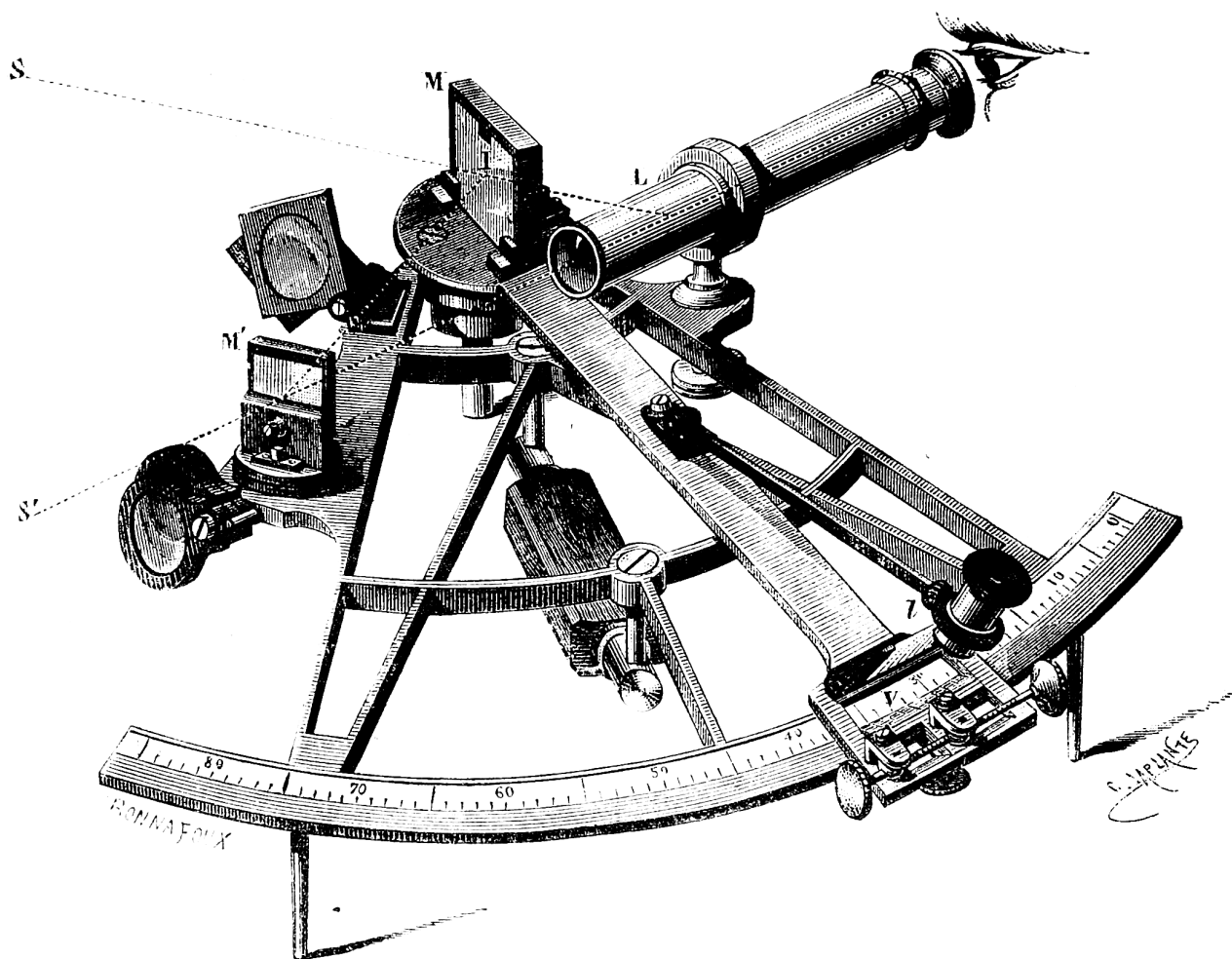




ALMANAQUE NÁUTICO PERSEIS 2018

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

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Introducción

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

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

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

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

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

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

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'3 PMG: 12 ^h 03 ^m 6				Edad: 13 ^d 7 PHE { SD: 16'7 PMG: 23 ^h 56 ^m R°: 64 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	o	'	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m	
0	179	10.1	-23	01.1	16	05.7	+19	19.2	60 N	7 09	8 06	9 02	15 00	66	7 47	66		
1	194	09.8		00.9	30	27.9	32	22.7	58	7 02	7 54	8 45	14	66	33	66		
2	209	09.5		00.7	44	50.1	32	26.2	56	6 56	44	31	26	66	21	66		
3	224	09.2		00.5	59	12.2	31	29.5	54	50	36	19	37	66	10	66		
4	239	08.9		00.3	73	34.3	31	32.6	52	44	28	8 08	46	66	7 01	66		
5	254	08.6	-23	00.1	87	56.4	31	+19	50	6 39	7 20	7 59	15 55	65	6 53	65		
6	269	08.3	-22	59.9	102	18.4	30	+19	45	6 28	7 05	7 38	16 13	65	6 35	65		
7	284	08.0		59.7	116	40.4	30		40	18	6 51	22	27	66	20	66		
8	299	07.7		59.5	131	02.3	29		35	08	40	7 08	40	65	6 08	65		
9	314	07.4		59.3	145	24.2	29		30	6 00	30	6 56	16 51	65	5 57	65		
10	329	07.1		59.1	159	46.1	29		20	5 44	6 11	35	17 10	64	39	64		
11	344	06.8	-22	58.9	174	08.0	29	+19	10 N	5 28	5 54	6 17	17 26	64	5 23	64		
12	359	06.5	-22	58.7	188	29.8	28	+19	0	5 11	5 37	6 00	17 41	64	5 08	64		
13	14	06.2		58.5	202	51.6	28		10 S	4 53	5 20	5 43	17 57	63	4 53	63		
14	29	05.9		58.3	217	13.4	28		20	30	4 59	24	18 13	63	37	63		
15	44	05.6		58.0	231	35.1	27		30	4 02	35	5 02	32	63	18	63		
16	59	05.4		57.8	245	56.9	28		35	3 44	20	4 50	43	62	4 07	63		
17	74	05.1	-22	57.6	260	18.6	27	+19	40	3 21	4 02	4 35	18 56	62	3 55	62		
18	89	04.8	-22	57.4	274	40.3	27	+20	45	2 51	3 40	4 17	19 11	61	3 41	61		
19	104	04.5		57.2	289	02.0	27		50	2 07	3 11	3 55	29	61	23	61		
20	119	04.2		57.0	303	23.7	27		52	1 41	2 57	45	38	60	15	60		
21	134	03.9		56.8	317	45.4	27		54	1 01	39	33	48	60	3 05	60		
22	149	03.6		56.5	332	07.1	27		56	** ** *	2 18	19	19 59	59	2 55	59		
23	164	03.3		56.3	346	28.7	26		58	** ** *	1 50	3 03	20 12	58	43	58		
24	179	03.0	-22	56.1	0	50.4	27	+20	60 S	** ** *	1 06	2 43	20 26	58	2 29	58		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 17 ^h 14 ^m 8		Mag: -4.0 PMG: 11 ^h 56 ^m				Mag: +1.5 PMG: 8 ^h 05 ^m				Mag: -1.8 PMG: 8 ^h 16 ^m				Mag: +0.5 PMG: 11 ^h 22 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'
0	100	35.8	181	17.1	-23	37.9	238	36.7	-15	13.7	235	49.0	-15	53.1	189	05.5	-22	31.9
1	115	38.2	196	16.2		37.7	253	37.6		14.2	250	51.0		53.2	204	07.6		31.9
2	130	40.7	211	15.2		37.6	268	38.5		14.7	265	53.0		53.3	219	09.8		31.9
3	145	43.2	226	14.2		37.5	283	39.5		15.1	280	55.1		53.4	234	11.9		31.9
4	160	45.6	241	13.3		37.4	298	40.4		15.6	295	57.1		53.5	249	14.1		31.9
5	175	48.1	256	12.3	-23	37.3	313	41.3	-15	16.1	310	59.2	-15	53.6	264	16.2	-22	31.9
6	190	50.6	271	11.3	-23	37.2	328	42.2	-15	16.6	326	01.2	-15	53.8	279	18.4	-22	31.9
7	205	53.0	286	10.4		37.1	343	43.2		17.0	341	03.3		53.9	294	20.5		31.9
8	220	55.5	301	09.4		36.9	358	44.1		17.5	356	05.3		54.0	309	22.7		31.9
9	235	58.0	316	08.4		36.8	13	45.0		18.0	11	07.4		54.1	324	24.8		31.9
10	251	00.4	331	07.4		36.7	28	45.9		18.5	26	09.4		54.2	339	27.0		31.9
11	266	02.9	346	06.5	-23	36.6	43	46.9	-15	18.9	41	11.4	-15	54.3	354	29.1	-22	31.8
12	281	05.3	1	05.5	-23	36.5	58	47.8	-15	19.4	56	13.5	-15	54.4	9	31.2	-22	31.8
13	296	07.8	16	04.5		36.3	73	48.7		19.9	71	15.5		54.6	24	33.4		31.8
14	311	10.3	31	03.6		36.2	88	49.6		20.4	86	17.6		54.7	39	35.5		31.8
15	326	12.7	46	02.6		36.1	103	50.6		20.8	101	19.6		54.8	54	37.7		31.8
16	341	15.2	61	01.6		36.0	118	51.5		21.3	116	21.7		54.9	69	39.8		31.8
17	356	17.7	76	00.7	-23	35.8	133	52.4	-15	21.8	131	23.7	-15	55.0	84	42.0	-22	31.8
18	11	20.1	90	59.7	-23	35.7	148	53.3	-15	22.3	146	25.8	-15	55.1	99	44.1	-22	31.8
19	26	22.6	105	58.7		35.6	163	54.3		22.7	161	27.8		55.2	114	46.3		31.8
20	41	25.1	120	57.8		35.4	178	55.2		23.2	176	29.8		55.4	129	48.4		31.8
21	56	27.5	135	56.8		35.3	193	56.1		23.7	191	31.9		55.5	144	50.6		31.8
22	71	30.0	150	55.8		35.2	208	57.0		24.1	206	33.9		55.6	159	52.7		31.8
23	86	32.5	165	54.9		35.0	223	58.0		24.6	221	36.0		55.7	174	54.9		31.8
24	101	34.9	180	53.9	-23	34.9	238	58.9	-15	25.1	236	38.0	-15	55.8	189	57.0	-22	31.8
Dif	—		-10		+1		+9		-5		+20		-1		+21		0	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16°3			Edad: 14 ^d 7 PHE { 4 ^h : 61'5 12 ^h : 61'4 20 ^h : 61'3										
	PMG: 12 ^h 04 ^m 0			SD: 16°7 PMG: ***mm R°: **m										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	o	'	o	'	'	o	'	o	h m	h m	h m	h m	h m	h m
0	179	03.0	-22	56.1	0	50.4	+20	03.4	15 07	16 03	16 59	16 06	80	8 53
1	194	02.7		55.9	15	12.1		03.3	23	14	17 06	20	78	39
2	209	02.4		55.7	29	33.8		03.1	37	24	13	32	77	27
3	224	02.1		55.4	43	55.4		02.7	15 50	33	19	43	75	16
4	239	01.9		55.2	58	17.1		02.1	16 00	41	24	16 52	74	8 07
5	254	01.6	-22	55.0	72	38.8	+20	01.4	16 10	16 48	17 29	17 00	74	7 58
6	269	01.3	-22	54.8	87	00.6	+20	00.6	16 30	17 04	17 41	17 18	71	7 40
7	284	01.0		54.5	101	22.3	+19	59.5	16 46	17	17 51	33	69	26
8	299	00.7		54.3	115	44.0		58.4	17 00	28	18 00	45	68	13
9	314	00.4		54.1	130	05.8		57.1	12	38	08	17 56	67	7 02
10	329	00.1		53.9	144	27.6		55.6	33	17 57	24	18 14	65	6 43
11	343	59.8	-22	53.6	158	49.4	+19	53.9	17 51	18 14	18 40	18 30	64	6 27
12	358	59.5	-22	53.4	173	11.2	+19	52.2	18 08	18 30	18 56	18 45	62	6 12
13	13	59.2		53.2	187	33.1		50.2	25	18 48	19 15	19 00	61	5 56
14	28	59.0		52.9	201	55.0		48.1	20	18 43	19 08	19 37	16	59
15	43	58.7		52.7	216	16.9		45.9	19 05	32	20 05	35	56	21
16	58	58.4		52.5	230	38.9		43.5	17	19 47	23	45	56	5 10
17	73	58.1	-22	52.2	245	00.9	+19	41.0	19 32	20 05	20 46	19 58	54	4 57
18	88	57.8	-22	52.0	259	22.9	+19	38.3	19 50	20 27	21 15	20 12	52	4 42
19	103	57.5		51.8	273	45.0		35.4	20 11	20 55	21 58	30	50	24
20	118	57.2		51.5	288	07.1		32.5	22	21 10	22 24	38	49	15
21	133	56.9		51.3	302	29.3		29.3	34	27	23 02	48	47	4 05
22	148	56.6		51.1	316	51.5		26.0	20 47	21 48	** **	20 58	46	3 54
23	163	56.4		50.8	331	13.8		22.6	21 03	22 15	** **	21 10	44	41
24	178	56.1	-22	50.6	345	36.1	+19	19.0	21 23	22 56	** **	21 24	41	3 27

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 17 ^h 10 ^m 8		Mag: -4.0 PMG: 11 ^h 57 ^m		Mag: +1.5 PMG: 8 ^h 04 ^m		Mag: -1.9 PMG: 8 ^h 12 ^m		Mag: +0.5 PMG: 11 ^h 19 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	o	'	o	'	o	'	o	'	o	'
0	101	34.9	180	53.9	-23	34.9	238	58.9	-15	25.1
1	116	37.4	195	52.9		34.7	253	59.8		25.6
2	131	39.8	210	52.0		34.6	269	00.7		26.0
3	146	42.3	225	51.0		34.5	284	01.6		26.5
4	161	44.8	240	50.0		34.3	299	02.6		27.0
5	176	47.2	255	49.1	-23	34.2	314	03.5	-15	27.4
6	191	49.7	270	48.1	-23	34.0	329	04.4	-15	27.9
7	206	52.2	285	47.2		33.9	344	05.3		28.4
8	221	54.6	300	46.2		33.7	359	06.3		28.9
9	236	57.1	315	45.2		33.6	14	07.2		29.3
10	251	59.6	330	44.3		33.4	29	08.1		29.8
11	267	02.0	345	43.3	-23	33.3	44	09.0	-15	30.3
12	282	04.5	0	42.3	-23	33.1	59	09.9	-15	30.7
13	297	07.0	15	41.4		33.0	74	10.9		31.2
14	312	09.4	30	40.4		32.8	89	11.8		31.7
15	327	11.9	45	39.4		32.7	104	12.7		32.1
16	342	14.3	60	38.5		32.5	119	13.6		32.6
17	357	16.8	75	37.5	-23	32.3	134	14.6	-15	33.1
18	12	19.3	90	36.5	-23	32.2	149	15.5	-15	33.6
19	27	21.7	105	35.6		32.0	164	16.4		34.0
20	42	24.2	120	34.6		31.9	179	17.3		34.5
21	57	26.7	135	33.7		31.7	194	18.2		35.0
22	72	29.1	150	32.7		31.5	209	19.2		35.4
23	87	31.6	165	31.7		31.4	224	20.1		35.9
24	102	34.1	180	30.8	-23	31.2	239	21.0	-15	36.4
Dif	—		-10		+2		+9		-5	
								+20		-1
									+21	
										0

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16/3 PMG: 12 ^h 04 ^m 5				Edad: 15 ^d 7 PHE { SD: 16/6 PMG: 1 ^h 00 ^m R°: 61 ^m												
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	o	'	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m
0	178	56.1	-22	50.6	345	36.1	+19	19.0	60 N	7 09	8 05	9 01	17 26	88	9 43	35	
1	193	55.8		50.4	359	58.4		15.3	58	7 02	7 54	8 45		38 85		30 38	
2	208	55.5		50.1	14	20.8		11.5	56	6 55	44	31		49 82		19 41	
3	223	55.2		49.9	28	43.3		07.5	54	49	35	18	17 58	80		10 42	
4	238	54.9		49.6	43	05.8	+19	03.3	52	44	27	8 08	18 06	79	9 01	44	
5	253	54.6	-22	49.4	57	28.4	+18	59.0	50	6 39	7 20	7 58	18 14	77	8 54	44	
6	268	54.4	-22	49.1	71	51.1	+18	54.6	44	6 28	7 05	7 38	18 29	74	8 37	48	
7	283	54.1		48.9	86	13.8		50.1	40	18	6 52	22		42 72		24 50	
8	298	53.8		48.7	100	36.5		45.4	35	09	40	7 08	18 53	69	12 52		
9	313	53.5		48.4	114	59.4		40.5	30	6 00	30	6 56	19 03	67	8 02	53	
10	328	53.2		48.2	129	22.3		35.6	20	5 44	6 12	36		19 64		7 45 56	
11	343	52.9	-22	47.9	143	45.2	+18	30.5	10 N	5 29	5 55	6 18	19 34	61	7 29	59	
12	358	52.6	-22	47.7	158	08.3	+18	25.2	0	5 12	5 38	6 01	19 47	59	7 15	61	
13	13	52.3		47.4	172	31.4		19.9	10 S	4 54	21	5 44	20 01	56	7 01	62	
14	28	52.1		47.2	186	54.5		14.4	20	32	5 01	25		15 53		6 45 65	
15	43	51.8		46.9	201	17.8		08.8	30	4 03	4 37	5 04	31	50		27 68	
16	58	51.5		46.7	215	41.1	+18	03.0	35	3 45	22	4 51	41	48	17	69	
17	73	51.2	-22	46.4	230	04.5	+17	57.1	40	3 23	4 04	4 37	20 52	46	6 05	71	
18	88	50.9	-22	46.2	244	28.0	+17	51.1	45	2 53	3 42	4 19	21 04	44	5 51	73	
19	103	50.6		45.9	258	51.5		45.0	50	2 10	3 14	3 57		20 40		34 76	
20	118	50.4		45.7	273	15.2		38.8	52	1 45	2 59	47	27	38	26	77	
21	133	50.1		45.4	287	38.9		32.4	54	1 06	42	35	35	37	16	79	
22	148	49.8		45.1	302	02.7		25.9	56	** ** *	2 21	21	44	35	5 06	81	
23	163	49.5		44.9	316	26.6		19.3	58	** ** *	1 54	3 05	21 54	32	4 55	82	
24	178	49.2	-22	44.6	330	50.5	+17	12.6	60 S	** ** *	1 12	2 46	22 05	30	4 41	85	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 17 ^h 06 ^m 9		Mag: -4.0 PMG: 11 ^h 59 ^m		Mag: +1.5 PMG: 8 ^h 02 ^m		Mag: -1.9 PMG: 8 ^h 09 ^m		Mag: +0.5 PMG: 11 ^h 15 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	o	'	o	'	o	'	o	'	o	'
0	102	34.1	180	30.8	-23	31.2	239	21.0	-15	36.4
1	117	36.5	195	29.8		31.0	254	21.9		36.8
2	132	39.0	210	28.8		30.8	269	22.8		37.3
3	147	41.5	225	27.9		30.7	284	23.8		37.8
4	162	43.9	240	26.9		30.5	299	24.7		38.2
5	177	46.4	255	26.0	-23	30.3	314	25.6	-15	38.7
6	192	48.8	270	25.0	-23	30.2	329	26.5	-15	39.2
7	207	51.3	285	24.0		30.0	344	27.4		39.6
8	222	53.8	300	23.1		29.8	359	28.4		40.1
9	237	56.2	315	22.1		29.6	14	29.3		40.6
10	252	58.7	330	21.1		29.4	29	30.2		41.0
11	268	01.2	345	20.2	-23	29.3	44	31.1	-15	41.5
12	283	03.6	0	19.2	-23	29.1	59	32.0	-15	42.0
13	298	06.1	15	18.3		28.9	74	33.0		42.4
14	313	08.6	30	17.3		28.7	89	33.9		42.9
15	328	11.0	45	16.3		28.5	104	34.8		43.3
16	343	13.5	60	15.4		28.3	119	35.7		43.8
17	358	16.0	75	14.4	-23	28.1	134	36.6	-15	44.3
18	13	18.4	90	13.5	-23	27.9	149	37.6	-15	44.7
19	28	20.9	105	12.5		27.7	164	38.5		45.2
20	43	23.3	120	11.5		27.5	179	39.4		45.7
21	58	25.8	135	10.6		27.4	194	40.3		46.1
22	73	28.3	150	09.6		27.2	209	41.2		46.6
23	88	30.7	165	08.7		27.0	224	42.2		47.1
24	103	33.2	180	07.7	-23	26.8	239	43.1	-15	47.5
Dif	—		-10		+2		+9		-5	

UT	SOL				LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:3 PMG: 12 ^h 04 ^m 9				Edad: 16 ^d 7 PHE { 4 ^h : 60:7 12 ^h : 60:4 20 ^h : 60:1 R°: 58 ^m												
	hG ☉		Dec		hG ☾		Dif							Civil	Náutico	Hora	R°
h	o	'	o	'	o	'	o	'	o	h m	h m	h m	h m	m	h m	m	m
0	178	49.2	-22	44.6	330	50.5	+17	12.6	60 N	15 10	16 06	17 02	18 54	88	10 18	26	
1	193	48.9		44.4	345	14.6	51	+17 05.8	58	26	17	09	19 03	85	08	29	
2	208	48.7		44.1	359	38.7	51	+16 58.8	56	40	27	15	11	83	10 00	30	
3	223	48.4		43.9	14	02.9	52	51.8	54	15 52	35	21	18	81	9 52	33	
4	238	48.1		43.6	28	27.2	53	44.6	52	16 03	43	26	25	78	45	35	
5	253	47.8	-22	43.3	42	51.6	54	+16 37.3	50	16 12	16 50	17 31	19 31	76	9 38	37	
6	268	47.5	-22	43.1	57	16.1	55	+16 29.9	45	16 32	17 05	17 42	19 43	73	9 25	40	
7	283	47.2		42.8	71	40.7	56	22.5	40	16 48	18	17 52	19 54	69	14	42	
8	298	47.0		42.5	86	05.3	56	14.9	35	17 02	30	18 01	20 02	68	9 04	45	
9	313	46.7		42.3	100	30.1	58	+16 07.2	30	14	40	09	10	65	8 55	48	
10	328	46.4		42.0	114	54.9	58	+15 59.4	20	34	17 58	25	23	62	41	51	
11	343	46.1	-22	41.8	129	19.9	60	+15 51.5	10 N	17 52	18 15	18 41	20 35	58	8 28	54	
12	358	45.8	-22	41.5	143	44.9	60	+15 43.5	0	18 09	18 31	18 57	20 46	55	8 16	56	
13	13	45.5		41.2	158	10.0	61	35.4	10 S	26	18 49	19 15	20 57	51	8 03	60	
14	28	45.3		41.0	172	35.2	62	27.2	20	18 44	19 08	19 37	21 08	48	7 50	63	
15	43	45.0		40.7	187	00.5	63	18.9	30	19 05	32	20 05	21	45	35	66	
16	58	44.7		40.4	201	25.9	64	10.5	35	18	19 47	23	29	42	26	69	
17	73	44.4	-22	40.1	215	51.4	65	+15 02.1	40	19 32	20 05	20 46	21 38	39	7 16	71	
18	88	44.1	-22	39.9	230	17.0	66	+14 53.5	45	19 49	20 26	21 15	21 48	36	7 04	74	
19	103	43.9		39.6	244	42.6	66	44.9	50	20 11	20 54	21 57	22 00	33	6 50	77	
20	118	43.6		39.3	259	08.4	68	36.1	52	21	21 09	22 22	05	32	43	79	
21	133	43.3		39.1	273	34.3	69	27.3	54	33	25	22 58	12	29	35	81	
22	148	43.0		38.8	288	00.2	69	18.4	56	20 46	21 46	** ** *	19	27	27	83	
23	163	42.7		38.5	302	26.3	71	09.5	58	21 02	22 12	** ** *	26	25	17	86	
24	178	42.5	-22	38.2	316	52.4	71	+14 00.4	60 S	21 21	22 52	** ** *	22 35	22	6 06	89	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 17 ^h 03 ^m 0		Mag: -4.0 PMG: 12 ^h 00 ^m			Mag: +1.5 PMG: 8 ^h 01 ^m			Mag: -1.9 PMG: 8 ^h 06 ^m			Mag: +0.5 PMG: 11 ^h 12 ^m				
	hG ♈		hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec		
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'		
0	103	33.2	180	07.7	-23	26.8	239	43.1	-15	47.5	238	16.4	-16	01.2		
1	118	35.7	195	06.8		26.6	254	44.0		48.0	253	18.5		01.3		
2	133	38.1	210	05.8		26.4	269	44.9		48.4	268	20.5		01.4		
3	148	40.6	225	04.8		26.2	284	45.8		48.9	283	22.6		01.5		
4	163	43.1	240	03.9		26.0	299	46.8		49.4	298	24.6		01.6		
5	178	45.5	255	02.9	-23	25.7	314	47.7	-15	49.8	313	26.7	-16	01.8		
6	193	48.0	270	02.0	-23	25.5	329	48.6	-15	50.3	328	28.8	-16	01.9		
7	208	50.4	285	01.0		25.3	344	49.5		50.8	343	30.8		02.0		
8	223	52.9	300	00.0		25.1	359	50.4		51.2	358	32.9		02.1		
9	238	55.4	314	59.1		24.9	14	51.3		51.7	13	34.9		02.2		
10	253	57.8	329	58.1		24.7	29	52.3		52.1	28	37.0		02.3		
11	269	00.3	344	57.2	-23	24.5	44	53.2	-15	52.6	43	39.0	-16	02.4		
12	284	02.8	359	56.2	-23	24.3	59	54.1	-15	53.1	58	41.1	-16	02.5		
13	299	05.2	14	55.3		24.1	74	55.0		53.5	73	43.1		02.6		
14	314	07.7	29	54.3		23.8	89	55.9		54.0	88	45.2		02.7		
15	329	10.2	44	53.4		23.6	104	56.8		54.4	103	47.3		02.9		
16	344	12.6	59	52.4		23.4	119	57.8		54.9	118	49.3		03.0		
17	359	15.1	74	51.4	-23	23.2	134	58.7	-15	55.4	133	51.4	-16	03.1		
18	14	17.6	89	50.5	-23	23.0	149	59.6	-15	55.8	148	53.4	-16	03.2		
19	29	20.0	104	49.5		22.7	165	00.5		56.3	163	55.5		03.3		
20	44	22.5	119	48.6		22.5	180	01.4		56.7	178	57.5		03.4		
21	59	24.9	134	47.6		22.3	195	02.4		57.2	193	59.6		03.5		
22	74	27.4	149	46.7		22.1	210	03.3		57.7	209	01.7		03.6		
23	89	29.9	164	45.7		21.8	225	04.2		58.1	224	03.7		03.7		
24	104	32.3	179	44.8	-23	21.6	240	05.1	-15	58.6	239	05.8	-16	03.8		
Dif	—		-10		+2		+9		-5		+21		-1		+21	

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16/3 PMG: 12 ^h 05 ^m 4				Edad: 17 ^d 7 PHE { SD: 16/2 PMG: 2 ^h 59 ^m R°: 54 ^m													
	hG ☉		Dec		hG ☾		Dif			Dec			Dif		Hora		R°	
h	o	'	o	'	o	'	o	'	o	'	h	m	h	m	h	m	h	m
0	178	42.5	-22	38.2	316	52.4			+14	00.4	60 N	7 08	8 04	9 00	20 22	86	10 44	19
1	193	42.2		37.9	331	18.6	72		+13	51.3	58	7 01	7 53	8 43	28 83		37	22
2	208	41.9		37.7	345	45.0	74			42.1	56	6 55	43	30	34 80		30	25
3	223	41.6		37.4	0	11.4	74			32.8	54	49	35	18	39 78		25	27
4	238	41.3		37.1	14	37.9	75			23.4	52	44	27	8 07	43 77		20	28
5	253	41.1	-22	36.8	29	04.5	76		+13	14.0	50	6 39	7 20	7 58	20 47	75	10 15	30
6	268	40.8	-22	36.6	43	31.2	77		+13	04.5	45	6 28	7 05	7 38	20 56	71	10 05	34
7	283	40.5		36.3	57	58.0	78		+12	54.9	40	18	6 52	22	21 03	68	9 56	38
8	298	40.2		36.0	72	24.9	79			45.3	35	09	41	7 09	10 64		49	40
9	313	40.0		35.7	86	51.9	80			35.6	30	6 01	30	6 57	15 62		43	42
10	328	39.7		35.4	101	19.0	81			25.8	20	5 45	6 12	36	25 57		32	46
11	343	39.4	-22	35.1	115	46.2	82		+12	16.0	10 N	5 30	5 56	6 18	21 33	54	9 22	49
12	358	39.1	-22	34.9	130	13.4	82		+12	06.1	0	5 13	5 39	6 02	21 41	50	9 12	53
13	13	38.8		34.6	144	40.8	84		+11	56.1	10 S	4 55	22	5 45	48 48		9 03	56
14	28	38.6		34.3	159	08.2	84			46.1	20	33	5 02	27	21 56	44	8 53	60
15	43	38.3		34.0	173	35.8	86			36.1	30	4 05	4 38	5 05	22 06	40	41	64
16	58	38.0		33.7	188	03.4	86			25.9	35	3 47	23	4 53	11 38		35	66
17	73	37.7	-22	33.4	202	31.1	87		+11	15.8	40	3 25	4 06	4 38	22 17	35	8 27	69
18	88	37.5	-22	33.1	216	58.9	88		+11	05.5	45	2 56	3 44	4 21	22 24	32	8 18	72
19	103	37.2		32.8	231	26.8	89		+10	55.3	50	2 14	16	4 00	33 28		07	76
20	118	36.9		32.5	245	54.8	90			44.9	52	1 49	3 02	3 49	37 26		8 02	78
21	133	36.6		32.2	260	22.9	91			34.6	54	1 13	2 45	38	41 24		7 56	80
22	148	36.4		32.0	274	51.0	91			24.1	56	** ** *	2 25	24	46 22		50	82
23	163	36.1		31.7	289	19.3	93			13.7	58	** ** *	1 58	3 09	51 20		43	85
24	178	35.8	-22	31.4	303	47.6	93		+10	03.2	60 S	** ** *	1 19	2 50	22 57	17	7 35	88

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 16 ^h 59 ^m 1		Mag: -4.0 PMG: 12 ^h 02 ^m		Mag: +1.4 PMG: 7 ^h 59 ^m		Mag: -1.9 PMG: 8 ^h 03 ^m		Mag: +0.5 PMG: 11 ^h 08 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	o	'	o	'	o	'	o	'	o	'
0	104	32.3	179	44.8	-23	21.6	240	05.1	-15	58.6
1	119	34.8	194	43.8		21.4	255	06.0		59.0
2	134	37.3	209	42.9		21.1	270	06.9	-15	59.5
3	149	39.7	224	41.9		20.9	285	07.9	-16	00.0
4	164	42.2	239	40.9		20.7	300	08.8	-16	00.4
5	179	44.7	254	40.0	-23	20.4	315	09.7	-16	00.9
6	194	47.1	269	39.0	-23	20.2	330	10.6	-16	01.3
7	209	49.6	284	38.1		20.0	345	11.5		01.8
8	224	52.1	299	37.1		19.7	0	12.4		02.2
9	239	54.5	314	36.2		19.5	15	13.3		02.7
10	254	57.0	329	35.2		19.2	30	14.3		03.2
11	269	59.4	344	34.3	-23	19.0	45	15.2	-16	03.6
12	285	01.9	359	33.3	-23	18.8	60	16.1	-16	04.1
13	300	04.4	14	32.4		18.5	75	17.0		04.5
14	315	06.8	29	31.4		18.3	90	17.9		05.0
15	330	09.3	44	30.5		18.0	105	18.8		05.4
16	345	11.8	59	29.5		17.8	120	19.8		05.9
17	0	14.2	74	28.6	-23	17.5	135	20.7	-16	06.3
18	15	16.7	89	27.6	-23	17.3	150	21.6	-16	06.8
19	30	19.2	104	26.7		17.0	165	22.5		07.3
20	45	21.6	119	25.7		16.8	180	23.4		07.7
21	60	24.1	134	24.8		16.5	195	24.3		08.2
22	75	26.6	149	23.8		16.2	210	25.2		08.6
23	90	29.0	164	22.9		16.0	225	26.2		09.1
24	105	31.5	179	21.9	-23	15.7	240	27.1	-16	09.5
Dif	—		-10		+2		+9		-5	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16:3			Edad: 18 ^d 7 PHE { 4 ^h : 58'9 12 ^h : 58'6 20 ^h : 58'2					Final del crepúsculo			Salida de Luna		Puesta de Luna		
	PMG: 12 ^h 05 ^m 8			PMG: 3 ^h 53 ^m R°: 50 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°	
h	o	'	o	o	'	o	'	h	m	h	m	h	m	m	h	m
0	178	35.8	-22 31.4	303	47.6	+10 03.2	60 N	15 13	16 09	17 04		21 48	83	11 03	17	
1	193	35.5	31.1	318	16.1	+9 52.6	58	29	20	11		51	80	10 59	19	
2	208	35.3	30.8	332	44.6	42.0	56	43	29	17		54	78	55	21	
3	223	35.0	30.5	347	13.2	31.4	54	15 55	38	23		21 57	75	52	23	
4	238	34.7	30.2	1	41.8	20.7	52	16 05	45	28		22 00	73	48	25	
5	253	34.4	-22 29.9	16	10.6	+9 10.0	50	16 14	16 52	17 33		22 02	71	10 45	27	
6	268	34.2	-22 29.6	30	39.4	+8 59.2	45	16 34	17 07	17 44		22 07	67	10 39	30	
7	283	33.9	29.3	45	08.4	48.4	40	16 50	20	17 54		11	64	34	33	
8	298	33.6	29.0	59	37.4	37.6	35	17 03	31	18 03		14	62	29	36	
9	313	33.3	28.7	74	06.5	26.8	30	15	41	11		17	59	25	38	
10	328	33.1	28.4	88	35.6	15.9	20	35	17 59	26		22	56	18	42	
11	343	32.8	-22 28.1	103	04.9	+8 05.0	10 N	17 53	18 16	18 42		22 27	52	10 11	46	
12	358	32.5	-22 27.8	117	34.2	+7 54.0	0	18 10	18 32	18 58		22 31	49	10 05	50	
13	13	32.2	27.5	132	03.6	43.1	10 S	26	18 49	19 16		36	44	9 59	53	
14	28	32.0	27.2	146	33.1	32.1	20	18 44	19 09	19 38		40	42	53	56	
15	43	31.7	26.9	161	02.7	21.1	30	19 05	33	20 05		46	37	45	61	
16	58	31.4	26.5	175	32.3	+7 10.0	35	18	19 47	23		49	34	41	63	
17	73	31.2	-22 26.2	190	02.0	+6 59.0	40	19 32	20 04	20 45		22 52	32	9 36	66	
18	88	30.9	-22 25.9	204	31.8	+6 47.9	45	19 49	20 26	21 14		22 56	29	9 30	69	
19	103	30.6	25.6	219	01.7	36.8	50	20 10	20 53	21 55		23 01	25	23	73	
20	118	30.3	25.3	233	31.6	25.6	52	20	21 07	22 19		03	24	20	75	
21	133	30.1	25.0	248	01.6	14.5	54	32	24	22 53		05	22	16	77	
22	148	29.8	24.7	262	31.6	+6 03.3	56	20 45	21 44	*** **		08	20	12	79	
23	163	29.5	24.4	277	01.8	+5 52.2	58	21 00	22 09	*** **		11	17	08	82	
24	178	29.3	-22 24.1	291	32.0	+5 41.0	60 S	21 19	22 46	*** **		23 14	15	9 03	84	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 16 ^h 55 ^m 1		Mag: -4.0 PMG: 12 ^h 03 ^m		Mag: +1.4 PMG: 7 ^h 58 ^m		Mag: -1.9 PMG: 7 ^h 59 ^m		Mag: +0.5 PMG: 11 ^h 05 ^m	
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	o	'	o	'	o	'	o	'	o	'
0	105	31.5	179 21.9	-23 15.7	240 27.1	-16 09.5	239 55.2	-16 06.4	193 23.3	-22 31.7
1	120	33.9	194 21.0	15.5	255 28.0	10.0	254 57.3	06.5	208 25.5	31.7
2	135	36.4	209 20.0	15.2	270 28.9	10.4	269 59.3	06.7	223 27.6	31.7
3	150	38.9	224 19.1	14.9	285 29.8	10.9	285 01.4	06.8	238 29.8	31.7
4	165	41.3	239 18.1	14.7	300 30.7	11.3	300 03.5	06.9	253 31.9	31.7
5	180	43.8	254 17.2	-23 14.4	315 31.6	-16 11.8	315 05.5	-16 07.0	268 34.1	-22 31.7
6	195	46.3	269 16.2	-23 14.2	330 32.6	-16 12.2	330 07.6	-16 07.1	283 36.2	-22 31.7
7	210	48.7	284 15.3	13.9	345 33.5	12.7	345 09.6	07.2	298 38.4	31.7
8	225	51.2	299 14.3	13.6	0 34.4	13.1	0 11.7	07.3	313 40.5	31.6
9	240	53.7	314 13.4	13.3	15 35.3	13.6	15 13.8	07.4	328 42.7	31.6
10	255	56.1	329 12.4	13.1	30 36.2	14.0	30 15.8	07.5	343 44.8	31.6
11	270	58.6	344 11.5	-23 12.8	45 37.1	-16 14.5	45 17.9	-16 07.6	358 47.0	-22 31.6
12	286	01.0	359 10.6	-23 12.5	60 38.0	-16 15.0	60 20.0	-16 07.7	13 49.1	-22 31.6
13	301	03.5	14 09.6	12.3	75 38.9	15.4	75 22.0	07.8	28 51.3	31.6
14	316	06.0	29 08.7	12.0	90 39.9	15.9	90 24.1	07.9	43 53.4	31.6
15	331	08.4	44 07.7	11.7	105 40.8	16.3	105 26.2	08.0	58 55.6	31.6
16	346	10.9	59 06.8	11.4	120 41.7	16.8	120 28.2	08.1	73 57.7	31.6
17	1	13.4	74 05.8	-23 11.1	135 42.6	-16 17.2	135 30.3	-16 08.3	88 59.9	-22 31.6
18	16	15.8	89 04.9	-23 10.9	150 43.5	-16 17.7	150 32.4	-16 08.4	104 02.0	-22 31.6
19	31	18.3	104 03.9	10.6	165 44.4	18.1	165 34.4	08.5	119 04.2	31.6
20	46	20.8	119 03.0	10.3	180 45.3	18.6	180 36.5	08.6	134 06.3	31.6
21	61	23.2	134 02.0	10.0	195 46.2	19.0	195 38.5	08.7	149 08.5	31.6
22	76	25.7	149 01.1	09.7	210 47.2	19.5	210 40.6	08.8	164 10.6	31.6
23	91	28.2	164 00.2	09.4	225 48.1	19.9	225 42.7	08.9	179 12.8	31.6
24	106	30.6	178 59.2	-23 09.1	240 49.0	-16 20.4	240 44.7	-16 09.0	194 14.9	-22 31.6
Dif	—		-9	+3	+9	-5	+21	-1	+22	

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'3 PMG: 12 ^h 06 ^m 3				Edad: 19 ^d 7 PHE { SD: 15'7 PMG: 4 ^h 43 ^m R°: 48 ^m 4 ^h : 57'9 12 ^h : 57'6 20 ^h : 57'3												
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	o	'	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m
0	178	29.3	-22	24.1	291	32.0	+5	41.0	60 N	7 07	8 03	8 58	23 11	79	11 20	14	
1	193	29.0		23.8	306	02.3 ¹¹³		29.8 ¹¹²	58	7 00	7 52	42	11 77		18 17		
2	208	28.7		23.4	320	32.6 ¹¹³		18.6 ¹¹²	56	6 54	42	28	12 74		16 19		
3	223	28.5		23.1	335	03.0 ¹¹⁴	+5	07.3 ¹¹³	54	49	34	17	12 73		15 21		
4	238	28.2		22.8	349	33.5 ¹¹⁵	+4	56.1 ¹¹²	52	43	26	8 06	13 70		13 23		
5	253	27.9	-22	22.5	4	04.0 ¹¹⁵	+4	44.9 ¹¹²	50	6 39	7 19	7 57	23 13	69	11 12	25	
6	268	27.6	-22	22.2	18	34.7 ¹¹⁷	+4	33.6 ¹¹³	45	6 28	7 04	7 38	23 14	65	11 09	29	
7	283	27.4		21.9	33	05.3 ¹¹⁶		22.4 ¹¹²	40	18	6 52	22	15 62		07 31		
8	298	27.1		21.5	47	36.0 ¹¹⁷	+4	11.1 ¹¹³	35	09	41	7 09	16 59		05 34		
9	313	26.8		21.2	62	06.8 ¹¹⁸	+3	59.8 ¹¹³	30	6 01	31	6 57	16 57		03 36		
10	328	26.6		20.9	76	37.7 ¹¹⁹		48.6 ¹¹²	20	5 46	6 13	37	18 53		11 00	40	
11	343	26.3	-22	20.6	91	08.6 ¹¹⁹	+3	37.3 ¹¹³	10 N	5 30	5 56	6 19	23 19	49	10 57	44	
12	358	26.0	-22	20.2	105	39.6 ¹²⁰	+3	26.0 ¹¹³	0	5 14	5 40	6 03	23 20	46	10 55	47	
13	13	25.8		19.9	120	10.6 ¹²⁰		14.7 ¹¹³	10 S	4 56	23	5 46	20 43		52 50		
14	28	25.5		19.6	134	41.7 ¹²¹	+3	03.4 ¹¹³	20	35	5 03	28	22 39		49 54		
15	43	25.2		19.3	149	12.8 ¹²¹	+2	52.2 ¹¹²	30	4 07	4 40	5 07	23 35		46 58		
16	58	25.0		19.0	163	44.0 ¹²²		40.9 ¹¹³	35	3 49	25	4 55	23 33		44 61		
17	73	24.7	-22	18.6	178	15.2 ¹²²	+2	29.6 ¹¹³	40	3 27	4 08	4 40	23 24	31	10 42	63	
18	88	24.4	-22	18.3	192	46.5 ¹²³	+2	18.3 ¹¹³	45	2 59	3 47	4 23	23 25	28	10 39	67	
19	103	24.2		18.0	207	17.9 ¹²⁴	+2	07.1 ¹¹²	50	2 17	19	4 02	26 24		36 70		
20	118	23.9		17.6	221	49.3 ¹²⁴	+1	55.8 ¹¹³	52	1 53	3 05	3 52	27 22		35 72		
21	133	23.6		17.3	236	20.7 ¹²⁴		44.6 ¹¹²	54	1 19	2 49	40	27 21		33 74		
22	148	23.4		17.0	250	52.2 ¹²⁵		33.3 ¹¹³	56	*** **	29	27	28 18		31 77		
23	163	23.1		16.7	265	23.8 ¹²⁶		22.1 ¹¹²	58	*** **	2 03	3 12	28 17		30 78		
24	178	22.8	-22	16.3	279	55.4 ¹²⁶	+1	10.8 ¹¹³	60 S	*** **	1 26	2 54	23 29	14	10 27	82	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 16 ^h 51 ^m 2		Mag: -4.0 PMG: 12 ^h 05 ^m		Mag: +1.4 PMG: 7 ^h 56 ^m		Mag: -1.9 PMG: 7 ^h 56 ^m		Mag: +0.5 PMG: 11 ^h 01 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	o	'	o	'	o	'	o	'	o	'
0	106	30.6	178	59.2	-23	09.1	240	44.7	-16	09.0
1	121	33.1	193	58.3		08.8	255	46.8		09.1
2	136	35.5	208	57.3		08.6	270	48.9		09.2
3	151	38.0	223	56.4		08.3	285	50.9		09.3
4	166	40.5	238	55.4		08.0	300	53.0		09.4
5	181	42.9	253	54.5	-23	07.7	315	55.1	-16	09.5
6	196	45.4	268	53.6	-23	07.4	330	57.1	-16	09.6
7	211	47.9	283	52.6		07.1	345	59.2		09.7
8	226	50.3	298	51.7		06.8	0	01.3		09.8
9	241	52.8	313	50.7		06.5	15	03.3		09.9
10	256	55.3	328	49.8		06.2	30	05.4		10.1
11	271	57.7	343	48.9	-23	05.9	45	07.5	-16	10.2
12	287	00.2	358	47.9	-23	05.6	60	09.6	-16	10.3
13	302	02.7	13	47.0		05.3	76	11.6		10.4
14	317	05.1	28	46.0		05.0	91	13.7		10.5
15	332	07.6	43	45.1		04.7	106	15.8		10.6
16	347	10.0	58	44.2		04.3	121	17.8		10.7
17	2	12.5	73	43.2	-23	04.0	136	19.9	-16	10.8
18	17	15.0	88	42.3	-23	03.7	151	22.0	-16	10.9
19	32	17.4	103	41.3		03.4	166	24.0		11.0
20	47	19.9	118	40.4		03.1	181	26.1		11.1
21	62	22.4	133	39.5		02.8	196	28.2		11.2
22	77	24.8	148	38.5		02.5	211	30.2		11.3
23	92	27.3	163	37.6		02.2	226	32.3		11.4
24	107	29.8	178	36.7	-23	01.8	241	34.4	-16	11.5
Dif	—		-9		+3		+9		-4	
							+21		-1	
									+22	
									0	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16'3			Edad: 20 ^d 7 PHE { 4 ^h : 57'0 12 ^h : 56'7 20 ^h : 56'4														
	PMG: 12 ^h 06 ^m 7			SD: 15'4														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°			
h	o	'	o	'	o	'	o	'	h	m	h	m	h	m	h	m		
0	178	22.8	-22	16.3	279	55.4	+1	10.8	60 N	15 17	16 12	17 07	***	***	11 34	15		
1	193	22.6		16.0	294	27.0 ¹²⁶	+0	59.6 ¹¹²	58	33	22	14	***	***	35	16		
2	208	22.3		15.7	308	58.7 ¹²⁷		48.4 ¹¹²	56	46	32	20	***	***	35	19		
3	223	22.0		15.3	323	30.4 ¹²⁷		37.2 ¹¹²	54	15 58	40	26	***	***	36	20		
4	238	21.8		15.0	338	02.2 ¹²⁸		26.0 ¹¹²	52	16 08	48	31	***	***	36	23		
5	253	21.5	-22	14.7	352	34.0 ¹²⁸	+0	14.9 ¹¹¹	50	16 17	16 54	17 35	***	***	11 37	24		
6	268	21.2	-22	14.3	7	05.9 ¹²⁹	+0	03.7 ¹¹²	45	16 36	17 09	17 46	***	***	11 38	27		
7	283	21.0		14.0	21	37.8 ¹²⁹	-0	07.4 ¹¹¹	40	16 52	22	17 56	***	***	38	30		
8	298	20.7		13.6	36	09.7 ¹²⁹		18.6 ¹¹²	35	17 05	33	18 04	***	***	39	33		
9	313	20.5		13.3	50	41.7 ¹³⁰		29.7 ¹¹¹	30	17	17 43	12	***	***	39	35		
10	328	20.2		13.0	65	13.7 ¹³⁰		40.8 ¹¹¹	20	37	18 00	28	***	***	40	39		
11	343	19.9	-22	12.6	79	45.8 ¹³¹	-0	51.9 ¹¹¹	10 N	17 54	18 17	18 43	***	***	11 41	42		
12	358	19.7	-22	12.3	94	17.9 ¹³¹	-1	02.9 ¹¹⁰	0	18 10	18 33	18 59	***	***	11 42	45		
13	13	19.4		11.9	108	50.0 ¹³¹		14.0 ¹¹¹	10 S	27	18 50	19 17	***	***	42	49		
14	28	19.1		11.6	123	22.2 ¹³²		25.0 ¹¹⁰	20	18 45	19 09	19 38	***	***	43	52		
15	43	18.9		11.3	137	54.4 ¹³²		36.0 ¹¹⁰	30	19 06	33	20 05	23 58	35	44	56		
16	58	18.6		10.9	152	26.6 ¹³²		47.0 ¹¹⁰	35	18	19 47	23	56	33	45	58		
17	73	18.4	-22	10.6	166	58.8 ¹³²	-1	57.9 ¹⁰⁹	40	19 32	20 04	20 44	23 55	30	11 45	61		
18	88	18.1	-22	10.2	181	31.1 ¹³³	-2	08.9 ¹¹⁰	45	19 49	20 25	21 13	23 53	27	11 46	64		
19	103	17.8		09.9	196	03.5 ¹³⁴		19.8 ¹⁰⁹	50	20 09	20 52	21 53	50	24	46	68		
20	118	17.6		09.5	210	35.8 ¹³³		30.6 ¹⁰⁸	52	19	21 06	22 16	49	22	47	69		
21	133	17.3		09.2	225	08.2 ¹³⁴		41.5 ¹⁰⁹	54	31	22	22 48	48	20	47	71		
22	148	17.0		08.8	239	40.6 ¹³⁴	-2	52.3 ¹⁰⁸	56	44	21 41	***	46	19	48	73		
23	163	16.8		08.5	254	13.0 ¹³⁴	-3	03.2 ¹⁰⁹	58	20 59	22 06	***	45	17	48	76		
24	178	16.5	-22	08.1	268	45.5 ¹³⁵	-3	13.9 ¹⁰⁷	60 S	21 17	22 41	***	23 43	15	11 49	78		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 16 ^h 47 ^m 3		Mag: -4.0 PMG: 12 ^h 06 ^m			Mag: +1.4 PMG: 7 ^h 55 ^m			Mag: -1.9 PMG: 7 ^h 53 ^m			Mag: +0.5 PMG: 10 ^h 58 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		hG ♅	Dec		
h	o	'	o	'	o	'	'	o	'	'	o	'	'	o	'	'		
0	107	29.8	178	36.7	-23	01.8	241	10.8	-16	31.1	241	34.4	-16	11.5	195	06.6	-22	31.5
1	122	32.2	193	35.7		01.5	256	11.7		31.5	256	36.5		11.6	210	08.7		31.5
2	137	34.7	208	34.8		01.2	271	12.7		32.0	271	38.5		11.7	225	10.9		31.5
3	152	37.1	223	33.8		00.9	286	13.6		32.4	286	40.6		11.8	240	13.0		31.5
4	167	39.6	238	32.9		00.5	301	14.5		32.9	301	42.7		11.9	255	15.2		31.5
5	182	42.1	253	32.0	-23	00.2	316	15.4	-16	33.3	316	44.7	-16	12.0	270	17.3	-22	31.5
6	197	44.5	268	31.0	-22	59.9	331	16.3	-16	33.7	331	46.8	-16	12.1	285	19.5	-22	31.5
7	212	47.0	283	30.1		59.6	346	17.2		34.2	346	48.9		12.2	300	21.7		31.5
8	227	49.5	298	29.2		59.2	1	18.1		34.6	1	51.0		12.4	315	23.8		31.5
9	242	51.9	313	28.2		58.9	16	19.0		35.1	16	53.0		12.5	330	26.0		31.5
10	257	54.4	328	27.3		58.6	31	19.9		35.5	31	55.1		12.6	345	28.1		31.5
11	272	56.9	343	26.4	-22	58.2	46	20.8	-16	35.9	46	57.2	-16	12.7	0	30.3	-22	31.5
12	287	59.3	358	25.4	-22	57.9	61	21.7	-16	36.4	61	59.2	-16	12.8	15	32.4	-22	31.5
13	303	01.8	13	24.5		57.6	76	22.7		36.8	77	01.3		12.9	30	34.6		31.5
14	318	04.3	28	23.6		57.2	91	23.6		37.3	92	03.4		13.0	45	36.7		31.5
15	333	06.7	43	22.6		56.9	106	24.5		37.7	107	05.5		13.1	60	38.9		31.5
16	348	09.2	58	21.7		56.6	121	25.4		38.2	122	07.5		13.2	75	41.0		31.5
17	3	11.6	73	20.8	-22	56.2	136	26.3	-16	38.6	137	09.6	-16	13.3	90	43.2	-22	31.5
18	18	14.1	88	19.8	-22	55.9	151	27.2	-16	39.0	152	11.7	-16	13.4	105	45.3	-22	31.5
19	33	16.6	103	18.9		55.5	166	28.1		39.5	167	13.8		13.5	120	47.5		31.5
20	48	19.0	118	18.0		55.2	181	29.0		39.9	182	15.8		13.6	135	49.6		31.5
21	63	21.5	133	17.0		54.9	196	29.9		40.4	197	17.9		13.7	150	51.8		31.5
22	78	24.0	148	16.1		54.5	211	30.8		40.8	212	20.0		13.8	165	53.9		31.5
23	93	26.4	163	15.2		54.2	226	31.7		41.2	227	22.1		13.9	180	56.1		31.5
24	108	28.9	178	14.3	-22	53.8	241	32.6	-16	41.7	242	24.1	-16	14.0	195	58.2	-22	31.5
Dif	—		-9		+3		+9		-4		+21		-1		+22		0	

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16/3 PMG: 12 ^h 07 ^m 1				Edad: 21 ^d 7 PHE { SD: 15 ^h 2 PMG: 6 ^h 16 ^m R°: 45 ^m 4 ^h : 56/1 12 ^h : 55/9 20 ^h : 55/6												
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	o	'	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m
0	178	16.5	-22	08.1	268	45.5	-3	13.9	60 N	7 06	8 01	8 56	0 30	77	11 49	14	
1	193	16.3		07.8	283	18.0 ¹³⁵		24.7 ¹⁰⁸	58	6 59	7 51	40	28	74	51	18	
2	208	16.0		07.4	297	50.5 ¹³⁵		35.4 ¹⁰⁷	56	53	41	27	26	72	54	19	
3	223	15.7		07.1	312	23.0 ¹³⁵		46.1 ¹⁰⁷	54	48	33	16	25	70	56	22	
4	238	15.5		06.7	326	55.6 ¹³⁶	-3	56.8 ¹⁰⁷	52	43	26	8 05	23	69	11 59	23	
5	253	15.2	-22	06.4	341	28.2 ¹³⁶	-4	07.4 ¹⁰⁶	50	6 38	7 19	7 56	0 22	67	12 01	24	
6	268	15.0	-22	06.0	356	00.8 ¹³⁶	-4	18.0 ¹⁰⁶	45	6 27	7 04	7 37	0 19	63	12 05	28	
7	283	14.7		05.7	10	33.4 ¹³⁶		28.6 ¹⁰⁶	40	18	6 52	22	17	60	08	31	
8	298	14.5		05.3	25	06.0 ¹³⁶		39.2 ¹⁰⁶	35	09	41	7 09	15	58	12	32	
9	313	14.2		05.0	39	38.7 ¹³⁷	-4	49.7 ¹⁰⁵	30	6 01	31	6 57	13	56	14	35	
10	328	13.9		04.6	54	11.3 ¹³⁶	-5	00.1 ¹⁰⁴	20	5 46	6 13	37	11	51	19	39	
11	343	13.7	-22	04.2	68	44.0 ¹³⁷	-5	10.6 ¹⁰⁵	10 N	5 31	5 57	6 20	0 08	48	12 23	42	
12	358	13.4	-22	03.9	83	16.7 ¹³⁷	-5	21.0 ¹⁰⁴	0	5 15	5 41	6 03	0 06	45	12 27	45	
13	13	13.2		03.5	97	49.5 ¹³⁸		31.4 ¹⁰⁴	10 S	4 57	24	5 47	03	42	31	48	
14	28	12.9		03.2	112	22.2 ¹³⁷		41.7 ¹⁰³	20	36	5 05	29	0 01	38	35	52	
15	43	12.6		02.8	126	55.0 ¹³⁸	-5	52.0 ¹⁰³	30	4 09	4 41	5 08	***	***	40	55	
16	58	12.4		02.4	141	27.7 ¹³⁷	-6	02.3 ¹⁰³	35	3 51	27	4 56	***	***	43	57	
17	73	12.1	-22	02.1	156	00.5 ¹³⁸	-6	12.5 ¹⁰²	40	3 30	4 10	4 42	***	***	12 46	60	
18	88	11.9	-22	01.7	170	33.3 ¹³⁸	-6	22.7 ¹⁰²	45	3 01	3 49	4 25	***	***	12 50	62	
19	103	11.6		01.4	185	06.1 ¹³⁸		32.9 ¹⁰²	50	2 21	22	4 05	***	***	54	66	
20	118	11.4		01.0	199	38.9 ¹³⁸		43.0 ¹⁰¹	52	1 58	3 08	3 55	***	***	56	68	
21	133	11.1		00.6	214	11.7 ¹³⁸	-6	53.0 ¹⁰⁰	54	1 26	2 52	43	***	***	12 58	70	
22	148	10.9	-22	00.3	228	44.5 ¹³⁸	-7	03.1 ¹⁰¹	56	***	33	31	***	***	13 01	71	
23	163	10.6	-21	59.9	243	17.4 ¹³⁹		13.1 ¹⁰⁰	58	***	2 08	3 16	***	***	04	73	
24	178	10.3	-21	59.5	257	50.2 ¹³⁸	-7	23.0 ⁹⁹	60 S	***	1 33	2 58	23 58	15	13 07	76	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 16 ^h 43 ^m 3		Mag: -4.0 PMG: 12 ^h 08 ^m		Mag: +1.4 PMG: 7 ^h 53 ^m		Mag: -1.9 PMG: 7 ^h 49 ^m		Mag: +0.5 PMG: 10 ^h 55 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	o	'	o	'	o	'	o	'	o	'
0	108	28.9	178	14.3	-22	53.8	241	32.6	-16	41.7
1	123	31.4	193	13.3		53.5	256	33.5		42.1
2	138	33.8	208	12.4		53.1	271	34.5		42.6
3	153	36.3	223	11.5		52.8	286	35.4		43.0
4	168	38.7	238	10.5		52.4	301	36.3		43.4
5	183	41.2	253	09.6	-22	52.1	316	37.2	-16	43.9
6	198	43.7	268	08.7	-22	51.7	331	38.1	-16	44.3
7	213	46.1	283	07.8		51.3	346	39.0		44.8
8	228	48.6	298	06.8		51.0	1	39.9		45.2
9	243	51.1	313	05.9		50.6	16	40.8		45.6
10	258	53.5	328	05.0		50.3	31	41.7		46.1
11	273	56.0	343	04.0	-22	49.9	46	42.6	-16	46.5
12	288	58.5	358	03.1	-22	49.5	61	43.5	-16	46.9
13	304	00.9	13	02.2		49.2	76	44.4		47.4
14	319	03.4	28	01.3		48.8	91	45.3		47.8
15	334	05.9	43	00.3		48.4	106	46.2		48.3
16	349	08.3	57	59.4		48.1	121	47.2		48.7
17	4	10.8	72	58.5	-22	47.7	136	48.1	-16	49.1
18	19	13.2	87	57.6	-22	47.3	151	49.0	-16	49.6
19	34	15.7	102	56.6		47.0	166	49.9		50.0
20	49	18.2	117	55.7		46.6	181	50.8		50.4
21	64	20.6	132	54.8		46.2	196	51.7		50.9
22	79	23.1	147	53.9		45.8	211	52.6		51.3
23	94	25.6	162	52.9		45.5	226	53.5		51.7
24	109	28.0	177	52.0	-22	45.1	241	54.4	-16	52.2
Dif	—		-9		+4		+9		-4	

0	7 06	8 01	8 56	0 30	77	11 49	14
58	6 59	7 51	40	28	74	51	18
56	53	41	27	26	72	54	19
54	48	33	16	25	70	56	22
52	43	26	8 05	23	69	11 59	23
50	6 38	7 19	7 56	0 22	67	12 01	24
45	6 27	7 04	7 37	0 19	63	12 05	28
40	18	6 52	22	17	60	08	31
35	09	41	7 09	15	58	12	32
30	6 01	31	6 57	13	56	14	35
20	5 46	6 13	37	11	51	19	39
10 N	5 31	5 57	6 20	0 08	48	12 23	42
0	5 15	5 41	6 03	0 06	45	12 27	45
10 S	4 57	24	5 47	03	42	31	48
20	36	5 05	29	0 01	38	35	52
30	4 09	4 41	5 08	***	***	40	55
35	3 51	27	4 56	***	***	43	57
40	3 30	4 10	4 42	***	***	12 46	60
45	3 01	3 49	4 25	***	***	12 50	62
50	2 21	22	4 05	***	***	54	66
52	1 58	3 08	3 55	***	***	56	68
54	1 26	2 52	43	***	***	12 58	70
56	***	33	31	***	***	13 01	71
58	***	2 08	3 16	***	***	04	73
60 S	***	1 33	2 58	23 58	15	13 07	76

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16/3 PMG: 12 ^h 07 ^m 5			Edad: 22 ^d 7 PHE { SD: 15/0 PMG: 7 ^h 01 ^m R°: 45 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	o	'	o	o	'	o	'	o	h m	h m	h m	h m m	h m m	h m m
0	178	10.3	-21 59.5	257	50.2	-7 23.0		60 N	15 21	16 15	17 10	1 47 74	12 03 17	
1	193	10.1		272	23.1 ¹³⁹	32.9 ⁹⁹		58	36	26	17	42 73	09 19	
2	208	09.8		286	55.9 ¹³⁸	42.8 ⁹⁸		56	15 49	35	23	38 70	13 22	
3	223	09.6		301	28.8 ¹³⁹	-7 52.6 ⁹⁹		54	16 01	43	28	35 68	18 22	
4	238	09.3		316	01.6 ¹³⁸	-8 02.4 ⁹⁸		52	11	50	33	32 66	22 24	
5	253	09.1	-21 57.7	330	34.5 ¹³⁹	-8 12.1 ⁹⁷		50	16 19	16 57	17 38	1 29 65	12 25 26	
6	268	08.8	-21 57.3	345	07.4 ¹³⁹	-8 21.8 ⁹⁷		45	16 38	17 11	17 48	1 22 62	12 33 29	
7	283	08.6		359	40.3 ¹³⁹	31.4 ⁹⁶		40	16 54	24	17 57	17 59	39 32	
8	298	08.3		56.6	14 13.1 ¹³⁸	41.0 ⁹⁶		35	17 07	35	18 06	13 56	44 35	
9	313	08.1		56.2	28 46.0 ¹³⁹	-8 50.6 ⁹⁶		30	18	17 44	14	09 54	49 36	
10	328	07.8		55.8	43 18.9 ¹³⁹	-9 00.1 ⁹⁵		20	38	18 02	29	1 02 51	12 58 39	
11	343	07.6	-21 55.4	57	51.8 ¹³⁹	-9 09.6 ⁹⁵		10 N	17 55	18 18	18 44	0 56 48	13 05 42	
12	358	07.3	-21 55.1	72	24.6 ¹³⁸	-9 19.0 ⁹⁴		0	18 11	18 33	18 59	0 51 44	13 12 45	
13	13	07.1		86	57.5 ¹³⁹	28.3 ⁹³		10 S	28	18 50	19 17	45 42	19 48	
14	28	06.8		54.3	101 30.4 ¹³⁹	37.6 ⁹³		20	18 45	19 09	19 38	39 39	27 50	
15	43	06.6		53.9	116 03.2 ¹³⁸	46.9 ⁹³		30	19 06	32	20 05	33 35	35 54	
16	58	06.3		53.5	130 36.1 ¹³⁹	-9 56.1 ⁹²		35	18	19 47	22	29 33	40 56	
17	73	06.1	-21 53.2	145	09.0 ¹³⁹	-10 05.3 ⁹²		40	19 31	20 03	20 44	0 25 31	13 46 58	
18	88	05.8	-21 52.8	159	41.8 ¹³⁸	-10 14.4 ⁹¹		45	19 48	20 24	21 11	0 20 28	13 52 61	
19	103	05.6		52.4	174 14.7 ¹³⁹	23.4 ⁹⁰		50	20 08	20 51	21 51	14 25	14 00 64	
20	118	05.3		52.0	188 47.5 ¹³⁸	32.4 ⁹⁰		52	18	21 04	22 13	11 24	04 65	
21	133	05.1		51.6	203 20.4 ¹³⁹	41.4 ⁹⁰		54	29	20	22 43	08 22	08 67	
22	148	04.8		51.2	217 53.2 ¹³⁸	50.3 ⁸⁹		56	42	21 39	** ** *	05 20	12 69	
23	163	04.6		50.9	232 26.0 ¹³⁸	-10 59.1 ⁸⁸		58	20 56	22 02	** ** *	0 02 18	17 71	
24	178	04.3	-21 50.5	246	58.8 ¹³⁸	-11 07.9 ⁸⁸		60 S	21 14	22 35	** ** *	** ** *	14 23 73	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 16 ^h 39 ^m 4		Mag: -4.0 PMG: 12 ^h 09 ^m			Mag: +1.4 PMG: 7 ^h 52 ^m			Mag: -1.9 PMG: 7 ^h 46 ^m			Mag: +0.5 PMG: 10 ^h 51 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	o	'	o	'	o	o	'	o	o	'	o	o	'	o
0	109	28.0	177	52.0	-22 45.1	241	54.4	-16 52.2	243	14.0	-16 16.4	196	49.9	-22 31.4
1	124	30.5	192	51.1	44.7	256	55.3	52.6	258	16.1	16.5	211	52.1	31.4
2	139	33.0	207	50.2	44.3	271	56.2	53.0	273	18.1	16.6	226	54.2	31.4
3	154	35.4	222	49.3	44.0	286	57.1	53.5	288	20.2	16.7	241	56.4	31.4
4	169	37.9	237	48.3	43.6	301	58.0	53.9	303	22.3	16.9	256	58.5	31.4
5	184	40.4	252	47.4	-22 43.2	316	58.9	-16 54.3	318	24.4	-16 17.0	272	00.7	-22 31.4
6	199	42.8	267	46.5	-22 42.8	331	59.8	-16 54.8	333	26.5	-16 17.1	287	02.9	-22 31.4
7	214	45.3	282	45.6	42.4	347	00.7	55.2	348	28.5	17.2	302	05.0	31.4
8	229	47.7	297	44.7	42.0	2	01.6	55.6	3	30.6	17.3	317	07.2	31.4
9	244	50.2	312	43.7	41.6	17	02.5	56.1	18	32.7	17.4	332	09.3	31.4
10	259	52.7	327	42.8	41.2	32	03.4	56.5	33	34.8	17.5	347	11.5	31.4
11	274	55.1	342	41.9	-22 40.9	47	04.3	-16 56.9	48	36.9	-16 17.6	2	13.6	-22 31.3
12	289	57.6	357	41.0	-22 40.5	62	05.3	-16 57.4	63	38.9	-16 17.7	17	15.8	-22 31.3
13	305	00.1	12	40.1	40.1	77	06.2	57.8	78	41.0	17.8	32	17.9	31.3
14	320	02.5	27	39.1	39.7	92	07.1	58.2	93	43.1	17.9	47	20.1	31.3
15	335	05.0	42	38.2	39.3	107	08.0	58.7	108	45.2	18.0	62	22.2	31.3
16	350	07.5	57	37.3	38.9	122	08.9	59.1	123	47.3	18.1	77	24.4	31.3
17	5	09.9	72	36.4	-22 38.5	137	09.8	-16 59.5	138	49.4	-16 18.2	92	26.6	-22 31.3
18	20	12.4	87	35.5	-22 38.1	152	10.7	-17 00.0	153	51.4	-16 18.3	107	28.7	-22 31.3
19	35	14.8	102	34.6	37.7	167	11.6	-17 00.4	168	53.5	18.4	122	30.9	31.3
20	50	17.3	117	33.6	37.3	182	12.5	00.8	183	55.6	18.5	137	33.0	31.3
21	65	19.8	132	32.7	36.9	197	13.4	01.3	198	57.7	18.6	152	35.2	31.3
22	80	22.2	147	31.8	36.5	212	14.3	01.7	213	59.8	18.7	167	37.3	31.3
23	95	24.7	162	30.9	36.1	227	15.2	02.1	229	01.9	18.8	182	39.5	31.3
24	110	27.2	177	30.0	-22 35.7	242	16.1	-17 02.5	244	03.9	-16 18.9	197	41.6	-22 31.3
Dif	—		-9 +4			+9 -4			+21 -1			+22 0		

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'3			Edad: 23 ^d 7 PHE { 4 ^h : 54'8 12 ^h : 54'7 20 ^h : 54'6												
	PMG: 12 ^h 07 ^m 9			SD: 14'9												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	o	'	o	o	'	o	'	o	h	m	h	m	h	m	h	m
0	178	04.3	-21	50.5	246	58.8	-11	07.9	60 N	7 05	7 59	8 53	3 01	73	12 20	21
1	193	04.1		50.1	261	31.7 ¹³⁹		16.7 ⁸⁸	58	6 58	49	38	2 55	69	28	23
2	208	03.8		49.7	276	04.5 ¹³⁸		25.4 ⁸⁷	56	52	40	25	48	68	35	24
3	223	03.6		49.3	290	37.2 ¹³⁷		34.0 ⁸⁶	54	47	32	14	43	66	41	26
4	238	03.3		48.9	305	10.0 ¹³⁸		42.6 ⁸⁶	52	42	25	8 04	38	64	46	28
5	253	03.1	-21	48.5	319	42.8 ¹³⁸	-11	51.1 ⁸⁵	50	6 37	7 18	7 55	2 34	62	12 51	29
6	268	02.8	-21	48.1	334	15.6 ¹³⁸	-11	59.5 ⁸⁴	45	6 27	7 04	7 37	2 24	60	13 02	32
7	283	02.6		47.8	348	48.3 ¹³⁷	-12	07.9 ⁸⁴	40	18	6 51	21	16	57	11	34
8	298	02.3		47.4	3	21.0 ¹³⁷		16.3 ⁸⁴	35	09	41	7 08	09	55	19	36
9	313	02.1		47.0	17	53.8 ¹³⁸		24.5 ⁸²	30	6 01	31	6 57	2 03	54	25	38
10	328	01.8		46.6	32	26.5 ¹³⁷		32.8 ⁸³	20	5 47	6 14	37	1 53	50	37	41
11	343	01.6	-21	46.2	46	59.2 ¹³⁷	-12	40.9 ⁸¹	10 N	5 32	5 58	6 20	1 44	47	13 47	44
12	358	01.3	-21	45.8	61	31.9 ¹³⁷	-12	49.0 ⁸¹	0	5 16	5 42	6 04	1 35	45	13 57	46
13	13	01.1		45.4	76	04.5 ¹³⁶	-12	57.1 ⁸¹	10 S	4 58	25	5 48	27	43	14 07	48
14	28	00.8		45.0	90	37.2 ¹³⁷	-13	05.1 ⁸⁰	20	37	5 06	30	18	40	17	50
15	43	00.6		44.6	105	09.8 ¹³⁶		13.0 ⁷⁹	30	4 11	4 43	5 10	08	37	29	53
16	58	00.4		44.2	119	42.5 ¹³⁷		20.8 ⁷⁸	35	3 53	29	4 58	1 02	35	36	55
17	73	00.1	-21	43.8	134	15.1 ¹³⁶	-13	28.6 ⁷⁸	40	3 32	4 12	4 44	0 56	33	14 44	56
18	87	59.9	-21	43.4	148	47.7 ¹³⁶	-13	36.4 ⁷⁸	45	3 04	3 52	4 28	0 48	31	14 53	59
19	102	59.6		43.0	163	20.3 ¹³⁶		44.0 ⁷⁶	50	2 25	25	4 07	39	28	15 04	62
20	117	59.4		42.6	177	52.8 ¹³⁵		51.6 ⁷⁶	52	2 03	3 12	3 58	35	26	09	63
21	132	59.1		42.2	192	25.4 ¹³⁶	-13	59.2 ⁷⁵	54	1 32	2 56	47	30	25	15	64
22	147	58.9		41.8	206	57.9 ¹³⁵	-14	06.7 ⁷⁵	56	0 31	37	34	25	23	21	67
23	162	58.6		41.4	221	30.4 ¹³⁵		14.1 ⁷⁴	58	***	2 13	19	20	21	28	69
24	177	58.4	-21	41.0	236	02.9 ¹³⁵	-14	21.4 ⁷³	60 S	***	1 41	3 02	0 13	19	15 36	71

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 16 ^h 35 ^m 5		Mag: -4.0 PMG: 12 ^h 11 ^m		Mag: +1.4 PMG: 7 ^h 50 ^m		Mag: -1.9 PMG: 7 ^h 43 ^m		Mag: +0.5 PMG: 10 ^h 48 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	o	'	o	'	o	'	o	'	o	'
0	110	27.2	177	30.0	-22	35.7	242	16.1	-17	02.5
1	125	29.6	192	29.1		35.3	257	17.0		03.0
2	140	32.1	207	28.1		34.9	272	17.9		03.4
3	155	34.6	222	27.2		34.4	287	18.8		03.8
4	170	37.0	237	26.3		34.0	302	19.7		04.3
5	185	39.5	252	25.4	-22	33.6	317	20.6	-17	04.7
6	200	42.0	267	24.5	-22	33.2	332	21.5	-17	05.1
7	215	44.4	282	23.6		32.8	347	22.4		05.6
8	230	46.9	297	22.7		32.4	2	23.3		06.0
9	245	49.3	312	21.8		32.0	17	24.2		06.4
10	260	51.8	327	20.9		31.5	32	25.1		06.8
11	275	54.3	342	19.9	-22	31.1	47	26.0	-17	07.3
12	290	56.7	357	19.0	-22	30.7	62	26.9	-17	07.7
13	305	59.2	12	18.1		30.3	77	27.8		08.1
14	321	01.7	27	17.2		29.9	92	28.7		08.5
15	336	04.1	42	16.3		29.4	107	29.6		09.0
16	351	06.6	57	15.4		29.0	122	30.5		09.4
17	6	09.1	72	14.5	-22	28.6	137	31.4	-17	09.8
18	21	11.5	87	13.6	-22	28.1	152	32.3	-17	10.3
19	36	14.0	102	12.7		27.7	167	33.2		10.7
20	51	16.5	117	11.8		27.3	182	34.1		11.1
21	66	18.9	132	10.9		26.9	197	35.0		11.5
22	81	21.4	147	09.9		26.4	212	35.9		12.0
23	96	23.8	162	09.0		26.0	227	36.8		12.4
24	111	26.3	177	08.1	-22	25.6	242	37.8	-17	12.8
Dif	—		-9 +4		+9 -4		+21 -1		-1	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna						
	SD: 16'3 PMG: 12 ^h 08 ^m 3			Edad: 24 ^d 7 PHE { 4 ^h : 54'4 12 ^h : 54'3 20 ^h : 54'2 R°: 47 ^m																
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°					
h	o	'	o	'	o	'	o	'	h m	h m	h m	h m m	h m m	h m m	h m m					
0	177	58.4	-21	41.0	236	02.9	-14	21.4	60 N	15 25	16 19	17 13	4 14 69	12 41 25						
1	192	58.2		40.6	250	35.4 ¹³⁵		28.7 ⁷³	58	40	29	20	4 04 67	51 27						
2	207	57.9		40.2	265	07.9 ¹³⁵		35.9 ⁷²	56	15 53	38	25	3 56 65	12 59 30						
3	222	57.7		39.8	279	40.3 ¹³⁴		43.0 ⁷¹	54	16 04	46	31	49 63	13 07 31						
4	237	57.4		39.4	294	12.7 ¹³⁴		50.1 ⁷¹	52	13	53	36	42 62	14 32						
5	252	57.2	-21	39.0	308	45.1 ¹³⁴	-14	57.1 ⁷⁰	50	16 22	16 59	17 40	3 36 61	13 20 34						
6	267	56.9	-21	38.6	323	17.5 ¹³⁴	-15	04.1 ⁷⁰	45	16 41	17 14	17 50	3 24 58	13 34 36						
7	282	56.7		38.2	337	49.9 ¹³⁴		10.9 ⁶⁸	40	16 56	26	17 59	13 56	45 38						
8	297	56.5		37.8	352	22.2 ¹³³		17.7 ⁶⁸	35	17 09	36	18 08	3 04 55	13 55 39						
9	312	56.2		37.3	6	54.5 ¹³³		24.5 ⁶⁸	30	20	17 46	15	2 57 52	14 03 41						
10	327	56.0		36.9	21	26.8 ¹³³		31.1 ⁶⁶	20	39	18 03	30	43 50	18 43						
11	342	55.7	-21	36.5	35	59.1 ¹³³	-15	37.7 ⁶⁶	10 N	17 56	18 19	18 45	2 31 48	14 31 44						
12	357	55.5	-21	36.1	50	31.4 ¹³³	-15	44.3 ⁶⁶	0	18 12	18 34	19 00	2 20 46	14 43 46						
13	12	55.3		35.7	65	03.6 ¹³²		50.7 ⁶⁴	10 S	28	18 51	17	2 10 43	14 55 48						
14	27	55.0		35.3	79	35.8 ¹³²	-15	57.1 ⁶⁴	20	18 45	19 09	19 38	1 58 42	15 07 50						
15	42	54.8		34.9	94	08.0 ¹³²	-16	03.4 ⁶³	30	19 05	32	20 05	45 39	22 52						
16	57	54.5		34.5	108	40.2 ¹³²		09.6 ⁶²	35	17	19 46	22	37 38	31 53						
17	72	54.3	-21	34.0	123	12.4 ¹³²	-16	15.8 ⁶²	40	19 31	20 03	20 43	1 29 36	15 40 55						
18	87	54.1	-21	33.6	137	44.5 ¹³¹	-16	21.9 ⁶¹	45	19 47	20 23	21 10	1 19 34	15 52 57						
19	102	53.8		33.2	152	16.6 ¹³¹		27.9 ⁶⁰	50	20 07	20 49	21 48	07 31	16 06 59						
20	117	53.6		32.8	166	48.7 ¹³¹		33.8 ⁵⁹	52	17	21 02	22 09	1 01 30	12 60						
21	132	53.4		32.4	181	20.8 ¹³¹		39.7 ⁵⁹	54	27	17	22 38	0 55 28	19 62						
22	147	53.1		32.0	195	52.8 ¹³⁰		45.4 ⁵⁷	56	40	36	23 28	48 27	28 62						
23	162	52.9		31.5	210	24.9 ¹³¹		51.2 ⁵⁸	58	20 54	21 58	** ** *	41 25	37 64						
24	177	52.6	-21	31.1	224	56.9 ¹³⁰	-16	56.8 ⁵⁶	60 S	21 11	22 29	** ** *	0 32 23	16 47 67						
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 16 ^h 31 ^m 5			Mag: -4.0 PMG: 12 ^h 12 ^m			Mag: +1.4 PMG: 7 ^h 49 ^m			Mag: -1.9 PMG: 7 ^h 39 ^m			Mag: +0.5 PMG: 10 ^h 44 ^m							
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♎	Dec						
h	o	'		o	'		o	'		o	'		o	'						
0	111	26.3		177	08.1	-22	25.6	242	37.8	-17	12.8	244	54.0	-16	21.2					
1	126	28.8			25.1		257	38.7		13.2		259	56.1		21.3					
2	141	31.2		207	06.3		24.7	272	39.6		13.7	274	58.2		21.4					
3	156	33.7		222	05.4		24.2	287	40.5		14.1	290	00.3		21.5					
4	171	36.2		237	04.5		23.8	302	41.4		14.5	305	02.4		21.6					
5	186	38.6		252	03.6	-22	23.4	317	42.3	-17	14.9	320	04.4	-16	21.7					
6	201	41.1		267	02.7	-22	22.9	332	43.2	-17	15.3	335	06.5	-16	21.8					
7	216	43.6		282	01.8		22.5	347	44.1		15.8	350	08.6		21.9					
8	231	46.0		297	00.9		22.0	2	45.0		16.2	5	10.7		22.0					
9	246	48.5		312	00.0		21.6	17	45.9		16.6	20	12.8		22.1					
10	261	51.0		326	59.1		21.1	32	46.8		17.0	35	14.9		22.2					
11	276	53.4		341	58.2	-22	20.7	47	47.7	-17	17.5	50	17.0	-16	22.3					
12	291	55.9		356	57.3	-22	20.2	62	48.6	-17	17.9	65	19.1	-16	22.4					
13	306	58.3		11	56.4		19.8	77	49.5		18.3	80	21.2		22.5					
14	322	00.8		26	55.5		19.3	92	50.4		18.7	95	23.3		22.6					
15	337	03.3		41	54.6		18.9	107	51.3		19.2	110	25.3		22.7					
16	352	05.7		56	53.7		18.4	122	52.2		19.6	125	27.4		22.8					
17	7	08.2		71	52.8	-22	18.0	137	53.1	-17	20.0	140	29.5	-16	22.9					
18	22	10.7		86	51.9	-22	17.5	152	54.0	-17	20.4	155	31.6	-16	23.0					
19	37	13.1		101	51.0		17.1	167	54.9		20.8	170	33.7		23.1					
20	52	15.6		116	50.1		16.6	182	55.8		21.3	185	35.8		23.2					
21	67	18.1		131	49.2		16.1	197	56.7		21.7	200	37.9		23.3					
22	82	20.5		146	48.3		15.7	212	57.6		22.1	215	40.0		23.3					
23	97	23.0		161	47.4		15.2	227	58.5		22.5	230	42.1		23.4					
24	112	25.4		176	46.5	-22	14.8	242	59.4	-17	22.9	245	44.2	-16	23.5					
Dif	—			-9			+4	+9			-4			+21			-1	+22		

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16:3 PMG: 12 ^h 08 ^m 7			Edad: 25 ^d 7 PHE { 4 ^h : 54:1 12 ^h : 54:1 20 ^h : 54:0 SD: 14:7 PMG: 9 ^h 18 ^m R°: 47 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	o	'	o	'	o	'	o	'	h	m	h	m	h	m	h	m
0	177	52.6	-21	31.1	224	56.9	-16	56.8	60 N	7 03	7 57	8 51	5 23	64	13 06	33
1	192	52.4		30.7	239	28.8 ¹²⁹	-17	02.3 ⁵⁵	58	6 57	47	36	11	62	18	35
2	207	52.2		30.3	254	00.8 ¹³⁰		07.8 ⁵⁵	56	51	38	23	5 01	61	29	36
3	222	51.9		29.8	268	32.7 ¹²⁹		13.2 ⁵⁴	54	46	31	12	4 52	59	38	37
4	237	51.7		29.4	283	04.7 ¹³⁰		18.5 ⁵³	52	41	23	8 03	44	58	46	38
5	252	51.5	-21	29.0	297	36.6 ¹²⁹	-17	23.8 ⁵³	50	6 36	7 17	7 54	4 37	57	13 54	39
6	267	51.2	-21	28.6	312	08.4 ¹²⁸	-17	29.0 ⁵²	45	6 26	7 03	7 36	4 22	55	14 10	40
7	282	51.0		28.1	326	40.3 ¹²⁹		34.0 ⁵⁰	40	17	6 51	21	4 09	54	23	41
8	297	50.8		27.7	341	12.1 ¹²⁸		39.1 ⁵¹	35	09	40	7 08	3 59	52	34	43
9	312	50.5		27.3	355	43.9 ¹²⁸		44.0 ⁴⁹	30	6 02	31	6 57	49	52	14 44	43
10	327	50.3		26.9	10	15.7 ¹²⁸		48.8 ⁴⁸	20	5 47	6 14	38	33	50	15 01	44
11	342	50.1	-21	26.4	24	47.5 ¹²⁸	-17	53.6 ⁴⁸	10 N	5 32	5 58	6 21	3 19	49	15 15	46
12	357	49.8	-21	26.0	39	19.2 ¹²⁷	-17	58.3 ⁴⁷	0	5 17	5 43	6 05	3 06	47	15 29	47
13	12	49.6		25.6	53	50.9 ¹²⁷	-18	02.9 ⁴⁶	10 S	5 00	26	5 49	2 53	46	43	48
14	27	49.4		25.1	68	22.6 ¹²⁷		07.4 ⁴⁵	20	4 39	5 08	32	40	43	15 57	50
15	42	49.1		24.7	82	54.3 ¹²⁷		11.9 ⁴⁵	30	4 12	4 45	12	24	42	16 14	51
16	57	48.9		24.3	97	26.0 ¹²⁷		16.2 ⁴³	35	3 56	31	5 00	15	41	24	52
17	72	48.7	-21	23.9	111	57.6 ¹²⁶	-18	20.5 ⁴³	40	3 35	4 15	4 46	2 05	39	16 35	53
18	87	48.4	-21	23.4	126	29.2 ¹²⁶	-18	24.7 ⁴²	45	3 08	3 54	4 30	1 53	37	16 49	53
19	102	48.2		23.0	141	00.8 ¹²⁶		28.8 ⁴¹	50	2 29	28	10	38	36	17 05	55
20	117	48.0		22.5	155	32.4 ¹²⁶		32.8 ⁴⁰	52	2 08	15	4 01	31	35	12	56
21	132	47.7		22.1	170	03.9 ¹²⁵		36.8 ⁴⁰	54	1 39	3 00	3 50	23	34	21	57
22	147	47.5		21.7	184	35.5 ¹²⁶		40.6 ³⁸	56	0 50	2 42	38	15	33	30	58
23	162	47.3		21.2	199	07.0 ¹²⁵		44.4 ³⁸	58	** **	2 19	23	1 06	30	41	59
24	177	47.0	-21	20.8	213	38.5 ¹²⁵	-18	48.1 ³⁷	60 S	** **	1 48	3 06	0 55	29	17 54	60
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 16 ^h 27 ^m 6			Mag: -4.0 PMG: 12 ^h 14 ^m			Mag: +1.4 PMG: 7 ^h 48 ^m			Mag: -1.9 PMG: 7 ^h 36 ^m			Mag: +0.5 PMG: 10 ^h 41 ^m			
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec	
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'
0	112	25.4	176	46.5	-22	14.8	242	59.4	-17	22.9	245	44.2	-16	23.5	199	25.1
1	127	27.9	191	45.6		14.3	258	00.3		23.4	260	46.3		23.6	214	27.3
2	142	30.4	206	44.7		13.8	273	01.2		23.8	275	48.4		23.7	229	29.4
3	157	32.8	221	43.8		13.4	288	02.1		24.2	290	50.5		23.8	244	31.6
4	172	35.3	236	42.9		12.9	303	02.9		24.6	305	52.6		23.9	259	33.8
5	187	37.8	251	42.0	-22	12.4	318	03.8	-17	25.0	320	54.6	-16	24.0	274	35.9
6	202	40.2	266	41.1	-22	12.0	333	04.7	-17	25.5	335	56.7	-16	24.1	289	38.1
7	217	42.7	281	40.2		11.5	348	05.6		25.9	350	58.8		24.2	304	40.2
8	232	45.2	296	39.3		11.0	3	06.5		26.3	6	00.9		24.3	319	42.4
9	247	47.6	311	38.4		10.5	18	07.4		26.7	21	03.0		24.4	334	44.5
10	262	50.1	326	37.5		10.1	33	08.3		27.1	36	05.1		24.5	349	46.7
11	277	52.6	341	36.7	-22	09.6	48	09.2	-17	27.5	51	07.2	-16	24.6	4	48.9
12	292	55.0	356	35.8	-22	09.1	63	10.1	-17	28.0	66	09.3	-16	24.7	19	51.0
13	307	57.5	11	34.9		08.6	78	11.0		28.4	81	11.4		24.8	34	53.2
14	322	59.9	26	34.0		08.2	93	11.9		28.8	96	13.5		24.9	49	55.3
15	338	02.4	41	33.1		07.7	108	12.8		29.2	111	15.6		25.0	64	57.5
16	353	04.9	56	32.2		07.2	123	13.7		29.6	126	17.7		25.1	79	59.6
17	8	07.3	71	31.3	-22	06.7	138	14.6	-17	30.0	141	19.8	-16	25.2	95	01.8
18	23	09.8	86	30.4	-22	06.2	153	15.5	-17	30.5	156	21.9	-16	25.3	110	04.0
19	38	12.3	101	29.5		05.7	168	16.4		30.9	171	24.0		25.4	125	06.1
20	53	14.7	116	28.6		05.3	183	17.3		31.3	186	26.1		25.4	140	08.3
21	68	17.2	131	27.7		04.8	198	18.2		31.7	201	28.2		25.5	155	10.4
22	83	19.7	146	26.9		04.3	213	19.1		32.1	216	30.3		25.6	170	12.6
23	98	22.1	161	26.0		03.8	228	20.0		32.5	231	32.4		25.7	185	14.8
24	113	24.6	176	25.1	-22	03.3	243	20.9	-17	33.0	246	34.5	-16	25.8	200	16.9
Dif	—		-9		+5		+9		-4		+21		-1		+22	

UT	SOL		● LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16 ^h 3		Edad: 26 ^d 7 PHE { 4 ^h : 54 ^h 0 12 ^h : 54 ^h 0 20 ^h : 53 ^h 9												
	PMG: 12 ^h 09 ^m 0		SD: 14 ^h 7 PMG: 10 ^h 05 ^m R°: 47 ^m												
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°	
h	o	'	o	'	o	'	o	h m	h m	h m	h m m	h m m	h m m	h m m	
0	177	47.0	-21 20.8	213	38.5	-18 48.1	36	60 N	15 29	16 23	17 17	6 27 56	13 39 42		
1	192	46.8	20.4	228	09.9 ¹²⁴	51.7	36	58	44	32	23	13 55	13 53 43		
2	207	46.6	19.9	242	41.4 ¹²⁵	55.2	35	56	15 56	41	28	6 02 54	14 05 43		
3	222	46.4	19.5	257	12.8 ¹²⁴	-18 58.6	34	54	16 07	49	33	5 51 54	15 44		
4	237	46.1	19.0	271	44.3 ¹²⁵	-19 02.0	34	52	17	16 56	38	42 54	24 45		
5	252	45.9	-21 18.6	286	15.7 ¹²⁴	-19 05.2	32	50	16 25	17 02	17 43	5 34 53	14 33 44		
6	267	45.7	-21 18.2	300	47.0 ¹²³	-19 08.4	32	45	16 43	17 16	17 52	5 17 52	14 50 45		
7	282	45.4	17.7	315	18.4 ¹²⁴	11.5	31	40	16 58	28	18 01	5 03 51	15 04 46		
8	297	45.2	17.3	329	49.7 ¹²³	14.5	30	35	17 11	38	09	4 51 51	17 46		
9	312	45.0	16.8	344	21.1 ¹²⁴	17.4	29	30	22	17 47	17	41 50	27 47		
10	327	44.8	16.4	358	52.4 ¹²³	20.2	28	20	40	18 04	31	23 49	15 45 47		
11	342	44.5	-21 15.9	13	23.7 ¹²³	-19 22.9	27	10 N	17 57	18 20	18 46	4 08 48	16 01 48		
12	357	44.3	-21 15.5	27	54.9 ¹²²	-19 25.6	27	0	18 13	18 35	19 01	3 53 48	16 16 48		
13	12	44.1	15.0	42	26.2 ¹²³	28.1	25	10 S	28	18 51	18	39 47	31 48		
14	27	43.8	14.6	56	57.5 ¹²³	30.6	25	20	18 45	19 10	19 38	23 46	16 47 49		
15	42	43.6	14.2	71	28.7 ¹²²	33.0	24	30	19 05	32	20 04	3 06 45	17 05 49		
16	57	43.4	13.7	85	59.9 ¹²²	35.3	23	35	17	19 46	21	2 56 44	16 49		
17	72	43.2	-21 13.3	100	31.1 ¹²²	-19 37.5	22	40	19 30	20 02	20 41	2 44 44	17 28 50		
18	87	42.9	-21 12.8	115	02.3 ¹²²	-19 39.6	21	45	19 46	20 22	21 08	2 30 43	17 42 50		
19	102	42.7	12.3	129	33.5 ¹²²	41.6	20	50	20 06	20 47	21 45	14 41	18 00 50		
20	117	42.5	11.9	144	04.6 ¹²¹	43.5	19	52	15	21 00	22 06	2 06 41	08 51		
21	132	42.3	11.4	158	35.8 ¹²²	45.4	19	54	25	15	22 33	1 57 41	18 50		
22	147	42.0	11.0	173	06.9 ¹²¹	47.1	17	56	37	32	23 16	48 39	28 51		
23	162	41.8	10.5	187	38.0 ¹²¹	48.8	17	58	20 51	21 54	** ** *	36 39	40 51		
24	177	41.6	-21 10.1	202	09.1 ¹²¹	-19 50.3	15	60 S	21 08	22 23	** ** *	1 24 37	18 54 51		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 16 ^h 23 ^m 7		Mag: -4.0 PMG: 12 ^h 15 ^m			Mag: +1.4 PMG: 7 ^h 46 ^m			Mag: -1.9 PMG: 7 ^h 33 ^m			Mag: +0.5 PMG: 10 ^h 37 ^m			
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♃	Dec	hG ♃	Dec				
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	
0	113	24.6	176 25.1	-22 03.3	243 20.9	-17 33.0	246 34.5	-16 25.8	200 16.9	-22 31.0					
1	128	27.1	191 24.2	02.8	258 21.8	33.4	261 36.6	25.9	215 19.1	31.0					
2	143	29.5	206 23.3	02.3	273 22.7	33.8	276 38.7	26.0	230 21.2	31.0					
3	158	32.0	221 22.4	01.8	288 23.6	34.2	291 40.8	26.1	245 23.4	31.0					
4	173	34.4	236 21.5	01.3	303 24.5	34.6	306 42.9	26.2	260 25.5	31.0					
5	188	36.9	251 20.7	-22 00.8	318 25.4	-17 35.0	321 45.0	-16 26.3	275 27.7	-22 31.0					
6	203	39.4	266 19.8	-22 00.3	333 26.3	-17 35.4	336 47.1	-16 26.4	290 29.9	-22 31.0					
7	218	41.8	281 18.9	-21 59.8	348 27.2	35.9	351 49.2	26.5	305 32.0	31.0					
8	233	44.3	296 18.0	59.3	3 28.1	36.3	6 51.3	26.6	320 34.2	31.0					
9	248	46.8	311 17.1	58.8	18 29.0	36.7	21 53.4	26.7	335 36.3	31.0					
10	263	49.2	326 16.2	58.3	33 29.9	37.1	36 55.5	26.8	350 38.5	31.0					
11	278	51.7	341 15.3	-21 57.8	48 30.8	-17 37.5	51 57.6	-16 26.9	5 40.7	-22 30.9					
12	293	54.2	356 14.5	-21 57.3	63 31.7	-17 37.9	66 59.7	-16 27.0	20 42.8	-22 30.9					
13	308	56.6	11 13.6	56.8	78 32.6	38.3	82 01.8	27.0	35 45.0	30.9					
14	323	59.1	26 12.7	56.3	93 33.5	38.7	97 03.9	27.1	50 47.1	30.9					
15	339	01.6	41 11.8	55.8	108 34.4	39.2	112 06.0	27.2	65 49.3	30.9					
16	354	04.0	56 10.9	55.3	123 35.3	39.6	127 08.1	27.3	80 51.4	30.9					
17	9	06.5	71 10.1	-21 54.8	138 36.1	-17 40.0	142 10.2	-16 27.4	95 53.6	-22 30.9					
18	24	08.9	86 09.2	-21 54.3	153 37.0	-17 40.4	157 12.3	-16 27.5	110 55.8	-22 30.9					
19	39	11.4	101 08.3	53.7	168 37.9	40.8	172 14.4	27.6	125 57.9	30.9					
20	54	13.9	116 07.4	53.2	183 38.8	41.2	187 16.5	27.7	141 00.1	30.9					
21	69	16.3	131 06.5	52.7	198 39.7	41.6	202 18.6	27.8	156 02.2	30.9					
22	84	18.8	146 05.7	52.2	213 40.6	42.0	217 20.7	27.9	171 04.4	30.9					
23	99	21.3	161 04.8	51.7	228 41.5	42.4	232 22.8	28.0	186 06.6	30.9					
24	114	23.7	176 03.9	-21 51.2	243 42.4	-17 42.9	247 24.9	-16 28.1	201 08.7	-22 30.9					
Dif	—	—	-9	+5	+9	-4	+21	-1	+22	0					

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'3			Edad: 27 ^d 7	PHE {	4 ^h : 53'9		12 ^h : 54'0	20 ^h : 54'0		R°: 48 ^m	R°: 48 ^m	R°: 48 ^m	R°: 48 ^m
	PMG: 12 ^h 09 ^m 4													
h	G ☉	Dec		G ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R°	Hora	R°
0	177	41.6	-21	10.1	202	09.1	-19	50.3	60 N	7 01	7 55	8 48	7 23	46
1	192	41.4		09.6	216	40.2	121	51.8	58	6 55	45	33	7 08	47
2	207	41.2		09.2	231	11.3	121	53.2	56	49	37	21	6 56	47
3	222	40.9		08.7	245	42.4	121	54.5	54	44	29	11	45	47
4	237	40.7		08.3	260	13.4	120	55.7	52	40	22	8 01	36	47
5	252	40.5	-21	07.8	274	44.5	121	56.8	50	6 35	7 16	7 53	6 27	48
6	267	40.3	-21	07.3	289	15.5	120	57.8	45	6 26	7 02	7 35	6 09	48
7	282	40.0		06.9	303	46.5	120	58.8	40	17	6 50	20	5 54	48
8	297	39.8		06.4	318	17.6	121	59.6	35	09	40	7 08	42	48
9	312	39.6		06.0	332	48.6	120	00.3	30	6 01	31	6 57	31	48
10	327	39.4		05.5	347	19.6	120	01.0	20	5 47	6 14	38	5 12	48
11	342	39.2	-21	05.0	1	50.6	120	01.5	10 N	5 33	5 59	6 21	4 56	48
12	357	38.9	-21	04.6	16	21.6	120	02.0	0	5 18	5 44	6 06	4 41	48
13	12	38.7		04.1	30	52.6	120	02.4	10 S	5 01	27	5 50	26	48
14	27	38.5		03.6	45	23.6	120	02.6	20	4 40	5 09	33	4 09	48
15	42	38.3		03.2	59	54.5	119	02.8	30	4 14	4 47	13	3 51	48
16	57	38.1		02.7	74	25.5	120	02.9	35	3 58	33	5 02	40	48
17	72	37.8	-21	02.2	88	56.5	120	02.9	40	3 37	4 17	4 49	3 28	48
18	87	37.6	-21	01.8	103	27.4	119	02.8	45	3 11	3 57	4 33	3 13	48
19	102	37.4		01.3	117	58.4	120	02.7	50	2 34	32	13	2 55	48
20	117	37.2		00.8	132	29.4	120	02.4	52	2 13	19	4 04	47	48
21	132	37.0	-21	00.4	147	00.3	119	02.0	54	1 46	3 04	3 53	38	47
22	147	36.8	-20	59.9	161	31.3	120	01.5	56	1 03	2 46	41	27	48
23	162	36.5		59.4	176	02.2	119	01.0	58	** ** *	2 25	28	15	47
24	177	36.3	-20	59.0	190	33.2	120	00.3	60 S	** ** *	1 56	3 11	2 01	47

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 16 ^h 19 ^m 7		Mag: -4.0 PMG: 12 ^h 16 ^m		Mag: +1.4 PMG: 7 ^h 45 ^m		Mag: -1.9 PMG: 7 ^h 29 ^m		Mag: +0.5 PMG: 10 ^h 34 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	o	'	o	'	o	'	o	'	o	'
0	114	23.7	176	03.9	-21	51.2	243	42.4	-17	42.9
1	129	26.2	191	03.0		50.6	258	43.3		43.3
2	144	28.7	206	02.2		50.1	273	44.2		43.7
3	159	31.1	221	01.3		49.6	288	45.1		44.1
4	174	33.6	236	00.4		49.1	303	46.0		44.5
5	189	36.0	250	59.5	-21	48.5	318	46.9	-17	44.9
6	204	38.5	265	58.6	-21	48.0	333	47.8	-17	45.3
7	219	41.0	280	57.8		47.5	348	48.7		45.7
8	234	43.4	295	56.9		47.0	3	49.6		46.1
9	249	45.9	310	56.0		46.4	18	50.5		46.5
10	264	48.4	325	55.2		45.9	33	51.4		46.9
11	279	50.8	340	54.3	-21	45.4	48	52.3	-17	47.3
12	294	53.3	355	53.4	-21	44.8	63	53.2	-17	47.8
13	309	55.8	10	52.5		44.3	78	54.0		48.2
14	324	58.2	25	51.7		43.8	93	54.9		48.6
15	340	00.7	40	50.8		43.2	108	55.8		49.0
16	355	03.2	55	49.9		42.7	123	56.7		49.4
17	10	05.6	70	49.0	-21	42.2	138	57.6	-17	49.8
18	25	08.1	85	48.2	-21	41.6	153	58.5	-17	50.2
19	40	10.5	100	47.3		41.1	168	59.4		50.6
20	55	13.0	115	46.4		40.5	184	00.3		51.0
21	70	15.5	130	45.6		40.0	199	01.2		51.4
22	85	17.9	145	44.7		39.5	214	02.1		51.8
23	100	20.4	160	43.8		38.9	229	03.0		52.2
24	115	22.9	175	43.0	-21	38.4	244	03.9	-17	52.6
Dif	—		-9 +5		+9 -4		+21 -1		-1 0	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:3			Edad: 28 ^d 7 PHE { 4 ^h : 54:0 12 ^h : 54:0 20 ^h : 54:1					Final del crepúsculo			Salida de Luna		Puesta de Luna	
	PMG: 12 ^h 09 ^m 8			PMG: 11 ^h 40 ^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	o	'	o	'	o	'	o	h m	h m	h m	h m m	h m m	h m m	h m m	
0	177	36.3	-20 59.0	190	33.2	-20 00.3	7 60 N	15 34	16 26	17 20	8 09 38	15 13 62			
1	192	36.1	58.5	205	04.1 ¹¹⁹	-19 59.6	8 58	15 48	36	26	7 55 39	28 59			
2	207	35.9	58.0	219	35.1 ¹²⁰	58.8	10 56	16 00	44	31	43 40	40 58			
3	222	35.7	57.5	234	06.0 ¹¹⁹	57.8	10 54	10	52	36	32 41	50 58			
4	237	35.5	57.1	248	37.0 ¹²⁰	56.8	10 52	20	16 59	41	23 41	15 59 57			
5	252	35.2	-20 56.6	263	07.9 ¹¹⁹	-19 55.7	11 50	16 28	17 05	17 45	7 15 41	16 08 56			
6	267	35.0	-20 56.1	277	38.9 ¹²⁰	-19 54.5	12 45	16 46	17 18	17 55	6 57 42	16 26 54			
7	282	34.8	55.6	292	09.8 ¹¹⁹	53.2	13 40	17 00	30	18 03	42 44	40 53			
8	297	34.6	55.2	306	40.8 ¹²⁰	51.8	14 35	12	40	11	30 44	16 52 53			
9	312	34.4	54.7	321	11.7 ¹¹⁹	50.3	15 30	23	17 49	18	19 45	17 03 51			
10	327	34.2	54.2	335	42.7 ¹²⁰	48.7	16 20	42	18 05	32	6 00 46	21 50			
11	342	34.0	-20 53.7	350	13.7 ¹²⁰	-19 47.1	16 10 N	17 58	18 20	18 46	5 44 47	17 37 49			
12	357	33.7	-20 53.2	4	44.6 ¹¹⁹	-19 45.3	18 0	18 13	18 36	19 01	5 29 48	17 52 48			
13	12	33.5	52.8	19	15.6 ¹²⁰	43.5	18 10 S	29	18 51	18	5 14 48	18 07 46			
14	27	33.3	52.3	33	46.6 ¹²⁰	41.5	20 20	18 46	19 10	19 38	4 57 50	23 45			
15	42	33.1	51.8	48	17.6 ¹²⁰	39.5	20 30	19 05	31	20 04	39 50	41 43			
16	57	32.9	51.3	62	48.6 ¹²⁰	37.4	21 35	16	19 45	20	28 51	18 51 43			
17	72	32.7	-20 50.8	77	19.6 ¹²⁰	-19 35.1	23 40	19 29	20 01	20 40	4 16 51	19 03 42			
18	87	32.5	-20 50.3	91	50.6 ¹²⁰	-19 32.8	23 45	19 45	20 20	21 06	4 01 53	19 17 41			
19	102	32.3	49.9	106	21.6 ¹²⁰	30.4	24 50	20 04	45	21 42	3 43 54	35 39			
20	117	32.0	49.4	120	52.6 ¹²⁰	27.9	25 52	13	20 58	22 02	35 54	43 38			
21	132	31.8	48.9	135	23.7 ¹²¹	25.4	25 54	23	21 12	22 27	25 55	19 52 37			
22	147	31.6	48.4	149	54.7 ¹²⁰	22.7	27 56	35	29	23 06	15 55	20 02 36			
23	162	31.4	47.9	164	25.8 ¹²¹	19.9	28 58	20 48	21 50	** ** *	3 02 56	14 34			
24	177	31.2	-20 47.4	178	56.8 ¹²⁰	-19 17.1	28 60 S	21 04	22 17	** ** *	2 48 57	20 27 33			
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 16 ^h 15 ^m 8			Mag: -4.0 PMG: 12 ^h 18 ^m			Mag: +1.3 PMG: 7 ^h 43 ^m			Mag: -1.9 PMG: 7 ^h 26 ^m			Mag: +0.5 PMG: 10 ^h 30 ^m		
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♃	Dec	hG ♃	Dec	hG ♃	Dec		
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	
0	115	22.9	175 43.0	-21 38.4	244 03.9	-17 52.6	248 15.4	-16 30.3	202 00.6	-22 30.8					
1	130	25.3	190 42.1	37.8	259 04.8	53.0	263 17.5	30.4	217 02.7	30.8					
2	145	27.8	205 41.2	37.3	274 05.7	53.4	278 19.6	30.5	232 04.9	30.8					
3	160	30.3	220 40.4	36.7	289 06.6	53.8	293 21.7	30.5	247 07.1	30.8					
4	175	32.7	235 39.5	36.2	304 07.5	54.2	308 23.8	30.6	262 09.2	30.7					
5	190	35.2	250 38.6	-21 35.6	319 08.3	-17 54.6	323 25.9	-16 30.7	277 11.4	-22 30.7					
6	205	37.7	265 37.8	-21 35.1	334 09.2	-17 55.1	338 28.1	-16 30.8	292 13.5	-22 30.7					
7	220	40.1	280 36.9	34.5	349 10.1	55.5	353 30.2	30.9	307 15.7	30.7					
8	235	42.6	295 36.0	34.0	4 11.0	55.9	8 32.3	31.0	322 17.9	30.7					
9	250	45.0	310 35.2	33.4	19 11.9	56.3	23 34.4	31.1	337 20.0	30.7					
10	265	47.5	325 34.3	32.8	34 12.8	56.7	38 36.5	31.2	352 22.2	30.7					
11	280	50.0	340 33.5	-21 32.3	49 13.7	-17 57.1	53 38.6	-16 31.3	7 24.3	-22 30.7					
12	295	52.4	355 32.6	-21 31.7	64 14.6	-17 57.5	68 40.7	-16 31.4	22 26.5	-22 30.7					
13	310	54.9	10 31.7	31.2	79 15.5	57.9	83 42.8	31.5	37 28.7	30.7					
14	325	57.4	25 30.9	30.6	94 16.4	58.3	98 44.9	31.5	52 30.8	30.7					
15	340	59.8	40 30.0	30.0	109 17.3	58.7	113 47.0	31.6	67 33.0	30.7					
16	356	02.3	55 29.1	29.5	124 18.2	59.1	128 49.2	31.7	82 35.1	30.7					
17	11	04.8	70 28.3	-21 28.9	139 19.1	-17 59.5	143 51.3	-16 31.8	97 37.3	-22 30.7					
18	26	07.2	85 27.4	-21 28.3	154 19.9	-17 59.9	158 53.4	-16 31.9	112 39.5	-22 30.7					
19	41	09.7	100 26.6	27.8	169 20.8	-18 00.3	173 55.5	32.0	127 41.6	30.7					
20	56	12.2	115 25.7	27.2	184 21.7	00.7	188 57.6	32.1	142 43.8	30.7					
21	71	14.6	130 24.9	26.6	199 22.6	01.1	203 59.7	32.2	157 46.0	30.7					
22	86	17.1	145 24.0	26.1	214 23.5	01.5	219 01.8	32.3	172 48.1	30.7					
23	101	19.5	160 23.1	25.5	229 24.4	01.9	234 03.9	32.3	187 50.3	30.6					
24	116	22.0	175 22.3	-21 24.9	244 25.3	-18 02.3	249 06.0	-16 32.4	202 52.4	-22 30.6					
Dif	—	—	-9	+6	+9	-4	+21	-1	+22	0					

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna							
	SD: 16'3 PMG: 12 ^h 10 ^m 1			Edad: 29 ^d 7 PHE { 4 ^h : 54'1 12 ^h : 54'2 20 ^h : 54'3 SD: 14'8 PMG: 12 ^h 28 ^m R°: 47 ^m																
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°					
h	o	'	o	'	o	'	o	'	h	m	h	m	h	m	h	m	h	m	h	m
0	177	31.2	-20	47.4	178	56.8	-19	17.1	60 N	6 59	7 52	8 44	8 47	29	16 15	68				
1	192	31.0		46.9	193	27.9 ¹²¹		14.1	58	53	43	31	34	31	27	66				
2	207	30.8		46.5	207	59.0 ¹²¹		11.1	56	48	35	19	23	32	38	64				
3	222	30.6		46.0	222	30.1 ¹²¹		08.0	54	43	27	8 09	13	34	48	62				
4	237	30.4		45.5	237	01.2 ¹²¹		04.8	52	38	21	7 59	8 04	35	16 56	61				
5	252	30.2	-20	45.0	251	32.3 ¹²¹	-19	01.5	50	6 34	7 14	7 51	7 56	36	17 04	60				
6	267	30.0	-20	44.5	266	03.4 ¹²¹	-18	58.1	45	6 25	7 01	7 34	7 39	39	17 20	58				
7	282	29.8		44.0	280	34.6 ¹²²		54.6	40	16	6 50	19	26	40	33	56				
8	297	29.5		43.5	295	05.7 ¹²¹		51.0	35	09	40	7 07	14	41	45	54				
9	312	29.3		43.0	309	36.9 ¹²²		47.4	30	6 01	31	6 56	7 04	42	17 54	53				
10	327	29.1		42.5	324	08.1 ¹²²		43.6	20	5 47	6 14	38	6 46	45	18 11	51				
11	342	28.9	-20	42.0	338	39.3 ¹²²	-18	39.8	10 N	5 33	5 59	6 22	6 31	46	18 26	49				
12	357	28.7	-20	41.5	353	10.5 ¹²²	-18	35.9	0	5 19	5 44	6 06	6 17	47	18 40	47				
13	12	28.5		41.0	7	41.7 ¹²²		31.9	10 S	5 02	28	5 51	6 02	49	18 53	45				
14	27	28.3		40.5	22	13.0 ¹²³		27.8	20	4 42	5 10	34	5 47	51	19 08	43				
15	42	28.1		40.0	36	44.2 ¹²²		23.6	30	16	4 49	15	29	53	24	41				
16	57	27.9		39.5	51	15.5 ¹²³		19.4	35	4 00	35	5 04	19	54	34	40				
17	72	27.7	-20	39.0	65	46.8 ¹²³	-18	15.0	40	3 40	4 19	4 51	5 07	55	19 45	38				
18	87	27.5	-20	38.5	80	18.1 ¹²³	-18	10.6	45	3 14	4 00	4 35	4 54	56	19 58	36				
19	102	27.3		38.0	94	49.4 ¹²³		06.1	50	2 38	3 35	16	37	58	20 14	33				
20	117	27.1		37.5	109	20.8 ¹²⁴	-18	01.4	52	2 19	23	4 07	29	59	21	32				
21	132	26.9		37.0	123	52.1 ¹²³	-17	56.8	54	1 53	3 08	3 57	20	60	29	31				
22	147	26.7		36.5	138	23.5 ¹²⁴		52.0	56	1 15	2 51	45	4 10	61	38	30				
23	162	26.5		36.0	152	54.9 ¹²⁴		47.1	58	** ** *	30	32	3 58	63	20 48	28				
24	177	26.3	-20	35.5	167	26.3 ¹²⁴	-17	42.2	60 S	** ** *	2 03	3 16	3 45	65	21 00	26				
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO							
	PMG 16 ^h 11 ^m 9			Mag: -4.0 PMG: 12 ^h 19 ^m			Mag: +1.3 PMG: 7 ^h 42 ^m			Mag: -1.9 PMG: 7 ^h 23 ^m			Mag: +0.5 PMG: 10 ^h 27 ^m							
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec						
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'				
0	116	22.0	175	22.3	-21	24.9	244	25.3	-18	02.3	249	06.0	-16	32.4	202	52.4				
1	131	24.5	190	21.4		24.3	259	26.2		02.7	264	08.2		32.5	217	54.6				
2	146	26.9	205	20.6		23.8	274	27.1		03.1	279	10.3		32.6	232	56.8				
3	161	29.4	220	19.7		23.2	289	28.0		03.5	294	12.4		32.7	247	58.9				
4	176	31.9	235	18.9		22.6	304	28.9		03.9	309	14.5		32.8	263	01.1				
5	191	34.3	250	18.0	-21	22.0	319	29.8	-18	04.3	324	16.6	-16	32.9	278	03.3				
6	206	36.8	265	17.2	-21	21.5	334	30.6	-18	04.7	339	18.7	-16	33.0	293	05.4				
7	221	39.3	280	16.3		20.9	349	31.5		05.1	354	20.8		33.1	308	07.6				
8	236	41.7	295	15.4		20.3	4	32.4		05.5	9	23.0		33.1	323	09.7				
9	251	44.2	310	14.6		19.7	19	33.3		05.9	24	25.1		33.2	338	11.9				
10	266	46.7	325	13.7		19.1	34	34.2		06.3	39	27.2		33.3	353	14.1				
11	281	49.1	340	12.9	-21	18.5	49	35.1	-18	06.7	54	29.3	-16	33.4	8	16.2				
12	296	51.6	355	12.0	-21	18.0	64	36.0	-18	07.1	69	31.4	-16	33.5	23	18.4				
13	311	54.0	10	11.2		17.4	79	36.9		07.4	84	33.5		33.6	38	20.6				
14	326	56.5	25	10.3		16.8	94	37.8		07.8	99	35.6		33.7	53	22.7				
15	341	59.0	40	09.5		16.2	109	38.7		08.2	114	37.8		33.8	68	24.9				
16	357	01.4	55	08.6		15.6	124	39.6		08.6	129	39.9		33.9	83	27.0				
17	12	03.9	70	07.8	-21	15.0	139	40.4	-18	09.0	144	42.0	-16	33.9	98	29.2				
18	27	06.4	85	06.9	-21	14.4	154	41.3	-18	09.4	159	44.1	-16	34.0	113	31.4				
19	42	08.8	100	06.1		13.8	169	42.2		09.8	174	46.2		34.1	128	33.5				
20	57	11.3	115	05.2		13.2	184	43.1		10.2	189	48.3		34.2	143	35.7				
21	72	13.8	130	04.4		12.6	199	44.0		10.6	204	50.5		34.3	158	37.9				
22	87	16.2	145	03.6		12.0	214	44.9		11.0	219	52.6		34.4	173	40.0				
23	102	18.7	160	02.7		11.4	229	45.8		11.4	234	54.7		34.5	188	42.2				
24	117	21.1	175	01.9	-21	10.8	244	46.7	-18	11.8	249	56.8	-16	34.6	203	44.4				
Dif	—		-9		+6		+9		-4		+21		-1		+22					

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 16'3 PMG: 12 ^h 10 ^m 4			Edad: 30 ^d 7 PHE { 4 ^h : 54'4 12 ^h : 54'4 20 ^h : 54'5 R°: 47 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	o	'	o	'	o	'	o	'	h m	h m	h m	h m	m	h m	m	h m	m	
0	177	26.3	-20	35.5	167	26.3	-17	42.2	60 N	15 39	16 30	17 24	9 16	22	17 23	72		
1	192	26.1		35.0	181	57.7 ¹²⁴		37.2 ⁵⁰	58	15 52	40	30	9 05	25	33	70		
2	207	25.9		34.5	196	29.2 ¹²⁵		32.1 ⁵¹	56	16 04	48	35	8 55	27	42	68		
3	222	25.7		34.0	211	00.6 ¹²⁴		26.9 ⁵²	54	14	16 55	39	47	28	50	66		
4	237	25.5		33.5	225	32.1 ¹²⁵		21.6 ⁵³	52	23	17 02	44	39	30	17 57	65		
5	252	25.3	-20	33.0	240	03.6 ¹²⁵	-17	16.3 ⁵³	50	16 31	17 08	17 48	8 32	32	18 04	63		
6	267	25.1	-20	32.5	254	35.2 ¹²⁶	-17	10.8 ⁵⁵	45	16 48	17 21	17 57	8 18	34	18 18	60		
7	282	24.9		32.0	269	06.7 ¹²⁵	-17	05.3 ⁵⁵	40	17 02	32	18 05	8 06	36	29	58		
8	297	24.7		31.4	283	38.3 ¹²⁶	-16	59.7 ⁵⁶	35	14	42	13	7 55	38	39	56		
9	312	24.5		30.9	298	09.8 ¹²⁵		54.1 ⁵⁶	30	25	17 51	20	46	40	18 47	54		
10	327	24.3		30.4	312	41.4 ¹²⁶		48.3 ⁵⁸	20	43	18 07	34	31	42	19 02	51		
11	342	24.1	-20	29.9	327	13.1 ¹²⁷	-16	42.5 ⁵⁸	10 N	17 59	18 21	18 47	7 17	44	19 15	48		
12	357	23.9	-20	29.4	341	44.7 ¹²⁶	-16	36.6 ⁵⁹	0	18 14	18 36	19 02	7 04	47	19 27	46		
13	12	23.7		28.9	356	16.4 ¹²⁷		30.6 ⁶⁰	10 S	29	18 52	18	6 51	49	38	44		
14	27	23.5		28.4	10	48.0 ¹²⁶		24.6 ⁶⁰	20	18 45	19 09	19 38	38	50	19 51	41		
15	42	23.3		27.9	25	19.7 ¹²⁷		18.4 ⁶²	30	19 04	31	20 03	22	53	20 05	39		
16	57	23.1		27.3	39	51.4 ¹²⁷		12.2 ⁶²	35	15	19 44	19	13	55	14	36		
17	72	22.9	-20	26.8	54	23.2 ¹²⁸	-16	05.9 ⁶³	40	19 28	20 00	20 39	6 02	57	20 23	35		
18	87	22.7	-20	26.3	68	54.9 ¹²⁷	-15	59.6 ⁶³	45	19 43	20 19	21 04	5 50	59	20 34	32		
19	102	22.5		25.8	83	26.7 ¹²⁸		53.1 ⁶⁵	50	20 02	43	39	35	62	47	30		
20	117	22.3		25.3	97	58.5 ¹²⁸		46.6 ⁶⁵	52	11	20 55	21 58	28	63	20 53	28		
21	132	22.1		24.8	112	30.4 ¹²⁹		40.0 ⁶⁶	54	21	21 09	22 22	20	64	21 00	27		
22	147	21.9		24.2	127	02.2 ¹²⁸		33.4 ⁶⁶	56	32	25	22 56	11	66	08	24		
23	162	21.7		23.7	141	34.1 ¹²⁹		26.6 ⁶⁸	58	20 45	21 45	*** **	5 01	68	16	23		
24	177	21.5	-20	23.2	156	05.9 ¹²⁸	-15	19.8 ⁶⁸	60 S	21 01	22 11	*** **	4 50	70	21 26	20		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 16 ^h 07 ^m 9		Mag: -4.0 PMG: 12 ^h 21 ^m				Mag: +1.3 PMG: 7 ^h 40 ^m				Mag: -1.9 PMG: 7 ^h 19 ^m				Mag: +0.5 PMG: 10 ^h 24 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'
0	117	21.1	175	01.9	-21	10.8	244	46.7	-18	11.8	249	56.8	-16	34.6	203	44.4	-22	30.5
1	132	23.6	190	01.0		10.2	259	47.6		12.2	264	58.9		34.6	218	46.5		30.5
2	147	26.1	205	00.2		09.6	274	48.5		12.6	280	01.1		34.7	233	48.7		30.5
3	162	28.5	219	59.3		09.0	289	49.3		13.0	295	03.2		34.8	248	50.8		30.5
4	177	31.0	234	58.5		08.4	304	50.2		13.4	310	05.3		34.9	263	53.0		30.5
5	192	33.5	249	57.6	-21	07.8	319	51.1	-18	13.8	325	07.4	-16	35.0	278	55.2	-22	30.5
6	207	35.9	264	56.8	-21	07.2	334	52.0	-18	14.2	340	09.5	-16	35.1	293	57.3	-22	30.5
7	222	38.4	279	56.0		06.6	349	52.9		14.6	355	11.6		35.2	308	59.5		30.5
8	237	40.9	294	55.1		06.0	4	53.8		14.9	10	13.8		35.3	324	01.7		30.5
9	252	43.3	309	54.3		05.4	19	54.7		15.3	25	15.9		35.3	339	03.8		30.5
10	267	45.8	324	53.4		04.8	34	55.6		15.7	40	18.0		35.4	354	06.0		30.5
11	282	48.3	339	52.6	-21	04.2	49	56.5	-18	16.1	55	20.1	-16	35.5	9	08.2	-22	30.4
12	297	50.7	354	51.7	-21	03.5	64	57.3	-18	16.5	70	22.2	-16	35.6	24	10.3	-22	30.4
13	312	53.2	9	50.9		02.9	79	58.2		16.9	85	24.4		35.7	39	12.5		30.4
14	327	55.6	24	50.1		02.3	94	59.1		17.3	100	26.5		35.8	54	14.6		30.4
15	342	58.1	39	49.2		01.7	110	00.0		17.7	115	28.6		35.9	69	16.8		30.4
16	358	00.6	54	48.4		01.1	125	00.9		18.1	130	30.7		36.0	84	19.0		30.4
17	13	03.0	69	47.6	-21	00.5	140	01.8	-18	18.5	145	32.9	-16	36.0	99	21.1	-22	30.4
18	28	05.5	84	46.7	-20	59.9	155	02.7	-18	18.9	160	35.0	-16	36.1	114	23.3	-22	30.4
19	43	08.0	99	45.9		59.2	170	03.6		19.2	175	37.1		36.2	129	25.5		30.4
20	58	10.4	114	45.0		58.6	185	04.5		19.6	190	39.2		36.3	144	27.6		30.4
21	73	12.9	129	44.2		58.0	200	05.3		20.0	205	41.3		36.4	159	29.8		30.4
22	88	15.4	144	43.4		57.4	215	06.2		20.4	220	43.5		36.5	174	32.0		30.4
23	103	17.8	159	42.5		56.7	230	07.1		20.8	235	45.6		36.6	189	34.1		30.4
24	118	20.3	174	41.7	-20	56.1	245	08.0	-18	21.2	250	47.7	-16	36.6	204	36.3	-22	30.4
Dif	—		-8		+6		+9		-4		+21		-1		+22			

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'3 PMG: 12 ^h 10 ^m 7			Edad: 1 ^d 9 PHE { 4 ^h : 54'7 12 ^h : 54'8 20 ^h : 54'9 SD: 14'9 PMG: 14 ^h 02 ^m R°: 45 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	o	'	o	'	o	'	o	'	h	m	h	m	h	m	h	m		
0	177	21.5	-20	23.2	156	05.9	-15	19.8	60 N	6 56	7 50	8 41	9 38	19	18 35	75		
1	192	21.3		22.7	170	37.8 ¹²⁹		12.9 ⁶⁹	58	51	41	28	30	20	43	72		
2	207	21.1		22.2	185	09.8 ¹³⁰	-15	06.0 ⁶⁹	56	46	33	16	22	23	50	70		
3	222	20.9		21.6	199	41.7 ¹²⁹	-14	59.0 ⁷⁰	54	41	25	8 06	15	25	18 56	68		
4	237	20.7		21.1	214	13.7 ¹³⁰		51.9 ⁷¹	52	37	19	7 57	09	26	19 02	66		
5	252	20.6	-20	20.6	228	45.7 ¹³⁰	-14	44.7 ⁷²	50	6 33	7 13	7 49	9 04	27	19 07	65		
6	267	20.4	-20	20.1	243	17.7 ¹³⁰	-14	37.5 ⁷²	45	6 24	7 00	7 32	8 52	30	19 18	61		
7	282	20.2		19.5	257	49.7 ¹³⁰		30.2 ⁷³	40	16	6 49	18	42	33	27	59		
8	297	20.0		19.0	272	21.7 ¹³⁰		22.8 ⁷⁴	35	08	39	7 06	33	36	35	56		
9	312	19.8		18.5	286	53.8 ¹³¹		15.4 ⁷⁴	30	6 01	30	6 56	26	37	41	55		
10	327	19.6		18.0	301	25.9 ¹³¹		07.9 ⁷⁵	20	5 47	14	38	13	40	19 53	51		
11	342	19.4	-20	17.4	315	58.0 ¹³¹	-14	00.3 ⁷⁶	10 N	5 34	6 00	6 22	8 01	44	20 03	49		
12	357	19.2	-20	16.9	330	30.1 ¹³¹	-13	52.6 ⁷⁷	0	5 19	5 45	6 07	7 51	45	20 13	45		
13	12	19.0		16.4	345	02.2 ¹³¹		44.9 ⁷⁷	10 S	5 03	29	5 52	40	48	22	43		
14	27	18.8		15.8	359	34.4 ¹³²		37.2 ⁷⁷	20	4 44	5 12	36	28	52	32	40		
15	42	18.6		15.3	14	06.6 ¹³²		29.3 ⁷⁹	30	18	4 50	17	15	55	44	36		
16	57	18.5		14.8	28	38.8 ¹³²		21.4 ⁷⁹	35	4 02	37	5 06	7 08	56	50	35		
17	72	18.3	-20	14.2	43	11.0 ¹³²	-13	13.5 ⁷⁹	40	3 43	4 22	4 53	6 59	58	20 58	32		
18	87	18.1	-20	13.7	57	43.2 ¹³²	-13	05.5 ⁸⁰	45	3 18	4 03	4 38	6 49	61	21 06	30		
19	102	17.9		13.2	72	15.5 ¹³³	-12	57.4 ⁸¹	50	2 43	3 39	19	37	64	17	26		
20	117	17.7		12.6	86	47.7 ¹³²		49.2 ⁸²	52	24	27	11	31	65	21	25		
21	132	17.5		12.1	101	20.0 ¹³³		41.0 ⁸²	54	2 00	3 13	4 01	24	68	27	23		
22	147	17.3		11.6	115	52.3 ¹³³		32.7 ⁸³	56	1 25	2 56	3 49	17	69	32	22		
23	162	17.1		11.0	130	24.6 ¹³³		24.4 ⁸³	58	** ** *	36	36	09	72	39	19		
24	177	16.9	-20	10.5	144	57.0 ¹³⁴	-12	16.0 ⁸⁴	60 S	** ** *	2 11	3 21	6 00	74	21 46	17		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG 16 ^h 04 ^m 0			Mag: -4.0 PMG: 12 ^h 22 ^m			Mag: +1.3 PMG: 7 ^h 39 ^m			Mag: -1.9 PMG: 7 ^h 16 ^m			Mag: +0.5 PMG: 10 ^h 20 ^m					
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'		
0	118	20.3	174	41.7	-20	56.1	245	08.0	-18	21.2	250	47.7	-16	36.6	204	36.3	-22	30.4
1	133	22.8	189	40.9		55.5	260	08.9		21.6	265	49.8		36.7	219	38.5		30.4
2	148	25.2	204	40.0		54.9	275	09.8		22.0	280	52.0		36.8	234	40.6		30.4
3	163	27.7	219	39.2		54.2	290	10.7		22.4	295	54.1		36.9	249	42.8		30.4
4	178	30.1	234	38.4		53.6	305	11.6		22.7	310	56.2		37.0	264	45.0		30.4
5	193	32.6	249	37.5	-20	53.0	320	12.4	-18	23.1	325	58.3	-16	37.1	279	47.1	-22	30.3
6	208	35.1	264	36.7	-20	52.3	335	13.3	-18	23.5	341	00.4	-16	37.2	294	49.3	-22	30.3
7	223	37.5	279	35.9		51.7	350	14.2		23.9	356	02.6		37.2	309	51.5		30.3
8	238	40.0	294	35.1		51.1	5	15.1		24.3	11	04.7		37.3	324	53.6		30.3
9	253	42.5	309	34.2		50.4	20	16.0		24.7	26	06.8		37.4	339	55.8		30.3
10	268	44.9	324	33.4		49.8	35	16.9		25.1	41	08.9		37.5	354	57.9		30.3
11	283	47.4	339	32.6	-20	49.2	50	17.8	-18	25.5	56	11.1	-16	37.6	10	00.1	-22	30.3
12	298	49.9	354	31.7	-20	48.5	65	18.7	-18	25.8	71	13.2	-16	37.7	25	02.3	-22	30.3
13	313	52.3	9	30.9		47.9	80	19.5		26.2	86	15.3		37.7	40	04.4		30.3
14	328	54.8	24	30.1		47.2	95	20.4		26.6	101	17.5		37.8	55	06.6		30.3
15	343	57.2	39	29.3		46.6	110	21.3		27.0	116	19.6		37.9	70	08.8		30.3
16	358	59.7	54	28.4		46.0	125	22.2		27.4	131	21.7		38.0	85	10.9		30.3
17	14	02.2	69	27.6	-20	45.3	140	23.1	-18	27.8	146	23.8	-16	38.1	100	13.1	-22	30.3
18	29	04.6	84	26.8	-20	44.7	155	24.0	-18	28.2	161	26.0	-16	38.2	115	15.3	-22	30.3
19	44	07.1	99	25.9		44.0	170	24.9		28.5	176	28.1		38.3	130	17.4		30.3
20	59	09.6	114	25.1		43.4	185	25.7		28.9	191	30.2		38.3	145	19.6		30.3
21	74	12.0	129	24.3		42.7	200	26.6		29.3	206	32.3		38.4	160	21.8		30.3
22	89	14.5	144	23.5		42.1	215	27.5		29.7	221	34.5		38.5	175	23.9		30.2
23	104	17.0	159	22.7		41.4	230	28.4		30.1	236	36.6		38.6	190	26.1		30.2
24	119	19.4	174	21.8	-20	40.8	245	29.3	-18	30.5	251	38.7	-16	38.7	205	28.3	-22	30.2
Dif	—		-8		+6		+9		-4		+21		-1		+22			

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16/3 PMG: 12 ^h 11 ^m 0			Edad: 2 ^d 9 PHE { 4 ^h : 55/0 12 ^h : 55/2 20 ^h : 55/3 SD: 15/0 PMG: 14 ^h 47 ^m R°: 46 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	o	'	o	'	o	'	o	'	h m	h m	h m	h m m	h m m	h m m				
0	177	16.9	-20	10.5	144	57.0	-12	16.0	60 N	15 43	16 35	17 28	9 57 15	19 50 76				
1	192	16.8		10.0	159	29.3 ¹³³	-12	07.6 ⁸⁴	58	15 56	43	33	50 19	19 55 74				
2	207	16.6		09.4	174	01.7 ¹³⁴	-11	59.1 ⁸⁵	56	16 08	51	38	45 20	20 00 72				
3	222	16.4		08.9	188	34.1 ¹³⁴		50.5 ⁸⁶	54	18	16 58	42	40 22	04 70				
4	237	16.2		08.3	203	06.5 ¹³⁴		41.9 ⁸⁶	52	26	17 05	47	35 24	08 68				
5	252	16.0	-20	07.8	217	38.9 ¹³⁴	-11	33.2 ⁸⁷	50	16 34	17 11	17 50	9 31 26	20 12 66				
6	267	15.8	-20	07.3	232	11.3 ¹³⁴	-11	24.4 ⁸⁸	45	16 51	17 23	17 59	9 22 29	20 19 63				
7	282	15.7		06.7	246	43.8 ¹³⁵		15.6 ⁸⁸	40	17 05	34	18 07	15 31	26 60				
8	297	15.5		06.2	261	16.2 ¹³⁴	-11	06.8 ⁸⁸	35	16	44	15	09 33	31 58				
9	312	15.3		05.6	275	48.7 ¹³⁵	-10	57.9 ⁸⁹	30	27	17 52	21	9 03 36	36 55				
10	327	15.1		05.1	290	21.2 ¹³⁵		48.9 ⁹⁰	20	17 44	18 08	35	8 53 39	44 52				
11	342	14.9	-20	04.6	304	53.7 ¹³⁵	-10	39.9 ⁹⁰	10 N	18 00	18 22	18 48	8 45 42	20 52 48				
12	357	14.7	-20	04.0	319	26.2 ¹³⁵	-10	30.9 ⁹⁰	0	18 15	18 37	19 02	8 36 46	20 58 45				
13	12	14.6		03.5	333	58.7 ¹³⁵		21.8 ⁹¹	10 S	29	18 52	18	28 48	21 05 42				
14	27	14.4		02.9	348	31.3 ¹³⁶		12.6 ⁹²	20	18 45	19 09	19 37	20 51	12 39				
15	42	14.2		02.4	3	03.8 ¹³⁵	-10	03.4 ⁹²	30	19 04	30	20 02	10 55	20 35				
16	57	14.0		01.8	17	36.4 ¹³⁶	-9	54.1 ⁹³	35	15	43	18	8 04 57	25 33				
17	72	13.8	-20	01.3	32	08.9 ¹³⁵	-9	44.8 ⁹³	40	19 27	19 58	20 37	7 57 60	21 30 30				
18	87	13.6	-20	00.7	46	41.5 ¹³⁶	-9	35.4 ⁹⁴	45	19 42	20 17	21 01	7 50 62	21 36 28				
19	102	13.5	-20	00.2	61	14.1 ¹³⁶		26.0 ⁹⁴	50	20 00	40	35	41 65	43 24				
20	117	13.3	-19	59.6	75	46.7 ¹³⁶		16.6 ⁹⁴	52	09	20 52	21 53	36 68	46 23				
21	132	13.1		59.1	90	19.3 ¹³⁶	-9	07.1 ⁹⁵	54	18	21 06	22 16	32 69	50 21				
22	147	12.9		58.5	104	51.9 ¹³⁶	-8	57.5 ⁹⁶	56	29	21	22 48	26 71	54 19				
23	162	12.7		58.0	119	24.5 ¹³⁶		47.9 ⁹⁶	58	42	21 40	** ** *	21 73	21 58 17				
24	177	12.6	-19	57.4	133	57.2 ¹³⁷	-8	38.3 ⁹⁶	60 S	20 57	22 05	** ** *	7 14 76	22 03 15				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 16 ^h 00 ^m 1		Mag: -4.0 PMG: 12 ^h 23 ^m			Mag: +1.3 PMG: 7 ^h 38 ^m			Mag: -2.0 PMG: 7 ^h 12 ^m			Mag: +0.5 PMG: 10 ^h 17 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'				
0	119	19.4	174	21.8	-20	40.8	245	29.3	-18	30.5	251	38.7	-16	38.7	205	28.3	-22	30.2
1	134	21.9	189	21.0		40.1	260	30.2		30.8	266	40.9		38.8	220	30.4		30.2
2	149	24.4	204	20.2		39.5	275	31.1		31.2	281	43.0		38.8	235	32.6		30.2
3	164	26.8	219	19.4		38.8	290	32.0		31.6	296	45.1		38.9	250	34.8		30.2
4	179	29.3	234	18.5		38.2	305	32.8		32.0	311	47.2		39.0	265	36.9		30.2
5	194	31.7	249	17.7	-20	37.5	320	33.7	-18	32.4	326	49.4	-16	39.1	280	39.1	-22	30.2
6	209	34.2	264	16.9	-20	36.8	335	34.6	-18	32.8	341	51.5	-16	39.2	295	41.3	-22	30.2
7	224	36.7	279	16.1		36.2	350	35.5		33.1	356	53.6		39.3	310	43.4		30.2
8	239	39.1	294	15.3		35.5	5	36.4		33.5	11	55.8		39.3	325	45.6		30.2
9	254	41.6	309	14.5		34.9	20	37.3		33.9	26	57.9		39.4	340	47.8		30.2
10	269	44.1	324	13.6		34.2	35	38.2		34.3	42	00.0		39.5	355	49.9		30.2
11	284	46.5	339	12.8	-20	33.5	50	39.0	-18	34.7	57	02.2	-16	39.6	10	52.1	-22	30.2
12	299	49.0	354	12.0	-20	32.9	65	39.9	-18	35.0	72	04.3	-16	39.7	25	54.3	-22	30.2
13	314	51.5	9	11.2		32.2	80	40.8		35.4	87	06.4		39.8	40	56.4		30.2
14	329	53.9	24	10.4		31.5	95	41.7		35.8	102	08.5		39.8	55	58.6		30.1
15	344	56.4	39	09.6		30.9	110	42.6		36.2	117	10.7		39.9	71	00.8		30.1
16	359	58.9	54	08.7		30.2	125	43.5		36.6	132	12.8		40.0	86	02.9		30.1
17	15	01.3	69	07.9	-20	29.5	140	44.3	-18	36.9	147	14.9	-16	40.1	101	05.1	-22	30.1
18	30	03.8	84	07.1	-20	28.9	155	45.2	-18	37.3	162	17.1	-16	40.2	116	07.3	-22	30.1
19	45	06.2	99	06.3		28.2	170	46.1		37.7	177	19.2		40.3	131	09.5		30.1
20	60	08.7	114	05.5		27.5	185	47.0		38.1	192	21.3		40.3	146	11.6		30.1
21	75	11.2	129	04.7		26.8	200	47.9		38.5	207	23.5		40.4	161	13.8		30.1
22	90	13.6	144	03.9		26.2	215	48.8		38.8	222	25.6		40.5	176	16.0		30.1
23	105	16.1	159	03.1		25.5	230	49.7		39.2	237	27.7		40.6	191	18.1		30.1
24	120	18.6	174	02.2	-20	24.8	245	50.5	-18	39.6	252	29.9	-16	40.7	206	20.3	-22	30.1
Dif	—		-8		+7		+9		-4		+21		-1		+22		0	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16/3 PMG: 12 ^h 11 ^m 3			Edad: 3 ^d 9 PHE { 4 ^h : 55/5 12 ^h : 55/6 20 ^h : 55/8 PMG: 15 ^h 33 ^m R°: 45 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	o	'	o	'	o	'	o	'	h	m	h	m	h	m	h	m	h	m
0	177	12.6	-19	57.4	133	57.2	-8	38.3	60 N	6 54	7 47	8 37	10 12	15			21 06	78
1	192	12.4		56.9	148	29.8		28.6	58	49	38	25	09	16			09	76
2	207	12.2		56.3	163	02.4		18.8	56	44	30	14	05	19			12	73
3	222	12.0		55.8	177	35.1		137	54	39	23	8 04	10 02	21			14	71
4	237	11.9		55.2	192	07.7		136	52	35	17	7 55	9 59	23			16	70
5	252	11.7	-19	54.7	206	40.4		137	50	6 31	7 11	7 47	9 57	24			21 18	68
6	267	11.5	-19	54.1	221	13.1		137	45	6 23	6 58	7 31	9 51	27			21 22	64
7	282	11.3		53.5	235	45.7		136	40	15	48	17	46	31			26	61
8	297	11.1		53.0	250	18.4		137	35	07	38	7 05	42	33			29	58
9	312	11.0		52.4	264	51.0		136	30	6 01	30	6 55	39	35			31	56
10	327	10.8		51.9	279	23.7		137	20	5 47	14	38	32	39			36	52
11	342	10.6	-19	51.3	293	56.4		137	10 N	5 34	6 00	6 22	9 27	42			21 40	48
12	357	10.4	-19	50.7	308	29.1		137	0	5 20	5 46	6 08	9 22	45			21 43	46
13	12	10.3		50.2	323	01.7		136	10 S	5 04	31	5 53	16	49			47	42
14	27	10.1		49.6	337	34.4		137	20	4 45	5 13	37	11	52			51	38
15	42	09.9		49.1	352	07.1		137	30	20	4 52	19	05	55			55	35
16	57	09.8		48.5	6	39.7		136	35	4 05	40	5 08	9 01	58			21 58	32
17	72	09.6	-19	47.9	21	12.4		137	40	3 46	4 24	4 56	8 57	60			22 00	30
18	87	09.4	-19	47.4	35	45.0		136	45	3 21	4 06	4 41	8 52	63			22 04	27
19	102	09.2		46.8	50	17.7		137	50	2 48	3 42	23	46	67			07	24
20	117	09.1		46.2	64	50.3		136	52	29	31	14	44	68			09	22
21	132	08.9		45.7	79	23.0		137	54	2 07	17	4 05	41	70			11	20
22	147	08.7		45.1	93	55.6		136	56	1 35	3 02	3 54	37	73			13	19
23	162	08.5		44.5	108	28.2		136	58	** **	2 42	41	34	75			15	17
24	177	08.4	-19	44.0	123	00.9		137	60 S	** **	2 18	3 26	8 30	77			22 18	14
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 15 ^h 56 ^m 1			Mag: -4.0 PMG: 12 ^h 25 ^m			Mag: +1.3 PMG: 7 ^h 36 ^m			Mag: -2.0 PMG: 7 ^h 09 ^m			Mag: +0.5 PMG: 10 ^h 13 ^m					
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec			
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'		
0	120	18.6	174	02.2	-20	24.8	245	50.5	-18	39.6	252	29.9	-16	40.7	206	20.3		
1	135	21.0	189	01.4		24.1	260	51.4		40.0	267	32.0		40.8	221	22.5		
2	150	23.5	204	00.6		23.5	275	52.3		40.4	282	34.1		40.8	236	24.6		
3	165	26.0	218	59.8		22.8	290	53.2		40.7	297	36.3		40.9	251	26.8		
4	180	28.4	233	59.0		22.1	305	54.1		41.1	312	38.4		41.0	266	29.0		
5	195	30.9	248	58.2	-20	21.4	320	55.0	-18	41.5	327	40.5	-16	41.1	281	31.1		
6	210	33.3	263	57.4	-20	20.7	335	55.8	-18	41.9	342	42.7	-16	41.2	296	33.3		
7	225	35.8	278	56.6		20.1	350	56.7		42.2	357	44.8		41.2	311	35.5		
8	240	38.3	293	55.8		19.4	5	57.6		42.6	12	46.9		41.3	326	37.6		
9	255	40.7	308	55.0		18.7	20	58.5		43.0	27	49.1		41.4	341	39.8		
10	270	43.2	323	54.2		18.0	35	59.4		43.4	42	51.2		41.5	356	42.0		
11	285	45.7	338	53.4	-20	17.3	51	00.3	-18	43.7	57	53.4	-16	41.6	11	44.1		
12	300	48.1	353	52.6	-20	16.6	66	01.2	-18	44.1	72	55.5	-16	41.7	26	46.3		
13	315	50.6	8	51.8		15.9	81	02.0		44.5	87	57.6		41.7	41	48.5		
14	330	53.1	23	51.0		15.2	96	02.9		44.9	102	59.8		41.8	56	50.7		
15	345	55.5	38	50.1		14.5	111	03.8		45.2	118	01.9		41.9	71	52.8		
16	0	58.0	53	49.3		13.9	126	04.7		45.6	133	04.0		42.0	86	55.0		
17	16	00.5	68	48.5	-20	13.2	141	05.6	-18	46.0	148	06.2	-16	42.1	101	57.2		
18	31	02.9	83	47.7	-20	12.5	156	06.5	-18	46.4	163	08.3	-16	42.1	116	59.3		
19	46	05.4	98	46.9		11.8	171	07.3		46.7	178	10.5		42.2	132	01.5		
20	61	07.8	113	46.1		11.1	186	08.2		47.1	193	12.6		42.3	147	03.7		
21	76	10.3	128	45.3		10.4	201	09.1		47.5	208	14.7		42.4	162	05.8		
22	91	12.8	143	44.5		09.7	216	10.0		47.9	223	16.9		42.5	177	08.0		
23	106	15.2	158	43.7		09.0	231	10.9		48.2	238	19.0		42.5	192	10.2		
24	121	17.7	173	42.9	-20	08.3	246	11.8	-18	48.6	253	21.1	-16	42.6	207	12.3		
Dif	—		-8		+7		+9		-4		+21		-1		+22			

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16/3 PMG: 12 ^h 11 ^m 6		Edad: 4 ^d 9 SD: 15/3 PMG: 16 ^h 18 ^m		PHE { 4 ^h : 56/0 12 ^h : 56/2 20 ^h : 56/4 R°: 46 ^m									
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	o	/	o	/	o	/	o	h m	h m	h m	h m m	h m m	h m m	
0	177	08.4	-19	44.0	123	00.9	-4 34.9	60 N	15 48	16 39	17 31	10 27 14	22 24 80	
1	192	08.2		43.4	137	33.5 ¹³⁶	24.4 ¹⁰⁵	58	16 01	47	37	25 17	25 77	
2	207	08.0		42.8	152	06.1 ¹³⁶	13.8 ¹⁰⁶	56	12	16 55	41	24 19	25 75	
3	222	07.9		42.3	166	38.7 ¹³⁶	-4 03.2 ¹⁰⁶	54	21	17 02	46	23 20	25 73	
4	237	07.7		41.7	181	11.3 ¹³⁶	-3 52.5 ¹⁰⁷	52	30	08	50	22 22	26 71	
5	252	07.5	-19	41.1	195	43.8 ¹³⁵	-3 41.9 ¹⁰⁶	50	16 37	17 13	17 53	10 21 24	22 26 69	
6	267	07.4	-19	40.6	210	16.4 ¹³⁶	-3 31.2 ¹⁰⁷	45	16 54	17 26	18 02	10 18 28	22 26 66	
7	282	07.2		40.0	224	49.0 ¹³⁶	20.4 ¹⁰⁸	40	17 07	36	09	17 30	27 62	
8	297	07.0		39.4	239	21.5 ¹³⁵	-3 09.7 ¹⁰⁷	35	18	46	16	15 33	27 60	
9	312	06.9		38.8	253	54.0 ¹³⁵	-2 58.9 ¹⁰⁸	30	28	17 54	23	14 35	27 58	
10	327	06.7		38.3	268	26.5 ¹³⁵	48.2 ¹⁰⁷	20	17 46	18 09	36	11 39	28 53	
11	342	06.5	-19	37.7	282	59.0 ¹³⁵	-2 37.3 ¹⁰⁹	10 N	18 01	18 23	18 49	10 09 43	22 28 50	
12	357	06.4	-19	37.1	297	31.5 ¹³⁵	-2 26.5 ¹⁰⁸	0	18 15	18 37	19 03	10 07 46	22 29 46	
13	12	06.2		36.5	312	03.9 ¹³⁴	15.7 ¹⁰⁸	10 S	30	18 52	18	05 49	29 43	
14	27	06.0		36.0	326	36.4 ¹³⁵	-2 04.8 ¹⁰⁹	20	18 45	19 09	19 37	03 52	29 40	
15	42	05.9		35.4	341	08.8 ¹³⁴	-1 53.9 ¹⁰⁹	30	19 03	29	20 01	10 00 57	30 36	
16	57	05.7		34.8	355	41.2 ¹³⁴	43.0 ¹⁰⁹	35	14	42	16	9 59 59	30 33	
17	72	05.5	-19	34.2	10	13.6 ¹³⁴	-1 32.1 ¹⁰⁹	40	19 26	19 57	20 35	9 57 62	22 30 31	
18	87	05.4	-19	33.7	24	46.0 ¹³⁴	-1 21.1 ¹¹⁰	45	19 40	20 15	20 59	9 55 65	22 31 27	
19	102	05.2		33.1	39	18.3 ¹³³	-1 10.2 ¹⁰⁹	50	19 58	38	21 32	53 69	31 24	
20	117	05.0		32.5	53	50.6 ¹³³	-0 59.2 ¹¹⁰	52	20 06	20 49	21 49	52 71	31 23	
21	132	04.9		31.9	68	22.9 ¹³³	48.2 ¹¹⁰	54	16	21 02	22 10	51 72	31 21	
22	147	04.7		31.3	82	55.2 ¹³³	37.2 ¹¹⁰	56	26	17	22 39	50 74	32 18	
23	162	04.5		30.7	97	27.4 ¹³²	26.2 ¹¹⁰	58	38	36	23 30	49 76	32 16	
24	177	04.4	-19	30.2	111	59.6 ¹³²	-0 15.2 ¹¹⁰	60 S	20 52	21 59	** **	9 47 79	22 32 14	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG		Mag: -3.9			Mag: +1.3			Mag: -2.0			Mag: +0.5		
	15 ^h 52 ^m 2		PMG: 12 ^h 26 ^m			PMG: 7 ^h 35 ^m			PMG: 7 ^h 06 ^m			PMG: 10 ^h 10 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	o	/	o	/	o	/	o	/	o	/	o	/	o	/
0	121	17.7	173	42.9	-20	08.3	246	11.8	-18	48.6	253	21.1	-16	42.6
1	136	20.2	188	42.1		07.6	261	12.6		49.0	268	23.3		42.7
2	151	22.6	203	41.4		06.9	276	13.5		49.4	283	25.4		42.8
3	166	25.1	218	40.6		06.2	291	14.4		49.7	298	27.6		42.9
4	181	27.6	233	39.8		05.5	306	15.3		50.1	313	29.7		42.9
5	196	30.0	248	39.0	-20	04.7	321	16.2	-18	50.5	328	31.8	-16	43.0
6	211	32.5	263	38.2	-20	04.0	336	17.0	-18	50.8	343	34.0	-16	43.1
7	226	35.0	278	37.4		03.3	351	17.9		51.2	358	36.1		43.2
8	241	37.4	293	36.6		02.6	6	18.8		51.6	13	38.3		43.3
9	256	39.9	308	35.8		01.9	21	19.7		52.0	28	40.4		43.3
10	271	42.3	323	35.0		01.2	36	20.6		52.3	43	42.5		43.4
11	286	44.8	338	34.2	-20	00.5	51	21.5	-18	52.7	58	44.7	-16	43.5
12	301	47.3	353	33.4	-19	59.8	66	22.3	-18	53.1	73	46.8	-16	43.6
13	316	49.7	8	32.6		59.1	81	23.2		53.4	88	49.0		43.7
14	331	52.2	23	31.8		58.3	96	24.1		53.8	103	51.1		43.7
15	346	54.7	38	31.0		57.6	111	25.0		54.2	118	53.3		43.8
16	1	57.1	53	30.2		56.9	126	25.9		54.5	133	55.4		43.9
17	16	59.6	68	29.5	-19	56.2	141	26.8	-18	54.9	148	57.5	-16	44.0
18	32	02.1	83	28.7	-19	55.5	156	27.6	-18	55.3	163	59.7	-16	44.1
19	47	04.5	98	27.9		54.7	171	28.5		55.6	179	01.8		44.1
20	62	07.0	113	27.1		54.0	186	29.4		56.0	194	04.0		44.2
21	77	09.4	128	26.3		53.3	201	30.3		56.4	209	06.1		44.3
22	92	11.9	143	25.5		52.6	216	31.2		56.8	224	08.3		44.4
23	107	14.4	158	24.7		51.9	231	32.0		57.1	239	10.4		44.5
24	122	16.8	173	23.9	-19	51.1	246	32.9	-18	57.5	254	12.6	-16	44.5
Dif	—		-8 +7		+9 -4		+21 -1		+22 0					

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna											
	SD: 16'2 PMG: 12 ^h 11 ^m 8			Edad: 5 ^d 9 SD: 15'5 PMG: 17 ^h 04 ^m	PHE { 4 ^h : 56'6 12 ^h : 56'9 20 ^h : 57'1 R°: 48 ^m																			
	hG ☉	Dec				hG ☾		Dif	Dec		Dif	Náutico	Civil	Hora	R°	Hora	R°							
h	o	'	o	'	o	'	o	'	h	m	h	m	h	m	h	m	m							
0	177	04.4	-19	30.2	111	59.6	-0	15.2	60 N	6 51	7 43	8 34	10 41	15	23 44	83								
1	192	04.2		29.6	126	31.8 ¹³²	-0	04.2 ¹¹⁰	58	46	35	21	42	17	42	80								
2	207	04.1		29.0	141	04.0 ¹³²	+0	06.9 ¹¹¹	56	41	28	11	43	19	40	77								
3	222	03.9		28.4	155	36.1 ¹³¹		17.9 ¹¹⁰	54	37	21	8 01	43	22	38	75								
4	237	03.7		27.8	170	08.2 ¹³¹		29.0 ¹¹¹	52	33	15	7 53	44	23	37	73								
5	252	03.6	-19	27.2	184	40.3 ¹³¹	+0	40.1 ¹¹¹	50	6 30	7 09	7 45	10 45	25	23 35	72								
6	267	03.4	-19	26.7	199	12.4 ¹³¹	+0	51.2 ¹¹¹	45	6 21	6 57	7 29	10 46	28	23 32	68								
7	282	03.3		26.1	213	44.4 ¹³⁰	+1	02.2 ¹¹⁰	40	14	47	16	47	32	29	65								
8	297	03.1		25.5	228	16.4 ¹³⁰		13.3 ¹¹¹	35	07	37	7 05	48	34	27	62								
9	312	02.9		24.9	242	48.3 ¹²⁹		24.4 ¹¹¹	30	6 00	29	6 55	49	36	25	59								
10	327	02.8		24.3	257	20.2 ¹²⁹		35.5 ¹¹¹	20	5 47	14	38	50	41	21	56								
11	342	02.6	-19	23.7	271	52.1 ¹²⁹	+1	46.6 ¹¹¹	10 N	5 35	6 00	6 22	10 52	44	23 18	52								
12	357	02.5	-19	23.1	286	23.9 ¹²⁸	+1	57.7 ¹¹¹	0	5 21	5 46	6 08	10 53	47	23 15	49								
13	12	02.3		22.5	300	55.7 ¹²⁸	+2	08.8 ¹¹¹	10 S	5 05	31	5 54	54	51	12	45								
14	27	02.1		21.9	315	27.5 ¹²⁸		20.0 ¹¹²	20	4 47	5 15	38	55	55	09	42								
15	42	02.0		21.3	329	59.2 ¹²⁷		31.1 ¹¹¹	30	23	4 54	21	57	59	06	37								
16	57	01.8		20.8	344	30.9 ¹²⁷		42.2 ¹¹¹	35	4 07	42	5 10	58	61	03	36								
17	72	01.7	-19	20.2	359	02.6 ¹²⁷	+2	53.3 ¹¹¹	40	3 49	4 27	4 58	10 59	64	23 01	33								
18	87	01.5	-19	19.6	13	34.2 ¹²⁶	+3	04.4 ¹¹¹	45	3 25	4 09	4 44	11 00	67	22 58	30								
19	102	01.4		19.0	28	05.8 ¹²⁶		15.5 ¹¹¹	50	2 52	3 46	26	02	70	55	26								
20	117	01.2		18.4	42	37.3 ¹²⁵		26.6 ¹¹¹	52	35	35	18	03	72	54	24								
21	132	01.1		17.8	57	08.8 ¹²⁵		37.6 ¹¹⁰	54	2 14	22	4 08	03	75	52	23								
22	147	00.9		17.2	71	40.2 ¹²⁴		48.7 ¹¹¹	56	1 45	3 07	3 58	04	76	50	21								
23	162	00.7		16.6	86	11.6 ¹²⁴	+3	59.8 ¹¹¹	58	0 54	2 48	46	05	79	48	19								
24	177	00.6	-19	16.0	100	42.9 ¹²³	+4	10.9 ¹¹¹	60 S	** **	2 26	3 32	11 06	82	22 46	16								
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO											
	PMG 15 ^h 48 ^m 3			Mag: -3.9 PMG: 12 ^h 27 ^m			Mag: +1.3 PMG: 7 ^h 33 ^m			Mag: -2.0 PMG: 7 ^h 02 ^m			Mag: +0.5 PMG: 10 ^h 06 ^m											
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec										
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'						
0	122	16.8	173	23.9	-19	51.1	246	32.9	-18	57.5	254	12.6	-16	44.5	208	04.4	-22	29.8						
1	137	19.3	188	23.2		50.4	261	33.8		57.9	269	14.7		44.6	223	06.6		29.8						
2	152	21.8	203	22.4		49.7	276	34.7		58.2	284	16.8		44.7	238	08.8		29.8						
3	167	24.2	218	21.6		48.9	291	35.6		58.6	299	19.0		44.8	253	11.0		29.8						
4	182	26.7	233	20.8		48.2	306	36.4		59.0	314	21.1		44.9	268	13.1		29.7						
5	197	29.2	248	20.0	-19	47.5	321	37.3	-18	59.3	329	23.3	-16	44.9	283	15.3	-22	29.7						
6	212	31.6	263	19.2	-19	46.7	336	38.2	-18	59.7	344	25.4	-16	45.0	298	17.5	-22	29.7						
7	227	34.1	278	18.5		46.0	351	39.1	-19	00.1	359	27.6		45.1	313	19.6		29.7						
8	242	36.6	293	17.7		45.3	6	40.0		00.4	14	29.7		45.2	328	21.8		29.7						
9	257	39.0	308	16.9		44.5	21	40.9		00.8	29	31.9		45.2	343	24.0		29.7						
10	272	41.5	323	16.1		43.8	36	41.7		01.1	44	34.0		45.3	358	26.2		29.7						
11	287	43.9	338	15.3	-19	43.1	51	42.6	-19	01.5	59	36.2	-16	45.4	13	28.3	-22	29.7						
12	302	46.4	353	14.6	-19	42.3	66	43.5	-19	01.9	74	38.3	-16	45.5	28	30.5	-22	29.7						
13	317	48.9	8	13.8		41.6	81	44.4		02.2	89	40.5		45.6	43	32.7		29.7						
14	332	51.3	23	13.0		40.9	96	45.3		02.6	104	42.6		45.6	58	34.8		29.7						
15	347	53.8	38	12.2		40.1	111	46.1		03.0	119	44.7		45.7	73	37.0		29.7						
16	2	56.3	53	11.4		39.4	126	47.0		03.3	134	46.9		45.8	88	39.2		29.7						
17	17	58.7	68	10.7	-19	38.6	141	47.9	-19	03.7	149	49.0	-16	45.9	103	41.4	-22	29.7						
18	33	01.2	83	09.9	-19	37.9	156	48.8	-19	04.1	164	51.2	-16	45.9	118	43.5	-22	29.6						
19	48	03.7	98	09.1		37.1	171	49.7		04.4	179	53.3		46.0	133	45.7		29.6						
20	63	06.1	113	08.3		36.4	186	50.5		04.8	194	55.5		46.1	148	47.9		29.6						
21	78	08.6	128	07.6		35.6	201	51.4		05.1	209	57.6		46.2	163	50.1		29.6						
22	93	11.0	143	06.8		34.9	216	52.3		05.5	224	59.8		46.3	178	52.2		29.6						
23	108	13.5	158	06.0		34.2	231	53.2		05.9	240	01.9		46.3	193	54.4		29.6						
24	123	16.0	173	05.3	-19	33.4	246	54.1	-19	06.2	255	04.1	-16	46.4	208	56.6	-22	29.6						
Dif	—			-8			+7			+9			-4			+21			-1			+22		

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16:2 PMG: 12 ^h 12 ^m 1				Edad: 6 ^d 9 PHE { SD: 15:7 PMG: 17 ^h 52 ^m 4 ^h : 57/4 12 ^h : 57/6 20 ^h : 57/9 R°: 50 ^m													
	hG ☉	Dec	hG ☾	Dif	Dec	Dif	Civil	Náutico			Hora	R°	Hora	R°				
h	o	'	o	'	o	'	o	'	o	h m	h m	h m	h m m	h m m	h m m	R°		
0	177	00.6	-19	16.0	100	42.9	+4	10.9	60 N	15 53	16 43	17 35	10 56	17	***	***		
1	192	00.4		15.4	115	14.2 ¹²³		21.9 ¹¹⁰	58	16 05	51	40	10 59	20	***	***		
2	207	00.3		14.8	129	45.5 ¹²³		33.0 ¹¹¹	56	16	16 59	45	11 02	23	***	***		
3	222	00.1		14.2	144	16.7 ¹²²		44.0 ¹¹⁰	54	25	17 05	49	05 24		***	***		
4	237	00.0		13.6	158	47.8 ¹²¹	+4	55.0 ¹¹⁰	52	33	11	53	07 26		***	***		
5	251	59.8	-19	13.0	173	19.0 ¹²²	+5	06.0 ¹¹⁰	50	16 41	17 16	17 56	11 10	27	***	***		
6	266	59.7	-19	12.4	187	50.0 ¹²⁰	+5	17.0 ¹¹⁰	45	16 56	17 28	18 04	11 14	32	***	***		
7	281	59.5		11.8	202	21.0 ¹²⁰		28.0 ¹¹⁰	40	17 09	39	11	19 34		***	***		
8	296	59.4		11.2	216	51.9 ¹¹⁹		39.0 ¹¹⁰	35	20	48	18	22 37		***	***		
9	311	59.2		10.6	231	22.8 ¹¹⁹	+5	49.9 ¹⁰⁹	30	30	17 56	25	25 39		***	***		
10	326	59.1		10.0	245	53.7 ¹¹⁹	+6	00.9 ¹¹⁰	20	17 47	18 10	37	31 43		***	***		
11	341	58.9	-19	09.4	260	24.5 ¹¹⁸	+6	11.8 ¹⁰⁹	10 N	18 02	18 24	18 50	11 36	46	***	***		
12	356	58.8	-19	08.8	274	55.2 ¹¹⁷	+6	22.7 ¹⁰⁹	0	18 16	18 38	19 03	11 40	50	***	***		
13	11	58.6		08.2	289	25.8 ¹¹⁶		33.6 ¹⁰⁹	10 S	30	18 52	18	45 53		23 57	48		
14	26	58.5		07.6	303	56.5 ¹¹⁷		44.4 ¹⁰⁸	20	18 45	19 09	19 37	50 56		51 44			
15	41	58.3		07.0	318	27.0 ¹¹⁵	+6	55.2 ¹⁰⁸	30	19 02	29	20 00	56 60		43 41			
16	56	58.2		06.3	332	57.5 ¹¹⁵	+7	06.1 ¹⁰⁹	35	13	41	15	11 59	63	39 38			
17	71	58.0	-19	05.7	347	27.9 ¹¹⁴	+7	16.8 ¹⁰⁷	40	19 24	19 55	20 33	12 03	65	23 34	36		
18	86	57.9	-19	05.1	1	58.3 ¹¹⁴	+7	27.6 ¹⁰⁸	45	19 38	20 13	20 56	12 07	69	23 28	33		
19	101	57.7		04.5	16	28.6 ¹¹³		38.3 ¹⁰⁷	50	19 56	35	21 28	12 73		21 30			
20	116	57.6		03.9	30	58.8 ¹¹²		49.0 ¹⁰⁷	52	20 04	46	21 44	15 74		18 28			
21	131	57.4		03.3	45	29.0 ¹¹²	+7	59.7 ¹⁰⁷	54	13	20 58	22 05	18 76		15 26			
22	146	57.3		02.7	59	59.1 ¹¹¹	+8	10.3 ¹⁰⁶	56	23	21 13	22 31	20 79		11 24			
23	161	57.1		02.1	74	29.2 ¹¹¹		21.0 ¹⁰⁷	58	35	30	23 13	24 81		07 21			
24	176	57.0	-19	01.5	88	59.2 ¹¹⁰	+8	31.5 ¹⁰⁵	60 S	20 48	21 52	***	12 28	83	23 02	19		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 15 ^h 44 ^m 3		Mag: -3.9 PMG: 12 ^h 28 ^m				Mag: +1.3 PMG: 7 ^h 32 ^m				Mag: -2.0 PMG: 6 ^h 59 ^m				Mag: +0.5 PMG: 10 ^h 03 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'
0	123	16.0	173	05.3	-19	33.4	246	54.1	-19	06.2	255	04.1	-16	46.4	208	56.6	-22	29.6
1	138	18.4	188	04.5		32.7	261	54.9		06.6	270	06.2		46.5	223	58.7		29.6
2	153	20.9	203	03.7		31.9	276	55.8		07.0	285	08.4		46.6	239	00.9		29.6
3	168	23.4	218	02.9		31.1	291	56.7		07.3	300	10.5		46.6	254	03.1		29.6
4	183	25.8	233	02.2		30.4	306	57.6		07.7	315	12.7		46.7	269	05.3		29.6
5	198	28.3	248	01.4	-19	29.6	321	58.5	-19	08.0	330	14.8	-16	46.8	284	07.4	-22	29.6
6	213	30.8	263	00.6	-19	28.9	336	59.3	-19	08.4	345	17.0	-16	46.9	299	09.6	-22	29.6
7	228	33.2	277	59.9		28.1	352	00.2		08.8	0	19.2		46.9	314	11.8		29.6
8	243	35.7	292	59.1		27.4	7	01.1		09.1	15	21.3		47.0	329	14.0		29.6
9	258	38.2	307	58.3		26.6	22	02.0		09.5	30	23.5		47.1	344	16.1		29.5
10	273	40.6	322	57.6		25.9	37	02.8		09.8	45	25.6		47.2	359	18.3		29.5
11	288	43.1	337	56.8	-19	25.1	52	03.7	-19	10.2	60	27.8	-16	47.2	14	20.5	-22	29.5
12	303	45.5	352	56.0	-19	24.3	67	04.6	-19	10.6	75	29.9	-16	47.3	29	22.7	-22	29.5
13	318	48.0	7	55.3		23.6	82	05.5		10.9	90	32.1		47.4	44	24.8		29.5
14	333	50.5	22	54.5		22.8	97	06.4		11.3	105	34.2		47.5	59	27.0		29.5
15	348	52.9	37	53.7		22.0	112	07.2		11.6	120	36.4		47.6	74	29.2		29.5
16	3	55.4	52	53.0		21.3	127	08.1		12.0	135	38.5		47.6	89	31.4		29.5
17	18	57.9	67	52.2	-19	20.5	142	09.0	-19	12.3	150	40.7	-16	47.7	104	33.5	-22	29.5
18	34	00.3	82	51.4	-19	19.7	157	09.9	-19	12.7	165	42.8	-16	47.8	119	35.7	-22	29.5
19	49	02.8	97	50.7		19.0	172	10.8		13.1	180	45.0		47.9	134	37.9		29.5
20	64	05.3	112	49.9		18.2	187	11.6		13.4	195	47.1		47.9	149	40.1		29.5
21	79	07.7	127	49.1		17.4	202	12.5		13.8	210	49.3		48.0	164	42.2		29.5
22	94	10.2	142	48.4		16.7	217	13.4		14.1	225	51.5		48.1	179	44.4		29.5
23	109	12.7	157	47.6		15.9	232	14.3		14.5	240	53.6		48.2	194	46.6		29.4
24	124	15.1	172	46.9	-19	15.1	247	15.1	-19	14.8	255	55.8	-16	48.2	209	48.7	-22	29.4
Dif	—		-8		+8		+9		-4		+22		-1		+22		0	

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16:2			Edad: 7 ^d 9 PHE { 4 ^h : 58'1 12 ^h : 58'4 20 ^h : 58'7	SD: 15:9			Principio del crepúsculo			Salida de Luna		Puesta de Luna			
	PMG: 12 ^h 12 ^m 3				PMG: 18 ^h 42 ^m			R°: 54 ^m								
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	o	'	o	o	'	o	'	o	h	m	h	m	h	m	h	m
0	176	57.0	-19 01.5	88	59.2	+8 31.5	106	60 N	6 48	7 40	8 29	11 13	22	1 07	84	
1	191	56.8	00.8	103	29.1	109 42.1	106	58	43	32	18	19	25	1 02	82	
2	206	56.7	-19 00.2	117	58.9	+8 52.6	105	56	39	25	8 07	25	26	0 57	80	
3	221	56.6	-18 59.6	132	28.7	+9 03.1	105	54	35	18	7 58	29	29	53	78	
4	236	56.4	59.0	146	58.4	107 13.5	104	52	31	13	50	33	31	50	75	
5	251	56.3	-18 58.4	161	28.1	+9 23.9	104	50	6 28	7 07	7 43	11 37	33	0 47	73	
6	266	56.1	-18 57.8	175	57.6	+9 34.3	104	45	6 20	6 55	7 27	11 46	36	0 40	69	
7	281	56.0	57.2	190	27.1	105 44.6	103	40	13	45	14	53	39	34	66	
8	296	55.8	56.5	204	56.6	+9 54.9	103	35	06	37	7 03	11 59	41	29	64	
9	311	55.7	55.9	219	25.9	+10 05.2	103	30	6 00	28	6 54	12 04	44	24	62	
10	326	55.6	55.3	233	55.2	103 15.4	102	20	5 47	14	37	14	47	17	57	
11	341	55.4	-18 54.7	248	24.4	+10 25.5	101	10 N	5 35	6 00	6 23	12 22	50	0 10	54	
12	356	55.3	-18 54.1	262	53.5	+10 35.6	101	0	5 21	5 47	6 09	12 30	53	0 04	51	
13	11	55.1	53.4	277	22.6	101 45.7	101	10 S	5 06	32	5 55	38	56	***	***	
14	26	55.0	52.8	291	51.6	+10 55.7	100	20	4 48	5 16	40	46	60	***	***	
15	41	54.9	52.2	306	20.5	+11 05.7	100	30	25	4 56	22	12 56	63	***	***	
16	56	54.7	51.6	320	49.3	98 15.6	99	35	4 10	44	12	13 02	65	***	***	
17	71	54.6	-18 51.0	335	18.0	+11 25.5	97	40	3 52	4 30	5 00	13 08	68	***	***	
18	86	54.4	-18 50.3	349	46.7	+11 35.3	98	45	3 29	4 12	4 46	13 16	71	***	***	
19	101	54.3	49.7	4	15.3	96 45.0	97	50	2 57	3 50	29	25	74	23 51	35	
20	116	54.2	49.1	18	43.8	+11 54.7	97	52	41	39	21	29	76	46	33	
21	131	54.0	48.5	33	12.2	+12 04.4	96	54	2 20	27	12	34	78	41	31	
22	146	53.9	47.8	47	40.6	94 14.0	96	56	1 54	3 12	4 02	39	80	35	29	
23	161	53.7	47.2	62	08.9	93 23.5	95	58	1 12	2 55	3 51	45	83	28	28	
24	176	53.6	-18 46.6	76	37.0	+12 33.0	95	60 S	** **	2 33	3 37	13 51	86	23 21	24	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 15 ^h 40 ^m 4		Mag: -3.9 PMG: 12 ^h 30 ^m		Mag: +1.3 PMG: 7 ^h 31 ^m		Mag: -2.0 PMG: 6 ^h 55 ^m		Mag: +0.5 PMG: 9 ^h 59 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	o	'	o	'	o	'	o	'	o	'				
0	124	15.1	172	46.9	-19 15.1	247	15.1	-19 14.8	255	55.8	-16 48.2	209	48.7	-22 29.4
1	139	17.6	187	46.1	14.3	262	16.0	15.2	270	57.9	48.3	224	50.9	29.4
2	154	20.0	202	45.3	13.6	277	16.9	15.6	286	00.1	48.4	239	53.1	29.4
3	169	22.5	217	44.6	12.8	292	17.8	15.9	301	02.2	48.5	254	55.3	29.4
4	184	25.0	232	43.8	12.0	307	18.7	16.3	316	04.4	48.5	269	57.5	29.4
5	199	27.4	247	43.1	-19 11.2	322	19.5	-19 16.6	331	06.6	-16 48.6	284	59.6	-22 29.4
6	214	29.9	262	42.3	-19 10.5	337	20.4	-19 17.0	346	08.7	-16 48.7	300	01.8	-22 29.4
7	229	32.4	277	41.6	09.7	352	21.3	17.3	1	10.9	48.8	315	04.0	29.4
8	244	34.8	292	40.8	08.9	7	22.2	17.7	16	13.0	48.8	330	06.2	29.4
9	259	37.3	307	40.0	08.1	22	23.1	18.0	31	15.2	48.9	345	08.3	29.4
10	274	39.8	322	39.3	07.3	37	23.9	18.4	46	17.3	49.0	0	10.5	29.4
11	289	42.2	337	38.5	-19 06.5	52	24.8	-19 18.7	61	19.5	-16 49.1	15	12.7	-22 29.4
12	304	44.7	352	37.8	-19 05.8	67	25.7	-19 19.1	76	21.7	-16 49.1	30	14.9	-22 29.4
13	319	47.1	7	37.0	05.0	82	26.6	19.5	91	23.8	49.2	45	17.0	29.3
14	334	49.6	22	36.3	04.2	97	27.4	19.8	106	26.0	49.3	60	19.2	29.3
15	349	52.1	37	35.5	03.4	112	28.3	20.2	121	28.1	49.4	75	21.4	29.3
16	4	54.5	52	34.8	02.6	127	29.2	20.5	136	30.3	49.4	90	23.6	29.3
17	19	57.0	67	34.0	-19 01.8	142	30.1	-19 20.9	151	32.5	-16 49.5	105	25.7	-22 29.3
18	34	59.5	82	33.3	-19 01.0	157	30.9	-19 21.2	166	34.6	-16 49.6	120	27.9	-22 29.3
19	50	01.9	97	32.5	-19 00.2	172	31.8	21.6	181	36.8	49.6	135	30.1	29.3
20	65	04.4	112	31.8	-18 59.4	187	32.7	21.9	196	38.9	49.7	150	32.3	29.3
21	80	06.9	127	31.0	58.7	202	33.6	22.3	211	41.1	49.8	165	34.4	29.3
22	95	09.3	142	30.3	57.9	217	34.5	22.6	226	43.3	49.9	180	36.6	29.3
23	110	11.8	157	29.5	57.1	232	35.3	23.0	241	45.4	49.9	195	38.8	29.3
24	125	14.3	172	28.8	-18 56.3	247	36.2	-19 23.3	256	47.6	-16 50.0	210	41.0	-22 29.3
Dif	—		-8 +8		+9 -4		+22 -1		+22 -1		+22		+22	

UT	SOL			☾ LUNA					Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16:2 PMG: 12 ^h 12 ^m 5			Edad: 8 ^d 9 PHE { 4 ^h : 58'9 12 ^h : 59'2 20 ^h : 59'5 R°: 58 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif						Civil	Náutico	Hora	R°	Hora	R°
h	o	'	o	'	o	'	o	'	o	h m	h m	h m	h m m	h m m	h m m	h m m		
0	176	53.6	-18	46.6	76	37.0	+12	33.0	60 N	15 58	16 48	17 39	11 35 29	2 31 86				
1	191	53.5		46.0	91	05.1		42.4	58	16 10	16 55	44	44 31	24 82				
2	206	53.3		45.3	105	33.2	+12	51.7	56	20	17 02	48	51 34	17 80				
3	221	53.2		44.7	120	01.1	+13	01.0	54	29	09	52	11 58 36	11 76				
4	236	53.1		44.1	134	29.0		10.2	52	37	14	56	12 04 38	05 77				
5	251	52.9	-18	43.4	148	56.7	+13	19.3	50	16 44	17 20	17 59	12 10 39	2 00 74				
6	266	52.8	-18	42.8	163	24.4	+13	28.4	45	16 59	17 31	18 07	12 22 42	1 49 71				
7	281	52.7		42.2	177	52.0		37.4	40	17 12	41	14	32 44	40 69				
8	296	52.5		41.6	192	19.5		46.4	35	22	49	20	40 47	33 66				
9	311	52.4		40.9	206	47.0	+13	55.2	30	32	17 57	26	12 48 48	26 64				
10	326	52.3		40.3	221	14.3	+14	04.0	20	17 48	18 11	38	13 01 51	14 61				
11	341	52.1	-18	39.7	235	41.6	+14	12.8	10 N	18 03	18 25	18 50	13 12 54	1 04 58				
12	356	52.0	-18	39.0	250	08.8	+14	21.4	0	18 16	18 38	19 03	13 23 57	0 55 55				
13	11	51.9		38.4	264	35.9		30.0	10 S	30	18 52	18	34 59	45 52				
14	26	51.7		37.7	279	02.9		38.5	20	18 44	19 08	36	46 62	35 49				
15	41	51.6		37.1	293	29.8		46.9	30	19 01	28	19 59	13 59 65	24 46				
16	56	51.5		36.5	307	56.6	+14	55.2	35	11	39	20 13	14 07 67	17 44				
17	71	51.3	-18	35.8	322	23.4	+15	03.4	40	19 23	19 53	20 31	14 16 69	0 10 41				
18	86	51.2	-18	35.2	336	50.0	+15	11.6	45	19 36	20 10	20 54	14 27 71	0 01 39				
19	101	51.1		34.6	351	16.6		19.7	50	19 53	32	21 24	39 75	*** ** *				
20	116	50.9		33.9	5	43.1		27.7	52	20 01	43	40	45 76	*** ** *				
21	131	50.8		33.3	20	09.5		35.6	54	10	20 55	21 59	52 78	*** ** *				
22	146	50.7		32.6	34	35.8		43.4	56	19	21 09	22 24	14 59 80	*** ** *				
23	161	50.5		32.0	49	02.0		51.1	58	31	25	23 00	15 08 82	23 56 36				
24	176	50.4	-18	31.4	63	28.2	+15	58.7	60 S	20 44	21 46	*** ** *	15 17 85	23 45 34				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 15 ^h 36 ^m 5		Mag: -3.9 PMG: 12 ^h 31 ^m				Mag: +1.2 PMG: 7 ^h 29 ^m				Mag: -2.0 PMG: 6 ^h 52 ^m				Mag: +0.5 PMG: 9 ^h 56 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'
0	125	14.3	172	28.8	-18	56.3	247	36.2	-19	23.3	256	47.6	-16	50.0	210	41.0	-22	29.3
1	140	16.7	187	28.0		55.5	262	37.1		23.7	271	49.7		50.1	225	43.1		29.3
2	155	19.2	202	27.3		54.7	277	38.0		24.0	286	51.9		50.2	240	45.3		29.2
3	170	21.6	217	26.5		53.9	292	38.8		24.4	301	54.1		50.2	255	47.5		29.2
4	185	24.1	232	25.8		53.1	307	39.7		24.7	316	56.2		50.3	270	49.7		29.2
5	200	26.6	247	25.1	-18	52.3	322	40.6	-19	25.1	331	58.4	-16	50.4	285	51.9	-22	29.2
6	215	29.0	262	24.3	-18	51.5	337	41.5	-19	25.4	347	00.6	-16	50.5	300	54.0	-22	29.2
7	230	31.5	277	23.6		50.7	352	42.3		25.8	2	02.7		50.5	315	56.2		29.2
8	245	34.0	292	22.8		49.9	7	43.2		26.1	17	04.9		50.6	330	58.4		29.2
9	260	36.4	307	22.1		49.1	22	44.1		26.5	32	07.0		50.7	346	00.6		29.2
10	275	38.9	322	21.3		48.3	37	45.0		26.8	47	09.2		50.7	1	02.7		29.2
11	290	41.4	337	20.6	-18	47.4	52	45.8	-19	27.2	62	11.4	-16	50.8	16	04.9	-22	29.2
12	305	43.8	352	19.9	-18	46.6	67	46.7	-19	27.5	77	13.5	-16	50.9	31	07.1	-22	29.2
13	320	46.3	7	19.1		45.8	82	47.6		27.9	92	15.7		51.0	46	09.3		29.2
14	335	48.8	22	18.4		45.0	97	48.5		28.2	107	17.9		51.0	61	11.5		29.2
15	350	51.2	37	17.6		44.2	112	49.3		28.6	122	20.0		51.1	76	13.6		29.2
16	5	53.7	52	16.9		43.4	127	50.2		28.9	137	22.2		51.2	91	15.8		29.1
17	20	56.1	67	16.2	-18	42.6	142	51.1	-19	29.2	152	24.4	-16	51.3	106	18.0	-22	29.1
18	35	58.6	82	15.4	-18	41.8	157	52.0	-19	29.6	167	26.5	-16	51.3	121	20.2	-22	29.1
19	51	01.1	97	14.7		41.0	172	52.9		29.9	182	28.7		51.4	136	22.3		29.1
20	66	03.5	112	14.0		40.1	187	53.7		30.3	197	30.9		51.5	151	24.5		29.1
21	81	06.0	127	13.2		39.3	202	54.6		30.6	212	33.0		51.5	166	26.7		29.1
22	96	08.5	142	12.5		38.5	217	55.5		31.0	227	35.2		51.6	181	28.9		29.1
23	111	10.9	157	11.8		37.7	232	56.4		31.3	242	37.4		51.7	196	31.1		29.1
24	126	13.4	172	11.0	-18	36.9	247	57.2	-19	31.7	257	39.5	-16	51.8	211	33.2	-22	29.1
Dif	—		-7		+8		+9		-3		+22		-1		+22			

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16:2 PMG: 12 ^h 12 ^m 7			Edad: 9 ^d 9 PHE { 4 ^h : 59:7 12 ^h : 59:9 20 ^h : 60:2 R°: 61 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°			
h	o	'	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m	
0	176	50.4	-18	31.4	63	28.2	+15	58.7	60 N	6 45	7 36	8 25	12 04	40		3 57	82	
1	191	50.3		30.7	77	54.2	+16	06.3	58	40	29	14	15	43		46	80	
2	206	50.2		30.1	92	20.2		13.7	56	36	22	8 04	25	44		37	77	
3	221	50.0		29.4	106	46.1		21.0	54	33	16	7 55	34	45		28	76	
4	236	49.9		28.8	121	11.9		28.3	52	29	10	47	42	46		21	74	
5	251	49.8	-18	28.2	135	37.6	+16	35.4	50	6 26	7 05	7 40	12 49	48		3 14	74	
6	266	49.7	-18	27.5	150	03.2	+16	42.5	45	6 18	6 54	7 25	13 04	50		3 00	71	
7	281	49.5		26.9	164	28.7		49.4	40	11	44	13	16	52		2 49	68	
8	296	49.4		26.2	178	54.2	+16	56.3	35	6 05	35	7 02	27	53		39	66	
9	311	49.3		25.6	193	19.6	+17	03.0	30	5 59	28	6 53	36	55		30	65	
10	326	49.2		24.9	207	44.9		09.6	20	47	14	37	13 52	57		15	63	
11	341	49.0	-18	24.3	222	10.1	+17	16.2	10 N	5 35	6 01	6 23	14 06	59		2 02	60	
12	356	48.9	-18	23.6	236	35.2	+17	22.6	0	5 22	5 47	6 09	14 20	60		1 50	58	
13	11	48.8		23.0	251	00.2		28.9	10 S	5 07	33	5 56	33	62		37	57	
14	26	48.7		22.3	265	25.2		35.1	20	4 50	5 17	41	14 48	63		24	54	
15	41	48.5		21.7	279	50.1		41.2	30	27	4 58	24	15 04	65		10	51	
16	56	48.4		21.0	294	14.9		47.2	35	4 12	46	14	14	66		1 01	50	
17	71	48.3	-18	20.4	308	39.6	+17	53.0	40	3 55	4 32	5 03	15 25	68		0 51	48	
18	86	48.2	-18	19.7	323	04.3	+17	58.8	45	3 32	4 15	4 49	15 38	69		0 40	46	
19	101	48.0		19.1	337	28.8	+18	04.4	50	3 02	3 54	33	15 54	71		26	43	
20	116	47.9		18.4	351	53.3		09.9	55	2 46	43	25	16 01	73		19	42	
21	131	47.8		17.8	6	17.7		15.3	54	27	31	16	10	73		12	40	
22	146	47.7		17.1	20	42.1		20.6	53	2 02	17	4 07	19	75		0 04	39	
23	161	47.6		16.5	35	06.3		25.7	51	1 26	3 01	3 55	30	76		***	***	
24	176	47.4	-18	15.8	49	30.5	+18	30.7	50	***	2 40	3 42	16 42	78		***	***	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 15 ^h 32 ^m 6			Mag: -3.9 PMG: 12 ^h 32 ^m			Mag: +1.2 PMG: 7 ^h 28 ^m			Mag: -2.0 PMG: 6 ^h 48 ^m			Mag: +0.5 PMG: 9 ^h 52 ^m					
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'		
0	126	13.4	172	11.0	-18	36.9	247	57.2	-19	31.7	257	39.5	-16	51.8	211	33.2		
1	141	15.9	187	10.3		36.1	262	58.1		32.0	272	41.7		51.8	226	35.4		
2	156	18.3	202	09.6		35.2	277	59.0		32.4	287	43.9		51.9	241	37.6		
3	171	20.8	217	08.8		34.4	292	59.9		32.7	302	46.0		52.0	256	39.8		
4	186	23.3	232	08.1		33.6	308	00.7		33.0	317	48.2		52.0	271	41.9		
5	201	25.7	247	07.4	-18	32.8	323	01.6	-19	33.4	332	50.4	-16	52.1	286	44.1		
6	216	28.2	262	06.6	-18	31.9	338	02.5	-19	33.7	347	52.5	-16	52.2	301	46.3		
7	231	30.6	277	05.9		31.1	353	03.4		34.1	2	54.7		52.3	316	48.5		
8	246	33.1	292	05.2		30.3	8	04.2		34.4	17	56.9		52.3	331	50.7		
9	261	35.6	307	04.4		29.5	23	05.1		34.8	32	59.0		52.4	346	52.8		
10	276	38.0	322	03.7		28.6	38	06.0		35.1	48	01.2		52.5	1	55.0		
11	291	40.5	337	03.0	-18	27.8	53	06.9	-19	35.4	63	03.4	-16	52.5	16	57.2		
12	306	43.0	352	02.3	-18	27.0	68	07.7	-19	35.8	78	05.6	-16	52.6	31	59.4		
13	321	45.4	7	01.5		26.1	83	08.6		36.1	93	07.7		52.7	47	01.6		
14	336	47.9	22	00.8		25.3	98	09.5		36.5	108	09.9		52.8	62	03.7		
15	351	50.4	37	00.1		24.5	113	10.3		36.8	123	12.1		52.8	77	05.9		
16	6	52.8	51	59.3		23.6	128	11.2		37.2	138	14.2		52.9	92	08.1		
17	21	55.3	66	58.6	-18	22.8	143	12.1	-19	37.5	153	16.4	-16	53.0	107	10.3		
18	36	57.7	81	57.9	-18	22.0	158	13.0	-19	37.8	168	18.6	-16	53.0	122	12.5		
19	52	00.2	96	57.2		21.1	173	13.8		38.2	183	20.8		53.1	137	14.6		
20	67	02.7	111	56.5		20.3	188	14.7		38.5	198	22.9		53.2	152	16.8		
21	82	05.1	126	55.7		19.5	203	15.6		38.9	213	25.1		53.2	167	19.0		
22	97	07.6	141	55.0		18.6	218	16.5		39.2	228	27.3		53.3	182	21.2		
23	112	10.1	156	54.3		17.8	233	17.3		39.5	243	29.4		53.4	197	23.4		
24	127	12.5	171	53.6	-18	16.9	248	18.2	-19	39.9	258	31.6	-16	53.5	212	25.5		
Dif	—			-7			+8			+9			+22			-1		

UT	SOL				LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna						
	SD: 16:2				Edad: 10 ^d 9 PHE { 4 ^h : 60:4																	
	PMG: 12 ^h 12 ^m 9				SD: 16:5																	
	PMG: 21 ^h 35 ^m				Rº: 62 ^m																	
	hG ☉		Dec		hG ☾		Dif		Dec		Dif			Civil	Náutico	Hora	Rº	Hora	Rº			
h	o	'	o	'	o	'	o	'	o	'	o	'	h	m	h	m	h	m	m			
0	176	47.4	-18	15.8	49	30.5	+18	30.7	60 N	16	04	16	52	17	44	12	44	56	5	19	72	
1	191	47.3		15.2	63	54.6		35.6	58	15		17	00	48		12	58	56	5	06	71	
2	206	47.2		14.5	78	18.7		40.4	56	24		06	52		13	09	58		4	54	71	
3	221	47.1		13.8	92	42.7		45.1	54	33		12	55		19	58		44	70			
4	236	47.0		13.2	107	06.6		49.6	52	40		18	17	59	28	59		35	69			
5	251	46.8	-18	12.5	121	30.4	+18	54.0	50	16	47	17	23	18	02	13	37	58	4	28	68	
6	266	46.7	-18	11.9	135	54.2	+18	58.3	45	17	02	17	34	18	09	13	54	59	4	11	67	
7	281	46.6		11.2	150	17.9	+19	02.4	40	14		43	16		14	08	60		3	57	66	
8	296	46.5		10.6	164	41.5		06.4	35	25		51	22		20	61		45	66			
9	311	46.4		09.9	179	05.1		10.3	30	34		17	59	28	31	61		35	65			
10	326	46.3		09.2	193	28.6		14.0	20	17	49	18	13	39	14	49	61		18	63		
11	341	46.1	-18	08.6	207	52.1	+19	17.6	10 N	18	03	18	25	18	51	15	05	62	3	02	63	
12	356	46.0	-18	07.9	222	15.4	+19	21.1	0	18	16	18	38	19	04	15	20	62	2	48	61	
13	11	45.9		07.3	236	38.8		24.4	10 S	30		18	52	18		35	63		34	60		
14	26	45.8		06.6	251	02.1		27.6	20	18	44	19	07	35		15	51	63	18	60		
15	41	45.7		05.9	265	25.3		30.7	30	19	01	26	19	58	16	09	64		2	01	58	
16	56	45.6		05.3	279	48.5		33.6	29	35	10	38	20	12	20	64		1	51	57		
17	71	45.5	-18	04.6	294	11.6	+19	36.4	28	40	19	21	19	52	20	29	16	33	64	1	39	56
18	86	45.3	-18	03.9	308	34.6	+19	39.0	26	45	19	34	20	08	20	51	16	47	65	1	26	54
19	101	45.2		03.3	322	57.7		41.5	25	50	50	29	21	20	17	05	65		09	53		
20	116	45.1		02.6	337	20.6		43.8	23	52	19	58	39	35	14	65		1	01	52		
21	131	45.0		01.9	351	43.6		46.1	23	54	20	06	20	51	21	53	23	65	0	52	52	
22	146	44.9		01.3	6	06.4		48.1	20	56	16	21	04	22	16	34	65		43	50		
23	161	44.8	-18	00.6	20	29.3		50.0	19	58	26	20	22	49	17	46	66		32	49		
24	176	44.7	-17	59.9	34	52.1	+19	51.8	18	60 S	20	39	21	39	** **	18	00	66	0	19	47	
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO					
	PMG: 15 ^h 28 ^m 6				Mag: -3.9				Mag: +1.2				Mag: -2.0				Mag: +0.5					
	PMG: 12 ^h 33 ^m				PMG: 7 ^h 26 ^m				PMG: 6 ^h 45 ^m				PMG: 9 ^h 49 ^m									
	hG ♈				hG ♀				hG ♂				hG ♃				hG ♄					
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'
0	127	12.5	171	53.6	-18	16.9	248	18.2	-19	39.9	258	31.6	-16	53.5	212	25.5	-22	28.9				
1	142	15.0	186	52.8		16.1	263	19.1		40.2	273	33.8		53.5	227	27.7		28.9				
2	157	17.5	201	52.1		15.3	278	20.0		40.6	288	36.0		53.6	242	29.9		28.9				
3	172	19.9	216	51.4		14.4	293	20.8		40.9	303	38.1		53.7	257	32.1		28.9				
4	187	22.4	231	50.7		13.6	308	21.7		41.2	318	40.3		53.7	272	34.3		28.9				
5	202	24.9	246	50.0	-18	12.7	323	22.6	-19	41.6	333	42.5	-16	53.8	287	36.4	-22	28.9				
6	217	27.3	261	49.3	-18	11.9	338	23.5	-19	41.9	348	44.7	-16	53.9	302	38.6	-22	28.9				
7	232	29.8	276	48.5		11.0	353	24.3		42.2	3	46.8		53.9	317	40.8		28.8				
8	247	32.2	291	47.8		10.2	8	25.2		42.6	18	49.0		54.0	332	43.0		28.8				
9	262	34.7	306	47.1		09.3	23	26.1		42.9	33	51.2		54.1	347	45.2		28.8				
10	277	37.2	321	46.4		08.5	38	26.9		43.3	48	53.4		54.1	2	47.4		28.8				
11	292	39.6	336	45.7	-18	07.6	53	27.8	-19	43.6	63	55.5	-16	54.2	17	49.5	-22	28.8				
12	307	42.1	351	45.0	-18	06.8	68	28.7	-19	43.9	78	57.7	-16	54.3	32	51.7	-22	28.8				
13	322	44.6	6	44.2		05.9	83	29.6		44.3	93	59.9		54.4	47	53.9		28.8				
14	337	47.0	21	43.5		05.1	98	30.4		44.6	109	02.1		54.4	62	56.1		28.8				
15	352	49.5	36	42.8		04.2	113	31.3		44.9	124	04.3		54.5	77	58.3		28.8				
16	7	52.0	51	42.1		03.4	128	32.2		45.3	139	06.4		54.6	93	00.4		28.8				
17	22	54.4	66	41.4	-18	02.5	143	33.1	-19	45.6	154	08.6	-16	54.6	108	02.6	-22	28.8				
18	37	56.9	81	40.7	-18	01.7	158	33.9	-19	45.9	169	10.8	-16	54.7	123	04.8	-22	28.8				
19	52	59.4	96	40.0	-18	00.8	173	34.8		46.3	184	13.0		54.8	138	07.0		28.7				
20	68	01.8	111	39.3	-17	59.9	188	35.7		46.6	199	15.1		54.8	153	09.2		28.7				
21	83	04.3	126	38.6		59.1	203	36.5		46.9	214	17.3		54.9	168	11.4		28.7				
22	98	06.7	141	37.8		58.2	218	37.4		47.3	229	19.5		55.0	183	13.5		28.7				
23	113	09.2	156	37.1		57.4	233	38.3		47.6	244	21.7		55.0	198	15.7		28.7				
24	128	11.7	171	36.4	-17	56.5	248	39.2	-19	47.9	259	23.9	-16	55.1	213	17.9	-22	28.7				
Dif	—				-7 +9				+9 -3				+22 -1				+22 0					

