88	9 45	51		
23	164	28.7		25.9	331	58.1	11	48.2	32		58	7 04	7 56	8 48	14 37	93	10 12	46		
24	179	28.5	+23	25.8	346	18.3	12	-27 44.8	34		60 S	7 11	8 08	9 06	14 01	101	10 48	39		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 5 ^h 57 ^m 9		Mag: -3.8 PMG: 13 ^h 37 ^m		Mag: +0.1 PMG: 6 ^h 27 ^m		Mag: -2.1 PMG: 18 ^h 32 ^m		Mag: +0.2 PMG: 13 ^h 53 ^m					
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄					
h	°	'	°	'	°	'	°	'	°	'				
0	270	16.5	155	49.2	+23 00.3	263	03.2	+0 28.8	81	09.6	-2 27.9	151	15.8	+21 00.6
1	285	19.0	170	48.4	+22 59.8	278	04.1	29.5	96	11.9	28.0	166	17.9	00.5
2	300	21.5	185	47.6	59.4	293	05.0	30.1	111	14.3	28.0	181	20.1	00.5
3	315	23.9	200	46.8	58.9	308	05.9	30.7	126	16.6	28.1	196	22.2	00.4
4	330	26.4	215	46.0	58.5	323	06.7	31.4	141	19.0	28.1	211	24.4	00.4
5	345	28.8	230	45.2	+22 58.0	338	07.6	+0 32.0	156	21.4	-2 28.2	226	26.5	+21 00.3
6	0	31.3	245	44.4	+22 57.6	353	08.5	+0 32.7	171	23.7	-2 28.2	241	28.7	+21 00.3
7	15	33.8	260	43.6	57.1	8	09.4	33.3	186	26.1	28.3	256	30.8	00.2
8	30	36.2	275	42.8	56.7	23	10.3	34.0	201	28.4	28.4	271	33.0	00.1
9	45	38.7	290	42.0	56.2	38	11.2	34.6	216	30.8	28.4	286	35.1	+21 00.1
10	60	41.2	305	41.2	55.7	53	12.1	35.2	231	33.1	28.5	301	37.3	+21 00.0
11	75	43.6	320	40.4	+22 55.3	68	13.0	+0 35.9	246	35.5	-2 28.5	316	39.4	+21 00.0
12	90	46.1	335	39.6	+22 54.8	83	13.9	+0 36.5	261	37.8	-2 28.6	331	41.6	+20 59.9
13	105	48.6	350	38.8	54.4	98	14.7	37.2	276	40.2	28.7	346	43.7	59.9
14	120	51.0	5	38.0	53.9	113	15.6	37.8	291	42.5	28.7	1	45.8	59.8
15	135	53.5	20	37.2	53.4	128	16.5	38.5	306	44.9	28.8	16	48.0	59.8
16	150	56.0	35	36.4	53.0	143	17.4	39.1	321	47.2	28.8	31	50.1	59.7
17	165	58.4	50	35.6	+22 52.5	158	18.3	+0 39.7	336	49.6	-2 28.9	46	52.3	+20 59.6
18	181	00.9	65	34.8	+22 52.0	173	19.2	+0 40.4	351	51.9	-2 29.0	61	54.4	+20 59.6
19	196	03.3	80	34.0	51.6	188	20.1	41.0	6	54.3	29.0	76	56.6	59.5
20	211	05.8	95	33.2	51.1	203	21.0	41.7	21	56.6	29.1	91	58.7	59.5
21	226	08.3	110	32.4	50.6	218	21.9	42.3	36	59.0	29.1	107	00.9	59.4
22	241	10.7	125	31.6	50.1	233	22.7	42.9	52	01.3	29.2	122	03.0	59.4
23	256	13.2	140	30.8	49.7	248	23.6	43.6	67	03.7	29.3	137	05.2	59.3
24	271	15.7	155	30.0	+22 49.2	263	24.5	+0 44.2	82	06.0	-2 29.3	152	07.3	+20 59.3
Dif	—		-8		-5	+9		+6	+24		-1	+21		-1

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 16 ^d 1 PHE	4 ^h : 60 ^m 9 12 ^h : 61 ^m 0 20 ^h : 60 ^m 9										
	PMG: 12 ^h 02 ^m 2				SD: 16 ^h 6										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m		h m m	
0	179	28.5	+23 25.8	346	18.3	-27 44.8	36	60 N	21 28	23 14	** **	23 41 6		2 39 116	
1	194	28.4	25.8	0	38.4	41.2	36	58	21 08	22 23	** **	23 16 15		3 14 105	
2	209	28.3	25.8	14	58.6	37.4	38	56	20 51	21 53	** **	22 57 21		3 40 98	
3	224	28.1	25.7	29	18.9	33.4	40	54	36	31	23 18	40 26		4 01 93	
4	239	28.0	25.7	43	39.2	29.1	43	52	24	21 13	22 31	26 30		18 90	
5	254	27.9	+23 25.7	57	59.5	-27 24.7	44	50	20 13	20 58	22 03	22 14 32		4 32 88	
6	269	27.7	+23 25.6	72	19.9	-27 20.0	47	45	19 51	20 28	21 18	21 48 38		5 02 82	
7	284	27.6	25.6	86	40.4	15.1	49	40	33	20 05	20 47	27 43		25 79	
8	299	27.4	25.6	101	00.9	10.0	51	35	18	19 47	24	21 10 47		5 44 76	
9	314	27.3	25.5	115	21.5	-27 04.7	53	30	19 05	32	20 05	20 55 50		6 00 74	
10	329	27.2	25.5	129	42.1	-26 59.2	55	20	18 42	19 07	19 36	30 54		28 70	
11	344	27.0	+23 25.5	144	02.8	-26 53.5	57	10 N	18 23	18 47	19 14	20 08 58		6 51 67	
12	359	26.9	+23 25.4	158	23.6	-26 47.6	59	0	18 06	18 28	18 55	19 47 62		7 13 64	
13	14	26.8	25.4	172	44.5	41.5	61	10 S	17 48	18 11	38	27 65		35 61	
14	29	26.6	25.3	187	05.5	35.2	63	20	30	17 54	21	19 05 69		7 58 58	
15	44	26.5	25.3	201	26.5	28.7	65	30	17 09	35	18 05	18 39 74		8 25 54	
16	59	26.4	25.3	215	47.6	21.9	68	35	16 56	24	17 56	24 77		41 52	
17	74	26.2	+23 25.2	230	08.8	-26 15.0	69	40	16 42	17 13	17 47	18 06 81		8 59 49	
18	89	26.1	+23 25.2	244	30.1	-26 07.9	71	45	16 25	16 59	17 36	17 45 85		9 21 45	
19	104	26.0	25.1	258	51.4	-26 00.6	73	50	16 04	43	25	18 90		9 49 40	
20	119	25.8	25.1	273	12.9	-25 53.1	75	52	15 55	36	19	17 05 93		10 02 37	
21	134	25.7	25.1	287	34.5	45.4	77	54	43	27	14	16 50 97		18 33	
22	149	25.6	25.0	301	56.1	37.6	78	56	31	18	07	32 102		36 29	
23	164	25.4	25.0	316	17.9	29.5	81	58	15 16	16 08	17 01	16 10 109		10 58 23	
24	179	25.3	+23 24.9	330	39.8	-25 21.3	82	60 S	14 58	15 56	16 53	15 42 118		11 27 13	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 5 ^h 54 ^m 0		Mag: -3.8 PMG: 13 ^h 39 ^m		Mag: 0.0 PMG: 6 ^h 26 ^m		Mag: -2.1 PMG: 18 ^h 29 ^m		Mag: +0.2 PMG: 13 ^h 50 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	271	15.7	155 30.0	+22 49.2	263 24.5	+0 44.2	82 06.0	-2 29.3	152 07.3	+20 59.3
1	286	18.1	170 29.3	48.7	278 25.4	44.9	97 08.4	29.4	167 09.4	59.2
2	301	20.6	185 28.5	48.2	293 26.3	45.5	112 10.7	29.4	182 11.6	59.1
3	316	23.1	200 27.7	47.8	308 27.2	46.2	127 13.1	29.5	197 13.7	59.1
4	331	25.5	215 26.9	47.3	323 28.1	46.8	142 15.4	29.6	212 15.9	59.0
5	346	28.0	230 26.1	+22 46.8	338 29.0	+0 47.4	157 17.8	-2 29.6	227 18.0	+20 59.0
6	1	30.5	245 25.3	+22 46.3	353 29.9	+0 48.1	172 20.1	-2 29.7	242 20.2	+20 58.9
7	16	32.9	260 24.5	45.8	8 30.8	48.7	187 22.5	29.7	257 22.3	58.9
8	31	35.4	275 23.7	45.3	23 31.6	49.4	202 24.8	29.8	272 24.5	58.8
9	46	37.8	290 22.9	44.9	38 32.5	50.0	217 27.2	29.9	287 26.6	58.8
10	61	40.3	305 22.1	44.4	53 33.4	50.6	232 29.5	29.9	302 28.7	58.7
11	76	42.8	320 21.3	+22 43.9	68 34.3	+0 51.3	247 31.9	-2 30.0	317 30.9	+20 58.6
12	91	45.2	335 20.5	+22 43.4	83 35.2	+0 51.9	262 34.2	-2 30.1	332 33.0	+20 58.6
13	106	47.7	350 19.8	42.9	98 36.1	52.6	277 36.6	30.1	347 35.2	58.5
14	121	50.2	5 19.0	42.4	113 37.0	53.2	292 38.9	30.2	2 37.3	58.5
15	136	52.6	20 18.2	41.9	128 37.9	53.8	307 41.2	30.2	17 39.5	58.4
16	151	55.1	35 17.4	41.4	143 38.8	54.5	322 43.6	30.3	32 41.6	58.4
17	166	57.6	50 16.6	+22 40.9	158 39.7	+0 55.1	337 45.9	-2 30.4	47 43.8	+20 58.3
18	182	00.0	65 15.8	+22 40.4	173 40.6	+0 55.8	352 48.3	-2 30.4	62 45.9	+20 58.3
19	197	02.5	80 15.0	39.9	188 41.5	56.4	7 50.6	30.5	77 48.1	58.2
20	212	05.0	95 14.2	39.4	203 42.4	57.0	22 53.0	30.6	92 50.2	58.1
21	227	07.4	110 13.5	38.9	218 43.2	57.7	37 55.3	30.6	107 52.3	58.1
22	242	09.9	125 12.7	38.4	233 44.1	58.3	52 57.7	30.7	122 54.5	58.0
23	257	12.3	140 11.9	37.9	248 45.0	59.0	68 00.0	30.7	137 56.6	58.0
24	272	14.8	155 11.1	+22 37.4	263 45.9	+0 59.6	83 02.3	-2 30.8	152 58.8	+20 57.9
Dif	—		-8	-5	+9	+6	+23	-1	+21	-1

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna									
	SD: 15 ^h 7 PMG: 12 ^h 02 ^m 4				Edad: 17 ^d 1 PHE { 4 ^h : 60 ^h 9 12 ^h : 60 ^h 8 20 ^h : 60 ^h 7 R°: 60 ^m																			
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°								
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m							
0	179	25.3	+23	24.9	330	39.8	-25	21.3	60 N	** **	0 51	2 37	23 47	2	4 35	120								
1	194	25.2		24.9	345	01.7	29	12.8	58	** **	1 41	2 57	31	8	4 59	111								
2	209	25.0		24.8	359	23.8	31	-25	04.2	56	** **	2 11	3 14	18	12	5 18	104							
3	224	24.9		24.8	13	46.0	32	-24	55.4	54	0 46	34	28	23	06	17	34 99							
4	239	24.8		24.7	28	08.3	33		46.5	52	1 33	2 52	41	22	56	20	5 48 95							
5	254	24.6	+23	24.7	42	30.7	34	-24	37.3	50	2 01	3 07	3 51	22	46	23	6 00 92							
6	269	24.5	+23	24.6	56	53.2	35	-24	28.0	45	2 47	3 37	4 14	22	26	30	6 24 86							
7	284	24.4		24.6	71	15.8	36		18.5	40	3 17	3 59	32	22	10	34	6 44 81							
8	299	24.3		24.5	85	38.6	38	-24	08.8	35	41	4 17	4 47	21	57	38	7 00 77							
9	314	24.1		24.5	100	01.4	38	-23	59.0	30	3 59	33	5 00	45	41	14	74							
10	329	24.0		24.4	114	24.4	40		49.0	20	4 28	4 58	22	24	47	38	68							
11	344	23.9	+23	24.4	128	47.5	41	-23	38.9	10 N	4 51	5 18	5 41	21	06	52	7 58 64							
12	359	23.7	+23	24.3	143	10.7	42	-23	28.6	0	5 10	5 36	5 59	20	49	57	8 17 60							
13	14	23.6		24.2	157	34.0	43		18.1	10 S	27	5 53	6 16	32	62	36	55							
14	29	23.5		24.2	171	57.5	45	-23	07.5	20	5 43	6 11	35	20	14	66	8 56 51							
15	44	23.3		24.1	186	21.0	45	-22	56.7	30	6 00	30	6 56	19	53	72	9 19 46							
16	59	23.2		24.1	200	44.7	47		45.7	35	08	40	7 08	41	75	33	42							
17	74	23.1	+23	24.0	215	08.6	49	-22	34.6	40	6 18	6 52	7 23	19	27	79	9 48 38							
18	89	22.9	+23	24.0	229	32.5	49	-22	23.4	45	6 28	7 05	7 39	19	10	84	10 06 34							
19	104	22.8		23.9	243	56.6	51		12.0	50	40	22	8 00	18	48	91	29 27							
20	119	22.7		23.8	258	20.8	52	-22	00.5	52	45	29	10	38	95	39	25							
21	134	22.5		23.8	272	45.1	53	-21	48.8	54	51	37	21	27	98	10 51	21							
22	149	22.4		23.7	287	09.5	54		37.0	56	6 57	46	34	18	14	102	11 05 17							
23	164	22.3		23.7	301	34.1	56		25.1	58	7 04	7 57	8 48	17	59	108	21 12							
24	179	22.1	+23	23.6	315	58.8	57	-21	13.0	60 S	7 11	8 08	9 06	17	40	115	11 40 5							
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO							
	PMG 5 ^h 50 ^m 1				Mag: -3.8 PMG: 13 ^h 40 ^m				Mag: 0.0 PMG: 6 ^h 25 ^m				Mag: -2.1 PMG: 18 ^h 25 ^m				Mag: +0.2 PMG: 13 ^h 46 ^m							
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	272	14.8			155	11.1	+22	37.4	263	45.9	+0	59.6	83	02.3	-2	30.8	152	58.8	+20	57.9				
1	287	17.3			170	10.3		36.9	278	46.8	+1	00.2	98	04.7		30.9	168	00.9		57.9				
2	302	19.7			185	09.5		36.4	293	47.7		00.9	113	07.0		30.9	183	03.1		57.8				
3	317	22.2			200	08.8		35.9	308	48.6		01.5	128	09.4		31.0	198	05.2		57.7				
4	332	24.7			215	08.0		35.4	323	49.5		02.1	143	11.7		31.1	213	07.3		57.7				
5	347	27.1			230	07.2	+22	34.9	338	50.4	+1	02.8	158	14.1	-2	31.1	228	09.5	+20	57.6				
6	2	29.6			245	06.4	+22	34.4	353	51.3	+1	03.4	173	16.4	-2	31.2	243	11.6	+20	57.6				
7	17	32.1			260	05.6		33.9	8	52.2		04.1	188	18.7		31.3	258	13.8		57.5				
8	32	34.5			275	04.9		33.4	23	53.1		04.7	203	21.1		31.3	273	15.9		57.5				
9	47	37.0			290	04.1		32.9	38	54.0		05.3	218	23.4		31.4	288	18.1		57.4				
10	62	39.5			305	03.3		32.3	53	54.9		06.0	233	25.8		31.4	303	20.2		57.4				
11	77	41.9			320	02.5	+22	31.8	68	55.8	+1	06.6	248	28.1	-2	31.5	318	22.4	+20	57.3				
12	92	44.4			335	01.7	+22	31.3	83	56.7	+1	07.3	263	30.4	-2	31.6	333	24.5	+20	57.2				
13	107	46.8			350	01.0		30.8	98	57.6		07.9	278	32.8		31.6	348	26.6		57.2				
14	122	49.3			5	00.2		30.3	113	58.5		08.5	293	35.1		31.7	3	28.8		57.1				
15	137	51.8			19	59.4		29.8	128	59.3		09.2	308	37.5		31.8	18	30.9		57.1				
16	152	54.2			34	58.6		29.2	144	00.2		09.8	323	39.8		31.8	33	33.1		57.0				
17	167	56.7			49	57.8	+22	28.7	159	01.1	+1	10.4	338	42.1	-2	31.9	48	35.2	+20	57.0				
18	182	59.2			64	57.1	+22	28.2	174	02.0	+1	11.1	353	44.5	-2	32.0	63	37.4	+20	56.9				
19	198	01.6			79	56.3		27.7	189	02.9		11.7	8	46.8		32.0	78	39.5		56.9				
20	213	04.1			94	55.5		27.2	204	03.8		12.3	23	49.2		32.1	93	41.6		56.8				
21	228	06.6			109	54.7		26.6	219	04.7		13.0	38	51.5		32.2	108	43.8		56.7				
22	243	09.0			124	54.0		26.1	234	05.6		13.6	53	53.8		32.2	123	45.9		56.7				
23	258	11.5			139	53.2		25.6	249	06.5		14.3	68	56.2		32.3	138	48.1		56.6				
24	273	14.0			154	52.4	+22	25.0	264	07.4	+1	14.9	83	58.5	-2	32.4	153	50.2	+20	56.6				
Dif	—				-8				+9				+23				+21				-1			

UT	SOL				LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna			
	SD: 15/7 PMG: 12 ^h 02 ^m 6				Edad: 18 ^d 1 PHE { 4 ^h : 60/6 12 ^h : 60/4 20 ^h : 60/2 PMG: 3 ^h 03 ^m R°: 56 ^m														
	hG ☉		Dec		hG ☾		Dif				Dec		Dif		Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	°	'	°	'	h m	h m	h m	h m	h m	h m	
0	179	22.1	+23	23.6	315	58.8		-21	13.0	122	60 N	21 28	23 12	** **	23 49	0	6 35	112	
1	194	22.0		23.5	330	23.6	58	-21	00.8	122	58	21 07	22 23	** **	39 5	5	6 50	105	
2	209	21.9		23.5	344	48.6	60	-20	48.5	123	56	20 51	21 53	** **	30 9	7	7 02	101	
3	224	21.7		23.4	359	13.7	61		36.0	125	54	36	31	23 17	23 12	13	97		
4	239	21.6		23.3	13	38.9	62		23.4	126	52	24	21 13	22 31	16 15	23	93		
5	254	21.5	+23	23.3	28	04.2	63	-20	10.7	127	50	20 13	20 58	22 03	23 09	18	7 32	89	
6	269	21.3	+23	23.2	42	29.7	65	-19	57.8	129	45	19 51	20 28	21 18	22 56	23	7 50	83	
7	284	21.2		23.1	56	55.3	66		44.9	129	40	33	20 06	20 47	44 28	8	05	78	
8	299	21.1		23.1	71	21.0	67		31.8	131	35	18	19 48	24	35 32	17	74		
9	314	20.9		23.0	85	46.8	68		18.6	132	30	19 05	32	20 06	26 36	28	70		
10	329	20.8		22.9	100	12.8	70	-19	05.3	133	20	18 43	19 07	19 37	22 11	42	8 46	64	
11	344	20.7	+23	22.8	114	38.9	71	-18	51.9	134	10 N	18 24	18 47	19 14	21 58	47	9 02	59	
12	359	20.5	+23	22.8	129	05.1	72	-18	38.4	135	0	18 06	18 29	18 55	21 46	52	9 17	54	
13	14	20.4		22.7	143	31.5	74		24.8	136	10 S	17 49	18 12	38	34 56	31	50		
14	29	20.3		22.6	157	57.9	74	-18	11.1	137	20	30	17 54	22	20 62	9	47	44	
15	44	20.2		22.6	172	24.5	76	-17	57.2	139	30	17 09	36	18 05	21 05	68	10	05	38
16	59	20.0		22.5	186	51.2	77		43.3	139	35	16 57	25	17 57	20 56	72	15	35	
17	74	19.9	+23	22.4	201	18.1	79	-17	29.3	140	40	16 43	17 13	17 47	20 46	76	10	26	31
18	89	19.8	+23	22.3	215	45.0	79	-17	15.2	141	45	16 26	17 00	17 37	20 34	81	10	40	26
19	104	19.6		22.2	230	12.1	81	-17	01.0	142	50	16 05	16 44	25	19 88	10	56	21	
20	119	19.5		22.2	244	39.3	82	-16	46.7	143	52	15 55	36	20	13 90	11	04	17	
21	134	19.4		22.1	259	06.6	83		32.3	144	54	44	28	14	20 05	93	12	15	
22	149	19.2		22.0	273	34.0	84		17.8	145	56	32	19	08	19 56	98	22	11	
23	164	19.1		21.9	288	01.6	86	-16	03.3	145	58	15 17	16 09	17 01	47 101	33	6		
24	179	19.0	+23	21.9	302	29.3	87	-15	48.7	146	60 S	14 59	15 57	16 54	19 35	107	11	45	2

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 5 ^h 46 ^m 1		Mag: -3.8 PMG: 13 ^h 41 ^m		Mag: 0.0 PMG: 6 ^h 23 ^m		Mag: -2.1 PMG: 18 ^h 21 ^m		Mag: +0.2 PMG: 13 ^h 43 ^m									
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄									
h	°	'	°	'	°	'	°	'	°	'								
0	273	14.0	154	52.4	+22	25.0	264	07.4	+1	14.9	83	58.5	-2	32.4	153	50.2	+20	56.6
1	288	16.4	169	51.7		24.5	279	08.3		15.5	99	00.8		32.4	168	52.4		56.5
2	303	18.9	184	50.9		24.0	294	09.2		16.2	114	03.2		32.5	183	54.5		56.5
3	318	21.3	199	50.1		23.4	309	10.1		16.8	129	05.5		32.6	198	56.6		56.4
4	333	23.8	214	49.3		22.9	324	11.0		17.4	144	07.8		32.6	213	58.8		56.3
5	348	26.3	229	48.6	+22	22.4	339	11.9	+1	18.1	159	10.2	-2	32.7	229	00.9	+20	56.3
6	3	28.7	244	47.8	+22	21.8	354	12.8	+1	18.7	174	12.5	-2	32.8	244	03.1	+20	56.2
7	18	31.2	259	47.0		21.3	9	13.7		19.3	189	14.9		32.8	259	05.2		56.2
8	33	33.7	274	46.3		20.8	24	14.6		20.0	204	17.2		32.9	274	07.4		56.1
9	48	36.1	289	45.5		20.2	39	15.5		20.6	219	19.5		33.0	289	09.5		56.1
10	63	38.6	304	44.7		19.7	54	16.4		21.3	234	21.9		33.0	304	11.6		56.0
11	78	41.1	319	44.0	+22	19.1	69	17.3	+1	21.9	249	24.2	-2	33.1	319	13.8	+20	55.9
12	93	43.5	334	43.2	+22	18.6	84	18.2	+1	22.5	264	26.5	-2	33.2	334	15.9	+20	55.9
13	108	46.0	349	42.4		18.1	99	19.1		23.2	279	28.9		33.2	349	18.1		55.8
14	123	48.5	4	41.7		17.5	114	20.0		23.8	294	31.2		33.3	4	20.2		55.8
15	138	50.9	19	40.9		17.0	129	20.9		24.4	309	33.5		33.4	19	22.4		55.7
16	153	53.4	34	40.1		16.4	144	21.8		25.1	324	35.9		33.4	34	24.5		55.7
17	168	55.8	49	39.4	+22	15.9	159	22.7	+1	25.7	339	38.2	-2	33.5	49	26.6	+20	55.6
18	183	58.3	64	38.6	+22	15.3	174	23.6	+1	26.3	354	40.5	-2	33.6	64	28.8	+20	55.6
19	199	00.8	79	37.8		14.8	189	24.5		27.0	9	42.9		33.6	79	30.9		55.5
20	214	03.2	94	37.1		14.2	204	25.4		27.6	24	45.2		33.7	94	33.1		55.4
21	229	05.7	109	36.3		13.7	219	26.3		28.2	39	47.5		33.8	109	35.2		55.4
22	244	08.2	124	35.5		13.1	234	27.2		28.9	54	49.8		33.8	124	37.3		55.3
23	259	10.6	139	34.8		12.6	249	28.1		29.5	69	52.2		33.9	139	39.5		55.3
24	274	13.1	154	34.0	+22	12.0	264	29.0	+1	30.1	84	54.5	-2	34.0	154	41.6	+20	55.2
Dif	—		-8		-5		+9		+6		+23		-1		+21		-1	

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna		
	SD: 15 ^h 7 PMG: 12 ^h 02 ^m 8				Edad: 19 ^d 1 PHE { SD: 16 ^h 4 PMG: 3 ^h 59 ^m R°: 50 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	179	19.0	+23	21.9	302	29.3	-15	48.7	60 N	** **	0 53	2 38	23 49	0	8 27	103		
1	194	18.8		21.8	316	57.0		33.9	58	** **	1 43	2 58	44	3	35	99		
2	209	18.7		21.7	331	24.9		19.2	56	** **	2 12	3 15	39	7	43	95		
3	224	18.6		21.6	345	52.9	90	-15 04.3	54	0 49	35	29	35	9	50	91		
4	239	18.4		21.5	0	21.1	92	-14 49.4	52	1 35	2 53	41	31	12	8 56	88		
5	254	18.3	+23	21.4	14	49.3	92	-14 34.4	50	2 02	3 08	3 52	23 27	15	9 01	85		
6	269	18.2	+23	21.4	29	17.6	93	-14 19.3	45	2 48	3 37	4 15	23 19	20	9 13	79		
7	284	18.1		21.3	43	46.1	95	-14 04.1	40	3 18	4 00	33	12	25	23	74		
8	299	17.9		21.2	58	14.6	95	-13 48.9	35	3 41	18	4 48	07	28	31	70		
9	314	17.8		21.1	72	43.3	97	33.7	30	4 00	33	5 01	23	02	31	38	66	
10	329	17.7		21.0	87	12.1	98	18.3	20	29	4 58	23	22 53	37	9 50	60		
11	344	17.5	+23	20.9	101	40.9	98	-13 02.9	10 N	4 51	5 19	5 42	22 45	43	10 01	55		
12	359	17.4	+23	20.8	116	09.9	100	-12 47.5	0	5 10	5 37	5 59	22 38	48	10 11	50		
13	14	17.3		20.7	130	39.0	101	32.0	10 S	27	5 54	6 17	30	53	21	44		
14	29	17.1		20.6	145	08.2	102	16.4	20	5 44	6 11	35	22	59	31	40		
15	44	17.0		20.6	159	37.4	102	-12 00.8	30	6 00	30	6 56	13	65	43	33		
16	59	16.9		20.5	174	06.8	104	-11 45.2	35	09	40	7 09	08	68	50	30		
17	74	16.8	+23	20.4	188	36.3	105	-11 29.5	40	6 18	6 52	7 23	22 02	72	10 57	26		
18	89	16.6	+23	20.3	203	05.8	105	-11 13.7	45	6 28	7 06	7 39	21 55	77	11 06	22		
19	104	16.5		20.2	217	35.5	107	-10 57.9	50	40	22	8 00	47	82	17	16		
20	119	16.4		20.1	232	05.3	108	42.1	52	45	29	10	43	85	21	14		
21	134	16.2		20.0	246	35.1	108	26.2	54	51	37	21	38	89	27	11		
22	149	16.1		19.9	261	05.0	109	-10 10.3	56	6 57	46	34	34	91	33	7		
23	164	16.0		19.8	275	35.0	110	-9 54.3	58	7 04	7 57	8 48	28	96	39	4		
24	179	15.8	+23	19.7	290	05.2	112	-9 38.3	60 S	7 11	8 08	9 06	21 22	100	11 47	0		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 5 ^h 42 ^m 2		Mag: -3.8 PMG: 13 ^h 42 ^m		Mag: 0.0 PMG: 6 ^h 22 ^m		Mag: -2.1 PMG: 18 ^h 18 ^m		Mag: +0.2 PMG: 13 ^h 39 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	274	13.1	154	34.0	+22	12.0	264	29.0	+1	30.1	84	54.5	-2	34.0	154	41.6	+20	55.2
1	289	15.6	169	33.2		11.5	279	29.9		30.8	99	56.8		34.0	169	43.8		55.2
2	304	18.0	184	32.5		10.9	294	30.8		31.4	114	59.2		34.1	184	45.9		55.1
3	319	20.5	199	31.7		10.3	309	31.7		32.0	130	01.5		34.2	199	48.1		55.0
4	334	22.9	214	31.0		09.8	324	32.6		32.7	145	03.8		34.2	214	50.2		55.0
5	349	25.4	229	30.2	+22	09.2	339	33.5	+1	33.3	160	06.2	-2	34.3	229	52.3	+20	54.9
6	4	27.9	244	29.4	+22	08.7	354	34.4	+1	33.9	175	08.5	-2	34.4	244	54.5	+20	54.9
7	19	30.3	259	28.7		08.1	9	35.3		34.6	190	10.8		34.5	259	56.6		54.8
8	34	32.8	274	27.9		07.5	24	36.2		35.2	205	13.1		34.5	274	58.8		54.8
9	49	35.3	289	27.2		07.0	39	37.1		35.8	220	15.5		34.6	290	00.9		54.7
10	64	37.7	304	26.4		06.4	54	38.0		36.5	235	17.8		34.7	305	03.0		54.6
11	79	40.2	319	25.7	+22	05.8	69	38.9	+1	37.1	250	20.1	-2	34.7	320	05.2	+20	54.6
12	94	42.7	334	24.9	+22	05.3	84	39.8	+1	37.7	265	22.5	-2	34.8	335	07.3	+20	54.5
13	109	45.1	349	24.1		04.7	99	40.7		38.4	280	24.8		34.9	350	09.5		54.5
14	124	47.6	4	23.4		04.1	114	41.6		39.0	295	27.1		34.9	5	11.6		54.4
15	139	50.1	19	22.6		03.5	129	42.5		39.6	310	29.4		35.0	20	13.8		54.4
16	154	52.5	34	21.9		03.0	144	43.4		40.3	325	31.8		35.1	35	15.9		54.3
17	169	55.0	49	21.1	+22	02.4	159	44.3	+1	40.9	340	34.1	-2	35.2	50	18.0	+20	54.2
18	184	57.4	64	20.4	+22	01.8	174	45.2	+1	41.5	355	36.4	-2	35.2	65	20.2	+20	54.2
19	199	59.9	79	19.6		01.2	189	46.1		42.2	10	38.7		35.3	80	22.3		54.1
20	215	02.4	94	18.9		00.7	204	47.0		42.8	25	41.1		35.4	95	24.5		54.1
21	230	04.8	109	18.1	+22	00.1	219	47.9		43.4	40	43.4		35.4	110	26.6		54.0
22	245	07.3	124	17.4	+21	59.5	234	48.8		44.1	55	45.7		35.5	125	28.7		54.0
23	260	09.8	139	16.6		58.9	249	49.7		44.7	70	48.0		35.6	140	30.9		53.9
24	275	12.2	154	15.9	+21	58.4	264	50.7	+1	45.3	85	50.4	-2	35.6	155	33.0	+20	53.8
Dif	—		-8 -6		+9 +6		+23 -1		+21 -1									

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7			Edad: 20 ^d 1 PHE { 4 ^h : 59/4 12 ^h : 59/1 20 ^h : 58/9	SD: 16 ^h 2				Final del crepúsculo		Salida de Luna		Puesta de Luna		
	PMG: 12 ^h 03 ^m 0				PMG: 4 ^h 49 ^m				R°: 48 ^m						
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	h m	m
0	179	15.8	+23	290	05.2	-9	38.3	60 N	21 27	23 10	** **	23 49	**	10 10	97
1	194	15.7		304	35.3 ¹¹¹		22.3 ¹⁶⁰	58	21 07	22 22	** **	47	3	14	93
2	209	15.6		319	05.6 ¹¹³	-9	06.3 ¹⁶⁰	56	20 50	21 52	** **	46	6	18	89
3	224	15.5		333	36.0 ¹¹⁴	-8	50.2 ¹⁶¹	54	36	30	23 14	44	9	21	86
4	239	15.3		348	06.4 ¹¹⁴		34.1 ¹⁶¹	52	24	21 13	22 30	43	11	24	83
5	254	15.2	+23	2	36.9 ¹¹⁵	-8	17.9 ¹⁶²	50	20 13	20 58	22 03	23 42	13	10 26	81
6	269	15.1	+23	17	07.5 ¹¹⁶	-8	01.8 ¹⁶¹	45	19 51	20 28	21 18	23 39	19	10 32	75
7	284	14.9		31	38.2 ¹¹⁷	-7	45.6 ¹⁶²	40	33	20 06	20 47	37	23	37	70
8	299	14.8		46	09.0 ¹¹⁸		29.4 ¹⁶²	35	18	19 48	24	35	27	41	66
9	314	14.7		60	39.8 ¹¹⁸	-7	13.2 ¹⁶²	30	19 05	32	20 06	33	30	44	63
10	329	14.6		75	10.7 ¹¹⁹	-6	56.9 ¹⁶³	20	18 43	19 08	19 37	30	36	50	57
11	344	14.4	+23	89	41.6 ¹¹⁹	-6	40.6 ¹⁶³	10 N	18 24	18 47	19 14	23 28	41	10 56	51
12	359	14.3	+23	104	12.7 ¹²¹	-6	24.4 ¹⁶²	0	18 07	18 29	18 55	23 26	45	11 01	46
13	14	14.2		118	43.8 ¹²¹	-6	08.1 ¹⁶³	10 S	17 49	18 12	39	23	51	05	42
14	29	14.0		133	14.9 ¹²¹	-5	51.8 ¹⁶³	20	31	17 55	22	21	55	11	36
15	44	13.9		147	46.2 ¹²³		35.5 ¹⁶³	30	17 10	36	18 06	18	62	16	31
16	59	13.8		162	17.5 ¹²³		19.1 ¹⁶⁴	35	16 58	26	17 57	16	65	20	27
17	74	13.7	+23	176	48.8 ¹²³	-5	02.8 ¹⁶³	40	16 43	17 14	17 48	23 14	69	11 23	24
18	89	13.5	+23	191	20.2 ¹²⁴	-4	46.5 ¹⁶³	45	16 27	17 01	17 38	23 12	74	11 28	19
19	104	13.4		205	51.7 ¹²⁵		30.1 ¹⁶⁴	50	16 06	16 45	26	09	80	33	14
20	119	13.3		220	23.3 ¹²⁶	-4	13.8 ¹⁶³	52	15 56	37	21	08	82	35	12
21	134	13.1		234	54.8 ¹²⁵	-3	57.4 ¹⁶⁴	54	45	29	15	07	84	38	9
22	149	13.0		249	26.5 ¹²⁷		41.0 ¹⁶⁴	56	33	20	09	05	88	40	7
23	164	12.9		263	58.2 ¹²⁷		24.7 ¹⁶³	58	18	16 10	17 02	04	91	43	4
24	179	12.8	+23	278	29.9 ¹²⁷	-3	08.3 ¹⁶⁴	60 S	15 01	15 58	16 55	23 02	95	11 47	**

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 5 ^h 38 ^m 3		Mag: -3.8 PMG: 13 ^h 44 ^m		Mag: 0.0 PMG: 6 ^h 20 ^m		Mag: -2.1 PMG: 18 ^h 14 ^m		Mag: +0.2 PMG: 13 ^h 36 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	275	12.2	154	15.9	264	50.7	85	50.4	155	33.0
1	290	14.7	169	15.1	279	51.6	100	52.7	170	35.2
2	305	17.2	184	14.4	294	52.5	115	55.0	185	37.3
3	320	19.6	199	13.6	309	53.4	130	57.3	200	39.4
4	335	22.1	214	12.9	324	54.3	145	59.7	215	41.6
5	350	24.6	229	12.1	339	55.2	161	02.0	230	43.7
6	5	27.0	244	11.4	354	56.1	176	04.3	245	45.9
7	20	29.5	259	10.6	9	57.0	191	06.6	260	48.0
8	35	31.9	274	09.9	24	57.9	206	08.9	275	50.1
9	50	34.4	289	09.1	39	58.8	221	11.3	290	52.3
10	65	36.9	304	08.4	54	59.7	236	13.6	305	54.4
11	80	39.3	319	07.6	70	00.6	251	15.9	320	56.6
12	95	41.8	334	06.9	85	01.5	266	18.2	335	58.7
13	110	44.3	349	06.1	100	02.4	281	20.6	351	00.8
14	125	46.7	4	05.4	115	03.3	296	22.9	6	03.0
15	140	49.2	19	04.7	130	04.2	311	25.2	21	05.1
16	155	51.7	34	03.9	145	05.1	326	27.5	36	07.3
17	170	54.1	49	03.2	160	06.1	341	29.8	51	09.4
18	185	56.6	64	02.4	175	07.0	356	32.2	66	11.5
19	200	59.0	79	01.7	190	07.9	11	34.5	81	13.7
20	216	01.5	94	01.0	205	08.8	26	36.8	96	15.8
21	231	04.0	109	00.2	220	09.7	41	39.1	111	18.0
22	246	06.4	123	59.5	235	10.6	56	41.4	126	20.1
23	261	08.9	138	58.7	250	11.5	71	43.7	141	22.2
24	276	11.4	153	58.0	265	12.4	86	46.1	156	24.4
Dif	—		-7		+9		+23		+21	
			-6		+6		-1		-1	

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15 ^h 7			Edad: 21 ^d 1 PHE { 4 ^h : 58 ^m 6 12 ^h : 58 ^m 3 20 ^h : 58 ^m 1 R ^o : 45 ^m	Dif	Dif		Náutico	Civil		Hora	R ^o	Hora	R ^o				
	hG ☉	Dec	hG ☾															
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m			
0	179	12.8	+23 17.1	278	29.9	-3 08.3	60 N	** **	0 57	2 39	23 48	0	11 47	95				
1	194	12.6	17.0	293	01.7 ¹²⁸	-2 52.0 ¹⁶³	58	** **	1 45	2 59	50 3	47 91						
2	209	12.5	16.9	307	33.6 ¹²⁹	35.7 ¹⁶³	56	** **	2 14	3 16	52 6	47 87						
3	224	12.4	16.8	322	05.5 ¹²⁹	19.3 ¹⁶⁴	54	0 52	36	30	53 9	47 84						
4	239	12.2	16.7	336	37.4 ¹²⁹	-2 03.0 ¹⁶³	52	1 36	2 54	42	54 12	47 81						
5	254	12.1	+23 16.6	351	09.4 ¹³⁰	-1 46.7 ¹⁶³	50	2 04	3 09	3 53	23 55	14	11 47	79				
6	269	12.0	+23 16.4	5	41.5 ¹³¹	-1 30.4 ¹⁶³	45	2 49	3 38	4 16	23 58	19	11 47	74				
7	284	11.9	16.3	20	13.5 ¹³⁰	-1 14.0 ¹⁶⁴	40	3 19	4 01	33	** **	**	47 69					
8	299	11.7	16.2	34	45.6 ¹³¹	-0 57.8 ¹⁶²	35	3 42	19	4 48	** **	**	47 65					
9	314	11.6	16.1	49	17.8 ¹³²	41.5 ¹⁶³	30	4 01	34	5 01	** **	**	47 62					
10	329	11.5	16.0	63	50.0 ¹³²	25.2 ¹⁶³	20	30	4 59	23	** **	**	47 56					
11	344	11.3	+23 15.8	78	22.2 ¹³²	-0 09.0 ¹⁶²	10 N	4 52	5 19	5 42	** **	**	11 47	51				
12	359	11.2	+23 15.7	92	54.5 ¹³³	+0 07.2 ¹⁶²	0	5 11	5 37	6 00	** **	**	11 47	46				
13	14	11.1	15.6	107	26.8 ¹³³	23.5 ¹⁶³	10 S	28	5 54	17	** **	**	47 41					
14	29	11.0	15.5	121	59.1 ¹³³	39.6 ¹⁶¹	20	5 44	6 11	35	** **	**	47 36					
15	44	10.8	15.3	136	31.4 ¹³³	+0 55.8 ¹⁶²	30	6 00	30	6 56	** **	**	47 30					
16	59	10.7	15.2	151	03.8 ¹³⁴	+1 12.0 ¹⁶²	35	09	41	7 09	** **	**	47 27					
17	74	10.6	+23 15.1	165	36.2 ¹³⁴	+1 28.1 ¹⁶¹	40	6 18	6 52	7 23	** **	**	11 47	23				
18	89	10.5	+23 15.0	180	08.6 ¹³⁴	+1 44.2 ¹⁶¹	45	6 28	7 06	7 39	** **	**	11 47	19				
19	104	10.3	14.8	194	41.1 ¹³⁵	+2 00.3 ¹⁶¹	50	40	22	8 00	** **	**	47 13					
20	119	10.2	14.7	209	13.6 ¹³⁵	16.3 ¹⁶⁰	52	45	29	10	** **	**	47 11					
21	134	10.1	14.6	223	46.1 ¹³⁵	32.3 ¹⁶⁰	54	51	37	21	** **	**	47 8					
22	149	10.0	14.4	238	18.6 ¹³⁵	+2 48.3 ¹⁶⁰	56	6 57	46	33	** **	**	47 6					
23	164	09.8	14.3	252	51.2 ¹³⁶	+3 04.3 ¹⁶⁰	58	7 04	7 56	8 48	** **	**	47 2					
24	179	09.7	+23 14.2	267	23.7 ¹³⁵	+3 20.2 ¹⁵⁹	60 S	7 11	8 08	9 05	** **	**	11 46	0				
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG 5 ^h 34 ^m 3			Mag: -3.8 PMG: 13 ^h 45 ^m			Mag: 0.0 PMG: 6 ^h 19 ^m			Mag: -2.1 PMG: 18 ^h 10 ^m			Mag: +0.2 PMG: 13 ^h 32 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	276	11.4	153	58.0	+21	44.1	265	12.4	+2	00.4	86	46.1	-2	37.4	156	24.4	+20	52.5
1	291	13.8	168	57.3		43.5	280	13.3		01.1	101	48.4		37.5	171	26.5		52.4
2	306	16.3	183	56.5		42.9	295	14.2		01.7	116	50.7		37.5	186	28.7		52.3
3	321	18.8	198	55.8		42.2	310	15.1		02.3	131	53.0		37.6	201	30.8		52.3
4	336	21.2	213	55.0		41.6	325	16.0		02.9	146	55.3		37.7	216	32.9		52.2
5	351	23.7	228	54.3	+21	41.0	340	16.9	+2	03.6	161	57.7	-2	37.8	231	35.1	+20	52.2
6	6	26.2	243	53.6	+21	40.4	355	17.9	+2	04.2	177	00.0	-2	37.8	246	37.2	+20	52.1
7	21	28.6	258	52.8		39.8	10	18.8		04.8	192	02.3		37.9	261	39.4		52.1
8	36	31.1	273	52.1		39.2	25	19.7		05.5	207	04.6		38.0	276	41.5		52.0
9	51	33.5	288	51.4		38.6	40	20.6		06.1	222	06.9		38.0	291	43.6		51.9
10	66	36.0	303	50.6		37.9	55	21.5		06.7	237	09.2		38.1	306	45.8		51.9
11	81	38.5	318	49.9	+21	37.3	70	22.4	+2	07.3	252	11.5	-2	38.2	321	47.9	+20	51.8
12	96	40.9	333	49.2	+21	36.7	85	23.3	+2	08.0	267	13.9	-2	38.3	336	50.0	+20	51.8
13	111	43.4	348	48.4		36.1	100	24.2		08.6	282	16.2		38.3	351	52.2		51.7
14	126	45.9	3	47.7		35.5	115	25.1		09.2	297	18.5		38.4	6	54.3		51.6
15	141	48.3	18	47.0		34.8	130	26.0		09.8	312	20.8		38.5	21	56.5		51.6
16	156	50.8	33	46.2		34.2	145	27.0		10.5	327	23.1		38.6	36	58.6		51.5
17	171	53.3	48	45.5	+21	33.6	160	27.9	+2	11.1	342	25.4	-2	38.7	52	00.7	+20	51.5
18	186	55.7	63	44.8	+21	33.0	175	28.8	+2	11.7	357	27.7	-2	38.7	67	02.9	+20	51.4
19	201	58.2	78	44.1		32.3	190	29.7		12.3	12	30.1		38.8	82	05.0		51.4
20	217	00.7	93	43.3		31.7	205	30.6		13.0	27	32.4		38.9	97	07.2		51.3
21	232	03.1	108	42.6		31.1	220	31.5		13.6	42	34.7		39.0	112	09.3		51.2
22	247	05.6	123	41.9		30.5	235	32.4		14.2	57	37.0		39.0	127	11.4		51.2
23	262	08.0	138	41.1		29.8	250	33.3		14.9	72	39.3		39.1	142	13.6		51.1
24	277	10.5	153	40.4	+21	29.2	265	34.2	+2	15.5	87	41.6	-2	39.2	157	15.7	+20	51.1
Dif	—			-7	-6	+9			+6	+23			-1	+21			-1	

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7 PMG: 12 ^h 03 ^m 5				Edad: 22 ^d 1 PHE { SD: 15 ^h 8 PMG: 6 ^h 22 ^m R°: 45 ^m												
	hG ☉		Dec		hG ☾		Dif				Dif		Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m	
0	179	09.7	+23	14.2	267	23.7	+3	20.2	60 N	21 26	23 06	** **	23 48 0	13 22 93			
1	194	09.6		14.0	281	56.3 ¹³⁶		36.1 ¹⁵⁹	58	21 06	22 20	** **	53 4	18 89			
2	209	09.5		13.9	296	28.9 ¹³⁶	+3	52.0 ¹⁵⁹	56	20 50	21 51	** **	23 58 7	14 86			
3	224	09.3		13.8	311	01.5 ¹³⁶	+4	07.8 ¹⁵⁸	54	36	30	23 11	** ** *	11 83			
4	239	09.2		13.6	325	34.1 ¹³⁶		23.6 ¹⁵⁸	52	24	21 12	22 29	** ** *	08 81			
5	254	09.1	+23	13.5	340	06.7 ¹³⁶	+4	39.3 ¹⁵⁷	50	20 13	20 57	22 02	** ** *	13 06 77			
6	269	08.9	+23	13.4	354	39.4 ¹³⁷	+4	55.0 ¹⁵⁷	45	19 51	20 28	21 17	** ** *	13 01 72			
7	284	08.8		13.2	9	12.0 ¹³⁶	+5	10.7 ¹⁵⁷	40	33	20 06	20 47	0 00 23	12 56 68			
8	299	08.7		13.1	23	44.7 ¹³⁷		26.4 ¹⁵⁷	35	18	19 48	24	02 26	52 64			
9	314	08.6		13.0	38	17.3 ¹³⁶		42.0 ¹⁵⁶	30	19 05	33	20 06	03 30	49 60			
10	329	08.4		12.8	52	50.0 ¹³⁷	+5	57.5 ¹⁵⁵	20	18 43	19 08	19 37	06 36	43 55			
11	344	08.3	+23	12.7	67	22.7 ¹³⁷	+6	13.0 ¹⁵⁵	10 N	18 25	18 48	19 15	0 09 40	12 38 50			
12	359	08.2	+23	12.5	81	55.3 ¹³⁶	+6	28.5 ¹⁵⁵	0	18 07	18 30	18 56	0 11 45	12 33 45			
13	14	08.1		12.4	96	28.0 ¹³⁷		43.9 ¹⁵⁴	10 S	17 50	18 13	39	14 50	28 41			
14	29	07.9		12.3	111	00.7 ¹³⁷	+6	59.3 ¹⁵⁴	20	32	17 55	23	16 55	23 36			
15	44	07.8		12.1	125	33.3 ¹³⁶	+7	14.6 ¹⁵³	30	17 11	37	18 07	20 60	17 30			
16	59	07.7		12.0	140	06.0 ¹³⁷		29.9 ¹⁵³	35	16 58	26	17 58	21 64	14 27			
17	74	07.6	+23	11.8	154	38.7 ¹³⁷	+7	45.1 ¹⁵²	40	16 44	17 15	17 49	0 23 68	12 10 24			
18	89	07.4	+23	11.7	169	11.3 ¹³⁶	+8	00.3 ¹⁵²	45	16 28	17 01	17 39	0 26 72	12 06 19			
19	104	07.3		11.5	183	44.0 ¹³⁷		15.4 ¹⁵¹	50	16 07	16 45	27	29 77	12 00 15			
20	119	07.2		11.4	198	16.6 ¹³⁶		30.5 ¹⁵¹	52	15 57	38	22	30 80	11 58 12			
21	134	07.1		11.2	212	49.3 ¹³⁷	+8	45.5 ¹⁵⁰	54	46	30	16	31 84	55 10			
22	149	06.9		11.1	227	21.9 ¹³⁶	+9	00.5 ¹⁵⁰	56	34	21	10	33 86	53 6			
23	164	06.8		11.0	241	54.5 ¹³⁶		15.4 ¹⁴⁹	58	19	11	17 03	35 90	49 4			
24	179	06.7	+23	10.8	256	27.1 ¹³⁶	+9	30.3 ¹⁴⁹	60 S	15 02	16 00	16 56	0 37 94	11 46 0			
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 5 ^h 30 ^m 4			Mag: -3.8 PMG: 13 ^h 46 ^m			Mag: 0.0 PMG: 6 ^h 17 ^m			Mag: -2.1 PMG: 18 ^h 06 ^m			Mag: +0.2 PMG: 13 ^h 29 ^m				
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	277	10.5	153	40.4	+21	29.2	265	34.2	+2	15.5	87	41.6	-2	39.2	157	15.7	
1	292	13.0	168	39.7		28.6	280	35.2		16.1	102	43.9		39.3	172	17.8	
2	307	15.4	183	39.0		27.9	295	36.1		16.7	117	46.2		39.3	187	20.0	
3	322	17.9	198	38.2		27.3	310	37.0		17.4	132	48.6		39.4	202	22.1	
4	337	20.4	213	37.5		26.6	325	37.9		18.0	147	50.9		39.5	217	24.3	
5	352	22.8	228	36.8	+21	26.0	340	38.8	+2	18.6	162	53.2	-2	39.6	232	26.4	
6	7	25.3	243	36.1	+21	25.4	355	39.7	+2	19.2	177	55.5	-2	39.6	247	28.5	
7	22	27.8	258	35.3		24.7	10	40.6		19.9	192	57.8		39.7	262	30.7	
8	37	30.2	273	34.6		24.1	25	41.6		20.5	208	00.1		39.8	277	32.8	
9	52	32.7	288	33.9		23.4	40	42.5		21.1	223	02.4		39.9	292	35.0	
10	67	35.1	303	33.2		22.8	55	43.4		21.7	238	04.7		39.9	307	37.1	
11	82	37.6	318	32.5	+21	22.2	70	44.3	+2	22.3	253	07.0	-2	40.0	322	39.2	
12	97	40.1	333	31.7	+21	21.5	85	45.2	+2	23.0	268	09.3	-2	40.1	337	41.4	
13	112	42.5	348	31.0		20.9	100	46.1		23.6	283	11.7		40.2	352	43.5	
14	127	45.0	3	30.3		20.2	115	47.0		24.2	298	14.0		40.3	7	45.6	
15	142	47.5	18	29.6		19.6	130	47.9		24.8	313	16.3		40.3	22	47.8	
16	157	49.9	33	28.9		18.9	145	48.9		25.5	328	18.6		40.4	37	49.9	
17	172	52.4	48	28.1	+21	18.3	160	49.8	+2	26.1	343	20.9	-2	40.5	52	52.1	
18	187	54.9	63	27.4	+21	17.6	175	50.7	+2	26.7	358	23.2	-2	40.6	67	54.2	
19	202	57.3	78	26.7		17.0	190	51.6		27.3	13	25.5		40.6	82	56.3	
20	217	59.8	93	26.0		16.3	205	52.5		28.0	28	27.8		40.7	97	58.5	
21	233	02.3	108	25.3		15.7	220	53.4		28.6	43	30.1		40.8	113	00.6	
22	248	04.7	123	24.6		15.0	235	54.4		29.2	58	32.4		40.9	128	02.7	
23	263	07.2	138	23.8		14.4	250	55.3		29.8	73	34.7		41.0	143	04.9	
24	278	09.6	153	23.1	+21	13.7	265	56.2	+2	30.5	88	37.0	-2	41.0	158	07.0	
Dif	—		-7		-6		+9		+6		+23		-1		+21		

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7			Edad: 23 ^d 1 PHE { 4 ^h : 57 ^h 1 12 ^h : 56 ^h 9 20 ^h : 56 ^h 7	SD: 15 ^h 6			R°: 46 ^m			Hora	R°	Hora	R°		
	PMG: 12 ^h 03 ^m 7	PMG: 7 ^h 07 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil						
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	179	06.7	+23	10.8	256	27.1	+9	30.3	60 N	** **	1 01	2 41	23 48	1	14 55	96
1	194	06.6		10.7	270	59.7 ¹³⁶		45.1 ¹⁴⁸	58	** **	1 47	3 01	23 57	6	47 91	
2	209	06.5		10.5	285	32.2 ¹³⁵	+9	59.8 ¹⁴⁷	56	** **	2 16	18	** **	**	40 87	
3	224	06.3		10.4	300	04.8 ¹³⁶	+10	14.5 ¹⁴⁷	54	0 56	38	31	0 02	10	34 83	
4	239	06.2		10.2	314	37.3 ¹³⁵		29.1 ¹⁴⁶	52	1 39	2 55	44	06 13		29 79	
5	254	06.1	+23	10.1	329	09.9 ¹³⁶	+10	43.7 ¹⁴⁶	50	2 05	3 10	3 54	0 09	15	14 23	78
6	269	06.0	+23	09.9	343	42.4 ¹³⁵	+10	58.2 ¹⁴⁵	45	2 50	3 39	4 17	0 17	20	14 13	71
7	284	05.8		09.7	358	14.9 ¹³⁵	+11	12.6 ¹⁴⁴	40	3 20	4 02	34	23 25		14 04	67
8	299	05.7		09.6	12	47.3 ¹³⁴		27.0 ¹⁴⁴	35	3 43	20	4 49	28 29		13 56	64
9	314	05.6		09.4	27	19.8 ¹³⁵		41.3 ¹⁴³	30	4 01	35	5 02	33 32		49 61	
10	329	05.5		09.3	41	52.2 ¹³⁴	+11	55.6 ¹⁴³	20	30	4 59	24	42 36		38 55	
11	344	05.3	+23	09.1	56	24.6 ¹³⁴	+12	09.7 ¹⁴¹	10 N	4 53	5 20	5 43	0 49	42	13 28	50
12	359	05.2	+23	09.0	70	56.9 ¹³³	+12	23.8 ¹⁴¹	0	5 11	5 37	6 00	0 56	46	13 18	47
13	14	05.1		08.8	85	29.3 ¹³⁴		37.9 ¹⁴¹	10 S	28	5 54	17	1 04	50	13 09	42
14	29	05.0		08.6	100	01.6 ¹³³	+12	51.9 ¹⁴⁰	20	5 44	6 12	36	11 55		12 59	37
15	44	04.8		08.5	114	33.9 ¹³³	+13	05.8 ¹³⁹	30	6 00	30	6 57	20 61		47 33	
16	59	04.7		08.3	129	06.2 ¹³³		19.6 ¹³⁸	35	09	41	7 09	25 64		41 29	
17	74	04.6	+23	08.2	143	38.4 ¹³²	+13	33.3 ¹³⁷	40	6 18	6 52	7 23	1 31	68	12 34	26
18	89	04.5	+23	08.0	158	10.6 ¹³²	+13	47.0 ¹³⁷	45	6 28	7 06	7 39	1 38	72	12 25	22
19	104	04.4		07.8	172	42.8 ¹³²	+14	00.6 ¹³⁶	50	40	21	8 00	46 78		15 16	
20	119	04.2		07.7	187	14.9 ¹³¹		14.2 ¹³⁶	52	45	29	09	50 80		10 14	
21	134	04.1		07.5	201	47.0 ¹³¹		27.6 ¹³⁴	54	51	37	20	55 82		12 05	11
22	149	04.0		07.4	216	19.1 ¹³¹		41.0 ¹³⁴	56	6 57	46	33	1 59	87	11 59	8
23	164	03.9		07.2	230	51.1 ¹³⁰	+14	54.3 ¹³³	58	7 03	7 56	8 47	2 05	90	53 4	
24	179	03.8	+23	07.0	245	23.1 ¹³⁰	+15	07.5 ¹³²	60 S	7 11	8 07	9 04	2 11	94	11 46	0

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 5 ^h 26 ^m 5		Mag: -3.8 PMG: 13 ^h 47 ^m		Mag: 0.0 PMG: 6 ^h 16 ^m		Mag: -2.1 PMG: 18 ^h 03 ^m		Mag: +0.2 PMG: 13 ^h 26 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	278	09.6	153	23.1	+21	13.7	265	56.2	+2	30.5	88	37.0	-2	41.0	158	07.0	+20	49.7
1	293	12.1	168	22.4		13.0	280	57.1		31.1	103	39.3		41.1	173	09.2		49.6
2	308	14.6	183	21.7		12.4	295	58.0		31.7	118	41.6		41.2	188	11.3		49.5
3	323	17.0	198	21.0		11.7	310	58.9		32.3	133	43.9		41.3	203	13.4		49.5
4	338	19.5	213	20.3		11.1	325	59.9		32.9	148	46.2		41.4	218	15.6		49.4
5	353	22.0	228	19.6	+21	10.4	341	00.8	+2	33.6	163	48.6	-2	41.4	233	17.7	+20	49.4
6	8	24.4	243	18.9	+21	09.7	356	01.7	+2	34.2	178	50.9	-2	41.5	248	19.8	+20	49.3
7	23	26.9	258	18.1		09.1	11	02.6		34.8	193	53.2		41.6	263	22.0		49.2
8	38	29.4	273	17.4		08.4	26	03.5		35.4	208	55.5		41.7	278	24.1		49.2
9	53	31.8	288	16.7		07.7	41	04.4		36.0	223	57.8		41.8	293	26.3		49.1
10	68	34.3	303	16.0		07.1	56	05.4		36.7	239	00.1		41.8	308	28.4		49.1
11	83	36.8	318	15.3	+21	06.4	71	06.3	+2	37.3	254	02.4	-2	41.9	323	30.5	+20	49.0
12	98	39.2	333	14.6	+21	05.7	86	07.2	+2	37.9	269	04.7	-2	42.0	338	32.7	+20	49.0
13	113	41.7	348	13.9		05.1	101	08.1		38.5	284	07.0		42.1	353	34.8		48.9
14	128	44.1	3	13.2		04.4	116	09.0		39.1	299	09.3		42.2	8	36.9		48.8
15	143	46.6	18	12.5		03.7	131	09.9		39.8	314	11.6		42.2	23	39.1		48.8
16	158	49.1	33	11.8		03.0	146	10.9		40.4	329	13.9		42.3	38	41.2		48.7
17	173	51.5	48	11.1	+21	02.4	161	11.8	+2	41.0	344	16.2	-2	42.4	53	43.3	+20	48.7
18	188	54.0	63	10.4	+21	01.7	176	12.7	+2	41.6	359	18.5	-2	42.5	68	45.5	+20	48.6
19	203	56.5	78	09.7		01.0	191	13.6		42.3	14	20.8		42.6	83	47.6		48.5
20	218	58.9	93	09.0	+21	00.3	206	14.5		42.9	29	23.1		42.6	98	49.8		48.5
21	234	01.4	108	08.3	+20	59.7	221	15.5		43.5	44	25.4		42.7	113	51.9		48.4
22	249	03.9	123	07.5		59.0	236	16.4		44.1	59	27.7		42.8	128	54.0		48.4
23	264	06.3	138	06.8		58.3	251	17.3		44.7	74	30.0		42.9	143	56.2		48.3
24	279	08.8	153	06.1	+20	57.6	266	18.2	+2	45.3	89	32.3	-2	43.0	158	58.3	+20	48.2
Dif	—		-7		-7		+9		+6		+23		-1		+21		-	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 24 ^d 1 PHE { 4 ^h : 56/4 12 ^h : 56/2 20 ^h : 56/0					Final del crepúsculo			Salida de Luna		Puesta de Luna	
	PMG: 12 ^h 03 ^m 8			SD: 15/4 PMG: 7 ^h 53 ^m R°: 48 ^m					Final del crepúsculo			Salida de Luna		Puesta de Luna	
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	h m	m
0	179	03.8	+23 07.0	245	23.1	+15 07.5		60 N	21 25	23 02	** **	23 49	4	16 31	97
1	194	03.6	06.9	259	55.1 ¹³⁰	20.6 ¹³¹		58	21 05	22 18	** **	** **	**	18	91
2	209	03.5	06.7	274	27.0 ¹²⁹	33.7 ¹³¹		56	20 49	21 50	** **	0 05	10	16 07	86
3	224	03.4	06.5	288	58.9 ¹²⁹	46.7 ¹³⁰		54	35	29	23 08	12 13	15	57	82
4	239	03.3	06.4	303	30.8 ¹²⁹	+15 59.6 ¹²⁹		52	23	21 11	22 27	19 15	48	79	
5	254	03.1	+23 06.2	318	02.6 ¹²⁸	+16 12.4 ¹²⁸		50	20 12	20 57	22 01	0 24	19	15 41	76
6	269	03.0	+23 06.0	332	34.3 ¹²⁷	+16 25.1 ¹²⁷		45	19 50	20 28	21 17	0 37	24	15 24	71
7	284	02.9	05.8	347	06.1 ¹²⁸	37.8 ¹²⁷		40	33	20 05	20 47	48	27	11	67
8	299	02.8	05.7	1	37.8 ¹²⁷	+16 50.3 ¹²⁵		35	18	19 48	24	0 57	31	15 00	63
9	314	02.7	05.5	16	09.4 ¹²⁶	+17 02.8 ¹²⁵		30	19 05	32	20 06	1 05	34	14 50	60
10	329	02.5	05.3	30	41.0 ¹²⁶	15.2 ¹²⁴		20	18 43	19 08	19 37	18 39	33	56	
11	344	02.4	+23 05.2	45	12.6 ¹²⁶	+17 27.5 ¹²³		10 N	18 25	18 48	19 15	1 31	43	14 18	52
12	359	02.3	+23 05.0	59	44.1 ¹²⁵	+17 39.7 ¹²²		0	18 08	18 30	18 56	1 42	47	14 05	48
13	14	02.2	04.8	74	15.6 ¹²⁵	+17 51.8 ¹²¹		10 S	17 50	18 13	39	1 54	51	13 51	45
14	29	02.1	04.6	88	47.0 ¹²⁴	+18 03.8 ¹²⁰		20	32	17 56	24	2 06	56	36	41
15	44	01.9	04.5	103	18.4 ¹²⁴	15.7 ¹¹⁹		30	17 11	38	18 07	21 60	20	36	
16	59	01.8	04.3	117	49.7 ¹²³	27.5 ¹¹⁸		35	16 59	27	17 59	29 64	10	34	
17	74	01.7	+23 04.1	132	21.0 ¹²³	+18 39.3 ¹¹⁸		40	16 45	17 16	17 50	2 39	67	13 00	29
18	89	01.6	+23 03.9	146	52.3 ¹²³	+18 50.9 ¹¹⁶		45	16 29	17 02	17 39	2 50	71	12 47	26
19	104	01.5	03.7	161	23.5 ¹²²	+19 02.5 ¹¹⁶		50	16 08	16 47	28	3 04	77	31	21
20	119	01.3	03.6	175	54.6 ¹²¹	13.9 ¹¹⁴		52	15 59	39	23	10 80	24	18	
21	134	01.2	03.4	190	25.7 ¹²¹	25.3 ¹¹⁴		54	48	31	17	17 83	16	15	
22	149	01.1	03.2	204	56.8 ¹²¹	36.5 ¹¹²		56	35	22	11	26 86	12	07	12
23	164	01.0	03.0	219	27.8 ¹²⁰	47.7 ¹¹²		58	21	12	17 05	35 91	11 57	8	
24	179	00.9	+23 02.8	233	58.8 ¹²⁰	+19 58.7 ¹¹⁰		60 S	15 04	16 01	16 57	3 45	97	11 46	2
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 5 ^h 22 ^m 5		Mag: -3.8 PMG: 13 ^h 48 ^m			Mag: -0.1 PMG: 6 ^h 14 ^m			Mag: -2.1 PMG: 17 ^h 59 ^m			Mag: +0.2 PMG: 13 ^h 22 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°	
0	279	08.8	153	06.1	+20 57.6	266	18.2	+2 45.3	89	32.3	-2 43.0	158	58.3	+20 48.2	
1	294	11.2	168	05.4	56.9	281	19.1	46.0	104	34.6	43.0	174	00.4	48.2	
2	309	13.7	183	04.7	56.3	296	20.1	46.6	119	36.9	43.1	189	02.6	48.1	
3	324	16.2	198	04.0	55.6	311	21.0	47.2	134	39.2	43.2	204	04.7	48.1	
4	339	18.6	213	03.3	54.9	326	21.9	47.8	149	41.5	43.3	219	06.8	48.0	
5	354	21.1	228	02.6	+20 54.2	341	22.8	+2 48.4	164	43.8	-2 43.4	234	09.0	+20 47.9	
6	9	23.6	243	01.9	+20 53.5	356	23.7	+2 49.1	179	46.1	-2 43.5	249	11.1	+20 47.9	
7	24	26.0	258	01.2	52.8	11	24.7	49.7	194	48.4	43.5	264	13.3	47.8	
8	39	28.5	273	00.5	52.1	26	25.6	50.3	209	50.7	43.6	279	15.4	47.8	
9	54	31.0	287	59.9	51.4	41	26.5	50.9	224	53.0	43.7	294	17.5	47.7	
10	69	33.4	302	59.2	50.7	56	27.4	51.5	239	55.3	43.8	309	19.7	47.7	
11	84	35.9	317	58.5	+20 50.1	71	28.4	+2 52.1	254	57.6	-2 43.9	324	21.8	+20 47.6	
12	99	38.4	332	57.8	+20 49.4	86	29.3	+2 52.8	269	59.9	-2 43.9	339	23.9	+20 47.5	
13	114	40.8	347	57.1	48.7	101	30.2	53.4	285	02.2	44.0	354	26.1	47.5	
14	129	43.3	2	56.4	48.0	116	31.1	54.0	300	04.5	44.1	9	28.2	47.4	
15	144	45.7	17	55.7	47.3	131	32.0	54.6	315	06.8	44.2	24	30.3	47.4	
16	159	48.2	32	55.0	46.6	146	33.0	55.2	330	09.0	44.3	39	32.5	47.3	
17	174	50.7	47	54.3	+20 45.9	161	33.9	+2 55.9	345	11.3	-2 44.4	54	34.6	+20 47.2	
18	189	53.1	62	53.6	+20 45.2	176	34.8	+2 56.5	0	13.6	-2 44.4	69	36.8	+20 47.2	
19	204	55.6	77	52.9	44.5	191	35.7	57.1	15	15.9	44.5	84	38.9	47.1	
20	219	58.1	92	52.2	43.8	206	36.7	57.7	30	18.2	44.6	99	41.0	47.1	
21	235	00.5	107	51.5	43.1	221	37.6	58.3	45	20.5	44.7	114	43.2	47.0	
22	250	03.0	122	50.8	42.4	236	38.5	58.9	60	22.8	44.8	129	45.3	46.9	
23	265	05.5	137	50.2	41.7	251	39.4	+2 59.6	75	25.1	44.9	144	47.4	46.9	
24	280	07.9	152	49.5	+20 41.0	266	40.4	+3 00.2	90	27.4	-2 44.9	159	49.6	+20 46.8	
Dif	—		-7	-7		+9	+6		+23	-1		+21	-1		

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15:7 PMG: 12 ^h 04 ^m 0			Edad: 25 ^d 1 PHE { 4 ^h : 55:8 12 ^h : 55:7 20 ^h : 55:5 R°: 50 ^m	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
	hG ☉	Dec	hG ☾												
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	179	00.9	+23 02.8	233	58.8	+19 58.7	60 N	** **	1 06	2 43	23 53	9	18 08	96	
1	194	00.7	02.7	248	29.7 ¹¹⁹	+20 09.7 ¹¹⁰	58	** **	1 50	3 03	0 03	10	17 49	88	
2	209	00.6	02.5	263	00.5 ¹¹⁸	20.5 ¹⁰⁸	56	** **	2 18	19	15 14		33 83		
3	224	00.5	02.3	277	31.3 ¹¹⁸	31.3 ¹⁰⁸	54	1 00	39	33	25 18		19 79		
4	239	00.4	02.1	292	02.1 ¹¹⁸	41.9 ¹⁰⁶	52	1 41	2 57	45	34 21		17 07	76	
5	254	00.3	+23 01.9	306	32.8 ¹¹⁷	+20 52.4 ¹⁰⁵	50	2 07	3 11	3 56	0 43	23	16 57	73	
6	269	00.1	+23 01.7	321	03.5 ¹¹⁷	+21 02.9 ¹⁰⁵	45	2 51	3 41	4 18	1 01	28	16 35	69	
7	284	00.0	01.5	335	34.1 ¹¹⁶	13.2 ¹⁰³	40	3 21	4 03	35	15 33		18 65		
8	298	59.9	01.4	350	04.6 ¹¹⁵	23.4 ¹⁰²	35	3 44	20	4 50	28 35		16 03	63	
9	313	59.8	01.2	4	35.1 ¹¹⁵	33.5 ¹⁰¹	30	4 02	4 35	5 03	39 38		15 50	61	
10	328	59.7	01.0	19	05.6 ¹¹⁵	43.5 ¹⁰⁰	20	31	5 00	24	1 57	43	29 56		
11	343	59.6	+23 00.8	33	36.0 ¹¹⁴	+21 53.4 ⁹⁹	10 N	4 53	5 20	5 43	2 14	46	15 10	53	
12	358	59.4	+23 00.6	48	06.4 ¹¹⁴	+22 03.2 ⁹⁸	0	5 12	5 38	6 00	2 29	50	14 53	50	
13	13	59.3	00.4	62	36.7 ¹¹³	12.8 ⁹⁶	10 S	28	5 55	17	2 45	53	36 47		
14	28	59.2	+23 00.2	77	06.9 ¹¹²	22.4 ⁹⁶	20	5 44	6 12	36	3 02	56	14 17	44	
15	43	59.1	+23 00.0	91	37.1 ¹¹²	31.8 ⁹⁴	30	6 00	30	6 57	21 61		13 56	40	
16	58	59.0	+22 59.8	106	07.3 ¹¹²	41.2 ⁹⁴	35	09	41	7 09	33 63		44 38		
17	73	58.9	+22 59.6	120	37.4 ¹¹¹	+22 50.4 ⁹²	40	6 18	6 52	7 23	3 46	66	13 29	36	
18	88	58.7	+22 59.4	135	07.4 ¹¹⁰	+22 59.5 ⁹¹	45	6 28	7 05	7 39	4 01	71	13 13	32	
19	103	58.6	59.2	149	37.4 ¹¹⁰	+23 08.4 ⁸⁹	50	40	21	7 59	21 75		12 52	27	
20	118	58.5	59.0	164	07.4 ¹¹⁰	17.3 ⁸⁹	52	45	28	8 09	30 78		42 25		
21	133	58.4	58.8	178	37.3 ¹⁰⁹	26.1 ⁸⁸	54	50	36	20	40 82		31 22		
22	148	58.3	58.6	193	07.1 ¹⁰⁸	34.7 ⁸⁶	56	6 56	45	32	4 52	85	19 18		
23	163	58.2	58.4	207	36.9 ¹⁰⁸	43.2 ⁸⁵	58	7 03	7 55	8 46	5 06	90	12 05	12	
24	178	58.0	+22 58.2	222	06.6 ¹⁰⁷	+23 51.6 ⁸⁴	60 S	7 10	8 06	9 03	5 22	98	11 48	5	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG 5 ^h 18 ^m 6			Mag: -3.8 PMG: 13 ^h 49 ^m			Mag: -0.1 PMG: 6 ^h 13 ^m			Mag: -2.1 PMG: 17 ^h 55 ^m			Mag: +0.2 PMG: 13 ^h 19 ^m		
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	280	07.9	152 49.5	+20 41.0	266 40.4	+3 00.2	90 27.4	-2 44.9	159 49.6	+20 46.8					
1	295	10.4	167 48.8	40.2	281 41.3	00.8	105 29.7	45.0	174 51.7	46.8					
2	310	12.9	182 48.1	39.5	296 42.2	01.4	120 32.0	45.1	189 53.8	46.7					
3	325	15.3	197 47.4	38.8	311 43.1	02.0	135 34.3	45.2	204 56.0	46.6					
4	340	17.8	212 46.7	38.1	326 44.1	02.6	150 36.6	45.3	219 58.1	46.6					
5	355	20.2	227 46.0	+20 37.4	341 45.0	+3 03.2	165 38.9	-2 45.4	235 00.2	+20 46.5					
6	10	22.7	242 45.3	+20 36.7	356 45.9	+3 03.9	180 41.2	-2 45.5	250 02.4	+20 46.5					
7	25	25.2	257 44.7	36.0	11 46.8	04.5	195 43.4	45.5	265 04.5	46.4					
8	40	27.6	272 44.0	35.3	26 47.8	05.1	210 45.7	45.6	280 06.6	46.3					
9	55	30.1	287 43.3	34.6	41 48.7	05.7	225 48.0	45.7	295 08.8	46.3					
10	70	32.6	302 42.6	33.8	56 49.6	06.3	240 50.3	45.8	310 10.9	46.2					
11	85	35.0	317 41.9	+20 33.1	71 50.5	+3 06.9	255 52.6	-2 45.9	325 13.1	+20 46.2					
12	100	37.5	332 41.2	+20 32.4	86 51.5	+3 07.5	270 54.9	-2 46.0	340 15.2	+20 46.1					
13	115	40.0	347 40.6	31.7	101 52.4	08.2	285 57.2	46.0	355 17.3	46.0					
14	130	42.4	2 39.9	31.0	116 53.3	08.8	300 59.5	46.1	10 19.5	46.0					
15	145	44.9	17 39.2	30.3	131 54.2	09.4	316 01.8	46.2	25 21.6	45.9					
16	160	47.3	32 38.5	29.5	146 55.2	10.0	331 04.1	46.3	40 23.7	45.9					
17	175	49.8	47 37.8	+20 28.8	161 56.1	+3 10.6	346 06.4	-2 46.4	55 25.9	+20 45.8					
18	190	52.3	62 37.2	+20 28.1	176 57.0	+3 11.2	1 08.6	-2 46.5	70 28.0	+20 45.7					
19	205	54.7	77 36.5	27.4	191 58.0	11.8	16 10.9	46.6	85 30.1	45.7					
20	220	57.2	92 35.8	26.6	206 58.9	12.5	31 13.2	46.6	100 32.3	45.6					
21	235	59.7	107 35.1	25.9	221 59.8	13.1	46 15.5	46.7	115 34.4	45.6					
22	251	02.1	122 34.4	25.2	237 00.7	13.7	61 17.8	46.8	130 36.5	45.5					
23	266	04.6	137 33.8	24.5	252 01.7	14.3	76 20.1	46.9	145 38.7	45.4					
24	281	07.1	152 33.1	+20 23.7	267 02.6	+3 14.9	91 22.4	-2 47.0	160 40.8	+20 45.4					
Dif	—		-7	-7	+9	+6	+23	-1	+21	-1					

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 26 ^d 1 PHE { 4 ^h : 55/3 12 ^h : 55/2 20 ^h : 55/0										
	PMG: 12 ^h 04 ^m 2			SD: 15 ^h 1 PMG: 9 ^h 31 ^m R°: 52 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	178	58.0	+22 58.2	222	06.6	+23 51.6	82	60 N	21 23	22 58	** ** *	** ** *	19 44	85
1	193	57.9	58.0	236	36.3 ¹⁰⁷	+23 59.8	82	58	21 04	22 16	** ** *	0 13	17	77
2	208	57.8	57.8	251	06.0 ¹⁰⁷	+24 08.0	80	56	20 48	21 48	** ** *	29 22	18 56	72
3	223	57.7	57.6	265	35.6 ¹⁰⁶	16.0	80	54	34	27	23 04	43 26	38 70	
4	238	57.6	57.4	280	05.2 ¹⁰⁶	23.9	79	52	22	21 10	22 25	0 55	29	68
5	253	57.5	+22 57.2	294	34.7 ¹⁰⁵	+24 31.7	78	50	20 12	20 56	21 59	1 06	32	66
6	268	57.3	+22 57.0	309	04.1 ¹⁰⁴	+24 39.3	76	45	19 50	20 27	21 16	1 29	36	63
7	283	57.2	56.8	323	33.5 ¹⁰⁴	46.8	75	40	32	20 05	20 46	1 48	38	61
8	298	57.1	56.6	338	02.9 ¹⁰⁴	+24 54.2	74	35	18	19 47	24	2 03	41	59
9	313	57.0	56.4	352	32.2 ¹⁰³	+25 01.5	73	30	19 05	32	20 05	17 43	16 51	58
10	328	56.9	56.2	7	01.5 ¹⁰³	08.6	71	20	18 44	19 08	19 37	2 40	46	56
11	343	56.8	+22 56.0	21	30.7 ¹⁰²	+25 15.6	70	10 N	18 25	18 48	19 15	3 00	49	54
12	358	56.6	+22 55.8	35	59.9 ¹⁰²	+25 22.5	69	0	18 08	18 30	18 56	3 19	51	52
13	13	56.5	55.6	50	29.1 ¹⁰²	29.3	68	10 S	17 51	18 14	40	38 53	23 50	
14	28	56.4	55.4	64	58.2 ¹⁰¹	35.9	66	20	33	17 57	24	3 58	56	49
15	43	56.3	55.2	79	27.2 ¹⁰⁰	42.4	65	30	12	38	08	4 22	59	46
16	58	56.2	55.0	93	56.3 ¹⁰¹	48.8	64	35	17 00	28	18 00	36 61	22 44	
17	73	56.1	+22 54.8	108	25.3 ¹⁰⁰	+25 55.0	62	40	16 46	17 17	17 51	4 52	63	42
18	88	56.0	+22 54.5	122	54.2 ⁹⁹	+26 01.1	61	45	16 30	17 03	17 41	5 12	66	39
19	103	55.8	54.3	137	23.1 ⁹⁹	07.1	60	50	10	16 48	29	36 70	19 36	
20	118	55.7	54.1	151	52.0 ⁹⁹	12.9	58	52	16 00	41	24	5 48	72	34
21	133	55.6	53.9	166	20.8 ⁹⁸	18.6	57	54	15 49	33	19	6 02	75	31
22	148	55.5	53.7	180	49.6 ⁹⁸	24.2	56	56	37	24	13	17 79	37 28	
23	163	55.4	53.5	195	18.4 ⁹⁸	29.6	54	58	23	14	17 06	6 36	85	23
24	178	55.3	+22 53.3	209	47.1 ⁹⁷	+26 34.9	53	60 S	15 06	16 03	16 59	7 00	93	14
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 5 ^h 14 ^m 7		Mag: -3.8 PMG: 13 ^h 50 ^m		Mag: -0.1 PMG: 6 ^h 11 ^m		Mag: -2.1 PMG: 17 ^h 52 ^m		Mag: +0.2 PMG: 13 ^h 15 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	281	07.1	152	33.1	+20 23.7	267	02.6	+3 14.9	91	22.4	-2 47.0	160	40.8	+20 45.4
1	296	09.5	167	32.4	23.0	282	03.5	15.5	106	24.7	47.1	175	42.9	45.3
2	311	12.0	182	31.7	22.3	297	04.5	16.1	121	26.9	47.2	190	45.1	45.3
3	326	14.5	197	31.1	21.5	312	05.4	16.7	136	29.2	47.2	205	47.2	45.2
4	341	16.9	212	30.4	20.8	327	06.3	17.4	151	31.5	47.3	220	49.3	45.1
5	356	19.4	227	29.7	+20 20.1	342	07.2	+3 18.0	166	33.8	-2 47.4	235	51.5	+20 45.1
6	11	21.8	242	29.0	+20 19.3	357	08.2	+3 18.6	181	36.1	-2 47.5	250	53.6	+20 45.0
7	26	24.3	257	28.4	18.6	12	09.1	19.2	196	38.4	47.6	265	55.7	45.0
8	41	26.8	272	27.7	17.9	27	10.0	19.8	211	40.7	47.7	280	57.9	44.9
9	56	29.2	287	27.0	17.1	42	11.0	20.4	226	42.9	47.8	296	00.0	44.8
10	71	31.7	302	26.4	16.4	57	11.9	21.0	241	45.2	47.9	311	02.1	44.8
11	86	34.2	317	25.7	+20 15.6	72	12.8	+3 21.6	256	47.5	-2 47.9	326	04.3	+20 44.7
12	101	36.6	332	25.0	+20 14.9	87	13.8	+3 22.2	271	49.8	-2 48.0	341	06.4	+20 44.7
13	116	39.1	347	24.4	14.2	102	14.7	22.9	286	52.1	48.1	356	08.6	44.6
14	131	41.6	2	23.7	13.4	117	15.6	23.5	301	54.4	48.2	11	10.7	44.5
15	146	44.0	17	23.0	12.7	132	16.5	24.1	316	56.7	48.3	26	12.8	44.5
16	161	46.5	32	22.4	11.9	147	17.5	24.7	331	58.9	48.4	41	15.0	44.4
17	176	49.0	47	21.7	+20 11.2	162	18.4	+3 25.3	347	01.2	-2 48.5	56	17.1	+20 44.4
18	191	51.4	62	21.0	+20 10.4	177	19.3	+3 25.9	2	03.5	-2 48.6	71	19.2	+20 44.3
19	206	53.9	77	20.4	09.7	192	20.3	26.5	17	05.8	48.6	86	21.4	44.2
20	221	56.3	92	19.7	08.9	207	21.2	27.1	32	08.1	48.7	101	23.5	44.2
21	236	58.8	107	19.0	08.2	222	22.1	27.7	47	10.4	48.8	116	25.6	44.1
22	252	01.3	122	18.4	07.4	237	23.1	28.3	62	12.6	48.9	131	27.8	44.1
23	267	03.7	137	17.7	06.7	252	24.0	29.0	77	14.9	49.0	146	29.9	44.0
24	282	06.2	152	17.0	+20 05.9	267	24.9	+3 29.6	92	17.2	-2 49.1	161	32.0	+20 43.9
Dif	—		-7	-7		+9	+6		+23	-1		+21	-1	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7 PMG: 12 ^h 04 ^m 4			Edad: 27 ^d 1 PHE { 4 ^h : 54 ^m 9 12 ^h : 54 ^m 8 20 ^h : 54 ^m 7 Rº: 52 ^m	hG ☾ Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº	
	hG ☉	Dec														
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	178	55.3	+22	53.3	209	47.1	+26	34.9	51	60 N	** *	1 11	2 46	0 02	24	21 09 58
1	193	55.2		53.0	224	15.8		40.0	51	58	** *	1 53	3 05	30 31	20 34 57	
2	208	55.1		52.8	238	44.4		45.1	51	56	** *	2 21	21	0 51	36	20 08 56
3	223	54.9		52.6	253	13.1		49.9	48	54	1 05	42	35	1 09	39	19 48 56
4	238	54.8		52.4	267	41.7		54.7	48	52	1 44	2 59	47	24 41		31 56
5	253	54.7	+22	52.2	282	10.2	+26	59.3	46	50	2 10	3 13	3 57	1 38	41	19 16 56
6	268	54.6	+22	51.9	296	38.8	+27	03.8	45	45	2 53	3 42	4 19	2 05	44	18 47 55
7	283	54.5		51.7	311	07.3		08.1	43	40	3 23	4 04	36	26 46		24 54
8	298	54.4		51.5	325	35.8		12.3	42	35	3 45	21	4 51	2 44	48	18 05 54
9	313	54.3		51.3	340	04.2		16.4	41	30	4 03	4 36	5 04	3 00	48	17 49 53
10	328	54.2		51.1	354	32.7		20.3	39	20	32	5 01	25	26 50		17 21 53
11	343	54.0	+22	50.8	9	01.1	+27	24.1	38	10 N	4 54	5 21	5 44	3 49	51	16 57 53
12	358	53.9	+22	50.6	23	29.5	+27	27.7	36	0	5 12	5 38	6 01	4 10	52	16 35 53
13	13	53.8		50.4	37	57.9		31.2	35	10 S	29	5 55	18	31 54		16 13 52
14	28	53.7		50.2	52	26.2		34.6	34	20	5 44	6 12	36	4 54	55	15 50 51
15	43	53.6		49.9	66	54.6		37.8	32	30	6 00	30	6 56	5 21	56	22 51
16	58	53.5		49.7	81	22.9		40.8	30	35	09	40	7 08	37 57		15 06 50
17	73	53.4	+22	49.5	95	51.2	+27	43.8	30	40	6 18	6 52	7 22	5 55	58	14 47 50
18	88	53.3	+22	49.3	110	19.5	+27	46.6	28	45	6 28	7 05	7 39	6 18	59	14 24 49
19	103	53.2		49.0	124	47.8		49.2	26	50	39	20	7 59	6 46	61	13 55 48
20	118	53.0		48.8	139	16.1		51.7	25	52	44	28	8 08	7 00	63	41 47
21	133	52.9		48.6	153	44.4		54.1	24	54	50	36	19	17 63		24 46
22	148	52.8		48.3	168	12.6		56.3	22	56	6 56	44	31	7 36	65	13 05 44
23	163	52.7		48.1	182	40.9	+27	58.4	21	58	7 02	7 54	8 45	8 01	68	12 40 42
24	178	52.6	+22	47.9	197	09.1	+28	00.3	19	60 S	7 09	8 05	9 02	8 33	74	12 07 36

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 5 ^h 10 ^m 7		Mag: -3.8 PMG: 13 ^h 51 ^m		Mag: -0.1 PMG: 6 ^h 10 ^m		Mag: -2.0 PMG: 17 ^h 48 ^m		Mag: +0.2 PMG: 13 ^h 12 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	282	06.2	152	17.0	+20	05.9	267	24.9	+3	29.6	92	17.2	-2	49.1	161	32.0	+20	43.9
1	297	08.7	167	16.4		05.2	282	25.9		30.2	107	19.5		49.2	176	34.2		43.9
2	312	11.1	182	15.7		04.4	297	26.8		30.8	122	21.8		49.3	191	36.3		43.8
3	327	13.6	197	15.1		03.7	312	27.7		31.4	137	24.0		49.4	206	38.4		43.8
4	342	16.1	212	14.4		02.9	327	28.7		32.0	152	26.3		49.4	221	40.6		43.7
5	357	18.5	227	13.7	+20	02.2	342	29.6	+3	32.6	167	28.6	-2	49.5	236	42.7	+20	43.6
6	12	21.0	242	13.1	+20	01.4	357	30.5	+3	33.2	182	30.9	-2	49.6	251	44.8	+20	43.6
7	27	23.5	257	12.4	+20	00.6	12	31.5		33.8	197	33.2		49.7	266	47.0		43.5
8	42	25.9	272	11.8	+19	59.9	27	32.4		34.4	212	35.4		49.8	281	49.1		43.5
9	57	28.4	287	11.1		59.1	42	33.3		35.0	227	37.7		49.9	296	51.2		43.4
10	72	30.8	302	10.4		58.4	57	34.3		35.6	242	40.0		50.0	311	53.4		43.3
11	87	33.3	317	09.8	+19	57.6	72	35.2	+3	36.2	257	42.3	-2	50.1	326	55.5	+20	43.3
12	102	35.8	332	09.1	+19	56.8	87	36.2	+3	36.9	272	44.6	-2	50.2	341	57.6	+20	43.2
13	117	38.2	347	08.5		56.1	102	37.1		37.5	287	46.8		50.3	356	59.8		43.1
14	132	40.7	2	07.8		55.3	117	38.0		38.1	302	49.1		50.3	12	01.9		43.1
15	147	43.2	17	07.2		54.5	132	39.0		38.7	317	51.4		50.4	27	04.0		43.0
16	162	45.6	32	06.5		53.8	147	39.9		39.3	332	53.7		50.5	42	06.2		43.0
17	177	48.1	47	05.9	+19	53.0	162	40.8	+3	39.9	347	55.9	-2	50.6	57	08.3	+20	42.9
18	192	50.6	62	05.2	+19	52.2	177	41.8	+3	40.5	2	58.2	-2	50.7	72	10.4	+20	42.8
19	207	53.0	77	04.6		51.5	192	42.7		41.1	18	00.5		50.8	87	12.6		42.8
20	222	55.5	92	03.9		50.7	207	43.6		41.7	33	02.8		50.9	102	14.7		42.7
21	237	58.0	107	03.2		49.9	222	44.6		42.3	48	05.1		51.0	117	16.8		42.7
22	253	00.4	122	02.6		49.1	237	45.5		42.9	63	07.3		51.1	132	19.0		42.6
23	268	02.9	137	01.9		48.4	252	46.5		43.5	78	09.6		51.2	147	21.1		42.5
24	283	05.3	152	01.3	+19	47.6	267	47.4	+3	44.1	93	11.9	-2	51.3	162	23.2	+20	42.5
Dif	—		-7		-8		+9		+6		+23		-1		+21		-	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 28 ^d 1	PHE { 4 ^h : 54 ⁵ / ₅ 12 ^h : 54 ⁴ / ₄ 20 ^h : 54 ⁴ / ₄									
	PMG: 12 ^h 04 ^m 6					SD: 14 ^h 9			PMG: 11 ^h 15 ^m		Rº: 52 ^m			
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	Rº	Hora	Rº
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	h m	h m
0	178	52.6	+22	47.9	197	09.1	+28	00.3	60 N	21 21	22 53	** **	0 26 52	22 07 26
1	193	52.5		47.6	211	37.3 92		02.1 18	58	21 02	22 13	** **	1 01 53	21 31 33
2	208	52.4		47.4	226	05.6 93		03.8 15	56	20 46	21 46	** **	27 53	21 04 38
3	223	52.3		47.2	240	33.8 92		05.3 15	54	33	26	22 59	1 48 53	20 44 40
4	238	52.2		46.9	255	02.1 93		06.7 14	52	21	21 09	22 22	2 05 53	27 41
5	253	52.1	+22	46.7	269	30.3 92	+28	07.9 12	50	20 11	20 55	21 57	2 19 54	20 12 42
6	268	51.9	+22	46.5	283	58.5 92	+28	09.0 11	45	19 49	20 26	21 15	2 49 53	19 42 45
7	283	51.8		46.2	298	26.8 93		09.9 8	40	32	20 04	20 45	3 12 54	19 18 47
8	298	51.7		46.0	312	55.0 92		10.7 9	35	17	19 47	23	32 53	18 59 48
9	313	51.6		45.7	327	23.3 93		11.4 7	30	19 05	32	20 05	3 48 53	42 49
10	328	51.5		45.5	341	51.5 92		11.9 5	20	18 44	19 08	19 37	4 16 53	18 14 50
11	343	51.4	+22	45.3	356	19.8 93	+28	12.3 4	10 N	18 25	18 48	19 15	4 40 53	17 50 51
12	358	51.3	+22	45.0	10	48.1 93	+28	12.5 1	0	18 08	18 31	18 57	5 02 53	17 28 52
13	13	51.2		44.8	25	16.4 93		12.6 1	10 S	17 51	18 14	40	25 52	17 05 53
14	28	51.1		44.5	39	44.7 93		12.5 1	20	33	17 57	25	5 49 52	16 41 54
15	43	51.0		44.3	54	13.0 93		12.3 2	30	13	39	09	6 17 51	16 13 55
16	58	50.9		44.1	68	41.4 94		12.0 3	35	17 01	29	18 00	34 51	15 56 56
17	73	50.8	+22	43.8	83	09.7 93	+28	11.5 5	40	16 47	17 18	17 52	6 53 51	15 37 56
18	88	50.6	+22	43.6	97	38.1 94	+28	10.9 6	45	16 31	17 05	17 42	7 17 50	15 13 57
19	103	50.5		43.3	112	06.5 94		10.1 8	50	11	16 49	30	7 47 49	14 43 58
20	118	50.4		43.1	126	34.9 94		09.2 10	52	16 02	42	25	8 03 48	28 59
21	133	50.3		42.8	141	03.4 95		08.2 9	54	15 51	34	20	20 48	14 10 60
22	148	50.2		42.6	155	31.8 94		07.0 12	56	39	26	14	8 41 47	13 49 61
23	163	50.1		42.3	170	00.3 95		05.7 13	58	25	16	08	9 09 44	13 22 64
24	178	50.0	+22	42.1	184	28.8 95	+28	04.2 15	60 S	15 09	16 05	17 01	9 47 40	12 43 69

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 5 ^h 06 ^m 8		Mag: -3.8 PMG: 13 ^h 53 ^m		Mag: -0.1 PMG: 6 ^h 08 ^m		Mag: -2.0 PMG: 17 ^h 45 ^m		Mag: +0.2 PMG: 13 ^h 09 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	283	05.3	152	01.3	+19	47.6	267	47.4	+3	44.1	93	11.9	-2	51.3	162	23.2	+20	42.5
1	298	07.8	167	00.7		46.8	282	48.3		44.7	108	14.2		51.3	177	25.4		42.4
2	313	10.3	182	00.0		46.0	297	49.3		45.3	123	16.4		51.4	192	27.5		42.4
3	328	12.7	196	59.4		45.3	312	50.2		45.9	138	18.7		51.5	207	29.6		42.3
4	343	15.2	211	58.7		44.5	327	51.1		46.5	153	21.0		51.6	222	31.8		42.2
5	358	17.7	226	58.1	+19	43.7	342	52.1	+3	47.2	168	23.3	-2	51.7	237	33.9	+20	42.2
6	13	20.1	241	57.4	+19	42.9	357	53.0	+3	47.8	183	25.5	-2	51.8	252	36.0	+20	42.1
7	28	22.6	256	56.8		42.1	12	54.0		48.4	198	27.8		51.9	267	38.2		42.1
8	43	25.1	271	56.1		41.4	27	54.9		49.0	213	30.1		52.0	282	40.3		42.0
9	58	27.5	286	55.5		40.6	42	55.8		49.6	228	32.3		52.1	297	42.4		41.9
10	73	30.0	301	54.8		39.8	57	56.8		50.2	243	34.6		52.2	312	44.6		41.9
11	88	32.5	316	54.2	+19	39.0	72	57.7	+3	50.8	258	36.9	-2	52.3	327	46.7	+20	41.8
12	103	34.9	331	53.6	+19	38.2	87	58.7	+3	51.4	273	39.2	-2	52.4	342	48.8	+20	41.7
13	118	37.4	346	52.9		37.4	102	59.6		52.0	288	41.4		52.4	357	51.0		41.7
14	133	39.8	1	52.3		36.6	118	00.5		52.6	303	43.7		52.5	12	53.1		41.6
15	148	42.3	16	51.6		35.8	133	01.5		53.2	318	46.0		52.6	27	55.2		41.6
16	163	44.8	31	51.0		35.1	148	02.4		53.8	333	48.3		52.7	42	57.3		41.5
17	178	47.2	46	50.3	+19	34.3	163	03.4	+3	54.4	348	50.5	-2	52.8	57	59.5	+20	41.4
18	193	49.7	61	49.7	+19	33.5	178	04.3	+3	55.0	3	52.8	-2	52.9	73	01.6	+20	41.4
19	208	52.2	76	49.1		32.7	193	05.2		55.6	18	55.1		53.0	88	03.7		41.3
20	223	54.6	91	48.4		31.9	208	06.2		56.2	33	57.3		53.1	103	05.9		41.3
21	238	57.1	106	47.8		31.1	223	07.1		56.8	48	59.6		53.2	118	08.0		41.2
22	253	59.6	121	47.2		30.3	238	08.1		57.4	64	01.9		53.3	133	10.1		41.1
23	269	02.0	136	46.5		29.5	253	09.0		58.0	79	04.2		53.4	148	12.3		41.1
24	284	04.5	151	45.9	+19	28.7	268	10.0	+3	58.6	94	06.4	-2	53.5	163	14.4	+20	41.0
Dif	—		-6		-8		+9		+6		+23		-1		+21		-1	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7			Edad: 29 ^d 1	PHE { 4 ^h : 54 ^m 3 12 ^h : 54 ^m 2 20 ^h : 54 ^m 1										
	PMG: 12 ^h 04 ^m 8					SD: 14 ^h 8		PMG: 12 ^h 07 ^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	178	50.0	+22 42.1	184	28.8	+28 04.2	16	60 N	** *	1 17	2 48	1 18	80	22 33	11
1	193	49.9	41.8	198	57.4	02.6	16	58	** *	1 57	3 07	1 54	73	22 04	19
2	208	49.8	41.6	213	26.0	00.9	17	56	** *	2 23	23	2 20	69	21 42	23
3	223	49.7	41.3	227	54.6	59.0	19	54	1 10	2 44	37	41	66	24	27
4	238	49.6	41.1	242	23.2	57.0	20	52	1 47	3 01	48	2 58	64	21 08	30
5	253	49.5	+22 40.8	256	51.9	54.8	22	50	2 12	3 15	3 59	3 13	63	20 54	32
6	268	49.4	+22 40.6	271	20.6	52.5	23	45	2 55	3 43	4 20	3 42	61	20 27	35
7	283	49.3	40.3	285	49.4	50.1	24	40	3 24	4 05	38	4 06	58	20 05	38
8	298	49.2	40.1	300	18.1	47.6	25	35	3 46	23	4 52	25	57	19 47	40
9	313	49.1	39.8	314	47.0	44.9	27	30	4 04	4 37	5 05	4 41	56	31	42
10	328	49.0	39.6	329	15.8	42.0	29	20	32	5 01	26	5 09	54	19 04	46
11	343	48.8	+22 39.3	343	44.7	39.1	29	10 N	4 54	5 21	5 44	5 33	52	18 41	48
12	358	48.7	+22 39.0	358	13.7	36.0	31	0	5 13	5 39	6 01	5 55	51	18 20	49
13	13	48.6	38.8	12	42.7	32.7	33	10 S	29	5 55	18	6 17	49	17 58	52
14	28	48.5	38.5	27	11.7	29.4	33	20	5 45	6 12	36	6 41	47	35	54
15	43	48.4	38.3	41	40.8	25.9	35	30	6 00	30	6 56	7 08	46	17 08	57
16	58	48.3	38.0	56	09.9	22.2	37	35	09	40	7 08	25	44	16 52	58
17	73	48.2	+22 37.7	70	39.1	18.5	37	40	6 18	6 51	7 22	7 44	42	16 33	61
18	88	48.1	+22 37.5	85	08.3	14.6	39	45	6 27	7 04	7 38	8 07	40	16 10	63
19	103	48.0	37.2	99	37.5	10.6	40	50	39	20	7 58	36	37	15 41	67
20	118	47.9	37.0	114	06.9	06.4	42	52	44	27	8 07	8 51	35	27	69
21	133	47.8	36.7	128	36.2	02.1	43	54	49	35	18	9 08	32	15 10	72
22	148	47.7	36.4	143	05.7	57.7	44	56	6 55	43	30	28	29	14 50	75
23	163	47.6	36.2	157	35.1	53.2	45	58	7 01	7 53	8 43	9 53	24	14 26	79
24	178	47.5	+22 35.9	172	04.7	48.5	47	60 S	7 08	8 04	9 00	10 27	16	13 52	88

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG 5 ^h 02 ^m 9		Mag: -3.8 PMG: 13 ^h 54 ^m		Mag: -0.1 PMG: 6 ^h 07 ^m		Mag: -2.0 PMG: 17 ^h 41 ^m		Mag: +0.2 PMG: 13 ^h 05 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	284	04.5	151 45.9	+19 28.7	268	10.0	+3 58.6	94 06.4	-2 53.5	163 14.4	+20 41.0
1	299	06.9	166 45.3	27.9	283	10.9	59.2	109 08.7	53.6	178 16.5	41.0
2	314	09.4	181 44.6	27.1	298	11.8	+3 59.8	124 11.0	53.7	193 18.7	40.9
3	329	11.9	196 44.0	26.3	313	12.8	+4 00.4	139 13.2	53.8	208 20.8	40.8
4	344	14.3	211 43.3	25.5	328	13.7	01.0	154 15.5	53.8	223 22.9	40.8
5	359	16.8	226 42.7	+19 24.7	343	14.7	+4 01.6	169 17.8	-2 53.9	238 25.1	+20 40.7
6	14	19.3	241 42.1	+19 23.9	358	15.6	+4 02.2	184 20.0	-2 54.0	253 27.2	+20 40.6
7	29	21.7	256 41.5	23.1	13	16.6	02.8	199 22.3	54.1	268 29.3	40.6
8	44	24.2	271 40.8	22.3	28	17.5	03.4	214 24.6	54.2	283 31.5	40.5
9	59	26.7	286 40.2	21.5	43	18.4	04.0	229 26.8	54.3	298 33.6	40.5
10	74	29.1	301 39.6	20.7	58	19.4	04.6	244 29.1	54.4	313 35.7	40.4
11	89	31.6	316 38.9	+19 19.9	73	20.3	+4 05.2	259 31.4	-2 54.5	328 37.9	+20 40.3
12	104	34.1	331 38.3	+19 19.1	88	21.3	+4 05.8	274 33.6	-2 54.6	343 40.0	+20 40.3
13	119	36.5	346 37.7	18.3	103	22.2	06.4	289 35.9	54.7	358 42.1	40.2
14	134	39.0	1 37.0	17.4	118	23.2	07.0	304 38.2	54.8	13 44.3	40.2
15	149	41.4	16 36.4	16.6	133	24.1	07.6	319 40.4	54.9	28 46.4	40.1
16	164	43.9	31 35.8	15.8	148	25.1	08.2	334 42.7	55.0	43 48.5	40.0
17	179	46.4	46 35.2	+19 15.0	163	26.0	+4 08.8	349 45.0	-2 55.1	58 50.6	+20 40.0
18	194	48.8	61 34.5	+19 14.2	178	26.9	+4 09.4	4 47.2	-2 55.2	73 52.8	+20 39.9
19	209	51.3	76 33.9	13.4	193	27.9	10.0	19 49.5	55.3	88 54.9	39.8
20	224	53.8	91 33.3	12.6	208	28.8	10.6	34 51.8	55.4	103 57.0	39.8
21	239	56.2	106 32.7	11.8	223	29.8	11.2	49 54.0	55.5	118 59.2	39.7
22	254	58.7	121 32.0	10.9	238	30.7	11.8	64 56.3	55.6	134 01.3	39.7
23	270	01.2	136 31.4	10.1	253	31.7	12.4	79 58.6	55.7	149 03.4	39.6
24	285	03.6	151 30.8	+19 09.3	268	32.6	+4 13.0	95 00.8	-2 55.7	164 05.6	+20 39.5
Dif	—		-6	-8	+9	+6		+23	-1	+21	-1

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 30 ^d 1 PHE	SD: 14 ^h 7				Final del crepúsculo	Salida de Luna		Puesta de Luna			
	PMG: 12 ^h 04 ^m 9				PMG: 12 ^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	m	h m m	m
0	178	47.5	+22 35.9	172	04.7	+26 48.5	48	60 N	21 19	22 48	** **	2 38 91	22 44	4	
1	193	47.4	35.6	186	34.2 ¹⁰⁵	43.7	49	58	21 00	22 10	** **	3 07 83	23	10	
2	208	47.3	35.4	201	03.9 ¹⁰⁷	38.8	50	56	20 45	21 44	** **	29 78	22 05	15	
3	223	47.2	35.1	215	33.6 ¹⁰⁷	33.8	50	54	32	24	22 54	3 47 74	21 51	15	
4	238	47.1	34.8	230	03.3 ¹⁰⁷	28.6	52	52	20	21 07	22 19	4 02 72	38	21	
5	253	47.0	+22 34.6	244	33.1 ¹⁰⁸	+26 23.3	53	50	20 10	20 53	21 55	4 16 69	21 26	24	
6	268	46.9	+22 34.3	259	03.0 ¹⁰⁹	+26 17.9	54	45	19 49	20 25	21 13	4 43 64	21 02	29	
7	283	46.8	34.0	273	32.9 ¹⁰⁹	12.4	55	40	31	20 04	20 45	5 04 62	20 43	32	
8	298	46.7	33.8	288	02.9 ¹¹⁰	06.8	56	35	17	19 46	23	22 59	27	35	
9	313	46.6	33.5	302	33.0 ¹¹¹	+26 01.0	58	30	19 05	32	20 05	5 37 57	20 13	37	
10	328	46.5	33.2	317	03.1 ¹¹¹	+25 55.1	59	20	18 44	19 08	19 37	6 03 54	19 50	40	
11	343	46.4	+22 32.9	331	33.2 ¹¹¹	+25 49.1	60	10 N	18 25	18 48	19 15	6 25 51	19 29	44	
12	358	46.3	+22 32.7	346	03.5 ¹¹³	+25 43.0	61	0	18 09	18 31	18 57	6 46 48	19 09	47	
13	13	46.2	32.4	0	33.8 ¹¹³	36.7	63	10 S	17 52	18 15	41	7 06 46	18 50	50	
14	28	46.1	32.1	15	04.1 ¹¹³	30.4	63	20	34	17 58	25	28 43	29	53	
15	43	46.0	31.8	29	34.5 ¹¹⁴	23.9	65	30	14	40	10	7 54 39	18 05	57	
16	58	45.9	31.6	44	05.0 ¹¹⁵	17.3	66	35	17 02	30	18 01	8 09 37	17 50	60	
17	73	45.8	+22 31.3	58	35.6 ¹¹⁶	+25 10.6	67	40	16 49	17 19	17 53	8 26 35	17 34	62	
18	88	45.7	+22 31.0	73	06.2 ¹¹⁶	+25 03.8	68	45	16 33	17 06	17 43	8 47 32	17 13	66	
19	103	45.6	30.7	87	36.9 ¹¹⁷	+24 56.9	69	50	13	16 51	32	9 13 27	16 48	71	
20	118	45.5	30.5	102	07.6 ¹¹⁷	49.8	71	52	16 04	44	27	26 25	36	73	
21	133	45.4	30.2	116	38.4 ¹¹⁸	42.7	71	54	15 53	36	22	40 22	22	76	
22	148	45.3	29.9	131	09.3 ¹¹⁹	35.4	73	56	41	28	16	9 57 18	16 05	80	
23	163	45.2	29.6	145	40.3 ¹²⁰	28.1	73	58	28	18	10	10 17 14	15 45	85	
24	178	45.1	+22 29.3	160	11.3 ¹²⁰	+24 20.6	75	60 S	15 11	16 07	17 03	10 43 6	15 20	93	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 4 ^h 58 ^m 9		Mag: -3.8 PMG: 13 ^h 55 ^m		Mag: -0.1 PMG: 6 ^h 05 ^m		Mag: -2.0 PMG: 17 ^h 37 ^m		Mag: +0.2 PMG: 13 ^h 02 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	285	03.6	151	30.8	+19 09.3	268	32.6	+4 13.0	95	00.8	-2 55.7	164	05.6	+20 39.5
1	300	06.1	166	30.2	08.5	283	33.6	13.6	110	03.1	55.8	179	07.7	39.5
2	315	08.6	181	29.6	07.7	298	34.5	14.2	125	05.3	55.9	194	09.8	39.4
3	330	11.0	196	28.9	06.8	313	35.5	14.8	140	07.6	56.0	209	12.0	39.4
4	345	13.5	211	28.3	06.0	328	36.4	15.4	155	09.9	56.1	224	14.1	39.3
5	0	15.9	226	27.7	+19 05.2	343	37.4	+4 16.0	170	12.1	-2 56.2	239	16.2	+20 39.2
6	15	18.4	241	27.1	+19 04.4	358	38.3	+4 16.6	185	14.4	-2 56.3	254	18.4	+20 39.2
7	30	20.9	256	26.5	03.5	13	39.3	17.2	200	16.7	56.4	269	20.5	39.1
8	45	23.3	271	25.8	02.7	28	40.2	17.8	215	18.9	56.5	284	22.6	39.0
9	60	25.8	286	25.2	01.9	43	41.2	18.4	230	21.2	56.6	299	24.8	39.0
10	75	28.3	301	24.6	01.1	58	42.1	19.0	245	23.4	56.7	314	26.9	38.9
11	90	30.7	316	24.0	+19 00.2	73	43.1	+4 19.6	260	25.7	-2 56.8	329	29.0	+20 38.9
12	105	33.2	331	23.4	+18 59.4	88	44.0	+4 20.1	275	28.0	-2 56.9	344	31.1	+20 38.8
13	120	35.7	346	22.8	58.6	103	45.0	20.7	290	30.2	57.0	359	33.3	38.7
14	135	38.1	1	22.1	57.7	118	45.9	21.3	305	32.5	57.1	14	35.4	38.7
15	150	40.6	16	21.5	56.9	133	46.9	21.9	320	34.8	57.2	29	37.5	38.6
16	165	43.1	31	20.9	56.1	148	47.8	22.5	335	37.0	57.3	44	39.7	38.5
17	180	45.5	46	20.3	+18 55.2	163	48.8	+4 23.1	350	39.3	-2 57.4	59	41.8	+20 38.5
18	195	48.0	61	19.7	+18 54.4	178	49.7	+4 23.7	5	41.5	-2 57.5	74	43.9	+20 38.4
19	210	50.4	76	19.1	53.6	193	50.7	24.3	20	43.8	57.6	89	46.1	38.4
20	225	52.9	91	18.5	52.7	208	51.6	24.9	35	46.0	57.7	104	48.2	38.3
21	240	55.4	106	17.9	51.9	223	52.6	25.5	50	48.3	57.8	119	50.3	38.2
22	255	57.8	121	17.3	51.1	238	53.5	26.1	65	50.6	57.9	134	52.5	38.2
23	271	00.3	136	16.6	50.2	253	54.5	26.7	80	52.8	58.0	149	54.6	38.1
24	286	02.8	151	16.0	+18 49.4	268	55.4	+4 27.3	95	55.1	-2 58.1	164	56.7	+20 38.1
Dif	—		-6	-8		+9	+6		+23	-1		+21	-1	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 15 ^h 7 PMG: 12 ^h 05 ^m 1			Edad: 1 ^d 5 PHE { 4 ^h : 54 ^o 0 12 ^h : 54 ^o 0 20 ^h : 54 ^o 0 PMG: 13 ^h 45 ^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		
0	178	45.1	+22	29.3	160	11.3	+24	20.6	76	60 N	1 23	2 51	4 09	91	22 48 2		
1	193	45.0		29.0	174	42.4 ¹²¹		13.0	76	58	2 01	3 10	30	85	33 6		
2	208	44.9		28.8	189	13.5 ¹²¹	+24	05.3	77	56	26	25	4 47	80	20 10		
3	223	44.8		28.5	203	44.7 ¹²²	+23	57.5	78	54	1 16	2 46	5 01	77	22 09 13		
4	238	44.7		28.2	218	16.0 ¹²³		49.6	79	52	1 51	3 03	3 50	14	73	21 59 15	
5	253	44.6	+22	27.9	232	47.4 ¹²⁴	+23	41.6	80	50	2 15	3 17	4 00	5 25	71	21 50 18	
6	268	44.5	+22	27.6	247	18.8 ¹²⁴	+23	33.5	81	45	2 57	3 45	4 22	5 47	66	21 31 23	
7	283	44.4		27.3	261	50.3 ¹²⁵		25.3	82	40	3 26	4 06	39	6 06	62	15 27	
8	298	44.3		27.1	276	21.9 ¹²⁶		17.0	83	35	3 48	24	4 53	21	59	21 02 30	
9	313	44.2		26.8	290	53.5 ¹²⁶		08.6	84	30	4 05	4 38	5 05	34	57	20 50 33	
10	328	44.1		26.5	305	25.2 ¹²⁷	+23	00.1	85	20	33	5 02	27	6 57	52	30 37	
11	343	44.0	+22	26.2	319	56.9 ¹²⁷	+22	51.5	86	10 N	4 55	5 22	5 45	7 16	49	20 13 40	
12	358	43.9	+22	25.9	334	28.8 ¹²⁹	+22	42.8	87	0	5 13	5 39	6 01	7 34	46	19 56 45	
13	13	43.8		25.6	349	00.7 ¹²⁹		34.0	88	10 S	29	5 55	18	7 52	42	40 48	
14	28	43.7		25.3	3	32.7 ¹³⁰		25.1	89	20	5 45	6 12	36	8 11	39	22 52	
15	43	43.6		25.0	18	04.7 ¹³⁰		16.1	90	30	6 00	30	6 56	33	35	19 02 56	
16	58	43.5		24.7	32	36.8 ¹³¹	+22	07.0	91	35	08	40	7 08	8 46	32	18 50 59	
17	73	43.4	+22	24.4	47	09.0 ¹³²	+21	57.8	92	40	6 17	6 51	7 21	9 01	29	18 36 62	
18	88	43.3	+22	24.1	61	41.2 ¹³²	+21	48.6	92	45	6 27	7 04	7 37	9 19	25	18 19 66	
19	103	43.3		23.9	76	13.5 ¹³³		39.2	94	50	38	19	7 57	40	21	17 59 71	
20	118	43.2		23.6	90	45.9 ¹³⁴		29.8	94	52	43	26	8 06	9 51	18	49 73	
21	133	43.1		23.3	105	18.3 ¹³⁴		20.2	96	54	48	33	16	10 02	15	38 76	
22	148	43.0		23.0	119	50.8 ¹³⁵		10.6	96	56	6 54	42	28	15	12	25 80	
23	163	42.9		22.7	134	23.4 ¹³⁶	+21	00.9	97	58	7 00	7 51	42	31	7	17 10 85	
24	178	42.8	+22	22.4	148	56.1 ¹³⁷	+20	51.1	98	60 S	7 07	8 02	8 58	10 49	2	16 53 90	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO				
	PMG 4 ^h 55 ^m 0			Mag: -3.9 PMG: 13 ^h 55 ^m			Mag: -0.1 PMG: 6 ^h 04 ^m			Mag: -2.0 PMG: 17 ^h 34 ^m			Mag: +0.2 PMG: 12 ^h 58 ^m				
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°		
0	286	02.8		151	16.0	+18	268	55.4	+4	95	55.1	-2	58.1	164	56.7	+20	38.1
1	301	05.2		166	15.4		283	56.4	27.9	110	57.3		58.2	179	58.9		38.0
2	316	07.7		181	14.8		298	57.3	28.5	125	59.6		58.3	195	01.0		37.9
3	331	10.2		196	14.2		313	58.3	29.1	141	01.9		58.4	210	03.1		37.9
4	346	12.6		211	13.6		328	59.2	29.7	156	04.1		58.5	225	05.2		37.8
5	1	15.1		226	13.0	+18	344	00.2	+4	171	06.4	-2	58.6	240	07.4	+20	37.7
6	16	17.6		241	12.4	+18	359	01.1	+4	186	08.6	-2	58.7	255	09.5	+20	37.7
7	31	20.0		256	11.8		14	02.1	31.4	201	10.9		58.8	270	11.6		37.6
8	46	22.5		271	11.2		29	03.0	32.0	216	13.1		58.9	285	13.8		37.6
9	61	24.9		286	10.6		44	04.0	32.6	231	15.4		59.0	300	15.9		37.5
10	76	27.4		301	10.0		59	04.9	33.2	246	17.7		59.1	315	18.0		37.4
11	91	29.9		316	09.4	+18	74	05.9	+4	261	19.9	-2	59.2	330	20.2	+20	37.4
12	106	32.3		331	08.8	+18	89	06.9	+4	276	22.2	-2	59.3	345	22.3	+20	37.3
13	121	34.8		346	08.2		104	07.8	35.0	291	24.4		59.4	0	24.4		37.2
14	136	37.3		1	07.6		119	08.8	35.6	306	26.7		59.5	15	26.6		37.2
15	151	39.7		16	07.0		134	09.7	36.2	321	28.9		59.6	30	28.7		37.1
16	166	42.2		31	06.4		149	10.7	36.8	336	31.2		59.7	45	30.8		37.1
17	181	44.7		46	05.8	+18	164	11.6	+4	351	33.4	-2	59.8	60	32.9	+20	37.0
18	196	47.1		61	05.2	+18	179	12.6	+4	6	35.7	-2	59.9	75	35.1	+20	36.9
19	211	49.6		76	04.6		194	13.5	38.5	21	37.9	-3	00.0	90	37.2		36.9
20	226	52.0		91	04.0		209	14.5	39.1	36	40.2	-3	00.1	105	39.3		36.8
21	241	54.5		106	03.4		224	15.5	39.7	51	42.5		00.2	120	41.5		36.7
22	256	57.0		121	02.8		239	16.4	40.3	66	44.7		00.3	135	43.6		36.7
23	271	59.4		136	02.2		254	17.4	40.9	81	47.0		00.4	150	45.7		36.6
24	287	01.9		151	01.6	+18	269	18.3	+4	96	49.2	-3	00.5	165	47.9	+20	36.6
Dif	—			-6		-9	+10		+6	+23		-1		+21		-1	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 15 ^h 7			Edad: 2 ^d 5	PHE { 4 ^h : 54 ^o 12 ^h : 54 ^o 20 ^h : 54 ^o	SD: 14 ^h 7			PMG: 14 ^h 30 ^m	R°: 43 ^m								
	hG ☉	Dec									hG ☾	Dif	Dec	Dif	Civil	Náutico	Hora	R°
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	h	m
0	178	42.8	+22	22.4	148	56.1	+20	51.1	60 N	21 16	22 42	** **	5 40	88	22 50	0		
1	193	42.7		22.1	163	28.8 ¹³⁷		41.2 ⁹⁹	58	20 58	22 06	** **	5 55	83	39	4		
2	208	42.6		21.8	178	01.5 ¹³⁷		31.2 ¹⁰⁰	56	43	21 41	** **	6 07	79	30	7		
3	223	42.5		21.5	192	34.4 ¹³⁹		21.2 ¹⁰⁰	54	30	22	22 49	18	76	22	10		
4	238	42.4		21.2	207	07.3 ¹³⁹		11.0 ¹⁰²	52	19	21 05	22 16	27	73	14	13		
5	253	42.3	+22	20.9	221	40.3 ¹⁴⁰	+20	00.8 ¹⁰²	50	20 09	20 52	21 53	6 36	70	22 08	14		
6	268	42.2	+22	20.6	236	13.3 ¹⁴⁰	+19	50.5 ¹⁰³	45	19 48	20 24	21 12	6 53	66	21 54	19		
7	283	42.1		20.3	250	46.4 ¹⁴¹		40.1 ¹⁰⁴	40	31	20 03	20 44	7 08	62	42	23		
8	298	42.0		20.0	265	19.5 ¹⁴¹		29.6 ¹⁰⁵	35	17	19 46	22	20	59	32	26		
9	313	41.9		19.7	279	52.8 ¹⁴³		19.1 ¹⁰⁵	30	19 04	31	20 04	31	55	23	29		
10	328	41.8		19.4	294	26.0 ¹⁴²	+19	08.5 ¹⁰⁶	20	18 43	19 08	19 37	7 49	51	21 07	34		
11	343	41.8	+22	19.0	308	59.4 ¹⁴⁴	+18	57.8 ¹⁰⁷	10 N	18 26	18 48	19 15	8 05	47	20 53	38		
12	358	41.7	+22	18.7	323	32.8 ¹⁴⁴	+18	47.0 ¹⁰⁸	0	18 09	18 31	18 57	8 20	43	20 41	42		
13	13	41.6		18.4	338	06.3 ¹⁴⁵		36.1 ¹⁰⁹	10 S	17 52	18 15	41	34	40	28	46		
14	28	41.5		18.1	352	39.8 ¹⁴⁵		25.2 ¹⁰⁹	20	35	17 59	26	8 50	35	20 14	50		
15	43	41.4		17.8	7	13.4 ¹⁴⁶		14.2 ¹¹⁰	30	15	41	11	9 08	30	19 58	55		
16	58	41.3		17.5	21	47.0 ¹⁴⁶	+18	03.1 ¹¹¹	35	17 03	31	18 02	18	28	49	57		
17	73	41.2	+22	17.2	36	20.7 ¹⁴⁷	+17	52.0 ¹¹¹	40	16 50	17 20	17 54	9 30	25	19 38	61		
18	88	41.1	+22	16.9	50	54.5 ¹⁴⁸	+17	40.8 ¹¹²	45	16 34	17 07	17 44	9 44	21	19 25	65		
19	103	41.0		16.6	65	28.3 ¹⁴⁸		29.5 ¹¹³	50	15	16 52	33	10 01	16	10	70		
20	118	40.9		16.3	80	02.2 ¹⁴⁹		18.1 ¹¹⁴	52	16 05	45	29	09	13	19 02	73		
21	133	40.8		16.0	94	36.1 ¹⁴⁹	+17	06.7 ¹¹⁴	54	15 55	38	23	17	11	18 54	76		
22	148	40.8		15.6	109	10.1 ¹⁵⁰	+16	55.2 ¹¹⁵	56	44	30	18	27	8	45	79		
23	163	40.7		15.3	123	44.2 ¹⁵¹		43.7 ¹¹⁵	58	30	20	12	38	5	35	82		
24	178	40.6	+22	15.0	138	18.2 ¹⁵⁰	+16	32.0 ¹¹⁷	60 S	15 14	16 09	17 05	10 51	0	18 23	86		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 4 ^h 51 ^m 1		Mag: -3.9 PMG: 13 ^h 56 ^m			Mag: -0.2 PMG: 6 ^h 02 ^m			Mag: -2.0 PMG: 17 ^h 30 ^m			Mag: +0.2 PMG: 12 ^h 55 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	287	01.9	151	01.6	+18	28.9	269	18.3	+4	41.5	96	49.2	-3	00.5	165	47.9	+20	36.6
1	302	04.4	166	01.0		28.1	284	19.3		42.1	111	51.5		00.6	180	50.0		36.5
2	317	06.8	181	00.4		27.2	299	20.2		42.7	126	53.7		00.7	195	52.1		36.4
3	332	09.3	195	59.8		26.4	314	21.2		43.2	141	56.0		00.8	210	54.2		36.4
4	347	11.8	210	59.2		25.5	329	22.1		43.8	156	58.2		00.9	225	56.4		36.3
5	2	14.2	225	58.6	+18	24.6	344	23.1	+4	44.4	172	00.5	-3	01.0	240	58.5	+20	36.2
6	17	16.7	240	58.1	+18	23.8	359	24.1	+4	45.0	187	02.7	-3	01.1	256	00.6	+20	36.2
7	32	19.2	255	57.5		22.9	14	25.0		45.6	202	05.0		01.2	271	02.8		36.1
8	47	21.6	270	56.9		22.0	29	26.0		46.2	217	07.2		01.3	286	04.9		36.1
9	62	24.1	285	56.3		21.2	44	26.9		46.8	232	09.5		01.4	301	07.0		36.0
10	77	26.5	300	55.7		20.3	59	27.9		47.4	247	11.7		01.5	316	09.2		35.9
11	92	29.0	315	55.1	+18	19.4	74	28.9	+4	48.0	262	14.0	-3	01.6	331	11.3	+20	35.9
12	107	31.5	330	54.5	+18	18.5	89	29.8	+4	48.5	277	16.2	-3	01.7	346	13.4	+20	35.8
13	122	33.9	345	53.9		17.7	104	30.8		49.1	292	18.5		01.8	1	15.5		35.7
14	137	36.4	0	53.3		16.8	119	31.7		49.7	307	20.7		01.9	16	17.7		35.7
15	152	38.9	15	52.8		15.9	134	32.7		50.3	322	23.0		02.0	31	19.8		35.6
16	167	41.3	30	52.2		15.0	149	33.7		50.9	337	25.2		02.1	46	21.9		35.6
17	182	43.8	45	51.6	+18	14.2	164	34.6	+4	51.5	352	27.5	-3	02.2	61	24.1	+20	35.5
18	197	46.3	60	51.0	+18	13.3	179	35.6	+4	52.1	7	29.7	-3	02.3	76	26.2	+20	35.4
19	212	48.7	75	50.4		12.4	194	36.5		52.6	22	32.0		02.4	91	28.3		35.4
20	227	51.2	90	49.8		11.5	209	37.5		53.2	37	34.2		02.5	106	30.5		35.3
21	242	53.7	105	49.3		10.7	224	38.5		53.8	52	36.5		02.6	121	32.6		35.2
22	257	56.1	120	48.7		09.8	239	39.4		54.4	67	38.7		02.7	136	34.7		35.2
23	272	58.6	135	48.1		08.9	254	40.4		55.0	82	41.0		02.8	151	36.8		35.1
24	288	01.0	150	47.5	+18	08.0	269	41.3	+4	55.6	97	43.2	-3	02.9	166	39.0	+20	35.1
Dif	—		-6		-9		+10		+6		+22		-1		+21		-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 4				Edad: 3 ^d 5 PHE { 4 ^h : 54 ^h 1 12 ^h : 54 ^h 1 20 ^h : 54 ^h 2 Rº: 40 ^m															
	hG ☉		Dec		hG ☾ Dif		Dec Dif			Náutico	Civil		Hora	Rº	Hora	Rº				
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	h m	h m	h m			
0	178	40.6	+22	15.0	138	18.2	+16	32.0	60 N	** **	1 29	2 55	7 08	85	22 50	**				
1	193	40.5		14.7	152	52.4 ¹⁵²		20.3 ¹¹⁷	58	** **	2 05	3 13	18 81		43 3					
2	208	40.4		14.4	167	26.6 ¹⁵²	+16	08.6 ¹¹⁷	56	** **	30	28	26 78		37 5					
3	223	40.3		14.1	182	00.9 ¹⁵³	+15	56.7 ¹¹⁹	54	1 22	2 49	41	34 74		32 8					
4	238	40.2		13.8	196	35.2 ¹⁵³		44.9 ¹¹⁸	52	1 55	3 05	3 52	40 72		27 10					
5	253	40.1	+22	13.4	211	09.5 ¹⁵³	+15	32.9 ¹²⁰	50	2 18	3 19	4 02	7 46	70	22 22	13				
6	268	40.0	+22	13.1	225	43.9 ¹⁵⁴	+15	20.9 ¹²⁰	45	2 59	3 47	4 23	7 59	65	22 13	17				
7	283	39.9		12.8	240	18.4 ¹⁵⁵	+15	08.8 ¹²¹	40	3 27	4 08	40	8 10	60	22 05	21				
8	298	39.9		12.5	254	52.9 ¹⁵⁵	+14	56.7 ¹²¹	35	3 49	25	4 54	19 57		21 58	24				
9	313	39.8		12.2	269	27.4 ¹⁵⁵		44.5 ¹²²	30	4 07	4 39	5 06	26 55		52 27					
10	328	39.7		11.8	284	02.0 ¹⁵⁶		32.2 ¹²³	20	34	5 03	27	40 49		41 32					
11	343	39.6	+22	11.5	298	36.7 ¹⁵⁷	+14	19.9 ¹²³	10 N	4 55	5 22	5 45	8 52	45	21 31	37				
12	358	39.5	+22	11.2	313	11.3 ¹⁵⁶	+14	07.6 ¹²³	0	5 13	5 39	6 02	9 03	41	21 23	40				
13	13	39.4		10.9	327	46.1 ¹⁵⁸	+13	55.2 ¹²⁴	10 S	29	5 56	18	14 37		14 44					
14	28	39.3		10.6	342	20.8 ¹⁵⁷		42.7 ¹²⁵	20	5 45	6 12	36	25 33		21 04	49				
15	43	39.2		10.2	356	55.7 ¹⁵⁹		30.1 ¹²⁶	30	6 00	30	6 56	38 28		20 53	54				
16	58	39.2		09.9	11	30.5 ¹⁵⁸		17.6 ¹²⁵	35	08	39	7 07	46 25		46 57					
17	73	39.1	+22	09.6	26	05.4 ¹⁵⁹	+13	04.9 ¹²⁷	40	6 17	6 50	7 21	9 55	21	20 39	61				
18	88	39.0	+22	09.3	40	40.4 ¹⁶⁰	+12	52.2 ¹²⁷	45	6 26	7 03	7 36	10 05	18	20 30	65				
19	103	38.9		08.9	55	15.3 ¹⁵⁹		39.5 ¹²⁷	50	37	18	7 55	17 13		20 69					
20	118	38.8		08.6	69	50.3 ¹⁶⁰		26.7 ¹²⁸	52	42	25	8 05	22 11		15 72					
21	133	38.7		08.3	84	25.4 ¹⁶¹		13.9 ¹²⁸	54	47	32	15	28 9		10 74					
22	148	38.6		07.9	99	00.5 ¹⁶¹	+12	01.0 ¹²⁹	56	52	41	26	35 6		20 04	77				
23	163	38.6		07.6	113	35.6 ¹⁶¹	+11	48.0 ¹³⁰	58	6 58	7 50	40	43 3		19 57	80				
24	178	38.5	+22	07.3	128	10.8 ¹⁶²	+11	35.0 ¹³⁰	60 S	7 05	8 00	8 55	10 51	0	19 49	84				
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG 4 ^h 47 ^m 1				Mag: -3.9 PMG: 13 ^h 57 ^m				Mag: -0.2 PMG: 6 ^h 01 ^m				Mag: -2.0 PMG: 17 ^h 27 ^m				Mag: +0.2 PMG: 12 ^h 52 ^m			
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	288	01.0			150	47.5	+18	08.0	269	41.3	+4	55.6	97	43.2	-3	02.9	166	39.0	+20	35.1
1	303	03.5			165	46.9		07.1	284	42.3		56.2	112	45.4		03.0	181	41.1		35.0
2	318	06.0			180	46.3		06.3	299	43.3		56.7	127	47.7		03.1	196	43.2		34.9
3	333	08.4			195	45.8		05.4	314	44.2		57.3	142	49.9		03.2	211	45.4		34.9
4	348	10.9			210	45.2		04.5	329	45.2		57.9	157	52.2		03.3	226	47.5		34.8
5	3	13.4			225	44.6	+18	03.6	344	46.2	+4	58.5	172	54.4	-3	03.4	241	49.6	+20	34.7
6	18	15.8			240	44.0	+18	02.7	359	47.1	+4	59.1	187	56.7	-3	03.5	256	51.8	+20	34.7
7	33	18.3			255	43.5		01.8	14	48.1	+4	59.7	202	58.9		03.6	271	53.9		34.6
8	48	20.8			270	42.9	+18	00.9	29	49.0	+5	00.3	218	01.2		03.7	286	56.0		34.6
9	63	23.2			285	42.3	+18	00.0	44	50.0		00.8	233	03.4		03.8	301	58.1		34.5
10	78	25.7			300	41.7	+17	59.2	59	51.0		01.4	248	05.7		03.9	317	00.3		34.4
11	93	28.2			315	41.2	+17	58.3	74	51.9	+5	02.0	263	07.9	-3	04.1	332	02.4	+20	34.4
12	108	30.6			330	40.6	+17	57.4	89	52.9	+5	02.6	278	10.1	-3	04.2	347	04.5	+20	34.3
13	123	33.1			345	40.0		56.5	104	53.9		03.2	293	12.4		04.3	2	06.7		34.2
14	138	35.5			0	39.4		55.6	119	54.8		03.8	308	14.6		04.4	17	08.8		34.2
15	153	38.0			15	38.9		54.7	134	55.8		04.3	323	16.9		04.5	32	10.9		34.1
16	168	40.5			30	38.3		53.8	149	56.8		04.9	338	19.1		04.6	47	13.1		34.1
17	183	42.9			45	37.7	+17	52.9	164	57.7	+5	05.5	353	21.4	-3	04.7	62	15.2	+20	34.0
18	198	45.4			60	37.1	+17	52.0	179	58.7	+5	06.1	8	23.6	-3	04.8	77	17.3	+20	33.9
19	213	47.9			75	36.6		51.1	194	59.7		06.7	23	25.8		04.9	92	19.4		33.9
20	228	50.3			90	36.0		50.2	210	00.6		07.2	38	28.1		05.0	107	21.6		33.8
21	243	52.8			105	35.4		49.3	225	01.6		07.8	53	30.3		05.1	122	23.7		33.7
22	258	55.3			120	34.9		48.4	240	02.6		08.4	68	32.6		05.2	137	25.8		33.7
23	273	57.7			135	34.3		47.5	255	03.5		09.0	83	34.8		05.3	152	28.0		33.6
24	289	00.2			150	33.7	+17	46.6	270	04.5	+5	09.6	98	37.1	-3	05.4	167	30.1	+20	33.5
Dif	—		-6		-9		+10		+6		+22		-1		+21		-			

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 4 ^d 5	PHE { 4 ^h : 54/3 12 ^h : 54/4 20 ^h : 54/5										
	PMG: 12 ^h 05 ^m 5					PMG: 15 ^h 53 ^m			Rº: 40 ^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	38.5	+22 07.3	128	10.8	+11 35.0		60 N	21 14	22 36	** **	8 33 84	22 49 **		
1	193	38.4	07.0	142	45.9 ¹⁶¹	22.0 ¹³⁰		58	20 56	22 02	** **	39 80	46 2		
2	208	38.3	06.6	157	21.2 ¹⁶³	+11 08.9 ¹³¹		56	41	21 38	** **	44 77	42 5		
3	223	38.2	06.3	171	56.4 ¹⁶²	+10 55.8 ¹³¹		54	28	19	22 44	48 74	40 7		
4	238	38.1	06.0	186	31.7 ¹⁶³	42.6 ¹³²		52	17	21 03	22 13	52 72	37 10		
5	253	38.1	+22 05.6	201	07.0 ¹⁶³	+10 29.4 ¹³²		50	20 07	20 50	21 50	8 56 69	22 35 12		
6	268	38.0	+22 05.3	215	42.4 ¹⁶⁴	+10 16.1 ¹³³		45	19 47	20 23	21 10	9 04 64	22 30 16		
7	283	37.9	05.0	230	17.7 ¹⁶³	+10 02.8 ¹³³		40	30	20 02	20 42	10 61	26 20		
8	298	37.8	04.6	244	53.1 ¹⁶⁴	+9 49.5 ¹³³		35	16	19 45	21	16 57	22 23		
9	313	37.7	04.3	259	28.5 ¹⁶⁴	36.1 ¹³⁴		30	19 04	31	20 04	21 54	19 26		
10	328	37.6	04.0	274	04.0 ¹⁶⁵	22.6 ¹³⁵		20	18 43	19 08	19 36	29 49	13 31		
11	343	37.6	+22 03.6	288	39.4 ¹⁶⁴	+9 09.2 ¹³⁴		10 N	18 26	18 48	19 15	9 37 44	22 08 36		
12	358	37.5	+22 03.3	303	14.9 ¹⁶⁵	+8 55.7 ¹³⁵		0	18 09	18 31	18 57	9 44 40	22 03 40		
13	13	37.4	02.9	317	50.4 ¹⁶⁵	42.1 ¹³⁶		10 S	17 53	18 15	42	51 35	21 58 44		
14	28	37.3	02.6	332	26.0 ¹⁶⁶	28.5 ¹³⁶		20	36	17 59	27	9 58 31	53 49		
15	43	37.2	02.3	347	01.5 ¹⁶⁵	14.9 ¹³⁶		30	16	42	11	10 06 27	47 54		
16	58	37.1	01.9	1	37.1 ¹⁶⁶	+8 01.2 ¹³⁷		35	17 04	32	18 03	11 23	43 58		
17	73	37.1	+22 01.6	16	12.7 ¹⁶⁶	+7 47.5 ¹³⁷		40	16 51	17 21	17 55	10 16 21	21 40 60		
18	88	37.0	+22 01.2	30	48.3 ¹⁶⁶	+7 33.8 ¹³⁷		45	16 36	17 09	17 45	10 23 16	21 35 64		
19	103	36.9	00.9	45	23.9 ¹⁶⁶	20.0 ¹³⁸		50	17	16 54	35	30 12	29 70		
20	118	36.8	00.6	59	59.5 ¹⁶⁶	+7 06.2 ¹³⁸		52	16 08	47	30	33 10	27 71		
21	133	36.7	+22 00.2	74	35.2 ¹⁶⁷	+6 52.4 ¹³⁸		54	15 57	40	25	37 8	24 74		
22	148	36.7	+21 59.9	89	10.8 ¹⁶⁶	38.5 ¹³⁹		56	46	32	20	41 5	21 77		
23	163	36.6	59.5	103	46.5 ¹⁶⁷	24.6 ¹³⁹		58	33	22	14	46 2	17 80		
24	178	36.5	+21 59.2	118	22.2 ¹⁶⁷	+6 10.7 ¹³⁹		60 S	15 17	16 12	17 07	10 51 **	21 13 84		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 4 ^h 43 ^m 2		Mag: -3.9 PMG: 13 ^h 58 ^m		Mag: -0.2 PMG: 5 ^h 59 ^m		Mag: -2.0 PMG: 17 ^h 23 ^m		Mag: +0.2 PMG: 12 ^h 48 ^m						
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	°	°	°	°	°	°	°	°	°						
0	289	00.2	150 33.7	+17 46.6	270 04.5	+5 09.6	98 37.1	-3 05.4	167 30.1						
1	304	02.6	165 33.2	45.7	285 05.5	10.2	113 39.3	05.5	182 32.2						
2	319	05.1	180 32.6	44.8	300 06.4	10.7	128 41.5	05.6	197 34.3						
3	334	07.6	195 32.0	43.9	315 07.4	11.3	143 43.8	05.7	212 36.5						
4	349	10.0	210 31.5	43.0	330 08.4	11.9	158 46.0	05.8	227 38.6						
5	4	12.5	225 30.9	+17 42.1	345 09.3	+5 12.5	173 48.3	-3 05.9	242 40.7						
6	19	15.0	240 30.3	+17 41.2	0 10.3	+5 13.1	188 50.5	-3 06.0	257 42.9						
7	34	17.4	255 29.8	40.3	15 11.3	13.6	203 52.7	06.2	272 45.0						
8	49	19.9	270 29.2	39.4	30 12.2	14.2	218 55.0	06.3	287 47.1						
9	64	22.4	285 28.7	38.5	45 13.2	14.8	233 57.2	06.4	302 49.2						
10	79	24.8	300 28.1	37.6	60 14.2	15.4	248 59.5	06.5	317 51.4						
11	94	27.3	315 27.5	+17 36.6	75 15.1	+5 16.0	264 01.7	-3 06.6	332 53.5						
12	109	29.8	330 27.0	+17 35.7	90 16.1	+5 16.5	279 03.9	-3 06.7	347 55.6						
13	124	32.2	345 26.4	34.8	105 17.1	17.1	294 06.2	06.8	2 57.8						
14	139	34.7	0 25.9	33.9	120 18.1	17.7	309 08.4	06.9	17 59.9						
15	154	37.1	15 25.3	33.0	135 19.0	18.3	324 10.6	07.0	33 02.0						
16	169	39.6	30 24.7	32.1	150 20.0	18.8	339 12.9	07.1	48 04.2						
17	184	42.1	45 24.2	+17 31.2	165 21.0	+5 19.4	354 15.1	-3 07.2	63 06.3						
18	199	44.5	60 23.6	+17 30.3	180 21.9	+5 20.0	9 17.4	-3 07.3	78 08.4						
19	214	47.0	75 23.1	29.3	195 22.9	20.6	24 19.6	07.4	93 10.5						
20	229	49.5	90 22.5	28.4	210 23.9	21.2	39 21.8	07.5	108 12.7						
21	244	51.9	105 22.0	27.5	225 24.9	21.7	54 24.1	07.6	123 14.8						
22	259	54.4	120 21.4	26.6	240 25.8	22.3	69 26.3	07.8	138 16.9						
23	274	56.9	135 20.9	25.7	255 26.8	22.9	84 28.5	07.9	153 19.1						
24	289	59.3	150 20.3	+17 24.7	270 27.8	+5 23.5	99 30.8	-3 08.0	168 21.2						
Dif	—	—	-6	-9	+10	+6	+22	-1	+21						

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7			Edad: 5 ^d 5	PHE {	4 ^h : 54 ^m /7 12 ^h : 54 ^m /8 20 ^h : 55 ^m /0		Náutico	Civil		Hora	R°	Hora	R°		
	PMG: 12 ^h 05 ^m 6														SD: 14 ^h 9	PMG: 16 ^h 33 ^m
	hG ☉	Dec		hG ☾	Dif	Dec	Dif									
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	36.5	+21	59.2	118	22.2	+6	10.7	60 N	** **	1 35	2 58	9 57	84	22 48	**
1	193	36.4		58.8	132	57.9 ¹⁶⁷	+5	56.8 ¹³⁹	58	** **	2 09	3 16	9 59	80	48	2
2	208	36.3		58.5	147	33.6 ¹⁶⁷		42.8 ¹⁴⁰	56	** **	33	31	10 01	77	47	5
3	223	36.3		58.1	162	09.3 ¹⁶⁷		28.8 ¹⁴⁰	54	1 27	2 52	43	02	75	47	
4	238	36.2		57.8	176	45.0 ¹⁶⁷		14.7 ¹⁴¹	52	1 59	3 08	3 54	04	72	47	9
5	253	36.1	+21	57.4	191	20.7 ¹⁶⁷	+5	00.6 ¹⁴¹	50	2 21	3 22	4 04	10 05	70	22 47	11
6	268	36.0	+21	57.1	205	56.4 ¹⁶⁷	+4	46.5 ¹⁴¹	45	3 01	3 49	4 25	10 08	65	22 46	16
7	283	35.9		56.7	220	32.1 ¹⁶⁷		32.4 ¹⁴¹	40	29	4 09	41	11	61	46	20
8	298	35.9		56.4	235	07.8 ¹⁶⁷		18.3 ¹⁴¹	35	3 50	26	4 55	13	58	45	24
9	313	35.8		56.0	249	43.5 ¹⁶⁷	+4	04.1 ¹⁴²	30	4 08	4 40	5 07	15	54	45	26
10	328	35.7		55.7	264	19.2 ¹⁶⁷	+3	49.9 ¹⁴²	20	35	5 04	28	18	49	44	32
11	343	35.6	+21	55.3	278	55.0 ¹⁶⁸	+3	35.7 ¹⁴²	10 N	4 56	5 23	5 46	10 21	45	22 44	36
12	358	35.5	+21	55.0	293	30.7 ¹⁶⁷	+3	21.4 ¹⁴³	0	5 14	5 40	6 02	10 24	40	22 43	41
13	13	35.5		54.6	308	06.4 ¹⁶⁷	+3	07.1 ¹⁴³	10 S	30	5 56	18	26	36	42	45
14	28	35.4		54.3	322	42.1 ¹⁶⁷	+2	52.8 ¹⁴³	20	5 45	6 12	35	29	32	42	49
15	43	35.3		53.9	337	17.7 ¹⁶⁶		38.5 ¹⁴³	30	6 00	29	6 55	33	26	41	55
16	58	35.2		53.6	351	53.4 ¹⁶⁷		24.2 ¹⁴³	35	08	39	7 07	34	24	41	58
17	73	35.2	+21	53.2	6	29.1 ¹⁶⁷	+2	09.9 ¹⁴³	40	6 16	6 50	7 20	10 37	20	22 40	62
18	88	35.1	+21	52.8	21	04.7 ¹⁶⁶	+1	55.5 ¹⁴⁴	45	6 25	7 02	7 35	10 39	16	22 39	66
19	103	35.0		52.5	35	40.4 ¹⁶⁷		41.1 ¹⁴⁴	50	36	17	7 54	42	12	39	71
20	118	34.9		52.1	50	16.0 ¹⁶⁶		26.7 ¹⁴⁴	52	40	23	8 03	43	10	38	73
21	133	34.9		51.8	64	51.6 ¹⁶⁶	+1	12.3 ¹⁴⁴	54	46	31	13	45	7	38	76
22	148	34.8		51.4	79	27.2 ¹⁶⁶	+0	57.8 ¹⁴⁵	56	51	39	24	46	5	38	78
23	163	34.7		51.1	94	02.8 ¹⁶⁶		43.4 ¹⁴⁴	58	6 57	48	37	48	2	37	82
24	178	34.6	+21	50.7	108	38.4 ¹⁶⁶	+0	28.9 ¹⁴⁵	60 S	7 03	7 58	8 53	10 50	**	22 37	85

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 4 ^h 39 ^m 3		Mag: -3.9 PMG: 13 ^h 59 ^m		Mag: -0.2 PMG: 5 ^h 58 ^m		Mag: -2.0 PMG: 17 ^h 19 ^m		Mag: +0.2 PMG: 12 ^h 45 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	289	59.3	150	20.3	+17	24.7	270	27.8	+5	23.5	99	30.8	-3	08.0	168	21.2	+20	32.0
1	305	01.8	165	19.7		23.8	285	28.7		24.0	114	33.0		08.1	183	23.3		32.0
2	320	04.3	180	19.2		22.9	300	29.7		24.6	129	35.2		08.2	198	25.4		31.9
3	335	06.7	195	18.6		22.0	315	30.7		25.2	144	37.5		08.3	213	27.6		31.8
4	350	09.2	210	18.1		21.1	330	31.7		25.8	159	39.7		08.4	228	29.7		31.8
5	5	11.6	225	17.5	+17	20.1	345	32.6	+5	26.3	174	41.9	-3	08.5	243	31.8	+20	31.7
6	20	14.1	240	17.0	+17	19.2	0	33.6	+5	26.9	189	44.2	-3	08.6	258	34.0	+20	31.6
7	35	16.6	255	16.4		18.3	15	34.6		27.5	204	46.4		08.7	273	36.1		31.6
8	50	19.0	270	15.9		17.3	30	35.6		28.1	219	48.6		08.8	288	38.2		31.5
9	65	21.5	285	15.3		16.4	45	36.5		28.6	234	50.9		08.9	303	40.3		31.5
10	80	24.0	300	14.8		15.5	60	37.5		29.2	249	53.1		09.0	318	42.5		31.4
11	95	26.4	315	14.3	+17	14.6	75	38.5	+5	29.8	264	55.3	-3	09.2	333	44.6	+20	31.3
12	110	28.9	330	13.7	+17	13.6	90	39.5	+5	30.4	279	57.6	-3	09.3	348	46.7	+20	31.3
13	125	31.4	345	13.2		12.7	105	40.4		30.9	294	59.8		09.4	3	48.9		31.2
14	140	33.8	0	12.6		11.8	120	41.4		31.5	310	02.0		09.5	18	51.0		31.1
15	155	36.3	15	12.1		10.8	135	42.4		32.1	325	04.3		09.6	33	53.1		31.1
16	170	38.7	30	11.5		09.9	150	43.4		32.7	340	06.5		09.7	48	55.2		31.0
17	185	41.2	45	11.0	+17	09.0	165	44.3	+5	33.2	355	08.7	-3	09.8	63	57.4	+20	30.9
18	200	43.7	60	10.4	+17	08.0	180	45.3	+5	33.8	10	11.0	-3	09.9	78	59.5	+20	30.9
19	215	46.1	75	09.9		07.1	195	46.3		34.4	25	13.2		10.0	94	01.6		30.8
20	230	48.6	90	09.4		06.2	210	47.3		35.0	40	15.4		10.1	109	03.8		30.8
21	245	51.1	105	08.8		05.2	225	48.2		35.5	55	17.7		10.2	124	05.9		30.7
22	260	53.5	120	08.3		04.3	240	49.2		36.1	70	19.9		10.4	139	08.0		30.6
23	275	56.0	135	07.7		03.4	255	50.2		36.7	85	22.1		10.5	154	10.1		30.6
24	290	58.5	150	07.2	+17	02.4	270	51.2	+5	37.3	100	24.4	-3	10.6	169	12.3	+20	30.5
Dif	—		-5	-9			+10	+6			+22	-1			+21	-1		

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15:7			Edad: 6 ^d 5	PHE {	4 ^h : 55:2 12 ^h : 55:4 20 ^h : 55:6									
	PMG: 12 ^h 05 ^m 8														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	178	34.6	+21 50.7	108	38.4	+0 28.9		60 N	21 10	22 30	** **	11 21 86	22 47 **		
1	193	34.6	50.3	123	13.9 ¹⁶⁵	+0 14.4 ¹⁴⁵		58	20 53	21 58	** **	19 84	50 2		
2	208	34.5	50.0	137	49.4 ¹⁶⁵	-0 00.1 ¹⁴⁵		56	39	35	23 34	18 80	52 6		
3	223	34.4	49.6	152	25.0 ¹⁶⁶	14.6 ¹⁴⁵		54	26	17	22 39	17 77	54 9		
4	238	34.3	49.2	167	00.4 ¹⁶⁴	29.1 ¹⁴⁵		52	15	21 01	22 09	16 75	56 11		
5	253	34.3	+21 48.9	181	35.9 ¹⁶⁵	-0 43.6 ¹⁴⁵		50	20 06	20 48	21 47	11 15 72	22 58 13		
6	268	34.2	+21 48.5	196	11.3 ¹⁶⁴	-0 58.1 ¹⁴⁵		45	19 45	20 21	21 08	11 13 68	23 02 18		
7	283	34.1	48.1	210	46.7 ¹⁶⁴	-1 12.7 ¹⁴⁶		40	29	20 01	20 41	12 63	06 22		
8	298	34.0	47.8	225	22.1 ¹⁶⁴	27.2 ¹⁴⁵		35	15	19 44	20	11 59	09 25		
9	313	34.0	47.4	239	57.4 ¹⁶³	41.8 ¹⁴⁶		30	19 03	30	20 03	09 57	11 29		
10	328	33.9	47.0	254	32.7 ¹⁶³	-1 56.4 ¹⁴⁶		20	18 43	19 07	19 36	07 51	16 34		
11	343	33.8	+21 46.7	269	08.0 ¹⁶³	-2 10.9 ¹⁴⁵		10 N	18 26	18 48	19 15	11 06 46	23 20 38		
12	358	33.7	+21 46.3	283	43.3 ¹⁶³	-2 25.5 ¹⁴⁶		0	18 09	18 32	18 58	11 04 42	23 24 42		
13	13	33.7	45.9	298	18.5 ¹⁶²	40.1 ¹⁴⁶		10 S	17 53	16	42	02 38	27 48		
14	28	33.6	45.6	312	53.7 ¹⁶²	-2 54.7 ¹⁴⁶		20	36	18 00	27	11 01 32	31 52		
15	43	33.5	45.2	327	28.8 ¹⁶¹	-3 09.3 ¹⁴⁶		30	17	17 43	12	10 59 27	36 58		
16	58	33.5	44.8	342	03.9 ¹⁶¹	23.9 ¹⁴⁶		35	17 05	33	18 04	58 24	39 60		
17	73	33.4	+21 44.5	356	38.9 ¹⁶⁰	-3 38.5 ¹⁴⁶		40	16 53	17 23	17 56	10 57 21	23 42 64		
18	88	33.3	+21 44.1	11	14.0 ¹⁶¹	-3 53.0 ¹⁴⁵		45	16 37	17 10	17 47	10 55 17	23 45 69		
19	103	33.2	43.7	25	48.9 ¹⁵⁹	-4 07.6 ¹⁴⁶		50	19	16 56	37	54 12	50 73		
20	118	33.2	43.3	40	23.9 ¹⁶⁰	22.2 ¹⁴⁶		52	10	49	32	53 10	51 77		
21	133	33.1	43.0	54	58.8 ¹⁵⁹	36.8 ¹⁴⁶		54	16 00	42	27	52 8	54 78		
22	148	33.0	42.6	69	33.6 ¹⁵⁸	-4 51.4 ¹⁴⁶		56	15 49	34	22	51 6	56 82		
23	163	33.0	42.2	84	08.4 ¹⁵⁸	-5 06.0 ¹⁴⁶		58	36	25	16	50 3	23 59 85		
24	178	32.9	+21 41.8	98	43.1 ¹⁵⁷	-5 20.6 ¹⁴⁶		60 S	15 21	16 15	17 10	10 49 **	** ** *		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 4 ^h 35 ^m 3		Mag: -3.9 PMG: 14 ^h 00 ^m		Mag: -0.2 PMG: 5 ^h 56 ^m		Mag: -2.0 PMG: 17 ^h 16 ^m		Mag: +0.2 PMG: 12 ^h 41 ^m	
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	°	°	°	°	°	°	°	°	
0	290	58.5	+17 02.4	270	51.2	+5 37.3	100 24.4	-3 10.6	169 12.3	
1	306	00.9	01.5	285	52.1	37.8	115 26.6	10.7	184 14.4	
2	321	03.4	+17 00.5	300	53.1	38.4	130 28.8	10.8	199 16.5	
3	336	05.9	+16 59.6	315	54.1	39.0	145 31.0	10.9	214 18.7	
4	351	08.3	05.0	330	55.1	39.5	160 33.3	11.0	229 20.8	
5	6	10.8	+16 57.7	345	56.1	+5 40.1	175 35.5	-3 11.1	244 22.9	
6	21	13.2	+16 56.8	0	57.0	+5 40.7	190 37.7	-3 11.2	259 25.0	
7	36	15.7	55.8	15	58.0	41.3	205 40.0	11.3	274 27.2	
8	51	18.2	270 02.9	30	59.0	41.8	220 42.2	11.5	289 29.3	
9	66	20.6	285 02.4	45	00.0	42.4	235 44.4	11.6	304 31.4	
10	81	23.1	300 01.8	60	01.0	43.0	250 46.7	11.7	319 33.6	
11	96	25.6	+16 52.0	76	01.9	+5 43.5	265 48.9	-3 11.8	334 35.7	
12	111	28.0	+16 51.1	91	02.9	+5 44.1	280 51.1	-3 11.9	349 37.8	
13	126	30.5	50.1	106	03.9	44.7	295 53.3	12.0	4 39.9	
14	141	33.0	49.2	121	04.9	45.2	310 55.6	12.1	19 42.1	
15	156	35.4	48.2	136	05.9	45.8	325 57.8	12.2	34 44.2	
16	171	37.9	29 58.6	151	06.8	46.4	341 00.0	12.3	49 46.3	
17	186	40.3	+16 46.3	166	07.8	+5 47.0	356 02.2	-3 12.4	64 48.5	
18	201	42.8	+16 45.4	181	08.8	+5 47.5	11 04.5	-3 12.6	79 50.6	
19	216	45.3	44.4	196	09.8	48.1	26 06.7	12.7	94 52.7	
20	231	47.7	43.5	211	10.8	48.7	41 08.9	12.8	109 54.8	
21	246	50.2	42.5	226	11.7	49.2	56 11.1	12.9	124 57.0	
22	261	52.7	41.5	241	12.7	49.8	71 13.4	13.0	139 59.1	
23	276	55.1	40.6	256	13.7	50.4	86 15.6	13.1	155 01.2	
24	291	57.6	+16 39.6	271	14.7	+5 50.9	101 17.8	-3 13.2	170 03.4	
Dif	—	-5	-9	+10	+6	+22	-1	+21	-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 9			Edad: 7 ^d 5 PHE { 4 ^h : 55 ^m 8 12 ^h : 56 ^m 1 20 ^h : 56 ^m 4 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	178	32.9	+21	41.8	98	43.1	-5	20.6	60 N	** ** *	1	42	3	02	12	47
1	193	32.8		41.5	113	17.8 ¹⁵⁷		35.1 ¹⁴⁵	58	** ** *	2	14		19	43	88
2	208	32.8		41.1	127	52.5 ¹⁵⁷	-5	49.7 ¹⁴⁶	56	0	38	37	33	38	85	22
3	223	32.7		40.7	142	27.0 ¹⁵⁵	-6	04.3 ¹⁴⁶	54	1	33	2	55	46	34	82
4	238	32.6		40.3	157	01.6 ¹⁵⁶		18.8 ¹⁴⁵	52	2	03	3	11	3	57	31
5	253	32.5	+21	39.9	171	36.0 ¹⁵⁴	-6	33.3 ¹⁴⁵	50	2	25	3	24	4	06	12
6	268	32.5	+21	39.6	186	10.5 ¹⁵⁵	-6	47.9 ¹⁴⁶	45	3	04	3	51	4	27	12
7	283	32.4		39.2	200	44.8 ¹⁵³	-7	02.4 ¹⁴⁵	40		31	4	11	43	15	66
8	298	32.3		38.8	215	19.1 ¹⁵³		16.9 ¹⁴⁵	35	3	52	28	4	57	10	62
9	313	32.3		38.4	229	53.3 ¹⁵²		31.4 ¹⁴⁵	30	4	09	4	42	5	09	12
10	328	32.2		38.0	244	27.5 ¹⁵²	-7	45.9 ¹⁴⁵	20		36	5	05	29	11	58
11	343	32.1	+21	37.6	259	01.6 ¹⁵¹	-8	00.3 ¹⁴⁴	10 N	4	57	5	23	5	46	11
12	358	32.1	+21	37.3	273	35.7 ¹⁵¹	-8	14.8 ¹⁴⁵	0	5	14	5	40	6	02	11
13	13	32.0		36.9	288	09.6 ¹⁴⁹		29.2 ¹⁴⁴	10 S		30	5	56	18	40	40
14	28	31.9		36.5	302	43.5 ¹⁴⁹		43.6 ¹⁴⁴	20		44	6	12	35	33	36
15	43	31.9		36.1	317	17.4 ¹⁴⁹	-8	58.0 ¹⁴⁴	30	5	59	29	6	55	26	30
16	58	31.8		35.7	331	51.1 ¹⁴⁷	-9	12.4 ¹⁴⁴	35	6	07	38	7	06	22	27
17	73	31.7	+21	35.3	346	24.8 ¹⁴⁷	-9	26.8 ¹⁴⁴	40	6	15	6	49	7	19	11
18	88	31.7	+21	34.9	0	58.5 ¹⁴⁷	-9	41.1 ¹⁴³	45	6	24	7	01	7	34	11
19	103	31.6		34.5	15	32.0 ¹⁴⁵	-9	55.4 ¹⁴³	50	35	15	7	52		06	14
20	118	31.5		34.2	30	05.5 ¹⁴⁵	-10	09.7 ¹⁴³	52	39	22	8	01		03	12
21	133	31.5		33.8	44	38.8 ¹⁴³		24.0 ¹⁴³	54	44	29		11	11	00	10
22	148	31.4		33.4	59	12.2 ¹⁴⁴		38.2 ¹⁴²	56	49	37		22	10	57	6
23	163	31.3		33.0	73	45.4 ¹⁴²	-10	52.4 ¹⁴²	58	6	55	46	35		53	3
24	178	31.3	+21	32.6	88	18.5 ¹⁴¹	-11	06.6 ¹⁴²	60 S	7	01	7	56	8	50	10

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 4 ^h 31 ^m 4		Mag: -3.9 PMG: 14 ^h 01 ^m		Mag: -0.2 PMG: 5 ^h 55 ^m		Mag: -2.0 PMG: 17 ^h 12 ^m		Mag: +0.2 PMG: 12 ^h 38 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	291	57.6	149	54.4	+16	271	14.7	+5	101	17.8	-3	170	03.4	+20	29.0
1	307	00.1	164	53.9		286	15.7		116	20.0		185	05.5		28.9
2	322	02.5	179	53.4		301	16.7		131	22.3		200	07.6		28.8
3	337	05.0	194	52.8		316	17.6		146	24.5		215	09.7		28.8
4	352	07.5	209	52.3		331	18.6		161	26.7		230	11.9		28.7
5	7	09.9	224	51.8	+16	346	19.6	+5	176	28.9	-3	245	14.0	+20	28.6
6	22	12.4	239	51.3	+16	1	20.6	+5	191	31.2	-3	260	16.1	+20	28.6
7	37	14.8	254	50.8		16	21.6		206	33.4		275	18.3		28.5
8	52	17.3	269	50.2		31	22.6		221	35.6		290	20.4		28.5
9	67	19.8	284	49.7		46	23.6		236	37.8		305	22.5		28.4
10	82	22.2	299	49.2		61	24.5		251	40.1		320	24.6		28.3
11	97	24.7	314	48.7	+16	76	25.5	+5	266	42.3	-3	335	26.8	+20	28.3
12	112	27.2	329	48.2	+16	91	26.5	+5	281	44.5	-3	350	28.9	+20	28.2
13	127	29.6	344	47.6		106	27.5		296	46.7		5	31.0		28.1
14	142	32.1	359	47.1		121	28.5		311	48.9		20	33.1		28.1
15	157	34.6	14	46.6		136	29.5	+5	326	51.2		35	35.3		28.0
16	172	37.0	29	46.1		151	30.5	+6	341	53.4		50	37.4		27.9
17	187	39.5	44	45.6	+16	166	31.4	+6	356	55.6	-3	65	39.5	+20	27.9
18	202	42.0	59	45.1	+16	181	32.4	+6	11	57.8	-3	80	41.7	+20	27.8
19	217	44.4	74	44.5		196	33.4		27	00.0		95	43.8		27.7
20	232	46.9	89	44.0		211	34.4		42	02.3		110	45.9		27.7
21	247	49.3	104	43.5		226	35.4		57	04.5		125	48.0		27.6
22	262	51.8	119	43.0		241	36.4		72	06.7		140	50.2		27.5
23	277	54.3	134	42.5		256	37.4		87	08.9		155	52.3		27.5
24	292	56.7	149	42.0	+16	271	38.4	+6	102	11.1	-3	170	54.4	+20	27.4
Dif	—		-5		-10	+10		+6	+22		-1	+21		-1	

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15:7 PMG: 12 ^h 06 ^m 0				Edad: 8 ^d 5 PHE { SD: 15:4 PMG: 18 ^h 41 ^m 4 ^h : 56:6 12 ^h : 56:9 20 ^h : 57:2 R°: 50 ^m												
	hG ☉		Dec		hG ☾		Dif							Civil	Náutico	Hora	R°
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m	
0	178	31.3	+21	32.6	88	18.5	-11	06.6	60 N	21 07	22 24	** **	14 20 101	22 46	2		
1	193	31.2		32.2	102	51.6 ¹⁴¹		20.7 ¹⁴¹	58	20 50	21 54	** **	11 95	22 56	7		
2	208	31.2		31.8	117	24.5 ¹³⁹		34.8 ¹⁴¹	56	36	32	23 20	14 03 91	23 05	12		
3	223	31.1		31.4	131	57.4 ¹³⁹	-11	48.9 ¹⁴¹	54	24	21 14	22 33	13 56 87	13	15		
4	238	31.0		31.0	146	30.2 ¹³⁸	-12	03.0 ¹⁴¹	52	13	20 59	22 05	49 84	21	18		
5	253	31.0	+21	30.6	161	02.9 ¹³⁷	-12	17.0 ¹⁴⁰	50	20 04	20 46	21 44	13 43 81	23 27	21		
6	268	30.9	+21	30.2	175	35.6 ¹³⁷	-12	31.0 ¹⁴⁰	45	19 44	20 20	21 06	13 31 75	23 41	27		
7	283	30.8		29.8	190	08.1 ¹³⁵		44.9 ¹³⁹	40	28	20 00	20 39	21 70	23 53	31		
8	298	30.8		29.4	204	40.5 ¹³⁴	-12	58.8 ¹³⁹	35	14	19 43	19	12 67	** ** *	** ** *		
9	313	30.7		29.0	219	12.8 ¹³³	-13	12.7 ¹³⁹	30	19 03	29	20 02	13 05 63	** ** *	** ** *		
10	328	30.6		28.6	233	45.1 ¹³³		26.5 ¹³⁸	20	18 43	19 07	19 35	12 52 58	** ** *	** ** *		
11	343	30.6	+21	28.2	248	17.2 ¹³¹	-13	40.3 ¹³⁸	10 N	18 26	18 48	19 15	12 41 53	** ** *	** ** *		
12	358	30.5	+21	27.8	262	49.3 ¹³¹	-13	54.0 ¹³⁷	0	18 10	18 32	18 58	12 30 49	0 06	47		
13	13	30.5		27.4	277	21.2 ¹²⁹	-14	07.7 ¹³⁷	10 S	17 54	16	42	20 44	15	50		
14	28	30.4		27.0	291	53.1 ¹²⁹		21.4 ¹³⁷	20	37	18 01	28	12 09 40	23	56		
15	43	30.3		26.6	306	24.8 ¹²⁷		35.0 ¹³⁶	30	18	17 44	13	11 56 35	34	61		
16	58	30.3		26.2	320	56.4 ¹²⁶	-14	48.5 ¹³⁵	35	17 07	34	18 06	49 32	39	65		
17	73	30.2	+21	25.8	335	27.9 ¹²⁵	-15	02.0 ¹³⁵	40	16 54	17 24	17 57	11 41 28	0 46	68		
18	88	30.2	+21	25.4	349	59.4 ¹²⁵	-15	15.5 ¹³⁵	45	16 39	17 12	17 48	11 32 23	0 54	72		
19	103	30.1		25.0	4	30.7 ¹²³		28.9 ¹³⁴	50	21	16 58	38	20 19	1 03	78		
20	118	30.0		24.6	19	01.9 ¹²²		42.2 ¹³³	52	12	51	34	15 16	08	80		
21	133	30.0		24.2	33	33.0 ¹²¹	-15	55.5 ¹³³	54	16 02	44	29	10 12	12	84		
22	148	29.9		23.8	48	03.9 ¹¹⁹	-16	08.7 ¹³²	56	15 51	36	24	11 03 10	18	87		
23	163	29.9		23.4	62	34.8 ¹¹⁹		21.9 ¹³²	58	39	28	18	10 56 6	24	91		
24	178	29.8	+21	23.0	77	05.5 ¹¹⁷	-16	35.0 ¹³¹	60 S	15 24	16 18	17 12	10 48 1	1 31	96		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 4 ^h 27 ^m 5		Mag: -3.9 PMG: 14 ^h 02 ^m		Mag: -0.2 PMG: 5 ^h 53 ^m		Mag: -2.0 PMG: 17 ^h 09 ^m		Mag: +0.2 PMG: 12 ^h 35 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	292	56.7	149	42.0	+16	16.4	271	38.4	+6	04.5
1	307	59.2	164	41.5		15.4	286	39.3		05.1
2	323	01.7	179	41.0		14.5	301	40.3		05.6
3	338	04.1	194	40.4		13.5	316	41.3		06.2
4	353	06.6	209	39.9		12.5	331	42.3		06.8
5	8	09.1	224	39.4	+16	11.5	346	43.3	+6	07.3
6	23	11.5	239	38.9	+16	10.6	1	44.3	+6	07.9
7	38	14.0	254	38.4		09.6	16	45.3		08.5
8	53	16.4	269	37.9		08.6	31	46.3		09.0
9	68	18.9	284	37.4		07.6	46	47.3		09.6
10	83	21.4	299	36.9		06.6	61	48.3		10.1
11	98	23.8	314	36.4	+16	05.6	76	49.2	+6	10.7
12	113	26.3	329	35.9	+16	04.7	91	50.2	+6	11.3
13	128	28.8	344	35.4		03.7	106	51.2		11.8
14	143	31.2	359	34.9		02.7	121	52.2		12.4
15	158	33.7	14	34.4		01.7	136	53.2		12.9
16	173	36.2	29	33.9	+16	00.7	151	54.2		13.5
17	188	38.6	44	33.4	+15	59.7	166	55.2	+6	14.1
18	203	41.1	59	32.9	+15	58.7	181	56.2	+6	14.6
19	218	43.6	74	32.3		57.7	196	57.2		15.2
20	233	46.0	89	31.8		56.8	211	58.2		15.7
21	248	48.5	104	31.3		55.8	226	59.2		16.3
22	263	50.9	119	30.8		54.8	242	00.2		16.9
23	278	53.4	134	30.3		53.8	257	01.2		17.4
24	293	55.9	149	29.9	+15	52.8	272	02.1	+6	18.0
Dif	—		-5		-10		+10		+6	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7			Edad: 9 ^d 5	PHE {	SD: 15 ^h 6	PMG: 19 ^h 31 ^m	4 ^h : 57 ^m 5 12 ^h : 57 ^m 9 20 ^h : 58 ^m 2		R ^o : 56 ^m	Náutico		Civil	Hora	R ^o	Hora	R ^o
	hG ☉	Dec															
h	°	'	°	°	'	°	°	'	°	h	m	h	m	h	m	h	m
0	178	29.8	+21	23.0	77	05.5	-16	35.0	60 N	**	**	1	48	3	06	16	01
1	193	29.7		22.6	91	36.2 ¹¹⁷	-16	48.1 ¹³¹	58	**	**	2	18	22		15	46
2	208	29.7		22.2	106	06.7 ¹¹⁵	-17	01.0 ¹²⁹	56	0	52	41	36			34	95
3	223	29.6		21.8	120	37.1 ¹¹⁴		14.0 ¹³⁰	54	1	39	2	59	48		23	91
4	238	29.6		21.4	135	07.4 ¹¹³		26.8 ¹²⁸	52	2	07	3	14	3	59	13	87
5	253	29.5	+21	21.0	149	37.5 ¹¹¹	-17	39.6 ¹²⁸	50	2	28	3	27	4	09	15	04
6	268	29.4	+21	20.5	164	07.6 ¹¹¹	-17	52.3 ¹²⁷	45	3	06	3	53	4	28	14	46
7	283	29.4		20.1	178	37.5 ¹⁰⁹	-18	04.9 ¹²⁶	40	33	4	13	44			31	74
8	298	29.3		19.7	193	07.2 ¹⁰⁷		17.5 ¹²⁶	35	3	54	29	4	58		19	70
9	313	29.3		19.3	207	36.9 ¹⁰⁷		30.0 ¹²⁵	30	4	10	4	43	5	10	14	08
10	328	29.2		18.9	222	06.4 ¹⁰⁵		42.4 ¹²⁴	20	37	5	05	29			13	50
11	343	29.2	+21	18.5	236	35.8 ¹⁰⁴	-18	54.7 ¹²³	10 N	4	57	5	24	5	47	13	34
12	358	29.1	+21	18.1	251	05.1 ¹⁰³	-19	07.0 ¹²³	0	5	14	5	40	6	02	13	19
13	13	29.0		17.6	265	34.3 ¹⁰²		19.1 ¹²¹	10 S	30	5	56	18			13	04
14	28	29.0		17.2	280	03.3 ¹⁰⁰		31.2 ¹²¹	20	44	6	11	35			12	49
15	43	28.9		16.8	294	32.2 ⁹⁹		43.2 ¹²⁰	30	5	59	28	6	54		31	41
16	58	28.9		16.4	309	00.9 ⁹⁷	-19	55.1 ¹¹⁹	35	6	06	37	7	05		21	38
17	73	28.8	+21	16.0	323	29.6 ⁹⁷	-20	07.0 ¹¹⁹	40	6	14	6	48	7	18	12	09
18	88	28.8	+21	15.6	337	58.0 ⁹⁴	-20	18.7 ¹¹⁷	45	6	23	7	00	7	33	11	55
19	103	28.7		15.1	352	26.4 ⁹⁴		30.3 ¹¹⁶	50	33		14	51			39	25
20	118	28.7		14.7	6	54.6 ⁹²		41.9 ¹¹⁶	52	38	20	7	59			31	22
21	133	28.6		14.3	21	22.7 ⁹¹	-20	53.3 ¹¹⁴	54	42	27	8	09			22	19
22	148	28.6		13.9	35	50.6 ⁸⁹	-21	04.7 ¹¹⁴	56	48	35	20				13	15
23	163	28.5		13.5	50	18.4 ⁸⁸		15.9 ¹¹²	58	53	44	32				11	02
24	178	28.4	+21	13.0	64	46.1 ⁸⁷	-21	27.1 ¹¹²	60 S	6	59	7	54	8	47	10	49

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 4 ^h 23 ^m 6		Mag: -3.9 PMG: 14 ^h 02 ^m			Mag: -0.3 PMG: 5 ^h 51 ^m			Mag: -2.0 PMG: 17 ^h 05 ^m			Mag: +0.2 PMG: 12 ^h 31 ^m						
	hG ♈	Dec	hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'				
0	293	55.9	149	29.9	+15	52.8	272	02.1	+6	18.0	103	04.3	-3	18.7	171	45.5	+20	25.9
1	308	58.3	164	29.4		51.8	287	03.1		18.5	118	06.6		18.8	186	47.6		25.8
2	324	00.8	179	28.9		50.8	302	04.1		19.1	133	08.8		18.9	201	49.8		25.7
3	339	03.3	194	28.4		49.8	317	05.1		19.7	148	11.0		19.0	216	51.9		25.7
4	354	05.7	209	27.9		48.8	332	06.1		20.2	163	13.2		19.2	231	54.0		25.6
5	9	08.2	224	27.4	+15	47.8	347	07.1	+6	20.8	178	15.4	-3	19.3	246	56.1	+20	25.5
6	24	10.7	239	26.9	+15	46.8	2	08.1	+6	21.3	193	17.6	-3	19.4	261	58.3	+20	25.5
7	39	13.1	254	26.4		45.8	17	09.1		21.9	208	19.8		19.5	277	00.4		25.4
8	54	15.6	269	25.9		44.8	32	10.1		22.4	223	22.1		19.6	292	02.5		25.3
9	69	18.1	284	25.4		43.8	47	11.1		23.0	238	24.3		19.7	307	04.6		25.3
10	84	20.5	299	24.9		42.8	62	12.1		23.6	253	26.5		19.9	322	06.8		25.2
11	99	23.0	314	24.4	+15	41.8	77	13.1	+6	24.1	268	28.7	-3	20.0	337	08.9	+20	25.2
12	114	25.4	329	23.9	+15	40.8	92	14.1	+6	24.7	283	30.9	-3	20.1	352	11.0	+20	25.1
13	129	27.9	344	23.4		39.8	107	15.1		25.2	298	33.1		20.2	7	13.2		25.0
14	144	30.4	359	22.9		38.8	122	16.1		25.8	313	35.3		20.3	22	15.3		25.0
15	159	32.8	14	22.4		37.8	137	17.1		26.3	328	37.5		20.5	37	17.4		24.9
16	174	35.3	29	22.0		36.8	152	18.1		26.9	343	39.7		20.6	52	19.5		24.8
17	189	37.8	44	21.5	+15	35.8	167	19.1	+6	27.5	358	42.0	-3	20.7	67	21.7	+20	24.8
18	204	40.2	59	21.0	+15	34.8	182	20.1	+6	28.0	13	44.2	-3	20.8	82	23.8	+20	24.7
19	219	42.7	74	20.5		33.8	197	21.1		28.6	28	46.4		20.9	97	25.9		24.6
20	234	45.2	89	20.0		32.8	212	22.1		29.1	43	48.6		21.0	112	28.0		24.6
21	249	47.6	104	19.5		31.8	227	23.1		29.7	58	50.8		21.2	127	30.2		24.5
22	264	50.1	119	19.0		30.8	242	24.1		30.2	73	53.0		21.3	142	32.3		24.4
23	279	52.5	134	18.5		29.8	257	25.1		30.8	88	55.2		21.4	157	34.4		24.4
24	294	55.0	149	18.1	+15	28.8	272	26.1	+6	31.3	103	57.4	-3	21.5	172	36.6	+20	24.3
Dif	—		-5		-10		+10		+6		+22		-1		+21		-1	

UT	SOL				LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7				Edad: 10 ^d 5	PHE {	4 ^h : 58 ^m 5 12 ^h : 58 ^m 8 20 ^h : 59 ^m 1	R°: 62 ^m			Final del crepúsculo			Salida de Luna		Puesta de Luna		
	PMG: 12 ^h 06 ^m 1										Civil			Náutico				
	hG ☉		Dec		hG ☾		Dif						Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m			
0	178	28.4	+21	13.0	64	46.1	-21	27.1	60 N	21 03	22 18	** **	17 51 112		22 53 16			
1	193	28.4		12.6	79	13.6	85	38.1	58	20 47	21 50	** **	28 101		23 16 28			
2	208	28.3		12.2	93	41.0	84	49.1	56	33	28	23 09	17 09 95		35 34			
3	223	28.3		11.8	108	08.3	83	-21 59.9	54	22	21 11	22 28	16 54 90		23 51 38			
4	238	28.2		11.3	122	35.4	81	-22 10.6	52	11	20 56	22 01	40 87		** **	** **		
5	253	28.2	+21	10.9	137	02.4	80	-22 21.2	50	20 02	20 43	21 41	16 29 83		** **	** **		
6	268	28.1	+21	10.5	151	29.2	78	-22 31.7	45	19 42	20 18	21 04	16 05 78		0 08 35			
7	283	28.1		10.1	165	55.9	77	42.1	40	27	19 58	20 38	15 45 75		24 39			
8	298	28.0		09.6	180	22.4	75	-22 52.3	35	13	42	17	29 73		37 43			
9	313	28.0		09.2	194	48.8	74	-23 02.4	30	19 02	29	20 01	15 15 71		0 49 45			
10	328	27.9		08.8	209	15.1	73	12.5	20	18 42	19 06	19 35	14 52 66		1 10 49			
11	343	27.9	+21	08.4	223	41.2	71	-23 22.3	10 N	18 25	18 48	19 15	14 32 63		1 27 54			
12	358	27.8	+21	07.9	238	07.2	70	-23 32.1	0	18 10	18 32	18 58	14 13 61		1 44 57			
13	13	27.8		07.5	252	33.0	68	41.7	10 S	17 54	17	43	13 55 57		2 01 61			
14	28	27.7		07.1	266	58.7	67	-23 51.2	20	38	18 01	28	35 54		19 64			
15	43	27.7		06.6	281	24.3	66	-24 00.6	30	19	17 45	14	13 12 51		40 69			
16	58	27.6		06.2	295	49.7	64	09.8	35	17 08	36	18 07	12 59 48		2 52 72			
17	73	27.6	+21	05.8	310	15.0	63	-24 18.9	40	16 56	17 25	17 59	12 44 45		3 06 75			
18	88	27.5	+21	05.3	324	40.1	61	-24 27.9	45	16 41	17 14	17 50	12 26 41		3 23 79			
19	103	27.5		04.9	339	05.1	60	36.7	50	23	17 00	40	12 04 36		44 84			
20	118	27.4		04.5	353	29.9	58	45.4	52	14	16 53	36	11 53 34		3 54 87			
21	133	27.4		04.0	7	54.6	57	-24 53.9	54	16 05	47	31	41 30		4 05 91			
22	148	27.3		03.6	22	19.2	56	-25 02.3	56	15 54	39	26	28 25		18 96			
23	163	27.3		03.2	36	43.6	54	10.5	58	42	30	21	11 12 20		33 102			
24	178	27.2	+21	02.7	51	07.9	53	-25 18.6	60 S	15 28	16 21	17 15	10 53 11		4 51 111			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 4 ^h 19 ^m 6		Mag: -3.9 PMG: 14 ^h 03 ^m				Mag: -0.3 PMG: 5 ^h 50 ^m				Mag: -2.0 PMG: 17 ^h 02 ^m				Mag: +0.2 PMG: 12 ^h 28 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	294	55.0	149	18.1	+15	28.8	272	26.1	+6	31.3	103	57.4	-3	21.5	172	36.6	+20	24.3
1	309	57.5	164	17.6		27.7	287	27.1		31.9	118	59.6		21.6	187	38.7		24.2
2	324	59.9	179	17.1		26.7	302	28.1		32.4	134	01.8		21.7	202	40.8		24.2
3	340	02.4	194	16.6		25.7	317	29.1		33.0	149	04.1		21.9	217	42.9		24.1
4	355	04.9	209	16.1		24.7	332	30.1		33.5	164	06.3		22.0	232	45.1		24.0
5	10	07.3	224	15.6	+15	23.7	347	31.1	+6	34.1	179	08.5	-3	22.1	247	47.2	+20	24.0
6	25	09.8	239	15.2	+15	22.7	2	32.1	+6	34.7	194	10.7	-3	22.2	262	49.3	+20	23.9
7	40	12.3	254	14.7		21.7	17	33.1		35.2	209	12.9		22.3	277	51.5		23.9
8	55	14.7	269	14.2		20.6	32	34.1		35.8	224	15.1		22.5	292	53.6		23.8
9	70	17.2	284	13.7		19.6	47	35.1		36.3	239	17.3		22.6	307	55.7		23.7
10	85	19.7	299	13.2		18.6	62	36.1		36.9	254	19.5		22.7	322	57.8		23.7
11	100	22.1	314	12.8	+15	17.6	77	37.1	+6	37.4	269	21.7	-3	22.8	338	00.0	+20	23.6
12	115	24.6	329	12.3	+15	16.6	92	38.1	+6	38.0	284	23.9	-3	22.9	353	02.1	+20	23.5
13	130	27.0	344	11.8		15.6	107	39.1		38.5	299	26.1		23.1	8	04.2		23.5
14	145	29.5	359	11.3		14.5	122	40.1		39.1	314	28.3		23.2	23	06.3		23.4
15	160	32.0	14	10.8		13.5	137	41.1		39.6	329	30.5		23.3	38	08.5		23.3
16	175	34.4	29	10.4		12.5	152	42.1		40.2	344	32.7		23.4	53	10.6		23.3
17	190	36.9	44	09.9	+15	11.5	167	43.1	+6	40.7	359	34.9	-3	23.5	68	12.7	+20	23.2
18	205	39.4	59	09.4	+15	10.5	182	44.1	+6	41.3	14	37.2	-3	23.7	83	14.9	+20	23.1
19	220	41.8	74	08.9		09.4	197	45.1		41.8	29	39.4		23.8	98	17.0		23.1
20	235	44.3	89	08.5		08.4	212	46.1		42.4	44	41.6		23.9	113	19.1		23.0
21	250	46.8	104	08.0		07.4	227	47.1		42.9	59	43.8		24.0	128	21.2		22.9
22	265	49.2	119	07.5		06.4	242	48.1		43.5	74	46.0		24.1	143	23.4		22.9
23	280	51.7	134	07.0		05.3	257	49.1		44.0	89	48.2		24.3	158	25.5		22.8
24	295	54.2	149	06.6	+15	04.3	272	50.1	+6	44.6	104	50.4	-3	24.4	173	27.6	+20	22.7
Dif	—		-5		-10		+10		+6		+22		-1		+21		-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 5 PHE { 4 ^h : 59 ^m 4 12 ^h : 59 ^m 7 20 ^h : 60 ^m 0 Rº: 66 ^m														
	PMG: 12 ^h 06 ^m 2			SD: 16 ^h 1 PMG: 21 ^h 29 ^m														
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Náutico	Civil		Hora	Rº	Hora	Rº		
h	°	'	°	°	'	°	'	°	°	h m	h m	h m	h m	m	h m	m		
0	178	27.2	+21	02.7	51	07.9	52	-25	18.6	79	60 N	** **	1 55	3 10	19 43	86	23 09	52
1	193	27.2		02.3	65	32.1	50		26.5	79	58	** **	2 23	26	19 09	80	23 44	57
2	208	27.1		01.8	79	56.1	50		34.3	78	56	1 04	2 45	39	18 44	77	** **	** **
3	223	27.1		01.4	94	20.0	49		41.9	76	54	1 45	3 02	3 51	24	76	** **	** *
4	238	27.0		01.0	108	43.8	48		49.3	74	52	2 12	17	4 02	18 07	75	0 05	41
5	253	27.0	+21	00.5	123	07.4	46	-25	56.6	73	50	2 32	3 29	4 11	17 52	74	0 17	44
6	268	27.0	+21	00.1	137	30.9	45	-26	03.7	71	45	3 09	3 55	4 30	17 23	72	0 43	48
7	283	26.9	+20	59.6	151	54.2	43		10.7	70	40	35	4 14	46	17 00	71	1 03	51
8	298	26.9		59.2	166	17.5	43		17.5	68	35	3 55	30	4 59	16 42	69	20	53
9	313	26.8		58.8	180	40.6	41		24.1	66	30	4 12	4 44	5 11	16 26	68	34	56
10	328	26.8		58.3	195	03.5	39		30.5	64	20	38	5 06	30	15 58	68	1 59	59
11	343	26.7	+20	57.9	209	26.4	39	-26	36.8	63	10 N	4 58	5 24	5 47	15 35	66	2 21	61
12	358	26.7	+20	57.4	223	49.1	37	-26	42.9	61	0	5 15	5 40	6 03	15 14	65	2 41	63
13	13	26.6		57.0	238	11.7	36		48.8	59	10 S	30	5 56	18	14 52	64	3 02	64
14	28	26.6		56.5	252	34.2	35	-26	54.6	58	20	44	6 11	34	29 62		23	68
15	43	26.5		56.1	266	56.6	34	-27	00.1	55	30	5 58	27	6 53	14 03	60	3 49	70
16	58	26.5		55.6	281	18.9	33		05.5	54	35	6 05	37	7 04	13 47	59	4 04	71
17	73	26.5	+20	55.2	295	41.0	31	-27	10.7	52	40	6 13	6 47	7 16	13 29	58	4 21	73
18	88	26.4	+20	54.7	310	03.0	30	-27	15.7	50	45	6 22	6 58	7 31	13 07	56	4 42	76
19	103	26.4		54.3	324	24.9	29		20.5	48	50	32	7 12	49	12 40	53	5 08	80
20	118	26.3		53.8	338	46.8	29		25.2	47	52	36	18	7 57	27 51		21	82
21	133	26.3		53.4	353	08.5	27		29.6	44	54	41	25	8 07	12 11	50	36	84
22	148	26.2		52.9	7	30.1	26		33.8	42	56	46	33	17	11 53	47	5 54	87
23	163	26.2		52.5	21	51.6	25		37.9	41	58	51	41	29	32 41		6 15	92
24	178	26.2	+20	52.0	36	13.0	24	-27	41.7	38	60 S	6 57	7 51	8 43	11 04	33	6 42	102

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO								
	PMG: 4 ^h 15 ^m 7		Mag: -3.9 PMG: 14 ^h 04 ^m			Mag: -0.3 PMG: 5 ^h 48 ^m			Mag: -2.0 PMG: 16 ^h 58 ^m			Mag: +0.2 PMG: 12 ^h 24 ^m								
	hG ♈		hG ♀			hG ♂			hG ♃			hG ♄								
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'						
0	295	54.2	149	06.6	+15	04.3	272	50.1	+6	44.6	104	50.4	-3	24.4	173	27.6	+20	22.7		
1	310	56.6	164	06.1		03.3	287	51.2		45.1	119	52.6		24.5	188	29.7		22.7		
2	325	59.1	179	05.6		02.3	302	52.2		45.7	134	54.8		24.6	203	31.9		22.6		
3	341	01.5	194	05.2		01.2	317	53.2		46.2	149	57.0		24.7	218	34.0		22.5		
4	356	04.0	209	04.7	+15	00.2	332	54.2		46.8	164	59.2		24.9	233	36.1		22.5		
5	11	06.5	224	04.2	+14	59.2	347	55.2	+6	47.3	180	01.4	-3	25.0	248	38.3	+20	22.4		
6	26	08.9	239	03.8	+14	58.1	2	56.2	+6	47.9	195	03.6	-3	25.1	263	40.4	+20	22.3		
7	41	11.4	254	03.3		57.1	17	57.2		48.4	210	05.8		25.2	278	42.5		22.3		
8	56	13.9	269	02.8		56.1	32	58.2		49.0	225	08.0		25.3	293	44.6		22.2		
9	71	16.3	284	02.4		55.0	47	59.2		49.5	240	10.2		25.5	308	46.8		22.2		
10	86	18.8	299	01.9		54.0	63	00.2		50.1	255	12.4		25.6	323	48.9		22.1		
11	101	21.3	314	01.4	+14	53.0	78	01.2	+6	50.6	270	14.6	-3	25.7	338	51.0	+20	22.0		
12	116	23.7	329	01.0	+14	51.9	93	02.2	+6	51.2	285	16.8	-3	25.8	353	53.1	+20	22.0		
13	131	26.2	344	00.5		50.9	108	03.2		51.7	300	19.0		25.9	8	55.3		21.9		
14	146	28.7	359	00.0		49.9	123	04.2		52.3	315	21.2		26.1	23	57.4		21.8		
15	161	31.1	13	59.6		48.8	138	05.3		52.8	330	23.4		26.2	38	59.5		21.8		
16	176	33.6	28	59.1		47.8	153	06.3		53.3	345	25.6		26.3	54	01.7		21.7		
17	191	36.0	43	58.6	+14	46.8	168	07.3	+6	53.9	0	27.8	-3	26.4	69	03.8	+20	21.6		
18	206	38.5	58	58.2	+14	45.7	183	08.3	+6	54.4	15	30.0	-3	26.6	84	05.9	+20	21.6		
19	221	41.0	73	57.7		44.7	198	09.3		55.0	30	32.2		26.7	99	08.0		21.5		
20	236	43.4	88	57.3		43.7	213	10.3		55.5	45	34.4		26.8	114	10.2		21.4		
21	251	45.9	103	56.8		42.6	228	11.3		56.1	60	36.6		26.9	129	12.3		21.4		
22	266	48.4	118	56.3		41.6	243	12.3		56.6	75	38.8		27.0	144	14.4		21.3		
23	281	50.8	133	55.9		40.5	258	13.3		57.2	90	41.0		27.2	159	16.5		21.2		
24	296	53.3	148	55.4	+14	39.5	273	14.4	+6	57.7	105	43.2	-3	27.3	174	18.7	+20	21.2		
Dif	—		-5			-10	+10			+5	+22			-1			+21			-1

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 12 ^d 5 PHE { 4 ^h : 60'3 12 ^h : 60'5 20 ^h : 60'8										
	PMG: 12 ^h 06 ^m 3			PMG: 22 ^h 35 ^m R°: 66 ^m										
	hG ☉		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	26.2	+20 52.0	36	13.0	-27 41.7	60 N	21 00	22 12	** **	21 09 36		** ** *	
1	193	26.1	51.6	50	34.3	23 45.4	58	20 44	21 45	** **	20 29 46		** ** *	
2	208	26.1	51.1	64	55.5	22 48.8	56	30	24	22 59	20 01 51		0 09 60	
3	223	26.0	50.7	79	16.6	21 52.1	54	19	21 07	22 22	19 40 53		2 49 63	
4	238	26.0	50.2	93	37.7	21 55.1	52	09	20 53	21 57	22 55		0 46 62	
5	253	26.0	+20 49.8	107	58.6	19 -27 58.0	50	20 00	20 41	21 37	19 06 57		1 01 63	
6	268	25.9	+20 49.3	122	19.5	19 -28 00.6	45	19 41	20 16	21 02	18 35 60		1 31 64	
7	283	25.9	48.9	136	40.3	18 03.1	40	25	19 57	20 36	18 11 61		1 54 65	
8	298	25.8	48.4	151	01.1	18 05.3	35	12	41	16	17 51 63		2 13 65	
9	313	25.8	48.0	165	21.7	16 07.3	30	19 01	28	20 00	34 64		3 30 65	
10	328	25.8	47.5	179	42.3	16 09.1	20	18 42	19 06	19 34	17 06 65		2 58 66	
11	343	25.7	+20 47.0	194	02.8	15 -28 10.7	10 N	18 25	18 48	19 14	16 41 66		3 22 66	
12	358	25.7	+20 46.6	208	23.3	15 -28 12.1	0	18 10	18 32	18 58	16 19 67		3 44 66	
13	13	25.6	46.1	222	43.7	14 13.2	10 S	17 55	17	43	15 56 68		4 06 67	
14	28	25.6	45.7	237	04.0	13 14.2	20	38	18 02	29	31 69		3 1 66	
15	43	25.6	45.2	251	24.3	13 14.9	30	20	17 46	15	15 03 70		4 59 66	
16	58	25.5	44.7	265	44.5	12 15.5	35	17 09	37	08	14 46 71		5 15 67	
17	73	25.5	+20 44.3	280	04.7	12 -28 15.8	40	16 57	17 27	18 00	14 27 71		5 34 67	
18	88	25.4	+20 43.8	294	24.9	12 -28 15.9	45	16 43	17 15	17 52	14 03 72		5 58 66	
19	103	25.4	43.3	308	45.0	11 15.7	50	25	17 02	42	13 33 73		6 28 66	
20	118	25.4	42.9	323	05.1	11 15.4	52	17	16 56	38	18 74		6 43 65	
21	133	25.3	42.4	337	25.1	10 14.8	54	16 08	49	33	13 01 74		7 00 65	
22	148	25.3	42.0	351	45.1	10 14.0	56	15 57	42	29	12 40 75		21 64	
23	163	25.3	41.5	6	05.1	10 13.0	58	45	33	23	12 13 78		7 47 63	
24	178	25.2	+20 41.0	20	25.1	10 -28 11.8	60 S	15 32	16 24	17 18	11 37 80		8 24 60	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 4 ^h 11 ^m 8		Mag: -3.9 PMG: 14 ^h 05 ^m		Mag: -0.3 PMG: 5 ^h 47 ^m		Mag: -2.0 PMG: 16 ^h 55 ^m		Mag: +0.2 PMG: 12 ^h 21 ^m	
	hG ♈		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♅ Dec	
h	°	'	°	'	°	'	°	'	°	'
0	296	53.3	148 55.4	+14 39.5	273 14.4	+6 57.7	105 43.2	-3 27.3	174 18.7	+20 21.2
1	311	55.8	163 55.0	38.4	288 15.4	58.3	120 45.4	27.4	189 20.8	21.1
2	326	58.2	178 54.5	37.4	303 16.4	58.8	135 47.6	27.5	204 22.9	21.0
3	342	00.7	193 54.0	36.4	318 17.4	59.3	150 49.8	27.7	219 25.1	21.0
4	357	03.2	208 53.6	35.3	333 18.4	+6 59.9	165 52.0	27.8	234 27.2	20.9
5	12	05.6	223 53.1	+14 34.3	348 19.4	+7 00.4	180 54.2	-3 27.9	249 29.3	+20 20.8
6	27	08.1	238 52.7	+14 33.2	3 20.4	+7 01.0	195 56.4	-3 28.0	264 31.4	+20 20.8
7	42	10.5	253 52.2	32.2	18 21.4	01.5	210 58.6	28.1	279 33.6	20.7
8	57	13.0	268 51.8	31.1	33 22.5	02.1	226 00.8	28.3	294 35.7	20.6
9	72	15.5	283 51.3	30.1	48 23.5	02.6	241 03.0	28.4	309 37.8	20.6
10	87	17.9	298 50.9	29.0	63 24.5	03.1	256 05.2	28.5	324 39.9	20.5
11	102	20.4	313 50.4	+14 28.0	78 25.5	+7 03.7	271 07.4	-3 28.6	339 42.1	+20 20.4
12	117	22.9	328 50.0	+14 26.9	93 26.5	+7 04.2	286 09.6	-3 28.8	354 44.2	+20 20.4
13	132	25.3	343 49.5	25.9	108 27.5	04.8	301 11.8	28.9	9 46.3	20.3
14	147	27.8	358 49.0	24.8	123 28.5	05.3	316 14.0	29.0	24 48.5	20.2
15	162	30.3	13 48.6	23.8	138 29.6	05.9	331 16.2	29.1	39 50.6	20.2
16	177	32.7	28 48.1	22.7	153 30.6	06.4	346 18.4	29.3	54 52.7	20.1
17	192	35.2	43 47.7	+14 21.7	168 31.6	+7 06.9	1 20.6	-3 29.4	69 54.8	+20 20.0
18	207	37.7	58 47.2	+14 20.6	183 32.6	+7 07.5	16 22.7	-3 29.5	84 57.0	+20 20.0
19	222	40.1	73 46.8	19.6	198 33.6	08.0	31 24.9	29.6	99 59.1	19.9
20	237	42.6	88 46.4	18.5	213 34.6	08.6	46 27.1	29.7	115 01.2	19.9
21	252	45.0	103 45.9	17.5	228 35.7	09.1	61 29.3	29.9	130 03.3	19.8
22	267	47.5	118 45.5	16.4	243 36.7	09.6	76 31.5	30.0	145 05.5	19.7
23	282	50.0	133 45.0	15.3	258 37.7	10.2	91 33.7	30.1	160 07.6	19.7
24	297	52.4	148 44.6	+14 14.3	273 38.7	+7 10.7	106 35.9	-3 30.2	175 09.7	+20 19.6
Dif	—		-5 -10		+10 +5		+22 -1		+21 -1	

UT	SOL			LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7			Edad: 13 ^d 5 PHE { 4 ^h : 60 ^m 9 12 ^h : 61 ^m 1 20 ^h : 61 ^m 2 Rº: 65 ^m													
	PMG: 12 ^h 06 ^m 3			SD: 16 ^h 6 PMG: 23 ^h 41 ^m													
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Náutico	Civil		Hora	Rº	Hora	Rº	
h	°	'	°	°	'	°	°	'	°	h m	h m	h m	h m m	m	h m m	m	
0	178	25.2	+20 41.0	20	25.1	-28 11.8	14		60 N	** **	2 01	3 14	21 45 11	0 01 105			
1	193	25.2	40.6	34	45.0	10.4	14		58	** **	28	29	21 15 21	0 41 95			
2	208	25.2	40.1	49	05.0	08.7	17		56	1 14	2 49	43	20 52 28	1 09 89			
3	223	25.1	39.6	63	24.9	06.8	19		54	1 51	3 06	3 54	33 33	31 86			
4	238	25.1	39.2	77	44.8	04.7	21		52	2 16	20	4 04	17 37	1 49 83			
5	253	25.0	+20 38.7	92	04.7	-28 02.4	23		50	2 36	3 32	4 13	20 03 40	2 04 82			
6	268	25.0	+20 38.2	106	24.7	-27 59.8	26		45	3 11	3 57	4 32	19 35 45	2 35 78			
7	283	25.0	37.7	120	44.6	57.1	27		40	37	4 16	4 48	19 12 50	2 59 76			
8	298	24.9	37.3	135	04.5	54.1	30		35	3 57	32	5 01	18 54 52	3 18 75			
9	313	24.9	36.8	149	24.5	50.9	32		30	4 13	4 45	12	38 55	3 35 73			
10	328	24.9	36.3	163	44.4	47.4	35		20	39	5 07	31	18 11 59	4 04 70			
11	343	24.8	+20 35.9	178	04.4	-27 43.8	36		10 N	4 58	5 25	5 47	17 47 63	4 28 68			
12	358	24.8	+20 35.4	192	24.4	-27 39.9	39		0	5 15	5 41	6 03	17 26 65	4 50 67			
13	13	24.8	34.9	206	44.4	35.8	41		10 S	30	5 56	18	17 04 68	5 13 64			
14	28	24.7	34.4	221	04.5	31.5	43		20	44	6 11	34	16 40 72	5 37 62			
15	43	24.7	34.0	235	24.5	27.0	45		30	5 57	27	6 52	16 13 75	6 05 59			
16	58	24.7	33.5	249	44.7	22.3	47		35	6 05	36	7 03	15 57 77	22 57			
17	73	24.6	+20 33.0	264	04.8	-27 17.3	50		40	6 12	6 46	7 15	15 38 80	6 41 55			
18	88	24.6	+20 32.5	278	25.0	-27 12.2	51		45	6 21	6 57	7 29	15 15 84	7 04 52			
19	103	24.6	32.0	292	45.3	06.8	54		50	30	7 10	47	14 46 89	34 48			
20	118	24.6	31.6	307	05.6	-27 01.2	56		52	34	16	7 55	32 91	7 48 46			
21	133	24.5	31.1	321	25.9	-26 55.4	58		54	39	23	8 04	14 15 95	8 05 43			
22	148	24.5	30.6	335	46.3	49.4	60		56	43	30	14	13 55 99	25 39			
23	163	24.5	30.1	350	06.8	43.1	63		58	49	39	26	13 31 105	8 50 33			
24	178	24.4	+20 29.7	4	27.3	-26 36.7	64		60 S	6 54	7 48	8 40	12 57 116	9 24 22			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG 4 ^h 07 ^m 8		Mag: -3.9 PMG: 14 ^h 05 ^m			Mag: -0.3 PMG: 5 ^h 45 ^m			Mag: -2.0 PMG: 16 ^h 51 ^m			Mag: +0.2 PMG: 12 ^h 18 ^m					
	hG ♈		hG ♀			hG ♂			hG ♃			hG ♄					
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	'	
0	297	52.4	148 44.6	+14 14.3	273 38.7	+7 10.7	106 35.9	-3 30.2	175 09.7	+20 19.6							
1	312	54.9	163 44.1	13.2	288 39.7	11.3	121 38.1	30.4	190 11.8	19.5							
2	327	57.4	178 43.7	12.2	303 40.7	11.8	136 40.3	30.5	205 14.0	19.5							
3	342	59.8	193 43.2	11.1	318 41.8	12.3	151 42.5	30.6	220 16.1	19.4							
4	358	02.3	208 42.8	10.1	333 42.8	12.9	166 44.7	30.7	235 18.2	19.3							
5	13	04.8	223 42.3	+14 09.0	348 43.8	+7 13.4	181 46.9	-3 30.9	250 20.4	+20 19.3							
6	28	07.2	238 41.9	+14 07.9	3	44.8	+7 14.0	196 49.1	-3 31.0	265 22.5	+20 19.2						
7	43	09.7	253 41.5	06.9	18 45.8	14.5	211 51.3	31.1	280 24.6	19.1							
8	58	12.2	268 41.0	05.8	33 46.9	15.0	226 53.5	31.2	295 26.7	19.1							
9	73	14.6	283 40.6	04.8	48 47.9	15.6	241 55.6	31.4	310 28.9	19.0							
10	88	17.1	298 40.1	03.7	63 48.9	16.1	256 57.8	31.5	325 31.0	18.9							
11	103	19.5	313 39.7	+14 02.6	78 49.9	+7 16.7	272 00.0	-3 31.6	340 33.1	+20 18.9							
12	118	22.0	328 39.3	+14 01.6	93 50.9	+7 17.2	287 02.2	-3 31.7	355 35.2	+20 18.8							
13	133	24.5	343 38.8	+14 00.5	108 52.0	17.7	302 04.4	31.9	10 37.4	18.7							
14	148	26.9	358 38.4	+13 59.4	123 53.0	18.3	317 06.6	32.0	25 39.5	18.7							
15	163	29.4	13 37.9	58.4	138 54.0	18.8	332 08.8	32.1	40 41.6	18.6							
16	178	31.9	28 37.5	57.3	153 55.0	19.3	347 11.0	32.2	55 43.8	18.5							
17	193	34.3	43 37.1	+13 56.2	168 56.0	+7 19.9	2	13.2	-3 32.4	18.5							
18	208	36.8	58 36.6	+13 55.2	183 57.1	+7 20.4	17 15.4	-3 32.5	85 48.0	+20 18.4							
19	223	39.3	73 36.2	54.1	198 58.1	20.9	32 17.6	32.6	100 50.1	18.3							
20	238	41.7	88 35.8	53.0	213 59.1	21.5	47 19.7	32.7	115 52.3	18.3							
21	253	44.2	103 35.3	52.0	229 00.1	22.0	62 21.9	32.9	130 54.4	18.2							
22	268	46.7	118 34.9	50.9	244 01.2	22.6	77 24.1	33.0	145 56.5	18.1							
23	283	49.1	133 34.5	49.8	259 02.2	23.1	92 26.3	33.1	160 58.6	18.1							
24	298	51.6	148 34.0	+13 48.7	274 03.2	+7 23.6	107 28.5	-3 33.3	176 00.8	+20 18.0							
Dif	—		-4	-11	+10	+5	+22	-1	+21	-1							

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 15 ^h 7			Edad: 14 ^d 5 PHE					SD: 16 ^h 7			Salida de Luna			Puesta de Luna		
	PMG: 12 ^h 06 ^m 4			PMG: **h **m					R°: **m								
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m			
0	178	24.4	+20 29.7	4	27.3	-26 36.7	67	60 N	20 55	22 06	** ** *	21 56 3	1 46 124				
1	193	24.4	29.2	18	47.9	30.0	67	58	40	21 40	** ** *	36 11	2 16 112				
2	208	24.4	28.7	33	08.5	23.2	68	56	27	20	22 50	20 16	38 106				
3	223	24.3	28.2	47	29.3	16.1	71	54	16	21 04	22 16	21 06 21	2 57 100				
4	238	24.3	27.7	61	50.0	08.9	72	52	20 06	20 50	21 52	20 54 24	3 12 97				
5	253	24.3	+20 27.2	76	10.9	-26 01.4	75	50	19 57	20 38	21 34	20 43 27	3 26 93				
6	268	24.3	+20 26.8	90	31.9	-25 53.8	76	45	19 39	20 14	20 59	20 20 34	3 53 87				
7	283	24.2	26.3	104	52.9	45.9	79	40	24	19 55	34	20 02 38	4 15 82				
8	298	24.2	25.8	119	14.0	37.8	81	35	11	40	20 14	19 46 43	33 79				
9	313	24.2	25.3	133	35.2	29.6	82	30	19 00	27	19 59	33 46	4 48 76				
10	328	24.1	24.8	147	56.5	21.1	85	20	18 41	19 05	33	19 10 51	5 14 71				
11	343	24.1	+20 24.3	162	17.8	-25 12.5	86	10 N	18 25	18 48	19 14	18 50 56	5 36 67				
12	358	24.1	+20 23.8	176	39.3	-25 03.7	88	0	18 10	18 32	18 58	18 31 60	5 57 63				
13	13	24.1	23.4	191	00.8	-24 54.6	91	10 S	17 55	17	43	18 12 65	6 17 60				
14	28	24.0	22.9	205	22.5	45.4	92	20	39	18 03	30	17 52 69	6 39 56				
15	43	24.0	22.4	219	44.2	36.0	94	30	21	17 47	16	28 75	7 04 51				
16	58	24.0	21.9	234	06.1	26.5	95	35	17 11	38	09	17 14 79	19 48				
17	73	24.0	+20 21.4	248	28.0	-24 16.7	98	40	16 59	17 28	18 01	16 58 83	7 36 44				
18	88	23.9	+20 20.9	262	50.1	-24 06.8	99	45	16 45	17 17	17 53	16 39 87	7 56 40				
19	103	23.9	20.4	277	12.2	-23 56.6	102	50	28	17 04	44	15 94	8 22 33				
20	118	23.9	19.9	291	34.5	46.4	102	52	19	16 58	40	16 03 98	34 30				
21	133	23.9	19.4	305	56.8	35.9	105	54	10	51	36	15 50 101	8 48 26				
22	148	23.8	18.9	320	19.3	25.3	106	56	16 00	44	31	34 107	9 04 22				
23	163	23.8	18.4	334	41.9	14.5	108	58	15 49	36	26	15 16 113	23 16				
24	178	23.8	+20 17.9	349	04.6	-23 03.5	110	60 S	15 35	16 27	17 20	14 53 121	9 46 8				

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 4 ^h 03 ^m 9		Mag: -3.9 PMG: 14 ^h 06 ^m		Mag: -0.3 PMG: 5 ^h 43 ^m		Mag: -1.9 PMG: 16 ^h 48 ^m		Mag: +0.2 PMG: 12 ^h 14 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	298	51.6	148 34.0	+13 48.7	274 03.2	+7 23.6	107 28.5	-3 33.3	176 00.8	+20 18.0
1	313	54.0	163 33.6	47.7	289 04.2	24.2	122 30.7	33.4	191 02.9	17.9
2	328	56.5	178 33.2	46.6	304 05.3	24.7	137 32.9	33.5	206 05.0	17.9
3	343	59.0	193 32.7	45.5	319 06.3	25.2	152 35.1	33.6	221 07.2	17.8
4	359	01.4	208 32.3	44.4	334 07.3	25.8	167 37.3	33.8	236 09.3	17.7
5	14	03.9	223 31.9	+13 43.4	349 08.3	+7 26.3	182 39.4	-3 33.9	251 11.4	+20 17.7
6	29	06.4	238 31.4	+13 42.3	4 09.4	+7 26.8	197 41.6	-3 34.0	266 13.5	+20 17.6
7	44	08.8	253 31.0	41.2	19 10.4	27.4	212 43.8	34.1	281 15.7	17.5
8	59	11.3	268 30.6	40.1	34 11.4	27.9	227 46.0	34.3	296 17.8	17.5
9	74	13.8	283 30.1	39.1	49 12.4	28.4	242 48.2	34.4	311 19.9	17.4
10	89	16.2	298 29.7	38.0	64 13.5	29.0	257 50.4	34.5	326 22.0	17.3
11	104	18.7	313 29.3	+13 36.9	79 14.5	+7 29.5	272 52.6	-3 34.6	341 24.2	+20 17.3
12	119	21.2	328 28.9	+13 35.8	94 15.5	+7 30.0	287 54.8	-3 34.8	356 26.3	+20 17.2
13	134	23.6	343 28.4	34.7	109 16.5	30.6	302 56.9	34.9	11 28.4	17.1
14	149	26.1	358 28.0	33.7	124 17.6	31.1	317 59.1	35.0	26 30.6	17.1
15	164	28.5	13 27.6	32.6	139 18.6	31.6	333 01.3	35.2	41 32.7	17.0
16	179	31.0	28 27.2	31.5	154 19.6	32.2	348 03.5	35.3	56 34.8	16.9
17	194	33.5	43 26.7	+13 30.4	169 20.7	+7 32.7	3 05.7	-3 35.4	71 36.9	+20 16.9
18	209	35.9	58 26.3	+13 29.3	184 21.7	+7 33.2	18 07.9	-3 35.5	86 39.1	+20 16.8
19	224	38.4	73 25.9	28.3	199 22.7	33.8	33 10.1	35.7	101 41.2	16.7
20	239	40.9	88 25.5	27.2	214 23.7	34.3	48 12.2	35.8	116 43.3	16.7
21	254	43.3	103 25.0	26.1	229 24.8	34.8	63 14.4	35.9	131 45.4	16.6
22	269	45.8	118 24.6	25.0	244 25.8	35.3	78 16.6	36.0	146 47.6	16.5
23	284	48.3	133 24.2	23.9	259 26.8	35.9	93 18.8	36.2	161 49.7	16.5
24	299	50.7	148 23.8	+13 22.8	274 27.9	+7 36.4	108 21.0	-3 36.3	176 51.8	+20 16.4
Dif	—		-4	-11	+10	+5	+22	-1	+21	-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 4			Edad: 15 ^d 5 SD: 16 ^h 7 PMG: 0 ^h 46 ^m	PHE { 4 ^h : 61 ^m 4 12 ^h : 61 ^m 3 20 ^h : 61 ^m 2 R ^o : 59 ^m										
	hG ☉	Dec	Dif			Náutico		Civil	Hora		R ^o	Hora	R ^o		
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	23.8	+20	17.9	349	04.6	–23 03.5	60 N	***	2 08	3 18	21 59	1	3 50	119
1	193	23.8		17.4	3	27.4	38 –22 52.3	58	***	33	33	47	6	4 08	112
2	208	23.7		16.9	17	50.3	39 41.0	56	1 23	2 53	46	36	10	24	106
3	223	23.7		16.5	32	13.4	41 29.6	54	1 57	3 09	3 57	27	14	37	101
4	238	23.7		16.0	46	36.5	41 18.0	52	2 21	23	4 07	18	17	49	97
5	253	23.7	+20	15.5	60	59.8	43 –22 06.2	50	2 39	3 35	4 16	21 10	21	4 59	94
6	268	23.6	+20	15.0	75	23.2	44 –21 54.3	45	3 14	3 59	4 34	20 54	26	5 20	87
7	283	23.6		14.5	89	46.7	45 42.2	40	39	4 18	4 49	40	32	37	82
8	298	23.6		14.0	104	10.3	46 30.0	35	3 59	33	5 02	29	35	5 52	77
9	313	23.6		13.5	118	34.1	48 17.6	30	4 15	4 46	13	19	39	6 04	74
10	328	23.5		13.0	132	58.0	49 –21 05.1	20	40	5 08	32	20 01	45	25	68
11	343	23.5	+20	12.5	147	21.9	49 –20 52.4	10 N	4 59	5 25	5 48	19 46	50	6 43	63
12	358	23.5	+20	12.0	161	46.0	51 –20 39.6	0	5 15	5 41	6 03	19 31	56	7 00	58
13	13	23.5		11.5	176	10.3	53 26.7	10 S	30	5 55	18	17	60	17	53
14	28	23.5		11.0	190	34.6	53 13.6	20	43	6 10	33	19 01	66	35	48
15	43	23.4		10.4	204	59.1	55 –20 00.4	30	5 57	26	6 51	18 43	73	7 55	42
16	58	23.4		09.9	219	23.7	56 –19 47.1	35	6 04	35	7 02	33	76	8 07	39
17	73	23.4	+20	09.4	233	48.4	57 –19 33.7	40	6 11	6 44	7 14	18 21	80	8 20	35
18	88	23.4	+20	08.9	248	13.2	58 –19 20.1	45	6 19	6 55	7 28	18 06	86	8 36	30
19	103	23.4		08.4	262	38.2	60 –19 06.4	50	28	7 08	45	17 49	92	8 55	24
20	118	23.3		07.9	277	03.3	61 –18 52.5	52	32	14	7 53	41	95	9 04	21
21	133	23.3		07.4	291	28.5	62 38.6	54	36	21	8 01	31	99	14	17
22	148	23.3		06.9	305	53.8	63 24.5	56	41	28	11	21	103	26	13
23	163	23.3		06.4	320	19.3	65 –18 10.4	58	46	36	23	17 09	108	39	8
24	178	23.3	+20	05.9	334	44.8	65 –17 56.1	60 S	6 52	7 45	8 36	16 54	115	9 54	2

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 4 ^h 00 ^m 0		Mag: –3.9 PMG: 14 ^h 07 ^m		Mag: –0.3 PMG: 5 ^h 42 ^m		Mag: –1.9 PMG: 16 ^h 44 ^m		Mag: +0.2 PMG: 12 ^h 11 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	299	50.7	148	23.8	+13	22.8	274	27.9	–3	36.3
1	314	53.2	163	23.4		21.7	289	28.9		36.4
2	329	55.6	178	22.9		20.7	304	29.9		36.6
3	344	58.1	193	22.5		19.6	319	30.9		36.7
4	0	00.6	208	22.1		18.5	334	32.0		36.8
5	15	03.0	223	21.7	+13	17.4	349	33.0	–3	36.9
6	30	05.5	238	21.3	+13	16.3	4	34.0	–3	37.1
7	45	08.0	253	20.8		15.2	19	35.1		37.2
8	60	10.4	268	20.4		14.1	34	36.1		37.3
9	75	12.9	283	20.0		13.0	49	37.1		37.5
10	90	15.4	298	19.6		11.9	64	38.2		37.6
11	105	17.8	313	19.2	+13	10.8	79	39.2	–3	37.7
12	120	20.3	328	18.8	+13	09.8	94	40.2	–3	37.8
13	135	22.8	343	18.4		08.7	109	41.3		38.0
14	150	25.2	358	17.9		07.6	124	42.3		38.1
15	165	27.7	13	17.5		06.5	139	43.3		38.2
16	180	30.1	28	17.1		05.4	154	44.4		38.4
17	195	32.6	43	16.7	+13	04.3	169	45.4	–3	38.5
18	210	35.1	58	16.3	+13	03.2	184	46.4	–3	38.6
19	225	37.5	73	15.9		02.1	199	47.5		38.8
20	240	40.0	88	15.5	+13	01.0	214	48.5		38.9
21	255	42.5	103	15.1	+12	59.9	229	49.6		39.0
22	270	44.9	118	14.6		58.8	244	50.6		39.1
23	285	47.4	133	14.2		57.7	259	51.6		39.3
24	300	49.9	148	13.8	+12	56.6	274	52.7	–3	39.4
Dif	—		–4		–11		+10		+22	
									–1	
									+21	
									–1	

UT	SOL			☉ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 16 ^d 5 PHE { 4 ^h : 61'1 12 ^h : 60'9 20 ^h : 60'8											
	PMG: 12 ^h 06 ^m 5			SD: 16'7 PMG: 1 ^h 45 ^m R°: 54 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	h m	m
0	178	23.3	+20 05.9	334	44.8	-17 56.1	67	60 N	20 51	21 59	** **	22 00	0	5 49	111
1	193	23.3	05.4	349	10.5	41.7	144	58	37	35	** **	21 53	4	6 00	106
2	208	23.2	04.9	3	36.3	27.2	145	56	24	16	22 42	46	8	10	101
3	223	23.2	04.4	18	02.2	-17 12.6	146	54	13	21 00	22 10	41	10	18	97
4	238	23.2	03.8	32	28.3	-16 57.9	147	52	20 04	20 47	21 48	35	14	26	93
5	253	23.2	+20 03.3	46	54.4	-16 43.1	148	50	19 55	20 35	21 30	21 31	16	6 33	90
6	268	23.2	+20 02.8	61	20.7	-16 28.2	149	45	19 37	20 12	20 56	21 20	22	6 47	84
7	283	23.1	02.3	75	47.1	-16 13.3	149	40	22	19 53	32	12	26	6 59	79
8	298	23.1	01.8	90	13.6	-15 58.2	151	35	19 10	38	20 13	21 04	31	7 09	75
9	313	23.1	01.3	104	40.3	43.0	152	30	18 59	25	19 57	20 58	34	18	71
10	328	23.1	00.8	119	07.0	27.8	152	20	41	19 04	33	46	41	33	64
11	343	23.1	+20 00.3	133	33.9	-15 12.4	154	10 N	18 25	18 47	19 14	20 36	46	7 46	59
12	358	23.1	+19 59.7	148	00.8	-14 57.0	154	0	18 10	18 32	18 58	20 27	51	7 58	54
13	13	23.1	59.2	162	27.9	41.5	155	10 S	17 55	18	43	17	57	8 10	48
14	28	23.0	58.7	176	55.1	25.9	156	20	40	18 03	30	20 07	62	23	43
15	43	23.0	58.2	191	22.4	-14 10.3	156	30	22	17 48	17	19 56	68	37	37
16	58	23.0	57.7	205	49.8	-13 54.6	157	35	12	39	10	49	72	46	32
17	73	23.0	+19 57.1	220	17.4	-13 38.8	158	40	17 00	17 30	18 03	19 41	77	8 55	29
18	88	23.0	+19 56.6	234	45.0	-13 22.9	159	45	16 47	17 19	17 55	19 32	82	9 06	24
19	103	23.0	56.1	249	12.7	-13 07.0	159	50	30	06	46	21	88	19	18
20	118	23.0	55.6	263	40.6	-12 51.0	160	52	22	17 00	42	16	90	25	15
21	133	22.9	55.1	278	08.5	34.9	161	54	13	16 54	38	10	94	31	13
22	148	22.9	54.5	292	36.6	18.8	161	56	16 04	47	34	19 04	97	39	9
23	163	22.9	54.0	307	04.7	-12 02.7	161	58	15 52	39	29	18 57	101	47	5
24	178	22.9	+19 53.5	321	33.0	-11 46.5	162	60 S	15 39	16 31	17 24	18 49	106	9 56	1

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 3 ^h 56 ^m 0		Mag: -3.9 PMG: 14 ^h 07 ^m		Mag: -0.4 PMG: 5 ^h 40 ^m		Mag: -1.9 PMG: 16 ^h 41 ^m		Mag: +0.2 PMG: 12 ^h 07 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	300	49.9	148 13.8	+12 56.6	274 52.7	+7 49.1	109 13.3	-3 39.4	177 42.9	+20 14.8
1	315	52.3	163 13.4	55.5	289 53.7	49.6	124 15.5	39.5	192 45.0	14.7
2	330	54.8	178 13.0	54.4	304 54.7	50.1	139 17.7	39.7	207 47.1	14.7
3	345	57.3	193 12.6	53.3	319 55.8	50.6	154 19.9	39.8	222 49.2	14.6
4	0	59.7	208 12.2	52.2	334 56.8	51.2	169 22.0	39.9	237 51.4	14.6
5	16	02.2	223 11.8	+12 51.1	349 57.9	+7 51.7	184 24.2	-3 40.1	252 53.5	+20 14.5
6	31	04.6	238 11.4	+12 50.0	4 58.9	+7 52.2	199 26.4	-3 40.2	267 55.6	+20 14.4
7	46	07.1	253 11.0	48.9	19 59.9	52.7	214 28.6	40.3	282 57.8	14.4
8	61	09.6	268 10.6	47.8	35 01.0	53.3	229 30.7	40.4	297 59.9	14.3
9	76	12.0	283 10.2	46.7	50 02.0	53.8	244 32.9	40.6	313 02.0	14.2
10	91	14.5	298 09.8	45.6	65 03.0	54.3	259 35.1	40.7	328 04.1	14.2
11	106	17.0	313 09.4	+12 44.5	80 04.1	+7 54.8	274 37.3	-3 40.8	343 06.3	+20 14.1
12	121	19.4	328 09.0	+12 43.3	95 05.1	+7 55.3	289 39.5	-3 41.0	358 08.4	+20 14.0
13	136	21.9	343 08.6	42.2	110 06.2	55.9	304 41.6	41.1	13 10.5	14.0
14	151	24.4	358 08.2	41.1	125 07.2	56.4	319 43.8	41.2	28 12.6	13.9
15	166	26.8	13 07.8	40.0	140 08.2	56.9	334 46.0	41.4	43 14.8	13.8
16	181	29.3	28 07.4	38.9	155 09.3	57.4	349 48.2	41.5	58 16.9	13.8
17	196	31.8	43 07.0	+12 37.8	170 10.3	+7 58.0	4 50.3	-3 41.6	73 19.0	+20 13.7
18	211	34.2	58 06.6	+12 36.7	185 11.4	+7 58.5	19 52.5	-3 41.8	88 21.2	+20 13.6
19	226	36.7	73 06.2	35.6	200 12.4	59.0	34 54.7	41.9	103 23.3	13.6
20	241	39.1	88 05.8	34.5	215 13.5	+7 59.5	49 56.9	42.0	118 25.4	13.5
21	256	41.6	103 05.4	33.4	230 14.5	+8 00.0	64 59.0	42.1	133 27.6	13.4
22	271	44.1	118 05.0	32.2	245 15.5	+8 00.6	80 01.2	42.3	148 29.7	13.4
23	286	46.5	133 04.6	31.1	260 16.6	01.1	95 03.4	42.4	163 31.8	13.3
24	301	49.0	148 04.2	+12 30.0	275 17.6	+8 01.6	110 05.6	-3 42.5	178 33.9	+20 13.2
Dif	—	-4	-11		+10	+5	+22	-1	+21	-1

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 17 ^d 5 PHE { 4 ^h : 60 ^m 5 12 ^h : 60 ^m 3 20 ^h : 60 ^m 0										
	PMG: 12 ^h 06 ^m 5			SD: 16 ^d 5 PMG: 2 ^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 m		h m m	
0	178	22.9	+19 53.5	321	33.0	-11 46.5	60 N	** **	2 14	3 22	22 00 **		7 40	103
1	193	22.9	53.0	336	01.3	93 30.2	58	0 27	38	37	21 57 3		46	98
2	208	22.9	52.5	350	29.8	95 -11 13.9	56	1 32	2 57	3 49	54 6		51	95
3	223	22.9	51.9	4	58.4	96 -10 57.5	54	2 03	3 13	4 00	51 9		55	92
4	238	22.9	51.4	19	27.0	96 41.1	52	25	26	10	49 12		7 59	89
5	253	22.8	+19 50.9	33	55.7	97 -10 24.6	50	2 43	3 38	4 18	21 47 14		8 03	86
6	268	22.8	+19 50.4	48	24.6	99 -10 08.1	45	3 17	4 02	4 36	21 42 20		8 11	80
7	283	22.8	49.8	62	53.5	99 -9 51.5	40	3 41	20	4 51	38 25		18	75
8	298	22.8	49.3	77	22.5	100 35.0	35	4 00	35	5 03	35 28		24	70
9	313	22.8	48.8	91	51.6	101 18.3	30	16	4 48	14	32 32		29	66
10	328	22.8	48.2	106	20.8	102 -9 01.7	20	40	5 09	32	27 38		37	61
11	343	22.8	+19 47.7	120	50.1	103 -8 45.0	10 N	4 59	5 26	5 48	21 22 43		8 45	54
12	358	22.8	+19 47.2	135	19.5	104 -8 28.3	0	5 15	5 41	6 03	21 18 48		8 52	49
13	13	22.8	46.7	149	48.9	104 -8 11.5	10 S	29	5 55	17	14 53		8 58	45
14	28	22.8	46.1	164	18.5	106 -7 54.8	20	43	6 09	33	09 59		9 06	39
15	43	22.7	45.6	178	48.1	106 38.0	30	5 56	25	6 50	04 65		14	33
16	58	22.7	45.1	193	17.8	107 21.1	35	6 03	33	7 01	21 01 69		18	30
17	73	22.7	+19 44.5	207	47.6	108 -7 04.3	40	6 10	6 43	7 12	20 58 72		9 24	25
18	88	22.7	+19 44.0	222	17.4	108 -6 47.4	45	6 18	6 53	7 26	20 54 77		9 30	20
19	103	22.7	43.5	236	47.4	110 30.6	50	26	7 06	42	49 83		37	15
20	118	22.7	42.9	251	17.4	110 -6 13.7	52	30	12	50	46 87		40	13
21	133	22.7	42.4	265	47.4	110 -5 56.8	54	34	18	7 59	44 89		44	10
22	148	22.7	41.9	280	17.6	112 39.9	56	39	25	8 08	41 93		48	7
23	163	22.7	41.3	294	47.8	112 22.9	58	43	33	19	38 96		52	4
24	178	22.7	+19 40.8	309	18.1	113 -5 06.0	60 S	6 49	7 41	8 32	20 35 100		9 57	0

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG 3 ^h 52 ^m 1		Mag: -3.9 PMG: 14 ^h 08 ^m		Mag: -0.4 PMG: 5 ^h 38 ^m		Mag: -1.9 PMG: 16 ^h 37 ^m		Mag: +0.2 PMG: 12 ^h 04 ^m		
	hG ♈		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec		
h	°	'	°	°	'	°	°	'	°	°	'
0	301	49.0	148 04.2	+12 30.0	275 17.6	+8 01.6	110 05.6	-3 42.5	178 33.9	+20 13.2	
1	316	51.5	163 03.8	28.9	290 18.7	02.1	125 07.7	42.7	193 36.1	13.2	
2	331	53.9	178 03.4	27.8	305 19.7	02.6	140 09.9	42.8	208 38.2	13.1	
3	346	56.4	193 03.0	26.7	320 20.8	03.2	155 12.1	42.9	223 40.3	13.0	
4	1	58.9	208 02.6	25.6	335 21.8	03.7	170 14.3	43.1	238 42.5	13.0	
5	17	01.3	223 02.2	+12 24.4	350 22.8	+8 04.2	185 16.4	-3 43.2	253 44.6	+20 12.9	
6	32	03.8	238 01.8	+12 23.3	5 23.9	+8 04.7	200 18.6	-3 43.3	268 46.7	+20 12.8	
7	47	06.2	253 01.4	22.2	20 24.9	05.2	215 20.8	43.5	283 48.8	12.8	
8	62	08.7	268 01.0	21.1	35 26.0	05.8	230 22.9	43.6	298 51.0	12.7	
9	77	11.2	283 00.6	20.0	50 27.0	06.3	245 25.1	43.7	313 53.1	12.6	
10	92	13.6	298 00.2	18.9	65 28.1	06.8	260 27.3	43.9	328 55.2	12.5	
11	107	16.1	312 59.8	+12 17.7	80 29.1	+8 07.3	275 29.5	-3 44.0	343 57.3	+20 12.5	
12	122	18.6	327 59.4	+12 16.6	95 30.2	+8 07.8	290 31.6	-3 44.1	358 59.5	+20 12.4	
13	137	21.0	342 59.1	15.5	110 31.2	08.3	305 33.8	44.3	14 01.6	12.3	
14	152	23.5	357 58.7	14.4	125 32.3	08.9	320 36.0	44.4	29 03.7	12.3	
15	167	26.0	12 58.3	13.3	140 33.3	09.4	335 38.1	44.5	44 05.9	12.2	
16	182	28.4	27 57.9	12.1	155 34.4	09.9	350 40.3	44.7	59 08.0	12.1	
17	197	30.9	42 57.5	+12 11.0	170 35.4	+8 10.4	5 42.5	-3 44.8	74 10.1	+20 12.1	
18	212	33.4	57 57.1	+12 09.9	185 36.5	+8 10.9	20 44.7	-3 44.9	89 12.2	+20 12.0	
19	227	35.8	72 56.7	08.8	200 37.5	11.4	35 46.8	45.1	104 14.4	11.9	
20	242	38.3	87 56.3	07.6	215 38.6	12.0	50 49.0	45.2	119 16.5	11.9	
21	257	40.7	102 56.0	06.5	230 39.6	12.5	65 51.2	45.3	134 18.6	11.8	
22	272	43.2	117 55.6	05.4	245 40.7	13.0	80 53.3	45.5	149 20.7	11.7	
23	287	45.7	132 55.2	04.3	260 41.7	13.5	95 55.5	45.6	164 22.9	11.7	
24	302	48.1	147 54.8	+12 03.1	275 42.8	+8 14.0	110 57.7	-3 45.7	179 25.0	+20 11.6	
Dif	—		-4	-11	+10	+5	+22	-1	+21	-1	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7			Edad: 18 ^d 5	PHE { 4 ^h : 59 ^m 8 12 ^h : 59 ^m 5 20 ^h : 59 ^m 2	SD: 16 ^h 3			PMG: 3 ^h 30 ^m	R°: 47 ^m						
	PMG: 12 ^h 06 ^m 5															
	hG ☉	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	+19 40.8	309	18.1	-5 06.0		60 N	20 47	21 53	** **	21 59 **	9 23 98			
1	193	22.7		323	48.5 ¹¹⁴	-4 49.1 ¹⁶⁹		58	33	30	23 23	22 00 2	24 95			
2	208	22.7	39.7	338	18.9 ¹¹⁴	32.1 ¹⁷⁰		56	21	21 12	22 33	00 6	26 90			
3	223	22.7	39.2	352	49.4 ¹¹⁵	-4 15.2 ¹⁶⁹		54	10	20 57	22 05	00 9	27 87			
4	238	22.7	38.6	7	19.9 ¹¹⁵	-3 58.2 ¹⁷⁰		52	20 01	44	21 43	01 11	28 85			
5	253	22.7	+19 38.1	21	50.5 ¹¹⁶	-3 41.3 ¹⁶⁹		50	19 52	20 32	21 26	22 01 14	9 29 82			
6	268	22.6	+19 37.6	36	21.2 ¹¹⁷	-3 24.3 ¹⁷⁰		45	19 35	20 09	20 53	22 02 19	9 31 76			
7	283	22.6	37.0	50	51.9 ¹¹⁷	-3 07.4 ¹⁶⁹		40	21	19 51	30	03 23	33 71			
8	298	22.6	36.5	65	22.7 ¹¹⁸	-2 50.4 ¹⁷⁰		35	19 08	37	20 11	03 27	34 68			
9	313	22.6	35.9	79	53.6 ¹¹⁹	33.5 ¹⁶⁹		30	18 58	24	19 56	04 30	35 64			
10	328	22.6	35.4	94	24.5 ¹¹⁹	-2 16.6 ¹⁶⁹		20	40	19 04	32	05 36	38 57			
11	343	22.6	+19 34.8	108	55.4 ¹¹⁹	-1 59.7 ¹⁶⁹		10 N	18 24	18 47	19 13	22 05 42	9 39 53			
12	358	22.6	+19 34.3	123	26.4 ¹²⁰	-1 42.8 ¹⁶⁹		0	18 10	18 32	18 57	22 06 47	9 41 47			
13	13	22.6	33.8	137	57.5 ¹²¹	25.9 ¹⁶⁹		10 S	17 56	18	44	07 52	43 42			
14	28	22.6	33.2	152	28.6 ¹²¹	-1 09.0 ¹⁶⁹		20	41	18 04	31	08 57	45 37			
15	43	22.6	32.7	166	59.7 ¹²¹	-0 52.2 ¹⁶⁸		30	23	17 49	18	09 63	47 31			
16	58	22.6	32.1	181	30.9 ¹²²	35.3 ¹⁶⁹		35	13	41	11	10 66	48 27			
17	73	22.6	+19 31.6	196	02.1 ¹²²	-0 18.5 ¹⁶⁸		40	17 02	17 31	18 04	22 10 71	9 49 24			
18	88	22.6	+19 31.0	210	33.4 ¹²³	-0 01.7 ¹⁶⁸		45	16 49	17 21	17 57	22 11 75	9 50 20			
19	103	22.6	30.5	225	04.7 ¹²³	+0 15.1 ¹⁶⁸		50	32	09	48	12 81	52 14			
20	118	22.6	29.9	239	36.1 ¹²⁴	31.8 ¹⁶⁷		52	25	17 03	45	13 83	53 12			
21	133	22.6	29.4	254	07.5 ¹²⁴	+0 48.6 ¹⁶⁸		54	16	16 57	41	13 86	54 9			
22	148	22.6	28.8	268	38.9 ¹²⁴	+1 05.3 ¹⁶⁷		56	16 07	50	36	14 89	55 6			
23	163	22.6	28.3	283	10.4 ¹²⁵	22.0 ¹⁶⁷		58	15 56	43	32	14 93	56 3			
24	178	22.6	+19 27.7	297	41.9 ¹²⁵	+1 38.6 ¹⁶⁶		60 S	15 44	16 34	17 27	22 15 97	9 57 **			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 3 ^h 48 ^m 2		Mag: -3.9 PMG: 14 ^h 09 ^m			Mag: -0.4 PMG: 5 ^h 37 ^m			Mag: -1.9 PMG: 16 ^h 34 ^m			Mag: +0.2 PMG: 12 ^h 01 ^m				
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	302	48.1	147 54.8	+12 03.1	275 42.8	+8 14.0	110 57.7	-3 45.7	179 25.0	+20 11.6						
1	317	50.6	162 54.4	02.0	290 43.8	14.5	125 59.9	45.9	194 27.1	11.5						
2	332	53.1	177 54.0	+12 00.9	305 44.9	15.0	141 02.0	46.0	209 29.3	11.5						
3	347	55.5	192 53.6	+11 59.8	320 45.9	15.6	156 04.2	46.1	224 31.4	11.4						
4	2	58.0	207 53.3	58.6	335 47.0	16.1	171 06.4	46.3	239 33.5	11.3						
5	18	00.5	222 52.9	+11 57.5	350 48.0	+8 16.6	186 08.5	-3 46.4	254 35.6	+20 11.3						
6	33	02.9	237 52.5	+11 56.4	5 49.1	+8 17.1	201 10.7	-3 46.5	269 37.8	+20 11.2						
7	48	05.4	252 52.1	55.2	20 50.1	17.6	216 12.9	46.7	284 39.9	11.1						
8	63	07.8	267 51.7	54.1	35 51.2	18.1	231 15.0	46.8	299 42.0	11.1						
9	78	10.3	282 51.3	53.0	50 52.2	18.6	246 17.2	46.9	314 44.1	11.0						
10	93	12.8	297 51.0	51.9	65 53.3	19.1	261 19.4	47.1	329 46.3	10.9						
11	108	15.2	312 50.6	+11 50.7	80 54.3	+8 19.7	276 21.5	-3 47.2	344 48.4	+20 10.9						
12	123	17.7	327 50.2	+11 49.6	95 55.4	+8 20.2	291 23.7	-3 47.3	359 50.5	+20 10.8						
13	138	20.2	342 49.8	48.5	110 56.4	20.7	306 25.9	47.5	14 52.7	10.7						
14	153	22.6	357 49.5	47.3	125 57.5	21.2	321 28.0	47.6	29 54.8	10.7						
15	168	25.1	12 49.1	46.2	140 58.5	21.7	336 30.2	47.7	44 56.9	10.6						
16	183	27.6	27 48.7	45.1	155 59.6	22.2	351 32.4	47.9	59 59.0	10.5						
17	198	30.0	42 48.3	+11 43.9	171 00.7	+8 22.7	6 34.5	-3 48.0	75 01.2	+20 10.5						
18	213	32.5	57 47.9	+11 42.8	186 01.7	+8 23.2	21 36.7	-3 48.2	90 03.3	+20 10.4						
19	228	35.0	72 47.6	41.6	201 02.8	23.7	36 38.9	48.3	105 05.4	10.3						
20	243	37.4	87 47.2	40.5	216 03.8	24.3	51 41.0	48.4	120 07.5	10.3						
21	258	39.9	102 46.8	39.4	231 04.9	24.8	66 43.2	48.6	135 09.7	10.2						
22	273	42.3	117 46.4	38.2	246 05.9	25.3	81 45.4	48.7	150 11.8	10.1						
23	288	44.8	132 46.1	37.1	261 07.0	25.8	96 47.5	48.8	165 13.9	10.1						
24	303	47.3	147 45.7	+11 36.0	276 08.1	+8 26.3	111 49.7	-3 49.0	180 16.1	+20 10.0						
Dif	—		-4	-11	+11	+5	+22	-1	+21	-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: 19 ^d 5 PHE { 4 ^h : 58 ^m 9 12 ^h : 58 ^m 6 20 ^h : 58 ^m 3 PMG: 4 ^h 17 ^m R°: 47 ^m												
	hG ☉		Dec		hG ☾ Dif		Dec Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	22.6	+19	27.7	297	41.9	+1	38.6	60 N	** *	2	21	3	27	21	58	0
1	193	22.6		27.2	312	13.4 ¹²⁵	+1	55.2 ¹⁶⁶	58	0	51	2	44	41	22	02	4
2	208	22.6		26.6	326	45.0 ¹²⁶	+2	11.8 ¹⁶⁶	56	1	40	3	02	3	53	06	7
3	223	22.6		26.1	341	16.6 ¹²⁶		28.4 ¹⁶⁶	54	2	09	17		4	03	09	10
4	238	22.6		25.5	355	48.2 ¹²⁶	+2	44.9 ¹⁶⁵	52		30	30		13	12	13	53
5	253	22.6	+19	25.0	10	19.9 ¹²⁷	+3	01.4 ¹⁶⁵	50	2	47	3	41	4	21	22	15
6	268	22.6	+19	24.4	24	51.6 ¹²⁷	+3	17.8 ¹⁶⁴	45	3	20	4	04	4	39	22	21
7	283	22.6		23.9	39	23.3 ¹²⁷		34.2 ¹⁶⁴	40	3	44	22		4	53	26	25
8	298	22.6		23.3	53	55.0 ¹²⁷	+3	50.6 ¹⁶⁴	35	4	02	37		5	05	30	29
9	313	22.6		22.8	68	26.8 ¹²⁸	+4	06.9 ¹⁶³	30		17	4	49	15		34	32
10	328	22.6		22.2	82	58.5 ¹²⁷		23.2 ¹⁶³	20	4	41	5	09	33		41	37
11	343	22.6	+19	21.7	97	30.3 ¹²⁸	+4	39.5 ¹⁶³	10 N	5	00	5	26	5	49	22	47
12	358	22.6	+19	21.1	112	02.1 ¹²⁸	+4	55.7 ¹⁶²	0	5	16	5	41	6	03	22	53
13	13	22.6		20.5	126	34.0 ¹²⁹	+5	11.8 ¹⁶¹	10 S		29	5	55	17		22	59
14	28	22.6		20.0	141	05.8 ¹²⁸		27.9 ¹⁶¹	20		42	6	09	32		23	05
15	43	22.6		19.4	155	37.7 ¹²⁹	+5	44.0 ¹⁶¹	30	5	55	24		49		12	62
16	58	22.6		18.9	170	09.5 ¹²⁸	+6	00.0 ¹⁶⁰	35	6	01	32		6	59	16	65
17	73	22.6	+19	18.3	184	41.4 ¹²⁹	+6	16.0 ¹⁶⁰	40	6	08	6	41	7	10	23	21
18	88	22.6	+19	17.7	199	13.3 ¹²⁹	+6	31.9 ¹⁵⁹	45	6	16	6	52	7	24	23	26
19	103	22.6		17.2	213	45.2 ¹²⁹	+6	47.8 ¹⁵⁹	50		24	7	04	40		33	79
20	118	22.6		16.6	228	17.1 ¹²⁹	+7	03.6 ¹⁵⁸	52		28	09		47		36	82
21	133	22.6		16.1	242	49.0 ¹²⁹		19.3 ¹⁵⁷	54		32	15		7	56	39	85
22	148	22.7		15.5	257	21.0 ¹³⁰		35.0 ¹⁵⁷	56		36	22		8	05	43	88
23	163	22.7		14.9	271	52.9 ¹²⁹	+7	50.7 ¹⁵⁷	58		40	29		16		47	92
24	178	22.7	+19	14.4	286	24.8 ¹²⁹	+8	06.3 ¹⁵⁶	60 S	6	45	7	38	8	28	23	52

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 3 ^h 44 ^m 2		Mag: -3.9 PMG: 14 ^h 09 ^m			Mag: -0.4 PMG: 5 ^h 35 ^m			Mag: -1.9 PMG: 16 ^h 30 ^m			Mag: +0.2 PMG: 11 ^h 57 ^m					
	hG ♈		hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec			
h	°	'	°	'	°	°	'	°	'	°	'	°	'	°			
0	303	47.3	147	45.7	+11	276	08.1	+8	26.3	111	49.7	-3	49.0	180	16.1	+20	10.0
1	318	49.7	162	45.3		291	09.1		26.8	126	51.9		49.1	195	18.2		09.9
2	333	52.2	177	44.9		306	10.2		27.3	141	54.0		49.2	210	20.3		09.9
3	348	54.7	192	44.6		321	11.2		27.8	156	56.2		49.4	225	22.4		09.8
4	3	57.1	207	44.2		336	12.3		28.3	171	58.3		49.5	240	24.6		09.7
5	18	59.6	222	43.8	+11	351	13.4	+8	28.8	187	00.5	-3	49.6	255	26.7	+20	09.7
6	34	02.1	237	43.5	+11	6	14.4	+8	29.3	202	02.7	-3	49.8	270	28.8	+20	09.6
7	49	04.5	252	43.1		21	15.5		29.9	217	04.8		49.9	285	30.9		09.5
8	64	07.0	267	42.7		36	16.5		30.4	232	07.0		50.0	300	33.1		09.4
9	79	09.5	282	42.3		51	17.6		30.9	247	09.2		50.2	315	35.2		09.4
10	94	11.9	297	42.0		66	18.7		31.4	262	11.3		50.3	330	37.3		09.3
11	109	14.4	312	41.6	+11	81	19.7	+8	31.9	277	13.5	-3	50.5	345	39.5	+20	09.2
12	124	16.8	327	41.2	+11	96	20.8	+8	32.4	292	15.7	-3	50.6	0	41.6	+20	09.2
13	139	19.3	342	40.9		111	21.8		32.9	307	17.8		50.7	15	43.7		09.1
14	154	21.8	357	40.5		126	22.9		33.4	322	20.0		50.9	30	45.8		09.0
15	169	24.2	12	40.1		141	24.0		33.9	337	22.1		51.0	45	48.0		09.0
16	184	26.7	27	39.8		156	25.0		34.4	352	24.3		51.1	60	50.1		08.9
17	199	29.2	42	39.4	+11	171	26.1	+8	34.9	7	26.5	-3	51.3	75	52.2	+20	08.8
18	214	31.6	57	39.0	+11	186	27.1	+8	35.4	22	28.6	-3	51.4	90	54.4	+20	08.8
19	229	34.1	72	38.7		201	28.2		35.9	37	30.8		51.6	105	56.5		08.7
20	244	36.6	87	38.3		216	29.3		36.4	52	32.9		51.7	120	58.6		08.6
21	259	39.0	102	37.9		231	30.3		36.9	67	35.1		51.8	136	00.7		08.6
22	274	41.5	117	37.6		246	31.4		37.4	82	37.3		52.0	151	02.9		08.5
23	289	43.9	132	37.2		261	32.5		37.9	97	39.4		52.1	166	05.0		08.4
24	304	46.4	147	36.9	+11	276	33.5	+8	38.4	112	41.6	-3	52.2	181	07.1	+20	08.4
Dif	—		-4		-11	+11		+5		+22		-1		+21		-	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7			Edad: 20 ^d 5	PHE {	4 ^h : 58 ^m 0 12 ^h : 57 ^m 7 20 ^h : 57 ^m 4			Civil		Náutico		Hora	R°	Hora	R°
	PMG: 12 ^h 06 ^m 5	hG ☉	Dec						hG ☾	Dif	Dec	Dif				
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	m	h m m	m	
0	178	22.7	+19 14.4	286	24.8	+8 06.3	129	60 N	20 42	21 46	** **	21 58	1	12 38	97	
1	193	22.7	13.8	300	56.7	+8 06.3	155	58	29	25	23 07	22 06	5	31	92	
2	208	22.7	13.2	315	28.7	+8 06.3	155	56	17	21 07	22 26	13	9	25	88	
3	223	22.7	12.7	330	00.6	+8 52.7	154	54	20 07	20 53	21 59	19	12	20	84	
4	238	22.7	12.1	344	32.5	+9 08.0	153	52	19 58	40	39	25	15	15	82	
5	253	22.7	+19 11.5	359	04.5	+9 23.3	153	50	19 50	20 29	21 22	22 30	18	12 11	79	
6	268	22.7	+19 11.0	13	36.4	+9 38.5	152	45	19 33	20 07	20 51	22 41	23	12 02	73	
7	283	22.7	10.4	28	08.3	+9 53.7	152	40	19	19 49	27	51	27	11 54	69	
8	298	22.7	09.8	42	40.2	+10 08.7	150	35	19 07	35	20 09	22 59	30	47	65	
9	313	22.7	09.3	57	12.1	+10 23.8	151	30	18 57	23	19 54	23 06	33	42	61	
10	328	22.7	08.7	71	44.0	+10 38.7	149	20	39	19 03	31	18	39	32	56	
11	343	22.7	+19 08.1	86	15.9	+10 53.6	149	10 N	18 24	18 46	19 13	23 29	43	11 23	51	
12	358	22.7	+19 07.6	100	47.8	+11 08.4	148	0	18 10	18 32	18 57	23 39	48	11 15	47	
13	13	22.8	07.0	115	19.6	+11 23.1	147	10 S	17 56	18	44	23 50	51	11 07	42	
14	28	22.8	06.4	129	51.5	+11 37.8	147	20	41	18 05	31	** ** *	**	10 58	38	
15	43	22.8	05.9	144	23.3	+11 52.4	146	30	25	17 50	19	** ** *	**	49	32	
16	58	22.8	05.3	158	55.1	+12 06.9	145	35	15	42	13	** ** *	**	43	29	
17	73	22.8	+19 04.7	173	26.9	+12 21.4	145	40	17 04	17 33	18 06	** ** *	**	10 37	25	
18	88	22.8	+19 04.1	187	58.7	+12 35.8	144	45	16 51	17 23	17 59	** ** *	**	10 29	22	
19	103	22.8	03.6	202	30.5	+12 50.1	143	50	35	11	50	** ** *	**	21	16	
20	118	22.8	03.0	217	02.2	+13 04.3	142	52	28	05	47	** ** *	**	17	13	
21	133	22.8	02.4	231	34.0	+13 18.4	141	54	19	17 00	43	** ** *	**	12	11	
22	148	22.8	01.8	246	05.7	+13 32.5	141	56	10	16 53	39	** ** *	**	07	8	
23	163	22.9	01.3	260	37.4	+13 46.4	139	58	16 00	46	35	** ** *	**	10 02	4	
24	178	22.9	+19 00.7	275	09.0	+14 00.3	139	60 S	15 48	16 38	17 30	** ** *	**	9 56	0	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 3 ^h 40 ^m 3	Mag: -3.9 PMG: 14 ^h 10 ^m	Mag: -0.4 PMG: 5 ^h 33 ^m	Mag: -1.9 PMG: 16 ^h 27 ^m	Mag: +0.2 PMG: 11 ^h 54 ^m					
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	°	'	°	'	°	'	
0	304	46.4	147 36.9	+11 08.5	276 33.5	+8 38.4	112 41.6	-3 52.2	181 07.1	
1	319	48.9	162 36.5	07.3	291 34.6	39.0	127 43.7	52.4	196 09.2	
2	334	51.3	177 36.1	06.2	306 35.7	39.5	142 45.9	52.5	211 11.4	
3	349	53.8	192 35.8	05.0	321 36.7	40.0	157 48.1	52.6	226 13.5	
4	4	56.3	207 35.4	03.9	336 37.8	40.5	172 50.2	52.8	241 15.6	
5	19	58.7	222 35.0	+11 02.7	351 38.9	+8 41.0	187 52.4	-3 52.9	256 17.8	
6	35	01.2	237 34.7	+11 01.6	6 39.9	+8 41.5	202 54.5	-3 53.1	271 19.9	
7	50	03.7	252 34.3	+11 00.4	21 41.0	42.0	217 56.7	53.2	286 22.0	
8	65	06.1	267 34.0	+10 59.3	36 42.1	42.5	232 58.9	53.3	301 24.1	
9	80	08.6	282 33.6	58.1	51 43.1	43.0	248 01.0	53.5	316 26.3	
10	95	11.1	297 33.2	57.0	66 44.2	43.5	263 03.2	53.6	331 28.4	
11	110	13.5	312 32.9	+10 55.8	81 45.3	+8 44.0	278 05.3	-3 53.8	346 30.5	
12	125	16.0	327 32.5	+10 54.6	96 46.3	+8 44.5	293 07.5	-3 53.9	1 32.7	
13	140	18.4	342 32.2	53.5	111 47.4	45.0	308 09.6	54.0	16 34.8	
14	155	20.9	357 31.8	52.3	126 48.5	45.5	323 11.8	54.2	31 36.9	
15	170	23.4	12 31.5	51.2	141 49.6	46.0	338 14.0	54.3	46 39.0	
16	185	25.8	27 31.1	50.0	156 50.6	46.5	353 16.1	54.4	61 41.2	
17	200	28.3	42 30.7	+10 48.9	171 51.7	+8 47.0	8 18.3	-3 54.6	76 43.3	
18	215	30.8	57 30.4	+10 47.7	186 52.8	+8 47.5	23 20.4	-3 54.7	91 45.4	
19	230	33.2	72 30.0	46.5	201 53.8	48.0	38 22.6	54.9	106 47.5	
20	245	35.7	87 29.7	45.4	216 54.9	48.5	53 24.7	55.0	121 49.7	
21	260	38.2	102 29.3	44.2	231 56.0	49.0	68 26.9	55.1	136 51.8	
22	275	40.6	117 29.0	43.1	246 57.0	49.5	83 29.1	55.3	151 53.9	
23	290	43.1	132 28.6	41.9	261 58.1	50.0	98 31.2	55.4	166 56.1	
24	305	45.6	147 28.3	+10 40.7	276 59.2	+8 50.5	113 33.4	-3 55.6	181 58.2	
Dif	—	—	-4 -12	+11 +5	+22 -1	+21 -1				

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15/8 PMG: 12 ^h 06 ^m 5			Edad: 21 ^d 5 PHE { 4 ^h : 57/1 12 ^h : 56/8 20 ^h : 56/5 SD: 15/6 PMG: 5 ^h 50 ^m R°: 48 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	178	22.9	+19	00.7	275	09.0	+14	00.3	60 N	** ** *	2 27	3 31	21 59	2	14 15	97
1	193	22.9	+19	00.1	289	40.7 ¹²⁷		14.2 ¹³⁹	58	1 06	2 49	45	22 11	8	14 03	92
2	208	22.9	+18	59.5	304	12.3 ¹²⁶		27.9 ¹³⁷	56	1 48	3 06	3 56	22 13	13 53	88	
3	223	22.9		58.9	318	43.9 ¹²⁶		41.5 ¹³⁶	54	2 15	21	4 07	31 17	44	84	
4	238	22.9		58.4	333	15.5 ¹²⁶	+14	55.1 ¹³⁶	52	35	33	16	40 19	37	80	
5	253	22.9	+18	57.8	347	47.0 ¹²⁵	+15	08.6 ¹³⁵	50	2 51	3 44	4 24	22 48	21	13 30	77
6	268	22.9	+18	57.2	2	18.5 ¹²⁵	+15	22.0 ¹³⁴	45	3 23	4 06	4 41	23 04	27	13 15	72
7	283	23.0		56.6	16	50.0 ¹²⁵		35.3 ¹³³	40	3 46	24	4 55	18 31	13 03	67	
8	298	23.0		56.1	31	21.5 ¹²⁵	+15	48.5 ¹³²	35	4 04	38	5 06	29 34	12 52	65	
9	313	23.0		55.5	45	52.9 ¹²⁴	+16	01.6 ¹³¹	30	19	4 50	17	39 37	43	62	
10	328	23.0		54.9	60	24.3 ¹²⁴		14.7 ¹³¹	20	4 42	5 10	34	23 57	41	28	56
11	343	23.0	+18	54.3	74	55.7 ¹²⁴	+16	27.6 ¹²⁹	10 N	5 01	5 27	5 49	** ** *	**	12 14	52
12	358	23.0	+18	53.7	89	27.0 ¹²³	+16	40.5 ¹²⁹	0	5 16	5 41	6 03	** ** *	**	12 02	48
13	13	23.0		53.1	103	58.3 ¹²³	+16	53.2 ¹²⁷	10 S	29	5 55	17	** ** *	**	11 49	45
14	28	23.1		52.6	118	29.6 ¹²³	+17	05.9 ¹²⁷	20	41	6 08	31	0 01	56	36	40
15	43	23.1		52.0	133	00.8 ¹²²		18.5 ¹²⁶	30	5 54	23	48	14 61	21	35	
16	58	23.1		51.4	147	32.0 ¹²²		30.9 ¹²⁴	35	6 00	31	6 58	21 65	12	32	
17	73	23.1	+18	50.8	162	03.2 ¹²²	+17	43.3 ¹²⁴	40	6 07	6 40	7 09	0 30	68	11 02	29
18	88	23.1	+18	50.2	176	34.3 ¹²¹	+17	55.6 ¹²³	45	6 14	6 50	7 21	0 40	73	10 51	24
19	103	23.1		49.6	191	05.4 ¹²¹	+18	07.8 ¹²²	50	22	7 01	37	52 78	37	19	
20	118	23.2		49.0	205	36.4 ¹²⁰		19.9 ¹²¹	52	25	07	44	0 58	81	30	17
21	133	23.2		48.4	220	07.4 ¹²⁰		31.9 ¹²⁰	54	29	13	7 52	1 04	84	23	14
22	148	23.2		47.9	234	38.4 ¹²⁰		43.8 ¹¹⁹	56	33	19	8 01	11 88	15	10	
23	163	23.2		47.3	249	09.4 ¹²⁰	+18	55.5 ¹¹⁷	58	37	26	12	19 93	10 06	6	
24	178	23.2	+18	46.7	263	40.3 ¹¹⁹	+19	07.2 ¹¹⁷	60 S	6 42	7 34	8 24	1 29	97	9 56	1

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 3 ^h 36 ^m 4		Mag: -3.9 PMG: 14 ^h 10 ^m		Mag: -0.4 PMG: 5 ^h 32 ^m		Mag: -1.9 PMG: 16 ^h 23 ^m		Mag: +0.2 PMG: 11 ^h 50 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	305	45.6	147	28.3	+10	40.7	276	59.2	+8	50.5
1	320	48.0	162	27.9		39.6	292	00.3		51.0
2	335	50.5	177	27.6		38.4	307	01.3		51.5
3	350	52.9	192	27.2		37.2	322	02.4		52.0
4	5	55.4	207	26.9		36.1	337	03.5		52.5
5	20	57.9	222	26.5	+10	34.9	352	04.6	+8	53.0
6	36	00.3	237	26.2	+10	33.8	7	05.6	+8	53.5
7	51	02.8	252	25.8		32.6	22	06.7		54.0
8	66	05.3	267	25.5		31.4	37	07.8		54.4
9	81	07.7	282	25.1		30.3	52	08.9		54.9
10	96	10.2	297	24.8		29.1	67	09.9		55.4
11	111	12.7	312	24.4	+10	27.9	82	11.0	+8	55.9
12	126	15.1	327	24.1	+10	26.8	97	12.1	+8	56.4
13	141	17.6	342	23.7		25.6	112	13.2		56.9
14	156	20.0	357	23.4		24.4	127	14.3		57.4
15	171	22.5	12	23.0		23.2	142	15.3		57.9
16	186	25.0	27	22.7		22.1	157	16.4		58.4
17	201	27.4	42	22.4	+10	20.9	172	17.5	+8	58.9
18	216	29.9	57	22.0	+10	19.7	187	18.6	+8	59.4
19	231	32.4	72	21.7		18.6	202	19.6	+8	59.9
20	246	34.8	87	21.3		17.4	217	20.7	+9	00.4
21	261	37.3	102	21.0		16.2	232	21.8		00.9
22	276	39.8	117	20.6		15.1	247	22.9		01.4
23	291	42.2	132	20.3		13.9	262	24.0		01.9
24	306	44.7	147	19.9	+10	12.7	277	25.0	+9	02.4
Dif	—		-3		-12		+11		+5	
							+22		-1	
									+21	
									-1	

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 15 ^h 8			Edad: 22 ^d 5	PHE {	4 ^h : 56 ^m 3 12 ^h : 56 ^m 0 20 ^h : 55 ^m 8												
	PMG: 12 ^h 06 ^m 4								SD: 15 ^h 4		PMG: 6 ^h 38 ^m		Rº: 50 ^m					
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	Rº	Hora	Rº			
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m	h m m			
0	178	23.2	+18	46.7	263	40.3	+19	07.2	60 N	20 38	21 40	** **	22 01 7	15 52 98				
1	193	23.2		46.1	278	11.1 ¹¹⁸		18.8 ¹¹⁶	58	25	19	22 54	19 15	35 90				
2	208	23.3		45.5	292	42.0 ¹¹⁹		30.3 ¹¹⁵	56	13	21 03	22 18	35 19	21 84				
3	223	23.3		44.9	307	12.7 ¹¹⁷		41.7 ¹¹⁴	54	20 03	20 49	21 53	48 23	15 08 81				
4	238	23.3		44.3	321	43.5 ¹¹⁸	+19	52.9 ¹¹²	52	19 55	37	34	22 59 27	14 57 77				
5	253	23.3	+18	43.7	336	14.2 ¹¹⁷	+20	04.1 ¹¹²	50	19 47	20 26	21 18	23 09 29	14 47 75				
6	268	23.3	+18	43.1	350	44.8 ¹¹⁶	+20	15.2 ¹¹¹	45	19 30	20 04	20 47	23 31 33	14 27 70				
7	283	23.4		42.5	5	15.5 ¹¹⁷		26.1 ¹⁰⁹	40	17	19 47	25	23 49 36	14 10 66				
8	298	23.4		41.9	19	46.0 ¹¹⁵		36.9 ¹⁰⁸	35	19 05	33	20 07	** * *	13 57 63				
9	313	23.4		41.3	34	16.6 ¹¹⁶		47.7 ¹⁰⁸	30	18 55	21	19 53	** * *	45 60				
10	328	23.4		40.8	48	47.1 ¹¹⁵	+20	58.3 ¹⁰⁶	20	38	19 02	30	** * *	24 57				
11	343	23.4	+18	40.2	63	17.5 ¹¹⁴	+21	08.8 ¹⁰⁵	10 N	18 24	18 46	19 12	0 12 46	13 06 54				
12	358	23.5	+18	39.6	77	47.9 ¹¹⁴	+21	19.2 ¹⁰⁴	0	18 10	18 32	18 57	0 27 49	12 50 50				
13	13	23.5		39.0	92	18.3 ¹¹⁴		29.5 ¹⁰³	10 S	17 56	18	44	41 53	34 46				
14	28	23.5		38.4	106	48.6 ¹¹³		39.7 ¹⁰²	20	42	18 05	32	0 57 56	12 16 43				
15	43	23.5		37.8	121	18.9 ¹¹³		49.8 ¹⁰¹	30	26	17 51	20	1 15 61	11 56 39				
16	58	23.5		37.2	135	49.1 ¹¹²	+21	59.7 ⁹⁹	35	16	43	14	26 64	44 37				
17	73	23.6	+18	36.6	150	19.3 ¹¹²	+22	09.5 ⁹⁸	40	17 06	17 35	18 07	1 38 67	11 31 34				
18	88	23.6	+18	36.0	164	49.4 ¹¹¹	+22	19.3 ⁹⁸	45	16 53	17 25	18 00	1 53 71	11 15 30				
19	103	23.6		35.4	179	19.5 ¹¹¹		28.9 ⁹⁶	50	38	13	17 53	2 10 77	10 56 25				
20	118	23.6		34.8	193	49.6 ¹¹¹		38.3 ⁹⁴	52	31	08	49	19 79	47 22				
21	133	23.7		34.2	208	19.6 ¹¹⁰		47.7 ⁹⁴	54	23	17 02	46	28 83	37 19				
22	148	23.7		33.6	222	49.6 ¹¹⁰	+22	57.0 ⁹³	56	14	16 56	42	39 87	25 16				
23	163	23.7		33.0	237	19.5 ¹⁰⁹	+23	06.1 ⁹¹	58	16 04	49	38	2 52 91	10 12 11				
24	178	23.7	+18	32.4	251	49.4 ¹⁰⁹	+23	15.1 ⁹⁰	60 S	15 52	16 41	17 33	3 06 99	9 57 4				
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 3 ^h 32 ^m 4			Mag: -3.9 PMG: 14 ^h 11 ^m			Mag: -0.4 PMG: 5 ^h 30 ^m			Mag: -1.9 PMG: 16 ^h 20 ^m			Mag: +0.2 PMG: 11 ^h 47 ^m					
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	306	44.7	147	19.9	+10	12.7	277	25.0	+9	02.4	114	25.0	-3	58.9	182	49.3		
1	321	47.2	162	19.6		11.5	292	26.1		02.9	129	27.2		59.1	197	51.4		
2	336	49.6	177	19.3		10.4	307	27.2		03.3	144	29.3		59.2	212	53.5		
3	351	52.1	192	18.9		09.2	322	28.3		03.8	159	31.5		59.3	227	55.7		
4	6	54.5	207	18.6		08.0	337	29.4		04.3	174	33.6		59.5	242	57.8		
5	21	57.0	222	18.2	+10	06.8	352	30.5	+9	04.8	189	35.8	-3	59.6	257	59.9		
6	36	59.5	237	17.9	+10	05.7	7	31.5	+9	05.3	204	37.9	-3	59.8	273	02.0		
7	52	01.9	252	17.6		04.5	22	32.6		05.8	219	40.1	-3	59.9	288	04.2		
8	67	04.4	267	17.2		03.3	37	33.7		06.3	234	42.2	-4	00.0	303	06.3		
9	82	06.9	282	16.9		02.1	52	34.8		06.8	249	44.4	-4	00.2	318	08.4		
10	97	09.3	297	16.6	+10	01.0	67	35.9		07.3	264	46.5		00.3	333	10.6		
11	112	11.8	312	16.2	+9	59.8	82	37.0	+9	07.8	279	48.7	-4	00.5	348	12.7		
12	127	14.3	327	15.9	+9	58.6	97	38.0	+9	08.3	294	50.8	-4	00.6	3	14.8		
13	142	16.7	342	15.5		57.4	112	39.1		08.7	309	53.0		00.8	18	16.9		
14	157	19.2	357	15.2		56.2	127	40.2		09.2	324	55.1		00.9	33	19.1		
15	172	21.7	12	14.9		55.1	142	41.3		09.7	339	57.3		01.0	48	21.2		
16	187	24.1	27	14.5		53.9	157	42.4		10.2	354	59.4		01.2	63	23.3		
17	202	26.6	42	14.2	+9	52.7	172	43.5	+9	10.7	10	01.6	-4	01.3	78	25.5		
18	217	29.0	57	13.9	+9	51.5	187	44.6	+9	11.2	25	03.7	-4	01.5	93	27.6		
19	232	31.5	72	13.5		50.3	202	45.6		11.7	40	05.9		01.6	108	29.7		
20	247	34.0	87	13.2		49.2	217	46.7		12.2	55	08.0		01.7	123	31.8		
21	262	36.4	102	12.9		48.0	232	47.8		12.6	70	10.2		01.9	138	34.0		
22	277	38.9	117	12.5		46.8	247	48.9		13.1	85	12.3		02.0	153	36.1		
23	292	41.4	132	12.2		45.6	262	50.0		13.6	100	14.5		02.2	168	38.2		
24	307	43.8	147	11.9	+9	44.4	277	51.1	+9	14.1	115	16.6	-4	02.3	183	40.4		
Dif	—			-3			-12			+11			+5			+21		

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8 PMG: 12 ^h 06 ^m 4			Edad: 23 ^d 5 PHE { 4 ^h : 55 ^m /6 12 ^h : 55 ^m /4 20 ^h : 55 ^m /2 PMG: 7 ^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	h m	h m	h m	h m
0	178	23.7	+18	32.4	251	49.4	+23	15.1	60 N	** **	2 34	3 36	22 08 18	17 30 91		
1	193	23.8		31.8	266	19.2		108	58	1 19	2 54	3 49	34 26	17 05 82		
2	208	23.8		31.2	280	49.0		108	56	1 56	3 11	4 00	22 54 31	16 45 77		
3	223	23.8		30.6	295	18.8		108	54	2 20	25	10	23 11 34	29 73		
4	238	23.8		30.0	309	48.5		107	52	40	37	19	26 36	14 71		
5	253	23.9	+18	29.3	324	18.2	+23	58.3	50	2 55	3 47	4 26	23 38 39	16 02 69		
6	268	23.9	+18	28.7	338	47.8	+24	06.6	45	3 26	4 09	4 43	** ** *	15 37 65		
7	283	23.9		28.1	353	17.4		106	40	3 48	26	4 56	** ** *	16 63		
8	298	23.9		27.5	7	46.9		105	35	4 06	40	5 08	0 03 40	15 00 60		
9	313	24.0		26.9	22	16.4		105	30	20	4 52	18	16 42	14 45 59		
10	328	24.0		26.3	36	45.9		105	20	4 43	5 11	35	38 46	21 56		
11	343	24.0	+18	25.7	51	15.3	+24	46.1	10 N	5 01	5 27	5 49	0 58 48	14 00 53		
12	358	24.0	+18	25.1	65	44.7	+24	53.7	0	5 16	5 41	6 03	1 16 51	13 40 52		
13	13	24.1		24.5	80	14.0	+25	01.1	10 S	29	5 54	16	34 53	13 20 50		
14	28	24.1		23.9	94	43.3		103	20	41	6 07	31	1 53 57	12 59 48		
15	43	24.1		23.3	109	12.6		103	30	53	21	47	2 16 60	35 45		
16	58	24.1		22.7	123	41.8		102	35	5 59	29	6 56	30 62	21 43		
17	73	24.2	+18	22.0	138	11.0	+25	29.3	40	6 05	6 38	7 07	2 45 65	12 05 40		
18	88	24.2	+18	21.4	152	40.1	+25	36.1	45	6 12	6 47	7 19	3 04 67	11 45 38		
19	103	24.2		20.8	167	09.2		101	50	20	6 59	34	27 72	21 33		
20	118	24.3		20.2	181	38.3		101	52	23	7 04	41	38 75	11 09 31		
21	133	24.3		19.6	196	07.4	+25	55.5	54	26	10	49	3 51 78	10 56 28		
22	148	24.3		19.0	210	36.4	+26	01.8	56	30	16	7 58	4 06 81	41 24		
23	163	24.3		18.4	225	05.3		99	58	34	23	8 08	23 88	23 19		
24	178	24.4	+18	17.7	239	34.3	+26	13.8	60 S	6 39	7 30	8 19	4 45 96	10 01 10		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 3 ^h 28 ^m 5		Mag: -3.9 PMG: 14 ^h 12 ^m		Mag: -0.5 PMG: 5 ^h 28 ^m		Mag: -1.9 PMG: 16 ^h 17 ^m		Mag: +0.2 PMG: 11 ^h 44 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	307	43.8	147	11.9	+9	44.4	277	51.1	+9	14.1	115	16.6	-4	02.3	183	40.4	+20	03.5
1	322	46.3	162	11.5		43.3	292	52.2		14.6	130	18.7		02.5	198	42.5		03.4
2	337	48.8	177	11.2		42.1	307	53.3		15.1	145	20.9		02.6	213	44.6		03.3
3	352	51.2	192	10.9		40.9	322	54.4		15.6	160	23.0		02.7	228	46.7		03.3
4	7	53.7	207	10.5		39.7	337	55.5		16.1	175	25.2		02.9	243	48.9		03.2
5	22	56.1	222	10.2	+9	38.5	352	56.5	+9	16.5	190	27.3	-4	03.0	258	51.0	+20	03.1
6	37	58.6	237	09.9	+9	37.3	7	57.6	+9	17.0	205	29.5	-4	03.2	273	53.1	+20	03.1
7	53	01.1	252	09.6		36.1	22	58.7		17.5	220	31.6		03.3	288	55.3		03.0
8	68	03.5	267	09.2		35.0	37	59.8		18.0	235	33.8		03.5	303	57.4		02.9
9	83	06.0	282	08.9		33.8	53	00.9		18.5	250	35.9		03.6	318	59.5		02.9
10	98	08.5	297	08.6		32.6	68	02.0		19.0	265	38.1		03.7	334	01.6		02.8
11	113	10.9	312	08.2	+9	31.4	83	03.1	+9	19.5	280	40.2	-4	03.9	349	03.8	+20	02.7
12	128	13.4	327	07.9	+9	30.2	98	04.2	+9	19.9	295	42.3	-4	04.0	4	05.9	+20	02.7
13	143	15.9	342	07.6		29.0	113	05.3		20.4	310	44.5		04.2	19	08.0		02.6
14	158	18.3	357	07.3		27.8	128	06.4		20.9	325	46.6		04.3	34	10.2		02.5
15	173	20.8	12	06.9		26.6	143	07.5		21.4	340	48.8		04.5	49	12.3		02.5
16	188	23.3	27	06.6		25.4	158	08.6		21.9	355	50.9		04.6	64	14.4		02.4
17	203	25.7	42	06.3	+9	24.3	173	09.7	+9	22.4	10	53.1	-4	04.8	79	16.5	+20	02.3
18	218	28.2	57	06.0	+9	23.1	188	10.8	+9	22.8	25	55.2	-4	04.9	94	18.7	+20	02.2
19	233	30.6	72	05.6		21.9	203	11.9		23.3	40	57.3		05.0	109	20.8		02.2
20	248	33.1	87	05.3		20.7	218	13.0		23.8	55	59.5		05.2	124	22.9		02.1
21	263	35.6	102	05.0		19.5	233	14.0		24.3	71	01.6		05.3	139	25.1		02.0
22	278	38.0	117	04.7		18.3	248	15.1		24.8	86	03.8		05.5	154	27.2		02.0
23	293	40.5	132	04.3		17.1	263	16.2		25.2	101	05.9		05.6	169	29.3		01.9
24	308	43.0	147	04.0	+9	15.9	278	17.3	+9	25.7	116	08.1	-4	05.8	184	31.4	+20	01.8
Dif	—		-3		-12		+11		+5		+21		-1		+21		-	

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: 24 ^d 5 PHE { 4 ^h : 55 ⁰ 12 ^h : 54 ⁹ 20 ^h : 54 ⁷ 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	24.4	+18	17.7	239	34.3	+26	13.8	60 N	20 33	21 33	** **	22 26 42	19 01 67
1	193	24.4		17.1	254	03.2	99	19.6	58	20	21 14	22 43	23 00 46	18 27 63
2	208	24.4		16.5	268	32.0	98	25.3	56	09	20 58	22 10	25 48	18 02 60
3	223	24.5		15.9	283	00.9	99	30.8	54	20 00	44	21 47	23 45 49	17 42 60
4	238	24.5		15.3	297	29.7	98	36.3	52	19 52	33	29	** ** *	25 59
5	253	24.5	+18	14.7	311	58.5	98	+26 41.5	50	19 44	20 23	21 14	** ** *	17 11 58
6	268	24.6	+18	14.0	326	27.2	97	+26 46.7	45	19 28	20 02	20 44	0 04 42	16 42 57
7	283	24.6		13.4	340	56.0	98	51.7	40	15	19 45	22	25 44	19 56
8	298	24.6		12.8	355	24.7	97	+26 56.5	35	19 04	31	20 05	43 45	16 00 56
9	313	24.7		12.2	9	53.3	96	+27 01.3	30	18 54	20	19 51	0 58 47	15 44 55
10	328	24.7		11.6	24	22.0	97	05.9	20	37	19 01	29	1 24 48	15 17 54
11	343	24.7	+18	10.9	38	50.6	96	+27 10.3	10 N	18 23	18 45	19 11	1 46 50	14 53 54
12	358	24.8	+18	10.3	53	19.2	96	+27 14.6	0	18 10	18 32	18 57	2 07 52	14 32 52
13	13	24.8		09.7	67	47.8	96	18.8	10 S	17 57	19	44	27 54	14 10 51
14	28	24.8		09.1	82	16.3	95	22.8	20	43	18 06	32	2 50 55	13 47 50
15	43	24.9		08.5	96	44.9	96	26.7	30	27	17 52	21	3 16 57	20 49
16	58	24.9		07.8	111	13.4	95	30.5	35	18	45	15	32 58	13 04 48
17	73	24.9	+18	07.2	125	41.9	95	+27 34.1	40	17 07	17 36	18 09	3 50 59	12 45 47
18	88	25.0	+18	06.6	140	10.4	95	+27 37.6	45	16 55	17 27	18 02	4 11 62	12 23 46
19	103	25.0		06.0	154	38.8	94	40.9	50	40	16	17 55	39 64	11 54 44
20	118	25.0		05.3	169	07.3	95	44.1	52	33	11	52	4 53 65	40 43
21	133	25.1		04.7	183	35.7	94	47.2	54	26	17 05	48	5 09 67	24 41
22	148	25.1		04.1	198	04.1	94	50.1	56	17	16 59	45	27 70	11 05 39
23	163	25.1		03.5	212	32.5	94	52.9	58	16 08	53	41	5 51 73	10 42 35
24	178	25.2	+18	02.8	227	00.9	94	+27 55.5	60 S	15 57	16 45	17 37	6 21 82	10 11 27
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 3 ^h 24 ^m 6		Mag: -3.9 PMG: 14 ^h 12 ^m		Mag: -0.5 PMG: 5 ^h 26 ^m		Mag: -1.9 PMG: 16 ^h 13 ^m		Mag: +0.2 PMG: 11 ^h 40 ^m					
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄					
h	°	'	°	'	°	'	°	'	°	'				
0	308	43.0	147	04.0	+9 15.9	278 17.3	+9 25.7	116 08.1	-4 05.8	184 31.4	+20 01.8			
1	323	45.4	162	03.7	14.7	293 18.4	26.2	131 10.2	05.9	199 33.6	01.8			
2	338	47.9	177	03.4	13.5	308 19.5	26.7	146 12.3	06.1	214 35.7	01.7			
3	353	50.4	192	03.1	12.3	323 20.6	27.2	161 14.5	06.2	229 37.8	01.6			
4	8	52.8	207	02.7	11.1	338 21.7	27.6	176 16.6	06.3	244 40.0	01.6			
5	23	55.3	222	02.4	+9 09.9	353 22.8	+9 28.1	191 18.8	-4 06.5	259 42.1	+20 01.5			
6	38	57.8	237	02.1	+9 08.7	8 23.9	+9 28.6	206 20.9	-4 06.6	274 44.2	+20 01.4			
7	54	00.2	252	01.8	07.5	23 25.0	29.1	221 23.0	06.8	289 46.4	01.4			
8	69	02.7	267	01.5	06.4	38 26.1	29.6	236 25.2	06.9	304 48.5	01.3			
9	84	05.1	282	01.1	05.2	53 27.2	30.0	251 27.3	07.1	319 50.6	01.2			
10	99	07.6	297	00.8	04.0	68 28.3	30.5	266 29.5	07.2	334 52.7	01.2			
11	114	10.1	312	00.5	+9 02.8	83 29.4	+9 31.0	281 31.6	-4 07.4	349 54.9	+20 01.1			
12	129	12.5	327	00.2	+9 01.6	98 30.5	+9 31.5	296 33.7	-4 07.5	4 57.0	+20 01.0			
13	144	15.0	341	59.9	+9 00.4	113 31.6	32.0	311 35.9	07.6	19 59.1	00.9			
14	159	17.5	356	59.5	+8 59.2	128 32.7	32.4	326 38.0	07.8	35 01.3	00.9			
15	174	19.9	11 59.2	58.0	143 33.9	32.9	32.9	341 40.2	07.9	50 03.4	00.8			
16	189	22.4	26 58.9	56.8	158 35.0	33.4	33.4	356 42.3	08.1	65 05.5	00.7			
17	204	24.9	41 58.6	+8 55.6	173 36.1	+9 33.9	33.9	11 44.4	-4 08.2	80 07.6	+20 00.7			
18	219	27.3	56 58.3	+8 54.4	188 37.2	+9 34.3	34.3	26 46.6	-4 08.4	95 09.8	+20 00.6			
19	234	29.8	71 58.0	53.2	203 38.3	34.8	34.8	41 48.7	08.5	110 11.9	00.5			
20	249	32.3	86 57.7	52.0	218 39.4	35.3	35.3	56 50.9	08.7	125 14.0	00.5			
21	264	34.7	101 57.3	50.8	233 40.5	35.8	35.8	71 53.0	08.8	140 16.2	00.4			
22	279	37.2	116 57.0	49.6	248 41.6	36.3	36.3	86 55.1	09.0	155 18.3	00.3			
23	294	39.6	131 56.7	48.4	263 42.7	36.7	36.7	101 57.3	09.1	170 20.4	00.3			
24	309	42.1	146 56.4	+8 47.2	278 43.8	+9 37.2	37.2	116 59.4	-4 09.2	185 22.5	+20 00.2			
Dif	—		-3		-12	+11	+5	+21		-1		+21		-

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8 PMG: 12 ^h 06 ^m 3				Edad: 25 ^d 5 PHE { 4 ^h : 54 ^m 6 12 ^h : 54 ^m 5 20 ^h : 54 ^m 4 PMG: 9 ^h 11 ^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	178	25.2	+18	02.8	227	00.9	+27	55.5	25	60 N	** **	2 40	3 41	23 08	74	20 08	33	
1	193	25.2		02.2	241	29.3	+27	58.0	25	58	1 30	2 59	3 53	23 46	68	19 30	39	
2	208	25.2		01.6	255	57.7	+28	00.4	24	56	2 03	3 15	4 04	** **	**	19 03	42	
3	223	25.3		00.9	270	26.1		02.6	22	54	26	29	13	** **	**	18 42	44	
4	238	25.3	+18	00.3	284	54.5		04.6	20	52	2 44	40	22	0 02	49	24	45	
5	253	25.4	+17	59.7	299	22.9	+28	06.6	20	50	3 00	3 51	4 29	0 17	49	18 09	46	
6	268	25.4	+17	59.1	313	51.2	+28	08.3	17	45	3 29	4 11	4 45	0 46	51	17 39	47	
7	283	25.4		58.4	328	19.6		10.0	17	40	3 51	28	4 58	1 09	51	17 15	49	
8	298	25.5		57.8	342	47.9		11.5	15	35	4 08	42	5 09	28	52	16 56	49	
9	313	25.5		57.2	357	16.3		12.9	14	30	22	4 53	19	1 45	51	39	50	
10	328	25.6		56.5	11	44.7		14.1	12	20	4 44	5 12	35	2 12	52	16 11	51	
11	343	25.6	+17	55.9	26	13.0	+28	15.1	10	10 N	5 01	5 27	5 50	2 36	52	15 47	51	
12	358	25.6	+17	55.3	40	41.4	+28	16.1	10	0	5 16	5 41	6 03	2 59	52	15 24	52	
13	13	25.7		54.6	55	09.8		16.9	8	10 S	28	5 54	16	3 21	52	15 01	53	
14	28	25.7		54.0	69	38.2		17.5	6	20	40	6 07	30	3 45	53	14 37	53	
15	43	25.7		53.4	84	06.6		18.0	5	30	51	20	45	4 13	53	14 09	53	
16	58	25.8		52.7	98	35.0		18.4	4	35	5 57	28	6 54	30	52	13 52	54	
17	73	25.8	+17	52.1	113	03.4	+28	18.6	2	40	6 03	6 36	7 05	4 49	53	13 32	55	
18	88	25.9	+17	51.4	127	31.8	+28	18.7	1	45	6 10	6 45	7 17	5 13	52	13 09	55	
19	103	25.9		50.8	142	00.3		18.7	0	50	17	6 56	31	43	52	12 38	56	
20	118	26.0		50.2	156	28.7		18.5	2	52	20	7 01	38	5 58	52	23	56	
21	133	26.0		49.5	170	57.2		18.1	4	54	23	06	46	6 16	52	12 05	57	
22	148	26.0		48.9	185	25.7		17.6	5	56	27	12	7 54	6 37	52	11 44	57	
23	163	26.1		48.3	199	54.2		17.0	6	58	31	19	8 04	7 04	51	11 17	57	
24	178	26.1	+17	47.6	214	22.7	+28	16.3	7	60 S	6 35	7 26	8 15	7 43	49	10 38	59	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 3 ^h 20 ^m 6		Mag: -3.9 PMG: 14 ^h 13 ^m				Mag: -0.5 PMG: 5 ^h 25 ^m				Mag: -1.9 PMG: 16 ^h 10 ^m				Mag: +0.2 PMG: 11 ^h 37 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♊		Dec		hG ♏		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	309	42.1	146	56.4	+8	47.2	278	43.8	+9	37.2	116	59.4	-4	09.2	185	22.5	+20	00.2
1	324	44.6	161	56.1		46.0	293	44.9		37.7	132	01.5		09.4	200	24.7		00.1
2	339	47.0	176	55.8		44.8	308	46.0		38.2	147	03.7		09.5	215	26.8	+20	00.1
3	354	49.5	191	55.5		43.5	323	47.1		38.6	162	05.8		09.7	230	28.9	+20	00.0
4	9	52.0	206	55.2		42.3	338	48.2		39.1	177	08.0		09.8	245	31.1	+19	59.9
5	24	54.4	221	54.8	+8	41.1	353	49.3	+9	39.6	192	10.1	-4	10.0	260	33.2	+19	59.8
6	39	56.9	236	54.5	+8	39.9	8	50.4	+9	40.0	207	12.2	-4	10.1	275	35.3	+19	59.8
7	54	59.4	251	54.2		38.7	23	51.6		40.5	222	14.4		10.3	290	37.5		59.7
8	70	01.8	266	53.9		37.5	38	52.7		41.0	237	16.5		10.4	305	39.6		59.6
9	85	04.3	281	53.6		36.3	53	53.8		41.5	252	18.6		10.6	320	41.7		59.6
10	100	06.8	296	53.3		35.1	68	54.9		41.9	267	20.8		10.7	335	43.8		59.5
11	115	09.2	311	53.0	+8	33.9	83	56.0	+9	42.4	282	22.9	-4	10.9	350	46.0	+19	59.4
12	130	11.7	326	52.7	+8	32.7	98	57.1	+9	42.9	297	25.0	-4	11.0	5	48.1	+19	59.4
13	145	14.1	341	52.4		31.5	113	58.2		43.4	312	27.2		11.2	20	50.2		59.3
14	160	16.6	356	52.1		30.3	128	59.3		43.8	327	29.3		11.3	35	52.4		59.2
15	175	19.1	11	51.8		29.1	144	00.4		44.3	342	31.4		11.4	50	54.5		59.2
16	190	21.5	26	51.4		27.9	159	01.6		44.8	357	33.6		11.6	65	56.6		59.1
17	205	24.0	41	51.1	+8	26.7	174	02.7	+9	45.2	12	35.7	-4	11.7	80	58.8	+19	59.0
18	220	26.5	56	50.8	+8	25.4	189	03.8	+9	45.7	27	37.8	-4	11.9	96	00.9	+19	59.0
19	235	28.9	71	50.5		24.2	204	04.9		46.2	42	40.0		12.0	111	03.0		58.9
20	250	31.4	86	50.2		23.0	219	06.0		46.7	57	42.1		12.2	126	05.1		58.8
21	265	33.9	101	49.9		21.8	234	07.1		47.1	72	44.3		12.3	141	07.3		58.8
22	280	36.3	116	49.6		20.6	249	08.2		47.6	87	46.4		12.5	156	09.4		58.7
23	295	38.8	131	49.3		19.4	264	09.4		48.1	102	48.5		12.6	171	11.5		58.6
24	310	41.2	146	49.0	+8	18.2	279	10.5	+9	48.5	117	50.7	-4	12.8	186	13.7	+19	58.5
Dif	—		-3		-12		+11		+5		+21		-1		+21		-	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15'8 PMG: 12 ^h 06 ^m 2			Edad: 26 ^d 5 SD: 14'8 PMG: 10 ^h 03 ^m					PHE { 4 ^h : 54'3 12 ^h : 54'2 20 ^h : 54'1 R°: 51 ^m						
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	178	26.1	+17 47.6	214	22.7	+28 16.3	9	60 N	20 28	21 27	23 25	** ** *	20 41	13	
1	193	26.2	47.0	228	51.3 ⁹⁶	15.4	11	58	16	21 08	22 33	** ** *	20 09	22	
2	208	26.2	46.3	243	19.9 ⁹⁶	14.3	11	56	20 05	20 53	22 03	0 13 65	19 45	27	
3	223	26.2	45.7	257	48.4 ⁹⁵	13.2	11	54	19 56	40	21 41	34 63	26	30	
4	238	26.3	45.0	272	17.1 ⁹⁷	11.8	14	52	48	29	24	0 51 62	19 09	33	
5	253	26.3	+17 44.4	286	45.7 ⁹⁶	+28 10.4	14	50	19 41	20 19	21 09	1 06 61	18 55	35	
6	268	26.4	+17 43.8	301	14.4 ⁹⁷	+28 08.8	16	45	19 25	19 59	20 41	1 37 58	18 26	38	
7	283	26.4	43.1	315	43.1 ⁹⁷	07.1	17	40	13	43	20	2 00 57	18 04	40	
8	298	26.5	42.5	330	11.8 ⁹⁷	05.2	19	35	19 02	30	20 03	20 56	17 45	42	
9	313	26.5	41.8	344	40.6 ⁹⁸	03.2	20	30	18 53	18	19 49	2 36 55	29	44	
10	328	26.6	41.2	359	09.4 ⁹⁸	+28 01.0	22	20	36	19 00	28	3 04 54	17 02	46	
11	343	26.6	+17 40.5	13	38.2 ⁹⁸	+27 58.8	22	10 N	18 23	18 45	19 11	3 28 53	16 38	48	
12	358	26.6	+17 39.9	28	07.1 ⁹⁹	+27 56.4	24	0	18 10	18 31	18 57	3 51 51	16 16	50	
13	13	26.7	39.3	42	36.0 ⁹⁹	53.8	26	10 S	17 57	19	44	4 13 50	15 54	52	
14	28	26.7	38.6	57	04.9 ⁹⁹	51.1	27	20	43	18 06	33	4 38 48	30	54	
15	43	26.8	38.0	71	33.9 ¹⁰⁰	48.3	28	30	28	17 53	22	5 06 47	15 02	57	
16	58	26.8	37.3	86	02.9 ¹⁰⁰	45.4	29	35	19	46	16	22 46	14 46	58	
17	73	26.9	+17 36.7	100	31.9 ¹⁰⁰	+27 42.3	31	40	17 09	17 38	18 10	5 42 44	14 27	59	
18	88	26.9	+17 36.0	115	01.0 ¹⁰¹	+27 39.1	32	45	16 57	17 29	18 04	6 05 43	14 04	61	
19	103	27.0	35.4	129	30.1 ¹⁰¹	35.7	34	50	43	18	17 57	35 40	13 34	64	
20	118	27.0	34.7	143	59.3 ¹⁰²	32.2	35	52	36	13	54	6 50 39	19	66	
21	133	27.1	34.1	158	28.5 ¹⁰²	28.6	36	54	29	08	51	7 08 36	13 02	68	
22	148	27.1	33.4	172	57.8 ¹⁰³	24.9	37	56	21	17 02	48	29 33	12 41	72	
23	163	27.2	32.8	187	27.1 ¹⁰³	21.0	39	58	12	16 56	44	7 55 29	12 14	77	
24	178	27.2	+17 32.1	201	56.4 ¹⁰³	+27 17.0	40	60 S	16 01	16 49	17 40	8 32 20	11 37	86	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 3 ^h 16 ^m 7		Mag: -3.9 PMG: 14 ^h 13 ^m			Mag: -0.5 PMG: 5 ^h 23 ^m			Mag: -1.9 PMG: 16 ^h 06 ^m			Mag: +0.2 PMG: 11 ^h 33 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	310	41.2	146	49.0	+8 18.2	279	10.5	+9 48.5	117	50.7	-4 12.8	186	13.7	+19 58.5	
1	325	43.7	161	48.7	17.0	294	11.6	49.0	132	52.8	12.9	201	15.8	58.5	
2	340	46.2	176	48.4	15.8	309	12.7	49.5	147	54.9	13.1	216	17.9	58.4	
3	355	48.6	191	48.1	14.5	324	13.8	49.9	162	57.0	13.2	231	20.1	58.3	
4	10	51.1	206	47.8	13.3	339	14.9	50.4	177	59.2	13.4	246	22.2	58.3	
5	25	53.6	221	47.5	+8 12.1	354	16.1	+9 50.9	193	01.3	-4 13.5	261	24.3	+19 58.2	
6	40	56.0	236	47.2	+8 10.9	9	17.2	+9 51.3	208	03.4	-4 13.7	276	26.4	+19 58.1	
7	55	58.5	251	46.9	09.7	24	18.3	51.8	223	05.6	13.8	291	28.6	58.1	
8	71	01.0	266	46.6	08.5	39	19.4	52.3	238	07.7	14.0	306	30.7	58.0	
9	86	03.4	281	46.3	07.3	54	20.5	52.7	253	09.8	14.1	321	32.8	57.9	
10	101	05.9	296	46.0	06.0	69	21.7	53.2	268	12.0	14.3	336	35.0	57.9	
11	116	08.4	311	45.7	+8 04.8	84	22.8	+9 53.7	283	14.1	-4 14.4	351	37.1	+19 57.8	
12	131	10.8	326	45.4	+8 03.6	99	23.9	+9 54.1	298	16.2	-4 14.6	6	39.2	+19 57.7	
13	146	13.3	341	45.1	02.4	114	25.0	54.6	313	18.4	14.7	21	41.4	57.7	
14	161	15.7	356	44.8	+8 01.2	129	26.1	55.1	328	20.5	14.8	36	43.5	57.6	
15	176	18.2	11	44.5	+8 00.0	144	27.3	55.5	343	22.6	15.0	51	45.6	57.5	
16	191	20.7	26	44.2	+7 58.7	159	28.4	56.0	358	24.8	15.1	66	47.7	57.4	
17	206	23.1	41	43.9	+7 57.5	174	29.5	+9 56.5	13	26.9	-4 15.3	81	49.9	+19 57.4	
18	221	25.6	56	43.6	+7 56.3	189	30.6	+9 56.9	28	29.0	-4 15.4	96	52.0	+19 57.3	
19	236	28.1	71	43.3	55.1	204	31.8	57.4	43	31.1	15.6	111	54.1	57.2	
20	251	30.5	86	43.0	53.9	219	32.9	57.9	58	33.3	15.7	126	56.3	57.2	
21	266	33.0	101	42.7	52.7	234	34.0	58.3	73	35.4	15.9	141	58.4	57.1	
22	281	35.5	116	42.4	51.4	249	35.1	58.8	88	37.5	16.0	157	00.5	57.0	
23	296	37.9	131	42.1	50.2	264	36.2	59.3	103	39.7	16.2	172	02.7	57.0	
24	311	40.4	146	41.8	+7 49.0	279	37.4	+9 59.7	118	41.8	-4 16.3	187	04.8	+19 56.9	
Dif	—		-3	-12		+11	+5		+21		-1	+21		-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: 27 ^d 5 PHE { 4 ^h : 54 ^m 1 12 ^h : 54 ^m 0 20 ^h : 54 ^m 0 R°: 49 ^m												
	hG ☉		Dec		hG ☾ Dif		Dec Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	27.2	+17	32.1	201	56.4	+27	17.0	60 N	0 48	2 46	3 45	0 22	90	20 54	5	
1	193	27.3		31.5	216	25.8 ¹⁰⁴		12.8	58	1 40	3 05	3 57	0 54	81	31	12	
2	208	27.3		30.8	230	55.3 ¹⁰⁵		08.6	56	2 10	20	4 08	1 18	76	20 12	16	
3	223	27.4		30.1	245	24.8 ¹⁰⁵	+27	04.2	54	32	33	17	37	72	19 56	20	
4	238	27.4		29.5	259	54.3 ¹⁰⁵	+26	59.7	52	2 49	44	25	1 53	70	42	23	
5	253	27.5	+17	28.8	274	23.9 ¹⁰⁶	+26	55.0	50	3 04	3 54	4 32	2 07	67	19 30	25	
6	268	27.5	+17	28.2	288	53.6 ¹⁰⁷	+26	50.2	45	3 32	4 14	4 48	2 35	64	19 04	31	
7	283	27.6		27.5	303	23.3 ¹⁰⁷		45.3	40	3 53	30	5 00	2 57	61	18 44	34	
8	298	27.6		26.9	317	53.0 ¹⁰⁷		40.3	35	4 10	43	11	3 16	58	27	37	
9	313	27.7		26.2	332	22.9 ¹⁰⁹		35.2	30	23	4 54	20	31	57	18 13	38	
10	328	27.7		25.6	346	52.7 ¹⁰⁸		29.9	20	4 45	5 13	36	3 58	54	17 48	42	
11	343	27.8	+17	24.9	1	22.7 ¹¹⁰	+26	24.5	10 N	5 02	5 28	5 50	4 21	51	17 26	45	
12	358	27.8	+17	24.2	15	52.6 ¹⁰⁹	+26	19.0	0	5 16	5 41	6 03	4 42	49	17 06	48	
13	13	27.9		23.6	30	22.7 ¹¹¹		13.4	10 S	28	5 53	15	5 03	47	16 46	51	
14	28	27.9		22.9	44	52.8 ¹¹¹		07.6	20	39	6 06	29	26	44	16 24	54	
15	43	28.0		22.3	59	22.9 ¹¹¹	+26	01.7	30	50	19	44	5 53	41	15 59	57	
16	58	28.0		21.6	73	53.1 ¹¹²	+25	55.7	60	5 56	26	6 53	6 08	39	44	59	
17	73	28.1	+17	21.0	88	23.4 ¹¹³	+25	49.6	40	6 01	6 34	7 03	6 26	37	15 26	62	
18	88	28.1	+17	20.3	102	53.7 ¹¹³	+25	43.4	45	6 08	6 43	7 14	6 48	34	15 05	65	
19	103	28.2		19.6	117	24.1 ¹¹⁴		37.0	50	14	53	28	7 15	30	14 38	70	
20	118	28.2		19.0	131	54.6 ¹¹⁵		30.6	52	17	6 58	35	29	27	25	73	
21	133	28.3		18.3	146	25.1 ¹¹⁵		24.0	54	20	7 03	42	7 44	24	14 10	76	
22	148	28.4		17.6	160	55.7 ¹¹⁶		17.3	56	24	09	50	8 02	21	13 53	79	
23	163	28.4		17.0	175	26.3 ¹¹⁶		10.5	58	27	15	7 59	24	16	31	84	
24	178	28.5	+17	16.3	189	57.0 ¹¹⁷	+25	03.6	60 S	6 31	7 22	8 10	8 52	8	13 03	93	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 3 ^h 12 ^m 8		Mag: -3.9 PMG: 14 ^h 13 ^m		Mag: -0.5 PMG: 5 ^h 21 ^m		Mag: -1.9 PMG: 16 ^h 03 ^m		Mag: +0.2 PMG: 11 ^h 30 ^m	
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'
0	311	40.4	146	41.8	+7	49.0	279	37.4	+9	59.7
1	326	42.9	161	41.5		47.8	294	38.5	+10	00.2
2	341	45.3	176	41.2		46.6	309	39.6		00.7
3	356	47.8	191	40.9		45.3	324	40.8		01.1
4	11	50.2	206	40.6		44.1	339	41.9		01.6
5	26	52.7	221	40.3	+7	42.9	354	43.0	+10	02.0
6	41	55.2	236	40.1	+7	41.7	9	44.1	+10	02.5
7	56	57.6	251	39.8		40.4	24	45.3		03.0
8	72	00.1	266	39.5		39.2	39	46.4		03.4
9	87	02.6	281	39.2		38.0	54	47.5		03.9
10	102	05.0	296	38.9		36.8	69	48.7		04.3
11	117	07.5	311	38.6	+7	35.6	84	49.8	+10	04.8
12	132	10.0	326	38.3	+7	34.3	99	50.9	+10	05.3
13	147	12.4	341	38.0		33.1	114	52.0		05.7
14	162	14.9	356	37.7		31.9	129	53.2		06.2
15	177	17.4	11	37.4		30.7	144	54.3		06.6
16	192	19.8	26	37.1		29.4	159	55.4		07.1
17	207	22.3	41	36.8	+7	28.2	174	56.6	+10	07.6
18	222	24.7	56	36.6	+7	27.0	189	57.7	+10	08.0
19	237	27.2	71	36.3		25.8	204	58.8		08.5
20	252	29.7	86	36.0		24.5	220	00.0		08.9
21	267	32.1	101	35.7		23.3	235	01.1		09.4
22	282	34.6	116	35.4		22.1	250	02.2		09.9
23	297	37.1	131	35.1		20.8	265	03.4		10.3
24	312	39.5	146	34.8	+7	19.6	280	04.5	+10	10.8
Dif	—		-3		-12		+11		+5	
							+21		-2	
									+21	
									-	

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: 28 ^d 5 PHE { 4 ^h : 53 ^m 9 12 ^h : 53 ^m 9 20 ^h : 53 ^m 9 PMG: 11 ^h 43 ^m R°: 45 ^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	178	28.5	+17	16.3	189	57.0	+25	03.6	60 N	20 23	21 20	23 05	1 52 92		20 59 2	
1	193	28.5		15.7	204	27.8 ¹¹⁸	+24	56.5	58	11	21 03	22 23	2 15 85		43 6	
2	208	28.6		15.0	218	58.6 ¹¹⁸		49.4	56	20 01	20 48	21 56	34 80		28 11	
3	223	28.6		14.3	233	29.5 ¹¹⁹		42.1	54	19 52	36	35	2 49 77		16 14	
4	238	28.7		13.7	248	00.5 ¹²⁰		34.8	52	45	25	19	3 03 73		20 05 17	
5	253	28.7	+17	13.0	262	31.5 ¹²⁰	+24	27.3	50	19 38	20 16	21 05	3 14 71		19 55 19	
6	268	28.8	+17	12.3	277	02.6 ¹²¹	+24	19.7	45	19 23	19 56	20 38	3 39 66		19 35 24	
7	283	28.9		11.7	291	33.7 ¹²¹		12.0	40	10	40	17	3 58 63		18 28	
8	298	28.9		11.0	306	04.9 ¹²²	+24	04.2	35	19 00	28	20 01	4 14 60		19 04 31	
9	313	29.0		10.3	320	36.2 ¹²³	+23	56.3	30	18 51	19 17	19 47	28 57		18 51 34	
10	328	29.0		09.7	335	07.6 ¹²⁴		48.3	20	35	18 59	26	4 52 53		30 38	
11	343	29.1	+17	09.0	349	39.0 ¹²⁴	+23	40.2	10 N	18 22	18 44	19 10	5 12 50		18 11 42	
12	358	29.1	+17	08.3	4	10.5 ¹²⁵	+23	32.0	0	18 10	18 31	18 56	5 31 47		17 54 45	
13	13	29.2		07.6	18	42.0 ¹²⁵		23.7	10 S	17 57	19	44	5 50 43		37 48	
14	28	29.3		07.0	33	13.6 ¹²⁶		15.3	20	44	18 07	34	6 10 40		17 18 52	
15	43	29.3		06.3	47	45.3 ¹²⁷	+23	06.8	30	29	17 54	23	34 35		16 56 57	
16	58	29.4		05.6	62	17.0 ¹²⁷	+22	58.1	35	21	47	18	6 47 34		43 59	
17	73	29.4	+17	05.0	76	48.9 ¹²⁹	+22	49.4	40	17 11	17 40	18 12	7 03 30		16 28 63	
18	88	29.5	+17	04.3	91	20.7 ¹²⁸	+22	40.6	45	17 00	17 31	18 06	7 22 26		16 10 67	
19	103	29.6		03.6	105	52.7 ¹³⁰		31.7	50	16 46	21	18 00	45 22		15 48 72	
20	118	29.6		02.9	120	24.7 ¹³⁰		22.7	52	39	16	17 57	7 56 19		38 74	
21	133	29.7		02.3	134	56.8 ¹³¹		13.6	54	32	11	54	8 08 17		26 77	
22	148	29.7		01.6	149	28.9 ¹³¹	+22	04.4	56	25	06	51	23 13		15 12 80	
23	163	29.8		00.9	164	01.1 ¹³²	+21	55.1	58	16	17 00	47	8 40 8		14 55 86	
24	178	29.9	+17	00.2	178	33.4 ¹³³	+21	45.8	60 S	16 05	16 53	17 44	9 00 2		14 36 91	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 3 ^h 08 ^m 8		Mag: -3.9 PMG: 14 ^h 14 ^m		Mag: -0.5 PMG: 5 ^h 19 ^m		Mag: -1.9 PMG: 16 ^h 00 ^m		Mag: +0.2 PMG: 11 ^h 27 ^m							
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄							
h	°	'	°	'	°	'	°	'	°	'						
0	312	39.5	146	34.8	280	04.5	119	32.8	187	55.9						
1	327	42.0	161	34.5	295	05.6	134	35.0	202	58.1						
2	342	44.5	176	34.3	310	06.8	149	37.1	218	00.2						
3	357	46.9	191	34.0	325	07.9	164	39.2	233	02.3						
4	12	49.4	206	33.7	340	09.0	179	41.3	248	04.5						
5	27	51.9	221	33.4	355	10.2	194	43.4	263	06.6						
6	42	54.3	236	33.1	10	11.3	209	45.6	278	08.7						
7	57	56.8	251	32.8	25	12.5	224	47.7	293	10.9						
8	72	59.2	266	32.6	40	13.6	239	49.8	308	13.0						
9	88	01.7	281	32.3	55	14.7	254	51.9	323	15.1						
10	103	04.2	296	32.0	70	15.9	269	54.1	338	17.2						
11	118	06.6	311	31.7	85	17.0	284	56.2	353	19.4						
12	133	09.1	326	31.4	100	18.2	299	58.3	8	21.5						
13	148	11.6	341	31.1	115	19.3	315	00.4	23	23.6						
14	163	14.0	356	30.9	130	20.4	330	02.6	38	25.8						
15	178	16.5	11	30.6	145	21.6	345	04.7	53	27.9						
16	193	19.0	26	30.3	160	22.7	0	06.8	68	30.0						
17	208	21.4	41	30.0	175	23.9	15	08.9	83	32.2						
18	223	23.9	56	29.7	190	25.0	30	11.0	98	34.3						
19	238	26.3	71	29.4	205	26.2	45	13.2	113	36.4						
20	253	28.8	86	29.2	220	27.3	60	15.3	128	38.6						
21	268	31.3	101	28.9	235	28.4	75	17.4	143	40.7						
22	283	33.7	116	28.6	250	29.6	90	19.5	158	42.8						
23	298	36.2	131	28.3	265	30.7	105	21.6	173	45.0						
24	313	38.7	146	28.0	280	31.9	120	23.8	188	47.1						
Dif	—		-3		-12		+11		+21							

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8 PMG: 12 ^h 06 ^m 0				Edad: 29 ^d 5 PHE { 4 ^h : 53 ^m 9 12 ^h : 53 ^m 9 20 ^h : 54 ^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	29.9	+17	00.2	178	33.4	+21	45.8	60 N	1 08	2 53	3 50	3 24	89	21 01	0	
1	193	29.9	+16	59.6	193	05.7 ¹³³		36.3 ⁹⁵	58	1 50	3 10	4 02	40	84	20 49	4	
2	208	30.0		58.9	207	38.1 ¹³⁴		26.7 ⁹⁶	56	2 17	25	11	3 54	80	39	8	
3	223	30.0		58.2	222	10.6 ¹³⁵		17.1 ⁹⁶	54	37	37	20	4 06	76	30	10	
4	238	30.1		57.5	236	43.1 ¹³⁵	+21	07.3 ⁹⁸	52	2 54	48	28	16	74	22	13	
5	253	30.2	+16	56.9	251	15.7 ¹³⁶	+20	57.5 ⁹⁸	50	3 08	3 57	4 35	4 25	72	20 14	16	
6	268	30.2	+16	56.2	265	48.4 ¹³⁷	+20	47.6 ⁹⁹	45	3 35	4 17	4 50	4 45	66	19 59	20	
7	283	30.3		55.5	280	21.1 ¹³⁷		37.6 ¹⁰⁰	40	3 55	32	5 02	5 01	62	46	24	
8	298	30.4		54.8	294	53.9 ¹³⁸		27.5 ¹⁰¹	35	4 12	45	12	14	59	35	27	
9	313	30.4		54.1	309	26.8 ¹³⁹		17.3 ¹⁰²	30	25	4 56	21	25	56	25	30	
10	328	30.5		53.5	323	59.7 ¹³⁹	+20	07.1 ¹⁰²	20	4 46	5 13	37	5 45	51	19 08	34	
11	343	30.5	+16	52.8	338	32.7 ¹⁴⁰	+19	56.7 ¹⁰⁴	10 N	5 02	5 28	5 50	6 02	47	18 53	39	
12	358	30.6	+16	52.1	353	05.7 ¹⁴⁰	+19	46.3 ¹⁰⁴	0	5 16	5 41	6 02	6 18	43	18 39	43	
13	13	30.7		51.4	7	38.8 ¹⁴¹		35.8 ¹⁰⁵	10 S	28	5 53	15	33	41	25	46	
14	28	30.7		50.7	22	12.0 ¹⁴²		25.2 ¹⁰⁶	20	38	6 05	28	6 50	36	18 10	51	
15	43	30.8		50.1	36	45.2 ¹⁴²		14.6 ¹⁰⁶	30	49	17	42	7 09	32	17 53	55	
16	58	30.9		49.4	51	18.5 ¹⁴³	+19	03.8 ¹⁰⁸	35	5 54	24	6 51	21	28	42	59	
17	73	30.9	+16	48.7	65	51.9 ¹⁴⁴	+18	53.0 ¹⁰⁸	40	6 00	6 32	7 00	7 33	26	17 31	61	
18	88	31.0	+16	48.0	80	25.3 ¹⁴⁴	+18	42.1 ¹⁰⁹	45	6 05	6 40	7 12	7 48	22	17 17	65	
19	103	31.1		47.3	94	58.8 ¹⁴⁵		31.1 ¹¹⁰	50	12	50	25	8 07	17	17 00	71	
20	118	31.1		46.6	109	32.3 ¹⁴⁵		20.1 ¹¹⁰	52	14	6 55	32	15	15	16 52	73	
21	133	31.2		46.0	124	05.9 ¹⁴⁶	+18	09.0 ¹¹¹	54	17	7 00	38	25	12	43	76	
22	148	31.3		45.3	138	39.5 ¹⁴⁶	+17	57.8 ¹¹²	56	20	05	46	36	9	32	80	
23	163	31.3		44.6	153	13.2 ¹⁴⁷		46.5 ¹¹³	58	24	11	7 55	8 48	5	21	83	
24	178	31.4	+16	43.9	167	47.0 ¹⁴⁸	+17	35.2 ¹¹³	60 S	6 27	7 18	8 05	9 02	1	16 07	88	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 3 ^h 04 ^m 9		Mag: -3.9 PMG: 14 ^h 14 ^m		Mag: -0.5 PMG: 5 ^h 17 ^m		Mag: -1.9 PMG: 15 ^h 56 ^m		Mag: +0.2 PMG: 11 ^h 23 ^m	
	hG ♈		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec	
h	°	'	°	'	°	'	°	'	°	'
0	313	38.7	146	28.0	+6	50.1	280	31.9	+10	21.7
1	328	41.1	161	27.8		48.8	295	33.0		22.1
2	343	43.6	176	27.5		47.6	310	34.2		22.6
3	358	46.1	191	27.2		46.3	325	35.3		23.0
4	13	48.5	206	26.9		45.1	340	36.5		23.5
5	28	51.0	221	26.7	+6	43.9	355	37.6	+10	23.9
6	43	53.5	236	26.4	+6	42.6	10	38.8	+10	24.4
7	58	55.9	251	26.1		41.4	25	39.9		24.8
8	73	58.4	266	25.8		40.2	40	41.0		25.3
9	89	00.8	281	25.6		38.9	55	42.2		25.7
10	104	03.3	296	25.3		37.7	70	43.3		26.2
11	119	05.8	311	25.0	+6	36.4	85	44.5	+10	26.6
12	134	08.2	326	24.7	+6	35.2	100	45.6	+10	27.1
13	149	10.7	341	24.5		34.0	115	46.8		27.5
14	164	13.2	356	24.2		32.7	130	47.9		28.0
15	179	15.6	11	23.9		31.5	145	49.1		28.4
16	194	18.1	26	23.6		30.2	160	50.3		28.9
17	209	20.6	41	23.4	+6	29.0	175	51.4	+10	29.3
18	224	23.0	56	23.1	+6	27.8	190	52.6	+10	29.8
19	239	25.5	71	22.8		26.5	205	53.7		30.2
20	254	28.0	86	22.5		25.3	220	54.9		30.6
21	269	30.4	101	22.3		24.0	235	56.0		31.1
22	284	32.9	116	22.0		22.8	250	57.2		31.5
23	299	35.3	131	21.7		21.6	265	58.3		32.0
24	314	37.8	146	21.4	+6	20.3	280	59.5	+10	32.4
Dif	—		-3 -12		+12 +4		+21 -2		+21 -1	

UT	SOL				● LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 12 ^h 05 ^m 9				Edad: 30 ^d 5 PHE { 4 ^h : 54 ⁰ 12 ^h : 54 ⁰ 20 ^h : 54 ¹ R°: 41 ^m												
	hG ☉		Dec		hG ☾		Dif							Civil	Náutico	Hora	R°
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	h m	h m	h m
0	178	31.4	+16	43.9	167	47.0	+17	35.2	60 N	20 17	21 14	22 50	4 53 87	21 01	**		
1	193	31.5		43.2	182	20.8 ¹⁴⁸		23.8 ¹¹⁴	58	20 07	20 57	22 14	5 04 82	20 53	3		
2	208	31.5		42.5	196	54.7 ¹⁴⁹		12.3 ¹¹⁵	56	19 57		43	21 49	14 78	47	5	
3	223	31.6		41.8	211	28.6 ¹⁴⁹	+17	00.7 ¹¹⁶	54		49	31	29	22 76	40	9	
4	238	31.7		41.1	226	02.6 ¹⁵⁰	+16	49.1 ¹¹⁶	52		41	21	14	30 72	35	10	
5	253	31.7	+16	40.5	240	36.7 ¹⁵¹	+16	37.4 ¹¹⁷	50	19 34	20 12	21 00	5 37 70	20 30	13		
6	268	31.8	+16	39.8	255	10.8 ¹⁵¹	+16	25.7 ¹¹⁷	45	19 20	19 53	20 34	5 51 65	20 19	17		
7	283	31.9		39.1	269	44.9 ¹⁵¹		13.9 ¹¹⁸	40	19 08		38	20 14	6 03 61	10	21	
8	298	31.9		38.4	284	19.1 ¹⁵²	+16	02.0 ¹¹⁹	35	18 58		25	19 59	13 57	20 02	24	
9	313	32.0		37.7	298	53.4 ¹⁵³	+15	50.1 ¹¹⁹	30		49	19 15	46	21 55	19 55	27	
10	328	32.1		37.0	313	27.7 ¹⁵³		38.1 ¹²⁰	20		34	18 58	25	36 50	42	33	
11	343	32.2	+16	36.3	328	02.0 ¹⁵³	+15	26.0 ¹²¹	10 N	18 21	18 43	19 09	6 49 46	19 32	36		
12	358	32.2	+16	35.6	342	36.4 ¹⁵⁴	+15	13.9 ¹²¹	0	18 09	18 31	18 56	7 01 42	19 22	40		
13	13	32.3		34.9	357	10.9 ¹⁵⁵	+15	01.7 ¹²²	10 S	17 57		19	44	14 37	11	45	
14	28	32.4		34.2	11	45.4 ¹⁵⁵	+14	49.4 ¹²³	20		45	18 08	34	26 34	19 01	49	
15	43	32.4		33.5	26	19.9 ¹⁵⁵		37.1 ¹²³	30		30	17 55	24	41 28	18 48	54	
16	58	32.5		32.8	40	54.5 ¹⁵⁶		24.8 ¹²³	35		22	49	19	49 26	41	57	
17	73	32.6	+16	32.2	55	29.2 ¹⁵⁷	+14	12.3 ¹²⁵	40	17 13	17 41	18 14	7 59 22	18 32	61		
18	88	32.7	+16	31.5	70	03.9 ¹⁵⁷	+13	59.9 ¹²⁴	45	17 02	17 33	18 08	8 10 19	18 22	65		
19	103	32.7		30.8	84	38.6 ¹⁵⁷		47.3 ¹²⁶	50	16 49		23	02	24 14	11	69	
20	118	32.8		30.1	99	13.4 ¹⁵⁸		34.7 ¹²⁶	52		43	19	18 00	30 12	18 05	72	
21	133	32.9		29.4	113	48.2 ¹⁵⁸		22.1 ¹²⁶	54		36	14	17 57	37 9	17 59	74	
22	148	32.9		28.7	128	23.1 ¹⁵⁹	+13	09.4 ¹²⁷	56		28	09	54	45 6	52	77	
23	163	33.0		28.0	142	58.0 ¹⁵⁹	+12	56.6 ¹²⁸	58		20	17 03	51	8 53 3	44	81	
24	178	33.1	+16	27.3	157	32.9 ¹⁵⁹	+12	43.8 ¹²⁸	60 S	16 10	16 57	17 47	9 03 **	17 35	85		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO								
	PMG: 3 ^h 01 ^m 0		Mag: -3.9 PMG: 14 ^h 15 ^m		Mag: -0.6 PMG: 5 ^h 16 ^m		Mag: -1.9 PMG: 15 ^h 53 ^m		Mag: +0.2 PMG: 11 ^h 20 ^m								
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄								
h	°	'	°	'	°	'	°	'	°	'							
0	314	37.8	146	21.4	+6	20.3	121	14.6	-4	27.3							
1	329	40.3	161	21.2		19.1	136	16.7		27.4							
2	344	42.7	176	20.9		17.8	151	18.8		27.6							
3	359	45.2	191	20.6		16.6	166	20.9		27.7							
4	14	47.7	206	20.4		15.3	181	23.1		27.9							
5	29	50.1	221	20.1	+6	14.1	196	25.2	-4	28.0							
6	44	52.6	236	19.8	+6	12.8	211	27.3	-4	28.2							
7	59	55.1	251	19.6		11.6	226	29.4		28.3							
8	74	57.5	266	19.3		10.4	241	31.5		28.5							
9	90	00.0	281	19.0		09.1	256	33.6		28.6							
10	105	02.4	296	18.8		07.9	271	35.7		28.8							
11	120	04.9	311	18.5	+6	06.6	286	37.9	-4	29.0							
12	135	07.4	326	18.2	+6	05.4	301	40.0	-4	29.1							
13	150	09.8	341	18.0		04.1	316	42.1		29.3							
14	165	12.3	356	17.7		02.9	331	44.2		29.4							
15	180	14.8	11	17.4		01.6	346	46.3		29.6							
16	195	17.2	26	17.2	+6	00.4	1	48.4		29.7							
17	210	19.7	41	16.9	+5	59.1	16	50.5	-4	29.9							
18	225	22.2	56	16.6	+5	57.9	31	52.7	-4	30.0							
19	240	24.6	71	16.4		56.7	46	54.8		30.2							
20	255	27.1	86	16.1		55.4	61	56.9		30.4							
21	270	29.6	101	15.8		54.2	76	59.0		30.5							
22	285	32.0	116	15.6		52.9	92	01.1		30.7							
23	300	34.5	131	15.3		51.7	107	03.2		30.8							
24	315	36.9	146	15.0	+5	50.4	122	05.3	-4	31.0							
Dif	—		-3		-12		+12		+21								

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 7			Edad: 1 ^d 9 PHE { 4 ^h : 54 ^m /2 12 ^h : 54 ^m /2 20 ^h : 54 ^m /3 R°: 40 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m		
0	178	33.1	+16	27.3	157	32.9	+12	43.8	60 N	1 22	2 59	3 55	6 20	83	21 00	**		
1	193	33.2		26.6	172	07.9 ¹⁶⁰		31.0 ¹²⁸	58	1 59	3 15	4 06	26	81	20 56	2		
2	208	33.2		25.9	186	42.9 ¹⁶⁰		18.1 ¹²⁹	56	2 24		15	32	77	52	5		
3	223	33.3		25.2	201	18.0 ¹⁶¹	+12	05.1 ¹³⁰	54	43	41	24	38	74	49	7		
4	238	33.4		24.5	215	53.1 ¹⁶¹	+11	52.1 ¹³⁰	52	2 58	3 51	31	42	72	45	10		
5	253	33.5	+16	23.8	230	28.2 ¹⁶¹	+11	39.1 ¹³⁰	50	3 12	4 00	4 38	6 47	69	20 43	11		
6	268	33.5	+16	23.1	245	03.4 ¹⁶²	+11	26.0 ¹³¹	45	3 38	4 19	4 52	6 56	65	20 36	16		
7	283	33.6		22.4	259	38.6 ¹⁶²	+11	12.9 ¹³¹	40	3 58	34	5 04	7 04	60	31	20		
8	298	33.7		21.7	274	13.8 ¹⁶²	+10	59.7 ¹³²	35	4 13	46	14	10	57	26	23		
9	313	33.8		21.0	288	49.1 ¹⁶³		46.5 ¹³²	30	26	4 57	23	16	54	22	26		
10	328	33.8		20.3	303	24.4 ¹⁶³		33.2 ¹³³	20	4 47	5 14	37	26	49	15	31		
11	343	33.9	+16	19.6	317	59.8 ¹⁶⁴	+10	19.9 ¹³³	10 N	5 03	5 28	5 50	7 35	44	20 08	36		
12	358	34.0	+16	18.9	332	35.1 ¹⁶³	+10	06.5 ¹³⁴	0	5 16	5 41	6 02	7 43	40	20 02	40		
13	13	34.1		18.2	347	10.5 ¹⁶⁴	+9	53.1 ¹³⁴	10 S	27	5 52	14	7 51	36	19 56	44		
14	28	34.2		17.5	1	46.0 ¹⁶⁵		39.7 ¹³⁴	20	37	6 04	27	8 00	31	50	48		
15	43	34.2		16.8	16	21.4 ¹⁶⁴		26.2 ¹³⁵	30	47	16	41	09	27	42	54		
16	58	34.3		16.1	30	56.9 ¹⁶⁵	+9	12.7 ¹³⁵	35	52	22	49	15	24	38	57		
17	73	34.4	+16	15.3	45	32.4 ¹⁶⁵	+8	59.1 ¹³⁶	40	5 57	6 30	6 58	8 21	21	19 33	60		
18	88	34.5	+16	14.6	60	07.9 ¹⁶⁵	+8	45.5 ¹³⁶	45	6 03	6 38	7 09	8 29	16	19 27	65		
19	103	34.5		13.9	74	43.5 ¹⁶⁶		31.9 ¹³⁶	50	09	47	22	38	12	20	69		
20	118	34.6		13.2	89	19.1 ¹⁶⁶		18.3 ¹³⁶	52	11	52	28	42	10	17	71		
21	133	34.7		12.5	103	54.7 ¹⁶⁶	+8	04.6 ¹³⁷	54	14	6 56	35	46	8	13	74		
22	148	34.8		11.8	118	30.3 ¹⁶⁶	+7	50.8 ¹³⁸	56	17	7 01	42	51	5	09	77		
23	163	34.9		11.1	133	05.9 ¹⁶⁶		37.1 ¹³⁷	58	20	07	7 50	8 56	3	05	80		
24	178	34.9	+16	10.4	147	41.6 ¹⁶⁷	+7	23.3 ¹³⁸	60 S	6 23	7 13	8 00	9 02	**	19 00	83		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 2 ^h 57 ^m 1		Mag: -3.9 PMG: 14 ^h 15 ^m			Mag: -0.6 PMG: 5 ^h 14 ^m			Mag: -1.9 PMG: 15 ^h 49 ^m			Mag: +0.2 PMG: 11 ^h 16 ^m						
h	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
0	315	36.9	146	15.0	+5	50.4	281	27.3	+10	43.0	122	05.3	-4	31.0	190	29.5	+19	50.3
1	330	39.4	161	14.8		49.2	296	28.5		43.5	137	07.4		31.1	205	31.6		50.2
2	345	41.9	176	14.5		47.9	311	29.7		43.9	152	09.6		31.3	220	33.7		50.1
3	0	44.3	191	14.2		46.7	326	30.8		44.3	167	11.7		31.4	235	35.9		50.1
4	15	46.8	206	14.0		45.4	341	32.0		44.8	182	13.8		31.6	250	38.0		50.0
5	30	49.3	221	13.7	+5	44.2	356	33.2	+10	45.2	197	15.9	-4	31.8	265	40.1	+19	49.9
6	45	51.7	236	13.5	+5	42.9	11	34.4	+10	45.7	212	18.0	-4	31.9	280	42.3	+19	49.9
7	60	54.2	251	13.2		41.7	26	35.5		46.1	227	20.1		32.1	295	44.4		49.8
8	75	56.7	266	12.9		40.4	41	36.7		46.5	242	22.2		32.2	310	46.5		49.7
9	90	59.1	281	12.7		39.2	56	37.9		47.0	257	24.3		32.4	325	48.7		49.6
10	106	01.6	296	12.4		37.9	71	39.0		47.4	272	26.4		32.5	340	50.8		49.6
11	121	04.1	311	12.1	+5	36.7	86	40.2	+10	47.8	287	28.6	-4	32.7	355	52.9	+19	49.5
12	136	06.5	326	11.9	+5	35.4	101	41.4	+10	48.3	302	30.7	-4	32.8	10	55.1	+19	49.4
13	151	09.0	341	11.6		34.1	116	42.5		48.7	317	32.8		33.0	25	57.2		49.4
14	166	11.4	356	11.4		32.9	131	43.7		49.2	332	34.9		33.2	40	59.3		49.3
15	181	13.9	11	11.1		31.6	146	44.9		49.6	347	37.0		33.3	56	01.5		49.2
16	196	16.4	26	10.8		30.4	161	46.1		50.0	2	39.1		33.5	71	03.6		49.2
17	211	18.8	41	10.6	+5	29.1	176	47.2	+10	50.5	17	41.2	-4	33.6	86	05.7	+19	49.1
18	226	21.3	56	10.3	+5	27.9	191	48.4	+10	50.9	32	43.3	-4	33.8	101	07.9	+19	49.0
19	241	23.8	71	10.1		26.6	206	49.6		51.3	47	45.4		33.9	116	10.0		49.0
20	256	26.2	86	09.8		25.4	221	50.8		51.8	62	47.5		34.1	131	12.1		48.9
21	271	28.7	101	09.6		24.1	236	51.9		52.2	77	49.6		34.3	146	14.3		48.8
22	286	31.2	116	09.3		22.9	251	53.1		52.6	92	51.8		34.4	161	16.4		48.7
23	301	33.6	131	09.0		21.6	266	54.3		53.1	107	53.9		34.6	176	18.5		48.7
24	316	36.1	146	08.8	+5	20.4	281	55.5	+10	53.5	122	56.0	-4	34.7	191	20.7	+19	48.6
Dif	—		-3		-13	+12		+4		+21		-2		+21		-		-4

ALMANAQUE NÁUTICO PERSEUS

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 12 ^h 05 ^m 5			Edad: 3 ^d 9 PHE { 4 ^h : 54 ^m 8 12 ^h : 54 ^m 9 20 ^h : 55 ^m 1 R°: 40 ^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	178	36.9	+15 53.3	138	00.5	+1 44.2	60 N	1 35	3 05	4 00	9 07 84	20 58	**	
1	193	37.0		152	36.3 ¹⁶⁸	29.8 ¹⁴⁴	58	2 07	21	10	06 82	21 00	2	
2	208	37.1		167	12.1 ¹⁶⁸	15.4 ¹⁴⁴	56	30	34	19	06 78		02 5	
3	223	37.2		181	47.9 ¹⁶⁸	+1 01.0 ¹⁴⁴	54	2 48	45	27	06 75		03 8	
4	238	37.3		196	23.7 ¹⁶⁸	+0 46.6 ¹⁴⁴	52	3 03	3 55	34	06 72		04 10	
5	253	37.4	+15 49.7	210	59.4 ¹⁶⁷	+0 32.1 ¹⁴⁵	50	3 16	4 04	4 41	9 05 71	21 06	12	
6	268	37.5	+15 48.9	225	35.2 ¹⁶⁸	+0 17.7 ¹⁴⁴	45	3 41	4 22	4 55	9 05 66	21 08	17	
7	283	37.5		240	10.9 ¹⁶⁷	+0 03.3 ¹⁴⁴	40	4 00	36	5 06	05 61		10 21	
8	298	37.6		254	46.6 ¹⁶⁷	-0 11.2 ¹⁴⁵	35	15	48	15	04 58		12 25	
9	313	37.7		269	22.4 ¹⁶⁸	25.6 ¹⁴⁴	30	28	4 58	24	04 55		14 27	
10	328	37.8		283	58.0 ¹⁶⁶	40.1 ¹⁴⁵	20	4 48	5 15	38	04 49		17 33	
11	343	37.9	+15 45.3	298	33.7 ¹⁶⁷	-0 54.6 ¹⁴⁵	10 N	5 03	5 29	5 51	9 03 45	21 20	37	
12	358	38.0	+15 44.6	313	09.4 ¹⁶⁷	-1 09.1 ¹⁴⁵	0	5 16	5 41	6 02	9 03 41	21 22	42	
13	13	38.1		327	45.0 ¹⁶⁶	23.6 ¹⁴⁵	10 S	26	5 52	13	03 36		25 45	
14	28	38.2		342	20.6 ¹⁶⁶	38.0 ¹⁴⁴	20	36	6 03	25	02 32		27 51	
15	43	38.3		356	56.2 ¹⁶⁶	-1 52.5 ¹⁴⁵	30	46	14	39	02 26		30 56	
16	58	38.3		11	31.7 ¹⁶⁵	-2 07.0 ¹⁴⁵	35	50	21	47	02 23		32 59	
17	73	38.4	+15 41.0	26	07.3 ¹⁶⁶	-2 21.5 ¹⁴⁵	40	5 55	6 27	6 56	9 02 20	21 34	63	
18	88	38.5	+15 40.2	40	42.8 ¹⁶⁵	-2 36.0 ¹⁴⁵	45	6 00	6 35	7 06	9 01 17	21 36	67	
19	103	38.6		55	18.3 ¹⁶⁵	-2 50.5 ¹⁴⁵	50	06	44	19	01 12		39 72	
20	118	38.7		69	53.7 ¹⁶⁴	-3 05.0 ¹⁴⁵	52	08	48	24	01 10		40 74	
21	133	38.8		84	29.1 ¹⁶⁴	19.5 ¹⁴⁵	54	11	53	31	01 7		42 76	
22	148	38.9		99	04.5 ¹⁶⁴	34.0 ¹⁴⁵	56	13	6 58	38	01 5		43 80	
23	163	39.0		113	39.9 ¹⁶⁴	-3 48.5 ¹⁴⁵	58	16	7 03	46	01 2		45 83	
24	178	39.1	+15 35.9	128	15.2 ¹⁶³	-4 03.0 ¹⁴⁵	60 S	6 19	7 09	7 55	9 00 **	21 47	86	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 2 ^h 49 ^m 2		Mag: -3.9 PMG: 14 ^h 16 ^m		Mag: -0.6 PMG: 5 ^h 10 ^m		Mag: -1.8 PMG: 15 ^h 43 ^m		Mag: +0.2 PMG: 11 ^h 10 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	317	35.2	146	02.7	+4 50.2	282	23.9	+11 03.8	123	46.5	-4 38.5	192	11.9	+19 46.9
1	332	37.7	161	02.4	48.9	297	25.0	04.2	138	48.6	38.7	207	14.0	46.9
2	347	40.1	176	02.2	47.6	312	26.2	04.6	153	50.7	38.8	222	16.2	46.8
3	2	42.6	191	01.9	46.4	327	27.4	05.1	168	52.8	39.0	237	18.3	46.7
4	17	45.1	206	01.7	45.1	342	28.6	05.5	183	54.9	39.1	252	20.4	46.7
5	32	47.5	221	01.4	+4 43.9	357	29.8	+11 05.9	198	57.0	-4 39.3	267	22.6	+19 46.6
6	47	50.0	236	01.2	+4 42.6	12	31.0	+11 06.3	213	59.1	-4 39.5	282	24.7	+19 46.5
7	62	52.5	251	00.9	41.3	27	32.2	06.8	229	01.2	39.6	297	26.8	46.5
8	77	54.9	266	00.7	40.1	42	33.4	07.2	244	03.3	39.8	312	29.0	46.4
9	92	57.4	281	00.5	38.8	57	34.6	07.6	259	05.4	39.9	327	31.1	46.3
10	107	59.9	296	00.2	37.5	72	35.8	08.0	274	07.5	40.1	342	33.2	46.3
11	123	02.3	311	00.0	+4 36.3	87	37.0	+11 08.5	289	09.6	-4 40.3	357	35.4	+19 46.2
12	138	04.8	325	59.7	+4 35.0	102	38.1	+11 08.9	304	11.7	-4 40.4	12	37.5	+19 46.1
13	153	07.3	340	59.5	33.8	117	39.3	09.3	319	13.8	40.6	27	39.6	46.0
14	168	09.7	355	59.2	32.5	132	40.5	09.7	334	16.0	40.7	42	41.8	46.0
15	183	12.2	10	59.0	31.2	147	41.7	10.2	349	18.1	40.9	57	43.9	45.9
16	198	14.6	25	58.7	30.0	162	42.9	10.6	4	20.2	41.1	72	46.1	45.8
17	213	17.1	40	58.5	+4 28.7	177	44.1	+11 11.0	19	22.3	-4 41.2	87	48.2	+19 45.8
18	228	19.6	55	58.2	+4 27.4	192	45.3	+11 11.4	34	24.4	-4 41.4	102	50.3	+19 45.7
19	243	22.0	70	58.0	26.2	207	46.5	11.8	49	26.5	41.5	117	52.5	45.6
20	258	24.5	85	57.7	24.9	222	47.7	12.3	64	28.6	41.7	132	54.6	45.6
21	273	27.0	100	57.5	23.6	237	48.9	12.7	79	30.7	41.8	147	56.7	45.5
22	288	29.4	115	57.2	22.4	252	50.1	13.1	94	32.8	42.0	162	58.9	45.4
23	303	31.9	130	57.0	21.1	267	51.3	13.5	109	34.9	42.2	178	01.0	45.3
24	318	34.4	145	56.8	+4 19.8	282	52.5	+11 14.0	124	37.0	-4 42.3	193	03.1	+19 45.3
Dif	—		-2 -13		+12 +4		+21		-2		+21		-	

UT	SOL				LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 15°8 PMG: 12 ^h 05 ^m 3				Edad: 4 ^d 9 PHE { SD: 15°0 PMG: 15 ^h 53 ^m													
	hG ☉		Dec		hG ☾		Dif											
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m			
0	178	39.1	+15	35.9	128	15.2	-4	03.0	60 N	20 07	21 00	22 25	10 31 89		20 57	**		
1	193	39.2		35.1	142	50.5 ¹⁶³		17.5 ¹⁴⁵	58	19 57	20 46	21 56	28 85		21 02	3		
2	208	39.3		34.4	157	25.8 ¹⁶³		32.0 ¹⁴⁵	56	48	33	35	24 82		07	6		
3	223	39.4		33.7	172	01.0 ¹⁶²	-4	46.4 ¹⁴⁴	54	40	22	18	21 79		11	9		
4	238	39.4		32.9	186	36.2 ¹⁶²	-5	00.9 ¹⁴⁵	52	34	13	21 03	18 76		14	12		
5	253	39.5	+15	32.2	201	11.3 ¹⁶¹	-5	15.3 ¹⁴⁴	50	19 27	20 04	20 51	10 16 73		21 18	14		
6	268	39.6	+15	31.5	215	46.4 ¹⁶¹	-5	29.8 ¹⁴⁵	45	19 14	19 47	20 27	10 11 68		21 25	19		
7	283	39.7		30.7	230	21.4 ¹⁶⁰		44.2 ¹⁴⁴	40	19 03	33	20 08	06 64		31	23		
8	298	39.8		30.0	244	56.4 ¹⁶⁰	-5	58.6 ¹⁴⁴	35	18 54	21	19 54	10 02 61		37	26		
9	313	39.9		29.3	259	31.4 ¹⁶⁰	-6	13.1 ¹⁴⁵	30	46	19 11	41	9 59 57		41	30		
10	328	40.0		28.5	274	06.3 ¹⁵⁹		27.5 ¹⁴⁴	20	32	18 55	22	53 52		50	35		
11	343	40.1	+15	27.8	288	41.2 ¹⁵⁹	-6	41.8 ¹⁴³	10 N	18 20	18 42	19 07	9 48 47		21 57	39		
12	358	40.2	+15	27.1	303	16.0 ¹⁵⁸	-6	56.2 ¹⁴⁴	0	18 09	18 30	18 55	9 44 42		22 04	44		
13	13	40.3		26.3	317	50.8 ¹⁵⁸	-7	10.6 ¹⁴⁴	10 S	17 58	19	45	39 38		10	49		
14	28	40.4		25.6	332	25.5 ¹⁵⁷		24.9 ¹⁴³	20	46	18 09	35	34 34		18	53		
15	43	40.5		24.9	347	00.2 ¹⁵⁷		39.2 ¹⁴³	30	33	17 58	26	28 29		26	59		
16	58	40.6		24.1	1	34.8 ¹⁵⁶	-7	53.5 ¹⁴³	35	25	51	21	25 26		31	62		
17	73	40.7	+15	23.4	16	09.4 ¹⁵⁶	-8	07.8 ¹⁴³	40	17 17	17 45	18 17	9 22 22		22 37	65		
18	88	40.8	+15	22.6	30	43.9 ¹⁵⁵	-8	22.1 ¹⁴³	45	17 06	17 37	18 12	9 18 18		22 43	70		
19	103	40.9		21.9	45	18.3 ¹⁵⁴		36.4 ¹⁴³	50	16 54	29	07	13 13		51	75		
20	118	41.0		21.2	59	52.7 ¹⁵⁴	-8	50.6 ¹⁴²	52	49	25	05	11 11		54	78		
21	133	41.1		20.4	74	27.0 ¹⁵³	-9	04.8 ¹⁴²	54	43	20	03	08 9		22 58	81		
22	148	41.2		19.7	89	01.3 ¹⁵³		19.0 ¹⁴²	56	36	16	18 00	06 5		23 03	83		
23	163	41.3		19.0	103	35.5 ¹⁵²		33.1 ¹⁴¹	58	28	11	17 58	9 03 2		08	87		
24	178	41.4	+15	18.2	118	09.6 ¹⁵¹	-9	47.2 ¹⁴¹	60 S	16 19	17 05	17 55	8 59 0		23 13	92		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 2 ^h 45 ^m 3			Mag: -3.9 PMG: 14 ^h 16 ^m			Mag: -0.6 PMG: 5 ^h 08 ^m			Mag: -1.8 PMG: 15 ^h 39 ^m			Mag: +0.2 PMG: 11 ^h 06 ^m					
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	318	34.4	145	56.8	+4	19.8	282	52.5	+11	14.0	124	37.0	-4	42.3	193	03.1	+19	45.3
1	333	36.8	160	56.5		18.6	297	53.7		14.4	139	39.1		42.5	208	05.3		45.2
2	348	39.3	175	56.3		17.3	312	54.9		14.8	154	41.2		42.6	223	07.4		45.1
3	3	41.8	190	56.0		16.0	327	56.1		15.2	169	43.3		42.8	238	09.5		45.1
4	18	44.2	205	55.8		14.8	342	57.3		15.6	184	45.4		43.0	253	11.7		45.0
5	33	46.7	220	55.5	+4	13.5	357	58.5	+11	16.1	199	47.5	-4	43.1	268	13.8	+19	44.9
6	48	49.1	235	55.3	+4	12.2	12	59.7	+11	16.5	214	49.6	-4	43.3	283	16.0	+19	44.9
7	63	51.6	250	55.1		11.0	28	00.9		16.9	229	51.7		43.4	298	18.1		44.8
8	78	54.1	265	54.8		09.7	43	02.1		17.3	244	53.8		43.6	313	20.2		44.7
9	93	56.5	280	54.6		08.4	58	03.3		17.7	259	55.9		43.8	328	22.4		44.7
10	108	59.0	295	54.3		07.2	73	04.5		18.1	274	58.0		43.9	343	24.5		44.6
11	124	01.5	310	54.1	+4	05.9	88	05.7	+11	18.6	290	00.1	-4	44.1	358	26.6	+19	44.5
12	139	03.9	325	53.8	+4	04.6	103	06.9	+11	19.0	305	02.1	-4	44.2	13	28.8	+19	44.4
13	154	06.4	340	53.6		03.4	118	08.1		19.4	320	04.2		44.4	28	30.9		44.4
14	169	08.9	355	53.4		02.1	133	09.4		19.8	335	06.3		44.6	43	33.0		44.3
15	184	11.3	10	53.1	+4	00.8	148	10.6		20.2	350	08.4		44.7	58	35.2		44.2
16	199	13.8	25	52.9	+3	59.6	163	11.8		20.6	5	10.5		44.9	73	37.3		44.2
17	214	16.2	40	52.6	+3	58.3	178	13.0	+11	21.1	20	12.6	-4	45.1	88	39.5	+19	44.1
18	229	18.7	55	52.4	+3	57.0	193	14.2	+11	21.5	35	14.7	-4	45.2	103	41.6	+19	44.0
19	244	21.2	70	52.2		55.8	208	15.4		21.9	50	16.8		45.4	118	43.7		44.0
20	259	23.6	85	51.9		54.5	223	16.6		22.3	65	18.9		45.5	133	45.9		43.9
21	274	26.1	100	51.7		53.2	238	17.8		22.7	80	21.0		45.7	148	48.0		43.8
22	289	28.6	115	51.4		52.0	253	19.0		23.1	95	23.1		45.9	163	50.1		43.8
23	304	31.0	130	51.2		50.7	268	20.2		23.5	110	25.2		46.0	178	52.3		43.7
24	319	33.5	145	51.0	+3	49.4	283	21.4	+11	24.0	125	27.3	-4	46.2	193	54.4	+19	43.6
Dif	—		-2		-13		+12		+4		+21		-2		+21		-1	

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna									
	SD: 15 ^h 8 PMG: 12 ^h 05 ^m 2			Edad: 5 ^d 9 PHE { SD: 15 ^h 2 PMG: 16 ^h 37 ^m																		
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°							
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	h	m				
0	178	41.4	+15	18.2	118	09.6	-9	47.2	60 N	1	46	3	11	4	05	12	00	96	20	56	1	
1	193	41.5		17.5	132	43.7 ¹⁵¹	-10	01.3 ¹⁴¹	58	2	15		26	14		11	53	90	21	05	5	
2	208	41.6		16.7	147	17.7 ¹⁵⁰		15.4 ¹⁴¹	56		36		38	23		46	86		13	9		
3	223	41.7		16.0	161	51.6 ¹⁴⁹		29.5 ¹⁴¹	54	2	53		49	31		40	83		20	12		
4	238	41.8		15.3	176	25.5 ¹⁴⁹		43.5 ¹⁴⁰	52	3	08	3	59	38		34	80		26	15		
5	253	41.9	+15	14.5	190	59.3 ¹⁴⁸	-10	57.5 ¹⁴⁰	50	3	20	4	07	4	44	11	29	77	21	32	18	
6	268	42.0	+15	13.8	205	33.0 ¹⁴⁷	-11	11.4 ¹³⁹	45	3	44	4	24	4	57	11	19	71	21	44	23	
7	283	42.1		13.0	220	06.7 ¹⁴⁷		25.3 ¹³⁹	40	4	03		38	5	08		10	67	21	54	28	
8	298	42.2		12.3	234	40.3 ¹⁴⁶		39.2 ¹³⁹	35		17	4	50	17		11	03	63	22	03	31	
9	313	42.3		11.5	249	13.8 ¹⁴⁵	-11	53.1 ¹³⁹	30		29	5	00	25		10	56	60	11	34		
10	328	42.4		10.8	263	47.2 ¹⁴⁴	-12	06.9 ¹³⁸	20	4	48		16	39		45	55		25	39		
11	343	42.5	+15	10.0	278	20.6 ¹⁴⁴	-12	20.7 ¹³⁸	10 N	5	03	5	29	5	51	10	35	50	22	36	44	
12	358	42.6	+15	09.3	292	53.8 ¹⁴²	-12	34.4 ¹³⁷	0	5	15	5	40	6	02	10	26	46	22	48	47	
13	13	42.7		08.6	307	27.0 ¹⁴²	-12	48.1 ¹³⁷	10 S		26	5	51	13		17	42		22	59	52	
14	28	42.8		07.8	322	00.2 ¹⁴²	-13	01.8 ¹³⁷	20		35	6	01	24		10	08	37	23	11	56	
15	43	42.9		07.1	336	33.2 ¹⁴⁰		15.4 ¹³⁶	30		44		13	37		9	57	32		25	61	
16	58	43.0		06.3	351	06.1 ¹³⁹		29.0 ¹³⁶	35		49		19	45		51	28		33	65		
17	73	43.1	+15	05.6	5	39.0 ¹³⁹	-13	42.5 ¹³⁵	40	5	53	6	25	6	53	9	44	25	23	42	68	
18	88	43.2	+15	04.8	20	11.8 ¹³⁸	-13	56.0 ¹³⁵	45	5	58	6	33	7	03	9	36	21	23	53	73	
19	103	43.3		04.1	34	44.4 ¹³⁶	-14	09.5 ¹³⁵	50	6	03		41	15		26	16		**	**	**	
20	118	43.4		03.3	49	17.0 ¹³⁶		22.8 ¹³³	52		05		45	21		22	13		**	**	**	
21	133	43.5		02.6	63	49.5 ¹³⁵		36.2 ¹³⁴	54		07		49	27		17	10		**	**	**	
22	148	43.6		01.8	78	21.9 ¹³⁴	-14	49.5 ¹³³	56		09		54	34		11	8		**	**	**	
23	163	43.7		01.1	92	54.3 ¹³⁴	-15	02.7 ¹³²	58		12	6	59	41		9	05	5		**	**	**
24	178	43.8	+15	00.3	107	26.5 ¹³²	-15	15.9 ¹³²	60 S	6	14	7	04	7	50	8	59	0		**	**	**
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO									
	PMG: 2 ^h 41 ^m 3			Mag: -3.9 PMG: 14 ^h 17 ^m			Mag: -0.6 PMG: 5 ^h 06 ^m			Mag: -1.8 PMG: 15 ^h 36 ^m			Mag: +0.3 PMG: 11 ^h 03 ^m									
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	319	33.5	145	51.0	+3	49.4	283	21.4	+11	24.0	125	27.3	-4	46.2	193	54.4	+19	43.6				
1	334	36.0	160	50.7		48.1	298	22.7		24.4	140	29.4		46.3	208	56.5		43.5				
2	349	38.4	175	50.5		46.9	313	23.9		24.8	155	31.5		46.5	223	58.7		43.5				
3	4	40.9	190	50.3		45.6	328	25.1		25.2	170	33.6		46.7	239	00.8		43.4				
4	19	43.4	205	50.0		44.3	343	26.3		25.6	185	35.7		46.8	254	03.0		43.3				
5	34	45.8	220	49.8	+3	43.1	358	27.5	+11	26.0	200	37.8	-4	47.0	269	05.1	+19	43.3				
6	49	48.3	235	49.5	+3	41.8	13	28.7	+11	26.4	215	39.9	-4	47.1	284	07.2	+19	43.2				
7	64	50.7	250	49.3		40.5	28	29.9		26.9	230	42.0		47.3	299	09.4		43.1				
8	79	53.2	265	49.1		39.2	43	31.2		27.3	245	44.1		47.5	314	11.5		43.1				
9	94	55.7	280	48.8		38.0	58	32.4		27.7	260	46.2		47.6	329	13.6		43.0				
10	109	58.1	295	48.6		36.7	73	33.6		28.1	275	48.3		47.8	344	15.8		42.9				
11	125	00.6	310	48.4	+3	35.4	88	34.8	+11	28.5	290	50.4	-4	48.0	359	17.9	+19	42.8				
12	140	03.1	325	48.1	+3	34.2	103	36.0	+11	28.9	305	52.5	-4	48.1	14	20.1	+19	42.8				
13	155	05.5	340	47.9		32.9	118	37.2		29.3	320	54.6		48.3	29	22.2		42.7				
14	170	08.0	355	47.7		31.6	133	38.5		29.7	335	56.6		48.4	44	24.3		42.6				
15	185	10.5	10	47.4		30.3	148	39.7		30.1	350	58.7		48.6	59	26.5		42.6				
16	200	12.9	25	47.2		29.1	163	40.9		30.5	6	00.8		48.8	74	28.6		42.5				
17	215	15.4	40	47.0	+3	27.8	178	42.1	+11	31.0	21	02.9	-4	48.9	89	30.7	+19	42.4				
18	230	17.8	55	46.7	+3	26.5	193	43.3	+11	31.4	36	05.0	-4	49.1	104	32.9	+19	42.4				
19	245	20.3	70	46.5		25.2	208	44.6		31.8	51	07.1		49.3	119	35.0		42.3				
20	260	22.8	85	46.2		24.0	223	45.8		32.2	66	09.2		49.4	134	37.2		42.2				
21	275	25.2	100	46.0		22.7	238	47.0		32.6	81	11.3		49.6	149	39.3		42.2				
22	290	27.7	115	45.8		21.4	253	48.2		33.0	96	13.4		49.7	164	41.4		42.1				
23	305	30.2	130	45.5		20.1	268	49.4		33.4	111	15.5		49.9	179	43.6		42.0				
24	320	32.6	145	45.3	+3	18.9	283	50.7	+11	33.8	126	17.6	-4	50.1	194	45.7	+19	41.9				
Dif	—			-2	-13		+12	+4		+21	-2				+21	-			-1			