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'2 PMG: 12 ^h 13 ^m 1			Edad: 11 ^d 9 PHE { 4 ^h : 60'8 12 ^h : 61'0 20 ^h : 61'0 R°: 62 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°		
h	o	'	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m
0	176	44.7	-17	59.9	34	52.1	+19	51.8	60 N	6 41	7 33	8 21	13 40	72	6 31	58	
1	191	44.6		59.3	49	14.8		53.5	58	37	25	10	13 54	71	17	58	
2	206	44.4		58.6	63	37.6		54.9	56	33	19	8 01	14 07	70	6 05	59	
3	221	44.3		57.9	78	00.3		56.3	54	30	13	7 52	17 70		5 54	59	
4	236	44.2		57.3	92	22.9		57.5	52	27	08	45	27 69		44	60	
5	251	44.1	-17	56.6	106	45.5	+19	58.5	50	6 24	7 03	7 38	14 35	69	5 36	60	
6	266	44.0	-17	55.9	121	08.1	+19	59.4	45	6 16	6 52	7 23	14 53	68	5 18	61	
7	281	43.9		55.2	135	30.7	+20	00.2	40	10	42	11	15 08	67	5 03	61	
8	296	43.8		54.6	149	53.2		00.8	35	6 04	34	7 01	21 66		4 51	61	
9	311	43.7		53.9	164	15.7		01.2	30	5 58	27	6 52	32 65		40	61	
10	326	43.6		53.2	178	38.2		01.5	20	47	13	36	15 50	65	21	62	
11	341	43.5	-17	52.5	193	00.7	+20	01.7	10 N	5 35	6 01	6 23	16 07	63	4 05	62	
12	356	43.4	-17	51.9	207	23.1	+20	01.7	0	5 23	5 48	6 10	16 22	63	3 49	63	
13	11	43.3		51.2	221	45.6		01.6	10 S	5 08	34	5 56	38 61		34	63	
14	26	43.1		50.5	236	08.0		01.3	20	4 51	19	42	16 54	61	3 18	63	
15	41	43.0		49.8	250	30.4		00.8	30	29	5 00	26	17 13	59	2 59	63	
16	56	42.9		49.2	264	52.8	+20	00.2	35	4 15	4 48	16	24 59		48	63	
17	71	42.8	-17	48.5	279	15.2	+19	59.5	40	3 58	4 35	5 05	17 37	57	2 35	64	
18	86	42.7	-17	47.8	293	37.6	+19	58.6	45	3 36	4 18	4 52	17 52	56	2 20	64	
19	101	42.6		47.1	307	59.9		57.5	50	3 07	3 58	36	18 10	55	2 02	64	
20	116	42.5		46.5	322	22.3		56.3	52	2 52	47	29	19 54		1 53	64	
21	131	42.4		45.8	336	44.7		55.0	54	33	36	20	28 54		44	64	
22	146	42.3		45.1	351	07.0		53.5	56	2 10	23	11	39 53		33	64	
23	161	42.2		44.4	5	29.4		51.9	58	1 38	3 07	4 00	18 52	51	21	64	
24	176	42.1	-17	43.7	19	51.8	+19	50.1	60 S	** **	2 47	3 48	19 06	50	1 06	64	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 15 ^h 24 ^m 7		Mag: -3.9 PMG: 12 ^h 34 ^m			Mag: +1.2 PMG: 7 ^h 25 ^m			Mag: -2.0 PMG: 6 ^h 41 ^m			Mag: +0.5 PMG: 9 ^h 45 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♏	Dec		hG ♉	Dec			
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'		
0	128	11.7	171	36.4	-17	56.5	248	39.2	-19	47.9	259	23.9	-16	55.1		
1	143	14.1	186	35.7		55.6	263	40.0		48.3	274	26.0		55.2		
2	158	16.6	201	35.0		54.8	278	40.9		48.6	289	28.2		55.2		
3	173	19.1	216	34.3		53.9	293	41.8		48.9	304	30.4		55.3		
4	188	21.5	231	33.6		53.0	308	42.7		49.3	319	32.6		55.4		
5	203	24.0	246	32.9	-17	52.2	323	43.5	-19	49.6	334	34.8	-16	55.4		
6	218	26.5	261	32.2	-17	51.3	338	44.4	-19	49.9	349	36.9	-16	55.5		
7	233	28.9	276	31.5		50.4	353	45.3		50.3	4	39.1		55.6		
8	248	31.4	291	30.8		49.6	8	46.1		50.6	19	41.3		55.7		
9	263	33.9	306	30.1		48.7	23	47.0		50.9	34	43.5		55.7		
10	278	36.3	321	29.4		47.8	38	47.9		51.3	49	45.7		55.8		
11	293	38.8	336	28.7	-17	47.0	53	48.8	-19	51.6	64	47.8	-16	55.9		
12	308	41.2	351	28.0	-17	46.1	68	49.6	-19	51.9	79	50.0	-16	55.9		
13	323	43.7	6	27.3		45.2	83	50.5		52.3	94	52.2		56.0		
14	338	46.2	21	26.6		44.3	98	51.4		52.6	109	54.4		56.1		
15	353	48.6	36	25.9		43.5	113	52.2		52.9	124	56.6		56.1		
16	8	51.1	51	25.2		42.6	128	53.1		53.3	139	58.8		56.2		
17	23	53.6	66	24.5	-17	41.7	143	54.0	-19	53.6	155	00.9	-16	56.3		
18	38	56.0	81	23.8	-17	40.8	158	54.9	-19	53.9	170	03.1	-16	56.3		
19	53	58.5	96	23.1		40.0	173	55.7		54.2	185	05.3		56.4		
20	69	01.0	111	22.4		39.1	188	56.6		54.6	200	07.5		56.5		
21	84	03.4	126	21.7		38.2	203	57.5		54.9	215	09.7		56.5		
22	99	05.9	141	21.0		37.3	218	58.3		55.2	230	11.9		56.6		
23	114	08.4	156	20.3		36.4	233	59.2		55.6	245	14.0		56.7		
24	129	10.8	171	19.6	-17	35.5	249	00.1	-19	55.9	260	16.2	-16	56.7		
Dif	—		-7		+9		+9		-3		+22		-1		+22	

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 13 ^m 4			Edad: 13 ^d 9 PHE { 4 ^h : 61'0 12 ^h : 60'9 20 ^h : 60'8 PMG: ***h***m R°: ***m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico		Civil	Hora		R°	Hora	R°	
h	o	'	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m
0	176	39.7	-17	27.2	4	55.2	+18	23.1	58	6	38	7	29	8	16	16	17
1	191	39.6		26.5	19	18.3	41	17.8	53	34	22		8	06	28	86	8
2	206	39.6		25.8	33	41.5	42	12.2	56	30	16		7	57	37	84	7
3	221	39.5		25.1	48	04.7	42	06.6	56	27	10		49	45	83		42
4	236	39.4		24.4	62	28.0	43	+18	00.8	58	24	05	42	16	53	80	34
5	251	39.3	-17	23.7	76	51.3	43	+17	54.9	59	6	21	7	00	78	7	27
6	266	39.2	-17	23.0	91	14.7	44	+17	48.9	60	6	15	6	50	75	7	11
7	281	39.1		22.3	105	38.1	44	42.7	62	40	08	41	10	26	72	6	59
8	296	39.0		21.6	120	01.6	45	36.5	62	35	6	03	33	7	00	36	70
9	311	38.9		20.9	134	25.1	45	30.1	64	30	5	57	26	6	51	17	45
10	326	38.8		20.2	148	48.7	46	23.5	66	20	46	13	36	18	00	64	22
11	341	38.7	-17	19.5	163	12.4	47	+17	16.9	66	5	35	6	01	61	6	08
12	356	38.6	-17	18.8	177	36.1	47	+17	10.1	68	5	23	5	48	58	5	54
13	11	38.6		18.1	192	00.0	49	+17	03.2	69	5	09	35	5	57	38	55
14	26	38.5		17.4	206	23.8	48	+16	56.2	70	4	52	20	43	18	51	52
15	41	38.4		16.7	220	47.8	50	49.1	71	30	31	5	02	28	19	06	49
16	56	38.3		16.0	235	11.8	50	41.8	73	35	17	4	51	18	15	46	4
17	71	38.2	-17	15.3	249	35.8	50	+16	34.5	73	4	01	4	38	5	08	44
18	86	38.1	-17	14.6	264	00.0	52	+16	27.0	75	3	40	4	22	4	55	4
19	101	38.0		13.9	278	24.2	52	19.4	76	50	3	12	4	02	40	51	37
20	116	37.9		13.2	292	48.5	53	11.7	77	52	2	57	3	52	33	19	57
21	131	37.8		12.5	307	12.9	54	+16	03.9	78	54	40	41	25	20	04	34
22	146	37.8		11.8	321	37.3	54	+15	56.0	79	56	2	18	28	15	12	32
23	161	37.7		11.1	336	01.8	55	48.0	80	58	1	49	3	13	4	05	22
24	176	37.6	-17	10.4	350	26.4	56	+15	39.9	81	0	59	2	55	3	53	20

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 15 ^h 16 ^m 8		Mag: -3.9 PMG: 12 ^h 36 ^m		Mag: +1.2 PMG: 7 ^h 22 ^m		Mag: -2.0 PMG: 6 ^h 34 ^m		Mag: +0.6 PMG: 9 ^h 38 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	o	'	o	'	o	'	o	'	o	'
0	130	10.0	171	03.1	249	21.0	261	08.8	215	02.8
1	145	12.4	186	02.4	264	21.8	276	10.9	230	04.9
2	160	14.9	201	01.8	279	22.7	291	13.1	245	07.1
3	175	17.3	216	01.1	294	23.6	306	15.3	260	09.3
4	190	19.8	231	00.4	309	24.4	321	17.5	275	11.5
5	205	22.3	245	59.7	324	25.3	336	19.7	290	13.7
6	220	24.7	260	59.0	339	26.2	351	21.9	305	15.9
7	235	27.2	275	58.4	354	27.0	6	24.1	320	18.1
8	250	29.7	290	57.7	9	27.9	21	26.3	335	20.2
9	265	32.1	305	57.0	24	28.8	36	28.5	350	22.4
10	280	34.6	320	56.3	39	29.6	51	30.7	5	24.6
11	295	37.1	335	55.7	54	30.5	66	32.9	20	26.8
12	310	39.5	350	55.0	69	31.4	81	35.1	35	29.0
13	325	42.0	5	54.3	84	32.3	96	37.3	50	31.2
14	340	44.5	20	53.6	99	33.1	111	39.5	65	33.4
15	355	46.9	35	53.0	114	34.0	126	41.7	80	35.6
16	10	49.4	50	52.3	129	34.9	141	43.8	95	37.7
17	25	51.8	65	51.6	144	35.7	156	46.0	110	39.9
18	40	54.3	80	50.9	159	36.6	171	48.2	125	42.1
19	55	56.8	95	50.3	174	37.5	186	50.4	140	44.3
20	70	59.2	110	49.6	189	38.3	201	52.6	155	46.5
21	86	01.7	125	48.9	204	39.2	216	54.8	170	48.7
22	101	04.2	140	48.3	219	40.1	231	57.0	185	50.9
23	116	06.6	155	47.6	234	40.9	246	59.2	200	53.1
24	131	09.1	170	46.9	249	41.8	262	01.4	215	55.3
Dif	—		-7	+9	+9	-3	+22	-1	+22	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 16'2 PMG: 12 ^h 13 ^m 6			Edad: 14 ^d 9 PHE { 4 ^h : 60'6 12 ^h : 60'4 20 ^h : 60'2 PMG: 0 ^h 40 ^m R°: 57 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	o	'	o	'	o	'	o	'	h m	h m	h m	h m	h m	h m	h m	h m		
0	176	37.6	-17	10.4	350	26.4	+15	39.9	60 N	16 14	17 01	17 52	17 47	89	8 43	23		
1	191	37.5		09.7	4	51.0	56	31.7	58	24	08	56	17 54	87	34	26		
2	206	37.4		09.0	19	15.8	58	23.3	56	33	14	17 59	18 01	85	27	28		
3	221	37.3		08.3	33	40.6	58	14.9	54	41	19	18 02	08	81	20	30		
4	236	37.2		07.5	48	05.5	59	+15	52	48	24	05	13	80	14	32		
5	251	37.2	-17	06.8	62	30.5	60	+14	50	16 54	17 29	18 08	18 18	78	8 08	34		
6	266	37.1	-17	06.1	76	55.5	60	+14	45	17 08	17 39	18 14	18 29	74	7 56	38		
7	281	37.0		05.4	91	20.6	61	40.3	40	19	48	20	38	71	46	41		
8	296	36.9		04.7	105	45.9	63	31.4	35	29	17 55	25	46	68	37	44		
9	311	36.8		04.0	120	11.1	62	22.4	30	37	18 02	31	18 52	66	30	45		
10	326	36.8		03.3	134	36.5	64	13.3	20	17 52	15	41	19 04	61	16	50		
11	341	36.7	-17	02.6	149	02.0	65	+14	10 N	18 05	18 27	18 52	19 14	58	7 05	53		
12	356	36.6	-17	01.9	163	27.5	65	+13	0	18 17	18 39	19 04	19 24	54	6 54	56		
13	11	36.5		01.1	177	53.1	66	45.5	10 S	29	18 52	17	33	51	43	59		
14	26	36.4	-17	00.4	192	18.8	67	36.1	20	43	19 06	34	43	48	31	63		
15	41	36.3	-16	59.7	206	44.6	68	26.6	30	18 58	24	19 55	19 55	43	17	67		
16	56	36.3		59.0	221	10.5	69	17.0	35	19 07	35	20 08	20 01	41	09	69		
17	71	36.2	-16	58.3	235	36.4	69	+13	40	19 18	19 47	20 24	20 09	38	6 00	72		
18	86	36.1	-16	57.6	250	02.4	70	+12	45	19 30	20 03	20 44	20 18	35	5 49	75		
19	101	36.0		56.8	264	28.5	71	47.8	50	45	22	21 12	28	31	36	79		
20	116	35.9		56.1	278	54.7	72	38.0	52	52	32	25	33	29	30	81		
21	131	35.9		55.4	293	21.0	73	28.0	54	19 59	42	21 42	38	28	24	82		
22	146	35.8		54.7	307	47.4	74	18.0	56	20 08	20 55	22 02	44	26	16	85		
23	161	35.7		54.0	322	13.8	74	+12	58	18	21 09	22 28	51	23	5 08	87		
24	176	35.6	-16	53.3	336	40.3	75	+11	60 S	20 29	21 26	23 09	20 58	20	4 58	91		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 15 ^h 12 ^m 9		Mag: -3.9 PMG: 12 ^h 37 ^m				Mag: +1.2 PMG: 7 ^h 21 ^m				Mag: -2.0 PMG: 6 ^h 31 ^m				Mag: +0.6 PMG: 9 ^h 35 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'
0	131	09.1	170	46.9	-16	52.2	249	41.8	-20	11.3	262	01.4	-16	59.8	215	55.3	-22	28.1
1	146	11.6	185	46.3		51.2	264	42.7		11.7	277	03.6		59.9	230	57.4		28.1
2	161	14.0	200	45.6		50.3	279	43.5		12.0	292	05.8	-16	59.9	245	59.6		28.1
3	176	16.5	215	44.9		49.4	294	44.4		12.3	307	08.0	-17	00.0	261	01.8		28.1
4	191	19.0	230	44.3		48.5	309	45.3		12.6	322	10.2	-17	00.1	276	04.0		28.1
5	206	21.4	245	43.6	-16	47.5	324	46.1	-20	12.9	337	12.4	-17	00.1	291	06.2	-22	28.1
6	221	23.9	260	42.9	-16	46.6	339	47.0	-20	13.2	352	14.6	-17	00.2	306	08.4	-22	28.1
7	236	26.3	275	42.3		45.7	354	47.9		13.6	7	16.8		00.3	321	10.6		28.1
8	251	28.8	290	41.6		44.7	9	48.7		13.9	22	19.0		00.3	336	12.8		28.0
9	266	31.3	305	40.9		43.8	24	49.6		14.2	37	21.2		00.4	351	15.0		28.0
10	281	33.7	320	40.3		42.9	39	50.5		14.5	52	23.4		00.4	6	17.1		28.0
11	296	36.2	335	39.6	-16	41.9	54	51.3	-20	14.8	67	25.6	-17	00.5	21	19.3	-22	28.0
12	311	38.7	350	39.0	-16	41.0	69	52.2	-20	15.1	82	27.8	-17	00.6	36	21.5	-22	28.0
13	326	41.1	5	38.3		40.1	84	53.1		15.4	97	30.0		00.6	51	23.7		28.0
14	341	43.6	20	37.6		39.1	99	53.9		15.8	112	32.2		00.7	66	25.9		28.0
15	356	46.1	35	37.0		38.2	114	54.8		16.1	127	34.4		00.7	81	28.1		28.0
16	11	48.5	50	36.3		37.3	129	55.7		16.4	142	36.6		00.8	96	30.3		28.0
17	26	51.0	65	35.7	-16	36.3	144	56.5	-20	16.7	157	38.8	-17	00.9	111	32.5	-22	28.0
18	41	53.4	80	35.0	-16	35.4	159	57.4	-20	17.0	172	41.0	-17	00.9	126	34.7	-22	28.0
19	56	55.9	95	34.3		34.5	174	58.3		17.3	187	43.2		01.0	141	36.9		28.0
20	71	58.4	110	33.7		33.5	189	59.1		17.6	202	45.4		01.1	156	39.0		27.9
21	87	00.8	125	33.0		32.6	205	00.0		17.9	217	47.6		01.1	171	41.2		27.9
22	102	03.3	140	32.4		31.6	220	00.9		18.2	232	49.8		01.2	186	43.4		27.9
23	117	05.8	155	31.7		30.7	235	01.7		18.6	247	52.0		01.2	201	45.6		27.9
24	132	08.2	170	31.1	-16	29.8	250	02.6	-20	18.9	262	54.2	-17	01.3	216	47.8	-22	27.9
Dif	—		-7		+9		+9		-3		+22		-1		+22			

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'2 PMG: 12 ^h 13 ^m 7			Edad: 15 ^d 9 PHE { 4 ^h : 60'0 12 ^h : 59'7 20 ^h : 59'4 SD: 16'3 PMG: 1 ^h 37 ^m R°: 54 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	o	'	o	'	o	'	o	'	h	m	h	m	h	m	h	m		
0	176	35.6	-16	53.3	336	40.3	+11	57.7	60 N	6 34	7 25	8 12	19 16	88	9 06	18		
1	191	35.6		52.5	351	06.9	76	47.5	58	31	18	8 02	21	85	9 00	21		
2	206	35.5		51.8	5	33.6	77	37.2	56	27	12	7 53	26	81	8 55	24		
3	221	35.4		51.1	20	00.4	78	26.9	54	24	07	45	29	80	50	26		
4	236	35.3		50.4	34	27.3	79	16.5	52	21	7 02	38	33	77	46	28		
5	251	35.3	-16	49.6	48	54.2	79	+11	50	6 19	6 57	7 32	19 36	76	8 42	30		
6	266	35.2	-16	48.9	63	21.2	80	+10	45	6 13	6 48	7 19	19 43	71	8 34	33		
7	281	35.1		48.2	77	48.3	81		40	07	39	7 08	49	68	27	36		
8	296	35.0		47.5	92	15.5	82		35	6 01	32	6 58	54	65	21	39		
9	311	35.0		46.8	106	42.8	83		30	5 56	25	50	19 58	63	15	42		
10	326	34.9		46.0	121	10.1	83		20	46	12	35	20 05	59	8 06	46		
11	341	34.8	-16	45.3	135	37.6	85	+10	10 N	5 35	6 00	6 22	20 12	55	7 58	49		
12	356	34.7	-16	44.6	150	05.1	85	+9	0	5 23	5 49	6 10	20 18	51	7 50	53		
13	11	34.7		43.8	164	32.7	86		10 S	5 10	36	5 58	24	48	42	56		
14	26	34.6		43.1	179	00.3	86		20	4 54	21	45	31	44	34	60		
15	41	34.5		42.4	193	28.1	88		30	33	5 04	29	38	40	24	64		
16	56	34.4		41.7	207	55.9	88	+9	35	20	4 53	20	42	38	18	67		
17	71	34.4	-16	40.9	222	23.8	89	+8	40	4 04	4 40	5 10	20 47	35	7 12	69		
18	86	34.3	-16	40.2	236	51.8	90	+8	45	3 43	4 25	4 58	20 53	31	7 04	73		
19	101	34.2		39.5	251	19.8	90		50	16	4 05	43	20 59	28	6 55	77		
20	116	34.2		38.8	265	48.0	92		52	3 03	3 56	36	21 02	26	51	79		
21	131	34.1		38.0	280	16.2	92		54	2 46	45	29	06	24	46	81		
22	146	34.0		37.3	294	44.5	93	+8	56	26	33	20	10	21	41	84		
23	161	34.0		36.6	309	12.9	94	+7	58	2 00	19	4 10	14	19	35	86		
24	176	33.9	-16	35.8	323	41.3	94	+7	60 S	1 19	3 02	3 59	21 18	17	6 29	89		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 15 ^h 09 ^m 0		Mag: -3.9 PMG: 12 ^h 38 ^m				Mag: +1.2 PMG: 7 ^h 19 ^m				Mag: -2.0 PMG: 6 ^h 27 ^m				Mag: +0.6 PMG: 9 ^h 31 ^m			
	hG ♈		hG ♀	Dec			hG ♂	Dec			hG ♃	Dec			hG ♄	Dec		
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'		
0	132	08.2	170	31.1	-16	29.8	250	02.6	-20	18.9	262	54.2	-17	01.3	216	47.8		
1	147	10.7	185	30.4		28.8	265	03.5		19.2	277	56.4		01.4	231	50.0		
2	162	13.2	200	29.7		27.9	280	04.3		19.5	292	58.6		01.4	246	52.2		
3	177	15.6	215	29.1		26.9	295	05.2		19.8	308	00.8		01.5	261	54.4		
4	192	18.1	230	28.4		26.0	310	06.1		20.1	323	03.1		01.5	276	56.6		
5	207	20.6	245	27.8	-16	25.0	325	06.9	-20	20.4	338	05.3	-17	01.6	291	58.8		
6	222	23.0	260	27.1	-16	24.1	340	07.8	-20	20.7	353	07.5	-17	01.7	307	01.0		
7	237	25.5	275	26.5		23.1	355	08.7		21.0	8	09.7		01.7	322	03.1		
8	252	27.9	290	25.8		22.2	10	09.5		21.3	23	11.9		01.8	337	05.3		
9	267	30.4	305	25.2		21.2	25	10.4		21.7	38	14.1		01.8	352	07.5		
10	282	32.9	320	24.5		20.3	40	11.3		22.0	53	16.3		01.9	7	09.7		
11	297	35.3	335	23.9	-16	19.3	55	12.1	-20	22.3	68	18.5	-17	02.0	22	11.9		
12	312	37.8	350	23.2	-16	18.4	70	13.0	-20	22.6	83	20.7	-17	02.0	37	14.1		
13	327	40.3	5	22.6		17.4	85	13.9		22.9	98	22.9		02.1	52	16.3		
14	342	42.7	20	21.9		16.5	100	14.7		23.2	113	25.1		02.1	67	18.5		
15	357	45.2	35	21.3		15.5	115	15.6		23.5	128	27.3		02.2	82	20.7		
16	12	47.7	50	20.6		14.6	130	16.5		23.8	143	29.5		02.3	97	22.9		
17	27	50.1	65	20.0	-16	13.6	145	17.3	-20	24.1	158	31.7	-17	02.3	112	25.1		
18	42	52.6	80	19.4	-16	12.6	160	18.2	-20	24.4	173	33.9	-17	02.4	127	27.3		
19	57	55.1	95	18.7		11.7	175	19.1		24.7	188	36.2		02.4	142	29.4		
20	72	57.5	110	18.1		10.7	190	19.9		25.0	203	38.4		02.5	157	31.6		
21	88	00.0	125	17.4		09.8	205	20.8		25.3	218	40.6		02.6	172	33.8		
22	103	02.4	140	16.8		08.8	220	21.7		25.6	233	42.8		02.6	187	36.0		
23	118	04.9	155	16.1		07.8	235	22.5		25.9	248	45.0		02.7	202	38.2		
24	133	07.4	170	15.5	-16	06.9	250	23.4	-20	26.3	263	47.2	-17	02.7	217	40.4		
Dif	—		-6		+10		+9		-3		+22		-1		+22			

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16:2 PMG: 12 ^h 13 ^m 8			Edad: 16 ^d 9 PHE { 4 ^h : 59:1 12 ^h : 58:8 20 ^h : 58:5 R°: 50 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°	
h	o	'	o	'	o	'	o	h m	h m	h m	h m m	h m m	h m m	h m m		
0	176	33.9	-16	35.8	323	41.3	+7 37.9	60 N	16 19	17 06	17 56	20 44	83	9 24 16		
1	191	33.8		35.1	338	09.8	26.6 ¹¹³	58	29	12	18 00	46	81	21 19		
2	206	33.8		34.4	352	38.4	15.3 ¹¹³	56	37	18	03	47	79	19 20		
3	221	33.7		33.6	7	07.1	+7 03.9 ¹¹⁴	54	45	23	06	49	76	16 23		
4	236	33.6		32.9	21	35.8	+6 52.5 ¹¹⁴	52	51	28	08	50	75	14 24		
5	251	33.5	-16	32.2	36	04.6	+6 41.0 ¹¹⁵	50	16 57	17 32	18 11	20 52	72	9 12 26		
6	266	33.5	-16	31.4	50	33.5	+6 29.6 ¹¹⁴	45	17 11	17 42	18 17	20 54	69	9 07 30		
7	281	33.4		30.7	65	02.5 ¹⁰⁰	18.1 ¹¹⁵	40	21	50	22	57	65	03 33		
8	296	33.3		30.0	79	31.5 ¹⁰⁰	+6 06.6 ¹¹⁵	35	31	17 57	27	20 59	62	9 00 36		
9	311	33.3		29.2	94	00.6 ¹⁰¹	+5 55.1 ¹¹⁵	30	39	18 04	32	21 01	60	8 57 38		
10	326	33.2		28.5	108	29.7 ¹⁰¹	43.5 ¹¹⁶	20	17 53	16	42	04	56	52 42		
11	341	33.2	-16	27.7	122	59.0 ¹⁰³	+5 32.0 ¹¹⁵	10 N	18 05	18 27	18 53	21 07	52	8 47 46		
12	356	33.1	-16	27.0	137	28.3 ¹⁰³	+5 20.4 ¹¹⁶	0	18 17	18 39	19 04	21 09	49	8 43 50		
13	11	33.0		26.3	151	57.6 ¹⁰³	+5 08.8 ¹¹⁶	10 S	29	18 51	17	12	45	38 54		
14	26	33.0		25.5	166	27.1 ¹⁰⁵	+4 57.3 ¹¹⁵	20	42	19 05	33	15	41	34 57		
15	41	32.9		24.8	180	56.6 ¹⁰⁵	45.7 ¹¹⁶	30	18 57	23	19 53	18	37	28 62		
16	56	32.8		24.0	195	26.1 ¹⁰⁵	34.0 ¹¹⁷	35	19 06	33	20 06	20	34	25 64		
17	71	32.8	-16	23.3	209	55.8 ¹⁰⁷	+4 22.4 ¹¹⁶	40	19 16	19 45	20 22	21 22	32	8 21 67		
18	86	32.7	-16	22.6	224	25.5 ¹⁰⁷	+4 10.8 ¹¹⁶	45	19 27	20 00	20 41	21 24	29	8 17 71		
19	101	32.6		21.8	238	55.2 ¹⁰⁷	+3 59.2 ¹¹⁶	50	42	19	21 07	27	25	12 74		
20	116	32.6		21.1	253	25.0 ¹⁰⁸	47.5 ¹¹⁷	52	48	28	20	28	24	10 76		
21	131	32.5		20.3	267	54.9 ¹⁰⁹	35.9 ¹¹⁶	54	19 56	38	36	30	21	07 78		
22	146	32.5		19.6	282	24.8 ¹⁰⁹	24.2 ¹¹⁷	56	20 04	20 50	21 55	31	20	05 80		
23	161	32.4		18.9	296	54.8 ¹¹⁰	12.6 ¹¹⁶	58	13	21 04	22 19	33	17	8 01 83		
24	176	32.3	-16	18.1	311	24.9 ¹¹¹	+3 01.0 ¹¹⁶	60 S	20 24	21 20	22 54	21 35	15	7 58 86		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 15 ^h 05 ^m 0			Mag: -3.9 PMG: 12 ^h 40 ^m			Mag: +1.1 PMG: 7 ^h 18 ^m			Mag: -2.0 PMG: 6 ^h 24 ^m			Mag: +0.6 PMG: 9 ^h 28 ^m			
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec	
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'
0	133	07.4	170	15.5	-16	06.9	250	23.4	-20	26.3	263	47.2	-17	02.7	217	40.4
1	148	09.8	185	14.8		05.9	265	24.3		26.6	278	49.4		02.8	232	42.6
2	163	12.3	200	14.2		05.0	280	25.1		26.9	293	51.6		02.9	247	44.8
3	178	14.8	215	13.6		04.0	295	26.0		27.2	308	53.8		02.9	262	47.0
4	193	17.2	230	12.9		03.0	310	26.9		27.5	323	56.0		03.0	277	49.2
5	208	19.7	245	12.3	-16	02.1	325	27.7	-20	27.8	338	58.3	-17	03.0	292	51.4
6	223	22.2	260	11.6	-16	01.1	340	28.6	-20	28.1	354	00.5	-17	03.1	307	53.6
7	238	24.6	275	11.0	-16	00.1	355	29.5		28.4	9	02.7		03.1	322	55.8
8	253	27.1	290	10.4	-15	59.2	10	30.3		28.7	24	04.9		03.2	337	58.0
9	268	29.5	305	09.7		58.2	25	31.2		29.0	39	07.1		03.3	353	00.2
10	283	32.0	320	09.1		57.2	40	32.0		29.3	54	09.3		03.3	8	02.3
11	298	34.5	335	08.5	-15	56.3	55	32.9	-20	29.6	69	11.5	-17	03.4	23	04.5
12	313	36.9	350	07.8	-15	55.3	70	33.8	-20	29.9	84	13.7	-17	03.4	38	06.7
13	328	39.4	5	07.2		54.3	85	34.6		30.2	99	16.0		03.5	53	08.9
14	343	41.9	20	06.6		53.3	100	35.5		30.5	114	18.2		03.6	68	11.1
15	358	44.3	35	05.9		52.4	115	36.4		30.8	129	20.4		03.6	83	13.3
16	13	46.8	50	05.3		51.4	130	37.2		31.1	144	22.6		03.7	98	15.5
17	28	49.3	65	04.7	-15	50.4	145	38.1	-20	31.4	159	24.8	-17	03.7	113	17.7
18	43	51.7	80	04.0	-15	49.4	160	39.0	-20	31.7	174	27.0	-17	03.8	128	19.9
19	58	54.2	95	03.4		48.5	175	39.8		32.0	189	29.2		03.8	143	22.1
20	73	56.7	110	02.8		47.5	190	40.7		32.3	204	31.5		03.9	158	24.3
21	88	59.1	125	02.1		46.5	205	41.6		32.6	219	33.7		04.0	173	26.5
22	104	01.6	140	01.5		45.5	220	42.4		32.9	234	35.9		04.0	188	28.7
23	119	04.0	155	00.9		44.6	235	43.3		33.2	249	38.1		04.1	203	30.9
24	134	06.5	170	00.2	-15	43.6	250	44.2	-20	33.5	264	40.3	-17	04.1	218	33.1
Dif	—		-6		+10		+9		-3		+22		-1		+22	

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: 17 ^d 9 PHE { 4 ^h : 58'2 12 ^h : 57'9 20 ^h : 57'5 SD: 15'8 PMG: 3 ^h 21 ^m R°: 48 ^m													
	hG ☉		Dec		hG ☾		Dif			Dif								
h	o	'	o	'	o	'	o	'	o	'	h	m	h	m	h	m	h	m
0	176	32.3	-16	18.1	311	24.9	+3	01.0	60 N	6 30	7 20	8 07	22 07	81	9 40	15		
1	191	32.3		17.4	325	55.0 ¹¹¹	+2	49.3 ¹¹⁷	58	27	14	7 57	07 77		40	17		
2	206	32.2		16.6	340	25.2 ¹¹²		37.7 ¹¹⁶	56	24	09	49	06 75		39	20		
3	221	32.2		15.9	354	55.4 ¹¹²		26.0 ¹¹⁷	54	21	7 04	42	05 74		39	21		
4	236	32.1		15.1	9	25.7 ¹¹³		14.4 ¹¹⁶	52	19	6 59	35	05 71		38	24		
5	251	32.0	-16	14.4	23	56.0 ¹¹³	+2	02.8 ¹¹⁶	50	6 16	6 55	7 29	22 04	70	9 38	25		
6	266	32.0	-16	13.6	38	26.4 ¹¹⁴	+1	51.1 ¹¹⁷	45	6 10	6 45	7 16	22 03	66	9 37	29		
7	281	31.9		12.9	52	56.9 ¹¹⁵		39.5 ¹¹⁶	40	05	37	7 06	02 63		36	32		
8	296	31.9		12.1	67	27.4 ¹¹⁵		27.9 ¹¹⁶	35	6 00	30	6 57	01 61		36	34		
9	311	31.8		11.4	81	57.9 ¹¹⁵		16.3 ¹¹⁶	30	5 55	24	48	01 58		35	37		
10	326	31.8		10.6	96	28.5 ¹¹⁶	+1	04.7 ¹¹⁶	20	45	12	34	22 00	53	34	41		
11	341	31.7	-16	09.9	110	59.2 ¹¹⁷	+0	53.1 ¹¹⁶	10 N	5 35	6 00	6 22	21 59	50	9 33	45		
12	356	31.6	-16	09.1	125	29.9 ¹¹⁷	+0	41.6 ¹¹⁵	0	5 24	5 49	6 10	21 58	47	9 33	47		
13	11	31.6		08.4	140	00.7 ¹¹⁸		30.0 ¹¹⁶	10 S	5 11	37	5 59	57 44		32	51		
14	26	31.5		07.6	154	31.5 ¹¹⁸		18.5 ¹¹⁵	20	4 55	23	46	56 40		31	55		
15	41	31.5		06.9	169	02.3 ¹¹⁸	+0	07.0 ¹¹⁵	30	35	5 06	31	55 36		30	59		
16	56	31.4		06.1	183	33.2 ¹¹⁹	-0	04.5 ¹¹⁵	35	22	4 55	22	54 34		29	62		
17	71	31.4	-16	05.4	198	04.1 ¹¹⁹	-0	16.0 ¹¹⁵	40	4 07	4 43	5 13	21 54	31	9 28	65		
18	86	31.3	-16	04.6	212	35.1 ¹²⁰	-0	27.5 ¹¹⁵	45	3 47	4 28	5 01	21 53	28	9 28	67		
19	101	31.3		03.9	227	06.2 ¹²¹		39.0 ¹¹⁵	50	21	09	4 47	52 25		26	72		
20	116	31.2		03.1	241	37.2 ¹²⁰	-0	50.4 ¹¹⁴	52	3 08	4 00	40	52 23		26	73		
21	131	31.1		02.4	256	08.3 ¹²¹	-1	01.8 ¹¹⁴	54	2 52	3 50	33	51 22		25	75		
22	146	31.1		01.6	270	39.5 ¹²²		13.2 ¹¹⁴	56	34	39	25	51 19		25	77		
23	161	31.0		00.9	285	10.7 ¹²²		24.6 ¹¹⁴	58	2 09	25	15	50 18		24	80		
24	176	31.0	-16	00.1	299	41.9 ¹²²	-1	35.9 ¹¹³	60 S	1 34	3 09	4 04	21 50	14	9 24	82		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 15 ^h 01 ^m 1		Mag: -3.9 PMG: 12 ^h 41 ^m		Mag: +1.1 PMG: 7 ^h 17 ^m		Mag: -2.0 PMG: 6 ^h 20 ^m		Mag: +0.6 PMG: 9 ^h 24 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	o	'	o	'	o	'	o	'	o	'
0	134	06.5	170	00.2	-15	43.6	250	44.2	-20	33.5
1	149	09.0	184	59.6		42.6	265	45.0		33.8
2	164	11.4	199	59.0		41.6	280	45.9		34.1
3	179	13.9	214	58.3		40.6	295	46.7		34.4
4	194	16.4	229	57.7		39.6	310	47.6		34.7
5	209	18.8	244	57.1	-15	38.7	325	48.5	-20	35.0
6	224	21.3	259	56.5	-15	37.7	340	49.3	-20	35.3
7	239	23.8	274	55.8		36.7	355	50.2		35.6
8	254	26.2	289	55.2		35.7	10	51.1		35.9
9	269	28.7	304	54.6		34.7	25	51.9		36.2
10	284	31.1	319	54.0		33.7	40	52.8		36.5
11	299	33.6	334	53.3	-15	32.7	55	53.7	-20	36.8
12	314	36.1	349	52.7	-15	31.8	70	54.5	-20	37.1
13	329	38.5	4	52.1		30.8	85	55.4		37.4
14	344	41.0	19	51.5		29.8	100	56.2		37.7
15	359	43.5	34	50.9		28.8	115	57.1		38.0
16	14	45.9	49	50.2		27.8	130	58.0		38.2
17	29	48.4	64	49.6	-15	26.8	145	58.8	-20	38.5
18	44	50.9	79	49.0	-15	25.8	160	59.7	-20	38.8
19	59	53.3	94	48.4		24.8	176	00.6		39.1
20	74	55.8	109	47.8		23.8	191	01.4		39.4
21	89	58.3	124	47.1		22.8	206	02.3		39.7
22	105	00.7	139	46.5		21.8	221	03.1		40.0
23	120	03.2	154	45.9		20.8	236	04.0		40.3
24	135	05.6	169	45.3	-15	19.8	251	04.9	-20	40.6
Dif	—		-6 +10		+9 -3		+22 -1		-1 +22	

0

UT	SOL		LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16°2		Edad: 18 ^d 9 PHE { 4 ^h : 57°2 12 ^h : 56°9 20 ^h : 56°6											
	PMG: 12 ^h 14 ^m 0		SD: 15°5 PMG: 4 ^h 09 ^m R°: 47 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	o	'	o	'	o	'	o	h m	h m	h m	h m	m	m	m
0	176	31.0	-16	00.1	299	41.9	-1 35.9	60 N	16 25	17 11	18 01	23 28	77	9 55 15
1	191	30.9	-15	59.4	314	13.2 ¹²³	47.2 ¹¹³	58	34	17	04	24	75	57 17
2	206	30.9		58.6	328	44.5 ¹²³	-1 58.5 ¹¹³	56	42	22	07	21	73	9 59 19
3	221	30.8		57.8	343	15.9 ¹²⁴	-2 09.8 ¹¹³	54	49	27	09	19	70	10 00 22
4	236	30.8		57.1	357	47.3 ¹²⁴	21.0 ¹¹²	52	16 55	31	12	16	69	02 23
5	251	30.7	-15	56.3	12	18.7 ¹²⁴	-2 32.3 ¹¹³	50	17 01	17 35	18 14	23 14	67	10 03 25
6	266	30.7	-15	55.6	26	50.1 ¹²⁴	-2 43.4 ¹¹¹	45	17 13	17 44	18 19	23 09	64	10 06 28
7	281	30.6		54.8	41	21.6 ¹²⁵	-2 54.6 ¹¹²	40	24	52	24	05	61	08 31
8	296	30.6		54.1	55	53.2 ¹²⁶	-3 05.7 ¹¹¹	35	33	17 59	29	23 02	58	10 34
9	311	30.5		53.3	70	24.7 ¹²⁵	16.8 ¹¹¹	30	40	18 05	34	22 59	56	12 36
10	326	30.5		52.5	84	56.3 ¹²⁶	27.9 ¹¹¹	20	17 54	17	43	53	53	15 40
11	341	30.4	-15	51.8	99	27.9 ¹²⁶	-3 38.9 ¹¹⁰	10 N	18 06	18 28	18 53	22 49	49	10 18 43
12	356	30.4	-15	51.0	113	59.6 ¹²⁷	-3 49.9 ¹¹⁰	0	18 17	18 39	19 04	22 45	46	10 20 47
13	11	30.3		50.2	128	31.3 ¹²⁷	-4 00.9 ¹¹⁰	10 S	29	18 51	16	41	42	23 50
14	26	30.3		49.5	143	03.0 ¹²⁷	11.8 ¹⁰⁹	20	41	19 04	32	36	40	26 53
15	41	30.2		48.7	157	34.7 ¹²⁷	22.7 ¹⁰⁹	30	18 56	21	19 51	31	36	29 57
16	56	30.2		48.0	172	06.5 ¹²⁸	33.6 ¹⁰⁹	35	19 04	31	20 04	28	34	31 59
17	71	30.2	-15	47.2	186	38.3 ¹²⁸	-4 44.4 ¹⁰⁸	40	19 13	19 43	20 19	22 25	31	10 33 61
18	86	30.1	-15	46.4	201	10.1 ¹²⁸	-4 55.2 ¹⁰⁸	45	19 25	19 57	20 38	22 21	29	10 35 65
19	101	30.1		45.7	215	42.0 ¹²⁹	-5 06.0 ¹⁰⁸	50	38	20 15	21 03	17	25	38 68
20	116	30.0		44.9	230	13.8 ¹²⁸	16.7 ¹⁰⁷	52	45	24	15	15	23	39 70
21	131	30.0		44.1	244	45.7 ¹²⁹	27.3 ¹⁰⁶	54	19 52	34	30	13	22	40 73
22	146	29.9		43.4	259	17.6 ¹²⁹	38.0 ¹⁰⁷	56	20 00	45	21 48	10	20	42 74
23	161	29.9		42.6	273	49.6 ¹³⁰	48.6 ¹⁰⁶	58	09	20 58	22 10	08	17	44 76
24	176	29.8	-15	41.8	288	21.5 ¹²⁹	-5 59.1 ¹⁰⁵	60 S	20 19	21 13	22 41	22 04	16	10 46 79
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 14 ^h 57 ^m 2		Mag: -3.9 PMG: 12 ^h 41 ^m			Mag: +1.1 PMG: 7 ^h 15 ^m			Mag: -2.1 PMG: 6 ^h 17 ^m			Mag: +0.6 PMG: 9 ^h 21 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'
0	135	05.6	169	45.3	-15	19.8	251	04.9	-20	40.6	265	33.6	-17	05.5
1	150	08.1	184	44.7		18.8	266	05.7		40.9	280	35.8		05.5
2	165	10.6	199	44.1		17.8	281	06.6		41.2	295	38.0		05.6
3	180	13.0	214	43.4		16.8	296	07.5		41.5	310	40.3		05.6
4	195	15.5	229	42.8		15.8	311	08.3		41.8	325	42.5		05.7
5	210	18.0	244	42.2	-15	14.8	326	09.2	-20	42.1	340	44.7	-17	05.8
6	225	20.4	259	41.6	-15	13.8	341	10.1	-20	42.4	355	46.9	-17	05.8
7	240	22.9	274	41.0		12.8	356	10.9		42.6	10	49.2		05.9
8	255	25.4	289	40.4		11.8	11	11.8		42.9	25	51.4		05.9
9	270	27.8	304	39.8		10.8	26	12.6		43.2	40	53.6		06.0
10	285	30.3	319	39.1		09.8	41	13.5		43.5	55	55.8		06.0
11	300	32.8	334	38.5	-15	08.8	56	14.4	-20	43.8	70	58.1	-17	06.1
12	315	35.2	349	37.9	-15	07.8	71	15.2	-20	44.1	86	00.3	-17	06.1
13	330	37.7	4	37.3		06.8	86	16.1		44.4	101	02.5		06.2
14	345	40.1	19	36.7		05.8	101	17.0		44.7	116	04.7		06.2
15	0	42.6	34	36.1		04.8	116	17.8		45.0	131	07.0		06.3
16	15	45.1	49	35.5		03.8	131	18.7		45.3	146	09.2		06.4
17	30	47.5	64	34.9	-15	02.7	146	19.5	-20	45.5	161	11.4	-17	06.4
18	45	50.0	79	34.3	-15	01.7	161	20.4	-20	45.8	176	13.7	-17	06.5
19	60	52.5	94	33.7	-15	00.7	176	21.3		46.1	191	15.9		06.5
20	75	54.9	109	33.1	-14	59.7	191	22.1		46.4	206	18.1		06.6
21	90	57.4	124	32.4		58.7	206	23.0		46.7	221	20.3		06.6
22	105	59.9	139	31.8		57.7	221	23.9		47.0	236	22.6		06.7
23	121	02.3	154	31.2		56.7	236	24.7		47.3	251	24.8		06.7
24	136	04.8	169	30.6	-14	55.7	251	25.6	-20	47.6	266	27.0	-17	06.8
Dif	—		-6		+10		+9		-3		+22		-1	
											+22		0	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'2 PMG: 12 ^h 14 ^m 0			Edad: 19 ^d 9 PHE { 4 ^h : 56'3 12 ^h : 56'1 20 ^h : 55'8 SD: 15'3 PMG: 4 ^h 56 ^m R°: 46 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	o	'	o	'	o	'	o	'	h	m	h	m	h	m	h	m	m	
0	176	29.8	-15	41.8	288	21.5	-5	59.1	60 N	6 26	7 16	8 02	***	**	10 10	17		
1	191	29.8		41.1	302	53.5	-6	09.6	58	23	10	7 53	***	**	14	19		
2	206	29.7		40.3	317	25.5		20.1	56	21	05	45	***	**	18	21		
3	221	29.7		39.5	331	57.5		30.5	54	18	7 00	38	***	**	22	23		
4	236	29.7		38.8	346	29.6		40.9	52	16	6 56	32	***	**	25	24		
5	251	29.6	-15	38.0	1	01.6	-6	51.2	50	6 13	6 52	7 26	***	**	10 28	26		
6	266	29.6	-15	37.2	15	33.7	-7	01.5	45	6 08	6 43	7 14	***	**	10 34	29		
7	281	29.5		36.5	30	05.8		11.8	40	6 03	35	7 04	***	**	39	32		
8	296	29.5		35.7	44	37.9		22.0	35	5 58	29	6 55	***	**	44	34		
9	311	29.5		34.9	59	10.0		32.1	30	54	22	47	23 55	54	48	36		
10	326	29.4		34.1	73	42.1		42.2	20	45	11	34	46	51	10 55	40		
11	341	29.4	-15	33.4	88	14.3	-7	52.3	10 N	5 35	6 00	6 22	23 38	48	11 01	43		
12	356	29.3	-15	32.6	102	46.4	-8	02.3	0	5 24	5 49	6 11	23 31	45	11 07	46		
13	11	29.3		31.8	117	18.6		12.2	10 S	5 12	37	5 59	23	43	13	48		
14	26	29.3		31.1	131	50.8		22.2	20	4 57	24	47	16	40	19	52		
15	41	29.2		30.3	146	23.0		32.0	30	37	5 07	33	07	37	26	55		
16	56	29.2		29.5	160	55.2		41.8	35	25	4 57	25	23 02	35	30	57		
17	71	29.1	-15	28.7	175	27.4	-8	51.6	40	4 10	4 46	5 15	22 56	33	11 34	60		
18	86	29.1	-15	28.0	189	59.6	-9	01.3	45	3 51	4 31	5 04	22 50	30	11 40	63		
19	101	29.1		27.2	204	31.8		10.9	50	26	13	4 50	42	27	46	66		
20	116	29.0		26.4	219	04.1		20.5	52	3 13	4 05	44	38	26	49	68		
21	131	29.0		25.6	233	36.3		30.1	54	2 59	3 55	37	35	23	53	69		
22	146	29.0		24.8	248	08.6		39.6	56	41	44	29	30	22	11 56	72		
23	161	28.9		24.1	262	40.8		49.0	58	2 18	31	20	25	20	12 00	74		
24	176	28.9	-15	23.3	277	13.1	-9	58.4	60 S	1 48	3 16	4 10	22 20	18	12 05	76		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 14 ^h 53 ^m 2		Mag: -3.9 PMG: 12 ^h 42 ^m			Mag: +1.1 PMG: 7 ^h 14 ^m			Mag: -2.1 PMG: 6 ^h 13 ^m			Mag: +0.6 PMG: 9 ^h 17 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'
0	136	04.8	169	30.6	-14	55.7	251	25.6	-20	47.6	266	27.0	-17	06.8	220	18.5	-22	27.1
1	151	07.2	184	30.0		54.6	266	26.4		47.9	281	29.3		06.8	235	20.7		27.0
2	166	09.7	199	29.4		53.6	281	27.3		48.1	296	31.5		06.9	250	22.9		27.0
3	181	12.2	214	28.8		52.6	296	28.2		48.4	311	33.7		06.9	265	25.1		27.0
4	196	14.6	229	28.2		51.6	311	29.0		48.7	326	35.9		07.0	280	27.3		27.0
5	211	17.1	244	27.6	-14	50.6	326	29.9	-20	49.0	341	38.2	-17	07.1	295	29.5	-22	27.0
6	226	19.6	259	27.0	-14	49.5	341	30.7	-20	49.3	356	40.4	-17	07.1	310	31.7	-22	27.0
7	241	22.0	274	26.4		48.5	356	31.6		49.6	11	42.6		07.2	325	34.0		27.0
8	256	24.5	289	25.8		47.5	11	32.5		49.9	26	44.9		07.2	340	36.2		27.0
9	271	27.0	304	25.2		46.5	26	33.3		50.1	41	47.1		07.3	355	38.4		27.0
10	286	29.4	319	24.6		45.5	41	34.2		50.4	56	49.3		07.3	10	40.6		27.0
11	301	31.9	334	24.0	-14	44.4	56	35.1	-20	50.7	71	51.6	-17	07.4	25	42.8	-22	27.0
12	316	34.4	349	23.4	-14	43.4	71	35.9	-20	51.0	86	53.8	-17	07.4	40	45.0	-22	26.9
13	331	36.8	4	22.8		42.4	86	36.8		51.3	101	56.0		07.5	55	47.2		26.9
14	346	39.3	19	22.2		41.4	101	37.6		51.6	116	58.3		07.5	70	49.4		26.9
15	1	41.7	34	21.6		40.3	116	38.5		51.8	132	00.5		07.6	85	51.6		26.9
16	16	44.2	49	21.0		39.3	131	39.4		52.1	147	02.7		07.6	100	53.8		26.9
17	31	46.7	64	20.4	-14	38.3	146	40.2	-20	52.4	162	05.0	-17	07.7	115	56.0	-22	26.9
18	46	49.1	79	19.8	-14	37.3	161	41.1	-20	52.7	177	07.2	-17	07.7	130	58.2	-22	26.9
19	61	51.6	94	19.2		36.2	176	41.9		53.0	192	09.4		07.8	146	00.4		26.9
20	76	54.1	109	18.7		35.2	191	42.8		53.3	207	11.7		07.8	161	02.6		26.9
21	91	56.5	124	18.1		34.2	206	43.7		53.5	222	13.9		07.9	176	04.8		26.9
22	106	59.0	139	17.5		33.1	221	44.5		53.8	237	16.1		07.9	191	07.0		26.9
23	122	01.5	154	16.9		32.1	236	45.4		54.1	252	18.4		08.0	206	09.2		26.8
24	137	03.9	169	16.3	-14	31.1	251	46.2	-20	54.4	267	20.6	-17	08.0	221	11.4	-22	26.8
Dif	—		-6		+10		+9		-3		+22		-1		+22			

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16/2 PMG: 12 ^h 14 ^m 1				Edad: 20 ^d 9 PHE { SD: 15/1 PMG: 5 ^h 42 ^m R°: 45 ^m 4 ^h : 55/6 12 ^h : 55/3 20 ^h : 55/1													
	hG ☉	Dec			hG ☾	Dif					Civil	Náutico	Hora	R°	Hora	R°		
h	o	'	o	'	o	'	o	'	o	h m	h m	h m	h m	h m	h m	h m		
0	176	28.9	-15	23.3	277	13.1	-9	58.4	60 N	16 30	17 16	18 05	0 45	75	10 27	19		
1	191	28.8		22.5	291	45.4 ¹³³	-10	07.7 ⁹³	58	38	21	08	39	72	33	22		
2	206	28.8		21.7	306	17.6 ¹³²		17.0 ⁹²	56	46	26	10	34	70	39	24		
3	221	28.8		21.0	320	49.9 ¹³³		26.2 ⁹³	54	53	31	13	29	68	45	25		
4	236	28.7		20.2	335	22.2 ¹³³		35.3 ⁹¹	52	16 59	35	15	25	66	49	27		
5	251	28.7	-15	19.4	349	54.5 ¹³³	-10	44.4 ⁹¹	50	17 04	17 39	18 17	0 21	65	10 54	28		
6	266	28.7	-15	18.6	4	26.7 ¹³²	-10	53.5 ⁹¹	45	17 16	17 47	18 22	0 13	61	11 03	32		
7	281	28.6		17.8	18	59.0 ¹³³	-11	02.5 ⁹⁰	40	26	17 54	26	06	59	11	34		
8	296	28.6		17.1	33	31.3 ¹³³		11.4 ⁸⁹	35	35	18 01	31	0 00	57	18	36		
9	311	28.6		16.3	48	03.6 ¹³³		20.3 ⁸⁹	30	42	07	35	** ** *	**	24	38		
10	326	28.5		15.5	62	35.9 ¹³³		29.1 ⁸⁸	20	17 55	18	44	** ** *	**	35	40		
11	341	28.5	-15	14.7	77	08.2 ¹³³	-11	37.8 ⁸⁷	10 N	18 07	18 28	18 53	** ** *	**	11 44	43		
12	356	28.5	-15	13.9	91	40.4 ¹³²	-11	46.5 ⁸⁶	0	18 18	18 39	19 04	** ** *	**	11 53	46		
13	11	28.4		13.1	106	12.7 ¹³³	-11	55.1 ⁸⁷	10 S	29	18 50	16	** ** *	**	12 01	49		
14	26	28.4		12.4	120	45.0 ¹³³	-12	03.7 ⁸⁶	20	40	19 03	31	23 56	41	11	51		
15	41	28.4		11.6	135	17.3 ¹³³		12.1 ⁸⁴	30	18 54	19	19 50	44	38	21	54		
16	56	28.4		10.8	149	49.5 ¹³²		20.6 ⁸⁵	35	19 02	29	20 02	37	37	27	56		
17	71	28.3	-15	10.0	164	21.8 ¹³³	-12	28.9 ⁸³	40	19 11	19 41	20 16	23 29	35	12 34	58		
18	86	28.3	-15	09.2	178	54.1 ¹³³	-12	37.3 ⁸⁴	45	19 22	19 54	20 34	23 20	33	12 43	60		
19	101	28.3		08.4	193	26.3 ¹³²		45.5 ⁸²	50	35	20 12	20 58	09	30	52	64		
20	116	28.2		07.6	207	58.6 ¹³³	-12	53.7 ⁸²	52	41	20	21 10	23 04	29	12 57	65		
21	131	28.2		06.9	222	30.8 ¹³²	-13	01.8 ⁸¹	54	48	29	24	22 58	28	13 02	67		
22	146	28.2		06.1	237	03.1 ¹³³		09.8 ⁸⁰	56	19 55	40	21 41	52	26	08	68		
23	161	28.1		05.3	251	35.3 ¹³²		17.8 ⁸⁰	58	20 04	20 52	22 02	45	24	14	71		
24	176	28.1	-15	04.5	266	07.5 ¹³²	-13	25.7 ⁷⁹	60 S	20 14	21 07	22 30	22 38	21	13 21	73		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 14 ^h 49 ^m 3		Mag: -3.9 PMG: 12 ^h 43 ^m				Mag: +1.1 PMG: 7 ^h 13 ^m				Mag: -2.1 PMG: 6 ^h 10 ^m				Mag: +0.6 PMG: 9 ^h 14 ^m			
	hG ♈		hG ♀	Dec			hG ♂	Dec			hG ♃	Dec			hG ♎	Dec		
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'
0	137	03.9	169	16.3	-14	31.1	251	46.2	-20	54.4	267	20.6	-17	08.0	221	11.4	-22	26.8
1	152	06.4	184	15.7		30.0	266	47.1		54.7	282	22.8		08.1	236	13.6		26.8
2	167	08.8	199	15.1		29.0	281	48.0		54.9	297	25.1		08.1	251	15.8		26.8
3	182	11.3	214	14.5		28.0	296	48.8		55.2	312	27.3		08.2	266	18.0		26.8
4	197	13.8	229	13.9		26.9	311	49.7		55.5	327	29.6		08.3	281	20.2		26.8
5	212	16.2	244	13.3	-14	25.9	326	50.6	-20	55.8	342	31.8	-17	08.3	296	22.4	-22	26.8
6	227	18.7	259	12.7	-14	24.9	341	51.4	-20	56.1	357	34.0	-17	08.4	311	24.6	-22	26.8
7	242	21.2	274	12.2		23.8	356	52.3		56.3	12	36.3		08.4	326	26.8		26.8
8	257	23.6	289	11.6		22.8	11	53.1		56.6	27	38.5		08.5	341	29.0		26.8
9	272	26.1	304	11.0		21.8	26	54.0		56.9	42	40.7		08.5	356	31.2		26.7
10	287	28.6	319	10.4		20.7	41	54.9		57.2	57	43.0		08.6	11	33.4		26.7
11	302	31.0	334	09.8	-14	19.7	56	55.7	-20	57.5	72	45.2	-17	08.6	26	35.6	-22	26.7
12	317	33.5	349	09.2	-14	18.6	71	56.6	-20	57.7	87	47.5	-17	08.7	41	37.8	-22	26.7
13	332	36.0	4	08.6		17.6	86	57.4		58.0	102	49.7		08.7	56	40.0		26.7
14	347	38.4	19	08.0		16.6	101	58.3		58.3	117	51.9		08.8	71	42.2		26.7
15	2	40.9	34	07.5		15.5	116	59.2		58.6	132	54.2		08.8	86	44.4		26.7
16	17	43.3	49	06.9		14.5	132	00.0		58.9	147	56.4		08.9	101	46.6		26.7
17	32	45.8	64	06.3	-14	13.4	147	00.9	-20	59.1	162	58.7	-17	08.9	116	48.8	-22	26.7
18	47	48.3	79	05.7	-14	12.4	162	01.7	-20	59.4	178	00.9	-17	09.0	131	51.0	-22	26.7
19	62	50.7	94	05.1		11.3	177	02.6	-20	59.7	193	03.1		09.0	146	53.2		26.7
20	77	53.2	109	04.5		10.3	192	03.5	-21	00.0	208	05.4		09.1	161	55.4		26.6
21	92	55.7	124	04.0		09.2	207	04.3	-21	00.2	223	07.6		09.1	176	57.6		26.6
22	107	58.1	139	03.4		08.2	222	05.2		00.5	238	09.9		09.2	191	59.8		26.6
23	123	00.6	154	02.8		07.1	237	06.0		00.8	253	12.1		09.2	207	02.0		26.6
24	138	03.1	169	02.2	-14	06.1	252	06.9	-21	01.1	268	14.4	-17	09.3	222	04.3	-22	26.6
Dif	—		-6		+10		+9		-3		+22		-1		+22		0	

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'2 PMG: 12 ^h 14 ^m 1				Edad: 21 ^d 9 PHE { 4 ^h : 55'0 12 ^h : 54'8 20 ^h : 54'6 SD: 14'9 PMG: 6 ^h 27 ^m R°: 47 ^m															
	hG ☉		Dec		hG ☾		Dif			Dif			Náutico	Civil	Hora	R°	Hora	R°		
h	o	'	o	'	o	'	o	'	o	'	h	m	h	m	h	m	h	m	h	m
0	176	28.1	-15	04.5	266	07.5	-13	25.7	79	60 N	6 22	7 11	7 57	2 00	71	10 46	23			
1	191	28.1		03.7	280	39.8 ¹³³		33.6	77	58	19	06	48	1 51	69	10 55	26			
2	206	28.1		02.9	295	12.0 ¹³²		41.3	78	56	17	7 01	41	44	67	11 03	28			
3	221	28.0		02.1	309	44.2 ¹³²		49.1	76	54	15	6 57	34	37	65	10	29			
4	236	28.0		01.3	324	16.4 ¹³²	-13	56.7	76	52	13	53	28	31	64	16	31			
5	251	28.0	-15	00.5	338	48.6 ¹³²	-14	04.3	76	50	6 11	6 49	7 23	1 26	62	11 22	32			
6	266	28.0	-14	59.7	353	20.7 ¹³¹	-14	11.8	75	45	6 06	6 40	7 11	1 14	60	11 35	34			
7	281	27.9		59.0	7	52.9 ¹³²		19.2	74	40	6 01	33	7 01	1 05	57	45	37			
8	296	27.9		58.2	22	25.1 ¹³²		26.6	74	35	5 57	27	6 53	0 57	55	11 54	38			
9	311	27.9		57.4	36	57.2 ¹³¹		33.9	73	30	53	21	46	49	54	12 02	40			
10	326	27.9		56.6	51	29.4 ¹³²		41.1	72	20	44	10	33	37	51	15	43			
11	341	27.8	-14	55.8	66	01.5 ¹³¹	-14	48.3	72	10 N	5 35	6 00	6 21	0 26	49	12 27	45			
12	356	27.8	-14	55.0	80	33.6 ¹³¹	-14	55.3	70	0	5 24	5 49	6 11	0 16	46	12 39	46			
13	11	27.8		54.2	95	05.7 ¹³¹	-15	02.4	71	10 S	5 12	38	6 00	0 06	44	12 50	48			
14	26	27.8		53.4	109	37.8 ¹³¹		09.3	69	20	4 58	25	5 48	***	***	13 02	50			
15	41	27.7		52.6	124	09.9 ¹³¹		16.2	69	30	39	09	34	***	***	15	53			
16	56	27.7		51.8	138	41.9 ¹³⁰		23.0	68	35	27	5 00	27	***	***	23	55			
17	71	27.7	-14	51.0	153	14.0 ¹³¹	-15	29.7	67	40	4 13	4 48	5 18	***	***	13 32	57			
18	86	27.7	-14	50.2	167	46.0 ¹³⁰	-15	36.3	66	45	3 54	4 34	5 07	23 53	36	13 43	58			
19	101	27.7		49.4	182	18.1 ¹³¹		42.9	66	50	30	17	4 54	39	34	13 56	61			
20	116	27.6		48.6	196	50.1 ¹³⁰		49.4	65	52	19	09	48	33	33	14 02	62			
21	131	27.6		47.8	211	22.1 ¹³⁰	-15	55.8	64	54	3 05	4 00	41	26	31	09	63			
22	146	27.6		47.0	225	54.1 ¹³⁰	-16	02.2	64	56	2 48	3 49	34	18	30	16	65			
23	161	27.6		46.2	240	26.1 ¹³⁰		08.4	62	58	2 27	37	25	23 09	29	25	66			
24	176	27.6	-14	45.4	254	58.0 ¹²⁹	-16	14.6	62	60 S	1 59	3 22	4 16	22 59	26	14 34	69			

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 14 ^h 45 ^m 4		Mag: -3.9 PMG: 12 ^h 44 ^m				Mag: +1.1 PMG: 7 ^h 11 ^m				Mag: -2.1 PMG: 6 ^h 06 ^m				Mag: +0.6 PMG: 9 ^h 10 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'
0	138	03.1	169	02.2	-14	06.1	252	06.9	-21	01.1	268	14.4	-17	09.3	222	04.3	-22	26.6
1	153	05.5	184	01.6		05.0	267	07.8		01.3	283	16.6		09.3	237	06.5		26.6
2	168	08.0	199	01.1		04.0	282	08.6		01.6	298	18.8		09.4	252	08.7		26.6
3	183	10.5	214	00.5		02.9	297	09.5		01.9	313	21.1		09.4	267	10.9		26.6
4	198	12.9	228	59.9		01.9	312	10.3		02.2	328	23.3		09.5	282	13.1		26.6
5	213	15.4	243	59.3	-14	00.8	327	11.2	-21	02.4	343	25.6	-17	09.5	297	15.3	-22	26.6
6	228	17.8	258	58.8	-13	59.8	342	12.1	-21	02.7	358	27.8	-17	09.6	312	17.5	-22	26.5
7	243	20.3	273	58.2		58.7	357	12.9		03.0	13	30.1		09.6	327	19.7		26.5
8	258	22.8	288	57.6		57.7	12	13.8		03.3	28	32.3		09.7	342	21.9		26.5
9	273	25.2	303	57.0		56.6	27	14.6		03.5	43	34.6		09.7	357	24.1		26.5
10	288	27.7	318	56.5		55.6	42	15.5		03.8	58	36.8		09.8	12	26.3		26.5
11	303	30.2	333	55.9	-13	54.5	57	16.4	-21	04.1	73	39.0	-17	09.8	27	28.5	-22	26.5
12	318	32.6	348	55.3	-13	53.5	72	17.2	-21	04.3	88	41.3	-17	09.9	42	30.7	-22	26.5
13	333	35.1	3	54.7		52.4	87	18.1		04.6	103	43.5		09.9	57	32.9		26.5
14	348	37.6	18	54.2		51.4	102	18.9		04.9	118	45.8		10.0	72	35.1		26.5
15	3	40.0	33	53.6		50.3	117	19.8		05.2	133	48.0		10.0	87	37.3		26.5
16	18	42.5	48	53.0		49.2	132	20.7		05.4	148	50.3		10.0	102	39.5		26.5
17	33	45.0	63	52.4	-13	48.2	147	21.5	-21	05.7	163	52.5	-17	10.1	117	41.7	-22	26.4
18	48	47.4	78	51.9	-13	47.1	162	22.4	-21	06.0	178	54.8	-17	10.1	132	44.0	-22	26.4
19	63	49.9	93	51.3		46.1	177	23.2		06.2	193	57.0		10.2	147	46.2		26.4
20	78	52.3	108	50.7		45.0	192	24.1		06.5	208	59.3		10.2	162	48.4		26.4
21	93	54.8	123	50.2		43.9	207	25.0		06.8	224	01.5		10.3	177	50.6		26.4
22	108	57.3	138	49.6		42.9	222	25.8		07.1	239	03.8		10.3	192	52.8		26.4
23	123	59.7	153	49.0		41.8	237	26.7		07.3	254	06.0		10.4	207	55.0		26.4
24	139	02.2	168	48.5	-13	40.7	252	27.5	-21	07.6	269	08.3	-17	10.4	222	57.2	-22	26.4
Dif	—		-6		+11		+9		-3		+22		0		+22		0	

UT	SOL				 LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 16°2 PMG: 12 ^h 14 ^m 2				Edad: 22 ^d 9 PHE { 4 ^h : 54'5 12 ^h : 54'4 20 ^h : 54'3 R°: 47 ^m															
	hG ☉		Dec		hG ☾		Dif				Dec		Dif		Civil	Náutico	Hora	R°	Hora	R°
h	o	'	o	'	o	'	o	'	o	'	h	m	h	m	h	m	h	m	h	m
0	176	27.6	-14	45.4	254	58.0	-16	14.6	60 N	16 35	17 20	18 10	3 11	66	11 09	31				
1	191	27.5		44.6	269	30.0 ¹³⁰		20.8	58	43	25	12	3 00	64	21	32				
2	206	27.5		43.8	284	01.9 ¹²⁹		26.8	56	50	30	14	2 51	62	31	33				
3	221	27.5		43.0	298	33.8 ¹²⁹		32.8	54	16 57	34	16	42	61	39	35				
4	236	27.5		42.2	313	05.7 ¹²⁹		38.7	52	17 03	38	18	35	60	47	36				
5	251	27.5	-14	41.4	327	37.6 ¹²⁹	-16	44.5	50	17 08	17 42	18 20	2 28	59	11 54	37				
6	266	27.4	-14	40.6	342	09.5 ¹²⁹	-16	50.2	45	17 19	17 50	18 24	2 14	56	12 09	39				
7	281	27.4		39.8	356	41.3 ¹²⁸	-16	55.9	40	29	17 57	29	2 02	55	22	40				
8	296	27.4		39.0	11	13.2 ¹²⁹	-17	01.5	35	37	18 03	33	1 52	53	32	42				
9	311	27.4		38.2	25	45.0 ¹²⁸		07.0	30	44	08	37	43	52	42	42				
10	326	27.4		37.4	40	16.8 ¹²⁸		12.4	20	17 56	19	45	28	50	12 58	44				
11	341	27.4	-14	36.6	54	48.6 ¹²⁸	-17	17.7	10 N	18 07	18 29	18 54	1 15	48	13 12	45				
12	356	27.3	-14	35.8	69	20.4 ¹²⁸	-17	23.0	0	18 18	18 39	19 04	1 02	47	13 25	47				
13	11	27.3		35.0	83	52.1 ¹²⁷		28.2	10 S	28	18 50	15	0 50	45	38	48				
14	26	27.3		34.2	98	23.9 ¹²⁸		33.2	20	39	19 02	29	37	43	13 52	50				
15	41	27.3		33.4	112	55.6 ¹²⁷		38.3	30	18 53	18	48	22	41	14 08	52				
16	56	27.3		32.6	127	27.3 ¹²⁷		43.2	35	19 00	27	19 59	14	40	18	52				
17	71	27.3	-14	31.8	141	59.0 ¹²⁷	-17	48.1	40	19 09	19 38	20 13	0 04	38	14 29	53				
18	86	27.2	-14	31.0	156	30.7 ¹²⁷	-17	52.8	45	19 19	19 51	20 31	*** **	**	14 41	55				
19	101	27.2		30.2	171	02.4 ¹²⁷	-17	57.5	47	50	32	20 08	20 54	*** **	**	14 57	56			
20	116	27.2		29.3	185	34.0 ¹²⁶	-18	02.1	46	52	37	16	21 05	*** **	**	15 04	57			
21	131	27.2		28.5	200	05.7 ¹²⁷		06.7	44	54	44	25	19	23 57	38	12	58			
22	146	27.2		27.7	214	37.3 ¹²⁶		11.1	46	56	51	35	34	48	37	21	60			
23	161	27.2		26.9	229	08.9 ¹²⁶		15.4	43	58	19 59	20 47	21 54	38	35	31	61			
24	176	27.2	-14	26.1	243	40.5 ¹²⁶	-18	19.7	43	60 S	20 08	21 00	22 19	23 25	35	15 43	63			
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 14 ^h 41 ^m 4				Mag: -3.9 PMG: 12 ^h 45 ^m				Mag: +1.1 PMG: 7 ^h 10 ^m				Mag: -2.1 PMG: 6 ^h 03 ^m				Mag: +0.6 PMG: 9 ^h 07 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec			
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'
0	139	02.2	168	48.5	-13	40.7	252	27.5	-21	07.6	269	08.3	-17	10.4	222	57.2	-22	26.4		
1	154	04.7	183	47.9		39.7	267	28.4		07.9	284	10.5		10.5	237	59.4		26.4		
2	169	07.1	198	47.3		38.6	282	29.3		08.1	299	12.8		10.5	253	01.6		26.4		
3	184	09.6	213	46.8		37.5	297	30.1		08.4	314	15.0		10.6	268	03.8		26.3		
4	199	12.1	228	46.2		36.5	312	31.0		08.7	329	17.3		10.6	283	06.0		26.3		
5	214	14.5	243	45.6	-13	35.4	327	31.8	-21	08.9	344	19.5	-17	10.7	298	08.2	-22	26.3		
6	229	17.0	258	45.1	-13	34.3	342	32.7	-21	09.2	359	21.8	-17	10.7	313	10.4	-22	26.3		
7	244	19.4	273	44.5		33.3	357	33.6		09.5	14	24.0		10.8	328	12.6		26.3		
8	259	21.9	288	43.9		32.2	12	34.4		09.7	29	26.3		10.8	343	14.9		26.3		
9	274	24.4	303	43.4		31.1	27	35.3		10.0	44	28.5		10.9	358	17.1		26.3		
10	289	26.8	318	42.8		30.1	42	36.1		10.3	59	30.8		10.9	13	19.3		26.3		
11	304	29.3	333	42.2	-13	29.0	57	37.0	-21	10.5	74	33.0	-17	11.0	28	21.5	-22	26.3		
12	319	31.8	348	41.7	-13	27.9	72	37.8	-21	10.8	89	35.3	-17	11.0	43	23.7	-22	26.3		
13	334	34.2	3	41.1		26.8	87	38.7		11.1	104	37.5		11.0	58	25.9		26.3		
14	349	36.7	18	40.6		25.8	102	39.6		11.3	119	39.8		11.1	73	28.1		26.2		
15	4	39.2	33	40.0		24.7	117	40.4		11.6	134	42.0		11.1	88	30.3		26.2		
16	19	41.6	48	39.4		23.6	132	41.3		11.9	149	44.3		11.2	103	32.5		26.2		
17	34	44.1	63	38.9	-13	22.6	147	42.1	-21	12.1	164	46.5	-17	11.2	118	34.7	-22	26.2		
18	49	46.6	78	38.3	-13	21.5	162	43.0	-21	12.4	179	48.8	-17	11.3	133	36.9	-22	26.2		
19	64	49.0	93	37.8		20.4	177	43.9		12.7	194	51.1		11.3	148	39.1		26.2		
20	79	51.5	108	37.2		19.3	192	44.7		12.9	209	53.3		11.4	163	41.4		26.2		
21	94	53.9	123	36.6		18.2	207	45.6		13.2	224	55.6		11.4	178	43.6		26.2		
22	109	56.4	138	36.1		17.2	222	46.4		13.5	239	57.8		11.5	193	45.8		26.2		
23	124	58.9	153	35.5		16.1	237	47.3		13.7	255	00.1		11.5	208	48.0		26.2		
24	140	01.3	168	35.0	-13	15.0	252	48.2	-21	14.0	270	02.3	-17	11.6	223	50.2	-22	26.1		
Dif	—		-6		+11		+9		-3		+23		0		+22		0			

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'2 PMG: 12 ^h 14 ^m 2			Edad: 23 ^d 9 PHE { 4 ^h : 54'2 12 ^h : 54'1 20 ^h : 54'1 SD: 14'7 PMG: 8 ^h 01 ^m R°: 47 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	o	'	o	'	o	'	o	'	h	m	h	m	h	m	h	m		
0	176	27.2	-14	26.1	243	40.5	-18	19.7	60 N	6 17	7 07	7 52	4 17	59	11 40	38		
1	191	27.2		25.3	258	12.0 ¹²⁵		23.9 ⁴²	58	15	7 02	44	4 04	58	11 53	39		
2	206	27.2		24.5	272	43.6 ¹²⁶		28.0 ⁴¹	56	13	6 57	37	3 53	57	12 04	41		
3	221	27.1		23.7	287	15.1 ¹²⁵		32.0 ⁴⁰	54	11	53	30	43	56	14	44		
4	236	27.1		22.9	301	46.7 ¹²⁶		36.0 ⁴⁰	52	09	49	25	35	55	23	42		
5	251	27.1	-14	22.1	316	18.2 ¹²⁵	-18	39.8 ³⁸	50	6 08	6 46	7 20	3 27	54	12 31	42		
6	266	27.1	-14	21.2	330	49.6 ¹²⁴	-18	43.6 ³⁸	45	6 03	6 38	7 08	3 10	54	12 48	43		
7	281	27.1		20.4	345	21.1 ¹²⁵		47.3 ³⁷	40	5 59	31	6 59	2 57	52	13 02	44		
8	296	27.1		19.6	359	52.6 ¹²⁵		50.9 ³⁶	35	55	25	51	45	52	14	45		
9	311	27.1		18.8	14	24.0 ¹²⁴		54.4 ³⁵	30	51	19	44	35	51	24	45		
10	326	27.1		18.0	28	55.4 ¹²⁴	-18	57.8 ³⁴	20	43	6 09	32	18	49	42	46		
11	341	27.1	-14	17.2	43	26.9 ¹²⁵	-19	01.1 ³³	10 N	5 34	5 59	6 21	2 03	48	13 57	47		
12	356	27.1	-14	16.4	57	58.3 ¹²⁴	-19	04.4 ³³	0	5 25	5 49	6 11	1 49	47	14 12	48		
13	11	27.0		15.5	72	29.6 ¹²³		07.5 ³¹	10 S	5 13	39	6 00	35	47	26	49		
14	26	27.0		14.7	87	01.0 ¹²⁴		10.6 ³¹	20	4 59	26	5 49	20	46	14 42	49		
15	41	27.0		13.9	101	32.4 ¹²⁴		13.6 ³⁰	30	41	11	36	1 03	44	15 00	50		
16	56	27.0		13.1	116	03.7 ¹²³		16.5 ²⁹	35	29	5 02	29	0 54	43	10	50		
17	71	27.0	-14	12.3	130	35.0 ¹²³	-19	19.3 ²⁸	40	4 15	4 51	5 20	0 42	43	15 22	51		
18	86	27.0	-14	11.5	145	06.3 ¹²³	-19	22.0 ²⁷	45	3 58	4 38	5 10	0 29	41	15 36	51		
19	101	27.0		10.6	159	37.6 ¹²³		24.6 ²⁶	50	35	21	4 57	13	40	15 53	52		
20	116	27.0		09.8	174	08.9 ¹²³		27.2 ²⁶	52	24	13	52	0 06	39	16 01	53		
21	131	27.0		09.0	188	40.2 ¹²³		29.6 ²⁴	54	3 11	4 04	45	** ** *	**	10	53		
22	146	27.0		08.2	203	11.4 ¹²²		32.0 ²⁴	56	2 55	3 54	38	** ** *	**	21	53		
23	161	27.0		07.4	217	42.7 ¹²³		34.3 ²³	58	35	43	30	** ** *	**	32	54		
24	176	27.0	-14	06.6	232	13.9 ¹²²	-19	36.5 ²²	60 S	2 10	3 29	4 21	** ** *	**	16 46	54		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 14 ^h 37 ^m 5		Mag: -3.9 PMG: 12 ^h 46 ^m				Mag: +1.1 PMG: 7 ^h 08 ^m				Mag: -2.1 PMG: 5 ^h 59 ^m				Mag: +0.6 PMG: 9 ^h 03 ^m			
	hG ♈		hG ♀	Dec			hG ♂	Dec			hG ♃	Dec			hG ♄	Dec		
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'		
0	140	01.3	168	35.0	-13	15.0	252	48.2	-21	14.0	270	02.3	-17	11.6	223	50.2		
1	155	03.8	183	34.4		13.9	267	49.0		14.3	285	04.6		11.6	238	52.4		
2	170	06.3	198	33.9		12.8	282	49.9		14.5	300	06.8		11.7	253	54.6		
3	185	08.7	213	33.3		11.8	297	50.7		14.8	315	09.1		11.7	268	56.8		
4	200	11.2	228	32.7		10.7	312	51.6		15.0	330	11.4		11.7	283	59.0		
5	215	13.7	243	32.2	-13	09.6	327	52.4	-21	15.3	345	13.6	-17	11.8	299	01.2		
6	230	16.1	258	31.6	-13	08.5	342	53.3	-21	15.6	0	15.9	-17	11.8	314	03.5		
7	245	18.6	273	31.1		07.4	357	54.2		15.8	15	18.1		11.9	329	05.7		
8	260	21.1	288	30.5		06.4	12	55.0		16.1	30	20.4		11.9	344	07.9		
9	275	23.5	303	30.0		05.3	27	55.9		16.3	45	22.7		12.0	359	10.1		
10	290	26.0	318	29.4		04.2	42	56.7		16.6	60	24.9		12.0	14	12.3		
11	305	28.4	333	28.9	-13	03.1	57	57.6	-21	16.9	75	27.2	-17	12.1	29	14.5		
12	320	30.9	348	28.3	-13	02.0	72	58.5	-21	17.1	90	29.4	-17	12.1	44	16.7		
13	335	33.4	3	27.8	-13	00.9	87	59.3		17.4	105	31.7		12.2	59	18.9		
14	350	35.8	18	27.2	-12	59.8	103	00.2		17.6	120	34.0		12.2	74	21.1		
15	5	38.3	33	26.7		58.7	118	01.0		17.9	135	36.2		12.2	89	23.4		
16	20	40.8	48	26.1		57.7	133	01.9		18.2	150	38.5		12.3	104	25.6		
17	35	43.2	63	25.6	-12	56.6	148	02.8	-21	18.4	165	40.7	-17	12.3	119	27.8		
18	50	45.7	78	25.0	-12	55.5	163	03.6	-21	18.7	180	43.0	-17	12.4	134	30.0		
19	65	48.2	93	24.5		54.4	178	04.5		18.9	195	45.3		12.4	149	32.2		
20	80	50.6	108	23.9		53.3	193	05.3		19.2	210	47.5		12.5	164	34.4		
21	95	53.1	123	23.4		52.2	208	06.2		19.5	225	49.8		12.5	179	36.6		
22	110	55.5	138	22.8		51.1	223	07.0		19.7	240	52.0		12.6	194	38.8		
23	125	58.0	153	22.3		50.0	238	07.9		20.0	255	54.3		12.6	209	41.0		
24	141	00.5	168	21.8	-12	48.9	253	08.8	-21	20.2	270	56.6	-17	12.6	224	43.3		
Dif	—		-6		+11		+9		-3		+23		0		+22			

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16°2			Edad: 24 ^d 9 PHE { 4 ^h : 54'1 12 ^h : 54'0 20 ^h : 54'1					Final del crepúsculo			Salida de Luna		Puesta de Luna	
	PMG: 12 ^h 14 ^m 2			PMG: 8 ^h 48 ^m R°: 48 ^m					Civil			Náutico		Hora R°	
	hG ☉	Dec		hG ☾	Dif	Dec	Dif								
h	o	'	o	'	'	o	'	o	h m	h m	h m	h m	m	h m	m
0	176	27.0	-14	06.6		232	13.9	-19	36.5	60 N	16 40	17 25	18 14	5 16	50
1	191	27.0		05.7		246	45.1 ¹²²		38.5	58	48	30	16	5 02	50
2	206	27.0		04.9		261	16.3 ¹²²		40.6	56	16 55	34	18	4 50	50
3	221	27.0		04.1		275	47.5 ¹²²		42.5	54	17 01	38	20	39	50
4	236	27.0		03.3		290	18.7 ¹²²		44.3	52	06	42	22	30	49
5	251	27.0	-14	02.5		304	49.9 ¹²²	-19	46.0	50	17 11	17 45	18 23	4 21	50
6	266	27.0	-14	01.6		319	21.0 ¹²¹	-19	47.7	45	17 22	17 52	18 27	4 04	49
7	281	27.0	-14	00.8		333	52.2 ¹²²		49.2	40	31	17 59	31	3 49	49
8	296	27.0	-14	00.0		348	23.3 ¹²¹		50.7	35	39	18 05	35	37	48
9	311	27.0	-13	59.2		2	54.4 ¹²¹		52.0	30	45	10	38	26	49
10	326	27.0		58.3		17	25.6 ¹²²		53.3	20	17 57	20	46	3 07	49
11	341	27.0	-13	57.5		31	56.7 ¹²¹	-19	54.5	10 N	18 08	18 29	18 54	2 51	49
12	356	27.0	-13	56.7		46	27.8 ¹²¹	-19	55.6	0	18 18	18 39	19 04	2 36	48
13	11	27.0		55.9		60	58.8 ¹²⁰		56.6	10 S	28	18 49	15	22	47
14	26	27.0		55.0		75	29.9 ¹²¹		57.5	20	38	19 01	28	2 06	47
15	41	27.0		54.2		90	01.0 ¹²¹		58.3	30	51	16	46	1 47	47
16	56	27.0		53.4		104	32.1 ¹²¹		59.1	35	18 58	25	19 57	37	46
17	71	27.0	-13	52.6		119	03.1 ¹²⁰	-19	59.7	40	19 07	19 35	20 11	1 25	46
18	86	27.0	-13	51.7		133	34.2 ¹²¹	-20	00.2	45	19 16	19 48	20 27	1 10	46
19	101	27.0		50.9		148	05.2 ¹²⁰		00.7	50	28	20 04	20 49	0 53	45
20	116	27.0		50.1		162	36.2 ¹²⁰		01.1	52	34	12	21 00	45	45
21	131	27.0		49.3		177	07.2 ¹²⁰		01.3	54	40	20	13	35	45
22	146	27.0		48.4		191	38.3 ¹²¹		01.5	56	47	30	28	25	45
23	161	27.0		47.6		206	09.3 ¹²⁰		01.6	58	19 54	41	21 46	13	44
24	176	27.0	-13	46.8		220	40.3 ¹²⁰	-20	01.6	60 S	20 03	20 54	22 09	0 00	43

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 14 ^h 33 ^m 6		Mag: -3.9 PMG: 12 ^h 47 ^m		Mag: +1.1 PMG: 7 ^h 07 ^m		Mag: -2.1 PMG: 5 ^h 55 ^m		Mag: +0.6 PMG: 9 ^h 00 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	o	'	o	'	o	'	o	'	o	'
0	141	00.5	168	21.8	-12	48.9	253	08.8	-21	20.2
1	156	02.9	183	21.2		47.8	268	09.6		20.5
2	171	05.4	198	20.7		46.7	283	10.5		20.7
3	186	07.9	213	20.1		45.6	298	11.3		21.0
4	201	10.3	228	19.6		44.5	313	12.2		21.3
5	216	12.8	243	19.0	-12	43.4	328	13.1	-21	21.5
6	231	15.3	258	18.5	-12	42.3	343	13.9	-21	21.8
7	246	17.7	273	18.0		41.2	358	14.8		22.0
8	261	20.2	288	17.4		40.1	13	15.6		22.3
9	276	22.7	303	16.9		39.1	28	16.5		22.5
10	291	25.1	318	16.3		38.0	43	17.3		22.8
11	306	27.6	333	15.8	-12	36.9	58	18.2	-21	23.0
12	321	30.0	348	15.3	-12	35.7	73	19.1	-21	23.3
13	336	32.5	3	14.7		34.6	88	19.9		23.6
14	351	35.0	18	14.2		33.5	103	20.8		23.8
15	6	37.4	33	13.6		32.4	118	21.6		24.1
16	21	39.9	48	13.1		31.3	133	22.5		24.3
17	36	42.4	63	12.6	-12	30.2	148	23.3	-21	24.6
18	51	44.8	78	12.0	-12	29.1	163	24.2	-21	24.8
19	66	47.3	93	11.5		28.0	178	25.1		25.1
20	81	49.8	108	11.0		26.9	193	25.9		25.3
21	96	52.2	123	10.4		25.8	208	26.8		25.6
22	111	54.7	138	09.9		24.7	223	27.6		25.8
23	126	57.2	153	09.4		23.6	238	28.5		26.1
24	141	59.6	168	08.8	-12	22.5	253	29.4	-21	26.3
Dif	—		-5		+11		+9		-3	
								+23		0
									+22	

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'2 PMG: 12 ^h 14 ^m 2			Edad: 25 ^d 9 PHE { 4 ^h : 54'1 12 ^h : 54'1 20 ^h : 54'1 SD: 14'7 PMG: 9 ^h 36 ^m R°: 48 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	o	'	o	'	o	'	o	'	h	m	h	m	h	m	h	m	h	m
0	176	27.0	-13	46.8	220	40.3	-20	01.6	60 N	6 13	7 02	7 46	6 06	41	13 07	58		
1	191	27.0		45.9	235	11.3 ¹²⁰		01.5	58	11	6 57	39	5 52	41	21	57		
2	206	27.0		45.1	249	42.3 ¹²⁰		01.3	56	09	53	32	40	42	33	56		
3	221	27.0		44.3	264	13.3 ¹²⁰		01.0	54	08	49	26	29	43	44	55		
4	236	27.0		43.4	278	44.3 ¹²⁰		00.6	52	06	46	21	19	44	13 53	55		
5	251	27.0	-13	42.6	293	15.3 ¹²⁰	-20	00.1	50	6 04	6 42	7 16	5 11	44	14 02	54		
6	266	27.0	-13	41.8	307	46.2 ¹¹⁹	-19	59.5	45	6 01	6 35	7 06	4 53	44	14 20	53		
7	281	27.0		41.0	322	17.2 ¹²⁰		58.9	40	5 57	29	6 57	38	45	34	53		
8	296	27.0		40.1	336	48.2 ¹²⁰		58.1	35	53	23	49	25	46	47	51		
9	311	27.0		39.3	351	19.2 ¹²⁰		57.3	30	50	18	43	4 15	46	14 58	51		
10	326	27.0		38.5	5	50.1 ¹¹⁹		56.3	20	42	6 08	31	3 56	47	15 16	50		
11	341	27.1	-13	37.6	20	21.1 ¹²⁰	-19	55.3	10 N	5 34	5 59	6 21	3 40	47	15 32	49		
12	356	27.1	-13	36.8	34	52.1 ¹²⁰	-19	54.2	0	5 25	5 49	6 11	3 24	48	15 47	48		
13	11	27.1		36.0	49	23.1 ¹²⁰		53.0	10 S	14	39	6 01	3 09	49	16 03	47		
14	26	27.1		35.1	63	54.0 ¹¹⁹		51.6	20	5 00	27	5 50	2 53	49	19	46		
15	41	27.1		34.3	78	25.0 ¹²⁰		50.2	30	4 43	13	38	34	50	37	45		
16	56	27.1		33.4	92	56.0 ¹²⁰		48.7	35	32	5 04	31	23	50	16 48	44		
17	71	27.1	-13	32.6	107	26.9 ¹¹⁹	-19	47.2	40	4 18	4 53	5 22	2 11	50	17 00	43		
18	86	27.1	-13	31.8	121	57.9 ¹²⁰	-19	45.5	45	4 02	4 41	5 13	1 56	51	17 14	43		
19	101	27.1		30.9	136	28.9 ¹²⁰		43.7	50	3 40	25	5 01	38	52	32	41		
20	116	27.1		30.1	150	59.9 ¹²⁰		41.8	52	29	18	4 56	30	51	40	41		
21	131	27.1		29.3	165	30.8 ¹¹⁹		39.9	54	16	4 09	49	20	52	17 50	39		
22	146	27.2		28.4	180	01.8 ¹²⁰		37.8	56	3 01	3 59	43	1 10	52	18 00	39		
23	161	27.2		27.6	194	32.8 ¹²⁰		35.7	58	2 43	48	35	0 57	53	12	37		
24	176	27.2	-13	26.8	209	03.8 ¹²⁰	-19	33.5	60 S	2 21	3 36	4 27	0 43	54	18 26	36		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 14 ^h 29 ^m 6		Mag: -3.9 PMG: 12 ^h 48 ^m		Mag: +1.0 PMG: 7 ^h 06 ^m		Mag: -2.1 PMG: 5 ^h 52 ^m		Mag: +0.6 PMG: 8 ^h 56 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	o	'	o	'	o	'	o	'	o	'
0	141	59.6	168	08.8	-12	22.5	253	29.4	-21	26.3
1	157	02.1	183	08.3		21.4	268	30.2		26.6
2	172	04.5	198	07.8		20.3	283	31.1		26.8
3	187	07.0	213	07.2		19.2	298	31.9		27.1
4	202	09.5	228	06.7		18.1	313	32.8		27.3
5	217	11.9	243	06.2	-12	16.9	328	33.6	-21	27.6
6	232	14.4	258	05.6	-12	15.8	343	34.5	-21	27.8
7	247	16.9	273	05.1		14.7	358	35.4		28.1
8	262	19.3	288	04.6		13.6	13	36.2		28.3
9	277	21.8	303	04.0		12.5	28	37.1		28.6
10	292	24.3	318	03.5		11.4	43	37.9		28.8
11	307	26.7	333	03.0	-12	10.3	58	38.8	-21	29.1
12	322	29.2	348	02.4	-12	09.2	73	39.6	-21	29.3
13	337	31.7	3	01.9		08.0	88	40.5		29.6
14	352	34.1	18	01.4		06.9	103	41.4		29.8
15	7	36.6	33	00.9		05.8	118	42.2		30.1
16	22	39.0	48	00.3		04.7	133	43.1		30.3
17	37	41.5	62	59.8	-12	03.6	148	43.9	-21	30.6
18	52	44.0	77	59.3	-12	02.5	163	44.8	-21	30.8
19	67	46.4	92	58.8		01.3	178	45.6		31.1
20	82	48.9	107	58.2	-12	00.2	193	46.5		31.3
21	97	51.4	122	57.7	-11	59.1	208	47.4		31.6
22	112	53.8	137	57.2		58.0	223	48.2		31.8
23	127	56.3	152	56.7		56.9	238	49.1		32.0
24	142	58.8	167	56.1	-11	55.7	253	49.9	-21	32.3
Dif	—		-5		+11		+9		-2	

UT	SOL				● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16/2 PMG: 12 ^h 14 ^m 2				Edad: 26 ^d 9 PHE { SD: 14/8 PMG: 10 ^h 24 ^m R°: 47 ^m													
	hG ☉		Dec		hG ☾		Dif				Civil		Náutico		Hora R°		Hora R°	
h	o	'	o	'	o	'	o	'	o	h m	h m	h m	h m m		h m m			
0	176	27.2	-13	26.8	209	03.8	-19	33.5	60 N	16 46	17 30	18 19	6 47 32		14 05 66			
1	191	27.2		25.9	223	34.8 ¹²⁰		31.1 ²⁴	58	53	34	21	33 34		18 64			
2	206	27.2		25.1	238	05.8 ¹²⁰		28.7 ²⁴	56	16 59	38	22	22 35		29 63			
3	221	27.2		24.2	252	36.8 ¹²⁰		26.2 ²⁵	54	17 05	42	24	12 36		39 62			
4	236	27.2		23.4	267	07.8 ¹²⁰		23.6 ²⁶	52	10	45	25	6 03 37		48 60			
5	251	27.2	-13	22.6	281	38.8 ¹²⁰	-19	20.9 ²⁷	50	17 15	17 48	18 26	5 55 38		14 56 59			
6	266	27.3	-13	21.7	296	09.8 ¹²⁰	-19	18.1 ²⁸	45	17 25	17 55	18 30	5 37 40		15 13 57			
7	281	27.3		20.9	310	40.8 ¹²⁰		15.3 ²⁸	40	33	18 01	33	23 41		27 55			
8	296	27.3		20.0	325	11.9 ¹²¹		12.3 ³⁰	35	41	07	36	11 43		38 54			
9	311	27.3		19.2	339	42.9 ¹²⁰		09.2 ³¹	30	47	12	40	5 01 43		15 49 52			
10	326	27.3		18.3	354	13.9 ¹²⁰		06.1 ³¹	20	17 58	21	47	4 43 45		16 06 51			
11	341	27.3	-13	17.5	8	45.0 ¹²¹	-19	02.9 ³²	10 N	18 08	18 30	18 55	4 27 46		16 21 49			
12	356	27.3	-13	16.7	23	16.1 ¹²¹	-18	59.5 ³⁴	0	18 18	18 39	19 03	4 12 48		16 35 48			
13	11	27.4		15.8	37	47.1 ¹²⁰		56.1 ³⁴	10 S	27	18 49	14	3 58 49		16 50 45			
14	26	27.4		15.0	52	18.2 ¹²¹		52.6 ³⁵	20	37	19 00	27	42 50		17 05 44			
15	41	27.4		14.1	66	49.3 ¹²¹		49.0 ³⁶	30	49	14	44	24 52		22 42			
16	56	27.4		13.3	81	20.4 ¹²¹		45.3 ³⁷	35	18 56	23	19 55	13 53		32 41			
17	71	27.4	-13	12.4	95	51.5 ¹²¹	-18	41.6 ³⁷	40	19 04	19 33	20 08	3 01 54		17 43 40			
18	86	27.4	-13	11.6	110	22.6 ¹²¹	-18	37.7 ³⁹	45	19 13	19 45	20 24	2 47 55		17 57 37			
19	101	27.5		10.7	124	53.7 ¹²¹		33.8 ³⁹	50	25	20 00	45	30 56		18 13 35			
20	116	27.5		09.9	139	24.9 ¹²²		29.7 ⁴¹	52	30	07	20 55	21 58		21 34			
21	131	27.5		09.1	153	56.0 ¹²¹		25.6 ⁴¹	54	36	15	21 07	12 59		29 33			
22	146	27.5		08.2	168	27.2 ¹²²		21.4 ⁴²	56	42	25	21	2 02 60		39 31			
23	161	27.5		07.4	182	58.3 ¹²¹		17.1 ⁴³	58	49	35	38	1 50 61		18 49 30			
24	176	27.6	-13	06.5	197	29.5 ¹²²	-18	12.7 ⁴⁴	60 S	19 57	20 47	21 59	1 37 62		19 02 28			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 14 ^h 25 ^m 7		Mag: -3.9 PMG: 12 ^h 49 ^m				Mag: +1.0 PMG: 7 ^h 04 ^m				Mag: -2.1 PMG: 5 ^h 48 ^m				Mag: +0.6 PMG: 8 ^h 53 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'
0	142	58.8	167	56.1	-11	55.7	253	49.9	-21	32.3	272	45.6	-17	14.7	226	29.6	-22	25.4
1	158	01.2	182	55.6		54.6	268	50.8		32.5	287	47.8		14.7	241	31.8		25.4
2	173	03.7	197	55.1		53.5	283	51.7		32.8	302	50.1		14.8	256	34.0		25.4
3	188	06.1	212	54.6		52.4	298	52.5		33.0	317	52.4		14.8	271	36.2		25.4
4	203	08.6	227	54.1		51.2	313	53.4		33.3	332	54.7		14.8	286	38.4		25.4
5	218	11.1	242	53.5	-11	50.1	328	54.2	-21	33.5	347	56.9	-17	14.9	301	40.7	-22	25.4
6	233	13.5	257	53.0	-11	49.0	343	55.1	-21	33.8	2	59.2	-17	14.9	316	42.9	-22	25.4
7	248	16.0	272	52.5		47.9	358	55.9		34.0	18	01.5		15.0	331	45.1		25.4
8	263	18.5	287	52.0		46.7	13	56.8		34.2	33	03.8		15.0	346	47.3		25.4
9	278	20.9	302	51.5		45.6	28	57.7		34.5	48	06.1		15.0	1	49.5		25.4
10	293	23.4	317	50.9		44.5	43	58.5		34.7	63	08.3		15.1	16	51.8		25.3
11	308	25.9	332	50.4	-11	43.4	58	59.4	-21	35.0	78	10.6	-17	15.1	31	54.0	-22	25.3
12	323	28.3	347	49.9	-11	42.2	74	00.2	-21	35.2	93	12.9	-17	15.2	46	56.2	-22	25.3
13	338	30.8	2	49.4		41.1	89	01.1		35.5	108	15.2		15.2	61	58.4		25.3
14	353	33.3	17	48.9		40.0	104	01.9		35.7	123	17.5		15.2	77	00.6		25.3
15	8	35.7	32	48.4		38.8	119	02.8		35.9	138	19.7		15.3	92	02.8		25.3
16	23	38.2	47	47.8		37.7	134	03.7		36.2	153	22.0		15.3	107	05.1		25.3
17	38	40.6	62	47.3	-11	36.6	149	04.5	-21	36.4	168	24.3	-17	15.3	122	07.3	-22	25.3
18	53	43.1	77	46.8	-11	35.4	164	05.4	-21	36.7	183	26.6	-17	15.4	137	09.5	-22	25.3
19	68	45.6	92	46.3		34.3	179	06.2		36.9	198	28.9		15.4	152	11.7		25.3
20	83	48.0	107	45.8		33.2	194	07.1		37.1	213	31.2		15.5	167	13.9		25.2
21	98	50.5	122	45.3		32.1	209	07.9		37.4	228	33.4		15.5	182	16.2		25.2
22	113	53.0	137	44.8		30.9	224	08.8		37.6	243	35.7		15.5	197	18.4		25.2
23	128	55.4	152	44.2		29.8	239	09.7		37.9	258	38.0		15.6	212	20.6		25.2
24	143	57.9	167	43.7	-11	28.7	254	10.5	-21	38.1	273	40.3	-17	15.6	227	22.8	-22	25.2
Dif	—		-5		+11		+9		-2		+23		0		+22		0	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna											
	SD: 16'2 PMG: 12 ^h 14 ^m 1			Edad: 27 ^d 9 PHE { 4 ^h : 54'4 12 ^h : 54'5 20 ^h : 54'6 SD: 14'9 PMG: 11 ^h 11 ^m R°: 48 ^m																				
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°									
h	o	'	o	'	o	'	o	'	h	m	h	m	h	m	h	m	h	m						
0	176	27.6	-13	06.5	197	29.5	-18	12.7	60 N	6 08	6 57	7 41	7 19	24	15 11	72								
1	191	27.6		05.7	212	00.7 ¹²²		08.2 ⁴⁵	58	07	53	34	7 07	27	22	69								
2	206	27.6		04.8	226	31.9 ¹²²	-18	03.7 ⁴⁵	56	05	49	28	6 57	29	32	67								
3	221	27.6		04.0	241	03.1 ¹²²	-17	59.0 ⁴⁷	54	04	45	22	48	30	41	65								
4	236	27.6		03.1	255	34.3 ¹²²		54.3 ⁴⁷	52	03	42	17	40	32	48	64								
5	251	27.7	-13	02.3	270	05.6 ¹²³	-17	49.5 ⁴⁸	50	6 01	6 39	7 13	6 33	33	15 55	63								
6	266	27.7	-13	01.4	284	36.8 ¹²²	-17	44.6 ⁴⁹	45	5 58	6 32	7 03	6 17	36	16 10	60								
7	281	27.7	-13	00.6	299	08.1 ¹²³		39.6 ⁵⁰	40	55	27	6 54	6 04	38	22	58								
8	296	27.7	-12	59.7	313	39.4 ¹²³		34.5 ⁵¹	35	52	21	47	5 54	39	32	56								
9	311	27.7		58.9	328	10.7 ¹²³		29.4 ⁵¹	30	48	16	41	44	41	41	55								
10	326	27.8		58.0	342	42.0 ¹²³		24.1 ⁵³	20	41	6 07	30	28	43	16 57	51								
11	341	27.8	-12	57.2	357	13.3 ¹²³	-17	18.8 ⁵³	10 N	5 34	5 59	6 20	5 13	46	17 10	49								
12	356	27.8	-12	56.3	11	44.7 ¹²⁴	-17	13.4 ⁵⁴	0	5 25	5 50	6 11	5 00	47	17 23	47								
13	11	27.8		55.5	26	16.0 ¹²³		07.9 ⁵⁵	10 S	14	40	6 01	4 47	49	35	45								
14	26	27.9		54.6	40	47.4 ¹²⁴	-17	02.4 ⁵⁵	20	5 02	28	5 51	32	51	17 49	42								
15	41	27.9		53.8	55	18.8 ¹²⁴	-16	56.7 ⁵⁷	30	4 45	14	39	16	53	18 04	39								
16	56	27.9		52.9	69	50.1 ¹²³		51.0 ⁵⁷	35	34	5 06	33	4 06	55	13	38								
17	71	27.9	-12	52.0	84	21.6 ¹²⁵	-16	45.2 ⁵⁸	40	4 21	4 56	5 25	3 55	57	18 23	36								
18	86	28.0	-12	51.2	98	53.0 ¹²⁴	-16	39.3 ⁵⁹	45	4 05	4 44	5 16	3 42	59	18 34	34								
19	101	28.0		50.3	113	24.4 ¹²⁴		33.3 ⁶⁰	50	3 44	29	5 05	26	62	48	31								
20	116	28.0		49.5	127	55.9 ¹²⁵		27.2 ⁶¹	52	34	22	4 59	19	62	18 55	30								
21	131	28.0		48.6	142	27.4 ¹²⁵		21.1 ⁶¹	54	22	14	54	11	63	19 02	28								
22	146	28.1		47.8	156	58.9 ¹²⁵		14.9 ⁶²	56	3 08	4 05	47	3 02	65	10	27								
23	161	28.1		46.9	171	30.4 ¹²⁵		08.6 ⁶³	58	2 51	3 54	40	2 51	67	19	25								
24	176	28.1	-12	46.1	186	01.9 ¹²⁵	-16	02.2 ⁶⁴	60 S	2 30	3 42	4 32	2 39	69	19 30	22								
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO											
	PMG 14 ^h 21 ^m 8			Mag: -3.9 PMG: 12 ^h 50 ^m			Mag: +1.0 PMG: 7 ^h 03 ^m			Mag: -2.1 PMG: 5 ^h 44 ^m			Mag: +0.6 PMG: 8 ^h 49 ^m											
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♅	Dec	hG ♄	Dec													
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'						
0	143	57.9	167	43.7	-11	28.7	254	10.5	-21	38.1	273	40.3	-17	15.6	227	22.8	-22	25.2						
1	159	00.4	182	43.2		27.5	269	11.4		38.3	288	42.6		15.7	242	25.0		25.2						
2	174	02.8	197	42.7		26.4	284	12.2		38.6	303	44.9		15.7	257	27.3		25.2						
3	189	05.3	212	42.2		25.2	299	13.1		38.8	318	47.2		15.7	272	29.5		25.2						
4	204	07.8	227	41.7		24.1	314	13.9		39.1	333	49.4		15.8	287	31.7		25.2						
5	219	10.2	242	41.2	-11	23.0	329	14.8	-21	39.3	348	51.7	-17	15.8	302	33.9	-22	25.2						
6	234	12.7	257	40.7	-11	21.8	344	15.7	-21	39.5	3	54.0	-17	15.8	317	36.1	-22	25.1						
7	249	15.1	272	40.2		20.7	359	16.5		39.8	18	56.3		15.9	332	38.4		25.1						
8	264	17.6	287	39.7		19.6	14	17.4		40.0	33	58.6		15.9	347	40.6		25.1						
9	279	20.1	302	39.1		18.4	29	18.2		40.2	49	00.9		16.0	2	42.8		25.1						
10	294	22.5	317	38.6		17.3	44	19.1		40.5	64	03.2		16.0	17	45.0		25.1						
11	309	25.0	332	38.1	-11	16.1	59	19.9	-21	40.7	79	05.4	-17	16.0	32	47.3	-22	25.1						
12	324	27.5	347	37.6	-11	15.0	74	20.8	-21	41.0	94	07.7	-17	16.1	47	49.5	-22	25.1						
13	339	29.9	2	37.1		13.9	89	21.7		41.2	109	10.0		16.1	62	51.7		25.1						
14	354	32.4	17	36.6		12.7	104	22.5		41.4	124	12.3		16.1	77	53.9		25.1						
15	9	34.9	32	36.1		11.6	119	23.4		41.7	139	14.6		16.2	92	56.1		25.1						
16	24	37.3	47	35.6		10.4	134	24.2		41.9	154	16.9		16.2	107	58.4		25.0						
17	39	39.8	62	35.1	-11	09.3	149	25.1	-21	42.1	169	19.2	-17	16.3	123	00.6	-22	25.0						
18	54	42.2	77	34.6	-11	08.1	164	25.9	-21	42.4	184	21.5	-17	16.3	138	02.8	-22	25.0						
19	69	44.7	92	34.1		07.0	179	26.8		42.6	199	23.8		16.3	153	05.0		25.0						
20	84	47.2	107	33.6		05.8	194	27.7		42.8	214	26.0		16.4	168	07.3		25.0						
21	99	49.6	122	33.1		04.7	209	28.5		43.1	229	28.3		16.4	183	09.5		25.0						
22	114	52.1	137	32.6		03.6	224	29.4		43.3	244	30.6		16.4	198	11.7		25.0						
23	129	54.6	152	32.1		02.4	239	30.2		43.5	259	32.9		16.5	213	13.9		25.0						
24	144	57.0	167	31.6	-11	01.3	254	31.1	-21	43.8	274	35.2	-17	16.5	228	16.1	-22	25.0						
Dif	—			-5			+11			+9			-2			+23			0			+22		

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna								
	SD: 16'2			Edad: 28 ^d 9	PHE { 4 ^h : 54'8 12 ^h : 54'9 20 ^h : 55'0	PMG: 12 ^h 14 ^m 1			SD: 14'9		PMG: 11 ^h 59 ^m		R°: 46 ^m								
	hG ☉	Dec	hG ☾			Dif			Dec	Dif	Civil	Náutico	Hora	R°	Hora	R°					
h	o	'	o	'	o	'	o	'	h m	h m	h m	h m m	h m m	h m m							
0	176	28.1	-12	46.1	186	01.9	-16	02.2	60 N	16 51	17 35	18 24	7 43 20	16 23 75							
1	191	28.1		45.2	200	33.4 ¹²⁵	-15	55.8 ⁶⁴	58	16 58	39	25	34 22	31 73							
2	206	28.2		44.3	215	05.0 ¹²⁶		49.3 ⁶⁵	56	17 04	42	26	26 24	39 70							
3	221	28.2		43.5	229	36.6 ¹²⁶		42.7 ⁶⁶	54		09	46	27	18 27							
4	236	28.2		42.6	244	08.1 ¹²⁵		36.0 ⁶⁷	52		14	49	28	12 28							
5	251	28.2	-12	41.8	258	39.8 ¹²⁷	-15	29.2 ⁶⁸	50	17 18	17 52	18 29	7 06 29	16 58 65							
6	266	28.3	-12	40.9	273	11.4 ¹²⁶	-15	22.4 ⁶⁸	45	17 28	17 58	18 32	6 53 32	17 10 62							
7	281	28.3		40.1	287	43.0 ¹²⁶		15.5 ⁶⁹	40	36	18 03	35	42 35	20 59							
8	296	28.3		39.2	302	14.7 ¹²⁷		08.5 ⁷⁰	35	43	08	38	33 37	28 57							
9	311	28.4		38.3	316	46.3 ¹²⁶	-15	01.5 ⁷⁰	30	49	13	41	25 38	36 55							
10	326	28.4		37.5	331	18.0 ¹²⁷	-14	54.4 ⁷¹	20	17 59	22	48	6 11 41	48 52							
11	341	28.4	-12	36.6	345	49.7 ¹²⁷	-14	47.2 ⁷²	10 N	18 09	18 30	18 55	5 59 44	17 59 49							
12	356	28.5	-12	35.8	0	21.5 ¹²⁸	-14	39.9 ⁷³	0	18 18	18 39	19 03	5 47 47	18 10 46							
13	11	28.5		34.9	14	53.2 ¹²⁷		32.6 ⁷³	10 S		27	48	13	36 49							
14	26	28.5		34.0	29	24.9 ¹²⁷		25.2 ⁷⁴	20	36	18 59	26	23 52	31 41							
15	41	28.5		33.2	43	56.7 ¹²⁸		17.7 ⁷⁵	30	47	19 12	42	09 55	43 38							
16	56	28.6		32.3	58	28.5 ¹²⁸		10.1 ⁷⁶	35	18 54	21	19 52	5 01 57	51 35							
17	71	28.6	-12	31.5	73	00.3 ¹²⁸	-14	02.5 ⁷⁶	40	19 01	19 30	20 05	4 52 58	18 59 33							
18	86	28.6	-12	30.6	87	32.1 ¹²⁸	-13	54.8 ⁷⁷	45	19 10	19 42	20 20	4 41 61	19 08 31							
19	101	28.7		29.7	102	04.0 ¹²⁹		47.1 ⁷⁷	50	21	19 56	40	28 64	19 28							
20	116	28.7		28.9	116	35.8 ¹²⁸		39.3 ⁷⁸	52	26	20 03	20 50	21 66	25 26							
21	131	28.7		28.0	131	07.7 ¹²⁹		31.4 ⁷⁹	54	31	11	21 01	14 68	30 25							
22	146	28.8		27.1	145	39.6 ¹²⁹		23.4 ⁸⁰	56	37	19	15	4 07 69	37 23							
23	161	28.8		26.3	160	11.5 ¹²⁹		15.4 ⁸⁰	58	44	29	30	3 58 71	44 21							
24	176	28.8	-12	25.4	174	43.4 ¹²⁹	-13	07.3 ⁸¹	60 S	19 52	20 41	21 50	3 48 74	19 52 18							
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO								
	PMG: 14 ^h 17 ^m 8			Mag: -3.9 PMG: 12 ^h 50 ^m			Mag: +1.0 PMG: 7 ^h 02 ^m			Mag: -2.1 PMG: 5 ^h 41 ^m			Mag: +0.6 PMG: 8 ^h 46 ^m								
	hG ♈	hG ♀	Dec	hG ♂	Dec		hG ♃	Dec		hG ♃	Dec		hG ♄	Dec							
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o						
0	144	57.0	167	31.6	-11	01.3	254	31.1	-21	43.8	274	35.2	-17	16.5	228	16.1	-22	25.0			
1	159	59.5	182	31.1	-11	00.1	269	31.9		44.0	289	37.5		16.6	243	18.4		25.0			
2	175	02.0	197	30.6	-10	59.0	284	32.8		44.2	304	39.8		16.6	258	20.6		24.9			
3	190	04.4	212	30.1		57.8	299	33.7		44.5	319	42.1		16.6	273	22.8		24.9			
4	205	06.9	227	29.6		56.7	314	34.5		44.7	334	44.4		16.7	288	25.0		24.9			
5	220	09.4	242	29.1	-10	55.5	329	35.4	-21	44.9	349	46.7	-17	16.7	303	27.3	-22	24.9			
6	235	11.8	257	28.6	-10	54.4	344	36.2	-21	45.2	4	49.0	-17	16.7	318	29.5	-22	24.9			
7	250	14.3	272	28.1		53.2	359	37.1		45.4	19	51.3		16.8	333	31.7		24.9			
8	265	16.7	287	27.6		52.1	14	37.9		45.6	34	53.6		16.8	348	33.9		24.9			
9	280	19.2	302	27.1		50.9	29	38.8		45.9	49	55.9		16.8	3	36.2		24.9			
10	295	21.7	317	26.6		49.8	44	39.7		46.1	64	58.1		16.9	18	38.4		24.9			
11	310	24.1	332	26.1	-10	48.6	59	40.5	-21	46.3	80	00.4	-17	16.9	33	40.6	-22	24.9			
12	325	26.6	347	25.6	-10	47.5	74	41.4	-21	46.6	95	02.7	-17	17.0	48	42.8	-22	24.8			
13	340	29.1	2	25.1		46.3	89	42.2		46.8	110	05.0		17.0	63	45.1		24.8			
14	355	31.5	17	24.6		45.2	104	43.1		47.0	125	07.3		17.0	78	47.3		24.8			
15	10	34.0	32	24.1		44.0	119	43.9		47.2	140	09.6		17.1	93	49.5		24.8			
16	25	36.5	47	23.6		42.8	134	44.8		47.5	155	11.9		17.1	108	51.7		24.8			
17	40	38.9	62	23.1	-10	41.7	149	45.7	-21	47.7	170	14.2	-17	17.1	123	54.0	-22	24.8			
18	55	41.4	77	22.6	-10	40.5	164	46.5	-21	47.9	185	16.5	-17	17.2	138	56.2	-22	24.8			
19	70	43.9	92	22.1		39.4	179	47.4		48.2	200	18.8		17.2	153	58.4		24.8			
20	85	46.3	107	21.6		38.2	194	48.2		48.4	215	21.1		17.2	169	00.6		24.8			
21	100	48.8	122	21.1		37.1	209	49.1		48.6	230	23.4		17.3	184	02.9		24.7			
22	115	51.2	137	20.6		35.9	224	49.9		48.8	245	25.7		17.3	199	05.1		24.7			
23	130	53.7	152	20.2		34.7	239	50.8		49.1	260	28.0		17.3	214	07.3		24.7			
24	145	56.2	167	19.7	-10	33.6	254	51.7	-21	49.3	275	30.3	-17	17.4	229	09.5	-22	24.7			
Dif	—			-5			+12			+9			-2			+23			0		

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16 ^h 2 PMG: 12 ^h 14 ^m 0				Edad: 0 ^d 1 PHE { SD: 15 ^h 1 PMG: 12 ^h 45 ^m R°: 46 ^m 4 ^h : 55 ^h 1 12 ^h : 55 ^h 3 20 ^h : 55 ^h 4															
	hG ☉		Dec		hG ☾		Dif			Dec			Dif		Hora		R°			
h	o	'	o	'	o	'	o	'	o	'	o	'	h	m	h	m	h	m	h	m
0	176	28.8	-12	25.4	174	43.4	-13	07.3	82	60 N	6 03	6 52	7 36	8 03	17	17 38	77			
1	191	28.9		24.5	189	15.3	-12	59.1	82	58	02	48	29	7 56	20	44	74			
2	206	28.9		23.7	203	47.3		50.9	82	56	01	45	23	50	21	49	73			
3	221	28.9		22.8	218	19.2		42.6	83	54	6 00	41	18	45	23	54	71			
4	236	29.0		21.9	232	51.2		34.3	83	52	5 59	38	13	40	24	17 59	68			
5	251	29.0	-12	21.1	247	23.2	-12	25.9	84	50	5 58	6 36	7 09	7 35	26	18 03	67			
6	266	29.1	-12	20.2	261	55.2	-12	17.4	85	45	5 55	6 29	7 00	7 25	30	18 12	63			
7	281	29.1		19.3	276	27.2		08.9	85	40	52	24	6 52	17	32	19	60			
8	296	29.1		18.5	290	59.3	-12	00.3	86	35	50	19	45	10	34	25	58			
9	311	29.2		17.6	305	31.3	-11	51.6	87	30	47	15	39	7 03	37	31	55			
10	326	29.2		16.7	320	03.4		42.9	87	20	40	6 06	29	6 52	40	40	52			
11	341	29.2	-12	15.9	334	35.5	-11	34.2	87	10 N	5 33	5 58	6 19	6 43	43	18 48	49			
12	356	29.3	-12	15.0	349	07.5	-11	25.3	89	0	5 25	5 49	6 11	6 34	46	18 56	46			
13	11	29.3		14.1	3	39.6		16.4	89	10 S	15	40	6 02	25	49	19 04	42			
14	26	29.4		13.3	18	11.8	-11	07.5	89	20	5 03	29	5 52	15	52	12	39			
15	41	29.4		12.4	32	43.9	-10	58.5	90	30	4 47	16	41	6 04	55	21	36			
16	56	29.4		11.5	47	16.0		49.5	90	35	36	5 08	35	5 58	57	26	34			
17	71	29.5	-12	10.7	61	48.2	-10	40.3	92	40	4 24	4 59	5 27	5 50	60	19 32	31			
18	86	29.5	-12	09.8	76	20.4	-10	31.2	91	45	4 09	4 47	5 19	5 42	62	19 39	28			
19	101	29.6		08.9	90	52.5		22.0	92	50	3 49	33	08	32	66	47	25			
20	116	29.6		08.0	105	24.7		12.7	93	52	39	26	5 03	27	67	51	24			
21	131	29.6		07.2	119	56.9	-10	03.4	93	54	28	18	4 58	22	69	19 55	22			
22	146	29.7		06.3	134	29.1	-9	54.0	94	56	3 14	10	52	16	71	20 00	20			
23	161	29.7		05.4	149	01.4		44.6	94	58	2 59	4 00	45	09	74	05	18			
24	176	29.8	-12	04.5	163	33.6	-9	35.1	95	60 S	2 39	3 48	4 37	5 02	76	20 10	16			
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG 14 ^h 13 ^m 9				Mag: -3.9 PMG: 12 ^h 51 ^m				Mag: +1.0 PMG: 7 ^h 00 ^m				Mag: -2.1 PMG: 5 ^h 37 ^m				Mag: +0.6 PMG: 8 ^h 42 ^m			
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'
0	145	56.2	167	19.7	-10	33.6	254	51.7	-21	49.3	275	30.3	-17	17.4	229	09.5	-22	24.7		
1	160	58.6	182	19.2		32.4	269	52.5		49.5	290	32.6		17.4	244	11.8		24.7		
2	176	01.1	197	18.7		31.3	284	53.4		49.7	305	34.9		17.4	259	14.0		24.7		
3	191	03.6	212	18.2		30.1	299	54.2		50.0	320	37.2		17.5	274	16.2		24.7		
4	206	06.0	227	17.7		28.9	314	55.1		50.2	335	39.5		17.5	289	18.4		24.7		
5	221	08.5	242	17.2	-10	27.8	329	55.9	-21	50.4	350	41.8	-17	17.5	304	20.7	-22	24.7		
6	236	11.0	257	16.7	-10	26.6	344	56.8	-21	50.7	5	44.1	-17	17.6	319	22.9	-22	24.7		
7	251	13.4	272	16.2		25.5	359	57.7		50.9	20	46.4		17.6	334	25.1		24.6		
8	266	15.9	287	15.7		24.3	14	58.5		51.1	35	48.7		17.6	349	27.3		24.6		
9	281	18.3	302	15.3		23.1	29	59.4		51.3	50	51.0		17.7	4	29.6		24.6		
10	296	20.8	317	14.8		22.0	45	00.2		51.6	65	53.3		17.7	19	31.8		24.6		
11	311	23.3	332	14.3	-10	20.8	60	01.1	-21	51.8	80	55.6	-17	17.7	34	34.0	-22	24.6		
12	326	25.7	347	13.8	-10	19.6	75	01.9	-21	52.0	95	57.9	-17	17.8	49	36.3	-22	24.6		
13	341	28.2	2	13.3		18.5	90	02.8		52.2	111	00.2		17.8	64	38.5		24.6		
14	356	30.7	17	12.8		17.3	105	03.7		52.4	126	02.5		17.9	79	40.7		24.6		
15	11	33.1	32	12.3		16.1	120	04.5		52.7	141	04.8		17.9	94	42.9		24.6		
16	26	35.6	47	11.9		15.0	135	05.4		52.9	156	07.1		17.9	109	45.2		24.6		
17	41	38.1	62	11.4	-10	13.8	150	06.2	-21	53.1	171	09.4	-17	18.0	124	47.4	-22	24.5		
18	56	40.5	77	10.9	-10	12.6	165	07.1	-21	53.3	186	11.7	-17	18.0	139	49.6	-22	24.5		
19	71	43.0	92	10.4		11.5	180	07.9		53.6	201	14.0		18.0	154	51.8		24.5		
20	86	45.5	107	09.9		10.3	195	08.8		53.8	216	16.3		18.1	169	54.1		24.5		
21	101	47.9	122	09.4		09.1	210	09.7		54.0	231	18.7		18.1	184	56.3		24.5		
22	116	50.4	137	09.0		08.0	225	10.5		54.2	246	21.0		18.1	199	58.5		24.5		
23	131	52.8	152	08.5		06.8	240	11.4		54.4	261	23.3		18.1	215	00.8		24.5		
24	146	55.3	167	08.0	-10	05.6	255	12.2	-21	54.7	276	25.6	-17	18.2	230	03.0	-22	24.5		
Dif	—				-5 +12				+9 -2				+23 0				+22 0			

UT	SOL				● LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna				
	SD: 16/2 PMG: 12 ^h 14 ^m 0				Edad: 1 ^d 1 PHE { 4 ^h : 55/6 12 ^h : 55/7 20 ^h : 55/9 PMG: 13 ^h 31 ^m R°: 45 ^m																
	hG ☉		Dec		hG ☾		Dif				Dec		Dif		Civil		Náutico		Hora R°		Hora R°
h	o	'	o	'	o	'	o	'	o	'	o	'	h	m	h	m	h	m	h	m	m
0	176	29.8	-12	04.5	163	33.6	-9	35.1	60 N	16 56	17 40	18 28	8 20	15	18 55	78					
1	191	29.8		03.7	178	05.8 ¹³²		25.6 ⁹⁵	58	17 02	43	29	16	17	18 58	76					
2	206	29.8		02.8	192	38.1 ¹³³		16.0 ⁹⁶	56	08	47	30	11	20	19 02	73					
3	221	29.9		01.9	207	10.3 ¹³²		-9 06.4 ⁹⁶	54	13	50	31	08	21	05	7					
4	236	29.9		01.1	221	42.6 ¹³³		-8 56.7 ⁹⁷	52	18	52	32	04	23	07	70					
5	251	30.0	-12	00.2	236	14.9 ¹³³		-8 47.0 ⁹⁷	50	17 22	17 55	18 33	8 01	25	19 10	68					
6	266	30.0	-11	59.3	250	47.2 ¹³³		-8 37.2 ⁹⁸	45	17 31	18 01	18 35	7 55	28	19 15	64					
7	281	30.1		58.4	265	19.5 ¹³³		27.4 ⁹⁸	40	38	06	37	49	31	19	62					
8	296	30.1		57.6	279	51.8 ¹³³		17.6 ⁹⁸	35	44	10	40	44	33	23	59					
9	311	30.1		56.7	294	24.1 ¹³³		-8 07.7 ⁹⁹	30	17 50	15	43	40	35	26	57					
10	326	30.2		55.8	308	56.4 ¹³³		-7 57.7 ¹⁰⁰	20	18 00	23	48	32	40	32	52					
11	341	30.2	-11	54.9	323	28.7 ¹³³		-7 47.7 ¹⁰⁰	10 N	18 09	18 30	18 55	7 26	42	19 37	49					
12	356	30.3	-11	54.0	338	01.0 ¹³³		-7 37.7 ¹⁰⁰	0	18 17	18 38	19 03	7 20	45	19 42	45					
13	11	30.3		53.2	352	33.3 ¹³³		27.7 ¹⁰⁰	10 S	26	47	12	14	48	46	43					
14	26	30.4		52.3	7	05.7 ¹³⁴		17.6 ¹⁰¹	20	35	18 58	24	7 07	52	51	39					
15	41	30.4		51.4	21	38.0 ¹³³		-7 07.4 ¹⁰²	30	46	19 10	40	6 59	57	19 57	35					
16	56	30.5		50.5	36	10.3 ¹³³		-6 57.2 ¹⁰²	35	52	18	19 50	55	58	20 00	33					
17	71	30.5	-11	49.7	50	42.7 ¹³⁴		-6 47.0 ¹⁰²	40	18 59	19 27	20 02	6 50	61	20 03	31					
18	86	30.6	-11	48.8	65	15.0 ¹³³		-6 36.7 ¹⁰³	45	19 07	19 38	20 16	6 44	64	20 07	28					
19	101	30.6		47.9	79	47.4 ¹³⁴		26.4 ¹⁰³	50	17	52	35	38	67	12	24					
20	116	30.7		47.0	94	19.7 ¹³³		16.1 ¹⁰³	52	22	19 58	45	34	69	15	22					
21	131	30.7		46.1	108	52.1 ¹³⁴		-6 05.7 ¹⁰⁴	54	27	20 06	20 56	31	71	17	21					
22	146	30.8		45.3	123	24.4 ¹³³		-5 55.3 ¹⁰⁴	56	32	14	21 08	27	73	20	18					
23	161	30.8		44.4	137	56.8 ¹³⁴		44.9 ¹⁰⁴	58	39	23	23	23	75	23	16					
24	176	30.9	-11	43.5	152	29.1 ¹³³		-5 34.4 ¹⁰⁵	60 S	19 46	20 34	21 41	6 18	78	20 26	14					
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO				
	PMG: 14 ^h 10 ^m 0				Mag: -3.9 PMG: 12 ^h 52 ^m				Mag: +1.0 PMG: 6 ^h 59 ^m				Mag: -2.1 PMG: 5 ^h 33 ^m				Mag: +0.6 PMG: 8 ^h 39 ^m				
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♊		Dec		hG ♉		Dec				
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'			
0	146	55.3	167	08.0	-10	05.6	255	12.2	-21	54.7	276	25.6	-17	18.2	230	03.0	-22	24.5			
1	161	57.8	182	07.5		04.5	270	13.1		54.9	291	27.9		18.2	245	05.2		24.5			
2	177	00.2	197	07.0		03.3	285	13.9		55.1	306	30.2		18.2	260	07.5		24.5			
3	192	02.7	212	06.5		02.1	300	14.8		55.3	321	32.5		18.3	275	09.7		24.4			
4	207	05.2	227	06.1	-10	00.9	315	15.7		55.5	336	34.8		18.3	290	11.9		24.4			
5	222	07.6	242	05.6	-9	59.8	330	16.5	-21	55.8	351	37.1	-17	18.3	305	14.1	-22	24.4			
6	237	10.1	257	05.1	-9	58.6	345	17.4	-21	56.0	6	39.4	-17	18.4	320	16.4	-22	24.4			
7	252	12.6	272	04.6		57.4	0	18.2		56.2	21	41.7		18.4	335	18.6		24.4			
8	267	15.0	287	04.1		56.3	15	19.1		56.4	36	44.0		18.4	350	20.8		24.4			
9	282	17.5	302	03.7		55.1	30	19.9		56.6	51	46.3		18.5	5	23.1		24.4			
10	297	20.0	317	03.2		53.9	45	20.8		56.9	66	48.6		18.5	20	25.3		24.4			
11	312	22.4	332	02.7	-9	52.7	60	21.7	-21	57.1	81	51.0	-17	18.5	35	27.5	-22	24.4			
12	327	24.9	347	02.2	-9	51.6	75	22.5	-21	57.3	96	53.3	-17	18.6	50	29.7	-22	24.4			
13	342	27.3	2	01.8		50.4	90	23.4		57.5	111	55.6		18.6	65	32.0		24.3			
14	357	29.8	17	01.3		49.2	105	24.2		57.7	126	57.9		18.6	80	34.2		24.3			
15	12	32.3	32	00.8		48.0	120	25.1		58.0	142	00.2		18.7	95	36.4		24.3			
16	27	34.7	47	00.3		46.8	135	25.9		58.2	157	02.5		18.7	110	38.7		24.3			
17	42	37.2	61	59.9	-9	45.7	150	26.8	-21	58.4	172	04.8	-17	18.7	125	40.9	-22	24.3			
18	57	39.7	76	59.4	-9	44.5	165	27.7	-21	58.6	187	07.1	-17	18.8	140	43.1	-22	24.3			
19	72	42.1	91	58.9		43.3	180	28.5		58.8	202	09.4		18.8	155	45.4		24.3			
20	87	44.6	106	58.4		42.1	195	29.4		59.0	217	11.8		18.8	170	47.6		24.3			
21	102	47.1	121	58.0		41.0	210	30.2		59.2	232	14.1		18.9	185	49.8		24.3			
22	117	49.5	136	57.5		39.8	225	31.1		59.5	247	16.4		18.9	200	52.1		24.3			
23	132	52.0	151	57.0		38.6	240	31.9		59.7	262	18.7		18.9	215	54.3		24.2			
24	147	54.4	166	56.5	-9	37.4	255	32.8	-21	59.9	277	21.0	-17	18.9	230	56.5	-22	24.2			
Dif	—		-5		+12		+9		-2		+23		0		+22		0				

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16°2 PMG: 12 ^h 13 ^m 9				Edad: 2 ^d 1 PHE { 4 ^h : 56°0 12 ^h : 56°2 20 ^h : 56°3 SD: 15°3 PMG: 14 ^h 16 ^m R°: 46 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	o	'	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m	m
0	176	30.9	-11	43.5	152	29.1	-5	34.4	60 N	5 58	6 47	7 30	8 35	14	20 13	80		
1	191	30.9		42.6	167	01.5 ¹³⁴		23.9 ¹⁰⁵	58	58	43	24	33	16	14	77		
2	206	31.0		41.7	181	33.8 ¹³³		13.4 ¹⁰⁵	56	57	40	19	31	18	15	75		
3	221	31.0		40.9	196	06.1 ¹³³		-5 02.8 ¹⁰⁶	54	56	37	14	29	21	16	73		
4	236	31.1		40.0	210	38.5 ¹³⁴		-4 52.2 ¹⁰⁶	52	55	35	09	27	23	17	71		
5	251	31.1	-11	39.1	225	10.8 ¹³³		-4 41.6 ¹⁰⁶	50	5 54	6 32	7 05	8 26	24	20 18	69		
6	266	31.2	-11	38.2	239	43.2 ¹³⁴		-4 31.0 ¹⁰⁶	45	5 52	6 27	6 56	8 23	27	20 19	66		
7	281	31.2		37.3	254	15.5 ¹³³		20.3 ¹⁰⁷	40	50	22	49	20	30	21	62		
8	296	31.3		36.4	268	47.8 ¹³³		-4 09.6 ¹⁰⁷	35	48	17	43	17	33	22	59		
9	311	31.3		35.6	283	20.1 ¹³³		-3 58.8 ¹⁰⁸	30	45	13	37	15	36	23	57		
10	326	31.4		34.7	297	52.4 ¹³³		48.1 ¹⁰⁷	20	39	6 05	27	12	39	24	54		
11	341	31.4	-11	33.8	312	24.7 ¹³³		-3 37.3 ¹⁰⁸	10 N	5 33	5 57	6 19	8 08	43	20 26	50		
12	356	31.5	-11	32.9	326	57.0 ¹³³		-3 26.5 ¹⁰⁸	0	5 25	5 49	6 11	8 05	46	20 27	47		
13	11	31.5		32.0	341	29.3 ¹³³		15.7 ¹⁰⁸	10 S	16	41	6 02	8 02	50	29	43		
14	26	31.6		31.1	356	01.6 ¹³³		-3 04.8 ¹⁰⁹	20	5 04	30	5 53	7 59	53	30	40		
15	41	31.6		30.2	10	33.9 ¹³³		-2 53.9 ¹⁰⁹	30	4 48	18	43	56	56	32	35		
16	56	31.7		29.4	25	06.2 ¹³³		43.1 ¹⁰⁸	35	39	10	37	53	60	33	33		
17	71	31.7	-11	28.5	39	38.4 ¹³²		-2 32.1 ¹¹⁰	40	4 27	5 01	5 30	7 51	62	20 34	30		
18	86	31.8	-11	27.6	54	10.7 ¹³³		-2 21.2 ¹⁰⁹	45	4 12	4 50	5 21	7 48	65	20 35	27		
19	101	31.8		26.7	68	42.9 ¹³²		-2 10.3 ¹⁰⁹	50	3 53	37	12	45	69	36	24		
20	116	31.9		25.8	83	15.1 ¹³²		-1 59.3 ¹¹⁰	52	44	30	07	43	71	37	22		
21	131	32.0		24.9	97	47.3 ¹³²		48.3 ¹¹⁰	54	33	23	5 02	42	72	38	20		
22	146	32.0		24.0	112	19.5 ¹³²		37.3 ¹¹⁰	56	21	15	4 56	40	74	38	19		
23	161	32.1		23.2	126	51.7 ¹³²		26.3 ¹¹⁰	58	3 06	4 05	50	38	76	39	17		
24	176	32.1	-11	22.3	141	23.8 ¹³¹		-1 15.3 ¹¹⁰	60 S	2 48	3 55	4 43	7 36	79	20 40	14		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 14 ^h 06 ^m 1		Mag: -3.9 PMG: 12 ^h 53 ^m		Mag: +1.0 PMG: 6 ^h 57 ^m		Mag: -2.1 PMG: 5 ^h 30 ^m		Mag: +0.6 PMG: 8 ^h 35 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	o	'	o	'	o	'	o	'	o	'
0	147	54.4	166	56.5	-9	37.4	255	32.8	-21	59.9
1	162	56.9	181	56.1		36.2	270	33.7	-22	00.1
2	177	59.4	196	55.6		35.0	285	34.5		00.3
3	193	01.8	211	55.1		33.9	300	35.4		00.5
4	208	04.3	226	54.7		32.7	315	36.2		00.8
5	223	06.8	241	54.2	-9	31.5	330	37.1	-22	01.0
6	238	09.2	256	53.7	-9	30.3	345	37.9	-22	01.2
7	253	11.7	271	53.2		29.1	0	38.8		01.4
8	268	14.2	286	52.8		27.9	15	39.7		01.6
9	283	16.6	301	52.3		26.8	30	40.5		01.8
10	298	19.1	316	51.8		25.6	45	41.4		02.0
11	313	21.6	331	51.4	-9	24.4	60	42.2	-22	02.2
12	328	24.0	346	50.9	-9	23.2	75	43.1	-22	02.5
13	343	26.5	1	50.4		22.0	90	44.0		02.7
14	358	28.9	16	50.0		20.8	105	44.8		02.9
15	13	31.4	31	49.5		19.6	120	45.7		03.1
16	28	33.9	46	49.0		18.5	135	46.5		03.3
17	43	36.3	61	48.6	-9	17.3	150	47.4	-22	03.5
18	58	38.8	76	48.1	-9	16.1	165	48.2	-22	03.7
19	73	41.3	91	47.6		14.9	180	49.1		03.9
20	88	43.7	106	47.2		13.7	195	50.0		04.1
21	103	46.2	121	46.7		12.5	210	50.8		04.3
22	118	48.7	136	46.3		11.3	225	51.7		04.6
23	133	51.1	151	45.8		10.1	240	52.5		04.8
24	148	53.6	166	45.3	-9	08.9	255	53.4	-22	05.0
Dif	—		-5		+12		+9		-2	
							+23		0	
									+22	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna			
	SD: 16 ^h 2			Edad: 3 ^d 1 PHE { 4 ^h : 56 ^h 5 12 ^h : 56 ^h 7 20 ^h : 56 ^h 8														
	PMG: 12 ^h 13 ^m 8			SD: 15 ^h 4														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico		Hora	R°	Hora	R°		
h	o	'	o	'	o	'	o	h	m	h	m	h	m	m	h	m	m	
0	176	32.1	-11	22.3	141	23.8	-1 15.3	60 N	17 01	17 45	18 33	8	49	15	21	33	81	
1	191	32.2		21.4	155	56.0 ¹³²	-1 04.2 ¹¹¹	58	07	48	34	49	17		31	79		
2	206	32.2		20.5	170	28.1 ¹³¹	-0 53.2 ¹¹⁰	56	12	51	34	49	20		30	76		
3	221	32.3		19.6	185	00.2 ¹³¹	42.1 ¹¹¹	54	17	53	35	50	21		29	77		
4	236	32.3		18.7	199	32.3 ¹³¹	31.0 ¹¹¹	52	21	56	35	50	23		28	72		
5	251	32.4	-11	17.8	214	04.4 ¹³¹	-0 20.0 ¹¹⁰	50	17 25	17 58	18 36	8	50	24	21	27	70	
6	266	32.5	-11	16.9	228	36.5 ¹³¹	-0 08.9 ¹¹¹	45	17 33	18 03	18 38	8	50	28	21	25	66	
7	281	32.5		16.0	243	08.5 ¹³⁰	+0 02.2 ¹¹¹	40	40	08	40	50	31		23	63		
8	296	32.6		15.1	257	40.5 ¹³⁰	13.4 ¹¹²	35	46	12	42	50	34		21	61		
9	311	32.6		14.3	272	12.5 ¹³⁰	24.5 ¹¹¹	30	17 52	16	44	51	36		20	59		
10	326	32.7		13.4	286	44.5 ¹³⁰	35.6 ¹¹¹	20	18 01	23	49	51	40		18	54		
11	341	32.8	-11	12.5	301	16.5 ¹³⁰	+0 46.7 ¹¹¹	10 N	18 09	18 31	18 55	8	51	44	21	16	50	
12	356	32.8	-11	11.6	315	48.4 ¹²⁹	+0 57.8 ¹¹¹	0	18 17	18 38	19 03	8	51	47	21	14	47	
13	11	32.9		10.7	330	20.3 ¹²⁹	+1 09.0 ¹¹²	10 S	25	47	12	52	50		12	44		
14	26	32.9		09.8	344	52.2 ¹²⁹	20.1 ¹¹¹	20	34	18	56	23	52	54	10	40		
15	41	33.0		08.9	359	24.0 ¹²⁸	31.2 ¹¹¹	30	44	19	08	38	52	58	07	37		
16	56	33.1		08.0	13	55.9 ¹²⁹	42.4 ¹¹²	35	50	16	47	53	60		06	34		
17	71	33.1	-11	07.1	28	27.7 ¹²⁸	+1 53.5 ¹¹¹	40	18 56	19 24	19 58	8	53	63	21	04	32	
18	86	33.2	-11	06.2	42	59.5 ¹²⁸	+2 04.7 ¹¹²	45	19 04	19 35	20 13	8	53	66	21	02	29	
19	101	33.2		05.3	57	31.2 ¹²⁷	15.8 ¹¹¹	50	13	48	31	54	69		21	00	26	
20	116	33.3		04.4	72	02.9 ¹²⁷	26.9 ¹¹¹	52	18	19	54	40	54	71	20	59	24	
21	131	33.4		03.5	86	34.6 ¹²⁷	38.0 ¹¹¹	54	22	20	01	20	50	54	73	58	22	
22	146	33.4		02.6	101	06.3 ¹²⁷	+2 49.2 ¹¹²	56	28	09	21	02	54	76	57	20		
23	161	33.5		01.7	115	37.9 ¹²⁶	+3 00.3 ¹¹¹	58	34	18	16	54	78	56	17			
24	176	33.6	-11	00.9	130	09.5 ¹²⁶	+3 11.4 ¹¹¹	60 S	19 40	20 28	21 32	8	55	80	20	54	15	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 14 ^h 02 ^m 1		Mag: -3.9 PMG: 12 ^h 53 ^m				Mag: +0.9 PMG: 6 ^h 56 ^m				Mag: -2.1 PMG: 5 ^h 26 ^m				Mag: +0.6 PMG: 8 ^h 31 ^m			
	hG ♈		hG ♀	Dec			hG ♂	Dec			hG ♃	Dec			hG ♄	Dec		
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'		
0	148	53.6	166	45.3	-9	08.9	255	53.4	-22	05.0	278	16.6	-17	19.7	231	50.1	-22	24.0
1	163	56.0	181	44.9		07.7	270	54.2		05.2	293	19.0		19.7	246	52.4		24.0
2	178	58.5	196	44.4		06.6	285	55.1		05.4	308	21.3		19.7	261	54.6		24.0
3	194	01.0	211	43.9		05.4	300	56.0		05.6	323	23.6		19.7	276	56.8		24.0
4	209	03.4	226	43.5		04.2	315	56.8		05.8	338	25.9		19.8	291	59.1		23.9
5	224	05.9	241	43.0	-9	03.0	330	57.7	-22	06.0	353	28.2	-17	19.8	307	01.3	-22	23.9
6	239	08.4	256	42.6	-9	01.8	345	58.5	-22	06.2	8	30.6	-17	19.8	322	03.5	-22	23.9
7	254	10.8	271	42.1	-9	00.6	0	59.4		06.4	23	32.9		19.9	337	05.8		23.9
8	269	13.3	286	41.6	-8	59.4	16	00.2		06.6	38	35.2		19.9	352	08.0		23.9
9	284	15.8	301	41.2		58.2	31	01.1		06.8	53	37.5		19.9	7	10.2		23.9
10	299	18.2	316	40.7		57.0	46	02.0		07.0	68	39.9		19.9	22	12.5		23.9
11	314	20.7	331	40.3	-8	55.8	61	02.8	-22	07.3	83	42.2	-17	20.0	37	14.7	-22	23.9
12	329	23.2	346	39.8	-8	54.6	76	03.7	-22	07.5	98	44.5	-17	20.0	52	16.9	-22	23.9
13	344	25.6	1	39.3		53.4	91	04.5		07.7	113	46.8		20.0	67	19.2		23.9
14	359	28.1	16	38.9		52.2	106	05.4		07.9	128	49.2		20.1	82	21.4		23.8
15	14	30.5	31	38.4		51.0	121	06.3		08.1	143	51.5		20.1	97	23.7		23.8
16	29	33.0	46	38.0		49.8	136	07.1		08.3	158	53.8		20.1	112	25.9		23.8
17	44	35.5	61	37.5	-8	48.6	151	08.0	-22	08.5	173	56.1	-17	20.1	127	28.1	-22	23.8
18	59	37.9	76	37.1	-8	47.4	166	08.8	-22	08.7	188	58.5	-17	20.2	142	30.4	-22	23.8
19	74	40.4	91	36.6		46.2	181	09.7		08.9	204	00.8		20.2	157	32.6		23.8
20	89	42.9	106	36.1		45.0	196	10.5		09.1	219	03.1		20.2	172	34.8		23.8
21	104	45.3	121	35.7		43.8	211	11.4		09.3	234	05.4		20.2	187	37.1		23.8
22	119	47.8	136	35.2		42.6	226	12.3		09.5	249	07.8		20.3	202	39.3		23.8
23	134	50.3	151	34.8		41.4	241	13.1		09.7	264	10.1		20.3	217	41.6		23.7
24	149	52.7	166	34.3	-8	40.2	256	14.0	-22	09.9	279	12.4	-17	20.3	232	43.8	-22	23.7
Dif	—		-5		+12		+9		-2		+23		0		+22			

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16:2 PMG: 12 ^h 13 ^m 7			Edad: 4 ^d 1 PHE { 4 ^h : 57/0 12 ^h : 57/2 20 ^h : 57/4 SD: 15:6 PMG: 15 ^h 50 ^m R°: 49 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°		
h	o	'	o	'	o	'	o	'	h	m	h	m	h	m	h	m	m
0	176	33.6	-11	00.9	130	09.5	+3	11.4	60 N	5 53	6 42	7 25	9 04	16	22 54	83	
1	191	33.6	-11	00.0	144	41.1 ¹²⁶		22.5 ¹¹¹	58	53	38	19	06	19	50	80	
2	206	33.7	-10	59.1	159	12.6 ¹²⁵		33.6 ¹¹¹	56	53	36	14	09	21	46	78	
3	221	33.8		58.2	173	44.1 ¹²⁵		44.6 ¹¹⁰	54	52	33	09	11	23	43	75	
4	236	33.8		57.3	188	15.6 ¹²⁵	+3	55.7 ¹¹¹	52	52	31	05	13	24	40	73	
5	251	33.9	-10	56.4	202	47.0 ¹²⁴	+4	06.8 ¹¹¹	50	5 51	6 28	7 01	9 14	27	22 37	72	
6	266	33.9	-10	55.5	217	18.4 ¹²⁴	+4	17.8 ¹¹⁰	45	5 49	6 23	6 53	9 18	30	22 31	68	
7	281	34.0		54.6	231	49.8 ¹²⁴		28.9 ¹¹¹	40	47	19	46	21	33	26	65	
8	296	34.1		53.7	246	21.1 ¹²³		39.9 ¹¹⁰	35	45	15	41	24	36	22	63	
9	311	34.1		52.8	260	52.4 ¹²³	+4	50.9 ¹¹⁰	30	43	11	35	27	37	19	60	
10	326	34.2		51.9	275	23.7 ¹²³	+5	01.9 ¹¹⁰	20	38	6 04	26	31	42	12	56	
11	341	34.3	-10	51.0	289	54.9 ¹²²	+5	12.8 ¹⁰⁹	10 N	5 32	5 57	6 18	9 35	45	22 06	53	
12	356	34.3	-10	50.1	304	26.0 ¹²¹	+5	23.8 ¹¹⁰	0	5 25	5 49	6 10	9 38	49	22 01	50	
13	11	34.4		49.2	318	57.2 ¹²²		34.7 ¹⁰⁹	10 S	16	41	6 02	42	52	21 56	46	
14	26	34.5		48.3	333	28.3 ¹²¹		45.6 ¹⁰⁹	20	5 05	31	5 54	46	55	50	43	
15	41	34.5		47.4	347	59.3 ¹²⁰	+5	56.5 ¹⁰⁹	30	4 50	19	44	50	60	44	39	
16	56	34.6		46.5	2	30.3 ¹²⁰	+6	07.4 ¹⁰⁹	35	41	12	38	53	62	40	37	
17	71	34.7	-10	45.6	17	01.3 ¹²⁰	+6	18.2 ¹⁰⁸	40	4 30	5 04	5 32	9 56	64	21 36	34	
18	86	34.7	-10	44.7	31	32.2 ¹¹⁹	+6	29.1 ¹⁰⁹	45	4 16	4 53	5 24	9 59	68	21 31	32	
19	101	34.8		43.8	46	03.1 ¹¹⁹		39.9 ¹⁰⁸	50	3 57	40	15	10 03	72	26	27	
20	116	34.9		42.9	60	33.9 ¹¹⁸	+6	50.6 ¹⁰⁷	52	49	34	11	05	73	23	26	
21	131	35.0		42.0	75	04.7 ¹¹⁸	+7	01.4 ¹⁰⁸	54	38	27	06	07	76	20	24	
22	146	35.0		41.1	89	35.4 ¹¹⁷		12.1 ¹⁰⁷	56	27	20	5 01	10	77	17	22	
23	161	35.1		40.2	104	06.1 ¹¹⁷		22.8 ¹⁰⁷	58	3 13	11	4 55	12	80	13	20	
24	176	35.2	-10	39.3	118	36.7 ¹¹⁶	+7	33.5 ¹⁰⁷	60 S	2 56	4 01	4 48	10 15	83	21 09	18	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 13 ^h 58 ^m 2			Mag: -3.9 PMG: 12 ^h 54 ^m			Mag: +0.9 PMG: 6 ^h 55 ^m			Mag: -2.2 PMG: 5 ^h 22 ^m			Mag: +0.6 PMG: 8 ^h 28 ^m				
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec		
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'	
0	149	52.7	166	34.3	-8	40.2	256	14.0	-22	09.9	279	12.4	-17	20.3	232	43.8	
1	164	55.2	181	33.9		39.0	271	14.8		10.1	294	14.8		20.4	247	46.0	
2	179	57.6	196	33.4		37.8	286	15.7		10.3	309	17.1		20.4	262	48.3	
3	195	00.1	211	33.0		36.6	301	16.5		10.5	324	19.4		20.4	277	50.5	
4	210	02.6	226	32.5		35.4	316	17.4		10.7	339	21.7		20.4	292	52.7	
5	225	05.0	241	32.1	-8	34.2	331	18.3	-22	10.9	354	24.1	-17	20.5	307	55.0	
6	240	07.5	256	31.6	-8	33.0	346	19.1	-22	11.1	9	26.4	-17	20.5	322	57.2	
7	255	10.0	271	31.2		31.8	1	20.0		11.3	24	28.7		20.5	337	59.5	
8	270	12.4	286	30.7		30.6	16	20.8		11.5	39	31.1		20.5	353	01.7	
9	285	14.9	301	30.3		29.4	31	21.7		11.7	54	33.4		20.6	8	03.9	
10	300	17.4	316	29.8		28.2	46	22.6		11.9	69	35.7		20.6	23	06.2	
11	315	19.8	331	29.4	-8	27.0	61	23.4	-22	12.1	84	38.1	-17	20.6	38	08.4	
12	330	22.3	346	28.9	-8	25.8	76	24.3	-22	12.3	99	40.4	-17	20.6	53	10.7	
13	345	24.8	1	28.5		24.6	91	25.1		12.5	114	42.7		20.7	68	12.9	
14	0	27.2	16	28.0		23.4	106	26.0		12.7	129	45.1		20.7	83	15.1	
15	15	29.7	31	27.6		22.2	121	26.8		12.9	144	47.4		20.7	98	17.4	
16	30	32.1	46	27.1		20.9	136	27.7		13.1	159	49.7		20.8	113	19.6	
17	45	34.6	61	26.7	-8	19.7	151	28.6	-22	13.3	174	52.1	-17	20.8	128	21.9	
18	60	37.1	76	26.2	-8	18.5	166	29.4	-22	13.5	189	54.4	-17	20.8	143	24.1	
19	75	39.5	91	25.8		17.3	181	30.3		13.7	204	56.7		20.8	158	26.3	
20	90	42.0	106	25.3		16.1	196	31.1		13.9	219	59.1		20.9	173	28.6	
21	105	44.5	121	24.9		14.9	211	32.0		14.1	235	01.4		20.9	188	30.8	
22	120	46.9	136	24.4		13.7	226	32.9		14.3	250	03.7		20.9	203	33.1	
23	135	49.4	151	24.0		12.5	241	33.7		14.5	265	06.1		20.9	218	35.3	
24	150	51.9	166	23.5	-8	11.3	256	34.6	-22	14.7	280	08.4	-17	21.0	233	37.5	
Dif	—			-4 +12			+9 -2			+23 0			+22 0				

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:2			Edad: 5 ^d 1	PHE { 4 ^h : 57:6 12 ^h : 57:7 20 ^h : 57:9									
	PMG: 12 ^h 13 ^m 6					SD: 15:7								
	hG ☉		Dec	hG ☾ Dif		Dec Dif			Civil	Náutico	Hora	R°	Hora	R°
h	o	'	o	'	o	'	o	h m	h m	h m	h m m		h m m	
0	176	35.2	-10	39.3	118	36.7	+7 33.5	60 N	17 07	17 49	18 38	9 20 20	*** **	*** **
1	191	35.2		38.4	133	07.3 ¹¹⁶	44.1 ¹⁰⁶	58	12	52	38	25 22	*** **	*** **
2	206	35.3		37.5	147	37.8 ¹¹⁵	+7 54.7 ¹⁰⁶	56	17	55	38	30 24	*** **	*** **
3	221	35.4		36.6	162	08.3 ¹¹⁵	+8 05.3 ¹⁰⁶	54	21	57	38	34 26	23 58	76
4	236	35.5		35.7	176	38.7 ¹¹⁴	15.8 ¹⁰⁵	52	25	17 59	39	37 29	53	75
5	251	35.5	-10	34.8	191	09.1 ¹¹⁴	+8 26.3 ¹⁰⁵	50	17 28	18 01	18 39	9 41 30	23 49	72
6	266	35.6	-10	33.8	205	39.4 ¹¹³	+8 36.7 ¹⁰⁴	45	17 36	18 06	18 40	9 48 34	23 39	69
7	281	35.7		32.9	220	09.7 ¹¹³	47.2 ¹⁰⁵	40	43	10	42	9 54 37	31	67
8	296	35.7		32.0	234	39.9 ¹¹²	+8 57.6 ¹⁰⁴	35	48	14	43	10 00 38	25	63
9	311	35.8		31.1	249	10.1 ¹¹²	+9 07.9 ¹⁰³	30	17 53	17	45	04 41	19	61
10	326	35.9		30.2	263	40.2 ¹¹¹	18.2 ¹⁰³	20	18 02	24	50	13 44	23 08	58
11	341	36.0	-10	29.3	278	10.3 ¹¹¹	+9 28.5 ¹⁰³	10 N	18 10	18 31	18 56	10 20 48	22 59	55
12	356	36.0	-10	28.4	292	40.3 ¹¹⁰	+9 38.7 ¹⁰²	0	18 17	18 38	19 02	10 27 51	22 51	52
13	11	36.1		27.5	307	10.2 ¹⁰⁹	48.9 ¹⁰²	10 S	24	46	11	34 54	42	50
14	26	36.2		26.6	321	40.1 ¹⁰⁹	+9 59.0 ¹⁰¹	20	32	18 55	21	41 57	33	47
15	41	36.3		25.7	336	09.9 ¹⁰⁸	+10 09.1 ¹⁰¹	30	42	19 06	35	50 61	23	43
16	56	36.3		24.8	350	39.7 ¹⁰⁸	19.2 ¹⁰¹	35	47	13	44	10 55 63	17	41
17	71	36.4	-10	23.9	5	09.4 ¹⁰⁷	+10 29.2 ¹⁰⁰	40	18 53	19 22	19 55	11 00 66	22 10	39
18	86	36.5	-10	23.0	19	39.1 ¹⁰⁷	+10 39.1 ⁹⁹	45	19 01	19 31	20 09	11 07 69	22 03	35
19	101	36.6		22.1	34	08.7 ¹⁰⁶	49.0 ⁹⁹	50	09	44	26	15 72	21 53	33
20	116	36.6		21.2	48	38.2 ¹⁰⁵	+10 58.9 ⁹⁹	52	13	49	34	18 75	49	31
21	131	36.7		20.2	63	07.7 ¹⁰⁵	+11 08.7 ⁹⁸	54	18	19 56	44	23 76	44	29
22	146	36.8		19.3	77	37.1 ¹⁰⁴	18.4 ⁹⁷	56	23	20 03	20 55	27 78	39	27
23	161	36.9		18.4	92	06.4 ¹⁰³	28.1 ⁹⁷	58	28	12	21 08	32 81	33	25
24	176	36.9	-10	17.5	106	35.7 ¹⁰³	+11 37.7 ⁹⁶	60 S	19 35	20 21	21 24	11 38 83	21 27	22

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 13 ^h 54 ^m 3		Mag: -3.9 PMG: 12 ^h 55 ^m		Mag: +0.9 PMG: 6 ^h 53 ^m		Mag: -2.2 PMG: 5 ^h 19 ^m		Mag: +0.6 PMG: 8 ^h 24 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	o	'	o	'	o	'	o	'	o	'
0	150	51.9	166	23.5	256	34.6	280	08.4	233	37.5
1	165	54.3	181	23.1	271	35.4	295	10.7	248	39.8
2	180	56.8	196	22.6	286	36.3	310	13.1	263	42.0
3	195	59.3	211	22.2	301	37.1	325	15.4	278	44.3
4	211	01.7	226	21.7	316	38.0	340	17.8	293	46.5
5	226	04.2	241	21.3	331	38.9	355	20.1	308	48.7
6	241	06.6	256	20.9	346	39.7	10	22.4	323	51.0
7	256	09.1	271	20.4	1	40.6	25	24.8	338	53.2
8	271	11.6	286	20.0	16	41.4	40	27.1	353	55.5
9	286	14.0	301	19.5	31	42.3	55	29.4	8	57.7
10	301	16.5	316	19.1	46	43.2	70	31.8	23	59.9
11	316	19.0	331	18.6	61	44.0	85	34.1	39	02.2
12	331	21.4	346	18.2	76	44.9	100	36.5	54	04.4
13	346	23.9	1	17.8	91	45.7	115	38.8	69	06.7
14	1	26.4	16	17.3	106	46.6	130	41.1	84	08.9
15	16	28.8	31	16.9	121	47.5	145	43.5	99	11.2
16	31	31.3	46	16.4	136	48.3	160	45.8	114	13.4
17	46	33.7	61	16.0	151	49.2	175	48.2	129	15.6
18	61	36.2	76	15.6	166	50.0	190	50.5	144	17.9
19	76	38.7	91	15.1	181	50.9	205	52.9	159	20.1
20	91	41.1	106	14.7	196	51.7	220	55.2	174	22.4
21	106	43.6	121	14.2	211	52.6	235	57.5	189	24.6
22	121	46.1	136	13.8	226	53.5	250	59.9	204	26.9
23	136	48.5	151	13.4	241	54.3	266	02.2	219	29.1
24	151	51.0	166	12.9	256	55.2	281	04.6	234	31.4
Dif	—		-4		+12		+23		+22	

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: 6 ^d 1 PHE { 4 ^h : 58 ^m 1 12 ^h : 58 ^m 3 20 ^h : 58 ^m 5 R°: 55 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	o	'	o	'	o	'	o	'	h	m	h	m	h	m	h	m	h	m
0	176	36.9	-10	17.5	106	35.7	+11	37.7	60 N	5 48	6 36	7 19	9 40	25	0 17	83		
1	191	37.0		16.6	121	04.9	102	47.3	58	48	34	14	47	28	10	80		
2	206	37.1		15.7	135	34.1	102	+11 56.8	56	48	31	09	9 54	30	0 04	78		
3	221	37.2		14.8	150	03.1	100	+12 06.3	54	48	29	05	10 00	32	***	***	***	
4	236	37.3		13.9	164	32.2	101	15.7	52	48	27	7 01	06	33	***	***	***	
5	251	37.3	-10	13.0	179	01.1	99	+12 25.1	50	5 47	6 25	6 58	10 11	35	***	***	***	
6	266	37.4	-10	12.1	193	30.0	99	+12 34.3	45	5 46	6 20	6 50	10 22	38	***	***	***	
7	281	37.5		11.1	207	58.8	98	43.6	40	45	16	44	31	41	***	***	***	
8	296	37.6		10.2	222	27.6	98	+12 52.7	35	43	13	38	38	44	***	***	***	
9	311	37.6		09.3	236	56.3	97	+13 01.8	30	41	09	33	45	45	***	***	***	
10	326	37.7		08.4	251	24.9	96	10.8	20	37	6 03	25	10 57	49	***	***	***	
11	341	37.8	-10	07.5	265	53.5	96	+13 19.8	10 N	5 31	5 56	6 17	11 08	51	23 54	58		
12	356	37.9	-10	06.6	280	22.0	95	+13 28.7	0	5 25	5 49	6 10	11 18	53	23 43	55		
13	11	38.0		05.7	294	50.4	94	37.5	10 S	16	41	6 03	28	56	32	52		
14	26	38.0		04.8	309	18.7	93	46.3	20	5 06	32	5 55	38	59	20	50		
15	41	38.1		03.8	323	47.0	93	+13 54.9	30	4 52	21	46	51	62	23 06	47		
16	56	38.2		02.9	338	15.2	92	+14 03.6	35	43	14	40	11 58	64	22 58	46		
17	71	38.3	-10	02.0	352	43.4	92	+14 12.1	40	4 32	5 06	5 34	12 06	66	22 49	44		
18	86	38.4	-10	01.1	7	11.5	91	+14 20.5	45	4 19	4 56	5 27	12 16	69	22 38	42		
19	101	38.5	-10	00.2	21	39.5	90	28.9	50	4 02	44	19	27	73	26	38		
20	116	38.5	-9	59.3	36	07.4	89	37.2	52	3 53	38	15	33	74	20	37		
21	131	38.6		58.4	50	35.3	89	45.5	54	44	32	10	39	75	13	36		
22	146	38.7		57.4	65	03.1	88	+14 53.6	56	33	25	05	45	78	22 06	33		
23	161	38.8		56.5	79	30.8	87	+15 01.7	58	20	16	5 00	12 53	80	21 58	31		
24	176	38.9	-9	55.6	93	58.5	87	+15 09.7	60 S	3 04	4 07	4 54	13 01	83	21 49	28		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 13 ^h 50 ^m 3			Mag: -3.9 PMG: 12 ^h 56 ^m			Mag: +0.9 PMG: 6 ^h 52 ^m			Mag: -2.2 PMG: 5 ^h 15 ^m			Mag: +0.6 PMG: 8 ^h 21 ^m					
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec			
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'
0	151	51.0	166	12.9	-7	42.1	256	55.2	-22	19.3	281	04.6	-17	21.5	234	31.4	-22	23.2
1	166	53.5	181	12.5		40.9	271	56.0		19.5	296	06.9		21.6	249	33.6		23.2
2	181	55.9	196	12.1		39.7	286	56.9		19.7	311	09.3		21.6	264	35.8		23.2
3	196	58.4	211	11.6		38.5	301	57.8		19.9	326	11.6		21.6	279	38.1		23.2
4	212	00.9	226	11.2		37.2	316	58.6		20.1	341	13.9		21.6	294	40.3		23.2
5	227	03.3	241	10.7	-7	36.0	331	59.5	-22	20.3	356	16.3	-17	21.6	309	42.6	-22	23.2
6	242	05.8	256	10.3	-7	34.8	347	00.3	-22	20.5	11	18.6	-17	21.7	324	44.8	-22	23.2
7	257	08.2	271	09.9		33.6	2	01.2		20.7	26	21.0		21.7	339	47.1		23.2
8	272	10.7	286	09.4		32.4	17	02.1		20.8	41	23.3		21.7	354	49.3		23.2
9	287	13.2	301	09.0		31.1	32	02.9		21.0	56	25.7		21.7	9	51.6		23.1
10	302	15.6	316	08.6		29.9	47	03.8		21.2	71	28.0		21.8	24	53.8		23.1
11	317	18.1	331	08.1	-7	28.7	62	04.6	-22	21.4	86	30.4	-17	21.8	39	56.0	-22	23.1
12	332	20.6	346	07.7	-7	27.5	77	05.5	-22	21.6	101	32.7	-17	21.8	54	58.3	-22	23.1
13	347	23.0	1	07.3		26.2	92	06.4		21.8	116	35.1		21.8	70	00.5		23.1
14	2	25.5	16	06.8		25.0	107	07.2		22.0	131	37.4		21.8	85	02.8		23.1
15	17	28.0	31	06.4		23.8	122	08.1		22.2	146	39.8		21.9	100	05.0		23.1
16	32	30.4	46	06.0		22.6	137	08.9		22.3	161	42.1		21.9	115	07.3		23.1
17	47	32.9	61	05.5	-7	21.3	152	09.8	-22	22.5	176	44.5	-17	21.9	130	09.5	-22	23.1
18	62	35.3	76	05.1	-7	20.1	167	10.7	-22	22.7	191	46.8	-17	21.9	145	11.8	-22	23.1
19	77	37.8	91	04.7		18.9	182	11.5		22.9	206	49.2		22.0	160	14.0		23.0
20	92	40.3	106	04.2		17.7	197	12.4		23.1	221	51.5		22.0	175	16.3		23.0
21	107	42.7	121	03.8		16.4	212	13.2		23.3	236	53.9		22.0	190	18.5		23.0
22	122	45.2	136	03.4		15.2	227	14.1		23.4	251	56.2		22.0	205	20.8		23.0
23	137	47.7	151	03.0		14.0	242	14.9		23.6	266	58.6		22.0	220	23.0		23.0
24	152	50.1	166	02.5	-7	12.8	257	15.8	-22	23.8	282	00.9	-17	22.1	235	25.2	-22	23.0
Dif	—			-4 +12			+9 -2			+23 0			+22 0					

UT	SOL		 LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16°2		Edad: 7 ^d 1	PHE {	4 ^h : 58'7 12 ^h : 58'9 20 ^h : 59'0	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	PMG: 12 ^h 13 ^m 3					R°: 57 ^m									
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°	
h	o	'	o	'	o	'		h	m	h	m	h	m	h	m
0	176	38.9	-9	55.6	93	58.5	+15 09.7	60 N	17 12	17 54	18 43	10 05	34	1 40	81
1	191	39.0		54.7	108	26.0	85 17.6	58	17	57	42	15	37	30	79
2	206	39.0		53.8	122	53.6	86 25.4	56	21	59	42	24	39	22	76
3	221	39.1		52.9	137	21.0	84 33.1	54	25	18 01	42	32	40	14	75
4	236	39.2		52.0	151	48.4	84 40.8	52	29	03	42	39	42	08	72
5	251	39.3	-9	51.0	166	15.7	83 +15 48.3	50	17 32	18 05	18 42	10 46	43	1 01	72
6	266	39.4	-9	50.1	180	42.9	82 +15 55.8	45	17 39	18 09	18 43	11 00	45	0 48	69
7	281	39.5		49.2	195	10.1	82 +16 03.2	40	45	12	44	12	47	38	66
8	296	39.6		48.3	209	37.1	80 10.5	35	50	16	45	22	49	28	65
9	311	39.6		47.4	224	04.2	81 17.6	30	17 55	19	47	30	51	20	63
10	326	39.7		46.4	238	31.1	79 24.8	20	18 03	25	51	46	52	0 06	60
11	341	39.8	-9	45.5	252	58.0	79 +16 31.8	10 N	18 10	18 31	18 56	11 59	55	***	***
12	356	39.9	-9	44.6	267	24.8	78 +16 38.7	0	18 17	18 38	19 02	12 11	57	***	***
13	11	40.0		43.7	281	51.5	77 45.5	10 S	24	45	10	24	59	***	***
14	26	40.1		42.8	296	18.2	77 52.2	20	31	18 54	20	37	61	***	***
15	41	40.2		41.9	310	44.8	76 +16 58.8	30	40	19 04	33	12 53	63	23 53	53
16	56	40.3		40.9	325	11.3	75 +17 05.4	35	45	11	42	13 02	64	44	52
17	71	40.3	-9	40.0	339	37.8	75 +17 11.8	40	18 51	19 19	19 52	13 12	66	23 33	50
18	86	40.4	-9	39.1	354	04.1	73 +17 18.1	45	18 57	19 28	20 05	13 25	68	23 20	49
19	101	40.5		38.2	8	30.5	74 24.3	50	19 05	39	21	40	70	23 04	47
20	116	40.6		37.2	22	56.7	72 30.4	52	09	45	29	47	71	22 57	46
21	131	40.7		36.3	37	22.9	72 36.4	54	13	51	38	13 54	73	49	44
22	146	40.8		35.4	51	49.0	71 42.3	56	18	19 58	20 49	14 03	74	39	44
23	161	40.9		34.5	66	15.1	71 48.1	58	23	20 06	21 01	14 13	76	29	42
24	176	41.0	-9	33.6	80	41.0	69 +17 53.8	60 S	19 29	20 15	21 16	14 24	79	22 17	40

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 13 ^h 46 ^m 4		Mag: -3.9 PMG: 12 ^h 56 ^m		Mag: +0.9 PMG: 6 ^h 51 ^m		Mag: -2.2 PMG: 5 ^h 11 ^m		Mag: +0.6 PMG: 8 ^h 17 ^m	
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	o	'	o	'	o	'	o	'	o	'
0	152	50.1	166	02.5	-7	12.8	257	15.8	-22	23.8
1	167	52.6	181	02.1		11.5	272	16.7		24.0
2	182	55.1	196	01.7		10.3	287	17.5		24.2
3	197	57.5	211	01.2		09.1	302	18.4		24.4
4	213	00.0	226	00.8		07.8	317	19.2		24.6
5	228	02.5	241	00.4	-7	06.6	332	20.1	-22	24.7
6	243	04.9	256	00.0	-7	05.4	347	21.0	-22	24.9
7	258	07.4	270	59.5		04.2	2	21.8		25.1
8	273	09.8	285	59.1		02.9	17	22.7		25.3
9	288	12.3	300	58.7		01.7	32	23.5		25.5
10	303	14.8	315	58.2	-7	00.5	47	24.4		25.6
11	318	17.2	330	57.8	-6	59.2	62	25.3	-22	25.8
12	333	19.7	345	57.4	-6	58.0	77	26.1	-22	26.0
13	348	22.2	0	57.0		56.8	92	27.0		26.2
14	3	24.6	15	56.5		55.5	107	27.8		26.4
15	18	27.1	30	56.1		54.3	122	28.7		26.6
16	33	29.6	45	55.7		53.1	137	29.6		26.7
17	48	32.0	60	55.3	-6	51.8	152	30.4	-22	26.9
18	63	34.5	75	54.8	-6	50.6	167	31.3	-22	27.1
19	78	37.0	90	54.4		49.4	182	32.1		27.3
20	93	39.4	105	54.0		48.1	197	33.0		27.4
21	108	41.9	120	53.6		46.9	212	33.9		27.6
22	123	44.3	135	53.1		45.7	227	34.7		27.8
23	138	46.8	150	52.7		44.4	242	35.6		28.0
24	153	49.3	165	52.3	-6	43.2	257	36.4	-22	28.2
Dif	—		-4		+12		+9		-2	
							+24		0	
									+22	
									0	

UT	SOL			☾ LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna								
	SD: 16/2 PMG: 12 ^h 13 ^m 2			Edad: 8 ^d 1 PHE { 4 ^h : 59/2 12 ^h : 59/4 20 ^h : 59/5 SD: 16/2 PMG: 19 ^h 22 ^m R°: 60 ^m																			
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°								
h	o	'	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m						
0	176	41.0	-9	33.6	80	41.0	+17	53.8	56	60 N	5	43	6	31	7	13	10	39	47	3	01	74	
1	191	41.1		32.6	95	06.9	69	+17	59.4	56	58	43		29	08		10	52	48	2	49	72	
2	206	41.2		31.7	109	32.8	69	+18	04.9	55	56	43		26	04		11	03	49	38	71		
3	221	41.2		30.8	123	58.6	68		10.2	53	54	44		24	7	00		12	51	29	70		
4	236	41.3		29.9	138	24.3	67		15.5	53	52	44		23	6	57		21	51	20	69		
5	251	41.4	-9	28.9	152	49.9	66	+18	20.6	51	50	5	44	6	21	6	54	11	29	52	2	13	68
6	266	41.5	-9	28.0	167	15.5	66	+18	25.6	50	45	5	43	6	17	6	47	11	45	54	1	57	66
7	281	41.6		27.1	181	41.1	66		30.5	49	40	42		14	41		11	59	54	44	65		
8	296	41.7		26.2	196	06.5	64		35.3	48	35	41		10	36		12	11	55	33	63		
9	311	41.8		25.3	210	31.9	64		40.0	47	30	39		07	31		21	56	23	63			
10	326	41.9		24.3	224	57.3	64		44.5	45	20	36		6	01	24	38	58	1	06	61		
11	341	42.0	-9	23.4	239	22.6	63	+18	49.0	45	10 N	5	31	5	55	6	17	12	54	58	0	52	59
12	356	42.1	-9	22.5	253	47.8	62	+18	53.3	43	0	5	25	5	49	6	10	13	08	59	0	38	58
13	11	42.2		21.6	268	12.9	61	+18	57.5	42	10 S	17		42	6	03	23	60		24	57		
14	26	42.3		20.6	282	38.1	62	+19	01.5	40	20	5	07	33	5	56	38	61	0	10	55		
15	41	42.4		19.7	297	03.1	60		05.5	40	30	4	54	23	47		13	56	62	***	***	***	
16	56	42.5		18.8	311	28.1	60		09.3	38	35	45		16	42		14	06	63	***	***	***	
17	71	42.5	-9	17.9	325	53.0	59	+19	13.0	37	40	4	35	5	09	5	37	14	18	64	***	***	***
18	86	42.6	-9	16.9	340	17.9	59	+19	16.6	36	45	4	22	4	59	5	30	14	33	64	***	***	***
19	101	42.7		16.0	354	42.7	58		20.0	34	50	4	06	48	22		50	65		23	51	57	
20	116	42.8		15.1	9	07.5	58		23.3	33	52	3	58	42	18		14	58	66	43	56		
21	131	42.9		14.1	23	32.3	58		26.5	32	54	49		36	14		15	07	66	33	57		
22	146	43.0		13.2	37	56.9	56		29.6	31	56	38		29	10		17	67		23	56		
23	161	43.1		12.3	52	21.6	57		32.5	29	58	26		22	5	05	29	68	23	11	55		
24	176	43.2	-9	11.4	66	46.1	55	+19	35.3	28	60 S	3	12	4	13	4	59	15	43	69	22	57	54
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO										
	PMG: 13 ^h 42 ^m 5			Mag: -3.9 PMG: 12 ^h 57 ^m			Mag: +0.9 PMG: 6 ^h 49 ^m			Mag: -2.2 PMG: 5 ^h 07 ^m			Mag: +0.6 PMG: 8 ^h 13 ^m										
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec								
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'	
0	153	49.3	165	52.3	-6	43.2	257	36.4	-22	28.2	282	57.4	-17	22.5	236	19.2	-22	22.7					
1	168	51.7	180	51.9		42.0	272	37.3		28.3	297	59.8		22.6	251	21.5		22.7					
2	183	54.2	195	51.5		40.7	287	38.2		28.5	313	02.2		22.6	266	23.7		22.7					
3	198	56.7	210	51.0		39.5	302	39.0		28.7	328	04.5		22.6	281	26.0		22.7					
4	213	59.1	225	50.6		38.3	317	39.9		28.9	343	06.9		22.6	296	28.2		22.7					
5	229	01.6	240	50.2	-6	37.0	332	40.7	-22	29.0	358	09.2	-17	22.6	311	30.5	-22	22.7					
6	244	04.1	255	49.8	-6	35.8	347	41.6	-22	29.2	13	11.6	-17	22.7	326	32.7	-22	22.7					
7	259	06.5	270	49.4		34.6	2	42.5		29.4	28	14.0		22.7	341	35.0		22.7					
8	274	09.0	285	48.9		33.3	17	43.3		29.6	43	16.3		22.7	356	37.2		22.7					
9	289	11.5	300	48.5		32.1	32	44.2		29.8	58	18.7		22.7	11	39.5		22.7					
10	304	13.9	315	48.1		30.8	47	45.1		29.9	73	21.0		22.7	26	41.7		22.6					
11	319	16.4	330	47.7	-6	29.6	62	45.9	-22	30.1	88	23.4	-17	22.8	41	44.0	-22	22.6					
12	334	18.8	345	47.3	-6	28.4	77	46.8	-22	30.3	103	25.8	-17	22.8	56	46.2	-22	22.6					
13	349	21.3	0	46.8		27.1	92	47.6		30.5	118	28.1		22.8	71	48.5		22.6					
14	4	23.8	15	46.4		25.9	107	48.5		30.6	133	30.5		22.8	86	50.7		22.6					
15	19	26.2	30	46.0		24.7	122	49.4		30.8	148	32.9		22.8	101	53.0		22.6					
16	34	28.7	45	45.6		23.4	137	50.2		31.0	163	35.2		22.8	116	55.2		22.6					
17	49	31.2	60	45.2	-6	22.2	152	51.1	-22	31.2	178	37.6	-17	22.9	131	57.5	-22	22.6					
18	64	33.6	75	44.7	-6	20.9	167	51.9	-22	31.3	193	40.0	-17	22.9	146	59.7	-22	22.6					
19	79	36.1	90	44.3		19.7	182	52.8		31.5	208	42.3		22.9	162	02.0		22.5					
20	94	38.6	105	43.9		18.5	197	53.7		31.7	223	44.7		22.9	177	04.2		22.5					
21	109	41.0	120	43.5		17.2	212	54.5		31.8	238	47.0		22.9	192	06.5		22.5					
22	124	43.5	135	43.1		16.0	227	55.4		32.0	253	49.4		23.0	207	08.8		22.5					
23	139	45.9	150	42.7		14.7	242	56.2		32.2	268	51.8		23.0	222	11.0		22.5					
24	154	48.4	165	42.3	-6	13.5	257	57.1	-22	32.4	283	54.1	-17	23.0	237	13.3	-22	22.5					
Dif	—		-4		+12		+9		-2		+24		0		+23		0						

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16'2 PMG: 12 ^h 13 ^m 0			Edad: 9 ^d 1 PHE { 4 ^h : 59'7 12 ^h : 59'8 20 ^h : 59'9 Rº: 60 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	Rº	Hora	Rº
h	o	'	o	'	o	'	o	h m	h m	h m	h m m	h m m	h m m		
0	176	43.2	-9	11.4	66	46.1	+19 35.3	60 N	17 17	17 59	18 47	11 26 62	4 15 62		
1	191	43.3		10.4	81	10.7	56 38.0	58	21	18 01	47	40 62	4 01 62		
2	206	43.4		09.5	95	35.2	55 40.6	56	25	03	46	11 52 63	3 49 62		
3	221	43.5		08.6	109	59.6	54 43.0	54	29	05	46	12 03 62	39 61		
4	236	43.6		07.7	124	24.0	54 45.3	52	32	06	46	12 62	29 62		
5	251	43.7	-9	06.7	138	48.4	54 +19 47.4	50	17 35	18 08	18 45	12 21 62	3 21 61		
6	266	43.8	-9	05.8	153	12.7	53 +19 49.4	45	17 42	18 11	18 45	12 39 62	3 03 61		
7	281	43.9		04.9	167	37.0	53 51.3	40	47	15	46	12 53 62	2 49 61		
8	296	44.0		03.9	182	01.2	52 53.1	35	52	17	47	13 06 61	36 61		
9	311	44.1		03.0	196	25.4	52 54.7	30	17 56	20	48	17 61	26 60		
10	326	44.2		02.1	210	49.6	52 56.2	20	18 04	26	51	36 61	2 07 61		
11	341	44.3	-9	01.1	225	13.7	51 +19 57.5	10 N	18 10	18 31	18 56	13 52 61	1 51 60		
12	356	44.4	-9	00.2	239	37.8	51 +19 58.7	0	18 16	18 37	19 02	14 07 61	1 36 60		
13	11	44.5	-8	59.3	254	01.9	51 +19 59.8	10 S	23	44	09	23 60	21 60		
14	26	44.6		58.4	268	25.9	50 +20 00.7	20	30	18 52	18	39 60	1 05 59		
15	41	44.7		57.4	282	49.9	50 01.5	8	30	19 02	31	14 58 59	0 46 59		
16	56	44.8		56.5	297	13.9	50 02.1	6	35	42	08	39	15 09 59	36 58	
17	71	44.9	-8	55.6	311	37.8	49 +20 02.7	40	18 48	19 15	19 49	15 22 58	0 23 58		
18	86	45.0	-8	54.6	326	01.7	49 +20 03.0	45	18 54	19 24	20 01	15 37 58	0 09 57		
19	101	45.1		53.7	340	25.6	49 03.3	3	50	19 01	35	17	15 55 58	*** ** *	
20	116	45.2		52.8	354	49.5	49 03.4	1	52	05	40	24	16 04 57	*** ** *	
21	131	45.3		51.8	9	13.4	49 03.3	2	54	09	46	33	13 57	*** ** *	
22	146	45.4		50.9	23	37.2	48 03.1	1	56	13	19 53	43	24 57	*** ** *	
23	161	45.5		50.0	38	01.0	48 02.8	3	58	18	20 00	20 54	37 56	*** ** *	
24	176	45.6	-8	49.0	52	24.8	48 +20 02.4	4	60 S	19 23	20 08	21 08	16 52 55	23 51 71	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 13 ^h 38 ^m 5		Mag: -3.9 PMG: 12 ^h 58 ^m		Mag: +0.9 PMG: 6 ^h 48 ^m		Mag: -2.2 PMG: 5 ^h 04 ^m		Mag: +0.6 PMG: 8 ^h 10 ^m						
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄						
h	o	'	o	'	o	'	o	'	o	'					
0	154	48.4	165	42.3	257	57.1	283	54.1	237	13.3					
1	169	50.9	180	41.8	272	58.0	298	56.5	252	15.5					
2	184	53.3	195	41.4	287	58.8	313	58.9	267	17.8					
3	199	55.8	210	41.0	302	59.7	329	01.2	282	20.0					
4	214	58.3	225	40.6	318	00.5	344	03.6	297	22.3					
5	230	00.7	240	40.2	333	01.4	359	06.0	312	24.5					
6	245	03.2	255	39.8	348	02.3	14	08.4	327	26.8					
7	260	05.7	270	39.3	3	03.1	29	10.7	342	29.0					
8	275	08.1	285	38.9	18	04.0	44	13.1	357	31.3					
9	290	10.6	300	38.5	33	04.9	59	15.5	12	33.6					
10	305	13.1	315	38.1	48	05.7	74	17.8	27	35.8					
11	320	15.5	330	37.7	63	06.6	89	20.2	42	38.1					
12	335	18.0	345	37.3	78	07.4	104	22.6	57	40.3					
13	350	20.4	0	36.9	93	08.3	119	24.9	72	42.6					
14	5	22.9	15	36.5	108	09.2	134	27.3	87	44.8					
15	20	25.4	30	36.1	123	10.0	149	29.7	102	47.1					
16	35	27.8	45	35.6	138	10.9	164	32.1	117	49.3					
17	50	30.3	60	35.2	153	11.7	179	34.4	132	51.6					
18	65	32.8	75	34.8	168	12.6	194	36.8	147	53.8					
19	80	35.2	90	34.4	183	13.5	209	39.2	162	56.1					
20	95	37.7	105	34.0	198	14.3	224	41.5	177	58.4					
21	110	40.2	120	33.6	213	15.2	239	43.9	193	00.6					
22	125	42.6	135	33.2	228	16.1	254	46.3	208	02.9					
23	140	45.1	150	32.8	243	16.9	269	48.7	223	05.1					
24	155	47.6	165	32.4	258	17.8	284	51.0	238	07.4					
Dif	—		-4		+12		+24		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 9			Edad: 10 ^d 1 PHE { 4 ^h : 60'0 12 ^h : 60'1 20 ^h : 60'2 PMG: 21 ^h 22 ^m R°: 60 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	o	'	o	'	o	'	o	'	h	m	h	m	h	m	h	m
0	176	45.6	-8	49.0	52	24.8	+20	02.4	60 N	5 37	6 25	7 07	12 28	77	5 17	48
1	191	45.7		48.1	66	48.6		01.8	58	38	23	7 03	42	76	5 03	49
2	206	45.8		47.2	81	12.4		01.0	56	39	22	6 59	12 55	73	4 51	50
3	221	45.9		46.2	95	36.1	+20	00.1	54	39	20	56	13 05	73	40	50
4	236	46.0		45.3	109	59.9	+19	59.1	52	40	19	53	14	72	31	52
5	251	46.1	-8	44.4	124	23.6	+19	57.9	50	5 40	6 17	6 50	13 23	70	4 22	53
6	266	46.2	-8	43.4	138	47.4	+19	56.6	45	5 40	6 14	6 43	13 41	68	4 04	55
7	281	46.3		42.5	153	11.1		55.2	40	39	11	38	13 55	67	3 50	55
8	296	46.4		41.6	167	34.8		53.6	35	39	08	33	14 07	66	37	57
9	311	46.6		40.6	181	58.5		51.9	30	37	05	29	18	65	26	58
10	326	46.7		39.7	196	22.3		50.0	20	34	6 00	22	37	63	3 08	58
11	341	46.8	-8	38.8	210	46.0	+19	48.0	10 N	5 30	5 54	6 16	14 53	61	2 51	60
12	356	46.9	-8	37.8	225	09.7	+19	45.8	0	5 24	5 49	6 10	15 08	60	2 36	60
13	11	47.0		36.9	239	33.4		43.6	10 S	17	42	6 03	23	58	21	61
14	26	47.1		35.9	253	57.1		41.1	20	5 08	34	5 57	39	57	2 04	62
15	41	47.2		35.0	268	20.9		38.6	30	4 55	24	49	15 57	55	1 45	64
16	56	47.3		34.1	282	44.6		35.9	35	47	18	44	16 08	54	34	64
17	71	47.4	-8	33.1	297	08.4	+19	33.0	40	4 38	5 11	5 39	16 20	53	1 21	65
18	86	47.5	-8	32.2	311	32.1	+19	30.0	45	4 26	5 02	5 33	16 35	50	1 06	66
19	101	47.6		31.3	325	55.9		26.9	50	10	4 52	25	16 53	48	0 48	67
20	116	47.7		30.3	340	19.7		23.6	52	4 03	46	22	17 01	47	39	68
21	131	47.8		29.4	354	43.5		20.2	54	3 54	41	18	10	46	30	67
22	146	47.9		28.4	9	07.3		16.7	56	44	34	14	21	44	19	68
23	161	48.1		27.5	23	31.1		13.0	58	33	27	09	33	43	0 06	69
24	176	48.2	-8	26.6	37	55.0	+19	09.2	60 S	3 19	4 19	5 04	17 47	40	** **	**
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 13 ^h 34 ^m 6		Mag: -3.9 PMG: 12 ^h 58 ^m			Mag: +0.8 PMG: 6 ^h 46 ^m			Mag: -2.2 PMG: 5 ^h 00 ^m			Mag: +0.6 PMG: 8 ^h 06 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'
0	155	47.6	165	32.4	-5	43.6	258	17.8	-22	36.4	284	51.0	-17	23.4	238	07.4
1	170	50.0	180	32.0		42.4	273	18.6		36.6	299	53.4		23.4	253	09.6
2	185	52.5	195	31.5		41.1	288	19.5		36.7	314	55.8		23.4	268	11.9
3	200	54.9	210	31.1		39.9	303	20.4		36.9	329	58.2		23.4	283	14.2
4	215	57.4	225	30.7		38.6	318	21.2		37.1	345	00.5		23.4	298	16.4
5	230	59.9	240	30.3	-5	37.4	333	22.1	-22	37.2	0	02.9	-17	23.5	313	18.7
6	246	02.3	255	29.9	-5	36.1	348	22.9	-22	37.4	15	05.3	-17	23.5	328	20.9
7	261	04.8	270	29.5		34.9	3	23.8		37.6	30	07.7		23.5	343	23.2
8	276	07.3	285	29.1		33.6	18	24.7		37.7	45	10.0		23.5	358	25.4
9	291	09.7	300	28.7		32.4	33	25.5		37.9	60	12.4		23.5	13	27.7
10	306	12.2	315	28.3		31.1	48	26.4		38.1	75	14.8		23.5	28	30.0
11	321	14.7	330	27.9	-5	29.8	63	27.3	-22	38.2	90	17.2	-17	23.5	43	32.2
12	336	17.1	345	27.5	-5	28.6	78	28.1	-22	38.4	105	19.6	-17	23.6	58	34.5
13	351	19.6	0	27.1		27.3	93	29.0		38.5	120	21.9		23.6	73	36.7
14	6	22.1	15	26.7		26.1	108	29.8		38.7	135	24.3		23.6	88	39.0
15	21	24.5	30	26.3		24.8	123	30.7		38.9	150	26.7		23.6	103	41.3
16	36	27.0	45	25.9		23.6	138	31.6		39.0	165	29.1		23.6	118	43.5
17	51	29.4	60	25.4	-5	22.3	153	32.4	-22	39.2	180	31.4	-17	23.6	133	45.8
18	66	31.9	75	25.0	-5	21.1	168	33.3	-22	39.4	195	33.8	-17	23.6	148	48.0
19	81	34.4	90	24.6		19.8	183	34.2		39.5	210	36.2		23.7	163	50.3
20	96	36.8	105	24.2		18.6	198	35.0		39.7	225	38.6		23.7	178	52.6
21	111	39.3	120	23.8		17.3	213	35.9		39.8	240	41.0		23.7	193	54.8
22	126	41.8	135	23.4		16.1	228	36.7		40.0	255	43.4		23.7	208	57.1
23	141	44.2	150	23.0		14.8	243	37.6		40.2	270	45.7		23.7	223	59.3
24	156	46.7	165	22.6	-5	13.6	258	38.5	-22	40.3	285	48.1	-17	23.7	239	01.6
Dif	—		-4		+13		+9		-2		+24		0		+23	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16 ^h 1			Edad: 11 ^d 1 PHE { 4 ^h : 60/2 12 ^h : 60/3 20 ^h : 60/2	SD: 16 ^h 4				Civil		Náutico		Hora R°		
	PMG: 12 ^h 12 ^m 7	hG ☉	Dec		hG ☾	Dif			Dec	Dif					
h	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m
0	176	48.2	-8	26.6	37	55.0	+19 09.2	60 N	17 22	18 04	18 52	13 45	87	6 05	35
1	191	48.3		25.6	52	18.9	05.3	58	26	06	51	13 58	83	5 52	38
2	206	48.4		24.7	66	42.8	49	56	30	07	50	14 08	81	41	40
3	221	48.5		23.7	81	06.7	49	54	33	09	50	18	79	32	4
4	236	48.6		22.8	95	30.6	49	52	36	10	49	26	77	23	43
5	251	48.7	-8	21.9	109	54.6	50	50	17 39	18 11	18 49	14 33	76	5 15	45
6	266	48.8	-8	20.9	124	18.6	50	45	17 44	18 14	18 48	14 49	73	4 59	47
7	281	48.9		20.0	138	42.6	50	40	49	17	48	15 02	71	45	50
8	296	49.0		19.1	153	06.7	51	35	54	19	49	13	69	34	51
9	311	49.2		18.1	167	30.7	50	30	17 58	22	49	23	66	24	52
10	326	49.3		17.2	181	54.9	52	20	18 04	26	52	40	63	4 06	55
11	341	49.4	-8	16.2	196	19.0	51	10 N	18 10	18 31	18 56	15 54	61	3 51	57
12	356	49.5	-8	15.3	210	43.2	52	0	18 16	18 37	19 01	16 08	58	3 36	60
13	11	49.6		14.3	225	07.4	52	10 S	22	43	08	21	56	22	61
14	26	49.7		13.4	239	31.7	53	20	28	18 51	17	36	53	3 06	64
15	41	49.8		12.5	253	56.0	53	30	36	19 00	29	16 52	50	2 49	66
16	56	49.9		11.5	268	20.3	53	35	40	06	36	17 02	48	38	68
17	71	50.0	-8	10.6	282	44.7	54	40	18 45	19 12	19 45	17 13	46	2 26	69
18	86	50.2	-8	09.6	297	09.1	54	45	18 50	19 21	19 57	17 25	44	2 12	71
19	101	50.3		08.7	311	33.6	55	50	18 57	31	20 12	41	40	1 55	74
20	116	50.4		07.8	325	58.1	55	52	19 00	36	19	48	39	47	75
21	131	50.5		06.8	340	22.6	55	54	04	41	27	17 56	37	37	77
22	146	50.6		05.9	354	47.2	56	56	08	47	36	18 05	35	27	78
23	161	50.7		04.9	9	11.9	57	58	12	19 54	20 47	16	32	15	81
24	176	50.8	-8	04.0	23	36.6	57	60 S	19 17	20 02	21 00	18 27	30	1 02	82