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 15'8			Edad: 6 ^d 9	PHE {	4 ^h : 56'6 12 ^h : 56'8 20 ^h : 57'1											
	PMG: 12 ^h 05 ^m 0																
	hG ☉	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	43.8	+15 00.3	107	26.5	-15 15.9	60 N	20 01	20 54	22 14	13 36 103	20 57 2					
1	193	43.9	+14 59.6	121	58.6 ¹³¹	29.1 ¹³²	58	19 52	40	21 48	23 97	21 10 9					
2	208	44.0	58.8	136	30.6 ¹³⁰	42.2 ¹³¹	56	44	28	28	12 92	22 14					
3	223	44.1	58.1	151	02.6 ¹³⁰	-15 55.2 ¹³⁰	54	36	17	21 12	13 03 87	32 19					
4	238	44.2	57.3	165	34.4 ¹²⁸	-16 08.1 ¹²⁹	52	30	08	20 58	12 54 84	41 22					
5	253	44.3	+14 56.6	180	06.1 ¹²⁷	-16 21.1 ¹³⁰	50	19 24	20 00	20 47	12 46 81	21 50 24					
6	268	44.4	+14 55.8	194	37.8 ¹²⁷	-16 33.9 ¹²⁸	45	19 11	19 43	20 23	12 30 75	22 07 30					
7	283	44.5	55.1	209	09.3 ¹²⁵	46.7 ¹²⁸	40	19 01	30	20 05	17 71	22 34					
8	298	44.6	54.3	223	40.7 ¹²⁴	-16 59.4 ¹²⁷	35	18 52	19	19 51	12 06 67	34 38					
9	313	44.8	53.6	238	12.1 ¹²⁴	-17 12.1 ¹²⁷	30	44	19 09	39	11 56 64	22 45 41					
10	328	44.9	52.8	252	43.3 ¹²²	24.7 ¹²⁶	20	31	18 54	21	40 58	23 04 45					
11	343	45.0	+14 52.0	267	14.4 ¹²¹	-17 37.2 ¹²⁵	10 N	18 19	18 41	19 06	11 25 55	23 20 49					
12	358	45.1	+14 51.3	281	45.4 ¹²⁰	-17 49.7 ¹²⁵	0	18 08	18 30	18 55	11 12 50	23 35 53					
13	13	45.2	50.5	296	16.3 ¹¹⁹	-18 02.1 ¹²⁴	10 S	17 58	19	45	10 59 46	23 51 56					
14	28	45.3	49.8	310	47.1 ¹¹⁸	14.4 ¹²³	20	47	18 09	35	45 42	** ** *					
15	43	45.4	49.0	325	17.7 ¹¹⁶	26.6 ¹²²	30	34	17 59	27	29 37	** ** *					
16	58	45.5	48.3	339	48.3 ¹¹⁶	38.8 ¹²²	35	27	53	23	19 35	** ** *					
17	73	45.6	+14 47.5	354	18.7 ¹¹⁴	-18 50.9 ¹²¹	40	17 18	17 47	18 19	10 09 31	** ** *					
18	88	45.7	+14 46.8	8	49.0 ¹¹³	-19 02.9 ¹²⁰	45	17 09	17 39	18 14	9 57 26	** ** *					
19	103	45.8	46.0	23	19.3 ¹¹³	14.9 ¹²⁰	50	16 57	31	10	42 21	0 06 78					
20	118	45.9	45.2	37	49.4 ¹¹¹	26.7 ¹¹⁸	52	52	28	08	35 18	12 81					
21	133	46.1	44.5	52	19.3 ¹⁰⁹	38.5 ¹¹⁸	54	46	24	06	27 16	19 84					
22	148	46.2	43.7	66	49.2 ¹⁰⁹	-19 50.2 ¹¹⁷	56	39	19	03	19 12	26 89					
23	163	46.3	43.0	81	18.9 ¹⁰⁷	-20 01.8 ¹¹⁶	58	32	14	18 01	9 10 7	35 93					
24	178	46.4	+14 42.2	95	48.6 ¹⁰⁷	-20 13.3 ¹¹⁵	60 S	16 24	17 09	17 59	8 59 2	0 45 98					
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG		Mag: -3.9			Mag: -0.7			Mag: -1.8			Mag: +0.3					
	2 ^h 37 ^m 4		PMG: 14 ^h 17 ^m			PMG: 5 ^h 04 ^m			PMG: 15 ^h 33 ^m			PMG: 10 ^h 59 ^m					
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°				
0	320	32.6	145 45.3	+3 18.9	283 50.7	+11 33.8	126 17.6	-4 50.1	194 45.7	+19 41.9							
1	335	35.1	160 45.1	17.6	298 51.9	34.2	141 19.7	50.2	209 47.8	41.9							
2	350	37.6	175 44.9	16.3	313 53.1	34.6	156 21.8	50.4	224 50.0	41.8							
3	5 40.0	190 44.6	15.0	328 54.3	35.0	171 23.9	50.6	239 52.1	41.7								
4	20 42.5	205 44.4	13.8	343 55.6	35.4	186 25.9	50.7	254 54.3	41.7								
5	35 45.0	220 44.2	+3 12.5	358 56.8	+11 35.9	201 28.0	-4 50.9	269 56.4	+19 41.6								
6	50 47.4	235 43.9	+3 11.2	13 58.0	+11 36.3	216 30.1	-4 51.0	284 58.5	+19 41.5								
7	65 49.9	250 43.7	09.9	28 59.2	36.7	231 32.2	51.2	300 00.7	41.5								
8	80 52.3	265 43.5	08.7	44 00.5	37.1	246 34.3	51.4	315 02.8	41.4								
9	95 54.8	280 43.2	07.4	59 01.7	37.5	261 36.4	51.5	330 04.9	41.3								
10	110 57.3	295 43.0	06.1	74 02.9	37.9	276 38.5	51.7	345 07.1	41.3								
11	125 59.7	310 42.8	+3 04.8	89 04.2	+11 38.3	291 40.6	-4 51.9	0 09.2	+19 41.2								
12	141 02.2	325 42.5	+3 03.6	104 05.4	+11 38.7	306 42.7	-4 52.0	15 11.4	+19 41.1								
13	156 04.7	340 42.3	02.3	119 06.6	39.1	321 44.8	52.2	30 13.5	41.0								
14	171 07.1	355 42.1	+3 01.0	134 07.8	39.5	336 46.9	52.3	45 15.6	41.0								
15	186 09.6	10 41.8	+2 59.7	149 09.1	39.9	351 48.9	52.5	60 17.8	40.9								
16	201 12.1	25 41.6	58.5	164 10.3	40.3	6 51.0	52.7	75 19.9	40.8								
17	216 14.5	40 41.4	+2 57.2	179 11.5	+11 40.7	21 53.1	-4 52.8	90 22.0	+19 40.8								
18	231 17.0	55 41.2	+2 55.9	194 12.8	+11 41.1	36 55.2	-4 53.0	105 24.2	+19 40.7								
19	246 19.5	70 40.9	54.6	209 14.0	41.5	51 57.3	53.2	120 26.3	40.6								
20	261 21.9	85 40.7	53.4	224 15.2	41.9	66 59.4	53.3	135 28.5	40.6								
21	276 24.4	100 40.5	52.1	239 16.5	42.3	82 01.5	53.5	150 30.6	40.5								
22	291 26.8	115 40.2	50.8	254 17.7	42.7	97 03.6	53.7	165 32.7	40.4								
23	306 29.3	130 40.0	49.5	269 18.9	43.1	112 05.7	53.8	180 34.9	40.3								
24	321 31.8	145 39.8	+2 48.2	284 20.2	+11 43.5	127 07.8	-4 54.0	195 37.0	+19 40.3								
Dif	—	-2	-13	+12	+4	+21	-2	+21	-1								

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8 PMG: 12 ^h 04 ^m 8			Edad: 7 ^d 9 SD: 15 ^h 6 PMG: 18 ^h 15 ^m	PHE { 4 ^h : 57 ^h 4 12 ^h : 57 ^h 6 20 ^h : 57 ^h 9 R°: 57 ^m	Náutico		Civil	Hora		R°	Hora	R°		
	hG ☉	Dec	Dif												
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	46.4	+14	42.2	95	48.6	-20 13.3	60 N	1 57	3 17	4 09	15 19	110	20 59	9
1	193	46.5		41.4	110	18.1 ¹⁰⁵	24.8 ¹¹⁵	58	2 23	31	19	15 00	100	21 19	19
2	208	46.6		40.7	124	47.4 ¹⁰³	36.1 ¹¹³	56	43	43	27	14 44	93	36	25
3	223	46.7		39.9	139	16.7 ¹⁰³	47.4 ¹¹³	54	2 59	3 53	34	30	88	21 51	29
4	238	46.8		39.2	153	45.8 ¹⁰¹	-20 58.5 ¹¹¹	52	3 12	4 02	41	18 85		22 03	33
5	253	46.9	+14	38.4	168	14.8 ¹⁰⁰	-21 09.6 ¹¹¹	50	3 24	4 10	4 47	14 07	82	22 14	36
6	268	47.0	+14	37.6	182	43.7 ⁹⁹	-21 20.6 ¹¹⁰	45	3 47	4 27	4 59	13 45	77	22 37	41
7	283	47.2		36.9	197	12.5 ⁹⁸	31.4 ¹⁰⁸	40	4 05	40	5 10	28 72		22 56	44
8	298	47.3		36.1	211	41.1 ⁹⁶	42.2 ¹⁰⁸	35	19	4 51	18	13 69		23 12	47
9	313	47.4		35.3	226	09.6 ⁹⁵	-21 52.9 ¹⁰⁷	30	31	5 01	26	13 00	67	26	49
10	328	47.5		34.6	240	38.0 ⁹⁴	-22 03.4 ¹⁰⁵	20	4 49	16	39	12 38	63	23 49	53
11	343	47.6	+14	33.8	255	06.2 ⁹²	-22 13.9 ¹⁰⁵	10 N	5 04	5 29	5 51	12 20	59	** ** *	**
12	358	47.7	+14	33.0	269	34.4 ⁹²	-22 24.3 ¹⁰⁴	0	5 15	5 40	6 01	12 02	56	** ** *	**
13	13	47.8		32.3	284	02.4 ⁹⁰	34.5 ¹⁰²	10 S	25	5 50	12	11 45	53	** ** *	**
14	28	48.0		31.5	298	30.2 ⁸⁸	44.6 ¹⁰¹	20	34	6 00	23	27 49		0 07	61
15	43	48.1		30.8	312	58.0 ⁸⁸	-22 54.7 ¹⁰¹	30	43	11	35	11 06	45	26	66
16	58	48.2		30.0	327	25.6 ⁸⁶	-23 04.6 ⁹⁹	35	47	17	43	10 54	42	38	68
17	73	48.3	+14	29.2	341	53.0 ⁸⁴	-23 14.4 ⁹⁸	40	5 51	6 23	6 51	10 40	39	0 50	72
18	88	48.4	+14	28.5	356	20.4 ⁸⁴	-23 24.1 ⁹⁷	45	5 55	6 30	7 00	10 23	35	1 06	76
19	103	48.5		27.7	10	47.6 ⁸²	33.6 ⁹⁵	50	6 00	38	12	10 03	30	24	82
20	118	48.6		26.9	25	14.7 ⁸¹	43.1 ⁹⁵	52	01	41	17	9 53	27	33	85
21	133	48.8		26.1	39	41.6 ⁷⁹	-23 52.4 ⁹³	54	03	45	23	43 23		43	89
22	148	48.9		25.4	54	08.4 ⁷⁸	-24 01.6 ⁹²	56	05	49	29	31 19		1 55	92
23	163	49.0		24.6	68	35.1 ⁷⁷	10.6 ⁹⁰	58	08	54	36	17 14		2 08	98
24	178	49.1	+14	23.8	83	01.7 ⁷⁶	-24 19.6 ⁹⁰	60 S	6 10	6 59	7 45	9 01	6	2 23	107

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 2 ^h 33 ^m 5		Mag: -3.9 PMG: 14 ^h 18 ^m		Mag: -0.7 PMG: 5 ^h 02 ^m		Mag: -1.8 PMG: 15 ^h 29 ^m		Mag: +0.3 PMG: 10 ^h 56 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	321	31.8	145	39.8	+2	48.2	284	20.2	+11	43.5	127	07.8	-4	54.0	195	37.0	+19	40.3
1	336	34.2	160	39.6		47.0	299	21.4		43.9	142	09.8		54.1	210	39.2		40.2
2	351	36.7	175	39.3		45.7	314	22.7		44.3	157	11.9		54.3	225	41.3		40.1
3	6	39.2	190	39.1		44.4	329	23.9		44.7	172	14.0		54.5	240	43.4		40.1
4	21	41.6	205	38.9		43.1	344	25.1		45.1	187	16.1		54.6	255	45.6		40.0
5	36	44.1	220	38.7	+2	41.8	359	26.4	+11	45.5	202	18.2	-4	54.8	270	47.7	+19	39.9
6	51	46.6	235	38.4	+2	40.6	14	27.6	+11	45.9	217	20.3	-4	55.0	285	49.9	+19	39.9
7	66	49.0	250	38.2		39.3	29	28.8		46.3	232	22.4		55.1	300	52.0		39.8
8	81	51.5	265	38.0		38.0	44	30.1		46.7	247	24.5		55.3	315	54.1		39.7
9	96	53.9	280	37.7		36.7	59	31.3		47.1	262	26.5		55.5	330	56.3		39.7
10	111	56.4	295	37.5		35.5	74	32.6		47.5	277	28.6		55.6	345	58.4		39.6
11	126	58.9	310	37.3	+2	34.2	89	33.8	+11	47.9	292	30.7	-4	55.8	1	00.5	+19	39.5
12	142	01.3	325	37.1	+2	32.9	104	35.1	+11	48.3	307	32.8	-4	56.0	16	02.7	+19	39.4
13	157	03.8	340	36.8		31.6	119	36.3		48.7	322	34.9		56.1	31	04.8		39.4
14	172	06.3	355	36.6		30.3	134	37.5		49.1	337	37.0		56.3	46	07.0		39.3
15	187	08.7	10	36.4		29.1	149	38.8		49.5	352	39.1		56.4	61	09.1		39.2
16	202	11.2	25	36.2		27.8	164	40.0		49.9	7	41.2		56.6	76	11.2		39.2
17	217	13.7	40	35.9	+2	26.5	179	41.3	+11	50.3	22	43.2	-4	56.8	91	13.4	+19	39.1
18	232	16.1	55	35.7	+2	25.2	194	42.5	+11	50.7	37	45.3	-4	56.9	106	15.5	+19	39.0
19	247	18.6	70	35.5		23.9	209	43.8		51.1	52	47.4		57.1	121	17.7		39.0
20	262	21.1	85	35.3		22.7	224	45.0		51.5	67	49.5		57.3	136	19.8		38.9
21	277	23.5	100	35.0		21.4	239	46.3		51.9	82	51.6		57.4	151	21.9		38.8
22	292	26.0	115	34.8		20.1	254	47.5		52.3	97	53.7		57.6	166	24.1		38.8
23	307	28.4	130	34.6		18.8	269	48.8		52.7	112	55.8		57.8	181	26.2		38.7
24	322	30.9	145	34.4	+2	17.5	284	50.0	+11	53.1	127	57.8	-4	57.9	196	28.4	+19	38.6
Dif	—		-2		-13		+12		+4		+21		-2		+21		-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 6			Edad: 8 ^d 9 PHE { 4 ^h : 58'2 12 ^h : 58'5 20 ^h : 58'8 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	178	49.1	+14 23.8	83	01.7	-24 19.6	74	60 N	19 56	20 47	22 04	17 09 101	21 08 29	
1	193	49.2	23.1	97	28.1	28.4	88	58	47	34	21 40	16 40 89	21 38 40	
2	208	49.3	22.3	111	54.4	37.1	87	56	39	22	21	16 17 84	22 01 45	
3	223	49.5	21.5	126	20.6	45.6	85	54	32	13	21 06	15 58 82	20 48	
4	238	49.6	20.8	140	46.6	-24 54.0	84	52	26	20 04	20 53	43 79	36 50	
5	253	49.7	+14 20.0	155	12.5	-25 02.3	83	50	19 20	19 56	20 42	15 29 77	22 50 52	
6	268	49.8	+14 19.2	169	38.3	-25 10.4	81	45	19 08	19 40	20 19	15 02 73	23 18 55	
7	283	49.9	18.4	184	03.9	18.4	80	40	18 58	27	20 02	14 40 71	40 57	
8	298	50.0	17.7	198	29.4	26.3	79	35	50	16	19 49	22 70	23 59 58	
9	313	50.2	16.9	212	54.8	34.0	77	30	42	19 07	37	14 07 68	** ** *	
10	328	50.3	16.1	227	20.1	41.5	75	20	29	18 52	19	13 41 65	** ** *	
11	343	50.4	+14 15.4	241	45.2	-25 49.0	75	10 N	18 18	18 40	19 05	13 19 63	0 09 56	
12	358	50.5	+14 14.6	256	10.2	-25 56.2	72	0	18 08	18 29	18 54	12 58 61	0 28 59	
13	13	50.6	13.8	270	35.1	-26 03.3	71	10 S	17 58	19	44	38 59	0 47 62	
14	28	50.8	13.0	284	59.9	10.3	70	20	47	10	36	12 16 57	1 08 64	
15	43	50.9	12.3	299	24.5	17.1	68	30	35	18 00	28	11 51 54	32 67	
16	58	51.0	11.5	313	49.0	23.7	66	35	28	17 54	24	36 52	1 46 69	
17	73	51.1	+14 10.7	328	13.4	-26 30.2	65	40	17 20	17 48	18 20	11 19 50	2 02 72	
18	88	51.2	+14 09.9	342	37.6	-26 36.5	63	45	17 11	17 42	18 16	10 58 48	2 22 75	
19	103	51.4	09.1	357	01.8	42.7	62	50	17 00	34	12	33 43	46 80	
20	118	51.5	08.4	11	25.8	48.7	60	52	16 55	31	10	20 41	2 58 83	
21	133	51.6	07.6	25	49.7	-26 54.5	58	54	49	27	09	10 06 39	3 12 85	
22	148	51.7	06.8	40	13.5	-27 00.2	57	56	43	23	07	9 50 34	27 90	
23	163	51.8	06.0	54	37.2	05.7	55	58	36	18	05	31 28	3 46 96	
24	178	52.0	+14 05.3	69	00.7	-27 11.0	53	60 S	16 28	17 13	18 03	9 07 18	4 10 106	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 2 ^h 29 ^m 5		Mag: -3.9 PMG: 14 ^h 18 ^m			Mag: -0.7 PMG: 5 ^h 00 ^m			Mag: -1.8 PMG: 15 ^h 26 ^m			Mag: +0.3 PMG: 10 ^h 53 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	322	30.9	145 34.4	+2 17.5	284 50.0	+11 53.1	127 57.8	-4 57.9	196 28.4	+19 38.6				
1	337	33.4	160 34.2	16.2	299 51.2	53.5	142 59.9	58.1	211 30.5	38.5				
2	352	35.8	175 33.9	15.0	314 52.5	53.9	158 02.0	58.3	226 32.6	38.5				
3	7 38.3	190 33.7	13.7	329 53.7	54.3	173 04.1	58.4	241 34.8	38.4					
4	22 40.8	205 33.5	12.4	344 55.0	54.7	188 06.2	58.6	256 36.9	38.3					
5	37 43.2	220 33.3	+2 11.1	359 56.3	+11 55.0	203 08.3	-4 58.8	271 39.1	+19 38.3					
6	52 45.7	235 33.0	+2 09.8	14 57.5	+11 55.4	218 10.3	-4 58.9	286 41.2	+19 38.2					
7	67 48.2	250 32.8	08.6	29 58.8	55.8	233 12.4	59.1	301 43.3	38.1					
8	82 50.6	265 32.6	07.3	45 00.0	56.2	248 14.5	59.3	316 45.5	38.1					
9	97 53.1	280 32.4	06.0	60 01.3	56.6	263 16.6	59.4	331 47.6	38.0					
10	112 55.6	295 32.2	04.7	75 02.5	57.0	278 18.7	59.6	346 49.8	37.9					
11	127 58.0	310 31.9	+2 03.4	90 03.8	+11 57.4	293 20.8	-4 59.7	1 51.9	+19 37.8					
12	143 00.5	325 31.7	+2 02.1	105 05.0	+11 57.8	308 22.8	-4 59.9	16 54.0	+19 37.8					
13	158 02.9	340 31.5	+2 00.9	120 06.3	58.2	323 24.9	-5 00.1	31 56.2	37.7					
14	173 05.4	355 31.3	+1 59.6	135 07.5	58.6	338 27.0	00.2	46 58.3	37.6					
15	188 07.9	10 31.1	58.3	150 08.8	59.0	353 29.1	00.4	62 00.5	37.6					
16	203 10.3	25 30.8	57.0	165 10.0	59.4	8 31.2	00.6	77 02.6	37.5					
17	218 12.8	40 30.6	+1 55.7	180 11.3	+11 59.8	23 33.3	-5 00.7	92 04.7	+19 37.4					
18	233 15.3	55 30.4	+1 54.4	195 12.6	+12 00.1	38 35.3	-5 00.9	107 06.9	+19 37.4					
19	248 17.7	70 30.2	53.2	210 13.8	00.5	53 37.4	01.1	122 09.0	37.3					
20	263 20.2	85 30.0	51.9	225 15.1	00.9	68 39.5	01.2	137 11.2	37.2					
21	278 22.7	100 29.7	50.6	240 16.3	01.3	83 41.6	01.4	152 13.3	37.2					
22	293 25.1	115 29.5	49.3	255 17.6	01.7	98 43.7	01.6	167 15.4	37.1					
23	308 27.6	130 29.3	48.0	270 18.9	02.1	113 45.8	01.7	182 17.6	37.0					
24	323 30.1	145 29.1	+1 46.7	285 20.1	+12 02.5	128 47.8	-5 01.9	197 19.7	+19 36.9					
Dif	—		-2	-13	+13	+4	+21	-2	+21	-1				

UT	SOL				LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8 PMG: 12 ^h 04 ^m 4				Edad: 9 ^d 9 PHE { SD: 16 ^h 1 PMG: 20 ^h 15 ^m 4 ^h : 59 ^m 1 12 ^h : 59 ^m 4 20 ^h : 59 ^m 7 R°: 65 ^m															
	hG ☉		Dec		hG ☾		Dif		Dec			Dif			Náutico	Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	178	52.0	+14	05.3	69	00.7	-27	11.0	52	58	60 N	2 06	3 23	4 14	18 50	56	21 37	81		
1	193	52.1		04.5	83	24.2	45	16.2	52	58		30	36	23	18 09	60	22 18	76		
2	208	52.2		03.7	97	47.5	43	21.2	50	56		2 49	47	31	17 41	62	22 46	75		
3	223	52.3		02.9	112	10.7	42	26.0	48	54		3 04	3 57	38	20 62		23 08	73		
4	238	52.5		02.1	126	33.8	41	30.6	46	52		17	4 06	44	17 02	63	26	73		
5	253	52.6	+14	01.4	140	56.9	41	-27	35.0	44	50	3 28	4 14	4 50	16 46	64	23 42	71		
6	268	52.7	+14	00.6	155	19.8	39	-27	39.3	43	45	3 50	4 30	5 02	16 15	64	***	***	***	
7	283	52.8	+13	59.8	169	42.6	38		43.4	41	40	4 07	42	12	15 51	65	***	***	***	
8	298	53.0		59.0	184	05.3	37		47.3	39	35	21	4 53	20	32	64	***	***	***	
9	313	53.1		58.2	198	27.9	36		51.0	37	30	32	5 02	27	15 15	64	0 15	59		
10	328	53.2		57.4	212	50.4	35		54.5	35	20	4 50	17	40	14 46	65	0 42	60		
11	343	53.3	+13	56.7	227	12.8	34	-27	57.8	33	10 N	5 04	5 29	5 51	14 22	65	1 05	62		
12	358	53.5	+13	55.9	241	35.2	34	-28	01.0	32	0	5 15	5 40	6 01	13 59	65	1 27	63		
13	13	53.6		55.1	255	57.4	32		03.9	29	10 S	25	49	11	37	64	1 49	64		
14	28	53.7		54.3	270	19.6	32		06.7	28	20	33	5 59	22	13 13	64	2 12	65		
15	43	53.8		53.5	284	41.6	30		09.3	26	30	41	6 09	34	12 45	64	39	67		
16	58	54.0		52.7	299	03.6	30		11.7	24	35	45	14	40	28	64	2 55	68		
17	73	54.1	+13	52.0	313	25.5	29	-28	13.8	21	40	5 48	6 20	6 48	12 09	63	3 14	68		
18	88	54.2	+13	51.2	327	47.4	29	-28	15.8	20	45	5 52	6 27	6 57	11 46	63	3 37	69		
19	103	54.3		50.4	342	09.1	27		17.6	18	50	56	34	7 08	16	62	4 06	71		
20	118	54.5		49.6	356	30.8	27		19.2	16	52	5 58	38	13	11 01	62	21	71		
21	133	54.6		48.8	10	52.4	26		20.6	14	54	6 00	41	19	10 45	60	37	73		
22	148	54.7		48.0	25	14.0	26		21.8	12	56	01	45	25	10 24	60	4 57	74		
23	163	54.8		47.2	39	35.5	25		22.7	9	58	03	50	31	9 59	58	5 22	76		
24	178	55.0	+13	46.4	53	56.9	24	-28	23.5	8	60 S	6 05	6 54	7 39	9 25	54	5 56	80		

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG 2 ^h 25 ^m 6		Mag: -3.9 PMG: 14 ^h 18 ^m			Mag: -0.7 PMG: 4 ^h 58 ^m			Mag: -1.8 PMG: 15 ^h 23 ^m			Mag: +0.3 PMG: 10 ^h 49 ^m		
	hG ♈		hG ♀			hG ♂			hG ♃			hG ♄		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	323	30.1	145	29.1	+1	46.7	285	20.1	+12	02.5	128	47.8	-5	01.9
1	338	32.5	160	28.9		45.5	300	21.4		02.9	143	49.9		02.1
2	353	35.0	175	28.6		44.2	315	22.6		03.3	158	52.0		02.2
3	8	37.4	190	28.4		42.9	330	23.9		03.6	173	54.1		02.4
4	23	39.9	205	28.2		41.6	345	25.2		04.0	188	56.2		02.6
5	38	42.4	220	28.0	+1	40.3	0	26.4	+12	04.4	203	58.2	-5	02.7
6	53	44.8	235	27.8	+1	39.0	15	27.7	+12	04.8	219	00.3	-5	02.9
7	68	47.3	250	27.6		37.8	30	29.0		05.2	234	02.4		03.1
8	83	49.8	265	27.3		36.5	45	30.2		05.6	249	04.5		03.2
9	98	52.2	280	27.1		35.2	60	31.5		06.0	264	06.6		03.4
10	113	54.7	295	26.9		33.9	75	32.8		06.4	279	08.6		03.6
11	128	57.2	310	26.7	+1	32.6	90	34.0	+12	06.7	294	10.7	-5	03.7
12	143	59.6	325	26.5	+1	31.3	105	35.3	+12	07.1	309	12.8	-5	03.9
13	159	02.1	340	26.3		30.0	120	36.6		07.5	324	14.9		04.1
14	174	04.6	355	26.0		28.8	135	37.8		07.9	339	17.0		04.2
15	189	07.0	10	25.8		27.5	150	39.1		08.3	354	19.0		04.4
16	204	09.5	25	25.6		26.2	165	40.4		08.7	9	21.1		04.6
17	219	11.9	40	25.4	+1	24.9	180	41.7	+12	09.0	24	23.2	-5	04.7
18	234	14.4	55	25.2	+1	23.6	195	42.9	+12	09.4	39	25.3	-5	04.9
19	249	16.9	70	25.0		22.3	210	44.2		09.8	54	27.4		05.1
20	264	19.3	85	24.7		21.1	225	45.5		10.2	69	29.4		05.2
21	279	21.8	100	24.5		19.8	240	46.7		10.6	84	31.5		05.4
22	294	24.3	115	24.3		18.5	255	48.0		11.0	99	33.6		05.6
23	309	26.7	130	24.1		17.2	270	49.3		11.3	114	35.7		05.8
24	324	29.2	145	23.9	+1	15.9	285	50.6	+12	11.7	129	37.7	-5	05.9
Dif	—		-2 -13			+13 +4			+21 -2			+21 -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 2			Edad: 10 ^d 9 PHE { 4 ^h : 60'0 12 ^h : 60'2 20 ^h : 60'5 R°: 64 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	55.0	+13 46.4	53	56.9	-28 23.5	6	60 N	19 50	20 41	21 54	19 46	18	22 58	118	
1	193	55.1	45.7	68	18.3	24	24.1	58	42	28	32	19 09	30	23 34	106	
2	208	55.2	44.9	82	39.6	23	24.4	56	34	17	14	18 43	37	*** **	***	
3	223	55.4	44.1	97	00.8	22	24.6	54	28	20 08	21 00	22 41		*** **	***	
4	238	55.5	43.3	111	22.1	23	24.5	52	22	19 59	20 48	18 05	44	*** **	***	
5	253	55.6	+13 42.5	125	43.2	21	-28 24.3	50	19 16	19 52	20 37	17 50	46	*** **	***	
6	268	55.7	+13 41.7	140	04.3	21	-28 23.8	45	19 05	19 37	20 16	17 19	51	0 13	70	
7	283	55.9	40.9	154	25.4	21	23.2	40	18 55	24	19 59	16 56	54	37	69	
8	298	56.0	40.1	168	46.5	21	22.3	35	47	14	46	36	56	0 57	69	
9	313	56.1	39.3	183	07.5	20	21.2	30	40	19 05	35	16 19	58	1 14	68	
10	328	56.3	38.5	197	28.5	20	19.9	20	28	18 51	18	15 51	61	1 42	68	
11	343	56.4	+13 37.8	211	49.4	19	-28 18.4	10 N	18 17	18 39	19 04	15 27	63	2 07	66	
12	358	56.5	+13 37.0	226	10.3	19	-28 16.6	0	18 08	18 29	18 54	15 04	65	2 30	65	
13	13	56.6	36.2	240	31.3	20	14.7	10 S	17 58	19	44	14 41	68	2 53	64	
14	28	56.8	35.4	254	52.1	18	12.5	20	48	10	36	14 17	69	3 17	63	
15	43	56.9	34.6	269	13.0	19	10.2	30	36	18 01	29	13 49	72	3 46	61	
16	58	57.0	33.8	283	33.9	19	07.6	35	30	17 56	25	32	73	4 03	60	
17	73	57.2	+13 33.0	297	54.7	18	-28 04.8	40	17 22	17 50	18 22	13 12	76	4 22	60	
18	88	57.3	+13 32.2	312	15.6	19	-28 01.8	45	17 13	17 44	18 18	12 49	77	4 46	58	
19	103	57.4	31.4	326	36.4	18	-27 58.6	50	17 03	37	15	18	81	5 17	55	
20	118	57.6	30.6	340	57.3	19	55.2	52	16 58	33	13	12 03	83	32	54	
21	133	57.7	29.8	355	18.1	18	51.5	54	53	30	12	11 45	85	5 50	51	
22	148	57.8	29.0	9	39.0	19	47.7	56	47	26	10	11 24	88	6 11	49	
23	163	58.0	28.2	23	59.8	18	43.6	58	40	22	08	10 57	93	6 38	44	
24	178	58.1	+13 27.4	38	20.7	19	-27 39.4	60 S	16 33	17 18	18 07	10 19	103	7 16	35	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 2 ^h 21 ^m 7		Mag: -3.9 PMG: 14 ^h 19 ^m		Mag: -0.7 PMG: 4 ^h 56 ^m		Mag: -1.8 PMG: 15 ^h 19 ^m		Mag: +0.3 PMG: 10 ^h 46 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	324	29.2	145 23.9	+1 15.9	285 50.6	+12 11.7	129 37.7	-5 05.9	198 11.1	+19 35.3
1	339	31.7	160 23.7	14.6	300 51.8	12.1	144 39.8	06.1	213 13.3	35.2
2	354	34.1	175 23.4	13.3	315 53.1	12.5	159 41.9	06.3	228 15.4	35.1
3	9	36.6	190 23.2	12.0	330 54.4	12.9	174 44.0	06.4	243 17.6	35.1
4	24	39.1	205 23.0	10.8	345 55.7	13.3	189 46.1	06.6	258 19.7	35.0
5	39	41.5	220 22.8	+1 09.5	0 56.9	+12 13.6	204 48.1	-5 06.8	273 21.8	+19 34.9
6	54	44.0	235 22.6	+1 08.2	15 58.2	+12 14.0	219 50.2	-5 06.9	288 24.0	+19 34.9
7	69	46.4	250 22.4	06.9	30 59.5	14.4	234 52.3	07.1	303 26.1	34.8
8	84	48.9	265 22.2	05.6	46 00.8	14.8	249 54.4	07.3	318 28.3	34.7
9	99	51.4	280 22.0	04.3	61 02.1	15.2	264 56.4	07.4	333 30.4	34.7
10	114	53.8	295 21.7	03.0	76 03.3	15.5	279 58.5	07.6	348 32.5	34.6
11	129	56.3	310 21.5	+1 01.8	91 04.6	+12 15.9	295 00.6	-5 07.8	3 34.7	+19 34.5
12	144	58.8	325 21.3	+1 00.5	106 05.9	+12 16.3	310 02.7	-5 07.9	18 36.8	+19 34.4
13	160	01.2	340 21.1	+0 59.2	121 07.2	16.7	325 04.7	08.1	33 39.0	34.4
14	175	03.7	355 20.9	57.9	136 08.5	17.1	340 06.8	08.3	48 41.1	34.3
15	190	06.2	10 20.7	56.6	151 09.7	17.4	355 08.9	08.4	63 43.3	34.2
16	205	08.6	25 20.5	55.3	166 11.0	17.8	10 11.0	08.6	78 45.4	34.2
17	220	11.1	40 20.3	+0 54.0	181 12.3	+12 18.2	25 13.0	-5 08.8	93 47.5	+19 34.1
18	235	13.5	55 20.0	+0 52.7	196 13.6	+12 18.6	40 15.1	-5 08.9	108 49.7	+19 34.0
19	250	16.0	70 19.8	51.5	211 14.9	18.9	55 17.2	09.1	123 51.8	34.0
20	265	18.5	85 19.6	50.2	226 16.2	19.3	70 19.3	09.3	138 54.0	33.9
21	280	20.9	100 19.4	48.9	241 17.5	19.7	85 21.3	09.5	153 56.1	33.8
22	295	23.4	115 19.2	47.6	256 18.7	20.1	100 23.4	09.6	168 58.3	33.8
23	310	25.9	130 19.0	46.3	271 20.0	20.5	115 25.5	09.8	184 00.4	33.7
24	325	28.3	145 18.8	+0 45.0	286 21.3	+12 20.8	130 27.6	-5 10.0	199 02.5	+19 33.6
Dif	—		-2 -13		+13 +4		+21 -2		+21 -1	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 11 ^d 9	PHE { 4 ^h : 60 ^m 7 12 ^h : 60 ^m 9 20 ^h : 61 ^m 0	SD: 16 ^h 5	PMG: 22 ^h 24 ^m	Rº: 62 ^m								
	PMG: 12 ^h 04 ^m 0															
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	Rº	Hora	Rº	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	58.1	+13	27.4	38	20.7	19	-27	39.4	45	60 N	2 15	3 29	4 19	20 04	5
1	193	58.2		26.6	52	41.6	19		34.9	45	58		37	41	27	19 39
2	208	58.4		25.8	67	02.5	19		30.2	47	56	2 55	3 52	35	20 20	0 01
3	223	58.5		25.0	81	23.5	20		25.3	49	54	3 09	4 01	41	19 03	26
4	238	58.6		24.2	95	44.4	19		20.2	51	52		21	09	47	18 49
5	253	58.8	+13	23.4	110	05.4	20	-27	14.8	54	50	3 32	4 17	4 53	18 36	33
6	268	58.9	+13	22.6	124	26.4	20	-27	09.3	55	45	3 53	4 32	5 04	18 10	39
7	283	59.0		21.8	138	47.5	21	-27	03.6	57	40	4 10		45	13	17 50
8	298	59.2		21.0	153	08.6	21	-26	57.6	60	35		23	4 55	21	32 47
9	313	59.3		20.2	167	29.7	21		51.5	61	30		34	5 03	28	17 17
10	328	59.4		19.4	181	50.8	21		45.1	64	20	4 51	18	41	16 52	55
11	343	59.6	+13	18.6	196	12.1	23	-26	38.5	66	10 N	5 04	5 29	5 51	16 30	59
12	358	59.7	+13	17.8	210	33.3	22	-26	31.8	67	0	5 15	5 39	6 01	16 09	63
13	13	59.9		17.0	224	54.6	23		24.8	70	10 S		24	49	10	15 49
14	29	00.0		16.2	239	16.0	24		17.6	72	20		32	5 58	20	26 71
15	44	00.1		15.4	253	37.4	24		10.3	73	30		39	6 07	32	15 01
16	59	00.3		14.6	267	58.9	25	-26	02.7	76	35		42	12	38	14 45
17	74	00.4	+13	13.8	282	20.4	25	-25	54.9	78	40	5 46	6 18	6 46	14 28	81
18	89	00.5	+13	13.0	296	42.0	26	-25	47.0	79	45	5 49	6 24	6 54	14 06	86
19	104	00.7		12.2	311	03.7	27		38.8	82	50		53	31	7 04	13 39
20	119	00.8		11.4	325	25.4	27		30.4	84	52		54	34	09	26 95
21	134	01.0		10.6	339	47.2	28		21.9	85	54		56	37	14	13 10
22	149	01.1		09.8	354	09.1	29		13.1	88	56		57	41	20	12 52
23	164	01.2		09.0	8	31.0	29	-25	04.2	89	58	5 59	45	26	30	111
24	179	01.4	+13	08.2	22	53.1	31	-24	55.1	91	60 S	6 01	6 49	7 34	12 02	121

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG		Mag: -3.9		Mag: -0.7		Mag: -1.8		Mag: +0.3	
	2 ^h 17 ^m 7		PMG: 14 ^h 19 ^m		PMG: 4 ^h 54 ^m		PMG: 15 ^h 16 ^m		PMG: 10 ^h 42 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	325	28.3	145	18.8	+0	45.0	286	21.3	+12	20.8
1	340	30.8	160	18.6		43.7	301	22.6		21.2
2	355	33.3	175	18.3		42.4	316	23.9		21.6
3	10	35.7	190	18.1		41.2	331	25.2		22.0
4	25	38.2	205	17.9		39.9	346	26.5		22.3
5	40	40.7	220	17.7	+0	38.6	1	27.8	+12	22.7
6	55	43.1	235	17.5	+0	37.3	16	29.1	+12	23.1
7	70	45.6	250	17.3		36.0	31	30.4		23.5
8	85	48.0	265	17.1		34.7	46	31.7		23.8
9	100	50.5	280	16.9		33.4	61	32.9		24.2
10	115	53.0	295	16.7		32.1	76	34.2		24.6
11	130	55.4	310	16.5	+0	30.9	91	35.5	+12	25.0
12	145	57.9	325	16.2	+0	29.6	106	36.8	+12	25.3
13	161	00.4	340	16.0		28.3	121	38.1		25.7
14	176	02.8	355	15.8		27.0	136	39.4		26.1
15	191	05.3	10	15.6		25.7	151	40.7		26.4
16	206	07.8	25	15.4		24.4	166	42.0		26.8
17	221	10.2	40	15.2	+0	23.1	181	43.3	+12	27.2
18	236	12.7	55	15.0	+0	21.8	196	44.6	+12	27.6
19	251	15.2	70	14.8		20.5	211	45.9		27.9
20	266	17.6	85	14.6		19.3	226	47.2		28.3
21	281	20.1	100	14.4		18.0	241	48.5		28.7
22	296	22.5	115	14.2		16.7	256	49.8		29.0
23	311	25.0	130	13.9		15.4	271	51.1		29.4
24	326	27.5	145	13.7	+0	14.1	286	52.4	+12	29.8
Dif	—		-2	-13		+13	+4	+21		-2
										+21
										-1

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'8 PMG: 12 ^h 03 ^m 8			Edad: 12 ^d 9 PHE { 4 ^h : 61'2 12 ^h : 61'3 20 ^h : 61'3 R°: 57 ^m SD: 16'6 PMG: 23 ^h 26 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	179	01.4	+13 08.2	22	53.1	-24 55.1	30	60 N	19 44	20 34	21 45	20 09 2	0 56 123	
1	194	01.5	07.4	37	15.1	45.8	93	58	37	22	24	19 54 7	1 20 114	
2	209	01.6	06.6	51	37.3	36.3	95	56	29	12	21 08	40 13	39 107	
3	224	01.8	05.8	65	59.6	26.6	97	54	23	20 03	20 54	29 16	1 55 102	
4	239	01.9	05.0	80	21.9	16.7	99	52	18	19 55	42	18 20	2 09 98	
5	254	02.1	+13 04.2	94	44.3	-24 06.7	100	50	19 13	19 48	20 32	19 09 23	2 21 94	
6	269	02.2	+13 03.3	109	06.8	-23 56.5	102	45	19 02	19 33	20 12	18 49 30	2 46 88	
7	284	02.3	02.5	123	29.4	46.1	104	40	18 53	21	19 56	33 35	3 06 82	
8	299	02.5	01.7	137	52.1	35.5	106	35	45	11	43	19 39	22 79	
9	314	02.6	00.9	152	14.9	24.8	107	30	38	19 03	33	18 07 43	3 36 75	
10	329	02.8	+13 00.1	166	37.8	13.8	110	20	26	18 49	16	17 47 48	4 00 70	
11	344	02.9	+12 59.3	181	00.7	-23 02.8	110	10 N	18 16	18 38	19 03	17 29 53	4 20 65	
12	359	03.0	+12 58.5	195	23.8	-22 51.5	113	0	18 07	18 28	18 53	17 12 58	4 39 61	
13	14	03.2	57.7	209	46.9	40.1	114	10 S	17 58	19	44	16 55 63	4 58 57	
14	29	03.3	56.9	224	10.2	28.5	116	20	48	11	37	37 68	5 18 52	
15	44	03.5	56.1	238	33.5	16.7	118	30	37	18 02	30	16 74	41 47	
16	59	03.6	55.2	252	56.9	-22 04.8	119	35	31	17 57	27	16 03 78	5 55 43	
17	74	03.8	+12 54.4	267	20.5	-21 52.8	120	40	17 24	17 52	18 24	15 49 82	6 10 39	
18	89	03.9	+12 53.6	281	44.1	-21 40.6	122	45	17 16	17 46	18 20	15 32 88	6 29 34	
19	104	04.0	52.8	296	07.9	28.2	124	50	06	39	17	11 94	6 51 28	
20	119	04.2	52.0	310	31.7	15.7	125	52	17 01	36	16	15 01 98	7 02 24	
21	134	04.3	51.2	324	55.7	-21 03.0	127	54	16 56	33	15	14 49 102	14 21	
22	149	04.5	50.4	339	19.7	-20 50.2	128	56	51	30	13	36 107	28 16	
23	164	04.6	49.6	353	43.8	37.2	130	58	45	26	12	21 112	7 44 11	
24	179	04.8	+12 48.7	8	08.1	-20 24.1	131	60 S	16 38	17 22	18 11	14 03 119	8 03 4	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 2 ^h 13 ^m 8		Mag: -4.0 PMG: 14 ^h 19 ^m		Mag: -0.8 PMG: 4 ^h 52 ^m		Mag: -1.8 PMG: 15 ^h 13 ^m		Mag: +0.3 PMG: 10 ^h 39 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	326	27.5	145 13.7	+0 14.1	286 52.4	+12 29.8	131 17.3	-5 14.0	199 54.0	+19 32.0
1	341	29.9	160 13.5	12.8	301 53.7	30.2	146 19.4	14.2	214 56.1	31.9
2	356	32.4	175 13.3	11.5	316 55.0	30.5	161 21.5	14.4	229 58.3	31.8
3	11	34.9	190 13.1	10.2	331 56.3	30.9	176 23.5	14.5	245 00.4	31.7
4	26	37.3	205 12.9	08.9	346 57.6	31.3	191 25.6	14.7	260 02.6	31.7
5	41	39.8	220 12.7	+0 07.7	1 58.9	+12 31.6	206 27.7	-5 14.9	275 04.7	+19 31.6
6	56	42.3	235 12.5	+0 06.4	17 00.2	+12 32.0	221 29.7	-5 15.0	290 06.9	+19 31.5
7	71	44.7	250 12.3	05.1	32 01.5	32.4	236 31.8	15.2	305 09.0	31.5
8	86	47.2	265 12.1	03.8	47 02.9	32.7	251 33.9	15.4	320 11.2	31.4
9	101	49.7	280 11.9	02.5	62 04.2	33.1	266 35.9	15.6	335 13.3	31.3
10	116	52.1	295 11.7	+0 01.2	77 05.5	33.5	281 38.0	15.7	350 15.4	31.3
11	131	54.6	310 11.5	-0 00.1	92 06.8	+12 33.8	296 40.1	-5 15.9	5 17.6	+19 31.2
12	146	57.0	325 11.3	-0 01.4	107 08.1	+12 34.2	311 42.2	-5 16.1	20 19.7	+19 31.1
13	161	59.5	340 11.0	02.7	122 09.4	34.6	326 44.2	16.2	35 21.9	31.1
14	177	02.0	355 10.8	04.0	137 10.7	34.9	341 46.3	16.4	50 24.0	31.0
15	192	04.4	10 10.6	05.2	152 12.0	35.3	356 48.4	16.6	65 26.2	30.9
16	207	06.9	25 10.4	06.5	167 13.3	35.7	11 50.4	16.8	80 28.3	30.8
17	222	09.4	40 10.2	-0 07.8	182 14.6	+12 36.0	26 52.5	-5 16.9	95 30.5	+19 30.8
18	237	11.8	55 10.0	-0 09.1	197 16.0	+12 36.4	41 54.6	-5 17.1	110 32.6	+19 30.7
19	252	14.3	70 09.8	10.4	212 17.3	36.8	56 56.6	17.3	125 34.8	30.6
20	267	16.8	85 09.6	11.7	227 18.6	37.1	71 58.7	17.4	140 36.9	30.6
21	282	19.2	100 09.4	13.0	242 19.9	37.5	87 00.8	17.6	155 39.0	30.5
22	297	21.7	115 09.2	14.3	257 21.2	37.9	102 02.8	17.8	170 41.2	30.4
23	312	24.2	130 09.0	15.6	272 22.5	38.2	117 04.9	18.0	185 43.3	30.4
24	327	26.6	145 08.8	-0 16.8	287 23.8	+12 38.6	132 07.0	-5 18.1	200 45.5	+19 30.3
Dif	—		-2	-13	+13	+4	+21	-2	+21	-1

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8			Edad: 13 ^d 9	PHE {	4 ^h : 61 ^m 4 12 ^h : 61 ^m 3 20 ^h : 61 ^m 3	SD: 16 ^h 7	PMG: **h **m		R°: **m							
	PMG: 12 ^h 03 ^m 6																
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	°	'	°	h	m	h	m	h	m	h	m
0	179	04.8	+12 48.7	8	08.1	-20 24.1	60 N	2 24	3 34	4 24	20 11	0	2 59	117			
1	194	04.9		22	32.5	54 -20 10.8	58	2 44	46	32	20 01	5	3 14	110			
2	209	05.0		36	56.9	54 -19 57.5	56	3 00	3 56	39	19 53	8	26	106			
3	224	05.2		51	21.5	56 43.9	54	14	4 05	45	45	12	37	101			
4	239	05.3		65	46.1	56 30.3	52	26	13	50	38	16	47	97			
5	254	05.5	+12 44.7	80	10.9	58 -19 16.5	50	3 36	4 20	4 56	19 32	18	3 55	94			
6	269	05.6	+12 43.9	94	35.8	59 -19 02.6	45	3 56	4 35	5 06	19 19	24	4 14	87			
7	284	05.8		109	00.8	60 -18 48.5	40	4 12	47	15	19 08	29	28	82			
8	299	05.9		123	25.9	61 34.4	35	25	4 56	23	18 58	33	41	77			
9	314	06.1		137	51.1	62 20.1	30	35	5 05	30	50	37	4	51	74		
10	329	06.2		152	16.4	63 -18 05.7	20	4 52	18	41	35	43	5	10	67		
11	344	06.4	+12 39.8	166	41.8	64 -17 51.1	10 N	5 04	5 29	5 51	18 22	49	5	25	62		
12	359	06.5	+12 38.9	181	07.3	65 -17 36.5	0	5 14	5 39	6 00	18 10	54	5	40	56		
13	14	06.7		195	32.9	66 21.7	10 S	23	48	09	17 58	60	5	55	51		
14	29	06.8		209	58.6	67 -17 06.9	20	30	5 56	19	45	65	6	10	46		
15	44	06.9		224	24.4	68 -16 51.9	30	37	6 05	30	30	72	28	39			
16	59	07.1		238	50.4	70 36.8	35	40	10	36	21	76	38	36			
17	74	07.2	+12 34.9	253	16.4	70 -16 21.6	40	5 43	6 15	6 43	17 11	80	6	49	32		
18	89	07.4	+12 34.0	267	42.5	71 -16 06.3	45	5 46	6 21	6 51	17 00	85	7	03	26		
19	104	07.5		282	08.8	73 -15 51.0	50	49	27	7 01	16 45	92	19	20			
20	119	07.7		296	35.1	73 35.5	52	51	30	05	39	94	26	18			
21	134	07.8		311	01.5	74 19.9	54	52	33	10	31	98	35	14			
22	149	08.0		325	28.1	76 -15 04.2	56	53	37	15	23	102	44	11			
23	164	08.1		339	54.7	76 -14 48.5	58	54	40	21	13	107	7	55	6		
24	179	08.3	+12 29.1	354	21.4	77 -14 32.6	60 S	5 56	6 44	7 28	16 02	112	8	07	1		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 2 ^h 09 ^m 9		Mag: -4.0 PMG: 14 ^h 20 ^m		Mag: -0.8 PMG: 4 ^h 50 ^m		Mag: -1.8 PMG: 15 ^h 09 ^m		Mag: +0.3 PMG: 10 ^h 35 ^m					
	hG ♈		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec					
h	°	'	°	°	'	°	°	'	°	°	'			
0	327	26.6	145	08.8	-0 16.8	287	23.8	+12 38.6	132	07.0	-5 18.1	200	45.5	+19 30.3
1	342	29.1	160	08.6	18.1	302	25.2	38.9	147	09.0	18.3	215	47.6	30.2
2	357	31.5	175	08.4	19.4	317	26.5	39.3	162	11.1	18.5	230	49.8	30.2
3	12	34.0	190	08.2	20.7	332	27.8	39.7	177	13.2	18.6	245	51.9	30.1
4	27	36.5	205	08.0	22.0	347	29.1	40.0	192	15.2	18.8	260	54.1	30.0
5	42	38.9	220	07.8	-0 23.3	2	30.4	+12 40.4	207	17.3	-5 19.0	275	56.2	+19 29.9
6	57	41.4	235	07.6	-0 24.6	17	31.8	+12 40.8	222	19.4	-5 19.1	290	58.4	+19 29.9
7	72	43.9	250	07.3	25.9	32	33.1	41.1	237	21.4	19.3	306	00.5	29.8
8	87	46.3	265	07.1	27.2	47	34.4	41.5	252	23.5	19.5	321	02.7	29.7
9	102	48.8	280	06.9	28.5	62	35.7	41.8	267	25.6	19.7	336	04.8	29.7
10	117	51.3	295	06.7	29.7	77	37.0	42.2	282	27.6	19.8	351	06.9	29.6
11	132	53.7	310	06.5	-0 31.0	92	38.4	+12 42.6	297	29.7	-5 20.0	6	09.1	+19 29.5
12	147	56.2	325	06.3	-0 32.3	107	39.7	+12 42.9	312	31.8	-5 20.2	21	11.2	+19 29.5
13	162	58.6	340	06.1	33.6	122	41.0	43.3	327	33.8	20.4	36	13.4	29.4
14	178	01.1	355	05.9	34.9	137	42.3	43.6	342	35.9	20.5	51	15.5	29.3
15	193	03.6	10	05.7	36.2	152	43.7	44.0	357	38.0	20.7	66	17.7	29.3
16	208	06.0	25	05.5	37.5	167	45.0	44.4	12	40.0	20.9	81	19.8	29.2
17	223	08.5	40	05.3	-0 38.8	182	46.3	+12 44.7	27	42.1	-5 21.0	96	22.0	+19 29.1
18	238	11.0	55	05.1	-0 40.1	197	47.6	+12 45.1	42	44.2	-5 21.2	111	24.1	+19 29.0
19	253	13.4	70	04.9	41.4	212	49.0	45.4	57	46.2	21.4	126	26.3	29.0
20	268	15.9	85	04.7	42.6	227	50.3	45.8	72	48.3	21.6	141	28.4	28.9
21	283	18.4	100	04.5	43.9	242	51.6	46.2	87	50.4	21.7	156	30.6	28.8
22	298	20.8	115	04.3	45.2	257	53.0	46.5	102	52.4	21.9	171	32.7	28.8
23	313	23.3	130	04.1	46.5	272	54.3	46.9	117	54.5	22.1	186	34.9	28.7
24	328	25.8	145	03.9	-0 47.8	287	55.6	+12 47.2	132	56.6	-5 22.2	201	37.0	+19 28.6
Dif	—		-2 -13		+13 +4		+21 -2		+21 -1					

UT	SOL			☉ LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 15 ^h 8			Edad: 14 ^d 9 PHE { 4 ^h : 61 ^m 2 12 ^h : 61 ^m 1 20 ^h : 60 ^m 9														
	PMG: 12 ^h 03 ^m 3			SD: 16 ^h 7 PMG: 0 ^h 23 ^m R°: 54 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	m	h m m	m			
0	179	08.3	+12 29.1	354	21.4	-14 32.6	79	60 N	19 39	20 27	21 36	20 11 **		4 56	109			
1	194	08.4	28.3	8	48.3	16.7	159	58	31	16	17	06 3		5 04	105			
2	209	08.6	27.5	23	15.2	-14 00.7	160	56	25	20 06	21 01	20 01 7		12	100			
3	224	08.7	26.6	37	42.2	-13 44.6	161	54	19	19 58	20 48	19 57 10		18	96			
4	239	08.9	25.8	52	09.4	28.4	162	52	13	50	37	54 12		24	93			
5	254	09.0	+12 25.0	66	36.6	-13 12.2	162	50	19 09	19 44	20 27	19 50 16		5 29	90			
6	269	09.2	+12 24.2	81	03.9	-12 55.9	163	45	18 58	19 30	20 08	19 43 21		5 41	83			
7	284	09.3	23.3	95	31.3	39.5	164	40	50	18	19 53	37 25		50	78			
8	299	09.5	22.5	109	58.8	23.0	165	35	42	09	40	31 30		5 58	74			
9	314	09.6	21.7	124	26.4	-12 06.5	165	30	36	19 01	30	27 33		6 05	70			
10	329	09.8	20.9	138	54.1	-11 49.9	166	20	25	18 48	14	18 40		17	63			
11	344	09.9	+12 20.0	153	21.8	-11 33.3	166	10 N	18 15	18 37	19 02	19 11 46		6 27	57			
12	359	10.1	+12 19.2	167	49.7	-11 16.6	167	0	18 07	18 28	18 52	19 04 51		6 36	53			
13	14	10.2	18.4	182	17.6	-10 59.8	168	10 S	17 58	19	44	18 58 56		46	47			
14	29	10.4	17.6	196	45.7	43.0	168	20	49	11	37	50 62		6 56	41			
15	44	10.5	16.7	211	13.8	26.1	169	30	38	18 03	31	42 68		7 07	35			
16	59	10.7	15.9	225	42.0	-10 09.2	169	35	33	17 58	28	37 72		14	31			
17	74	10.8	+12 15.1	240	10.3	-9 52.2	170	40	17 26	17 54	18 25	18 31 77		7 21	27			
18	89	11.0	+12 14.2	254	38.7	-9 35.2	170	45	17 18	17 48	18 23	18 25 82		7 29	23			
19	104	11.1	13.4	269	07.1	18.2	170	50	09	42	20	17 88		39	17			
20	119	11.3	12.6	283	35.6	-9 01.1	171	52	04	39	19	13 91		44	14			
21	134	11.5	11.8	298	04.2	-8 43.9	172	54	17 00	36	18	09 94		49	11			
22	149	11.6	10.9	312	32.9	26.7	172	56	16 55	33	17	05 97		7 55	7			
23	164	11.8	10.1	327	01.7	-8 09.5	172	58	49	30	16	18 00 101		8 01	4			
24	179	11.9	+12 09.3	341	30.5	-7 52.3	172	60 S	16 42	17 26	18 15	17 54 106		8 08	0			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 2 ^h 05 ^m 9		Mag: -4.0 PMG: 14 ^h 20 ^m			Mag: -0.8 PMG: 4 ^h 48 ^m			Mag: -1.8 PMG: 15 ^h 06 ^m			Mag: +0.3 PMG: 10 ^h 32 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°			
0	328	25.8	145 03.9	-0 47.8		287 55.6	+12 47.2		132 56.6	-5 22.2		201 37.0	+19 28.6					
1	343	28.2	160 03.7	49.1		302 57.0	47.6		147 58.6	22.4		216 39.1	28.6					
2	358	30.7	175 03.5	50.4		317 58.3	47.9		163 00.7	22.6		231 41.3	28.5					
3	13	33.1	190 03.3	51.7		332 59.6	48.3		178 02.7	22.8		246 43.4	28.4					
4	28	35.6	205 03.1	53.0		348 01.0	48.6		193 04.8	22.9		261 45.6	28.4					
5	43	38.1	220 02.9	-0 54.3		3 02.3	+12 49.0		208 06.9	-5 23.1		276 47.7	+19 28.3					
6	58	40.5	235 02.7	-0 55.5		18 03.6	+12 49.4		223 08.9	-5 23.3		291 49.9	+19 28.2					
7	73	43.0	250 02.5	56.8		33 05.0	49.7		238 11.0	23.5		306 52.0	28.1					
8	88	45.5	265 02.3	58.1		48 06.3	50.1		253 13.1	23.6		321 54.2	28.1					
9	103	47.9	280 02.1	-0 59.4		63 07.6	50.4		268 15.1	23.8		336 56.3	28.0					
10	118	50.4	295 01.9	-1 00.7		78 09.0	50.8		283 17.2	24.0		351 58.5	27.9					
11	133	52.9	310 01.7	-1 02.0		93 10.3	+12 51.1		298 19.3	-5 24.1		7 00.6	+19 27.9					
12	148	55.3	325 01.5	-1 03.3		108 11.7	+12 51.5		313 21.3	-5 24.3		22 02.8	+19 27.8					
13	163	57.8	340 01.3	04.6		123 13.0	51.8		328 23.4	24.5		37 04.9	27.7					
14	179	00.3	355 01.1	05.9		138 14.3	52.2		343 25.4	24.7		52 07.1	27.7					
15	194	02.7	10 00.9	07.2		153 15.7	52.5		358 27.5	24.8		67 09.2	27.6					
16	209	05.2	25 00.7	08.4		168 17.0	52.9		13 29.6	25.0		82 11.4	27.5					
17	224	07.6	40 00.4	-1 09.7		183 18.4	+12 53.3		28 31.6	-5 25.2		97 13.5	+19 27.5					
18	239	10.1	55 00.2	-1 11.0		198 19.7	+12 53.6		43 33.7	-5 25.4		112 15.7	+19 27.4					
19	254	12.6	70 00.0	12.3		213 21.0	54.0		58 35.7	25.5		127 17.8	27.3					
20	269	15.0	84 59.8	13.6		228 22.4	54.3		73 37.8	25.7		142 19.9	27.3					
21	284	17.5	99 59.6	14.9		243 23.7	54.7		88 39.9	25.9		157 22.1	27.2					
22	299	20.0	114 59.4	16.2		258 25.1	55.0		103 41.9	26.0		172 24.2	27.1					
23	314	22.4	129 59.2	17.5		273 26.4	55.4		118 44.0	26.2		187 26.4	27.0					
24	329	24.9	144 59.0	-1 18.8		288 27.8	+12 55.7		133 46.1	-5 26.4		202 28.5	+19 27.0					
Dif	—		-2	-13		+13	+4		+21	-2		+21		-1				

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 1				Edad: 15 ^d 9 PHE { 4 ^h : 60 ^m 8 12 ^h : 60 ^m 5 20 ^h : 60 ^m 3 R ^o : 50 ^m													
	hG ☉		Dec		hG ☾ Dif		Dec Dif			Náutico	Civil		Hora	R ^o	Hora	R ^o		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	179	11.9	+12	09.3	341	30.5	-7	52.3	60 N	2 32	3 40	4 29	20 10	**	6 45	104		
1	194	12.1		08.4	355	59.4		35.0 ¹⁷³	58	2 51	3 51	36	09 3		49	99		
2	209	12.2		07.6	10	28.4 ¹⁰⁰		17.7 ¹⁷³	56	3 06	4 01	43	08 6		52	95		
3	224	12.4		06.8	24	57.5 ¹⁰¹	-7	00.4 ¹⁷³	54	19	09	48	07 9		54	93		
4	239	12.5		05.9	39	26.6 ¹⁰¹	-6	43.0 ¹⁷⁴	52	30	17	54	06 12		57	89		
5	254	12.7	+12	05.1	53	55.8 ¹⁰²	-6	25.6 ¹⁷⁴	50	3 40	4 23	4 59	20 06	14	6 59	87		
6	269	12.8	+12	04.3	68	25.0 ¹⁰²	-6	08.2 ¹⁷⁴	45	3 59	4 37	5 09	20 04	20	7 04	80		
7	284	13.0		03.4	82	54.3 ¹⁰³	-5	50.8 ¹⁷⁴	40	4 14	49	17	02 25		08	75		
8	299	13.1		02.6	97	23.7 ¹⁰⁴		33.4 ¹⁷⁴	35	26	4 58	24	01 29		12	71		
9	314	13.3		01.8	111	53.2 ¹⁰⁵	-5	15.9 ¹⁷⁵	30	36	5 06	31	20 00	32	15	67		
10	329	13.5		00.9	126	22.7 ¹⁰⁵	-4	58.5 ¹⁷⁴	20	4 52	19	42	19 58	38	20	61		
11	344	13.6	+12	00.1	140	52.3 ¹⁰⁶	-4	41.0 ¹⁷⁵	10 N	5 04	5 30	5 51	19 57	43	7 24	55		
12	359	13.8	+11	59.3	155	21.9 ¹⁰⁶	-4	23.5 ¹⁷⁵	0	5 14	5 39	6 00	19 55	49	7 29	49		
13	14	13.9		58.4	169	51.6 ¹⁰⁷	-4	06.0 ¹⁷⁵	10 S	22	47	08	54 53		33	44		
14	29	14.1		57.6	184	21.4 ¹⁰⁸	-3	48.5 ¹⁷⁵	20	29	5 55	17	52 59		37	39		
15	44	14.2		56.8	198	51.2 ¹⁰⁸		31.0 ¹⁷⁵	30	35	6 03	28	50 66		42	33		
16	59	14.4		55.9	213	21.0 ¹⁰⁸	-3	13.5 ¹⁷⁵	35	38	08	33	49 70		45	29		
17	74	14.6	+11	55.1	227	50.9 ¹⁰⁹	-2	56.0 ¹⁷⁵	40	5 41	6 12	6 40	19 48	74	7 48	25		
18	89	14.7	+11	54.3	242	20.9 ¹¹⁰	-2	38.5 ¹⁷⁵	45	5 43	6 18	6 48	19 47	78	7 52	20		
19	104	14.9		53.4	256	50.9 ¹¹⁰		21.0 ¹⁷⁵	50	46	23	6 57	45 85		56	15		
20	119	15.0		52.6	271	21.0 ¹¹¹	-2	03.5 ¹⁷⁵	52	47	26	7 01	44 88		7 58	12		
21	134	15.2		51.7	285	51.1 ¹¹¹	-1	46.1 ¹⁷⁴	54	48	29	05	43 91		8 00	9		
22	149	15.3		50.9	300	21.2 ¹¹¹		28.6 ¹⁷⁵	56	49	32	11	42 94		02	7		
23	164	15.5		50.1	314	51.4 ¹¹²	-1	11.1 ¹⁷⁵	58	50	35	16	41 98		05	3		
24	179	15.7	+11	49.2	329	21.7 ¹¹³	-0	53.7 ¹⁷⁴	60 S	5 51	6 39	7 23	19 40	102	8 08	**		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 2 ^h 02 ^m 0		Mag: -4.0 PMG: 14 ^h 20 ^m				Mag: -0.8 PMG: 4 ^h 46 ^m				Mag: -1.8 PMG: 15 ^h 03 ^m				Mag: +0.3 PMG: 10 ^h 29 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	329	24.9	144	59.0	-1	18.8	288	27.8	+12	55.7	133	46.1	-5	26.4	202	28.5	+19	27.0
1	344	27.4	159	58.8		20.1	303	29.1		56.1	148	48.1		26.6	217	30.7		26.9
2	359	29.8	174	58.6		21.3	318	30.5		56.4	163	50.2		26.7	232	32.8		26.8
3	14	32.3	189	58.4		22.6	333	31.8		56.8	178	52.2		26.9	247	35.0		26.8
4	29	34.7	204	58.2		23.9	348	33.2		57.1	193	54.3		27.1	262	37.1		26.7
5	44	37.2	219	58.0	-1	25.2	3	34.5	+12	57.5	208	56.4	-5	27.3	277	39.3	+19	26.6
6	59	39.7	234	57.8	-1	26.5	18	35.9	+12	57.8	223	58.4	-5	27.4	292	41.4	+19	26.6
7	74	42.1	249	57.6		27.8	33	37.2		58.2	239	00.5		27.6	307	43.6		26.5
8	89	44.6	264	57.4		29.1	48	38.6		58.5	254	02.5		27.8	322	45.7		26.4
9	104	47.1	279	57.2		30.4	63	39.9		58.9	269	04.6		28.0	337	47.9		26.4
10	119	49.5	294	57.0		31.7	78	41.3		59.2	284	06.7		28.1	352	50.0		26.3
11	134	52.0	309	56.8	-1	33.0	93	42.6	+12	59.6	299	08.7	-5	28.3	7	52.2	+19	26.2
12	149	54.5	324	56.6	-1	34.2	108	44.0	+12	59.9	314	10.8	-5	28.5	22	54.3	+19	26.1
13	164	56.9	339	56.4		35.5	123	45.3	+13	00.2	329	12.8		28.6	37	56.5		26.1
14	179	59.4	354	56.2		36.8	138	46.7		00.6	344	14.9		28.8	52	58.6		26.0
15	195	01.9	9	56.0		38.1	153	48.0		00.9	359	17.0		29.0	68	00.8		25.9
16	210	04.3	24	55.8		39.4	168	49.4		01.3	14	19.0		29.2	83	02.9		25.9
17	225	06.8	39	55.6	-1	40.7	183	50.8	+13	01.6	29	21.1	-5	29.3	98	05.1	+19	25.8
18	240	09.2	54	55.4	-1	42.0	198	52.1	+13	02.0	44	23.1	-5	29.5	113	07.2	+19	25.7
19	255	11.7	69	55.2		43.3	213	53.5		02.3	59	25.2		29.7	128	09.4		25.7
20	270	14.2	84	55.0		44.6	228	54.8		02.7	74	27.2		29.9	143	11.5		25.6
21	285	16.6	99	54.8		45.9	243	56.2		03.0	89	29.3		30.0	158	13.7		25.5
22	300	19.1	114	54.6		47.1	258	57.6		03.4	104	31.4		30.2	173	15.8		25.5
23	315	21.6	129	54.4		48.4	273	58.9		03.7	119	33.4		30.4	188	18.0		25.4
24	330	24.0	144	54.2	-1	49.7	289	00.3	+13	04.0	134	35.5	-5	30.6	203	20.1	+19	25.3
Dif	—		-2		-13		+14		+3		+21		-2		+21		-1	

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8			Edad: 16 ^d 9	PHE { 4 ^h : 60 ⁰ 12 ^h : 59 ⁸ 20 ^h : 59 ⁵	Civil			Náutico	Hora	R°	Hora	R°		
	PMG: 12 ^h 02 ^m 8	PMG: 2 ^h 07 ^m	R°: 48 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		h m	h m	h m	h m	m	h m	m
0	179	15.7	+11 49.2	329	21.7	-0 53.7		60 N	19 33	20 21	21 27	20 09	0	8 29	100
1	194	15.8		343	52.0 ¹¹³	36.3 ¹⁷⁴		58	26	10	21 09	12	3	28	96
2	209	16.0		358	22.3 ¹¹³	18.9 ¹⁷⁴		56	20	20 01	20 55	14	7	27	93
3	224	16.1		12	52.7 ¹¹⁴	-0 01.5 ¹⁷⁴		54	14	19 53	42	16	10	27	89
4	239	16.3		27	23.1 ¹¹⁴	+0 15.9 ¹⁷⁴		52	09	46	32	18	12	26	86
5	254	16.5	+11 45.0	41	53.5 ¹¹⁴	+0 33.3 ¹⁷⁴		50	19 05	19 39	20 23	20 20	15	8 26	83
6	269	16.6	+11 44.2	56	24.0 ¹¹⁵	+0 50.6 ¹⁷³		45	18 55	19 26	20 04	20 24	20	8 24	78
7	284	16.8		70	54.5 ¹¹⁵	+1 07.9 ¹⁷³		40	47	15	19 49	27	24	23	73
8	299	16.9		85	25.1 ¹¹⁶	25.2 ¹⁷³		35	40	19 06	38	30	28	23	68
9	314	17.1		99	55.6 ¹¹⁵	42.4 ¹⁷²		30	34	18 59	28	32	32	22	65
10	329	17.3		114	26.2 ¹¹⁶	+1 59.6 ¹⁷²		20	23	46	13	36	38	21	58
11	344	17.4	+11 40.0	128	56.9 ¹¹⁷	+2 16.8 ¹⁷²		10 N	18 14	18 36	19 01	20 40	43	8 19	54
12	359	17.6	+11 39.1	143	27.5 ¹¹⁶	+2 34.0 ¹⁷¹		0	18 06	18 27	18 52	20 44	48	8 18	49
13	14	17.7		157	58.2 ¹¹⁷	+2 51.1 ¹⁷¹		10 S	17 58	19	44	47	53	17	43
14	29	17.9		172	28.9 ¹¹⁷	+3 08.2 ¹⁷¹		20	49	12	38	51	59	16	38
15	44	18.1		186	59.7 ¹¹⁸	25.2 ¹⁷⁰		30	40	04	32	56	65	15	31
16	59	18.2		201	30.5 ¹¹⁸	42.2 ¹⁷⁰		35	34	18 00	29	20 59	68	14	28
17	74	18.4	+11 34.9	216	01.2 ¹¹⁷	+3 59.2 ¹⁷⁰		40	17 28	17 55	18 27	21 02	72	8 13	24
18	89	18.5	+11 34.1	230	32.0 ¹¹⁸	+4 16.1 ¹⁶⁹		45	17 20	17 50	18 25	21 05	77	8 12	20
19	104	18.7		245	02.9 ¹¹⁹	33.0 ¹⁶⁹		50	12	45	23	10	82	11	14
20	119	18.9		259	33.7 ¹¹⁸	+4 49.8 ¹⁶⁸		52	08	42	22	12	85	10	12
21	134	19.0		274	04.6 ¹¹⁹	+5 06.6 ¹⁶⁸		54	17 03	40	21	14	88	09	10
22	149	19.2		288	35.4 ¹¹⁸	23.3 ¹⁶⁷		56	16 58	37	20	16	92	09	6
23	164	19.4		303	06.3 ¹¹⁹	40.0 ¹⁶⁷		58	53	34	20	19	96	08	3
24	179	19.5	+11 29.0	317	37.2 ¹¹⁹	+5 56.6 ¹⁶⁶		60 S	16 47	17 30	18 19	21 22	100	8 07	**

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG		Mag: -4.0		Mag: -0.8		Mag: -1.8		Mag: +0.3	
	1 ^h 58 ^m 1	PMG: 14 ^h 21 ^m		PMG: 4 ^h 44 ^m		PMG: 15 ^h 00 ^m		PMG: 10 ^h 25 ^m		
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	°	°	°	°	°	°	°	°	
0	330	24.0	144 54.2	-1 49.7	289 00.3	+13 04.0	134 35.5	-5 30.6	203 20.1	+19 25.3
1	345	26.5	159 54.0	51.0	304 01.6	04.4	149 37.5	30.7	218 22.3	25.3
2	0	29.0	174 53.8	52.3	319 03.0	04.7	164 39.6	30.9	233 24.4	25.2
3	15	31.4	189 53.6	53.6	334 04.4	05.1	179 41.6	31.1	248 26.6	25.1
4	30	33.9	204 53.4	54.9	349 05.7	05.4	194 43.7	31.3	263 28.7	25.0
5	45	36.3	219 53.2	-1 56.2	4 07.1	+13 05.8	209 45.8	-5 31.4	278 30.9	+19 25.0
6	60	38.8	234 53.0	-1 57.5	19 08.5	+13 06.1	224 47.8	-5 31.6	293 33.0	+19 24.9
7	75	41.3	249 52.8	-1 58.7	34 09.8	06.5	239 49.9	31.8	308 35.2	24.8
8	90	43.7	264 52.6	-2 00.0	49 11.2	06.8	254 51.9	32.0	323 37.3	24.8
9	105	46.2	279 52.4	-2 01.3	64 12.6	07.1	269 54.0	32.1	338 39.5	24.7
10	120	48.7	294 52.2	02.6	79 13.9	07.5	284 56.0	32.3	353 41.6	24.6
11	135	51.1	309 52.0	-2 03.9	94 15.3	+13 07.8	299 58.1	-5 32.5	8 43.8	+19 24.6
12	150	53.6	324 51.8	-2 05.2	109 16.7	+13 08.2	315 00.2	-5 32.7	23 45.9	+19 24.5
13	165	56.1	339 51.6	06.5	124 18.0	08.5	330 02.2	32.8	38 48.1	24.4
14	180	58.5	354 51.4	07.8	139 19.4	08.8	345 04.3	33.0	53 50.2	24.4
15	196	01.0	9 51.2	09.1	154 20.8	09.2	0 06.3	33.2	68 52.4	24.3
16	211	03.5	24 51.1	10.3	169 22.2	09.5	15 08.4	33.4	83 54.5	24.2
17	226	05.9	39 50.9	-2 11.6	184 23.5	+13 09.9	30 10.4	-5 33.5	98 56.7	+19 24.1
18	241	08.4	54 50.7	-2 12.9	199 24.9	+13 10.2	45 12.5	-5 33.7	113 58.8	+19 24.1
19	256	10.8	69 50.5	14.2	214 26.3	10.5	60 14.5	33.9	129 01.0	24.0
20	271	13.3	84 50.3	15.5	229 27.7	10.9	75 16.6	34.1	144 03.1	23.9
21	286	15.8	99 50.1	16.8	244 29.0	11.2	90 18.7	34.2	159 05.3	23.9
22	301	18.2	114 49.9	18.1	259 30.4	11.6	105 20.7	34.4	174 07.4	23.8
23	316	20.7	129 49.7	19.4	274 31.8	11.9	120 22.8	34.6	189 09.6	23.7
24	331	23.2	144 49.5	-2 20.7	289 33.2	+13 12.2	135 24.8	-5 34.8	204 11.7	+19 23.7
Dif	—	-2	-13	+14	+3	+21	-2	+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 6			Edad: 17 ^d 9 PHE { 4 ^h : 59/2 12 ^h : 58/8 20 ^h : 58/5 PMG: 2 ^h 55 ^m R°: 48 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	179	19.5	+11	29.0	317	37.2	+5 56.6	60 N	2 39	3 45	4 33	20 09	0	10 09	101
1	194	19.7			332	08.1 ¹¹⁹	+6 13.2 ¹⁶⁶	58	2 57	3 56	40	15	4	04	96
2	209	19.8			346	39.1 ¹²⁰	29.7 ¹⁶⁵	56	3 12	4 05	47	21	8	10 00	91
3	224	20.0			1	10.0 ¹¹⁹	+6 46.2 ¹⁶⁵	54	24	13	52	26	11	9 56	88
4	239	20.2			15	40.9 ¹¹⁹	+7 02.6 ¹⁶⁴	52	34	20	4 57	30	15	52	85
5	254	20.3	+11	24.8	30	11.9 ¹²⁰	+7 19.0 ¹⁶⁴	50	3 43	4 27	5 01	20 35	16	9 49	82
6	269	20.5	+11	23.9	44	42.8 ¹¹⁹	+7 35.3 ¹⁶³	45	4 02	4 40	5 11	20 44	22	9 42	76
7	284	20.7			59	13.8 ¹²⁰	+7 51.5 ¹⁶²	40	17	4 51	19	51	27	36	72
8	299	20.8			73	44.7 ¹¹⁹	+8 07.7 ¹⁶²	35	28	5 00	26	20 58	30	31	68
9	314	21.0			88	15.7 ¹²⁰	23.8 ¹⁶¹	30	38	07	32	21 04	33	27	64
10	329	21.2			102	46.7 ¹²⁰	39.9 ¹⁶¹	20	4 53	20	42	14	39	19	59
11	344	21.3	+11	19.7	117	17.6 ¹¹⁹	+8 55.9 ¹⁶⁰	10 N	5 05	5 30	5 51	21 23	44	9 13	53
12	359	21.5	+11	18.8	131	48.6 ¹²⁰	+9 11.8 ¹⁵⁹	0	5 14	5 38	5 59	21 32	48	9 07	48
13	14	21.7			146	19.6 ¹²⁰	27.6 ¹⁵⁸	10 S	21	46	6 07	40	54	9 00	44
14	29	21.8			160	50.5 ¹¹⁹	43.4 ¹⁵⁸	20	28	5 53	16	21 50	58	8 54	38
15	44	22.0			175	21.5 ¹²⁰	+9 59.1 ¹⁵⁷	30	33	6 01	25	22 01	63	46	33
16	59	22.2			189	52.4 ¹¹⁹	+10 14.8 ¹⁵⁷	35	36	05	31	07	67	42	29
17	74	22.3	+11	14.6	204	23.4 ¹²⁰	+10 30.3 ¹⁵⁵	40	5 38	6 09	6 37	22 14	71	8 37	26
18	89	22.5	+11	13.7	218	54.3 ¹¹⁹	+10 45.8 ¹⁵⁵	45	5 40	6 14	6 44	22 22	76	8 32	21
19	104	22.7			233	25.2 ¹¹⁹	+11 01.2 ¹⁵⁴	50	42	20	53	32	82	25	16
20	119	22.8			247	56.1 ¹¹⁹	16.6 ¹⁵⁴	52	43	22	6 57	37	84	22	13
21	134	23.0			262	27.0 ¹¹⁹	31.8 ¹⁵²	54	44	25	7 01	42	88	19	10
22	149	23.2			276	57.9 ¹¹⁹	+11 47.0 ¹⁵²	56	44	27	06	48	91	15	7
23	164	23.3			291	28.8 ¹¹⁹	+12 02.1 ¹⁵¹	58	45	30	11	22 55	95	11	4
24	179	23.5	+11	08.6	305	59.7 ¹¹⁹	+12 17.2 ¹⁵¹	60 S	5 45	6 34	7 17	23 02	101	8 06	0
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG 1 ^h 54 ^m 1			Mag: -4.0 PMG: 14 ^h 21 ^m			Mag: -0.9 PMG: 4 ^h 41 ^m			Mag: -1.8 PMG: 14 ^h 56 ^m			Mag: +0.3 PMG: 10 ^h 22 ^m		
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	331	23.2			144	49.5	-2 20.7	289	33.2	+13 12.2	135	24.8	-5 34.8	204	11.7
1	346	25.6			159	49.3	21.9	304	34.5	12.6	150	26.9	34.9	219	13.9
2	1	28.1			174	49.1	23.2	319	35.9	12.9	165	28.9	35.1	234	16.0
3	16	30.6			189	48.9	24.5	334	37.3	13.2	180	31.0	35.3	249	18.2
4	31	33.0			204	48.7	25.8	349	38.7	13.6	195	33.0	35.5	264	20.3
5	46	35.5			219	48.5	-2 27.1	4	40.1	+13 13.9	210	35.1	-5 35.6	279	22.5
6	61	37.9			234	48.3	-2 28.4	19	41.5	+13 14.2	225	37.1	-5 35.8	294	24.6
7	76	40.4			249	48.1	29.7	34	42.8	14.6	240	39.2	36.0	309	26.8
8	91	42.9			264	47.9	31.0	49	44.2	14.9	255	41.2	36.2	324	28.9
9	106	45.3			279	47.7	32.2	64	45.6	15.3	270	43.3	36.3	339	31.1
10	121	47.8			294	47.5	33.5	79	47.0	15.6	285	45.4	36.5	354	33.2
11	136	50.3			309	47.3	-2 34.8	94	48.4	+13 15.9	300	47.4	-5 36.7	9	35.4
12	151	52.7			324	47.1	-2 36.1	109	49.8	+13 16.3	315	49.5	-5 36.9	24	37.6
13	166	55.2			339	46.9	37.4	124	51.2	16.6	330	51.5	37.0	39	39.7
14	181	57.7			354	46.7	38.7	139	52.5	16.9	345	53.6	37.2	54	41.9
15	197	00.1			9	46.5	40.0	154	53.9	17.3	0	55.6	37.4	69	44.0
16	212	02.6			24	46.3	41.3	169	55.3	17.6	15	57.7	37.6	84	46.2
17	227	05.1			39	46.1	-2 42.5	184	56.7	+13 17.9	30	59.7	-5 37.8	99	48.3
18	242	07.5			54	45.9	-2 43.8	199	58.1	+13 18.3	46	01.8	-5 37.9	114	50.5
19	257	10.0			69	45.7	45.1	214	59.5	18.6	61	03.8	38.1	129	52.6
20	272	12.4			84	45.5	46.4	230	00.9	18.9	76	05.9	38.3	144	54.8
21	287	14.9			99	45.3	47.7	245	02.3	19.3	91	07.9	38.5	159	56.9
22	302	17.4			114	45.1	49.0	260	03.7	19.6	106	10.0	38.6	174	59.1
23	317	19.8			129	44.9	50.3	275	05.1	19.9	121	12.0	38.8	190	01.2
24	332	22.3			144	44.7	-2 51.6	290	06.5	+13 20.3	136	14.1	-5 39.0	205	03.4
Dif	—				-2	-13		+14	+3		+21	-2		+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 3			Edad: 18 ^d 9 PHE SD: 15 ^h 9 PMG: 3 ^h 43 ^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	23.5	+11	08.6	305	59.7	+12 17.2	60 N	19 27	20 14	21 18	20 09	1	11 50	100		
1	194	23.7		07.8	320	30.5 ¹¹⁸	32.1 ¹⁴⁹	58	21	20 04	21 02	19	7	40	95		
2	209	23.8		06.9	335	01.4 ¹¹⁹	+12 47.0 ¹⁴⁹	56	15	19 56	20 48	29	11	31	91		
3	224	24.0		06.0	349	32.2 ¹¹⁸	+13 01.7 ¹⁴⁷	54	10	48	37	37	15	24	87		
4	239	24.2		05.2	4	03.0 ¹¹⁸	16.4 ¹⁴⁷	52	05	41	27	45	17	17	84		
5	254	24.3	+11	04.3	18	33.8 ¹¹⁸	+13 31.0 ¹⁴⁶	50	19 01	19 35	20 18	20 51	21	11 11	81		
6	269	24.5	+11	03.5	33	04.6 ¹¹⁸	+13 45.5 ¹⁴⁵	45	18 51	19 22	20 00	21 06	26	10 58	75		
7	284	24.7		02.6	47	35.3 ¹¹⁷	+14 00.0 ¹⁴⁵	40	44	12	19 46	18	30	48	70		
8	299	24.8		01.8	62	06.1 ¹¹⁸	+14 14.3 ¹⁴³	35	37	19 04	35	28	34	39	67		
9	314	25.0		00.9	76	36.8 ¹¹⁷	28.6 ¹⁴³	30	32	18 56	25	37	37	31	63		
10	329	25.2	+11	00.1	91	07.5 ¹¹⁷	42.7 ¹⁴¹	20	22	44	11	21 53	42	18	58		
11	344	25.3	+10	59.2	105	38.1 ¹¹⁶	+14 56.8 ¹⁴¹	10 N	18 13	18 35	19 00	22 07	46	10 06	53		
12	359	25.5	+10	58.3	120	08.8 ¹¹⁷	+15 10.8 ¹⁴⁰	0	18 06	18 27	18 51	22 20	50	9 55	49		
13	14	25.7		57.5	134	39.4 ¹¹⁶	24.6 ¹³⁸	10 S	17 58	19	44	34	53	44	45		
14	29	25.8		56.6	149	10.0 ¹¹⁶	38.4 ¹³⁸	20	50	12	38	22 48	58	32	40		
15	44	26.0		55.8	163	40.5 ¹¹⁵	+15 52.1 ¹³⁷	30	41	05	33	23 04	63	19	35		
16	59	26.2		54.9	178	11.1 ¹¹⁶	+16 05.7 ¹³⁶	35	35	18 01	31	14	66	11	32		
17	74	26.4	+10	54.0	192	41.6 ¹¹⁵	+16 19.2 ¹³⁵	40	17 30	17 57	18 29	23 25	69	9 03	28		
18	89	26.5	+10	53.2	207	12.1 ¹¹⁵	+16 32.6 ¹³⁴	45	17 23	17 53	18 27	23 38	74	8 53	24		
19	104	26.7		52.3	221	42.6 ¹¹⁵	45.8 ¹³²	50	15	48	25	23 54	80	41	18		
20	119	26.9		51.5	236	13.0 ¹¹⁴	+16 59.0 ¹³²	52	11	45	25	** ** *	**	35	16		
21	134	27.0		50.6	250	43.4 ¹¹⁴	+17 12.1 ¹³¹	54	07	43	24	** ** *	**	29	13		
22	149	27.2		49.7	265	13.8 ¹¹⁴	25.1 ¹³⁰	56	17 02	40	24	** ** *	**	22	10		
23	164	27.4		48.9	279	44.1 ¹¹³	38.0 ¹²⁹	58	16 57	38	23	** ** *	**	15	5		
24	179	27.6	+10	48.0	294	14.4 ¹¹³	+17 50.8 ¹²⁸	60 S	16 51	17 35	18 23	** ** *	**	8 06	0		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 1 ^h 50 ^m 2		Mag: -4.0 PMG: 14 ^h 21 ^m		Mag: -0.9 PMG: 4 ^h 39 ^m		Mag: -1.8 PMG: 14 ^h 53 ^m		Mag: +0.3 PMG: 10 ^h 18 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	332	22.3	144	44.7	-2	51.6	290	06.5	+13	20.3
1	347	24.8	159	44.5		52.8	305	07.9		20.6
2	2	27.2	174	44.3		54.1	320	09.2		20.9
3	17	29.7	189	44.1		55.4	335	10.6		21.2
4	32	32.2	204	43.9		56.7	350	12.0		21.6
5	47	34.6	219	43.7	-2	58.0	5	13.4	+13	21.9
6	62	37.1	234	43.5	-2	59.3	20	14.8	+13	22.2
7	77	39.6	249	43.3	-3	00.6	35	16.2		22.6
8	92	42.0	264	43.1		01.9	50	17.6		22.9
9	107	44.5	279	42.9		03.1	65	19.0		23.2
10	122	46.9	294	42.7		04.4	80	20.4		23.5
11	137	49.4	309	42.5	-3	05.7	95	21.8	+13	23.9
12	152	51.9	324	42.3	-3	07.0	110	23.3	+13	24.2
13	167	54.3	339	42.1		08.3	125	24.7		24.5
14	182	56.8	354	41.9		09.6	140	26.1		24.9
15	197	59.3	9	41.7		10.9	155	27.5		25.2
16	213	01.7	24	41.5		12.1	170	28.9		25.5
17	228	04.2	39	41.3	-3	13.4	185	30.3	+13	25.8
18	243	06.7	54	41.1	-3	14.7	200	31.7	+13	26.2
19	258	09.1	69	41.0		16.0	215	33.1		26.5
20	273	11.6	84	40.8		17.3	230	34.5		26.8
21	288	14.0	99	40.6		18.6	245	35.9		27.1
22	303	16.5	114	40.4		19.9	260	37.3		27.5
23	318	19.0	129	40.2		21.1	275	38.7		27.8
24	333	21.4	144	40.0	-3	22.4	290	40.2	+13	28.1
Dif	—		-2	-13		+14	+3	+20		-2
										+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 0			Edad: 19 ^d 9 PHE { 4 ^h : 57/2 12 ^h : 56/9 20 ^h : 56/6 PMG: 4 ^h 32 ^m R°: 50 ^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	179	27.6	+10 48.0	294	14.4	+17 50.8	60 N	2 47	3 51	4 38		20 10 5	13 30 102				
1	194	27.7		308	44.7 ¹¹³	+18 03.4 ¹²⁶	58	3 03	4 01	45		26 12	15 94				
2	209	27.9		323	15.0 ¹¹³	16.0 ¹²⁶	56	17	10	50		40 17	13 02 89				
3	224	28.1		337	45.2 ¹¹²	28.4 ¹²⁴	54	28	17	4 56		20 52 21	12 51 84				
4	239	28.2		352	15.4 ¹¹²	40.8 ¹²⁴	52	38	24	5 00		21 02 24	41 81				
5	254	28.4	+10 43.7	6	45.5 ¹¹¹	+18 53.0 ¹²²	50	3 47	4 30	5 04		21 12 26	12 32 78				
6	269	28.6	+10 42.9	21	15.6 ¹¹¹	+19 05.2 ¹²²	45	4 05	4 43	5 14		21 32 31	12 13 73				
7	284	28.8		35	45.7 ¹¹¹	17.2 ¹²⁰	40	19	4 53	21		21 48 35	11 58 69				
8	299	28.9		50	15.8 ¹¹¹	29.1 ¹¹⁹	35	30	5 01	27		22 02 38	46 65				
9	314	29.1		64	45.8 ¹¹⁰	40.9 ¹¹⁸	30	39	08	33		14 41	34 63				
10	329	29.3		79	15.8 ¹¹⁰	+19 52.5 ¹¹⁶	20	4 54	20	43		35 45	11 16 58				
11	344	29.5	+10 38.5	93	45.7 ¹⁰⁹	+20 04.1 ¹¹⁶	10 N	5 05	5 30	5 51		22 53 48	10 59 54				
12	359	29.6	+10 37.7	108	15.6 ¹⁰⁹	+20 15.6 ¹¹⁵	0	5 13	5 38	5 59		23 10 51	10 44 50				
13	14	29.8		122	45.5 ¹⁰⁹	26.9 ¹¹³	10 S	20	45	6 06		27 55	29 47				
14	29	30.0		137	15.3 ¹⁰⁸	38.1 ¹¹²	20	26	52	14		23 46 57	10 12 44				
15	44	30.1		151	45.1 ¹⁰⁸	+20 49.2 ¹¹¹	30	31	5 59	23		** ** *	9 54 39				
16	59	30.3		166	14.9 ¹⁰⁸	+21 00.2 ¹¹⁰	35	33	6 03	28		** ** *	43 36				
17	74	30.5	+10 33.3	180	44.6 ¹⁰⁷	+21 11.1 ¹⁰⁹	40	5 35	6 07	6 34		** ** *	9 31 33				
18	89	30.7	+10 32.5	195	14.3 ¹⁰⁷	+21 21.8 ¹⁰⁷	45	5 37	6 11	6 41		** ** *	9 17 28				
19	104	30.8		209	44.0 ¹⁰⁷	32.4 ¹⁰⁶	50	38	16	49		** ** *	8 59 23				
20	119	31.0		224	13.6 ¹⁰⁶	43.0 ¹⁰⁶	52	39	18	52		0 01 83	51 20				
21	134	31.2		238	43.2 ¹⁰⁶	+21 53.3 ¹⁰³	54	39	20	6 56		10 86	42 17				
22	149	31.4		253	12.7 ¹⁰⁵	+22 03.6 ¹⁰³	56	40	23	7 01		19 90	32 13				
23	164	31.5		267	42.2 ¹⁰⁵	13.7 ¹⁰¹	58	40	25	06		30 95	20 8				
24	179	31.7	+10 27.3	282	11.7 ¹⁰⁵	+22 23.8 ¹⁰¹	60 S	5 40	6 28	7 11		0 43 101	8 06 3				
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO				
	PMG 1 ^h 46 ^m 3			Mag: -4.0 PMG: 14 ^h 22 ^m			Mag: -0.9 PMG: 4 ^h 37 ^m			Mag: -1.8 PMG: 14 ^h 50 ^m			Mag: +0.3 PMG: 10 ^h 15 ^m				
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	333	21.4		144	40.0	-3 22.4	290	40.2	+13 28.1	137	03.3	-5 43.2	205	55.1	+19 20.4		
1	348	23.9		159	39.8	23.7	305	41.6	28.4	152	05.3	43.4	220	57.2	20.3		
2	3	26.4		174	39.6	25.0	320	43.0	28.8	167	07.4	43.6	235	59.4	20.2		
3	18	28.8		189	39.4	26.3	335	44.4	29.1	182	09.4	43.8	251	01.5	20.2		
4	33	31.3		204	39.2	27.6	350	45.8	29.4	197	11.5	43.9	266	03.7	20.1		
5	48	33.8		219	39.0	-3 28.9	5	47.2	+13 29.7	212	13.5	-5 44.1	281	05.8	+19 20.0		
6	63	36.2		234	38.8	-3 30.1	20	48.6	+13 30.1	227	15.6	-5 44.3	296	08.0	+19 20.0		
7	78	38.7		249	38.6	31.4	35	50.1	30.4	242	17.6	44.5	311	10.1	19.9		
8	93	41.2		264	38.4	32.7	50	51.5	30.7	257	19.7	44.7	326	12.3	19.8		
9	108	43.6		279	38.2	34.0	65	52.9	31.0	272	21.7	44.8	341	14.5	19.8		
10	123	46.1		294	38.0	35.3	80	54.3	31.3	287	23.7	45.0	356	16.6	19.7		
11	138	48.5		309	37.8	-3 36.6	95	55.7	+13 31.7	302	25.8	-5 45.2	11	18.8	+19 19.6		
12	153	51.0		324	37.6	-3 37.8	110	57.2	+13 32.0	317	27.8	-5 45.4	26	20.9	+19 19.6		
13	168	53.5		339	37.4	39.1	125	58.6	32.3	332	29.9	45.5	41	23.1	19.5		
14	183	55.9		354	37.2	40.4	141	00.0	32.6	347	31.9	45.7	56	25.2	19.4		
15	198	58.4		9	37.0	41.7	156	01.4	33.0	2	34.0	45.9	71	27.4	19.3		
16	214	00.9		24	36.8	43.0	171	02.8	33.3	17	36.0	46.1	86	29.5	19.3		
17	229	03.3		39	36.6	-3 44.3	186	04.3	+13 33.6	32	38.1	-5 46.3	101	31.7	+19 19.2		
18	244	05.8		54	36.4	-3 45.5	201	05.7	+13 33.9	47	40.1	-5 46.4	116	33.9	+19 19.1		
19	259	08.3		69	36.2	46.8	216	07.1	34.2	62	42.2	46.6	131	36.0	19.1		
20	274	10.7		84	36.0	48.1	231	08.5	34.6	77	44.2	46.8	146	38.2	19.0		
21	289	13.2		99	35.8	49.4	246	10.0	34.9	92	46.3	47.0	161	40.3	18.9		
22	304	15.7		114	35.6	50.7	261	11.4	35.2	107	48.3	47.2	176	42.5	18.9		
23	319	18.1		129	35.4	52.0	276	12.8	35.5	122	50.3	47.3	191	44.6	18.8		
24	334	20.6		144	35.2	-3 53.2	291	14.3	+13 35.8	137	52.4	-5 47.5	206	46.8	+19 18.7		
Dif	—			-2	-13		+14	+3		+20	-2		+22	-1			

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 20 ^d 9 PHE { 4 ^h : 56 ^h /4 12 ^h : 56 ^h /1 20 ^h : 55 ^h /8					Civil			Hora		Hora	
	PMG: 12 ^h 01 ^m 7			SD: 15 ^h 4 PMG: 5 ^h 22 ^m R°: 52 ^m					Náutico			R°		R°	
	hG ☉	Dec		hG ☾	Dif	Dec	Dif								
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	h m	m
0	179	31.7	+10 27.3	282	11.7	+22 23.8	98	60 N	19 21	20 08	21 10	20 15	12	15 12	96
1	194	31.9	26.4	296	41.1 ¹⁰⁴	33.6	98	58	15	19 58	20 55	38 21		14 49	87
2	209	32.1	25.5	311	10.5 ¹⁰⁴	43.4	98	56	10	50	42	20 57	26	31	81
3	224	32.2	24.7	325	39.9 ¹⁰⁴	+22 53.1	97	54	05	43	31	21 13	30	15	78
4	239	32.4	23.8	340	09.2 ¹⁰³	+23 02.6	95	52	19 00	36	21	26 33		14 02	75
5	254	32.6	+10 22.9	354	38.5 ¹⁰³	+23 12.0	94	50	18 56	19 31	20 13	21 38	36	13 50	73
6	269	32.8	+10 22.1	9	07.7 ¹⁰²	+23 21.2	92	45	18 48	19 19	19 56	22 03	40	13 26	68
7	284	33.0	21.2	23	36.9 ¹⁰²	30.3	91	40	41	09	43	23 42		13 07	65
8	299	33.1	20.3	38	06.1 ¹⁰²	39.4	91	35	35	19 01	32	40 44		12 51	62
9	314	33.3	19.4	52	35.2 ¹⁰¹	48.2	88	30	29	18 54	23	22 55	45	37	61
10	329	33.5	18.6	67	04.3 ¹⁰¹	+23 57.0	88	20	20	43	19 09	23 20	48	12 14	57
11	344	33.7	+10 17.7	81	33.4 ¹⁰¹	+24 05.6	86	10 N	18 12	18 34	18 59	23 41	51	11 53	55
12	359	33.8	+10 16.8	96	02.4 ¹⁰⁰	+24 14.1	85	0	18 05	18 26	18 50	*** ** *		11 34	52
13	14	34.0	16.0	110	31.4 ¹⁰⁰	22.4	83	10 S	17 58	19	44	*** ** *		11 16	49
14	29	34.2	15.1	125	00.4 ¹⁰⁰	30.6	82	20	50	13	38	*** ** *		10 56	46
15	44	34.4	14.2	139	29.3 ⁹⁹	38.7	81	30	42	06	34	0 07	62	33	43
16	59	34.6	13.3	153	58.2 ⁹⁹	46.7	80	35	37	18 03	32	20 64		19	41
17	74	34.7	+10 12.5	168	27.1 ⁹⁹	+24 54.5	78	40	17 31	17 59	18 30	0 34	67	10 04	38
18	89	34.9	+10 11.6	182	55.9 ⁹⁸	+25 02.2	77	45	17 25	17 55	18 29	0 52	71	9 45	35
19	104	35.1	10.7	197	24.7 ⁹⁸	09.7	75	50	18	50	28	1 14	75	22	31
20	119	35.3	09.8	211	53.5 ⁹⁸	17.2	75	52	14	48	28	24 78		9 11	28
21	134	35.4	09.0	226	22.2 ⁹⁷	24.4	72	54	10	46	27	36 82		8 59	25
22	149	35.6	08.1	240	50.9 ⁹⁷	31.6	72	56	06	44	27	1 49	86	45	21
23	164	35.8	07.2	255	19.6 ⁹⁷	38.6	70	58	17 01	42	27	2 05	92	28	16
24	179	36.0	+10 06.3	269	48.3 ⁹⁷	+25 45.5	69	60 S	16 56	17 39	18 27	2 24	101	8 09	6

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 1 ^h 42 ^m 3		Mag: -4.0 PMG: 14 ^h 22 ^m		Mag: -0.9 PMG: 4 ^h 35 ^m		Mag: -1.8 PMG: 14 ^h 46 ^m		Mag: +0.3 PMG: 10 ^h 11 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	334	20.6	144	35.2	291	14.3	+13 35.8	137	52.4	-5 47.5	206	46.8	+19 18.7		
1	349	23.0	159	35.0	306	15.7	36.1	152	54.4	47.7	221	48.9	18.7		
2	4	25.5	174	34.8	321	17.1	36.5	167	56.5	47.9	236	51.1	18.6		
3	19	28.0	189	34.6	336	18.6	36.8	182	58.5	48.0	251	53.3	18.5		
4	34	30.4	204	34.4	351	20.0	37.1	198	00.6	48.2	266	55.4	18.5		
5	49	32.9	219	34.2	6	21.4	+13 37.4	213	02.6	-5 48.4	281	57.6	+19 18.4		
6	64	35.4	234	34.0	21	22.9	+13 37.7	228	04.7	-5 48.6	296	59.7	+19 18.3		
7	79	37.8	249	33.8	36	24.3	38.0	243	06.7	48.8	312	01.9	18.3		
8	94	40.3	264	33.6	51	25.7	38.4	258	08.7	48.9	327	04.0	18.2		
9	109	42.8	279	33.4	66	27.2	38.7	273	10.8	49.1	342	06.2	18.1		
10	124	45.2	294	33.2	81	28.6	39.0	288	12.8	49.3	357	08.3	18.0		
11	139	47.7	309	33.0	96	30.0	+13 39.3	303	14.9	-5 49.5	12	10.5	+19 18.0		
12	154	50.1	324	32.8	111	31.5	+13 39.6	318	16.9	-5 49.7	27	12.7	+19 17.9		
13	169	52.6	339	32.6	126	32.9	39.9	333	19.0	49.8	42	14.8	17.8		
14	184	55.1	354	32.4	141	34.4	40.2	348	21.0	50.0	57	17.0	17.8		
15	199	57.5	9	32.3	156	35.8	40.6	3	23.1	50.2	72	19.1	17.7		
16	215	00.0	24	32.1	171	37.2	40.9	18	25.1	50.4	87	21.3	17.6		
17	230	02.5	39	31.9	186	38.7	+13 41.2	33	27.1	-5 50.6	102	23.4	+19 17.6		
18	245	04.9	54	31.7	201	40.1	+13 41.5	48	29.2	-5 50.7	117	25.6	+19 17.5		
19	260	07.4	69	31.5	216	41.6	41.8	63	31.2	50.9	132	27.8	17.4		
20	275	09.9	84	31.3	231	43.0	42.1	78	33.3	51.1	147	29.9	17.4		
21	290	12.3	99	31.1	246	44.5	42.4	93	35.3	51.3	162	32.1	17.3		
22	305	14.8	114	30.9	261	45.9	42.7	108	37.3	51.4	177	34.2	17.2		
23	320	17.3	129	30.7	276	47.4	43.1	123	39.4	51.6	192	36.4	17.2		
24	335	19.7	144	30.5	291	48.8	+13 43.4	138	41.4	-5 51.8	207	38.5	+19 17.1		
Dif	—		-2	-13	+14	+3		+20		-2		+22		-1	

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 21 ^d 9	PHE {	R°: 53 ^m		Náutico	Civil		Hora	R°	Hora	R°
	PMG: 12 ^h 01 ^m 5													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif							
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m
0	179	36.0	+10 06.3	269	48.3	+25 45.5	67	60 N	2 54	3 56	4 43	20 27	32	16 48 78
1	194	36.2	05.5	284	16.9	52.2	67	58	3 09	4 06	49	20 59	39	16 16 71
2	209	36.3	04.6	298	45.5	58.8	66	56	22	14	54	21 23	43	15 52 68
3	224	36.5	03.7	313	14.0	05.2	64	54	33	21	4 59	43	44	33 65
4	239	36.7	02.8	327	42.6	11.5	63	52	43	27	5 04	21 59	46	17 63
5	254	36.9	+10 02.0	342	11.1	17.7	62	50	3 51	4 33	5 07	22 14	46	15 03 62
6	269	37.1	+10 01.1	356	39.6	23.8	61	45	4 08	4 45	5 16	22 43	48	14 34 61
7	284	37.2	+10 00.2	11	08.0	29.7	59	40	21	4 55	23	23 05	49	14 12 59
8	299	37.4	+9 59.3	25	36.5	35.4	57	35	32	5 03	29	24	50	13 53 58
9	314	37.6	58.5	40	04.9	41.0	56	30	41	10	34	23 40	51	38 57
10	329	37.8	57.6	54	33.3	46.5	55	20	4 54	21	43	** ** *	**	13 11 55
11	344	38.0	+9 56.7	69	01.6	51.9	54	10 N	5 05	5 30	5 51	** ** *	**	12 48 54
12	359	38.1	+9 55.8	83	30.0	57.0	51	0	5 13	5 37	5 58	0 01	53	12 26 53
13	14	38.3	54.9	97	58.3	02.1	51	10 S	19	44	6 05	22	54	12 05 52
14	29	38.5	54.1	112	26.6	07.0	49	20	25	50	13	0 43	57	11 42 50
15	44	38.7	53.2	126	54.9	11.8	48	30	29	5 57	21	1 09	59	16 48
16	59	38.9	52.3	141	23.2	16.4	46	35	31	6 00	26	24	60	11 00 47
17	74	39.1	+9 51.4	155	51.4	20.9	45	40	5 32	6 04	6 31	1 41	63	10 42 46
18	89	39.2	+9 50.5	170	19.7	25.2	43	45	5 34	6 08	6 37	2 03	64	10 20 44
19	104	39.4	49.7	184	47.9	29.4	42	50	34	12	45	29	68	9 53 40
20	119	39.6	48.8	199	16.1	33.5	41	52	35	14	48	42	70	39 39
21	134	39.8	47.9	213	44.3	37.4	39	54	35	16	52	2 58	72	24 37
22	149	40.0	47.0	228	12.5	41.2	38	56	35	18	6 56	3 15	76	9 06 33
23	164	40.2	46.1	242	40.7	44.8	36	58	35	20	7 00	3 37	81	8 44 28
24	179	40.3	+9 45.3	257	08.9	48.3	35	60 S	5 35	6 23	7 06	4 05	91	8 15 19

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 1 ^h 38 ^m 4		Mag: -4.0 PMG: 14 ^h 22 ^m		Mag: -0.9 PMG: 4 ^h 32 ^m		Mag: -1.8 PMG: 14 ^h 43 ^m		Mag: +0.3 PMG: 10 ^h 08 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	335	19.7	144	30.5	291	48.8	138	41.4	207	38.5
1	350	22.2	159	30.3	306	50.3	153	43.5	222	40.7
2	5	24.6	174	30.1	321	51.7	168	45.5	237	42.9
3	20	27.1	189	29.9	336	53.2	183	47.6	252	45.0
4	35	29.6	204	29.7	351	54.6	198	49.6	267	47.2
5	50	32.0	219	29.5	6	56.1	213	51.6	282	49.3
6	65	34.5	234	29.3	21	57.5	228	53.7	297	51.5
7	80	37.0	249	29.1	36	59.0	243	55.7	312	53.6
8	95	39.4	264	28.9	52	00.4	258	57.8	327	55.8
9	110	41.9	279	28.7	67	01.9	273	59.8	342	58.0
10	125	44.4	294	28.5	82	03.3	289	01.8	358	00.1
11	140	46.8	309	28.3	97	04.8	304	03.9	13	02.3
12	155	49.3	324	28.1	112	06.3	319	05.9	28	04.4
13	170	51.8	339	27.9	127	07.7	334	08.0	43	06.6
14	185	54.2	354	27.7	142	09.2	349	10.0	58	08.8
15	200	56.7	9	27.5	157	10.6	4	12.0	73	10.9
16	215	59.1	24	27.3	172	12.1	19	14.1	88	13.1
17	231	01.6	39	27.1	187	13.6	34	16.1	103	15.2
18	246	04.1	54	26.9	202	15.0	49	18.2	118	17.4
19	261	06.5	69	26.7	217	16.5	64	20.2	133	19.5
20	276	09.0	84	26.5	232	17.9	79	22.2	148	21.7
21	291	11.5	99	26.3	247	19.4	94	24.3	163	23.9
22	306	13.9	114	26.1	262	20.9	109	26.3	178	26.0
23	321	16.4	129	25.9	277	22.3	124	28.4	193	28.2
24	336	18.9	144	25.7	292	23.8	139	30.4	208	30.3
Dif	—		-2	-13	+15	+3	+20	-2	+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 2		Edad: 22 ^d 9 PHE { 4 ^h : 55°0 12 ^h : 54°8 20 ^h : 54°7 R°: 52 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	179	40.3	+9 45.3	257	08.9	+27 48.3	60 N	19 15	20 01	21 02	20 59 66	18 06 43		
1	194	40.5	44.4	271	37.0	51.6	58	10	19 52	20 47	21 38 62	17 27 46		
2	209	40.7	43.5	286	05.2	54.8	56	05	45	35	22 06 60	17 00 48		
3	224	40.9	42.6	300	33.3	+27 57.8	54	19 00	38	25	27 59	16 38 49		
4	239	41.1	41.7	315	01.5	+28 00.7	52	18 56	32	16	22 45 58	20 50		
5	254	41.3	+9 40.8	329	29.6	+28 03.5	50	18 52	19 26	20 08	23 00 58	16 05 50		
6	269	41.4	+9 40.0	343	57.8	+28 06.1	45	18 44	19 15	19 52	23 31 56	15 35 50		
7	284	41.6	39.1	358	25.9	08.6	40	38	19 06	39	23 54 56	15 11 51		
8	299	41.8	38.2	12	54.1	10.9	35	32	18 58	29	** ** *	14 51 52		
9	314	42.0	37.3	27	22.2	13.1	30	27	52	21	** ** *	35 51		
10	329	42.2	36.4	41	50.3	15.1	20	19	41	19 07	0 08 51	14 06 52		
11	344	42.4	+9 35.5	56	18.5	+28 17.0	10 N	18 11	18 33	18 57	0 32 52	13 42 52		
12	359	42.5	+9 34.7	70	46.6	+28 18.8	0	18 04	18 25	18 50	0 54 52	13 19 53		
13	14	42.7	33.8	85	14.8	20.4	10 S	17 58	19	44	1 16 53	12 57 52		
14	29	42.9	32.9	99	43.0	21.8	20	51	13	39	1 40 54	32 53		
15	44	43.1	32.0	114	11.1	23.1	30	43	07	35	2 08 54	12 04 53		
16	59	43.3	31.1	128	39.3	24.3	35	38	04	33	24 55	11 47 53		
17	74	43.5	+9 30.2	143	07.5	+28 25.3	40	17 33	18 01	18 32	2 44 55	11 28 52		
18	89	43.7	+9 29.3	157	35.7	+28 26.2	45	17 27	17 57	18 31	3 07 56	11 04 52		
19	104	43.8	28.5	172	03.9	27.0	50	20	53	31	37 57	10 33 53		
20	119	44.0	27.6	186	32.2	27.6	52	17	51	31	3 52 57	18 52		
21	134	44.2	26.7	201	00.4	28.0	54	14	50	31	4 10 57	10 01 52		
22	149	44.4	25.8	215	28.7	28.3	56	10	48	31	31 58	9 39 52		
23	164	44.6	24.9	229	56.9	28.5	58	06	46	31	4 58 59	9 12 51		
24	179	44.8	+9 24.0	244	25.2	+28 28.5	60 S	17 01	17 43	18 31	5 36 61	8 34 49		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 1 ^h 34 ^m 5		Mag: -4.0 PMG: 14 ^h 22 ^m		Mag: -0.9 PMG: 4 ^h 30 ^m		Mag: -1.8 PMG: 14 ^h 40 ^m		Mag: +0.3 PMG: 10 ^h 05 ^m	
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	°	'	°	'	°	'	
0	336	18.9	144 25.7	-4 54.7	292 23.8	+13 50.8	139 30.4	-5 56.1	208 30.3	+19 15.5
1	351	21.3	159 25.5	56.0	307 25.3	51.1	154 32.4	56.3	223 32.5	15.4
2	6	23.8	174 25.3	57.2	322 26.7	51.4	169 34.5	56.5	238 34.7	15.3
3	21	26.3	189 25.1	58.5	337 28.2	51.7	184 36.5	56.7	253 36.8	15.3
4	36	28.7	204 24.9	-4 59.8	352 29.7	52.0	199 38.6	56.8	268 39.0	15.2
5	51	31.2	219 24.7	-5 01.1	7 31.2	+13 52.3	214 40.6	-5 57.0	283 41.1	+19 15.1
6	66	33.6	234 24.5	-5 02.3	22 32.6	+13 52.6	229 42.6	-5 57.2	298 43.3	+19 15.0
7	81	36.1	249 24.3	03.6	37 34.1	52.9	244 44.7	57.4	313 45.5	15.0
8	96	38.6	264 24.1	04.9	52 35.6	53.2	259 46.7	57.6	328 47.6	14.9
9	111	41.0	279 23.9	06.2	67 37.0	53.5	274 48.7	57.8	343 49.8	14.8
10	126	43.5	294 23.7	07.4	82 38.5	53.8	289 50.8	57.9	358 51.9	14.8
11	141	46.0	309 23.5	-5 08.7	97 40.0	+13 54.1	304 52.8	-5 58.1	13 54.1	+19 14.7
12	156	48.4	324 23.3	-5 10.0	112 41.5	+13 54.4	319 54.9	-5 58.3	28 56.3	+19 14.6
13	171	50.9	339 23.1	11.3	127 43.0	54.7	334 56.9	58.5	43 58.4	14.6
14	186	53.4	354 22.9	12.5	142 44.4	55.0	349 58.9	58.7	59 00.6	14.5
15	201	55.8	9 22.7	13.8	157 45.9	55.3	5 01.0	58.8	74 02.7	14.4
16	216	58.3	24 22.5	15.1	172 47.4	55.6	20 03.0	59.0	89 04.9	14.4
17	232	00.7	39 22.3	-5 16.4	187 48.9	+13 55.9	35 05.0	-5 59.2	104 07.1	+19 14.3
18	247	03.2	54 22.1	-5 17.6	202 50.4	+13 56.2	50 07.1	-5 59.4	119 09.2	+19 14.2
19	262	05.7	69 21.9	18.9	217 51.8	56.5	65 09.1	59.6	134 11.4	14.2
20	277	08.1	84 21.7	20.2	232 53.3	56.8	80 11.2	59.7	149 13.5	14.1
21	292	10.6	99 21.5	21.5	247 54.8	57.1	95 13.2	-5 59.9	164 15.7	14.0
22	307	13.1	114 21.3	22.7	262 56.3	57.4	110 15.2	-6 00.1	179 17.9	14.0
23	322	15.5	129 21.1	24.0	277 57.8	57.7	125 17.3	00.3	194 20.0	13.9
24	337	18.0	144 20.9	-5 25.3	292 59.3	+13 58.0	140 19.3	-6 00.5	209 22.2	+19 13.8
Dif	—		-2	-13	+15	+3	+20	-2	+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 00 ^m 9			Edad: 23 ^d 9 PHE { 4 ^h : 54 ^m /5 12 ^h : 54 ^m /4 20 ^h : 54 ^m /3 SD: 14 ^h 9 PMG: 7 ^h 59 ^m R°: 52 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	179	44.8	+9	244	25.2	+28	28.5	60 N	3 01	4 02	4 48	22 05 88	18 49 17		
1	194	45.0		258	53.5 ⁹³		28.4	58	15	11	53	22 40 79	18 13 26		
2	209	45.1		273	21.9 ⁹⁴		28.1	56	27	18	4 58	23 06 74	17 48 30		
3	224	45.3		287	50.2 ⁹³		27.7	54	38	25	5 03	26 71	27 34		
4	239	45.5		302	18.6 ⁹⁴		27.2	52	47	31	07	43 68	17 10 36		
5	254	45.7	+9	316	47.0 ⁹⁴	+28	26.5	50	3 55	4 36	5 10	23 58 66	16 55 38		
6	269	45.9	+9	331	15.5 ⁹⁵	+28	25.7	45	4 11	4 48	5 18	** ** *	16 25 41		
7	284	46.1		345	43.9 ⁹⁴		24.7	40	23	4 57	25	** ** *	16 02 43		
8	299	46.3		0	12.4 ⁹⁵		23.6	35	34	5 04	30	0 14 55	15 43 44		
9	314	46.5		14	40.9 ⁹⁵		22.4	30	42	11	35	31 54	15 26 46		
10	329	46.6		29	09.5 ⁹⁶		21.0	20	4 55	21	44	0 59 54	14 58 48		
11	344	46.8	+9	43	38.0 ⁹⁵	+28	19.5	10 N	5 05	5 30	5 51	1 24 52	14 34 50		
12	359	47.0	+9	58	06.7 ⁹⁷	+28	17.8	0	5 12	5 37	5 58	1 46 52	14 12 51		
13	14	47.2		72	35.3 ⁹⁶		16.0	10 S	18	43	6 04	2 09 51	13 49 53		
14	29	47.4		87	04.0 ⁹⁷		14.1	20	23	49	11	2 34 50	13 25 54		
15	44	47.6		101	32.7 ⁹⁷		12.0	30	27	55	19	3 02 49	12 57 55		
16	59	47.8		116	01.4 ⁹⁷		09.8	35	28	5 58	23	19 48	40 57		
17	74	48.0	+9	130	30.2 ⁹⁸	+28	07.4	40	5 29	6 01	6 28	3 39 47	12 20 58		
18	89	48.2	+9	144	59.0 ⁹⁸	+28	04.9	45	5 30	6 04	6 34	4 03 45	11 56 60		
19	104	48.3		159	27.9 ⁹⁹	+28	02.3	50	31	08	41	34 43	26 62		
20	119	48.5		173	56.8 ⁹⁹	+27	59.5	52	31	10	44	4 49 42	11 10 64		
21	134	48.7		188	25.8 ¹⁰⁰		56.7	54	30	11	47	5 07 41	10 53 65		
22	149	48.9		202	54.7 ⁹⁹		53.6	56	30	13	51	29 38	31 68		
23	164	49.1		217	23.8 ¹⁰¹		50.5	58	30	15	6 55	5 57 34	10 03 72		
24	179	49.3	+9	231	52.9 ¹⁰¹	+27	47.2	60 S	5 29	6 17	7 00	6 37 26	9 23 81		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 1 ^h 30 ^m 6		Mag: -4.0 PMG: 14 ^h 23 ^m			Mag: -1.0 PMG: 4 ^h 28 ^m			Mag: -1.8 PMG: 14 ^h 37 ^m			Mag: +0.3 PMG: 10 ^h 01 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	337	18.0	144	20.9	-5 25.3	292	59.3	+13 58.0	140	19.3	-6 00.5	209	22.2	+19 13.8	
1	352	20.5	159	20.7	26.6	308	00.8	58.3	155	21.3	00.7	224	24.3	13.8	
2	7	22.9	174	20.5	27.8	323	02.2	58.6	170	23.4	00.8	239	26.5	13.7	
3	22	25.4	189	20.3	29.1	338	03.7	58.9	185	25.4	01.0	254	28.7	13.6	
4	37	27.9	204	20.1	30.4	353	05.2	59.2	200	27.4	01.2	269	30.8	13.6	
5	52	30.3	219	19.9	-5 31.7	8	06.7	+13 59.5	215	29.5	-6 01.4	284	33.0	+19 13.5	
6	67	32.8	234	19.7	-5 32.9	23	08.2	+13 59.8	230	31.5	-6 01.6	299	35.1	+19 13.4	
7	82	35.2	249	19.5	34.2	38	09.7	+14 00.1	245	33.5	01.7	314	37.3	13.4	
8	97	37.7	264	19.3	35.5	53	11.2	00.4	260	35.6	01.9	329	39.5	13.3	
9	112	40.2	279	19.1	36.7	68	12.7	00.7	275	37.6	02.1	344	41.6	13.2	
10	127	42.6	294	18.9	38.0	83	14.2	01.0	290	39.7	02.3	359	43.8	13.2	
11	142	45.1	309	18.7	-5 39.3	98	15.7	+14 01.2	305	41.7	-6 02.5	14	45.9	+19 13.1	
12	157	47.6	324	18.5	-5 40.6	113	17.2	+14 01.5	320	43.7	-6 02.6	29	48.1	+19 13.0	
13	172	50.0	339	18.3	41.8	128	18.7	01.8	335	45.8	02.8	44	50.3	12.9	
14	187	52.5	354	18.1	43.1	143	20.2	02.1	350	47.8	03.0	59	52.4	12.9	
15	202	55.0	9	17.9	44.4	158	21.7	02.4	5	49.8	03.2	74	54.6	12.8	
16	217	57.4	24	17.7	45.6	173	23.2	02.7	20	51.9	03.4	89	56.8	12.7	
17	232	59.9	39	17.5	-5 46.9	188	24.7	+14 03.0	35	53.9	-6 03.6	104	58.9	+19 12.7	
18	248	02.4	54	17.3	-5 48.2	203	26.2	+14 03.3	50	55.9	-6 03.7	120	01.1	+19 12.6	
19	263	04.8	69	17.1	49.5	218	27.7	03.6	65	58.0	03.9	135	03.2	12.5	
20	278	07.3	84	16.9	50.7	233	29.2	03.9	81	00.0	04.1	150	05.4	12.5	
21	293	09.7	99	16.7	52.0	248	30.7	04.2	96	02.0	04.3	165	07.6	12.4	
22	308	12.2	114	16.5	53.3	263	32.2	04.5	111	04.1	04.5	180	09.7	12.3	
23	323	14.7	129	16.3	54.5	278	33.7	04.8	126	06.1	04.7	195	11.9	12.3	
24	338	17.1	144	16.1	-5 55.8	293	35.2	+14 05.1	141	08.1	-6 04.8	210	14.1	+19 12.2	
Dif	—		-2		-13	+15		+3	+20		-2	+22		-1	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 24 ^d 9 PHE { 4 ^h : 54 ^m /2 12 ^h : 54 ^m /1 20 ^h : 54 ^m /1					Final del crepúsculo			Salida de Luna		Puesta de Luna	
	PMG: 12 ^h 00 ^m 6			SD: 14 ^h 8 PMG: 8 ^h 51 ^m R°: 49 ^m					Final del crepúsculo			Salida de Luna		Puesta de Luna	
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	m	h m m	m
0	179	49.3	+9 02.6	231	52.9	+27 47.2	35	60 N	19 09	19 55	20 54	23 33 93		19 06	6
1	194	49.5	01.7	246	22.0 ¹⁰¹	43.7	35	58	04	46	40	23 59 85		18 39	14
2	209	49.7	+9 00.8	260	51.1 ¹⁰¹	40.2	35	56	19 00	39	29	** ** *		18	19
3	224	49.9	+8 59.9	275	20.4 ¹⁰³	36.5	37	54	18 55	33	19	** ** *		18 01	22
4	239	50.1	59.0	289	49.6 ¹⁰²	32.7	38	52	52	27	11	** ** *		17 46	25
5	254	50.2	+8 58.1	304	18.9 ¹⁰³	+27 28.7	40	50	18 48	19 22	20 03	** ** *		17 33	28
6	269	50.4	+8 57.3	318	48.3 ¹⁰⁴	+27 24.6	41	45	18 41	19 11	19 48	0 27 63		17 06	32
7	284	50.6	56.4	333	17.7 ¹⁰⁴	20.4	42	40	35	19 02	36	0 50 60		16 45	35
8	299	50.8	55.5	347	47.2 ¹⁰⁵	16.1	43	35	29	18 55	26	1 09 58		27	38
9	314	51.0	54.6	2	16.7 ¹⁰⁵	11.6	45	30	25	49	18	25 57		16 12	40
10	329	51.2	53.7	16	46.3 ¹⁰⁶	07.0	46	20	17	39	19 05	1 53 54		15 46	43
11	344	51.4	+8 52.8	31	15.9 ¹⁰⁶	+27 02.3	47	10 N	18 10	18 31	18 56	2 16 52		15 24	46
12	359	51.6	+8 51.9	45	45.5 ¹⁰⁶	+26 57.5	48	0	18 04	18 25	18 49	2 38 50		15 03	48
13	14	51.8	51.0	60	15.3 ¹⁰⁸	52.5	50	10 S	17 58	19	43	3 00 48		14 42	51
14	29	52.0	50.1	74	45.1 ¹⁰⁸	47.4	51	20	51	13	39	24 45		14 19	54
15	44	52.2	49.2	89	14.9 ¹⁰⁸	42.2	52	30	44	08	36	3 51 43		13 52	58
16	59	52.4	48.3	103	44.8 ¹⁰⁹	36.8	54	35	40	05	35	4 07 41		37	59
17	74	52.5	+8 47.4	118	14.8 ¹¹⁰	+26 31.4	54	40	17 35	18 02	18 34	4 26 39		13 18	62
18	89	52.7	+8 46.5	132	44.8 ¹¹⁰	+26 25.8	56	45	17 30	17 59	18 33	4 48 37		12 56	65
19	104	52.9	45.6	147	14.8 ¹¹⁰	20.1	57	50	23	56	33	5 17 32		28	69
20	119	53.1	44.7	161	45.0 ¹¹²	14.2	59	52	20	55	34	31 30		12 14	72
21	134	53.3	43.8	176	15.2 ¹¹²	08.3	59	54	17	53	34	5 48 27		11 58	74
22	149	53.5	42.9	190	45.4 ¹¹²	+26 02.2	61	56	14	51	34	6 07 24		39	78
23	164	53.7	42.0	205	15.7 ¹¹³	+25 56.0	62	58	10	50	35	6 31 18		11 15	84
24	179	53.9	+8 41.1	219	46.1 ¹¹⁴	+25 49.7	63	60 S	17 05	17 48	18 36	7 03 9		10 44	93
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 1 ^h 26 ^m 6		Mag: -4.0 PMG: 14 ^h 23 ^m			Mag: -1.0 PMG: 4 ^h 25 ^m			Mag: -1.8 PMG: 14 ^h 33 ^m			Mag: +0.3 PMG: 9 ^h 58 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	°	'	°	°	'	°	'	°	'	°
0	338	17.1	144	16.1	-5 55.8	293	35.2	+14 05.1	141	08.1	-6 04.8	210	14.1	+19 12.2	
1	353	19.6	159	15.9	57.1	308	36.7	05.3	156	10.2	05.0	225	16.2	12.1	
2	8	22.1	174	15.6	58.3	323	38.2	05.6	171	12.2	05.2	240	18.4	12.1	
3	23	24.5	189	15.4	-5 59.6	338	39.7	05.9	186	14.2	05.4	255	20.5	12.0	
4	38	27.0	204	15.2	-6 00.9	353	41.2	06.2	201	16.3	05.6	270	22.7	11.9	
5	53	29.5	219	15.0	-6 02.1	8	42.7	+14 06.5	216	18.3	-6 05.7	285	24.9	+19 11.9	
6	68	31.9	234	14.8	-6 03.4	23	44.3	+14 06.8	231	20.3	-6 05.9	300	27.0	+19 11.8	
7	83	34.4	249	14.6	04.7	38	45.8	07.1	246	22.4	06.1	315	29.2	11.7	
8	98	36.9	264	14.4	05.9	53	47.3	07.4	261	24.4	06.3	330	31.4	11.7	
9	113	39.3	279	14.2	07.2	68	48.8	07.7	276	26.4	06.5	345	33.5	11.6	
10	128	41.8	294	14.0	08.5	83	50.3	08.0	291	28.5	06.7	0	35.7	11.5	
11	143	44.2	309	13.8	-6 09.7	98	51.8	+14 08.2	306	30.5	-6 06.8	15	37.8	+19 11.5	
12	158	46.7	324	13.6	-6 11.0	113	53.3	+14 08.5	321	32.5	-6 07.0	30	40.0	+19 11.4	
13	173	49.2	339	13.4	12.3	128	54.9	08.8	336	34.5	07.2	45	42.2	11.3	
14	188	51.6	354	13.2	13.5	143	56.4	09.1	351	36.6	07.4	60	44.3	11.3	
15	203	54.1	9	13.0	14.8	158	57.9	09.4	6	38.6	07.6	75	46.5	11.2	
16	218	56.6	24	12.8	16.1	173	59.4	09.7	21	40.6	07.8	90	48.7	11.1	
17	233	59.0	39	12.6	-6 17.3	189	00.9	+14 10.0	36	42.7	-6 07.9	105	50.8	+19 11.1	
18	249	01.5	54	12.4	-6 18.6	204	02.5	+14 10.3	51	44.7	-6 08.1	120	53.0	+19 11.0	
19	264	04.0	69	12.2	19.9	219	04.0	10.5	66	46.7	08.3	135	55.2	10.9	
20	279	06.4	84	12.0	21.1	234	05.5	10.8	81	48.8	08.5	150	57.3	10.9	
21	294	08.9	99	11.8	22.4	249	07.0	11.1	96	50.8	08.7	165	59.5	10.8	
22	309	11.4	114	11.6	23.7	264	08.6	11.4	111	52.8	08.9	181	01.6	10.7	
23	324	13.8	129	11.4	24.9	279	10.1	11.7	126	54.9	09.0	196	03.8	10.7	
24	339	16.3	144	11.2	-6 26.2	294	11.6	+14 12.0	141	56.9	-6 09.2	211	06.0	+19 10.6	
Dif	—		-2		-13	+15		+3	+20		-2	+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 00 ^m 3			Edad: 25 ^d 9 PHE { 4 ^h : 54 ^o 0 12 ^h : 54 ^o 0 20 ^h : 54 ^o 0 PMG: 9 ^h 40 ^m R ^o : 46 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R ^o	Hora	R ^o		
h	°	'	°	°	'	°	°	h	m	h	m	h	m	m	h	m	m
0	179	53.9	+8 41.1	219	46.1	+25 49.7	60 N	3 08	4 07	4 52	*** ** *	19 12	2				
1	194	54.1		234	16.5 ¹¹⁴	43.3 ⁶⁴	58	21	15	4 58	*** ** *	18 53	7				
2	209	54.3		248	47.0 ¹¹⁵	36.8 ⁶⁵	56	33	23	5 02	0 20	79	37	12			
3	224	54.5		263	17.6 ¹¹⁶	30.1 ⁶⁷	54	42	29	06	37	76	23	16			
4	239	54.7		277	48.2 ¹¹⁶	23.4 ⁶⁷	52	51	35	10	0 51	73	11	19			
5	254	54.9	+8 36.6	292	18.9 ¹¹⁷	+25 16.5 ⁶⁹	50	3 58	4 40	5 13	1 04	70	18 01	20			
6	269	55.1	+8 35.7	306	49.6 ¹¹⁷	+25 09.5 ⁷⁰	45	4 14	4 50	5 21	1 30	65	17 38	26			
7	284	55.3		321	20.4 ¹¹⁸	+25 02.4 ⁷¹	40	26	4 59	27	1 50	62	20	30			
8	299	55.5		335	51.3 ¹¹⁹	+24 55.2 ⁷²	35	35	5 06	32	2 07	60	17 05	33			
9	314	55.6		350	22.2 ¹¹⁹	47.8 ⁷⁴	30	43	12	36	22	57	16 52	35			
10	329	55.8		4	53.2 ¹²⁰	40.4 ⁷⁴	20	4 56	22	44	2 47	53	29	40			
11	344	56.0	+8 31.2	19	24.3 ¹²¹	+24 32.8 ⁷⁶	10 N	5 05	5 30	5 51	3 08	50	16 10	42			
12	359	56.2	+8 30.3	33	55.4 ¹²¹	+24 25.2 ⁷⁶	0	5 12	5 36	5 57	3 28	47	15 51	46			
13	14	56.4		48	26.6 ¹²²	17.4 ⁷⁸	10 S	17	42	6 03	3 48	44	33	49			
14	29	56.6		62	57.9 ¹²³	09.6 ⁷⁸	20	21	47	09	4 09	41	15 13	53			
15	44	56.8		77	29.2 ¹²³	+24 01.6 ⁸⁰	30	25	52	16	34	37	14 50	57			
16	59	57.0		92	00.6 ¹²⁴	+23 53.5 ⁸¹	35	26	55	20	4 48	35	36	59			
17	74	57.2	+8 25.7	106	32.0 ¹²⁴	+23 45.3 ⁸²	40	5 26	5 58	6 25	5 05	32	14 20	63			
18	89	57.4	+8 24.8	121	03.5 ¹²⁵	+23 37.0 ⁸³	45	5 27	6 01	6 30	5 25	28	14 01	66			
19	104	57.6		135	35.1 ¹²⁶	28.7 ⁸³	50	27	04	36	5 49	24	13 37	72			
20	119	57.8		150	06.8 ¹²⁷	20.2 ⁸⁵	52	26	05	39	6 01	22	26	74			
21	134	58.0		164	38.5 ¹²⁷	11.6 ⁸⁶	54	26	07	42	15	18	13 12	78			
22	149	58.2		179	10.3 ¹²⁸	+23 02.9 ⁸⁷	56	25	08	46	31	14	12 57	81			
23	164	58.4		193	42.1 ¹²⁸	+22 54.1 ⁸⁸	58	25	10	50	6 49	10	39	86			
24	179	58.6	+8 19.4	208	14.0 ¹²⁹	+22 45.2 ⁸⁹	60 S	5 24	6 12	6 54	7 12	3	12 17	93			
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 1 ^h 22 ^m 7			Mag: -4.0 PMG: 14 ^h 23 ^m			Mag: -1.0 PMG: 4 ^h 23 ^m			Mag: -1.8 PMG: 14 ^h 30 ^m			Mag: +0.3 PMG: 9 ^h 54 ^m				
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	339	16.3	144	11.2	-6 26.2	294	11.6	+14 12.0	141	56.9	-6 09.2	211	06.0	+19 10.6			
1	354	18.7	159	11.0	27.5	309	13.1	12.2	156	58.9	09.4	226	08.1	10.5			
2	9	21.2	174	10.8	28.7	324	14.7	12.5	172	00.9	09.6	241	10.3	10.5			
3	24	23.7	189	10.6	30.0	339	16.2	12.8	187	03.0	09.8	256	12.5	10.4			
4	39	26.1	204	10.4	31.3	354	17.7	13.1	202	05.0	10.0	271	14.6	10.3			
5	54	28.6	219	10.1	-6 32.5	9	19.3	+14 13.4	217	07.0	-6 10.1	286	16.8	+19 10.3			
6	69	31.1	234	09.9	-6 33.8	24	20.8	+14 13.7	232	09.1	-6 10.3	301	19.0	+19 10.2			
7	84	33.5	249	09.7	35.1	39	22.3	13.9	247	11.1	10.5	316	21.1	10.1			
8	99	36.0	264	09.5	36.3	54	23.9	14.2	262	13.1	10.7	331	23.3	10.0			
9	114	38.5	279	09.3	37.6	69	25.4	14.5	277	15.2	10.9	346	25.5	10.0			
10	129	40.9	294	09.1	38.8	84	26.9	14.8	292	17.2	11.1	1	27.6	09.9			
11	144	43.4	309	08.9	-6 40.1	99	28.5	+14 15.1	307	19.2	-6 11.2	16	29.8	+19 09.8			
12	159	45.8	324	08.7	-6 41.4	114	30.0	+14 15.4	322	21.2	-6 11.4	31	32.0	+19 09.8			
13	174	48.3	339	08.5	42.6	129	31.5	15.6	337	23.3	11.6	46	34.1	09.7			
14	189	50.8	354	08.3	43.9	144	33.1	15.9	352	25.3	11.8	61	36.3	09.6			
15	204	53.2	9	08.1	45.1	159	34.6	16.2	7	27.3	12.0	76	38.5	09.6			
16	219	55.7	24	07.9	46.4	174	36.2	16.5	22	29.4	12.2	91	40.6	09.5			
17	234	58.2	39	07.7	-6 47.7	189	37.7	+14 16.8	37	31.4	-6 12.3	106	42.8	+19 09.4			
18	250	00.6	54	07.5	-6 48.9	204	39.2	+14 17.0	52	33.4	-6 12.5	121	44.9	+19 09.4			
19	265	03.1	69	07.3	50.2	219	40.8	17.3	67	35.4	12.7	136	47.1	09.3			
20	280	05.6	84	07.1	51.5	234	42.3	17.6	82	37.5	12.9	151	49.3	09.2			
21	295	08.0	99	06.9	52.7	249	43.9	17.9	97	39.5	13.1	166	51.4	09.2			
22	310	10.5	114	06.6	54.0	264	45.4	18.2	112	41.5	13.3	181	53.6	09.1			
23	325	13.0	129	06.4	55.2	279	47.0	18.4	127	43.5	13.4	196	55.8	09.0			
24	340	15.4	144	06.2	-6 56.5	294	48.5	+14 18.7	142	45.6	-6 13.6	211	57.9	+19 09.0			
Dif	—		-2	-13		+15	+3		+20	-2		+22	-1				

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15'8 PMG: 11 ^h 59 ^m 9			Edad: 26 ^d 9 PHE { 4 ^h : 54'0 12 ^h : 54'0 20 ^h : 54'0 PMG: 10 ^h 26 ^m R°: 44 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	179	58.6	+8 19.4	208	14.0	+22 45.2	90	60 N	19 03	19 48	20 46	1 06 91	19 14 0		
1	194	58.8		222	46.0 ¹³⁰	36.2	90	58	18 59	40	34	24 85	19 00 5		
2	209	59.0		237	18.0 ¹³⁰	27.1	91	56	54	34	23	39 81	18 49 8		
3	224	59.2		251	50.1 ¹³¹	18.0	91	54	51	28	14	1 53 77	39 11		
4	239	59.4		266	22.3 ¹³²	+22 08.7	93	52	47	22	20 06	2 04 74	30 13		
5	254	59.6	+8 14.9	280	54.5 ¹³²	+21 59.3	94	50	18 44	19 17	19 58	2 14 72	18 21 17		
6	269	59.8	+8 14.0	295	26.8 ¹³³	+21 49.9	94	45	18 37	19 07	19 44	2 35 67	18 04 21		
7	285	00.0	13.1	309	59.2 ¹³⁴	40.3	96	40	32	18 59	32	2 52 63	17 50 25		
8	300	00.2	12.1	324	31.6 ¹³⁴	30.7	96	35	27	53	23	3 07 59	38 28		
9	315	00.4	11.2	339	04.1 ¹³⁵	20.9	98	30	22	47	15	19 57	27 31		
10	330	00.6	10.3	353	36.6 ¹³⁵	11.1	98	20	15	38	19 04	40 52	17 09 35		
11	345	00.7	+8 09.4	8	09.2 ¹³⁶	+21 01.2	99	10 N	18 09	18 30	18 55	3 58 49	16 52 40		
12	0	00.9	+8 08.5	22	41.9 ¹³⁷	+20 51.2	100	0	18 03	18 24	18 48	4 15 45	16 37 44		
13	15	01.1	07.6	37	14.6 ¹³⁷	41.1	101	10 S	17 58	19	43	32 41	22 47		
14	30	01.3	06.7	51	47.4 ¹³⁸	30.9	102	20	52	14	39	4 50 37	16 06 51		
15	45	01.5	05.8	66	20.3 ¹³⁹	20.7	102	30	45	09	37	5 11 33	15 47 56		
16	60	01.7	04.9	80	53.2 ¹³⁹	+20 10.3	104	35	41	07	36	23 30	35 59		
17	75	01.9	+8 04.0	95	26.2 ¹⁴⁰	+19 59.9	104	40	17 37	18 04	18 36	5 37 27	15 23 62		
18	90	02.1	+8 03.1	109	59.2 ¹⁴⁰	+19 49.4	105	45	17 32	18 02	18 36	5 53 23	15 07 67		
19	105	02.3	02.1	124	32.4 ¹⁴²	38.8	106	50	26	17 59	36	6 13 18	14 49 71		
20	120	02.5	01.2	139	05.5 ¹⁴¹	28.1	107	52	24	58	37	23 15	40 74		
21	135	02.7	+8 00.3	153	38.7 ¹⁴²	17.4	107	54	21	56	37	33 13	30 77		
22	150	02.9	+7 59.4	168	12.0 ¹⁴³	+19 06.5	109	56	18	55	38	45 10	18 81		
23	165	03.1	58.5	182	45.4 ¹⁴⁴	+18 55.6	109	58	14	54	39	6 59 6	14 05 85		
24	180	03.3	+7 57.6	197	18.8 ¹⁴⁴	+18 44.6	110	60 S	17 10	17 52	18 40	7 15 1	13 50 89		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 1 ^h 18 ^m 8		Mag: -4.0 PMG: 14 ^h 24 ^m			Mag: -1.0 PMG: 4 ^h 20 ^m			Mag: -1.8 PMG: 14 ^h 27 ^m			Mag: +0.3 PMG: 9 ^h 51 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°	
0	340	15.4	144	06.2	-6 56.5	294	48.5	+14 18.7	142	45.6	-6 13.6	211	57.9	+19 09.0	
1	355	17.9	159	06.0	57.8	309	50.1	19.0	157	47.6	13.8	227	00.1	08.9	
2	10	20.3	174	05.8	-6 59.0	324	51.6	19.3	172	49.6	14.0	242	02.3	08.8	
3	25	22.8	189	05.6	-7 00.3	339	53.2	19.5	187	51.7	14.2	257	04.4	08.8	
4	40	25.3	204	05.4	01.5	354	54.7	19.8	202	53.7	14.4	272	06.6	08.7	
5	55	27.7	219	05.2	-7 02.8	9	56.3	+14 20.1	217	55.7	-6 14.5	287	08.8	+19 08.6	
6	70	30.2	234	05.0	-7 04.0	24	57.8	+14 20.4	232	57.7	-6 14.7	302	10.9	+19 08.6	
7	85	32.7	249	04.8	05.3	39	59.4	20.6	247	59.8	14.9	317	13.1	08.5	
8	100	35.1	264	04.6	06.6	55	00.9	20.9	263	01.8	15.1	332	15.3	08.4	
9	115	37.6	279	04.4	07.8	70	02.5	21.2	278	03.8	15.3	347	17.4	08.4	
10	130	40.1	294	04.2	09.1	85	04.1	21.5	293	05.8	15.5	2	19.6	08.3	
11	145	42.5	309	03.9	-7 10.3	100	05.6	+14 21.7	308	07.9	-6 15.6	17	21.8	+19 08.2	
12	160	45.0	324	03.7	-7 11.6	115	07.2	+14 22.0	323	09.9	-6 15.8	32	23.9	+19 08.2	
13	175	47.5	339	03.5	12.8	130	08.7	22.3	338	11.9	16.0	47	26.1	08.1	
14	190	49.9	354	03.3	14.1	145	10.3	22.6	353	13.9	16.2	62	28.3	08.0	
15	205	52.4	9	03.1	15.4	160	11.9	22.8	8	16.0	16.4	77	30.4	08.0	
16	220	54.8	24	02.9	16.6	175	13.4	23.1	23	18.0	16.6	92	32.6	07.9	
17	235	57.3	39	02.7	-7 17.9	190	15.0	+14 23.4	38	20.0	-6 16.8	107	34.8	+19 07.8	
18	250	59.8	54	02.5	-7 19.1	205	16.6	+14 23.7	53	22.0	-6 16.9	122	36.9	+19 07.8	
19	266	02.2	69	02.3	20.4	220	18.1	23.9	68	24.1	17.1	137	39.1	07.7	
20	281	04.7	84	02.1	21.6	235	19.7	24.2	83	26.1	17.3	152	41.3	07.6	
21	296	07.2	99	01.9	22.9	250	21.3	24.5	98	28.1	17.5	167	43.5	07.6	
22	311	09.6	114	01.6	24.1	265	22.8	24.8	113	30.1	17.7	182	45.6	07.5	
23	326	12.1	129	01.4	25.4	280	24.4	25.0	128	32.2	17.9	197	47.8	07.4	
24	341	14.6	144	01.2	-7 26.7	295	26.0	+14 25.3	143	34.2	-6 18.0	212	50.0	+19 07.4	
Dif	—		-2		-13	+16		+3	+20		-2	+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 6			Edad: 27 ^d 9 PHE { 4 ^h : 54'0 12 ^h : 54'1 20 ^h : 54'1 R°: 42 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	180	03.3	+7	57.6	197	18.8	+18	44.6	60 N	3 14	4 12	4 57	2 37	88	19 14	**
1	195	03.5		56.7	211	52.2 ¹⁴⁴		33.6 ¹¹⁰	58		27	20	5 02	2 49	84	19 05 3
2	210	03.7		55.8	226	25.7 ¹⁴⁵		22.4 ¹¹²	56	38	27	06	3 00	80	18 57	6
3	225	03.9		54.9	240	59.3 ¹⁴⁶	+18	11.2 ¹¹²	54	47	33	10	10 76		50	8
4	240	04.1		53.9	255	32.9 ¹⁴⁶	+17	59.9 ¹¹³	52	3 55	38	13	18 74		43	12
5	255	04.3	+7	53.0	270	06.6 ¹⁴⁷	+17	48.5 ¹¹⁴	50	4 02	4 43	5 16	3 26	71	18 38	13
6	270	04.5	+7	52.1	284	40.3 ¹⁴⁷	+17	37.1 ¹¹⁴	45	4 16	4 53	5 23	3 42	66	18 25	18
7	285	04.7		51.2	299	14.1 ¹⁴⁸		25.6 ¹¹⁵	40	28	5 01	29	3 55	62		15 22
8	300	04.9		50.3	313	48.0 ¹⁴⁹		14.0 ¹¹⁶	35	37	08	33	4 06	58	18 06	25
9	315	05.1		49.4	328	21.9 ¹⁴⁹	+17	02.4 ¹¹⁶	30	44	13	37	16 55		17 58	28
10	330	05.3		48.5	342	55.8 ¹⁴⁹	+16	50.6 ¹¹⁸	20	4 56	22	45	32 51		44	33
11	345	05.5	+7	47.5	357	29.8 ¹⁵⁰	+16	38.8 ¹¹⁸	10 N	5 05	5 29	5 51	4 47	46	17 32	37
12	0	05.7	+7	46.6	12	03.9 ¹⁵¹	+16	27.0 ¹¹⁸	0	5 11	5 35	5 56	5 00	42	17 21	41
13	15	05.9		45.7	26	38.0 ¹⁵¹		15.0 ¹²⁰	10 S	16	41	6 02	13 39		17 09	46
14	30	06.1		44.8	41	12.1 ¹⁵¹	+16	03.1 ¹¹⁹	20	20	45	08	27 35		16 57	50
15	45	06.3		43.9	55	46.3 ¹⁵²	+15	51.0 ¹²¹	30	22	50	14	44 29		43	54
16	60	06.5		43.0	70	20.6 ¹⁵³		38.9 ¹²¹	35	23	52	18	5 53	26	34	58
17	75	06.7	+7	42.1	84	54.9 ¹⁵³	+15	26.7 ¹²²	40	5 23	5 55	6 22	6 04	23	16 25	61
18	90	06.9	+7	41.1	99	29.2 ¹⁵³	+15	14.4 ¹²³	45	5 23	5 57	6 27	6 16	19	16 14	65
19	105	07.1		40.2	114	03.6 ¹⁵⁴	+15	02.1 ¹²³	50	23	6 00	32	31 15		16 00	71
20	120	07.3		39.3	128	38.1 ¹⁵⁵	+14	49.8 ¹²³	52	22	01	35	38 12		15 54	73
21	135	07.5		38.4	143	12.6 ¹⁵⁵		37.3 ¹²⁵	54	21	02	38	46 10		47	75
22	150	07.8		37.5	157	47.1 ¹⁵⁵		24.8 ¹²⁵	56	21	03	41	6 55	6	39	78
23	165	08.0		36.6	172	21.7 ¹⁵⁶	+14	12.3 ¹²⁵	58	19	05	44	7 05	3	30	82
24	180	08.2	+7	35.6	186	56.3 ¹⁵⁶	+13	59.7 ¹²⁶	60 S	5 18	6 06	6 48	7 16	**	15 19	87
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 1 ^h 14 ^m 8			Mag: -4.0 PMG: 14 ^h 24 ^m			Mag: -1.0 PMG: 4 ^h 18 ^m			Mag: -1.8 PMG: 14 ^h 24 ^m			Mag: +0.3 PMG: 9 ^h 47 ^m			
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	341	14.6	144	01.2	-7	26.7	295	26.0	+14	25.3	143	34.2	-6	18.0	212	50.0
1	356	17.0	159	01.0		27.9	310	27.5		25.6	158	36.2		18.2	227	52.1
2	11	19.5	174	00.8		29.2	325	29.1		25.8	173	38.2		18.4	242	54.3
3	26	21.9	189	00.6		30.4	340	30.7		26.1	188	40.3		18.6	257	56.5
4	41	24.4	204	00.4		31.7	355	32.2		26.4	203	42.3		18.8	272	58.6
5	56	26.9	219	00.2	-7	32.9	10	33.8	+14	26.6	218	44.3	-6	19.0	288	00.8
6	71	29.3	234	00.0	-7	34.2	25	35.4	+14	26.9	233	46.3	-6	19.2	303	03.0
7	86	31.8	248	59.8		35.4	40	37.0		27.2	248	48.4		19.3	318	05.1
8	101	34.3	263	59.5		36.7	55	38.6		27.5	263	50.4		19.5	333	07.3
9	116	36.7	278	59.3		37.9	70	40.1		27.7	278	52.4		19.7	348	09.5
10	131	39.2	293	59.1		39.2	85	41.7		28.0	293	54.4		19.9	3	11.6
11	146	41.7	308	58.9	-7	40.4	100	43.3	+14	28.3	308	56.5	-6	20.1	18	13.8
12	161	44.1	323	58.7	-7	41.7	115	44.9	+14	28.5	323	58.5	-6	20.3	33	16.0
13	176	46.6	338	58.5		42.9	130	46.5		28.8	339	00.5		20.5	48	18.1
14	191	49.1	353	58.3		44.2	145	48.0		29.1	354	02.5		20.6	63	20.3
15	206	51.5	8	58.1		45.4	160	49.6		29.3	9	04.6		20.8	78	22.5
16	221	54.0	23	57.9		46.7	175	51.2		29.6	24	06.6		21.0	93	24.7
17	236	56.4	38	57.6	-7	47.9	190	52.8	+14	29.9	39	08.6	-6	21.2	108	26.8
18	251	58.9	53	57.4	-7	49.2	205	54.4	+14	30.1	54	10.6	-6	21.4	123	29.0
19	267	01.4	68	57.2		50.4	220	56.0		30.4	69	12.6		21.6	138	31.2
20	282	03.8	83	57.0		51.7	235	57.6		30.7	84	14.7		21.7	153	33.3
21	297	06.3	98	56.8		52.9	250	59.1		30.9	99	16.7		21.9	168	35.5
22	312	08.8	113	56.6		54.2	266	00.7		31.2	114	18.7		22.1	183	37.7
23	327	11.2	128	56.4		55.4	281	02.3		31.5	129	20.7		22.3	198	39.8
24	342	13.7	143	56.2	-7	56.7	296	03.9	+14	31.7	144	22.8	-6	22.5	213	42.0
Dif	—		-2	-13		+16	+3		+20		-2		+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 3			Edad: 28 ^d 9 PHE { 4 ^h : 54'2 12 ^h : 54'3 20 ^h : 54'3 SD: 14'8 PMG: 11 ^h 52 ^m R°: 41 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m	
0	180	08.2	+7 35.6	186	56.3	+13 59.7	60 N	18 57	19 42	20 38	4 05 85	19 13	**		
1	195	08.4	34.7	201	31.0 ¹⁵⁷	47.0 ¹²⁷	58	53	34	27	13 81	08 2			
2	210	08.6	33.8	216	05.7 ¹⁵⁷	34.3 ¹²⁷	56	49	28	17	20 78	19 03	5		
3	225	08.8	32.9	230	40.4 ¹⁵⁷	21.5 ¹²⁸	54	46	22	08	26 75	18 58	8		
4	240	09.0	32.0	245	15.2 ¹⁵⁸	+13 08.7 ¹²⁸	52	43	18	20 00	32 72	55	9		
5	255	09.2	+7 31.1	259	50.0 ¹⁵⁸	+12 55.8 ¹²⁹	50	18 40	19 13	19 54	4 37 70	18 51	12		
6	270	09.4	+7 30.1	274	24.9 ¹⁵⁹	+12 42.9 ¹²⁹	45	18 33	19 04	19 40	4 48 65	18 43	17		
7	285	09.6	29.2	288	59.8 ¹⁵⁹	29.9 ¹³⁰	40	28	18 56	29	4 57 61	37	20		
8	300	09.8	28.3	303	34.7 ¹⁵⁹	16.8 ¹³¹	35	24	50	20	5 04 58	31	23		
9	315	10.0	27.4	318	09.7 ¹⁶⁰	+12 03.7 ¹³¹	30	20	44	13	11 55	26	26		
10	330	10.2	26.5	332	44.7 ¹⁶⁰	+11 50.6 ¹³¹	20	14	36	19 02	23 49	17	32		
11	345	10.4	+7 25.5	347	19.8 ¹⁶¹	+11 37.4 ¹³²	10 N	18 08	18 29	18 54	5 33 45	18 09	36		
12	0	10.6	+7 24.6	1	54.8 ¹⁶⁰	+11 24.2 ¹³²	0	18 03	18 23	18 48	5 42 41	18 02	40		
13	15	10.8	23.7	16	30.0 ¹⁶²	+11 10.9 ¹³³	10 S	17 57	19	43	5 52 36	17 55	44		
14	30	11.0	22.8	31	05.1 ¹⁶¹	+10 57.5 ¹³⁴	20	52	14	40	6 02 32	47	49		
15	45	11.2	21.9	45	40.3 ¹⁶²	44.2 ¹³³	30	46	10	38	13 27	37	55		
16	60	11.4	21.0	60	15.5 ¹⁶²	30.8 ¹³⁴	35	43	08	37	19 25	32	58		
17	75	11.6	+7 20.0	74	50.7 ¹⁶²	+10 17.3 ¹³⁵	40	17 39	18 06	18 37	6 27 21	17 26	61		
18	90	11.8	+7 19.1	89	26.0 ¹⁶³	+10 03.8 ¹³⁵	45	17 34	18 04	18 38	6 35 18	17 19	65		
19	105	12.0	18.2	104	01.3 ¹⁶³	+9 50.2 ¹³⁶	50	29	02	39	46 12	11	69		
20	120	12.2	17.3	118	36.6 ¹⁶³	36.6 ¹³⁶	52	27	01	40	50 11	07	72		
21	135	12.4	16.3	133	11.9 ¹⁶³	23.0 ¹³⁶	54	24	18 00	41	6 56 8	17 02	75		
22	150	12.6	15.4	147	47.3 ¹⁶⁴	+9 09.3 ¹³⁷	56	21	17 59	42	7 01 6	16 57	78		
23	165	12.8	14.5	162	22.7 ¹⁶⁴	+8 55.6 ¹³⁷	58	18	58	43	08 2	52	81		
24	180	13.0	+7 13.6	176	58.1 ¹⁶⁴	+8 41.9 ¹³⁷	60 S	17 15	17 57	18 45	7 15 **	16 46	84		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 1 ^h 10 ^m 9		Mag: -4.0 PMG: 14 ^h 24 ^m			Mag: -1.1 PMG: 4 ^h 15 ^m			Mag: -1.7 PMG: 14 ^h 21 ^m			Mag: +0.3 PMG: 9 ^h 44 ^m			
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	342	13.7	143 56.2	-7 56.7	296 03.9	+14 31.7	144 22.8	-6 22.5	213 42.0	+19 05.8					
1	357	16.2	158 55.9	57.9	311 05.5	32.0	159 24.8	22.7	228 44.2	05.7					
2	12	18.6	173 55.7	-7 59.2	326 07.1	32.2	174 26.8	22.9	243 46.4	05.6					
3	27	21.1	188 55.5	-8 00.4	341 08.7	32.5	189 28.8	23.0	258 48.5	05.6					
4	42	23.5	203 55.3	01.7	356 10.3	32.8	204 30.8	23.2	273 50.7	05.5					
5	57	26.0	218 55.1	-8 02.9	11 11.9	+14 33.0	219 32.9	-6 23.4	288 52.9	+19 05.4					
6	72	28.5	233 54.9	-8 04.2	26 13.5	+14 33.3	234 34.9	-6 23.6	303 55.0	+19 05.4					
7	87	30.9	248 54.7	05.4	41 15.1	33.6	249 36.9	23.8	318 57.2	05.3					
8	102	33.4	263 54.4	06.7	56 16.7	33.8	264 38.9	24.0	333 59.4	05.2					
9	117	35.9	278 54.2	07.9	71 18.3	34.1	279 40.9	24.2	349 01.5	05.2					
10	132	38.3	293 54.0	09.1	86 19.9	34.3	294 43.0	24.3	4 03.7	05.1					
11	147	40.8	308 53.8	-8 10.4	101 21.5	+14 34.6	309 45.0	-6 24.5	19 05.9	+19 05.0					
12	162	43.3	323 53.6	-8 11.6	116 23.1	+14 34.9	324 47.0	-6 24.7	34 08.1	+19 05.0					
13	177	45.7	338 53.4	12.9	131 24.7	35.1	339 49.0	24.9	49 10.2	04.9					
14	192	48.2	353 53.2	14.1	146 26.3	35.4	354 51.1	25.1	64 12.4	04.8					
15	207	50.7	8 52.9	15.4	161 27.9	35.7	9 53.1	25.3	79 14.6	04.8					
16	222	53.1	23 52.7	16.6	176 29.5	35.9	24 55.1	25.5	94 16.7	04.7					
17	237	55.6	38 52.5	-8 17.9	191 31.1	+14 36.2	39 57.1	-6 25.6	109 18.9	+19 04.6					
18	252	58.0	53 52.3	-8 19.1	206 32.7	+14 36.4	54 59.1	-6 25.8	124 21.1	+19 04.6					
19	268	00.5	68 52.1	20.3	221 34.4	36.7	70 01.2	26.0	139 23.3	04.5					
20	283	03.0	83 51.9	21.6	236 36.0	36.9	85 03.2	26.2	154 25.4	04.4					
21	298	05.4	98 51.7	22.8	251 37.6	37.2	100 05.2	26.4	169 27.6	04.4					
22	313	07.9	113 51.4	24.1	266 39.2	37.5	115 07.2	26.6	184 29.8	04.3					
23	328	10.4	128 51.2	25.3	281 40.8	37.7	130 09.2	26.8	199 31.9	04.2					
24	343	12.8	143 51.0	-8 26.6	296 42.4	+14 38.0	145 11.2	-6 27.0	214 34.1	+19 04.2					
Dif	—		-2	-12	+16	+3	+20	-2	+22	-1					

ALMANAQUE NÁUTICO PERSEIS

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'9 PMG: 11 ^h 58 ^m 6			Edad: 1 ^d 2 PHE { 4 ^h : 54'7 12 ^h : 54'9 20 ^h : 55'0 R°: 40 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	180	18.0	+6 51.4	167	12.8	+3 02.5		60 N	18 51	19 35	20 31	6 54 84	19 10 **	
1	195	18.2		181	48.5 ¹⁶⁷	+2 48.1 ¹⁴⁴		58	47	28	20	54 81	11 2	
2	210	18.4		196	24.2 ¹⁶⁷	33.6 ¹⁴⁵		56	44	23	10	55 78	12 5	
3	225	18.6		210	59.9 ¹⁶⁷	19.1 ¹⁴⁵		54	41	17	20 02	55 76	13	
4	240	18.8		225	35.6 ¹⁶⁷	+2 04.6 ¹⁴⁵		52	38	13	19 55	56 73	13 10	
5	255	19.0	+6 46.8	240	11.3 ¹⁶⁷	+1 50.1 ¹⁴⁵		50	18 35	19 09	19 49	6 56 71	19 14 12	
6	270	19.2	+6 45.8	254	46.9 ¹⁶⁶	+1 35.6 ¹⁴⁵		45	18 30	19 00	19 36	6 58 65	19 15 17	
7	285	19.5		269	22.6 ¹⁶⁷	21.1 ¹⁴⁵		40	25	18 53	25	58 62	16 21	
8	300	19.7		283	58.3 ¹⁶⁷	+1 06.5 ¹⁴⁶		35	21	47	17	6 59 58	17 24	
9	315	19.9		298	33.9 ¹⁶⁶	+0 52.0 ¹⁴⁵		30	18	42	10	7 00 55	18 27	
10	330	20.1		313	09.6 ¹⁶⁷	37.4 ¹⁴⁶		20	12	34	19 00	01 49	20 32	
11	345	20.3	+6 41.2	327	45.2 ¹⁶⁶	+0 22.8 ¹⁴⁶		10 N	18 07	18 28	18 52	7 02 45	19 21 37	
12	0	20.5	+6 40.3	342	20.9 ¹⁶⁷	+0 08.2 ¹⁴⁶		0	18 02	18 23	18 47	7 03 40	19 22 41	
13	15	20.7		356	56.5 ¹⁶⁶	-0 06.4 ¹⁴⁶		10 S	17 57	18	43	04 36	23 46	
14	30	20.9		11	32.1 ¹⁶⁶	21.0 ¹⁴⁶		20	52	15	40	05 31	25 50	
15	45	21.1		26	07.7 ¹⁶⁶	35.6 ¹⁴⁶		30	47	11	39	06 26	26 56	
16	60	21.3		40	43.2 ¹⁶⁵	-0 50.2 ¹⁴⁶		35	44	09	39	07 23	27 58	
17	75	21.5	+6 35.6	55	18.8 ¹⁶⁶	-1 04.8 ¹⁴⁶		40	17 41	18 08	18 39	7 08 20	19 28 62	
18	90	21.7	+6 34.7	69	54.3 ¹⁶⁵	-1 19.5 ¹⁴⁷		45	17 37	18 06	18 40	7 09 16	19 29 66	
19	105	22.0		84	29.8 ¹⁶⁵	34.1 ¹⁴⁶		50	32	05	42	10 11	30 72	
20	120	22.2		99	05.3 ¹⁶⁵	-1 48.7 ¹⁴⁶		52	30	04	43	10 9	31 73	
21	135	22.4		113	40.8 ¹⁶⁵	-2 03.3 ¹⁴⁶		54	28	03	44	11 7	32 76	
22	150	22.6		128	16.2 ¹⁶⁴	18.0 ¹⁴⁷		56	25	02	46	11 5	32 79	
23	165	22.8		142	51.6 ¹⁶⁴	32.6 ¹⁴⁶		58	22	02	47	12 2	33 82	
24	180	23.0	+6 29.1	157	27.0 ¹⁶⁴	-2 47.2 ¹⁴⁶		60 S	17 19	18 01	18 49	7 13 **	19 34 86	
UT	ARIES		VENUS			MARTE			JÚPITER		SATURNO			
	PMG: 1 ^h 03 ^m 0		Mag: -4.0 PMG: 14 ^h 25 ^m			Mag: -1.1 PMG: 4 ^h 10 ^m			Mag: -1.7 PMG: 14 ^h 14 ^m		Mag: +0.3 PMG: 9 ^h 37 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♉	Dec	
h	°	'	°	°	'	°	'	°	°	'	°	°	'	°
0	344	12.0	143	45.8	-8 56.3	297	21.5	+14 44.1	145	59.7	-6 31.4	215	26.3	+19 02.6
1	359	14.4	158	45.5	57.5	312	23.1	44.3	161	01.7	31.6	230	28.4	02.5
2	14	16.9	173	45.3	-8 58.7	327	24.8	44.6	176	03.7	31.8	245	30.6	02.5
3	29	19.4	188	45.1	-9 00.0	342	26.4	44.8	191	05.7	32.0	260	32.8	02.4
4	44	21.8	203	44.9	-9 01.2	357	28.0	45.1	206	07.7	32.2	275	35.0	02.3
5	59	24.3	218	44.7	-9 02.4	12	29.7	+14 45.3	221	09.8	-6 32.4	290	37.1	+19 02.3
6	74	26.8	233	44.4	-9 03.7	27	31.3	+14 45.6	236	11.8	-6 32.6	305	39.3	+19 02.2
7	89	29.2	248	44.2	04.9	42	33.0	45.8	251	13.8	32.7	320	41.5	02.1
8	104	31.7	263	44.0	06.1	57	34.6	46.1	266	15.8	32.9	335	43.7	02.1
9	119	34.1	278	43.8	07.4	72	36.3	46.3	281	17.8	33.1	350	45.8	02.0
10	134	36.6	293	43.6	08.6	87	37.9	46.6	296	19.8	33.3	5	48.0	01.9
11	149	39.1	308	43.3	-9 09.8	102	39.6	+14 46.8	311	21.9	-6 33.5	20	50.2	+19 01.9
12	164	41.5	323	43.1	-9 11.1	117	41.2	+14 47.1	326	23.9	-6 33.7	35	52.4	+19 01.8
13	179	44.0	338	42.9	12.3	132	42.9	47.3	341	25.9	33.9	50	54.5	01.7
14	194	46.5	353	42.7	13.5	147	44.5	47.6	356	27.9	34.1	65	56.7	01.7
15	209	48.9	8	42.4	14.7	162	46.2	47.8	11	29.9	34.2	80	58.9	01.6
16	224	51.4	23	42.2	16.0	177	47.8	48.1	26	31.9	34.4	96	01.1	01.5
17	239	53.9	38	42.0	-9 17.2	192	49.5	+14 48.3	41	33.9	-6 34.6	111	03.2	+19 01.5
18	254	56.3	53	41.8	-9 18.4	207	51.1	+14 48.6	56	36.0	-6 34.8	126	05.4	+19 01.4
19	269	58.8	68	41.6	19.7	222	52.8	48.8	71	38.0	35.0	141	07.6	01.4
20	285	01.2	83	41.3	20.9	237	54.5	49.0	86	40.0	35.2	156	09.8	01.3
21	300	03.7	98	41.1	22.1	252	56.1	49.3	101	42.0	35.4	171	11.9	01.2
22	315	06.2	113	40.9	23.4	267	57.8	49.5	116	44.0	35.6	186	14.1	01.2
23	330	08.6	128	40.7	24.6	282	59.4	49.8	131	46.0	35.7	201	16.3	01.1
24	345	11.1	143	40.4	-9 25.8	298	01.1	+14 50.0	146	48.0	-6 35.9	216	18.5	+19 01.0
Dif	—		-2		-12	+17		+2	+20		-2	+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 3			Edad: 2 ^d 2	PHE { 4 ^h : 55'1 12 ^h : 55'3 20 ^h : 55'4 R°: 43 ^m											
	hG ☉	Dec		hG ☾		Dif		Dec	Dif		Náutico	Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	180	23.0	+6	29.1	157	27.0	-2	47.2	60 N	3 27	4 23	5 07	8 18	88	19 09	**
1	195	23.2		28.2	172	02.4 ¹⁶⁴	-3	01.9 ¹⁴⁷	58	38	29	11	15	84	13	2
2	210	23.4		27.2	186	37.8 ¹⁶⁴		16.5 ¹⁴⁶	56	47	35	14	13	81	17	5
3	225	23.6		26.3	201	13.1 ¹⁶³		31.1 ¹⁴⁶	54	3 56	40	17	11	77	20	8
4	240	23.8		25.4	215	48.4 ¹⁶³	-3	45.7 ¹⁴⁶	52	4 03	45	20	09	75	23	11
5	255	24.1	+6	24.4	230	23.6 ¹⁶²	-4	00.3 ¹⁴⁶	50	4 09	4 49	5 22	8 07	73	19 26	13
6	270	24.3	+6	23.5	244	58.9 ¹⁶³	-4	14.9 ¹⁴⁶	45	4 22	4 58	5 28	8 03	68	19 32	18
7	285	24.5		22.6	259	34.1 ¹⁶²		29.5 ¹⁴⁶	40	32	5 05	32	8 00	63	37	22
8	300	24.7		21.6	274	09.2 ¹⁶¹		44.1 ¹⁴⁶	35	40	11	36	7 57	60	41	26
9	315	24.9		20.7	288	44.3 ¹⁶¹	-4	58.7 ¹⁴⁶	30	47	15	40	55	56	45	29
10	330	25.1		19.8	303	19.4 ¹⁶¹	-5	13.3 ¹⁴⁶	20	4 57	23	45	50	51	52	34
11	345	25.3	+6	18.8	317	54.5 ¹⁶¹	-5	27.8 ¹⁴⁵	10 N	5 05	5 29	5 50	7 47	46	19 58	38
12	0	25.5	+6	17.9	332	29.5 ¹⁶⁰	-5	42.4 ¹⁴⁶	0	5 10	5 34	5 55	7 43	42	20 03	43
13	15	25.7		17.0	347	04.5 ¹⁶⁰	-5	56.9 ¹⁴⁵	10 S	14	38	6 00	40	37	09	47
14	30	26.0		16.0	1	39.4 ¹⁵⁹	-6	11.4 ¹⁴⁵	20	16	42	04	36	33	15	52
15	45	26.2		15.1	16	14.3 ¹⁵⁹		25.9 ¹⁴⁵	30	18	45	09	32	28	22	57
16	60	26.4		14.2	30	49.1 ¹⁵⁸		40.4 ¹⁴⁵	35	18	47	12	30	25	25	61
17	75	26.6	+6	13.2	45	24.0 ¹⁵⁹	-6	54.9 ¹⁴⁵	40	5 17	5 48	6 16	7 28	21	20 30	64
18	90	26.8	+6	12.3	59	58.7 ¹⁵⁷	-7	09.3 ¹⁴⁴	45	5 16	5 50	6 19	7 25	17	20 35	69
19	105	27.0		11.4	74	33.4 ¹⁵⁷		23.8 ¹⁴⁵	50	14	51	24	21	12	42	73
20	120	27.2		10.4	89	08.1 ¹⁵⁷		38.2 ¹⁴⁴	52	13	52	26	19	11	44	77
21	135	27.4		09.5	103	42.7 ¹⁵⁶	-7	52.6 ¹⁴⁴	54	12	53	28	18	8	48	79
22	150	27.6		08.6	118	17.3 ¹⁵⁶	-8	06.9 ¹⁴³	56	10	53	30	16	5	51	82
23	165	27.9		07.6	132	51.8 ¹⁵⁵		21.3 ¹⁴⁴	58	09	54	33	14	2	20 55	86
24	180	28.1	+6	06.7	147	26.3 ¹⁵⁵	-8	35.6 ¹⁴³	60 S	5 07	5 55	6 36	7 11	**	21 00	89
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO			
	PMG 0 ^h 59 ^m 1			Mag: -4.0 PMG: 14 ^h 26 ^m			Mag: -1.1 PMG: 4 ^h 07 ^m			Mag: -1.7 PMG: 14 ^h 11 ^m			Mag: +0.3 PMG: 9 ^h 33 ^m			
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	345	11.1	143	40.4	-9	25.8	298	01.1	+14	50.0	146	48.0	-6	35.9	216	18.5
1	0	13.6	158	40.2		27.0	313	02.8		50.3	161	50.1		36.1	231	20.7
2	15	16.0	173	40.0		28.3	328	04.4		50.5	176	52.1		36.3	246	22.8
3	30	18.5	188	39.8		29.5	343	06.1		50.8	191	54.1		36.5	261	25.0
4	45	21.0	203	39.5		30.7	358	07.8		51.0	206	56.1		36.7	276	27.2
5	60	23.4	218	39.3	-9	31.9	13	09.4	+14	51.2	221	58.1	-6	36.9	291	29.4
6	75	25.9	233	39.1	-9	33.2	28	11.1	+14	51.5	237	00.1	-6	37.1	306	31.5
7	90	28.4	248	38.9		34.4	43	12.8		51.7	252	02.1		37.2	321	33.7
8	105	30.8	263	38.6		35.6	58	14.4		52.0	267	04.2		37.4	336	35.9
9	120	33.3	278	38.4		36.8	73	16.1		52.2	282	06.2		37.6	351	38.1
10	135	35.7	293	38.2		38.1	88	17.8		52.5	297	08.2		37.8	6	40.2
11	150	38.2	308	38.0	-9	39.3	103	19.5	+14	52.7	312	10.2	-6	38.0	21	42.4
12	165	40.7	323	37.7	-9	40.5	118	21.1	+14	52.9	327	12.2	-6	38.2	36	44.6
13	180	43.1	338	37.5		41.7	133	22.8		53.2	342	14.2		38.4	51	46.8
14	195	45.6	353	37.3		43.0	148	24.5		53.4	357	16.2		38.6	66	49.0
15	210	48.1	8	37.0		44.2	163	26.2		53.7	12	18.2		38.7	81	51.1
16	225	50.5	23	36.8		45.4	178	27.8		53.9	27	20.3		38.9	96	53.3
17	240	53.0	38	36.6	-9	46.6	193	29.5	+14	54.1	42	22.3	-6	39.1	111	55.5
18	255	55.5	53	36.4	-9	47.8	208	31.2	+14	54.4	57	24.3	-6	39.3	126	57.7
19	270	57.9	68	36.1		49.1	223	32.9		54.6	72	26.3		39.5	141	59.8
20	286	00.4	83	35.9		50.3	238	34.6		54.9	87	28.3		39.7	157	02.0
21	301	02.8	98	35.7		51.5	253	36.3		55.1	102	30.3		39.9	172	04.2
22	316	05.3	113	35.5		52.7	268	37.9		55.3	117	32.3		40.1	187	06.4
23	331	07.8	128	35.2		53.9	283	39.6		55.6	132	34.3		40.2	202	08.6
24	346	10.2	143	35.0	-9	55.2	298	41.3	+14	55.8	147	36.4	-6	40.4	217	10.7
Dif	—		-2	-12		+17	+2			+20		-2		+22		-1

UT	SOL		● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15°9		Edad: 3 ^d 2	PHE { 4 ^h : 55/6 12 ^h : 55/7 20 ^h : 55/9	SD: 15°1				R°: 45 ^m						
	PMG: 11 ^h 58 ^m 0				PMG: 14 ^h 36 ^m										
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	m	h m m	m	
0	180	28.1	+6	06.7	147	26.3	-8 35.6	60 N	18 45	19 29	20 24	9 46 93	19 08	**	
1	195	28.3		05.8	162	00.7 ¹⁵⁴	-8 49.9 ¹⁴³	58	42	23	13	39 89	15	4	
2	210	28.5		04.8	176	35.1 ¹⁵⁴	-9 04.2 ¹⁴³	56	39	17	20 04	34 84	22	8	
3	225	28.7		03.9	191	09.4 ¹⁵³	18.4 ¹⁴²	54	36	12	19 57	28 82	28	11	
4	240	28.9		03.0	205	43.6 ¹⁵²	32.7 ¹⁴³	52	33	08	50	24 78	34	14	
5	255	29.1	+6	02.0	220	17.8 ¹⁵²	-9 46.9 ¹⁴²	50	18 31	19 04	19 44	9 20 75	19 39	16	
6	270	29.3	+6	01.1	234	51.9 ¹⁵¹	-10 01.0 ¹⁴¹	45	18 26	18 56	19 31	9 11 70	19 50	21	
7	285	29.6	+6	00.1	249	26.0 ¹⁵¹	15.1 ¹⁴¹	40	22	49	22	9 03 66	19 59	25	
8	300	29.8	+5	59.2	264	00.0 ¹⁵⁰	29.2 ¹⁴¹	35	18	44	14	8 57 62	20 07	29	
9	315	30.0		58.3	278	34.0 ¹⁵⁰	43.3 ¹⁴¹	30	15	39	19 08	51 59	14	32	
10	330	30.2		57.3	293	07.9 ¹⁴⁹	-10 57.4 ¹⁴¹	20	10	32	18 58	41 54	26	37	
11	345	30.4	+5	56.4	307	41.7 ¹⁴⁸	-11 11.4 ¹⁴⁰	10 N	18 05	18 27	18 51	8 33 49	20 36	42	
12	0	30.6	+5	55.5	322	15.4 ¹⁴⁷	-11 25.3 ¹³⁹	0	18 01	18 22	18 46	8 25 45	20 46	46	
13	15	30.8		54.5	336	49.1 ¹⁴⁷	39.2 ¹³⁹	10 S	17 57	18	43	17 41	20 56	50	
14	30	31.0		53.6	351	22.8 ¹⁴⁷	-11 53.1 ¹³⁹	20	53	15	41	09 36	21 07	55	
15	45	31.3		52.6	5	56.3 ¹⁴⁵	-12 07.0 ¹³⁹	30	48	12	40	8 00 30	19	60	
16	60	31.5		51.7	20	29.8 ¹⁴⁵	20.8 ¹³⁸	35	46	11	40	7 55 27	26	64	
17	75	31.7	+5	50.8	35	03.2 ¹⁴⁴	-12 34.6 ¹³⁸	40	17 43	18 10	18 41	7 49 23	21 34	67	
18	90	31.9	+5	49.8	49	36.6 ¹⁴⁴	-12 48.3 ¹³⁷	45	17 39	18 09	18 43	7 42 19	21 44	71	
19	105	32.1		48.9	64	09.8 ¹⁴²	-13 02.0 ¹³⁷	50	35	07	45	33 15	21 55	77	
20	120	32.3		48.0	78	43.0 ¹⁴²	15.6 ¹³⁶	52	33	07	46	30 12	22 01	80	
21	135	32.5		47.0	93	16.1 ¹⁴¹	29.2 ¹³⁶	54	31	07	48	26 9	07	83	
22	150	32.8		46.1	107	49.2 ¹⁴¹	42.7 ¹³⁵	56	29	06	49	21 7	13	87	
23	165	33.0		45.1	122	22.1 ¹³⁹	-13 56.2 ¹³⁵	58	27	06	51	16 3	21	91	
24	180	33.2	+5	44.2	136	55.0 ¹³⁹	-14 09.7 ¹³⁵	60 S	17 24	18 06	18 54	7 10 0	22 29	96	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 0 ^h 55 ^m 2		Mag: -4.0			Mag: -1.1			Mag: -1.7			Mag: +0.3			
	PMG: 14 ^h 26 ^m		PMG: 4 ^h 05 ^m			PMG: 14 ^h 08 ^m			PMG: 9 ^h 30 ^m						
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	346	10.2	143	35.0	-9	55.2	298	41.3	+14	55.8	147	36.4	-6	40.4	
1	1	12.7	158	34.8		56.4	313	43.0		56.0	162	38.4		40.6	
2	16	15.2	173	34.5		57.6	328	44.7		56.3	177	40.4		40.8	
3	31	17.6	188	34.3	-9	58.8	343	46.4		56.5	192	42.4		41.0	
4	46	20.1	203	34.1	-10	00.0	358	48.1		56.8	207	44.4		41.2	
5	61	22.6	218	33.9	-10	01.3	13	49.8	+14	57.0	222	46.4	-6	41.4	
6	76	25.0	233	33.6	-10	02.5	28	51.5	+14	57.2	237	48.4	-6	41.6	
7	91	27.5	248	33.4		03.7	43	53.2		57.5	252	50.4		41.8	
8	106	30.0	263	33.2		04.9	58	54.8		57.7	267	52.4		41.9	
9	121	32.4	278	32.9		06.1	73	56.5		57.9	282	54.5		42.1	
10	136	34.9	293	32.7		07.3	88	58.2		58.2	297	56.5		42.3	
11	151	37.3	308	32.5	-10	08.6	103	59.9	+14	58.4	312	58.5	-6	42.5	
12	166	39.8	323	32.2	-10	09.8	119	01.6	+14	58.6	328	00.5	-6	42.7	
13	181	42.3	338	32.0		11.0	134	03.3		58.9	343	02.5		42.9	
14	196	44.7	353	31.8		12.2	149	05.0		59.1	358	04.5		43.1	
15	211	47.2	8	31.5		13.4	164	06.7		59.3	13	06.5		43.3	
16	226	49.7	23	31.3		14.6	179	08.4		59.6	28	08.5		43.5	
17	241	52.1	38	31.1	-10	15.8	194	10.2	+14	59.8	43	10.5	-6	43.6	
18	256	54.6	53	30.9	-10	17.1	209	11.9	+15	00.0	58	12.5	-6	43.8	
19	271	57.1	68	30.6		18.3	224	13.6	+15	00.3	73	14.6		44.0	
20	286	59.5	83	30.4		19.5	239	15.3		00.5	88	16.6		44.2	
21	302	02.0	98	30.2		20.7	254	17.0		00.7	103	18.6		44.4	
22	317	04.5	113	29.9		21.9	269	18.7		01.0	118	20.6		44.6	
23	332	06.9	128	29.7		23.1	284	20.4		01.2	133	22.6		44.8	
24	347	09.4	143	29.5	-10	24.3	299	22.1	+15	01.4	148	24.6	-6	45.0	
Dif	—	—	-2	-12		+17	+2			+20	-2		+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 6			Edad: 4 ^d 2 PHE { 4 ^h : 56'1 12 ^h : 56'3 20 ^h : 56'5 PMG: 15 ^h 21 ^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	33.2	+5 44.2	136	55.0	-14 09.7	60 N	3 33	4 28	5 11	11 19	100	19 07	1	
1	195	33.4		151	27.8 ¹³⁸	23.1 ¹³⁴	58	43	34	15	11 08	94	19	7	
2	210	33.6		166	00.6 ¹³⁸	36.4 ¹³³	56	3 52	39	18	10 58	89	30	12	
3	225	33.8		180	33.2 ¹³⁶	-14 49.7 ¹³³	54	4 00	44	21	50 85		39	16	
4	240	34.0		195	05.8 ¹³⁶	-15 03.0 ¹³³	52	07	48	23	42 82		48	18	
5	255	34.3	+5 39.5	209	38.2 ¹³⁴	-15 16.1 ¹³¹	50	4 12	4 52	5 25	10 35	79	19 55	22	
6	270	34.5	+5 38.6	224	10.6 ¹³⁴	-15 29.3 ¹³²	45	4 25	5 00	5 30	10 21	73	20 11	27	
7	285	34.7		238	42.9 ¹³³	42.3 ¹³⁰	40	34	07	34	10 09	68	24	32	
8	300	34.9		253	15.1 ¹³²	-15 55.3 ¹³⁰	35	42	12	38	9 59	65	36	34	
9	315	35.1		267	47.3 ¹³²	-16 08.3 ¹³⁰	30	48	17	41	50 62		20 46	37	
10	330	35.3		282	19.3 ¹³⁰	21.2 ¹²⁹	20	4 58	24	46	35 57		21 03	42	
11	345	35.5	+5 33.9	296	51.3 ¹³⁰	-16 34.0 ¹²⁸	10 N	5 05	5 29	5 50	9 22	52	21 18	47	
12	0	35.8	+5 32.9	311	23.1 ¹²⁸	-16 46.7 ¹²⁷	0	5 09	5 34	5 54	9 10	48	21 32	51	
13	15	36.0		325	54.9 ¹²⁸	-16 59.4 ¹²⁷	10 S	13	37	5 58	8 58	44	21 46	55	
14	30	36.2		340	26.6 ¹²⁷	-17 12.1 ¹²⁷	20	15	40	6 02	45 40		22 02	58	
15	45	36.4		354	58.1 ¹²⁵	24.6 ¹²⁵	30	15	43	07	30 35		19	64	
16	60	36.6		9	29.6 ¹²⁵	37.1 ¹²⁵	35	15	44	09	22 32		30	66	
17	75	36.8	+5 28.2	24	01.0 ¹²⁴	-17 49.5 ¹²⁴	40	5 14	5 45	6 12	8 12	29	22 41	70	
18	90	37.1	+5 27.3	38	32.3 ¹²³	-18 01.9 ¹²⁴	45	5 12	5 46	6 16	8 01	24	22 55	74	
19	105	37.3		53	03.5 ¹²²	14.2 ¹²³	50	10	47	19	7 48	19	23 12	80	
20	120	37.5		67	34.6 ¹²¹	26.4 ¹²²	52	09	48	21	42 16		21	82	
21	135	37.7		82	05.6 ¹²⁰	38.5 ¹²¹	54	07	48	23	35 13		30	86	
22	150	37.9		96	36.4 ¹¹⁸	-18 50.5 ¹²⁰	56	05	48	25	28 9		40	90	
23	165	38.1		111	07.2 ¹¹⁸	-19 02.5 ¹²⁰	58	03	49	28	19 6		23 52	95	
24	180	38.3	+5 21.6	125	37.9 ¹¹⁷	-19 14.4 ¹¹⁹	60 S	5 01	5 49	6 30	7 10	0	** ** *	**	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 0 ^h 51 ^m 2		Mag: -4.1 PMG: 14 ^h 26 ^m		Mag: -1.2 PMG: 4 ^h 02 ^m		Mag: -1.7 PMG: 14 ^h 04 ^m		Mag: +0.3 PMG: 9 ^h 26 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	347	09.4	143	29.5	-10 24.3	299	22.1	+15 01.4	148	24.6	-6 45.0	218	03.0	+18 57.9
1	2	11.8	158	29.2	25.5	314	23.8	01.7	163	26.6	45.2	233	05.2	57.8
2	17	14.3	173	29.0	26.7	329	25.5	01.9	178	28.6	45.3	248	07.4	57.8
3	32	16.8	188	28.8	28.0	344	27.3	02.1	193	30.6	45.5	263	09.6	57.7
4	47	19.2	203	28.5	29.2	359	29.0	02.4	208	32.6	45.7	278	11.8	57.6
5	62	21.7	218	28.3	-10 30.4	14	30.7	+15 02.6	223	34.6	-6 45.9	293	13.9	+18 57.6
6	77	24.2	233	28.1	-10 31.6	29	32.4	+15 02.8	238	36.7	-6 46.1	308	16.1	+18 57.5
7	92	26.6	248	27.8	32.8	44	34.1	03.0	253	38.7	46.3	323	18.3	57.4
8	107	29.1	263	27.6	34.0	59	35.9	03.3	268	40.7	46.5	338	20.5	57.4
9	122	31.6	278	27.3	35.2	74	37.6	03.5	283	42.7	46.7	353	22.7	57.3
10	137	34.0	293	27.1	36.4	89	39.3	03.7	298	44.7	46.9	8	24.8	57.2
11	152	36.5	308	26.9	-10 37.6	104	41.0	+15 04.0	313	46.7	-6 47.0	23	27.0	+18 57.2
12	167	38.9	323	26.6	-10 38.8	119	42.7	+15 04.2	328	48.7	-6 47.2	38	29.2	+18 57.1
13	182	41.4	338	26.4	40.0	134	44.5	04.4	343	50.7	47.4	53	31.4	57.1
14	197	43.9	353	26.2	41.2	149	46.2	04.6	358	52.7	47.6	68	33.6	57.0
15	212	46.3	8	25.9	42.4	164	47.9	04.9	13	54.7	47.8	83	35.8	56.9
16	227	48.8	23	25.7	43.6	179	49.7	05.1	28	56.7	48.0	98	37.9	56.9
17	242	51.3	38	25.5	-10 44.9	194	51.4	+15 05.3	43	58.7	-6 48.2	113	40.1	+18 56.8
18	257	53.7	53	25.2	-10 46.1	209	53.1	+15 05.5	59	00.7	-6 48.4	128	42.3	+18 56.7
19	272	56.2	68	25.0	47.3	224	54.8	05.8	74	02.8	48.6	143	44.5	56.7
20	287	58.7	83	24.7	48.5	239	56.6	06.0	89	04.8	48.8	158	46.7	56.6
21	303	01.1	98	24.5	49.7	254	58.3	06.2	104	06.8	48.9	173	48.9	56.5
22	318	03.6	113	24.3	50.9	270	00.1	06.4	119	08.8	49.1	188	51.0	56.5
23	333	06.1	128	24.0	52.1	285	01.8	06.7	134	10.8	49.3	203	53.2	56.4
24	348	08.5	143	23.8	-10 53.3	300	03.5	+15 06.9	149	12.8	-6 49.5	218	55.4	+18 56.3
Dif	—		-2 -12		+17 +2		+20 -2		+22 -1					

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna			
	SD: 15 ^h 9			Edad: 5 ^d 2	PHE	SD: 15 ^h 4			SD: 16 ^h 10 ^m	R ^o : 54 ^m								
	hG ☉	Dec									hG ☾	Dif	Dec	Dif	Civil	Náutico	Hora	R°
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m	h	m	m
0	180	38.3	+5	21.6	125	37.9	-19	14.4	60 N	18 39	19 22	20 16	12 59	107		19 08	5	
1	195	38.6		20.7	140	08.5 ¹¹⁶		26.2 ¹¹⁸	58	36	17	20 07	42	98		26	14	
2	210	38.8		19.7	154	39.0 ¹¹⁵		37.9 ¹¹⁷	56	33	12	19 58	27	92		42	19	
3	225	39.0		18.8	169	09.4 ¹¹⁴	-19	49.5 ¹¹⁶	54	31	07	51	15	87		19 55	24	
4	240	39.2		17.8	183	39.6 ¹¹²	-20	01.1 ¹¹⁶	52	29	03	45	12 04	83		20 06	28	
5	255	39.4	+5	16.9	198	09.8 ¹¹²	-20	12.5 ¹¹⁴	50	18 27	19 00	19 39	11 54	81		20 17	30	
6	270	39.6	+5	15.9	212	39.8 ¹¹⁰	-20	23.9 ¹¹⁴	45	18 22	18 52	19 27	11 34	75		20 38	36	
7	285	39.9		15.0	227	09.8 ¹¹⁰		35.2 ¹¹³	40	19	46	18	17	71		20 56	39	
8	300	40.1		14.0	241	39.6 ¹⁰⁸		46.4 ¹¹²	35	16	41	11	11 04	67		21 10	43	
9	315	40.3		13.1	256	09.4 ¹⁰⁸	-20	57.5 ¹¹¹	30	13	37	19 05	10 52	65		23	45	
10	330	40.5		12.2	270	39.0 ¹⁰⁶	-21	08.5 ¹¹⁰	20	08	30	18 56	32	60		21 45	49	
11	345	40.7	+5	11.2	285	08.5 ¹⁰⁵	-21	19.4 ¹⁰⁹	10 N	18 04	18 25	18 50	10 14	56		22 05	52	
12	0	40.9	+5	10.3	299	37.9 ¹⁰⁴	-21	30.2 ¹⁰⁸	0	18 01	18 21	18 45	9 58	53		22 23	55	
13	15	41.2		09.3	314	07.2 ¹⁰³		40.9 ¹⁰⁷	10 S	17 57	18	42	42	49		22 41	58	
14	30	41.4		08.4	328	36.4 ¹⁰²	-21	51.5 ¹⁰⁶	20	53	15	41	25	45		23 00	62	
15	45	41.6		07.4	343	05.4 ¹⁰⁰	-22	02.1 ¹⁰⁶	30	49	13	41	9 05	41		23	65	
16	60	41.8		06.5	357	34.4 ¹⁰⁰		12.5 ¹⁰⁴	35	47	12	42	8 54	38		36	68	
17	75	42.0	+5	05.5	12	03.2 ⁹⁸	-22	22.8 ¹⁰³	40	17 44	18 12	18 43	8 41	35		23 51	71	
18	90	42.2	+5	04.6	26	32.0 ⁹⁸	-22	33.0 ¹⁰²	45	17 42	18 11	18 45	8 25	31	***	***	***	
19	105	42.5		03.6	41	00.6 ⁹⁶		43.0 ¹⁰⁰	50	38	10	48	8 07	25	***	***	***	
20	120	42.7		02.7	55	29.1 ⁹⁵	-22	53.0 ¹⁰⁰	52	37	10	49	7 58	23	***	***	***	
21	135	42.9		01.8	69	57.5 ⁹⁴	-23	02.9 ⁹⁹	54	35	10	51	48	20	***	***	***	
22	150	43.1	+5	00.8	84	25.7 ⁹²		12.6 ⁹⁷	56	33	10	53	37	16	***	***	***	
23	165	43.3	+4	59.9	98	53.9 ⁹²		22.3 ⁹⁷	58	31	10	56	25	10	***	***	***	
24	180	43.6	+4	58.9	113	21.9 ⁹⁰	-23	31.8 ⁹⁵	60 S	17 28	18 10	18 58	7 10	4		0 05	103	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 0 ^h 47 ^m 3		Mag: -4.1 PMG: 14 ^h 27 ^m		Mag: -1.2 PMG: 3 ^h 59 ^m		Mag: -1.7 PMG: 14 ^h 01 ^m		Mag: +0.3 PMG: 9 ^h 23 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	348	08.5	143	23.8	-10	53.3	300	03.5	+15	06.9	149	12.8	-6	49.5	218	55.4	+18	56.3
1	3	11.0	158	23.6		54.5	315	05.3		07.1	164	14.8		49.7	233	57.6		56.3
2	18	13.4	173	23.3		55.7	330	07.0		07.3	179	16.8		49.9	248	59.8		56.2
3	33	15.9	188	23.1		56.9	345	08.7		07.6	194	18.8		50.1	264	01.9		56.2
4	48	18.4	203	22.8		58.1	0	10.5		07.8	209	20.8		50.3	279	04.1		56.1
5	63	20.8	218	22.6	-10	59.3	15	12.2	+15	08.0	224	22.8	-6	50.5	294	06.3	+18	56.0
6	78	23.3	233	22.4	-11	00.5	30	14.0	+15	08.2	239	24.8	-6	50.6	309	08.5	+18	56.0
7	93	25.8	248	22.1		01.7	45	15.7		08.5	254	26.8		50.8	324	10.7		55.9
8	108	28.2	263	21.9		02.9	60	17.5		08.7	269	28.8		51.0	339	12.9		55.8
9	123	30.7	278	21.6		04.1	75	19.2		08.9	284	30.8		51.2	354	15.0		55.8
10	138	33.2	293	21.4		05.3	90	21.0		09.1	299	32.8		51.4	9	17.2		55.7
11	153	35.6	308	21.2	-11	06.5	105	22.7	+15	09.4	314	34.9	-6	51.6	24	19.4	+18	55.6
12	168	38.1	323	20.9	-11	07.7	120	24.5	+15	09.6	329	36.9	-6	51.8	39	21.6	+18	55.6
13	183	40.5	338	20.7		08.9	135	26.2		09.8	344	38.9		52.0	54	23.8		55.5
14	198	43.0	353	20.4		10.1	150	28.0		10.0	359	40.9		52.2	69	26.0		55.4
15	213	45.5	8	20.2		11.3	165	29.7		10.2	14	42.9		52.4	84	28.2		55.4
16	228	47.9	23	20.0		12.5	180	31.5		10.5	29	44.9		52.5	99	30.3		55.3
17	243	50.4	38	19.7	-11	13.7	195	33.2	+15	10.7	44	46.9	-6	52.7	114	32.5	+18	55.3
18	258	52.9	53	19.5	-11	14.9	210	35.0	+15	10.9	59	48.9	-6	52.9	129	34.7	+18	55.2
19	273	55.3	68	19.2		16.0	225	36.8		11.1	74	50.9		53.1	144	36.9		55.1
20	288	57.8	83	19.0		17.2	240	38.5		11.3	89	52.9		53.3	159	39.1		55.1
21	304	00.3	98	18.8		18.4	255	40.3		11.6	104	54.9		53.5	174	41.3		55.0
22	319	02.7	113	18.5		19.6	270	42.0		11.8	119	56.9		53.7	189	43.4		54.9
23	334	05.2	128	18.3		20.8	285	43.8		12.0	134	58.9		53.9	204	45.6		54.9
24	349	07.7	143	18.0	-11	22.0	300	45.6	+15	12.2	150	00.9	-6	54.1	219	47.8	+18	54.8
Dif	—		-2		-12		+18		+2		+20		-2		+22		-1	

UT	SOL			 LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 9			Edad: 6 ^d 2	PHE	4 ^h : 57/3 12 ^h : 57/6 20 ^h : 57/8												
	PMG: 11 ^h 56 ^m 9					SD: 15 ^h 6				R°: 59 ^m								
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m		
0	180	43.6	+4	58.9	113	21.9	90	-23	31.8	94	60 N	3 39	4 33	5 16	14 46	105		
1	195	43.8		58.0	127	49.9	88		41.2	94	58	49	39	19	14 20	93		
2	210	44.0		57.0	142	17.7	88		50.5	93	56	3 57	44	22	13 59	87		
3	225	44.2		56.1	156	45.4	87	-23	59.6	91	54	4 04	48	24	42 83	19		
4	240	44.4		55.1	171	12.9	85	-24	08.7	91	52	10	52	26	27 80	34		
5	255	44.6	+4	54.2	185	40.4	85	-24	17.6	89	50	4 16	4 55	5 28	13 15	77		
6	270	44.9	+4	53.2	200	07.8	84	-24	26.4	88	45	4 27	5 03	5 33	12 49	73		
7	285	45.1		52.3	214	35.0	82		35.0	86	40	36	09	36	28 70			
8	300	45.3		51.3	229	02.1	81		43.6	86	35	44	14	39	12 11	68		
9	315	45.5		50.4	243	29.1	80	-24	52.0	84	30	49	18	42	11 57	65		
10	330	45.7		49.4	257	56.0	79	-25	00.3	83	20	4 58	24	46	32 62			
11	345	46.0	+4	48.5	272	22.8	78	-25	08.4	81	10 N	5 05	5 29	5 50	11 10	61		
12	0	46.2	+4	47.5	286	49.5	77	-25	16.4	80	0	5 09	5 33	5 54	10 51	57		
13	15	46.4		46.6	301	16.0	75		24.3	79	10 S	12	36	5 57	31 55			
14	30	46.6		45.6	315	42.4	74		32.0	77	20	13	39	6 01	10 10	53		
15	45	46.8		44.7	330	08.8	74		39.6	76	30	13	41	04	9 46	49		
16	60	47.0		43.7	344	35.0	72		47.0	74	35	12	41	07	32 47			
17	75	47.3	+4	42.8	359	01.1	71	-25	54.3	73	40	5 11	5 42	6 09	9 16	44		
18	90	47.5	+4	41.8	13	27.1	70	-26	01.5	72	45	5 09	5 43	6 12	8 56	42		
19	105	47.7		40.9	27	52.9	68		08.5	70	50	06	43	15	32 37			
20	120	47.9		39.9	42	18.7	68		15.4	69	52	04	43	17	21 34			
21	135	48.1		39.0	56	44.4	67		22.1	67	54	02	43	18	8 08	31		
22	150	48.4		38.0	71	09.9	65		28.7	66	56	5 00	43	20	7 53	27		
23	165	48.6		37.1	85	35.4	65		35.1	64	58	4 58	43	22	35 21			
24	180	48.8	+4	36.1	100	00.7	63	-26	41.4	63	60 S	4 55	5 43	6 24	7 14	11		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 0 ^h 43 ^m 4		Mag: -4.1 PMG: 14 ^h 27 ^m				Mag: -1.2 PMG: 3 ^h 56 ^m				Mag: -1.7 PMG: 13 ^h 58 ^m				Mag: +0.3 PMG: 9 ^h 19 ^m			
	hG ♈		hG ♀				hG ♂				hG ♃				hG ♄			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	349	07.7	143	18.0	-11	22.0	300	45.6	+15	12.2	150	00.9	-6	54.1	219	47.8		
1	4	10.1	158	17.8		23.2	315	47.3		12.4	165	02.9		54.3	234	50.0		
2	19	12.6	173	17.5		24.4	330	49.1		12.6	180	04.9		54.4	249	52.2		
3	34	15.0	188	17.3		25.6	345	50.9		12.9	195	06.9		54.6	264	54.4		
4	49	17.5	203	17.0		26.8	0	52.6		13.1	210	08.9		54.8	279	56.6		
5	64	20.0	218	16.8	-11	28.0	15	54.4	+15	13.3	225	10.9	-6	55.0	294	58.7		
6	79	22.4	233	16.6	-11	29.2	30	56.2	+15	13.5	240	12.9	-6	55.2	310	00.9		
7	94	24.9	248	16.3		30.4	45	57.9		13.7	255	14.9		55.4	325	03.1		
8	109	27.4	263	16.1		31.5	60	59.7		13.9	270	17.0		55.6	340	05.3		
9	124	29.8	278	15.8		32.7	76	01.5		14.2	285	19.0		55.8	355	07.5		
10	139	32.3	293	15.6		33.9	91	03.3		14.4	300	21.0		56.0	10	09.7		
11	154	34.8	308	15.3	-11	35.1	106	05.0	+15	14.6	315	23.0	-6	56.2	25	11.9		
12	169	37.2	323	15.1	-11	36.3	121	06.8	+15	14.8	330	25.0	-6	56.4	40	14.0		
13	184	39.7	338	14.8		37.5	136	08.6		15.0	345	27.0		56.5	55	16.2		
14	199	42.2	353	14.6		38.7	151	10.4		15.2	0	29.0		56.7	70	18.4		
15	214	44.6	8	14.3		39.9	166	12.2		15.4	15	31.0		56.9	85	20.6		
16	229	47.1	23	14.1		41.0	181	13.9		15.7	30	33.0		57.1	100	22.8		
17	244	49.5	38	13.9	-11	42.2	196	15.7	+15	15.9	45	35.0	-6	57.3	115	25.0		
18	259	52.0	53	13.6	-11	43.4	211	17.5	+15	16.1	60	37.0	-6	57.5	130	27.2		
19	274	54.5	68	13.4		44.6	226	19.3		16.3	75	39.0		57.7	145	29.4		
20	289	56.9	83	13.1		45.8	241	21.1		16.5	90	41.0		57.9	160	31.5		
21	304	59.4	98	12.9		47.0	256	22.9		16.7	105	43.0		58.1	175	33.7		
22	320	01.9	113	12.6		48.2	271	24.6		16.9	120	45.0		58.3	190	35.9		
23	335	04.3	128	12.4		49.3	286	26.4		17.1	135	47.0		58.4	205	38.1		
24	350	06.8	143	12.1	-11	50.5	301	28.2	+15	17.4	150	49.0	-6	58.6	220	40.3		
Dif	—		-2		-12		+18		+2		+20		-2		+22			

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'9 PMG: 11 ^h 56 ^m 6		Edad: 7 ^d 2 SD: 15'8 PMG: 18 ^h 03 ^m PHE { 4 ^h : 58'1 12 ^h : 58'3 20 ^h : 58'5 Rº: 62 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	Rº	Hora	Rº
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	180	48.8	+4	36.1	100	00.7	-26 41.4	60 N	18 33	19 16	20 09	16 31 75	19 30 56	
1	195	49.0		35.2	114	26.0	63 47.5	58	31	11	20 00	15 53 71	20 09 59	
2	210	49.2		34.2	128	51.1	61 53.4	56	28	06	19 52	26 69	36 60	
3	225	49.5		33.3	143	16.1	60 -26 59.2	54	26	19 02	45	15 05 68	20 57 61	
4	240	49.7		32.3	157	41.0	59 -27 04.8	52	24	18 58	40	14 47 68	21 15 62	
5	255	49.9	+4	31.4	172	05.9	59 -27 10.3	50	18 22	18 55	19 34	14 32 67	21 30 62	
6	270	50.1	+4	30.4	186	30.6	57 -27 15.6	45	18 19	18 48	19 23	14 02 66	22 01 62	
7	285	50.3		29.5	200	55.2	56 20.8	40	15	43	15	13 38 65	25 62	
8	300	50.6		28.5	215	19.7	55 25.8	35	13	38	08	19 64	22 45 62	
9	315	50.8		27.6	229	44.2	55 30.6	30	10	34	19 03	13 02 64	23 02 62	
10	330	51.0		26.6	244	08.5	53 35.2	20	06	28	18 54	12 34 64	30 63	
11	345	51.2	+4	25.7	258	32.8	53 -27 39.7	10 N	18 03	18 24	18 48	12 11 62	23 55 62	
12	0	51.4	+4	24.7	272	56.9	51 -27 44.0	0	18 00	18 21	18 45	11 48 62	*** ** **	
13	15	51.7		23.8	287	21.0	51 48.2	10 S	17 57	18	42	26 61	*** ** **	
14	30	51.9		22.8	301	45.0	50 52.1	20	54	16	41	11 03 59	0 02 63	
15	45	52.1		21.9	316	08.9	49 55.9	30	50	14	42	10 35 59	28 65	
16	60	52.3		20.9	330	32.7	48 -27 59.5	35	48	14	43	19 58	0 44 66	
17	75	52.5	+4	20.0	344	56.4	47 -28 03.0	40	17 46	18 13	18 45	10 00 57	1 02 68	
18	90	52.8	+4	19.0	359	20.0	46 -28 06.2	45	17 44	18 13	18 47	9 38 55	1 24 70	
19	105	53.0		18.1	13	43.6	46 09.3	50	41	13	51	9 09 53	1 52 72	
20	120	53.2		17.1	28	07.1	45 12.2	52	40	13	53	8 55 51	2 05 75	
21	135	53.4		16.2	42	30.5	44 14.9	54	38	14	55	39 49	21 77	
22	150	53.6		15.2	56	53.8	43 17.5	56	37	14	18 57	8 20 47	2 40 79	
23	165	53.9		14.3	71	17.1	43 19.8	58	35	14	19 00	7 56 43	3 03 84	
24	180	54.1	+4	13.3	85	40.3	42 -28 22.0	60 S	17 33	18 15	19 03	7 25 34	3 34 93	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 0 ^h 39 ^m 4		Mag: -4.1 PMG: 14 ^h 27 ^m		Mag: -1.2 PMG: 3 ^h 54 ^m		Mag: -1.7 PMG: 13 ^h 55 ^m		Mag: +0.3 PMG: 9 ^h 16 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	350	06.8	143	12.1	301	28.2	+15 17.4	150 49.0	-6 58.6	220 40.3	+18 53.3			
1	5	09.3	158	11.9	316	30.0	17.6	165 51.0	58.8	235 42.5	53.2			
2	20	11.7	173	11.6	331	31.8	17.8	180 53.0	59.0	250 44.7	53.1			
3	35	14.2	188	11.4	346	33.6	18.0	195 55.0	59.2	265 46.8	53.1			
4	50	16.7	203	11.1	1	35.4	18.2	210 57.0	59.4	280 49.0	53.0			
5	65	19.1	218	10.9	16	37.2	+15 18.4	225 59.0	-6 59.6	295 51.2	+18 53.0			
6	80	21.6	233	10.6	31	39.0	+15 18.6	241 01.0	-6 59.8	310 53.4	+18 52.9			
7	95	24.0	248	10.4	46	40.8	18.8	256 03.0	-7 00.0	325 55.6	52.8			
8	110	26.5	263	10.1	61	42.6	19.0	271 05.0	-7 00.2	340 57.8	52.8			
9	125	29.0	278	09.9	76	44.4	19.3	286 07.0	00.4	356 00.0	52.7			
10	140	31.4	293	09.6	91	46.2	19.5	301 09.0	00.5	11 02.2	52.6			
11	155	33.9	308	09.4	106	48.0	+15 19.7	316 11.0	-7 00.7	26 04.4	+18 52.6			
12	170	36.4	323	09.1	121	49.8	+15 19.9	331 13.0	-7 00.9	41 06.5	+18 52.5			
13	185	38.8	338	08.9	136	51.6	20.1	346 15.0	01.1	56 08.7	52.4			
14	200	41.3	353	08.6	151	53.4	20.3	1 17.0	01.3	71 10.9	52.4			
15	215	43.8	8	08.4	166	55.2	20.5	16 19.0	01.5	86 13.1	52.3			
16	230	46.2	23	08.1	181	57.0	20.7	31 21.0	01.7	101 15.3	52.3			
17	245	48.7	38	07.9	196	58.8	+15 20.9	46 23.0	-7 01.9	116 17.5	+18 52.2			
18	260	51.1	53	07.6	212	00.6	+15 21.1	61 25.0	-7 02.1	131 19.7	+18 52.1			
19	275	53.6	68	07.4	227	02.5	21.3	76 27.0	02.3	146 21.9	52.1			
20	290	56.1	83	07.1	242	04.3	21.5	91 29.0	02.5	161 24.1	52.0			
21	305	58.5	98	06.8	257	06.1	21.7	106 31.0	02.6	176 26.2	51.9			
22	321	01.0	113	06.6	272	07.9	21.9	121 33.0	02.8	191 28.4	51.9			
23	336	03.5	128	06.3	287	09.7	22.2	136 35.0	03.0	206 30.6	51.8			
24	351	05.9	143	06.1	302	11.5	+15 22.4	151 37.0	-7 03.2	221 32.8	+18 51.8			
Dif	—		-3	-12	+18	+2		+20	-2	+22	-1			

UT	SOL			☾ LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'9 PMG: 11 ^h 56 ^m 2			Edad: 8 ^d 2 PHE { 4 ^h : 58'8 12 ^h : 59'0 20 ^h : 59'3 PMG: 19 ^h 05 ^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	180	54.1	+4	13.3	85	40.3	-28	22.0	60 N	3	45	4	38	5	21	17	46
1	195	54.3		12.3	100	03.4	41	24.0	58	3	54	4	43	23	17	04	38
2	210	54.5		11.4	114	26.5	41	25.7	56	4	01	4	48	26	16	35	44
3	225	54.7		10.4	128	49.5	40	27.4	54		08	5	52	28	16	13	47
4	240	55.0		09.5	143	12.4	39	28.8	52		14	5	55	30	15	55	49
5	255	55.2	+4	08.5	157	35.3	39	-28	50	4	19	4	59	5	31	15	39
6	270	55.4	+4	07.6	171	58.1	38	-28	45	4	30	5	05	5	35	15	08
7	285	55.6		06.6	186	20.9	38	31.9	40		39		11	38	14	43	57
8	300	55.8		05.7	200	43.6	37	32.5	35		45		15	41		23	58
9	315	56.1		04.7	215	06.3	37	33.0	30		51		19	43	14	06	59
10	330	56.3		03.8	229	28.9	36	33.3	20	4	59		25	47	13	38	60
11	345	56.5	+4	02.8	243	51.5	36	-28	10 N	5	04	5	29	5	50	13	13
12	0	56.7	+4	01.8	258	14.1	36	-28	0	5	08	5	32	5	53	12	50
13	15	56.9	+4	00.9	272	36.6	35	32.9	10 S		10		35	56		27	64
14	30	57.2	+3	59.9	286	59.0	34	32.4	20	11	37	5	59	59		12	02
15	45	57.4		59.0	301	21.5	35	31.7	30		10	38	6	02		11	34
16	60	57.6		58.0	315	43.9	34	30.8	35		09	39		04		11	17
17	75	57.8	+3	57.1	330	06.2	33	-28	40	5	08	5	39	6	06	10	57
18	90	58.1	+3	56.1	344	28.6	34	-28	45	5	05	5	39	6	08	10	33
19	105	58.3		55.2	358	50.9	33	26.9	50	5	01	39		11		10	02
20	120	58.5		54.2	13	13.2	33	25.2	52	4	59	38		12		9	46
21	135	58.7		53.3	27	35.5	33	23.3	54		57	38	13			28	74
22	150	58.9		52.3	41	57.8	33	21.3	56		55	38	15			9	07
23	165	59.2		51.3	56	20.0	32	19.0	58		52	37	16			8	39
24	180	59.4	+3	50.4	70	42.3	33	-28	60 S	4	49	5	37	6	18	7	59

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 0 ^h 35 ^m 5		Mag: -4.1 PMG: 14 ^h 28 ^m		Mag: -1.3 PMG: 3 ^h 51 ^m		Mag: -1.7 PMG: 13 ^h 52 ^m		Mag: +0.3 PMG: 9 ^h 12 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	351	05.9	143	06.1	-12	18.8	302	11.5	+15	22.4
1	6	08.4	158	05.8		20.0	317	13.4		22.6
2	21	10.9	173	05.6		21.1	332	15.2		22.8
3	36	13.3	188	05.3		22.3	347	17.0		23.0
4	51	15.8	203	05.1		23.5	2	18.8		23.2
5	66	18.3	218	04.8	-12	24.6	17	20.6	+15	23.4
6	81	20.7	233	04.6	-12	25.8	32	22.5	+15	23.6
7	96	23.2	248	04.3		27.0	47	24.3		23.8
8	111	25.6	263	04.0		28.2	62	26.1		24.0
9	126	28.1	278	03.8		29.3	77	28.0		24.2
10	141	30.6	293	03.5		30.5	92	29.8		24.4
11	156	33.0	308	03.3	-12	31.7	107	31.6	+15	24.6
12	171	35.5	323	03.0	-12	32.8	122	33.4	+15	24.8
13	186	38.0	338	02.8		34.0	137	35.3		25.0
14	201	40.4	353	02.5		35.2	152	37.1		25.2
15	216	42.9	8	02.2		36.3	167	38.9		25.4
16	231	45.4	23	02.0		37.5	182	40.8		25.6
17	246	47.8	38	01.7	-12	38.7	197	42.6	+15	25.8
18	261	50.3	53	01.5	-12	39.8	212	44.5	+15	26.0
19	276	52.8	68	01.2		41.0	227	46.3		26.2
20	291	55.2	83	01.0		42.2	242	48.1		26.4
21	306	57.7	98	00.7		43.3	257	50.0		26.6
22	322	00.1	113	00.4		44.5	272	51.8		26.8
23	337	02.6	128	00.2		45.6	287	53.7		27.0
24	352	05.1	142	59.9	-12	46.8	302	55.5	+15	27.2
Dif	—		-3 -12		+18 +2		+20 -2		+22 -1	

UT	SOL			☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna				
	SD: 15 ^h 9			Edad: 9 ^d 2 PHE { 4 ^h : 59 ^m 5 12 ^h : 59 ^m 7 20 ^h : 59 ^m 9														
	PMG: 11 ^h 55 ^m 9			SD: 16 ^h 2 PMG: 20 ^h 08 ^m R°: 61 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	h m	h m	h m			
0	180	59.4	+3 50.4	70	42.3	-28 16.5	32	60 N	18 27	19 10	20 02	18 13 8	22 11 120					
1	195	59.6	49.4	85	04.5	13.8	27	58	25	05	19 54	17 42 19	22 41 109					
2	210	59.8	48.5	99	26.7	10.9	29	56	23	19 01	46	19 26	23 04 102					
3	226	00.0	47.5	113	49.0	07.8	31	54	21	18 57	40	17 00 30	22 97					
4	241	00.3	46.6	128	11.2	04.5	33	52	19	53	34	16 44 34	38 93					
5	256	00.5	+3 45.6	142	33.4	-28 01.1	34	50	18 18	18 51	19 29	16 31 36	23 51 90					
6	271	00.7	+3 44.6	156	55.6	-27 57.4	37	45	18 15	18 44	19 19	16 02 42	*** ** *					
7	286	00.9	43.7	171	17.9	53.5	39	40	12	39	11	15 40 46	*** ** *					
8	301	01.2	42.7	185	40.1	49.4	41	35	10	35	05	21 49	*** ** *					
9	316	01.4	41.8	200	02.4	45.1	43	30	08	32	19 00	15 05 52	0 04 70					
10	331	01.6	40.8	214	24.7	40.7	44	20	05	27	18 52	14 38 56	33 67					
11	346	01.8	+3 39.9	228	47.0	-27 36.0	47	10 N	18 02	18 23	18 47	14 15 59	0 57 65					
12	1	02.0	+3 38.9	243	09.3	-27 31.1	49	0	17 59	18 20	18 44	13 53 62	1 20 63					
13	16	02.3	37.9	257	31.6	26.1	50	10 S	57	18	42	31 65	1 42 61					
14	31	02.5	37.0	271	54.0	20.8	53	20	54	16	42	13 07 68	2 07 58					
15	46	02.7	36.0	286	16.4	15.3	55	30	51	15	43	12 40 72	35 55					
16	61	02.9	35.1	300	38.8	09.7	56	35	50	15	44	24 74	2 51 54					
17	76	03.2	+3 34.1	315	01.2	-27 03.8	59	40	17 48	18 15	18 47	12 05 77	3 11 51					
18	91	03.4	+3 33.1	329	23.7	-26 57.8	60	45	17 46	18 16	18 50	11 42 80	3 34 48					
19	106	03.6	32.2	343	46.2	51.6	62	50	44	16	54	11 13 85	4 04 44					
20	121	03.8	31.2	358	08.8	45.1	65	52	43	17	56	10 58 88	19 41					
21	136	04.0	30.3	12	31.4	38.5	66	54	42	17	18 58	42 91	36 38					
22	151	04.3	29.3	26	54.0	31.7	68	56	41	18	19 01	10 21 96	4 56 34					
23	166	04.5	28.4	41	16.7	24.7	70	58	39	18	04	9 56 103	5 21 28					
24	181	04.7	+3 27.4	55	39.4	-26 17.5	72	60 S	17 38	18 19	19 08	9 22 114	5 56 17					
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 0 ^h 31 ^m 6		Mag: -4.1 PMG: 14 ^h 28 ^m			Mag: -1.3 PMG: 3 ^h 48 ^m			Mag: -1.7 PMG: 13 ^h 48 ^m			Mag: +0.4 PMG: 9 ^h 09 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	352	05.1	142	59.9	-12	46.8	302	55.5	+15	27.2	152	25.0	-7	07.8	222	25.4	+18	50.2
1	7	07.5	157	59.7		48.0	317	57.4		27.4	167	27.0		08.0	237	27.6		50.2
2	22	10.0	172	59.4		49.1	332	59.2		27.6	182	29.0		08.2	252	29.8		50.1
3	37	12.5	187	59.1		50.3	348	01.1		27.8	197	31.0		08.4	267	32.0		50.1
4	52	14.9	202	58.9		51.4	3	02.9		28.0	212	33.0		08.6	282	34.2		50.0
5	67	17.4	217	58.6	-12	52.6	18	04.8	+15	28.2	227	35.0	-7	08.8	297	36.4	+18	49.9
6	82	19.9	232	58.4	-12	53.8	33	06.6	+15	28.4	242	37.0	-7	09.0	312	38.6	+18	49.9
7	97	22.3	247	58.1		54.9	48	08.5		28.6	257	39.0		09.2	327	40.7		49.8
8	112	24.8	262	57.8		56.1	63	10.3		28.8	272	41.0		09.4	342	42.9		49.7
9	127	27.3	277	57.6		57.2	78	12.2		29.0	287	43.0		09.5	357	45.1		49.7
10	142	29.7	292	57.3		58.4	93	14.0		29.2	302	45.0		09.7	12	47.3		49.6
11	157	32.2	307	57.0	-12	59.6	108	15.9	+15	29.4	317	47.0	-7	09.9	27	49.5	+18	49.6
12	172	34.6	322	56.8	-13	00.7	123	17.7	+15	29.6	332	49.0	-7	10.1	42	51.7	+18	49.5
13	187	37.1	337	56.5		01.9	138	19.6		29.8	347	50.9		10.3	57	53.9		49.4
14	202	39.6	352	56.3		03.0	153	21.5		30.0	2	52.9		10.5	72	56.1		49.4
15	217	42.0	7	56.0		04.2	168	23.3		30.2	17	54.9		10.7	87	58.3		49.3
16	232	44.5	22	55.7		05.3	183	25.2		30.3	32	56.9		10.9	103	00.5		49.2
17	247	47.0	37	55.5	-13	06.5	198	27.1	+15	30.5	47	58.9	-7	11.1	118	02.7	+18	49.2
18	262	49.4	52	55.2	-13	07.6	213	28.9	+15	30.7	63	00.9	-7	11.3	133	04.9	+18	49.1
19	277	51.9	67	54.9		08.8	228	30.8		30.9	78	02.9		11.5	148	07.1		49.1
20	292	54.4	82	54.7		09.9	243	32.7		31.1	93	04.9		11.7	163	09.3		49.0
21	307	56.8	97	54.4		11.1	258	34.5		31.3	108	06.9		11.9	178	11.5		48.9
22	322	59.3	112	54.1		12.2	273	36.4		31.5	123	08.9		12.0	193	13.7		48.9
23	338	01.8	127	53.9		13.4	288	38.3		31.7	138	10.9		12.2	208	15.8		48.8
24	353	04.2	142	53.6	-13	14.5	303	40.2	+15	31.9	153	12.9	-7	12.4	223	18.0	+18	48.7
Dif	—		-3		-12		+19		+2		+20		-2		+22		-1	

UT	SOL			LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna				
	SD: 15'9 PMG: 11 ^h 55 ^m 5			Edad: 10 ^d 2 PHE { 4 ^h : 60'1 12 ^h : 60'3 20 ^h : 60'4 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	04.7	+3 27.4	55	39.4	-26	17.5	74	60 N	3	50	4	43	5	25	18	21	2			
1	196	04.9		70	02.2	38	10.1	74	58	3	59		48	28	18	01	9	*** ** *			
2	211	05.2		84	25.1	39	-26	02.6	75	56	4	06		52	30	17	45	14	*** ** *		
3	226	05.4		98	47.9	38	-25	54.8	78	54	12		55	31		30	20		*** ** *		
4	241	05.6		113	10.9	40	46.9	79	52	18	4	59		33		18	23		*** ** *		
5	256	05.8	+3 22.6	127	33.9	40	-25	38.7	82	50	4	23	5	02	5	34	17	07	26	*** ** *	
6	271	06.1	+3 21.6	141	56.9	40	-25	30.4	83	45	4	33	5	08	5	37	16	44	33	0 19 83	
7	286	06.3		156	20.0	41	21.9	85	40	41		13		40		26	37		40	80	
8	301	06.5		170	43.2	42		13.3	86	35	47		17	42		16	10	42		0 58 76	
9	316	06.7		185	06.4	42	-25	04.4	89	30	52		20	44		15	57	44		1 14 73	
10	331	06.9		199	29.7	43	-24	55.4	90	20	4	59		25	47		34	50		1 40 68	
11	346	07.2	+3 16.8	213	53.1	44	-24	46.2	92	10 N	5	04		5	29	5	50	15	14	54	2 02 64
12	1	07.4	+3 15.9	228	16.5	44	-24	36.8	94	0	5	08		5	32	5	52	14	55	59	2 23 60
13	16	07.6		242	40.0	45		27.2	96	10 S		09		34	55		36	63		2 43 57	
14	31	07.8		257	03.6	46		17.5	97	20		09		35	5	57	14	15	68		3 05 53
15	46	08.1		271	27.2	46	-24	07.6	99	30		08		36	6	00	13	52	73		30 48
16	61	08.3		285	51.0	48	-23	57.5	101	35		06		36	01		38	76		3 45 45	
17	76	08.5	+3 11.1	300	14.8	48	-23	47.3	102	40	5	04	5	36	6	03	13	22	80		4 02 41
18	91	08.7	+3 10.1	314	38.6	48	-23	36.9	104	45	5	01	5	35	6	04	13	02	86		4 22 37
19	106	08.9		329	02.6	50		26.3	106	50	4	57		34	06		12	38	92		4 48 31
20	121	09.2		343	26.6	50		15.6	107	52		55		34	07		26	95		5	00 28
21	136	09.4		357	50.7	51	-23	04.6	110	54		52		33	08		12	13	99		14 24
22	151	09.6		06.3	12	14.8	51	-22	53.6	110		49		33	10		11	57	104		30 20
23	166	09.8		05.3	26	39.1	53	42.4	112	58		46		32	11		39	110		5	49 14
24	181	10.1	+3 04.4	41	03.4	53	-22	31.0	114	60 S	4	42		5	31	6	12	11	16	119	6 13 5

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 0 ^h 27 ^m 6		Mag: -4.1 PMG: 14 ^h 29 ^m			Mag: -1.3 PMG: 3 ^h 45 ^m			Mag: -1.7 PMG: 13 ^h 45 ^m			Mag: +0.4 PMG: 9 ^h 05 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	353	04.2	142	53.6	-13 14.5	303	40.2	+15 31.9	153	12.9	-7 12.4	223	18.0	+18 48.7
1	8	06.7	157	53.3	15.7	318	42.0	32.1	168	14.9	12.6	238	20.2	48.7
2	23	09.1	172	53.1	16.8	333	43.9	32.3	183	16.9	12.8	253	22.4	48.6
3	38	11.6	187	52.8	18.0	348	45.8	32.5	198	18.9	13.0	268	24.6	48.6
4	53	14.1	202	52.5	19.1	3	47.7	32.7	213	20.9	13.2	283	26.8	48.5
5	68	16.5	217	52.3	-13 20.3	18	49.5	+15 32.8	228	22.9	-7 13.4	298	29.0	+18 48.4
6	83	19.0	232	52.0	-13 21.4	33	51.4	+15 33.0	243	24.9	-7 13.6	313	31.2	+18 48.4
7	98	21.5	247	51.7	22.6	48	53.3	33.2	258	26.9	13.8	328	33.4	48.3
8	113	23.9	262	51.5	23.7	63	55.2	33.4	273	28.9	14.0	343	35.6	48.2
9	128	26.4	277	51.2	24.9	78	57.1	33.6	288	30.9	14.2	358	37.8	48.2
10	143	28.9	292	50.9	26.0	93	59.0	33.8	303	32.9	14.4	13	40.0	48.1
11	158	31.3	307	50.7	-13 27.2	109	00.8	+15 34.0	318	34.9	-7 14.5	28	42.2	+18 48.1
12	173	33.8	322	50.4	-13 28.3	124	02.7	+15 34.2	333	36.8	-7 14.7	43	44.4	+18 48.0
13	188	36.3	337	50.1	29.5	139	04.6	34.4	348	38.8	14.9	58	46.6	47.9
14	203	38.7	352	49.9	30.6	154	06.5	34.6	3	40.8	15.1	73	48.8	47.9
15	218	41.2	7	49.6	31.8	169	08.4	34.7	18	42.8	15.3	88	51.0	47.8
16	233	43.6	22	49.3	32.9	184	10.3	34.9	33	44.8	15.5	103	53.2	47.8
17	248	46.1	37	49.0	-13 34.0	199	12.2	+15 35.1	48	46.8	-7 15.7	118	55.4	+18 47.7
18	263	48.6	52	48.8	-13 35.2	214	14.1	+15 35.3	63	48.8	-7 15.9	133	57.6	+18 47.6
19	278	51.0	67	48.5	36.3	229	16.0	35.5	78	50.8	16.1	148	59.8	47.6
20	293	53.5	82	48.2	37.5	244	17.9	35.7	93	52.8	16.3	164	02.0	47.5
21	308	56.0	97	48.0	38.6	259	19.8	35.9	108	54.8	16.5	179	04.2	47.4
22	323	58.4	112	47.7	39.7	274	21.7	36.1	123	56.8	16.7	194	06.3	47.4
23	339	00.9	127	47.4	40.9	289	23.6	36.2	138	58.8	16.9	209	08.5	47.3
24	354	03.4	142	47.1	-13 42.0	304	25.5	+15 36.4	154	00.8	-7 17.0	224	10.7	+18 47.3
Dif	—		-3 -11			+19 +2			+20 -2			+22 -1		

UT	SOL			LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna				
	SD: 15/9			Edad: 11 ^d 2 PHE	4 ^h : 60/6 12 ^h : 60/7 20 ^h : 60/8 R°: 54 ^m													
	PMG: 11 ^h 55 ^m 2																	
	hG ☉	Dec			hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	m	h m	m			
0	181	10.1	+3	04.4	41	03.4	-22	31.0	60 N	18 21	19 03	19 55	18 23	0	0 11 118			
1	196	10.3		03.4	55	27.9	55	19.4	58	19	18 59	47	18 10	6	30 110			
2	211	10.5		02.4	69	52.4	55	-22	07.7	56	18	55	40	17 59	10 46 104			
3	226	10.7		01.5	84	16.9	55	-21	55.9	54	16	52	34	50 13	0 59 100			
4	241	11.0	+3	00.5	98	41.6	57	43.9	52	15	49	29	41	17	1 11 96			
5	256	11.2	+2	59.5	113	06.4	58	-21	31.7	50	18 14	18 46	19 25	17 33	20 1 21 93			
6	271	11.4	+2	58.6	127	31.2	58	-21	19.4	45	18 11	18 40	19 15	17 17	26 1 42 86			
7	286	11.6		57.6	141	56.1	59	-21	07.0	40	09	36	08	17 03	31 2 00 80			
8	301	11.9		56.7	156	21.1	60	-20	54.4	35	07	32	19 02	16 52	35 14 77			
9	316	12.1		55.7	170	46.2	61	41.7	30	05	29	18 57	41	39	27 72			
10	331	12.3		54.7	185	11.4	62	28.8	20	03	25	50	24	44	2 48 67			
11	346	12.5	+2	53.8	199	36.7	63	-20	15.8	10 N	18 00	18 21	18 46	16 08	50 3 06 62			
12	1	12.7	+2	52.8	214	02.0	63	-20	02.6	0	17 58	18 19	18 43	15 54	55 3 23 57			
13	16	13.0		51.8	228	27.5	65	-19	49.4	10 S	56	17	42	39 60	40 52			
14	31	13.2		50.9	242	53.0	65	35.9	20	55	17	42	23	66	3 58 47			
15	46	13.4		49.9	257	18.6	66	22.4	30	52	16	44	15 05	72	4 18 42			
16	61	13.6		49.0	271	44.3	67	-19	08.7	35	51	17	46	14 54	76 30 38			
17	76	13.9	+2	48.0	286	10.1	68	-18	54.9	40	17 50	18 17	18 48	14 42	80 4 43 34			
18	91	14.1	+2	47.0	300	36.0	69	-18	41.0	45	17 49	18 18	18 52	14 28	85 4 59 29			
19	106	14.3		46.1	315	01.9	69	26.9	50	47	19	57	10	92	5 19 23			
20	121	14.5		45.1	329	28.0	71	-18	12.8	52	46	20	18 59	14 01	96 28 20			
21	136	14.8		44.1	343	54.1	71	-17	58.5	54	45	21	19 02	13 52	99 38 16			
22	151	15.0		43.2	358	20.3	72	44.1	56	44	22	05	41	103	5 50 12			
23	166	15.2		42.2	12	46.6	73	29.5	58	43	23	09	29	108	6 03 7			
24	181	15.4	+2	41.3	27	13.0	74	-17	14.9	60 S	17 42	18 24	19 13	13 15	114 6 18 2			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 0 ^h 23 ^m 7		Mag: -4.1 PMG: 14 ^h 29 ^m			Mag: -1.3 PMG: 3 ^h 42 ^m			Mag: -1.7 PMG: 13 ^h 42 ^m			Mag: +0.4 PMG: 9 ^h 02 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	354	03.4	142	47.1	-13	42.0	304	25.5	+15	36.4	154	00.8	-7	17.0	224	10.7	+18	47.3
1	9	05.8	157	46.9		43.2	319	27.4		36.6	169	02.8		17.2	239	12.9		47.2
2	24	08.3	172	46.6		44.3	334	29.3		36.8	184	04.8		17.4	254	15.1		47.1
3	39	10.7	187	46.3		45.4	349	31.2		37.0	199	06.8		17.6	269	17.3		47.1
4	54	13.2	202	46.1		46.6	4	33.1		37.2	214	08.7		17.8	284	19.5		47.0
5	69	15.7	217	45.8	-13	47.7	19	35.0	+15	37.4	229	10.7	-7	18.0	299	21.7	+18	47.0
6	84	18.1	232	45.5	-13	48.8	34	36.9	+15	37.5	244	12.7	-7	18.2	314	23.9	+18	46.9
7	99	20.6	247	45.2		50.0	49	38.8		37.7	259	14.7		18.4	329	26.1		46.8
8	114	23.1	262	45.0		51.1	64	40.8		37.9	274	16.7		18.6	344	28.3		46.8
9	129	25.5	277	44.7		52.3	79	42.7		38.1	289	18.7		18.8	359	30.5		46.7
10	144	28.0	292	44.4		53.4	94	44.6		38.3	304	20.7		19.0	14	32.7		46.6
11	159	30.5	307	44.1	-13	54.5	109	46.5	+15	38.5	319	22.7	-7	19.2	29	34.9	+18	46.6
12	174	32.9	322	43.9	-13	55.7	124	48.4	+15	38.6	334	24.7	-7	19.4	44	37.1	+18	46.5
13	189	35.4	337	43.6		56.8	139	50.3		38.8	349	26.7		19.6	59	39.3		46.5
14	204	37.9	352	43.3		57.9	154	52.3		39.0	4	28.7		19.7	74	41.5		46.4
15	219	40.3	7	43.0	-13	59.0	169	54.2		39.2	19	30.7		19.9	89	43.7		46.3
16	234	42.8	22	42.8	-14	00.2	184	56.1		39.4	34	32.7		20.1	104	45.9		46.3
17	249	45.2	37	42.5	-14	01.3	199	58.0	+15	39.5	49	34.6	-7	20.3	119	48.1	+18	46.2
18	264	47.7	52	42.2	-14	02.4	214	59.9	+15	39.7	64	36.6	-7	20.5	134	50.3	+18	46.2
19	279	50.2	67	41.9		03.6	230	01.9		39.9	79	38.6		20.7	149	52.5		46.1
20	294	52.6	82	41.6		04.7	245	03.8		40.1	94	40.6		20.9	164	54.7		46.0
21	309	55.1	97	41.4		05.8	260	05.7		40.3	109	42.6		21.1	179	56.9		46.0
22	324	57.6	112	41.1		07.0	275	07.7		40.5	124	44.6		21.3	194	59.1		45.9
23	340	00.0	127	40.8		08.1	290	09.6		40.6	139	46.6		21.5	210	01.3		45.8
24	355	02.5	142	40.5	-14	09.2	305	11.5	+15	40.8	154	48.6	-7	21.7	225	03.5	+18	45.8
Dif	—		-3		-11		+19		+2		+20		-2		+22		-1	

UT	SOL			LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna			
	SD: 15 ^h 9			Edad: 12 ^d 2	PHE {	4 ^h : 60 ^h 8 12 ^h : 60 ^h 8 20 ^h : 60 ^h 8	SD: 16 ^h 6	PMG: 23 ^h 01 ^m	R°: 52 ^m											
	hG ☉	Dec									hG ☾	Dif		Dec	Dif	Náutico	Civil	Hora	R°	Hora
h	°	'	°	°	'	°	°	'	°	h	m	h	m	h	m	h	m	m		
0	181	15.4	+2	41.3	27	13.0	-17	14.9	60 N	3	56	4	48	5	30	18	23	**		
1	196	15.7		40.3	41	39.5	75	-17	00.2	58	4	04	52	32		16	3			
2	211	15.9		39.3	56	06.1	76	-16	45.3	56	10		56	33		09	7			
3	226	16.1		38.4	70	32.7	76		30.3	54	16	4	59	35		18	03	11		
4	241	16.3		37.4	84	59.5	78		15.3	52	21	5	02	36		17	58	13		
5	256	16.5	+2	36.4	99	26.3	78	-16	00.1	50	4	26	5	05	5	37	17	53	16	
6	271	16.8	+2	35.5	113	53.2	79	-15	44.8	45	4	35	5	10	5	40	17	43	22	
7	286	17.0		34.5	128	20.2	80		29.4	40	43		15	42		34	27		20	
8	301	17.2		33.5	142	47.2	80	-15	14.0	35	48		18	44		27	31		31	
9	316	17.4		32.6	157	14.4	82	-14	58.4	30	4	53	21	45		20	35		39	
10	331	17.7		31.6	171	41.6	82		42.8	20	5	00	26	48		17	08	41	3	
11	346	17.9	+2	30.7	186	08.9	83	-14	27.0	10 N	5	04	5	29	5	50	16	58	47	4
12	1	18.1	+2	29.7	200	36.3	84	-14	11.2	0	5	07	5	31	5	52	16	49	52	4
13	16	18.3		28.7	215	03.8	85	-13	55.3	10 S	08		32	53		39	57		32	
14	31	18.6		27.8	229	31.3	85		39.3	20	08		33	55		29	63		4	
15	46	18.8		26.8	243	59.0	87		23.2	30	05		33	57		17	70		5	
16	61	19.0		25.8	258	26.7	87	-13	07.0	35	04		33	58		10	74		08	
17	76	19.2	+2	24.9	272	54.5	88	-12	50.8	40	5	01	5	32	5	59	16	02	78	5
18	91	19.5	+2	23.9	287	22.3	88	-12	34.4	45	4	57	5	31	6	01	15	53	83	5
19	106	19.7		22.9	301	50.2	89		18.0	50	52		30	02		42	89		42	
20	121	19.9		22.0	316	18.2	90	-12	01.6	52	50		29	03		37	92		48	
21	136	20.1		21.0	330	46.3	91	-11	45.1	54	47		28	03		31	96		5	
22	151	20.4		20.0	345	14.5	92		28.4	56	44		27	04		24	100		6	
23	166	20.6		19.1	359	42.7	92	-11	11.8	58	40		26	05		17	104		10	
24	181	20.8	+2	18.1	14	11.0	93	-10	55.1	60 S	4	36	5	25	6	06	15	09	108	6

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 0 ^h 19 ^m 8		Mag: -4.1 PMG: 14 ^h 30 ^m			Mag: -1.3 PMG: 3 ^h 39 ^m			Mag: -1.7 PMG: 13 ^h 39 ^m			Mag: +0.4 PMG: 8 ^h 58 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'				
0	355	02.5	142	40.5	-14	09.2	305	11.5	+15	40.8	154	48.6	-7	21.7	225	03.5	+18	45.8
1	10	05.0	157	40.3		10.3	320	13.4		41.0	169	50.6		21.9	240	05.7		45.7
2	25	07.4	172	40.0		11.5	335	15.4		41.2	184	52.6		22.1	255	07.9		45.7
3	40	09.9	187	39.7		12.6	350	17.3		41.3	199	54.6		22.3	270	10.1		45.6
4	55	12.4	202	39.4		13.7	5	19.3		41.5	214	56.6		22.5	285	12.3		45.5
5	70	14.8	217	39.1	-14	14.8	20	21.2	+15	41.7	229	58.5	-7	22.6	300	14.5	+18	45.5
6	85	17.3	232	38.9	-14	16.0	35	23.1	+15	41.9	245	00.5	-7	22.8	315	16.7	+18	45.4
7	100	19.7	247	38.6		17.1	50	25.1		42.1	260	02.5		23.0	330	18.9		45.4
8	115	22.2	262	38.3		18.2	65	27.0		42.2	275	04.5		23.2	345	21.1		45.3
9	130	24.7	277	38.0		19.3	80	29.0		42.4	290	06.5		23.4	0	23.3		45.2
10	145	27.1	292	37.7		20.4	95	30.9		42.6	305	08.5		23.6	15	25.5		45.2
11	160	29.6	307	37.5	-14	21.6	110	32.9	+15	42.8	320	10.5	-7	23.8	30	27.7	+18	45.1
12	175	32.1	322	37.2	-14	22.7	125	34.8	+15	42.9	335	12.5	-7	24.0	45	29.9	+18	45.1
13	190	34.5	337	36.9		23.8	140	36.7		43.1	350	14.5		24.2	60	32.1		45.0
14	205	37.0	352	36.6		24.9	155	38.7		43.3	5	16.5		24.4	75	34.3		44.9
15	220	39.5	7	36.3		26.0	170	40.6		43.5	20	18.5		24.6	90	36.5		44.9
16	235	41.9	22	36.0		27.2	185	42.6		43.6	35	20.4		24.8	105	38.7		44.8
17	250	44.4	37	35.8	-14	28.3	200	44.6	+15	43.8	50	22.4	-7	25.0	120	40.9	+18	44.7
18	265	46.8	52	35.5	-14	29.4	215	46.5	+15	44.0	65	24.4	-7	25.2	135	43.1	+18	44.7
19	280	49.3	67	35.2		30.5	230	48.5		44.2	80	26.4		25.4	150	45.3		44.6
20	295	51.8	82	34.9		31.6	245	50.4		44.3	95	28.4		25.5	165	47.5		44.6
21	310	54.2	97	34.6		32.7	260	52.4		44.5	110	30.4		25.7	180	49.7		44.5
22	325	56.7	112	34.3		33.9	275	54.3		44.7	125	32.4		25.9	195	51.9		44.4
23	340	59.2	127	34.1		35.0	290	56.3		44.9	140	34.4		26.1	210	54.1		44.4
24	356	01.6	142	33.8	-14	36.1	305	58.3	+15	45.0	155	36.4	-7	26.3	225	56.3	+18	44.3
Dif	—		-3		-11		+19		+2		+20		-2		+22		-1	

UT	SOL			☉ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 9			Edad: 13 ^d 2 PHE { 4 ^h : 60 ^m 8 12 ^h : 60 ^m 7 20 ^h : 60 ^m 6 R°: 49 ^m											
	PMG: 11 ^h 54 ^m 4			SD: 16 ^h PMG: 23 ^h 53 ^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	181	20.8	+2 18.1	14	11.0	-10 55.1		60 N	18 15	18 57	19 48	18 22	**	4 01	106
1	196	21.0		28	39.3 ⁹³	38.3 ¹⁶⁸		58	14	53	41	19	3	07	102
2	211	21.2	16.2	43	07.7 ⁹⁴	21.4 ¹⁶⁹		56	12	50	35	16	6	12	98
3	226	21.5	15.2	57	36.2 ⁹⁵	-10 04.5 ¹⁶⁹		54	11	47	29	14	9	17	94
4	241	21.7	14.2	72	04.8 ⁹⁶	-9 47.5 ¹⁷⁰		52	10	44	24	11	12	21	91
5	256	21.9	+2 13.3	86	33.4 ⁹⁶	-9 30.5 ¹⁷⁰		50	18 09	18 42	19 20	18 09	15	4 25	88
6	271	22.1	+2 12.3	101	02.1 ⁹⁷	-9 13.5 ¹⁷⁰		45	18 07	18 36	19 11	18 05	20	4 33	82
7	286	22.4	11.3	115	30.8 ⁹⁷	-8 56.4 ¹⁷¹		40	05	33	19 04	18 01	25	39	77
8	301	22.6	10.4	129	59.6 ⁹⁸	39.2 ¹⁷²		35	04	29	18 59	17 58	29	45	73
9	316	22.8	09.4	144	28.5 ⁹⁹	22.0 ¹⁷²		30	03	27	55	55	32	50	69
10	331	23.0	08.4	158	57.4 ⁹⁹	-8 04.7 ¹⁷³		20	18 01	23	48	49	39	4 59	62
11	346	23.3	+2 07.5	173	26.4 ¹⁰⁰	-7 47.5 ¹⁷²		10 N	17 59	18 20	18 45	17 45	44	5 07	56
12	1	23.5	+2 06.5	187	55.5 ¹⁰¹	-7 30.1 ¹⁷³		0	17 58	18 18	18 42	17 41	50	5 14	50
13	16	23.7	05.5	202	24.6 ¹⁰¹	-7 12.8 ¹⁷⁴		10 S	56	17	42	36	56	20	46
14	31	23.9	04.6	216	53.7 ¹⁰¹	-6 55.4 ¹⁷⁴		20	55	17	43	32	61	28	40
15	46	24.2	03.6	231	22.9 ¹⁰²	37.9 ¹⁷⁵		30	54	17	45	27	67	36	33
16	61	24.4	02.6	245	52.2 ¹⁰³	20.5 ¹⁷⁴		35	53	18	47	24	71	41	30
17	76	24.6	+2 01.7	260	21.5 ¹⁰³	-6 03.0 ¹⁷⁵		40	17 52	18 19	18 50	17 20	76	5 46	26
18	91	24.8	+2 00.7	274	50.9 ¹⁰⁴	-5 45.5 ¹⁷⁵		45	17 51	18 20	18 54	17 16	81	5 52	21
19	106	25.1	+1 59.7	289	20.3 ¹⁰⁴	28.0 ¹⁷⁵		50	50	22	19 00	11	87	5 59	16
20	121	25.3	58.8	303	49.7 ¹⁰⁴	-5 10.4 ¹⁷⁶		52	49	23	03	09	90	6 03	12
21	136	25.5	57.8	318	19.2 ¹⁰⁵	-4 52.8 ¹⁷⁶		54	49	24	06	07	92	06	10
22	151	25.7	56.8	332	48.8 ¹⁰⁶	35.2 ¹⁷⁶		56	48	25	09	04	96	10	7
23	166	25.9	55.9	347	18.4 ¹⁰⁶	-4 17.6 ¹⁷⁶		58	48	27	13	17 01	100	15	3
24	181	26.2	+1 54.9	1	48.0 ¹⁰⁶	-4 00.0 ¹⁷⁶		60 S	17 47	18 29	19 18	16 57	105	6 20	**
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 0 ^h 15 ^m 8		Mag: -4.1 PMG: 14 ^h 30 ^m			Mag: -1.4 PMG: 3 ^h 36 ^m			Mag: -1.7 PMG: 13 ^h 36 ^m			Mag: +0.4 PMG: 8 ^h 55 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	356	01.6	142	33.8	-14 36.1	305	58.3	+15 45.0	155	36.4	-7 26.3	225	56.3	+18 44.3	
1	11	04.1	157	33.5	37.2	321	00.2	45.2	170	38.3	26.5	240	58.5	44.3	
2	26	06.6	172	33.2	38.3	336	02.2	45.4	185	40.3	26.7	256	00.7	44.2	
3	41	09.0	187	32.9	39.4	351	04.2	45.6	200	42.3	26.9	271	02.9	44.1	
4	56	11.5	202	32.6	40.5	6	06.1	45.7	215	44.3	27.1	286	05.1	44.1	
5	71	14.0	217	32.3	-14 41.7	21	08.1	+15 45.9	230	46.3	-7 27.3	301	07.3	+18 44.0	
6	86	16.4	232	32.1	-14 42.8	36	10.1	+15 46.1	245	48.3	-7 27.5	316	09.5	+18 44.0	
7	101	18.9	247	31.8	43.9	51	12.0	46.2	260	50.3	27.7	331	11.8	43.9	
8	116	21.3	262	31.5	45.0	66	14.0	46.4	275	52.3	27.9	346	14.0	43.8	
9	131	23.8	277	31.2	46.1	81	16.0	46.6	290	54.3	28.1	1	16.2	43.8	
10	146	26.3	292	30.9	47.2	96	17.9	46.8	305	56.2	28.3	16	18.4	43.7	
11	161	28.7	307	30.6	-14 48.3	111	19.9	+15 46.9	320	58.2	-7 28.4	31	20.6	+18 43.7	
12	176	31.2	322	30.3	-14 49.4	126	21.9	+15 47.1	336	00.2	-7 28.6	46	22.8	+18 43.6	
13	191	33.7	337	30.0	50.5	141	23.9	47.3	351	02.2	28.8	61	25.0	43.5	
14	206	36.1	352	29.8	51.6	156	25.9	47.4	6	04.2	29.0	76	27.2	43.5	
15	221	38.6	7	29.5	52.7	171	27.8	47.6	21	06.2	29.2	91	29.4	43.4	
16	236	41.1	22	29.2	53.8	186	29.8	47.8	36	08.2	29.4	106	31.6	43.4	
17	251	43.5	37	28.9	-14 55.0	201	31.8	+15 47.9	51	10.2	-7 29.6	121	33.8	+18 43.3	
18	266	46.0	52	28.6	-14 56.1	216	33.8	+15 48.1	66	12.2	-7 29.8	136	36.0	+18 43.2	
19	281	48.4	67	28.3	57.2	231	35.8	48.3	81	14.1	30.0	151	38.2	43.2	
20	296	50.9	82	28.0	58.3	246	37.8	48.4	96	16.1	30.2	166	40.4	43.1	
21	311	53.4	97	27.7	-14 59.4	261	39.8	48.6	111	18.1	30.4	181	42.6	43.1	
22	326	55.8	112	27.4	-15 00.5	276	41.7	48.8	126	20.1	30.6	196	44.8	43.0	
23	341	58.3	127	27.1	01.6	291	43.7	48.9	141	22.1	30.8	211	47.0	42.9	
24	357	00.8	142	26.8	-15 02.7	306	45.7	+15 49.1	156	24.1	-7 31.0	226	49.2	+18 42.9	
Dif	—		-3		-11	+20		+2	+20		-2	+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 54 ^m 1			Edad: 14 ^d 2 PHE { SD: 16 ^h 5 PMG: *** **m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	181	26.2	+1 54.9	1	48.0	-4 00.0	60 N	4 02	4 53	5 35	18 21	**	5 47	104	
1	196	26.4		16	17.7 ¹⁰⁷	-3 42.3 ¹⁷⁷	58	09	4 57	36	22	3	49	99	
2	211	26.6		30	47.4 ¹⁰⁷	24.7 ¹⁷⁶	56	15	5 00	37	22	7	50	95	
3	226	26.8		45	17.2 ¹⁰⁸	-3 07.0 ¹⁷⁷	54	20	03	38	23	9	51	92	
4	241	27.1		59	47.0 ¹⁰⁸	-2 49.4 ¹⁷⁶	52	25	05	39	23	12	52	89	
5	256	27.3	+1 50.1	74	16.8 ¹⁰⁸	-2 31.7 ¹⁷⁷	50	4 29	5 08	5 40	18 24	14	5 53	86	
6	271	27.5	+1 49.1	88	46.6 ¹⁰⁸	-2 14.0 ¹⁷⁷	45	4 38	5 13	5 42	18 25	20	5 55	80	
7	286	27.7		103	16.5 ¹⁰⁹	-1 56.4 ¹⁷⁶	40	45	17	44	26	24	56	75	
8	301	28.0		117	46.5 ¹¹⁰	38.7 ¹⁷⁷	35	50	20	45	27	28	58	70	
9	316	28.2		132	16.4 ¹⁰⁹	21.0 ¹⁷⁷	30	4 54	22	46	27	32	5 59	67	
10	331	28.4		146	46.4 ¹¹⁰	-1 03.4 ¹⁷⁶	20	5 00	26	48	28	39	6 01	60	
11	346	28.6	+1 44.3	161	16.5 ¹¹¹	-0 45.7 ¹⁷⁷	10 N	5 04	5 28	5 49	18 29	44	6 03	54	
12	1	28.9	+1 43.3	175	46.5 ¹¹⁰	-0 28.1 ¹⁷⁶	0	5 06	5 30	5 51	18 31	49	6 04	50	
13	16	29.1		190	16.6 ¹¹¹	-0 10.4 ¹⁷⁷	10 S	07	31	52	32	54	06	44	
14	31	29.3		204	46.7 ¹¹¹	+0 07.2 ¹⁷⁶	20	06	31	53	33	60	08	38	
15	46	29.5		219	16.8 ¹¹¹	24.8 ¹⁷⁶	30	03	31	55	34	66	09	33	
16	61	29.7		233	47.0 ¹¹²	+0 42.4 ¹⁷⁶	35	5 01	30	55	35	70	11	28	
17	76	30.0	+1 38.5	248	17.2 ¹¹²	+1 00.0 ¹⁷⁶	40	4 58	5 29	5 56	18 36	74	6 12	24	
18	91	30.2	+1 37.5	262	47.4 ¹¹²	+1 17.5 ¹⁷⁵	45	4 53	5 28	5 57	18 37	79	6 13	20	
19	106	30.4		277	17.6 ¹¹²	35.1 ¹⁷⁶	50	48	26	58	38	85	15	14	
20	121	30.6		291	47.8 ¹¹²	+1 52.6 ¹⁷⁵	52	45	25	58	39	88	15	12	
21	136	30.9		306	18.1 ¹¹³	+2 10.1 ¹⁷⁵	54	42	23	59	39	92	16	9	
22	151	31.1		320	48.3 ¹¹²	27.5 ¹⁷⁴	56	38	22	5 59	40	95	17	6	
23	166	31.3		335	18.6 ¹¹³	+2 45.0 ¹⁷⁵	58	34	21	6 00	41	98	18	3	
24	181	31.5	+1 31.7	349	48.9 ¹¹³	+3 02.4 ¹⁷⁴	60 S	4 30	5 19	6 00	18 42	103	6 19	**	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 0 ^h 11 ^m 9		Mag: -4.1 PMG: 14 ^h 30 ^m			Mag: -1.4 PMG: 3 ^h 32 ^m			Mag: -1.7 PMG: 13 ^h 33 ^m			Mag: +0.4 PMG: 8 ^h 51 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	357	00.8	142	26.8	-15 02.7	306	45.7	+15 49.1	156	24.1	-7 31.0	226	49.2	+18 42.9	226 49.2
1	12	03.2	157	26.6	03.8	321	47.7	49.3	171	26.1	31.2	241	51.4	42.8	241 51.4
2	27	05.7	172	26.3	04.9	336	49.7	49.4	186	28.1	31.4	256	53.6	42.8	256 53.6
3	42	08.2	187	26.0	06.0	351	51.7	49.6	201	30.0	31.5	271	55.8	42.7	271 55.8
4	57	10.6	202	25.7	07.1	6	53.7	49.8	216	32.0	31.7	286	58.0	42.6	286 58.0
5	72	13.1	217	25.4	-15 08.2	21	55.7	+15 49.9	231	34.0	-7 31.9	302	00.2	+18 42.6	302 00.2
6	87	15.6	232	25.1	-15 09.3	36	57.7	+15 50.1	246	36.0	-7 32.1	317	02.5	+18 42.5	317 02.5
7	102	18.0	247	24.8	10.4	51	59.7	50.3	261	38.0	32.3	332	04.7	42.5	332 04.7
8	117	20.5	262	24.5	11.5	67	01.7	50.4	276	40.0	32.5	347	06.9	42.4	347 06.9
9	132	22.9	277	24.2	12.6	82	03.7	50.6	291	42.0	32.7	2	09.1	42.3	2 09.1
10	147	25.4	292	23.9	13.6	97	05.7	50.8	306	43.9	32.9	17	11.3	42.3	17 11.3
11	162	27.9	307	23.6	-15 14.7	112	07.7	+15 50.9	321	45.9	-7 33.1	32	13.5	+18 42.2	32 13.5
12	177	30.3	322	23.3	-15 15.8	127	09.7	+15 51.1	336	47.9	-7 33.3	47	15.7	+18 42.2	47 15.7
13	192	32.8	337	23.0	16.9	142	11.8	51.3	351	49.9	33.5	62	17.9	42.1	62 17.9
14	207	35.3	352	22.7	18.0	157	13.8	51.4	6	51.9	33.7	77	20.1	42.0	77 20.1
15	222	37.7	7	22.4	19.1	172	15.8	51.6	21	53.9	33.9	92	22.3	42.0	92 22.3
16	237	40.2	22	22.1	20.2	187	17.8	51.7	36	55.9	34.1	107	24.5	41.9	107 24.5
17	252	42.7	37	21.8	-15 21.3	202	19.8	+15 51.9	51	57.9	-7 34.3	122	26.7	+18 41.9	122 26.7
18	267	45.1	52	21.5	-15 22.4	217	21.8	+15 52.1	66	59.8	-7 34.5	137	28.9	+18 41.8	137 28.9
19	282	47.6	67	21.2	23.5	232	23.8	52.2	82	01.8	34.7	152	31.1	41.7	152 31.1
20	297	50.0	82	20.9	24.6	247	25.9	52.4	97	03.8	34.8	167	33.3	41.7	167 33.3
21	312	52.5	97	20.6	25.7	262	27.9	52.6	112	05.8	35.0	182	35.5	41.6	182 35.5
22	327	55.0	112	20.4	26.8	277	29.9	52.7	127	07.8	35.2	197	37.8	41.6	197 37.8
23	342	57.4	127	20.1	27.8	292	31.9	52.9	142	09.8	35.4	212	40.0	41.5	212 40.0
24	357	59.9	142	19.8	-15 28.9	307	33.9	+15 53.0	157	11.8	-7 35.6	227	42.2	+18 41.4	227 42.2
Dif	—		-3		-11	+20		+2	+20		-2	+22		-1	

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 9			Edad: 15 ^d 2	PHE { 4 ^h : 59 ^m 9 12 ^h : 59 ^m 7 20 ^h : 59 ^m 4									
	PMG: 11 ^h 53 ^m 7					SD: 16 ^h 3			PMG: 0 ^h 42 ^m		R°: 49 ^m			
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	181	31.5	+1 31.7	349	48.9	+3 02.4	60 N	18 09	18 51	19 41	18 20	0	7 31	102
1	196	31.8	30.7	4	19.2 ¹¹³	19.7 ¹⁷³	58	08	47	35	25	3	28	98
2	211	32.0	29.7	18	49.6 ¹¹⁴	37.1 ¹⁷⁴	56	07	44	29	29	7	25	94
3	226	32.2	28.8	33	19.9 ¹¹³	+3 54.4 ¹⁷³	54	06	41	24	32	11	23	91
4	241	32.4	27.8	47	50.2 ¹¹³	+4 11.6 ¹⁷²	52	05	39	19	35	14	21	87
5	256	32.7	+1 26.8	62	20.6 ¹¹⁴	+4 28.9 ¹⁷³	50	18 05	18 37	19 15	18 38	16	7 19	85
6	271	32.9	+1 25.9	76	50.9 ¹¹³	+4 46.0 ¹⁷¹	45	18 03	18 33	19 07	18 45	21	7 15	79
7	286	33.1	24.9	91	21.3 ¹¹⁴	+5 03.2 ¹⁷²	40	02	29	19 01	50	26	11	74
8	301	33.3	23.9	105	51.7 ¹¹⁴	20.3 ¹⁷¹	35	01	26	18 56	55	30	08	70
9	316	33.5	23.0	120	22.0 ¹¹³	37.3 ¹⁷⁰	30	18 00	24	52	18 59	34	06	66
10	331	33.8	22.0	134	52.4 ¹¹⁴	+5 54.4 ¹⁷¹	20	17 59	21	47	19 07	39	7 01	60
11	346	34.0	+1 21.0	149	22.8 ¹¹⁴	+6 11.3 ¹⁶⁹	10 N	17 58	18 19	18 43	19 13	45	6 57	55
12	1	34.2	+1 20.0	163	53.1 ¹¹³	+6 28.2 ¹⁶⁹	0	17 57	18 18	18 42	19 20	49	6 54	49
13	16	34.4	19.1	178	23.5 ¹¹⁴	+6 45.1 ¹⁶⁹	10 S	56	17	41	26	54	50	44
14	31	34.7	18.1	192	53.9 ¹¹⁴	+7 01.9 ¹⁶⁸	20	55	17	43	33	59	46	39
15	46	34.9	17.1	207	24.2 ¹¹³	18.6 ¹⁶⁷	30	55	18	46	40	66	42	32
16	61	35.1	16.2	221	54.6 ¹¹⁴	35.3 ¹⁶⁷	35	54	19	49	45	69	39	29
17	76	35.3	+1 15.2	236	24.9 ¹¹³	+7 52.0 ¹⁶⁷	40	17 54	18 21	18 52	19 50	74	6 36	26
18	91	35.6	+1 14.2	250	55.3 ¹¹⁴	+8 08.5 ¹⁶⁵	45	17 53	18 23	18 57	19 56	78	6 33	21
19	106	35.8	13.3	265	25.6 ¹¹³	25.1 ¹⁶⁶	50	53	25	19 03	20 03	85	29	15
20	121	36.0	12.3	279	56.0 ¹¹⁴	41.5 ¹⁶⁴	52	53	26	06	07	87	27	13
21	136	36.2	11.3	294	26.3 ¹¹³	+8 57.9 ¹⁶⁴	54	52	28	09	11	90	25	10
22	151	36.4	10.3	308	56.6 ¹¹³	+9 14.2 ¹⁶³	56	52	29	13	15	94	23	7
23	166	36.7	09.4	323	26.9 ¹¹³	30.5 ¹⁶³	58	52	31	18	19	99	21	3
24	181	36.9	+1 08.4	337	57.2 ¹¹³	+9 46.7 ¹⁶²	60 S	17 52	18 33	19 23	20 25	103	6 18	**
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 0 ^h 08 ^m 0		Mag: -4.1 PMG: 14 ^h 31 ^m		Mag: -1.4 PMG: 3 ^h 29 ^m		Mag: -1.7 PMG: 13 ^h 29 ^m		Mag: +0.4 PMG: 8 ^h 48 ^m					
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	°	°	°	°	°	°	°	°					
0	357	59.9	142 19.8	-15 28.9	307 33.9	+15 53.0	157 11.8	-7 35.6	227 42.2					
1	13	02.4	157 19.5	30.0	322 36.0	53.2	172 13.7	35.8	242 44.4					
2	28	04.8	172 19.2	31.1	337 38.0	53.4	187 15.7	36.0	257 46.6					
3	43	07.3	187 18.9	32.2	352 40.0	53.5	202 17.7	36.2	272 48.8					
4	58	09.8	202 18.6	33.3	7 42.1	53.7	217 19.7	36.4	287 51.0					
5	73	12.2	217 18.3	-15 34.4	22 44.1	+15 53.8	232 21.7	-7 36.6	302 53.2					
6	88	14.7	232 18.0	-15 35.4	37 46.1	+15 54.0	247 23.7	-7 36.8	317 55.4					
7	103	17.2	247 17.7	36.5	52 48.1	54.1	262 25.7	37.0	332 57.6					
8	118	19.6	262 17.4	37.6	67 50.2	54.3	277 27.6	37.2	347 59.8					
9	133	22.1	277 17.1	38.7	82 52.2	54.5	292 29.6	37.4	3 02.0					
10	148	24.5	292 16.7	39.8	97 54.3	54.6	307 31.6	37.6	18 04.3					
11	163	27.0	307 16.4	-15 40.8	112 56.3	+15 54.8	322 33.6	-7 37.8	33 06.5					
12	178	29.5	322 16.1	-15 41.9	127 58.3	+15 54.9	337 35.6	-7 38.0	48 08.7					
13	193	31.9	337 15.8	43.0	143 00.4	55.1	352 37.6	38.1	63 10.9					
14	208	34.4	352 15.5	44.1	158 02.4	55.2	7 39.5	38.3	78 13.1					
15	223	36.9	7 15.2	45.2	173 04.5	55.4	22 41.5	38.5	93 15.3					
16	238	39.3	22 14.9	46.2	188 06.5	55.6	37 43.5	38.7	108 17.5					
17	253	41.8	37 14.6	-15 47.3	203 08.6	+15 55.7	52 45.5	-7 38.9	123 19.7					
18	268	44.3	52 14.3	-15 48.4	218 10.6	+15 55.9	67 47.5	-7 39.1	138 21.9					
19	283	46.7	67 14.0	49.5	233 12.7	56.0	82 49.5	39.3	153 24.1					
20	298	49.2	82 13.7	50.6	248 14.7	56.2	97 51.4	39.5	168 26.3					
21	313	51.7	97 13.4	51.6	263 16.8	56.3	112 53.4	39.7	183 28.6					
22	328	54.1	112 13.1	52.7	278 18.8	56.5	127 55.4	39.9	198 30.8					
23	343	56.6	127 12.8	53.8	293 20.9	56.6	142 57.4	40.1	213 33.0					
24	358	59.0	142 12.5	-15 54.9	308 22.9	+15 56.8	157 59.4	-7 40.3	228 35.2					
Dif	—	—	-3	-11	+20	+2	+20	-2	+22	-1				

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 9			Edad: 16 ^d 2 PHE { 4 ^h : 59 ^m 2 12 ^h : 58 ^m 9 20 ^h : 58 ^m 6													
	PMG: 11 ^h 53 ^m 4			SD: 16 ^d 1 PMG: 1 ^h 31 ^m R°: 50 ^m													
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	°	'	°	h	m	h	m	h	m	h	m
0	181	36.9	+1 08.4	337	57.2	+9 46.7	161	58	60 N	4 07	4 58	5 40	18 20	0	9 13	104	
1	196	37.1	07.4	352	27.5 ¹¹³	+10 02.8 ¹⁶¹	58	58		14	5 01	40	28	6	9 06	98	
2	211	37.3	06.5	6	57.7 ¹¹²	18.8 ¹⁶⁰	56	56		19	04	41	36	9	8 59	94	
3	226	37.6	05.5	21	28.0 ¹¹³	34.8 ¹⁶⁰	54	54		24	07	42	43	13	54	90	
4	241	37.8	04.5	35	58.2 ¹¹²	+10 50.7 ¹⁵⁹	52	52		29	09	43	49	16	48	87	
5	256	38.0	+1 03.6	50	28.4 ¹¹²	+11 06.5 ¹⁵⁸	50	50		4 33	5 11	5 43	18 54	19	8 44	84	
6	271	38.2	+1 02.6	64	58.6 ¹¹²	+11 22.3 ¹⁵⁸	45	45		4 41	5 15	5 45	19 06	25	8 34	77	
7	286	38.5	01.6	79	28.8 ¹¹²	37.9 ¹⁵⁶	40	40		47	19	46	16	30	25	73	
8	301	38.7	+1 00.6	93	58.9 ¹¹¹	+11 53.5 ¹⁵⁶	35	35		52	21	46	25	33	18	69	
9	316	38.9	+0 59.7	108	29.1 ¹¹²	+12 09.0 ¹⁵⁵	30	30		4 55	23	47	33	36	12	65	
10	331	39.1	58.7	122	59.2 ¹¹¹	24.5 ¹⁵⁵	20	20		5 01	26	48	46	42	8 01	60	
11	346	39.3	+0 57.7	137	29.3 ¹¹¹	+12 39.8 ¹⁵³	10 N	10 N		5 04	5 28	5 49	19 58	46	7 52	54	
12	1	39.6	+0 56.8	151	59.4 ¹¹¹	+12 55.1 ¹⁵³	0	0		5 05	5 29	5 50	20 09	51	7 43	50	
13	16	39.8	55.8	166	29.4 ¹¹⁰	+13 10.2 ¹⁵¹	10 S	10 S		05	30	51	20	55	34	45	
14	31	40.0	54.8	180	59.4 ¹¹⁰	25.3 ¹⁵¹	20	20		04	29	51	32	60	25	40	
15	46	40.2	53.8	195	29.4 ¹¹⁰	40.3 ¹⁵⁰	30	30		5 00	28	52	46	65	14	35	
16	61	40.5	52.9	209	59.4 ¹¹⁰	+13 55.2 ¹⁴⁹	35	35		4 58	27	52	20 54	69	08	32	
17	76	40.7	+0 51.9	224	29.3 ¹⁰⁹	+14 10.1 ¹⁴⁹	40	40		4 54	5 26	5 53	21 04	72	7 02	27	
18	91	40.9	+0 50.9	238	59.3 ¹¹⁰	+14 24.8 ¹⁴⁷	45	45		4 49	5 24	5 53	21 14	78	6 54	22	
19	106	41.1	50.0	253	29.2 ¹⁰⁹	39.4 ¹⁴⁶	50	50		43	21	53	28	83	44	17	
20	121	41.3	49.0	267	59.0 ¹⁰⁸	+14 53.9 ¹⁴⁵	52	52		40	20	53	34	86	40	14	
21	136	41.6	48.0	282	28.9 ¹⁰⁹	+15 08.4 ¹⁴⁵	54	54		37	18	54	41	90	35	12	
22	151	41.8	47.1	296	58.7 ¹⁰⁸	22.7 ¹⁴³	56	56		33	17	54	49	94	30	8	
23	166	42.0	46.1	311	28.4 ¹⁰⁷	37.0 ¹⁴³	58	58		28	15	54	21 58	98	24	4	
24	181	42.2	+0 45.1	325	58.2 ¹⁰⁸	+15 51.1 ¹⁴¹	60 S	60 S		4 23	5 13	5 54	22 08	104	6 17	0	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG		Mag: -4.1		Mag: -1.4		Mag: -1.7		Mag: +0.4							
	0 ^h 04 ^m 1		PMG: 14 ^h 31 ^m		PMG: 3 ^h 26 ^m		PMG: 13 ^h 26 ^m		PMG: 8 ^h 44 ^m							
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄							
h	°	'	°	'	°	'	°	'	°	'						
0	358	59.0	142	12.5	-15 54.9	308	22.9	+15 56.8	157	59.4	-7 40.3	228	35.2	+18 40.0		
1	14	01.5	157	12.2	55.9	323	25.0	57.0	173	01.4	40.5	243	37.4	40.0		
2	29	04.0	172	11.9	57.0	338	27.0	57.1	188	03.3	40.7	258	39.6	39.9		
3	44	06.4	187	11.6	58.1	353	29.1	57.3	203	05.3	40.9	273	41.8	39.8		
4	59	08.9	202	11.3	-15 59.1	8	31.2	57.4	218	07.3	41.1	288	44.0	39.8		
5	74	11.4	217	11.0	-16 00.2	23	33.2	+15 57.6	233	09.3	-7 41.3	303	46.2	+18 39.7		
6	89	13.8	232	10.7	-16 01.3	38	35.3	+15 57.7	248	11.3	-7 41.5	318	48.4	+18 39.7		
7	104	16.3	247	10.3	02.3	53	37.3	57.9	263	13.3	41.7	333	50.7	39.6		
8	119	18.8	262	10.0	03.4	68	39.4	58.0	278	15.2	41.8	348	52.9	39.5		
9	134	21.2	277	09.7	04.5	83	41.5	58.2	293	17.2	42.0	3	55.1	39.5		
10	149	23.7	292	09.4	05.6	98	43.6	58.3	308	19.2	42.2	18	57.3	39.4		
11	164	26.1	307	09.1	-16 06.6	113	45.6	+15 58.5	323	21.2	-7 42.4	33	59.5	+18 39.4		
12	179	28.6	322	08.8	-16 07.7	128	47.7	+15 58.6	338	23.2	-7 42.6	49	01.7	+18 39.3		
13	194	31.1	337	08.5	08.8	143	49.8	58.8	353	25.2	42.8	64	03.9	39.2		
14	209	33.5	352	08.2	09.8	158	51.8	58.9	8	27.1	43.0	79	06.1	39.2		
15	224	36.0	7	07.9	10.9	173	53.9	59.1	23	29.1	43.2	94	08.4	39.1		
16	239	38.5	22	07.6	11.9	188	56.0	59.2	38	31.1	43.4	109	10.6	39.1		
17	254	40.9	37	07.2	-16 13.0	203	58.1	+15 59.4	53	33.1	-7 43.6	124	12.8	+18 39.0		
18	269	43.4	52	06.9	-16 14.1	219	00.2	+15 59.5	68	35.1	-7 43.8	139	15.0	+18 39.0		
19	284	45.9	67	06.6	15.1	234	02.2	59.7	83	37.1	44.0	154	17.2	38.9		
20	299	48.3	82	06.3	16.2	249	04.3	+15 59.8	98	39.0	44.2	169	19.4	38.8		
21	314	50.8	97	06.0	17.3	264	06.4	+16 00.0	113	41.0	44.4	184	21.6	38.8		
22	329	53.3	112	05.7	18.3	279	08.5	+16 00.1	128	43.0	44.6	199	23.8	38.7		
23	344	55.7	127	05.4	19.4	294	10.6	00.3	143	45.0	44.8	214	26.1	38.7		
24	359	58.2	142	05.1	-16 20.4	309	12.7	+16 00.4	158	47.0	-7 45.0	229	28.3	+18 38.6		
Dif	—		-3		-11	+21		+2	+20		-2	+22		-1		

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 15 ^h 9 PMG: 11 ^h 53 ^m 0			Edad: 17 ^d 2 PHE { 4 ^h : 58 ^m 3 12 ^h : 58 ^m 0 20 ^h : 57 ^m 7 R°: 51 ^m					Civil			Náutico			Hora R°		
	hG ☉	Dec		hG ☾	Dif	Dec			Dif				Hora	R°			Hora
h	°	'	°	°	'	°	°	h m	h m	h m	h m m		h m m				
0	181	42.2	+0 45.1	325	58.2	+15 51.1	60 N	18 03	18 44	19 35	18 20 3		10 57 105				
1	196	42.5	44.1	340	27.9 ¹⁰⁷	+16 05.1 ¹⁴⁰	58	02	41	28	34 9		44 98				
2	211	42.7	43.2	354	57.6 ¹⁰⁷	19.1 ¹⁴⁰	56	02	39	23	45 15		33 93				
3	226	42.9	42.2	9	27.2 ¹⁰⁶	32.9 ¹³⁸	54	01	36	18	18 56 18		24 88				
4	241	43.1	41.2	23	56.8 ¹⁰⁶	+16 46.6 ¹³⁷	52	01	34	14	19 05 21		15 85				
5	256	43.3	+0 40.3	38	26.4 ¹⁰⁶	+17 00.3 ¹³⁷	50	18 00	18 33	19 11	19 13 24		10 08 82				
6	271	43.6	+0 39.3	52	55.9 ¹⁰⁵	+17 13.8 ¹³⁵	45	17 59	18 29	19 03	19 31 30		9 51 77				
7	286	43.8	38.3	67	25.5 ¹⁰⁶	27.2 ¹³⁴	40	59	26	18 57	46 33		38 72				
8	301	44.0	37.3	81	54.9 ¹⁰⁴	40.5 ¹³³	35	58	24	53	19 58 37		27 68				
9	316	44.2	36.4	96	24.4 ¹⁰⁵	+17 53.7 ¹³²	30	58	22	50	20 09 40		17 65				
10	331	44.4	35.4	110	53.8 ¹⁰⁴	+18 06.8 ¹³¹	20	57	19	45	28 44		9 01 60				
11	346	44.7	+0 34.4	125	23.1 ¹⁰³	+18 19.7 ¹²⁹	10 N	17 57	18 18	18 42	20 44 49		8 46 56				
12	1	44.9	+0 33.4	139	52.5 ¹⁰⁴	+18 32.6 ¹²⁹	0	17 56	18 17	18 41	21 00 52		8 33 51				
13	16	45.1	32.5	154	21.8 ¹⁰³	45.3 ¹²⁷	10 S	56	17	41	15 56		19 48				
14	31	45.3	31.5	168	51.0 ¹⁰²	+18 57.9 ¹²⁶	20	56	18	43	32 60		8 05 43				
15	46	45.6	30.5	183	20.3 ¹⁰³	+19 10.4 ¹²⁵	30	56	20	47	21 51 65		7 49 38				
16	61	45.8	29.6	197	49.4 ¹⁰¹	22.8 ¹²⁴	35	56	21	50	22 03 67		40 34				
17	76	46.0	+0 28.6	212	18.6 ¹⁰²	+19 35.1 ¹²³	40	17 56	18 23	18 54	22 16 71		7 29 31				
18	91	46.2	+0 27.6	226	47.7 ¹⁰¹	+19 47.3 ¹²²	45	17 56	18 25	18 59	22 32 74		7 16 27				
19	106	46.4	26.6	241	16.8 ¹⁰¹	+19 59.3 ¹²⁰	50	56	28	19 06	22 51 80		7 01 22				
20	121	46.7	25.7	255	45.8 ¹⁰⁰	+20 11.2 ¹¹⁹	52	56	30	09	23 00 84		6 54 19				
21	136	46.9	24.7	270	14.8 ¹⁰⁰	23.0 ¹¹⁸	54	56	31	13	11 87		47 15				
22	151	47.1	23.7	284	43.8 ¹⁰⁰	34.7 ¹¹⁷	56	56	33	17	23 91		38 11				
23	166	47.3	22.8	299	12.7 ⁹⁹	46.2 ¹¹⁵	58	56	35	22	36 97		28 7				
24	181	47.5	+0 21.8	313	41.6 ⁹⁹	+20 57.6 ¹¹⁴	60 S	17 56	18 38	19 28	23 52 106		6 17 1				
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 0 ^h 00 ^m 1			Mag: -4.1 PMG: 14 ^h 32 ^m			Mag: -1.5 PMG: 3 ^h 23 ^m			Mag: -1.7 PMG: 13 ^h 23 ^m			Mag: +0.4 PMG: 8 ^h 41 ^m				
	hG ♈	hG ♀	Dec	hG ♂	Dec		hG ♃	Dec		hG ♄	Dec						
h	°	'	°	°	'		°	'		°	'						
0	359	58.2	142 05.1	-16 20.4	309 12.7	+16 00.4	158	47.0	-7 45.0	229 28.3	+18 38.6						
1	15	00.6	157 04.7	21.5	324 14.8	00.6	173	48.9	45.2	244 30.5	38.5						
2	30	03.1	172 04.4	22.6	339 16.8	00.7	188	50.9	45.4	259 32.7	38.5						
3	45	05.6	187 04.1	23.6	354 18.9	00.8	203	52.9	45.5	274 34.9	38.4						
4	60	08.0	202 03.8	24.7	9 21.0	01.0	218	54.9	45.7	289 37.1	38.4						
5	75	10.5	217 03.5	-16 25.7	24 23.1	+16 01.1	233	56.9	-7 45.9	304 39.3	+18 38.3						
6	90	13.0	232 03.2	-16 26.8	39 25.2	+16 01.3	248	58.9	-7 46.1	319 41.5	+18 38.3						
7	105	15.4	247 02.9	27.8	54 27.3	01.4	264	00.8	46.3	334 43.8	38.2						
8	120	17.9	262 02.5	28.9	69 29.4	01.6	279	02.8	46.5	349 46.0	38.1						
9	135	20.4	277 02.2	29.9	84 31.5	01.7	294	04.8	46.7	4 48.2	38.1						
10	150	22.8	292 01.9	31.0	99 33.6	01.9	309	06.8	46.9	19 50.4	38.0						
11	165	25.3	307 01.6	-16 32.0	114 35.7	+16 02.0	324	08.8	-7 47.1	34 52.6	+18 38.0						
12	180	27.7	322 01.3	-16 33.1	129 37.8	+16 02.2	339	10.7	-7 47.3	49 54.8	+18 37.9						
13	195	30.2	337 01.0	34.1	144 39.9	02.3	354	12.7	47.5	64 57.0	37.8						
14	210	32.7	352 00.6	35.2	159 42.1	02.4	9	14.7	47.7	79 59.3	37.8						
15	225	35.1	7 00.3	36.2	174 44.2	02.6	24	16.7	47.9	95 01.5	37.7						
16	240	37.6	22 00.0	37.3	189 46.3	02.7	39	18.7	48.1	110 03.7	37.7						
17	255	40.1	36 59.7	-16 38.3	204 48.4	+16 02.9	54	20.6	-7 48.3	125 05.9	+18 37.6						
18	270	42.5	51 59.4	-16 39.4	219 50.5	+16 03.0	69	22.6	-7 48.5	140 08.1	+18 37.6						
19	285	45.0	66 59.0	40.4	234 52.6	03.2	84	24.6	48.7	155 10.3	37.5						
20	300	47.5	81 58.7	41.5	249 54.7	03.3	99	26.6	48.9	170 12.6	37.4						
21	315	49.9	96 58.4	42.5	264 56.8	03.4	114	28.6	49.1	185 14.8	37.4						
22	330	52.4	111 58.1	43.6	279 59.0	03.6	129	30.5	49.3	200 17.0	37.3						
23	345	54.9	126 57.8	44.6	295 01.1	03.7	144	32.5	49.4	215 19.2	37.3						
24	0	57.3	141 57.4	-16 45.7	310 03.2	+16 03.9	159	34.5	-7 49.6	230 21.4	+18 37.2						
Dif	—			-3	-11	+21	+1	+20	-2	+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 7			Edad: 18 ^d 2 PHE { 4 ^h : 57.4 12 ^h : 57.1 20 ^h : 56.8 PMG: 3 ^h 12 ^m Rº: 52 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico		Civil	Hora		Rº	Hora	Rº	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	181	47.5	+0	21.8	313	41.6	+20	57.6	60 N	4 12	5 02	5 44	18 23	7	12 42	103	
1	196	47.8		20.8	328	10.4	+21	08.9 ¹¹³	58	18	05	45	18 43	17	22	94	
2	211	48.0		19.8	342	39.2		20.1 ¹¹²	56	24	08	45	19 00	22	12 06	88	
3	226	48.2		18.9	357	08.0		31.1 ¹¹⁰	54	28	10	46	14 26		11 52	84	
4	241	48.4		17.9	11	36.7		42.0 ¹⁰⁹	52	32	12	46	26 30		40	81	
5	256	48.6	+0	16.9	26	05.4	+21	52.8 ¹⁰⁸	50	4 36	5 14	5 46	19 37	33	11 30	77	
6	271	48.9	+0	15.9	40	34.1	+22	03.5 ¹⁰⁷	45	4 43	5 18	5 47	20 01	36	11 08	72	
7	286	49.1		15.0	55	02.7		14.0 ¹⁰⁵	40	49	20	47	19 41		10 50	69	
8	301	49.3		14.0	69	31.3		24.4 ¹⁰⁴	35	53	23	48	35 43		35	66	
9	316	49.5		13.0	83	59.8		34.7 ¹⁰³	30	4 57	24	48	20 49	45	22	64	
10	331	49.8		12.1	98	28.4		44.8 ¹⁰¹	20	5 01	27	49	21 12	48	10 01	59	
11	346	50.0	+0	11.1	112	56.8	+22	54.8 ¹⁰⁰	10 N	5 04	5 28	5 49	21 33	51	9 42	56	
12	1	50.2	+0	10.1	127	25.3	+23	04.6 ⁹⁸	0	5 05	5 29	5 49	21 52	53	9 24	53	
13	16	50.4		09.1	141	53.7		14.4 ⁹⁸	10 S		04	29	50		9 07	50	
14	31	50.6		08.2	156	22.0		24.0 ⁹⁶	20	5 02	28	50	32 58		8 48	47	
15	46	50.9		07.2	170	50.4		33.4 ⁹⁴	30	4 58	26	50	22 56	62	27	42	
16	61	51.1		06.2	185	18.7		42.7 ⁹³	35	55	24	49	23 10	64	14	40	
17	76	51.3	+0	05.2	199	46.9	+23	51.9 ⁹²	40	4 51	5 22	5 49	23 27	66	8 00	37	
18	91	51.5	+0	04.3	214	15.1	+24	00.9 ⁹⁰	45	4 46	5 20	5 49	23 46	70	7 43	33	
19	106	51.7		03.3	228	43.3		09.8 ⁸⁹	50	39	17	49	** ** *		23	27	
20	121	52.0		02.3	243	11.5		18.6 ⁸⁸	52	35	15	49	** ** *		13	25	
21	136	52.2		01.4	257	39.6		27.2 ⁸⁶	54	32	13	49	** ** *		7 02	21	
22	151	52.4	+0	00.4	272	07.7		35.7 ⁸⁵	56	27	11	48	** ** *		6 49	18	
23	166	52.6	-0	00.6	286	35.8		44.0 ⁸³	58	22	09	48	** ** *		35	12	
24	181	52.8	-0	01.6	301	03.8	+24	52.2 ⁸²	60 S	4 17	5 06	5 48	** ** *		6 18	4	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 23 ^h 52 ^m 3		Mag: -4.1 PMG: 14 ^h 32 ^m			Mag: -1.5 PMG: 3 ^h 19 ^m			Mag: -1.7 PMG: 13 ^h 20 ^m			Mag: +0.4 PMG: 8 ^h 37 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'				
0	0	57.3	141	57.4	-16	45.7	310	03.2	+16	03.9	159	34.5	-7	49.6	230	21.4	+18	37.2
1	15	59.8	156	57.1		46.7	325	05.3		04.0	174	36.5		49.8	245	23.6		37.1
2	31	02.2	171	56.8		47.8	340	07.5		04.1	189	38.5		50.0	260	25.8		37.1
3	46	04.7	186	56.5		48.8	355	09.6		04.3	204	40.4		50.2	275	28.1		37.0
4	61	07.2	201	56.2		49.8	10	11.7		04.4	219	42.4		50.4	290	30.3		37.0
5	76	09.6	216	55.8	-16	50.9	25	13.8	+16	04.6	234	44.4	-7	50.6	305	32.5	+18	36.9
6	91	12.1	231	55.5	-16	51.9	40	16.0	+16	04.7	249	46.4	-7	50.8	320	34.7	+18	36.9
7	106	14.6	246	55.2		53.0	55	18.1		04.8	264	48.4		51.0	335	36.9		36.8
8	121	17.0	261	54.9		54.0	70	20.2		05.0	279	50.3		51.2	350	39.1		36.7
9	136	19.5	276	54.5		55.0	85	22.4		05.1	294	52.3		51.4	5	41.4		36.7
10	151	22.0	291	54.2		56.1	100	24.5		05.2	309	54.3		51.6	20	43.6		36.6
11	166	24.4	306	53.9	-16	57.1	115	26.6	+16	05.4	324	56.3	-7	51.8	35	45.8	+18	36.6
12	181	26.9	321	53.6	-16	58.1	130	28.8	+16	05.5	339	58.3	-7	52.0	50	48.0	+18	36.5
13	196	29.4	336	53.3	-16	59.2	145	30.9		05.7	355	00.2		52.2	65	50.2		36.5
14	211	31.8	351	52.9	-17	00.2	160	33.1		05.8	10	02.2		52.4	80	52.4		36.4
15	226	34.3	6	52.6		01.3	175	35.2		05.9	25	04.2		52.6	95	54.7		36.3
16	241	36.7	21	52.3		02.3	190	37.4		06.1	40	06.2		52.8	110	56.9		36.3
17	256	39.2	36	52.0	-17	03.3	205	39.5	+16	06.2	55	08.2	-7	53.0	125	59.1	+18	36.2
18	271	41.7	51	51.6	-17	04.4	220	41.6	+16	06.3	70	10.1	-7	53.2	141	01.3	+18	36.2
19	286	44.1	66	51.3		05.4	235	43.8		06.5	85	12.1		53.4	156	03.5		36.1
20	301	46.6	81	51.0		06.4	250	45.9		06.6	100	14.1		53.5	171	05.8		36.1
21	316	49.1	96	50.6		07.4	265	48.1		06.7	115	16.1		53.7	186	08.0		36.0
22	331	51.5	111	50.3		08.5	280	50.2		06.9	130	18.0		53.9	201	10.2		35.9
23	346	54.0	126	50.0		09.5	295	52.4		07.0	145	20.0		54.1	216	12.4		35.9
24	1	56.5	141	49.7	-17	10.5	310	54.6	+16	07.2	160	22.0	-7	54.3	231	14.6	+18	35.8
Dif	—		-3 -10			+21 +1			+20 -2			+22 -1						

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 9			Edad: 19 ^d 2	PHE { 4 ^h : 56 ^s 5 12 ^h : 56 ^s 2 20 ^h : 55 ^s 9										
	PMG: 11 ^h 52 ^m 3					SD: 15 ^h 4			PMG: 4 ^h 04 ^m			R°: 54 ^m			
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	m	h m m	m
0	181	52.8	-0 01.6	301	03.8	+24 52.2	81	60 N	17 57	18 38	19 28	18 30 23	14 25 90		
1	196	53.1	02.5	315	31.8	+25 00.3	79	58	56	36	22	19 00 31	13 56 81		
2	211	53.3	03.5	329	59.8	08.2	78	56	56	33	17	22 36	34 76		
3	226	53.5	04.5	344	27.7	16.0	78	54	56	31	13	40 40	16 72		
4	241	53.7	05.5	358	55.7	23.6	76	52	56	30	09	19 56 41	13 01 70		
5	256	53.9	-0 06.4	13	23.5	+25 31.1	75	50	17 56	18 28	19 06	20 10 42	12 47 69		
6	271	54.1	-0 07.4	27	51.4	+25 38.4	73	45	17 56	18 25	18 59	20 37 46	12 20 65		
7	286	54.4	08.4	42	19.2	45.6	72	40	56	22	54	21 00 47	11 59 63		
8	301	54.6	09.4	56	47.1	52.7	71	35	55	21	50	18 48	41 61		
9	316	54.8	10.3	71	14.8	+25 59.6	69	30	55	19	47	21 34 49	26 60		
10	331	55.0	11.3	85	42.6	+26 06.3	67	20	55	17	43	22 00 52	11 00 58		
11	346	55.2	-0 12.3	100	10.3	+26 12.9	66	10 N	17 55	18 16	18 41	22 24 52	10 38 56		
12	1	55.5	-0 13.2	114	38.1	+26 19.4	65	0	17 56	18 16	18 40	22 45 54	10 17 54		
13	16	55.7	14.2	129	05.8	25.7	63	10 S	56	17	41	23 07 55	9 57 52		
14	31	55.9	15.2	143	33.4	31.8	61	20	56	18	44	30 56	35 50		
15	46	56.1	16.2	158	01.1	37.9	61	30	57	21	49	23 58 57	9 09 48		
16	61	56.3	17.1	172	28.7	43.7	58	35	57	22	52	*** ** *	8 54 46		
17	76	56.6	-0 18.1	186	56.4	+26 49.4	57	40	17 58	18 25	18 56	*** ** *	8 37 44		
18	91	56.8	-0 19.1	201	24.0	+26 55.0	56	45	17 58	18 28	19 02	*** ** *	8 16 41		
19	106	57.0	20.1	215	51.6	+27 00.4	54	50	59	31	09	0 11 74	7 50 38		
20	121	57.2	21.0	230	19.2	05.7	53	52	17 59	33	13	24 76	38 35		
21	136	57.4	22.0	244	46.7	10.8	51	54	18 00	35	17	38 79	23 33		
22	151	57.6	23.0	259	14.3	15.8	50	56	00	37	22	0 54 83	7 07 28		
23	166	57.9	24.0	273	41.8	20.6	48	58	01	40	27	1 13 89	6 47 22		
24	181	58.1	-0 24.9	288	09.4	+27 25.3	47	60 S	18 01	18 43	19 33	1 38 100	6 22 12		

UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO								
	PMG: 23 ^h 48 ^m 3		Mag: -4.2 PMG: 14 ^h 33 ^m		Mag: -1.5 PMG: 3 ^h 16 ^m		Mag: -1.7 PMG: 13 ^h 17 ^m			Mag: +0.4 PMG: 8 ^h 34 ^m								
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'	°	'						
0	1	56.5	141	49.7	-17	10.5	310	54.6	+16	07.2	160	22.0	-7	54.3	231	14.6	+18	35.8
1	16	58.9	156	49.3		11.6	325	56.7		07.3	175	24.0		54.5	246	16.8		35.8
2	32	01.4	171	49.0		12.6	340	58.9		07.4	190	26.0		54.7	261	19.1		35.7
3	47	03.8	186	48.7		13.6	356	01.0		07.6	205	27.9		54.9	276	21.3		35.7
4	62	06.3	201	48.3		14.6	11	03.2		07.7	220	29.9		55.1	291	23.5		35.6
5	77	08.8	216	48.0	-17	15.7	26	05.4	+16	07.8	235	31.9	-7	55.3	306	25.7	+18	35.5
6	92	11.2	231	47.7	-17	16.7	41	07.5	+16	08.0	250	33.9	-7	55.5	321	27.9	+18	35.5
7	107	13.7	246	47.4		17.7	56	09.7		08.1	265	35.8		55.7	336	30.2		35.4
8	122	16.2	261	47.0		18.7	71	11.9		08.2	280	37.8		55.9	351	32.4		35.4
9	137	18.6	276	46.7		19.8	86	14.0		08.3	295	39.8		56.1	6	34.6		35.3
10	152	21.1	291	46.4		20.8	101	16.2		08.5	310	41.8		56.3	21	36.8		35.3
11	167	23.6	306	46.0	-17	21.8	116	18.4	+16	08.6	325	43.8	-7	56.5	36	39.0	+18	35.2
12	182	26.0	321	45.7	-17	22.8	131	20.5	+16	08.7	340	45.7	-7	56.7	51	41.3	+18	35.1
13	197	28.5	336	45.4		23.8	146	22.7		08.9	355	47.7		56.9	66	43.5		35.1
14	212	31.0	351	45.0		24.9	161	24.9		09.0	10	49.7		57.1	81	45.7		35.0
15	227	33.4	6	44.7		25.9	176	27.1		09.1	25	51.7		57.3	96	47.9		35.0
16	242	35.9	21	44.4		26.9	191	29.3		09.3	40	53.6		57.5	111	50.1		34.9
17	257	38.3	36	44.0	-17	27.9	206	31.4	+16	09.4	55	55.6	-7	57.7	126	52.4	+18	34.9
18	272	40.8	51	43.7	-17	28.9	221	33.6	+16	09.5	70	57.6	-7	57.9	141	54.6	+18	34.8
19	287	43.3	66	43.4		30.0	236	35.8		09.6	85	59.6		58.0	156	56.8		34.7
20	302	45.7	81	43.0		31.0	251	38.0		09.8	101	01.5		58.2	171	59.0		34.7
21	317	48.2	96	42.7		32.0	266	40.2		09.9	116	03.5		58.4	187	01.2		34.6
22	332	50.7	111	42.4		33.0	281	42.4		10.0	131	05.5		58.6	202	03.5		34.6
23	347	53.1	126	42.0		34.0	296	44.5		10.2	146	07.5		58.8	217	05.7		34.5
24	2	55.6	141	41.7	-17	35.0	311	46.7	+16	10.3	161	09.5	-7	59.0	232	07.9	+18	34.5
Dif	—		-3		-10		+22		+1		+20		-2		+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 0			Edad: 20 ^d 2 PHE { 4 ^h : 55 ^m 7 12 ^h : 55 ^m 5 20 ^h : 55 ^m 3 PMG: 4 ^h 58 ^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	181	58.1	-0 24.9	288	09.4	+27 25.3	45	60 N	4 17	5 07	5 49	18 53	54	15 55	58		
1	196	58.3	25.9	302	36.9	85 29.8	45	58	23	10	49	19 31	55	15 17	56		
2	211	58.5	26.9	317	04.4	85 34.2	44	56	28	12	49	19 58	55	14 50	56		
3	226	58.7	27.8	331	31.9	85 38.4	42	54	32	14	49	20 20	54	28	55		
4	241	59.0	28.8	345	59.4	85 42.5	41	52	36	16	49	37	55	14 11	56		
5	256	59.2	-0 29.8	0	26.9	85 +27 46.4	39	50	4 39	5 17	5 49	20 52	55	13 56	56		
6	271	59.4	-0 30.8	14	54.4	85 +27 50.1	37	45	4 46	5 20	5 49	21 23	54	13 25	56		
7	286	59.6	31.7	29	21.9	85 53.8	37	40	51	22	49	21 47	54	13 02	55		
8	301	59.8	32.7	43	49.4	85 +27 57.2	34	35	55	24	49	22 06	54	12 42	55		
9	317	00.0	33.7	58	16.9	85 +28 00.5	33	30	4 58	25	49	23 54		12 26	55		
10	332	00.3	34.7	72	44.4	85 03.7	32	20	5 02	27	49	22 52	53	11 58	54		
11	347	00.5	-0 35.6	87	11.9	85 +28 06.7	30	10 N	5 04	5 28	5 49	23 16	54	11 34	54		
12	2	00.7	-0 36.6	101	39.4	85 +28 09.6	29	0	5 04	5 28	5 49	23 39	53	11 11	54		
13	17	00.9	37.6	116	06.9	85 12.3	27	10 S	03	27	48	** ** *	**	10 49	53		
14	32	01.1	38.6	130	34.5	86 14.9	26	20	5 00	26	48	** ** *	**	10 25	52		
15	47	01.3	39.5	145	02.0	85 17.3	24	30	4 55	23	47	** ** *	**	9 57	52		
16	62	01.6	40.5	159	29.5	85 19.5	22	35	52	21	47	0 14	58	40	52		
17	77	01.8	-0 41.5	173	57.1	86 +28 21.6	21	40	4 47	5 19	5 46	0 33	59	9 21	51		
18	92	02.0	-0 42.5	188	24.6	85 +28 23.6	20	45	4 42	5 16	5 45	0 56	60	8 57	51		
19	107	02.2	43.4	202	52.2	86 25.4	18	50	34	12	44	1 25	62	28	48		
20	122	02.4	44.4	217	19.8	86 27.1	17	52	30	10	44	40	63	8 13	48		
21	137	02.6	45.4	231	47.4	86 28.6	15	54	26	08	44	1 57	64	7 56	47		
22	152	02.9	46.4	246	15.0	86 29.9	13	56	22	06	43	2 17	66	35	45		
23	167	03.1	47.3	260	42.7	87 31.1	12	58	16	03	42	2 42	70	7 09	43		
24	182	03.3	-0 48.3	275	10.3	86 +28 32.2	11	60 S	4 10	5 00	5 42	3 18	77	6 34	35		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 23 ^h 44 ^m 4		Mag: -4.2 PMG: 14 ^h 34 ^m		Mag: -1.5 PMG: 3 ^h 12 ^m		Mag: -1.7 PMG: 13 ^h 14 ^m		Mag: +0.4 PMG: 8 ^h 30 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	2	55.6	141	41.7	-17	35.0	311	46.7	+16	10.3	161	09.5	-7	59.0	232	07.9	+18	34.5
1	17	58.1	156	41.4		36.0	326	48.9		10.4	176	11.4		59.2	247	10.1		34.4
2	33	00.5	171	41.0		37.1	341	51.1		10.5	191	13.4		59.4	262	12.4		34.3
3	48	03.0	186	40.7		38.1	356	53.3		10.7	206	15.4		59.6	277	14.6		34.3
4	63	05.5	201	40.3		39.1	11	55.5		10.8	221	17.4	-7	59.8	292	16.8		34.2
5	78	07.9	216	40.0	-17	40.1	26	57.7	+16	10.9	236	19.3	-8	00.0	307	19.0	+18	34.2
6	93	10.4	231	39.7	-17	41.1	41	59.9	+16	11.0	251	21.3	-8	00.2	322	21.2	+18	34.1
7	108	12.8	246	39.3		42.1	57	02.1		11.2	266	23.3		00.4	337	23.5		34.1
8	123	15.3	261	39.0		43.1	72	04.3		11.3	281	25.3		00.6	352	25.7		34.0
9	138	17.8	276	38.7		44.1	87	06.5		11.4	296	27.2		00.8	7	27.9		33.9
10	153	20.2	291	38.3		45.1	102	08.7		11.5	311	29.2		01.0	22	30.1		33.9
11	168	22.7	306	38.0	-17	46.1	117	10.9	+16	11.7	326	31.2	-8	01.2	37	32.4	+18	33.8
12	183	25.2	321	37.6	-17	47.1	132	13.1	+16	11.8	341	33.2	-8	01.4	52	34.6	+18	33.8
13	198	27.6	336	37.3		48.1	147	15.3		11.9	356	35.1		01.6	67	36.8		33.7
14	213	30.1	351	37.0		49.1	162	17.6		12.0	11	37.1		01.8	82	39.0		33.7
15	228	32.6	6	36.6		50.1	177	19.8		12.2	26	39.1		02.0	97	41.2		33.6
16	243	35.0	21	36.3		51.1	192	22.0		12.3	41	41.1		02.2	112	43.5		33.6
17	258	37.5	36	35.9	-17	52.1	207	24.2	+16	12.4	56	43.0	-8	02.4	127	45.7	+18	33.5
18	273	40.0	51	35.6	-17	53.2	222	26.4	+16	12.5	71	45.0	-8	02.6	142	47.9	+18	33.4
19	288	42.4	66	35.2		54.2	237	28.6		12.7	86	47.0		02.7	157	50.1		33.4
20	303	44.9	81	34.9		55.2	252	30.9		12.8	101	49.0		02.9	172	52.4		33.3
21	318	47.3	96	34.6		56.1	267	33.1		12.9	116	50.9		03.1	187	54.6		33.3
22	333	49.8	111	34.2		57.1	282	35.3		13.0	131	52.9		03.3	202	56.8		33.2
23	348	52.3	126	33.9		58.1	297	37.5		13.1	146	54.9		03.5	217	59.0		33.2
24	3	54.7	141	33.5	-17	59.1	312	39.7	+16	13.3	161	56.9	-8	03.7	233	01.3	+18	33.1
Dif	—		-3		-10		+22		+1		+20		-2		+22		-	

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15°9		Edad: 21 ^d 2 PHE { 4 ^h : 55'1 12 ^h : 54'9 20 ^h : 54'7						Civil		Náutico		Hora R°	
	PMG: 11 ^h 51 ^m 6		SD: 15°0		PMG: 5 ^h 52 ^m R°: 53 ^m									
	hG ☉	Dec	hG ☾	Dif	Dec	Dif								
h	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	h m	m
0	182	03.3	-0 48.3		275	10.3	+28 32.2	9	60 N	17 51	18 32	19 21	19 47 84	16 53 23
1	197	03.5	49.3		289	38.0	87 33.1	8	58	51	30	16	20 26 75	16 13 33
2	212	03.7	50.2		304	05.7	87 33.9	9	56	51	28	12	20 53 70	15 46 36
3	227	03.9	51.2		318	33.4	87 34.5	6	54	51	26	08	21 14 68	25 39
4	242	04.2	52.2		333	01.2	88 35.0	5	52	51	25	04	32 65	15 07 41
5	257	04.4	-0 53.2		347	28.9	87 +28 35.3	3	50	17 51	18 24	19 01	21 47 64	14 52 42
6	272	04.6	-0 54.1		1	56.7	88 +28 35.5	2	45	17 52	18 21	18 55	22 17 62	14 21 45
7	287	04.8	55.1		16	24.6	89 35.5	0	40	52	19	51	22 41 59	13 57 46
8	302	05.0	56.1		30	52.4	88 35.4	1	35	53	18	47	23 00 58	37 48
9	317	05.2	57.1		45	20.3	89 35.1	3	30	53	17	44	17 57	13 21 48
10	332	05.5	58.0		59	48.2	89 34.7	4	20	53	15	41	23 45 55	12 52 50
11	347	05.7	-0 59.0		74	16.2	90 +28 34.1	6	10 N	17 54	18 15	18 39	** ** *	12 28 51
12	2	05.9	-1 00.0		88	44.1	89 +28 33.4	7	0	17 55	18 16	18 40	** ** *	12 05 52
13	17	06.1	-1 01.0		103	12.2	91 32.6	8	10 S	56	17	41	0 02 53	11 42 53
14	32	06.3	01.9		117	40.2	90 31.6	10	20	57	19	44	26 53	11 17 55
15	47	06.5	02.9		132	08.3	91 30.5	11	30	58	22	50	0 55 52	10 49 55
16	62	06.7	03.9		146	36.4	91 29.2	13	35	17 59	24	54	1 12 51	32 56
17	77	07.0	-1 04.9		161	04.6	92 +28 27.8	14	40	18 00	18 27	18 58	1 32 51	10 12 57
18	92	07.2	-1 05.8		175	32.8	92 +28 26.2	16	45	18 01	18 30	19 05	1 56 50	9 48 58
19	107	07.4	06.8		190	01.1	93 24.5	17	50	02	34	13	2 27 49	16 60
20	122	07.6	07.8		204	29.3	92 22.7	18	52	03	36	17	2 43 48	9 01 61
21	137	07.8	08.8		218	57.7	94 20.7	20	54	03	39	21	3 01 47	8 43 61
22	152	08.0	09.7		233	26.1	94 18.6	21	56	04	41	26	23 46	8 20 64
23	167	08.3	10.7		247	54.5	94 16.3	23	58	05	44	32	3 52 43	7 52 66
24	182	08.5	-1 11.7		262	23.0	95 +28 13.9	24	60 S	18 06	18 48	19 38	4 35 37	7 09 73

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO										
	PMG: 23 ^h 40 ^m 5		Mag: -4.2 PMG: 14 ^h 34 ^m		Mag: -1.5 PMG: 3 ^h 09 ^m		Mag: -1.7 PMG: 13 ^h 10 ^m		Mag: +0.4 PMG: 8 ^h 27 ^m										
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec									
h	°	'	°	'	°	'	°	'	°	'									
0	3	54.7	141	33.5	-17	59.1	312	39.7	+16	13.3	161	56.9	-8	03.7	233	01.3	+18	33.1	
1	18	57.2	156	33.2	-18	00.1	327	42.0		13.4	176	58.8		03.9	248	03.5		33.0	
2	33	59.7	171	32.8		01.1	342	44.2		13.5	192	00.8		04.1	263	05.7		33.0	
3	49	02.1	186	32.5		02.1	357	46.4		13.6	207	02.8		04.3	278	07.9		32.9	
4	64	04.6	201	32.2		03.1	12	48.7		13.7	222	04.8		04.5	293	10.2		32.9	
5	79	07.1	216	31.8	-18	04.1	27	50.9	+16	13.9	237	06.7	-8	04.7	308	12.4	+18	32.8	
6	94	09.5	231	31.5	-18	05.1	42	53.1	+16	14.0	252	08.7	-8	04.9	323	14.6	+18	32.8	
7	109	12.0	246	31.1		06.1	57	55.4		14.1	267	10.7		05.1	338	16.8		32.7	
8	124	14.5	261	30.8		07.1	72	57.6		14.2	282	12.7		05.3	353	19.1		32.7	
9	139	16.9	276	30.4		08.1	87	59.8		14.3	297	14.6		05.5	8	21.3		32.6	
10	154	19.4	291	30.1		09.1	103	02.1		14.5	312	16.6		05.7	23	23.5		32.5	
11	169	21.8	306	29.7	-18	10.1	118	04.3	+16	14.6	327	18.6	-8	05.9	38	25.7	+18	32.5	
12	184	24.3	321	29.4	-18	11.1	133	06.6	+16	14.7	342	20.6	-8	06.1	53	28.0	+18	32.4	
13	199	26.8	336	29.0		12.0	148	08.8		14.8	357	22.5		06.3	68	30.2		32.4	
14	214	29.2	351	28.7		13.0	163	11.1		14.9	12	24.5		06.5	83	32.4		32.3	
15	229	31.7	6	28.3		14.0	178	13.3		15.0	27	26.5		06.7	98	34.6		32.3	
16	244	34.2	21	28.0		15.0	193	15.6		15.2	42	28.5		06.9	113	36.9		32.2	
17	259	36.6	36	27.6	-18	16.0	208	17.8	+16	15.3	57	30.4	-8	07.1	128	39.1	+18	32.2	
18	274	39.1	51	27.3	-18	17.0	223	20.1	+16	15.4	72	32.4	-8	07.3	143	41.3	+18	32.1	
19	289	41.6	66	26.9		18.0	238	22.3		15.5	87	34.4		07.5	158	43.6		32.0	
20	304	44.0	81	26.6		18.9	253	24.6		15.6	102	36.3		07.6	173	45.8		32.0	
21	319	46.5	96	26.2		19.9	268	26.8		15.7	117	38.3		07.8	188	48.0		31.9	
22	334	48.9	111	25.9		20.9	283	29.1		15.8	132	40.3		08.0	203	50.2		31.9	
23	349	51.4	126	25.5		21.9	298	31.4		16.0	147	42.3		08.2	218	52.5		31.8	
24	4	53.9	141	25.2	-18	22.9	313	33.6	+16	16.1	162	44.2	-8	08.4	233	54.7	+18	31.8	
Dif	—		-3	-10		+22	+1			+20	-2			+22	-1				

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'0 PMG: 11 ^h 51 ^m 3			Edad: 22 ^d 2 PHE { 4 ^h : 54'6 12 ^h : 54'5 20 ^h : 54'4 SD: 14'9 PMG: 6 ^h 45 ^m R°: 50 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m		
0	182	08.5	-1	11.7	262	23.0	+28	13.9	60 N	4	23	5	12	5	54	21	11	
1	197	08.7		12.6	276	51.5	95	11.4	58		28		14	53	21	41		
2	212	08.9		13.6	291	20.0	95	08.7	56		32		16	53	22	03		
3	227	09.1		14.6	305	48.7	97	05.9	54		36		18	53	22	75		
4	242	09.3		15.6	320	17.3	96	+28	52		39		19	53	37	73		
5	257	09.5	-1	16.5	334	46.0	97	+27	50	4	42	5	20	5	52	22	51	
6	272	09.7	-1	17.5	349	14.8	98	+27	45	4	48	5	23	5	52	23	19	
7	287	10.0		18.5	3	43.6	98	53.2	40		53		24	51	40	62		
8	302	10.2		19.5	18	12.5	99	49.7	35		56		26	51	23	58		
9	317	10.4		20.4	32	41.5	100	46.1	30	4	59		27	50	**	**		
10	332	10.6		21.4	47	10.4	99	42.4	20	5	02		28	50	**	**		
11	347	10.8	-1	22.4	61	39.5	101	+27	10 N	5	04	5	28	5	49	0	10	
12	2	11.0	-1	23.4	76	08.6	101	+27	0	5	03	5	27	5	48	0	32	
13	17	11.2		24.3	90	37.7	101	30.3	10 S	5	02		26	47	0	55		
14	32	11.5		25.3	105	07.0	103	26.0	20	4	58		24	46	1	19		
15	47	11.7		26.3	119	36.2	102	21.6	30		53		21	45	1	47		
16	62	11.9		27.3	134	05.6	104	17.1	35		49		18	44	2	03		
17	77	12.1	-1	28.2	148	35.0	104	+27	40	4	44	5	16	5	43	2	23	
18	92	12.3	-1	29.2	163	04.4	104	+27	45	4	38	5	12	5	41	2	46	
19	107	12.5		30.2	177	33.9	105	+27	50		29		08	40	3	16		
20	122	12.7		31.2	192	03.5	106	+26	52		25		06	39	31	34		
21	137	12.9		32.1	206	33.1	106	52.4	54		21		03	39	3	48		
22	152	13.2		33.1	221	02.8	107	47.1	56		16	5	01	38	4	09		
23	167	13.4		34.1	235	32.6	108	41.7	58		10	4	57	37	4	35		
24	182	13.6	-1	35.0	250	02.4	108	+26	60 S	4	03	4	54	5	36	5	12	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 23 ^h 36 ^m 5		Mag: -4.2 PMG: 14 ^h 35 ^m			Mag: -1.6 PMG: 3 ^h 05 ^m			Mag: -1.7 PMG: 13 ^h 07 ^m			Mag: +0.4 PMG: 8 ^h 23 ^m						
	hG ♈		hG ♀ Dec			hG ♂ Dec			hG ♃ Dec			hG ♄ Dec						
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	4	53.9	141	25.2	-18	22.9	313	33.6	+16	16.1	162	44.2	-8	08.4	233	54.7	+18	
1	19	56.3	156	24.8		23.8	328	35.9		16.2	177	46.2		08.6	248	56.9		
2	34	58.8	171	24.5		24.8	343	38.1		16.3	192	48.2		08.8	263	59.1		
3	50	01.3	186	24.1		25.8	358	40.4		16.4	207	50.2		09.0	279	01.4		
4	65	03.7	201	23.8		26.8	13	42.7		16.5	222	52.1		09.2	294	03.6		
5	80	06.2	216	23.4	-18	27.7	28	44.9	+16	16.6	237	54.1	-8	09.4	309	05.8	+18	
6	95	08.7	231	23.1	-18	28.7	43	47.2	+16	16.8	252	56.1	-8	09.6	324	08.1	+18	
7	110	11.1	246	22.7		29.7	58	49.5		16.9	267	58.1		09.8	339	10.3		
8	125	13.6	261	22.4		30.7	73	51.8		17.0	283	00.0		10.0	354	12.5		
9	140	16.1	276	22.0		31.6	88	54.0		17.1	298	02.0		10.2	9	14.7		
10	155	18.5	291	21.7		32.6	103	56.3		17.2	313	04.0		10.4	24	17.0		
11	170	21.0	306	21.3	-18	33.6	118	58.6	+16	17.3	328	05.9	-8	10.6	39	19.2	+18	
12	185	23.4	321	20.9	-18	34.6	134	00.9	+16	17.4	343	07.9	-8	10.8	54	21.4	+18	
13	200	25.9	336	20.6		35.5	149	03.1		17.5	358	09.9		11.0	69	23.7		
14	215	28.4	351	20.2		36.5	164	05.4		17.6	13	11.9		11.2	84	25.9		
15	230	30.8	6	19.9		37.5	179	07.7		17.8	28	13.8		11.4	99	28.1		
16	245	33.3	21	19.5		38.4	194	10.0		17.9	43	15.8		11.6	114	30.3		
17	260	35.8	36	19.2	-18	39.4	209	12.3	+16	18.0	58	17.8	-8	11.8	129	32.6	+18	
18	275	38.2	51	18.8	-18	40.4	224	14.6	+16	18.1	73	19.7	-8	12.0	144	34.8	+18	
19	290	40.7	66	18.5		41.3	239	16.9		18.2	88	21.7		12.2	159	37.0		
20	305	43.2	81	18.1		42.3	254	19.2		18.3	103	23.7		12.4	174	39.3		
21	320	45.6	96	17.7		43.3	269	21.5		18.4	118	25.7		12.6	189	41.5		
22	335	48.1	111	17.4		44.2	284	23.7		18.5	133	27.6		12.8	204	43.7		
23	350	50.6	126	17.0		45.2	299	26.0		18.6	148	29.6		12.9	219	46.0		
24	5	53.0	141	16.7	-18	46.2	314	28.3	+16	18.7	163	31.6	-8	13.1	234	48.2	+18	
Dif	—		-4			-10	+23			+1	+20			-2	+22			-

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG: 11 ^h 50 ^m 9			Edad: 23 ^d 2 PHE { 4 ^h : 54'3 12 ^h : 54'2 20 ^h : 54'1 SD: 14'8 PMG: 7 ^h 35 ^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	182	13.6	-1 35.0	250	02.4	+26 36.2		60 N	17 45	18 26	19 15	22 44 93	17 24 2		
1	197	13.8		264	32.3 ¹⁰⁹	30.5	57	58	45	24	10	23 05 86	17 02 9		
2	212	14.0		279	02.3 ¹¹⁰	24.7	58	56	46	23	06	22 81	16 45 13		
3	227	14.2		293	32.3 ¹¹⁰	18.8	59	54	46	21	03	37 77	29 18		
4	242	14.4		308	02.4 ¹¹¹	12.8	60	52	47	20	19 00	23 50 74	16 21		
5	257	14.6	-1 39.9	322	32.6 ¹¹²	+26 06.7	61	50	17 47	18 19	18 57	** ** *	16 05 23		
6	272	14.9	-1 40.9	337	02.8 ¹¹²	+26 00.4	63	45	17 48	18 17	18 51	** ** *	15 41 27		
7	287	15.1		351	33.1 ¹¹³	+25 54.0	64	40	49	16	47	** ** *	21 32		
8	302	15.3		6	03.4 ¹¹³	47.5	65	35	50	15	44	** ** *	15 05 34		
9	317	15.5		20	33.9 ¹¹⁵	40.9	66	30	50	14	42	0 14 57	14 51 37		
10	332	15.7		35	04.3 ¹¹⁴	34.2	67	20	52	14	39	0 40 54	27 41		
11	347	15.9	-1 45.8	49	34.9 ¹¹⁶	+25 27.3	69	10 N	17 53	18 14	18 38	1 02 51	14 06 44		
12	2	16.1	-1 46.7	64	05.5 ¹¹⁶	+25 20.4	69	0	17 54	18 15	18 39	1 23 48	13 47 47		
13	17	16.3		78	36.2 ¹¹⁷	13.3	71	10 S	56	17	41	1 44 45	27 50		
14	32	16.5		93	07.0 ¹¹⁸	+25 06.1	72	20	57	19	45	2 06 43	13 06 53		
15	47	16.8		107	37.8 ¹¹⁸	+24 58.8	73	30	17 59	23	51	32 39	12 41 58		
16	62	17.0		122	08.7 ¹¹⁹	51.4	74	35	18 00	26	18 55	2 47 37	27 59		
17	77	17.2	-1 51.6	136	39.7 ¹²⁰	+24 43.9	75	40	18 01	18 29	19 00	3 05 34	12 10 62		
18	92	17.4	-1 52.6	151	10.7 ¹²⁰	+24 36.3	76	45	18 03	18 33	19 07	3 26 31	11 49 67		
19	107	17.6		165	41.8 ¹²¹	28.6	77	50	05	37	16	3 52 26	24 71		
20	122	17.8		180	13.0 ¹²²	20.8	78	52	06	40	20	4 05 24	11 11 74		
21	137	18.0		194	44.2 ¹²²	12.8	80	54	07	42	25	20 21	10 57 77		
22	152	18.2		56.5	209 15.5 ¹²³	+24 04.8	80	56	08	45	30	37 17	40 81		
23	167	18.4		57.4	223 46.9 ¹²⁴	+23 56.6	82	58	09	49	37	4 58 11	10 20 86		
24	182	18.6	-1 58.4	238	18.4 ¹²⁵	+23 48.4	82	60 S	18 11	18 53	19 44	5 24 4	9 54 94		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 23 ^h 32 ^m 6			Mag: -4.2 PMG: 14 ^h 35 ^m			Mag: -1.6 PMG: 3 ^h 02 ^m			Mag: -1.7 PMG: 13 ^h 04 ^m			Mag: +0.4 PMG: 8 ^h 20 ^m		
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	5	53.0		141	16.7	-18 46.2	314	28.3	+16 18.7	163	31.6	-8 13.1	234	48.2	+18 30.4
1	20	55.5		156	16.3	47.1	329	30.6	18.8	178	33.5	13.3	249	50.4	30.4
2	35	57.9		171	15.9	48.1	344	32.9	18.9	193	35.5	13.5	264	52.6	30.3
3	51	00.4		186	15.6	49.1	359	35.2	19.1	208	37.5	13.7	279	54.9	30.3
4	66	02.9		201	15.2	50.0	14	37.6	19.2	223	39.5	13.9	294	57.1	30.2
5	81	05.3		216	14.9	-18 51.0	29	39.9	+16 19.3	238	41.4	-8 14.1	309	59.3	+18 30.2
6	96	07.8		231	14.5	-18 51.9	44	42.2	+16 19.4	253	43.4	-8 14.3	325	01.6	+18 30.1
7	111	10.3		246	14.1	52.9	59	44.5	19.5	268	45.4	14.5	340	03.8	30.1
8	126	12.7		261	13.8	53.8	74	46.8	19.6	283	47.3	14.7	355	06.0	30.0
9	141	15.2		276	13.4	54.8	89	49.1	19.7	298	49.3	14.9	10	08.3	30.0
10	156	17.7		291	13.1	55.8	104	51.4	19.8	313	51.3	15.1	25	10.5	29.9
11	171	20.1		306	12.7	-18 56.7	119	53.7	+16 19.9	328	53.3	-8 15.3	40	12.7	+18 29.8
12	186	22.6		321	12.3	-18 57.7	134	56.0	+16 20.0	343	55.2	-8 15.5	55	15.0	+18 29.8
13	201	25.0		336	12.0	58.6	149	58.4	20.1	358	57.2	15.7	70	17.2	29.7
14	216	27.5		351	11.6	-18 59.6	165	00.7	20.2	13	59.2	15.9	85	19.4	29.7
15	231	30.0		6	11.2	-19 00.5	180	03.0	20.3	29	01.1	16.1	100	21.7	29.6
16	246	32.4		21	10.9	01.5	195	05.3	20.4	44	03.1	16.3	115	23.9	29.6
17	261	34.9		36	10.5	-19 02.4	210	07.6	+16 20.5	59	05.1	-8 16.5	130	26.1	+18 29.5
18	276	37.4		51	10.1	-19 03.4	225	10.0	+16 20.6	74	07.1	-8 16.7	145	28.4	+18 29.5
19	291	39.8		66	09.8	04.3	240	12.3	20.7	89	09.0	16.9	160	30.6	29.4
20	306	42.3		81	09.4	05.3	255	14.6	20.8	104	11.0	17.1	175	32.8	29.4
21	321	44.8		96	09.0	06.2	270	17.0	20.9	119	13.0	17.3	190	35.1	29.3
22	336	47.2		111	08.7	07.2	285	19.3	21.0	134	14.9	17.5	205	37.3	29.3
23	351	49.7		126	08.3	08.1	300	21.6	21.1	149	16.9	17.7	220	39.5	29.2
24	6	52.2		141	08.0	-19 09.1	315	24.0	+16 21.2	164	18.9	-8 17.9	235	41.8	+18 29.1
Dif	—			-4		-10	+23		+1	+20		-2	+22		-1

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'0 PMG: 11 ^h 50 ^m 6			Edad: 24 ^d 2 PHE { 4 ^h : 54'1 12 ^h : 54'1 20 ^h : 54'1 SD: 14'7 PMG: 8 ^h 23 ^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	182	18.6	-1 58.4	238	18.4	+23 48.4	60 N	4 28	5 17	5 58	** ** *	**	17 26	1	
1	197	18.9	-1 59.4	252	49.9 ¹²⁵	40.0 ⁸⁴	58	32	19	58	** ** *	**	17 11	5	
2	212	19.1	-2 00.4	267	21.5 ¹²⁶	31.6 ⁸⁴	56	36	20	57	** ** *	**	16 58	9	
3	227	19.3	01.3	281	53.1 ¹²⁶	23.0 ⁸⁶	54	40	21	56	** ** *	**	47	12	
4	242	19.5	02.3	296	24.8 ¹²⁷	14.4 ⁸⁶	52	43	22	56	** ** *	**	37	15	
5	257	19.7	-2 03.3	310	56.6 ¹²⁸	+23 05.6 ⁸⁸	50	4 45	5 23	5 55	0 01	71	16 28	17	
6	272	19.9	-2 04.2	325	28.5 ¹²⁹	+22 56.8 ⁸⁸	45	4 51	5 25	5 54	0 24	66	16 08	23	
7	287	20.1	05.2	340	00.4 ¹²⁹	47.8 ⁹⁰	40	55	26	53	42	63	15 53	26	
8	302	20.3	06.2	354	32.4 ¹³⁰	38.8 ⁹⁰	35	4 58	27	52	0 58	59	39	30	
9	317	20.5	07.2	9	04.4 ¹³⁰	29.6 ⁹²	30	5 00	28	52	1 11	57	28	32	
10	332	20.7	08.1	23	36.5 ¹³¹	20.4 ⁹²	20	03	28	50	34	52	15 08	36	
11	347	20.9	-2 09.1	38	08.7 ¹³²	+22 11.1 ⁹³	10 N	5 03	5 28	5 49	1 53	49	14 50	41	
12	2	21.2	-2 10.1	52	41.0 ¹³³	+22 01.6 ⁹⁵	0	5 03	5 27	5 47	2 11	46	14 34	44	
13	17	21.4	11.1	67	13.3 ¹³³	+21 52.1 ⁹⁵	10 S	5 00	25	46	29	43	14 17	48	
14	32	21.6	12.0	81	45.7 ¹³⁴	42.5 ⁹⁶	20	4 56	22	44	2 49	38	13 59	52	
15	47	21.8	13.0	96	18.1 ¹³⁴	32.8 ⁹⁷	30	50	18	42	3 11	34	39	56	
16	62	22.0	14.0	110	50.6 ¹³⁵	23.0 ⁹⁸	35	46	16	41	24	31	26	60	
17	77	22.2	-2 15.0	125	23.2 ¹³⁶	+21 13.1 ⁹⁹	40	4 40	5 12	5 39	3 39	28	13 12	63	
18	92	22.4	-2 15.9	139	55.9 ¹³⁷	+21 03.2 ⁹⁹	45	4 34	5 08	5 38	3 57	24	12 56	66	
19	107	22.6	16.9	154	28.6 ¹³⁷	+20 53.1 ¹⁰¹	50	25	03	36	4 18	20	35	72	
20	122	22.8	17.9	169	01.3 ¹³⁷	43.0 ¹⁰¹	52	20	5 01	35	29	17	25	74	
21	137	23.0	18.8	183	34.2 ¹³⁹	32.7 ¹⁰³	54	16	4 58	34	41	14	14	77	
22	152	23.2	19.8	198	07.1 ¹³⁹	22.4 ¹⁰³	56	10	55	32	4 54	11	12 01	81	
23	167	23.4	20.8	212	40.0 ¹³⁹	12.0 ¹⁰⁴	58	4 04	52	31	5 09	7	11 46	86	
24	182	23.7	-2 21.8	227	13.0 ¹⁴⁰	+20 01.5 ¹⁰⁵	60 S	3 57	4 48	5 30	5 28	1	11 28	92	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 23 ^h 28 ^m 7			Mag: -4.2 PMG: 14 ^h 36 ^m			Mag: -1.6 PMG: 2 ^h 58 ^m			Mag: -1.7 PMG: 13 ^h 01 ^m			Mag: +0.4 PMG: 8 ^h 16 ^m		
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°
0	6	52.2	141 08.0	-19 09.1	315 24.0	+16 21.2	164 18.9	-8 17.9	235 41.8	+18 29.1			235 41.8	+18 29.1	
1	21	54.6	156 07.6	10.0	330 26.3	21.3	179 20.8	18.1	250 44.0	29.1			250 44.0	29.1	
2	36	57.1	171 07.2	11.0	345 28.6	21.4	194 22.8	18.3	265 46.2	29.0			265 46.2	29.0	
3	51	59.5	186 06.8	11.9	0 31.0	21.5	209 24.8	18.5	280 48.5	29.0			280 48.5	29.0	
4	67	02.0	201 06.5	12.8	15 33.3	21.6	224 26.7	18.6	295 50.7	28.9			295 50.7	28.9	
5	82	04.5	216 06.1	-19 13.8	30 35.6	+16 21.7	239 28.7	-8 18.8	310 52.9	+18 28.9			310 52.9	+18 28.9	
6	97	06.9	231 05.7	-19 14.7	45 38.0	+16 21.8	254 30.7	-8 19.0	325 55.2	+18 28.8			325 55.2	+18 28.8	
7	112	09.4	246 05.4	15.7	60 40.3	21.9	269 32.7	19.2	340 57.4	28.8			340 57.4	28.8	
8	127	11.9	261 05.0	16.6	75 42.7	22.0	284 34.6	19.4	355 59.6	28.7			355 59.6	28.7	
9	142	14.3	276 04.6	17.5	90 45.0	22.1	299 36.6	19.6	11 01.9	28.7			11 01.9	28.7	
10	157	16.8	291 04.3	18.5	105 47.4	22.2	314 38.6	19.8	26 04.1	28.6			26 04.1	28.6	
11	172	19.3	306 03.9	-19 19.4	120 49.7	+16 22.3	329 40.5	-8 20.0	41 06.3	+18 28.6			41 06.3	+18 28.6	
12	187	21.7	321 03.5	-19 20.4	135 52.1	+16 22.4	344 42.5	-8 20.2	56 08.6	+18 28.5			56 08.6	+18 28.5	
13	202	24.2	336 03.2	21.3	150 54.4	22.5	359 44.5	20.4	71 10.8	28.4			71 10.8	28.4	
14	217	26.7	351 02.8	22.2	165 56.8	22.6	14 46.4	20.6	86 13.0	28.4			86 13.0	28.4	
15	232	29.1	6 02.4	23.2	180 59.2	22.7	29 48.4	20.8	101 15.3	28.3			101 15.3	28.3	
16	247	31.6	21 02.0	24.1	196 01.5	22.8	44 50.4	21.0	116 17.5	28.3			116 17.5	28.3	
17	262	34.0	36 01.7	-19 25.0	211 03.9	+16 22.9	59 52.3	-8 21.2	131 19.7	+18 28.2			131 19.7	+18 28.2	
18	277	36.5	51 01.3	-19 26.0	226 06.2	+16 23.0	74 54.3	-8 21.4	146 22.0	+18 28.2			146 22.0	+18 28.2	
19	292	39.0	66 00.9	26.9	241 08.6	23.1	89 56.3	21.6	161 24.2	28.1			161 24.2	28.1	
20	307	41.4	81 00.5	27.8	256 11.0	23.2	104 58.3	21.8	176 26.4	28.1			176 26.4	28.1	
21	322	43.9	96 00.2	28.7	271 13.3	23.3	120 00.2	22.0	191 28.7	28.0			191 28.7	28.0	
22	337	46.4	110 59.8	29.7	286 15.7	23.4	135 02.2	22.2	206 30.9	28.0			206 30.9	28.0	
23	352	48.8	125 59.4	30.6	301 18.1	23.5	150 04.2	22.4	221 33.2	27.9			221 33.2	27.9	
24	7	51.3	140 59.1	-19 31.5	316 20.5	+16 23.6	165 06.1	-8 22.6	236 35.4	+18 27.9			236 35.4	+18 27.9	
Dif	—		-4	-9	+24	+1	+20	-2	+22	-1					

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16°0			Edad: 25 ^d 2	PHE { 4 ^h : 54'1 12 ^h : 54'2 20 ^h : 54'2	Final del crepúsculo			Salida de Luna		Puesta de Luna			
	PMG: 11 ^h 50 ^m 3					R°: 43 ^m								
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	182	23.7	-2 21.8	227	13.0	+20 01.5		60 N	17 38	18 20	19 09	0 17 89	17 27	**
1	197	23.9		241	46.1 ¹⁴¹	+19 51.0 ¹⁰⁵		58	40	18	04	31 84	16	3
2	212	24.1		256	19.2 ¹⁴¹			56	40	17	19 01	43 81	17 07	7
3	227	24.3		270	52.4 ¹⁴²			54	41	16	18 58	0 54 77	16 59	9
4	242	24.5		285	25.7 ¹⁴³			52	42	16	55	1 04 74	52	11
5	257	24.7	-2 26.6	299	59.0 ¹⁴³	+19 07.9 ¹⁰⁹		50	17 43	18 15	18 52	1 12 72	16 45	14
6	272	24.9	-2 27.6	314	32.4 ¹⁴⁴	+18 56.9 ¹¹⁰		45	17 44	18 13	18 48	1 30 66	16 31	19
7	287	25.1		329	05.8 ¹⁴⁴			40	46	13	44	45 62	19	23
8	302	25.3		343	39.3 ¹⁴⁵			35	47	12	41	1 57 59	09	26
9	317	25.5		358	12.8 ¹⁴⁵			30	48	12	39	2 08 56	16 00	29
10	332	25.7		12	46.4 ¹⁴⁶			20	50	12	37	26 51	15 44	34
11	347	25.9	-2 32.5	27	20.1 ¹⁴⁷	+18 00.9 ¹¹⁴		10 N	17 52	18 13	18 37	2 42 47	15 31	38
12	2	26.1	-2 33.4	41	53.8 ¹⁴⁷	+17 49.5 ¹¹⁴		0	17 54	18 14	18 38	2 57 43	15 18	42
13	17	26.3		56	27.6 ¹⁴⁸			10 S	55	16	41	3 12 39	15 05	46
14	32	26.5		71	01.4 ¹⁴⁸			20	17 58	20	45	27 35	14 51	50
15	47	26.7		85	35.2 ¹⁴⁸			30	18 00	24	52	45 30	35	55
16	62	27.0		100	09.2 ¹⁵⁰	+17 03.1 ¹¹⁷		35	02	27	18 57	3 55 28	26	58
17	77	27.2	-2 38.3	114	43.1 ¹⁴⁹	+16 51.3 ¹¹⁸		40	18 03	18 31	19 03	4 07 25	14 15	62
18	92	27.4	-2 39.3	129	17.2 ¹⁵¹	+16 39.5 ¹¹⁸		45	18 06	18 35	19 10	4 21 21	14 02	66
19	107	27.6		143	51.2 ¹⁵⁰			50	08	41	19	38 16	13 47	71
20	122	27.8		158	25.4 ¹⁵²			52	09	43	24	46 13	39	74
21	137	28.0		172	59.5 ¹⁵¹	+16 03.5 ¹²¹		54	11	46	29	4 55 10	31	77
22	152	28.2		187	33.7 ¹⁵²	+15 51.4 ¹²¹		56	12	50	35	5 05 7	22	80
23	167	28.4		202	08.0 ¹⁵³			58	14	53	42	16 4	12	83
24	182	28.6	-2 45.1	216	42.3 ¹⁵³	+15 26.9 ¹²³		60 S	18 15	18 58	19 49	5 29 **	13 00	87

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 23 ^h 24 ^m 7		Mag: -4.2 PMG: 14 ^h 36 ^m		Mag: -1.6 PMG: 2 ^h 54 ^m		Mag: -1.7 PMG: 12 ^h 58 ^m		Mag: +0.4 PMG: 8 ^h 12 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	7	51.3	140	59.1	-19	31.5	316	20.5	+16	23.6
1	22	53.8	155	58.7		32.5	331	22.8		23.6
2	37	56.2	170	58.3		33.4	346	25.2		23.7
3	52	58.7	185	57.9		34.3	1	27.6		23.8
4	68	01.1	200	57.6		35.2	16	30.0		23.9
5	83	03.6	215	57.2	-19	36.2	31	32.3	+16	24.0
6	98	06.1	230	56.8	-19	37.1	46	34.7	+16	24.1
7	113	08.5	245	56.4		38.0	61	37.1		24.2
8	128	11.0	260	56.0		38.9	76	39.5		24.3
9	143	13.5	275	55.7		39.8	91	41.9		24.4
10	158	15.9	290	55.3		40.8	106	44.3		24.5
11	173	18.4	305	54.9	-19	41.7	121	46.6	+16	24.6
12	188	20.9	320	54.5	-19	42.6	136	49.0	+16	24.7
13	203	23.3	335	54.2		43.5	151	51.4		24.7
14	218	25.8	350	53.8		44.4	166	53.8		24.8
15	233	28.3	5	53.4		45.4	181	56.2		24.9
16	248	30.7	20	53.0		46.3	196	58.6		25.0
17	263	33.2	35	52.6	-19	47.2	212	01.0	+16	25.1
18	278	35.6	50	52.3	-19	48.1	227	03.4	+16	25.2
19	293	38.1	65	51.9		49.0	242	05.8		25.3
20	308	40.6	80	51.5		49.9	257	08.2		25.4
21	323	43.0	95	51.1		50.8	272	10.6		25.5
22	338	45.5	110	50.7		51.7	287	13.0		25.5
23	353	48.0	125	50.4		52.7	302	15.4		25.6
24	8	50.4	140	50.0	-19	53.6	317	17.9	+16	25.7
Dif	—		-4		-9		+24		+1	
								+20		-2
									+22	
										-1

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna														
	SD: 16'0 PMG: 11 ^h 49 ^m 9			Edad: 26 ^d 2 PHE { 4 ^h : 54'3 12 ^h : 54'3 20 ^h : 54'4 PMG: 9 ^h 50 ^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	182	28.6	-2	45.1	216	42.3	+15	26.9	60 N	4	33	5	22	6	03	1	46	86	17	26	**						
1	197	28.8		46.1	231	16.7 ¹⁵⁴		14.6 ¹²³	58	37	23	02	1	55	82		19	3									
2	212	29.0		47.0	245	51.1 ¹⁵⁴	+15	02.3 ¹²³	56	40	24	01	2	04	78		14	5									
3	227	29.2		48.0	260	25.5 ¹⁵⁴	+14	49.8 ¹²⁵	54	44	25	6	00	11	76		08	8									
4	242	29.4		49.0	275	00.0 ¹⁵⁵		37.3 ¹²⁵	52	46	26	5	59	18	73		17	03	10								
5	257	29.6	-2	49.9	289	34.5 ¹⁵⁵	+14	24.8 ¹²⁵	50	4	49	5	58	2	24	70		16	59	12							
6	272	29.8	-2	50.9	304	09.1 ¹⁵⁶	+14	12.2 ¹²⁶	45	4	53	5	57	2	36	66		16	50	16							
7	287	30.0		51.9	318	43.7 ¹⁵⁶	+13	59.5 ¹²⁷	40	57	28	55		47	61		42	20									
8	302	30.2		52.9	333	18.4 ¹⁵⁷		46.7 ¹²⁸	35	4	59	29	54	2	56	58		35	24								
9	317	30.4		53.8	347	53.0 ¹⁵⁶		33.9 ¹²⁸	30	5	01	29	53	3	04	55		29	27								
10	332	30.6		54.8	2	27.8 ¹⁵⁸		21.1 ¹²⁸	20	03	29	51		17	50		18	32									
11	347	30.8	-2	55.8	17	02.5 ¹⁵⁷	+13	08.2 ¹²⁹	10 N	5	03	5	49	3	29	45		16	09	36							
12	2	31.0	-2	56.7	31	37.3 ¹⁵⁸	+12	55.2 ¹³⁰	0	5	02	5	47	3	40	41		16	00	41							
13	17	31.2		57.7	46	12.2 ¹⁵⁹		42.2 ¹³⁰	10 S	4	59	24	45	3	51	37		15	51	45							
14	32	31.4		58.7	60	47.1 ¹⁵⁹		29.2 ¹³⁰	20	55	20	42		4	02	33		41	50								
15	47	31.6	-2	59.7	75	22.0 ¹⁵⁹		16.0 ¹³²	30	48	16	40		15	28		30	55									
16	62	31.8	-3	00.6	89	56.9 ¹⁵⁹	+12	02.9 ¹³¹	35	43	13	38		23	25		24	58									
17	77	32.1	-3	01.6	104	31.9 ¹⁶⁰	+11	49.6 ¹³³	40	4	37	5	09	4	32	21		15	17	61							
18	92	32.3	-3	02.6	119	06.9 ¹⁶⁰	+11	36.4 ¹³²	45	4	30	5	04	5	42	17		15	08	65							
19	107	32.5		03.5	133	41.9 ¹⁶⁰		23.0 ¹³⁴	50	20	4	59	31	4	54	13		14	58	70							
20	122	32.7		04.5	148	17.0 ¹⁶¹	+11	09.7 ¹³³	52	15	56	30		4	59	11		53	73								
21	137	32.9		05.5	162	52.1 ¹⁶¹	+10	56.3 ¹³⁴	54	10	53	29		5	05	9		48	75								
22	152	33.1		06.5	177	27.2 ¹⁶¹		42.8 ¹³⁵	56	4	04	50	27		12	6		42	78								
23	167	33.3		07.4	192	02.3 ¹⁶¹		29.3 ¹³⁵	58	3	58	46	25		20	2		35	81								
24	182	33.5	-3	08.4	206	37.5 ¹⁶²	+10	15.7 ¹³⁶	60 S	3	50	4	41	5	28	**		14	27	86							
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO														
	PMG: 23 ^h 20 ^m 8			Mag: -4.2 PMG: 14 ^h 37 ^m			Mag: -1.7 PMG: 2 ^h 50 ^m			Mag: -1.7 PMG: 12 ^h 55 ^m			Mag: +0.4 PMG: 8 ^h 09 ^m														
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec													
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°												
0	8	50.4	140	50.0	-19	53.6	317	17.9	+16	25.7	165	53.4	-8	27.3	237	29.1	+18	26.6									
1	23	52.9	155	49.6		54.5	332	20.3		25.8	180	55.3		27.5	252	31.4		26.5									
2	38	55.4	170	49.2		55.4	347	22.7		25.9	195	57.3		27.7	267	33.6		26.5									
3	53	57.8	185	48.8		56.3	2	25.1		26.0	210	59.3		27.9	282	35.8		26.4									
4	69	00.3	200	48.4		57.2	17	27.5		26.1	226	01.2		28.1	297	38.1		26.4									
5	84	02.8	215	48.1	-19	58.1	32	29.9	+16	26.1	241	03.2	-8	28.3	312	40.3	+18	26.3									
6	99	05.2	230	47.7	-19	59.0	47	32.3	+16	26.2	256	05.2	-8	28.5	327	42.6	+18	26.3									
7	114	07.7	245	47.3	-19	59.9	62	34.8		26.3	271	07.1		28.7	342	44.8		26.2									
8	129	10.1	260	46.9	-20	00.8	77	37.2		26.4	286	09.1		28.9	357	47.0		26.2									
9	144	12.6	275	46.5		01.7	92	39.6		26.5	301	11.1		29.1	12	49.3		26.1									
10	159	15.1	290	46.1		02.6	107	42.0		26.6	316	13.0		29.3	27	51.5		26.1									
11	174	17.5	305	45.8	-20	03.5	122	44.5	+16	26.7	331	15.0	-8	29.5	42	53.8	+18	26.0									
12	189	20.0	320	45.4	-20	04.4	137	46.9	+16	26.7	346	17.0	-8	29.7	57	56.0	+18	26.0									
13	204	22.5	335	45.0		05.3	152	49.3		26.8	1	18.9		29.9	72	58.2		25.9									
14	219	24.9	350	44.6		06.2	167	51.8		26.9	16	20.9		30.1	88	00.5		25.9									
15	234	27.4	5	44.2		07.1	182	54.2		27.0	31	22.9		30.3	103	02.7		25.8									
16	249	29.9	20	43.8		08.0	197	56.6		27.1	46	24.8		30.5	118	05.0		25.8									
17	264	32.3	35	43.4	-20	08.9	212	59.1	+16	27.2	61	26.8	-8	30.7	133	07.2	+18	25.7									
18	279	34.8	50	43.0	-20	09.8	228	01.5	+16	27.2	76	28.7	-8	30.8	148	09.5	+18	25.6									
19	294	37.2	65	42.7		10.7	243	03.9		27.3	91	30.7		31.0	163	11.7		25.6									
20	309	39.7	80	42.3		11.6	258	06.4		27.4	106	32.7		31.2	178	13.9		25.5									
21	324	42.2	95	41.9		12.5	273	08.8		27.5	121	34.6		31.4	193	16.2		25.5									
22	339	44.6	110	41.5		13.4	288	11.3		27.6	136	36.6		31.6	208	18.4		25.4									
23	354	47.1	125	41.1		14.3	303	13.7		27.6	151	38.6		31.8	223	20.7		25.4									
24	9	49.6	140	40.7	-20	15.1	318	16.2	+16	27.7	166	40.5	-8	32.0	238	22.9	+18	25.3									
Dif	—			-4			-9			+24			+1			+20			-2			+22			-1		