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 13 ^h 30 ^m 7	Mag: -3.9 PMG: 12 ^h 59 ^m	Mag: -3.9 PMG: 12 ^h 59 ^m	Mag: +0.8 PMG: 6 ^h 45 ^m	Mag: +0.8 PMG: 6 ^h 45 ^m	Mag: -2.2 PMG: 4 ^h 56 ^m	Mag: -2.2 PMG: 4 ^h 56 ^m	Mag: +0.6 PMG: 8 ^h 03 ^m	Mag: +0.6 PMG: 8 ^h 03 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	o	'	o	'	o	'	o	'	o	'					
0	156	46.7	165	22.6	-5	13.6	258	38.5	-22	40.3					
1	171	49.2	180	22.2		12.3	273	39.3		40.5					
2	186	51.6	195	21.8		11.1	288	40.2		40.6					
3	201	54.1	210	21.4		09.8	303	41.1		40.8					
4	216	56.5	225	21.0		08.5	318	41.9		41.0					
5	231	59.0	240	20.6	-5	07.3	333	42.8	-22	41.1					
6	247	01.5	255	20.2	-5	06.0	348	43.6	-22	41.3					
7	262	03.9	270	19.8		04.8	3	44.5		41.4					
8	277	06.4	285	19.4		03.5	18	45.4		41.6					
9	292	08.9	300	19.0		02.3	33	46.2		41.7					
10	307	11.3	315	18.6	-5	01.0	48	47.1		41.9					
11	322	13.8	330	18.2	-4	59.7	63	48.0	-22	42.1					
12	337	16.3	345	17.8	-4	58.5	78	48.8	-22	42.2					
13	352	18.7	0	17.4		57.2	93	49.7		42.4					
14	7	21.2	15	17.0		56.0	108	50.5		42.5					
15	22	23.7	30	16.6		54.7	123	51.4		42.7					
16	37	26.1	45	16.2		53.5	138	52.3		42.8					
17	52	28.6	60	15.8	-4	52.2	153	53.1	-22	43.0					
18	67	31.0	75	15.4	-4	50.9	168	54.0	-22	43.2					
19	82	33.5	90	15.0		49.7	183	54.9		43.3					
20	97	36.0	105	14.6		48.4	198	55.7		43.5					
21	112	38.4	120	14.2		47.2	213	56.6		43.6					
22	127	40.9	135	13.8		45.9	228	57.5		43.8					
23	142	43.4	150	13.4		44.6	243	58.3		43.9					
24	157	45.8	165	13.0	-4	43.4	258	59.2	-22	44.1					
Dif	—		-4		+13		+9		-2		+24	0		+23	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1			Edad: 12 ^d 1 PHE { 4 ^h : 60 ^h /2 12 ^h : 60 ^h /2 20 ^h : 60 ^h /1						Principio del crepúsculo			Salida de Luna		Puesta de Luna	
	PMG: 12 ^h 12 ^m 5			PMG: 23 ^h 19 ^m R°: 56 ^m						Principio del crepúsculo			Salida de Luna		Puesta de Luna	
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°
h	o	'	o	o	'	o	o	'	o	h	m	h	m	h	m	m
0	176	50.8	-8 04.0	23	36.6	+16 58.8	70	58	60 N	5 32	6 20	7 02	15 12	89	6 40	26
1	191	51.0	03.0	38	01.3	57	51.8	70	58	33	18	6 58	21	87	30	29
2	206	51.1	02.1	52	26.1	58	44.7	71	56	34	17	54	29	84	21	32
3	221	51.2	01.1	66	50.9	58	37.6	71	54	35	16	51	37	82	13	34
4	236	51.3	-8 00.2	81	15.8	59	30.2	74	52	35	14	48	43	80	06	36
5	251	51.4	-7 59.3	95	40.8	60	+16 22.8	74	50	5 36	6 13	6 46	15 49	78	6 00	37
6	266	51.5	-7 58.3	110	05.8	60	+16 15.3	75	45	5 36	6 10	6 40	16 02	74	5 46	40
7	281	51.7	57.4	124	30.8	60	+16 07.6	77	40	37	08	35	13	71	35	43
8	296	51.8	56.4	138	55.9	61	+15 59.9	77	35	36	06	31	22	68	25	45
9	311	51.9	55.5	153	21.1	62	52.0	79	30	35	6 03	27	29	67	16	48
10	326	52.0	54.5	167	46.3	62	44.1	79	20	33	5 58	21	43	62	5 01	51
11	341	52.1	-7 53.6	182	11.6	63	+15 36.0	81	10 N	5 29	5 54	6 15	16 55	59	4 48	54
12	356	52.2	-7 52.6	196	36.9	63	+15 27.9	81	0	5 24	5 48	6 09	17 06	56	4 36	57
13	11	52.4	51.7	211	02.3	64	19.6	83	10 S	18	42	6 03	17	53	23	60
14	26	52.5	50.8	225	27.7	64	11.2	84	20	5 09	35	5 57	29	49	4 10	63
15	41	52.6	49.8	239	53.2	65	+15 02.8	84	30	4 57	26	50	42	46	3 55	66
16	56	52.7	48.9	254	18.8	66	+14 54.2	86	35	49	20	46	50	43	46	68
17	71	52.8	-7 47.9	268	44.4	66	+14 45.5	87	40	4 40	5 13	5 41	17 59	40	3 35	71
18	86	52.9	-7 47.0	283	10.1	67	+14 36.8	87	45	4 29	5 05	5 36	18 09	38	3 23	74
19	101	53.1	46.0	297	35.9	68	27.9	89	50	14	4 55	29	21	34	09	77
20	116	53.2	45.1	312	01.7	68	19.0	89	52	4 07	50	26	27	32	3 02	79
21	131	53.3	44.1	326	27.5	68	10.0	90	54	3 59	45	22	33	31	2 54	81
22	146	53.4	43.2	340	53.5	70	+14 00.8	92	56	50	39	18	40	28	45	84
23	161	53.5	42.2	355	19.5	70	+13 51.6	92	58	39	32	14	48	26	36	85
24	176	53.7	-7 41.3	9	45.5	70	+13 42.4	92	60 S	3 26	4 24	5 09	18 57	23	2 24	89

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 13 ^h 26 ^m 7		Mag: -3.9 PMG: 12 ^h 59 ^m		Mag: +0.8 PMG: 6 ^h 44 ^m		Mag: -2.2 PMG: 4 ^h 52 ^m		Mag: +0.6 PMG: 7 ^h 59 ^m							
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄							
h	o	'	o	'	o	'	o	'	o	'						
0	157	45.8	165	13.0	-4 43.4	258	59.2	-22 44.1	286	45.4	-17 24.0					
1	172	48.3	180	12.6	42.1	274	00.0	44.2	301	47.8	24.0					
2	187	50.8	195	12.2	40.9	289	00.9	44.4	316	50.2	24.1					
3	202	53.2	210	11.8	39.6	304	01.8	44.5	331	52.6	24.1					
4	217	55.7	225	11.4	38.3	319	02.6	44.7	346	54.9	24.1					
5	232	58.2	240	11.0	-4 37.1	334	03.5	-22 44.8	1	57.3	-17 24.1					
6	248	00.6	255	10.6	-4 35.8	349	04.4	-22 45.0	16	59.7	-17 24.1					
7	263	03.1	270	10.3	34.6	4 05.2	45.2	32	32	02.1	24.1					
8	278	05.5	285	09.9	33.3	19 06.1	45.3	47	47	04.5	24.1					
9	293	08.0	300	09.5	32.0	34 07.0	45.5	62	62	06.9	24.1					
10	308	10.5	315	09.1	30.8	49 07.8	45.6	77	77	09.3	24.1					
11	323	12.9	330	08.7	-4 29.5	64 08.7	-22 45.8	92	92	11.7	-17 24.2					
12	338	15.4	345	08.3	-4 28.2	79 09.5	-22 45.9	107	107	14.1	-17 24.2					
13	353	17.9	0 07.9	27.0	94 10.4	46.1	122	122	16.5	24.2	24.2					
14	8	20.3	15 07.5	25.7	109 11.3	46.2	137	137	18.9	24.2	24.2					
15	23	22.8	30 07.1	24.5	124 12.1	46.4	152	152	21.3	24.2	24.2					
16	38	25.3	45 06.7	23.2	139 13.0	46.5	167	167	23.7	24.2	24.2					
17	53	27.7	60 06.3	-4 21.9	154 13.9	-22 46.7	182	182	26.1	-17 24.2	24.2					
18	68	30.2	75 05.9	-4 20.7	169 14.7	-22 46.8	197	197	28.4	-17 24.2	24.2					
19	83	32.7	90 05.5	19.4	184 15.6	47.0	212	212	30.8	24.2	24.2					
20	98	35.1	105 05.1	18.1	199 16.5	47.1	227	227	33.2	24.2	24.2					
21	113	37.6	120 04.7	16.9	214 17.3	47.3	242	242	35.6	24.3	24.3					
22	128	40.0	135 04.3	15.6	229 18.2	47.4	257	257	38.0	24.3	24.3					
23	143	42.5	150 04.0	14.3	244 19.1	47.6	272	272	40.4	24.3	24.3					
24	158	45.0	165 03.6	-4 13.1	259 19.9	-22 47.7	287	287	42.8	-17 24.3	24.3					
Dif	—		-4		+13		+9		+24		0		+23			

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16'1			Edad: 13 ^d 1 PHE { 4 ^h : 60'0 12 ^h : 59'8 20 ^h : 59'7					Civil			Hora		Hora	
	PMG: 12 ^h 12 ^m 3			PMG: ***mm R°: **m					Náutico			R°		R°	
	hG ☉	Dec		hG ☾	Dif	Dec	Dif								
h	o	'	o	o	'	o	'	o	h m	h m	h m	h m m	h m m	h m m	m
0	176	53.7	-7 41.3	9	45.5	+13 42.4	94	60 N	17 27	18 09	18 57	16 41	89	7 06	21
1	191	53.8	40.3	24	11.6	71 33.0	94	58	31	10	56	48	86	6 59	23
2	206	53.9	39.4	38	37.8	72 23.5	95	56	34	11	54	53	84	53	25
3	221	54.0	38.4	53	04.1	73 14.0	95	54	37	12	53	16 59	81	47	28
4	236	54.1	37.5	67	30.4	+13 04.3	97	52	39	13	52	17 03	79	42	29
5	251	54.3	-7 36.5	81	56.8	+12 54.6	97	50	17 42	18 14	18 52	17 07	77	6 37	31
6	266	54.4	-7 35.6	96	23.2	+12 44.9	97	45	17 47	18 17	18 51	17 16	73	6 26	36
7	281	54.5	34.6	110	49.7	75 35.0	99	40	52	19	50	24	69	18	38
8	296	54.6	33.7	125	16.3	76 25.1	99	35	56	21	50	30	67	10	42
9	311	54.8	32.7	139	42.9	76 15.1	100	30	17 59	23	51	36	64	6 04	43
10	326	54.9	31.8	154	09.6	+12 05.0	101	20	18 05	27	53	45	61	5 52	48
11	341	55.0	-7 30.8	168	36.4	+11 54.8	102	10 N	18 10	18 32	18 56	17 54	56	5 42	51
12	356	55.1	-7 29.9	183	03.2	+11 44.6	102	0	18 16	18 36	19 01	18 02	53	5 33	54
13	11	55.2	28.9	197	30.1	79 34.3	103	10 S	21	42	07	10	49	23	58
14	26	55.4	28.0	211	57.0	79 24.0	103	20	27	49	15	18	46	13	61
15	41	55.5	27.0	226	24.1	81 13.6	104	30	33	18 58	26	28	41	5 01	66
16	56	55.6	26.1	240	51.2	+11 03.1	105	35	37	19 03	33	33	39	4 54	68
17	71	55.7	-7 25.1	255	18.3	+10 52.6	105	40	18 42	19 09	19 42	18 39	37	4 46	71
18	86	55.9	-7 24.2	269	45.5	+10 42.0	106	45	18 47	19 17	19 53	18 47	33	4 37	74
19	101	56.0	23.2	284	12.8	83 31.3	107	50	53	27	20 07	55	30	26	78
20	116	56.1	22.3	298	40.2	84 20.6	107	52	56	31	14	18 59	28	21	80
21	131	56.2	21.3	313	07.6	+10 09.8	108	54	18 59	36	22	19 04	25	15	82
22	146	56.4	20.4	327	35.0	+9 59.0	108	56	19 03	42	30	08	24	09	84
23	161	56.5	19.4	342	02.6	86 48.1	109	58	07	48	40	14	21	4 01	87
24	176	56.6	-7 18.5	356	30.2	+9 37.2	109	60 S	19 11	19 55	20 52	19 20	18	3 53	90

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 13 ^h 22 ^m 8		Mag: -3.9 PMG: 13 ^h 00 ^m		Mag: +0.8 PMG: 6 ^h 42 ^m		Mag: -2.2 PMG: 4 ^h 48 ^m		Mag: +0.6 PMG: 7 ^h 55 ^m							
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	o	'	o	'	o	'	o	'	o	'						
0	158	45.0	165	03.6	-4	13.1	259	19.9	-22	287	42.8					
1	173	47.4	180	03.2		11.8	274	20.8		302	45.2					
2	188	49.9	195	02.8		10.6	289	21.6		317	47.6					
3	203	52.4	210	02.4		09.3	304	22.5		332	50.0					
4	218	54.8	225	02.0		08.0	319	23.4		347	52.4					
5	233	57.3	240	01.6	-4	06.8	334	24.2	-22	2	54.8					
6	248	59.8	255	01.2	-4	05.5	349	25.1	-22	17	57.2					
7	264	02.2	270	00.8		04.2	4	26.0		32	59.6					
8	279	04.7	285	00.4		03.0	19	26.8		48	02.0					
9	294	07.1	300	00.0		01.7	34	27.7		63	04.4					
10	309	09.6	314	59.7	-4	00.4	49	28.6		78	06.8					
11	324	12.1	329	59.3	-3	59.2	64	29.4	-22	93	09.2					
12	339	14.5	344	58.9	-3	57.9	79	30.3	-22	108	11.6					
13	354	17.0	359	58.5		56.6	94	31.2		123	14.0					
14	9	19.5	14	58.1		55.4	109	32.0		138	16.4					
15	24	21.9	29	57.7		54.1	124	32.9		153	18.8					
16	39	24.4	44	57.3		52.8	139	33.8		168	21.2					
17	54	26.9	59	56.9	-3	51.6	154	34.6	-22	183	23.6					
18	69	29.3	74	56.5	-3	50.3	169	35.5	-22	198	26.0					
19	84	31.8	89	56.2		49.0	184	36.4		213	28.4					
20	99	34.3	104	55.8		47.7	199	37.2		228	30.8					
21	114	36.7	119	55.4		46.5	214	38.1		243	33.3					
22	129	39.2	134	55.0		45.2	229	39.0		258	35.7					
23	144	41.6	149	54.6		43.9	244	39.8		273	38.1					
24	159	44.1	164	54.2	-3	42.7	259	40.7	-22	288	40.5					
Dif	—		-4		+13		+9		-1		+24		0		+23	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna	
	SD: 16 ^h 1			Edad: 14 ^d 1 PHE { 4 ^h : 59 ^m 5 12 ^h : 59 ^m 3 20 ^h : 59 ^m 1													
	PMG: 12 ^h 12 ^m 1			SD: 16 ^h 2 PMG: 0 ^h 15 ^m R°: 52 ^m													
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	o	'	o	o	'	o	o	'	o	h	m	h	m	h	m	m	
0	176	56.6	-7 18.5	356	30.2	+9 37.2	110	58	60 N	5 26	6 14	6 56	18 10	87	7 27	17	
1	191	56.7	17.5	10	57.9	26.2	110	58	58	28	13	52	14	84	22	20	
2	206	56.9	16.6	25	55.6	15.1	111	56	56	29	12	49	17	81	18	22	
3	221	57.0	15.6	39	53.4	+9 04.1	110	54	54	30	11	46	20	79	15	24	
4	236	57.1	14.7	54	21.2	+8 52.9	112	52	52	31	10	44	22	77	11	26	
5	251	57.2	-7 13.7	68	49.2	+8 41.8	111	50	50	5 32	6 09	6 42	18 24	76	7 08	28	
6	266	57.4	-7 12.7	83	17.1	+8 30.6	112	45	45	5 33	6 07	6 36	18 29	72	7 02	32	
7	281	57.5	11.8	97	45.2	19.3	113	40	40	34	05	32	33	68	6 56	35	
8	296	57.6	10.8	112	13.3	+8 08.0	113	35	35	34	03	28	37	65	52	37	
9	311	57.8	09.9	126	41.5	+7 56.7	113	30	30	33	6 01	25	40	63	47	40	
10	326	57.9	08.9	141	09.7	45.3	114	20	20	31	5 57	19	46	58	40	44	
11	341	58.0	-7 08.0	155	38.0	+7 33.9	114	10 N	10 N	5 28	5 53	6 14	18 50	54	6 33	49	
12	356	58.1	-7 07.0	170	06.3	+7 22.5	114	0	0	5 24	5 48	6 09	18 55	50	6 27	52	
13	11	58.3	06.1	184	34.8	+7 11.0	115	10 S	10 S	18	42	6 04	18 59	47	21	55	
14	26	58.4	05.1	199	03.2	+6 59.5	115	20	20	5 10	36	5 58	19 04	43	14	59	
15	41	58.5	04.2	213	31.8	48.0	115	30	30	4 59	27	52	09	39	07	63	
16	56	58.6	03.2	228	00.3	36.4	116	35	35	52	22	48	12	37	6 02	66	
17	71	58.8	-7 02.2	242	29.0	+6 24.8	116	40	40	4 43	5 16	5 43	19 16	33	5 57	69	
18	86	58.9	-7 01.3	256	57.7	+6 13.2	116	45	45	4 32	5 08	5 38	19 20	30	5 51	73	
19	101	59.0	-7 00.3	271	26.5	+6 01.5	117	50	50	18	4 59	32	25	26	44	76	
20	116	59.2	-6 59.4	285	55.3	+5 49.9	116	52	52	11	54	29	27	25	41	78	
21	131	59.3	58.4	300	24.2	38.2	117	54	54	4 04	49	26	29	23	37	81	
22	146	59.4	57.5	314	53.1	26.5	117	56	56	3 55	44	23	32	21	33	83	
23	161	59.6	56.5	329	22.1	14.8	117	58	58	45	37	19	35	18	28	86	
24	176	59.7	-6 55.5	343	51.1	+5 03.0	118	60 S	60 S	3 33	4 30	5 15	19 38	16	5 23	89	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 13 ^h 18 ^m 9		Mag: -3.9 PMG: 13 ^h 01 ^m			Mag: +0.8 PMG: 6 ^h 41 ^m			Mag: -2.2 PMG: 4 ^h 45 ^m			Mag: +0.6 PMG: 7 ^h 52 ^m		
	hG ♈		hG ♀			hG ♂			hG ♃			hG ♄		
h	o	'	o	o	'	o	o	'	o	o	'	o	o	'
0	159	44.1	164	54.2	-3 42.7	259	40.7	-22 51.2	288	40.5	-17 24.5	241	44.7	-22 21.3
1	174	46.6	179	53.8	41.4	274	41.5	51.3	303	42.9	24.5	256	47.0	21.3
2	189	49.0	194	53.4	40.1	289	42.4	51.5	318	45.3	24.5	271	49.2	21.2
3	204	51.5	209	53.1	38.9	304	43.3	51.6	333	47.7	24.5	286	51.5	21.2
4	219	54.0	224	52.7	37.6	319	44.1	51.7	348	50.1	24.5	301	53.8	21.2
5	234	56.4	239	52.3	-3 36.3	334	45.0	-22 51.9	3	52.5	-17 24.5	316	56.0	-22 21.2
6	249	58.9	254	51.9	-3 35.0	349	45.9	-22 52.0	18	54.9	-17 24.5	331	58.3	-22 21.2
7	265	01.4	269	51.5	33.8	4	46.7	52.2	33	57.3	24.5	347	00.6	21.2
8	280	03.8	284	51.1	32.5	19	47.6	52.3	48	59.7	24.6	2	02.9	21.2
9	295	06.3	299	50.7	31.2	34	48.5	52.4	64	02.1	24.6	17	05.1	21.2
10	310	08.7	314	50.4	30.0	49	49.3	52.6	79	04.5	24.6	32	07.4	21.2
11	325	11.2	329	50.0	-3 28.7	64	50.2	-22 52.7	94	06.9	-17 24.6	47	09.7	-22 21.2
12	340	13.7	344	49.6	-3 27.4	79	51.1	-22 52.9	109	09.4	-17 24.6	62	11.9	-22 21.1
13	355	16.1	359	49.2	26.2	94	51.9	53.0	124	11.8	24.6	77	14.2	21.1
14	10	18.6	14	48.8	24.9	109	52.8	53.1	139	14.2	24.6	92	16.5	21.1
15	25	21.1	29	48.4	23.6	124	53.7	53.3	154	16.6	24.6	107	18.8	21.1
16	40	23.5	44	48.0	22.3	139	54.5	53.4	169	19.0	24.6	122	21.0	21.1
17	55	26.0	59	47.7	-3 21.1	154	55.4	-22 53.5	184	21.4	-17 24.6	137	23.3	-22 21.1
18	70	28.5	74	47.3	-3 19.8	169	56.3	-22 53.7	199	23.8	-17 24.6	152	25.6	-22 21.1
19	85	30.9	89	46.9	18.5	184	57.1	53.8	214	26.2	24.6	167	27.8	21.1
20	100	33.4	104	46.5	17.2	199	58.0	54.0	229	28.6	24.6	182	30.1	21.1
21	115	35.9	119	46.1	16.0	214	58.9	54.1	244	31.1	24.6	197	32.4	21.1
22	130	38.3	134	45.7	14.7	229	59.7	54.2	259	33.5	24.6	212	34.7	21.0
23	145	40.8	149	45.4	13.4	245	00.6	54.4	274	35.9	24.6	227	36.9	21.0
24	160	43.2	164	45.0	-3 12.2	260	01.5	-22 54.5	289	38.3	-17 24.7	242	39.2	-22 21.0

Dif	—	-4	+13	+9	-1	+24	0	+23

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16°1 PMG: 12 ^h 11 ^m 9			Edad: 15 ^d 1 PHE { 4 ^h : 58'9 12 ^h : 58'6 20 ^h : 58'3 SD: 16'0 PMG: 1 ^h 07 ^m R°: 50 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Civil	Náutico	Hora	R°	Hora	R°				
h	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m			
0	176	59.7	-6	55.5	343	51.1	+5 03.0	60 N	17 32	18 14	19 02	19 37	84	7 44	15			
1	191	59.8		54.6	358	20.2 ¹⁰¹	+4 51.3 ¹¹⁷	58	35	15	19 00	38	81	42	18			
2	206	59.9		53.6	12	49.4 ¹⁰²	39.5 ¹¹⁸	56	38	15	18 59	38	79	40	21			
3	222	00.1		52.7	27	18.6 ¹⁰²	27.7 ¹¹⁸	54	41	16	57	39	77	39	22			
4	237	00.2		51.7	41	47.8 ¹⁰²	15.9 ¹¹⁸	52	43	17	56	39	75	37	25			
5	252	00.3	-6	50.8	56	17.1 ¹⁰³	+4 04.1 ¹¹⁸	50	17 45	18 18	18 55	19 40	73	7 36	26			
6	267	00.5	-6	49.8	70	46.5 ¹⁰⁴	+3 52.2 ¹¹⁹	45	17 50	18 19	18 53	19 41	69	7 34	29			
7	282	00.6		48.8	85	15.9 ¹⁰⁴	40.4 ¹¹⁸	40	54	21	52	41	66	31	33			
8	297	00.7		47.9	99	45.4 ¹⁰⁵	28.6 ¹¹⁸	35	17 57	23	52	42	63	29	36			
9	312	00.9		46.9	114	14.9 ¹⁰⁵	16.7 ¹¹⁹	30	18 00	24	52	43	60	27	39			
10	327	01.0		46.0	128	44.5 ¹⁰⁶	+3 04.9 ¹¹⁸	20	06	28	53	44	56	24	43			
11	342	01.1	-6	45.0	143	14.1 ¹⁰⁶	+2 53.0 ¹¹⁹	10 N	18 11	18 32	18 56	19 44	53	7 22	46			
12	357	01.3	-6	44.1	157	43.7 ¹⁰⁶	+2 41.2 ¹¹⁸	0	18 15	18 36	19 00	19 45	49	7 19	50			
13	12	01.4		43.1	172	13.4 ¹⁰⁷	29.3 ¹¹⁹	10 S	20	41	06	46	45	16	54			
14	27	01.5		42.1	186	43.2 ¹⁰⁸	17.4 ¹¹⁹	20	25	47	13	47	42	13	58			
15	42	01.7		41.2	201	13.0 ¹⁰⁸	+2 05.6 ¹¹⁸	30	31	18 55	24	48	37	10	62			
16	57	01.8		40.2	215	42.9 ¹⁰⁹	+1 53.7 ¹¹⁹	35	35	19 00	31	49	35	08	64			
17	72	01.9	-6	39.3	230	12.8 ¹⁰⁹	+1 41.9 ¹¹⁸	40	18 39	19 06	19 39	19 49	33	7 06	67			
18	87	02.1	-6	38.3	244	42.7 ¹⁰⁹	+1 30.0 ¹¹⁹	45	18 43	19 13	19 49	19 50	29	7 04	70			
19	102	02.2		37.3	259	12.7 ¹¹⁰	18.2 ¹¹⁸	50	49	22	20 02	51	26	7 00	75			
20	117	02.3		36.4	273	42.7 ¹¹⁰	+1 06.4 ¹¹⁸	52	52	26	09	52	23	6 59	76			
21	132	02.5		35.4	288	12.8 ¹¹¹	+0 54.5 ¹¹⁹	54	54	31	16	52	22	58	78			
22	147	02.6		34.5	302	42.9 ¹¹¹	42.7 ¹¹⁸	56	18 58	36	24	53	19	56	80			
23	162	02.7		33.5	317	13.0 ¹¹¹	30.9 ¹¹⁸	58	19 01	42	34	53	18	54	83			
24	177	02.9	-6	32.5	331	43.2 ¹¹²	+0 19.1 ¹¹⁸	60 S	19 05	19 49	20 45	19 54	15	6 52	85			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 13 ^h 14 ^m 9		Mag: -3.9 PMG: 13 ^h 01 ^m			Mag: +0.8 PMG: 6 ^h 40 ^m			Mag: -2.2 PMG: 4 ^h 41 ^m			Mag: +0.6 PMG: 7 ^h 48 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'		
0	160	43.2	164	45.0	-3	12.2	260	01.5	-22	54.5	289	38.3	-17	24.7	242	39.2	-22	21.0
1	175	45.7	179	44.6		10.9	275	02.3		54.6	304	40.7		24.7	257	41.5		21.0
2	190	48.2	194	44.2		09.6	290	03.2		54.8	319	43.1		24.7	272	43.8		21.0
3	205	50.6	209	43.8		08.3	305	04.1		54.9	334	45.5		24.7	287	46.0		21.0
4	220	53.1	224	43.5		07.1	320	04.9		55.0	349	47.9		24.7	302	48.3		21.0
5	235	55.6	239	43.1	-3	05.8	335	05.8	-22	55.2	4	50.4	-17	24.7	317	50.6	-22	21.0
6	250	58.0	254	42.7	-3	04.5	350	06.7	-22	55.3	19	52.8	-17	24.7	332	52.9	-22	21.0
7	266	00.5	269	42.3		03.2	5	07.5		55.4	34	55.2		24.7	347	55.1		21.0
8	281	03.0	284	41.9		02.0	20	08.4		55.6	49	57.6		24.7	2	57.4		20.9
9	296	05.4	299	41.5	-3	00.7	35	09.3		55.7	65	00.0		24.7	17	59.7		20.9
10	311	07.9	314	41.2	-2	59.4	50	10.1		55.8	80	02.4		24.7	33	02.0		20.9
11	326	10.3	329	40.8	-2	58.1	65	11.0	-22	56.0	95	04.9	-17	24.7	48	04.2	-22	20.9
12	341	12.8	344	40.4	-2	56.9	80	11.9	-22	56.1	110	07.3	-17	24.7	63	06.5	-22	20.9
13	356	15.3	359	40.0		55.6	95	12.7		56.2	125	09.7		24.7	78	08.8		20.9
14	11	17.7	14	39.6		54.3	110	13.6		56.4	140	12.1		24.7	93	11.1		20.9
15	26	20.2	29	39.3		53.0	125	14.5		56.5	155	14.5		24.7	108	13.3		20.9
16	41	22.7	44	38.9		51.8	140	15.4		56.6	170	16.9		24.7	123	15.6		20.9
17	56	25.1	59	38.5	-2	50.5	155	16.2	-22	56.8	185	19.4	-17	24.7	138	17.9	-22	20.9
18	71	27.6	74	38.1	-2	49.2	170	17.1	-22	56.9	200	21.8	-17	24.7	153	20.2	-22	20.8
19	86	30.1	89	37.7		47.9	185	18.0		57.0	215	24.2		24.7	168	22.4		20.8
20	101	32.5	104	37.4		46.7	200	18.8		57.2	230	26.6		24.8	183	24.7		20.8
21	116	35.0	119	37.0		45.4	215	19.7		57.3	245	29.0		24.8	198	27.0		20.8
22	131	37.5	134	36.6		44.1	230	20.6		57.4	260	31.5		24.8	213	29.3		20.8
23	146	39.9	149	36.2		42.8	245	21.4		57.6	275	33.9		24.8	228	31.5		20.8
24	161	42.4	164	35.8	-2	41.5	260	22.3	-22	57.7	290	36.3	-17	24.8	243	33.8	-22	20.8
Dif	—		-4		+13		+9		-1		+24		0		+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 1 PHE { 4 ^h : 58 ^m /12 ^h : 57 ^m /820 ^h : 57 ^m /5										
	PMG: 12 ^h 11 ^m 7			SD: 15 ^h 7 PMG: 1 ^h 57 ^m R°: 48 ^m										
	hG ☉		Dec	hG ☾		Dif		Náutico	Civil		Hora	R°	Hora	R°
h	o	'	o	o	'	o	o	h	m	h	m	h	m	m
0	177	02.9	-6 32.5	331	43.2	+0 19.1	60 N	5 20	6 08	6 50	21 01	82	7 59	15
1	192	03.0	31.6	346	13.5 ¹¹³	+0 07.3 ¹¹⁸	58	22	08	47	20 59	79	8 00	18
2	207	03.1	30.6	0	43.8 ¹¹³	-0 04.5 ¹¹⁸	56	24	07	44	57	76	01	19
3	222	03.3	29.6	15	14.1 ¹¹³	16.2 ¹¹⁷	54	26	06	42	56	74	01	22
4	237	03.4	28.7	29	44.4 ¹¹³	28.0 ¹¹⁸	52	27	06	39	54	72	02	23
5	252	03.6	-6 27.7	44	14.8 ¹¹⁴	-0 39.7 ¹¹⁷	50	5 28	6 05	6 37	20 53	70	8 02	26
6	267	03.7	-6 26.8	58	45.3 ¹¹⁵	-0 51.4 ¹¹⁷	45	5 30	6 04	6 33	20 50	66	8 03	29
7	282	03.8	25.8	73	15.7 ¹¹⁴	-1 03.1 ¹¹⁷	40	31	02	29	47	63	04	32
8	297	04.0	24.8	87	46.2 ¹¹⁵	14.7 ¹¹⁶	35	31	6 00	26	45	61	05	35
9	312	04.1	23.9	102	16.8 ¹¹⁶	26.4 ¹¹⁷	30	31	5 59	23	43	58	06	37
10	327	04.2	22.9	116	47.3 ¹¹⁵	38.0 ¹¹⁶	20	30	56	18	40	54	07	41
11	342	04.4	-6 22.0	131	17.9 ¹¹⁶	-1 49.6 ¹¹⁶	10 N	5 27	5 52	6 13	20 37	51	8 08	44
12	357	04.5	-6 21.0	145	48.6 ¹¹⁷	-2 01.2 ¹¹⁶	0	5 23	5 48	6 08	20 34	48	8 09	48
13	12	04.7	20.0	160	19.3 ¹¹⁷	12.7 ¹¹⁵	10 S	18	43	6 04	31	45	10	51
14	27	04.8	19.1	174	50.0 ¹¹⁷	24.3 ¹¹⁶	20	11	37	5 59	29	40	11	55
15	42	04.9	18.1	189	20.7 ¹¹⁷	35.8 ¹¹⁵	30	5 00	29	53	25	37	12	59
16	57	05.1	17.1	203	51.5 ¹¹⁸	47.2 ¹¹⁴	35	4 54	24	49	24	34	12	62
17	72	05.2	-6 16.2	218	22.3 ¹¹⁸	-2 58.7 ¹¹⁵	40	4 45	5 18	5 46	20 22	32	8 13	65
18	87	05.3	-6 15.2	232	53.1 ¹¹⁸	-3 10.1 ¹¹⁴	45	4 35	5 11	5 41	20 19	29	8 14	68
19	102	05.5	14.2	247	24.0 ¹¹⁹	21.5 ¹¹⁴	50	22	5 02	35	17	25	15	71
20	117	05.6	13.3	261	54.8 ¹¹⁸	32.8 ¹¹³	52	16	4 58	33	15	24	15	74
21	132	05.8	12.3	276	25.8 ¹²⁰	44.2 ¹¹⁴	54	09	53	30	14	22	16	75
22	147	05.9	11.4	290	56.7 ¹¹⁹	-3 55.4 ¹¹²	56	4 00	48	27	12	20	16	78
23	162	06.0	10.4	305	27.7 ¹²⁰	-4 06.7 ¹¹³	58	3 51	42	24	11	17	17	80
24	177	06.2	-6 09.4	319	58.7 ¹²⁰	-4 17.9 ¹¹²	60 S	3 40	4 36	5 20	20 09	15	8 17	83

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 13 ^h 11 ^m 0		Mag: -3.9 PMG: 13 ^h 02 ^m		Mag: +0.8 PMG: 6 ^h 38 ^m		Mag: -2.2 PMG: 4 ^h 37 ^m		Mag: +0.6 PMG: 7 ^h 45 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	o	'	o	'	o	'	o	'	o	'
0	161	42.4	164	35.8	260	22.3	290	36.3	243	33.8
1	176	44.8	179	35.5	275	23.2	305	38.7	258	36.1
2	191	47.3	194	35.1	290	24.0	320	41.1	273	38.4
3	206	49.8	209	34.7	305	24.9	335	43.6	288	40.7
4	221	52.2	224	34.3	320	25.8	350	46.0	303	42.9
5	236	54.7	239	34.0	335	26.6	5 48.4	-17 24.8	318	45.2
6	251	57.2	254	33.6	350	27.5	20 50.8	-17 24.8	333	47.5
7	266	59.6	269	33.2	5 28.4	58.6	35 53.3	24.8	348	49.8
8	282	02.1	284	32.8	20 29.2	58.7	50 55.7	24.8	3 52.0	20.7
9	297	04.6	299	32.4	35 30.1	58.8	65 58.1	24.8	18 54.3	20.7
10	312	07.0	314	32.1	50 31.0	59.0	81 00.5	24.8	33 56.6	20.7
11	327	09.5	329	31.7	65 31.8	-22 59.1	96 03.0	-17 24.8	48 58.9	-22 20.7
12	342	12.0	344	31.3	80 32.7	-22 59.2	111 05.4	-17 24.8	64 01.2	-22 20.7
13	357	14.4	359	30.9	95 33.6	59.4	126 07.8	24.8	79 03.4	20.7
14	12	16.9	14 30.6	23.7	110 34.5	59.5	141 10.2	24.8	94 05.7	20.6
15	27	19.3	29 30.2	22.4	125 35.3	59.6	156 12.7	24.8	109 08.0	20.6
16	42	21.8	44 29.8	21.1	140 36.2	59.7	171 15.1	24.8	124 10.3	20.6
17	57	24.3	59 29.4	-2 19.8	155 37.1	-22 59.9	186 17.5	-17 24.8	139 12.6	-22 20.6
18	72	26.7	74 29.1	-2 18.5	170 37.9	-23 00.0	201 19.9	-17 24.8	154 14.8	-22 20.6
19	87	29.2	89 28.7	17.3	185 38.8	-23 00.1	216 22.4	24.8	169 17.1	20.6
20	102	31.7	104 28.3	16.0	200 39.7	00.2	231 24.8	24.8	184 19.4	20.6
21	117	34.1	119 27.9	14.7	215 40.5	00.4	246 27.2	24.8	199 21.7	20.6
22	132	36.6	134 27.5	13.4	230 41.4	00.5	261 29.6	24.8	214 24.0	20.6
23	147	39.1	149 27.2	12.1	245 42.3	00.6	276 32.1	24.8	229 26.2	20.6
24	162	41.5	164 26.8	-2 10.9	260 43.1	-23 00.7	291 34.5	-17 24.8	244 28.5	-22 20.5
Dif	—		-4 +13		+9 -1		+24 0		+23 0	

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1			Edad: 17 ^d 1 PHE { 4 ^h : 57 ^m /2 12 ^h : 57 ^m /0 20 ^h : 56 ^m /7										
	PMG: 12 ^h 11 ^m 5			SD: 15 ^h 5 PMG: 2 ^h 45 ^m R°: 48 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	o	'	o	o	'	o	'	o	h m	h m	h m	h m m	h m m	h m m
0	177	06.2	-6 09.4	319	58.7	-4 17.9		60 N	17 37	18 19	19 07	22 23	78	8 14 16
1	192	06.3	08.5	334	29.7 ¹²⁰	29.1 ¹¹²		58	40	19	05	18 75		18 18
2	207	06.5	07.5	349	00.7 ¹²⁰	40.2 ¹¹¹		56	42	20	03	13 74		20 21
3	222	06.6	06.5	3	31.8 ¹²¹	-4 51.3 ¹¹¹		54	45	20	19 01	10 71		23 23
4	237	06.7	05.6	18	02.9 ¹²¹	-5 02.4 ¹¹¹		52	47	20	18 59	06 69		25 25
5	252	06.9	-6 04.6	32	34.0 ¹²¹	-5 13.4 ¹¹⁰		50	17 49	18 21	18 58	22 03	68	8 28 26
6	267	07.0	-6 03.6	47	05.1 ¹²¹	-5 24.4 ¹¹⁰		45	17 53	18 22	18 56	21 56	64	8 32 30
7	282	07.2	02.7	61	36.3 ¹²²	35.4 ¹¹⁰		40	56	23	54	50 62		36 33
8	297	07.3	01.7	76	07.5 ¹²²	46.3 ¹⁰⁹		35	17 59	24	54	46 59		40 34
9	312	07.4	-6 00.7	90	38.7 ¹²²	-5 57.2 ¹⁰⁹		30	18 02	26	53	41 57		43 37
10	327	07.6	-5 59.8	105	09.9 ¹²²	-6 08.0 ¹⁰⁸		20	06	28	54	34 53		48 41
11	342	07.7	-5 58.8	119	41.1 ¹²²	-6 18.8 ¹⁰⁸		10 N	18 11	18 32	18 56	21 28	50	8 52 45
12	357	07.9	-5 57.8	134	12.4 ¹²³	-6 29.5 ¹⁰⁷		0	18 15	18 36	19 00	21 22	47	8 57 47
13	12	08.0	56.9	148	43.7 ¹²³	40.2 ¹⁰⁷		10 S	19	40	05	16 44		9 01 51
14	27	08.2	55.9	163	15.0 ¹²³	-6 50.8 ¹⁰⁶		20	24	46	12	09 41		06 54
15	42	08.3	54.9	177	46.3 ¹²³	-7 01.4 ¹⁰⁶		30	29	53	21	21 02	38	11 58
16	57	08.4	54.0	192	17.6 ¹²³	12.0 ¹⁰⁶		35	32	18 58	28	20 58	35	14 60
17	72	08.6	-5 53.0	206	49.0 ¹²⁴	-7 22.5 ¹⁰⁵		40	18 36	19 03	19 35	20 54	32	9 18 62
18	87	08.7	-5 52.0	221	20.3 ¹²³	-7 32.9 ¹⁰⁴		45	18 40	19 10	19 45	20 48	30	9 22 65
19	102	08.9	51.1	235	51.7 ¹²⁴	43.3 ¹⁰⁴		50	45	18	19 58	42 27		26 70
20	117	09.0	50.1	250	23.1 ¹²⁴	-7 53.7 ¹⁰⁴		52	47	22	20 04	39 25		29 70
21	132	09.2	49.1	264	54.5 ¹²⁴	-8 04.0 ¹⁰³		54	50	26	10	36 23		31 73
22	147	09.3	48.2	279	25.9 ¹²⁴	14.2 ¹⁰²		56	52	31	18	32 22		34 75
23	162	09.4	47.2	293	57.3 ¹²⁴	24.4 ¹⁰²		58	56	36	27	28 20		37 77
24	177	09.6	-5 46.2	308	28.8 ¹²⁵	-8 34.5 ¹⁰¹		60 S	18 59	19 43	20 37	20 24	17	9 40 80

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 13 ^h 07 ^m 1		Mag: -3.9 PMG: 13 ^h 03 ^m		Mag: +0.7 PMG: 6 ^h 37 ^m		Mag: -2.2 PMG: 4 ^h 33 ^m		Mag: +0.6 PMG: 7 ^h 41 ^m		
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec		
h	o	'	o	o	'	o	'	o	'	o	'
0	162	41.5	164 26.8	-2 10.9	260 43.1	-23 00.7	291 34.5	-17 24.8	244 28.5	-22 20.5	
1	177	44.0	179 26.4	09.6	275 44.0	00.9	306 36.9	24.8	259 30.8	20.5	
2	192	46.4	194 26.0	08.3	290 44.9	01.0	321 39.4	24.8	274 33.1	20.5	
3	207	48.9	209 25.7	07.0	305 45.8	01.1	336 41.8	24.8	289 35.4	20.5	
4	222	51.4	224 25.3	05.7	320 46.6	01.2	351 44.2	24.8	304 37.6	20.5	
5	237	53.8	239 24.9	-2 04.5	335 47.5	-23 01.3	6 46.7	-17 24.8	319 39.9	-22 20.5	
6	252	56.3	254 24.5	-2 03.2	350 48.4	-23 01.5	21 49.1	-17 24.8	334 42.2	-22 20.5	
7	267	58.8	269 24.2	01.9	5 49.2	01.6	36 51.5	24.9	349 44.5	20.5	
8	283	01.2	284 23.8	-2 00.6	20 50.1	01.7	51 54.0	24.9	4 46.8	20.5	
9	298	03.7	299 23.4	-1 59.3	35 51.0	01.8	66 56.4	24.9	19 49.1	20.5	
10	313	06.2	314 23.1	58.1	50 51.8	02.0	81 58.8	24.9	34 51.3	20.4	
11	328	08.6	329 22.7	-1 56.8	65 52.7	-23 02.1	97 01.2	-17 24.9	49 53.6	-22 20.4	
12	343	11.1	344 22.3	-1 55.5	80 53.6	-23 02.2	112 03.7	-17 24.9	64 55.9	-22 20.4	
13	358	13.6	359 21.9	54.2	95 54.5	02.3	127 06.1	24.9	79 58.2	20.4	
14	13	16.0	14 21.6	52.9	110 55.3	02.4	142 08.5	24.9	95 00.5	20.4	
15	28	18.5	29 21.2	51.7	125 56.2	02.6	157 11.0	24.9	110 02.8	20.4	
16	43	20.9	44 20.8	50.4	140 57.1	02.7	172 13.4	24.9	125 05.0	20.4	
17	58	23.4	59 20.4	-1 49.1	155 57.9	-23 02.8	187 15.8	-17 24.9	140 07.3	-22 20.4	
18	73	25.9	74 20.1	-1 47.8	170 58.8	-23 02.9	202 18.3	-17 24.9	155 09.6	-22 20.4	
19	88	28.3	89 19.7	46.5	185 59.7	03.0	217 20.7	24.9	170 11.9	20.4	
20	103	30.8	104 19.3	45.2	201 00.6	03.2	232 23.2	24.9	185 14.2	20.3	
21	118	33.3	119 18.9	44.0	216 01.4	03.3	247 25.6	24.9	200 16.5	20.3	
22	133	35.7	134 18.6	42.7	231 02.3	03.4	262 28.0	24.9	215 18.7	20.3	
23	148	38.2	149 18.2	41.4	246 03.2	03.5	277 30.5	24.9	230 21.0	20.3	
24	163	40.7	164 17.8	-1 40.1	261 04.0	-23 03.6	292 32.9	-17 24.9	245 23.3	-22 20.3	
Dif	—	—	-4 +13	—	+9	-1	+24	0	+23	0	—

UT	SOL		LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'1		Edad: 18 ^d 1 PHE { 4 ^h : 56'4 12 ^h : 56'2 20 ^h : 55'9												
	PMG: 12 ^h 11 ^m 2		SD: 15'3 PMG: 3 ^h 33 ^m R°: 47 ^m												
	hG ☉	Dec	hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m
0	177	09.6	-5	46.2	308	28.8	-8 34.5	5 14	6 03	6 44	23 41	74	8 30	19	
1	192	09.7		45.3	323	00.2 ¹²⁴	44.6 ¹⁰¹	17	02	41	33	72	36	21	
2	207	09.9		44.3	337	31.7 ¹²⁵	-8 54.7 ¹⁰¹	19	02	39	27	69	41	23	
3	222	10.0		43.3	352	03.1 ¹²⁴	-9 04.6 ⁹⁹	21	02	37	21	68	46	24	
4	237	10.2		42.4	6	34.6 ¹²⁵	14.6 ¹⁰⁰	22	01	35	15	67	50	26	
5	252	10.3	-5	41.4	21	06.1 ¹²⁵	-9 24.4 ⁹⁸	5 24	6 01	6 33	23 11	64	8 54	27	
6	267	10.5	-5	40.4	35	37.6 ¹²⁵	-9 34.2 ⁹⁸	5 26	6 00	6 29	23 00	62	9 02	31	
7	282	10.6		39.5	50	09.1 ¹²⁵	44.0 ⁹⁷	28	5 59	26	22 52	59	09	33	
8	297	10.7		38.5	64	40.6 ¹²⁵	-9 53.7 ⁹⁸	29	58	23	45	57	14	36	
9	312	10.9		37.5	79	12.2 ¹²⁶	-10 03.3 ⁹⁶	29	57	21	38	55	20	38	
10	327	11.0		36.5	93	43.7 ¹²⁵	12.9 ⁹⁶	28	54	16	27	52	29	41	
11	342	11.2	-5	35.6	108	15.2 ¹²⁵	-10 22.4 ⁹⁵	5 26	5 51	6 12	22 18	49	9 37	44	
12	357	11.3	-5	34.6	122	46.8 ¹²⁶	-10 31.9 ⁹⁵	5 23	5 47	6 08	22 09	47	9 44	47	
13	12	11.5		33.6	137	18.3 ¹²⁵	41.2 ⁹³	18	43	6 04	22 00	44	9 52	49	
14	27	11.6		32.7	151	49.9 ¹²⁶	50.6 ⁹⁴	11	37	5 59	21 50	42	10 00	52	
15	42	11.8		31.7	166	21.5 ¹²⁶	-10 59.8 ⁹²	5 02	30	54	40	38	09	56	
16	57	11.9		30.7	180	53.0 ¹²⁵	-11 09.1 ⁹³	4 55	26	51	33	37	14	58	
17	72	12.1	-5	29.8	195	24.6 ¹²⁶	-11 18.2 ⁹¹	4 48	5 20	5 48	21 26	35	10 20	60	
18	87	12.2	-5	28.8	209	56.2 ¹²⁶	-11 27.3 ⁹¹	4 38	5 14	5 44	21 18	33	10 27	63	
19	102	12.4		27.8	224	27.7 ¹²⁵	36.3 ⁹⁰	26	06	39	09	29	36	66	
20	117	12.5		26.8	238	59.3 ¹²⁶	45.2 ⁸⁹	20	5 02	37	21 04	28	39	68	
21	132	12.6		25.9	253	30.9 ¹²⁶	-11 54.1 ⁸⁹	13	4 58	34	20 59	26	44	69	
22	147	12.8		24.9	268	02.5 ¹²⁶	-12 02.9 ⁸⁸	4 06	53	31	54	24	49	71	
23	162	12.9		23.9	282	34.1 ¹²⁶	11.7 ⁸⁸	3 57	47	28	48	22	10 54	74	
24	177	13.1	-5	23.0	297	05.7 ¹²⁶	-12 20.4 ⁸⁷	3 46	4 41	5 25	20 41	20	11 00	76	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 13 ^h 03 ^m 1		Mag: -3.9 PMG: 13 ^h 03 ^m		Mag: +0.7 PMG: 6 ^h 35 ^m		Mag: -2.2 PMG: 4 ^h 29 ^m		Mag: +0.6 PMG: 7 ^h 37 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	o	'	o	'	o	'	o	'	o	'					
0	163	40.7	164	17.8	-1	40.1	261	04.0	-23	03.6					
1	178	43.1	179	17.5		38.8	276	04.9		03.7					
2	193	45.6	194	17.1		37.6	291	05.8		03.9					
3	208	48.0	209	16.7		36.3	306	06.7		04.0					
4	223	50.5	224	16.3		35.0	321	07.5		04.1					
5	238	53.0	239	16.0	-1	33.7	336	08.4	-23	04.2					
6	253	55.4	254	15.6	-1	32.4	351	09.3	-23	04.3					
7	268	57.9	269	15.2		31.1	6	10.1		04.4					
8	284	00.4	284	14.8		29.9	21	11.0		04.6					
9	299	02.8	299	14.5		28.6	36	11.9		04.7					
10	314	05.3	314	14.1		27.3	51	12.8		04.8					
11	329	07.8	329	13.7	-1	26.0	66	13.6	-23	04.9					
12	344	10.2	344	13.4	-1	24.7	81	14.5	-23	05.0					
13	359	12.7	359	13.0		23.4	96	15.4		05.1					
14	14	15.2	14	12.6		22.2	111	16.2		05.3					
15	29	17.6	29	12.3		20.9	126	17.1		05.4					
16	44	20.1	44	11.9		19.6	141	18.0		05.5					
17	59	22.5	59	11.5	-1	18.3	156	18.9	-23	05.6					
18	74	25.0	74	11.1	-1	17.0	171	19.7	-23	05.7					
19	89	27.5	89	10.8		15.7	186	20.6		05.8					
20	104	29.9	104	10.4		14.5	201	21.5		05.9					
21	119	32.4	119	10.0		13.2	216	22.4		06.0					
22	134	34.9	134	09.7		11.9	231	23.2		06.2					
23	149	37.3	149	09.3		10.6	246	24.1		06.3					
24	164	39.8	164	08.9	-1	09.3	261	25.0	-23	06.4					
Dif	—		-4	+13		+9	-1		+24	0					
										+23					

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:1		Edad: 19 ^d 1 PHE { 4 ^h : 55/7 12 ^h : 55/5 20 ^h : 55/3 R°: 47 ^m												
	PMG: 12 ^h 11 ^m 0		SD: 15:1 PMG: 4 ^h 20 ^m												
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°	
h	o	'	o	'	o	'	o	h m	h m	h m	h m	m	h m	m	
0	177	13.1	-5 23.0	297	05.7	-12 20.4	86	60 N	17 42	18 24	19 12	*** **	8 49	21	
1	192	13.2	22.0	311	37.2 ¹²⁵	29.0	86	58	45	24	09	*** **	8 57	24	
2	207	13.4	21.0	326	08.8 ¹²⁶	37.5	85	56	47	24	07	*** **	9 04	26	
3	222	13.5	20.0	340	40.4 ¹²⁶	46.0	85	54	48	24	05	*** **	10	28	
4	237	13.7	19.1	355	12.0 ¹²⁶	-12 54.4	84	52	50	24	03	*** **	16	30	
5	252	13.8	-5 18.1	9	43.6 ¹²⁶	-13 02.8	84	50	17 52	18 24	19 02	*** **	9 21	31	
6	267	14.0	-5 17.1	24	15.2 ¹²⁶	-13 11.0	82	45	17 55	18 25	18 59	*** **	9 33	34	
7	282	14.1	16.2	38	46.8 ¹²⁶	19.2	82	40	17 58	25	57	23 51	57	42 36	
8	297	14.3	15.2	53	18.3 ¹²⁵	27.4	82	35	18 01	26	55	42 55		50 38	
9	312	14.4	14.2	67	49.9 ¹²⁶	35.4	80	30	03	27	55	33 54		9 58 39	
10	327	14.6	13.2	82	21.5 ¹²⁶	43.4	80	20	07	29	55	19 52		10 10 42	
11	342	14.7	-5 12.3	96	53.1 ¹²⁶	-13 51.3	79	10 N	18 11	18 32	18 56	23 07	49	10 21 45	
12	357	14.9	-5 11.3	111	24.7 ¹²⁶	-13 59.2	79	0	18 14	18 35	18 59	22 56	47	10 31 47	
13	12	15.0	10.3	125	56.2 ¹²⁵	-14 06.9	77	10 S	18	39	19 04	44 45		41 50	
14	27	15.2	09.4	140	27.8 ¹²⁶	14.6	77	20	22	44	10	32 43		10 52 52	
15	42	15.3	08.4	154	59.4 ¹²⁶	22.3	77	30	27	51	19	18 41		11 05 54	
16	57	15.5	07.4	169	30.9 ¹²⁵	29.8	75	35	29	18 55	25	10 39		12 56	
17	72	15.6	-5 06.4	184	02.5 ¹²⁶	-14 37.3	75	40	18 32	19 00	19 32	22 01	38	11 20 59	
18	87	15.8	-5 05.5	198	34.0 ¹²⁵	-14 44.7	74	45	18 36	19 06	19 41	21 51	35	11 30 61	
19	102	15.9	04.5	213	05.6 ¹²⁶	52.0	73	50	41	13	53	38 33		42 63	
20	117	16.1	03.5	227	37.1 ¹²⁵	-14 59.3	73	52	43	17	19 58	32 32		47 65	
21	132	16.2	02.5	242	08.6 ¹²⁵	-15 06.4	71	54	45	21	20 05	25 31		11 53 67	
22	147	16.4	01.6	256	40.2 ¹²⁶	13.5	71	56	47	25	12	18 29		12 00 68	
23	162	16.5	-5 00.6	271	11.7 ¹²⁵	20.5	70	58	50	30	20	10 27		08 70	
24	177	16.7	-4 59.6	285	43.2 ¹²⁵	-15 27.5	70	60 S	18 53	19 36	20 30	21 01	24	12 16 73	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 12 ^h 59 ^m 2		Mag: -3.9 PMG: 13 ^h 04 ^m			Mag: +0.7 PMG: 6 ^h 34 ^m			Mag: -2.3 PMG: 4 ^h 25 ^m			Mag: +0.6 PMG: 7 ^h 34 ^m			
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	
0	164	39.8	164 08.9	-1 09.3	261 25.0	-23 06.4	293 31.5	-17 24.8	246 18.2	-22 20.1					
1	179	42.3	179 08.5	08.0	276 25.8	06.5	308 33.9	24.8	261 20.5	20.1					
2	194	44.7	194 08.2	06.8	291 26.7	06.6	323 36.4	24.8	276 22.7	20.1					
3	209	47.2	209 07.8	05.5	306 27.6	06.7	338 38.8	24.8	291 25.0	20.0					
4	224	49.7	224 07.4	04.2	321 28.5	06.8	353 41.3	24.8	306 27.3	20.0					
5	239	52.1	239 07.1	-1 02.9	336 29.3	-23 06.9	8 43.7	-17 24.8	321 29.6	-22 20.0					
6	254	54.6	254 06.7	-1 01.6	351 30.2	-23 07.1	23 46.2	-17 24.8	336 31.9	-22 20.0					
7	269	57.0	269 06.3	-1 00.3	6 31.1	07.2	38 48.6	24.8	351 34.2	20.0					
8	284	59.5	284 06.0	-0 59.0	21 32.0	07.3	53 51.1	24.8	6 36.5	20.0					
9	300	02.0	299 05.6	57.8	36 32.8	07.4	68 53.5	24.8	21 38.8	20.0					
10	315	04.4	314 05.2	56.5	51 33.7	07.5	83 55.9	24.8	36 41.1	20.0					
11	330	06.9	329 04.9	-0 55.2	66 34.6	-23 07.6	98 58.4	-17 24.8	51 43.3	-22 20.0					
12	345	09.4	344 04.5	-0 53.9	81 35.5	-23 07.7	114 00.8	-17 24.8	66 45.6	-22 20.0					
13	0	11.8	359 04.1	52.6	96 36.3	07.8	129 03.3	24.8	81 47.9	19.9					
14	15	14.3	14 03.7	51.3	111 37.2	07.9	144 05.7	24.8	96 50.2	19.9					
15	30	16.8	29 03.4	50.0	126 38.1	08.0	159 08.2	24.8	111 52.5	19.9					
16	45	19.2	44 03.0	48.8	141 38.9	08.1	174 10.6	24.8	126 54.8	19.9					
17	60	21.7	59 02.6	-0 47.5	156 39.8	-23 08.3	189 13.1	-17 24.8	141 57.1	-22 19.9					
18	75	24.1	74 02.3	-0 46.2	171 40.7	-23 08.4	204 15.5	-17 24.8	156 59.4	-22 19.9					
19	90	26.6	89 01.9	44.9	186 41.6	08.5	219 18.0	24.8	172 01.7	19.9					
20	105	29.1	104 01.5	43.6	201 42.4	08.6	234 20.4	24.8	187 04.0	19.9					
21	120	31.5	119 01.2	42.3	216 43.3	08.7	249 22.9	24.8	202 06.3	19.9					
22	135	34.0	134 00.8	41.0	231 44.2	08.8	264 25.4	24.8	217 08.5	19.9					
23	150	36.5	149 00.4	39.8	246 45.1	08.9	279 27.8	24.8	232 10.8	19.8					
24	165	38.9	164 00.1	-0 38.5	261 45.9	-23 09.0	294 30.3	-17 24.8	247 13.1	-22 19.8					
Dif	—		-4	+13	+9	-1	+24 0		+23						

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna						
	SD: 16 ^h 1			Edad: 20 ^d 1 PHE { 4 ^h : 55 ^m 1 12 ^h : 54 ^m 9 20 ^h : 54 ^m 7																	
	PMG: 12 ^h 10 ^m 8			SD: 15 ^h 0 PMG: 5 ^h 07 ^m R°: 47 ^m																	
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°					
h	o	'	o	o	'	o	o	'	o	h	m	h	m	h	m	m					
0	177	16.7	-4	59.6	285	43.2	-15	27.5	68	509	557	638	055	70	910	28					
1	192	16.8		58.6	300	14.7 ¹²⁵		34.3	68	58	11	57	45	68	21	30					
2	207	17.0		57.7	314	46.2 ¹²⁵		41.1	68	56	14	57	36	66	30	32					
3	222	17.2		56.7	329	17.7 ¹²⁵		47.8	67	54	16	57	32	64	38	33					
4	237	17.3		55.7	343	49.2 ¹²⁵	-15	54.4	66	52	18	57	30	22	62	46	34				
5	252	17.5	-4	54.7	358	20.7 ¹²⁵	-16	01.0	66	50	519	557	629	015	62	952	36				
6	267	17.6	-4	53.8	12	52.2 ¹²⁵	-16	07.5	65	45	523	556	626	002	59	1007	37				
7	282	17.8		52.8	27	23.6 ¹²⁴		13.9	64	40	25	56	23	***	***	18	39				
8	297	17.9		51.8	41	55.1 ¹²⁵		20.2	63	35	26	55	20	***	***	28	41				
9	312	18.1		50.8	56	26.5 ¹²⁴		26.4	62	30	27	54	18	***	***	37	42				
10	327	18.2		49.9	70	58.0 ¹²⁵		32.5	61	20	27	52	14	***	***	1052	44				
11	342	18.4	-4	48.9	85	29.4 ¹²⁴	-16	38.6	61	10 N	525	550	611	2356	49	1106	45				
12	357	18.5	-4	47.9	100	00.9 ¹²⁵	-16	44.6	60	0	523	547	607	2343	47	1118	48				
13	12	18.7		46.9	114	32.3 ¹²⁴		50.5	59	10 S	18	43	04	29	47	31	49				
14	27	18.8		46.0	129	03.7 ¹²⁴	-16	56.3	58	20	12	38	600	2315	45	44	51				
15	42	19.0		45.0	143	35.1 ¹²⁴	-17	02.0	57	30	503	32	556	2259	43	1159	53				
16	57	19.2		44.0	158	06.5 ¹²⁴		07.7	57	35	457	27	53	49	42	1208	54				
17	72	19.3	-4	43.0	172	37.9 ¹²⁴	-17	13.3	56	40	450	523	550	2239	41	1219	55				
18	87	19.5	-4	42.1	187	09.3 ¹²⁴	-17	18.7	54	45	441	517	546	2226	40	1231	57				
19	102	19.6		41.1	201	40.7 ¹²⁴		24.1	54	50	30	09	42	11	37	45	59				
20	117	19.8		40.1	216	12.0 ¹²³		29.5	54	52	24	06	40	2204	36	1252	60				
21	132	19.9		39.1	230	43.4 ¹²⁴		34.7	52	54	18	502	38	2156	35	1300	61				
22	147	20.1		38.2	245	14.7 ¹²³		39.9	52	56	11	457	36	47	34	08	63				
23	162	20.2		37.2	259	46.1 ¹²⁴		44.9	50	58	402	52	33	37	33	18	64				
24	177	20.4	-4	36.2	274	17.4 ¹²³	-17	49.9	50	60 S	353	447	530	2125	32	1329	66				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO									
	PMG: 12 ^h 55 ^m 3		Mag: -3.9 PMG: 13 ^h 04 ^m			Mag: +0.7 PMG: 6 ^h 33 ^m			Mag: -2.3 PMG: 4 ^h 21 ^m			Mag: +0.6 PMG: 7 ^h 30 ^m									
	hG ♈		hG ♀			hG ♂			hG ♃			hG ♄									
h	o	'	o	o	'	o	o	'	o	o	'	o	o	'	o	o	'	o			
0	165	38.9	164	00.1	-0	38.5	261	45.9	-23	09.0	294	30.3	-17	24.8	247	13.1	-22	19.8			
1	180	41.4	178	59.7		37.2	276	46.8		09.1	309	32.7		24.8	262	15.4		19.8			
2	195	43.9	193	59.3		35.9	291	47.7		09.2	324	35.2		24.8	277	17.7		19.8			
3	210	46.3	208	59.0		34.6	306	48.6		09.3	339	37.6		24.8	292	20.0		19.8			
4	225	48.8	223	58.6		33.3	321	49.4		09.4	354	40.1		24.8	307	22.3		19.8			
5	240	51.3	238	58.2	-0	32.0	336	50.3	-23	09.5	9	42.5	-17	24.8	322	24.6	-22	19.8			
6	255	53.7	253	57.9	-0	30.8	351	51.2	-23	09.6	24	45.0	-17	24.7	337	26.9	-22	19.8			
7	270	56.2	268	57.5		29.5	6	52.1		09.7	39	47.4		24.7	352	29.2		19.8			
8	285	58.6	283	57.1		28.2	21	52.9		09.8	54	49.9		24.7	7	31.5		19.8			
9	301	01.1	298	56.8		26.9	36	53.8		09.9	69	52.3		24.7	22	33.8		19.8			
10	316	03.6	313	56.4		25.6	51	54.7		10.0	84	54.8		24.7	37	36.0		19.7			
11	331	06.0	328	56.0	-0	24.3	66	55.6	-23	10.2	99	57.3	-17	24.7	52	38.3	-22	19.7			
12	346	08.5	343	55.7	-0	23.0	81	56.4	-23	10.3	114	59.7	-17	24.7	67	40.6	-22	19.7			
13	1	11.0	358	55.3		21.8	96	57.3		10.4	130	02.2		24.7	82	42.9		19.7			
14	16	13.4	13	54.9		20.5	111	58.2		10.5	145	04.6		24.7	97	45.2		19.7			
15	31	15.9	28	54.6		19.2	126	59.1		10.6	160	07.1		24.7	112	47.5		19.7			
16	46	18.4	43	54.2		17.9	142	00.0		10.7	175	09.5		24.7	127	49.8		19.7			
17	61	20.8	58	53.8	-0	16.6	157	00.8	-23	10.8	190	12.0	-17	24.7	142	52.1	-22	19.7			
18	76	23.3	73	53.5	-0	15.3	172	01.7	-23	10.9	205	14.5	-17	24.7	157	54.4	-22	19.7			
19	91	25.7	88	53.1		14.0	187	02.6		11.0	220	16.9		24.7	172	56.7		19.7			
20	106	28.2	103	52.7		12.8	202	03.5		11.1	235	19.4		24.7	187	59.0		19.6			
21	121	30.7	118	52.4		11.5	217	04.3		11.2	250	21.8		24.7	203	01.3		19.6			
22	136	33.1	133	52.0		10.2	232	05.2		11.3	265	24.3		24.7	218	03.6		19.6			
23	151	35.6	148	51.6		08.9	247	06.1		11.4	280	26.8		24.7	233	05.9		19.6			
24	166	38.1	163	51.3	-0	07.6	262	07.0	-23	11.5	295	29.2	-17	24.7	248	08.2	-22	19.6			
Dif	—		-4			+13	+9			-1			+25			0			+23		

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: 21 ^d 1 PHE { 4 ^h : 54/6 12 ^h : 54/5 20 ^h : 54/4 SD: 14'8 PMG: 5 ^h 54 ^m R°: 48 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec			Dif				Civil	Náutico	Hora	R°	Hora
h	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m	h	m
0	177	20.4	-4	36.2	274	17.4	-17 49.9	60 N	17 47	18 29	19 17	2 05	62	9 38	35		
1	192	20.5		35.2	288	48.7 ¹²³	54.8 ⁴⁹	58	49	28	14	1 53	61	9 51	36		
2	207	20.7		34.3	303	20.0 ¹²³	-17 59.6 ⁴⁸	56	51	28	11	42	60	10 02	38		
3	222	20.9		33.3	317	51.3 ¹²³	-18 04.3 ⁴⁷	54	52	28	09	33	58	11	39		
4	237	21.0		32.3	332	22.6 ¹²³	09.0 ⁴⁷	52	54	27	07	24	58	20	40		
5	252	21.2	-4	31.3	346	53.9 ¹²³	-18 13.5 ⁴⁵	50	17 55	18 27	19 05	1 17	57	10 28	40		
6	267	21.3	-4	30.3	1	25.2 ¹²³	-18 18.0 ⁴⁵	45	17 58	18 27	19 01	1 01	55	10 44	42		
7	282	21.5		29.4	15	56.5 ¹²³	22.4 ⁴⁴	40	18 00	27	18 59	0 48	54	10 57	43		
8	297	21.6		28.4	30	27.7 ¹²²	26.6 ⁴²	35	02	28	57	37	53	11 09	44		
9	312	21.8		27.4	44	59.0 ¹²³	30.8 ⁴²	30	04	28	56	27	52	19	45		
10	327	22.0		26.4	59	30.2 ¹²²	35.0 ⁴²	20	08	30	55	0 11	50	36	46		
11	342	22.1	-4	25.5	74	01.4 ¹²²	-18 39.0 ⁴⁰	10 N	18 11	18 32	18 56	** ** *	**	11 51	47		
12	357	22.3	-4	24.5	88	32.7 ¹²³	-18 42.9 ³⁹	0	18 14	18 35	18 59	** ** *	**	12 06	47		
13	12	22.4		23.5	103	03.9 ¹²²	46.8 ³⁹	10 S	17	38	19 02	** ** *	**	20	48		
14	27	22.6		22.5	117	35.1 ¹²²	50.5 ³⁷	20	20	42	08	** ** *	**	35	50		
15	42	22.7		21.5	132	06.3 ¹²²	54.2 ³⁷	30	24	48	16	23 42	46	12 52	51		
16	57	22.9		20.6	146	37.5 ¹²²	-18 57.8 ³⁶	35	27	52	22	31	46	13 02	52		
17	72	23.1	-4	19.6	161	08.7 ¹²²	-19 01.3 ³⁵	40	18 29	18 57	19 29	23 20	44	13 14	52		
18	87	23.2	-4	18.6	175	39.8 ¹²¹	-19 04.7 ³⁴	45	18 32	19 02	19 37	23 06	44	13 28	53		
19	102	23.4		17.6	190	11.0 ¹²²	08.0 ³³	50	36	09	48	22 48	44	44	55		
20	117	23.5		16.6	204	42.2 ¹²²	11.3 ³¹	52	38	12	53	40	43	13 52	55		
21	132	23.7		15.7	219	13.3 ¹²¹	14.4 ³³	54	40	16	19 59	31	43	14 01	56		
22	147	23.9		14.7	233	44.5 ¹²²	17.4 ³⁰	56	42	20	20 06	21	42	11	56		
23	162	24.0		13.7	248	15.6 ¹²¹	20.4 ³⁰	58	44	25	14	22 10	41	22	57		
24	177	24.2	-4	12.7	262	46.7 ¹²¹	-19 23.3 ²⁹	60 S	18 47	19 30	20 23	21 57	40	14 35	59		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 12 ^h 51 ^m 4			Mag: -3.9 PMG: 13 ^h 05 ^m			Mag: +0.7 PMG: 6 ^h 31 ^m			Mag: -2.3 PMG: 4 ^h 17 ^m			Mag: +0.6 PMG: 7 ^h 26 ^m				
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec		
h	o	'	o	'	o	'	o	'	o	o	'	o	'	o	'		
0	166	38.1	163 51.3	-0 07.6	262 07.0	-23 11.5	295 29.2	-17 24.7	248 08.2	-22 19.6							
1	181	40.5	178 50.9	06.3	277 07.8	11.6	310 31.7	24.7	263 10.5	19.6							
2	196	43.0	193 50.5	05.0	292 08.7	11.7	325 34.1	24.6	278 12.8	19.6							
3	211	45.5	208 50.2	03.7	307 09.6	11.8	340 36.6	24.6	293 15.1	19.6							
4	226	47.9	223 49.8	02.5	322 10.5	11.9	355 39.1	24.6	308 17.3	19.6							
5	241	50.4	238 49.4	-0 01.2	337 11.3	-23 12.0	10 41.5	-17 24.6	323 19.6	-22 19.6							
6	256	52.9	253 49.1	+0 00.1	352 12.2	-23 12.1	25 44.0	-17 24.6	338 21.9	-22 19.5							
7	271	55.3	268 48.7	01.4	7 13.1	12.2	40 46.5	24.6	353 24.2	19.5							
8	286	57.8	283 48.3	02.7	22 14.0	12.3	55 48.9	24.6	8 26.5	19.5							
9	302	00.2	298 48.0	04.0	37 14.9	12.4	70 51.4	24.6	23 28.8	19.5							
10	317	02.7	313 47.6	05.3	52 15.7	12.5	85 53.8	24.6	38 31.1	19.5							
11	332	05.2	328 47.2	+0 06.5	67 16.6	-23 12.6	100 56.3	-17 24.6	53 33.4	-22 19.5							
12	347	07.6	343 46.9	+0 07.8	82 17.5	-23 12.7	115 58.8	-17 24.6	68 35.7	-22 19.5							
13	2	10.1	358 46.5	09.1	97 18.4	12.8	131 01.2	24.6	83 38.0	19.5							
14	17	12.6	13 46.1	10.4	112 19.2	12.9	146 03.7	24.6	98 40.3	19.5							
15	32	15.0	28 45.8	11.7	127 20.1	13.0	161 06.2	24.6	113 42.6	19.5							
16	47	17.5	43 45.4	13.0	142 21.0	13.0	176 08.6	24.6	128 44.9	19.5							
17	62	20.0	58 45.0	+0 14.3	157 21.9	-23 13.1	191 11.1	-17 24.5	143 47.2	-22 19.4							
18	77	22.4	73 44.7	+0 15.6	172 22.8	-23 13.2	206 13.6	-17 24.5	158 49.5	-22 19.4							
19	92	24.9	88 44.3	16.8	187 23.6	13.3	221 16.0	24.5	173 51.8	19.4							
20	107	27.4	103 43.9	18.1	202 24.5	13.4	236 18.5	24.5	188 54.1	19.4							
21	122	29.8	118 43.6	19.4	217 25.4	13.5	251 21.0	24.5	203 56.4	19.4							
22	137	32.3	133 43.2	20.7	232 26.3	13.6	266 23.4	24.5	218 58.7	19.4							
23	152	34.7	148 42.8	22.0	247 27.2	13.7	281 25.9	24.5	234 01.0	19.4							
24	167	37.2	163 42.5	+0 23.3	262 28.0	-23 13.8	296 28.4	-17 24.5	249 03.3	-22 19.4							
Dif	—		-4	+13	+9		-1	+25		0	+23		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 3			Edad: 22 ^d 1 PHE { 4 ^h : 54'3 12 ^h : 54'3 20 ^h : 54'2 SD: 14'8 PMG: 6 ^h 42 ^m R°: 48 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	o	'	o	'	o	'	o	'	h	m	h	m	h	m	h	m	h	m
0	177	24.2	-4	12.7	262	46.7	-19	23.3	60 N	5 02	5 51	6 32	3 07	54	10 13	45		
1	192	24.3		11.8	277	17.9	122	26.0	58	06	51	30	2 54	53	27	46		
2	207	24.5		10.8	291	49.0	121	28.7	56	09	52	29	42	52	40	45		
3	222	24.7		09.8	306	20.1	121	31.3	54	11	52	27	31	53	10 50	46		
4	237	24.8		08.8	320	51.2	121	33.8	52	13	52	26	22	52	11 00	46		
5	252	25.0	-4	07.8	335	22.3	121	-19	50	5 15	5 53	6 25	2 14	51	11 08	46		
6	267	25.1	-4	06.9	349	53.4	121	-19	45	5 19	5 53	6 22	1 56	51	11 26	46		
7	282	25.3		05.9	4	24.4	120	40.8	40	21	53	20	42	50	40	47		
8	297	25.5		04.9	18	55.5	121	42.9	35	23	53	18	30	50	11 53	47		
9	312	25.6		03.9	33	26.6	121	45.0	30	24	52	16	19	50	12 04	47		
10	327	25.8		02.9	47	57.7	121	46.9	20	25	51	13	1 01	49	22	48		
11	342	25.9	-4	02.0	62	28.7	120	-19	10 N	5 24	5 49	6 10	0 45	48	12 38	48		
12	357	26.1	-4	01.0	76	59.8	121	-19	0	5 22	5 46	6 07	0 30	48	12 53	48		
13	12	26.3	-4	00.0	91	30.8	120	52.3	10 S	18	43	04	16	47	13 08	49		
14	27	26.4	-3	59.0	106	01.9	121	53.9	20	13	39	6 01	0 00	47	25	48		
15	42	26.6		58.0	120	32.9	120	55.3	30	5 05	33	5 57	** ** *	**	43	49		
16	57	26.7		57.1	135	03.9	120	56.8	35	4 59	29	55	** ** *	**	13 54	48		
17	72	26.9	-3	56.1	149	35.0	121	-19	40	4 53	5 25	5 52	** ** *	**	14 06	49		
18	87	27.1	-3	55.1	164	06.0	120	-19	45	4 44	5 19	5 49	23 50	49	14 21	49		
19	102	27.2		54.1	178	37.0	120	-20	50	33	13	45	32	49	39	49		
20	117	27.4		53.1	193	08.0	120	01.4	52	28	09	44	23	49	47	49		
21	132	27.5		52.1	207	39.0	120	02.4	54	22	06	42	14	49	14 57	49		
22	147	27.7		51.2	222	10.0	120	03.2	56	16	5 02	40	23 03	49	15 07	49		
23	162	27.9		50.2	236	41.1	121	04.0	58	4 08	4 57	37	22 51	49	19	49		
24	177	28.0	-3	49.2	251	12.1	120	-20	60 S	3 59	4 52	5 35	22 37	49	15 34	49		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 12 ^h 47 ^m 4			Mag: -3.9 PMG: 13 ^h 05 ^m			Mag: +0.7 PMG: 6 ^h 30 ^m			Mag: -2.3 PMG: 4 ^h 13 ^m			Mag: +0.5 PMG: 7 ^h 23 ^m					
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec							
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'
0	167	37.2	163	42.5	+0	23.3	262	28.0	-23	13.8	296	28.4	-17	24.5	249	03.3	-22	19.4
1	182	39.7	178	42.1		24.6	277	28.9		13.9	311	30.8		24.5	264	05.6		19.4
2	197	42.1	193	41.8		25.8	292	29.8		14.0	326	33.3		24.5	279	07.9		19.4
3	212	44.6	208	41.4		27.1	307	30.7		14.1	341	35.8		24.5	294	10.2		19.4
4	227	47.1	223	41.0		28.4	322	31.5		14.2	356	38.3		24.5	309	12.5		19.3
5	242	49.5	238	40.7	+0	29.7	337	32.4	-23	14.3	11	40.7	-17	24.5	324	14.8	-22	19.3
6	257	52.0	253	40.3	+0	31.0	352	33.3	-23	14.4	26	43.2	-17	24.4	339	17.1	-22	19.3
7	272	54.5	268	39.9		32.3	7	34.2		14.5	41	45.7		24.4	354	19.4		19.3
8	287	56.9	283	39.6		33.6	22	35.1		14.6	56	48.1		24.4	9	21.7		19.3
9	302	59.4	298	39.2		34.9	37	35.9		14.7	71	50.6		24.4	24	24.0		19.3
10	318	01.9	313	38.8		36.1	52	36.8		14.7	86	53.1		24.4	39	26.3		19.3
11	333	04.3	328	38.5	+0	37.4	67	37.7	-23	14.8	101	55.6	-17	24.4	54	28.6	-22	19.3
12	348	06.8	343	38.1	+0	38.7	82	38.6	-23	14.9	116	58.0	-17	24.4	69	30.9	-22	19.3
13	3	09.2	358	37.7		40.0	97	39.5		15.0	132	00.5		24.4	84	33.2		19.3
14	18	11.7	13	37.4		41.3	112	40.3		15.1	147	03.0		24.4	99	35.5		19.2
15	33	14.2	28	37.0		42.6	127	41.2		15.2	162	05.4		24.4	114	37.8		19.2
16	48	16.6	43	36.6		43.9	142	42.1		15.3	177	07.9		24.4	129	40.1		19.2
17	63	19.1	58	36.3	+0	45.2	157	43.0	-23	15.4	192	10.4	-17	24.4	144	42.4	-22	19.2
18	78	21.6	73	35.9	+0	46.4	172	43.9	-23	15.5	207	12.9	-17	24.3	159	44.7	-22	19.2
19	93	24.0	88	35.6		47.7	187	44.8		15.6	222	15.3		24.3	174	47.0		19.2
20	108	26.5	103	35.2		49.0	202	45.6		15.7	237	17.8		24.3	189	49.3		19.2
21	123	29.0	118	34.8		50.3	217	46.5		15.7	252	20.3		24.3	204	51.6		19.2
22	138	31.4	133	34.5		51.6	232	47.4		15.8	267	22.8		24.3	219	53.9		19.2
23	153	33.9	148	34.1		52.9	247	48.3		15.9	282	25.3		24.3	234	56.2		19.2
24	168	36.3	163	33.7	+0	54.2	262	49.2	-23	16.0	297	27.7	-17	24.3	249	58.5	-22	19.2
Dif	—			-4 +13			+9 -1			+25 0			+23 0					

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16 ^h 1		Edad: 23 ^d 1 PHE { 4 ^h : 54 ^m /2 12 ^h : 54 ^m /2 20 ^h : 54 ^m /2 R°: 48 ^m												
	PMG: 12 ^h 10 ^m 0		SD: 14 ^h 8 PMG: 7 ^h 30 ^m												
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°	
h	o	'	o	'	o	'	o	h m	h m	h m	h m m	h m m	h m m	h m m	
0	177	28.0	-3	49.2	251	12.1	-20 04.7	60 N	17 52	18 34	19 22	4 01 44	10 58 55		
1	192	28.2		48.2	265	43.1 ¹²⁰	05.2	58	54	33	19	3 47 44	11 13 54		
2	207	28.4		47.2	280	14.1 ¹²⁰	05.7	56	55	32	15	34 45	25 53		
3	222	28.5		46.3	294	45.1 ¹²⁰	06.1	54	56	31	13	24 45	36 53		
4	237	28.7		45.3	309	16.1 ¹²⁰	06.4	52	57	31	10	14 46	46 52		
5	252	28.8	-3	44.3	323	47.1 ¹²⁰	-20 06.6	50	17 58	18 31	19 08	3 05 46	11 54 52		
6	267	29.0	-3	43.3	338	18.0 ¹¹⁹	-20 06.7	45	18 01	18 30	19 04	2 47 46	12 12 52		
7	282	29.2		42.3	352	49.0 ¹²⁰	06.7	40	02	29	19 01	32 47	27 51		
8	297	29.3		41.4	7	20.0 ¹²⁰	06.6	35	04	29	18 59	20 46	40 50		
9	312	29.5		40.4	21	51.0 ¹²⁰	06.4	30	06	30	57	2 09 47	12 51 50		
10	327	29.7		39.4	36	22.0 ¹²⁰	06.2	20	08	30	56	1 50 47	13 10 49		
11	342	29.8	-3	38.4	50	53.0 ¹²⁰	-20 05.8	10 N	18 11	18 32	18 56	1 33 48	13 26 49		
12	357	30.0	-3	37.4	65	24.0 ¹²⁰	-20 05.3	0	18 13	18 34	18 58	1 18 48	13 41 48		
13	12	30.2		36.4	79	55.0 ¹²⁰	04.8	10 S	16	37	19 01	1 03 48	13 57 47		
14	27	30.3		35.5	94	26.0 ¹²⁰	04.2	20	19	41	06	0 47 48	14 13 46		
15	42	30.5		34.5	108	57.0 ¹²⁰	03.4	30	22	46	14	28 48	32 45		
16	57	30.6		33.5	123	28.0 ¹²⁰	02.6	35	24	49	19	17 49	42 46		
17	72	30.8	-3	32.5	137	59.0 ¹²⁰	-20 01.7	40	18 26	18 53	19 25	0 04 49	14 55 45		
18	87	31.0	-3	31.5	152	29.9 ¹¹⁹	-20 00.7	45	18 29	18 58	19 33	** ** *	15 10 43		
19	102	31.1		30.5	167	00.9 ¹²⁰	-19 59.6	50	32	19 05	43	** ** *	28 42		
20	117	31.3		29.6	181	31.9 ¹²⁰	58.4	52	33	07	48	** ** *	36 42		
21	132	31.5		28.6	196	03.0 ¹²¹	57.1	54	35	11	19 54	** ** *	46 41		
22	147	31.6		27.6	210	34.0 ¹²⁰	55.7	56	37	15	20 00	23 52 57	15 56 41		
23	162	31.8		26.6	225	05.0 ¹²⁰	54.2	58	39	19	07	40 58	16 08 41		
24	177	32.0	-3	25.6	239	36.0 ¹²⁰	-19 52.6	60 S	18 41	19 23	20 16	23 26 59	16 23 39		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 12 ^h 43 ^m 5		Mag: -3.9 PMG: 13 ^h 06 ^m			Mag: +0.6 PMG: 6 ^h 28 ^m			Mag: -2.3 PMG: 4 ^h 09 ^m			Mag: +0.5 PMG: 7 ^h 19 ^m			
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec			
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	
0	168	36.3	163	33.7	+0 54.2	262	49.2	-23 16.0	297	27.7	-17 24.3	249	58.5	-22 19.2	
1	183	38.8	178	33.4	55.5	277	50.0	16.1	312	30.2	24.3	265	00.8	19.1	
2	198	41.3	193	33.0	56.7	292	50.9	16.2	327	32.7	24.3	280	03.1	19.1	
3	213	43.7	208	32.6	58.0	307	51.8	16.3	342	35.2	24.3	295	05.4	19.1	
4	228	46.2	223	32.3	+0 59.3	322	52.7	16.4	357	37.6	24.3	310	07.7	19.1	
5	243	48.7	238	31.9	+1 00.6	337	53.6	-23 16.5	12	40.1	-17 24.2	325	10.0	-22 19.1	
6	258	51.1	253	31.5	+1 01.9	352	54.4	-23 16.5	27	42.6	-17 24.2	340	12.3	-22 19.1	
7	273	53.6	268	31.2	03.2	7	55.3	16.6	42	45.1	24.2	355	14.6	19.1	
8	288	56.1	283	30.8	04.5	22	56.2	16.7	57	47.6	24.2	10	16.9	19.1	
9	303	58.5	298	30.4	05.7	37	57.1	16.8	72	50.0	24.2	25	19.3	19.1	
10	319	01.0	313	30.1	07.0	52	58.0	16.9	87	52.5	24.2	40	21.6	19.1	
11	334	03.5	328	29.7	+1 08.3	67	58.9	-23 17.0	102	55.0	-17 24.2	55	23.9	-22 19.1	
12	349	05.9	343	29.4	+1 09.6	82	59.7	-23 17.1	117	57.5	-17 24.2	70	26.2	-22 19.0	
13	4	08.4	358	29.0	10.9	98	00.6	17.1	133	00.0	24.2	85	28.5	19.0	
14	19	10.8	13	28.6	12.2	113	01.5	17.2	148	02.4	24.1	100	30.8	19.0	
15	34	13.3	28	28.3	13.5	128	02.4	17.3	163	04.9	24.1	115	33.1	19.0	
16	49	15.8	43	27.9	14.8	143	03.3	17.4	178	07.4	24.1	130	35.4	19.0	
17	64	18.2	58	27.5	+1 16.0	158	04.2	-23 17.5	193	09.9	-17 24.1	145	37.7	-22 19.0	
18	79	20.7	73	27.2	+1 17.3	173	05.0	-23 17.6	208	12.4	-17 24.1	160	40.0	-22 19.0	
19	94	23.2	88	26.8	18.6	188	05.9	17.7	223	14.8	24.1	175	42.3	19.0	
20	109	25.6	103	26.4	19.9	203	06.8	17.7	238	17.3	24.1	190	44.6	19.0	
21	124	28.1	118	26.1	21.2	218	07.7	17.8	253	19.8	24.1	205	46.9	19.0	
22	139	30.6	133	25.7	22.5	233	08.6	17.9	268	22.3	24.1	220	49.2	18.9	
23	154	33.0	148	25.4	23.8	248	09.5	18.0	283	24.8	24.1	235	51.5	18.9	
24	169	35.5	163	25.0	+1 25.0	263	10.3	-23 18.1	298	27.3	-17 24.0	250	53.8	-22 18.9	
Dif	—		-4		+13		+9	-1		+25		0		+23	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: 24 ^d 1 PHE { 4 ^h : 54'2 12 ^h : 54'3 20 ^h : 54'4 SD: 14'8 PMG: 8 ^h 18 ^m R°: 47 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m			
0	177	32.0	-3	25.6	239	36.0	-19 52.6	60 N	4 56	5 45	6 26	4 45	35	11 53	63			
1	192	32.1		24.6	254	07.0 ¹²⁰	51.0 ¹⁶	58	5 00	46	25	31	37	12 07	61			
2	207	32.3		23.7	268	38.0 ¹²⁰	49.2 ¹⁸	56	03	47	24	19	38	18	61			
3	222	32.5		22.7	283	09.0 ¹²⁰	47.4 ¹⁸	54	06	47	22	09	38	29	59			
4	237	32.6		21.7	297	40.1 ¹²¹	45.4 ²⁰	52	09	48	21	4 00	39	38	58			
5	252	32.8	-3	20.7	312	11.1 ¹²⁰	-19 43.4 ²⁰	50	5 11	5 48	6 20	3 51	40	12 46	58			
6	267	33.0	-3	19.7	326	42.1 ¹²⁰	-19 41.3 ²¹	45	5 15	5 49	6 18	3 33	42	13 04	55			
7	282	33.1		18.7	341	13.2 ¹²¹	39.1 ²²	40	18	50	17	19	42	18	54			
8	297	33.3		17.8	355	44.2 ¹²⁰	36.8 ²³	35	21	50	15	3 06	44	30	53			
9	312	33.5		16.8	10	15.3 ¹²¹	34.4 ²⁴	30	22	50	14	2 56	44	41	52			
10	327	33.6		15.8	24	46.3 ¹²⁰	31.9 ²⁵	20	24	49	11	37	46	13 59	50			
11	342	33.8	-3	14.8	39	17.4 ¹²¹	-19 29.3 ²⁶	10 N	5 23	5 48	6 09	2 21	47	14 15	48			
12	357	34.0	-3	13.8	53	48.5 ¹²¹	-19 26.6 ²⁷	0	5 22	5 46	6 06	2 06	48	14 29	48			
13	12	34.1		12.8	68	19.6 ¹²¹	23.9 ²⁷	10 S	19	43	04	1 51	49	44	46			
14	27	34.3		11.9	82	50.6 ¹²⁰	21.0 ²⁹	20	14	39	6 01	35	50	14 59	45			
15	42	34.5		10.9	97	21.7 ¹²¹	18.1 ²⁹	30	06	34	5 58	16	51	15 17	43			
16	57	34.6		09.9	111	52.8 ¹²¹	15.0 ³¹	35	5 01	31	56	1 06	51	28	42			
17	72	34.8	-3	08.9	126	23.9 ¹²¹	-19 11.9 ³¹	40	4 55	5 27	5 54	0 53	53	15 40	40			
18	87	35.0	-3	07.9	140	55.1 ¹²²	-19 08.7 ³²	45	4 47	5 22	5 52	0 39	53	15 53	40			
19	102	35.1		06.9	155	26.2 ¹²¹	05.4 ³³	50	37	16	49	21	55	16 10	38			
20	117	35.3		06.0	169	57.3 ¹²¹	-19 02.0 ³⁴	52	32	13	47	12	56	18	37			
21	132	35.5		05.0	184	28.4 ¹²¹	-18 58.5 ³⁵	54	27	10	46	0 03	56	27	36			
22	147	35.6		04.0	198	59.6 ¹²²	54.9 ³⁶	56	20	06	44	***	***	37	34			
23	162	35.8		03.0	213	30.8 ¹²²	51.3 ³⁶	58	13	5 02	42	***	***	16 49	32			
24	177	36.0	-3	02.0	228	01.9 ¹²¹	-18 47.5 ³⁸	60 S	4 05	4 57	5 40	***	***	17 02	31			
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 12 ^h 39 ^m 6			Mag: -3.9 PMG: 13 ^h 07 ^m			Mag: +0.6 PMG: 6 ^h 27 ^m			Mag: -2.3 PMG: 4 ^h 06 ^m			Mag: +0.5 PMG: 7 ^h 15 ^m					
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec			
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o			
0	169	35.5	163	25.0	+1	25.0	263	10.3	-23	18.1	298	27.3	-17	24.0	250	53.8	-22	18.9
1	184	38.0	178	24.6		26.3	278	11.2		18.2	313	29.8		24.0	265	56.1		18.9
2	199	40.4	193	24.3		27.6	293	12.1		18.2	328	32.2		24.0	280	58.4		18.9
3	214	42.9	208	23.9		28.9	308	13.0		18.3	343	34.7		24.0	296	00.8		18.9
4	229	45.3	223	23.5		30.2	323	13.9		18.4	358	37.2		24.0	311	03.1		18.9
5	244	47.8	238	23.2	+1	31.5	338	14.8	-23	18.5	13	39.7	-17	24.0	326	05.4	-22	18.9
6	259	50.3	253	22.8	+1	32.8	353	15.6	-23	18.6	28	42.2	-17	24.0	341	07.7	-22	18.9
7	274	52.7	268	22.4		34.0	8	16.5		18.6	43	44.7		24.0	356	10.0		18.9
8	289	55.2	283	22.1		35.3	23	17.4		18.7	58	47.2		23.9	11	12.3		18.9
9	304	57.7	298	21.7		36.6	38	18.3		18.8	73	49.6		23.9	26	14.6		18.8
10	320	00.1	313	21.3		37.9	53	19.2		18.9	88	52.1		23.9	41	16.9		18.8
11	335	02.6	328	21.0	+1	39.2	68	20.1	-23	19.0	103	54.6	-17	23.9	56	19.2	-22	18.8
12	350	05.1	343	20.6	+1	40.5	83	21.0	-23	19.0	118	57.1	-17	23.9	71	21.5	-22	18.8
13	5	07.5	358	20.3		41.8	98	21.8		19.1	133	59.6		23.9	86	23.8		18.8
14	20	10.0	13	19.9		43.1	113	22.7		19.2	149	02.1		23.9	101	26.1		18.8
15	35	12.4	28	19.5		44.3	128	23.6		19.3	164	04.6		23.9	116	28.4		18.8
16	50	14.9	43	19.2		45.6	143	24.5		19.4	179	07.1		23.8	131	30.8		18.8
17	65	17.4	58	18.8	+1	46.9	158	25.4	-23	19.4	194	09.6	-17	23.8	146	33.1	-22	18.8
18	80	19.8	73	18.4	+1	48.2	173	26.3	-23	19.5	209	12.1	-17	23.8	161	35.4	-22	18.8
19	95	22.3	88	18.1		49.5	188	27.2		19.6	224	14.5		23.8	176	37.7		18.8
20	110	24.8	103	17.7		50.8	203	28.0		19.7	239	17.0		23.8	191	40.0		18.7
21	125	27.2	118	17.3		52.0	218	28.9		19.8	254	19.5		23.8	206	42.3		18.7
22	140	29.7	133	17.0		53.3	233	29.8		19.8	269	22.0		23.8	221	44.6		18.7
23	155	32.2	148	16.6		54.6	248	30.7		19.9	284	24.5		23.8	236	46.9		18.7
24	170	34.6	163	16.2	+1	55.9	263	31.6	-23	20.0	299	27.0	-17	23.7	251	49.2	-22	18.7
Dif	—			-4	+13		+9	-1		+25	0		+23					

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 16°1 PMG: 12 ^h 09 ^m 5			Edad: 25 ^d 1 PHE { SD: 14°9 PMG: 9 ^h 05 ^m R°: 48 ^m 4 ^h : 54/4 12 ^h : 54/5 20 ^h : 54/6														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif		Civil	Náutico	Hora	R°	Hora	R°		
h	o	'	o	'	o	'	o	'	h	m	h	m	h	m	h	m	m	
0	177	36.0	-3	02.0	228	01.9	-18	47.5	60 N	17 57	18 39	19 27	5 20	27	12 56	70		
1	192	36.1	-3	01.0	242	33.1 ¹²²		43.7 ³⁸	58	58	37	23	5 08	29	13 08	68		
2	207	36.3	-3	00.0	257	04.3 ¹²²		39.7 ⁴⁰	56	17 59	36	20	4 57	31	19	66		
3	222	36.5	-2	59.1	271	35.5 ¹²²		35.7 ⁴⁰	54	18 00	35	17	47	33	28	64		
4	237	36.7		58.1	286	06.7 ¹²²		31.6 ⁴¹	52	01	34	14	39	34	36	63		
5	252	36.8	-2	57.1	300	37.9 ¹²²		-18 27.4 ⁴²	50	18 02	18 34	19 11	4 31	35	13 44	61		
6	267	37.0	-2	56.1	315	09.1 ¹²²		-18 23.1 ⁴³	45	18 03	18 32	19 07	4 15	37	13 59	59		
7	282	37.2		55.1	329	40.3 ¹²²		18.8 ⁴³	40	05	32	03	4 01	39	14 12	57		
8	297	37.3		54.1	344	11.6 ¹²³		14.3 ⁴⁵	35	06	31	19 00	3 50	40	23	55		
9	312	37.5		53.1	358	42.8 ¹²²		09.8 ⁴⁵	30	07	31	18 59	40	42	33	54		
10	327	37.7		52.2	13	14.1 ¹²³		05.1 ⁴⁷	20	09	31	57	23	44	14 49	51		
11	342	37.8	-2	51.2	27	45.4 ¹²³		-18 00.4 ⁴⁷	10 N	18 11	18 32	18 56	3 08	46	15 03	50		
12	357	38.0	-2	50.2	42	16.6 ¹²²		-17 55.6 ⁴⁸	0	18 13	18 33	18 57	2 54	47	15 17	47		
13	12	38.2		49.2	56	47.9 ¹²³		50.7 ⁴⁹	10 S	15	36	19 00	40	49	30	45		
14	27	38.3		48.2	71	19.2 ¹²³		45.8 ⁴⁹	20	17	39	05	25	51	15 44	43		
15	42	38.5		47.2	85	50.6 ¹²⁴		40.7 ⁵¹	30	20	44	12	2 07	53	16 00	41		
16	57	38.7		46.3	100	21.9 ¹²³		35.5 ⁵²	35	21	46	16	1 57	55	10	39		
17	72	38.9	-2	45.3	114	53.2 ¹²³		-17 30.3 ⁵²	40	18 23	18 50	19 22	1 46	56	16 20	37		
18	87	39.0	-2	44.3	129	24.6 ¹²⁴		-17 25.0 ⁵³	45	18 25	18 54	19 29	1 32	58	16 33	35		
19	102	39.2		43.3	143	55.9 ¹²³		19.6 ⁵⁴	50	28	19 00	39	16	59	48	32		
20	117	39.4		42.3	158	27.3 ¹²⁴		14.1 ⁵⁵	52	29	03	43	1 08	61	16 55	31		
21	132	39.5		41.3	172	58.7 ¹²⁴		08.6 ⁵⁵	54	30	06	49	0 59	62	17 03	30		
22	147	39.7		40.3	187	30.1 ¹²⁴		-17 02.9 ⁵⁷	56	32	09	19 54	49	64	11	29		
23	162	39.9		39.3	202	01.5 ¹²⁴		-16 57.2 ⁵⁷	58	33	13	20 01	38	65	21	27		
24	177	40.1	-2	38.4	216	32.9 ¹²⁴		-16 51.4 ⁵⁸	60 S	18 35	19 17	20 09	0 25	67	17 33	24		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 12 ^h 35 ^m 6		Mag: -3.9 PMG: 13 ^h 07 ^m			Mag: +0.6 PMG: 6 ^h 26 ^m			Mag: -2.3 PMG: 4 ^h 02 ^m			Mag: +0.5 PMG: 7 ^h 12 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	
0	170	34.6	163	16.2	+1	55.9	263	31.6	-23	20.0	299	27.0	-17	23.7	251	49.2	-22	18.7
1	185	37.1	178	15.9		57.2	278	32.5		20.1	314	29.5		23.7	266	51.5		18.7
2	200	39.6	193	15.5		58.5	293	33.4		20.1	329	32.0		23.7	281	53.9		18.7
3	215	42.0	208	15.2	+1	59.8	308	34.2		20.2	344	34.5		23.7	296	56.2		18.7
4	230	44.5	223	14.8	+2	01.0	323	35.1		20.3	359	37.0		23.7	311	58.5		18.7
5	245	46.9	238	14.4	+2	02.3	338	36.0	-23	20.4	14	39.5	-17	23.7	327	00.8	-22	18.7
6	260	49.4	253	14.1	+2	03.6	353	36.9	-23	20.5	29	42.0	-17	23.7	342	03.1	-22	18.7
7	275	51.9	268	13.7		04.9	8	37.8		20.5	44	44.5		23.6	357	05.4		18.6
8	290	54.3	283	13.3		06.2	23	38.7		20.6	59	47.0		23.6	12	07.7		18.6
9	305	56.8	298	13.0		07.5	38	39.6		20.7	74	49.5		23.6	27	10.0		18.6
10	320	59.3	313	12.6		08.8	53	40.5		20.8	89	51.9		23.6	42	12.3		18.6
11	336	01.7	328	12.2	+2	10.0	68	41.3	-23	20.8	104	54.4	-17	23.6	57	14.7	-22	18.6
12	351	04.2	343	11.9	+2	11.3	83	42.2	-23	20.9	119	56.9	-17	23.6	72	17.0	-22	18.6
13	6	06.7	358	11.5		12.6	98	43.1		21.0	134	59.4		23.6	87	19.3		18.6
14	21	09.1	13	11.1		13.9	113	44.0		21.1	150	01.9		23.5	102	21.6		18.6
15	36	11.6	28	10.8		15.2	128	44.9		21.1	165	04.4		23.5	117	23.9		18.6
16	51	14.1	43	10.4		16.5	143	45.8		21.2	180	06.9		23.5	132	26.2		18.6
17	66	16.5	58	10.0	+2	17.7	158	46.7	-23	21.3	195	09.4	-17	23.5	147	28.5	-22	18.6
18	81	19.0	73	09.7	+2	19.0	173	47.6	-23	21.3	210	11.9	-17	23.5	162	30.8	-22	18.6
19	96	21.4	88	09.3		20.3	188	48.4		21.4	225	14.4		23.5	177	33.2		18.5
20	111	23.9	103	09.0		21.6	203	49.3		21.5	240	16.9		23.5	192	35.5		18.5
21	126	26.4	118	08.6		22.9	218	50.2		21.6	255	19.4		23.4	207	37.8		18.5
22	141	28.8	133	08.2		24.2	233	51.1		21.6	270	21.9		23.4	222	40.1		18.5
23	156	31.3	148	07.9		25.4	248	52.0		21.7	285	24.4		23.4	237	42.4		18.5
24	171	33.8	163	07.5	+2	26.7	263	52.9	-23	21.8	300	26.9	-17	23.4	252	44.7	-22	18.5
Dif	—		-4		+13		+9		-1		+25		0		+23			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 2			Edad: 26 ^d 1 PHE { 4 ^h : 54'8 12 ^h : 54'9 20 ^h : 55'0 SD: 15'0 PMG: 9 ^h 53 ^m R°: 46 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	o	'	o	'	o	'	o	'	h	m	h	m	h	m	h	m		
0	177	40.1	-2	38.4	216	32.9	-16	51.4	60 N	4 50	5 39	6 20	5 47	22	14 06	75		
1	192	40.2		37.4	231	04.4 ¹²⁵		45.5 ⁵⁹	58	54	40	19	37	24	16	72		
2	207	40.4		36.4	245	35.8 ¹²⁴		39.5 ⁶⁰	56	4 58	41	18	28	26	25	69		
3	222	40.6		35.4	260	07.3 ¹²⁵		33.5 ⁶⁰	54	5 01	42	18	20	27	32	68		
4	237	40.7		34.4	274	38.7 ¹²⁴		27.3 ⁶²	52	04	43	17	13	29	39	66		
5	252	40.9	-2	33.4	289	10.2 ¹²⁵	-16	21.1 ⁶²	50	5 06	5 44	6 16	5 06	31	14 45	65		
6	267	41.1	-2	32.4	303	41.7 ¹²⁵	-16	14.8 ⁶³	45	5 11	5 45	6 15	4 52	33	14 58	62		
7	282	41.3		31.5	318	13.2 ¹²⁵		08.4 ⁶⁴	40	15	46	13	40	36	15 09	59		
8	297	41.4		30.5	332	44.7 ¹²⁵	-16	02.0 ⁶⁴	35	18	47	12	30	38	18	57		
9	312	41.6		29.5	347	16.3 ¹²⁶	-15	55.4 ⁶⁶	30	20	47	11	22	39	27	55		
10	327	41.8		28.5	1	47.8 ¹²⁵		48.8 ⁶⁶	20	22	47	09	4 07	42	40	52		
11	342	41.9	-2	27.5	16	19.4 ¹²⁶	-15	42.1 ⁶⁷	10 N	5 22	5 47	6 08	3 54	44	15 53	49		
12	357	42.1	-2	26.5	30	50.9 ¹²⁵	-15	35.4 ⁶⁷	0	5 21	5 45	6 06	3 41	47	16 04	47		
13	12	42.3		25.5	45	22.5 ¹²⁶		28.5 ⁶⁹	10 S	19	43	04	29	49	15	44		
14	27	42.5		24.6	59	54.1 ¹²⁶		21.6 ⁶⁹	20	14	40	02	16	51	27	41		
15	42	42.6		23.6	74	25.7 ¹²⁶		14.6 ⁷⁰	30	08	36	6 00	3 00	55	41	38		
16	57	42.8		22.6	88	57.3 ¹²⁶		07.5 ⁷¹	35	5 03	33	5 58	2 52	56	49	36		
17	72	43.0	-2	21.6	103	28.9 ¹²⁶	-15	00.4 ⁷¹	40	4 57	5 29	5 56	2 42	58	16 57	35		
18	87	43.1	-2	20.6	118	00.6 ¹²⁷	-14	53.2 ⁷²	45	4 50	5 25	5 54	2 30	60	17 08	32		
19	102	43.3		19.6	132	32.2 ¹²⁶		45.9 ⁷³	50	41	19	52	15	64	20	29		
20	117	43.5		18.6	147	03.9 ¹²⁷		38.5 ⁷⁴	52	36	17	51	09	64	26	27		
21	132	43.7		17.6	161	35.6 ¹²⁷		31.1 ⁷⁴	54	31	14	50	2 01	66	33	25		
22	147	43.8		16.7	176	07.2 ¹²⁶		23.6 ⁷⁵	56	25	11	48	1 53	68	40	24		
23	162	44.0		15.7	190	38.9 ¹²⁷		16.0 ⁷⁶	58	19	07	47	43	70	48	21		
24	177	44.2	-2	14.7	205	10.6 ¹²⁷	-14	08.3 ⁷⁷	60 S	4 11	5 03	5 45	1 32	73	17 57	19		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 12 ^h 31 ^m 7			Mag: -3.9 PMG: 13 ^h 08 ^m			Mag: +0.6 PMG: 6 ^h 24 ^m			Mag: -2.3 PMG: 3 ^h 58 ^m			Mag: +0.5 PMG: 7 ^h 08 ^m					
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'		
0	171	33.8	163	07.5	+2	26.7	263	52.9	-23	21.8	300	26.9	-17	23.4	252	44.7		
1	186	36.2	178	07.1		28.0	278	53.8		21.9	315	29.4		23.4	267	47.0		
2	201	38.7	193	06.8		29.3	293	54.7		21.9	330	31.9		23.4	282	49.4		
3	216	41.2	208	06.4		30.6	308	55.6		22.0	345	34.4		23.4	297	51.7		
4	231	43.6	223	06.0		31.9	323	56.5		22.1	0	36.9		23.3	312	54.0		
5	246	46.1	238	05.7	+2	33.1	338	57.3	-23	22.1	15	39.4	-17	23.3	327	56.3		
6	261	48.5	253	05.3	+2	34.4	353	58.2	-23	22.2	30	41.9	-17	23.3	342	58.6		
7	276	51.0	268	04.9		35.7	8	59.1		22.3	45	44.4		23.3	358	00.9		
8	291	53.5	283	04.6		37.0	24	00.0		22.3	60	46.9		23.3	13	03.3		
9	306	55.9	298	04.2		38.3	39	00.9		22.4	75	49.5		23.3	28	05.6		
10	321	58.4	313	03.8		39.6	54	01.8		22.5	90	52.0		23.2	43	07.9		
11	337	00.9	328	03.5	+2	40.8	69	02.7	-23	22.6	105	54.5	-17	23.2	58	10.2		
12	352	03.3	343	03.1	+2	42.1	84	03.6	-23	22.6	120	57.0	-17	23.2	73	12.5		
13	7	05.8	358	02.7		43.4	99	04.5		22.7	135	59.5		23.2	88	14.8		
14	22	08.3	13	02.4		44.7	114	05.4		22.8	151	02.0		23.2	103	17.1		
15	37	10.7	28	02.0		46.0	129	06.2		22.8	166	04.5		23.2	118	19.5		
16	52	13.2	43	01.6		47.3	144	07.1		22.9	181	07.0		23.1	133	21.8		
17	67	15.7	58	01.3	+2	48.5	159	08.0	-23	23.0	196	09.5	-17	23.1	148	24.1		
18	82	18.1	73	00.9	+2	49.8	174	08.9	-23	23.0	211	12.0	-17	23.1	163	26.4		
19	97	20.6	88	00.6		51.1	189	09.8		23.1	226	14.5		23.1	178	28.7		
20	112	23.0	103	00.2		52.4	204	10.7		23.2	241	17.0		23.1	193	31.1		
21	127	25.5	117	59.8		53.7	219	11.6		23.2	256	19.5		23.1	208	33.4		
22	142	28.0	132	59.5		55.0	234	12.5		23.3	271	22.0		23.0	223	35.7		
23	157	30.4	147	59.1		56.2	249	13.4		23.4	286	24.5		23.0	238	38.0		
24	172	32.9	162	58.7	+2	57.5	264	14.3	-23	23.4	301	27.0	-17	23.0	253	40.3		
Dif	—			-4			+13			+9			-1			+25		
										</								

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16 ^h 1			Edad: 27 ^d 1 PHE { 4 ^h : 55/2 12 ^h : 55/4 20 ^h : 55/5					Final del crepúsculo			Salida de Luna		Puesta de Luna		
	PMG: 12 ^h 08 ^m 9			SD: 15 ^h 1 PMG: 10 ^h 39 ^m R°: 47 ^m					Final del crepúsculo			Salida de Luna		Puesta de Luna		
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°	
h	o	'	o	o	'	o	'	o	h m	h m	h m	h m m	m	h m m	m	
0	177	44.2	-2 14.7	205	10.6	-14 08.3		60 N	18 02	18 43	19 33	6 09 17		15 21 77		
1	192	44.4		219	42.4 ¹²⁸	-14 00.6	77	58	03	42	28	6 01 20		28 74		
2	207	44.5		234	14.1 ¹²⁷	-13 52.8	78	56	03	40	24	5 54 22		34 73		
3	222	44.7		248	45.8 ¹²⁷		44.9	54	04	39	20	47 25		40 70		
4	237	44.9		263	17.6 ¹²⁸		37.0	52	04	38	17	42 26		45 69		
5	252	45.1	-2 09.7	277	49.3 ¹²⁷	-13 28.9	81	50	18 05	18 37	19 15	5 37 27		15 50 67		
6	267	45.2	-2 08.8	292	21.1 ¹²⁸	-13 20.9	80	45	18 06	18 35	19 09	5 25 31		16 00 63		
7	282	45.4		306	52.9 ¹²⁸		12.7	40	07	34	05	16 33		08 61		
8	297	45.6		321	24.7 ¹²⁸	-13 04.5	82	35	07	33	02	08 36		15 59		
9	312	45.8		335	56.5 ¹²⁸	-12 56.2	83	30	08	32	19 00	5 01 37		22 56		
10	327	45.9		350	28.3 ¹²⁸		47.9	20	10	32	18 57	4 49 41		32 53		
11	342	46.1	-2 03.8	5	00.1 ¹²⁸	-12 39.4	85	10 N	18 11	18 32	18 56	4 38 44		16 42 49		
12	357	46.3	-2 02.8	19	31.9 ¹²⁸	-12 31.0	84	0	18 12	18 33	18 57	4 28 47		16 51 46		
13	12	46.5		34	03.8 ¹²⁹		22.4	10 S	14	35	18 59	18 49		16 59 44		
14	27	46.6	-2 00.9	48	35.6 ¹²⁸		13.8	20	15	37	19 03	4 07 53		17 08 41		
15	42	46.8	-1 59.9	63	07.5 ¹²⁹	-12 05.1	87	30	17	41	09	3 55 56		19 37		
16	57	47.0		77	39.4 ¹²⁹	-11 56.4	88	35	18	44	13	48 57		25 35		
17	72	47.2	-1 57.9	92	11.2 ¹²⁸	-11 47.6	87	40	18 20	18 47	19 19	3 40 60		17 32 32		
18	87	47.3	-1 56.9	106	43.1 ¹²⁹	-11 38.7	89	45	18 21	18 51	19 25	3 30 63		17 40 29		
19	102	47.5		121	15.0 ¹²⁹		29.8	50	23	56	34	19 66		49 26		
20	117	47.7		135	46.9 ¹²⁹		20.8	52	24	18 58	38	13 68		53 25		
21	132	47.9		150	18.8 ¹²⁹		11.8	54	25	19 01	43	07 70		17 58 23		
22	147	48.0		164	50.7 ¹²⁹	-11 02.7	91	56	26	04	49	3 01 71		18 04 20		
23	162	48.2		179	22.6 ¹²⁹	-10 53.5	92	58	28	07	19 55	2 53 74		09 19		
24	177	48.4	-1 51.0	193	54.6 ¹³⁰	-10 44.3	92	60 S	18 29	19 11	20 02	2 45 76		18 16 16		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 12 ^h 27 ^m 8			Mag: -3.9 PMG: 13 ^h 08 ^m			Mag: +0.6 PMG: 6 ^h 23 ^m			Mag: -2.3 PMG: 3 ^h 54 ^m			Mag: +0.5 PMG: 7 ^h 04 ^m			
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec	
h	o	'	o	o	'	o	'	o	o	'	o	'	o	'	o	
0	172	32.9	162 58.7	+2 57.5	264 14.3	-23 23.4		301 27.0	-17 23.0		253 40.3	-22 18.3				
1	187	35.4	177 58.4	+2 58.8	279 15.2		23.5	316 29.6		23.0	268 42.6		18.3			
2	202	37.8	192 58.0	+3 00.1	294 16.1		23.6	331 32.1		23.0	283 45.0		18.3			
3	217	40.3	207 57.6		01.4	309 16.9	23.6	346 34.6		23.0	298 47.3		18.3			
4	232	42.8	222 57.3		02.6	324 17.8	23.7	1 37.1		22.9	313 49.6		18.3			
5	247	45.2	237 56.9	+3 03.9	339 18.7	-23 23.8		16 39.6	-17 22.9		328 51.9	-22 18.2				
6	262	47.7	252 56.5	+3 05.2	354 19.6	-23 23.8		31 42.1	-17 22.9		343 54.2	-22 18.2				
7	277	50.2	267 56.2		06.5	9 20.5	23.9	46 44.6		22.9	358 56.6		18.2			
8	292	52.6	282 55.8		07.8	24 21.4	24.0	61 47.1		22.9	13 58.9		18.2			
9	307	55.1	297 55.4		09.0	39 22.3	24.0	76 49.6		22.8	29 01.2		18.2			
10	322	57.5	312 55.1		10.3	54 23.2	24.1	91 52.2		22.8	44 03.5		18.2			
11	338	00.0	327 54.7	+3 11.6	69 24.1	-23 24.1		106 54.7	-17 22.8		59 05.8	-22 18.2				
12	353	02.5	342 54.3	+3 12.9	84 25.0	-23 24.2		121 57.2	-17 22.8		74 08.2	-22 18.2				
13	8	04.9	357 54.0		14.2	99 25.9	24.3	136 59.7		22.8	89 10.5		18.2			
14	23	07.4	12 53.6		15.4	114 26.8	24.3	152 02.2		22.8	104 12.8		18.2			
15	38	09.9	27 53.2		16.7	129 27.7	24.4	167 04.7		22.7	119 15.1		18.2			
16	53	12.3	42 52.9		18.0	144 28.6	24.5	182 07.2		22.7	134 17.4		18.1			
17	68	14.8	57 52.5	+3 19.3	159 29.5	-23 24.5		197 09.7	-17 22.7		149 19.8	-22 18.1				
18	83	17.3	72 52.1	+3 20.6	174 30.4	-23 24.6		212 12.3	-17 22.7		164 22.1	-22 18.1				
19	98	19.7	87 51.8		21.8	189 31.2	24.6	227 14.8		22.7	179 24.4		18.1			
20	113	22.2	102 51.4		23.1	204 32.1	24.7	242 17.3		22.6	194 26.7		18.1			
21	128	24.6	117 51.0		24.4	219 33.0	24.8	257 19.8		22.6	209 29.0		18.1			
22	143	27.1	132 50.7		25.7	234 33.9	24.8	272 22.3		22.6	224 31.4		18.1			
23	158	29.6	147 50.3		27.0	249 34.8	24.9	287 24.8		22.6	239 33.7		18.1			
24	173	32.0	162 49.9	+3 28.2	264 35.7	-23 25.0		302 27.4	-17 22.6		254 36.0	-22 18.1				
Dif	—			-4 +13	+9 -1			+25 0			+23 0					

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16 ^h 1			Edad: 28 ^d 1 PHE { 4 ^h : 55 ^m 7 12 ^h : 55 ^m 9 20 ^h : 56 ^m 0											
	PMG: 12 ^h 08 ^m 6			SD: 15 ^h 2 PMG: 11 ^h 26 ^m R°: 46 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°
h	o	'	o	o	'	o	'	o	h	m	h	m	h	m	m
0	177	48.4	-1 51.0	193	54.6	-10 44.3		60 N	4 44	5 33	6 14	6 26	16	16 38	79
1	192	48.6		208	26.5 ¹²⁹	35.0	93	58	48	35	14	21	18	42	77
2	207	48.7		222	58.4 ¹²⁹	25.7	94	56	53	36	13	16	20	47	74
3	222	48.9		237	30.4 ¹³⁰	16.3	94	54	56	38	13	12	21	50	73
4	237	49.1		252	02.3 ¹²⁹	-10 06.8	95	52	4 59	39	12	08	23	54	70
5	252	49.3	-1 46.0	266	34.3 ¹³⁰	-9 57.3	95	50	5 02	5 40	6 12	6 04	25	16 57	68
6	267	49.4	-1 45.1	281	06.2 ¹²⁹	-9 47.8	95	45	5 08	5 42	6 11	5 56	29	17 03	65
7	282	49.6		295	38.2 ¹³⁰	38.2	96	40	12	43	10	49	32	09	62
8	297	49.8		310	10.1 ¹²⁹	28.5	97	35	15	44	10	44	34	14	59
9	312	50.0		324	42.1 ¹³⁰	18.8	97	30	17	45	09	38	37	18	57
10	327	50.1		339	14.1 ¹³⁰	-9 09.0	98	20	20	46	08	30	40	25	53
11	342	50.3	-1 40.1	353	46.1 ¹³⁰	-8 59.2	98	10 N	5 21	5 46	6 07	5 22	43	17 31	50
12	357	50.5	-1 39.1	8	18.0 ¹²⁹	-8 49.3	99	0	5 21	5 45	6 05	5 15	46	17 37	46
13	12	50.7		22	50.0 ¹³⁰	39.4	99	10 S	19	43	04	07	50	43	43
14	27	50.9		37	22.0 ¹³⁰	29.5	99	20	15	41	03	5 00	52	49	39
15	42	51.0		51	54.0 ¹³⁰	19.4	101	30	09	37	01	4 51	56	17 56	35
16	57	51.2		66	25.9 ¹²⁹	-8 09.4	100	35	05	34	6 00	45	59	18 00	33
17	72	51.4	-1 34.2	80	57.9 ¹³⁰	-7 59.3	101	40	5 00	5 31	5 58	4 40	61	18 04	31
18	87	51.6	-1 33.2	95	29.9 ¹³⁰	-7 49.1	102	45	4 53	5 28	5 57	4 33	64	18 09	28
19	102	51.7		110	01.9 ¹³⁰	38.9	102	50	44	23	55	25	67	15	25
20	117	51.9		124	33.9 ¹³⁰	28.7	102	52	40	20	54	21	69	18	23
21	132	52.1		139	05.9 ¹³⁰	18.4	103	54	35	18	53	17	71	21	21
22	147	52.3		153	37.8 ¹²⁹	-7 08.1	103	56	30	15	52	12	73	24	20
23	162	52.5		168	09.8 ¹³⁰	-6 57.7	104	58	24	12	51	07	75	28	17
24	177	52.6	-1 27.3	182	41.8 ¹³⁰	-6 47.3	104	60 S	4 17	5 08	5 50	4 01	78	18 32	15

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 12 ^h 23 ^m 8		Mag: -3.9 PMG: 13 ^h 09 ^m		Mag: +0.6 PMG: 6 ^h 21 ^m		Mag: -2.3 PMG: 3 ^h 50 ^m		Mag: +0.5 PMG: 7 ^h 01 ^m						
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	o	'	o	'	o	'	o	'	o	'					
0	173	32.0	162	49.9	+3 28.2		264	35.7	-23 25.0	302	27.4	-17 22.6	254	36.0	-22 18.1
1	188	34.5	177	49.6	29.5		279	36.6	25.0	317	29.9	22.6	269	38.3	18.1
2	203	37.0	192	49.2	30.8		294	37.5	25.1	332	32.4	22.5	284	40.7	18.1
3	218	39.4	207	48.8	32.1		309	38.4	25.1	347	34.9	22.5	299	43.0	18.1
4	233	41.9	222	48.5	33.4		324	39.3	25.2	2	37.4	22.5	314	45.3	18.0
5	248	44.4	237	48.1	+3 34.6		339	40.2	-23 25.2	17	39.9	-17 22.5	329	47.6	-22 18.0
6	263	46.8	252	47.7	+3 35.9		354	41.1	-23 25.3	32	42.5	-17 22.5	344	49.9	-22 18.0
7	278	49.3	267	47.3	37.2		9	42.0	25.4	47	45.0	22.4	359	52.3	18.0
8	293	51.8	282	47.0	38.5		24	42.9	25.4	62	47.5	22.4	14	54.6	18.0
9	308	54.2	297	46.6	39.7		39	43.8	25.5	77	50.0	22.4	29	56.9	18.0
10	323	56.7	312	46.2	41.0		54	44.7	25.5	92	52.5	22.4	44	59.2	18.0
11	338	59.1	327	45.9	+3 42.3		69	45.6	-23 25.6	107	55.1	-17 22.4	60	01.6	-22 18.0
12	354	01.6	342	45.5	+3 43.6		84	46.5	-23 25.7	122	57.6	-17 22.3	75	03.9	-22 18.0
13	9	04.1	357	45.1	44.9		99	47.4	25.7	138	00.1	22.3	90	06.2	18.0
14	24	06.5	12	44.8	46.1		114	48.3	25.8	153	02.6	22.3	105	08.5	18.0
15	39	09.0	27	44.4	47.4		129	49.2	25.8	168	05.1	22.3	120	10.9	17.9
16	54	11.5	42	44.0	48.7		144	50.1	25.9	183	07.7	22.3	135	13.2	17.9
17	69	13.9	57	43.7	+3 50.0		159	51.0	-23 25.9	198	10.2	-17 22.2	150	15.5	-22 17.9
18	84	16.4	72	43.3	+3 51.2		174	51.9	-23 26.0	213	12.7	-17 22.2	165	17.8	-22 17.9
19	99	18.9	87	42.9	52.5		189	52.8	26.1	228	15.2	22.2	180	20.2	17.9
20	114	21.3	102	42.6	53.8		204	53.7	26.1	243	17.8	22.2	195	22.5	17.9
21	129	23.8	117	42.2	55.1		219	54.6	26.2	258	20.3	22.2	210	24.8	17.9
22	144	26.2	132	41.8	56.3		234	55.5	26.2	273	22.8	22.1	225	27.1	17.9
23	159	28.7	147	41.4	57.6		249	56.4	26.3	288	25.3	22.1	240	29.5	17.9
24	174	31.2	162	41.1	+3 58.9		264	57.3	-23 26.3	303	27.9	-17 22.1	255	31.8	-22 17.9
Dif	—		-4	+13		+9	-1		+25		0		+23		0

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16°1			Edad: 29 ^d 1 PHE { 4 ^h : 56'2 12 ^h : 56'4 20 ^h : 56'6					Civil			Náutico		Hora R°	
	PMG: 12 ^h 08 ^m 3			SD: 15'4 PMG: 12 ^h 12 ^m R°: 47 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif								
h	o	'	o	'	'	o	'	o	h m	h m	h m	h m	m	h m	m
0	177	52.6	-1	27.3		182	41.8	-6 47.3	60 N	18 07	18 48	19 38	6 42	14	17 57 81
1	192	52.8		26.3		197	13.8 ¹³⁰	36.8 ¹⁰⁵	58	07	46	33	39	17	17 59 78
2	207	53.0		25.3		211	45.7 ¹²⁹	26.3 ¹⁰⁵	56	07	44	28	36	19	18 01 76
3	222	53.2		24.3		226	17.7 ¹³⁰	15.8 ¹⁰⁵	54	08	43	24	33	21	03 73
4	237	53.3		23.3		240	49.6 ¹²⁹	-6 05.2 ¹⁰⁶	52	08	41	21	31	23	04 72
5	252	53.5	-1	22.3		255	21.6 ¹³⁰	-5 54.6 ¹⁰⁶	50	18 08	18 40	19 18	6 29	24	18 05 71
6	267	53.7	-1	21.3		269	53.5 ¹²⁹	-5 44.0 ¹⁰⁶	45	18 08	18 38	19 12	6 25	28	18 08 67
7	282	53.9		20.3		284	25.5 ¹³⁰	33.3 ¹⁰⁷	40	09	36	07	21	31	11 63
8	297	54.1		19.4		298	57.4 ¹²⁹	22.6 ¹⁰⁷	35	09	34	04	18	33	13 60
9	312	54.2		18.4		313	29.4 ¹³⁰	11.8 ¹⁰⁸	30	09	33	19 01	15	35	15 58
10	327	54.4		17.4		328	01.3 ¹²⁹	-5 01.0 ¹⁰⁸	20	10	32	18 58	10	39	18 54
11	342	54.6	-1	16.4		342	33.2 ¹²⁹	-4 50.2 ¹⁰⁸	10 N	18 11	18 32	18 56	6 05	43	18 21 50
12	357	54.8	-1	15.4		357	05.1 ¹²⁹	-4 39.4 ¹⁰⁸	0	18 12	18 32	18 56	6 01	46	18 23 47
13	12	55.0		14.4		11	37.0 ¹²⁹	28.5 ¹⁰⁹	10 S	12	33	18 58	5 57	50	26 43
14	27	55.1		13.4		26	08.9 ¹²⁹	17.6 ¹⁰⁹	20	14	36	19 01	52	54	28 40
15	42	55.3		12.4		40	40.8 ¹²⁹	-4 06.6 ¹¹⁰	30	15	39	07	47	58	31 36
16	57	55.5		11.4		55	12.6 ¹²⁸	-3 55.7 ¹⁰⁹	35	16	41	10	44	60	33 34
17	72	55.7	-1	10.5		69	44.5 ¹²⁹	-3 44.7 ¹¹⁰	40	18 16	18 44	19 15	5 41	63	18 35 31
18	87	55.8	-1	09.5		84	16.4 ¹²⁹	-3 33.7 ¹¹⁰	45	18 18	18 47	19 21	5 37	66	18 37 28
19	102	56.0		08.5		98	48.2 ¹²⁸	22.6 ¹¹¹	50	19	51	29	32	70	40 24
20	117	56.2		07.5		113	20.0 ¹²⁸	11.5 ¹¹¹	52	20	53	33	30	71	41 23
21	132	56.4		06.5		127	51.8 ¹²⁸	-3 00.4 ¹¹¹	54	20	56	38	28	73	42 21
22	147	56.6		05.5		142	23.6 ¹²⁸	-2 49.3 ¹¹¹	56	21	18 58	43	25	76	44 19
23	162	56.7		04.5		156	55.4 ¹²⁸	38.2 ¹¹¹	58	22	19 01	49	22	78	45 17
24	177	56.9	-1	03.5		171	27.2 ¹²⁸	-2 27.0 ¹¹²	60 S	18 23	19 05	19 55	5 19	80	18 47 14
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 12 ^h 19 ^m 9		Mag: -3.9 PMG: 13 ^h 10 ^m			Mag: +0.5 PMG: 6 ^h 20 ^m			Mag: -2.3 PMG: 3 ^h 46 ^m			Mag: +0.5 PMG: 6 ^h 57 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	o	'	o	'	'	o	'	'	o	'	'	o	'	'	
0	174	31.2	162	41.1	+3 58.9	264	57.3	-23 26.3	303	27.9	-17 22.1	255	31.8	-22 17.9	
1	189	33.6	177	40.7	+4 00.2	279	58.2	26.4	318	30.4	22.1	270	34.1	17.9	
2	204	36.1	192	40.3	01.4	294	59.0	26.4	333	32.9	22.0	285	36.4	17.9	
3	219	38.6	207	40.0	02.7	309	59.9	26.5	348	35.4	22.0	300	38.8	17.8	
4	234	41.0	222	39.6	04.0	325	00.8	26.6	3	38.0	22.0	315	41.1	17.8	
5	249	43.5	237	39.2	+4 05.3	340	01.7	-23 26.6	18	40.5	-17 22.0	330	43.4	-22 17.8	
6	264	46.0	252	38.9	+4 06.5	355	02.6	-23 26.7	33	43.0	-17 22.0	345	45.7	-22 17.8	
7	279	48.4	267	38.5	07.8	10	03.5	26.7	48	45.5	21.9	0	48.1	17.8	
8	294	50.9	282	38.1	09.1	25	04.4	26.8	63	48.1	21.9	15	50.4	17.8	
9	309	53.4	297	37.8	10.4	40	05.3	26.8	78	50.6	21.9	30	52.7	17.8	
10	324	55.8	312	37.4	11.6	55	06.2	26.9	93	53.1	21.9	45	55.1	17.8	
11	339	58.3	327	37.0	+4 12.9	70	07.1	-23 26.9	108	55.6	-17 21.9	60	57.4	-22 17.8	
12	355	00.7	342	36.6	+4 14.2	85	08.0	-23 27.0	123	58.2	-17 21.8	75	59.7	-22 17.8	
13	10	03.2	357	36.3	15.5	100	08.9	27.0	139	00.7	21.8	91	02.0	17.8	
14	25	05.7	12	35.9	16.7	115	09.8	27.1	154	03.2	21.8	106	04.4	17.8	
15	40	08.1	27	35.5	18.0	130	10.7	27.1	169	05.8	21.8	121	06.7	17.7	
16	55	10.6	42	35.2	19.3	145	11.6	27.2	184	08.3	21.7	136	09.0	17.7	
17	70	13.1	57	34.8	+4 20.6	160	12.6	-23 27.2	199	10.8	-17 21.7	151	11.4	-22 17.7	
18	85	15.5	72	34.4	+4 21.8	175	13.5	-23 27.3	214	13.4	-17 21.7	166	13.7	-22 17.7	
19	100	18.0	87	34.0	23.1	190	14.4	27.3	229	15.9	21.7	181	16.0	17.7	
20	115	20.5	102	33.7	24.4	205	15.3	27.4	244	18.4	21.7	196	18.3	17.7	
21	130	22.9	117	33.3	25.6	220	16.2	27.4	259	20.9	21.6	211	20.7	17.7	
22	145	25.4	132	32.9	26.9	235	17.1	27.5	274	23.5	21.6	226	23.0	17.7	
23	160	27.8	147	32.6	28.2	250	18.0	27.5	289	26.0	21.6	241	25.3	17.7	
24	175	30.3	162	32.2	+4 29.5	265	18.9	-23 27.6	304	28.5	-17 21.6	256	27.7	-22 17.7	
Dif	—		-4 +13			+9 -1			+25 0			+23 0			

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1			Edad: 0 ^d 5 PHE { 4 ^h : 56 ^m 8 12 ^h : 56 ^m 9 20 ^h : 57 ^m 1	SD: 15 ^h 5			Principio del crepúsculo			R°		R°	
	PMG: 12 ^h 08 ^m 1				PMG: 12 ^h 59 ^m			R°: 47 ^m			R°		R°	
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R°	Hora	R°
h	o	'	o	o	'	o	'	o	h m	h m	h m	h m m	h m m	h m m
0	177	56.9	-1 03.5	171	27.2	-2 27.0	60 N	4 37	5 27	6 08	6 56 15		19 18 83	
1	192	57.1	02.5	185	58.9 ¹²⁷	15.8 ¹¹²	58	43	29	08	56 16		17 80	
2	207	57.3	01.6	200	30.7 ¹²⁸	-2 04.6 ¹¹²	56	47	31	08	55 19		17 77	
3	222	57.5	-1 00.6	215	02.4 ¹²⁷	-1 53.4 ¹¹²	54	51	33	08	54 21		16 76	
4	237	57.6	-0 59.6	229	34.1 ¹²⁷	42.2 ¹¹²	52	54	34	08	54 23		16 73	
5	252	57.8	-0 58.6	244	05.8 ¹²⁷	-1 30.9 ¹¹³	50	4 58	5 35	6 08	6 53 25		19 16 71	
6	267	58.0	-0 57.6	258	37.5 ¹²⁷	-1 19.6 ¹¹³	45	5 04	5 38	6 07	6 53 28		19 15 67	
7	282	58.2	56.6	273	09.1 ¹²⁶	-1 08.3 ¹¹³	40	09	40	07	52 31		14 64	
8	297	58.4	55.6	287	40.7 ¹²⁶	-0 57.0 ¹¹³	35	12	42	07	51 34		13 62	
9	312	58.6	54.6	302	12.4 ¹²⁷	45.7 ¹¹³	30	15	43	06	50 37		13 59	
10	327	58.7	53.6	316	44.0 ¹²⁶	34.4 ¹¹³	20	18	44	06	49 41		12 55	
11	342	58.9	-0 52.7	331	15.5 ¹²⁵	-0 23.0 ¹¹⁴	10 N	5 20	5 44	6 05	6 48 44		19 11 51	
12	357	59.1	-0 51.7	345	47.1 ¹²⁶	-0 11.7 ¹¹³	0	5 20	5 44	6 05	6 47 48		19 10 48	
13	12	59.3	50.7	0	18.6 ¹²⁵	-0 00.3 ¹¹⁴	10 S	19	43	04	47 50		09 45	
14	27	59.5	49.7	14	50.1 ¹²⁵	+0 11.0 ¹¹³	20	16	41	03	46 54		08 41	
15	42	59.6	48.7	29	21.6 ¹²⁵	22.4 ¹¹⁴	30	10	38	02	45 58		07 37	
16	57	59.8	47.7	43	53.1 ¹²⁵	33.8 ¹¹⁴	35	06	36	01	44 61		07 34	
17	73	00.0	-0 46.7	58	24.5 ¹²⁴	+0 45.2 ¹¹⁴	40	5 02	5 33	6 01	6 44 63		19 06 32	
18	88	00.2	-0 45.7	72	55.9 ¹²⁴	+0 56.6 ¹¹⁴	45	4 56	5 30	6 00	6 43 67		19 05 29	
19	103	00.4	44.7	87	27.3 ¹²⁴	+1 08.0 ¹¹⁴	50	48	26	5 58	42 71		04 25	
20	118	00.5	43.8	101	58.7 ¹²⁴	19.4 ¹¹⁴	52	44	24	58	41 73		04 23	
21	133	00.7	42.8	116	30.0 ¹²³	30.8 ¹¹⁴	54	39	22	57	41 75		03 22	
22	148	00.9	41.8	131	01.3 ¹²³	42.2 ¹¹⁴	56	35	19	56	41 76		03 19	
23	163	01.1	40.8	145	32.6 ¹²³	+1 53.6 ¹¹⁴	58	29	16	56	40 79		02 17	
24	178	01.3	-0 39.8	160	03.8 ¹²²	+2 05.0 ¹¹⁴	60 S	4 22	5 13	5 55	6 39 82		19 01 15	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 12 ^h 16 ^m 0		Mag: -3.9 PMG: 13 ^h 10 ^m			Mag: +0.5 PMG: 6 ^h 18 ^m			Mag: -2.3 PMG: 3 ^h 41 ^m			Mag: +0.5 PMG: 6 ^h 53 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	o	'	o	o	'	o	'	o	o	'	o	o	o	'
0	175	30.3	162 32.2	+4 29.5	265 18.9	-23 27.6	304 28.5	-17 21.6	256 27.7	-22 17.7				
1	190	32.8	177 31.8	30.7	280 19.8	27.6	319 31.1	21.5	271 30.0	17.7				
2	205	35.2	192 31.4	32.0	295 20.7	27.7	334 33.6	21.5	286 32.3	17.7				
3	220	37.7	207 31.1	33.3	310 21.6	27.7	349 36.1	21.5	301 34.7	17.6				
4	235	40.2	222 30.7	34.6	325 22.5	27.8	4 38.7	21.5	316 37.0	17.6				
5	250	42.6	237 30.3	+4 35.8	340 23.4	-23 27.8	19 41.2	-17 21.4	331 39.3	-22 17.6				
6	265	45.1	252 30.0	+4 37.1	355 24.3	-23 27.9	34 43.7	-17 21.4	346 41.6	-22 17.6				
7	280	47.6	267 29.6	38.4	10 25.2	27.9	49 46.3	21.4	1 44.0	17.6				
8	295	50.0	282 29.2	39.6	25 26.1	28.0	64 48.8	21.4	16 46.3	17.6				
9	310	52.5	297 28.8	40.9	40 27.0	28.0	79 51.4	21.4	31 48.6	17.6				
10	325	55.0	312 28.5	42.2	55 27.9	28.1	94 53.9	21.3	46 51.0	17.6				
11	340	57.4	327 28.1	+4 43.4	70 28.8	-23 28.1	109 56.4	-17 21.3	61 53.3	-22 17.6				
12	355	59.9	342 27.7	+4 44.7	85 29.7	-23 28.2	124 59.0	-17 21.3	76 55.6	-22 17.6				
13	11	02.3	357 27.3	46.0	100 30.6	28.2	140 01.5	21.3	91 58.0	17.6				
14	26	04.8	12 27.0	47.3	115 31.5	28.3	155 04.0	21.2	107 00.3	17.6				
15	41	07.3	27 26.6	48.5	130 32.4	28.3	170 06.6	21.2	122 02.6	17.5				
16	56	09.7	42 26.2	49.8	145 33.3	28.3	185 09.1	21.2	137 05.0	17.5				
17	71	12.2	57 25.9	+4 51.1	160 34.2	-23 28.4	200 11.6	-17 21.2	152 07.3	-22 17.5				
18	86	14.7	72 25.5	+4 52.3	175 35.1	-23 28.4	215 14.2	-17 21.1	167 09.6	-22 17.5				
19	101	17.1	87 25.1	53.6	190 36.0	28.5	230 16.7	21.1	182 12.0	17.5				
20	116	19.6	102 24.7	54.9	205 36.9	28.5	245 19.3	21.1	197 14.3	17.5				
21	131	22.1	117 24.4	56.1	220 37.8	28.6	260 21.8	21.1	212 16.6	17.5				
22	146	24.5	132 24.0	57.4	235 38.7	28.6	275 24.3	21.0	227 19.0	17.5				
23	161	27.0	147 23.6	58.7	250 39.6	28.7	290 26.9	21.0	242 21.3	17.5				
24	176	29.4	162 23.2	+4 59.9	265 40.6	-23 28.7	305 29.4	-17 21.0	257 23.6	-22 17.5				
Dif	—		-4	+13	+9		0	+25		0	+23		0	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1			Edad: 1 ^d 5	PHE { 4 ^h : 57 ^h /3 12 ^h : 57 ^h /4 20 ^h : 57 ^h /6									
	PMG: 12 ^h 07 ^m 8					SD: 15 ^h 6			PMG: 13 ^h 46 ^m			R°: 50 ^m		
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	o	'	o	o	'	o	'	o	h	m	h	m	h	m
0	178	01.3	-0 39.8	160	03.8	+2 05.0		60 N	18 12	18 53	19 43	7 11 15	20 41 84	
1	193	01.5	38.8	174	35.1 ¹²³	16.4 ¹¹⁴		58	12	51	38	12 19	37 81	
2	208	01.6	37.8	189	06.3 ¹²²	27.8 ¹¹⁴		56	11	49	33	14 20	34 79	
3	223	01.8	36.8	203	37.4 ¹²¹	39.2 ¹¹⁴		54	11	47	29	15 23	32 76	
4	238	02.0	35.9	218	08.5 ¹²¹	+2 50.6 ¹¹⁴		52	11	45	25	17 24	29 75	
5	253	02.2	-0 34.9	232	39.6 ¹²¹	+3 02.0 ¹¹⁴		50	18 11	18 43	19 21	7 18 26	20 27 73	
6	268	02.4	-0 33.9	247	10.7 ¹²¹	+3 13.3 ¹¹³		45	18 11	18 40	19 15	7 21 29	20 22 69	
7	283	02.5	32.9	261	41.8 ¹²¹	24.7 ¹¹⁴		40	11	38	09	23 33	18 66	
8	298	02.7	31.9	276	12.8 ¹²⁰	36.1 ¹¹⁴		35	11	36	05	25 35	15 63	
9	313	02.9	30.9	290	43.7 ¹¹⁹	47.4 ¹¹³		30	11	35	19 02	27 37	12 61	
10	328	03.1	29.9	305	14.7 ¹²⁰	+3 58.8 ¹¹⁴		20	11	33	18 58	30 41	07 56	
11	343	03.3	-0 28.9	319	45.6 ¹¹⁹	+4 10.1 ¹¹³		10 N	18 11	18 32	18 56	7 32 46	20 02 53	
12	358	03.5	-0 27.9	334	16.4 ¹¹⁸	+4 21.4 ¹¹³		0	18 11	18 32	18 56	7 35 49	19 58 50	
13	13	03.6	27.0	348	47.3 ¹¹⁹	32.7 ¹¹³		10 S	11	32	57	37 53	54 46	
14	28	03.8	26.0	3	18.0 ¹¹⁷	44.0 ¹¹³		20	12	34	18 59	40 56	49 43	
15	43	04.0	25.0	17	48.8 ¹¹⁸	+4 55.2 ¹¹²		30	12	36	19 04	43 60	44 39	
16	58	04.2	24.0	32	19.5 ¹¹⁷	+5 06.5 ¹¹³		35	13	38	08	45 63	41 36	
17	73	04.4	-0 23.0	46	50.2 ¹¹⁷	+5 17.7 ¹¹²		40	18 13	18 40	19 12	7 47 66	19 38 33	
18	88	04.6	-0 22.0	61	20.8 ¹¹⁶	+5 28.9 ¹¹²		45	18 14	18 43	19 18	7 50 68	19 34 31	
19	103	04.7	21.0	75	51.4 ¹¹⁶	40.1 ¹¹²		50	15	47	25	53 72	29 27	
20	118	04.9	20.0	90	22.0 ¹¹⁶	+5 51.3 ¹¹²		52	15	49	28	54 74	27 25	
21	133	05.1	19.0	104	52.5 ¹¹⁵	+6 02.4 ¹¹¹		54	15	51	33	56 76	25 23	
22	148	05.3	18.1	119	23.0 ¹¹⁵	13.5 ¹¹¹		56	16	53	37	57 79	22 22	
23	163	05.5	17.1	133	53.4 ¹¹⁴	24.6 ¹¹¹		58	16	55	42	7 59 81	19 19	
24	178	05.7	-0 16.1	148	23.8 ¹¹⁴	+6 35.7 ¹¹¹		60 S	18 17	18 58	19 49	8 01 84	19 16 17	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 12 ^h 12 ^m 0		Mag: -3.9 PMG: 13 ^h 11 ^m		Mag: +0.5 PMG: 6 ^h 17 ^m		Mag: -2.3 PMG: 3 ^h 37 ^m		Mag: +0.5 PMG: 6 ^h 49 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	o	'	o	'	o	'	o	'	o	'	
0	176	29.4	162	23.2	+4 59.9	265	40.6	-23 28.7	305	29.4	-17 21.0
1	191	31.9	177	22.9	+5 01.2	280	41.5	28.8	320	32.0	21.0
2	206	34.4	192	22.5	02.5	295	42.4	28.8	335	34.5	20.9
3	221	36.8	207	22.1	03.7	310	43.3	28.8	350	37.0	20.9
4	236	39.3	222	21.7	05.0	325	44.2	28.9	5	39.6	20.9
5	251	41.8	237	21.4	+5 06.3	340	45.1	-23 28.9	20	42.1	-17 20.9
6	266	44.2	252	21.0	+5 07.5	355	46.0	-23 29.0	35	44.7	-17 20.8
7	281	46.7	267	20.6	08.8	10	46.9	29.0	50	47.2	20.8
8	296	49.2	282	20.2	10.1	25	47.8	29.1	65	49.8	20.8
9	311	51.6	297	19.9	11.3	40	48.7	29.1	80	52.3	20.8
10	326	54.1	312	19.5	12.6	55	49.6	29.1	95	54.8	20.7
11	341	56.6	327	19.1	+5 13.9	70	50.5	-23 29.2	110	57.4	-17 20.7
12	356	59.0	342	18.7	+5 15.1	85	51.4	-23 29.2	125	59.9	-17 20.7
13	12	01.5	357	18.4	16.4	100	52.3	29.3	141	02.5	20.7
14	27	03.9	12	18.0	17.7	115	53.2	29.3	156	05.0	20.6
15	42	06.4	27	17.6	18.9	130	54.2	29.3	171	07.6	20.6
16	57	08.9	42	17.2	20.2	145	55.1	29.4	186	10.1	20.6
17	72	11.3	57	16.9	+5 21.5	160	56.0	-23 29.4	201	12.7	-17 20.6
18	87	13.8	72	16.5	+5 22.7	175	56.9	-23 29.5	216	15.2	-17 20.5
19	102	16.3	87	16.1	24.0	190	57.8	29.5	231	17.8	20.5
20	117	18.7	102	15.7	25.3	205	58.7	29.5	246	20.3	20.5
21	132	21.2	117	15.3	26.5	220	59.6	29.6	261	22.8	20.5
22	147	23.7	132	15.0	27.8	236	00.5	29.6	276	25.4	20.4
23	162	26.1	147	14.6	29.0	251	01.4	29.7	291	27.9	20.4
24	177	28.6	162	14.2	+5 30.3	266	02.3	-23 29.7	306	30.5	-17 20.4
Dif	—		-4	+13		+9	0		+25		0

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'1			Edad: 2 ^d 5	PHE {	4 ^h : 57'8 12 ^h : 57'9 20 ^h : 58'0								
	PMG: 12 ^h 07 ^m 5							SD: 15'8			PMG: 14 ^h 36 ^m		R°: 51 ^m	
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R°	Hora	R°
h	o	'	o	o	'	o	'	h	m	h	m	h	m	m
0	178	05.7	-0 16.1	148	23.8	+6 35.7	110	60 N	4 31	5 21	6 02	7 26	19	22 05 84
1	193	05.8		162	54.2 ¹¹⁴	46.7 ¹¹⁰		58	36	23	02	31	21	21 58 82
2	208	06.0		177	24.5 ¹¹³	+6 57.7 ¹¹⁰		56	41	26	03	34	24	53 79
3	223	06.2		191	54.8 ¹¹³	+7 08.7 ¹¹⁰		54	46	28	03	38	25	48 77
4	238	06.4		206	25.0 ¹¹²	19.6 ¹⁰⁹		52	50	29	03	41	27	44 75
5	253	06.6	-0 11.1	220	55.2 ¹¹²	+7 30.6 ¹¹⁰		50	4 53	5 31	6 03	7 44	29	21 40 73
6	268	06.8	-0 10.1	235	25.3 ¹¹¹	+7 41.5 ¹⁰⁹		45	5 00	5 34	6 04	7 50	33	21 31 70
7	283	06.9		249	55.4 ¹¹¹	+7 52.3 ¹⁰⁸		40	05	37	04	7 56	35	24 67
8	298	07.1		264	25.4 ¹¹⁰	+8 03.1 ¹⁰⁸		35	09	39	04	8 00	38	18 64
9	313	07.3		278	55.4 ¹¹⁰	13.9 ¹⁰⁸		30	12	40	04	04	41	13 62
10	328	07.5		293	25.3 ¹⁰⁹	24.6 ¹⁰⁷		20	17	42	04	11	45	21 03 58
11	343	07.7	-0 05.2	307	55.2 ¹⁰⁹	+8 35.3 ¹⁰⁷		10 N	5 19	5 43	6 04	8 18	47	20 55 55
12	358	07.9	-0 04.2	322	25.1 ¹⁰⁹	+8 46.0 ¹⁰⁷		0	5 20	5 44	6 04	8 24	50	20 48 51
13	13	08.0	03.2	336	54.9 ¹⁰⁸	+8 56.6 ¹⁰⁶		10 S	19	43	04	30	54	40 49
14	28	08.2	02.2	351	24.6 ¹⁰⁷	+9 07.2 ¹⁰⁶		20	16	42	04	36	57	32 46
15	43	08.4	01.3	5	54.3 ¹⁰⁷	17.8 ¹⁰⁶		30	12	39	03	43	62	23 42
16	58	08.6	-0 00.3	20	24.0 ¹⁰⁷	28.3 ¹⁰⁵		35	08	38	03	48	63	17 40
17	73	08.8	+0 00.7	34	53.6 ¹⁰⁶	+9 38.7 ¹⁰⁴		40	5 04	5 36	6 03	8 53	66	20 11 38
18	88	09.0	+0 01.7	49	23.1 ¹⁰⁵	+9 49.1 ¹⁰⁴		45	4 58	5 33	6 02	8 58	70	20 05 34
19	103	09.1	02.7	63	52.6 ¹⁰⁵	+9 59.5 ¹⁰⁴		50	51	29	02	9 05	73	19 56 31
20	118	09.3	03.7	78	22.1 ¹⁰⁵	+10 09.8 ¹⁰³		52	48	28	01	08	75	52 30
21	133	09.5	04.7	92	51.5 ¹⁰⁴	20.0 ¹⁰²		54	44	26	01	12	77	48 28
22	148	09.7	05.7	107	20.8 ¹⁰³	30.2 ¹⁰²		56	39	23	01	16	79	44 25
23	163	09.9	06.7	121	50.1 ¹⁰³	40.4 ¹⁰²		58	34	21	00	20	82	38 23
24	178	10.1	+0 07.6	136	19.3 ¹⁰²	+10 50.5 ¹⁰¹		60 S	4 28	5 18	6 00	9 25	85	19 33 20

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 12 ^h 08 ^m 1		Mag: -3.9 PMG: 13 ^h 11 ^m		Mag: +0.5 PMG: 6 ^h 15 ^m		Mag: -2.3 PMG: 3 ^h 33 ^m		Mag: +0.5 PMG: 6 ^h 46 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	o	'	o	'	o	'	o	'	o	'				
0	177	28.6	162	14.2	+5 30.3	266	02.3	-23 29.7	306	30.5	-17 20.4	258	19.7	-22 17.3
1	192	31.1	177	13.8		281	03.2	29.7	321	33.0	20.3	273	22.0	17.3
2	207	33.5	192	13.5		296	04.2	29.8	336	35.6	20.3	288	24.4	17.3
3	222	36.0	207	13.1		311	05.1	29.8	351	38.1	20.3	303	26.7	17.3
4	237	38.4	222	12.7		326	06.0	29.9	6	40.7	20.3	318	29.1	17.3
5	252	40.9	237	12.3	+5 36.6	341	06.9	-23 29.9	21	43.2	-17 20.2	333	31.4	-22 17.2
6	267	43.4	252	11.9	+5 37.9	356	07.8	-23 29.9	36	45.8	-17 20.2	348	33.7	-22 17.2
7	282	45.8	267	11.6		11	08.7	30.0	51	48.3	20.2	3	36.1	17.2
8	297	48.3	282	11.2		26	09.6	30.0	66	50.9	20.2	18	38.4	17.2
9	312	50.8	297	10.8		41	10.5	30.0	81	53.4	20.1	33	40.8	17.2
10	327	53.2	312	10.4		56	11.4	30.1	96	56.0	20.1	48	43.1	17.2
11	342	55.7	327	10.1	+5 44.2	71	12.3	-23 30.1	111	58.5	-17 20.1	63	45.4	-22 17.2
12	357	58.2	342	09.7	+5 45.5	86	13.3	-23 30.1	127	01.1	-17 20.0	78	47.8	-22 17.2
13	13	00.6	357	09.3		101	14.2	30.2	142	03.6	20.0	93	50.1	17.2
14	28	03.1	12	08.9		116	15.1	30.2	157	06.2	20.0	108	52.5	17.2
15	43	05.5	27	08.5		131	16.0	30.3	172	08.8	20.0	123	54.8	17.2
16	58	08.0	42	08.2		146	16.9	30.3	187	11.3	19.9	138	57.1	17.2
17	73	10.5	57	07.8	+5 51.8	161	17.8	-23 30.3	202	13.9	-17 19.9	153	59.5	-22 17.1
18	88	12.9	72	07.4	+5 53.0	176	18.7	-23 30.4	217	16.4	-17 19.9	169	01.8	-22 17.1
19	103	15.4	87	07.0		191	19.6	30.4	232	19.0	19.9	184	04.2	17.1
20	118	17.9	102	06.6		206	20.6	30.4	247	21.5	19.8	199	06.5	17.1
21	133	20.3	117	06.3		221	21.5	30.5	262	24.1	19.8	214	08.8	17.1
22	148	22.8	132	05.9		236	22.4	30.5	277	26.6	19.8	229	11.2	17.1
23	163	25.3	147	05.5	+5 59.3	251	23.3	30.5	292	29.2	19.7	244	13.5	17.1
24	178	27.7	162	05.1	+6 00.6	266	24.2	-23 30.6	307	31.7	-17 19.7	259	15.9	-22 17.1
Dif	—		-4	+13		+9	0		+26		0	+23		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 2			Edad: 3 ^d 5 PHE { SD: 15/9 PMG: 15 ^h 27 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°	
h	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m	
0	178	10.1	+0	07.6	136	19.3	+10	50.5	60 N	18 17	18 58	19 49	7 45	23	23 29	
1	193	10.3		08.6	150	48.5 ¹⁰²	+11	00.6 ¹⁰¹	58	16	55	43	52	25	20 80	
2	208	10.4		09.6	165	17.6 ¹⁰¹		10.6 ¹⁰⁰	56	16	53	37	7 58	28	12 77	
3	223	10.6		10.6	179	46.7 ¹⁰¹		20.5 ⁹⁹	54	15	51	33	8 03	30	23 05	
4	238	10.8		11.6	194	15.7 ¹⁰⁰		30.4 ⁹⁹	52	15	48	28	08	32	22 59	
5	253	11.0	+0	12.6	208	44.6 ⁹⁹	+11	40.2 ⁹⁸	50	18 14	18 47	19 25	8 13	33	22 53	
6	268	11.2	+0	13.6	223	13.5 ⁹⁹	+11	50.0 ⁹⁸	45	18 14	18 43	19 17	8 23	37	22 41	
7	283	11.4		14.6	237	42.4 ⁹⁹	+11	59.7 ⁹⁷	40	13	40	12	31	40	31 66	
8	298	11.6		15.5	252	11.2 ⁹⁸	+12	09.3 ⁹⁶	35	12	38	07	38	42	22 65	
9	313	11.7		16.5	266	39.9 ⁹⁷		18.9 ⁹⁶	30	12	36	19 04	45	44	15 62	
10	328	11.9		17.5	281	08.6 ⁹⁷		28.4 ⁹⁵	20	11	33	18 59	8 56	47	22 01	
11	343	12.1	+0	18.5	295	37.2 ⁹⁶	+12	37.8 ⁹⁴	10 N	18 11	18 32	18 56	9 05	51	21 50	
12	358	12.3	+0	19.5	310	05.8 ⁹⁶	+12	47.2 ⁹³	0	18 10	18 31	18 55	9 14	54	21 39	
13	13	12.5		20.5	324	34.3 ⁹⁵	+12	56.5 ⁹³	10 S	10	31	56	24	56	29 52	
14	28	12.7		21.5	339	02.7 ⁹⁴	+13	05.8 ⁹³	20	10	32	18 58	33	59	18 49	
15	43	12.8		22.5	353	31.1 ⁹⁴		14.9 ⁹¹	30	10	34	19 02	45	62	21 05	
16	58	13.0		23.4	7	59.4 ⁹³		24.0 ⁹¹	35	10	35	05	51	65	20 57	
17	73	13.2	+0	24.4	22	27.7 ⁹³	+13	33.1 ⁹¹	40	18 10	18 37	19 09	9 59	67	20 49	
18	88	13.4	+0	25.4	36	55.9 ⁹²	+13	42.0 ⁸⁹	45	18 10	18 39	19 14	10 08	69	20 39	
19	103	13.6		26.4	51	24.1 ⁹²		50.9 ⁸⁹	50	10	42	20	18	74	27 36	
20	118	13.8		27.4	65	52.2 ⁹¹	+13	59.7 ⁸⁸	52	10	44	24	23	75	22 34	
21	133	14.0		28.4	80	20.2 ⁹⁰	+14	08.4 ⁸⁷	54	10	46	27	29	76	16 33	
22	148	14.2		29.4	94	48.2 ⁹⁰		17.1 ⁸⁷	56	11	48	32	35	79	09 31	
23	163	14.3		30.4	109	16.1 ⁸⁹		25.7 ⁸⁶	58	11	50	36	42	81	20 01	
24	178	14.5	+0	31.3	123	44.0 ⁸⁹	+14	34.1 ⁸⁴	60 S	18 11	18 52	19 42	10 50	84	19 53	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 12 ^h 04 ^m 2		Mag: -3.9 PMG: 13 ^h 12 ^m			Mag: +0.5 PMG: 6 ^h 14 ^m			Mag: -2.3 PMG: 3 ^h 29 ^m			Mag: +0.5 PMG: 6 ^h 42 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'
0	178	27.7	162	05.1	+6	00.6	266	24.2	-23	30.6	307	31.7	-17	19.7	259	15.9
1	193	30.2	177	04.7		01.8	281	25.1		30.6	322	34.3		19.7	274	18.2
2	208	32.7	192	04.3		03.1	296	26.0		30.6	337	36.9		19.7	289	20.6
3	223	35.1	207	04.0		04.3	311	26.9		30.7	352	39.4		19.6	304	22.9
4	238	37.6	222	03.6		05.6	326	27.9		30.7	7	42.0		19.6	319	25.2
5	253	40.0	237	03.2	+6	06.8	341	28.8	-23	30.7	22	44.5	-17	19.6	334	27.6
6	268	42.5	252	02.8	+6	08.1	356	29.7	-23	30.8	37	47.1	-17	19.5	349	29.9
7	283	45.0	267	02.4		09.4	11	30.6		30.8	52	49.6		19.5	4	32.3
8	298	47.4	282	02.1		10.6	26	31.5		30.8	67	52.2		19.5	19	34.6
9	313	49.9	297	01.7		11.9	41	32.4		30.9	82	54.8		19.4	34	37.0
10	328	52.4	312	01.3		13.1	56	33.3		30.9	97	57.3		19.4	49	39.3
11	343	54.8	327	00.9	+6	14.4	71	34.3	-23	30.9	112	59.9	-17	19.4	64	41.7
12	358	57.3	342	00.5	+6	15.6	86	35.2	-23	30.9	128	02.4	-17	19.4	79	44.0
13	13	59.8	357	00.1		16.9	101	36.1		31.0	143	05.0		19.3	94	46.3
14	29	02.2	11	59.8		18.1	116	37.0		31.0	158	07.6		19.3	109	48.7
15	44	04.7	26	59.4		19.4	131	37.9		31.0	173	10.1		19.3	124	51.0
16	59	07.1	41	59.0		20.7	146	38.8		31.1	188	12.7		19.2	139	53.4
17	74	09.6	56	58.6	+6	21.9	161	39.8	-23	31.1	203	15.2	-17	19.2	154	55.7
18	89	12.1	71	58.2	+6	23.2	176	40.7	-23	31.1	218	17.8	-17	19.2	169	58.1
19	104	14.5	86	57.8		24.4	191	41.6		31.2	233	20.4		19.2	185	00.4
20	119	17.0	101	57.5		25.7	206	42.5		31.2	248	22.9		19.1	200	02.8
21	134	19.5	116	57.1		26.9	221	43.4		31.2	263	25.5		19.1	215	05.1
22	149	21.9	131	56.7		28.2	236	44.3		31.2	278	28.1		19.1	230	07.5
23	164	24.4	146	56.3		29.4	251	45.3		31.3	293	30.6		19.0	245	09.8
24	179	26.9	161	55.9	+6	30.7	266	46.2	-23	31.3	308	33.2	-17	19.0	260	12.1
Dif	—		-4		+13		+9		0		+26		0		+23	

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'1			Edad: 4 ^d 5	PHE {	SD: 16'0		R°: 56 ^m								
	PMG: 12 ^h 06 ^m 9															
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	o	'	o	o	'	o	'	o	h	m	h	m	h	m	h	m
0	178	14.5	+0	31.3	123	44.0	+14	34.1	4 24	5 14	5 56	8 08	30	***	***	***
1	193	14.7		32.3	138	11.8		42.6	30	17	57	17	34	***	***	***
2	208	14.9		33.3	152	39.5		50.9	36	20	57	26	35	***	***	***
3	223	15.1		34.3	167	07.2		59.1	41	23	58	33	38	***	***	***
4	238	15.3		35.3	181	34.9		+15 07.3	45	25	58	40	39	***	***	***
5	253	15.5	+0	36.3	196	02.4		+15 15.4	4 48	5 27	5 59	8 46	40	***	***	***
6	268	15.6	+0	37.3	210	29.9		+15 23.4	4 56	5 30	6 00	9 00	43	23 50	66	
7	283	15.8		38.3	224	57.4		31.3	5 02	34	01	11	45	37	65	
8	298	16.0		39.2	239	24.8		39.1	06	36	01	20	47	27	63	
9	313	16.2		40.2	253	52.1		46.8	10	38	02	29	48	17	62	
10	328	16.4		41.2	268	19.4		+15 54.4	15	41	03	43	51	23 01	60	
11	343	16.6	+0	42.2	282	46.6		+16 02.0	5 18	5 42	6 03	9 56	53	22 47	58	
12	358	16.8	+0	43.2	297	13.8		+16 09.4	5 19	5 43	6 04	10 08	55	22 34	56	
13	13	16.9		44.2	311	40.9		16.8	19	43	04	20	57	21	55	
14	28	17.1		45.2	326	07.9		24.0	10	17	42	32	60	22 07	53	
15	43	17.3		46.1	340	34.9		31.2	70	13	41	47	63	21 51	51	
16	58	17.5		47.1	355	01.8		38.2	10	39	05	10 56	64	41	50	
17	73	17.7	+0	48.1	9	28.7		+16 45.2	5 06	5 38	6 05	11 06	66	21 31	48	
18	88	17.9	+0	49.1	23	55.5		+16 52.1	5 01	5 35	6 05	11 17	69	21 18	47	
19	103	18.1		50.1	38	22.3		+16 58.8	4 55	32	05	32	70	21 03	44	
20	118	18.3		51.1	52	49.0		+17 05.5	51	31	05	38	72	20 56	43	
21	133	18.4		52.1	67	15.7		12.1	54	48	05	45	74	49	41	
22	148	18.6		53.0	81	42.3		18.5	56	43	05	11 54	75	40	40	
23	163	18.8		54.0	96	08.8		24.9	58	39	05	12 03	78	30	38	
24	178	19.0	+0	55.0	110	35.3		+17 31.1	4 33	5 23	6 05	12 14	80	20 19	35	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 12 ^h 00 ^m 2		Mag: -3.9 PMG: 13 ^h 13 ^m		Mag: +0.5 PMG: 6 ^h 13 ^m		Mag: -2.3 PMG: 3 ^h 25 ^m		Mag: +0.5 PMG: 6 ^h 38 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	o	'	o	'	o	'	o	'	o	'
0	179	26.9	161	55.9	+6	30.7	266	46.2	-23	31.3
1	194	29.3	176	55.5		31.9	281	47.1		31.3
2	209	31.8	191	55.1		33.2	296	48.0		31.4
3	224	34.3	206	54.8		34.4	311	48.9		31.4
4	239	36.7	221	54.4		35.7	326	49.8		31.4
5	254	39.2	236	54.0	+6	36.9	341	50.8	-23	31.4
6	269	41.6	251	53.6	+6	38.2	356	51.7	-23	31.5
7	284	44.1	266	53.2		39.4	11	52.6		31.5
8	299	46.6	281	52.8		40.7	26	53.5		31.5
9	314	49.0	296	52.4		41.9	41	54.4		31.5
10	329	51.5	311	52.1		43.2	56	55.3		31.6
11	344	54.0	326	51.7	+6	44.4	71	56.3	-23	31.6
12	359	56.4	341	51.3	+6	45.7	86	57.2	-23	31.6
13	14	58.9	356	50.9		46.9	101	58.1		31.6
14	30	01.4	11	50.5		48.2	116	59.0		31.7
15	45	03.8	26	50.1		49.4	131	59.9		31.7
16	60	06.3	41	49.7		50.7	147	00.9		31.7
17	75	08.8	56	49.3	+6	51.9	162	01.8	-23	31.7
18	90	11.2	71	49.0	+6	53.2	177	02.7	-23	31.8
19	105	13.7	86	48.6		54.4	192	03.6		31.8
20	120	16.1	101	48.2		55.7	207	04.5		31.8
21	135	18.6	116	47.8		56.9	222	05.5		31.8
22	150	21.1	131	47.4		58.2	237	06.4		31.9
23	165	23.5	146	47.0	+6	59.4	252	07.3		31.9
24	180	26.0	161	46.6	+7	00.7	267	08.2	-23	31.9
Dif	—		-4		+12		+9		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 6			Edad: 5 ^d 5 SD: 16'1 PMG: 17 ^h 17 ^m	PHE { 4 ^h : 58'9 12 ^h : 58'9 20 ^h : 59'0 R°: 58 ^m											
	hG ☉	Dec				hG ☾			Dif	Dec	Dif	Civil	Náutico	Hora	R°	Hora
h	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m	
0	178	19.0	+0	55.0	110	35.3	+17 31.1	60 N	18 22	19 04	19 54	8 38 42	0 51 77			
1	193	19.2		56.0	125	01.7	74 37.3	58	21	19 00	48	8 51 43	40 74			
2	208	19.4		57.0	139	28.1	74 43.3	56	20	18 57	42	9 01 45	29 73			
3	223	19.6		58.0	153	54.4	73 49.3	54	19	54	37	11 46	20 72			
4	238	19.8	+0	59.0	168	20.7	73 +17 55.1	52	18	52	32	19 47	12 70			
5	253	19.9	+1	00.0	182	46.9	72 +18 00.8	50	18 17	18 50	19 28	9 26 49	0 05 69			
6	268	20.1	+1	00.9	197	13.1	72 +18 06.4	56	18 16	18 45	19 20	9 43 50	*** **			
7	283	20.3		01.9	211	39.2	71 11.9	55	15	42	14	9 56 51	*** **			
8	298	20.5		02.9	226	05.3	71 17.3	54	14	39	09	10 07 53	*** **			
9	313	20.7		03.9	240	31.3	70 22.5	52	13	37	19 05	17 54	*** **			
10	328	20.9		04.9	254	57.3	70 27.7	52	12	34	18 59	34 55	*** **			
11	343	21.1	+1	05.9	269	23.2	69 +18 32.7	50	10 N	18 11	18 32	18 56	10 49 57	23 45 59		
12	358	21.3	+1	06.9	283	49.1	69 +18 37.6	49	0	18 10	18 31	18 55	11 03 58	23 30 59		
13	13	21.4		07.8	298	14.9	68 42.4	48	10 S	09	30	54	17 59	16 57		
14	28	21.6		08.8	312	40.7	68 47.1	47	20	08	30	56	32 61	23 00 57		
15	43	21.8		09.8	327	06.4	67 51.7	46	30	08	31	18 59	11 50 61	22 42 56		
16	58	22.0		10.8	341	32.1	67 +18 56.2	45	35	07	32	19 02	12 00 63	31 55		
17	73	22.2	+1	11.8	355	57.7	66 +19 00.5	43	40	18 07	18 34	19 05	12 12 63	22 19 55		
18	88	22.4	+1	12.8	10	23.3	66 +19 04.7	42	45	18 06	18 36	19 10	12 26 64	22 05 54		
19	103	22.6		13.7	24	48.9	66 08.8	41	50	06	38	16	42 67	21 47 53		
20	118	22.8		14.7	39	14.4	65 12.8	40	52	06	39	19	50 67	39 52		
21	133	22.9		15.7	53	39.9	65 16.6	38	54	05	41	22	12 59 68	30 51		
22	148	23.1		16.7	68	05.3	64 20.3	37	56	05	42	26	13 09 69	20 50		
23	163	23.3		17.7	82	30.7	64 23.9	36	58	05	44	30	21 70	21 08 50		
24	178	23.5	+1	18.7	96	56.1	64 +19 27.4	35	60 S	18 05	18 46	19 35	13 34 71	20 54 49		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 11 ^h 56 ^m 3		Mag: -3.9 PMG: 13 ^h 13 ^m			Mag: +0.4 PMG: 6 ^h 11 ^m			Mag: -2.4 PMG: 3 ^h 21 ^m			Mag: +0.5 PMG: 6 ^h 34 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'
0	180	26.0	161	46.6	+7	00.7	267 08.2	-23 31.9	309 34.8	-17 18.3		261 08.5	-22 16.7			
1	195	28.5	176	46.2		01.9	282 09.1	31.9	324 37.4	18.2		276 10.9	16.7			
2	210	30.9	191	45.8		03.1	297 10.1	32.0	339 40.0	18.2		291 13.2	16.7			
3	225	33.4	206	45.5		04.4	312 11.0	32.0	354 42.5	18.2		306 15.6	16.7			
4	240	35.9	221	45.1		05.6	327 11.9	32.0	9 45.1	18.1		321 17.9	16.7			
5	255	38.3	236	44.7	+7	06.9	342 12.8	-23 32.0	24 47.7	-17 18.1		336 20.3	-22 16.7			
6	270	40.8	251	44.3	+7	08.1	357 13.8	-23 32.0	39 50.2	-17 18.1		351 22.6	-22 16.7			
7	285	43.3	266	43.9		09.4	12 14.7	32.1	54 52.8	18.0		6 25.0	16.7			
8	300	45.7	281	43.5		10.6	27 15.6	32.1	69 55.4	18.0		21 27.3	16.7			
9	315	48.2	296	43.1		11.9	42 16.5	32.1	84 58.0	18.0		36 29.7	16.7			
10	330	50.6	311	42.7		13.1	57 17.4	32.1	100 00.5	17.9		51 32.0	16.7			
11	345	53.1	326	42.3	+7	14.3	72 18.4	-23 32.2	115 03.1	-17 17.9		66 34.4	-22 16.7			
12	0	55.6	341	41.9	+7	15.6	87 19.3	-23 32.2	130 05.7	-17 17.9		81 36.7	-22 16.6			
13	15	58.0	356	41.6		16.8	102 20.2	32.2	145 08.3	17.8		96 39.1	16.6			
14	31	00.5	11	41.2		18.1	117 21.1	32.2	160 10.8	17.8		111 41.4	16.6			
15	46	03.0	26	40.8		19.3	132 22.1	32.2	175 13.4	17.8		126 43.8	16.6			
16	61	05.4	41	40.4		20.6	147 23.0	32.3	190 16.0	17.7		141 46.1	16.6			
17	76	07.9	56	40.0	+7	21.8	162 23.9	-23 32.3	205 18.6	-17 17.7		156 48.5	-22 16.6			
18	91	10.4	71	39.6	+7	23.0	177 24.8	-23 32.3	220 21.1	-17 17.7		171 50.9	-22 16.6			
19	106	12.8	86	39.2		24.3	192 25.8	32.3	235 23.7	17.6		186 53.2	16.6			
20	121	15.3	101	38.8		25.5	207 26.7	32.3	250 26.3	17.6		201 55.6	16.6			
21	136	17.7	116	38.4		26.8	222 27.6	32.3	265 28.9	17.6		216 57.9	16.6			
22	151	20.2	131	38.0		28.0	237 28.5	32.4	280 31.5	17.5		232 00.3	16.6			
23	166	22.7	146	37.6		29.2	252 29.5	32.4	295 34.0	17.5		247 02.6	16.6			
24	181	25.1	161	37.2	+7	30.5	267 30.4	-23 32.4	310 36.6	-17 17.5		262 05.0	-22 16.6			
Dif	—		-4		+12		+9		0		+26		0		+24	
0																

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16:0			Edad: 6 ^d 5	PHE {	SD: 16:1		SD: 18 ^h 15 ^m	R°: 58 ^m		Náutico	Civil	Hora	R°	Hora	R°
	PMG: 12 ^h 06 ^m 3															
	hG ☉	Dec		hG ☾	Dif	Dec	Dif									
h	o	'	o	o	'	o	'	o	h	m	h	m	h	m	h	m
0	178	23.5	+1 18.7	96	56.1	+19 27.4	34	60 N	4 17	5 08	5 50	9 20	56	2 08	65	
1	193	23.7	19.7	111	21.4	30.8	34	58	24	12	51	34	57	1 54	64	
2	208	23.9	20.6	125	46.7	34.0	32	56	30	15	52	46	57	42	64	
3	223	24.1	21.6	140	12.0	37.1	31	54	35	18	53	9 57	57	32	66	
4	238	24.3	22.6	154	37.2	40.1	30	52	40	20	54	10 06	58	22	63	
5	253	24.4	+1 23.6	169	02.4	42.9	28	50	4 44	5 22	5 54	10 15	57	1 14	63	
6	268	24.6	+1 24.6	183	27.5	45.6	27	45	4 52	5 27	5 56	10 33	57	0 56	62	
7	283	24.8	25.6	197	52.7	48.2	26	40	4 58	30	57	10 47	58	42	61	
8	298	25.0	26.6	212	17.8	50.7	25	35	5 03	33	58	11 00	58	30	61	
9	313	25.2	27.5	226	42.8	53.0	23	30	07	35	5 59	11	58	19	61	
10	328	25.4	28.5	241	07.8	55.2	22	20	13	39	6 01	29	59	0 01	60	
11	343	25.6	+1 29.5	255	32.9	57.3	21	10 N	5 17	5 41	6 02	11 46	58	***	***	
12	358	25.8	+1 30.5	269	57.8	59.2	19	0	5 18	5 42	6 03	12 01	58	***	***	
13	13	26.0	31.5	284	22.8	01.0	18	10 S	19	43	04	16	59	***	***	
14	28	26.1	32.5	298	47.7	02.7	17	20	17	43	05	33	58	23 57	59	
15	43	26.3	33.4	313	12.6	04.3	16	30	14	42	06	12 51	59	38	60	
16	58	26.5	34.4	327	37.5	05.7	14	35	12	41	06	13 03	58	26	61	
17	73	26.7	+1 35.4	342	02.4	07.0	13	40	5 08	5 40	6 07	13 15	59	23 14	61	
18	88	26.9	+1 36.4	356	27.2	08.1	11	45	5 04	5 38	6 07	13 30	59	22 59	61	
19	103	27.1	37.4	10	52.1	09.2	11	50	4 58	36	08	49	58	40	62	
20	118	27.3	38.4	25	16.9	10.0	8	52	55	35	08	13 57	59	31	62	
21	133	27.5	39.3	39	41.7	10.8	8	54	52	33	08	14 07	58	21	63	
22	148	27.6	40.3	54	06.5	11.4	6	56	48	32	09	18	58	22 10	63	
23	163	27.8	41.3	68	31.2	11.9	5	58	44	30	09	31	58	21 58	63	
24	178	28.0	+1 42.3	82	56.0	12.3	4	60 S	4 39	5 28	6 09	14 45	58	21 43	64	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 11 ^h 52 ^m 4		Mag: -3.9 PMG: 13 ^h 14 ^m		Mag: +0.4 PMG: 6 ^h 10 ^m		Mag: -2.4 PMG: 3 ^h 17 ^m		Mag: +0.5 PMG: 6 ^h 31 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	o	'	o	'	o	'	o	'	o	'
0	181	25.1	161	37.2	267	30.4	310	36.6	262	05.0
1	196	27.6	176	36.8	282	31.3	325	39.2	277	07.3
2	211	30.1	191	36.4	297	32.2	340	41.8	292	09.7
3	226	32.5	206	36.0	312	33.2	355	44.4	307	12.0
4	241	35.0	221	35.7	327	34.1	10	46.9	322	14.4
5	256	37.5	236	35.3	342	35.0	25	49.5	337	16.8
6	271	39.9	251	34.9	357	35.9	40	52.1	352	19.1
7	286	42.4	266	34.5	12	36.9	55	54.7	7	21.5
8	301	44.9	281	34.1	27	37.8	70	57.3	22	23.8
9	316	47.3	296	33.7	42	38.7	85	59.8	37	26.2
10	331	49.8	311	33.3	57	39.6	101	02.4	52	28.5
11	346	52.2	326	32.9	72	40.6	116	05.0	67	30.9
12	1	54.7	341	32.5	87	41.5	131	07.6	82	33.2
13	16	57.2	356	32.1	102	42.4	146	10.2	97	35.6
14	31	59.6	11	31.7	117	43.4	161	12.8	112	38.0
15	47	02.1	26	31.3	132	44.3	176	15.3	127	40.3
16	62	04.6	41	30.9	147	45.2	191	17.9	142	42.7
17	77	07.0	56	30.5	162	46.1	206	20.5	157	45.0
18	92	09.5	71	30.1	177	47.1	221	23.1	172	47.4
19	107	12.0	86	29.7	192	48.0	236	25.7	187	49.8
20	122	14.4	101	29.3	207	48.9	251	28.3	202	52.1
21	137	16.9	116	28.9	222	49.9	266	30.8	217	54.5
22	152	19.4	131	28.5	237	50.8	281	33.4	232	56.8
23	167	21.8	146	28.1	252	51.7	296	36.0	247	59.2
24	182	24.3	161	27.7	267	52.6	311	38.6	263	01.5
Dif	—		-4	+12	+9	0	+26	0	+24	0

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16°0 PMG: 12 ^h 06 ^m 0			Edad: 7 ^d 5 SD: 16°2 PMG: 19 ^h 13 ^m	PHE { 4 ^h : 59/3 12 ^h : 59/3 20 ^h : 59/4 R°: 59 ^m									
	hG ☉	Dec	Dif			Civil			Náutico	Hora	R°	Hora	R°	
h	o	'	o	'	o	'	o	h m	h m	h m	h m m	h m m	h m m	h m m
0	178	28.0	+1	42.3	82	56.0	+20 12.3	60 N	18 27	19 09	20 00	10 16 71	3 13 50	
1	193	28.2		43.3	97	20.7	12.5	58	25	05	19 53	31 69	2 58 52	
2	208	28.4		44.3	111	45.5	12.6	56	24	19 01	46	43 68	46 52	
3	223	28.6		45.2	126	10.2	12.5	54	23	18 58	41	10 54 67	35 53	
4	238	28.8		46.2	140	34.9	12.3	52	22	56	36	11 04 66	25 54	
5	253	29.0	+1	47.2	154	59.6	+20 12.0	50	18 21	18 53	19 32	11 12 66	2 17 54	
6	268	29.2	+1	48.2	169	24.3	+20 11.6	45	18 19	18 48	19 23	11 30 65	1 58 56	
7	283	29.3		49.2	183	49.0	11.0	40	17	44	16	45 64	43 56	
8	298	29.5		50.2	198	13.7	10.2	35	16	41	11	11 58 63	31 56	
9	313	29.7		51.1	212	38.4	09.4	30	14	38	06	12 09 62	20 57	
10	328	29.9		52.1	227	03.1	08.4	20	12	34	19 00	28 60	1 01 57	
11	343	30.1	+1	53.1	241	27.8	+20 07.3	10 N	18 11	18 32	18 56	12 44 60	0 44 58	
12	358	30.3	+1	54.1	255	52.5	+20 06.0	0	18 09	18 30	18 54	12 59 59	0 29 58	
13	13	30.5		55.1	270	17.2	04.6	10 S	08	29	53	13 15 57	0 13 59	
14	28	30.7		56.0	284	41.9	03.1	20	07	29	54	31 57	*** ** *	
15	43	30.9		57.0	299	06.6	+20 01.4	30	05	29	57	13 50 55	*** ** *	
16	58	31.0		58.0	313	31.4	+19 59.6	35	04	30	18 59	14 01 54	*** ** *	
17	73	31.2	+1	59.0	327	56.1	+19 57.7	40	18 04	18 30	19 02	14 14 53	*** ** *	
18	88	31.4	+2	00.0	342	20.8	+19 55.6	45	18 03	18 32	19 06	14 29 51	*** ** *	
19	103	31.6	+2	01.0	356	45.6	53.4	50	02	34	11	47 50	23 42 69	
20	118	31.8		01.9	11	10.3	51.1	52	01	35	14	14 56 49	33 71	
21	133	32.0		02.9	25	35.1	48.6	54	01	36	17	15 05 49	24 71	
22	148	32.2		03.9	39	59.9	46.1	56	18 00	37	20	16 47	13 73	
23	163	32.4		04.9	54	24.7	43.3	58	17 59	38	24	29 45	23 01 74	
24	178	32.6	+2	05.9	68	49.5	+19 40.5	60 S	17 59	18 40	19 29	15 43 44	22 47 76	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 11 ^h 48 ^m 4		Mag: -3.9 PMG: 13 ^h 15 ^m		Mag: +0.4 PMG: 6 ^h 08 ^m		Mag: -2.4 PMG: 3 ^h 13 ^m		Mag: +0.5 PMG: 6 ^h 27 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	o	'	o	'	o	'	o	'	o	'
0	182	24.3	161	27.7	+8	00.1	267	52.6	-23	32.8
1	197	26.7	176	27.3		01.4	282	53.6		32.8
2	212	29.2	191	26.9		02.6	297	54.5		32.8
3	227	31.7	206	26.5		03.8	312	55.4		32.8
4	242	34.1	221	26.1		05.0	327	56.4		32.8
5	257	36.6	236	25.7	+8	06.3	342	57.3	-23	32.8
6	272	39.1	251	25.3	+8	07.5	357	58.2	-23	32.8
7	287	41.5	266	24.9		08.7	12	59.2		32.9
8	302	44.0	281	24.5		10.0	28	00.1		32.9
9	317	46.5	296	24.1		11.2	43	01.0		32.9
10	332	48.9	311	23.7		12.4	58	01.9		32.9
11	347	51.4	326	23.3	+8	13.7	73	02.9	-23	32.9
12	2	53.9	341	22.9	+8	14.9	88	03.8	-23	32.9
13	17	56.3	356	22.5		16.1	103	04.7		32.9
14	32	58.8	11	22.1		17.3	118	05.7		32.9
15	48	01.2	26	21.7		18.6	133	06.6		32.9
16	63	03.7	41	21.3		19.8	148	07.5		32.9
17	78	06.2	56	20.9	+8	21.0	163	08.5	-23	33.0
18	93	08.6	71	20.5	+8	22.2	178	09.4	-23	33.0
19	108	11.1	86	20.1		23.5	193	10.3		33.0
20	123	13.6	101	19.7		24.7	208	11.3		33.0
21	138	16.0	116	19.3		25.9	223	12.2		33.0
22	153	18.5	131	18.9		27.1	238	13.1		33.0
23	168	21.0	146	18.5		28.4	253	14.1		33.0
24	183	23.4	161	18.1	+8	29.6	268	15.0	-23	33.0
Dif	—		-4		+12		+9		0	
									+26	
									0	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16/0 PMG: 12 ^h 05 ^m 7			Edad: 8 ^d 5 PHE { 4 ^h : 59/4 12 ^h : 59/4 20 ^h : 59/4 SD: 16/2 PMG: 20 ^h 12 ^m R°: 56 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m			
0	178	32.6	+2	05.9	68	49.5	+19	40.5	60 N	4 11	5 02	5 44	11 27	81	4 03 38			
1	193	32.8		06.8	83	14.4	59	37.5	58	18	06	45	40	79	3 50 40			
2	208	32.9		07.8	97	39.2	58	34.4	56	24	09	47	11 51	77	38 42			
3	223	33.1		08.8	112	04.1	59	31.1	54	30	12	48	12 01	75	28 44			
4	238	33.3		09.8	126	29.0	59	27.7	52	35	15	49	10	74	19 45			
5	253	33.5	+2	10.8	140	53.9	59	+19	24.2	50	4 39	5 18	5 50	12 18	72 3 11 46			
6	268	33.7	+2	11.8	155	18.8	59	+19	20.6	45	4 48	5 23	5 52	12 35	69 2 54 48			
7	283	33.9		12.7	169	43.8	60	16.8	40	4 55	27	54	12 49	67	39 50			
8	298	34.1		13.7	184	08.8	60	12.9	39	5 01	30	56	13 01	65	27 51			
9	313	34.3		14.7	198	33.8	60	08.9	40	30	05	33	57	11 64	2 17 52			
10	328	34.5		15.7	212	58.9	61	04.8	41	20	11	37	5 59	28 62	1 58 55			
11	343	34.6	+2	16.7	227	23.9	60	+19	00.5	10 N	5 15	5 40	6 01	13 44	59 1 42 57			
12	358	34.8	+2	17.6	241	49.0	61	+18	56.1	45	5 18	5 42	6 02	13 58	57 1 27 58			
13	13	35.0		18.6	256	14.1	61	51.6	44	10 S	19	43	04	14 12	55 1 12 60			
14	28	35.2		19.6	270	39.3	62	46.9	47	20	18	43	05	28 52	0 56 62			
15	43	35.4		20.6	285	04.5	62	42.1	48	30	15	43	07	45 50	38 63			
16	58	35.6		21.6	299	29.7	62	37.2	49	35	13	43	08	14 55	49 27 64			
17	73	35.8	+2	22.5	313	55.0	63	+18	32.2	40	5 10	5 42	6 09	15 07	47 0 15 65			
18	88	36.0	+2	23.5	328	20.3	63	+18	27.1	45	5 06	5 41	6 10	15 20	45 0 00 67			
19	103	36.2		24.5	342	45.6	63	21.8	53	50	5 01	39	11	37 42	*** ** *			
20	118	36.3		25.5	357	11.0	64	16.4	54	52	4 59	38	12	45 40	*** ** *			
21	133	36.5		26.5	11	36.4	64	10.9	55	54	56	37	12	15 54	38 *** ** *			
22	148	36.7		27.4	26	01.8	64	+18	05.3	56	52	36	13	16 03	37 *** ** *			
23	163	36.9		28.4	40	27.3	65	+17	59.6	57	48	34	14	14 35	*** ** *			
24	178	37.1	+2	29.4	54	52.8	65	+17	53.7	59	4 44	5 33	6 14	16 27	32 *** ** *			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 11 ^h 44 ^m 5		Mag: -3.9 PMG: 13 ^h 15 ^m			Mag: +0.4 PMG: 6 ^h 07 ^m			Mag: -2.4 PMG: 3 ^h 09 ^m			Mag: +0.5 PMG: 6 ^h 23 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o			
0	183	23.4	161	18.1	+8	29.6	268	15.0	-23	33.0	312	40.8	-17	15.7	263	58.2	-22	16.2
1	198	25.9	176	17.7		30.8	283	15.9		33.0	327	43.4		15.7	279	00.6		16.2
2	213	28.3	191	17.3		32.0	298	16.9		33.0	342	46.0		15.7	294	02.9		16.2
3	228	30.8	206	16.9		33.3	313	17.8		33.0	357	48.6		15.6	309	05.3		16.2
4	243	33.3	221	16.5		34.5	328	18.7		33.0	12	51.1		15.6	324	07.7		16.2
5	258	35.7	236	16.1	+8	35.7	343	19.7	-23	33.1	27	53.7	-17	15.6	339	10.0	-22	16.2
6	273	38.2	251	15.6	+8	36.9	358	20.6	-23	33.1	42	56.3	-17	15.5	354	12.4	-22	16.2
7	288	40.7	266	15.2		38.2	13	21.5		33.1	57	58.9		15.5	9	14.8		16.2
8	303	43.1	281	14.8		39.4	28	22.5		33.1	73	01.5		15.4	24	17.1		16.2
9	318	45.6	296	14.4		40.6	43	23.4		33.1	88	04.1		15.4	39	19.5		16.2
10	333	48.1	311	14.0		41.8	58	24.3		33.1	103	06.7		15.4	54	21.9		16.2
11	348	50.5	326	13.6	+8	43.0	73	25.3	-23	33.1	118	09.3	-17	15.3	69	24.2	-22	16.2
12	3	53.0	341	13.2	+8	44.3	88	26.2	-23	33.1	133	11.9	-17	15.3	84	26.6	-22	16.1
13	18	55.5	356	12.8		45.5	103	27.2		33.1	148	14.5		15.2	99	28.9		16.1
14	33	57.9	11	12.4		46.7	118	28.1		33.1	163	17.1		15.2	114	31.3		16.1
15	49	00.4	26	12.0		47.9	133	29.0		33.1	178	19.7		15.2	129	33.7		16.1
16	64	02.8	41	11.6		49.1	148	30.0		33.1	193	22.3		15.1	144	36.0		16.1
17	79	05.3	56	11.2	+8	50.3	163	30.9	-23	33.1	208	24.9	-17	15.1	159	38.4	-22	16.1
18	94	07.8	71	10.8	+8	51.6	178	31.8	-23	33.1	223	27.5	-17	15.1	174	40.8	-22	16.1
19	109	10.2	86	10.3		52.8	193	32.8		33.1	238	30.1		15.0	189	43.1		16.1
20	124	12.7	101	09.9		54.0	208	33.7		33.1	253	32.7		15.0	204	45.5		16.1
21	139	15.2	116	09.5		55.2	223	34.7		33.1	268	35.3		14.9	219	47.9		16.1
22	154	17.6	131	09.1		56.4	238	35.6		33.1	283	37.9		14.9	234	50.2		16.1
23	169	20.1	146	08.7		57.6	253	36.5		33.1	298	40.5		14.9	249	52.6		16.1
24	184	22.6	161	08.3	+8	58.9	268	37.5	-23	33.1	313	43.1	-17	14.8	264	55.0	-22	16.1
Dif	—		-4 +12			+9 0			+26 0			+24 0						