UT	SOL		● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'0		Edad: 27 ^d 2 PHE { 4 ^h : 54'5 12 ^h : 54'6 20 ^h : 54'7											
	PMG: 11 ^h 49 ^m 6		SD: 14'8 PMG: 10 ^h 31 ^m R°: 40 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	m	h m m	m
0	182	33.5	-3	08.4	206	37.5	+10 15.7	60 N	17 32	18 14	19 02	3 12 85	17 25	**
1	197	33.7		09.4	221	12.7 ¹⁶²	+10 02.1 ¹³⁶	58	34	13	18 59	17 82	22	1
2	212	33.9		10.3	235	47.9 ¹⁶²	+9 48.5 ¹³⁶	56	35	12	55	22 78	19	4
3	227	34.1		11.3	250	23.2 ¹⁶³	34.8 ¹³⁷	54	36	11	53	27 75	16	
4	242	34.3		12.3	264	58.5 ¹⁶³	21.0 ¹³⁸	52	37	11	50	31 72	13	10
5	257	34.5	-3	13.2	279	33.8 ¹⁶³	+9 07.3 ¹³⁷	50	17 38	18 11	18 48	3 34 70	17 11	12
6	272	34.7	-3	14.2	294	09.1 ¹⁶³	+8 53.5 ¹³⁸	45	17 41	18 10	18 44	3 42 65	17 06	16
7	287	34.9		15.2	308	44.4 ¹⁶³	39.6 ¹³⁹	40	42	09	41	48 62	17 02	20
8	302	35.1		16.2	323	19.7 ¹⁶³	25.7 ¹³⁹	35	44	09	39	54 58	16 59	23
9	317	35.3		17.1	337	55.1 ¹⁶⁴	+8 11.8 ¹³⁹	30	45	09	37	3 59 54	56	26
10	332	35.5		18.1	352	30.5 ¹⁶⁴	+7 57.8 ¹⁴⁰	20	48	10	36	4 07 49	50	31
11	347	35.7	-3	19.1	7	05.9 ¹⁶⁴	+7 43.8 ¹⁴⁰	10 N	17 51	18 12	18 36	4 14 45	16 45	36
12	2	35.9	-3	20.0	21	41.3 ¹⁶⁴	+7 29.7 ¹⁴¹	0	17 53	18 14	18 38	4 21 40	16 41	40
13	17	36.1		21.0	36	16.7 ¹⁶⁴	15.7 ¹⁴⁰	10 S	55	16	41	28 36	36	44
14	32	36.3		22.0	50	52.2 ¹⁶⁵	+7 01.6 ¹⁴¹	20	17 58	20	46	35 32	31	49
15	47	36.5		22.9	65	27.6 ¹⁶⁴	+6 47.4 ¹⁴²	30	18 01	25	53	43 27	25	55
16	62	36.7		23.9	80	03.1 ¹⁶⁵	33.2 ¹⁴²	35	03	29	18 58	48 23	22	57
17	77	36.9	-3	24.9	94	38.6 ¹⁶⁵	+6 19.0 ¹⁴²	40	18 05	18 33	19 05	4 53 20	16 18	61
18	92	37.1	-3	25.8	109	14.1 ¹⁶⁵	+6 04.8 ¹⁴²	45	18 08	18 38	19 13	4 59 17	16 13	66
19	107	37.3		26.8	123	49.6 ¹⁶⁵	+5 50.5 ¹⁴³	50	11	44	23	5 07 11	08	70
20	122	37.5		27.8	138	25.1 ¹⁶⁵	36.2 ¹⁴³	52	13	47	28	10 9	06	72
21	137	37.7		28.8	153	00.6 ¹⁶⁵	21.8 ¹⁴⁴	54	14	50	33	14 7	03	75
22	152	37.9		29.7	167	36.1 ¹⁶⁵	+5 07.5 ¹⁴³	56	16	54	40	18 4	16 00	78
23	167	38.1		30.7	182	11.6 ¹⁶⁵	+4 53.1 ¹⁴⁴	58	18	18 58	47	22 2	15 56	82
24	182	38.3	-3	31.7	196	47.1 ¹⁶⁵	+4 38.7 ¹⁴⁴	60 S	18 20	19 03	19 55	5 27 **	15 53	84
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 23 ^h 16 ^m 9		Mag: -4.2 PMG: 14 ^h 38 ^m		Mag: -1.7 PMG: 2 ^h 46 ^m		Mag: -1.7 PMG: 12 ^h 52 ^m		Mag: +0.4 PMG: 8 ^h 05 ^m					
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	°	°	°	°	°	°	°	°					
0	9 49.6	140 40.7	-20 15.1	318 16.2	+16 27.7	166 40.5	-8 32.0	238 22.9	+18 25.3					
1	24 52.0	155 40.3	16.0	333 18.6	27.8	181 42.5	32.2	253 25.2	25.3					
2	39 54.5	170 39.9	16.9	348 21.1	27.9	196 44.5	32.4	268 27.4	25.2					
3	54 57.0	185 39.5	17.8	3 23.5	28.0	211 46.4	32.6	283 29.6	25.2					
4	69 59.4	200 39.2	18.7	18 26.0	28.0	226 48.4	32.8	298 31.9	25.1					
5	85 01.9	215 38.8	-20 19.6	33 28.4	+16 28.1	241 50.4	-8 33.0	313 34.1	+18 25.1					
6	100 04.4	230 38.4	-20 20.5	48 30.9	+16 28.2	256 52.3	-8 33.2	328 36.4	+18 25.0					
7	115 06.8	245 38.0	21.4	63 33.3	28.3	271 54.3	33.4	343 38.6	25.0					
8	130 09.3	260 37.6	22.2	78 35.8	28.4	286 56.3	33.6	358 40.9	24.9					
9	145 11.7	275 37.2	23.1	93 38.3	28.4	301 58.2	33.8	13 43.1	24.9					
10	160 14.2	290 36.8	24.0	108 40.7	28.5	317 00.2	34.0	28 45.3	24.8					
11	175 16.7	305 36.4	-20 24.9	123 43.2	+16 28.6	332 02.2	-8 34.2	43 47.6	+18 24.8					
12	190 19.1	320 36.0	-20 25.8	138 45.7	+16 28.7	347 04.1	-8 34.4	58 49.8	+18 24.7					
13	205 21.6	335 35.6	26.6	153 48.1	28.7	2 06.1	34.6	73 52.1	24.7					
14	220 24.1	350 35.2	27.5	168 50.6	28.8	17 08.1	34.8	88 54.3	24.6					
15	235 26.5	5 34.8	28.4	183 53.1	28.9	32 10.0	35.0	103 56.6	24.6					
16	250 29.0	20 34.4	29.3	198 55.5	29.0	47 12.0	35.2	118 58.8	24.5					
17	265 31.5	35 34.1	-20 30.2	213 58.0	+16 29.0	62 13.9	-8 35.4	134 01.1	+18 24.5					
18	280 33.9	50 33.7	-20 31.0	229 00.5	+16 29.1	77 15.9	-8 35.6	149 03.3	+18 24.4					
19	295 36.4	65 33.3	31.9	244 03.0	29.2	92 17.9	35.8	164 05.6	24.4					
20	310 38.8	80 32.9	32.8	259 05.4	29.3	107 19.8	36.0	179 07.8	24.3					
21	325 41.3	95 32.5	33.7	274 07.9	29.3	122 21.8	36.2	194 10.0	24.3					
22	340 43.8	110 32.1	34.5	289 10.4	29.4	137 23.8	36.4	209 12.3	24.2					
23	355 46.2	125 31.7	35.4	304 12.9	29.5	152 25.7	36.6	224 14.5	24.2					
24	10 48.7	140 31.3	-20 36.3	319 15.4	+16 29.6	167 27.7	-8 36.8	239 16.8	+18 24.1					
Dif	—	-4	-9	+25	+1	+20	-2	+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 49 ^m 0		Edad: 29 ^d 2 PHE { 4 ^h : 55'3 12 ^h : 55'4 20 ^h : 55'5 R°: 42 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	**
0	182	43.0	-3	54.9	186	57.9	-1 13.1	60 N	17 26	18 08	18 56	6 02 87	17 22	**
1	197	43.2		55.9	201	33.2 ¹⁶³	27.9 ¹⁴⁸	58	28	07	53	6 00 84	25	2
2	212	43.4		56.8	216	08.5 ¹⁶³	42.7 ¹⁴⁸	56	30	07	50	5 59 80	27	6
3	227	43.6		57.8	230	43.7 ¹⁶²	-1 57.5 ¹⁴⁸	54	31	07	48	58 77	30	8
4	242	43.8		58.8	245	18.9 ¹⁶²	-2 12.4 ¹⁴⁹	52	33	06	45	56 75	32	11
5	257	44.0	-3	59.7	259	54.0 ¹⁶¹	-2 27.2 ¹⁴⁸	50	17 34	18 06	18 44	5 55 73	17 34	13
6	272	44.2	-4	00.7	274	29.2 ¹⁶²	-2 42.0 ¹⁴⁸	45	17 37	18 06	18 40	5 53 68	17 39	17
7	287	44.3		01.7	289	04.3 ¹⁶¹	-2 56.8 ¹⁴⁸	40	39	06	37	51 64	42	22
8	302	44.5		02.6	303	39.4 ¹⁶¹	-3 11.6 ¹⁴⁸	35	41	06	36	50 59	45	26
9	317	44.7		03.6	318	14.4 ¹⁶⁰	26.4 ¹⁴⁸	30	43	07	35	48 57	48	28
10	332	44.9		04.6	332	49.4 ¹⁶⁰	41.3 ¹⁴⁹	20	46	08	34	46 51	53	34
11	347	45.1	-4	05.5	347	24.4 ¹⁶⁰	-3 56.1 ¹⁴⁸	10 N	17 49	18 10	18 35	5 44 46	17 58	38
12	2	45.3	-4	06.5	1	59.4 ¹⁶⁰	-4 10.9 ¹⁴⁸	0	17 52	18 13	18 37	5 42 42	18 02	42
13	17	45.5		07.5	16	34.3 ¹⁵⁹	25.7 ¹⁴⁸	10 S	55	16	41	40 37	06	47
14	32	45.7		08.4	31	09.1 ¹⁵⁸	40.4 ¹⁴⁷	20	17 59	21	46	38 33	10	52
15	47	45.9		09.4	45	44.0 ¹⁵⁹	-4 55.2 ¹⁴⁸	30	18 02	27	18 55	36 27	15	58
16	62	46.1		10.4	60	18.8 ¹⁵⁸	-5 10.0 ¹⁴⁸	35	05	30	19 00	35 24	18	61
17	77	46.3	-4	11.3	74	53.5 ¹⁵⁷	-5 24.8 ¹⁴⁸	40	18 07	18 35	19 07	5 33 21	18 22	64
18	92	46.5	-4	12.3	89	28.3 ¹⁵⁸	-5 39.5 ¹⁴⁷	45	18 11	18 40	19 15	5 32 16	18 25	69
19	107	46.7		13.3	104	02.9 ¹⁵⁶	-5 54.2 ¹⁴⁷	50	14	47	26	30 12	30	74
20	122	46.9		14.2	118	37.6 ¹⁵⁷	-6 09.0 ¹⁴⁸	52	16	50	32	29 10	32	77
21	137	47.0		15.2	133	12.2 ¹⁵⁶	23.7 ¹⁴⁷	54	18	54	38	28 7	34	80
22	152	47.2		16.1	147	46.7 ¹⁵⁵	38.4 ¹⁴⁷	56	20	18 58	44	27 5	37	82
23	167	47.4		17.1	162	21.2 ¹⁵⁵	-6 53.0 ¹⁴⁶	58	22	19 03	19 52	25 2	40	86
24	182	47.6	-4	18.1	176	55.6 ¹⁵⁴	-7 07.7 ¹⁴⁷	60 S	18 25	19 08	20 01	5 24 **	18 43	90
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 23 ^h 09 ^m 0		Mag: -4.2 PMG: 14 ^h 39 ^m			Mag: -1.7 PMG: 2 ^h 39 ^m			Mag: -1.7 PMG: 12 ^h 45 ^m			Mag: +0.4 PMG: 7 ^h 58 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	11	47.8	140	21.7	-20	56.9	320	15.5	+16	31.2	168	14.8	-8	41.5
1	26	50.3	155	21.3		57.8	335	18.1		31.3	183	16.8		41.7
2	41	52.8	170	20.9		58.6	350	20.6		31.4	198	18.7		41.9
3	56	55.2	185	20.5	-20	59.5	5	23.1		31.4	213	20.7		42.1
4	71	57.7	200	20.1	-21	00.3	20	25.6		31.5	228	22.7		42.3
5	87	00.2	215	19.6	-21	01.2	35	28.2	+16	31.6	243	24.6	-8	42.5
6	102	02.6	230	19.2	-21	02.0	50	30.7	+16	31.6	258	26.6	-8	42.7
7	117	05.1	245	18.8		02.9	65	33.2		31.7	273	28.6		42.9
8	132	07.6	260	18.4		03.7	80	35.8		31.8	288	30.5		43.1
9	147	10.0	275	18.0		04.5	95	38.3		31.8	303	32.5		43.3
10	162	12.5	290	17.6		05.4	110	40.9		31.9	318	34.4		43.5
11	177	14.9	305	17.2	-21	06.2	125	43.4	+16	32.0	333	36.4	-8	43.6
12	192	17.4	320	16.8	-21	07.1	140	45.9	+16	32.0	348	38.4	-8	43.8
13	207	19.9	335	16.4		07.9	155	48.5		32.1	3	40.3		44.0
14	222	22.3	350	16.0		08.8	170	51.0		32.1	18	42.3		44.2
15	237	24.8	5	15.6		09.6	185	53.6		32.2	33	44.3		44.4
16	252	27.3	20	15.2		10.4	200	56.1		32.3	48	46.2		44.6
17	267	29.7	35	14.8	-21	11.3	215	58.7	+16	32.3	63	48.2	-8	44.8
18	282	32.2	50	14.4	-21	12.1	231	01.2	+16	32.4	78	50.1	-8	45.0
19	297	34.7	65	13.9		12.9	246	03.8		32.4	93	52.1		45.2
20	312	37.1	80	13.5		13.8	261	06.4		32.5	108	54.1		45.4
21	327	39.6	95	13.1		14.6	276	08.9		32.6	123	56.0		45.6
22	342	42.1	110	12.7		15.4	291	11.5		32.6	138	58.0		45.8
23	357	44.5	125	12.3		16.3	306	14.0		32.7	154	00.0		46.0
24	12	47.0	140	11.9	-21	17.1	321	16.6	+16	32.7	169	01.9	-8	46.2
Dif	—		-4		-8		+25		+1		+20		-2	
											+23		0	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16:0 PMG: 11 ^h 48 ^m 7			Edad: 0 ^d 6 PHE { 4 ^h : 55:7 12 ^h : 55:9 20 ^h : 56:0 R°: 45 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	°	'	°	°	'	°	'	h	m	h	m	h	m	h	m	h	m	
0	182	47.6	-4	181	176	55.6	-7	07.7	60 N	4	43	5	31	6	13	7	29	
1	197	47.8		19.0	191	30.0 ¹⁵⁴		22.3 ¹⁴⁶	58		46		32	11		24	88	
2	212	48.0		20.0	206	04.4 ¹⁵⁴		37.0 ¹⁴⁷	56		49		32	09		19	85	
3	227	48.2		21.0	220	38.7 ¹⁵³	-7	51.6 ¹⁴⁶	54		51		32	07		15	81	
4	242	48.4		21.9	235	12.9 ¹⁵²	-8	06.2 ¹⁴⁶	52		53		32	06		11	79	
5	257	48.6	-4	22.9	249	47.1 ¹⁵²	-8	20.7 ¹⁴⁵	50	4	55	5	32	6	05	7	08	
6	272	48.8	-4	23.9	264	21.3 ¹⁵²	-8	35.2 ¹⁴⁵	45	4	58	5	32	6	02	7	01	
7	287	49.0		24.8	278	55.4 ¹⁵¹	-8	49.8 ¹⁴⁶	40	5	01		32	5	59	6	55	
8	302	49.2		25.8	293	29.4 ¹⁵⁰	-9	04.2 ¹⁴⁴	35		02		32	57		49	62	
9	317	49.3		26.8	308	03.4 ¹⁵⁰		18.7 ¹⁴⁵	30		03		31	55		45	59	
10	332	49.5		27.7	322	37.3 ¹⁴⁹		33.1 ¹⁴⁴	20		04		30	52		37	53	
11	347	49.7	-4	28.7	337	11.1 ¹⁴⁸	-9	47.5 ¹⁴⁴	10 N	5	03	5	27	5	48	6	30	
12	2	49.9	-4	29.7	351	44.9 ¹⁴⁸	-10	01.9 ¹⁴⁴	0	5	01	5	25	5	45	6	24	
13	17	50.1		30.6	6	18.7 ¹⁴⁸		16.2 ¹⁴³	10 S	4	57		21	42		17	40	
14	32	50.3		31.6	20	52.3 ¹⁴⁶		30.5 ¹⁴³	20		51		17	39		11	35	
15	47	50.5		32.5	35	25.9 ¹⁴⁶		44.8 ¹⁴³	30		43		11	35		6	03	
16	62	50.7		33.5	49	59.5 ¹⁴⁶	-10	59.0 ¹⁴²	35		37		07	32		5	59	
17	77	50.9	-4	34.5	64	33.0 ¹⁴⁵	-11	13.2 ¹⁴²	40	4	30	5	02	5	30	5	54	
18	92	51.0	-4	35.4	79	06.4 ¹⁴⁴	-11	27.4 ¹⁴²	45	4	22	4	57	5	26	5	48	
19	107	51.2		36.4	93	39.7 ¹⁴³		41.5 ¹⁴¹	50		11		50	23		42	14	
20	122	51.4		37.4	108	13.0 ¹⁴³	-11	55.6 ¹⁴¹	52	4	05		47	21		39	11	
21	137	51.6		38.3	122	46.2 ¹⁴²	-12	09.7 ¹⁴¹	54	3	59		43	19		35	9	
22	152	51.8		39.3	137	19.3 ¹⁴¹		23.7 ¹⁴⁰	56		52		39	17		32	6	
23	167	52.0		40.2	151	52.4 ¹⁴¹		37.6 ¹³⁹	58		45		34	14		27	3	
24	182	52.2	-4	41.2	166	25.4 ¹⁴⁰	-12	51.5 ¹³⁹	60 S	3	36	4	29	5	11	5	23	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 23 ^h 05 ^m 1			Mag: -4.2 PMG: 14 ^h 40 ^m			Mag: -1.8 PMG: 2 ^h 34 ^m			Mag: -1.7 PMG: 12 ^h 42 ^m			Mag: +0.4 PMG: 7 ^h 54 ^m					
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°			
0	12	47.0	140	11.9	-21	17.1	321	16.6	+16	32.7	169	01.9	-8	46.2	241	04.8	+18	21.7
1	27	49.4	155	11.5		17.9	336	19.2		32.8	184	03.9		46.4	256	07.0		21.6
2	42	51.9	170	11.1		18.8	351	21.7		32.9	199	05.8		46.6	271	09.3		21.6
3	57	54.4	185	10.7		19.6	6	24.3		32.9	214	07.8		46.8	286	11.5		21.5
4	72	56.8	200	10.3		20.4	21	26.9		33.0	229	09.8		47.0	301	13.8		21.5
5	87	59.3	215	09.8	-21	21.2	36	29.4	+16	33.0	244	11.7	-8	47.2	316	16.0	+18	21.4
6	103	01.8	230	09.4	-21	22.1	51	32.0	+16	33.1	259	13.7	-8	47.4	331	18.3	+18	21.4
7	118	04.2	245	09.0		22.9	66	34.6		33.2	274	15.6		47.6	346	20.5		21.3
8	133	06.7	260	08.6		23.7	81	37.2		33.2	289	17.6		47.8	1	22.8		21.3
9	148	09.2	275	08.2		24.5	96	39.7		33.3	304	19.6		48.0	16	25.1		21.2
10	163	11.6	290	07.8		25.4	111	42.3		33.3	319	21.5		48.2	31	27.3		21.2
11	178	14.1	305	07.4	-21	26.2	126	44.9	+16	33.4	334	23.5	-8	48.4	46	29.6	+18	21.2
12	193	16.5	320	06.9	-21	27.0	141	47.5	+16	33.4	349	25.4	-8	48.6	61	31.8	+18	21.1
13	208	19.0	335	06.5		27.8	156	50.1		33.5	4	27.4		48.8	76	34.1		21.1
14	223	21.5	350	06.1		28.6	171	52.6		33.6	19	29.4		49.0	91	36.3		21.0
15	238	23.9	5	05.7		29.5	186	55.2		33.6	34	31.3		49.2	106	38.6		21.0
16	253	26.4	20	05.3		30.3	201	57.8		33.7	49	33.3		49.4	121	40.8		20.9
17	268	28.9	35	04.9	-21	31.1	217	00.4	+16	33.7	64	35.3	-8	49.6	136	43.1	+18	20.9
18	283	31.3	50	04.5	-21	31.9	232	03.0	+16	33.8	79	37.2	-8	49.8	151	45.4	+18	20.8
19	298	33.8	65	04.0		32.7	247	05.6		33.8	94	39.2		50.0	166	47.6		20.8
20	313	36.3	80	03.6		33.5	262	08.2		33.9	109	41.1		50.1	181	49.9		20.7
21	328	38.7	95	03.2		34.4	277	10.8		33.9	124	43.1		50.3	196	52.1		20.7
22	343	41.2	110	02.8		35.2	292	13.4		34.0	139	45.1		50.5	211	54.4		20.6
23	358	43.7	125	02.4		36.0	307	16.0		34.0	154	47.0		50.7	226	56.6		20.6
24	13	46.1	140	02.0	-21	36.8	322	18.6	+16	34.1	169	49.0	-8	50.9	241	58.9	+18	20.5
Dif	—		-4		-8		+26		+1		+20		-2		+23			

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:0 PMG: 11 ^h 48 ^m 4			Edad: 1 ^d 6 PHE { 4 ^h : 56:2 12 ^h : 56:3 20 ^h : 56:5 PMG: 13 ^h 19 ^m R°: 48 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	°	'	°	°	h m	h m	h m	h m m	h m m	h m m	
0	182	52.2	-4 41.2	166	25.4	-12 51.5	60 N	17 20	18 02	18 50	9 02 99	17 20 0		
1	197	52.4	42.2	180	58.3 ¹³⁹	-13 05.4 ¹³⁹	58	23	02	47	8 52 94	30 6		
2	212	52.6	43.1	195	31.1 ¹³⁸	19.2 ¹³⁸	56	25	02	45	44 89	40 10		
3	227	52.7	44.1	210	03.9 ¹³⁸	33.0 ¹³⁸	54	27	02	43	36 85	48 14		
4	242	52.9	45.1	224	36.6 ¹³⁷	-13 46.7 ¹³⁷	52	28	02	41	30 81	17 55 17		
5	257	53.1	-4 46.0	239	09.2 ¹³⁶	-14 00.4 ¹³⁷	50	17 30	18 02	18 39	8 24 79	18 02 20		
6	272	53.3	-4 47.0	253	41.7 ¹³⁵	-14 14.0 ¹³⁶	45	17 33	18 02	18 36	8 11 73	18 16 26		
7	287	53.5	47.9	268	14.1 ¹³⁴	27.6 ¹³⁶	40	36	03	34	8 00 69	28 30		
8	302	53.7	48.9	282	46.5 ¹³⁴	41.1 ¹³⁵	35	38	04	33	7 51 65	39 33		
9	317	53.9	49.9	297	18.8 ¹³³	-14 54.6 ¹³⁵	30	41	05	32	44 61	18 48 36		
10	332	54.0	50.8	311	51.0 ¹³²	-15 08.0 ¹³⁴	20	45	07	32	30 57	19 03 41		
11	347	54.2	-4 51.8	326	23.1 ¹³¹	-15 21.3 ¹³³	10 N	17 48	18 09	18 34	7 19 51	19 17 45		
12	2	54.4	-4 52.8	340	55.1 ¹³⁰	-15 34.6 ¹³³	0	17 52	18 12	18 36	7 08 47	19 30 49		
13	17	54.6	53.7	355	27.1 ¹³⁰	-15 47.8 ¹³²	10 S	55	16	41	6 57 43	43 53		
14	32	54.8	54.7	9	58.9 ¹²⁸	-16 01.0 ¹³²	20	17 59	21	47	46 38	19 57 58		
15	47	55.0	55.6	24	30.7 ¹²⁸	14.1 ¹³¹	30	18 04	28	18 56	33 33	20 13 63		
16	62	55.2	56.6	39	02.4 ¹²⁷	27.1 ¹³⁰	35	06	32	19 02	25 31	22 66		
17	77	55.3	-4 57.6	53	34.0 ¹²⁶	-16 40.0 ¹²⁹	40	18 09	18 37	19 09	6 17 27	20 33 70		
18	92	55.5	-4 58.5	68	05.5 ¹²⁵	-16 52.9 ¹²⁹	45	18 13	18 43	19 18	6 07 23	20 46 74		
19	107	55.7	-4 59.5	82	36.9 ¹²⁴	-17 05.8 ¹²⁹	50	17	50	30	5 56 17	21 01 80		
20	122	55.9	-5 00.4	97	08.2 ¹²³	18.5 ¹²⁷	52	19	54	36	50 15	08 83		
21	137	56.1	01.4	111	39.5 ¹²³	31.2 ¹²⁷	54	22	18 58	42	44 12	16 87		
22	152	56.3	02.4	126	10.6 ¹²¹	43.8 ¹²⁶	56	24	19 02	49	38 8	25 91		
23	167	56.5	03.3	140	41.7 ¹²¹	-17 56.3 ¹²⁵	58	27	07	19 57	30 5	36 95		
24	182	56.6	-5 04.3	155	12.6 ¹¹⁹	-18 08.8 ¹²⁵	60 S	18 30	19 13	20 07	5 22 0	21 48 102		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 23 ^h 01 ^m 1		Mag: -4.3 PMG: 14 ^h 40 ^m			Mag: -1.8 PMG: 2 ^h 30 ^m			Mag: -1.7 PMG: 12 ^h 39 ^m			Mag: +0.4 PMG: 7 ^h 51 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	'	°	°	'	°
0	13	46.1	140 02.0	-21 36.8	322 18.6	+16 34.1	169 49.0	-8 50.9	241 58.9	+18 20.5				
1	28	48.6	155 01.5	37.6	337 21.2	34.1	184 50.9	51.1	257 01.1	20.5				
2	43	51.0	170 01.1	38.4	352 23.8	34.2	199 52.9	51.3	272 03.4	20.4				
3	58	53.5	185 00.7	39.2	7 26.4	34.3	214 54.9	51.5	287 05.7	20.4				
4	73	56.0	200 00.3	40.0	22 29.0	34.3	229 56.8	51.7	302 07.9	20.3				
5	88	58.4	214 59.9	-21 40.8	37 31.6	+16 34.4	244 58.8	-8 51.9	317 10.2	+18 20.3				
6	104	00.9	229 59.4	-21 41.6	52 34.2	+16 34.4	260 00.7	-8 52.1	332 12.4	+18 20.2				
7	119	03.4	244 59.0	42.4	67 36.9	34.5	275 02.7	52.3	347 14.7	20.2				
8	134	05.8	259 58.6	43.2	82 39.5	34.5	290 04.7	52.5	2 16.9	20.1				
9	149	08.3	274 58.2	44.0	97 42.1	34.6	305 06.6	52.7	17 19.2	20.1				
10	164	10.8	289 57.8	44.8	112 44.7	34.6	320 08.6	52.9	32 21.5	20.0				
11	179	13.2	304 57.4	-21 45.6	127 47.3	+16 34.7	335 10.5	-8 53.1	47 23.7	+18 20.0				
12	194	15.7	319 56.9	-21 46.4	142 49.9	+16 34.7	350 12.5	-8 53.3	62 26.0	+18 19.9				
13	209	18.1	334 56.5	47.2	157 52.6	34.8	5 14.5	53.5	77 28.2	19.9				
14	224	20.6	349 56.1	48.0	172 55.2	34.8	20 16.4	53.7	92 30.5	19.8				
15	239	23.1	4 55.7	48.8	187 57.8	34.9	35 18.4	53.9	107 32.8	19.8				
16	254	25.5	19 55.2	49.6	203 00.4	34.9	50 20.3	54.1	122 35.0	19.7				
17	269	28.0	34 54.8	-21 50.4	218 03.1	+16 35.0	65 22.3	-8 54.3	137 37.3	+18 19.7				
18	284	30.5	49 54.4	-21 51.2	233 05.7	+16 35.0	80 24.3	-8 54.5	152 39.5	+18 19.6				
19	299	32.9	64 54.0	52.0	248 08.3	35.0	95 26.2	54.7	167 41.8	19.6				
20	314	35.4	79 53.6	52.8	263 11.0	35.1	110 28.2	54.9	182 44.0	19.5				
21	329	37.9	94 53.1	53.6	278 13.6	35.1	125 30.1	55.1	197 46.3	19.5				
22	344	40.3	109 52.7	54.4	293 16.2	35.2	140 32.1	55.3	212 48.6	19.5				
23	359	42.8	124 52.3	55.2	308 18.9	35.2	155 34.1	55.5	227 50.8	19.4				
24	14	45.3	139 51.9	-21 56.0	323 21.5	+16 35.3	170 36.0	-8 55.7	242 53.1	+18 19.4				
Dif	—		-4	-8	+26	0	+20	-2	+23	0				

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'0 PMG: 11 ^h 48 ^m 1			Edad: 2 ^d 6 PHE { 4 ^h : 56'7 12 ^h : 56'8 20 ^h : 57'0 Rº: 53 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	182	56.6	-5 04.3	155	12.6	-18 08.8	60 N	4 48	5 36	6 17	10 41	106	17 20	3	
1	197	56.8	05.2	169	43.5 ¹¹⁹	21.2 ¹²⁴	58	50	36	15	26	97	36	11	
2	212	57.0	06.2	184	14.2 ¹¹⁷	33.5 ¹²³	56	53	36	13	13	92	17 50	16	
3	227	57.2	07.2	198	44.9 ¹¹⁷	45.7 ¹²²	54	55	36	11	10 01	88	18 02	20	
4	242	57.4	08.1	213	15.4 ¹¹⁵	-18 57.9 ¹²²	52	56	36	09	9 51	84	12	24	
5	257	57.6	-5 09.1	227	45.9 ¹¹⁵	-19 09.9 ¹²⁰	50	4 58	5 35	6 08	9 43	80	18 22	27	
6	272	57.7	-5 10.0	242	16.3 ¹¹⁴	-19 21.9 ¹²⁰	45	5 01	5 35	6 04	9 24	75	18 42	32	
7	287	57.9	11.0	256	46.5 ¹¹²	33.8 ¹¹⁹	40	03	34	6 01	9 09	71	18 58	36	
8	302	58.1	12.0	271	16.7 ¹¹²	45.6 ¹¹⁸	35	04	33	5 59	8 56	68	19 12	39	
9	317	58.3	12.9	285	46.8 ¹¹¹	-19 57.3 ¹¹⁷	30	05	32	56	45	65	24	42	
10	332	58.5	13.9	300	16.7 ¹⁰⁹	-20 08.9 ¹¹⁶	20	05	30	52	27	59	19 44	47	
11	347	58.7	-5 14.8	314	46.6 ¹⁰⁹	-20 20.4 ¹¹⁵	10 N	5 03	5 27	5 48	8 10	56	20 02	51	
12	2	58.8	-5 15.8	329	16.3 ¹⁰⁷	-20 31.9 ¹¹⁵	0	5 00	5 24	5 45	7 55	52	20 19	54	
13	17	59.0	16.8	343	46.0 ¹⁰⁷	43.2 ¹¹³	10 S	4 55	20	41	40	48	36	58	
14	32	59.2	17.7	358	15.6 ¹⁰⁶	-20 54.4 ¹¹²	20	49	15	37	24	44	20 55	61	
15	47	59.4	18.7	12	45.0 ¹⁰⁴	-21 05.6 ¹¹²	30	40	08	32	7 06	39	21 16	65	
16	62	59.6	19.6	27	14.4 ¹⁰⁴	16.6 ¹¹⁰	35	34	5 04	30	6 56	36	28	68	
17	77	59.7	-5 20.6	41	43.6 ¹⁰²	-21 27.6 ¹¹⁰	40	4 27	4 59	5 26	6 44	33	21 43	70	
18	92	59.9	-5 21.6	56	12.7 ¹⁰¹	-21 38.4 ¹⁰⁸	45	4 18	4 53	5 23	6 30	29	22 00	75	
19	108	00.1	22.5	70	41.8 ¹⁰¹	49.1 ¹⁰⁷	50	06	45	18	13	23	21	80	
20	123	00.3	23.5	85	10.7 ⁹⁹	-21 59.8 ¹⁰⁷	52	4 00	42	16	6 05	20	31	83	
21	138	00.5	24.4	99	39.5 ⁹⁸	-22 10.3 ¹⁰⁵	54	3 54	38	14	5 56	17	43	86	
22	153	00.6	25.4	114	08.2 ⁹⁷	20.7 ¹⁰⁴	56	46	33	11	46	14	22 56	91	
23	168	00.8	26.3	128	36.9 ⁹⁷	31.0 ¹⁰³	58	38	28	09	35	9	23 11	97	
24	183	01.0	-5 27.3	143	05.4 ⁹⁵	-22 41.2 ¹⁰²	60 S	3 28	4 22	5 05	5 22	2	23 30	106	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 22 ^h 57 ^m 2		Mag: -4.3 PMG: 14 ^h 41 ^m		Mag: -1.8 PMG: 2 ^h 26 ^m		Mag: -1.7 PMG: 12 ^h 36 ^m		Mag: +0.4 PMG: 7 ^h 47 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	14	45.3	139	51.9	-21 56.0	323	21.5	+16 35.3	170	36.0	-8 55.7	242	53.1	+18 19.4
1	29	47.7	154	51.4	56.8	338	24.2	35.3	185	38.0	55.9	257	55.3	19.3
2	44	50.2	169	51.0	57.6	353	26.8	35.4	200	39.9	56.1	272	57.6	19.3
3	59	52.6	184	50.6	58.3	8	29.5	35.4	215	41.9	56.3	287	59.9	19.2
4	74	55.1	199	50.2	59.1	23	32.1	35.5	230	43.8	56.5	303	02.1	19.2
5	89	57.6	214	49.7	-21 59.9	38	34.7	+16 35.5	245	45.8	-8 56.6	318	04.4	+18 19.1
6	105	00.0	229	49.3	-22 00.7	53	37.4	+16 35.6	260	47.8	-8 56.8	333	06.6	+18 19.1
7	120	02.5	244	48.9	01.5	68	40.0	35.6	275	49.7	57.0	348	08.9	19.0
8	135	05.0	259	48.5	02.3	83	42.7	35.6	290	51.7	57.2	3	11.2	19.0
9	150	07.4	274	48.0	03.0	98	45.4	35.7	305	53.6	57.4	18	13.4	18.9
10	165	09.9	289	47.6	03.8	113	48.0	35.7	320	55.6	57.6	33	15.7	18.9
11	180	12.4	304	47.2	-22 04.6	128	50.7	+16 35.8	335	57.6	-8 57.8	48	18.0	+18 18.8
12	195	14.8	319	46.8	-22 05.4	143	53.3	+16 35.8	350	59.5	-8 58.0	63	20.2	+18 18.8
13	210	17.3	334	46.3	06.2	158	56.0	35.9	6	01.5	58.2	78	22.5	18.7
14	225	19.8	349	45.9	06.9	173	58.7	35.9	21	03.4	58.4	93	24.7	18.7
15	240	22.2	4	45.5	07.7	189	01.3	35.9	36	05.4	58.6	108	27.0	18.6
16	255	24.7	19	45.1	08.5	204	04.0	36.0	51	07.4	58.8	123	29.3	18.6
17	270	27.1	34	44.6	-22 09.3	219	06.7	+16 36.0	66	09.3	-8 59.0	138	31.5	+18 18.6
18	285	29.6	49	44.2	-22 10.0	234	09.3	+16 36.1	81	11.3	-8 59.2	153	33.8	+18 18.5
19	300	32.1	64	43.8	10.8	249	12.0	36.1	96	13.2	59.4	168	36.1	18.5
20	315	34.5	79	43.3	11.6	264	14.7	36.1	111	15.2	59.6	183	38.3	18.4
21	330	37.0	94	42.9	12.3	279	17.3	36.2	126	17.1	-8 59.8	198	40.6	18.4
22	345	39.5	109	42.5	13.1	294	20.0	36.2	141	19.1	-9 00.0	213	42.8	18.3
23	0	41.9	124	42.1	13.9	309	22.7	36.3	156	21.1	-9 00.2	228	45.1	18.3
24	15	44.4	139	41.6	-22 14.7	324	25.4	+16 36.3	171	23.0	-9 00.4	243	47.4	+18 18.2
Dif	—		-4	-8		+27	0		+20	-2		+23	0	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16°0			Edad: 3 ^d 6 PHE	SD: 15°5				Final del crepúsculo		Salida de Luna		Puesta de Luna	
	PMG: 11 ^h 47 ^m 8				PMG: 15 ^h 00 ^m									
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	Rº	Hora	Rº
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	183	01.0	-5 27.3	143	05.4	-22 41.2		60 N	17 14	17 56	18 44	12 27 107	17 23 11	
1	198	01.2	28.3	157	33.8	-22 51.3	94	58	17	56	42	12 03 96	17 47 23	
2	213	01.4	29.2	172	02.1	-23 01.2	93	56	20	57	40	11 45 89	18 06 29	
3	228	01.5	30.2	186	30.2	11.1	91	54	22	57	38	29 85	22 34	
4	243	01.7	31.1	200	58.3	20.8	91	52	24	57	36	15 82	36 37	
5	258	01.9	-5 32.1	215	26.3	-23 30.4	90	50	17 25	17 58	18 35	11 03 79	18 49 39	
6	273	02.1	-5 33.0	229	54.2	-23 39.9	89	45	17 29	17 59	18 33	10 39 74	19 14 43	
7	288	02.3	34.0	244	21.9	49.3	87	40	33	18 00	31	20 70	34 47	
8	303	02.4	35.0	258	49.6	-23 58.5	87	35	36	01	30	10 04 67	19 51 49	
9	318	02.6	35.9	273	17.1	-24 07.7	85	30	38	02	30	9 50 65	20 06 51	
10	333	02.8	36.9	287	44.6	16.7	85	20	43	05	31	26 62	31 54	
11	348	03.0	-5 37.8	302	11.9	-24 25.5	88	10 N	17 47	18 08	18 33	9 06 59	20 53 56	
12	3	03.2	-5 38.8	316	39.2	-24 34.3	88	0	17 51	18 12	18 36	8 47 56	21 13 58	
13	18	03.3	39.7	331	06.3	42.9	86	10 S	17 55	16	41	28 54	34 60	
14	33	03.5	40.7	345	33.3	51.3	84	20	18 00	22	48	8 08 50	21 56 62	
15	48	03.7	41.6	0	00.3	-24 59.7	84	30	05	29	18 57	7 45 47	22 21 65	
16	63	03.9	42.6	14	27.1	-25 07.9	82	35	08	34	19 04	32 44	36 67	
17	78	04.0	-5 43.6	28	53.8	-25 15.9	80	40	18 11	18 39	19 11	7 17 41	22 53 69	
18	93	04.2	-5 44.5	43	20.4	-25 23.9	80	45	18 16	18 45	19 21	6 59 37	23 15 71	
19	108	04.4	45.5	57	46.9	31.6	77	50	21	54	34	36 33	41 75	
20	123	04.6	46.4	72	13.4	39.3	77	52	23	18 57	40	25 30	23 54 77	
21	138	04.7	47.4	86	39.7	46.8	75	54	25	19 02	46	13 27	*** **	
22	153	04.9	48.3	101	05.9	-25 54.1	73	56	28	07	19 54	6 00 22	*** **	
23	168	05.1	49.3	115	32.0	-26 01.3	72	58	31	12	20 03	5 44 16	*** **	
24	183	05.3	-5 50.2	129	58.0	-26 08.4	71	60 S	18 35	19 18	20 13	5 24 8	*** **	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 22 ^h 53 ^m 3		Mag: -4.3 PMG: 14 ^h 42 ^m			Mag: -1.8 PMG: 2 ^h 22 ^m			Mag: -1.7 PMG: 12 ^h 33 ^m			Mag: +0.4 PMG: 7 ^h 44 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	15	44.4	139	41.6	-22	14.7	324	25.4	+16	36.3	171	23.0	-9	00.4
1	30	46.9	154	41.2		15.4	339	28.1		36.3	186	25.0		00.6
2	45	49.3	169	40.8		16.2	354	30.7		36.4	201	26.9		00.8
3	60	51.8	184	40.3		17.0	9	33.4		36.4	216	28.9		01.0
4	75	54.2	199	39.9		17.7	24	36.1		36.5	231	30.8		01.2
5	90	56.7	214	39.5	-22	18.5	39	38.8	+16	36.5	246	32.8	-9	01.4
6	105	59.2	229	39.0	-22	19.2	54	41.5	+16	36.5	261	34.8	-9	01.6
7	121	01.6	244	38.6		20.0	69	44.2		36.6	276	36.7		01.8
8	136	04.1	259	38.2		20.8	84	46.9		36.6	291	38.7		02.0
9	151	06.6	274	37.7		21.5	99	49.6		36.6	306	40.6		02.2
10	166	09.0	289	37.3		22.3	114	52.3		36.7	321	42.6		02.4
11	181	11.5	304	36.9	-22	23.0	129	54.9	+16	36.7	336	44.6	-9	02.6
12	196	14.0	319	36.5	-22	23.8	144	57.6	+16	36.8	351	46.5	-9	02.8
13	211	16.4	334	36.0		24.6	160	00.3		36.8	6	48.5		02.9
14	226	18.9	349	35.6		25.3	175	03.0		36.8	21	50.4		03.1
15	241	21.4	4	35.2		26.1	190	05.8		36.9	36	52.4		03.3
16	256	23.8	19	34.7		26.8	205	08.5		36.9	51	54.3		03.5
17	271	26.3	34	34.3	-22	27.6	220	11.2	+16	36.9	66	56.3	-9	03.7
18	286	28.7	49	33.9	-22	28.3	235	13.9	+16	37.0	81	58.3	-9	03.9
19	301	31.2	64	33.4		29.1	250	16.6		37.0	97	00.2		04.1
20	316	33.7	79	33.0		29.8	265	19.3		37.0	112	02.2		04.3
21	331	36.1	94	32.6		30.6	280	22.0		37.1	127	04.1		04.5
22	346	38.6	109	32.1		31.3	295	24.7		37.1	142	06.1		04.7
23	1	41.1	124	31.7		32.1	310	27.4		37.1	157	08.0		04.9
24	16	43.5	139	31.2	-22	32.8	325	30.2	+16	37.2	172	10.0	-9	05.1
Dif	—		-4	-8		-8	+27	0		+20	-2	+23		0

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16/0 PMG: 11 ^h 47 ^m 5			Edad: 4 ^d 6	PHE { 4 ^h : 57/7 12 ^h : 57/8 20 ^h : 58/0 R°: 60 ^m													
	hG ☉	Dec		hG ☾		Dif		Dec	Dif		Náutico	Civil	Hora	R°	Hora	R°		
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m	m	
0	183	05.3	-5	50.2	129	58.0	-26	08.4	60 N	4 52	5 41	6 22	14 14	88	17 34	39		
1	198	05.5		51.2	144	24.0	70	15.3	58	55	40	20	13 39	79	18 10	47		
2	213	05.6		52.2	158	49.8	68	22.1	56	57	40	17	13 14	75		35	51	
3	228	05.8		53.1	173	15.5	67	28.7	54	4 58	39	15	12 54	73	18 56	52		
4	243	06.0		54.1	187	41.2	67	35.2	52	5 00	39	13		37	71	19 13	54	
5	258	06.2	-5	55.0	202	06.7	65	-26	50	5 01	5 38	6 11	12 22	70	19 28	55		
6	273	06.3	-5	56.0	216	32.2	65	-26	45	5 03	5 37	6 07	11 53	68	19 57	57		
7	288	06.5		56.9	230	57.5	63	53.6	40	05	36	03		30	67	20 21	57	
8	303	06.7		57.9	245	22.8	63	-26	35	06	35	6 00	11 11	65		40	58	
9	318	06.8		58.8	259	48.0	62	-27	30	06	33	5 57	10 55	64	20 57	59		
10	333	07.0	-5	59.8	274	13.1	61	10.6	20	05	31	53		28	63	21 25	59	
11	348	07.2	-6	00.7	288	38.1	60	-27	10 N	5 03	5 27	5 48	10 05	61	21 49	60		
12	3	07.4	-6	01.7	303	03.0	59	-27	0	4 59	5 23	5 44	9 43	60	22 11	61		
13	18	07.5		02.6	317	27.9	59	26.2	10 S	54	19	40	9 22	58		34	61	
14	33	07.7		03.6	331	52.7	58	31.1	20	47	13	35	8 58	57	22 58	62		
15	48	07.9		04.5	346	17.3	56	35.8	30	37	06	30	32	55	23 26	62		
16	63	08.1		05.5	0	42.0	57	40.3	35	31	5 01	27	8 16	54	23 43	62		
17	78	08.2	-6	06.4	15	06.5	55	-27	40	4 23	4 56	5 23	7 58	52	** *	** *		
18	93	08.4	-6	07.4	29	30.9	54	-27	45	4 14	4 49	5 19	7 36	50	** *	** *		
19	108	08.6		08.3	43	55.3	54	52.9	50	4 01	41	14	7 09	47	** *	** *		
20	123	08.8		09.3	58	19.7	54	-27	52	3 55	37	12	6 55	45	** *	** *		
21	138	08.9		10.3	72	43.9	52	-28	54	48	33	09	40	43	0 09	80		
22	153	09.1		11.2	87	08.1	52	03.9	56	40	28	06	22	39	27	83		
23	168	09.3		12.2	101	32.2	51	07.2	58	31	22	5 03	6 00	34	0 48	89		
24	183	09.4	-6	13.1	115	56.2	50	-28	60 S	3 21	4 16	4 59	5 32	24	1 16	99		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG 22 ^h 49 ^m 3			Mag: -4.3 PMG: 14 ^h 42 ^m			Mag: -1.8 PMG: 2 ^h 18 ^m			Mag: -1.7 PMG: 12 ^h 30 ^m			Mag: +0.4 PMG: 7 ^h 40 ^m					
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	16	43.5	139	31.2	-22	32.8	325	30.2	+16	37.2	172	10.0	-9	05.1	244	41.7	+18	17.1
1	31	46.0	154	30.8		33.6	340	32.9		37.2	187	12.0		05.3	259	44.0		17.1
2	46	48.5	169	30.4		34.3	355	35.6		37.2	202	13.9		05.5	274	46.3		17.0
3	61	50.9	184	29.9		35.1	10	38.3		37.3	217	15.9		05.7	289	48.5		17.0
4	76	53.4	199	29.5		35.8	25	41.0		37.3	232	17.8		05.9	304	50.8		16.9
5	91	55.9	214	29.1	-22	36.5	40	43.8	+16	37.3	247	19.8	-9	06.1	319	53.1	+18	16.9
6	106	58.3	229	28.6	-22	37.3	55	46.5	+16	37.4	262	21.7	-9	06.3	334	55.3	+18	16.8
7	122	00.8	244	28.2		38.0	70	49.2		37.4	277	23.7		06.5	349	57.6		16.8
8	137	03.2	259	27.8		38.8	85	51.9		37.4	292	25.7		06.7	4	59.9		16.7
9	152	05.7	274	27.3		39.5	100	54.7		37.4	307	27.6		06.9	20	02.1		16.7
10	167	08.2	289	26.9		40.2	115	57.4		37.5	322	29.6		07.1	35	04.4		16.6
11	182	10.6	304	26.4	-22	41.0	131	00.1	+16	37.5	337	31.5	-9	07.3	50	06.7	+18	16.6
12	197	13.1	319	26.0	-22	41.7	146	02.9	+16	37.5	352	33.5	-9	07.5	65	09.0	+18	16.6
13	212	15.6	334	25.6		42.4	161	05.6		37.6	7	35.4		07.7	80	11.2		16.5
14	227	18.0	349	25.1		43.2	176	08.4		37.6	22	37.4		07.9	95	13.5		16.5
15	242	20.5	4	24.7		43.9	191	11.1		37.6	37	39.3		08.1	110	15.8		16.4
16	257	23.0	19	24.3		44.6	206	13.8		37.6	52	41.3		08.3	125	18.0		16.4
17	272	25.4	34	23.8	-22	45.4	221	16.6	+16	37.7	67	43.3	-9	08.5	140	20.3	+18	16.3
18	287	27.9	49	23.4	-22	46.1	236	19.3	+16	37.7	82	45.2	-9	08.7	155	22.6	+18	16.3
19	302	30.4	64	22.9		46.8	251	22.1		37.7	97	47.2		08.9	170	24.8		16.2
20	317	32.8	79	22.5		47.5	266	24.8		37.8	112	49.1		09.1	185	27.1		16.2
21	332	35.3	94	22.1		48.3	281	27.6		37.8	127	51.1		09.2	200	29.4		16.1
22	347	37.7	109	21.6		49.0	296	30.3		37.8	142	53.0		09.4	215	31.6		16.1
23	2	40.2	124	21.2		49.7	311	33.1		37.8	157	55.0		09.6	230	33.9		16.1
24	17	42.7	139	20.7	-22	50.5	326	35.8	+16	37.9	172	57.0	-9	09.8	245	36.2	+18	16.0
Dif	—			-4			-7			+27			0			+23		

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG: 11 ^h 47 ^m 2			Edad: 5 ^d 6 SD: 15'8 PMG: 16 ^h 57 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	183	09.4	-6 13.1	115	56.2	-28 10.4		60 N	17 09	17 50	18 38	15 42 38	18 13 90		
1	198	09.6		130	20.2	13.3	29	58	12	51	36	14 58 47	18 57 81		
2	213	09.8	15.0	144	44.2	16.1	28	56	14	52	34	29 51	19 26 77		
3	228	10.0	16.0	159	08.0	18.7	26	54	17	52	33	14 07 52	19 48 75		
4	243	10.1	16.9	173	31.8	21.2	25	52	19	53	32	13 48 54	20 07 73		
5	258	10.3	-6 17.9	187	55.6	-28 23.4	22	50	17 21	17 54	18 31	13 32 56	20 23 71		
6	273	10.5	-6 18.8	202	19.3	-28 25.5	21	45	17 26	17 55	18 29	13 01 57	20 54 70		
7	288	10.6	19.8	216	43.0	27.4	19	40	30	57	28	12 37 58	21 18 68		
8	303	10.8	20.7	231	06.6	29.1	17	35	33	17 58	28	12 16 59	38 67		
9	318	11.0	21.7	245	30.1	30.6	15	30	36	18 00	28	11 59 60	21 56 65		
10	333	11.1	22.6	259	53.6	32.0	14	20	41	03	29	31 60	22 24 65		
11	348	11.3	-6 23.6	274	17.1	-28 33.1	11	10 N	17 46	18 07	18 32	11 06 61	22 49 63		
12	3	11.5	-6 24.5	288	40.6	-28 34.1	10	0	17 51	18 11	18 35	10 43 61	23 12 61		
13	18	11.7	25.5	303	04.0	34.9	8	10 S	17 55	16	41	10 20 62	23 35 60		
14	33	11.8	26.4	317	27.3	35.5	6	20	18 00	22	48	9 55 63	** ** *		
15	48	12.0	27.4	331	50.7	35.9	4	30	06	30	18 59	27 62	** ** *		
16	63	12.2	28.3	346	14.0	36.1	2	35	10	35	19 06	9 10 63	** ** *		
17	78	12.3	-6 29.3	0	37.2	-28 36.2	1	40	18 14	18 41	19 14	8 50 63	0 02 63		
18	93	12.5	-6 30.2	15	00.5	-28 36.0	2	45	18 18	18 48	19 24	8 26 64	0 26 63		
19	108	12.7	31.1	29	23.7	35.7	3	50	24	18 57	37	7 56 63	0 56 63		
20	123	12.8	32.1	43	46.9	35.1	6	52	26	19 01	44	40 64	1 11 63		
21	138	13.0	33.0	58	10.1	34.4	7	54	29	06	51	23 64	29 63		
22	153	13.2	34.0	72	33.3	33.5	9	56	32	11	19 59	7 01 65	1 50 63		
23	168	13.3	34.9	86	56.5	32.4	11	58	36	17	20 08	6 34 65	2 17 64		
24	183	13.5	-6 35.9	101	19.6	-28 31.1	13	60 S	18 40	19 24	20 20	5 56 65	2 55 64		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 22 ^h 45 ^m 4		Mag: -4.3 PMG: 14 ^h 43 ^m		Mag: -1.9 PMG: 2 ^h 13 ^m		Mag: -1.7 PMG: 12 ^h 27 ^m		Mag: +0.4 PMG: 7 ^h 36 ^m							
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'						
0	17	42.7	139	20.7	-22 50.5	326	35.8	+16 37.9	172	57.0	-9 09.8	245	36.2	+18 16.0		
1	32	45.1	154	20.3	51.2	341	38.6	37.9	187	58.9	10.0	260	38.5	16.0		
2	47	47.6	169	19.9	51.9	356	41.4	37.9	203	00.9	10.2	275	40.7	15.9		
3	62	50.1	184	19.4	52.6	11	44.1	37.9	218	02.8	10.4	290	43.0	15.9		
4	77	52.5	199	19.0	53.3	26	46.9	38.0	233	04.8	10.6	305	45.3	15.8		
5	92	55.0	214	18.5	-22 54.1	41	49.6	+16 38.0	248	06.7	-9 10.8	320	47.5	+18 15.8		
6	107	57.5	229	18.1	-22 54.8	56	52.4	+16 38.0	263	08.7	-9 11.0	335	49.8	+18 15.7		
7	122	59.9	244	17.7	55.5	71	55.2	38.0	278	10.6	11.2	350	52.1	15.7		
8	138	02.4	259	17.2	56.2	86	57.9	38.1	293	12.6	11.4	5	54.4	15.6		
9	153	04.8	274	16.8	56.9	102	00.7	38.1	308	14.6	11.6	20	56.6	15.6		
10	168	07.3	289	16.3	57.6	117	03.5	38.1	323	16.5	11.8	35	58.9	15.6		
11	183	09.8	304	15.9	-22 58.4	132	06.3	+16 38.1	338	18.5	-9 12.0	51	01.2	+18 15.5		
12	198	12.2	319	15.4	-22 59.1	147	09.0	+16 38.1	353	20.4	-9 12.2	66	03.4	+18 15.5		
13	213	14.7	334	15.0	-22 59.8	162	11.8	38.2	8	22.4	12.4	81	05.7	15.4		
14	228	17.2	349	14.6	-23 00.5	177	14.6	38.2	23	24.3	12.6	96	08.0	15.4		
15	243	19.6	4	14.1	01.2	192	17.4	38.2	38	26.3	12.8	111	10.3	15.3		
16	258	22.1	19	13.7	01.9	207	20.2	38.2	53	28.2	13.0	126	12.5	15.3		
17	273	24.6	34	13.2	-23 02.6	222	22.9	+16 38.3	68	30.2	-9 13.2	141	14.8	+18 15.2		
18	288	27.0	49	12.8	-23 03.3	237	25.7	+16 38.3	83	32.2	-9 13.4	156	17.1	+18 15.2		
19	303	29.5	64	12.3	04.0	252	28.5	38.3	98	34.1	13.6	171	19.4	15.2		
20	318	32.0	79	11.9	04.7	267	31.3	38.3	113	36.1	13.8	186	21.6	15.1		
21	333	34.4	94	11.4	05.4	282	34.1	38.3	128	38.0	14.0	201	23.9	15.1		
22	348	36.9	109	11.0	06.1	297	36.9	38.4	143	40.0	14.2	216	26.2	15.0		
23	3	39.3	124	10.6	06.8	312	39.7	38.4	158	41.9	14.4	231	28.5	15.0		
24	18	41.8	139	10.1	-23 07.5	327	42.5	+16 38.4	173	43.9	-9 14.6	246	30.7	+18 14.9		
Dif	—		-4		-7		+28		+20		-2		+23		0	

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'0 PMG: 11 ^h 47 ^m 0			Edad: 6 ^d 6	PHE { 4 ^h : 58'7 12 ^h : 58'8 20 ^h : 59'0 Rº: 60 ^m										
	hG ☉	Dec		hG ☾		Dif		Dec	Dif		Náutico	Civil	Hora	Rº	Hora
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m
0	183	13.5	-6	35.9	101	19.6	-28	31.1	60 N	4 57	5 45	6 27	16 20	12	19 43 115
1	198	13.7		36.8	115	42.7 41		29.7 14	58	4 59	45	24	15 45	23	20 18 102
2	213	13.8		37.8	130	05.9 42		28.0 17	56	5 01	44	21	15 20	30	20 43 95
3	228	14.0		38.7	144	29.0 41		26.2 18	54	02	43	18	14 59	35	21 03 91
4	243	14.2		39.7	158	52.1 41		24.1 21	52	03	42	16	42	38	20 87
5	258	14.3	-6	40.6	173	15.3 42	-28	21.9 22	50	5 04	5 42	6 14	14 28	40	21 34 85
6	273	14.5	-6	41.6	187	38.4 41	-28	19.5 24	45	5 06	5 40	6 09	13 58	45	22 04 79
7	288	14.7		42.5	202	01.5 41		16.9 26	40	07	38	05	35	48	26 76
8	303	14.8		43.5	216	24.7 42		14.1 28	35	07	36	6 02	13 15	51	22 45 72
9	318	15.0		44.4	230	47.8 41		11.1 30	30	07	35	5 59	12 59	52	23 01 70
10	333	15.2		45.4	245	11.0 42		07.9 32	20	06	31	53	31	55	29 65
11	348	15.3	-6	46.3	259	34.2 42	-28	04.5 34	10 N	5 03	5 27	5 48	12 07	58	23 52 62
12	3	15.5	-6	47.2	273	57.4 42	-28	01.0 35	0	4 59	5 23	5 44	11 44	61	** ** *
13	18	15.7		48.2	288	20.6 42	-27	57.2 38	10 S	53	18	39	11 22	63	** ** *
14	33	15.8		49.1	302	43.8 42		53.3 39	20	45	11	34	10 58	65	0 00 58
15	48	16.0		50.1	317	07.1 43		49.2 41	30	35	5 03	28	29	69	28 56
16	63	16.1		51.0	331	30.4 43		44.9 43	35	28	4 58	24	10 13	70	0 45 55
17	78	16.3	-6	52.0	345	53.7 43	-27	40.4 45	40	4 20	4 53	5 20	9 53	72	1 05 53
18	93	16.5	-6	52.9	0	17.0 43	-27	35.7 47	45	4 10	4 45	5 15	9 30	75	1 29 51
19	108	16.6		53.9	14	40.4 44		30.8 49	50	3 56	36	10	8 59	79	1 59 48
20	123	16.8		54.8	29	03.8 44		25.8 50	52	50	32	07	44	81	2 14 46
21	138	17.0		55.7	43	27.2 44		20.5 53	54	43	28	04	27	84	32 43
22	153	17.1		56.7	57	50.7 45		15.1 54	56	34	22	5 01	8 06	87	2 53 40
23	168	17.3		57.6	72	14.2 45		09.5 56	58	25	16	4 57	7 39	93	3 21 34
24	183	17.4	-6	58.6	86	37.8 46	-27	03.7 58	60 S	3 14	4 10	4 53	7 01	104	3 59 23

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 22 ^h 41 ^m 5		Mag: -4.3 PMG: 14 ^h 44 ^m		Mag: -1.9 PMG: 2 ^h 09 ^m		Mag: -1.7 PMG: 12 ^h 23 ^m		Mag: +0.4 PMG: 7 ^h 33 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	18	41.8	139	10.1	-23	07.5	327	42.5	+16	38.4	173	43.9	-9	14.6	246	30.7	+18	14.9
1	33	44.3	154	09.7		08.3	342	45.2		38.4	188	45.8		14.8	261	33.0		14.9
2	48	46.7	169	09.2		09.0	357	48.0		38.4	203	47.8		15.0	276	35.3		14.8
3	63	49.2	184	08.8		09.6	12	50.8		38.5	218	49.8		15.1	291	37.5		14.8
4	78	51.7	199	08.3		10.3	27	53.6		38.5	233	51.7		15.3	306	39.8		14.8
5	93	54.1	214	07.9	-23	11.0	42	56.4	+16	38.5	248	53.7	-9	15.5	321	42.1	+18	14.7
6	108	56.6	229	07.4	-23	11.7	57	59.2	+16	38.5	263	55.6	-9	15.7	336	44.4	+18	14.7
7	123	59.1	244	07.0		12.4	73	02.1		38.5	278	57.6		15.9	351	46.6		14.6
8	139	01.5	259	06.5		13.1	88	04.9		38.5	293	59.5		16.1	6	48.9		14.6
9	154	04.0	274	06.1		13.8	103	07.7		38.6	309	01.5		16.3	21	51.2		14.5
10	169	06.5	289	05.7		14.5	118	10.5		38.6	324	03.4		16.5	36	53.5		14.5
11	184	08.9	304	05.2	-23	15.2	133	13.3	+16	38.6	339	05.4	-9	16.7	51	55.8	+18	14.4
12	199	11.4	319	04.8	-23	15.9	148	16.1	+16	38.6	354	07.3	-9	16.9	66	58.0	+18	14.4
13	214	13.8	334	04.3		16.6	163	18.9		38.6	9	09.3		17.1	82	00.3		14.4
14	229	16.3	349	03.9		17.3	178	21.7		38.6	24	11.3		17.3	97	02.6		14.3
15	244	18.8	4	03.4		18.0	193	24.5		38.6	39	13.2		17.5	112	04.9		14.3
16	259	21.2	19	03.0		18.6	208	27.4		38.7	54	15.2		17.7	127	07.1		14.2
17	274	23.7	34	02.5	-23	19.3	223	30.2	+16	38.7	69	17.1	-9	17.9	142	09.4	+18	14.2
18	289	26.2	49	02.1	-23	20.0	238	33.0	+16	38.7	84	19.1	-9	18.1	157	11.7	+18	14.1
19	304	28.6	64	01.6		20.7	253	35.8		38.7	99	21.0		18.3	172	14.0		14.1
20	319	31.1	79	01.2		21.4	268	38.6		38.7	114	23.0		18.5	187	16.2		14.1
21	334	33.6	94	00.7		22.1	283	41.5		38.7	129	24.9		18.7	202	18.5		14.0
22	349	36.0	109	00.3		22.7	298	44.3		38.7	144	26.9		18.9	217	20.8		14.0
23	4	38.5	123	59.8		23.4	313	47.1		38.8	159	28.8		19.1	232	23.1		13.9
24	19	41.0	138	59.4	-23	24.1	328	50.0	+16	38.8	174	30.8	-9	19.3	247	25.4	+18	13.9
Dif	—		-4	-7		+28	0		+20	-2		+23		0				

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna						
	SD: 16'0 PMG: 11 ^h 46 ^m 7		Edad: 7 ^d 6 PHE { 4 ^h : 59'1 12 ^h : 59'3 20 ^h : 59'4 R°: 57 ^m SD: 16'1 PMG: 18 ^h 59 ^m																
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°					
h	°	'	°	'	°	'	°	h m	h m	h m	m	h m	m	h m	m				
0	183	17.4	-6	58.6	86	37.8	-27	03.7	60 N	17 03	17 44	18 32	16 32	3	21 38	115			
1	198	17.6	-6	59.5	101	01.4	46	-26	57.8	58	06	46	31	16 08	12	22 00	107		
2	213	17.8	-7	00.5	115	25.0	46		51.6	56	09	47	29	15 50	17	18	101		
3	228	17.9		01.4	129	48.7	47		45.3	54	12	48	28	34	21	34	96		
4	243	18.1		02.3	144	12.5	48		38.8	52	15	49	27	20	25	47	92		
5	258	18.3	-7	03.3	158	36.3	48	-26	32.1	50	17 17	17 49	18 27	15 08	28	22 59	89		
6	273	18.4	-7	04.2	173	00.1	48	-26	25.2	45	17 22	17 52	18 26	14 43	34	23 23	82		
7	288	18.6		05.2	187	24.0	49		18.2	40	27	54	25	23	39	42	77		
8	303	18.7		06.1	201	47.9	49		11.0	35	30	56	25	14 06	42	23 57	74		
9	318	18.9		07.1	216	12.0	51	-26	03.6	30	34	17 58	25	13 51	46	***	***		
10	333	19.1		08.0	230	36.0	50	-25	56.0	20	40	18 02	27	26	51	***	***		
11	348	19.2	-7	08.9	245	00.2	52	-25	48.3	10 N	17 45	18 06	18 31	13 05	54	***	***		
12	3	19.4	-7	09.9	259	24.3	51	-25	40.3	0	17 50	18 11	18 35	12 45	58	0	13	60	
13	18	19.5		10.8	273	48.6	53		32.3	10 S	17 55	16	41	25	61	35	56		
14	33	19.7		11.8	288	12.9	53		24.0	20	18 01	23	18 49	12 03	66	0	58	53	
15	48	19.9		12.7	302	37.3	54		15.6	30	07	32	19 00	11 38	70	1	24	49	
16	63	20.0		13.6	317	01.7	54	-25	07.0	35	11	37	07	23	73	40	46		
17	78	20.2	-7	14.6	331	26.2	55	-24	58.2	40	18 16	18 43	19 16	11 05	77	1	58	43	
18	93	20.3	-7	15.5	345	50.8	56	-24	49.3	45	18 21	18 51	19 27	10 45	81	2	20	39	
19	108	20.5		16.5	0	15.5	57		40.2	50	27	19 00	41	18	87	2	47	34	
20	123	20.7		17.4	14	40.2	57		31.0	52	30	05	48	10 05	91	3	00	31	
21	138	20.8		18.4	29	05.0	58		21.6	54	33	10	19 55	9	51	94	15	28	
22	153	21.0		19.3	43	29.8	58		12.0	56	36	15	20 04	33	99	33	23		
23	168	21.1		20.2	57	54.8	60	-24	02.3	58	40	22	14	9	12	105	3	55	16
24	183	21.3	-7	21.2	72	19.8	60	-23	52.4	60 S	18 45	19 29	20 26	8	45	115	4	22	8
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 22 ^h 37 ^m 6		Mag: -4.3 PMG: 14 ^h 44 ^m			Mag: -1.9 PMG: 2 ^h 04 ^m			Mag: -1.7 PMG: 12 ^h 20 ^m			Mag: +0.4 PMG: 7 ^h 29 ^m							
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'			
0	19	41.0	138	59.4	-23	24.1	328	50.0	+16	38.8	174	30.8	-9	19.3	247	25.4	+18	13.9	
1	34	43.4	153	58.9		24.8	343	52.8		38.8	189	32.8		19.5	262	27.6		13.8	
2	49	45.9	168	58.5		25.5	358	55.6		38.8	204	34.7		19.7	277	29.9		13.8	
3	64	48.3	183	58.0		26.1	13	58.5		38.8	219	36.7		19.9	292	32.2		13.8	
4	79	50.8	198	57.6		26.8	29	01.3		38.8	234	38.6		20.1	307	34.5		13.7	
5	94	53.3	213	57.1	-23	27.5	44	04.1	+16	38.8	249	40.6	-9	20.3	322	36.7	+18	13.7	
6	109	55.7	228	56.7	-23	28.2	59	07.0	+16	38.8	264	42.5	-9	20.5	337	39.0	+18	13.6	
7	124	58.2	243	56.2		28.8	74	09.8		38.9	279	44.5		20.6	352	41.3		13.6	
8	140	00.7	258	55.8		29.5	89	12.7		38.9	294	46.4		20.8	7	43.6		13.5	
9	155	03.1	273	55.3		30.2	104	15.5		38.9	309	48.4		21.0	22	45.9		13.5	
10	170	05.6	288	54.9		30.8	119	18.4		38.9	324	50.3		21.2	37	48.1		13.5	
11	185	08.1	303	54.4	-23	31.5	134	21.2	+16	38.9	339	52.3	-9	21.4	52	50.4	+18	13.4	
12	200	10.5	318	54.0	-23	32.2	149	24.1	+16	38.9	354	54.2	-9	21.6	67	52.7	+18	13.4	
13	215	13.0	333	53.5		32.8	164	26.9		38.9	9	56.2		21.8	82	55.0		13.3	
14	230	15.5	348	53.1		33.5	179	29.8		38.9	24	58.2		22.0	97	57.3		13.3	
15	245	17.9	3	52.6		34.2	194	32.6		38.9	40	00.1		22.2	112	59.5		13.2	
16	260	20.4	18	52.2		34.8	209	35.5		38.9	55	02.1		22.4	128	01.8		13.2	
17	275	22.8	33	51.7	-23	35.5	224	38.3	+16	38.9	70	04.0	-9	22.6	143	04.1	+18	13.2	
18	290	25.3	48	51.3	-23	36.2	239	41.2	+16	38.9	85	06.0	-9	22.8	158	06.4	+18	13.1	
19	305	27.8	63	50.8		36.8	254	44.0		39.0	100	07.9		23.0	173	08.7		13.1	
20	320	30.2	78	50.4		37.5	269	46.9		39.0	115	09.9		23.2	188	10.9		13.0	
21	335	32.7	93	49.9		38.1	284	49.8		39.0	130	11.8		23.4	203	13.2		13.0	
22	350	35.2	108	49.5		38.8	299	52.6		39.0	145	13.8		23.6	218	15.5		12.9	
23	5	37.6	123	49.0		39.4	314	55.5		39.0	160	15.7		23.8	233	17.8		12.9	
24	20	40.1	138	48.6	-23	40.1	329	58.4	+16	39.0	175	17.7	-9	24.0	248	20.1	+18	12.9	
Dif	—		-5		-7		+28		0		+20		-2		+23		0		

UT	SOL			☾ LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16/0 PMG: 11 ^h 46 ^m 5			Edad: 8 ^d 6 PHE { 4 ^h : 59/5 12 ^h : 59/6 20 ^h : 59/7 PMG: 19 ^h 56 ^m R°: 54 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°			
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	183	21.3	-7	21.2	72	19.8	-23	52.4	60 N	5 02	5 50	6 32	16 35	0	23 33	11		
1	198	21.4		22.1	86	44.9	61	42.3	58	03	49	28	20	6	47	105		
2	213	21.6		23.0	101	10.0	61	32.1	56	05	48	25	16 07	11	23 59	100		
3	228	21.8		24.0	115	35.3	63	21.8	54	06	47	22	15 55	15	***	***	***	
4	243	21.9		24.9	130	00.6	63	11.3	52	07	46	20	45	19	***	***	***	
5	258	22.1	-7	25.9	144	26.0	64	00.6	50	5 07	5 45	6 17	15 36	21	***	***	***	
6	273	22.2	-7	26.8	158	51.5	65	49.8	45	5 08	5 42	6 12	15 17	27	***	***	***	
7	288	22.4		27.7	173	17.0	65	38.9	40	09	40	07	15 02	32	***	***	***	
8	303	22.5		28.7	187	42.6	66	27.8	35	09	38	03	14 48	36	***	***	***	
9	318	22.7		29.6	202	08.3	67	16.5	30	08	36	6 00	37	39	0	11	71	
10	333	22.8		30.6	216	34.1	68	05.1	20	06	32	5 54	14 17	45	34	66		
11	348	23.0	-7	31.5	231	00.0	69	53.6	10 N	5 03	5 27	5 48	13 59	50	0	54	61	
12	3	23.2	-7	32.4	245	25.9	69	41.9	0	4 58	5 22	5 43	13 43	54	1	13	56	
13	18	23.3		33.4	259	52.0	71	30.1	10 S	52	17	38	26	60	31	52		
14	33	23.5		34.3	274	18.1	71	18.2	20	44	10	32	13 09	64	1	51	47	
15	48	23.6		35.2	288	44.3	72	06.1	30	33	5 01	25	12 48	70	2	13	42	
16	63	23.8		36.2	303	10.5	72	53.9	35	25	4 56	21	36	74	26	39		
17	78	23.9	-7	37.1	317	36.9	74	41.5	40	4 16	4 49	5 17	12 22	78	2	41	35	
18	93	24.1	-7	38.0	332	03.3	74	29.1	45	4 06	4 42	5 12	12 06	82	2	59	31	
19	108	24.2		39.0	346	29.8	75	16.5	50	3 51	32	05	11 45	89	3	21	24	
20	123	24.4		39.9	0	56.4	76	03.7	52	45	28	5 03	36	92	31	22		
21	138	24.5		40.9	15	23.1	77	50.9	54	37	22	4 59	25	96	43	18		
22	153	24.7		41.8	29	49.9	78	37.9	56	28	17	56	11 12	100	3	56	14	
23	168	24.8		42.7	44	16.7	78	24.8	58	18	10	52	10 57	106	4	11	9	
24	183	25.0	-7	43.7	58	43.6	79	11.5	60 S	3 06	4 03	4 47	10 40	112	4	30	2	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 22 ^h 33 ^m 6		Mag: -4.3 PMG: 14 ^h 45 ^m			Mag: -1.9 PMG: 2 ^h 00 ^m			Mag: -1.7 PMG: 12 ^h 17 ^m			Mag: +0.4 PMG: 7 ^h 26 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	
0	20	40.1	138	48.6	-23	40.1	329	58.4	+16	39.0	175	17.7	-9	24.0	248	
1	35	42.6	153	48.1		40.8	345	01.2		39.0	190	19.6		24.2	263	
2	50	45.0	168	47.7		41.4	0	04.1		39.0	205	21.6		24.4	278	
3	65	47.5	183	47.2		42.1	15	07.0		39.0	220	23.5		24.6	293	
4	80	49.9	198	46.7		42.7	30	09.8		39.0	235	25.5		24.8	308	
5	95	52.4	213	46.3	-23	43.4	45	12.7	+16	39.0	250	27.5	-9	25.0	323	
6	110	54.9	228	45.8	-23	44.0	60	15.6	+16	39.0	265	29.4	-9	25.2	338	
7	125	57.3	243	45.4		44.7	75	18.5		39.0	280	31.4		25.4	353	
8	140	59.8	258	44.9		45.3	90	21.4		39.0	295	33.3		25.6	8	
9	156	02.3	273	44.5		46.0	105	24.2		39.0	310	35.3		25.8	23	
10	171	04.7	288	44.0		46.6	120	27.1		39.0	325	37.2		25.9	38	
11	186	07.2	303	43.6	-23	47.3	135	30.0	+16	39.0	340	39.2	-9	26.1	53	
12	201	09.7	318	43.1	-23	47.9	150	32.9	+16	39.0	355	41.1	-9	26.3	68	
13	216	12.1	333	42.7		48.5	165	35.8		39.0	10	43.1		26.5	83	
14	231	14.6	348	42.2		49.2	180	38.7		39.0	25	45.0		26.7	98	
15	246	17.1	3	41.7		49.8	195	41.6		39.0	40	47.0		26.9	113	
16	261	19.5	18	41.3		50.5	210	44.5		39.0	55	48.9		27.1	128	
17	276	22.0	33	40.8	-23	51.1	225	47.3	+16	39.0	70	50.9	-9	27.3	143	
18	291	24.4	48	40.4	-23	51.7	240	50.2	+16	39.0	85	52.8	-9	27.5	159	
19	306	26.9	63	39.9		52.4	255	53.1		39.0	100	54.8		27.7	174	
20	321	29.4	78	39.5		53.0	270	56.0		39.0	115	56.7		27.9	189	
21	336	31.8	93	39.0		53.6	285	58.9		39.0	130	58.7		28.1	204	
22	351	34.3	108	38.6		54.3	301	01.8		39.0	146	00.7		28.3	219	
23	6	36.8	123	38.1		54.9	316	04.7		39.0	161	02.6		28.5	234	
24	21	39.2	138	37.6	-23	55.5	331	07.6	+16	39.0	176	04.6	-9	28.7	249	
Dif	—		-5		-6		+29		0	+20		-2		+23		0

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG: 11 ^h 46 ^m 2			Edad: 9 ^d 6 PHE { 4 ^h : 59'8 12 ^h : 59'9 20 ^h : 59'9 R°: 51 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	m	h m	m	
0	183	25.0	-7	43.7	58	43.6	-19 11.5	60 N	16 57	17 39	18 27	16 35	0	
1	198	25.1		44.6	73	10.6	80 -18 58.2	58	17 01	40	26	26	4	
2	213	25.3		45.5	87	37.7	81 44.7	56	04	42	25	18	7	
3	228	25.4		46.5	102	04.9	82 31.1	54	07	43	24	10	11	
4	243	25.6		47.4	116	32.1	82 17.4	52	10	44	23	16	04	
5	258	25.7	-7	48.3	130	59.4	83 -18 03.6	50	17 13	17 45	18 23	15 57	17	
6	273	25.9	-7	49.3	145	26.8	84 -17 49.7	45	17 19	17 48	18 22	15 44	23	
7	288	26.1		50.2	159	54.3	85 35.7	40	23	51	22	34	27	
8	303	26.2		51.1	174	21.9	86 21.5	35	28	53	22	24	32	
9	318	26.4		52.1	188	49.5	86 -17 07.3	30	31	17 55	23	16	35	
10	333	26.5		53.0	203	17.2	87 -16 52.9	20	38	18 00	26	15 02	41	
11	348	26.7	-7	53.9	217	45.0	88 -16 38.5	10 N	17 44	18 05	18 30	14 49	47	
12	3	26.8	-7	54.9	232	12.8	88 -16 23.9	0	17 50	18 10	18 35	14 37	52	
13	18	26.9		55.8	246	40.8	90 -16 09.3	10 S	17 55	16	41	26	56	
14	33	27.1		56.7	261	08.8	90 -15 54.5	20	18 01	24	18 50	14 13	62	
15	48	27.2		57.7	275	36.9	91 39.7	30	09	33	19 02	13 58	69	
16	63	27.4		58.6	290	05.0	91 24.7	35	13	39	09	50	72	
17	78	27.5	-7	59.5	304	33.2	92 -15 09.7	40	18 18	18 45	19 19	13 40	76	
18	93	27.7	-8	00.5	319	01.5	93 -14 54.6	45	18 23	18 54	19 30	13 28	82	
19	108	27.8		01.4	333	29.9	94 39.4	50	30	19 04	45	14	88	
20	123	28.0		02.3	347	58.3	94 24.1	52	33	09	19 52	08	91	
21	138	28.1		03.3	2	26.8	95 -14 08.7	54	37	14	20 00	13 01	94	
22	153	28.3		04.2	16	55.4	96 -13 53.2	56	41	20	09	12	98	
23	168	28.4		05.1	31	24.1	97 37.7	58	45	27	20	43	102	
24	183	28.6	-8	06.0	45	52.8	97 -13 22.1	60 S	18 50	19 35	20 33	12 32	108	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 22 ^h 29 ^m 7		Mag: -4.3 PMG: 14 ^h 46 ^m		Mag: -2.0 PMG: 1 ^h 55 ^m		Mag: -1.7 PMG: 12 ^h 14 ^m		Mag: +0.4 PMG: 7 ^h 22 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	21	39.2	138	37.6	-23	55.5	331	07.6	176	04.6
1	36	41.7	153	37.2		56.2	346	10.5		28.9
2	51	44.2	168	36.7		56.8	1	13.5		29.1
3	66	46.6	183	36.3		57.4	16	16.4		29.3
4	81	49.1	198	35.8		58.1	31	19.3		29.5
5	96	51.6	213	35.4	-23	58.7	46	22.2	+16	39.0
6	111	54.0	228	34.9	-23	59.3	61	25.1	+16	39.0
7	126	56.5	243	34.5	-23	59.9	76	28.0		39.0
8	141	58.9	258	34.0	-24	00.6	91	30.9		39.0
9	157	01.4	273	33.5		01.2	106	33.8		39.0
10	172	03.9	288	33.1		01.8	121	36.8		39.0
11	187	06.3	303	32.6	-24	02.4	136	39.7	+16	39.0
12	202	08.8	318	32.2	-24	03.0	151	42.6	+16	39.0
13	217	11.3	333	31.7		03.7	166	45.5		39.0
14	232	13.7	348	31.3		04.3	181	48.5		39.0
15	247	16.2	3	30.8		04.9	196	51.4		39.0
16	262	18.7	18	30.3		05.5	211	54.3		39.0
17	277	21.1	33	29.9	-24	06.1	226	57.2	+16	39.0
18	292	23.6	48	29.4	-24	06.7	242	00.2	+16	39.0
19	307	26.0	63	29.0		07.4	257	03.1		39.0
20	322	28.5	78	28.5		08.0	272	06.0		39.0
21	337	31.0	93	28.0		08.6	287	09.0		39.0
22	352	33.4	108	27.6		09.2	302	11.9		39.0
23	7	35.9	123	27.1		09.8	317	14.8		38.9
24	22	38.4	138	26.7	-24	10.4	332	17.8	+16	38.9
Dif	—		-5	-6		+29	0	+20		-2

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'0 PMG: 11 ^h 46 ^m 0			Edad: 10 ^d 6 PHE { 4 ^h : 60'0 12 ^h : 60'0 20 ^h : 60'0 Rº: 49 ^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	28.6	-8	06.0		45	52.8	5 07	5 55	6 37		16 35	**	1 24	105	
1	198	28.7		07.0		60	21.5 97	08	53	33		30	2	32	101	
2	213	28.9		07.9		74	50.4 99	09	52	29		25	6	39	97	
3	228	29.0		08.8		89	19.3 99	09	50	26		21	10	45	93	
4	243	29.2		09.8		103	48.2 99	10	49	23		18	12	51	90	
5	258	29.3	-8	10.7		118	17.3 101	5 10	5 48	6 20		16 14	15	1 56	87	
6	273	29.5	-8	11.6		132	46.4 101	5 11	5 45	6 14		16 07	20	2 07	81	
7	288	29.6		12.5		147	15.5 101	11	42	09		16 01	25	16	76	
8	303	29.7		13.5		161	44.7 102	10	40	05		15 56	29	24	72	
9	318	29.9		14.4		176	14.0 103	09	37	6 01		51	32	31	68	
10	333	30.0		15.3		190	43.3 103	07	32	5 54		43	39	43	61	
11	348	30.2	-8	16.3		205	12.7 104	5 03	5 27	5 48		15 36	44	2 53	55	
12	3	30.3	-8	17.2		219	42.1 104	4 58	5 22	5 43		15 29	49	3 02	50	
13	18	30.5		18.1		234	11.6 105	51	16	37		22	55	11	46	
14	33	30.6		19.0		248	41.1 105	42	5 08	30		15	60	21	40	
15	48	30.8		20.0		263	10.7 106	30	4 59	23		07	66	32	34	
16	63	30.9		20.9		277	40.4 107	22	53	19		15 02	70	39	30	
17	78	31.0	-8	21.8		292	10.0 106	4 13	4 46	5 14		14 56	75	3 46	26	
18	93	31.2	-8	22.8		306	39.8 108	4 02	4 38	5 08		14 50	80	3 54	21	
19	108	31.3		23.7		321	09.6 108	3 47	28	5 01		42	86	4 04	16	
20	123	31.5		24.6		335	39.4 108	39	23	4 58		39	88	09	13	
21	138	31.6		25.5		350	09.3 109	31	17	55		35	91	14	10	
22	153	31.7		26.5		4	39.2 109	22	11	51		30	95	19	7	
23	168	31.9		27.4		19	09.1 109	3 11	4 04	46		25	99	25	4	
24	183	32.0	-8	28.3		33	39.1 110	2 58	3 57	4 41		14 20	103	4 32	0	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 22 ^h 25 ^m 8		Mag: -4.3 PMG: 14 ^h 47 ^m		Mag: -2.0 PMG: 1 ^h 50 ^m		Mag: -1.7 PMG: 12 ^h 11 ^m		Mag: +0.4 PMG: 7 ^h 18 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	22	38.4	138	26.7	-24	10.4	332	17.8	+16	38.9
1	37	40.8	153	26.2		11.0	347	20.7		38.9
2	52	43.3	168	25.8		11.6	2	23.7		38.9
3	67	45.8	183	25.3		12.2	17	26.6		38.9
4	82	48.2	198	24.8		12.8	32	29.6		38.9
5	97	50.7	213	24.4	-24	13.4	47	32.5	+16	38.9
6	112	53.2	228	23.9	-24	14.0	62	35.5	+16	38.9
7	127	55.6	243	23.5		14.6	77	38.4		38.9
8	142	58.1	258	23.0		15.2	92	41.4		38.9
9	158	00.5	273	22.5		15.8	107	44.3		38.9
10	173	03.0	288	22.1		16.4	122	47.3		38.8
11	188	05.5	303	21.6	-24	17.0	137	50.2	+16	38.8
12	203	07.9	318	21.2	-24	17.6	152	53.2	+16	38.8
13	218	10.4	333	20.7		18.2	167	56.1		38.8
14	233	12.9	348	20.2		18.8	182	59.1		38.8
15	248	15.3	3	19.8		19.4	198	02.1		38.8
16	263	17.8	18	19.3		20.0	213	05.0		38.8
17	278	20.3	33	18.9	-24	20.6	228	08.0	+16	38.8
18	293	22.7	48	18.4	-24	21.2	243	10.9	+16	38.8
19	308	25.2	63	17.9		21.8	258	13.9		38.7
20	323	27.7	78	17.5		22.4	273	16.9		38.7
21	338	30.1	93	17.0		23.0	288	19.9		38.7
22	353	32.6	108	16.6		23.5	303	22.8		38.7
23	8	35.0	123	16.1		24.1	318	25.8		38.7
24	23	37.5	138	15.6	-24	24.7	333	28.8	+16	38.7
Dif	—		-5		-6		+30		0	

UT	SOL		LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'0		Edad: 11 ^d 6 PHE	4 ^h : 60'0 12 ^h : 59'9 20 ^h : 59'8 R°: 48 ^m										
	PMG: 11 ^h 45 ^m 8			SD: 16'3 PMG: 22 ^h 30 ^m										
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m	
0	183	32.0	-8 28.3	33 39.1	-6 47.8		60 N	16 51	17 33	18 21	16 34 **		3 09 103	
1	198	32.2	29.2	48 09.2 ¹¹¹	30.8 ¹⁷⁰		58	55	35	20	32 3		13 98	
2	213	32.3	30.2	62 39.2 ¹¹⁰	-6 13.7 ¹⁷¹		56	16 59	37	20	31 6		16 94	
3	228	32.5	31.1	77 09.4 ¹¹²	-5 56.6 ¹⁷¹		54	17 03	38	19	31 8		18 91	
4	243	32.6	32.0	91 39.5 ¹¹¹	39.5 ¹⁷¹		52	06	40	19	30 11		21 88	
5	258	32.7	-8 32.9	106 09.7 ¹¹²	-5 22.3 ¹⁷²		50	17 09	17 41	18 19	16 29 14		3 23 85	
6	273	32.9	-8 33.9	120 39.9 ¹¹²	-5 05.1 ¹⁷²		45	17 15	17 45	18 19	16 27 20		3 28 79	
7	288	33.0	34.8	135 10.2 ¹¹³	-4 47.9 ¹⁷²		40	20	48	19	26 24		32 74	
8	303	33.2	35.7	149 40.4 ¹¹²	30.7 ¹⁷²		35	25	51	20	25 28		36 69	
9	318	33.3	36.6	164 10.8 ¹¹⁴	-4 13.4 ¹⁷³		30	29	53	21	23 32		39 66	
10	333	33.4	37.6	178 41.1 ¹¹³	-3 56.2 ¹⁷²		20	36	17 59	24	22 37		44 60	
11	348	33.6	-8 38.5	193 11.5 ¹¹⁴	-3 38.9 ¹⁷³		10 N	17 43	18 04	18 29	16 20 43		3 48 54	
12	3 33.7	-8 39.4	207 41.9 ¹¹⁴	-3 21.6 ¹⁷³			0	17 49	18 10	18 34	16 18 49		3 52 49	
13	18 33.8	40.3	222 12.3 ¹¹⁴	-3 04.2 ¹⁷⁴			10 S	17 55	17	41	17 54		3 57 43	
14	33 34.0	41.2	236 42.7 ¹¹⁴	-2 46.9 ¹⁷³			20	18 02	25	18 51	15 60		4 01 38	
15	48 34.1	42.2	251 13.2 ¹¹⁵	29.6 ¹⁷³			30	10	34	19 03	13 66		06 32	
16	63 34.3	43.1	265 43.7 ¹¹⁵	-2 12.2 ¹⁷⁴			35	15	41	11	12 70		09 28	
17	78 34.4	-8 44.0	280 14.2 ¹¹⁵	-1 54.8 ¹⁷⁴			40	18 20	18 48	19 21	16 11 74		4 12 24	
18	93 34.5	-8 44.9	294 44.7 ¹¹⁵	-1 37.5 ¹⁷³			45	18 26	18 56	19 33	16 10 78		4 15 20	
19	108 34.7	45.8	309 15.3 ¹¹⁶	20.1 ¹⁷⁴			50	33	19 07	49	08 85		20 14	
20	123 34.8	46.8	323 45.8 ¹¹⁵	-1 02.7 ¹⁷⁴			52	37	12	19 56	07 88		22 11	
21	138 34.9	47.7	338 16.4 ¹¹⁶	-0 45.4 ¹⁷³			54	41	18	20 05	06 91		24 9	
22	153 35.1	48.6	352 47.0 ¹¹⁶	28.0 ¹⁷⁴			56	45	24	15	05 94		26 6	
23	168 35.2	49.5	7 17.6 ¹¹⁶	-0 10.6 ¹⁷⁴			58	49	32	26	04 98		29 2	
24	183 35.3	-8 50.5	21 48.2 ¹¹⁶	+0 06.7 ¹⁷³			60 S	18 55	19 40	20 40	16 03 102		4 32 **	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG 22 ^h 21 ^m 8		Mag: -4.3 PMG: 14 ^h 47 ^m			Mag: -2.0 PMG: 1 ^h 46 ^m			Mag: -1.7 PMG: 12 ^h 08 ^m			Mag: +0.4 PMG: 7 ^h 15 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	23 37.5	138 15.6	-24 24.7		333 28.8	+16 38.7		177 38.2	-9 38.1		251 04.7	+18 09.9		
1	38 40.0	153 15.2	25.3		348 31.7	38.7		192 40.2	38.3		266 07.0	09.9		
2	53 42.4	168 14.7	25.9		3 34.7	38.6		207 42.1	38.5		281 09.3	09.8		
3	68 44.9	183 14.3	26.5		18 37.7	38.6		222 44.1	38.7		296 11.6	09.8		
4	83 47.4	198 13.8	27.0		33 40.7	38.6		237 46.0	38.9		311 13.9	09.7		
5	98 49.8	213 13.3	-24 27.6		48 43.7	+16 38.6		252 48.0	-9 39.1		326 16.2	+18 09.7		
6	113 52.3	228 12.9	-24 28.2		63 46.7	+16 38.6		267 49.9	-9 39.3		341 18.5	+18 09.7		
7	128 54.8	243 12.4	28.8		78 49.6	38.6		282 51.9	39.5		356 20.8	09.6		
8	143 57.2	258 12.0	29.3		93 52.6	38.6		297 53.9	39.7		11 23.1	09.6		
9	158 59.7	273 11.5	29.9		108 55.6	38.5		312 55.8	39.8		26 25.4	09.5		
10	174 02.1	288 11.0	30.5		123 58.6	38.5		327 57.8	40.0		41 27.7	09.5		
11	189 04.6	303 10.6	-24 31.1		139 01.6	+16 38.5		342 59.7	-9 40.2		56 30.0	+18 09.5		
12	204 07.1	318 10.1	-24 31.6		154 04.6	+16 38.5		358 01.7	-9 40.4		71 32.3	+18 09.4		
13	219 09.5	333 09.7	32.2		169 07.6	38.5		13 03.6	40.6		86 34.6	09.4		
14	234 12.0	348 09.2	32.8		184 10.6	38.4		28 05.6	40.8		101 36.9	09.4		
15	249 14.5	3 08.7	33.3		199 13.6	38.4		43 07.5	41.0		116 39.2	09.3		
16	264 16.9	18 08.3	33.9		214 16.6	38.4		58 09.5	41.2		131 41.4	09.3		
17	279 19.4	33 07.8	-24 34.5		229 19.6	+16 38.4		73 11.4	-9 41.4		146 43.7	+18 09.2		
18	294 21.9	48 07.3	-24 35.0		244 22.6	+16 38.4		88 13.4	-9 41.6		161 46.0	+18 09.2		
19	309 24.3	63 06.9	35.6		259 25.6	38.4		103 15.3	41.8		176 48.3	09.2		
20	324 26.8	78 06.4	36.2		274 28.6	38.3		118 17.3	42.0		191 50.6	09.1		
21	339 29.3	93 06.0	36.7		289 31.6	38.3		133 19.2	42.2		206 52.9	09.1		
22	354 31.7	108 05.5	37.3		304 34.6	38.3		148 21.2	42.4		221 55.2	09.0		
23	9 34.2	123 05.0	37.9		319 37.6	38.3		163 23.1	42.6		236 57.5	09.0		
24	24 36.6	138 04.6	-24 38.4		334 40.6	+16 38.3		178 25.1	-9 42.8		251 59.8	+18 09.0		
Dif	—	-5	-6		+30	0		+20	-2		+23	0		

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16:0			Edad: 12 ^d 6 PHE { 4 ^h : 59:7 12 ^h : 59:6 20 ^h : 59:5 Rº: 50 ^m												
	PMG: 11 ^h 45 ^m 5			SD: 16:3 PMG: 23 ^h 18 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	Rº	Hora	Rº	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	183	35.3	-8 50.5	21	48.2	+0 06.7		60 N	5 11	5 59	6 42	16 33	**	4 52	101	
1	198	35.5	51.4	36	18.9 ¹¹⁷	24.1 ¹⁷⁴		58	12	57	37	35	3	51	97	
2	213	35.6	52.3	50	49.5 ¹¹⁶	41.4 ¹⁷³		56	13	56	33	37	7	50	94	
3	228	35.8	53.2	65	20.2 ¹¹⁷	+0 58.8 ¹⁷⁴		54	13	54	30	39	10	49	91	
4	243	35.9	54.1	79	50.8 ¹¹⁶	+1 16.1 ¹⁷³		52	13	52	26	41	13	49	87	
5	258	36.0	-8 55.1	94	21.5 ¹¹⁷	+1 33.4 ¹⁷³		50	5 13	5 51	6 23	16 43	15	4 48	85	
6	273	36.2	-8 56.0	108	52.1 ¹¹⁶	+1 50.7 ¹⁷³		45	5 13	5 47	6 17	16 47	20	4 47	79	
7	288	36.3	56.9	123	22.8 ¹¹⁷	+2 08.0 ¹⁷³		40	13	44	11	50	25	46	74	
8	303	36.4	57.8	137	53.5 ¹¹⁷	25.2 ¹⁷²		35	12	41	07	53	29	45	70	
9	318	36.6	58.7	152	24.2 ¹¹⁷	42.5 ¹⁷³		30	11	38	6 03	55	33	45	66	
10	333	36.7	-8 59.6	166	54.8 ¹¹⁶	+2 59.7 ¹⁷²		20	07	33	5 55	16 59	39	44	59	
11	348	36.8	-9 00.6	181	25.5 ¹¹⁷	+3 16.9 ¹⁷²		10 N	5 03	5 27	5 49	17 03	44	4 42	54	
12	3 37.0	-9 01.5	195 56.2 ¹¹⁷	+3 34.0 ¹⁷¹		0	4 57	5 21	5 42	17 07	49	4 41	49			
13	18 37.1	02.4	210 26.8 ¹¹⁶	+3 51.2 ¹⁷²		10 S	50	15	36	11 54	40	44				
14	33 37.2	03.3	224 57.5 ¹¹⁷	+4 08.3 ¹⁷¹		20	40	5 07	29	15 59	39	38				
15	48 37.4	04.2	239 28.1 ¹¹⁶	25.4 ¹⁷¹		30	28	4 56	21	19 66	38	32				
16	63 37.5	05.1	253 58.8 ¹¹⁷	42.4 ¹⁷⁰		35	20	50	16	22 69	37	28				
17	78 37.6	-9 06.1	268 29.4 ¹¹⁶	+4 59.4 ¹⁷⁰		40	4 10	4 43	5 11	17 25	73	4 36	25			
18	93 37.7	-9 07.0	283 00.1 ¹¹⁷	+5 16.4 ¹⁷⁰		45	3 58	4 34	5 05	17 28	79	4 35	20			
19	108 37.9	07.9	297 30.7 ¹¹⁶	33.3 ¹⁶⁹		50	42	23	4 57	33 84	34	14				
20	123 38.0	08.8	312 01.3 ¹¹⁶	+5 50.2 ¹⁶⁹		52	34	18	54	35 87	33	12				
21	138 38.1	09.7	326 31.9 ¹¹⁶	+6 07.1 ¹⁶⁹		54	26	12	50	37 90	33	9				
22	153 38.3	10.6	341 02.5 ¹¹⁶	23.9 ¹⁶⁸		56	16	4 06	46	39 94	32	6				
23	168 38.4	11.6	355 33.0 ¹¹⁵	40.7 ¹⁶⁸		58	3 04	3 59	41	42 98	31	3				
24	183 38.5	-9 12.5	10 03.6 ¹¹⁶	+6 57.4 ¹⁶⁷		60 S	2 51	3 50	4 36	17 45	103	4 31	**			

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 22 ^h 17 ^m 9		Mag: -4.4 PMG: 14 ^h 48 ^m			Mag: -2.0 PMG: 1 ^h 41 ^m			Mag: -1.7 PMG: 12 ^h 05 ^m			Mag: +0.4 PMG: 7 ^h 11 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°				
0	24	36.6	138	04.6	-24	38.4	334	40.6	+16	38.3	178	25.1	-9	42.8	251	59.8	+18	09.0
1	39	39.1	153	04.1		39.0	349	43.6		38.2	193	27.0		43.0	267	02.1		08.9
2	54	41.6	168	03.6		39.5	4	46.6		38.2	208	29.0		43.2	282	04.4		08.9
3	69	44.0	183	03.2		40.1	19	49.6		38.2	223	30.9		43.4	297	06.7		08.8
4	84	46.5	198	02.7		40.6	34	52.6		38.2	238	32.9		43.6	312	09.0		08.8
5	99	49.0	213	02.3	-24	41.2	49	55.7	+16	38.1	253	34.8	-9	43.8	327	11.3	+18	08.8
6	114	51.4	228	01.8	-24	41.8	64	58.7	+16	38.1	268	36.8	-9	43.9	342	13.6	+18	08.7
7	129	53.9	243	01.3		42.3	80	01.7		38.1	283	38.7		44.1	357	15.9		08.7
8	144	56.4	258	00.9		42.9	95	04.7		38.1	298	40.7		44.3	12	18.2		08.7
9	159	58.8	273	00.4		43.4	110	07.7		38.1	313	42.6		44.5	27	20.5		08.6
10	175	01.3	288	00.0		44.0	125	10.8		38.0	328	44.6		44.7	42	22.8		08.6
11	190	03.7	302	59.5	-24	44.5	140	13.8	+16	38.0	343	46.5	-9	44.9	57	25.1	+18	08.5
12	205	06.2	317	59.0	-24	45.1	155	16.8	+16	38.0	358	48.5	-9	45.1	72	27.4	+18	08.5
13	220	08.7	332	58.6		45.6	170	19.8		38.0	13	50.4		45.3	87	29.7		08.5
14	235	11.1	347	58.1		46.1	185	22.9		37.9	28	52.4		45.5	102	32.0		08.4
15	250	13.6	2	57.6		46.7	200	25.9		37.9	43	54.3		45.7	117	34.3		08.4
16	265	16.1	17	57.2		47.2	215	28.9		37.9	58	56.3		45.9	132	36.6		08.4
17	280	18.5	32	56.7	-24	47.8	230	32.0	+16	37.9	73	58.2	-9	46.1	147	38.9	+18	08.3
18	295	21.0	47	56.3	-24	48.3	245	35.0	+16	37.8	89	00.2	-9	46.3	162	41.2	+18	08.3
19	310	23.5	62	55.8		48.9	260	38.0		37.8	104	02.1		46.5	177	43.5		08.2
20	325	25.9	77	55.3		49.4	275	41.1		37.8	119	04.1		46.7	192	45.8		08.2
21	340	28.4	92	54.9		49.9	290	44.1		37.8	134	06.0		46.9	207	48.1		08.2
22	355	30.9	107	54.4		50.5	305	47.1		37.7	149	08.0		47.1	222	50.4		08.1
23	10	33.3	122	53.9		51.0	320	50.2		37.7	164	09.9		47.3	237	52.7		08.1
24	25	35.8	137	53.5	-24	51.5	335	53.2	+16	37.7	179	11.9	-9	47.5	252	55.0	+18	08.1
Dif	—		-5	-5			+30	0			+20	-2			+23	0		

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:0 PMG: 11 ^h 45 ^m 3			Edad: 13 ^d 6 PHE { 4 ^h : 59/3 12 ^h : 59/1 20 ^h : 58/9 PMG: **h **m R°: **m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	183	38.5	-9 12.5	10	03.6	+6 57.4	115	60 N	16 45	17 28	18 16	16 32 0	6 33 104	
1	198	38.7	13.4	24	34.1	+7 14.1	167	58	50	30	15	38 5	28 99	
2	213	38.8	14.3	39	04.6	30.8	167	56	54	32	15	44 8	24 94	
3	228	38.9	15.2	53	35.1	+7 47.3	165	54	16 58	34	15	49 12	20 91	
4	243	39.0	16.1	68	05.6	+8 03.9	166	52	17 02	36	15	54 14	16 88	
5	258	39.2	-9 17.0	82	36.1	+8 20.4	165	50	17 05	17 37	18 15	16 58 17	6 13 85	
6	273	39.3	-9 18.0	97	06.5	+8 36.8	164	45	17 12	17 41	18 15	17 07 23	6 06 78	
7	288	39.4	18.9	111	36.9	+8 53.2	164	40	18	45	16	15 27	6 00 74	
8	303	39.6	19.8	126	07.3	+9 09.5	163	35	23	48	18	22 31	5 55 69	
9	318	39.7	20.7	140	37.7	25.7	162	30	27	51	19	28 34	51 65	
10	333	39.8	21.6	155	08.0	41.9	162	20	35	17 57	23	38 41	43 60	
11	348	39.9	-9 22.5	169	38.3	+9 58.1	162	10 N	17 42	18 03	18 28	17 47 46	5 36 55	
12	3	40.1	-9 23.4	184	08.6	+10 14.1	160	0	17 49	18 10	18 34	17 56 50	5 30 50	
13	18	40.2	24.3	198	38.9	30.1	160	10 S	17 55	17	42	18 05 55	24 44	
14	33	40.3	25.3	213	09.1	+10 46.1	160	20	18 03	25	18 52	14 60	17 40	
15	48	40.4	26.2	227	39.3	+11 01.9	158	30	11	36	19 05	25 66	10 33	
16	63	40.6	27.1	242	09.4	17.7	158	35	16	42	13	31 70	05 30	
17	78	40.7	-9 28.0	256	39.6	+11 33.4	157	40	18 22	18 50	19 24	18 38 74	5 01 26	
18	93	40.8	-9 28.9	271	09.7	+11 49.1	157	45	18 29	18 59	19 36	18 47 79	4 55 21	
19	108	40.9	29.8	285	39.7	+12 04.7	156	50	37	19 11	19 53	18 57 85	48 16	
20	123	41.1	30.7	300	09.8	20.2	155	52	40	16	20 01	19 02 88	45 13	
21	138	41.2	31.6	314	39.8	35.6	154	54	44	22	10	07 91	42 10	
22	153	41.3	32.5	329	09.7	+12 50.9	153	56	49	29	20	13 95	38 7	
23	168	41.4	33.5	343	39.7	+13 06.2	153	58	18 54	37	32	20 99	34 4	
24	183	41.6	-9 34.4	358	09.6	+13 21.3	151	60 S	19 00	19 46	20 47	19 28 104	4 30 **	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 22 ^h 14 ^m 0		Mag: -4.4 PMG: 14 ^h 49 ^m			Mag: -2.0 PMG: 1 ^h 36 ^m			Mag: -1.7 PMG: 12 ^h 02 ^m			Mag: +0.3 PMG: 7 ^h 07 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	'	°	°	'	°	°	'	°
0	25	35.8	137 53.5	-24 51.5	335 53.2	+16 37.7	179 11.9	-9 47.5	252 55.0	+18 47.5	252 55.0	+18 08.1		
1	40	38.2	152 53.0	52.1	350 56.3	37.6	194 13.8	47.7	267 57.3	08.0	267 57.3	08.0		
2	55	40.7	167 52.6	52.6	5 59.3	37.6	209 15.8	47.8	282 59.6	08.0	282 59.6	08.0		
3	70	43.2	182 52.1	53.1	21 02.4	37.6	224 17.7	48.0	298 01.9	07.9	298 01.9	07.9		
4	85	45.6	197 51.6	53.7	36 05.4	37.6	239 19.7	48.2	313 04.2	07.9	313 04.2	07.9		
5	100	48.1	212 51.2	-24 54.2	51 08.5	+16 37.5	254 21.6	-9 48.4	328 06.5	+18 07.9	328 06.5	+18 07.9		
6	115	50.6	227 50.7	-24 54.7	66 11.5	+16 37.5	269 23.6	-9 48.6	343 08.8	+18 07.8	343 08.8	+18 07.8		
7	130	53.0	242 50.2	55.3	81 14.6	37.5	284 25.5	48.8	358 11.1	07.8	358 11.1	07.8		
8	145	55.5	257 49.8	55.8	96 17.6	37.4	299 27.5	49.0	13 13.4	07.8	13 13.4	07.8		
9	160	58.0	272 49.3	56.3	111 20.7	37.4	314 29.4	49.2	28 15.7	07.7	28 15.7	07.7		
10	176	00.4	287 48.9	56.8	126 23.7	37.4	329 31.4	49.4	43 18.0	07.7	43 18.0	07.7		
11	191	02.9	302 48.4	-24 57.4	141 26.8	+16 37.4	344 33.3	-9 49.6	58 20.3	+18 07.6	58 20.3	+18 07.6		
12	206	05.3	317 47.9	-24 57.9	156 29.8	+16 37.3	359 35.3	-9 49.8	73 22.6	+18 07.6	73 22.6	+18 07.6		
13	221	07.8	332 47.5	58.4	171 32.9	37.3	14 37.2	50.0	88 24.9	07.6	88 24.9	07.6		
14	236	10.3	347 47.0	58.9	186 36.0	37.3	29 39.2	50.2	103 27.2	07.5	103 27.2	07.5		
15	251	12.7	2 46.5	-24 59.4	201 39.0	37.2	44 41.1	50.4	118 29.5	07.5	118 29.5	07.5		
16	266	15.2	17 46.1	-25 00.0	216 42.1	37.2	59 43.1	50.6	133 31.8	07.5	133 31.8	07.5		
17	281	17.7	32 45.6	-25 00.5	231 45.2	+16 37.2	74 45.0	-9 50.8	148 34.1	+18 07.4	148 34.1	+18 07.4		
18	296	20.1	47 45.1	-25 01.0	246 48.2	+16 37.1	89 47.0	-9 51.0	163 36.4	+18 07.4	163 36.4	+18 07.4		
19	311	22.6	62 44.7	01.5	261 51.3	37.1	104 48.9	51.2	178 38.7	07.3	178 38.7	07.3		
20	326	25.1	77 44.2	02.0	276 54.4	37.1	119 50.9	51.4	193 41.0	07.3	193 41.0	07.3		
21	341	27.5	92 43.8	02.5	291 57.4	37.0	134 52.8	51.5	208 43.3	07.3	208 43.3	07.3		
22	356	30.0	107 43.3	03.0	307 00.5	37.0	149 54.7	51.7	223 45.6	07.2	223 45.6	07.2		
23	11	32.5	122 42.8	03.6	322 03.6	37.0	164 56.7	51.9	238 47.9	07.2	238 47.9	07.2		
24	26	34.9	137 42.4	-25 04.1	337 06.7	+16 36.9	179 58.6	-9 52.1	253 50.2	+18 07.2	253 50.2	+18 07.2		
Dif	—		-5	-5	+31	0	+19	-2	+23	0				

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16 ^h 1			Edad: 14 ^d 6 PHE { 4 ^h : 58 ^m /7 12 ^h : 58 ^m /5 20 ^h : 58 ^m /3													
	PMG: 11 ^h 45 ^m 1			SD: 16 ^h 0 PMG: 0 ^h 08 ^m R°: 50 ^m													
	hG ☉		Dec	hG ☾ Dif		Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m		h m m			
0	183	41.6	-9 34.4	358	09.6	+13 21.3	151	60 N	5 16	6 04	6 47	16 32 1	8 17 105				
1	198	41.7	35.3	12	39.4 ¹⁰⁸	36.4 ¹⁵¹		58	16	02	42	43 7	8 07 99				
2	213	41.8	36.2	27	09.2 ¹⁰⁸	+13 51.5 ¹⁵¹		56	16	6 00	37	16 52 12	7 58 95				
3	228	41.9	37.1	41	39.0 ¹⁰⁸	+14 06.4 ¹⁴⁹		54	17	5 58	34	17 01 15	51 90				
4	243	42.0	38.0	56	08.7 ¹⁰⁷	21.2 ¹⁴⁸		52	16	56	30	08 19	44 87				
5	258	42.2	-9 38.9	70	38.4 ¹⁰⁷	+14 36.0 ¹⁴⁸		50	5 16	5 54	6 27	17 15 22	7 38 84				
6	273	42.3	-9 39.8	85	08.1 ¹⁰⁷	+14 50.6 ¹⁴⁶		45	5 16	5 50	6 20	17 30 28	7 24 79				
7	288	42.4	40.7	99	37.7 ¹⁰⁶	+15 05.2 ¹⁴⁶		40	15	46	14	42 32	14 73				
8	303	42.5	41.6	114	07.3 ¹⁰⁶	19.6 ¹⁴⁴		35	13	43	08	17 53 36	7 04 70				
9	318	42.7	42.5	128	36.8 ¹⁰⁵	34.0 ¹⁴⁴		30	12	40	6 04	18 02 39	6 56 67				
10	333	42.8	43.4	143	06.3 ¹⁰⁵	+15 48.3 ¹⁴³		20	08	34	5 56	19 43	43 60				
11	348	42.9	-9 44.3	157	35.7 ¹⁰⁴	+16 02.5 ¹⁴²		10 N	5 03	5 27	5 49	18 33 48	6 31 55				
12	3	43.0	-9 45.3	172	05.1 ¹⁰⁴	+16 16.5 ¹⁴⁰		0	4 56	5 21	5 42	18 46 52	6 20 51				
13	18	43.1	46.2	186	34.5 ¹⁰⁴	30.5 ¹⁴⁰		10 S	49	14	35	19 00 56	6 08 47				
14	33	43.3	47.1	201	03.8 ¹⁰³	44.4 ¹³⁹		20	39	5 05	27	14 61	5 57 42				
15	48	43.4	48.0	215	33.1 ¹⁰³	+16 58.2 ¹³⁸		30	25	4 54	19	31 66	43 37				
16	63	43.5	48.9	230	02.3 ¹⁰²	+17 11.9 ¹³⁷		35	17	48	14	41 69	35 34				
17	78	43.6	-9 49.8	244	31.4 ¹⁰¹	+17 25.4 ¹³⁵		40	4 06	4 40	5 08	19 52 73	5 27 29				
18	93	43.7	-9 50.7	259	00.6 ¹⁰²	+17 38.9 ¹³⁵		45	3 54	4 31	5 01	20 06 77	5 16 25				
19	108	43.8	51.6	273	29.6 ¹⁰⁰	+17 52.2 ¹³³		50	37	19	4 53	22 83	5 04 19				
20	123	44.0	52.5	287	58.7 ¹⁰¹	+18 05.5 ¹³³		52	29	13	49	30 86	4 58 17				
21	138	44.1	53.4	302	27.7 ¹⁰⁰	18.6 ¹³¹		54	20	07	45	38 91	52 14				
22	153	44.2	54.3	316	56.6 ⁹⁹	31.6 ¹³⁰		56	3 09	4 00	41	48 95	45 10				
23	168	44.3	55.2	331	25.5 ⁹⁹	44.5 ¹²⁹		58	2 57	3 53	35	20 59 100	38 5				
24	183	44.4	-9 56.1	345	54.3 ⁹⁸	+18 57.3 ¹²⁸		60 S	2 43	3 44	4 30	21 12 107	4 29 0				
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 22 ^h 10 ^m 0			Mag: -4.4 PMG: 14 ^h 50 ^m			Mag: -2.1 PMG: 1 ^h 31 ^m			Mag: -1.7 PMG: 11 ^h 59 ^m			Mag: +0.3 PMG: 7 ^h 04 ^m				
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	'	
0	26	34.9	137 42.4	-25 04.1	337 06.7	+16 36.9	179 58.6	-9 52.1	253 50.2	+18 07.2			253 50.2	+18 07.2			
1	41	37.4	152 41.9	04.6	352 09.7	36.9	195 00.6	52.3	268 52.6	07.1			268 52.6	07.1			
2	56	39.8	167 41.4	05.1	7 12.8	36.9	210 02.5	52.5	283 54.9	07.1			283 54.9	07.1			
3	71	42.3	182 41.0	05.6	22 15.9	36.8	225 04.5	52.7	298 57.2	07.1			298 57.2	07.1			
4	86	44.8	197 40.5	06.1	37 19.0	36.8	240 06.4	52.9	313 59.5	07.0			313 59.5	07.0			
5	101	47.2	212 40.1	-25 06.6	52 22.1	+16 36.8	255 08.4	-9 53.1	329 01.8	+18 07.0			329 01.8	+18 07.0			
6	116	49.7	227 39.6	-25 07.1	67 25.1	+16 36.7	270 10.3	-9 53.3	344 04.1	+18 06.9			344 04.1	+18 06.9			
7	131	52.2	242 39.1	07.6	82 28.2	36.7	285 12.3	53.5	359 06.4	06.9			359 06.4	06.9			
8	146	54.6	257 38.7	08.1	97 31.3	36.7	300 14.2	53.7	14 08.7	06.9			14 08.7	06.9			
9	161	57.1	272 38.2	08.6	112 34.4	36.6	315 16.2	53.9	29 11.0	06.8			29 11.0	06.8			
10	176	59.6	287 37.7	09.1	127 37.5	36.6	330 18.1	54.1	44 13.3	06.8			44 13.3	06.8			
11	192	02.0	302 37.3	-25 09.6	142 40.6	+16 36.5	345 20.1	-9 54.3	59 15.6	+18 06.8			59 15.6	+18 06.8			
12	207	04.5	317 36.8	-25 10.1	157 43.7	+16 36.5	0 22.0	-9 54.5	74 17.9	+18 06.7			74 17.9	+18 06.7			
13	222	07.0	332 36.4	10.6	172 46.8	36.5	15 24.0	54.7	89 20.2	06.7			89 20.2	06.7			
14	237	09.4	347 35.9	11.1	187 49.9	36.4	30 25.9	54.9	104 22.5	06.7			104 22.5	06.7			
15	252	11.9	2 35.4	11.6	202 52.9	36.4	45 27.9	55.0	119 24.8	06.6			119 24.8	06.6			
16	267	14.3	17 35.0	12.1	217 56.0	36.4	60 29.8	55.2	134 27.1	06.6			134 27.1	06.6			
17	282	16.8	32 34.5	-25 12.6	232 59.1	+16 36.3	75 31.8	-9 55.4	149 29.4	+18 06.5			149 29.4	+18 06.5			
18	297	19.3	47 34.0	-25 13.1	248 02.2	+16 36.3	90 33.7	-9 55.6	164 31.8	+18 06.5			164 31.8	+18 06.5			
19	312	21.7	62 33.6	13.6	263 05.3	36.2	105 35.7	55.8	179 34.1	06.5			179 34.1	06.5			
20	327	24.2	77 33.1	14.1	278 08.4	36.2	120 37.6	56.0	194 36.4	06.4			194 36.4	06.4			
21	342	26.7	92 32.7	14.5	293 11.5	36.2	135 39.6	56.2	209 38.7	06.4			209 38.7	06.4			
22	357	29.1	107 32.2	15.0	308 14.6	36.1	150 41.5	56.4	224 41.0	06.4			224 41.0	06.4			
23	12	31.6	122 31.7	15.5	323 17.8	36.1	165 43.5	56.6	239 43.3	06.3			239 43.3	06.3			
24	27	34.1	137 31.3	-25 16.0	338 20.9	+16 36.0	180 45.4	-9 56.8	254 45.6	+18 06.3			254 45.6	+18 06.3			
Dif	—		-5	-5	+31		0	+19	-2	+23		0					

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:1 PMG: 11 ^h 44 ^m 9			Edad: 15 ^d 6 PHE { SD: 15 ^h 8 PMG: 0 ^h 58 ^m 4 ^h : 58 ^h 0 12 ^h : 57 ^h 8 20 ^h : 57 ^h 5 R°: 53 ^m										
	hG ☉	Dec		hG ☾	Dif				Civil		Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m	m	h m	m
0	183	44.4	-9	56.1	345	54.3	+18 57.3	60 N	16 39	17 22	18 10	16 33	5	10 02 107
1	198	44.5		57.0	0	23.1	+19 10.0 ¹²⁷	58	45	25	10	16 50	13	9 46 99
2	213	44.7		57.9	14	51.9	22.5 ¹²⁵	56	49	27	10	17 04	18	33 93
3	228	44.8		58.8	29	20.6	35.0 ¹²⁵	54	54	30	11	16 23		21 89
4	243	44.9	-9	59.7	43	49.2	47.3 ¹²³	52	16 57	32	11	27 26		11 85
5	258	45.0	-10	00.6	58	17.8	+19 59.5 ¹²²	50	17 01	17 34	18 11	17 37	29	9 02 82
6	273	45.1	-10	01.5	72	46.4	+20 11.6 ¹²¹	45	17 08	17 38	18 12	17 58	34	8 43 76
7	288	45.2		02.4	87	14.9	23.5 ¹¹⁹	40	15	42	14	18 14	38	27 72
8	303	45.4		03.3	101	43.4	35.4 ¹¹⁹	35	20	46	15	29 40		14 68
9	318	45.5		04.2	116	11.8	47.1 ¹¹⁷	30	25	49	17	18 41	43	8 03 65
10	333	45.6		05.1	130	40.1	+20 58.7 ¹¹⁶	20	33	17 56	22	19 02	48	7 43 61
11	348	45.7	-10	06.0	145	08.4	+21 10.1 ¹¹⁴	10 N	17 41	18 02	18 27	19 21	51	7 26 57
12	3	45.8	-10	06.9	159	36.7	+21 21.4 ¹¹³	0	17 48	18 09	18 34	19 38	54	7 11 53
13	18	45.9		07.8	174	04.9	32.6 ¹¹²	10 S	17 56	17	42	19 56	57	6 55 50
14	33	46.0		08.7	188	33.1	43.7 ¹¹¹	20	18 04	26	18 52	20 15	61	39 45
15	48	46.1		09.6	203	01.2	+21 54.6 ¹⁰⁹	30	13	37	19 06	37 65		20 41
16	63	46.3		10.5	217	29.3	+22 05.5 ¹⁰⁹	35	18	44	15	20 50	67	6 09 38
17	78	46.4	-10	11.4	231	57.4	+22 16.1 ¹⁰⁶	40	18 24	18 52	19 26	21 05	70	5 56 35
18	93	46.5	-10	12.3	246	25.4	+22 26.7 ¹⁰⁶	45	18 31	19 02	19 39	21 23	74	5 41 31
19	108	46.6		13.2	260	53.3	37.1 ¹⁰⁴	50	40	14	19 57	45 79		23 25
20	123	46.7		14.1	275	21.2	47.3 ¹⁰²	52	44	20	20 05	21 56	82	15 22
21	138	46.8		15.0	289	49.1	+22 57.5 ¹⁰²	54	48	27	15	22 09	85	5 06 18
22	153	46.9		15.9	304	16.9	+23 07.5 ¹⁰⁰	56	53	34	26	23 89		4 55 14
23	168	47.0		16.8	318	44.7	17.3 ⁹⁸	58	18 59	42	39	39 96		43 9
24	183	47.1	-10	17.7	333	12.4	+23 27.0 ⁹⁷	60 S	19 05	19 52	20 54	22 59	106	4 29 2
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 22 ^h 06 ^m 1		Mag: -4.4 PMG: 14 ^h 50 ^m			Mag: -2.1 PMG: 1 ^h 26 ^m			Mag: -1.7 PMG: 11 ^h 55 ^m			Mag: +0.3 PMG: 7 ^h 00 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	27	34.1	137	31.3	-25	16.0	338	20.9	+16	36.0	180	45.4	-9	56.8
1	42	36.5	152	30.8		16.5	353	24.0		36.0	195	47.4		57.0
2	57	39.0	167	30.3		17.0	8	27.1		36.0	210	49.3		57.2
3	72	41.4	182	29.9		17.4	23	30.2		35.9	225	51.3		57.4
4	87	43.9	197	29.4		17.9	38	33.3		35.9	240	53.2		57.6
5	102	46.4	212	29.0	-25	18.4	53	36.4	+16	35.8	255	55.2	-9	57.8
6	117	48.8	227	28.5	-25	18.9	68	39.5	+16	35.8	270	57.1	-9	58.0
7	132	51.3	242	28.0		19.4	83	42.6		35.7	285	59.1		58.2
8	147	53.8	257	27.6		19.8	98	45.8		35.7	301	01.0		58.4
9	162	56.2	272	27.1		20.3	113	48.9		35.7	316	03.0		58.5
10	177	58.7	287	26.7		20.8	128	52.0		35.6	331	04.9		58.7
11	193	01.2	302	26.2	-25	21.3	143	55.1	+16	35.6	346	06.9	-9	58.9
12	208	03.6	317	25.7	-25	21.7	158	58.2	+16	35.5	1	08.8	-9	59.1
13	223	06.1	332	25.3		22.2	174	01.4		35.5	16	10.7		59.3
14	238	08.6	347	24.8		22.7	189	04.5		35.4	31	12.7		59.5
15	253	11.0	2	24.3		23.1	204	07.6		35.4	46	14.6		59.7
16	268	13.5	17	23.9		23.6	219	10.7		35.4	61	16.6	-9	59.9
17	283	15.9	32	23.4	-25	24.1	234	13.9	+16	35.3	76	18.5	-10	00.1
18	298	18.4	47	23.0	-25	24.6	249	17.0	+16	35.3	91	20.5	-10	00.3
19	313	20.9	62	22.5		25.0	264	20.1		35.2	106	22.4		00.5
20	328	23.3	77	22.0		25.5	279	23.3		35.2	121	24.4		00.7
21	343	25.8	92	21.6		25.9	294	26.4		35.1	136	26.3		00.9
22	358	28.3	107	21.1		26.4	309	29.5		35.1	151	28.3		01.1
23	13	30.7	122	20.7		26.9	324	32.7		35.0	166	30.2		01.3
24	28	33.2	137	20.2	-25	27.3	339	35.8	+16	35.0	181	32.2	-10	01.5
Dif	—		-5		-5		+31		0		+19		-2	
													+23	
													0	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16 ^h 1			Edad: 16 ^d 6 PHE { 4 ^h : 57/2 12 ^h : 57/0 20 ^h : 56/7													
	PMG: 11 ^h 44 ^m 8			SD: 15 ^h 6 PMG: 1 ^h 51 ^m R°: 55 ^m													
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	°	'	°	h	m	h	m	h	m	h	m
0	183	47.1	-10	17.7	333	12.4	+23	27.0	60 N	5	21	6	09	6	52	16	38
1	198	47.3		18.6	347	40.1		36.6	58		21		06	46		17	03
2	213	47.4		19.5	2	07.7		46.0	56		20		04	42		22	30
3	228	47.5		20.4	16	35.3		55.3	54		20		6	01	37	39	34
4	243	47.6		21.3	31	02.9		04.5	52		20		5	59	33	17	53
5	258	47.7	-10	22.2	45	30.4		13.5	50	5	19	5	57	6	30	18	06
6	273	47.8	-10	23.1	59	57.9		22.3	45	5	18	5	52	6	22	18	32
7	288	47.9		24.0	74	25.3		31.1	40		17		48	16		18	52
8	303	48.0		24.9	88	52.8		39.6	35		15		44	10		19	09
9	318	48.1		25.8	103	20.1		48.1	30		13		41	6	05	24	49
10	333	48.2		26.7	117	47.5		56.3	20		08		34	5	56	19	50
11	348	48.3	-10	27.6	132	14.8		04.5	10 N	5	03	5	27	5	49	20	12
12	3	48.4	-10	28.5	146	42.0		12.5	0	4	56	5	20	5	41	20	32
13	18	48.6		29.4	161	09.3		20.3	10 S		48		13	34		20	53
14	33	48.7		30.2	175	36.5		28.0	20		37		5	03	26	21	16
15	48	48.8		31.1	190	03.7		35.5	30		23		4	52	17	42	61
16	63	48.9		32.0	204	30.8		42.9	35		14		45	11		21	57
17	78	49.0	-10	32.9	218	57.9		50.1	40	4	03	4	37	5	05	22	15
18	93	49.1	-10	33.8	233	25.0		57.2	45	3	50	4	27	4	58	22	37
19	108	49.2		34.7	247	52.1		04.1	50		32		15	49		23	04
20	123	49.3		35.6	262	19.1		10.9	52		24		09	45		18	71
21	138	49.4		36.5	276	46.1		17.5	54		14		4	02	41	34	73
22	153	49.5		37.4	291	13.1		24.0	56	3	03	3	55	36		23	52
23	168	49.6		38.3	305	40.1		30.3	58		2	50	47	30		**	**
24	183	49.7	-10	39.2	320	07.0		36.5	60 S	2	34	3	37	4	24	**	**

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 22 ^h 02 ^m 2		Mag: -4.4 PMG: 14 ^h 51 ^m		Mag: -2.1 PMG: 1 ^h 21 ^m		Mag: -1.7 PMG: 11 ^h 52 ^m		Mag: +0.3 PMG: 6 ^h 56 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	28	33.2	137	20.2	-25	27.3	339	35.8	181	32.2
1	43	35.7	152	19.7		27.8	354	38.9	196	34.1
2	58	38.1	167	19.3		28.2	9	42.1	211	36.1
3	73	40.6	182	18.8		28.7	24	45.2	226	38.0
4	88	43.1	197	18.4		29.2	39	48.4	241	40.0
5	103	45.5	212	17.9	-25	29.6	54	51.5	256	41.9
6	118	48.0	227	17.4	-25	30.1	69	54.7	271	43.9
7	133	50.4	242	17.0		30.5	84	57.8	286	45.8
8	148	52.9	257	16.5		31.0	100	01.0	301	47.8
9	163	55.4	272	16.0		31.4	115	04.1	316	49.7
10	178	57.8	287	15.6		31.9	130	07.3	331	51.7
11	194	00.3	302	15.1	-25	32.3	145	10.4	346	53.6
12	209	02.8	317	14.7	-25	32.8	160	13.6	1	55.6
13	224	05.2	332	14.2		33.2	175	16.7	16	57.5
14	239	07.7	347	13.7		33.7	190	19.9	31	59.4
15	254	10.2	2	13.3		34.1	205	23.0	47	01.4
16	269	12.6	17	12.8		34.5	220	26.2	62	03.3
17	284	15.1	32	12.4	-25	35.0	235	29.3	77	05.3
18	299	17.6	47	11.9	-25	35.4	250	32.5	92	07.2
19	314	20.0	62	11.4		35.9	265	35.7	107	09.2
20	329	22.5	77	11.0		36.3	280	38.8	122	11.1
21	344	24.9	92	10.5		36.7	295	42.0	137	13.1
22	359	27.4	107	10.1		37.2	310	45.1	152	15.0
23	14	29.9	122	09.6		37.6	325	48.3	167	17.0
24	29	32.3	137	09.2	-25	38.0	340	51.5	182	18.9
Dif	—		-5		-4		+32		+19	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:1 PMG: 11 ^h 44 ^m 6			Edad: 17 ^d 6 PHE { 4 ^h : 56/4 12 ^h : 56/2 20 ^h : 56/0 SD: 15:4 PMG: 2 ^h 46 ^m R°: 55 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m		
0	183	49.7	-10	39.2	320	07.0	+26 36.5	60 N	16 34	17 17	18 05	16 52 40	13 29 76		
1	198	49.8		40.1	334	33.9	79 42.5	58	39	20	05	17 27 45	12 55 69		
2	213	49.9		41.0	349	00.9	80 48.3	56	45	23	06	17 52 48	30 67		
3	228	50.0		41.8	3	27.7	78 54.0	54	49	25	06	18 13 49	12 10 65		
4	243	50.1		42.7	17	54.6	79 +26 59.6	56	53	28	07	30 49	11 53 64		
5	258	50.2	-10	43.6	32	21.5	79 +27 05.0	54	50	16 57	17 30	18 07	18 44 51		
6	273	50.3	-10	44.5	46	48.3	78 +27 10.2	52	45	17 05	17 35	18 09	19 14 52		
7	288	50.4		45.4	61	15.2	79 15.3	51	40	12	39	11	37 53		
8	303	50.5		46.3	75	42.0	78 20.2	49	35	18	43	13	19 56 53		
9	318	50.6		47.2	90	08.8	78 25.0	48	30	23	47	15	20 13 53		
10	333	50.7		48.1	104	35.6	78 29.6	46	20	32	17 54	20	20 41 54		
11	348	50.8	-10	49.0	119	02.4	78 +27 34.0	44	10 N	17 40	18 02	18 26	21 05 54		
12	3	50.9	-10	49.8	133	29.2	78 +27 38.3	43	0	17 48	18 09	18 33	21 27 55		
13	18	51.0		50.7	147	56.0	78 42.4	41	10 S	17 56	17	42	21 50 55		
14	33	51.1		51.6	162	22.8	78 46.4	40	20	18 04	27	18 53	22 14 55		
15	48	51.2		52.5	176	49.6	78 50.2	38	30	14	39	19 08	43 55		
16	63	51.3		53.4	191	16.3	77 53.9	37	35	20	46	17	22 59 56		
17	78	51.4	-10	54.3	205	43.1	78 +27 57.4	35	40	18 26	18 55	19 29	23 19 56		
18	93	51.5	-10	55.2	220	09.9	78 +28 00.7	33	45	18 34	19 05	19 43	23 43 56		
19	108	51.6		56.0	234	36.7	78 03.9	32	50	43	18	20 01	** ** *		
20	123	51.7		56.9	249	03.5	78 07.0	31	52	48	24	10	** ** *		
21	138	51.8		57.8	263	30.3	78 09.8	28	54	52	31	20	** ** *		
22	153	51.9		58.7	277	57.2	79 12.6	28	56	18 57	39	32	** ** *		
23	168	52.0	-10	59.6	292	24.0	78 15.1	25	58	19 03	47	20 45	0 15 82		
24	183	52.1	-11	00.5	306	50.8	78 +28 17.5	24	60 S	19 10	19 57	21 02	0 45 93		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 21 ^h 58 ^m 2		Mag: -4.4 PMG: 14 ^h 52 ^m		Mag: -2.1 PMG: 1 ^h 16 ^m		Mag: -1.7 PMG: 11 ^h 49 ^m		Mag: +0.3 PMG: 6 ^h 52 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	29	32.3	137	09.2	-25	38.0	340	51.5	+16	33.8
1	44	34.8	152	08.7		38.5	355	54.6		33.7
2	59	37.3	167	08.2		38.9	10	57.8		33.7
3	74	39.7	182	07.8		39.3	26	01.0		33.6
4	89	42.2	197	07.3		39.8	41	04.2		33.6
5	104	44.7	212	06.9	-25	40.2	56	07.3	+16	33.5
6	119	47.1	227	06.4	-25	40.6	71	10.5	+16	33.5
7	134	49.6	242	05.9		41.1	86	13.7		33.4
8	149	52.0	257	05.5		41.5	101	16.9		33.4
9	164	54.5	272	05.0		41.9	116	20.0		33.3
10	179	57.0	287	04.6		42.3	131	23.2		33.2
11	194	59.4	302	04.1	-25	42.8	146	26.4	+16	33.2
12	210	01.9	317	03.7	-25	43.2	161	29.6	+16	33.1
13	225	04.4	332	03.2		43.6	176	32.8		33.1
14	240	06.8	347	02.7		44.0	191	35.9		33.0
15	255	09.3	2	02.3		44.4	206	39.1		33.0
16	270	11.8	17	01.8		44.8	221	42.3		32.9
17	285	14.2	32	01.4	-25	45.3	236	45.5	+16	32.8
18	300	16.7	47	00.9	-25	45.7	251	48.7	+16	32.8
19	315	19.2	62	00.5		46.1	266	51.9		32.7
20	330	21.6	77	00.0		46.5	281	55.1		32.7
21	345	24.1	91	59.5		46.9	296	58.2		32.6
22	0	26.5	106	59.1		47.3	312	01.4		32.6
23	15	29.0	121	58.6		47.7	327	04.6		32.5
24	30	31.5	136	58.2	-25	48.1	342	07.8	+16	32.4
Dif	—		-5		-4		+32		-1	

+19		-2		+23	

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: 18 ^d 6 PHE { 4 ^h : 55'7 12 ^h : 55'5 20 ^h : 55'3 SD: 15'2 PMG: 3 ^h 41 ^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	52.1	-11	00.5	306	50.8	+28	17.5	60 N	5	25	6	14	6	57	17	32
1	198	52.2		01.4	321	17.7	79	19.8	58	25	10		51	18	12	69	14
2	213	52.3		02.2	335	44.6	79	21.9	56	24	08		46	18	40	65	13
3	228	52.4		03.1	350	11.4	78	23.8	54	24	05		41	19	02	63	13
4	243	52.5		04.0	4	38.4	80	25.6	52	23	02		37	19	63	12	57
5	258	52.6	-11	04.9	19	05.3	79	+28	50	5	22	6	00	6	33	19	35
6	273	52.7	-11	05.8	33	32.2	79	+28	45	5	21	5	55	6	25	20	06
7	288	52.8		06.7	47	59.2	80	30.0	40	19	50		18	30	58	11	47
8	303	52.9		07.5	62	26.2	80	31.1	35	17	46		12	20	49	58	27
9	318	52.9		08.4	76	53.2	80	32.2	30	14	42	6	07	21	06	57	11
10	333	53.0		09.3	91	20.2	80	33.0	20	09	35	5	57	35	55	10	41
11	348	53.1	-11	10.2	105	47.3	81	+28	10 N	5	03	5	28	5	49	21	59
12	3	53.2	-11	11.1	120	14.4	81	+28	0	4	56	5	20	5	41	22	22
13	18	53.3		11.9	134	41.6	82	34.6	10 S	47	12		33	22	45	51	31
14	33	53.4		12.8	149	08.7	81	34.9	20	35	5	02	25	23	09	51	9
15	48	53.5		13.7	163	35.9	82	34.9	30	21	4	50	15	38	49	8	38
16	63	53.6		14.6	178	03.2	83	34.9	35	11	43		09	23	55	47	21
17	78	53.7	-11	15.5	192	30.4	82	+28	40	4	00	4	34	5	02	**	**
18	93	53.8	-11	16.3	206	57.7	83	+28	45	3	46	4	23	4	54	**	**
19	108	53.9		17.2	221	25.1	84	33.8	50	28	10		45	0	14	56	7
20	123	54.0		18.1	235	52.5	84	33.1	52	19	4	04	41	29	56	6	51
21	138	54.0		19.0	250	19.9	84	32.3	54	3	09	3	57	36	0	47	56
22	153	54.1		19.9	264	47.4	85	31.3	56	2	57		50	31	1	09	56
23	168	54.2		20.7	279	14.9	85	30.2	58	43	41		25	1	37	55	5
24	183	54.3	-11	21.6	293	42.5	86	+28	60 S	2	26	3	31	4	18	2	18

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 21 ^h 54 ^m 3		Mag: -4.4 PMG: 14 ^h 53 ^m			Mag: -2.1 PMG: 1 ^h 11 ^m			Mag: -1.7 PMG: 11 ^h 46 ^m			Mag: +0.3 PMG: 6 ^h 49 ^m					
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'			
0	30	31.5	136	58.2	-25	48.1	342	07.8	+16	32.4	183	05.7	-10	10.7			
1	45	33.9	151	57.7		48.6	357	11.0		32.4	198	07.6		10.9			
2	60	36.4	166	57.3		49.0	12	14.2		32.3	213	09.6		11.1			
3	75	38.9	181	56.8		49.4	27	17.4		32.3	228	11.5		11.3			
4	90	41.3	196	56.3		49.8	42	20.6		32.2	243	13.5		11.5			
5	105	43.8	211	55.9	-25	50.2	57	23.8	+16	32.1	258	15.4	-10	11.7			
6	120	46.3	226	55.4	-25	50.6	72	27.0	+16	32.1	273	17.3	-10	11.9			
7	135	48.7	241	55.0		51.0	87	30.2		32.0	288	19.3		12.1			
8	150	51.2	256	54.5		51.4	102	33.4		31.9	303	21.2		12.3			
9	165	53.7	271	54.1		51.8	117	36.6		31.9	318	23.2		12.5			
10	180	56.1	286	53.6		52.2	132	39.8		31.8	333	25.1		12.7			
11	195	58.6	301	53.2	-25	52.6	147	43.0	+16	31.8	348	27.1	-10	12.9			
12	211	01.0	316	52.7	-25	53.0	162	46.3	+16	31.7	3	29.0	-10	13.1			
13	226	03.5	331	52.2		53.4	177	49.5		31.6	18	31.0		13.3			
14	241	06.0	346	51.8		53.8	192	52.7		31.6	33	32.9		13.4			
15	256	08.4	1	51.3		54.2	207	55.9		31.5	48	34.9		13.6			
16	271	10.9	16	50.9		54.5	222	59.1		31.4	63	36.8		13.8			
17	286	13.4	31	50.4	-25	54.9	238	02.3	+16	31.4	78	38.8	-10	14.0			
18	301	15.8	46	50.0	-25	55.3	253	05.5	+16	31.3	93	40.7	-10	14.2			
19	316	18.3	61	49.5		55.7	268	08.7		31.3	108	42.7		14.4			
20	331	20.8	76	49.1		56.1	283	12.0		31.2	123	44.6		14.6			
21	346	23.2	91	48.6		56.5	298	15.2		31.1	138	46.6		14.8			
22	1	25.7	106	48.2		56.9	313	18.4		31.1	153	48.5		15.0			
23	16	28.2	121	47.7		57.3	328	21.6		31.0	168	50.4		15.2			
24	31	30.6	136	47.3	-25	57.6	343	24.8	+16	30.9	183	52.4	-10	15.4			
Dif	—		-5			-4	+32			-1	+19			-2	+23		

UT	SOL			☾ LUNA					Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:1 PMG: 11 ^h 44 ^m 3			Edad: 19 ^d 6 PHE { 4 ^h : 55 ^m 1 12 ^h : 54 ^m 9 20 ^h : 54 ^m 8 PMG: 4 ^h 35 ^m R°: 52 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif						Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	m	h m	m	m
0	183	54.3	-11	21.6	293	42.5	+28	28.9	60 N	16 28	17 12	18 00	18 47	92	15 21	13	
1	198	54.4		22.5	308	10.1		27.5	58	34	15	01	19 21	82	14 47	22	
2	213	54.5		23.4	322	37.7		25.9	56	40	18	01	19 45	78		22	27
3	228	54.6		24.2	337	05.4		24.2	54	45	21	02	20 05	74	14 01	31	
4	243	54.7		25.1	351	33.2		22.4	52	49	24	03		22 71	13 45	33	
5	258	54.8	-11	26.0	6	01.0	+28	20.4	50	16 53	17 26	18 04	20 36	69	13 30	36	
6	273	54.8	-11	26.9	20	28.9	+28	18.2	45	17 02	17 32	18 06	21 05	65	13 01	39	
7	288	54.9		27.7	34	56.8		16.0	22	09	37	08		28 62	12 38	41	
8	303	55.0		28.6	49	24.7		13.5	25	15	41	11	21 47	59		18	44
9	318	55.1		29.5	63	52.8		11.0	25	30	21	45	13	22 03	57	12 02	45
10	333	55.2		30.4	78	20.9		08.3	27	20	31	17 53	19	30 55	11 34	48	
11	348	55.3	-11	31.2	92	49.0	+28	05.4	29	10 N	17 39	18 01	18 26	22 53	52	11 10	50
12	3	55.4	-11	32.1	107	17.2	+28	02.4	30	0	17 48	18 09	18 33	23 15	50	10 48	51
13	18	55.4		33.0	121	45.5	+27	59.3	31	10 S	17 56	18	43	23 36	48		25 54
14	33	55.5		33.9	136	13.8		56.0	33	20	18 05	28	18 54	** ** *	**	10 01	55
15	48	55.6		34.7	150	42.2		52.6	34	30	16	40	19 10	** ** *	**	9 33	57
16	63	55.7		35.6	165	10.6		49.1	35	35	22	48	19	** ** *	**	9 16	59
17	78	55.8	-11	36.5	179	39.1	+27	45.4	37	40	18 29	18 57	19 31	0 15	46	8 57	60
18	93	55.9	-11	37.4	194	07.7	+27	41.6	38	45	18 37	19 08	19 46	0 39	44	8 33	63
19	108	55.9		38.2	208	36.3		37.7	39	50	47	21	20 05	1 10	41	8 02	66
20	123	56.0		39.1	223	05.0		33.6	41	52	51	28	14	25 40		7 47	68
21	138	56.1		40.0	237	33.8		29.4	42	54	18 56	35	25	1 43	38	29	70
22	153	56.2		40.8	252	02.6		25.0	44	56	19 02	43	37	2 05	34	7 08	73
23	168	56.3		41.7	266	31.5		20.5	45	58	08	19 53	20 52	2 32	30	6 40	78
24	183	56.4	-11	42.6	281	00.5	+27	15.9	46	60 S	19 15	20 03	21 10	3 13	19	6 00	89

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 21 ^h 50 ^m 4		Mag: -4.4 PMG: 14 ^h 53 ^m			Mag: -2.2 PMG: 1 ^h 06 ^m			Mag: -1.7 PMG: 11 ^h 43 ^m			Mag: +0.3 PMG: 6 ^h 45 ^m							
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'					
0	31	30.6	136	47.3	-25	57.6	343	24.8	+16	30.9	183	52.4	-10	15.4	258	28.0	+18	03.1	
1	46	33.1	151	46.8		58.0	358	28.1		30.9	198	54.3		15.6	273	30.3		03.0	
2	61	35.5	166	46.4		58.4	13	31.3		30.8	213	56.3		15.8	288	32.6		03.0	
3	76	38.0	181	45.9		58.8	28	34.5		30.7	228	58.2		16.0	303	35.0		03.0	
4	91	40.5	196	45.4		59.2	43	37.7		30.7	244	00.2		16.1	318	37.3		03.0	
5	106	42.9	211	45.0	-25	59.5	58	41.0	+16	30.6	259	02.1	-10	16.3	333	39.6	+18	02.9	
6	121	45.4	226	44.5	-25	59.9	73	44.2	+16	30.5	274	04.1	-10	16.5	348	41.9	+18	02.9	
7	136	47.9	241	44.1	-26	00.3	88	47.4		30.5	289	06.0		16.7	3	44.3		02.9	
8	151	50.3	256	43.6		00.7	103	50.7		30.4	304	08.0		16.9	18	46.6		02.8	
9	166	52.8	271	43.2		01.0	118	53.9		30.3	319	09.9		17.1	33	48.9		02.8	
10	181	55.3	286	42.7		01.4	133	57.1		30.3	334	11.9		17.3	48	51.2		02.8	
11	196	57.7	301	42.3	-26	01.8	149	00.4	+16	30.2	349	13.8	-10	17.5	63	53.6	+18	02.7	
12	212	00.2	316	41.8	-26	02.2	164	03.6	+16	30.1	4	15.8	-10	17.7	78	55.9	+18	02.7	
13	227	02.7	331	41.4		02.5	179	06.8		30.1	19	17.7		17.9	93	58.2		02.7	
14	242	05.1	346	40.9		02.9	194	10.1		30.0	34	19.6		18.1	109	00.5		02.6	
15	257	07.6	1	40.5		03.3	209	13.3		29.9	49	21.6		18.3	124	02.9		02.6	
16	272	10.0	16	40.0		03.6	224	16.5		29.9	64	23.5		18.5	139	05.2		02.6	
17	287	12.5	31	39.6	-26	04.0	239	19.8	+16	29.8	79	25.5	-10	18.7	154	07.5	+18	02.6	
18	302	15.0	46	39.1	-26	04.4	254	23.0	+16	29.7	94	27.4	-10	18.8	169	09.9	+18	02.5	
19	317	17.4	61	38.7		04.7	269	26.3		29.6	109	29.4		19.0	184	12.2		02.5	
20	332	19.9	76	38.2		05.1	284	29.5		29.6	124	31.3		19.2	199	14.5		02.5	
21	347	22.4	91	37.8		05.4	299	32.7		29.5	139	33.3		19.4	214	16.8		02.4	
22	2	24.8	106	37.3		05.8	314	36.0		29.4	154	35.2		19.6	229	19.2		02.4	
23	17	27.3	121	36.9		06.2	329	39.2		29.4	169	37.2		19.8	244	21.5		02.4	
24	32	29.8	136	36.4	-26	06.5	344	42.5	+16	29.3	184	39.1	-10	20.0	259	23.8	+18	02.3	
Dif	—		-5			-4	+32			-1	+19			-2			+23		

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'1 PMG: 11 ^h 44 ^m 2			Edad: 20 ^d 6 PHE { 4 ^h : 54'6 12 ^h : 54'5 20 ^h : 54'4 PMG: 5 ^h 27 ^m R°: 49 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	183	56.4	-11	42.6	281	00.5	+27 15.9	60 N	5 30	6 18	7 02	20 19	94	15 34	4
1	198	56.4		43.4	295	29.6 ¹⁰¹	11.2 47	58	29	15	6 56	20 43	87	15 09	11
2	213	56.5		44.3	309	58.7 ¹⁰¹	06.3 49	56	28	11	50	21 03	81	14 49	17
3	228	56.6		45.2	324	27.8 ¹⁰¹	+27 01.3 50	54	27	09	45	19 77		32	22
4	243	56.7		46.1	338	57.1 ¹⁰³	+26 56.2 51	52	26	06	41	33 74		18	24
5	258	56.8	-11	46.9	353	26.4 ¹⁰³	+26 51.0 52	50	5 25	6 03	6 36	21 45	71	14 06	25
6	273	56.8	-11	47.8	7	55.8 ¹⁰⁴	+26 45.6 54	45	5 23	5 57	6 28	22 10	66	13 40	30
7	288	56.9		48.7	22	25.3 ¹⁰⁵	40.1 55	40	21	52	20	30 62		19	34
8	303	57.0		49.5	36	54.8 ¹⁰⁵	34.5 56	35	18	48	14	22 46	60	13 02	37
9	318	57.1		50.4	51	24.4 ¹⁰⁶	28.8 57	30	16	44	6 08	23 00	58	12 47	39
10	333	57.2		51.3	65	54.1 ¹⁰⁷	22.9 59	20	10	36	5 58	25 53		22	42
11	348	57.2	-11	52.1	80	23.9 ¹⁰⁸	+26 16.9 60	10 N	5 03	5 28	5 49	23 45	50	12 00	45
12	3	57.3	-11	53.0	94	53.7 ¹⁰⁸	+26 10.8 61	0	4 55	5 20	5 41	** ** *		11 39	49
13	18	57.4		53.9	109	23.6 ¹⁰⁹	+26 04.6 62	10 S	46	11	32	** ** *		11 19	51
14	33	57.5		54.7	123	53.6 ¹¹⁰	+25 58.2 64	20	34	5 01	23	0 00	45	10 56	55
15	48	57.5		55.6	138	23.7 ¹¹¹	51.8 64	30	18	4 48	13	27 41		30 58	
16	63	57.6		56.5	152	53.8 ¹¹¹	45.2 66	35	4 09	40	5 06	0 42	40	10 15	60
17	78	57.7	-11	57.3	167	24.0 ¹¹²	+25 38.5 67	40	3 57	4 31	4 59	1 01	37	9 57	63
18	93	57.8	-11	58.2	181	54.3 ¹¹³	+25 31.7 68	45	3 42	4 20	4 51	1 23	34	9 36	66
19	108	57.8		59.1	196	24.7 ¹¹⁴	24.8 69	50	23	06	41	1 51	30	9 08	71
20	123	57.9	-11	59.9	210	55.1 ¹¹⁴	17.8 70	52	13	4 00	37	2 05	28	8 55	73
21	138	58.0	-12	00.8	225	25.6 ¹¹⁵	10.6 72	54	3 03	3 53	31	21 24		39 77	
22	153	58.1		01.6	239	56.2 ¹¹⁶	+25 03.4 72	56	2 50	44	26	2 39	21	8 21	80
23	168	58.1		02.5	254	26.9 ¹¹⁷	+24 56.0 74	58	35	35	19	3 02	16	7 58	86
24	183	58.2	-12	03.4	268	57.6 ¹¹⁷	+24 48.5 75	60 S	2 17	3 24	4 12	3 32	7	7 29	95
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 21 ^h 46 ^m 4		Mag: -4.4 PMG: 14 ^h 54 ^m			Mag: -2.2 PMG: 1 ^h 01 ^m			Mag: -1.7 PMG: 11 ^h 40 ^m			Mag: +0.3 PMG: 6 ^h 41 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°
0	32	29.8	136	36.4	-26 06.5	344	42.5	+16 29.3	184	39.1	-10 20.0	259	23.8	+18 02.3	
1	47	32.2	151	36.0	06.9	359	45.7	29.2	199	41.1	20.2	274	26.2	02.3	
2	62	34.7	166	35.5	07.2	14	49.0	29.1	214	43.0	20.4	289	28.5	02.3	
3	77	37.1	181	35.1	07.6	29	52.2	29.1	229	45.0	20.6	304	30.8	02.2	
4	92	39.6	196	34.7	07.9	44	55.5	29.0	244	46.9	20.8	319	33.1	02.2	
5	107	42.1	211	34.2	-26 08.3	59	58.7	+16 28.9	259	48.8	-10 21.0	334	35.5	+18 02.2	
6	122	44.5	226	33.8	-26 08.6	75	02.0	+16 28.9	274	50.8	-10 21.2	349	37.8	+18 02.2	
7	137	47.0	241	33.3	09.0	90	05.2	28.8	289	52.7	21.4	4	40.1	02.1	
8	152	49.5	256	32.9	09.3	105	08.5	28.7	304	54.7	21.5	19	42.5	02.1	
9	167	51.9	271	32.4	09.7	120	11.7	28.6	319	56.6	21.7	34	44.8	02.1	
10	182	54.4	286	32.0	10.0	135	15.0	28.6	334	58.6	21.9	49	47.1	02.0	
11	197	56.9	301	31.5	-26 10.4	150	18.3	+16 28.5	350	00.5	-10 22.1	64	49.5	+18 02.0	
12	212	59.3	316	31.1	-26 10.7	165	21.5	+16 28.4	5	02.5	-10 22.3	79	51.8	+18 02.0	
13	228	01.8	331	30.6	11.1	180	24.8	28.3	20	04.4	22.5	94	54.1	02.0	
14	243	04.3	346	30.2	11.4	195	28.0	28.3	35	06.4	22.7	109	56.4	01.9	
15	258	06.7	1	29.7	11.7	210	31.3	28.2	50	08.3	22.9	124	58.8	01.9	
16	273	09.2	16	29.3	12.1	225	34.6	28.1	65	10.3	23.1	140	01.1	01.9	
17	288	11.6	31	28.8	-26 12.4	240	37.8	+16 28.0	80	12.2	-10 23.3	155	03.4	+18 01.8	
18	303	14.1	46	28.4	-26 12.8	255	41.1	+16 28.0	95	14.1	-10 23.5	170	05.8	+18 01.8	
19	318	16.6	61	28.0	13.1	270	44.4	27.9	110	16.1	23.7	185	08.1	01.8	
20	333	19.0	76	27.5	13.4	285	47.6	27.8	125	18.0	23.8	200	10.4	01.7	
21	348	21.5	91	27.1	13.8	300	50.9	27.7	140	20.0	24.0	215	12.8	01.7	
22	3	24.0	106	26.6	14.1	315	54.2	27.7	155	21.9	24.2	230	15.1	01.7	
23	18	26.4	121	26.2	14.4	330	57.4	27.6	170	23.9	24.4	245	17.4	01.7	
24	33	28.9	136	25.7	-26 14.8	346	00.7	+16 27.5	185	25.8	-10 24.6	260	19.8	+18 01.6	
Dif	—		-4		-3	+33		-1	+19		-2	+23			

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16 ^h 1				Edad: 21 ^d 6 PHE { 4 ^h : 54 ^h 3 12 ^h : 54 ^h 3 20 ^h : 54 ^h 2													
	PMG: 11 ^h 44 ^m 1				SD: 14 ^h 8 PMG: 6 ^h 16 ^m R°: 46 ^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	58.2	-12	03.4	268	57.6	+24	48.5	60 N	16 23	17 06	17 55	21 53 90		15 38 1			
1	198	58.3		04.2	283	28.5 ¹¹⁹		40.9 ⁷⁶	58	29	10	56	22 10 85		20 7			
2	213	58.4		05.1	297	59.4 ¹¹⁹		33.3 ⁷⁸	56	35	14	57	24 80		15 06 10			
3	228	58.4		06.0	312	30.3 ¹¹⁹		25.5 ⁷⁸	54	40	17	58	36 77		14 53 14			
4	243	58.5		06.8	327	01.4 ¹²¹		17.6 ⁷⁹	52	45	20	17 59	47 74		42 16			
5	258	58.6	-12	07.7	341	32.5 ¹²¹	+24	09.5 ⁸¹	50	16 49	17 23	18 00	22 56 72		14 31 20			
6	273	58.7	-12	08.5	356	03.7 ¹²²	+24	01.4 ⁸¹	45	16 59	17 29	18 03	23 16 67		14 10 25			
7	288	58.7		09.4	10	35.0 ¹²³	+23	53.2 ⁸²	40	17 06	34	06	32 63		13 53 28			
8	303	58.8		10.3	25	06.3 ¹²³		44.9 ⁸³	35	13	39	09	46 59		39 31			
9	318	58.9		11.1	39	37.7 ¹²⁴		36.5 ⁸⁴	30	19	43	12	23 58 56		26 34			
10	333	58.9		12.0	54	09.2 ¹²⁵		28.0 ⁸⁵	20	29	17 52	18	** ** *		13 04 38			
11	348	59.0	-12	12.8	68	40.8 ¹²⁶	+23	19.4 ⁸⁶	10 N	17 39	18 00	18 25	** ** *		12 45 42			
12	3	59.1	-12	13.7	83	12.5 ¹²⁷	+23	10.6 ⁸⁸	0	17 47	18 09	18 33	0 05 46		12 28 45			
13	18	59.1		14.6	97	44.2 ¹²⁷	+23	01.8 ⁸⁸	10 S	17 56	18	43	24 44		12 10 48			
14	33	59.2		15.4	112	16.0 ¹²⁸	+22	52.9 ⁸⁹	20	18 06	29	18 55	0 45 40		11 51 52			
15	48	59.3		16.3	126	47.9 ¹²⁹		43.9 ⁹⁰	30	17	42	19 11	1 08 36		28 57			
16	63	59.4		17.1	141	19.8 ¹²⁹		34.8 ⁹¹	35	23	50	22	22 34		15 60			
17	78	59.4	-12	18.0	155	51.8 ¹³⁰	+22	25.6 ⁹²	40	18 31	18 59	19 34	1 38 31		11 00 63			
18	93	59.5	-12	18.8	170	23.9 ¹³¹	+22	16.3 ⁹³	45	18 39	19 11	19 49	1 57 27		10 42 66			
19	108	59.6		19.7	184	56.1 ¹³²	+22	06.9 ⁹⁴	50	50	25	20 09	2 21 22		19 72			
20	123	59.6		20.6	199	28.3 ¹³²	+21	57.5 ⁹⁴	52	18 55	32	19	33 19		10 08 74			
21	138	59.7		21.4	214	00.6 ¹³³		47.9 ⁹⁶	54	19 00	40	30	2 45 17		9 56 77			
22	153	59.8		22.3	228	33.0 ¹³⁴		38.2 ⁹⁷	56	06	48	43	3 00 13		41 82			
23	168	59.8		23.1	243	05.4 ¹³⁴		28.5 ⁹⁷	58	13	19 58	20 59	18 8		24 87			
24	183	59.9	-12	24.0	257	37.9 ¹³⁵	+21	18.7 ⁹⁸	60 S	19 20	20 10	21 19	3 39 2		9 04 92			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 21 ^h 42 ^m 5		Mag: -4.4 PMG: 14 ^h 55 ^m				Mag: -2.2 PMG: 0 ^h 56 ^m				Mag: -1.7 PMG: 11 ^h 37 ^m				Mag: +0.3 PMG: 6 ^h 38 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	33	28.9	136	25.7	-26	14.8	346	00.7	+16	27.5	185	25.8	-10	24.6	260	19.8		
1	48	31.4	151	25.3		15.1	1	04.0		27.4	200	27.8		24.8	275	22.1		
2	63	33.8	166	24.9		15.4	16	07.2		27.4	215	29.7		25.0	290	24.4		
3	78	36.3	181	24.4		15.8	31	10.5		27.3	230	31.7		25.2	305	26.8		
4	93	38.8	196	24.0		16.1	46	13.8		27.2	245	33.6		25.4	320	29.1		
5	108	41.2	211	23.5	-26	16.4	61	17.1	+16	27.1	260	35.6	-10	25.6	335	31.4		
6	123	43.7	226	23.1	-26	16.7	76	20.3	+16	27.0	275	37.5	-10	25.8	350	33.8		
7	138	46.1	241	22.6		17.1	91	23.6		27.0	290	39.4		26.0	5	36.1		
8	153	48.6	256	22.2		17.4	106	26.9		26.9	305	41.4		26.2	20	38.4		
9	168	51.1	271	21.8		17.7	121	30.2		26.8	320	43.3		26.3	35	40.8		
10	183	53.5	286	21.3		18.0	136	33.5		26.7	335	45.3		26.5	50	43.1		
11	198	56.0	301	20.9	-26	18.3	151	36.7	+16	26.6	350	47.2	-10	26.7	65	45.4		
12	213	58.5	316	20.4	-26	18.7	166	40.0	+16	26.6	5	49.2	-10	26.9	80	47.8		
13	229	00.9	331	20.0		19.0	181	43.3		26.5	20	51.1		27.1	95	50.1		
14	244	03.4	346	19.6		19.3	196	46.6		26.4	35	53.1		27.3	110	52.4		
15	259	05.9	1	19.1		19.6	211	49.9		26.3	50	55.0		27.5	125	54.8		
16	274	08.3	16	18.7		19.9	226	53.1		26.2	65	57.0		27.7	140	57.1		
17	289	10.8	31	18.2	-26	20.2	241	56.4	+16	26.2	80	58.9	-10	27.9	155	59.4		
18	304	13.2	46	17.8	-26	20.5	256	59.7	+16	26.1	96	00.9	-10	28.1	171	01.8		
19	319	15.7	61	17.4		20.9	272	03.0		26.0	111	02.8		28.3	186	04.1		
20	334	18.2	76	16.9		21.2	287	06.3		25.9	126	04.7		28.5	201	06.5		
21	349	20.6	91	16.5		21.5	302	09.6		25.8	141	06.7		28.6	216	08.8		
22	4	23.1	106	16.1		21.8	317	12.9		25.8	156	08.6		28.8	231	11.1		
23	19	25.6	121	15.6		22.1	332	16.2		25.7	171	10.6		29.0	246	13.5		
24	34	28.0	136	15.2	-26	22.4	347	19.5	+16	25.6	186	12.5	-10	29.2	261	15.8		
Dif	—		-4		-3		+33		-1		+19		-2		+23			
															0			

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'1 PMG: 11 ^h 44 ^m 0			Edad: 22 ^d 6 PHE { 4 ^h : 54'2 12 ^h : 54'2 20 ^h : 54'2 SD: 14'8 PMG: 7 ^h 02 ^m R°: 43 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m			
0	183	59.9	-12	24.0	257	37.9	+21 18.7	60 N	5 34	6 23	7 07	23 23	87	15 39	0			
1	199	00.0		24.8	272	10.5 ¹³⁶	+21 08.8 ⁹⁹	58	33	19	7 00	35 82		27 4				
2	214	00.0		25.7	286	43.2 ¹³⁷	+20 58.7 ¹⁰¹	56	32	15	6 54	44 79		16 7				
3	229	00.1		26.5	301	15.9 ¹³⁷	48.7 ¹⁰⁰	54	31	12	49	23 53	76	15 07	10			
4	244	00.2		27.4	315	48.7 ¹³⁸	38.5 ¹⁰²	52	30	09	44	** ** *	**	14 58	13			
5	259	00.2	-12	28.3	330	21.5 ¹³⁸	+20 28.2 ¹⁰³	50	5 28	6 06	6 40	** ** *	**	14 51	15			
6	274	00.3	-12	29.1	344	54.4 ¹³⁹	+20 17.9 ¹⁰³	45	5 26	6 00	6 30	** ** *	**	14 35	20			
7	289	00.3		30.0	359	27.4 ¹⁴⁰	+20 07.5 ¹⁰⁴	40	23	5 55	22	** ** *	**	21 24				
8	304	00.4		30.8	14	00.5 ¹⁴¹	+19 56.9 ¹⁰⁶	35	20	50	15	** ** *	**	10 27				
9	319	00.5		31.7	28	33.6 ¹⁴¹	46.4 ¹⁰⁵	30	17	45	6 09	** ** *	**	14 00	30			
10	334	00.5		32.5	43	06.8 ¹⁴²	35.7 ¹⁰⁷	20	10	36	5 59	0 18	51	13 42	35			
11	349	00.6	-12	33.4	57	40.0 ¹⁴²	+19 24.9 ¹⁰⁸	10 N	5 03	5 28	5 49	0 35	48	13 27	39			
12	4	00.7	-12	34.2	72	13.3 ¹⁴³	+19 14.1 ¹⁰⁸	0	4 55	5 19	5 41	0 51	44	13 13	43			
13	19	00.7		35.1	86	46.7 ¹⁴⁴	+19 03.2 ¹⁰⁹	10 S	45	5 10	32	1 08	40	12 58	47			
14	34	00.8		35.9	101	20.1 ¹⁴⁴	+18 52.2 ¹¹⁰	20	32	4 59	22	25 36		43 51				
15	49	00.9		36.8	115	53.6 ¹⁴⁵	41.2 ¹¹⁰	30	16	46	11	44 32		25 56				
16	64	00.9		37.6	130	27.2 ¹⁴⁶	30.1 ¹¹¹	35	4 06	38	5 04	1 56	29	15 58				
17	79	01.0	-12	38.5	145	00.8 ¹⁴⁶	+18 18.8 ¹¹³	40	3 54	4 28	4 57	2 09	26	12 03	62			
18	94	01.0	-12	39.3	159	34.4 ¹⁴⁶	+18 07.6 ¹¹²	45	3 38	4 17	4 48	2 24	22	11 48	66			
19	109	01.1		40.2	174	08.2 ¹⁴⁸	+17 56.2 ¹¹⁴	50	18	4 02	37	43 17		31 71				
20	124	01.2		41.0	188	42.0 ¹⁴⁸	44.8 ¹¹⁴	52	3 08	3 55	32	2 52	14	22 74				
21	139	01.2		41.9	203	15.8 ¹⁴⁸	33.3 ¹¹⁵	54	2 57	48	27	3 02	12	13 77				
22	154	01.3		42.7	217	49.7 ¹⁴⁹	21.7 ¹¹⁶	56	44	39	21	13 9		11 03	80			
23	169	01.3		43.6	232	23.6 ¹⁴⁹	+17 10.1 ¹¹⁶	58	28	29	14	26 4		10 51	84			
24	184	01.4	-12	44.4	246	57.6 ¹⁵⁰	+16 58.4 ¹¹⁷	60 S	2 09	3 18	4 07	3 41	0	10 36	89			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 21 ^h 38 ^m 6		Mag: -4.5 PMG: 14 ^h 55 ^m			Mag: -2.2 PMG: 0 ^h 51 ^m			Mag: -1.7 PMG: 11 ^h 34 ^m			Mag: +0.3 PMG: 6 ^h 34 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'				
0	34	28.0	136	15.2	-26	22.4	347	19.5	+16	25.6	186	12.5	-10	29.2	261	15.8	+18	00.9
1	49	30.5	151	14.7		22.7	2	22.8		25.5	201	14.5		29.4	276	18.1		00.9
2	64	33.0	166	14.3		23.0	17	26.0		25.4	216	16.4		29.6	291	20.5		00.9
3	79	35.4	181	13.9		23.3	32	29.3		25.3	231	18.4		29.8	306	22.8		00.9
4	94	37.9	196	13.4		23.6	47	32.6		25.3	246	20.3		30.0	321	25.2		00.8
5	109	40.4	211	13.0	-26	23.9	62	35.9	+16	25.2	261	22.3	-10	30.2	336	27.5	+18	00.8
6	124	42.8	226	12.6	-26	24.2	77	39.2	+16	25.1	276	24.2	-10	30.4	351	29.8	+18	00.8
7	139	45.3	241	12.1		24.5	92	42.5		25.0	291	26.2		30.6	6	32.2		00.7
8	154	47.7	256	11.7		24.8	107	45.8		24.9	306	28.1		30.8	21	34.5		00.7
9	169	50.2	271	11.3		25.1	122	49.1		24.8	321	30.0		30.9	36	36.8		00.7
10	184	52.7	286	10.8		25.4	137	52.4		24.8	336	32.0		31.1	51	39.2		00.7
11	199	55.1	301	10.4	-26	25.7	152	55.7	+16	24.7	351	33.9	-10	31.3	66	41.5	+18	00.6
12	214	57.6	316	9.9	-26	26.0	167	59.0	+16	24.6	6	35.9	-10	31.5	81	43.9	+18	00.6
13	230	00.1	331	9.5		26.3	183	02.3		24.5	21	37.8		31.7	96	46.2		00.6
14	245	02.5	346	9.1		26.6	198	05.6		24.4	36	39.8		31.9	111	48.5		00.6
15	260	05.0	1	08.6		26.8	213	08.9		24.3	51	41.7		32.1	126	50.9		00.5
16	275	07.5	16	08.2		27.1	228	12.2		24.2	66	43.7		32.3	141	53.2		00.5
17	290	09.9	31	07.8	-26	27.4	243	15.6	+16	24.2	81	45.6	-10	32.5	156	55.6	+18	00.5
18	305	12.4	46	07.4	-26	27.7	258	18.9	+16	24.1	96	47.6	-10	32.7	171	57.9	+18	00.4
19	320	14.9	61	06.9		28.0	273	22.2		24.0	111	49.5		32.9	187	00.2		00.4
20	335	17.3	76	06.5		28.3	288	25.5		23.9	126	51.4		33.0	202	02.6		00.4
21	350	19.8	91	06.1		28.6	303	28.8		23.8	141	53.4		33.2	217	04.9		00.4
22	5	22.2	106	05.6		28.8	318	32.1		23.7	156	55.3		33.4	232	07.3		00.3
23	20	24.7	121	05.2		29.1	333	35.4		23.6	171	57.3		33.6	247	09.6		00.3
24	35	27.2	136	04.8	-26	29.4	348	38.7	+16	23.5	186	59.2	-10	33.8	262	11.9	+18	00.3
Dif	—		-4	-3			+33	-1			+19	-2			+23	0		