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16°0 PMG: 12 ^h 05 ^m 4			Edad: 9 ^d 5 PHE { SD: 16°2 PMG: 21 ^h 08 ^m R°: 55 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	o	'	o	'	o	'	o	h m	h m	h m	h m m	h m m	h m m	
0	178	37.1	+2 29.4	54	52.8	+17 53.7	60 N	18 31	19 14	20 06	12 48 86	4 41 28		
1	193	37.3		69	18.4	47.7	60	58	30	09	19 58	12 59 83	30 31	
2	208	37.5	31.4	83	44.0	41.7	60	56	28	05	51	13 08 81	20 33	
3	223	37.7	32.3	98	09.6	35.5	62	54	26	19 02	45	16 79	12 34	
4	238	37.9	33.3	112	35.3	29.1	64	52	25	18 59	40	24 76	4 04 36	
5	253	38.1	+2 34.3	127	01.0	+17 22.7	64	50	18 24	18 56	19 35	13 30 75	3 57 38	
6	268	38.2	+2 35.3	141	26.8	+17 16.2	65	45	18 21	18 51	19 26	13 44 72	3 42 41	
7	283	38.4	36.2	155	52.6	09.5	67	40	19	46	18	13 56 69	29 44	
8	298	38.6	37.2	170	18.4	+17 02.8	67	35	17	43	12	14 06 67	18 46	
9	313	38.8	38.2	184	44.3	+16 55.9	69	30	16	40	08	15 64	3 09 48	
10	328	39.0	39.2	199	10.3	48.9	70	20	13	35	19 01	30 61	2 53 51	
11	343	39.2	+2 40.2	213	36.3	+16 41.8	71	10 N	18 11	18 32	18 56	14 43 58	2 39 53	
12	358	39.4	+2 41.1	228	02.3	+16 34.6	72	0	18 09	18 29	18 53	14 55 55	2 25 57	
13	13	39.6	42.1	242	28.4	27.3	73	10 S	07	28	52	15 07 52	2 12 59	
14	28	39.8	43.1	256	54.6	19.9	74	20	05	27	52	20 49	1 58 61	
15	43	39.9	44.1	271	20.8	12.4	75	30	03	27	54	35 46	41 65	
16	58	40.1	45.1	285	47.0	+16 04.8	76	35	02	27	56	44 43	31 67	
17	73	40.3	+2 46.0	300	13.3	+15 57.1	77	40	18 00	18 27	18 59	15 54 41	1 20 69	
18	88	40.5	+2 47.0	314	39.6	+15 49.3	78	45	17 59	18 28	19 02	16 05 38	1 07 71	
19	103	40.7	48.0	329	06.0	41.4	79	50	57	29	07	19 35	0 51 74	
20	118	40.9	49.0	343	32.5	33.4	80	52	56	30	09	25 33	44 75	
21	133	41.1	49.9	357	58.9	25.3	81	54	56	31	12	32 32	35 78	
22	148	41.3	50.9	12	25.5	17.1	82	56	55	32	15	40 30	26 79	
23	163	41.5	51.9	26	52.1	08.8	83	58	54	33	19	49 27	15 82	
24	178	41.7	+2 52.9	41	18.7	+15 00.4	84	60 S	17 53	18 34	19 23	16 59 24	0 03 85	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 11 ^h 40 ^m 6		Mag: -3.9 PMG: 13 ^h 16 ^m		Mag: +0.4 PMG: 6 ^h 05 ^m		Mag: -2.4 PMG: 3 ^h 05 ^m		Mag: +0.5 PMG: 6 ^h 19 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	o	'	o	'	o	'	o	'	o	'	
0	184	22.6	161	08.3	+8 58.9	-23 33.1	313	43.1	-17 14.8	264	55.0
1	199	25.0	176	07.9	+9 00.1	283	38.4	33.2	328	45.7	
2	214	27.5	191	07.5	01.3	298	39.3	33.2	343	48.3	
3	229	30.0	206	07.1	02.5	313	40.3	33.2	358	50.9	
4	244	32.4	221	06.7	03.7	328	41.2	33.2	13	53.5	
5	259	34.9	236	06.2	+9 04.9	343	42.2	-23 33.2	28	56.1	
6	274	37.3	251	05.8	+9 06.2	358	43.1	-23 33.2	43	58.7	
7	289	39.8	266	05.4	07.4	13	44.0	33.2	59	01.3	
8	304	42.3	281	05.0	08.6	28	45.0	33.2	74	03.9	
9	319	44.7	296	04.6	09.8	43	45.9	33.2	89	06.5	
10	334	47.2	311	04.2	11.0	58	46.9	33.2	104	09.1	
11	349	49.7	326	03.8	+9 12.2	73	47.8	-23 33.2	119	11.7	
12	4	52.1	341	03.4	+9 13.4	88	48.7	-23 33.2	134	14.3	
13	19	54.6	356	02.9	14.6	103	49.7	33.2	149	17.0	
14	34	57.1	11	02.5	15.8	118	50.6	33.2	164	19.6	
15	49	59.5	26	02.1	17.1	133	51.6	33.2	179	22.2	
16	65	02.0	41	01.7	18.3	148	52.5	33.2	194	24.8	
17	80	04.4	56	01.3	+9 19.5	163	53.4	-23 33.2	209	27.4	
18	95	06.9	71	00.9	+9 20.7	178	54.4	-23 33.2	224	30.0	
19	110	09.4	86	00.5	21.9	193	55.3	33.2	239	32.6	
20	125	11.8	101	00.0	23.1	208	56.3	33.2	254	35.2	
21	140	14.3	115	59.6	24.3	223	57.2	33.2	269	37.8	
22	155	16.8	130	59.2	25.5	238	58.2	33.2	284	40.4	
23	170	19.2	145	58.8	26.7	253	59.1	33.2	299	43.0	
24	185	21.7	160	58.4	+9 27.9	269	00.0	-23 33.2	314	45.6	
Dif	—		-4	+12		+9	0		+26	0	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'0 PMG: 12 ^h 05 ^m 1			Edad: 10 ^d 5 PHE { SD: 16'1 PMG: 22 ^h 03 ^m 4 ^h : 59'3 12 ^h : 59'2 20 ^h : 59'1 R°: 52 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°		
h	o	'	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m
0	178	41.7	+2	52.9	41	18.7	+15	00.4	60 N	4 04	4 56	5 38	14 14	88	5 09	22	
1	193	41.8		53.8	55	45.4	77	+14	51.9	12	5 00	40	22	85	5 01	24	
2	208	42.0		54.8	70	12.2	78		43.4	19	04	41	29	82	4 53	27	
3	223	42.2		55.8	84	39.0	78		34.7	25	07	43	35	80	46	29	
4	238	42.4		56.8	99	05.8	78		26.0	30	10	44	40	78	40	31	
5	253	42.6	+2	57.8	113	32.7	79	+14	17.1	4 34	5 13	5 46	14 45	76	4 35	32	
6	268	42.8	+2	58.7	127	59.7	80	+14	08.2	4 44	5 19	5 49	14 56	72	4 23	36	
7	283	43.0	+2	59.7	142	26.7	80	+13	59.2	52	24	51	15 05	69	13	39	
8	298	43.2	+3	00.7	156	53.8	81		50.1	4 58	27	53	13	66	4 04	42	
9	313	43.4		01.7	171	20.9	81		40.9	5 02	30	54	19	64	3 57	44	
10	328	43.5		02.6	185	48.1	82		31.7	10	35	5 57	31	59	44	47	
11	343	43.7	+3	03.6	200	15.3	82	+13	22.3	5 14	5 39	6 00	15 41	56	3 32	51	
12	358	43.9	+3	04.6	214	42.6	83	+13	12.9	5 17	5 41	6 02	15 50	53	3 22	54	
13	13	44.1		05.6	229	10.0	84	+13	03.4	18	43	04	15 59	50	3 11	57	
14	28	44.3		06.5	243	37.3	83	+12	53.9	20	18	44	06	16 09	46	2 59	60
15	43	44.5		07.5	258	04.8	85		44.2	30	17	44	08	21	42	46	64
16	58	44.7		08.5	272	32.3	85		34.5	35	15	44	09	27	40	38	66
17	73	44.9	+3	09.5	286	59.8	85	+12	24.7	40	5 12	5 44	6 11	16 35	37	2 29	69
18	88	45.1	+3	10.4	301	27.5	87	+12	14.8	45	5 09	5 43	6 12	16 43	34	2 18	72
19	103	45.3		11.4	315	55.1	86	+12	04.9	50	04	42	14	54	30	2 05	76
20	118	45.4		12.4	330	22.8	87	+11	54.9	52	5 02	41	15	16 58	29	1 59	78
21	133	45.6		13.4	344	50.6	88		44.8	54	4 59	41	16	17 04	26	53	80
22	148	45.8		14.3	359	18.4	88		34.7	56	56	40	17	10	24	45	83
23	163	46.0		15.3	13	46.3	89		24.5	58	53	39	18	16	22	37	85
24	178	46.2	+3	16.3	28	14.2	89	+11	14.2	60 S	4 49	5 38	6 19	17 23	19	1 28	87
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG 11 ^h 36 ^m 6		Mag: -3.9 PMG: 13 ^h 16 ^m			Mag: +0.3 PMG: 6 ^h 04 ^m			Mag: -2.4 PMG: 3 ^h 00 ^m			Mag: +0.5 PMG: 6 ^h 16 ^m					
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'	
0	185	21.7	160	58.4	+9	27.9	269	00.0	-23	33.2	314	45.6	-17	13.9	265	51.8	
1	200	24.2	175	58.0		29.1	284	01.0		33.2	329	48.2		13.8	280	54.2	
2	215	26.6	190	57.5		30.3	299	01.9		33.2	344	50.8		13.8	295	56.6	
3	230	29.1	205	57.1		31.5	314	02.9		33.2	359	53.5		13.7	310	59.0	
4	245	31.6	220	56.7		32.8	329	03.8		33.2	14	56.1		13.7	326	01.3	
5	260	34.0	235	56.3	+9	34.0	344	04.8	-23	33.2	29	58.7	-17	13.7	341	03.7	
6	275	36.5	250	55.9	+9	35.2	359	05.7	-23	33.1	45	01.3	-17	13.6	356	06.1	
7	290	38.9	265	55.5		36.4	14	06.6		33.1	60	03.9		13.6	11	08.5	
8	305	41.4	280	55.0		37.6	29	07.6		33.1	75	06.5		13.5	26	10.8	
9	320	43.9	295	54.6		38.8	44	08.5		33.1	90	09.1		13.5	41	13.2	
10	335	46.3	310	54.2		40.0	59	09.5		33.1	105	11.7		13.4	56	15.6	
11	350	48.8	325	53.8	+9	41.2	74	10.4	-23	33.1	120	14.3	-17	13.4	71	17.9	
12	5	51.3	340	53.4	+9	42.4	89	11.4	-23	33.1	135	17.0	-17	13.4	86	20.3	
13	20	53.7	355	52.9		43.6	104	12.3		33.1	150	19.6		13.3	101	22.7	
14	35	56.2	10	52.5		44.8	119	13.3		33.1	165	22.2		13.3	116	25.1	
15	50	58.7	25	52.1		46.0	134	14.2		33.1	180	24.8		13.2	131	27.4	
16	66	01.1	40	51.7		47.2	149	15.1		33.1	195	27.4		13.2	146	29.8	
17	81	03.6	55	51.3	+9	48.4	164	16.1	-23	33.1	210	30.0	-17	13.2	161	32.2	
18	96	06.1	70	50.8	+9	49.6	179	17.0	-23	33.1	225	32.6	-17	13.1	176	34.6	
19	111	08.5	85	50.4		50.8	194	18.0		33.1	240	35.2		13.1	191	36.9	
20	126	11.0	100	50.0		52.0	209	18.9		33.1	255	37.9		13.0	206	39.3	
21	141	13.4	115	49.6		53.2	224	19.9		33.1	270	40.5		13.0	221	41.7	
22	156	15.9	130	49.2		54.4	239	20.8		33.1	285	43.1		12.9	236	44.1	
23	171	18.4	145	48.7		55.6	254	21.8		33.1	300	45.7		12.9	251	46.4	
24	186	20.8	160	48.3	+9	56.8	269	22.7	-23	33.1	315	48.3	-17	12.9	266	48.8	
Dif	—		-4 +12				+9 0				+26 0				+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 8			Edad: 11 ^d 5 PHE { 4 ^h : 59'0 12 ^h : 58'9 20 ^h : 58'8 SD: 16'0 PMG: 22 ^h 55 ^m R°: 50 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°			
h	o	'	o	'	o	'	o	'	h	m	h	m	h	m	h	m		
0	178	46.2	+3	16.3	28	14.2	+11	14.2	60 N	18 36	19 19	20 11	15 42	87	5 31	17		
1	193	46.4		17.3	42	42.2	90	+11	03.9	58	34	14	20 03	47	84	25 20		
2	208	46.6		18.2	57	10.3	91	+10	53.5	56	32	10	19 56	51	81	20 22		
3	223	46.8		19.2	71	38.3	90		43.0	54	30	06	49	55	79	15 25		
4	238	47.0		20.2	86	06.5	92		32.5	52	28	03	44	15 58	77	11 27		
5	253	47.1	+3	21.2	100	34.7	92	+10	22.0	50	18 27	19 00	19 39	16 01	76	5 07 29		
6	268	47.3	+3	22.1	115	02.9	92	+10	11.3	45	18 24	18 53	19 28	16 08	71	4 59 32		
7	283	47.5		23.1	129	31.2	93	+10	00.7	40	21	48	20	14	68	52 35		
8	298	47.7		24.1	143	59.6	94	+9	49.9	35	19	44	14	19	65	46 38		
9	313	47.9		25.1	158	28.0	94		39.1	30	17	41	09	23	62	41 40		
10	328	48.1		26.0	172	56.4	94		28.3	20	13	36	19 01	30	58	31 45		
11	343	48.3	+3	27.0	187	24.9	95	+9	17.4	10 N	18 11	18 32	18 56	16 37	54	4 23 49		
12	358	48.5	+3	28.0	201	53.5	96	+9	06.5	0	18 08	18 29	18 53	16 43	51	4 16 51		
13	13	48.7		28.9	216	22.1	96	+8	55.5	10 S	06	27	51	49	47	4 08 55		
14	28	48.8		29.9	230	50.7	96		44.4	20	03	25	51	16	55 44	3 59 59		
15	43	49.0		30.9	245	19.4	97		33.4	30	18 00	24	52	17 03	39	50 63		
16	58	49.2		31.9	259	48.2	98		22.2	35	17 59	24	53	07	37	44 66		
17	73	49.4	+3	32.8	274	17.0	98	+8	11.1	40	17 57	18 24	18 55	17 12	34	3 38 68		
18	88	49.6	+3	33.8	288	45.8	98	+7	59.9	45	17 55	18 24	18 58	17 17	31	3 30 72		
19	103	49.8		34.8	303	14.7	99		48.6	50	53	25	19 02	24	27	21 76		
20	118	50.0		35.8	317	43.7	100		37.3	52	52	25	05	27	25	17 78		
21	133	50.2		36.7	332	12.7	100		26.0	54	51	26	07	30	23	13 79		
22	148	50.4		37.7	346	41.7	100		14.7	56	50	26	10	34	21	08 82		
23	163	50.5		38.7	1	10.8	101	+7	03.3	58	48	27	13	38	19	3 02 85		
24	178	50.7	+3	39.6	15	39.9	101	+6	51.8	60 S	17 47	18 28	19 16	17 42	16	2 55 88		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 11 ^h 32 ^m 7		Mag: -3.9 PMG: 13 ^h 17 ^m			Mag: +0.3 PMG: 6 ^h 02 ^m			Mag: -2.4 PMG: 2 ^h 56 ^m			Mag: +0.5 PMG: 6 ^h 12 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'				
0	186	20.8	160	48.3	+9	56.8	269	22.7	-23	33.1	315	48.3	-17	12.9	266	48.8	-22	15.8
1	201	23.3	175	47.9		58.0	284	23.7		33.1	330	50.9		12.8	281	51.2		15.8
2	216	25.8	190	47.5		59.2	299	24.6		33.0	345	53.6		12.8	296	53.6		15.8
3	231	28.2	205	47.0	+10	00.4	314	25.6		33.0	0	56.2		12.7	311	55.9		15.8
4	246	30.7	220	46.6		01.6	329	26.5		33.0	15	58.8		12.7	326	58.3		15.7
5	261	33.2	235	46.2	+10	02.8	344	27.5	-23	33.0	31	01.4	-17	12.6	342	00.7	-22	15.7
6	276	35.6	250	45.8	+10	04.0	359	28.4	-23	33.0	46	04.0	-17	12.6	357	03.1	-22	15.7
7	291	38.1	265	45.3		05.1	14	29.4		33.0	61	06.6		12.6	12	05.5		15.7
8	306	40.5	280	44.9		06.3	29	30.3		33.0	76	09.3		12.5	27	07.8		15.7
9	321	43.0	295	44.5		07.5	44	31.3		33.0	91	11.9		12.5	42	10.2		15.7
10	336	45.5	310	44.1		08.7	59	32.2		33.0	106	14.5		12.4	57	12.6		15.7
11	351	47.9	325	43.6	+10	09.9	74	33.2	-23	33.0	121	17.1	-17	12.4	72	15.0	-22	15.7
12	6	50.4	340	43.2	+10	11.1	89	34.1	-23	33.0	136	19.7	-17	12.3	87	17.3	-22	15.7
13	21	52.9	355	42.8		12.3	104	35.1		33.0	151	22.4		12.3	102	19.7		15.7
14	36	55.3	10	42.4		13.5	119	36.0		33.0	166	25.0		12.2	117	22.1		15.7
15	51	57.8	25	41.9		14.7	134	37.0		32.9	181	27.6		12.2	132	24.5		15.7
16	67	00.3	40	41.5		15.9	149	37.9		32.9	196	30.2		12.2	147	26.9		15.7
17	82	02.7	55	41.1	+10	17.1	164	38.9	-23	32.9	211	32.8	-17	12.1	162	29.2	-22	15.7
18	97	05.2	70	40.6	+10	18.3	179	39.8	-23	32.9	226	35.5	-17	12.1	177	31.6	-22	15.7
19	112	07.7	85	40.2		19.4	194	40.8		32.9	241	38.1		12.0	192	34.0		15.7
20	127	10.1	100	39.8		20.6	209	41.7		32.9	256	40.7		12.0	207	36.4		15.7
21	142	12.6	115	39.4		21.8	224	42.7		32.9	271	43.3		11.9	222	38.8		15.6
22	157	15.0	130	38.9		23.0	239	43.6		32.9	286	45.9		11.9	237	41.1		15.6
23	172	17.5	145	38.5		24.2	254	44.6		32.9	301	48.6		11.9	252	43.5		15.6
24	187	20.0	160	38.1	+10	25.4	269	45.5	-23	32.9	316	51.2	-17	11.8	267	45.9	-22	15.6
Dif	—		-4		+12		+9		0		+26		0		+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 5			Edad: 12 ^d 5 PHE { 4 ^h : 58'7 12 ^h : 58'5 20 ^h : 58'3 SD: 15'9 PMG: 23 ^h 45 ^m R°: 49 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m
0	178	50.7	+3	39.6	15	39.9	+6	51.8	60 N	3 57	4 49	5 32	17 09	85	5 48 16
1	193	50.9		40.6	30	09.1 ¹⁰²		40.4 ¹¹⁴	58	4 05	54	34	11 82		45 18
2	208	51.1		41.6	44	38.3 ¹⁰²		28.9 ¹¹⁵	56	13	4 58	36	12 80		42 21
3	223	51.3		42.6	59	07.6 ¹⁰³		17.4 ¹¹⁵	54	19	5 02	38	14 77		40 22
4	238	51.5		43.5	73	36.9 ¹⁰³	+6	05.8 ¹¹⁶	52	25	06	40	15 76		38 24
5	253	51.7	+3	44.5	88	06.3 ¹⁰⁴	+5	54.3 ¹¹⁵	50	4 30	5 09	5 41	17 17	73	5 36 26
6	268	51.9	+3	45.5	102	35.7 ¹⁰⁴	+5	42.7 ¹¹⁶	45	4 40	5 15	5 45	17 19	70	5 31 30
7	283	52.1		46.4	117	05.1 ¹⁰⁴		31.0 ¹¹⁷	40	48	20	48	22 66		27 33
8	298	52.2		47.4	131	34.6 ¹⁰⁵		19.4 ¹¹⁶	35	4 55	25	50	24 63		24 36
9	313	52.4		48.4	146	04.1 ¹⁰⁵	+5	07.7 ¹¹⁷	30	5 00	28	52	25 61		21 38
10	328	52.6		49.3	160	33.7 ¹⁰⁶	+4	56.0 ¹¹⁷	20	08	33	56	28 57		16 43
11	343	52.8	+3	50.3	175	03.3 ¹⁰⁶	+4	44.3 ¹¹⁷	10 N	5 13	5 37	5 58	17 31	53	5 12 46
12	358	53.0	+3	51.3	189	32.9 ¹⁰⁶	+4	32.6 ¹¹⁷	0	5 16	5 40	6 01	17 34	49	5 07 50
13	13	53.2		52.3	204	02.6 ¹⁰⁷		20.8 ¹¹⁸	10 S	18	43	04	36 46		5 03 53
14	28	53.4		53.2	218	32.3 ¹⁰⁷	+4	09.1 ¹¹⁷	20	19	44	06	39 42		4 58 58
15	43	53.6		54.2	233	02.1 ¹⁰⁸	+3	57.3 ¹¹⁸	30	18	45	09	42 37		53 62
16	58	53.7		55.2	247	31.9 ¹⁰⁸		45.5 ¹¹⁸	35	16	46	11	44 35		50 64
17	73	53.9	+3	56.1	262	01.7 ¹⁰⁸	+3	33.7 ¹¹⁸	40	5 14	5 46	6 13	17 46	32	4 46 67
18	88	54.1	+3	57.1	276	31.6 ¹⁰⁹	+3	21.9 ¹¹⁸	45	5 12	5 46	6 15	17 48	29	4 42 71
19	103	54.3		58.1	291	01.5 ¹⁰⁹	+3	10.1 ¹¹⁸	50	08	45	17	51 25		37 75
20	118	54.5	+3	59.0	305	31.5 ¹¹⁰	+2	58.2 ¹¹⁹	52	06	45	18	52 24		35 76
21	133	54.7	+4	00.0	320	01.5 ¹¹⁰		46.4 ¹¹⁸	54	03	44	20	53 22		32 79
22	148	54.9	+4	01.0	334	31.5 ¹¹⁰		34.5 ¹¹⁹	56	5 01	44	21	55 19		30 80
23	163	55.1		02.0	349	01.5 ¹¹⁰		22.7 ¹¹⁸	58	4 57	43	22	57 17		27 83
24	178	55.3	+4	02.9	3	31.6 ¹¹¹	+2	10.8 ¹¹⁹	60 S	4 54	5 43	6 24	17 58	15	4 23 86

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 11 ^h 28 ^m 8		Mag: -3.9 PMG: 13 ^h 18 ^m		Mag: +0.3 PMG: 6 ^h 01 ^m		Mag: -2.4 PMG: 2 ^h 52 ^m		Mag: +0.5 PMG: 6 ^h 08 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	o	'	o	'	o	'	o	'	o	'								
0	187	20.0	160	38.1	+10	25.4	269	45.5	-23	32.9	316	51.2	-17	11.8	267	45.9	-22	15.6
1	202	22.4	175	37.6		26.6	284	46.5		32.8	331	53.8		11.8	282	48.3		15.6
2	217	24.9	190	37.2		27.8	299	47.4		32.8	346	56.4		11.7	297	50.7		15.6
3	232	27.4	205	36.8		29.0	314	48.4		32.8	1	59.1		11.7	312	53.0		15.6
4	247	29.8	220	36.4		30.1	329	49.3		32.8	17	01.7		11.6	327	55.4		15.6
5	262	32.3	235	35.9	+10	31.3	344	50.3	-23	32.8	32	04.3	-17	11.6	342	57.8	-22	15.6
6	277	34.8	250	35.5	+10	32.5	359	51.2	-23	32.8	47	06.9	-17	11.5	358	00.2	-22	15.6
7	292	37.2	265	35.1		33.7	14	52.2		32.8	62	09.6		11.5	13	02.6		15.6
8	307	39.7	280	34.6		34.9	29	53.1		32.8	77	12.2		11.4	28	04.9		15.6
9	322	42.1	295	34.2		36.1	44	54.1		32.7	92	14.8		11.4	43	07.3		15.6
10	337	44.6	310	33.8		37.2	59	55.1		32.7	107	17.4		11.4	58	09.7		15.6
11	352	47.1	325	33.3	+10	38.4	74	56.0	-23	32.7	122	20.1	-17	11.3	73	12.1	-22	15.6
12	7	49.5	340	32.9	+10	39.6	89	57.0	-23	32.7	137	22.7	-17	11.3	88	14.5	-22	15.6
13	22	52.0	355	32.5		40.8	104	57.9		32.7	152	25.3		11.2	103	16.9		15.6
14	37	54.5	10	32.0		42.0	119	58.9		32.7	167	27.9		11.2	118	19.2		15.6
15	52	56.9	25	31.6		43.2	134	59.8		32.7	182	30.6		11.1	133	21.6		15.5
16	67	59.4	40	31.2		44.3	150	00.8		32.6	197	33.2		11.1	148	24.0		15.5
17	83	01.9	55	30.7	+10	45.5	165	01.7	-23	32.6	212	35.8	-17	11.0	163	26.4	-22	15.5
18	98	04.3	70	30.3	+10	46.7	180	02.7	-23	32.6	227	38.4	-17	11.0	178	28.8	-22	15.5
19	113	06.8	85	29.8		47.9	195	03.6		32.6	242	41.1		10.9	193	31.2		15.5
20	128	09.3	100	29.4		49.1	210	04.6		32.6	257	43.7		10.9	208	33.5		15.5
21	143	11.7	115	29.0		50.2	225	05.6		32.6	272	46.3		10.9	223	35.9		15.5
22	158	14.2	130	28.5		51.4	240	06.5		32.6	287	49.0		10.8	238	38.3		15.5
23	173	16.6	145	28.1		52.6	255	07.5		32.5	302	51.6		10.8	253	40.7		15.5
24	188	19.1	160	27.7	+10	53.8	270	08.4	-23	32.5	317	54.2	-17	10.7	268	43.1	-22	15.5
Dif	—		-4 +12		+10		0		+26		0		+24					

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16°0 PMG: 12 ^h 04 ^m 2			Edad: 13 ^d 5 PHE { 4 ^h : 58'1 12 ^h : 57'9 20 ^h : 57'7 R°: **m					Civil		Náutico	Hora	R°	Hora	R°	
	hG ☉	Dec		hG ☾	Dif	Dec			Dif							
h	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m	
0	178	55.3	+4	02.9	3	31.6	+2 10.8	60 N	18 41	19 24	20 17	18 34	83	6 04	14	
1	193	55.4		03.9	18	01.7 ¹¹¹	+1 59.0 ¹¹⁸	58	38	19	08	33	80	03	17	
2	208	55.6		04.9	32	31.9 ¹¹²	47.1 ¹¹⁹	56	36	14	20 00	32	78	03	19	
3	223	55.8		05.8	47	02.1 ¹¹²	35.3 ¹¹⁸	54	34	10	19 54	31	76	02	22	
4	238	56.0		06.8	61	32.3 ¹¹²	23.4 ¹¹⁹	52	32	06	48	31	74	02	23	
5	253	56.2	+4	07.8	76	02.5 ¹¹²	+1 11.5 ¹¹⁹	50	18 30	19 03	19 42	18 30	72	6 02	25	
6	268	56.4	+4	08.7	90	32.8 ¹¹³	+0 59.7 ¹¹⁸	45	18 26	18 56	19 31	18 29	68	6 01	29	
7	283	56.6		09.7	105	03.1 ¹¹³	47.8 ¹¹⁹	40	23	50	23	28	65	00	32	
8	298	56.8		10.7	119	33.5 ¹¹⁴	36.0 ¹¹⁸	35	20	46	16	27	62	6 00	35	
9	313	56.9		11.6	134	03.9 ¹¹⁴	24.1 ¹¹⁹	30	18	42	10	26	60	5 59	38	
10	328	57.1		12.6	148	34.2 ¹¹³	12.3 ¹¹⁸	20	14	36	19 02	25	55	59	41	
11	343	57.3	+4	13.6	163	04.7 ¹¹⁵	+0 00.5 ¹¹⁸	10 N	18 11	18 32	18 56	18 24	51	5 58	45	
12	358	57.5	+4	14.5	177	35.1 ¹¹⁴	-0 11.3 ¹¹⁸	0	18 07	18 28	18 52	18 23	48	5 57	49	
13	13	57.7		15.5	192	05.6 ¹¹⁵	23.1 ¹¹⁸	10 S	04	25	50	22	44	56	53	
14	28	57.9		16.5	206	36.1 ¹¹⁵	34.9 ¹¹⁸	20	18 01	23	49	21	41	56	56	
15	43	58.1		17.4	221	06.6 ¹¹⁵	46.7 ¹¹⁸	30	17 58	22	49	19	37	55	60	
16	58	58.3		18.4	235	37.2 ¹¹⁶	-0 58.5 ¹¹⁸	35	56	21	51	19	34	54	63	
17	73	58.4	+4	19.4	250	07.8 ¹¹⁶	-1 10.2 ¹¹⁷	40	17 54	18 21	18 52	18 18	32	5 53	66	
18	88	58.6	+4	20.3	264	38.4 ¹¹⁶	-1 22.0 ¹¹⁸	45	17 51	18 21	18 55	18 17	29	5 53	69	
19	103	58.8		21.3	279	09.0 ¹¹⁶	33.7 ¹¹⁷	50	49	21	18 58	16	25	52	73	
20	118	59.0		22.3	293	39.7 ¹¹⁷	45.4 ¹¹⁷	52	47	21	19 00	16	23	51	75	
21	133	59.2		23.2	308	10.3 ¹¹⁶	-1 57.1 ¹¹⁷	54	46	21	02	15	22	51	77	
22	148	59.4		24.2	322	41.0 ¹¹⁷	-2 08.7 ¹¹⁶	56	44	21	04	14	20	50	79	
23	163	59.6		25.2	337	11.8 ¹¹⁸	20.4 ¹¹⁷	58	43	22	07	14	17	50	81	
24	178	59.8	+4	26.1	351	42.5 ¹¹⁷	-2 32.0 ¹¹⁶	60 S	17 41	18 22	19 10	18 13	15	5 49	84	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 11 ^h 24 ^m 9		Mag: -3.9 PMG: 13 ^h 19 ^m			Mag: +0.3 PMG: 5 ^h 59 ^m			Mag: -2.4 PMG: 2 ^h 48 ^m			Mag: +0.5 PMG: 6 ^h 04 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'		
0	188	19.1	160	27.7	+10	53.8	270	08.4	-23	32.5	317	54.2	-17	10.7	268	43.1
1	203	21.6	175	27.2		54.9	285	09.4		32.5	332	56.8		10.7	283	45.5
2	218	24.0	190	26.8		56.1	300	10.3		32.5	347	59.5		10.6	298	47.8
3	233	26.5	205	26.4		57.3	315	11.3		32.5	3	02.1		10.6	313	50.2
4	248	29.0	220	25.9		58.5	330	12.3		32.5	18	04.7		10.5	328	52.6
5	263	31.4	235	25.5	+10	59.6	345	13.2	-23	32.4	33	07.4	-17	10.5	343	55.0
6	278	33.9	250	25.0	+11	00.8	0	14.2	-23	32.4	48	10.0	-17	10.4	358	57.4
7	293	36.4	265	24.6		02.0	15	15.1		32.4	63	12.6		10.4	13	59.8
8	308	38.8	280	24.2		03.2	30	16.1		32.4	78	15.3		10.3	29	02.2
9	323	41.3	295	23.7		04.3	45	17.1		32.4	93	17.9		10.3	44	04.5
10	338	43.7	310	23.3		05.5	60	18.0		32.4	108	20.5		10.3	59	06.9
11	353	46.2	325	22.8	+11	06.7	75	19.0	-23	32.3	123	23.2	-17	10.2	74	09.3
12	8	48.7	340	22.4	+11	07.9	90	19.9	-23	32.3	138	25.8	-17	10.2	89	11.7
13	23	51.1	355	22.0		09.0	105	20.9		32.3	153	28.4		10.1	104	14.1
14	38	53.6	10	21.5		10.2	120	21.9		32.3	168	31.1		10.1	119	16.5
15	53	56.1	25	21.1		11.4	135	22.8		32.3	183	33.7		10.0	134	18.9
16	68	58.5	40	20.6		12.5	150	23.8		32.3	198	36.3		10.0	149	21.2
17	84	01.0	55	20.2	+11	13.7	165	24.7	-23	32.2	213	39.0	-17	09.9	164	23.6
18	99	03.5	70	19.7	+11	14.9	180	25.7	-23	32.2	228	41.6	-17	09.9	179	26.0
19	114	05.9	85	19.3		16.0	195	26.7		32.2	243	44.2		09.8	194	28.4
20	129	08.4	100	18.9		17.2	210	27.6		32.2	258	46.9		09.8	209	30.8
21	144	10.9	115	18.4		18.4	225	28.6		32.2	273	49.5		09.7	224	33.2
22	159	13.3	130	18.0		19.5	240	29.5		32.1	288	52.1		09.7	239	35.6
23	174	15.8	145	17.5		20.7	255	30.5		32.1	303	54.8		09.6	254	38.0
24	189	18.2	160	17.1	+11	21.9	270	31.5	-23	32.1	318	57.4	-17	09.6	269	40.4
Dif	—		-4		+12		+10		0		+26		0		+24	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16 ^h 0			Edad: 14 ^d 5 PHE	SD: 15 ^h 6			R°: 48 ^m							
	PMG: 12 ^h 03 ^m 9				PMG: 0 ^h 34 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R°	Hora	R°	
h	o	'	o	'	o	'	o	h	m	h	m	h	m	m	
0	178	59.8	+4	26.1	351	42.5	-2 32.0	60 N	3 50	4 43	5 26	19 57	81	6 18 16	
1	193	59.9		27.1	6	13.2 ¹¹⁷	43.6 ¹¹⁶	58	3 59	48	28	53 78		20 18	
2	209	00.1		28.1	20	44.0 ¹¹⁸	-2 55.1 ¹¹⁵	56	4 07	53	31	50 76		22 20	
3	224	00.3		29.0	35	14.8 ¹¹⁸	-3 06.7 ¹¹⁶	54	14	4 57	33	47 74		24 22	
4	239	00.5		30.0	49	45.6 ¹¹⁸	18.2 ¹¹⁵	52	20	5 01	35	45 71		25 24	
5	254	00.7	+4	31.0	64	16.5 ¹¹⁹	-3 29.7 ¹¹⁵	50	4 25	5 04	5 37	19 42	70	6 27 25	
6	269	00.9	+4	31.9	78	47.3 ¹¹⁸	-3 41.2 ¹¹⁵	45	4 36	5 11	5 41	19 37	66	6 30 29	
7	284	01.1		32.9	93	18.2 ¹¹⁹	-3 52.6 ¹¹⁴	40	45	17	44	33 63		32 33	
8	299	01.2		33.8	107	49.1 ¹¹⁹	-4 04.0 ¹¹⁴	35	52	22	47	29 61		35 34	
9	314	01.4		34.8	122	20.0 ¹¹⁹	15.4 ¹¹⁴	30	4 57	26	50	26 58		37 37	
10	329	01.6		35.8	136	50.9 ¹¹⁹	26.7 ¹¹³	20	5 06	32	54	20 55		40 41	
11	344	01.8	+4	36.7	151	21.8 ¹¹⁹	-4 38.0 ¹¹³	10 N	5 12	5 36	5 57	19 15	51	6 43 45	
12	359	02.0	+4	37.7	165	52.8 ¹²⁰	-4 49.3 ¹¹³	0	5 16	5 40	6 01	19 11	48	6 46 48	
13	14	02.2		38.7	180	23.7 ¹¹⁹	-5 00.5 ¹¹²	10 S	18	43	04	06 45		49 51	
14	29	02.4		39.6	194	54.7 ¹²⁰	11.7 ¹¹²	20	19	45	07	19 02	41	52 54	
15	44	02.6		40.6	209	25.7 ¹²⁰	22.9 ¹¹²	30	19	47	11	18 56	38	55 59	
16	59	02.7		41.6	223	56.7 ¹²⁰	34.0 ¹¹¹	35	18	47	13	53 35		57 61	
17	74	02.9	+4	42.5	238	27.7 ¹²⁰	-5 45.1 ¹¹¹	40	5 16	5 48	6 15	18 50	32	6 59 64	
18	89	03.1	+4	43.5	252	58.7 ¹²⁰	-5 56.1 ¹¹⁰	45	5 14	5 48	6 17	18 46	29	7 02 67	
19	104	03.3		44.4	267	29.7 ¹²⁰	-6 07.1 ¹¹⁰	50	11	48	20	41 26		05 71	
20	119	03.5		45.4	282	00.8 ¹²¹	18.1 ¹¹⁰	52	09	48	22	39 24		06 73	
21	134	03.7		46.4	296	31.8 ¹²⁰	29.0 ¹⁰⁹	54	07	48	23	37 22		08 74	
22	149	03.9		47.3	311	02.9 ¹²¹	39.9 ¹⁰⁹	56	05	48	25	34 21		09 77	
23	164	04.0		48.3	325	34.0 ¹²¹	-6 50.8 ¹⁰⁹	58	5 02	48	27	31 19		11 80	
24	179	04.2	+4	49.3	340	05.1 ¹²¹	-7 01.5 ¹⁰⁷	60 S	4 59	5 47	6 29	18 28	16	7 13 82	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 11 ^h 20 ^m 9		Mag: -3.9 PMG: 13 ^h 19 ^m		Mag: +0.3 PMG: 5 ^h 58 ^m		Mag: -2.4 PMG: 2 ^h 44 ^m		Mag: +0.5 PMG: 6 ^h 00 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	o	'	o	'	o	'	o	'	o	'
0	189	18.2	160	17.1	+11	21.9	270	31.5	-23	32.1
1	204	20.7	175	16.6		23.0	285	32.4		32.1
2	219	23.2	190	16.2		24.2	300	33.4		32.1
3	234	25.6	205	15.7		25.4	315	34.4		32.0
4	249	28.1	220	15.3		26.5	330	35.3		32.0
5	264	30.6	235	14.9	+11	27.7	345	36.3	-23	32.0
6	279	33.0	250	14.4	+11	28.9	0	37.2	-23	32.0
7	294	35.5	265	14.0		30.0	15	38.2		31.9
8	309	38.0	280	13.5		31.2	30	39.2		31.9
9	324	40.4	295	13.1		32.4	45	40.1		31.9
10	339	42.9	310	12.6		33.5	60	41.1		31.9
11	354	45.3	325	12.2	+11	34.7	75	42.1	-23	31.9
12	9	47.8	340	11.7	+11	35.8	90	43.0	-23	31.8
13	24	50.3	355	11.3		37.0	105	44.0		31.8
14	39	52.7	10	10.8		38.2	120	45.0		31.8
15	54	55.2	25	10.4		39.3	135	45.9		31.8
16	69	57.7	40	09.9		40.5	150	46.9		31.7
17	85	00.1	55	09.5	+11	41.6	165	47.9	-23	31.7
18	100	02.6	70	09.0	+11	42.8	180	48.8	-23	31.7
19	115	05.1	85	08.6		43.9	195	49.8		31.7
20	130	07.5	100	08.1		45.1	210	50.7		31.7
21	145	10.0	115	07.7		46.3	225	51.7		31.6
22	160	12.5	130	07.2		47.4	240	52.7		31.6
23	175	14.9	145	06.8		48.6	255	53.6		31.6
24	190	17.4	160	06.3	+11	49.7	270	54.6	-23	31.6
Dif	—		-4		+12		+10		0	
							+26		0	
									+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 6			Edad: 15 ^d 5 PHE { 4 ^h : 56/9 12 ^h : 56/6 20 ^h : 56/4 PMG: 1 ^h 22 ^m R°: 48 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°	
h	o	'	o	'	o	'	o	'	h	m	h	m	h	m	h	m
0	179	04.2	+4	49.3	340	05.1	-7	01.5	60 N	18 46	19 29	20 23	21 18	78	6 34	16
1	194	04.4		50.2	354	36.1 ¹²⁰		12.3 ¹⁰⁸	58	43	23	14	11	76	38	20
2	209	04.6		51.2	9	07.2 ¹²¹		23.0 ¹⁰⁷	56	40	18	20 05	06	73	42	22
3	224	04.8		52.1	23	38.3 ¹²¹		33.6 ¹⁰⁶	54	38	14	19 58	21 01	71	46	22
4	239	05.0		53.1	38	09.5 ¹²²		44.3 ¹⁰⁷	52	35	10	52	20 56	69	49	26
5	254	05.2	+4	54.1	52	40.6 ¹²¹	-7	54.8 ¹⁰⁵	50	18 33	19 06	19 46	20 52	67	6 52	27
6	269	05.3	+4	55.0	67	11.7 ¹²¹	-8	05.3 ¹⁰⁵	45	18 29	18 59	19 34	20 43	64	6 59	30
7	284	05.5		56.0	81	42.8 ¹²¹		15.8 ¹⁰⁵	40	25	52	25	36	61	7 05	33
8	299	05.7		56.9	96	14.0 ¹²²		26.2 ¹⁰⁴	35	22	48	18	30	59	09	36
9	314	05.9		57.9	110	45.1 ¹²¹		36.5 ¹⁰³	30	19	43	12	24	57	14	37
10	329	06.1		58.9	125	16.2 ¹²¹		46.8 ¹⁰³	20	15	37	19 03	15	53	21	42
11	344	06.3	+4	59.8	139	47.4 ¹²²	-8	57.1 ¹⁰³	10 N	18 11	18 32	18 56	20 06	51	7 28	44
12	359	06.5	+5	00.8	154	18.5 ¹²¹	-9	07.3 ¹⁰²	0	18 07	18 28	18 52	19 59	47	7 34	47
13	14	06.6		01.7	168	49.7 ¹²²		17.4 ¹⁰¹	10 S	03	24	49	51	45	40	51
14	29	06.8		02.7	183	20.8 ¹²¹		27.5 ¹⁰¹	20	18 00	22	47	43	42	46	54
15	44	07.0		03.7	197	52.0 ¹²²		37.5 ¹⁰⁰	30	17 56	19	47	34	38	54	58
16	59	07.2		04.6	212	23.2 ¹²²		47.5 ¹⁰⁰	35	53	19	48	28	37	7 58	60
17	74	07.4	+5	05.6	226	54.3 ¹²¹	-9	57.4 ⁹⁹	40	17 51	18 18	18 49	19 22	34	8 03	62
18	89	07.6	+5	06.5	241	25.5 ¹²²	-10	07.3 ⁹⁹	45	17 48	18 17	18 51	19 15	32	8 09	65
19	104	07.7		07.5	255	56.7 ¹²²		17.0 ⁹⁷	50	44	16	54	07	28	16	69
20	119	07.9		08.5	270	27.8 ¹²¹		26.8 ⁹⁸	52	43	16	55	19 03	27	19	70
21	134	08.1		09.4	284	59.0 ¹²²		36.5 ⁹⁷	54	41	16	57	18 59	25	22	73
22	149	08.3		10.4	299	30.2 ¹²²		46.1 ⁹⁶	56	39	16	18 59	55	23	26	75
23	164	08.5		11.3	314	01.3 ¹²¹	-10	55.6 ⁹⁵	58	37	16	19 01	50	20	31	76
24	179	08.7	+5	12.3	328	32.5 ¹²²	-11	05.1 ⁹⁵	60 S	17 35	18 16	19 04	18 44	18	8 35	80
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 11 ^h 17 ^m 0		Mag: -3.9 PMG: 13 ^h 20 ^m			Mag: +0.3 PMG: 5 ^h 56 ^m			Mag: -2.4 PMG: 2 ^h 39 ^m			Mag: +0.5 PMG: 5 ^h 57 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'
0	190	17.4	160	06.3	+11	49.7	270	54.6	-23	31.6	320	00.8	-17	08.4	270	37.7
1	205	19.8	175	05.9		50.9	285	55.6		31.5	335	03.4		08.4	285	40.1
2	220	22.3	190	05.4		52.0	300	56.6		31.5	350	06.1		08.3	300	42.5
3	235	24.8	205	04.9		53.2	315	57.5		31.5	5	08.7		08.3	315	44.9
4	250	27.2	220	04.5		54.3	330	58.5		31.5	20	11.4		08.2	330	47.3
5	265	29.7	235	04.0	+11	55.5	345	59.5	-23	31.4	35	14.0	-17	08.2	345	49.7
6	280	32.2	250	03.6	+11	56.6	1	00.4	-23	31.4	50	16.6	-17	08.1	0	52.1
7	295	34.6	265	03.1		57.8	16	01.4		31.4	65	19.3		08.1	15	54.5
8	310	37.1	280	02.7	+11	58.9	31	02.4		31.4	80	21.9		08.0	30	56.9
9	325	39.6	295	02.2	+12	00.1	46	03.3		31.3	95	24.6		08.0	45	59.3
10	340	42.0	310	01.8		01.2	61	04.3		31.3	110	27.2		07.9	61	01.7
11	355	44.5	325	01.3	+12	02.4	76	05.3	-23	31.3	125	29.9	-17	07.9	76	04.1
12	10	47.0	340	00.8	+12	03.5	91	06.2	-23	31.2	140	32.5	-17	07.8	91	06.5
13	25	49.4	355	00.4		04.7	106	07.2		31.2	155	35.2		07.8	106	08.9
14	40	51.9	9	59.9		05.8	121	08.2		31.2	170	37.8		07.7	121	11.3
15	55	54.3	24	59.5		07.0	136	09.2		31.2	185	40.5		07.7	136	13.7
16	70	56.8	39	59.0		08.1	151	10.1		31.1	200	43.1		07.6	151	16.0
17	85	59.3	54	58.6	+12	09.3	166	11.1	-23	31.1	215	45.8	-17	07.6	166	18.4
18	101	01.7	69	58.1	+12	10.4	181	12.1	-23	31.1	230	48.4	-17	07.5	181	20.8
19	116	04.2	84	57.6		11.6	196	13.0		31.1	245	51.1		07.5	196	23.2
20	131	06.7	99	57.2		12.7	211	14.0		31.0	260	53.7		07.4	211	25.6
21	146	09.1	114	56.7		13.9	226	15.0		31.0	275	56.4		07.4	226	28.0
22	161	11.6	129	56.3		15.0	241	16.0		31.0	290	59.0		07.3	241	30.4
23	176	14.1	144	55.8		16.1	256	16.9		30.9	306	01.7		07.3	256	32.8
24	191	16.5	159	55.3	+12	17.3	271	17.9	-23	30.9	321	04.3	-17	07.2	271	35.2
Dif	—		-5		+11		+10		0		+26		+1		+24	
															0	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16 ^h 0			Edad: 16 ^d 5 PHE { 4 ^h : 56 ^m /2 12 ^h : 56 ^m /0 20 ^h : 55 ^m /8												
	PMG: 12 ^h 03 ^m 3			SD: 15 ^d 2 PMG: 2 ^h 10 ^m R°: 48 ^m												
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°
h	o	'	o	o	'	o	o	'	o	h	m	h	m	h	m	m
0	179	08.7	+5 12.3	328	32.5		-11 05.1		60 N	3 42	4 37	5 20	22 36	73	6 50	21
1	194	08.9		343	03.7 ¹²²		14.5	94	58	3 52	42	23	27 71		6 58	22
2	209	09.0		357	34.8 ¹²¹		23.9	94	56	4 01	48	26	19 69		7 04	25
3	224	09.2		12	06.0 ¹²²		33.2	93	54	08	52	28	12 67		10 26	
4	239	09.4		26	37.2 ¹²²		42.4	92	52	15	4 56	31	22 05	66	15	28
5	254	09.6	+5 17.1	41	08.3 ¹²¹		-11 51.6	92	50	4 20	5 00	5 33	21 59	65	7 19	30
6	269	09.8	+5 18.0	55	39.5 ¹²²		-12 00.7	91	45	4 32	5 08	5 37	21 47	62	7 29	33
7	284	10.0		70	10.7 ¹²²		09.7	90	40	41	14	41	37 59		38	35
8	299	10.1		84	41.8 ¹²¹		18.7	90	35	49	19	44	29 57		45	38
9	314	10.3		99	13.0 ¹²²		27.5	88	30	4 55	23	47	21 55		7 51	40
10	329	10.5		113	44.1 ¹²¹		36.4	89	20	5 04	30	52	21 08	53	8 03	42
11	344	10.7	+5 22.8	128	15.3 ¹²²		-12 45.1	87	10 N	5 11	5 35	5 56	20 57	50	8 12	46
12	359	10.9	+5 23.8	142	46.4 ¹²¹		-12 53.8	87	0	5 15	5 39	6 00	20 46	48	8 21	48
13	14	11.1		157	17.5 ¹²¹		-13 02.4	86	10 S	18	43	04	36 45		31	50
14	29	11.2		171	48.7 ¹²²		11.0	86	20	20	45	08	25 43		40	54
15	44	11.4		186	19.8 ¹²¹		19.4	84	30	20	48	12	12 40		52	56
16	59	11.6		200	50.9 ¹²¹		27.8	84	35	20	49	14	20 05	38	8 58	58
17	74	11.8	+5 28.6	215	22.1 ¹²²		-13 36.2	84	40	5 18	5 50	6 17	19 56	37	9 05	61
18	89	12.0	+5 29.5	229	53.2 ¹²¹		-13 44.4	82	45	5 17	5 51	6 20	19 47	34	9 14	63
19	104	12.2		244	24.3 ¹²¹		-13 52.6	82	50	14	51	24	35 32		25	66
20	119	12.3		258	55.4 ¹²¹		-14 00.7	81	52	12	51	25	30 30		29	68
21	134	12.5		273	26.5 ¹²¹		08.7	80	54	11	52	27	24 29		35	69
22	149	12.7		287	57.6 ¹²¹		16.7	80	56	09	52	29	18 26		41	71
23	164	12.9		302	28.7 ¹²¹		24.5	78	58	06	52	31	10 25		47	74
24	179	13.1	+5 35.2	316	59.8 ¹²¹		-14 32.3	78	60 S	5 04	5 52	6 34	19 02	22	9 55	76

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG 11 ^h 13 ^m 1		Mag: -3.9 PMG: 13 ^h 21 ^m		Mag: +0.2 PMG: 5 ^h 54 ^m		Mag: -2.4 PMG: 2 ^h 35 ^m		Mag: +0.5 PMG: 5 ^h 53 ^m		
	hG ♈		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec		
h	o	'	o	o	o	'	o	o	o	o	'
0	191	16.5	159 55.3	+12 17.3	271 17.9	-23 30.9	321 04.3	-17 07.2	271 35.2	-22 15.1	
1	206	19.0	174 54.9		286 18.9	30.9	336 07.0	07.2	286 37.6	15.1	
2	221	21.4	189 54.4		301 19.8	30.9	351 09.6	07.1	301 40.0	15.1	
3	236	23.9	204 53.9		316 20.8	30.8	6 12.3	07.1	316 42.4	15.1	
4	251	26.4	219 53.5		331 21.8	30.8	21 14.9	07.0	331 44.8	15.1	
5	266	28.8	234 53.0	+12 23.0	346 22.8	-23 30.8	36 17.6	-17 07.0	346 47.2	-22 15.1	
6	281	31.3	249 52.6	+12 24.1	1 23.7	-23 30.7	51 20.2	-17 06.9	1 49.6	-22 15.1	
7	296	33.8	264 52.1		16 24.7	30.7	66 22.9	06.9	16 52.0	15.1	
8	311	36.2	279 51.6		31 25.7	30.7	81 25.5	06.8	31 54.4	15.1	
9	326	38.7	294 51.2		46 26.7	30.6	96 28.2	06.8	46 56.8	15.1	
10	341	41.2	309 50.7		61 27.6	30.6	111 30.8	06.7	61 59.2	15.1	
11	356	43.6	324 50.2	+12 29.8	76 28.6	-23 30.6	126 33.5	-17 06.7	77 01.6	-22 15.1	
12	11	46.1	339 49.8	+12 31.0	91 29.6	-23 30.6	141 36.1	-17 06.6	92 04.0	-22 15.1	
13	26	48.6	354 49.3		106 30.6	30.5	156 38.8	06.5	107 06.4	15.1	
14	41	51.0	9 48.8		121 31.5	30.5	171 41.4	06.5	122 08.8	15.1	
15	56	53.5	24 48.4		136 32.5	30.5	186 44.1	06.4	137 11.2	15.1	
16	71	55.9	39 47.9		151 33.5	30.4	201 46.7	06.4	152 13.6	15.0	
17	86	58.4	54 47.4	+12 36.6	166 34.5	-23 30.4	216 49.4	-17 06.3	167 16.0	-22 15.0	
18	102	00.9	69 47.0	+12 37.8	181 35.4	-23 30.4	231 52.1	-17 06.3	182 18.4	-22 15.0	
19	117	03.3	84 46.5		196 36.4	30.3	246 54.7	06.2	197 20.8	15.0	
20	132	05.8	99 46.0		211 37.4	30.3	261 57.4	06.2	212 23.2	15.0	
21	147	08.3	114 45.6		226 38.4	30.3	277 00.0	06.1	227 25.6	15.0	
22	162	10.7	129 45.1		241 39.4	30.2	292 02.7	06.1	242 28.0	15.0	
23	177	13.2	144 44.6		256 40.3	30.2	307 05.3	06.0	257 30.4	15.0	
24	192	15.7	159 44.2	+12 44.6	271 41.3	-23 30.2	322 08.0	-17 06.0	272 32.8	-22 15.0	
Dif	—		-5	+11	+10		0	+27	+1	+24	

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 16:0 PMG: 12 ^h 03 ^m 0		Edad: 17 ^d 5 PHE { 4 ^h : 55/6 12 ^h : 55/4 20 ^h : 55/2 PMG: 2 ^h 58 ^m R°: 48 ^m															
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°				
h	o	'	o	'	o	'	o	h m	h m	h m	h m	h m	h m	h m	h m			
0	179	13.1	+5	35.2	316	59.8	-14	32.3	60 N	18 51	19 34	20 30	23 49	67	7 11			
1	194	13.3		36.2	331	30.9 ¹²¹		40.1	58	47	28	19	38	65	20 28			
2	209	13.4		37.2	346	01.9 ¹²⁰		47.7	56	44	23	10	28	63	29 29			
3	224	13.6		38.1	0	33.0 ¹²¹	-14	55.3	54	41	18	20 02	19	62	36 31			
4	239	13.8		39.1	15	04.1 ¹²¹	-15	02.8	52	39	13	19 56	11	61	43 32			
5	254	14.0	+5	40.0	29	35.1 ¹²⁰	-15	10.2	50	18 36	19 09	19 49	23 04	60	7 49			
6	269	14.2	+5	41.0	44	06.2 ¹²¹	-15	17.5	45	18 31	19 01	19 37	22 49	57	8 02			
7	284	14.3		41.9	58	37.2 ¹²⁰		24.8	73	27	18 55	27	36	56	13 39			
8	299	14.5		42.9	73	08.2 ¹²⁰		31.9	71	24	49	19	26	54	23 40			
9	314	14.7		43.8	87	39.3 ¹²¹		39.0	71	30	20	45	13	16	54			
10	329	14.9		44.8	102	10.3 ¹²⁰		46.0	70	20	15	37	19 03	51	45 44			
11	344	15.1	+5	45.7	116	41.3 ¹²⁰	-15	53.0	70	10 N	18 10	18 32	18 56	21 47	50			
12	359	15.3	+5	46.7	131	12.3 ¹²⁰	-15	59.8	68	0	18 06	18 27	18 51	21 34	48			
13	14	15.4		47.6	145	43.3 ¹²⁰	-16	06.6	68	10 S	18 02	23	48	21	47			
14	29	15.6		48.6	160	14.3 ¹²⁰		13.3	67	20	17 58	20	46	21	08			
15	44	15.8		49.5	174	45.3 ¹²⁰		19.9	66	30	53	17	45	20	52			
16	59	16.0		50.5	189	16.3 ¹²⁰		26.4	65	35	50	16	45	43	42			
17	74	16.2	+5	51.4	203	47.3 ¹²⁰	-16	32.8	64	40	17 48	18 15	18 46	20	33			
18	89	16.3	+5	52.4	218	18.3 ¹²⁰	-16	39.2	64	45	17 44	18 13	18 47	20	21			
19	104	16.5		53.3	232	49.2 ¹¹⁹		45.4	62	50	40	12	50	07	36			
20	119	16.7		54.3	247	20.2 ¹²⁰		51.6	62	52	38	12	51	20	00			
21	134	16.9		55.2	261	51.2 ¹²⁰	-16	57.7	61	54	36	11	52	19	53			
22	149	17.1		56.2	276	22.1 ¹¹⁹	-17	03.7	60	56	34	11	54	44	33			
23	164	17.3		57.2	290	53.0 ¹¹⁹		09.6	59	58	31	11	56	35	30			
24	179	17.4	+5	58.1	305	24.0 ¹²⁰	-17	15.4	58	60 S	17 29	18 10	18 58	19	24			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 11 ^h 09 ^m 1		Mag: -3.9 PMG: 13 ^h 21 ^m				Mag: +0.2 PMG: 5 ^h 53 ^m				Mag: -2.4 PMG: 2 ^h 31 ^m				Mag: +0.5 PMG: 5 ^h 49 ^m			
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec						
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'		
0	192	15.7	159	44.2	+12	44.6	271	41.3	-23	30.2	322	08.0	-17	06.0	272	32.8		
1	207	18.1	174	43.7		45.7	286	42.3		30.1	337	10.6		05.9	287	35.2		
2	222	20.6	189	43.2		46.8	301	43.3		30.1	352	13.3		05.9	302	37.6		
3	237	23.1	204	42.7		47.9	316	44.2		30.1	7	16.0		05.8	317	40.0		
4	252	25.5	219	42.3		49.1	331	45.2		30.0	22	18.6		05.8	332	42.4		
5	267	28.0	234	41.8	+12	50.2	346	46.2	-23	30.0	37	21.3	-17	05.7	347	44.8		
6	282	30.4	249	41.3	+12	51.3	1	47.2	-23	30.0	52	23.9	-17	05.7	2	47.2		
7	297	32.9	264	40.9		52.5	16	48.2		29.9	67	26.6		05.6	17	49.6		
8	312	35.4	279	40.4		53.6	31	49.1		29.9	82	29.3		05.5	32	52.0		
9	327	37.8	294	39.9		54.7	46	50.1		29.9	97	31.9		05.5	47	54.4		
10	342	40.3	309	39.4		55.8	61	51.1		29.8	112	34.6		05.4	62	56.8		
11	357	42.8	324	39.0	+12	57.0	76	52.1	-23	29.8	127	37.2	-17	05.4	77	59.2		
12	12	45.2	339	38.5	+12	58.1	91	53.1	-23	29.8	142	39.9	-17	05.3	93	01.6		
13	27	47.7	354	38.0	+12	59.2	106	54.0		29.7	157	42.6		05.3	108	04.1		
14	42	50.2	9	37.5	+13	00.3	121	55.0		29.7	172	45.2		05.2	123	06.5		
15	57	52.6	24	37.1		01.5	136	56.0		29.7	187	47.9		05.2	138	08.9		
16	72	55.1	39	36.6		02.6	151	57.0		29.6	202	50.5		05.1	153	11.3		
17	87	57.5	54	36.1	+13	03.7	166	58.0	-23	29.6	217	53.2	-17	05.1	168	13.7		
18	103	00.0	69	35.6	+13	04.8	181	59.0	-23	29.5	232	55.9	-17	05.0	183	16.1		
19	118	02.5	84	35.2		05.9	196	59.9		29.5	247	58.5		05.0	198	18.5		
20	133	04.9	99	34.7		07.1	212	00.9		29.5	263	01.2		04.9	213	20.9		
21	148	07.4	114	34.2		08.2	227	01.9		29.4	278	03.8		04.9	228	23.3		
22	163	09.9	129	33.7		09.3	242	02.9		29.4	293	06.5		04.8	243	25.7		
23	178	12.3	144	33.2		10.4	257	03.9		29.4	308	09.2		04.7	258	28.1		
24	193	14.8	159	32.8	+13	11.5	272	04.9	-23	29.3	323	11.8	-17	04.7	273	30.5		
Dif	—		-5		+11		+10		0		+27		+1		+24			

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'0 PMG: 12 ^h 02 ^m 7			Edad: 18 ^d 5 SD: 14'9 PMG: 3 ^h 46 ^m	PHE { 4 ^h : 55'0 12 ^h : 54'9 20 ^h : 54'7 R°: 48 ^m													
	hG ☉	Dec				hG ☾		Dif	Dec		Dif	Náutico	Civil	Hora	R°	Hora	R°	
h	o	'	o	'	o	'	o	h	m	h	m	h	m	m				
0	179	17.4	+5	58.1	305	24.0	-17 15.4	60 N	3 35	4 30	5 14	*** **	**	7 36 32				
1	194	17.6	+5	59.1	319	54.9 ¹¹⁹	21.2 58	58	46	36	17	*** **	**	48 33				
2	209	17.8	+6	00.0	334	25.8 ¹¹⁹	26.9 57	56	3 55	42	21	*** **	**	7 58 35				
3	224	18.0	+6	01.0	348	56.7 ¹¹⁹	32.4 55	54	4 02	47	23	*** **	**	8 07 37				
4	239	18.2		01.9	3	27.7 ¹²⁰	37.9 55	52	09	51	26	*** **	**	15 38				
5	254	18.3	+6	02.8	17	58.6 ¹¹⁹	-17 43.3 54	50	4 15	4 55	5 28	*** **	**	8 23 38				
6	269	18.5	+6	03.8	32	29.5 ¹¹⁹	-17 48.6 53	45	4 28	5 04	5 34	23 46	54	8 39 40				
7	284	18.7		04.7	47	00.3 ¹¹⁸	53.8 52	40	38	10	38	32 53		8 52 41				
8	299	18.9		05.7	61	31.2 ¹¹⁹	-17 59.0 52	35	46	16	42	20 52		9 03 43				
9	314	19.1		06.6	76	02.1 ¹¹⁹	-18 04.0 50	30	4 52	21	45	23 10	51	12 44				
10	329	19.2		07.6	90	33.0 ¹¹⁹	09.0 50	20	5 02	28	50	22 52	50	29 46				
11	344	19.4	+6	08.5	105	03.9 ¹¹⁹	-18 13.8 48	10 N	5 09	5 34	5 55	22 37	49	9 44 47				
12	359	19.6	+6	09.5	119	34.7 ¹¹⁸	-18 18.6 48	0	5 15	5 39	5 59	22 22	49	9 57 49				
13	14	19.8		10.4	134	05.6 ¹¹⁹	23.3 47	10 S	18	43	6 04	22 08	47	10 11 50				
14	29	20.0		11.4	148	36.4 ¹¹⁸	27.9 46	20	20	46	08	21 53	46	26 51				
15	44	20.1		12.3	163	07.3 ¹¹⁹	32.4 45	30	21	49	13	35 45		42 53				
16	59	20.3		13.3	177	38.1 ¹¹⁸	36.8 44	35	21	50	16	25 44		10 52 54				
17	74	20.5	+6	14.2	192	09.0 ¹¹⁹	-18 41.1 43	40	5 20	5 52	6 19	21 13	44	11 03 55				
18	89	20.7	+6	15.2	206	39.8 ¹¹⁸	-18 45.4 43	45	5 19	5 53	6 22	20 59	43	11 17 55				
19	104	20.8		16.1	221	10.6 ¹¹⁸	49.5 41	50	17	54	27	43 41		33 57				
20	119	21.0		17.1	235	41.4 ¹¹⁸	53.6 41	52	16	55	29	35 41		40 59				
21	134	21.2		18.0	250	12.3 ¹¹⁹	-18 57.5 39	54	14	55	31	26 40		49 59				
22	149	21.4		19.0	264	43.1 ¹¹⁸	-19 01.4 39	56	13	56	33	17 38		11 58 60				
23	164	21.6		19.9	279	13.9 ¹¹⁸	05.2 38	58	11	56	36	20 05	38	12 09 62				
24	179	21.7	+6	20.9	293	44.7 ¹¹⁸	-19 08.9 37	60 S	5 09	5 57	6 38	19 53	36	12 22 63				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 11 ^h 05 ^m 2		Mag: -3.9 PMG: 13 ^h 22 ^m			Mag: +0.2 PMG: 5 ^h 51 ^m			Mag: -2.4 PMG: 2 ^h 27 ^m			Mag: +0.5 PMG: 5 ^h 45 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'				
0	193	14.8	159	32.8	+13	11.5	272	04.9	-23	29.3	323	11.8	-17	04.7	273	30.5	-22	14.9
1	208	17.3	174	32.3		12.6	287	05.8		29.3	338	14.5		04.6	288	32.9		14.9
2	223	19.7	189	31.8		13.8	302	06.8		29.2	353	17.2		04.6	303	35.3		14.9
3	238	22.2	204	31.3		14.9	317	07.8		29.2	8	19.8		04.5	318	37.7		14.9
4	253	24.7	219	30.8		16.0	332	08.8		29.2	23	22.5		04.5	333	40.1		14.9
5	268	27.1	234	30.4	+13	17.1	347	09.8	-23	29.1	38	25.2	-17	04.4	348	42.5	-22	14.9
6	283	29.6	249	29.9	+13	18.2	2	10.8	-23	29.1	53	27.8	-17	04.4	3	44.9	-22	14.9
7	298	32.0	264	29.4		19.3	17	11.8		29.1	68	30.5		04.3	18	47.4		14.9
8	313	34.5	279	28.9		20.4	32	12.7		29.0	83	33.2		04.3	33	49.8		14.9
9	328	37.0	294	28.4		21.6	47	13.7		29.0	98	35.8		04.2	48	52.2		14.9
10	343	39.4	309	28.0		22.7	62	14.7		28.9	113	38.5		04.1	63	54.6		14.9
11	358	41.9	324	27.5	+13	23.8	77	15.7	-23	28.9	128	41.1	-17	04.1	78	57.0	-22	14.9
12	13	44.4	339	27.0	+13	24.9	92	16.7	-23	28.9	143	43.8	-17	04.0	93	59.4	-22	14.9
13	28	46.8	354	26.5		26.0	107	17.7		28.8	158	46.5		04.0	109	01.8		14.9
14	43	49.3	9	26.0		27.1	122	18.7		28.8	173	49.1		03.9	124	04.2		14.9
15	58	51.8	24	25.5		28.2	137	19.6		28.7	188	51.8		03.9	139	06.6		14.8
16	73	54.2	39	25.0		29.3	152	20.6		28.7	203	54.5		03.8	154	09.0		14.8
17	88	56.7	54	24.6	+13	30.4	167	21.6	-23	28.7	218	57.2	-17	03.8	169	11.4	-22	14.8
18	103	59.2	69	24.1	+13	31.5	182	22.6	-23	28.6	233	59.8	-17	03.7	184	13.8	-22	14.8
19	119	01.6	84	23.6		32.7	197	23.6		28.6	249	02.5		03.6	199	16.3		14.8
20	134	04.1	99	23.1		33.8	212	24.6		28.5	264	05.2		03.6	214	18.7		14.8
21	149	06.5	114	22.6		34.9	227	25.6		28.5	279	07.8		03.5	229	21.1		14.8
22	164	09.0	129	22.1		36.0	242	26.6		28.5	294	10.5		03.5	244	23.5		14.8
23	179	11.5	144	21.6		37.1	257	27.6		28.4	309	13.2		03.4	259	25.9		14.8
24	194	13.9	159	21.2	+13	38.2	272	28.5	-23	28.4	324	15.8	-17	03.4	274	28.3	-22	14.8
Dif	—		-5		+11		+10		0		+27		+1		+24		0	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16'0 PMG: 12 ^h 02 ^m 4			Edad: 19 ^d 5 PHE { 4 ^h : 54'6 12 ^h : 54'5 20 ^h : 54'4 R°: 48 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°	
h	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m	
0	179	21.7	+6 20.9	293	44.7	-19 08.9	35	60 N	18 56	19 40	20 36	0 56 59	8 08 41			
1	194	21.9		308	15.5 ¹¹⁸	12.4	35	58	52	33	25	43 57	21 42			
2	209	22.1		322	46.3 ¹¹⁸	15.9	35	56	48	27	15	31 57	33 43			
3	224	22.3		337	17.1 ¹¹⁸	19.3	34	54	45	22	07	21 56	44 43			
4	239	22.5		351	47.9 ¹¹⁸	22.7	34	52	42	17	20 00	12 55	8 53 44			
5	254	22.6	+6 25.6	6	18.7 ¹¹⁸	-19 25.9	32	50	18 40	19 13	19 53	0 04 54	9 01 44			
6	269	22.8	+6 26.5	20	49.5 ¹¹⁸	-19 29.0	31	45	18 34	19 04	19 40	*** ** *	9 19 45			
7	284	23.0		35	20.3 ¹¹⁸	32.0	30	40	29	18 57	29	*** ** *	33 46			
8	299	23.2		49	51.1 ¹¹⁸	35.0	30	35	25	51	21	*** ** *	46 46			
9	314	23.3		64	21.9 ¹¹⁸	37.8	28	30	22	46	14	*** ** *	9 56 47			
10	329	23.5		78	52.7 ¹¹⁸	40.6	28	20	16	38	19 04	23 42 49	10 15 47			
11	344	23.7	+6 31.2	93	23.5 ¹¹⁸	-19 43.2	26	10 N	18 10	18 32	18 56	23 26 48	10 31 47			
12	359	23.9	+6 32.2	107	54.2 ¹¹⁷	-19 45.8	26	0	18 06	18 26	18 51	23 11 48	10 46 48			
13	14	24.1		122	25.0 ¹¹⁸	48.3	25	10 S	18 01	22	47	22 55 48	11 01 48			
14	29	24.2		136	55.8 ¹¹⁸	50.6	23	20	17 56	18	44	39 48	17 49			
15	44	24.4		151	26.6 ¹¹⁸	52.9	23	30	51	15	43	20 48	35 50			
16	59	24.6		165	57.4 ¹¹⁸	55.1	22	35	48	13	42	22 09 48	46 50			
17	74	24.8	+6 36.9	180	28.2 ¹¹⁸	-19 57.2	21	40	17 44	18 11	18 43	21 57 47	11 58 51			
18	89	24.9	+6 37.8	194	58.9 ¹¹⁷	-19 59.2	20	45	17 40	18 10	18 44	21 42 47	12 12 52			
19	104	25.1		209	29.7 ¹¹⁸	-20 01.1	19	50	36	08	45	24 47	30 52			
20	119	25.3		224	00.5 ¹¹⁸	02.9	18	52	34	07	46	16 46	39 51			
21	134	25.5		238	31.3 ¹¹⁸	04.6	17	54	31	07	47	21 06 47	48 52			
22	149	25.7		41.6	253 02.1 ¹¹⁸	06.2	16	56	29	06	49	20 55 47	12 58 53			
23	164	25.8		42.6	267 32.9 ¹¹⁸	07.8	16	58	26	05	50	43 46	13 11 53			
24	179	26.0	+6 43.5	282	03.7 ¹¹⁸	-20 09.2	14	60 S	17 23	18 04	18 52	20 29 46	13 25 53			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 11 ^h 01 ^m 3		Mag: -3.9 PMG: 13 ^h 23 ^m			Mag: +0.2 PMG: 5 ^h 50 ^m			Mag: -2.4 PMG: 2 ^h 23 ^m			Mag: +0.5 PMG: 5 ^h 41 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	
0	194	13.9	159	21.2	+13 38.2	272	28.5	-23 28.4	324	15.8	-17 03.4	274	28.3	-22 14.8		
1	209	16.4	174	20.7		287	29.5		339	18.5		289	30.7		14.8	
2	224	18.9	189	20.2		302	30.5		354	21.2		304	33.1		14.8	
3	239	21.3	204	19.7		317	31.5		9	23.8		319	35.5		14.8	
4	254	23.8	219	19.2		332	32.5		24	26.5		334	38.0		14.8	
5	269	26.3	234	18.7	+13 43.7	347	33.5	-23 28.2	39	29.2	-17 03.1	349	40.4	-22 14.8		
6	284	28.7	249	18.2	+13 44.8	2	34.5	-23 28.1	54	31.9	-17 03.0	4	42.8	-22 14.8		
7	299	31.2	264	17.7		17	35.5		69	34.5		19	45.2		14.8	
8	314	33.6	279	17.2		32	36.5		84	37.2		34	47.6		14.8	
9	329	36.1	294	16.7		47	37.5		99	39.9		49	50.0		14.8	
10	344	38.6	309	16.3		62	38.5		114	42.5		64	52.4		14.8	
11	359	41.0	324	15.8	+13 50.3	77	39.5	-23 27.9	129	45.2	-17 02.8	79	54.8	-22 14.8		
12	14	43.5	339	15.3	+13 51.4	92	40.4	-23 27.9	144	47.9	-17 02.7	94	57.2	-22 14.8		
13	29	46.0	354	14.8		107	41.4		159	50.6		109	59.7		14.8	
14	44	48.4	9	14.3		122	42.4		174	53.2		125	02.1		14.8	
15	59	50.9	24	13.8		137	43.4		189	55.9		140	04.5		14.8	
16	74	53.4	39	13.3		152	44.4		204	58.6		155	06.9		14.7	
17	89	55.8	54	12.8	+13 56.9	167	45.4	-23 27.7	220	01.3	-17 02.4	170	09.3	-22 14.7		
18	104	58.3	69	12.3	+13 58.0	182	46.4	-23 27.6	235	03.9	-17 02.4	185	11.7	-22 14.7		
19	120	00.8	84	11.8	+13 59.0	197	47.4		250	06.6		200	14.1		14.7	
20	135	03.2	99	11.3	+14 00.1	212	48.4		265	09.3		215	16.6		14.7	
21	150	05.7	114	10.8		227	49.4		280	12.0		230	19.0		14.7	
22	165	08.1	129	10.3		242	50.4		295	14.6		245	21.4		14.7	
23	180	10.6	144	09.8		257	51.4		310	17.3		260	23.8		14.7	
24	195	13.1	159	09.3	+14 04.5	272	52.4	-23 27.3	325	20.0	-17 02.0	275	26.2	-22 14.7		
Dif	—		-5			+11	+10		0		+27	+1		+24		0

UT	SOL			☾ LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'0 PMG: 12 ^h 02 ^m 1			Edad: 20 ^d 5 PHE { 4 ^h : 54'4 12 ^h : 54'3 20 ^h : 54'3 PMG: 5 ^h 22 ^m R°: 48 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	o	'	o	'	o	'	o	'	o	h	m	h	m	h	m	m		
0	179	26.0	+6	43.5	282	03.7	-20	09.2	13	60 N	3 28	4 24	5 08	1 55	48	8 49 50		
1	194	26.2		44.4	296	34.5 ¹¹⁸		10.5	13	58	39	31	12	40	48	9 03 51		
2	209	26.4		45.4	311	05.3 ¹¹⁸		11.8	13	56	49	37	15	28	48	16 50		
3	224	26.5		46.3	325	36.1 ¹¹⁸		12.9	11	54	3 57	42	19	17	48	27 50		
4	239	26.7		47.3	340	06.9 ¹¹⁸		14.0	11	52	4 04	47	22	1 07	48	37 50		
5	254	26.9	+6	48.2	354	37.7 ¹¹⁸	-20	14.9	9	50	4 11	4 51	5 24	0 58	49	9 45 50		
6	269	27.1	+6	49.1	9	08.5 ¹¹⁸	-20	15.8	9	45	4 24	5 00	5 30	0 40	48	10 04 50		
7	284	27.2		50.1	23	39.3 ¹¹⁸		16.5	7	40	35	07	35	25	48	19 49		
8	299	27.4		51.0	38	10.1 ¹¹⁸		17.2	7	35	43	13	39	12	49	32 49		
9	314	27.6		52.0	52	40.9 ¹¹⁸		17.8	6	30	4 50	18	42	0 01	49	10 43 49		
10	329	27.8		52.9	67	11.8 ¹¹⁹		18.3	5	20	5 00	26	49	***	***	11 02 49		
11	344	27.9	+6	53.8	81	42.6 ¹¹⁸	-20	18.7	4	10 N	5 08	5 33	5 54	***	***	11 18 49		
12	359	28.1	+6	54.8	96	13.4 ¹¹⁸	-20	18.9	2	0	5 14	5 38	5 59	23 59	48	11 34 48		
13	14	28.3		55.7	110	44.3 ¹¹⁹		19.1	2	10 S	18	43	6 04	43	49	11 49 48		
14	29	28.5		56.7	125	15.1 ¹¹⁸		19.2	1	20	21	46	09	27	49	12 06 47		
15	44	28.6		57.6	139	46.0 ¹¹⁹		19.3	1	30	22	50	14	23 08	50	25 47		
16	59	28.8		58.5	154	16.8 ¹¹⁸		19.2	1	35	23	52	17	22 57	51	36 47		
17	74	29.0	+6	59.5	168	47.7 ¹¹⁹	-20	19.0	2	40	5 22	5 54	6 21	22 44	51	12 49 46		
18	89	29.2	+7	00.4	183	18.6 ¹¹⁹	-20	18.7	3	45	5 21	5 55	6 25	22 29	52	13 04 45		
19	104	29.3		01.3	197	49.5 ¹¹⁹		18.3	4	50	20	57	30	11	53	22 45		
20	119	29.5		02.3	212	20.3 ¹¹⁸		17.9	4	52	19	58	32	22 02	54	30 46		
21	134	29.7		03.2	226	51.2 ¹¹⁹		17.3	6	54	18	5 59	34	21 53	53	40 45		
22	149	29.9		04.2	241	22.1 ¹¹⁹		16.7	6	56	17	6 00	37	42	54	13 51 44		
23	164	30.0		05.1	255	53.1 ¹²⁰		15.9	8	58	15	01	40	29	55	14 04 43		
24	179	30.2	+7	06.0	270	24.0 ¹¹⁹	-20	15.1	8	60 S	5 13	6 01	6 43	21 15	55	14 18 43		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG 10 ^h 57 ^m 3			Mag: -3.9 PMG: 13 ^h 24 ^m			Mag: +0.2 PMG: 5 ^h 48 ^m			Mag: -2.4 PMG: 2 ^h 18 ^m			Mag: +0.5 PMG: 5 ^h 37 ^m					
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	o	'	o	'	o	'	o	'	o	o	'	o	'	o	'	o		
0	195	13.1	159	09.3	+14	04.5	272	52.4	-23	27.3	325	20.0	-17	02.0	275	26.2	-22	14.7
1	210	15.5	174	08.8		05.6	287	53.4		27.3	340	22.7		02.0	290	28.6		14.7
2	225	18.0	189	08.3		06.7	302	54.4		27.3	355	25.3		01.9	305	31.0		14.7
3	240	20.5	204	07.8		07.8	317	55.4		27.2	10	28.0		01.8	320	33.5		14.7
4	255	22.9	219	07.3		08.9	332	56.4		27.2	25	30.7		01.8	335	35.9		14.7
5	270	25.4	234	06.8	+14	09.9	347	57.4	-23	27.1	40	33.4	-17	01.7	350	38.3	-22	14.7
6	285	27.9	249	06.3	+14	11.0	2	58.4	-23	27.1	55	36.0	-17	01.7	5	40.7	-22	14.7
7	300	30.3	264	05.8		12.1	17	59.4		27.0	70	38.7		01.6	20	43.1		14.7
8	315	32.8	279	05.3		13.2	33	00.4		27.0	85	41.4		01.5	35	45.5		14.7
9	330	35.3	294	04.8		14.3	48	01.4		26.9	100	44.1		01.5	50	48.0		14.7
10	345	37.7	309	04.3		15.4	63	02.4		26.9	115	46.8		01.4	65	50.4		14.7
11	0	40.2	324	03.8	+14	16.5	78	03.4	-23	26.8	130	49.4	-17	01.4	80	52.8	-22	14.7
12	15	42.6	339	03.3	+14	17.5	93	04.4	-23	26.8	145	52.1	-17	01.3	95	55.2	-22	14.7
13	30	45.1	354	02.8		18.6	108	05.4		26.7	160	54.8		01.3	110	57.6		14.7
14	45	47.6	9	02.3		19.7	123	06.4		26.7	175	57.5		01.2	126	00.0		14.7
15	60	50.0	24	01.8		20.8	138	07.4		26.7	191	00.2		01.1	141	02.5		14.7
16	75	52.5	39	01.3		21.9	153	08.4		26.6	206	02.8		01.1	156	04.9		14.7
17	90	55.0	54	00.8	+14	22.9	168	09.4	-23	26.6	221	05.5	-17	01.0	171	07.3	-22	14.7
18	105	57.4	69	00.3	+14	24.0	183	10.4	-23	26.5	236	08.2	-17	01.0	186	09.7	-22	14.7
19	120	59.9	83	59.8		25.1	198	11.4		26.5	251	10.9		00.9	201	12.1		14.7
20	136	02.4	98	59.3		26.2	213	12.4		26.4	266	13.6		00.9	216	14.6		14.6
21	151	04.8	113	58.8		27.3	228	13.4		26.4	281	16.2		00.8	231	17.0		14.6
22	166	07.3	128	58.3		28.3	243	14.4		26.3	296	18.9		00.7	246	19.4		14.6
23	181	09.7	143	57.8		29.4	258	15.4		26.3	311	21.6		00.7	261	21.8		14.6
24	196	12.2	158	57.3	+14	30.5	273	16.4	-23	26.2	326	24.3	-17	00.6	276	24.2	-22	14.6
Dif	—		-5	+11	+10	0	+27	+1	+24	0					+24			

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna				
	SD: 16°0 PMG: 12 ^h 01 ^m 8			Edad: 21 ^d 5 PHE { 4 ^h : 54'3 12 ^h : 54'3 20 ^h : 54'3 SD: 14'8 PMG: 6 ^h 10 ^m R°: 48 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°		
h	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m		
0	179	30.2	+7	06.0	270	24.0	-20	15.1	60 N	19 01	19 45	20 42	2 43	38	9 39	61	
1	194	30.4		07.0	284	54.9 ¹¹⁹		14.1	58	18 56	38	30	28	40	9 54	59	
2	209	30.6		07.9	299	25.8 ¹¹⁹		13.1	56	52	31	20	16	40	10 06	58	
3	224	30.7		08.8	313	56.8 ¹²⁰		12.0	54	49	26	11	2 05	41	17	57	
4	239	30.9		09.8	328	27.7 ¹¹⁹		10.8	52	46	21	20 04	1 55	42	27	56	
5	254	31.1	+7	10.7	342	58.7 ¹²⁰	-20	09.5	50	18 43	19 16	19 57	1 47	42	10 35	56	
6	269	31.2	+7	11.6	357	29.7 ¹²⁰	-20	08.1	45	18 36	19 07	19 43	1 28	44	10 54	53	
7	284	31.4		12.6	12	00.6 ¹¹⁹		06.6	40	31	18 59	32	13	45	11 08	53	
8	299	31.6		13.5	26	31.6 ¹²⁰		05.0	35	27	52	23	1 01	45	21	52	
9	314	31.8		14.4	41	02.6 ¹²⁰		03.3	30	23	47	16	0 50	45	32	51	
10	329	31.9		15.4	55	33.6 ¹²⁰	-20	01.5	20	16	38	19 05	31	46	11 51	49	
11	344	32.1	+7	16.3	70	04.7 ¹²¹	-19	59.7	10 N	18 10	18 32	18 56	0 14	47	12 07	48	
12	359	32.3	+7	17.2	84	35.7 ¹²⁰	-19	57.7	0	18 05	18 26	18 50	***	***	**	12 22	48
13	14	32.5		18.2	99	06.7 ¹²⁰		55.7	20	18 00	21	46	***	***	**	37	47
14	29	32.6		19.1	113	37.8 ¹²¹		53.5	22	17 55	17	42	***	***	**	12 53	46
15	44	32.8		20.0	128	08.8 ¹²⁰		51.3	22	30	49	13	40	23 58	52	13 12	44
16	59	33.0		21.0	142	39.9 ¹²¹		48.9	24	35	45	10	40	48	53	23	43
17	74	33.1	+7	21.9	157	11.0 ¹²¹	-19	46.5	24	40	17 41	18 08	18 40	23 35	55	13 35	42
18	89	33.3	+7	22.8	171	42.1 ¹²¹	-19	44.0	25	45	17 37	18 06	18 40	23 21	56	13 49	41
19	104	33.5		23.8	186	13.2 ¹²¹		41.4	26	50	32	04	41	23 04	57	14 07	40
20	119	33.7		24.7	200	44.3 ¹²¹		38.7	27	52	29	03	42	22 56	58	16	38
21	134	33.8		25.6	215	15.5 ¹²²		35.9	28	54	27	02	43	46	60	25	38
22	149	34.0		26.6	229	46.6 ¹²¹		33.1	28	56	24	01	44	36	61	35	37
23	164	34.2		27.5	244	17.8 ¹²²		30.1	30	58	20	18 00	45	24	62	14 47	36
24	179	34.3	+7	28.4	258	49.0 ¹²²	-19	27.0	31	60 S	17 17	17 59	18 47	22 10	64	15 01	34
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 10 ^h 53 ^m 4			Mag: -3.9 PMG: 13 ^h 25 ^m			Mag: +0.1 PMG: 5 ^h 47 ^m			Mag: -2.4 PMG: 2 ^h 14 ^m			Mag: +0.5 PMG: 5 ^h 33 ^m				
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'	
0	196	12.2	158	57.3	+14	30.5	273	16.4	-23	26.2	326	24.3	-17	00.6	276	24.2	
1	211	14.7	173	56.7		31.6	288	17.4		26.2	341	27.0		00.6	291	26.6	
2	226	17.1	188	56.2		32.6	303	18.4		26.1	356	29.7		00.5	306	29.1	
3	241	19.6	203	55.7		33.7	318	19.4		26.1	11	32.3		00.4	321	31.5	
4	256	22.1	218	55.2		34.8	333	20.4		26.0	26	35.0		00.4	336	33.9	
5	271	24.5	233	54.7	+14	35.8	348	21.4	-23	26.0	41	37.7	-17	00.3	351	36.3	
6	286	27.0	248	54.2	+14	36.9	3	22.4	-23	25.9	56	40.4	-17	00.3	6	38.7	
7	301	29.5	263	53.7		38.0	18	23.4		25.9	71	43.1		00.2	21	41.2	
8	316	31.9	278	53.2		39.1	33	24.4		25.8	86	45.8		00.1	36	43.6	
9	331	34.4	293	52.7		40.1	48	25.4		25.8	101	48.4	-17	00.1	51	46.0	
10	346	36.9	308	52.2		41.2	63	26.4		25.7	116	51.1	-17	00.0	66	48.4	
11	1	39.3	323	51.6	+14	42.3	78	27.4	-23	25.7	131	53.8	-17	00.0	81	50.8	
12	16	41.8	338	51.1	+14	43.3	93	28.4	-23	25.6	146	56.5	-16	59.9	96	53.3	
13	31	44.2	353	50.6		44.4	108	29.4		25.6	161	59.2		59.8	111	55.7	
14	46	46.7	8	50.1		45.5	123	30.4		25.5	177	01.9		59.8	126	58.1	
15	61	49.2	23	49.6		46.5	138	31.4		25.5	192	04.6		59.7	142	00.5	
16	76	51.6	38	49.1		47.6	153	32.4		25.4	207	07.2		59.7	157	03.0	
17	91	54.1	53	48.6	+14	48.7	168	33.5	-23	25.4	222	09.9	-16	59.6	172	05.4	
18	106	56.6	68	48.0	+14	49.7	183	34.5	-23	25.3	237	12.6	-16	59.5	187	07.8	
19	121	59.0	83	47.5		50.8	198	35.5		25.3	252	15.3		59.5	202	10.2	
20	137	01.5	98	47.0		51.9	213	36.5		25.2	267	18.0		59.4	217	12.6	
21	152	04.0	113	46.5		52.9	228	37.5		25.2	282	20.7		59.4	232	15.1	
22	167	06.4	128	46.0		54.0	243	38.5		25.1	297	23.4		59.3	247	17.5	
23	182	08.9	143	45.5		55.0	258	39.5		25.1	312	26.0		59.2	262	19.9	
24	197	11.4	158	44.9	+14	56.1	273	40.5	-23	25.0	327	28.7	-16	59.2	277	22.3	
Dif	—			-5 +11			+10 +1			+27 +1			+24 0				

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'0 PMG: 12 ^h 01 ^m 6			Edad: 22 ^d 5 PHE { 4 ^h : 54'3 12 ^h : 54'4 20 ^h : 54'5 SD: 14'8 PMG: 6 ^h 58 ^m R°: 47 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m	m
0	179	34.3	+7	28.4	258	49.0	-19 27.0	60 N	3 20	4 17	5 02	3 21	30	10 40	67	
1	194	34.5		29.4	273	20.1 ¹²¹	23.9 31	58	32	25	06	3 08	31	10 53	65	
2	209	34.7		30.3	287	51.3 ¹²²	20.7 32	56	42	31	10	2 56	33	11 04	64	
3	224	34.9		31.2	302	22.6 ¹²³	17.3 34	54	51	37	14	46	34	14	61	
4	239	35.0		32.2	316	53.8 ¹²²	13.9 34	52	3 59	42	17	37	36	23	61	
5	254	35.2	+7	33.1	331	25.0 ¹²²	-19 10.4 35	50	4 06	4 47	5 20	2 29	36	11 31	59	
6	269	35.4	+7	34.0	345	56.3 ¹²³	-19 06.8 36	45	4 20	4 56	5 26	2 12	38	11 47	58	
7	284	35.5		34.9	0	27.5 ¹²²	-19 03.1 37	40	31	5 04	32	1 58	40	12 01	56	
8	299	35.7		35.9	14	58.8 ¹²³	-18 59.4 37	35	40	10	36	46	41	13	54	
9	314	35.9		36.8	29	30.1 ¹²³	55.5 39	30	47	16	40	35	43	23	53	
10	329	36.0		37.7	44	01.4 ¹²³	51.5 40	20	4 59	25	47	17	44	40	51	
11	344	36.2	+7	38.7	58	32.7 ¹²³	-18 47.5 40	10 N	5 07	5 32	5 53	1 01	46	12 55	49	
12	359	36.4	+7	39.6	73	04.1 ¹²⁴	-18 43.4 41	0	5 13	5 37	5 58	0 47	47	13 10	47	
13	14	36.6		40.5	87	35.4 ¹²³	39.2 42	10 S	18	42	6 04	32	49	24	45	
14	29	36.7		41.5	102	06.8 ¹²⁴	34.9 43	20	21	47	09	0 16	50	39	43	
15	44	36.9		42.4	116	38.1 ¹²³	30.5 44	30	24	51	15	***	***	13 56	41	
16	59	37.1		43.3	131	09.5 ¹²⁴	26.0 45	35	24	53	19	***	***	14 06	39	
17	74	37.2	+7	44.2	145	40.9 ¹²⁴	-18 21.5 45	40	5 24	5 56	6 23	***	***	14 17	38	
18	89	37.4	+7	45.2	160	12.4 ¹²⁵	-18 16.8 47	45	5 24	5 58	6 27	***	***	14 30	37	
19	104	37.6		46.1	174	43.8 ¹²⁴	12.1 47	50	23	6 00	33	***	***	47	34	
20	119	37.7		47.0	189	15.2 ¹²⁴	07.3 48	52	22	01	35	23 54	63	14 54	33	
21	134	37.9		47.9	203	46.7 ¹²⁵	-18 02.4 49	54	22	02	38	46	64	15 03	31	
22	149	38.1		48.9	218	18.2 ¹²⁵	-17 57.4 50	56	21	04	41	37	66	12	30	
23	164	38.2		49.8	232	49.7 ¹²⁵	52.3 51	58	19	05	44	26	68	23	28	
24	179	38.4	+7	50.7	247	21.2 ¹²⁵	-17 47.2 51	60 S	5 18	6 06	6 48	23 14	71	15 35	26	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 10 ^h 49 ^m 5		Mag: -3.9 PMG: 13 ^h 25 ^m		Mag: +0.1 PMG: 5 ^h 45 ^m		Mag: -2.4 PMG: 2 ^h 10 ^m		Mag: +0.5 PMG: 5 ^h 30 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	o	'	o	'	o	'	o	'	o	'
0	197	11.4	158	44.9	+14	56.1	273	40.5	-23	25.0
1	212	13.8	173	44.4		57.2	288	41.5		24.9
2	227	16.3	188	43.9		58.2	303	42.5		24.9
3	242	18.7	203	43.4	+14	59.3	318	43.5		24.8
4	257	21.2	218	42.9	+15	00.3	333	44.5		24.8
5	272	23.7	233	42.4	+15	01.4	348	45.6	-23	24.7
6	287	26.1	248	41.8	+15	02.5	3	46.6	-23	24.7
7	302	28.6	263	41.3		03.5	18	47.6		24.6
8	317	31.1	278	40.8		04.6	33	48.6		24.6
9	332	33.5	293	40.3		05.6	48	49.6		24.5
10	347	36.0	308	39.7		06.7	63	50.6		24.5
11	2	38.5	323	39.2	+15	07.7	78	51.6	-23	24.4
12	17	40.9	338	38.7	+15	08.8	93	52.6	-23	24.4
13	32	43.4	353	38.2		09.8	108	53.6		24.3
14	47	45.9	8	37.7		10.9	123	54.7		24.3
15	62	48.3	23	37.1		11.9	138	55.7		24.2
16	77	50.8	38	36.6		13.0	153	56.7		24.1
17	92	53.2	53	36.1	+15	14.0	168	57.7	-23	24.1
18	107	55.7	68	35.6	+15	15.1	183	58.7	-23	24.0
19	122	58.2	83	35.0		16.1	198	59.7		24.0
20	138	00.6	98	34.5		17.2	214	00.7		23.9
21	153	03.1	113	34.0		18.2	229	01.8		23.9
22	168	05.6	128	33.5		19.3	244	02.8		23.8
23	183	08.0	143	32.9		20.3	259	03.8		23.8
24	198	10.5	158	32.4	+15	21.4	274	04.8	-23	23.7
Dif	—		-5		+11		+10		+1	

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16'0			Edad: 23 ^d 5	PHE { 4 ^h : 54'6 12 ^h : 54'7 20 ^h : 54'8										
	PMG: 12 ^h 01 ^m 3					SD: 14'9			PMG: 7 ^h 45 ^m			R°: 47 ^m			
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	o	'	o	'	'	o	'	o	h m	h m	h m	h m m	m	h m m	m
0	179	38.4	+7	50.7	247	21.2	-17 47.2	60 N	19 06	19 51	20 49	3 51 23	11 47 73		
1	194	38.6		51.6	261	52.7 ¹²⁵	41.9 ⁵³	58	19 01	43	36	39 26	11 58 70		
2	209	38.8		52.6	276	24.2 ¹²⁵	36.6 ⁵³	56	18 56	36	25	29 28	12 08 68		
3	224	38.9		53.5	290	55.8 ¹²⁶	31.2 ⁵⁴	54	52	30	16	20 30	16 66		
4	239	39.1		54.4	305	27.3 ¹²⁵	25.7 ⁵⁵	52	49	24	08	13 30	24 64		
5	254	39.3	+7	55.3	319	58.9 ¹²⁶	-17 20.2 ⁵⁵	50	18 46	19 19	20 01	3 05 32	12 30 64		
6	269	39.4	+7	56.3	334	30.5 ¹²⁶	-17 14.5 ⁵⁷	45	18 39	19 09	19 46	2 50 35	12 45 60		
7	284	39.6		57.2	349	02.1 ¹²⁶	08.8 ⁵⁷	40	33	19 01	34	38 36	12 57 58		
8	299	39.8		58.1	3	33.7 ¹²⁶	-17 03.0 ⁵⁸	35	28	18 54	25	27 38	13 07 56		
9	314	39.9	+7	59.0	18	05.3 ¹²⁶	-16 57.1 ⁵⁹	30	24	48	17	18 39	16 54		
10	329	40.1	+8	00.0	32	37.0 ¹²⁷	51.1 ⁶⁰	20	17	39	19 05	2 01 43	31 51		
11	344	40.3	+8	00.9	47	08.6 ¹²⁶	-16 45.0 ⁶¹	10 N	18 10	18 32	18 56	1 47 45	13 44 49		
12	359	40.4	+8	01.8	61	40.3 ¹²⁷	-16 38.9 ⁶¹	0	18 05	18 25	18 50	1 34 47	13 57 46		
13	14	40.6		02.7	76	12.0 ¹²⁷	32.7 ⁶²	10 S	17 59	20	45	21 49	14 09 44		
14	29	40.8		03.7	90	43.7 ¹²⁷	26.4 ⁶³	20	53	15	41	1 06 52	22 42		
15	44	40.9		04.6	105	15.4 ¹²⁷	20.0 ⁶⁴	30	46	10	38	0 50 54	37 39		
16	59	41.1		05.5	119	47.1 ¹²⁷	13.6 ⁶⁴	35	42	08	37	41 55	45 37		
17	74	41.3	+8	06.4	134	18.8 ¹²⁷	-16 07.0 ⁶⁶	40	17 38	18 05	18 37	0 30 57	14 55 35		
18	89	41.4	+8	07.4	148	50.6 ¹²⁸	-16 00.4 ⁶⁶	45	17 33	18 03	18 37	0 17 59	15 07 32		
19	104	41.6		08.3	163	22.3 ¹²⁷	-15 53.7 ⁶⁷	50	27	18 00	37	0 01 62	21 29		
20	119	41.8		09.2	177	54.1 ¹²⁸	47.0 ⁶⁷	52	25	17 59	38	** ** *	27 28		
21	134	41.9		10.1	192	25.9 ¹²⁸	40.1 ⁶⁹	54	22	57	38	** ** *	34 27		
22	149	42.1		11.0	206	57.7 ¹²⁸	33.2 ⁶⁹	56	19	56	39	** ** *	42 25		
23	164	42.3		12.0	221	29.5 ¹²⁸	26.2 ⁷⁰	58	15	55	40	** ** *	15 51 23		
24	179	42.4	+8	12.9	236	01.3 ¹²⁸	-15 19.1 ⁷¹	60 S	17 11	17 53	18 41	** ** *	16 01 21		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 10 ^h 45 ^m 5		Mag: -3.9 PMG: 13 ^h 26 ^m		Mag: +0.1 PMG: 5 ^h 43 ^m		Mag: -2.4 PMG: 2 ^h 05 ^m		Mag: +0.5 PMG: 5 ^h 26 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	o	'	o	'	o	'	o	'	o	'
0	198	10.5	158	32.4	+15	21.4	274	04.8	-23	23.7
1	213	13.0	173	31.9		22.4	289	05.8		23.6
2	228	15.4	188	31.3		23.5	304	06.8		23.6
3	243	17.9	203	30.8		24.5	319	07.9		23.5
4	258	20.3	218	30.3		25.5	334	08.9		23.5
5	273	22.8	233	29.8	+15	26.6	349	09.9	-23	23.4
6	288	25.3	248	29.2	+15	27.6	4	10.9	-23	23.4
7	303	27.7	263	28.7		28.7	19	11.9		23.3
8	318	30.2	278	28.2		29.7	34	12.9		23.2
9	333	32.7	293	27.6		30.7	49	14.0		23.2
10	348	35.1	308	27.1		31.8	64	15.0		23.1
11	3	37.6	323	26.6	+15	32.8	79	16.0	-23	23.1
12	18	40.1	338	26.0	+15	33.9	94	17.0	-23	23.0
13	33	42.5	353	25.5		34.9	109	18.0		23.0
14	48	45.0	8	25.0		35.9	124	19.1		22.9
15	63	47.5	23	24.4		37.0	139	20.1		22.8
16	78	49.9	38	23.9		38.0	154	21.1		22.8
17	93	52.4	53	23.4	+15	39.0	169	22.1	-23	22.7
18	108	54.8	68	22.8	+15	40.1	184	23.1	-23	22.7
19	123	57.3	83	22.3		41.1	199	24.2		22.6
20	138	59.8	98	21.7		42.1	214	25.2		22.5
21	154	02.2	113	21.2		43.2	229	26.2		22.5
22	169	04.7	128	20.7		44.2	244	27.2		22.4
23	184	07.2	143	20.1		45.2	259	28.2		22.4
24	199	09.6	158	19.6	+15	46.2	274	29.3	-23	22.3
Dif	—		-5 +10		+10 +1		+27 +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: 24 ^d 5 PHE { SD: 15 ^h 0 PMG: 8 ^h 32 ^m R°: 46 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Náutico	Civil		Hora	R°	Hora	R°	
h	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m
0	179	42.4	+8	12.9	236	01.3	-15	19.1	71	60 N	3 12	4 11	4 56	4 14 18	13 00 76
1	194	42.6		13.8	250	33.2	129	12.0	71	58	25	19	5 01	4 05 21	08 74
2	209	42.7		14.7	265	05.0	128	-15	04.8	72	36	26	05	3 57 23	16 71
3	224	42.9		15.6	279	36.9	129	-14	57.5	73	54	46	32	50 25	22 66
4	239	43.1		16.6	294	08.7	128	50.1	74	52	3 54	37	13	43 27	28 68
5	254	43.2	+8	17.5	308	40.6	129	-14	42.7	74	50	4 01	4 42	3 37 28	13 34 65
6	269	43.4	+8	18.4	323	12.5	129	-14	35.1	76	45	4 16	4 52	3 25 31	13 45 63
7	284	43.6		19.3	337	44.4	129	27.6	75	40	28	5 01	29	14 34	13 55 60
8	299	43.7		20.2	352	16.3	129	19.9	77	35	37	08	34	3 05 36	14 03 57
9	314	43.9		21.2	6	48.2	129	12.2	77	30	45	14	38	2 57 38	10 55
10	329	44.1		22.1	21	20.2	130	-14	04.4	78	20	4 57	23	44 41	22 52
11	344	44.2	+8	23.0	35	52.1	129	-13	56.5	79	10 N	5 06	5 31	2 32 44	14 33 49
12	359	44.4	+8	23.9	50	24.0	129	-13	48.5	80	0	5 13	5 37	2 21 46	14 43 46
13	14	44.6		24.8	64	56.0	130	40.5	80	10 S	18	42	6 04	2 10 48	14 53 43
14	29	44.7		25.7	79	28.0	130	32.5	80	20	22	48	10	1 58 51	15 04 40
15	44	44.9		26.7	93	59.9	129	24.3	82	30	25	52	17	44 55	16 36
16	59	45.0		27.6	108	31.9	130	16.1	82	35	26	55	20	36 57	22 35
17	74	45.2	+8	28.5	123	03.9	130	-13	07.8	83	40	5 26	5 58	1 27 59	15 30 33
18	89	45.4	+8	29.4	137	35.9	130	-12	59.4	84	45	5 26	6 00	1 16 61	15 39 30
19	104	45.5		30.3	152	07.9	130	51.0	84	50	26	03	36	1 03 65	15 27 27
20	119	45.7		31.2	166	39.9	130	42.5	85	52	26	05	39	0 57 66	15 55 26
21	134	45.9		32.2	181	11.9	130	34.0	85	54	25	06	42	50 68	16 01 23
22	149	46.0		33.1	195	43.9	130	25.3	87	56	24	07	45	43 70	07 22
23	164	46.2		34.0	210	15.9	130	16.7	86	58	24	09	49	34 72	14 19
24	179	46.3	+8	34.9	224	48.0	131	-12	07.9	88	60 S	5 23	6 11	0 25 74	16 22 17

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 10 ^h 41 ^m 6		Mag: -3.9 PMG: 13 ^h 27 ^m		Mag: +0.1 PMG: 5 ^h 42 ^m		Mag: -2.5 PMG: 2 ^h 01 ^m		Mag: +0.4 PMG: 5 ^h 22 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	o	'	o	'	o	'	o	'	o	'								
0	199	09.6	158	19.6	+15	46.2	274	29.3	-23	22.3	329	38.1	-16	56.2	279	18.9	-22	14.4
1	214	12.1	173	19.1		47.3	289	30.3		22.2	344	40.8		56.2	294	21.3		14.4
2	229	14.6	188	18.5		48.3	304	31.3		22.2	359	43.5		56.1	309	23.8		14.4
3	244	17.0	203	18.0		49.3	319	32.3		22.1	14	46.2		56.0	324	26.2		14.4
4	259	19.5	218	17.4		50.4	334	33.4		22.1	29	48.9		56.0	339	28.6		14.4
5	274	21.9	233	16.9	+15	51.4	349	34.4	-23	22.0	44	51.6	-16	55.9	354	31.1	-22	14.4
6	289	24.4	248	16.4	+15	52.4	4	35.4	-23	21.9	59	54.3	-16	55.8	9	33.5	-22	14.4
7	304	26.9	263	15.8		53.4	19	36.4		21.9	74	57.0		55.8	24	35.9		14.4
8	319	29.3	278	15.3		54.4	34	37.5		21.8	89	59.7		55.7	39	38.4		14.4
9	334	31.8	293	14.7		55.5	49	38.5		21.8	105	02.4		55.7	54	40.8		14.4
10	349	34.3	308	14.2		56.5	64	39.5		21.7	120	05.1		55.6	69	43.2		14.4
11	4	36.7	323	13.6	+15	57.5	79	40.5	-23	21.6	135	07.8	-16	55.5	84	45.7	-22	14.4
12	19	39.2	338	13.1	+15	58.5	94	41.6	-23	21.6	150	10.5	-16	55.5	99	48.1	-22	14.4
13	34	41.7	353	12.6	+15	59.6	109	42.6		21.5	165	13.2		55.4	114	50.5		14.4
14	49	44.1	8	12.0	+16	00.6	124	43.6		21.5	180	15.9		55.3	129	53.0		14.4
15	64	46.6	23	11.5		01.6	139	44.6		21.4	195	18.6		55.3	144	55.4		14.4
16	79	49.1	38	10.9		02.6	154	45.7		21.3	210	21.3		55.2	159	57.8		14.4
17	94	51.5	53	10.4	+16	03.6	169	46.7	-23	21.3	225	24.0	-16	55.1	175	00.3	-22	14.4
18	109	54.0	68	09.8	+16	04.6	184	47.7	-23	21.2	240	26.7	-16	55.1	190	02.7	-22	14.4
19	124	56.4	83	09.3		05.7	199	48.8		21.1	255	29.4		55.0	205	05.2		14.4
20	139	58.9	98	08.7		06.7	214	49.8		21.1	270	32.1		54.9	220	07.6		14.4
21	155	01.4	113	08.2		07.7	229	50.8		21.0	285	34.8		54.9	235	10.0		14.4
22	170	03.8	128	07.6		08.7	244	51.8		21.0	300	37.5		54.8	250	12.5		14.4
23	185	06.3	143	07.1		09.7	259	52.9		20.9	315	40.2		54.8	265	14.9		14.4
24	200	08.8	158	06.5	+16	10.7	274	53.9	-23	20.8	330	42.9	-16	54.7	280	17.3	-22	14.4
Dif	—		-5		+10		+10		+1		+27		+1		+24		0	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16:0 PMG: 12 ^h 00 ^m 8			Edad: 25 ^d 5 PHE { SD: 15:2 PMG: 9 ^h 18 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	Rº	Hora	Rº
h	o	'	o	'	o	'	o	h m	h m	h m	h m m	h m m	h m m		
0	179	46.3	+8	34.9	224	48.0	-12 07.9	60 N	19 10	19 56	20 56	4 32 16	14 16 79		
1	194	46.5		35.8	239	20.0 ¹³⁰	-11 59.1 ⁸⁸	58	05	48	42	26 18	22 76		
2	209	46.7		36.7	253	52.1 ¹³¹	50.2 ⁸⁹	56	19 00	40	31	20 20	27 74		
3	224	46.8		37.6	268	24.1 ¹³⁰	41.3 ⁸⁹	54	18 56	34	21	15 22	31 72		
4	239	47.0		38.6	282	56.1 ¹³⁰	32.3 ⁹⁰	52	52	28	12	10 24	36 69		
5	254	47.2	+8	39.5	297	28.2 ¹³¹	-11 23.2 ⁹¹	50	18 49	19 23	20 04	4 05 26	14 39 69		
6	269	47.3	+8	40.4	312	00.2 ¹³⁰	-11 14.1 ⁹¹	45	18 41	19 12	19 49	3 56 29	14 48 64		
7	284	47.5		41.3	326	32.3 ¹³¹	-11 04.9 ⁹²	40	35	19 03	36	48 32	14 55 61		
8	299	47.6		42.2	341	04.4 ¹³¹	-10 55.7 ⁹²	35	30	18 56	27	41 34	15 00 59		
9	314	47.8		43.1	355	36.4 ¹³⁰	46.4 ⁹³	30	25	50	19	35 37	05 57		
10	329	48.0		44.0	10	08.5 ¹³¹	37.0 ⁹⁴	20	17	40	19 06	25 40	14 53		
11	344	48.1	+8	44.9	24	40.5 ¹³⁰	-10 27.6 ⁹⁴	10 N	18 10	18 32	18 57	3 16 43	15 22 49		
12	359	48.3	+8	45.9	39	12.6 ¹³¹	-10 18.1 ⁹⁵	0	18 04	18 25	18 49	3 07 46	15 29 46		
13	14	48.4		46.8	53	44.7 ¹³¹	-10 08.6 ⁹⁵	10 S	17 58	19	44	2 58 50	36 43		
14	29	48.6		47.7	68	16.7 ¹³⁰	-9 59.0 ⁹⁶	20	51	14	39	49 53	44 40		
15	44	48.8		48.6	82	48.8 ¹³¹	49.3 ⁹⁷	30	44	08	36	39 56	52 36		
16	59	48.9		49.5	97	20.9 ¹³¹	39.6 ⁹⁷	35	40	05	35	33 58	15 57 34		
17	74	49.1	+8	50.4	111	52.9 ¹³⁰	-9 29.8 ⁹⁸	40	17 35	18 02	18 34	2 26 60	16 03 31		
18	89	49.2	+8	51.3	126	25.0 ¹³¹	-9 20.0 ⁹⁸	45	17 30	17 59	18 33	2 17 64	16 09 29		
19	104	49.4		52.2	140	57.0 ¹³⁰	10.2 ⁹⁸	50	23	56	33	08 67	17 25		
20	119	49.6		53.1	155	29.1 ¹³¹	-9 00.2 ¹⁰⁰	52	20	54	33	2 03 69	21 23		
21	134	49.7		54.0	170	01.1 ¹³⁰	-8 50.3 ⁹⁹	54	17	53	34	1 58 71	24 22		
22	149	49.9		55.0	184	33.2 ¹³¹	40.2 ¹⁰¹	56	14	51	34	53 72	29 19		
23	164	50.0		55.9	199	05.2 ¹³⁰	30.2 ¹⁰⁰	58	10	49	35	46 75	33 18		
24	179	50.2	+8	56.8	213	37.2 ¹³⁰	-8 20.0 ¹⁰²	60 S	17 05	17 47	18 35	1 39 78	16 39 15		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 10 ^h 37 ^m 7		Mag: -3.9 PMG: 13 ^h 28 ^m			Mag: 0.0 PMG: 5 ^h 40 ^m			Mag: -2.5 PMG: 1 ^h 57 ^m			Mag: +0.4 PMG: 5 ^h 18 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	
0	200	08.8	158	06.5	+16	10.7	274	53.9	-23	20.8	330	42.9	-16	54.7	
1	215	11.2	173	06.0		11.7	289	54.9		20.8	345	45.6		54.6	
2	230	13.7	188	05.5		12.8	304	56.0		20.7	0	48.3		54.6	
3	245	16.2	203	04.9		13.8	319	57.0		20.6	15	51.0		54.5	
4	260	18.6	218	04.3		14.8	334	58.0		20.6	30	53.7		54.4	
5	275	21.1	233	03.8	+16	15.8	349	59.1	-23	20.5	45	56.5	-16	54.4	
6	290	23.6	248	03.2	+16	16.8	5	00.1	-23	20.5	60	59.2	-16	54.3	
7	305	26.0	263	02.7		17.8	20	01.1		20.4	76	01.9		54.2	
8	320	28.5	278	02.1		18.8	35	02.2		20.3	91	04.6		54.2	
9	335	30.9	293	01.6		19.8	50	03.2		20.3	106	07.3		54.1	
10	350	33.4	308	01.0		20.8	65	04.2		20.2	121	10.0		54.0	
11	5	35.9	323	00.5	+16	21.8	80	05.3	-23	20.1	136	12.7	-16	54.0	
12	20	38.3	337	59.9	+16	22.8	95	06.3	-23	20.1	151	15.4	-16	53.9	
13	35	40.8	352	59.4		23.8	110	07.3		20.0	166	18.1		53.8	
14	50	43.3	7	58.8		24.8	125	08.4		19.9	181	20.8		53.8	
15	65	45.7	22	58.3		25.8	140	09.4		19.9	196	23.5		53.7	
16	80	48.2	37	57.7		26.8	155	10.4		19.8	211	26.2		53.6	
17	95	50.7	52	57.2	+16	27.8	170	11.5	-23	19.7	226	29.0	-16	53.6	
18	110	53.1	67	56.6	+16	28.8	185	12.5	-23	19.7	241	31.7	-16	53.5	
19	125	55.6	82	56.0		29.8	200	13.5		19.6	256	34.4		53.5	
20	140	58.0	97	55.5		30.8	215	14.6		19.6	271	37.1		53.4	
21	156	00.5	112	54.9		31.8	230	15.6		19.5	286	39.8		53.3	
22	171	03.0	127	54.4		32.8	245	16.6		19.4	301	42.5		53.3	
23	186	05.4	142	53.8		33.8	260	17.7		19.4	316	45.2		53.2	
24	201	07.9	157	53.2	+16	34.8	275	18.7	-23	19.3	331	47.9	-16	53.1	
Dif	—		-6			+10	+10		+1		+27		+1		+24
															0

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'0 PMG: 12 ^h 00 ^m 5			Edad: 26 ^d 5 PHE { 4 ^h : 56'1 12 ^h : 56'4 20 ^h : 56'6 PMG: 10 ^h 04 ^m R°: 47 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m	m		
0	179	50.2	+8	56.8	213	37.2	-8 20.0	60 N	3 04	4 04	4 50	4 48	15	15 35	81			
1	194	50.4		57.7	228	09.3 ¹³¹	-8 09.9 ¹⁰¹	58	18	13	4 55	44	17	38	78			
2	209	50.5		58.6	242	41.3 ¹³⁰	-7 59.6 ¹⁰³	56	30	20	5 00	40	19	41	76			
3	224	50.7	+8	59.5	257	13.3 ¹³⁰	49.4 ¹⁰²	54	40	27	04	37	21	43	74			
4	239	50.8	+9	00.4	271	45.3 ¹³⁰	39.1 ¹⁰³	52	49	33	08	34	23	45	72			
5	254	51.0	+9	01.3	286	17.3 ¹³⁰	-7 28.7 ¹⁰⁴	50	3 56	4 38	5 12	4 31	25	15 48	70			
6	269	51.1	+9	02.2	300	49.3 ¹³⁰	-7 18.3 ¹⁰⁴	45	4 12	4 49	5 19	4 25	28	15 52	67			
7	284	51.3		03.1	315	21.3 ¹³⁰	-7 07.8 ¹⁰⁵	40	24	4 58	25	20	31	56	63			
8	299	51.5		04.0	329	53.3 ¹³⁰	-6 57.3 ¹⁰⁵	35	34	5 05	31	15	34	15 59	61			
9	314	51.6		04.9	344	25.2 ¹²⁹	46.8 ¹⁰⁵	30	42	11	36	12	35	16 02	58			
10	329	51.8		05.8	358	57.2 ¹³⁰	36.2 ¹⁰⁶	20	4 55	21	44	4 05	40	07	54			
11	344	51.9	+9	06.8	13	29.1 ¹²⁹	-6 25.5 ¹⁰⁷	10 N	5 05	5 29	5 51	3 59	43	16 11	51			
12	359	52.1	+9	07.7	28	01.1 ¹³⁰	-6 14.9 ¹⁰⁶	0	5 12	5 36	5 57	3 53	47	16 15	47			
13	14	52.2		08.6	42	33.0 ¹²⁹	-6 04.1 ¹⁰⁸	10 S	18	42	6 04	48	49	19	44			
14	29	52.4		09.5	57	04.9 ¹²⁹	-5 53.4 ¹⁰⁷	20	22	48	10	42	53	24	39			
15	44	52.6		10.4	71	36.8 ¹²⁹	42.6 ¹⁰⁸	30	26	54	18	35	57	28	36			
16	59	52.7		11.3	86	08.7 ¹²⁹	31.8 ¹⁰⁸	35	27	5 56	22	31	60	31	34			
17	74	52.9	+9	12.2	100	40.6 ¹²⁹	-5 20.9 ¹⁰⁹	40	5 28	6 00	6 27	3 26	63	16 34	31			
18	89	53.0	+9	13.1	115	12.4 ¹²⁸	-5 10.0 ¹⁰⁹	45	5 29	6 03	6 32	3 21	66	16 38	27			
19	104	53.2		14.0	129	44.3 ¹²⁹	-4 59.0 ¹¹⁰	50	29	06	39	15	69	42	24			
20	119	53.3		14.9	144	16.1 ¹²⁸	48.0 ¹¹⁰	52	29	08	42	12	71	44	22			
21	134	53.5		15.8	158	47.9 ¹²⁸	37.0 ¹¹⁰	54	29	10	45	09	73	46	21			
22	149	53.7		16.7	173	19.7 ¹²⁸	26.0 ¹¹⁰	56	28	11	49	05	75	48	19			
23	164	53.8		17.6	187	51.5 ¹²⁸	14.9 ¹¹¹	58	28	13	53	3 01	78	51	16			
24	179	54.0	+9	18.5	202	23.2 ¹²⁷	-4 03.8 ¹¹¹	60 S	5 27	6 15	6 58	2 57	80	16 54	14			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 10 ^h 33 ^m 7		Mag: -3.9 PMG: 13 ^h 29 ^m			Mag: 0.0 PMG: 5 ^h 38 ^m			Mag: -2.5 PMG: 1 ^h 52 ^m			Mag: +0.4 PMG: 5 ^h 14 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'		
0	201	07.9	157	53.2	+16	34.8	275	18.7	-23	19.3	331	47.9	-16	53.1	281	15.9	-22	14.3
1	216	10.4	172	52.7		35.8	290	19.8		19.2	346	50.6		53.1	296	18.3		14.3
2	231	12.8	187	52.1		36.8	305	20.8		19.2	1	53.3		53.0	311	20.8		14.3
3	246	15.3	202	51.6		37.8	320	21.8		19.1	16	56.1		52.9	326	23.2		14.3
4	261	17.8	217	51.0		38.8	335	22.9		19.0	31	58.8		52.9	341	25.6		14.3
5	276	20.2	232	50.4	+16	39.8	350	23.9	-23	19.0	47	01.5	-16	52.8	356	28.1	-22	14.3
6	291	22.7	247	49.9	+16	40.8	5	25.0	-23	18.9	62	04.2	-16	52.7	11	30.5	-22	14.3
7	306	25.2	262	49.3		41.8	20	26.0		18.8	77	06.9		52.7	26	33.0		14.3
8	321	27.6	277	48.7		42.7	35	27.0		18.8	92	09.6		52.6	41	35.4		14.3
9	336	30.1	292	48.2		43.7	50	28.1		18.7	107	12.3		52.5	56	37.9		14.3
10	351	32.5	307	47.6		44.7	65	29.1		18.6	122	15.0		52.5	71	40.3		14.3
11	6	35.0	322	47.1	+16	45.7	80	30.2	-23	18.6	137	17.8	-16	52.4	86	42.7	-22	14.3
12	21	37.5	337	46.5	+16	46.7	95	31.2	-23	18.5	152	20.5	-16	52.3	101	45.2	-22	14.3
13	36	39.9	352	45.9		47.7	110	32.2		18.4	167	23.2		52.3	116	47.6		14.3
14	51	42.4	7	45.4		48.7	125	33.3		18.3	182	25.9		52.2	131	50.1		14.3
15	66	44.9	22	44.8		49.7	140	34.3		18.3	197	28.6		52.1	146	52.5		14.3
16	81	47.3	37	44.2		50.6	155	35.4		18.2	212	31.3		52.1	161	55.0		14.3
17	96	49.8	52	43.7	+16	51.6	170	36.4	-23	18.1	227	34.0	-16	52.0	176	57.4	-22	14.3
18	111	52.3	67	43.1	+16	52.6	185	37.4	-23	18.1	242	36.8	-16	51.9	191	59.9	-22	14.3
19	126	54.7	82	42.5		53.6	200	38.5		18.0	257	39.5		51.9	207	02.3		14.3
20	141	57.2	97	42.0		54.6	215	39.5		17.9	272	42.2		51.8	222	04.7		14.3
21	156	59.6	112	41.4		55.5	230	40.6		17.9	287	44.9		51.7	237	07.2		14.3
22	172	02.1	127	40.8		56.5	245	41.6		17.8	302	47.6		51.7	252	09.6		14.3
23	187	04.6	142	40.2		57.5	260	42.7		17.7	317	50.3		51.6	267	12.1		14.3
24	202	07.0	157	39.7	+16	58.5	275	43.7	-23	17.7	332	53.1	-16	51.5	282	14.5	-22	14.3
Dif	—		-6		+10		+10		+1		+27		+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 3			Edad: 27 ^d 5 PHE { SD: 15°5 PMG: 10 ^h 51 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	Rº	Hora	Rº
h	o	'	o	o	'	o	'	o	h	m	h	m	h	m	m
0	179	54.0	+9 18.5	202	23.2	-4 03.8		60 N	19 15	20 02	21 03	5 03	14	16 56	83
1	194	54.1		216	54.9 ¹²⁷	-3 52.6 ¹¹²		58	10	19 53	20 48	5 01	16	56	81
2	209	54.3		231	26.7 ¹²⁸	41.4 ¹¹²		56	05	45	36	4 59	19	57	78
3	224	54.4		245	58.4 ¹²⁷	30.2 ¹¹²		54	19 00	38	25	58	21	57	76
4	239	54.6		260	30.0 ¹²⁶	19.0 ¹¹²		52	18 56	32	16	57	22	57	74
5	254	54.7	+9 23.0	275	01.7 ¹²⁷	-3 07.7 ¹¹³		50	18 52	19 26	20 08	4 56	24	16 58	72
6	269	54.9	+9 23.9	289	33.3 ¹²⁶	-2 56.4 ¹¹³		45	18 44	19 15	19 52	4 53	28	16 59	68
7	284	55.0	24.8	304	04.9 ¹²⁶	45.1 ¹¹³		40	37	19 05	39	51	31	16 59	65
8	299	55.2	25.7	318	36.5 ¹²⁶	33.7 ¹¹⁴		35	32	18 58	29	49	34	17 00	62
9	314	55.4	26.6	333	08.1 ¹²⁶	22.4 ¹¹³		30	27	51	20	47	37	00	60
10	329	55.5	27.5	347	39.6 ¹²⁵	-2 11.0 ¹¹⁴		20	18	40	19 07	45	40	01	55
11	344	55.7	+9 28.4	2	11.2 ¹²⁶	-1 59.6 ¹¹⁴		10 N	18 10	18 32	18 57	4 42	44	17 02	51
12	359	55.8	+9 29.3	16	42.6 ¹²⁴	-1 48.1 ¹¹⁵		0	18 04	18 25	18 49	4 40	47	17 02	48
13	14	56.0	30.2	31	14.1 ¹²⁵	36.7 ¹¹⁴		10 S	17 57	18	43	37	51	03	44
14	29	56.1	31.1	45	45.5 ¹²⁴	25.2 ¹¹⁵		20	50	12	38	35	55	03	41
15	44	56.3	32.0	60	17.0 ¹²⁵	13.7 ¹¹⁵		30	42	06	34	32	59	04	37
16	59	56.4	32.9	74	48.3 ¹²³	-1 02.1 ¹¹⁶		35	37	18 03	32	31	61	05	34
17	74	56.6	+9 33.8	89	19.7 ¹²⁴	-0 50.6 ¹¹⁵		40	17 32	17 59	18 31	4 29	64	17 05	31
18	89	56.7	+9 34.7	103	51.0 ¹²³	-0 39.1 ¹¹⁵		45	17 26	17 56	18 30	4 27	67	17 05	29
19	104	56.9	35.6	118	22.3 ¹²³	27.5 ¹¹⁶		50	19	52	29	24	71	06	25
20	119	57.0	36.5	132	53.6 ¹²³	15.9 ¹¹⁶		52	16	50	29	23	73	06	23
21	134	57.2	37.4	147	24.8 ¹²²	-0 04.3 ¹¹⁶		54	12	48	29	22	75	07	21
22	149	57.3	38.3	161	56.0 ¹²²	+0 07.3 ¹¹⁶		56	09	46	29	20	77	07	19
23	164	57.5	39.2	176	27.2 ¹²²	18.9 ¹¹⁶		58	17 04	44	30	19	79	07	17
24	179	57.6	+9 40.1	190	58.3 ¹²¹	+0 30.6 ¹¹⁷		60 S	16 59	17 42	18 30	4 17	82	17 08	14
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 10 ^h 29 ^m 8			Mag: -3.9 PMG: 13 ^h 30 ^m			Mag: 0.0 PMG: 5 ^h 37 ^m			Mag: -2.5 PMG: 1 ^h 48 ^m			Mag: +0.4 PMG: 5 ^h 10 ^m		
	hG ♈	hG ♀	Dec	hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		hG ♅	Dec	
h	o	'	o	o	'	o	o	'	o	o	'	o	o	'	o
0	202	07.0	157 39.7	+16 58.5	275 43.7	-23 17.7	332 53.1	-16 51.5	282 14.5	-22 14.3					
1	217	09.5	172 39.1	+16 59.5	290 44.8	17.6	347 55.8	51.5	297 17.0	14.3					
2	232	12.0	187 38.5	+17 00.4	305 45.8	17.5	2 58.5	51.4	312 19.4	14.3					
3	247	14.4	202 38.0	01.4	320 46.9	17.5	18 01.2	51.3	327 21.9	14.3					
4	262	16.9	217 37.4	02.4	335 47.9	17.4	33 03.9	51.3	342 24.3	14.3					
5	277	19.4	232 36.8	+17 03.4	350 48.9	-23 17.3	48 06.6	-16 51.2	357 26.8	-22 14.3					
6	292	21.8	247 36.2	+17 04.3	5 50.0	-23 17.2	63 09.4	-16 51.1	12 29.2	-22 14.3					
7	307	24.3	262 35.7	05.3	20 51.0	17.2	78 12.1	51.1	27 31.7	14.3					
8	322	26.8	277 35.1	06.3	35 52.1	17.1	93 14.8	51.0	42 34.1	14.3					
9	337	29.2	292 34.5	07.2	50 53.1	17.0	108 17.5	50.9	57 36.5	14.3					
10	352	31.7	307 33.9	08.2	65 54.2	17.0	123 20.2	50.8	72 39.0	14.3					
11	7	34.1	322 33.4	+17 09.2	80 55.2	-23 16.9	138 22.9	-16 50.8	87 41.4	-22 14.3					
12	22	36.6	337 32.8	+17 10.2	95 56.3	-23 16.8	153 25.7	-16 50.7	102 43.9	-22 14.3					
13	37	39.1	352 32.2	11.1	110 57.3	16.8	168 28.4	50.6	117 46.3	14.3					
14	52	41.5	7 31.6	12.1	125 58.4	16.7	183 31.1	50.6	132 48.8	14.3					
15	67	44.0	22 31.1	13.1	140 59.4	16.6	198 33.8	50.5	147 51.2	14.3					
16	82	46.5	37 30.5	14.0	156 00.5	16.5	213 36.5	50.4	162 53.7	14.2					
17	97	48.9	52 29.9	+17 15.0	171 01.5	-23 16.5	228 39.3	-16 50.4	177 56.1	-22 14.2					
18	112	51.4	67 29.3	+17 15.9	186 02.6	-23 16.4	243 42.0	-16 50.3	192 58.6	-22 14.2					
19	127	53.9	82 28.8	16.9	201 03.6	16.3	258 44.7	50.2	208 01.0	14.2					
20	142	56.3	97 28.2	17.9	216 04.7	16.3	273 47.4	50.2	223 03.5	14.2					
21	157	58.8	112 27.6	18.8	231 05.7	16.2	288 50.1	50.1	238 05.9	14.2					
22	173	01.2	127 27.0	19.8	246 06.8	16.1	303 52.9	50.0	253 08.4	14.2					
23	188	03.7	142 26.4	20.8	261 07.8	16.0	318 55.6	50.0	268 10.8	14.2					
24	203	06.2	157 25.8	+17 21.7	276 08.9	-23 16.0	333 58.3	-16 49.9	283 13.3	-22 14.2					
Dif	—		-6	+10	+10	+1	+27	+1	+24	0					

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15/9 PMG: 12 ^h 00 ^m 0			Edad: 28 ^d 5 PHE SD: 15/7 PMG: 11 ^h 39 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora
h	o	'	o	'	o	'	o	h	m	h	m	h	m	m
0	179	57.6	+9	40.1	190	58.3	+0	30.6	60 N	2 56	3 58	4 44	5 17	15
1	194	57.8		41.0	205	29.4 ¹²¹		42.2 ¹¹⁶	58	3 11	4 07	50	17	18
2	209	57.9		41.9	220	00.5 ¹²¹	+0	53.9 ¹¹⁷	56	24	15	55	18	20
3	224	58.1		42.8	234	31.6 ¹²¹	+1	05.5 ¹¹⁶	54	34	22	4 59	19	22
4	239	58.2		43.7	249	02.6 ¹²⁰		17.2 ¹¹⁷	52	43	28	5 04	19	24
5	254	58.4	+9	44.6	263	33.5 ¹¹⁹	+1	28.9 ¹¹⁷	50	3 51	4 33	5 07	5 20	25
6	269	58.6	+9	45.4	278	04.5 ¹²⁰	+1	40.5 ¹¹⁶	45	4 08	4 45	5 16	5 21	29
7	284	58.7		46.3	292	35.3 ¹¹⁸	+1	52.2 ¹¹⁷	40	21	4 54	22	22	32
8	299	58.9		47.2	307	06.2 ¹¹⁹	+2	03.9 ¹¹⁷	35	31	5 02	28	23	35
9	314	59.0		48.1	321	37.0 ¹¹⁸		15.6 ¹¹⁷	30	40	09	33	24	37
10	329	59.2		49.0	336	07.8 ¹¹⁸		27.3 ¹¹⁷	20	4 53	20	42	25	42
11	344	59.3	+9	49.9	350	38.5 ¹¹⁷	+2	39.0 ¹¹⁷	10 N	5 04	5 28	5 50	5 26	45
12	359	59.5	+9	50.8	5	09.2 ¹¹⁷	+2	50.6 ¹¹⁶	0	5 11	5 36	5 57	5 27	49
13	14	59.6		51.7	19	39.9 ¹¹⁷	+3	02.3 ¹¹⁷	10 S	18	42	6 04	28	53
14	29	59.8		52.6	34	10.5 ¹¹⁶		14.0 ¹¹⁷	20	23	49	11	30	56
15	44	59.9		53.5	48	41.1 ¹¹⁶		25.7 ¹¹⁷	30	27	55	19	31	61
16	60	00.0		54.4	63	11.6 ¹¹⁵		37.3 ¹¹⁶	35	29	5 58	24	32	63
17	75	00.2	+9	55.3	77	42.1 ¹¹⁵	+3	49.0 ¹¹⁷	40	5 30	6 01	6 29	5 33	66
18	90	00.3	+9	56.2	92	12.5 ¹¹⁴	+4	00.6 ¹¹⁶	45	5 31	6 05	6 35	5 34	69
19	105	00.5		57.0	106	42.9 ¹¹⁴		12.2 ¹¹⁶	50	32	09	42	35	74
20	120	00.6		57.9	121	13.3 ¹¹⁴		23.9 ¹¹⁷	52	32	11	45	36	75
21	135	00.8		58.8	135	43.6 ¹¹³		35.5 ¹¹⁶	54	32	13	49	37	77
22	150	00.9	+9	59.7	150	13.9 ¹¹³		47.1 ¹¹⁶	56	32	15	53	37	80
23	165	01.1	+10	00.6	164	44.1 ¹¹²	+4	58.7 ¹¹⁶	58	32	17	6 57	38	82
24	180	01.2	+10	01.5	179	14.3 ¹¹²	+5	10.2 ¹¹⁵	60 S	5 32	6 20	7 02	5 39	85

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 10 ^h 25 ^m 9		Mag: -3.9 PMG: 13 ^h 31 ^m		Mag: 0.0 PMG: 5 ^h 35 ^m		Mag: -2.5 PMG: 1 ^h 44 ^m		Mag: +0.4 PMG: 5 ^h 06 ^m						
	hG ♊		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	o	'	o	'	o	'	o	'	o	'					
0	203	06.2	157	25.8	+17	21.7	276	08.9	-23	16.0					
1	218	08.6	172	25.3		22.7	291	09.9		15.9					
2	233	11.1	187	24.7		23.6	306	11.0		15.8					
3	248	13.6	202	24.1		24.6	321	12.1		15.7					
4	263	16.0	217	23.5		25.5	336	13.1		15.7					
5	278	18.5	232	22.9	+17	26.5	351	14.2	-23	15.6					
6	293	21.0	247	22.3	+17	27.5	6	15.2	-23	15.5					
7	308	23.4	262	21.8		28.4	21	16.3		15.5					
8	323	25.9	277	21.2		29.4	36	17.3		15.4					
9	338	28.4	292	20.6		30.3	51	18.4		15.3					
10	353	30.8	307	20.0		31.3	66	19.4		15.2					
11	8	33.3	322	19.4	+17	32.2	81	20.5	-23	15.2					
12	23	35.7	337	18.8	+17	33.2	96	21.6	-23	15.1					
13	38	38.2	352	18.2		34.1	111	22.6		15.0					
14	53	40.7	7	17.7		35.1	126	23.7		14.9					
15	68	43.1	22	17.1		36.0	141	24.7		14.9					
16	83	45.6	37	16.5		37.0	156	25.8		14.8					
17	98	48.1	52	15.9	+17	37.9	171	26.8	-23	14.7					
18	113	50.5	67	15.3	+17	38.9	186	27.9	-23	14.6					
19	128	53.0	82	14.7		39.8	201	29.0		14.6					
20	143	55.5	97	14.1		40.7	216	30.0		14.5					
21	158	57.9	112	13.5		41.7	231	31.1		14.4					
22	174	00.4	127	12.9		42.6	246	32.1		14.3					
23	189	02.9	142	12.3		43.6	261	33.2		14.3					
24	204	05.3	157	11.8	+17	44.5	276	34.3	-23	14.2					
Dif	—		-6		+9		+11		+1		+27		+1		0

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15°9			Edad: 29 ^d 5 PHE { 4 ^h : 58'1 12 ^h : 58'3 20 ^h : 58'5										
	PMG: 11 ^h 59 ^m 8			SD: 15°9 PMG: 12 ^h 28 ^m R°: 52 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	o	'	o	'	o	'	o	'	h m	h m	h m	h m m	h m m	h m m
0	180	01.2	+10	01.5	179	14.3	+5	10.2	60 N	19 20	20 07	21 10	5 32 17	19 45 87
1	195	01.4		02.4	193	44.4 ¹¹¹		21.8 ¹¹⁶	58	14	19 58	20 54	35 20	40 84
2	210	01.5		03.3	208	14.5 ¹¹¹		33.3 ¹¹⁵	56	09	49	41	38 22	35 82
3	225	01.7		04.2	222	44.5 ¹¹⁰		44.8 ¹¹⁵	54	19 04	42	30	41 24	31 79
4	240	01.8		05.0	237	14.5 ¹¹⁰	+5	56.3 ¹¹⁵	52	18 59	35	21	43 26	27 78
5	255	02.0	+10	05.9	251	44.4 ¹⁰⁹	+6	07.8 ¹¹⁵	50	18 55	19 30	20 12	5 45 28	19 24 75
6	270	02.1	+10	06.8	266	14.3 ¹⁰⁹	+6	19.3 ¹¹⁵	45	18 47	19 17	19 55	5 50 32	19 17 71
7	285	02.3		07.7	280	44.1 ¹⁰⁸		30.7 ¹¹⁴	40	39	19 07	41	54 35	11 68
8	300	02.4		08.6	295	13.9 ¹⁰⁸		42.1 ¹¹⁴	35	33	18 59	30	5 58 37	06 65
9	315	02.6		09.5	309	43.6 ¹⁰⁷	+6	53.5 ¹¹⁴	30	28	52	21	6 01 40	19 01 63
10	330	02.7		10.4	324	13.3 ¹⁰⁷	+7	04.8 ¹¹³	20	19	41	19 07	07 44	18 53 60
11	345	02.9	+10	11.3	338	42.9 ¹⁰⁶	+7	16.1 ¹¹³	10 N	18 11	18 32	18 57	6 11 48	18 47 55
12	0	03.0	+10	12.1	353	12.4 ¹⁰⁵	+7	27.4 ¹¹³	0	18 03	18 24	18 49	6 16 51	18 40 53
13	15	03.1		13.0	7	42.0 ¹⁰⁶		38.7 ¹¹³	10 S	17 56	17	42	21 54	34 49
14	30	03.3		13.9	22	11.4 ¹⁰⁴	+7	49.9 ¹¹²	20	48	11	36	26 58	27 46
15	45	03.4		14.8	36	40.8 ¹⁰⁴	+8	01.1 ¹¹²	30	40	04	32	32 62	19 42
16	60	03.6		15.7	51	10.2 ¹⁰⁴		12.2 ¹¹¹	35	35	18 00	30	35 65	15 39
17	75	03.7	+10	16.6	65	39.5 ¹⁰³	+8	23.4 ¹¹²	40	17 29	17 57	18 28	6 39 68	18 10 36
18	90	03.9	+10	17.4	80	08.7 ¹⁰²	+8	34.4 ¹¹⁰	45	17 23	17 53	18 27	6 43 71	18 04 33
19	105	04.0		18.3	94	37.9 ¹⁰²		45.5 ¹¹¹	50	15	48	26	49 75	17 57 30
20	120	04.2		19.2	109	07.0 ¹⁰¹	+8	56.5 ¹¹⁰	52	12	46	25	51 77	54 28
21	135	04.3		20.1	123	36.1 ¹⁰¹	+9	07.4 ¹⁰⁹	54	08	44	25	54 79	50 26
22	150	04.5		21.0	138	05.1 ¹⁰⁰		18.4 ¹¹⁰	56	17 04	42	25	6 57 81	46 24
23	165	04.6		21.9	152	34.0 ⁹⁹		29.2 ¹⁰⁸	58	16 59	39	25	7 00 84	42 22
24	180	04.7	+10	22.7	167	02.9 ⁹⁹	+9	40.1 ¹⁰⁹	60 S	16 54	17 36	18 25	7 04 87	17 37 19
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 10 ^h 21 ^m 9		Mag: -3.9 PMG: 13 ^h 32 ^m		Mag: 0.0 PMG: 5 ^h 33 ^m		Mag: -2.5 PMG: 1 ^h 39 ^m		Mag: +0.4 PMG: 5 ^h 02 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	o	'	o	'	o	'	o	'	o	'				
0	204	05.3	157	11.8	+17	44.5	276	34.3	-23	14.2				
1	219	07.8	172	11.2		45.5	291	35.3		14.1				
2	234	10.2	187	10.6		46.4	306	36.4		14.0				
3	249	12.7	202	10.0		47.3	321	37.4		14.0				
4	264	15.2	217	09.4		48.3	336	38.5		13.9				
5	279	17.6	232	08.8	+17	49.2	351	39.6	-23	13.8				
6	294	20.1	247	08.2	+17	50.1	6	40.6	-23	13.7				
7	309	22.6	262	07.6		51.1	21	41.7		13.7				
8	324	25.0	277	07.0		52.0	36	42.8		13.6				
9	339	27.5	292	06.4		52.9	51	43.8		13.5				
10	354	30.0	307	05.8		53.9	66	44.9		13.4				
11	9	32.4	322	05.2	+17	54.8	81	46.0	-23	13.4				
12	24	34.9	337	04.6	+17	55.7	96	47.0	-23	13.3				
13	39	37.3	352	04.0		56.7	111	48.1		13.2				
14	54	39.8	7	03.4		57.6	126	49.1		13.1				
15	69	42.3	22	02.8		58.5	141	50.2		13.1				
16	84	44.7	37	02.2	+17	59.5	156	51.3		13.0				
17	99	47.2	52	01.6	+18	00.4	171	52.3	-23	12.9				
18	114	49.7	67	01.0	+18	01.3	186	53.4	-23	12.8				
19	129	52.1	82	00.4		02.2	201	54.5		12.7				
20	144	54.6	96	59.8		03.2	216	55.6		12.7				
21	159	57.1	111	59.2		04.1	231	56.6		12.6				
22	174	59.5	126	58.6		05.0	246	57.7		12.5				
23	190	02.0	141	58.0		05.9	261	58.8		12.4				
24	205	04.5	156	57.4	+18	06.9	276	59.8	-23	12.4				
Dif	—		-6		+9		+11		+1					
							+27		+1					
									+25					
									0					

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15 ^h 9 PMG: 11 ^h 59 ^m 6				Edad: 0 ^d 9 PHE { 4 ^h : 58 ^m 7 12 ^h : 58 ^m 8 20 ^h : 59 ^m 0 PMG: 13 ^h 20 ^m R°: 54 ^m															
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°				
h	o	'	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m	m		
0	180	04.7	+10	22.7	167	02.9	+9	40.1	60 N	2 48	3 51	4 38	5 49	21	21 12	86				
1	195	04.9		23.6	181	31.7	98	+9 50.8	58	3 04	4 01	44	5 55	24	21 04	83				
2	210	05.0		24.5	196	00.5	98	+10 01.6	56	17	09	50	6 00	27	20 57	80				
3	225	05.2		25.4	210	29.2	97	12.3	54	28	17	55	05	29	50	79				
4	240	05.3		26.3	224	57.9	97	22.9	52	38	23	4 59	09	31	45	76				
5	255	05.5	+10	27.1	239	26.5	96	+10 33.5	50	3 47	4 29	5 03	6 13	33	20 39	75				
6	270	05.6	+10	28.0	253	55.0	95	+10 44.0	45	4 04	4 41	5 12	6 22	36	20 28	72				
7	285	05.7		28.9	268	23.5	95	+10 54.5	40	18	4 51	20	29	39	19	69				
8	300	05.9		29.8	282	51.9	94	+11 04.9	35	29	5 00	26	35	42	11	67				
9	315	06.0		30.7	297	20.3	94	15.3	30	38	07	31	41	44	20 04	65				
10	330	06.2		31.5	311	48.6	93	25.6	20	4 52	18	41	51	47	19 53	60				
11	345	06.3	+10	32.4	326	16.8	92	+11 35.8	10 N	5 02	5 27	5 49	6 59	51	19 42	58				
12	0	06.5	+10	33.3	340	45.0	92	+11 46.0	0	5 11	5 35	5 56	7 07	54	19 33	54				
13	15	06.6		34.2	355	13.1	91	+11 56.1	10 S	18	42	6 04	15	57	23	52				
14	30	06.7		35.1	9	41.1	90	+12 06.2	20	23	49	11	24	60	13	49				
15	45	06.9		35.9	24	09.1	90	16.2	30	28	5 56	20	34	64	19 01	45				
16	60	07.0		36.8	38	37.0	89	26.1	35	30	6 00	25	40	66	18 54	44				
17	75	07.2	+10	37.7	53	04.9	89	+12 35.9	40	5 32	6 03	6 31	7 47	68	18 46	42				
18	90	07.3	+10	38.6	67	32.7	88	+12 45.7	45	5 33	6 08	6 37	7 54	72	18 37	39				
19	105	07.4		39.4	82	00.4	87	+12 55.4	50	35	12	45	8 04	75	27	35				
20	120	07.6		40.3	96	28.1	87	+13 05.1	52	35	14	49	08	77	22	33				
21	135	07.7		41.2	110	55.7	86	14.7	54	35	16	53	13	79	16	32				
22	150	07.9		42.1	125	23.3	86	24.2	56	36	19	6 57	18	82	10	30				
23	165	08.0		42.9	139	50.7	84	33.6	58	36	21	7 02	24	84	18 04	26				
24	180	08.1	+10	43.8	154	18.2	85	+13 42.9	60 S	5 36	6 24	7 07	8 31	87	17 56	24				
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 10 ^h 18 ^m 0				Mag: -3.9 PMG: 13 ^h 33 ^m				Mag: -0.1 PMG: 5 ^h 32 ^m				Mag: -2.5 PMG: 1 ^h 35 ^m				Mag: +0.4 PMG: 4 ^h 58 ^m			
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'
0	205	04.5	156	57.4	+18	06.9	276	59.8	-23	12.4	336	09.2	-16	46.5	285	11.1	-22	14.2		
1	220	06.9	171	56.8		07.8	292	00.9		12.3	351	11.9		46.5	300	13.6		14.2		
2	235	09.4	186	56.2		08.7	307	02.0		12.2	6	14.6		46.4	315	16.0		14.2		
3	250	11.8	201	55.6		09.6	322	03.0		12.1	21	17.4		46.3	330	18.5		14.2		
4	265	14.3	216	55.0		10.5	337	04.1		12.0	36	20.1		46.3	345	21.0		14.2		
5	280	16.8	231	54.4	+18	11.5	352	05.2	-23	12.0	51	22.8	-16	46.2	0	23.4	-22	14.2		
6	295	19.2	246	53.8	+18	12.4	7	06.2	-23	11.9	66	25.6	-16	46.1	15	25.9	-22	14.2		
7	310	21.7	261	53.2		13.3	22	07.3		11.8	81	28.3		46.0	30	28.3		14.2		
8	325	24.2	276	52.6		14.2	37	08.4		11.7	96	31.0		46.0	45	30.8		14.2		
9	340	26.6	291	51.9		15.1	52	09.5		11.7	111	33.8		45.9	60	33.3		14.2		
10	355	29.1	306	51.3		16.0	67	10.5		11.6	126	36.5		45.8	75	35.7		14.2		
11	10	31.6	321	50.7	+18	16.9	82	11.6	-23	11.5	141	39.2	-16	45.8	90	38.2	-22	14.2		
12	25	34.0	336	50.1	+18	17.9	97	12.7	-23	11.4	156	42.0	-16	45.7	105	40.6	-22	14.2		
13	40	36.5	351	49.5		18.8	112	13.8		11.3	171	44.7		45.6	120	43.1		14.2		
14	55	38.9	6	48.9		19.7	127	14.8		11.3	186	47.4		45.5	135	45.6		14.2		
15	70	41.4	21	48.3		20.6	142	15.9		11.2	201	50.2		45.5	150	48.0		14.2		
16	85	43.9	36	47.7		21.5	157	17.0		11.1	216	52.9		45.4	165	50.5		14.2		
17	100	46.3	51	47.1	+18	22.4	172	18.1	-23	11.0	231	55.6	-16	45.3	180	53.0	-22	14.2		
18	115	48.8	66	46.5	+18	23.3	187	19.1	-23	10.9	246	58.4	-16	45.3	195	55.4	-22	14.2		
19	130	51.3	81	45.8		24.2	202	20.2		10.9	262	01.1		45.2	210	57.9		14.2		
20	145	53.7	96	45.2		25.1	217	21.3		10.8	277	03.8		45.1	226	00.3		14.2		
21	160	56.2	111	44.6		26.0	232	22.4		10.7	292	06.6		45.0	241	02.8		14.2		
22	175	58.7	126	44.0		26.9	247	23.4		10.6	307	09.3		45.0	256	05.3		14.2		
23	191	01.1	141	43.4		27.8	262	24.5		10.5	322	12.0		44.9	271	07.7		14.2		
24	206	03.6	156	42.8	+18	28.7	277	25.6	-23	10.5	337	14.8	-16	44.8	286	10.2	-22	14.2		
Dif	—				-6				+11				+27				+25			
					+9				+1								0			

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 15°9			Edad: 1 ^d 9 PHE { 4 ^h : 59/1 12 ^h : 59/2 20 ^h : 59/3												
	PMG: 11 ^h 59 ^m 3				PMG: 14 ^h 14 ^m R°: 57 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°	
h	o	'	o	o	'	o	'	o	h m	h m	h m	h m m	m	h m m	m	
0	180	08.1	+10 43.8	154	18.2	+13 42.9	93	60 N	19 25	20 13	21 18	6 10 28	22 38 81			
1	195	08.3		168	45.5	+13 52.2	83	58	19	20 03	21 01	19 31	27 79			
2	210	08.4		183	12.8	+14 01.4	92	56	13	19 54	20 47	27 33	17 77			
3	225	08.6		197	40.1		83	54	07	46	35	34 35	09 75			
4	240	08.7		212	07.3		82	52	19 03	39	25	40 37	22 01 74			
5	255	08.8	+10 48.2	226	34.4	+14 28.5	81	50	18 58	19 33	20 16	6 46 38	21 54 73			
6	270	09.0	+10 49.1	241	01.4	+14 37.4	80	45	18 49	19 20	19 58	6 58 41	21 40 69			
7	285	09.1		255	28.4		80	40	41	10	44	7 08 44	28 67			
8	300	09.3		269	55.4	+14 54.8	80	35	35	19 01	32	17 46	18 65			
9	315	09.4		284	22.2	+15 03.4	78	30	29	18 54	23	25 48	21 09 64			
10	330	09.5		298	49.0		78	20	19	42	19 08	38 51	20 53 62			
11	345	09.7	+10 53.4	313	15.8	+15 20.4	78	10 N	18 11	18 32	18 57	7 50 54	20 40 59			
12	0	09.8	+10 54.3	327	42.5	+15 28.7	77	0	18 03	18 24	18 48	8 01 56	20 27 58			
13	15	10.0		342	09.1		76	10 S	17 55	16	41	12 59	15 55			
14	30	10.1		356	35.7		76	20	47	09	35	24 62	20 02 53			
15	45	10.2		11	02.2	+15 53.1	75	30	37	18 02	30	38 65	19 46 51			
16	60	10.4		25	28.6	+16 01.1	74	35	32	17 58	27	46 66	38 48			
17	75	10.5	+10 58.6	39	55.0	+16 09.0	74	40	17 26	17 54	18 25	8 55 69	19 28 47			
18	90	10.6	+10 59.5	54	21.4	+16 16.7	74	45	17 19	17 49	18 23	9 06 71	19 16 45			
19	105	10.8	+11 00.4	68	47.7		73	50	11	44	22	19 74	19 02 42			
20	120	10.9		83	13.9		72	52	07	42	21	25 76	18 55 41			
21	135	11.1		97	40.0		71	54	17 03	40	21	32 78	48 39			
22	150	11.2		112	06.1		71	56	16 59	37	20	40 79	40 37			
23	165	11.3		126	32.2	+16 54.0	71	58	54	34	20	48 82	30 35			
24	180	11.5	+11 04.7	140	58.2	+17 01.1	71	60 S	16 48	17 31	18 19	9 58 85	18 20 32			

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 10 ^h 14 ^m 1		Mag: -3.9 PMG: 13 ^h 34 ^m		Mag: -0.1 PMG: 5 ^h 30 ^m		Mag: -2.5 PMG: 1 ^h 31 ^m		Mag: +0.4 PMG: 4 ^h 55 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	o	'	o	'	o	'	o	'	o	'
0	206	03.6	156 42.8	+18 28.7	277 25.6	-23 10.5	337 14.8	-16 44.8	286 10.2	-22 14.2
1	221	06.1	171 42.2	29.6	292 26.7	10.4	352 17.5	44.8	301 12.7	14.2
2	236	08.5	186 41.5	30.5	307 27.7	10.3	7 20.2	44.7	316 15.1	14.2
3	251	11.0	201 40.9	31.4	322 28.8	10.2	22 23.0	44.6	331 17.6	14.2
4	266	13.4	216 40.3	32.3	337 29.9	10.1	37 25.7	44.5	346 20.1	14.2
5	281	15.9	231 39.7	+18 33.2	352 31.0	-23 10.1	52 28.4	-16 44.5	1 22.5	-22 14.2
6	296	18.4	246 39.1	+18 34.1	7 32.1	-23 10.0	67 31.2	-16 44.4	16 25.0	-22 14.2
7	311	20.8	261 38.5	35.0	22 33.1	09.9	82 33.9	44.3	31 27.5	14.2
8	326	23.3	276 37.8	35.9	37 34.2	09.8	97 36.7	44.2	46 29.9	14.2
9	341	25.8	291 37.2	36.8	52 35.3	09.7	112 39.4	44.2	61 32.4	14.2
10	356	28.2	306 36.6	37.7	67 36.4	09.6	127 42.1	44.1	76 34.8	14.2
11	11	30.7	321 36.0	+18 38.6	82 37.5	-23 09.6	142 44.9	-16 44.0	91 37.3	-22 14.2
12	26	33.2	336 35.4	+18 39.5	97 38.5	-23 09.5	157 47.6	-16 44.0	106 39.8	-22 14.2
13	41	35.6	351 34.7	40.4	112 39.6	09.4	172 50.3	43.9	121 42.2	14.2
14	56	38.1	6 34.1	41.3	127 40.7	09.3	187 53.1	43.8	136 44.7	14.2
15	71	40.6	21 33.5	42.2	142 41.8	09.2	202 55.8	43.7	151 47.2	14.2
16	86	43.0	36 32.9	43.1	157 42.9	09.2	217 58.6	43.7	166 49.6	14.2
17	101	45.5	51 32.3	+18 43.9	172 44.0	-23 09.1	233 01.3	-16 43.6	181 52.1	-22 14.2
18	116	47.9	66 31.6	+18 44.8	187 45.0	-23 09.0	248 04.0	-16 43.5	196 54.6	-22 14.2
19	131	50.4	81 31.0	45.7	202 46.1	08.9	263 06.8	43.4	211 57.0	14.2
20	146	52.9	96 30.4	46.6	217 47.2	08.8	278 09.5	43.4	226 59.5	14.2
21	161	55.3	111 29.8	47.5	232 48.3	08.7	293 12.3	43.3	242 02.0	14.2
22	176	57.8	126 29.1	48.4	247 49.4	08.7	308 15.0	43.2	257 04.4	14.2
23	192	00.3	141 28.5	49.3	262 50.5	08.6	323 17.7	43.2	272 06.9	14.2
24	207	02.7	156 27.9	+18 50.1	277 51.6	-23 08.5	338 20.5	-16 43.1	287 09.4	-22 14.2
Dif	—		-6	+9	+11	+1	+27	+1	+25	

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15°9 PMG: 11 ^h 59 ^m 1				Edad: 2 ^d 9 PHE { 4 ^h : 59°3 12 ^h : 59°4 20 ^h : 59°4 PMG: 15 ^h 11 ^m R°: 59 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	o	'	o	'	o	'	o	'	o	h	m	h	m	h	m	m		
0	180	11.5	+11	04.7	140	58.2	+17	01.1	60 N	2 40	3 45	4 32	6 38	38	23 59	71		
1	195	11.6		05.6	155	24.1	69	08.2	58	2 57	3 55	39	6 50	40	46	69		
2	210	11.7		06.5	169	50.0	69	15.1	56	3 11	4 04	45	7 00	42	34	68		
3	225	11.9		07.3	184	15.9	69	21.9	54	23	12	50	09	43	24	67		
4	240	12.0		08.2	198	41.6	67	28.6	52	33	19	55	17	45	15	66		
5	255	12.1	+11	09.1	213	07.4	68	+17 35.2	50	3 42	4 25	4 59	7 24	46	23 07	66		
6	270	12.3	+11	09.9	227	33.1	67	+17 41.7	45	4 00	4 38	5 09	7 39	49	22 49	65		
7	285	12.4		10.8	241	58.7	66	48.1	40	14	48	17	7 52	50	35	64		
8	300	12.5		11.6	256	24.3	66	+17 54.4	35	26	4 57	23	8 03	52	23	63		
9	315	12.7		12.5	270	49.8	65	+18 00.5	30	35	5 04	29	13	52	22 13	62		
10	330	12.8		13.4	285	15.3	65	06.5	20	4 50	17	39	29	55	21 55	61		
11	345	12.9	+11	14.2	299	40.7	64	+18 12.5	10 N	5 01	5 26	5 48	8 44	56	21 39	60		
12	0	13.1	+11	15.1	314	06.1	64	+18 18.3	0	5 10	5 35	5 56	8 57	58	21 25	59		
13	15	13.2		16.0	328	31.5	64	23.9	10 S	18	42	6 04	9 11	60	21 10	58		
14	30	13.3		16.8	342	56.8	63	29.5	20	24	50	12	26	61	20 55	56		
15	45	13.5		17.7	357	22.0	62	34.9	30	29	5 57	21	43	63	37	55		
16	60	13.6		18.6	11	47.2	62	40.3	35	31	6 01	27	9 52	65	26	55		
17	75	13.7	+11	19.4	26	12.4	62	+18 45.5	40	5 34	6 05	6 33	10 04	66	20 15	53		
18	90	13.9	+11	20.3	40	37.5	61	+18 50.5	45	5 36	6 10	6 40	10 17	68	20 01	52		
19	105	14.0		21.1	55	02.6	61	+18 55.5	50	37	15	48	33	70	19 44	50		
20	120	14.1		22.0	69	27.6	60	+19 00.3	52	38	17	52	41	71	36	49		
21	135	14.3		22.9	83	52.7	61	05.0	54	39	20	6 56	50	71	27	49		
22	150	14.4		23.7	98	17.6	60	09.6	56	39	23	7 01	10 59	73	17	47		
23	165	14.5		24.6	112	42.6	60	14.0	58	40	26	06	11 10	75	19 05	47		
24	180	14.7	+11	25.4	127	07.5	59	+19 18.4	60 S	5 40	6 29	7 12	11 23	77	18 52	45		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 10 ^h 10 ^m 1		Mag: -3.9 PMG: 13 ^h 35 ^m				Mag: -0.1 PMG: 5 ^h 28 ^m				Mag: -2.5 PMG: 1 ^h 26 ^m				Mag: +0.4 PMG: 4 ^h 51 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'
0	207	02.7	156	27.9	+18	50.1	277	51.6	-23	08.5	338	20.5	-16	43.1	287	09.4	-22	14.2
1	222	05.2	171	27.3		51.0	292	52.6		08.4	353	23.2		43.0	302	11.9		14.2
2	237	07.7	186	26.6		51.9	307	53.7		08.3	8	26.0		42.9	317	14.3		14.2
3	252	10.1	201	26.0		52.8	322	54.8		08.2	23	28.7		42.9	332	16.8		14.2
4	267	12.6	216	25.4		53.7	337	55.9		08.2	38	31.4		42.8	347	19.3		14.2
5	282	15.1	231	24.7	+18	54.5	352	57.0	-23	08.1	53	34.2	-16	42.7	2	21.7	-22	14.2
6	297	17.5	246	24.1	+18	55.4	7	58.1	-23	08.0	68	36.9	-16	42.6	17	24.2	-22	14.2
7	312	20.0	261	23.5		56.3	22	59.2		07.9	83	39.7		42.6	32	26.7		14.2
8	327	22.4	276	22.9		57.2	38	00.3		07.8	98	42.4		42.5	47	29.1		14.2
9	342	24.9	291	22.2		58.0	53	01.3		07.7	113	45.1		42.4	62	31.6		14.2
10	357	27.4	306	21.6		58.9	68	02.4		07.7	128	47.9		42.3	77	34.1		14.2
11	12	29.8	321	21.0	+18	59.8	83	03.5	-23	07.6	143	50.6	-16	42.3	92	36.5	-22	14.2
12	27	32.3	336	20.3	+19	00.7	98	04.6	-23	07.5	158	53.4	-16	42.2	107	39.0	-22	14.2
13	42	34.8	351	19.7		01.5	113	05.7		07.4	173	56.1		42.1	122	41.5		14.2
14	57	37.2	6	19.1		02.4	128	06.8		07.3	188	58.9		42.1	137	44.0		14.2
15	72	39.7	21	18.4		03.3	143	07.9		07.2	204	01.6		42.0	152	46.4		14.2
16	87	42.2	36	17.8		04.1	158	09.0		07.2	219	04.3		41.9	167	48.9		14.2
17	102	44.6	51	17.2	+19	05.0	173	10.1	-23	07.1	234	07.1	-16	41.8	182	51.4	-22	14.2
18	117	47.1	66	16.5	+19	05.9	188	11.2	-23	07.0	249	09.8	-16	41.8	197	53.8	-22	14.2
19	132	49.5	81	15.9		06.7	203	12.3		06.9	264	12.6		41.7	212	56.3		14.2
20	147	52.0	96	15.3		07.6	218	13.4		06.8	279	15.3		41.6	227	58.8		14.2
21	162	54.5	111	14.6		08.5	233	14.5		06.7	294	18.1		41.5	243	01.3		14.2
22	177	56.9	126	14.0		09.3	248	15.5		06.6	309	20.8		41.5	258	03.7		14.2
23	192	59.4	141	13.4		10.2	263	16.6		06.6	324	23.5		41.4	273	06.2		14.2
24	208	01.9	156	12.7	+19	11.1	278	17.7	-23	06.5	339	26.3	-16	41.3	288	08.7	-22	14.2
Dif	—		-6 +9		+11		+1		+27		+1		+25		0			

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 15'9 PMG: 11 ^h 58 ^m 9			Edad: 3 ^d 9 PHE { 4 ^h : 59'5 12 ^h : 59'5 SD: 16'2 20 ^h : 59'5 PMG: 16 ^h 10 ^m R°: 59 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	o	'	o	'	o	'	o	'	h m	h m	h m	h m	m	m	m	m		
0	180	14.7	+11	25.4	127	07.5	+19	18.4	60 N	19 30	20 19	21 25	7 16	52	***	***		
1	195	14.8		26.3	141	32.3		22.6	58	23	20 08	21 07	30	53	***	***		
2	210	14.9		27.2	155	57.2		26.6	56	17	19 58	20 53	42	54	***	***		
3	225	15.1		28.0	170	22.0		30.6	54	11	50	40	7	52	55	***		
4	240	15.2		28.9	184	46.8		34.4	52	06	43	29	8	02	55	***		
5	255	15.3	+11	29.7	199	11.5	+19	38.1	50	19 01	19 36	20 20	8	10	55	***		
6	270	15.5	+11	30.6	213	36.2	+19	41.6	45	18 52	19 23	20 01	8	28	56	23 54		
7	285	15.6		31.4	228	00.9		45.0	40	43	12	19 46	42	57		39 58		
8	300	15.7		32.3	242	25.6		48.3	35	36	19 03	34	8	55	57	26 59		
9	315	15.9		33.2	256	50.2		51.5	30	30	18 55	24	9	05	58	23 15		
10	330	16.0		34.0	271	14.8		54.5	20	20	42	19 09	24	58		22 56		
11	345	16.1	+11	34.9	285	39.4	+19	57.4	10 N	18 11	18 32	18 57	9	40	59	22 39		
12	0	16.2	+11	35.7	300	04.0	+20	00.1	0	18 02	18 23	18 48	9	55	60	22 24		
13	15	16.4		36.6	314	28.5		02.7	10 S	17 54	15	40	10	11	59	22 08		
14	30	16.5		37.4	328	53.1		05.2	20	45	08	34	27	60		21 51		
15	45	16.6		38.3	343	17.6		07.6	30	35	18 00	28	46	61		32 60		
16	60	16.8		39.1	357	42.1		09.8	22	30	17 56	25	10	57	61	21 60		
17	75	16.9	+11	40.0	12	06.6	+20	11.9	21	40	17 23	17 51	18	23		21 08		
18	90	17.0	+11	40.9	26	31.0	+20	13.8	19	45	17 16	17 46	18	20		20 53		
19	105	17.1		41.7	40	55.5		15.6	18	50	07	40	18	43	62	34 60		
20	120	17.3		42.6	55	19.9		17.3	17	52	17 03	38	17	11	52	25 60		
21	135	17.4		43.4	69	44.4		18.8	15	54	16 59	35	16	12	01	63 16 59		
22	150	17.5		44.3	84	08.8		20.2	14	56	54	32	16	12	63	20 04 60		
23	165	17.7		45.1	98	33.2		21.5	13	58	48	29	15	25	63	19 52 59		
24	180	17.8	+11	46.0	112	57.6	+20	22.6	11	60 S	16 42	17 26	18	14	12	40 63 19 37 59		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 10 ^h 06 ^m 2		Mag: -3.9 PMG: 13 ^h 36 ^m				Mag: -0.1 PMG: 5 ^h 26 ^m				Mag: -2.5 PMG: 1 ^h 22 ^m				Mag: +0.4 PMG: 4 ^h 47 ^m			
	hG ♈		hG ♀ Dec				hG ♂ Dec				hG ♃ Dec				hG ♄ Dec			
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'		
0	208	01.9	156	12.7	+19	11.1	278	17.7	-23	06.5	339	26.3	-16	41.3	288	08.7		
1	223	04.3	171	12.1		11.9	293	18.8		06.4	354	29.0		41.2	303	11.1		
2	238	06.8	186	11.5		12.8	308	19.9		06.3	9	31.8		41.2	318	13.6		
3	253	09.3	201	10.8		13.6	323	21.0		06.2	24	34.5		41.1	333	16.1		
4	268	11.7	216	10.2		14.5	338	22.1		06.1	39	37.3		41.0	348	18.6		
5	283	14.2	231	09.5	+19	15.3	353	23.2	-23	06.1	54	40.0	-16	40.9	3	21.0		
6	298	16.7	246	08.9	+19	16.2	8	24.3	-23	06.0	69	42.8	-16	40.9	18	23.5		
7	313	19.1	261	08.3		17.1	23	25.4		05.9	84	45.5		40.8	33	26.0		
8	328	21.6	276	07.6		17.9	38	26.5		05.8	99	48.2		40.7	48	28.5		
9	343	24.0	291	07.0		18.8	53	27.6		05.7	114	51.0		40.6	63	30.9		
10	358	26.5	306	06.3		19.6	68	28.7		05.6	129	53.7		40.6	78	33.4		
11	13	29.0	321	05.7	+19	20.5	83	29.8	-23	05.5	144	56.5	-16	40.5	93	35.9		
12	28	31.4	336	05.0	+19	21.3	98	30.9	-23	05.4	159	59.2	-16	40.4	108	38.4		
13	43	33.9	351	04.4		22.2	113	32.0		05.4	175	02.0		40.3	123	40.8		
14	58	36.4	6	03.8		23.0	128	33.1		05.3	190	04.7		40.3	138	43.3		
15	73	38.8	21	03.1		23.9	143	34.2		05.2	205	07.5		40.2	153	45.8		
16	88	41.3	36	02.5		24.7	158	35.3		05.1	220	10.2		40.1	168	48.3		
17	103	43.8	51	01.8	+19	25.6	173	36.4	-23	05.0	235	13.0	-16	40.0	183	50.7		
18	118	46.2	66	01.2	+19	26.4	188	37.5	-23	04.9	250	15.7	-16	40.0	198	53.2		
19	133	48.7	81	00.5		27.3	203	38.6		04.8	265	18.5		39.9	213	55.7		
20	148	51.2	95	59.9		28.1	218	39.7		04.8	280	21.2		39.8	228	58.2		
21	163	53.6	110	59.2		28.9	233	40.8		04.7	295	23.9		39.7	244	00.6		
22	178	56.1	125	58.6		29.8	248	41.9		04.6	310	26.7		39.7	259	03.1		
23	193	58.5	140	58.0		30.6	263	43.0		04.5	325	29.4		39.6	274	05.6		
24	209	01.0	155	57.3	+19	31.5	278	44.1	-23	04.4	340	32.2	-16	39.5	289	08.1		
Dif	—		-6 +9				+11 +1				+27 +1				+25			

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15/9 PMG: 11 ^h 58 ^m 7				Edad: 4 ^d 9 PHE { 4 ^h : 59/5 12 ^h : 59/4 20 ^h : 59/4 PMG: 17 ^h 09 ^m R°: 58 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	o	'	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m	m
0	180	17.8	+11	46.0	112	57.6	+20	22.6	60 N	2 31	3 38	4 26	8 08	67	1 10	55		
1	195	17.9		46.8	127	22.1		23.6	58	2 49	49	34	23	66	0 55	56		
2	210	18.0		47.7	141	46.5		24.4	56	3 04	3 58	40	36	65	42	57		
3	225	18.2		48.5	156	10.9		25.1	54	17	4 07	46	47	64	31	57		
4	240	18.3		49.4	170	35.3		25.7	52	28	14	51	8 57	64	21	57		
5	255	18.4	+11	50.2	184	59.7	+20	26.1	50	3 37	4 21	4 55	9 05	64	0 13	57		
6	270	18.6	+11	51.1	199	24.1	+20	26.4	45	3 56	4 34	5 05	9 24	63	***	***	***	
7	285	18.7		51.9	213	48.5		26.6	40	4 11	45	14	39	62	***	***	***	
8	300	18.8		52.8	228	12.9		26.6	35	23	4 54	21	9 52	62	***	***	***	
9	315	18.9		53.6	242	37.4		26.5	30	33	5 02	27	10 03	61	***	***	***	
10	330	19.1		54.5	257	01.8		26.2	20	4 48	15	38	22	61	23 55	55		
11	345	19.2	+11	55.3	271	26.3	+20	25.9	10 N	5 00	5 25	5 47	10 39	60	23 38	57		
12	0	19.3	+11	56.2	285	50.7	+20	25.3	0	5 10	5 34	5 55	10 55	58	23 23	58		
13	15	19.4		57.0	300	15.2		24.7	10 S	18	42	6 04	11 10	58	23 07	60		
14	30	19.6		57.9	314	39.7		23.9	20	24	50	13	27	57	22 51	61		
15	45	19.7		58.7	329	04.2		22.9	30	30	5 58	23	47	56	32	62		
16	60	19.8	+11	59.5	343	28.7		21.8	35	33	6 03	28	11 58	55	21	63		
17	75	19.9	+12	00.4	357	53.2	+20	20.6	40	5 36	6 07	6 35	12 11	54	22 08	64		
18	90	20.1	+12	01.2	12	17.7	+20	19.3	45	5 38	6 12	6 42	12 26	54	21 53	65		
19	105	20.2		02.1	26	42.3		17.8	50	40	18	51	45	52	34	67		
20	120	20.3		02.9	41	06.9		16.2	52	41	21	6 55	12 54	52	25	68		
21	135	20.4		03.8	55	31.5		14.4	54	42	23	7 00	13 04	51	15	69		
22	150	20.6		04.6	69	56.1		12.5	56	43	26	05	15	50	21 04	70		
23	165	20.7		05.5	84	20.8		10.5	58	44	30	11	28	49	20 51	72		
24	180	20.8	+12	06.3	98	45.5	+20	08.3	60 S	5 45	6 33	7 17	13 43	48	20 36	74		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 10 ^h 02 ^m 3		Mag: -3.9 PMG: 13 ^h 37 ^m		Mag: -0.1 PMG: 5 ^h 25 ^m		Mag: -2.5 PMG: 1 ^h 18 ^m		Mag: +0.4 PMG: 4 ^h 43 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	o	'	o	'	o	'	o	'	o	'
0	209	01.0	155	57.3	+19	31.5	278	44.1	-23	04.4
1	224	03.5	170	56.7		32.3	293	45.2		04.3
2	239	05.9	185	56.0		33.1	308	46.3		04.2
3	254	08.4	200	55.4		34.0	323	47.4		04.1
4	269	10.9	215	54.7		34.8	338	48.5		04.1
5	284	13.3	230	54.1	+19	35.7	353	49.6	-23	04.0
6	299	15.8	245	53.4	+19	36.5	8	50.8	-23	03.9
7	314	18.3	260	52.8		37.3	23	51.9		03.8
8	329	20.7	275	52.1		38.2	38	53.0		03.7
9	344	23.2	290	51.5		39.0	53	54.1		03.6
10	359	25.7	305	50.8		39.8	68	55.2		03.5
11	14	28.1	320	50.2	+19	40.6	83	56.3	-23	03.4
12	29	30.6	335	49.5	+19	41.5	98	57.4	-23	03.4
13	44	33.0	350	48.8		42.3	113	58.5		03.3
14	59	35.5	5	48.2		43.1	128	59.6		03.2
15	74	38.0	20	47.5		44.0	144	00.7		03.1
16	89	40.4	35	46.9		44.8	159	01.8		03.0
17	104	42.9	50	46.2	+19	45.6	174	02.9	-23	02.9
18	119	45.4	65	45.6	+19	46.4	189	04.1	-23	02.8
19	134	47.8	80	44.9		47.3	204	05.2		02.7
20	149	50.3	95	44.3		48.1	219	06.3		02.6
21	164	52.8	110	43.6		48.9	234	07.4		02.6
22	179	55.2	125	42.9		49.7	249	08.5		02.5
23	194	57.7	140	42.3		50.5	264	09.6		02.4
24	210	00.1	155	41.6	+19	51.4	279	10.7	-23	02.3
Dif	—		-7		+8		+11		+1	

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15'9 PMG: 11 ^h 58 ^m 5			Edad: 5 ^d 9 SD: 16'1 PMG: 18 ^h 07 ^m	PHE { 4 ^h : 59'3 12 ^h : 59'3 20 ^h : 59'2 R°: 57 ^m										
	hG ☉	Dec				hG ☾			Dif	Dec	Dif	Civil	Náutico	Hora	R°
h	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m
0	180	20.8	+12	06.3	98	45.5	+20	08.3	60 N	19 35	20 24	21 34	9 15	78	2 05 41
1	195	20.9		07.1	113	10.2		06.1	58	28	13	21 14	29	76	1 51 43
2	210	21.0		08.0	127	34.9		03.6	56	21	20 03	20 58	41	74	39 44
3	225	21.2		08.8	141	59.7	+20	01.1	54	15	19 54	45	9 51	73	28 46
4	240	21.3		09.7	156	24.5	+19	58.4	52	09	47	34	10 01	71	18 47
5	255	21.4	+12	10.5	170	49.3	+19	55.6	50	19 05	19 40	20 24	10 09	70	1 10 48
6	270	21.5	+12	11.4	185	14.2	+19	52.6	45	18 54	19 26	20 04	10 27	68	0 52 50
7	285	21.7		12.2	199	39.0		49.5	40	45	14	19 49	41	66	37 52
8	300	21.8		13.0	214	04.0		46.3	35	38	19 05	36	10 54	64	25 52
9	315	21.9		13.9	228	28.9		43.0	30	32	18 56	26	11 04	63	0 14 53
10	330	22.0		14.7	242	53.9		39.5	20	20	43	19 10	23	60	** ** *
11	345	22.1	+12	15.6	257	19.0	+19	35.9	10 N	18 11	18 32	18 58	11 39	58	** ** *
12	0	22.3	+12	16.4	271	44.0	+19	32.2	0	18 02	18 23	18 48	11 53	58	** ** *
13	15	22.4		17.2	286	09.2		28.3	10 S	17 53	15	39	12 08	56	** ** *
14	30	22.5		18.1	300	34.3		24.3	20	44	18 06	32	24	54	23 52 60
15	45	22.6		18.9	314	59.5		20.2	30	33	17 58	26	43	51	34 64
16	60	22.7		19.7	329	24.7		16.0	35	27	53	23	12 53	50	24 65
17	75	22.9	+12	20.6	343	50.0	+19	11.6	40	17 21	17 48	18 20	13 05	48	23 12 67
18	90	23.0	+12	21.4	358	15.3	+19	07.2	45	17 13	17 43	18 17	13 20	46	22 58 70
19	105	23.1		22.3	12	40.7	+19	02.6	50	17 03	37	15	37	44	41 73
20	120	23.2		23.1	27	06.1	+18	57.8	52	16 59	34	13	46	42	33 74
21	135	23.3		23.9	41	31.6		53.0	54	54	31	12	13 55	41	24 76
22	150	23.5		24.8	55	57.1		48.0	56	49	28	11	14 05	39	14 77
23	165	23.6		25.6	70	22.7		42.9	58	43	24	10	17	37	22 03 79
24	180	23.7	+12	26.4	84	48.3	+18	37.7	60 S	16 37	17 20	18 09	14 31	34	21 50 82

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 9 ^h 58 ^m 4		Mag: -3.9 PMG: 13 ^h 38 ^m		Mag: -0.2 PMG: 5 ^h 23 ^m		Mag: -2.5 PMG: 1 ^h 13 ^m		Mag: +0.4 PMG: 4 ^h 39 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	o	'	o	'	o	'	o	'	o	'				
0	210	00.1	155	41.6	+19	51.4	279	10.7	-23	02.3				
1	225	02.6	170	41.0		52.2	294	11.8		02.2				
2	240	05.1	185	40.3		53.0	309	13.0		02.1				
3	255	07.5	200	39.6		53.8	324	14.1		02.0				
4	270	10.0	215	39.0		54.6	339	15.2		01.9				
5	285	12.5	230	38.3	+19	55.4	354	16.3	-23	01.8				
6	300	14.9	245	37.7	+19	56.3	9	17.4	-23	01.7				
7	315	17.4	260	37.0		57.1	24	18.5		01.7				
8	330	19.9	275	36.3		57.9	39	19.6		01.6				
9	345	22.3	290	35.7		58.7	54	20.8		01.5				
10	0	24.8	305	35.0	+19	59.5	69	21.9		01.4				
11	15	27.3	320	34.4	+20	00.3	84	23.0	-23	01.3				
12	30	29.7	335	33.7	+20	01.1	99	24.1	-23	01.2				
13	45	32.2	350	33.0		01.9	114	25.2		01.1				
14	60	34.6	5	32.4		02.7	129	26.3		01.0				
15	75	37.1	20	31.7		03.5	144	27.5		00.9				
16	90	39.6	35	31.0		04.3	159	28.6		00.8				
17	105	42.0	50	30.4	+20	05.1	174	29.7	-23	00.8				
18	120	44.5	65	29.7	+20	05.9	189	30.8	-23	00.7				
19	135	47.0	80	29.0		06.7	204	31.9		00.6				
20	150	49.4	95	28.4		07.5	219	33.1		00.5				
21	165	51.9	110	27.7		08.3	234	34.2		00.4				
22	180	54.4	125	27.0		09.1	249	35.3		00.3				
23	195	56.8	140	26.4		09.9	264	36.4		00.2				
24	210	59.3	155	25.7	+20	10.7	279	37.5	-23	00.1				
Dif	—		-7	+8		+11	+1		+28	+1		+25		

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: 6 ^d 9 PHE { 4 ^h : 59 ^m 1 12 ^h : 59 ^m 1 20 ^h : 59 ^m 0 PMG: 19 ^h 04 ^m R°: 54 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	o	'	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m	m
0	180	23.7	+12	26.4	84	48.3	+18	37.7	60 N	2 22	3 32	4 21	10 33	84	2 46	30		
1	195	23.8		27.3	99	13.9	66	32.4	58	42	43	28	45	81	34	32		
2	210	23.9		28.1	113	39.6	67	27.0	56	2 58	3 53	35	10 55	79	23	35		
3	225	24.1		28.9	128	05.4	68	21.4	56	3 11	4 02	41	11 04	77	14	36		
4	240	24.2		29.8	142	31.2	68	15.8	56	22	09	47	12	75	2 05	39		
5	255	24.3	+12	30.6	156	57.0	68	+18	10.0	58	3 32	4 16	4 52	11 19	74	1 58	39	
6	270	24.4	+12	31.4	171	23.0	70	+18	04.1	59	3 52	4 31	5 02	11 35	70	1 42	42	
7	285	24.5		32.3	185	48.9	69	+17	58.1	60	4 08	42	11	47	68	29	44	
8	300	24.6		33.1	200	14.9	70	52.0	61	35	20	4 52	18	11 58	65	17	47	
9	315	24.8		33.9	214	41.0	71	45.7	63	30	31	5 00	25	12 07	64	1 07	49	
10	330	24.9		34.8	229	07.1	71	39.4	63	20	47	13	36	23	61	0 50	51	
11	345	25.0	+12	35.6	243	33.3	72	+17	32.9	65	4 59	5 24	5 46	12 37	58	0 35	54	
12	0	25.1	+12	36.4	257	59.6	73	+17	26.4	65	5 09	5 34	5 55	12 51	54	0 21	56	
13	15	25.2		37.3	272	25.9	73	19.7	67	10 S	18	42	6 04	13 04	52	0 07	58	
14	30	25.3		38.1	286	52.2	73	12.9	68	20	25	51	13	18	49	***	**	
15	45	25.5		38.9	301	18.6	74	+17	06.1	68	31	5 59	24	34	46	***	**	
16	60	25.6		39.7	315	45.1	75	+16	59.1	70	34	6 04	30	43	44	***	**	
17	75	25.7	+12	40.6	330	11.6	75	+16	52.0	71	40	5 37	6 09	6 37	13 53	42	***	**
18	90	25.8	+12	41.4	344	38.2	76	+16	44.8	72	45	5 40	6 15	6 45	14 06	39	***	**
19	105	25.9		42.2	359	04.8	76	37.5	73	50	43	21	54	21	36	23 54	74	
20	120	26.0		43.1	13	31.5	77	30.2	73	52	44	24	6 59	28	34	47	76	
21	135	26.2		43.9	27	58.3	78	22.7	75	54	45	27	7 04	36	32	40	78	
22	150	26.3		44.7	42	25.1	78	15.1	76	56	47	30	09	44	31	31	81	
23	165	26.4		45.5	56	52.0	79	+16	07.4	77	58	48	34	15	14 54	28	22	83
24	180	26.5	+12	46.4	71	18.9	79	+15	59.7	77	60 S	5 49	6 38	7 22	15 05	25	23 12	85
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 9 ^h 54 ^m 4		Mag: -3.9 PMG: 13 ^h 39 ^m				Mag: -0.2 PMG: 5 ^h 21 ^m				Mag: -2.5 PMG: 1 ^h 09 ^m				Mag: +0.4 PMG: 4 ^h 35 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'
0	210	59.3	155	25.7	+20	10.7	279	37.5	-23	00.1	342	44.3	-16	35.9	291	07.2	-22	14.2
1	226	01.8	170	25.0		11.5	294	38.7	-23	00.0	357	47.0		35.8	306	09.7		14.2
2	241	04.2	185	24.3		12.3	309	39.8	-22	59.9	12	49.8		35.7	321	12.2		14.2
3	256	06.7	200	23.7		13.1	324	40.9		59.8	27	52.5		35.6	336	14.6		14.2
4	271	09.1	215	23.0		13.9	339	42.0		59.7	42	55.3		35.5	351	17.1		14.2
5	286	11.6	230	22.3	+20	14.7	354	43.2	-22	59.7	57	58.1	-16	35.5	6	19.6	-22	14.2
6	301	14.1	245	21.7	+20	15.5	9	44.3	-22	59.6	73	00.8	-16	35.4	21	22.1	-22	14.2
7	316	16.5	260	21.0		16.3	24	45.4		59.5	88	03.6		35.3	36	24.6		14.2
8	331	19.0	275	20.3		17.1	39	46.5		59.4	103	06.3		35.2	51	27.1		14.2
9	346	21.5	290	19.6		17.9	54	47.7		59.3	118	09.1		35.2	66	29.6		14.2
10	1	23.9	305	19.0		18.7	69	48.8		59.2	133	11.8		35.1	81	32.1		14.2
11	16	26.4	320	18.3	+20	19.4	84	49.9	-22	59.1	148	14.6	-16	35.0	96	34.5	-22	14.2
12	31	28.9	335	17.6	+20	20.2	99	51.0	-22	59.0	163	17.3	-16	34.9	111	37.0	-22	14.2
13	46	31.3	350	16.9		21.0	114	52.2		58.9	178	20.1		34.9	126	39.5		14.2
14	61	33.8	5	16.3		21.8	129	53.3		58.8	193	22.9		34.8	141	42.0		14.2
15	76	36.3	20	15.6		22.6	144	54.4		58.7	208	25.6		34.7	156	44.5		14.2
16	91	38.7	35	14.9		23.4	159	55.5		58.6	223	28.4		34.6	171	47.0		14.2
17	106	41.2	50	14.2	+20	24.1	174	56.7	-22	58.5	238	31.1	-16	34.5	186	49.5	-22	14.2
18	121	43.6	65	13.6	+20	24.9	189	57.8	-22	58.5	253	33.9	-16	34.5	201	52.0	-22	14.2
19	136	46.1	80	12.9		25.7	204	58.9		58.4	268	36.6		34.4	216	54.4		14.2
20	151	48.6	95	12.2		26.5	220	00.1		58.3	283	39.4		34.3	231	56.9		14.2
21	166	51.0	110	11.5		27.3	235	01.2		58.2	298	42.2		34.2	246	59.4		14.2
22	181	53.5	125	10.8		28.0	250	02.3		58.1	313	44.9		34.2	262	01.9		14.2
23	196	56.0	140	10.2		28.8	265	03.5		58.0	328	47.7		34.1	277	04.4		14.2
24	211	58.4	155	09.5	+20	29.6	280	04.6	-22	57.9	343	50.4	-16	34.0	292	06.9	-22	14.2
Dif	—		-7 +8				+11 +1				+28 +1				+25 0			

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'9 PMG: 11 ^h 58 ^m 1			Edad: 7 ^d 9 SD: 16'0 PMG: 19 ^h 58 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	o	'	o	'	o	'	o	h m	h m	h m	h m	h m	h m	
0	180	26.5	+12	46.4	71	18.9	+15	59.7	60 N	19 40	20 30	21 42	11 57	86
1	195	26.6		47.2	85	45.9	80	51.8	58	32	18	21	12 06	83
2	210	26.7		48.0	100	12.9	80	43.8	56	25	20 08	21 04	14 80	2 58
3	225	26.8		48.8	114	40.1	82	35.8	54	19	19 58	20 50	21 78	50
4	240	27.0		49.7	129	07.2	81	27.6	52	13	50	38	27 76	44
5	255	27.1	+12	50.5	143	34.5	83	+15	50	19 08	19 43	20 28	12 33	74
6	270	27.2	+12	51.3	158	01.8	83	+15	45	18 57	19 28	20 07	12 45	70
7	285	27.3		52.1	172	29.1	83	+15	40	47	16	19 51	12 55	67
8	300	27.4		53.0	186	56.5	84	+14	35	40	19 06	38	13 03	65
9	315	27.5		53.8	201	24.0	85	45.6	30	33	18 58	27	11 62	1 56
10	330	27.6		54.6	215	51.5	85	36.9	20	21	44	19 11	24 58	41
11	345	27.7	+12	55.4	230	19.1	86	+14	10 N	18 11	18 33	18 58	13 35	55
12	0	27.9	+12	56.3	244	46.8	87	+14	0	18 02	18 23	18 47	13 45	52
13	15	28.0		57.1	259	14.5	87	10.4	10 S	17 52	14	39	13 56	49
14	30	28.1		57.9	273	42.2	87	+14	20	42	18 05	31	14 07	46
15	45	28.2		58.7	288	10.1	89	+13	30	31	17 56	24	20 41	38
16	60	28.3	+12	59.5	302	38.0	89	43.2	35	25	51	21	27 40	29
17	75	28.4	+13	00.4	317	05.9	89	+13	40	17 18	17 46	18 17	14 35	37
18	90	28.5	+13	01.2	331	33.9	90	+13	45	17 10	17 40	18 14	14 45	34
19	105	28.6		02.0	346	02.0	91	15.3	50	17 00	33	11	14 57	30
20	120	28.7		02.8	0	30.1	91	+13	52	16 55	30	10	15 02	29
21	135	28.8		03.6	14	58.3	92	+12	54	50	27	08	08 27	27
22	150	29.0		04.4	29	26.5	92	46.8	56	45	23	07	15 24	24
23	165	29.1		05.3	43	54.8	93	37.1	58	38	20	06	22 22	22
24	180	29.2	+13	06.1	58	23.2	94	+12	60 S	16 31	17 15	18 04	15 30	20
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 9 ^h 50 ^m 5		Mag: -3.9 PMG: 13 ^h 40 ^m			Mag: -0.2 PMG: 5 ^h 19 ^m			Mag: -2.5 PMG: 1 ^h 04 ^m			Mag: +0.4 PMG: 4 ^h 31 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'
0	211	58.4	155	09.5	+20	29.6	280	04.6	-22	57.9	343	50.4	-16	34.0
1	227	00.9	170	08.8		30.4	295	05.7		57.8	358	53.2		33.9
2	242	03.4	185	08.1		31.1	310	06.9		57.7	13	56.0		33.8
3	257	05.8	200	07.4		31.9	325	08.0		57.6	28	58.7		33.8
4	272	08.3	215	06.8		32.7	340	09.1		57.5	44	01.5		33.7
5	287	10.7	230	06.1	+20	33.4	355	10.3	-22	57.4	59	04.2	-16	33.6
6	302	13.2	245	05.4	+20	34.2	10	11.4	-22	57.3	74	07.0	-16	33.5
7	317	15.7	260	04.7		35.0	25	12.5		57.2	89	09.8		33.4
8	332	18.1	275	04.0		35.7	40	13.7		57.2	104	12.5		33.4
9	347	20.6	290	03.3		36.5	55	14.8		57.1	119	15.3		33.3
10	2	23.1	305	02.7		37.3	70	15.9		57.0	134	18.0		33.2
11	17	25.5	320	02.0	+20	38.0	85	17.1	-22	56.9	149	20.8	-16	33.1
12	32	28.0	335	01.3	+20	38.8	100	18.2	-22	56.8	164	23.6	-16	33.1
13	47	30.5	350	00.6		39.6	115	19.3		56.7	179	26.3		33.0
14	62	32.9	4	59.9		40.3	130	20.5		56.6	194	29.1		32.9
15	77	35.4	19	59.2		41.1	145	21.6		56.5	209	31.8		32.8
16	92	37.9	34	58.5		41.8	160	22.7		56.4	224	34.6		32.7
17	107	40.3	49	57.9	+20	42.6	175	23.9	-22	56.3	239	37.4	-16	32.7
18	122	42.8	64	57.2	+20	43.4	190	25.0	-22	56.2	254	40.1	-16	32.6
19	137	45.2	79	56.5		44.1	205	26.2		56.1	269	42.9		32.5
20	152	47.7	94	55.8		44.9	220	27.3		56.0	284	45.6		32.4
21	167	50.2	109	55.1		45.6	235	28.4		55.9	299	48.4		32.3
22	182	52.6	124	54.4		46.4	250	29.6		55.8	314	51.2		32.3
23	197	55.1	139	53.7		47.1	265	30.7		55.7	329	53.9		32.2
24	212	57.6	154	53.0	+20	47.9	280	31.9	-22	55.6	344	56.7	-16	32.1
Dif	—		-7 +8			+11 +1			+28 +1			+25 0		

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15'9 PMG: 11 ^h 58 ^m 0				Edad: 8 ^d 9 PHE { 4 ^h : 58'6 12 ^h : 58'4 20 ^h : 58'3 R°: 49 ^m															
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°				
h	o	'	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m			
0	180	29.2	+13	06.1	58	23.2	+12	27.4	60 N	2 13	3 25	4 15	13 23	85	3 38	18				
1	195	29.3		06.9	72	51.6	94	17.6	58	34	37	23	29	82	31	21				
2	210	29.4		07.7	87	20.1	95	+12 07.7	56	2 51	48	30	34	80	25	23				
3	225	29.5		08.5	101	48.6	95	+11 57.8	54	3 05	3 57	37	39	78	20	25				
4	240	29.6		09.3	116	17.2	96	47.8	52	17	4 05	42	43	76	15	27				
5	255	29.7	+13	10.2	130	45.8	96	+11 37.8	50	3 28	4 12	4 48	13 47	74	3 11	28				
6	270	29.8	+13	11.0	145	14.5	97	+11 27.7	45	3 48	4 27	4 59	13 55	70	3 01	32				
7	285	29.9		11.8	159	43.3	98	17.5	40	4 05	39	5 08	14 02	67	2 53	35				
8	300	30.0		12.6	174	12.1	98	+11 07.3	35	18	49	16	08	64	46	38				
9	315	30.2		13.4	188	41.0	99	+10 57.0	30	28	4 58	23	13	62	40	40				
10	330	30.3		14.2	203	09.9	99	46.6	20	45	5 12	35	22	57	29	44				
11	345	30.4	+13	15.0	217	38.8	99	+10 36.2	10 N	4 58	5 23	5 45	14 30	54	2 19	48				
12	0	30.5	+13	15.9	232	07.9	101	+10 25.8	0	5 09	5 33	5 55	14 37	50	2 10	52				
13	15	30.6		16.7	246	36.9	100	15.3	10 S	18	42	6 04	45	46	2 01	55				
14	30	30.7		17.5	261	06.1	102	+10 04.7	20	25	5 51	14	14 53	43	1 52	58				
15	45	30.8		18.3	275	35.3	102	+9 54.1	30	32	6 01	25	15 01	39	41	62				
16	60	30.9		19.1	290	04.5	102	43.4	35	36	06	32	07	36	34	65				
17	75	31.0	+13	19.9	304	33.8	103	+9 32.7	40	5 39	6 11	6 39	15 12	34	1 27	67				
18	90	31.1	+13	20.7	319	03.1	103	+9 22.0	45	5 42	6 17	6 47	15 19	31	1 18	71				
19	105	31.2		21.5	333	32.5	104	11.2	50	46	24	6 57	27	27	08	74				
20	120	31.3		22.3	348	01.9	104	+9 00.3	52	47	27	7 02	31	25	1 03	76				
21	135	31.4		23.2	2	31.4	105	+8 49.4	54	49	30	07	35	23	0 58	78				
22	150	31.5		24.0	17	00.9	105	38.5	56	50	34	13	39	21	52	80				
23	165	31.6		24.8	31	30.5	106	27.5	58	52	38	19	44	19	45	83				
24	180	31.7	+13	25.6	46	00.1	106	+8 16.5	60 S	5 53	6 42	7 26	15 50	16	0 37	86				
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 9 ^h 46 ^m 6				Mag: -3.9 PMG: 13 ^h 41 ^m				Mag: -0.2 PMG: 5 ^h 17 ^m				Mag: -2.5 PMG: 1 ^h 00 ^m				Mag: +0.4 PMG: 4 ^h 27 ^m			
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'
0	212	57.6	154	53.0	+20	47.9	280	31.9	-22	55.6	344	56.7	-16	32.1	293	06.7	-22	14.3		
1	228	00.0	169	52.3		48.6	295	33.0		55.6	359	59.4		32.0	308	09.2		14.3		
2	243	02.5	184	51.7		49.4	310	34.1		55.5	15	02.2		32.0	323	11.7		14.3		
3	258	05.0	199	51.0		50.1	325	35.3		55.4	30	05.0		31.9	338	14.2		14.3		
4	273	07.4	214	50.3		50.9	340	36.4		55.3	45	07.7		31.8	353	16.7		14.3		
5	288	09.9	229	49.6	+20	51.6	355	37.6	-22	55.2	60	10.5	-16	31.7	8	19.2	-22	14.3		
6	303	12.4	244	48.9	+20	52.4	10	38.7	-22	55.1	75	13.3	-16	31.6	23	21.7	-22	14.3		
7	318	14.8	259	48.2		53.1	25	39.9		55.0	90	16.0		31.6	38	24.2		14.3		
8	333	17.3	274	47.5		53.8	40	41.0		54.9	105	18.8		31.5	53	26.7		14.3		
9	348	19.7	289	46.8		54.6	55	42.1		54.8	120	21.5		31.4	68	29.2		14.3		
10	3	22.2	304	46.1		55.3	70	43.3		54.7	135	24.3		31.3	83	31.7		14.3		
11	18	24.7	319	45.4	+20	56.1	85	44.4	-22	54.6	150	27.1	-16	31.2	98	34.2	-22	14.3		
12	33	27.1	334	44.7	+20	56.8	100	45.6	-22	54.5	165	29.8	-16	31.2	113	36.7	-22	14.3		
13	48	29.6	349	44.0		57.6	115	46.7		54.4	180	32.6		31.1	128	39.2		14.3		
14	63	32.1	4	43.3		58.3	130	47.9		54.3	195	35.4		31.0	143	41.7		14.3		
15	78	34.5	19	42.6		59.0	145	49.0		54.2	210	38.1		30.9	158	44.1		14.3		
16	93	37.0	34	41.9	+20	59.8	160	50.2		54.1	225	40.9		30.8	173	46.6		14.3		
17	108	39.5	49	41.2	+21	00.5	175	51.3	-22	54.0	240	43.7	-16	30.8	188	49.1	-22	14.3		
18	123	41.9	64	40.5	+21	01.2	190	52.5	-22	53.9	255	46.4	-16	30.7	203	51.6	-22	14.3		
19	138	44.4	79	39.8		02.0	205	53.6		53.8	270	49.2		30.6	218	54.1		14.3		
20	153	46.8	94	39.1		02.7	220	54.8		53.7	285	51.9		30.5	233	56.6		14.3		
21	168	49.3	109	38.4		03.4	235	55.9		53.6	300	54.7		30.4	248	59.1		14.3		
22	183	51.8	124	37.7		04.2	250	57.1		53.5	315	57.5		30.4	264	01.6		14.3		
23	198	54.2	139	37.0		04.9	265	58.2		53.5	331	00.2		30.3	279	04.1		14.3		
24	213	56.7	154	36.3	+21	05.6	280	59.4	-22	53.4	346	03.0	-16	30.2	294	06.6	-22	14.3		
Dif	—		-7		+7		+11		+1		+28		+1		+25					