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 16:1 PMG: 11 ^h 43 ^m 9			Edad: 23 ^d 6 PHE { 4 ^h : 54:3 12 ^h : 54:3 20 ^h : 54:4 PMG: 7 ^h 45 ^m R°: 42 ^m					Civil		Náutico	Hora	R°	Hora	R°			
	hG ☉	Dec		hG ☾	Dif	Dec			Dif									
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	h	m
0	184	01.4	-12	44.4	246	57.6	+16	58.4	60 N	16 17	17 01	17 50	** ** *	** ** *	15 39	**		
1	199	01.4		45.3	261	31.7 ¹⁵¹		46.6 ¹¹⁸	58	24	06	52	** ** *	** ** *	31	2		
2	214	01.5		46.1	276	05.8 ¹⁵¹		34.8 ¹¹⁸	56	30	09	53	** ** *	** ** *	23	6		
3	229	01.6		46.9	290	40.0 ¹⁵²		22.9 ¹¹⁹	54	36	13	54	** ** *	** ** *	17	8		
4	244	01.6		47.8	305	14.2 ¹⁵²	+16	10.9 ¹²⁰	52	41	16	56	0 01	73	11	11		
5	259	01.7	-12	48.6	319	48.4 ¹⁵²	+15	58.9 ¹²⁰	50	16 46	17 19	17 57	0 08	70	15 06	13		
6	274	01.7	-12	49.5	334	22.8 ¹⁵⁴	+15	46.8 ¹²¹	45	16 56	17 26	18 00	0 23	65	14 55	17		
7	289	01.8		50.3	348	57.1 ¹⁵³		34.6 ¹²²	40	17 04	32	03	35	61	45	21		
8	304	01.8		51.2	3	31.5 ¹⁵⁴		22.4 ¹²²	35	11	37	07	45	58	37	24		
9	319	01.9		52.0	18	06.0 ¹⁵⁵	+15	10.1 ¹²³	30	17	42	10	0 54	55	30	27		
10	334	02.0		52.9	32	40.5 ¹⁵⁵	+14	57.7 ¹²⁴	20	28	51	17	1 09	50	17	33		
11	349	02.0	-12	53.7	47	15.0 ¹⁵⁵	+14	45.3 ¹²⁴	10 N	17 38	17 59	18 24	1 23	46	14 06	37		
12	4	02.1	-12	54.5	61	49.6 ¹⁵⁶	+14	32.9 ¹²⁴	0	17 47	18 08	18 33	1 35	42	13 56	41		
13	19	02.1		55.4	76	24.2 ¹⁵⁶		20.3 ¹²⁶	10 S	17 57	18	44	1 48	37	45	45		
14	34	02.2		56.2	90	58.9 ¹⁵⁷	+14	07.7 ¹²⁶	20	18 07	30	18 56	2 01	33	34	49		
15	49	02.2		57.1	105	33.6 ¹⁵⁷	+13	55.1 ¹²⁶	30	18	43	19 13	16	28	21	54		
16	64	02.3		57.9	120	08.4 ¹⁵⁸		42.4 ¹²⁷	35	25	18 52	24	25	25	13	58		
17	79	02.3	-12	58.8	134	43.1 ¹⁵⁷	+13	29.6 ¹²⁸	40	18 33	19 02	19 37	2 35	22	13 05	61		
18	94	02.4	-12	59.6	149	18.0 ¹⁵⁹	+13	16.8 ¹²⁸	45	18 42	19 14	19 53	2 46	19	12 54	66		
19	109	02.4	-13	00.4	163	52.8 ¹⁵⁸	+13	03.9 ¹²⁹	50	53	29	20 14	3 00	14	42	70		
20	124	02.5		01.3	178	27.7 ¹⁵⁹	+12	51.0 ¹²⁹	52	18 58	36	24	06	12	36	73		
21	139	02.5		02.1	193	02.7 ¹⁶⁰		38.0 ¹³⁰	54	19 04	44	36	14	9	30	75		
22	154	02.6		03.0	207	37.6 ¹⁵⁹		25.0 ¹³⁰	56	11	19 53	20 50	22	6	23	78		
23	169	02.6		03.8	222	12.7 ¹⁶¹	+12	11.9 ¹³¹	58	18	20 04	21 06	30	3	15	81		
24	184	02.7	-13	04.6	236	47.7 ¹⁶⁰	+11	58.8 ¹³¹	60 S	19 26	20 16	21 27	3 41	**	12 05	86		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 21 ^h 34 ^m 6		Mag: -4.5 PMG: 14 ^h 56 ^m			Mag: -2.2 PMG: 0 ^h 45 ^m			Mag: -1.7 PMG: 11 ^h 31 ^m			Mag: +0.3 PMG: 6 ^h 30 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	35	27.2	136	04.8	-26	29.4	348	38.7	+16	23.5	186	59.2	-10	33.8	262	11.9	+18	00.3
1	50	29.6	151	04.3		29.7	3	42.0		23.5	202	01.2		34.0	277	14.3		00.3
2	65	32.1	166	03.9		30.0	18	45.3		23.4	217	03.1		34.2	292	16.6		00.2
3	80	34.6	181	03.5		30.2	33	48.7		23.3	232	05.1		34.4	307	19.0		00.2
4	95	37.0	196	03.0		30.5	48	52.0		23.2	247	07.0		34.6	322	21.3		00.2
5	110	39.5	211	02.6	-26	30.8	63	55.3	+16	23.1	262	09.0	-10	34.8	337	23.7	+18	00.2
6	125	42.0	226	02.2	-26	31.1	78	58.6	+16	23.0	277	10.9	-10	35.0	352	26.0	+18	00.1
7	140	44.4	241	01.8		31.3	94	01.9		22.9	292	12.9		35.1	7	28.3		00.1
8	155	46.9	256	01.3		31.6	109	05.2		22.8	307	14.8		35.3	22	30.7	+18	00.1
9	170	49.3	271	00.9		31.9	124	08.6		22.7	322	16.7		35.5	37	33.0	+18	00.0
10	185	51.8	286	00.5		32.1	139	11.9		22.7	337	18.7		35.7	52	35.4		00.0
11	200	54.3	301	00.1	-26	32.4	154	15.2	+16	22.6	352	20.6	-10	35.9	67	37.7	+18	00.0
12	215	56.7	315	59.6	-26	32.7	169	18.5	+16	22.5	7	22.6	-10	36.1	82	40.1	+18	00.0
13	230	59.2	330	59.2		32.9	184	21.8		22.4	22	24.5		36.3	97	42.4	+17	59.9
14	246	01.7	345	58.8		33.2	199	25.2		22.3	37	26.5		36.5	112	44.7		59.9
15	261	04.1	0	58.3		33.5	214	28.5		22.2	52	28.4		36.7	127	47.1		59.9
16	276	06.6	15	57.9		33.7	229	31.8		22.1	67	30.4		36.9	142	49.4		59.9
17	291	09.1	30	57.5	-26	34.0	244	35.1	+16	22.0	82	32.3	-10	37.1	157	51.8	+17	59.8
18	306	11.5	45	57.1	-26	34.2	259	38.5	+16	21.9	97	34.3	-10	37.2	172	54.1	+17	59.8
19	321	14.0	60	56.7		34.5	274	41.8		21.8	112	36.2		37.4	187	56.5		59.8
20	336	16.5	75	56.2		34.8	289	45.1		21.7	127	38.1		37.6	202	58.8		59.8
21	351	18.9	90	55.8		35.0	304	48.4		21.7	142	40.1		37.8	218	01.2		59.7
22	6	21.4	105	55.4		35.3	319	51.8		21.6	157	42.0		38.0	233	03.5		59.7
23	21	23.8	120	55.0		35.5	334	55.1		21.5	172	44.0		38.2	248	05.8		59.7
24	36	26.3	135	54.5	-26	35.8	349	58.4	+16	21.4	187	45.9	-10	38.4	263	08.2	+17	59.7
Dif	—		-4		-3		+33		-1		+19		-2		+23			

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'1 PMG: 11 ^h 43 ^m 8			Edad: 24 ^d 6 PHE { 4 ^h : 54'5 12 ^h : 54'6 20 ^h : 54'7 SD: 14'8 PMG: 8 ^h 27 ^m R°: 40 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	184	02.7	-13	04.6	236	47.7	+11	58.8	60 N	5 39	6 28	7 12	0 50	85	15 37	**
1	199	02.7		05.5	251	22.8 ¹⁶¹		45.6 ¹³²	58	37	23	7 05	0 57	81	33	2
2	214	02.8		06.3	265	57.9 ¹⁶¹		32.4 ¹³²	56	36	19	6 59	1 03	78	29	4
3	229	02.8		07.1	280	33.0 ¹⁶¹		19.1 ¹³³	54	34	16	53	09	75	25	
4	244	02.9		08.0	295	08.1 ¹⁶¹	+11	05.8 ¹³³	52	33	13	48	14	72	22	9
5	259	02.9	-13	08.8	309	43.3 ¹⁶²	+10	52.4 ¹³⁴	50	5 32	6 09	6 43	1 18	71	15 19	11
6	274	03.0	-13	09.7	324	18.5 ¹⁶²	+10	39.0 ¹³⁴	45	5 28	6 03	6 33	1 28	65	15 12	16
7	289	03.0		10.5	338	53.8 ¹⁶³		25.5 ¹³⁵	40	25	5 57	25	36	61	06	20
8	304	03.1		11.3	353	29.0 ¹⁶²	+10	12.0 ¹³⁵	35	22	51	17	43	58	15 01	24
9	319	03.1		12.2	8	04.3 ¹⁶³	+9	58.4 ¹³⁶	30	18	46	11	49	55	14 57	26
10	334	03.2		13.0	22	39.6 ¹⁶³		44.8 ¹³⁶	20	11	37	6 00	1 59	50	50	31
11	349	03.2	-13	13.8	37	15.0 ¹⁶⁴	+9	31.1 ¹³⁷	10 N	5 03	5 28	5 50	2 09	44	14 43	36
12	4	03.3	-13	14.7	51	50.3 ¹⁶³	+9	17.5 ¹³⁶	0	4 54	5 19	5 40	2 17	41	14 37	40
13	19	03.3		15.5	66	25.7 ¹⁶⁴	+9	03.7 ¹³⁸	10 S	44	5 09	31	25	37	30	45
14	34	03.4		16.3	81	01.1 ¹⁶⁴	+8	49.9 ¹³⁸	20	31	4 58	21	34	32	23	50
15	49	03.4		17.2	95	36.5 ¹⁶⁴		36.1 ¹³⁸	30	14	44	09	44	27	15	55
16	64	03.5		18.0	110	11.9 ¹⁶⁴		22.3 ¹³⁸	35	4 03	35	5 02	50	24	11	57
17	79	03.5	-13	18.8	124	47.3 ¹⁶⁴	+8	08.4 ¹³⁹	40	3 51	4 25	4 54	2 57	20	14 06	61
18	94	03.5	-13	19.7	139	22.8 ¹⁶⁵	+7	54.4 ¹⁴⁰	45	3 34	4 13	4 45	3 05	16	14 00	65
19	109	03.6		20.5	153	58.3 ¹⁶⁵		40.5 ¹³⁹	50	13	3 58	34	14	12	13 52	70
20	124	03.6		21.3	168	33.7 ¹⁶⁴		26.5 ¹⁴⁰	52	3 03	51	28	18	10	49	72
21	139	03.7		22.2	183	09.2 ¹⁶⁵	+7	12.4 ¹⁴¹	54	2 51	43	23	23	7	45	75
22	154	03.7		23.0	197	44.7 ¹⁶⁵	+6	58.3 ¹⁴¹	56	37	34	16	28	5	41	78
23	169	03.8		23.8	212	20.2 ¹⁶⁵		44.2 ¹⁴¹	58	2 20	23	09	33	2	36	81
24	184	03.8	-13	24.7	226	55.7 ¹⁶⁵	+6	30.1 ¹⁴¹	60 S	1 59	3 11	4 01	3 40	**	13 31	85

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 21 ^h 30 ^m 7		Mag: -4.5 PMG: 14 ^h 57 ^m		Mag: -2.2 PMG: 0 ^h 40 ^m		Mag: -1.7 PMG: 11 ^h 27 ^m		Mag: +0.3 PMG: 6 ^h 26 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	36	26.3	135	54.5	349	58.4	+16	21.4	187	45.9
1	51	28.8	150	54.1	5	01.8		21.3	202	47.9
2	66	31.2	165	53.7	20	05.1		21.2	217	49.8
3	81	33.7	180	53.3	35	08.4		21.1	232	51.8
4	96	36.2	195	52.9	50	11.8		21.0	247	53.7
5	111	38.6	210	52.4	65	15.1	+16	20.9	262	55.7
6	126	41.1	225	52.0	80	18.4	+16	20.8	277	57.6
7	141	43.6	240	51.6	95	21.8		20.7	292	59.5
8	156	46.0	255	51.2	110	25.1		20.6	308	01.5
9	171	48.5	270	50.8	125	28.4		20.5	323	03.4
10	186	51.0	285	50.3	140	31.8		20.4	338	05.4
11	201	53.4	300	49.9	155	35.1	+16	20.3	353	07.3
12	216	55.9	315	49.5	170	38.4	+16	20.2	8	09.3
13	231	58.3	330	49.1	185	41.8		20.2	23	11.2
14	247	00.8	345	48.7	200	45.1		20.1	38	13.2
15	262	03.3	0	48.2	215	48.5		20.0	53	15.1
16	277	05.7	15	47.8	230	51.8		19.9	68	17.1
17	292	08.2	30	47.4	245	55.1	+16	19.8	83	19.0
18	307	10.7	45	47.0	260	58.5	+16	19.7	98	20.9
19	322	13.1	60	46.6	276	01.8		19.6	113	22.9
20	337	15.6	75	46.2	291	05.2		19.5	128	24.8
21	352	18.1	90	45.8	306	08.5		19.4	143	26.8
22	7	20.5	105	45.3	321	11.9		19.3	158	28.7
23	22	23.0	120	44.9	336	15.2		19.2	173	30.7
24	37	25.4	135	44.5	351	18.6	+16	19.1	188	32.6
Dif	—		-4		-2		+33		+19	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1 PMG: 11 ^h 43 ^m 7			Edad: 25 ^d 6 PHE { SD: 14 ^h 9 PMG: 9 ^h 07 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	Rº	Hora
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m
0	184	03.8	-13	24.7	226	55.7	+6	30.1	60 N	16 12	16 56	17 45	2 15 85	15 36 **
1	199	03.8		25.5	241	31.3 ¹⁶⁶		15.9 ¹⁴²	58	19	17 01	47	18 82	35 1
2	214	03.9		26.3	256	06.8 ¹⁶⁵	+6	01.7 ¹⁴²	56	26	05	49	21 78	33 5
3	229	03.9		27.1	270	42.3 ¹⁶⁵	+5	47.4 ¹⁴³	54	32	09	50	24 75	32 7
4	244	04.0		28.0	285	17.9 ¹⁶⁶		33.2 ¹⁴²	52	37	12	52	26 73	31 9
5	259	04.0	-13	28.8	299	53.4 ¹⁶⁵	+5	18.8 ¹⁴⁴	50	16 42	17 16	17 54	2 29 70	15 30 12
6	274	04.1	-13	29.6	314	28.9 ¹⁶⁵	+5	04.5 ¹⁴³	45	16 53	17 23	17 57	2 33 66	15 28 16
7	289	04.1		30.5	329	04.5 ¹⁶⁶	+4	50.1 ¹⁴⁴	40	17 01	29	18 01	37 62	26 20
8	304	04.1		31.3	343	40.0 ¹⁶⁵		35.7 ¹⁴⁴	35	09	35	05	41 58	25 23
9	319	04.2		32.1	358	15.6 ¹⁶⁶		21.3 ¹⁴⁴	30	15	40	08	44 54	23 27
10	334	04.2		32.9	12	51.1 ¹⁶⁵	+4	06.9 ¹⁴⁴	20	27	50	16	49 49	21 32
11	349	04.2	-13	33.8	27	26.6 ¹⁶⁵	+3	52.4 ¹⁴⁵	10 N	17 37	17 59	18 24	2 53 45	15 19 36
12	4	04.3	-13	34.6	42	02.2 ¹⁶⁶	+3	37.9 ¹⁴⁵	0	17 47	18 08	18 33	2 58 40	15 17 40
13	19	04.3		35.4	56	37.7 ¹⁶⁵		23.4 ¹⁴⁵	10 S	17 57	19	44	3 02 36	15 45
14	34	04.4		36.2	71	13.2 ¹⁶⁵	+3	08.8 ¹⁴⁶	20	18 08	31	18 57	06 32	13 49
15	49	04.4		37.1	85	48.7 ¹⁶⁵	+2	54.3 ¹⁴⁵	30	20	45	19 15	11 26	10 55
16	64	04.4		37.9	100	24.2 ¹⁶⁵		39.7 ¹⁴⁶	35	27	18 54	26	14 23	08 59
17	79	04.5	-13	38.7	114	59.7 ¹⁶⁵	+2	25.1 ¹⁴⁶	40	18 35	19 04	19 39	3 17 20	15 07 62
18	94	04.5	-13	39.5	129	35.2 ¹⁶⁵	+2	10.4 ¹⁴⁷	45	18 45	19 17	19 56	3 21 16	15 05 66
19	109	04.5		40.4	144	10.6 ¹⁶⁴	+1	55.8 ¹⁴⁶	50	18 57	33	20 18	26 11	02 71
20	124	04.6		41.2	158	46.1 ¹⁶⁵		41.1 ¹⁴⁷	52	19 02	40	29	28 9	01 74
21	139	04.6		42.0	173	21.5 ¹⁶⁴		26.4 ¹⁴⁷	54	08	49	41	30 7	15 00 76
22	154	04.7		42.8	187	56.9 ¹⁶⁴	+1	11.7 ¹⁴⁷	56	15	19 58	20 56	33 4	14 59 78
23	169	04.7		43.6	202	32.3 ¹⁶⁴	+0	57.0 ¹⁴⁷	58	22	20 09	21 14	35 2	57 82
24	184	04.7	-13	44.5	217	07.7 ¹⁶⁴	+0	42.3 ¹⁴⁷	60 S	19 31	20 22	21 37	3 38 **	14 56 85
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 21 ^h 26 ^m 8		Mag: -4.5 PMG: 14 ^h 57 ^m		Mag: -2.2 PMG: 0 ^h 35 ^m		Mag: -1.7 PMG: 11 ^h 24 ^m		Mag: +0.3 PMG: 6 ^h 23 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	37	25.4	135	44.5	-26	41.5	351	18.6	+16	19.1				
1	52	27.9	150	44.1		41.8	6	21.9		19.0				
2	67	30.4	165	43.7		42.0	21	25.2		18.9				
3	82	32.8	180	43.3		42.2	36	28.6		18.8				
4	97	35.3	195	42.9		42.4	51	31.9		18.7				
5	112	37.8	210	42.4	-26	42.6	66	35.3	+16	18.6				
6	127	40.2	225	42.0	-26	42.9	81	38.6	+16	18.5				
7	142	42.7	240	41.6		43.1	96	42.0		18.4				
8	157	45.2	255	41.2		43.3	111	45.3		18.3				
9	172	47.6	270	40.8		43.5	126	48.7		18.2				
10	187	50.1	285	40.4		43.7	141	52.0		18.1				
11	202	52.6	300	40.0	-26	44.0	156	55.4	+16	18.0				
12	217	55.0	315	39.6	-26	44.2	171	58.8	+16	17.9				
13	232	57.5	330	39.2		44.4	187	02.1		17.8				
14	247	59.9	345	38.8		44.6	202	05.5		17.7				
15	263	02.4	0	38.4		44.8	217	08.8		17.6				
16	278	04.9	15	37.9		45.0	232	12.2		17.5				
17	293	07.3	30	37.5	-26	45.2	247	15.5	+16	17.4				
18	308	09.8	45	37.1	-26	45.4	262	18.9	+16	17.3				
19	323	12.3	60	36.7		45.6	277	22.2		17.2				
20	338	14.7	75	36.3		45.8	292	25.6		17.1				
21	353	17.2	90	35.9		46.0	307	29.0		17.0				
22	8	19.7	105	35.5		46.2	322	32.3		16.9				
23	23	22.1	120	35.1		46.4	337	35.7		16.8				
24	38	24.6	135	34.7	-26	46.7	352	39.0	+16	16.7				
Dif	—		-4		-2		+34		-1					
							+19		-2					
									+24					
									0					

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16 ^h 1			Edad: 26 ^d 6 PHE { 4 ^h : 55 ^m 3 12 ^h : 55 ^m 4 20 ^h : 55 ^m 6											
	PMG: 11 ^h 43 ^m 7			SD: 15 ^h 0 PMG: 9 ^h 48 ^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	184	04.7	-13 44.5	217	07.7	+0 42.3	60 N	5 43	6 32	7 17	3 40	87	15 35	**	
1	199	04.8	45.3	231	43.1 ¹⁶⁴	27.5 ¹⁴⁸	58	41	28	10	40	83	36	2	
2	214	04.8	46.1	246	18.4 ¹⁶³	+0 12.7 ¹⁴⁸	56	39	23	7 03	39	80	38	5	
3	229	04.8	46.9	260	53.7 ¹⁶³	-0 02.0 ¹⁴⁷	54	38	19	6 57	39	77	39	8	
4	244	04.9	47.7	275	29.0 ¹⁶³	16.8 ¹⁴⁸	52	36	16	51	39	75	40	11	
5	259	04.9	-13 48.6	290	04.3 ¹⁶³	-0 31.6 ¹⁴⁸	50	5 35	6 13	6 46	3 39	72	15 42	12	
6	274	04.9	-13 49.4	304	39.6 ¹⁶³	-0 46.4 ¹⁴⁸	45	5 31	6 05	6 36	3 39	67	15 44	17	
7	289	05.0	50.2	319	14.8 ¹⁶²	-1 01.3 ¹⁴⁹	40	27	5 59	27	39	63	46	21	
8	304	05.0	51.0	333	50.0 ¹⁶²	16.1 ¹⁴⁸	35	23	53	19	39	59	48	25	
9	319	05.0	51.8	348	25.1 ¹⁶¹	30.9 ¹⁴⁸	30	20	48	12	38	56	50	27	
10	334	05.0	52.7	3	00.3 ¹⁶²	-1 45.8 ¹⁴⁹	20	12	38	6 01	38	51	53	33	
11	349	05.1	-13 53.5	17	35.4 ¹⁶¹	-2 00.6 ¹⁴⁸	10 N	5 04	5 29	5 50	3 38	46	15 55	38	
12	4	05.1	-13 54.3	32	10.5 ¹⁶¹	-2 15.5 ¹⁴⁹	0	4 54	5 19	5 40	3 38	41	15 57	43	
13	19	05.1	55.1	46	45.5 ¹⁶⁰	30.3 ¹⁴⁸	10 S	43	5 09	30	38	37	16 00	47	
14	34	05.2	55.9	61	20.5 ¹⁶⁰	-2 45.2 ¹⁴⁹	20	30	4 57	19	38	32	02	52	
15	49	05.2	56.7	75	55.5 ¹⁶⁰	-3 00.1 ¹⁴⁹	30	12	42	07	37	27	05	57	
16	64	05.2	57.6	90	30.4 ¹⁵⁹	14.9 ¹⁴⁸	35	4 01	33	5 00	37	24	07	60	
17	79	05.3	-13 58.4	105	05.3 ¹⁵⁹	-3 29.8 ¹⁴⁹	40	3 48	4 23	4 51	3 37	21	16 09	64	
18	94	05.3	-13 59.2	119	40.2 ¹⁵⁹	-3 44.7 ¹⁴⁹	45	3 31	4 10	4 42	3 37	17	16 11	68	
19	109	05.3	-14 00.0	134	15.0 ¹⁵⁸	-3 59.5 ¹⁴⁸	50	3 09	3 54	30	37	12	13	74	
20	124	05.3	-14 00.8	148	49.7 ¹⁵⁷	-4 14.4 ¹⁴⁹	52	2 58	47	24	37	10	15	76	
21	139	05.4	01.6	163	24.5 ¹⁵⁸	29.3 ¹⁴⁹	54	45	38	18	37	7	16	78	
22	154	05.4	02.4	177	59.2 ¹⁵⁷	44.1 ¹⁴⁸	56	31	28	12	37	5	17	82	
23	169	05.4	03.2	192	33.8 ¹⁵⁶	-4 59.0 ¹⁴⁹	58	2 13	17	4 04	37	2	19	85	
24	184	05.4	-14 04.1	207	08.4 ¹⁵⁶	-5 13.8 ¹⁴⁸	60 S	1 50	3 04	3 55	3 37	**	16 21	88	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 21 ^h 22 ^m 8		Mag: -4.5 PMG: 14 ^h 58 ^m			Mag: -2.3 PMG: 0 ^h 29 ^m			Mag: -1.7 PMG: 11 ^h 21 ^m			Mag: +0.3 PMG: 6 ^h 19 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°
0	38	24.6	135	34.7	-26 46.7	352	39.0	+16 16.7	189	19.3	-10 47.5	265	01.0	+17 58.5	
1	53	27.0	150	34.3	46.9	7	42.4	16.6	204	21.3	47.7	280	03.3	58.5	
2	68	29.5	165	33.9	47.0	22	45.8	16.5	219	23.2	47.9	295	05.7	58.4	
3	83	32.0	180	33.5	47.2	37	49.1	16.4	234	25.1	48.1	310	08.1	58.4	
4	98	34.4	195	33.1	47.4	52	52.5	16.3	249	27.1	48.3	325	10.4	58.4	
5	113	36.9	210	32.7	-26 47.6	67	55.8	+16 16.2	264	29.0	-10 48.5	340	12.8	+17 58.4	
6	128	39.4	225	32.3	-26 47.8	82	59.2	+16 16.1	279	31.0	-10 48.6	355	15.1	+17 58.3	
7	143	41.8	240	31.9	48.0	98	02.6	16.0	294	32.9	48.8	10	17.5	58.3	
8	158	44.3	255	31.5	48.2	113	05.9	15.9	309	34.9	49.0	25	19.8	58.3	
9	173	46.8	270	31.1	48.4	128	09.3	15.8	324	36.8	49.2	40	22.2	58.3	
10	188	49.2	285	30.7	48.6	143	12.7	15.7	339	38.8	49.4	55	24.5	58.2	
11	203	51.7	300	30.3	-26 48.8	158	16.0	+16 15.6	354	40.7	-10 49.6	70	26.9	+17 58.2	
12	218	54.2	315	29.9	-26 49.0	173	19.4	+16 15.5	9	42.7	-10 49.8	85	29.3	+17 58.2	
13	233	56.6	330	29.5	49.2	188	22.8	15.4	24	44.6	50.0	100	31.6	58.2	
14	248	59.1	345	29.1	49.4	203	26.1	15.3	39	46.5	50.2	115	34.0	58.2	
15	264	01.5	0 28.7	49.5	218	29.5	15.2	15.2	54	48.5	50.3	130	36.3	58.1	
16	279	04.0	15 28.3	49.7	233	32.9	15.1	15.1	69	50.4	50.5	145	38.7	58.1	
17	294	06.5	30 27.9	-26 49.9	248	36.2	+16 14.9	14.9	84	52.4	-10 50.7	160	41.0	+17 58.1	
18	309	08.9	45 27.5	-26 50.1	263	39.6	+16 14.8	14.8	99	54.3	-10 50.9	175	43.4	+17 58.1	
19	324	11.4	60 27.1	50.3	278	43.0	14.7	14.7	114	56.3	51.1	190	45.8	58.0	
20	339	13.9	75 26.7	50.4	293	46.3	14.6	14.6	129	58.2	51.3	205	48.1	58.0	
21	354	16.3	90 26.3	50.6	308	49.7	14.5	14.5	145	00.2	51.5	220	50.5	58.0	
22	9	18.8	105 25.9	50.8	323	53.1	14.4	14.4	160	02.1	51.7	235	52.8	58.0	
23	24	21.3	120 25.6	51.0	338	56.4	14.3	14.3	175	04.1	51.9	250	55.2	58.0	
24	39	23.7	135 25.2	-26 51.1	353	59.8	+16 14.2	14.2	190	06.0	-10 52.0	265	57.6	+17 57.9	
Dif	—		-4	-2	+34	-1	+19	-2	+19		-2	+24			

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1			Edad: 27 ^d 6 PHE { 4 ^h : 55 ^m 8 12 ^h : 56 ^m 0 20 ^h : 56 ^m 2 Rº: 45 ^m										
	PMG: 11 ^h 43 ^m 6			SD: 15 ^h 2 PMG: 10 ^h 29 ^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	184	05.4	-14 04.1	207	08.4	-5 13.8		60 N	16 07	16 51	17 41	5 07 91	15 33 **	
1	199	05.5		221	43.0 ¹⁵⁶	28.6 ¹⁴⁸		58	14	16 56	43	5 03 87	38 3	
2	214	05.5		236	17.5 ¹⁵⁵	43.5 ¹⁴⁹		56	21	17 01	45	4 59 84	43 6	
3	229	05.5		250	51.9 ¹⁵⁴	-5 58.3 ¹⁴⁸		54	28	05	47	56 81	47 9	
4	244	05.5		265	26.3 ¹⁵⁴	-6 13.1 ¹⁴⁸		52	33	09	49	54 77	51 12	
5	259	05.6	-14 08.1	280	00.7 ¹⁵⁴	-6 27.9 ¹⁴⁸		50	16 39	17 12	17 50	4 51 75	15 54 14	
6	274	05.6	-14 08.9	294	35.0 ¹⁵³	-6 42.7 ¹⁴⁸		45	16 50	17 20	17 55	4 46 70	16 01 20	
7	289	05.6		309	09.2 ¹⁵²	-6 57.4 ¹⁴⁷		40	16 59	27	17 59	42 65	07 24	
8	304	05.6		323	43.4 ¹⁵²	-7 12.2 ¹⁴⁸		35	17 07	33	18 03	38 62	13 27	
9	319	05.7		338	17.6 ¹⁵²	26.9 ¹⁴⁷		30	14	38	07	34 59	17 31	
10	334	05.7		352	51.6 ¹⁵⁰	41.6 ¹⁴⁷		20	26	49	15	29 53	26 35	
11	349	05.7	-14 13.0	7	25.6 ¹⁵⁰	-7 56.4 ¹⁴⁸		10 N	17 37	17 58	18 23	4 24 48	16 33 40	
12	4	05.7	-14 13.8	21	59.6 ¹⁵⁰	-8 11.0 ¹⁴⁶		0	17 47	18 08	18 33	4 19 44	16 40 45	
13	19	05.7		36	33.5 ¹⁴⁹	25.7 ¹⁴⁷		10 S	17 57	19	45	15 39	47 49	
14	34	05.8		51	07.3 ¹⁴⁸	40.3 ¹⁴⁶		20	18 09	32	18 59	10 34	16 54 54	
15	49	05.8		65	41.1 ¹⁴⁸	-8 55.0 ¹⁴⁷		30	22	47	19 17	04 29	17 02 60	
16	64	05.8		80	14.8 ¹⁴⁷	-9 09.6 ¹⁴⁶		35	29	18 56	28	4 01 26	07 63	
17	79	05.8	-14 17.8	94	48.5 ¹⁴⁷	-9 24.1 ¹⁴⁵		40	18 38	19 07	19 42	3 58 22	17 13 67	
18	94	05.8	-14 18.6	109	22.0 ¹⁴⁵	-9 38.7 ¹⁴⁶		45	18 48	19 20	20 00	3 54 18	17 19 71	
19	109	05.9		123	55.5 ¹⁴⁵	-9 53.2 ¹⁴⁵		50	19 00	36	22	49 13	27 77	
20	124	05.9		138	29.0 ¹⁴⁵	-10 07.7 ¹⁴⁵		52	06	44	34	47 11	31 79	
21	139	05.9		153	02.4 ¹⁴⁴	22.1 ¹⁴⁴		54	12	19 53	20 47	44 9	34 83	
22	154	05.9		167	35.7 ¹⁴³	36.6 ¹⁴⁵		56	19	20 03	21 03	42 6	39 86	
23	169	05.9		182	08.9 ¹⁴²	-10 51.0 ¹⁴⁴		58	27	15	22	39 2	44 89	
24	184	06.0	-14 23.4	196	42.0 ¹⁴¹	-11 05.3 ¹⁴³		60 S	19 36	20 28	21 47	3 36 **	17 49 94	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 21 ^h 18 ^m 9		Mag: -4.5 PMG: 14 ^h 59 ^m			Mag: -2.3 PMG: 0 ^h 24 ^m			Mag: -1.7 PMG: 11 ^h 18 ^m			Mag: +0.3 PMG: 6 ^h 15 ^m		
	hG ♈	hG ♀		Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	39	23.7	135	25.2	-26	51.1	353	59.8	+16	14.2	190	06.0	-10	52.0
1	54	26.2	150	24.8		51.3	9	03.2		14.1	205	07.9		52.2
2	69	28.7	165	24.4		51.5	24	06.6		14.0	220	09.9		52.4
3	84	31.1	180	24.0		51.7	39	09.9		13.9	235	11.8		52.6
4	99	33.6	195	23.6		51.8	54	13.3		13.8	250	13.8		52.8
5	114	36.0	210	23.2	-26	52.0	69	16.7	+16	13.7	265	15.7	-10	53.0
6	129	38.5	225	22.8	-26	52.2	84	20.0	+16	13.6	280	17.7	-10	53.2
7	144	41.0	240	22.4		52.3	99	23.4		13.5	295	19.6		53.4
8	159	43.4	255	22.0		52.5	114	26.8		13.4	310	21.6		53.6
9	174	45.9	270	21.7		52.7	129	30.2		13.3	325	23.5		53.7
10	189	48.4	285	21.3		52.8	144	33.5		13.2	340	25.5		53.9
11	204	50.8	300	20.9	-26	53.0	159	36.9	+16	13.0	355	27.4	-10	54.1
12	219	53.3	315	20.5	-26	53.2	174	40.3	+16	12.9	10	29.3	-10	54.3
13	234	55.8	330	20.1		53.3	189	43.7		12.8	25	31.3		54.5
14	249	58.2	345	19.7		53.5	204	47.1		12.7	40	33.2		54.7
15	265	00.7	0	19.3		53.6	219	50.4		12.6	55	35.2		54.9
16	280	03.1	15	19.0		53.8	234	53.8		12.5	70	37.1		55.1
17	295	05.6	30	18.6	-26	54.0	249	57.2	+16	12.4	85	39.1	-10	55.3
18	310	08.1	45	18.2	-26	54.1	265	00.6	+16	12.3	100	41.0	-10	55.4
19	325	10.5	60	17.8		54.3	280	03.9		12.2	115	43.0		55.6
20	340	13.0	75	17.4		54.4	295	07.3		12.1	130	44.9		55.8
21	355	15.5	90	17.0		54.6	310	10.7		12.0	145	46.9		56.0
22	10	17.9	105	16.7		54.7	325	14.1		11.9	160	48.8		56.2
23	25	20.4	120	16.3		54.9	340	17.5		11.7	175	50.8		56.4
24	40	22.9	135	15.9	-26	55.0	355	20.8	+16	11.6	190	52.7	-10	56.6
Dif	—		-4		-2		+34		-1		+19		-2	
													+24	
													0	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'1 PMG: 11 ^h 43 ^m 6			Edad: 28 ^d 6 PHE { 4 ^h : 56'4 12 ^h : 56'6 20 ^h : 56'8 Rº: 48 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m		
0	184	06.0	-14	23.4	196	42.0	-11	05.3	60 N	5 48	6 37	7 22	6 38	98	15 32	0		
1	199	06.0		24.2	211	15.1 ¹⁴¹		19.7 ¹⁴⁴	58	45	32	14	30	93	41	5		
2	214	06.0		25.0	225	48.1 ¹⁴⁰		33.9 ¹⁴²	56	43	27	07	23	89	49	9		
3	229	06.0		25.8	240	21.1 ¹⁴⁰	-11	48.2 ¹⁴³	54	41	23	7 01	17	85	15 56	13		
4	244	06.0		26.6	254	53.9 ¹³⁸	-12	02.4 ¹⁴²	52	39	19	6 55	11	82	16 03	15		
5	259	06.0	-14	27.4	269	26.7 ¹³⁸	-12	16.6 ¹⁴²	50	5 38	6 16	6 50	6 06	79	16 08	18		
6	274	06.1	-14	28.2	283	59.4 ¹³⁷	-12	30.7 ¹⁴¹	45	5 33	6 08	6 38	5 56	73	16 21	23		
7	289	06.1		29.0	298	32.0 ¹³⁶		44.8 ¹⁴¹	40	29	6 01	29	47	69	31	28		
8	304	06.1		29.8	313	04.5 ¹³⁵	-12	58.9 ¹⁴¹	35	25	5 55	21	40	64	40	32		
9	319	06.1		30.6	327	36.9 ¹³⁴	-13	12.9 ¹⁴⁰	30	21	49	14	33	62	16 48	35		
10	334	06.1		31.4	342	09.3 ¹³⁴		26.8 ¹³⁹	20	13	39	6 01	22	56	17 01	41		
11	349	06.1	-14	32.2	356	41.6 ¹³³	-13	40.7 ¹³⁹	10 N	5 04	5 29	5 51	5 12	51	17 13	45		
12	4	06.1	-14	33.0	11	13.8 ¹³²	-13	54.6 ¹³⁹	0	4 54	5 19	5 40	5 03	47	17 25	49		
13	19	06.2		33.8	25	45.9 ¹³¹	-14	08.4 ¹³⁸	10 S	42	5 08	30	4 54	42	36	53		
14	34	06.2		34.6	40	17.9 ¹³⁰		22.2 ¹³⁸	20	28	4 55	18	44	38	17 48	58		
15	49	06.2		35.4	54	49.8 ¹²⁹		35.9 ¹³⁷	30	4 10	40	5 05	33	33	18 02	63		
16	64	06.2		36.2	69	21.7 ¹²⁹	-14	49.5 ¹³⁶	35	3 59	31	4 58	27	29	10	67		
17	79	06.2	-14	37.0	83	53.4 ¹²⁷	-15	03.1 ¹³⁶	40	3 45	4 20	4 49	4 20	26	18 20	70		
18	94	06.2	-14	37.8	98	25.1 ¹²⁷	-15	16.7 ¹³⁶	45	3 27	4 07	4 39	4 12	21	18 30	75		
19	109	06.2		38.6	112	56.6 ¹²⁵		30.1 ¹³⁴	50	3 04	3 50	26	4 02	17	44	80		
20	124	06.2		39.4	127	28.1 ¹²⁵		43.6 ¹³⁵	52	2 53	42	21	3 58	14	50	83		
21	139	06.3		40.2	141	59.5 ¹²⁴	-15	56.9 ¹³³	54	40	33	14	53	11	18 57	87		
22	154	06.3		41.0	156	30.8 ¹²³	-16	10.2 ¹³³	56	24	23	4 07	48	7	19 05	90		
23	169	06.3		41.8	171	01.9 ¹²¹		23.4 ¹³²	58	2 05	3 12	3 59	41	5	13	96		
24	184	06.3	-14	42.6	185	33.0 ¹²¹	-16	36.6 ¹³²	60 S	1 40	2 58	3 50	3 35	0	19 23	101		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 21 ^h 15 ^m 0		Mag: -4.5 PMG: 14 ^h 59 ^m				Mag: -2.3 PMG: 0 ^h 19 ^m				Mag: -1.7 PMG: 11 ^h 15 ^m				Mag: +0.3 PMG: 6 ^h 11 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	40	22.9	135	15.9	-26	55.0	355	20.8	+16	11.6	190	52.7	-10	56.6	266	54.2	+17	57.4
1	55	25.3	150	15.5		55.2	10	24.2		11.5	205	54.6		56.8	281	56.6		57.4
2	70	27.8	165	15.1		55.3	25	27.6		11.4	220	56.6		56.9	296	58.9		57.4
3	85	30.3	180	14.8		55.5	40	31.0		11.3	235	58.5		57.1	312	01.3		57.3
4	100	32.7	195	14.4		55.6	55	34.4		11.2	251	00.5		57.3	327	03.7		57.3
5	115	35.2	210	14.0	-26	55.8	70	37.8	+16	11.1	266	02.4	-10	57.5	342	06.0	+17	57.3
6	130	37.6	225	13.6	-26	55.9	85	41.1	+16	11.0	281	04.4	-10	57.7	357	08.4	+17	57.3
7	145	40.1	240	13.2		56.0	100	44.5		10.9	296	06.3		57.9	12	10.8		57.3
8	160	42.6	255	12.9		56.2	115	47.9		10.8	311	08.3		58.1	27	13.1		57.2
9	175	45.0	270	12.5		56.3	130	51.3		10.7	326	10.2		58.3	42	15.5		57.2
10	190	47.5	285	12.1		56.5	145	54.7		10.5	341	12.2		58.5	57	17.9		57.2
11	205	50.0	300	11.7	-26	56.6	160	58.1	+16	10.4	356	14.1	-10	58.6	72	20.2	+17	57.2
12	220	52.4	315	11.4	-26	56.7	176	01.4	+16	10.3	11	16.0	-10	58.8	87	22.6	+17	57.2
13	235	54.9	330	11.0		56.9	191	04.8		10.2	26	18.0		59.0	102	25.0		57.1
14	250	57.4	345	10.6		57.0	206	08.2		10.1	41	19.9		59.2	117	27.3		57.1
15	265	59.8	0	10.3		57.1	221	11.6		10.0	56	21.9		59.4	132	29.7		57.1
16	281	02.3	15	09.9		57.3	236	15.0		09.9	71	23.8		59.6	147	32.1		57.1
17	296	04.7	30	09.5	-26	57.4	251	18.4	+16	09.8	86	25.8	-10	59.8	162	34.4	+17	57.1
18	311	07.2	45	09.1	-26	57.5	266	21.7	+16	09.7	101	27.7	-11	00.0	177	36.8	+17	57.0
19	326	09.7	60	08.8		57.6	281	25.1		09.5	116	29.7	-11	00.1	192	39.2		57.0
20	341	12.1	75	08.4		57.8	296	28.5		09.4	131	31.6		00.3	207	41.5		57.0
21	356	14.6	90	08.0		57.9	311	31.9		09.3	146	33.6		00.5	222	43.9		57.0
22	11	17.1	105	07.7		58.0	326	35.3		09.2	161	35.5		00.7	237	46.3		57.0
23	26	19.5	120	07.3		58.1	341	38.7		09.1	176	37.4		00.9	252	48.6		56.9
24	41	22.0	135	06.9	-26	58.3	356	42.1	+16	09.0	191	39.4	-11	01.1	267	51.0	+17	56.9
Dif	—		-4		-1		+34		-1		+19		-2		+24		0	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna			
	SD: 16:1 PMG: 11 ^h 43 ^m 6			Edad: 29 ^d 6 PHE { SD: 15:5 PMG: 12 ^h 02 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	m	h m	m	h m	m	
0	184	06.3	-14	42.6	185	33.0	-16	36.6	60 N	16 01	16 47	17 36	8 16	105	15 32	3		
1	199	06.3		43.4	200	04.0 ¹²⁰	-16	49.7 ¹³¹	58	10	52	39	8 03	98	46	9		
2	214	06.3		44.2	214	34.9 ¹¹⁹	-17	02.7 ¹³⁰	56	17	16 57	41	7 52	93	15 58	15		
3	229	06.3		44.9	229	05.7 ¹¹⁸		15.7 ¹³⁰	54	24	17 01	43	42	89	16 09	18		
4	244	06.3		45.7	243	36.4 ¹¹⁷		28.5 ¹²⁸	52	30	05	45	33	85	18	22		
5	259	06.3	-14	46.5	258	07.0 ¹¹⁶	-17	41.3 ¹²⁸	50	16 35	17 09	17 47	7 25	83	16 26	25		
6	274	06.3	-14	47.3	272	37.5 ¹¹⁵	-17	54.1 ¹²⁸	45	16 47	17 17	17 52	7 09	76	16 44	31		
7	289	06.3		48.1	287	07.8 ¹¹³	-18	06.7 ¹²⁶	40	16 56	25	17 57	6 56	71	16 59	35		
8	304	06.3		48.9	301	38.1 ¹¹³		19.3 ¹²⁶	35	17 05	31	18 01	44	68	17 12	38		
9	319	06.3		49.7	316	08.3 ¹¹²		31.8 ¹²⁵	30	12	37	05	35	64	23	41		
10	334	06.4		50.5	330	38.4 ¹¹¹		44.2 ¹²⁴	20	25	48	14	18	59	42	45		
11	349	06.4	-14	51.3	345	08.3 ¹⁰⁹	-18	56.5 ¹²³	10 N	17 36	17 58	18 23	6 03	55	17 58	50		
12	4	06.4	-14	52.1	359	38.2 ¹⁰⁹	-19	08.8 ¹²³	0	17 47	18 08	18 33	5 50	51	18 14	53		
13	19	06.4		52.8	14	08.0 ¹⁰⁸		20.9 ¹²¹	10 S	17 58	20	18 45	36	47	29	57		
14	34	06.4		53.6	28	37.6 ¹⁰⁶		33.0 ¹²¹	20	18 10	33	19 00	22	43	18 46	61		
15	49	06.4		54.4	43	07.1 ¹⁰⁵		45.0 ¹²⁰	30	23	48	19	5 06	38	19 05	66		
16	64	06.4		55.2	57	36.6 ¹⁰⁵	-19	56.9 ¹¹⁹	35	31	18 58	31	4 56	35	17	68		
17	79	06.4	-14	56.0	72	05.9 ¹⁰³	-20	08.6 ¹¹⁷	40	18 40	19 09	19 45	4 46	31	19 30	72		
18	94	06.4	-14	56.8	86	35.1 ¹⁰²	-20	20.3 ¹¹⁷	45	18 51	19 23	20 03	4 33	27	19 45	77		
19	109	06.4		57.6	101	04.2 ¹⁰¹		31.9 ¹¹⁶	50	19 04	40	27	19	21	20 04	83		
20	124	06.4		58.3	115	33.2 ¹⁰⁰		43.5 ¹¹⁶	52	10	48	39	12	18	13	86		
21	139	06.4		59.1	130	02.1 ⁹⁹	-20	54.9 ¹¹⁴	54	16	19 58	20 53	4 04	15	24	88		
22	154	06.4	-14	59.9	144	30.9 ⁹⁸	-21	06.2 ¹¹³	56	24	20 08	21 09	3 55	12	35	94		
23	169	06.4	-15	00.7	158	59.6 ⁹⁷		17.4 ¹¹²	58	32	20	30	46	7	20 49	99		
24	184	06.4	-15	01.5	173	28.1 ⁹⁵	-21	28.5 ¹¹¹	60 S	19 42	20 35	21 57	3 35	1	21 04	108		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 21 ^h 11 ^m 1		Mag: -4.5 PMG: 15 ^h 00 ^m		Mag: -2.3 PMG: 0 ^h 13 ^m		Mag: -1.7 PMG: 11 ^h 12 ^m		Mag: +0.3 PMG: 6 ^h 08 ^m									
	hG ♈		hG ♀	Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	41	22.0	135	06.9	-26	58.3	356	42.1	+16	09.0	191	39.4	-11	01.1				
1	56	24.5	150	06.6		58.4	11	45.5		08.9	206	41.3		01.3				
2	71	26.9	165	06.2		58.5	26	48.8		08.8	221	43.3		01.5				
3	86	29.4	180	05.8		58.6	41	52.2		08.6	236	45.2		01.6				
4	101	31.9	195	05.5		58.8	56	55.6		08.5	251	47.2		01.8				
5	116	34.3	210	05.1	-26	58.9	71	59.0	+16	08.4	266	49.1	-11	02.0				
6	131	36.8	225	04.7	-26	59.0	87	02.4	+16	08.3	281	51.1	-11	02.2				
7	146	39.2	240	04.4		59.1	102	05.8		08.2	296	53.0		02.4				
8	161	41.7	255	04.0		59.2	117	09.2		08.1	311	55.0		02.6				
9	176	44.2	270	03.7		59.3	132	12.6		08.0	326	56.9		02.8				
10	191	46.6	285	03.3		59.4	147	16.0		07.9	341	58.8		03.0				
11	206	49.1	300	02.9	-26	59.6	162	19.4	+16	07.7	357	00.8	-11	03.1				
12	221	51.6	315	02.6	-26	59.7	177	22.7	+16	07.6	12	02.7	-11	03.3				
13	236	54.0	330	02.2		59.8	192	26.1		07.5	27	04.7		03.5				
14	251	56.5	345	01.9	-26	59.9	207	29.5		07.4	42	06.6		03.7				
15	266	59.0	0	01.5	-27	00.0	222	32.9		07.3	57	08.6		03.9				
16	282	01.4	15	01.1	-27	00.1	237	36.3		07.2	72	10.5		04.1				
17	297	03.9	30	00.8	-27	00.2	252	39.7	+16	07.1	87	12.5	-11	04.3				
18	312	06.4	45	00.4	-27	00.3	267	43.1	+16	07.0	102	14.4	-11	04.5				
19	327	08.8	60	00.1		00.4	282	46.5		06.8	117	16.4		04.6				
20	342	11.3	74	59.7		00.5	297	49.9		06.7	132	18.3		04.8				
21	357	13.7	89	59.4		00.6	312	53.3		06.6	147	20.3		05.0				
22	12	16.2	104	59.0		00.7	327	56.7		06.5	162	22.2		05.2				
23	27	18.7	119	58.7		00.8	343	00.0		06.4	177	24.1		05.4				
24	42	21.1	134	58.3	-27	00.9	358	03.4	+16	06.3	192	26.1	-11	05.6				
Dif	—		-4		-1		+34		-1		+19		-2		+24		0	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'1 PMG: 11 ^h 43 ^m 6			Edad: 0 ^d 9 PHE { 4 ^h : 57'5 12 ^h : 57'7 20 ^h : 57'8 R°: 57 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	184	06.4	-15	01.5	173	28.1	-21	28.5	60 N	5 52	6 42	7 27	10 01	110	15 35	8
1	199	06.4		02.3	187	56.6	95	39.4	58	49	36	19	9 41	100	15 55	19
2	214	06.4		03.0	202	24.9	93	-21 50.3	56	47	31	11	25	93	16 13	24
3	229	06.4		03.8	216	53.1	92	-22 01.1	54	45	27	7 05	9 11	88	27	29
4	244	06.4		04.6	231	21.2	91	11.7	52	43	23	6 59	8 58	85	40	33
5	259	06.4	-15	05.4	245	49.2	90	-22 22.3	50	5 40	6 19	6 53	8 48	81	16 51	36
6	274	06.4	-15	06.2	260	17.1	89	-22 32.7	45	5 36	6 10	6 41	8 25	77	17 15	40
7	289	06.4		06.9	274	44.9	88	43.0	40	31	6 03	31	8 07	73	34	44
8	304	06.4		07.7	289	12.6	87	-22 53.2	35	27	5 57	23	7 52	70	17 50	46
9	319	06.4		08.5	303	40.1	85	-23 03.3	30	22	51	15	39	67	18 04	48
10	334	06.4		09.3	318	07.6	85	13.3	20	13	40	6 02	7 17	63	27	53
11	349	06.4	-15	10.1	332	34.9	83	-23 23.1	10 N	5 04	5 29	5 51	6 58	60	18 48	55
12	4	06.4	-15	10.8	347	02.2	83	-23 32.8	0	4 54	5 19	5 40	6 41	56	19 07	58
13	19	06.4		11.6	1	29.3	81	42.4	10 S	42	5 07	29	23	53	26	61
14	34	06.4		12.4	15	56.3	80	-23 51.8	20	27	4 54	17	6 05	49	19 47	63
15	49	06.4		13.2	30	23.2	79	-24 01.2	30	4 08	38	5 04	5 44	44	20 11	67
16	64	06.4		13.9	44	50.0	78	10.4	35	3 56	29	4 56	31	42	25	69
17	79	06.4	-15	14.7	59	16.7	77	-24 19.4	40	3 42	4 17	4 47	5 17	39	20 42	71
18	94	06.4	-15	15.5	73	43.2	75	-24 28.3	45	3 24	4 04	4 36	5 00	36	21 02	74
19	109	06.3		16.3	88	09.7	75	37.1	50	3 00	3 46	23	4 40	30	27	78
20	124	06.3		17.0	102	36.1	74	45.8	52	2 48	38	17	30	27	39	81
21	139	06.3		17.8	117	02.3	72	-24 54.3	54	34	29	10	19	24	21 52	85
22	154	06.3		18.6	131	28.5	72	-25 02.6	56	2 17	18	4 03	4 07	19	22 09	88
23	169	06.3		19.4	145	54.5	70	10.9	58	1 56	3 06	3 54	3 53	14	28	95
24	184	06.3	-15	20.1	160	20.5	70	-25 19.0	60 S	1 29	2 51	3 44	3 36	6	22 52	105

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 21 ^h 07 ^m 1		Mag: -4.5 PMG: 15 ^h 00 ^m		Mag: -2.3 PMG: 0 ^h 08 ^m		Mag: -1.7 PMG: 11 ^h 09 ^m		Mag: +0.3 PMG: 6 ^h 04 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	42	21.1	134	58.3	358	03.4	192	26.1	268	47.9
1	57	23.6	149	57.9	13	06.8	207	28.0	283	50.2
2	72	26.1	164	57.6	28	10.2	222	30.0	298	52.6
3	87	28.5	179	57.2	43	13.6	237	31.9	313	55.0
4	102	31.0	194	56.9	58	17.0	252	33.9	328	57.4
5	117	33.5	209	56.5	73	20.4	267	35.8	343	59.7
6	132	35.9	224	56.2	88	23.8	282	37.8	359	02.1
7	147	38.4	239	55.8	103	27.2	297	39.7	14	04.5
8	162	40.9	254	55.5	118	30.6	312	41.7	29	06.8
9	177	43.3	269	55.2	133	34.0	327	43.6	44	09.2
10	192	45.8	284	54.8	148	37.4	342	45.6	59	11.6
11	207	48.2	299	54.5	163	40.8	357	47.5	74	14.0
12	222	50.7	314	54.1	178	44.2	12	49.4	89	16.3
13	237	53.2	329	53.8	193	47.6	27	51.4	104	18.7
14	252	55.6	344	53.4	208	50.9	42	53.3	119	21.1
15	267	58.1	359	53.1	223	54.3	57	55.3	134	23.5
16	283	00.6	14	52.7	238	57.7	72	57.2	149	25.8
17	298	03.0	29	52.4	254	01.1	87	59.2	164	28.2
18	313	05.5	44	52.1	269	04.5	103	01.1	179	30.6
19	328	08.0	59	51.7	284	07.9	118	03.1	194	33.0
20	343	10.4	74	51.4	299	11.3	133	05.0	209	35.3
21	358	12.9	89	51.0	314	14.7	148	07.0	224	37.7
22	13	15.3	104	50.7	329	18.1	163	08.9	239	40.1
23	28	17.8	119	50.4	344	21.5	178	10.9	254	42.5
24	43	20.3	134	50.0	359	24.9	193	12.8	269	44.9
Dif	—		-3	-1	+34	-1	+19	-2	+24	0

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:1 PMG: 11 ^h 43 ^m 6			Edad: 1 ^d 9	PHE { 4 ^h : 58/0 12 ^h : 58/1 20 ^h : 58/3 R°: 60 ^m										
	hG ☉	Dec		hG ☾		Dif			Dec	Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	184	06.3	-15 20.1	160	20.5	-25 19.0		60 N	15 56	16 42	17 32	11 51 99	15 43 28		
1	199	06.3		20.9	174 46.3	68 26.9	79	58	16 05		48 35	11 21 87	16 14 39		
2	214	06.3		21.7	189 12.0	67 34.7	78	56	13		53 37	10 58 82	37 44		
3	229	06.3		22.4	203 37.7	67 42.3		54	20	16 58	40	39 79	16 56 47		
4	244	06.3		23.2	218 03.2	65 49.8	75	52	26	17 02	42	23 77	17 13 48		
5	259	06.3	-15 24.0	232	28.7	65 -25 57.1	73	50	16 32	17 06	17 44	10 09 75	17 27 50		
6	274	06.3	-15 24.8	246	54.0	63 -26 04.3	72	45	16 44	17 15	17 50	9 42 71	17 55 53		
7	289	06.3		25.5	261 19.2	62 11.4	71	40	16 54		22 55	20 69	18 18 55		
8	304	06.2		26.3	275 44.4	62 18.2		35	17 03	29	17 59	9 02 67	36 57		
9	319	06.2		27.1	290 09.4	60 25.0	68	30	11	35	18 04	8 46 66	18 52 58		
10	334	06.2		27.8	304 34.4	60 31.5	65	20	24		47 13	8 20 64	19 20 58		
11	349	06.2	-15 28.6	318	59.3	59 -26 37.9	64	10 N	17 36	17 58	18 23	7 58 61	19 43 60		
12	4	06.2	-15 29.4	333	24.1	58 -26 44.1	62	0	17 47	18 09	18 33	7 37 60	20 05 61		
13	19	06.2		30.1	347 48.8	57 50.2		10 S	17 58		20 18 46	7 16 58	27 62		
14	34	06.2		30.9	2	56 -26 56.1	59	20	18 11	34	19 01	6 54 56	20 50 64		
15	49	06.2		31.7	16 37.9	55 -27 01.9	58	30	25	18 50	20	28 54	21 18 64		
16	64	06.1		32.4	31 02.3	54 07.4	55	35	33	19 00	33	6 13 52	34 65		
17	79	06.1	-15 33.2	45	26.7	54 -27 12.8	54	40	18 42	19 12	19 48	5 56 50	21 53 66		
18	94	06.1	-15 34.0	59	51.0	53 -27 18.1	53	45	18 53	19 26	20 07	5 36 46	22 16 67		
19	109	06.1		34.7	74 15.2	52 23.1	50	50	19 07		44 31	5 10 42	22 45 69		
20	124	06.1		35.5	88 39.3	51 28.0	49	52	13	19 53	44	4 57 41	23 00 69		
21	139	06.1		36.2	103 03.3	50 32.7	47	54	20	20 02	20 59	43 37	17 70		
22	154	06.1		37.0	117 27.3	50 37.3	46	56	28	13	21 16	26 34	23 37 72		
23	169	06.0		37.8	131 51.2	49 41.7	44	58	37	26	21 38	4 07 27	** ** *		
24	184	06.0	-15 38.5	146	15.0	48 -27 45.8	41	60 S	19 47	20 42	22 09	3 42 17	** ** *		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 21 ^h 03 ^m 2		Mag: -4.6 PMG: 15 ^h 01 ^m			Mag: -2.3 PMG: 0 ^h 02 ^m			Mag: -1.7 PMG: 11 ^h 06 ^m			Mag: +0.3 PMG: 6 ^h 00 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°	'
0	43	20.3	134	50.0	-27 02.9	359	24.9	+16 03.5	193	12.8	-11 10.1	269	44.9	+17 56.0	
1	58	22.7	149	49.7	03.0	14	28.3	03.4	208	14.7	10.2	284	47.2	56.0	
2	73	25.2	164	49.4	03.0	29	31.7	03.3	223	16.7	10.4	299	49.6	56.0	
3	88	27.7	179	49.0	03.1	44	35.1	03.1	238	18.6	10.6	314	52.0	56.0	
4	103	30.1	194	48.7	03.2	59	38.5	03.0	253	20.6	10.8	329	54.4	56.0	
5	118	32.6	209	48.4	-27 03.3	74	41.9	+16 02.9	268	22.5	-11 11.0	344	56.7	+17 55.9	
6	133	35.1	224	48.0	-27 03.3	89	45.3	+16 02.8	283	24.5	-11 11.2	359	59.1	+17 55.9	
7	148	37.5	239	47.7	03.4	104	48.7	02.7	298	26.4	11.4	15	01.5	55.9	
8	163	40.0	254	47.4	03.4	119	52.1	02.6	313	28.4	11.5	30	03.9	55.9	
9	178	42.5	269	47.0	03.5	134	55.4	02.4	328	30.3	11.7	45	06.3	55.9	
10	193	44.9	284	46.7	03.6	149	58.8	02.3	343	32.3	11.9	60	08.6	55.9	
11	208	47.4	299	46.4	-27 03.6	165	02.2	+16 02.2	358	34.2	-11 12.1	75	11.0	+17 55.8	
12	223	49.8	314	46.0	-27 03.7	180	05.6	+16 02.1	13	36.2	-11 12.3	90	13.4	+17 55.8	
13	238	52.3	329	45.7	03.7	195	09.0	02.0	28	38.1	12.5	105	15.8	55.8	
14	253	54.8	344	45.4	03.8	210	12.4	01.9	43	40.0	12.7	120	18.1	55.8	
15	268	57.2	359	45.1	03.9	225	15.8	01.7	58	42.0	12.8	135	20.5	55.8	
16	283	59.7	14	44.7	03.9	240	19.2	01.6	73	43.9	13.0	150	22.9	55.8	
17	299	02.2	29	44.4	-27 04.0	255	22.6	+16 01.5	88	45.9	-11 13.2	165	25.3	+17 55.7	
18	314	04.6	44	44.1	-27 04.0	270	26.0	+16 01.4	103	47.8	-11 13.4	180	27.7	+17 55.7	
19	329	07.1	59	43.8	04.1	285	29.4	01.3	118	49.8	13.6	195	30.0	55.7	
20	344	09.6	74	43.4	04.1	300	32.8	01.1	133	51.7	13.8	210	32.4	55.7	
21	359	12.0	89	43.1	04.2	315	36.2	01.0	148	53.7	14.0	225	34.8	55.7	
22	14	14.5	104	42.8	04.2	330	39.6	00.9	163	55.6	14.1	240	37.2	55.7	
23	29	17.0	119	42.5	04.3	345	43.0	00.8	178	57.6	14.3	255	39.6	55.6	
24	44	19.4	134	42.2	-27 04.3	0	46.4	+16 00.7	193	59.5	-11 14.5	270	41.9	+17 55.6	
Dif	—		-3		-1	-8966		-1	+19		-2	+24		0	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16:1 PMG: 11 ^h 43 ^m 6			Edad: 2 ^d 9 PHE { SD: 15:9 PMG: 14 ^h 51 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	184	06.0	-15 38.5	146	15.0	-27 45.8	60 N	5 56	6 46	7 33	13 30	54	16 11	76	
1	199	06.0	39.3	160	38.8	48 49.9	58	53	41	24	12 48	58	16 53	72	
2	214	06.0	40.1	175	02.5	47 53.7	56	51	35	16	12 20	59	17 21	70	
3	229	06.0	40.8	189	26.2	47 -27 57.4	54	48	30	09	11 58	60	17 43	69	
4	244	06.0	41.6	203	49.7	45 -28 00.8	52	46	26	7 02	40 60		18 01	69	
5	259	05.9	-15 42.3	218	13.3	46 -28 04.1	50	5 43	6 22	6 56	11 24	61	18 17	68	
6	274	05.9	-15 43.1	232	36.7	44 -28 07.2	45	5 38	6 13	6 44	10 53	61	18 48	67	
7	289	05.9	43.9	247	00.1	44 10.2	40	33	6 05	34	29 61		19 13	65	
8	304	05.9	44.6	261	23.5	44 12.9	35	28	5 58	25	10 09	62	33	65	
9	319	05.9	45.4	275	46.8	43 15.5	30	24	52	17	9 52	62	19 50	64	
10	334	05.8	46.1	290	10.1	43 17.9	20	14	41	6 03	9 24	62	20 18	64	
11	349	05.8	-15 46.9	304	33.3	42 -28 20.0	10 N	5 05	5 30	5 51	8 59	62	20 43	63	
12	4	05.8	-15 47.6	318	56.5	42 -28 22.0	0	4 54	5 19	5 40	8 37	61	21 06	62	
13	19	05.8	48.4	333	19.6	41 23.9	10 S	41	5 07	29	8 14	62	29 61		
14	34	05.8	49.2	347	42.7	41 25.5	20	26	4 53	16	7 50	61	21 54	59	
15	49	05.7	49.9	2	05.8	41 26.9	30	4 06	37	5 02	22 61		22 22	59	
16	64	05.7	50.7	16	28.8	40 28.2	35	3 54	27	4 54	7 05	61	39 58		
17	79	05.7	-15 51.4	30	51.8	40 -28 29.2	40	3 39	4 15	4 44	6 46	60	22 59	56	
18	94	05.7	-15 52.2	45	14.8	40 -28 30.1	45	3 20	4 01	4 33	6 22	60	23 23	55	
19	109	05.7	52.9	59	37.8	40 30.8	50	2 55	3 43	20	5 52	60	23 54	52	
20	124	05.6	53.7	74	00.7	39 31.3	5	43	34	13	38 58		** ** *	**	
21	139	05.6	54.4	88	23.6	39 31.6	54	28	24	4 06	20 59		** ** *	**	
22	154	05.6	55.2	102	46.5	39 31.7	56	2 10	13	3 58	5 00 57		** ** *	**	
23	169	05.6	55.9	117	09.4	39 31.6	58	1 48	3 00	49	4 34 56		0 03 73		
24	184	05.5	-15 56.7	131	32.3	39 -28 31.4	60 S	1 17	2 45	3 39	3 59 51		0 37 78		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 20 ^h 59 ^m 3		Mag: -4.6 PMG: 15 ^h 02 ^m		Mag: -2.3 PMG: 23 ^h 52 ^m		Mag: -1.7 PMG: 11 ^h 03 ^m		Mag: +0.3 PMG: 5 ^h 56 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	44	19.4	134	42.2	-27 04.3	0 46.4	+16 00.7	193 59.5	-11 14.5	270 41.9	+17 55.6				
1	59	21.9	149	41.8	04.3	15 49.8	00.6	209 01.5	14.7	285 44.3	55.6				
2	74	24.3	164	41.5	04.4	30 53.2	00.4	224 03.4	14.9	300 46.7	55.6				
3	89	26.8	179	41.2	04.4	45 56.6	00.3	239 05.3	15.1	315 49.1	55.6				
4	104	29.3	194	40.9	04.5	61 00.0	00.2	254 07.3	15.3	330 51.5	55.6				
5	119	31.7	209	40.6	-27 04.5	76 03.3	+16 00.1	269 09.2	-11 15.4	345 53.9	+17 55.5				
6	134	34.2	224	40.2	-27 04.6	91 06.7	+16 00.0	284 11.2	-11 15.6	0 56.2	+17 55.5				
7	149	36.7	239	39.9	04.6	106 10.1	+15 59.8	299 13.1	15.8	15 58.6	55.5				
8	164	39.1	254	39.6	04.6	121 13.5	59.7	314 15.1	16.0	31 01.0	55.5				
9	179	41.6	269	39.3	04.7	136 16.9	59.6	329 17.0	16.2	46 03.4	55.5				
10	194	44.1	284	39.0	04.7	151 20.3	59.5	344 19.0	16.4	61 05.8	55.5				
11	209	46.5	299	38.7	-27 04.7	166 23.7	+15 59.4	359 20.9	-11 16.6	76 08.2	+17 55.5				
12	224	49.0	314	38.4	-27 04.8	181 27.1	+15 59.3	14 22.9	-11 16.7	91 10.5	+17 55.4				
13	239	51.5	329	38.1	04.8	196 30.5	59.1	29 24.8	16.9	106 12.9	55.4				
14	254	53.9	344	37.7	04.8	211 33.9	59.0	44 26.8	17.1	121 15.3	55.4				
15	269	56.4	359	37.4	04.9	226 37.3	58.9	59 28.7	17.3	136 17.7	55.4				
16	284	58.8	14 37.1	04.9	241 40.7	58.8	74 30.7	74 30.7	17.5	151 20.1	55.4				
17	300	01.3	29 36.8	-27 04.9	256 44.1	+15 58.7	89 32.6	-11 17.7	17.7	166 22.5	+17 55.4				
18	315	03.8	44 36.5	-27 05.0	271 47.5	+15 58.5	104 34.6	-11 17.9	17.9	181 24.8	+17 55.3				
19	330	06.2	59 36.2	05.0	286 50.9	58.4	119 36.5	18.0		196 27.2	55.3				
20	345	08.7	74 35.9	05.0	301 54.3	58.3	134 38.4	18.2		211 29.6	55.3				
21	0	11.2	89 35.6	05.0	316 57.6	58.2	149 40.4	18.4		226 32.0	55.3				
22	15	13.6	104 35.3	05.0	332 01.0	58.1	164 42.3	18.6		241 34.4	55.3				
23	30	16.1	119 35.0	05.1	347 04.4	57.9	179 44.3	18.8		256 36.8	55.3				
24	45	18.6	134 34.7	-27 05.1	2 07.8	+15 57.8	194 46.2	-11 19.0		271 39.2	+17 55.3				
Dif	—		-3	0		+34	-1	+19	-2		+24	0			

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 16°1 PMG: 11 ^h 43 ^m 7			Edad: 3 ^d 9 PHE { 4 ^h : 58'7 12 ^h : 58'8 20 ^h : 58'9 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	h m m		
0	184	05.5	-15 56.7	131	32.3	-28 31.4	5	60 N	15 51	16 38	17 28	14 24 17	17 27 110				
1	199	05.5	57.4	145	55.1	30.9	7	58	16 01	44	31	13 46 29	18 05 97				
2	214	05.5	58.2	160	18.0	30.2	8	56	09	49	34	13 19 35	31 91				
3	229	05.5	58.9	174	40.8	29.4	8	54	16	54	37	12 58 39	18 52 87				
4	244	05.4	-15 59.7	189	03.7	28.3	11	52	23	16 59	39	40 42	19 10 83				
5	259	05.4	-16 00.4	203	26.5	-28 27.1	12	50	16 29	17 03	17 42	12 25 44	19 25 81				
6	274	05.4	-16 01.2	217	49.4	-28 25.7	14	45	16 41	17 12	17 47	11 54 49	19 55 76				
7	289	05.4	01.9	232	12.2	24.1	16	40	16 52	20	53	30 52	20 18 74				
8	304	05.3	02.7	246	35.1	22.3	18	35	17 01	28	17 58	11 11 53	38 70				
9	319	05.3	03.4	260	58.0	20.3	20	30	09	34	18 03	10 54 55	20 54 69				
10	334	05.3	04.2	275	20.9	18.1	22	20	23	46	12	26 57	21 22 65				
11	349	05.2	-16 04.9	289	43.8	-28 15.7	24	10 N	17 35	17 57	18 23	10 01 59	21 46 62				
12	4	05.2	-16 05.7	304	06.7	-28 13.1	26	0	17 47	18 09	18 34	9 38 62	22 08 60				
13	19	05.2	06.4	318	29.7	10.4	27	10 S	17 59	21	18 47	9 16 63	30 57				
14	34	05.2	07.1	332	52.6	07.4	30	20	18 12	35	19 02	8 51 65	22 53 55				
15	49	05.1	07.9	347	15.6	04.3	31	30	26	18 52	22	23 67	23 21 51				
16	64	05.1	08.6	1	38.7	-28 00.9	34	35	35	19 02	35	8 06 68	37 48				
17	79	05.1	-16 09.4	16	01.7	-27 57.4	35	40	18 45	19 14	19 51	7 46 70	23 55 46				
18	94	05.0	-16 10.1	30	24.8	-27 53.7	37	45	18 56	19 29	20 10	7 22 73	*** **				
19	109	05.0	10.9	44	47.9	49.8	39	50	19 10	48	36	6 52 75	*** **				
20	124	05.0	11.6	59	11.1	45.7	41	52	17	19 57	20 49	36 77	0 09 51				
21	139	04.9	12.3	73	34.3	41.5	42	54	24	20 07	21 05	6 19 78	27 49				
22	154	04.9	13.1	87	57.5	37.0	45	56	33	18	23	5 57 82	0 49 46				
23	169	04.9	13.8	102	20.8	32.4	46	58	42	32	21 47	5 30 86	1 16 42				
24	184	04.8	-16 14.6	116	44.2	-27 27.6	48	60 S	19 53	20 48	22 22	4 50 96	1 55 34				

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 20 ^h 55 ^m 3		Mag: -4.6 PMG: 15 ^h 02 ^m			Mag: -2.3 PMG: 23 ^h 46 ^m			Mag: -1.7 PMG: 10 ^h 59 ^m			Mag: +0.3 PMG: 5 ^h 52 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°
0	45	18.6	134	34.7	-27 05.1	2	07.8	+15 57.8	194	46.2	-11 19.0	271	39.2	+17 55.3
1	60	21.0	149	34.4	05.1	17	11.2	57.7	209	48.2	19.1	286	41.5	55.2
2	75	23.5	164	34.1	05.1	32	14.6	57.6	224	50.1	19.3	301	43.9	55.2
3	90	26.0	179	33.8	05.1	47	18.0	57.5	239	52.1	19.5	316	46.3	55.2
4	105	28.4	194	33.5	05.2	62	21.4	57.3	254	54.0	19.7	331	48.7	55.2
5	120	30.9	209	33.2	-27 05.2	77	24.8	+15 57.2	269	56.0	-11 19.9	346	51.1	+17 55.2
6	135	33.3	224	32.9	-27 05.2	92	28.2	+15 57.1	284	57.9	-11 20.1	1	53.5	+17 55.2
7	150	35.8	239	32.6	05.2	107	31.6	57.0	299	59.9	20.3	16	55.9	55.2
8	165	38.3	254	32.3	05.2	122	35.0	56.9	315	01.8	20.4	31	58.2	55.1
9	180	40.7	269	32.0	05.2	137	38.3	56.7	330	03.8	20.6	47	00.6	55.1
10	195	43.2	284	31.7	05.2	152	41.7	56.6	345	05.7	20.8	62	03.0	55.1
11	210	45.7	299	31.4	-27 05.2	167	45.1	+15 56.5	0	07.6	-11 21.0	77	05.4	+17 55.1
12	225	48.1	314	31.1	-27 05.3	182	48.5	+15 56.4	15	09.6	-11 21.2	92	07.8	+17 55.1
13	240	50.6	329	30.8	05.3	197	51.9	56.3	30	11.5	21.4	107	10.2	55.1
14	255	53.1	344	30.6	05.3	212	55.3	56.2	45	13.5	21.5	122	12.6	55.1
15	270	55.5	359	30.3	05.3	227	58.7	56.0	60	15.4	21.7	137	15.0	55.0
16	285	58.0	14	30.0	05.3	243	02.1	55.9	75	17.4	21.9	152	17.3	55.0
17	301	00.5	29	29.7	-27 05.3	258	05.5	+15 55.8	90	19.3	-11 22.1	167	19.7	+17 55.0
18	316	02.9	44	29.4	-27 05.3	273	08.9	+15 55.7	105	21.3	-11 22.3	182	22.1	+17 55.0
19	331	05.4	59	29.1	05.3	288	12.2	55.6	120	23.2	22.5	197	24.5	55.0
20	346	07.8	74	28.8	05.3	303	15.6	55.4	135	25.2	22.7	212	26.9	55.0
21	1	10.3	89	28.5	05.3	318	19.0	55.3	150	27.1	22.8	227	29.3	55.0
22	16	12.8	104	28.3	05.3	333	22.4	55.2	165	29.1	23.0	242	31.7	54.9
23	31	15.2	119	28.0	05.3	348	25.8	55.1	180	31.0	23.2	257	34.1	54.9
24	46	17.7	134	27.7	-27 05.3	3	29.2	+15 55.0	195	33.0	-11 23.4	272	36.5	+17 54.9

Dif	—	-3	0	+34	-1	+19	-2	+24	0

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16 ^h 1 PMG: 11 ^h 43 ^m 7			Edad: 4 ^d 9 SD: 16 ^h 0 PMG: 16 ^h 54 ^m	PHE { 4 ^h : 59 ^h 0 12 ^h : 59 ^h 0 20 ^h : 59 ^h 1 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	184	04.8	-16	14.6	116	44.2	-27	27.6	60 N	6 01	6 51	7 38	14 41	5	19 17	114
1	199	04.8		15.3	131	07.5	43	22.6	58	5 57	45	28	14 15	14	19 42	105
2	214	04.8		16.0	145	31.0	45	17.4	56	54	39	20	13 54	20	20 02	99
3	229	04.7		16.8	159	54.5	45	12.0	54	52	34	12	37 24		19 94	
4	244	04.7		17.5	174	18.0	45	06.4	52	49	29	06	22 28		33 90	
5	259	04.7	-16	18.3	188	41.6	46	-27	00.7	50	5 46	6 25	7 00	13 09	31	20 46 87
6	274	04.6	-16	19.0	203	05.3	47	-26	54.8	45	5 41	6 16	6 47	12 43	37	21 11 81
7	289	04.6		19.7	217	29.0	47	48.7	61	40	35	07	36	22 41		32 76
8	304	04.6		20.5	231	52.7	47	42.5	62	35	30	6 00	27	12 04	44	21 48 73
9	319	04.5		21.2	246	16.6	49	36.0	65	30	25	5 54	19	11 49	47	22 03 69
10	334	04.5		21.9	260	40.5	49	29.4	66	20	15	42	6 04	23 51		27 65
11	349	04.4	-16	22.7	275	04.5	50	-26	22.6	10 N	5 05	5 30	5 52	11 00	55	22 48 61
12	4	04.4	-16	23.4	289	28.5	50	-26	15.6	0	4 54	5 19	5 40	10 40	58	23 08 56
13	19	04.4		24.1	303	52.6	51	08.5	71	10 S	41	5 06	28	10 19	61	27 53
14	34	04.3		24.9	318	16.8	52	-26	01.2	20	25	4 52	16	9 56	65	23 48 48
15	49	04.3		25.6	332	41.0	52	-25	53.7	30	4 05	35	5 01	30 69		*** ** *
16	64	04.3		26.3	347	05.4	54	46.1	76	35	3 52	25	4 52	9 14	72	*** ** *
17	79	04.2	-16	27.1	1	29.8	54	-25	38.3	40	3 36	4 13	4 42	8 56	75	*** ** *
18	94	04.2	-16	27.8	15	54.2	54	-25	30.3	45	3 17	3 58	4 31	8 35	79	0 18 42
19	109	04.1		28.5	30	18.8	56	22.2	81	50	2 51	39	16	8 07	84	0 46 38
20	124	04.1		29.2	44	43.4	56	13.9	83	52	38	30	10	7 53	88	1 00 35
21	139	04.1		30.0	59	08.1	57	-25	05.4	54	22	20	4 02	37 92		16 32
22	154	04.0		30.7	73	32.9	58	-24	56.8	56	2 03	3 08	3 54	7 19	96	35 27
23	169	04.0		31.4	87	57.8	59	48.0	88	58	1 39	2 55	45	6 56	102	1 58 21
24	184	03.9	-16	32.2	102	22.8	60	-24	39.1	60 S	1 05	2 38	3 34	6 26	113	2 29 11

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 20 ^h 51 ^m 4		Mag: -4.6 PMG: 15 ^h 02 ^m		Mag: -2.3 PMG: 23 ^h 41 ^m		Mag: -1.7 PMG: 10 ^h 56 ^m		Mag: +0.3 PMG: 5 ^h 49 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	46	17.7	134	27.7	-27	05.3	3	29.2	+15	55.0	195	33.0	-11	23.4	272	36.5	+17	54.9
1	61	20.2	149	27.4		05.3	18	32.6		54.8	210	34.9		23.6	287	38.9		54.9
2	76	22.6	164	27.1		05.3	33	36.0		54.7	225	36.9		23.8	302	41.2		54.9
3	91	25.1	179	26.9		05.3	48	39.4		54.6	240	38.8		23.9	317	43.6		54.9
4	106	27.6	194	26.6		05.2	63	42.7		54.5	255	40.8		24.1	332	46.0		54.9
5	121	30.0	209	26.3	-27	05.2	78	46.1	+15	54.4	270	42.7	-11	24.3	347	48.4	+17	54.8
6	136	32.5	224	26.0	-27	05.2	93	49.5	+15	54.2	285	44.6	-11	24.5	2	50.8	+17	54.8
7	151	34.9	239	25.7		05.2	108	52.9		54.1	300	46.6		24.7	17	53.2		54.8
8	166	37.4	254	25.5		05.2	123	56.3		54.0	315	48.5		24.9	32	55.6		54.8
9	181	39.9	269	25.2		05.2	138	59.7		53.9	330	50.5		25.0	47	58.0		54.8
10	196	42.3	284	24.9		05.2	154	03.1		53.8	345	52.4		25.2	63	00.4		54.8
11	211	44.8	299	24.6	-27	05.2	169	06.4	+15	53.6	0	54.4	-11	25.4	78	02.8	+17	54.8
12	226	47.3	314	24.4	-27	05.1	184	09.8	+15	53.5	15	56.3	-11	25.6	93	05.2	+17	54.8
13	241	49.7	329	24.1		05.1	199	13.2		53.4	30	58.3		25.8	108	07.6		54.7
14	256	52.2	344	23.8		05.1	214	16.6		53.3	46	00.2		26.0	123	09.9		54.7
15	271	54.7	359	23.6		05.1	229	20.0		53.2	61	02.2		26.1	138	12.3		54.7
16	286	57.1	14	23.3		05.1	244	23.4		53.0	76	04.1		26.3	153	14.7		54.7
17	301	59.6	29	23.0	-27	05.0	259	26.7	+15	52.9	91	06.1	-11	26.5	168	17.1	+17	54.7
18	317	02.1	44	22.8	-27	05.0	274	30.1	+15	52.8	106	08.0	-11	26.7	183	19.5	+17	54.7
19	332	04.5	59	22.5		05.0	289	33.5		52.7	121	10.0		26.9	198	21.9		54.7
20	347	07.0	74	22.2		05.0	304	36.9		52.6	136	11.9		27.1	213	24.3		54.7
21	2	09.4	89	22.0		04.9	319	40.3		52.4	151	13.9		27.2	228	26.7		54.6
22	17	11.9	104	21.7		04.9	334	43.7		52.3	166	15.8		27.4	243	29.1		54.6
23	32	14.4	119	21.4		04.9	349	47.0		52.2	181	17.8		27.6	258	31.5		54.6
24	47	16.8	134	21.2	-27	04.9	4	50.4	+15	52.1	196	19.7	-11	27.8	273	33.9	+17	54.6
Dif	—		-3		0		+34		-1		+19		-2		+24		0	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna												
	SD: 16:1 PMG: 11 ^h 43 ^m 8			Edad: 5 ^d 9 PHE { SD: 16:1 PMG: 17 ^h 51 ^m 4 ^h : 59/1 12 ^h : 59/2 20 ^h : 59/2 R°: 54 ^m																							
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°												
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	m	h m	m	h m	m										
0	184	03.9	-16	32.2	102	22.8	-24	39.1	60 N	15 46	16 33	17 24	14 46	1	21 11	109											
1	199	03.9		32.9	116	47.8	60	30.0	58	15 56	40	27	29	7	27	103											
2	214	03.8		33.6	131	12.9	61	20.7	56	16 05	46	31	14	12	41	98											
3	229	03.8		34.3	145	38.1	62	11.3	54	12	51	34	14 01	17	21 53	94											
4	244	03.8		35.1	160	03.4	63	-24 01.7	52	19	16 56	36	13 50	20	22 03	90											
5	259	03.7	-16	35.8	174	28.8	64	-23 52.0	50	16 26	17 00	17 39	13 40	23	22 13	87											
6	274	03.7	-16	36.5	188	54.3	65	-23 42.2	45	16 39	17 10	17 45	13 20	28	22 32	81											
7	289	03.6		37.2	203	19.8	65	32.2	40	50	19	51	13 03	33	22 48	75											
8	304	03.6		38.0	217	45.5	67	22.0	35	16 59	26	17 56	12 48	37	23 01	72											
9	319	03.5		38.7	232	11.2	67	11.7	30	17 08	33	18 01	36	40	12	69											
10	334	03.5		39.4	246	37.1	69	-23 01.3	20	22	45	12	12 14	46	32	62											
11	349	03.5	-16	40.1	261	03.0	69	-22 50.7	10 N	17 35	17 57	18 22	11 55	51	23 49	57											
12	4	03.4	-16	40.9	275	29.0	70	-22 40.0	0	17 47	18 09	18 34	11 38	54	***	***	***										
13	19	03.4		41.6	289	55.1	71	29.1	10 S	18 00	22	18 47	20	59	***	***	***										
14	34	03.3		42.3	304	21.3	72	18.1	20	13	36	19 03	11 01	64	***	***	***										
15	49	03.3		43.0	318	47.5	72	-22 07.0	30	28	18 54	24	10 39	69	0 12	43											
16	64	03.2		43.7	333	13.9	74	-21 55.7	35	37	19 04	38	26	73	25	41											
17	79	03.2	-16	44.5	347	40.4	75	-21 44.3	40	18 47	19 17	19 54	10 11	77	0 41	37											
18	94	03.1	-16	45.2	2	06.9	75	-21 32.8	45	18 59	19 32	20 14	9 54	81	1 00	33											
19	109	03.1		45.9	16	33.6	77	21.1	50	19 14	19 52	41	31	88	24	26											
20	124	03.0		46.6	31	00.3	77	-21 09.3	52	21	20 01	20 54	21	90	35	24											
21	139	03.0		47.3	45	27.1	78	-20 57.4	54	28	11	21 11	9 09	94	1 48	20											
22	154	02.9		48.1	59	54.0	79	45.4	56	37	24	31	8 55	98	2 02	16											
23	169	02.9		48.8	74	21.0	80	33.2	58	47	38	21 57	38	104	19	11											
24	184	02.8	-16	49.5	88	48.1	81	-20 20.9	60 S	19 58	20 55	22 37	8 19	111	2 40	3											
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO														
	PMG: 20 ^h 47 ^m 5			Mag: -4.6 PMG: 15 ^h 03 ^m			Mag: -2.3 PMG: 23 ^h 35 ^m			Mag: -1.7 PMG: 10 ^h 53 ^m			Mag: +0.3 PMG: 5 ^h 45 ^m														
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec																
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'											
0	47	16.8	134	21.2	-27	04.9	4	50.4	+15	52.1	196	19.7	-11	27.8	273	33.9	+17	54.6									
1	62	19.3	149	20.9		04.8	19	53.8		52.0	211	21.7		28.0	288	36.3		54.6									
2	77	21.8	164	20.7		04.8	34	57.2		51.8	226	23.6		28.2	303	38.7		54.6									
3	92	24.2	179	20.4		04.8	50	00.6		51.7	241	25.5		28.3	318	41.1		54.6									
4	107	26.7	194	20.1		04.7	65	03.9		51.6	256	27.5		28.5	333	43.5		54.6									
5	122	29.2	209	19.9	-27	04.7	80	07.3	+15	51.5	271	29.4	-11	28.7	348	45.9	+17	54.5									
6	137	31.6	224	19.6	-27	04.7	95	10.7	+15	51.4	286	31.4	-11	28.9	3	48.3	+17	54.5									
7	152	34.1	239	19.4		04.6	110	14.1		51.2	301	33.3		29.1	18	50.7		54.5									
8	167	36.6	254	19.1		04.6	125	17.5		51.1	316	35.3		29.3	33	53.1		54.5									
9	182	39.0	269	18.9		04.5	140	20.8		51.0	331	37.2		29.4	48	55.5		54.5									
10	197	41.5	284	18.6		04.5	155	24.2		50.9	346	39.2		29.6	63	57.8		54.5									
11	212	43.9	299	18.4	-27	04.5	170	27.6	+15	50.8	1	41.1	-11	29.8	79	00.2	+17	54.5									
12	227	46.4	314	18.1	-27	04.4	185	31.0	+15	50.6	16	43.1	-11	30.0	94	02.6	+17	54.5									
13	242	48.9	329	17.9		04.4	200	34.3		50.5	31	45.0		30.2	109	05.0		54.4									
14	257	51.3	344	17.6		04.3	215	37.7		50.4	46	47.0		30.4	124	07.4		54.4									
15	272	53.8	359	17.4		04.3	230	41.1		50.3	61	48.9		30.5	139	09.8		54.4									
16	287	56.3	14	17.1		04.2	245	44.5		50.2	76	50.9		30.7	154	12.2		54.4									
17	302	58.7	29	16.9	-27	04.2	260	47.8	+15	50.0	91	52.8	-11	30.9	169	14.6	+17	54.4									
18	318	01.2	44	16.6	-27	04.1	275	51.2	+15	49.9	106	54.8	-11	31.1	184	17.0	+17	54.4									
19	333	03.7	59	16.4		04.1	290	54.6		49.8	121	56.7		31.3	199	19.4		54.4									
20	348	06.1	74	16.1		04.0	305	58.0		49.7	136	58.7		31.5	214	21.8		54.4									
21	3	08.6	89	15.9		04.0	321	01.3		49.6	152	00.6		31.6	229	24.2		54.4									
22	18	11.1	104	15.7		03.9	336	04.7		49.4	167	02.6		31.8	244	26.6		54.3									
23	33	13.5	119	15.4		03.9	351	08.1		49.3	182	04.5		32.0	259	29.0		54.3									
24	48	16.0	134	15.2	-27	03.8	6	11.5	+15	49.2	197	06.5	-11	32.2	274	31.4	+17	54.3									
Dif	—			-2			0			+34			-1			+19			-2			+24			0		

UT	SOL			 LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna	
	SD: 16 ^h 1			Edad: 6 ^d 9	PHE { 4 ^h : 59 ^m /2 12 ^h : 59 ^m /3 20 ^h : 59 ^m /3	SD: 16 ^h 1	PMG: 18 ^h 45 ^m	R°: 50 ^m						Hora	R°	Hora	R°
	hG ☉	Dec															
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	184	02.8	−16	49.5	88	48.1	−20	20.9	60 N	6 05	6 56	7 43	14 47	0	23 00	104	
1	199	02.8		50.2	103	15.3	82	−20	08.5 ¹²⁴	58	6 01	49	33	36	4	10 99	
2	214	02.7		50.9	117	42.6	83	−19	56.0 ¹²⁵	56	5 58	43	24	26	9	19 95	
3	229	02.7		51.6	132	10.0	84		43.4 ¹²⁶	54	55	38	16	18	11	27 91	
4	244	02.6		52.3	146	37.4	84		30.6 ¹²⁸	52	52	33	09	10	15	33 88	
5	259	02.6	−16	53.1	161	05.0	86	−19	17.7 ¹²⁹	50	5 49	6 28	7 03	14 03	18	23 40 84	
6	274	02.5	−16	53.8	175	32.6	86	−19	04.8 ¹²⁹	45	5 43	6 18	6 49	13 48	23	23 53 78	
7	289	02.5		54.5	190	00.3	87	−18	51.7 ¹³¹	40	37	10	38	36	28	** ** *	
8	304	02.4		55.2	204	28.1	88		38.5 ¹³²	35	32	6 02	29	25	32	** ** *	
9	319	02.4		55.9	218	56.0	89		25.2 ¹³³	30	26	5 55	20	16	35	** ** *	
10	334	02.3		56.6	233	24.0	90	−18	11.8 ¹³⁴	20	16	43	6 05	13 00	41	** ** *	
11	349	02.2	−16	57.3	247	52.1	91	−17	58.3 ¹³⁵	10 N	5 05	5 31	5 53	12 46	46	** ** *	
12	4	02.2	−16	58.0	262	20.2	91	−17	44.7 ¹³⁶	0	4 54	5 19	5 40	12 32	51	0 04 53	
13	19	02.1		58.8	276	48.5	93		30.9 ¹³⁸	10 S	40	5 06	28	19	56	20 48	
14	34	02.1	−16	59.5	291	16.8	93		17.1 ¹³⁸	20	24	4 51	5 15	12 05	61	36 43	
15	49	02.0	−17	00.2	305	45.2	94	−17	03.2 ¹³⁹	30	4 03	34	4 59	11 48	67	0 55 38	
16	64	02.0		00.9	320	13.7	95	−16	49.2 ¹⁴⁰	35	3 50	23	50	39	70	1 06 34	
17	79	01.9	−17	01.6	334	42.3	96	−16	35.1 ¹⁴¹	40	3 34	4 10	4 40	11 28	74	1 18 31	
18	94	01.9	−17	02.3	349	10.9	96	−16	20.9 ¹⁴²	45	3 13	3 55	4 28	11 15	79	1 33 25	
19	109	01.8		03.0	3	39.6	97	−16	06.7 ¹⁴²	50	2 46	35	13	10 59	85	50 20	
20	124	01.7		03.7	18	08.5	99	−15	52.3 ¹⁴⁴	52	33	26	4 06	51	89	1 59 17	
21	139	01.7		04.4	32	37.3	98		37.8 ¹⁴⁵	54	2 16	15	3 59	43	92	2 08 14	
22	154	01.6		05.1	47	06.3	100		23.3 ¹⁴⁵	56	1 56	3 03	50	33	96	18 10	
23	169	01.6		05.8	61	35.4 ¹⁰¹		−15	08.7 ¹⁴⁶	58	1 30	2 49	40	22	101	30 6	
24	184	01.5	−17	06.5	76	04.5 ¹⁰¹		−14	54.0 ¹⁴⁷	60 S	0 50	2 32	3 29	10 10	106	2 43 1	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 20 ^h 43 ^m 5		Mag: −4.6 PMG: 15 ^h 03 ^m			Mag: −2.3 PMG: 23 ^h 30 ^m			Mag: −1.7 PMG: 10 ^h 50 ^m			Mag: +0.3 PMG: 5 ^h 41 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	48	16.0	134	15.2	−27	03.8	6	11.5	+15	49.2	197	06.5	−11	32.2	274	31.4	+17	54.3
1	63	18.4	149	14.9		03.8	21	14.8		49.1	212	08.4		32.4	289	33.8		54.3
2	78	20.9	164	14.7		03.7	36	18.2		49.0	227	10.4		32.6	304	36.2		54.3
3	93	23.4	179	14.5		03.7	51	21.6		48.8	242	12.3		32.7	319	38.6		54.3
4	108	25.8	194	14.2		03.6	66	24.9		48.7	257	14.3		32.9	334	41.0		54.3
5	123	28.3	209	14.0	−27	03.6	81	28.3	+15	48.6	272	16.2	−11	33.1	349	43.4	+17	54.3
6	138	30.8	224	13.8	−27	03.5	96	31.7	+15	48.5	287	18.2	−11	33.3	4	45.8	+17	54.3
7	153	33.2	239	13.5		03.4	111	35.0		48.4	302	20.1		33.5	19	48.2		54.2
8	168	35.7	254	13.3		03.4	126	38.4		48.3	317	22.0		33.7	34	50.6		54.2
9	183	38.2	269	13.1		03.3	141	41.8		48.1	332	24.0		33.8	49	53.0		54.2
10	198	40.6	284	12.8		03.2	156	45.2		48.0	347	25.9		34.0	64	55.4		54.2
11	213	43.1	299	12.6	−27	03.2	171	48.5	+15	47.9	2	27.9	−11	34.2	79	57.8	+17	54.2
12	228	45.5	314	12.4	−27	03.1	186	51.9	+15	47.8	17	29.8	−11	34.4	95	00.2	+17	54.2
13	243	48.0	329	12.2		03.0	201	55.3		47.7	32	31.8		34.6	110	02.6		54.2
14	258	50.5	344	11.9		03.0	216	58.6		47.5	47	33.7		34.7	125	05.0		54.2
15	273	52.9	359	11.7		02.9	232	02.0		47.4	62	35.7		34.9	140	07.4		54.2
16	288	55.4	14	11.5		02.8	247	05.3		47.3	77	37.6		35.1	155	09.8		54.2
17	303	57.9	29	11.3	−27	02.8	262	08.7	+15	47.2	92	39.6	−11	35.3	170	12.2	+17	54.1
18	319	00.3	44	11.0	−27	02.7	277	12.1	+15	47.1	107	41.5	−11	35.5	185	14.6	+17	54.1
19	334	02.8	59	10.8		02.6	292	15.4		46.9	122	43.5		35.7	200	17.0		54.1
20	349	05.3	74	10.6		02.5	307	18.8		46.8	137	45.4		35.8	215	19.5		54.1
21	4	07.7	89	10.4		02.5	322	22.2		46.7	152	47.4		36.0	230	21.9		54.1
22	19	10.2	104	10.2		02.4	337	25.5		46.6	167	49.3		36.2	245	24.3		54.1
23	34	12.7	119	09.9		02.3	352	28.9		46.5	182	51.3		36.4	260	26.7		54.1
24	49	15.1	134	09.7	−27	02.2	7	32.3	+15	46.4	197	53.2	−11	36.6	275	29.1	+17	54.1
Dif	—		−2		+1		+34		−1		+19		−2		+24		0	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 11 ^h 43 ^m 9			Edad: 7 ^d 9 PHE { 4 ^h : 59/3 12 ^h : 59/3 20 ^h : 59/2 R°: 48 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	184	01.5	-17 06.5	76	04.5	-14 54.0		60 N	15 42	16 29	17 20	14 47 **	** ** *	** ** *	
1	199	01.5	07.2	90	33.7 ¹⁰²	39.2 ¹⁴⁸		58	15 52	36	24	40 3	** ** *	** ** *	
2	214	01.4	07.9	105	02.9 ¹⁰²	24.3 ¹⁴⁹		56	16 01	42	27	35 6	** ** *	** ** *	
3	229	01.3	08.6	119	32.3 ¹⁰⁴	-14 09.4 ¹⁴⁹		54	09	48	31	29 10	** ** *	** ** *	
4	244	01.3	09.3	134	01.7 ¹⁰⁴	-13 54.4 ¹⁵⁰		52	16	53	34	25 12	** ** *	** ** *	
5	259	01.2	-17 10.0	148	31.2 ¹⁰⁵	-13 39.3 ¹⁵¹		50	16 23	16 58	17 36	14 21 14	** ** *	** ** *	
6	274	01.2	-17 10.7	163	00.7 ¹⁰⁵	-13 24.1 ¹⁵²		45	16 37	17 08	17 43	14 11 21	** ** *	** ** *	
7	289	01.1	11.4	177	30.4 ¹⁰⁷	-13 08.9 ¹⁵²		40	48	17	49	14 04 24	0 03 74		
8	304	01.0	12.1	192	00.0 ¹⁰⁶	-12 53.6 ¹⁵³		35	16 58	25	17 55	13 57 29	13 69		
9	319	01.0	12.8	206	29.8 ¹⁰⁸	38.2 ¹⁵⁴		30	17 07	32	18 00	51 32	21 66		
10	334	00.9	13.5	220	59.6 ¹⁰⁸	22.7 ¹⁵⁵		20	22	45	11	41 38	34 60		
11	349	00.8	-17 14.2	235	29.5 ¹⁰⁹	-12 07.2 ¹⁵⁵		10 N	17 35	17 57	18 22	13 32 43	0 46 55		
12	4	00.8	-17 14.9	249	59.5 ¹¹⁰	-11 51.7 ¹⁵⁵		0	17 47	18 09	18 34	13 23 49	0 57 50		
13	19	00.7	15.6	264	29.5 ¹¹⁰	36.0 ¹⁵⁷		10 S	18 00	22	18 48	15 53	1 08 45		
14	34	00.6	16.3	278	59.6 ¹¹¹	20.4 ¹⁵⁶		20	14	37	19 05	13 06 59	19 40		
15	49	00.6	17.0	293	29.7 ¹¹¹	-11 04.6 ¹⁵⁸		30	30	18 55	26	12 55 65	33 33		
16	64	00.5	17.7	307	59.9 ¹¹²	-10 48.8 ¹⁵⁸		35	39	19 06	40	49 69	40 30		
17	79	00.5	-17 18.4	322	30.1 ¹¹²	-10 32.9 ¹⁵⁹		40	18 49	19 20	19 56	12 42 73	1 49 26		
18	94	00.4	-17 19.1	337	00.4 ¹¹³	-10 17.0 ¹⁵⁹		45	19 02	19 35	20 17	12 34 78	1 58 22		
19	109	00.3	19.8	351	30.8 ¹¹⁴	-10 01.1 ¹⁵⁹		50	17	19 55	20 45	24 84	2 10 16		
20	124	00.3	20.5	6	01.2 ¹¹⁴	-9 45.0 ¹⁶¹		52	24	20 05	21 00	20 86	16 13		
21	139	00.2	21.2	20	31.7 ¹¹⁵	29.0 ¹⁶⁰		54	32	16	17	15 89	22 10		
22	154	00.1	21.9	35	02.2 ¹¹⁵	-9 12.9 ¹⁶¹		56	41	29	21 38	09 93	28 8		
23	169	00.1	22.6	49	32.8 ¹¹⁶	-8 56.7 ¹⁶²		58	19 52	20 44	22 07	12 03 97	36 3		
24	184	00.0	-17 23.3	64	03.4 ¹¹⁶	-8 40.5 ¹⁶²		60 S	20 03	21 02	22 55	11 56 101	2 44 0		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 20 ^h 39 ^m 6			Mag: -4.6 PMG: 15 ^h 04 ^m			Mag: -2.3 PMG: 23 ^h 25 ^m			Mag: -1.7 PMG: 10 ^h 47 ^m			Mag: +0.3 PMG: 5 ^h 37 ^m		
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	'	°	°	'	°	°	'	°	
0	49	15.1	134 09.7	-27 02.2		7 32.3	+15 46.4		197 53.2	-11 36.6		275 29.1	+17 54.1		
1	64	17.6	149 09.5	02.2		22 35.6	46.2		212 55.2	36.7		290 31.5	54.1		
2	79	20.0	164 09.3	02.1		37 39.0	46.1		227 57.1	36.9		305 33.9	54.1		
3	94	22.5	179 09.1	02.0		52 42.3	46.0		242 59.1	37.1		320 36.3	54.0		
4	109	25.0	194 08.9	01.9		67 45.7	45.9		258 01.0	37.3		335 38.7	54.0		
5	124	27.4	209 08.7	-27 01.8		82 49.0	+15 45.8		273 03.0	-11 37.5		350 41.1	+17 54.0		
6	139	29.9	224 08.5	-27 01.7		97 52.4	+15 45.6		288 04.9	-11 37.7		5 43.5	+17 54.0		
7	154	32.4	239 08.2	01.7		112 55.8	45.5		303 06.9	37.8		20 45.9	54.0		
8	169	34.8	254 08.0	01.6		127 59.1	45.4		318 08.8	38.0		35 48.3	54.0		
9	184	37.3	269 07.8	01.5		143 02.5	45.3		333 10.8	38.2		50 50.7	54.0		
10	199	39.8	284 07.6	01.4		158 05.8	45.2		348 12.7	38.4		65 53.1	54.0		
11	214	42.2	299 07.4	-27 01.3		173 09.2	+15 45.1		3 14.7	-11 38.6		80 55.5	+17 54.0		
12	229	44.7	314 07.2	-27 01.2		188 12.5	+15 44.9		18 16.6	-11 38.7		95 57.9	+17 54.0		
13	244	47.2	329 07.0	01.1		203 15.9	44.8		33 18.6	38.9		111 00.3	54.0		
14	259	49.6	344 06.8	01.0		218 19.3	44.7		48 20.5	39.1		126 02.7	53.9		
15	274	52.1	359 06.6	00.9		233 22.6	44.6		63 22.5	39.3		141 05.2	53.9		
16	289	54.5	14 06.4	00.8		248 26.0	44.5		78 24.4	39.5		156 07.6	53.9		
17	304	57.0	29 06.2	-27 00.8		263 29.3	+15 44.3		93 26.4	-11 39.6		171 10.0	+17 53.9		
18	319	59.5	44 06.0	-27 00.7		278 32.7	+15 44.2		108 28.3	-11 39.8		186 12.4	+17 53.9		
19	335	01.9	59 05.8	00.6		293 36.0	44.1		123 30.3	40.0		201 14.8	53.9		
20	350	04.4	74 05.6	00.5		308 39.4	44.0		138 32.2	40.2		216 17.2	53.9		
21	5	06.9	89 05.4	00.4		323 42.7	43.9		153 34.2	40.4		231 19.6	53.9		
22	20	09.3	104 05.2	00.3		338 46.1	43.8		168 36.1	40.6		246 22.0	53.9		
23	35	11.8	119 05.1	00.2		353 49.4	43.6		183 38.1	40.7		261 24.4	53.9		
24	50	14.3	134 04.9	-27 00.1		8 52.8	+15 43.5		198 40.0	-11 40.9		276 26.8	+17 53.9		
Dif	—			-2 +1			+34 -1			+19 -2			+24 0		

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16:2 PMG: 11 ^h 44 ^m 1			Edad: 8 ^d 9 PHE { SD: 16:1 PMG: 20 ^h 23 ^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	00.0	-17 23.3	64	03.4	-8 40.5	60 N	6 09	7 00	7 48	14 46	**	0 44	100			
1	198	59.9	24.0	78	34.1 ¹¹⁷	24.3 ¹⁶²	58	05	6 53	37	43	3	49	96			
2	213	59.9	24.6	93	04.8 ¹¹⁷	-8 08.0 ¹⁶³	56	6 02	47	28	41	6	54	92			
3	228	59.8	25.3	107	35.5 ¹¹⁷	-7 51.7 ¹⁶³	54	5 58	41	20	39	9	0 58	88			
4	243	59.7	26.0	122	06.3 ¹¹⁸	35.3 ¹⁶⁴	52	55	36	13	37	11	1 01	86			
5	258	59.6	-17 26.7	136	37.2 ¹¹⁹	-7 18.9 ¹⁶⁴	50	5 52	6 31	7 06	14 35	14	1 04	83			
6	273	59.6	-17 27.4	151	08.1 ¹¹⁹	-7 02.5 ¹⁶⁴	45	5 45	6 21	6 52	14 32	19	1 11	78			
7	288	59.5	28.1	165	39.0 ¹¹⁹	-6 46.0 ¹⁶⁵	40	39	12	41	28	24	17	72			
8	303	59.4	28.8	180	10.0 ¹²⁰	29.5 ¹⁶⁵	35	33	6 04	31	26	27	22	68			
9	318	59.4	29.5	194	41.0 ¹²⁰	-6 12.9 ¹⁶⁶	30	28	5 57	22	23	31	27	64			
10	333	59.3	30.2	209	12.0 ¹²⁰	-5 56.4 ¹⁶⁵	20	17	44	6 07	19	37	34	58			
11	348	59.2	-17 30.8	223	43.1 ¹²¹	-5 39.8 ¹⁶⁶	10 N	5 06	5 31	5 53	14 15	43	1 41	52			
12	3	59.2	-17 31.5	238	14.2 ¹²¹	-5 23.2 ¹⁶⁶	0	4 54	5 19	5 41	14 12	47	1 47	47			
13	18	59.1	32.2	252	45.3 ¹²¹	-5 06.5 ¹⁶⁷	10 S	40	5 06	28	08	53	53	42			
14	33	59.0	32.9	267	16.5 ¹²²	-4 49.9 ¹⁶⁶	20	23	4 51	5 14	05	57	1 59	37			
15	48	58.9	33.6	281	47.7 ¹²²	33.2 ¹⁶⁷	30	4 01	32	4 58	14 00	64	2 06	31			
16	63	58.9	34.3	296	18.9 ¹²²	-4 16.5 ¹⁶⁷	35	3 48	21	49	13 58	68	10	28			
17	78	58.8	-17 34.9	310	50.2 ¹²³	-3 59.8 ¹⁶⁷	40	3 31	4 08	4 38	13 55	72	2 15	24			
18	93	58.7	-17 35.6	325	21.5 ¹²³	-3 43.0 ¹⁶⁸	45	3 10	3 52	4 26	13 52	76	2 20	19			
19	108	58.6	36.3	339	52.8 ¹²³	26.3 ¹⁶⁷	50	2 42	32	10	48	82	26	14			
20	123	58.6	37.0	354	24.1 ¹²³	-3 09.5 ¹⁶⁸	52	28	22	4 03	46	85	29	12			
21	138	58.5	37.7	8	55.4 ¹²³	-2 52.7 ¹⁶⁸	54	2 11	3 11	3 55	44	88	32	9			
22	153	58.4	38.4	23	26.8 ¹²⁴	35.9 ¹⁶⁸	56	1 49	2 58	46	42	91	36	6			
23	168	58.3	39.0	37	58.2 ¹²⁴	19.1 ¹⁶⁸	58	1 20	43	36	40	94	39	3			
24	183	58.3	-17 39.7	52	29.6 ¹²⁴	-2 02.3 ¹⁶⁸	60 S	0 32	2 25	3 24	13 37	99	2 44	**			
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 20 ^h 35 ^m 7			Mag: -4.6 PMG: 15 ^h 04 ^m			Mag: -2.2 PMG: 23 ^h 19 ^m			Mag: -1.7 PMG: 10 ^h 44 ^m			Mag: +0.3 PMG: 5 ^h 33 ^m				
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	50	14.3	134 04.9	-27 00.1	8 52.8	+15 43.5	198	40.0	-11 40.9	276	26.8	+17 53.9	276	26.8	+17 53.9		
1	65	16.7	149 04.7	-27 00.0	23 56.1	43.4	213	42.0	41.1	291	29.2	53.8	291	29.2	53.8		
2	80	19.2	164 04.5	-26 59.8	38 59.5	43.3	228	43.9	41.3	306	31.6	53.8	306	31.6	53.8		
3	95	21.6	179 04.3	59.7	54 02.8	43.2	243	45.9	41.5	321	34.1	53.8	321	34.1	53.8		
4	110	24.1	194 04.1	59.6	69 06.1	43.1	258	47.8	41.6	336	36.5	53.8	336	36.5	53.8		
5	125	26.6	209 03.9	-26 59.5	84 09.5	+15 42.9	273	49.8	-11 41.8	351	38.9	+17 53.8	351	38.9	+17 53.8		
6	140	29.0	224 03.7	-26 59.4	99 12.8	+15 42.8	288	51.7	-11 42.0	6	41.3	+17 53.8	6	41.3	+17 53.8		
7	155	31.5	239 03.6	59.3	114 16.2	42.7	303	53.7	42.2	21	43.7	53.8	21	43.7	53.8		
8	170	34.0	254 03.4	59.2	129 19.5	42.6	318	55.6	42.4	36	46.1	53.8	36	46.1	53.8		
9	185	36.4	269 03.2	59.1	144 22.9	42.5	333	57.6	42.5	51	48.5	53.8	51	48.5	53.8		
10	200	38.9	284 03.0	59.0	159 26.2	42.4	348	59.5	42.7	66	50.9	53.8	66	50.9	53.8		
11	215	41.4	299 02.8	-26 58.9	174 29.5	+15 42.2	4	01.5	-11 42.9	81	53.3	+17 53.8	81	53.3	+17 53.8		
12	230	43.8	314 02.7	-26 58.8	189 32.9	+15 42.1	19	03.4	-11 43.1	96	55.7	+17 53.8	96	55.7	+17 53.8		
13	245	46.3	329 02.5	58.6	204 36.2	42.0	34	05.4	43.3	111	58.2	53.7	111	58.2	53.7		
14	260	48.8	344 02.3	58.5	219 39.6	41.9	49	07.3	43.4	127	00.6	53.7	127	00.6	53.7		
15	275	51.2	359 02.1	58.4	234 42.9	41.8	64	09.3	43.6	142	03.0	53.7	142	03.0	53.7		
16	290	53.7	14 02.0	58.3	249 46.2	41.7	79	11.2	43.8	157	05.4	53.7	157	05.4	53.7		
17	305	56.1	29 01.8	-26 58.2	264 49.6	+15 41.5	94	13.2	-11 44.0	172	07.8	+17 53.7	172	07.8	+17 53.7		
18	320	58.6	44 01.6	-26 58.0	279 52.9	+15 41.4	109	15.1	-11 44.2	187	10.2	+17 53.7	187	10.2	+17 53.7		
19	336	01.1	59 01.5	57.9	294 56.3	41.3	124	17.1	44.3	202	12.6	53.7	202	12.6	53.7		
20	351	03.5	74 01.3	57.8	309 59.6	41.2	139	19.0	44.5	217	15.0	53.7	217	15.0	53.7		
21	6	06.0	89 01.1	57.7	325 02.9	41.1	154	21.0	44.7	232	17.5	53.7	232	17.5	53.7		
22	21	08.5	104 00.9	57.6	340 06.3	41.0	169	22.9	44.9	247	19.9	53.7	247	19.9	53.7		
23	36	10.9	119 00.8	57.4	355 09.6	40.9	184	24.9	45.1	262	22.3	53.7	262	22.3	53.7		
24	51	13.4	134 00.6	-26 57.3	10 12.9	+15 40.7	199	26.8	-11 45.2	277	24.7	+17 53.7	277	24.7	+17 53.7		
Dif	—		-2	+1	+33	-1	+20		-2	+24		0					

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16:2 PMG: 11 ^h 44 ^m 2			Edad: 9 ^d 9 PHE { SD: 16:1 PMG: 21 ^h 10 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	m	m	h m	m		
0	183	58.3	-17	39.7	52	29.6	-2	02.3	60 N	15 37	16 25	17 16	14 45	**	2 24	98		
1	198	58.2		40.4	67	01.0 ¹²⁴	-1	45.5 ¹⁶⁸	58	48	32	20	46	3	25	94		
2	213	58.1		41.1	81	32.5 ¹²⁵		28.7 ¹⁶⁸	56	15 57	39	24	47	6	26	90		
3	228	58.0		41.7	96	03.9 ¹²⁴	-1	11.8 ¹⁶⁹	54	16 06	45	28	48	9	26	88		
4	243	58.0		42.4	110	35.4 ¹²⁵	-0	55.0 ¹⁶⁸	52	13	50	31	48	12	27	85		
5	258	57.9	-17	43.1	125	06.9 ¹²⁵	-0	38.2 ¹⁶⁸	50	16 20	16 55	17 34	14 49	14	2 27	82		
6	273	57.8	-17	43.8	139	38.4 ¹²⁵	-0	21.4 ¹⁶⁸	45	16 34	17 06	17 41	14 51	19	2 29	76		
7	288	57.7		44.4	154	09.9 ¹²⁵	-0	04.5 ¹⁶⁹	40	46	15	48	52	24	29	72		
8	303	57.6		45.1	168	41.4 ¹²⁵	+0	12.3 ¹⁶⁸	35	16 56	23	54	53	28	30	68		
9	318	57.6		45.8	183	12.9 ¹²⁵		29.1 ¹⁶⁸	30	17 05	31	17 59	54	31	31	64		
10	333	57.5		46.5	197	44.4 ¹²⁵	+0	45.9 ¹⁶⁸	20	21	44	18 11	56	37	32	58		
11	348	57.4	-17	47.1	212	15.9 ¹²⁵	+1	02.7 ¹⁶⁸	10 N	17 35	17 57	18 22	14 58	42	2 33	53		
12	3	57.3	-17	47.8	226	47.4 ¹²⁵	+1	19.5 ¹⁶⁸	0	17 48	18 09	18 35	14 59	47	2 34	47		
13	18	57.2		48.5	241	18.9 ¹²⁵		36.3 ¹⁶⁸	10 S	18 01	23	18 49	15 01	52	35	42		
14	33	57.2		49.2	255	50.5 ¹²⁶	+1	53.1 ¹⁶⁸	20	15	38	19 06	02	58	36	37		
15	48	57.1		49.8	270	22.0 ¹²⁵	+2	09.8 ¹⁶⁷	30	31	18 57	28	04	64	37	31		
16	63	57.0		50.5	284	53.5 ¹²⁵		26.6 ¹⁶⁸	35	41	19 09	42	06	67	38	27		
17	78	56.9	-17	51.2	299	25.0 ¹²⁵	+2	43.3 ¹⁶⁷	40	18 52	19 22	19 59	15 07	71	2 39	23		
18	93	56.8	-17	51.8	313	56.5 ¹²⁵	+3	00.0 ¹⁶⁷	45	19 05	19 38	20 21	15 08	77	2 39	19		
19	108	56.7		52.5	328	28.0 ¹²⁵	+3	16.7 ¹⁶⁷	50	21	19 59	20 50	10	82	40	14		
20	123	56.7		53.2	342	59.5 ¹²⁵		33.4 ¹⁶⁷	52	28	20 09	21 05	11	85	41	11		
21	138	56.6		53.8	357	31.0 ¹²⁵	+3	50.0 ¹⁶⁶	54	36	21	23	12	88	41	9		
22	153	56.5		54.5	12	02.5 ¹²⁵	+4	06.6 ¹⁶⁶	56	46	34	21 46	13	91	42	5		
23	168	56.4		55.2	26	33.9 ¹²⁴		23.2 ¹⁶⁶	58	19 56	20 50	22 18	14	95	42	3		
24	183	56.3	-17	55.8	41	05.4 ¹²⁵	+4	39.8 ¹⁶⁶	60 S	20 09	21 09	** **	15 16	99	2 43	**		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 20 ^h 31 ^m 7		Mag: -4.6 PMG: 15 ^h 04 ^m			Mag: -2.2 PMG: 23 ^h 14 ^m			Mag: -1.7 PMG: 10 ^h 41 ^m			Mag: +0.3 PMG: 5 ^h 29 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	51	13.4	134	00.6	-26	57.3	10	12.9	+15	40.7	199	26.8	-11	45.2	277	24.7	+17	53.7
1	66	15.9	149	00.5		57.2	25	16.3		40.6	214	28.8		45.4	292	27.1		53.7
2	81	18.3	164	00.3		57.0	40	19.6		40.5	229	30.7		45.6	307	29.5		53.7
3	96	20.8	179	00.1		56.9	55	22.9		40.4	244	32.7		45.8	322	31.9		53.6
4	111	23.3	194	00.0		56.8	70	26.2		40.3	259	34.6		46.0	337	34.3		53.6
5	126	25.7	208	59.8	-26	56.7	85	29.6	+15	40.2	274	36.6	-11	46.1	352	36.8	+17	53.6
6	141	28.2	223	59.7	-26	56.5	100	32.9	+15	40.1	289	38.5	-11	46.3	7	39.2	+17	53.6
7	156	30.6	238	59.5		56.4	115	36.2		39.9	304	40.5		46.5	22	41.6		53.6
8	171	33.1	253	59.3		56.3	130	39.6		39.8	319	42.4		46.7	37	44.0		53.6
9	186	35.6	268	59.2		56.1	145	42.9		39.7	334	44.4		46.9	52	46.4		53.6
10	201	38.0	283	59.0		56.0	160	46.2		39.6	349	46.3		47.0	67	48.8		53.6
11	216	40.5	298	58.9	-26	55.9	175	49.5	+15	39.5	4	48.3	-11	47.2	82	51.3	+17	53.6
12	231	43.0	313	58.7	-26	55.7	190	52.9	+15	39.4	19	50.2	-11	47.4	97	53.7	+17	53.6
13	246	45.4	328	58.6		55.6	205	56.2		39.3	34	52.2		47.6	112	56.1		53.6
14	261	47.9	343	58.4		55.4	220	59.5		39.1	49	54.1		47.8	127	58.5		53.6
15	276	50.4	358	58.3		55.3	236	02.8		39.0	64	56.1		47.9	143	00.9		53.6
16	291	52.8	13	58.1		55.2	251	06.2		38.9	79	58.0		48.1	158	03.3		53.6
17	306	55.3	28	58.0	-26	55.0	266	09.5	+15	38.8	95	00.0	-11	48.3	173	05.7	+17	53.6
18	321	57.7	43	57.9	-26	54.9	281	12.8	+15	38.7	110	01.9	-11	48.5	188	08.2	+17	53.5
19	337	00.2	58	57.7		54.7	296	16.1		38.6	125	03.9		48.7	203	10.6		53.5
20	352	02.7	73	57.6		54.6	311	19.4		38.5	140	05.8		48.8	218	13.0		53.5
21	7	05.1	88	57.4		54.4	326	22.8		38.3	155	07.8		49.0	233	15.4		53.5
22	22	07.6	103	57.3		54.3	341	26.1		38.2	170	09.7		49.2	248	17.8		53.5
23	37	10.1	118	57.2		54.1	356	29.4		38.1	185	11.7		49.4	263	20.3		53.5
24	52	12.5	133	57.0	-26	54.0	11	32.7	+15	38.0	200	13.6	-11	49.6	278	22.7	+17	53.5
Dif	—		-1 +1			+33 -1			+20 -2			+24 0			0			

UT	SOL			O LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16'2 PMG: 11 ^h 44 ^m 3			Edad: 10 ^d 9 PHE { 4 ^h : 58'8 12 ^h : 58'7 20 ^h : 58'6 Rº: 49 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	Rº	Hora	Rº			
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m		
0	183	56.3	-17	55.8	41	05.4	+4	39.8	60 N	6 13	7 05	7 53	14 44	**	4 02	100		
1	198	56.2		56.5	55	36.8 ¹²⁴	+4	56.3 ¹⁶⁵	58	09	6 57	42	49	3	3 59	96		
2	213	56.2		57.2	70	08.2 ¹²⁴	+5	12.8 ¹⁶⁵	56	05	51	32	53	7	56	92		
3	228	56.1		57.8	84	39.6 ¹²⁴		29.3 ¹⁶⁵	54	6 02	45	24	14 57	10	54	88		
4	243	56.0		58.5	99	11.0 ¹²⁴	+5	45.7 ¹⁶⁴	52	5 58	39	16	15 00	13	52	85		
5	258	55.9	-17	59.2	113	42.4 ¹²⁴	+6	02.1 ¹⁶⁴	50	5 55	6 34	7 10	15 03	16	3 49	83		
6	273	55.8	-17	59.8	128	13.8 ¹²⁴	+6	18.5 ¹⁶⁴	45	5 48	6 23	6 55	15 10	21	3 45	76		
7	288	55.7	-18	00.5	142	45.1 ¹²³		34.8 ¹⁶³	40	41	14	43	16	26	41	72		
8	303	55.6		01.2	157	16.4 ¹²³	+6	51.1 ¹⁶³	35	35	6 06	33	21	29	38	67		
9	318	55.5		01.8	171	47.7 ¹²³	+7	07.4 ¹⁶³	30	29	5 58	23	25	33	35	64		
10	333	55.5		02.5	186	18.9 ¹²²		23.6 ¹⁶²	20	18	45	6 08	33	39	30	58		
11	348	55.4	-18	03.1	200	50.2 ¹²³	+7	39.8 ¹⁶²	10 N	5 06	5 32	5 54	15 40	44	3 26	52		
12	3	55.3	-18	03.8	215	21.4 ¹²²	+7	55.9 ¹⁶¹	0	4 54	5 19	5 41	15 46	49	3 21	48		
13	18	55.2		04.5	229	52.6 ¹²²	+8	12.0 ¹⁶¹	10 S	39	5 05	28	15 53	53	17	43		
14	33	55.1		05.1	244	23.7 ¹²¹		28.0 ¹⁶⁰	20	22	4 50	5 13	16 00	59	13	38		
15	48	55.0		05.8	258	54.8 ¹²¹		44.0 ¹⁶⁰	30	4 00	31	4 57	08	65	08	32		
16	63	54.9		06.4	273	25.9 ¹²¹	+8	59.9 ¹⁵⁹	35	3 46	20	47	13	68	05	29		
17	78	54.8	-18	07.1	287	57.0 ¹²¹	+9	15.8 ¹⁵⁹	40	3 29	4 06	4 36	16 18	73	3 02	25		
18	93	54.7	-18	07.7	302	28.0 ¹²⁰	+9	31.6 ¹⁵⁸	45	3 07	3 50	4 23	16 25	77	2 58	21		
19	108	54.6		08.4	316	59.0 ¹²⁰	+9	47.4 ¹⁵⁸	50	2 38	29	07	32	83	54	15		
20	123	54.6		09.1	331	30.0 ¹²⁰	+10	03.1 ¹⁵⁷	52	23	19	4 00	36	86	52	12		
21	138	54.5		09.7	346	00.9 ¹¹⁹		18.8 ¹⁵⁷	54	2 05	3 07	3 51	40	89	50	9		
22	153	54.4		10.4	0	31.8 ¹¹⁹		34.4 ¹⁵⁶	56	1 42	2 54	42	44	93	47	7		
23	168	54.3		11.0	15	02.6 ¹¹⁸	+10	49.9 ¹⁵⁵	58	1 10	38	31	49	97	45	3		
24	183	54.2	-18	11.7	29	33.4 ¹¹⁸	+11	05.4 ¹⁵⁵	60 S	** **	2 19	3 19	16 55	101	2 42	**		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 20 ^h 27 ^m 8		Mag: -4.7 PMG: 15 ^h 04 ^m			Mag: -2.2 PMG: 23 ^h 09 ^m			Mag: -1.7 PMG: 10 ^h 38 ^m			Mag: +0.3 PMG: 5 ^h 26 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'				
0	52	12.5	133	57.0	-26	54.0	11	32.7	+15	38.0	200	13.6	-11	49.6	278	22.7	+17	53.5
1	67	15.0	148	56.9		53.8	26	36.0		37.9	215	15.6		49.7	293	25.1		53.5
2	82	17.5	163	56.8		53.7	41	39.3		37.8	230	17.5		49.9	308	27.5		53.5
3	97	19.9	178	56.6		53.5	56	42.7		37.7	245	19.5		50.1	323	29.9		53.5
4	112	22.4	193	56.5		53.4	71	46.0		37.6	260	21.4		50.3	338	32.3		53.5
5	127	24.9	208	56.4	-26	53.2	86	49.3	+15	37.4	275	23.4	-11	50.5	353	34.8	+17	53.5
6	142	27.3	223	56.2	-26	53.1	101	52.6	+15	37.3	290	25.3	-11	50.6	8	37.2	+17	53.5
7	157	29.8	238	56.1		52.9	116	55.9		37.2	305	27.3		50.8	23	39.6		53.5
8	172	32.2	253	56.0		52.8	131	59.2		37.1	320	29.2		51.0	38	42.0		53.5
9	187	34.7	268	55.9		52.6	147	02.5		37.0	335	31.2		51.2	53	44.4		53.5
10	202	37.2	283	55.7		52.4	162	05.8		36.9	350	33.1		51.3	68	46.9		53.5
11	217	39.6	298	55.6	-26	52.3	177	09.1	+15	36.8	5	35.1	-11	51.5	83	49.3	+17	53.4
12	232	42.1	313	55.5	-26	52.1	192	12.4	+15	36.7	20	37.0	-11	51.7	98	51.7	+17	53.4
13	247	44.6	328	55.4		52.0	207	15.8		36.5	35	39.0		51.9	113	54.1		53.4
14	262	47.0	343	55.2		51.8	222	19.1		36.4	50	41.0		52.1	128	56.5		53.4
15	277	49.5	358	55.1		51.6	237	22.4		36.3	65	42.9		52.2	143	59.0		53.4
16	292	52.0	13	55.0		51.5	252	25.7		36.2	80	44.9		52.4	159	01.4		53.4
17	307	54.4	28	54.9	-26	51.3	267	29.0	+15	36.1	95	46.8	-11	52.6	174	03.8	+17	53.4
18	322	56.9	43	54.8	-26	51.1	282	32.3	+15	36.0	110	48.8	-11	52.8	189	06.2	+17	53.4
19	337	59.3	58	54.7		51.0	297	35.6		35.9	125	50.7		53.0	204	08.6		53.4
20	353	01.8	73	54.6		50.8	312	38.9		35.8	140	52.7		53.1	219	11.1		53.4
21	8	04.3	88	54.4		50.6	327	42.2		35.7	155	54.6		53.3	234	13.5		53.4
22	23	06.7	103	54.3		50.5	342	45.5		35.5	170	56.6		53.5	249	15.9		53.4
23	38	09.2	118	54.2		50.3	357	48.8		35.4	185	58.5		53.7	264	18.3		53.4
24	53	11.7	133	54.1	-26	50.1	12	52.1	+15	35.3	201	00.5	-11	53.8	279	20.8	+17	53.4
Dif	—		-1		+2		+33		-1		+20		-2		+24			0

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 16:2 PMG: 11 ^h 44 ^m 5			Edad: 11 ^d 9 PHE { SD: 15:9 PMG: 22 ^h 47 ^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	h m m		
0	183	54.2	-18	11.7	29	33.4	+11	05.4	60 N	15 33	16 21	17 13	14 43	1	5 42	103		
1	198	54.1		12.3	44	04.2 ¹¹⁸		20.8 ¹⁵⁴	58		44	29	17	14 52	6	35 97		
2	213	54.0		13.0	58	34.9 ¹¹⁷		36.2 ¹⁵⁴	56	15 54	36	21	15 00	10	28 93			
3	228	53.9		13.6	73	05.6 ¹¹⁷	+11	51.5 ¹⁵³	54	16 02	42	25	07 14		22 89			
4	243	53.8		14.3	87	36.3 ¹¹⁷	+12	06.7 ¹⁵²	52		10	47	29	13 17		17 86		
5	258	53.7	-18	14.9	102	06.9 ¹¹⁶	+12	21.8 ¹⁵¹	50	16 17	16 53	17 32	15 19	19	5 12	83		
6	273	53.6	-18	15.6	116	37.4 ¹¹⁵	+12	36.9 ¹⁵¹	45	16 32	17 04	17 39	15 31	25	5 01	78		
7	288	53.5		16.2	131	08.0 ¹¹⁶	+12	51.9 ¹⁵⁰	40		45	13	46	42 29	4 53	72		
8	303	53.4		16.9	145	38.4 ¹¹⁴	+13	06.8 ¹⁴⁹	35	16 55	22	52	50 34		45 69			
9	318	53.3		17.5	160	08.8 ¹¹⁴		21.7 ¹⁴⁹	30	17 04	30	17 59	15 58	37	39 65			
10	333	53.2		18.2	174	39.2 ¹¹⁴		36.5 ¹⁴⁸	20		20	44	18 10		28 59			
11	348	53.1	-18	18.8	189	09.6 ¹¹⁴	+13	51.2 ¹⁴⁷	10 N	17 35	17 57	18 22	16 24	46	4 18	55		
12	3	53.0	-18	19.5	203	39.8 ¹¹²	+14	05.8 ¹⁴⁶	0	17 48	18 10	18 35	16 35	51	4 09	50		
13	18	52.9		20.1	218	10.1 ¹¹³		20.3 ¹⁴⁵	10 S	18 02		24	18 50	46 56	4 00	45		
14	33	52.8		20.8	232	40.3 ¹¹²		34.8 ¹⁴⁵	20		16	40	19 08	16 59	60	3 51 40		
15	48	52.7		21.4	247	10.4 ¹¹¹	+14	49.2 ¹⁴⁴	30	33	18 59	30	17 13	65	40 34			
16	63	52.6		22.0	261	40.5 ¹¹¹	+15	03.5 ¹⁴³	35		43	19 11	19 45	21 69	34 31			
17	78	52.5	-18	22.7	276	10.5 ¹¹⁰	+15	17.7 ¹⁴²	40	18 54	19 25	20 02	17 31	72	3 27	27		
18	93	52.4	-18	23.3	290	40.5 ¹¹⁰	+15	31.8 ¹⁴¹	45	19 08	19 42	20 25	17 42	77	3 19	22		
19	108	52.3		24.0	305	10.4 ¹⁰⁹		45.8 ¹⁴⁰	50		24	20 03	20 55	17 55	84	09 17		
20	123	52.2		24.6	319	40.3 ¹⁰⁹	+15	59.8 ¹⁴⁰	52		32	13	21 10	18 02	86	3 04 15		
21	138	52.1		25.3	334	10.1 ¹⁰⁸	+16	13.6 ¹³⁸	54		40	25	30	09 90	2 59	12		
22	153	52.0		25.9	348	39.9 ¹⁰⁸		27.4 ¹³⁸	56	19 50		39	21 54	17 94	54	8		
23	168	51.9		26.5	3	09.6 ¹⁰⁷		41.0 ¹³⁶	58	20 01	20 56	22 30	26 98		48 4			
24	183	51.8	-18	27.2	17	39.2 ¹⁰⁶	+16	54.6 ¹³⁶	60 S	20 14	21 16	** **	18 36	105	2 41	0		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 20 ^h 23 ^m 9			Mag: -4.7 PMG: 15 ^h 04 ^m			Mag: -2.2 PMG: 23 ^h 03 ^m			Mag: -1.7 PMG: 10 ^h 35 ^m			Mag: +0.3 PMG: 5 ^h 22 ^m					
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	53	11.7	133	54.1	-26	50.1	12	52.1	+15	35.3	201	00.5	-11	53.8	279	20.8	+17	53.4
1	68	14.1	148	54.0		49.9	27	55.4		35.2	216	02.4		54.0	294	23.2		53.4
2	83	16.6	163	53.9		49.8	42	58.7		35.1	231	04.4		54.2	309	25.6		53.4
3	98	19.1	178	53.8		49.6	58	02.0		35.0	246	06.3		54.4	324	28.0		53.4
4	113	21.5	193	53.7		49.4	73	05.3		34.9	261	08.3		54.6	339	30.5		53.4
5	128	24.0	208	53.6	-26	49.2	88	08.6	+15	34.8	276	10.2	-11	54.7	354	32.9	+17	53.4
6	143	26.5	223	53.5	-26	49.1	103	11.8	+15	34.7	291	12.2	-11	54.9	9	35.3	+17	53.4
7	158	28.9	238	53.4		48.9	118	15.1		34.6	306	14.1		55.1	24	37.7		53.3
8	173	31.4	253	53.3		48.7	133	18.4		34.5	321	16.1		55.3	39	40.1		53.3
9	188	33.8	268	53.2		48.5	148	21.7		34.3	336	18.0		55.5	54	42.6		53.3
10	203	36.3	283	53.1		48.3	163	25.0		34.2	351	20.0		55.6	69	45.0		53.3
11	218	38.8	298	53.0	-26	48.2	178	28.3	+15	34.1	6	21.9	-11	55.8	84	47.4	+17	53.3
12	233	41.2	313	52.9	-26	48.0	193	31.6	+15	34.0	21	23.9	-11	56.0	99	49.8	+17	53.3
13	248	43.7	328	52.8		47.8	208	34.9		33.9	36	25.8		56.2	114	52.3		53.3
14	263	46.2	343	52.7		47.6	223	38.2		33.8	51	27.8		56.3	129	54.7		53.3
15	278	48.6	358	52.7		47.4	238	41.4		33.7	66	29.8		56.5	144	57.1		53.3
16	293	51.1	13	52.6		47.2	253	44.7		33.6	81	31.7		56.7	159	59.5		53.3
17	308	53.6	28	52.5	-26	47.1	268	48.0	+15	33.5	96	33.7	-11	56.9	175	02.0	+17	53.3
18	323	56.0	43	52.4	-26	46.9	283	51.3	+15	33.4	111	35.6	-11	57.1	190	04.4	+17	53.3
19	338	58.5	58	52.3		46.7	298	54.6		33.3	126	37.6		57.2	205	06.8		53.3
20	354	01.0	73	52.2		46.5	313	57.9		33.2	141	39.5		57.4	220	09.3		53.3
21	9	03.4	88	52.2		46.3	329	01.1		33.0	156	41.5		57.6	235	11.7		53.3
22	24	05.9	103	52.1		46.1	344	04.4		32.9	171	43.4		57.8	250	14.1		53.3
23	39	08.3	118	52.0		45.9	359	07.7		32.8	186	45.4		57.9	265	16.5		53.3
24	54	10.8	133	51.9	-26	45.7	14	11.0	+15	32.7	201	47.3	-11	58.1	280	19.0	+17	53.3
Dif	—		-1		+2		+33		-1		+20		-2		+24		0	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16:2 PMG: 11 ^h 44 ^m 6			Edad: 12 ^d 9 PHE { 4 ^h : 57/9 12 ^h : 57/8 20 ^h : 57/6 PMG: 23 ^h 38 ^m R°: 54 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°			
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	183	51.8	-18	27.2	17	39.2	+16	54.6	60 N	6 17	7 09	7 58	14 44	4	7 25	106		
1	198	51.7		27.8	32	08.8 ¹⁰⁶	+17	08.1 ¹³⁵	58	13	7 01	47	14 58	10	12	99		
2	213	51.6		28.4	46	38.4 ¹⁰⁶		21.4 ¹³³	56	09	6 54	37	15 10	15	7 01	94		
3	228	51.5		29.1	61	07.8 ¹⁰⁴		34.7 ¹³³	54	05	48	28	21 19		6 51	90		
4	243	51.4		29.7	75	37.3 ¹⁰⁵	+17	47.9 ¹³²	52	6 01	42	20	30 22		43	85		
5	258	51.3	-18	30.4	90	06.6 ¹⁰³	+18	01.0 ¹³¹	50	5 58	6 37	7 13	15 38	26	6 35	83		
6	273	51.2	-18	31.0	104	36.0 ¹⁰⁴	+18	13.9 ¹²⁹	45	5 50	6 26	6 58	15 56	31	6 19	76		
7	288	51.1		31.6	119	05.2 ¹⁰²		26.8 ¹²⁹	40	43	16	45	16 11	35	6 05	73		
8	303	51.0		32.3	133	34.4 ¹⁰²		39.5 ¹²⁷	35	37	08	34	24 38		5 54	69		
9	318	50.9		32.9	148	03.6 ¹⁰²	+18	52.2 ¹²⁷	30	31	6 00	25	35 41		44	66		
10	333	50.8		33.5	162	32.6 ¹⁰⁰	+19	04.7 ¹²⁵	20	19	5 46	6 09	16 54	45	27	61		
11	348	50.7	-18	34.2	177	01.7 ¹⁰¹	+19	17.1 ¹²⁴	10 N	5 07	5 32	5 55	17 10	50	5 13	56		
12	3	50.6	-18	34.8	191	30.6 ⁹⁹	+19	29.4 ¹²³	0	4 54	5 19	5 41	17 26	53	4 59	52		
13	18	50.5		35.4	205	59.5 ⁹⁹		41.6 ¹²²	10 S	39	5 05	27	42 56		45	48		
14	33	50.4		36.1	220	28.4 ⁹⁹	+19	53.7 ¹²¹	20	4 21	4 49	5 13	17 59	60	31	44		
15	48	50.2		36.7	234	57.2 ⁹⁸	+20	05.7 ¹²⁰	30	3 59	30	4 56	18 18	66	14	39		
16	63	50.1		37.3	249	25.9 ⁹⁷		17.6 ¹¹⁹	35	44	18	46	30 68		4 05	35		
17	78	50.0	-18	38.0	263	54.6 ⁹⁷	+20	29.3 ¹¹⁷	40	3 26	4 04	4 35	18 43	72	3 54	32		
18	93	49.9	-18	38.6	278	23.2 ⁹⁶	+20	40.9 ¹¹⁶	45	3 04	3 47	4 21	18 59	76	3 41	28		
19	108	49.8		39.2	292	51.7 ⁹⁵	+20	52.4 ¹¹⁵	50	2 34	26	4 05	19 19	81	26	22		
20	123	49.7		39.8	307	20.2 ⁹⁵	+21	03.8 ¹¹⁴	52	2 18	15	3 57	28 84		19	19		
21	138	49.6		40.5	321	48.7 ⁹⁵		15.1 ¹¹³	54	1 59	3 03	48	39 87		11	16		
22	153	49.5		41.1	336	17.1 ⁹⁴		26.2 ¹¹¹	56	1 34	2 49	38	19 51	92	3 02	12		
23	168	49.4		41.7	350	45.4 ⁹³		37.2 ¹¹⁰	58	0 59	33	27	20 04	99	2 52	8		
24	183	49.3	-18	42.4	5	13.7 ⁹³	+21	48.1 ¹⁰⁹	60 S	** **	2 12	3 14	20 21	107	2 41	1		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 20 ^h 19 ^m 9			Mag: -4.7 PMG: 15 ^h 05 ^m			Mag: -2.1 PMG: 22 ^h 58 ^m			Mag: -1.7 PMG: 10 ^h 31 ^m			Mag: +0.2 PMG: 5 ^h 18 ^m					
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	54	10.8	133	51.9	-26	45.7	14	11.0	+15	32.7	201	47.3	-11	58.1	280	19.0	+17	53.3
1	69	13.3	148	51.8		45.5	29	14.3		32.6	216	49.3		58.3	295	21.4		53.3
2	84	15.7	163	51.8		45.3	44	17.5		32.5	231	51.2		58.5	310	23.8		53.3
3	99	18.2	178	51.7		45.1	59	20.8		32.4	246	53.2		58.7	325	26.2		53.3
4	114	20.7	193	51.6		44.9	74	24.1		32.3	261	55.1		58.8	340	28.7		53.3
5	129	23.1	208	51.6	-26	44.7	89	27.4	+15	32.2	276	57.1	-11	59.0	355	31.1	+17	53.3
6	144	25.6	223	51.5	-26	44.5	104	30.6	+15	32.1	291	59.0	-11	59.2	10	33.5	+17	53.3
7	159	28.1	238	51.4		44.3	119	33.9		32.0	307	01.0		59.4	25	36.0		53.3
8	174	30.5	253	51.4		44.1	134	37.2		31.9	322	03.0		59.5	40	38.4		53.3
9	189	33.0	268	51.3		43.9	149	40.4		31.8	337	04.9		59.7	55	40.8		53.3
10	204	35.4	283	51.2		43.7	164	43.7		31.7	352	06.9	-11	59.9	70	43.2		53.3
11	219	37.9	298	51.2	-26	43.5	179	47.0	+15	31.6	7	08.8	-12	00.1	85	45.7	+17	53.2
12	234	40.4	313	51.1	-26	43.3	194	50.2	+15	31.5	22	10.8	-12	00.2	100	48.1	+17	53.2
13	249	42.8	328	51.0		43.1	209	53.5		31.4	37	12.7		00.4	115	50.5		53.2
14	264	45.3	343	51.0		42.9	224	56.8		31.2	52	14.7		00.6	130	53.0		53.2
15	279	47.8	358	50.9		42.7	240	00.0		31.1	67	16.6		00.8	145	55.4		53.2
16	294	50.2	13	50.9		42.5	255	03.3		31.0	82	18.6		01.0	160	57.8		53.2
17	309	52.7	28	50.8	-26	42.3	270	06.6	+15	30.9	97	20.5	-12	01.1	176	00.3	+17	53.2
18	324	55.2	43	50.8	-26	42.0	285	09.8	+15	30.8	112	22.5	-12	01.3	191	02.7	+17	53.2
19	339	57.6	58	50.7		41.8	300	13.1		30.7	127	24.4		01.5	206	05.1		53.2
20	355	00.1	73	50.7		41.6	315	16.3		30.6	142	26.4		01.7	221	07.6		53.2
21	10	02.6	88	50.6		41.4	330	19.6		30.5	157	28.3		01.8	236	10.0		53.2
22	25	05.0	103	50.6		41.2	345	22.9		30.4	172	30.3		02.0	251	12.4		53.2
23	40	07.5	118	50.5		41.0	0	26.1		30.3	187	32.3		02.2	266	14.8		53.2
24	55	09.9	133	50.5	-26	40.8	15	29.4	+15	30.2	202	34.2	-12	02.4	281	17.3	+17	53.2
Dif	—			-1	+2		+33	-1		+20	-2				+24	0		

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 11 ^h 44 ^m 8			Edad: 13 ^d 9 PHE SD: 15:7 PMG: **h ***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	49.3	-18 42.4	5	13.7	+21 48.1	60 N	15 28	16 18	17 10	14 48 9	9 11 104		
1	198	49.1	43.0	19	41.9 92	+21 58.8	58	40	26	14	15 08 19	8 51 95		
2	213	49.0	43.6	34	10.0 91	+22 09.5	56	50	33	19	25 25	35 89		
3	228	48.9	44.2	48	38.1 91	20.0	54	15 59	39	23	40 28	21 84		
4	243	48.8	44.9	63	06.2 91	30.3	52	16 07	45	26	15 52 32	8 08 82		
5	258	48.7	-18 45.5	77	34.1 89	+22 40.6	50	16 15	16 50	17 30	16 04 34	7 58 78		
6	273	48.6	-18 46.1	92	02.1 90	+22 50.7	45	16 30	17 02	17 38	16 27 39	7 35 74		
7	288	48.5	46.7	106	29.9 88	+23 00.6	40	43	12	45	16 46 42	18 69		
8	303	48.4	47.3	120	57.8 89	10.5	35	16 54	21	51	17 02 44	7 03 67		
9	318	48.2	48.0	135	25.5 87	20.2	30	17 03	29	17 58	16 46	6 50 64		
10	333	48.1	48.6	149	53.2 87	29.7	20	20	43	18 10	17 39 50	28 60		
11	348	48.0	-18 49.2	164	20.9 87	+23 39.1	10 N	17 35	17 57	18 22	18 00 52	6 09 57		
12	3	47.9	-18 49.8	178	48.5 86	+23 48.4	0	17 48	18 10	18 36	18 19 55	5 51 54		
13	18	47.8	50.4	193	16.1 86	+23 57.6	10 S	18 02	25	18 51	38 58	33 52		
14	33	47.7	51.1	207	43.6 85	+24 06.6	20	17	18 41	19 09	18 59 60	5 15 47		
15	48	47.5	51.7	222	11.0 84	15.5	30	35	19 01	32	19 24 63	4 53 44		
16	63	47.4	52.3	236	38.5 85	24.2	35	45	13	19 47	38 65	40 42		
17	78	47.3	-18 52.9	251	05.8 83	+24 32.8	40	18 56	19 27	20 05	19 55 67	4 26 38		
18	93	47.2	-18 53.5	265	33.1 83	+24 41.2	45	19 10	19 45	20 28	20 15 70	4 09 34		
19	108	47.1	54.1	280	00.4 83	49.5	50	27	20 07	20 59	40 75	3 48 29		
20	123	47.0	54.7	294	27.6 82	+24 57.6	52	35	18	21 16	20 52 77	38 27		
21	138	46.8	55.4	308	54.8 82	+25 05.6	54	44	30	21 36	21 06 80	27 23		
22	153	46.7	56.0	323	22.0 82	13.5	56	19 54	20 44	22 02	23 84	14 19		
23	168	46.6	56.6	337	49.1 81	21.2	58	20 06	21 02	22 43	21 43 90	3 00 13		
24	183	46.5	-18 57.2	352	16.1 80	+25 28.8	60 S	20 19	21 23	** **	22 08 100	2 42 5		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 20 ^h 16 ^m 0		Mag: -4.7 PMG: 15 ^h 05 ^m		Mag: -2.1 PMG: 22 ^h 53 ^m		Mag: -1.7 PMG: 10 ^h 28 ^m		Mag: +0.2 PMG: 5 ^h 14 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	55	09.9	133	50.5	-26 40.8	15 29.4	+15 30.2	202 34.2	-12 02.4	281 17.3	+17 53.2
1	70	12.4	148	50.4	40.5	30 32.6	30.1	217 36.2	02.5	296 19.7	53.2
2	85	14.9	163	50.4	40.3	45 35.9	30.0	232 38.1	02.7	311 22.1	53.2
3	100	17.3	178	50.4	40.1	60 39.1	29.9	247 40.1	02.9	326 24.6	53.2
4	115	19.8	193	50.3	39.9	75 42.4	29.8	262 42.0	03.1	341 27.0	53.2
5	130	22.3	208	50.3	-26 39.7	90 45.6	+15 29.7	277 44.0	-12 03.2	356 29.4	+17 53.2
6	145	24.7	223	50.2	-26 39.4	105 48.9	+15 29.6	292 45.9	-12 03.4	11 31.9	+17 53.2
7	160	27.2	238	50.2	39.2	120 52.1	29.5	307 47.9	03.6	26 34.3	53.2
8	175	29.7	253	50.2	39.0	135 55.4	29.4	322 49.8	03.8	41 36.7	53.2
9	190	32.1	268	50.1	38.8	150 58.6	29.3	337 51.8	04.0	56 39.2	53.2
10	205	34.6	283	50.1	38.5	166 01.9	29.2	352 53.7	04.1	71 41.6	53.2
11	220	37.1	298	50.1	-26 38.3	181 05.1	+15 29.1	7 55.7	-12 04.3	86 44.0	+17 53.2
12	235	39.5	313	50.0	-26 38.1	196 08.4	+15 29.0	22 57.7	-12 04.5	101 46.5	+17 53.2
13	250	42.0	328	50.0	37.9	211 11.6	28.9	37 59.6	04.7	116 48.9	53.2
14	265	44.4	343	50.0	37.6	226 14.9	28.8	53 01.6	04.8	131 51.3	53.2
15	280	46.9	358	50.0	37.4	241 18.1	28.7	68 03.5	05.0	146 53.8	53.2
16	295	49.4	13 49.9	37.2	37.2	256 21.4	28.6	83 05.5	05.2	161 56.2	53.2
17	310	51.8	28 49.9	-26 36.9	36.9	271 24.6	+15 28.5	98 07.4	-12 05.4	176 58.7	+17 53.2
18	325	54.3	43 49.9	-26 36.7	36.7	286 27.8	+15 28.4	113 09.4	-12 05.5	192 01.1	+17 53.2
19	340	56.8	58 49.9	36.5	36.5	301 31.1	28.3	128 11.3	05.7	207 03.5	53.2
20	355	59.2	73 49.9	36.2	36.2	316 34.3	28.2	143 13.3	05.9	222 06.0	53.2
21	11	01.7	88 49.9	36.0	36.0	331 37.5	28.1	158 15.2	06.1	237 08.4	53.2
22	26	04.2	103 49.8	35.8	35.8	346 40.8	28.0	173 17.2	06.2	252 10.8	53.2
23	41	06.6	118 49.8	35.5	35.5	1 44.0	27.9	188 19.1	06.4	267 13.3	53.2
24	56	09.1	133 49.8	-26 35.3	35.3	16 47.2	+15 27.8	203 21.1	-12 06.6	282 15.7	+17 53.2
Dif	—		0	+2	+2	+32	-1	+20	-2	+24	0

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'2			Edad: 14 ^d 9 PHE { 4 ^h : 56'8 12 ^h : 56'6 20 ^h : 56'3													
	PMG: 11 ^h 45 ^m 0			SD: 15'5 PMG: 0 ^h 32 ^m R°: 55 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	183	46.5	-18	57.2	352	16.1	+25	28.8	60 N	6 21	7 13	8 03	14 57	27	10 55	90	
1	198	46.4		57.8	6	43.1	80	36.2	58	16	7 05	7 51	15 27	35	26	80	
2	213	46.2		58.4	21	10.1	80	43.4	56	12	6 58	41	15 50	39	10 04	76	
3	228	46.1		59.0	35	37.1	80	50.5	54	08	52	32	16 08	43	9 45	73	
4	243	46.0	-18	59.6	50	04.0	79	+25	57.5	52	04	46	23	24 44	30	71	
5	258	45.9	-19	00.3	64	30.8	78	+26	04.3	50	6 01	6 40	7 16	16 38	45	9 16	70
6	273	45.8	-19	00.9	78	57.7	79	+26	10.9	45	5 53	6 28	7 00	17 06	48	8 49	66
7	288	45.6		01.5	93	24.5	78		17.4	40	45	18	6 47	28 50		27	65
8	303	45.5		02.1	107	51.2	77		23.8	35	39	09	36	17 46	51	8 10	62
9	318	45.4		02.7	122	18.0	78		30.0	30	32	6 01	27	18 02	52	7 54	62
10	333	45.3		03.3	136	44.7	77		36.0	20	20	5 47	6 10	29 54		28	60
11	348	45.1	-19	03.9	151	11.4	77	+26	41.9	10 N	5 08	5 33	5 55	18 52	55	7 06	57
12	3	45.0	-19	04.5	165	38.1	77	+26	47.6	0	4 54	5 20	5 41	19 14	56	6 45	56
13	18	44.9		05.1	180	04.7	76		53.2	10 S	39	5 05	27	36 57		25	53
14	33	44.8		05.7	194	31.3	76	+26	58.6	20	4 21	4 49	5 12	19 59	58	6 02	52
15	48	44.6		06.3	208	57.9	76	+27	03.9	30	3 57	29	4 55	20 27	59	5 37	49
16	63	44.5		06.9	223	24.5	76		09.0	35	42	17	45	20 43	60	22	48
17	78	44.4	-19	07.5	237	51.0	75	+27	13.9	40	3 24	4 02	4 33	21 02	60	5 04	46
18	93	44.3	-19	08.1	252	17.6	76	+27	18.7	45	3 01	3 45	4 19	21 25	61	4 43	44
19	108	44.1		08.7	266	44.1	75		23.3	50	2 30	23	4 02	21 55	62	17	40
20	123	44.0		09.3	281	10.6	75		27.8	52	2 13	3 12	3 54	22 09	64	4 05	37
21	138	43.9		09.9	295	37.1	75		32.1	54	1 53	2 59	45	26 65		3 50	35
22	153	43.8		10.5	310	03.6	75		36.2	56	1 27	45	35	22 47	66	33	31
23	168	43.6		11.1	324	30.1	75		40.2	58	0 46	27	23	23 13	68	3 13	25
24	183	43.5	-19	11.7	338	56.5	74	+27	44.1	60 S	** **	2 06	3 10	23 48	75	2 47	15

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 20 ^h 12 ^m 1		Mag: -4.7 PMG: 15 ^h 05 ^m			Mag: -2.1 PMG: 22 ^h 48 ^m			Mag: -1.7 PMG: 10 ^h 25 ^m			Mag: +0.2 PMG: 5 ^h 10 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°				
0	56	09.1	133	49.8	-26	35.3	16	47.2	+15	27.8	203	21.1	-12	06.6	282	15.7	+17	53.2
1	71	11.6	148	49.8		35.1	31	50.5		27.7	218	23.1		06.8	297	18.1		53.2
2	86	14.0	163	49.8		34.8	46	53.7		27.6	233	25.0		06.9	312	20.6		53.2
3	101	16.5	178	49.8		34.6	61	56.9		27.5	248	27.0		07.1	327	23.0		53.2
4	116	18.9	193	49.8		34.3	77	00.2		27.4	263	28.9		07.3	342	25.5		53.2
5	131	21.4	208	49.8	-26	34.1	92	03.4	+15	27.3	278	30.9	-12	07.5	357	27.9	+17	53.2
6	146	23.9	223	49.8	-26	33.8	107	06.6	+15	27.2	293	32.8	-12	07.6	12	30.3	+17	53.2
7	161	26.3	238	49.8		33.6	122	09.9		27.1	308	34.8		07.8	27	32.8		53.2
8	176	28.8	253	49.8		33.4	137	13.1		27.0	323	36.7		08.0	42	35.2		53.2
9	191	31.3	268	49.8		33.1	152	16.3		26.9	338	38.7		08.2	57	37.6		53.2
10	206	33.7	283	49.8		32.9	167	19.5		26.8	353	40.7		08.3	72	40.1		53.2
11	221	36.2	298	49.8	-26	32.6	182	22.8	+15	26.7	8	42.6	-12	08.5	87	42.5	+17	53.2
12	236	38.7	313	49.8	-26	32.4	197	26.0	+15	26.6	23	44.6	-12	08.7	102	45.0	+17	53.2
13	251	41.1	328	49.8		32.1	212	29.2		26.5	38	46.5		08.9	117	47.4		53.2
14	266	43.6	343	49.8		31.9	227	32.4		26.4	53	48.5		09.0	132	49.8		53.2
15	281	46.1	358	49.8		31.6	242	35.6		26.3	68	50.4		09.2	147	52.3		53.2
16	296	48.5	13	49.8		31.4	257	38.8		26.2	83	52.4		09.4	162	54.7		53.2
17	311	51.0	28	49.8	-26	31.1	272	42.1	+15	26.1	98	54.3	-12	09.6	177	57.2	+17	53.2
18	326	53.4	43	49.9	-26	30.9	287	45.3	+15	26.0	113	56.3	-12	09.7	192	59.6	+17	53.2
19	341	55.9	58	49.9		30.6	302	48.5		25.9	128	58.3		09.9	208	02.0		53.2
20	356	58.4	73	49.9		30.3	317	51.7		25.8	144	00.2		10.1	223	04.5		53.2
21	12	00.8	88	49.9		30.1	332	54.9		25.7	159	02.2		10.3	238	06.9		53.2
22	27	03.3	103	49.9		29.8	347	58.1		25.6	174	04.1		10.4	253	09.4		53.2
23	42	05.8	118	49.9		29.6	3	01.3		25.6	189	06.1		10.6	268	11.8		53.2
24	57	08.2	133	50.0	-26	29.3	18	04.6	+15	25.5	204	08.0	-12	10.8	283	14.2	+17	53.2
Dif	—		0		+2		+32		-1		+20		-2		+24		0	

UT	SOL			☉ LUNA					Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16:2 PMG: 11 ^h 45 ^m 2			Edad: 15 ^d 9 PHE { 4 ^h : 56:1 12 ^h : 55:9 20 ^h : 55:7 PMG: 1 ^h 27 ^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			
0	183	43.5	-19	11.7	338	56.5	+27	44.1	60 N	15 24	16 14	17 07	15 24 61		12 25 53			
1	198	43.4		12.3	353	23.0	75	47.7	58	36	23	12	16 02 60		11 46 55			
2	213	43.2		12.9	7	49.5	75	51.2	56	47	30	16	29 59		11 20 55			
3	228	43.1		13.5	22	15.9	74	54.6	54	15 56	37	20	16 51 58		10 58 56			
4	243	43.0		14.1	36	42.4	75	+27 57.8	52	16 05	43	24	17 08 58		41 55			
5	258	42.9	-19	14.7	51	08.8	74	+28 00.8	50	16 12	16 48	17 28	17 23 58		10 26 55			
6	273	42.7	-19	15.3	65	35.3	75	+28 03.7	45	16 28	17 00	17 36	17 54 57		9 55 56			
7	288	42.6		15.9	80	01.8	75	06.4	40	41	11	44	18 18 57		32 56			
8	303	42.5		16.5	94	28.3	75	09.0	35	16 53	20	50	37 57		9 12 56			
9	318	42.3		17.1	108	54.7	74	11.4	30	17 03	28	17 57	18 54 56		8 56 55			
10	333	42.2		17.7	123	21.2	75	13.6	20	20	43	18 10	19 23 55		28 55			
11	348	42.1	-19	18.3	137	47.7	75	+28 15.7	10 N	17 35	17 57	18 23	19 47 55		8 03 56			
12	3	41.9	-19	18.8	152	14.2	75	+28 17.6	0	17 49	18 11	18 36	20 10 54		7 41 55			
13	18	41.8		19.4	166	40.8	76	19.4	10 S	18 03	25	18 52	33 53		7 18 55			
14	33	41.7		20.0	181	07.3	75	21.0	20	18	18 42	19 10	20 57 53		6 54 55			
15	48	41.5		20.6	195	33.9	76	22.4	30	36	19 03	34	21 26 52		26 55			
16	63	41.4		21.2	210	00.5	76	23.7	35	47	15	19 49	21 43 51		6 10 54			
17	78	41.3	-19	21.8	224	27.1	76	+28 24.8	40	18 59	19 30	20 08	22 02 51		5 50 54			
18	93	41.1	-19	22.4	238	53.7	76	+28 25.8	45	19 13	19 48	20 32	22 26 50		5 27 53			
19	108	41.0		23.0	253	20.3	76	26.6	50	31	20 10	21 04	22 57 49		4 57 52			
20	123	40.9		23.5	267	47.0	77	27.3	52	39	22	21	23 13 47		42 51			
21	138	40.7		24.1	282	13.7	77	27.8	54	48	35	21 43	31 46		25 50			
22	153	40.6		24.7	296	40.5	78	28.1	56	19 59	20 50	22 11	23 53 44		4 04 49			
23	168	40.4		25.3	311	07.2	77	28.3	58	20 11	21 08	23 00	** ** *		3 38 47			
24	183	40.3	-19	25.9	325	34.0	78	+28 28.3	60 S	20 25	21 30	** ** *	** ** *		3 02 42			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 20 ^h 08 ^m 1		Mag: -4.7 PMG: 15 ^h 05 ^m				Mag: -2.0 PMG: 22 ^h 43 ^m				Mag: -1.7 PMG: 10 ^h 22 ^m				Mag: +0.2 PMG: 5 ^h 06 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	57	08.2	133	50.0	-26	29.3	18	04.6	+15	25.5	204	08.0	-12	10.8	283	14.2	+17	53.2
1	72	10.7	148	50.0		29.1	33	07.8		25.4	219	10.0		11.0	298	16.7		53.2
2	87	13.2	163	50.0		28.8	48	11.0		25.3	234	11.9		11.1	313	19.1		53.2
3	102	15.6	178	50.1		28.5	63	14.2		25.2	249	13.9		11.3	328	21.6		53.2
4	117	18.1	193	50.1		28.3	78	17.4		25.1	264	15.9		11.5	343	24.0		53.2
5	132	20.5	208	50.1	-26	28.0	93	20.6	+15	25.0	279	17.8	-12	11.7	358	26.5	+17	53.2
6	147	23.0	223	50.1	-26	27.7	108	23.8	+15	24.9	294	19.8	-12	11.8	13	28.9	+17	53.2
7	162	25.5	238	50.2		27.5	123	27.0		24.8	309	21.7		12.0	28	31.3		53.2
8	177	27.9	253	50.2		27.2	138	30.2		24.7	324	23.7		12.2	43	33.8		53.2
9	192	30.4	268	50.2		26.9	153	33.4		24.6	339	25.6		12.4	58	36.2		53.2
10	207	32.9	283	50.3		26.7	168	36.6		24.5	354	27.6		12.5	73	38.7		53.2
11	222	35.3	298	50.3	-26	26.4	183	39.8	+15	24.4	9	29.5	-12	12.7	88	41.1	+17	53.2
12	237	37.8	313	50.4	-26	26.1	198	43.0	+15	24.3	24	31.5	-12	12.9	103	43.6	+17	53.2
13	252	40.3	328	50.4		25.9	213	46.2		24.2	39	33.5		13.1	118	46.0		53.2
14	267	42.7	343	50.5		25.6	228	49.4		24.2	54	35.4		13.2	133	48.4		53.2
15	282	45.2	358	50.5		25.3	243	52.6		24.1	69	37.4		13.4	148	50.9		53.2
16	297	47.7	13	50.5		25.1	258	55.8		24.0	84	39.3		13.6	163	53.3		53.2
17	312	50.1	28	50.6	-26	24.8	273	58.9	+15	23.9	99	41.3	-12	13.8	178	55.8	+17	53.2
18	327	52.6	43	50.6	-26	24.5	289	02.1	+15	23.8	114	43.2	-12	13.9	193	58.2	+17	53.2
19	342	55.0	58	50.7		24.2	304	05.3		23.7	129	45.2		14.1	209	00.7		53.2
20	357	57.5	73	50.8		24.0	319	08.5		23.6	144	47.1		14.3	224	03.1		53.2
21	13	00.0	88	50.8		23.7	334	11.7		23.5	159	49.1		14.5	239	05.6		53.2
22	28	02.4	103	50.9		23.4	349	14.9		23.4	174	51.1		14.6	254	08.0		53.2
23	43	04.9	118	50.9		23.1	4	18.1		23.3	189	53.0		14.8	269	10.5		53.2
24	58	07.4	133	51.0	-26	22.8	19	21.3	+15	23.2	204	55.0	-12	15.0	284	12.9	+17	53.2
Dif	—		0		+3		+32		-1		+20		-2		+24			

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16:2			Edad: 16 ^d 9 PHE { 4 ^h : 55:5 12 ^h : 55:3 20 ^h : 55:2												
	PMG: 11 ^h 45 ^m 4			SD: 15:1 PMG: 2 ^h 23 ^m R ^o : 54 ^m												
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'		°	'	°	h	m	h	m	h	m	m
0	183	40.3	-19 25.9	325	34.0		+28 28.3	1	60 N	6 25	7 18	8 08	16 25	88	13 18	21
1	198	40.2	26.5	340	00.9	79	28.2	1	58	20	09	7 56	17 02	79	12 41	30
2	213	40.0	27.0	354	27.7	78	27.9	3	56	15	7 02	45	28 75		12 15	34
3	228	39.9	27.6	8	54.6	79	27.5	4	54	11	6 55	35	17 49	71	11 54	37
4	243	39.8	28.2	23	21.6	80	26.9	6	52	07	49	27	18 06	69	36	40
5	258	39.6	-19 28.8	37	48.6	80	+28 26.1	8	50	6 03	6 43	7 19	18 21	67	11 21	42
6	273	39.5	-19 29.4	52	15.6	80	+28 25.2	9	45	5 55	6 31	7 03	18 51	64	10 51	44
7	288	39.3	30.0	66	42.7	81	24.2	10	40	47	20	6 50	19 15	61	28	46
8	303	39.2	30.5	81	09.8	81	23.0	12	35	40	11	38	34 59		10 08	48
9	318	39.1	31.1	95	37.0	82	21.7	13	30	34	6 03	28	19 50	58	9 51	49
10	333	38.9	31.7	110	04.2	82	20.2	15	20	21	5 48	6 11	20 18	56	9 23	51
11	348	38.8	-19 32.3	124	31.5	83	+28 18.5	17	10 N	5 08	5 34	5 56	20 42	54	8 59	52
12	3	38.6	-19 32.8	138	58.8	83	+28 16.7	18	0	4 54	5 20	5 42	21 04	52	8 36	53
13	18	38.5	33.4	153	26.1	83	14.8	19	10 S	39	5 05	27	26 50		8 13	55
14	33	38.3	34.0	167	53.6	85	12.7	21	20	4 20	4 48	5 12	21 50	48	7 49	56
15	48	38.2	34.6	182	21.0	84	10.4	23	30	3 56	28	4 54	22 18	45	21	57
16	63	38.1	35.1	196	48.6	86	08.0	24	35	41	15	44	34 44		7 04	58
17	78	37.9	-19 35.7	211	16.1	85	+28 05.5	25	40	3 22	4 01	4 31	22 53	42	6 44	59
18	93	37.8	-19 36.3	225	43.8	87	+28 02.8	27	45	2 59	3 43	4 17	23 16	39	6 20	61
19	108	37.6	36.9	240	11.5	87	+28 00.0	28	50	26	20	4 00	23 46	35	5 49	63
20	123	37.5	37.4	254	39.3	88	+27 57.1	29	52	2 09	3 08	3 51	** ** *		33	65
21	138	37.3	38.0	269	07.1	88	53.9	32	54	1 48	2 56	42	** ** *		5 15	66
22	153	37.2	38.6	283	35.0	89	50.7	32	56	1 19	40	31	** ** *		4 53	68
23	168	37.0	39.1	298	03.0	90	47.3	34	58	0 30	22	19	0 21	41	4 25	72
24	183	36.9	-19 39.7	312	31.0	90	+27 43.8	35	60 S	** ** *	2 00	3 05	1 03	33	3 44	79

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 20 ^h 04 ^m 2		Mag: -4.7 PMG: 15 ^h 05 ^m		Mag: -2.0 PMG: 22 ^h 38 ^m		Mag: -1.7 PMG: 10 ^h 19 ^m		Mag: +0.2 PMG: 5 ^h 02 ^m		
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄		
h	°	'	°	°	'	°	°	'	°	°	'
0	58	07.4	133 51.0	-26 22.8		19 21.3	+15 23.2		204 55.0	-12 15.0	
1	73	09.8	148 51.0	22.6		34 24.4	23.2		219 56.9	15.2	
2	88	12.3	163 51.1	22.3		49 27.6	23.1		234 58.9	15.3	
3	103	14.8	178 51.2	22.0		64 30.8	23.0		250 00.8	15.5	
4	118	17.2	193 51.2	21.7		79 34.0	22.9		265 02.8	15.7	
5	133	19.7	208 51.3	-26 21.4		94 37.2	+15 22.8		280 04.8	-12 15.8	
6	148	22.2	223 51.4	-26 21.1		109 40.3	+15 22.7		295 06.7	-12 16.0	
7	163	24.6	238 51.4	20.9		124 43.5	22.6		310 08.7	16.2	
8	178	27.1	253 51.5	20.6		139 46.7	22.5		325 10.6	16.4	
9	193	29.5	268 51.6	20.3		154 49.9	22.4		340 12.6	16.5	
10	208	32.0	283 51.7	20.0		169 53.0	22.4		355 14.5	16.7	
11	223	34.5	298 51.7	-26 19.7		184 56.2	+15 22.3		10 16.5	-12 16.9	
12	238	36.9	313 51.8	-26 19.4		199 59.4	+15 22.2		25 18.5	-12 17.1	
13	253	39.4	328 51.9	19.1		215 02.5	22.1		40 20.4	17.2	
14	268	41.9	343 52.0	18.8		230 05.7	22.0		55 22.4	17.4	
15	283	44.3	358 52.1	18.5		245 08.9	21.9		70 24.3	17.6	
16	298	46.8	13 52.1	18.3		260 12.0	21.8		85 26.3	17.8	
17	313	49.3	28 52.2	-26 18.0		275 15.2	+15 21.7		100 28.2	-12 17.9	
18	328	51.7	43 52.3	-26 17.7		290 18.4	+15 21.7		115 30.2	-12 18.1	
19	343	54.2	58 52.4	17.4		305 21.5	21.6		130 32.2	18.3	
20	358	56.7	73 52.5	17.1		320 24.7	21.5		145 34.1	18.4	
21	13	59.1	88 52.6	16.8		335 27.9	21.4		160 36.1	18.6	
22	29	01.6	103 52.7	16.5		350 31.0	21.3		175 38.0	18.8	
23	44	04.0	118 52.8	16.2		5 34.2	21.2		190 40.0	19.0	
24	59	06.5	133 52.9	-26 15.9		20 37.3	+15 21.2		205 42.0	-12 19.1	
Dif	—		+1	+3		+32	-1		+20	-2	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 11 ^h 45 ^m 7			Edad: 17 ^d 9 PHE { 4 ^h : 55:0 12 ^h : 54:9 20 ^h : 54:7 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	183	36.9	-19 39.7	312	31.0	+27 43.8	60 N	15 20	16 11	17 04	17 53 95	13 39 8			
1	198	36.8		326	59.1	40.1	58	33	20	09	18 21 86	13 11 16			
2	213	36.6		341	27.2	36.3	56	44	27	14	18 43 80	12 49 21			
3	228	36.5		355	55.5	32.4	54	15 54	34	18	19 00 77	31 25			
4	243	36.3		10	23.8	28.3	52	16 02	40	22	15 74	16 28			
5	258	36.2	-19 42.5	24	52.1	+27 24.1	50	16 10	16 46	17 26	19 28 71	12 03 30			
6	273	36.0	-19 43.1	39	20.6	+27 19.7	45	16 27	16 59	17 35	19 55 66	11 35 35			
7	288	35.9		53	49.1	15.2	40	40	17 09	43	20 16 63	11 14 37			
8	303	35.7		68	17.6	10.6	35	16 52	19	50	33 61	10 56 40			
9	318	35.6		82	46.3	05.9	30	17 02	27	17 56	20 48 58	40 42			
10	333	35.4		97	15.0	+27 01.0	20	19	43	18 10	21 14 54	10 14 45			
11	348	35.3	-19 45.9	111	43.8	+26 56.0	10 N	17 35	17 57	18 23	21 36 51	9 51 48			
12	3	35.1	-19 46.5	126	12.7	+26 50.9	0	17 49	18 11	18 37	21 56 48	9 29 51			
13	18	35.0		140	41.7	45.6	10 S	18 04	26	18 53	22 16 46	9 08 53			
14	33	34.8		47.6	155 10.7	40.2	20	20	18 44	19 12	22 38 42	8 45 55			
15	48	34.7		48.2	169 39.8	34.7	30	38	19 04	36	23 03 39	18 58			
16	63	34.5		48.7	184 09.0	29.0	35	18 49	17	19 52	18 36	8 02 60			
17	78	34.4	-19 49.3	198	38.3	+26 23.3	40	19 01	19 32	20 11	23 35 33	7 43 63			
18	93	34.2	-19 49.8	213	07.6	+26 17.4	45	19 16	19 51	20 35	23 55 30	7 21 65			
19	108	34.1		50.4	227 37.1	11.3	50	34	20 14	21 09	** ** *	6 52 70			
20	123	33.9		51.0	242 06.6	+26 05.2	52	42	26	27	0 00 33	38 72			
21	138	33.8		51.5	256 36.2	+25 59.0	54	19 52	39	21 49	17 30	21 75			
22	153	33.6		52.1	271 05.8	52.6	56	20 03	20 55	22 20	0 37 26	6 01 79			
23	168	33.4		52.6	285 35.6	46.1	58	15	21 14	23 25	1 02 21	5 37 84			
24	183	33.3	-19 53.2	300	05.4	+25 39.5	60 S	20 30	21 38	** ** *	1 36 11	5 03 95			

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO				
	PMG: 20 ^h 00 ^m 3		Mag: -4.7 PMG: 15 ^h 04 ^m		Mag: -2.0 PMG: 22 ^h 33 ^m		Mag: -1.7 PMG: 10 ^h 16 ^m		Mag: +0.2 PMG: 4 ^h 58 ^m				
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'			
0	59	06.5	133	52.9	-26	15.9	20	37.3	+15	21.2			
1	74	09.0	148	53.0		15.6	35	40.5		21.1			
2	89	11.4	163	53.1		15.3	50	43.6		21.0			
3	104	13.9	178	53.2		15.0	65	46.8		20.9			
4	119	16.4	193	53.3		14.7	80	49.9		20.8			
5	134	18.8	208	53.4	-26	14.4	95	53.1	+15	20.7			
6	149	21.3	223	53.5	-26	14.1	110	56.2	+15	20.7			
7	164	23.8	238	53.6		13.8	125	59.4		20.6			
8	179	26.2	253	53.7		13.5	141	02.5		20.5			
9	194	28.7	268	53.8		13.1	156	05.7		20.4			
10	209	31.2	283	53.9		12.8	171	08.8		20.3			
11	224	33.6	298	54.0	-26	12.5	186	12.0	+15	20.2			
12	239	36.1	313	54.2	-26	12.2	201	15.1	+15	20.2			
13	254	38.5	328	54.3		11.9	216	18.3		20.1			
14	269	41.0	343	54.4		11.6	231	21.4		20.0			
15	284	43.5	358	54.5		11.3	246	24.5		19.9			
16	299	45.9	13	54.6		11.0	261	27.7		19.8			
17	314	48.4	28	54.8	-26	10.7	276	30.8	+15	19.8			
18	329	50.9	43	54.9	-26	10.3	291	34.0	+15	19.7			
19	344	53.3	58	55.0		10.0	306	37.1		19.6			
20	359	55.8	73	55.2		09.7	321	40.2		19.5			
21	14	58.3	88	55.3		09.4	336	43.4		19.4			
22	30	00.7	103	55.4		09.1	351	46.5		19.4			
23	45	03.2	118	55.6		08.8	6	49.6		19.3			
24	60	05.7	133	55.7	-26	08.4	21	52.8	+15	19.2			
Dif	—		+1	+3		+31	-1		+20	-2	+25		