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15/9 PMG: 11 ^h 57 ^m 8				Edad: 9 ^d 9 PHE { SD: 15/8 PMG: 21 ^h 39 ^m 4 ^h : 58/2 12 ^h : 58/0 20 ^h : 57/9 R°: 48 ^m											
	hG ☉		Dec		hG ☾		Dif				Civil		Náutico		Hora R°	
h	o	'	o	'	o	'	o	'	o	h m	h m	h m	h m m	h m m	h m m	h m m
0	180	31.7	+13	25.6	46	00.1	+8	16.5	60 N	19 45	20 36	21 51	14 48	85	3 56	15
1	195	31.8		26.4	60	29.8 ¹⁰⁷	+8	05.4 ¹¹¹	58	37	23	28	51	82	52	17
2	210	32.0		27.2	74	59.5 ¹⁰⁷	+7	54.3 ¹¹¹	56	29	12	21 10	54	79	48	20
3	225	32.1		28.0	89	29.3 ¹⁰⁸		43.2 ¹¹¹	54	22	20 03	20 55	57	76	45	22
4	240	32.2		28.8	103	59.1 ¹⁰⁸		32.0 ¹¹²	52	16	19 54	43	14 59	74	42	24
5	255	32.3	+13	29.6	118	29.0 ¹⁰⁹	+7	20.8 ¹¹²	50	19 11	19 47	20 32	15 01	73	3 39	26
6	270	32.4	+13	30.4	132	58.9 ¹⁰⁹	+7	09.6 ¹¹²	45	18 59	19 31	20 10	15 05	69	3 33	30
7	285	32.5		31.2	147	28.8 ¹⁰⁹	+6	58.3 ¹¹³	40	49	18	19 53	09	65	28	33
8	300	32.6		32.0	161	58.8 ¹¹⁰		47.0 ¹¹³	35	41	19 08	40	12	62	24	35
9	315	32.7		32.8	176	28.8 ¹¹⁰		35.7 ¹¹³	30	34	18 59	29	15	60	20	38
10	330	32.8		33.6	190	58.9 ¹¹¹		24.3 ¹¹⁴	20	22	45	19 12	19	56	13	42
11	345	32.9	+13	34.4	205	29.0 ¹¹¹	+6	12.9 ¹¹⁴	10 N	18 11	18 33	18 58	15 24	52	3 07	46
12	0	33.0	+13	35.2	219	59.1 ¹¹¹	+6	01.5 ¹¹⁴	0	18 01	18 22	18 47	15 27	49	3 02	49
13	15	33.1		36.0	234	29.3 ¹¹²	+5	50.0 ¹¹⁵	10 S	17 51	13	38	31	45	2 56	53
14	30	33.2		36.8	248	59.6 ¹¹³		38.6 ¹¹⁴	20	41	18 04	30	36	41	50	56
15	45	33.3		37.7	263	29.8 ¹¹²		27.1 ¹¹⁵	30	29	17 54	22	40	37	43	61
16	60	33.4		38.5	278	00.1 ¹¹³		15.6 ¹¹⁵	35	23	49	19	43	35	39	63
17	75	33.5	+13	39.3	292	30.5 ¹¹⁴	+5	04.0 ¹¹⁶	40	17 15	17 43	18 15	15 46	32	2 34	66
18	90	33.6	+13	40.1	307	00.9 ¹¹⁴	+4	52.5 ¹¹⁵	45	17 07	17 37	18 11	15 50	28	2 29	69
19	105	33.7		40.9	321	31.3 ¹¹⁴		40.9 ¹¹⁶	50	16 56	30	08	54	25	22	74
20	120	33.8		41.7	336	01.7 ¹¹⁴		29.3 ¹¹⁶	52	51	26	06	56	23	19	75
21	135	33.9		42.5	350	32.2 ¹¹⁵		17.7 ¹¹⁶	54	46	23	04	15 58	21	16	77
22	150	34.0		43.3	5	02.7 ¹¹⁵	+4	06.1 ¹¹⁶	56	40	19	03	16 00	20	12	80
23	165	34.1		44.1	19	33.3 ¹¹⁶	+3	54.4 ¹¹⁷	58	33	15	18 01	03	17	08	82
24	180	34.2	+13	44.9	34	03.9 ¹¹⁶	+3	42.8 ¹¹⁶	60 S	16 26	17 10	17 59	16 06	14	2 03	85

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 9 ^h 42 ^m 6		Mag: -3.9 PMG: 13 ^h 42 ^m		Mag: -0.3 PMG: 5 ^h 16 ^m		Mag: -2.5 PMG: 0 ^h 56 ^m		Mag: +0.4 PMG: 4 ^h 23 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♎	
h	o	'	o	'	o	'	o	'	o	'
0	213	56.7	154	36.3	+21	05.6	280	59.4	-22	53.4
1	228	59.2	169	35.6		06.3	296	00.5		53.3
2	244	01.6	184	34.9		07.1	311	01.7		53.2
3	259	04.1	199	34.2		07.8	326	02.8		53.1
4	274	06.6	214	33.5		08.5	341	04.0		53.0
5	289	09.0	229	32.8	+21	09.2	356	05.1	-22	52.9
6	304	11.5	244	32.1	+21	10.0	11	06.3	-22	52.8
7	319	14.0	259	31.4		10.7	26	07.4		52.7
8	334	16.4	274	30.7		11.4	41	08.6		52.6
9	349	18.9	289	30.0		12.1	56	09.7		52.5
10	4	21.3	304	29.3		12.8	71	10.9		52.4
11	19	23.8	319	28.6	+21	13.5	86	12.0	-22	52.3
12	34	26.3	334	27.9	+21	14.3	101	13.2	-22	52.2
13	49	28.7	349	27.2		15.0	116	14.3		52.1
14	64	31.2	4	26.5		15.7	131	15.5		52.0
15	79	33.7	19	25.8		16.4	146	16.7		51.9
16	94	36.1	34	25.1		17.1	161	17.8		51.8
17	109	38.6	49	24.4	+21	17.8	176	19.0	-22	51.7
18	124	41.1	64	23.6	+21	18.5	191	20.1	-22	51.6
19	139	43.5	79	22.9		19.2	206	21.3		51.5
20	154	46.0	94	22.2		20.0	221	22.4		51.4
21	169	48.4	109	21.5		20.7	236	23.6		51.3
22	184	50.9	124	20.8		21.4	251	24.8		51.2
23	199	53.4	139	20.1		22.1	266	25.9		51.1
24	214	55.8	154	19.4	+21	22.8	281	27.1	-22	51.0
Dif	—		-7		+7		+12		+1	
							+28		+1	
									+25	
									0	

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15:9 PMG: 11 ^h 57 ^m 6				Edad: 10 ^d 9 PHE { SD: 15:7 PMG: 22 ^h 27 ^m R°: 48 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	o	'	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m	
0	180	34.2	+13	44.9	34	03.9	+3	42.8	60 N	2 04	3 18	4 09	16 13	82	4 11	14		
1	195	34.3		45.7	48	34.5 ¹¹⁶		31.1 ¹¹⁷	58	27	31	18	13	80	09	17		
2	210	34.4		46.4	63	05.1 ¹¹⁶		19.4 ¹¹⁷	56	45	42	26	13	77	08	19		
3	225	34.5		47.2	77	35.8 ¹¹⁷	+3	07.7 ¹¹⁷	54	2 59	3 52	32	13	75	07	21		
4	240	34.6		48.0	92	06.5 ¹¹⁷	+2	56.0 ¹¹⁷	52	3 12	4 01	38	13	74	06	23		
5	255	34.7	+13	48.8	106	37.3 ¹¹⁸	+2	44.3 ¹¹⁷	50	3 23	4 08	4 44	16 14	71	4 05	24		
6	270	34.8	+13	49.6	121	08.0 ¹¹⁷	+2	32.6 ¹¹⁷	45	3 45	4 24	4 56	16 14	67	4 03	28		
7	285	34.9		50.4	135	38.8 ¹¹⁸		20.9 ¹¹⁷	40	4 01	37	5 05	14	64	4 01	31		
8	300	35.0		51.2	150	09.7 ¹¹⁹	+2	09.1 ¹¹⁸	35	15	47	14	14	62	3 59	34		
9	315	35.1		52.0	164	40.5 ¹¹⁸	+1	57.4 ¹¹⁷	30	26	4 56	21	15	59	58	36		
10	330	35.2		52.8	179	11.4 ¹¹⁹		45.7 ¹¹⁷	20	44	5 11	33	15	55	55	41		
11	345	35.3	+13	53.6	193	42.3 ¹¹⁹	+1	33.9 ¹¹⁸	10 N	4 57	5 23	5 44	16 16	51	3 53	44		
12	0	35.4	+13	54.4	208	13.2 ¹¹⁹	+1	22.2 ¹¹⁷	0	5 08	5 33	5 54	16 16	47	3 51	48		
13	15	35.5		55.2	222	44.2 ¹²⁰	+1	10.4 ¹¹⁸	10 S	18	43	6 04	16	44	49	51		
14	30	35.6		56.0	237	15.2 ¹²⁰	+0	58.7 ¹¹⁷	20	26	5 52	15	17	40	46	55		
15	45	35.7		56.8	251	46.2 ¹²⁰		47.0 ¹¹⁷	30	34	6 02	26	17	36	44	59		
16	60	35.8		57.6	266	17.2 ¹²⁰		35.2 ¹¹⁸	35	37	07	33	18	33	42	62		
17	75	35.9	+13	58.4	280	48.2 ¹²⁰	+0	23.5 ¹¹⁷	40	5 41	6 13	6 41	16 18	31	3 40	65		
18	90	35.9	+13	59.2	295	19.3 ¹²¹	+0	11.8 ¹¹⁷	45	5 45	6 19	6 50	16 18	28	3 38	68		
19	105	36.0	+14	00.0	309	50.4 ¹²¹	+0	00.1 ¹¹⁷	50	49	27	7 00	19	24	36	72		
20	120	36.1	+14	00.7	324	21.5 ¹²¹	-0	11.6 ¹¹⁷	52	50	30	05	19	23	34	74		
21	135	36.2		01.5	338	52.6 ¹²¹		23.4 ¹¹⁸	54	52	34	11	19	21	33	76		
22	150	36.3		02.3	353	23.8 ¹²²		35.0 ¹¹⁶	56	54	37	17	20	18	32	78		
23	165	36.4		03.1	7	54.9 ¹²¹		46.7 ¹¹⁷	58	55	42	24	20	16	30	81		
24	180	36.5	+14	03.9	22	26.1 ¹²²	-0	58.4 ¹¹⁷	60 S	5 57	6 46	7 31	16 20	14	3 28	84		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 9 ^h 38 ^m 7		Mag: -3.9 PMG: 13 ^h 43 ^m				Mag: -0.3 PMG: 5 ^h 14 ^m				Mag: -2.5 PMG: 0 ^h 51 ^m				Mag: +0.4 PMG: 4 ^h 19 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'
0	214	55.8	154	19.4	+21	22.8	281	27.1	-22	51.0	347	09.4	-16	28.3	295	06.7	-22	14.4
1	229	58.3	169	18.7		23.5	296	28.2		50.9	2	12.2		28.2	310	09.2		14.4
2	245	00.8	184	18.0		24.2	311	29.4		50.8	17	14.9		28.1	325	11.7		14.4
3	260	03.2	199	17.2		24.9	326	30.6		50.7	32	17.7		28.1	340	14.2		14.4
4	275	05.7	214	16.5		25.6	341	31.7		50.6	47	20.5		28.0	355	16.7		14.4
5	290	08.2	229	15.8	+21	26.3	356	32.9	-22	50.5	62	23.2	-16	27.9	10	19.2	-22	14.4
6	305	10.6	244	15.1	+21	27.0	11	34.1	-22	50.4	77	26.0	-16	27.8	25	21.7	-22	14.4
7	320	13.1	259	14.4		27.7	26	35.2		50.3	92	28.8		27.7	40	24.2		14.4
8	335	15.6	274	13.7		28.4	41	36.4		50.2	107	31.5		27.6	55	26.7		14.4
9	350	18.0	289	13.0		29.1	56	37.5		50.2	122	34.3		27.6	70	29.2		14.4
10	5	20.5	304	12.3		29.8	71	38.7		50.1	137	37.1		27.5	85	31.7		14.4
11	20	22.9	319	11.5	+21	30.5	86	39.9	-22	50.0	152	39.8	-16	27.4	100	34.2	-22	14.4
12	35	25.4	334	10.8	+21	31.1	101	41.0	-22	49.9	167	42.6	-16	27.3	115	36.7	-22	14.4
13	50	27.9	349	10.1		31.8	116	42.2		49.8	182	45.4		27.2	130	39.2		14.4
14	65	30.3	4	09.4		32.5	131	43.4		49.7	197	48.1		27.2	145	41.7		14.4
15	80	32.8	19	08.7		33.2	146	44.5		49.6	212	50.9		27.1	160	44.2		14.4
16	95	35.3	34	08.0		33.9	161	45.7		49.5	227	53.7		27.0	175	46.7		14.4
17	110	37.7	49	07.2	+21	34.6	176	46.9	-22	49.4	242	56.5	-16	26.9	190	49.2	-22	14.4
18	125	40.2	64	06.5	+21	35.3	191	48.0	-22	49.3	257	59.2	-16	26.8	205	51.7	-22	14.4
19	140	42.7	79	05.8		36.0	206	49.2		49.2	273	02.0		26.8	220	54.2		14.4
20	155	45.1	94	05.1		36.6	221	50.4		49.1	288	04.8		26.7	235	56.8		14.4
21	170	47.6	109	04.4		37.3	236	51.5		49.0	303	07.5		26.6	250	59.3		14.4
22	185	50.1	124	03.6		38.0	251	52.7		48.9	318	10.3		26.5	266	01.8		14.4
23	200	52.5	139	02.9		38.7	266	53.9		48.8	333	13.1		26.4	281	04.3		14.4
24	215	55.0	154	02.2	+21	39.4	281	55.1	-22	48.7	348	15.8	-16	26.4	296	06.8	-22	14.4
Dif	—		-7		+7		+12		+1		+28		+1		+25			

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 15'9 PMG: 11 ^h 57 ^m 5			Edad: 11 ^d 9 PHE { SD: 15'6 PMG: 23 ^h 15 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	o	'	o	'	o	'	o	'	h	m	h	m	h	m	h	m		
0	180	36.5	+14	03.9	22	26.1	-0	58.4	60 N	19 50	20 42	22 00	17 35	81	4 25	14		
1	195	36.6		04.7	36	57.3 ¹²²	-1	10.1 ¹¹⁷	58	41	29	21 36	33	78	26	17		
2	210	36.7		05.5	51	28.5 ¹²²		21.7 ¹¹⁶	56	33	17	16	30	76	27	19		
3	225	36.8		06.3	65	59.8 ¹²³		33.4 ¹¹⁷	54	26	20 07	21 01	28	74	28	21		
4	240	36.9		07.1	80	31.0 ¹²²		45.0 ¹¹⁶	52	20	19 58	20 47	27	72	29	22		
5	255	37.0	+14	07.8	95	02.3 ¹²³	-1	56.6 ¹¹⁶	50	19 14	19 50	20 36	17 25	70	4 29	25		
6	270	37.1	+14	08.6	109	33.5 ¹²²	-2	08.2 ¹¹⁶	45	19 02	19 34	20 13	17 21	67	4 31	28		
7	285	37.2		09.4	124	04.8 ¹²³		19.7 ¹¹⁵	40	18 52	21	19 56	18	64	32	31		
8	300	37.3		10.2	138	36.1 ¹²³		31.3 ¹¹⁶	35	43	10	42	16	60	33	34		
9	315	37.4		11.0	153	07.4 ¹²³		42.8 ¹¹⁵	30	35	19 01	31	14	58	34	36		
10	330	37.4		11.8	167	38.8 ¹²⁴	-2	54.3 ¹¹⁵	20	22	18 45	19 12	10	54	36	40		
11	345	37.5	+14	12.6	182	10.1 ¹²³	-3	05.8 ¹¹⁵	10 N	18 11	18 33	18 58	17 07	50	4 37	44		
12	0	37.6	+14	13.3	196	41.4 ¹²³	-3	17.3 ¹¹⁵	0	18 01	18 22	18 47	17 03	48	4 39	47		
13	15	37.7		14.1	211	12.8 ¹²⁴		28.7 ¹¹⁴	10 S	17 51	12	37	17 00	44	40	51		
14	30	37.8		14.9	225	44.2 ¹²⁴		40.1 ¹¹⁴	20	40	18 03	29	16 57	40	41	55		
15	45	37.9		15.7	240	15.5 ¹²³	-3	51.5 ¹¹⁴	30	28	17 52	21	53	37	43	59		
16	60	38.0		16.5	254	46.9 ¹²⁴	-4	02.9 ¹¹⁴	35	21	47	17	51	34	44	61		
17	75	38.1	+14	17.3	269	18.3 ¹²⁴	-4	14.2 ¹¹³	40	17 13	17 41	18 13	16 49	31	4 45	64		
18	90	38.2	+14	18.0	283	49.7 ¹²⁴	-4	25.5 ¹¹³	45	17 03	17 34	18 09	16 46	29	4 46	67		
19	105	38.3		18.8	298	21.1 ¹²⁴		36.8 ¹¹³	50	16 52	26	04	43	25	48	71		
20	120	38.4		19.6	312	52.5 ¹²⁴		48.1 ¹¹³	52	47	23	03	42	23	48	73		
21	135	38.4		20.4	327	23.9 ¹²⁴	-4	59.3 ¹¹²	54	42	19	18 01	40	21	49	75		
22	150	38.5		21.2	341	55.3 ¹²⁴	-5	10.5 ¹¹²	56	35	15	17 59	38	20	50	77		
23	165	38.6		21.9	356	26.7 ¹²⁴		21.6 ¹¹¹	58	28	10	57	36	17	51	79		
24	180	38.7	+14	22.7	10	58.2 ¹²⁵	-5	32.8 ¹¹²	60 S	16 20	17 05	17 55	16 34	15	4 52	82		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 9 ^h 34 ^m 8		Mag: -3.9 PMG: 13 ^h 45 ^m				Mag: -0.3 PMG: 5 ^h 12 ^m				Mag: -2.5 PMG: 0 ^h 47 ^m				Mag: +0.4 PMG: 4 ^h 15 ^m			
	hG ♈		hG ♀	Dec			hG ♂	Dec			hG ♃	Dec			hG ♄	Dec		
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'		
0	215	55.0	154	02.2	+21	39.4	281	55.1	-22	48.7	348	15.8	-16	26.4	296	06.8		
1	230	57.4	169	01.5		40.0	296	56.2		48.6	3	18.6		26.3	311	09.3		
2	245	59.9	184	00.8		40.7	311	57.4		48.5	18	21.4		26.2	326	11.8		
3	261	02.4	199	00.0		41.4	326	58.6		48.4	33	24.1		26.1	341	14.3		
4	276	04.8	213	59.3		42.1	341	59.7		48.3	48	26.9		26.0	356	16.8		
5	291	07.3	228	58.6	+21	42.7	357	00.9	-22	48.2	63	29.7	-16	26.0	11	19.3		
6	306	09.8	243	57.9	+21	43.4	12	02.1	-22	48.1	78	32.5	-16	25.9	26	21.8		
7	321	12.2	258	57.1		44.1	27	03.3		48.0	93	35.2		25.8	41	24.3		
8	336	14.7	273	56.4		44.8	42	04.4		47.9	108	38.0		25.7	56	26.8		
9	351	17.2	288	55.7		45.4	57	05.6		47.8	123	40.8		25.6	71	29.4		
10	6	19.6	303	55.0		46.1	72	06.8		47.7	138	43.5		25.5	86	31.9		
11	21	22.1	318	54.2	+21	46.8	87	08.0	-22	47.6	153	46.3	-16	25.5	101	34.4		
12	36	24.5	333	53.5	+21	47.4	102	09.1	-22	47.5	168	49.1	-16	25.4	116	36.9		
13	51	27.0	348	52.8		48.1	117	10.3		47.4	183	51.9		25.3	131	39.4		
14	66	29.5	3	52.1		48.8	132	11.5		47.3	198	54.6		25.2	146	41.9		
15	81	31.9	18	51.3		49.4	147	12.7		47.2	213	57.4		25.1	161	44.4		
16	96	34.4	33	50.6		50.1	162	13.8		47.1	229	00.2		25.1	176	46.9		
17	111	36.9	48	49.9	+21	50.8	177	15.0	-22	47.0	244	02.9	-16	25.0	191	49.4		
18	126	39.3	63	49.1	+21	51.4	192	16.2	-22	46.9	259	05.7	-16	24.9	206	51.9		
19	141	41.8	78	48.4		52.1	207	17.4		46.8	274	08.5		24.8	221	54.5		
20	156	44.3	93	47.7		52.7	222	18.5		46.7	289	11.3		24.7	236	57.0		
21	171	46.7	108	47.0		53.4	237	19.7		46.6	304	14.0		24.6	251	59.5		
22	186	49.2	123	46.2		54.1	252	20.9		46.5	319	16.8		24.6	267	02.0		
23	201	51.7	138	45.5		54.7	267	22.1		46.4	334	19.6		24.5	282	04.5		
24	216	54.1	153	44.8	+21	55.4	282	23.3	-22	46.3	349	22.3	-16	24.4	297	07.0		
Dif	—		-7 +7		+12		+1		+28		+1		+25		0			

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15'9 PMG: 11 ^h 57 ^m 3				Edad: 12 ^d 9 PHE { SD: 15'4 PMG: *** ^m R°: ** ^m															
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°				
h	o	'	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m			
0	180	38.7	+14	22.7	10	58.2	-5	32.8	60 N	1 54	3 12	4 04	18 56	80	4 39	16				
1	195	38.8		23.5	25	29.6 ¹²⁴		43.8 ¹¹⁰	58	2 19	26	13	51	77	43	18				
2	210	38.9		24.3	40	01.0 ¹²⁴		54.9 ¹¹¹	56	38	37	21	46	75	46	20				
3	225	39.0		25.0	54	32.5 ¹²⁵		05.9 ¹¹⁰	54	2 54	47	28	42	72	49	22				
4	240	39.1		25.8	69	03.9 ¹²⁴		16.9 ¹¹⁰	52	3 07	3 56	34	39	70	51	24				
5	255	39.2	+14	26.6	83	35.3 ¹²⁴	-6	27.8 ¹⁰⁹	50	3 18	4 04	4 40	18 35	69	4 54	25				
6	270	39.2	+14	27.4	98	06.8 ¹²⁵	-6	38.7 ¹⁰⁹	45	3 41	4 21	4 53	18 28	65	4 59	29				
7	285	39.3		28.2	112	38.2 ¹²⁴	-6	49.6 ¹⁰⁹	40	3 58	34	5 03	22	62	5 03	32				
8	300	39.4		28.9	127	09.6 ¹²⁴	-7	00.4 ¹⁰⁸	35	4 12	45	12	16	60	07	35				
9	315	39.5		29.7	141	41.1 ¹²⁵		11.2 ¹⁰⁸	30	24	4 54	19	12	57	10	37				
10	330	39.6		30.5	156	12.5 ¹²⁴		21.9 ¹⁰⁷	20	42	5 09	32	18 04	54	16	41				
11	345	39.7	+14	31.3	170	43.9 ¹²⁴	-7	32.6 ¹⁰⁷	10 N	4 56	5 22	5 43	17 57	50	5 21	44				
12	0	39.8	+14	32.0	185	15.4 ¹²⁵	-7	43.3 ¹⁰⁷	0	5 08	5 33	5 54	17 51	47	5 26	47				
13	15	39.9		32.8	199	46.8 ¹²⁴	-7	53.9 ¹⁰⁶	10 S	18	43	6 04	44	45	31	50				
14	30	39.9		33.6	214	18.2 ¹²⁴	-8	04.4 ¹⁰⁵	20	26	5 53	15	37	42	36	54				
15	45	40.0		34.4	228	49.7 ¹²⁵		14.9 ¹⁰⁵	30	35	6 03	28	30	37	42	58				
16	60	40.1		35.1	243	21.1 ¹²⁴		25.4 ¹⁰⁵	35	39	09	35	25	36	45	60				
17	75	40.2	+14	35.9	257	52.5 ¹²⁴	-8	35.8 ¹⁰⁴	40	5 43	6 15	6 43	17 20	33	5 49	63				
18	90	40.3	+14	36.7	272	23.9 ¹²⁴	-8	46.2 ¹⁰⁴	45	5 47	6 22	6 52	17 15	30	5 53	66				
19	105	40.4		37.4	286	55.3 ¹²⁴	-8	56.5 ¹⁰³	50	51	29	7 03	08	27	5 59	69				
20	120	40.5		38.2	301	26.7 ¹²⁴	-9	06.8 ¹⁰³	52	53	33	09	05	25	6 01	71				
21	135	40.5		39.0	315	58.1 ¹²⁴		17.0 ¹⁰²	54	55	37	14	17 01	24	04	73				
22	150	40.6		39.8	330	29.5 ¹²⁴		27.1 ¹⁰¹	56	57	41	21	16 58	21	07	75				
23	165	40.7		40.5	345	00.9 ¹²⁴		37.2 ¹⁰¹	58	5 59	46	28	53	19	10	78				
24	180	40.8	+14	41.3	359	32.3 ¹²⁴	-9	47.3 ¹⁰¹	60 S	6 01	6 51	7 36	16 49	16	6 14	80				
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG 9 ^h 30 ^m 8				Mag: -3.9 PMG: 13 ^h 46 ^m				Mag: -0.3 PMG: 5 ^h 10 ^m				Mag: -2.5 PMG: 0 ^h 42 ^m				Mag: +0.4 PMG: 4 ^h 11 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec			
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'		
0	216	54.1	153	44.8	+21	55.4	282	23.3	-22	46.3	349	22.3	-16	24.4	297	07.0	-22	14.5		
1	231	56.6	168	44.0		56.0	297	24.4		46.2	4	25.1		24.3	312	09.5		14.5		
2	246	59.0	183	43.3		56.7	312	25.6		46.1	19	27.9		24.2	327	12.0		14.5		
3	262	01.5	198	42.6		57.3	327	26.8		46.0	34	30.7		24.2	342	14.5		14.5		
4	277	04.0	213	41.8		58.0	342	28.0		45.9	49	33.4		24.1	357	17.1		14.5		
5	292	06.4	228	41.1	+21	58.6	357	29.2	-22	45.8	64	36.2	-16	24.0	12	19.6	-22	14.5		
6	307	08.9	243	40.4	+21	59.3	12	30.4	-22	45.7	79	39.0	-16	23.9	27	22.1	-22	14.5		
7	322	11.4	258	39.6	+21	59.9	27	31.5		45.6	94	41.8		23.8	42	24.6		14.5		
8	337	13.8	273	38.9	+22	00.6	42	32.7		45.5	109	44.5		23.8	57	27.1		14.5		
9	352	16.3	288	38.2		01.2	57	33.9		45.4	124	47.3		23.7	72	29.6		14.5		
10	7	18.8	303	37.4		01.9	72	35.1		45.3	139	50.1		23.6	87	32.1		14.5		
11	22	21.2	318	36.7	+22	02.5	87	36.3	-22	45.2	154	52.8	-16	23.5	102	34.6	-22	14.5		
12	37	23.7	333	36.0	+22	03.1	102	37.5	-22	45.1	169	55.6	-16	23.4	117	37.2	-22	14.5		
13	52	26.1	348	35.2		03.8	117	38.7		45.0	184	58.4		23.3	132	39.7		14.5		
14	67	28.6	3	34.5		04.4	132	39.8		44.9	200	01.2		23.3	147	42.2		14.5		
15	82	31.1	18	33.8		05.1	147	41.0		44.8	215	03.9		23.2	162	44.7		14.5		
16	97	33.5	33	33.0		05.7	162	42.2		44.7	230	06.7		23.1	177	47.2		14.5		
17	112	36.0	48	32.3	+22	06.3	177	43.4	-22	44.6	245	09.5	-16	23.0	192	49.7	-22	14.5		
18	127	38.5	63	31.6	+22	07.0	192	44.6	-22	44.5	260	12.3	-16	22.9	207	52.2	-22	14.5		
19	142	40.9	78	30.8		07.6	207	45.8		44.4	275	15.0		22.8	222	54.8		14.5		
20	157	43.4	93	30.1		08.2	222	47.0		44.3	290	17.8		22.8	237	57.3		14.5		
21	172	45.9	108	29.3		08.9	237	48.2		44.2	305	20.6		22.7	252	59.8		14.5		
22	187	48.3	123	28.6		09.5	252	49.3		44.1	320	23.4		22.6	268	02.3		14.6		
23	202	50.8	138	27.9		10.1	267	50.5		44.0	335	26.1		22.5	283	04.8		14.6		
24	217	53.3	153	27.1	+22	10.8	282	51.7	-22	43.9	350	28.9	-16	22.4	298	07.3	-22	14.6		
Dif	—				-7 +6				+12 +1				+28 +1				+25 0			

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 15°9 PMG: 11 ^h 57 ^m 2			Edad: 13 ^d 9 PHE { 4 ^h : 56'2 12 ^h : 56'1 20 ^h : 55'9 SD: 15°3 PMG: 0 ^h 02 ^m R°: 47 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	o	'	o	'	o	'	o	'	h m	h m	h m	h m m	h m m	h m m				
0	180	40.8	+14	41.3	359	32.3	-9	47.3	60 N	19 55	20 48	22 10	20 16 76	4 55 18				
1	195	40.9		42.1	14	03.6 ¹²³	-9	57.3 ¹⁰⁰	58	46	34	21 43	08 73	5 01 20				
2	210	41.0		42.8	28	35.0 ¹²⁴	-10	07.2 ⁹⁹	56	37	22	23	20 01 71	06 23				
3	225	41.0		43.6	43	06.3 ¹²³		17.1 ⁹⁹	54	30	11	21 06	19 54 70	11 25				
4	240	41.1		44.4	57	37.7 ¹²⁴		27.0 ⁹⁹	52	23	20 02	20 52	49 67	15 27				
5	255	41.2	+14	45.1	72	09.0 ¹²³	-10	36.7 ⁹⁷	50	19 17	19 54	20 40	19 44 66	5 19 28				
6	270	41.3	+14	45.9	86	40.4 ¹²⁴	-10	46.5 ⁹⁸	45	19 04	19 36	20 17	19 33 63	5 28 31				
7	285	41.4		46.7	101	11.7 ¹²³	-10	56.1 ⁹⁶	40	18 54	23	19 58	24 60	35 34				
8	300	41.4		47.4	115	43.0 ¹²³	-11	05.7 ⁹⁶	35	45	12	44	16 58	42 36				
9	315	41.5		48.2	130	14.3 ¹²³		15.3 ⁹⁶	30	37	19 02	32	19 09 57	47 39				
10	330	41.6		49.0	144	45.6 ¹²³		24.7 ⁹⁴	20	23	18 46	19 13	18 58 53	5 57 42				
11	345	41.7	+14	49.7	159	16.9 ¹²³	-11	34.1 ⁹⁴	10 N	18 11	18 33	18 59	18 47 51	6 05 45				
12	0	41.8	+14	50.5	173	48.2 ¹²³	-11	43.5 ⁹⁴	0	18 01	18 22	18 47	18 38 48	6 13 48				
13	15	41.9		51.3	188	19.4 ¹²²	-11	52.8 ⁹³	10 S	17 50	12	37	29 45	21 51				
14	30	41.9		52.0	202	50.7 ¹²³	-12	02.0 ⁹²	20	39	18 01	28	19 42	30 53				
15	45	42.0		52.8	217	21.9 ¹²²		11.2 ⁹²	30	26	17 51	19	07 40	40 56				
16	60	42.1		53.5	231	53.2 ¹²³		20.3 ⁹¹	35	18	45	15	18 01 37	45 59				
17	75	42.2	+14	54.3	246	24.4 ¹²²	-12	29.3 ⁹⁰	40	17 10	17 38	18 10	17 53 36	6 52 61				
18	90	42.3	+14	55.1	260	55.6 ¹²²	-12	38.3 ⁹⁰	45	17 00	17 31	18 06	17 45 33	6 59 64				
19	105	42.3		55.8	275	26.8 ¹²²		47.1 ⁸⁸	50	16 49	23	18 01	35 29	7 08 68				
20	120	42.4		56.6	289	58.0 ¹²²	-12	56.0 ⁸⁹	52	43	19	17 59	30 28	12 69				
21	135	42.5		57.3	304	29.2 ¹²²	-13	04.7 ⁸⁷	54	38	15	57	25 26	17 71				
22	150	42.6		58.1	319	00.3 ¹²¹		13.4 ⁸⁷	56	31	11	55	19 25	22 73				
23	165	42.6		58.9	333	31.5 ¹²²		22.0 ⁸⁶	58	24	06	53	12 23	28 75				
24	180	42.7	+14	59.6	348	02.6 ¹²¹	-13	30.6 ⁸⁶	60 S	16 15	17 01	17 50	17 05 20	7 34 78				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 9 ^h 26 ^m 9		Mag: -3.9 PMG: 13 ^h 47 ^m				Mag: -0.4 PMG: 5 ^h 08 ^m				Mag: -2.5 PMG: 0 ^h 38 ^m				Mag: +0.4 PMG: 4 ^h 07 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♎		Dec	
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'
0	217	53.3	153	27.1	+22	10.8	282	51.7	-22	43.9	350	28.9	-16	22.4	298	07.3	-22	14.6
1	232	55.7	168	26.4		11.4	297	52.9		43.8	5	31.7		22.4	313	09.9		14.6
2	247	58.2	183	25.6		12.0	312	54.1		43.7	20	34.5		22.3	328	12.4		14.6
3	263	00.6	198	24.9		12.7	327	55.3		43.6	35	37.2		22.2	343	14.9		14.6
4	278	03.1	213	24.2		13.3	342	56.5		43.5	50	40.0		22.1	358	17.4		14.6
5	293	05.6	228	23.4	+22	13.9	357	57.7	-22	43.4	65	42.8	-16	22.0	13	19.9	-22	14.6
6	308	08.0	243	22.7	+22	14.5	12	58.9	-22	43.3	80	45.6	-16	21.9	28	22.4	-22	14.6
7	323	10.5	258	21.9		15.2	28	00.1		43.2	95	48.3		21.9	43	25.0		14.6
8	338	13.0	273	21.2		15.8	43	01.3		43.1	110	51.1		21.8	58	27.5		14.6
9	353	15.4	288	20.4		16.4	58	02.5		43.0	125	53.9		21.7	73	30.0		14.6
10	8	17.9	303	19.7		17.0	73	03.7		42.9	140	56.7		21.6	88	32.5		14.6
11	23	20.4	318	18.9	+22	17.6	88	04.9	-22	42.8	155	59.4	-16	21.5	103	35.0	-22	14.6
12	38	22.8	333	18.2	+22	18.2	103	06.1	-22	42.7	171	02.2	-16	21.5	118	37.5	-22	14.6
13	53	25.3	348	17.5		18.9	118	07.2		42.6	186	05.0		21.4	133	40.1		14.6
14	68	27.8	3	16.7		19.5	133	08.4		42.5	201	07.8		21.3	148	42.6		14.6
15	83	30.2	18	16.0		20.1	148	09.6		42.4	216	10.5		21.2	163	45.1		14.6
16	98	32.7	33	15.2		20.7	163	10.8		42.3	231	13.3		21.1	178	47.6		14.6
17	113	35.1	48	14.5	+22	21.3	178	12.0	-22	42.2	246	16.1	-16	21.0	193	50.1	-22	14.6
18	128	37.6	63	13.7	+22	21.9	193	13.2	-22	42.1	261	18.9	-16	21.0	208	52.6	-22	14.6
19	143	40.1	78	13.0		22.5	208	14.4		42.0	276	21.6		20.9	223	55.2		14.6
20	158	42.5	93	12.2		23.1	223	15.6		41.9	291	24.4		20.8	238	57.7		14.6
21	173	45.0	108	11.5		23.8	238	16.8		41.8	306	27.2		20.7	254	00.2		14.6
22	188	47.5	123	10.7		24.4	253	18.0		41.7	321	30.0		20.6	269	02.7		14.6
23	203	49.9	138	10.0		25.0	268	19.2		41.6	336	32.7		20.5	284	05.2		14.6
24	218	52.4	153	09.2	+22	25.6	283	20.4	-22	41.5	351	35.5	-16	20.5	299	07.8	-22	14.6
Dif	—		-7		+6		+12		+1		+28		+1		+25		0	

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna				
	SD: 15 ^h 9				Edad: 14 ^d 9	PHE {	SD: 15 ^h 1	PMG: 0 ^h 49 ^m		R°: 48 ^m										
	PMG: 11 ^h 57 ^m 1																			
	hG ☉		Dec		hG ☾		Dif		Dec		Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	o	'	o	'	o	'	o	'	o	'	o	'	h	m	h	m	h	m	m	
0	180	42.7	+14	59.6	348	02.6	−13	30.6	85	60 N	1 43	3 05	3 58	21 32	71	5 13	22			
1	195	42.8	+15	00.4	2	33.8 ¹²²		39.1	85	58	2 10	20	4 08	21 69		21	25			
2	210	42.9		01.1	17	04.9 ¹²¹		47.5	84	56	31	32	16	12 67		29	27			
3	225	43.0		01.9	31	36.0 ¹²¹	−13	55.8	83	54	2 48	43	24	21 04	65	36	28			
4	240	43.0		02.7	46	07.1 ¹²¹	−14	04.1	83	52	3 02	3 52	31	20 56	64	42	30			
5	255	43.1	+15	03.4	60	38.2 ¹²¹	−14	12.2	81	50	3 13	4 00	4 37	20 50	62	5 47	32			
6	270	43.2	+15	04.2	75	09.3 ¹²¹	−14	20.4	82	45	3 37	4 17	4 50	20 36	60	5 59	35			
7	285	43.3		04.9	89	40.3 ¹²⁰		28.4	80	40	3 55	31	5 00	24 58		6 09	37			
8	300	43.3		05.7	104	11.4 ¹²¹		36.3	79	35	4 10	42	09	14 57		18	39			
9	315	43.4		06.4	118	42.4 ¹²⁰		44.2	79	30	22	4 52	17	20 06	54	26	40			
10	330	43.5		07.2	133	13.4 ¹²⁰		52.0	78	20	41	5 08	31	19 51	52	39	43			
11	345	43.6	+15	07.9	147	44.4 ¹²⁰	−14	59.8	78	10 N	4 55	5 21	5 43	19 38	50	6 50	46			
12	0	43.6	+15	08.7	162	15.4 ¹²⁰	−15	07.4	76	0	5 07	5 32	5 54	19 26	48	7 01	48			
13	15	43.7		09.5	176	46.4 ¹²⁰		15.0	76	10 S	18	43	6 04	14 46		12	50			
14	30	43.8		10.2	191	17.4 ¹²⁰		22.5	75	20	27	5 53	16	19 01	44	23	53			
15	45	43.9		11.0	205	48.3 ¹¹⁹		29.9	74	30	36	6 04	29	18 47	41	36	56			
16	60	43.9		11.7	220	19.3 ¹²⁰		37.3	74	35	40	10	36	38 41		44	58			
17	75	44.0	+15	12.5	234	50.2 ¹¹⁹	−15	44.5	72	40	5 44	6 17	6 45	18 29	38	7 53	59			
18	90	44.1	+15	13.2	249	21.1 ¹¹⁹	−15	51.7	72	45	5 49	6 24	6 55	18 18	36	8 03	62			
19	105	44.2		14.0	263	52.0 ¹¹⁹	−15	58.8	71	50	54	32	7 06	18 04	34	16	64			
20	120	44.2		14.7	278	22.9 ¹¹⁹	−16	05.8	70	52	56	36	12	17 58	33	21	66			
21	135	44.3		15.5	292	53.8 ¹¹⁹		12.7	69	54	5 58	40	18	51 31		28	67			
22	150	44.4		16.2	307	24.7 ¹¹⁹		19.6	69	56	6 00	45	25	44 29		35	69			
23	165	44.5		17.0	321	55.5 ¹¹⁸		26.3	67	58	03	50	32	35 27		43	71			
24	180	44.5	+15	17.7	336	26.4 ¹¹⁹	−16	33.0	67	60 S	6 05	6 55	7 41	17 25	25	8 52	74			
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG 9 ^h 23 ^m 0				Mag: −3.9 PMG: 13 ^h 48 ^m				Mag: −0.4 PMG: 5 ^h 06 ^m				Mag: −2.5 PMG: 0 ^h 34 ^m				Mag: +0.3 PMG: 4 ^h 03 ^m			
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'
0	218	52.4	153	09.2	+22	25.6	283	20.4	−22	41.5	351	35.5	−16	20.5	299	07.8	−22	14.6		
1	233	54.9	168	08.5		26.2	298	21.6		41.4	6	38.3		20.4	314	10.3		14.6		
2	248	57.3	183	07.7		26.8	313	22.8		41.3	21	41.1		20.3	329	12.8		14.6		
3	263	59.8	198	07.0		27.4	328	24.0		41.2	36	43.8		20.2	344	15.3		14.6		
4	279	02.2	213	06.2		28.0	343	25.3		41.1	51	46.6		20.1	359	17.8		14.6		
5	294	04.7	228	05.5	+22	28.6	358	26.5	−22	41.0	66	49.4	−16	20.0	14	20.4	−22	14.7		
6	309	07.2	243	04.7	+22	29.2	13	27.7	−22	40.9	81	52.2	−16	20.0	29	22.9	−22	14.7		
7	324	09.6	258	04.0		29.8	28	28.9		40.8	96	55.0		19.9	44	25.4		14.7		
8	339	12.1	273	03.2		30.4	43	30.1		40.7	111	57.7		19.8	59	27.9		14.7		
9	354	14.6	288	02.5		31.0	58	31.3		40.6	127	00.5		19.7	74	30.5		14.7		
10	9	17.0	303	01.7		31.6	73	32.5		40.5	142	03.3		19.6	89	33.0		14.7		
11	24	19.5	318	01.0	+22	32.1	88	33.7	−22	40.4	157	06.1	−16	19.6	104	35.5	−22	14.7		
12	39	22.0	333	00.2	+22	32.7	103	34.9	−22	40.3	172	08.8	−16	19.5	119	38.0	−22	14.7		
13	54	24.4	347	59.5		33.3	118	36.1		40.2	187	11.6		19.4	134	40.5		14.7		
14	69	26.9	2	58.7		33.9	133	37.3		40.1	202	14.4		19.3	149	43.1		14.7		
15	84	29.4	17	58.0		34.5	148	38.5		40.0	217	17.2		19.2	164	45.6		14.7		
16	99	31.8	32	57.2		35.1	163	39.7		39.9	232	19.9		19.1	179	48.1		14.7		
17	114	34.3	47	56.4	+22	35.7	178	40.9	−22	39.8	247	22.7	−16	19.1	194	50.6	−22	14.7		
18	129	36.7	62	55.7	+22	36.3	193	42.1	−22	39.7	262	25.5	−16	19.0	209	53.2	−22	14.7		
19	144	39.2	77	54.9		36.8	208	43.4		39.5	277	28.3		18.9	224	55.7		14.7		
20	159	41.7	92	54.2		37.4	223	44.6		39.4	292	31.1		18.8	239	58.2		14.7		
21	174	44.1	107	53.4		38.0	238	45.8		39.3	307	33.8		18.7	255	00.7		14.7		
22	189	46.6	122	52.7		38.6	253	47.0		39.2	322	36.6		18.6	270	03.2		14.7		
23	204	49.1	137	51.9		39.2	268	48.2		39.1	337	39.4		18.6	285	05.8		14.7		
24	219	51.5	152	51.1	+22	39.7	283	49.4	−22	39.0	352	42.2	−16	18.5	300	08.3	−22	14.7		
Dif	—				−8 +6				+12 +1				+28 +1				+25 0			

UT	SOL				☉ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15°9 PMG: 11 ^h 57 ^m 0				Edad: 15 ^d 9 PHE { 4 ^h : 55/2 12 ^h : 55/1 SD: 15°0 20 ^h : 54/9 PMG: 1 ^h 37 ^m R°: 49 ^m													
	hG ☉	Dec			hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°		
h	o	'	o	'	o	'	o	'	o	h m	h m	h m	h m m	h m m	h m m	h m m		
0	180	44.5	+15	17.7	336	26.4	-16	33.0	60 N	20 00	20 54	22 21	22 43 63	5 35 28				
1	195	44.6		18.5	350	57.2 ¹¹⁸		39.6 ⁶⁶	58	19 50	39	21 51	30 62	46 31				
2	210	44.7		19.2	5	28.0 ¹¹⁸		46.1 ⁶⁵	56	41	26	29	19 60	5 56 32				
3	225	44.7		20.0	19	58.8 ¹¹⁸		52.6 ⁶⁵	54	33	15	21 11	09 59	6 04 34				
4	240	44.8		20.7	34	29.6 ¹¹⁸		-16 58.9 ⁶³	52	26	20 06	20 57	22 00 59	12 35				
5	255	44.9	+15	21.4	49	00.4 ¹¹⁸		-17 05.2 ⁶³	50	19 20	19 57	20 44	21 52 58	6 19 36				
6	270	45.0	+15	22.2	63	31.2 ¹¹⁸		-17 11.3 ⁶¹	45	19 07	19 39	20 20	21 36 56	6 34 39				
7	285	45.0		22.9	78	02.0 ¹¹⁸		17.4 ⁶¹	40	18 56	25	20 01	22 55	46 41				
8	300	45.1		23.7	92	32.7 ¹¹⁷		23.4 ⁶⁰	35	46	13	19 46	11 53	6 57 42				
9	315	45.2		24.4	107	03.5 ¹¹⁸		29.3 ⁵⁹	30	38	19 03	34	21 00 53	7 06 43				
10	330	45.2		25.2	121	34.2 ¹¹⁷		35.1 ⁵⁸	20	24	18 47	19 14	20 43 51	22 45				
11	345	45.3	+15	25.9	136	04.9 ¹¹⁷		-17 40.9 ⁵⁸	10 N	18 12	18 34	18 59	20 28 50	7 36 47				
12	0	45.4	+15	26.7	150	35.6 ¹¹⁷		-17 46.5 ⁵⁶	0	18 00	18 22	18 47	20 14 49	7 49 49				
13	15	45.4		27.4	165	06.3 ¹¹⁷		52.1 ⁵⁶	10 S	17 49	11	36	20 00 48	8 02 50				
14	30	45.5		28.1	179	37.0 ¹¹⁷		-17 57.5 ⁵⁴	20	37	18 00	26	19 45 46	16 52				
15	45	45.6		28.9	194	07.7 ¹¹⁷		-18 02.9 ⁵⁴	30	24	17 49	17	28 45	32 54				
16	60	45.7		29.6	208	38.4 ¹¹⁷		08.2 ⁵³	35	16	43	13	19 43	42 55				
17	75	45.7	+15	30.4	223	09.0 ¹¹⁶		-18 13.4 ⁵²	40	17 08	17 36	18 08	19 07 43	8 52 57				
18	90	45.8	+15	31.1	237	39.7 ¹¹⁷		-18 18.5 ⁵¹	45	16 58	17 28	18 03	18 54 41	9 05 58				
19	105	45.9		31.8	252	10.4 ¹¹⁷		23.5 ⁵⁰	50	45	20	17 58	38 39	20 60				
20	120	45.9		32.6	266	41.0 ¹¹⁶		28.4 ⁴⁹	52	40	16	56	31 38	27 62				
21	135	46.0		33.3	281	11.6 ¹¹⁶		33.3 ⁴⁹	54	34	11	54	22 37	35 63				
22	150	46.1		34.1	295	42.3 ¹¹⁷		38.0 ⁴⁷	56	27	07	51	13 36	44 64				
23	165	46.1		34.8	310	12.9 ¹¹⁶		42.6 ⁴⁶	58	19	17 02	48	18 02 35	9 54 66				
24	180	46.2	+15	35.5	324	43.5 ¹¹⁶		-18 47.2 ⁴⁶	60 S	16 10	16 56	17 46	17 50 33	10 06 68				
UT	ARIES			VENUS			MARTE			JÚPITER				SATURNO				
	PMG: 9 ^h 19 ^m 0			Mag: -3.9 PMG: 13 ^h 49 ^m			Mag: -0.4 PMG: 5 ^h 04 ^m			Mag: -2.5 PMG: 0 ^h 29 ^m				Mag: +0.3 PMG: 3 ^h 59 ^m				
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'		
0	219	51.5	152	51.1	+22	39.7	283	49.4	-22	39.0	352	42.2	-16	18.5	300	08.3	-22	14.7
1	234	54.0	167	50.4		40.3	298	50.6		38.9	7	44.9		18.4	315	10.8		14.7
2	249	56.5	182	49.6		40.9	313	51.8		38.8	22	47.7		18.3	330	13.3		14.7
3	264	58.9	197	48.9		41.5	328	53.1		38.7	37	50.5		18.2	345	15.9		14.7
4	280	01.4	212	48.1		42.1	343	54.3		38.6	52	53.3		18.1	0	18.4		14.7
5	295	03.9	227	47.3	+22	42.6	358	55.5	-22	38.5	67	56.1	-16	18.1	15	20.9	-22	14.7
6	310	06.3	242	46.6	+22	43.2	13	56.7	-22	38.4	82	58.8	-16	18.0	30	23.4	-22	14.7
7	325	08.8	257	45.8		43.8	28	57.9		38.3	98	01.6		17.9	45	26.0		14.7
8	340	11.2	272	45.1		44.3	43	59.1		38.2	113	04.4		17.8	60	28.5		14.7
9	355	13.7	287	44.3		44.9	59	00.3		38.1	128	07.2		17.7	75	31.0		14.8
10	10	16.2	302	43.5		45.5	74	01.6		38.0	143	09.9		17.6	90	33.5		14.8
11	25	18.6	317	42.8	+22	46.0	89	02.8	-22	37.9	158	12.7	-16	17.6	105	36.1	-22	14.8
12	40	21.1	332	42.0	+22	46.6	104	04.0	-22	37.8	173	15.5	-16	17.5	120	38.6	-22	14.8
13	55	23.6	347	41.3		47.2	119	05.2		37.7	188	18.3		17.4	135	41.1		14.8
14	70	26.0	2	40.5		47.7	134	06.4		37.6	203	21.1		17.3	150	43.7		14.8
15	85	28.5	17	39.7		48.3	149	07.7		37.5	218	23.8		17.2	165	46.2		14.8
16	100	31.0	32	39.0		48.9	164	08.9		37.4	233	26.6		17.1	180	48.7		14.8
17	115	33.4	47	38.2	+22	49.4	179	10.1	-22	37.3	248	29.4	-16	17.1	195	51.2	-22	14.8
18	130	35.9	62	37.4	+22	50.0	194	11.3	-22	37.2	263	32.2	-16	17.0	210	53.8	-22	14.8
19	145	38.3	77	36.7		50.5	209	12.5		37.1	278	35.0		16.9	225	56.3		14.8
20	160	40.8	92	35.9		51.1	224	13.8		37.0	293	37.7		16.8	240	58.8		14.8
21	175	43.3	107	35.1		51.6	239	15.0		36.9	308	40.5		16.7	256	01.3		14.8
22	190	45.7	122	34.4		52.2	254	16.2		36.8	323	43.3		16.6	271	03.9		14.8
23	205	48.2	137	33.6		52.8	269	17.4		36.7	338	46.1		16.6	286	06.4		14.8
24	220	50.7	152	32.8	+22	53.3	284	18.7	-22	36.6	353	48.9	-16	16.5	301	08.9	-22	14.8
Dif	—			-8 +6			+12 +1			+28 +1				+25 0				

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15 ^h 9 PMG: 11 ^h 56 ^m 9				Edad: 16 ^d 9 PHE { 4 ^h : 54 ^h 8 12 ^h : 54 ^h 7 20 ^h : 54 ^h 6 PMG: 2 ^h 26 ^m R°: 49 ^m															
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°				
h	o	'	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m			
0	180	46.2	+15	35.5	324	43.5	-18	47.2	60 N	1 32	2 59	3 53	23 46	54	6 03	37				
1	195	46.3		36.3	339	14.1 ¹¹⁶		51.7 ⁴⁵	58	2 02	3 14	4 03	32	53	17	38				
2	210	46.3		37.0	353	44.7 ¹¹⁶	-18	56.0 ⁴³	56	24	27	12	19	53	28	40				
3	225	46.4		37.8	8	15.3 ¹¹⁶	-19	00.3 ⁴²	54	42	38	20	23 08	52	38	41				
4	240	46.5		38.5	22	45.9 ¹¹⁶		04.5 ⁴¹	52	2 56	48	27	22 59	51	47	42				
5	255	46.5	+15	39.2	37	16.4 ¹¹⁵	-19	08.6 ⁴⁰	50	3 09	3 56	4 33	22 50	52	6 55	42				
6	270	46.6	+15	40.0	51	47.0 ¹¹⁶	-19	12.6 ³⁹	45	3 34	4 14	4 47	22 32	51	7 13	43				
7	285	46.7		40.7	66	17.6 ¹¹⁶		16.5 ³⁸	40	3 52	28	4 58	17	50	27	44				
8	300	46.7		41.4	80	48.2 ¹¹⁶		20.3 ³⁷	35	4 07	40	5 07	22 04	51	39	45				
9	315	46.8		42.2	95	18.7 ¹¹⁵		24.0 ³⁶	30	20	4 50	16	21 53	50	7 49	46				
10	330	46.9		42.9	109	49.3 ¹¹⁶		27.6 ³⁵	20	39	5 07	30	34	50	8 07	47				
11	345	46.9	+15	43.6	124	19.8 ¹¹⁵	-19	31.1 ³⁴	10 N	4 55	5 20	5 42	21 18	49	8 23	48				
12	0	47.0	+15	44.4	138	50.4 ¹¹⁶	-19	34.5 ³⁴	0	5 07	5 32	5 53	21 03	48	8 38	48				
13	15	47.0		45.1	153	20.9 ¹¹⁵		37.9 ³²	10 S	18	43	6 05	20 48	48	8 52	50				
14	30	47.1		45.8	167	51.5 ¹¹⁶		41.1 ³²	20	28	5 54	17	31	48	9 08	51				
15	45	47.2		46.6	182	22.0 ¹¹⁵		44.3 ³⁰	30	37	6 05	30	13	47	26	52				
16	60	47.2		47.3	196	52.6 ¹¹⁶		47.3 ³⁰	35	41	12	38	20 02	47	37	52				
17	75	47.3	+15	48.0	211	23.1 ¹¹⁵	-19	50.3 ²⁸	40	5 46	6 18	6 47	19 50	46	9 49	53				
18	90	47.4	+15	48.8	225	53.6 ¹¹⁵	-19	53.1 ²⁸	45	5 51	6 26	6 57	19 35	46	10 03	54				
19	105	47.4		49.5	240	24.2 ¹¹⁶		55.9 ²⁶	50	56	35	7 09	17	45	20	55				
20	120	47.5		50.2	254	54.7 ¹¹⁵	-19	58.5 ²⁵	52	5 59	39	15	19 09	44	29	55				
21	135	47.5		50.9	269	25.3 ¹¹⁶	-20	01.1 ²⁵	54	6 01	43	21	18 59	44	38	56				
22	150	47.6		51.7	283	55.8 ¹¹⁵		03.6 ²³	56	04	48	29	49	43	10 48	57				
23	165	47.7		52.4	298	26.3 ¹¹⁵		05.9 ²³	58	06	53	36	37	43	11 00	57				
24	180	47.7	+15	53.1	312	56.9 ¹¹⁶	-20	08.2 ²³	60 S	6 09	6 59	7 45	18 23	42	11 14	58				
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 9 ^h 15 ^m 1				Mag: -3.9 PMG: 13 ^h 51 ^m				Mag: -0.4 PMG: 5 ^h 02 ^m				Mag: -2.5 PMG: 0 ^h 25 ^m				Mag: +0.3 PMG: 3 ^h 55 ^m			
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'
0	220	50.7	152	32.8	+22	53.3	284	18.7	-22	36.6	353	48.9	-16	16.5	301	08.9	-22	14.8		
1	235	53.1	167	32.1		53.9	299	19.9		36.5	8	51.6		16.4	316	11.5		14.8		
2	250	55.6	182	31.3		54.4	314	21.1		36.4	23	54.4		16.3	331	14.0		14.8		
3	265	58.1	197	30.5		55.0	329	22.3		36.3	38	57.2		16.2	346	16.5		14.8		
4	281	00.5	212	29.8		55.5	344	23.6		36.2	54	00.0		16.1	1	19.0		14.8		
5	296	03.0	227	29.0	+22	56.0	359	24.8	-22	36.1	69	02.8	-16	16.1	16	21.6	-22	14.8		
6	311	05.5	242	28.2	+22	56.6	14	26.0	-22	36.0	84	05.5	-16	16.0	31	24.1	-22	14.8		
7	326	07.9	257	27.5		57.1	29	27.2		35.9	99	08.3		15.9	46	26.6		14.8		
8	341	10.4	272	26.7		57.7	44	28.5		35.8	114	11.1		15.8	61	29.2		14.8		
9	356	12.8	287	25.9		58.2	59	29.7		35.7	129	13.9		15.7	76	31.7		14.8		
10	11	15.3	302	25.2		58.8	74	30.9		35.6	144	16.7		15.6	91	34.2		14.9		
11	26	17.8	317	24.4	+22	59.3	89	32.2	-22	35.5	159	19.4	-16	15.6	106	36.7	-22	14.9		
12	41	20.2	332	23.6	+22	59.8	104	33.4	-22	35.4	174	22.2	-16	15.5	121	39.3	-22	14.9		
13	56	22.7	347	22.8	+23	00.4	119	34.6		35.3	189	25.0		15.4	136	41.8		14.9		
14	71	25.2	2	22.1		00.9	134	35.8		35.2	204	27.8		15.3	151	44.3		14.9		
15	86	27.6	17	21.3		01.5	149	37.1		35.1	219	30.6		15.2	166	46.9		14.9		
16	101	30.1	32	20.5		02.0	164	38.3		35.0	234	33.3		15.1	181	49.4		14.9		
17	116	32.6	47	19.8	+23	02.5	179	39.5	-22	34.9	249	36.1	-16	15.1	196	51.9	-22	14.9		
18	131	35.0	62	19.0	+23	03.1	194	40.8	-22	34.8	264	38.9	-16	15.0	211	54.5	-22	14.9		
19	146	37.5	77	18.2		03.6	209	42.0		34.7	279	41.7		14.9	226	57.0		14.9		
20	161	40.0	92	17.4		04.1	224	43.2		34.6	294	44.5		14.8	241	59.5		14.9		
21	176	42.4	107	16.7		04.6	239	44.5		34.5	309	47.2		14.7	257	02.1		14.9		
22	191	44.9	122	15.9		05.2	254	45.7		34.4	324	50.0		14.6	272	04.6		14.9		
23	206	47.3	137	15.1		05.7	269	46.9		34.3	339	52.8		14.5	287	07.1		14.9		
24	221	49.8	152	14.3	+23	06.2	284	48.2	-22	34.2	354	55.6	-16	14.5	302	09.7	-22	14.9		
Dif	—				-8				+12				+28				+1			
					+5				+1								0			

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 15'9 PMG: 11 ^h 56 ^m 8			Edad: 17 ^d 9 PHE { SD: 14'8 PMG: 3 ^h 15 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°	
h	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m	
0	180	47.7	+15	53.1	312	56.9	-20 08.2	22	60 N	20 05	21 01	22 33	*** **	6 40	47	
1	195	47.8		53.8	327	27.4 ¹¹⁵	10.4	21	58	19 54	20 44	21 59	*** **	6 55	47	
2	210	47.8		54.6	341	58.0 ¹¹⁶	12.5	19	56	45	31	36	*** **	7 08	47	
3	225	47.9		55.3	356	28.5 ¹¹⁵	14.4	19	54	37	19	17	*** **	19	47	
4	240	48.0		56.0	10	59.1 ¹¹⁶	16.3	19	52	30	09	21 02	23 50	45	29 47	
5	255	48.0	+15	56.7	25	29.6 ¹¹⁵	-20 18.1	18	50	19 23	20 00	20 49	23 42	45	7 37 48	
6	270	48.1	+15	57.5	40	00.2 ¹¹⁶	-20 19.8	17	45	19 09	19 42	20 23	23 23	45	7 56 48	
7	285	48.1		58.2	54	30.7 ¹¹⁵	21.4	16	40	18 58	27	20 03	23 07	47	8 11 48	
8	300	48.2		58.9	69	01.3 ¹¹⁶	22.9	15	35	48	15	19 48	22 55	46	24 48	
9	315	48.3	+15	59.6	83	31.9 ¹¹⁶	24.3	14	30	39	19 05	35	43	47	35 48	
10	330	48.3	+16	00.4	98	02.4 ¹¹⁵	25.6	13	20	25	18 48	15	24	47	8 54 49	
11	345	48.4	+16	01.1	112	33.0 ¹¹⁶	-20 26.8	12	10 N	18 12	18 34	19 00	22 07	48	9 11 48	
12	0	48.4	+16	01.8	127	03.6 ¹¹⁶	-20 27.9	11	0	18 00	18 22	18 47	21 51	49	9 26 49	
13	15	48.5		02.5	141	34.2 ¹¹⁶	29.0	11	10 S	17 49	18 10	36	36	48	42 48	
14	30	48.6		03.3	156	04.8 ¹¹⁶	29.9	9	20	36	17 59	26	19	49	9 59 48	
15	45	48.6		04.0	170	35.4 ¹¹⁶	30.7	8	30	22	47	16	21 00	49	10 18 48	
16	60	48.7		04.7	185	06.0 ¹¹⁶	31.4	7	35	14	41	11	20 49	49	29 48	
17	75	48.7	+16	05.4	199	36.7 ¹¹⁷	-20 32.1	7	40	17 05	17 34	18 06	20 36	50	10 42 48	
18	90	48.8	+16	06.1	214	07.3 ¹¹⁶	-20 32.6	5	45	16 55	17 26	18 01	20 21	50	10 57 48	
19	105	48.8		06.8	228	37.9 ¹¹⁶	33.0	4	50	42	17	17 55	20 02	51	11 15 48	
20	120	48.9		07.6	243	08.6 ¹¹⁷	33.4	4	52	36	12	53	19 53	51	24 48	
21	135	48.9		08.3	257	39.2 ¹¹⁶	33.6	2	54	30	08	50	43	51	34 48	
22	150	49.0		09.0	272	09.9 ¹¹⁷	33.7	1	56	22	17 03	47	32	52	45 48	
23	165	49.1		09.7	286	40.6 ¹¹⁷	33.8	1	58	14	16 57	44	20	51	11 57 48	
24	180	49.1	+16	10.4	301	11.3 ¹¹⁷	-20 33.7	1	60 S	16 05	16 51	17 41	19 05	52	12 12 48	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 9 ^h 11 ^m 2		Mag: -3.9 PMG: 13 ^h 52 ^m			Mag: -0.5 PMG: 5 ^h 00 ^m			Mag: -2.5 PMG: 0 ^h 20 ^m			Mag: +0.3 PMG: 3 ^h 51 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'
0	221	49.8	152	14.3	+23 06.2	284	48.2	-22 34.2	354	55.6	-16 14.5	302	09.7	-22 14.9		
1	236	52.3	167	13.6	06.8	299	49.4	34.0	9	58.4	14.4	317	12.2	14.9		
2	251	54.7	182	12.8	07.3	314	50.6	33.9	25	01.1	14.3	332	14.7	14.9		
3	266	57.2	197	12.0	07.8	329	51.9	33.8	40	03.9	14.2	347	17.3	14.9		
4	281	59.7	212	11.2	08.3	344	53.1	33.7	55	06.7	14.1	2	19.8	14.9		
5	297	02.1	227	10.5	+23 08.8	359	54.4	-22 33.6	70	09.5	-16 14.0	17	22.3	-22 14.9		
6	312	04.6	242	09.7	+23 09.4	14	55.6	-22 33.5	85	12.3	-16 14.0	32	24.9	-22 14.9		
7	327	07.1	257	08.9	09.9	29	56.8	33.4	100	15.0	13.9	47	27.4	14.9		
8	342	09.5	272	08.1	10.4	44	58.1	33.3	115	17.8	13.8	62	29.9	14.9		
9	357	12.0	287	07.3	10.9	59	59.3	33.2	130	20.6	13.7	77	32.5	14.9		
10	12	14.5	302	06.6	11.4	75	00.6	33.1	145	23.4	13.6	92	35.0	15.0		
11	27	16.9	317	05.8	+23 11.9	90	01.8	-22 33.0	160	26.2	-16 13.5	107	37.5	-22 15.0		
12	42	19.4	332	05.0	+23 12.4	105	03.0	-22 32.9	175	29.0	-16 13.5	122	40.1	-22 15.0		
13	57	21.8	347	04.2	13.0	120	04.3	32.8	190	31.7	13.4	137	42.6	15.0		
14	72	24.3	2	03.5	13.5	135	05.5	32.7	205	34.5	13.3	152	45.1	15.0		
15	87	26.8	17	02.7	14.0	150	06.8	32.6	220	37.3	13.2	167	47.7	15.0		
16	102	29.2	32	01.9	14.5	165	08.0	32.5	235	40.1	13.1	182	50.2	15.0		
17	117	31.7	47	01.1	+23 15.0	180	09.2	-22 32.4	250	42.9	-16 13.0	197	52.7	-22 15.0		
18	132	34.2	62	00.3	+23 15.5	195	10.5	-22 32.3	265	45.6	-16 13.0	212	55.3	-22 15.0		
19	147	36.6	76	59.6	16.0	210	11.7	32.2	280	48.4	12.9	227	57.8	15.0		
20	162	39.1	91	58.8	16.5	225	13.0	32.1	295	51.2	12.8	243	00.3	15.0		
21	177	41.6	106	58.0	17.0	240	14.2	32.0	310	54.0	12.7	258	02.9	15.0		
22	192	44.0	121	57.2	17.5	255	15.5	31.9	325	56.8	12.6	273	05.4	15.0		
23	207	46.5	136	56.4	18.0	270	16.7	31.8	340	59.5	12.5	288	07.9	15.0		
24	222	48.9	151	55.6	+23 18.5	285	18.0	-22 31.7	356	02.3	-16 12.5	303	10.5	-22 15.0		
Dif	—		-8 +5			+12 +1			+28 +1			+25 0				

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'9 PMG: 11 ^h 56 ^m 7				Edad: 18 ^d 9 PHE { SD: 14'8 PMG: 4 ^h 03 ^m R°: 48 ^m												
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	o	'	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m
0	180	49.1	+16	10.4	301	11.3	-20	33.7	1	60 N	1 19	2 52	3 48	0 40	42	7 27	57
1	195	49.2		11.1	315	42.0 ¹¹⁷		33.6	1	58	1 53	3 08	3 58	25	43	42	56
2	210	49.2		11.9	330	12.7 ¹¹⁷		33.4	2	56	2 17	22	4 08	12	43	7 55	55
3	225	49.3		12.6	344	43.4 ¹¹⁷		33.0	4	54	36	33	16	0 00	45	8 06	55
4	240	49.3		13.3	359	14.1 ¹¹⁷		32.6	4	52	2 51	43	23	** ** *	**	16	54
5	255	49.4	+16	14.0	13	44.9 ¹¹⁸	-20	32.1	5	50	3 04	3 52	4 30	** ** *	**	8 25	53
6	270	49.4	+16	14.7	28	15.6 ¹¹⁷	-20	31.4	7	45	3 30	4 11	4 44	** ** *	**	8 44	52
7	285	49.5		15.4	42	46.4 ¹¹⁸		30.7	7	40	3 50	26	4 55	23 54	41	8 59	52
8	300	49.5		16.1	57	17.2 ¹¹⁸		29.9	8	35	4 05	38	5 05	41	43	9 12	51
9	315	49.6		16.9	71	48.0 ¹¹⁸		29.0	9	30	18	4 48	14	30	44	23	51
10	330	49.6		17.6	86	18.8 ¹¹⁸		28.0	10	20	38	5 05	29	23 11	45	43	49
11	345	49.7	+16	18.3	100	49.6 ¹¹⁸	-20	26.9	11	10 N	4 54	5 19	5 41	22 55	46	9 59	49
12	0	49.7	+16	19.0	115	20.5 ¹¹⁹	-20	25.7	12	0	5 07	5 32	5 53	22 40	47	10 15	48
13	15	49.8		19.7	129	51.3 ¹¹⁸		24.4	13	10 S	18	43	6 05	24	49	30	48
14	30	49.9		20.4	144	22.2 ¹¹⁹		23.0	14	20	28	5 54	17	22 08	50	10 47	46
15	45	49.9		21.1	158	53.1 ¹¹⁹		21.5	15	30	38	6 06	31	21 49	51	11 06	45
16	60	50.0		21.8	173	24.0 ¹¹⁹		20.0	15	35	43	13	39	38	52	17	45
17	75	50.0	+16	22.5	187	54.9 ¹¹⁹	-20	18.3	17	40	5 48	6 20	6 49	21 26	53	11 30	44
18	90	50.1	+16	23.2	202	25.9 ¹²⁰	-20	16.5	18	45	5 53	6 28	6 59	21 11	54	11 45	43
19	105	50.1		24.0	216	56.8 ¹¹⁹		14.7	18	50	5 59	38	7 12	20 53	55	12 03	42
20	120	50.2		24.7	231	27.8 ¹²⁰		12.7	20	52	6 02	42	18	44	56	12	41
21	135	50.2		25.4	245	58.8 ¹²⁰		10.7	20	54	04	47	25	34	58	22	40
22	150	50.3		26.1	260	29.8 ¹²⁰		08.5	22	56	07	52	32	24	58	33	39
23	165	50.3		26.8	275	00.8 ¹²⁰		06.3	22	58	10	6 57	41	20 11	59	12 45	39
24	180	50.4	+16	27.5	289	31.8 ¹²⁰	-20	04.0	23	60 S	6 13	7 03	7 50	19 57	60	13 00	37

UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG 9 ^h 07 ^m 2			Mag: -3.9 PMG: 13 ^h 53 ^m			Mag: -0.5 PMG: 4 ^h 58 ^m			Mag: -2.5 PMG: 0 ^h 16 ^m			Mag: +0.3 PMG: 3 ^h 47 ^m					
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec			
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'		
0	222	48.9	151	55.6	+23	18.5	285	18.0	-22	31.7	356	02.3	-16	12.5	303	10.5	-22	15.0
1	237	51.4	166	54.9		19.0	300	19.2		31.6	11	05.1		12.4	318	13.0		15.0
2	252	53.9	181	54.1		19.5	315	20.5		31.5	26	07.9		12.3	333	15.6		15.0
3	267	56.3	196	53.3		20.0	330	21.7		31.4	41	10.7		12.2	348	18.1		15.0
4	282	58.8	211	52.5		20.5	345	23.0		31.3	56	13.5		12.1	3	20.6		15.0
5	298	01.3	226	51.7	+23	21.0	0	24.2	-22	31.2	71	16.2	-16	12.0	18	23.2	-22	15.0
6	313	03.7	241	50.9	+23	21.5	15	25.5	-22	31.1	86	19.0	-16	11.9	33	25.7	-22	15.0
7	328	06.2	256	50.2		22.0	30	26.7		31.0	101	21.8		11.9	48	28.2		15.0
8	343	08.7	271	49.4		22.5	45	28.0		30.9	116	24.6		11.8	63	30.8		15.1
9	358	11.1	286	48.6		22.9	60	29.2		30.8	131	27.4		11.7	78	33.3		15.1
10	13	13.6	301	47.8		23.4	75	30.5		30.7	146	30.1		11.6	93	35.9		15.1
11	28	16.1	316	47.0	+23	23.9	90	31.7	-22	30.6	161	32.9	-16	11.5	108	38.4	-22	15.1
12	43	18.5	331	46.2	+23	24.4	105	33.0	-22	30.5	176	35.7	-16	11.4	123	40.9	-22	15.1
13	58	21.0	346	45.4		24.9	120	34.2		30.4	191	38.5		11.4	138	43.5		15.1
14	73	23.4	1	44.7		25.4	135	35.5		30.3	206	41.3		11.3	153	46.0		15.1
15	88	25.9	16	43.9		25.9	150	36.7		30.2	221	44.1		11.2	168	48.5		15.1
16	103	28.4	31	43.1		26.3	165	38.0		30.1	236	46.8		11.1	183	51.1		15.1
17	118	30.8	46	42.3	+23	26.8	180	39.3	-22	30.0	251	49.6	-16	11.0	198	53.6	-22	15.1
18	133	33.3	61	41.5	+23	27.3	195	40.5	-22	29.9	266	52.4	-16	10.9	213	56.2	-22	15.1
19	148	35.8	76	40.7		27.8	210	41.8		29.8	281	55.2		10.9	228	58.7		15.1
20	163	38.2	91	39.9		28.2	225	43.0		29.7	296	58.0		10.8	244	01.2		15.1
21	178	40.7	106	39.1		28.7	240	44.3		29.6	312	00.8		10.7	259	03.8		15.1
22	193	43.2	121	38.3		29.2	255	45.5		29.5	327	03.5		10.6	274	06.3		15.1
23	208	45.6	136	37.6		29.7	270	46.8		29.4	342	06.3		10.5	289	08.9		15.1
24	223	48.1	151	36.8	+23	30.1	285	48.1	-22	29.3	357	09.1	-16	10.4	304	11.4	-22	15.1
Dif	—		-8		+5		+13		+1		+28		+1		+25		0	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 15°9 PMG: 11 ^h 56 ^m 6			Edad: 19 ^d 9 PHE { 4 ^h : 54'2 12 ^h : 54'2 20 ^h : 54'3 SD: 14'8 PMG: 4 ^h 51 ^m R°: 48 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	o	'	o	'	o	'	o	'	h	m	h	m	h	m	h	m		
0	180	50.4	+16	27.5	289	31.8	-20	04.0	60 N	20 10	21 07	22 47	1 22 32	8 24 65				
1	195	50.4		28.2	304	02.9 ¹²¹	-20	01.6 ²⁴	58	19 59	20 50	22 08	1 08 34	38 63				
2	210	50.5		28.9	318	33.9 ¹²⁰	-19	59.1 ²⁵	56	49	36	21 42	0 55 36	8 50 61				
3	225	50.5		29.6	333	05.0 ¹²¹		56.5 ²⁶	54	41	24	23	45 36	9 01 60				
4	240	50.5		30.3	347	36.1 ¹²¹		53.8 ²⁷	52	33	13	21 06	35 38	10 59				
5	255	50.6	+16	31.0	2	07.3 ¹²²	-19	51.0 ²⁸	50	19 26	20 04	20 53	0 27 38	9 18 58				
6	270	50.6	+16	31.7	16	38.4 ¹²¹	-19	48.2 ²⁸	45	19 12	19 45	20 26	0 08 41	9 36 56				
7	285	50.7		32.4	31	09.6 ¹²²		45.2 ³⁰	40	19 00	29	20 06	** ** *	9 51 54				
8	300	50.7		33.1	45	40.8 ¹²²		42.2 ³⁰	35	18 49	17	19 50	** ** *	10 03 53				
9	315	50.8		33.8	60	12.0 ¹²²		39.0 ³²	30	41	19 06	37	** ** *	14 52				
10	330	50.8		34.5	74	43.2 ¹²²		35.8 ³²	20	25	18 49	16	23 56 43	32 50				
11	345	50.9	+16	35.2	89	14.5 ¹²³	-19	32.5 ³³	10 N	18 12	18 34	19 00	23 41 45	10 48 48				
12	0	50.9	+16	35.9	103	45.7 ¹²²	-19	29.1 ³⁴	0	18 00	18 22	18 47	23 27 47	11 03 47				
13	15	51.0		36.6	118	17.0 ¹²³		25.6 ³⁵	10 S	17 48	18 10	35	23 13 48	18 45				
14	30	51.0		37.3	132	48.3 ¹²³		22.0 ³⁶	20	35	17 58	25	22 58 50	33 44				
15	45	51.1		38.0	147	19.6 ¹²³		18.3 ³⁷	30	21	46	14	40 53	11 51 42				
16	60	51.1		38.7	161	51.0 ¹²⁴		14.5 ³⁸	35	13	39	09	30 54	12 02 41				
17	75	51.1	+16	39.4	176	22.3 ¹²³	-19	10.7 ³⁸	40	17 03	17 32	18 04	22 19 55	12 14 39				
18	90	51.2	+16	40.1	190	53.7 ¹²⁴	-19	06.7 ⁴⁰	45	16 52	17 23	17 58	22 05 57	12 28 38				
19	105	51.2		40.8	205	25.1 ¹²⁴	-19	02.7 ⁴⁰	50	39	14	52	21 48 60	45 36				
20	120	51.3		41.5	219	56.6 ¹²⁵	-18	58.6 ⁴¹	52	33	09	50	40 61	12 53 35				
21	135	51.3		42.2	234	28.0 ¹²⁴		54.4 ⁴²	54	26	17 04	47	32 62	13 02 34				
22	150	51.4		42.9	248	59.5 ¹²⁵		50.1 ⁴³	56	18	16 59	44	22 64	12 33				
23	165	51.4		43.6	263	31.0 ¹²⁵		45.7 ⁴⁴	58	10	53	41	21 10 66	24 31				
24	180	51.5	+16	44.3	278	02.5 ¹²⁵	-18	41.3 ⁴⁴	60 S	16 00	16 47	17 37	20 57 68	13 37 29				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 9 ^h 03 ^m 3		Mag: -3.9 PMG: 13 ^h 54 ^m				Mag: -0.5 PMG: 4 ^h 56 ^m				Mag: -2.5 PMG: 0 ^h 11 ^m				Mag: +0.3 PMG: 3 ^h 43 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'
0	223	48.1	151	36.8	+23	30.1	285	48.1	-22	29.3	357	09.1	-16	10.4	304	11.4	-22	15.1
1	238	50.6	166	36.0		30.6	300	49.3		29.2	12	11.9		10.3	319	13.9		15.1
2	253	53.0	181	35.2		31.1	315	50.6		29.1	27	14.7		10.3	334	16.5		15.1
3	268	55.5	196	34.4		31.5	330	51.8		29.0	42	17.5		10.2	349	19.0		15.1
4	283	57.9	211	33.6		32.0	345	53.1		28.9	57	20.2		10.1	4	21.6		15.1
5	299	00.4	226	32.8	+23	32.5	0	54.4	-22	28.8	72	23.0	-16	10.0	19	24.1	-22	15.2
6	314	02.9	241	32.0	+23	32.9	15	55.6	-22	28.7	87	25.8	-16	09.9	34	26.7	-22	15.2
7	329	05.3	256	31.2		33.4	30	56.9		28.5	102	28.6		09.8	49	29.2		15.2
8	344	07.8	271	30.4		33.9	45	58.1		28.4	117	31.4		09.8	64	31.7		15.2
9	359	10.3	286	29.6		34.3	60	59.4		28.3	132	34.1		09.7	79	34.3		15.2
10	14	12.7	301	28.8		34.8	76	00.7		28.2	147	36.9		09.6	94	36.8		15.2
11	29	15.2	316	28.1	+23	35.3	91	01.9	-22	28.1	162	39.7	-16	09.5	109	39.4	-22	15.2
12	44	17.7	331	27.3	+23	35.7	106	03.2	-22	28.0	177	42.5	-16	09.4	124	41.9	-22	15.2
13	59	20.1	346	26.5		36.2	121	04.5		27.9	192	45.3		09.3	139	44.4		15.2
14	74	22.6	1	25.7		36.6	136	05.7		27.8	207	48.1		09.2	154	47.0		15.2
15	89	25.1	16	24.9		37.1	151	07.0		27.7	222	50.8		09.2	169	49.5		15.2
16	104	27.5	31	24.1		37.5	166	08.3		27.6	237	53.6		09.1	184	52.1		15.2
17	119	30.0	46	23.3	+23	38.0	181	09.5	-22	27.5	252	56.4	-16	09.0	199	54.6	-22	15.2
18	134	32.4	61	22.5	+23	38.4	196	10.8	-22	27.4	267	59.2	-16	08.9	214	57.2	-22	15.2
19	149	34.9	76	21.7		38.9	211	12.1		27.3	283	02.0		08.8	229	59.7		15.2
20	164	37.4	91	20.9		39.3	226	13.4		27.2	298	04.8		08.7	245	02.3		15.2
21	179	39.8	106	20.1		39.8	241	14.6		27.1	313	07.5		08.7	260	04.8		15.2
22	194	42.3	121	19.3		40.2	256	15.9		27.0	328	10.3		08.6	275	07.3		15.2
23	209	44.8	136	18.5		40.7	271	17.2		26.9	343	13.1		08.5	290	09.9		15.2
24	224	47.2	151	17.7	+23	41.1	286	18.4	-22	26.8	358	15.9	-16	08.4	305	12.4	-22	15.2
Dif	—		-8		+5		+13		+1		+28		+1		+25			

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15°9 PMG: 11 ^h 56 ^m 5				Edad: 20 ^d 9 PHE { 4 ^h : 54/3 12 ^h : 54/4 20 ^h : 54/5 PMG: 5 ^h 39 ^m R°: 46 ^m											
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°
h	o	'	o	'	o	'	o	'	o	h	m	h	m	h	m	m
0	180	51.5	+16	44.3	278	02.5	-18	41.3	60 N	1 05	2 46	3 42	1 54	25	9 29	70
1	195	51.5		44.9	292	34.0 ¹²⁵		36.7 ⁴⁶	58	1 44	3 03	3 54	42	27	41	68
2	210	51.5		45.6	307	05.6 ¹²⁶		32.1 ⁴⁶	56	2 10	17	4 03	31	29	9 51	66
3	225	51.6		46.3	321	37.1 ¹²⁵		27.4 ⁴⁷	54	30	29	12	21	31	10 01	64
4	240	51.6		47.0	336	08.7 ¹²⁶		22.6 ⁴⁸	52	2 46	39	20	13	32	09	63
5	255	51.7	+16	47.7	350	40.3 ¹²⁶	-18	17.7 ⁴⁹	50	3 00	3 49	4 26	1 05	33	10 16	62
6	270	51.7	+16	48.4	5	12.0 ¹²⁷	-18	12.8 ⁴⁹	45	3 27	4 08	4 41	0 49	35	10 32	59
7	285	51.7		49.1	19	43.6 ¹²⁶		07.7 ⁵¹	40	3 47	23	4 53	35	38	45	57
8	300	51.8		49.8	34	15.3 ¹²⁷	-18	02.6 ⁵¹	35	4 03	36	5 03	24	39	10 56	55
9	315	51.8		50.5	48	47.0 ¹²⁷	-17	57.4 ⁵²	30	16	4 47	12	0 14	40	11 06	53
10	330	51.9		51.2	63	18.7 ¹²⁷		52.1 ⁵³	20	37	5 04	28	***	***	22	51
11	345	51.9	+16	51.8	77	50.4 ¹²⁷	-17	46.7 ⁵⁴	10 N	4 53	5 19	5 41	***	***	11 36	49
12	0	51.9	+16	52.5	92	22.2 ¹²⁸	-17	41.2 ⁵⁵	0	5 06	5 31	5 53	***	***	11 50	46
13	15	52.0		53.2	106	54.0 ¹²⁸		35.7 ⁵⁵	10 S	18	43	6 05	***	***	12 03	44
14	30	52.0		53.9	121	25.8 ¹²⁸		30.1 ⁵⁶	20	29	5 55	18	23 48	51	17	42
15	45	52.1		54.6	135	57.6 ¹²⁸		24.4 ⁵⁷	30	39	6 08	33	33	54	33	40
16	60	52.1		55.3	150	29.4 ¹²⁸		18.6 ⁵⁸	35	44	15	41	24	56	43	37
17	75	52.1	+16	56.0	165	01.3 ¹²⁹	-17	12.7 ⁵⁹	40	5 50	6 22	6 51	23 14	58	12 53	36
18	90	52.2	+16	56.7	179	33.2 ¹²⁹	-17	06.8 ⁵⁹	45	5 55	6 31	7 02	23 02	60	13 06	34
19	105	52.2		57.3	194	05.1 ¹²⁹	-17	00.7 ⁶¹	50	6 02	40	15	22 48	63	21	31
20	120	52.3		58.0	208	37.0 ¹²⁹	-16	54.6 ⁶¹	52	04	45	22	41	65	28	30
21	135	52.3		58.7	223	08.9 ¹²⁹		48.5 ⁶¹	54	07	50	28	34	66	36	28
22	150	52.3	+16	59.4	237	40.9 ¹³⁰		42.2 ⁶³	56	10	6 55	36	26	67	45	26
23	165	52.4	+17	00.1	252	12.9 ¹³⁰		35.9 ⁶³	58	13	7 01	45	16	70	13 55	24
24	180	52.4	+17	00.7	266	44.8 ¹²⁹	-16	29.5 ⁶⁴	60 S	6 17	7 08	7 55	22 05	73	14 06	22

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 8 ^h 59 ^m 4		Mag: -3.9 PMG: 13 ^h 56 ^m		Mag: -0.5 PMG: 4 ^h 54 ^m		Mag: -2.5 PMG: 0 ^h 07 ^m		Mag: +0.3 PMG: 3 ^h 39 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	o	'	o	'	o	'	o	'	o	'
0	224	47.2	151	17.7	+23	41.1	286	18.4	-22	26.8
1	239	49.7	166	16.9		41.6	301	19.7		26.7
2	254	52.2	181	16.1		42.0	316	21.0		26.6
3	269	54.6	196	15.3		42.4	331	22.3		26.5
4	284	57.1	211	14.5		42.9	346	23.5		26.4
5	299	59.5	226	13.7	+23	43.3	1	24.8	-22	26.3
6	315	02.0	241	12.9	+23	43.8	16	26.1	-22	26.2
7	330	04.5	256	12.1		44.2	31	27.4		26.1
8	345	06.9	271	11.3		44.6	46	28.6		26.0
9	0	09.4	286	10.5		45.1	61	29.9		25.9
10	15	11.9	301	09.7		45.5	76	31.2		25.8
11	30	14.3	316	08.9	+23	45.9	91	32.5	-22	25.7
12	45	16.8	331	08.1	+23	46.4	106	33.7	-22	25.6
13	60	19.3	346	07.3		46.8	121	35.0		25.5
14	75	21.7	1	06.5		47.2	136	36.3		25.4
15	90	24.2	16	05.7		47.6	151	37.6		25.3
16	105	26.7	31	04.9		48.1	166	38.9		25.2
17	120	29.1	46	04.1	+23	48.5	181	40.1	-22	25.1
18	135	31.6	61	03.3	+23	48.9	196	41.4	-22	25.0
19	150	34.0	76	02.5		49.3	211	42.7		24.9
20	165	36.5	91	01.7		49.8	226	44.0		24.8
21	180	39.0	106	00.9		50.2	241	45.3		24.7
22	195	41.4	121	00.1		50.6	256	46.6		24.6
23	210	43.9	135	59.3		51.0	271	47.8		24.5
24	225	46.4	150	58.5	+23	51.4	286	49.1	-22	24.4
Dif	—		-8		+4		+13		+1	
							+28		+1	
									+25	
									0	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15°8 PMG: 11 ^h 56 ^m 5			Edad: 21 ^d 9 PHE { SD: 14°9 PMG: 6 ^h 25 ^m R°: 46 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	o	'	o	'	o	'	o	h m	h m	h m	h m m	h m m	h m m		
0	180	52.4	+17 00.7	266	44.8	-16 29.5	65	60 N	20 15	21 13	23 04	2 19 20	10 39 74		
1	195	52.4	01.4	281	16.9 ¹³¹	23.0	65	58	20 03	20 55	22 17	09 22	49 71		
2	210	52.5	02.1	295	48.9 ¹³⁰	16.4	66	56	19 53	40	21 49	2 00 24	10 57 70		
3	225	52.5	02.8	310	20.9 ¹³⁰	09.8	66	54	44	28	28	1 52 26	11 05 67		
4	240	52.5	03.5	324	53.0 ¹³¹	-16 03.1	67	52	36	17	21 11	45 27	12 65		
5	255	52.6	+17 04.1	339	25.1 ¹³¹	-15 56.3	68	50	19 29	20 07	20 57	1 38 29	11 18 64		
6	270	52.6	+17 04.8	353	57.2 ¹³¹	-15 49.4	69	45	19 14	19 47	20 29	1 24 32	11 31 61		
7	285	52.7	05.5	8	29.3 ¹³¹	42.5	69	40	19 02	32	20 08	13 34	42 58		
8	300	52.7	06.2	23	01.4 ¹³¹	35.4	71	35	18 51	19	19 52	1 03 36	51 56		
9	315	52.7	06.9	37	33.6 ¹³²	28.4	70	30	42	19 08	38	0 54 38	11 59 54		
10	330	52.8	07.5	52	05.7 ¹³¹	21.2	72	20	26	18 49	17	39 41	12 13 51		
11	345	52.8	+17 08.2	66	37.9 ¹³²	-15 14.0	72	10 N	18 13	18 35	19 00	0 26 44	12 25 48		
12	0	52.8	+17 08.9	81	10.1 ¹³²	-15 06.7	73	0	18 00	18 22	18 47	0 14 46	12 36 46		
13	15	52.9	09.6	95	42.3 ¹³²	-14 59.3	74	10 S	17 47	18 09	35	0 01 49	47 43		
14	30	52.9	10.2	110	14.6 ¹³³	51.8	75	20	34	17 57	24	** ** *	12 59 40		
15	45	52.9	10.9	124	46.8 ¹³²	44.3	75	30	19	44	13	** ** *	13 13 37		
16	60	53.0	11.6	139	19.1 ¹³³	36.7	76	35	11	37	08	** ** *	20 36		
17	75	53.0	+17 12.3	153	51.3 ¹³²	-14 29.1	76	40	17 01	17 30	18 02	** ** *	13 29 33		
18	90	53.0	+17 12.9	168	23.6 ¹³³	-14 21.3	78	45	16 50	17 21	17 56	** ** *	13 40 30		
19	105	53.1	13.6	182	55.9 ¹³³	13.5	78	50	36	11	49	23 51 65	52 27		
20	120	53.1	14.3	197	28.2 ¹³³	-14 05.7	78	52	29	06	47	46 67	13 58 26		
21	135	53.1	15.0	212	00.6 ¹³⁴	-13 57.7	80	54	22	17 01	44	40 68	14 04 24		
22	150	53.1	15.6	226	32.9 ¹³³	49.7	80	56	14	16 55	40	33 71	11 22		
23	165	53.2	16.3	241	05.2 ¹³³	41.7	80	58	16 05	49	37	26 73	19 20		
24	180	53.2	+17 17.0	255	37.6 ¹³⁴	-13 33.5	82	60 S	15 55	16 42	17 33	23 18 75	14 28 18		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 8 ^h 55 ^m 4			Mag: -3.9 PMG: 13 ^h 57 ^m			Mag: -0.6 PMG: 4 ^h 52 ^m			Mag: -2.5 PMG: 0 ^h 02 ^m			Mag: +0.3 PMG: 3 ^h 34 ^m		
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	o	'	o	'	o	'	o	'	o	o	'	o	o	'	o
0	225	46.4	150 58.5	+23 51.4	286 49.1	-22 24.4	359 22.7	-16 06.4	306 13.5	-22 15.4					
1	240	48.8	165 57.7	51.8	301 50.4	24.3	14 25.5	06.3	321 16.1	15.4					
2	255	51.3	180 56.9	52.3	316 51.7	24.2	29 28.3	06.2	336 18.6	15.4					
3	270	53.8	195 56.1	52.7	331 53.0	24.1	44 31.1	06.1	351 21.2	15.4					
4	285	56.2	210 55.3	53.1	346 54.3	24.0	59 33.8	06.0	6 23.7	15.4					
5	300	58.7	225 54.5	+23 53.5	1 55.6	-22 23.9	74 36.6	-16 06.0	21 26.3	-22 15.4					
6	316	01.2	240 53.7	+23 53.9	16 56.8	-22 23.8	89 39.4	-16 05.9	36 28.8	-22 15.4					
7	331	03.6	255 52.9	54.3	31 58.1	23.7	104 42.2	05.8	51 31.4	15.4					
8	346	06.1	270 52.1	54.7	46 59.4	23.6	119 45.0	05.7	66 33.9	15.4					
9	1	08.5	285 51.3	55.1	62 00.7	23.5	134 47.8	05.6	81 36.5	15.4					
10	16	11.0	300 50.5	55.5	77 02.0	23.4	149 50.5	05.5	96 39.0	15.4					
11	31	13.5	315 49.7	+23 55.9	92 03.3	-22 23.3	164 53.3	-16 05.4	111 41.6	-22 15.4					
12	46	15.9	330 48.9	+23 56.3	107 04.6	-22 23.2	179 56.1	-16 05.4	126 44.1	-22 15.4					
13	61	18.4	345 48.0	56.7	122 05.9	23.1	194 58.9	05.3	141 46.7	15.4					
14	76	20.9	0 47.2	57.1	137 07.2	23.0	210 01.7	05.2	156 49.2	15.5					
15	91	23.3	15 46.4	57.5	152 08.5	22.9	225 04.5	05.1	171 51.8	15.5					
16	106	25.8	30 45.6	57.9	167 09.8	22.8	240 07.2	05.0	186 54.3	15.5					
17	121	28.3	45 44.8	+23 58.3	182 11.0	-22 22.7	255 10.0	-16 04.9	201 56.9	-22 15.5					
18	136	30.7	60 44.0	+23 58.7	197 12.3	-22 22.6	270 12.8	-16 04.9	216 59.5	-22 15.5					
19	151	33.2	75 43.2	59.1	212 13.6	22.5	285 15.6	04.8	232 02.0	15.5					
20	166	35.6	90 42.4	59.5	227 14.9	22.4	300 18.4	04.7	247 04.6	15.5					
21	181	38.1	105 41.6	+23 59.9	242 16.2	22.3	315 21.2	04.6	262 07.1	15.5					
22	196	40.6	120 40.8	+24 00.3	257 17.5	22.2	330 23.9	04.5	277 09.7	15.5					
23	211	43.0	135 40.0	00.7	272 18.8	22.1	345 26.7	04.4	292 12.2	15.5					
24	226	45.5	150 39.2	+24 01.1	287 20.1	-22 22.0	0 29.5	-16 04.3	307 14.8	-22 15.5					
Dif	—		-8	+4	+13	+1	-8972	+1	+26	0					

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 4				Edad: 22 ^d 9 PHE { 4 ^h : 55 ^o 0 12 ^h : 55 ^o 2 20 ^h : 55 ^o 4 PMG: 7 ^h 11 ^m R°: 45 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	o	'	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m	m
0	180	53.2	+17	17.0	255	37.6	-13	33.5	82	60 N	0 48	2 39	3 37	2 39	16	11 53	77	
1	195	53.2		17.6	270	10.0		25.3	83	58	1 35	2 57	49	31	19	12 00	74	
2	210	53.3		18.3	284	42.3		17.0	83	56	2 03	3 12	3 59	24	21	07	71	
3	225	53.3		19.0	299	14.7		08.7	83	54	24	24	4 08	18	23	12	70	
4	240	53.3		19.6	313	47.1		-13	00.3	84	41	35	16	12	25	17	68	
5	255	53.4	+17	20.3	328	19.5		-12	51.8	85	50	2 55	3 45	4 23	2 07	26	12 22	66
6	270	53.4	+17	21.0	342	52.0		-12	43.3	85	45	3 23	4 05	4 38	1 56	30	12 32	63
7	285	53.4		21.6	357	24.4		34.7	86	40	3 44	21	4 51	47	32	40	60	
8	300	53.4		22.3	11	56.8		26.1	86	35	4 01	34	5 02	39	34	47	58	
9	315	53.5		23.0	26	29.3		17.3	88	30	14	4 45	11	32	37	12 53	56	
10	330	53.5		23.6	41	01.7		-12	08.6	87	20	36	5 03	27	20	40	13 04	51
11	345	53.5	+17	24.3	55	34.2		-11	59.7	89	10 N	4 52	5 18	5 40	1 10	42	13 13	48
12	0	53.6	+17	25.0	70	06.6		-11	50.8	89	0	5 06	5 31	5 53	1 00	45	13 22	45
13	15	53.6		25.6	84	39.1		41.8	90	10 S	18	44	6 06	0 50	48	30	43	
14	30	53.6		26.3	99	11.6		32.8	90	20	29	5 56	19	39	51	39	39	
15	45	53.6		26.9	113	44.1		23.7	91	30	40	6 09	34	27	55	50	35	
16	60	53.7		27.6	128	16.5		14.6	91	35	46	16	43	20	57	13 56	33	
17	75	53.7	+17	28.3	142	49.0		-11	05.4	92	40	5 51	6 24	6 53	0 12	59	14 02	31
18	90	53.7	+17	28.9	157	21.5		-10	56.1	93	45	5 57	6 33	7 04	0 02	62	14 10	28
19	105	53.7		29.6	171	54.0		46.8	93	50	6 04	43	18	***	***	19	25	
20	120	53.8		30.3	186	26.5		37.4	94	52	07	48	25	***	***	24	23	
21	135	53.8		30.9	200	59.0		28.0	94	54	10	53	32	***	***	28	22	
22	150	53.8		31.6	215	31.5		18.5	95	56	13	6 59	40	***	***	33	20	
23	165	53.8		32.2	230	04.0		-10	08.9	96	58	17	7 05	49	***	***	39	18
24	180	53.9	+17	32.9	244	36.5		-9	59.3	96	60 S	6 21	7 12	7 59	***	***	14 46	15

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 8 ^h 51 ^m 5		Mag: -3.9 PMG: 13 ^h 58 ^m		Mag: -0.6 PMG: 4 ^h 50 ^m		Mag: -2.5 PMG: 23 ^h 54 ^m		Mag: +0.3 PMG: 3 ^h 30 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	o	'	o	'	o	'	o	'	o	'
0	226	45.5	150	39.2	+24	01.1	287	20.1	-22	22.0
1	241	48.0	165	38.3		01.5	302	21.4		21.9
2	256	50.4	180	37.5		01.8	317	22.7		21.8
3	271	52.9	195	36.7		02.2	332	24.0		21.7
4	286	55.4	210	35.9		02.6	347	25.3		21.6
5	301	57.8	225	35.1	+24	03.0	2	26.6	-22	21.5
6	317	00.3	240	34.3	+24	03.4	17	27.9	-22	21.4
7	332	02.8	255	33.5		03.8	32	29.2		21.3
8	347	05.2	270	32.7		04.1	47	30.5		21.2
9	2	07.7	285	31.9		04.5	62	31.8		21.1
10	17	10.1	300	31.0		04.9	77	33.1		21.0
11	32	12.6	315	30.2	+24	05.3	92	34.4	-22	20.9
12	47	15.1	330	29.4	+24	05.6	107	35.7	-22	20.8
13	62	17.5	345	28.6		06.0	122	37.0		20.7
14	77	20.0	0	27.8		06.4	137	38.3		20.6
15	92	22.5	15	27.0		06.7	152	39.7		20.5
16	107	24.9	30	26.2		07.1	167	41.0		20.4
17	122	27.4	45	25.4	+24	07.5	182	42.3	-22	20.3
18	137	29.9	60	24.5	+24	07.9	197	43.6	-22	20.2
19	152	32.3	75	23.7		08.2	212	44.9		20.1
20	167	34.8	90	22.9		08.6	227	46.2		20.0
21	182	37.3	105	22.1		08.9	242	47.5		19.9
22	197	39.7	120	21.3		09.3	257	48.8		19.8
23	212	42.2	135	20.5		09.7	272	50.1		19.7
24	227	44.6	150	19.7	+24	10.0	287	51.4	-22	19.6
Dif	—		-8		+4		+13		+1	

+28		+1		+26		0	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 15°8 PMG: 11 ^h 56 ^m 4			Edad: 23 ^d 9 PHE { SD: 15°2 PMG: 7 ^h 56 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	o	'	o	'	o	'	o	'	h m	h m	h m	h m m	h m m	h m m	h m m			
0	180	53.9	+17	32.9	244	36.5	-9	59.3	60 N	20 20	21 20	23 29	2 55 15	13 10 79				
1	195	53.9		33.5	259	09.0 ¹³⁵		49.7 ⁹⁶	58	20 08	21 01	22 27	50 17	14 77				
2	210	53.9		34.2	273	41.4 ¹³⁴		40.0 ⁹⁷	56	19 57	20 45	21 56	45 19	18 75				
3	225	53.9		34.9	288	13.9 ¹³⁵		30.2 ⁹⁸	54	48	32	34	41 21	22 72				
4	240	54.0		35.5	302	46.4 ¹³⁵		20.4 ⁹⁸	52	39	21	16	37 23	25 71				
5	255	54.0	+17	36.2	317	18.9 ¹³⁵	-9	10.5 ⁹⁹	50	19 32	20 11	21 01	2 33 25	13 28 69				
6	270	54.0	+17	36.8	331	51.4 ¹³⁵	-9	00.6 ⁹⁹	45	19 16	19 50	20 32	2 26 27	13 35 64				
7	285	54.0		37.5	346	23.9 ¹³⁵	-8	50.6 ¹⁰⁰	40	19 03	34	20 11	19 31	40 62				
8	300	54.1		38.1	0	56.3 ¹³⁴		40.6 ¹⁰⁰	35	18 53	20	19 54	13 34	45 59				
9	315	54.1		38.8	15	28.8 ¹³⁵		30.5 ¹⁰¹	30	43	19 09	40	09 35	49 56				
10	330	54.1		39.4	30	01.2 ¹³⁴		20.4 ¹⁰¹	20	27	18 50	18	2 00 39	13 55 53				
11	345	54.1	+17	40.1	44	33.7 ¹³⁵	-8	10.2 ¹⁰²	10 N	18 13	18 35	19 01	1 52 43	14 01 50				
12	0	54.1	+17	40.7	59	06.1 ¹³⁴	-8	00.0 ¹⁰²	0	18 00	18 22	18 47	1 45 46	14 07 46				
13	15	54.2		41.4	73	38.6 ¹³⁵	-7	49.7 ¹⁰³	10 S	17 47	18 09	34	38 49	13 42				
14	30	54.2		42.0	88	11.0 ¹³⁴		39.4 ¹⁰³	20	33	17 56	23	30 53	18 40				
15	45	54.2		42.7	102	43.4 ¹³⁴		29.1 ¹⁰³	30	18	43	12	22 56	25 35				
16	60	54.2		43.3	117	15.8 ¹³⁴		18.7 ¹⁰⁴	35	17 09	36	06	17 58	29 33				
17	75	54.2	+17	44.0	131	48.2 ¹³⁴	-7	08.2 ¹⁰⁵	40	16 59	17 28	18 00	1 11 61	14 33 31				
18	90	54.3	+17	44.6	146	20.6 ¹³⁴	-6	57.7 ¹⁰⁵	45	16 47	17 18	17 54	1 04 64	14 38 28				
19	105	54.3		45.3	160	53.9 ¹³⁴		47.2 ¹⁰⁵	50	33	08	47	0 56 68	44 24				
20	120	54.3		45.9	175	25.3 ¹³³		36.6 ¹⁰⁶	52	26	17 03	44	53 69	47 22				
21	135	54.3		46.6	189	57.7 ¹³⁴		25.9 ¹⁰⁷	54	19	16 58	41	48 71	50 20				
22	150	54.3		47.2	204	30.0 ¹³³		15.3 ¹⁰⁶	56	10	52	37	44 73	53 18				
23	165	54.4		47.9	219	02.3 ¹³³	-6	04.6 ¹⁰⁷	58	16 01	45	33	39 75	14 57 16				
24	180	54.4	+17	48.5	233	34.6 ¹³³	-5	53.8 ¹⁰⁸	60 S	15 50	16 38	17 29	0 33 78	15 01 13				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 8 ^h 47 ^m 6		Mag: -3.9 PMG: 13 ^h 59 ^m				Mag: -0.6 PMG: 4 ^h 48 ^m				Mag: -2.5 PMG: 23 ^h 49 ^m				Mag: +0.3 PMG: 3 ^h 26 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♎		Dec	
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'
0	227	44.6	150	19.7	+24	10.0	287	51.4	-22	19.6	1	36.3	-16	02.3	308	16.1	-22	15.6
1	242	47.1	165	18.8		10.4	302	52.7		19.5	16	39.1		02.2	323	18.6		15.7
2	257	49.6	180	18.0		10.7	317	54.1		19.4	31	41.9		02.1	338	21.2		15.7
3	272	52.0	195	17.2		11.1	332	55.4		19.3	46	44.7		02.1	353	23.7		15.7
4	287	54.5	210	16.4		11.5	347	56.7		19.2	61	47.5		02.0	8	26.3		15.7
5	302	57.0	225	15.6	+24	11.8	2	58.0	-22	19.1	76	50.2	-16	01.9	23	28.9	-22	15.7
6	317	59.4	240	14.8	+24	12.2	17	59.3	-22	19.0	91	53.0	-16	01.8	38	31.4	-22	15.7
7	333	01.9	255	14.0		12.5	33	00.6		18.9	106	55.8		01.7	53	34.0		15.7
8	348	04.4	270	13.1		12.9	48	01.9		18.8	121	58.6		01.6	68	36.5		15.7
9	3	06.8	285	12.3		13.2	63	03.3		18.7	137	01.4		01.5	83	39.1		15.7
10	18	09.3	300	11.5		13.6	78	04.6		18.6	152	04.2		01.5	98	41.6		15.7
11	33	11.7	315	10.7	+24	13.9	93	05.9	-22	18.5	167	06.9	-16	01.4	113	44.2	-22	15.7
12	48	14.2	330	09.9	+24	14.3	108	07.2	-22	18.4	182	09.7	-16	01.3	128	46.8	-22	15.7
13	63	16.7	345	09.1		14.6	123	08.5		18.3	197	12.5		01.2	143	49.3		15.7
14	78	19.1	0	08.2		14.9	138	09.9		18.2	212	15.3		01.1	158	51.9		15.7
15	93	21.6	15	07.4		15.3	153	11.2		18.1	227	18.1		01.0	173	54.4		15.7
16	108	24.1	30	06.6		15.6	168	12.5		18.0	242	20.9		01.0	188	57.0		15.7
17	123	26.5	45	05.8	+24	16.0	183	13.8	-22	18.0	257	23.6	-16	00.9	203	59.6	-22	15.7
18	138	29.0	60	05.0	+24	16.3	198	15.1	-22	17.9	272	26.4	-16	00.8	219	02.1	-22	15.8
19	153	31.5	75	04.1		16.6	213	16.5		17.8	287	29.2		00.7	234	04.7		15.8
20	168	33.9	90	03.3		17.0	228	17.8		17.7	302	32.0		00.6	249	07.2		15.8
21	183	36.4	105	02.5		17.3	243	19.1		17.6	317	34.8		00.5	264	09.8		15.8
22	198	38.9	120	01.7		17.6	258	20.4		17.5	332	37.6		00.4	279	12.4		15.8
23	213	41.3	135	00.9		18.0	273	21.8		17.4	347	40.4		00.4	294	14.9		15.8
24	228	43.8	150	00.0	+24	18.3	288	23.1	-22	17.3	2	43.1	-16	00.3	309	17.5	-22	15.8
Dif	—		-8		+3		+13		+1		+28		+1		+26			

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 4				Edad: 24 ^d 9 PHE { SD: 15 ^h 4 PMG: 8 ^h 42 ^m R°: 46 ^m 4 ^h : 56 ^m 4 12 ^h : 56 ^m 6 20 ^h : 56 ^m 9													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	o	'	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m	m
0	180	54.4	+17	48.5	233	34.6	-5	53.8	60 N	0 23	2 32	3 32	3 10	13	14 29	82		
1	195	54.4		49.2	248	06.9 ¹³³		43.0 ¹⁰⁸	58	1 25	2 51	45	07	16	31	79		
2	210	54.4		49.8	262	39.2 ¹³³		32.2 ¹⁰⁸	56	1 56	3 07	3 55	04	18	33	77		
3	225	54.4		50.5	277	11.4 ¹³²		21.3 ¹⁰⁹	54	2 18	20	4 04	02	20	34	75		
4	240	54.5		51.1	291	43.6 ¹³²	-5	10.4 ¹⁰⁹	52	36	32	13	3 00	22	36	72		
5	255	54.5	+17	51.7	306	15.9 ¹³³	-4	59.5 ¹⁰⁹	50	2 51	3 42	4 20	2 58	23	14 37	71		
6	270	54.5	+17	52.4	320	48.0 ¹³¹	-4	48.5 ¹¹⁰	45	3 20	4 02	4 36	2 53	28	14 39	67		
7	285	54.5		53.0	335	20.2 ¹³²		37.5 ¹¹⁰	40	41	19	4 49	50	30	42	63		
8	300	54.5		53.7	349	52.4 ¹³²		26.4 ¹¹¹	35	3 58	32	5 00	47	33	44	60		
9	315	54.5		54.3	4	24.5 ¹³¹		15.3 ¹¹¹	30	4 12	4 43	09	44	35	45	59		
10	330	54.6		54.9	18	56.6 ¹³¹	-4	04.2 ¹¹¹	20	34	5 02	26	39	39	48	54		
11	345	54.6	+17	55.6	33	28.7 ¹³¹	-3	53.0 ¹¹²	10 N	4 52	5 18	5 40	2 35	43	14 51	50		
12	0	54.6	+17	56.2	48	00.7 ¹³⁰	-3	41.9 ¹¹¹	0	5 06	5 31	5 53	2 31	46	14 53	47		
13	15	54.6		56.9	62	32.8 ¹³¹		30.6 ¹¹³	10 S	18	44	6 06	27	50	55	44		
14	30	54.6		57.5	77	04.8 ¹³⁰		19.4 ¹¹²	20	30	5 56	20	23	53	14 58	39		
15	45	54.6		58.1	91	36.7 ¹²⁹	-3	08.1 ¹¹³	30	41	6 10	35	18	57	15 00	36		
16	60	54.6		58.8	106	08.7 ¹³⁰	-2	56.8 ¹¹³	35	47	17	44	15	60	02	33		
17	75	54.7	+17	59.4	120	40.6 ¹²⁹	-2	45.5 ¹¹³	40	5 53	6 26	6 54	2 12	63	15 04	30		
18	90	54.7	+18	00.0	135	12.5 ¹²⁹	-2	34.1 ¹¹⁴	45	5 59	6 35	7 06	2 08	66	15 06	27		
19	105	54.7	+18	00.7	149	44.4 ¹²⁹		22.7 ¹¹⁴	50	6 07	46	21	04	70	08	24		
20	120	54.7		01.3	164	16.2 ¹²⁸	-2	11.3 ¹¹⁴	52	10	51	28	2 02	71	09	22		
21	135	54.7		02.0	178	48.0 ¹²⁸	-1	59.8 ¹¹⁵	54	13	6 56	35	1 59	74	10	20		
22	150	54.7		02.6	193	19.8 ¹²⁸		48.4 ¹¹⁴	56	16	7 02	44	57	76	11	19		
23	165	54.7		03.2	207	51.5 ¹²⁷		36.9 ¹¹⁵	58	20	08	7 53	54	78	13	16		
24	180	54.7	+18	03.9	222	23.2 ¹²⁷	-1	25.4 ¹¹⁵	60 S	6 24	7 16	8 04	1 51	81	15 14	14		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 8 ^h 43 ^m 6		Mag: -3.9 PMG: 14 ^h 01 ^m		Mag: -0.6 PMG: 4 ^h 46 ^m		Mag: -2.5 PMG: 23 ^h 45 ^m		Mag: +0.3 PMG: 3 ^h 22 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	o	'	o	'	o	'	o	'	o	'
0	228	43.8	150	00.0	+24	18.3	288	23.1	-22	17.3
1	243	46.2	164	59.2		18.6	303	24.4		17.2
2	258	48.7	179	58.4		19.0	318	25.7		17.1
3	273	51.2	194	57.6		19.3	333	27.1		17.0
4	288	53.6	209	56.8		19.6	348	28.4		16.9
5	303	56.1	224	55.9	+24	20.0	3	29.7	-22	16.8
6	318	58.6	239	55.1	+24	20.3	18	31.0	-22	16.7
7	334	01.0	254	54.3		20.6	33	32.4		16.6
8	349	03.5	269	53.5		20.9	48	33.7		16.5
9	4	06.0	284	52.7		21.2	63	35.0		16.4
10	19	08.4	299	51.8		21.6	78	36.4		16.3
11	34	10.9	314	51.0	+24	21.9	93	37.7	-22	16.2
12	49	13.3	329	50.2	+24	22.2	108	39.0	-22	16.1
13	64	15.8	344	49.4		22.5	123	40.4		16.0
14	79	18.3	359	48.6		22.8	138	41.7		15.9
15	94	20.7	14	47.7		23.1	153	43.0		15.8
16	109	23.2	29	46.9		23.5	168	44.4		15.7
17	124	25.7	44	46.1	+24	23.8	183	45.7	-22	15.6
18	139	28.1	59	45.3	+24	24.1	198	47.0	-22	15.5
19	154	30.6	74	44.4		24.4	213	48.4		15.4
20	169	33.1	89	43.6		24.7	228	49.7		15.3
21	184	35.5	104	42.8		25.0	243	51.1		15.2
22	199	38.0	119	42.0		25.3	258	52.4		15.1
23	214	40.5	134	41.1		25.6	273	53.7		15.0
24	229	42.9	149	40.3	+24	25.9	288	55.1	-22	14.9
Dif	—		-8 +3		+13 +1		+28 +1		+1	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15'8 PMG: 11 ^h 56 ^m 3			Edad: 25 ^d 9 PHE { SD: 15'6 PMG: 9 ^h 28 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°	
h	o	'	o	'	o	'	o	'	h	m	h	m	h	m	h	m
0	180	54.7	+18	03.9	222	23.2	-1	25.4	60 N	20 25	21 26	***	3 23	14	15 51	85
1	195	54.8		04.5	236	54.9 ¹²⁷		13.8 ¹¹⁶	58	12	21 06	22 38	23	16	50	82
2	210	54.8		05.1	251	26.5 ¹²⁶	-1	02.3 ¹¹⁵	56	20 01	20 50	22 04	22	19	50	79
3	225	54.8		05.7	265	58.1 ¹²⁶	-0	50.7 ¹¹⁶	54	19 51	36	21 40	22	21	49	77
4	240	54.8		06.4	280	29.7 ¹²⁶		39.1 ¹¹⁶	52	43	24	21	22	22	48	76
5	255	54.8	+18	07.0	295	01.2 ¹²⁵	-0	27.5 ¹¹⁶	50	19 35	20 14	21 05	3 21	25	15 48	73
6	270	54.8	+18	07.6	309	32.7 ¹²⁵	-0	15.8 ¹¹⁷	45	19 19	19 53	20 36	3 21	28	15 46	70
7	285	54.8		08.3	324	04.2 ¹²⁵	-0	04.2 ¹¹⁶	40	19 05	36	20 13	20	31	45	66
8	300	54.8		08.9	338	35.6 ¹²⁴	+0	07.5 ¹¹⁷	35	18 54	22	19 56	20	34	44	64
9	315	54.8		09.5	353	06.9 ¹²³		19.2 ¹¹⁷	30	44	19 10	42	19	37	44	60
10	330	54.9		10.2	7	38.3 ¹²⁴		30.8 ¹¹⁶	20	28	18 51	19	18	41	42	57
11	345	54.9	+18	10.8	22	09.6 ¹²³	+0	42.6 ¹¹⁸	10 N	18 13	18 35	19 02	3 18	44	15 41	52
12	0	54.9	+18	11.4	36	40.8 ¹²²	+0	54.3 ¹¹⁷	0	18 00	18 22	18 47	3 17	48	15 40	49
13	15	54.9		12.0	51	12.0 ¹²²	+1	06.0 ¹¹⁷	10 S	17 47	18 09	34	17	51	39	45
14	30	54.9		12.7	65	43.2 ¹²²		17.7 ¹¹⁷	20	33	17 56	22	16	55	37	42
15	45	54.9		13.3	80	14.3 ¹²¹		29.5 ¹¹⁸	30	17	42	11	15	60	36	37
16	60	54.9		13.9	94	45.4 ¹²¹		41.2 ¹¹⁷	35	17 07	34	18 05	15	62	35	35
17	75	54.9	+18	14.5	109	16.4 ¹²⁰	+1	53.0 ¹¹⁸	40	16 57	17 26	17 58	3 15	65	15 34	32
18	90	54.9	+18	15.2	123	47.4 ¹²⁰	+2	04.8 ¹¹⁸	45	16 45	17 16	17 52	3 14	68	15 33	29
19	105	54.9		15.8	138	18.3 ¹¹⁹		16.5 ¹¹⁷	50	30	05	44	14	72	32	25
20	120	54.9		16.4	152	49.2 ¹¹⁹		28.3 ¹¹⁸	52	23	17 00	41	13	74	31	23
21	135	54.9		17.0	167	20.0 ¹¹⁸		40.1 ¹¹⁸	54	15	16 55	38	13	76	30	22
22	150	55.0		17.6	181	50.8 ¹¹⁸	+2	51.9 ¹¹⁸	56	16 07	48	34	13	78	30	19
23	165	55.0		18.3	196	21.5 ¹¹⁷	+3	03.7 ¹¹⁸	58	15 57	42	30	12	81	29	17
24	180	55.0	+18	18.9	210	52.2 ¹¹⁷	+3	15.4 ¹¹⁷	60 S	15 46	16 34	17 26	3 12	84	15 28	14

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 8 ^h 39 ^m 7		Mag: -3.9 PMG: 14 ^h 02 ^m		Mag: -0.7 PMG: 4 ^h 44 ^m		Mag: -2.5 PMG: 23 ^h 40 ^m		Mag: +0.3 PMG: 3 ^h 18 ^m							
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	o	'	o	'	o	'	o	'	o	'						
0	229	42.9	149	40.3	+24	25.9	288	55.1	-22	14.9	310	19.0	-22	15.9		
1	244	45.4	164	39.5		26.2	303	56.4		14.8	325	21.5		15.9		
2	259	47.8	179	38.7		26.5	318	57.7		14.8	340	24.1		16.0		
3	274	50.3	194	37.8		26.8	333	59.1		14.7	355	26.7		16.0		
4	289	52.8	209	37.0		27.1	349	00.4		14.6	10	29.2		16.0		
5	304	55.2	224	36.2	+24	27.4	4	01.8	-22	14.5	25	31.8	-22	16.0		
6	319	57.7	239	35.4	+24	27.7	19	03.1	-22	14.4	40	34.4	-22	16.0		
7	335	00.2	254	34.5		28.0	34	04.5		14.3	55	36.9		16.0		
8	350	02.6	269	33.7		28.3	49	05.8		14.2	70	39.5		16.0		
9	5	05.1	284	32.9		28.6	64	07.2		14.1	85	42.1		16.0		
10	20	07.6	299	32.1		28.9	79	08.5		14.0	100	44.6		16.0		
11	35	10.0	314	31.2	+24	29.2	94	09.8	-22	13.9	115	47.2	-22	16.0		
12	50	12.5	329	30.4	+24	29.4	109	11.2	-22	13.8	130	49.8	-22	16.0		
13	65	15.0	344	29.6		29.7	124	12.5		13.7	145	52.3		16.0		
14	80	17.4	359	28.8		30.0	139	13.9		13.6	160	54.9		16.0		
15	95	19.9	14	27.9		30.3	154	15.2		13.5	175	57.5		16.0		
16	110	22.3	29	27.1		30.6	169	16.6		13.4	191	00.0		16.0		
17	125	24.8	44	26.3	+24	30.9	184	17.9	-22	13.3	206	02.6	-22	16.1		
18	140	27.3	59	25.5	+24	31.2	199	19.3	-22	13.2	221	05.2	-22	16.1		
19	155	29.7	74	24.6		31.4	214	20.6		13.1	236	07.7		16.1		
20	170	32.2	89	23.8		31.7	229	22.0		13.0	251	10.3		16.1		
21	185	34.7	104	23.0		32.0	244	23.3		12.9	266	12.9		16.1		
22	200	37.1	119	22.2		32.3	259	24.7		12.9	281	15.4		16.1		
23	215	39.6	134	21.3		32.5	274	26.0		12.8	296	18.0		16.1		
24	230	42.1	149	20.5	+24	32.8	289	27.4	-22	12.7	311	20.6	-22	16.1		
Dif	—		-8		+3		+13		+1		+28		+1		+26	

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 3				Edad: 26 ^d 9 PHE { SD: 15 ^h 9 PMG: 10 ^h 17 ^m R°: 51 ^m											
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°
h	o	'	o	'	o	'	o	'	o	h	m	h	m	h	m	m
0	180	55.0	+18	18.9	210	52.2	+3	15.4	60 N	***	26	3	27	3	37	16
1	195	55.0		19.5	225	22.8 ¹¹⁶		27.2 ¹¹⁸	58	1	14	2	46	40	39	18
2	210	55.0		20.1	239	53.4 ¹¹⁶		39.0 ¹¹⁸	56	1	48	3	02	3	51	21
3	225	55.0		20.7	254	23.9 ¹¹⁵	+3	50.8 ¹¹⁸	54	2	12	16	4	01	43	22
4	240	55.0		21.4	268	54.4 ¹¹⁵	+4	02.5 ¹¹⁷	52	31	28	09	44	25	04	77
5	255	55.0	+18	22.0	283	24.8 ¹¹⁴	+4	14.3 ¹¹⁸	50	2	47	3	38	4	17	3
6	270	55.0	+18	22.6	297	55.1 ¹¹³	+4	26.1 ¹¹⁸	45	3	17	4	00	4	34	3
7	285	55.0		23.2	312	25.4 ¹¹³		37.8 ¹¹⁷	40	39	16	47	51	34	51	69
8	300	55.0		23.8	326	55.7 ¹¹³	+4	49.5 ¹¹⁷	35	3	56	30	4	58	54	36
9	315	55.0		24.4	341	25.8 ¹¹¹	+5	01.3 ¹¹⁸	30	4	11	4	42	5	08	56
10	330	55.0		25.1	355	56.0 ¹¹²		13.0 ¹¹⁷	20	33	5	01	25	3	59	43
11	345	55.0	+18	25.7	10	26.0 ¹¹⁰	+5	24.7 ¹¹⁷	10 N	4	51	5	17	5	39	4
12	0	55.0	+18	26.3	24	56.0 ¹¹⁰	+5	36.4 ¹¹⁷	0	5	06	5	31	5	53	4
13	15	55.0		26.9	39	26.0 ¹¹⁰		48.0 ¹¹⁶	10 S	19	44	6	06	08	54	24
14	30	55.0		27.5	53	55.8 ¹⁰⁸	+5	59.7 ¹¹⁷	20	31	5	57	20	11	58	19
15	45	55.0		28.1	68	25.7 ¹⁰⁹	+6	11.3 ¹¹⁶	30	42	6	11	36	15	62	13
16	60	55.0		28.7	82	55.4 ¹⁰⁷		23.0 ¹¹⁷	35	48	19	46	17	65	10	38
17	75	55.0	+18	29.3	97	25.1 ¹⁰⁷	+6	34.6 ¹¹⁶	40	5	55	6	27	6	56	4
18	90	55.0	+18	30.0	111	54.7 ¹⁰⁶	+6	46.1 ¹¹⁵	45	6	01	6	37	7	09	4
19	105	55.0		30.6	126	24.3 ¹⁰⁶	+6	57.7 ¹¹⁶	50	09	48	24	26	75	15	57
20	120	55.0		31.2	140	53.8 ¹⁰⁵	+7	09.2 ¹¹⁵	52	12	53	31	27	77	54	26
21	135	55.0		31.8	155	23.2 ¹⁰⁴		20.7 ¹¹⁵	54	16	6	59	39	29	79	52
22	150	55.0		32.4	169	52.6 ¹⁰⁴		32.2 ¹¹⁵	56	19	7	05	47	31	81	49
23	165	55.0		33.0	184	21.9 ¹⁰³		43.6 ¹¹⁴	58	24	12	7	57	33	84	46
24	180	55.0	+18	33.6	198	51.2 ¹⁰³	+7	55.1 ¹¹⁵	60 S	6	28	7	20	8	09	4

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 8 ^h 35 ^m 8		Mag: -3.9 PMG: 14 ^h 03 ^m		Mag: -0.7 PMG: 4 ^h 42 ^m		Mag: -2.5 PMG: 23 ^h 36 ^m		Mag: +0.3 PMG: 3 ^h 14 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	o	'	o	'	o	'	o	'	o	'
0	230	42.1	149	20.5	+24	32.8	289	27.4	-22	12.7
1	245	44.5	164	19.7		33.1	304	28.8		12.6
2	260	47.0	179	18.8		33.4	319	30.1		12.5
3	275	49.4	194	18.0		33.6	334	31.5		12.4
4	290	51.9	209	17.2		33.9	349	32.8		12.3
5	305	54.4	224	16.4	+24	34.2	4	34.2	-22	12.2
6	320	56.8	239	15.5	+24	34.4	19	35.5	-22	12.1
7	335	59.3	254	14.7		34.7	34	36.9		12.0
8	351	01.8	269	13.9		35.0	49	38.3		11.9
9	6	04.2	284	13.0		35.2	64	39.6		11.8
10	21	06.7	299	12.2		35.5	79	41.0		11.7
11	36	09.2	314	11.4	+24	35.7	94	42.3	-22	11.6
12	51	11.6	329	10.6	+24	36.0	109	43.7	-22	11.5
13	66	14.1	344	09.7		36.3	124	45.1		11.4
14	81	16.6	359	08.9		36.5	139	46.4		11.3
15	96	19.0	14	08.1		36.8	154	47.8		11.3
16	111	21.5	29	07.2		37.0	169	49.1		11.2
17	126	23.9	44	06.4	+24	37.3	184	50.5	-22	11.1
18	141	26.4	59	05.6	+24	37.5	199	51.9	-22	11.0
19	156	28.9	74	04.7		37.8	214	53.2		10.9
20	171	31.3	89	03.9		38.0	229	54.6		10.8
21	186	33.8	104	03.1		38.3	244	56.0		10.7
22	201	36.3	119	02.3		38.5	259	57.3		10.6
23	216	38.7	134	01.4		38.8	274	58.7		10.5
24	231	41.2	149	00.6	+24	39.0	290	00.1	-22	10.4
Dif	—		-8		+3		+14		+1	
									+28	
									+1	
									+26	
									0	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15°8 PMG: 11 ^h 56 ^m 3			Edad: 27 ^d 9 PHE { 4 ^h : 58/8 12 ^h : 59/0 20 ^h : 59/2 PMG: 11 ^h 08 ^m R°: 54 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	o	'	o	'	o	'	o	h m	h m	h m	h m m	h m m	h m m	
0	180	55.0	+18 33.6	198	51.2	+7 55.1	60 N	20 29	21 33	*** **	3 53 19	18 44 89		
1	195	55.0	34.2	213	20.3 ¹⁰¹	+8 06.5 ¹¹⁴	58	16	21 11	22 50	3 57 22	37 87		
2	210	55.0	34.8	227	49.4 ¹⁰¹	17.8 ¹¹³	56	20 05	20 54	22 11	4 02 24	31 84		
3	225	55.0	35.4	242	18.4 ¹⁰⁰	29.1 ¹¹³	54	19 55	40	21 46	05 27	26 8		
4	240	55.0	36.0	256	47.4 ¹⁰⁰	40.4 ¹¹³	52	46	28	26	09 28	21 79		
5	255	55.0	+18 36.6	271	16.3 ⁹⁹	+8 51.7 ¹¹³	50	19 38	20 17	21 10	4 12 30	18 17 77		
6	270	55.0	+18 37.2	285	45.1 ⁹⁸	+9 02.9 ¹¹²	45	19 21	19 55	20 39	4 19 34	18 08 73		
7	285	55.0	37.8	300	13.9 ⁹⁸	14.1 ¹¹²	40	19 07	38	20 16	25 37	18 00 70		
8	300	55.0	38.4	314	42.5 ⁹⁶	25.2 ¹¹¹	35	18 56	24	19 58	30 40	17 53 68		
9	315	55.0	39.1	329	11.1 ⁹⁶	36.3 ¹¹¹	30	46	19 12	43	34 42	47 66		
10	330	55.0	39.7	343	39.7 ⁹⁶	47.3 ¹¹⁰	20	28	18 52	20	42 46	37 62		
11	345	55.0	+18 40.3	358	08.1 ⁹⁴	+9 58.4 ¹¹¹	10 N	18 14	18 36	19 02	4 49 50	17 29 57		
12	0	55.0	+18 40.9	12	36.5 ⁹⁴	+10 09.3 ¹⁰⁹	0	18 00	18 22	18 47	4 55 54	17 20 55		
13	15	55.0	41.5	27	04.8 ⁹³	20.2 ¹⁰⁹	10 S	17 46	18 08	34	5 02 56	12 52		
14	30	55.0	42.1	41	33.1 ⁹³	31.1 ¹⁰⁹	20	32	17 55	22	09 60	17 03 49		
15	45	55.0	42.7	56	01.2 ⁹¹	41.9 ¹⁰⁸	30	15	41	10	17 64	16 53 45		
16	60	55.0	43.3	70	29.3 ⁹¹	+10 52.7 ¹⁰⁸	35	17 06	33	18 03	22 66	48 42		
17	75	55.0	+18 43.9	84	57.3 ⁹⁰	+11 03.4 ¹⁰⁷	40	16 55	17 24	17 57	5 27 70	16 41 40		
18	90	55.0	+18 44.4	99	25.3 ⁹⁰	+11 14.0 ¹⁰⁶	45	16 42	17 14	17 50	5 33 73	16 34 36		
19	105	55.0	45.0	113	53.1 ⁸⁸	24.6 ¹⁰⁶	50	27	17 03	42	41 77	25 32		
20	120	55.0	45.6	128	20.9 ⁸⁸	35.2 ¹⁰⁶	52	20	16 57	39	44 79	20 31		
21	135	55.0	46.2	142	48.6 ⁸⁷	45.7 ¹⁰⁵	54	12	52	35	48 81	16 29		
22	150	55.0	46.8	157	16.3 ⁸⁷	+11 56.1 ¹⁰⁴	56	16 03	45	31	52 84	11 26		
23	165	55.0	47.4	171	43.8 ⁸⁵	+12 06.5 ¹⁰⁴	58	15 53	38	27	5 57 86	16 05 24		
24	180	55.0	+18 48.0	186	11.3 ⁸⁵	+12 16.8 ¹⁰³	60 S	15 41	16 30	17 22	6 02 90	15 59 21		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 8 ^h 31 ^m 9		Mag: -3.9 PMG: 14 ^h 05 ^m		Mag: -0.7 PMG: 4 ^h 40 ^m		Mag: -2.5 PMG: 23 ^h 31 ^m		Mag: +0.3 PMG: 3 ^h 10 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	o	'	o	'	o	'	o	'	o	'
0	231	41.2	149	00.6	290	00.1	6	03.5	312	22.2
1	246	43.7	163	59.8	305	01.4	21	06.3	327	24.8
2	261	46.1	178	58.9	320	02.8	36	09.0	342	27.4
3	276	48.6	193	58.1	335	04.2	51	11.8	357	30.0
4	291	51.0	208	57.3	350	05.6	66	14.6	12	32.5
5	306	53.5	223	56.4	5	06.9	81	17.4	27	35.1
6	321	56.0	238	55.6	20	08.3	96	20.2	42	37.7
7	336	58.4	253	54.8	35	09.7	111	23.0	57	40.2
8	352	00.9	268	53.9	50	11.1	126	25.7	72	42.8
9	7	03.4	283	53.1	65	12.4	141	28.5	87	45.4
10	22	05.8	298	52.3	80	13.8	156	31.3	102	48.0
11	37	08.3	313	51.4	95	15.2	171	34.1	117	50.5
12	52	10.8	328	50.6	110	16.6	186	36.9	132	53.1
13	67	13.2	343	49.8	125	17.9	201	39.6	147	55.7
14	82	15.7	358	48.9	140	19.3	216	42.4	162	58.3
15	97	18.2	13	48.1	155	20.7	231	45.2	178	00.8
16	112	20.6	28	47.3	170	22.1	246	48.0	193	03.4
17	127	23.1	43	46.4	185	23.4	261	50.8	208	06.0
18	142	25.5	58	45.6	200	24.8	276	53.5	223	08.6
19	157	28.0	73	44.8	215	26.2	291	56.3	238	11.1
20	172	30.5	88	44.0	230	27.6	306	59.1	253	13.7
21	187	32.9	103	43.1	245	29.0	322	01.9	268	16.3
22	202	35.4	118	42.3	260	30.4	337	04.7	283	18.9
23	217	37.9	133	41.5	275	31.7	352	07.4	298	21.4
24	232	40.3	148	40.6	290	33.1	7	10.2	313	24.0
Dif	—		-8	+2	+14	+1	+28	+1	+26	0

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15'8 PMG: 11 ^h 56 ^m 3				Edad: 28 ^d 9 PHE { SD: 16'2 PMG: 12 ^h 02 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	o	'	o	'	o	'	o	'	o	h	m	h	m	h	m	m		
0	180	55.0	+18	48.0	186	11.3	+12	16.8	60 N	*** **	2 19	3 23	4 12	24	20 13	87		
1	195	55.0		48.6	200	38.7	84	27.0	58	1 02	41	36	19	28	20 04	84		
2	210	55.0		49.2	215	06.1	84	37.2	56	1 41	2 58	47	26	30	19 55	81		
3	225	54.9		49.8	229	33.3	82	47.3	54	2 07	3 12	3 57	32	32	47	80		
4	240	54.9		50.4	244	00.5	82	+12 57.3	52	26	24	4 06	37	35	40	78		
5	255	54.9	+18	51.0	258	27.6	81	+13 07.3	50	2 43	3 35	4 14	4 42	36	19 34	76		
6	270	54.9	+18	51.6	272	54.6	80	+13 17.2	45	3 14	3 57	4 31	4 53	39	19 21	73		
7	285	54.9		52.2	287	21.6	80	27.0	40	36	4 14	45	5 02	42	10	70		
8	300	54.9		52.8	301	48.4	78	36.7	35	3 54	29	4 57	10	44	19 01	68		
9	315	54.9		53.3	316	15.2	78	46.4	30	4 09	4 41	5 07	16	47	18 53	66		
10	330	54.9		53.9	330	41.9	77	+13 56.0	20	32	5 00	24	28	51	39	63		
11	345	54.9	+18	54.5	345	08.6	77	+14 05.5	10 N	4 51	5 17	5 39	5 39	53	18 26	61		
12	0	54.9	+18	55.1	359	35.2	76	+14 14.9	0	5 06	5 31	5 53	5 49	56	18 15	58		
13	15	54.9		55.7	14	01.6	74	24.3	10 S	19	44	6 07	5 58	60	18 04	55		
14	30	54.9		56.3	28	28.0	74	33.5	20	31	5 58	21	6 09	63	17 52	52		
15	45	54.8		56.9	42	54.4	74	42.7	30	43	6 12	38	21	66	38	49		
16	60	54.8		57.5	57	20.6	72	+14 51.8	35	50	20	47	28	69	30	47		
17	75	54.8	+18	58.0	71	46.8	72	+15 00.8	40	5 56	6 29	6 58	6 37	70	17 21	45		
18	90	54.8	+18	58.6	86	12.9	71	+15 09.7	45	6 03	6 39	7 11	6 46	74	17 10	43		
19	105	54.8		59.2	100	39.0	71	18.5	50	11	51	27	6 58	77	16 57	40		
20	120	54.8	+18	59.8	115	04.9	69	27.2	52	15	6 56	34	7 03	79	51	38		
21	135	54.8	+19	00.4	129	30.8	69	35.9	54	18	7 02	42	09	81	45	36		
22	150	54.8		01.0	143	56.6	68	44.4	56	22	08	7 51	16	83	37	34		
23	165	54.8		01.5	158	22.4	68	+15 52.9	58	27	16	8 01	23	86	29	32		
24	180	54.7	+19	02.1	172	48.0	66	+16 01.2	60 S	6 31	7 23	8 13	7 32	89	16 20	28		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 8 ^h 27 ^m 9		Mag: -3.9 PMG: 14 ^h 06 ^m				Mag: -0.7 PMG: 4 ^h 37 ^m				Mag: -2.5 PMG: 23 ^h 27 ^m				Mag: +0.3 PMG: 3 ^h 06 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'
0	232	40.3	148	40.6	+24	44.5	290	33.1	-22	08.2	7	10.2	-15	52.2	313	24.0	-22	16.4
1	247	42.8	163	39.8		44.7	305	34.5		08.1	22	13.0		52.1	328	26.6		16.4
2	262	45.3	178	39.0		44.9	320	35.9		08.0	37	15.8		52.0	343	29.2		16.4
3	277	47.7	193	38.1		45.2	335	37.3		08.0	52	18.6		51.9	358	31.7		16.5
4	292	50.2	208	37.3		45.4	350	38.7		07.9	67	21.3		51.9	13	34.3		16.5
5	307	52.7	223	36.5	+24	45.6	5	40.1	-22	07.8	82	24.1	-15	51.8	28	36.9	-22	16.5
6	322	55.1	238	35.6	+24	45.8	20	41.4	-22	07.7	97	26.9	-15	51.7	43	39.5	-22	16.5
7	337	57.6	253	34.8		46.0	35	42.8		07.6	112	29.7		51.6	58	42.0		16.5
8	353	00.0	268	33.9		46.2	50	44.2		07.5	127	32.5		51.5	73	44.6		16.5
9	8	02.5	283	33.1		46.4	65	45.6		07.4	142	35.2		51.4	88	47.2		16.5
10	23	05.0	298	32.3		46.6	80	47.0		07.3	157	38.0		51.4	103	49.8		16.5
11	38	07.4	313	31.4	+24	46.8	95	48.4	-22	07.2	172	40.8	-15	51.3	118	52.3	-22	16.5
12	53	09.9	328	30.6	+24	47.0	110	49.8	-22	07.1	187	43.6	-15	51.2	133	54.9	-22	16.5
13	68	12.4	343	29.8		47.2	125	51.2		07.1	202	46.4		51.1	148	57.5		16.5
14	83	14.8	358	28.9		47.4	140	52.6		07.0	217	49.1		51.0	164	00.1		16.5
15	98	17.3	13	28.1		47.6	155	54.0		06.9	232	51.9		50.9	179	02.7		16.5
16	113	19.8	28	27.3		47.8	170	55.4		06.8	247	54.7		50.9	194	05.2		16.5
17	128	22.2	43	26.4	+24	48.0	185	56.8	-22	06.7	262	57.5	-15	50.8	209	07.8	-22	16.6
18	143	24.7	58	25.6	+24	48.2	200	58.1	-22	06.6	278	00.3	-15	50.7	224	10.4	-22	16.6
19	158	27.2	73	24.8		48.4	215	59.5		06.5	293	03.0		50.6	239	13.0		16.6
20	173	29.6	88	23.9		48.6	231	00.9		06.4	308	05.8		50.5	254	15.5		16.6
21	188	32.1	103	23.1		48.8	246	02.3		06.3	323	08.6		50.4	269	18.1		16.6
22	203	34.5	118	22.3		48.9	261	03.7		06.3	338	11.4		50.4	284	20.7		16.6
23	218	37.0	133	21.4		49.1	276	05.1		06.2	353	14.2		50.3	299	23.3		16.6
24	233	39.5	148	20.6	+24	49.3	291	06.5	-22	06.1	8	16.9	-15	50.2	314	25.9	-22	16.6
Dif	—		-8		+2		+14		+1		+28		+1		+26			
0																		

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15'8 PMG: 11 ^h 56 ^m 4			Edad: 29 ^d 9 PHE { SD: 16'4 PMG: 12 ^h 59 ^m 4 ^h : 59'9 12 ^h : 60'1 20 ^h : 60'2 R°: 60 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°	
h	o	'	o	'	o	'	o	'	h	m	h	m	h	m	h	m
0	180	54.7	+19	02.1	172	48.0	+16	01.2	60 N	20 34	21 39	** **	4 36	34	21 40	79
1	195	54.7		02.7	187	13.6	66	09.5	58	20	21 17	23 05	47	36	28	76
2	210	54.7		03.3	201	39.1	65	17.6	56	20 08	20 59	22 19	4 56	39	16	75
3	225	54.7		03.9	216	04.6	65	25.6	54	19 58	44	21 51	5 04	41	21 07	73
4	240	54.7		04.4	230	30.0	64	33.6	52	49	31	31	12	42	20 58	73
5	255	54.7	+19	05.0	244	55.3	63	+16 41.4	50	19 41	20 20	21 14	5 18	44	20 50	72
6	270	54.7	+19	05.6	259	20.5	62	+16 49.1	45	19 23	19 58	20 42	5 32	47	20 34	69
7	285	54.7		06.2	273	45.7	62	+16 56.8	40	19 09	40	18	44	49	20	68
8	300	54.6		06.7	288	10.8	61	+17 04.3	35	18 57	26	20 00	5 54	51	20 09	67
9	315	54.6		07.3	302	35.8	60	11.7	30	47	19 13	19 45	6 03	53	19 59	65
10	330	54.6		07.9	317	00.8	60	19.0	20	29	18 53	21	19	55	42	63
11	345	54.6	+19	08.5	331	25.7	59	+17 26.1	10 N	18 14	18 36	19 03	6 32	58	19 27	62
12	0	54.6	+19	09.0	345	50.5	58	+17 33.2	0	18 00	18 22	18 47	6 45	59	19 13	60
13	15	54.6		09.6	0	15.3	58	40.2	10 S	17 46	18 08	34	6 58	61	18 59	59
14	30	54.6		10.2	14	40.0	57	47.0	20	31	17 54	21	7 12	63	44	57
15	45	54.5		10.8	29	04.7	57	+17 53.7	30	14	40	09	27	67	27	55
16	60	54.5		11.3	43	29.3	56	+18 00.3	35	17 04	31	18 02	37	68	17	54
17	75	54.5	+19	11.9	57	53.8	55	+18 06.8	40	16 53	17 22	17 55	7 47	70	18 06	52
18	90	54.5	+19	12.5	72	18.3	55	+18 13.1	45	16 40	17 12	17 48	8 00	72	17 53	50
19	105	54.5		13.0	86	42.7	54	19.3	50	24	17 00	40	15	74	37	48
20	120	54.5		13.6	101	07.0	53	25.5	52	17	16 55	36	22	76	29	47
21	135	54.4		14.2	115	31.3	53	31.4	54	16 09	49	32	30	77	21	45
22	150	54.4		14.8	129	55.6	53	37.3	56	15 59	42	28	39	79	11	44
23	165	54.4		15.3	144	19.8	52	43.0	58	49	35	24	8 49	81	17 01	42
24	180	54.4	+19	15.9	158	43.9	51	+18 48.6	60 S	15 37	16 27	17 19	9 01	84	16 48	40

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 8 ^h 24 ^m 0		Mag: -3.9 PMG: 14 ^h 07 ^m		Mag: -0.8 PMG: 4 ^h 35 ^m		Mag: -2.5 PMG: 23 ^h 23 ^m		Mag: +0.3 PMG: 3 ^h 02 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	o	'	o	'	o	'	o	'	o	'								
0	233	39.5	148	20.6	+24	49.3	291	06.5	-22	06.1	314	25.9	-22	16.6				
1	248	41.9	163	19.8		49.5	306	07.9		06.0	329	28.4		16.6				
2	263	44.4	178	18.9		49.7	321	09.3		05.9	344	31.0		16.6				
3	278	46.9	193	18.1		49.9	336	10.7		05.8	359	33.6		16.6				
4	293	49.3	208	17.3		50.1	351	12.1		05.7	14	36.2		16.6				
5	308	51.8	223	16.4	+24	50.2	6	13.5	-22	05.6	83	30.8	-15	16.6				
6	323	54.3	238	15.6	+24	50.4	21	14.9	-22	05.6	98	33.6	-15	16.6				
7	338	56.7	253	14.7		50.6	36	16.4		05.5	113	36.4		16.7				
8	353	59.2	268	13.9		50.8	51	17.8		05.4	128	39.2		16.7				
9	9	01.6	283	13.1		50.9	66	19.2		05.3	143	41.9		16.7				
10	24	04.1	298	12.2		51.1	81	20.6		05.2	158	44.7		16.7				
11	39	06.6	313	11.4	+24	51.3	96	22.0	-22	05.1	173	47.5	-15	16.7				
12	54	09.0	328	10.6	+24	51.5	111	23.4	-22	05.0	188	50.3	-15	16.7				
13	69	11.5	343	09.7		51.6	126	24.8		04.9	203	53.1		16.7				
14	84	14.0	358	08.9		51.8	141	26.2		04.9	218	55.8		16.7				
15	99	16.4	13	08.1		52.0	156	27.6		04.8	233	58.6		16.7				
16	114	18.9	28	07.2		52.1	171	29.0		04.7	249	01.4		16.7				
17	129	21.4	43	06.4	+24	52.3	186	30.4	-22	04.6	264	04.2	-15	16.7				
18	144	23.8	58	05.6	+24	52.5	201	31.8	-22	04.5	279	06.9	-15	16.7				
19	159	26.3	73	04.7		52.6	216	33.3		04.4	294	09.7		16.7				
20	174	28.8	88	03.9		52.8	231	34.7		04.3	309	12.5		16.8				
21	189	31.2	103	03.0		52.9	246	36.1		04.3	324	15.3		16.8				
22	204	33.7	118	02.2		53.1	261	37.5		04.2	339	18.1		16.8				
23	219	36.1	133	01.4		53.3	276	38.9		04.1	354	20.8		16.8				
24	234	38.6	148	00.5	+24	53.4	291	40.3	-22	04.0	9	23.6	-15	16.8				
Dif	—		-8		+2		+14		+1		+28		+1		+26		0	

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 4				Edad: 1 ^d 5 PHE { 4 ^h : 60 ^m 2 12 ^h : 60 ^m 3 20 ^h : 60 ^m 3 PMG: 13 ^h 59 ^m R°: 61 ^m														
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°			
h	o	'	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m	m	
0	180	54.4	+19	15.9	158	43.9	+18	48.6	60 N	*** **	2 13	3 18	5 10	48	22 59	63			
1	195	54.4		16.5	173	08.0		54.1	55	58	0 48	35	32	23 50	44	63			
2	210	54.4		17.0	187	32.0	+18	59.4	53	56	1 33	2 53	44	35 50	31	64			
3	225	54.3		17.6	201	56.0	+19	04.6	52	54	2 01	3 08	3 54	45 51	20	64			
4	240	54.3		18.2	216	20.0		09.7	51	52	22	21	4 03	5 54	52	11	63		
5	255	54.3	+19	18.7	230	43.9	+19	14.7	50	50	2 39	3 32	4 12	6 02	53	22 02	63		
6	270	54.3	+19	19.3	245	07.7	+19	19.5	48	45	3 11	3 55	4 29	6 19	55	21 43	63		
7	285	54.3		19.8	259	31.5		24.2	47	40	34	4 12	43	33 56	28	63			
8	300	54.2		20.4	273	55.3		28.7	45	35	3 53	27	4 55	45 57	16	62			
9	315	54.2		21.0	288	19.0		33.1	44	30	4 08	4 39	5 06	6 56	57	21 04	63		
10	330	54.2		21.5	302	42.7		37.4	43	20	31	5 00	23	7 14	59	20 45	62		
11	345	54.2	+19	22.1	317	06.4	+19	41.5	41	10 N	4 50	5 16	5 39	7 30	60	20 29	61		
12	0	54.2	+19	22.7	331	30.0	+19	45.5	40	0	5 05	5 31	5 53	7 44	61	20 13	62		
13	15	54.1		23.2	345	53.6		49.4	39	10 S	19	45	6 07	7 59	62	19 58	61		
14	30	54.1		23.8	0	17.1		53.1	37	20	32	5 59	22	8 15	63	41	61		
15	45	54.1		24.3	14	40.6	+19	56.7	36	30	44	6 13	39	34 64	22	60			
16	60	54.1		24.9	29	04.1	+20	00.1	34	35	51	22	6 49	45 64	19 11	60			
17	75	54.1	+19	25.4	43	27.6	+20	03.4	33	40	5 58	6 31	7 00	8 57	65	18 58	60		
18	90	54.0	+19	26.0	57	51.0	+20	06.5	31	45	6 05	6 41	7 13	9 12	66	18 43	59		
19	105	54.0		26.6	72	14.4		09.5	30	50	14	53	29	29 68	25	58			
20	120	54.0		27.1	86	37.8		12.4	29	52	17	6 59	37	38 68	16	58			
21	135	54.0		27.7	101	01.2		15.1	27	54	21	7 05	45	47 69	18 06	58			
22	150	53.9		28.2	115	24.5		17.7	26	56	25	12	7 54	9 58	70	17 55	57		
23	165	53.9		28.8	129	47.9		20.1	24	58	30	19	8 05	10 10	71	43	56		
24	180	53.9	+19	29.3	144	11.2	+20	22.4	23	60 S	6 35	7 27	8 17	10 25	71	17 28	56		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 8 ^h 20 ^m 1		Mag: -3.9 PMG: 14 ^h 09 ^m		Mag: -0.8 PMG: 4 ^h 33 ^m		Mag: -2.5 PMG: 23 ^h 18 ^m		Mag: +0.3 PMG: 2 ^h 58 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
	Dec		Dec		Dec		Dec		Dec	
h	o	'	o	'	o	'	o	'	o	'
0	234	38.6	148	00.5	+24	53.4	291	40.3	-22	04.0
1	249	41.1	162	59.7		53.6	306	41.7		03.9
2	264	43.5	177	58.9		53.7	321	43.2		03.8
3	279	46.0	192	58.0		53.9	336	44.6		03.7
4	294	48.5	207	57.2		54.0	351	46.0		03.7
5	309	50.9	222	56.4	+24	54.2	6	47.4	-22	03.6
6	324	53.4	237	55.5	+24	54.3	21	48.8	-22	03.5
7	339	55.9	252	54.7		54.5	36	50.3		03.4
8	354	58.3	267	53.8		54.6	51	51.7		03.3
9	10	00.8	282	53.0		54.8	66	53.1		03.2
10	25	03.3	297	52.2		54.9	81	54.5		03.1
11	40	05.7	312	51.3	+24	55.1	96	55.9	-22	03.1
12	55	08.2	327	50.5	+24	55.2	111	57.4	-22	03.0
13	70	10.6	342	49.7		55.3	126	58.8		02.9
14	85	13.1	357	48.8		55.5	142	00.2		02.8
15	100	15.6	12	48.0		55.6	157	01.6		02.7
16	115	18.0	27	47.2		55.8	172	03.1		02.6
17	130	20.5	42	46.3	+24	55.9	187	04.5	-22	02.6
18	145	23.0	57	45.5	+24	56.0	202	05.9	-22	02.5
19	160	25.4	72	44.6		56.2	217	07.4		02.4
20	175	27.9	87	43.8		56.3	232	08.8		02.3
21	190	30.4	102	43.0		56.4	247	10.2		02.2
22	205	32.8	117	42.1		56.5	262	11.6		02.1
23	220	35.3	132	41.3		56.7	277	13.1		02.1
24	235	37.8	147	40.5	+24	56.8	292	14.5	-22	02.0
Dif	—		-8 +1		+14 +1		+28 +1		+26 0	

UT	SOL				● LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15°8 PMG: 11 ^h 56 ^m 4				Edad: 2 ^d 5 PHE { 4 ^h : 60°/3 12 ^h : 60°/2 20 ^h : 60°/2 PMG: 15 ^h 00 ^m R°: 61 ^m												
	hG ☉		Dec		hG ☾		Dif							Civil	Náutico	Hora	R°
h	o	'	o	'	o	'	o	'	o	h m	h m	h m	h m m	h m m	h m m	h m m	
0	180	53.9	+19	29.3	144	11.2	+20	22.4	60 N	20 39	21 46	***	5 58	63	***	**	
1	195	53.9		29.9	158	34.5		24.6	58	24	22	23 24	6 13	63	23 47	49	
2	210	53.9		30.4	172	57.7		26.6	56	12	21 04	22 27	25	63	35	50	
3	225	53.8		31.0	187	21.0		28.4	54	20 01	20 48	21 57	36	63	24	51	
4	240	53.8		31.5	201	44.3		30.1	52	19 52	35	35	46	63	14	52	
5	255	53.8	+19	32.1	216	07.5	+20	31.7	50	19 43	20 24	21 18	6 55	63	23 05	53	
6	270	53.8	+19	32.6	230	30.8	+20	33.1	45	19 26	20 00	20 45	7 14	62	22 46	54	
7	285	53.7		33.2	244	54.0		34.3	40	19 11	19 42	21	29	62	31	55	
8	300	53.7		33.7	259	17.3		35.4	35	18 59	27	20 02	42	62	18	56	
9	315	53.7		34.3	273	40.5		36.4	30	48	19 15	19 46	7 53	62	22 07	57	
10	330	53.7		34.8	288	03.8		37.2	20	30	18 54	22	8 13	61	21 47	59	
11	345	53.6	+19	35.4	302	27.0	+20	37.9	10 N	18 14	18 37	19 03	8 30	61	21 30	60	
12	0	53.6	+19	35.9	316	50.2	+20	38.4	0	18 00	18 22	18 47	8 45	61	21 15	60	
13	15	53.6		36.5	331	13.5		38.8	10 S	17 46	18 08	34	9 01	61	20 59	61	
14	30	53.6		37.0	345	36.8		39.0	20	30	17 54	21	18	61	42	62	
15	45	53.5		37.6	0	00.0		39.1	30	13	39	08	38	60	22	64	
16	60	53.5		38.1	14	23.3		39.1	35	17 03	30	18 01	9 49	60	20 11	64	
17	75	53.5	+19	38.7	28	46.6	+20	38.8	40	16 52	17 21	17 54	10 02	59	19 58	64	
18	90	53.4	+19	39.2	43	09.9	+20	38.5	45	16 38	17 10	17 46	10 18	59	19 42	66	
19	105	53.4		39.7	57	33.2		38.0	50	22	16 58	38	37	58	23	67	
20	120	53.4		40.3	71	56.6		37.3	52	14	52	34	46	58	14	67	
21	135	53.4		40.8	86	20.0		36.5	54	16 06	46	30	10 56	57	19 04	68	
22	150	53.3		41.4	100	43.3		35.6	56	15 56	39	26	11 08	56	18 52	69	
23	165	53.3		41.9	115	06.7		34.5	58	45	32	21	21	56	39	70	
24	180	53.3	+19	42.5	129	30.2	+20	33.3	60 S	15 33	16 23	17 16	11 36	55	18 24	70	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 8 ^h 16 ^m 1		Mag: -3.9 PMG: 14 ^h 10 ^m		Mag: -0.8 PMG: 4 ^h 31 ^m		Mag: -2.5 PMG: 23 ^h 14 ^m		Mag: +0.2 PMG: 2 ^h 54 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	o	'	o	'	o	'	o	'	o	'
0	235	37.8	147	40.5	292	14.5	10	30.2	316	29.8
1	250	40.2	162	39.6	307	15.9	25	33.0	331	32.4
2	265	42.7	177	38.8	322	17.4	40	35.8	346	35.0
3	280	45.1	192	37.9	337	18.8	55	38.6	1	37.6
4	295	47.6	207	37.1	352	20.2	70	41.3	16	40.2
5	310	50.1	222	36.3	7	21.7	85	44.1	31	42.8
6	325	52.5	237	35.4	22	23.1	100	46.9	46	45.3
7	340	55.0	252	34.6	37	24.5	115	49.7	61	47.9
8	355	57.5	267	33.8	52	26.0	130	52.4	76	50.5
9	10	59.9	282	32.9	67	27.4	145	55.2	91	53.1
10	26	02.4	297	32.1	82	28.9	160	58.0	106	55.7
11	41	04.9	312	31.3	97	30.3	176	00.8	121	58.3
12	56	07.3	327	30.4	112	31.7	191	03.5	137	00.9
13	71	09.8	342	29.6	127	33.2	206	06.3	152	03.5
14	86	12.3	357	28.7	142	34.6	221	09.1	167	06.0
15	101	14.7	12	27.9	157	36.1	236	11.9	182	08.6
16	116	17.2	27	27.1	172	37.5	251	14.6	197	11.2
17	131	19.6	42	26.2	187	38.9	266	17.4	212	13.8
18	146	22.1	57	25.4	202	40.4	281	20.2	227	16.4
19	161	24.6	72	24.6	217	41.8	296	23.0	242	19.0
20	176	27.0	87	23.7	232	43.3	311	25.7	257	21.6
21	191	29.5	102	22.9	247	44.7	326	28.5	272	24.2
22	206	32.0	117	22.1	262	46.2	341	31.3	287	26.8
23	221	34.4	132	21.2	277	47.6	356	34.0	302	29.3
24	236	36.9	147	20.4	292	49.1	11	36.8	317	31.9
Dif	—		-8		+1		+28		+26	

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 5				Edad: 3 ^d 5 PHE { 4 ^h : 60 ^h 1 12 ^h : 60 ^h 0 20 ^h : 59 ^h 9 PMG: 16 ^h 01 ^m R°: 58 ^m											
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°
h	o	'	o	'	o	'	o	'	o	h	m	h	m	h	m	m
0	180	53.3	+19	42.5	129	30.2	+20	33.3	60 N	***	***	2 07	3 14	7 01	77	0 02 47
1	195	53.2		43.0	143	53.6	44	31.9	58	0 29	30	28	16	75	***	***
2	210	53.2		43.5	158	17.1	45	30.4	56	1 25	2 49	40	28	74	***	***
3	225	53.2		44.1	172	40.6	45	28.7	54	1 55	3 04	3 51	39	72	***	***
4	240	53.2		44.6	187	04.2	46	26.9	52	2 17	17	4 01	49	71	***	***
5	255	53.1	+19	45.1	201	27.8	46	+20 24.9	50	2 35	3 29	4 09	7 58	70	23 58	42
6	270	53.1	+19	45.7	215	51.4	46	+20 22.9	45	3 08	3 52	4 27	8 16	68	23 40	46
7	285	53.1		46.2	230	15.0	46	20.6	40	32	4 10	41	31	67	26	48
8	300	53.0		46.7	244	38.7	47	18.2	35	3 51	25	4 54	44	65	14	50
9	315	53.0		47.3	259	02.5	48	15.7	30	4 06	38	5 04	8 55	64	23 04	51
10	330	53.0		47.8	273	26.2	47	13.1	20	31	4 59	23	9 14	63	22 46	53
11	345	52.9	+19	48.3	287	50.0	48	+20 10.3	10 N	4 50	5 16	5 38	9 31	61	22 30	56
12	0	52.9	+19	48.9	302	13.9	49	+20 07.3	0	5 05	5 31	5 53	9 46	60	22 15	58
13	15	52.9		49.4	316	37.8	49	04.2	10 S	19	45	6 07	10 02	58	22 00	60
14	30	52.8		49.9	331	01.7	49	+20 01.0	20	32	5 59	23	19	56	21 44	62
15	45	52.8		50.5	345	25.7	50	+19 57.7	30	46	6 15	40	38	54	26	64
16	60	52.8		51.0	359	49.7	50	54.2	35	52	23	6 50	10 49	53	15	66
17	75	52.7	+19	51.5	14	13.8	51	+19 50.6	40	5 59	6 32	7 02	11 01	52	21 02	68
18	90	52.7	+19	52.1	28	38.0	52	+19 46.8	45	6 07	6 43	7 15	11 17	49	20 48	70
19	105	52.7		52.6	43	02.1	51	42.9	50	16	6 56	32	35	47	30	72
20	120	52.6		53.1	57	26.4	53	38.9	52	20	7 01	40	44	46	21	74
21	135	52.6		53.7	71	50.7	53	34.8	54	24	08	48	11 53	45	12	75
22	150	52.6		54.2	86	15.0	53	30.5	56	28	15	7 58	12 04	44	20 01	77
23	165	52.5		54.7	100	39.4	54	26.1	58	33	22	8 09	17	41	19 49	79
24	180	52.5	+19	55.2	115	03.9	55	+19 21.5	60 S	6 38	7 31	8 22	12 31	40	19 34	82

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 8 ^h 12 ^m 2		Mag: -3.9 PMG: 14 ^h 11 ^m		Mag: -0.9 PMG: 4 ^h 28 ^m		Mag: -2.5 PMG: 23 ^h 09 ^m		Mag: +0.2 PMG: 2 ^h 49 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	o	'	o	'	o	'	o	'	o	'
0	236	36.9	147	20.4	+24	59.5	292	49.1	-22	00.0
1	251	39.4	162	19.5		59.6	307	50.5	-21	59.9
2	266	41.8	177	18.7		59.7	322	52.0		59.9
3	281	44.3	192	17.9		59.8	337	53.4		59.8
4	296	46.8	207	17.0		59.9	352	54.9		59.7
5	311	49.2	222	16.2	+24	59.9	7	56.3	-21	59.6
6	326	51.7	237	15.4	+25	00.0	22	57.8	-21	59.5
7	341	54.1	252	14.5	+25	00.1	37	59.2		59.5
8	356	56.6	267	13.7		00.2	53	00.7		59.4
9	11	59.1	282	12.9		00.3	68	02.1		59.3
10	27	01.5	297	12.0		00.4	83	03.6		59.2
11	42	04.0	312	11.2	+25	00.5	98	05.0	-21	59.1
12	57	06.5	327	10.3	+25	00.5	113	06.5	-21	59.1
13	72	08.9	342	09.5		00.6	128	08.0		59.0
14	87	11.4	357	08.7		00.7	143	09.4		58.9
15	102	13.9	12	07.8		00.8	158	10.9		58.8
16	117	16.3	27	07.0		00.9	173	12.3		58.7
17	132	18.8	42	06.2	+25	00.9	188	13.8	-21	58.7
18	147	21.2	57	05.3	+25	01.0	203	15.3	-21	58.6
19	162	23.7	72	04.5		01.1	218	16.7		58.5
20	177	26.2	87	03.7		01.2	233	18.2		58.4
21	192	28.6	102	02.8		01.2	248	19.6		58.4
22	207	31.1	117	02.0		01.3	263	21.1		58.3
23	222	33.6	132	01.2		01.4	278	22.6		58.2
24	237	36.0	147	00.3	+25	01.4	293	24.0	-21	58.1
Dif	—		-8		+1		+15		+1	
							+28		+1	
									+26	
									0	

UT	SOL				 LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 15'8 PMG: 11 ^h 56 ^m 5				Edad: 4 ^d 5 PHE { 4 ^h : 59'8 12 ^h : 59'6 20 ^h : 59'5 Rº: 56 ^m														
	hG ☉		Dec		hG ☾		Dif				Dec		Dif		Civil	Náutico	Hora	Rº	Hora
h	o	'	o	'	o	'	o	'	o	'	h	m	h	m	h	m	h	m	m
0	180	52.5	+19	55.2	115	03.9	+19	21.5	60 N	20 43	21 52	***	8 18	84	0 49	34			
1	195	52.5		55.8	129	28.4	55	16.8	58	28	28	***	31	81	36	36			
2	210	52.4		56.3	143	53.0	56	12.0	48	16	21 08	22 36	42	79	25	38			
3	225	52.4		56.8	158	17.6	56	07.1	54	20 05	20 52	22 03	8 51	78	15	40			
4	240	52.4		57.3	172	42.3	57	+19 02.1	52	19 55	38	21 40	9 00	76	0 06	41			
5	255	52.3	+19	57.8	187	07.1	58	+18 56.9	50	19 46	20 27	21 22	9 08	74	***	***			
6	270	52.3	+19	58.4	201	31.9	58	+18 51.6	53	19 28	20 03	20 48	9 24	71	***	***			
7	285	52.3		58.9	215	56.8	59	46.2	54	13	19 44	23	38	68	***	***			
8	300	52.2		59.4	230	21.8	60	40.6	56	19 00	29	20 04	49	67	***	***			
9	315	52.2	+19	59.9	244	46.8	60	35.0	56	18 49	19 16	19 48	9 59	65	23 55	46			
10	330	52.2	+20	00.5	259	11.9	61	29.2	58	31	18 55	23	10 17	61	39	49			
11	345	52.1	+20	01.0	273	37.1	62	+18 23.3	59	10 N	18 15	18 37	19 04	10 32	58	23 26	52		
12	0	52.1	+20	01.5	288	02.3	62	+18 17.3	60	0	18 00	18 22	18 48	10 46	56	23 13	55		
13	15	52.0		02.0	302	27.6	63	11.1	62	10 S	17 45	18 08	33	11 00	54	23 00	58		
14	30	52.0		02.5	316	52.9	63	+18 04.9	62	20	30	17 53	20	15	51	22 46	61		
15	45	52.0		03.0	331	18.4	65	+17 58.5	64	30	12	38	07	32	48	30	64		
16	60	51.9		03.6	345	43.9	65	52.1	64	35	17 02	29	18 00	42	46	21	66		
17	75	51.9	+20	04.1	0	09.5	66	+17 45.5	66	40	16 50	17 19	17 52	11 53	44	22 10	69		
18	90	51.9	+20	04.6	14	35.1	66	+17 38.8	67	45	16 36	17 09	17 45	12 06	42	21 58	71		
19	105	51.8		05.1	29	00.8	67	32.0	68	50	19	16 56	36	22	39	42	75		
20	120	51.8		05.6	43	26.6	68	25.1	69	52	12	50	32	30	37	35	77		
21	135	51.7		06.1	57	52.5	69	18.1	70	54	16 03	43	28	38	36	27	79		
22	150	51.7		06.6	72	18.4	69	10.9	72	56	15 53	36	23	48	33	18	81		
23	165	51.7		07.2	86	44.4	70	+17 03.7	72	58	42	29	18	12 58	31	21 08	83		
24	180	51.6	+20	07.7	101	10.5	71	+16 56.4	73	60 S	15 29	16 20	17 13	13 11	28	20 56	87		

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 8 ^h 08 ^m 3		Mag: -3.9 PMG: 14 ^h 13 ^m			Mag: -0.9 PMG: 4 ^h 26 ^m			Mag: -2.5 PMG: 23 ^h 05 ^m			Mag: +0.2 PMG: 2 ^h 45 ^m		
	hG ♈		hG ♀ Dec			hG ♂ Dec			hG ♃ Dec			hG ♄ Dec		
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'
0	237	36.0	147	00.3	+25	01.4	293	24.0	-21	58.1	12	43.3	-15	42.3
1	252	38.5	161	59.5		01.5	308	25.5		58.0	27	46.1		42.2
2	267	41.0	176	58.6		01.6	323	27.0		58.0	42	48.9		42.1
3	282	43.4	191	57.8		01.6	338	28.4		57.9	57	51.7		42.0
4	297	45.9	206	57.0		01.7	353	29.9		57.8	72	54.4		42.0
5	312	48.4	221	56.1	+25	01.8	8	31.4	-21	57.7	87	57.2	-15	41.9
6	327	50.8	236	55.3	+25	01.8	23	32.8	-21	57.7	103	00.0	-15	41.8
7	342	53.3	251	54.5		01.9	38	34.3		57.6	118	02.7		41.7
8	357	55.7	266	53.6		01.9	53	35.8		57.5	133	05.5		41.6
9	12	58.2	281	52.8		02.0	68	37.2		57.4	148	08.3		41.6
10	28	00.7	296	52.0		02.0	83	38.7		57.4	163	11.1		41.5
11	43	03.1	311	51.1	+25	02.1	98	40.2	-21	57.3	178	13.8	-15	41.4
12	58	05.6	326	50.3	+25	02.2	113	41.7	-21	57.2	193	16.6	-15	41.3
13	73	08.1	341	49.5		02.2	128	43.1		57.1	208	19.4		41.2
14	88	10.5	356	48.6		02.3	143	44.6		57.1	223	22.1		41.2
15	103	13.0	11	47.8		02.3	158	46.1		57.0	238	24.9		41.1
16	118	15.5	26	47.0		02.4	173	47.6		56.9	253	27.7		41.0
17	133	17.9	41	46.1	+25	02.4	188	49.0	-21	56.8	268	30.4	-15	40.9
18	148	20.4	56	45.3	+25	02.4	203	50.5	-21	56.8	283	33.2	-15	40.8
19	163	22.9	71	44.5		02.5	218	52.0		56.7	298	36.0		40.8
20	178	25.3	86	43.6		02.5	233	53.5		56.6	313	38.7		40.7
21	193	27.8	101	42.8		02.6	248	55.0		56.5	328	41.5		40.6
22	208	30.2	116	42.0		02.6	263	56.4		56.5	343	44.3		40.5
23	223	32.7	131	41.1		02.6	278	57.9		56.4	358	47.1		40.4
24	238	35.2	146	40.3	+25	02.7	293	59.4	-21	56.3	13	49.8	-15	40.3

Dif	—	-8	+1	+15	+1	+28	+1	+26	0

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 6				Edad: 5 ^d 5 PHE { 4 ^h : 59 ^m 3 12 ^h : 59 ^m 1 20 ^h : 58 ^m 9 PMG: 17 ^h 55 ^m R°: 52 ^m											
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°
h	o	'	o	'	o	'	o	'	o	h	m	h	m	h	m	m
0	180	51.6	+20	07.7	101	10.5	+16	56.4	60 N	** ** *	2 00	3 09	9 42	87	1 23	24
1	195	51.6		08.2	115	36.7	72	49.0	58	** ** *	25	24	9 52	84	12	27
2	210	51.5		08.7	130	02.9	72	41.4	56	1 17	2 45	37	10 01	81	1 03	29
3	225	51.5		09.2	144	29.2	73	33.8	54	1 49	3 01	48	09 78		0 55	31
4	240	51.5		09.7	158	55.6	74	26.1	52	2 12	14	3 58	16 76		47	34
5	255	51.4	+20	10.2	173	22.0	74	+16 18.2	50	2 31	3 26	4 07	10 22	75	0 40	35
6	270	51.4	+20	10.7	187	48.6	76	+16 10.3	45	3 05	3 50	4 25	10 35	71	0 26	39
7	285	51.3		11.2	202	15.2	76	+16 02.3	40	30	4 09	40	46 68		14	41
8	300	51.3		11.7	216	41.9	77	+15 54.2	35	3 49	24	4 52	10 56	65	0 04	43
9	315	51.3		12.2	231	08.6	77	46.0	30	4 05	37	5 03	11 04	63	** ** *	**
10	330	51.2		12.7	245	35.4	78	37.7	20	30	4 58	22	18 60		** ** *	**
11	345	51.2	+20	13.3	260	02.4	80	+15 29.3	10 N	4 49	5 16	5 38	11 30	57	** ** *	**
12	0	51.1	+20	13.8	274	29.3	79	+15 20.9	0	5 05	5 31	5 53	11 42	53	** ** *	**
13	15	51.1		14.3	288	56.4	81	12.3	10 S	20	5 46	6 08	11 54	50	23 58	55
14	30	51.0		14.8	303	23.5	81	+15 03.7	20	33	6 00	24	12 06	47	47	58
15	45	51.0		15.3	317	50.7	82	+14 55.0	30	47	16	41	20 43		34	63
16	60	51.0		15.8	332	18.0	83	46.2	35	5 54	24	6 52	28 41		27	65
17	75	50.9	+20	16.3	346	45.4	84	+14 37.3	40	6 01	6 34	7 04	12 37	39	23 19	67
18	90	50.9	+20	16.8	1	12.8	84	+14 28.3	45	6 09	6 45	7 18	12 48	35	23 09	71
19	105	50.8		17.3	15	40.3	85	19.3	50	18	6 58	34	13 01	32	22 57	75
20	120	50.8		17.8	30	07.9	86	10.1	52	22	7 04	42	07 30		52	76
21	135	50.7		18.3	44	35.6	87	+14 00.9	54	26	10	7 51	14 28		46	78
22	150	50.7		18.8	59	03.3	87	+13 51.7	56	31	18	8 01	21 26		39	81
23	165	50.6		19.3	73	31.1	88	42.3	58	36	26	13	29 24		31	84
24	180	50.6	+20	19.8	87	59.0	89	+13 32.9	60 S	6 41	7 34	8 26	13 39	20	22 23	86

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 8 ^h 04 ^m 3		Mag: -3.9 PMG: 14 ^h 14 ^m		Mag: -0.9 PMG: 4 ^h 24 ^m		Mag: -2.5 PMG: 23 ^h 00 ^m		Mag: +0.2 PMG: 2 ^h 41 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	o	'	o	'	o	'	o	'	o	'
0	238	35.2	146	40.3	+25	02.7	293	59.4	-21	56.3
1	253	37.6	161	39.5		02.7	309	00.9		56.2
2	268	40.1	176	38.6		02.8	324	02.4		56.2
3	283	42.6	191	37.8		02.8	339	03.8		56.1
4	298	45.0	206	37.0		02.8	354	05.3		56.0
5	313	47.5	221	36.1	+25	02.9	9	06.8	-21	56.0
6	328	50.0	236	35.3	+25	02.9	24	08.3	-21	55.9
7	343	52.4	251	34.5		02.9	39	09.8		55.8
8	358	54.9	266	33.6		02.9	54	11.3		55.7
9	13	57.4	281	32.8		03.0	69	12.8		55.7
10	28	59.8	296	32.0		03.0	84	14.3		55.6
11	44	02.3	311	31.1	+25	03.0	99	15.7	-21	55.5
12	59	04.7	326	30.3	+25	03.0	114	17.2	-21	55.4
13	74	07.2	341	29.5		03.1	129	18.7		55.4
14	89	09.7	356	28.6		03.1	144	20.2		55.3
15	104	12.1	11	27.8		03.1	159	21.7		55.2
16	119	14.6	26	27.0		03.1	174	23.2		55.2
17	134	17.1	41	26.1	+25	03.1	189	24.7	-21	55.1
18	149	19.5	56	25.3	+25	03.2	204	26.2	-21	55.0
19	164	22.0	71	24.5		03.2	219	27.7		54.9
20	179	24.5	86	23.6		03.2	234	29.2		54.9
21	194	26.9	101	22.8		03.2	249	30.7		54.8
22	209	29.4	116	22.0		03.2	264	32.2		54.7
23	224	31.8	131	21.1		03.2	279	33.7		54.7
24	239	34.3	146	20.3	+25	03.2	294	35.2	-21	54.6
Dif	—		-8		0		+15		+1	

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8			Edad: 6 ^d 5	PHE {	4 ^h : 58'8 12 ^h : 58'6 20 ^h : 58'4			Civil			Náutico		Hora	R°	Hora	R°
	PMG: 11 ^h 56 ^m 7	hG ☉	Dec						hG ☾	Dif	Dec	Dif	Civil				
h	o	'	o	'	o	'	o	h m	h m	h m	h m m	h m m	h m m	h m m			
0	180	50.6	+20	19.8	87	59.0	+13	32.9	60 N	20 48	21 59	***	11 09	85	1 47	18	
1	195	50.6		20.3	102	26.9	89	23.4	58	32	33	***	16	82	39	21	
2	210	50.5		20.8	116	55.0	91	13.8	56	19	21 12	22 45	22	80	32	24	
3	225	50.5		21.2	131	23.1	91	+13	54	20 08	20 56	22 09	27	78	26	26	
4	240	50.4		21.7	145	51.2	91	+12	52	19 58	42	21 45	32	76	21	27	
5	255	50.4	+20	22.2	160	19.5	93	+12	50	19 49	20 30	21 26	11 37	74	1 15	30	
6	270	50.3	+20	22.7	174	47.8	93	+12	45	19 30	20 05	20 51	11 46	70	1 05	33	
7	285	50.3		23.2	189	16.2	94	25.0	40	15	19 46	25	11 54	67	0 55	37	
8	300	50.2		23.7	203	44.6	94	15.1	35	19 02	30	20 05	12 01	64	47	39	
9	315	50.2		24.2	218	13.2	96	+12	30	18 51	19 17	19 49	07	62	41	41	
10	330	50.1		24.7	232	41.7	95	+11	20	32	18 56	24	18	57	28	46	
11	345	50.1	+20	25.2	247	10.4	97	+11	10 N	18 15	18 38	19 04	12 27	53	0 18	48	
12	0	50.0	+20	25.7	261	39.1	97	+11	0	18 00	18 22	18 48	12 35	51	0 08	52	
13	15	50.0		26.2	276	07.9	98	24.4	10 S	17 45	18 08	33	44	47	***	***	
14	30	49.9		26.7	290	36.8	99	14.0	20	29	17 53	20	12 53	43	***	***	
15	45	49.9		27.1	305	05.7	99	+11	30	11	37	18 06	13 03	39	***	***	
16	60	49.8		27.6	319	34.7	100	+10	35	17 01	28	17 59	09	37	***	***	
17	75	49.8	+20	28.1	334	03.8	101	+10	40	16 49	17 18	17 51	13 16	34	***	***	
18	90	49.8	+20	28.6	348	32.9	101	+10	45	16 34	17 07	17 43	13 23	32	***	***	
19	105	49.7		29.1	3	02.1	102	21.7	50	17	16 54	34	33	27	***	***	
20	120	49.7		29.6	17	31.4	103	11.1	52	09	48	30	37	26	***	***	
21	135	49.6		30.1	32	00.7	103	+10	54	16 00	41	25	42	23	***	***	
22	150	49.6		30.5	46	30.1	104	+9	56	15 50	34	21	47	21	***	***	
23	165	49.5		31.0	60	59.5	104	38.9	58	38	26	16	53	19	23 55	82	
24	180	49.5	+20	31.5	75	29.0	105	+9	60 S	15 25	16 17	17 10	13 59	17	23 49	85	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 8 ^h 00 ^m 4			Mag: -3.9 PMG: 14 ^h 15 ^m			Mag: -0.9 PMG: 4 ^h 21 ^m			Mag: -2.5 PMG: 22 ^h 56 ^m			Mag: +0.2 PMG: 2 ^h 37 ^m				
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec						
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'	
0	239	34.3	146	20.3	+25	03.2	294	35.2	-21	54.6	14	56.2	-15	38.4	320	38.8	
1	254	36.8	161	19.5		03.2	309	36.7		54.5	29	59.0		38.3	335	41.4	
2	269	39.2	176	18.6		03.2	324	38.2		54.5	45	01.8		38.3	350	44.0	
3	284	41.7	191	17.8		03.2	339	39.7		54.4	60	04.5		38.2	5	46.6	
4	299	44.2	206	17.0		03.2	354	41.2		54.3	75	07.3		38.1	20	49.2	
5	314	46.6	221	16.2	+25	03.2	9	42.7	-21	54.2	90	10.1	-15	38.0	35	51.8	
6	329	49.1	236	15.3	+25	03.2	24	44.2	-21	54.2	105	12.8	-15	38.0	50	54.4	
7	344	51.6	251	14.5		03.2	39	45.7		54.1	120	15.6		37.9	65	57.0	
8	359	54.0	266	13.7		03.2	54	47.2		54.0	135	18.4		37.8	80	59.6	
9	14	56.5	281	12.8		03.2	69	48.7		54.0	150	21.1		37.7	96	02.2	
10	29	59.0	296	12.0		03.2	84	50.2		53.9	165	23.9		37.6	111	04.8	
11	45	01.4	311	11.2	+25	03.2	99	51.7	-21	53.8	180	26.6	-15	37.6	126	07.4	
12	60	03.9	326	10.3	+25	03.2	114	53.2	-21	53.8	195	29.4	-15	37.5	141	10.0	
13	75	06.3	341	09.5		03.2	129	54.7		53.7	210	32.2		37.4	156	12.6	
14	90	08.8	356	08.7		03.2	144	56.2		53.6	225	34.9		37.3	171	15.2	
15	105	11.3	11	07.9		03.2	159	57.8		53.6	240	37.7		37.2	186	17.8	
16	120	13.7	26	07.0		03.2	174	59.3		53.5	255	40.5		37.2	201	20.4	
17	135	16.2	41	06.2	+25	03.2	190	00.8	-21	53.4	270	43.2	-15	37.1	216	23.0	
18	150	18.7	56	05.4	+25	03.2	205	02.3	-21	53.4	285	46.0	-15	37.0	231	25.6	
19	165	21.1	71	04.5		03.1	220	03.8		53.3	300	48.8		36.9	246	28.2	
20	180	23.6	86	03.7		03.1	235	05.3		53.2	315	51.5		36.8	261	30.8	
21	195	26.1	101	02.9		03.1	250	06.8		53.2	330	54.3		36.8	276	33.4	
22	210	28.5	116	02.1		03.1	265	08.3		53.1	345	57.0		36.7	291	36.0	
23	225	31.0	131	01.2		03.1	280	09.9		53.0	0	59.8		36.6	306	38.6	
24	240	33.5	146	00.4	+25	03.0	295	11.4	-21	53.0	16	02.6	-15	36.5	321	41.2	
Dif	—		-8		0		+15		+1		+28		+1		+26		0

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna			
	SD: 15'8 PMG: 11 ^h 56 ^m 7				Edad: 7 ^d 5 PHE SD: 15'8 PMG: 19 ^h 37 ^m R°: 48 ^m														
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°			
h	o	'	o	'	o	'	o	'	o	h	m	h	m	h	m	m	h	m	m
0	180	49.5	+20	31.5	75	29.0	+9	28.1	60 N	** ** *	1 54	3 05	12 34	84	2 05	16			
1	195	49.4		32.0	89	58.6 ¹⁰⁶		17.3 ¹⁰⁸	58	** ** *	2 20	21	38	81	2 00	18			
2	210	49.4		32.5	104	28.2 ¹⁰⁶	+9	06.4 ¹⁰⁹	56	1 08	41	34	42	78	1 56	20			
3	225	49.3		32.9	118	57.9 ¹⁰⁷	+8	55.5 ¹⁰⁹	54	1 43	2 57	45	45	76	52	22			
4	240	49.2		33.4	133	27.7 ¹⁰⁸		44.5 ¹¹⁰	52	2 08	3 11	3 55	48	74	48	25			
5	255	49.2	+20	33.9	147	57.5 ¹⁰⁸	+8	33.5 ¹¹⁰	50	2 27	3 23	4 04	12 51	72	1 45	26			
6	270	49.1	+20	34.4	162	27.3 ¹⁰⁸	+8	22.5 ¹¹⁰	45	3 03	3 48	4 23	12 56	69	1 38	29			
7	285	49.1		34.9	176	57.3 ¹¹⁰		11.4 ¹¹¹	40	28	4 07	38	13 01	65	32	32			
8	300	49.0		35.3	191	27.2 ¹⁰⁹	+8	00.3 ¹¹¹	35	3 48	23	4 51	05	62	26	36			
9	315	49.0		35.8	205	57.3 ¹¹¹	+7	49.1 ¹¹²	30	4 04	36	5 02	09	59	22	38			
10	330	48.9		36.3	220	27.4 ¹¹¹		37.9 ¹¹²	20	29	4 58	21	15	55	14	42			
11	345	48.9	+20	36.8	234	57.5 ¹¹¹	+7	26.7 ¹¹²	10 N	4 49	5 15	5 38	13 20	52	1 06	46			
12	0	48.8	+20	37.2	249	27.7 ¹¹²	+7	15.5 ¹¹²	0	5 05	5 31	5 53	13 26	48	1 00	49			
13	15	48.8		37.7	263	57.9 ¹¹²	+7	04.2 ¹¹³	10 S	20	5 46	6 08	31	44	0 53	52			
14	30	48.7		38.2	278	28.2 ¹¹³	+6	52.9 ¹¹³	20	34	6 01	24	36	41	45	57			
15	45	48.7		38.7	292	58.6 ¹¹⁴		41.6 ¹¹³	30	48	17	43	42	37	37	60			
16	60	48.6		39.1	307	29.0 ¹¹⁴		30.3 ¹¹³	35	5 55	26	6 53	46	34	32	63			
17	75	48.6	+20	39.6	321	59.4 ¹¹⁴	+6	18.9 ¹¹⁴	40	6 02	6 36	7 05	13 50	31	0 26	66			
18	90	48.5	+20	40.1	336	29.9 ¹¹⁵	+6	07.5 ¹¹⁴	45	6 11	6 47	7 20	13 55	28	0 20	69			
19	105	48.5		40.5	351	00.4 ¹¹⁵	+5	56.1 ¹¹⁴	50	20	7 00	37	14 00	25	12	73			
20	120	48.4		41.0	5	31.0 ¹¹⁶		44.6 ¹¹⁵	52	24	06	45	03	23	08	75			
21	135	48.3		41.5	20	01.7 ¹¹⁷		33.2 ¹¹⁴	54	29	13	7 54	05	22	04	77			
22	150	48.3		42.0	34	32.3 ¹¹⁶		21.7 ¹¹⁵	56	33	20	8 05	08	19	0 00	79			
23	165	48.2		42.4	49	03.1 ¹¹⁸	+5	10.2 ¹¹⁵	58	39	29	16	12	17	** ** *	**			
24	180	48.2	+20	42.9	63	33.8 ¹¹⁷	+4	58.6 ¹¹⁶	60 S	6 44	7 38	8 30	14 16	14	** ** *	**			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO				
	PMG 7 ^h 56 ^m 5		Mag: -3.9 PMG: 14 ^h 17 ^m				Mag: -1.0 PMG: 4 ^h 19 ^m				Mag: -2.5 PMG: 22 ^h 52 ^m				Mag: +0.2 PMG: 2 ^h 33 ^m				
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec		
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'	
0	240	33.5	146	00.4	+25	03.0	295	11.4	-21	53.0	16	02.6	-15	36.5	321	41.2	-22	18.0	
1	255	35.9	160	59.6		03.0	310	12.9		52.9	31	05.3		36.4	336	43.8		18.0	
2	270	38.4	175	58.7		03.0	325	14.4		52.8	46	08.1		36.4	351	46.4		18.0	
3	285	40.8	190	57.9		03.0	340	15.9		52.8	61	10.9		36.3	6	49.0		18.0	
4	300	43.3	205	57.1		02.9	355	17.4		52.7	76	13.6		36.2	21	51.6		18.0	
5	315	45.8	220	56.3	+25	02.9	10	19.0	-21	52.6	91	16.4	-15	36.1	36	54.2	-22	18.0	
6	330	48.2	235	55.4	+25	02.9	25	20.5	-21	52.6	106	19.1	-15	36.1	51	56.8	-22	18.0	
7	345	50.7	250	54.6		02.9	40	22.0		52.5	121	21.9		36.0	66	59.4		18.0	
8	0	53.2	265	53.8		02.8	55	23.5		52.4	136	24.7		35.9	82	02.0		18.0	
9	15	55.6	280	52.9		02.8	70	25.1		52.4	151	27.4		35.8	97	04.6		18.1	
10	30	58.1	295	52.1		02.8	85	26.6		52.3	166	30.2		35.7	112	07.2		18.1	
11	46	00.6	310	51.3	+25	02.7	100	28.1	-21	52.2	181	33.0	-15	35.7	127	09.8	-22	18.1	
12	61	03.0	325	50.5	+25	02.7	115	29.6	-21	52.2	196	35.7	-15	35.6	142	12.4	-22	18.1	
13	76	05.5	340	49.6		02.7	130	31.2		52.1	211	38.5		35.5	157	15.0		18.1	
14	91	07.9	355	48.8		02.6	145	32.7		52.0	226	41.2		35.4	172	17.6		18.1	
15	106	10.4	10	48.0		02.6	160	34.2		52.0	241	44.0		35.4	187	20.2		18.1	
16	121	12.9	25	47.2		02.5	175	35.7		51.9	256	46.8		35.3	202	22.8		18.1	
17	136	15.3	40	46.3	+25	02.5	190	37.3	-21	51.8	271	49.5	-15	35.2	217	25.4	-22	18.1	
18	151	17.8	55	45.5	+25	02.4	205	38.8	-21	51.8	286	52.3	-15	35.1	232	28.1	-22	18.1	
19	166	20.3	70	44.7		02.4	220	40.3		51.7	301	55.0		35.0	247	30.7		18.1	
20	181	22.7	85	43.9		02.4	235	41.9		51.7	316	57.8		35.0	262	33.3		18.2	
21	196	25.2	100	43.0		02.3	250	43.4		51.6	332	00.6		34.9	277	35.9		18.2	
22	211	27.7	115	42.2		02.3	265	44.9		51.5	347	03.3		34.8	292	38.5		18.2	
23	226	30.1	130	41.4		02.2	280	46.5		51.5	2	06.1		34.7	307	41.1		18.2	
24	241	32.6	145	40.6	+25	02.2	295	48.0	-21	51.4	17	08.8	-15	34.6	322	43.7	-22	18.2	
Dif	—		-8		0		+15		+1		+28		+1		+26		0		

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^s 8			Edad: 8 ^d 5 PHE { 4 ^h : 57/6 12 ^h : 57/4 20 ^h : 57/2										
	PMG: 11 ^h 56 ^m 8				SD: 15 ^s 6									
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	o	'	o	'	'	o	'	o	h m	h m	h m	h m	h m	h m
0	180	48.2	+20 42.9	63	33.8	+4 58.6	60 N	20 52	22 06	***	13 58	82	2 21	13
1	195	48.1	43.4	78	04.6 ¹¹⁸	47.1 ¹¹⁵	58	36	21 38	***	13 59	79	18	17
2	210	48.1	43.8	92	35.5 ¹¹⁹	35.6 ¹¹⁵	56	22	17	22 55	14 00	77	16	19
3	225	48.0	44.3	107	06.4 ¹¹⁹	24.0 ¹¹⁶	54	11	21 00	22 16	01 75	14	21	
4	240	48.0	44.8	121	37.3 ¹¹⁹	12.4 ¹¹⁶	52	20 00	20 45	21 50	02 73	13	22	
5	255	47.9	+20 45.2	136	08.3 ¹²⁰	+4 00.8 ¹¹⁶	50	19 51	20 33	21 30	14 03	71	2 11	24
6	270	47.8	+20 45.7	150	39.3 ¹²⁰	+3 49.2 ¹¹⁶	45	19 32	20 07	20 53	14 05	67	2 07	28
7	285	47.8	46.1	165	10.4 ¹²¹	37.6 ¹¹⁶	40	16	19 48	27	06 64	04	31	
8	300	47.7	46.6	179	41.4 ¹²⁰	26.0 ¹¹⁶	35	19 03	32	20 07	07 61	02	34	
9	315	47.7	47.1	194	12.6 ¹²²	14.3 ¹¹⁷	30	18 52	19 19	19 51	08 59	2 00	36	
10	330	47.6	47.5	208	43.7 ¹²¹	+3 02.7 ¹¹⁶	20	33	18 57	25	10 54	1 56	40	
11	345	47.6	+20 48.0	223	14.9 ¹²²	+2 51.1 ¹¹⁶	10 N	18 16	18 39	19 05	14 12	50	1 52	44
12	0	47.5	+20 48.4	237	46.1 ¹²²	+2 39.4 ¹¹⁷	0	18 00	18 23	18 48	14 14	47	1 49	47
13	15	47.4	48.9	252	17.4 ¹²³	27.8 ¹¹⁶	10 S	17 45	18 07	33	15 44	45	51	
14	30	47.4	49.4	266	48.7 ¹²³	16.1 ¹¹⁷	20	29	17 52	19	17 40	42	54	
15	45	47.3	49.8	281	20.0 ¹²³	+2 04.4 ¹¹⁷	30	10	36	18 05	19 36	37	60	
16	60	47.3	50.3	295	51.4 ¹²⁴	+1 52.8 ¹¹⁶	35	17 00	27	17 58	20 33	35	62	
17	75	47.2	+20 50.7	310	22.8 ¹²⁴	+1 41.1 ¹¹⁷	40	16 47	17 17	17 50	14 21	31	1 32	65
18	90	47.1	+20 51.2	324	54.2 ¹²⁴	+1 29.4 ¹¹⁷	45	16 33	17 05	17 42	14 23	27	1 29	68
19	105	47.1	51.7	339	25.6 ¹²⁴	17.8 ¹¹⁶	50	15	16 52	32	25 23	25	72	
20	120	47.0	52.1	353	57.1 ¹²⁵	+1 06.1 ¹¹⁷	52	16 07	46	28	26 22	23	74	
21	135	47.0	52.6	8	28.6 ¹²⁵	+0 54.5 ¹¹⁶	54	15 58	39	23	27 20	21	76	
22	150	46.9	53.0	23	00.1 ¹²⁵	42.8 ¹¹⁷	56	47	31	18	27 19	19	78	
23	165	46.8	53.5	37	31.7 ¹²⁶	31.1 ¹¹⁷	58	35	23	13	29 15	17	80	
24	180	46.8	+20 53.9	52	03.2 ¹²⁵	+0 19.5 ¹¹⁶	60 S	15 21	16 14	17 07	14 30	13	1 14	83