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'2 PMG: 11 ^h 45 ^m 9			Edad: 18 ^d 9 PHE { 4 ^h : 54'6 12 ^h : 54'5 20 ^h : 54'4 SD: 14'9 PMG: 4 ^h 08 ^m R°: 47 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m
0	183	33.3	-19	53.2	300	05.4	+25	39.5	68	60 N	6 29	7 22	8 13	19 28	92
1	198	33.1		53.7	314	35.3	109	32.7	68	58	23	13	8 00	19 47	86
2	213	33.0		54.3	329	05.3	110	25.9	68	56	19	7 05	7 49	20 03	81
3	228	32.8		54.8	343	35.4	111	18.9	70	54	14	6 58	39	17 77	12 56
4	243	32.7		55.4	358	05.6	112	11.9	70	52	10	52	30	29 74	44 19
5	258	32.5	-19	55.9	12	35.8	112	+25	04.7	72	50	6 06	6 46	7 22	20 39
6	273	32.4	-19	56.5	27	06.1	113	+24	57.4	73	45	5 57	6 33	7 06	21 01
7	288	32.2		57.0	41	36.5	114		50.0	74	40	49	23	6 52	19 63
8	303	32.0		57.6	56	07.0	115		42.5	75	35	42	13	40	34 59
9	318	31.9		58.1	70	37.6	116		34.8	77	30	35	6 04	30	21 46
10	333	31.7		58.7	85	08.2	116		27.1	77	20	22	5 49	6 12	22 08
11	348	31.6	-19	59.2	99	39.0	118	+24	19.3	78	10 N	5 09	5 35	5 57	22 27
12	3	31.4	-19	59.8	114	09.8	118	+24	11.3	80	0	4 55	5 20	5 42	22 44
13	18	31.3	-20	00.3	128	40.7	119	+24	03.3	80	10 S	39	5 05	28	23 02
14	33	31.1		00.9	143	11.7	120	+23	55.1	82	20	4 20	4 48	5 12	20 38
15	48	30.9		01.4	157	42.8	121		46.8	83	30	3 55	27	4 53	42 33
16	63	30.8		02.0	172	13.9	121		38.5	83	35	39	4 14	43	23 54
17	78	30.6	-20	02.5	186	45.1	122	+23	30.0	85	40	3 20	3 59	4 30	** ** *
18	93	30.5	-20	03.0	201	16.5	124	+23	21.5	85	45	2 56	3 41	4 15	** ** *
19	108	30.3		03.6	215	47.9	124		12.8	87	50	22	17	3 57	0 21
20	123	30.1		04.1	230	19.3	124	+23	04.1	87	52	2 04	3 05	49	33 23
21	138	30.0		04.7	244	50.9	126	+22	55.2	89	54	1 42	2 52	39	0 47
22	153	29.8		05.2	259	22.5	126		46.3	89	56	1 11	36	28	1 03
23	168	29.6		05.7	273	54.2	127		37.2	91	58	0 06	2 17	16	23 11
24	183	29.5	-20	06.3	288	26.0	128	+22	28.1	91	60 S	** ** *	1 53	3 01	1 47
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 19 ^h 56 ^m 3		Mag: -4.7 PMG: 15 ^h 04 ^m			Mag: -1.9 PMG: 22 ^h 28 ^m			Mag: -1.7 PMG: 10 ^h 13 ^m			Mag: +0.2 PMG: 4 ^h 54 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°
0	60	05.7	133	55.7	-26	08.4	21	52.8	+15	19.2	206	29.0	-12	23.3	286
1	75	08.1	148	55.8		08.1	36	55.9		19.1	221	30.9		23.4	301
2	90	10.6	163	56.0		07.8	51	59.0		19.0	236	32.9		23.6	316
3	105	13.0	178	56.1		07.5	67	02.1		19.0	251	34.8		23.8	331
4	120	15.5	193	56.3		07.2	82	05.3		18.9	266	36.8		24.0	346
5	135	18.0	208	56.4	-26	06.8	97	08.4	+15	18.8	281	38.7	-12	24.1	1
6	150	20.4	223	56.5	-26	06.5	112	11.5	+15	18.7	296	40.7	-12	24.3	16
7	165	22.9	238	56.7		06.2	127	14.6		18.6	311	42.7		24.5	31
8	180	25.4	253	56.8		05.9	142	17.7		18.6	326	44.6		24.7	46
9	195	27.8	268	57.0		05.5	157	20.9		18.5	341	46.6		24.8	61
10	210	30.3	283	57.1		05.2	172	24.0		18.4	356	48.5		25.0	76
11	225	32.8	298	57.3	-26	04.9	187	27.1	+15	18.3	11	50.5	-12	25.2	91
12	240	35.2	313	57.5	-26	04.6	202	30.2	+15	18.3	26	52.5	-12	25.3	106
13	255	37.7	328	57.6		04.2	217	33.3		18.2	41	54.4		25.5	121
14	270	40.1	343	57.8		03.9	232	36.4		18.1	56	56.4		25.7	136
15	285	42.6	358	57.9		03.6	247	39.5		18.0	71	58.3		25.9	151
16	300	45.1	13	58.1		03.2	262	42.7		18.0	87	00.3		26.0	166
17	315	47.5	28	58.3	-26	02.9	277	45.8	+15	17.9	102	02.3	-12	26.2	181
18	330	50.0	43	58.4	-26	02.6	292	48.9	+15	17.8	117	04.2	-12	26.4	196
19	345	52.5	58	58.6		02.2	307	52.0		17.7	132	06.2		26.5	211
20	0	54.9	73	58.8		01.9	322	55.1		17.7	147	08.1		26.7	226
21	15	57.4	88	58.9		01.6	337	58.2		17.6	162	10.1		26.9	242
22	30	59.9	103	59.1		01.2	353	01.3		17.5	177	12.1		27.0	257
23	46	02.3	118	59.3		00.9	8	04.4		17.4	192	14.0		27.2	272
24	61	04.8	133	59.5	-26	00.6	23	07.5	+15	17.4	207	16.0	-12	27.4	287
Dif	—		+2		+3		+31		-1		+20		-2		+25

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16°2			Edad: 19 ^d 9 PHE	SD: 14°8				Final del crepúsculo		Salida de Luna		Puesta de Luna	
	PMG: 11 ^h 46 ^m 2				PMG: 4 ^h 55 ^m				Final del crepúsculo		Salida de Luna		Puesta de Luna	
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	Rº	Hora	Rº
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	183	29.5	-20 06.3	288	26.0	+22 28.1	92	60 N	15 17	16 08	17 01	21 00 87	13 49 1	
1	198	29.3	06.8	302	57.9 ¹²⁹	18.9	92	58	30	17	07	13 83	35 5	
2	213	29.2	07.4	317	29.9 ¹³⁰	09.5	94	56	41	25	12	24 80	23 9	
3	228	29.0	07.9	332	01.9 ¹³⁰	+22 00.1	94	54	15 51	32	16	34 76	12 12	
4	243	28.8	08.4	346	34.0 ¹³¹	+21 50.6	95	52	16 00	38	20	43 73	13 03 14	
5	258	28.7	-20 09.0	1	06.2 ¹³²	+21 41.0	96	50	16 08	16 44	17 24	21 51 71	12 54 17	
6	273	28.5	-20 09.5	15	38.5 ¹³³	+21 31.4	96	45	16 25	16 57	17 33	22 08 65	12 36 22	
7	288	28.3	10.0	30	10.8 ¹³³	21.6	98	40	39	17 08	42	22 61	22 25	
8	303	28.2	10.6	44	43.3 ¹³⁵	11.7	99	35	16 51	18	49	33 58	12 09 28	
9	318	28.0	11.1	59	15.8 ¹³⁵	+21 01.8	99	30	17 01	27	17 56	22 43 55	11 58 31	
10	333	27.8	11.6	73	48.3 ¹³⁵	+20 51.8	100	20	19	43	18 10	23 00 51	39 36	
11	348	27.7	-20 12.2	88	21.0 ¹³⁷	+20 41.7	101	10 N	17 35	17 57	18 23	23 15 47	11 22 40	
12	3	27.5	-20 12.7	102	53.7 ¹³⁷	+20 31.5	102	0	17 50	18 12	18 37	23 29 43	11 06 44	
13	18	27.3	13.2	117	26.5 ¹³⁸	21.2	103	10 S	18 05	27	18 54	43 39	10 51 47	
14	33	27.2	13.8	131	59.4 ¹³⁹	10.9	103	20	21	18 45	19 13	23 58 34	34 51	
15	48	27.0	14.3	146	32.3 ¹³⁹	+20 00.4	105	30	40	19 06	38	** ** *	14 56	
16	63	26.8	14.8	161	05.4 ¹⁴¹	+19 49.9	105	35	18 51	19	19 54	** ** *	10 02 59	
17	78	26.7	-20 15.3	175	38.4 ¹⁴⁰	+19 39.3	106	40	19 03	19 35	20 14	0 08 28	9 49 62	
18	93	26.5	-20 15.9	190	11.6 ¹⁴²	+19 28.7	106	45	19 18	19 54	20 39	0 25 24	9 33 67	
19	108	26.3	16.4	204	44.8 ¹⁴²	17.9	108	50	37	20 18	21 13	46 19	14 71	
20	123	26.1	16.9	219	18.1 ¹⁴³	+19 07.1	108	52	46	30	32	0 56 16	9 05 74	
21	138	26.0	17.4	233	51.5 ¹⁴⁴	+18 56.2	109	54	19 56	20 43	21 56	1 07 13	8 54 77	
22	153	25.8	18.0	248	24.9 ¹⁴⁴	45.2	110	56	20 07	21 00	22 30	19 10	42 81	
23	168	25.6	18.5	262	58.4 ¹⁴⁵	34.2	110	58	20	20	** ** *	34 6	28 85	
24	183	25.5	-20 19.0	277	32.0 ¹⁴⁶	+18 23.1	111	60 S	20 35	21 45	** ** *	1 51 0	8 12 90	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 19 ^h 52 ^m 4		Mag: -4.8 PMG: 15 ^h 04 ^m			Mag: -1.9 PMG: 22 ^h 23 ^m			Mag: -1.7 PMG: 10 ^h 10 ^m			Mag: +0.2 PMG: 4 ^h 51 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	°	'	°	°	'	°	'	°	'
0	61	04.8	133	59.5	-26 00.6	23	07.5	+15 17.4	207	16.0	-12 27.4	287	09.5	+17 53.5
1	76	07.3	148	59.6	-26 00.2	38	10.6	17.3	222	17.9	27.6	302	12.0	53.5
2	91	09.7	163	59.8	-25 59.9	53	13.7	17.2	237	19.9	27.7	317	14.5	53.5
3	106	12.2	179	00.0	59.5	68	16.8	17.2	252	21.9	27.9	332	16.9	53.5
4	121	14.6	194	00.2	59.2	83	19.9	17.1	267	23.8	28.1	347	19.4	53.5
5	136	17.1	209	00.4	-25 58.9	98	23.0	+15 17.0	282	25.8	-12 28.2	2	21.8	+17 53.5
6	151	19.6	224	00.6	-25 58.5	113	26.1	+15 16.9	297	27.7	-12 28.4	17	24.3	+17 53.5
7	166	22.0	239	00.7	58.2	128	29.2	16.9	312	29.7	28.6	32	26.8	53.5
8	181	24.5	254	00.9	57.8	143	32.3	16.8	327	31.7	28.8	47	29.2	53.5
9	196	27.0	269	01.1	57.5	158	35.3	16.7	342	33.6	28.9	62	31.7	53.5
10	211	29.4	284	01.3	57.1	173	38.4	16.7	357	35.6	29.1	77	34.2	53.5
11	226	31.9	299	01.5	-25 56.8	188	41.5	+15 16.6	12	37.5	-12 29.3	92	36.6	+17 53.5
12	241	34.4	314	01.7	-25 56.4	203	44.6	+15 16.5	27	39.5	-12 29.4	107	39.1	+17 53.5
13	256	36.8	329	01.9	56.1	218	47.7	16.4	42	41.5	29.6	122	41.5	53.6
14	271	39.3	344	02.1	55.7	233	50.8	16.4	57	43.4	29.8	137	44.0	53.6
15	286	41.8	359	02.3	55.4	248	53.9	16.3	72	45.4	29.9	152	46.5	53.6
16	301	44.2	14	02.5	55.0	263	56.9	16.2	87	47.4	30.1	167	48.9	53.6
17	316	46.7	29	02.7	-25 54.7	279	00.0	+15 16.2	102	49.3	-12 30.3	182	51.4	+17 53.6
18	331	49.1	44	02.9	-25 54.3	294	03.1	+15 16.1	117	51.3	-12 30.5	197	53.9	+17 53.6
19	346	51.6	59	03.2	54.0	309	06.2	16.0	132	53.2	30.6	212	56.3	53.6
20	1	54.1	74	03.4	53.6	324	09.2	16.0	147	55.2	30.8	227	58.8	53.6
21	16	56.5	89	03.6	53.3	339	12.3	15.9	162	57.2	31.0	243	01.3	53.6
22	31	59.0	104	03.8	52.9	354	15.4	15.8	177	59.1	31.1	258	03.7	53.6
23	47	01.5	119	04.0	52.6	9	18.5	15.8	193	01.1	31.3	273	06.2	53.6
24	62	03.9	134	04.2	-25 52.2	24	21.5	+15 15.7	208	03.0	-12 31.5	288	08.7	+17 53.6
Dif	—		+2		+3	+31		-1	+20		-2	+25		0

ALMANAQUE NÁUTICO PERSEIS

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 11 ^h 46 ^m 7				Edad: 21 ^d 9 PHE { 4 ^h : 54:3 12 ^h : 54:4 20 ^h : 54:4 PMG: 6 ^h 22 ^m R°: 40 ^m												
	hG ☉	Dec	hG ☾	Dif	Dec	Dif	Civil	Náutico			Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	h m	h m	h m	h m	
0	183	21.2	-20	31.4	267	15.1	+13	36.8	60 N	15 13	16 05	16 59	23 52	83	13 49	**	
1	198	21.1		31.9	281	50.1 ¹⁶⁰		24.1 ¹²⁷	58	27	14	17 04	23 57	80	43	2	
2	213	20.9		32.4	296	25.0 ¹⁵⁹	+13	11.4 ¹²⁷	56	38	23	10	** ** *	**	38	5	
3	228	20.7		32.9	311	00.1 ¹⁶¹	+12	58.6 ¹²⁸	54	49	30	14	** ** *	**	33		
4	243	20.5		33.4	325	35.1 ¹⁶⁰		45.8 ¹²⁸	52	15 58	37	19	** ** *	**	29	9	
5	258	20.3	-20	33.9	340	10.2 ¹⁶¹	+12	33.0 ¹²⁸	50	16 06	16 43	17 23	** ** *	**	13 25	12	
6	273	20.2	-20	34.4	354	45.3 ¹⁶¹	+12	20.0 ¹³⁰	45	16 24	16 56	17 32	** ** *	**	13 16	17	
7	288	20.0		34.9	9	20.5 ¹⁶²	+12	07.1 ¹²⁹	40	38	17 07	41	** ** *	**	09	20	
8	303	19.8		35.4	23	55.7 ¹⁶²	+11	54.1 ¹³⁰	35	16 50	17	48	** ** *	**	13 03	23	
9	318	19.6		35.9	38	31.0 ¹⁶³		41.0 ¹³¹	30	17 01	26	17 56	** ** *	**	12 57	27	
10	333	19.4		36.4	53	06.2 ¹⁶²		27.9 ¹³¹	20	19	43	18 10	** ** *	**	48	31	
11	348	19.2	-20	36.9	67	41.6 ¹⁶⁴	+11	14.7 ¹³²	10 N	17 35	17 58	18 23	0 02	44	12 39	36	
12	3	19.1	-20	37.4	82	16.9 ¹⁶³	+11	01.5 ¹³²	0	17 50	18 12	18 38	0 12	40	12 31	40	
13	18	18.9		37.9	96	52.3 ¹⁶⁴	+10	48.3 ¹³²	10 S	18 06	28	18 55	22	36	23	45	
14	33	18.7		38.4	111	27.7 ¹⁶⁴		35.0 ¹³³	20	22	18 46	19 15	32	32	15	48	
15	48	18.5		38.9	126	03.1 ¹⁶⁴		21.7 ¹³³	30	41	19 08	40	44	28	12 05	54	
16	63	18.3		39.4	140	38.6 ¹⁶⁵	+10	08.3 ¹³⁴	35	18 53	21	19 56	51	25	11 59	57	
17	78	18.1	-20	39.9	155	14.1 ¹⁶⁵	+9	54.9 ¹³⁴	40	19 06	19 37	20 16	0 59	21	11 52	61	
18	93	18.0	-20	40.4	169	49.6 ¹⁶⁵	+9	41.4 ¹³⁵	45	19 21	19 56	20 42	1 08	18	11 45	64	
19	108	17.8		40.9	184	25.1 ¹⁶⁵		27.9 ¹³⁵	50	40	20 21	21 18	19	13	35	70	
20	123	17.6		41.4	199	00.7 ¹⁶⁶		14.4 ¹³⁵	52	49	34	21 37	25	10	31	72	
21	138	17.4		41.9	213	36.3 ¹⁶⁶	+9	00.8 ¹³⁶	54	19 59	20 48	22 03	30	8	26	74	
22	153	17.2		42.4	228	11.9 ¹⁶⁶	+8	47.2 ¹³⁶	56	20 11	21 05	22 40	36	6	21	77	
23	168	17.0		42.9	242	47.5 ¹⁶⁶		33.5 ¹³⁷	58	24	25	** ** *	43	3	15	80	
24	183	16.8	-20	43.4	257	23.1 ¹⁶⁶	+8	19.8 ¹³⁷	60 S	20 40	21 53	** ** *	1 51	**	11 08	84	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO								
	PMG: 19 ^h 44 ^m 6		Mag: -4.8 PMG: 15 ^h 03 ^m		Mag: -1.8 PMG: 22 ^h 13 ^m		Mag: -1.7 PMG: 10 ^h 03 ^m		Mag: +0.2 PMG: 4 ^h 43 ^m								
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec							
h	°	'	°	'	°	'	°	'	°	'							
0	63	03.1	134	10.0	25	34.8	208	50.1	289	07.9							
1	78	05.5	149	10.3	40	37.9	223	52.1	304	10.3							
2	93	08.0	164	10.6	55	40.9	238	54.1	319	12.8							
3	108	10.5	179	10.8	70	44.0	253	56.0	334	15.3							
4	123	12.9	194	11.1	85	47.0	268	58.0	349	17.8							
5	138	15.4	209	11.4	100	50.0	284	00.0	4	20.2							
6	153	17.9	224	11.6	115	53.1	299	01.9	19	22.7							
7	168	20.3	239	11.9	130	56.1	314	03.9	34	25.2							
8	183	22.8	254	12.2	145	59.1	329	05.8	49	27.6							
9	198	25.2	269	12.5	161	02.1	344	07.8	64	30.1							
10	213	27.7	284	12.8	176	05.2	359	09.8	79	32.6							
11	228	30.2	299	13.0	191	08.2	14	11.7	94	35.1							
12	243	32.6	314	13.3	206	11.2	29	13.7	109	37.5							
13	258	35.1	329	13.6	221	14.2	44	15.7	124	40.0							
14	273	37.6	344	13.9	236	17.3	59	17.6	139	42.5							
15	288	40.0	359	14.2	251	20.3	74	19.6	154	44.9							
16	303	42.5	14	14.5	266	23.3	89	21.5	169	47.4							
17	318	45.0	29	14.8	281	26.3	104	23.5	184	49.9							
18	333	47.4	44	15.1	296	29.3	119	25.5	199	52.4							
19	348	49.9	59	15.4	311	32.4	134	27.4	214	54.8							
20	3	52.4	74	15.7	326	35.4	149	29.4	229	57.3							
21	18	54.8	89	16.0	341	38.4	164	31.4	244	59.8							
22	33	57.3	104	16.3	356	41.4	179	33.3	260	02.3							
23	48	59.7	119	16.6	11	44.4	194	35.3	275	04.7							
24	64	02.2	134	16.9	26	47.4	209	37.3	290	07.2							
Dif	—		+3	+4	+30	-1	+20	-2	+25	0							

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna								
	SD: 16'2 PMG: 11 ^h 47 ^m 0			Edad: 22 ^d 9 PHE { 4 ^h : 54'5 12 ^h : 54'7 20 ^h : 54'8 SD: 14'8 PMG: 7 ^h 02 ^m R°: 40 ^m																	
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°						
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m					
0	183	16.8	-20	43.4	257	23.1	+8	19.8	60 N	6	36	7	30	8	22	** ** *	13	48	**		
1	198	16.6		43.9	271	58.8 ¹⁶⁷	+8	06.1 ¹³⁷	58	30	20	8	08	** ** *		45	2				
2	213	16.5		44.4	286	34.5 ¹⁶⁷	+7	52.3 ¹³⁸	56	25	12	7	56	0	01	77	43	4			
3	228	16.3		44.8	301	10.2 ¹⁶⁷		38.5 ¹³⁸	54	20	7	05	46		05	74	40				
4	243	16.1		45.3	315	45.9 ¹⁶⁷		24.7 ¹³⁸	52	16	6	58	37		08	72	38	10			
5	258	15.9	-20	45.8	330	21.6 ¹⁶⁷	+7	10.8 ¹³⁹	50	6	11	6	52	7	28	0	11	70	13	37	11
6	273	15.7	-20	46.3	344	57.3 ¹⁶⁷	+6	56.9 ¹³⁹	45	6	02	6	38	7	11	0	18	65	13	33	15
7	288	15.5		46.8	359	33.1 ¹⁶⁸		42.9 ¹⁴⁰	40	5	53	27	6	56		24	60		29	20	
8	303	15.3		47.3	14	08.8 ¹⁶⁷		29.0 ¹³⁹	35	46	17	44				28	57		26	23	
9	318	15.1		47.8	28	44.6 ¹⁶⁸		15.0 ¹⁴⁰	30	38	6	08	33			33	54		24	26	
10	333	14.9		48.3	43	20.4 ¹⁶⁸	+6	00.9 ¹⁴¹	20	24	5	51	6	15		40	49		19	31	
11	348	14.7	-20	48.7	57	56.1 ¹⁶⁷	+5	46.9 ¹⁴⁰	10 N	5	10	5	36	5	59	0	46	44	13	15	36
12	3	14.6	-20	49.2	72	31.9 ¹⁶⁸	+5	32.8 ¹⁴¹	0	4	56	5	21	5	43	0	52	40	13	11	40
13	18	14.4		49.7	87	07.7 ¹⁶⁸		18.7 ¹⁴¹	10 S	39	5	05	28			0	58	36		08	44
14	33	14.2		50.2	101	43.5 ¹⁶⁸	+5	04.5 ¹⁴²	20	4	19	4	47	5	11	1	04	32	13	03	49
15	48	14.0		50.7	116	19.3 ¹⁶⁸	+4	50.3 ¹⁴²	30	3	53	25	4	52		12	26		12	59	54
16	63	13.8		51.2	130	55.1 ¹⁶⁸		36.1 ¹⁴²	35	37	4	12	41			16	23		56	57	
17	78	13.6	-20	51.6	145	30.9 ¹⁶⁸	+4	21.9 ¹⁴²	40	3	17	3	56	4	28	1	20	20	12	53	61
18	93	13.4	-20	52.1	160	06.6 ¹⁶⁷	+4	07.7 ¹⁴²	45	2	51	3	37	4	12	1	26	16	12	49	65
19	108	13.2		52.6	174	42.4 ¹⁶⁸	+3	53.4 ¹⁴³	50	2	15	12	3	53		32	12		45	69	
20	123	13.0		53.1	189	18.2 ¹⁶⁸		39.1 ¹⁴³	52	1	56	3	00	44		35	9		43	72	
21	138	12.8		53.5	203	54.0 ¹⁶⁸		24.7 ¹⁴⁴	54	1	31	2	45	34		38	7		40	75	
22	153	12.6		54.0	218	29.8 ¹⁶⁸	+3	10.4 ¹⁴³	56	0	53	29	22			42	4		38	77	
23	168	12.4		54.5	233	05.5 ¹⁶⁷	+2	56.0 ¹⁴⁴	58	** ** *	2	08	3	09		46	1		35	80	
24	183	12.2	-20	55.0	247	41.3 ¹⁶⁸	+2	41.6 ¹⁴⁴	60 S	** ** *	1	41	2	53		1	50	**	12	32	84
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO								
	PMG: 19 ^h 40 ^m 6			Mag: -4.8 PMG: 15 ^h 03 ^m			Mag: -1.8 PMG: 22 ^h 08 ^m			Mag: -1.7 PMG: 10 ^h 00 ^m			Mag: +0.2 PMG: 4 ^h 39 ^m								
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'					
0	64	02.2	134	16.9	-25	34.3	26	47.4	+15	12.8	209	37.3	-12	39.6	290	07.2	+17	54.0			
1	79	04.7	149	17.2		33.9	41	50.4		12.8	224	39.2		39.7	305	09.7		54.0			
2	94	07.1	164	17.5		33.5	56	53.4		12.7	239	41.2		39.9	320	12.2		54.0			
3	109	09.6	179	17.8		33.1	71	56.4		12.7	254	43.2		40.1	335	14.6		54.1			
4	124	12.1	194	18.1		32.7	86	59.4		12.6	269	45.1		40.2	350	17.1		54.1			
5	139	14.5	209	18.5	-25	32.3	102	02.4	+15	12.6	284	47.1	-12	40.4	5	19.6	+17	54.1			
6	154	17.0	224	18.8	-25	31.9	117	05.4	+15	12.5	299	49.0	-12	40.6	20	22.1	+17	54.1			
7	169	19.5	239	19.1		31.5	132	08.4		12.5	314	51.0		40.7	35	24.5		54.1			
8	184	21.9	254	19.4		31.1	147	11.4		12.4	329	53.0		40.9	50	27.0		54.1			
9	199	24.4	269	19.8		30.7	162	14.4		12.4	344	54.9		41.1	65	29.5		54.1			
10	214	26.8	284	20.1		30.3	177	17.4		12.3	359	56.9		41.3	80	32.0		54.1			
11	229	29.3	299	20.4	-25	29.9	192	20.4	+15	12.3	14	58.9	-12	41.4	95	34.4	+17	54.1			
12	244	31.8	314	20.7	-25	29.5	207	23.4	+15	12.2	30	00.8	-12	41.6	110	36.9	+17	54.1			
13	259	34.2	329	21.1		29.1	222	26.4		12.2	45	02.8		41.8	125	39.4		54.2			
14	274	36.7	344	21.4		28.7	237	29.4		12.1	60	04.8		41.9	140	41.9		54.2			
15	289	39.2	359	21.7		28.3	252	32.4		12.1	75	06.7		42.1	155	44.4		54.2			
16	304	41.6	14	22.1		27.9	267	35.4		12.0	90	08.7		42.3	170	46.8		54.2			
17	319	44.1	29	22.4	-25	27.5	282	38.3	+15	12.0	105	10.7	-12	42.4	185	49.3	+17	54.2			
18	334	46.6	44	22.8	-25	27.1	297	41.3	+15	11.9	120	12.6	-12	42.6	200	51.8	+17	54.2			
19	349	49.0	59	23.1		26.7	312	44.3		11.9	135	14.6		42.8	215	54.3		54.2			
20	4	51.5	74	23.5		26.3	327	47.3		11.8	150	16.6		42.9	230	56.7		54.2			
21	19	54.0	89	23.8		25.9	342	50.3		11.8	165	18.5		43.1	245	59.2		54.2			
22	34	56.4	104	24.2		25.5	357	53.3		11.7	180	20.5		43.3	261	01.7		54.3			
23	49	58.9	119	24.5		25.1	12	56.2		11.7	195	22.5		43.4	276	04.2		54.3			
24	65	01.3	134	24.9	-25	24.7	27	59.2	+15	11.6	210	24.4	-12	43.6	291	06.7	+17	54.3			
Dif	—		+3		+4		+30		0		+20		-2		+25						

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna											
	SD: 16'2 PMG: 11 ^h 47 ^m 3			Edad: 23 ^d 9 PHE { SD: 14'9 PMG: 7 ^h 42 ^m																				
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°									
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m		h m m										
0	183	12.2	-20	55.0	247	41.3	+2	41.6	60 N	15 10	16 02	16 56	1 15 85	13 46	**									
1	198	12.0		55.5	262	17.0 ¹⁶⁷		27.2 ¹⁴⁴	58	24	12	17 02	17 81	47	2									
2	213	11.8		55.9	276	52.8 ¹⁶⁸	+2	12.8 ¹⁴⁴	56	36	21	08	18 78	47	5									
3	228	11.6		56.4	291	28.5 ¹⁶⁷	+1	58.3 ¹⁴⁵	54	47	28	13	19 75	47	8									
4	243	11.4		56.9	306	04.2 ¹⁶⁷		43.8 ¹⁴⁵	52	15 56	35	17	20 73	48	9									
5	258	11.2	-20	57.3	320	39.9 ¹⁶⁷	+1	29.4 ¹⁴⁴	50	16 04	16 41	17 22	1 21 70	13 48	12									
6	273	11.0	-20	57.8	335	15.6 ¹⁶⁷	+1	14.8 ¹⁴⁶	45	16 22	16 55	17 31	1 23 65	13 48	17									
7	288	10.8		58.3	349	51.2 ¹⁶⁶	+1	00.3 ¹⁴⁵	40	37	17 07	40	24 62	49	20									
8	303	10.7		58.8	4	26.8 ¹⁶⁶	+0	45.8 ¹⁴⁵	35	16 49	17	48	25 58	49	24									
9	318	10.5		59.2	19	02.5 ¹⁶⁷		31.2 ¹⁴⁶	30	17 00	26	17 55	27 54	50	26									
10	333	10.3	-20	59.7	33	38.1 ¹⁶⁶		16.7 ¹⁴⁵	20	19	43	18 10	29 49	50	32									
11	348	10.1	-21	00.2	48	13.6 ¹⁶⁵	+0	02.1 ¹⁴⁶	10 N	17 35	17 58	18 24	1 30 45	13 51	37									
12	3	09.9	-21	00.6	62	49.2 ¹⁶⁶	-0	12.5 ¹⁴⁶	0	17 51	18 13	18 39	1 32 41	13 51	41									
13	18	09.7		01.1	77	24.7 ¹⁶⁵		27.1 ¹⁴⁶	10 S	18 07	29	18 56	34 36	52	45									
14	33	09.5		01.6	92	00.2 ¹⁶⁵		41.8 ¹⁴⁷	20	24	18 48	19 16	36 31	52	51									
15	48	09.3		02.0	106	35.7 ¹⁶⁵	-0	56.4 ¹⁴⁶	30	43	19 10	42	38 26	53	55									
16	63	09.1		02.5	121	11.1 ¹⁶⁴	-1	11.0 ¹⁴⁶	35	18 55	23	19 59	39 23	53	59									
17	78	08.8	-21	03.0	135	46.6 ¹⁶⁵	-1	25.7 ¹⁴⁷	40	19 08	19 39	20 19	1 40 20	13 54	62									
18	93	08.6	-21	03.4	150	21.9 ¹⁶³	-1	40.3 ¹⁴⁶	45	19 24	19 59	20 45	1 42 16	13 54	66									
19	108	08.4		03.9	164	57.3 ¹⁶⁴	-1	55.0 ¹⁴⁷	50	43	20 25	21 22	44 11	54	72									
20	123	08.2		04.3	179	32.6 ¹⁶³	-2	09.7 ¹⁴⁷	52	19 52	37	21 43	44 10	55	73									
21	138	08.0		04.8	194	07.9 ¹⁶³		24.3 ¹⁴⁶	54	20 03	20 52	22 09	45 7	55	76									
22	153	07.8		05.3	208	43.2 ¹⁶³		39.0 ¹⁴⁷	56	15	21 10	22 52	46 5	55	79									
23	168	07.6		05.7	223	18.4 ¹⁶²	-2	53.7 ¹⁴⁷	58	28	21 31	** **	47 2	55	83									
24	183	07.4	-21	06.2	237	53.5 ¹⁶¹	-3	08.4 ¹⁴⁷	60 S	20 45	22 00	** **	1 49 **	13 56	86									
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO											
	PMG: 19 ^h 36 ^m 7			Mag: -4.8 PMG: 15 ^h 02 ^m			Mag: -1.8 PMG: 22 ^h 04 ^m			Mag: -1.7 PMG: 9 ^h 57 ^m			Mag: +0.2 PMG: 4 ^h 35 ^m											
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec										
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'								
0	65	01.3	134	24.9	-25	24.7	27	59.2	+15	11.6	210	24.4	-12	43.6	291	06.7	+17	54.3						
1	80	03.8	149	25.2		24.3	43	02.2		11.6	225	26.4		43.8	306	09.1		54.3						
2	95	06.3	164	25.6		23.8	58	05.2		11.5	240	28.4		43.9	321	11.6		54.3						
3	110	08.7	179	25.9		23.4	73	08.1		11.5	255	30.3		44.1	336	14.1		54.3						
4	125	11.2	194	26.3		23.0	88	11.1		11.5	270	32.3		44.3	351	16.6		54.3						
5	140	13.7	209	26.7	-25	22.6	103	14.1	+15	11.4	285	34.3	-12	44.4	6	19.1	+17	54.3						
6	155	16.1	224	27.0	-25	22.2	118	17.0	+15	11.4	300	36.2	-12	44.6	21	21.5	+17	54.3						
7	170	18.6	239	27.4		21.8	133	20.0		11.3	315	38.2		44.8	36	24.0		54.4						
8	185	21.1	254	27.8		21.4	148	23.0		11.3	330	40.1		44.9	51	26.5		54.4						
9	200	23.5	269	28.2		21.0	163	25.9		11.2	345	42.1		45.1	66	29.0		54.4						
10	215	26.0	284	28.5		20.5	178	28.9		11.2	0	44.1		45.3	81	31.5		54.4						
11	230	28.4	299	28.9	-25	20.1	193	31.9	+15	11.2	15	46.0	-12	45.4	96	33.9	+17	54.4						
12	245	30.9	314	29.3	-25	19.7	208	34.8	+15	11.1	30	48.0	-12	45.6	111	36.4	+17	54.4						
13	260	33.4	329	29.7		19.3	223	37.8		11.1	45	50.0		45.8	126	38.9		54.4						
14	275	35.8	344	30.1		18.9	238	40.7		11.0	60	51.9		45.9	141	41.4		54.4						
15	290	38.3	359	30.4		18.5	253	43.7		11.0	75	53.9		46.1	156	43.9		54.4						
16	305	40.8	14	30.8		18.0	268	46.6		10.9	90	55.9		46.2	171	46.4		54.5						
17	320	43.2	29	31.2	-25	17.6	283	49.6	+15	10.9	105	57.8	-12	46.4	186	48.8	+17	54.5						
18	335	45.7	44	31.6	-25	17.2	298	52.6	+15	10.9	120	59.8	-12	46.6	201	51.3	+17	54.5						
19	350	48.2	59	32.0		16.8	313	55.5		10.8	136	01.8		46.7	216	53.8		54.5						
20	5	50.6	74	32.4		16.4	328	58.5		10.8	151	03.7		46.9	231	56.3		54.5						
21	20	53.1	89	32.8		15.9	344	01.4		10.7	166	05.7		47.1	246	58.8		54.5						
22	35	55.6	104	33.2		15.5	359	04.3		10.7	181	07.7		47.2	262	01.3		54.5						
23	50	58.0	119	33.6		15.1	14	07.3		10.7	196	09.7		47.4	277	03.7		54.5						
24	66	00.5	134	34.0	-25	14.7	29	10.2	+15	10.6	211	11.6	-12	47.6	292	06.2	+17	54.6						
Dif	—			+4			+30			0			+20			-2			+25			0		

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna								
	SD: 16'2 PMG: 11 ^h 47 ^m 7			Edad: 24 ^d 9 PHE { 4 ^h : 55'5 12 ^h : 55'7 20 ^h : 55'9 SD: 15'1 PMG: 8 ^h 22 ^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	07.4	-21	06.2	237	53.5	-3	08.4	60 N	6	39	7	34	8	27	2	40	88			
1	198	07.2		06.6	252	28.7 ¹⁶²		23.1 ¹⁴⁷	58	33		24	12		38	84	49	2			
2	213	07.0		07.1	267	03.8 ¹⁶¹		37.8 ¹⁴⁷	56	28		15	8	00	36	81	52	6			
3	228	06.8		07.6	281	38.8 ¹⁶⁰	-3	52.5 ¹⁴⁷	54	23		08	7	49	34	78	55	8			
4	243	06.6		08.0	296	13.8 ¹⁶⁰	-4	07.1 ¹⁴⁶	52	18		7	01	40	33	75	13	57	11		
5	258	06.4	-21	08.5	310	48.8 ¹⁶⁰	-4	21.8 ¹⁴⁷	50	6	14	6	54	7	31	2	31	73	14	00	13
6	273	06.2	-21	08.9	325	23.7 ¹⁵⁹	-4	36.5 ¹⁴⁷	45	6	04	6	40	7	13	2	28	68	14	05	18
7	288	06.0		09.4	339	58.6 ¹⁵⁹	-4	51.2 ¹⁴⁷	40	5	55		29	6	58	26	63		09	23	
8	303	05.8		09.8	354	33.4 ¹⁵⁸	-5	05.9 ¹⁴⁷	35		47		18	46		23	60		13	26	
9	318	05.6		10.3	9	08.2 ¹⁵⁸		20.6 ¹⁴⁷	30		40	6	09	35		21	57		16	29	
10	333	05.4		10.7	23	42.9 ¹⁵⁷		35.2 ¹⁴⁶	20		25	5	53	16		18	52		22	35	
11	348	05.2	-21	11.2	38	17.6 ¹⁵⁷	-5	49.9 ¹⁴⁷	10 N	5	11	5	37	6	00	2	15	47	14	28	39
12	3	05.0	-21	11.6	52	52.2 ¹⁵⁶	-6	04.6 ¹⁴⁷	0	4	56	5	22	5	44	2	13	42	14	32	44
13	18	04.8		12.1	67	26.7 ¹⁵⁵		19.2 ¹⁴⁶	10 S		39	5	06	28		10	38		37	48	
14	33	04.5		12.5	82	01.2 ¹⁵⁵		33.9 ¹⁴⁷	20	4	19	4	47	5	11	07	33		43	52	
15	48	04.3		13.0	96	35.7 ¹⁵⁵	-6	48.5 ¹⁴⁶	30	3	53	25		4	52	04	28		48	59	
16	63	04.1		13.4	111	10.1 ¹⁵⁴	-7	03.1 ¹⁴⁶	35	36		4	11	40		02	25		52	61	
17	78	03.9	-21	13.9	125	44.4 ¹⁵³	-7	17.7 ¹⁴⁶	40	3	16	3	55	4	27	2	00	21	14	56	65
18	93	03.7	-21	14.3	140	18.6 ¹⁵²	-7	32.3 ¹⁴⁶	45	2	49	3	35	4	11	1	58	17	15	00	70
19	108	03.5		14.8	154	52.8 ¹⁵²	-7	46.9 ¹⁴⁶	50	2	12	3	10	3	52	55	13		06	75	
20	123	03.3		15.2	169	27.0 ¹⁵²	-8	01.4 ¹⁴⁵	52	1	52	2	57	42		54	10		08	78	
21	138	03.1		15.7	184	01.1 ¹⁵¹		16.0 ¹⁴⁶	54	1	25		43	32		52	8		11	80	
22	153	02.9		16.1	198	35.1 ¹⁵⁰		30.5 ¹⁴⁵	56		0	43	25	20		51	5		14	84	
23	168	02.7		16.6	213	09.0 ¹⁴⁹		45.0 ¹⁴⁵	58	** **	2	03	3	06		49	3		18	87	
24	183	02.4	-21	17.0	227	42.9 ¹⁴⁹	-8	59.5 ¹⁴⁵	60 S	** **	1	35	2	50		1	47	**	15	22	91

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 19 ^h 32 ^m 8		Mag: -4.8 PMG: 15 ^h 01 ^m		Mag: -1.7 PMG: 21 ^h 59 ^m		Mag: -1.7 PMG: 9 ^h 54 ^m		Mag: +0.2 PMG: 4 ^h 31 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	66	00.5	134	34.0	-25	14.7	29	10.2	+15	10.6	211	11.6	-12	47.6	292	06.2	+17	54.6
1	81	02.9	149	34.4		14.3	44	13.2		10.6	226	13.6		47.7	307	08.7		54.6
2	96	05.4	164	34.8		13.8	59	16.1		10.6	241	15.6		47.9	322	11.2		54.6
3	111	07.9	179	35.2		13.4	74	19.1		10.5	256	17.5		48.1	337	13.7		54.6
4	126	10.3	194	35.6		13.0	89	22.0		10.5	271	19.5		48.2	352	16.2		54.6
5	141	12.8	209	36.0	-25	12.6	104	24.9	+15	10.4	286	21.5	-12	48.4	7	18.7	+17	54.6
6	156	15.3	224	36.5	-25	12.1	119	27.9	+15	10.4	301	23.4	-12	48.6	22	21.1	+17	54.6
7	171	17.7	239	36.9		11.7	134	30.8		10.4	316	25.4		48.7	37	23.6		54.6
8	186	20.2	254	37.3		11.3	149	33.7		10.3	331	27.4		48.9	52	26.1		54.6
9	201	22.7	269	37.7		10.8	164	36.7		10.3	346	29.3		49.1	67	28.6		54.7
10	216	25.1	284	38.1		10.4	179	39.6		10.3	1	31.3		49.2	82	31.1		54.7
11	231	27.6	299	38.6	-25	10.0	194	42.5	+15	10.2	16	33.3	-12	49.4	97	33.6	+17	54.7
12	246	30.1	314	39.0	-25	09.6	209	45.4	+15	10.2	31	35.2	-12	49.6	112	36.1	+17	54.7
13	261	32.5	329	39.4		09.1	224	48.4		10.2	46	37.2		49.7	127	38.5		54.7
14	276	35.0	344	39.9		08.7	239	51.3		10.1	61	39.2		49.9	142	41.0		54.7
15	291	37.4	359	40.3		08.3	254	54.2		10.1	76	41.1		50.0	157	43.5		54.7
16	306	39.9	14	40.7		07.8	269	57.1		10.1	91	43.1		50.2	172	46.0		54.8
17	321	42.4	29	41.2	-25	07.4	285	00.1	+15	10.0	106	45.1	-12	50.4	187	48.5	+17	54.8
18	336	44.8	44	41.6	-25	07.0	300	03.0	+15	10.0	121	47.0	-12	50.5	202	51.0	+17	54.8
19	351	47.3	59	42.1		06.5	315	05.9		10.0	136	49.0		50.7	217	53.5		54.8
20	6	49.8	74	42.5		06.1	330	08.8		09.9	151	51.0		50.9	232	56.0		54.8
21	21	52.2	89	43.0		05.6	345	11.7		09.9	166	52.9		51.0	247	58.4		54.8
22	36	54.7	104	43.4		05.2	0	14.6		09.9	181	54.9		51.2	263	00.9		54.8
23	51	57.2	119	43.9		04.8	15	17.6		09.8	196	56.9		51.4	278	03.4		54.8
24	66	59.6	134	44.3	-25	04.3	30	20.5	+15	09.8	211	58.9	-12	51.5	293	05.9	+17	54.9
Dif	—		+4		+4		+29		0		+20		-2		+25			

UT	SOL				● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16°2 PMG: 11 ^h 48 ^m 0				Edad: 25 ^d 9 PHE { 4 ^h : 56°2 12 ^h : 56°4 20 ^h : 56°7 SD: 15°3 PMG: 9 ^h 05 ^m R°: 46 ^m													
	hG ☉		Dec		hG ☾		Dif				Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m		
0	183	02.4	-21	17.0	227	42.9	-8	59.5	60 N	15 07	16 00	16 54	4 08 95	13 44	0			
1	198	02.2		17.4	242	16.7 ¹⁴⁸	-9	14.0 ¹⁴⁵	58	21	10	17 01	4 02 91	51	4			
2	213	02.0		17.9	256	50.4 ¹⁴⁷		28.4 ¹⁴⁴	56	34	19	06	3 57 86	13 58	7			
3	228	01.8		18.3	271	24.1 ¹⁴⁷		42.9 ¹⁴⁵	54	45	26	11	52 83	14 03	11			
4	243	01.6		18.8	285	57.6 ¹⁴⁵	-9	57.3 ¹⁴⁴	52	15 54	34	16	48 80	08	14			
5	258	01.4	-21	19.2	300	31.1 ¹⁴⁵	-10	11.6 ¹⁴³	50	16 03	16 40	17 21	3 44 78	14 13	16			
6	273	01.2	-21	19.6	315	04.6 ¹⁴⁵	-10	26.0 ¹⁴⁴	45	16 21	16 54	17 31	3 36 72	14 23	22			
7	288	01.0		20.1	329	37.9 ¹⁴³		40.3 ¹⁴³	40	36	17 06	39	29 67	32	26			
8	303	00.7		20.5	344	11.2 ¹⁴³	-10	54.6 ¹⁴³	35	16 49	16	48	23 64	39	30			
9	318	00.5		21.0	358	44.4 ¹⁴²	-11	08.8 ¹⁴²	30	17 00	26	17 55	18 60	45	33			
10	333	00.3		21.4	13	17.5 ¹⁴¹		23.1 ¹⁴³	20	19	43	18 10	10 54	14 57	38			
11	348	00.1	-21	21.8	27	50.5 ¹⁴⁰	-11	37.3 ¹⁴²	10 N	17 36	17 58	18 24	3 02 50	15 07	42			
12	2	59.9	-21	22.3	42	23.5 ¹⁴⁰	-11	51.4 ¹⁴¹	0	17 52	18 14	18 40	2 55 45	15 16	47			
13	17	59.7		22.7	56	56.3 ¹³⁸	-12	05.6 ¹⁴²	10 S	18 08	30	18 57	48 40	25	52			
14	32	59.5		23.1	71	29.1 ¹³⁸		19.7 ¹⁴¹	20	25	18 49	19 18	40 36	35	57			
15	47	59.2		23.6	86	01.8 ¹³⁷		33.7 ¹⁴⁰	30	45	19 12	19 44	32 30	47	62			
16	62	59.0		24.0	100	34.4 ¹³⁶	-12	47.7 ¹⁴⁰	35	18 56	25	20 01	27 28	15 53	66			
17	77	58.8	-21	24.4	115	06.9 ¹³⁵	-13	01.7 ¹⁴⁰	40	19 10	19 42	20 22	2 21 24	16 01	69			
18	92	58.6	-21	24.9	129	39.3 ¹³⁴	-13	15.6 ¹³⁹	45	19 26	20 02	20 49	2 15 20	16 10	73			
19	107	58.4		25.3	144	11.6 ¹³³		29.5 ¹³⁹	50	46	28	21 27	08 14	21	79			
20	122	58.2		25.7	158	43.8 ¹³²		43.4 ¹³⁹	52	19 56	41	21 48	04 13	26	82			
21	137	57.9		26.1	173	15.9 ¹³¹	-13	57.2 ¹³⁸	54	20 06	20 56	22 16	2 00 10	31	85			
22	152	57.7		26.6	187	48.0 ¹³¹	-14	10.9 ¹³⁷	56	18	21 14	23 05	1 56 7	38	88			
23	167	57.5		27.0	202	19.9 ¹²⁹		24.6 ¹³⁷	58	33	21 37	** ** *	52 3	45	92			
24	182	57.3	-21	27.4	216	51.8 ¹²⁹	-14	38.3 ¹³⁷	60 S	20 49	22 07	** ** *	1 46 0	16 53	97			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 19 ^h 28 ^m 8		Mag: -4.8 PMG: 15 ^h 01 ^m				Mag: -1.7 PMG: 21 ^h 54 ^m				Mag: -1.7 PMG: 9 ^h 51 ^m				Mag: +0.2 PMG: 4 ^h 27 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	66	59.6	134	44.3	-25	04.3	30	20.5	+15	09.8	211	58.9	-12	51.5	293	05.9	+17	54.9
1	82	02.1	149	44.8		03.9	45	23.4		09.8	227	00.8		51.7	308	08.4		54.9
2	97	04.5	164	45.2		03.5	60	26.3		09.7	242	02.8		51.9	323	10.9		54.9
3	112	07.0	179	45.7		03.0	75	29.2		09.7	257	04.8		52.0	338	13.4		54.9
4	127	09.5	194	46.2		02.6	90	32.1		09.7	272	06.7		52.2	353	15.9		54.9
5	142	11.9	209	46.6	-25	02.1	105	35.0	+15	09.7	287	08.7	-12	52.4	8	18.4	+17	54.9
6	157	14.4	224	47.1	-25	01.7	120	37.9	+15	09.6	302	10.7	-12	52.5	23	20.8	+17	54.9
7	172	16.9	239	47.6		01.2	135	40.8		09.6	317	12.6		52.7	38	23.3		55.0
8	187	19.3	254	48.0		00.8	150	43.7		09.6	332	14.6		52.8	53	25.8		55.0
9	202	21.8	269	48.5	-25	00.4	165	46.6		09.5	347	16.6		53.0	68	28.3		55.0
10	217	24.3	284	49.0	-24	59.9	180	49.5		09.5	2	18.5		53.2	83	30.8		55.0
11	232	26.7	299	49.5	-24	59.5	195	52.4	+15	09.5	17	20.5	-12	53.3	98	33.3	+17	55.0
12	247	29.2	314	49.9	-24	59.0	210	55.3	+15	09.5	32	22.5	-12	53.5	113	35.8	+17	55.0
13	262	31.7	329	50.4		58.6	225	58.2		09.4	47	24.5		53.7	128	38.3		55.0
14	277	34.1	344	50.9		58.1	241	01.1		09.4	62	26.4		53.8	143	40.8		55.1
15	292	36.6	359	51.4		57.7	256	03.9		09.4	77	28.4		54.0	158	43.3		55.1
16	307	39.0	14	51.9		57.2	271	06.8		09.4	92	30.4		54.2	173	45.8		55.1
17	322	41.5	29	52.4	-24	56.8	286	09.7	+15	09.3	107	32.3	-12	54.3	188	48.2	+17	55.1
18	337	44.0	44	52.9	-24	56.3	301	12.6	+15	09.3	122	34.3	-12	54.5	203	50.7	+17	55.1
19	352	46.4	59	53.4		55.9	316	15.5		09.3	137	36.3		54.6	218	53.2		55.1
20	7	48.9	74	53.9		55.4	331	18.4		09.3	152	38.2		54.8	233	55.7		55.1
21	22	51.4	89	54.4		55.0	346	21.3		09.2	167	40.2		55.0	248	58.2		55.2
22	37	53.8	104	54.9		54.5	1	24.1		09.2	182	42.2		55.1	264	00.7		55.2
23	52	56.3	119	55.4		54.1	16	27.0		09.2	197	44.2		55.3	279	03.2		55.2
24	67	58.8	134	55.9	-24	53.6	31	29.9	+15	09.2	212	46.1	-12	55.5	294	05.7	+17	55.2
Dif	—		+5		+4		+29		0		+20		-2		+25		0	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16:2 PMG: 11 ^h 48 ^m 4			Edad: 26 ^d 9 PHE { SD: 15:5 PMG: 9 ^h 51 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº
h	°	'	°	°	'	°	'	h	m	h	m	h	m	h	m
0	182	57.3	-21 27.4	216	51.8	-14 38.3	60 N	6 43	7 37	8 31	5 43	103	13 44	1	
1	197	57.1	27.8	231	23.5 ¹²⁷	-14 51.9 ¹³⁶	58	36	27	16	33	96	13 55	8	
2	212	56.8	28.3	245	55.1 ¹²⁶	-15 05.4 ¹³⁵	56	31	18	8 04	23	92	14 05	12	
3	227	56.6	28.7	260	26.7 ¹²⁶	18.9 ¹³⁵	54	26	11	7 53	15	88	14	16	
4	242	56.4	29.1	274	58.1 ¹²⁴	32.4 ¹³⁵	52	21	7 03	43	08	85	22	19	
5	257	56.2	-21 29.5	289	29.4 ¹²³	-15 45.7 ¹³³	50	6 16	6 57	7 34	5 02	81	14 29	22	
6	272	56.0	-21 30.0	304	00.7 ¹²³	-15 59.1 ¹³⁴	45	6 06	6 43	7 16	4 48	75	14 45	28	
7	287	55.7	30.4	318	31.8 ¹²¹	-16 12.3 ¹³²	40	5 57	31	7 01	36	71	14 58	32	
8	302	55.5	30.8	333	02.8 ¹²⁰	25.5 ¹³²	35	49	20	6 48	27	67	15 09	35	
9	317	55.3	31.2	347	33.7 ¹¹⁹	38.7 ¹³²	30	41	6 11	37	18	64	18	39	
10	332	55.1	31.6	2	04.5 ¹¹⁸	-16 51.7 ¹³⁰	20	27	5 54	17	4 04	59	35	44	
11	347	54.9	-21 32.1	16	35.2 ¹¹⁷	-17 04.8 ¹³¹	10 N	5 12	5 38	6 01	3 52	54	15 49	48	
12	2	54.6	-21 32.5	31	05.8 ¹¹⁶	-17 17.7 ¹²⁹	0	4 57	5 22	5 45	3 40	50	16 03	52	
13	17	54.4	32.9	45	36.3 ¹¹⁵	30.6 ¹²⁹	10 S	39	5 06	29	28	46	17	56	
14	32	54.2	33.3	60	06.6 ¹¹³	43.4 ¹²⁸	20	4 19	4 47	5 11	16	41	32	60	
15	47	54.0	33.7	74	36.8 ¹¹²	-17 56.1 ¹²⁷	30	3 52	25	4 51	3 02	36	49	65	
16	62	53.7	34.1	89	07.0 ¹¹²	-18 08.7 ¹²⁶	35	35	4 11	40	2 55	32	16 59	68	
17	77	53.5	-21 34.5	103	37.0 ¹¹⁰	-18 21.3 ¹²⁶	40	3 14	3 54	4 26	2 45	29	17 10	72	
18	92	53.3	-21 35.0	118	06.9 ¹⁰⁹	-18 33.8 ¹²⁵	45	2 47	3 34	4 10	2 35	25	17 23	77	
19	107	53.1	35.4	132	36.7 ¹⁰⁸	46.2 ¹²⁴	50	2 09	3 08	3 50	22	20	40	83	
20	122	52.8	35.8	147	06.3 ¹⁰⁶	-18 58.6 ¹²⁴	52	1 48	2 55	40	17	16	48	85	
21	137	52.6	36.2	161	35.9 ¹⁰⁶	-19 10.8 ¹²²	54	1 20	40	30	10	14	17 56	90	
22	152	52.4	36.6	176	05.3 ¹⁰⁴	23.0 ¹²²	56	0 31	2 22	17	2 03	10	18 06	94	
23	167	52.2	37.0	190	34.6 ¹⁰³	35.1 ¹²¹	58	** **	1 59	3 03	1 55	6	17	99	
24	182	51.9	-21 37.4	205	03.8 ¹⁰²	-19 47.0 ¹¹⁹	60 S	** **	1 28	2 46	1 46	1	18 30	106	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 19 ^h 24 ^m 9		Mag: -4.8 PMG: 15 ^h 00 ^m		Mag: -1.7 PMG: 21 ^h 50 ^m		Mag: -1.7 PMG: 9 ^h 48 ^m		Mag: +0.2 PMG: 4 ^h 23 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	67	58.8	134	55.9	-24	53.6	31	29.9	-12	55.5
1	83	01.2	149	56.4		53.2	46	32.8		55.6
2	98	03.7	164	56.9		52.7	61	35.6		55.8
3	113	06.2	179	57.4		52.3	76	38.5		56.0
4	128	08.6	194	57.9		51.8	91	41.4		56.1
5	143	11.1	209	58.4	-24	51.4	106	44.2	+15	56.3
6	158	13.5	224	59.0	-24	50.9	121	47.1	+15	56.4
7	173	16.0	239	59.5		50.4	136	50.0		56.6
8	188	18.5	255	00.0		50.0	151	52.8		56.8
9	203	20.9	270	00.5		49.5	166	55.7		56.9
10	218	23.4	285	01.1		49.1	181	58.6		57.1
11	233	25.9	300	01.6	-24	48.6	197	01.4	+15	57.3
12	248	28.3	315	02.1	-24	48.1	212	04.3	+15	57.4
13	263	30.8	330	02.7		47.7	227	07.2		57.6
14	278	33.3	345	03.2		47.2	242	10.0		57.7
15	293	35.7	0	03.7		46.8	257	12.9		57.9
16	308	38.2	15	04.3		46.3	272	15.7		58.1
17	323	40.6	30	04.8	-24	45.8	287	18.6	+15	58.2
18	338	43.1	45	05.4	-24	45.4	302	21.4	+15	58.4
19	353	45.6	60	05.9		44.9	317	24.3		58.6
20	8	48.0	75	06.5		44.4	332	27.1		58.7
21	23	50.5	90	07.0		44.0	347	30.0		58.9
22	38	53.0	105	07.6		43.5	2	32.8		59.0
23	53	55.4	120	08.1		43.0	17	35.7		59.2
24	68	57.9	135	08.7	-24	42.6	32	38.5	+15	59.4
Dif	—		+5	+5		+29	0	+20		-2

0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
1	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
2	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
3	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
4	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
5	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
6	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
7	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
8	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
9	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
10	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
11	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
12	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
13	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
14	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
15	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
16	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
17	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
18	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
19	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
20	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
21	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
22	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
23	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
24	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100

UT	SOL				● LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16 ^h 2 PMG: 11 ^h 48 ^m 7				Edad: 27 ^d 9 PHE { 4 ^h : 57 ^m 6 12 ^h : 57 ^m 9 20 ^h : 58 ^m 1 PMG: 10 ^h 42 ^m R°: 56 ^m													
	hG ☉		Dec		hG ☾		Dif				Dec		Dif		Civil	Náutico	Hora	R°
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	182	51.9	-21	37.4	205	03.8	-19	47.0	60 N	15 04	15 58	16 53	7 26 110	13 45 6				
1	197	51.7		37.8	219	32.9 ¹⁰¹	-19	58.9 ¹¹⁹	58	19	16 08	16 59	7 09 102	14 03 14				
2	212	51.5		38.2	234	01.8 ⁹⁹	-20	10.8 ¹¹⁹	56	32		17 05	6 55 95	17 21				
3	227	51.3		38.6	248	30.6 ⁹⁸		22.5 ¹¹⁷	54	43	25	10	43 91	30 25				
4	242	51.0		39.1	262	59.3 ⁹⁷		34.1 ¹¹⁶	52	15 53	32	15	33 86	41 29				
5	257	50.8	-21	39.5	277	27.9 ⁹⁶	-20	45.6 ¹¹⁵	50	16 02	16 39	17 20	6 23 84	14 51 32				
6	272	50.6	-21	39.9	291	56.4 ⁹⁵	-20	57.0 ¹¹⁴	45	16 20	16 53	17 30	6 03 78	15 13 36				
7	287	50.4		40.3	306	24.7 ⁹³	-21	08.4 ¹¹⁴	40	36	17 06	39	5 47 74	30 40				
8	302	50.1		40.7	320	52.9 ⁹²		19.6 ¹¹²	35	16 49	16	47	34 70	44 44				
9	317	49.9		41.1	335	21.0 ⁹¹		30.7 ¹¹¹	30	17 00	26	17 55	22 68	15 57 46				
10	332	49.7		41.5	349	48.9 ⁸⁹		41.7 ¹¹⁰	20	19	43	18 10	5 03 62	16 19 50				
11	347	49.4	-21	41.9	4	16.8 ⁸⁹	-21	52.6 ¹⁰⁹	10 N	17 36	17 59	18 25	4 46 58	16 37 55				
12	2	49.2	-21	42.3	18	44.5 ⁸⁷	-22	03.4 ¹⁰⁸	0	17 52	18 15	18 41	4 30 54	16 55 57				
13	17	49.0		42.7	33	12.1 ⁸⁶		14.1 ¹⁰⁷	10 S	18 09	31	18 58	4 14 51	17 13 60				
14	32	48.8		43.1	47	39.5 ⁸⁴		24.7 ¹⁰⁶	20	26	18 50	19 19	3 57 47	32 64				
15	47	48.5		43.5	62	06.9 ⁸⁴		35.1 ¹⁰⁴	30	46	19 13	19 46	38 42	17 54 68				
16	62	48.3		43.9	76	34.1 ⁸²		45.4 ¹⁰³	35	18 58	27	20 03	27 40	18 07 71				
17	77	48.1	-21	44.3	91	01.2 ⁸¹	-22	55.7 ¹⁰³	40	19 12	19 44	20 24	3 14 37	18 22 74				
18	92	47.8	-21	44.7	105	28.1 ⁷⁹	-23	05.8 ¹⁰¹	45	19 28	20 05	20 52	3 00 32	18 40 78				
19	107	47.6		45.1	119	55.0 ⁷⁹		15.7 ⁹⁹	50	49	31	21 31	2 42 26	19 03 82				
20	122	47.4		45.5	134	21.7 ⁷⁷		25.6 ⁹⁹	52	19 59	20 45	21 53	33 24	13 86				
21	137	47.1		45.8	148	48.3 ⁷⁶		35.3 ⁹⁷	54	20 10	21 00	22 23	24 20	26 89				
22	152	46.9		46.2	163	14.7 ⁷⁴		44.9 ⁹⁶	56	22	19	23 21	13 16	40 93				
23	167	46.7		46.6	177	41.1 ⁷⁴	-23	54.3 ⁹⁴	58	37	21 42	** ** *	2 01 11	19 56 100				
24	182	46.4	-21	47.0	192	07.3 ⁷²	-24	03.7 ⁹⁴	60 S	20 54	22 15	** ** *	1 47 4	20 16 110				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 19 ^h 21 ^m 0		Mag: -4.8 PMG: 14 ^h 59 ^m				Mag: -1.6 PMG: 21 ^h 45 ^m				Mag: -1.7 PMG: 9 ^h 44 ^m				Mag: +0.2 PMG: 4 ^h 19 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	68	57.9	135	08.7	-24	42.6	32	38.5	+15	08.7	213	33.4	-12	59.4	295	05.6	+17	55.6
1	84	00.4	150	09.3		42.1	47	41.3		08.7	228	35.4		59.5	310	08.1		55.6
2	99	02.8	165	09.8		41.6	62	44.2		08.7	243	37.4		59.7	325	10.6		55.6
3	114	05.3	180	10.4		41.2	77	47.0		08.7	258	39.4	-12	59.9	340	13.1		55.6
4	129	07.8	195	11.0		40.7	92	49.9		08.7	273	41.3	-13	00.0	355	15.6		55.6
5	144	10.2	210	11.5	-24	40.2	107	52.7	+15	08.7	288	43.3	-13	00.2	10	18.1	+17	55.7
6	159	12.7	225	12.1	-24	39.8	122	55.5	+15	08.6	303	45.3	-13	00.3	25	20.6	+17	55.7
7	174	15.1	240	12.7		39.3	137	58.4		08.6	318	47.2		00.5	40	23.1		55.7
8	189	17.6	255	13.3		38.8	153	01.2		08.6	333	49.2		00.7	55	25.6		55.7
9	204	20.1	270	13.8		38.4	168	04.0		08.6	348	51.2		00.8	70	28.1		55.7
10	219	22.5	285	14.4		37.9	183	06.8		08.6	3	53.2		01.0	85	30.6		55.7
11	234	25.0	300	15.0	-24	37.4	198	09.7	+15	08.6	18	55.1	-13	01.1	100	33.1	+17	55.7
12	249	27.5	315	15.6	-24	36.9	213	12.5	+15	08.6	33	57.1	-13	01.3	115	35.6	+17	55.8
13	264	29.9	330	16.2		36.5	228	15.3		08.6	48	59.1		01.5	130	38.1		55.8
14	279	32.4	345	16.8		36.0	243	18.1		08.5	64	01.1		01.6	145	40.6		55.8
15	294	34.9	0	17.4		35.5	258	21.0		08.5	79	03.0		01.8	160	43.1		55.8
16	309	37.3	15	18.0		35.0	273	23.8		08.5	94	05.0		02.0	175	45.6		55.8
17	324	39.8	30	18.6	-24	34.6	288	26.6	+15	08.5	109	07.0	-13	02.1	190	48.1	+17	55.9
18	339	42.3	45	19.2	-24	34.1	303	29.4	+15	08.5	124	09.0	-13	02.3	205	50.6	+17	55.9
19	354	44.7	60	19.8		33.6	318	32.2		08.5	139	10.9		02.4	220	53.1		55.9
20	9	47.2	75	20.4		33.1	333	35.0		08.5	154	12.9		02.6	235	55.6		55.9
21	24	49.6	90	21.0		32.7	348	37.9		08.5	169	14.9		02.8	250	58.1		55.9
22	39	52.1	105	21.6		32.2	3	40.7		08.5	184	16.9		02.9	266	00.6		55.9
23	54	54.6	120	22.2		31.7	18	43.5		08.5	199	18.8		03.1	281	03.1		56.0
24	69	57.0	135	22.9	-24	31.2	33	46.3	+15	08.5	214	20.8	-13	03.2	296	05.6	+17	56.0
Dif	—		+6		+5		+28		0		+20		-2		+25		0	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'2			Edad: 28 ^d 9	PHE { 4 ^h : 58'3 12 ^h : 58'5 20 ^h : 58'7											
	PMG: 11 ^h 49 ^m 1					SD: 15'9		PMG: 11 ^h 38 ^m			R°: 61 ^m					
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	182	46.4	-21 47.0	192	07.3	-24 03.7	92	60 N	6 46	7 41	8 35	9 16	108	13 51	19	
1	197	46.2	47.4	206	33.4	12.9	71	58	39	31	20	8 51	96	14 17	30	
2	212	46.0	47.8	220	59.4	21.9	70	56	34	21	8 07	30	90	38	36	
3	227	45.7	48.2	235	25.2	30.8	68	54	28	13	7 56	8 14	85	14 55	40	
4	242	45.5	48.6	249	51.0	39.6	68	52	23	7 06	46	7 59	83	15 10	43	
5	257	45.3	-21 49.0	264	16.6	-24 48.3	87	50	6 19	6 59	7 37	7 47	80	15 23	45	
6	272	45.0	-21 49.4	278	42.1	-24 56.8	85	45	6 08	6 45	7 18	7 21	76	15 49	49	
7	287	44.8	49.7	293	07.4	-25 05.1	83	40	5 59	33	7 03	7 01	73	16 10	52	
8	302	44.6	50.1	307	32.7	13.3	82	35	51	22	6 50	6 44	70	28	54	
9	317	44.3	50.5	321	57.8	21.4	81	30	43	6 12	38	30	68	16 43	56	
10	332	44.1	50.9	336	22.9	29.3	79	20	28	5 55	19	6 05	65	17 09	58	
11	347	43.9	-21 51.3	350	47.8	-25 37.0	77	10 N	5 13	5 39	6 02	5 44	62	17 32	59	
12	2	43.6	-21 51.7	5	12.6	-25 44.6	76	0	4 57	5 23	5 45	5 24	60	17 52	62	
13	17	43.4	52.0	19	37.3	52.0	74	10 S	40	5 06	29	5 05	57	18 13	64	
14	32	43.2	52.4	34	01.8	-25 59.3	73	20	4 19	4 47	5 12	4 44	55	18 36	65	
15	47	42.9	52.8	48	26.3	-26 06.5	72	30	3 52	24	4 51	20	51	19 02	68	
16	62	42.7	53.2	62	50.7	13.4	69	35	35	4 10	39	4 07	48	18	68	
17	77	42.4	-21 53.6	77	14.9	-26 20.2	68	40	3 13	3 54	4 25	3 51	46	19 36	70	
18	92	42.2	-21 53.9	91	39.1	-26 26.9	67	45	2 46	3 33	4 09	3 32	42	19 58	72	
19	107	42.0	54.3	106	03.1	33.3	64	50	2 07	3 06	3 49	3 08	38	20 25	75	
20	122	41.7	54.7	120	27.0	39.6	63	52	1 45	2 53	39	2 57	35	39	76	
21	137	41.5	55.1	134	50.9	45.8	62	54	1 14	37	28	44	32	20 55	78	
22	152	41.2	55.5	149	14.6	51.7	59	56	0 16	2 19	15	29	28	21 13	82	
23	167	41.0	55.8	163	38.3	-26 57.5	58	58	** **	1 55	3 01	2 12	22	21 36	86	
24	182	40.8	-21 56.2	178	01.8	-27 03.1	56	60 S	** **	1 23	2 43	1 51	12	22 06	94	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 19 ^h 17 ^m 0		Mag: -4.8 PMG: 14 ^h 58 ^m		Mag: -1.6 PMG: 21 ^h 41 ^m		Mag: -1.7 PMG: 9 ^h 41 ^m		Mag: +0.2 PMG: 4 ^h 15 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	69	57.0	135	22.9	-24	31.2	33	46.3	+15	08.5	214	20.8	-13	03.2	296	05.6	+17	56.0
1	84	59.5	150	23.5		30.7	48	49.1		08.5	229	22.8		03.4	311	08.1		56.0
2	100	02.0	165	24.1		30.3	63	51.9		08.5	244	24.7		03.6	326	10.6		56.0
3	115	04.4	180	24.7		29.8	78	54.7		08.5	259	26.7		03.7	341	13.1		56.0
4	130	06.9	195	25.3		29.3	93	57.5		08.4	274	28.7		03.9	356	15.6		56.0
5	145	09.4	210	26.0	-24	28.8	109	00.3	+15	08.4	289	30.7	-13	04.0	11	18.1	+17	56.1
6	160	11.8	225	26.6	-24	28.3	124	03.1	+15	08.4	304	32.6	-13	04.2	26	20.6	+17	56.1
7	175	14.3	240	27.2		27.8	139	05.9		08.4	319	34.6		04.4	41	23.2		56.1
8	190	16.8	255	27.9		27.4	154	08.7		08.4	334	36.6		04.5	56	25.7		56.1
9	205	19.2	270	28.5		26.9	169	11.5		08.4	349	38.6		04.7	71	28.2		56.1
10	220	21.7	285	29.2		26.4	184	14.3		08.4	4	40.5		04.8	86	30.7		56.1
11	235	24.1	300	29.8	-24	25.9	199	17.1	+15	08.4	19	42.5	-13	05.0	101	33.2	+17	56.2
12	250	26.6	315	30.4	-24	25.4	214	19.9	+15	08.4	34	44.5	-13	05.2	116	35.7	+17	56.2
13	265	29.1	330	31.1		24.9	229	22.7		08.4	49	46.5		05.3	131	38.2		56.2
14	280	31.5	345	31.7		24.4	244	25.4		08.4	64	48.4		05.5	146	40.7		56.2
15	295	34.0	0	32.4		24.0	259	28.2		08.4	79	50.4		05.6	161	43.2		56.2
16	310	36.5	15	33.1		23.5	274	31.0		08.4	94	52.4		05.8	176	45.7		56.3
17	325	38.9	30	33.7	-24	23.0	289	33.8	+15	08.4	109	54.4	-13	06.0	191	48.2	+17	56.3
18	340	41.4	45	34.4	-24	22.5	304	36.6	+15	08.4	124	56.3	-13	06.1	206	50.7	+17	56.3
19	355	43.9	60	35.0		22.0	319	39.4		08.4	139	58.3		06.3	221	53.2		56.3
20	10	46.3	75	35.7		21.5	334	42.1		08.4	155	00.3		06.4	236	55.7		56.3
21	25	48.8	90	36.4		21.0	349	44.9		08.4	170	02.3		06.6	251	58.2		56.3
22	40	51.3	105	37.0		20.5	4	47.7		08.4	185	04.2		06.8	267	00.7		56.4
23	55	53.7	120	37.7		20.0	19	50.5		08.4	200	06.2		06.9	282	03.3		56.4
24	70	56.2	135	38.4	-24	19.5	34	53.2	+15	08.4	215	08.2	-13	07.1	297	05.8	+17	56.4
Dif	—		+6		+5		+28		0		+20		-2		+25			

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16°2 PMG: 11 ^h 49 ^m 5			Edad: 29 ^d 9 PHE { 4 ^h : 58'9 12 ^h : 59'1 20 ^h : 59'2 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	h m m			
0	182	40.8	-21	56.2	178	01.8	-27	03.1	60 N	15 01	15 56	16 51	11 04	75	14 10	58		
1	197	40.5		56.6	192	25.3	45	08.6	58	17	16 06	16 58	10 27	72	14 47	62		
2	212	40.3		56.9	206	48.6	43	13.8	56	30	16	17 04	10 00	71	15 14	62		
3	227	40.0		57.3	221	11.9	43	18.9	54	41	24	09	9 39	70	35	66		
4	242	39.8		57.7	235	35.1	42	23.8	52	15 52	31	14	22 69		15 53	63		
5	257	39.6	-21	58.1	249	58.2	41	-27 28.6	50	16 01	16 38	17 19	9 07	68	16 08	63		
6	272	39.3	-21	58.4	264	21.2	40	-27 33.1	45	16 20	16 53	17 29	8 37	67	16 38	64		
7	287	39.1		58.8	278	44.1	39	37.5	44	35	17 05	39	8 14	66	17 02	64		
8	302	38.8		59.2	293	07.0	39	41.6	41	16 48	16	47	7 54	66	22	64		
9	317	38.6		59.5	307	29.8	38	45.6	40	17 00	26	17 55	38 65		17 39	64		
10	332	38.4	-21	59.9	321	52.5	37	49.4	38	20	43	18 11	7 10	65	18 07	64		
11	347	38.1	-22	00.3	336	15.1	36	-27 53.1	37	10 N	17 37	17 59	6 46	64	18 31	64		
12	2	37.9	-22	00.6	350	37.7	36	-27 56.5	34	0	17 53	18 15	6 24	63	18 54	64		
13	17	37.6		01.0	5	00.2	35	-27 59.7	32	10 S	18 10	32	6 02	63	19 17	63		
14	32	37.4		01.4	19	22.7	35	-28 02.8	31	20	27	18 52	5 39	61	19 41	63		
15	47	37.1		01.7	33	45.0	33	05.6	28	30	18 48	19 15	5 11	61	20 10	62		
16	62	36.9		02.1	48	07.4	34	08.3	27	35	19 00	29	4 55	60	26	63		
17	77	36.7	-22	02.4	62	29.6	32	-28 10.7	24	40	19 14	19 46	4 37	58	20 46	62		
18	92	36.4	-22	02.8	76	51.9	33	-28 13.0	23	45	19 31	20 07	4 14	57	21 10	61		
19	107	36.2		03.2	91	14.0	31	15.1	21	50	19 52	34	3 46	54	40	60		
20	122	35.9		03.5	105	36.1	31	17.0	19	52	20 01	20 48	32	53	21 55	60		
21	137	35.7		03.9	119	58.2	31	18.6	16	54	13	21 04	3 16	51	22 13	59		
22	152	35.4		04.2	134	20.3	31	20.1	15	56	25	23	** **		22 35	57		
23	167	35.2		04.6	148	42.3	30	21.4	13	58	40	21 48	** **		23 02	54		
24	182	34.9	-22	05.0	163	04.2	29	-28 22.5	11	60 S	20 58	22 22	** **		23 40	50		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 19 ^h 13 ^m 1		Mag: -4.8 PMG: 14 ^h 57 ^m			Mag: -1.6 PMG: 21 ^h 36 ^m			Mag: -1.7 PMG: 9 ^h 38 ^m			Mag: +0.2 PMG: 4 ^h 11 ^m						
	hG ♈		hG ♀			hG ♂			hG ♃			hG ♄						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	70	56.2	135	38.4	-24	19.5	34	53.2	+15	08.4	215	08.2	-13	07.1	297	05.8	+17	56.4
1	85	58.6	150	39.1		19.1	49	56.0		08.4	230	10.2		07.2	312	08.3		56.4
2	101	01.1	165	39.7		18.6	64	58.8		08.4	245	12.2		07.4	327	10.8		56.4
3	116	03.6	180	40.4		18.1	80	01.5		08.4	260	14.1		07.6	342	13.3		56.5
4	131	06.0	195	41.1		17.6	95	04.3		08.4	275	16.1		07.7	357	15.8		56.5
5	146	08.5	210	41.8	-24	17.1	110	07.1	+15	08.4	290	18.1	-13	07.9	12	18.3	+17	56.5
6	161	11.0	225	42.5	-24	16.6	125	09.8	+15	08.4	305	20.1	-13	08.0	27	20.8	+17	56.5
7	176	13.4	240	43.2		16.1	140	12.6		08.5	320	22.0		08.2	42	23.3		56.5
8	191	15.9	255	43.9		15.6	155	15.4		08.5	335	24.0		08.4	57	25.8		56.6
9	206	18.4	270	44.6		15.1	170	18.1		08.5	350	26.0		08.5	72	28.3		56.6
10	221	20.8	285	45.3		14.6	185	20.9		08.5	5	28.0		08.7	87	30.8		56.6
11	236	23.3	300	46.0	-24	14.1	200	23.6	+15	08.5	20	29.9	-13	08.8	102	33.4	+17	56.6
12	251	25.8	315	46.7	-24	13.6	215	26.4	+15	08.5	35	31.9	-13	09.0	117	35.9	+17	56.6
13	266	28.2	330	47.4		13.1	230	29.2		08.5	50	33.9		09.2	132	38.4		56.6
14	281	30.7	345	48.1		12.6	245	31.9		08.5	65	35.9		09.3	147	40.9		56.7
15	296	33.1	0	48.8		12.1	260	34.7		08.5	80	37.9		09.5	162	43.4		56.7
16	311	35.6	15	49.5		11.6	275	37.4		08.5	95	39.8		09.6	177	45.9		56.7
17	326	38.1	30	50.2	-24	11.1	290	40.2	+15	08.5	110	41.8	-13	09.8	192	48.4	+17	56.7
18	341	40.5	45	51.0	-24	10.6	305	42.9	+15	08.5	125	43.8	-13	10.0	207	50.9	+17	56.7
19	356	43.0	60	51.7		10.1	320	45.7		08.5	140	45.8		10.1	222	53.4		56.8
20	11	45.5	75	52.4		09.6	335	48.4		08.5	155	47.7		10.3	237	56.0		56.8
21	26	47.9	90	53.1		09.1	350	51.1		08.6	170	49.7		10.4	252	58.5		56.8
22	41	50.4	105	53.9		08.6	5	53.9		08.6	185	51.7		10.6	268	01.0		56.8
23	56	52.9	120	54.6		08.1	20	56.6		08.6	200	53.7		10.7	283	03.5		56.8
24	71	55.3	135	55.3	-24	07.6	35	59.4	+15	08.6	215	55.6	-13	10.9	298	06.0	+17	56.9
Dif	—		+7			+5	+28			0	+20			-2		+25		

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16:2 PMG: 11 ^h 49 ^m 9			Edad: 1 ^d 4 PHE { 4 ^h : 59:3 12 ^h : 59:5 20 ^h : 59:5 PMG: 13 ^h 43 ^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		
0	182	34.9	-22	05.0	163	04.2	-28	22.5	60 N	6 49	7 44	8 39	12 19	28	15 08	105		
1	197	34.7		05.3	177	26.2	30	23.4	58	42	34	23	11 39	38	15 49	93		
2	212	34.4		05.7	191	48.1	29	24.1	56	36	24	8 10	11 11	44	16 16	88		
3	227	34.2		06.0	206	09.9	28	24.6	54	31	16	7 59	10 49	47	38	84		
4	242	34.0		06.4	220	31.8	29	24.8	52	26	09	48	31	49	16 56	82		
5	257	33.7	-22	06.7	234	53.6	28	-28	50	6 21	7 02	7 39	10 15	52	17 11	80		
6	272	33.5	-22	07.1	249	15.4	28	-28	45	6 10	6 47	7 20	9 44	55	17 42	76		
7	287	33.2		07.4	263	37.2	28	24.5	40	6 01	34	7 05	20	57	18 06	73		
8	302	33.0		07.8	277	59.0	28	24.0	35	5 52	24	6 51	9	00	58	26	71	
9	317	32.7		08.1	292	20.8	28	23.2	30	44	6 14	40	8	43	60	18	43	69
10	332	32.5		08.5	306	42.6	28	22.3	20	29	5 56	20	8	15	61	19	11	67
11	347	32.2	-22	08.8	321	04.4	28	-28	10 N	5 14	5 40	6 03	7	50	63	19	35	65
12	2	32.0	-22	09.2	335	26.2	28	-28	0	4 58	5 24	5 46	7	27	64	19	58	62
13	17	31.7		09.5	349	47.9	27	18.3	10 S	40	5 07	30	7	05	64	20	20	61
14	32	31.5		09.9	4	09.7	28	16.6	20	4 19	4 48	5 12	6	40	66	20	44	58
15	47	31.2		10.2	18	31.5	28	14.7	30	3 51	24	4 51	6	12	67	21	12	55
16	62	31.0		10.6	32	53.3	28	12.5	35	34	4 10	39	5	55	68	29	53	
17	77	30.7	-22	10.9	47	15.2	29	-28	40	3 12	3 53	4 25	5	35	69	21	48	51
18	92	30.5	-22	11.2	61	37.0	28	-28	45	2 44	3 32	4 08	5	11	70	22	11	48
19	107	30.2		11.6	75	58.9	29	04.9	50	2 04	3 05	3 47	4	40	73	40	44	
20	122	30.0		11.9	90	20.8	29	-28	52	1 41	2 51	38	25	73	22	55	41	
21	137	29.7		12.3	104	42.7	29	-27	54	1 09	35	26	4	07	75	23	12	37
22	152	29.5		12.6	119	04.7	30	55.5	56	** ** *	2 16	3 13	3	46	76	32	33	
23	167	29.2		12.9	133	26.6	29	52.0	58	** ** *	1 51	2 59	3	19	79	23	56	28
24	182	29.0	-22	13.3	147	48.7	31	-27	60 S	** ** *	1 17	2 41	2	40	84	** ** *	**	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 19 ^h 09 ^m 2		Mag: -4.9 PMG: 14 ^h 56 ^m		Mag: -1.5 PMG: 21 ^h 32 ^m		Mag: -1.7 PMG: 9 ^h 35 ^m		Mag: +0.1 PMG: 4 ^h 07 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	71	55.3	135	55.3	-24	07.6	35	59.4	+15	08.6	215	55.6	-13	10.9	298	06.0	+17	56.9
1	86	57.8	150	56.1		07.1	51	02.1		08.6	230	57.6		11.1	313	08.5		56.9
2	102	00.2	165	56.8		06.6	66	04.8		08.6	245	59.6		11.2	328	11.0		56.9
3	117	02.7	180	57.6		06.1	81	07.6		08.6	261	01.6		11.4	343	13.5		56.9
4	132	05.2	195	58.3		05.6	96	10.3		08.6	276	03.6		11.5	358	16.1		56.9
5	147	07.6	210	59.1	-24	05.1	111	13.0	+15	08.6	291	05.5	-13	11.7	13	18.6	+17	57.0
6	162	10.1	225	59.8	-24	04.6	126	15.8	+15	08.7	306	07.5	-13	11.9	28	21.1	+17	57.0
7	177	12.6	241	00.6		04.1	141	18.5		08.7	321	09.5		12.0	43	23.6		57.0
8	192	15.0	256	01.3		03.6	156	21.2		08.7	336	11.5		12.2	58	26.1		57.0
9	207	17.5	271	02.1		03.0	171	23.9		08.7	351	13.5		12.3	73	28.6		57.0
10	222	20.0	286	02.8		02.5	186	26.7		08.7	6	15.4		12.5	88	31.1		57.1
11	237	22.4	301	03.6	-24	02.0	201	29.4	+15	08.7	21	17.4	-13	12.6	103	33.7	+17	57.1
12	252	24.9	316	04.4	-24	01.5	216	32.1	+15	08.7	36	19.4	-13	12.8	118	36.2	+17	57.1
13	267	27.4	331	05.1		01.0	231	34.8		08.8	51	21.4		13.0	133	38.7		57.1
14	282	29.8	346	05.9	-24	00.5	246	37.5		08.8	66	23.3		13.1	148	41.2		57.1
15	297	32.3	1	06.7	-24	00.0	261	40.3		08.8	81	25.3		13.3	163	43.7		57.2
16	312	34.7	16	07.5	-23	59.5	276	43.0		08.8	96	27.3		13.4	178	46.2		57.2
17	327	37.2	31	08.2	-23	59.0	291	45.7	+15	08.8	111	29.3	-13	13.6	193	48.7	+17	57.2
18	342	39.7	46	09.0	-23	58.5	306	48.4	+15	08.8	126	31.3	-13	13.7	208	51.3	+17	57.2
19	357	42.1	61	09.8		57.9	321	51.1		08.9	141	33.2		13.9	223	53.8		57.3
20	12	44.6	76	10.6		57.4	336	53.8		08.9	156	35.2		14.1	238	56.3		57.3
21	27	47.1	91	11.4		56.9	351	56.5		08.9	171	37.2		14.2	253	58.8		57.3
22	42	49.5	106	12.2		56.4	6	59.2		08.9	186	39.2		14.4	269	01.3		57.3
23	57	52.0	121	13.0		55.9	22	01.9		08.9	201	41.2		14.5	284	03.8		57.3
24	72	54.5	136	13.8	-23	55.4	37	04.6	+15	09.0	216	43.1	-13	14.7	299	06.4	+17	57.4
Dif	—		+8 +5		+27		0		+20		-2		+25		0			

UT	SOL			● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna				
	SD: 16/2 PMG: 11 ^h 50 ^m 3			Edad: 2 ^d 4 PHE { 4 ^h : 59/6 SD: 16/2 12 ^h : 59/7 PMG: 14 ^h 46 ^m R°: 60 ^m						Civil		Náutico	Hora R°	Hora R°				
	hG ☉	Dec		hG ☾	Dif	Dec	Dif											
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	h m	h m	m	
0	182	29.0	-22	13.3	147	48.7	-27	48.2	60 N	14 59	15 54	16 50	12 47	8	16 53	117		
1	197	28.7		13.6	162	10.7	30	44.3	58	15 15	16 05	16 57	12 17	19	17 22	106		
2	212	28.5		14.0	176	32.8	31	40.2	56	28	14	17 03	11 55	24	17 44	100		
3	227	28.2		14.3	190	55.0	32	35.8	54	40	23	08	36	30	18 02	95		
4	242	28.0		14.6	205	17.2	32	31.3	52	15 50	30	13	20	34	18 91			
5	257	27.7	-22	15.0	219	39.4	32	-27 26.6	50	16 00	16 37	17 18	11 07	36	18 31	88		
6	272	27.4	-22	15.3	234	01.7	33	-27 21.7	45	16 19	16 52	17 29	10 39	41	18 58	82		
7	287	27.2		15.6	248	24.1	34	16.6	40	35	17 05	39	10 17	45	19 19	78		
8	302	26.9		16.0	262	46.5	34	11.3	35	16 48	16	47	9 58	49	37 74			
9	317	26.7		16.3	277	09.0	35	05.8	30	17 00	26	17 56	43 50		19 52	72		
10	332	26.4		16.6	291	31.5	35	-27 00.2	20	20	17 44	18 11	9 16	54	20 18	67		
11	347	26.2	-22	17.0	305	54.1	36	-26 54.3	10 N	17 37	18 00	18 26	8 53	58	20 40	63		
12	2	25.9	-22	17.3	320	16.7	36	-26 48.3	0	17 54	18 16	18 42	8 31	61	21 00	59		
13	17	25.7		17.6	334	39.5	38	42.0	10 S	18 11	34	19 00	8 09	64	21 55			
14	32	25.4		17.9	349	02.3	38	35.6	20	29	18 53	22	7 46	67	21 42	52		
15	47	25.2		18.3	3	25.1	38	29.0	30	18 50	19 17	19 50	19 71		22 07	47		
16	62	24.9		18.6	17	48.1	40	22.2	35	19 02	31	20 07	7 03	73	22 44			
17	77	24.6	-22	18.9	32	11.1	40	-26 15.3	40	19 16	19 48	20 29	6 44	76	22 39	40		
18	92	24.4	-22	19.3	46	34.2	41	-26 08.1	45	19 33	20 10	20 58	6 21	80	22 59	36		
19	107	24.1		19.6	60	57.4	42	-26 00.8	50	19 54	37	21 39	5 53	84	23 24	30		
20	122	23.9		19.9	75	20.7	43	-25 53.3	52	20 04	20 51	22 03	38	87	36	27		
21	137	23.6		20.2	89	44.0	43	45.6	54	16	21 08	22 36	22	90	23 49	24		
22	152	23.4		20.5	104	07.4	44	37.8	56	29	27	** ** *	5 02	95	** ** *	** ** *		
23	167	23.1		20.9	118	31.0	46	29.8	58	20 44	21 53	** ** *	4 38	101	** ** *	** ** *		
24	182	22.8	-22	21.2	132	54.6	46	-25 21.6	60 S	21 02	22 29	** ** *	4 04	113	0 30	17		
UT	ARIES		VENUS			MARTE			JÚPITER				SATURNO					
	PMG: 19 ^h 05 ^m 2		Mag: -4.9 PMG: 14 ^h 54 ^m			Mag: -1.5 PMG: 21 ^h 28 ^m			Mag: -1.7 PMG: 9 ^h 32 ^m				Mag: +0.1 PMG: 4 ^h 03 ^m					
	hG ♈		hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	
0	72	54.5	136	13.8	-23	55.4	37	04.6	+15	09.0	216	43.1	-13	14.7	299	06.4	+17	57.4
1	87	56.9	151	14.6		54.9	52	07.3		09.0	231	45.1		14.9	314	08.9		57.4
2	102	59.4	166	15.4		54.4	67	10.0		09.0	246	47.1		15.0	329	11.4		57.4
3	118	01.9	181	16.2		53.8	82	12.7		09.0	261	49.1		15.2	344	13.9		57.4
4	133	04.3	196	17.0		53.3	97	15.4		09.0	276	51.1		15.3	359	16.4		57.4
5	148	06.8	211	17.8	-23	52.8	112	18.1	+15	09.1	291	53.0	-13	15.5	14	18.9	+17	57.5
6	163	09.2	226	18.6	-23	52.3	127	20.8	+15	09.1	306	55.0	-13	15.6	29	21.5	+17	57.5
7	178	11.7	241	19.4		51.8	142	23.5		09.1	321	57.0		15.8	44	24.0		57.5
8	193	14.2	256	20.2		51.3	157	26.2		09.1	336	59.0		15.9	59	26.5		57.5
9	208	16.6	271	21.1		50.7	172	28.9		09.1	352	01.0		16.1	74	29.0		57.5
10	223	19.1	286	21.9		50.2	187	31.6		09.2	7	03.0		16.3	89	31.5		57.6
11	238	21.6	301	22.7	-23	49.7	202	34.3	+15	09.2	22	04.9	-13	16.4	104	34.1	+17	57.6
12	253	24.0	316	23.5	-23	49.2	217	37.0	+15	09.2	37	06.9	-13	16.6	119	36.6	+17	57.6
13	268	26.5	331	24.4		48.7	232	39.7		09.2	52	08.9		16.7	134	39.1		57.6
14	283	29.0	346	25.2		48.1	247	42.3		09.3	67	10.9		16.9	149	41.6		57.7
15	298	31.4	1	26.1		47.6	262	45.0		09.3	82	12.9		17.0	164	44.1		57.7
16	313	33.9	16	26.9		47.1	277	47.7		09.3	97	14.8		17.2	179	46.7		57.7
17	328	36.4	31	27.7	-23	46.6	292	50.4	+15	09.3	112	16.8	-13	17.4	194	49.2	+17	57.7
18	343	38.8	46	28.6	-23	46.1	307	53.1	+15	09.4	127	18.8	-13	17.5	209	51.7	+17	57.7
19	358	41.3	61	29.4		45.5	322	55.7		09.4	142	20.8		17.7	224	54.2		57.8
20	13	43.7	76	30.3		45.0	337	58.4		09.4	157	22.8		17.8	239	56.7		57.8
21	28	46.2	91	31.1		44.5	353	01.1		09.4	172	24.7		18.0	254	59.3		57.8
22	43	48.7	106	32.0		44.0	8	03.7		09.5	187	26.7		18.1	270	01.8		57.8
23	58	51.1	121	32.9		43.4	23	06.4		09.5	202	28.7		18.3	285	04.3		57.9
24	73	53.6	136	33.7	-23	42.9	38	09.1	+15	09.5	217	30.7	-13	18.5	300	06.8	+17	57.9
Dif	—		+8		+5		+27		0		+20		-2		+25		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 7			Edad: 3 ^d 4 PHE	4 ^h : 59'7 12 ^h : 59'7 20 ^h : 59'7 R°: 55 ^m													
	hG ☉	Dec			hG ☾	Dif		Dec	Dif		Náutico	Civil	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m	
0	182	22.8	-22	21.2	132	54.6	-25	21.6	60 N	6 52	7 47	8 43	12 55	2	18 50	112		
1	197	22.6		21.5	147	18.3	47	13.2	58	45	37	27	36	9	19 08	106		
2	212	22.3		21.8	161	42.1	48	-25	04.7	39	27	13	19	15	24	100		
3	227	22.1		22.1	176	06.0	49	-24	56.0	33	19	8 01	12 06	18	37	95		
4	242	21.8		22.5	190	29.9	49	47.1	89	28	11	7 51	11 54	22	49	91		
5	257	21.6	-22	22.8	204	54.0	51	-24	38.1	50	6 23	7 04	7 42	11 43	25	19 59	88	
6	272	21.3	-22	23.1	219	18.2	52	-24	28.9	45	6 12	6 49	7 22	11 20	32	20 20	82	
7	287	21.0		23.4	233	42.4	52	19.6	93	40	6 03	36	7 07	11 02	36	37	77	
8	302	20.8		23.7	248	06.8	54	10.1	95	35	5 54	25	6 53	10 47	39	20 51	73	
9	317	20.5		24.0	262	31.3	55	-24	00.4	30	46	6 15	41	33	43	21	04	69
10	332	20.3		24.4	276	55.8	55	-23	50.6	20	30	5 57	21	10 10	49	25	63	
11	347	20.0	-22	24.7	291	20.5	57	-23	40.6	10 N	5 15	5 41	6 04	9 51	52	21 43	59	
12	2	19.7	-22	25.0	305	45.3	58	-23	30.5	0	4 59	5 25	5 47	9 32	57	21 59	55	
13	17	19.5		25.3	320	10.1	58	20.2	103	10 S	41	5 07	30	9 13	61	22 16	50	
14	32	19.2		25.6	334	35.1	60	-23	09.8	20	4 19	4 48	5 12	8 53	65	34	45	
15	47	19.0		25.9	349	00.2	61	-22	59.2	30	3 51	24	4 51	30	70	22 54	40	
16	62	18.7		26.2	3	25.4	62	48.5	107	35	34	4 10	39	16	74	23 06	36	
17	77	18.4	-22	26.5	17	50.7	63	-22	37.7	40	3 12	3 52	4 25	8 00	78	23 19	33	
18	92	18.2	-22	26.8	32	16.1	64	-22	26.7	45	2 43	3 31	4 08	7 41	82	23 35	28	
19	107	17.9		27.1	46	41.5	64	15.6	111	50	2 02	3 03	3 47	17	89	23 54	22	
20	122	17.6		27.4	61	07.2	67	-22	04.3	52	1 38	2 49	36	7 05	92	** ** *	**	
21	137	17.4		27.7	75	32.9	67	-21	52.9	54	1 04	33	25	6 52	96	** ** *	**	
22	152	17.1		28.0	89	58.7	68	41.4	115	56	** ** *	2 13	3 12	37	100	0 05	20	
23	167	16.9		28.3	104	24.6	69	29.7	117	58	** ** *	1 48	2 57	6 19	106	24	14	
24	182	16.6	-22	28.7	118	50.6	70	-21	17.9	60 S	** ** *	1 11	2 38	5 57	114	0 47	6	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG 19 ^h 01 ^m 3			Mag: -4.9 PMG: 14 ^h 53 ^m			Mag: -1.5 PMG: 21 ^h 24 ^m			Mag: -1.7 PMG: 9 ^h 29 ^m			Mag: +0.1 PMG: 3 ^h 59 ^m					
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♎		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	73	53.6	136	33.7	-23	42.9	38	09.1	+15	09.5	217	30.7	-13	18.5	300	06.8	+17	57.9
1	88	56.1	151	34.6		42.4	53	11.8		09.6	232	32.7		18.6	315	09.3		57.9
2	103	58.5	166	35.5		41.9	68	14.4		09.6	247	34.7		18.8	330	11.9		57.9
3	119	01.0	181	36.3		41.3	83	17.1		09.6	262	36.6		18.9	345	14.4		57.9
4	134	03.5	196	37.2		40.8	98	19.7		09.6	277	38.6		19.1	0	16.9		58.0
5	149	05.9	211	38.1	-23	40.3	113	22.4	+15	09.7	292	40.6	-13	19.2	15	19.4	+17	58.0
6	164	08.4	226	39.0	-23	39.8	128	25.1	+15	09.7	307	42.6	-13	19.4	30	22.0	+17	58.0
7	179	10.9	241	39.8		39.2	143	27.7		09.7	322	44.6		19.5	45	24.5		58.0
8	194	13.3	256	40.7		38.7	158	30.4		09.8	337	46.6		19.7	60	27.0		58.1
9	209	15.8	271	41.6		38.2	173	33.0		09.8	352	48.5		19.9	75	29.5		58.1
10	224	18.2	286	42.5		37.7	188	35.7		09.8	7	50.5		20.0	90	32.1		58.1
11	239	20.7	301	43.4	-23	37.1	203	38.3	+15	09.9	22	52.5	-13	20.2	105	34.6	+17	58.1
12	254	23.2	316	44.3	-23	36.6	218	41.0	+15	09.9	37	54.5	-13	20.3	120	37.1	+17	58.2
13	269	25.6	331	45.2		36.1	233	43.6		09.9	52	56.5		20.5	135	39.6		58.2
14	284	28.1	346	46.1		35.5	248	46.3		10.0	67	58.5		20.6	150	42.2		58.2
15	299	30.6	1	47.0		35.0	263	48.9		10.0	83	00.4		20.8	165	44.7		58.2
16	314	33.0	16	47.9		34.5	278	51.6		10.0	98	02.4		20.9	180	47.2		58.2
17	329	35.5	31	48.8	-23	34.0	293	54.2	+15	10.1	113	04.4	-13	21.1	195	49.7	+17	58.3
18	344	38.0	46	49.7	-23	33.4	308	56.9	+15	10.1	128	06.4	-13	21.3	210	52.3	+17	58.3
19	359	40.4	61	50.6		32.9	323	59.5		10.1	143	08.4		21.4	225	54.8		58.3
20	14	42.9	76	51.6		32.4	339	02.1		10.2	158	10.4		21.6	240	57.3		58.3
21	29	45.4	91	52.5		31.8	354	04.8		10.2	173	12.3		21.7	255	59.8		58.4
22	44	47.8	106	53.4		31.3	9	07.4		10.2	188	14.3		21.9	271	02.4		58.4
23	59	50.3	121	54.3		30.8	24	10.1		10.3	203	16.3		22.0	286	04.9		58.4
24	74	52.7	136	55.3	-23	30.2	39	12.7	+15	10.3	218	18.3	-13	22.2	301	07.4	+17	58.4
Dif	—		+9		+5		+27		0		+20		-2		+25		0	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16/2 PMG: 11 ^h 51 ^m 1			Edad: 4 ^d 4 SD: 16/2 PMG: 16 ^h 41 ^m PHE { 4 ^h : 59/6 12 ^h : 59/6 20 ^h : 59/5 R°: 52 ^m										
	hG ☉		Dec	hG ☾		Dif			Dec		Dif			
	h	°	'	h	°	'			h	°	'			
0	182	16.6	-22 28.7	118	50.6	-21 17.9	60 N	14 57	15 53	16 49	12 57	1	20 42	106
1	197	16.3		133	16.8	-21 06.0 ¹¹⁹	58	15 14	16 04	16 56	45	5	20 54	100
2	212	16.1		147	43.0	-20 53.9 ¹²¹	56	27	14	17 02	34	9	21 04	95
3	227	15.8		162	09.3	41.8 ¹²¹	54	39	22	08	24	13	12	92
4	242	15.5		176	35.8	29.5 ¹²³	52	50	30	13	16	16	20	89
5	257	15.3	-22 30.2	191	02.3	-20 17.0 ¹²⁵	50	15 59	16 37	17 18	12 08	19	21 27	86
6	272	15.0	-22 30.4	205	29.0	-20 04.5 ¹²⁵	45	16 19	16 52	17 29	11 52	24	21 42	79
7	287	14.7		219	55.8	-19 51.9 ¹²⁶	40	35	17 05	39	38	29	21 54	75
8	302	14.5		234	22.7	39.1 ¹²⁸	35	16 48	16	48	26	34	22 04	71
9	317	14.2		248	49.6	26.2 ¹²⁹	30	17 00	26	17 56	11 16	37	13	67
10	332	13.9		263	16.7	13.2 ¹³⁰	20	20	17 44	18 11	10 59	42	28	61
11	347	13.7	-22 31.9	277	43.9	-19 00.1 ¹³¹	10 N	17 38	18 01	18 27	10 43	48	22 42	55
12	2	13.4	-22 32.2	292	11.2	-18 46.9 ¹³²	0	17 55	18 17	18 43	10 29	52	22 54	50
13	17	13.1		306	38.6	33.6 ¹³³	10 S	18 12	35	19 02	10 14	57	23 06	46
14	32	12.9		321	06.1	20.2 ¹³⁴	20	30	18 54	23	9 58	63	19	41
15	47	12.6		335	33.7	-18 06.7 ¹³⁵	30	18 51	19 18	19 51	40	68	34	34
16	62	12.3		350	01.4	-17 53.1 ¹³⁶	35	19 04	33	20 09	30	71	42	31
17	77	12.1	-22 33.7	4	29.2	-17 39.3 ¹³⁸	40	19 18	19 50	20 31	9 18	75	23 52	27
18	92	11.8	-22 34.0	18	57.1	-17 25.5 ¹³⁸	45	19 35	20 12	21 00	9 03	81	** ** *	**
19	107	11.5		34.3	33	-17 11.6 ¹³⁹	50	19 57	40	21 42	8 46	87	** ** *	**
20	122	11.3		34.5	47	-16 57.6 ¹⁴⁰	52	20 07	20 54	22 07	37	90	0 03	19
21	137	11.0		34.8	62	43.5 ¹⁴¹	54	18	21 11	22 43	28	93	13	16
22	152	10.7		35.1	76	29.4 ¹⁴¹	56	32	31	** ** *	17	98	25	12
23	167	10.5		35.4	91	15.1 ¹⁴³	58	20 47	21 58	** ** *	8 05	102	38	7
24	182	10.2	-22 35.7	105	46.5	-16 00.7 ¹⁴⁴	60 S	21 06	22 36	** ** *	7 51	108	0 53	2
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 18 ^h 57 ^m 4		Mag: -4.9 PMG: 14 ^h 51 ^m		Mag: -1.4 PMG: 21 ^h 19 ^m		Mag: -1.8 PMG: 9 ^h 26 ^m		Mag: +0.1 PMG: 3 ^h 55 ^m					
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄					
	h	°	h	°	h	°	h	°	h	°				
0	74	52.7	136	55.3	-23	30.2	39	12.7	+15	10.3				
1	89	55.2	151	56.2		29.7	54	15.3		10.4				
2	104	57.7	166	57.1		29.2	69	18.0		10.4				
3	120	00.1	181	58.1		28.6	84	20.6		10.4				
4	135	02.6	196	59.0		28.1	99	23.2		10.5				
5	150	05.1	212	00.0	-23	27.6	114	25.8	+15	10.5				
6	165	07.5	227	00.9	-23	27.0	129	28.5	+15	10.5				
7	180	10.0	242	01.9		26.5	144	31.1		10.6				
8	195	12.5	257	02.8		26.0	159	33.7		10.6				
9	210	14.9	272	03.8		25.4	174	36.3		10.7				
10	225	17.4	287	04.7		24.9	189	38.9		10.7				
11	240	19.9	302	05.7	-23	24.3	204	41.6	+15	10.8				
12	255	22.3	317	06.6	-23	23.8	219	44.2	+15	10.8				
13	270	24.8	332	07.6		23.3	234	46.8		10.8				
14	285	27.2	347	08.6		22.7	249	49.4		10.9				
15	300	29.7	2	09.6		22.2	264	52.0		10.9				
16	315	32.2	17	10.5		21.7	279	54.6		11.0				
17	330	34.6	32	11.5	-23	21.1	294	57.2	+15	11.0				
18	345	37.1	47	12.5	-23	20.6	309	59.8	+15	11.0				
19	0	39.6	62	13.5		20.0	325	02.5		11.1				
20	15	42.0	77	14.5		19.5	340	05.1		11.1				
21	30	44.5	92	15.5		19.0	355	07.7		11.2				
22	45	47.0	107	16.4		18.4	10	10.3		11.2				
23	60	49.4	122	17.4		17.9	25	12.9		11.3				
24	75	51.9	137	18.4	-23	17.3	40	15.5	+15	11.3				
Dif	—		+10		+5		+26		0					

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16:2 PMG: 11 ^h 51 ^m 5			Edad: 5 ^d 4 SD: 16:2 PMG: 17 ^h 33 ^m	PHE { 4 ^h : 59/4 12 ^h : 59/3 20 ^h : 59/2 R°: 48 ^m											
	hG ☉	Dec				hG ☾		Dif	Dec		Dif	Náutico	Civil	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	182	10.2	-22	35.7	105	46.5	-16	00.7	60 N	6 54	7 50	8 46	12 58	**	22 28	99
1	197	09.9		36.0	120	15.1 96	-15	46.3 144	58	47	39	30	50	4	34	95
2	212	09.7		36.2	134	43.8 97		31.8 145	56	41	30	16	43	7	39	92
3	227	09.4		36.5	149	12.5 97		17.2 146	54	35	21	8 04	37	10	44	89
4	242	09.1		36.8	163	41.4 99	-15	02.5 147	52	30	13	7 54	32	13	49	85
5	257	08.9	-22	37.1	178	10.3 99	-14	47.8 147	50	6 25	7 06	7 44	12 27	15	22 53	82
6	272	08.6	-22	37.4	192	39.4 101	-14	32.9 149	45	6 14	6 51	7 24	12 16	21	23 01	77
7	287	08.3		37.6	207	08.5 101		18.0 149	40	6 04	38	7 08	07	26	09	72
8	302	08.1		37.9	221	37.7 102	-14	03.1 149	35	5 55	27	6 55	12 00	29	15	68
9	317	07.8		38.2	236	07.0 103	-13	48.0 151	30	47	6 17	43	11 53	33	20	64
10	332	07.5		38.5	250	36.4 104		32.9 151	20	31	5 59	22	41	39	29	58
11	347	07.2	-22	38.7	265	05.8 104	-13	17.7 152	10 N	5 16	5 42	6 05	11 31	44	23 37	53
12	2	07.0	-22	39.0	279	35.4 106	-13	02.5 152	0	4 59	5 25	5 48	11 21	49	23 44	48
13	17	06.7		39.3	294	05.0 106	-12	47.2 153	10 S	41	5 08	31	11 54		23 52	43
14	32	06.4		39.6	308	34.7 107		31.8 154	20	4 19	4 48	5 13	11 01	59	** ** *	**
15	47	06.2		39.8	323	04.5 108		16.4 154	30	3 51	24	4 51	10 48	66	** ** *	**
16	62	05.9		40.1	337	34.4 109	-12	00.9 155	35	33	4 10	39	41	69	** ** *	**
17	77	05.6	-22	40.4	352	04.3 109	-11	45.4 155	40	3 11	3 52	4 25	10 33	73	** ** *	**
18	92	05.3	-22	40.7	6	34.3 110	-11	29.8 156	45	2 42	3 31	4 07	10 24	78	0 03	22
19	107	05.1		40.9	21	04.4 111	-11	14.2 156	50	2 00	3 02	3 46	13 83		16	17
20	122	04.8		41.2	35	34.6 112	-10	58.5 157	52	1 35	2 48	36	07	87	22	15
21	137	04.5		41.5	50	04.8 112		42.7 158	54	1 00	31	24	10 01	90	29	12
22	152	04.3		41.7	64	35.1 113		26.9 158	56	** ** *	2 11	3 11	9 55	93	37	8
23	167	04.0		42.0	79	05.5 114	-10	11.1 158	58	** ** *	1 45	2 55	47	98	45	5
24	182	03.7	-22	42.3	93	35.9 114	-9	55.2 159	60 S	** ** *	1 06	2 36	9 39	102	0 55	0

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 18 ^h 53 ^m 4		Mag: -4.9 PMG: 14 ^h 50 ^m		Mag: -1.4 PMG: 21 ^h 15 ^m		Mag: -1.8 PMG: 9 ^h 22 ^m		Mag: +0.1 PMG: 3 ^h 51 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	75	51.9	137	18.4	-23	17.3	219	05.9	-13	25.9
1	90	54.3	152	19.4		16.8	234	07.9		26.0
2	105	56.8	167	20.5		16.3	249	09.9		26.2
3	120	59.3	182	21.5		15.7	264	11.9		26.3
4	136	01.7	197	22.5		15.2	279	13.9		26.5
5	151	04.2	212	23.5	-23	14.6	294	15.9	-13	26.6
6	166	06.7	227	24.5	-23	14.1	309	17.9	-13	26.8
7	181	09.1	242	25.5		13.5	324	19.9		26.9
8	196	11.6	257	26.5		13.0	339	21.8		27.1
9	211	14.1	272	27.6		12.4	354	23.8		27.3
10	226	16.5	287	28.6		11.9	9	25.8		27.4
11	241	19.0	302	29.6	-23	11.4	24	27.8	-13	27.6
12	256	21.5	317	30.7	-23	10.8	39	29.8	-13	27.7
13	271	23.9	332	31.7		10.3	54	31.8		27.9
14	286	26.4	347	32.8		09.7	69	33.8		28.0
15	301	28.8	2	33.8		09.2	84	35.8		28.2
16	316	31.3	17	34.8		08.6	99	37.7		28.3
17	331	33.8	32	35.9	-23	08.1	114	39.7	-13	28.5
18	346	36.2	47	36.9	-23	07.5	129	41.7	-13	28.6
19	1	38.7	62	38.0		07.0	144	43.7		28.8
20	16	41.2	77	39.1		06.4	159	45.7		28.9
21	31	43.6	92	40.1		05.9	174	47.7		29.1
22	46	46.1	107	41.2		05.4	189	49.7		29.2
23	61	48.6	122	42.3		04.8	204	51.7		29.4
24	76	51.0	137	43.3	-23	04.3	219	53.6	-13	29.5
Dif	—		+10		+5		+26		+1	
							+20		-2	
									+25	
									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 0			Edad: 6 ^d 4 PHE { 4 ^h : 59:1 12 ^h : 59:0 20 ^h : 58:9 R°: 47 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	182	03.7	-22 42.3	93	35.9	-9 55.2		60 N	14 56	15 52	16 48	12 57 **	** ** *	** ** *
1	197	03.4		108	06.4 ¹¹⁵	39.3 ¹⁵⁹		58	15 12	16 03	16 55	54 2	** ** *	** ** *
2	212	03.2		122	37.0 ¹¹⁶	23.3 ¹⁶⁰		56	26	13	17 01	50 6	** ** *	** ** *
3	227	02.9		137	07.6 ¹¹⁶	-9 07.3 ¹⁶⁰		54	38	21	07	47 9	** ** *	** ** *
4	242	02.6		151	38.3 ¹¹⁷	-8 51.2 ¹⁶¹		52	49	29	13	45 11	** ** *	** ** *
5	257	02.3	-22 43.6	166	09.1 ¹¹⁸	-8 35.2 ¹⁶⁰		50	15 58	16 36	17 18	12 42 14	** ** *	** ** *
6	272	02.1	-22 43.8	180	39.9 ¹¹⁸	-8 19.0 ¹⁶²		45	16 18	16 52	17 29	12 37 19	** ** *	** ** *
7	287	01.8		195	10.8 ¹¹⁹	-8 02.9 ¹⁶¹		40	35	17 05	39	33 23	** ** *	** ** *
8	302	01.5		209	41.7 ¹¹⁹	-7 46.7 ¹⁶²		35	16 48	16	48	29 27	** ** *	** ** *
9	317	01.2		224	12.7 ¹²⁰	30.5 ¹⁶²		30	17 00	26	17 56	26 30	** ** *	** ** *
10	332	01.0		238	43.8 ¹²¹	-7 14.2 ¹⁶³		20	21	17 45	18 12	20 36	** ** *	** ** *
11	347	00.7	-22 45.1	253	14.9 ¹²¹	-6 57.9 ¹⁶³		10 N	17 39	18 02	18 28	12 15 42	** ** *	** ** *
12	2	00.4	-22 45.4	267	46.0 ¹²¹	-6 41.6 ¹⁶³		0	17 56	18 18	18 44	12 10 47	** ** *	** ** *
13	17	00.1		282	17.2 ¹²²	25.3 ¹⁶³		10 S	18 13	36	19 03	05 52	** ** *	** ** *
14	31	59.9		296	48.4 ¹²²	-6 09.0 ¹⁶³		20	31	18 56	25	12 00 57	0 00 37	
15	46	59.6		311	19.7 ¹²³	-5 52.6 ¹⁶⁴		30	18 53	19 20	19 53	11 54 63	08 32	
16	61	59.3		325	51.1 ¹²⁴	36.2 ¹⁶⁴		35	19 05	35	20 11	50 67	13 28	
17	76	59.0	-22 46.7	340	22.5 ¹²⁴	-5 19.8 ¹⁶⁴		40	19 20	19 52	20 33	11 46 71	0 19 24	
18	91	58.8	-22 46.9	354	53.9 ¹²⁴	-5 03.3 ¹⁶⁵		45	19 37	20 14	21 03	11 42 76	0 25 20	
19	106	58.5		9	25.3 ¹²⁴	-4 46.9 ¹⁶⁴		50	19 59	43	21 46	36 82	33 15	
20	121	58.2		23	56.8 ¹²⁵	30.4 ¹⁶⁵		52	20 09	20 57	22 11	34 84	37 12	
21	136	57.9		38	28.4 ¹²⁶	-4 14.0 ¹⁶⁴		54	21	21 14	22 49	31 87	41 9	
22	151	57.6		53	00.0 ¹²⁶	-3 57.5 ¹⁶⁵		56	35	21 35	** ** *	28 90	45 6	
23	166	57.4		67	31.6 ¹²⁶	41.0 ¹⁶⁵		58	20 51	22 02	** ** *	25 93	50 3	
24	181	57.1	-22 48.4	82	03.2 ¹²⁶	-3 24.4 ¹⁶⁶		60 S	21 10	22 43	** ** *	11 21 97	0 55 **	
UT	ARIES		VENUS			MARTE			JÚPITER		SATURNO			
	PMG: 18 ^h 49 ^m 5		Mag: -4.9 PMG: 14 ^h 48 ^m			Mag: -1.4 PMG: 21 ^h 11 ^m			Mag: -1.8 PMG: 9 ^h 19 ^m		Mag: +0.1 PMG: 3 ^h 47 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	'	°	°	'	°	°	'	
0	76	51.0	137 43.3	-23 04.3		41 17.4	+15 12.5		219 53.6	-13 29.5		303 08.9	+17 59.6	
1	91	53.5	152 44.4		03.7	56 20.0	12.6		234 55.6	29.7		318 11.4	59.7	
2	106	56.0	167 45.5		03.2	71 22.5	12.6		249 57.6	29.8		333 14.0	59.7	
3	121	58.4	182 46.6		02.6	86 25.1	12.7		264 59.6	30.0		348 16.5	59.7	
4	137	00.9	197 47.6		02.1	101 27.6	12.7		280 01.6	30.1		3 19.0	59.7	
5	152	03.3	212 48.7	-23 01.5		116 30.2	+15 12.8		295 03.6	-13 30.3		18 21.6	+17 59.8	
6	167	05.8	227 49.8	-23 01.0		131 32.8	+15 12.9		310 05.6	-13 30.5		33 24.1	+17 59.8	
7	182	08.3	242 50.9	-23 00.4		146 35.3	12.9		325 07.6	30.6		48 26.6	59.8	
8	197	10.7	257 52.0	-22 59.9		161 37.9	13.0		340 09.6	30.8		63 29.2	59.8	
9	212	13.2	272 53.1		59.3	176 40.4	13.0		355 11.6	30.9		78 31.7	59.9	
10	227	15.7	287 54.2		58.8	191 43.0	13.1		10 13.5	31.1		93 34.3	59.9	
11	242	18.1	302 55.3	-22 58.2		206 45.5	+15 13.1		25 15.5	-13 31.2		108 36.8	+17 59.9	
12	257	20.6	317 56.4	-22 57.7		221 48.1	+15 13.2		40 17.5	-13 31.4		123 39.3	+17 59.9	
13	272	23.1	332 57.5		57.1	236 50.6	13.3		55 19.5	31.5		138 41.9	+18 00.0	
14	287	25.5	347 58.7		56.5	251 53.2	13.3		70 21.5	31.7		153 44.4	00.0	
15	302	28.0	2 59.8		56.0	266 55.7	13.4		85 23.5	31.8		168 46.9	+18 00.0	
16	317	30.4	18 00.9		55.4	281 58.2	13.4		100 25.5	32.0		183 49.5	+18 00.1	
17	332	32.9	33 02.0	-22 54.9		297 00.8	+15 13.5		115 27.5	-13 32.1		198 52.0	+18 00.1	
18	347	35.4	48 03.1	-22 54.3		312 03.3	+15 13.6		130 29.5	-13 32.3		213 54.6	+18 00.1	
19	2	37.8	63 04.3		53.8	327 05.9	13.6		145 31.5	32.4		228 57.1	00.1	
20	17	40.3	78 05.4		53.2	342 08.4	13.7		160 33.4	32.6		243 59.6	00.2	
21	32	42.8	93 06.5		52.7	357 10.9	13.8		175 35.4	32.7		259 02.2	00.2	
22	47	45.2	108 07.7		52.1	12 13.5	13.8		190 37.4	32.9		274 04.7	00.2	
23	62	47.7	123 08.8		51.6	27 16.0	13.9		205 39.4	33.0		289 07.3	00.2	
24	77	50.2	138 10.0	-22 51.0		42 18.5	+15 13.9		220 41.4	-13 33.2		304 09.8	+18 00.3	
Dif	—		+11	+6		+25	+1		+20	-2		+25		

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'2 PMG: 11 ^h 52 ^m 4			Edad: 7 ^d 4 PHE { 4 ^h : 58'8 12 ^h : 58'7 20 ^h : 58'5 R°: 46 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	181	57.1	-22 48.4	82	03.2	-3 24.4	60 N	6 57	7 53	8 49	12 56	**	0 07	97	
1	196	56.8	48.6	96	34.9 ¹²⁷	-3 07.9 ¹⁶⁵	58	50	42	33	56	3	09	93	
2	211	56.5	48.9	111	06.6 ¹²⁷	-2 51.4 ¹⁶⁵	56	43	32	19	56	6	11	89	
3	226	56.3	49.1	125	38.4 ¹²⁸	34.9 ¹⁶⁵	54	37	23	8 07	56	9	13	86	
4	241	56.0	49.4	140	10.2 ¹²⁸	18.3 ¹⁶⁶	52	32	15	7 56	56	11	14	83	
5	256	55.7	-22 49.6	154	42.0 ¹²⁸	-2 01.8 ¹⁶⁵	50	6 27	7 08	7 46	12 56	14	0 15	81	
6	271	55.4	-22 49.9	169	13.8 ¹²⁸	-1 45.3 ¹⁶⁵	45	6 16	6 53	7 26	12 56	19	0 18	75	
7	286	55.1	50.1	183	45.6 ¹²⁸	28.7 ¹⁶⁶	40	6 06	40	7 10	56	23	21	70	
8	301	54.9	50.3	198	17.5 ¹²⁹	-1 12.2 ¹⁶⁵	35	5 57	28	6 56	56	27	23	66	
9	316	54.6	50.6	212	49.4 ¹²⁹	-0 55.6 ¹⁶⁶	30	48	18	44	56	31	24	63	
10	331	54.3	50.8	227	21.3 ¹²⁹	39.1 ¹⁶⁵	20	32	6 00	24	56	37	27	57	
11	346	54.0	-22 51.1	241	53.3 ¹³⁰	-0 22.6 ¹⁶⁵	10 N	5 17	5 43	6 06	12 57	41	0 30	51	
12	1	53.7	-22 51.3	256	25.2 ¹²⁹	-0 06.1 ¹⁶⁵	0	5 00	5 26	5 49	12 57	46	0 32	47	
13	16	53.5	51.5	270	57.2 ¹³⁰	+0 10.4 ¹⁶⁵	10 S	4 42	5 09	32	57	51	35	41	
14	31	53.2	51.8	285	29.2 ¹³⁰	26.9 ¹⁶⁵	20	4 20	4 49	5 13	57	56	37	36	
15	46	52.9	52.0	300	01.2 ¹³⁰	43.4 ¹⁶⁵	30	3 51	24	4 52	57	63	40	30	
16	61	52.6	52.2	314	33.2 ¹³⁰	+0 59.9 ¹⁶⁵	35	33	4 10	39	57	66	41	27	
17	76	52.3	-22 52.5	329	05.2 ¹³⁰	+1 16.4 ¹⁶⁵	40	3 11	3 52	4 24	12 57	70	0 43	23	
18	91	52.1	-22 52.7	343	37.2 ¹³⁰	+1 32.8 ¹⁶⁴	45	2 41	3 30	4 07	12 58	74	0 45	19	
19	106	51.8	52.9	358	09.3 ¹³¹	+1 49.3 ¹⁶⁵	50	1 58	3 02	3 45	58	80	48	13	
20	121	51.5	53.2	12	41.3 ¹³⁰	+2 05.7 ¹⁶⁴	52	1 33	2 47	35	58	83	49	11	
21	136	51.2	53.4	27	13.4 ¹³¹	22.1 ¹⁶⁴	54	0 55	30	23	58	86	50	8	
22	151	50.9	53.6	41	45.4 ¹³⁰	38.5 ¹⁶⁴	56	** ** *	2 09	3 09	58	89	51	6	
23	166	50.7	53.9	56	17.5 ¹³¹	+2 54.8 ¹⁶³	58	** ** *	1 42	2 54	58	93	53	2	
24	181	50.4	-22 54.1	70	49.5 ¹³⁰	+3 11.1 ¹⁶³	60 S	** ** *	1 01	2 34	12 58	97	0 54	**	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 18 ^h 45 ^m 6		Mag: -4.9 PMG: 14 ^h 46 ^m			Mag: -1.3 PMG: 21 ^h 07 ^m			Mag: -1.8 PMG: 9 ^h 16 ^m			Mag: +0.1 PMG: 3 ^h 43 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°
0	77	50.2	138 10.0	-22 51.0	42	18.5	+15 13.9	220 41.4	-13 33.2	304 09.8	+18 00.3				
1	92	52.6	153 11.1	50.5	57	21.0	14.0	235 43.4	33.3	319 12.3	00.3				
2	107	55.1	168 12.3	49.9	72	23.6	14.1	250 45.4	33.5	334 14.9	00.3				
3	122	57.6	183 13.4	49.3	87	26.1	14.1	265 47.4	33.6	349 17.4	00.4				
4	138	00.0	198 14.6	48.8	102	28.6	14.2	280 49.4	33.8	4 20.0	00.4				
5	153	02.5	213 15.8	-22 48.2	117	31.1	+15 14.3	295 51.4	-13 33.9	19 22.5	+18 00.4				
6	168	04.9	228 16.9	-22 47.7	132	33.7	+15 14.3	310 53.4	-13 34.1	34 25.0	+18 00.4				
7	183	07.4	243 18.1	47.1	147	36.2	14.4	325 55.4	34.2	49 27.6	00.5				
8	198	09.9	258 19.3	46.6	162	38.7	14.5	340 57.3	34.4	64 30.1	00.5				
9	213	12.3	273 20.4	46.0	177	41.2	14.5	355 59.3	34.5	79 32.7	00.5				
10	228	14.8	288 21.6	45.4	192	43.7	14.6	11 01.3	34.7	94 35.2	00.5				
11	243	17.3	303 22.8	-22 44.9	207	46.3	+15 14.7	26 03.3	-13 34.8	109 37.7	+18 00.6				
12	258	19.7	318 24.0	-22 44.3	222	48.8	+15 14.7	41 05.3	-13 35.0	124 40.3	+18 00.6				
13	273	22.2	333 25.2	43.8	237	51.3	14.8	56 07.3	35.1	139 42.8	00.6				
14	288	24.7	348 26.4	43.2	252	53.8	14.9	71 09.3	35.3	154 45.4	00.7				
15	303	27.1	3 27.5	42.7	267	56.3	14.9	86 11.3	35.4	169 47.9	00.7				
16	318	29.6	18 28.7	42.1	282	58.8	15.0	101 13.3	35.6	184 50.5	00.7				
17	333	32.1	33 29.9	-22 41.5	298	01.3	+15 15.1	116 15.3	-13 35.7	199 53.0	+18 00.7				
18	348	34.5	48 31.1	-22 41.0	313	03.8	+15 15.1	131 17.3	-13 35.9	214 55.5	+18 00.8				
19	3 37.0	63 32.4	40.4	328 06.3	15.2	146 19.3	15.2	146 19.3	36.0	229 58.1	00.8				
20	18 39.4	78 33.6	39.9	343 08.8	15.3	161 21.3	15.3	161 21.3	36.2	245 00.6	00.8				
21	33 41.9	93 34.8	39.3	358 11.3	15.3	176 23.3	15.3	176 23.3	36.3	260 03.2	00.9				
22	48 44.4	108 36.0	38.7	13 13.8	15.4	191 25.2	15.4	191 25.2	36.5	275 05.7	00.9				
23	63 46.8	123 37.2	38.2	28 16.3	15.5	206 27.2	15.5	206 27.2	36.6	290 08.3	00.9				
24	78 49.3	138 38.4	-22 37.6	43 18.8	+15 15.6	221 29.2	-13 36.8	221 29.2	-13 36.8	305 10.8	+18 00.9				
Dif	—		+12	+6		+25	+1	+20	-2		+25	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 9			Edad: 8 ^d 4 SD: 15:9 PMG: 19 ^h 54 ^m	PHE { 4 ^h : 58/4 12 ^h : 58/3 20 ^h : 58/1 Rº: 47 ^m													
	hG ☉	Dec				hG ☾			Dif	Dec	Dif	Civil	Náutico	Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m		
0	181	50.4	-22	54.1	70	49.5	+3 11.1	60 N	14 55	15 51	16 47	12 55	0	1 44	97			
1	196	50.1		54.3	85	21.6 ¹³¹	27.5 ¹⁶⁴	58	15 11	16 02	16 55	12 59	3	42	93			
2	211	49.8		54.5	99	53.6 ¹³⁰	+3 43.7 ¹⁶²	56	26	12	17 01	13 02	7	40	89			
3	226	49.5		54.8	114	25.7 ¹³¹	+4 00.0 ¹⁶³	54	38	21	07	05	10	39	86			
4	241	49.2		55.0	128	57.7 ¹³⁰	+4 16.2 ¹⁶²	52	49	29	13	07	13	37	83			
5	256	49.0	-22	55.2	143	29.8 ¹³¹	+4 32.4 ¹⁶²	50	15 58	16 36	17 18	13 10	15	1 36	80			
6	271	48.7	-22	55.4	158	01.8 ¹³⁰	+4 48.6 ¹⁶²	45	16 18	16 52	17 29	13 15	20	1 33	75			
7	286	48.4		55.7	172	33.8 ¹³⁰	+5 04.8 ¹⁶²	40	35	17 05	39	19	25	31	70			
8	301	48.1		55.9	187	05.8 ¹³⁰	20.9 ¹⁶¹	35	16 49	17	48	23	28	29	66			
9	316	47.8		56.1	201	37.8 ¹³⁰	37.0 ¹⁶¹	30	17 01	27	17 57	27	31	27	63			
10	331	47.5		56.3	216	09.8 ¹³⁰	+5 53.0 ¹⁶⁰	20	21	17 45	18 13	33	37	24	56			
11	346	47.3	-22	56.5	230	41.8 ¹³⁰	+6 09.0 ¹⁶⁰	10 N	17 40	18 02	18 29	13 38	42	1 21	51			
12	1	47.0	-22	56.8	245	13.8 ¹³⁰	+6 25.0 ¹⁶⁰	0	17 57	18 19	18 45	13 43	47	1 19	46			
13	16	46.7		57.0	259	45.7 ¹²⁹	40.9 ¹⁵⁹	10 S	18 14	37	19 04	48	52	16	42			
14	31	46.4		57.2	274	17.7 ¹³⁰	+6 56.8 ¹⁵⁹	20	32	18 57	26	13	53	57	13	37		
15	46	46.1		57.4	288	49.6 ¹²⁹	+7 12.6 ¹⁵⁸	30	18 54	19 21	19 54	14 00	62	10	31			
16	61	45.8		57.6	303	21.5 ¹²⁹	28.5 ¹⁵⁹	35	19 07	36	20 13	03	66	08	28			
17	76	45.5	-22	57.8	317	53.4 ¹²⁹	+7 44.2 ¹⁵⁷	40	19 21	19 54	20 35	14 07	70	1 06	24			
18	91	45.3	-22	58.0	332	25.2 ¹²⁸	+7 59.9 ¹⁵⁷	45	19 39	20 16	21 05	14 12	75	1 04	19			
19	106	45.0		58.3	346	57.0 ¹²⁸	+8 15.6 ¹⁵⁷	50	20 01	20 45	21 49	18	81	01	14			
20	121	44.7		58.5	1	28.9 ¹²⁹	31.2 ¹⁵⁶	52	12	21 00	22 15	21	83	1 00	12			
21	136	44.4		58.7	16	00.6 ¹²⁷	+8 46.8 ¹⁵⁶	54	24	17	22 55	24	86	0 58	10			
22	151	44.1		58.9	30	32.4 ¹²⁸	+9 02.3 ¹⁵⁵	56	37	21 38	** **	27	90	57	6			
23	166	43.8		59.1	45	04.1 ¹²⁷	17.8 ¹⁵⁵	58	20 53	22 06	** **	31	93	55	3			
24	181	43.5	-22	59.3	59	35.8 ¹²⁷	+9 33.2 ¹⁵⁴	60 S	21 13	22 49	** **	14 35	98	0 53	0			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 18 ^h 41 ^m 6		Mag: -4.9 PMG: 14 ^h 44 ^m			Mag: -1.3 PMG: 21 ^h 03 ^m			Mag: -1.8 PMG: 9 ^h 13 ^m			Mag: +0.1 PMG: 3 ^h 39 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	78	49.3	138	38.4	-22	37.6	43	18.8	+15	15.6	221	29.2	-13	36.8	305	10.8	+18	00.9
1	93	51.8	153	39.7		37.1	58	21.3		15.6	236	31.2		36.9	320	13.3		01.0
2	108	54.2	168	40.9		36.5	73	23.8		15.7	251	33.2		37.1	335	15.9		01.0
3	123	56.7	183	42.1		35.9	88	26.3		15.8	266	35.2		37.2	350	18.4		01.0
4	138	59.2	198	43.4		35.4	103	28.8		15.9	281	37.2		37.4	5	21.0		01.1
5	154	01.6	213	44.6	-22	34.8	118	31.3	+15	15.9	296	39.2	-13	37.5	20	23.5	+18	01.1
6	169	04.1	228	45.8	-22	34.3	133	33.8	+15	16.0	311	41.2	-13	37.7	35	26.1	+18	01.1
7	184	06.5	243	47.1		33.7	148	36.3		16.1	326	43.2		37.8	50	28.6		01.1
8	199	09.0	258	48.3		33.1	163	38.7		16.1	341	45.2		38.0	65	31.2		01.2
9	214	11.5	273	49.6		32.6	178	41.2		16.2	356	47.2		38.1	80	33.7		01.2
10	229	13.9	288	50.8		32.0	193	43.7		16.3	11	49.2		38.3	95	36.3		01.2
11	244	16.4	303	52.1	-22	31.4	208	46.2	+15	16.4	26	51.2	-13	38.4	110	38.8	+18	01.3
12	259	18.9	318	53.4	-22	30.9	223	48.7	+15	16.5	41	53.2	-13	38.6	125	41.3	+18	01.3
13	274	21.3	333	54.6		30.3	238	51.1		16.5	56	55.2		38.7	140	43.9		01.3
14	289	23.8	348	55.9		29.8	253	53.6		16.6	71	57.2		38.9	155	46.4		01.3
15	304	26.3	3	57.2		29.2	268	56.1		16.7	86	59.1		39.0	170	49.0		01.4
16	319	28.7	18	58.5		28.6	283	58.6		16.8	102	01.1		39.2	185	51.5		01.4
17	334	31.2	33	59.7	-22	28.1	299	01.0	+15	16.8	117	03.1	-13	39.3	200	54.1	+18	01.4
18	349	33.7	49	01.0	-22	27.5	314	03.5	+15	16.9	132	05.1	-13	39.5	215	56.6	+18	01.5
19	4	36.1	64	02.3		26.9	329	06.0		17.0	147	07.1		39.6	230	59.2		01.5
20	19	38.6	79	03.6		26.4	344	08.5		17.1	162	09.1		39.7	246	01.7		01.5
21	34	41.0	94	04.9		25.8	359	10.9		17.2	177	11.1		39.9	261	04.3		01.5
22	49	43.5	109	06.2		25.2	14	13.4		17.2	192	13.1		40.0	276	06.8		01.6
23	64	46.0	124	07.5		24.7	29	15.9		17.3	207	15.1		40.2	291	09.4		01.6
24	79	48.4	139	08.8	-22	24.1	44	18.3	+15	17.4	222	17.1	-13	40.3	306	11.9	+18	01.6
Dif	—		+13		+6		+25		+1		+20		-1		+25		0	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16/2 PMG: 11 ^h 53 ^m 3			Edad: 9 ^d 4 PHE { 4 ^h : 58/0 12 ^h : 57/8 20 ^h : 57/7 PMG: 20 ^h 41 ^m R°: 50 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m		
0	181	43.5	-22	59.3	59	35.8	+9	33.2	60 N	6	59	7	56	8	52	12	55	0
1	196	43.3		59.5	74	07.5	+9	48.6	58		52		44	35	13	02	5	
2	211	43.0		59.7	88	39.1	+10	03.9	56	45	34		21		09	8		
3	226	42.7	-22	59.9	103	10.7		19.2	54	39	25	8	09		15	12		
4	241	42.4	-23	00.1	117	42.3		34.4	52	34	17	7	58		20	15		
5	256	42.1	-23	00.3	132	13.8	+10	49.5	50	6	29	7	10	7	48	13	25	17
6	271	41.8	-23	00.6	146	45.4	+11	04.6	45	6	17	6	54	7	28	13	35	23
7	286	41.5		00.8	161	16.8		19.6	40	6	07	41	7	12	44	27		41
8	301	41.3		01.0	175	48.3		34.6	35	5	58	30	6	58	51	31		35
9	316	41.0		01.2	190	19.6	+11	49.5	30		50	19		46	13	58	34	30
10	331	40.7		01.4	204	51.0	+12	04.3	20	34	6	01	25		14	10	39	20
11	346	40.4	-23	01.6	219	22.3	+12	19.0	10 N	5	18	5	44	6	07	14	20	44
12	1	40.1	-23	01.8	233	53.6	+12	33.7	0	5	01	5	27	5	50	14	30	49
13	16	39.8		02.0	248	24.8	+12	48.4	10 S	4	42	5	09	32		40	53	1
14	31	39.5		02.2	262	56.0	+13	02.9	20	4	20	4	49	5	14	14	50	58
15	46	39.2		02.4	277	27.2		17.4	30	3	52	25	4	52	15	02	64	41
16	61	38.9		02.5	291	58.2		31.8	35		33	4	10	39		09	67	36
17	76	38.7	-23	02.7	306	29.3	+13	46.2	40	3	11	3	52	4	25	15	17	71
18	91	38.4	-23	02.9	321	00.3	+14	00.4	45	2	41	3	30	4	07	15	27	75
19	106	38.1		03.1	335	31.3		14.6	50	1	57	3	01	3	45		39	81
20	121	37.8		03.3	350	02.2		28.7	52	1	31	2	46	34		44	84	12
21	136	37.5		03.5	4	33.0		42.8	54	0	51	29		22		50	87	08
22	151	37.2		03.7	19	03.9	+14	56.7	56	**	**	2	08	3	09	15	57	91
23	166	36.9		03.9	33	34.6	+15	10.6	58	**	**	1	40	2	53	16	04	96
24	181	36.6	-23	04.1	48	05.3	+15	24.4	60 S	**	**	0	56	2	33	16	13	101

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 18 ^h 37 ^m 7		Mag: -4.9 PMG: 14 ^h 42 ^m			Mag: -1.3 PMG: 20 ^h 59 ^m			Mag: -1.8 PMG: 9 ^h 10 ^m			Mag: +0.1 PMG: 3 ^h 35 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'				
0	79	48.4	139	08.8	-22	24.1	44	18.3	+15	17.4	222	17.1	-13	40.3	306	11.9	+18	01.6
1	94	50.9	154	10.1		23.5	59	20.8		17.5	237	19.1		40.5	321	14.5		01.7
2	109	53.4	169	11.4		23.0	74	23.2		17.6	252	21.1		40.6	336	17.0		01.7
3	124	55.8	184	12.7		22.4	89	25.7		17.6	267	23.1		40.8	351	19.6		01.7
4	139	58.3	199	14.0		21.8	104	28.2		17.7	282	25.1		40.9	6	22.1		01.8
5	155	00.8	214	15.3	-22	21.3	119	30.6	+15	17.8	297	27.1	-13	41.1	21	24.7	+18	01.8
6	170	03.2	229	16.7	-22	20.7	134	33.1	+15	17.9	312	29.1	-13	41.2	36	27.2	+18	01.8
7	185	05.7	244	18.0		20.1	149	35.5		18.0	327	31.1		41.4	51	29.8		01.8
8	200	08.2	259	19.3		19.6	164	38.0		18.0	342	33.1		41.5	66	32.3		01.9
9	215	10.6	274	20.7		19.0	179	40.4		18.1	357	35.1		41.7	81	34.9		01.9
10	230	13.1	289	22.0		18.4	194	42.9		18.2	12	37.1		41.8	96	37.4		01.9
11	245	15.5	304	23.3	-22	17.9	209	45.3	+15	18.3	27	39.1	-13	42.0	111	40.0	+18	02.0
12	260	18.0	319	24.7	-22	17.3	224	47.8	+15	18.4	42	41.1	-13	42.1	126	42.5	+18	02.0
13	275	20.5	334	26.0		16.7	239	50.2		18.5	57	43.1		42.3	141	45.1		02.0
14	290	22.9	349	27.4		16.2	254	52.7		18.5	72	45.1		42.4	156	47.6		02.1
15	305	25.4	4	28.7		15.6	269	55.1		18.6	87	47.1		42.6	171	50.2		02.1
16	320	27.9	19	30.1		15.0	284	57.5		18.7	102	49.1		42.7	186	52.7		02.1
17	335	30.3	34	31.4	-22	14.5	300	00.0	+15	18.8	117	51.1	-13	42.8	201	55.3	+18	02.1
18	350	32.8	49	32.8	-22	13.9	315	02.4	+15	18.9	132	53.1	-13	43.0	216	57.8	+18	02.2
19	5	35.3	64	34.2		13.3	330	04.9		19.0	147	55.1		43.1	232	00.4		02.2
20	20	37.7	79	35.5		12.8	345	07.3		19.1	162	57.1		43.3	247	02.9		02.2
21	35	40.2	94	36.9		12.2	0	09.7		19.2	177	59.1		43.4	262	05.5		02.3
22	50	42.6	109	38.3		11.6	15	12.2		19.2	193	01.1		43.6	277	08.0		02.3
23	65	45.1	124	39.7		11.1	30	14.6		19.3	208	03.1		43.7	292	10.6		02.3
24	80	47.6	139	41.1	-22	10.5	45	17.0	+15	19.4	223	05.0	-13	43.9	307	13.1	+18	02.4
Dif	—		+13		+6		+24		+1		+20		-1		+26		0	

UT	SOL			LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 16/2 PMG: 11 ^h 53 ^m 8			Edad: 10 ^d 4 PHE SD: 15/7 PMG: 21 ^h 31 ^m R°: 51 ^m														
	hG ☉	Dec		hG ☾	Dif		Dec			Dif	Civil	Náutico		Hora	R°		Hora	R°
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m
0	181	36.6	-23 04.1	48	05.3	+15	24.4	60 N	14	54	15	51	16	47	12 55 3	5	00	102
1	196	36.3	04.3	62	36.0 ¹¹⁷		38.1 ¹³⁷	58	15	11	16	02	16	54	13 07 8	4	49	96
2	211	36.1	04.5	77	06.6 ¹¹⁶	+15	51.7 ¹³⁶	56	25		12	17	01	17 13		40	91	
3	226	35.8	04.7	91	37.2 ¹¹⁶	+16	05.2 ¹³⁵	54	37	21	07	27	16	31 88				
4	241	35.5	04.8	106	07.7 ¹¹⁵		18.7 ¹³⁵	52	48	29	13	35	20	24 84				
5	256	35.2	-23 05.0	120	38.1 ¹¹⁴	+16	32.1 ¹³⁴	50	15	58	16	36	17	18	13 42 23	4	17	81
6	271	34.9	-23 05.2	135	08.5 ¹¹⁴	+16	45.3 ¹³²	45	16	18	16	52	17	29	13 58 28	4	03	75
7	286	34.6	05.4	149	38.8 ¹¹³	+16	58.5 ¹³¹	40	35		17 05	39		14 11 32	3	51	71	
8	301	34.3	05.6	164	09.1 ¹¹³	+17	11.6 ¹³¹	35	16	49	17	49		22 36		41	67	
9	316	34.0	05.8	178	39.3 ¹¹²		24.6 ¹³⁰	30	17	01	27	17 57		32 39		33	64	
10	331	33.7	05.9	193	09.5 ¹¹²		37.5 ¹²⁹	20	22		17 46	18 13		14 49 44		18	58	
11	346	33.4	-23 06.1	207	39.6 ¹¹¹	+17	50.3 ¹²⁸	10 N	17	40	18	03	18	29	15 04 48	3	05	54
12	1	33.1	-23 06.3	222	09.7 ¹¹¹	+18	03.0 ¹²⁷	0	17	58	18	20	18	46	15 19 51	2	53	50
13	16	32.9	06.5	236	39.6 ¹⁰⁹		15.6 ¹²⁶	10 S	18	15	38	19	05	33 55		41	46	
14	31	32.6	06.7	251	09.6 ¹¹⁰		28.1 ¹²⁵	20	34		18 58	27		15 48 59		28	41	
15	46	32.3	06.8	265	39.4 ¹⁰⁸		40.5 ¹²⁴	30	18	55	19	23	19	56	16 06 64		13	37
16	61	32.0	07.0	280	09.3 ¹⁰⁹	+18	52.8 ¹²³	35	19	08	38	20	14	16 67		2	05	33
17	76	31.7	-23 07.2	294	39.0 ¹⁰⁷	+19	05.0 ¹²²	40	19	23	19	56	20	37	16 28 71	1	56	29
18	91	31.4	-23 07.4	309	08.7 ¹⁰⁷	+19	17.1 ¹²¹	45	19	41	20	18	21	07	16 42 75	1	44	26
19	106	31.1	07.5	323	38.3 ¹⁰⁶		29.1 ¹²⁰	50	20	03	20	47	21	52	17 00 80	31	20	
20	121	30.8	07.7	338	07.9 ¹⁰⁶		41.0 ¹¹⁹	52	14		21 02	22	18	08 84		25	17	
21	136	30.5	07.9	352	37.4 ¹⁰⁵	+19	52.8 ¹¹⁸	54	26		20	23	00	17 87		18	14	
22	151	30.2	08.1	7	06.9 ¹⁰⁵	+20	04.5 ¹¹⁷	56	40		21 41	** **		28 91		11	10	
23	166	29.9	08.2	21	36.2 ¹⁰³		16.1 ¹¹⁶	58	20	56	22	10	** **	40 96		1	02	6
24	181	29.6	-23 08.4	36	05.6 ¹⁰⁴	+20	27.5 ¹¹⁴	60 S	21	16	22	55	** **	17 54 103		0	52	1
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 18 ^h 33 ^m 8		Mag: -4.9 PMG: 14 ^h 40 ^m			Mag: -1.2 PMG: 20 ^h 55 ^m			Mag: -1.8 PMG: 9 ^h 06 ^m			Mag: +0.1 PMG: 3 ^h 31 ^m						
	hG ♈	hG ♀		Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	80	47.6	139	41.1	-22	10.5	45	17.0	+15	19.4	223	05.0	-13	43.9	307	13.1	+18	02.4
1	95	50.0	154	42.4		09.9	60	19.4		19.5	238	07.0		44.0	322	15.7		02.4
2	110	52.5	169	43.8		09.4	75	21.9		19.6	253	09.0		44.2	337	18.2		02.4
3	125	55.0	184	45.2		08.8	90	24.3		19.7	268	11.0		44.3	352	20.8		02.5
4	140	57.4	199	46.6		08.2	105	26.7		19.8	283	13.0		44.5	7	23.4		02.5
5	155	59.9	214	48.0	-22	07.7	120	29.1	+15	19.9	298	15.0	-13	44.6	22	25.9	+18	02.5
6	171	02.4	229	49.4	-22	07.1	135	31.6	+15	20.0	313	17.0	-13	44.8	37	28.5	+18	02.5
7	186	04.8	244	50.8		06.5	150	34.0		20.0	328	19.0		44.9	52	31.0		02.6
8	201	07.3	259	52.3		05.9	165	36.4		20.1	343	21.0		45.0	67	33.6		02.6
9	216	09.8	274	53.7		05.4	180	38.8		20.2	358	23.0		45.2	82	36.1		02.6
10	231	12.2	289	55.1		04.8	195	41.2		20.3	13	25.0		45.3	97	38.7		02.7
11	246	14.7	304	56.5	-22	04.2	210	43.7	+15	20.4	28	27.0	-13	45.5	112	41.2	+18	02.7
12	261	17.1	319	57.9	-22	03.7	225	46.1	+15	20.5	43	29.0	-13	45.6	127	43.8	+18	02.7
13	276	19.6	334	59.4		03.1	240	48.5		20.6	58	31.0		45.8	142	46.3		02.8
14	291	22.1	350	00.8		02.5	255	50.9		20.7	73	33.0		45.9	157	48.9		02.8
15	306	24.5	5	02.2		01.9	270	53.3		20.8	88	35.0		46.1	172	51.5		02.8
16	321	27.0	20	03.7		01.4	285	55.7		20.9	103	37.0		46.2	187	54.0		02.9
17	336	29.5	35	05.1	-22	00.8	300	58.1	+15	21.0	118	39.0	-13	46.4	202	56.6	+18	02.9
18	351	31.9	50	06.6	-22	00.2	316	00.5	+15	21.1	133	41.0	-13	46.5	217	59.1	+18	02.9
19	6	34.4	65	08.0	-21	59.7	331	02.9		21.2	148	43.0		46.7	233	01.7		03.0
20	21	36.9	80	09.5		59.1	346	05.3		21.3	163	45.0		46.8	248	04.2		03.0
21	36	39.3	95	10.9		58.5	1	07.7		21.4	178	47.0		46.9	263	06.8		03.0
22	51	41.8	110	12.4		57.9	16	10.1		21.5	193	49.0		47.1	278	09.3		03.0
23	66	44.3	125	13.9		57.4	31	12.5		21.6	208	51.1		47.2	293	11.9		03.1
24	81	46.7	140	15.3	-21	56.8	46	14.9	+15	21.6	223	53.1	-13	47.4	308	14.5	+18	03.1
Dif	—		+14		+6		+24		+1		+20		-1		+26		0	

UT	SOL			O LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'2			Edad: 11 ^d .4 PHE { 4 ^h : 57'1 12 ^h : 56'9 20 ^h : 56'7 R°: 55 ^m												
	PMG: 11 ^h 54 ^m 3			SD: 15'6 PMG: 22 ^h 22 ^m												
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	'	°	h	m	h	m	h	m	m
0	181	29.6	-23 08.4	36	05.6	+20 27.5	113	58	60 N	7 01	7 58	8 55	12 58	7	6 42	104
1	196	29.3	08.6	50	34.8	102	38.8	113	58	6 54	46	38	13 15	15	25	95
2	211	29.0	08.8	65	04.0	102	+20 50.1	113	56	47	36	23	30	20	6 11	90
3	226	28.8	08.9	79	33.2	102	+21 01.2	111	54	41	27	11	43	24	5 59	85
4	241	28.5	09.1	94	02.3	101	12.2	110	52	36	19	8 00	13 55	27	48	82
5	256	28.2	-23 09.3	108	31.3	100	+21 23.1	109	50	6 31	7 12	7 50	14 05	30	5 38	79
6	271	27.9	-23 09.4	123	00.2	99	+21 33.8	107	45	6 19	6 56	7 30	14 26	35	5 18	74
7	286	27.6	09.6	137	29.1	99	44.5	107	40	09	43	7 13	43	39	5 02	70
8	301	27.3	09.8	151	58.0	99	+21 55.0	105	35	6 00	31	6 59	14 58	41	4 48	67
9	316	27.0	09.9	166	26.7	97	+22 05.4	104	30	5 51	21	47	15 11	44	37	64
10	331	26.7	10.1	180	55.4	97	15.7	103	20	35	6 02	26	33	47	4 16	60
11	346	26.4	-23 10.2	195	24.1	97	+22 25.8	101	10 N	5 19	5 45	6 08	15 52	51	3 59	56
12	1	26.1	-23 10.4	209	52.7	96	+22 35.9	101	0	5 02	5 28	5 51	16 10	53	3 43	52
13	16	25.8	10.6	224	21.2	95	45.8	99	10 S	4 43	5 10	33	28	56	27	49
14	31	25.5	10.7	238	49.7	95	+22 55.5	97	20	4 21	4 50	5 14	16 47	60	3 09	46
15	46	25.2	10.9	253	18.1	94	+23 05.2	97	30	3 52	25	4 53	17 10	63	2 50	41
16	61	24.9	11.0	267	46.4	93	14.7	95	35	34	4 10	40	23	66	38	38
17	76	24.6	-23 11.2	282	14.7	93	+23 24.1	94	40	3 11	3 52	4 25	17 39	68	2 25	35
18	91	24.3	-23 11.4	296	43.0	93	+23 33.4	93	45	2 41	3 30	4 07	17 57	72	2 10	31
19	106	24.0	11.5	311	11.1	91	42.5	91	50	1 56	3 01	3 45	18 20	77	1 51	26
20	121	23.7	11.7	325	39.3	92	+23 51.5	90	52	1 30	2 46	34	32	79	42	23
21	136	23.4	11.8	340	07.3	90	+24 00.4	89	54	0 47	28	22	44	83	32	20
22	151	23.1	12.0	354	35.3	90	09.1	87	56	** **	2 07	3 08	18 59	87	21	16
23	166	22.9	12.1	9	03.3	90	17.7	86	58	** **	1 38	2 52	19 16	93	1 08	11
24	181	22.6	-23 12.3	23	31.2	89	+24 26.2	85	60 S	** **	0 52	2 32	19 37	103	0 53	4

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 18 ^h 29 ^m 8		Mag: -4.9 PMG: 14 ^h 38 ^m		Mag: -1.2 PMG: 20 ^h 52 ^m		Mag: -1.8 PMG: 9 ^h 03 ^m		Mag: +0.1 PMG: 3 ^h 26 ^m							
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄							
h	°	'	°	°	°	°	°	°	°	°						
0	81	46.7	140 15.3	-21 56.8	46	14.9	+15 21.6	223 53.1	-13 47.4	308 14.5	+18 03.1					
1	96	49.2	155 16.8	56.2	61	17.3	21.7	238 55.1	47.5	323 17.0	03.1					
2	111	51.6	170 18.3	55.7	76	19.7	21.8	253 57.1	47.7	338 19.6	03.2					
3	126	54.1	185 19.8	55.1	91	22.1	21.9	268 59.1	47.8	353 22.1	03.2					
4	141	56.6	200 21.2	54.5	106	24.5	22.0	284 01.1	48.0	8 24.7	03.2					
5	156	59.0	215 22.7	-21 53.9	121	26.9	+15 22.1	299 03.1	-13 48.1	23 27.3	+18 03.3					
6	172	01.5	230 24.2	-21 53.4	136	29.3	+15 22.2	314 05.1	-13 48.2	38 29.8	+18 03.3					
7	187	04.0	245 25.7	52.8	151	31.7	22.3	329 07.1	48.4	53 32.4	03.3					
8	202	06.4	260 27.2	52.2	166	34.1	22.4	344 09.1	48.5	68 34.9	03.4					
9	217	08.9	275 28.7	51.7	181	36.5	22.5	359 11.1	48.7	83 37.5	03.4					
10	232	11.4	290 30.2	51.1	196	38.8	22.6	14 13.1	48.8	98 40.0	03.4					
11	247	13.8	305 31.7	-21 50.5	211	41.2	+15 22.7	29 15.1	-13 49.0	113 42.6	+18 03.5					
12	262	16.3	320 33.2	-21 49.9	226	43.6	+15 22.8	44 17.1	-13 49.1	128 45.2	+18 03.5					
13	277	18.8	335 34.8	49.4	241	46.0	22.9	59 19.1	49.3	143 47.7	03.5					
14	292	21.2	350 36.3	48.8	256	48.4	23.0	74 21.1	49.4	158 50.3	03.6					
15	307	23.7	5 37.8	48.2	271	50.7	23.1	89 23.1	49.6	173 52.8	03.6					
16	322	26.1	20 39.3	47.6	286	53.1	23.2	104 25.1	49.7	188 55.4	03.6					
17	337	28.6	35 40.9	-21 47.1	301	55.5	+15 23.3	119 27.1	-13 49.8	203 58.0	+18 03.7					
18	352	31.1	50 42.4	-21 46.5	316	57.9	+15 23.4	134 29.1	-13 50.0	219 00.5	+18 03.7					
19	7	33.5	65 43.9	45.9	332	00.2	23.6	149 31.1	50.1	234 03.1	03.7					
20	22	36.0	80 45.5	45.4	347	02.6	23.7	164 33.1	50.3	249 05.6	03.8					
21	37	38.5	95 47.0	44.8	2	05.0	23.8	179 35.1	50.4	264 08.2	03.8					
22	52	40.9	110 48.6	44.2	17	07.3	23.9	194 37.1	50.6	279 10.8	03.8					
23	67	43.4	125 50.1	43.6	32	09.7	24.0	209 39.1	50.7	294 13.3	03.9					
24	82	45.9	140 51.7	-21 43.1	47	12.1	+15 24.1	224 41.1	-13 50.8	309 15.9	+18 03.9					
Dif	—		+15	+6	+24		+1	+20		-1	+26		0			

UT	SOL			LUNA					Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 2			Edad: 12 ^d 4 PHE { 4 ^h : 56 ^m 6 12 ^h : 56 ^m 4 20 ^h : 56 ^m 2 Rº: 55 ^m												
	PMG: 11 ^h 54 ^m 7			PMG: 23 ^h 17 ^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	181	22.6	-23	23	31.2	+24	26.2	60 N	14 53	15 50	16 47	13 05 18		8 26 96		
1	196	22.3		37	59.0	88	34.5	58	15 10	16 02	16 54	30 28		8 00 87		
2	211	22.0		52	26.8	88	42.7	56	25	12	17 01	13 50 33		7 41 81		
3	226	21.7		66	54.5	87	50.7	54	37	21	07	14 07 37		24 77		
4	241	21.4		81	22.2	87	+24 58.6	52	48	29	13	22 39		7 10 75		
5	256	21.1	-23	95	49.9	87	+25 06.4	50	15 58	16 37	17 18	14 35 40		6 57 73		
6	271	20.8	-23	110	17.5	86	+25 14.0	45	16 19	16 52	17 30	15 01 44		6 32 69		
7	286	20.5		124	45.0	85	21.5	40	35	17 06	40	22 46		6 12 66		
8	301	20.2		139	12.5	85	28.8	35	16 49	18	49	39 49		5 55 64		
9	316	19.9		153	39.9	84	36.0	30	17 02	28	17 58	15 55 49		41 62		
10	331	19.6		168	07.3	84	43.1	20	23	17 47	18 14	16 20 52		5 16 59		
11	346	19.3	-23	182	34.7	84	+25 50.0	10 N	17 41	18 04	18 30	16 43 53		4 55 57		
12	1	19.0	-23	197	02.0	83	+25 56.7	0	17 58	18 21	18 47	17 03 56		4 35 55		
13	16	18.7		211	29.3	83	+26 03.4	10 S	18 16	39	19 06	24 57		4 16 52		
14	31	18.4		225	56.5	82	09.8	20	35	18 59	28	17 47 58		3 55 50		
15	46	18.1		240	23.7	82	16.1	30	18 57	19 24	19 57	18 13 61		31 46		
16	61	17.8		254	50.8	81	22.3	35	19 10	39	20 16	29 61		16 45		
17	76	17.5	-23	269	17.9	81	+26 28.3	40	19 25	19 57	20 39	18 47 63		3 00 43		
18	91	17.2	-23	283	45.0	81	+26 34.2	45	19 42	20 20	21 09	19 09 65		2 41 39		
19	106	16.9		298	12.1	81	39.9	50	20 05	20 49	21 54	37 67		17 34		
20	121	16.6		312	39.1	80	45.5	52	15	21 04	22 21	19 51 69		2 05 32		
21	136	16.3		327	06.0	79	50.9	54	28	22	23 05	20 07 70		1 52 29		
22	151	16.0		341	33.0	80	+26 56.2	56	42	21 44	** ** *	26 73		37 25		
23	166	15.7		355	59.9	79	+27 01.3	58	20 58	22 13	** ** *	20 49 78		1 19 19		
24	181	15.4	-23	10	26.8	79	+27 06.2	60 S	21 19	23 01	** ** *	21 20 87		0 57 10		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 18 ^h 25 ^m 9		Mag: -4.9 PMG: 14 ^h 35 ^m		Mag: -1.2 PMG: 20 ^h 48 ^m		Mag: -1.8 PMG: 9 ^h 00 ^m		Mag: +0.1 PMG: 3 ^h 22 ^m							
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'						
0	82	45.9	140	51.7	47	12.1	+15	24.1	224	41.1	-13	50.8	309	15.9	+18	03.9
1	97	48.3	155	53.2	62	14.4		24.2	239	43.1		51.0	324	18.5		03.9
2	112	50.8	170	54.8	77	16.8		24.3	254	45.1		51.1	339	21.0		04.0
3	127	53.2	185	56.4	92	19.2		24.4	269	47.1		51.3	354	23.6		04.0
4	142	55.7	200	57.9	107	21.5		24.5	284	49.1		51.4	9	26.1		04.0
5	157	58.2	215	59.5	122	23.9	+15	24.6	299	51.1	-13	51.6	24	28.7	+18	04.1
6	173	00.6	231	01.1	137	26.2	+15	24.7	314	53.1	-13	51.7	39	31.3	+18	04.1
7	188	03.1	246	02.7	152	28.6		24.8	329	55.1		51.9	54	33.8		04.1
8	203	05.6	261	04.3	167	31.0		24.9	344	57.2		52.0	69	36.4		04.2
9	218	08.0	276	05.8	182	33.3		25.0	359	59.2		52.1	84	39.0		04.2
10	233	10.5	291	07.4	197	35.7		25.1	15	01.2		52.3	99	41.5		04.2
11	248	13.0	306	09.0	212	38.0	+15	25.3	30	03.2	-13	52.4	114	44.1	+18	04.3
12	263	15.4	321	10.6	227	40.4	+15	25.4	45	05.2	-13	52.6	129	46.6	+18	04.3
13	278	17.9	336	12.2	242	42.7		25.5	60	07.2		52.7	144	49.2		04.3
14	293	20.4	351	13.8	257	45.1		25.6	75	09.2		52.9	159	51.8		04.4
15	308	22.8	6	15.5	272	47.4		25.7	90	11.2		53.0	174	54.3		04.4
16	323	25.3	21	17.1	287	49.8		25.8	105	13.2		53.1	189	56.9		04.4
17	338	27.7	36	18.7	302	52.1	+15	25.9	120	15.2	-13	53.3	204	59.5	+18	04.5
18	353	30.2	51	20.3	317	54.4	+15	26.0	135	17.2	-13	53.4	220	02.0	+18	04.5
19	8	32.7	66	21.9	332	56.8		26.1	150	19.2		53.6	235	04.6		04.5
20	23	35.1	81	23.6	347	59.1		26.2	165	21.2		53.7	250	07.2		04.6
21	38	37.6	96	25.2	3	01.5		26.4	180	23.2		53.9	265	09.7		04.6
22	53	40.1	111	26.8	18	03.8		26.5	195	25.2		54.0	280	12.3		04.6
23	68	42.5	126	28.5	33	06.1		26.6	210	27.2		54.1	295	14.9		04.7
24	83	45.0	141	30.1	48	08.5	+15	26.7	225	29.2	-13	54.3	310	17.4	+18	04.7
Dif	—		+16		+6		+23		+20		-1		+26		0	

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'2 PMG: 11 ^h 55 ^m 2				Edad: 13 ^d 4 PHE { 4 ^h : 56'1 12 ^h : 55'9 20 ^h : 55'7 R°: ***															
	hG ☉		Dec		hG ☾		Dif			Dec			Dif		Hora		R°			
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	181	15.4	-23	15.7	10	26.8			+27	06.2			60 N	7 03	8 00	8 57	13 23	47	10 02	68
1	196	15.1		15.8	24	53.6	78				48	58	6 56	7 48		40	13 58	50	9 27	65
2	211	14.8		15.9	39	20.5	79				47	56		49	38	25	14 23	52	9 02	63
3	226	14.5		16.1	53	47.3	78				45	54		43	29	13	14 44	52	8 41	63
4	241	14.2		16.2	68	14.1	78				43	52		37	21	8 02	15 01	53		25 61
5	256	13.9	-23	16.3	82	40.8	77			+27	28.7	42	50	6 32	7 14	7 52	15 15	54	8 10	61
6	271	13.6	-23	16.5	97	07.6	78			+27	32.8	41	45	6 20	6 58	7 31	15 45	54	7 41	60
7	286	13.3		16.6	111	34.3	77				38	40		10	44	15	16 08	55	7 18	59
8	301	13.0		16.7	126	01.0	77				38	35		6 01	32	7 01		28 54	6 59	58
9	316	12.7		16.8	140	27.7	77				35	30		5 52	22	6 48	16 44	55		43 58
10	331	12.4		17.0	154	54.4	77				34	20		36	6 03	27	17 12	55	6 15	57
11	346	12.1	-23	17.1	169	21.1	77			+27	50.6	33	10 N	5 20	5 46	6 09	17 36	55	5 52	56
12	1	11.8	-23	17.2	183	47.8	77			+27	53.7	31	0	5 03	5 29	5 51	17 59	55	5 30	55
13	16	11.5		17.3	198	14.4	76				29	10 S		4 44	5 11	34	18 21	55	5 08	55
14	31	11.2		17.4	212	41.1	77			+27	59.4	28	20	4 21	4 51	5 15	18 45	55	4 45	53
15	46	10.9		17.6	227	07.8	77			+28	02.0	26	30	3 52	26	4 53	19 14	54		17 53
16	61	10.6		17.7	241	34.4	76				25	35		34	4 11	40		30 55	4 01	52
17	76	10.3	-23	17.8	256	01.1	77			+28	06.8	23	40	3 11	3 53	4 25	19 50	55	3 43	50
18	91	10.0	-23	17.9	270	27.7	76			+28	09.0	22	45	2 41	3 30	4 07	20 14	54	3 20	49
19	106	09.7		18.0	284	54.4	77				20	50		1 56	3 01	3 45	20 44	54	2 51	47
20	121	09.4		18.2	299	21.0	76				18	52		1 29	2 46	34	21 00	53		37 46
21	136	09.1		18.3	313	47.7	77				17	54		0 45	28	22		17 54		21 44
22	151	08.8		18.4	328	14.4	77				15	56		** ** *	2 06	3 08	21 39	53	2 02	42
23	166	08.5		18.5	342	41.1	77				14	58		** ** *	1 37	2 51	22 07	51	1 38	38
24	181	08.2	-23	18.6	357	07.8	77			+28	18.6	12	60 S	** ** *	0 49	2 31	22 47	48	1 07	29

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO					
	PMG 18 ^h 22 ^m 0		Mag: -4.9 PMG: 14 ^h 32 ^m				Mag: -1.1 PMG: 20 ^h 44 ^m				Mag: -1.8 PMG: 8 ^h 57 ^m				Mag: +0.1 PMG: 3 ^h 18 ^m					
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	83	45.0	141	30.1	-21	29.3			48	08.5	+15	26.7	225	29.2	-13	54.3	310	17.4	+18	04.7
1	98	47.5	156	31.8		28.7			63	10.8		26.8	240	31.3		54.4	325	20.0		04.7
2	113	49.9	171	33.4		28.1			78	13.1		26.9	255	33.3		54.6	340	22.6		04.8
3	128	52.4	186	35.1		27.5			93	15.5		27.0	270	35.3		54.7	355	25.1		04.8
4	143	54.9	201	36.8		27.0			108	17.8		27.1	285	37.3		54.9	10	27.7		04.8
5	158	57.3	216	38.4	-21	26.4			123	20.1	+15	27.3	300	39.3	-13	55.0	25	30.3	+18	04.9
6	173	59.8	231	40.1	-21	25.8			138	22.4	+15	27.4	315	41.3	-13	55.1	40	32.8	+18	04.9
7	189	02.2	246	41.8		25.2			153	24.8		27.5	330	43.3		55.3	55	35.4		04.9
8	204	04.7	261	43.4		24.7			168	27.1		27.6	345	45.3		55.4	70	38.0		05.0
9	219	07.2	276	45.1		24.1			183	29.4		27.7	0	47.3		55.6	85	40.5		05.0
10	234	09.6	291	46.8		23.5			198	31.7		27.8	15	49.3		55.7	100	43.1		05.0
11	249	12.1	306	48.5	-21	22.9			213	34.1	+15	28.0	30	51.3	-13	55.8	115	45.7	+18	05.1
12	264	14.6	321	50.2	-21	22.4			228	36.4	+15	28.1	45	53.3	-13	56.0	130	48.2	+18	05.1
13	279	17.0	336	51.9		21.8			243	38.7		28.2	60	55.3		56.1	145	50.8		05.1
14	294	19.5	351	53.6		21.2			258	41.0		28.3	75	57.4		56.3	160	53.4		05.2
15	309	22.0	6	55.3		20.6			273	43.3		28.4	90	59.4		56.4	175	55.9		05.2
16	324	24.4	21	57.0		20.1			288	45.6		28.5	106	01.4		56.6	190	58.5		05.2
17	339	26.9	36	58.7	-21	19.5			303	47.9	+15	28.7	121	03.4	-13	56.7	206	01.1	+18	05.3
18	354	29.4	52	00.4	-21	18.9			318	50.3	+15	28.8	136	05.4	-13	56.8	221	03.6	+18	05.3
19	9	31.8	67	02.1		18.3			333	52.6		28.9	151	07.4		57.0	236	06.2		05.4
20	24	34.3	82	03.8		17.8			348	54.9		29.0	166	09.4		57.1	251	08.8		05.4
21	39	36.7	97	05.6		17.2			3	57.2		29.1	181	11.4		57.3	266	11.3		05.4
22	54	39.2	112	07.3		16.6			18	59.5		29.3	196	13.4		57.4	281	13.9		05.5
23	69	41.7	127	09.0		16.0			34	01.8		29.4	211	15.4		57.5	296	16.5		05.5
24	84	44.1	142	10.8	-21	15.5			49	04.1	+15	29.5	226	17.4	-13	57.7	311	19.0	+18	05.5

Dif	—		+17		+6		+23		+1		+20		-1		+26	

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna				
	SD: 16 ^h 3				Edad: 14 ^d 4 PHE	$\left\{ \begin{array}{l} 4^h: 55/6 \\ 12^h: 55/4 \\ 20^h: 55/3 \end{array} \right.$					R°: 55 ^m		PMG: 0 ^h 12 ^m		R°: 55 ^m		R°: 55 ^m		
	PMG: 11 ^h 55 ^m 7																		
	hG ☉	Dec			hG ☾	Dif			Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	181	08.2	-23	18.6	357	07.8	+28	18.6	11	58	60 N	14 53	15 51	16 47	14 10	80	11 10	32	
1	196	07.9		18.7	11	34.5	77	19.7	9	58	58	15 10	16 02	16 55	14 48	73	10 32	39	
2	211	07.6		18.8	26	01.2	77	20.6	7	56	56	25	12	17 01	15 15	69	10 05	42	
3	226	07.3		18.9	40	27.9	77	21.3	7	54	54	38	21	08	36	67	9 44	44	
4	241	07.0		19.1	54	54.7	78	21.9	6	52	52	49	30	13	15 54	65	26	46	
5	256	06.7	-23	19.2	69	21.5	78	+28	22.3	4	50	15 59	16 37	17 19	16 09	64	9 11	47	
6	271	06.4	-23	19.3	83	48.3	78	+28	22.6	3	45	16 19	16 53	17 30	16 39	62	8 41	48	
7	286	06.1		19.4	98	15.1	78	22.7	1	40	40	36	17 06	41	17 03	60	8 17	50	
8	301	05.8		19.5	112	41.9	78	22.7	0	35	35	16 50	18	50	22	59	7 57	51	
9	316	05.5		19.6	127	08.8	79	22.5	2	30	30	17 02	29	17 59	17 39	57	41	51	
10	331	05.2		19.7	141	35.7	79	22.2	3	20	20	24	17 48	18 15	18 07	56	7 12	53	
11	346	04.9	-23	19.8	156	02.7	80	+28	21.7	5	10 N	17 42	18 05	18 31	18 31	55	6 48	54	
12	1	04.6	-23	19.9	170	29.6	79	+28	21.0	7	0	17 59	18 22	18 48	18 54	53	6 25	55	
13	16	04.3		20.0	184	56.6	80	20.2	8	10 S	18 17	18 40	19 07	19 16	52	6 03	55		
14	31	04.0		20.1	199	23.7	81	19.3	9	20	20	36	19 00	30	19 40	50	5 38	56	
15	46	03.7		20.2	213	50.8	81	18.2	11	30	30	18 58	25	19 59	20 08	49	5 10	56	
16	61	03.3		20.3	228	17.9	81	16.9	13	35	35	19 11	41	20 17	25	47	4 53	57	
17	76	03.0	-23	20.4	242	45.0	81	+28	15.5	14	40	19 26	19 59	20 40	20 45	45	4 33	58	
18	91	02.7	-23	20.5	257	12.2	82	+28	13.9	16	45	19 44	20 21	21 11	21 08	43	4 09	58	
19	106	02.4		20.6	271	39.5	83	12.2	17	50	50	20 06	20 51	21 56	38	40	3 38	60	
20	121	02.1		20.7	286	06.8	83	10.4	18	52	52	17	21 06	22 24	21 53	38	23	60	
21	136	01.8		20.8	300	34.1	83	08.4	20	54	54	29	24	23 09	22 11	36	3 05	61	
22	151	01.5		20.9	315	01.5	84	06.2	22	56	56	20 44	21 46	** **	32	32	2 44	61	
23	166	01.2		21.0	329	28.9	84	03.9	23	58	58	21 00	22 16	** **	22 58	28	2 16	63	
24	181	00.9	-23	21.1	343	56.4	85	+28	01.5	24	60 S	21 21	23 05	** **	23 35	18	1 36	66	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 18 ^h 18 ^m 1		Mag: -4.9 PMG: 14 ^h 30 ^m		Mag: -1.1 PMG: 20 ^h 41 ^m		Mag: -1.8 PMG: 8 ^h 54 ^m		Mag: +0.1 PMG: 3 ^h 14 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	84	44.1	142	10.8	49	04.1	+15	29.5	226	17.4
1	99	46.6	157	12.5	64	06.4		29.6	241	19.5
2	114	49.1	172	14.3	79	08.7		29.7	256	21.5
3	129	51.5	187	16.0	94	11.0		29.9	271	23.5
4	144	54.0	202	17.8	109	13.3		30.0	286	25.5
5	159	56.5	217	19.5	124	15.6	+15	30.1	301	27.5
6	174	58.9	232	21.3	139	17.9	+15	30.2	316	29.5
7	190	01.4	247	23.0	154	20.2		30.4	331	31.5
8	205	03.9	262	24.8	169	22.5		30.5	346	33.5
9	220	06.3	277	26.6	184	24.8		30.6	1	35.5
10	235	08.8	292	28.4	199	27.1		30.7	16	37.5
11	250	11.2	307	30.1	214	29.3	+15	30.9	31	39.6
12	265	13.7	322	31.9	229	31.6	+15	31.0	46	41.6
13	280	16.2	337	33.7	244	33.9		31.1	61	43.6
14	295	18.6	352	35.5	259	36.2		31.2	76	45.6
15	310	21.1	7	37.3	274	38.5		31.4	91	47.6
16	325	23.6	22	39.1	289	40.8		31.5	106	49.6
17	340	26.0	37	40.9	304	43.1	+15	31.6	121	51.6
18	355	28.5	52	42.7	319	45.3	+15	31.7	136	53.6
19	10	31.0	67	44.5	334	47.6		31.9	151	55.6
20	25	33.4	82	46.3	349	49.9		32.0	166	57.7
21	40	35.9	97	48.2	4	52.2		32.1	181	59.7
22	55	38.4	112	50.0	19	54.4		32.2	197	01.7
23	70	40.8	127	51.8	34	56.7		32.4	212	03.7
24	85	43.3	142	53.6	49	59.0	+15	32.5	227	05.7
Dif	—		+18		+6		+1		+20	
									-1	
									+26	
									0	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'3 PMG: 11 ^h 56 ^m 2			Edad: 15 ^d 4 PHE { 4 ^h : 55'1 12 ^h : 55'0 20 ^h : 54'9 PMG: 1 ^h 07 ^m R°: 52 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m
0	181	00.9	-23	21.1	343	56.4	+28	01.5	60 N	7 05	8 02	8 59	15 30	94	11 42	12
1	196	00.6		21.2	358	23.9	+27	58.9	58	6 57	7 50	42	16 01	85	11 11	20
2	211	00.3		21.3	12	51.5		56.1	56	51	40	27	24	79	10 47	26
3	226	00.0		21.4	27	19.2		53.2	54	44	31	14	43	76	28	30
4	240	59.7		21.5	41	46.9		50.2	52	39	22	8 03	16 59	73	10 12	32
5	255	59.4	-23	21.5	56	14.6	+27	47.0	50	6 33	7 15	7 54	17 13	70	9 58	34
6	270	59.1	-23	21.6	70	42.4	+27	43.7	45	6 22	6 59	7 33	17 41	66	9 29	39
7	285	58.8		21.7	85	10.3		40.3	40	11	45	16	18 03	63	9 07	41
8	300	58.5		21.8	99	38.3		36.7	35	6 02	34	7 02	21	60	8 48	43
9	315	58.2		21.9	114	06.3		32.9	30	5 53	23	6 50	18 36	59	32	45
10	330	57.9		22.0	128	34.3		29.0	20	37	6 04	28	19 03	55	8 05	47
11	345	57.6	-23	22.1	143	02.4	+27	25.0	10 N	5 21	5 47	6 10	19 26	52	7 42	49
12	0	57.3	-23	22.1	157	30.6	+27	20.9	0	5 04	5 30	5 52	19 47	50	7 20	51
13	15	57.0		22.2	171	58.9		16.6	10 S	4 45	5 12	35	20 08	47	6 58	53
14	30	56.7		22.3	186	27.2		12.2	20	4 22	4 51	5 16	30	45	34	56
15	45	56.3		22.4	200	55.6		07.6	30	3 53	26	4 54	20	57	41	6 06
16	60	56.0		22.5	215	24.1	+27	02.9	35	35	4 11	41	21	12	39	5 50
17	75	55.7	-23	22.6	229	52.6	+26	58.1	40	3 11	3 53	4 26	21	30	36	5 31
18	90	55.4	-23	22.6	244	21.3	+26	53.1	45	2 41	3 31	4 08	21	51	34	5 07
19	105	55.1		22.7	258	49.9		48.0	50	1 56	3 01	3 45	22	18	29	4 38
20	120	54.8		22.8	273	18.7		42.8	52	1 28	2 46	35	31	27	23	70
21	135	54.5		22.9	287	47.5		37.5	54	0 42	28	22	22	47	23	4 06
22	150	54.2		22.9	302	16.4		32.0	55	** **	2 06	3 08	23	04	20	3 45
23	165	53.9		23.0	316	45.4		26.4	56	** **	1 36	2 51	26	14	3	19
24	180	53.6	-23	23.1	331	14.5	+26	20.6	58	** **	0 47	2 31	23	53	6	2 42

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 18 ^h 14 ^m 1		Mag: -4.9 PMG: 14 ^h 27 ^m		Mag: -1.1 PMG: 20 ^h 37 ^m		Mag: -1.8 PMG: 8 ^h 50 ^m		Mag: +0.1 PMG: 3 ^h 10 ^m	
	hG ♂	Dec	hG ♀	Dec	hG ♂	Dec	hG ♀	Dec	hG ♀	Dec
h	°	'	°	'	°	'	°	'	°	'
0	85	43.3	142	53.6	-21	01.7	49	59.0	+15	32.5
1	100	45.7	157	55.5		01.1	65	01.3		32.6
2	115	48.2	172	57.3	-21	00.5	80	03.5		32.8
3	130	50.7	187	59.2	-21	00.0	95	05.8		32.9
4	145	53.1	203	01.0	-20	59.4	110	08.1		33.0
5	160	55.6	218	02.9	-20	58.8	125	10.3	+15	33.1
6	175	58.1	233	04.7	-20	58.2	140	12.6	+15	33.3
7	191	00.5	248	06.6		57.7	155	14.9		33.4
8	206	03.0	263	08.4		57.1	170	17.1		33.5
9	221	05.5	278	10.3		56.5	185	19.4		33.7
10	236	07.9	293	12.2		55.9	200	21.6		33.8
11	251	10.4	308	14.0	-20	55.4	215	23.9	+15	33.9
12	266	12.9	323	15.9	-20	54.8	230	26.2	+15	34.1
13	281	15.3	338	17.8		54.2	245	28.4		34.2
14	296	17.8	353	19.7		53.6	260	30.7		34.3
15	311	20.2	8	21.6		53.1	275	32.9		34.5
16	326	22.7	23	23.5		52.5	290	35.2		34.6
17	341	25.2	38	25.4	-20	51.9	305	37.4	+15	34.7
18	356	27.6	53	27.3	-20	51.3	320	39.7	+15	34.9
19	11	30.1	68	29.2		50.8	335	41.9		35.0
20	26	32.6	83	31.1		50.2	350	44.2		35.1
21	41	35.0	98	33.0		49.6	5	46.4		35.3
22	56	37.5	113	34.9		49.1	20	48.7		35.4
23	71	40.0	128	36.9		48.5	35	50.9		35.5
24	86	42.4	143	38.8	-20	47.9	50	53.2	+15	35.7
Dif	—		+19		+6		+23		+1	

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16 ^d 3 PMG: 11 ^h 56 ^m 7			Edad: 16 ^d 4 PHE { 4 ^h : 54 ^m 7 12 ^h : 54 ^m 6 20 ^h : 54 ^m 5 PMG: 1 ^h 59 ^m R°: 49 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	180	53.6	-23 23.1	331	14.5	+26 20.6	58	60 N	14 53	15 51	16 48	17 04 93	11 54 4	
1	195	53.3	23.2	345	43.6 ¹⁰¹	14.8	58	58	15 11	16 03	16 55	26 86	31 11	
2	210	53.0	23.2	0	12.8 ¹⁰²	08.8	60	56	25	13	17 02	43 82	11 13 16	
3	225	52.7	23.3	14	42.1 ¹⁰³	+26 02.7	61	54	38	22	08	17 59 77	10 58 19	
4	240	52.4	23.4	29	11.5 ¹⁰⁴	+25 56.5	62	52	49	30	14	18 12 74	44 22	
5	255	52.1	-23 23.5	43	41.0 ¹⁰⁵	+25 50.1	64	50	15 59	16 38	17 19	18 23 72	10 32 25	
6	270	51.8	-23 23.5	58	10.5 ¹⁰⁵	+25 43.7	64	45	16 20	16 54	17 31	18 47 67	10 08 29	
7	285	51.4	23.6	72	40.1 ¹⁰⁶	37.1	66	40	37	17 07	41	19 06 63	9 48 33	
8	300	51.1	23.7	87	09.8 ¹⁰⁷	30.4	67	35	16 51	19	51	21 61	31 36	
9	315	50.8	23.7	101	39.6 ¹⁰⁸	23.5	69	30	17 03	30	17 59	35 58	9 17 38	
10	330	50.5	23.8	116	09.5 ¹⁰⁹	16.6	69	20	24	17 48	18 16	19 58 54	8 52 43	
11	345	50.2	-23 23.9	130	39.4 ¹⁰⁹	+25 09.5	71	10 N	17 43	18 06	18 32	20 18 50	8 31 46	
12	0	49.9	-23 23.9	145	09.4 ¹¹⁰	+25 02.4	71	0	18 00	18 23	18 49	20 37 46	8 11 49	
13	15	49.6	24.0	159	39.5 ¹¹¹	+24 55.1	73	10 S	18	18 41	19 08	20 55 44	7 51 52	
14	30	49.3	24.0	174	09.7 ¹¹²	47.7	74	20	37	19 02	19 31	21 15 40	30 54	
15	45	49.0	24.1	188	40.0 ¹¹³	40.2	75	30	18 59	27	20 00	38 35	7 05 58	
16	60	48.7	24.2	203	10.3 ¹¹³	32.6	76	35	19 12	19 42	19	21 51 33	6 50 61	
17	75	48.4	-23 24.2	217	40.8 ¹¹⁵	+24 24.8	78	40	19 27	20 00	20 42	22 06 30	6 33 63	
18	90	48.1	-23 24.3	232	11.3 ¹¹⁵	+24 17.0	78	45	19 45	20 23	21 12	22 25 26	6 12 67	
19	105	47.8	24.4	246	41.9 ¹¹⁶	09.1	79	50	20 08	20 52	21 58	47 21	5 46 72	
20	120	47.5	24.4	261	12.6 ¹¹⁷	+24 01.0	81	52	19	21 07	22 26	22 58 18	33 74	
21	135	47.1	24.5	275	43.4 ¹¹⁸	+23 52.9	81	54	31	25	23 13	23 10 16	18 78	
22	150	46.8	24.5	290	14.3 ¹¹⁹	44.6	83	56	20 45	21 48	** **	24 12	5 01 81	
23	165	46.5	24.6	304	45.2 ¹¹⁹	36.2	84	58	21 02	22 18	** **	40 8	4 40 87	
24	180	46.2	-23 24.6	319	16.2 ¹²⁰	+23 27.8	84	60 S	21 22	23 08	** **	23 59 2	4 13 95	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 18 ^h 10 ^m 2		Mag: -4.9 PMG: 14 ^h 24 ^m			Mag: -1.0 PMG: 20 ^h 33 ^m			Mag: -1.8 PMG: 8 ^h 47 ^m			Mag: 0.0 PMG: 3 ^h 06 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	86	42.4	143 38.8	-20 47.9		50 53.2	+15 35.7		227 54.0	-14 04.4		313 22.6	+18 07.3	
1	101	44.9	158 40.7	47.3		65 55.4	35.8		242 56.1	04.5		328 25.2	07.3	
2	116	47.4	173 42.7	46.8		80 57.6	35.9		257 58.1	04.7		343 27.8	07.3	
3	131	49.8	188 44.6	46.2		95 59.9	36.1		273 00.1	04.8		358 30.3	07.4	
4	146	52.3	203 46.5	45.6		111 02.1	36.2		288 02.1	04.9		13 32.9	07.4	
5	161	54.7	218 48.5	-20 45.0		126 04.3	+15 36.4		303 04.1	-14 05.1		28 35.5	+18 07.5	
6	176	57.2	233 50.4	-20 44.5		141 06.6	+15 36.5		318 06.1	-14 05.2		43 38.1	+18 07.5	
7	191	59.7	248 52.4	43.9		156 08.8	36.6		333 08.2	05.4		58 40.7	07.5	
8	207	02.1	263 54.4	43.3		171 11.1	36.8		348 10.2	05.5		73 43.2	07.6	
9	222	04.6	278 56.3	42.8		186 13.3	36.9		3 12.2	05.6		88 45.8	07.6	
10	237	07.1	293 58.3	42.2		201 15.5	37.1		18 14.2	05.8		103 48.4	07.6	
11	252	09.5	309 00.3	-20 41.6		216 17.7	+15 37.2		33 16.2	-14 05.9		118 51.0	+18 07.7	
12	267	12.0	324 02.2	-20 41.0		231 20.0	+15 37.3		48 18.2	-14 06.0		133 53.6	+18 07.7	
13	282	14.5	339 04.2	40.5		246 22.2	37.5		63 20.3	06.2		148 56.1	07.8	
14	297	16.9	354 06.2	39.9		261 24.4	37.6		78 22.3	06.3		163 58.7	07.8	
15	312	19.4	9 08.2	39.3		276 26.6	37.8		93 24.3	06.5		179 01.3	07.8	
16	327	21.8	24 10.2	38.8		291 28.9	37.9		108 26.3	06.6		194 03.9	07.9	
17	342	24.3	39 12.2	-20 38.2		306 31.1	+15 38.0		123 28.3	-14 06.7		209 06.5	+18 07.9	
18	357	26.8	54 14.2	-20 37.6		321 33.3	+15 38.2		138 30.3	-14 06.9		224 09.0	+18 07.9	
19	12	29.2	69 16.2	37.0		336 35.5	38.3		153 32.4	07.0		239 11.6	08.0	
20	27	31.7	84 18.2	36.5		351 37.7	38.5		168 34.4	07.1		254 14.2	08.0	
21	42	34.2	99 20.2	35.9		6 40.0	38.6		183 36.4	07.3		269 16.8	08.1	
22	57	36.6	114 22.2	35.3		21 42.2	38.7		198 38.4	07.4		284 19.4	08.1	
23	72	39.1	129 24.3	34.8		36 44.4	38.9		213 40.4	07.6		299 21.9	08.1	
24	87	41.6	144 26.3	-20 34.2		51 46.6	+15 39.0		228 42.5	-14 07.7		314 24.5	+18 08.2	
Dif	—		+20		+6	+22		+1	+20		-1	+26		0

UT	SOL			LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'3 PMG: 11 ^h 57 ^m 2			Edad: 17 ^d 4 PHE { 4 ^h : 54'4 12 ^h : 54'3 20 ^h : 54'3 SD: 14'8 PMG: 2 ^h 48 ^m R°: 46 ^m															
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico		Civil	Hora		R°	Hora	R°			
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m		
0	180	46.2	-23	24.6	319	16.2	+23	27.8	86	60 N	7 06	8 03	9 01	18 37	89	11 58	1		
1	195	45.9		24.7	333	47.3		19.2	86	58	6 59	7 51	8 43	18 52	84	42	6		
2	210	45.6		24.7	348	18.5		10.6	86	56		52	41	29	19 05	80	29	10	
3	225	45.3		24.8	2	49.8	+23	01.8	88	54		46	32	16	16	77	17	13	
4	240	45.0		24.8	17	21.2	+22	52.9	89	52		40	24	8 05	26	74	11 06	16	
5	255	44.7	-23	24.9	31	52.6	+22	44.0	89	50	6 35	7 16	7 55	19 35	71	10 57	18		
6	270	44.4	-23	24.9	46	24.2	+22	34.9	91	45	6 23	7 00	7 34	19 54	66	10 37	24		
7	285	44.1		25.0	60	55.8		25.8	91	40		13	6 47	17	20 09	62	21	27	
8	300	43.8		25.0	75	27.5		16.6	92	35	6 03	35	7 03	22	58	10 07	31		
9	315	43.5		25.1	89	59.3	+22	07.2	94	30	5 54	24	6 51	33	56	9 55	33		
10	330	43.1		25.1	104	31.1	+21	57.8	94	20		38	6 05	29	20 52	51	35	37	
11	345	42.8	-23	25.2	119	03.1	+21	48.3	95	10 N	5 22	5 48	6 11	21 08	47	9 17	41		
12	0	42.5	-23	25.2	133	35.1	+21	38.7	96	0	5 05	5 31	5 53	21 23	44	9 00	45		
13	15	42.2		25.3	148	07.2		29.0	97	10 S	4 46	5 13	36		39	39	8	43	48
14	30	41.9		25.3	162	39.4		19.3	97	20	4 23	4 52	5 17	21 55	35	24	53		
15	45	41.6		25.4	177	11.7	+21	09.4	99	30	3 54	27	4 55	22 13	31	8 03	57		
16	60	41.3		25.4	191	44.0	+20	59.4	100	35		35	4 12	42	24	28	7	51	59
17	75	41.0	-23	25.4	206	16.4	+20	49.4	100	40	3 12	3 54	4 27	22 36	25	7	36	63	
18	90	40.7	-23	25.5	220	48.9	+20	39.3	101	45	2 41	3 31	4 09	22 51	21	7	19	67	
19	105	40.4		25.5	235	21.5		29.1	102	50	1 56	3 01	3 46	23 08	16	6	58	72	
20	120	40.1		25.6	249	54.2		18.8	103	52	1 28	2 46	35	16	14	47	75		
21	135	39.8		25.6	264	26.9	+20	08.5	103	54	0 41	28	23	26	11	36	77		
22	150	39.4		25.6	278	59.7	+19	58.0	105	56	** ** *	2 06	3 09	36	8	22	82		
23	165	39.1		25.7	293	32.6		47.5	105	58	** ** *	1 36	2 52	23	48	4	6	07	86
24	180	38.8	-23	25.7	308	05.6	+19	36.9	106	60 S	** ** *	0 45	2 31	** ** *	**	5	48	92	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG 18 ^h 06 ^m 3		Mag: -4.9 PMG: 14 ^h 20 ^m			Mag: -1.0 PMG: 20 ^h 30 ^m			Mag: -1.8 PMG: 8 ^h 44 ^m			Mag: 0.0 PMG: 3 ^h 02 ^m							
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'					
0	87	41.6	144	26.3	-20	34.2	51	46.6	+15	39.0	228	42.5	-14	07.7	314	24.5	+18	08.2	
1	102	44.0	159	28.3		33.6	66	48.8		39.2	243	44.5		07.8	329	27.1		08.2	
2	117	46.5	174	30.4		33.0	81	51.0		39.3	258	46.5		08.0	344	29.7		08.3	
3	132	49.0	189	32.4		32.5	96	53.2		39.5	273	48.5		08.1	359	32.3		08.3	
4	147	51.4	204	34.4		31.9	111	55.4		39.6	288	50.5		08.2	14	34.9		08.3	
5	162	53.9	219	36.5	-20	31.3	126	57.7	+15	39.8	303	52.5	-14	08.4	29	37.4	+18	08.4	
6	177	56.3	234	38.5	-20	30.8	141	59.9	+15	39.9	318	54.6	-14	08.5	44	40.0	+18	08.4	
7	192	58.8	249	40.6		30.2	157	02.1		40.0	333	56.6		08.6	59	42.6		08.4	
8	208	01.3	264	42.7		29.6	172	04.3		40.2	348	58.6		08.8	74	45.2		08.5	
9	223	03.7	279	44.7		29.1	187	06.5		40.3	4	00.6		08.9	89	47.8		08.5	
10	238	06.2	294	46.8		28.5	202	08.7		40.5	19	02.6		09.1	104	50.4		08.6	
11	253	08.7	309	48.9	-20	27.9	217	10.9	+15	40.6	34	04.7	-14	09.2	119	52.9	+18	08.6	
12	268	11.1	324	50.9	-20	27.4	232	13.1	+15	40.8	49	06.7	-14	09.3	134	55.5	+18	08.6	
13	283	13.6	339	53.0		26.8	247	15.3		40.9	64	08.7		09.5	149	58.1		08.7	
14	298	16.1	354	55.1		26.2	262	17.5		41.1	79	10.7		09.6	165	00.7		08.7	
15	313	18.5		57.2		25.6	277	19.7		41.2	94	12.7		09.7	180	03.3		08.8	
16	328	21.0	24	59.3		25.1	292	21.9		41.4	109	14.8		09.9	195	05.9		08.8	
17	343	23.5	40	01.4	-20	24.5	307	24.0	+15	41.5	124	16.8	-14	10.0	210	08.5	+18	08.8	
18	358	25.9	55	03.5	-20	23.9	322	26.2	+15	41.7	139	18.8	-14	10.1	225	11.0	+18	08.9	
19	13	28.4	70	05.6		23.4	337	28.4		41.8	154	20.8		10.3	240	13.6		08.9	
20	28	30.8	85	07.7		22.8	352	30.6		42.0	169	22.8		10.4	255	16.2		08.9	
21	43	33.3	100	09.8		22.2	7	32.8		42.1	184	24.9		10.5	270	18.8		09.0	
22	58	35.8	115	11.9		21.7	22	35.0		42.3	199	26.9		10.7	285	21.4		09.0	
23	73	38.2	130	14.1		21.1	37	37.2		42.4	214	28.9		10.8	300	24.0		09.1	
24	88	40.7	145	16.2	-20	20.5	52	39.4	+15	42.6	229	30.9	-14	11.0	315	26.5	+18	09.1	
Dif	—		+21			+6	+22			+1	+20			-1	+26				

UT	SOL		LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16:3		Edad: 18 ^d 4 PHE { 4 ^h : 54/2 12 ^h : 54/2 20 ^h : 54/1															
	PMG: 11 ^h 57 ^m 7		SD: 14:8 PMG: 3 ^h 34 ^m Rº: 43 ^m															
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	Rº	Hora	Rº				
h	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m					
0	180	38.8	-23	25.7	308	05.6	+19 36.9	60 N	14 54	15 52	16 49	20 06 85	11 59 0					
1	195	38.5		25.7	322	38.7 ¹⁴¹	26.3 ¹⁰⁶	58	15 11	16 03	16 56	16 81	48 4	0				
2	210	38.2		25.8	337	11.8 ¹⁴¹	15.5 ¹⁰⁸	56	26	14	17 03	25 78	39 7					
3	225	37.9		25.8	351	45.0 ¹⁴²	+19 04.7 ¹⁰⁸	54	39	23	09	33 75	30 10					
4	240	37.6		25.8	6	18.2 ¹⁴²	+18 53.8 ¹⁰⁹	52	15 50	31	15	40 72	22 13					
5	255	37.3	-23	25.9	20	51.6 ¹⁴⁴	+18 42.8 ¹¹⁰	50	16 00	16 38	17 20	20 46 70	11 15 15					
6	270	37.0	-23	25.9	35	25.0 ¹⁴⁴	+18 31.8 ¹¹⁰	45	16 21	16 55	17 32	21 00 65	11 01 19					
7	285	36.7		25.9	49	58.5 ¹⁴⁵	20.7 ¹¹¹	40	38	17 08	42	11 61	10 48 23					
8	300	36.4		26.0	64	32.0 ¹⁴⁵	+18 09.5 ¹¹²	35	16 52	20	17 52	20 58	38 26					
9	315	36.0		26.0	79	05.6 ¹⁴⁶	+17 58.3 ¹¹²	30	17 04	30	18 00	29 54	28 29					
10	330	35.7		26.0	93	39.3 ¹⁴⁷	47.0 ¹¹³	20	25	17 49	17	43 49	10 12 34					
11	345	35.4	-23	26.0	108	13.1 ¹⁴⁸	+17 35.6 ¹¹⁴	10 N	17 44	18 07	18 33	21 55 45	9 58 38					
12	0	35.1	-23	26.1	122	46.9 ¹⁴⁸	+17 24.1 ¹¹⁵	0	18 01	18 24	18 50	22 07 41	9 45 42					
13	15	34.8		26.1	137	20.8 ¹⁴⁹	12.6 ¹¹⁵	10 S	19	18 42	19 09	18 37	31 46					
14	30	34.5		26.1	151	54.8 ¹⁵⁰	+17 01.0 ¹¹⁶	20	18 38	19 03	19 32	30 33	17 50					
15	45	34.2		26.1	166	28.8 ¹⁵⁰	+16 49.4 ¹¹⁶	30	19 00	28	20 01	44 28	9 00 55					
16	60	33.9		26.2	181	02.9 ¹⁵¹	37.7 ¹¹⁷	35	13	19 43	20	22 52 25	8 50 58					
17	75	33.6	-23	26.2	195	37.0 ¹⁵¹	+16 25.9 ¹¹⁸	40	19 28	20 01	20 43	23 01 22	8 39 61					
18	90	33.3	-23	26.2	210	11.2 ¹⁵²	+16 14.1 ¹¹⁸	45	19 46	20 24	21 14	23 12 18	8 26 65					
19	105	32.9		26.2	224	45.5 ¹⁵³	+16 02.2 ¹¹⁹	50	20 09	20 54	21 59	24 14	10 70					
20	120	32.6		26.2	239	19.8 ¹⁵³	+15 50.2 ¹²⁰	52	20	21 09	22 27	30 11	8 02 73					
21	135	32.3		26.3	253	54.2 ¹⁵⁴	38.2 ¹²⁰	54	32	27	23 15	37 8	7 53 76					
22	150	32.0		26.3	268	28.7 ¹⁵⁵	26.2 ¹²⁰	56	20 46	21 49	** ** *	44 6	44 79					
23	165	31.7		26.3	283	03.2 ¹⁵⁵	14.1 ¹²¹	58	21 03	22 19	** ** *	23 52 3	33 83					
24	180	31.4	-23	26.3	297	37.8 ¹⁵⁶	+15 01.9 ¹²²	60 S	21 24	23 11	** ** *	0 01 1439	7 20 87					
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 18 ^h 02 ^m 3		Mag: -4.8 PMG: 14 ^h 17 ^m				Mag: -1.0 PMG: 20 ^h 26 ^m				Mag: -1.8 PMG: 8 ^h 41 ^m				Mag: 0.0 PMG: 2 ^h 58 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	88	40.7	145	16.2	-20	20.5	52	39.4	+15	42.6	229	30.9	-14	11.0	315	26.5	+18	09.1
1	103	43.2	160	18.3		20.0	67	41.5		42.7	244	33.0		11.1	330	29.1		09.1
2	118	45.6	175	20.5		19.4	82	43.7		42.9	259	35.0		11.2	345	31.7		09.2
3	133	48.1	190	22.6		18.8	97	45.9		43.0	274	37.0		11.4	0	34.3		09.2
4	148	50.6	205	24.8		18.3	112	48.1		43.2	289	39.0		11.5	15	36.9		09.3
5	163	53.0	220	26.9	-20	17.7	127	50.3	+15	43.3	304	41.0	-14	11.6	30	39.5	+18	09.3
6	178	55.5	235	29.1	-20	17.1	142	52.4	+15	43.5	319	43.1	-14	11.8	45	42.1	+18	09.3
7	193	58.0	250	31.2		16.6	157	54.6		43.6	334	45.1		11.9	60	44.7		09.4
8	209	00.4	265	33.4		16.0	172	56.8		43.8	349	47.1		12.0	75	47.2		09.4
9	224	02.9	280	35.5		15.4	187	59.0		43.9	4	49.1		12.2	90	49.8		09.5
10	239	05.3	295	37.7		14.9	203	01.1		44.1	19	51.2		12.3	105	52.4		09.5
11	254	07.8	310	39.9	-20	14.3	218	03.3	+15	44.2	34	53.2	-14	12.4	120	55.0	+18	09.5
12	269	10.3	325	42.1	-20	13.7	233	05.5	+15	44.4	49	55.2	-14	12.6	135	57.6	+18	09.6
13	284	12.7	340	44.2		13.2	248	07.6		44.5	64	57.2		12.7	151	00.2		09.6
14	299	15.2	355	46.4		12.6	263	09.8		44.7	79	59.2		12.8	166	02.8		09.7
15	314	17.7	10	48.6		12.1	278	12.0		44.9	95	01.3		13.0	181	05.4		09.7
16	329	20.1	25	50.8		11.5	293	14.1		45.0	110	03.3		13.1	196	07.9		09.7
17	344	22.6	40	53.0	-20	10.9	308	16.3	+15	45.2	125	05.3	-14	13.2	211	10.5	+18	09.8
18	359	25.1	55	55.2	-20	10.4	323	18.5	+15	45.3	140	07.3	-14	13.4	226	13.1	+18	09.8
19	14	27.5	70	57.4		09.8	338	20.6		45.5	155	09.4		13.5	241	15.7		09.9
20	29	30.0	85	59.6		09.2	353	22.8		45.6	170	11.4		13.6	256	18.3		09.9
21	44	32.4	101	01.9		08.7	8	24.9		45.8	185	13.4		13.8	271	20.9		09.9
22	59	34.9	116	04.1		08.1	23	27.1		45.9	200	15.4		13.9	286	23.5		10.0
23	74	37.4	131	06.3		07.5	38	29.3		46.1	215	17.5		14.1	301	26.1		10.0
24	89	39.8	146	08.5	-20	07.0	53	31.4	+15	46.3	230	19.5	-14	14.2	316	28.7	+18	10.1
Dif	—		+22		+6		+22		+2		+20		-1		+26			

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna								
	SD: 16'3 PMG: 11 ^h 58 ^m 2			Edad: 19 ^d 4 PHE { 4 ^h : 54'1 12 ^h : 54'2 20 ^h : 54'2 SD: 14'7 PMG: 4 ^h 17 ^m R°: 40 ^m																	
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°						
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	h	m			
0	180	31.4	-23	26.3	297	37.8	+15	01.9	60 N	7 07	8 04	9 02	21 31	83	11 59	**					
1	195	31.1		26.3	312	12.4 ¹⁵⁶	+14	49.6 ¹²³	58	7 00	7 53	8 44	37	80	52	3					
2	210	30.8		26.3	326	47.1 ¹⁵⁷		37.4 ¹²²	56	6 53	42	30	43	76	46	5					
3	225	30.5		26.3	341	21.8 ¹⁵⁷		25.0 ¹²⁴	54	47	33	17	48	73	40	8					
4	240	30.2		26.4	355	56.6 ¹⁵⁸		12.6 ¹²⁴	52	41	25	8 06	52	71	35	10					
5	255	29.8	-23	26.4	10	31.4 ¹⁵⁸	+14	00.2 ¹²⁴	50	6 36	7 17	7 56	21 56	69	11 30	12					
6	270	29.5	-23	26.4	25	06.3 ¹⁵⁹	+13	47.7 ¹²⁵	45	6 24	7 01	7 35	22 05	63	11 20	17					
7	285	29.2		26.4	39	41.3 ¹⁶⁰		35.1 ¹²⁶	40	14	6 48	18	12	59	11	21					
8	300	28.9		26.4	54	16.3 ¹⁶⁰		22.5 ¹²⁶	35	6 04	36	7 04	18	56	11 04	24					
9	315	28.6		26.4	68	51.3 ¹⁶⁰	+13	09.9 ¹²⁶	30	5 55	25	6 52	23	53	10 57	27					
10	330	28.3		26.4	83	26.4 ¹⁶¹	+12	57.2 ¹²⁷	20	39	6 06	30	32	48	46	32					
11	345	28.0	-23	26.4	98	01.6 ¹⁶²	+12	44.4 ¹²⁸	10 N	5 23	5 49	6 12	22 40	44	10 36	36					
12	0	27.7	-23	26.4	112	36.7 ¹⁶¹	+12	31.6 ¹²⁸	0	5 06	5 32	5 54	22 48	39	10 27	40					
13	15	27.4		26.4	127	12.0 ¹⁶³		18.8 ¹²⁸	10 S	4 47	5 14	37	22 55	35	17	44					
14	30	27.1		26.4	141	47.2 ¹⁶²	+12	05.9 ¹²⁹	20	4 24	4 53	5 18	23 03	31	10 07	48					
15	45	26.7		26.4	156	22.5 ¹⁶³	+11	53.0 ¹²⁹	30	3 55	28	4 56	12	26	9 55	54					
16	60	26.4		26.4	170	57.9 ¹⁶⁴		40.0 ¹³⁰	35	36	4 13	43	17	23	48	57					
17	75	26.1	-23	26.4	185	33.3 ¹⁶⁴	+11	27.0 ¹³⁰	40	3 13	3 55	4 28	23 23	20	9 40	61					
18	90	25.8	-23	26.4	200	08.7 ¹⁶⁴	+11	13.9 ¹³¹	45	2 42	3 32	4 09	23 30	16	9 31	64					
19	105	25.5		26.4	214	44.2 ¹⁶⁵	+11	00.8 ¹³¹	50	1 56	3 02	3 47	38	11	20	69					
20	120	25.2		26.4	229	19.7 ¹⁶⁵	+10	47.7 ¹³¹	52	1 28	2 47	36	41	10	15	71					
21	135	24.9		26.4	243	55.3 ¹⁶⁶		34.5 ¹³²	54	0 41	29	24	45	8	09	74					
22	150	24.6		26.4	258	30.8 ¹⁶⁵		21.3 ¹³²	56	** **	2 07	3 09	50	5	9 03	77					
23	165	24.3		26.4	273	06.5 ¹⁶⁷	+10	08.0 ¹³³	58	** **	1 37	2 53	23 55	2	8 56	80					
24	180	23.9	-23	26.4	287	42.1 ¹⁶⁶	+9	54.7 ¹³³	60 S	** **	0 45	2 32	** **	**	8 47	84					
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO								
	PMG: 17 ^h 58 ^m 4			Mag: -4.8 PMG: 14 ^h 13 ^m			Mag: -0.9 PMG: 20 ^h 23 ^m			Mag: -1.8 PMG: 8 ^h 38 ^m			Mag: 0.0 PMG: 2 ^h 54 ^m								
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'					
0	89	39.8	146	08.5	-20	07.0	53	31.4	+15	46.3	230	19.5	-14	14.2	316	28.7	+18	10.1			
1	104	42.3	161	10.8		06.4	68	33.6		46.4	245	21.5		14.3	331	31.3		10.1			
2	119	44.8	176	13.0		05.9	83	35.7		46.6	260	23.5		14.5	346	33.8		10.1			
3	134	47.2	191	15.3		05.3	98	37.9		46.7	275	25.6		14.6	1	36.4		10.2			
4	149	49.7	206	17.5		04.7	113	40.0		46.9	290	27.6		14.7	16	39.0		10.2			
5	164	52.2	221	19.8	-20	04.2	128	42.2	+15	47.1	305	29.6	-14	14.9	31	41.6	+18	10.3			
6	179	54.6	236	22.0	-20	03.6	143	44.3	+15	47.2	320	31.6	-14	15.0	46	44.2	+18	10.3			
7	194	57.1	251	24.3		03.0	158	46.5		47.4	335	33.7		15.1	61	46.8		10.3			
8	209	59.6	266	26.5		02.5	173	48.6		47.5	350	35.7		15.3	76	49.4		10.4			
9	225	02.0	281	28.8		01.9	188	50.8		47.7	5	37.7		15.4	91	52.0		10.4			
10	240	04.5	296	31.1		01.4	203	52.9		47.9	20	39.7		15.5	106	54.6		10.5			
11	255	06.9	311	33.4	-20	00.8	218	55.0	+15	48.0	35	41.8	-14	15.7	121	57.2	+18	10.5			
12	270	09.4	326	35.6	-20	00.2	233	57.2	+15	48.2	50	43.8	-14	15.8	136	59.8	+18	10.5			
13	285	11.9	341	37.9	-19	59.7	248	59.3		48.3	65	45.8		15.9	152	02.3		10.6			
14	300	14.3	356	40.2		59.1	264	01.5		48.5	80	47.8		16.1	167	04.9		10.6			
15	315	16.8	11	42.5		58.6	279	03.6		48.7	95	49.9		16.2	182	07.5		10.7			
16	330	19.3	26	44.8		58.0	294	05.7		48.8	110	51.9		16.3	197	10.1		10.7			
17	345	21.7	41	47.1	-19	57.4	309	07.9	+15	49.0	125	53.9	-14	16.4	212	12.7	+18	10.8			
18	0	24.2	56	49.4	-19	56.9	324	10.0	+15	49.1	140	56.0	-14	16.6	227	15.3	+18	10.8			
19	15	26.7	71	51.7		56.3	339	12.1		49.3	155	58.0		16.7	242	17.9		10.8			
20	30	29.1	86	54.1		55.8	354	14.3		49.5	171	00.0		16.8	257	20.5		10.9			
21	45	31.6	101	56.4		55.2	9	16.4		49.6	186	02.0		17.0	272	23.1		10.9			
22	60	34.1	116	58.7		54.6	24	18.5		49.8	201	04.1		17.1	287	25.7		11.0			
23	75	36.5	132	01.0		54.1	39	20.7		50.0	216	06.1		17.2	302	28.3		11.0			
24	90	39.0	147	03.4	-19	53.5	54	22.8	+15	50.1	231	08.1	-14	17.4	317	30.9	+18	11.0			
Dif	—			+23			+6			+21			+2			+20			-1		

UT	SOL				LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16:3 PMG: 11 ^h 58 ^m 7				Edad: 20 ^d 4 PHE { SD: 14:8 PMG: 4 ^h 57 ^m													
	hG ☉		Dec		hG ☾		Dif							Hora		Rº		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	180	23.9	-23	26.4	287	42.1	+9	54.7	60 N	14	55	15	53	16	49	22	54	82
1	195	23.6		26.4	302	17.8 ¹⁶⁷		41.4 ¹³³	58	15	12	16	04	16	57	57	79	55
2	210	23.3		26.4	316	53.5 ¹⁶⁷		28.0 ¹³⁴	56	27		15	17	04	22	59	76	51
3	225	23.0		26.4	331	29.3 ¹⁶⁸		14.6 ¹³⁴	54	40		24		10	23	01	73	48
4	240	22.7		26.4	346	05.0 ¹⁶⁷	+9	01.1 ¹³⁵	52	15	51	32		16	03	71		45
5	255	22.4	-23	26.4	0	40.8 ¹⁶⁸	+8	47.7 ¹³⁴	50	16	01	16	39	17	21	23	05	68
6	270	22.1	-23	26.4	15	16.7 ¹⁶⁹	+8	34.1 ¹³⁶	45	16	22	16	56	17	33	23	08	64
7	285	21.8		26.4	29	52.5 ¹⁶⁸		20.6 ¹³⁵	40	38		17	09	43	11	60		32
8	300	21.5		26.4	44	28.4 ¹⁶⁹	+8	07.0 ¹³⁶	35	16	53	21		17	53	14	56	28
9	315	21.2		26.4	59	04.3 ¹⁶⁹	+7	53.4 ¹³⁶	30	17	05	31		18	01	16	54	24
10	330	20.8		26.4	73	40.2 ¹⁶⁹		39.7 ¹³⁷	20	26		17	50	18	20	49		18
11	345	20.5	-23	26.3	88	16.1 ¹⁶⁹	+7	26.1 ¹³⁶	10 N	17	45	18	08	18	34	23	24	44
12	0	20.2	-23	26.3	102	52.1 ¹⁷⁰	+7	12.4 ¹³⁷	0	18	02	18	25	18	51	23	27	40
13	15	19.9		26.3	117	28.1 ¹⁷⁰	+6	58.6 ¹³⁸	10 S	20		18	43	19	10	30	36	11
14	30	19.6		26.3	132	04.1 ¹⁷⁰		44.9 ¹³⁷	20	18	39	19	04	19	33	34	31	10
15	45	19.3		26.3	146	40.1 ¹⁷⁰		31.1 ¹³⁸	30	19	01		29	20	02	38	26	49
16	60	19.0		26.3	161	16.1 ¹⁷⁰		17.2 ¹³⁹	35	14		19	44	21		40	23	45
17	75	18.7	-23	26.2	175	52.2 ¹⁷¹	+6	03.4 ¹³⁸	40	19	29	20	02	20	44	23	43	19
18	90	18.4	-23	26.2	190	28.2 ¹⁷⁰	+5	49.5 ¹³⁹	45	19	47	20	25	21	15	23	46	16
19	105	18.0		26.2	205	04.3 ¹⁷¹		35.6 ¹³⁹	50	20	10	20	55	22	00	49	12	29
20	120	17.7		26.2	219	40.4 ¹⁷¹		21.7 ¹³⁹	52	21		21	10	22	28	51	9	26
21	135	17.4		26.2	234	16.5 ¹⁷¹	+5	07.7 ¹⁴⁰	54	33		28		23	16	53	7	23
22	150	17.1		26.1	248	52.6 ¹⁷¹	+4	53.8 ¹³⁹	56	20	47	21	50	** ** *		55	4	20
23	165	16.8		26.1	263	28.7 ¹⁷¹		39.8 ¹⁴⁰	58	21	04	22	20	** ** *		57	2	16
24	180	16.5	-23	26.1	278	04.8 ¹⁷¹	+4	25.7 ¹⁴¹	60 S	21	25	23	11	** ** *		23	59	**

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 17 ^h 54 ^m 5		Mag: -4.8 PMG: 14 ^h 10 ^m		Mag: -0.9 PMG: 20 ^h 20 ^m		Mag: -1.8 PMG: 8 ^h 34 ^m		Mag: 0.0 PMG: 2 ^h 49 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	90	39.0	147	03.4	-19	53.5	54	22.8	+15	50.1
1	105	41.4	162	05.7		53.0	69	24.9		50.3
2	120	43.9	177	08.1		52.4	84	27.0		50.5
3	135	46.4	192	10.4		51.9	99	29.2		50.6
4	150	48.8	207	12.8		51.3	114	31.3		50.8
5	165	51.3	222	15.1	-19	50.7	129	33.4	+15	51.0
6	180	53.8	237	17.5	-19	50.2	144	35.5	+15	51.1
7	195	56.2	252	19.8		49.6	159	37.6		51.3
8	210	58.7	267	22.2		49.1	174	39.8		51.5
9	226	01.2	282	24.6		48.5	189	41.9		51.6
10	241	03.6	297	27.0		48.0	204	44.0		51.8
11	256	06.1	312	29.4	-19	47.4	219	46.1	+15	52.0
12	271	08.5	327	31.7	-19	46.9	234	48.2	+15	52.1
13	286	11.0	342	34.1		46.3	249	50.3		52.3
14	301	13.5	357	36.5		45.7	264	52.4		52.5
15	316	15.9	12	38.9		45.2	279	54.6		52.6
16	331	18.4	27	41.3		44.6	294	56.7		52.8
17	346	20.9	42	43.7	-19	44.1	309	58.8	+15	53.0
18	1	23.3	57	46.2	-19	43.5	325	00.9	+15	53.1
19	16	25.8	72	48.6		43.0	340	03.0		53.3
20	31	28.3	87	51.0		42.4	355	05.1		53.5
21	46	30.7	102	53.4		41.9	10	07.2		53.7
22	61	33.2	117	55.9		41.3	25	09.3		53.8
23	76	35.7	132	58.3		40.8	40	11.4		54.0
24	91	38.1	148	00.7	-19	40.2	55	13.5	+15	54.2
Dif	—		+24		+6		+21		+2	
							+20		-1	
									+26	
									0	

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'3 PMG: 11 ^h 59 ^m 1				Edad: 21 ^d 4 PHE { 4 ^h : 54'5 12 ^h : 54'6 20 ^h : 54'8 R°: 39 ^m					Náutico	Civil		Hora	R°	Hora	R°		
	hG ☉	Dec	hG ☾	Dif	Dec	Dif												
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	180	16.5	-23	26.1	278	04.8	+4	25.7	60 N	7 08	8 05	9 03	** ** *	** ** *	11 57	**		
1	195	16.2		26.1	292	40.9 ¹⁷¹	+4	11.7 ¹⁴⁰	58	7 01	7 53	8 45	** ** *	** ** *	56	2		
2	210	15.9		26.0	307	17.0 ¹⁷¹	+3	57.6 ¹⁴¹	56	6 54	43	31	** ** *	** ** *	56	4		
3	225	15.6		26.0	321	53.1 ¹⁷¹		43.5 ¹⁴¹	54	48	34	18	** ** *	** ** *	55			
4	240	15.2		26.0	336	29.2 ¹⁷¹		29.4 ¹⁴¹	52	42	26	8 07	** ** *	** ** *	54	10		
5	255	14.9	-23	26.0	351	05.4 ¹⁷²	+3	15.3 ¹⁴¹	50	6 37	7 18	7 57	** ** *	** ** *	11 54	11		
6	270	14.6	-23	25.9	5	41.5 ¹⁷¹	+3	01.2 ¹⁴¹	45	6 25	7 02	7 36	** ** *	** ** *	11 53	15		
7	285	14.3		25.9	20	17.6 ¹⁷¹	+2	47.0 ¹⁴²	40	15	6 49	19	** ** *	** ** *	52	19		
8	300	14.0		25.9	34	53.7 ¹⁷¹		32.8 ¹⁴²	35	6 05	37	7 05	** ** *	** ** *	51	23		
9	315	13.7		25.8	49	29.8 ¹⁷¹		18.6 ¹⁴²	30	5 56	26	6 53	** ** *	** ** *	50	26		
10	330	13.4		25.8	64	05.9 ¹⁷¹	+2	04.4 ¹⁴²	20	40	6 07	31	** ** *	** ** *	48	31		
11	345	13.1	-23	25.8	78	42.0 ¹⁷¹	+1	50.2 ¹⁴²	10 N	5 24	5 50	6 13	** ** *	** ** *	11 47	36		
12	0	12.8	-23	25.8	93	18.1 ¹⁷¹	+1	35.9 ¹⁴³	0	5 07	5 33	5 55	** ** *	** ** *	11 46	40		
13	15	12.4		25.7	107	54.2 ¹⁷¹		21.7 ¹⁴²	10 S	4 48	5 15	38	** ** *	** ** *	45	44		
14	30	12.1		25.7	122	30.3 ¹⁷¹	+1	07.4 ¹⁴³	20	4 25	4 54	5 19	** ** *	** ** *	44	48		
15	45	11.8		25.6	137	06.3 ¹⁷⁰	+0	53.1 ¹⁴³	30	3 56	29	4 57	** ** *	** ** *	42	54		
16	60	11.5		25.6	151	42.4 ¹⁷¹		38.8 ¹⁴³	35	37	4 14	44	** ** *	** ** *	41	57		
17	75	11.2	-23	25.6	166	18.4 ¹⁷⁰	+0	24.5 ¹⁴³	40	3 14	3 56	4 29	** ** *	** ** *	11 40	60		
18	90	10.9	-23	25.5	180	54.4 ¹⁷⁰	+0	10.2 ¹⁴³	45	2 43	3 33	4 11	** ** *	** ** *	11 39	64		
19	105	10.6		25.5	195	30.4 ¹⁷⁰	-0	04.1 ¹⁴³	50	1 58	3 03	3 48	** ** *	** ** *	38	69		
20	120	10.3		25.5	210	06.4 ¹⁷⁰		18.5 ¹⁴⁴	52	1 30	2 48	37	** ** *	** ** *	37	71		
21	135	10.0		25.4	224	42.3 ¹⁶⁹		32.8 ¹⁴³	54	0 42	30	25	** ** *	** ** *	36	74		
22	150	09.6		25.4	239	18.2 ¹⁶⁹	-0	47.2 ¹⁴⁴	56	** ** *	2 08	3 10	23 59	5	35	77		
23	165	09.3		25.3	253	54.2 ¹⁷⁰	-1	01.5 ¹⁴³	58	** ** *	1 38	2 54	59	2	35	79		
24	180	09.0	-23	25.3	268	30.0 ¹⁶⁸	-1	15.9 ¹⁴⁴	60 S	** ** *	0 46	2 33	23 58	**	11 34	83		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 17 ^h 50 ^m 5		Mag: -4.8 PMG: 14 ^h 06 ^m				Mag: -0.9 PMG: 20 ^h 16 ^m				Mag: -1.8 PMG: 8 ^h 31 ^m				Mag: 0.0 PMG: 2 ^h 45 ^m			
	hG ♈		hG ♀	Dec			hG ♂	Dec			hG ♃	Dec			hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	91	38.1	148	00.7	-19	40.2	55	13.5	+15	54.2	231	56.8	-14	20.5	318	33.2	+18	12.0
1	106	40.6	163	03.2		39.7	70	15.6		54.3	246	58.9		20.7	333	35.8		12.1
2	121	43.0	178	05.6		39.1	85	17.7		54.5	262	00.9		20.8	348	38.4		12.1
3	136	45.5	193	08.1		38.6	100	19.8		54.7	277	02.9		20.9	3	41.0		12.2
4	151	48.0	208	10.5		38.0	115	21.9		54.9	292	05.0		21.1	18	43.6		12.2
5	166	50.4	223	13.0	-19	37.5	130	24.0	+15	55.0	307	07.0	-14	21.2	33	46.2	+18	12.3
6	181	52.9	238	15.5	-19	36.9	145	26.1	+15	55.2	322	09.0	-14	21.3	48	48.8	+18	12.3
7	196	55.4	253	18.0		36.4	160	28.2		55.4	337	11.1		21.4	63	51.4		12.3
8	211	57.8	268	20.4		35.8	175	30.3		55.5	352	13.1		21.6	78	54.0		12.4
9	227	00.3	283	22.9		35.3	190	32.3		55.7	7	15.1		21.7	93	56.6		12.4
10	242	02.8	298	25.4		34.7	205	34.4		55.9	22	17.1		21.8	108	59.2		12.5
11	257	05.2	313	27.9	-19	34.2	220	36.5	+15	56.1	37	19.2	-14	22.0	124	01.8	+18	12.5
12	272	07.7	328	30.4	-19	33.6	235	38.6	+15	56.2	52	21.2	-14	22.1	139	04.4	+18	12.6
13	287	10.2	343	32.9		33.1	250	40.7		56.4	67	23.2		22.2	154	07.0		12.6
14	302	12.6	358	35.4		32.5	265	42.8		56.6	82	25.3		22.4	169	09.6		12.6
15	317	15.1	13	37.9		32.0	280	44.9		56.8	97	27.3		22.5	184	12.2		12.7
16	332	17.5	28	40.4		31.4	295	46.9		56.9	112	29.3		22.6	199	14.8		12.7
17	347	20.0	43	42.9	-19	30.9	310	49.0	+15	57.1	127	31.4	-14	22.7	214	17.4	+18	12.8
18	2	22.5	58	45.4	-19	30.3	325	51.1	+15	57.3	142	33.4	-14	22.9	229	20.0	+18	12.8
19	17	24.9	73	48.0		29.8	340	53.2		57.5	157	35.4		23.0	244	22.6		12.9
20	32	27.4	88	50.5		29.2	355	55.2		57.7	172	37.5		23.1	259	25.2		12.9
21	47	29.9	103	53.0		28.7	10	57.3		57.8	187	39.5		23.3	274	27.8		12.9
22	62	32.3	118	55.6		28.1	25	59.4		58.0	202	41.5		23.4	289	30.4		13.0
23	77	34.8	133	58.1		27.6	41	01.5		58.2	217	43.6		23.5	304	33.0		13.0
24	92	37.3	149	00.7	-19	27.0	56	03.5	+15	58.4	232	45.6	-14	23.7	319	35.6	+18	13.1
Dif	—		+25		+5		+21		+2		+20		-1		+26			

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16'3 PMG: 11 ^h 59 ^m 6				Edad: 22 ^d 4 PHE { SD: 14'9 PMG: 6 ^h 16 ^m R°: 41 ^m												
	hG ☉		Dec		hG ☾		Dif				Civil		Náutico		Hora R°		Hora R°
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	m	h m	m	
0	180	09.0	-23	25.3	268	30.0	-1	15.9	60 N	14 56	15 54	16 51	0 16	85	11 56	**	
1	195	08.7		25.2	283	05.9 ¹⁶⁹		30.3 ¹⁴⁴	58	15 14	16 06	16 58	16	81	11 58	2	
2	210	08.4		25.2	297	41.7 ¹⁶⁸		44.7 ¹⁴⁴	56	28	16	17 05	15	78	12 00	5	
3	225	08.1		25.2	312	17.6 ¹⁶⁹	-1	59.1 ¹⁴⁴	54	41	25	11	14	76	02	8	
4	240	07.8		25.1	326	53.3 ¹⁶⁷	-2	13.5 ¹⁴⁴	52	15 52	33	17	14	72	04	10	
5	255	07.5	-23	25.1	341	29.1 ¹⁶⁸	-2	27.8 ¹⁴³	50	16 02	16 41	17 22	0 13	71	12 05	12	
6	270	07.2	-23	25.0	356	04.8 ¹⁶⁷	-2	42.2 ¹⁴⁴	45	16 23	16 57	17 34	0 12	66	12 08	17	
7	285	06.8		25.0	10	40.5 ¹⁶⁷	-2	56.6 ¹⁴⁴	40	40	17 10	44	11	62	11	21	
8	300	06.5		24.9	25	16.2 ¹⁶⁷	-3	11.0 ¹⁴⁴	35	16 54	22	17 54	10	58	14	24	
9	315	06.2		24.9	39	51.8 ¹⁶⁶		25.4 ¹⁴⁴	30	17 06	33	18 02	10	54	16	27	
10	330	05.9		24.8	54	27.4 ¹⁶⁶		39.8 ¹⁴⁴	20	27	17 51	19	09	49	19	33	
11	345	05.6	-23	24.8	69	02.9 ¹⁶⁵	-3	54.2 ¹⁴⁴	10 N	17 46	18 09	18 35	0 08	44	12 23	37	
12	0	05.3	-23	24.7	83	38.4 ¹⁶⁵	-4	08.6 ¹⁴⁴	0	18 03	18 26	18 52	0 07	40	12 26	41	
13	15	05.0		24.7	98	13.9 ¹⁶⁵		23.0 ¹⁴⁴	10 S	21	18 44	19 11	06	36	29	46	
14	30	04.7		24.6	112	49.3 ¹⁶⁴		37.4 ¹⁴⁴	20	18 40	19 05	19 34	05	31	32	51	
15	45	04.4		24.5	127	24.7 ¹⁶⁴	-4	51.8 ¹⁴⁴	30	19 02	29	20 03	04	26	36	56	
16	60	04.1		24.5	142	00.0 ¹⁶³	-5	06.2 ¹⁴⁴	35	15	19 45	22	03	23	38	59	
17	75	03.7	-23	24.4	156	35.3 ¹⁶³	-5	20.6 ¹⁴⁴	40	19 30	20 03	20 45	0 02	20	12 40	63	
18	90	03.4	-23	24.4	171	10.6 ¹⁶³	-5	34.9 ¹⁴³	45	19 48	20 26	21 15	0 02	16	12 43	67	
19	105	03.1		24.3	185	45.8 ¹⁶²	-5	49.3 ¹⁴⁴	50	20 11	20 55	22 01	01	11	47	71	
20	120	02.8		24.3	200	20.9 ¹⁶¹	-6	03.7 ¹⁴⁴	52	22	21 10	22 29	00	10	48	74	
21	135	02.5		24.2	214	56.0 ¹⁶¹		18.0 ¹⁴³	54	34	28	23 15	0 00	7	50	77	
22	150	02.2		24.1	229	31.0 ¹⁶⁰		32.3 ¹⁴³	56	20 48	21 51	** ** *	** ** *	**	52	80	
23	165	01.9		24.1	244	06.0 ¹⁶⁰	-6	46.7 ¹⁴⁴	58	21 05	22 21	** ** *	** ** *	**	54	83	
24	180	01.6	-23	24.0	258	41.0 ¹⁶⁰	-7	01.0 ¹⁴³	60 S	21 25	23 11	** ** *	23 57	**	12 57	86	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 17 ^h 46 ^m 6		Mag: -4.8 PMG: 14 ^h 02 ^m		Mag: -0.8 PMG: 20 ^h 13 ^m		Mag: -1.8 PMG: 8 ^h 28 ^m		Mag: 0.0 PMG: 2 ^h 41 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	92	37.3	149	00.7	-19	27.0	56	03.5	+15	58.4	232	45.6	-14	23.7	319	35.6	+18	13.1
1	107	39.7	164	03.2		26.5	71	05.6		58.5	247	47.7		23.8	334	38.2		13.1
2	122	42.2	179	05.8		25.9	86	07.7		58.7	262	49.7		23.9	349	40.8		13.2
3	137	44.6	194	08.3		25.4	101	09.8		58.9	277	51.7		24.0	4	43.4		13.2
4	152	47.1	209	10.9		24.9	116	11.8		59.1	292	53.8		24.2	19	46.0		13.2
5	167	49.6	224	13.5	-19	24.3	131	13.9	+15	59.3	307	55.8	-14	24.3	34	48.6	+18	13.3
6	182	52.0	239	16.0	-19	23.8	146	16.0	+15	59.4	322	57.8	-14	24.4	49	51.2	+18	13.3
7	197	54.5	254	18.6		23.2	161	18.0		59.6	337	59.9		24.6	64	53.8		13.4
8	212	57.0	269	21.2		22.7	176	20.1	+15	59.8	353	01.9		24.7	79	56.4		13.4
9	227	59.4	284	23.8		22.1	191	22.1	+16	00.0	8	03.9		24.8	94	59.0		13.5
10	243	01.9	299	26.4		21.6	206	24.2	+16	00.2	23	06.0		24.9	110	01.6		13.5
11	258	04.4	314	29.0	-19	21.1	221	26.3	+16	00.3	38	08.0	-14	25.1	125	04.2	+18	13.5
12	273	06.8	329	31.6	-19	20.5	236	28.3	+16	00.5	53	10.0	-14	25.2	140	06.8	+18	13.6
13	288	09.3	344	34.2		20.0	251	30.4		00.7	68	12.1		25.3	155	09.4		13.6
14	303	11.8	359	36.8		19.4	266	32.4		00.9	83	14.1		25.5	170	12.0		13.7
15	318	14.2	14	39.4		18.9	281	34.5		01.1	98	16.2		25.6	185	14.6		13.7
16	333	16.7	29	42.0		18.3	296	36.6		01.2	113	18.2		25.7	200	17.2		13.8
17	348	19.1	44	44.7	-19	17.8	311	38.6	+16	01.4	128	20.2	-14	25.8	215	19.8	+18	13.8
18	3	21.6	59	47.3	-19	17.3	326	40.7	+16	01.6	143	22.3	-14	26.0	230	22.4	+18	13.9
19	18	24.1	74	49.9		16.7	341	42.7		01.8	158	24.3		26.1	245	25.0		13.9
20	33	26.5	89	52.6		16.2	356	44.8		02.0	173	26.3		26.2	260	27.6		13.9
21	48	29.0	104	55.2		15.6	11	46.8		02.2	188	28.4		26.3	275	30.2		14.0
22	63	31.5	119	57.9		15.1	26	48.9		02.3	203	30.4		26.5	290	32.8		14.0
23	78	33.9	135	00.5		14.6	41	50.9		02.5	218	32.5		26.6	305	35.4		14.1
24	93	36.4	150	03.2	-19	14.0	56	52.9	+16	02.7	233	34.5	-14	26.7	320	38.0	+18	14.1
Dif	—		+26		+5		+21		+2		+20		-1		+26		0	

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'3 PMG: 12 ^h 00 ^m 1			Edad: 23 ^d 4 PHE { 4 ^h : 55'5 12 ^h : 55'7 20 ^h : 56'0 SD: 15'1 PMG: 6 ^h 57 ^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	01.6	-23	24.0	258	41.0	-7	01.0	60 N	7 09	8 06	9 03	1 41	90	11 55	**		
1	195	01.3		23.9	273	15.8 ¹⁵⁸		15.3 ¹⁴³	58	7 01	7 54	8 46	37	85	12 00	3		
2	210	00.9		23.9	287	50.7 ¹⁵⁹		29.6 ¹⁴³	56	6 55	44	31	33	82	05	7		
3	225	00.6		23.8	302	25.4 ¹⁵⁷		43.9 ¹⁴³	54	49	35	19	30	78	10	9		
4	240	00.3		23.7	317	00.1 ¹⁵⁷		-7 58.1 ¹⁴²	52	43	27	8 08	26	77	14	12		
5	255	00.0	-23	23.7	331	34.8 ¹⁵⁷	-8	12.4 ¹⁴³	50	6 38	7 19	7 58	1 24	73	12 17	15		
6	269	59.7	-23	23.6	346	09.4 ¹⁵⁶	-8	26.6 ¹⁴²	45	6 26	7 03	7 37	1 18	68	12 25	20		
7	284	59.4		23.5	0	43.9 ¹⁵⁵		40.8 ¹⁴²	40	15	6 50	20	13	64	32	24		
8	299	59.1		23.5	15	18.3 ¹⁵⁴	-8	55.0 ¹⁴²	35	6 06	38	7 06	08	61	38	27		
9	314	58.8		23.4	29	52.7 ¹⁵⁴	-9	09.1 ¹⁴¹	30	5 57	27	6 54	1 04	58	43	30		
10	329	58.5		23.3	44	27.0 ¹⁵³		23.3 ¹⁴²	20	41	6 08	32	0 58	52	12 52	35		
11	344	58.2	-23	23.3	59	01.3 ¹⁵³	-9	37.4 ¹⁴¹	10 N	5 25	5 51	6 14	0 52	48	13 00	40		
12	359	57.8	-23	23.2	73	35.4 ¹⁵¹	-9	51.5 ¹⁴¹	0	5 08	5 34	5 56	0 47	43	13 07	45		
13	14	57.5		23.1	88	09.5 ¹⁵¹	-10	05.6 ¹⁴¹	10 S	4 49	5 16	39	42	38	15	48		
14	29	57.2		23.0	102	43.6 ¹⁵¹		19.7 ¹⁴¹	20	4 26	4 55	5 20	36	34	23	53		
15	44	56.9		23.0	117	17.5 ¹⁴⁹		33.7 ¹⁴⁰	30	3 57	30	4 58	30	29	32	59		
16	59	56.6		22.9	131	51.4 ¹⁴⁹	-10	47.7 ¹⁴⁰	35	38	4 15	45	26	26	37	62		
17	74	56.3	-23	22.8	146	25.2 ¹⁴⁸	-11	01.7 ¹⁴⁰	40	3 15	3 57	4 30	0 22	23	13 43	66		
18	89	56.0	-23	22.7	160	58.9 ¹⁴⁷	-11	15.6 ¹³⁹	45	2 45	3 34	4 12	0 18	18	13 50	70		
19	104	55.7		22.7	175	32.5 ¹⁴⁶		29.5 ¹³⁹	50	1 59	3 05	3 49	12	14	13 58	76		
20	119	55.4		22.6	190	06.1 ¹⁴⁶		43.4 ¹³⁹	52	1 31	2 49	38	10	11	14 02	79		
21	134	55.1		22.5	204	39.6 ¹⁴⁵	-11	57.3 ¹³⁹	54	0 45	31	26	07	9	07	81		
22	149	54.7		22.4	219	13.0 ¹⁴⁴	-12	11.1 ¹³⁸	56	** ** *	2 09	3 12	04	6	12	84		
23	164	54.4		22.3	233	46.3 ¹⁴³		24.9 ¹³⁸	58	** ** *	1 39	2 55	0 01	2	17	88		
24	179	54.1	-23	22.3	248	19.5 ¹⁴²	-12	38.6 ¹³⁷	60 S	** ** *	0 49	2 34	23	56	1	14 23	93	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 17 ^h 42 ^m 7		Mag: -4.8 PMG: 13 ^h 57 ^m			Mag: -0.8 PMG: 20 ^h 10 ^m			Mag: -1.8 PMG: 8 ^h 25 ^m			Mag: 0.0 PMG: 2 ^h 37 ^m						
h	hG ♈		hG ♀			hG ♂			hG ♃			hG ♄						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	93	36.4	150	03.2	-19	14.0	56	52.9	+16	02.7	233	34.5	-14	26.7	320	38.0	+18	14.1
1	108	38.9	165	05.8		13.5	71	55.0		02.9	248	36.5		26.9	335	40.6		14.2
2	123	41.3	180	08.5		13.0	86	57.0		03.1	263	38.6		27.0	350	43.3		14.2
3	138	43.8	195	11.2		12.4	101	59.1		03.3	278	40.6		27.1	5	45.9		14.3
4	153	46.3	210	13.8		11.9	117	01.1		03.5	293	42.6		27.2	20	48.5		14.3
5	168	48.7	225	16.5	-19	11.3	132	03.2	+16	03.6	308	44.7	-14	27.4	35	51.1	+18	14.3
6	183	51.2	240	19.2	-19	10.8	147	05.2	+16	03.8	323	46.7	-14	27.5	50	53.7	+18	14.4
7	198	53.6	255	21.9		10.3	162	07.2		04.0	338	48.8		27.6	65	56.3		14.4
8	213	56.1	270	24.6		09.7	177	09.3		04.2	353	50.8		27.8	80	58.9		14.5
9	228	58.6	285	27.3		09.2	192	11.3		04.4	8	52.8		27.9	96	01.5		14.5
10	244	01.0	300	30.0		08.7	207	13.3		04.6	23	54.9		28.0	111	04.1		14.6
11	259	03.5	315	32.7	-19	08.1	222	15.4	+16	04.8	38	56.9	-14	28.1	126	06.7	+18	14.6
12	274	06.0	330	35.4	-19	07.6	237	17.4	+16	04.9	53	59.0	-14	28.3	141	09.3	+18	14.6
13	289	08.4	345	38.1		07.1	252	19.4		05.1	69	01.0		28.4	156	11.9		14.7
14	304	10.9	0	40.8		06.5	267	21.5		05.3	84	03.0		28.5	171	14.5		14.7
15	319	13.4	15	43.6		06.0	282	23.5		05.5	99	05.1		28.6	186	17.1		14.8
16	334	15.8	30	46.3		05.5	297	25.5		05.7	114	07.1		28.8	201	19.7		14.8
17	349	18.3	45	49.0	-19	04.9	312	27.6	+16	05.9	129	09.2	-14	28.9	216	22.4	+18	14.9
18	4	20.7	60	51.8	-19	04.4	327	29.6	+16	06.1	144	11.2	-14	29.0	231	25.0	+18	14.9
19	19	23.2	75	54.5		03.9	342	31.6		06.3	159	13.2		29.1	246	27.6		15.0
20	34	25.7	90	57.3		03.3	357	33.6		06.5	174	15.3		29.3	261	30.2		15.0
21	49	28.1	106	00.0		02.8	12	35.7		06.6	189	17.3		29.4	276	32.8		15.1
22	64	30.6	121	02.8		02.3	27	37.7		06.8	204	19.4		29.5	291	35.4		15.1
23	79	33.1	136	05.5		01.7	42	39.7		07.0	219	21.4		29.6	306	38.0		15.1
24	94	35.5	151	08.3	-19	01.2	57	41.7	+16	07.2	234	23.4	-14	29.8	321	40.6	+18	15.2
Dif	—		+27			+5	+20		+2	+20		-1		+26				

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna			
	SD: 16:3 PMG: 12 ^h 00 ^m 6				Edad: 24 ^d 4 PHE { SD: 15:3 PMG: 7 ^h 41 ^m 4 ^h : 56:2 12 ^h : 56:5 20 ^h : 56:8 R°: 47 ^m															
	hG ☉		Dec		hG ☾		Dif				Dec		Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	179	54.1	-23	22.3	248	19.5	-12	38.6	60 N	14	58	15	55	16	52	3	11	97	11	54
1	194	53.8		22.2	262	52.6 ¹⁴¹	-12	52.4 ¹³⁸	58	15	15	16	07	17	00	3	02	92	12	03
2	209	53.5		22.1	277	25.6 ¹⁴⁰	-13	06.0 ¹³⁶	56		30		17	06		2	55	88		12
3	224	53.2		22.0	291	58.6 ¹⁴⁰		19.7 ¹³⁷	54		43		26	13			48	84		19
4	239	52.9		21.9	306	31.4 ¹³⁸		33.3 ¹³⁶	52	15	54		34	18			43	80		26
5	254	52.6	-23	21.8	321	04.2 ¹³⁸	-13	46.8 ¹³⁵	50	16	03	16	42	17	23	2	37	78	12	32
6	269	52.3	-23	21.7	335	36.9 ¹³⁷	-14	00.3 ¹³⁵	45	16	24	16	58	17	35	2	26	72	12	45
7	284	52.0		21.7	350	09.4 ¹³⁵		13.8 ¹³⁵	40		41	17	11	45			17	68	12	56
8	299	51.6		21.6	4	41.9 ¹³⁵		27.2 ¹³⁴	35	16	55	23	17	55			09	64	13	05
9	314	51.3		21.5	19	14.3 ¹³⁴		40.6 ¹³⁴	30	17	07	34	18	04			2	02	61	13
10	329	51.0		21.4	33	46.6 ¹³³	-14	53.9 ¹³³	20		29	17	53	20			1	50	55	27
11	344	50.7	-23	21.3	48	18.7 ¹³¹	-15	07.2 ¹³³	10 N	17	47	18	10	18	36	1	40	50	13	40
12	359	50.4	-23	21.2	62	50.8 ¹³¹	-15	20.5 ¹³³	0	18	04	18	27	18	53	1	30	47	13	52
13	14	50.1		21.1	77	22.8 ¹³⁰		33.6 ¹³¹	10 S		22	18	45	19	12		20	43	14	03
14	29	49.8		21.0	91	54.6 ¹²⁸		46.8 ¹³²	20	18	41	19	05	19	35	1	10	38		16
15	44	49.5		20.9	106	26.4 ¹²⁸	-15	59.8 ¹³⁰	30	19	03		30	20	04		0	59	32	31
16	59	49.2		20.8	120	58.0 ¹²⁶	-16	12.8 ¹³⁰	35		16	19	46		22		52	30		39
17	74	48.9	-23	20.7	135	29.6 ¹²⁶	-16	25.8 ¹³⁰	40	19	31	20	04	20	45		0	45	26	14
18	89	48.6	-23	20.6	150	01.0 ¹²⁴	-16	38.7 ¹²⁹	45	19	49	20	26	21	16		0	36	22	15
19	104	48.2		20.5	164	32.3 ¹²³	-16	51.5 ¹²⁸	50	20	11	20	56	22	01		26	16		14
20	119	47.9		20.4	179	03.5 ¹²²	-17	04.3 ¹²⁸	52		22	21	11	22	29		21	14		21
21	134	47.6		20.3	193	34.6 ¹²¹		17.0 ¹²⁷	54		34	29	23	14			16	11		28
22	149	47.3		20.2	208	05.6 ¹²⁰		29.7 ¹²⁷	56	20	48	21	51	** **			10	8		36
23	164	47.0		20.1	222	36.4 ¹¹⁸		42.3 ¹²⁶	58	21	05	22	20	** **			0	03	5	45
24	179	46.7	-23	20.0	237	07.2 ¹¹⁸	-17	54.8 ¹²⁵	60 S	21	26	23	09	** **			23	57	2	15
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG 17 ^h 38 ^m 7				Mag: -4.7 PMG: 13 ^h 53 ^m				Mag: -0.8 PMG: 20 ^h 07 ^m				Mag: -1.8 PMG: 8 ^h 21 ^m				Mag: 0.0 PMG: 2 ^h 33 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	94	35.5	151	08.3	-19	01.2	57	41.7	+16	07.2	234	23.4	-14	29.8	321	40.6	+18	15.2		
1	109	38.0	166	11.1		00.7	72	43.7		07.4	249	25.5		29.9	336	43.2		15.2		
2	124	40.5	181	13.8	-19	00.2	87	45.7		07.6	264	27.5		30.0	351	45.8		15.3		
3	139	42.9	196	16.6	-18	59.6	102	47.8		07.8	279	29.6		30.2	6	48.4		15.3		
4	154	45.4	211	19.4		59.1	117	49.8		08.0	294	31.6		30.3	21	51.0		15.4		
5	169	47.9	226	22.2	-18	58.6	132	51.8	+16	08.2	309	33.7	-14	30.4	36	53.7	+18	15.4		
6	184	50.3	241	25.0	-18	58.0	147	53.8	+16	08.4	324	35.7	-14	30.5	51	56.3	+18	15.5		
7	199	52.8	256	27.8		57.5	162	55.8		08.6	339	37.7		30.7	66	58.9		15.5		
8	214	55.2	271	30.6		57.0	177	57.8		08.7	354	39.8		30.8	82	01.5		15.5		
9	229	57.7	286	33.4		56.5	192	59.8		08.9	9	41.8		30.9	97	04.1		15.6		
10	245	00.2	301	36.2		55.9	208	01.8		09.1	24	43.9		31.0	112	06.7		15.6		
11	260	02.6	316	39.0	-18	55.4	223	03.9	+16	09.3	39	45.9	-14	31.2	127	09.3	+18	15.7		
12	275	05.1	331	41.8	-18	54.9	238	05.9	+16	09.5	54	48.0	-14	31.3	142	11.9	+18	15.7		
13	290	07.6	346	44.7		54.4	253	07.9		09.7	69	50.0		31.4	157	14.5		15.8		
14	305	10.0	1	47.5		53.8	268	09.9		09.9	84	52.0		31.5	172	17.1		15.8		
15	320	12.5	16	50.3		53.3	283	11.9		10.1	99	54.1		31.7	187	19.8		15.9		
16	335	15.0	31	53.2		52.8	298	13.9		10.3	114	56.1		31.8	202	22.4		15.9		
17	350	17.4	46	56.0	-18	52.3	313	15.9	+16	10.5	129	58.2	-14	31.9	217	25.0	+18	16.0		
18	5	19.9	61	58.8	-18	51.7	328	17.9	+16	10.7	145	00.2	-14	32.0	232	27.6	+18	16.0		
19	20	22.4	77	01.7		51.2	343	19.9		10.9	160	02.3		32.2	247	30.2		16.0		
20	35	24.8	92	04.6		50.7	358	21.9		11.1	175	04.3		32.3	262	32.8		16.1		
21	50	27.3	107	07.4		50.2	13	23.9		11.3	190	06.4		32.4	277	35.4		16.1		
22	65	29.7	122	10.3		49.6	28	25.9		11.5	205	08.4		32.5	292	38.0		16.2		
23	80	32.2	137	13.2		49.1	43	27.9		11.7	220	10.4		32.7	307	40.6		16.2		
24	95	34.7	152	16.0	-18	48.6	58	29.9	+16	11.9	235	12.5	-14	32.8	322	43.3	+18	16.3		
Dif	—		+28		+5		+20		+2		+20		-1		+26		0			

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16:3 PMG: 12 ^h 01 ^m 1			Edad: 25 ^d 4 PHE { 4 ^h : 57/1 12 ^h : 57/4 20 ^h : 57/7 SD: 15/5 PMG: 8 ^h 28 ^m R°: 53 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	179	46.7	-23	20.0	237	07.2	-17	54.8	60 N	7 09	8 06	9 04	4 48	106	11 55	3
1	194	46.4		19.9	251	37.8	-18	07.2	58	7 02	7 55	8 46	34	99	12 09	10
2	209	46.1		19.8	266	08.3		19.6	56	6 55	44	32	23	93	21	16
3	224	45.8		19.7	280	38.7		31.9	54	49	35	19	12	89	32	20
4	239	45.5		19.6	295	09.0		44.1	52	43	27	8 08	4 03	86	42	23
5	254	45.2	-23	19.5	309	39.1	-18	56.3	50	6 38	7 20	7 58	3 55	83	12 51	26
6	269	44.9	-23	19.4	324	09.2	-19	08.3	45	6 26	7 04	7 38	3 38	77	13 09	32
7	284	44.5		19.3	338	39.1		20.3	40	16	6 50	21	25	71	24	36
8	299	44.2		19.2	353	08.8		32.2	35	6 07	39	7 07	13	68	37	39
9	314	43.9		19.1	7	38.5		44.1	30	5 58	28	6 54	3 03	65	13 48	42
10	329	43.6		19.0	22	08.0	-19	55.8	20	42	6 09	33	2 45	60	14 08	47
11	344	43.3	-23	18.9	36	37.4	-20	07.5	10 N	5 26	5 52	6 15	2 30	56	14 25	50
12	359	43.0	-23	18.7	51	06.7	-20	19.1	0	5 09	5 35	5 57	2 17	51	14 41	54
13	14	42.7		18.6	65	35.8		30.5	10 S	4 50	5 17	40	2 03	47	14 56	59
14	29	42.4		18.5	80	04.8		41.9	20	4 27	4 56	5 21	1 48	43	15 14	62
15	44	42.1		18.4	94	33.7	-20	53.2	30	3 58	32	4 59	31	39	33	67
16	59	41.8		18.3	109	02.5	-21	04.4	35	40	4 16	46	22	35	45	69
17	74	41.5	-23	18.2	123	31.1	-21	15.6	40	3 17	3 58	4 31	1 11	32	15 58	73
18	89	41.2	-23	18.1	137	59.6	-21	26.6	45	2 46	3 36	4 13	0 58	28	16 14	77
19	104	40.9		17.9	152	27.9		37.5	50	2 01	3 06	3 51	42	23	34	83
20	119	40.5		17.8	166	56.2		48.3	52	1 33	2 51	40	35	20	43	86
21	134	40.2		17.7	181	24.3	-21	59.0	54	0 48	33	28	27	16	16 54	89
22	149	39.9		17.6	195	52.2	-22	09.6	56	** **	2 11	3 13	18	13	17 06	94
23	164	39.6		17.5	210	20.0		20.1	58	** **	1 42	2 57	0 08	8	20	99
24	179	39.3	-23	17.3	224	47.7	-22	30.5	60 S	** **	0 52	2 36	23 59	8	17 36	108

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 17 ^h 34 ^m 8		Mag: -4.7 PMG: 13 ^h 48 ^m		Mag: -0.7 PMG: 20 ^h 03 ^m		Mag: -1.8 PMG: 8 ^h 18 ^m		Mag: 0.0 PMG: 2 ^h 29 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	95	34.7	152	16.0	-18	48.6	58	29.9	+16	11.9
1	110	37.1	167	18.9		48.1	73	31.8		12.1
2	125	39.6	182	21.8		47.6	88	33.8		12.3
3	140	42.1	197	24.7		47.0	103	35.8		12.5
4	155	44.5	212	27.6		46.5	118	37.8		12.7
5	170	47.0	227	30.5	-18	46.0	133	39.8	+16	12.9
6	185	49.5	242	33.4	-18	45.5	148	41.8	+16	13.0
7	200	51.9	257	36.3		45.0	163	43.8		13.2
8	215	54.4	272	39.2		44.4	178	45.8		13.4
9	230	56.8	287	42.1		43.9	193	47.7		13.6
10	245	59.3	302	45.0		43.4	208	49.7		13.8
11	261	01.8	317	47.9	-18	42.9	223	51.7	+16	14.0
12	276	04.2	332	50.9	-18	42.4	238	53.7	+16	14.2
13	291	06.7	347	53.8		41.9	253	55.7		14.4
14	306	09.2	2	56.7		41.3	268	57.6		14.6
15	321	11.6	17	59.7		40.8	283	59.6		14.8
16	336	14.1	33	02.6		40.3	299	01.6		15.0
17	351	16.6	48	05.6	-18	39.8	314	03.6	+16	15.2
18	6	19.0	63	08.5	-18	39.3	329	05.6	+16	15.4
19	21	21.5	78	11.5		38.8	344	07.5		15.6
20	36	24.0	93	14.5		38.3	359	09.5		15.9
21	51	26.4	108	17.4		37.8	14	11.5		16.1
22	66	28.9	123	20.4		37.2	29	13.4		16.3
23	81	31.3	138	23.4		36.7	44	15.4		16.5
24	96	33.8	153	26.4	-18	36.2	59	17.4	+16	16.7
Dif	—		+29		+5		+20		+2	
							+20		-1	
									+26	
									0	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 16:3			Edad: 26 ^d 4 PHE { 4 ^h : 58'0 12 ^h : 58'3 20 ^h : 58'6													
	PMG: 12 ^h 01 ^m 6			SD: 15:7													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico		Hora	R°		Hora	R°
h	°	'	°	°	'	°	'	°		h m	h m	h m	h m	m	h m	m	m
0	179	39.3	-23	17.3		224	47.7	-22	30.5	60 N	15 00	15 57	16 54	6 34	111	11 58	11
1	194	39.0		17.2		239	15.3		40.7	58	17	16 09	17 01	6 13	100	12 19	22
2	209	38.7		17.1		253	42.7	-22	50.9	56	32	19	08	5 56	93	37	28
3	224	38.4		17.0		268	10.0	-23	01.0	54	44	28	14	41	89	12 52	32
4	239	38.1		16.8		282	37.2		10.9	52	15 55	36	20	29	85	13 05	36
5	254	37.8	-23	16.7		297	04.2	-23	20.7	50	16 05	16 43	17 25	5 18	82	13 17	38
6	269	37.5	-23	16.6		311	31.0	-23	30.4	45	16 26	16 59	17 37	4 55	77	13 41	43
7	284	37.2		16.5		325	57.8		40.0	40	42	17 13	47	36	74	14 00	47
8	299	36.9		16.3		340	24.4		49.4	35	16 56	24	17 56	21	71	16	49
9	314	36.6		16.2		354	50.9	-23	58.7	30	17 09	35	18 05	4 08	68	30	52
10	329	36.2		16.1		9	17.2	-24	07.9	20	30	17 54	21	3 45	64	14 55	54
11	344	35.9	-23	15.9		23	43.4	-24	17.0	10 N	17 48	18 11	18 37	3 26	61	15 15	58
12	359	35.6	-23	15.8		38	09.5	-24	25.9	0	18 05	18 28	18 54	3 08	58	15 35	60
13	14	35.3		15.7		52	35.4		34.7	10 S	23	18 46	19 13	2 50	55	15 55	62
14	29	35.0		15.6		67	01.2		43.3	20	18 42	19 06	19 35	31	51	16 16	65
15	44	34.7		15.4		81	26.9	-24	51.8	30	19 04	31	20 04	2 10	46	40	68
16	59	34.4		15.3		95	52.4	-25	00.2	35	16	19 46	23	1 57	44	16 54	71
17	74	34.1	-23	15.1		110	17.8	-25	08.5	40	19 31	20 04	20 46	1 43	41	17 11	73
18	89	33.8	-23	15.0		124	43.1	-25	16.5	45	19 49	20 27	21 16	1 26	37	17 31	76
19	104	33.5		14.9		139	08.3		24.5	50	20 12	20 56	22 01	1 05	31	17 57	80
20	119	33.2		14.7		153	33.3		32.3	52	22	21 11	22 28	0 55	29	18 09	82
21	134	32.9		14.6		167	58.2		39.9	54	35	29	23 11	43	26	23	85
22	149	32.6		14.5		182	22.9		47.4	56	20 49	21 50	** ** *	31	21	40	89
23	164	32.3		14.3		196	47.5	-25	54.8	58	21 05	22 19	** ** *	0 16	16	18 59	95
24	179	32.0	-23	14.2		211	12.0	-26	02.0	60 S	21 25	23 07	** ** *	** ** *	**	19 24	106

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 17 ^h 30 ^m 9		Mag: -4.7 PMG: 13 ^h 43 ^m		Mag: -0.7 PMG: 20 ^h 00 ^m		Mag: -1.8 PMG: 8 ^h 15 ^m		Mag: 0.0 PMG: 2 ^h 25 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♎	Dec
h	°	'	°	'	°	'	°	'	°	'
0	96	33.8	153	26.4	-18	36.2	59	17.4	+16	16.7
1	111	36.3	168	29.4		35.7	74	19.3		16.9
2	126	38.7	183	32.4		35.2	89	21.3		17.1
3	141	41.2	198	35.4		34.7	104	23.3		17.3
4	156	43.7	213	38.4		34.2	119	25.2		17.5
5	171	46.1	228	41.4	-18	33.7	134	27.2	+16	17.7
6	186	48.6	243	44.4	-18	33.2	149	29.2	+16	17.9
7	201	51.1	258	47.4		32.6	164	31.1		18.1
8	216	53.5	273	50.4		32.1	179	33.1		18.3
9	231	56.0	288	53.4		31.6	194	35.0		18.5
10	246	58.5	303	56.5		31.1	209	37.0		18.7
11	262	00.9	318	59.5	-18	30.6	224	39.0	+16	18.9
12	277	03.4	334	02.5	-18	30.1	239	40.9	+16	19.1
13	292	05.8	349	05.6		29.6	254	42.9		19.3
14	307	08.3	4	08.6		29.1	269	44.8		19.5
15	322	10.8	19	11.7		28.6	284	46.8		19.7
16	337	13.2	34	14.7		28.1	299	48.7		19.9
17	352	15.7	49	17.8	-18	27.6	314	50.7	+16	20.1
18	7	18.2	64	20.8	-18	27.1	329	52.6	+16	20.3
19	22	20.6	79	23.9		26.6	344	54.6		20.6
20	37	23.1	94	27.0		26.1	359	56.5		20.8
21	52	25.6	109	30.1		25.6	14	58.5		21.0
22	67	28.0	124	33.1		25.1	30	00.4		21.2
23	82	30.5	139	36.2		24.6	45	02.4		21.4
24	97	33.0	154	39.3	-18	24.1	60	04.3	+16	21.6
Dif	—		+30		+5		+20		+2	
							+21		-1	
									+26	
									0	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'3 PMG: 12 ^h 02 ^m 1			Edad: 27 ^d 4 PHE { 4 ^h : 58'8 12 ^h : 59'1 20 ^h : 59'4 R°: 63 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m
0	179	32.0	-23	14.2	211	12.0	-26	02.0	60 N	7 10	8 06	9 03	8 25	96
1	194	31.7		14.0	225	36.4 ⁵⁴		09.0 ⁷⁰	58	7 02	7 55	8 46	7 53	87
2	209	31.4		13.9	240	00.7 ⁵³		15.9 ⁶⁹	56	6 56	45	32	29	82
3	224	31.0		13.8	254	24.8 ⁵¹		22.6 ⁶⁷	54	49	36	19	7 10	79
4	239	30.7		13.6	268	48.8 ⁵⁰		29.1 ⁶⁵	52	44	27	8 08	6 54	77
5	254	30.4	-23	13.5	283	12.7 ⁴⁹	-26	35.5 ⁶⁴	50	6 39	7 20	7 58	6 40	76
6	269	30.1	-23	13.3	297	36.5 ⁴⁸	-26	41.7 ⁶²	45	6 27	7 04	7 38	6 12	73
7	284	29.8		13.2	312	00.1 ⁴⁶		47.8 ⁶¹	40	17	6 51	21	5 50	71
8	299	29.5		13.0	326	23.7 ⁴⁶		53.6 ⁵⁸	35	6 08	39	7 07	32	69
9	314	29.2		12.9	340	47.1 ⁴⁴	-26	59.4 ⁵⁸	30	5 59	29	6 55	5 16	68
10	329	28.9		12.7	355	10.4 ⁴³	-27	04.9 ⁵⁵	20	43	6 10	34	4 49	66
11	344	28.6	-23	12.6	9	33.6 ⁴²	-27	10.2 ⁵³	10 N	5 27	5 53	6 16	4 27	64
12	359	28.3	-23	12.4	23	56.7 ⁴¹	-27	15.4 ⁵²	0	5 10	5 36	5 58	4 06	62
13	14	28.0		12.3	38	19.7 ⁴⁰		20.4 ⁵⁰	10 S	4 51	5 18	41	3 45	60
14	29	27.7		12.1	52	42.6 ³⁹		25.2 ⁴⁸	20	28	4 58	22	3 22	59
15	44	27.4		12.0	67	05.4 ³⁸		29.9 ⁴⁷	30	4 00	33	5 00	2 56	57
16	59	27.1		11.8	81	28.0 ³⁶		34.3 ⁴⁴	35	3 41	18	4 47	41	55
17	74	26.8	-23	11.7	95	50.6 ³⁶	-27	38.6 ⁴³	40	3 18	4 00	4 32	2 24	53
18	89	26.5	-23	11.5	110	13.1 ³⁵	-27	42.7 ⁴¹	45	2 48	3 37	4 15	2 03	50
19	104	26.2		11.3	124	35.5 ³⁴		46.6 ³⁹	50	2 03	3 08	3 52	1 36	47
20	119	25.9		11.2	138	57.8 ³³		50.3 ³⁷	52	1 36	2 53	42	24	44
21	134	25.6		11.0	153	20.0 ³²		53.8 ³⁵	54	0 52	35	29	1 09	42
22	149	25.3		10.9	167	42.2 ³²	-27	57.1 ³³	56	** **	2 13	3 15	0 52	38
23	164	25.0		10.7	182	04.2 ³⁰	-28	00.3 ³²	58	** **	1 44	2 59	32	33
24	179	24.7	-23	10.6	196	26.2 ³⁰	-28	03.2 ²⁹	60 S	** **	0 57	2 39	0 06	23

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 17 ^h 26 ^m 9		Mag: -4.6 PMG: 13 ^h 39 ^m		Mag: -0.7 PMG: 19 ^h 57 ^m		Mag: -1.8 PMG: 8 ^h 11 ^m		Mag: 0.0 PMG: 2 ^h 20 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	97	33.0	154	39.3	-18	24.1	236	50.8	-14	38.7
1	112	35.4	169	42.4		23.6	251	52.9		38.8
2	127	37.9	184	45.5		23.1	266	54.9		38.9
3	142	40.3	199	48.6		22.6	281	57.0		39.0
4	157	42.8	214	51.7		22.1	296	59.1		39.2
5	172	45.3	229	54.8	-18	21.6	312	01.1	-14	39.3
6	187	47.7	244	58.0	-18	21.1	327	03.2	-14	39.4
7	202	50.2	260	01.1		20.6	342	05.2		39.5
8	217	52.7	275	04.2		20.1	357	07.3		39.6
9	232	55.1	290	07.3		19.6	12	09.3		39.8
10	247	57.6	305	10.5		19.1	27	11.4		39.9
11	263	00.1	320	13.6	-18	18.6	42	13.4	-14	40.0
12	278	02.5	335	16.8	-18	18.1	57	15.5	-14	40.1
13	293	05.0	350	19.9		17.6	72	17.5		40.3
14	308	07.5	5	23.1		17.1	87	19.6		40.4
15	323	09.9	20	26.2		16.6	102	21.7		40.5
16	338	12.4	35	29.4		16.1	117	23.7		40.6
17	353	14.8	50	32.6	-18	15.6	132	25.8	-14	40.7
18	8	17.3	65	35.7	-18	15.1	147	27.8	-14	40.9
19	23	19.8	80	38.9		14.6	162	29.9		41.0
20	38	22.2	95	42.1		14.1	177	31.9		41.1
21	53	24.7	110	45.3		13.7	192	34.0		41.2
22	68	27.2	125	48.5		13.2	207	36.0		41.3
23	83	29.6	140	51.6		12.7	222	38.1		41.5
24	98	32.1	155	54.8	-18	12.2	237	40.2	-14	41.6
Dif	—		+31		+5		+19		+2	
							+21		-1	
									+26	
									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 6			Edad: 28 ^d 4 PHE { SD: 16'2 PMG: 11 ^h 23 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	Rº	Hora	Rº		
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m			
0	179	24.7	-23	10.6	196	26.2	-28	03.2	60 N	15 02	15 59	16 56	10 01 47	12 45 90			
1	194	24.4		10.4	210	48.1	29	06.0	58	19	16 11	17 03	9 20 54	13 27 82			
2	209	24.1		10.2	225	09.9	28	08.5	56	34	21	10	8 51 57	13 55 79			
3	224	23.8		10.1	239	31.6	27	10.8	54	46	30	16	29 59	14 17 77			
4	239	23.5		09.9	253	53.3	27	13.0	52	15 57	38	21	8 11 60	35 76			
5	254	23.2	-23	09.7	268	14.9	26	-28 14.9	50	16 07	16 45	17 27	7 56 60	14 51 74			
6	269	22.8	-23	09.6	282	36.5	26	-28 16.7	45	16 27	17 01	17 38	7 25 62	15 22 73			
7	284	22.5		09.4	296	58.0	25	18.2	40	44	14	48	7 01 62	15 46 71			
8	299	22.2		09.2	311	19.4	24	19.6	35	16 58	26	17 57	6 41 63	16 06 70			
9	314	21.9		09.1	325	40.7	23	20.7	30	17 10	36	18 06	6 24 64	23 69			
10	329	21.6		08.9	340	02.1	24	21.6	20	31	17 55	22	5 55 65	16 51 68			
11	344	21.3	-23	08.7	354	23.3	22	-28 22.3	10 N	17 49	18 12	18 38	5 31 65	17 16 66			
12	359	21.0	-23	08.6	8	44.6	23	-28 22.9	0	18 06	18 29	18 55	5 08 65	17 39 65			
13	14	20.7		08.4	23	05.8	22	23.2	10 S	24	18 47	19 14	4 45 66	18 02 63			
14	29	20.4		08.2	37	26.9	21	23.3	20	18 42	19 07	19 36	4 21 66	26 62			
15	44	20.1		08.1	51	48.0	21	23.2	30	19 04	32	20 05	3 53 66	18 55 60			
16	59	19.8		07.9	66	09.1	21	22.9	35	17	19 47	23	36 66	19 11 59			
17	74	19.5	-23	07.7	80	30.1	20	-28 22.3	40	19 32	20 05	20 46	3 17 66	19 31 57			
18	89	19.2	-23	07.5	94	51.2	21	-28 21.6	45	19 50	20 27	21 16	2 53 66	19 55 55			
19	104	18.9		07.4	109	12.2	20	20.7	50	20 12	20 56	22 00	23 66	20 25 52			
20	119	18.6		07.2	123	33.1	19	19.5	52	22	21 11	22 27	2 08 66	40 50			
21	134	18.3		07.0	137	54.1	20	18.1	54	34	28	23 08	1 51 66	20 58 47			
22	149	18.0		06.8	152	15.1	20	16.6	56	20 48	21 50	** **	30 66	21 19 44			
23	164	17.7		06.6	166	36.0	19	14.8	58	21 05	22 18	** **	1 05 64	21 45 39			
24	179	17.4	-23	06.5	180	57.0	20	-28 12.8	60 S	21 25	23 03	** **	0 29 63	22 23 28			
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO								
	PMG: 17 ^h 23 ^m 0		Mag: -4.6 PMG: 13 ^h 33 ^m		Mag: -0.7 PMG: 19 ^h 54 ^m		Mag: -1.9 PMG: 8 ^h 08 ^m		Mag: 0.0 PMG: 2 ^h 16 ^m								
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec							
h	°	'	°	'	°	'	°	'	°	'							
0	98	32.1	155	54.8	60	50.6	+16	26.7	237	40.2	-14	41.6	325	51.7	+18	19.7	
1	113	34.6	170	58.0	75	52.5		26.9	252	42.2		41.7	340	54.3		19.7	
2	128	37.0	186	01.3	90	54.5		27.1	267	44.3		41.8	355	57.0		19.8	
3	143	39.5	201	04.5	105	56.4		27.3	282	46.3		41.9	10	59.6		19.8	
4	158	42.0	216	07.7	120	58.3		27.5	297	48.4		42.0	26	02.2		19.9	
5	173	44.4	231	10.9	136	00.2	+16	27.7	312	50.4	-14	42.2	41	04.8	+18	19.9	
6	188	46.9	246	14.1	151	02.1	+16	28.0	327	52.5	-14	42.3	56	07.4	+18	19.9	
7	203	49.3	261	17.3	166	04.0		28.2	342	54.6		42.4	71	10.1		20.0	
8	218	51.8	276	20.6	181	05.9		28.4	357	56.6		42.5	86	12.7		20.0	
9	233	54.3	291	23.8	196	07.8		28.6	12	58.7		42.6	101	15.3		20.1	
10	248	56.7	306	27.1	211	09.8		28.8	28	00.7		42.8	116	17.9		20.1	
11	263	59.2	321	30.3	226	11.7	+16	29.0	43	02.8	-14	42.9	131	20.6	+18	20.2	
12	279	01.7	336	33.6	241	13.6	+16	29.3	58	04.8	-14	43.0	146	23.2	+18	20.2	
13	294	04.1	351	36.8	256	15.5		29.5	73	06.9		43.1	161	25.8		20.3	
14	309	06.6	6	40.1	271	17.4		29.7	88	09.0		43.2	176	28.4		20.3	
15	324	09.1	21	43.3	286	19.3		29.9	103	11.0		43.4	191	31.1		20.4	
16	339	11.5	36	46.6	301	21.2		30.1	118	13.1		43.5	206	33.7		20.4	
17	354	14.0	51	49.9	316	23.1	+16	30.3	133	15.1	-14	43.6	221	36.3	+18	20.5	
18	9	16.5	66	53.1	331	25.0	+16	30.6	148	17.2	-14	43.7	236	38.9	+18	20.5	
19	24	18.9	81	56.4	346	26.9		30.8	163	19.3		43.8	251	41.6		20.6	
20	39	21.4	96	59.7	1	28.8		31.0	178	21.3		43.9	266	44.2		20.6	
21	54	23.8	112	03.0	16	30.7		31.2	193	23.4		44.1	281	46.8		20.7	
22	69	26.3	127	06.3	31	32.6		31.4	208	25.4		44.2	296	49.4		20.7	
23	84	28.8	142	09.6	46	34.5		31.7	223	27.5		44.3	311	52.1		20.8	
24	99	31.2	157	12.9	61	36.4	+16	31.9	238	29.6	-14	44.4	326	54.7	+18	20.8	
Dif	—		+33		+5		+19		+2		+21		-1		+26		0

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'3 PMG: 12 ^h 03 ^m 1			Edad: 29 ^d 4 PHE { 4 ^h : 60'2 12 ^h : 60'3 20 ^h : 60'4 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	179	17.4	-23	06.5	180	57.0	-28	12.8	60 N	7 10	8 06	9 03	10 48	14	14 15	119
1	194	17.1		06.3	195	17.9	19	10.6	58	7 02	7 55	8 46	10 14	26	14 49	107
2	209	16.8		06.1	209	38.8	19	08.1	56	6 56	45	32	9 48	33	15 14	100
3	224	16.5		05.9	223	59.8	20	05.5	54	50	36	19	28	37	34	95
4	239	16.2		05.7	238	20.7	19	-28 02.7	52	44	28	8 08	9 11	41	15 51	91
5	254	15.9	-23	05.6	252	41.7	20	-27 59.6	50	6 39	7 20	7 59	8 56	44	16 05	89
6	269	15.6	-23	05.4	267	02.7	20	-27 56.4	45	6 27	7 05	7 38	8 27	48	16 35	82
7	284	15.3		05.2	281	23.7	20	52.9	40	17	6 51	22	8 03	52	16 57	79
8	299	15.0		05.0	295	44.7	20	49.2	35	08	40	7 08	7 44	54	17 16	76
9	314	14.7		04.8	310	05.7	20	45.3	30	6 00	29	6 56	28	56	32	74
10	329	14.4		04.6	324	26.8	21	41.2	20	5 43	6 11	35	7 00	59	17 59	70
11	344	14.1	-23	04.4	338	47.9	21	-27 36.9	10 N	5 27	5 54	6 17	6 36	61	18 22	66
12	359	13.8	-23	04.2	353	09.0	21	-27 32.4	0	5 11	5 37	5 59	6 13	64	18 44	63
13	14	13.5		04.1	7	30.2	22	27.7	10 S	4 52	5 19	42	5 51	66	19 05	60
14	29	13.2		03.9	21	51.4	22	22.8	20	30	4 59	23	5 27	69	28	56
15	44	12.9		03.7	36	12.6	22	17.6	52	4 01	34	5 02	4 59	72	19 55	52
16	59	12.6		03.5	50	33.9	23	12.3	53	3 43	19	4 49	42	74	20 10	50
17	74	12.3	-23	03.3	64	55.3	24	-27 06.8	40	3 20	4 01	4 34	4 23	76	20 28	46
18	89	12.0	-23	03.1	79	16.7	24	-27 01.0	45	2 50	3 39	4 16	3 59	79	20 50	42
19	104	11.7		02.9	93	38.1	24	-26 55.1	50	2 06	3 10	3 54	29	83	21 17	36
20	119	11.4		02.7	107	59.6	25	48.9	62	1 39	2 55	43	3 14	85	30	34
21	134	11.1		02.5	122	21.2	26	42.6	63	0 57	38	31	2 57	87	21 45	30
22	149	10.8		02.3	136	42.8	26	36.1	65	** ** *	2 16	18	36	91	22 03	25
23	164	10.6		02.1	151	04.5	27	29.3	68	** ** *	1 48	3 01	2 09	97	24	19
24	179	10.3	-23	01.9	165	26.3	28	-26 22.4	69	** ** *	1 03	2 41	1 32	107	22 51	10

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 17 ^h 19 ^m 1		Mag: -4.6 PMG: 13 ^h 28 ^m		Mag: -0.6 PMG: 19 ^h 51 ^m		Mag: -1.9 PMG: 8 ^h 05 ^m		Mag: -0.1 PMG: 2 ^h 12 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	99	31.2	157	12.9	-18	00.6	61	36.4	+16	31.9
1	114	33.7	172	16.2	-18	00.1	76	38.3		32.1
2	129	36.2	187	19.5	-17	59.6	91	40.2		32.3
3	144	38.6	202	22.8		59.1	106	42.0		32.5
4	159	41.1	217	26.1		58.7	121	43.9		32.8
5	174	43.6	232	29.5	-17	58.2	136	45.8	+16	33.0
6	189	46.0	247	32.8	-17	57.7	151	47.7	+16	33.2
7	204	48.5	262	36.1		57.2	166	49.6		33.4
8	219	51.0	277	39.5		56.8	181	51.5		33.6
9	234	53.4	292	42.8		56.3	196	53.4		33.9
10	249	55.9	307	46.2		55.8	211	55.3		34.1
11	264	58.3	322	49.5	-17	55.4	226	57.1	+16	34.3
12	280	00.8	337	52.9	-17	54.9	241	59.0	+16	34.5
13	295	03.3	352	56.2		54.4	257	00.9		34.8
14	310	05.7	7	59.6		53.9	272	02.8		35.0
15	325	08.2	23	02.9		53.5	287	04.7		35.2
16	340	10.7	38	06.3		53.0	302	06.5		35.4
17	355	13.1	53	09.7	-17	52.5	317	08.4	+16	35.6
18	10	15.6	68	13.1	-17	52.1	332	10.3	+16	35.9
19	25	18.1	83	16.5		51.6	347	12.2		36.1
20	40	20.5	98	19.8		51.1	2	14.0		36.3
21	55	23.0	113	23.2		50.7	17	15.9		36.5
22	70	25.5	128	26.6		50.2	32	17.8		36.8
23	85	27.9	143	30.0		49.7	47	19.7		37.0
24	100	30.4	158	33.4	-17	49.3	62	21.5	+16	37.2
Dif	—		+34		+5		+19		+2	
							+21		-1	
									+26	
									0	

UT	SOL			● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16/3			Edad: 30 ^d 4 PHE { 4 ^h : 60'5 12 ^h : 60'6 20 ^h : 60'6											
	PMG: 12 ^h 03 ^m 6			SD: 16'5 PMG: 13 ^h 32 ^m R°: 60 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	179	10.3	-23 01.9	165	26.3	-26 22.4	71	60 N	15 05	16 02	16 58	11 02 5	16 14 119		
1	194	10.0	01.7	179	48.1	15.3	71	58	22	13	17 05	10 40 12	36 111		
2	209	09.7	01.5	194	10.0	08.0	73	56	36	23	12	21 19	16 54 105		
3	224	09.4	01.3	208	32.0	-26 00.5	75	54	48	32	18	10 05 24	17 09 100		
4	239	09.1	01.1	222	54.0	-25 52.8	77	52	15 59	40	23	9 52 27	22 96		
5	254	08.8	-23 00.9	237	16.1	-25 44.9	79	50	16 09	16 47	17 28	9 40 30	17 34 92		
6	269	08.5	-23 00.7	251	38.3	-25 36.8	81	45	16 29	17 03	17 40	9 15 36	17 57 86		
7	284	08.2	00.5	266	00.6	28.5	83	40	45	16	50	8 55 41	18 16 81		
8	299	07.9	00.3	280	23.0	20.1	84	35	16 59	27	17 59	38 45	32 77		
9	314	07.6	-23 00.1	294	45.5	11.5	86	30	17 11	38	18 07	8 24 47	18 46 73		
10	329	07.3	-22 59.9	309	08.0	-25 02.7	88	20	32	17 56	23	7 59 53	19 09 67		
11	344	07.0	-22 59.7	323	30.7	-24 53.7	90	10 N	17 50	18 13	18 39	7 37 57	19 28 63		
12	359	06.7	-22 59.5	337	53.4	-24 44.5	92	0	18 07	18 30	18 56	7 17 61	19 47 58		
13	14	06.4	59.3	352	16.2	35.2	93	10 S	25	18 47	19 14	6 57 65	20 05 54		
14	29	06.1	59.0	6	39.2	25.7	95	20	18 43	19 08	19 37	36 68	24 50		
15	44	05.8	58.8	21	02.2	16.0	97	30	19 05	32	20 05	6 11 73	20 47 43		
16	59	05.5	58.6	35	25.3	-24 06.1	99	35	17	19 47	23	5 56 76	21 00 40		
17	74	05.2	-22 58.4	49	48.5	-23 56.1	100	40	19 32	20 05	20 46	5 39 80	21 14 37		
18	89	04.9	-22 58.2	64	11.8	-23 45.9	102	45	19 50	20 27	21 16	5 18 85	21 32 32		
19	104	04.6	58.0	78	35.3	35.6	103	50	20 12	20 56	21 59	4 52 91	21 53 26		
20	119	04.3	57.8	92	58.8	25.0	106	52	22	21 10	22 25	39 94	22 04 22		
21	134	04.0	57.5	107	22.4	14.4	106	54	34	27	23 05	24 98	15 19		
22	149	03.7	57.3	121	46.1	-23 03.5	109	56	20 48	21 49	** **	4 07 103	28 15		
23	164	03.5	57.1	136	10.0	-22 52.5	110	58	21 04	22 16	** **	3 46 110	22 43 10		
24	179	03.2	-22 56.9	150	33.9	-22 41.4	111	60 S	21 23	22 59	** **	3 19 120	23 01 3		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 17 ^h 15 ^m 1		Mag: -4.5 PMG: 13 ^h 23 ^m		Mag: -0.6 PMG: 19 ^h 48 ^m		Mag: -1.9 PMG: 8 ^h 02 ^m		Mag: -0.1 PMG: 2 ^h 08 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	100	30.4	158 33.4	-17 49.3	62 21.5	+16 37.2	239 19.1	-14 47.2	327 57.7	+18 22.0
1	115	32.8	173 36.8	48.8	77 23.4	37.4	254 21.1	47.4	343 00.4	22.1
2	130	35.3	188 40.3	48.3	92 25.3	37.7	269 23.2	47.5	358 03.0	22.1
3	145	37.8	203 43.7	47.9	107 27.1	37.9	284 25.3	47.6	13 05.6	22.2
4	160	40.2	218 47.1	47.4	122 29.0	38.1	299 27.3	47.7	28 08.2	22.2
5	175	42.7	233 50.5	-17 46.9	137 30.9	+16 38.3	314 29.4	-14 47.8	43 10.9	+18 22.3
6	190	45.2	248 53.9	-17 46.5	152 32.7	+16 38.6	329 31.5	-14 47.9	58 13.5	+18 22.3
7	205	47.6	263 57.4	46.0	167 34.6	38.8	344 33.5	48.0	73 16.1	22.4
8	220	50.1	279 00.8	45.6	182 36.5	39.0	359 35.6	48.2	88 18.8	22.4
9	235	52.6	294 04.3	45.1	197 38.3	39.2	14 37.7	48.3	103 21.4	22.5
10	250	55.0	309 07.7	44.6	212 40.2	39.5	29 39.7	48.4	118 24.0	22.5
11	265	57.5	324 11.1	-17 44.2	227 42.0	+16 39.7	44 41.8	-14 48.5	133 26.7	+18 22.6
12	280	59.9	339 14.6	-17 43.7	242 43.9	+16 39.9	59 43.9	-14 48.6	148 29.3	+18 22.6
13	296	02.4	354 18.1	43.3	257 45.8	40.2	74 45.9	48.7	163 31.9	22.7
14	311	04.9	9 21.5	42.8	272 47.6	40.4	89 48.0	48.9	178 34.5	22.7
15	326	07.3	24 25.0	42.3	287 49.5	40.6	104 50.1	49.0	193 37.2	22.8
16	341	09.8	39 28.5	41.9	302 51.3	40.8	119 52.1	49.1	208 39.8	22.8
17	356	12.3	54 31.9	-17 41.4	317 53.2	+16 41.1	134 54.2	-14 49.2	223 42.4	+18 22.9
18	11	14.7	69 35.4	-17 41.0	332 55.0	+16 41.3	149 56.3	-14 49.3	238 45.1	+18 22.9
19	26	17.2	84 38.9	40.5	347 56.9	41.5	164 58.3	49.4	253 47.7	23.0
20	41	19.7	99 42.4	40.1	2 58.7	41.8	180 00.4	49.5	268 50.3	23.0
21	56	22.1	114 45.9	39.6	18 00.6	42.0	195 02.5	49.7	283 53.0	23.1
22	71	24.6	129 49.4	39.2	33 02.4	42.2	210 04.5	49.8	298 55.6	23.1
23	86	27.1	144 52.9	38.7	48 04.3	42.4	225 06.6	49.9	313 58.2	23.2
24	101	29.5	159 56.4	-17 38.3	63 06.1	+16 42.7	240 08.7	-14 50.0	329 00.9	+18 23.2
Dif	—		+35	+5	+19	+2	+21	-1	+26	+1

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	50.6	50.7	50.7	50.6	50.4	50.2	49.9	49.7	49.5	49.5	49.5	49.6
2 - β Cas	<i>Caph</i>	2.3	357	38.8	39.0	39.1	39.0	38.7	38.3	37.9	37.6	37.4	37.4	37.5	37.7
3 - γ Peg	<i>Algenib</i>	2.8	356	37.8	37.9	37.9	37.8	37.7	37.4	37.2	37.0	36.8	36.8	36.8	36.9
4 - α Phe	<i>Ankaa</i>	2.4	353	22.1	22.2	22.3	22.2	22.0	21.8	21.5	21.2	21.0	21.0	21.1	21.2
5 - α Cas	<i>Schedar</i>	2.2	349	48.5	48.7	48.8	48.7	48.5	48.2	47.8	47.5	47.2	47.2	47.2	47.4
6 - β Cet	<i>Diphda</i>	2.0	349	2.5	2.6	2.6	2.6	2.4	2.2	2.0	1.7	1.6	1.5	1.5	1.6
7 - γ Cas	<i>Navi</i>	1.6	345	45.2	45.5	45.6	45.5	45.3	45.0	44.5	44.2	43.9	43.8	43.8	44.0
8 - β And	<i>Mirach</i>	2.1	342	30.0	30.1	30.2	30.2	30.0	29.8	29.5	29.2	29.0	28.9	28.9	29.0
9 - α Eri	<i>Achernar</i>	0.5	335	31.4	31.6	31.8	31.8	31.7	31.4	31.1	30.7	30.4	30.3	30.3	30.5
10 - γ And	<i>Almak</i>	2.3	328	57.0	57.2	57.3	57.3	57.2	56.9	56.7	56.3	56.1	55.9	55.9	55.9
12 - α Ari	<i>Hamal</i>	2.0	328	8.2	8.3	8.4	8.4	8.3	8.1	7.9	7.6	7.4	7.3	7.2	7.2
11 - α UMi	<i>Polaris</i>	2.0	320	38.3	51.5	61.9	67.6	66.0	57.8	45.3	30.7	17.6	8.8	5.5	8.9
13 - θ Eri	<i>Acamar</i>	3.3	315	23.0	23.2	23.4	23.5	23.4	23.3	23.1	22.8	22.5	22.4	22.3	22.3
14 - α Cet	<i>Menkar</i>	2.5	314	21.8	21.9	22.0	22.1	22.0	21.9	21.7	21.4	21.2	21.0	20.9	20.9
15 - β Per	<i>Algol</i>	2.1	312	52.5	52.7	52.8	52.9	52.8	52.7	52.4	52.1	51.8	51.6	51.5	51.4
16 - α Per	<i>Mirfak</i>	1.8	308	49.7	49.9	50.1	50.2	50.1	49.9	49.7	49.3	49.0	48.7	48.5	48.5
17 - η Tau	<i>Alcyone</i>	2.9	303	3.2	3.3	3.4	3.5	3.4	3.3	3.1	2.8	2.6	2.4	2.2	2.2
18 - γ Eri	<i>Zaurak</i>	3.0	300	25.9	26.0	26.1	26.2	26.2	26.1	25.9	25.7	25.5	25.3	25.2	25.1
19 - α Tau	<i>Aldebaran</i>	0.9	290	56.7	56.8	56.9	57.0	57.0	56.9	56.8	56.5	56.3	56.1	55.9	55.8
20 - β Ori	<i>Rigel</i>	0.1	281	18.1	18.2	18.3	18.4	18.5	18.4	18.3	18.1	17.8	17.6	17.5	17.3
21 - α Aur	<i>Capella</i>	0.1	280	43.8	43.9	44.1	44.3	44.3	44.2	44.1	43.8	43.4	43.1	42.8	42.7
22 - γ Ori	<i>Bellatrix</i>	1.6	278	38.8	38.9	39.0	39.1	39.1	39.1	38.9	38.7	38.5	38.3	38.1	37.9
23 - β Tau	<i>Elnath</i>	1.7	278	20.6	20.7	20.8	21.0	21.0	21.0	20.8	20.6	20.3	20.0	19.8	19.6
24 - δ Ori	<i>Mintaka</i>	2.2	276	55.8	55.9	56.0	56.1	56.2	56.1	56.0	55.8	55.6	55.4	55.2	55.0
25 - ϵ Ori	<i>Alnilam</i>	1.7	275	52.8	52.8	52.9	53.0	53.1	53.1	52.9	52.8	52.5	52.3	52.1	52.0
26 - ζ Ori	<i>Alnitak</i>	1.9	274	44.6	44.7	44.8	44.9	44.9	44.9	44.8	44.6	44.4	44.1	44.0	43.8
27 - κ Ori	<i>Saiph</i>	2.1	272	59.8	59.9	60.0	60.1	60.2	60.2	60.1	59.9	59.7	59.4	59.3	59.1
28 - α Ori	<i>Betelgeuse</i>	0.4	271	8.1	8.2	8.3	8.4	8.5	8.4	8.3	8.1	7.9	7.7	7.4	7.3
29 - β Aur	<i>Menkalinan</i>	1.9	270	1.2	1.3	1.4	1.6	1.7	1.7	1.5	1.3	0.9	0.6	0.3	0.1
30 - β CMa	<i>Mirzam</i>	2.0	264	15.9	16.0	16.1	16.2	16.3	16.3	16.3	16.1	15.9	15.6	15.4	15.3
31 - α Car	<i>Canopus</i>	-0.7	263	58.6	58.7	58.9	59.2	59.4	59.5	59.5	59.3	59.0	58.7	58.4	58.2
32 - γ Gem	<i>Alhena</i>	1.9	260	29.7	29.7	29.8	30.0	30.0	30.0	29.9	29.8	29.5	29.3	29.1	28.9
33 - α CMa	<i>Sirius</i>	-1.5	258	39.2	39.2	39.3	39.5	39.6	39.6	39.5	39.4	39.2	38.9	38.7	38.6
34 - ϵ CMa	<i>Adhara</i>	1.5	255	17.3	17.4	17.5	17.7	17.8	17.8	17.8	17.7	17.4	17.2	17.0	16.8
35 - δ CMa	<i>Wezen</i>	1.9	252	50.8	50.8	50.9	51.1	51.2	51.2	51.2	51.1	50.9	50.6	50.4	50.2
36 - η CMa	<i>Aludra</i>	2.5	248	55.3	55.3	55.4	55.6	55.7	55.8	55.8	55.6	55.4	55.2	55.0	54.8
37 - α Gem	<i>Castor</i>	2.0	246	15.9	15.9	15.9	16.1	16.2	16.2	16.2	16.0	15.8	15.5	15.2	15.0
38 - α CMi	<i>Procyon</i>	0.4	245	6.3	6.3	6.3	6.4	6.5	6.6	6.5	6.4	6.2	6.0	5.8	5.5
39 - β Gem	<i>Pollux</i>	1.1	243	35.4	35.3	35.4	35.5	35.6	35.7	35.6	35.5	35.3	35.0	34.8	34.5
40 - ζ Pup	<i>Naos</i>	2.3	239	3.3	3.3	3.4	3.6	3.7	3.8	3.9	3.8	3.6	3.3	3.1	2.8
41 - γ Vel	<i>Regor</i>	1.8	237	34.3	34.3	34.5	34.7	34.9	35.0	35.1	35.0	34.8	34.5	34.2	34.0
42 - ϵ Car	<i>Avior</i>	1.9	234	20.3	20.3	20.5	20.8	21.0	21.3	21.4	21.3	21.1	20.8	20.4	20.1
43 - δ Velorum		2.0	228	47.0	47.0	47.1	47.3	47.6	47.8	47.9	47.8	47.7	47.4	47.0	46.7
44 - ζ Hydrae		3.1	226	4.9	4.8	4.8	4.9	5.0	5.1	5.1	5.0	4.9	4.7	4.4	4.2
45 - λ Vel	<i>Suhail</i>	2.2	222	57.0	56.9	57.0	57.2	57.3	57.5	57.6	57.5	57.4	57.2	56.9	56.6
46 - β Car	<i>Miaplacidus</i>	1.7	221	40.6	40.6	40.8	41.1	41.6	42.0	42.3	42.3	42.2	41.8	41.3	40.8
47 - ι Car	<i>Aspidiske</i>	2.3	220	41.2	41.2	41.3	41.5	41.8	42.1	42.2	42.2	42.1	41.8	41.4	41.1
48 - α Lyn	<i>Elvashak</i>	3.1	219	39.3	39.2	39.2	39.3	39.4	39.5	39.5	39.4	39.3	39.1	38.8	38.5
49 - α Hyd	<i>Alphard</i>	2.0	218	2.3	2.2	2.2	2.3	2.4	2.5	2.5	2.4	2.3	2.2	1.9	1.7
50 - α Leo	<i>Regulus</i>	1.4	207	50.2	50.1	50.1	50.1	50.2	50.3	50.3	50.3	50.2	50.1	49.8	49.6

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Nº	NOMBRE	Mag		Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
			°	'	'	'	'	'	'	'	'	'	'	'	'
1 - α And	<i>Alpheratz</i>	2.1	+29	7.2	7.1	7.0	7.0	7.0	7.0	7.1	7.3	7.4	7.5	7.5	7.6
2 - β Cas	<i>Caph</i>	2.3	+59	10.9	10.8	10.6	10.5	10.5	10.5	10.5	10.7	10.9	11.0	11.2	11.2
3 - γ Peg	<i>Algenib</i>	2.8	+15	12.7	12.6	12.6	12.6	12.6	12.7	12.8	12.9	13.0	13.1	13.1	13.1
4 - α Phe	<i>Ankaa</i>	2.4	-42	17.0	17.0	16.8	16.7	16.5	16.4	16.3	16.3	16.4	16.5	16.6	16.6
5 - α Cas	<i>Schedar</i>	2.2	+56	34.1	34.0	33.9	33.8	33.7	33.7	33.8	33.9	34.1	34.3	34.4	34.5
6 - β Cet	<i>Diphda</i>	2.0	-17	57.7	57.7	57.7	57.6	57.5	57.3	57.2	57.2	57.2	57.2	57.3	57.3
7 - γ Cas	<i>Navi</i>	1.6	+60	44.9	44.8	44.7	44.6	44.5	44.5	44.5	44.7	44.8	45.0	45.1	45.2
8 - β And	<i>Mirach</i>	2.1	+35	39.0	38.9	38.8	38.8	38.7	38.8	38.8	39.0	39.1	39.2	39.3	39.3
9 - α Eri	<i>Achernar</i>	0.5	-57	13.0	12.9	12.8	12.6	12.5	12.3	12.2	12.2	12.2	12.3	12.5	12.6
10 - γ And	<i>Almak</i>	2.3	+42	21.4	21.4	21.3	21.3	21.2	21.2	21.2	21.3	21.4	21.6	21.7	21.7
12 - α Ari	<i>Hamal</i>	2.0	+23	29.3	29.2	29.2	29.2	29.2	29.2	29.3	29.4	29.5	29.5	29.6	29.6
11 - α UMi	<i>Polaris</i>	2.0	+89	17.5	17.6	17.5	17.3	17.2	17.1	17.0	17.1	17.2	17.3	17.5	17.7
13 - θ Eri	<i>Acamar</i>	3.3	-40	17.3	17.3	17.2	17.1	17.0	16.8	16.7	16.6	16.6	16.7	16.8	16.9
14 - α Cet	<i>Menkar</i>	2.5	+4	6.6	6.6	6.5	6.6	6.6	6.7	6.8	6.9	6.9	6.9	6.9	6.9
15 - β Per	<i>Algol</i>	2.1	+40	58.7	58.7	58.7	58.6	58.5	58.5	58.5	58.6	58.7	58.8	58.9	58.9
16 - α Per	<i>Mirfak</i>	1.8	+49	53.0	53.0	53.0	52.9	52.8	52.7	52.7	52.8	52.9	53.0	53.1	53.2
17 - η Tau	<i>Alcyone</i>	2.9	+24	7.4	7.4	7.3	7.3	7.3	7.3	7.3	7.4	7.5	7.5	7.5	7.6
18 - γ Eri	<i>Zaurak</i>	3.0	-13	29.7	29.7	29.7	29.7	29.6	29.5	29.4	29.3	29.2	29.3	29.3	29.4
19 - α Tau	<i>Aldebaran</i>	0.9	+16	31.3	31.3	31.2	31.2	31.2	31.3	31.3	31.4	31.4	31.4	31.4	31.4
20 - β Ori	<i>Rigel</i>	0.1	-8	11.7	11.8	11.8	11.8	11.7	11.6	11.5	11.4	11.4	11.4	11.5	11.6
21 - α Aur	<i>Capella</i>	0.1	+46	0.4	0.4	0.4	0.4	0.3	0.3	0.2	0.2	0.2	0.3	0.3	0.4
22 - γ Ori	<i>Bellatrix</i>	1.6	+6	21.3	21.3	21.3	21.3	21.3	21.4	21.4	21.5	21.5	21.5	21.5	21.4
23 - β Tau	<i>Elnath</i>	1.7	+28	36.8	36.9	36.9	36.8	36.8	36.8	36.8	36.8	36.8	36.8	36.9	36.9
24 - δ Ori	<i>Mintaka</i>	2.2	-0	17.7	17.7	17.7	17.7	17.7	17.6	17.5	17.5	17.4	17.4	17.5	17.6
25 - ϵ Ori	<i>Alnilam</i>	1.7	-1	11.9	11.9	11.9	11.9	11.9	11.8	11.7	11.7	11.6	11.6	11.7	11.8
26 - ζ Ori	<i>Alnitak</i>	1.9	-1	56.4	56.4	56.4	56.4	56.4	56.3	56.2	56.1	56.1	56.1	56.2	56.2
27 - κ Ori	<i>Saiph</i>	2.1	-9	40.0	40.1	40.1	40.1	40.1	40.0	39.9	39.8	39.7	39.8	39.8	39.9
28 - α Ori	<i>Betelgeuse</i>	0.4	+7	24.5	24.5	24.5	24.5	24.5	24.6	24.6	24.7	24.7	24.7	24.7	24.6
29 - β Aur	<i>Menkalinan</i>	1.9	+44	57.0	57.1	57.1	57.1	57.1	57.0	56.9	56.9	56.9	56.9	56.9	57.0
30 - β CMa	<i>Mirzam</i>	2.0	-17	57.5	57.6	57.6	57.6	57.5	57.4	57.3	57.2	57.2	57.2	57.3	57.4
31 - α Car	<i>Canopus</i>	-0.7	-52	41.9	42.0	42.1	42.1	42.0	41.9	41.7	41.5	41.5	41.5	41.6	41.7
32 - γ Gem	<i>Alhena</i>	1.9	+16	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8	23.8
33 - α CMa	<i>Sirius</i>	-1.5	-16	43.3	43.4	43.5	43.5	43.4	43.3	43.2	43.1	43.1	43.1	43.2	43.3
34 - ϵ CMa	<i>Adhara</i>	1.5	-28	58.7	58.8	58.9	58.9	58.8	58.7	58.6	58.5	58.4	58.4	58.5	58.6
35 - δ CMa	<i>Wezen</i>	1.9	-26	24.0	24.1	24.2	24.2	24.2	24.1	23.9	23.8	23.8	23.7	23.8	24.0
36 - η CMa	<i>Aludra</i>	2.5	-29	18.7	18.8	18.9	18.9	18.9	18.8	18.7	18.5	18.5	18.5	18.5	18.7
37 - α Gem	<i>Castor</i>	2.0	+31	52.7	52.7	52.8	52.8	52.8	52.8	52.7	52.7	52.7	52.6	52.6	52.6
38 - α CMi	<i>Procyon</i>	0.4	+5	12.8	12.7	12.7	12.7	12.7	12.8	12.8	12.9	12.9	12.8	12.8	12.7
39 - β Gem	<i>Pollux</i>	1.1	+28	0.9	0.9	1.0	1.0	1.0	1.0	0.9	0.9	0.9	0.8	0.8	0.7
40 - ζ Pup	<i>Naos</i>	2.3	-40	0.9	1.1	1.2	1.2	1.2	1.1	1.0	0.9	0.8	0.7	0.8	0.9
41 - γ Vel	<i>Regor</i>	1.8	-47	21.0	21.1	21.3	21.3	21.3	21.2	21.1	20.9	20.8	20.8	20.8	21.0
42 - ϵ Car	<i>Avior</i>	1.9	-59	31.4	31.6	31.7	31.8	31.8	31.7	31.6	31.4	31.3	31.2	31.3	31.4
43 - δ Velorum		2.0	-54	43.5	43.7	43.8	43.9	43.9	43.8	43.7	43.5	43.4	43.4	43.4	43.5
44 - ζ Hydrae		3.1	+5	55.6	55.6	55.6	55.6	55.6	55.6	55.6	55.7	55.7	55.6	55.5	55.5
45 - λ Vel	<i>Suhail</i>	2.2	-43	27.0	27.2	27.3	27.4	27.4	27.4	27.3	27.1	27.0	26.9	27.0	27.1
46 - β Car	<i>Miaplacidus</i>	1.7	-69	44.0	44.2	44.4	44.5	44.6	44.5	44.4	44.3	44.1	44.0	44.0	44.1
47 - ι Car	<i>Aspidiske</i>	2.3	-59	17.6	17.8	17.9	18.0	18.1	18.0	17.9	17.8	17.6	17.5	17.6	17.7
48 - α Lyn	<i>Elvashak</i>	3.1	+34	22.2	22.3	22.3	22.4	22.4	22.4	22.4	22.3	22.2	22.1	22.0	22.0
49 - α Hyd	<i>Alphard</i>	2.0	-8	40.8	40.9	40.9	40.9	40.9	40.9	40.8	40.8	40.7	40.7	40.8	40.9
50 - α Leo	<i>Regulus</i>	1.4	+11	56.5	56.5	56.5	56.5	56.5	56.6	56.6	56.6	56.6	56.5	56.4	56.3

Nº	NOMBRE	Mag		Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
			°	/	/	/	/	/	/	/	/	/	/	/	/
51 - μ	Velorum	2.7	198	15.1	14.9	14.9	14.9	15.1	15.3	15.4	15.5	15.5	15.3	15.0	14.7
52 - ν	Hydrae	3.1	197	31.8	31.6	31.6	31.6	31.7	31.8	31.8	31.9	31.8	31.7	31.5	31.2
53 - β	UMa Merak	2.4	194	27.4	27.1	27.1	27.1	27.3	27.5	27.6	27.7	27.7	27.5	27.2	26.8
54 - α	UMa Dubhe	1.8	193	58.9	58.6	58.5	58.6	58.8	59.1	59.3	59.4	59.3	59.1	58.8	58.3
55 - β	Leo Denebola	2.1	182	40.2	40.0	39.9	39.9	39.9	40.0	40.0	40.1	40.1	40.0	39.8	39.6
56 - γ	Crv Gienah	2.6	175	59.0	58.8	58.7	58.7	58.7	58.8	58.8	58.9	58.9	58.9	58.7	58.5
57 - α	Cru Acrux	1.4	173	16.9	16.6	16.4	16.3	16.4	16.6	16.9	17.1	17.3	17.2	16.9	16.5
58 - γ	Cru Gacrux	1.6	172	8.4	8.1	7.9	7.9	7.9	8.1	8.3	8.5	8.6	8.5	8.3	7.9
59 - γ	Cen Muhlifain	2.2	169	33.2	32.9	32.7	32.7	32.7	32.8	33.0	33.1	33.2	33.1	33.0	32.6
60 - β	Cru Mimosa	1.3	167	59.9	59.6	59.4	59.3	59.3	59.5	59.7	59.9	60.0	60.0	59.8	59.4
61 - ε	UMa Alioth	1.8	166	26.1	25.7	25.5	25.4	25.5	25.7	25.9	26.1	26.2	26.2	26.0	25.7
62 - α^2	CVn Cor Caroli	2.9	165	56.0	55.7	55.6	55.5	55.5	55.6	55.7	55.8	55.9	55.9	55.8	55.5
63 - ε	Vir Vindemiatrix	2.8	164	23.6	23.4	23.2	23.2	23.2	23.2	23.3	23.4	23.4	23.4	23.3	23.1
64 - ζ	UMa Mizar	2.3	158	58.0	57.6	57.4	57.3	57.3	57.5	57.7	57.9	58.0	58.0	57.9	57.7
65 - α	Vir Spica	1.0	158	38.2	38.0	37.8	37.7	37.7	37.7	37.8	37.9	38.0	37.9	37.8	37.6
66 - η	UMa Alkaid	1.9	153	3.9	3.6	3.3	3.2	3.2	3.3	3.5	3.7	3.8	3.9	3.8	3.6
67 - β	Cen Hadar	0.6	148	57.7	57.3	56.9	56.7	56.7	56.7	56.9	57.2	57.4	57.4	57.3	57.0
68 - θ	Cen Menkent	2.1	148	15.6	15.3	15.1	14.9	14.8	14.9	14.9	15.1	15.2	15.2	15.1	14.9
69 - α	Boo Arcturus	0.0	146	1.8	1.5	1.3	1.2	1.1	1.2	1.2	1.3	1.4	1.5	1.4	1.2
70 - α^1	Cen Rigil Kentaurus	0.0	140	1.4	0.9	0.6	0.3	0.2	0.3	0.4	0.7	0.9	1.0	1.0	0.7
71 - α^2	Lib Zubenelgenubi	2.8	137	12.9	12.6	12.4	12.3	12.2	12.1	12.2	12.3	12.4	12.4	12.4	12.2
72 - β	UMi Kochab	2.1	137	19.6	19.0	18.4	18.1	18.0	18.3	18.8	19.4	19.9	20.3	20.4	20.2
73 - β	Lib Zubeneschamali	2.6	130	41.1	40.8	40.6	40.5	40.3	40.3	40.3	40.4	40.5	40.6	40.6	40.4
74 - α	CrB Alphecca	2.2	126	16.7	16.5	16.2	16.1	15.9	15.9	16.0	16.1	16.2	16.3	16.3	16.2
75 - α	Ser Unukalhai	2.7	123	52.5	52.3	52.1	51.9	51.8	51.7	51.8	51.8	51.9	52.0	52.0	51.9
76 - α	Sco Antares	0.9	112	34.7	34.4	34.2	33.9	33.7	33.6	33.6	33.7	33.8	33.9	34.0	33.9
77 - α	TrA Atria	1.9	107	43.0	42.4	41.9	41.3	40.9	40.7	40.7	41.0	41.3	41.7	41.8	41.7
78 - ε	Scorpii	2.3	107	23.1	22.8	22.6	22.3	22.1	22.0	22.0	22.0	22.2	22.3	22.3	22.3
79 - η	Oph Sabik	2.4	102	20.4	20.2	19.9	19.7	19.5	19.4	19.4	19.4	19.5	19.6	19.7	19.6
80 - α	Her Rasalgethi	3.1	101	17.2	17.0	16.8	16.6	16.4	16.3	16.3	16.3	16.4	16.6	16.6	16.6
81 - λ	Sco Shaula	1.6	96	31.2	31.0	30.7	30.4	30.2	30.0	30.0	30.0	30.1	30.3	30.4	30.3
82 - α	Oph Rasalhague	2.1	96	12.9	12.7	12.4	12.2	12.0	11.9	11.9	11.9	12.0	12.2	12.3	12.2
83 - θ	Sco Sargas	1.9	95	35.3	35.1	34.8	34.5	34.2	34.0	33.9	34.0	34.1	34.3	34.4	34.3
84 - γ	Dra Eltanin	2.2	90	49.7	49.5	49.2	48.9	48.6	48.5	48.5	48.7	48.9	49.1	49.3	49.4
85 - ε	Sgr Kaus Australis	1.9	83	52.9	52.7	52.5	52.2	51.9	51.7	51.6	51.6	51.7	51.9	52.0	52.0
86 - α	Lyr Vega	0.0	80	43.9	43.7	43.5	43.2	43.0	42.8	42.8	42.8	43.0	43.2	43.3	43.4
87 - σ	Sgr Nunki	2.0	76	6.8	6.6	6.4	6.2	5.9	5.7	5.6	5.6	5.6	5.8	5.9	5.9
88 - α	Aql Altair	0.8	62	15.0	14.9	14.7	14.5	14.3	14.1	13.9	13.9	14.0	14.1	14.2	14.2
89 - γ	Cyg Sadr	2.2	54	24.4	24.4	24.2	23.9	23.7	23.4	23.3	23.3	23.3	23.5	23.7	23.8
90 - α	Pav Peacock	1.9	53	30.0	29.8	29.6	29.2	28.8	28.4	28.2	28.1	28.1	28.3	28.6	28.7
91 - α	Cyg Deneb	1.3	49	36.6	36.5	36.4	36.1	35.8	35.5	35.4	35.3	35.4	35.6	35.8	35.9
92 - α	Cep Alderamin	2.4	40	20.4	20.4	20.3	20.0	19.6	19.2	18.9	18.8	19.0	19.2	19.5	19.8
93 - ε	Peg Enif	0.7	33	53.9	53.9	53.8	53.6	53.4	53.1	52.9	52.8	52.8	52.9	53.0	53.1
94 - δ	Cap Deneb Algedi	2.9	33	10.6	10.6	10.5	10.3	10.0	9.8	9.6	9.4	9.4	9.5	9.6	9.7
95 - α	Gru Al Na'ir	1.7	27	52.2	52.1	52.0	51.8	51.5	51.2	50.9	50.7	50.6	50.7	50.9	51.0
96 - β	Gruis	2.1	19	15.8	15.8	15.8	15.6	15.3	15.0	14.7	14.5	14.4	14.4	14.6	14.7
97 - α	PsA Fomalhaut	1.2	15	31.4	31.4	31.3	31.2	31.0	30.7	30.4	30.2	30.1	30.2	30.3	30.4
98 - β	Peg Scheat	2.4	13	60.1	60.2	60.1	60.0	59.8	59.5	59.3	59.1	59.0	59.0	59.1	59.2
99 - α	Peg Markab	2.5	13	45.2	45.2	45.2	45.0	44.8	44.6	44.4	44.2	44.1	44.1	44.2	44.3

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Nº	NOMBRE	Mag		Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
			°	/	/	/	/	/	/	/	/	/	/	/	/
51 - μ	Velorum	2.7	-49	26.6	26.8	26.9	27.1	27.1	27.1	27.1	27.0	26.8	26.7	26.7	26.8
52 - ν	Hydrae	3.1	-16	13.1	13.2	13.3	13.4	13.4	13.4	13.3	13.3	13.2	13.2	13.2	13.3
53 - β	UMa Merak	2.4	+56	21.1	21.2	21.3	21.4	21.5	21.5	21.5	21.4	21.2	21.0	20.9	20.8
54 - α	UMa Dubhe	1.8	+61	43.2	43.3	43.4	43.5	43.6	43.6	43.6	43.5	43.3	43.1	43.0	42.9
55 - β	Leo Denebola	2.1	+14	32.5	32.5	32.5	32.5	32.6	32.6	32.6	32.6	32.6	32.5	32.4	32.3
56 - γ	Crv Gienah	2.6	-17	34.1	34.2	34.3	34.4	34.4	34.4	34.4	34.3	34.3	34.3	34.3	34.4
57 - α	Cru Acrux	1.4	-63	7.3	7.5	7.6	7.8	8.0	8.0	8.0	8.0	7.8	7.7	7.6	7.6
58 - γ	Cru Gacrux	1.6	-57	8.2	8.4	8.5	8.7	8.8	8.9	8.9	8.8	8.7	8.6	8.5	8.5
59 - γ	Cen Muhlifain	2.2	-48	59.0	59.2	59.3	59.5	59.6	59.6	59.6	59.6	59.5	59.3	59.3	59.3
60 - β	Cru Mimosas	1.3	-59	42.7	42.8	43.0	43.2	43.3	43.4	43.4	43.3	43.2	43.1	43.0	43.0
61 - ϵ	UMa Alioth	1.8	+55	55.7	55.7	55.7	55.9	56.0	56.1	56.1	56.0	55.9	55.7	55.5	55.4
62 - α^2	CVn Cor Caroli	2.9	+38	17.2	17.2	17.3	17.4	17.5	17.5	17.6	17.5	17.4	17.3	17.1	17.0
63 - ϵ	Vir Vindemiatrix	2.8	+10	55.8	55.7	55.7	55.7	55.8	55.8	55.9	55.9	55.9	55.8	55.7	55.6
64 - ζ	UMa Mizar	2.3	+54	53.6	53.6	53.7	53.8	53.9	54.0	54.1	54.0	53.9	53.7	53.6	53.4
65 - α	Vir Spica	1.0	-11	11.2	11.3	11.4	11.5	11.5	11.5	11.4	11.4	11.4	11.4	11.4	11.5
66 - η	UMa Alkaid	1.9	+49	17.0	16.9	17.0	17.1	17.2	17.4	17.4	17.4	17.3	17.1	16.9	16.8
67 - β	Cen Hadar	0.6	-60	23.6	23.7	23.8	24.0	24.1	24.2	24.3	24.3	24.2	24.1	23.9	23.9
68 - θ	Cen Menkent	2.1	-36	23.6	23.7	23.8	23.9	23.9	24.0	24.0	24.0	23.9	23.9	23.8	23.8
69 - α	Boo Arcturus	0.0	+19	9.2	9.1	9.1	9.1	9.2	9.3	9.3	9.3	9.3	9.2	9.1	9.0
70 - α^1	Cen Rigil Kentaurus	0.0	-60	51.1	51.2	51.3	51.5	51.6	51.7	51.8	51.8	51.7	51.6	51.5	51.4
71 - α^2	Lib Zubenelgenubi	2.8	-16	3.8	3.9	3.9	4.0	4.0	4.0	4.0	4.0	3.9	3.9	3.9	4.0
72 - β	UMi Kochab	2.1	+74	7.7	7.7	7.7	7.9	8.0	8.1	8.2	8.2	8.1	8.0	7.8	7.6
73 - β	Lib Zubeneshamali	2.6	-9	24.2	24.2	24.3	24.3	24.3	24.3	24.3	24.2	24.2	24.2	24.3	24.3
74 - α	CrB Alphecca	2.2	+26	41.6	41.5	41.5	41.6	41.7	41.8	41.9	41.9	41.9	41.8	41.7	41.5
75 - α	Ser Unukalhai	2.7	+6	24.4	24.3	24.3	24.3	24.4	24.4	24.5	24.5	24.5	24.5	24.4	24.3
76 - α	Sco Antares	0.9	-26	26.6	26.7	26.7	26.7	26.8	26.8	26.8	26.8	26.8	26.8	26.8	26.7
77 - α	TrA Atria	1.9	-69	2.1	2.1	2.1	2.2	2.3	2.4	2.5	2.6	2.6	2.6	2.5	2.3
78 - ϵ	Scorpii	2.3	-34	18.2	18.2	18.2	18.2	18.3	18.3	18.4	18.4	18.4	18.4	18.3	18.3
79 - η	Oph Sabik	2.4	-15	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0
80 - α	Her Rasalgethi	3.1	+14	22.9	22.8	22.7	22.8	22.8	22.9	23.0	23.1	23.1	23.1	23.0	22.9
81 - λ	Sco Shaula	1.6	-37	6.5	6.5	6.5	6.5	6.5	6.6	6.6	6.7	6.7	6.7	6.6	6.6
82 - α	Oph Rasalhague	2.1	+12	33.2	33.1	33.1	33.1	33.1	33.2	33.3	33.4	33.4	33.4	33.3	33.2
83 - θ	Sco Sargas	1.9	-43	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.3	0.3	0.3	0.3	0.2
84 - γ	Dra Eltanin	2.2	+51	29.0	28.9	28.8	28.9	29.0	29.1	29.3	29.4	29.5	29.5	29.4	29.2
85 - ϵ	Sgr Kaus Australis	1.9	-34	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.1	23.1	23.1	23.1	23.0
86 - α	Lyr Vega	0.0	+38	47.1	46.9	46.9	46.9	47.0	47.1	47.3	47.4	47.5	47.5	47.4	47.3
87 - σ	Sgr Nunki	2.0	-26	17.6	17.6	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5
88 - α	Aql Altair	0.8	+8	52.7	52.7	52.6	52.6	52.7	52.8	52.9	53.0	53.0	53.1	53.0	53.0
89 - γ	Cyg Sadr	2.2	+40	16.3	16.1	16.0	16.0	16.0	16.2	16.3	16.5	16.6	16.7	16.7	16.6
90 - α	Pav Peacock	1.9	-56	43.3	43.2	43.1	43.0	43.0	43.0	43.0	43.1	43.2	43.3	43.3	43.2
91 - α	Cyg Deneb	1.3	+45	17.8	17.7	17.6	17.5	17.6	17.7	17.9	18.0	18.2	18.2	18.2	18.2
92 - α	Cep Alderamin	2.4	+62	36.4	36.2	36.1	36.0	36.1	36.2	36.3	36.5	36.7	36.8	36.8	36.8
93 - ϵ	Peg Enif	0.7	+9	53.8	53.7	53.7	53.7	53.7	53.8	53.9	54.1	54.1	54.2	54.2	54.1
94 - δ	Cap Deneb Algedi	2.9	-16	6.5	6.5	6.4	6.3	6.3	6.2	6.1	6.1	6.1	6.1	6.1	6.2
95 - α	Gru Al Na'ir	1.7	-46	56.5	56.4	56.3	56.1	56.0	55.9	55.9	56.0	56.1	56.2	56.2	56.2
96 - β	Gruis	2.1	-46	51.8	51.7	51.6	51.4	51.3	51.2	51.2	51.2	51.3	51.4	51.5	51.5
97 - α	PsA Fomalhaut	1.2	-29	36.0	35.9	35.9	35.7	35.6	35.5	35.5	35.4	35.5	35.6	35.6	35.6
98 - β	Peg Scheat	2.4	+28	6.6	6.5	6.4	6.4	6.4	6.5	6.6	6.8	6.9	7.0	7.0	7.0
99 - α	Peg Markab	2.5	+15	13.9	13.8	13.8	13.8	13.8	13.9	14.0	14.1	14.2	14.3	14.3	14.3

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

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

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

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

DETERMINACIÓN DE LA LATITUD
POR LA OBSERVACIÓN DE UNA ALTURA DE LA POLAR, 2005

TABLA I

h.L.Υ	Corr.	h.L.Υ	Corr.	h.L.Υ	Corr.	h.L.Υ	Corr.	h.L.Υ	Corr.	h.L.Υ	Corr.	h.L.Υ	Corr.
° /	'	° /	'	° /	'	° /	'	° /	'	° /	'	° /	'
0 00	-33.0	26 00	-41.5	52 00	-41.6	78 00	-33.3	104 00	-18.3	130 00	+0.5	156 00	+19.1
0 30	-33.2	26 30	-41.6	52 30	-41.5	78 30	-33.1	104 30	-17.9	130 30	+0.8	156 30	+19.4
1 00	-33.4	27 00	-41.6	53 00	-41.4	79 00	-32.8	105 00	-17.6	131 00	+1.2	157 00	+19.8
1 30	-33.7	27 30	-41.7	53 30	-41.3	79 30	-32.6	105 30	-17.3	131 30	+1.6	157 30	+20.1
2 00	-33.9	28 00	-41.8	54 00	-41.3	80 00	-32.4	106 00	-16.9	132 00	+1.9	158 00	+20.4
2 30	-34.1	28 30	-41.9	54 30	-41.2	80 30	-32.1	106 30	-16.6	132 30	+2.3	158 30	+20.7
3 00	-34.3	29 00	-41.9	55 00	-41.1	81 00	-31.9	107 00	-16.2	133 00	+2.7	159 00	+21.1
3 30	-34.5	29 30	-42.0	55 30	-41.0	81 30	-31.6	107 30	-15.9	133 30	+3.1	159 30	+21.4
4 00	-34.8	30 00	-42.1	56 00	-40.9	82 00	-31.4	108 00	-15.5	134 00	+3.4	160 00	+21.7
4 30	-35.0	30 30	-42.1	56 30	-40.7	82 30	-31.1	108 30	-15.2	134 30	+3.8	160 30	+22.0
5 00	-35.2	31 00	-42.2	57 00	-40.6	83 00	-30.9	109 00	-14.8	135 00	+4.2	161 00	+22.4
5 30	-35.4	31 30	-42.2	57 30	-40.5	83 30	-30.6	109 30	-14.5	135 30	+4.5	161 30	+22.7
6 00	-35.6	32 00	-42.3	58 00	-40.4	84 00	-30.3	110 00	-14.1	136 00	+4.9	162 00	+23.0
6 30	-35.8	32 30	-42.3	58 30	-40.3	84 30	-30.1	110 30	-13.8	136 30	+5.3	162 30	+23.3
7 00	-36.0	33 00	-42.4	59 00	-40.2	85 00	-29.8	111 00	-13.4	137 00	+5.7	163 00	+23.6
7 30	-36.2	33 30	-42.4	59 30	-40.0	85 30	-29.6	111 30	-13.1	137 30	+6.0	163 30	+23.9
8 00	-36.4	34 00	-42.4	60 00	-39.9	86 00	-29.3	112 00	-12.7	138 00	+6.4	164 00	+24.2
8 30	-36.6	34 30	-42.5	60 30	-39.8	86 30	-29.0	112 30	-12.4	138 30	+6.8	164 30	+24.5
9 00	-36.8	35 00	-42.5	61 00	-39.6	87 00	-28.7	113 00	-12.0	139 00	+7.1	165 00	+24.8
9 30	-37.0	35 30	-42.5	61 30	-39.5	87 30	-28.5	113 30	-11.7	139 30	+7.5	165 30	+25.1
10 00	-37.2	36 00	-42.6	62 00	-39.4	88 00	-28.2	114 00	-11.3	140 00	+7.9	166 00	+25.4
10 30	-37.3	36 30	-42.6	62 30	-39.2	88 30	-27.9	114 30	-11.0	140 30	+8.2	166 30	+25.7
11 00	-37.5	37 00	-42.6	63 00	-39.1	89 00	-27.6	115 00	-10.6	141 00	+8.6	167 00	+26.0
11 30	-37.7	37 30	-42.6	63 30	-38.9	89 30	-27.3	115 30	-10.2	141 30	+9.0	167 30	+26.3
12 00	-37.9	38 00	-42.6	64 00	-38.8	90 00	-27.1	116 00	-9.9	142 00	+9.3	168 00	+26.6
12 30	-38.0	38 30	-42.6	64 30	-38.6	90 30	-26.8	116 30	-9.5	142 30	+9.7	168 30	+26.9
13 00	-38.2	39 00	-42.6	65 00	-38.4	91 00	-26.5	117 00	-9.1	143 00	+10.0	169 00	+27.2
13 30	-38.4	39 30	-42.6	65 30	-38.3	91 30	-26.2	117 30	-8.8	143 30	+10.4	169 30	+27.5
14 00	-38.5	40 00	-42.6	66 00	-38.1	92 00	-25.9	118 00	-8.4	144 00	+10.8	170 00	+27.8
14 30	-38.7	40 30	-42.6	66 30	-37.9	92 30	-25.6	118 30	-8.0	144 30	+11.1	170 30	+28.0
15 00	-38.8	41 00	-42.6	67 00	-37.8	93 00	-25.3	119 00	-7.7	145 00	+11.5	171 00	+28.3
15 30	-39.0	41 30	-42.6	67 30	-37.6	93 30	-25.0	119 30	-7.3	145 30	+11.8	171 30	+28.6
16 00	-39.1	42 00	-42.6	68 00	-37.4	94 00	-24.7	120 00	-7.0	146 00	+12.2	172 00	+28.9
16 30	-39.3	42 30	-42.6	68 30	-37.2	94 30	-24.4	120 30	-6.6	146 30	+12.5	172 30	+29.1
17 00	-39.4	43 00	-42.6	69 00	-37.1	95 00	-24.1	121 00	-6.2	147 00	+12.9	173 00	+29.4
17 30	-39.6	43 30	-42.5	69 30	-36.9	95 30	-23.8	121 30	-5.8	147 30	+13.3	173 30	+29.7
18 00	-39.7	44 00	-42.5	70 00	-36.7	96 00	-23.5	122 00	-5.5	148 00	+13.6	174 00	+29.9
18 30	-39.8	44 30	-42.5	70 30	-36.5	96 30	-23.1	122 30	-5.1	148 30	+14.0	174 30	+30.2
19 00	-40.0	45 00	-42.4	71 00	-36.3	97 00	-22.8	123 00	-4.7	149 00	+14.3	175 00	+30.5
19 30	-40.1	45 30	-42.4	71 30	-36.1	97 30	-22.5	123 30	-4.4	149 30	+14.7	175 30	+30.7
20 00	-40.2	46 00	-42.4	72 00	-35.9	98 00	-22.2	124 00	-4.0	150 00	+15.0	176 00	+31.0
20 30	-40.3	46 30	-42.3	72 30	-35.7	98 30	-21.9	124 30	-3.6	150 30	+15.4	176 30	+31.2
21 00	-40.5	47 00	-42.3	73 00	-35.5	99 00	-21.6	125 00	-3.3	151 00	+15.7	177 00	+31.5
21 30	-40.6	47 30	-42.2	73 30	-35.3	99 30	-21.2	125 30	-2.9	151 30	+16.1	177 30	+31.7
22 00	-40.7	48 00	-42.2	74 00	-35.1	100 00	-20.9	126 00	-2.5	152 00	+16.4	178 00	+32.0
22 30	-40.8	48 30	-42.1	74 30	-34.9	100 30	-20.6	126 30	-2.1	152 30	+16.7	178 30	+32.2
23 00	-40.9	49 00	-42.0	75 00	-34.7	101 00	-20.3	127 00	-1.8	153 00	+17.1	179 00	+32.5
23 30	-41.0	49 30	-42.0	75 30	-34.4	101 30	-19.9	127 30	-1.4	153 30	+17.4	179 30	+32.7
24 00	-41.1	50 00	-41.9	76 00	-34.2	102 00	-19.6	128 00	-1.0	154 00	+17.8	180 00	+33.0
24 30	-41.2	50 30	-41.8	76 30	-34.0	102 30	-19.3	128 30	-0.7	154 30	+18.1	180 30	+33.2
25 00	-41.3	51 00	-41.8	77 00	-33.8	103 00	-18.9	129 00	-0.3	155 00	+18.4	181 00	+33.4
25 30	-41.4	51 30	-41.7	77 30	-33.5	103 30	-18.6	129 30	+0.1	155 30	+18.8	181 30	+33.7
26 00	-41.5	52 00	-41.6	78 00	-33.3	104 00	-18.3	130 00	+0.5	156 00	+19.1	182 00	+33.9

DETERMINACIÓN DE LA LATITUD
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TABLA I

h.L.Υ	Corr.	h.L.Υ	Corr.	h.L.Υ	Corr.	h.L.Υ	Corr.	h.L.Υ	Corr.	h.L.Υ	Corr.	h.L.Υ	Corr.
° /	'	° /	'	° /	'	° /	'	° /	'	° /	'	° /	'
182 00	+33.9	208 00	+41.8	234 00	+41.3	260 00	+32.4	286 00	+16.9	312 00	-1.9	338 00	-20.4
182 30	+34.1	208 30	+41.9	234 30	+41.2	260 30	+32.1	286 30	+16.6	312 30	-2.3	338 30	-20.7
183 00	+34.3	209 00	+41.9	235 00	+41.1	261 00	+31.9	287 00	+16.2	313 00	-2.7	339 00	-21.1
183 30	+34.5	209 30	+42.0	235 30	+41.0	261 30	+31.6	287 30	+15.9	313 30	-3.1	339 30	-21.4
184 00	+34.8	210 00	+42.1	236 00	+40.9	262 00	+31.4	288 00	+15.5	314 00	-3.4	340 00	-21.7
184 30	+35.0	210 30	+42.1	236 30	+40.7	262 30	+31.1	288 30	+15.2	314 30	-3.8	340 30	-22.0
185 00	+35.2	211 00	+42.2	237 00	+40.6	263 00	+30.9	289 00	+14.8	315 00	-4.2	341 00	-22.4
185 30	+35.4	211 30	+42.2	237 30	+40.5	263 30	+30.6	289 30	+14.5	315 30	-4.5	341 30	-22.7
186 00	+35.6	212 00	+42.3	238 00	+40.4	264 00	+30.3	290 00	+14.1	316 00	-4.9	342 00	-23.0
186 30	+35.8	212 30	+42.3	238 30	+40.3	264 30	+30.1	290 30	+13.8	316 30	-5.3	342 30	-23.3
187 00	+36.0	213 00	+42.4	239 00	+40.2	265 00	+29.8	291 00	+13.4	317 00	-5.7	343 00	-23.6
187 30	+36.2	213 30	+42.4	239 30	+40.0	265 30	+29.6	291 30	+13.1	317 30	-6.0	343 30	-23.9
188 00	+36.4	214 00	+42.4	240 00	+39.9	266 00	+29.3	292 00	+12.7	318 00	-6.4	344 00	-24.2
188 30	+36.6	214 30	+42.5	240 30	+39.8	266 30	+29.0	292 30	+12.4	318 30	-6.8	344 30	-24.5
189 00	+36.8	215 00	+42.5	241 00	+39.6	267 00	+28.7	293 00	+12.0	319 00	-7.1	345 00	-24.8
189 30	+37.0	215 30	+42.5	241 30	+39.5	267 30	+28.5	293 30	+11.7	319 30	-7.5	345 30	-25.1
190 00	+37.2	216 00	+42.6	242 00	+39.4	268 00	+28.2	294 00	+11.3	320 00	-7.9	346 00	-25.4
190 30	+37.3	216 30	+42.6	242 30	+39.2	268 30	+27.9	294 30	+11.0	320 30	-8.2	346 30	-25.7
191 00	+37.5	217 00	+42.6	243 00	+39.1	269 00	+27.6	295 00	+10.6	321 00	-8.6	347 00	-26.0
191 30	+37.7	217 30	+42.6	243 30	+38.9	269 30	+27.3	295 30	+10.2	321 30	-9.0	347 30	-26.3
192 00	+37.9	218 00	+42.6	244 00	+38.8	270 00	+27.1	296 00	+9.9	322 00	-9.3	348 00	-26.6
192 30	+38.0	218 30	+42.6	244 30	+38.6	270 30	+26.8	296 30	+9.5	322 30	-9.7	348 30	-26.9
193 00	+38.2	219 00	+42.6	245 00	+38.4	271 00	+26.5	297 00	+9.1	323 00	-10.0	349 00	-27.2
193 30	+38.4	219 30	+42.6	245 30	+38.3	271 30	+26.2	297 30	+8.8	323 30	-10.4	349 30	-27.5
194 00	+38.5	220 00	+42.6	246 00	+38.1	272 00	+25.9	298 00	+8.4	324 00	-10.8	350 00	-27.8
194 30	+38.7	220 30	+42.6	246 30	+37.9	272 30	+25.6	298 30	+8.0	324 30	-11.1	350 30	-28.0
195 00	+38.8	221 00	+42.6	247 00	+37.8	273 00	+25.3	299 00	+7.7	325 00	-11.5	351 00	-28.3
195 30	+39.0	221 30	+42.6	247 30	+37.6	273 30	+25.0	299 30	+7.3	325 30	-11.8	351 30	-28.6
196 00	+39.1	222 00	+42.6	248 00	+37.4	274 00	+24.7	300 00	+7.0	326 00	-12.2	352 00	-28.9
196 30	+39.3	222 30	+42.6	248 30	+37.2	274 30	+24.4	300 30	+6.6	326 30	-12.5	352 30	-29.1
197 00	+39.4	223 00	+42.6	249 00	+37.1	275 00	+24.1	301 00	+6.2	327 00	-12.9	353 00	-29.4
197 30	+39.6	223 30	+42.5	249 30	+36.9	275 30	+23.8	301 30	+5.8	327 30	-13.3	353 30	-29.7
198 00	+39.7	224 00	+42.5	250 00	+36.7	276 00	+23.5	302 00	+5.5	328 00	-13.6	354 00	-29.9
198 30	+39.8	224 30	+42.5	250 30	+36.5	276 30	+23.1	302 30	+5.1	328 30	-14.0	354 30	-30.2
199 00	+40.0	225 00	+42.4	251 00	+36.3	277 00	+22.8	303 00	+4.7	329 00	-14.3	355 00	-30.5
199 30	+40.1	225 30	+42.4	251 30	+36.1	277 30	+22.5	303 30	+4.4	329 30	-14.7	355 30	-30.7
200 00	+40.2	226 00	+42.4	252 00	+35.9	278 00	+22.2	304 00	+4.0	330 00	-15.0	356 00	-31.0
200 30	+40.3	226 30	+42.3	252 30	+35.7	278 30	+21.9	304 30	+3.6	330 30	-15.4	356 30	-31.2
201 00	+40.5	227 00	+42.3	253 00	+35.5	279 00	+21.6	305 00	+3.3	331 00	-15.7	357 00	-31.5
201 30	+40.6	227 30	+42.2	253 30	+35.3	279 30	+21.2	305 30	+2.9	331 30	-16.1	357 30	-31.7
202 00	+40.7	228 00	+42.2	254 00	+35.1	280 00	+20.9	306 00	+2.5	332 00	-16.4	358 00	-32.0
202 30	+40.8	228 30	+42.1	254 30	+34.9	280 30	+20.6	306 30	+2.1	332 30	-16.7	358 30	-32.2
203 00	+40.9	229 00	+42.0	255 00	+34.7	281 00	+20.3	307 00	+1.8	333 00	-17.1	359 00	-32.5
203 30	+41.0	229 30	+42.0	255 30	+34.4	281 30	+19.9	307 30	+1.4	333 30	-17.4	359 30	-32.7
204 00	+41.1	230 00	+41.9	256 00	+34.2	282 00	+19.6	308 00	+1.0	334 00	-17.8	360 00	-33.0
204 30	+41.2	230 30	+41.8	256 30	+34.0	282 30	+19.3	308 30	+0.7	334 30	-18.1		
205 00	+41.3	231 00	+41.8	257 00	+33.8	283 00	+18.9	309 00	+0.3	335 00	-18.4		
205 30	+41.4	231 30	+41.7	257 30	+33.5	283 30	+18.6	309 30	-0.1	335 30	-18.8		
206 00	+41.5	232 00	+41.6	258 00	+33.3	284 00	+18.3	310 00	-0.5	336 00	-19.1		
206 30	+41.6	232 30	+41.5	258 30	+33.1	284 30	+17.9	310 30	-0.8	336 30	-19.4		
207 00	+41.6	233 00	+41.4	259 00	+32.8	285 00	+17.6	311 00	-1.2	337 00	-19.8		
207 30	+41.7	233 30	+41.3	259 30	+32.6	285 30	+17.3	311 30	-1.6	337 30	-20.1		
208 00	+41.8	234 00	+41.3	260 00	+32.4	286 00	+16.9	312 00	-1.9	338 00	-20.4		

DETERMINACIÓN DE LA LATITUD
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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	0.1	0.1
80	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2
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	0.3	0.3	0.4	0.4	0.6
140	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.3	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	0.1	0.1
260	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2
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	0.3	0.3	0.4	0.4	0.6
320	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.3	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	+0.1	+0.1	-0.1	-0.2	-0.3	-0.4	-0.3	-0.2	0.0	+0.2	+0.4	+0.5
40	+0.1	+0.2	+0.2	+0.1	-0.1	-0.2	-0.3	-0.3	-0.2	-0.1	+0.1	+0.3	+0.4
60	+0.1	+0.2	+0.2	+0.2	0.0	-0.1	-0.2	-0.3	-0.3	-0.2	-0.1	+0.1	+0.3
80	+0.1	+0.2	+0.3	+0.3	+0.2	0.0	-0.1	-0.2	-0.3	-0.3	-0.2	0.0	+0.1
100	0.0	+0.2	+0.3	+0.3	+0.3	+0.2	0.0	-0.2	-0.3	-0.3	-0.3	-0.2	0.0
120	0.0	+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	-0.1	-0.1	+0.1	+0.2	+0.3	+0.4	+0.3	+0.2	0.0	-0.2	-0.4	-0.5
220	-0.1	-0.2	-0.2	-0.1	+0.1	+0.2	+0.3	+0.3	+0.2	+0.1	-0.1	-0.3	-0.4
240	-0.1	-0.2	-0.2	-0.2	0.0	+0.1	+0.2	+0.3	+0.3	+0.2	+0.1	-0.1	-0.3
260	-0.1	-0.2	-0.3	-0.3	-0.2	0.0	+0.1	+0.2	+0.3	+0.3	+0.2	0.0	-0.1
280	0.0	-0.2	-0.3	-0.3	-0.3	-0.2	0.0	+0.2	+0.3	+0.3	+0.3	+0.2	0.0
300	0.0	-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	+0.5	+0.6	+0.7	+0.8	10
20	+0.2	+0.2	+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	+0.1	+0.2	+0.2	+0.2	+0.2	+0.2	+0.3	30
40	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	40
50	-0.1	-0.1	-0.1	-0.1	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.3	-0.3	50
60	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.4	-0.4	-0.4	-0.5	-0.6	60
70	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.5	-0.5	-0.6	-0.6	-0.7	-0.9	70
80	-0.5	-0.5	-0.5	-0.5	-0.5	-0.6	-0.6	-0.7	-0.7	-0.8	-0.9	-1.1	80
90	-0.6	-0.6	-0.6	-0.6	-0.6	-0.7	-0.7	-0.8	-0.9	-1.0	-1.1	-1.3	90
100	-0.6	-0.6	-0.7	-0.7	-0.7	-0.8	-0.8	-0.9	-1.0	-1.1	-1.3	-1.5	100
110	-0.7	-0.7	-0.7	-0.7	-0.8	-0.8	-0.9	-1.0	-1.0	-1.2	-1.4	-1.6	110
120	-0.7	-0.7	-0.7	-0.8	-0.8	-0.9	-0.9	-1.0	-1.1	-1.2	-1.4	-1.7	120
130	-0.7	-0.7	-0.8	-0.8	-0.8	-0.9	-0.9	-1.0	-1.1	-1.2	-1.4	-1.7	130
140	-0.7	-0.7	-0.7	-0.8	-0.8	-0.9	-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	-1.2	-1.3	-1.6	150
160	-0.6	-0.6	-0.6	-0.7	-0.7	-0.7	-0.8	-0.9	-0.9	-1.1	-1.2	-1.4	160
170	-0.5	-0.6	-0.6	-0.6	-0.6	-0.7	-0.7	-0.8	-0.8	-0.9	-1.1	-1.3	170
180	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.6	-0.6	-0.7	-0.8	-0.9	-1.0	180
190	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.5	-0.5	-0.5	-0.6	-0.7	-0.8	190
200	-0.2	-0.2	-0.2	-0.3	-0.3	-0.3	-0.3	-0.3	-0.4	-0.4	-0.5	-0.5	200
210	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.2	-0.2	-0.2	-0.2	-0.3	210
220	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	220
230	+0.1	+0.1	+0.1	+0.1	+0.2	+0.2	+0.2	+0.2	+0.2	+0.2	+0.3	+0.3	230
240	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.4	+0.4	+0.5	+0.6	240
250	+0.4	+0.4	+0.4	+0.4	+0.4	+0.4	+0.5	+0.5	+0.6	+0.6	+0.7	+0.8	250
260	+0.5	+0.5	+0.5	+0.5	+0.5	+0.6	+0.6	+0.6	+0.7	+0.8	+0.9	+1.1	260
270	+0.6	+0.6	+0.6	+0.6	+0.6	+0.7	+0.7	+0.8	+0.8	+0.9	+1.1	+1.3	270
280	+0.6	+0.6	+0.7	+0.7	+0.7	+0.8	+0.8	+0.9	+1.0	+1.1	+1.2	+1.4	280
290	+0.7	+0.7	+0.7	+0.7	+0.8	+0.8	+0.9	+0.9	+1.0	+1.2	+1.3	+1.6	290
300	+0.7	+0.7	+0.7	+0.8	+0.8	+0.9	+0.9	+1.0	+1.1	+1.2	+1.4	+1.7	300
310	+0.7	+0.7	+0.8	+0.8	+0.8	+0.9	+0.9	+1.0	+1.1	+1.2	+1.4	+1.7	310
320	+0.7	+0.7	+0.7	+0.8	+0.8	+0.9	+0.9	+1.0	+1.1	+1.2	+1.4	+1.7	320
330	+0.7	+0.7	+0.7	+0.7	+0.8	+0.8	+0.9	+0.9	+1.0	+1.2	+1.3	+1.6	330
340	+0.6	+0.6	+0.7	+0.7	+0.7	+0.7	+0.8	+0.9	+1.0	+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	+1.0	+1.1	+1.3	350
360	+0.5	+0.5	+0.5	+0.5	+0.5	+0.6	+0.6	+0.6	+0.7	+0.8	+0.9	+1.1	360

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

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

**CORRECCIONES PARA OBTENER LA ALTURA VERDADERA
DEL SOL (LIMBO INFERIOR), PLANETA O ESTRELLA, 2005**

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TABLA A				TABLA B = SOL (LIMBO INFERIOR)											
Depresión del horizonte				Semidiámetro, refracción y paralaje										Correc. adicional (2005)	
Elevación del observador	Corrección	Elevación del observador	Corrección	Altura apte. ⊙	Corrección	Altura apte. ⊙	Corrección	Altura apte. ⊙	Corrección	Altura apte. ⊙	Corrección	Altura apte. ⊙	Corrección		
1.6	-2.3	12.7	-6.4	6 15	+8.2	8 45	+10.2	13 23	+12.2	25 59	+14.2			Ene 1	+0'3
1.7	-2.4	13.1	-6.5	6 21	+8.3	8 54	+10.3	13 44	+12.3	27 12	+14.3			Ene 22	+0'2
1.9	-2.5	13.6	-6.6	6 27	+8.4	9 05	+10.4	14 06	+12.4	28 32	+14.4			Feb 26	+0'1
2.0	-2.6	14.0	-6.7	6 33	+8.5	9 15	+10.5	14 29	+12.5	29 59	+14.5			Mar 22	0'0
2.2	-2.7	14.4	-6.8	6 40	+8.6	9 26	+10.6	14 53	+12.6	31 34	+14.6			Abr 13	-0'1
2.3	-2.8	14.8	-6.9	6 46	+8.7	9 37	+10.7	15 18	+12.7	33 19	+14.7			May 6	-0'2
2.5	-2.9	15.3	-7.0	6 53	+8.8	9 47	+10.8	15 45	+12.8	35 16	+14.8			Jun 11	-0'3
2.7	-3.0	15.7	-7.1	7 00	+8.9	10 00	+10.9	16 13	+12.9	37 25	+14.9			Jul 27	-0'2
2.9	-3.1	16.2	-7.2	7 06	+9.0	10 12	+11.0	16 43	+13.0	39 49	+15.0			Sep 1	-0'1
3.1	-3.2	16.6	-7.3	7 14	+9.1	10 25	+11.1	17 14	+13.1	42 30	+15.1			Sep 25	0'0
3.3	-3.3	17.1	-7.4	7 21	+9.2	10 38	+11.2	17 47	+13.2	44 53	+15.2			Oct 17	+0'1
3.5	-3.4	17.6	-7.5	7 28	+9.3	10 52	+11.3	18 23	+13.3	47 16	+15.3			Nov 9	+0'2
3.7	-3.5	18.0	-7.6	7 36	+9.4	11 06	+11.4	19 01	+13.4	49 40	+15.4			Dic 15	+0'3
3.9	-3.6	18.5	-7.7	7 44	+9.5	11 21	+11.5	19 41	+13.5	52 01	+15.5			Dic 31	
4.2	-3.7	19.0	-7.8	7 52	+9.6	11 36	+11.6	20 24	+13.6	54 26	+15.6				
4.4	-3.8	19.5	-7.9	8 00	+9.7	11 52	+11.7	21 10	+13.7	56 51	+15.7				
4.7	-3.9	20.0	-8.0	8 08	+9.8	12 09	+11.8	21 59	+13.8	59 16	+15.8				
4.9	-4.0	20.5	-8.1	8 17	+9.9	12 26	+11.9	22 53	+13.9	61 41	+15.9				
5.2	-4.1	21.0	-8.2	8 26	+10.0	12 44	+12.0	23 50	+14.0	64 06	+16.0				
5.4	-4.2	21.5	-8.3	8 35	+10.1	13 03	+12.1	24 52	+14.1	66 31	+16.1				
5.7	-4.3	22.1	-8.4	8 45	+10.2	13 23	+12.2	25 59	+14.2						
6.0	-4.4	22.6	-8.5												
6.2	-4.5	23.1	-8.6												
6.5	-4.6	23.7	-8.7												
6.8	-4.7	24.2	-8.8												
7.1	-4.8	24.8	-8.9												
7.4	-4.9	25.4	-9.0												
7.7	-5.0	25.9	-9.1												
8.0	-5.1	26.5	-9.2												
8.4	-5.2	27.1	-9.3												
8.7	-5.3	27.7	-9.4												
9.0	-5.4	28.3	-9.5												
9.4	-5.5	28.9	-9.6												
9.7	-5.6	29.5	-9.7												
10.1	-5.7	30.1	-9.8												
10.4	-5.8	30.7	-9.9												
10.8	-5.9	31.3	-10.0												
11.2	-6.0	32.0	-10.1												
11.6	-6.1	32.6	-10.2												
11.9	-6.2	33.3	-10.3												
12.3	-6.3	33.9	-10.4												
12.7		34.6													

TABLA C = PLANETAS Y ESTRELLAS											
Refracción						Paralaje (2005)					
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	+0'1	0'0	0'0		
6 40	-7.6	15 00	-3.6	Ene	26	+0'1	+0'1	+0'1	0'0		
6 50	-7.5	16 00	-3.3	Jul	1	+0'1	+0'1	+0'1	+0'1		
7 00	-7.3	17 00	-3.1	Jul	15	+0'1	+0'2	+0'1	+0'1		
7 15	-7.1	18 00	-3.0	Ago	26	+0'1	+0'2	+0'2	+0'1		
7 30	-6.9	19 00	-2.8	Sep	24	+0'1	+0'3	+0'2	+0'1		
7 45	-6.7	20 00	-2.6	Oct	6	+0'2	+0'3	+0'2	+0'1		
8 00	-6.5	21 00	-2.5	Nov	21	+0'3	+0'3	+0'2	+0'1		
8 15	-6.3	22 00	-2.4	Nov	30	+0'3	+0'2	+0'2	+0'1		
8 30	-6.2	24 00	-2.2	Dic	13	+0'4	+0'2	+0'2	+0'1		
8 45	-6.0	26 00	-2.0	Dic	21	+0'4	+0'2	+0'1	+0'1		
9 00	-5.9	28 00	-1.8	Dic	29	+0'5	+0'2	+0'1	+0'1		
9 20	-5.7	32 00	-1.6	Dic	31						
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.