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 7 ^h 52 ^m 5		Mag: -3.9 PMG: 14 ^h 18 ^m		Mag: -1.0 PMG: 4 ^h 16 ^m		Mag: -2.5 PMG: 22 ^h 47 ^m		Mag: +0.2 PMG: 2 ^h 29 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	o	'	o	'	o	'	o	'	o	'
0	241	32.6	145 40.6	+25 02.2	295 48.0	-21 51.4	17 08.8	-15 34.6	322 43.7	-22 18.2
1	256	35.1	160 39.7	02.1	310 49.5	51.3	32 11.6	34.6	337 46.3	18.2
2	271	37.5	175 38.9	02.1	325 51.1	51.3	47 14.4	34.5	352 48.9	18.2
3	286	40.0	190 38.1	02.0	340 52.6	51.2	62 17.1	34.4	7 51.5	18.2
4	301	42.4	205 37.3	01.9	355 54.1	51.2	77 19.9	34.3	22 54.1	18.2
5	316	44.9	220 36.4	+25 01.9	10 55.7	-21 51.1	92 22.6	-15 34.3	37 56.7	-22 18.2
6	331	47.4	235 35.6	+25 01.8	25 57.2	-21 51.0	107 25.4	-15 34.2	52 59.3	-22 18.2
7	346	49.8	250 34.8	01.8	40 58.8	51.0	122 28.2	34.1	68 01.9	18.3
8	1	52.3	265 34.0	01.7	56 00.3	50.9	137 30.9	34.0	83 04.5	18.3
9	16	54.8	280 33.2	01.6	71 01.8	50.8	152 33.7	33.9	98 07.1	18.3
10	31	57.2	295 32.3	01.6	86 03.4	50.8	167 36.4	33.9	113 09.7	18.3
11	46	59.7	310 31.5	+25 01.5	101 04.9	-21 50.7	182 39.2	-15 33.8	128 12.4	-22 18.3
12	62	02.2	325 30.7	+25 01.4	116 06.5	-21 50.7	197 41.9	-15 33.7	143 15.0	-22 18.3
13	77	04.6	340 29.9	01.4	131 08.0	50.6	212 44.7	33.6	158 17.6	18.3
14	92	07.1	355 29.0	01.3	146 09.6	50.5	227 47.5	33.6	173 20.2	18.3
15	107	09.5	10 28.2	01.2	161 11.1	50.5	242 50.2	33.5	188 22.8	18.3
16	122	12.0	25 27.4	01.2	176 12.6	50.4	257 53.0	33.4	203 25.4	18.3
17	137	14.5	40 26.6	+25 01.1	191 14.2	-21 50.4	272 55.7	-15 33.3	218 28.0	-22 18.3
18	152	16.9	55 25.8	+25 01.0	206 15.7	-21 50.3	287 58.5	-15 33.3	233 30.6	-22 18.4
19	167	19.4	70 24.9	00.9	221 17.3	50.2	303 01.2	33.2	248 33.2	18.4
20	182	21.9	85 24.1	00.9	236 18.8	50.2	318 04.0	33.1	263 35.8	18.4
21	197	24.3	100 23.3	00.8	251 20.4	50.1	333 06.8	33.0	278 38.4	18.4
22	212	26.8	115 22.5	00.7	266 21.9	50.1	348 09.5	32.9	293 41.0	18.4
23	227	29.3	130 21.7	00.6	281 23.5	50.0	3 12.3	32.9	308 43.7	18.4
24	242	31.7	145 20.8	+25 00.6	296 25.0	-21 50.0	18 15.0	-15 32.8	323 46.3	-22 18.4
Dif	—		-8	-1	+15	+1	+28	+1	+26	0

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 9				Edad: 9 ^d 5 PHE SD: 15 ^h 5 PMG: 21 ^h 12 ^m														
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°			
h	o	'	o	'	o	'	o	'	o	h	m	h	m	h	m	m	h	m	m
0	180	46.8	+20	53.9	52	03.2	+0	19.5	60 N	***	1 48	3 01	15 20	80	2 34	14			
1	195	46.7		54.4	66	34.8 ¹²⁶	+0	07.9 ¹¹⁶	58	***	2 15	17	18 78		35	15			
2	210	46.7		54.8	81	06.5 ¹²⁷	-0	03.8 ¹¹⁷	56	0 58	37	31	17 75		35	18			
3	225	46.6		55.3	95	38.1 ¹²⁶		15.4 ¹¹⁶	54	1 38	2 54	43	16 73		35	20			
4	240	46.5		55.7	110	09.8 ¹²⁷		27.0 ¹¹⁶	52	2 04	3 08	3 53	15 71		35	22			
5	255	46.5	+20	56.2	124	41.5 ¹²⁷	-0	38.6 ¹¹⁶	50	2 24	3 21	4 02	15 14	69	2 35	24			
6	270	46.4	+20	56.6	139	13.2 ¹²⁷	-0	50.2 ¹¹⁶	45	3 00	3 46	4 21	15 12	65	2 35	28			
7	285	46.4		57.1	153	44.9 ¹²⁷	-1	01.8 ¹¹⁶	40	26	4 06	37	10 62		35	31			
8	300	46.3		57.5	168	16.6 ¹²⁷		13.3 ¹¹⁵	35	3 46	21	4 50	08 60		36	33			
9	315	46.2		58.0	182	48.4 ¹²⁸		24.9 ¹¹⁶	30	4 03	35	5 02	07 57		36	35			
10	330	46.2		58.4	197	20.2 ¹²⁸		36.4 ¹¹⁵	20	29	4 57	21	04 54		36	39			
11	345	46.1	+20	58.9	211	52.0 ¹²⁸	-1	47.9 ¹¹⁵	10 N	4 49	5 15	5 38	15 02	50	2 36	43			
12	0	46.0	+20	59.3	226	23.8 ¹²⁸	-1	59.5 ¹¹⁶	0	5 05	5 31	5 53	15 01	46	2 36	47			
13	15	46.0	+20	59.7	240	55.6 ¹²⁸	-2	10.9 ¹¹⁴	10 S	20	5 46	6 09	14 59	43	36	50			
14	30	45.9	+21	00.2	255	27.4 ¹²⁸		22.4 ¹¹⁵	20	34	6 02	25	57 39		36	54			
15	45	45.9		00.6	269	59.3 ¹²⁹		33.9 ¹¹⁵	30	49	18	44	55 35		37	57			
16	60	45.8		01.1	284	31.1 ¹²⁸		45.3 ¹¹⁴	35	5 56	27	6 55	53 33		37	60			
17	75	45.7	+21	01.5	299	03.0 ¹²⁹	-2	56.7 ¹¹⁴	40	6 04	6 37	7 07	14 52	30	2 37	63			
18	90	45.7	+21	02.0	313	34.9 ¹²⁹	-3	08.1 ¹¹⁴	45	6 12	6 49	7 22	14 50	28	2 37	66			
19	105	45.6		02.4	328	06.8 ¹²⁹		19.5 ¹¹⁴	50	22	7 02	39	48 24		37	70			
20	120	45.5		02.8	342	38.7 ¹²⁹		30.8 ¹¹³	52	26	09	48	48 22		37	72			
21	135	45.5		03.3	357	10.6 ¹²⁹		42.1 ¹¹³	54	31	16	7 57	47 20		37	74			
22	150	45.4		03.7	11	42.5 ¹²⁹	-3	53.4 ¹¹³	56	36	23	8 08	46 18		37	76			
23	165	45.3		04.2	26	14.5 ¹³⁰	-4	04.7 ¹¹³	58	41	32	20	44 16		37	79			
24	180	45.3	+21	04.6	40	46.4 ¹²⁹	-4	15.9 ¹¹²	60 S	6 47	7 41	8 34	14 43	14	2 37	81			

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 7 ^h 48 ^m 6		Mag: -3.9 PMG: 14 ^h 19 ^m				Mag: -1.0 PMG: 4 ^h 14 ^m				Mag: -2.5 PMG: 22 ^h 43 ^m				Mag: +0.2 PMG: 2 ^h 24 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'
0	242	31.7	145	20.8	+25	00.6	296	25.0	-21	50.0	18	15.0	-15	32.8	323	46.3	-22	18.4
1	257	34.2	160	20.0		00.5	311	26.6		49.9	33	17.8		32.7	338	48.9		18.4
2	272	36.7	175	19.2		00.4	326	28.2		49.8	48	20.5		32.6	353	51.5		18.4
3	287	39.1	190	18.4		00.3	341	29.7		49.8	63	23.3		32.6	8	54.1		18.4
4	302	41.6	205	17.6		00.2	356	31.3		49.7	78	26.1		32.5	23	56.7		18.4
5	317	44.0	220	16.7	+25	00.1	11	32.8	-21	49.7	93	28.8	-15	32.4	38	59.3	-22	18.5
6	332	46.5	235	15.9	+25	00.0	26	34.4	-21	49.6	108	31.6	-15	32.3	54	01.9	-22	18.5
7	347	49.0	250	15.1	+25	00.0	41	35.9		49.5	123	34.3		32.3	69	04.5		18.5
8	2	51.4	265	14.3	+24	59.9	56	37.5		49.5	138	37.1		32.2	84	07.1		18.5
9	17	53.9	280	13.5		59.8	71	39.1		49.4	153	39.8		32.1	99	09.7		18.5
10	32	56.4	295	12.6		59.7	86	40.6		49.4	168	42.6		32.0	114	12.4		18.5
11	47	58.8	310	11.8	+24	59.6	101	42.2	-21	49.3	183	45.3	-15	31.9	129	15.0	-22	18.5
12	63	01.3	325	11.0	+24	59.5	116	43.7	-21	49.3	198	48.1	-15	31.9	144	17.6	-22	18.5
13	78	03.8	340	10.2		59.4	131	45.3		49.2	213	50.9		31.8	159	20.2		18.5
14	93	06.2	355	09.4		59.3	146	46.9		49.2	228	53.6		31.7	174	22.8		18.5
15	108	08.7	10	08.6		59.2	161	48.4		49.1	243	56.4		31.6	189	25.4		18.5
16	123	11.2	25	07.7		59.1	176	50.0		49.0	258	59.1		31.6	204	28.0		18.6
17	138	13.6	40	06.9	+24	59.0	191	51.6	-21	49.0	274	01.9	-15	31.5	219	30.6	-22	18.6
18	153	16.1	55	06.1	+24	58.9	206	53.1	-21	48.9	289	04.6	-15	31.4	234	33.2	-22	18.6
19	168	18.5	70	05.3		58.8	221	54.7		48.9	304	07.4		31.3	249	35.9		18.6
20	183	21.0	85	04.5		58.7	236	56.3		48.8	319	10.1		31.3	264	38.5		18.6
21	198	23.5	100	03.7		58.6	251	57.8		48.8	334	12.9		31.2	279	41.1		18.6
22	213	25.9	115	02.9		58.5	266	59.4		48.7	349	15.6		31.1	294	43.7		18.6
23	228	28.4	130	02.0		58.4	282	01.0		48.7	4	18.4		31.0	309	46.3		18.6
24	243	30.9	145	01.2	+24	58.2	297	02.5	-21	48.6	19	21.1	-15	31.0	324	48.9	-22	18.6
Dif	—		-8		-1		+16		+1		+28		+1		+26		0	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15'8 PMG: 11 ^h 57 ^m 0			Edad: 10 ^d 5 PHE { SD: 15'3 PMG: 21 ^h 58 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m
0	180	45.3	+21	04.6	40	46.4	-4 15.9	60 N	20 56	22 12	***	16 40	79	2 48	14
1	195	45.2		05.0	55	18.4 ¹³⁰	27.1 ¹¹²	58	40	21 43	***	36	77	50	17
2	210	45.1		05.5	69	50.3 ¹²⁹	38.3 ¹¹²	56	26	21	23 06	32	74	53	19
3	225	45.1		05.9	84	22.3 ¹³⁰	-4 49.5 ¹¹²	54	14	21 03	22 22	29	72	55	2
4	240	45.0		06.3	98	54.2 ¹²⁹	-5 00.6 ¹¹¹	52	20 03	20 48	21 54	26	70	57	23
5	255	44.9	+21	06.8	113	26.2 ¹³⁰	-5 11.7 ¹¹¹	50	19 54	20 35	21 33	16 23	68	2 59	24
6	270	44.9	+21	07.2	127	58.1 ¹²⁹	-5 22.7 ¹¹⁰	45	19 34	20 10	20 56	16 17	65	3 03	27
7	285	44.8		07.6	142	30.1 ¹³⁰	33.8 ¹¹¹	40	18	19 50	29	12	62	06	31
8	300	44.7		08.1	157	02.1 ¹³⁰	44.8 ¹¹⁰	35	19 05	34	20 09	08	59	09	33
9	315	44.7		08.5	171	34.1 ¹³⁰	-5 55.7 ¹⁰⁹	30	18 53	19 20	19 52	16 04	57	11	36
10	330	44.6		08.9	186	06.0 ¹²⁹	-6 06.7 ¹¹⁰	20	33	18 57	26	15 58	53	15	40
11	345	44.5	+21	09.4	200	38.0 ¹³⁰	-6 17.6 ¹⁰⁹	10 N	18 16	18 39	19 06	15 52	50	3 19	43
12	0	44.5	+21	09.8	215	10.0 ¹³⁰	-6 28.4 ¹⁰⁸	0	18 01	18 23	18 49	15 47	46	3 23	46
13	15	44.4		10.2	229	41.9 ¹²⁹	39.2 ¹⁰⁸	10 S	17 45	18 07	33	42	43	26	50
14	30	44.3		10.6	244	13.9 ¹³⁰	-6 50.0 ¹⁰⁸	20	28	17 52	19	36	40	30	53
15	45	44.3		11.1	258	45.9 ¹³⁰	-7 00.7 ¹⁰⁷	30	17 10	35	18 05	30	36	34	58
16	60	44.2		11.5	273	17.8 ¹²⁹	11.4 ¹⁰⁷	35	16 59	26	17 57	26	34	37	59
17	75	44.1	+21	11.9	287	49.8 ¹³⁰	-7 22.1 ¹⁰⁷	40	16 46	17 16	17 49	15 22	32	3 40	62
18	90	44.1	+21	12.4	302	21.7 ¹²⁹	-7 32.7 ¹⁰⁶	45	16 31	17 04	17 40	15 18	28	3 43	65
19	105	44.0		12.8	316	53.7 ¹³⁰	43.3 ¹⁰⁶	50	13	16 50	31	12	25	47	69
20	120	43.9		13.2	331	25.6 ¹²⁹	-7 53.8 ¹⁰⁵	52	16 05	44	26	10	23	49	71
21	135	43.9		13.6	345	57.6 ¹³⁰	-8 04.3 ¹⁰⁵	54	15 55	37	22	07	22	51	72
22	150	43.8		14.0	0	29.5 ¹²⁹	14.8 ¹⁰⁵	56	44	29	16	04	20	53	75
23	165	43.7		14.5	15	01.4 ¹²⁹	25.2 ¹⁰⁴	58	32	20	11	15 00	18	56	77
24	180	43.6	+21	14.9	29	33.4 ¹³⁰	-8 35.5 ¹⁰³	60 S	15 18	16 11	17 05	14 57	15	3 58	80

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 7 ^h 44 ^m 7		Mag: -3.9 PMG: 14 ^h 21 ^m		Mag: -1.1 PMG: 4 ^h 11 ^m		Mag: -2.5 PMG: 22 ^h 38 ^m		Mag: +0.2 PMG: 2 ^h 20 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	o	'	o	'	o	'	o	'	o	'								
0	243	30.9	145	01.2	+24	58.2	297	02.5	-21	48.6	19	21.1	-15	31.0	324	48.9	-22	18.6
1	258	33.3	160	00.4		58.1	312	04.1		48.6	34	23.9		30.9	339	51.5		18.6
2	273	35.8	174	59.6		58.0	327	05.7		48.5	49	26.6		30.8	354	54.1		18.7
3	288	38.3	189	58.8		57.9	342	07.3		48.4	64	29.4		30.7	9	56.7		18.7
4	303	40.7	204	58.0		57.8	357	08.8		48.4	79	32.2		30.7	24	59.4		18.7
5	318	43.2	219	57.2	+24	57.7	12	10.4	-21	48.3	94	34.9	-15	30.6	40	02.0	-22	18.7
6	333	45.6	234	56.3	+24	57.6	27	12.0	-21	48.3	109	37.7	-15	30.5	55	04.6	-22	18.7
7	348	48.1	249	55.5		57.4	42	13.6		48.2	124	40.4		30.4	70	07.2		18.7
8	3	50.6	264	54.7		57.3	57	15.1		48.2	139	43.2		30.3	85	09.8		18.7
9	18	53.0	279	53.9		57.2	72	16.7		48.1	154	45.9		30.3	100	12.4		18.7
10	33	55.5	294	53.1		57.1	87	18.3		48.1	169	48.7		30.2	115	15.0		18.7
11	48	58.0	309	52.3	+24	57.0	102	19.9	-21	48.0	184	51.4	-15	30.1	130	17.6	-22	18.7
12	64	00.4	324	51.5	+24	56.8	117	21.5	-21	48.0	199	54.2	-15	30.0	145	20.3	-22	18.7
13	79	02.9	339	50.7		56.7	132	23.0		47.9	214	56.9		30.0	160	22.9		18.8
14	94	05.4	354	49.8		56.6	147	24.6		47.9	229	59.7		29.9	175	25.5		18.8
15	109	07.8	9	49.0		56.4	162	26.2		47.8	245	02.4		29.8	190	28.1		18.8
16	124	10.3	24	48.2		56.3	177	27.8		47.8	260	05.2		29.7	205	30.7		18.8
17	139	12.8	39	47.4	+24	56.2	192	29.4	-21	47.7	275	07.9	-15	29.7	220	33.3	-22	18.8
18	154	15.2	54	46.6	+24	56.1	207	31.0	-21	47.7	290	10.7	-15	29.6	235	35.9	-22	18.8
19	169	17.7	69	45.8		55.9	222	32.5		47.6	305	13.4		29.5	250	38.6		18.8
20	184	20.1	84	45.0		55.8	237	34.1		47.6	320	16.2		29.4	265	41.2		18.8
21	199	22.6	99	44.2		55.6	252	35.7		47.5	335	18.9		29.4	280	43.8		18.8
22	214	25.1	114	43.4		55.5	267	37.3		47.5	350	21.7		29.3	295	46.4		18.8
23	229	27.5	129	42.5		55.4	282	38.9		47.4	5	24.4		29.2	310	49.0		18.8
24	244	30.0	144	41.7	+24	55.2	297	40.5	-21	47.4	20	27.2	-15	29.1	325	51.6	-22	18.9
Dif	—		-8		-1		+16		+1		+28		+1		+26		0	

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8 PMG: 11 ^h 57 ^m 1				Edad: 11 ^d 5 PHE { 4 ^h : 56 ^o 0 12 ^h : 55 ^o 9 20 ^h : 55 ^o 7 PMG: 22 ^h 45 ^m R°: 47 ^m													
	hG ☉	Dec			hG ☾	Dif				Náutico	Civil		Hora	R°	Hora	R°		
h	o	'	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m	
0	180	43.6	+21	14.9	29	33.4	−8	35.5	60 N	***	1 41	2 58	17 59	78	3 02	16		
1	195	43.6		15.3	44	05.3 ¹²⁹		45.9 ¹⁰⁴	58	***	2 11	3 14	53	74	07	19		
2	210	43.5		15.7	58	37.2 ¹²⁹	−8	56.1 ¹⁰²	56	0 48	33	28	46	72	12	21		
3	225	43.4		16.2	73	09.1 ¹²⁹	−9	06.3 ¹⁰²	54	1 32	2 51	40	41	70	16	23		
4	240	43.4		16.6	87	40.9 ¹²⁸		16.5 ¹⁰²	52	2 00	3 06	3 51	36	68	20	24		
5	255	43.3	+21	17.0	102	12.8 ¹²⁹	−9	26.6 ¹⁰¹	50	2 20	3 18	4 00	17 31	67	3 23	26		
6	270	43.2	+21	17.4	116	44.7 ¹²⁹	−9	36.7 ¹⁰¹	45	2 58	3 44	4 20	17 22	63	3 30	30		
7	285	43.1		17.8	131	16.5 ¹²⁸		46.7 ¹⁰⁰	40	3 24	4 04	36	14	60	37	32		
8	300	43.1		18.2	145	48.4 ¹²⁹	−9	56.7 ¹⁰⁰	35	3 45	20	4 49	07	58	42	35		
9	315	43.0		18.7	160	20.2 ¹²⁸	−10	06.6 ⁹⁹	30	4 02	34	5 01	17 01	56	47	37		
10	330	42.9		19.1	174	52.1 ¹²⁹		16.4 ⁹⁸	20	28	4 57	21	16 51	52	3 55	41		
11	345	42.9	+21	19.5	189	23.9 ¹²⁸	−10	26.2 ⁹⁸	10 N	4 48	5 15	5 38	16 42	49	4 02	44		
12	0	42.8	+21	19.9	203	55.7 ¹²⁸	−10	36.0 ⁹⁸	0	5 06	5 31	5 54	16 33	47	4 09	47		
13	15	42.7		20.3	218	27.4 ¹²⁷		45.7 ⁹⁷	10 S	21	5 47	6 09	25	44	16	50		
14	30	42.6		20.7	232	59.2 ¹²⁸	−10	55.3 ⁹⁶	20	35	6 02	26	16	41	23	53		
15	45	42.6		21.1	247	31.0 ¹²⁸	−11	04.9 ⁹⁶	30	50	19	45	06	38	32	56		
16	60	42.5		21.6	262	02.7 ¹²⁷		14.4 ⁹⁵	35	5 57	28	6 56	16 00	36	36	59		
17	75	42.4	+21	22.0	276	34.5 ¹²⁸	−11	23.9 ⁹⁵	40	6 05	6 39	7 09	15 54	34	4 42	61		
18	90	42.3	+21	22.4	291	06.2 ¹²⁷	−11	33.3 ⁹⁴	45	6 14	6 51	7 23	15 46	31	4 48	64		
19	105	42.3		22.8	305	37.9 ¹²⁷		42.6 ⁹³	50	24	7 05	42	37	28	4 56	67		
20	120	42.2		23.2	320	09.6 ¹²⁷	−11	51.9 ⁹³	52	28	11	7 50	33	26	5 00	69		
21	135	42.1		23.6	334	41.2 ¹²⁶	−12	01.1 ⁹²	54	33	18	8 00	29	24	03	71		
22	150	42.0		24.0	349	12.9 ¹²⁷		10.3 ⁹²	56	38	26	11	24	22	08	73		
23	165	42.0		24.4	3	44.5 ¹²⁶		19.4 ⁹¹	58	44	35	23	18	20	13	75		
24	180	41.9	+21	24.8	18	16.2 ¹²⁷	−12	28.4 ⁹⁰	60 S	6 50	7 44	8 38	15 12	18	5 18	78		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 7 ^h 40 ^m 7		Mag: −3.9 PMG: 14 ^h 22 ^m				Mag: −1.1 PMG: 4 ^h 09 ^m				Mag: −2.5 PMG: 22 ^h 34 ^m				Mag: +0.2 PMG: 2 ^h 16 ^m			
	hG ♈		hG ♀	Dec			hG ♂	Dec			hG ♃	Dec			hG ♄	Dec		
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'
0	244	30.0	144	41.7	+24	55.2	297	40.5	−21	47.4	20	27.2	−15	29.1	325	51.6	−22	18.9
1	259	32.5	159	40.9		55.1	312	42.1		47.3	35	29.9		29.1	340	54.2		18.9
2	274	34.9	174	40.1		55.0	327	43.7		47.3	50	32.7		29.0	355	56.9		18.9
3	289	37.4	189	39.3		54.8	342	45.3		47.2	65	35.4		28.9	10	59.5		18.9
4	304	39.9	204	38.5		54.7	357	46.9		47.2	80	38.2		28.8	26	02.1		18.9
5	319	42.3	219	37.7	+24	54.5	12	48.5	−21	47.1	95	40.9	−15	28.8	41	04.7	−22	18.9
6	334	44.8	234	36.9	+24	54.4	27	50.1	−21	47.1	110	43.7	−15	28.7	56	07.3	−22	18.9
7	349	47.3	249	36.1		54.2	42	51.6		47.0	125	46.4		28.6	71	09.9		18.9
8	4	49.7	264	35.3		54.1	57	53.2		47.0	140	49.2		28.5	86	12.6		18.9
9	19	52.2	279	34.5		53.9	72	54.8		46.9	155	51.9		28.5	101	15.2		18.9
10	34	54.6	294	33.7		53.8	87	56.4		46.9	170	54.7		28.4	116	17.8		19.0
11	49	57.1	309	32.9	+24	53.6	102	58.0	−21	46.8	185	57.4	−15	28.3	131	20.4	−22	19.0
12	64	59.6	324	32.1	+24	53.5	117	59.6	−21	46.8	201	00.1	−15	28.3	146	23.0	−22	19.0
13	80	02.0	339	31.2		53.3	133	01.2		46.7	216	02.9		28.2	161	25.6		19.0
14	95	04.5	354	30.4		53.1	148	02.8		46.7	231	05.6		28.1	176	28.2		19.0
15	110	07.0	9	29.6		53.0	163	04.4		46.6	246	08.4		28.0	191	30.9		19.0
16	125	09.4	24	28.8		52.8	178	06.0		46.6	261	11.1		28.0	206	33.5		19.0
17	140	11.9	39	28.0	+24	52.7	193	07.7	−21	46.6	276	13.9	−15	27.9	221	36.1	−22	19.0
18	155	14.4	54	27.2	+24	52.5	208	09.3	−21	46.5	291	16.6	−15	27.8	236	38.7	−22	19.0
19	170	16.8	69	26.4		52.3	223	10.9		46.5	306	19.4		27.7	251	41.3		19.0
20	185	19.3	84	25.6		52.2	238	12.5		46.4	321	22.1		27.7	266	44.0		19.1
21	200	21.7	99	24.8		52.0	253	14.1		46.4	336	24.9		27.6	281	46.6		19.1
22	215	24.2	114	24.0		51.9	268	15.7		46.3	351	27.6		27.5	296	49.2		19.1
23	230	26.7	129	23.2		51.7	283	17.3		46.3	6	30.4		27.4	311	51.8		19.1
24	245	29.1	144	22.4	+24	51.5	298	18.9	−21	46.2	21	33.1	−15	27.4	326	54.4	−22	19.1
Dif	—		−8				+16				+27				+1			
			−2				0								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 3			Edad: 12 ^d 5 PHE { 4 ^h : 55 ^m 6 12 ^h : 55 ^m 4 20 ^h : 55 ^m 3 PMG: 23 ^h 32 ^m R°: 48 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°	
h	o	'	o	'	o	'	o	'	h m	h m	h m	h m	m	m	m	m
0	180	41.9	+21	24.8	18	16.2	-12	28.4	60 N	21 00	22 19	***	19 17	73	3 18	20
1	195	41.8		25.2	32	47.8 ¹²⁶		37.4 ⁹⁰	58	20 43	21 48	***	19 07	71	26	22
2	210	41.7		25.6	47	19.4 ¹²⁶		46.3 ⁸⁹	56	29	25	23 19	18 58	69	33	24
3	225	41.7		26.0	61	50.9 ¹²⁵	-12	55.2 ⁸⁹	54	16	21 07	22 28	51	67	39	26
4	240	41.6		26.5	76	22.5 ¹²⁶	-13	04.0 ⁸⁸	52	20 06	20 51	21 59	44	65	44	28
5	255	41.5	+21	26.9	90	54.0 ¹²⁵	-13	12.7 ⁸⁷	50	19 56	20 38	21 37	18 38	64	3 49	30
6	270	41.4	+21	27.3	105	25.6 ¹²⁶	-13	21.3 ⁸⁶	45	19 36	20 12	20 59	18 25	61	4 00	33
7	285	41.4		27.7	119	57.1 ¹²⁵		29.9 ⁸⁶	40	20	19 52	32	14	59	09	35
8	300	41.3		28.1	134	28.6 ¹²⁵		38.4 ⁸⁵	35	19 06	35	20 11	18 05	57	17	37
9	315	41.2		28.5	149	00.0 ¹²⁴		46.8 ⁸⁴	30	18 54	19 21	19 54	17 57	55	24	39
10	330	41.1		28.9	163	31.5 ¹²⁵	-13	55.2 ⁸⁴	20	34	18 58	27	43	53	36	42
11	345	41.1	+21	29.3	178	02.9 ¹²⁴	-14	03.5 ⁸³	10 N	18 17	18 40	19 06	17 31	51	4 46	45
12	0	41.0	+21	29.7	192	34.3 ¹²⁴	-14	11.8 ⁸³	0	18 01	18 23	18 49	17 20	48	4 56	47
13	15	40.9		30.1	207	05.7 ¹²⁴		19.9 ⁸¹	10 S	17 45	18 08	34	17 09	46	5 06	50
14	30	40.8		30.5	221	37.1 ¹²⁴		28.0 ⁸¹	20	28	17 52	19	16 57	44	16	53
15	45	40.7		30.9	236	08.5 ¹²⁴		36.0 ⁸⁰	30	17 09	35	18 04	44	40	28	56
16	60	40.7		31.3	250	39.8 ¹²³		44.0 ⁸⁰	35	16 58	25	17 57	36	39	35	58
17	75	40.6	+21	31.6	265	11.2 ¹²⁴	-14	51.8 ⁷⁸	40	16 45	17 15	17 48	16 28	36	5 43	60
18	90	40.5	+21	32.0	279	42.5 ¹²³	-14	59.6 ⁷⁸	45	16 30	17 03	17 39	16 17	35	5 52	63
19	105	40.4		32.4	294	13.7 ¹²²	-15	07.3 ⁷⁷	50	11	16 49	29	16 05	32	6 03	66
20	120	40.4		32.8	308	45.0 ¹²³		15.0 ⁷⁷	52	16 03	42	25	15 59	31	09	67
21	135	40.3		33.2	323	16.3 ¹²³		22.5 ⁷⁵	54	15 53	35	20	53	29	14	69
22	150	40.2		33.6	337	47.5 ¹²²		30.0 ⁷⁵	56	42	27	15	46	27	21	70
23	165	40.1		34.0	352	18.7 ¹²²		37.5 ⁷⁵	58	29	18	09	38	25	28	73
24	180	40.0	+21	34.4	6	49.9 ¹²²	-15	44.8 ⁷³	60 S	15 15	16 08	17 03	15 30	22	6 36	76

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 7 ^h 36 ^m 8		Mag: -3.9 PMG: 14 ^h 23 ^m		Mag: -1.1 PMG: 4 ^h 06 ^m		Mag: -2.5 PMG: 22 ^h 30 ^m		Mag: +0.2 PMG: 2 ^h 12 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	o	'	o	'	o	'	o	'	o	'
0	245	29.1	144	22.4	+24	51.5	298	18.9	-21	46.2
1	260	31.6	159	21.6		51.3	313	20.5		46.2
2	275	34.1	174	20.8		51.2	328	22.1		46.1
3	290	36.5	189	20.0		51.0	343	23.7		46.1
4	305	39.0	204	19.2		50.8	358	25.3		46.1
5	320	41.5	219	18.4	+24	50.7	13	27.0	-21	46.0
6	335	43.9	234	17.6	+24	50.5	28	28.6	-21	46.0
7	350	46.4	249	16.8		50.3	43	30.2		45.9
8	5	48.9	264	16.0		50.1	58	31.8		45.9
9	20	51.3	279	15.2		49.9	73	33.4		45.8
10	35	53.8	294	14.4		49.8	88	35.0		45.8
11	50	56.2	309	13.6	+24	49.6	103	36.7	-21	45.8
12	65	58.7	324	12.8	+24	49.4	118	38.3	-21	45.7
13	81	01.2	339	12.0		49.2	133	39.9		45.7
14	96	03.6	354	11.2		49.0	148	41.5		45.6
15	111	06.1	9	10.4		48.8	163	43.1		45.6
16	126	08.6	24	09.6		48.6	178	44.8		45.5
17	141	11.0	39	08.8	+24	48.5	193	46.4	-21	45.5
18	156	13.5	54	08.0	+24	48.3	208	48.0	-21	45.5
19	171	16.0	69	07.2		48.1	223	49.6		45.4
20	186	18.4	84	06.4		47.9	238	51.3		45.4
21	201	20.9	99	05.6		47.7	253	52.9		45.3
22	216	23.4	114	04.8		47.5	268	54.5		45.3
23	231	25.8	129	04.0		47.3	283	56.1		45.3
24	246	28.3	144	03.2	+24	47.1	298	57.8	-21	45.2
Dif	—		-8		-2		+16		0	
							+27		+1	
									+26	
									0	

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8				Edad: 13 ^d 5 PHE { 4 ^h : 55°1 12 ^h : 55°0 20 ^h : 54°9												
	PMG: 11 ^h 57 ^m 4				PMG: *** ^h ** ^m R°: ** ^m												
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	o	'	o	'	o	'	o	'	o	h m	h m	h m	h m m		h m m		
0	180	40.0	+21	34.4	6	49.9	-15	44.8	60 N	***	1 35	2 54	20 30	67	3 38	25	
1	195	40.0		34.8	21	21.1 ¹²²		52.0	72	***	2 07	3 11	18 65		48	28	
2	210	39.9		35.2	35	52.2 ¹²¹	-15	59.2	72		29	26	20 07	63	3 57	30	
3	225	39.8		35.6	50	23.4 ¹²²	-16	06.3	71		1 27	2 48	38	19 58	62	4 05	33
4	240	39.7		36.0	64	54.5 ¹²¹		13.3	70		1 56	3 03	49	49	61	12	33
5	255	39.6	+21	36.3	79	25.6 ¹²¹	-16	20.3	70		2 17	3 16	3 58	19 42	60	4 19	34
6	270	39.6	+21	36.7	93	56.7 ¹²¹	-16	27.1	68		2 56	3 43	4 19	19 26	58	4 33	36
7	285	39.5		37.1	108	27.7 ¹²⁰		33.9	68		3 23	4 03	35	13	56	44	39
8	300	39.4		37.5	122	58.8 ¹²¹		40.6	67		3 44	19	4 48	19 02	55	4 54	41
9	315	39.3		37.9	137	29.8 ¹²⁰		47.2	66		4 01	33	5 00	18 52	54	5 03	42
10	330	39.2		38.3	152	00.8 ¹²⁰	-16	53.8	66		28	4 56	20	36	52	18	44
11	345	39.1	+21	38.7	166	31.8 ¹²⁰	-17	00.2	64	10 N	4 48	5 15	5 38	18 22	50	5 31	46
12	0	39.1	+21	39.0	181	02.8 ¹²⁰	-17	06.6	64	0	5 06	5 32	5 54	18 08	49	5 43	48
13	15	39.0		39.4	195	33.7 ¹¹⁹		12.8	62	10 S	21	5 47	6 10	17 55	47	5 56	50
14	30	38.9		39.8	210	04.7 ¹²⁰		19.0	62	20	36	6 03	27	41	45	6 09	52
15	45	38.8		40.2	224	35.6 ¹¹⁹		25.1	61	30	51	20	46	24	44	24	54
16	60	38.7		40.6	239	06.5 ¹¹⁹		31.2	61	35	5 58	30	6 57	15	42	33	56
17	75	38.7	+21	40.9	253	37.4 ¹¹⁹	-17	37.1	59	40	6 07	6 40	7 10	17 04	41	6 43	57
18	90	38.6	+21	41.3	268	08.3 ¹¹⁹	-17	42.9	58	45	6 16	6 52	7 25	16 52	39	6 55	59
19	105	38.5		41.7	282	39.1 ¹¹⁸		48.7	58	50	26	7 07	44	37	36	7 09	62
20	120	38.4		42.1	297	10.0 ¹¹⁹	-17	54.4	57	52	30	13	7 53	30	35	16	63
21	135	38.3		42.5	311	40.8 ¹¹⁸	-18	00.0	56	54	35	20	8 02	22	34	23	65
22	150	38.2		42.8	326	11.6 ¹¹⁸	-18	05.5	55	56	41	28	14	13	33	31	67
23	165	38.1		43.2	340	42.4 ¹¹⁸		10.9	54	58	46	37	26	16 03	31	41	68
24	180	38.1	+21	43.6	355	13.2 ¹¹⁸	-18	16.2	53	60 S	6 53	7 47	8 41	15 52	29	7 52	70

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 7 ^h 32 ^m 9		Mag: -3.9 PMG: 14 ^h 25 ^m		Mag: -1.1 PMG: 4 ^h 04 ^m		Mag: -2.5 PMG: 22 ^h 25 ^m		Mag: +0.2 PMG: 2 ^h 08 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	o	'	o	'	o	'	o	'	o	'								
0	246	28.3	144	03.2	+24	47.1	298	57.8	-21	45.2	22	38.9	-15	25.6	327	57.3	-22	19.3
1	261	30.7	159	02.4		46.9	313	59.4		45.2	37	41.7		25.5	342	59.9		19.3
2	276	33.2	174	01.6		46.7	329	01.0		45.1	52	44.4		25.5	358	02.5		19.3
3	291	35.7	189	00.9		46.5	344	02.7		45.1	67	47.2		25.4	13	05.1		19.4
4	306	38.1	204	00.1		46.3	359	04.3		45.1	82	49.9		25.3	28	07.8		19.4
5	321	40.6	218	59.3	+24	46.1	14	05.9	-21	45.0	97	52.7	-15	25.2	43	10.4	-22	19.4
6	336	43.1	233	58.5	+24	45.9	29	07.6	-21	45.0	112	55.4	-15	25.2	58	13.0	-22	19.4
7	351	45.5	248	57.7		45.7	44	09.2		45.0	127	58.1		25.1	73	15.6		19.4
8	6	48.0	263	56.9		45.5	59	10.8		44.9	143	00.9		25.0	88	18.2		19.4
9	21	50.5	278	56.1		45.3	74	12.5		44.9	158	03.6		25.0	103	20.9		19.4
10	36	52.9	293	55.3		45.0	89	14.1		44.8	173	06.4		24.9	118	23.5		19.4
11	51	55.4	308	54.5	+24	44.8	104	15.8	-21	44.8	188	09.1	-15	24.8	133	26.1	-22	19.4
12	66	57.8	323	53.7	+24	44.6	119	17.4	-21	44.8	203	11.8	-15	24.7	148	28.7	-22	19.4
13	82	00.3	338	52.9		44.4	134	19.0		44.7	218	14.6		24.7	163	31.3		19.5
14	97	02.8	353	52.1		44.2	149	20.7		44.7	233	17.3		24.6	178	34.0		19.5
15	112	05.2	8	51.3		44.0	164	22.3		44.7	248	20.0		24.5	193	36.6		19.5
16	127	07.7	23	50.6		43.8	179	24.0		44.6	263	22.8		24.4	208	39.2		19.5
17	142	10.2	38	49.8	+24	43.5	194	25.6	-21	44.6	278	25.5	-15	24.4	223	41.8	-22	19.5
18	157	12.6	53	49.0	+24	43.3	209	27.3	-21	44.5	293	28.3	-15	24.3	238	44.5	-22	19.5
19	172	15.1	68	48.2		43.1	224	28.9		44.5	308	31.0		24.2	253	47.1		19.5
20	187	17.6	83	47.4		42.9	239	30.5		44.5	323	33.7		24.2	268	49.7		19.5
21	202	20.0	98	46.6		42.7	254	32.2		44.4	338	36.5		24.1	283	52.3		19.5
22	217	22.5	113	45.8		42.4	269	33.8		44.4	353	39.2		24.0	298	55.0		19.5
23	232	25.0	128	45.0		42.2	284	35.5		44.4	8	42.0		23.9	313	57.6		19.6
24	247	27.4	143	44.2	+24	42.0	299	37.1	-21	44.3	23	44.7	-15	23.9	329	00.2	-22	19.6
Dif	—		-8		-2		+16		0		+27		+1		+26		0	

UT	SOL				☉ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8 PMG: 11 ^h 57 ^m 5				Edad: 14 ^d 5 PHE { 4 ^h : 54 ^m 8 SD: 14 ^h 9 { 12 ^h : 54 ^m 7 PMG: 0 ^h 20 ^m R°: 48 ^m													
	hG ☉	Dec	hG ☾	Dif	Dec	Dif	Civil	Náutico			Hora	R°	Hora	R°				
h	o	'	o	'	o	'	o	'	o	h m	h m	h m	h m m	h m m	h m m	h m m		
0	180	38.1	+21	43.6	355	13.2	-18	16.2	60 N	21 04	22 25	*** **	21 37	58	4 03	33		
1	195	38.0		44.0	9	43.9 ¹¹⁷		21.4	58	20 46	21 52	*** **	23	56	16	35		
2	210	37.9		44.3	24	14.7 ¹¹⁸		26.6	56	32	29	23 36	10	56	27	36		
3	225	37.8		44.7	38	45.4 ¹¹⁷		31.6	54	19	21 10	22 34	21 00	55	37	37		
4	240	37.7		45.1	53	16.1 ¹¹⁷		36.6	50	20 08	20 54	22 03	20 50	55	45	39		
5	255	37.6	+21	45.5	67	46.9 ¹¹⁸	-18	41.4	48	19 58	20 41	21 41	20 42	54	4 53	39		
6	270	37.6	+21	45.8	82	17.6 ¹¹⁷	-18	46.2	48	19 38	20 14	21 01	20 24	53	5 09	42		
7	285	37.5		46.2	96	48.2 ¹¹⁶		50.9	47	21	19 53	20 33	20 09	53	23	43		
8	300	37.4		46.6	111	18.9 ¹¹⁷	-18	55.5	46	35	19 07	36	20 12	52	35	43		
9	315	37.3		46.9	125	49.6 ¹¹⁷	-19	00.0	45	30	18 55	19 22	19 55	46	51	5 45	44	
10	330	37.2		47.3	140	20.2 ¹¹⁶	-19	04.4	44	20	35	18 59	28	50	6 02	46		
11	345	37.1	+21	47.7	154	50.8 ¹¹⁶	-19	08.7	43	10 N	18 17	18 40	19 07	19 12	49	6 17	48	
12	0	37.0	+21	48.0	169	21.5 ¹¹⁷	-19	12.9	42	0	18 01	18 23	18 49	18 57	48	6 31	49	
13	15	37.0		48.4	183	52.1 ¹¹⁶		17.1	42	10 S	17 45	18 08	34	42	48	6 46	50	
14	30	36.9		48.8	198	22.7 ¹¹⁶		21.1	40	20	28	17 52	19	26	47	7 01	51	
15	45	36.8		49.1	212	53.3 ¹¹⁶		25.1	40	30	17 08	34	18 04	18 08	46	18	53	
16	60	36.7		49.5	227	23.9 ¹¹⁶		28.9	38	35	16 57	25	17 56	17 57	45	29	53	
17	75	36.6	+21	49.9	241	54.4 ¹¹⁵	-19	32.7	38	40	16 44	17 14	17 48	17 45	44	7 40	55	
18	90	36.5	+21	50.2	256	25.0 ¹¹⁶	-19	36.3	36	45	16 29	17 02	17 38	17 31	43	7 54	56	
19	105	36.4		50.6	270	55.6 ¹¹⁶		39.9	36	50	10	16 47	28	13	43	8 11	57	
20	120	36.3		51.0	285	26.1 ¹¹⁵		43.3	34	52	16 01	41	23	17 05	42	19	58	
21	135	36.3		51.3	299	56.7 ¹¹⁶		46.7	34	54	15 51	33	18	16 56	41	28	59	
22	150	36.2		51.7	314	27.2 ¹¹⁵		50.0	33	56	40	25	13	46	40	38	60	
23	165	36.1		52.0	328	57.7 ¹¹⁵		53.2	32	58	27	16	07	34	39	8 49	61	
24	180	36.0	+21	52.4	343	28.3 ¹¹⁶	-19	56.3	31	60 S	15 12	16 06	17 01	16 21	37	9 02	63	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 7 ^h 28 ^m 9		Mag: -3.9 PMG: 14 ^h 26 ^m				Mag: -1.2 PMG: 4 ^h 01 ^m				Mag: -2.5 PMG: 22 ^h 21 ^m				Mag: +0.2 PMG: 2 ^h 04 ^m			
	hG ♈		hG ♀	Dec			hG ♂	Dec			hG ♃	Dec			hG ♄	Dec		
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'
0	247	27.4	143	44.2	+24	42.0	299	37.1	-21	44.3	23	44.7	-15	23.9	329	00.2	-22	19.6
1	262	29.9	158	43.5		41.8	314	38.8		44.3	38	47.4		23.8	344	02.8		19.6
2	277	32.3	173	42.7		41.5	329	40.4		44.3	53	50.2		23.7	359	05.4		19.6
3	292	34.8	188	41.9		41.3	344	42.1		44.2	68	52.9		23.7	14	08.1		19.6
4	307	37.3	203	41.1		41.1	359	43.7		44.2	83	55.6		23.6	29	10.7		19.6
5	322	39.7	218	40.3	+24	40.8	14	45.4	-21	44.2	98	58.4	-15	23.5	44	13.3	-22	19.6
6	337	42.2	233	39.5	+24	40.6	29	47.1	-21	44.1	114	01.1	-15	23.4	59	15.9	-22	19.6
7	352	44.7	248	38.7		40.4	44	48.7		44.1	129	03.8		23.4	74	18.6		19.6
8	7	47.1	263	38.0		40.1	59	50.4		44.1	144	06.6		23.3	89	21.2		19.6
9	22	49.6	278	37.2		39.9	74	52.0		44.0	159	09.3		23.2	104	23.8		19.7
10	37	52.1	293	36.4		39.6	89	53.7		44.0	174	12.1		23.2	119	26.4		19.7
11	52	54.5	308	35.6	+24	39.4	104	55.3	-21	44.0	189	14.8	-15	23.1	134	29.1	-22	19.7
12	67	57.0	323	34.8	+24	39.2	119	57.0	-21	43.9	204	17.5	-15	23.0	149	31.7	-22	19.7
13	82	59.5	338	34.0		38.9	134	58.7		43.9	219	20.3		23.0	164	34.3		19.7
14	98	01.9	353	33.3		38.7	150	00.3		43.9	234	23.0		22.9	179	36.9		19.7
15	113	04.4	8	32.5		38.4	165	02.0		43.8	249	25.7		22.8	194	39.6		19.7
16	128	06.8	23	31.7		38.2	180	03.7		43.8	264	28.5		22.7	209	42.2		19.7
17	143	09.3	38	30.9	+24	37.9	195	05.3	-21	43.8	279	31.2	-15	22.7	224	44.8	-22	19.7
18	158	11.8	53	30.1	+24	37.7	210	07.0	-21	43.8	294	33.9	-15	22.6	239	47.4	-22	19.7
19	173	14.2	68	29.3		37.4	225	08.6		43.7	309	36.7		22.5	254	50.1		19.8
20	188	16.7	83	28.6		37.2	240	10.3		43.7	324	39.4		22.5	269	52.7		19.8
21	203	19.2	98	27.8		36.9	255	12.0		43.7	339	42.1		22.4	284	55.3		19.8
22	218	21.6	113	27.0		36.7	270	13.7		43.6	354	44.9		22.3	299	57.9		19.8
23	233	24.1	128	26.2		36.4	285	15.3		43.6	9	47.6		22.2	315	00.6		19.8
24	248	26.6	143	25.4	+24	36.2	300	17.0	-21	43.6	24	50.3	-15	22.2	330	03.2	-22	19.8
Dif	—		-8		-2		+17		0		+27		+1		+26		0	

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8 PMG: 11 ^h 57 ^m 7				Edad: 15 ^d 5 PHE { 4 ^h : 54 ^h /5 12 ^h : 54 ^h /4 20 ^h : 54 ^h /3 PMG: 1 ^h 08 ^m R°: 49 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	o	'	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m	m
0	180	36.0	+21	52.4	343	28.3	−19	56.3	29	60 N	***	1 29	2 51	22 35	47	4 36	43	
1	195	35.9		52.8	357	58.8 ¹¹⁵	−19	59.2	29	58	***	2 02	3 09	19 48		4 51	43	
2	210	35.8		53.1	12	29.3 ¹¹⁵	−20	02.1	29	56	0 18	26	23	22 06	48	5 03	44	
3	225	35.7		53.5	26	59.8 ¹¹⁵		04.9	28	54	1 21	2 45	36	21 55	48	14	45	
4	240	35.6		53.8	41	30.3 ¹¹⁵		07.6	27	52	1 52	3 01	47	45	48	24	45	
5	255	35.5	+21	54.2	56	00.8 ¹¹⁵	−20	10.2	26	50	2 14	3 14	3 57	21 36	48	5 32	46	
6	270	35.4	+21	54.5	70	31.3 ¹¹⁵	−20	12.7	25	45	2 54	3 41	4 17	21 17	48	5 51	46	
7	285	35.4		54.9	85	01.8 ¹¹⁵		15.2	25	40	3 22	4 02	34	21 02	48	6 06	46	
8	300	35.3		55.3	99	32.3 ¹¹⁵		17.5	23	35	3 43	19	4 48	20 49	48	18	47	
9	315	35.2		55.6	114	02.8 ¹¹⁵		19.7	22	30	4 00	33	5 00	37	49	29	48	
10	330	35.1		56.0	128	33.3 ¹¹⁵		21.8	21	20	27	4 56	20	18	48	6 48	48	
11	345	35.0	+21	56.3	143	03.8 ¹¹⁵	−20	23.8	20	10 N	4 48	5 15	5 38	20 01	49	7 05	48	
12	0	34.9	+21	56.7	157	34.3 ¹¹⁵	−20	25.7	19	0	5 06	5 32	5 54	19 45	49	7 20	49	
13	15	34.8		57.0	172	04.8 ¹¹⁵		27.6	19	10 S	22	5 48	6 10	30	48	36	49	
14	30	34.7		57.4	186	35.3 ¹¹⁵		29.3	17	20	36	6 04	27	19 13	48	7 52	50	
15	45	34.6		57.7	201	05.8 ¹¹⁵		30.9	16	30	52	21	47	18 54	48	8 11	50	
16	60	34.5		58.1	215	36.3 ¹¹⁵		32.4	15	35	5 59	31	6 59	42	49	22	50	
17	75	34.4	+21	58.4	230	06.8 ¹¹⁵	−20	33.9	15	40	6 08	6 42	7 12	18 29	49	8 35	50	
18	90	34.4	+21	58.8	244	37.3 ¹¹⁵	−20	35.2	13	45	6 17	6 54	7 27	18 14	49	8 50	51	
19	105	34.3		59.1	259	07.8 ¹¹⁵		36.4	12	50	28	7 08	46	17 56	48	9 08	51	
20	120	34.2		59.5	273	38.4 ¹¹⁶		37.6	12	52	32	15	7 55	47	48	17	51	
21	135	34.1	+21	59.8	288	08.9 ¹¹⁵		38.6	10	54	37	23	8 05	37	48	27	51	
22	150	34.0	+22	00.2	302	39.4 ¹¹⁵		39.6	10	56	43	31	16	26	48	38	51	
23	165	33.9		00.5	317	09.9 ¹¹⁵		40.4	8	58	49	40	29	17 13	48	9 50	52	
24	180	33.8	+22	00.8	331	40.5 ¹¹⁶	−20	41.2	8	60 S	6 55	7 50	8 45	16 58	48	10 05	52	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 7 ^h 25 ^m 0		Mag: −3.9 PMG: 14 ^h 27 ^m		Mag: −1.2 PMG: 3 ^h 58 ^m		Mag: −2.5 PMG: 22 ^h 17 ^m		Mag: +0.2 PMG: 1 ^h 59 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	o	'	o	'	o	'	o	'	o	'
0	248	26.6	143	25.4	+24	36.2	300	17.0	−21	43.6
1	263	29.0	158	24.7		35.9	315	18.7		43.5
2	278	31.5	173	23.9		35.7	330	20.3		43.5
3	293	34.0	188	23.1		35.4	345	22.0		43.5
4	308	36.4	203	22.3		35.1	0	23.7		43.5
5	323	38.9	218	21.5	+24	34.9	15	25.4	−21	43.4
6	338	41.3	233	20.8	+24	34.6	30	27.0	−21	43.4
7	353	43.8	248	20.0		34.4	45	28.7		43.4
8	8	46.3	263	19.2		34.1	60	30.4		43.4
9	23	48.7	278	18.4		33.8	75	32.1		43.3
10	38	51.2	293	17.7		33.6	90	33.7		43.3
11	53	53.7	308	16.9	+24	33.3	105	35.4	−21	43.3
12	68	56.1	323	16.1	+24	33.0	120	37.1	−21	43.2
13	83	58.6	338	15.3		32.7	135	38.8		43.2
14	99	01.1	353	14.6		32.5	150	40.5		43.2
15	114	03.5	8	13.8		32.2	165	42.2		43.2
16	129	06.0	23	13.0		31.9	180	43.8		43.1
17	144	08.5	38	12.2	+24	31.6	195	45.5	−21	43.1
18	159	10.9	53	11.5	+24	31.4	210	47.2	−21	43.1
19	174	13.4	68	10.7		31.1	225	48.9		43.1
20	189	15.8	83	09.9		30.8	240	50.6		43.0
21	204	18.3	98	09.2		30.5	255	52.3		43.0
22	219	20.8	113	08.4		30.3	270	54.0		43.0
23	234	23.2	128	07.6		30.0	285	55.7		43.0
24	249	25.7	143	06.8	+24	29.7	300	57.3	−21	43.0
Dif	—		−8		−3		+17		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: 16 ^d 5 PHE { 4 ^h : 54'2 12 ^h : 54'2 20 ^h : 54'1 R°: 49 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	o	'	o	'	o	'	o	h m	h m	h m	h m	h m	h m	h m	h m
0	180	33.8	+22	00.8	331	40.5	-20 41.2	60 N	21 07	22 32	*** **	23 22 36	5 19 53		
1	195	33.7		01.2	346	11.0 ¹¹⁵	41.8	58	20 49	21 57	*** **	23 07 37	34 53		
2	210	33.6		01.5	0	41.6 ¹¹⁶	42.4	56	34	32	*** **	22 54 39	47 52		
3	225	33.5		01.9	15	12.1 ¹¹⁵	42.8	54	21	21 13	22 39	43 39	5 59 51		
4	240	33.4		02.2	29	42.7 ¹¹⁶	43.2	52	10	20 57	22 07	33 40	6 09 51		
5	255	33.3	+22	02.5	44	13.3 ¹¹⁶	-20 43.4	50	20 00	20 43	21 44	22 24 41	6 18 51		
6	270	33.2	+22	02.9	58	43.9 ¹¹⁶	-20 43.6	45	19 39	20 16	21 03	22 05 43	6 37 51		
7	285	33.1		03.2	73	14.5 ¹¹⁶	43.6	40	23	19 55	20 35	21 50 43	6 52 51		
8	300	33.0		03.6	87	45.1 ¹¹⁶	43.6	35	19 09	38	20 14	37 44	7 05 50		
9	315	33.0		03.9	102	15.7 ¹¹⁶	43.5	30	18 56	24	19 56	26 45	17 49		
10	330	32.9		04.2	116	46.3 ¹¹⁶	43.2	20	36	19 00	29	21 06 47	36 49		
11	345	32.8	+22	04.6	131	17.0 ¹¹⁷	-20 42.9	10 N	18 18	18 41	19 08	20 50 47	7 53 49		
12	0	32.7	+22	04.9	145	47.6 ¹¹⁶	-20 42.5	0	18 01	18 24	18 50	20 34 48	8 09 48		
13	15	32.6		05.2	160	18.3 ¹¹⁷	42.0	10 S	17 45	18 08	34	18 49	25 48		
14	30	32.5		05.6	174	49.0 ¹¹⁷	41.4	20	28	17 51	19	20 01 50	8 42 47		
15	45	32.4		05.9	189	19.6 ¹¹⁶	40.6	30	17 08	34	18 03	19 42 51	9 01 47		
16	60	32.3		06.2	203	50.4 ¹¹⁸	39.8	35	16 56	24	17 55	31 51	12 47		
17	75	32.2	+22	06.6	218	21.1 ¹¹⁷	-20 38.9	40	16 43	17 13	17 47	19 18 52	9 25 46		
18	90	32.1	+22	06.9	232	51.8 ¹¹⁷	-20 37.9	45	16 28	17 01	17 37	19 03 53	9 41 45		
19	105	32.0		07.2	247	22.6 ¹¹⁸	36.8	50	16 08	16 46	27	18 44 54	9 59 45		
20	120	31.9		07.6	261	53.3 ¹¹⁷	35.6	52	15 59	39	22	35 55	10 08 44		
21	135	31.8		07.9	276	24.1 ¹¹⁸	34.3	54	49	32	17	25 55	18 44		
22	150	31.7		08.2	290	54.9 ¹¹⁸	33.0	56	38	23	11	14 56	29 44		
23	165	31.6		08.6	305	25.7 ¹¹⁸	31.5	58	25	14	17 05	18 01 57	42 43		
24	180	31.5	+22	08.9	319	56.6 ¹¹⁹	-20 29.9	60 S	15 09	16 04	16 59	17 46 58	10 57 42		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 7 ^h 21 ^m 1		Mag: -3.9 PMG: 14 ^h 28 ^m		Mag: -1.2 PMG: 3 ^h 56 ^m		Mag: -2.5 PMG: 22 ^h 12 ^m		Mag: +0.2 PMG: 1 ^h 55 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	o	'	o	'	o	'	o	'	o	'
0	249	25.7	143	06.8	+24	29.7	300	57.3	-21	43.0
1	264	28.2	158	06.1		29.4	315	59.0		42.9
2	279	30.6	173	05.3		29.1	331	00.7		42.9
3	294	33.1	188	04.5		28.8	346	02.4		42.9
4	309	35.6	203	03.8		28.5	1	04.1		42.9
5	324	38.0	218	03.0	+24	28.2	16	05.8	-21	42.8
6	339	40.5	233	02.2	+24	28.0	31	07.5	-21	42.8
7	354	42.9	248	01.5		27.7	46	09.2		42.8
8	9	45.4	263	00.7		27.4	61	10.9		42.8
9	24	47.9	277	59.9		27.1	76	12.6		42.8
10	39	50.3	292	59.2		26.8	91	14.3		42.7
11	54	52.8	307	58.4	+24	26.5	106	16.0	-21	42.7
12	69	55.3	322	57.6	+24	26.2	121	17.7	-21	42.7
13	84	57.7	337	56.9		25.9	136	19.4		42.7
14	100	00.2	352	56.1		25.6	151	21.1		42.7
15	115	02.7	7	55.3		25.3	166	22.8		42.6
16	130	05.1	22	54.6		25.0	181	24.5		42.6
17	145	07.6	37	53.8	+24	24.7	196	26.2	-21	42.6
18	160	10.1	52	53.0	+24	24.4	211	28.0	-21	42.6
19	175	12.5	67	52.3		24.1	226	29.7		42.6
20	190	15.0	82	51.5		23.8	241	31.4		42.5
21	205	17.4	97	50.8		23.4	256	33.1		42.5
22	220	19.9	112	50.0		23.1	271	34.8		42.5
23	235	22.4	127	49.2		22.8	286	36.5		42.5
24	250	24.8	142	48.5	+24	22.5	301	38.2	-21	42.5
Dif	—		-8		-3		+17		0	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8			Edad: 17 ^d 5 PHE { 4 ^h : 54 ^m 1 12 ^h : 54 ^m 1 20 ^h : 54 ^m 1											
	PMG: 11 ^h 58 ^m 0			SD: 14 ^h 7 PMG: 2 ^h 46 ^m R°: 47 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R°	Hora	R°	
h	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m
0	180	31.5	+22	08.9	319	56.6	-20 29.9	60 N	***	1 24	2 48	23 58	27	6 12	62
1	195	31.4		09.2	334	27.4 ¹¹⁸	28.2 ¹⁷	58	***	1 59	3 06	44 30		27 60	
2	210	31.3		09.5	348	58.3 ¹¹⁹	26.5 ¹⁷	56	***	2 23	21	33 31		39 59	
3	225	31.2		09.9	3	29.2 ¹¹⁹	24.6 ¹⁹	54	1 16	43	34	22 33		6 50 58	
4	240	31.1		10.2	18	00.1 ¹¹⁹	22.7 ¹⁹	52	1 48	2 59	45	13 34		7 00 57	
5	255	31.0	+22	10.5	32	31.0 ¹¹⁹	-20 20.6 ²¹	50	2 12	3 12	3 55	23 05	35	7 09 56	
6	270	30.9	+22	10.8	47	02.0 ¹²⁰	-20 18.5 ²¹	45	2 52	3 40	4 16	22 48	37	7 28 54	
7	285	30.8		11.2	61	32.9 ¹¹⁹	16.2 ²³	40	3 20	4 01	33	33 39		43 53	
8	300	30.7		11.5	76	03.9 ¹²⁰	13.9 ²³	35	42	18	47	21 41		7 55 53	
9	315	30.6		11.8	90	34.9 ¹²⁰	11.5 ²⁴	30	3 59	32	4 59	22 11	41	8 06 52	
10	330	30.5		12.1	105	06.0 ¹²¹	09.0 ²⁵	20	4 27	4 56	5 20	21 53	43	25 50	
11	345	30.4	+22	12.5	119	37.0 ¹²⁰	-20 06.4 ²⁶	10 N	4 48	5 15	5 38	21 37	45	8 42 48	
12	0	30.3	+22	12.8	134	08.1 ¹²¹	-20 03.7 ²⁷	0	5 06	5 32	5 54	21 22	47	8 57 48	
13	15	30.2		13.1	148	39.2 ¹²¹	-20 00.9 ²⁸	10 S	22	5 48	6 11	21 07	48	9 13 46	
14	30	30.1		13.4	163	10.3 ¹²¹	-19 58.0 ²⁹	20	37	6 04	28	20 51	50	29 45	
15	45	30.0		13.7	177	41.4 ¹²¹	55.0 ³⁰	30	5 52	22	6 48	33 52		48 43	
16	60	29.9		14.0	192	12.6 ¹²²	52.0 ³⁰	35	6 01	32	7 00	22 53		9 59 42	
17	75	29.8	+22	14.4	206	43.8 ¹²²	-19 48.8 ³²	40	6 09	6 43	7 13	20 10	55	10 11 41	
18	90	29.7	+22	14.7	221	15.0 ¹²²	-19 45.6 ³²	45	6 19	6 55	7 29	19 56	56	10 26 40	
19	105	29.6		15.0	235	46.2 ¹²²	42.3 ³³	50	29	7 10	48	38 58		44 38	
20	120	29.5		15.3	250	17.5 ¹²³	38.8 ³⁵	52	34	17	7 57	30 59		10 52 38	
21	135	29.4		15.6	264	48.8 ¹²³	35.3 ³⁵	54	39	25	8 07	20 61		11 02 36	
22	150	29.3		15.9	279	20.1 ¹²³	31.7 ³⁶	56	45	33	19	19 10	62	13 34	
23	165	29.2		16.2	293	51.4 ¹²³	28.0 ³⁷	58	51	42	32	18 58	63	25 33	
24	180	29.1	+22	16.6	308	22.8 ¹²⁴	-19 24.3 ³⁷	60 S	6 58	7 53	8 48	18 44	65	11 39 32	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 7 ^h 17 ^m 1		Mag: -3.9 PMG: 14 ^h 30 ^m		Mag: -1.3 PMG: 3 ^h 53 ^m		Mag: -2.5 PMG: 22 ^h 08 ^m		Mag: +0.2 PMG: 1 ^h 51 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	o	'	o	'	o	'	o	'	o	'								
0	250	24.8	142	48.5	+24	22.5	301	38.2	-21	42.5	27	01.3	-15	18.9	332	09.3	-22	20.3
1	265	27.3	157	47.7		22.2	316	39.9		42.5	42	04.0		18.8	347	12.0		20.3
2	280	29.8	172	47.0		21.9	331	41.7		42.4	57	06.8		18.7	2	14.6		20.3
3	295	32.2	187	46.2		21.6	346	43.4		42.4	72	09.5		18.7	17	17.2		20.3
4	310	34.7	202	45.4		21.3	1	45.1		42.4	87	12.2		18.6	32	19.9		20.3
5	325	37.2	217	44.7	+24	20.9	16	46.8	-21	42.4	102	14.9	-15	18.5	47	22.5	-22	20.4
6	340	39.6	232	43.9	+24	20.6	31	48.5	-21	42.4	117	17.6	-15	18.5	62	25.1	-22	20.4
7	355	42.1	247	43.2		20.3	46	50.2		42.4	132	20.4		18.4	77	27.8		20.4
8	10	44.6	262	42.4		20.0	61	52.0		42.3	147	23.1		18.3	92	30.4		20.4
9	25	47.0	277	41.6		19.6	76	53.7		42.3	162	25.8		18.3	107	33.0		20.4
10	40	49.5	292	40.9		19.3	91	55.4		42.3	177	28.5		18.2	122	35.6		20.4
11	55	51.9	307	40.1	+24	19.0	106	57.1	-21	42.3	192	31.3	-15	18.1	137	38.3	-22	20.4
12	70	54.4	322	39.4	+24	18.7	121	58.9	-21	42.3	207	34.0	-15	18.1	152	40.9	-22	20.4
13	85	56.9	337	38.6		18.3	137	00.6		42.3	222	36.7		18.0	167	43.5		20.4
14	100	59.3	352	37.9		18.0	152	02.3		42.3	237	39.4		17.9	182	46.2		20.4
15	116	01.8	7	37.1		17.7	167	04.0		42.2	252	42.1		17.9	197	48.8		20.5
16	131	04.3	22	36.4		17.4	182	05.8		42.2	267	44.9		17.8	212	51.4		20.5
17	146	06.7	37	35.6	+24	17.0	197	07.5	-21	42.2	282	47.6	-15	17.7	227	54.1	-22	20.5
18	161	09.2	52	34.8	+24	16.7	212	09.2	-21	42.2	297	50.3	-15	17.7	242	56.7	-22	20.5
19	176	11.7	67	34.1		16.4	227	11.0		42.2	312	53.0		17.6	257	59.3		20.5
20	191	14.1	82	33.3		16.0	242	12.7		42.2	327	55.7		17.5	273	02.0		20.5
21	206	16.6	97	32.6		15.7	257	14.4		42.2	342	58.5		17.5	288	04.6		20.5
22	221	19.1	112	31.8		15.3	272	16.2		42.2	358	01.2		17.4	303	07.2		20.5
23	236	21.5	127	31.1		15.0	287	17.9		42.1	13	03.9		17.3	318	09.9		20.5
24	251	24.0	142	30.3	+24	14.7	302	19.6	-21	42.1	28	06.6	-15	17.3	333	12.5	-22	20.6
Dif	—		-8		-3		+17		0		+27		+1		+26			

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15'8 PMG: 11 ^h 58 ^m 1			Edad: 18 ^d 5 PHE { 4 ^h : 54'1 12 ^h : 54'1 20 ^h : 54'2 R°: 47 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°	
h	o	'	o	'	o	'	o	'	h	m	h	m	h	m	h	m
0	180	29.1	+22	16.6	308	22.8	-19	24.3	60 N	21 11	22 38	*** **	*** **	*** **	7 14	68
1	195	29.0		16.9	322	54.2 ¹²⁴		20.4	58	20 52	22 01	*** **	*** **	*** **	27 66	
2	210	28.9		17.2	337	25.6 ¹²⁴		16.4	56	37	21 36	*** **	*** **	*** **	38 64	
3	225	28.8		17.5	351	57.0 ¹²⁴		12.4	54	24	21 16	22 45	23 55	27	48	63
4	240	28.7		17.8	6	28.5 ¹²⁵		08.3	52	12	20 59	22 11	47 29	27	7 57	61
5	255	28.6	+22	18.1	20	59.9 ¹²⁴	-19	04.1	50	20 02	20 45	21 47	23 40	30	8 05	60
6	270	28.5	+22	18.4	35	31.4 ¹²⁵	-18	59.8	45	19 41	20 18	21 06	23 25	33	8 22	58
7	285	28.4		18.7	50	03.0 ¹²⁶		55.4	44	24	19 56	20 37	12 36		36 55	
8	300	28.3		19.0	64	34.5 ¹²⁵		50.9	45	35	19 10	39	20 15	23 02	37	48 54
9	315	28.2		19.3	79	06.1 ¹²⁶		46.4	45	30	18 57	25	19 57	22 52	39	8 58 52
10	330	28.1		19.6	93	37.7 ¹²⁶		41.7	47	20	37	19 01	30	36 41	9 15	51
11	345	28.0	+22	19.9	108	09.4 ¹²⁷	-18	37.0	47	10 N	18 19	18 41	19 08	22 22	44	9 30 49
12	0	27.9	+22	20.2	122	41.0 ¹²⁶	-18	32.2	48	0	18 02	18 24	18 50	22 09	46	9 45 46
13	15	27.8		20.5	137	12.7 ¹²⁷		27.3	49	10 S	17 45	18 08	34	21 55	48	9 59 44
14	30	27.7		20.8	151	44.5 ¹²⁸		22.3	50	20	28	17 51	19	41 51		10 14 42
15	45	27.6		21.1	166	16.2 ¹²⁷		17.3	50	30	17 07	34	18 03	25 53		31 40
16	60	27.5		21.4	180	48.0 ¹²⁸		12.1	52	35	16 56	24	17 55	15 55		41 39
17	75	27.4	+22	21.7	195	19.8 ¹²⁸	-18	06.9	52	40	16 42	17 13	17 46	21 05	56	10 52 37
18	90	27.3	+22	22.0	209	51.6 ¹²⁸	-18	01.6	53	45	16 27	17 00	17 37	20 52	58	11 06 35
19	105	27.2		22.3	224	23.4 ¹²⁸	-17	56.2	54	50	16 07	16 45	26	36 62		22 32
20	120	27.1		22.6	238	55.3 ¹²⁹		50.8	54	52	15 58	38	21	29 63		30 31
21	135	27.0		22.9	253	27.2 ¹²⁹		45.2	56	54	48	30	16	21 64		38 30
22	150	26.9		23.2	267	59.1 ¹²⁹		39.6	56	56	36	22	10	12 65		47 29
23	165	26.7		23.5	282	31.1 ¹³⁰		33.9	57	58	22	12	17 04	20 01	68	11 58 27
24	180	26.6	+22	23.8	297	03.1 ¹³⁰	-17	28.1	58	60 S	15 07	16 02	16 57	19 49	71	12 11 24

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 7 ^h 13 ^m 2		Mag: -4.0 PMG: 14 ^h 31 ^m		Mag: -1.3 PMG: 3 ^h 50 ^m		Mag: -2.5 PMG: 22 ^h 04 ^m		Mag: +0.2 PMG: 1 ^h 47 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	o	'	o	'	o	'	o	'	o	'								
0	251	24.0	142	30.3	+24	14.7	302	19.6	-21	42.1	28	06.6	-15	17.3	333	12.5	-22	20.6
1	266	26.4	157	29.6		14.3	317	21.4		42.1	43	09.3		17.2	348	15.1		20.6
2	281	28.9	172	28.8		14.0	332	23.1		42.1	58	12.1		17.1	3	17.8		20.6
3	296	31.4	187	28.1		13.6	347	24.8		42.1	73	14.8		17.1	18	20.4		20.6
4	311	33.8	202	27.3		13.3	2	26.6		42.1	88	17.5		17.0	33	23.0		20.6
5	326	36.3	217	26.6	+24	12.9	17	28.3	-21	42.1	103	20.2	-15	16.9	48	25.7	-22	20.6
6	341	38.8	232	25.8	+24	12.6	32	30.1	-21	42.1	118	22.9	-15	16.9	63	28.3	-22	20.6
7	356	41.2	247	25.1		12.3	47	31.8		42.1	133	25.7		16.8	78	30.9		20.6
8	11	43.7	262	24.3		11.9	62	33.5		42.1	148	28.4		16.8	93	33.6		20.6
9	26	46.2	277	23.6		11.6	77	35.3		42.0	163	31.1		16.7	108	36.2		20.6
10	41	48.6	292	22.8		11.2	92	37.0		42.0	178	33.8		16.6	123	38.8		20.7
11	56	51.1	307	22.1	+24	10.8	107	38.8	-21	42.0	193	36.5	-15	16.6	138	41.5	-22	20.7
12	71	53.6	322	21.4	+24	10.5	122	40.5	-21	42.0	208	39.2	-15	16.5	153	44.1	-22	20.7
13	86	56.0	337	20.6		10.1	137	42.3		42.0	223	42.0		16.4	168	46.7		20.7
14	101	58.5	352	19.9		09.8	152	44.0		42.0	238	44.7		16.4	183	49.4		20.7
15	117	00.9	7	19.1		09.4	167	45.8		42.0	253	47.4		16.3	198	52.0		20.7
16	132	03.4	22	18.4		09.1	182	47.5		42.0	268	50.1		16.2	213	54.6		20.7
17	147	05.9	37	17.6	+24	08.7	197	49.3	-21	42.0	283	52.8	-15	16.2	228	57.3	-22	20.7
18	162	08.3	52	16.9	+24	08.3	212	51.0	-21	42.0	298	55.5	-15	16.1	243	59.9	-22	20.7
19	177	10.8	67	16.1		08.0	227	52.8		42.0	313	58.3		16.0	259	02.5		20.8
20	192	13.3	82	15.4		07.6	242	54.5		42.0	329	01.0		16.0	274	05.2		20.8
21	207	15.7	97	14.7		07.3	257	56.3		42.0	344	03.7		15.9	289	07.8		20.8
22	222	18.2	112	13.9		06.9	272	58.1		42.0	359	06.4		15.8	304	10.4		20.8
23	237	20.7	127	13.2		06.5	287	59.8		42.0	14	09.1		15.8	319	13.1		20.8
24	252	23.1	142	12.4	+24	06.2	303	01.6	-21	41.9	29	11.8	-15	15.7	334	15.7	-22	20.8
Dif	—		-7		-4		+17		0		+27		+1		+26			

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna							
	SD: 15 ^h 8 PMG: 11 ^h 58 ^m 3				Edad: 19 ^d 5 PHE { SD: 14 ^h 8 PMG: 4 ^h 20 ^m R°: 45 ^m 4 ^h : 54 ^h 3 12 ^h : 54 ^h 3 20 ^h : 54 ^h 4																	
	hG ☉	Dec			hG ☾	Dif				Náutico	Civil		Hora	R°	Hora	R°						
h	o	'	o	'	o	'	o	'	o	h	m	h	m	h	m	m						
0	180	26.6	+22	23.8	297	03.1	-17	28.1	60 N	***	1 18	2 45	0 25	21	8 22	72						
1	195	26.5		24.1	311	35.1 ¹³⁰		22.3	58	***	1 55	3 04	14	23	33	70						
2	210	26.4		24.4	326	07.1 ¹³⁰		16.4	59	***	2 20	19	0 04	25	42	68						
3	225	26.3		24.7	340	39.2 ¹³¹		10.3	61	1 11	40	32	***	***	51	66						
4	240	26.2		25.0	355	11.3 ¹³¹	-17	04.3	60	1 45	2 57	44	***	***	8 58	64						
5	255	26.1	+22	25.3	9	43.4 ¹³¹	-16	58.1	62	2 09	3 11	3 54	***	***	9 05	63						
6	270	26.0	+22	25.6	24	15.5 ¹³¹	-16	51.8	63	2 51	3 39	4 15	23 58	30	9 20	59						
7	285	25.9		25.9	38	47.7 ¹³²		45.5	63	3 19	4 00	32	48	32	31	58						
8	300	25.8		26.2	53	19.8 ¹³¹		39.1	64	41	17	46	39	34	42	55						
9	315	25.7		26.5	67	52.1 ¹³³		32.7	64	3 59	32	4 59	31	36	9 50	54						
10	330	25.6		26.7	82	24.3 ¹³²		26.1	66	4 27	4 55	5 20	17	40	10 06	50						
11	345	25.5	+22	27.0	96	56.5 ¹³²	-16	19.5	66	4 48	5 15	5 38	23 06	42	10 19	47						
12	0	25.4	+22	27.3	111	28.8 ¹³³	-16	12.8	67	5 06	5 32	5 55	22 55	44	10 31	45						
13	15	25.3		27.6	126	01.1 ¹³³	-16	06.0	68	22	5 49	6 11	43	48	43	43						
14	30	25.2		27.9	140	33.5 ¹³⁴	-15	59.2	68	38	6 05	29	32	50	10 56	41						
15	45	25.0		28.2	155	05.8 ¹³³		52.3	69	5 53	23	6 49	18	54	11 11	37						
16	60	24.9		28.5	169	38.2 ¹³⁴		45.3	70	6 02	33	7 01	10	56	20	35						
17	75	24.8	+22	28.7	184	10.6 ¹³⁴	-15	38.3	70	6 10	6 44	7 14	22 01	58	11 29	34						
18	90	24.7	+22	29.0	198	43.0 ¹³⁴	-15	31.1	72	6 20	6 57	7 30	21 50	61	11 41	31						
19	105	24.6		29.3	213	15.5 ¹³⁵		24.0	71	31	7 12	50	38	63	11 54	29						
20	120	24.5		29.6	227	47.9 ¹³⁴		16.7	73	36	19	7 59	32	65	12 01	27						
21	135	24.4		29.9	242	20.4 ¹³⁵		09.4	73	41	27	8 09	25	67	08	25						
22	150	24.3		30.2	256	52.9 ¹³⁵	-15	02.0	74	47	35	21	17	69	16	23						
23	165	24.2		30.4	271	25.5 ¹³⁶	-14	54.5	75	6 53	45	35	09	71	25	21						
24	180	24.1	+22	30.7	285	58.0 ¹³⁵	-14	47.0	75	7 00	7 55	8 51	21 00	73	12 35	19						
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO							
	PMG 7 ^h 09 ^m 3		Mag: -4.0 PMG: 14 ^h 32 ^m				Mag: -1.3 PMG: 3 ^h 47 ^m				Mag: -2.5 PMG: 21 ^h 59 ^m				Mag: +0.1 PMG: 1 ^h 43 ^m							
	hG ♈	Dec			hG ♀	Dec			hG ♂	Dec			hG ♃	Dec			hG ♄	Dec				
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'		
0	252	23.1	142	12.4	+24	06.2	303	01.6	-21	41.9	29	11.8	-15	15.7	334	15.7	-22	20.8				
1	267	25.6	157	11.7		05.8	318	03.3		41.9	44	14.5		15.6	349	18.4		20.8				
2	282	28.0	172	11.0		05.4	333	05.1		41.9	59	17.3		15.6	4	21.0		20.8				
3	297	30.5	187	10.2		05.0	348	06.9		41.9	74	20.0		15.5	19	23.6		20.8				
4	312	33.0	202	09.5		04.7	3	08.6		41.9	89	22.7		15.5	34	26.3		20.9				
5	327	35.4	217	08.7	+24	04.3	18	10.4	-21	41.9	104	25.4	-15	15.4	49	28.9	-22	20.9				
6	342	37.9	232	08.0	+24	03.9	33	12.1	-21	41.9	119	28.1	-15	15.3	64	31.5	-22	20.9				
7	357	40.4	247	07.3		03.5	48	13.9		41.9	134	30.8		15.3	79	34.2		20.9				
8	12	42.8	262	06.5		03.2	63	15.7		41.9	149	33.5		15.2	94	36.8		20.9				
9	27	45.3	277	05.8		02.8	78	17.4		41.9	164	36.2		15.1	109	39.4		20.9				
10	42	47.8	292	05.1		02.4	93	19.2		41.9	179	39.0		15.1	124	42.1		20.9				
11	57	50.2	307	04.3	+24	02.0	108	21.0	-21	41.9	194	41.7	-15	15.0	139	44.7	-22	20.9				
12	72	52.7	322	03.6	+24	01.6	123	22.7	-21	41.9	209	44.4	-15	14.9	154	47.4	-22	20.9				
13	87	55.2	337	02.8		01.3	138	24.5		41.9	224	47.1		14.9	169	50.0		20.9				
14	102	57.6	352	02.1		00.9	153	26.3		41.9	239	49.8		14.8	184	52.6		21.0				
15	118	00.1	7	01.4		00.5	168	28.1		41.9	254	52.5		14.7	199	55.3		21.0				
16	133	02.5	22	00.6	+24	00.1	183	29.8		41.9	269	55.2		14.7	214	57.9		21.0				
17	148	05.0	36	59.9	+23	59.7	198	31.6	-21	41.9	284	57.9	-15	14.6	230	00.5	-22	21.0				
18	163	07.5	51	59.2	+23	59.3	213	33.4	-21	41.9	300	00.6	-15	14.6	245	03.2	-22	21.0				
19	178	09.9	66	58.5		58.9	228	35.2		41.9	315	03.4		14.5	260	05.8		21.0				
20	193	12.4	81	57.7		58.6	243	36.9		41.9	330	06.1		14.4	275	08.4		21.0				
21	208	14.9	96	57.0		58.2	258	38.7		41.9	345	08.8		14.4	290	11.1		21.0				
22	223	17.3	111	56.3		57.8	273	40.5		41.9	0	11.5		14.3	305	13.7		21.0				
23	238	19.8	126	55.5		57.4	288	42.3		41.9	15	14.2		14.2	320	16.4		21.1				
24	253	22.3	141	54.8	+23	57.0	303	44.1	-21	41.9	30	16.9	-15	14.2	335	19.0	-22	21.1				
Dif	—		-7				+18				+27				+1				+26			
			-4				0												0			

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 15°8 PMG: 11 ^h 58 ^m 5			Edad: 20 ^d 5 PHE { SD: 14°9 PMG: 5 ^h 05 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	o	'	o	'	o	'	o	'	h	m	h	m	h	m	h	m		
0	180	24.1	+22	30.7	285	58.0	-14	47.0	60 N	21 14	22 44	***	0 46	17	9 34	75		
1	195	24.0		31.0	300	30.6 ¹³⁶		39.3 ⁷⁷	58	20 55	22 05	***	37	20	43	72		
2	210	23.8		31.3	315	03.2 ¹³⁶		31.7 ⁷⁶	56	39	21 39	***	29	22	50	70		
3	225	23.7		31.6	329	35.8 ¹³⁶		23.9 ⁷⁸	54	26	18	22 51	22	24	9 57	67		
4	240	23.6		31.8	344	08.4 ¹³⁶		16.1 ⁷⁸	52	14	21 02	22 15	16	25	10 02	66		
5	255	23.5	+22	32.1	358	41.1 ¹³⁷	-14	08.3 ⁷⁸	50	20 04	20 48	21 50	0 10	27	10 08	64		
6	270	23.4	+22	32.4	13	13.8 ¹³⁷	-14	00.3 ⁸⁰	45	19 43	20 19	21 08	***	***	10 19	61		
7	285	23.3		32.7	27	46.5 ¹³⁷	-13	52.3 ⁸⁰	40	25	19 58	20 39	***	***	29	58		
8	300	23.2		32.9	42	19.2 ¹³⁷		44.3 ⁸⁰	35	19 11	40	20 17	***	***	37	56		
9	315	23.1		33.2	56	51.9 ¹³⁷		36.1 ⁸²	30	18 58	26	19 59	***	***	44	54		
10	330	23.0		33.5	71	24.7 ¹³⁸		27.9 ⁸²	20	37	19 02	31	23 57	38	10 56	50		
11	345	22.9	+22	33.7	85	57.4 ¹³⁷	-13	19.7 ⁸²	10 N	18 19	18 42	19 09	23 48	42	11 06	48		
12	0	22.7	+22	34.0	100	30.2 ¹³⁸	-13	11.4 ⁸⁴	0	18 02	18 25	18 51	23 39	45	11 16	45		
13	15	22.6		34.3	115	03.0 ¹³⁸	-13	03.0 ⁸⁴	10 S	17 45	18 08	34	31	48	26	42		
14	30	22.5		34.6	129	35.8 ¹³⁸	-12	54.5 ⁸⁵	20	28	17 51	19	22	51	37	38		
15	45	22.4		34.8	144	08.6 ¹³⁸		46.0 ⁸⁵	30	17 07	33	18 03	12	54	48	36		
16	60	22.3		35.1	158	41.5 ¹³⁹		37.5 ⁸⁵	35	16 55	23	17 55	23 06	56	11 55	34		
17	75	22.2	+22	35.4	173	14.3 ¹³⁸	-12	28.9 ⁸⁶	40	16 42	17 12	17 46	22 59	59	12 03	31		
18	90	22.1	+22	35.6	187	47.2 ¹³⁹	-12	20.2 ⁸⁷	45	16 26	16 59	17 36	22 51	62	12 12	28		
19	105	22.0		35.9	202	20.0 ¹³⁸		11.4 ⁸⁸	50	16 06	44	25	41	65	23	25		
20	120	21.9		36.2	216	52.9 ¹³⁹	-12	02.6 ⁸⁸	52	15 57	37	20	37	67	28	23		
21	135	21.7		36.4	231	25.8 ¹³⁹	-11	53.8 ⁸⁸	54	46	29	15	32	69	33	22		
22	150	21.6		36.7	245	58.8 ¹⁴⁰		44.9 ⁸⁹	56	34	21	09	26	71	39	20		
23	165	21.5		36.9	260	31.7 ¹³⁹		35.9 ⁹⁰	58	21	11	17 03	20	73	46	18		
24	180	21.4	+22	37.2	275	04.6 ¹³⁹	-11	26.9 ⁹⁰	60 S	15 04	16 00	16 56	22 13	76	12 54	15		
UT	ARIES		VENUS			MARTE			JÚPITER				SATURNO					
	PMG: 7 ^h 05 ^m 4		Mag: -4.0 PMG: 14 ^h 33 ^m			Mag: -1.4 PMG: 3 ^h 45 ^m			Mag: -2.5 PMG: 21 ^h 55 ^m				Mag: +0.1 PMG: 1 ^h 38 ^m					
	hG ♈		hG ♀		Dec	hG ♂		Dec	hG ♃		Dec		hG ♄		Dec			
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'		
0	253	22.3	141	54.8	+23	57.0	303	44.1	-21	41.9	30	16.9	-15	14.2	335	19.0	-22	21.1
1	268	24.7	156	54.1		56.6	318	45.9		41.9	45	19.6		14.1	350	21.6		21.1
2	283	27.2	171	53.3		56.2	333	47.6		41.9	60	22.3		14.1	5	24.3		21.1
3	298	29.7	186	52.6		55.8	348	49.4		41.9	75	25.0		14.0	20	26.9		21.1
4	313	32.1	201	51.9		55.4	3	51.2		41.9	90	27.7		13.9	35	29.5		21.1
5	328	34.6	216	51.2	+23	55.0	18	53.0	-21	41.9	105	30.4	-15	13.9	50	32.2	-22	21.1
6	343	37.0	231	50.4	+23	54.6	33	54.8	-21	41.9	120	33.2	-15	13.8	65	34.8	-22	21.1
7	358	39.5	246	49.7		54.2	48	56.6		41.9	135	35.9		13.7	80	37.5		21.1
8	13	42.0	261	49.0		53.8	63	58.4		41.9	150	38.6		13.7	95	40.1		21.2
9	28	44.4	276	48.3		53.4	79	00.2		41.9	165	41.3		13.6	110	42.7		21.2
10	43	46.9	291	47.5		53.0	94	01.9		42.0	180	44.0		13.6	125	45.4		21.2
11	58	49.4	306	46.8	+23	52.6	109	03.7	-21	42.0	195	46.7	-15	13.5	140	48.0	-22	21.2
12	73	51.8	321	46.1	+23	52.1	124	05.5	-21	42.0	210	49.4	-15	13.4	155	50.7	-22	21.2
13	88	54.3	336	45.4		51.7	139	07.3		42.0	225	52.1		13.4	170	53.3		21.2
14	103	56.8	351	44.6		51.3	154	09.1		42.0	240	54.8		13.3	185	55.9		21.2
15	118	59.2	6	43.9		50.9	169	10.9		42.0	255	57.5		13.2	200	58.6		21.2
16	134	01.7	21	43.2		50.5	184	12.7		42.0	271	00.2		13.2	216	01.2		21.2
17	149	04.1	36	42.5	+23	50.1	199	14.5	-21	42.0	286	02.9	-15	13.1	231	03.8	-22	21.3
18	164	06.6	51	41.7	+23	49.7	214	16.3	-21	42.0	301	05.6	-15	13.1	246	06.5	-22	21.3
19	179	09.1	66	41.0		49.2	229	18.1		42.0	316	08.3		13.0	261	09.1		21.3
20	194	11.5	81	40.3		48.8	244	19.9		42.0	331	11.0		12.9	276	11.8		21.3
21	209	14.0	96	39.6		48.4	259	21.7		42.0	346	13.8		12.9	291	14.4		21.3
22	224	16.5	111	38.9		48.0	274	23.5		42.0	1	16.5		12.8	306	17.0		21.3
23	239	18.9	126	38.2		47.6	289	25.3		42.0	16	19.2		12.7	321	19.7		21.3
24	254	21.4	141	37.4	+23	47.1	304	27.1	-21	42.1	31	21.9	-15	12.7	336	22.3	-22	21.3
Dif	—		-7		-4		+18		0		+27		+1		+26		0	

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8 PMG: 11 ^h 58 ^m 7			Edad: 21 ^d 5 PHE { SD: 15 ^h 0 PMG: 5 ^h 50 ^m R°: 45 ^m 4 ^h : 55 ^o /0 12 ^h : 55 ^o /2 20 ^h : 55 ^o /4											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m
0	180	21.4	+22	37.2	275	04.6	-11 26.9	60 N	***	1 13	2 43	1 03	15	10 49	77
1	195	21.3		37.5	289	37.6 ¹⁴⁰	17.8 ⁹¹	58	***	1 52	3 02	0 57	17	10 55	74
2	210	21.2		37.7	304	10.5 ¹³⁹	-11 08.6 ⁹²	56	***	2 18	18	51	19	11 00	72
3	225	21.1		38.0	318	43.5 ¹⁴⁰	-10 59.4 ⁹²	54	1 06	38	31	46	21	04	70
4	240	21.0		38.3	333	16.4 ¹³⁹	50.2 ⁹²	52	1 42	2 55	43	41	23	08	68
5	255	20.8	+22	38.5	347	49.4 ¹⁴⁰	-10 40.9 ⁹³	50	2 07	3 09	3 53	0 37	24	11 12	66
6	270	20.7	+22	38.8	2	22.4 ¹⁴⁰	-10 31.5 ⁹⁴	45	2 49	3 38	4 14	0 28	27	11 20	63
7	285	20.6		39.0	16	55.4 ¹⁴⁰	22.1 ⁹⁴	40	3 18	3 59	32	20	30	27	60
8	300	20.5		39.3	31	28.4 ¹⁴⁰	12.7 ⁹⁴	35	40	4 17	46	13	33	33	57
9	315	20.4		39.5	46	01.4 ¹⁴⁰	-10 03.1 ⁹⁶	30	3 58	31	4 59	0 07	35	38	55
10	330	20.3		39.8	60	34.4 ¹⁴⁰	-9 53.6 ⁹⁵	20	4 26	4 55	5 20	***	***	46	51
11	345	20.2	+22	40.1	75	07.4 ¹⁴⁰	-9 44.0 ⁹⁶	10 N	4 48	5 15	5 38	***	***	11 54	48
12	0	20.0	+22	40.3	89	40.4 ¹⁴⁰	-9 34.3 ⁹⁷	0	5 07	5 33	5 55	***	***	12 01	44
13	15	19.9		40.6	104	13.4 ¹⁴⁰	24.6 ⁹⁷	10 S	23	5 49	6 12	***	***	08	41
14	30	19.8		40.8	118	46.4 ¹⁴⁰	14.8 ⁹⁸	20	38	6 06	30	***	***	15	38
15	45	19.7		41.1	133	19.5 ¹⁴¹	-9 05.0 ⁹⁸	30	5 54	24	6 50	***	***	24	34
16	60	19.6		41.3	147	52.5 ¹⁴⁰	-8 55.1 ⁹⁹	35	6 03	34	7 02	***	***	29	32
17	75	19.5	+22	41.6	162	25.5 ¹⁴⁰	-8 45.2 ⁹⁹	40	6 11	6 45	7 16	23 58	60	12 34	30
18	90	19.4	+22	41.8	176	58.5 ¹⁴⁰	-8 35.3 ⁹⁹	45	6 21	6 58	7 32	23 53	63	12 40	27
19	105	19.2		42.1	191	31.5 ¹⁴⁰	25.3 ¹⁰⁰	50	32	7 14	7 52	46	68	48	23
20	120	19.1		42.3	206	04.5 ¹⁴⁰	15.2 ¹⁰¹	52	37	21	8 01	44	69	51	22
21	135	19.0		42.6	220	37.5 ¹⁴⁰	-8 05.1 ¹⁰¹	54	43	28	11	41	70	55	20
22	150	18.9		42.8	235	10.5 ¹⁴⁰	-7 55.0 ¹⁰¹	56	48	37	23	37	73	12 59	18
23	165	18.8		43.1	249	43.5 ¹⁴⁰	44.8 ¹⁰²	58	6 55	47	37	33	76	13 04	16
24	180	18.7	+22	43.3	264	16.5 ¹⁴⁰	-7 34.6 ¹⁰²	60 S	7 02	7 58	8 54	23 29	78	13 09	14

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 7 ^h 01 ^m 4		Mag: -4.0 PMG: 14 ^h 34 ^m		Mag: -1.4 PMG: 3 ^h 42 ^m		Mag: -2.5 PMG: 21 ^h 51 ^m		Mag: +0.1 PMG: 1 ^h 34 ^m							
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	o	'	o	'	o	'	o	'	o	'						
0	254	21.4	141	37.4	+23	304	27.1	-21	31	21.9	-15	336	22.3	-22	21.3	
1	269	23.9	156	36.7		319	28.9	42.1	46	24.6	12.6	351	25.0		21.3	
2	284	26.3	171	36.0		334	30.8	42.1	61	27.3	12.6	6	27.6		21.3	
3	299	28.8	186	35.3		349	32.6	42.1	76	30.0	12.5	21	30.2		21.4	
4	314	31.3	201	34.6		4	34.4	42.1	91	32.7	12.4	36	32.9		21.4	
5	329	33.7	216	33.8	+23	19	36.2	-21	106	35.4	-15	51	35.5	-22	21.4	
6	344	36.2	231	33.1	+23	34	38.0	-21	121	38.1	-15	66	38.2	-22	21.4	
7	359	38.6	246	32.4		49	39.8	42.1	136	40.8	12.3	81	40.8		21.4	
8	14	41.1	261	31.7		64	41.6	42.1	151	43.5	12.2	96	43.4		21.4	
9	29	43.6	276	31.0		79	43.4	42.1	166	46.2	12.1	111	46.1		21.4	
10	44	46.0	291	30.3		94	45.3	42.2	181	48.9	12.1	126	48.7		21.4	
11	59	48.5	306	29.6	+23	109	47.1	-21	196	51.6	-15	141	51.4	-22	21.4	
12	74	51.0	321	28.9	+23	124	48.9	-21	211	54.3	-15	156	54.0	-22	21.5	
13	89	53.4	336	28.1		139	50.7	42.2	226	57.0	11.9	171	56.6		21.5	
14	104	55.9	351	27.4		154	52.5	42.2	241	59.7	11.8	186	59.3		21.5	
15	119	58.4	6	26.7		169	54.3	42.2	257	02.4	11.8	202	01.9		21.5	
16	135	00.8	21	26.0		184	56.2	42.2	272	05.1	11.7	217	04.6		21.5	
17	150	03.3	36	25.3	+23	199	58.0	-21	287	07.8	-15	232	07.2	-22	21.5	
18	165	05.8	51	24.6	+23	214	59.8	-21	302	10.5	-15	247	09.9	-22	21.5	
19	180	08.2	66	23.9		230	01.6	42.3	317	13.2	11.5	262	12.5		21.5	
20	195	10.7	81	23.2		245	03.5	42.3	332	15.9	11.5	277	15.1		21.5	
21	210	13.1	96	22.5		260	05.3	42.3	347	18.6	11.4	292	17.8		21.6	
22	225	15.6	111	21.8		275	07.1	42.3	2	21.3	11.3	307	20.4		21.6	
23	240	18.1	126	21.1		290	09.0	42.3	17	24.0	11.3	322	23.1		21.6	
24	255	20.5	141	20.3	+23	305	10.8	-21	32	26.7	-15	337	25.7	-22	21.6	
Dif	—		-7		-4		+18		+27		+1		+26		0	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15°8			Edad: 22 ^d 5 PHE { 4 ^h : 55°6 12 ^h : 55°8 20 ^h : 56°1										
	PMG: 11 ^h 58 ^m 8			SD: 15°2 PMG: 6 ^h 35 ^m R°: 45 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	o	'	o	'	o	'	o	'	h m	h m	h m	h m	h m	h m
0	180	18.7	+22	43.3	264	16.5	-7 34.6	60 N	21 17	22 50	***	1 18 13	12 06 79	
1	195	18.5		43.6	278	49.5 ¹⁴⁰	24.3 ¹⁰³	58	20 57	22 09	***	14 15	09 76	
2	210	18.4		43.8	293	22.5 ¹⁴⁰	14.0 ¹⁰³	56	42	21 42	***	10 18	12 74	
3	225	18.3		44.0	307	55.5 ¹⁴⁰	-7 03.6 ¹⁰⁴	54	28	21	22 56	07 19	14 72	
4	240	18.2		44.3	322	28.4 ¹³⁹	-6 53.2 ¹⁰⁴	52	16	21 04	22 18	04 21	16 70	
5	255	18.1	+22	44.5	337	01.4 ¹⁴⁰	-6 42.8 ¹⁰⁴	50	20 06	20 50	21 53	1 01 23	12 18 69	
6	270	18.0	+22	44.8	351	34.4 ¹⁴⁰	-6 32.3 ¹⁰⁵	45	19 44	20 21	21 10	0 55 27	12 23 64	
7	285	17.8		45.0	6	07.3 ¹³⁹	21.8 ¹⁰⁵	40	27	19 59	20 40	50 30	27 61	
8	300	17.7		45.2	20	40.2 ¹³⁹	11.2 ¹⁰⁶	35	19 12	41	18	46 32	30 56	
9	315	17.6		45.5	35	13.1 ¹³⁹	-6 00.7 ¹⁰⁵	30	18 59	27	20 00	42 34	33 58	
10	330	17.5		45.7	49	46.0 ¹³⁹	-5 50.0 ¹⁰⁷	20	38	19 02	19 31	35 39	37 53	
11	345	17.4	+22	46.0	64	18.9 ¹³⁹	-5 39.3 ¹⁰⁷	10 N	18 20	18 43	19 09	0 30 41	12 42 48	
12	0	17.3	+22	46.2	78	51.8 ¹³⁹	-5 28.6 ¹⁰⁷	0	18 03	18 25	18 51	0 24 45	12 45 46	
13	15	17.1		46.4	93	24.7 ¹³⁹	17.9 ¹⁰⁷	10 S	17 46	18 08	35	19 48	49 42	
14	30	17.0		46.7	107	57.5 ¹³⁸	-5 07.1 ¹⁰⁸	20	28	17 51	19	13 51	53 39	
15	45	16.9		46.9	122	30.3 ¹³⁸	-4 56.3 ¹⁰⁸	30	17 07	33	18 03	06 56	12 58 34	
16	60	16.8		47.1	137	03.1 ¹³⁸	45.4 ¹⁰⁹	35	16 55	23	17 55	0 02 58	13 01 32	
17	75	16.7	+22	47.4	151	35.9 ¹³⁸	-4 34.6 ¹⁰⁸	40	16 41	17 12	17 46	***	13 04 29	
18	90	16.6	+22	47.6	166	08.7 ¹³⁸	-4 23.6 ¹¹⁰	45	16 25	16 59	17 36	***	13 07 27	
19	105	16.4		47.8	180	41.4 ¹³⁷	12.7 ¹⁰⁹	50	16 05	43	24	***	11 23	
20	120	16.3		48.1	195	14.2 ¹³⁸	-4 01.7 ¹¹⁰	52	15 56	36	19	***	13 21	
21	135	16.2		48.3	209	46.9 ¹³⁷	-3 50.7 ¹¹⁰	54	45	28	14	***	15 20	
22	150	16.1		48.5	224	19.6 ¹³⁷	39.7 ¹¹⁰	56	33	20	08	***	17 18	
23	165	16.0		48.8	238	52.2 ¹³⁶	28.6 ¹¹¹	58	19	16 10	17 02	***	20 15	
24	180	15.8	+22	49.0	253	24.9 ¹³⁷	-3 17.5 ¹¹¹	60 S	15 02	15 59	16 55	***	13 23 12	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 6 ^h 57 ^m 5		Mag: -4.0 PMG: 14 ^h 35 ^m			Mag: -1.4 PMG: 3 ^h 39 ^m			Mag: -2.5 PMG: 21 ^h 46 ^m			Mag: +0.1 PMG: 1 ^h 30 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'
0	255	20.5	141	20.3	+23	36.7	305	10.8	-21	42.4	32	26.7	-15	11.2
1	270	23.0	156	19.6		36.2	320	12.6		42.4	47	29.4		11.2
2	285	25.5	171	18.9		35.8	335	14.4		42.4	62	32.1		11.1
3	300	27.9	186	18.2		35.3	350	16.3		42.4	77	34.8		11.0
4	315	30.4	201	17.5		34.9	5	18.1		42.4	92	37.5		11.0
5	330	32.9	216	16.8	+23	34.4	20	20.0	-21	42.4	107	40.2	-15	10.9
6	345	35.3	231	16.1	+23	33.9	35	21.8	-21	42.5	122	42.9	-15	10.9
7	0	37.8	246	15.4		33.5	50	23.6		42.5	137	45.6		10.8
8	15	40.2	261	14.7		33.0	65	25.5		42.5	152	48.3		10.8
9	30	42.7	276	14.0		32.6	80	27.3		42.5	167	51.0		10.7
10	45	45.2	291	13.3		32.1	95	29.1		42.5	182	53.7		10.6
11	60	47.6	306	12.6	+23	31.6	110	31.0	-21	42.5	197	56.4	-15	10.6
12	75	50.1	321	11.9	+23	31.2	125	32.8	-21	42.6	212	59.1	-15	10.5
13	90	52.6	336	11.2		30.7	140	34.7		42.6	228	01.8		10.5
14	105	55.0	351	10.5		30.3	155	36.5		42.6	243	04.5		10.4
15	120	57.5	6	09.8		29.8	170	38.4		42.6	258	07.1		10.3
16	136	00.0	21	09.1		29.3	185	40.2		42.6	273	09.8		10.3
17	151	02.4	36	08.4	+23	28.9	200	42.1	-21	42.7	288	12.5	-15	10.2
18	166	04.9	51	07.7	+23	28.4	215	43.9	-21	42.7	303	15.2	-15	10.2
19	181	07.4	66	07.0		27.9	230	45.8		42.7	318	17.9		10.1
20	196	09.8	81	06.3		27.4	245	47.6		42.7	333	20.6		10.0
21	211	12.3	96	05.6		27.0	260	49.5		42.8	348	23.3		10.0
22	226	14.7	111	04.9		26.5	275	51.3		42.8	3	26.0		09.9
23	241	17.2	126	04.3		26.0	290	53.2		42.8	18	28.7		09.9
24	256	19.7	141	03.6	+23	25.5	305	55.0	-21	42.8	33	31.4	-15	09.8
Dif	—		-7	-5			+18		0		+27	+1		+26

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15 ^h 8				Edad: 23 ^d 5 PHE { 4 ^h : 56 ^m 3 12 ^h : 56 ^m 6 20 ^h : 56 ^m 9															
	PMG: 11 ^h 59 ^m 0				SD: 15 ^h 4															
	PMG: 7 ^h 20 ^m				R°: 46 ^m															
	hG ☉	Dec			hG ☾	Dif				Náutico	Civil		Hora	R°	Hora	R°				
h	o	'	o	'	o	'	o	'	o	h	m	h	m	h	m	m	h	m	m	
0	180	15.8	+22	49.0	253	24.9	-3	17.5	60 N	***	1 07	2 41	1 31	13	13 25	82				
1	195	15.7		49.2	267	57.5 ¹³⁶	-3	06.4 ¹¹¹	58	***	1 49	3 00	29	16	25	79				
2	210	15.6		49.5	282	30.1 ¹³⁶	-2	55.2 ¹¹²	56	***	2 16	16	28	17	26	76				
3	225	15.5		49.7	297	02.6 ¹³⁵		44.0 ¹¹²	54	1 02	37	30	26	20	26	75				
4	240	15.4		49.9	311	35.2 ¹³⁶		32.8 ¹¹²	52	1 40	2 54	42	25	22	26	73				
5	255	15.2	+22	50.1	326	07.7 ¹³⁵	-2	21.6 ¹¹²	50	2 05	3 08	3 52	1 24	23	13 27	70				
6	270	15.1	+22	50.4	340	40.1 ¹³⁴	-2	10.3 ¹¹³	45	2 48	3 37	4 14	1 22	26	13 27	67				
7	285	15.0		50.6	355	12.6 ¹³⁵	-1	59.0 ¹¹³	40	3 17	3 59	31	20	29	28	63				
8	300	14.9		50.8	9	45.0 ¹³⁴		47.7 ¹¹³	35	40	4 16	46	18	32	28	61				
9	315	14.8		51.0	24	17.4 ¹³⁴		36.4 ¹¹³	30	3 58	31	4 58	16	35	29	58				
10	330	14.6		51.3	38	49.7 ¹³³		25.0 ¹¹⁴	20	4 26	4 55	5 20	14	38	30	54				
11	345	14.5	+22	51.5	53	22.0 ¹³³	-1	13.7 ¹¹³	10 N	4 48	5 15	5 38	1 11	43	13 30	50				
12	0	14.4	+22	51.7	67	54.3 ¹³³	-1	02.3 ¹¹⁴	0	5 07	5 33	5 55	1 09	46	13 31	46				
13	15	14.3		51.9	82	26.6 ¹³³	-0	50.9 ¹¹⁴	10 S	23	5 50	6 12	07	49	31	44				
14	30	14.2		52.1	96	58.8 ¹³²		39.4 ¹¹⁵	20	39	6 06	30	04	53	32	39				
15	45	14.0		52.4	111	30.9 ¹³¹		28.0 ¹¹⁴	30	5 55	25	6 51	02	57	32	36				
16	60	13.9		52.6	126	03.1 ¹³²		16.5 ¹¹⁵	35	6 03	35	7 03	1 00	60	33	33				
17	75	13.8	+22	52.8	140	35.2 ¹³¹	-0	05.0 ¹¹⁵	40	6 13	6 46	7 17	0 58	63	13 33	30				
18	90	13.7	+22	53.0	155	07.2 ¹³⁰	+0	06.5 ¹¹⁵	45	6 22	6 59	7 33	0 56	66	13 34	27				
19	105	13.6		53.2	169	39.2 ¹³⁰		18.0 ¹¹⁵	50	34	7 15	7 53	54	69	34	24				
20	120	13.4		53.4	184	11.2 ¹³⁰		29.5 ¹¹⁵	52	39	22	8 03	53	71	34	22				
21	135	13.3		53.7	198	43.1 ¹²⁹		41.1 ¹¹⁶	54	44	30	13	51	74	35	19				
22	150	13.2		53.9	213	15.0 ¹²⁹	+0	52.6 ¹¹⁵	56	50	39	25	50	75	35	18				
23	165	13.1		54.1	227	46.9 ¹²⁹	+1	04.2 ¹¹⁶	58	6 57	7 49	40	49	77	35	16				
24	180	13.0	+22	54.3	242	18.7 ¹²⁸	+1	15.8 ¹¹⁶	60 S	7 04	8 00	8 56	0 47	80	13 35	14				
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 6 ^h 53 ^m 6				Mag: -4.0 PMG: 14 ^h 36 ^m				Mag: -1.4 PMG: 3 ^h 36 ^m				Mag: -2.5 PMG: 21 ^h 42 ^m				Mag: +0.1 PMG: 1 ^h 26 ^m			
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'
0	256	19.7		141	03.6	+23	25.5	305	55.0	-21	42.8	33	31.4	-15	09.8	338	29.1	-22	21.9	
1	271	22.1		156	02.9		25.1	320	56.9		42.8	48	34.1		09.8	353	31.8		21.9	
2	286	24.6		171	02.2		24.6	335	58.7		42.9	63	36.8		09.7	8	34.4		21.9	
3	301	27.1		186	01.5		24.1	351	00.6		42.9	78	39.5		09.6	23	37.1		21.9	
4	316	29.5		201	00.8		23.6	6	02.5		42.9	93	42.2		09.6	38	39.7		21.9	
5	331	32.0		216	00.1	+23	23.2	21	04.3	-21	42.9	108	44.9	-15	09.5	53	42.4	-22	21.9	
6	346	34.5		230	59.4	+23	22.7	36	06.2	-21	43.0	123	47.6	-15	09.5	68	45.0	-22	21.9	
7	1	36.9		245	58.7		22.2	51	08.0		43.0	138	50.2		09.4	83	47.6		21.9	
8	16	39.4		260	58.0		21.7	66	09.9		43.0	153	52.9		09.3	98	50.3		21.9	
9	31	41.9		275	57.3		21.2	81	11.8		43.0	168	55.6		09.3	113	52.9		22.0	
10	46	44.3		290	56.7		20.7	96	13.6		43.1	183	58.3		09.2	128	55.6		22.0	
11	61	46.8		305	56.0	+23	20.2	111	15.5	-21	43.1	199	01.0	-15	09.2	143	58.2	-22	22.0	
12	76	49.2		320	55.3	+23	19.8	126	17.4	-21	43.1	214	03.7	-15	09.1	159	00.9	-22	22.0	
13	91	51.7		335	54.6		19.3	141	19.2		43.1	229	06.4		09.1	174	03.5		22.0	
14	106	54.2		350	53.9		18.8	156	21.1		43.2	244	09.1		09.0	189	06.2		22.0	
15	121	56.6		5	53.2		18.3	171	23.0		43.2	259	11.8		08.9	204	08.8		22.0	
16	136	59.1		20	52.5		17.8	186	24.9		43.2	274	14.5		08.9	219	11.4		22.0	
17	152	01.6		35	51.8	+23	17.3	201	26.7	-21	43.3	289	17.1	-15	08.8	234	14.1	-22	22.0	
18	167	04.0		50	51.2	+23	16.8	216	28.6	-21	43.3	304	19.8	-15	08.8	249	16.7	-22	22.1	
19	182	06.5		65	50.5		16.3	231	30.5		43.3	319	22.5		08.7	264	19.4		22.1	
20	197	09.0		80	49.8		15.8	246	32.4		43.3	334	25.2		08.7	279	22.0		22.1	
21	212	11.4		95	49.1		15.3	261	34.2		43.4	349	27.9		08.6	294	24.7		22.1	
22	227	13.9		110	48.4		14.8	276	36.1		43.4	4	30.6		08.5	309	27.3		22.1	
23	242	16.3		125	47.8		14.3	291	38.0		43.4	19	33.3		08.5	324	30.0		22.1	
24	257	18.8		140	47.1	+23	13.8	306	39.9	-21	43.5	34	36.0	-15	08.4	339	32.6	-22	22.1	
Dif	—				-7 -5				+19 0				+27 +1				+26 0			

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15°8 PMG: 11 ^h 59 ^m 2			Edad: 24 ^d 5 PHE { 4 ^h : 57/2 12 ^h : 57/5 20 ^h : 57/8 PMG: 8 ^h 06 ^m R°: 49 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	o	'	o	'	o	'	o	h	m	h	m	h	m	m
0	180	13.0	+22	54.3	242	18.7	+1 15.8	60 N	21 19	22 56	***	1 44	14	14 47 85
1	195	12.8		54.5	256	50.4 ¹²⁷	27.4 ¹¹⁶	58	21 00	22 12	***	45	16	44 83
2	210	12.7		54.7	271	22.1 ¹²⁷	39.0 ¹¹⁶	56	20 44	21 44	***	45	19	42 80
3	225	12.6		54.9	285	53.8 ¹²⁷	+1 50.6 ¹¹⁶	54	30	23	23 01	46	21	41 77
4	240	12.5		55.1	300	25.4 ¹²⁶	+2 02.2 ¹¹⁶	52	18	21 06	22 21	47	23	39 75
5	255	12.3	+22	55.4	314	56.9 ¹²⁵	+2 13.8 ¹¹⁶	50	20 07	20 51	21 55	1 47	25	14 37 74
6	270	12.2	+22	55.6	329	28.4 ¹²⁵	+2 25.4 ¹¹⁶	45	19 45	20 22	21 11	1 48	29	14 34 70
7	285	12.1		55.8	343	59.9 ¹²⁵	37.0 ¹¹⁶	40	28	20 00	20 42	49	32	31 67
8	300	12.0		56.0	358	31.3 ¹²⁴	+2 48.7 ¹¹⁷	35	13	19 43	19	50	34	29 64
9	315	11.8		56.2	13	02.6 ¹²³	+3 00.3 ¹¹⁶	30	19 00	28	20 01	51	37	27 61
10	330	11.7		56.4	27	33.9 ¹²³	11.9 ¹¹⁶	20	18 39	19 03	19 32	52	41	24 56
11	345	11.6	+22	56.6	42	05.2 ¹²³	+3 23.6 ¹¹⁷	10 N	18 20	18 43	19 10	1 54	44	14 20 53
12	0	11.5	+22	56.8	56	36.3 ¹²¹	+3 35.2 ¹¹⁶	0	18 03	18 25	18 51	1 55	48	14 17 50
13	15	11.4		57.0	71	07.5 ¹²²	46.9 ¹¹⁷	10 S	17 46	18 09	35	56	52	15 45
14	30	11.2		57.2	85	38.5 ¹²⁰	+3 58.5 ¹¹⁶	20	28	17 52	19	57	56	11 42
15	45	11.1		57.4	100	09.5 ¹²⁰	+4 10.1 ¹¹⁶	30	17 07	33	18 03	1 59	60	08 38
16	60	11.0		57.6	114	40.5 ¹²⁰	21.7 ¹¹⁶	35	16 55	23	17 54	2 00	62	06 35
17	75	10.9	+22	57.8	129	11.4 ¹¹⁹	+4 33.4 ¹¹⁷	40	16 41	17 11	17 45	2 01	65	14 03 33
18	90	10.7	+22	58.0	143	42.2 ¹¹⁸	+4 45.0 ¹¹⁶	45	16 25	16 58	17 35	2 02	68	14 01 29
19	105	10.6		58.2	158	13.0 ¹¹⁸	+4 56.6 ¹¹⁶	50	16 04	43	24	03	73	13 58 25
20	120	10.5		58.4	172	43.7 ¹¹⁷	+5 08.2 ¹¹⁶	52	15 55	35	19	04	74	56 24
21	135	10.4		58.6	187	14.3 ¹¹⁶	19.8 ¹¹⁶	54	44	27	13	05	76	54 22
22	150	10.2		58.8	201	44.9 ¹¹⁶	31.3 ¹¹⁵	56	32	19	07	05	79	53 20
23	165	10.1		59.0	216	15.4 ¹¹⁵	42.9 ¹¹⁶	58	18	16 09	17 01	06	81	51 17
24	180	10.0	+22	59.2	230	45.8 ¹¹⁴	+5 54.4 ¹¹⁵	60 S	15 01	15 57	16 54	2 07	84	13 49 14

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 6 ^h 49 ^m 6		Mag: -4.0 PMG: 14 ^h 38 ^m		Mag: -1.5 PMG: 3 ^h 33 ^m		Mag: -2.5 PMG: 21 ^h 38 ^m		Mag: +0.1 PMG: 1 ^h 22 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	o	'	o	'	o	'	o	'	o	'								
0	257	18.8	140	47.1	+23	13.8	306	39.9	-21	43.5	34	36.0	-15	08.4	339	32.6	-22	22.1
1	272	21.3	155	46.4		13.3	321	41.8		43.5	49	38.7		08.4	354	35.3		22.1
2	287	23.7	170	45.7		12.8	336	43.6		43.5	64	41.3		08.3	9	37.9		22.1
3	302	26.2	185	45.0		12.3	351	45.5		43.6	79	44.0		08.3	24	40.5		22.2
4	317	28.7	200	44.4		11.8	6	47.4		43.6	94	46.7		08.2	39	43.2		22.2
5	332	31.1	215	43.7	+23	11.3	21	49.3	-21	43.6	109	49.4	-15	08.1	54	45.8	-22	22.2
6	347	33.6	230	43.0	+23	10.8	36	51.2	-21	43.7	124	52.1	-15	08.1	69	48.5	-22	22.2
7	2	36.1	245	42.3		10.3	51	53.1		43.7	139	54.8		08.0	84	51.1		22.2
8	17	38.5	260	41.6		09.7	66	55.0		43.7	154	57.5		08.0	99	53.8		22.2
9	32	41.0	275	41.0		09.2	81	56.9		43.8	170	00.1		07.9	114	56.4		22.2
10	47	43.5	290	40.3		08.7	96	58.8		43.8	185	02.8		07.9	129	59.1		22.2
11	62	45.9	305	39.6	+23	08.2	112	00.6	-21	43.8	200	05.5	-15	07.8	145	01.7	-22	22.2
12	77	48.4	320	38.9	+23	07.7	127	02.5	-21	43.9	215	08.2	-15	07.8	160	04.4	-22	22.3
13	92	50.8	335	38.3		07.2	142	04.4		43.9	230	10.9		07.7	175	07.0		22.3
14	107	53.3	350	37.6		06.7	157	06.3		43.9	245	13.6		07.6	190	09.7		22.3
15	122	55.8	5	36.9		06.1	172	08.2		44.0	260	16.2		07.6	205	12.3		22.3
16	137	58.2	20	36.3		05.6	187	10.1		44.0	275	18.9		07.5	220	14.9		22.3
17	153	00.7	35	35.6	+23	05.1	202	12.0	-21	44.0	290	21.6	-15	07.5	235	17.6	-22	22.3
18	168	03.2	50	34.9	+23	04.6	217	13.9	-21	44.1	305	24.3	-15	07.4	250	20.2	-22	22.3
19	183	05.6	65	34.2		04.1	232	15.8		44.1	320	27.0		07.4	265	22.9		22.3
20	198	08.1	80	33.6		03.5	247	17.7		44.1	335	29.7		07.3	280	25.5		22.3
21	213	10.6	95	32.9		03.0	262	19.6		44.2	350	32.3		07.3	295	28.2		22.4
22	228	13.0	110	32.2		02.5	277	21.5		44.2	5	35.0		07.2	310	30.8		22.4
23	243	15.5	125	31.6		02.0	292	23.4		44.3	20	37.7		07.1	325	33.5		22.4
24	258	17.9	140	30.9	+23	01.4	307	25.4	-21	44.3	35	40.4	-15	07.1	340	36.1	-22	22.4
Dif	—		-7	-5			+19	0			+27	+1			+26	0		

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15°8 PMG: 11 ^h 59 ^m 4				Edad: 25 ^d 5 PHE { SD: 15°9 PMG: 8 ^h 55 ^m R°: 51 ^m															
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°				
h	o	'	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m			
0	180	10.0	+22	59.2	230	45.8	+5	54.4	60 N	***	1 03	2 39	1 58	16	16 12	88				
1	195	09.9		59.4	245	16.2 ¹¹⁴	+6	06.0 ¹¹⁶	58	***	1 46	2 59	2 01	19	07	85				
2	210	09.7		59.6	259	46.5 ¹¹³		17.5 ¹¹⁵	56	***	2 14	3 15	04	22	16 02	83				
3	225	09.6	+22	59.8	274	16.7 ¹¹²		29.0 ¹¹⁵	54	0 57	35	29	07	24	15 58	80				
4	240	09.5	+23	00.0	288	46.9 ¹¹²		40.5 ¹¹⁵	52	1 37	2 53	41	10	25	54	79				
5	255	09.4	+23	00.2	303	17.0 ¹¹¹	+6	52.0 ¹¹⁵	50	2 03	3 07	3 51	2 12	27	15 51	76				
6	270	09.2	+23	00.4	317	47.0 ¹¹⁰	+7	03.4 ¹¹⁴	45	2 47	3 36	4 13	2 17	31	15 44	72				
7	285	09.1		00.5	332	17.0 ¹¹⁰		14.8 ¹¹⁴	40	3 17	3 58	31	21	34	38	69				
8	300	09.0		00.7	346	46.8 ¹⁰⁸		26.2 ¹¹⁴	35	40	4 16	46	24	38	33	66				
9	315	08.9		00.9	1	16.7 ¹⁰⁹		37.6 ¹¹⁴	30	3 58	31	4 58	28	39	28	64				
10	330	08.7		01.1	15	46.4 ¹⁰⁷	+7	49.0 ¹¹⁴	20	4 26	4 55	5 20	33	44	20	60				
11	345	08.6	+23	01.3	30	16.0 ¹⁰⁶	+8	00.3 ¹¹³	10 N	4 49	5 16	5 39	2 38	48	15 13	56				
12	0	08.5	+23	01.5	44	45.6 ¹⁰⁶	+8	11.6 ¹¹³	0	5 07	5 33	5 56	2 43	51	15 07	52				
13	15	08.4		01.7	59	15.1 ¹⁰⁵		22.9 ¹¹³	10 S	24	5 50	6 13	48	54	15 00	49				
14	30	08.2		01.9	73	44.5 ¹⁰⁴		34.1 ¹¹²	20	40	6 07	31	53	58	14 53	46				
15	45	08.1		02.0	88	13.9 ¹⁰⁴		45.4 ¹¹³	30	5 56	26	6 52	2 59	62	46	41				
16	60	08.0		02.2	102	43.2 ¹⁰³	+8	56.5 ¹¹¹	35	6 04	36	7 04	3 02	65	41	39				
17	75	07.9	+23	02.4	117	12.3 ¹⁰¹	+9	07.7 ¹¹²	40	6 13	6 47	7 18	3 06	68	14 36	36				
18	90	07.7	+23	02.6	131	41.5 ¹⁰²	+9	18.8 ¹¹¹	45	6 24	7 01	7 34	3 10	71	14 30	33				
19	105	07.6		02.8	146	10.5 ¹⁰⁰		29.9 ¹¹¹	50	35	16	7 55	16	75	23	30				
20	120	07.5		03.0	160	39.4 ⁹⁹		40.9 ¹¹⁰	52	40	24	8 04	18	77	20	28				
21	135	07.3		03.1	175	08.3 ⁹⁹	+9	51.9 ¹¹⁰	54	46	32	15	21	79	16	26				
22	150	07.2		03.3	189	37.1 ⁹⁸	+10	02.9 ¹¹⁰	56	52	40	27	24	82	13	23				
23	165	07.1		03.5	204	05.8 ⁹⁷		13.8 ¹⁰⁹	58	6 58	7 50	42	27	85	08	21				
24	180	07.0	+23	03.7	218	34.4 ⁹⁶	+10	24.7 ¹⁰⁹	60 S	7 05	8 02	8 58	3 31	88	14 03	18				
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 6 ^h 45 ^m 7				Mag: -4.0 PMG: 14 ^h 39 ^m				Mag: -1.5 PMG: 3 ^h 30 ^m				Mag: -2.4 PMG: 21 ^h 33 ^m				Mag: +0.1 PMG: 1 ^h 17 ^m			
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'
0	258	17.9	140	30.9	+23	01.4	307	25.4	-21	44.3	35	40.4	-15	07.1	340	36.1	-22	22.4		
1	273	20.4	155	30.2		00.9	322	27.3		44.3	50	43.1		07.0	355	38.8		22.4		
2	288	22.9	170	29.6	+23	00.4	337	29.2		44.4	65	45.8		07.0	10	41.4		22.4		
3	303	25.3	185	28.9	+22	59.8	352	31.1		44.4	80	48.4		06.9	25	44.1		22.4		
4	318	27.8	200	28.2		59.3	7	33.0		44.5	95	51.1		06.9	40	46.7		22.4		
5	333	30.3	215	27.6	+22	58.8	22	34.9	-21	44.5	110	53.8	-15	06.8	55	49.4	-22	22.4		
6	348	32.7	230	26.9	+22	58.2	37	36.8	-21	44.5	125	56.5	-15	06.8	70	52.0	-22	22.5		
7	3	35.2	245	26.2		57.7	52	38.7		44.6	140	59.2		06.7	85	54.7		22.5		
8	18	37.7	260	25.6		57.2	67	40.7		44.6	156	01.8		06.7	100	57.3		22.5		
9	33	40.1	275	24.9		56.6	82	42.6		44.7	171	04.5		06.6	116	00.0		22.5		
10	48	42.6	290	24.3		56.1	97	44.5		44.7	186	07.2		06.5	131	02.6		22.5		
11	63	45.1	305	23.6	+22	55.6	112	46.4	-21	44.7	201	09.9	-15	06.5	146	05.3	-22	22.5		
12	78	47.5	320	22.9	+22	55.0	127	48.3	-21	44.8	216	12.6	-15	06.4	161	07.9	-22	22.5		
13	93	50.0	335	22.3		54.5	142	50.2		44.8	231	15.2		06.4	176	10.6		22.5		
14	108	52.4	350	21.6		53.9	157	52.2		44.9	246	17.9		06.3	191	13.2		22.5		
15	123	54.9	5	21.0		53.4	172	54.1		44.9	261	20.6		06.3	206	15.8		22.6		
16	138	57.4	20	20.3		52.8	187	56.0		45.0	276	23.3		06.2	221	18.5		22.6		
17	153	59.8	35	19.6	+22	52.3	202	57.9	-21	45.0	291	25.9	-15	06.2	236	21.1	-22	22.6		
18	169	02.3	50	19.0	+22	51.7	217	59.9	-21	45.0	306	28.6	-15	06.1	251	23.8	-22	22.6		
19	184	04.8	65	18.3		51.2	233	01.8		45.1	321	31.3		06.1	266	26.4		22.6		
20	199	07.2	80	17.7		50.6	248	03.7		45.1	336	34.0		06.0	281	29.1		22.6		
21	214	09.7	95	17.0		50.1	263	05.7		45.2	351	36.7		06.0	296	31.7		22.6		
22	229	12.2	110	16.4		49.5	278	07.6		45.2	6	39.3		05.9	311	34.4		22.6		
23	244	14.6	125	15.7		49.0	293	09.5		45.3	21	42.0		05.9	326	37.0		22.6		
24	259	17.1	140	15.0	+22	48.4	308	11.5	-21	45.3	36	44.7	-15	05.8	341	39.7	-22	22.7		
Dif	—				-7 -5				+19 0				+27 +1				+26 0			

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna				
	SD: 15'8 PMG: 11 ^h 59 ^m 6			Edad: 26 ^d 5 SD: 16'2 PMG: 9 ^h 46 ^m					PHE { 4 ^h : 59'0 12 ^h : 59'3 20 ^h : 59'6 R°: 56 ^m								
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°		
h	o	'	o	'	o	'	o	'	h	m	h	m	h	m	h	m	
0	180	07.0	+23	03.7	218	34.4	+10	24.7	60 N	21 22	23 01	***	2 14	21	17 40	90	
1	195	06.8		03.9	233	02.9	95	35.5	58	21 02	22 15	***	20	24	32	86	
2	210	06.7		04.0	247	31.4	95	46.3	56	20 45	21 47	***	26	26	25	83	
3	225	06.6		04.2	261	59.7	93	+10	57.0	54	31	25	23 06	31	28	18	82
4	240	06.5		04.4	276	28.0	93	+11	07.7	52	19	21 08	22 24	35	31	13	79
5	255	06.3	+23	04.6	290	56.2	92	+11	18.3	50	20 09	20 53	21 57	2 39	33	17 07	78
6	270	06.2	+23	04.7	305	24.3	91	+11	28.9	45	19 46	20 24	21 13	2 48	36	16 56	74
7	285	06.1		04.9	319	52.3	90		39.4	40	29	20 01	20 43	2 55	40	47	71
8	300	05.9		05.1	334	20.2	89	+11	49.9	35	14	19 44	20	3 02	41	39	68
9	315	05.8		05.3	348	48.0	88	+12	00.3	30	19 01	28	20 02	07	44	32	66
10	330	05.7		05.4	3	15.8	88		10.7	20	18 39	19 04	19 33	17	48	20	62
11	345	05.6	+23	05.6	17	43.4	86	+12	21.0	10 N	18 21	18 44	19 11	3 26	51	16 09	60
12	0	05.4	+23	05.8	32	11.0	86	+12	31.2	0	18 03	18 26	18 52	3 34	54	15 59	57
13	15	05.3		05.9	46	38.5	85		41.4	10 S	17 46	18 09	35	42	58	49	54
14	30	05.2		06.1	61	05.9	84	+12	51.5	20	28	17 52	19	3 51	61	39	50
15	45	05.0		06.3	75	33.2	83	+13	01.6	30	17 07	33	18 03	4 01	65	27	47
16	60	04.9		06.5	90	00.4	82		11.6	35	16 55	23	17 54	07	67	20	45
17	75	04.8	+23	06.6	104	27.5	81	+13	21.5	40	16 41	17 11	17 45	4 14	70	15 12	43
18	90	04.7	+23	06.8	118	54.5	80	+13	31.3	45	16 24	16 58	17 35	4 21	74	15 03	40
19	105	04.5		07.0	133	21.5	80		41.1	50	16 04	42	24	31	77	14 53	35
20	120	04.4		07.1	147	48.3	78	+13	50.8	52	15 54	35	18	35	80	48	33
21	135	04.3		07.3	162	15.1	78	+14	00.4	54	43	27	13	40	82	42	32
22	150	04.1		07.4	176	41.7	76		10.0	56	31	18	07	46	83	36	29
23	165	04.0		07.6	191	08.3	76		19.5	58	17	16 08	17 00	52	86	29	27
24	180	03.9	+23	07.8	205	34.8	75	+14	28.9	60 S	15 00	15 57	16 53	4 59	89	14 21	24
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 6 ^h 41 ^m 8		Mag: -4.0 PMG: 14 ^h 40 ^m			Mag: -1.5 PMG: 3 ^h 27 ^m			Mag: -2.4 PMG: 21 ^h 29 ^m			Mag: +0.1 PMG: 1 ^h 13 ^m					
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'	
0	259	17.1	140	15.0	+22	48.4	308	11.5	-21	45.3	36	44.7	-15	05.8	341	39.7	
1	274	19.6	155	14.4		47.9	323	13.4		45.4	51	47.4		05.7	356	42.3	
2	289	22.0	170	13.7		47.3	338	15.3		45.4	66	50.0		05.7	11	45.0	
3	304	24.5	185	13.1		46.8	353	17.3		45.4	81	52.7		05.6	26	47.6	
4	319	26.9	200	12.4		46.2	8	19.2		45.5	96	55.4		05.6	41	50.3	
5	334	29.4	215	11.8	+22	45.7	23	21.1	-21	45.5	111	58.1	-15	05.5	56	52.9	
6	349	31.9	230	11.1	+22	45.1	38	23.1	-21	45.6	127	00.7	-15	05.5	71	55.6	
7	4	34.3	245	10.5		44.5	53	25.0		45.6	142	03.4		05.4	86	58.2	
8	19	36.8	260	09.8		44.0	68	27.0		45.7	157	06.1		05.4	102	00.9	
9	34	39.3	275	09.2		43.4	83	28.9		45.7	172	08.8		05.3	117	03.5	
10	49	41.7	290	08.5		42.9	98	30.9		45.8	187	11.4		05.3	132	06.2	
11	64	44.2	305	07.9	+22	42.3	113	32.8	-21	45.8	202	14.1	-15	05.2	147	08.8	
12	79	46.7	320	07.2	+22	41.7	128	34.8	-21	45.9	217	16.8	-15	05.2	162	11.5	
13	94	49.1	335	06.6		41.2	143	36.7		45.9	232	19.4		05.1	177	14.1	
14	109	51.6	350	06.0		40.6	158	38.7		46.0	247	22.1		05.1	192	16.8	
15	124	54.1	5	05.3		40.0	173	40.6		46.0	262	24.8		05.0	207	19.4	
16	139	56.5	20	04.7		39.4	188	42.6		46.1	277	27.5		05.0	222	22.1	
17	154	59.0	35	04.0	+22	38.9	203	44.5	-21	46.1	292	30.1	-15	04.9	237	24.7	
18	170	01.4	50	03.4	+22	38.3	218	46.5	-21	46.2	307	32.8	-15	04.9	252	27.4	
19	185	03.9	65	02.7		37.7	233	48.4		46.2	322	35.5		04.8	267	30.0	
20	200	06.4	80	02.1		37.2	248	50.4		46.3	337	38.2		04.7	282	32.7	
21	215	08.8	95	01.5		36.6	263	52.3		46.3	352	40.8		04.7	297	35.3	
22	230	11.3	110	00.8		36.0	278	54.3		46.4	7	43.5		04.6	312	38.0	
23	245	13.8	125	00.2		35.4	293	56.3		46.5	22	46.2		04.6	327	40.6	
24	260	16.2	139	59.5	+22	34.9	308	58.2	-21	46.5	37	48.8	-15	04.5	342	43.3	
Dif	—		-6	-6		+19	-1		+27	+1		+1		+27	0		

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7 ^m PMG: 11 ^h 59 ^m 8				Edad: 27 ^d 5 ^h PHE { 4 ^h : 59 ^m 9 12 ^h : 60 ^m 1 20 ^h : 60 ^m 3 PMG: 10 ^h 42 ^m R°: 59 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	o	'	o	'	o	'	o	'	o	h	m	h	m	h	m	m		
0	180	03.9	+23	07.8	205	34.8	+14	28.9	60 N	***	0 59	2 38	2 35	29	19 10	85		
1	195	03.8		07.9	220	01.2	74	38.2	58	***	1 44	2 58	44	32	18 58	83		
2	210	03.6		08.1	234	27.4	72	47.4	56	***	2 13	3 14	52	34	48	81		
3	225	03.5		08.3	248	53.7	73	56.6	54	0 53	34	28	2 59	36	40	78		
4	240	03.4		08.4	263	19.8	71	05.6	52	1 35	2 52	40	3 06	38	32	77		
5	255	03.2	+23	08.6	277	45.8	70	14.6	50	2 02	3 06	3 51	3 12	39	18 25	75		
6	270	03.1	+23	08.7	292	11.7	69	23.5	45	2 46	3 36	4 13	3 24	43	18 10	73		
7	285	03.0		08.9	306	37.6	69	32.3	40	3 16	3 58	31	35	45	17 58	70		
8	300	02.8		09.0	321	03.3	67	41.0	35	39	4 16	45	43	48	47	69		
9	315	02.7		09.2	335	29.0	67	49.6	30	3 58	31	4 58	3 51	50	38	67		
10	330	02.6		09.4	349	54.5	65	58.1	20	4 26	4 56	5 20	4 05	53	22	65		
11	345	02.5	+23	09.5	4	20.0	65	16 06.6	10 N	4 49	5 16	5 39	4 17	56	17 09	62		
12	0	02.3	+23	09.7	18	45.4	64	16 14.9	0	5 08	5 34	5 56	4 28	59	16 56	60		
13	15	02.2		09.8	33	10.7	63	23.1	10 S	24	5 51	6 13	40	61	43	58		
14	30	02.1		10.0	47	35.9	62	31.3	20	40	6 08	32	4 52	64	29	56		
15	45	01.9		10.1	62	01.1	62	39.3	30	5 57	26	6 53	5 06	67	14	53		
16	60	01.8		10.3	76	26.1	60	47.2	35	6 05	37	7 05	14	69	16 05	51		
17	75	01.7	+23	10.4	90	51.1	60	55.0	40	6 14	6 48	7 19	5 24	71	15 55	49		
18	90	01.5	+23	10.6	105	15.9	58	02.7	45	6 25	7 02	7 35	5 35	74	15 43	46		
19	105	01.4		10.7	119	40.7	58	10.3	50	36	18	7 56	48	78	28	44		
20	120	01.3		10.9	134	05.4	57	17.8	52	41	25	8 06	5 55	79	21	43		
21	135	01.2		11.0	148	30.0	56	25.2	54	47	33	16	6 02	80	14	40		
22	150	01.0		11.2	162	54.6	56	32.5	56	53	42	29	09	83	15 05	39		
23	165	00.9		11.3	177	19.0	54	39.6	58	6 59	7 52	8 43	18	86	14 56	36		
24	180	00.8	+23	11.4	191	43.4	54	46.7	60 S	7 07	8 03	9 00	6 28	89	14 45	34		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 6 ^h 37 ^m 8		Mag: -4.0 PMG: 14 ^h 41 ^m				Mag: -1.6 PMG: 3 ^h 24 ^m				Mag: -2.4 PMG: 21 ^h 25 ^m				Mag: +0.1 PMG: 1 ^h 09 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'
0	260	16.2	139	59.5	+22	34.9	308	58.2	-21	46.5	37	48.8	-15	04.5	342	43.3	-22	22.9
1	275	18.7	154	58.9		34.3	324	00.2		46.6	52	51.5		04.5	357	45.9		22.9
2	290	21.2	169	58.3		33.7	339	02.1		46.6	67	54.2		04.4	12	48.6		23.0
3	305	23.6	184	57.6		33.1	354	04.1		46.7	82	56.8		04.4	27	51.2		23.0
4	320	26.1	199	57.0		32.5	9	06.1		46.7	97	59.5		04.3	42	53.9		23.0
5	335	28.5	214	56.3	+22	31.9	24	08.0	-21	46.8	113	02.2	-15	04.3	57	56.5	-22	23.0
6	350	31.0	229	55.7	+22	31.4	39	10.0	-21	46.8	128	04.8	-15	04.2	72	59.2	-22	23.0
7	5	33.5	244	55.1		30.8	54	12.0		46.9	143	07.5		04.2	88	01.8		23.0
8	20	35.9	259	54.4		30.2	69	13.9		47.0	158	10.2		04.1	103	04.5		23.0
9	35	38.4	274	53.8		29.6	84	15.9		47.0	173	12.8		04.1	118	07.1		23.0
10	50	40.9	289	53.2		29.0	99	17.9		47.1	188	15.5		04.0	133	09.8		23.0
11	65	43.3	304	52.5	+22	28.4	114	19.9	-21	47.1	203	18.2	-15	04.0	148	12.5	-22	23.1
12	80	45.8	319	51.9	+22	27.8	129	21.8	-21	47.2	218	20.9	-15	03.9	163	15.1	-22	23.1
13	95	48.3	334	51.3		27.2	144	23.8		47.2	233	23.5		03.9	178	17.8		23.1
14	110	50.7	349	50.6		26.6	159	25.8		47.3	248	26.2		03.8	193	20.4		23.1
15	125	53.2	4	50.0		26.1	174	27.8		47.4	263	28.9		03.8	208	23.1		23.1
16	140	55.7	19	49.4		25.5	189	29.8		47.4	278	31.5		03.7	223	25.7		23.1
17	155	58.1	34	48.7	+22	24.9	204	31.7	-21	47.5	293	34.2	-15	03.7	238	28.4	-22	23.1
18	171	00.6	49	48.1	+22	24.3	219	33.7	-21	47.5	308	36.8	-15	03.6	253	31.0	-22	23.1
19	186	03.0	64	47.5		23.7	234	35.7		47.6	323	39.5		03.6	268	33.7		23.1
20	201	05.5	79	46.9		23.1	249	37.7		47.7	338	42.2		03.5	283	36.3		23.2
21	216	08.0	94	46.2		22.5	264	39.7		47.7	353	44.8		03.5	298	39.0		23.2
22	231	10.4	109	45.6		21.9	279	41.7		47.8	8	47.5		03.4	313	41.6		23.2
23	246	12.9	124	45.0		21.3	294	43.6		47.8	23	50.2		03.4	328	44.3		23.2
24	261	15.4	139	44.4	+22	20.7	309	45.6	-21	47.9	38	52.8	-15	03.3	343	46.9	-22	23.2
Dif	—		-6		-6		+20		-1		+27		+1		+27			

UT	SOL			● LUNA					Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'7 PMG: 12 ^h 00 ^m 1			Edad: 28 ^d 5 PHE { 4 ^h : 60'5 12 ^h : 60'7 20 ^h : 60'8 SD: 16'5 PMG: 11 ^h 41 ^m R°: 62 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif					Civil	Náutico	Hora	R°	Hora
h	o	'	o	'	o	'	o	'	o	h m	h m	h m	h m	h m	h m	h m
0	180	00.8	+23	11.4	191	43.4	+17	46.7	60 N	21 24	23 05	***	3 04	41	20 35	73
1	195	00.6		11.6	206	07.7	+17	53.6	58	21 03	22 18	***	16	43	21	72
2	210	00.5		11.7	220	31.9	+18	00.4	56	20 47	21 49	***	26	45	20 09	71
3	225	00.4		11.9	234	56.0		07.1	54	33	27	23 10	35	47	19 58	71
4	240	00.2		12.0	249	20.1		13.6	52	21	21 09	22 26	44	48	49	70
5	255	00.1	+23	12.2	263	44.0	+18	20.1	50	20 10	20 54	21 59	3 51	49	19 40	70
6	270	00.0	+23	12.3	278	07.9	+18	26.4	45	19 48	20 25	21 14	4 07	51	19 23	68
7	284	59.8		12.4	292	31.8		32.6	40	30	20 02	20 44	20	53	19 08	67
8	299	59.7		12.6	306	55.5		38.6	35	15	19 44	21	31	55	18 56	66
9	314	59.6		12.7	321	19.2		44.5	30	19 02	29	20 03	41	56	45	66
10	329	59.4		12.9	335	42.8		50.4	20	18 40	19 05	19 34	4 58	58	27	64
11	344	59.3	+23	13.0	350	06.4	+18	56.0	10 N	18 21	18 44	19 11	5 13	60	18 11	63
12	359	59.2	+23	13.1	4	29.8	+19	01.6	0	18 04	18 26	18 52	5 27	61	17 56	62
13	14	59.0		13.3	18	53.2		07.0	10 S	17 46	18 09	36	41	63	41	61
14	29	58.9		13.4	33	16.6		12.3	20	28	17 52	20	5 56	65	25	60
15	44	58.8		13.5	47	39.9		17.4	30	17 07	33	18 03	6 13	67	17 07	59
16	59	58.6		13.7	62	03.1		22.4	35	16 55	23	17 55	23	69	16 56	58
17	74	58.5	+23	13.8	76	26.2	+19	27.3	40	16 41	17 11	17 45	6 35	70	16 44	57
18	89	58.4	+23	13.9	90	49.3	+19	32.0	45	16 24	16 58	17 35	6 49	71	16 29	56
19	104	58.3		14.1	105	12.4		36.6	50	16 04	42	23	7 06	73	12	54
20	119	58.1		14.2	119	35.3		41.0	52	15 54	35	18	14	74	16 04	53
21	134	58.0		14.3	133	58.3		45.3	54	43	26	13	22	76	15 54	53
22	149	57.9		14.5	148	21.1		49.5	56	30	17	07	32	77	44	51
23	164	57.7		14.6	162	44.0		53.5	58	15 16	16 07	17 00	44	78	32	50
24	179	57.6	+23	14.7	177	06.7	+19	57.4	60 S	14 59	15 56	16 52	7 57	80	15 19	48

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 6 ^h 33 ^m 9		Mag: -4.0 PMG: 14 ^h 42 ^m			Mag: -1.6 PMG: 3 ^h 21 ^m			Mag: -2.4 PMG: 21 ^h 21 ^m			Mag: +0.1 PMG: 1 ^h 05 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'				
0	261	15.4	139	44.4	+22	20.7	309	45.6	-21	47.9	38	52.8	-15	03.3	343	46.9	-22	23.2
1	276	17.8	154	43.7		20.1	324	47.6		48.0	53	55.5		03.3	358	49.6		23.2
2	291	20.3	169	43.1		19.5	339	49.6		48.0	68	58.2		03.2	13	52.2		23.2
3	306	22.8	184	42.5		18.8	354	51.6		48.1	84	00.8		03.2	28	54.9		23.2
4	321	25.2	199	41.9		18.2	9	53.6		48.2	99	03.5		03.1	43	57.5		23.2
5	336	27.7	214	41.2	+22	17.6	24	55.6	-21	48.2	114	06.1	-15	03.1	59	00.2	-22	23.3
6	351	30.2	229	40.6	+22	17.0	39	57.6	-21	48.3	129	08.8	-15	03.0	74	02.8	-22	23.3
7	6	32.6	244	40.0		16.4	54	59.6		48.3	144	11.5		03.0	89	05.5		23.3
8	21	35.1	259	39.4		15.8	70	01.6		48.4	159	14.1		02.9	104	08.1		23.3
9	36	37.5	274	38.8		15.2	85	03.6		48.5	174	16.8		02.9	119	10.8		23.3
10	51	40.0	289	38.1		14.6	100	05.6		48.5	189	19.5		02.8	134	13.5		23.3
11	66	42.5	304	37.5	+22	14.0	115	07.6	-21	48.6	204	22.1	-15	02.8	149	16.1	-22	23.3
12	81	44.9	319	36.9	+22	13.4	130	09.6	-21	48.7	219	24.8	-15	02.7	164	18.8	-22	23.3
13	96	47.4	334	36.3		12.7	145	11.6		48.7	234	27.4		02.7	179	21.4		23.4
14	111	49.9	349	35.7		12.1	160	13.6		48.8	249	30.1		02.7	194	24.1		23.4
15	126	52.3	4	35.0		11.5	175	15.6		48.9	264	32.8		02.6	209	26.7		23.4
16	141	54.8	19	34.4		10.9	190	17.6		48.9	279	35.4		02.6	224	29.4		23.4
17	156	57.3	34	33.8	+22	10.3	205	19.6	-21	49.0	294	38.1	-15	02.5	239	32.0	-22	23.4
18	171	59.7	49	33.2	+22	09.6	220	21.6	-21	49.1	309	40.7	-15	02.5	254	34.7	-22	23.4
19	187	02.2	64	32.6		09.0	235	23.6		49.1	324	43.4		02.4	269	37.3		23.4
20	202	04.7	79	32.0		08.4	250	25.7		49.2	339	46.1		02.4	284	40.0		23.4
21	217	07.1	94	31.4		07.8	265	27.7		49.3	354	48.7		02.3	299	42.6		23.4
22	232	09.6	109	30.7		07.1	280	29.7		49.4	9	51.4		02.3	314	45.3		23.5
23	247	12.0	124	30.1		06.5	295	31.7		49.4	24	54.0		02.2	329	47.9		23.5
24	262	14.5	139	29.5	+22	05.9	310	33.7	-21	49.5	39	56.7	-15	02.2	344	50.6	-22	23.5
Dif	—		-6		-6		+20		-1		+27		0		+27			

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7 PMG: 12 ^h 00 ^m 3				Edad: 0 ^d 2 PHE { SD: 16 ^h 6 PMG: 12 ^h 43 ^m												
	hG ☉	Dec			hG ☾	Dif				Náutico	Civil		Hora	R°	Hora	R°	
h	o	'	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m
0	179	57.6	+23	14.7	177	06.7	+19	57.4	60 N	***	0 55	2 37	3 45	57	21 48	57	
1	194	57.5		14.8	191	29.5	+20	01.1	58	***	1 42	2 57	3 59	58	33	57	
2	209	57.3		15.0	205	52.1		04.7	56	***	2 11	3 13	4 11	59	20	58	
3	224	57.2		15.1	220	14.8		08.2	54	0 50	33	27	22	59	21 09	58	
4	239	57.1		15.2	234	37.4		11.4	52	1 34	2 51	40	32	59	20 59	59	
5	254	56.9	+23	15.3	248	59.9	+20	14.6	50	2 01	3 06	3 50	4 40	60	20 50	59	
6	269	56.8	+23	15.5	263	22.4	+20	17.6	45	2 46	3 35	4 13	4 58	61	20 31	60	
7	284	56.7		15.6	277	44.9		20.4	40	3 16	3 58	31	5 13	62	15	61	
8	299	56.5		15.7	292	07.4		23.1	35	39	4 16	45	26	62	20 02	62	
9	314	56.4		15.8	306	29.8		25.6	30	3 58	31	4 58	37	62	19 51	62	
10	329	56.3		16.0	320	52.1		28.0	20	4 27	4 56	5 20	5 56	63	31	63	
11	344	56.1	+23	16.1	335	14.5	+20	30.3	10 N	4 49	5 16	5 39	6 13	63	19 14	63	
12	359	56.0	+23	16.2	349	36.8	+20	32.4	0	5 08	5 34	5 57	6 28	63	18 58	63	
13	14	55.9		16.3	3	59.1		34.3	10 S	25	5 51	6 14	6 44	63	42	64	
14	29	55.7		16.4	18	21.4		36.1	20	41	6 08	32	7 01	64	25	64	
15	44	55.6		16.6	32	43.6		37.7	30	5 57	27	6 53	20	64	18 06	64	
16	59	55.5		16.7	47	05.9		39.1	35	6 06	38	7 06	32	64	17 54	64	
17	74	55.3	+23	16.8	61	28.1	+20	40.5	40	6 15	6 49	7 20	7 45	64	17 41	64	
18	89	55.2	+23	16.9	75	50.3	+20	41.6	45	6 25	7 03	7 36	8 00	64	17 25	65	
19	104	55.1		17.0	90	12.5		42.6	50	37	19	7 57	19	65	17 06	65	
20	119	54.9		17.1	104	34.7		43.5	52	42	26	8 07	28	65	16 57	65	
21	134	54.8		17.2	118	56.8		44.1	54	48	34	18	38	65	47	65	
22	149	54.7		17.4	133	19.0		44.7	56	6 54	43	30	8 49	65	35	66	
23	164	54.5		17.5	147	41.2		45.1	58	7 01	7 53	8 45	9 02	65	22	66	
24	179	54.4	+23	17.6	162	03.3	+20	45.3	60 S	7 08	8 05	9 02	9 17	66	16 07	66	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 6 ^h 30 ^m 0		Mag: -4.0 PMG: 14 ^h 43 ^m		Mag: -1.6 PMG: 3 ^h 17 ^m		Mag: -2.4 PMG: 21 ^h 16 ^m		Mag: +0.1 PMG: 1 ^h 00 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	o	'	o	'	o	'	o	'	o	'
0	262	14.5	139	29.5	+22	05.9	310	33.7	-21	49.5
1	277	17.0	154	28.9		05.3	325	35.7		49.6
2	292	19.4	169	28.3		04.6	340	37.7		49.6
3	307	21.9	184	27.7		04.0	355	39.8		49.7
4	322	24.4	199	27.1		03.4	10	41.8		49.8
5	337	26.8	214	26.5	+22	02.7	25	43.8	-21	49.9
6	352	29.3	229	25.9	+22	02.1	40	45.8	-21	49.9
7	7	31.8	244	25.3		01.5	55	47.9		50.0
8	22	34.2	259	24.7		00.8	70	49.9		50.1
9	37	36.7	274	24.1	+22	00.2	85	51.9		50.1
10	52	39.2	289	23.5	+21	59.6	100	53.9		50.2
11	67	41.6	304	22.8	+21	58.9	115	56.0	-21	50.3
12	82	44.1	319	22.2	+21	58.3	130	58.0	-21	50.4
13	97	46.5	334	21.6		57.7	146	00.0		50.4
14	112	49.0	349	21.0		57.0	161	02.1		50.5
15	127	51.5	4	20.4		56.4	176	04.1		50.6
16	142	53.9	19	19.8		55.7	191	06.1		50.7
17	157	56.4	34	19.2	+21	55.1	206	08.2	-21	50.7
18	172	58.9	49	18.6	+21	54.4	221	10.2	-21	50.8
19	188	01.3	64	18.0		53.8	236	12.3		50.9
20	203	03.8	79	17.4		53.1	251	14.3		51.0
21	218	06.3	94	16.8		52.5	266	16.3		51.1
22	233	08.7	109	16.2		51.8	281	18.4		51.1
23	248	11.2	124	15.7		51.2	296	20.4		51.2
24	263	13.7	139	15.1	+21	50.5	311	22.5	-21	51.3
Dif	—		-6		-6		+20		-1	

UT	SOL				● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7				Edad: 1 ^d 2 PHE { 4 ^h : 61'0 12 ^h : 61'0 20 ^h : 60'9													
	PMG: 12 ^h 00 ^m 5				SD: 16'6 PMG: 13 ^h 46 ^m R°: 62 ^m													
	hG ☉		Dec		hG ☾ Dif		Dec Dif				Civil	Náutico	Hora	R°	Hora	R°		
h	o	'	o	'	o	'	o	'	o	h m	h m	h m	h m m	h m m	h m m	h m m		
0	179	54.4	+23	17.6	162	03.3	+20	45.3	60 N	21 25	23 09	***	4 42	73	22 45	40		
1	194	54.2		17.7	176	25.5		45.3	58	21 05	22 20	***	4 57	72	30	43		
2	209	54.1		17.8	190	47.7		45.2	56	20 48	21 50	***	5 10	71	18	45		
3	224	54.0		17.9	205	09.8		45.0	54	34	28	23 13	21	71	22 07	47		
4	239	53.8		18.0	219	32.0		44.6	52	22	21 10	22 28	31	70	21 58	47		
5	254	53.7	+23	18.1	233	54.2	+20	44.0	50	20 11	20 55	22 01	5 40	70	21 49	49		
6	269	53.6	+23	18.2	248	16.4	+20	43.3	45	19 48	20 26	21 15	5 59	68	21 31	51		
7	284	53.4		18.3	262	38.6		42.4	40	31	20 03	20 45	6 15	67	16	53		
8	299	53.3		18.4	277	00.8		41.4	35	16	19 45	22	28	66	21 04	54		
9	314	53.2		18.5	291	23.0		40.2	30	19 03	30	20 03	39	66	20 53	55		
10	329	53.0		18.6	305	45.3		38.9	20	18 41	19 05	19 34	6 59	64	34	57		
11	344	52.9	+23	18.8	320	07.6	+20	37.4	10 N	18 22	18 45	19 12	7 16	63	20 17	60		
12	359	52.8	+23	18.9	334	29.9	+20	35.8	0	18 04	18 27	18 53	7 31	63	20 01	62		
13	14	52.6		19.0	348	52.2		34.0	10 S	17 47	18 10	36	7 47	62	19 46	63		
14	29	52.5		19.1	3	14.6		32.0	20	28	17 52	20	8 05	60	29	65		
15	44	52.4		19.2	17	37.0		29.9	30	17 07	34	18 03	24	59	19 10	66		
16	59	52.2		19.3	31	59.4		27.6	35	16 55	23	17 55	36	58	18 58	68		
17	74	52.1	+23	19.4	46	21.8	+20	25.2	40	16 41	17 11	17 45	8 49	57	18 45	70		
18	89	52.0	+23	19.5	60	44.3	+20	22.7	45	16 24	16 58	17 35	9 04	56	18 30	71		
19	104	51.8		19.6	75	06.8		20.0	50	16 03	42	23	24	53	11	73		
20	119	51.7		19.6	89	29.4		17.1	52	15 54	34	18	33	53	18 02	74		
21	134	51.6		19.7	103	52.0		14.1	30	54	43	26	43	52	17 52	76		
22	149	51.4		19.8	118	14.6		10.9	32	56	30	17	9	54	41	77		
23	164	51.3		19.9	132	37.3		07.6	33	58	15 15	16 07	17 00	10 07	50	28	78	
24	179	51.1	+23	20.0	147	00.0	+20	04.2	34	60 S	14 58	15 55	16 52	10 23	47	17 13	80	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 6 ^h 26 ^m 0		Mag: -4.0 PMG: 14 ^h 44 ^m				Mag: -1.7 PMG: 3 ^h 14 ^m				Mag: -2.4 PMG: 21 ^h 12 ^m				Mag: +0.1 PMG: 0 ^h 56 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'
0	263	13.7	139	15.1	+21	50.5	311	22.5	-21	51.3	41	00.4	-15	01.1	345	54.3	-22	23.8
1	278	16.1	154	14.5		49.9	326	24.5		51.4	56	03.0		01.0	0	57.0		23.8
2	293	18.6	169	13.9		49.2	341	26.6		51.4	71	05.7		01.0	15	59.6		23.8
3	308	21.0	184	13.3		48.6	356	28.6		51.5	86	08.3		00.9	31	02.3		23.8
4	323	23.5	199	12.7		47.9	11	30.7		51.6	101	11.0		00.9	46	04.9		23.8
5	338	26.0	214	12.1	+21	47.3	26	32.7	-21	51.7	116	13.6	-15	00.8	61	07.6	-22	23.8
6	353	28.4	229	11.5	+21	46.6	41	34.8	-21	51.8	131	16.3	-15	00.8	76	10.2	-22	23.8
7	8	30.9	244	10.9		46.0	56	36.8		51.8	146	18.9		00.7	91	12.9		23.8
8	23	33.4	259	10.3		45.3	71	38.9		51.9	161	21.6		00.7	106	15.5		23.8
9	38	35.8	274	09.7		44.6	86	40.9		52.0	176	24.2		00.6	121	18.2		23.9
10	53	38.3	289	09.1		44.0	101	43.0		52.1	191	26.9		00.6	136	20.9		23.9
11	68	40.8	304	08.5	+21	43.3	116	45.1	-21	52.2	206	29.5	-15	00.6	151	23.5	-22	23.9
12	83	43.2	319	08.0	+21	42.7	131	47.1	-21	52.3	221	32.2	-15	00.5	166	26.2	-22	23.9
13	98	45.7	334	07.4		42.0	146	49.2		52.3	236	34.8		00.5	181	28.8		23.9
14	113	48.1	349	06.8		41.3	161	51.2		52.4	251	37.5		00.4	196	31.5		23.9
15	128	50.6	4	06.2		40.7	176	53.3		52.5	266	40.1		00.4	211	34.1		23.9
16	143	53.1	19	05.6		40.0	191	55.4		52.6	281	42.8		00.3	226	36.8		23.9
17	158	55.5	34	05.0	+21	39.3	206	57.4	-21	52.7	296	45.4	-15	00.3	241	39.5	-22	23.9
18	173	58.0	49	04.4	+21	38.7	221	59.5	-21	52.8	311	48.1	-15	00.2	256	42.1	-22	24.0
19	189	00.5	64	03.9		38.0	237	01.6		52.8	326	50.7		00.2	271	44.8		24.0
20	204	02.9	79	03.3		37.3	252	03.6		52.9	341	53.4		00.2	286	47.4		24.0
21	219	05.4	94	02.7		36.7	267	05.7		53.0	356	56.0		00.1	301	50.1		24.0
22	234	07.9	109	02.1		36.0	282	07.8		53.1	11	58.6	-15	00.1	316	52.7		24.0
23	249	10.3	124	01.5		35.3	297	09.9		53.2	27	01.3	-15	00.0	331	55.4		24.0
24	264	12.8	139	01.0	+21	34.6	312	11.9	-21	53.3	42	03.9	-15	00.0	346	58.0	-22	24.0
Dif	—		-6		-7		+21		-1		+26		0		+27		0	

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7 PMG: 12 ^h 00 ^m 7				Edad: 2 ^d 2 PHE { 4 ^h : 60 ^m 8 12 ^h : 60 ^m 7 20 ^h : 60 ^m 5 PMG: 14 ^h 48 ^m R°: 59 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	o	'	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m	m
0	179	51.1	+23	20.0	147	00.0	+20	04.2	60 N	***	0 52	2 36	5 55	85	23 25	28		
1	194	51.0		20.1	161	22.8	38	+20	00.6	58	***	1 41	2 56	6 09	83	13	31	
2	209	50.9		20.2	175	45.6	38	+19	56.8	56	***	2 11	3 13	21	81	23 03	33	
3	224	50.7		20.3	190	08.5	39		52.9	54	0 48	33	27	32	78	22 54	35	
4	239	50.6		20.4	204	31.5	40		48.9	52	1 33	2 51	39	41	77	45	38	
5	254	50.5	+23	20.5	218	54.4	39	+19	44.7	50	2 00	3 06	3 50	6 50	75	22 38	39	
6	269	50.3	+23	20.6	233	17.5	41	+19	40.4	45	2 46	3 35	4 13	7 07	73	22 22	43	
7	284	50.2		20.7	247	40.6	41		36.0	40	3 16	3 58	31	22	70	22 09	45	
8	299	50.1		20.8	262	03.7	41		31.4	35	39	4 16	46	34	69	21 58	48	
9	314	49.9		20.8	276	27.0	43		26.6	30	3 58	31	4 59	7 45	67	48	50	
10	329	49.8		20.9	290	50.2	42		21.8	20	4 27	4 56	5 21	8 03	64	31	53	
11	344	49.7	+23	21.0	305	13.6	44	+19	16.8	10 N	4 49	5 16	5 39	8 19	62	21 17	55	
12	359	49.5	+23	21.1	319	37.0	44	+19	11.6	0	5 08	5 34	5 57	8 34	60	21 03	58	
13	14	49.4		21.2	334	00.5	45		06.3	10 S	25	5 52	6 14	8 49	57	20 49	60	
14	29	49.3		21.3	348	24.0	45	+19	00.9	20	41	6 09	33	9 05	55	34	63	
15	44	49.1		21.3	2	47.6	46	+18	55.4	30	5 58	28	6 54	23	52	16	67	
16	59	49.0		21.4	17	11.3	47		49.7	35	6 07	38	7 06	34	50	20 06	69	
17	74	48.8	+23	21.5	31	35.1	48	+18	43.9	40	6 16	6 50	7 21	9 46	49	19 55	71	
18	89	48.7	+23	21.6	45	58.9	48	+18	38.0	45	6 26	7 03	7 37	10 00	47	19 41	74	
19	104	48.6		21.7	60	22.8	49		31.9	50	38	19	7 58	17	44	24	77	
20	119	48.4		21.8	74	46.7	49		25.7	62	43	27	8 08	26	42	16	79	
21	134	48.3		21.8	89	10.8	51		19.4	63	49	35	19	35	40	19 08	80	
22	149	48.2		21.9	103	34.9	51		13.0	64	6 55	44	31	45	38	18 58	82	
23	164	48.0		22.0	117	59.1	52	+18	06.5	65	7 02	7 54	8 46	10 57	36	46	86	
24	179	47.9	+23	22.1	132	23.4	53	+17	59.8	67	7 09	8 06	9 04	11 10	33	18 33	89	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 6 ^h 22 ^m 1		Mag: -4.0 PMG: 14 ^h 45 ^m				Mag: -1.7 PMG: 3 ^h 11 ^m				Mag: -2.4 PMG: 21 ^h 08 ^m				Mag: +0.1 PMG: 0 ^h 52 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'
0	264	12.8	139	01.0	+21	34.6	312	11.9	-21	53.3	42	03.9	-15	00.0	346	58.0	-22	24.0
1	279	15.3	154	00.4		34.0	327	14.0		53.4	57	06.6	-14	59.9	2	00.7		24.0
2	294	17.7	168	59.8		33.3	342	16.1		53.5	72	09.2		59.9	17	03.4		24.1
3	309	20.2	183	59.2		32.6	357	18.2		53.5	87	11.9		59.9	32	06.0		24.1
4	324	22.6	198	58.6		31.9	12	20.2		53.6	102	14.5		59.8	47	08.7		24.1
5	339	25.1	213	58.1	+21	31.3	27	22.3	-21	53.7	117	17.2	-14	59.8	62	11.3	-22	24.1
6	354	27.6	228	57.5	+21	30.6	42	24.4	-21	53.8	132	19.8	-14	59.7	77	14.0	-22	24.1
7	9	30.0	243	56.9		29.9	57	26.5		53.9	147	22.4		59.7	92	16.6		24.1
8	24	32.5	258	56.3		29.2	72	28.6		54.0	162	25.1		59.6	107	19.3		24.1
9	39	35.0	273	55.8		28.5	87	30.6		54.1	177	27.7		59.6	122	22.0		24.1
10	54	37.4	288	55.2		27.8	102	32.7		54.2	192	30.4		59.6	137	24.6		24.1
11	69	39.9	303	54.6	+21	27.2	117	34.8	-21	54.3	207	33.0	-14	59.5	152	27.3	-22	24.2
12	84	42.4	318	54.0	+21	26.5	132	36.9	-21	54.3	222	35.6	-14	59.5	167	29.9	-22	24.2
13	99	44.8	333	53.5		25.8	147	39.0		54.4	237	38.3		59.4	182	32.6		24.2
14	114	47.3	348	52.9		25.1	162	41.1		54.5	252	40.9		59.4	197	35.2		24.2
15	129	49.8	3	52.3		24.4	177	43.2		54.6	267	43.6		59.3	212	37.9		24.2
16	144	52.2	18	51.8		23.7	192	45.3		54.7	282	46.2		59.3	227	40.5		24.2
17	159	54.7	33	51.2	+21	23.0	207	47.4	-21	54.8	297	48.8	-14	59.3	242	43.2	-22	24.2
18	174	57.1	48	50.6	+21	22.3	222	49.5	-21	54.9	312	51.5	-14	59.2	257	45.9	-22	24.2
19	189	59.6	63	50.1		21.6	237	51.6		55.0	327	54.1		59.2	272	48.5		24.2
20	205	02.1	78	49.5		21.0	252	53.7		55.1	342	56.8		59.1	287	51.2		24.3
21	220	04.5	93	48.9		20.3	267	55.8		55.2	357	59.4		59.1	302	53.8		24.3
22	235	07.0	108	48.4		19.6	282	57.9		55.3	13	02.0		59.0	317	56.5		24.3
23	250	09.5	123	47.8		18.9	298	00.0		55.4	28	04.7		59.0	332	59.2		24.3
24	265	11.9	138	47.2	+21	18.2	313	02.1	-21	55.5	43	07.3	-14	59.0	348	01.8	-22	24.3
Dif	—		-6		-7		+21		-1		+26		0		+27		0	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7			Edad: 3 ^d 2	PHE {	4 ^h : 60 ^s /3 12 ^h : 60 ^s /2 20 ^h : 59 ^s /9			Civil	Náutico	Hora	R°	Hora	R°			
	PMG: 12 ^h 00 ^m 9					PMG: 15 ^h 47 ^m R°: 56 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif										
h	o	'	o	'	o	'	o	'	h	m	h	m	h	m	h	m	
0	179	47.9	+23	22.1	132	23.4	+17	59.8	60 N	21	26	23	12	7	20	23	53
1	194	47.8		22.1	146	47.7	53	53.0	58	21	06	22	22	32	86	44	24
2	209	47.6		22.2	161	12.1	54	46.1	56	20	49	21	52	42	83	36	27
3	224	47.5		22.3	175	36.7	56	39.1	54	35	29	23	16	50	81	29	29
4	239	47.4		22.4	190	01.2	55	31.9	52	23	21	22	30	7	58	23	30
5	254	47.2	+23	22.4	204	25.9	57	+17	50	20	12	20	56	8	05	23	32
6	269	47.1	+23	22.5	218	50.7	58	+17	45	19	49	20	27	8	20	23	36
7	284	46.9		22.6	233	15.5	58	09.8	40	31	20	04	20	32	71	22	39
8	299	46.8		22.7	247	40.4	59	+17	35	16	19	46	23	43	68	46	41
9	314	46.7		22.7	262	05.4	60	+16	30	19	03	31	20	8	52	38	44
10	329	46.5		22.8	276	30.5	61	46.8	20	18	41	19	06	9	07	24	48
11	344	46.4	+23	22.9	290	55.7	62	+16	10 N	18	22	18	45	9	21	22	51
12	359	46.3	+23	22.9	305	21.0	63	+16	0	18	05	18	27	9	34	22	54
13	14	46.1		23.0	319	46.3	63	22.8	10 S	17	47	18	10	9	46	21	49
14	29	46.0		23.1	334	11.7	64	14.6	20	29	17	53	20	10	50	37	61
15	44	45.9		23.1	348	37.2	65	+16	30	17	07	34	18	04	15	23	65
16	59	45.7		23.2	3	02.9	67	+15	35	16	55	23	17	24	45	15	67
17	74	45.6	+23	23.3	17	28.5	66	+15	40	16	41	17	11	10	35	21	70
18	89	45.4	+23	23.3	31	54.3	68	+15	45	16	24	16	58	10	47	20	73
19	104	45.3		23.4	46	20.2	69	32.1	50	16	03	42	23	11	01	41	78
20	119	45.2		23.4	60	46.1	69	23.3	52	15	54	34	18	08	33	35	79
21	134	45.0		23.5	75	12.2	71	14.4	54	42	26	13	13	15	32	28	81
22	149	44.9		23.6	89	38.3	71	+15	56	30	17	06	17	23	30	20	84
23	164	44.8		23.6	104	04.5	72	+14	58	15	15	16	07	33	26	12	86
24	179	44.6	+23	23.7	118	30.8	73	+14	60 S	14	58	15	55	11	43	20	89

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 6 ^h 18 ^m 2		Mag: -4.0 PMG: 14 ^h 45 ^m		Mag: -1.7 PMG: 3 ^h 07 ^m		Mag: -2.4 PMG: 21 ^h 04 ^m		Mag: +0.1 PMG: 0 ^h 48 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	o	'	o	'	o	'	o	'	o	'
0	265	11.9	138	47.2	+21	18.2	313	02.1	-21	55.5
1	280	14.4	153	46.7		17.5	328	04.2		55.6
2	295	16.9	168	46.1		16.8	343	06.3		55.7
3	310	19.3	183	45.5		16.1	358	08.4		55.8
4	325	21.8	198	45.0		15.4	13	10.5		55.9
5	340	24.3	213	44.4	+21	14.7	28	12.6	-21	56.0
6	355	26.7	228	43.9	+21	14.0	43	14.7	-21	56.1
7	10	29.2	243	43.3		13.3	58	16.8		56.1
8	25	31.6	258	42.7		12.6	73	18.9		56.2
9	40	34.1	273	42.2		11.9	88	21.1		56.3
10	55	36.6	288	41.6		11.2	103	23.2		56.4
11	70	39.0	303	41.1	+21	10.4	118	25.3	-21	56.5
12	85	41.5	318	40.5	+21	09.7	133	27.4	-21	56.6
13	100	44.0	333	39.9		09.0	148	29.5		56.7
14	115	46.4	348	39.4		08.3	163	31.7		56.8
15	130	48.9	3	38.8		07.6	178	33.8		56.9
16	145	51.4	18	38.3		06.9	193	35.9		57.0
17	160	53.8	33	37.7	+21	06.2	208	38.0	-21	57.1
18	175	56.3	48	37.2	+21	05.5	223	40.1	-21	57.3
19	190	58.8	63	36.6		04.8	238	42.3		57.4
20	206	01.2	78	36.1		04.0	253	44.4		57.5
21	221	03.7	93	35.5		03.3	268	46.5		57.6
22	236	06.1	108	35.0		02.6	283	48.7		57.7
23	251	08.6	123	34.4		01.9	298	50.8		57.8
24	266	11.1	138	33.9	+21	01.2	313	52.9	-21	57.9
Dif	—		-6		-7		+21		-1	
								+26		0
									+27	

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7 PMG: 12 ^h 01 ^m 1				Edad: 4 ^d 2 PHE { 4 ^h : 59 ^m 7 12 ^h : 59 ^m 5 20 ^h : 59 ^m 2 PMG: 16 ^h 43 ^m R°: 51 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	o	'	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m	m
0	179	44.6	+23	23.7	118	30.8	+14	47.3	60 N	***	0 50	2 36	8 50	88	***	***	***	***
1	194	44.5		23.7	132	57.2	74	38.1	92	58	***	1 40	2 56	8 58	85	***	***	***
2	209	44.4		23.8	147	23.7	75	28.8	93	56	***	2 10	3 13	9 05	83	***	***	***
3	224	44.2		23.9	161	50.2	75	19.4	94	54	0 46	33	27	11 81	81	23 58	21	
4	239	44.1		23.9	176	16.9	77	09.9	95	52	1 32	2 51	39	17 78		53	26	
5	254	43.9	+23	24.0	190	43.6	77	+14	00.4	50	2 00	3 06	3 50	9 22	77	23 49	28	
6	269	43.8	+23	24.0	205	10.4	78	+13	50.8	45	2 46	3 35	4 13	9 34	72	23 41	31	
7	284	43.7		24.1	219	37.3	79	41.1	97	40	3 16	3 58	31	43	69	33	35	
8	299	43.5		24.1	234	04.3	80	31.3	98	35	39	4 16	46	51	66	27	37	
9	314	43.4		24.2	248	31.4	81	21.5	98	30	3 58	31	4 59	9 58	63	22	39	
10	329	43.3		24.2	262	58.6	82	11.6	99	20	4 27	4 56	5 21	10 10	59	12	44	
11	344	43.1	+23	24.3	277	25.8	82	+13	01.6	10 N	4 50	5 17	5 40	10 20	56	23 03	48	
12	359	43.0	+23	24.3	291	53.2	84	+12	51.6	0	5 09	5 35	5 57	10 30	52	22 55	51	
13	14	42.9		24.4	306	20.6	84	41.4	102	10 S	26	5 52	6 15	40	49	47	55	
14	29	42.7		24.4	320	48.1	85	31.3	101	20	42	6 09	33	10 50	46	38	59	
15	44	42.6		24.5	335	15.7	86	21.0	103	30	5 58	28	6 55	11 02	41	28	63	
16	59	42.4		24.5	349	43.4	87	10.7	103	35	6 07	39	7 07	09	39	22	66	
17	74	42.3	+23	24.6	4	11.1	87	+12	00.4	40	6 17	6 51	7 21	11 16	37	22 16	68	
18	89	42.2	+23	24.6	18	39.0	89	+11	49.9	45	6 27	7 04	7 38	11 25	34	22 08	71	
19	104	42.0		24.7	33	06.9	89	39.5	104	50	39	20	7 59	36	29	21 59	75	
20	119	41.9		24.7	47	34.9	90	28.9	106	52	44	28	8 09	41	28	54	78	
21	134	41.8		24.8	62	03.0	91	18.3	106	54	50	36	20	47	25	49	80	
22	149	41.6		24.8	76	31.2	92	+11	07.7	56	6 56	45	32	53	23	44	82	
23	164	41.5		24.9	90	59.4	92	+10	57.0	58	7 03	7 55	8 47	11 59	21	38	85	
24	179	41.4	+23	24.9	105	27.7	93	+10	46.2	60 S	7 10	8 07	9 05	12 07	18	21 31	88	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 6 ^h 14 ^m 2		Mag: -4.0 PMG: 14 ^h 46 ^m				Mag: -1.8 PMG: 3 ^h 04 ^m				Mag: -2.4 PMG: 21 ^h 00 ^m				Mag: +0.1 PMG: 0 ^h 43 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'
0	266	11.1	138	33.9	+21	01.2	313	52.9	-21	57.9	44	10.6	-14	58.0	349	05.6	-22	24.6
1	281	13.5	153	33.3	+21	00.4	328	55.1		58.0	59	13.2		57.9	4	08.3		24.6
2	296	16.0	168	32.8	+20	59.7	343	57.2		58.1	74	15.8		57.9	19	10.9		24.6
3	311	18.5	183	32.2		59.0	358	59.3		58.2	89	18.4		57.9	34	13.6		24.6
4	326	20.9	198	31.7		58.3	14	01.5		58.3	104	21.1		57.8	49	16.2		24.6
5	341	23.4	213	31.1	+20	57.6	29	03.6	-21	58.4	119	23.7	-14	57.8	64	18.9	-22	24.6
6	356	25.9	228	30.6	+20	56.8	44	05.8	-21	58.5	134	26.3	-14	57.8	79	21.5	-22	24.7
7	11	28.3	243	30.1		56.1	59	07.9		58.6	149	29.0		57.7	94	24.2		24.7
8	26	30.8	258	29.5		55.4	74	10.0		58.7	164	31.6		57.7	109	26.9		24.7
9	41	33.2	273	29.0		54.6	89	12.2		58.8	179	34.2		57.6	124	29.5		24.7
10	56	35.7	288	28.4		53.9	104	14.3		58.9	194	36.9		57.6	139	32.2		24.7
11	71	38.2	303	27.9	+20	53.2	119	16.5	-21	59.0	209	39.5	-14	57.6	154	34.8	-22	24.7
12	86	40.6	318	27.3	+20	52.5	134	18.6	-21	59.1	224	42.1	-14	57.5	169	37.5	-22	24.7
13	101	43.1	333	26.8		51.7	149	20.8		59.3	239	44.7		57.5	184	40.2		24.7
14	116	45.6	348	26.3		51.0	164	22.9		59.4	254	47.4		57.4	199	42.8		24.7
15	131	48.0	3	25.7		50.3	179	25.1		59.5	269	50.0		57.4	214	45.5		24.8
16	146	50.5	18	25.2		49.5	194	27.2		59.6	284	52.6		57.4	229	48.1		24.8
17	161	53.0	33	24.7	+20	48.8	209	29.4	-21	59.7	299	55.2	-14	57.3	244	50.8	-22	24.8
18	176	55.4	48	24.1	+20	48.1	224	31.5	-21	59.8	314	57.9	-14	57.3	259	53.5	-22	24.8
19	191	57.9	63	23.6		47.3	239	33.7	-21	59.9	330	00.5		57.3	274	56.1		24.8
20	207	00.4	78	23.0		46.6	254	35.8	-22	00.0	345	03.1		57.2	289	58.8		24.8
21	222	02.8	93	22.5		45.8	269	38.0	-22	00.1	0	05.7		57.2	305	01.4		24.8
22	237	05.3	108	22.0		45.1	284	40.2		00.3	15	08.4		57.1	320	04.1		24.8
23	252	07.7	123	21.4		44.4	299	42.3		00.4	30	11.0		57.1	335	06.8		24.9
24	267	10.2	138	20.9	+20	43.6	314	44.5	-22	00.5	45	13.6	-14	57.1	350	09.4	-22	24.9
Dif	—		-5		-7		+21		-1		+26		0		+27		0	

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7			Edad: 5 ^d 2	PHE { 4 ^h : 59/0 12 ^h : 58/7 20 ^h : 58/5											
	PMG: 12 ^h 01 ^m 4					SD: 16 ^h 0			PMG: 17 ^h 34 ^m		R°: 49 ^m					
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°	
h	o	'	o	'	o	'	o	'	h	m	h	m	h	m	h	m
0	179	41.4	+23	24.9	105	27.7	+10	46.2	60 N	21	27	23	14	10	18	86
1	194	41.2		24.9	119	56.2	95	35.4	58	21	07	22	23	23	83	08
2	209	41.1		25.0	134	24.6	94	24.6	56	20	50	21	53	28	80	03
3	224	40.9		25.0	148	53.2	96	13.7	54	36	30	23	18	32	78	03
4	239	40.8		25.1	163	21.8	96	+10 02.7	52	23	21	12	22	35	76	03
5	254	40.7	+23	25.1	177	50.6	98	+9 51.7	50	20	12	20	57	10	39	74
6	269	40.5	+23	25.1	192	19.4	98	+9 40.7	45	19	50	20	27	10	46	70
7	284	40.4		25.2	206	48.2	98	29.6	40	32	20	05	20	52	66	03
8	299	40.3		25.2	221	17.2	100	18.5	35	17	19	46	23	10	57	64
9	314	40.1		25.2	235	46.2	100	+9 07.4	30	19	04	31	20	05	57	64
10	329	40.0		25.3	250	15.3	101	+8 56.2	20	18	42	19	06	09	57	64
11	344	39.8	+23	25.3	264	44.4	101	+8 45.0	10 N	18	23	18	46	11	16	53
12	359	39.7	+23	25.4	279	13.7	103	+8 33.7	0	18	05	18	28	11	22	50
13	14	39.6		25.4	293	43.0	103	22.4	10 S	17	48	18	10	29	46	42
14	29	39.4		25.4	308	12.3	103	+8 11.1	20	29	17	53	21	36	42	37
15	44	39.3		25.4	322	41.8	105	+7 59.7	30	17	08	34	18	43	38	31
16	59	39.2		25.5	337	11.3	105	48.3	35	16	55	24	17	48	35	28
17	74	39.0	+23	25.5	351	40.9	106	+7 36.9	40	16	41	17	12	11	53	33
18	89	38.9	+23	25.5	6	10.5	106	+7 25.4	45	16	24	16	58	11	59	29
19	104	38.8		25.6	20	40.2	107	14.0	50	16	04	42	24	12	05	26
20	119	38.6		25.6	35	10.0	108	+7 02.5	52	15	54	35	18	09	24	12
21	134	38.5		25.6	49	39.8	108	+6 50.9	54	43	26	13	13	12	22	09
22	149	38.3		25.6	64	09.7	109	39.4	56	30	17	07	07	16	20	06
23	164	38.2		25.7	78	39.7	110	27.8	58	15	15	16	07	17	00	18
24	179	38.1	+23	25.7	93	09.7	110	+6 16.2	60 S	14	58	15	55	12	25	15

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 6 ^h 10 ^m 3		Mag: -4.0 PMG: 14 ^h 47 ^m		Mag: -1.8 PMG: 3 ^h 01 ^m		Mag: -2.4 PMG: 20 ^h 55 ^m		Mag: +0.1 PMG: 0 ^h 39 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	o	'	o	'	o	'	o	'	o	'
0	267	10.2	138	20.9	+20	43.6	314	44.5	-22	00.5
1	282	12.7	153	20.4		42.9	329	46.7		00.6
2	297	15.1	168	19.9		42.1	344	48.8		00.7
3	312	17.6	183	19.3		41.4	359	51.0		00.8
4	327	20.1	198	18.8		40.6	14	53.2		00.9
5	342	22.5	213	18.3	+20	39.9	29	55.3	-22	01.0
6	357	25.0	228	17.7	+20	39.2	44	57.5	-22	01.2
7	12	27.5	243	17.2		38.4	59	59.7		01.3
8	27	29.9	258	16.7		37.7	75	01.8		01.4
9	42	32.4	273	16.2		36.9	90	04.0		01.5
10	57	34.9	288	15.6		36.2	105	06.2		01.6
11	72	37.3	303	15.1	+20	35.4	120	08.4	-22	01.7
12	87	39.8	318	14.6	+20	34.7	135	10.5	-22	01.9
13	102	42.2	333	14.1		33.9	150	12.7		02.0
14	117	44.7	348	13.5		33.2	165	14.9		02.1
15	132	47.2	3	13.0		32.4	180	17.1		02.2
16	147	49.6	18	12.5		31.6	195	19.3		02.3
17	162	52.1	33	12.0	+20	30.9	210	21.5	-22	02.4
18	177	54.6	48	11.4	+20	30.1	225	23.6	-22	02.6
19	192	57.0	63	10.9		29.4	240	25.8		02.7
20	207	59.5	78	10.4		28.6	255	28.0		02.8
21	223	02.0	93	09.9		27.8	270	30.2		02.9
22	238	04.4	108	09.4		27.1	285	32.4		03.0
23	253	06.9	123	08.9		26.3	300	34.6		03.2
24	268	09.3	138	08.3	+20	25.6	315	36.8	-22	03.3
Dif	—		-5	-8		+22	-1			+26
										0
										+27

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15:7 PMG: 12 ^h 01 ^m 6			Edad: 6 ^d 2 SD: 15:8 PMG: 18 ^h 23 ^m	PHE { 4 ^h : 58'2 12 ^h : 57'9 20 ^h : 57'7 R°: 48 ^m													
	hG ☉	Dec				hG ☾		Dif	Dec		Dif	Náutico	Civil	Hora	R°	Hora	R°	
h	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m	h	m	
0	179	38.1	+23	25.7	93	09.7	+6 16.2	60 N	***	0 49	2 36	11 44	83	0 30	15			
1	194	37.9		25.7	107	39.8 ¹¹¹	+6 04.6 ¹¹⁶	58	***	1 40	2 56	46	80	27	17			
2	209	37.8		25.7	122	10.0 ¹¹²	+5 53.0 ¹¹⁶	56	***	2 10	3 13	48	78	24	19			
3	224	37.7		25.8	136	40.2 ¹¹²	41.3 ¹¹⁷	54	0 45	33	27	50	75	21	22			
4	239	37.5		25.8	151	10.4 ¹¹²	29.6 ¹¹⁷	52	1 32	2 51	40	51	74	19	23			
5	254	37.4	+23	25.8	165	40.7 ¹¹³	+5 18.0 ¹¹⁶	50	2 00	3 06	3 50	11 53	72	0 17	25			
6	269	37.3	+23	25.8	180	11.1 ¹¹⁴	+5 06.3 ¹¹⁷	45	2 46	3 36	4 13	11 56	68	0 12	29			
7	284	37.1		25.9	194	41.6 ¹¹⁵	+4 54.6 ¹¹⁷	40	3 16	3 58	31	11 58	65	08	32			
8	299	37.0		25.9	209	12.0 ¹¹⁴	42.8 ¹¹⁸	35	40	4 16	46	12 01	61	04	35			
9	314	36.8		25.9	223	42.6 ¹¹⁶	31.1 ¹¹⁷	30	3 58	32	4 59	03	59	00	37			
10	329	36.7		25.9	238	13.2 ¹¹⁶	19.4 ¹¹⁷	20	4 27	4 57	5 21	06	55	***	***			
11	344	36.6	+23	25.9	252	43.8 ¹¹⁶	+4 07.6 ¹¹⁸	10 N	4 50	5 17	5 40	12 09	51	***	***			
12	359	36.4	+23	25.9	267	14.5 ¹¹⁷	+3 55.8 ¹¹⁸	0	5 09	5 35	5 58	12 12	47	***	***			
13	14	36.3		26.0	281	45.3 ¹¹⁸	44.1 ¹¹⁷	10 S	26	5 53	6 15	15	44	***	***			
14	29	36.2		26.0	296	16.1 ¹¹⁸	32.3 ¹¹⁸	20	42	6 10	34	18	40	***	***			
15	44	36.0		26.0	310	46.9 ¹¹⁸	20.5 ¹¹⁸	30	5 59	29	6 55	21	36	***	***			
16	59	35.9		26.0	325	17.8 ¹¹⁹	+3 08.7 ¹¹⁸	35	6 08	39	7 08	23	34	***	***			
17	74	35.8	+23	26.0	339	48.8 ¹²⁰	+2 57.0 ¹¹⁷	40	6 17	6 51	7 22	12 26	30	***	***			
18	89	35.6	+23	26.0	354	19.7 ¹¹⁹	+2 45.2 ¹¹⁸	45	6 27	7 05	7 39	12 28	28	***	***			
19	104	35.5		26.0	8	50.8 ¹²¹	33.4 ¹¹⁸	50	39	21	7 59	31	24	***	***			
20	119	35.3		26.0	23	21.9 ¹²¹	21.6 ¹¹⁸	52	45	28	8 09	33	22	***	***			
21	134	35.2		26.1	37	53.0 ¹²¹	+2 09.8 ¹¹⁸	54	50	37	20	34	20	***	***			
22	149	35.1		26.1	52	24.1 ¹²¹	+1 58.0 ¹¹⁸	56	6 56	46	33	36	18	***	***			
23	164	34.9		26.1	66	55.3 ¹²²	46.2 ¹¹⁸	58	7 03	7 56	8 48	38	16	***	***			
24	179	34.8	+23	26.1	81	26.6 ¹²³	+1 34.5 ¹¹⁷	60 S	7 11	8 08	9 05	12 40	13	***	***			
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG 6 ^h 06 ^m 4			Mag: -4.0 PMG: 14 ^h 48 ^m			Mag: -1.8 PMG: 2 ^h 57 ^m			Mag: -2.4 PMG: 20 ^h 51 ^m			Mag: +0.1 PMG: 0 ^h 35 ^m					
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'
0	268	09.3	138	08.3	+20	25.6	315	36.8	-22	03.3	46	16.5	-14	56.2	351	13.2	-22	25.1
1	283	11.8	153	07.8		24.8	330	39.0		03.4	61	19.1		56.2	6	15.9		25.2
2	298	14.3	168	07.3		24.0	345	41.2		03.5	76	21.8		56.1	21	18.6		25.2
3	313	16.7	183	06.8		23.3	0	43.4		03.7	91	24.4		56.1	36	21.2		25.2
4	328	19.2	198	06.3		22.5	15	45.6		03.8	106	27.0		56.0	51	23.9		25.2
5	343	21.7	213	05.8	+20	21.7	30	47.8	-22	03.9	121	29.6	-14	56.0	66	26.5	-22	25.2
6	358	24.1	228	05.3	+20	21.0	45	50.0	-22	04.0	136	32.2	-14	56.0	81	29.2	-22	25.2
7	13	26.6	243	04.8		20.2	60	52.2		04.1	151	34.8		55.9	96	31.9		25.2
8	28	29.1	258	04.2		19.4	75	54.4		04.3	166	37.5		55.9	111	34.5		25.2
9	43	31.5	273	03.7		18.7	90	56.6		04.4	181	40.1		55.9	126	37.2		25.2
10	58	34.0	288	03.2		17.9	105	58.8		04.5	196	42.7		55.8	141	39.8		25.3
11	73	36.5	303	02.7	+20	17.1	121	01.0	-22	04.6	211	45.3	-14	55.8	156	42.5	-22	25.3
12	88	38.9	318	02.2	+20	16.3	136	03.2	-22	04.8	226	47.9	-14	55.8	171	45.2	-22	25.3
13	103	41.4	333	01.7		15.6	151	05.4		04.9	241	50.5		55.7	186	47.8		25.3
14	118	43.8	348	01.2		14.8	166	07.6		05.0	256	53.1		55.7	201	50.5		25.3
15	133	46.3	3	00.7		14.0	181	09.8		05.1	271	55.8		55.7	216	53.1		25.3
16	148	48.8	18	00.2		13.2	196	12.0		05.3	286	58.4		55.6	231	55.8		25.3
17	163	51.2	32	59.7	+20	12.5	211	14.2	-22	05.4	302	01.0	-14	55.6	246	58.5	-22	25.3
18	178	53.7	47	59.2	+20	11.7	226	16.5	-22	05.5	317	03.6	-14	55.6	262	01.1	-22	25.4
19	193	56.2	62	58.7		10.9	241	18.7		05.7	332	06.2		55.5	277	03.8		25.4
20	208	58.6	77	58.2		10.1	256	20.9		05.8	347	08.8		55.5	292	06.5		25.4
21	224	01.1	92	57.7		09.3	271	23.1		05.9	2	11.4		55.5	307	09.1		25.4
22	239	03.6	107	57.2		08.6	286	25.3		06.0	17	14.0		55.4	322	11.8		25.4
23	254	06.0	122	56.7		07.8	301	27.6		06.2	32	16.7		55.4	337	14.4		25.4
24	269	08.5	137	56.2	+20	07.0	316	29.8	-22	06.3	47	19.3	-14	55.4	352	17.1	-22	25.4
Dif	—			-5 -8			+22 -1			+26 0			+27 0					

UT	SOL			☾ LUNA					Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7			Edad: 7 ^d 2	PHE	SD: 15 ^h 6					Puesta de Sol	Civil	Náutico	Hora	R°	Hora	R°
	PMG: 12 ^h 01 ^m 8	PMG: 19 ^h 11 ^m	R°: 46 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif										
h	o	'	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m
0	179	34.8	+23	26.1	81	26.6	+1	34.5	60 N	21	28	23	14	***	13	07	81
1	194	34.7		26.1	95	57.9 ¹²³		22.7 ¹¹⁸	58	21	07	22	23	***	06	79	44
2	209	34.5		26.1	110	29.2 ¹²³	+1	10.9 ¹¹⁸	56	20	50	21	53	***	06	76	43
3	224	34.4		26.1	125	00.5 ¹²³	+0	59.2 ¹¹⁷	54	36		31	23	18	05	74	43
4	239	34.3		26.1	139	31.9 ¹²⁴		47.4 ¹¹⁸	52	24	21	13	22	31	05	72	42
5	254	34.1	+23	26.1	154	03.4 ¹²⁵	+0	35.7 ¹¹⁷	50	20	13	20	58	22	03	13	05
6	269	34.0	+23	26.1	168	34.8 ¹²⁴	+0	23.9 ¹¹⁸	45	19	50	20	28	21	18	13	04
7	284	33.9		26.1	183	06.3 ¹²⁵		12.2 ¹¹⁷	40	32		20	05	20	47	03	63
8	299	33.7		26.1	197	37.8 ¹²⁵	+0	00.5 ¹¹⁷	35	17		19	47	24		02	60
9	314	33.6		26.1	212	09.4 ¹²⁶	-0	11.2 ¹¹⁷	30	19	04	32	20	05		02	57
10	329	33.4		26.1	226	41.0 ¹²⁶		22.9 ¹¹⁷	20	18	42	19	07	19	36	01	53
11	344	33.3	+23	26.1	241	12.6 ¹²⁶	-0	34.6 ¹¹⁷	10 N	18	23	18	46	19	13	13	00
12	359	33.2	+23	26.1	255	44.3 ¹²⁷	-0	46.3 ¹¹⁷	0	18	05	18	28	18	54	12	59
13	14	33.0		26.1	270	16.0 ¹²⁷	-0	57.9 ¹¹⁶	10 S	17	48	18	11	37		59	43
14	29	32.9		26.1	284	47.7 ¹²⁷	-1	09.5 ¹¹⁶	20	29		17	53	21		58	39
15	44	32.8		26.1	299	19.4 ¹²⁷		21.1 ¹¹⁶	30	17	08	35	18	04		57	35
16	59	32.6		26.1	313	51.2 ¹²⁸		32.7 ¹¹⁶	35	16	56	24	17	56		57	33
17	74	32.5	+23	26.1	328	23.0 ¹²⁸	-1	44.3 ¹¹⁶	40	16	42	17	12	17	46	12	56
18	89	32.4	+23	26.1	342	54.8 ¹²⁸	-1	55.9 ¹¹⁶	45	16	25	16	59	17	36	12	56
19	104	32.2		26.1	357	26.6 ¹²⁸	-2	07.4 ¹¹⁵	50	16	04	42	24			55	23
20	119	32.1		26.1	11	58.5 ¹²⁹		18.9 ¹¹⁵	52	15	54	35	19			55	21
21	134	31.9		26.1	26	30.4 ¹²⁹		30.4 ¹¹⁵	54	43		27	13			54	20
22	149	31.8		26.1	41	02.3 ¹²⁹		41.9 ¹¹⁵	56	30		18	07			54	18
23	164	31.7		26.1	55	34.2 ¹²⁹	-2	53.3 ¹¹⁴	58	15	15	16	07	17	00	54	15
24	179	31.5	+23	26.0	70	06.1 ¹²⁹	-3	04.7 ¹¹⁴	60 S	14	58	15	56	16	53	12	53

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG		Mag: -4.0		Mag: -1.9		Mag: -2.4		Mag: 0.0	
	6 ^h 02 ^m 4		PMG: 14 ^h 49 ^m		PMG: 2 ^h 54 ^m		PMG: 20 ^h 47 ^m		PMG: 0 ^h 31 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	o	'	o	'	o	'	o	'	o	'
0	269	08.5	137	56.2	316	29.8	47	19.3	352	17.1
1	284	11.0	152	55.7	331	32.0	62	21.9	7	19.8
2	299	13.4	167	55.2	346	34.2	77	24.5	22	22.4
3	314	15.9	182	54.7	1	36.5	92	27.1	37	25.1
4	329	18.3	197	54.2	16	38.7	107	29.7	52	27.7
5	344	20.8	212	53.7	31	40.9	122	32.3	67	30.4
6	359	23.3	227	53.2	46	43.2	137	34.9	82	33.1
7	14	25.7	242	52.7	61	45.4	152	37.5	97	35.7
8	29	28.2	257	52.2	76	47.6	167	40.1	112	38.4
9	44	30.7	272	51.7	91	49.9	182	42.8	127	41.0
10	59	33.1	287	51.2	106	52.1	197	45.4	142	43.7
11	74	35.6	302	50.7	121	54.3	212	48.0	157	46.4
12	89	38.1	317	50.2	136	56.6	227	50.6	172	49.0
13	104	40.5	332	49.7	151	58.8	242	53.2	187	51.7
14	119	43.0	347	49.3	167	01.0	257	55.8	202	54.3
15	134	45.4	2	48.8	182	03.3	272	58.4	217	57.0
16	149	47.9	17	48.3	197	05.5	288	01.0	232	59.7
17	164	50.4	32	47.8	212	07.8	303	03.6	248	02.3
18	179	52.8	47	47.3	227	10.0	318	06.2	263	05.0
19	194	55.3	62	46.8	242	12.3	333	08.8	278	07.7
20	209	57.8	77	46.3	257	14.5	348	11.4	293	10.3
21	225	00.2	92	45.8	272	16.8	3	14.0	308	13.0
22	240	02.7	107	45.4	287	19.0	18	16.6	323	15.6
23	255	05.2	122	44.9	302	21.3	33	19.2	338	18.3
24	270	07.6	137	44.4	317	23.5	48	21.8	353	21.0
Dif	—		-5	-8	+22	-1	+26	0	+27	0

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 15 ^h 7 ^m PMG: 12 ^h 02 ^m 0			Edad: 8 ^d 2 SD: 15 ^h 4 ^m PMG: 19 ^h 57 ^m	PHE { 4 ^h : 56 ^m 7 ^s 12 ^h : 56 ^m 5 ^s 20 ^h : 56 ^m 3 ^s R°: 46 ^m												
	hG ☉	Dec				hG ☾		Dif	Dec		Dif	Náutico	Civil	Hora	R°	Hora	R°
h	o	'	/	o	'	/	o	'	/	h	m	h	m	h	m	h	m
0	179	31.5	+23	26.0	70	06.1	-3	04.7	60 N	***	0 49	2 36	14 28	79	0 58	13	
1	194	31.4		26.0	84	38.1 ¹³⁰		16.1 ¹¹⁴	58	***	1 41	2 57	25	76	1 00	16	
2	209	31.3		26.0	99	10.1 ¹³⁰		27.5 ¹¹⁴	56	***	2 11	3 13	22	74	01	18	
3	224	31.1		26.0	113	42.1 ¹³⁰		38.8 ¹¹³	54	0 45	33	28	19	72	03	20	
4	239	31.0		26.0	128	14.1 ¹³⁰	-3	50.1 ¹¹³	52	1 33	2 51	40	17	69	04	22	
5	254	30.9	+23	26.0	142	46.1 ¹³⁰	-4	01.4 ¹¹³	50	2 01	3 06	3 51	14 14	69	1 05	24	
6	269	30.7	+23	26.0	157	18.1 ¹³⁰	-4	12.7 ¹¹³	45	2 46	3 36	4 13	14 10	64	1 08	27	
7	284	30.6		26.0	171	50.2 ¹³¹		23.9 ¹¹²	40	3 17	3 59	32	06	61	10	30	
8	299	30.5		25.9	186	22.3 ¹³¹		35.1 ¹¹²	35	40	4 17	4 47	14 02	59	12	33	
9	314	30.3		25.9	200	54.3 ¹³⁰		46.3 ¹¹²	30	3 59	32	5 00	13 59	57	14	35	
10	329	30.2		25.9	215	26.4 ¹³¹	-4	57.4 ¹¹¹	20	4 28	4 57	22	54	53	17	39	
11	344	30.1	+23	25.9	229	58.5 ¹³¹	-5	08.5 ¹¹¹	10 N	4 51	5 18	5 41	13 50	49	1 19	43	
12	359	29.9	+23	25.9	244	30.6 ¹³¹	-5	19.6 ¹¹¹	0	5 10	5 36	5 58	13 46	46	1 22	46	
13	14	29.8		25.9	259	02.8 ¹³²		30.6 ¹¹⁰	10 S	27	5 53	6 16	42	42	24	49	
14	29	29.6		25.8	273	34.9 ¹³¹		41.6 ¹¹⁰	20	43	6 10	34	37	40	27	53	
15	44	29.5		25.8	288	07.0 ¹³¹	-5	52.5 ¹⁰⁹	30	5 59	29	6 56	32	36	30	57	
16	59	29.4		25.8	302	39.2 ¹³²	-6	03.5 ¹¹⁰	35	6 08	40	7 08	30	33	31	60	
17	74	29.2	+23	25.8	317	11.3 ¹³¹	-6	14.3 ¹⁰⁸	40	6 18	6 52	7 22	13 26	31	1 33	62	
18	89	29.1	+23	25.8	331	43.5 ¹³²	-6	25.2 ¹⁰⁹	45	6 28	7 05	7 39	13 23	28	1 35	66	
19	104	29.0		25.7	346	15.6 ¹³¹		36.0 ¹⁰⁸	50	40	21	8 00	18	25	38	69	
20	119	28.8		25.7	0	47.8 ¹³²		46.8 ¹⁰⁸	52	45	29	10	16	23	39	71	
21	134	28.7		25.7	15	20.0 ¹³²	-6	57.5 ¹⁰⁷	54	51	37	21	14	21	41	72	
22	149	28.6		25.7	29	52.1 ¹³¹	-7	08.2 ¹⁰⁷	56	6 57	46	34	12	19	42	75	
23	164	28.4		25.6	44	24.3 ¹³²		18.8 ¹⁰⁶	58	7 04	7 56	8 48	09	17	44	77	
24	179	28.3	+23	25.6	58	56.5 ¹³²	-7	29.4 ¹⁰⁶	60 S	7 11	8 08	9 06	13 06	14	1 46	80	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 5 ^h 58 ^m 5		Mag: -4.0 PMG: 14 ^h 50 ^m		Mag: -1.9 PMG: 2 ^h 50 ^m		Mag: -2.4 PMG: 20 ^h 43 ^m		Mag: 0.0 PMG: 0 ^h 27 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	o	'	o	'	o	'	o	'	o	'
0	270	07.6	137	44.4	+19	317	23.5	-22	48	21.8
1	285	10.1	152	43.9		332	25.8		63	24.5
2	300	12.6	167	43.4		347	28.0		78	27.1
3	315	15.0	182	43.0		2	30.3		93	29.7
4	330	17.5	197	42.5		17	32.6		108	32.3
5	345	19.9	212	42.0	+19	32	34.8	-22	123	34.9
6	0	22.4	227	41.5	+19	47	37.1	-22	138	37.5
7	15	24.9	242	41.0		62	39.3		153	40.1
8	30	27.3	257	40.6		77	41.6		168	42.7
9	45	29.8	272	40.1		92	43.9		183	45.3
10	60	32.3	287	39.6		107	46.1		198	47.9
11	75	34.7	302	39.1	+19	122	48.4	-22	213	50.5
12	90	37.2	317	38.7	+19	137	50.7	-22	228	53.1
13	105	39.7	332	38.2		152	52.9		243	55.7
14	120	42.1	347	37.7		167	55.2		258	58.3
15	135	44.6	2	37.2		182	57.5		274	00.9
16	150	47.0	17	36.8		197	59.8		289	03.5
17	165	49.5	32	36.3	+19	213	02.0	-22	304	06.1
18	180	52.0	47	35.8	+19	228	04.3	-22	319	08.7
19	195	54.4	62	35.4		243	06.6		334	11.3
20	210	56.9	77	34.9		258	08.9		349	13.9
21	225	59.4	92	34.4		273	11.2		4	16.5
22	241	01.8	107	34.0		288	13.4		19	19.1
23	256	04.3	122	33.5		303	15.7		34	21.7
24	271	06.8	137	33.0	+19	318	18.0	-22	49	24.3
Dif	—		-5		-8		+23		+26	
							-1		0	
									+27	

UT	SOL				LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7				Edad: 9 ^d 2	PHE { 4 ^h : 56 ^m 1 12 ^h : 55 ^m 9 20 ^h : 55 ^m 7	SD: 15 ^h 2	PMG: 20 ^h 43 ^m			R°: 46 ^m								
	PMG: 12 ^h 02 ^m 2																		
	hG ☉		Dec		hG ☾		Dif		Dec		Dif			Civil	Náutico	Hora	R°	Hora	R°
h	o	'	o	'	o	'	o	'	o	'	o	'	h	m	h	m	h	m	m
0	179	28.3	+23	25.6	58	56.5	-7	29.4	60 N	21 28	23 14	***	15 47	77	1 11	15			
1	194	28.2		25.6	73	28.6 ¹³¹		40.0 ¹⁰⁶	58	21 07	22 23	***	41 74		16 17				
2	209	28.0		25.5	88	00.8 ¹³²	-7	50.5 ¹⁰⁵	56	20 51	21 53	***	36 72		19 20				
3	224	27.9		25.5	102	33.0 ¹³²	-8	01.0 ¹⁰⁵	54	36	31	23 18	31 70		23 22				
4	239	27.8		25.5	117	05.2 ¹³²		11.4 ¹⁰⁴	52	24	21 13	22 31	26 69		26 24				
5	254	27.6	+23	25.5	131	37.3 ¹³¹	-8	21.8 ¹⁰⁴	50	20 13	20 58	22 03	15 23	66	1 29	25			
6	269	27.5	+23	25.4	146	09.5 ¹³²	-8	32.1 ¹⁰³	45	19 51	20 28	21 18	15 14	63	1 35	29			
7	284	27.4		25.4	160	41.7 ¹³²		42.4 ¹⁰³	40	33	20 06	20 47	07 60		40 32				
8	299	27.2		25.4	175	13.8 ¹³¹	-8	52.6 ¹⁰²	35	18	19 47	24	15 01	58	45 34				
9	314	27.1		25.3	189	46.0 ¹³²	-9	02.8 ¹⁰²	30	19 05	32	20 05	14 56	56	49 36				
10	329	27.0		25.3	204	18.1 ¹³¹		12.9 ¹⁰¹	20	18 42	19 07	19 36	47 52		1 56	40			
11	344	26.8	+23	25.3	218	50.3 ¹³²	-9	23.0 ¹⁰¹	10 N	18 23	18 47	19 14	14 39	49	2 02	43			
12	359	26.7	+23	25.2	233	22.4 ¹³¹	-9	33.1 ¹⁰¹	0	18 06	18 28	18 55	14 32	46	2 08	46			
13	14	26.6		25.2	247	54.6 ¹³²		43.0 ⁹⁹	10 S	17 48	18 11	38	24 44		13 50				
14	29	26.4		25.2	262	26.7 ¹³¹	-9	53.0 ¹⁰⁰	20	30	17 54	21	17 40		20 52				
15	44	26.3		25.1	276	58.8 ¹³¹	-10	02.9 ⁹⁹	30	17 09	35	18 05	08 37		27 56				
16	59	26.1		25.1	291	30.9 ¹³¹		12.7 ⁹⁸	35	16 56	24	17 56	14 03	35	31 58				
17	74	26.0	+23	25.0	306	03.0 ¹³¹	-10	22.5 ⁹⁸	40	16 42	17 13	17 47	13 57	33	2 35	61			
18	89	25.9	+23	25.0	320	35.1 ¹³¹	-10	32.2 ⁹⁷	45	16 25	16 59	17 36	13 51	29	2 41	64			
19	104	25.7		25.0	335	07.2 ¹³¹		41.8 ⁹⁶	50	16 04	43	25	43 26		47 68				
20	119	25.6		24.9	349	39.3 ¹³¹	-10	51.5 ⁹⁷	52	15 55	36	19	39 25		50 69				
21	134	25.5		24.9	4	11.3 ¹³⁰	-11	01.0 ⁹⁵	54	43	27	14	35 23		53 71				
22	149	25.3		24.8	18	43.4 ¹³¹		10.5 ⁹⁵	56	31	18	07	31 21		2 57	73			
23	164	25.2		24.8	33	15.4 ¹³⁰		19.9 ⁹⁴	58	15 16	16 08	17 01	26 19		3 01	76			
24	179	25.1	+23	24.7	47	47.5 ¹³¹	-11	29.3 ⁹⁴	60 S	14 59	15 56	16 53	13 20	17	3 06	78			

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 5 ^h 54 ^m 6		Mag: -4.0 PMG: 14 ^h 50 ^m		Mag: -1.9 PMG: 2 ^h 46 ^m		Mag: -2.4 PMG: 20 ^h 39 ^m		Mag: 0.0 PMG: 0 ^h 22 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	o	'	o	'	o	'	o	'	o	'
0	271	06.8	137	33.0	+19	28.4	318	18.0	-22	13.0
1	286	09.2	152	32.6		27.5	333	20.3		13.1
2	301	11.7	167	32.1		26.7	348	22.6		13.3
3	316	14.2	182	31.6		25.9	3	24.9		13.4
4	331	16.6	197	31.2		25.1	18	27.2		13.6
5	346	19.1	212	30.7	+19	24.2	33	29.5	-22	13.7
6	1	21.5	227	30.3	+19	23.4	48	31.8	-22	13.9
7	16	24.0	242	29.8		22.6	63	34.0		14.0
8	31	26.5	257	29.3		21.7	78	36.3		14.2
9	46	28.9	272	28.9		20.9	93	38.6		14.3
10	61	31.4	287	28.4		20.1	108	40.9		14.5
11	76	33.9	302	28.0	+19	19.2	123	43.2	-22	14.6
12	91	36.3	317	27.5	+19	18.4	138	45.5	-22	14.8
13	106	38.8	332	27.0		17.6	153	47.8		14.9
14	121	41.3	347	26.6		16.7	168	50.1		15.1
15	136	43.7	2	26.1		15.9	183	52.4		15.2
16	151	46.2	17	25.7		15.1	198	54.8		15.4
17	166	48.7	32	25.2	+19	14.2	213	57.1	-22	15.5
18	181	51.1	47	24.8	+19	13.4	228	59.4	-22	15.7
19	196	53.6	62	24.3		12.5	244	01.7		15.8
20	211	56.0	77	23.9		11.7	259	04.0		16.0
21	226	58.5	92	23.4		10.9	274	06.3		16.1
22	242	01.0	107	23.0		10.0	289	08.6		16.3
23	257	03.4	122	22.5		09.2	304	10.9		16.4
24	272	05.9	137	22.1	+19	08.3	319	13.2	-22	16.6
Dif	—		-5		-8		+23		-2	
							+26		0	
									+27	
									0	

UT	SOL				LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7 PMG: 12 ^h 02 ^m 4				Edad: 10 ^d 2 PHE { SD: 15 ^h 1 PMG: 21 ^h 29 ^m R°: 47 ^m														
	hG ☉		Dec		hG ☾		Dif		Dec			Dif			Náutico	Civil	Hora	R°	Hora
h	o	'	o	'	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m
0	179	25.1	+23	24.7	47	47.5	-11	29.3	93	60 N	***	0 51	2 37	17 04	74	1 26	18		
1	194	24.9		24.7	62	19.5 ¹³⁰		38.6	93	58	***	1 42	2 57	16 55	72	33	21		
2	209	24.8		24.7	76	51.5 ¹³⁰		47.9	93	56	***	2 11	3 14	48	69	39	22		
3	224	24.7		24.6	91	23.5 ¹³⁰	-11	57.1	92	54	0 47	34	28	41	67	45	24		
4	239	24.5		24.6	105	55.4 ¹²⁹	-12	06.2	91	52	1 33	2 52	41	35	65	50	26		
5	254	24.4	+23	24.5	120	27.4 ¹³⁰	-12	15.3	91	50	2 01	3 07	3 51	16 29	64	1 54	28		
6	269	24.3	+23	24.5	134	59.4 ¹³⁰	-12	24.3	90	45	2 47	3 37	4 14	16 17	62	2 04	31		
7	284	24.1		24.4	149	31.3 ¹²⁹		33.3	90	40	3 17	3 59	32	16 07	59	12	34		
8	299	24.0		24.4	164	03.2 ¹²⁹		42.2	89	35	41	4 17	4 47	15 59	57	19	36		
9	314	23.9		24.3	178	35.1 ¹²⁹		51.0	88	30	3 59	33	5 00	52	55	25	38		
10	329	23.7		24.3	193	07.0 ¹²⁹	-12	59.8	88	20	4 28	4 58	22	39	52	36	41		
11	344	23.6	+23	24.2	207	38.9 ¹²⁹	-13	08.5	87	10 N	4 51	5 18	5 41	15 28	50	2 45	44		
12	359	23.5	+23	24.2	222	10.7 ¹²⁸	-13	17.1	86	0	5 10	5 36	5 59	15 18	47	2 54	46		
13	14	23.3		24.1	236	42.6 ¹²⁹		25.7	86	10 S	27	5 53	6 16	15 08	44	3 03	49		
14	29	23.2		24.1	251	14.4 ¹²⁸		34.2	85	20	5 43	6 11	35	14 57	42	12	52		
15	44	23.1		24.0	265	46.2 ¹²⁸		42.6	84	30	6 00	30	6 56	45	39	23	55		
16	59	22.9		23.9	280	18.0 ¹²⁸		51.0	84	35	08	40	7 08	38	37	29	58		
17	74	22.8	+23	23.9	294	49.8 ¹²⁸	-13	59.2	82	40	6 18	6 52	7 23	14 30	35	3 36	60		
18	89	22.7	+23	23.8	309	21.5 ¹²⁷	-14	07.5	83	45	6 28	7 05	7 39	14 20	33	3 45	62		
19	104	22.5		23.8	323	53.2 ¹²⁷		15.6	81	50	40	22	8 00	09	30	55	65		
20	119	22.4		23.7	338	25.0 ¹²⁸		23.7	81	52	45	29	10	14 04	28	3 59	67		
21	134	22.3		23.7	352	56.6 ¹²⁶		31.7	80	54	51	37	21	13 58	27	4 04	69		
22	149	22.1		23.6	7	28.3 ¹²⁷		39.7	80	56	6 57	46	34	52	25	10	71		
23	164	22.0		23.5	22	00.0 ¹²⁷		47.5	78	58	7 04	7 57	8 48	45	22	17	73		
24	179	21.9	+23	23.5	36	31.6 ¹²⁶	-14	55.3	78	60 S	7 11	8 08	9 06	13 37	20	4 24	76		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 5 ^h 50 ^m 6		Mag: -4.0 PMG: 14 ^h 51 ^m		Mag: -2.0 PMG: 2 ^h 43 ^m		Mag: -2.4 PMG: 20 ^h 35 ^m		Mag: 0.0 PMG: 0 ^h 18 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	o	'	o	'	o	'	o	'	o	'
0	272	05.9	137	22.1	+19	08.3	319	13.2	-22	16.6
1	287	08.4	152	21.6		07.5	334	15.6		16.8
2	302	10.8	167	21.2		06.6	349	17.9		16.9
3	317	13.3	182	20.7		05.8	4	20.2		17.1
4	332	15.8	197	20.3		05.0	19	22.5		17.2
5	347	18.2	212	19.8	+19	04.1	34	24.9	-22	17.4
6	2	20.7	227	19.4	+19	03.3	49	27.2	-22	17.5
7	17	23.2	242	19.0		02.4	64	29.5		17.7
8	32	25.6	257	18.5		01.6	79	31.8		17.9
9	47	28.1	272	18.1	+19	00.7	94	34.2		18.0
10	62	30.5	287	17.6	+18	59.9	109	36.5		18.2
11	77	33.0	302	17.2	+18	59.0	124	38.8	-22	18.3
12	92	35.5	317	16.7	+18	58.1	139	41.2	-22	18.5
13	107	37.9	332	16.3		57.3	154	43.5		18.7
14	122	40.4	347	15.9		56.4	169	45.8		18.8
15	137	42.9	2	15.4		55.6	184	48.2		19.0
16	152	45.3	17	15.0		54.7	199	50.5		19.1
17	167	47.8	32	14.6	+18	53.9	214	52.8	-22	19.3
18	182	50.3	47	14.1	+18	53.0	229	55.2	-22	19.5
19	197	52.7	62	13.7		52.1	244	57.5		19.6
20	212	55.2	77	13.3		51.3	259	59.9		19.8
21	227	57.6	92	12.8		50.4	275	02.2		20.0
22	243	00.1	107	12.4		49.6	290	04.5		20.1
23	258	02.6	122	12.0		48.7	305	06.9		20.3
24	273	05.0	137	11.5	+18	47.8	320	09.2	-22	20.4
Dif	—		-4		-9		+23		-2	

UT	SOL				LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7				Edad: 11 ^d 2	PHE { 4 ^h : 55 ^m 1 12 ^h : 54 ^m 9 20 ^h : 54 ^m 8	SD: 15 ^h 0	PMG: 22 ^h 16 ^m			R°: 48 ^m						
	PMG: 12 ^h 02 ^m 6																
	hG ☉	Dec			hG ☾	Dif					Civil	Náutico	Hora	R°	Hora	R°	
h	o	'	o	'	o	'	o	'	o	h m	h m	h m	h m m		h m m		
0	179	21.9	+23	23.5	36	31.6	-14	55.3	60 N	21 28	23 12	***	18 18	69	1 44	23	
1	194	21.7		23.4	51	03.2 ¹²⁶	-15	03.1	58	21 07	22 23	***	18 07	67	1 54	25	
2	209	21.6		23.3	65	34.9 ¹²⁷		10.7	56	20 51	21 53	***	17 57	65	2 02	27	
3	224	21.5		23.3	80	06.4 ¹²⁵		18.3	54	36	31	23 17	48	64	09	29	
4	239	21.4		23.2	94	38.0 ¹²⁶		25.8	52	24	21 13	22 31	40	63	16	30	
5	254	21.2	+23	23.2	109	09.5 ¹²⁵	-15	33.2	50	20 13	20 58	22 03	17 33	61	2 22	32	
6	269	21.1	+23	23.1	123	41.1 ¹²⁶	-15	40.6	45	19 51	20 28	21 18	17 19	58	2 35	34	
7	284	21.0		23.0	138	12.6 ¹²⁵		47.8	40	33	20 06	20 47	17 06	57	46	36	
8	299	20.8		23.0	152	44.0 ¹²⁴	-15	55.0	35	18	19 48	24	16 56	55	2 55	38	
9	314	20.7		22.9	167	15.5 ¹²⁵	-16	02.2	30	19 05	32	20 06	47	54	3 03	40	
10	329	20.6		22.8	181	47.0 ¹²⁵		09.2	20	18 43	19 07	19 37	31	52	17	43	
11	344	20.4	+23	22.8	196	18.4 ¹²⁴	-16	16.2	10 N	18 24	18 47	19 14	16 18	49	3 29	45	
12	359	20.3	+23	22.7	210	49.8 ¹²⁴	-16	23.1	0	18 06	18 29	18 55	16 05	48	3 40	48	
13	14	20.2		22.6	225	21.2 ¹²⁴		29.9	10 S	17 49	18 12	38	15 52	46	3 52	50	
14	29	20.0		22.5	239	52.5 ¹²³		36.6	20	30	17 54	22	39	44	4 04	52	
15	44	19.9		22.5	254	23.9 ¹²⁴		43.2	30	17 09	36	18 05	24	41	18	55	
16	59	19.8		22.4	268	55.2 ¹²³		49.8	35	16 57	25	17 57	15	40	27	56	
17	74	19.6	+23	22.3	283	26.5 ¹²³	-16	56.3	40	16 43	17 13	17 47	15 05	38	4 36	58	
18	89	19.5	+23	22.2	297	57.8 ¹²³	-17	02.7	45	16 26	17 00	17 37	14 53	37	4 47	60	
19	104	19.4		22.2	312	29.0 ¹²²		09.0	50	16 05	16 44	25	39	34	5 00	63	
20	119	19.2		22.1	327	00.3 ¹²³		15.2	52	15 55	36	20	32	33	06	65	
21	134	19.1		22.0	341	31.5 ¹²²		21.4	54	44	28	14	25	31	13	66	
22	149	19.0		21.9	356	02.7 ¹²²		27.5	56	32	19	08	17	30	21	67	
23	164	18.9		21.9	10	33.9 ¹²²		33.5	58	15 17	16 09	17 01	14 07	29	30	69	
24	179	18.7	+23	21.8	25	05.1 ¹²²	-17	39.4	60 S	14 59	15 57	16 54	13 57	26	5 40	72	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 5 ^h 46 ^m 7		Mag: -4.0 PMG: 14 ^h 52 ^m		Mag: -2.0 PMG: 2 ^h 39 ^m		Mag: -2.4 PMG: 20 ^h 31 ^m		Mag: 0.0 PMG: 0 ^h 14 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	o	'	o	'	o	'	o	'	o	'								
0	273	05.0	137	11.5	+18	47.8	320	09.2	-22	20.4	51	28.6	-14	52.6	356	32.6	-22	26.5
1	288	07.5	152	11.1		47.0	335	11.6		20.6	66	31.2		52.5	11	35.3		26.5
2	303	10.0	167	10.7		46.1	350	13.9		20.8	81	33.7		52.5	26	38.0		26.6
3	318	12.4	182	10.2		45.2	5	16.3		20.9	96	36.3		52.5	41	40.6		26.6
4	333	14.9	197	09.8		44.4	20	18.6		21.1	111	38.9		52.5	56	43.3		26.6
5	348	17.4	212	09.4	+18	43.5	35	21.0	-22	21.3	126	41.5	-14	52.4	71	45.9	-22	26.6
6	3	19.8	227	08.9	+18	42.6	50	23.4	-22	21.4	141	44.1	-14	52.4	86	48.6	-22	26.6
7	18	22.3	242	08.5		41.8	65	25.7		21.6	156	46.6		52.4	101	51.3		26.6
8	33	24.8	257	08.1		40.9	80	28.1		21.8	171	49.2		52.4	116	53.9		26.6
9	48	27.2	272	07.7		40.0	95	30.4		21.9	186	51.8		52.3	131	56.6		26.6
10	63	29.7	287	07.2		39.2	110	32.8		22.1	201	54.4		52.3	146	59.3		26.6
11	78	32.1	302	06.8	+18	38.3	125	35.2	-22	22.3	216	57.0	-14	52.3	162	01.9	-22	26.7
12	93	34.6	317	06.4	+18	37.4	140	37.5	-22	22.4	231	59.5	-14	52.3	177	04.6	-22	26.7
13	108	37.1	332	06.0		36.5	155	39.9		22.6	247	02.1		52.2	192	07.2		26.7
14	123	39.5	347	05.6		35.7	170	42.3		22.8	262	04.7		52.2	207	09.9		26.7
15	138	42.0	2	05.1		34.8	185	44.6		23.0	277	07.3		52.2	222	12.6		26.7
16	153	44.5	17	04.7		33.9	200	47.0		23.1	292	09.9		52.2	237	15.2		26.7
17	168	46.9	32	04.3	+18	33.0	215	49.4	-22	23.3	307	12.4	-14	52.2	252	17.9	-22	26.7
18	183	49.4	47	03.9	+18	32.2	230	51.7	-22	23.5	322	15.0	-14	52.1	267	20.6	-22	26.7
19	198	51.9	62	03.5		31.3	245	54.1		23.6	337	17.6		52.1	282	23.2		26.8
20	213	54.3	77	03.0		30.4	260	56.5		23.8	352	20.2		52.1	297	25.9		26.8
21	228	56.8	92	02.6		29.5	275	58.9		24.0	7	22.7		52.1	312	28.5		26.8
22	243	59.3	107	02.2		28.7	291	01.2		24.2	22	25.3		52.0	327	31.2		26.8
23	259	01.7	122	01.8		27.8	306	03.6		24.3	37	27.9		52.0	342	33.9		26.8
24	274	04.2	137	01.4	+18	26.9	321	06.0	-22	24.5	52	30.5	-14	52.0	357	36.5	-22	26.8
Dif	—		-4		-9		+24		-2		+26		0		+27		0	

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7 PMG: 12 ^h 02 ^m 9				Edad: 12 ^d 2 PHE { SD: 14 ^h 9 PMG: 23 ^h 04 ^m R°: 49 ^m												
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	o	'	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m
0	179	18.7	+23	21.8	25	05.1	-17	39.4	58	60 N	***	0 53	2 38	19 27	62	2 07	30
1	194	18.6		21.7	39	36.2 ¹²¹		45.2	57	58	***	1 43	2 58	14 60		19	32
2	209	18.5		21.6	54	07.3 ¹²¹		50.9	58	56	***	2 13	3 15	19 02	59	29	34
3	224	18.3		21.6	68	38.4 ¹²¹	-17	56.5	56	54	0 49	35	29	18 52	58	38	35
4	239	18.2		21.5	83	09.5 ¹²¹	-18	02.1	56	52	1 35	2 53	41	43	57	46	36
5	254	18.1	+23	21.4	97	40.6 ¹²¹	-18	07.6	55	50	2 02	3 08	3 52	18 34	57	2 54	37
6	269	17.9	+23	21.3	112	11.6 ¹²⁰	-18	13.0	54	45	2 48	3 37	4 15	18 17	55	3 09	40
7	284	17.8		21.2	126	42.7 ¹²¹		18.3	53	40	3 18	4 00	33	18 03	54	22	41
8	299	17.7		21.1	141	13.7 ¹²⁰		23.5	52	35	3 41	18	4 48	17 51	53	33	42
9	314	17.5		21.1	155	44.7 ¹²⁰		28.6	51	30	4 00	33	5 01	41	52	3 43	43
10	329	17.4		21.0	170	15.7 ¹²⁰		33.6	50	20	29	4 58	23	23	50	4 00	45
11	344	17.3	+23	20.9	184	46.6 ¹¹⁹	-18	38.6	50	10 N	4 51	5 19	5 42	17 07	50	4 14	47
12	359	17.2	+23	20.8	199	17.6 ¹²⁰	-18	43.4	48	0	5 10	5 37	5 59	16 53	48	4 28	48
13	14	17.0		20.7	213	48.5 ¹¹⁹		48.2	48	10 S	27	5 54	6 17	38	48	42	49
14	29	16.9		20.6	228	19.4 ¹¹⁹		52.9	47	20	5 44	6 11	35	23	46	4 56	51
15	44	16.8		20.5	242	50.3 ¹¹⁹	-18	57.5	46	30	6 00	30	6 56	16 05	45	5 13	53
16	59	16.6		20.4	257	21.2 ¹¹⁹	-19	02.0	45	35	09	40	7 09	15 55	44	23	54
17	74	16.5	+23	20.3	271	52.1 ¹¹⁹	-19	06.4	44	40	6 18	6 52	7 23	15 43	43	5 34	55
18	89	16.4	+23	20.3	286	22.9 ¹¹⁸	-19	10.7	43	45	6 28	7 06	7 39	15 30	41	5 47	57
19	104	16.2		20.2	300	53.8 ¹¹⁹		14.9	42	50	40	22	8 00	13	40	6 03	59
20	119	16.1		20.1	315	24.6 ¹¹⁸		19.0	41	52	45	29	10	15 05	39	11	59
21	134	16.0		20.0	329	55.4 ¹¹⁸		23.1	41	54	51	37	21	14 56	39	19	61
22	149	15.9		19.9	344	26.2 ¹¹⁸		27.0	39	56	6 57	46	34	47	37	28	63
23	164	15.7		19.8	358	57.0 ¹¹⁸		30.8	38	58	7 04	7 57	8 48	36	35	39	64
24	179	15.6	+23	19.7	13	27.7 ¹¹⁷	-19	34.6	38	60 S	7 11	8 08	9 06	14 23	34	6 52	65

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 5 ^h 42 ^m 8		Mag: -4.1 PMG: 14 ^h 52 ^m		Mag: -2.0 PMG: 2 ^h 35 ^m		Mag: -2.4 PMG: 20 ^h 26 ^m		Mag: 0.0 PMG: 0 ^h 10 ^m	
	hG ♈		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec	
h	o	'	o	'	o	'	o	'	o	'
0	274	04.2	137	01.4	+18	26.9	321	06.0	-22	24.5
1	289	06.6	152	01.0		26.0	336	08.4		24.7
2	304	09.1	167	00.6		25.1	351	10.8		24.8
3	319	11.6	182	00.1		24.2	6	13.1		25.0
4	334	14.0	196	59.7		23.4	21	15.5		25.2
5	349	16.5	211	59.3	+18	22.5	36	17.9	-22	25.4
6	4	19.0	226	58.9	+18	21.6	51	20.3	-22	25.5
7	19	21.4	241	58.5		20.7	66	22.7		25.7
8	34	23.9	256	58.1		19.8	81	25.1		25.9
9	49	26.4	271	57.7		18.9	96	27.5		26.1
10	64	28.8	286	57.3		18.0	111	29.9		26.2
11	79	31.3	301	56.9	+18	17.1	126	32.3	-22	26.4
12	94	33.8	316	56.5	+18	16.3	141	34.7	-22	26.6
13	109	36.2	331	56.1		15.4	156	37.1		26.8
14	124	38.7	346	55.7		14.5	171	39.5		26.9
15	139	41.1	1	55.2		13.6	186	41.9		27.1
16	154	43.6	16	54.8		12.7	201	44.3		27.3
17	169	46.1	31	54.4	+18	11.8	216	46.7	-22	27.5
18	184	48.5	46	54.0	+18	10.9	231	49.1	-22	27.7
19	199	51.0	61	53.6		10.0	246	51.5		27.8
20	214	53.5	76	53.2		09.1	261	53.9		28.0
21	229	55.9	91	52.8		08.2	276	56.3		28.2
22	244	58.4	106	52.4		07.3	291	58.7		28.4
23	260	00.9	121	52.0		06.4	307	01.1		28.6
24	275	03.3	136	51.6	+18	05.5	322	03.5	-22	28.7
Dif	—		-4 -9		+24 -2		+26 0		+27 0	

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7				Edad: 13 ^d 2 PHE { 4 ^h : 54/4 12 ^h : 54/3 20 ^h : 54/2													
	PMG: 12 ^h 03 ^m 1				SD: 14'8 PMG: 23 ^h 53 ^m R°: 48 ^m													
	hG ☉		Dec		hG ☾		Dif				Civil	Náutico	Hora	R°	Hora	R°		
h	o	'	o	'	o	'	o	'	o	h m	h m	h m	h m m		h m m			
0	179	15.6	+23	19.7	13	27.7	-19	34.6	60 N	21 27	23 10	***	20 29	51	2 37	38		
1	194	15.5		19.6	27	58.5 ¹¹⁸		38.3 ³⁷	58	21 07	22 22	***	14	50	2 51	39		
2	209	15.3		19.5	42	29.2 ¹¹⁷		41.8 ³⁵	56	20 50	21 52	***	20 01	50	3 03	40		
3	224	15.2		19.4	57	00.0 ¹¹⁸		45.3 ³⁵	54	36	30	23 14	19 50	50	13	42		
4	239	15.1		19.3	71	30.7 ¹¹⁷		48.7 ³⁴	52	24	21 13	22 30	40	50	22	43		
5	254	14.9	+23	19.2	86	01.4 ¹¹⁷	-19	52.0 ³³	50	20 13	20 58	22 03	19 31	50	3 31	43		
6	269	14.8	+23	19.1	100	32.1 ¹¹⁷	-19	55.2 ³²	45	19 51	20 28	21 18	19 12	50	3 49	44		
7	284	14.7		19.0	115	02.8 ¹¹⁷	-19	58.3 ³¹	40	33	20 06	20 47	18 57	49	4 03	45		
8	299	14.6		18.9	129	33.5 ¹¹⁷	-20	01.3 ³⁰	35	18	19 48	24	44	49	15	46		
9	314	14.4		18.8	144	04.2 ¹¹⁷		04.2 ²⁹	30	19 05	32	20 06	33	49	26	46		
10	329	14.3		18.7	158	34.8 ¹¹⁶		07.0 ²⁸	20	18 43	19 08	19 37	18 13	50	4 45	47		
11	344	14.2	+23	18.6	173	05.5 ¹¹⁷	-20	09.7 ²⁷	10 N	18 24	18 47	19 14	17 57	49	5 01	48		
12	359	14.0	+23	18.5	187	36.1 ¹¹⁶	-20	12.3 ²⁶	0	18 07	18 29	18 55	17 41	49	5 16	49		
13	14	13.9		18.4	202	06.8 ¹¹⁷		14.9 ²⁶	10 S	17 49	18 12	39	26	48	31	49		
14	29	13.8		18.3	216	37.4 ¹¹⁶		17.3 ²⁴	20	31	17 55	22	17 09	48	5 47	50		
15	44	13.7		18.2	231	08.0 ¹¹⁶		19.6 ²³	30	17 10	36	18 06	16 50	47	6 06	51		
16	59	13.5		18.1	245	38.7 ¹¹⁷		21.8 ²²	35	16 58	26	17 57	39	47	17	51		
17	74	13.4	+23	18.0	260	09.3 ¹¹⁶	-20	24.0 ²²	40	16 43	17 14	17 48	16 26	47	6 29	52		
18	89	13.3	+23	17.9	274	39.9 ¹¹⁶	-20	26.0 ²⁰	45	16 27	17 01	17 38	16 11	47	6 44	52		
19	104	13.1		17.7	289	10.5 ¹¹⁶		28.0 ²⁰	50	16 06	16 45	26	15 53	46	7 02	53		
20	119	13.0		17.6	303	41.1 ¹¹⁶		29.8 ¹⁸	52	15 56	37	21	44	46	10	54		
21	134	12.9		17.5	318	11.7 ¹¹⁶		31.6 ¹⁸	54	45	29	15	35	45	20	54		
22	149	12.8		17.4	332	42.3 ¹¹⁶		33.2 ¹⁶	56	33	20	09	24	45	31	54		
23	164	12.6		17.3	347	12.9 ¹¹⁶		34.8 ¹⁶	58	18	16 10	17 02	15 11	45	43	55		
24	179	12.5	+23	17.2	1	43.5 ¹¹⁶	-20	36.2 ¹⁴	60 S	15 01	15 58	16 55	14 57	44	7 57	57		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 5 ^h 38 ^m 9		Mag: -4.1 PMG: 14 ^h 53 ^m				Mag: -2.0 PMG: 2 ^h 31 ^m				Mag: -2.4 PMG: 20 ^h 22 ^m				Mag: 0.0 PMG: 0 ^h 05 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'
0	275	03.3	136	51.6	+18	05.5	322	03.5	-22	28.7	53	32.2	-14	51.5	358	40.4	-22	27.1
1	290	05.8	151	51.3		04.6	337	05.9		28.9	68	34.8		51.5	13	43.1		27.1
2	305	08.2	166	50.9		03.7	352	08.3		29.1	83	37.3		51.4	28	45.8		27.1
3	320	10.7	181	50.5		02.8	7	10.8		29.3	98	39.9		51.4	43	48.4		27.1
4	335	13.2	196	50.1		01.9	22	13.2		29.5	113	42.5		51.4	58	51.1		27.1
5	350	15.6	211	49.7	+18	01.0	37	15.6	-22	29.7	128	45.0	-14	51.4	73	53.8	-22	27.1
6	5	18.1	226	49.3	+18	00.1	52	18.0	-22	29.8	143	47.6	-14	51.4	88	56.4	-22	27.2
7	20	20.6	241	48.9	+17	59.2	67	20.4		30.0	158	50.2		51.3	103	59.1		27.2
8	35	23.0	256	48.5		58.3	82	22.9		30.2	173	52.7		51.3	119	01.7		27.2
9	50	25.5	271	48.1		57.4	97	25.3		30.4	188	55.3		51.3	134	04.4		27.2
10	65	28.0	286	47.7		56.5	112	27.7		30.6	203	57.9		51.3	149	07.1		27.2
11	80	30.4	301	47.3	+17	55.6	127	30.1	-22	30.8	219	00.4	-14	51.3	164	09.7	-22	27.2
12	95	32.9	316	46.9	+17	54.6	142	32.6	-22	30.9	234	03.0	-14	51.2	179	12.4	-22	27.2
13	110	35.4	331	46.5		53.7	157	35.0		31.1	249	05.6		51.2	194	15.1		27.2
14	125	37.8	346	46.2		52.8	172	37.4		31.3	264	08.1		51.2	209	17.7		27.2
15	140	40.3	1	45.8		51.9	187	39.9		31.5	279	10.7		51.2	224	20.4		27.3
16	155	42.7	16	45.4		51.0	202	42.3		31.7	294	13.3		51.2	239	23.0		27.3
17	170	45.2	31	45.0	+17	50.1	217	44.7	-22	31.9	309	15.8	-14	51.1	254	25.7	-22	27.3
18	185	47.7	46	44.6	+17	49.2	232	47.2	-22	32.1	324	18.4	-14	51.1	269	28.4	-22	27.3
19	200	50.1	61	44.2		48.3	247	49.6		32.2	339	21.0		51.1	284	31.0		27.3
20	215	52.6	76	43.9		47.4	262	52.0		32.4	354	23.5		51.1	299	33.7		27.3
21	230	55.1	91	43.5		46.4	277	54.5		32.6	9	26.1		51.1	314	36.4		27.3
22	245	57.5	106	43.1		45.5	292	56.9		32.8	24	28.6		51.1	329	39.0		27.3
23	261	00.0	121	42.7		44.6	307	59.4		33.0	39	31.2		51.0	344	41.7		27.4
24	276	02.5	136	42.3	+17	43.7	323	01.8	-22	33.2	54	33.8	-14	51.0	359	44.4	-22	27.4
Dif	—		-4		-9		+24		-2		+26		0		+27		0	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 15'7 PMG: 12 ^h 03 ^m 3			Edad: 14 ^d 2 PHE { 4 ^h : 54'2 12 ^h : 54'1 20 ^h : 54'1 SD: 14'7 PMG: *** ^m R°: *** ^m													
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°		
h	o	'	o	'	o	'	o	h m	h m	h m	h m	h m	h m				
0	179	12.5	+23	17.2	1	43.5	-20	36.2	14	60 N	***	0 57	2 39	21 20	40	3 15	49
1	194	12.4		17.1	16	14.1 ¹¹⁶		37.6	13	58	***	1 45	2 59	21 04	42	30	50
2	209	12.3		17.0	30	44.7 ¹¹⁶		38.9	11	56	***	2 14	3 16	20 51	42	43	50
3	224	12.1		16.9	45	15.3 ¹¹⁶		40.0	11	54	0 52	36	30	40	43	3 55	49
4	239	12.0		16.7	59	45.9 ¹¹⁶		41.1	11	52	1 36	2 54	42	30	43	4 05	49
5	254	11.9	+23	16.6	74	16.5 ¹¹⁶	-20	42.1	10	50	2 04	3 09	3 53	20 21	44	4 14	49
6	269	11.7	+23	16.5	88	47.1 ¹¹⁶	-20	42.9	8	45	2 49	3 38	4 16	20 02	44	4 33	49
7	284	11.6		16.4	103	17.7 ¹¹⁶		43.7	7	40	3 19	4 01	33	19 46	46	4 48	49
8	299	11.5		16.3	117	48.3 ¹¹⁶		44.4	7	35	3 42	19	4 48	33	46	5 01	49
9	314	11.4		16.1	132	18.9 ¹¹⁶		45.0	6	30	4 01	34	5 01	22	46	12	49
10	329	11.2		16.0	146	49.6 ¹¹⁷		45.5	5	20	30	4 59	23	19 03	47	32	49
11	344	11.1	+23	15.9	161	20.2 ¹¹⁶	-20	45.8	3	10 N	4 52	5 19	5 42	18 46	47	5 49	48
12	359	11.0	+23	15.8	175	50.8 ¹¹⁶	-20	46.1	3	0	5 11	5 37	6 00	18 30	48	6 05	48
13	14	10.9		15.7	190	21.4 ¹¹⁶		46.3	2	10 S	28	5 54	17	18 14	49	20	49
14	29	10.7		15.5	204	52.1 ¹¹⁷		46.4	1	20	5 44	6 11	35	17 57	49	37	48
15	44	10.6		15.4	219	22.7 ¹¹⁶		46.4	0	30	6 00	30	6 56	37	50	6 57	48
16	59	10.5		15.3	233	53.4 ¹¹⁷		46.3	1	35	09	41	7 09	26	50	7 08	48
17	74	10.4	+23	15.2	248	24.0 ¹¹⁶	-20	46.1	2	40	6 18	6 52	7 23	17 13	51	7 21	48
18	89	10.2	+23	15.0	262	54.7 ¹¹⁷	-20	45.8	3	45	6 28	7 06	7 39	16 58	51	7 36	48
19	104	10.1		14.9	277	25.4 ¹¹⁷		45.4	4	50	40	22	8 00	39	52	7 55	47
20	119	10.0		14.8	291	56.1 ¹¹⁷		44.9	5	52	45	29	10	30	52	8 04	47
21	134	09.8		14.7	306	26.8 ¹¹⁷		44.3	6	54	51	37	21	20	53	14	47
22	149	09.7		14.5	320	57.5 ¹¹⁷		43.6	7	56	6 57	46	33	16 09	53	25	47
23	164	09.6		14.4	335	28.2 ¹¹⁷		42.9	7	58	7 04	7 56	8 48	15 56	53	38	46
24	179	09.5	+23	14.3	349	58.9 ¹¹⁷	-20	42.0	9	60 S	7 11	8 08	9 05	15 41	54	8 54	45

UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG 5 ^h 34 ^m 9			Mag: -4.1 PMG: 14 ^h 54 ^m			Mag: -2.1 PMG: 2 ^h 27 ^m			Mag: -2.4 PMG: 20 ^h 18 ^m			Mag: 0.0 PMG: 0 ^h 01 ^m					
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♃	Dec	hG ♄	Dec							
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'				
0	276	02.5	136	42.3	+17	43.7	323	01.8	-22	33.2	54	33.8	-14	51.0	359	44.4	-22	27.4
1	291	04.9	151	41.9		42.8	338	04.3		33.4	69	36.3		51.0	14	47.0		27.4
2	306	07.4	166	41.6		41.9	353	06.7		33.6	84	38.9		51.0	29	49.7		27.4
3	321	09.9	181	41.2		40.9	8	09.2		33.8	99	41.4		51.0	44	52.3		27.4
4	336	12.3	196	40.8		40.0	23	11.6		34.0	114	44.0		50.9	59	55.0		27.4
5	351	14.8	211	40.4	+17	39.1	38	14.1	-22	34.1	129	46.6	-14	50.9	74	57.7	-22	27.4
6	6	17.2	226	40.1	+17	38.2	53	16.5	-22	34.3	144	49.1	-14	50.9	90	00.3	-22	27.4
7	21	19.7	241	39.7		37.2	68	19.0		34.5	159	51.7		50.9	105	03.0		27.4
8	36	22.2	256	39.3		36.3	83	21.4		34.7	174	54.2		50.9	120	05.7		27.5
9	51	24.6	271	38.9		35.4	98	23.9		34.9	189	56.8		50.9	135	08.3		27.5
10	66	27.1	286	38.6		34.5	113	26.3		35.1	204	59.4		50.8	150	11.0		27.5
11	81	29.6	301	38.2	+17	33.6	128	28.8	-22	35.3	220	01.9	-14	50.8	165	13.6	-22	27.5
12	96	32.0	316	37.8	+17	32.6	143	31.3	-22	35.5	235	04.5	-14	50.8	180	16.3	-22	27.5
13	111	34.5	331	37.5		31.7	158	33.7		35.7	250	07.0		50.8	195	19.0		27.5
14	126	37.0	346	37.1		30.8	173	36.2		35.9	265	09.6		50.8	210	21.6		27.5
15	141	39.4	1	36.7		29.8	188	38.7		36.1	280	12.1		50.8	225	24.3		27.5
16	156	41.9	16	36.3		28.9	203	41.1		36.3	295	14.7		50.7	240	27.0		27.5
17	171	44.4	31	36.0	+17	28.0	218	43.6	-22	36.5	310	17.3	-14	50.7	255	29.6	-22	27.6
18	186	46.8	46	35.6	+17	27.1	233	46.1	-22	36.7	325	19.8	-14	50.7	270	32.3	-22	27.6
19	201	49.3	61	35.2		26.1	248	48.5		36.9	340	22.4		50.7	285	34.9		27.6
20	216	51.7	76	34.9		25.2	263	51.0		37.0	355	24.9		50.7	300	37.6		27.6
21	231	54.2	91	34.5		24.3	278	53.5		37.2	10	27.5		50.7	315	40.3		27.6
22	246	56.7	106	34.1		23.3	293	55.9		37.4	25	30.0		50.6	330	42.9		27.6
23	261	59.1	121	33.8		22.4	308	58.4		37.6	40	32.6		50.6	345	45.6		27.6
24	277	01.6	136	33.4	+17	21.5	324	00.9	-22	37.8	55	35.1	-14	50.6	0	48.3	-22	27.6
Dif	—			-4 -9			+25 -2			+26 0			-8973 0					

UT	SOL			☉ LUNA					Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7			Edad: 15 ^d 2 PHE { 4 ^h : 54 ⁰ 12 ^h : 54 ⁰ 20 ^h : 54 ⁰ R°: 48 ^m														
	PMG: 12 ^h 03 ^m 5			PMG: 0 ^h 41 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif			Civil	Náutico	Hora	R°	Hora	R°		
h	o	'	o	'	o	'	o	'	o	h m	h m	h m	h m m		h m m			
0	179	09.5	+23	14.3	349	58.9	-20	42.0	60 N	21 26	23 07	***	22 00	30	4 04	59		
1	194	09.3		14.2	4	29.7 ¹¹⁸		41.0 ¹⁰	58	21 06	22 20	***	21 46	32	20	57		
2	209	09.2		14.0	19	00.4 ¹¹⁷		39.9 ¹¹	56	20 50	21 51	***	33	34	33	56		
3	224	09.1		13.9	33	31.2 ¹¹⁸		38.8 ¹¹	54	36	30	23 11	23	35	44	56		
4	239	09.0		13.8	48	02.0 ¹¹⁸		37.5 ¹³	52	24	21 12	22 29	13	36	4 54	55		
5	254	08.8	+23	13.6	62	32.8 ¹¹⁸	-20	36.1 ¹⁴	50	20 13	20 57	22 02	21 05	37	5 03	54		
6	269	08.7	+23	13.5	77	03.6 ¹¹⁸	-20	34.7 ¹⁴	45	19 51	20 28	21 17	20 46	40	5 22	53		
7	284	08.6		13.4	91	34.4 ¹¹⁸		33.1 ¹⁶	40	33	20 06	20 47	32	40	37	52		
8	299	08.5		13.2	106	05.3 ¹¹⁹		31.5 ¹⁶	35	18	19 48	24	19	42	5 50	52		
9	314	08.3		13.1	120	36.1 ¹¹⁸		29.7 ¹⁸	30	19 05	33	20 06	20 08	43	6 01	51		
10	329	08.2		12.9	135	07.0 ¹¹⁹		27.9 ¹⁸	20	18 43	19 08	19 37	19 50	44	21	49		
11	344	08.1	+23	12.8	149	37.9 ¹¹⁹	-20	26.0 ¹⁹	10 N	18 25	18 48	19 15	19 33	46	6 37	49		
12	359	08.0	+23	12.7	164	08.8 ¹¹⁹	-20	23.9 ²¹	0	18 07	18 30	18 56	19 18	47	6 53	48		
13	14	07.8		12.5	178	39.7 ¹¹⁹		21.8 ²¹	10 S	17 50	18 13	39	19 03	48	7 09	47		
14	29	07.7		12.4	193	10.7 ¹²⁰		19.6 ²²	20	32	17 56	23	18 46	50	25	46		
15	44	07.6		12.3	207	41.7 ¹²⁰		17.3 ²³	30	17 11	37	18 07	27	52	45	44		
16	59	07.5		12.1	222	12.6 ¹¹⁹		14.9 ²⁴	35	16 58	26	17 58	16	53	7 56	44		
17	74	07.3	+23	12.0	236	43.6 ¹²⁰	-20	12.4 ²⁵	40	16 44	17 15	17 49	18 04	54	8 09	43		
18	89	07.2	+23	11.8	251	14.7 ¹²¹	-20	09.8 ²⁶	45	16 28	17 01	17 39	17 49	55	8 24	42		
19	104	07.1		11.7	265	45.7 ¹²⁰		07.2 ²⁶	50	16 07	16 45	27	31	57	42	41		
20	119	07.0		11.5	280	16.8 ¹²¹		04.4 ²⁸	52	15 57	38	22	22	58	8 51	40		
21	134	06.9		11.4	294	47.9 ¹²¹	-20	01.5 ²⁹	54	46	30	16	13	58	9 01	39		
22	149	06.7		11.3	309	19.0 ¹²¹	-19	58.6 ²⁹	56	34	21	10	17 02	59	12	38		
23	164	06.6		11.1	323	50.1 ¹²¹		55.5 ³¹	58	19	11	17 03	16 49	61	24	37		
24	179	06.5	+23	11.0	338	21.3 ¹²²	-19	52.4 ³¹	60 S	15 02	16 00	16 56	16 35	62	9 39	35		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 5 ^h 31 ^m 0		Mag: -4.1 PMG: 14 ^h 54 ^m				Mag: -2.1 PMG: 2 ^h 24 ^m				Mag: -2.4 PMG: 20 ^h 14 ^m				Mag: 0.0 PMG: 23 ^h 53 ^m			
	hG ♈		hG ♀	Dec			hG ♂	Dec			hG ♃	Dec			hG ♄	Dec		
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'		
0	277	01.6	136	33.4	+17	21.5	324	00.9	-22	37.8	55	35.1	-14	50.6	0	48.3		
1	292	04.1	151	33.1		20.5	339	03.4		38.0	70	37.7		50.6	15	50.9		
2	307	06.5	166	32.7		19.6	354	05.9		38.2	85	40.3		50.6	30	53.6		
3	322	09.0	181	32.3		18.6	9	08.3		38.4	100	42.8		50.6	45	56.3		
4	337	11.5	196	32.0		17.7	24	10.8		38.6	115	45.4		50.5	60	58.9		
5	352	13.9	211	31.6	+17	16.8	39	13.3	-22	38.8	130	47.9	-14	50.5	76	01.6		
6	7	16.4	226	31.3	+17	15.8	54	15.8	-22	39.0	145	50.5	-14	50.5	91	04.2		
7	22	18.9	241	30.9		14.9	69	18.3		39.2	160	53.0		50.5	106	06.9		
8	37	21.3	256	30.5		14.0	84	20.8		39.4	175	55.6		50.5	121	09.6		
9	52	23.8	271	30.2		13.0	99	23.3		39.6	190	58.1		50.5	136	12.2		
10	67	26.2	286	29.8		12.1	114	25.8		39.8	206	00.7		50.5	151	14.9		
11	82	28.7	301	29.5	+17	11.1	129	28.2	-22	40.0	221	03.2	-14	50.4	166	17.6		
12	97	31.2	316	29.1	+17	10.2	144	30.7	-22	40.2	236	05.8	-14	50.4	181	20.2		
13	112	33.6	331	28.8		09.2	159	33.2		40.4	251	08.3		50.4	196	22.9		
14	127	36.1	346	28.4		08.3	174	35.7		40.6	266	10.9		50.4	211	25.5		
15	142	38.6	1	28.1		07.4	189	38.2		40.8	281	13.4		50.4	226	28.2		
16	157	41.0	16	27.7		06.4	204	40.7		41.0	296	16.0		50.4	241	30.9		
17	172	43.5	31	27.4	+17	05.5	219	43.2	-22	41.2	311	18.5	-14	50.3	256	33.5		
18	187	46.0	46	27.0	+17	04.5	234	45.7	-22	41.4	326	21.1	-14	50.3	271	36.2		
19	202	48.4	61	26.7		03.6	249	48.2		41.6	341	23.6		50.3	286	38.9		
20	217	50.9	76	26.3		02.6	264	50.7		41.8	356	26.2		50.3	301	41.5		
21	232	53.3	91	26.0		01.7	279	53.2		42.1	11	28.7		50.3	316	44.2		
22	247	55.8	106	25.6	+17	00.7	294	55.8		42.3	26	31.3		50.3	331	46.8		
23	262	58.3	121	25.3	+16	59.8	309	58.3		42.5	41	33.8		50.3	346	49.5		
24	278	00.7	136	24.9	+16	58.8	325	00.8	-22	42.7	56	36.4	-14	50.2	1	52.2		
Dif	—		-4		-9		+25		-2		+26		0		+27			

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7			Edad: 16 ^d 2	PHE { 4 ^h : 54/0 12 ^h : 54/0 20 ^h : 54/0	SD: 14 ^h 7		R°: 47 ^m			Hora	R°	Hora	R°	
	PMG: 12 ^h 03 ^m 7	PMG: 1 ^h 29 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R°	Hora	R°	
h	o	'	o	o	'	o	'	h	m	h	m	h	m	h	m
0	179	06.5	+23	11.0		338	21.3	−19	52.4	60 N	***	1 01	2 41	22 30	23
1	194	06.4		10.8		352	52.5 ¹²²		49.2	32	***	1 47	3 01	18 25	17 64
2	209	06.2		10.7		7	23.7 ¹²²		45.9	33	***	2 16	17	22 07	28
3	224	06.1		10.5		21	54.9 ¹²²		42.4	35		0 56	38	31	21 58
4	239	06.0		10.4		36	26.2 ¹²³		39.0	34		1 39	2 55	44	49 31
5	254	05.9	+23	10.2		50	57.5 ¹²³	−19	35.4	36	50	2 05	3 10	3 54	21 42
6	269	05.7	+23	10.1		65	28.8 ¹²³	−19	31.7	37	45	2 50	3 39	4 17	21 26
7	284	05.6		09.9		80	00.1 ¹²³		27.9	38	40	3 20	4 02	34	12 37
8	299	05.5		09.8		94	31.4 ¹²³		24.1	38	35	3 43	20	4 49	21 01
9	314	05.4		09.6		109	02.8 ¹²⁴		20.1	40	30	4 01	35	5 02	20 51
10	329	05.3		09.5		123	34.2 ¹²⁴		16.1	40	20	30	4 59	24	34 42
11	344	05.1	+23	09.3		138	05.7 ¹²⁵	−19	12.0	41	10 N	4 53	5 20	5 43	20 19
12	359	05.0	+23	09.2		152	37.1 ¹²⁴	−19	07.8	42	0	5 11	5 37	6 00	20 05
13	14	04.9		09.0		167	08.6 ¹²⁵	−19	03.5	43	10 S	28	5 54	17	19 51
14	29	04.8		08.8		181	40.1 ¹²⁵	−18	59.1	44	20	5 44	6 12	36	36 50
15	44	04.6		08.7		196	11.6 ¹²⁵		54.7	44	30	6 00	30	6 57	19 53
16	59	04.5		08.5		210	43.2 ¹²⁶		50.1	46	35	09	41	7 09	19 09
17	74	04.4	+23	08.4		225	14.8 ¹²⁶	−18	45.5	46	40	6 18	6 52	7 23	18 58
18	89	04.3	+23	08.2		239	46.4 ¹²⁶	−18	40.8	47	45	6 28	7 06	7 39	18 44
19	104	04.2		08.0		254	18.1 ¹²⁷		36.0	48	50	40	21	8 00	28 60
20	119	04.0		07.9		268	49.7 ¹²⁶		31.1	49	52	45	29	09	20 61
21	134	03.9		07.7		283	21.5 ¹²⁸		26.2	49	54	51	37	20	11 63
22	149	03.8		07.6		297	53.2 ¹²⁷		21.1	51	56	6 57	46	33	18 01
23	164	03.7		07.4		312	24.9 ¹²⁷		16.0	51	58	7 03	7 56	8 47	17 50
24	179	03.6	+23	07.2		326	56.7 ¹²⁸	−18	10.8	52	60 S	7 11	8 07	9 04	17 37

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 5 ^h 27 ^m 1		Mag: −4.1 PMG: 14 ^h 55 ^m		Mag: −2.1 PMG: 2 ^h 20 ^m		Mag: −2.3 PMG: 20 ^h 10 ^m		Mag: 0.0 PMG: 23 ^h 48 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	o	'	o	'	o	'	o	'	o	'
0	278	00.7	136	24.9	+16	58.8	325	00.8	−22	42.7
1	293	03.2	151	24.6		57.9	340	03.3		42.9
2	308	05.7	166	24.2		56.9	355	05.8		43.1
3	323	08.1	181	23.9		56.0	10	08.3		43.3
4	338	10.6	196	23.5		55.0	25	10.8		43.5
5	353	13.1	211	23.2	+16	54.1	40	13.3	−22	43.7
6	8	15.5	226	22.9	+16	53.1	55	15.9	−22	43.9
7	23	18.0	241	22.5		52.1	70	18.4		44.1
8	38	20.5	256	22.2		51.2	85	20.9		44.3
9	53	22.9	271	21.8		50.2	100	23.4		44.5
10	68	25.4	286	21.5		49.3	115	26.0		44.7
11	83	27.8	301	21.2	+16	48.3	130	28.5	−22	44.9
12	98	30.3	316	20.8	+16	47.4	145	31.0	−22	45.2
13	113	32.8	331	20.5		46.4	160	33.5		45.4
14	128	35.2	346	20.1		45.4	175	36.1		45.6
15	143	37.7	1	19.8		44.5	190	38.6		45.8
16	158	40.2	16	19.5		43.5	205	41.1		46.0
17	173	42.6	31	19.1	+16	42.5	220	43.7	−22	46.2
18	188	45.1	46	18.8	+16	41.6	235	46.2	−22	46.4
19	203	47.6	61	18.5		40.6	250	48.7		46.6
20	218	50.0	76	18.1		39.7	265	51.3		46.8
21	233	52.5	91	17.8		38.7	280	53.8		47.1
22	248	55.0	106	17.5		37.7	295	56.3		47.3
23	263	57.4	121	17.2		36.8	310	58.9		47.5
24	278	59.9	136	16.8	+16	35.8	326	01.4	−22	47.7
Dif	—		−3		−10		+25		−2	
							+25		0	
									+27	
									0	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 17 ^d 2 PHE { 4 ^h : 54 ^m 1 12 ^h : 54 ^m 1 20 ^h : 54 ^m 2										
	PMG: 12 ^h 03 ^m 9			SD: 14 ^h 7										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	o	'	o	o	'	o	'	o	h	m	h	m	h	m
0	179	03.6	+23 07.2	326	56.7	-18 10.8	53	60 N	21 25	23 03	***	22 53	18	6 09 71
1	194	03.4	07.1	341	28.6 ¹²⁹	05.5	53	58	21 05	22 18	***	43 21	21	69
2	209	03.3	06.9	356	00.4 ¹²⁸	-18 00.1	54	56	20 49	21 50	***	35 22	32	66
3	224	03.2	06.7	10	32.3 ¹²⁹	-17 54.7	54	54	35	29	23 08	27 24	41	64
4	239	03.1	06.6	25	04.2 ¹²⁹	49.1	56	52	23	21 11	22 27	20 26	49	63
5	254	03.0	+23 06.4	39	36.1 ¹²⁹	-17 43.5	56	50	20 12	20 57	22 01	22 14 27	6 56	62
6	269	02.8	+23 06.2	54	08.1 ¹³⁰	-17 37.8	57	45	19 50	20 28	21 17	22 00 31	7 12	58
7	284	02.7	06.1	68	40.1 ¹³⁰	32.1	57	40	33	20 05	20 47	21 49 33	24	57
8	299	02.6	05.9	83	12.1 ¹³⁰	26.2	59	35	18	19 48	24	39 35	35	55
9	314	02.5	05.7	97	44.1 ¹³⁰	20.3	59	30	19 05	33	20 06	31 37	7 44	53
10	329	02.4	05.6	112	16.2 ¹³¹	14.3	60	20	18 43	19 08	19 37	16 40	8 01	50
11	344	02.2	+23 05.4	126	48.3 ¹³¹	-17 08.2	61	10 N	18 25	18 48	19 15	21 03 43	8 15	47
12	359	02.1	+23 05.2	141	20.5 ¹³²	-17 02.1	61	0	18 08	18 30	18 56	20 51 45	8 28	45
13	14	02.0	05.1	155	52.6 ¹³¹	-16 55.8	63	10 S	17 50	18 13	39	39 48	41	43
14	29	01.9	04.9	170	24.8 ¹³²	49.5	63	20	32	17 56	24	26 51	8 55	41
15	44	01.8	04.7	184	57.0 ¹³²	43.2	63	30	17 11	38	18 07	12 53	9 10	39
16	59	01.6	04.5	199	29.3 ¹³³	36.7	65	35	16 59	27	17 59	20 03 55	20	36
17	74	01.5	+23 04.4	214	01.6 ¹³³	-16 30.2	65	40	16 45	17 16	17 50	19 53 57	9 30	35
18	89	01.4	+23 04.2	228	33.9 ¹³³	-16 23.6	66	45	16 29	17 02	17 39	19 42 59	9 42	33
19	104	01.3	04.0	243	06.2 ¹³³	16.9	67	50	16 08	16 47	28	28 62	9 57	30
20	119	01.2	03.8	257	38.6 ¹³⁴	10.2	67	52	15 59	39	23	21 64	10 04	28
21	134	01.0	03.6	272	11.0 ¹³⁴	-16 03.3	69	54	48	31	17	14 66	12	26
22	149	00.9	03.5	286	43.4 ¹³⁴	-15 56.5	68	56	35	22	11	19 06 68	20	25
23	164	00.8	03.3	301	15.8 ¹³⁴	49.5	70	58	21	12	17 05	18 57 70	30	23
24	179	00.7	+23 03.1	315	48.3 ¹³⁵	-15 42.5	70	60 S	15 04	16 01	16 57	18 46 73	10 41	20

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 5 ^h 23 ^m 1		Mag: -4.1 PMG: 14 ^h 55 ^m		Mag: -2.2 PMG: 2 ^h 16 ^m		Mag: -2.3 PMG: 20 ^h 06 ^m		Mag: 0.0 PMG: 23 ^h 44 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	o	'	o	'	o	'	o	'	o	'				
0	278	59.9	136	16.8	+16 35.8	326	01.4	-22 47.7	57	37.4	-14 49.9	2	56.1	-22 28.2
1	294	02.3	151	16.5	34.8	341	04.0	47.9	72	39.9	49.9	17	58.7	28.2
2	309	04.8	166	16.2	33.9	356	06.5	48.1	87	42.5	49.9	33	01.4	28.2
3	324	07.3	181	15.8	32.9	11	09.1	48.3	102	45.0	49.9	48	04.1	28.2
4	339	09.7	196	15.5	31.9	26	11.6	48.5	117	47.5	49.9	63	06.7	28.2
5	354	12.2	211	15.2	+16 30.9	41	14.2	-22 48.8	132	50.1	-14 49.9	78	09.4	-22 28.2
6	9	14.7	226	14.9	+16 30.0	56	16.7	-22 49.0	147	52.6	-14 49.9	93	12.0	-22 28.3
7	24	17.1	241	14.5	29.0	71	19.3	49.2	162	55.2	49.9	108	14.7	28.3
8	39	19.6	256	14.2	28.0	86	21.8	49.4	177	57.7	49.9	123	17.4	28.3
9	54	22.1	271	13.9	27.1	101	24.4	49.6	193	00.2	49.8	138	20.0	28.3
10	69	24.5	286	13.6	26.1	116	26.9	49.8	208	02.8	49.8	153	22.7	28.3
11	84	27.0	301	13.3	+16 25.1	131	29.5	-22 50.1	223	05.3	-14 49.8	168	25.4	-22 28.3
12	99	29.5	316	12.9	+16 24.1	146	32.1	-22 50.3	238	07.8	-14 49.8	183	28.0	-22 28.3
13	114	31.9	331	12.6	23.2	161	34.6	50.5	253	10.4	49.8	198	30.7	28.3
14	129	34.4	346	12.3	22.2	176	37.2	50.7	268	12.9	49.8	213	33.3	28.4
15	144	36.8	1	12.0	21.2	191	39.7	50.9	283	15.5	49.8	228	36.0	28.4
16	159	39.3	16	11.7	20.2	206	42.3	51.1	298	18.0	49.8	243	38.7	28.4
17	174	41.8	31	11.3	+16 19.2	221	44.9	-22 51.4	313	20.5	-14 49.8	258	41.3	-22 28.4
18	189	44.2	46	11.0	+16 18.3	236	47.4	-22 51.6	328	23.1	-14 49.8	273	44.0	-22 28.4
19	204	46.7	61	10.7	17.3	251	50.0	51.8	343	25.6	49.7	288	46.7	28.4
20	219	49.2	76	10.4	16.3	266	52.6	52.0	358	28.1	49.7	303	49.3	28.4
21	234	51.6	91	10.1	15.3	281	55.2	52.2	13	30.7	49.7	318	52.0	28.4
22	249	54.1	106	09.8	14.3	296	57.7	52.5	28	33.2	49.7	333	54.6	28.4
23	264	56.6	121	09.5	13.4	312	00.3	52.7	43	35.7	49.7	348	57.3	28.5
24	279	59.0	136	09.1	+16 12.4	327	02.9	-22 52.9	58	38.3	-14 49.7	4	00.0	-22 28.5
Dif	—		-3	-10		+26	-2		+25	0		+27	0	

UT	SOL			LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7			Edad: 18 ^d 2 PHE { 4 ^h : 54 ^m 2 12 ^h : 54 ^m 3 20 ^h : 54 ^m 4 SD: 14 ^h 8 PMG: 3 ^h 02 ^m R°: 45 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	o	'	o	'	o	'	o	'	o	'	h	m	h	m	h	m	h	m
0	179	00.7	+23	03.1	315	48.3	-15	42.5	71	60 N	***	1 06	2 43	23 11	15	7 20	74	
1	194	00.6		02.9	330	20.8 ¹³⁵		35.4	71	58	***	1 50	3 03	23 04	17	30	71	
2	209	00.4		02.7	344	53.3 ¹³⁵		28.2	72	56	***	2 18	19	22 57	20	38	69	
3	224	00.3		02.6	359	25.9 ¹³⁶		21.0	72	54	1 00	39	33	51	22	45	67	
4	239	00.2		02.4	13	58.5 ¹³⁶		13.7	73	52	1 41	2 57	45	46	23	52	65	
5	254	00.1	+23	02.2	28	31.1 ¹³⁶	-15	06.3	74	50	2 07	3 11	3 56	22 41	25	7 58	63	
6	269	00.0	+23	02.0	43	03.7 ¹³⁶	-14	58.9	74	45	2 51	3 41	4 18	22 31	28	8 10	60	
7	283	59.9		01.8	57	36.4 ¹³⁷		51.4	75	40	3 21	4 03	35	22	30	21	57	
8	298	59.7		01.6	72	09.1 ¹³⁷		43.8	76	35	3 44	20	4 50	14	33	30	55	
9	313	59.6		01.5	86	41.8 ¹³⁷		36.1	77	30	4 02	4 35	5 03	22 08	34	37	54	
10	328	59.5		01.3	101	14.5 ¹³⁷		28.4	77	20	31	5 00	24	21 56	38	8 51	50	
11	343	59.4	+23	01.1	115	47.3 ¹³⁸	-14	20.7	77	10 N	4 53	5 20	5 43	21 46	41	9 02	48	
12	358	59.3	+23	00.9	130	20.1 ¹³⁸	-14	12.8	79	0	5 12	5 38	6 00	21 36	45	9 13	45	
13	13	59.2		00.7	144	52.9 ¹³⁸	-14	05.0	80	10 S	28	5 55	18	27	47	24	42	
14	28	59.0		00.5	159	25.7 ¹³⁸	-13	57.0	80	20	5 44	6 12	36	17	50	36	39	
15	43	58.9		00.3	173	58.6 ¹³⁹		49.0	80	30	6 00	30	6 57	21 05	53	49	35	
16	58	58.8	+23	00.1	188	31.5 ¹³⁹		40.9	81	35	09	41	7 09	20 58	56	9 56	34	
17	73	58.7	+22	59.9	203	04.4 ¹³⁹	-13	32.8	81	40	6 18	6 52	7 23	20 50	58	10 05	31	
18	88	58.6	+22	59.7	217	37.3 ¹³⁹	-13	24.6	82	45	6 28	7 05	7 39	20 41	61	10 15	29	
19	103	58.5		59.6	232	10.3 ¹⁴⁰		16.3	83	50	40	21	7 59	30	65	27	26	
20	118	58.3		59.4	246	43.2 ¹³⁹	-13	08.0	83	52	45	28	8 09	25	66	32	25	
21	133	58.2		59.2	261	16.2 ¹⁴⁰	-12	59.6	84	54	50	36	20	20	67	38	23	
22	148	58.1		59.0	275	49.3 ¹⁴¹		51.1	85	56	6 56	45	32	14	69	45	21	
23	163	58.0		58.8	290	22.3 ¹⁴⁰		42.6	85	58	7 03	7 55	8 46	20 07	71	10 53	18	
24	178	57.9	+22	58.6	304	55.4 ¹⁴¹	-12	34.1	85	60 S	7 10	8 06	9 03	19 59	74	11 01	17	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG 5 ^h 19 ^m 2			Mag: -4.1 PMG: 14 ^h 56 ^m			Mag: -2.2 PMG: 2 ^h 11 ^m			Mag: -2.3 PMG: 20 ^h 02 ^m			Mag: 0.0 PMG: 23 ^h 40 ^m					
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec			
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'		
0	279	59.0	136	09.1	+16	12.4	327	02.9	-22	52.9	58	38.3	-14	49.7	4	00.0		
1	295	01.5	151	08.8		11.4	342	05.5		53.1	73	40.8		49.7	19	02.6		
2	310	03.9	166	08.5		10.4	357	08.0		53.3	88	43.3		49.7	34	05.3		
3	325	06.4	181	08.2		09.4	12	10.6		53.6	103	45.8		49.7	49	07.9		
4	340	08.9	196	07.9		08.4	27	13.2		53.8	118	48.4		49.7	64	10.6		
5	355	11.3	211	07.6	+16	07.5	42	15.8	-22	54.0	133	50.9	-14	49.7	79	13.3		
6	10	13.8	226	07.3	+16	06.5	57	18.4	-22	54.2	148	53.4	-14	49.6	94	15.9		
7	25	16.3	241	07.0		05.5	72	21.0		54.4	163	56.0		49.6	109	18.6		
8	40	18.7	256	06.7		04.5	87	23.5		54.7	178	58.5		49.6	124	21.3		
9	55	21.2	271	06.4		03.5	102	26.1		54.9	194	01.0		49.6	139	23.9		
10	70	23.7	286	06.1		02.5	117	28.7		55.1	209	03.6		49.6	154	26.6		
11	85	26.1	301	05.8	+16	01.5	132	31.3	-22	55.3	224	06.1	-14	49.6	169	29.2		
12	100	28.6	316	05.5	+16	00.5	147	33.9	-22	55.6	239	08.6	-14	49.6	184	31.9		
13	115	31.1	331	05.1	+15	59.5	162	36.5		55.8	254	11.1		49.6	199	34.6		
14	130	33.5	346	04.8		58.6	177	39.1		56.0	269	13.7		49.6	214	37.2		
15	145	36.0	1	04.5		57.6	192	41.7		56.2	284	16.2		49.6	229	39.9		
16	160	38.4	16	04.2		56.6	207	44.3		56.5	299	18.7		49.6	244	42.6		
17	175	40.9	31	03.9	+15	55.6	222	46.9	-22	56.7	314	21.3	-14	49.6	259	45.2		
18	190	43.4	46	03.6	+15	54.6	237	49.5	-22	56.9	329	23.8	-14	49.5	274	47.9		
19	205	45.8	61	03.3		53.6	252	52.1		57.1	344	26.3		49.5	289	50.5		
20	220	48.3	76	03.0		52.6	267	54.7		57.4	359	28.8		49.5	304	53.2		
21	235	50.8	91	02.8		51.6	282	57.3		57.6	14	31.4		49.5	319	55.9		
22	250	53.2	106	02.5		50.6	297	59.9		57.8	29	33.9		49.5	334	58.5		
23	265	55.7	121	02.2		49.6	313	02.5		58.0	44	36.4		49.5	350	01.2		
24	280	58.2	136	01.9	+15	48.6	328	05.1	-22	58.3	59	38.9	-14	49.5	5	03.8		
Dif	—			-3 -10			+26 -2			+25 0			+27 0					

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7			Edad: 19 ^d 2 PHE { 4 ^h : 54 ^m 5 12 ^h : 54 ^m 7 20 ^h : 54 ^m 8											
	PMG: 12 ^h 04 ^m 2	SD: 14 ^h 9			PMG: 3 ^h 47 ^m	R°: 44 ^m			Civil	Náutico	Hora	R°	Hora	R°	
	hG ☉	Dec		hG ☾	Dif	Dec	Dif								
h	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m
0	178	57.9	+22	58.6	304	55.4	-12 34.1	60 N	21 23	22 58	***	23 26	14	8 34	75
1	193	57.8		58.4	319	28.4 ¹⁴⁰	25.5 ⁸⁶	58	21 04	22 16	***	21 16		41	72
2	208	57.6		58.2	334	01.5 ¹⁴¹	16.8 ⁸⁷	56	20 48	21 48	***	17 18		47	70
3	223	57.5		58.0	348	34.6 ¹⁴¹	-12 08.1 ⁸⁷	54	34	27	23 04	13 19		52	68
4	238	57.4		57.8	3	07.8 ¹⁴²	-11 59.3 ⁸⁸	52	22	21 10	22 25	09 21		8 57	66
5	253	57.3	+22	57.6	17	40.9 ¹⁴¹	-11 50.5 ⁸⁸	50	20 12	20 56	21 59	23 06	23	9 01	65
6	268	57.2	+22	57.4	32	14.1 ¹⁴²	-11 41.6 ⁸⁹	45	19 50	20 27	21 16	22 59	26	9 10	62
7	283	57.1		57.2	46	47.3 ¹⁴²	32.6 ⁹⁰	40	32	20 05	20 46	52 30		18	59
8	298	57.0		57.0	61	20.5 ¹⁴²	23.6 ⁹⁰	35	18	19 47	24	47 32		25	56
9	313	56.8		56.8	75	53.7 ¹⁴²	14.6 ⁹⁰	30	19 05	32	20 06	42 34		31	53
10	328	56.7		56.6	90	26.9 ¹⁴²	-11 05.5 ⁹¹	20	18 44	19 08	19 37	34 38		41	50
11	343	56.6	+22	56.4	105	00.2 ¹⁴³	-10 56.3 ⁹²	10 N	18 25	18 48	19 15	22 27	41	9 50	46
12	358	56.5	+22	56.2	119	33.5 ¹⁴³	-10 47.1 ⁹²	0	18 08	18 30	18 56	22 21	43	9 58	44
13	13	56.4		56.0	134	06.7 ¹⁴²	37.9 ⁹²	10 S	17 51	18 14	40	14 47		10 06	41
14	28	56.3		55.7	148	40.0 ¹⁴³	28.6 ⁹³	20	33	17 57	24	22 07	50	15	37
15	43	56.2		55.5	163	13.3 ¹⁴³	19.2 ⁹⁴	30	12	38	08	21 58	55	24	34
16	58	56.0		55.3	177	46.6 ¹⁴³	09.8 ⁹⁴	35	17 00	28	18 00	54 56		30	32
17	73	55.9	+22	55.1	192	20.0 ¹⁴⁴	-10 00.3 ⁹⁵	40	16 46	17 17	17 51	21 48	59	10 36	30
18	88	55.8	+22	54.9	206	53.3 ¹⁴³	-9 50.8 ⁹⁵	45	16 30	17 03	17 41	21 42	62	10 44	27
19	103	55.7		54.7	221	26.7 ¹⁴⁴	41.3 ⁹⁵	50	10	16 48	29	35 65		53	23
20	118	55.6		54.5	236	00.0 ¹⁴³	31.7 ⁹⁶	52	16 00	41	24	31 67		10 57	22
21	133	55.5		54.3	250	33.4 ¹⁴⁴	22.1 ⁹⁶	54	15 49	33	19	27 69		11 01	20
22	148	55.4		54.1	265	06.7 ¹⁴³	12.4 ⁹⁷	56	37	24	13	23 71		06	18
23	163	55.3		53.9	279	40.1 ¹⁴⁴	-9 02.6 ⁹⁸	58	23	14	17 06	18 73		11	17
24	178	55.1	+22	53.6	294	13.5 ¹⁴⁴	-8 52.9 ⁹⁷	60 S	15 06	16 03	16 59	21 13	76	11 18	13

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 5 ^h 15 ^m 3	Mag: -4.1	PMG: 14 ^h 56 ^m	Mag: -2.2	PMG: 2 ^h 07 ^m	Mag: -2.3	PMG: 19 ^h 58 ^m	Mag: 0.0	PMG: 23 ^h 36 ^m	
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	o	'	o	'	o	'	o	'	o	'
0	280	58.2	136 01.9	+15 48.6	328 05.1	-22 58.3	59 38.9	-14 49.5	5 03.8	-22 28.7
1	296	00.6	151 01.6	47.6	343 07.7	58.5	74 41.5	49.5	20 06.5	28.7
2	311	03.1	166 01.3	46.6	358 10.4	58.7	89 44.0	49.5	35 09.2	28.8
3	326	05.6	181 01.0	45.6	13 13.0	59.0	104 46.5	49.5	50 11.8	28.8
4	341	08.0	196 00.7	44.6	28 15.6	59.2	119 49.0	49.5	65 14.5	28.8
5	356	10.5	211 00.4	+15 43.6	43 18.2	-22 59.4	134 51.6	-14 49.5	80 17.2	-22 28.8
6	11	12.9	226 00.1	+15 42.6	58 20.8	-22 59.6	149 54.1	-14 49.5	95 19.8	-22 28.8
7	26	15.4	240 59.8	41.6	73 23.4	-22 59.9	164 56.6	49.5	110 22.5	28.8
8	41	17.9	255 59.5	40.6	88 26.1	-23 00.1	179 59.1	49.4	125 25.1	28.8
9	56	20.3	270 59.2	39.6	103 28.7	00.3	195 01.6	49.4	140 27.8	28.8
10	71	22.8	285 58.9	38.6	118 31.3	00.6	210 04.2	49.4	155 30.5	28.8
11	86	25.3	300 58.7	+15 37.6	133 33.9	-23 00.8	225 06.7	-14 49.4	170 33.1	-22 28.9
12	101	27.7	315 58.4	+15 36.6	148 36.6	-23 01.0	240 09.2	-14 49.4	185 35.8	-22 28.9
13	116	30.2	330 58.1	35.6	163 39.2	01.2	255 11.7	49.4	200 38.4	28.9
14	131	32.7	345 57.8	34.6	178 41.8	01.5	270 14.3	49.4	215 41.1	28.9
15	146	35.1	0 57.5	33.6	193 44.4	01.7	285 16.8	49.4	230 43.8	28.9
16	161	37.6	15 57.2	32.6	208 47.1	01.9	300 19.3	49.4	245 46.4	28.9
17	176	40.0	30 56.9	+15 31.5	223 49.7	-23 02.2	315 21.8	-14 49.4	260 49.1	-22 28.9
18	191	42.5	45 56.7	+15 30.5	238 52.3	-23 02.4	330 24.3	-14 49.4	275 51.8	-22 28.9
19	206	45.0	60 56.4	29.5	253 55.0	02.6	345 26.9	49.4	290 54.4	29.0
20	221	47.4	75 56.1	28.5	268 57.6	02.9	0 29.4	49.4	305 57.1	29.0
21	236	49.9	90 55.8	27.5	284 00.3	03.1	15 31.9	49.4	320 59.7	29.0
22	251	52.4	105 55.5	26.5	299 02.9	03.3	30 34.4	49.4	336 02.4	29.0
23	266	54.8	120 55.3	25.5	314 05.5	03.6	45 36.9	49.4	351 05.1	29.0
24	281	57.3	135 55.0	+15 24.5	329 08.2	-23 03.8	60 39.4	-14 49.4	6 07.7	-22 29.0
Dif	—	—	-3 -10	+26 -2	+25 0	+27 0				

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15°7' PMG: 12 ^h 04 ^m 4			Edad: 20 ^d 2 PHE { 4 ^h : 55°0' 12 ^h : 55°1' 20 ^h : 55°3' R°: 44 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	o	'	o	'	o	'	o	'	h	m	h	m	h	m	h	m
0	178	55.1	+22	53.6	294	13.5	-8	52.9	60 N	***	1 11	2 46	23 40	12	9 49	76
1	193	55.0		53.4	308	46.9 ¹⁴⁴		43.0 ⁹⁹	58	***	1 53	3 05	37 15		53	74
2	208	54.9		53.2	323	20.3 ¹⁴⁴		33.2 ⁹⁸	56	***	2 20	21	35 17		9 57	70
3	223	54.8		53.0	337	53.7 ¹⁴⁴		23.3 ⁹⁹	54	1 05	41	35	32 19		10 00	70
4	238	54.7		52.8	352	27.1 ¹⁴⁴		13.3 ¹⁰⁰	52	1 44	2 59	47	30 21		03	68
5	253	54.6	+22	52.6	7	00.6 ¹⁴⁵	-8	03.3 ¹⁰⁰	50	2 10	3 13	3 57	23 29	22	10 06	66
6	268	54.5	+22	52.3	21	34.0 ¹⁴⁴	-7	53.3 ¹⁰⁰	45	2 53	3 42	4 19	23 25	26	10 12	62
7	283	54.4		52.1	36	07.4 ¹⁴⁴		43.2 ¹⁰¹	40	3 23	4 04	36	22 28		17	59
8	298	54.3		51.9	50	40.8 ¹⁴⁴		33.1 ¹⁰¹	35	3 45	21	4 51	19 31		21	57
9	313	54.1		51.7	65	14.3 ¹⁴⁵		23.0 ¹⁰¹	30	4 03	4 36	5 04	16 34		24	55
10	328	54.0		51.5	79	47.7 ¹⁴⁴		12.8 ¹⁰²	20	32	5 01	25	12 37		31	50
11	343	53.9	+22	51.3	94	21.1 ¹⁴⁴	-7	02.6 ¹⁰²	10 N	4 54	5 21	5 44	23 08	41	10 36	48
12	358	53.8	+22	51.0	108	54.5 ¹⁴⁴	-6	52.3 ¹⁰³	0	5 12	5 38	6 01	23 04	45	10 42	44
13	13	53.7		50.8	123	28.0 ¹⁴⁵		42.0 ¹⁰³	10 S	29	5 55	18	23 01	47	47	41
14	28	53.6		50.6	138	01.4 ¹⁴⁴		31.7 ¹⁰³	20	5 44	6 12	36	22 57	51	52	38
15	43	53.5		50.4	152	34.8 ¹⁴⁴		21.3 ¹⁰⁴	30	6 00	30	6 56	53 55		10 58	34
16	58	53.4		50.1	167	08.2 ¹⁴⁴		10.9 ¹⁰⁴	35	09	40	7 08	50 58		11 02	31
17	73	53.3	+22	49.9	181	41.6 ¹⁴⁴	-6	00.4 ¹⁰⁵	40	6 18	6 52	7 22	22 47	60	11 06	29
18	88	53.1	+22	49.7	196	15.0 ¹⁴⁴	-5	49.9 ¹⁰⁵	45	6 28	7 05	7 39	22 44	63	11 11	25
19	103	53.0		49.5	210	48.4 ¹⁴⁴		39.4 ¹⁰⁵	50	39	21	7 59	40 67		16	22
20	118	52.9		49.2	225	21.8 ¹⁴⁴		28.9 ¹⁰⁵	52	44	28	8 08	38 69		19	20
21	133	52.8		49.0	239	55.2 ¹⁴⁴		18.3 ¹⁰⁶	54	50	36	19	36 71		21	19
22	148	52.7		48.8	254	28.6 ¹⁴⁴	-5	07.7 ¹⁰⁶	56	6 56	44	31	34 73		24	17
23	163	52.6		48.5	269	01.9 ¹⁴³	-4	57.1 ¹⁰⁶	58	7 02	7 54	8 45	31 75		28	15
24	178	52.5	+22	48.3	283	35.3 ¹⁴⁴	-4	46.4 ¹⁰⁷	60 S	7 09	8 05	9 02	22 29	77	11 31	13

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 5 ^h 11 ^m 3		Mag: -4.1 PMG: 14 ^h 57 ^m		Mag: -2.3 PMG: 2 ^h 03 ^m		Mag: -2.3 PMG: 19 ^h 54 ^m		Mag: 0.0 PMG: 23 ^h 31 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	o	'	o	'	o	'	o	'	o	'								
0	281	57.3	135	55.0	+15	24.5	329	08.2	-23	03.8	60	39.4	-14	49.4	6	07.7	-22	29.0
1	296	59.8	150	54.7		23.5	344	10.8		04.0	75	42.0		49.4	21	10.4		29.0
2	312	02.2	165	54.4		22.4	359	13.5		04.3	90	44.5		49.3	36	13.0		29.0
3	327	04.7	180	54.2		21.4	14	16.1		04.5	105	47.0		49.3	51	15.7		29.0
4	342	07.2	195	53.9		20.4	29	18.8		04.7	120	49.5		49.3	66	18.4		29.1
5	357	09.6	210	53.6	+15	19.4	44	21.4	-23	05.0	135	52.0	-14	49.3	81	21.0	-22	29.1
6	12	12.1	225	53.3	+15	18.4	59	24.1	-23	05.2	150	54.5	-14	49.3	96	23.7	-22	29.1
7	27	14.5	240	53.1		17.4	74	26.7		05.5	165	57.1		49.3	111	26.3		29.1
8	42	17.0	255	52.8		16.3	89	29.4		05.7	180	59.6		49.3	126	29.0		29.1
9	57	19.5	270	52.5		15.3	104	32.0		05.9	196	02.1		49.3	141	31.7		29.1
10	72	21.9	285	52.2		14.3	119	34.7		06.2	211	04.6		49.3	156	34.3		29.1
11	87	24.4	300	52.0	+15	13.3	134	37.3	-23	06.4	226	07.1	-14	49.3	171	37.0	-22	29.1
12	102	26.9	315	51.7	+15	12.3	149	40.0	-23	06.6	241	09.6	-14	49.3	186	39.6	-22	29.1
13	117	29.3	330	51.4		11.3	164	42.7		06.9	256	12.1		49.3	201	42.3		29.2
14	132	31.8	345	51.2		10.2	179	45.3		07.1	271	14.7		49.3	216	45.0		29.2
15	147	34.3	0	50.9		09.2	194	48.0		07.4	286	17.2		49.3	231	47.6		29.2
16	162	36.7	15	50.6		08.2	209	50.7		07.6	301	19.7		49.3	246	50.3		29.2
17	177	39.2	30	50.4	+15	07.2	224	53.3	-23	07.8	316	22.2	-14	49.3	261	53.0	-22	29.2
18	192	41.7	45	50.1	+15	06.1	239	56.0	-23	08.1	331	24.7	-14	49.3	276	55.6	-22	29.2
19	207	44.1	60	49.8		05.1	254	58.7		08.3	346	27.2		49.3	291	58.3		29.2
20	222	46.6	75	49.6		04.1	270	01.3		08.5	1	29.7		49.3	307	00.9		29.2
21	237	49.0	90	49.3		03.1	285	04.0		08.8	16	32.2		49.3	322	03.6		29.2
22	252	51.5	105	49.0		02.0	300	06.7		09.0	31	34.8		49.3	337	06.3		29.3
23	267	54.0	120	48.8	+15	01.0	315	09.3		09.3	46	37.3		49.3	352	08.9		29.3
24	282	56.4	135	48.5	+15	00.0	330	12.0	-23	09.5	61	39.8	-14	49.3	7	11.6	-22	29.3
Dif	—		-3		-10		+27		-2		+25		0		+27			

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7			Edad: 21 ^d 2 PHE { 4 ^h : 55 ^m 5 12 ^h : 55 ^m 8 20 ^h : 56 ^m 0												
	PMG: 12 ^h 04 ^m 6			SD: 15 ^h 2 PMG: 5 ^h 15 ^m R°: 45 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°	
h	o	'	o	'	o	'	o	'	h	m	h	m	h	m	h	m
0	178	52.5	+22	48.3	283	35.3	-4 46.4	60 N	21 21	22 53	***	23 52 13	11 05 79			
1	193	52.4		48.1	298	08.6 ¹⁴³	35.7 ¹⁰⁷	58	21 02	22 13	***	52 15	07 76			
2	208	52.3		47.9	312	42.0 ¹⁴⁴	25.0 ¹⁰⁷	56	20 47	21 46	***	52 17	08 74			
3	223	52.2		47.6	327	15.3 ¹⁴³	14.2 ¹⁰⁸	54	33	26	22 59	51 20	10 71			
4	238	52.1		47.4	341	48.6 ¹⁴³	-4 03.4 ¹⁰⁸	52	21	21 09	22 22	51 22	11 69			
5	253	51.9	+22	47.2	356	21.9 ¹⁴³	-3 52.6 ¹⁰⁸	50	20 11	20 55	21 57	23 51 23	11 12 68			
6	268	51.8	+22	46.9	10	55.2 ¹⁴³	-3 41.8 ¹⁰⁸	45	19 49	20 26	21 15	23 51 26	11 14 64			
7	283	51.7		46.7	25	28.4 ¹⁴²	30.9 ¹⁰⁹	40	32	20 04	20 46	50 30	16 61			
8	298	51.6		46.4	40	01.7 ¹⁴³	20.0 ¹⁰⁹	35	17	19 47	23	50 32	18 58			
9	313	51.5		46.2	54	34.9 ¹⁴²	-3 09.1 ¹⁰⁹	30	19 05	32	20 05	50 34	19 56			
10	328	51.4		46.0	69	08.1 ¹⁴²	-2 58.1 ¹¹⁰	20	18 44	19 08	19 37	49 39	21 52			
11	343	51.3	+22	45.7	83	41.3 ¹⁴²	-2 47.2 ¹⁰⁹	10 N	18 25	18 48	19 15	23 49 42	11 24 48			
12	358	51.2	+22	45.5	98	14.5 ¹⁴²	-2 36.2 ¹¹⁰	0	18 08	18 31	18 57	23 49 45	11 26 44			
13	13	51.1		45.3	112	47.6 ¹⁴¹	25.2 ¹¹⁰	10 S	17 51	18 14	40	48 50	28 41			
14	28	51.0		45.0	127	20.7 ¹⁴¹	14.1 ¹¹¹	20	33	17 57	25	48 53	30 37			
15	43	50.9		44.8	141	53.8 ¹⁴¹	-2 03.1 ¹¹⁰	30	13	39	09	48 57	32 34			
16	58	50.8		44.5	156	26.9 ¹⁴¹	-1 52.0 ¹¹¹	35	17 01	29	18 00	48 59	33 32			
17	73	50.6	+22	44.3	171	00.0 ¹⁴¹	-1 40.9 ¹¹¹	40	16 47	17 18	17 51	23 47 63	11 35 29			
18	88	50.5	+22	44.1	185	33.0 ¹⁴⁰	-1 29.8 ¹¹¹	45	16 31	17 05	17 42	23 47 65	11 36 26			
19	103	50.4		43.8	200	06.0 ¹⁴⁰	18.7 ¹¹¹	50	11	16 49	30	47 69	38 23			
20	118	50.3		43.6	214	39.0 ¹⁴⁰	-1 07.5 ¹¹²	52	16 02	42	25	47 71	39 21			
21	133	50.2		43.3	229	11.9 ¹³⁹	-0 56.3 ¹¹²	54	15 51	34	20	47 72	40 19			
22	148	50.1		43.1	243	44.9 ¹⁴⁰	45.2 ¹¹¹	56	39	26	14	47 75	41 18			
23	163	50.0		42.8	258	17.7 ¹³⁸	34.0 ¹¹²	58	25	16	08	46 78	43 15			
24	178	49.9	+22	42.6	272	50.6 ¹³⁹	-0 22.7 ¹¹³	60 S	15 09	16 05	17 01	23 46 80	11 44 13			
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 5 ^h 07 ^m 4		Mag: -4.1 PMG: 14 ^h 57 ^m		Mag: -2.3 PMG: 1 ^h 59 ^m		Mag: -2.3 PMG: 19 ^h 50 ^m		Mag: +0.1 PMG: 23 ^h 27 ^m							
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec							
h	o	'	o	'	o	'	o	'	o	'						
0	282	56.4	135	48.5	+15	00.0	330	12.0	-23	09.5						
1	297	58.9	150	48.2	+14	59.0	345	14.7		09.8						
2	313	01.4	165	48.0		57.9	0	17.4		10.0						
3	328	03.8	180	47.7		56.9	15	20.1		10.2						
4	343	06.3	195	47.5		55.9	30	22.7		10.5						
5	358	08.8	210	47.2	+14	54.8	45	25.4	-23	10.7						
6	13	11.2	225	46.9	+14	53.8	60	28.1	-23	11.0						
7	28	13.7	240	46.7		52.8	75	30.8		11.2						
8	43	16.1	255	46.4		51.8	90	33.5		11.4						
9	58	18.6	270	46.2		50.7	105	36.2		11.7						
10	73	21.1	285	45.9		49.7	120	38.9		11.9						
11	88	23.5	300	45.7	+14	48.7	135	41.5	-23	12.2						
12	103	26.0	315	45.4	+14	47.6	150	44.2	-23	12.4						
13	118	28.5	330	45.2		46.6	165	46.9		12.7						
14	133	30.9	345	44.9		45.6	180	49.6		12.9						
15	148	33.4	0	44.7		44.5	195	52.3		13.2						
16	163	35.9	15	44.4		43.5	210	55.0		13.4						
17	178	38.3	30	44.2	+14	42.4	225	57.7	-23	13.6						
18	193	40.8	45	43.9	+14	41.4	241	00.4	-23	13.9						
19	208	43.3	60	43.7		40.4	256	03.1		14.1						
20	223	45.7	75	43.4		39.3	271	05.8		14.4						
21	238	48.2	90	43.2		38.3	286	08.5		14.6						
22	253	50.6	105	42.9		37.3	301	11.2		14.9						
23	268	53.1	120	42.7		36.2	316	13.9		15.1						
24	283	55.6	135	42.4	+14	35.2	331	16.7	-23	15.4						
Dif	—		-3	-10		+27	-2		+25	0						

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15 ^h 7 ^m PMG: 12 ^h 04 ^m 8			Edad: 22 ^d 2 PHE { 4 ^h : 56 ^m 2 12 ^h : 56 ^m 5 20 ^h : 56 ^m 8 R°: 46 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	o	'	o	'	o	'	o	'	h	m	h	m	h	m	h	m		
0	178	49.9	+22	42.6	272	50.6	-0	22.7	60 N	***	1 16	2 48	***	***	12 24	81		
1	193	49.8		42.3	287	23.4 ¹³⁸		11.5 ¹¹²	58	***	1 57	3 07	***	***	23	78		
2	208	49.7		42.1	301	56.2 ¹³⁸	-0	00.3 ¹¹²	56	***	2 23	23	***	***	22	76		
3	223	49.6		41.8	316	29.0 ¹³⁸	+0	11.0 ¹¹³	54	1 10	2 44	37	***	***	21	74		
4	238	49.5		41.6	331	01.7 ¹³⁷		22.2 ¹¹²	52	1 47	3 01	48	***	***	20	72		
5	253	49.4	+22	41.3	345	34.4 ¹³⁷	+0	33.5 ¹¹³	50	2 12	3 15	3 59	***	***	12 20	70		
6	268	49.3	+22	41.1	0	07.1 ¹³⁷	+0	44.8 ¹¹³	45	2 55	3 43	4 20	***	***	12 18	66		
7	283	49.2		40.8	14	39.7 ¹³⁶	+0	56.1 ¹¹³	40	3 24	4 05	37	***	***	17	63		
8	298	49.1		40.6	29	12.3 ¹³⁶	+1	07.4 ¹¹³	35	3 46	23	4 52	***	***	16	60		
9	313	49.0		40.3	43	44.8 ¹³⁵		18.7 ¹¹³	30	4 04	4 37	5 05	***	***	15	58		
10	328	48.9		40.1	58	17.3 ¹³⁵		30.1 ¹¹⁴	20	32	5 01	26	***	***	13	54		
11	343	48.7	+22	39.8	72	49.8 ¹³⁵	+1	41.4 ¹¹³	10 N	4 54	5 21	5 44	***	***	12 12	50		
12	358	48.6	+22	39.6	87	22.2 ¹³⁴	+1	52.7 ¹¹³	0	5 13	5 39	6 01	***	***	12 10	47		
13	13	48.5		39.3	101	54.6 ¹³⁴	+2	04.1 ¹¹⁴	10 S	29	5 55	18	***	***	09	43		
14	28	48.4		39.1	116	26.9 ¹³³		15.4 ¹¹³	20	5 45	6 12	36	***	***	07	40		
15	43	48.3		38.8	130	59.2 ¹³³		26.7 ¹¹³	30	6 00	30	6 56	***	***	06	35		
16	58	48.2		38.5	145	31.4 ¹³²		38.1 ¹¹⁴	35	09	40	7 08	***	***	05	33		
17	73	48.1	+22	38.3	160	03.6 ¹³²	+2	49.4 ¹¹³	40	6 18	6 52	7 22	***	***	12 04	30		
18	88	48.0	+22	38.0	174	35.8 ¹³²	+3	00.8 ¹¹⁴	45	6 28	7 04	7 38	***	***	12 02	28		
19	103	47.9		37.8	189	07.9 ¹³¹		12.2 ¹¹⁴	50	39	20	7 58	***	***	01	23		
20	118	47.8		37.5	203	39.9 ¹³⁰		23.5 ¹¹³	52	44	27	8 07	***	***	12 00	22		
21	133	47.7		37.3	218	11.9 ¹³⁰		34.9 ¹¹⁴	54	49	35	18	***	***	11 59	20		
22	148	47.6		37.0	232	43.9 ¹³⁰		46.2 ¹¹³	56	6 55	43	30	***	***	59	18		
23	163	47.5		36.7	247	15.8 ¹²⁹	+3	57.5 ¹¹³	58	7 01	7 53	8 44	***	***	58	15		
24	178	47.4	+22	36.5	261	47.6 ¹²⁸	+4	08.9 ¹¹⁴	60 S	7 08	8 04	9 00	***	***	11 57	13		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG 5 ^h 03 ^m 5			Mag: -4.1 PMG: 14 ^h 57 ^m			Mag: -2.3 PMG: 1 ^h 55 ^m			Mag: -2.3 PMG: 19 ^h 46 ^m			Mag: +0.1 PMG: 23 ^h 23 ^m					
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'		
0	283	55.6	135	42.4	+14	35.2	331	16.7	-23	15.4	62	39.9	-14	49.2	8	15.4		
1	298	58.0	150	42.2		34.1	346	19.4		15.6	77	42.4		49.2	23	18.1		
2	314	00.5	165	41.9		33.1	1	22.1		15.9	92	44.9		49.2	38	20.7		
3	329	03.0	180	41.7		32.0	16	24.8		16.1	107	47.4		49.2	53	23.4		
4	344	05.4	195	41.4		31.0	31	27.5		16.4	122	49.9		49.2	68	26.1		
5	359	07.9	210	41.2	+14	30.0	46	30.2	-23	16.6	137	52.4	-14	49.2	83	28.7		
6	14	10.4	225	41.0	+14	28.9	61	32.9	-23	16.8	152	54.9	-14	49.2	98	31.4		
7	29	12.8	240	40.7		27.9	76	35.7		17.1	167	57.4		49.2	113	34.0		
8	44	15.3	255	40.5		26.8	91	38.4		17.3	182	59.9		49.2	128	36.7		
9	59	17.7	270	40.2		25.8	106	41.1		17.6	198	02.4		49.2	143	39.4		
10	74	20.2	285	40.0		24.7	121	43.8		17.8	213	04.9		49.2	158	42.0		
11	89	22.7	300	39.8	+14	23.7	136	46.5	-23	18.1	228	07.4	-14	49.2	173	44.7		
12	104	25.1	315	39.5	+14	22.6	151	49.3	-23	18.3	243	09.9	-14	49.2	188	47.3		
13	119	27.6	330	39.3		21.6	166	52.0		18.6	258	12.4		49.2	203	50.0		
14	134	30.1	345	39.1		20.5	181	54.7		18.8	273	14.9		49.2	218	52.6		
15	149	32.5	0	38.8		19.5	196	57.4		19.1	288	17.4		49.2	233	55.3		
16	164	35.0	15	38.6		18.5	212	00.2		19.3	303	19.9		49.2	248	58.0		
17	179	37.5	30	38.4	+14	17.4	227	02.9	-23	19.6	318	22.4	-14	49.2	264	00.6		
18	194	39.9	45	38.1	+14	16.4	242	05.6	-23	19.8	333	24.9	-14	49.2	279	03.3		
19	209	42.4	60	37.9		15.3	257	08.4		20.1	348	27.4		49.2	294	05.9		
20	224	44.9	75	37.7		14.2	272	11.1		20.3	3	29.9		49.2	309	08.6		
21	239	47.3	90	37.4		13.2	287	13.8		20.6	18	32.4		49.3	324	11.3		
22	254	49.8	105	37.2		12.1	302	16.6		20.8	33	34.9		49.3	339	13.9		
23	269	52.2	120	37.0		11.1	317	19.3		21.1	48	37.4		49.3	354	16.6		
24	284	54.7	135	36.7	+14	10.0	332	22.1	-23	21.4	63	39.9	-14	49.3	9	19.2		
Dif	—			-2			+27			-2			+25			0		

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7			Edad: 23 ^d 2	PHE { 4 ^h : 57 ^m 1 12 ^h : 57 ^m 4 20 ^h : 57 ^m 7	Final del crepúsculo			Salida de Luna		Puesta de Luna						
	PMG: 12 ^h 04 ^m 9					SD: 15 ^h 6			R°: 48 ^m		R°: 48 ^m						
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico		Hora	R°	Hora	R°		
h	o	'	o	'	o	'	o	h	m	h	m	h	m	m	h	m	m
0	178	47.4	+22	36.5	261	47.6	+4 08.9	60 N	21 19	22 48	***	0 05	15		13 45	85	
1	193	47.3		36.2	276	19.4 ¹²⁸	20.2 ¹¹³	58	21 00	22 10	***	07 17		41	82		
2	208	47.2		35.9	290	51.1 ¹²⁷	31.6 ¹¹⁴	56	20 45	21 44	***	09 20		38	79		
3	223	47.1		35.7	305	22.8 ¹²⁷	42.9 ¹¹³	54	32	24	22 55	11 21		35	77		
4	238	47.0		35.4	319	54.4 ¹²⁶	+4 54.2 ¹¹³	52	20	21 07	22 19	13 23		32	75		
5	253	46.9	+22	35.1	334	26.0 ¹²⁶	+5 05.5 ¹¹³	50	20 10	20 53	21 55	0 14	25	13 30	73		
6	268	46.8	+22	34.9	348	57.5 ¹²⁵	+5 16.8 ¹¹³	45	19 49	20 25	21 13	0 17	29	13 24	69		
7	283	46.7		34.6	3	28.9 ¹²⁴	28.1 ¹¹³	40	31	20 04	20 45	20 32		20	66		
8	298	46.6		34.3	18	00.3 ¹²⁴	39.4 ¹¹³	35	17	19 46	23	22 35		16	63		
9	313	46.5		34.1	32	31.6 ¹²³	+5 50.6 ¹¹²	30	19 05	32	20 05	24 37		13	60		
10	328	46.4		33.8	47	02.9 ¹²³	+6 01.9 ¹¹³	20	18 44	19 08	19 37	28 41		07	56		
11	343	46.3	+22	33.5	61	34.1 ¹²²	+6 13.1 ¹¹²	10 N	18 25	18 48	19 15	0 31	45	13 02	53		
12	358	46.2	+22	33.3	76	05.2 ¹²¹	+6 24.3 ¹¹²	0	18 09	18 31	18 57	0 34	48	12 57	49		
13	13	46.1		33.0	90	36.3 ¹²¹	35.5 ¹¹²	10 S	17 52	18 15	41	38 51		52	46		
14	28	46.0		32.7	105	07.3 ¹²⁰	46.7 ¹¹²	20	34	17 58	25	41 55		47	42		
15	43	45.9		32.4	119	38.2 ¹¹⁹	+6 57.9 ¹¹²	30	14	40	10	45 59		41	39		
16	58	45.8		32.2	134	09.1 ¹¹⁹	+7 09.0 ¹¹¹	35	17 02	30	18 01	47 62		38	36		
17	73	45.7	+22	31.9	148	39.8 ¹¹⁷	+7 20.1 ¹¹¹	40	16 48	17 19	17 53	0 50	64	12 34	33		
18	88	45.6	+22	31.6	163	10.6 ¹¹⁸	+7 31.3 ¹¹²	45	16 32	17 06	17 43	0 52	68	12 30	30		
19	103	45.5		31.3	177	41.2 ¹¹⁶	42.3 ¹¹⁰	50	13	16 51	32	56 72		24	27		
20	118	45.4		31.1	192	11.8 ¹¹⁶	+7 53.4 ¹¹¹	52	16 03	44	27	0 58	73	22	25		
21	133	45.3		30.8	206	42.3 ¹¹⁵	+8 04.4 ¹¹⁰	54	15 53	36	22	1 00	75	19	23		
22	148	45.2		30.5	221	12.7 ¹¹⁴	15.4 ¹¹⁰	56	41	27	16	02 77		17	20		
23	163	45.1		30.2	235	43.1 ¹¹⁴	26.4 ¹¹⁰	58	27	18	10	04 80		13	19		
24	178	45.0	+22	29.9	250	13.4 ¹¹³	+8 37.4 ¹¹⁰	60 S	15 11	16 07	17 03	1 06	83	12 10	15		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 4 ^h 59 ^m 5			Mag: -4.1 PMG: 14 ^h 58 ^m			Mag: -2.4 PMG: 1 ^h 50 ^m			Mag: -2.3 PMG: 19 ^h 42 ^m			Mag: +0.1 PMG: 23 ^h 19 ^m				
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'	
0	284	54.7	135	36.7	+14	10.0	332	22.1	-23	21.4	63	39.9	-14	49.3	9	19.2	
1	299	57.2	150	36.5		09.0	347	24.8		21.6	78	42.4		49.3	24	21.9	
2	314	59.6	165	36.3		07.9	2	27.6		21.9	93	44.9		49.3	39	24.6	
3	330	02.1	180	36.0		06.9	17	30.3		22.1	108	47.4		49.3	54	27.2	
4	345	04.6	195	35.8		05.8	32	33.0		22.4	123	49.9		49.3	69	29.9	
5	0	07.0	210	35.6	+14	04.8	47	35.8	-23	22.6	138	52.4	-14	49.3	84	32.5	
6	15	09.5	225	35.4	+14	03.7	62	38.5	-23	22.9	153	54.9	-14	49.3	99	35.2	
7	30	12.0	240	35.1		02.6	77	41.3		23.1	168	57.4		49.3	114	37.8	
8	45	14.4	255	34.9		01.6	92	44.0		23.4	183	59.9		49.3	129	40.5	
9	60	16.9	270	34.7	+14	00.5	107	46.8		23.6	199	02.4		49.3	144	43.2	
10	75	19.4	285	34.5	+13	59.5	122	49.6		23.9	214	04.8		49.3	159	45.8	
11	90	21.8	300	34.3	+13	58.4	137	52.3	-23	24.1	229	07.3	-14	49.3	174	48.5	
12	105	24.3	315	34.0	+13	57.4	152	55.1	-23	24.4	244	09.8	-14	49.3	189	51.1	
13	120	26.7	330	33.8		56.3	167	57.8		24.7	259	12.3		49.3	204	53.8	
14	135	29.2	345	33.6		55.2	183	00.6		24.9	274	14.8		49.3	219	56.5	
15	150	31.7	0	33.4		54.2	198	03.4		25.2	289	17.3		49.3	234	59.1	
16	165	34.1	15	33.2		53.1	213	06.1		25.4	304	19.8		49.3	250	01.8	
17	180	36.6	30	32.9	+13	52.0	228	08.9	-23	25.7	319	22.3	-14	49.3	265	04.4	
18	195	39.1	45	32.7	+13	51.0	243	11.6	-23	25.9	334	24.8	-14	49.3	280	07.1	
19	210	41.5	60	32.5		49.9	258	14.4		26.2	349	27.3		49.3	295	09.7	
20	225	44.0	75	32.3		48.9	273	17.2		26.4	4	29.8		49.3	310	12.4	
21	240	46.5	90	32.1		47.8	288	19.9		26.7	19	32.2		49.3	325	15.1	
22	255	48.9	105	31.9		46.7	303	22.7		27.0	34	34.7		49.3	340	17.7	
23	270	51.4	120	31.6		45.7	318	25.5		27.2	49	37.2		49.3	355	20.4	
24	285	53.8	135	31.4	+13	44.6	333	28.3	-23	27.5	64	39.7	-14	49.3	10	23.0	
Dif	—		-2	-11			+28	-3			+25	0			+27	0	

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15'7 PMG: 12 ^h 05 ^m 1			Edad: 24 ^d 2 PHE { 4 ^h : 58'0 12 ^h : 58'3 20 ^h : 58'6 R°: 52 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	o	'	o	'	o	'	o	'	h	m	h	m	h	m	h	m		
0	178	45.0	+22	29.9	250	13.4	+8	37.4	60 N	***	1 22	2 51	0 20	17	15 10	87		
1	193	44.9		29.7	264	43.6 ¹¹²		48.3 ¹⁰⁹	58	***	2 00	3 10	24	21	15 03	84		
2	208	44.8		29.4	279	13.7 ¹¹¹	+8	59.2 ¹⁰⁹	56	***	26	25	29	23	14 57	81		
3	223	44.7		29.1	293	43.8 ¹¹¹	+9	10.0 ¹⁰⁸	54	1 16	2 46	39	32	25	52	79		
4	238	44.6		28.8	308	13.7 ¹⁰⁹		20.9 ¹⁰⁹	52	1 51	3 03	3 50	36	27	47	77		
5	253	44.5	+22	28.5	322	43.6 ¹⁰⁹	+9	31.7 ¹⁰⁸	50	2 15	3 17	4 00	0 39	29	14 43	75		
6	268	44.4	+22	28.3	337	13.5 ¹⁰⁹	+9	42.4 ¹⁰⁷	45	2 57	3 45	4 22	0 46	32	14 33	72		
7	283	44.3		28.0	351	43.2 ¹⁰⁷	+9	53.1 ¹⁰⁷	40	3 26	4 06	39	52	35	26	68		
8	298	44.2		27.7	6	12.8 ¹⁰⁶	+10	03.8 ¹⁰⁷	35	3 48	24	4 53	0 57	38	19	66		
9	313	44.1		27.4	20	42.4 ¹⁰⁶		14.5 ¹⁰⁷	30	4 05	4 38	5 05	1 01	41	13	64		
10	328	44.0		27.1	35	11.9 ¹⁰⁵		25.1 ¹⁰⁶	20	33	5 02	27	09	44	14 03	60		
11	343	43.9	+22	26.8	49	41.3 ¹⁰⁴	+10	35.6 ¹⁰⁵	10 N	4 55	5 22	5 45	1 16	48	13 55	56		
12	358	43.8	+22	26.5	64	10.6 ¹⁰³	+10	46.1 ¹⁰⁵	0	5 13	5 39	6 01	1 22	52	13 46	53		
13	13	43.7		26.3	78	39.9 ¹⁰³	+10	56.6 ¹⁰⁵	10 S	29	5 55	18	29	54	38	50		
14	28	43.6		26.0	93	09.0 ¹⁰¹	+11	07.1 ¹⁰⁵	20	5 45	6 12	36	36	58	29	47		
15	43	43.5		25.7	107	38.1 ¹⁰¹		17.4 ¹⁰³	30	6 00	30	6 56	44	62	20	42		
16	58	43.4		25.4	122	07.0 ⁹⁹		27.8 ¹⁰⁴	35	08	40	7 08	49	64	14	40		
17	73	43.3	+22	25.1	136	35.9 ⁹⁹	+11	38.1 ¹⁰³	40	6 17	6 51	7 21	1 54	67	13 07	38		
18	88	43.3	+22	24.8	151	04.7 ⁹⁸	+11	48.3 ¹⁰²	45	6 27	7 04	7 37	2 00	71	13 00	35		
19	103	43.2		24.5	165	33.4 ⁹⁷	+11	58.5 ¹⁰²	50	38	19	7 57	08	74	12 51	31		
20	118	43.1		24.2	180	02.0 ⁹⁶	+12	08.6 ¹⁰¹	52	43	26	8 06	11	77	47	29		
21	133	43.0		23.9	194	30.6 ⁹⁶		18.7 ¹⁰¹	54	48	34	16	15	78	42	28		
22	148	42.9		23.6	208	59.0 ⁹⁴		28.7 ¹⁰⁰	56	6 54	42	28	19	81	37	26		
23	163	42.8		23.3	223	27.3 ⁹³		38.7 ¹⁰⁰	58	7 00	7 52	42	24	83	32	22		
24	178	42.7	+22	23.0	237	55.6 ⁹³	+12	48.6 ⁹⁹	60 S	7 07	8 02	8 58	2 29	87	12 25	20		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 4 ^h 55 ^m 6			Mag: -4.1 PMG: 14 ^h 58 ^m			Mag: -2.4 PMG: 1 ^h 46 ^m			Mag: -2.3 PMG: 19 ^h 38 ^m			Mag: +0.1 PMG: 23 ^h 14 ^m					
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec			
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'		
0	285	53.8	135	31.4	+13	44.6	333	28.3	-23	27.5	64	39.7	-14	49.3	10	23.0		
1	300	56.3	150	31.2		43.5	348	31.0		27.7	79	42.2		49.3	25	25.7		
2	315	58.8	165	31.0		42.5	3	33.8		28.0	94	44.7		49.3	40	28.4		
3	331	01.2	180	30.8		41.4	18	36.6		28.2	109	47.2		49.3	55	31.0		
4	346	03.7	195	30.6		40.3	33	39.4		28.5	124	49.7		49.3	70	33.7		
5	1	06.2	210	30.4	+13	39.2	48	42.2	-23	28.8	139	52.1	-14	49.4	85	36.3		
6	16	08.6	225	30.2	+13	38.2	63	44.9	-23	29.0	154	54.6	-14	49.4	100	39.0		
7	31	11.1	240	30.0		37.1	78	47.7		29.3	169	57.1		49.4	115	41.6		
8	46	13.6	255	29.7		36.0	93	50.5		29.5	184	59.6		49.4	130	44.3		
9	61	16.0	270	29.5		35.0	108	53.3		29.8	200	02.1		49.4	145	47.0		
10	76	18.5	285	29.3		33.9	123	56.1		30.1	215	04.6		49.4	160	49.6		
11	91	21.0	300	29.1	+13	32.8	138	58.9	-23	30.3	230	07.1	-14	49.4	175	52.3		
12	106	23.4	315	28.9	+13	31.8	154	01.7	-23	30.6	245	09.5	-14	49.4	190	54.9		
13	121	25.9	330	28.7		30.7	169	04.4		30.8	260	12.0		49.4	205	57.6		
14	136	28.3	345	28.5		29.6	184	07.2		31.1	275	14.5		49.4	221	00.2		
15	151	30.8	0	28.3		28.5	199	10.0		31.4	290	17.0		49.4	236	02.9		
16	166	33.3	15	28.1		27.5	214	12.8		31.6	305	19.5		49.4	251	05.6		
17	181	35.7	30	27.9	+13	26.4	229	15.6	-23	31.9	320	22.0	-14	49.4	266	08.2		
18	196	38.2	45	27.7	+13	25.3	244	18.4	-23	32.1	335	24.4	-14	49.4	281	10.9		
19	211	40.7	60	27.5		24.2	259	21.2		32.4	350	26.9		49.4	296	13.5		
20	226	43.1	75	27.3		23.2	274	24.0		32.7	5	29.4		49.4	311	16.2		
21	241	45.6	90	27.1		22.1	289	26.8		32.9	20	31.9		49.4	326	18.8		
22	256	48.1	105	26.9		21.0	304	29.6		33.2	35	34.4		49.4	341	21.5		
23	271	50.5	120	26.7		19.9	319	32.4		33.5	50	36.8		49.5	356	24.2		
24	286	53.0	135	26.5	+13	18.8	334	35.2	-23	33.7	65	39.3	-14	49.5	11	26.8		
Dif	—			-2			+28			-3			+25			0		

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7			Edad: 25 ^d 2 PHE { 4 ^h : 58/9 12 ^h : 59/2 20 ^h : 59/5 R°: 57 ^m												
	hG ☉	Dec		hG ☾	Dif				Civil	Náutico	Hora	R°	Hora	R°		
h	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m	
0	178	42.7	+22	23.0	237	55.6	+12 48.6	60 N	21 17	22 42	***	0 37	24	16 37	87	
1	193	42.6		22.8	252	23.7	+12 58.4	58	20 58	22 06	***	45	26	27	84	
2	208	42.5		22.5	266	51.8	+13 08.2	56	43	21 41	***	52	28	18	82	
3	223	42.4		22.2	281	19.8	17.9	54	30	22	22 50	0 57	32	11	79	
4	238	42.3		21.9	295	47.7	27.6	52	19	21 06	22 16	1 03	33	16 04	77	
5	253	42.2	+22	21.6	310	15.4	+13 37.2	50	20 09	20 52	21 53	1 08	34	15 58	76	
6	268	42.1	+22	21.3	324	43.1	+13 46.7	45	19 48	20 24	21 12	1 18	39	15 45	72	
7	283	42.0		21.0	339	10.7	+13 56.2	40	31	20 03	20 44	27	41	34	70	
8	298	41.9		20.7	353	38.2	+14 05.6	35	17	19 46	22	35	44	25	67	
9	313	41.8		20.4	8	05.6	14.9	30	19 04	31	20 04	42	45	17	65	
10	328	41.7		20.1	22	32.9	24.1	20	18 43	19 08	19 37	1 53	50	15 03	62	
11	343	41.7	+22	19.8	37	00.1	+14 33.3	10 N	18 26	18 48	19 15	2 04	52	14 51	60	
12	358	41.6	+22	19.4	51	27.2	+14 42.4	0	18 09	18 31	18 57	2 14	55	14 39	58	
13	13	41.5		19.1	65	54.2	+14 51.4	10 S	17 52	18 15	41	23	59	28	55	
14	28	41.4		18.8	80	21.2	+15 00.3	20	35	17 59	26	34	61	16	52	
15	43	41.3		18.5	94	48.0	09.2	30	15	41	10	46	65	14 02	49	
16	58	41.2		18.2	109	14.7	18.0	35	17 03	31	18 02	2 53	67	13 54	47	
17	73	41.1	+22	17.9	123	41.3	+15 26.7	40	16 50	17 20	17 54	3 01	70	13 45	45	
18	88	41.0	+22	17.6	138	07.9	+15 35.3	45	16 34	17 07	17 44	3 11	72	13 35	42	
19	103	40.9		17.3	152	34.3	43.8	50	15	16 52	33	22	76	22	38	
20	118	40.8		17.0	167	00.6	+15 52.2	52	16 05	45	28	28	77	16	37	
21	133	40.7		16.7	181	26.8	+16 00.6	54	15 55	38	23	33	80	10	35	
22	148	40.6		16.4	195	53.0	08.8	56	43	29	18	40	82	13 03	32	
23	163	40.6		16.1	210	19.0	17.0	58	30	20	12	47	85	12 54	31	
24	178	40.5	+22	15.8	224	45.0	+16 25.1	60 S	15 14	16 09	17 05	3 56	88	12 45	28	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 4 ^h 51 ^m 7		Mag: -4.1 PMG: 14 ^h 58 ^m			Mag: -2.4 PMG: 1 ^h 41 ^m			Mag: -2.3 PMG: 19 ^h 34 ^m			Mag: +0.1 PMG: 23 ^h 10 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'
0	286	53.0	135	26.5	+13	18.8	334	35.2	-23	33.7	65	39.3	-14	49.5	11	26.8
1	301	55.5	150	26.3		17.8	349	38.0		34.0	80	41.8		49.5	26	29.5
2	316	57.9	165	26.1		16.7	4	40.8		34.2	95	44.3		49.5	41	32.1
3	332	00.4	180	25.9		15.6	19	43.7		34.5	110	46.8		49.5	56	34.8
4	347	02.8	195	25.7		14.5	34	46.5		34.8	125	49.2		49.5	71	37.4
5	2	05.3	210	25.5	+13	13.4	49	49.3	-23	35.0	140	51.7	-14	49.5	86	40.1
6	17	07.8	225	25.3	+13	12.4	64	52.1	-23	35.3	155	54.2	-14	49.5	101	42.8
7	32	10.2	240	25.2		11.3	79	54.9		35.6	170	56.7		49.5	116	45.4
8	47	12.7	255	25.0		10.2	94	57.7		35.8	185	59.2		49.5	131	48.1
9	62	15.2	270	24.8		09.1	110	00.5		36.1	201	01.6		49.5	146	50.7
10	77	17.6	285	24.6		08.0	125	03.4		36.3	216	04.1		49.5	161	53.4
11	92	20.1	300	24.4	+13	06.9	140	06.2	-23	36.6	231	06.6	-14	49.5	176	56.0
12	107	22.6	315	24.2	+13	05.9	155	09.0	-23	36.9	246	09.1	-14	49.5	191	58.7
13	122	25.0	330	24.0		04.8	170	11.8		37.1	261	11.5		49.6	207	01.3
14	137	27.5	345	23.8		03.7	185	14.6		37.4	276	14.0		49.6	222	04.0
15	152	30.0	0	23.6		02.6	200	17.5		37.7	291	16.5		49.6	237	06.7
16	167	32.4	15	23.5		01.5	215	20.3		37.9	306	19.0		49.6	252	09.3
17	182	34.9	30	23.3	+13	00.4	230	23.1	-23	38.2	321	21.4	-14	49.6	267	12.0
18	197	37.3	45	23.1	+12	59.3	245	25.9	-23	38.5	336	23.9	-14	49.6	282	14.6
19	212	39.8	60	22.9		58.3	260	28.8		38.7	351	26.4		49.6	297	17.3
20	227	42.3	75	22.7		57.2	275	31.6		39.0	6	28.9		49.6	312	19.9
21	242	44.7	90	22.5		56.1	290	34.4		39.3	21	31.3		49.6	327	22.6
22	257	47.2	105	22.3		55.0	305	37.3		39.5	36	33.8		49.6	342	25.3
23	272	49.7	120	22.2		53.9	320	40.1		39.8	51	36.3		49.6	357	27.9
24	287	52.1	135	22.0	+12	52.8	335	42.9	-23	40.1	66	38.8	-14	49.6	12	30.6
Dif	—		-2		-11		+28		-3		+25		0		+27	

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: 26 ^d 2 PHE { 4 ^h : 59 ^m 8 12 ^h : 60 ^m 1 20 ^h : 60 ^m 4 PMG: 9 ^h 23 ^m R°: 60 ^m					Náutico	Civil		Hora	R°	Hora	R°				
	hG ☉	Dec	hG ☾	Dif	Dec	Dif														
h	o	'	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m			
0	178	40.5	+22	15.8	224	45.0	+16	25.1	60 N	***	1 29	2 54	1 01	33	18 04	80				
1	193	40.4		15.4	239	10.8	68	33.0	58	***	2 04	3 13	11	36	17 51	78				
2	208	40.3		15.1	253	36.6	68	40.9	56	***	30	28	20	39	40	76				
3	223	40.2		14.8	268	02.2	66	48.7	54	1 21	2 49	41	29	40	30	75				
4	238	40.1		14.5	282	27.8	66	+16 56.4	52	1 55	3 05	3 52	36	42	21	74				
5	253	40.0	+22	14.2	296	53.2	64	+17 04.0	50	2 18	3 19	4 02	1 42	44	17 14	72				
6	268	39.9	+22	13.9	311	18.6	64	+17 11.4	45	2 59	3 47	4 23	1 57	46	16 57	71				
7	283	39.8		13.6	325	43.9	63	18.8	40	3 27	4 08	40	2 08	49	44	69				
8	298	39.7		13.2	340	09.1	62	26.1	35	3 49	25	4 54	19	50	32	68				
9	313	39.7		12.9	354	34.1	60	33.2	30	4 07	4 39	5 06	27	52	22	67				
10	328	39.6		12.6	8	59.1	60	40.3	20	34	5 03	27	43	54	16 05	65				
11	343	39.5	+22	12.3	23	24.0	59	+17 47.2	10 N	4 55	5 22	5 45	2 56	57	15 51	62				
12	358	39.4	+22	12.0	37	48.8	58	+17 54.1	0	5 13	5 39	6 02	3 09	59	15 37	61				
13	13	39.3		11.6	52	13.5	57	+18 00.8	10 S	29	5 56	18	22	61	23	59				
14	28	39.2		11.3	66	38.2	57	07.4	20	5 45	6 12	36	35	64	15 08	57				
15	43	39.1		11.0	81	02.7	55	13.9	30	6 00	30	6 56	3 51	67	14 51	55				
16	58	39.0		10.7	95	27.1	54	20.2	35	08	39	7 07	4 00	68	41	54				
17	73	39.0	+22	10.4	109	51.5	54	+18 26.5	40	6 17	6 50	7 21	4 11	70	14 30	52				
18	88	38.9	+22	10.0	124	15.7	52	+18 32.6	45	6 26	7 03	7 36	4 23	72	14 17	50				
19	103	38.8		09.7	138	39.9	52	38.6	50	37	18	7 56	38	75	14 00	49				
20	118	38.7		09.4	153	04.0	51	44.5	52	42	25	8 05	45	77	13 53	47				
21	133	38.6		09.1	167	28.0	50	50.3	54	47	32	15	4 53	78	45	45				
22	148	38.5		08.7	181	51.9	49	+18 55.9	56	52	41	26	5 02	80	35	44				
23	163	38.4		08.4	196	15.8	49	+19 01.4	55	6 59	7 50	40	12	82	25	42				
24	178	38.3	+22	08.1	210	39.5	47	+19 06.8	54	7 05	8 01	8 55	5 24	85	13 13	39				
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG 4 ^h 47 ^m 7				Mag: -4.1 PMG: 14 ^h 59 ^m				Mag: -2.4 PMG: 1 ^h 37 ^m				Mag: -2.3 PMG: 19 ^h 30 ^m				Mag: +0.1 PMG: 23 ^h 06 ^m			
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec								
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'				
0	287	52.1	135	22.0	+12	52.8	335	42.9	-23	40.1	66	38.8	-14	49.6	12	30.6	-22	30.6		
1	302	54.6	150	21.8		51.7	350	45.8		40.3	81	41.2		49.7	27	33.2		30.6		
2	317	57.1	165	21.6		50.6	5	48.6		40.6	96	43.7		49.7	42	35.9		30.6		
3	332	59.5	180	21.4		49.5	20	51.5		40.9	111	46.2		49.7	57	38.5		30.6		
4	348	02.0	195	21.3		48.4	35	54.3		41.1	126	48.7		49.7	72	41.2		30.6		
5	3	04.4	210	21.1	+12	47.3	50	57.2	-23	41.4	141	51.1	-14	49.7	87	43.8	-22	30.7		
6	18	06.9	225	20.9	+12	46.3	66	00.0	-23	41.7	156	53.6	-14	49.7	102	46.5	-22	30.7		
7	33	09.4	240	20.7		45.2	81	02.8		41.9	171	56.1		49.7	117	49.1		30.7		
8	48	11.8	255	20.6		44.1	96	05.7		42.2	186	58.5		49.7	132	51.8		30.7		
9	63	14.3	270	20.4		43.0	111	08.5		42.5	202	01.0		49.7	147	54.5		30.7		
10	78	16.8	285	20.2		41.9	126	11.4		42.7	217	03.5		49.7	162	57.1		30.7		
11	93	19.2	300	20.0	+12	40.8	141	14.2	-23	43.0	232	05.9	-14	49.7	177	59.8	-22	30.7		
12	108	21.7	315	19.9	+12	39.7	156	17.1	-23	43.3	247	08.4	-14	49.8	193	02.4	-22	30.7		
13	123	24.2	330	19.7		38.6	171	19.9		43.5	262	10.9		49.8	208	05.1		30.7		
14	138	26.6	345	19.5		37.5	186	22.8		43.8	277	13.4		49.8	223	07.7		30.8		
15	153	29.1	0	19.3		36.4	201	25.7		44.1	292	15.8		49.8	238	10.4		30.8		
16	168	31.6	15	19.2		35.3	216	28.5		44.3	307	18.3		49.8	253	13.0		30.8		
17	183	34.0	30	19.0	+12	34.2	231	31.4	-23	44.6	322	20.8	-14	49.8	268	15.7	-22	30.8		
18	198	36.5	45	18.8	+12	33.1	246	34.2	-23	44.9	337	23.2	-14	49.8	283	18.4	-22	30.8		
19	213	38.9	60	18.7		32.0	261	37.1		45.1	352	25.7		49.8	298	21.0		30.8		
20	228	41.4	75	18.5		30.9	276	39.9		45.4	7	28.2		49.8	313	23.7		30.8		
21	243	43.9	90	18.3		29.8	291	42.8		45.7	22	30.6		49.8	328	26.3		30.8		
22	258	46.3	105	18.2		28.7	306	45.7		46.0	37	33.1		49.9	343	29.0		30.8		
23	273	48.8	120	18.0		27.6	321	48.5		46.2	52	35.6		49.9	358	31.6		30.8		
24	288	51.3	135	17.8	+12	26.5	336	51.4	-23	46.5	67	38.0	-14	49.9	13	34.3	-22	30.9		
Dif	—				-2 -11				+29 -3				+25 0				+27 0			

UT	SOL				● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7				Edad: 27 ^d 2 PHE { 4 ^h : 60 ^m /6 12 ^h : 60 ^m /8 20 ^h : 61 ^m /0 Rº: 63 ^m											
	PMG: 12 ^h 05 ^m 5				SD: 16 ^m 6 PMG: 10 ^h 23 ^m											
	hG ☉		Dec		hG ☾ Dif		Dec Dif				Civil	Náutico	Hora	Rº	Hora	Rº
h	o	'	o	'	o	'	o	'	o	h m	h m	h m	h m m		h m m	
0	178	38.3	+22	08.1	210	39.5	+19	06.8	60 N	21 14	22 37	***	1 34 48		19 24 66	
1	193	38.3		07.8	225	03.2	47	12.0	58	20 56	22 03	***	47 50		19 09 66	
2	208	38.2		07.4	239	26.8	46	17.2	56	41	21 38	***	1 59 51		18 56 66	
3	223	38.1		07.1	253	50.3	45	22.1	54	28	19	22 44	2 09 52		45 66	
4	238	38.0		06.8	268	13.8	45	27.0	52	17	21 03	22 13	18 53		35 66	
5	253	37.9	+22	06.4	282	37.1	43	+19 31.7	50	20 07	20 50	21 50	2 26 54		18 26 66	
6	268	37.8	+22	06.1	297	00.4	43	+19 36.3	45	19 47	20 23	21 10	2 43 55		18 08 65	
7	283	37.8		05.8	311	23.6	42	40.7	44	30	20 02	20 42	2 57 57		17 53 65	
8	298	37.7		05.4	325	46.8	42	45.0	35	16	19 45	21	3 09 58		40 65	
9	313	37.6		05.1	340	09.9	41	49.2	30	19 04	31	20 04	19 59		29 64	
10	328	37.5		04.8	354	32.9	40	53.2	20	18 43	19 08	19 36	37 61		17 10 64	
11	343	37.4	+22	04.4	8	55.8	39	+19 57.1	10 N	18 26	18 48	19 15	3 53 62		16 53 64	
12	358	37.3	+22	04.1	23	18.7	39	+20 00.9	0	18 09	18 31	18 57	4 08 63		16 38 63	
13	13	37.2		03.8	37	41.5	38	04.5	10 S	17 53	18 15	42	23 64		22 63	
14	28	37.2		03.4	52	04.2	37	07.9	20	36	17 59	27	39 65		16 05 63	
15	43	37.1		03.1	66	26.9	37	11.2	30	16	42	11	4 58 65		15 46 62	
16	58	37.0		02.8	80	49.6	37	14.4	32	17 04	32	18 03	5 08 67		35 61	
17	73	36.9	+22	02.4	95	12.1	35	+20 17.4	40	16 51	17 21	17 55	5 21 67		15 22 61	
18	88	36.8	+22	02.1	109	34.7	36	+20 20.3	45	16 36	17 09	17 45	5 35 69		15 07 60	
19	103	36.7		01.7	123	57.1	34	23.0	50	16	16 54	35	5 53 70		14 49 59	
20	118	36.7		01.4	138	19.5	34	25.6	52	16 07	47	30	6 02 70		40 59	
21	133	36.6		01.1	152	41.9	34	28.0	54	15 57	40	25	11 71		30 59	
22	148	36.5		00.7	167	04.2	33	30.3	56	46	32	20	22 72		19 58	
23	163	36.4	+22	00.4	181	26.5	33	32.4	58	33	22	14	34 73		14 07 57	
24	178	36.3	+22	00.0	195	48.7	32	+20 34.3	60 S	15 17	16 12	17 07	6 49 74		13 52 56	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 4 ^h 43 ^m 8		Mag: -4.1 PMG: 14 ^h 59 ^m		Mag: -2.5 PMG: 1 ^h 32 ^m		Mag: -2.3 PMG: 19 ^h 26 ^m		Mag: +0.1 PMG: 23 ^h 02 ^m	
	hG ♈		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec	
h	o	'	o	'	o	'	o	'	o	'
0	288	51.3	135	17.8	+12	26.5	336	51.4	-23	46.5
1	303	53.7	150	17.7		25.4	351	54.3		46.8
2	318	56.2	165	17.5		24.3	6	57.1		47.0
3	333	58.7	180	17.3		23.2	22	00.0		47.3
4	349	01.1	195	17.2		22.1	37	02.9		47.6
5	4	03.6	210	17.0	+12	21.0	52	05.8	-23	47.8
6	19	06.1	225	16.8	+12	19.9	67	08.6	-23	48.1
7	34	08.5	240	16.7		18.8	82	11.5		48.4
8	49	11.0	255	16.5		17.7	97	14.4		48.7
9	64	13.4	270	16.4		16.6	112	17.3		48.9
10	79	15.9	285	16.2		15.5	127	20.1		49.2
11	94	18.4	300	16.0	+12	14.3	142	23.0	-23	49.5
12	109	20.8	315	15.9	+12	13.2	157	25.9	-23	49.7
13	124	23.3	330	15.7		12.1	172	28.8		50.0
14	139	25.8	345	15.6		11.0	187	31.7		50.3
15	154	28.2	0	15.4		09.9	202	34.6		50.6
16	169	30.7	15	15.3		08.8	217	37.5		50.8
17	184	33.2	30	15.1	+12	07.7	232	40.3	-23	51.1
18	199	35.6	45	15.0	+12	06.6	247	43.2	-23	51.4
19	214	38.1	60	14.8		05.5	262	46.1		51.6
20	229	40.6	75	14.7		04.4	277	49.0		51.9
21	244	43.0	90	14.5		03.3	292	51.9		52.2
22	259	45.5	105	14.3		02.1	307	54.8		52.5
23	274	47.9	120	14.2	+12	01.0	322	57.7		52.7
24	289	50.4	135	14.0	+11	59.9	338	00.6	-23	53.0
Dif	—		-2		-11		+29		-3	
							+25		0	
									+27	

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 6				Edad: 28 ^d 2 PHE { 4 ^h : 61 ^m 1 12 ^h : 61 ^m 2 20 ^h : 61 ^m 3 R°: 63 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	o	'	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m	m
0	178	36.3	+22	00.0	195	48.7	+20	34.3	18	60 N	***	1 35	2 58	2 22	66	20 30	49	
1	193	36.3	+21	59.7	210	10.9		36.1	18	58	***	2 09	3 16		37 66		15 51	
2	208	36.2		59.3	224	33.0		37.8	17	56	***	33	30	2 50	65	20 02	52	
3	223	36.1		59.0	238	55.1		39.3	15	54	1 27	2 52	43	3 01	65	19 51	53	
4	238	36.0		58.6	253	17.2		40.6	13	52	1 59	3 08	3 54	11	65	41	54	
5	253	35.9	+21	58.3	267	39.3	+20	41.8	12	50	2 21	3 21	4 04	3 20	65	19 32	55	
6	268	35.9	+21	58.0	282	01.3	+20	42.8	10	45	3 01	3 49	4 25	3 38	66	19 13	57	
7	283	35.8		57.6	296	23.2		43.7	9	40	29	4 09	41	3 54	65	18 58	58	
8	298	35.7		57.3	310	45.2		44.4	7	35	3 50	26	4 55	4 07	65	45	59	
9	313	35.6		56.9	325	07.1		45.0	6	30	4 08	4 40	5 07	18	65	33	60	
10	328	35.5		56.6	339	29.0		45.4	4	20	35	5 04	28	38	64	18 14	61	
11	343	35.5	+21	56.2	353	50.9	+20	45.6	2	10 N	4 56	5 23	5 46	4 55	64	17 57	62	
12	358	35.4	+21	55.9	8	12.8	+20	45.7	1	0	5 14	5 40	6 02	5 11	63	17 41	63	
13	13	35.3		55.5	22	34.6		45.6	1	10 S	30	5 56	18	27	63	25	64	
14	28	35.2		55.2	36	56.4		45.4	2	20	5 45	6 12	36	5 44	63	17 08	65	
15	43	35.1		54.8	51	18.3		45.0	4	30	6 00	29	6 55	6 03	63	16 48	67	
16	58	35.1		54.4	65	40.1		44.4	6	35	08	39	7 07	15	62	36	68	
17	73	35.0	+21	54.1	80	01.9	+20	43.7	7	40	6 16	6 50	7 20	6 28	62	16 23	68	
18	88	34.9	+21	53.7	94	23.7	+20	42.8	9	45	6 25	7 02	7 35	6 44	61	16 07	70	
19	103	34.8		53.4	108	45.5		41.8	10	50	36	17	7 54	7 03	61	15 48	71	
20	118	34.8		53.0	123	07.2		40.6	12	52	41	23	8 03	12	60	39	71	
21	133	34.7		52.7	137	29.0		39.3	13	54	46	31	13	22	60	29	72	
22	148	34.6		52.3	151	50.8		37.7	16	56	51	39	24	34	59	17	73	
23	163	34.5		52.0	166	12.6		36.1	16	58	6 57	48	38	7 47	59	15 04	73	
24	178	34.4	+21	51.6	180	34.5	+20	34.2	19	60 S	7 04	7 58	8 53	8 03	58	14 48	75	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 4 ^h 39 ^m 9		Mag: -4.1 PMG: 14 ^h 59 ^m				Mag: -2.5 PMG: 1 ^h 28 ^m				Mag: -2.3 PMG: 19 ^h 22 ^m				Mag: +0.1 PMG: 22 ^h 57 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'
0	289	50.4	135	14.0	+11	59.9		58.8	338	00.6	-23	53.0	68	37.1	-14	50.2	14	38.0
1	304	52.9	150	13.9				58.8	353	03.5		53.3	83	39.6		50.2	29	40.6
2	319	55.3	165	13.8				57.7	8	06.4		53.5	98	42.0		50.2	44	43.3
3	334	57.8	180	13.6				56.6	23	09.3		53.8	113	44.5		50.2	59	45.9
4	350	00.3	195	13.5				55.5	38	12.2		54.1	128	46.9		50.2	74	48.6
5	5	02.7	210	13.3	+11	54.3		54.3	53	15.1	-23	54.4	143	49.4	-14	50.2	89	51.2
6	20	05.2	225	13.2	+11	53.2		54.6	68	18.0	-23	54.6	158	51.8	-14	50.3	104	53.9
7	35	07.7	240	13.0		52.1		54.9	83	20.9		54.9	173	54.3		50.3	119	56.5
8	50	10.1	255	12.9		51.0		55.2	98	23.8		55.2	188	56.8		50.3	134	59.2
9	65	12.6	270	12.7		49.9		55.5	113	26.7		55.5	203	59.2		50.3	150	01.8
10	80	15.1	285	12.6		48.8		55.7	128	29.6		55.7	219	01.7		50.3	165	04.5
11	95	17.5	300	12.4	+11	47.7		56.0	143	32.5	-23	56.0	234	04.1	-14	50.3	180	07.1
12	110	20.0	315	12.3	+11	46.5		56.3	158	35.4	-23	56.3	249	06.6	-14	50.3	195	09.8
13	125	22.4	330	12.2		45.4		56.6	173	38.4		56.6	264	09.0		50.4	210	12.5
14	140	24.9	345	12.0		44.3		56.8	188	41.3		56.8	279	11.5		50.4	225	15.1
15	155	27.4	0	11.9		43.2		57.1	203	44.2		57.1	294	13.9		50.4	240	17.8
16	170	29.8	15	11.7		42.1		57.4	218	47.1		57.4	309	16.4		50.4	255	20.4
17	185	32.3	30	11.6	+11	40.9		57.7	233	50.0	-23	57.7	324	18.8	-14	50.4	270	23.1
18	200	34.8	45	11.5	+11	39.8		57.9	248	52.9	-23	57.9	339	21.3	-14	50.4	285	25.7
19	215	37.2	60	11.3		38.7		58.2	263	55.9		58.2	354	23.7		50.4	300	28.4
20	230	39.7	75	11.2		37.6		58.5	278	58.8		58.5	9	26.2		50.5	315	31.0
21	245	42.2	90	11.0		36.5		58.7	294	01.7		58.7	24	28.6		50.5	330	33.7
22	260	44.6	105	10.9		35.3		59.0	309	04.6		59.0	39	31.1		50.5	345	36.3
23	275	47.1	120	10.8		34.2		59.3	324	07.5		59.3	54	33.6		50.5	0	39.0
24	290	49.6	135	10.6	+11	33.1		59.6	339	10.5	-23	59.6	69	36.0	-14	50.5	15	41.6
Dif	—		-1		-11		+29		-3		+25		0		+27			

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 29 ^d 2 PHE { 4 ^h : 61 ^h 3 12 ^h : 61 ^h 3 20 ^h : 61 ^h 3					Civil			Náutico		Hora R°	
	PMG: 12 ^h 05 ^m 8			PMG: 12 ^h 29 ^m R°: 63 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif					Hora	R°	Hora	R°
h	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m
0	178	34.4	+21	51.6	180	34.5	+20	21 11	22 31	21 59	*** **	3 28	81	21 19	35
1	193	34.4		51.2	194	56.3	28	20 53	21 59		*** **	43	79	21 06	37
2	208	34.3		50.9	209	18.1	28	39	35	23 34		3 55	78	20 54	40
3	223	34.2		50.5	223	40.0	29	26	17	22 39		4 06	77	44	42
4	238	34.1		50.2	238	01.8	28	15	21 01	22 09		16	76	35	44
5	253	34.1	+21	49.8	252	23.7	29	20 06	20 48	21 47		4 25	75	20 27	45
6	268	34.0	+21	49.4	266	45.6	29	19 45	20 21	21 08		4 44	72	20 10	48
7	283	33.9		49.1	281	07.6	30	29	20 01	20 41		4 59	70	19 56	50
8	298	33.8		48.7	295	29.5	29	15	19 44	20		5 12	69	44	52
9	313	33.8		48.3	309	51.5	30	19 03	30	20 03		23	68	33	54
10	328	33.7		48.0	324	13.5	30	18 43	19 07	19 36		42	66	19 15	57
11	343	33.6	+21	47.6	338	35.6	31	18 26	18 48	19 15		5 59	64	18 59	60
12	358	33.5	+21	47.2	352	57.6	30	18 09	18 32	18 58		6 14	63	18 44	62
13	13	33.5		46.9	7	19.7	31	17 53	16	42		30	61	29	64
14	28	33.4		46.5	21	41.9	32	36	18 00	27		6 47	59	18 13	66
15	43	33.3		46.1	36	04.1	32	17	17 43	12		7 06	57	17 55	69
16	58	33.2		45.8	50	26.3	32	17 05	33	18 04		17	56	44	70
17	73	33.2	+21	45.4	64	48.6	33	16 52	17 22	17 56		7 30	54	17 31	73
18	88	33.1	+21	45.0	79	10.9	33	16 37	17 10	17 47		7 45	52	17 17	74
19	103	33.0		44.7	93	33.3	34	18	16 56	37		8 04	50	16 59	77
20	118	33.0		44.3	107	55.7	34	10	49	32		12	49	50	79
21	133	32.9		43.9	122	18.1	34	50	42	27		22	47	41	80
22	148	32.8		43.5	136	40.7	36	15 48	34	22		33	46	30	82
23	163	32.7		43.2	151	03.2	35	36	25	16		8 46	43	17	85
24	178	32.7	+21	42.8	165	25.9	37	15 20	16 15	17 09		9 01	41	16 03	88

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 4 ^h 35 ^m 9		Mag: -4.2 PMG: 14 ^h 59 ^m		Mag: -2.5 PMG: 1 ^h 23 ^m		Mag: -2.3 PMG: 19 ^h 18 ^m		Mag: +0.1 PMG: 22 ^h 53 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	o	'	o	'	o	'	o	'	o	'								
0	290	49.6	135	10.6	+11	33.1	339	10.5	-23	59.6	69	36.0	-14	50.5	15	41.6	-22	31.4
1	305	52.0	150	10.5		32.0	354	13.4	-23	59.8	84	38.5		50.5	30	44.3		31.4
2	320	54.5	165	10.4		30.8	9	16.3	-24	00.1	99	40.9		50.6	45	46.9		31.4
3	335	56.9	180	10.2		29.7	24	19.3		00.4	114	43.4		50.6	60	49.6		31.4
4	350	59.4	195	10.1		28.6	39	22.2		00.7	129	45.8		50.6	75	52.2		31.4
5	6	01.9	210	10.0	+11	27.5	54	25.1	-24	00.9	144	48.2	-14	50.6	90	54.9	-22	31.4
6	21	04.3	225	09.8	+11	26.3	69	28.0	-24	01.2	159	50.7	-14	50.6	105	57.5	-22	31.4
7	36	06.8	240	09.7		25.2	84	31.0		01.5	174	53.1		50.6	121	00.2		31.4
8	51	09.3	255	09.6		24.1	99	33.9		01.8	189	55.6		50.6	136	02.8		31.5
9	66	11.7	270	09.5		23.0	114	36.9		02.1	204	58.0		50.7	151	05.5		31.5
10	81	14.2	285	09.3		21.8	129	39.8		02.3	220	00.5		50.7	166	08.1		31.5
11	96	16.7	300	09.2	+11	20.7	144	42.7	-24	02.6	235	02.9	-14	50.7	181	10.8	-22	31.5
12	111	19.1	315	09.1	+11	19.6	159	45.7	-24	02.9	250	05.4	-14	50.7	196	13.4	-22	31.5
13	126	21.6	330	08.9		18.5	174	48.6		03.2	265	07.8		50.7	211	16.1		31.5
14	141	24.0	345	08.8		17.3	189	51.5		03.4	280	10.3		50.7	226	18.7		31.5
15	156	26.5	0	08.7		16.2	204	54.5		03.7	295	12.7		50.8	241	21.4		31.5
16	171	29.0	15	08.6		15.1	219	57.4		04.0	310	15.2		50.8	256	24.0		31.5
17	186	31.4	30	08.5	+11	13.9	235	00.4	-24	04.3	325	17.6	-14	50.8	271	26.7	-22	31.6
18	201	33.9	45	08.3	+11	12.8	250	03.3	-24	04.5	340	20.1	-14	50.8	286	29.3	-22	31.6
19	216	36.4	60	08.2		11.7	265	06.3		04.8	355	22.5		50.8	301	32.0		31.6
20	231	38.8	75	08.1		10.5	280	09.2		05.1	10	24.9		50.9	316	34.6		31.6
21	246	41.3	90	08.0		09.4	295	12.2		05.4	25	27.4		50.9	331	37.3		31.6
22	261	43.8	105	07.8		08.3	310	15.1		05.6	40	29.8		50.9	346	39.9		31.6
23	276	46.2	120	07.7		07.2	325	18.1		05.9	55	32.3		50.9	1	42.6		31.6
24	291	48.7	135	07.6	+11	06.0	340	21.0	-24	06.2	70	34.7	-14	50.9	16	45.2	-22	31.6
Dif	—		-1		-11		+29		-3		+24		0		+27			

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7 PMG: 12 ^h 05 ^m 9				Edad: 0 ^d 9 PHE { 4 ^h : 61 ^m 2 12 ^h : 61 ^m 1 20 ^h : 61 ^m 0 PMG: 13 ^h 32 ^m R°: 59 ^m													
	hG ☉		Dec		hG ☾		Dif			Dif			Náutico	Civil	Hora	R°	Hora	R°
h	o	'	o	'	o	'	o	'	o	'	h	m	h	m	h	m	h	m
0	178	32.7	+21	42.8	165	25.9	+19	04.1	60 N	*** **	1 41	3 01	4 49	91	21 54	24		
1	193	32.6		42.4	179	48.5	+18	58.5	58	*** **	2 13	19	5 02	88	43	28		
2	208	32.5		42.0	194	11.3		52.7	58	0 38	37	33	13	85	34	3		
3	223	32.5		41.7	208	34.1		46.9	58	1 33	2 55	46	23	83	26	33		
4	238	32.4		41.3	222	57.0		40.8	61	2 03	3 11	3 57	32	81	19	34		
5	253	32.3	+21	40.9	237	19.9	+18	34.7	61	2 25	3 24	4 06	5 40	79	21 12	37		
6	268	32.2	+21	40.5	251	42.9	+18	28.4	63	3 04	3 50	4 27	5 56	76	20 58	40		
7	283	32.2		40.2	266	05.9		22.0	64	31	4 11	43	6 09	74	46	44		
8	298	32.1		39.8	280	29.1		15.4	66	3 52	28	4 57	21	71	36	46		
9	313	32.0		39.4	294	52.2		08.7	67	4 09	4 42	5 09	31	69	27	48		
10	328	32.0		39.0	309	15.5	+18	01.9	68	36	5 05	29	6 48	66	20 12	52		
11	343	31.9	+21	38.6	323	38.8	+17	55.0	69	4 57	5 23	5 46	7 03	63	19 59	55		
12	358	31.8	+21	38.3	338	02.2	+17	47.9	71	5 14	5 40	6 02	7 17	60	19 46	58		
13	13	31.8		37.9	352	25.7		40.7	72	30	5 56	18	31	57	33	61		
14	28	31.7		37.5	6	49.3		33.4	73	20	44	6 12	35	7 46	54	19	65	
15	43	31.6		37.1	21	12.9		26.0	74	30	5 59	29	6 55	8 03	51	19 04	68	
16	58	31.5		36.7	35	36.6		18.4	76	35	6 07	38	7 06	13	49	18 54	71	
17	73	31.5	+21	36.3	50	00.4	+17	10.7	77	40	6 15	6 49	7 19	8 24	47	18 44	73	
18	88	31.4	+21	35.9	64	24.3	+17	02.9	78	45	6 24	7 01	7 34	8 37	44	18 31	77	
19	103	31.3		35.6	78	48.2	+16	55.0	79	50	35	15	7 53	8 54	40	16	80	
20	118	31.3		35.2	93	12.2		47.0	80	52	39	22	8 01	9 01	39	09	82	
21	133	31.2		34.8	107	36.3		38.9	81	54	44	29	11	09	37	18 01	84	
22	148	31.1		34.4	122	00.5		30.6	83	56	49	37	22	19	34	17 52	87	
23	163	31.1		34.0	136	24.8		22.3	83	58	6 55	46	35	29	32	42	90	
24	178	31.0	+21	33.6	150	49.1	+16	13.8	85	60 S	7 02	7 56	8 50	9 42	28	17 31	92	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 4 ^h 32 ^m 0		Mag: -4.2 PMG: 15 ^h 00 ^m		Mag: -2.5 PMG: 1 ^h 18 ^m		Mag: -2.3 PMG: 19 ^h 15 ^m		Mag: +0.1 PMG: 22 ^h 49 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	o	'	o	'	o	'	o	'	o	'								
0	291	48.7	135	07.6	+11	06.0	340	21.0	-24	06.2	70	34.7	-14	50.9	16	45.2	-22	31.6
1	306	51.2	150	07.5		04.9	355	24.0		06.5	85	37.2		50.9	31	47.9		31.6
2	321	53.6	165	07.4		03.8	10	26.9		06.7	100	39.6		51.0	46	50.5		31.7
3	336	56.1	180	07.2		02.6	25	29.9		07.0	115	42.0		51.0	61	53.2		31.7
4	351	58.5	195	07.1		01.5	40	32.8		07.3	130	44.5		51.0	76	55.8		31.7
5	7	01.0	210	07.0	+11	00.3	55	35.8	-24	07.6	145	46.9	-14	51.0	91	58.5	-22	31.7
6	22	03.5	225	06.9	+10	59.2	70	38.8	-24	07.9	160	49.4	-14	51.0	107	01.1	-22	31.7
7	37	05.9	240	06.8		58.1	85	41.7		08.1	175	51.8		51.0	122	03.8		31.7
8	52	08.4	255	06.7		56.9	100	44.7		08.4	190	54.3		51.1	137	06.4		31.7
9	67	10.9	270	06.6		55.8	115	47.7		08.7	205	56.7		51.1	152	09.1		31.7
10	82	13.3	285	06.4		54.7	130	50.6		09.0	220	59.1		51.1	167	11.7		31.7
11	97	15.8	300	06.3	+10	53.5	145	53.6	-24	09.2	236	01.6	-14	51.1	182	14.4	-22	31.7
12	112	18.3	315	06.2	+10	52.4	160	56.5	-24	09.5	251	04.0	-14	51.1	197	17.0	-22	31.8
13	127	20.7	330	06.1		51.3	175	59.5		09.8	266	06.5		51.2	212	19.7		31.8
14	142	23.2	345	06.0		50.1	191	02.5		10.1	281	08.9		51.2	227	22.3		31.8
15	157	25.7	0	05.9		49.0	206	05.5		10.3	296	11.3		51.2	242	25.0		31.8
16	172	28.1	15	05.8		47.8	221	08.4		10.6	311	13.8		51.2	257	27.6		31.8
17	187	30.6	30	05.7	+10	46.7	236	11.4	-24	10.9	326	16.2	-14	51.2	272	30.3	-22	31.8
18	202	33.0	45	05.6	+10	45.6	251	14.4	-24	11.2	341	18.6	-14	51.3	287	32.9	-22	31.8
19	217	35.5	60	05.5		44.4	266	17.3		11.5	356	21.1		51.3	302	35.6		31.8
20	232	38.0	75	05.3		43.3	281	20.3		11.7	11	23.5		51.3	317	38.2		31.8
21	247	40.4	90	05.2		42.1	296	23.3		12.0	26	26.0		51.3	332	40.9		31.9
22	262	42.9	105	05.1		41.0	311	26.3		12.3	41	28.4		51.3	347	43.5		31.9
23	277	45.4	120	05.0		39.9	326	29.2		12.6	56	30.8		51.4	2	46.2		31.9
24	292	47.8	135	04.9	+10	38.7	341	32.2	-24	12.8	71	33.3	-14	51.4	17	48.8	-22	31.9
Dif	—		-1		-11		+30		-3		+24		0		+26			

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7			Edad: 1 ^d 9	PHE {	4 ^h : 60 ^m /8 12 ^h : 60 ^m /6 20 ^h : 60 ^m /4										
	PMG: 12 ^h 06 ^m 0								SD: 16 ^h 5		PMG: 14 ^h 31 ^m		R ^o : 55 ^m			
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R ^o	Hora	R ^o	
h	o	'	o	'	o	'	o	'	h m	h m	h m	h m m	h m m	h m m	m	
0	178	31.0	+21	33.6	150	49.1	+16	13.8	60 N	21 07	22 25	*** **	6 20 93	22 18 19		
1	193	30.9		33.2	165	13.5	+16	05.2	58	20 50	21 54	*** **	30 89	11 22		
2	208	30.9		32.8	179	38.1	+15	56.5	56	36	32	23 21	38 87	22 05 24		
3	223	30.8		32.4	194	02.7		47.8	54	24	21 14	22 34	46 84	21 59 26		
4	238	30.7		32.1	208	27.3		38.9	52	13	20 59	22 05	53 81	53 29		
5	253	30.7	+21	31.7	222	52.1	+15	29.9	50	20 04	20 46	21 44	6 59 80	21 49 30		
6	268	30.6	+21	31.3	237	17.0	+15	20.8	45	19 44	20 20	21 06	7 12 76	21 38 35		
7	283	30.6		30.9	251	41.9		11.6	40	28	20 00	20 40	23 72	30 37		
8	298	30.5		30.5	266	06.9	+15	02.4	35	14	19 43	19	32 69	22 40		
9	313	30.4		30.1	280	32.1	+14	53.0	30	19 03	30	20 02	40 67	15 43		
10	328	30.4		29.7	294	57.3		43.5	20	18 43	19 07	19 35	7 54 63	21 04 47		
11	343	30.3	+21	29.3	309	22.6	+14	34.0	10 N	18 26	18 48	19 15	8 06 59	20 54 51		
12	358	30.2	+21	28.9	323	47.9	+14	24.3	0	18 10	18 32	18 58	8 17 56	20 44 54		
13	13	30.2		28.5	338	13.4		14.6	10 S	17 54	16	42	28 53	34 58		
14	28	30.1		28.1	352	39.0	+14	04.8	20	37	18 01	28	40 49	24 62		
15	43	30.0		27.7	7	04.6	+13	54.9	30	18	17 44	13	8 54 45	12 66		
16	58	30.0		27.3	21	30.3		44.9	35	17 07	34	18 05	9 02 42	20 05 69		
17	73	29.9	+21	26.9	35	56.2	+13	34.9	40	16 54	17 24	17 57	9 11 40	19 57 72		
18	88	29.9	+21	26.5	50	22.1	+13	24.7	45	16 39	17 12	17 48	9 21 37	19 48 75		
19	103	29.8		26.1	64	48.1		14.5	50	21	16 58	38	34 33	36 80		
20	118	29.7		25.7	79	14.2	+13	04.2	52	12	51	34	40 31	31 81		
21	133	29.7		25.3	93	40.4	+12	53.9	54	16 02	44	29	46 29	25 84		
22	148	29.6		24.9	108	06.6		43.4	56	15 51	36	24	9 53 27	19 86		
23	163	29.5		24.5	122	33.0		32.9	58	39	27	18	10 01 24	12 88		
24	178	29.5	+21	24.1	136	59.4	+12	22.3	60 S	15 24	16 17	17 12	10 10 21	19 03 92		
UT	ARIES		VENUS			MARTE			JÚPITER				SATURNO			
	PMG: 4 ^h 28 ^m 1		Mag: -4.2 PMG: 15 ^h 00 ^m			Mag: -2.6 PMG: 1 ^h 14 ^m			Mag: -2.3 PMG: 19 ^h 11 ^m				Mag: +0.1 PMG: 22 ^h 45 ^m			
	hG ♈	hG ♀		Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'		
0	292	47.8	135	04.9	+10	38.7	341	32.2	-24	12.8	71	33.3	-14	51.4	17	48.8
1	307	50.3	150	04.8		37.6	356	35.2		13.1	86	35.7		51.4	32	51.5
2	322	52.8	165	04.7		36.4	11	38.2		13.4	101	38.1		51.4	47	54.1
3	337	55.2	180	04.6		35.3	26	41.2		13.7	116	40.6		51.4	62	56.8
4	352	57.7	195	04.5		34.1	41	44.2		13.9	131	43.0		51.5	77	59.4
5	8	00.2	210	04.4	+10	33.0	56	47.1	-24	14.2	146	45.4	-14	51.5	93	02.1
6	23	02.6	225	04.3	+10	31.9	71	50.1	-24	14.5	161	47.9	-14	51.5	108	04.7
7	38	05.1	240	04.2		30.7	86	53.1		14.8	176	50.3		51.5	123	07.4
8	53	07.5	255	04.1		29.6	101	56.1		15.1	191	52.7		51.5	138	10.0
9	68	10.0	270	04.0		28.4	116	59.1		15.3	206	55.2		51.6	153	12.7
10	83	12.5	285	03.9		27.3	132	02.1		15.6	221	57.6		51.6	168	15.3
11	98	14.9	300	03.8	+10	26.1	147	05.1	-24	15.9	237	00.0	-14	51.6	183	17.9
12	113	17.4	315	03.7	+10	25.0	162	08.1	-24	16.2	252	02.5	-14	51.6	198	20.6
13	128	19.9	330	03.6		23.8	177	11.0		16.4	267	04.9		51.6	213	23.2
14	143	22.3	345	03.5		22.7	192	14.0		16.7	282	07.3		51.7	228	25.9
15	158	24.8	0	03.4		21.5	207	17.0		17.0	297	09.8		51.7	243	28.5
16	173	27.3	15	03.4		20.4	222	20.0		17.3	312	12.2		51.7	258	31.2
17	188	29.7	30	03.3	+10	19.3	237	23.0	-24	17.6	327	14.6	-14	51.7	273	33.8
18	203	32.2	45	03.2	+10	18.1	252	26.0	-24	17.8	342	17.1	-14	51.8	288	36.5
19	218	34.6	60	03.1		17.0	267	29.0		18.1	357	19.5		51.8	303	39.1
20	233	37.1	75	03.0		15.8	282	32.0		18.4	12	21.9		51.8	318	41.8
21	248	39.6	90	02.9		14.7	297	35.0		18.7	27	24.3		51.8	333	44.4
22	263	42.0	105	02.8		13.5	312	38.0		18.9	42	26.8		51.8	348	47.1
23	278	44.5	120	02.7		12.4	327	41.0		19.2	57	29.2		51.9	3	49.7
24	293	47.0	135	02.6	+10	11.2	342	44.0	-24	19.5	72	31.6	-14	51.9	18	52.4
Dif	—		-1		-11		+30		-3		+24		0		+26	

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7 PMG: 12 ^h 06 ^m 1				Edad: 2 ^d 9 PHE { 4 ^h : 60 ^m 2 12 ^h : 59 ^m 9 20 ^h : 59 ^m 6 PMG: 15 ^h 26 ^m R°: 52 ^m												
	hG ☉		Dec		hG ☾ Dif		Dec Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	o	'	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m
0	178	29.5	+21	24.1	136	59.4	+12	22.3	60 N	*** **	1 48	3 05	7 53	90	22 37	16	
1	193	29.4		23.7	151	25.9	75	11.7	58	*** **	2 18	22	7 59	87	33	18	
2	208	29.4		23.3	165	52.6	77	+12	01.0	56	0 52	41	8 05	84	29	20	
3	223	29.3		22.9	180	19.3	77	+11	50.2	54	1 39	2 59	10	82	25	23	
4	238	29.2		22.4	194	46.1	78		39.4	52	2 07	3 14	14	80	22	25	
5	253	29.2	+21	22.0	209	12.9	78	+11	28.5	50	2 28	3 27	8 19	77	22 19	27	
6	268	29.1	+21	21.6	223	39.9	80	+11	17.5	45	3 06	3 53	8 28	73	22 13	30	
7	283	29.1		21.2	238	07.0	81	+11	06.5	40	33	4 13	35	70	07	34	
8	298	29.0		20.8	252	34.1	81	+10	55.5	35	3 54	29	41	67	22 02	37	
9	313	28.9		20.4	267	01.3	82		44.3	30	4 10	4 43	47	64	21 58	39	
10	328	28.9		20.0	281	28.6	83		33.2	20	37	5 05	8 57	60	51	44	
11	343	28.8	+21	19.6	295	56.0	84	+10	21.9	10 N	4 57	5 24	9 05	56	21 45	47	
12	358	28.8	+21	19.2	310	23.5	85	+10	10.7	0	5 14	5 40	9 13	53	21 38	52	
13	13	28.7		18.8	324	51.0	85	+9	59.3	10 S	30	5 56	21	49	32	55	
14	28	28.7		18.3	339	18.7	87		48.0	20	44	6 11	35	29	45	26	58
15	43	28.6		17.9	353	46.4	87		36.6	30	5 59	28	39	41	18	63	
16	58	28.5		17.5	8	14.2	88		25.1	35	6 06	38	44	39	14	66	
17	73	28.5	+21	17.1	22	42.1	89	+9	13.6	40	6 14	6 48	9 51	35	21 09	68	
18	88	28.4	+21	16.7	37	10.1	90	+9	02.1	45	6 23	7 00	9 58	32	21 03	72	
19	103	28.4		16.3	51	38.1	90	+8	50.5	50	33	14	10 07	28	20 56	76	
20	118	28.3		15.8	66	06.2	91		38.9	52	38	20	11	26	52	79	
21	133	28.3		15.4	80	34.4	92		27.2	54	43	27	15	24	49	80	
22	148	28.2		15.0	95	02.7	93		15.5	56	48	35	20	22	45	83	
23	163	28.1		14.6	109	31.1	94	+8	03.8	58	53	44	25	19	40	86	
24	178	28.1	+21	14.2	123	59.5	94	+7	52.0	60 S	6 59	7 54	10 31	17	20 35	89	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 4 ^h 24 ^m 1		Mag: -4.2 PMG: 15 ^h 00 ^m		Mag: -2.6 PMG: 1 ^h 09 ^m		Mag: -2.3 PMG: 19 ^h 07 ^m		Mag: +0.1 PMG: 22 ^h 41 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	o	'	o	'	o	'	o	'	o	'
0	293	47.0	135	02.6	+10	11.2	342	44.0	-24	19.5
1	308	49.4	150	02.5		10.1	357	47.0		19.8
2	323	51.9	165	02.4		08.9	12	50.0		20.1
3	338	54.4	180	02.4		07.7	27	53.1		20.3
4	353	56.8	195	02.3		06.6	42	56.1		20.6
5	8	59.3	210	02.2	+10	05.4	57	59.1	-24	20.9
6	24	01.8	225	02.1	+10	04.3	73	02.1	-24	21.2
7	39	04.2	240	02.0		03.1	88	05.1		21.4
8	54	06.7	255	01.9		02.0	103	08.1		21.7
9	69	09.1	270	01.8	+10	00.8	118	11.1		22.0
10	84	11.6	285	01.8	+9	59.7	133	14.1		22.3
11	99	14.1	300	01.7	+9	58.5	148	17.1	-24	22.6
12	114	16.5	315	01.6	+9	57.4	163	20.2	-24	22.8
13	129	19.0	330	01.5		56.2	178	23.2		23.1
14	144	21.5	345	01.4		55.1	193	26.2		23.4
15	159	23.9	0	01.4		53.9	208	29.2		23.7
16	174	26.4	15	01.3		52.7	223	32.2		23.9
17	189	28.9	30	01.2	+9	51.6	238	35.3	-24	24.2
18	204	31.3	45	01.1	+9	50.4	253	38.3	-24	24.5
19	219	33.8	60	01.1		49.3	268	41.3		24.8
20	234	36.3	75	01.0		48.1	283	44.3		25.0
21	249	38.7	90	00.9		47.0	298	47.3		25.3
22	264	41.2	105	00.8		45.8	313	50.4		25.6
23	279	43.6	120	00.7		44.6	328	53.4		25.9
24	294	46.1	135	00.7	+9	43.5	343	56.4	-24	26.2
Dif	—		-1		-12		+30		-3	
							+24		0	
									+26	
									0	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 15 ^h 7 PMG: 12 ^h 06 ^m 2			Edad: 3 ^d 9 PHE { 4 ^h : 59 ^h 3 12 ^h : 59 ^h 0 20 ^h : 58 ^h 7 R°: 49 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	o	'	o	'	o	'	o	'	h m	h m	h m	h m m	h m m	h m m				
0	178	28.1	+21	14.2	123	59.5	+7	52.0	60 N	21 04	22 19	*** **	9 23	87	22 53	13		
1	193	28.0		13.7	138	28.0	95	40.3	58	20 47	21 50	*** **	26	84	51	16		
2	208	28.0		13.3	152	56.6	96	28.5	56	34	28	23 10	29	81	49	19		
3	223	27.9		12.9	167	25.3	97	16.6	54	22	21 11	22 28	32	79	48	21		
4	238	27.9		12.5	181	54.0	97	+7 04.7	52	11	20 56	22 01	34	77	47	23		
5	253	27.8	+21	12.1	196	22.8	98	+6 52.9	50	20 02	20 44	21 41	9 36	75	22 46	24		
6	268	27.8	+21	11.6	210	51.7	99	+6 40.9	45	19 42	20 18	21 04	9 41	71	22 43	28		
7	283	27.7		11.2	225	20.7	100	29.0	40	27	19 58	20 38	45	67	41	32		
8	298	27.7		10.8	239	49.7	100	17.0	35	13	42	18	48	65	39	34		
9	313	27.6		10.4	254	18.8	101	+6 05.1	30	19 02	29	20 01	51	62	37	37		
10	328	27.5		09.9	268	47.9	101	+5 53.1	20	18 42	19 06	19 35	9 57	57	35	41		
11	343	27.5	+21	09.5	283	17.2	103	+5 41.1	10 N	18 25	18 48	19 15	10 01	54	22 32	45		
12	358	27.4	+21	09.1	297	46.5	103	+5 29.0	0	18 10	18 32	18 58	10 06	49	22 30	48		
13	13	27.4		08.7	312	15.8	103	17.0	10 S	17 54	17	43	10	46	27	52		
14	28	27.3		08.2	326	45.3	105	+5 04.9	20	38	18 01	28	14	43	24	57		
15	43	27.3		07.8	341	14.8	105	+4 52.9	30	19	17 45	14	20	37	21	61		
16	58	27.2		07.4	355	44.3	105	40.8	35	17 08	35	18 07	23	35	20	63		
17	73	27.2	+21	06.9	10	13.9	106	+4 28.7	40	16 55	17 25	17 59	10 26	32	22 17	67		
18	88	27.1	+21	06.5	24	43.6	107	+4 16.6	45	16 41	17 14	17 50	10 30	29	22 15	70		
19	103	27.1		06.1	39	13.4	108	+4 04.5	50	23	17 00	40	35	25	12	74		
20	118	27.0		05.6	53	43.2	108	+3 52.4	52	14	16 53	36	37	23	11	75		
21	133	27.0		05.2	68	13.0	108	40.3	54	16 05	46	31	39	21	09	78		
22	148	26.9		04.8	82	43.0	110	28.2	56	15 54	39	26	42	19	08	80		
23	163	26.9		04.3	97	13.0	110	16.1	58	42	30	21	44	17	06	83		
24	178	26.8	+21	03.9	111	43.0	110	+3 04.0	60 S	15 28	16 21	17 15	10 48	14	22 04	85		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 4 ^h 20 ^m 2		Mag: -4.2 PMG: 15 ^h 00 ^m				Mag: -2.6 PMG: 1 ^h 04 ^m				Mag: -2.2 PMG: 19 ^h 03 ^m				Mag: +0.1 PMG: 22 ^h 36 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'
0	294	46.1	135	00.7	+9	43.5	343	56.4	-24	26.2	73	29.8	-14	52.5	19	55.9	-22	32.4
1	309	48.6	150	00.6		42.3	358	59.5		26.4	88	32.2		52.5	34	58.5		32.4
2	324	51.0	165	00.5		41.2	14	02.5		26.7	103	34.6		52.5	50	01.1		32.4
3	339	53.5	180	00.5		40.0	29	05.5		27.0	118	37.1		52.5	65	03.8		32.4
4	354	56.0	195	00.4		38.8	44	08.5		27.3	133	39.5		52.6	80	06.4		32.4
5	9	58.4	210	00.3	+9	37.7	59	11.6	-24	27.5	148	41.9	-14	52.6	95	09.1	-22	32.4
6	25	00.9	225	00.2	+9	36.5	74	14.6	-24	27.8	163	44.3	-14	52.6	110	11.7	-22	32.4
7	40	03.4	240	00.2		35.4	89	17.6		28.1	178	46.7		52.6	125	14.4		32.5
8	55	05.8	255	00.1		34.2	104	20.7		28.4	193	49.2		52.7	140	17.0		32.5
9	70	08.3	270	00.0		33.0	119	23.7		28.6	208	51.6		52.7	155	19.7		32.5
10	85	10.7	285	00.0		31.9	134	26.8		28.9	223	54.0		52.7	170	22.3		32.5
11	100	13.2	299	59.9	+9	30.7	149	29.8	-24	29.2	238	56.4	-14	52.7	185	24.9	-22	32.5
12	115	15.7	314	59.8	+9	29.5	164	32.8	-24	29.5	253	58.8	-14	52.8	200	27.6	-22	32.5
13	130	18.1	329	59.8		28.4	179	35.9		29.8	269	01.2		52.8	215	30.2		32.5
14	145	20.6	344	59.7		27.2	194	38.9		30.0	284	03.7		52.8	230	32.9		32.5
15	160	23.1	359	59.6		26.1	209	41.9		30.3	299	06.1		52.8	245	35.5		32.5
16	175	25.5	14	59.6		24.9	224	45.0		30.6	314	08.5		52.9	260	38.2		32.5
17	190	28.0	29	59.5	+9	23.7	239	48.0	-24	30.9	329	10.9	-14	52.9	275	40.8	-22	32.6
18	205	30.5	44	59.4	+9	22.6	254	51.1	-24	31.1	344	13.3	-14	52.9	290	43.4	-22	32.6
19	220	32.9	59	59.4		21.4	269	54.1		31.4	359	15.7		52.9	305	46.1		32.6
20	235	35.4	74	59.3		20.2	284	57.2		31.7	14	18.2		53.0	320	48.7		32.6
21	250	37.9	89	59.3		19.1	300	00.2		32.0	29	20.6		53.0	335	51.4		32.6
22	265	40.3	104	59.2		17.9	315	03.3		32.2	44	23.0		53.0	350	54.0		32.6
23	280	42.8	119	59.1		16.7	330	06.3		32.5	59	25.4		53.0	5	56.7		32.6
24	295	45.2	134	59.1	+9	15.6	345	09.4	-24	32.8	74	27.8	-14	53.1	20	59.3	-22	32.6
Dif	—		-1		-12		+30		-3		+24		0		+26			

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7 ^m PMG: 12 ^h 06 ^m 3			Edad: 4 ^d 9 PHE { 4 ^h : 58'4 12 ^h : 58'1 20 ^h : 57'8 SD: 15 ^h 8 PMG: 17 ^h 07 ^m R°: 47 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	o	'	o	'	o	'	o	'	h	m	h	m	h	m	h	m
0	178	26.8	+21	03.9	111	43.0	+3	04.0	60 N	***	1 54	3 09	10 50	83	23 06	14
1	193	26.8		03.5	126	13.1	+2	51.8	58	***	2 23	26	50	81	07	17
2	208	26.7		03.0	140	43.3		39.7	56	1 03	2 45	39	50	79	08	19
3	223	26.7		02.6	155	13.5		27.6	54	1 45	3 02	3 51	51	76	09	20
4	238	26.6		02.2	169	43.7		15.5	52	2 11	17	4 02	51	74	10	22
5	253	26.6	+21	01.7	184	14.0	+2	03.4	50	2 32	3 29	4 11	10 51	72	23 10	24
6	268	26.5	+21	01.3	198	44.4	+1	51.3	45	3 09	3 55	4 30	10 52	68	23 11	28
7	283	26.5		00.8	213	14.8		39.2	40	35	4 14	46	52	65	13	30
8	298	26.4	+21	00.4	227	45.3		27.1	35	3 55	30	4 59	53	62	13	34
9	313	26.4	+21	00.0	242	15.8		15.1	30	4 12	4 44	5 11	53	60	14	36
10	328	26.3	+20	59.5	256	46.4	+1	03.0	20	38	5 06	30	54	55	16	40
11	343	26.3	+20	59.1	271	17.0	+0	50.9	10 N	4 58	5 24	5 47	10 55	51	23 17	44
12	358	26.3	+20	58.6	285	47.6	+0	38.9	0	5 15	5 41	6 03	10 55	48	23 18	47
13	13	26.2		58.2	300	18.3		26.9	10 S	30	5 56	18	56	44	19	51
14	28	26.2		57.7	314	49.1		14.8	20	44	6 11	35	57	40	21	54
15	43	26.1		57.3	329	19.9	+0	02.8	30	5 58	27	6 53	57	37	22	59
16	58	26.1		56.9	343	50.7	-0	09.1	35	6 06	37	7 04	58	34	23	61
17	73	26.0	+20	56.4	358	21.6	-0	21.1	40	6 13	6 47	7 17	10 58	31	23 24	64
18	88	26.0	+20	56.0	12	52.5	-0	33.1	45	6 22	6 58	7 31	10 59	28	23 25	67
19	103	25.9		55.5	27	23.4		45.0	50	32	7 12	49	11 00	24	26	71
20	118	25.9		55.1	41	54.4	-0	56.9	52	36	18	7 57	00	22	26	73
21	133	25.8		54.6	56	25.5	-1	08.8	54	41	25	8 07	00	21	27	75
22	148	25.8		54.2	70	56.5		20.7	56	46	33	17	01	18	28	77
23	163	25.8		53.7	85	27.7		32.5	58	51	41	29	01	16	29	79
24	178	25.7	+20	53.3	99	58.8	-1	44.3	60 S	6 57	7 51	8 44	11 02	13	23 29	83
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 4 ^h 16 ^m 3		Mag: -4.2 PMG: 15 ^h 00 ^m			Mag: -2.6 PMG: 0 ^h 59 ^m			Mag: -2.2 PMG: 18 ^h 59 ^m			Mag: +0.1 PMG: 22 ^h 32 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'
0	295	45.2	134	59.1	+9	15.6	345	09.4	-24	32.8	74	27.8	-14	53.1	20	59.3
1	310	47.7	149	59.0		14.4	0	12.4		33.1	89	30.2		53.1	36	01.9
2	325	50.2	164	59.0		13.2	15	15.5		33.3	104	32.6		53.1	51	04.6
3	340	52.6	179	58.9		12.1	30	18.5		33.6	119	35.1		53.1	66	07.2
4	355	55.1	194	58.9		10.9	45	21.6		33.9	134	37.5		53.2	81	09.9
5	10	57.6	209	58.8	+9	09.7	60	24.6	-24	34.2	149	39.9	-14	53.2	96	12.5
6	26	00.0	224	58.7	+9	08.6	75	27.7	-24	34.4	164	42.3	-14	53.2	111	15.2
7	41	02.5	239	58.7		07.4	90	30.7		34.7	179	44.7		53.3	126	17.8
8	56	05.0	254	58.6		06.2	105	33.8		35.0	194	47.1		53.3	141	20.4
9	71	07.4	269	58.6		05.0	120	36.8		35.3	209	49.5		53.3	156	23.1
10	86	09.9	284	58.5		03.9	135	39.9		35.5	224	51.9		53.3	171	25.7
11	101	12.4	299	58.5	+9	02.7	150	43.0	-24	35.8	239	54.3	-14	53.4	186	28.4
12	116	14.8	314	58.4	+9	01.5	165	46.0	-24	36.1	254	56.7	-14	53.4	201	31.0
13	131	17.3	329	58.4	+9	00.4	180	49.1		36.4	269	59.2		53.4	216	33.7
14	146	19.7	344	58.3	+8	59.2	195	52.1		36.6	285	01.6		53.5	231	36.3
15	161	22.2	359	58.3		58.0	210	55.2		36.9	300	04.0		53.5	246	38.9
16	176	24.7	14	58.2		56.9	225	58.3		37.2	315	06.4		53.5	261	41.6
17	191	27.1	29	58.2	+8	55.7	241	01.3	-24	37.5	330	08.8	-14	53.5	276	44.2
18	206	29.6	44	58.1	+8	54.5	256	04.4	-24	37.7	345	11.2	-14	53.6	291	46.9
19	221	32.1	59	58.1		53.3	271	07.5		38.0	0	13.6		53.6	306	49.5
20	236	34.5	74	58.0		52.2	286	10.5		38.3	15	16.0		53.6	321	52.1
21	251	37.0	89	58.0		51.0	301	13.6		38.6	30	18.4		53.7	336	54.8
22	266	39.5	104	57.9		49.8	316	16.7		38.8	45	20.8		53.7	351	57.4
23	281	41.9	119	57.9		48.6	331	19.7		39.1	60	23.2		53.7	7	00.1
24	296	44.4	134	57.9	+8	47.5	346	22.8	-24	39.4	75	25.6	-14	53.7	22	02.7
Dif	—		-1 -12		+31 -3		+24 0		+26 0							

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7			Edad: 5 ^d 9	PHE { 4 ^h : 57 ^m /5 12 ^h : 57 ^m /2 20 ^h : 56 ^m /9	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	PMG: 12 ^h 06 ^m 3					SD: 15 ^h 6			R°: 47 ^m						
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°	
h	o	'	o	o	'	o	'	o	h	m	h	m	h	m	
0	178	25.7	+20 53.3	99	58.8	-1 44.3	118	60 N	21 00	22 12	***	12 13	81	23 20	15
1	193	25.7	52.8	114	30.0 ¹²²	-1 56.1 ¹¹⁸	118	58	20 44	21 45	***	11 78		24 17	
2	208	25.6	52.4	129	01.2 ¹²²	-2 07.9 ¹¹⁸	118	56	31	24	23 00	09 75		27 19	
3	223	25.6	51.9	143	32.4 ¹²²	19.7 ¹¹⁸	118	54	19	21 08	22 22	07 73		29 22	
4	238	25.5	51.5	158	03.7 ¹²³	31.4 ¹¹⁷	117	52	09	20 53	21 57	05 71		32 23	
5	253	25.5	+20 51.0	172	35.0 ¹²³	-2 43.1 ¹¹⁷	117	50	20 00	20 41	21 38	12 03	70	23 34	25
6	268	25.5	+20 50.6	187	06.4 ¹²⁴	-2 54.7 ¹¹⁶	116	45	19 41	20 16	21 02	12 00	66	23 39	29
7	283	25.4	50.1	201	37.7 ¹²³	-3 06.4 ¹¹⁷	117	40	25	19 57	20 36	11 57	63	43 32	
8	298	25.4	49.7	216	09.1 ¹²⁴	18.0 ¹¹⁶	116	35	12	41	16	55 60		47 34	
9	313	25.3	49.2	230	40.5 ¹²⁴	29.6 ¹¹⁶	116	30	19 01	28	20 00	53 57		50 36	
10	328	25.3	48.7	245	12.0 ¹²⁵	41.1 ¹¹⁵	115	20	18 42	19 06	19 34	49 54		23 56	40
11	343	25.2	+20 48.3	259	43.5 ¹²⁵	-3 52.6 ¹¹⁵	115	10 N	18 25	18 48	19 14	11 46	50	***	***
12	358	25.2	+20 47.8	274	15.0 ¹²⁵	-4 04.1 ¹¹⁵	115	0	18 10	18 32	18 58	11 43	47	***	***
13	13	25.2	47.4	288	46.5 ¹²⁵	15.5 ¹¹⁴	114	10 S	17 55	17	43	40 43		***	***
14	28	25.1	46.9	303	18.0 ¹²⁵	26.9 ¹¹⁴	114	20	38	18 02	29	37 40		***	***
15	43	25.1	46.5	317	49.6 ¹²⁶	38.3 ¹¹⁴	114	30	20	17 46	15	34 35		***	***
16	58	25.0	46.0	332	21.2 ¹²⁶	-4 49.6 ¹¹³	113	35	17 09	37	08	32 33		***	***
17	73	25.0	+20 45.5	346	52.8 ¹²⁶	-5 00.9 ¹¹³	113	40	16 57	17 27	18 00	11 29	31	***	***
18	88	25.0	+20 45.1	1	24.5 ¹²⁷	-5 12.2 ¹¹³	113	45	16 43	17 15	17 52	11 27	28	***	***
19	103	24.9	44.6	15	56.1 ¹²⁶	23.4 ¹¹²	112	50	25	17 02	42	24 24		***	***
20	118	24.9	44.2	30	27.8 ¹²⁷	34.6 ¹¹²	112	52	17	16 56	38	22 23		***	***
21	133	24.8	43.7	44	59.5 ¹²⁷	45.8 ¹¹²	112	54	16 08	49	33	21 21		***	***
22	148	24.8	43.2	59	31.2 ¹²⁷	-5 56.9 ¹¹¹	111	56	15 57	41	29	19 19		***	***
23	163	24.8	42.8	74	02.9 ¹²⁷	-6 07.9 ¹¹⁰	110	58	45	33	23	17 17		***	***
24	178	24.7	+20 42.3	88	34.6 ¹²⁷	-6 18.9 ¹¹⁰	110	60 S	15 31	16 24	17 17	11 15	14	***	***

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 4 ^h 12 ^m 4		Mag: -4.2 PMG: 15 ^h 00 ^m		Mag: -2.7 PMG: 0 ^h 54 ^m		Mag: -2.2 PMG: 18 ^h 55 ^m		Mag: +0.1 PMG: 22 ^h 28 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	o	'	o	'	o	'	o	'	o	'
0	296	44.4	134 57.9	+8 47.5	346 22.8	-24 39.4	75 25.6	-14 53.7	22 02.7	-22 32.9
1	311	46.8	149 57.8	46.3	1 25.9	39.7	90 28.0	53.8	37 05.3	32.9
2	326	49.3	164 57.8	45.1	16 28.9	39.9	105 30.5	53.8	52 08.0	32.9
3	341	51.8	179 57.7	43.9	31 32.0	40.2	120 32.9	53.8	67 10.6	32.9
4	356	54.2	194 57.7	42.8	46 35.1	40.5	135 35.3	53.9	82 13.3	32.9
5	11	56.7	209 57.6	+8 41.6	61 38.2	-24 40.7	150 37.7	-14 53.9	97 15.9	-22 32.9
6	26	59.2	224 57.6	+8 40.4	76 41.2	-24 41.0	165 40.1	-14 53.9	112 18.6	-22 32.9
7	42	01.6	239 57.6	39.2	91 44.3	41.3	180 42.5	53.9	127 21.2	32.9
8	57	04.1	254 57.5	38.1	106 47.4	41.6	195 44.9	54.0	142 23.8	33.0
9	72	06.6	269 57.5	36.9	121 50.5	41.8	210 47.3	54.0	157 26.5	33.0
10	87	09.0	284 57.4	35.7	136 53.5	42.1	225 49.7	54.0	172 29.1	33.0
11	102	11.5	299 57.4	+8 34.5	151 56.6	-24 42.4	240 52.1	-14 54.1	187 31.8	-22 33.0
12	117	14.0	314 57.4	+8 33.4	166 59.7	-24 42.7	255 54.5	-14 54.1	202 34.4	-22 33.0
13	132	16.4	329 57.3	32.2	182 02.8	42.9	270 56.9	54.1	217 37.0	33.0
14	147	18.9	344 57.3	31.0	197 05.9	43.2	285 59.3	54.2	232 39.7	33.0
15	162	21.3	359 57.3	29.8	212 08.9	43.5	301 01.7	54.2	247 42.3	33.0
16	177	23.8	14 57.2	28.6	227 12.0	43.7	316 04.1	54.2	262 44.9	33.0
17	192	26.3	29 57.2	+8 27.5	242 15.1	-24 44.0	331 06.5	-14 54.2	277 47.6	-22 33.0
18	207	28.7	44 57.2	+8 26.3	257 18.2	-24 44.3	346 08.9	-14 54.3	292 50.2	-22 33.1
19	222	31.2	59 57.1	25.1	272 21.3	44.6	1 11.3	54.3	307 52.9	33.1
20	237	33.7	74 57.1	23.9	287 24.4	44.8	16 13.7	54.3	322 55.5	33.1
21	252	36.1	89 57.1	22.7	302 27.5	45.1	31 16.1	54.4	337 58.1	33.1
22	267	38.6	104 57.0	21.6	317 30.5	45.4	46 18.5	54.4	353 00.8	33.1
23	282	41.1	119 57.0	20.4	332 33.6	45.6	61 20.9	54.4	8 03.4	33.1
24	297	43.5	134 57.0	+8 19.2	347 36.7	-24 45.9	76 23.3	-14 54.5	23 06.1	-22 33.1
Dif	—		0	-12	+31	-3	+24	0	+26	0

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7 PMG: 12 ^h 06 ^m 4			Edad: 6 ^d 9 PHE { 4 ^h : 56 ^m 7 12 ^h : 56 ^m 4 20 ^h : 56 ^m 2 PMG: 18 ^h 41 ^m R°: 46 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	o	'	o	'	o	'	o	'	h	m	h	m	h	m	h	m
0	178	24.7	+20	42.3	88	34.6	-6	18.9	60 N	***	2 01	3 13	13 34	78	23 35	17
1	193	24.7		41.8	103	06.4 ¹²⁸		29.9 ¹¹⁰	58	***	28	29	29	75	41	19
2	208	24.7		41.4	117	38.2 ¹²⁸		40.8 ¹⁰⁹	56	1 13	2 49	42	24	73	46	22
3	223	24.6		40.9	132	10.0 ¹²⁸		-6 51.7 ¹⁰⁹	54	1 51	3 06	3 54	20	71	51	23
4	238	24.6		40.4	146	41.7 ¹²⁷		-7 02.6 ¹⁰⁹	52	2 16	20	4 04	16	70	55	25
5	253	24.5	+20	40.0	161	13.6 ¹²⁹		-7 13.4 ¹⁰⁸	50	2 35	3 32	4 13	13 13	68	23 59	27
6	268	24.5	+20	39.5	175	45.4 ¹²⁸		-7 24.1 ¹⁰⁷	45	3 11	3 57	4 32	13 06	64	***	***
7	283	24.5		39.0	190	17.2 ¹²⁸		34.8 ¹⁰⁷	40	37	4 16	4 48	13 00	61	***	***
8	298	24.4		38.6	204	49.0 ¹²⁸		45.5 ¹⁰⁷	35	3 57	32	5 01	12 55	58	***	***
9	313	24.4		38.1	219	20.9 ¹²⁹		-7 56.1 ¹⁰⁶	30	4 13	4 45	12	50	57	***	***
10	328	24.4		37.6	233	52.7 ¹²⁸		-8 06.6 ¹⁰⁵	20	39	5 07	31	43	52	***	***
11	343	24.3	+20	37.2	248	24.6 ¹²⁹		-8 17.1 ¹⁰⁵	10 N	4 58	5 25	5 47	12 36	49	0 01	43
12	358	24.3	+20	36.7	262	56.5 ¹²⁹		-8 27.6 ¹⁰⁵	0	5 15	5 41	6 03	12 30	46	0 05	47
13	13	24.3		36.2	277	28.3 ¹²⁸		38.0 ¹⁰⁴	10 S	30	5 56	18	23	44	10	50
14	28	24.2		35.7	292	00.2 ¹²⁹		48.3 ¹⁰³	20	44	6 11	34	17	40	15	53
15	43	24.2		35.3	306	32.1 ¹²⁹		-8 58.6 ¹⁰³	30	5 57	27	6 52	09	37	21	57
16	58	24.2		34.8	321	04.0 ¹²⁹		-9 08.9 ¹⁰³	35	6 05	36	7 03	05	34	24	59
17	73	24.1	+20	34.3	335	35.9 ¹²⁹		-9 19.1 ¹⁰²	40	6 12	6 46	7 15	12 00	32	0 28	61
18	88	24.1	+20	33.8	350	07.8 ¹²⁹		-9 29.2 ¹⁰¹	45	6 21	6 57	7 30	11 55	29	0 32	65
19	103	24.1		33.4	4	39.7 ¹²⁹		39.3 ¹⁰¹	50	30	7 10	47	48	26	37	69
20	118	24.0		32.9	19	11.6 ¹²⁹		49.3 ¹⁰⁰	52	34	16	7 55	45	24	39	71
21	133	24.0		32.4	33	43.5 ¹²⁹		-9 59.3 ¹⁰⁰	54	39	23	8 04	42	22	42	72
22	148	24.0		31.9	48	15.4 ¹²⁹		-10 09.2 ⁹⁹	56	44	30	15	38	20	45	74
23	163	23.9		31.5	62	47.3 ¹²⁹		19.1 ⁹⁹	58	49	39	26	34	18	48	77
24	178	23.9	+20	31.0	77	19.2 ¹²⁹		-10 28.9 ⁹⁸	60 S	6 54	7 48	8 40	11 29	16	0 52	79

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 4 ^h 08 ^m 4		Mag: -4.2 PMG: 15 ^h 00 ^m		Mag: -2.7 PMG: 0 ^h 49 ^m		Mag: -2.2 PMG: 18 ^h 51 ^m		Mag: +0.1 PMG: 22 ^h 24 ^m									
	hG ♈	hG ♀	Dec		hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	o	'	o	'	o	'	o	'	o	'								
0	297	43.5	134	57.0	+8	19.2	347	36.7	-24	45.9	76	23.3	-14	54.5	23	06.1	-22	33.1
1	312	46.0	149	56.9		18.0	2	39.8		46.2	91	25.7		54.5	38	08.7		33.1
2	327	48.5	164	56.9		16.8	17	42.9		46.5	106	28.1		54.5	53	11.3		33.1
3	342	50.9	179	56.9		15.7	32	46.0		46.7	121	30.5		54.6	68	14.0		33.1
4	357	53.4	194	56.9		14.5	47	49.1		47.0	136	32.9		54.6	83	16.6		33.2
5	12	55.8	209	56.8	+8	13.3	62	52.2	-24	47.3	151	35.3	-14	54.6	98	19.3	-22	33.2
6	27	58.3	224	56.8	+8	12.1	77	55.3	-24	47.5	166	37.7	-14	54.6	113	21.9	-22	33.2
7	43	00.8	239	56.8		10.9	92	58.4		47.8	181	40.1		54.7	128	24.5		33.2
8	58	03.2	254	56.8		09.7	108	01.5		48.1	196	42.5		54.7	143	27.2		33.2
9	73	05.7	269	56.7		08.6	123	04.6		48.3	211	44.9		54.7	158	29.8		33.2
10	88	08.2	284	56.7		07.4	138	07.6		48.6	226	47.3		54.8	173	32.4		33.2
11	103	10.6	299	56.7	+8	06.2	153	10.7	-24	48.9	241	49.7	-14	54.8	188	35.1	-22	33.2
12	118	13.1	314	56.7	+8	05.0	168	13.8	-24	49.2	256	52.1	-14	54.8	203	37.7	-22	33.2
13	133	15.6	329	56.6		03.8	183	16.9		49.4	271	54.4		54.9	218	40.4		33.2
14	148	18.0	344	56.6		02.6	198	20.0		49.7	286	56.8		54.9	233	43.0		33.3
15	163	20.5	359	56.6		01.4	213	23.1		50.0	301	59.2		54.9	248	45.6		33.3
16	178	22.9	14	56.6	+8	00.3	228	26.2		50.2	317	01.6		55.0	263	48.3		33.3
17	193	25.4	29	56.6	+7	59.1	243	29.3	-24	50.5	332	04.0	-14	55.0	278	50.9	-22	33.3
18	208	27.9	44	56.5	+7	57.9	258	32.4	-24	50.8	347	06.4	-14	55.0	293	53.5	-22	33.3
19	223	30.3	59	56.5		56.7	273	35.5		51.0	2	08.8		55.1	308	56.2		33.3
20	238	32.8	74	56.5		55.5	288	38.6		51.3	17	11.2		55.1	323	58.8		33.3
21	253	35.3	89	56.5		54.3	303	41.8		51.6	32	13.6		55.1	339	01.5		33.3
22	268	37.7	104	56.5		53.1	318	44.9		51.8	47	16.0		55.2	354	04.1		33.3
23	283	40.2	119	56.5		52.0	333	48.0		52.1	62	18.4		55.2	9	06.7		33.3
24	298	42.7	134	56.4	+7	50.8	348	51.1	-24	52.4	77	20.8	-14	55.2	24	09.4	-22	33.4
Dif	—		0		-12		+31		-3		+24		0		+26			

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7			Edad: 7 ^d 9 PHE { 4 ^h : 55 ^m /9 12 ^h : 55 ^m /7 20 ^h : 55 ^m /5 R°: 47 ^m											
	PMG: 12 ^h 06 ^m 4				SD: 15 ^h 2				PMG: 19 ^h 27 ^m		R°: 47 ^m				
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°	
h	o	'	o	'	o	'	o	h m	h m	h m	h m	m	h m	m	
0	178	23.9	+20	31.0	77	19.2	-10	28.9	60 N	20 56	22 06	***	14 52	76	
1	193	23.9		30.5	91	51.1 ¹²⁹		38.6	58	41	21 40	***	44	73	
2	208	23.8		30.0	106	23.0 ¹²⁹		48.3	56	28	20	22 51	37	71	
3	223	23.8		29.5	120	54.9 ¹²⁹	-10	57.9	54	16	21 04	22 17	31	69	
4	238	23.8		29.1	135	26.8 ¹²⁹	-11	07.5	52	20 06	20 50	21 53	26	66	
5	253	23.7	+20	28.6	149	58.7 ¹²⁹	-11	17.0	50	19 58	20 38	21 34	14	21	
6	268	23.7	+20	28.1	164	30.5 ¹²⁸	-11	26.4	45	19 39	20 14	20 59	14	10	
7	283	23.7		27.6	179	02.4 ¹²⁹		35.8	40	24	19 55	34	14	01	
8	298	23.7		27.1	193	34.3 ¹²⁹		45.1	35	11	40	20 15	13	53	
9	313	23.6		26.6	208	06.2 ¹²⁹	-11	54.4	30	19 00	27	19 59	47	55	
10	328	23.6		26.2	222	38.0 ¹²⁸	-12	03.6	20	18 41	19 05	34	35	52	
11	343	23.6	+20	25.7	237	09.9 ¹²⁹	-12	12.7	10 N	18 25	18 48	19 14	13	25	
12	358	23.5	+20	25.2	251	41.7 ¹²⁸	-12	21.8	0	18 10	18 32	18 58	13	16	
13	13	23.5		24.7	266	13.6 ¹²⁹		30.8	10 S	17 55	17	43	13	07	
14	28	23.5		24.2	280	45.4 ¹²⁸		39.7	20	39	18 03	30	12	57	
15	43	23.5		23.7	295	17.2 ¹²⁸		48.6	30	21	17 47	16	46	38	
16	58	23.4		23.2	309	49.1 ¹²⁹	-12	57.4	35	17 11	38	09	39	37	
17	73	23.4	+20	22.8	324	20.9 ¹²⁸	-13	06.1	40	16 59	17 28	18 01	12	32	
18	88	23.4	+20	22.3	338	52.7 ¹²⁸	-13	14.8	45	16 45	17 17	17 53	12	24	
19	103	23.3		21.8	353	24.5 ¹²⁸		23.3	50	27	17 04	44	14	28	
20	118	23.3		21.3	7	56.2 ¹²⁷		31.9	52	19	16 58	40	09	27	
21	133	23.3		20.8	22	28.0 ¹²⁸		40.3	54	10	51	36	12	04	
22	148	23.3		20.3	36	59.8 ¹²⁸		48.7	56	16 00	44	31	11	58	
23	163	23.2		19.8	51	31.5 ¹²⁷	-13	57.0	58	15 49	36	26	52	21	
24	178	23.2	+20	19.3	66	03.2 ¹²⁷	-14	05.3	60 S	15 35	16 27	17 20	11	45	
UT	ARIES		VENUS			MARTE			JÚPITER				SATURNO		
	PMG: 4 ^h 04 ^m 5		Mag: -4.2 PMG: 15 ^h 00 ^m			Mag: -2.7 PMG: 0 ^h 44 ^m			Mag: -2.2 PMG: 18 ^h 48 ^m				Mag: +0.1 PMG: 22 ^h 19 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	
0	298	42.7	134	56.4	+7	50.8	348	51.1	-24	52.4	77	20.8	-14	55.2	
1	313	45.1	149	56.4		49.6	3	54.2		52.6	92	23.2		55.3	
2	328	47.6	164	56.4		48.4	18	57.3		52.9	107	25.5		55.3	
3	343	50.1	179	56.4		47.2	34	00.4		53.2	122	27.9		55.3	
4	358	52.5	194	56.4		46.0	49	03.5		53.4	137	30.3		55.4	
5	13	55.0	209	56.4	+7	44.8	64	06.6	-24	53.7	152	32.7	-14	55.4	
6	28	57.4	224	56.4	+7	43.6	79	09.7	-24	54.0	167	35.1	-14	55.4	
7	43	59.9	239	56.4		42.4	94	12.8		54.2	182	37.5		55.5	
8	59	02.4	254	56.3		41.3	109	15.9		54.5	197	39.9		55.5	
9	74	04.8	269	56.3		40.1	124	19.1		54.8	212	42.3		55.5	
10	89	07.3	284	56.3		38.9	139	22.2		55.0	227	44.7		55.6	
11	104	09.8	299	56.3	+7	37.7	154	25.3	-24	55.3	242	47.1	-14	55.6	
12	119	12.2	314	56.3	+7	36.5	169	28.4	-24	55.6	257	49.4	-14	55.6	
13	134	14.7	329	56.3		35.3	184	31.5		55.8	272	51.8		55.7	
14	149	17.2	344	56.3		34.1	199	34.6		56.1	287	54.2		55.7	
15	164	19.6	359	56.3		32.9	214	37.7		56.4	302	56.6		55.7	
16	179	22.1	14	56.3		31.7	229	40.9		56.6	317	59.0		55.8	
17	194	24.6	29	56.3	+7	30.5	244	44.0	-24	56.9	333	01.4	-14	55.8	
18	209	27.0	44	56.3	+7	29.3	259	47.1	-24	57.2	348	03.8	-14	55.8	
19	224	29.5	59	56.3		28.2	274	50.2		57.4	3	06.1		55.9	
20	239	31.9	74	56.3		27.0	289	53.3		57.7	18	08.5		55.9	
21	254	34.4	89	56.3		25.8	304	56.4		58.0	33	10.9		56.0	
22	269	36.9	104	56.3		24.6	319	59.6		58.2	48	13.3		56.0	
23	284	39.3	119	56.3		23.4	335	02.7		58.5	63	15.7		56.0	
24	299	41.8	134	56.3	+7	22.2	350	05.8	-24	58.7	78	18.1	-14	56.1	
Dif	—		0		-12		+31		-3		+24		0		

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15°7 PMG: 12 ^h 06 ^m 5				Edad: 8 ^d 9 PHE { 4 ^h : 55°3 12 ^h : 55°1 20 ^h : 55°0 SD: 15°0 PMG: 20 ^h 14 ^m R°: 48 ^m													
	hG ☉ Dec		hG ☾ Dif		Dec Dif		Náutico Civil			Hora R°			Hora R°					
h	o	'	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m	
0	178	23.2	+20	19.3	66	03.2	-14	05.3	60 N	***	2 07	3 18	16 08	70	***	***	***	
1	193	23.2		18.8	80	35.0 ¹²⁸		13.4 ⁸¹	58	***	33	33	15 57	68	0 00	24		
2	208	23.2		18.3	95	06.7 ¹²⁷		21.5 ⁸¹	56	1 23	2 53	46	48	66	08	25		
3	223	23.1		17.8	109	38.4 ¹²⁷		29.6 ⁸¹	54	1 57	3 09	3 57	40	64	14	28		
4	238	23.1		17.3	124	10.1 ¹²⁷		37.5 ⁷⁹	52	2 21	23	4 07	32	64	20	29		
5	253	23.1	+20	16.8	138	41.7 ¹²⁶	-14	45.4 ⁷⁹	50	2 39	3 35	4 16	15 26	62	0 26	30		
6	268	23.1	+20	16.3	153	13.4 ¹²⁷	-14	53.2 ⁷⁸	45	3 14	3 59	4 34	15 12	59	0 38	33		
7	283	23.0		15.8	167	45.0 ¹²⁶	-15	01.0 ⁷⁸	40	39	4 18	4 49	15 00	58	48	35		
8	298	23.0		15.4	182	16.7 ¹²⁷		08.6 ⁷⁶	35	3 59	33	5 02	14 51	55	0 56	38		
9	313	23.0		14.9	196	48.3 ¹²⁶		16.2 ⁷⁶	30	4 14	4 46	13	42	54	1 04	39		
10	328	23.0		14.4	211	19.9 ¹²⁶		23.7 ⁷⁵	20	39	5 08	32	27	52	16	43		
11	343	22.9	+20	13.9	225	51.5 ¹²⁶	-15	31.1 ⁷⁴	10 N	4 59	5 25	5 48	14 15	49	1 28	45		
12	358	22.9	+20	13.4	240	23.0 ¹²⁵	-15	38.5 ⁷³	0	5 15	5 41	6 03	14 03	47	1 38	48		
13	13	22.9		12.9	254	54.6 ¹²⁶		45.8 ⁷⁴	10 S	30	5 55	18	13 51	45	1 49	49		
14	28	22.9		12.4	269	26.1 ¹²⁵	-15	53.0 ⁷²	20	43	6 10	34	38	43	2 00	52		
15	43	22.9		11.9	283	57.7 ¹²⁶	-16	00.1 ⁷¹	30	5 57	26	6 52	24	41	14	54		
16	58	22.8		11.3	298	29.2 ¹²⁵		07.1 ⁷⁰	35	6 04	35	7 02	16	39	21	57		
17	73	22.8	+20	10.8	313	00.7 ¹²⁵	-16	14.1 ⁷⁰	40	6 11	6 44	7 14	13 06	38	2 30	58		
18	88	22.8	+20	10.3	327	32.2 ¹²⁵	-16	21.0 ⁶⁹	45	6 19	6 55	7 28	12 55	35	2 40	61		
19	103	22.8		09.8	342	03.6 ¹²⁴		27.8 ⁶⁸	50	28	7 08	45	42	33	52	64		
20	118	22.8		09.3	356	35.1 ¹²⁵		34.5 ⁶⁷	52	32	14	7 53	36	31	2 58	65		
21	133	22.7		08.8	11	06.5 ¹²⁴		41.1 ⁶⁶	54	37	21	8 02	29	30	3 04	67		
22	148	22.7		08.3	25	37.9 ¹²⁴		47.7 ⁶⁶	56	41	28	12	22	28	11	69		
23	163	22.7		07.8	40	09.3 ¹²⁴	-16	54.2 ⁶⁵	58	46	36	23	13	26	19	71		
24	178	22.7	+20	07.3	54	40.7 ¹²⁴	-17	00.6 ⁶⁴	60 S	6 52	7 45	8 36	12 03	24	3 28	74		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 4 ^h 00 ^m 6		Mag: -4.2 PMG: 15 ^h 00 ^m				Mag: -2.7 PMG: 0 ^h 39 ^m				Mag: -2.2 PMG: 18 ^h 44 ^m				Mag: +0.1 PMG: 22 ^h 15 ^m			
	hG ♈ Dec		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec		hG ♅ Dec		hG ♆ Dec					
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'
0	299	41.8	134	56.3	+7	22.2	350	05.8	-24	58.7	78	18.1	-14	56.1	25	12.6	-22	33.6
1	314	44.3	149	56.3		21.0	5	08.9		59.0	93	20.5		56.1	40	15.2		33.6
2	329	46.7	164	56.3		19.8	20	12.1		59.3	108	22.8		56.1	55	17.9		33.6
3	344	49.2	179	56.3		18.6	35	15.2		59.5	123	25.2		56.2	70	20.5		33.6
4	359	51.7	194	56.3		17.4	50	18.3	-24	59.8	138	27.6		56.2	85	23.1		33.6
5	14	54.1	209	56.3	+7	16.2	65	21.4	-25	00.1	153	30.0	-14	56.2	100	25.8	-22	33.6
6	29	56.6	224	56.3	+7	15.0	80	24.5	-25	00.3	168	32.4	-14	56.3	115	28.4	-22	33.7
7	44	59.0	239	56.3		13.8	95	27.7		00.6	183	34.7		56.3	130	31.0		33.7
8	60	01.5	254	56.3		12.6	110	30.8		00.8	198	37.1		56.3	145	33.7		33.7
9	75	04.0	269	56.3		11.4	125	33.9		01.1	213	39.5		56.4	160	36.3		33.7
10	90	06.4	284	56.3		10.2	140	37.1		01.4	228	41.9		56.4	175	38.9		33.7
11	105	08.9	299	56.3	+7	09.0	155	40.2	-25	01.6	243	44.3	-14	56.5	190	41.6	-22	33.7
12	120	11.4	314	56.3	+7	07.8	170	43.3	-25	01.9	258	46.7	-14	56.5	205	44.2	-22	33.7
13	135	13.8	329	56.3		06.7	185	46.4		02.2	273	49.0		56.5	220	46.8		33.7
14	150	16.3	344	56.3		05.5	200	49.6		02.4	288	51.4		56.6	235	49.5		33.7
15	165	18.8	359	56.3		04.3	215	52.7		02.7	303	53.8		56.6	250	52.1		33.7
16	180	21.2	14	56.3		03.1	230	55.8		02.9	318	56.2		56.6	265	54.7		33.8
17	195	23.7	29	56.3	+7	01.9	245	59.0	-25	03.2	333	58.5	-14	56.7	280	57.4	-22	33.8
18	210	26.2	44	56.4	+7	00.7	261	02.1	-25	03.5	349	00.9	-14	56.7	296	00.0	-22	33.8
19	225	28.6	59	56.4	+6	59.5	276	05.2		03.7	4	03.3		56.8	311	02.6		33.8
20	240	31.1	74	56.4		58.3	291	08.4		04.0	19	05.7		56.8	326	05.3		33.8
21	255	33.5	89	56.4		57.1	306	11.5		04.2	34	08.1		56.8	341	07.9		33.8
22	270	36.0	104	56.4		55.9	321	14.6		04.5	49	10.4		56.9	356	10.5		33.8
23	285	38.5	119	56.4		54.7	336	17.8		04.7	64	12.8		56.9	11	13.2		33.8
24	300	40.9	134	56.4	+6	53.5	351	20.9	-25	05.0	79	15.2	-14	56.9	26	15.8	-22	33.8
Dif	—		0 -12		+31 -3						+24 0				+26 0			

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7			Edad: 9 ^d 9 PHE	SD: 14 ^h 9				Final del crepúsculo		Salida de Luna		Puesta de Luna			
	PMG: 12 ^h 06 ^m 5				PMG: 21 ^h 02 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°		
h	o	/	o	/	o	/	o	h	m	h	m	h	m	h	m	
0	178	22.7	+20	07.3	54	40.7	-17 00.6	60 N	20 52	22 00	***	17 18	64	0 13	26	
1	193	22.7		06.8	69	12.1 ¹²⁴	06.9 ⁶³	58	37	21 35	***	17 05	63	24	29	
2	208	22.6		06.3	83	43.4 ¹²³	13.1 ⁶²	56	24	16	22 42	16 54	61	33	31	
3	223	22.6		05.8	98	14.8 ¹²⁴	19.3 ⁶²	54	13	21 01	22 11	44	60	42	32	
4	238	22.6		05.3	112	46.1 ¹²³	25.3 ⁶⁰	52	20 04	20 47	21 48	36	58	49	34	
5	253	22.6	+20	04.8	127	17.4 ¹²³	-17 31.3 ⁶⁰	50	19 55	20 36	21 30	16 28	58	0 56	35	
6	268	22.6	+20	04.3	141	48.7 ¹²³	-17 37.2 ⁵⁹	45	19 37	20 12	20 57	16 11	56	1 11	37	
7	283	22.5		03.7	156	19.9 ¹²²	43.0 ⁵⁸	40	22	19 53	32	15 58	54	23	40	
8	298	22.5		03.2	170	51.2 ¹²³	48.8 ⁵⁸	35	19 10	38	20 13	46	54	34	40	
9	313	22.5		02.7	185	22.4 ¹²²	-17 54.4 ⁵⁶	30	18 59	26	19 57	36	53	43	42	
10	328	22.5		02.2	199	53.6 ¹²²	-18 00.0 ⁵⁶	20	41	19 05	33	19 51		1 59	44	
11	343	22.5	+20	01.7	214	24.8 ¹²²	-18 05.4 ⁵⁴	10 N	18 25	18 47	19 14	15 04	49	2 13	46	
12	358	22.5	+20	01.2	228	56.0 ¹²²	-18 10.8 ⁵⁴	0	18 10	18 32	18 58	14 50	48	2 26	47	
13	13	22.4		00.7	243	27.2 ¹²²	16.1 ⁵³	10 S	17 55	18	43	36	47	38	50	
14	28	22.4	+20	00.2	257	58.4 ¹²²	21.3 ⁵²	20	40	18 03	30	21	46	2 52	52	
15	43	22.4	+19	59.6	272	29.5 ¹²¹	26.4 ⁵¹	30	22	17 48	17	14 05	43	3 08	54	
16	58	22.4		59.1	287	00.6 ¹²¹	31.5 ⁵¹	35	12	39	10	13 55	42	18	54	
17	73	22.4	+19	58.6	301	31.7 ¹²¹	-18 36.4 ⁴⁹	40	17 00	17 30	18 03	13 44	41	3 28	56	
18	88	22.4	+19	58.1	316	02.8 ¹²¹	-18 41.3 ⁴⁹	45	16 47	17 19	17 55	13 30	40	3 41	58	
19	103	22.3		57.6	330	33.9 ¹²¹	46.0 ⁴⁷	50	30	06	46	15	37	3 56	60	
20	118	22.3		57.0	345	05.0 ¹²¹	50.7 ⁴⁷	52	22	17 00	42	13 07	37	4 03	61	
21	133	22.3		56.5	359	36.0 ¹²⁰	55.3 ⁴⁶	54	13	16 54	38	12 59	35	11	62	
22	148	22.3		56.0	14	07.1 ¹²¹	-18 59.8 ⁴⁵	56	16 03	47	34	50	34	20	64	
23	163	22.3		55.5	28	38.1 ¹²⁰	-19 04.2 ⁴⁴	58	15 52	39	29	39	33	30	66	
24	178	22.3	+19	55.0	43	09.1 ¹²⁰	-19 08.5 ⁴³	60 S	15 39	16 30	17 23	12 27	31	4 42	67	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 3 ^h 56 ^m 6		Mag: -4.2 PMG: 15 ^h 00 ^m			Mag: -2.7 PMG: 0 ^h 34 ^m			Mag: -2.2 PMG: 18 ^h 40 ^m			Mag: +0.1 PMG: 22 ^h 11 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	o	/	o	/	o	/	o	/	o	/	o	/	o	/	o	/
0	300	40.9	134	56.4	+6	53.5	351	20.9	-25	05.0	79	15.2	-14	56.9	26	15.8
1	315	43.4	149	56.4		52.3	6	24.0		05.3	94	17.6		57.0	41	18.4
2	330	45.9	164	56.5		51.1	21	27.2		05.5	109	19.9		57.0	56	21.1
3	345	48.3	179	56.5		49.9	36	30.3		05.8	124	22.3		57.1	71	23.7
4	0	50.8	194	56.5		48.7	51	33.4		06.0	139	24.7		57.1	86	26.3
5	15	53.3	209	56.5	+6	47.5	66	36.6	-25	06.3	154	27.1	-14	57.1	101	29.0
6	30	55.7	224	56.5	+6	46.3	81	39.7	-25	06.6	169	29.4	-14	57.2	116	31.6
7	45	58.2	239	56.5		45.1	96	42.9		06.8	184	31.8		57.2	131	34.2
8	61	00.7	254	56.6		43.9	111	46.0		07.1	199	34.2		57.2	146	36.8
9	76	03.1	269	56.6		42.7	126	49.1		07.3	214	36.6		57.3	161	39.5
10	91	05.6	284	56.6		41.5	141	52.3		07.6	229	38.9		57.3	176	42.1
11	106	08.0	299	56.6	+6	40.3	156	55.4	-25	07.8	244	41.3	-14	57.4	191	44.7
12	121	10.5	314	56.6	+6	39.1	171	58.6	-25	08.1	259	43.7	-14	57.4	206	47.4
13	136	13.0	329	56.7		37.9	187	01.7		08.3	274	46.1		57.4	221	50.0
14	151	15.4	344	56.7		36.7	202	04.9		08.6	289	48.4		57.5	236	52.6
15	166	17.9	359	56.7		35.5	217	08.0		08.9	304	50.8		57.5	251	55.3
16	181	20.4	14	56.7		34.3	232	11.1		09.1	319	53.2		57.6	266	57.9
17	196	22.8	29	56.7	+6	33.1	247	14.3	-25	09.4	334	55.6	-14	57.6	282	00.5
18	211	25.3	44	56.8	+6	31.9	262	17.4	-25	09.6	349	57.9	-14	57.6	297	03.2
19	226	27.8	59	56.8		30.7	277	20.6		09.9	5	00.3		57.7	312	05.8
20	241	30.2	74	56.8		29.4	292	23.7		10.1	20	02.7		57.7	327	08.4
21	256	32.7	89	56.8		28.2	307	26.9		10.4	35	05.0		57.7	342	11.0
22	271	35.1	104	56.9		27.0	322	30.0		10.6	50	07.4		57.8	357	13.7
23	286	37.6	119	56.9		25.8	337	33.2		10.9	65	09.8		57.8	12	16.3
24	301	40.1	134	56.9	+6	24.6	352	36.3	-25	11.1	80	12.1	-14	57.9	27	18.9
Dif	—		0		-12		+31		-3		+24		0		+26	

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'7 PMG: 12 ^h 06 ^m 5				Edad: 10 ^d 9 PHE { SD: 14'8 PMG: 21 ^h 50 ^m R°: 48 ^m 4 ^h : 54'4 12 ^h : 54'3 20 ^h : 54'3												
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	o	'	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m
0	178	22.3	+19	55.0	43	09.1	-19	08.5	60 N	*** **	2 14	3 22	18 22	55	0 39	36	
1	193	22.3		54.4	57	40.1 ¹²⁰		12.7 ⁴²	58	0 24	38	37	18 08	53	0 53	36	
2	208	22.3		53.9	72	11.1 ¹²⁰		16.9 ⁴⁰	56	1 31	2 57	3 49	17 55	53	1 04	38	
3	223	22.2		53.4	86	42.0 ¹¹⁹		20.9 ⁴⁰	54	2 03	3 13	4 00	44 53		14	39	
4	238	22.2		52.9	101	13.0 ¹²⁰		24.9 ⁴⁰	52	25	26	10	34 53		23	40	
5	253	22.2	+19	52.4	115	43.9 ¹¹⁹	-19	28.7 ³⁸	50	2 43	3 38	4 18	17 26	52	1 31	41	
6	268	22.2	+19	51.8	130	14.8 ¹¹⁹	-19	32.5 ³⁸	45	3 17	4 02	4 36	17 07	52	1 48	43	
7	283	22.2		51.3	144	45.8 ¹²⁰		36.2 ³⁷	40	3 41	20	4 51	16 52	51	2 03	43	
8	298	22.2		50.8	159	16.7 ¹¹⁹		39.7 ³⁵	35	4 00	35	5 03	40 50		14	45	
9	313	22.2		50.3	173	47.6 ¹¹⁹		43.2 ³⁵	30	16	4 48	14	29 50		25	45	
10	328	22.2		49.7	188	18.4 ¹¹⁸		46.6 ³⁴	20	4 40	5 09	32	16 10	49	43	46	
11	343	22.1	+19	49.2	202	49.3 ¹¹⁹	-19	49.9 ³³	10 N	5 00	5 26	5 48	15 53	49	2 59	47	
12	358	22.1	+19	48.7	217	20.2 ¹¹⁹	-19	53.1 ³²	0	5 15	5 41	6 03	15 38	48	3 13	48	
13	13	22.1		48.1	231	51.0 ¹¹⁸		56.2 ³¹	10 S	30	5 55	18	23 48		28	49	
14	28	22.1		47.6	246	21.9 ¹¹⁹	-19	59.2 ³⁰	20	43	6 10	33	15 07	47	3 44	50	
15	43	22.1		47.1	260	52.7 ¹¹⁸	-20	02.2 ³⁰	30	5 56	25	6 50	14 48	46	4 02	51	
16	58	22.1		46.6	275	23.5 ¹¹⁸		05.0 ²⁸	35	6 03	33	7 01	37 46		12	52	
17	73	22.1	+19	46.0	289	54.3 ¹¹⁸	-20	07.7 ²⁷	40	6 10	6 43	7 12	14 25	45	4 24	53	
18	88	22.1	+19	45.5	304	25.1 ¹¹⁸	-20	10.4 ²⁷	45	6 18	6 54	7 26	14 10	45	4 39	53	
19	103	22.1		45.0	318	55.9 ¹¹⁸		12.9 ²⁵	50	26	7 06	42	13 52	44	4 56	55	
20	118	22.1		44.4	333	26.7 ¹¹⁸		15.4 ²⁵	52	30	12	50	44 43		5 04	56	
21	133	22.1		43.9	347	57.5 ¹¹⁸		17.7 ²³	54	34	18	7 59	34 43		13	57	
22	148	22.1		43.4	2	28.2 ¹¹⁷		20.0 ²³	56	39	25	8 08	24 42		24	57	
23	163	22.0		42.8	16	59.0 ¹¹⁸		22.1 ²¹	58	44	33	20	13 12	41	36	58	
24	178	22.0	+19	42.3	31	29.8 ¹¹⁸	-20	24.2 ²¹	60 S	6 49	7 42	8 32	12 58	40	5 49	60	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 3 ^h 52 ^m 7		Mag: -4.2 PMG: 15 ^h 00 ^m		Mag: -2.8 PMG: 0 ^h 29 ^m		Mag: -2.2 PMG: 18 ^h 36 ^m		Mag: +0.2 PMG: 22 ^h 07 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	o	'	o	'	o	'	o	'	o	'
0	301	40.1	134	56.9	+6	24.6	352	36.3	-25	11.1
1	316	42.5	149	57.0		23.4	7	39.5		11.4
2	331	45.0	164	57.0		22.2	22	42.6		11.7
3	346	47.5	179	57.0		21.0	37	45.7		11.9
4	1	49.9	194	57.0		19.8	52	48.9		12.2
5	16	52.4	209	57.1	+6	18.6	67	52.0	-25	12.4
6	31	54.9	224	57.1	+6	17.4	82	55.2	-25	12.7
7	46	57.3	239	57.1		16.2	97	58.3		12.9
8	61	59.8	254	57.2		15.0	113	01.5		13.2
9	77	02.3	269	57.2		13.8	128	04.7		13.4
10	92	04.7	284	57.2		12.6	143	07.8		13.7
11	107	07.2	299	57.3	+6	11.4	158	11.0	-25	13.9
12	122	09.6	314	57.3	+6	10.2	173	14.1	-25	14.2
13	137	12.1	329	57.3		09.0	188	17.3		14.4
14	152	14.6	344	57.4		07.8	203	20.4		14.7
15	167	17.0	359	57.4		06.5	218	23.6		14.9
16	182	19.5	14	57.4		05.3	233	26.7		15.2
17	197	22.0	29	57.5	+6	04.1	248	29.9	-25	15.4
18	212	24.4	44	57.5	+6	02.9	263	33.0	-25	15.7
19	227	26.9	59	57.6		01.7	278	36.2		15.9
20	242	29.4	74	57.6	+6	00.5	293	39.3		16.2
21	257	31.8	89	57.6	+5	59.3	308	42.5		16.4
22	272	34.3	104	57.7		58.1	323	45.7		16.7
23	287	36.8	119	57.7		56.9	338	48.8		16.9
24	302	39.2	134	57.8	+5	55.7	353	52.0	-25	17.1
Dif	—		0		-12		+32		-2	
							+24		0	
									+26	
									0	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7			Edad: 11 ^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 06 ^m 5				SD: 14 ^h 7				R°: 48 ^m							
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°	
h	o	'	o	'	o	'	o	o	h m	h m	h m	h m	m	h m	m	
0	178	22.0	+19	42.3	31	29.8	-20	24.2	60 N	20 47	21 53	***	19 17	43	1 15	45
1	193	22.0		41.8	46	00.5 ¹¹⁷		26.2	58	33	30	23 24	19 01	45	29	46
2	208	22.0		41.2	60	31.3 ¹¹⁸		28.0	56	21	21 12	22 34	18 48	45	42	46
3	223	22.0		40.7	75	02.0 ¹¹⁷		29.8	54	10	20 57	22 05	37	45	1 53	47
4	238	22.0		40.2	89	32.8 ¹¹⁸		31.5	52	20 01	44	21 44	27	45	2 03	47
5	253	22.0	+19	39.6	104	03.5 ¹¹⁷	-20	33.1	50	19 53	20 33	21 26	18 18	46	2 12	47
6	268	22.0	+19	39.1	118	34.2 ¹¹⁷	-20	34.6	45	19 35	20 10	20 54	17 59	46	2 31	47
7	283	22.0		38.5	133	05.0 ¹¹⁸		36.0	40	21	19 52	30	43	47	46	47
8	298	22.0		38.0	147	35.7 ¹¹⁷		37.2	35	19 09	37	20 11	30	47	2 59	47
9	313	22.0		37.5	162	06.4 ¹¹⁷		38.4	30	18 58	24	19 56	17 19	47	3 10	48
10	328	22.0		36.9	176	37.1 ¹¹⁷		39.5	20	40	19 04	32	16 59	48	29	48
11	343	22.0	+19	36.4	191	07.9 ¹¹⁸	-20	40.5	10 N	18 24	18 47	19 13	16 42	48	3 46	48
12	358	22.0	+19	35.8	205	38.6 ¹¹⁷	-20	41.5	0	18 10	18 32	18 58	16 26	49	4 01	49
13	13	22.0		35.3	220	09.3 ¹¹⁷		42.3	10 S	17 56	18	44	16 11	48	17	49
14	28	22.0		34.8	234	40.0 ¹¹⁷		43.0	20	41	18 04	31	15 54	49	34	49
15	43	22.0		34.2	249	10.8 ¹¹⁸		43.6	30	23	17 49	18	34	49	4 53	49
16	58	22.0		33.7	263	41.5 ¹¹⁷		44.1	35	13	41	11	23	49	5 04	49
17	73	22.0	+19	33.1	278	12.2 ¹¹⁷	-20	44.5	40	17 02	17 31	18 04	15 10	49	5 17	49
18	88	22.0	+19	32.6	292	42.9 ¹¹⁷	-20	44.9	45	16 49	17 21	17 57	14 55	49	5 32	49
19	103	22.0		32.0	307	13.7 ¹¹⁸		45.1	50	32	08	48	36	50	5 51	49
20	118	21.9		31.5	321	44.4 ¹¹⁷		45.2	52	25	17 03	44	27	50	6 00	49
21	133	21.9		30.9	336	15.1 ¹¹⁷		45.2	54	16	16 57	41	17	50	10	49
22	148	21.9		30.4	350	45.9 ¹¹⁸		45.2	56	16 07	50	36	14 06	50	21	49
23	163	21.9		29.8	5	16.6 ¹¹⁷		45.0	58	15 56	42	32	13 53	50	34	49
24	178	21.9	+19	29.3	19	47.4 ¹¹⁸	-20	44.8	60 S	15 43	16 34	17 27	13 38	51	6 49	49

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 3 ^h 48 ^m 8		Mag: -4.2 PMG: 15 ^h 00 ^m		Mag: -2.8 PMG: 0 ^h 24 ^m		Mag: -2.2 PMG: 18 ^h 32 ^m		Mag: +0.2 PMG: 22 ^h 03 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	o	'	o	'	o	'	o	'	o	'
0	302	39.2	134	57.8	+5	55.7	353	52.0	-25	17.1
1	317	41.7	149	57.8		54.5	8	55.1		17.4
2	332	44.1	164	57.9		53.3	23	58.3		17.6
3	347	46.6	179	57.9		52.0	39	01.5		17.9
4	2	49.1	194	57.9		50.8	54	04.6		18.1
5	17	51.5	209	58.0	+5	49.6	69	07.8	-25	18.4
6	32	54.0	224	58.0	+5	48.4	84	10.9	-25	18.6
7	47	56.5	239	58.1		47.2	99	14.1		18.9
8	62	58.9	254	58.1		46.0	114	17.3		19.1
9	78	01.4	269	58.2		44.8	129	20.4		19.4
10	93	03.9	284	58.2		43.6	144	23.6		19.6
11	108	06.3	299	58.3	+5	42.4	159	26.7	-25	19.8
12	123	08.8	314	58.3	+5	41.2	174	29.9	-25	20.1
13	138	11.3	329	58.4		39.9	189	33.1		20.3
14	153	13.7	344	58.4		38.7	204	36.2		20.6
15	168	16.2	359	58.5		37.5	219	39.4		20.8
16	183	18.6	14	58.5		36.3	234	42.6		21.1
17	198	21.1	29	58.6	+5	35.1	249	45.7	-25	21.3
18	213	23.6	44	58.6	+5	33.9	264	48.9	-25	21.5
19	228	26.0	59	58.7		32.7	279	52.0		21.8
20	243	28.5	74	58.7		31.5	294	55.2		22.0
21	258	31.0	89	58.8		30.3	309	58.4		22.3
22	273	33.4	104	58.8		29.0	325	01.5		22.5
23	288	35.9	119	58.9		27.8	340	04.7		22.7
24	303	38.4	134	58.9	+5	26.6	355	07.9	-25	23.0
Dif	—		0		-12		+32		-2	

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: 12 ^d 9 PHE { 4 ^h : 54 ^o 0 12 ^h : 54 ^o 0 20 ^h : 54 ^o 0 Rº: 48 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº	
h	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m	
0	178	21.9	+19	29.3	19	47.4	-20	44.8	60 N	*** **	2 21	3 27	20 00	34	2 00	55
1	193	21.9		28.7	34	18.2 ¹¹⁸		44.4	58	0 50	2 43	41	19 46	35	15	55
2	208	21.9		28.2	48	48.9 ¹¹⁷		44.0	56	1 40	3 02	3 53	33	37	28	54
3	223	21.9		27.6	63	19.7 ¹¹⁸		43.4	54	2 08	17	4 03	22	38	40	53
4	238	21.9		27.1	77	50.5 ¹¹⁸		42.8	52	30	30	13	12	39	50	53
5	253	21.9	+19	26.5	92	21.3 ¹¹⁸	-20	42.0	50	2 47	3 41	4 21	19 04	39	2 59	52
6	268	21.9	+19	26.0	106	52.1 ¹¹⁸	-20	41.2	45	3 20	4 04	4 38	18 45	41	3 18	52
7	283	21.9		25.4	121	22.9 ¹¹⁸		40.2	40	3 44	22	4 53	30	42	33	51
8	298	21.9		24.9	135	53.7 ¹¹⁸		39.2	35	4 02	37	5 05	17	43	46	51
9	313	21.9		24.3	150	24.5 ¹¹⁸		38.1	30	17	4 49	15	18 06	44	3 58	50
10	328	22.0		23.8	164	55.4 ¹¹⁹		36.9	20	4 41	5 09	33	17 47	45	4 17	50
11	343	22.0	+19	23.2	179	26.2 ¹¹⁸	-20	35.6	10 N	5 00	5 26	5 49	17 30	47	4 34	49
12	358	22.0	+19	22.7	193	57.1 ¹¹⁹	-20	34.1	0	5 16	5 41	6 03	17 15	47	4 50	48
13	13	22.0		22.1	208	28.0 ¹¹⁹		32.6	10 S	29	5 55	17	16 59	49	5 06	47
14	28	22.0		21.6	222	58.8 ¹¹⁸		31.0	20	42	6 09	32	43	49	23	46
15	43	22.0		21.0	237	29.7 ¹¹⁹		29.3	30	5 55	24	49	23	52	42	46
16	58	22.0		20.4	252	00.6 ¹¹⁹		27.5	35	6 01	32	6 59	16 12	52	5 53	45
17	73	22.0	+19	19.9	266	31.6 ¹²⁰	-20	25.6	40	6 08	6 41	7 11	15 59	53	6 06	45
18	88	22.0	+19	19.3	281	02.5 ¹¹⁹	-20	23.7	45	6 16	6 52	7 24	15 44	54	6 21	44
19	103	22.0		18.8	295	33.5 ¹²⁰		21.6	50	24	7 04	40	26	55	40	43
20	118	22.0		18.2	310	04.4 ¹¹⁹		19.4	52	28	09	47	17	56	49	42
21	133	22.0		17.7	324	35.4 ¹²⁰		17.1	54	32	16	7 56	15 07	57	6 59	41
22	148	22.0		17.1	339	06.4 ¹²⁰		14.8	56	36	22	8 05	14 56	58	7 10	41
23	163	22.0		16.5	353	37.5 ¹²¹		12.3	58	41	30	16	43	59	23	39
24	178	22.0	+19	16.0	8	08.5 ¹²⁰	-20	09.8	60 S	6 46	7 38	8 28	14 29	60	7 38	38

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 3 ^h 44 ^m 8		Mag: -4.3 PMG: 15 ^h 00 ^m		Mag: -2.8 PMG: 0 ^h 19 ^m		Mag: -2.2 PMG: 18 ^h 29 ^m		Mag: +0.2 PMG: 21 ^h 58 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	o	'	o	'	o	'	o	'	o	'
0	303	38.4	134	58.9	+5	26.6	355	07.9	-25	23.0
1	318	40.8	149	59.0		25.4	10	11.0		23.2
2	333	43.3	164	59.1		24.2	25	14.2		23.5
3	348	45.8	179	59.1		23.0	40	17.4		23.7
4	3	48.2	194	59.2		21.8	55	20.5		23.9
5	18	50.7	209	59.2	+5	20.5	70	23.7	-25	24.2
6	33	53.1	224	59.3	+5	19.3	85	26.9	-25	24.4
7	48	55.6	239	59.3		18.1	100	30.0		24.7
8	63	58.1	254	59.4		16.9	115	33.2		24.9
9	79	00.5	269	59.5		15.7	130	36.4		25.1
10	94	03.0	284	59.5		14.5	145	39.6		25.4
11	109	05.5	299	59.6	+5	13.3	160	42.7	-25	25.6
12	124	07.9	314	59.6	+5	12.0	175	45.9	-25	25.8
13	139	10.4	329	59.7		10.8	190	49.1		26.1
14	154	12.9	344	59.8		09.6	205	52.2		26.3
15	169	15.3	359	59.8		08.4	220	55.4		26.6
16	184	17.8	14	59.9		07.2	235	58.6		26.8
17	199	20.2	30	00.0	+5	06.0	251	01.7	-25	27.0
18	214	22.7	45	00.0	+5	04.8	266	04.9	-25	27.3
19	229	25.2	60	00.1		03.5	281	08.1		27.5
20	244	27.6	75	00.2		02.3	296	11.3		27.7
21	259	30.1	90	00.2	+5	01.1	311	14.4		28.0
22	274	32.6	105	00.3	+4	59.9	326	17.6		28.2
23	289	35.0	120	00.4		58.7	341	20.8		28.4
24	304	37.5	135	00.4	+4	57.5	356	23.9	-25	28.7
Dif	—		+1		-12		+32		-2	
							+24		0	
									+26	
									0	

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 13 ^d 9 PHE { 4 ^h : 54'0 12 ^h : 54'0 20 ^h : 54'0					Civil			Hora		Hora	
	PMG: 12 ^h 06 ^m 5			PMG: ***m R°: **m					Náutico			R°		R°	
	hG ☉	Dec		hG ☾	Dif	Dec	Dif								
h	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m
0	178	22.0	+19	16.0	8	08.5	-20 09.8	60 N	20 43	21 47	***	20 34	25	2 55	65
1	193	22.0		15.4	22	39.5 ¹²⁰	07.2 ²⁶	58	29	25	23 08	21	27	3 10	62
2	208	22.0		14.8	37	10.6 ¹²¹	04.4 ²⁸	56	17	21 08	22 26	10	29	22	61
3	223	22.0		14.3	51	41.7 ¹²¹	-20 01.6 ²⁸	54	20 07	20 53	21 59	20 00	31	33	60
4	238	22.0		13.7	66	12.8 ¹²¹	-19 58.7 ²⁹	52	19 58	40	39	19 51	32	43	58
5	253	22.0	+19	13.2	80	43.9 ¹²¹	-19 55.7 ³⁰	50	19 50	20 29	21 22	19 43	33	3 51	58
6	268	22.0	+19	12.6	95	15.1 ¹²²	-19 52.6 ³¹	45	19 33	20 07	20 51	19 26	36	4 10	55
7	283	22.0		12.0	109	46.3 ¹²²	49.4 ³²	40	19	19 50	28	12	38	24	55
8	298	22.1		11.5	124	17.5 ¹²²	46.1 ³³	35	19 07	35	20 09	19 00	40	37	53
9	313	22.1		10.9	138	48.7 ¹²²	42.7 ³⁴	30	18 57	23	19 54	18 50	41	4 48	52
10	328	22.1		10.3	153	19.9 ¹²²	39.3 ³⁴	20	39	19 03	31	32	43	5 07	50
11	343	22.1	+19	09.8	167	51.2 ¹²³	-19 35.7 ³⁶	10 N	18 24	18 46	19 13	18 17	45	5 23	48
12	358	22.1	+19	09.2	182	22.4 ¹²²	-19 32.1 ³⁶	0	18 10	18 32	18 57	18 02	47	5 38	47
13	13	22.1		08.6	196	53.7 ¹²³	28.4 ³⁷	10 S	17 56	18	44	17 48	48	5 53	46
14	28	22.1		08.1	211	25.0 ¹²³	24.5 ³⁹	20	41	18 05	31	32	51	6 09	44
15	43	22.1		07.5	225	56.4 ¹²⁴	20.6 ³⁹	30	25	17 50	19	15	52	28	42
16	58	22.1		06.9	240	27.8 ¹²⁴	16.6 ⁴⁰	35	15	42	13	17 04	54	38	42
17	73	22.1	+19	06.3	254	59.1 ¹²³	-19 12.5 ⁴¹	40	17 04	17 33	18 06	16 52	56	6 51	40
18	88	22.1	+19	05.8	269	30.6 ¹²⁵	-19 08.4 ⁴¹	45	16 51	17 23	17 58	16 38	57	7 05	38
19	103	22.2		05.2	284	02.0 ¹²⁴	-19 04.1 ⁴³	50	35	11	50	21	59	23	36
20	118	22.2		04.6	298	33.5 ¹²⁵	-18 59.8 ⁴³	52	28	17 05	47	13	60	31	35
21	133	22.2		04.1	313	04.9 ¹²⁴	55.3 ⁴⁵	54	19	16 59	43	16 04	62	40	34
22	148	22.2		03.5	327	36.5 ¹²⁶	50.8 ⁴⁵	56	10	53	39	15 54	63	7 51	32
23	163	22.2		02.9	342	08.0 ¹²⁵	46.2 ⁴⁶	58	16 00	46	35	42	65	8 02	32
24	178	22.2	+19	02.3	356	39.6 ¹²⁶	-18 41.5 ⁴⁷	60 S	15 48	16 37	17 30	15 29	67	8 16	30

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 3 ^h 40 ^m 9		Mag: -4.3 PMG: 15 ^h 00 ^m		Mag: -2.8 PMG: 0 ^h 14 ^m		Mag: -2.2 PMG: 18 ^h 25 ^m		Mag: +0.2 PMG: 21 ^h 54 ^m	
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	o	'	o	'	o	'	o	'	o	'
0	304	37.5	135	00.4	+4	57.5	356	23.9	-25	28.7
1	319	40.0	150	00.5		56.2	11	27.1		28.9
2	334	42.4	165	00.6		55.0	26	30.3		29.1
3	349	44.9	180	00.7		53.8	41	33.5		29.4
4	4	47.4	195	00.7		52.6	56	36.6		29.6
5	19	49.8	210	00.8	+4	51.4	71	39.8	-25	29.8
6	34	52.3	225	00.9	+4	50.2	86	43.0	-25	30.1
7	49	54.7	240	00.9		48.9	101	46.2		30.3
8	64	57.2	255	01.0		47.7	116	49.3		30.5
9	79	59.7	270	01.1		46.5	131	52.5		30.7
10	95	02.1	285	01.2		45.3	146	55.7		31.0
11	110	04.6	300	01.2	+4	44.1	161	58.9	-25	31.2
12	125	07.1	315	01.3	+4	42.9	177	02.0	-25	31.4
13	140	09.5	330	01.4		41.6	192	05.2		31.7
14	155	12.0	345	01.5		40.4	207	08.4		31.9
15	170	14.5	0	01.5		39.2	222	11.6		32.1
16	185	16.9	15	01.6		38.0	237	14.7		32.3
17	200	19.4	30	01.7	+4	36.8	252	17.9	-25	32.6
18	215	21.9	45	01.8	+4	35.5	267	21.1	-25	32.8
19	230	24.3	60	01.9		34.3	282	24.3		33.0
20	245	26.8	75	01.9		33.1	297	27.4		33.3
21	260	29.2	90	02.0		31.9	312	30.6		33.5
22	275	31.7	105	02.1		30.7	327	33.8		33.7
23	290	34.2	120	02.2		29.4	342	37.0		33.9
24	305	36.6	135	02.3	+4	28.2	357	40.2	-25	34.2
Dif	—		+1 -12		+32 -2		+23 0		+26 0	

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h /8 PMG: 12 ^h 06 ^m 5				Edad: 14 ^d 9 PHE { 4 ^h : 54 ^m /0 12 ^h : 54 ^m /0 20 ^h : 54 ^m /1 SD: 14 ^h /7 PMG: 0 ^h 14 ^m R°: 46 ^m												
	hG ☉		Dec		hG ☾ Dif		Dec Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	o	'	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m
0	178	22.2	+19	02.3	356	39.6	-18	41.5	47	60 N	***	2 27	3 31	20 59	20	4 00	69
1	193	22.2		01.8	11	11.1 ¹²⁵		36.8	47	58	1 06	2 49	45	48	23	12	68
2	208	22.2		01.2	25	42.8 ¹²⁷		31.9	49	56	1 48	3 06	3 56	39	24	23	66
3	223	22.2	+19	00.6	40	14.4 ¹²⁶		27.0	49	54	2 14	21	4 06	31	26	33	63
4	238	22.3	+19	00.0	54	46.1 ¹²⁷		21.9	51	52	35	33	16	23	28	41	63
5	253	22.3	+18	59.5	69	17.8 ¹²⁷	-18	16.8	51	50	2 51	3 44	4 24	20 16	29	4 49	61
6	268	22.3	+18	58.9	83	49.5 ¹²⁷	-18	11.6	52	45	3 23	4 06	4 41	20 02	32	5 05	59
7	283	22.3		58.3	98	21.2 ¹²⁷		06.4	52	40	3 46	24	4 55	19 50	34	19	56
8	298	22.3		57.7	112	53.0 ¹²⁸	-18	01.0	54	35	4 04	38	5 06	40	36	30	54
9	313	22.3		57.1	127	24.8 ¹²⁸	-17	55.6	54	30	19	4 50	17	31	38	40	53
10	328	22.3		56.6	141	56.6 ¹²⁸		50.1	55	20	4 42	5 10	34	15	41	5 57	50
11	343	22.4	+18	56.0	156	28.5 ¹²⁹	-17	44.5	56	10 N	5 01	5 27	5 49	19 02	43	6 11	49
12	358	22.4	+18	55.4	171	00.4 ¹²⁹	-17	38.8	57	0	5 16	5 41	6 03	18 49	46	6 25	46
13	13	22.4		54.8	185	32.3 ¹²⁹		33.0	58	10 S	29	5 55	17	36	48	39	44
14	28	22.4		54.2	200	04.2 ¹²⁹		27.2	58	20	42	6 08	31	23	50	6 53	42
15	43	22.4		53.6	214	36.2 ¹³⁰		21.3	59	30	5 54	23	48	18 07	53	7 10	39
16	58	22.4		53.1	229	08.2 ¹³⁰		15.3	60	35	6 00	31	6 58	17 58	55	20	37
17	73	22.5	+18	52.5	243	40.2 ¹³⁰	-17	09.2	61	40	6 07	6 40	7 09	17 48	56	7 31	35
18	88	22.5	+18	51.9	258	12.2 ¹³⁰	-17	03.1	61	45	6 14	6 50	7 22	17 35	60	7 43	34
19	103	22.5		51.3	272	44.3 ¹³¹	-16	56.9	62	50	22	7 02	37	20	63	7 59	31
20	118	22.5		50.7	287	16.4 ¹³¹		50.6	63	52	26	07	45	13	64	8 06	30
21	133	22.5		50.1	301	48.6 ¹³²		44.2	64	54	29	13	7 53	17 06	65	14	29
22	148	22.5		49.6	316	20.7 ¹³¹		37.7	65	56	33	19	8 02	16 57	67	23	27
23	163	22.6		49.0	330	52.9 ¹³²		31.2	65	58	38	26	12	47	69	34	24
24	178	22.6	+18	48.4	345	25.1 ¹³²	-16	24.6	66	60 S	6 42	7 34	8 24	16 36	71	8 46	22

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 3 ^h 37 ^m 0		Mag: -4.3 PMG: 15 ^h 00 ^m		Mag: -2.8 PMG: 0 ^h 09 ^m		Mag: -2.2 PMG: 18 ^h 21 ^m		Mag: +0.2 PMG: 21 ^h 50 ^m	
	hG ♈		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec	
h	o	'	o	'	o	'	o	'	o	'
0	305	36.6	135	02.3	+4	28.2	357	40.2	-25	34.2
1	320	39.1	150	02.4		27.0	12	43.3		34.4
2	335	41.6	165	02.4		25.8	27	46.5		34.6
3	350	44.0	180	02.5		24.6	42	49.7		34.8
4	5	46.5	195	02.6		23.3	57	52.9		35.1
5	20	49.0	210	02.7	+4	22.1	72	56.0	-25	35.3
6	35	51.4	225	02.8	+4	20.9	87	59.2	-25	35.5
7	50	53.9	240	02.9		19.7	103	02.4		35.7
8	65	56.4	255	03.0		18.5	118	05.6		35.9
9	80	58.8	270	03.0		17.2	133	08.8		36.2
10	96	01.3	285	03.1		16.0	148	11.9		36.4
11	111	03.7	300	03.2	+4	14.8	163	15.1	-25	36.6
12	126	06.2	315	03.3	+4	13.6	178	18.3	-25	36.8
13	141	08.7	330	03.4		12.4	193	21.5		37.0
14	156	11.1	345	03.5		11.1	208	24.7		37.3
15	171	13.6	0	03.6		09.9	223	27.8		37.5
16	186	16.1	15	03.7		08.7	238	31.0		37.7
17	201	18.5	30	03.8	+4	07.5	253	34.2	-25	37.9
18	216	21.0	45	03.9	+4	06.3	268	37.4	-25	38.1
19	231	23.5	60	04.0		05.0	283	40.6		38.4
20	246	25.9	75	04.0		03.8	298	43.7		38.6
21	261	28.4	90	04.1		02.6	313	46.9		38.8
22	276	30.8	105	04.2		01.4	328	50.1		39.0
23	291	33.3	120	04.3	+4	00.1	343	53.3		39.2
24	306	35.8	135	04.4	+3	58.9	358	56.5	-25	39.5
Dif	—		+1 -12		+32 -2		+23 0		+26 0	

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15'8 PMG: 12 ^h 06 ^m 5			Edad: 15 ^d 9 PHE { 4 ^h : 54'1 12 ^h : 54'2 20 ^h : 54'3 R°: 45 ^m SD: 14'8 PMG: 1 ^h 00 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	o	'	o	'	o	'	o	h m	h m	h m	h m	h m	h m	h m	
0	178	22.6	+18	48.4	345	25.1	-16	24.6	20 38	21 40	** **	21 19	16	5 09	73
1	193	22.6		47.8	359	57.4 ¹³³		18.0 ⁶⁶	25	20	22 55	11 18		20	70
2	208	22.6		47.2	14	29.7 ¹³³		11.2 ⁶⁸	14	21 03	22 18	21 03	21	29	68
3	223	22.6		46.6	29	02.0 ¹³³	-16	04.4 ⁶⁸	20 04	20 49	21 53	20 57	22	36	66
4	238	22.6		46.0	43	34.3 ¹³³	-15	57.5 ⁶⁹	19 55	37	34	51 24		44	64
5	253	22.7	+18	45.4	58	06.7 ¹³⁴	-15	50.6 ⁶⁹	19 47	20 26	21 18	20 45	26	5 50	63
6	268	22.7	+18	44.8	72	39.1 ¹³⁴	-15	43.5 ⁷¹	19 30	20 05	20 48	20 34	29	6 04	59
7	283	22.7		44.3	87	11.5 ¹³⁴		36.4 ⁷¹	17	19 47	25	24 31		15	57
8	298	22.7		43.7	101	43.9 ¹³⁴		29.3 ⁷¹	19 05	33	20 07	16 33		24	56
9	313	22.7		43.1	116	16.4 ¹³⁵		22.0 ⁷³	18 55	22	19 53	20 09	35	33	53
10	328	22.8		42.5	130	48.9 ¹³⁵		14.7 ⁷³	38	19 02	30	19 56	39	6 47	50
11	343	22.8	+18	41.9	145	21.4 ¹³⁵	-15	07.3 ⁷⁴	18 24	18 46	19 12	19 45	42	7 00	47
12	358	22.8	+18	41.3	159	54.0 ¹³⁶	-14	59.9 ⁷⁴	18 10	18 32	18 57	19 35	44	7 11	45
13	13	22.8		40.7	174	26.6 ¹³⁶		52.4 ⁷⁵	17 56	19	44	24 47		23	42
14	28	22.9		40.1	188	59.2 ¹³⁶		44.8 ⁷⁶	20	42	18 05	32	13	50	35
15	43	22.9		39.5	203	31.8 ¹³⁶		37.2 ⁷⁶	30	26	17 51	20	19 00	54	49
16	58	22.9		38.9	218	04.5 ¹³⁷		29.5 ⁷⁷	35	16	43	14	18 53	55	7 57
17	73	22.9	+18	38.3	232	37.1 ¹³⁶	-14	21.7 ⁷⁸	40	17 05	17 35	18 07	18 44	58	8 06
18	88	22.9	+18	37.7	247	09.9 ¹³⁸	-14	13.9 ⁷⁸	45	16 53	17 25	18 00	18 35	60	8 17
19	103	23.0		37.1	261	42.6 ¹³⁷	-14	06.0 ⁷⁹	50	38	13	17 53	23	63	30
20	118	23.0		36.5	276	15.4 ¹³⁸	-13	58.0 ⁸⁰	52	30	08	49	17	65	36
21	133	23.0		35.9	290	48.2 ¹³⁸		50.0 ⁸⁰	54	22	17 02	46	11	67	43
22	148	23.0		35.3	305	21.0 ¹³⁸		41.9 ⁸¹	56	14	16 56	42	18 04	69	50
23	163	23.1		34.7	319	53.8 ¹³⁸		33.8 ⁸¹	58	16 04	49	38	17 56	71	8 58
24	178	23.1	+18	34.1	334	26.7 ¹³⁹	-13	25.5 ⁸³	60 S	15 52	16 41	17 33	17 47	74	9 08

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 3 ^h 33 ^m 0		Mag: -4.3 PMG: 15 ^h 00 ^m		Mag: -2.8 PMG: 0 ^h 04 ^m		Mag: -2.2 PMG: 18 ^h 18 ^m		Mag: +0.2 PMG: 21 ^h 46 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	o	'	o	'	o	'	o	'	o	'
0	306	35.8	135	04.4	358	56.5	84	54.4	32	33.7
1	321	38.2	150	04.5	13	59.6	99	56.7	47	36.3
2	336	40.7	165	04.6	29	02.8	114	59.0	62	38.9
3	351	43.2	180	04.7	44	06.0	130	01.4	77	41.5
4	6	45.6	195	04.8	59	09.2	145	03.7	92	44.1
5	21	48.1	210	04.9	74	12.4	160	06.0	107	46.8
6	36	50.6	225	05.0	89	15.5	175	08.4	122	49.4
7	51	53.0	240	05.1	104	18.7	190	10.7	137	52.0
8	66	55.5	255	05.2	119	21.9	205	13.0	152	54.6
9	81	58.0	270	05.3	134	25.1	220	15.4	167	57.2
10	97	00.4	285	05.4	149	28.3	235	17.7	182	59.8
11	112	02.9	300	05.5	164	31.4	250	20.0	198	02.4
12	127	05.3	315	05.6	179	34.6	265	22.3	213	05.1
13	142	07.8	330	05.7	194	37.8	280	24.7	228	07.7
14	157	10.3	345	05.8	209	41.0	295	27.0	243	10.3
15	172	12.7	0	05.9	224	44.2	310	29.3	258	12.9
16	187	15.2	15	06.0	239	47.3	325	31.7	273	15.5
17	202	17.7	30	06.1	254	50.5	340	34.0	288	18.1
18	217	20.1	45	06.3	269	53.7	355	36.3	303	20.7
19	232	22.6	60	06.4	284	56.9	10	38.7	318	23.4
20	247	25.1	75	06.5	300	00.1	25	41.0	333	26.0
21	262	27.5	90	06.6	315	03.3	40	43.3	348	28.6
22	277	30.0	105	06.7	330	06.4	55	45.6	3	31.2
23	292	32.5	120	06.8	345	09.6	70	48.0	18	33.8
24	307	34.9	135	06.9	0	12.8	85	50.3	33	36.4
Dif	—		+1	-12	-8968	-2	+23	-1	+26	0

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'8 PMG: 12 ^h 06 ^m 4				Edad: 16 ^d 9 PHE { SD: 14'8 PMG: 1 ^h 45 ^m R°: 45 ^m												
	hG ☉		Dec		hG ☾ Dif		Dec Dif										
h	o	'	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m
0	178	23.1	+18	34.1	334	26.7	-13	25.5	82	60 N	*** **	2 33	3 36	21 35	13	6 22	75
1	193	23.1		33.5	348	59.6 ¹³⁹		17.3	82	58	1 18	2 54	3 49	29 16		30	72
2	208	23.1		32.9	3	32.5 ¹³⁹		09.0	83	56	1 55	3 11	4 00	24 18		37	69
3	223	23.2		32.3	18	05.4 ¹³⁹	-13	00.6	84	54	2 20	25	10	19 20		43	67
4	238	23.2		31.7	32	38.4 ¹⁴⁰	-12	52.1	85	52	39	37	19	15 21		48	66
5	253	23.2	+18	31.1	47	11.4 ¹⁴⁰	-12	43.6	85	50	2 55	3 47	4 26	21 11	23	6 53	64
6	268	23.2	+18	30.5	61	44.4 ¹⁴⁰	-12	35.1	85	45	3 26	4 09	4 43	21 03	26	7 03	61
7	283	23.3		29.9	76	17.4 ¹⁴⁰		26.4	87	40	3 48	26	4 56	20 55	30	12	58
8	298	23.3		29.3	90	50.5 ¹⁴¹		17.8	86	35	4 06	40	5 08	49 32		20	55
9	313	23.3		28.7	105	23.6 ¹⁴¹		09.0	88	30	20	4 52	18	44 34		26	54
10	328	23.3		28.1	119	56.7 ¹⁴¹	-12	00.3	87	20	4 43	5 11	35	35 37		37	50
11	343	23.4	+18	27.5	134	29.8 ¹⁴¹	-11	51.4	89	10 N	5 01	5 27	5 49	20 27	40	7 47	47
12	358	23.4	+18	26.9	149	02.9 ¹⁴¹	-11	42.5	89	0	5 16	5 41	6 03	20 19	44	7 56	44
13	13	23.4		26.3	163	36.1 ¹⁴²		33.6	89	10 S	29	5 54	16	11 47		8 05	41
14	28	23.4		25.7	178	09.3 ¹⁴²		24.6	90	20	41	6 07	31	20 03	50	15	38
15	43	23.5		25.0	192	42.5 ¹⁴²		15.6	90	30	53	22	47	19 54	54	26	34
16	58	23.5		24.4	207	15.7 ¹⁴²	-11	06.5	91	35	5 59	29	6 56	48 56		32	33
17	73	23.5	+18	23.8	221	48.9 ¹⁴²	-10	57.3	92	40	6 05	6 38	7 07	19 42	59	8 39	30
18	88	23.6	+18	23.2	236	22.2 ¹⁴³	-10	48.1	92	45	6 12	6 48	7 19	19 35	61	8 47	28
19	103	23.6		22.6	250	55.4 ¹⁴²		38.9	92	50	20	6 59	34	26 65		8 57	24
20	118	23.6		22.0	265	28.7 ¹⁴³		29.6	93	52	23	7 04	42	22 67		9 02	22
21	133	23.7		21.4	280	02.0 ¹⁴³		20.2	94	54	27	10	49	18 68		07	21
22	148	23.7		20.8	294	35.4 ¹⁴⁴		10.8	94	56	30	16	7 58	13 70		12	19
23	163	23.7		20.2	309	08.7 ¹⁴³	-10	01.4	94	58	34	23	8 08	07 73		19	17
24	178	23.7	+18	19.6	323	42.1 ¹⁴⁴	-9	51.9	95	60 S	6 39	7 31	8 19	19 01	75	9 25	15

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 3 ^h 29 ^m 1		Mag: -4.3 PMG: 14 ^h 59 ^m		Mag: -2.8 PMG: 23 ^h 54 ^m		Mag: -2.2 PMG: 18 ^h 14 ^m		Mag: +0.2 PMG: 21 ^h 42 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	o	'	o	'	o	'	o	'	o	'
0	307	34.9	135	06.9	+3	29.5	85	50.3	-15	04.5
1	322	37.4	150	07.0		28.3	100	52.6		04.5
2	337	39.8	165	07.1		27.1	115	54.9		04.6
3	352	42.3	180	07.2		25.9	130	57.3		04.7
4	7	44.8	195	07.3		24.6	145	59.6		04.7
5	22	47.2	210	07.5	+3	23.4	161	01.9	-15	04.8
6	37	49.7	225	07.6	+3	22.2	176	04.2	-15	04.8
7	52	52.2	240	07.7		21.0	191	06.6		04.9
8	67	54.6	255	07.8		19.7	206	08.9		04.9
9	82	57.1	270	07.9		18.5	221	11.2		05.0
10	97	59.6	285	08.0		17.3	236	13.5		05.0
11	113	02.0	300	08.1	+3	16.1	251	15.9	-15	05.1
12	128	04.5	315	08.3	+3	14.8	266	18.2	-15	05.1
13	143	06.9	330	08.4		13.6	281	20.5		05.2
14	158	09.4	345	08.5		12.4	296	22.8		05.2
15	173	11.9	0	08.6		11.2	311	25.2		05.3
16	188	14.3	15	08.7		09.9	326	27.5		05.3
17	203	16.8	30	08.8	+3	08.7	341	29.8	-15	05.4
18	218	19.3	45	09.0	+3	07.5	356	32.1	-15	05.4
19	233	21.7	60	09.1		06.3	11	34.5		05.5
20	248	24.2	75	09.2		05.0	26	36.8		05.6
21	263	26.7	90	09.3		03.8	41	39.1		05.6
22	278	29.1	105	09.4		02.6	56	41.4		05.7
23	293	31.6	120	09.6		01.4	71	43.7		05.7
24	308	34.1	135	09.7	+3	00.1	86	46.1	-15	05.8
Dif	—		+1		-12		+32		-1	
									+26	
									0	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 12 ^h 06 ^m 4			Edad: 17 ^d 9 PHE { SD: 14 ^h 9 PMG: 2 ^h 30 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	Rº	Hora
h	o	'	o	'	o	'	o	'	h m	h m	h m	h m	h m	h m
0	178	23.7	+18	19.6	323	42.1	-9	51.9	60 N	20 33	21 34	** **	21 48 13	7 37 75
1	193	23.8		18.9	338	15.4 ¹⁴³		42.4 ⁹⁵	58	21	21 14	22 44	45 15	42 73
2	208	23.8		18.3	352	48.8 ¹⁴⁴		32.8 ⁹⁶	56	10	20 58	22 11	42 17	46 71
3	223	23.8		17.7	7	22.2 ¹⁴⁴		23.2 ⁹⁶	54	20 00	45	21 48	39 19	50 69
4	238	23.9		17.1	21	55.6 ¹⁴⁴		13.5 ⁹⁷	52	19 52	33	29	36 21	54 67
5	253	23.9	+18	16.5	36	29.1 ¹⁴⁵	-9	03.8 ⁹⁷	50	19 44	20 23	21 14	21 34 22	7 57 65
6	268	23.9	+18	15.9	51	02.5 ¹⁴⁴	-8	54.0 ⁹⁸	45	19 28	20 02	20 44	21 29 26	8 04 62
7	283	24.0		15.2	65	36.0 ¹⁴⁵		44.2 ⁹⁸	40	15	19 45	23	25 28	10 59
8	298	24.0		14.6	80	09.4 ¹⁴⁴		34.4 ⁹⁸	35	19 04	32	20 05	21 31	15 56
9	313	24.0		14.0	94	42.9 ¹⁴⁵		24.5 ⁹⁹	30	18 54	20	19 51	18 33	20 54
10	328	24.1		13.4	109	16.4 ¹⁴⁵		14.6 ⁹⁹	20	38	19 01	29	12 37	27 50
11	343	24.1	+18	12.8	123	49.9 ¹⁴⁵	-8	04.6 ¹⁰⁰	10 N	18 23	18 45	19 11	21 07 41	8 34 47
12	358	24.1	+18	12.2	138	23.4 ¹⁴⁵	-7	54.6 ¹⁰⁰	0	18 10	18 32	18 57	21 03 43	8 40 44
13	13	24.2		11.5	152	56.9 ¹⁴⁵		44.6 ¹⁰⁰	10 S	17 57	19	44	20 58 47	46 41
14	28	24.2		10.9	167	30.4 ¹⁴⁵		34.5 ¹⁰¹	20	43	18 06	32	53 51	8 53 37
15	43	24.2		10.3	182	03.9 ¹⁴⁵		24.4 ¹⁰¹	30	27	17 52	21	48 54	9 00 34
16	58	24.3		09.7	196	37.4 ¹⁴⁵		14.3 ¹⁰¹	35	18	45	15	44 57	05 31
17	73	24.3	+18	09.1	211	11.0 ¹⁴⁶	-7	04.1 ¹⁰²	40	17 07	17 36	18 09	20 41 59	9 09 29
18	88	24.3	+18	08.4	225	44.5 ¹⁴⁵	-6	53.9 ¹⁰²	45	16 55	17 27	18 02	20 36 62	9 15 26
19	103	24.4		07.8	240	18.1 ¹⁴⁶		43.6 ¹⁰³	50	40	16	17 55	31 66	21 23
20	118	24.4		07.2	254	51.6 ¹⁴⁵		33.3 ¹⁰³	52	33	11	52	29 67	24 21
21	133	24.4		06.6	269	25.2 ¹⁴⁶		23.0 ¹⁰³	54	26	17 05	48	26 69	28 19
22	148	24.5		05.9	283	58.7 ¹⁴⁵		12.7 ¹⁰³	56	17	16 59	45	23 72	31 18
23	163	24.5		05.3	298	32.3 ¹⁴⁶	-6	02.3 ¹⁰⁴	58	16 07	52	41	20 74	36 15
24	178	24.6	+18	04.7	313	05.9 ¹⁴⁶	-5	51.9 ¹⁰⁴	60 S	15 56	16 45	17 36	20 16 77	9 40 13

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 3 ^h 25 ^m 2		Mag: -4.3 PMG: 14 ^h 59 ^m		Mag: -2.8 PMG: 23 ^h 49 ^m		Mag: -2.2 PMG: 18 ^h 10 ^m		Mag: +0.2 PMG: 21 ^h 38 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♎	Dec
h	o	'	o	'	o	'	o	'	o	'
0	308	34.1	135	09.7	+3	00.1	1	29.1	-25	49.4
1	323	36.5	150	09.8	+2	58.9	16	32.3		49.6
2	338	39.0	165	09.9		57.7	31	35.5		49.8
3	353	41.4	180	10.1		56.4	46	38.7		50.0
4	8	43.9	195	10.2		55.2	61	41.8		50.2
5	23	46.4	210	10.3	+2	54.0	76	45.0	-25	50.4
6	38	48.8	225	10.4	+2	52.8	91	48.2	-25	50.6
7	53	51.3	240	10.6		51.5	106	51.4		50.8
8	68	53.8	255	10.7		50.3	121	54.6		51.0
9	83	56.2	270	10.8		49.1	136	57.7		51.2
10	98	58.7	285	11.0		47.9	152	00.9		51.3
11	114	01.2	300	11.1	+2	46.6	167	04.1	-25	51.5
12	129	03.6	315	11.2	+2	45.4	182	07.3	-25	51.7
13	144	06.1	330	11.3		44.2	197	10.5		51.9
14	159	08.5	345	11.5		42.9	212	13.6		52.1
15	174	11.0	0	11.6		41.7	227	16.8		52.3
16	189	13.5	15	11.7		40.5	242	20.0		52.5
17	204	15.9	30	11.9	+2	39.3	257	23.2	-25	52.7
18	219	18.4	45	12.0	+2	38.0	272	26.3	-25	52.9
19	234	20.9	60	12.1		36.8	287	29.5		53.1
20	249	23.3	75	12.3		35.6	302	32.7		53.3
21	264	25.8	90	12.4		34.4	317	35.9		53.5
22	279	28.3	105	12.5		33.1	332	39.1		53.6
23	294	30.7	120	12.7		31.9	347	42.2		53.8
24	309	33.2	135	12.8	+2	30.7	2	45.4	-25	54.0
Dif	—		+1		-12		+32		-2	
							+23		-1	
									+26	

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15°8 PMG: 12 ^h 06 ^m 3				Edad: 18 ^d 9 PHE { 4 ^h : 55°1 12 ^h : 55°2 20 ^h : 55°4 R°: 44 ^m															
	hG ☉		Dec		hG ☾		Dif			Dif			Náutico	Civil	Hora	R°	Hora	R°		
h	o	'	o	'	o	'	o	'	o	'	h	m	h	m	h	m	h	m		
0	178	24.6	+18	04.7	313	05.9	-5	51.9	60 N	***	2 40	3 40	22 01	12	8 52	77				
1	193	24.6		04.1	327	39.4 ¹⁴⁵		41.4 ¹⁰⁵	58	1 30	2 59	3 53	22 00	14	55	74				
2	208	24.6		03.4	342	13.0 ¹⁴⁶		30.9 ¹⁰⁵	56	2 02	3 15	4 04	21 59	17	57	72				
3	223	24.7		02.8	356	46.6 ¹⁴⁶		20.4 ¹⁰⁵	54	26	29	13	58	19	8 59	70				
4	238	24.7		02.2	11	20.1 ¹⁴⁵		-5 09.9 ¹⁰⁵	52	44	40	22	57	21	9 01	68				
5	253	24.7	+18	01.5	25	53.7 ¹⁴⁶		-4 59.3 ¹⁰⁶	50	2 59	3 50	4 29	21 56	22	9 02	67				
6	268	24.8	+18	00.9	40	27.2 ¹⁴⁵		-4 48.7 ¹⁰⁶	45	3 29	4 11	4 45	21 55	25	9 06	63				
7	283	24.8	+18	00.3	55	00.8 ¹⁴⁶		38.1 ¹⁰⁶	40	3 50	28	4 58	53	29	09	60				
8	298	24.9	+17	59.7	69	34.3 ¹⁴⁵		27.5 ¹⁰⁶	35	4 08	41	5 09	52	31	11	57				
9	313	24.9		59.0	84	07.9 ¹⁴⁶		16.8 ¹⁰⁷	30	22	4 53	19	51	34	14	54				
10	328	24.9		58.4	98	41.4 ¹⁴⁵		-4 06.1 ¹⁰⁷	20	4 44	5 12	35	49	38	17	51				
11	343	25.0	+17	57.8	113	14.9 ¹⁴⁵		-3 55.4 ¹⁰⁷	10 N	5 01	5 27	5 50	21 48	41	9 21	47				
12	358	25.0	+17	57.1	127	48.5 ¹⁴⁶		-3 44.6 ¹⁰⁸	0	5 16	5 41	6 03	21 46	45	9 24	44				
13	13	25.1		56.5	142	22.0 ¹⁴⁵		33.9 ¹⁰⁷	10 S	28	5 54	16	45	48	27	40				
14	28	25.1		55.9	156	55.5 ¹⁴⁵		23.1 ¹⁰⁸	20	40	6 07	30	44	51	30	37				
15	43	25.1		55.2	171	29.0 ¹⁴⁵		12.2 ¹⁰⁹	30	52	20	46	42	55	34	33				
16	58	25.2		54.6	186	02.5 ¹⁴⁵		-3 01.4 ¹⁰⁸	35	5 57	28	6 55	41	57	36	31				
17	73	25.2	+17	54.0	200	36.0 ¹⁴⁵		-2 50.6 ¹⁰⁸	40	6 03	6 36	7 05	21 40	60	9 38	28				
18	88	25.3	+17	53.3	215	09.4 ¹⁴⁴		-2 39.7 ¹⁰⁹	45	6 10	6 45	7 17	21 38	64	9 41	25				
19	103	25.3		52.7	229	42.9 ¹⁴⁵		28.8 ¹⁰⁹	50	17	6 56	32	37	67	44	22				
20	118	25.3		52.1	244	16.3 ¹⁴⁴		17.9 ¹⁰⁹	52	20	7 01	38	36	69	45	21				
21	133	25.4		51.4	258	49.8 ¹⁴⁵		-2 06.9 ¹¹⁰	54	24	07	46	35	71	47	19				
22	148	25.4		50.8	273	23.2 ¹⁴⁴		-1 56.0 ¹⁰⁹	56	27	13	7 54	35	72	49	16				
23	163	25.5		50.2	287	56.6 ¹⁴⁴		45.0 ¹¹⁰	58	31	19	8 04	34	75	51	14				
24	178	25.5	+17	49.5	302	29.9 ¹⁴³		-1 34.1 ¹⁰⁹	60 S	6 35	7 27	8 15	21 33	77	9 53	12				
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG 3 ^h 21 ^m 2				Mag: -4.3 PMG: 14 ^h 59 ^m				Mag: -2.8 PMG: 23 ^h 44 ^m				Mag: -2.2 PMG: 18 ^h 06 ^m				Mag: +0.2 PMG: 21 ^h 33 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec			
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'		
0	309	33.2	135	12.8	+2	30.7	2	45.4	-25	54.0	87	41.7	-15	07.1	35	41.7	-22	35.9		
1	324	35.7	150	12.9		29.4	17	48.6		54.2	102	44.0		07.1	50	44.3		35.9		
2	339	38.1	165	13.1		28.2	32	51.8		54.4	117	46.3		07.2	65	46.9		35.9		
3	354	40.6	180	13.2		27.0	47	54.9		54.6	132	48.6		07.3	80	49.5		35.9		
4	9	43.0	195	13.4		25.8	62	58.1		54.8	147	50.9		07.3	95	52.1		35.9		
5	24	45.5	210	13.5	+2	24.5	78	01.3	-25	54.9	162	53.2	-15	07.4	110	54.7	-22	35.9		
6	39	48.0	225	13.6	+2	23.3	93	04.5	-25	55.1	177	55.5	-15	07.4	125	57.4	-22	35.9		
7	54	50.4	240	13.8		22.1	108	07.6		55.3	192	57.9		07.5	141	00.0		35.9		
8	69	52.9	255	13.9		20.8	123	10.8		55.5	208	00.2		07.5	156	02.6		35.9		
9	84	55.4	270	14.0		19.6	138	14.0		55.7	223	02.5		07.6	171	05.2		35.9		
10	99	57.8	285	14.2		18.4	153	17.2		55.9	238	04.8		07.7	186	07.8		36.0		
11	115	00.3	300	14.3	+2	17.2	168	20.3	-25	56.1	253	07.1	-15	07.7	201	10.4	-22	36.0		
12	130	02.8	315	14.5	+2	15.9	183	23.5	-25	56.2	268	09.4	-15	07.8	216	13.0	-22	36.0		
13	145	05.2	330	14.6		14.7	198	26.7		56.4	283	11.7		07.8	231	15.6		36.0		
14	160	07.7	345	14.8		13.5	213	29.9		56.6	298	14.0		07.9	246	18.2		36.0		
15	175	10.2	0	14.9		12.2	228	33.0		56.8	313	16.3		07.9	261	20.8		36.0		
16	190	12.6	15	15.0		11.0	243	36.2		57.0	328	18.6		08.0	276	23.4		36.0		
17	205	15.1	30	15.2	+2	09.8	258	39.4	-25	57.1	343	21.0	-15	08.1	291	26.0	-22	36.0		
18	220	17.5	45	15.3	+2	08.6	273	42.5	-25	57.3	358	23.3	-15	08.1	306	28.6	-22	36.0		
19	235	20.0	60	15.5		07.3	288	45.7		57.5	13	25.6		08.2	321	31.2		36.0		
20	250	22.5	75	15.6		06.1	303	48.9		57.7	28	27.9		08.2	336	33.8		36.0		
21	265	24.9	90	15.8		04.9	318	52.1		57.9	43	30.2		08.3	351	36.4		36.1		
22	280	27.4	105	15.9		03.6	333	55.2		58.0	58	32.5		08.3	6	39.0		36.1		
23	295	29.9	120	16.1		02.4	348	58.4		58.2	73	34.8		08.4	21	41.6		36.1		
24	310	32.3	135	16.2	+2	01.2	4	01.6	-25	58.4	88	37.1	-15	08.5	36	44.2	-22	36.1		
Dif	—				+1 -12				+32 -2				+23 -1				+26 0			

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 15°8 PMG: 12 ^h 06 ^m 3				Edad: 19 ^d 9 PHE { 4 ^h : 55°6 12 ^h : 55°8 20 ^h : 56°0 SD: 15°2 PMG: 3 ^h 57 ^m R°: 45 ^m															
	hG ☉		Dec		hG ☾ Dif		Dec Dif				Civil	Náutico	Hora	R°	Hora	R°				
h	o	'	o	'	o	'	o	'	o	h m	h m	h m	h m	m	h m	m				
0	178	25.5	+17	49.5	302	29.9	-1	34.1	60 N	20 28	21 27	23 26	22 13	13	10 09	79				
1	193	25.6		48.9	317	03.3 ¹⁴⁴		23.1 ¹¹⁰	58	16	21 09	22 33	14	16	09	76				
2	208	25.6		48.2	331	36.7 ¹⁴⁴		12.0 ¹¹¹	56	20 06	20 53	22 04	16	18	09	74				
3	223	25.6		47.6	346	10.0 ¹⁴³	-1	01.0 ¹¹⁰	54	19 57	40	21 42	17	20	09	72				
4	238	25.7		47.0	0	43.3 ¹⁴³	-0	50.0 ¹¹⁰	52	48	29	24	18	21	09	70				
5	253	25.7	+17	46.3	15	16.6 ¹⁴³	-0	38.9 ¹¹¹	50	19 41	20 19	21 10	22 18	24	10 09	68				
6	268	25.8	+17	45.7	29	49.8 ¹⁴²	-0	27.9 ¹¹⁰	45	19 26	19 59	20 41	22 20	27	10 09	64				
7	283	25.8		45.0	44	23.1 ¹⁴³		16.8 ¹¹¹	40	13	43	20	22	30	09	61				
8	298	25.9		44.4	58	56.3 ¹⁴²	-0	05.7 ¹¹¹	35	19 02	30	20 03	23	33	08	59				
9	313	25.9		43.8	73	29.5 ¹⁴²	+0	05.4 ¹¹¹	30	18 53	18	19 49	25	35	08	56				
10	328	26.0		43.1	88	02.7 ¹⁴²		16.5 ¹¹¹	20	37	19 00	28	27	39	08	52				
11	343	26.0	+17	42.5	102	35.8 ¹⁴¹	+0	27.6 ¹¹¹	10 N	18 23	18 45	19 11	22 29	42	10 08	48				
12	358	26.0	+17	41.8	117	08.9 ¹⁴¹	+0	38.7 ¹¹¹	0	18 10	18 31	18 57	22 31	46	10 08	45				
13	13	26.1		41.2	131	42.0 ¹⁴¹	+0	49.8 ¹¹¹	10 S	17 57	19	44	33	49	07	42				
14	28	26.1		40.5	146	15.1 ¹⁴¹	+1	00.9 ¹¹¹	20	43	18 06	33	35	53	07	38				
15	43	26.2		39.9	160	48.1 ¹⁴⁰		12.1 ¹¹²	30	28	17 53	22	37	57	07	34				
16	58	26.2		39.3	175	21.2 ¹⁴¹		23.2 ¹¹¹	35	19	46	16	38	60	07	31				
17	73	26.3	+17	38.6	189	54.1 ¹³⁹	+1	34.4 ¹¹²	40	17 09	17 38	18 10	22 40	62	10 06	30				
18	88	26.3	+17	38.0	204	27.1 ¹⁴⁰	+1	45.5 ¹¹¹	45	16 57	17 29	18 04	22 42	65	10 06	26				
19	103	26.4		37.3	219	00.0 ¹³⁹	+1	56.6 ¹¹¹	50	43	18	17 57	44	69	06	22				
20	118	26.4		36.7	233	32.9 ¹³⁹	+2	07.8 ¹¹²	52	36	13	54	45	71	06	21				
21	133	26.5		36.0	248	05.7 ¹³⁸		18.9 ¹¹¹	54	29	08	51	46	73	06	19				
22	148	26.5		35.4	262	38.5 ¹³⁸		30.1 ¹¹²	56	21	17 02	48	47	75	05	18				
23	163	26.6		34.7	277	11.3 ¹³⁸		41.2 ¹¹¹	58	11	16 56	44	49	77	05	15				
24	178	26.6	+17	34.1	291	44.0 ¹³⁷	+2	52.4 ¹¹²	60 S	16 01	16 49	17 40	22 50	80	10 05	13				
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 3 ^h 17 ^m 3				Mag: -4.3 PMG: 14 ^h 59 ^m				Mag: -2.7 PMG: 23 ^h 39 ^m				Mag: -2.1 PMG: 18 ^h 03 ^m				Mag: +0.2 PMG: 21 ^h 29 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♊		Dec		hG ♉		Dec			
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'		
0	310	32.3	135	16.2	+2	01.2	4	01.6	-25	58.4	88	37.1	-15	08.5	36	44.2	-22	36.1		
1	325	34.8	150	16.4	+2	00.0	19	04.8		58.6	103	39.4		08.5	51	46.9		36.1		
2	340	37.3	165	16.5	+1	58.7	34	07.9		58.7	118	41.7		08.6	66	49.5		36.1		
3	355	39.7	180	16.7		57.5	49	11.1		58.9	133	44.0		08.6	81	52.1		36.1		
4	10	42.2	195	16.8		56.3	64	14.3		59.1	148	46.3		08.7	96	54.7		36.1		
5	25	44.6	210	17.0	+1	55.0	79	17.4	-25	59.3	163	48.6	-15	08.7	111	57.3	-22	36.1		
6	40	47.1	225	17.1	+1	53.8	94	20.6	-25	59.4	178	50.9	-15	08.8	126	59.9	-22	36.1		
7	55	49.6	240	17.3		52.6	109	23.8		59.6	193	53.2		08.9	142	02.5		36.1		
8	70	52.0	255	17.4		51.3	124	26.9	-25	59.8	208	55.5		08.9	157	05.1		36.2		
9	85	54.5	270	17.6		50.1	139	30.1	-26	00.0	223	57.9		09.0	172	07.7		36.2		
10	100	57.0	285	17.7		48.9	154	33.3	-26	00.1	239	00.2		09.0	187	10.3		36.2		
11	115	59.4	300	17.9	+1	47.7	169	36.4	-26	00.3	254	02.5	-15	09.1	202	12.9	-22	36.2		
12	131	01.9	315	18.0	+1	46.4	184	39.6	-26	00.5	269	04.8	-15	09.2	217	15.5	-22	36.2		
13	146	04.4	330	18.2		45.2	199	42.8		00.7	284	07.1		09.2	232	18.1		36.2		
14	161	06.8	345	18.4		44.0	214	46.0		00.8	299	09.4		09.3	247	20.7		36.2		
15	176	09.3	0	18.5		42.7	229	49.1		01.0	314	11.7		09.3	262	23.3		36.2		
16	191	11.8	15	18.7		41.5	244	52.3		01.2	329	14.0		09.4	277	25.9		36.2		
17	206	14.2	30	18.8	+1	40.3	259	55.5	-26	01.3	344	16.3	-15	09.5	292	28.5	-22	36.2		
18	221	16.7	45	19.0	+1	39.0	274	58.6	-26	01.5	359	18.6	-15	09.5	307	31.1	-22	36.2		
19	236	19.1	60	19.1		37.8	290	01.8		01.7	14	20.9		09.6	322	33.7		36.2		
20	251	21.6	75	19.3		36.6	305	04.9		01.8	29	23.2		09.6	337	36.3		36.3		
21	266	24.1	90	19.5		35.4	320	08.1		02.0	44	25.5		09.7	352	38.9		36.3		
22	281	26.5	105	19.6		34.1	335	11.3		02.2	59	27.8		09.8	7	41.5		36.3		
23	296	29.0	120	19.8		32.9	350	14.4		02.3	74	30.1		09.8	22	44.1		36.3		
24	311	31.5	135	20.0	+1	31.7	5	17.6	-26	02.5	89	32.4	-15	09.9	37	46.7	-22	36.3		
Dif	—		+2		-12		+32		-2		+23		-1		+26					

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'8 PMG: 12 ^h 06 ^m 2				Edad: 20 ^d 9 PHE { 4 ^h : 56'2 12 ^h : 56'5 20 ^h : 56'7 SD: 15'4 PMG: 4 ^h 42 ^m R°: 46 ^m												
	hG ☉		Dec		hG ☾		Dif			Dif			Náutico	Civil	Hora	R°	Hora
h	o	'	o	'	o	'	o	'	o	'	h	m	h	m	h	m	m
0	178	26.6	+17	34.1	291	44.0	+2	52.4	60 N	0 47	2 46	3 45	22 26	16	11 28	81	
1	193	26.7		33.4	306	16.7 ¹³⁷	+3	03.5 ¹¹¹	58	1 40	3 04	3 57	30 19		25	79	
2	208	26.7		32.8	320	49.4 ¹³⁷		14.7 ¹¹²	56	2 10	20	4 07	34 20		23	76	
3	223	26.8		32.1	335	22.0 ¹³⁶		25.8 ¹¹¹	54	31	33	17	37 22		21	73	
4	238	26.8		31.5	349	54.6 ¹³⁶		36.9 ¹¹¹	52	2 49	44	25	39 25		19	71	
5	253	26.9	+17	30.8	4	27.2 ¹³⁶	+3	48.1 ¹¹²	50	3 03	3 54	4 32	22 42	26	11 17	70	
6	268	26.9	+17	30.2	18	59.7 ¹³⁵	+3	59.2 ¹¹¹	45	3 32	4 14	4 47	22 47	30	11 13	66	
7	283	27.0		29.5	33	32.1 ¹³⁴	+4	10.3 ¹¹¹	40	3 53	30	5 00	52 33		10	62	
8	298	27.0		28.9	48	04.5 ¹³⁴		21.4 ¹¹¹	35	4 10	43	11	22 56	36	07	60	
9	313	27.1		28.2	62	36.9 ¹³⁴		32.5 ¹¹¹	30	23	4 54	20	23 00	37	04	58	
10	328	27.1		27.5	77	09.2 ¹³³		43.6 ¹¹¹	20	4 45	5 13	36	06 42		11 00	54	
11	343	27.2	+17	26.9	91	41.5 ¹³³	+4	54.7 ¹¹¹	10 N	5 02	5 28	5 50	23 11	46	10 56	50	
12	358	27.2	+17	26.2	106	13.7 ¹³²	+5	05.7 ¹¹⁰	0	5 16	5 41	6 03	23 17	48	10 53	46	
13	13	27.3		25.6	120	45.9 ¹³²		16.8 ¹¹¹	10 S	28	5 53	15	22 52		49	44	
14	28	27.3		24.9	135	18.0 ¹³¹		27.8 ¹¹⁰	20	39	6 06	29	28 55		45	40	
15	43	27.4		24.3	149	50.1 ¹³¹		38.8 ¹¹⁰	30	50	19	44	34 59		41	36	
16	58	27.4		23.6	164	22.2 ¹³¹	+5	49.8 ¹¹⁰	35	5 56	26	6 53	38 61		38	34	
17	73	27.5	+17	23.0	178	54.1 ¹²⁹	+6	00.8 ¹¹⁰	40	6 02	6 34	7 03	23 42	64	10 36	31	
18	88	27.5	+17	22.3	193	26.1 ¹³⁰	+6	11.8 ¹¹⁰	45	6 08	6 43	7 14	23 47	67	10 32	28	
19	103	27.6		21.6	207	57.9 ¹²⁸		22.8 ¹¹⁰	50	15	54	29	53 71		28	25	
20	118	27.7		21.0	222	29.8 ¹²⁹		33.7 ¹⁰⁹	52	18	6 58	35	56 73		27	23	
21	133	27.7		20.3	237	01.5 ¹²⁷		44.6 ¹⁰⁹	54	21	7 03	42	23 59	75	25	21	
22	148	27.8		19.7	251	33.2 ¹²⁷	+6	55.5 ¹⁰⁹	56	24	09	7 51	*** **	**	23	19	
23	163	27.8		19.0	266	04.9 ¹²⁷	+7	06.4 ¹⁰⁹	58	28	15	8 00	*** **	**	20	17	
24	178	27.9	+17	18.3	280	36.5 ¹²⁶	+7	17.3 ¹⁰⁹	60 S	6 31	7 22	8 10	*** **	**	10 18	14	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 3 ^h 13 ^m 4		Mag: -4.3 PMG: 14 ^h 59 ^m		Mag: -2.7 PMG: 23 ^h 34 ^m		Mag: -2.1 PMG: 17 ^h 59 ^m		Mag: +0.2 PMG: 21 ^h 25 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	o	'	o	'	o	'	o	'	o	'
0	311	31.5	135	20.0	+1	31.7	89	32.4	-15	09.9
1	326	33.9	150	20.1		30.4	104	34.7		09.9
2	341	36.4	165	20.3		29.2	119	37.0		10.0
3	356	38.9	180	20.4		28.0	134	39.3		10.1
4	11	41.3	195	20.6		26.7	149	41.6		10.1
5	26	43.8	210	20.8	+1	25.5	164	43.9	-15	10.2
6	41	46.2	225	20.9	+1	24.3	179	46.2	-15	10.2
7	56	48.7	240	21.1		23.1	194	48.5		10.3
8	71	51.2	255	21.3		21.8	209	50.8		10.4
9	86	53.6	270	21.4		20.6	224	53.1		10.4
10	101	56.1	285	21.6		19.4	239	55.4		10.5
11	116	58.6	300	21.8	+1	18.1	254	57.7	-15	10.5
12	132	01.0	315	21.9	+1	16.9	270	00.0	-15	10.6
13	147	03.5	330	22.1		15.7	285	02.3		10.7
14	162	06.0	345	22.3		14.4	300	04.6		10.7
15	177	08.4	0	22.4		13.2	315	06.8		10.8
16	192	10.9	15	22.6		12.0	330	09.1		10.8
17	207	13.4	30	22.8	+1	10.8	345	11.4	-15	10.9
18	222	15.8	45	23.0	+1	09.5	0	13.7	-15	11.0
19	237	18.3	60	23.1		08.3	15	16.0		11.0
20	252	20.7	75	23.3		07.1	30	18.3		11.1
21	267	23.2	90	23.5		05.8	45	20.6		11.1
22	282	25.7	105	23.6		04.6	60	22.9		11.2
23	297	28.1	120	23.8		03.4	75	25.2		11.3
24	312	30.6	135	24.0	+1	02.1	90	27.5	-15	11.3
Dif	—		+2		-12		+32		-1	
									+26	
									0	

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 15'8 PMG: 12 ^h 06 ^m 1			Edad: 21 ^d 9 PHE { 4 ^h : 57'0 12 ^h : 57'2 20 ^h : 57'5 R°: 49 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	o	'	o	'	o	'	o	'	h	m	h	m	h	m	h	m		
0	178	27.9	+17	18.3	280	36.5	+7	17.3	60 N	20 23	21 21	23 06	22 42	20	12 49	83		
1	193	27.9		17.7	295	08.0 ¹²⁵		28.1 ¹⁰⁸	58	12	21 03	22 23	49	22	44	80		
2	208	28.0		17.0	309	39.5 ¹²⁵		38.9 ¹⁰⁸	56	20 02	20 48	21 56	54	25	39	78		
3	223	28.0		16.3	324	10.9 ¹²⁴	+7	49.7 ¹⁰⁸	54	19 53	36	36	22 59	28	34	76		
4	238	28.1		15.7	338	42.3 ¹²⁴	+8	00.5 ¹⁰⁸	52	45	25	19	23 04	29	30	74		
5	253	28.2	+17	15.0	353	13.5 ¹²²	+8	11.2 ¹⁰⁷	50	19 38	20 16	21 05	23 08	31	12 27	72		
6	268	28.2	+17	14.4	7	44.8 ¹²³	+8	21.9 ¹⁰⁷	45	19 23	19 56	20 38	23 17	35	12 19	68		
7	283	28.3		13.7	22	15.9 ¹²¹		32.6 ¹⁰⁷	40	11	41	17	25	37	12	66		
8	298	28.3		13.0	36	47.0 ¹²¹		43.2 ¹⁰⁶	35	19 00	28	20 01	32	39	07	62		
9	313	28.4		12.4	51	18.1 ¹²¹	+8	53.9 ¹⁰⁷	30	18 51	19 17	19 48	37	42	12 02	60		
10	328	28.4		11.7	65	49.0 ¹¹⁹	+9	04.4 ¹⁰⁵	20	36	18 59	26	48	45	11 54	56		
11	343	28.5	+17	11.0	80	19.9 ¹¹⁹	+9	15.0 ¹⁰⁶	10 N	18 22	18 44	19 10	23 57	48	11 46	53		
12	358	28.6	+17	10.4	94	50.8 ¹¹⁹	+9	25.5 ¹⁰⁵	0	18 10	18 31	18 56	** ** *	**	11 39	50		
13	13	28.6		09.7	109	21.5 ¹¹⁷		36.0 ¹⁰⁵	10 S	17 57	19	44	** ** *	**	33	46		
14	28	28.7		09.0	123	52.2 ¹¹⁷		46.4 ¹⁰⁴	20	44	18 07	34	** ** *	**	25	44		
15	43	28.7		08.4	138	22.8 ¹¹⁶	+9	56.9 ¹⁰⁵	30	29	17 54	23	** ** *	**	17	39		
16	58	28.8		07.7	152	53.4 ¹¹⁶	+10	07.2 ¹⁰³	35	21	47	18	** ** *	**	12	37		
17	73	28.8	+17	07.0	167	23.9 ¹¹⁵	+10	17.6 ¹⁰⁴	40	17 11	17 40	18 12	** ** *	**	11 07	34		
18	88	28.9	+17	06.3	181	54.3 ¹¹⁴	+10	27.8 ¹⁰²	45	16 59	17 31	18 06	** ** *	**	11 00	32		
19	103	29.0		05.7	196	24.6 ¹¹³		38.1 ¹⁰³	50	46	21	18 00	** ** *	**	10 53	28		
20	118	29.0		05.0	210	54.8 ¹¹²		48.3 ¹⁰²	52	39	16	17 57	** ** *	**	50	26		
21	133	29.1		04.3	225	25.0 ¹¹²	+10	58.5 ¹⁰²	54	32	11	54	** ** *	**	46	24		
22	148	29.1		03.7	239	55.1 ¹¹¹	+11	08.6 ¹⁰¹	56	24	17 06	51	0 02	78	42	22		
23	163	29.2		03.0	254	25.2 ¹¹¹		18.7 ¹⁰¹	58	15	16 59	47	06	80	37	20		
24	178	29.3	+17	02.3	268	55.1 ¹⁰⁹	+11	28.7 ¹⁰⁰	60 S	16 05	16 53	17 44	0 10	83	10 32	17		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 3 ^h 09 ^m 4		Mag: -4.3 PMG: 14 ^h 58 ^m				Mag: -2.7 PMG: 23 ^h 29 ^m				Mag: -2.1 PMG: 17 ^h 55 ^m				Mag: +0.2 PMG: 21 ^h 21 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'
0	312	30.6	135	24.0	+1	02.1	6	33.4	-26	06.4	90	27.5	-15	11.3	38	49.1	-22	36.5
1	327	33.1	150	24.2	+1	00.9	21	36.6		06.5	105	29.8		11.4	53	51.7		36.5
2	342	35.5	165	24.3	+0	59.7	36	39.7		06.7	120	32.1		11.5	68	54.3		36.5
3	357	38.0	180	24.5		58.5	51	42.9		06.8	135	34.4		11.5	83	56.9		36.5
4	12	40.5	195	24.7		57.2	66	46.1		07.0	150	36.7		11.6	98	59.5		36.5
5	27	42.9	210	24.9	+0	56.0	81	49.2	-26	07.1	165	39.0	-15	11.6	114	02.1	-22	36.5
6	42	45.4	225	25.0	+0	54.8	96	52.4	-26	07.3	180	41.2	-15	11.7	129	04.7	-22	36.6
7	57	47.9	240	25.2		53.5	111	55.5		07.4	195	43.5		11.8	144	07.3		36.6
8	72	50.3	255	25.4		52.3	126	58.7		07.6	210	45.8		11.8	159	09.9		36.6
9	87	52.8	270	25.6		51.1	142	01.8		07.7	225	48.1		11.9	174	12.5		36.6
10	102	55.2	285	25.8		49.8	157	05.0		07.9	240	50.4		12.0	189	15.1		36.6
11	117	57.7	300	25.9	+0	48.6	172	08.1	-26	08.0	255	52.7	-15	12.0	204	17.7	-22	36.6
12	133	00.2	315	26.1	+0	47.4	187	11.3	-26	08.2	270	55.0	-15	12.1	219	20.3	-22	36.6
13	148	02.6	330	26.3		46.2	202	14.4		08.3	285	57.3		12.1	234	22.9		36.6
14	163	05.1	345	26.5		44.9	217	17.6		08.5	300	59.6		12.2	249	25.5		36.6
15	178	07.6	0	26.7		43.7	232	20.7		08.6	316	01.9		12.3	264	28.0		36.6
16	193	10.0	15	26.9		42.5	247	23.9		08.8	331	04.1		12.3	279	30.6		36.6
17	208	12.5	30	27.0	+0	41.2	262	27.0	-26	08.9	346	06.4	-15	12.4	294	33.2	-22	36.7
18	223	15.0	45	27.2	+0	40.0	277	30.1	-26	09.1	1	08.7	-15	12.5	309	35.8	-22	36.7
19	238	17.4	60	27.4		38.8	292	33.3		09.2	16	11.0		12.5	324	38.4		36.7
20	253	19.9	75	27.6		37.5	307	36.4		09.4	31	13.3		12.6	339	41.0		36.7
21	268	22.3	90	27.8		36.3	322	39.6		09.5	46	15.6		12.6	354	43.6		36.7
22	283	24.8	105	28.0		35.1	337	42.7		09.7	61	17.9		12.7	9	46.2		36.7
23	298	27.3	120	28.1		33.9	352	45.9		09.8	76	20.2		12.8	24	48.8		36.7
24	313	29.7	135	28.3	+0	32.6	7	49.0	-26	09.9	91	22.4	-15	12.8	39	51.4	-22	36.7
Dif	—		+2		-12		+31		-1		+23		-1		+26			

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15°8 PMG: 12 ^h 06 ^m 0				Edad: 22 ^d 9 PHE { 4 ^h : 57°8 12 ^h : 58°1 20 ^h : 58°4 PMG: 6 ^h 17 ^m R°: 53 ^m												
	hG ☉		Dec		hG ☾ Dif		Dec Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	o	'	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m
0	178	29.3	+17	02.3	268	55.1	+11	28.7	60 N	1 07	2 52	3 50	23 02	27	14 12	85	
1	193	29.3		01.6	283	25.0		38.7	58	1 49	3 10	4 01	11 30	14 04	81		
2	208	29.4		01.0	297	54.8		48.6	56	2 16	24	11	19 33	13 57	79		
3	223	29.5	+17	00.3	312	24.5	+11	58.5	54	37	37	20	27 34	50	77		
4	238	29.5	+16	59.6	326	54.1	+12	08.3	52	2 54	47	28	33 36	44	75		
5	253	29.6	+16	58.9	341	23.7	+12	18.1	50	3 07	3 57	4 35	23 39	38	13 39	73	
6	268	29.6	+16	58.3	355	53.1	+12	27.8	45	3 35	4 16	4 50	23 52	40	13 27	70	
7	283	29.7		57.6	10	22.5		37.5	40	3 55	32	5 02	***	**	18	67	
8	298	29.8		56.9	24	51.8		47.1	35	4 11	45	12	***	**	09	65	
9	313	29.8		56.2	39	21.0	+12	56.7	30	25	4 56	21	***	**	13 02	63	
10	328	29.9		55.6	53	50.2	+13	06.2	20	4 46	5 13	37	***	**	12 50	59	
11	343	30.0	+16	54.9	68	19.2	+13	15.6	10 N	5 02	5 28	5 50	***	**	12 39	56	
12	358	30.0	+16	54.2	82	48.2	+13	25.0	0	5 16	5 41	6 03	0 05	52	12 29	54	
13	13	30.1		53.5	97	17.1		34.3	10 S	28	5 53	15	14 54		19	51	
14	28	30.2		52.8	111	45.9		43.5	20	38	6 05	28	23 58	12 09	47		
15	43	30.2		52.2	126	14.6	+13	52.7	30	49	17	43	33 62	11 56	45		
16	58	30.3		51.5	140	43.2	+14	01.9	35	5 54	24	6 51	39 64	49	43		
17	73	30.3	+16	50.8	155	11.8	+14	10.9	40	6 00	6 32	7 01	0 46	67	11 41	40	
18	88	30.4	+16	50.1	169	40.2	+14	19.9	45	6 06	6 41	7 12	0 54	70	11 32	37	
19	103	30.5		49.4	184	08.6		28.8	50	12	51	25	1 04	73	21	34	
20	118	30.5		48.7	198	36.8		37.7	52	15	6 55	32	09 75	16	32		
21	133	30.6		48.1	213	05.0		46.4	54	18	7 00	39	14 77	10	30		
22	148	30.7		47.4	227	33.1	+14	55.1	56	21	06	47	20 79	11 04	28		
23	163	30.7		46.7	242	01.1	+15	03.8	58	24	11	7 55	26 81	10 57	25		
24	178	30.8	+16	46.0	256	29.0	+15	12.3	60 S	6 28	7 18	8 05	1 33	85	10 49	23	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 3 ^h 05 ^m 5		Mag: -4.3 PMG: 14 ^h 58 ^m		Mag: -2.7 PMG: 23 ^h 24 ^m		Mag: -2.1 PMG: 17 ^h 52 ^m		Mag: +0.2 PMG: 21 ^h 17 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	o	'	o	'	o	'	o	'	o	'
0	313	29.7	135	28.3	+0	32.6	91	22.4	-15	12.8
1	328	32.2	150	28.5		31.4	106	24.7		12.9
2	343	34.7	165	28.7		30.2	121	27.0		13.0
3	358	37.1	180	28.9		28.9	136	29.3		13.0
4	13	39.6	195	29.1		27.7	151	31.6		13.1
5	28	42.1	210	29.3	+0	26.5	166	33.9	-15	13.2
6	43	44.5	225	29.5	+0	25.2	181	36.2	-15	13.2
7	58	47.0	240	29.7		24.0	196	38.4		13.3
8	73	49.5	255	29.9		22.8	211	40.7		13.3
9	88	51.9	270	30.0		21.6	226	43.0		13.4
10	103	54.4	285	30.2		20.3	241	45.3		13.5
11	118	56.8	300	30.4	+0	19.1	256	47.6	-15	13.5
12	133	59.3	315	30.6	+0	17.9	271	49.9	-15	13.6
13	149	01.8	330	30.8		16.6	286	52.1		13.7
14	164	04.2	345	31.0		15.4	301	54.4		13.7
15	179	06.7	0	31.2		14.2	316	56.7		13.8
16	194	09.2	15	31.4		13.0	331	59.0		13.9
17	209	11.6	30	31.6	+0	11.7	347	01.3	-15	13.9
18	224	14.1	45	31.8	+0	10.5	2	03.6	-15	14.0
19	239	16.6	60	32.0		09.3	17	05.8		14.1
20	254	19.0	75	32.2		08.0	32	08.1		14.1
21	269	21.5	90	32.4		06.8	47	10.4		14.2
22	284	24.0	105	32.6		05.6	62	12.7		14.3
23	299	26.4	120	32.8		04.3	77	15.0		14.3
24	314	28.9	135	33.0	+0	03.1	92	17.2	-15	14.4
Dif	—		+2		-12		+31		-1	
							+23		-1	
									+26	
									0	

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8 PMG: 12 ^h 05 ^m 9				Edad: 23 ^d 9 PHE { 4 ^h : 58 ^h /6 12 ^h : 58 ^h /9 20 ^h : 59 ^h /2 PMG: 7 ^h 10 ^m R°: 56 ^m													
	hG ☉		Dec		hG ☾		Dif				Civil	Náutico	Hora	R°	Hora	R°		
h	o	'	o	'	o	'	o	'	o	h m	h m	h m	h m m	h m m	h m m	h m m		
0	178	30.8	+16	46.0	256	29.0	+15	12.3	60 N	20 18	21 14	22 51	23 29 39	15 37 81				
1	193	30.9		45.3	270	56.8	88	20.8	58	20 07	20 57	22 14	41 42	25 79				
2	208	30.9		44.6	285	24.5	87	29.2	56	19 57	44	21 49	23 52 43	16 76				
3	223	31.0		44.0	299	52.2	87	37.5	54	49	32	30	** ** *	15 07 75				
4	238	31.1		43.3	314	19.7	85	45.7	52	41	21	14	** ** *	14 59 73				
5	253	31.2	+16	42.6	328	47.2	85	+15 53.9	50	19 35	20 12	21 01	** ** *	14 52 72				
6	268	31.2	+16	41.9	343	14.5	83	+16 01.9	45	19 20	19 53	20 34	** ** *	14 37 69				
7	283	31.3		41.2	357	41.8	83	09.9	40	19 08	38	20 14	0 02 44	25 67				
8	298	31.4		40.5	12	09.0	82	17.8	35	18 58	26	19 59	11 46	14 66				
9	313	31.4		39.8	26	36.1	81	25.6	30	49	19 15	46	19 48	14 05 64				
10	328	31.5		39.1	41	03.1	80	33.3	20	34	18 58	25	33 50	13 49 62				
11	343	31.6	+16	38.5	55	30.0	79	+16 41.0	10 N	18 21	18 43	19 09	0 45 53	13 35 60				
12	358	31.6	+16	37.8	69	56.8	78	+16 48.5	0	18 09	18 31	18 56	0 57 55	13 23 57				
13	13	31.7		37.1	84	23.5	77	+16 55.9	10 S	17 57	19	45	1 08 58	13 10 55				
14	28	31.8		36.4	98	50.1	76	+17 03.3	20	45	18 08	34	21 60	12 56 53				
15	43	31.9		35.7	113	16.7	76	10.5	30	30	17 55	24	35 64	41 50				
16	58	31.9		35.0	127	43.1	74	17.7	35	22	49	19	43 66	32 48				
17	73	32.0	+16	34.3	142	09.4	73	+17 24.7	40	17 13	17 41	18 14	1 53 67	12 21 47				
18	88	32.1	+16	33.6	156	35.7	73	+17 31.7	45	17 02	17 33	18 08	2 04 70	12 09 45				
19	103	32.1		32.9	171	01.9	72	38.5	50	16 49	23	18 02	17 74	11 55 41				
20	118	32.2		32.2	185	27.9	70	45.3	52	42	19	17 59	24 75	48 40				
21	133	32.3		31.5	199	53.9	70	51.9	54	36	14	57	31 76	40 39				
22	148	32.4		30.8	214	19.8	69	+17 58.5	56	28	09	54	39 78	32 37				
23	163	32.4		30.1	228	45.6	68	+18 04.9	58	19	17 03	51	47 82	22 35				
24	178	32.5	+16	29.4	243	11.3	67	+18 11.2	60 S	16 10	16 57	17 47	2 58 84	11 12 32				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 3 ^h 01 ^m 6		Mag: -4.4 PMG: 14 ^h 58 ^m				Mag: -2.7 PMG: 23 ^h 19 ^m				Mag: -2.1 PMG: 17 ^h 48 ^m				Mag: +0.2 PMG: 21 ^h 13 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♎		Dec	
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'
0	314	28.9	135	33.0	+0	03.1	9	04.3	-26	13.2	92	17.2	-15	14.4	40	53.6	-22	36.9
1	329	31.3	150	33.2		01.9	24	07.4		13.4	107	19.5		14.5	55	56.2		36.9
2	344	33.8	165	33.4	+0	00.7	39	10.6		13.5	122	21.8		14.5	70	58.8		36.9
3	359	36.3	180	33.6	-0	00.6	54	13.7		13.6	137	24.1		14.6	86	01.4		36.9
4	14	38.7	195	33.8		01.8	69	16.8		13.8	152	26.4		14.6	101	04.0		37.0
5	29	41.2	210	34.0	-0	03.0	84	20.0	-26	13.9	167	28.6	-15	14.7	116	06.6	-22	37.0
6	44	43.7	225	34.2	-0	04.3	99	23.1	-26	14.0	182	30.9	-15	14.8	131	09.2	-22	37.0
7	59	46.1	240	34.4		05.5	114	26.2		14.2	197	33.2		14.8	146	11.8		37.0
8	74	48.6	255	34.6		06.7	129	29.3		14.3	212	35.5		14.9	161	14.4		37.0
9	89	51.1	270	34.8		07.9	144	32.5		14.4	227	37.7		15.0	176	16.9		37.0
10	104	53.5	285	35.0		09.2	159	35.6		14.5	242	40.0		15.0	191	19.5		37.0
11	119	56.0	300	35.2	-0	10.4	174	38.7	-26	14.7	257	42.3	-15	15.1	206	22.1	-22	37.0
12	134	58.4	315	35.4	-0	11.6	189	41.8	-26	14.8	272	44.6	-15	15.2	221	24.7	-22	37.0
13	150	00.9	330	35.6		12.9	204	44.9		14.9	287	46.9		15.2	236	27.3		37.0
14	165	03.4	345	35.8		14.1	219	48.1		15.0	302	49.1		15.3	251	29.9		37.0
15	180	05.8	0	36.0		15.3	234	51.2		15.2	317	51.4		15.4	266	32.5		37.0
16	195	08.3	15	36.3		16.5	249	54.3		15.3	332	53.7		15.4	281	35.1		37.1
17	210	10.8	30	36.5	-0	17.8	264	57.4	-26	15.4	347	56.0	-15	15.5	296	37.7	-22	37.1
18	225	13.2	45	36.7	-0	19.0	280	00.6	-26	15.5	2	58.2	-15	15.6	311	40.3	-22	37.1
19	240	15.7	60	36.9		20.2	295	03.7		15.7	18	00.5		15.6	326	42.8		37.1
20	255	18.2	75	37.1		21.5	310	06.8		15.8	33	02.8		15.7	341	45.4		37.1
21	270	20.6	90	37.3		22.7	325	09.9		15.9	48	05.1		15.8	356	48.0		37.1
22	285	23.1	105	37.5		23.9	340	13.0		16.0	63	07.3		15.8	11	50.6		37.1
23	300	25.6	120	37.7		25.1	355	16.1		16.1	78	09.6		15.9	26	53.2		37.1
24	315	28.0	135	37.9	-0	26.4	10	19.3	-26	16.3	93	11.9	-15	16.0	41	55.8	-22	37.1
Dif	—		+2		-12		+31		-1		+23		-1		+26			
0																		

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8 PMG: 12 ^h 05 ^m 8			Edad: 24 ^d 9 PHE { 4 ^h : 59 ^m 5 12 ^h : 59 ^m 8 20 ^h : 60 ^m 0 R°: 60 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	o	'	o	'	o	'	o	'	h	m	h	m	h	m	h	m
0	178	32.5	+16	29.4	243	11.3	+18	11.2	60 N	1 22	2 58	3 55	*** **		16 58	72
1	193	32.6		28.7	257	37.0		17.5	58	1 58	3 15	4 06	*** **		44	71
2	208	32.6		28.1	272	02.5		23.6	56	2 23	29	15	*** **		32	70
3	223	32.7		27.4	286	27.9		29.6	54	42	41	23	0 01	45	22	69
4	238	32.8		26.7	300	53.3		35.5	52	2 58	3 51	31	09	46	12	69
5	253	32.9	+16	26.0	315	18.6	+18	41.2	50	3 12	4 00	4 38	0 17	47	16 04	68
6	268	32.9	+16	25.3	329	43.8	+18	46.9	45	3 38	4 19	4 52	0 32	50	15 46	67
7	283	33.0		24.6	344	08.9		52.4	40	3 58	34	5 04	46	51	32	66
8	298	33.1		23.9	358	33.9	+18	57.8	35	4 13	46	14	0 57	52	20	64
9	313	33.2		23.2	12	58.8	+19	03.1	30	26	4 57	23	1 07	53	15 09	64
10	328	33.2		22.5	27	23.7		08.3	20	4 47	5 14	37	23	56	14 51	63
11	343	33.3	+16	21.8	41	48.4	+19	13.4	10 N	5 03	5 28	5 50	1 38	58	14 35	62
12	358	33.4	+16	21.1	56	13.1	+19	18.3	0	5 16	5 41	6 02	1 52	59	14 20	61
13	13	33.5		20.4	70	37.7		23.1	10 S	27	5 52	14	2 06	61	14 05	60
14	28	33.6		19.7	85	02.2		27.8	20	37	6 04	27	21	63	13 49	59
15	43	33.6		19.0	99	26.6		32.4	30	47	16	41	39	64	31	57
16	58	33.7		18.2	113	51.0		36.8	35	52	23	49	2 49	65	20	57
17	73	33.8	+16	17.5	128	15.3	+19	41.1	40	5 58	6 30	6 58	3 00	67	13 08	55
18	88	33.9	+16	16.8	142	39.5	+19	45.3	45	6 03	6 38	7 09	3 14	69	12 54	54
19	103	33.9		16.1	157	03.6		49.3	50	09	48	22	31	70	36	53
20	118	34.0		15.4	171	27.7		53.2	52	12	52	28	39	71	28	52
21	133	34.1		14.7	185	51.7	+19	57.0	54	14	6 57	35	47	73	19	51
22	148	34.2		14.0	200	15.6	+20	00.6	56	17	7 02	42	3 57	75	12 09	49
23	163	34.3		13.3	214	39.4		04.1	58	20	07	7 51	4 09	76	11 57	48
24	178	34.3	+16	12.6	229	03.2	+20	07.5	60 S	6 23	7 14	8 00	4 22	78	11 44	46

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 2 ^h 57 ^m 6		Mag: -4.4 PMG: 14 ^h 57 ^m		Mag: -2.7 PMG: 23 ^h 14 ^m		Mag: -2.1 PMG: 17 ^h 45 ^m		Mag: +0.2 PMG: 21 ^h 09 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	o	'	o	'	o	'	o	'	o	'
0	315	28.0	135	37.9	-0	26.4	10	19.3	-26	16.3
1	330	30.5	150	38.2		27.6	25	22.4		16.4
2	345	32.9	165	38.4		28.8	40	25.5		16.5
3	0	35.4	180	38.6		30.1	55	28.6		16.6
4	15	37.9	195	38.8		31.3	70	31.7		16.7
5	30	40.3	210	39.0	-0	32.5	85	34.8	-26	16.9
6	45	42.8	225	39.2	-0	33.7	100	37.9	-26	17.0
7	60	45.3	240	39.4		35.0	115	41.0		17.1
8	75	47.7	255	39.7		36.2	130	44.2		17.2
9	90	50.2	270	39.9		37.4	145	47.3		17.3
10	105	52.7	285	40.1		38.7	160	50.4		17.4
11	120	55.1	300	40.3	-0	39.9	175	53.5	-26	17.5
12	135	57.6	315	40.5	-0	41.1	190	56.6	-26	17.7
13	151	00.1	330	40.8		42.3	205	59.7		17.8
14	166	02.5	345	41.0		43.6	221	02.8		17.9
15	181	05.0	0	41.2		44.8	236	05.9		18.0
16	196	07.4	15	41.4		46.0	251	09.0		18.1
17	211	09.9	30	41.6	-0	47.2	266	12.1	-26	18.2
18	226	12.4	45	41.9	-0	48.5	281	15.2	-26	18.3
19	241	14.8	60	42.1		49.7	296	18.3		18.4
20	256	17.3	75	42.3		50.9	311	21.4		18.5
21	271	19.8	90	42.5		52.2	326	24.5		18.7
22	286	22.2	105	42.7		53.4	341	27.6		18.8
23	301	24.7	120	43.0		54.6	356	30.7		18.9
24	316	27.2	135	43.2	-0	55.8	11	33.8	-26	19.0
Dif	—		+2		-12		+31		-1	
							+23		-1	
									+26	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8			Edad: 25 ^d 9 PHE { 4 ^h : 60 ^h 3 12 ^h : 60 ^h 5 20 ^h : 60 ^h 7												
	PMG: 12 ^h 05 ^m 6			SD: 16 ^h 5 PMG: 9 ^h 06 ^m												
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°	
h	o	'	o	'	o	'	o	'	o	h m	h m	h m	h m m	h m m	h m m	
0	178	34.3	+16	12.6	229	03.2	+20	07.5	60 N	20 13	21 07	22 38	0 08 55	18 10 57		
1	193	34.4		11.9	243	26.9	47	10.7	58	20 02	20 52	22 05	22 57	17 55 58		
2	208	34.5		11.2	257	50.5	46	13.8	56	19 53	38	21 42	35 57	42 59		
3	223	34.6		10.5	272	14.1	46	16.8	54	45	27	24	46 57	31 59		
4	238	34.7		09.8	286	37.6	45	19.6	52	38	17	21 09	0 55 58	21 59		
5	253	34.7	+16	09.1	301	01.0	44	+20 22.3	50	19 31	20 08	20 56	1 04 58	17 12 60		
6	268	34.8	+16	08.4	315	24.4	44	+20 24.8	45	19 17	19 50	20 31	1 22 59	16 53 60		
7	283	34.9		07.6	329	47.7	43	27.2	40	19 06	35	20 12	37 59	38 60		
8	298	35.0		06.9	344	11.0	43	29.4	35	18 56	23	19 56	1 49 60	24 62		
9	313	35.1		06.2	358	34.2	42	31.5	30	48	19 13	44	2 00 61	16 13 62		
10	328	35.1		05.5	12	57.3	41	33.5	20	33	18 56	24	19 61	15 54 62		
11	343	35.2	+16	04.8	27	20.4	41	+20 35.3	10 N	18 21	18 43	19 08	2 36 61	15 37 62		
12	358	35.3	+16	04.1	41	43.4	40	+20 36.9	0	18 09	18 31	18 56	2 51 62	15 21 62		
13	13	35.4		03.4	56	06.4	40	38.4	10 S	17 58	19	45	3 07 62	15 05 63		
14	28	35.5		02.7	70	29.4	40	39.8	20	45	18 08	35	24 62	14 48 63		
15	43	35.6		02.0	84	52.3	39	41.0	30	32	17 56	25	43 63	28 63		
16	58	35.6		01.2	99	15.1	38	42.1	35	24	50	20	3 54 64	17 63		
17	73	35.7	+16	00.5	113	37.9	38	+20 43.0	40	17 15	17 43	18 15	4 07 64	14 03 64		
18	88	35.8	+15	59.8	128	00.7	38	+20 43.8	45	17 04	17 35	18 10	4 23 63	13 48 64		
19	103	35.9		59.1	142	23.4	37	44.4	50	16 51	26	04	4 41 65	29 64		
20	118	36.0		58.4	156	46.1	37	44.8	52	45	22	02	4 50 65	20 64		
21	133	36.1		57.7	171	08.8	37	45.1	54	39	17	18 00	5 00 65	13 10 64		
22	148	36.1		56.9	185	31.4	36	45.3	56	32	12	17 57	12 64	12 58 64		
23	163	36.2		56.2	199	54.0	36	45.3	58	24	07	54	25 64	45 64		
24	178	36.3	+15	55.5	214	16.5	35	+20 45.1	60 S	16 14	17 01	17 51	5 40 65	12 30 64		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 2 ^h 53 ^m 7		Mag: -4.4 PMG: 14 ^h 57 ^m			Mag: -2.7 PMG: 23 ^h 09 ^m			Mag: -2.1 PMG: 17 ^h 41 ^m			Mag: +0.2 PMG: 21 ^h 05 ^m				
	hG ♈		hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♎		Dec		
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'
0	316	27.2	135	43.2	-0	55.8	11	33.8	-26	19.0	94	06.3	-15	17.6	42	57.8
1	331	29.6	150	43.4		57.1	26	36.9		19.1	109	08.6		17.7	58	00.4
2	346	32.1	165	43.7		58.3	41	40.0		19.2	124	10.9		17.8	73	03.0
3	1	34.6	180	43.9	-0	59.5	56	43.1		19.3	139	13.1		17.8	88	05.6
4	16	37.0	195	44.1	-1	00.7	71	46.2		19.4	154	15.4		17.9	103	08.2
5	31	39.5	210	44.3	-1	02.0	86	49.3	-26	19.5	169	17.7	-15	18.0	118	10.8
6	46	41.9	225	44.6	-1	03.2	101	52.4	-26	19.6	184	19.9	-15	18.0	133	13.4
7	61	44.4	240	44.8		04.4	116	55.5		19.7	199	22.2		18.1	148	15.9
8	76	46.9	255	45.0		05.6	131	58.6		19.8	214	24.5		18.2	163	18.5
9	91	49.3	270	45.2		06.9	147	01.7		19.9	229	26.7		18.2	178	21.1
10	106	51.8	285	45.5		08.1	162	04.7		20.0	244	29.0		18.3	193	23.7
11	121	54.3	300	45.7	-1	09.3	177	07.8	-26	20.1	259	31.3	-15	18.4	208	26.3
12	136	56.7	315	45.9	-1	10.6	192	10.9	-26	20.2	274	33.5	-15	18.5	223	28.8
13	151	59.2	330	46.2		11.8	207	14.0		20.3	289	35.8		18.5	238	31.4
14	167	01.7	345	46.4		13.0	222	17.1		20.4	304	38.0		18.6	253	34.0
15	182	04.1	0	46.6		14.2	237	20.2		20.5	319	40.3		18.7	268	36.6
16	197	06.6	15	46.9		15.5	252	23.3		20.6	334	42.6		18.7	283	39.2
17	212	09.1	30	47.1	-1	16.7	267	26.4	-26	20.7	349	44.8	-15	18.8	298	41.8
18	227	11.5	45	47.3	-1	17.9	282	29.4	-26	20.8	4	47.1	-15	18.9	313	44.3
19	242	14.0	60	47.6		19.1	297	32.5		20.9	19	49.4		18.9	328	46.9
20	257	16.4	75	47.8		20.4	312	35.6		21.0	34	51.6		19.0	343	49.5
21	272	18.9	90	48.0		21.6	327	38.7		21.1	49	53.9		19.1	358	52.1
22	287	21.4	105	48.3		22.8	342	41.8		21.2	64	56.1		19.2	13	54.7
23	302	23.8	120	48.5		24.0	357	44.8		21.3	79	58.4		19.2	28	57.2
24	317	26.3	135	48.8	-1	25.3	12	47.9	-26	21.4	95	00.7	-15	19.3	43	59.8
Dif	—		+2		-12		+31		-1		+23		-1		+26	

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'8 PMG: 12 ^h 05 ^m 5				Edad: 26 ^d 9 PHE { 4 ^h : 60'8 12 ^h : 61'0 20 ^h : 61'1 SD: 16'6 PMG: 10 ^h 08 ^m R°: 63 ^m												
	hG ☉		Dec		hG ☾ Dif		Dec Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	o	'	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m
0	178	36.3	+15	55.5	214	16.5	+20	45.1	60 N	1 34	3 05	3 59	1 03	74	19 07	42	
1	193	36.4		54.8	228	39.0		44.8	58	2 07	20	4 10	19	72	18 53	44	
2	208	36.5		54.1	243	01.5		44.4	56	30	33	19	32	71	41	45	
3	223	36.6		53.4	257	24.0		43.8	54	2 48	45	27	43	71	30	47	
4	238	36.7		52.6	271	46.5		43.0	52	3 03	3 55	34	1 53	70	20	49	
5	253	36.7	+15	51.9	286	08.9	+20	42.1	50	3 16	4 03	4 41	2 02	69	18 12	50	
6	268	36.8	+15	51.2	300	31.3	+20	41.0	45	3 41	4 22	4 54	2 21	68	17 53	53	
7	283	36.9		50.5	314	53.7		39.7	40	4 00	36	5 06	36	68	38	55	
8	298	37.0		49.8	329	16.1		38.4	35	15	48	15	2 49	67	26	55	
9	313	37.1		49.0	343	38.4		36.8	30	28	4 58	24	3 01	66	17 15	57	
10	328	37.2		48.3	358	00.8		35.1	20	4 48	5 15	38	20	65	16 56	59	
11	343	37.3	+15	47.6	12	23.1	+20	33.3	10 N	5 03	5 29	5 51	3 37	64	16 39	61	
12	358	37.3	+15	46.9	26	45.5	+20	31.2	0	5 16	5 41	6 02	3 53	63	16 23	63	
13	13	37.4		46.1	41	07.8		29.1	10 S	27	5 52	14	4 09	62	16 08	64	
14	28	37.5		45.4	55	30.1		26.8	20	36	6 03	26	26	61	15 51	66	
15	43	37.6		44.7	69	52.5		24.3	30	46	14	39	46	60	31	68	
16	58	37.7		44.0	84	14.8		21.6	35	51	21	47	4 58	58	20	69	
17	73	37.8	+15	43.2	98	37.1	+20	18.9	40	5 55	6 28	6 56	5 11	57	15 07	70	
18	88	37.9	+15	42.5	112	59.5	+20	15.9	45	6 01	6 35	7 06	5 26	57	14 52	72	
19	103	38.0		41.8	127	21.8		12.8	50	06	45	19	46	54	33	74	
20	118	38.1		41.1	141	44.2		09.6	52	08	49	25	5 55	54	24	75	
21	133	38.2		40.3	156	06.5		06.2	54	11	53	31	6 05	53	14	76	
22	148	38.2		39.6	170	28.9	+20	02.6	56	13	6 58	38	16	52	14 02	78	
23	163	38.3		38.9	184	51.3	+19	58.9	58	16	7 03	46	29	51	13 49	79	
24	178	38.4	+15	38.2	199	13.7	+19	55.1	60 S	6 19	7 09	7 55	6 45	49	13 34	81	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 2 ^h 49 ^m 8		Mag: -4.4 PMG: 14 ^h 57 ^m		Mag: -2.6 PMG: 23 ^h 04 ^m		Mag: -2.1 PMG: 17 ^h 37 ^m		Mag: +0.2 PMG: 21 ^h 00 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	o	'	o	'	o	'	o	'	o	'
0	317	26.3	135	48.8	-1	25.3	12	47.9	-26	21.4
1	332	28.8	150	49.0		26.5	27	51.0		21.5
2	347	31.2	165	49.2		27.7	42	54.1		21.6
3	2	33.7	180	49.5		28.9	57	57.2		21.7
4	17	36.2	195	49.7		30.2	73	00.2		21.8
5	32	38.6	210	50.0	-1	31.4	88	03.3	-26	21.9
6	47	41.1	225	50.2	-1	32.6	103	06.4	-26	22.0
7	62	43.5	240	50.4		33.8	118	09.5		22.0
8	77	46.0	255	50.7		35.1	133	12.5		22.1
9	92	48.5	270	50.9		36.3	148	15.6		22.2
10	107	50.9	285	51.2		37.5	163	18.7		22.3
11	122	53.4	300	51.4	-1	38.7	178	21.7	-26	22.4
12	137	55.9	315	51.7	-1	39.9	193	24.8	-26	22.5
13	152	58.3	330	51.9		41.2	208	27.9		22.6
14	168	00.8	345	52.1		42.4	223	30.9		22.7
15	183	03.3	0	52.4		43.6	238	34.0		22.8
16	198	05.7	15	52.6		44.8	253	37.1		22.8
17	213	08.2	30	52.9	-1	46.1	268	40.1	-26	22.9
18	228	10.7	45	53.1	-1	47.3	283	43.2	-26	23.0
19	243	13.1	60	53.4		48.5	298	46.3		23.1
20	258	15.6	75	53.6		49.7	313	49.3		23.2
21	273	18.0	90	53.9		51.0	328	52.4		23.3
22	288	20.5	105	54.1		52.2	343	55.4		23.4
23	303	23.0	120	54.4		53.4	358	58.5		23.4
24	318	25.4	135	54.6	-1	54.6	14	01.6	-26	23.5
Dif	—		+2		-12		+31		-1	
							+23		-1	
									+26	
									0	

UT	SOL				● LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 12 ^h 05 ^m 4				Edad: 27 ^d 9 PHE { 4 ^h : 61 ^h /2 SD: 16 ^h 7 12 ^h : 61 ^h /2 PMG: 11 ^h 11 ^m R°: 61 ^m												
	hG ☉		Dec		hG ☾		Dif							Civil	Náutico	Hora	R°
h	o	'	o	'	o	'	o	'	o	h m	h m	h m	h m m		h m m		
0	178	38.4	+15	38.2	199	13.7	+19	55.1	60 N	20 07	21 01	22 26	2 17 87		19 49 29		
1	193	38.5		37.4	213	36.1		51.1	58	19 57	20 46	21 57	31 84		37 32		
2	208	38.6		36.7	227	58.6		46.9	56		48	33	35	43 82	26 36		
3	223	38.7		36.0	242	21.1		42.6	54		41	22	18	2 54 80	17 38		
4	238	38.8		35.2	256	43.5		38.2	52		34	13	21 04	3 03 79	09 39		
5	253	38.9	+15	34.5	271	06.1	+19	33.5	50	19 28	20 04	20 52	3 11 78		19 02 41		
6	268	39.0	+15	33.8	285	28.6	+19	28.8	45	19 14	19 47	20 27	3 29 75		18 46 44		
7	283	39.1		33.1	299	51.2		23.9	40	19 03		33	20 09	44 72	33 47		
8	298	39.2		32.3	314	13.8		18.9	35	18 54		21	19 54	3 56 70	21 50		
9	313	39.3		31.6	328	36.4		13.7	30		46	19 11	42	4 07 69	18 12 51		
10	328	39.3		30.9	342	59.1		08.3	20		32	18 55	22	25 66	17 55 54		
11	343	39.4	+15	30.1	357	21.8	+19	02.9	10 N	18 20	18 42	19 07	4 41 64		17 40 57		
12	358	39.5	+15	29.4	11	44.6	+18	57.2	0	18 09	18 30	18 55	4 56 62		17 26 60		
13	13	39.6		28.7	26	07.4		51.5	10 S	17 58		19	45	5 11 60	17 12 63		
14	28	39.7		27.9	40	30.2		45.6	20		46	18 09	35	27 57	16 57 66		
15	43	39.8		27.2	54	53.1		39.5	30		33	17 58	26	46 54	39 70		
16	58	39.9		26.5	69	16.0		33.3	35		25	51	21	5 56 53	29 71		
17	73	40.0	+15	25.7	83	38.9	+18	27.0	40	17 16	17 45	18 17	6 08 51		16 17 74		
18	88	40.1	+15	25.0	98	01.9	+18	20.6	45	17 06	17 37	18 12	6 23 48		16 04 76		
19	103	40.2		24.2	112	25.0		14.0	50	16 54		28	07	40 46	15 47 80		
20	118	40.3		23.5	126	48.1		07.3	52		49	25	05	49 43	39 81		
21	133	40.4		22.8	141	11.3	+18	00.4	54		42	20	02	6 58 42	30 83		
22	148	40.5		22.0	155	34.5	+17	53.4	56		35	16	18 00	7 08 40	20 86		
23	163	40.6		21.3	169	57.8		46.3	58		28	10	17 57	20 38	15 08 89		
24	178	40.7	+15	20.6	184	21.1	+17	39.0	60 S	16 19	17 05	17 55	7 34 34		14 55 92		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO								
	PMG: 2 ^h 45 ^m 8		Mag: -4.4 PMG: 14 ^h 56 ^m		Mag: -2.6 PMG: 22 ^h 59 ^m		Mag: -2.1 PMG: 17 ^h 34 ^m		Mag: +0.2 PMG: 20 ^h 56 ^m								
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄								
h	o	'	o	'	o	'	o	'	o	'							
0	318	25.4	135	54.6	-1	54.6	95	54.8	-15	21.0							
1	333	27.9	150	54.9		55.8	110	57.1		21.1							
2	348	30.4	165	55.1		57.1	125	59.3		21.2							
3	3	32.8	180	55.4		58.3	141	01.6		21.2							
4	18	35.3	195	55.6	-1	59.5	156	03.8		21.3							
5	33	37.8	210	55.9	-2	00.7	171	06.1	-15	21.4							
6	48	40.2	225	56.1	-2	02.0	186	08.3	-15	21.5							
7	63	42.7	240	56.4		03.2	201	10.6		21.5							
8	78	45.2	255	56.7		04.4	216	12.8		21.6							
9	93	47.6	270	56.9		05.6	231	15.1		21.7							
10	108	50.1	285	57.2		06.8	246	17.3		21.8							
11	123	52.5	300	57.4	-2	08.1	261	19.6	-15	21.8							
12	138	55.0	315	57.7	-2	09.3	276	21.8	-15	21.9							
13	153	57.5	330	57.9		10.5	291	24.1		22.0							
14	168	59.9	345	58.2		11.7	306	26.3		22.1							
15	184	02.4	0	58.5		13.0	321	28.6		22.1							
16	199	04.9	15	58.7		14.2	336	30.8		22.2							
17	214	07.3	30	59.0	-2	15.4	351	33.1	-15	22.3							
18	229	09.8	45	59.2	-2	16.6	6	35.3	-15	22.3							
19	244	12.3	60	59.5		17.8	21	37.6		22.4							
20	259	14.7	75	59.8		19.1	36	39.8		22.5							
21	274	17.2	91	00.0		20.3	51	42.1		22.6							
22	289	19.7	106	00.3		21.5	66	44.3		22.6							
23	304	22.1	121	00.5		22.7	81	46.6		22.7							
24	319	24.6	136	00.8	-2	23.9	96	48.8	-15	22.8							
Dif	—		+3		-12		+30		-1								
							+23		-1								
									+26								
									0								

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8 PMG: 12 ^h 05 ^m 2			Edad: 28 ^d 9 PHE { 4 ^h : 61 ^m 2 12 ^h : 61 ^m 1 20 ^h : 61 ^m 0 PMG: 12 ^h 12 ^m R°: 58 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	o	'	o	'	o	'	o	'	h	m	h	m	h	m	h	m
0	178	40.7	+15	20.6	184	21.1	+17	39.0	60 N	1 46	3 11	4 04	3 44	93	20 18	22
1	193	40.8		19.8	198	44.5	44	31.7	58	2 15	25	14	3 55	91	09	25
2	208	40.9		19.1	213	07.9	44	24.2	56	36	38	23	4 05	88	20 02	27
3	223	41.0		18.3	227	31.4	45	16.5	54	2 53	49	30	14	85	19 55	29
4	238	41.1		17.6	241	54.9	45	08.8	52	3 07	3 58	37	22	83	48	32
5	253	41.2	+15	16.9	256	18.6	47	+17 00.9	50	3 20	4 07	4 44	4 29	81	19 43	33
6	268	41.3	+15	16.1	270	42.2	46	+16 52.9	45	3 44	4 24	4 57	4 44	77	19 30	38
7	283	41.4		15.4	285	06.0	48	44.8	40	4 02	38	5 08	4 56	74	20	41
8	298	41.5		14.6	299	29.8	48	36.6	35	17	4 50	17	5 06	72	11	44
9	313	41.6		13.9	313	53.7	49	28.2	30	29	5 00	25	16	69	19 03	46
10	328	41.7		13.1	328	17.6	49	19.7	20	4 48	16	39	31	66	18 49	51
11	343	41.8	+15	12.4	342	41.6	50	+16 11.2	10 N	5 03	5 29	5 51	5 45	62	18 37	55
12	358	41.9	+15	11.7	357	05.7	51	+16 02.5	0	5 15	5 40	6 02	5 58	59	18 26	58
13	13	42.0		10.9	11	29.8	51	+15 53.7	10 S	26	5 51	13	6 11	55	15	61
14	28	42.1		10.2	25	54.0	52	44.7	20	35	6 02	24	24	53	18 03	64
15	43	42.2		09.4	40	18.3	53	35.7	30	44	13	37	40	48	17 49	68
16	58	42.3		08.7	54	42.7	54	26.6	35	49	19	45	49	46	40	72
17	73	42.4	+15	07.9	69	07.1	54	+15 17.4	40	5 53	6 25	6 54	6 59	44	17 31	74
18	88	42.5	+15	07.2	83	31.6	55	+15 08.0	45	5 58	6 33	7 03	7 11	41	17 20	77
19	103	42.6		06.4	97	56.2	56	+14 58.6	50	6 03	41	15	26	36	07	81
20	118	42.7		05.7	112	20.8	56	49.0	52	05	45	21	32	35	17 00	84
21	133	42.8		05.0	126	45.5	57	39.4	54	07	49	27	40	33	16 53	86
22	148	42.9		04.2	141	10.3	58	29.7	56	10	54	34	48	31	46	88
23	163	43.0		03.5	155	35.2	59	19.9	58	12	6 59	42	7 58	28	37	91
24	178	43.1	+15	02.7	170	00.1	59	+14 09.9	60 S	6 15	7 04	7 50	8 08	25	16 27	94

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 2 ^h 41 ^m 9		Mag: -4.4 PMG: 14 ^h 56 ^m		Mag: -2.6 PMG: 22 ^h 54 ^m		Mag: -2.1 PMG: 17 ^h 30 ^m		Mag: +0.3 PMG: 20 ^h 52 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	o	'	o	'	o	'	o	'	o	'
0	319	24.6	136	00.8	-2	23.9	15	14.7	-26	25.3
1	334	27.0	151	01.1		25.2	30	17.7		25.4
2	349	29.5	166	01.3		26.4	45	20.7		25.5
3	4	32.0	181	01.6		27.6	60	23.8		25.5
4	19	34.4	196	01.9		28.8	75	26.8		25.6
5	34	36.9	211	02.1	-2	30.0	90	29.8	-26	25.7
6	49	39.4	226	02.4	-2	31.3	105	32.9	-26	25.7
7	64	41.8	241	02.7		32.5	120	35.9		25.8
8	79	44.3	256	02.9		33.7	135	38.9		25.9
9	94	46.8	271	03.2		34.9	150	41.9		25.9
10	109	49.2	286	03.5		36.1	165	45.0		26.0
11	124	51.7	301	03.7	-2	37.3	180	48.0	-26	26.1
12	139	54.2	316	04.0	-2	38.6	195	51.0	-26	26.1
13	154	56.6	331	04.3		39.8	210	54.0		26.2
14	169	59.1	346	04.6		41.0	225	57.0		26.3
15	185	01.5	1	04.8		42.2	241	00.1		26.3
16	200	04.0	16	05.1		43.4	256	03.1		26.4
17	215	06.5	31	05.4	-2	44.7	271	06.1	-26	26.4
18	230	08.9	46	05.6	-2	45.9	286	09.1	-26	26.5
19	245	11.4	61	05.9		47.1	301	12.1		26.6
20	260	13.9	76	06.2		48.3	316	15.2		26.6
21	275	16.3	91	06.5		49.5	331	18.2		26.7
22	290	18.8	106	06.7		50.7	346	21.2		26.7
23	305	21.3	121	07.0		52.0	1	24.2		26.8
24	320	23.7	136	07.3	-2	53.2	16	27.2	-26	26.8
Dif	—		+3		-12		+30		-1	
							+22		-1	
									+26	
									0	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 15'8 PMG: 12 ^h 05 ^m 0			Edad: 29 ^d 9 PHE { 4 ^h : 60'9 12 ^h : 60'8 20 ^h : 60'6 SD: 16'5 PMG: 13 ^h 10 ^m R°: 55 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°	
h	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m	m
0	178	43.1	+15	02.7	170	00.1	+14 09.9	60 N	20 02	20 54	22 15	5 17 94	20 40 18			
1	193	43.2		02.0	184	25.2	+13 59.9 ¹⁰⁰	58	19 52	40	21 48	26 90	34 21			
2	208	43.3		01.2	198	50.3	+13 49.8 ¹⁰¹	56	44	28	28	33 87	29 23			
3	223	43.4	+15	00.5	213	15.4	+13 39.6 ¹⁰²	54	37	18	21 12	39 85	24 26			
4	238	43.5	+14	59.7	227	40.7	+13 29.4 ¹⁰²	52	30	09	20 59	45 83	20 27			
5	253	43.6	+14	59.0	242	06.0	+13 19.0 ¹⁰⁴	50	19 24	20 00	20 47	5 50 81	20 16 29			
6	268	43.7	+14	58.2	256	31.4	+13 08.6 ¹⁰⁴	45	19 11	19 44	20 23	6 01 77	20 08 33			
7	283	43.8		57.5	270	56.9	+12 58.0 ¹⁰⁶	40	19 01	30	20 06	10 73	20 01 36			
8	298	43.9		56.7	285	22.5	+12 47.4 ¹⁰⁶	35	18 52	19	19 51	18 70	19 55 39			
9	313	44.0		56.0	299	48.1	+12 36.8 ¹⁰⁶	30	44	19 09	40	25 67	49 42			
10	328	44.1		55.2	314	13.8	+12 26.0 ¹⁰⁸	20	31	18 54	21	37 63	40 46			
11	343	44.2	+14	54.4	328	39.6	+12 15.2 ¹⁰⁸	10 N	18 19	18 41	19 06	6 47 59	19 32 50			
12	358	44.3	+14	53.7	343	05.5	+12 04.3 ¹⁰⁹	0	18 08	18 30	18 55	6 57 55	19 24 54			
13	13	44.4		52.9	357	31.4	+11 53.3 ¹¹⁰	10 S	17 58	19	45	7 06 53	16 58			
14	28	44.5		52.2	11	57.4	+11 42.2 ¹¹¹	20	47	18 09	35	17 48	19 07 62			
15	43	44.7		51.4	26	23.5	+11 31.1 ¹¹¹	30	34	17 59	27	28 44	18 57 67			
16	58	44.8		50.7	40	49.7	+11 19.9 ¹¹²	35	27	53	23	35 42	52 69			
17	73	44.9	+14	49.9	55	16.0	+11 08.7 ¹¹²	40	17 18	17 46	18 18	7 43 38	18 45 72			
18	88	45.0	+14	49.2	69	42.3	+10 57.4 ¹¹³	45	17 09	17 39	18 14	7 52 35	18 37 76			
19	103	45.1		48.4	84	08.7	+10 46.0 ¹¹⁴	50	16 57	31	09	8 02 31	28 80			
20	118	45.2		47.7	98	35.2	+10 34.6 ¹¹⁴	52	52	27	07	07 29	24 82			
21	133	45.3		46.9	113	01.8	+10 23.1 ¹¹⁵	54	46	23	05	13 27	19 85			
22	148	45.4		46.1	127	28.4	+10 11.6 ¹¹⁵	56	39	19	03	19 24	14 87			
23	163	45.5		45.4	141	55.2	+10 00.0 ¹¹⁶	58	32	14	18 01	26 21	08 90			
24	178	45.6	+14	44.6	156	22.0	+9 48.3 ¹¹⁷	60 S	16 23	17 09	17 59	8 33 19	18 01 94			

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 2 ^h 38 ^m 0		Mag: -4.4 PMG: 14 ^h 55 ^m		Mag: -2.6 PMG: 22 ^h 50 ^m		Mag: -2.1 PMG: 17 ^h 27 ^m		Mag: +0.3 PMG: 20 ^h 48 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	o	'	o	'	o	'	o	'	o	'
0	320	23.7	136	07.3	-2	53.2	16	27.2	-26	26.8
1	335	26.2	151	07.6		54.4	31	30.2		26.9
2	350	28.6	166	07.8		55.6	46	33.2		27.0
3	5	31.1	181	08.1		56.8	61	36.2		27.0
4	20	33.6	196	08.4		58.0	76	39.2		27.1
5	35	36.0	211	08.7	-2	59.3	91	42.2	-26	27.1
6	50	38.5	226	09.0	-3	00.5	106	45.2	-26	27.2
7	65	41.0	241	09.2		01.7	121	48.2		27.2
8	80	43.4	256	09.5		02.9	136	51.2		27.3
9	95	45.9	271	09.8		04.1	151	54.2		27.3
10	110	48.4	286	10.1		05.3	166	57.2		27.4
11	125	50.8	301	10.4	-3	06.6	182	00.2	-26	27.4
12	140	53.3	316	10.7	-3	07.8	197	03.2	-26	27.5
13	155	55.8	331	10.9		09.0	212	06.2		27.5
14	170	58.2	346	11.2		10.2	227	09.2		27.6
15	186	00.7	1	11.5		11.4	242	12.2		27.6
16	201	03.1	16	11.8		12.6	257	15.2		27.7
17	216	05.6	31	12.1	-3	13.8	272	18.2	-26	27.7
18	231	08.1	46	12.4	-3	15.1	287	21.2	-26	27.8
19	246	10.5	61	12.7		16.3	302	24.2		27.8
20	261	13.0	76	12.9		17.5	317	27.2		27.9
21	276	15.5	91	13.2		18.7	332	30.2		27.9
22	291	17.9	106	13.5		19.9	347	33.1		28.0
23	306	20.4	121	13.8		21.1	2	36.1		28.0
24	321	22.9	136	14.1	-3	22.3	17	39.1	-26	28.1
Dif	—		+3		-12		+30		-1	

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15'8 PMG: 12 ^h 04 ^m 9				Edad: 1 ^d 6 PHE { 4 ^h : 60'3 12 ^h : 60'1 20 ^h : 59'8 SD: 16'4 PMG: 14 ^h 05 ^m R°: 52 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico			Civil		Hora	R°	Hora	R°
h	o	'	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m	
0	178	45.6	+14	44.6	156	22.0	+9	48.3	60 N	1 56	3 16	4 09	6 51	92	20 58	14		
1	193	45.7		43.9	170	48.8	78	36.6	58	2 22	31	18	6 56	88	55	17		
2	208	45.8		43.1	185	15.8	80	24.9	56	42	43	27	7 00	86	52	20		
3	223	46.0		42.3	199	42.8	80	13.1	54	2 58	3 53	34	04	83	50	22		
4	238	46.1		41.6	214	09.9	81	+9 01.2	52	3 12	4 02	41	08	80	47	25		
5	253	46.2	+14	40.8	228	37.1	82	+8 49.4	50	3 24	4 10	4 46	7 11	79	20 45	26		
6	268	46.3	+14	40.1	243	04.3	82	+8 37.4	45	3 47	4 27	4 59	7 18	74	20 41	30		
7	283	46.4		39.3	257	31.7	84	25.5	40	4 05	40	5 10	23	71	37	34		
8	298	46.5		38.5	271	59.1	84	13.4	35	19	4 51	18	28	68	34	37		
9	313	46.6		37.8	286	26.5	84	+8 01.4	30	31	5 01	26	32	66	31	39		
10	328	46.7		37.0	300	54.1	86	+7 49.3	20	4 49	16	39	40	60	26	44		
11	343	46.8	+14	36.2	315	21.7	86	+7 37.2	10 N	5 04	5 29	5 51	7 46	57	20 22	48		
12	358	46.9	+14	35.5	329	49.4	87	+7 25.0	0	5 15	5 40	6 01	7 52	53	20 18	51		
13	13	47.1		34.7	344	17.1	87	12.9	10 S	25	5 50	12	7 59	48	14	55		
14	28	47.2		34.0	358	44.9	88	+7 00.7	20	34	6 00	23	8 05	45	09	59		
15	43	47.3		33.2	13	12.8	89	+6 48.4	30	43	11	36	12	41	04	64		
16	58	47.4		32.4	27	40.8	90	36.2	35	47	17	43	17	37	20 01	66		
17	73	47.5	+14	31.7	42	08.8	90	+6 23.9	40	5 51	6 23	6 51	8 21	35	19 57	70		
18	88	47.6	+14	30.9	56	36.9	91	+6 11.5	45	5 55	6 30	7 01	8 27	31	19 53	74		
19	103	47.7		30.1	71	05.1	92	+5 59.2	50	6 00	38	12	33	28	48	78		
20	118	47.9		29.4	85	33.3	92	46.8	52	02	42	17	36	26	46	80		
21	133	48.0		28.6	100	01.7	94	34.5	54	04	46	23	40	23	44	81		
22	148	48.1		27.8	114	30.0	93	22.1	56	06	50	29	43	21	41	84		
23	163	48.2		27.1	128	58.5	95	+5 09.7	58	08	6 54	37	47	19	38	87		
24	178	48.3	+14	26.3	143	27.0	95	+4 57.2	60 S	6 10	7 00	7 45	8 52	16	19 35	89		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 2 ^h 34 ^m 1		Mag: -4.4 PMG: 14 ^h 55 ^m				Mag: -2.6 PMG: 22 ^h 45 ^m				Mag: -2.1 PMG: 17 ^h 23 ^m				Mag: +0.3 PMG: 20 ^h 44 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'
0	321	22.9	136	14.1	-3	22.3	17	39.1	-26	28.1	98	36.4	-15	26.5	48	06.9	-22	38.3
1	336	25.3	151	14.4		23.5	32	42.1		28.1	113	38.6		26.5	63	09.4		38.3
2	351	27.8	166	14.7		24.8	47	45.1		28.1	128	40.8		26.6	78	12.0		38.3
3	6	30.2	181	15.0		26.0	62	48.1		28.2	143	43.1		26.7	93	14.6		38.3
4	21	32.7	196	15.3		27.2	77	51.0		28.2	158	45.3		26.8	108	17.1		38.3
5	36	35.2	211	15.6	-3	28.4	92	54.0	-26	28.3	173	47.5	-15	26.8	123	19.7	-22	38.3
6	51	37.6	226	15.8	-3	29.6	107	57.0	-26	28.3	188	49.8	-15	26.9	138	22.3	-22	38.4
7	66	40.1	241	16.1		30.8	123	00.0		28.3	203	52.0		27.0	153	24.8		38.4
8	81	42.6	256	16.4		32.0	138	02.9		28.4	218	54.2		27.1	168	27.4		38.4
9	96	45.0	271	16.7		33.2	153	05.9		28.4	233	56.5		27.2	183	30.0		38.4
10	111	47.5	286	17.0		34.5	168	08.9		28.5	248	58.7		27.2	198	32.5		38.4
11	126	50.0	301	17.3	-3	35.7	183	11.9	-26	28.5	264	00.9	-15	27.3	213	35.1	-22	38.4
12	141	52.4	316	17.6	-3	36.9	198	14.8	-26	28.5	279	03.1	-15	27.4	228	37.7	-22	38.4
13	156	54.9	331	17.9		38.1	213	17.8		28.6	294	05.4		27.5	243	40.2		38.4
14	171	57.4	346	18.2		39.3	228	20.8		28.6	309	07.6		27.5	258	42.8		38.4
15	186	59.8	1	18.5		40.5	243	23.7		28.6	324	09.8		27.6	273	45.4		38.4
16	202	02.3	16	18.8		41.7	258	26.7		28.7	339	12.1		27.7	288	47.9		38.4
17	217	04.7	31	19.1	-3	42.9	273	29.7	-26	28.7	354	14.3	-15	27.8	303	50.5	-22	38.4
18	232	07.2	46	19.4	-3	44.1	288	32.6	-26	28.8	9	16.5	-15	27.9	318	53.0	-22	38.5
19	247	09.7	61	19.7		45.4	303	35.6		28.8	24	18.8		27.9	333	55.6		38.5
20	262	12.1	76	20.0		46.6	318	38.6		28.8	39	21.0		28.0	348	58.2		38.5
21	277	14.6	91	20.3		47.8	333	41.5		28.9	54	23.2		28.1	4	00.7		38.5
22	292	17.1	106	20.6		49.0	348	44.5		28.9	69	25.4		28.2	19	03.3		38.5
23	307	19.5	121	20.9		50.2	3	47.4		28.9	84	27.7		28.3	34	05.9		38.5
24	322	22.0	136	21.2	-3	51.4	18	50.4	-26	28.9	99	29.9	-15	28.3	49	08.4	-22	38.5
Dif	—		+3		-12		+30		0		+22		-1		+26			

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15°8 PMG: 12 ^h 04 ^m 7			Edad: 2 ^d 6 PHE { 4 ^h : 59/6 12 ^h : 59/3 20 ^h : 58/9 R°: 50 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°	
h	o	'	o	'	o	'	o	'	h	m	h	m	h	m	h	m
0	178	48.3	+14	26.3	143	27.0	+4	57.2	60 N	19 56	20 48	22 04	8 23	87	21 12	15
1	193	48.4		25.5	157	55.5 ⁹⁵		44.8 ¹²⁴	58	47	34	21 40	24 85		12 17	
2	208	48.5		24.8	172	24.1 ⁹⁶		32.3 ¹²⁵	56	39	23	22	26 82		12 19	
3	223	48.7		24.0	186	52.8 ⁹⁷		19.9 ¹²⁴	54	32	13	21 06	27 80		12 21	
4	238	48.8		23.2	201	21.6 ⁹⁸	+4	07.4 ¹²⁵	52	26	20 04	20 53	28 78		12 23	
5	253	48.9	+14	22.4	215	50.4 ⁹⁸	+3	54.9 ¹²⁵	50	19 20	19 56	20 42	8 30	75	21 11	25
6	268	49.0	+14	21.7	230	19.3 ⁹⁹	+3	42.4 ¹²⁵	45	19 08	19 40	20 20	8 32	72	21 11	29
7	283	49.1		20.9	244	48.2 ⁹⁹		30.0 ¹²⁴	40	18 58	27	20 02	34 68		11 32	
8	298	49.2		20.1	259	17.2 ¹⁰⁰		17.5 ¹²⁵	35	50	17	19 49	36 65		11 34	
9	313	49.4		19.4	273	46.2 ¹⁰⁰	+3	05.0 ¹²⁵	30	42	19 07	37	38 62		10 38	
10	328	49.5		18.6	288	15.3 ¹⁰¹	+2	52.5 ¹²⁵	20	29	18 52	19	40 58		10 42	
11	343	49.6	+14	17.8	302	44.5 ¹⁰²	+2	40.0 ¹²⁵	10 N	18 18	18 40	19 05	8 43	54	21 10	45
12	358	49.7	+14	17.0	317	13.7 ¹⁰²	+2	27.5 ¹²⁵	0	18 08	18 29	18 54	8 45	50	21 09	49
13	13	49.8		16.3	331	43.0 ¹⁰³		15.0 ¹²⁵	10 S	17 58	20	45	47 47		09 53	
14	28	49.9		15.5	346	12.3 ¹⁰³	+2	02.5 ¹²⁵	20	47	10	36	50 42		08 57	
15	43	50.1		14.7	0	41.7 ¹⁰⁴	+1	50.0 ¹²⁵	30	35	18 00	28	53 38		08 61	
16	58	50.2		14.0	15	11.1 ¹⁰⁴		37.5 ¹²⁵	35	28	17 54	24	54 36		07 64	
17	73	50.3	+14	13.2	29	40.6 ¹⁰⁵	+1	25.1 ¹²⁴	40	17 20	17 48	18 20	8 56	32	21 07	67
18	88	50.4	+14	12.4	44	10.1 ¹⁰⁵	+1	12.6 ¹²⁵	45	17 11	17 42	18 16	8 58	29	21 07	70
19	103	50.5		11.6	58	39.7 ¹⁰⁶	+1	00.2 ¹²⁴	50	17 00	34	12	9 01	25	06 75	
20	118	50.7		10.9	73	09.3 ¹⁰⁶	+0	47.7 ¹²⁵	52	16 55	30	10	02 23		06 76	
21	133	50.8		10.1	87	39.0 ¹⁰⁷		35.3 ¹²⁴	54	49	27	08	03 21		05 79	
22	148	50.9		09.3	102	08.8 ¹⁰⁸		22.9 ¹²⁴	56	43	23	07	04 20		05 81	
23	163	51.0		08.5	116	38.5 ¹⁰⁷	+0	10.5 ¹²⁴	58	36	18	05	06 17		05 83	
24	178	51.1	+14	07.7	131	08.4 ¹⁰⁹	-0	01.9 ¹²⁴	60 S	16 28	17 13	18 02	9 08	14	21 04	87
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 2 ^h 30 ^m 1		Mag: -4.4 PMG: 14 ^h 54 ^m			Mag: -2.5 PMG: 22 ^h 40 ^m			Mag: -2.1 PMG: 17 ^h 19 ^m			Mag: +0.3 PMG: 20 ^h 40 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'
0	322	22.0	136	21.2	-3	51.4	18	50.4	-26	28.9	99	29.9	-15	28.3	49	08.4
1	337	24.5	151	21.5		52.6	33	53.3		29.0	114	32.1		28.4	64	11.0
2	352	26.9	166	21.8		53.8	48	56.3		29.0	129	34.4		28.5	79	13.5
3	7	29.4	181	22.1		55.0	63	59.2		29.0	144	36.6		28.6	94	16.1
4	22	31.9	196	22.4		56.2	79	02.2		29.1	159	38.8		28.7	109	18.7
5	37	34.3	211	22.7	-3	57.4	94	05.1	-26	29.1	174	41.0	-15	28.7	124	21.2
6	52	36.8	226	23.1	-3	58.6	109	08.1	-26	29.1	189	43.3	-15	28.8	139	23.8
7	67	39.2	241	23.4	-3	59.9	124	11.0		29.2	204	45.5		28.9	154	26.4
8	82	41.7	256	23.7	-4	01.1	139	14.0		29.2	219	47.7		29.0	169	28.9
9	97	44.2	271	24.0		02.3	154	16.9		29.2	234	49.9		29.1	184	31.5
10	112	46.6	286	24.3		03.5	169	19.9		29.2	249	52.2		29.1	199	34.0
11	127	49.1	301	24.6	-4	04.7	184	22.8	-26	29.3	264	54.4	-15	29.2	214	36.6
12	142	51.6	316	24.9	-4	05.9	199	25.8	-26	29.3	279	56.6	-15	29.3	229	39.2
13	157	54.0	331	25.2		07.1	214	28.7		29.3	294	58.8		29.4	244	41.7
14	172	56.5	346	25.5		08.3	229	31.6		29.3	310	01.1		29.5	259	44.3
15	187	59.0	1	25.8		09.5	244	34.6		29.4	325	03.3		29.5	274	46.8
16	203	01.4	16	26.2		10.7	259	37.5		29.4	340	05.5		29.6	289	49.4
17	218	03.9	31	26.5	-4	11.9	274	40.4	-26	29.4	355	07.7	-15	29.7	304	52.0
18	233	06.3	46	26.8	-4	13.1	289	43.4	-26	29.4	10	10.0	-15	29.8	319	54.5
19	248	08.8	61	27.1		14.3	304	46.3		29.4	25	12.2		29.9	334	57.1
20	263	11.3	76	27.4		15.5	319	49.2		29.5	40	14.4		29.9	349	59.6
21	278	13.7	91	27.7		16.7	334	52.2		29.5	55	16.6		30.0	5	02.2
22	293	16.2	106	28.0		18.0	349	55.1		29.5	70	18.8		30.1	20	04.8
23	308	18.7	121	28.4		19.2	4	58.0		29.5	85	21.1		30.2	35	07.3
24	323	21.1	136	28.7	-4	20.4	20	01.0	-26	29.5	100	23.3	-15	30.3	50	09.9
Dif	—		+3 -12			+29 0			+22 -1			+26 0				

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15'8 PMG: 12 ^h 04 ^m 5				Edad: 3 ^d 6 PHE { 4 ^h : 58'6 12 ^h : 58'3 20 ^h : 58'0 PMG: 15 ^h 47 ^m R°: 48 ^m													
	hG ☉		Dec		hG ☾ Dif		Dec Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	o	'	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m	
0	178	51.1	+14	07.7	131	08.4	−0	01.9	60 N	2 06	3 22	4 14	9 50	85	21 27	14		
1	193	51.3		07.0	145	38.2 ¹⁰⁸		14.2 ¹²³	58	30	36	23	49	82	29	17		
2	208	51.4		06.2	160	08.1 ¹⁰⁹		26.6 ¹²⁴	56	2 48	47	31	48	79	31	20		
3	223	51.5		05.4	174	38.1 ¹¹⁰		38.9 ¹²³	54	3 04	3 57	38	47	77	33	22		
4	238	51.6		04.6	189	08.1 ¹¹⁰	−0	51.2 ¹²³	52	16	4 06	44	46	75	35	23		
5	253	51.7	+14	03.9	203	38.2 ¹¹¹	−1	03.5 ¹²³	50	3 28	4 13	4 49	9 45	73	21 36	26		
6	268	51.9	+14	03.1	218	08.2 ¹¹⁰	−1	15.8 ¹²³	45	3 50	4 29	5 01	9 44	69	21 40	29		
7	283	52.0		02.3	232	38.4 ¹¹²		28.0 ¹²²	40	4 07	42	11	42	66	43	32		
8	298	52.1		01.5	247	08.5 ¹¹¹		40.2 ¹²²	35	21	4 53	20	41	63	45	35		
9	313	52.2	+14	00.7	261	38.7 ¹¹²	−1	52.4 ¹²²	30	32	5 02	27	40	60	48	37		
10	328	52.3	+13	59.9	276	09.0 ¹¹³	−2	04.5 ¹²¹	20	4 50	17	40	38	56	52	41		
11	343	52.5	+13	59.2	290	39.3 ¹¹³	−2	16.7 ¹²²	10 N	5 04	5 29	5 51	9 37	52	21 55	45		
12	358	52.6	+13	58.4	305	09.6 ¹¹³	−2	28.8 ¹²¹	0	5 15	5 40	6 01	9 35	49	21 58	49		
13	13	52.7		57.6	319	39.9 ¹¹³		40.8 ¹²⁰	10 S	25	50	11	34	45	22 02	51		
14	28	52.8		56.8	334	10.3 ¹¹⁴	−2	52.9 ¹²¹	20	33	5 59	22	32	41	05	55		
15	43	53.0		56.0	348	40.8 ¹¹⁵	−3	04.9 ¹²⁰	30	41	6 09	34	31	36	09	59		
16	58	53.1		55.3	3	11.2 ¹¹⁴		16.8 ¹¹⁹	35	45	15	41	30	34	11	62		
17	73	53.2	+13	54.5	17	41.7 ¹¹⁵	−3	28.8 ¹²⁰	40	5 49	6 20	6 48	9 28	32	22 14	65		
18	88	53.3	+13	53.7	32	12.2 ¹¹⁵	−3	40.7 ¹¹⁹	45	5 52	6 27	6 57	9 27	29	22 17	68		
19	103	53.5		52.9	46	42.8 ¹¹⁶	−3	52.5 ¹¹⁸	50	56	35	7 08	26	25	21	71		
20	118	53.6		52.1	61	13.4 ¹¹⁶	−4	04.4 ¹¹⁹	52	5 58	38	13	25	23	22	74		
21	133	53.7		51.3	75	44.0 ¹¹⁶		16.2 ¹¹⁸	54	6 00	42	19	24	22	24	76		
22	148	53.8		50.5	90	14.7 ¹¹⁷		27.9 ¹¹⁷	56	02	46	25	24	19	26	78		
23	163	54.0		49.8	104	45.3 ¹¹⁶		39.6 ¹¹⁷	58	04	50	32	23	16	28	80		
24	178	54.1	+13	49.0	119	16.0 ¹¹⁷	−4	51.3 ¹¹⁷	60 S	6 06	6 55	7 40	9 22	14	22 31	83		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 2 ^h 26 ^m 2		Mag: −4.4 PMG: 14 ^h 54 ^m				Mag: −2.5 PMG: 22 ^h 36 ^m				Mag: −2.1 PMG: 17 ^h 16 ^m				Mag: +0.3 PMG: 20 ^h 36 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'
0	323	21.1	136	28.7	−4	20.4	20	01.0	−26	29.5	100	23.3	−15	30.3	50	09.9	−22	38.7
1	338	23.6	151	29.0		21.6	35	03.9		29.6	115	25.5		30.4	65	12.4		38.7
2	353	26.1	166	29.3		22.8	50	06.8		29.6	130	27.7		30.4	80	15.0		38.7
3	8	28.5	181	29.6		24.0	65	09.7		29.6	145	30.0		30.5	95	17.5		38.7
4	23	31.0	196	30.0		25.2	80	12.7		29.6	160	32.2		30.6	110	20.1		38.7
5	38	33.5	211	30.3	−4	26.4	95	15.6	−26	29.6	175	34.4	−15	30.7	125	22.7	−22	38.7
6	53	35.9	226	30.6	−4	27.6	110	18.5	−26	29.6	190	36.6	−15	30.8	140	25.2	−22	38.7
7	68	38.4	241	30.9		28.8	125	21.4		29.7	205	38.8		30.8	155	27.8		38.7
8	83	40.8	256	31.2		30.0	140	24.3		29.7	220	41.1		30.9	170	30.3		38.8
9	98	43.3	271	31.6		31.2	155	27.2		29.7	235	43.3		31.0	185	32.9		38.8
10	113	45.8	286	31.9		32.4	170	30.2		29.7	250	45.5		31.1	200	35.4		38.8
11	128	48.2	301	32.2	−4	33.6	185	33.1	−26	29.7	265	47.7	−15	31.2	215	38.0	−22	38.8
12	143	50.7	316	32.5	−4	34.8	200	36.0	−26	29.7	280	49.9	−15	31.2	230	40.6	−22	38.8
13	158	53.2	331	32.9		36.0	215	38.9		29.7	295	52.1		31.3	245	43.1		38.8
14	173	55.6	346	33.2		37.2	230	41.8		29.8	310	54.4		31.4	260	45.7		38.8
15	188	58.1	1	33.5		38.4	245	44.7		29.8	325	56.6		31.5	275	48.2		38.8
16	204	00.6	16	33.8		39.6	260	47.6		29.8	340	58.8		31.6	290	50.8		38.8
17	219	03.0	31	34.2	−4	40.8	275	50.5	−26	29.8	356	01.0	−15	31.7	305	53.3	−22	38.8
18	234	05.5	46	34.5	−4	42.0	290	53.4	−26	29.8	11	03.2	−15	31.7	320	55.9	−22	38.8
19	249	07.9	61	34.8		43.2	305	56.3		29.8	26	05.5		31.8	335	58.4		38.8
20	264	10.4	76	35.1		44.4	320	59.2		29.8	41	07.7		31.9	351	01.0		38.8
21	279	12.9	91	35.5		45.6	336	02.1		29.8	56	09.9		32.0	6	03.6		38.9
22	294	15.3	106	35.8		46.8	351	05.0		29.8	71	12.1		32.1	21	06.1		38.9
23	309	17.8	121	36.1		48.0	6	07.9		29.8	86	14.3		32.2	36	08.7		38.9
24	324	20.3	136	36.5	−4	49.2	21	10.8	−26	29.8	101	16.5	−15	32.2	51	11.2	−22	38.9
Dif	—		+3		−12		+29		0		+22		−1		+26			

UT	SOL				 LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 15°8 PMG: 12 ^h 04 ^m 3				Edad: 4 ^d 6 PHE { SD: 15°6 PMG: 16 ^h 35 ^m 4 ^h : 57:7 12 ^h : 57:4 20 ^h : 57:1 R°: 48 ^m															
	hG ☉		Dec		hG ☾		Dif				Dec		Dif		Civil	Náutico	Hora	R°	Hora	R°
h	o	'	o	'	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m	
0	178	54.1	+13	49.0	119	16.0	-4	51.3	60 N	19	51	20	41	21	55	11	15	81	16	
1	193	54.2		48.2	133	46.8 ¹¹⁸	-5	02.9 ¹¹⁶	58	42	28	32	11	78		46	19			
2	208	54.3		47.4	148	17.5 ¹¹⁷		14.5 ¹¹⁶	56	35	18	15	07	76		51	21			
3	223	54.5		46.6	162	48.3 ¹¹⁸		26.1 ¹¹⁶	54	28	08	21	00	74		55	23			
4	238	54.6		45.8	177	19.1 ¹¹⁸		37.6 ¹¹⁵	52	22	20	00	20	48	11	01	72	21	58	
5	253	54.7	+13	45.0	191	50.0 ¹¹⁹	-5	49.0 ¹¹⁴	50	19	17	19	52	20	37	10	58	71	22	
6	268	54.9	+13	44.2	206	20.8 ¹¹⁸	-6	00.4 ¹¹⁴	45	19	05	19	37	20	16	10	53	66	22	
7	283	55.0		43.5	220	51.7 ¹¹⁹		11.8 ¹¹⁴	40	18	56	24	19	59		48	63		15	
8	298	55.1		42.7	235	22.6 ¹¹⁹		23.1 ¹¹³	35	47	14	46	44	61		20	36			
9	313	55.2		41.9	249	53.5 ¹¹⁹		34.4 ¹¹³	30	40	19	05	35	40	59		25	37		
10	328	55.4		41.1	264	24.4 ¹¹⁹		45.6 ¹¹²	20	28	18	51	18	34	54		33	41		
11	343	55.5	+13	40.3	278	55.4 ¹²⁰	-6	56.8 ¹¹²	10 N	18	17	18	39	19	04	10	29	51	22	
12	358	55.6	+13	39.5	293	26.4 ¹²⁰	-7	07.9 ¹¹¹	0	18	08	18	29	18	54	10	24	47	22	
13	13	55.7		38.7	307	57.4 ¹²⁰		19.0 ¹¹¹	10 S	17	58	20	44	19	44		22	53	51	
14	28	55.9		37.9	322	28.4 ¹²⁰		30.0 ¹¹⁰	20	48	10	36	13	41		23	00	54		
15	43	56.0		37.1	336	59.4 ¹²⁰		41.0 ¹¹⁰	30	36	18	01	29	07	38		08	58		
16	58	56.1		36.3	351	30.5 ¹²¹	-7	51.9 ¹⁰⁹	35	30	17	56	25	04	35		13	60		
17	73	56.3	+13	35.5	6	01.5 ¹²⁰	-8	02.8 ¹⁰⁹	40	17	22	17	50	18	22	10	00	32	23	
18	88	56.4	+13	34.7	20	32.6 ¹²¹	-8	13.6 ¹⁰⁸	45	17	13	17	44	18	18	9	56	29	23	
19	103	56.5		33.9	35	03.7 ¹²¹		24.3 ¹⁰⁷	50	17	03	37	15	51	25		32	69		
20	118	56.7		33.2	49	34.8 ¹²¹		35.0 ¹⁰⁷	52	16	58	33	13	48	24		36	70		
21	133	56.8		32.4	64	06.0 ¹²²		45.6 ¹⁰⁶	54	53	30	11	46	22		40	72			
22	148	56.9		31.6	78	37.1 ¹²¹	-8	56.2 ¹⁰⁶	56	47	26	10	43	20		44	74			
23	163	57.1		30.8	93	08.2 ¹²¹	-9	06.8 ¹⁰⁶	58	40	22	08	39	18		48	78			
24	178	57.2	+13	30.0	107	39.4 ¹²²	-9	17.2 ¹⁰⁴	60 S	16	33	17	17	18	06	9	36	15	23	
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 2 ^h 22 ^m 3				Mag: -4.5 PMG: 14 ^h 53 ^m				Mag: -2.5 PMG: 22 ^h 31 ^m				Mag: -2.1 PMG: 17 ^h 12 ^m				Mag: +0.3 PMG: 20 ^h 32 ^m			
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'
0	324	20.3	136	36.5	-4	49.2	21	10.8	-26	29.8	101	16.5	-15	32.2	51	11.2	-22	38.9		
1	339	22.7	151	36.8		50.4	36	13.7		29.8	116	18.7		32.3	66	13.8		38.9		
2	354	25.2	166	37.1		51.6	51	16.6		29.8	131	21.0		32.4	81	16.3		38.9		
3	9	27.7	181	37.5		52.8	66	19.5		29.9	146	23.2		32.5	96	18.9		38.9		
4	24	30.1	196	37.8		54.0	81	22.4		29.9	161	25.4		32.6	111	21.4		38.9		
5	39	32.6	211	38.1	-4	55.2	96	25.3	-26	29.9	176	27.6	-15	32.7	126	24.0	-22	38.9		
6	54	35.1	226	38.5	-4	56.4	111	28.2	-26	29.9	191	29.8	-15	32.7	141	26.5	-22	38.9		
7	69	37.5	241	38.8		57.6	126	31.1		29.9	206	32.0		32.8	156	29.1		38.9		
8	84	40.0	256	39.1	-4	58.8	141	33.9		29.9	221	34.2		32.9	171	31.7		38.9		
9	99	42.4	271	39.5	-5	00.0	156	36.8		29.9	236	36.5		33.0	186	34.2		38.9		
10	114	44.9	286	39.8	-5	01.2	171	39.7		29.9	251	38.7		33.1	201	36.8		39.0		
11	129	47.4	301	40.1	-5	02.4	186	42.6	-26	29.9	266	40.9	-15	33.2	216	39.3	-22	39.0		
12	144	49.8	316	40.5	-5	03.6	201	45.5	-26	29.9	281	43.1	-15	33.2	231	41.9	-22	39.0		
13	159	52.3	331	40.8		04.8	216	48.4		29.9	296	45.3		33.3	246	44.4		39.0		
14	174	54.8	346	41.2		06.0	231	51.2		29.9	311	47.5		33.4	261	47.0		39.0		
15	189	57.2	1	41.5		07.2	246	54.1		29.9	326	49.7		33.5	276	49.5		39.0		
16	204	59.7	16	41.8		08.4	261	57.0		29.9	341	51.9		33.6	291	52.1		39.0		
17	220	02.2	31	42.2	-5	09.6	276	59.9	-26	29.9	356	54.2	-15	33.7	306	54.6	-22	39.0		
18	235	04.6	46	42.5	-5	10.8	292	02.7	-26	29.9	11	56.4	-15	33.7	321	57.2	-22	39.0		
19	250	07.1	61	42.9		12.0	307	05.6		29.9	26	58.6		33.8	336	59.7		39.0		
20	265	09.6	76	43.2		13.2	322	08.5		29.9	42	00.8		33.9	352	02.3		39.0		
21	280	12.0	91	43.6		14.3	337	11.3		29.8	57	03.0		34.0	7	04.8		39.0		
22	295	14.5	106	43.9		15.5	352	14.2		29.8	72	05.2		34.1	22	07.4		39.0		
23	310	16.9	121	44.2		16.7	7	17.1		29.8	87	07.4		34.2	37	09.9		39.1		
24	325	19.4	136	44.6	-5	17.9	22	19.9	-26	29.8	102	09.6	-15	34.2	52	12.5	-22	39.1		
Dif	—				+3 -12				+29 0				+22 -1				+26 0			

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15 ^h 8 PMG: 12 ^h 04 ^m 1			Edad: 5 ^d 6 SD: 15 ^h 4 PMG: 17 ^h 23 ^m	PHE { 4 ^h : 56 ^m 8 12 ^h : 56 ^m 5 20 ^h : 56 ^m 2 R°: 47 ^m													
	hG ☉	Dec				hG ☾		Dif	Dec		Dif	Náutico	Civil	Hora	R°	Hora	R°	
h	o	'	o	'	o	'	o	'	h	m	h	m	h	m	h	m	h	m
0	178	57.2	+13	30.0	107	39.4	−9	17.2	60 N	2 15	3 28	4 19	12 36	78	21 57	20		
1	193	57.3		29.2	122	10.6		27.6	58	37	41	27	29	76	22 05	22		
2	208	57.4		28.4	136	41.7		38.0	56	2 54	3 52	35	23	73	12	24		
3	223	57.6		27.6	151	12.9		48.3	54	3 09	4 01	41	18	71	18	26		
4	238	57.7		26.8	165	44.1		−9 58.5	52	21	09	47	13	69	23	28		
5	253	57.8	+13	26.0	180	15.3		−10 08.6	50	3 32	4 17	4 52	12 09	67	22 28	30		
6	268	58.0	+13	25.2	194	46.5		−10 18.7	45	3 53	4 32	5 04	11 59	64	22 39	33		
7	283	58.1		24.4	209	17.8		28.8	40	4 10	44	13	51	61	48	35		
8	298	58.2		23.6	223	49.0		38.8	35	23	4 55	21	45	58	22 56	37		
9	313	58.4		22.8	238	20.2		48.7	30	34	5 03	28	39	56	23 02	40		
10	328	58.5		22.0	252	51.4		−10 58.5	20	4 51	18	41	28	54	14	42		
11	343	58.6	+13	21.2	267	22.7		−11 08.3	10 N	5 04	5 29	5 51	11 20	50	23 24	45		
12	358	58.8	+13	20.4	281	53.9		−11 18.0	0	5 15	5 39	6 01	11 11	48	23 34	48		
13	13	58.9		19.6	296	25.2		27.6	10 S	24	49	10	11 03	45	44	50		
14	28	59.1		18.8	310	56.4		37.2	20	32	5 58	20	10 54	42	23 54	53		
15	43	59.2		18.0	325	27.7		46.7	30	39	6 07	32	45	38	***	***	***	
16	58	59.3		17.2	339	59.0		−11 56.2	35	43	12	38	39	36	***	***	***	
17	73	59.5	+13	16.4	354	30.2		−12 05.6	40	5 46	6 18	6 46	10 32	34	***	***	***	
18	88	59.6	+13	15.6	9	01.5		−12 14.9	45	5 50	6 24	6 54	10 25	31	***	***	***	
19	103	59.7		14.8	23	32.8		24.1	50	53	31	7 05	16	28	***	***	***	
20	118	59.9		14.0	38	04.0		33.3	52	55	34	09	12	26	***	***	***	
21	134	00.0		13.2	52	35.3		42.4	54	56	38	15	08	24	***	***	***	
22	149	00.1		12.4	67	06.6		−12 51.4	56	58	41	20	10 03	22	***	***	***	
23	164	00.3		11.6	81	37.8		−13 00.3	58	5 59	45	27	9 57	20	***	***	***	
24	179	00.4	+13	10.8	96	09.1		−13 09.2	60 S	6 01	6 50	7 34	9 51	18	***	***	***	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG 2 ^h 18 ^m 3			Mag: −4.5 PMG: 14 ^h 53 ^m			Mag: −2.5 PMG: 22 ^h 26 ^m			Mag: −2.1 PMG: 17 ^h 09 ^m			Mag: +0.3 PMG: 20 ^h 28 ^m					
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'		
0	325	19.4	136	44.6	−5	17.9	22	19.9	−26	29.8	102	09.6	−15	34.2	52	12.5		
1	340	21.9	151	44.9		19.1	37	22.8		29.8	117	11.8		34.3	67	15.0		
2	355	24.3	166	45.3		20.3	52	25.7		29.8	132	14.0		34.4	82	17.6		
3	10	26.8	181	45.6		21.5	67	28.5		29.8	147	16.3		34.5	97	20.1		
4	25	29.3	196	46.0		22.7	82	31.4		29.8	162	18.5		34.6	112	22.7		
5	40	31.7	211	46.3	−5	23.9	97	34.2	−26	29.8	177	20.7	−15	34.7	127	25.2		
6	55	34.2	226	46.7	−5	25.1	112	37.1	−26	29.8	192	22.9	−15	34.8	142	27.8		
7	70	36.7	241	47.0		26.3	127	40.0		29.8	207	25.1		34.8	157	30.3		
8	85	39.1	256	47.4		27.5	142	42.8		29.8	222	27.3		34.9	172	32.9		
9	100	41.6	271	47.7		28.7	157	45.7		29.7	237	29.5		35.0	187	35.4		
10	115	44.0	286	48.1		29.9	172	48.5		29.7	252	31.7		35.1	202	38.0		
11	130	46.5	301	48.4	−5	31.1	187	51.4	−26	29.7	267	33.9	−15	35.2	217	40.5		
12	145	49.0	316	48.8	−5	32.2	202	54.2	−26	29.7	282	36.1	−15	35.3	232	43.1		
13	160	51.4	331	49.1		33.4	217	57.1		29.7	297	38.3		35.3	247	45.6		
14	175	53.9	346	49.5		34.6	232	59.9		29.7	312	40.5		35.4	262	48.2		
15	190	56.4	1	49.8		35.8	248	02.8		29.7	327	42.7		35.5	277	50.7		
16	205	58.8	16	50.2		37.0	263	05.6		29.7	342	44.9		35.6	292	53.3		
17	221	01.3	31	50.6	−5	38.2	278	08.4	−26	29.6	357	47.1	−15	35.7	307	55.8		
18	236	03.8	46	50.9	−5	39.4	293	11.3	−26	29.6	12	49.4	−15	35.8	322	58.4		
19	251	06.2	61	51.3		40.6	308	14.1		29.6	27	51.6		35.9	338	00.9		
20	266	08.7	76	51.6		41.8	323	17.0		29.6	42	53.8		35.9	353	03.5		
21	281	11.2	91	52.0		43.0	338	19.8		29.6	57	56.0		36.0	8	06.0		
22	296	13.6	106	52.3		44.1	353	22.6		29.6	72	58.2		36.1	23	08.6		
23	311	16.1	121	52.7		45.3	8	25.5		29.5	88	00.4		36.2	38	11.1		
24	326	18.5	136	53.1	−5	46.5	23	28.3	−26	29.5	103	02.6	−15	36.3	53	13.6		
Dif	—			+4			−12			+28			0			+22		
													−1			+25		

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 15°8 PMG: 12 ^h 03 ^m 9			Edad: 6 ^d 6 PHE { 4 ^h : 56'0 12 ^h : 55'7 20 ^h : 55'5 SD: 15°2 PMG: 18 ^h 10 ^m R°: 48 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	o	'	o	'	o	'	o	'	h m	h m	h m	h m m	h m m	h m m				
0	179	00.4	+13	10.8	96	09.1	-13	09.2	60 N	19 45	20 34	21 45	13 54	74	22 17	25		
1	194	00.6		10.0	110	40.3 ¹²²		18.0 ⁸⁸	58	37	23	25	45	71	27	27		
2	209	00.7		09.2	125	11.6 ¹²³		26.7 ⁸⁷	56	30	12	21 08	36	69	36	29		
3	224	00.8		08.3	139	42.9 ¹²³		35.4 ⁸⁷	54	24	20 03	20 55	29	67	44	31		
4	239	01.0		07.5	154	14.1 ¹²²		44.0 ⁸⁶	52	18	19 55	43	22	65	51	33		
5	254	01.1	+13	06.7	168	45.4 ¹²³	-13	52.5 ⁸⁵	50	19 13	19 48	20 33	13 16	64	22 58	33		
6	269	01.2	+13	05.9	183	16.6 ¹²²	-14	00.9 ⁸⁴	45	19 02	19 33	20 12	13 03	61	23 12	36		
7	284	01.4		05.1	197	47.9 ¹²³		09.3 ⁸⁴	40	18 53	21	19 56	12 52	59	23	38		
8	299	01.5		04.3	212	19.1 ¹²²		17.6 ⁸³	35	45	12	43	43	57	33	40		
9	314	01.7		03.5	226	50.4 ¹²³		25.8 ⁸²	30	38	19 03	33	35	56	42	41		
10	329	01.8		02.7	241	21.6 ¹²²		33.9 ⁸¹	20	27	18 49	16	22	52	23 56	44		
11	344	01.9	+13	01.9	255	52.8 ¹²²	-14	41.9 ⁸⁰	10 N	18 17	18 38	19 03	12 10	50	** ** *	**		
12	359	02.1	+13	01.1	270	24.0 ¹²²	-14	49.9 ⁸⁰	0	18 07	18 28	18 53	11 59	48	** ** *	**		
13	14	02.2	+13	00.3	284	55.3 ¹²³	-14	57.8 ⁷⁹	10 S	17 58	19	44	48	45	** ** *	**		
14	29	02.4	+12	59.5	299	26.5 ¹²²	-15	05.6 ⁷⁸	20	48	11	37	36	43	** ** *	**		
15	44	02.5		58.7	313	57.7 ¹²²		13.4 ⁷⁸	30	37	18 02	30	23	40	0 06	56		
16	59	02.6		57.8	328	28.9 ¹²²		21.0 ⁷⁶	35	31	17 57	27	15	39	13	58		
17	74	02.8	+12	57.0	343	00.1 ¹²²	-15	28.6 ⁷⁶	40	17 24	17 52	18 23	11 06	37	0 21	60		
18	89	02.9	+12	56.2	357	31.3 ¹²²	-15	36.1 ⁷⁵	45	17 16	17 46	18 20	10 56	34	0 30	63		
19	104	03.1		55.4	12	02.4 ¹²¹		43.5 ⁷⁴	50	06	39	17	44	31	41	66		
20	119	03.2		54.6	26	33.6 ¹²²		50.8 ⁷³	52	17 01	36	16	38	30	46	68		
21	134	03.3		53.8	41	04.8 ¹²²	-15	58.1 ⁷³	54	16 56	33	15	32	29	52	69		
22	149	03.5		53.0	55	35.9 ¹²¹	-16	05.2 ⁷¹	56	51	30	13	25	27	0 58	71		
23	164	03.6		52.2	70	07.1 ¹²²		12.3 ⁷¹	58	44	26	12	17	25	1 06	73		
24	179	03.8	+12	51.3	84	38.2 ¹²¹	-16	19.3 ⁷⁰	60 S	16 37	17 21	18 10	10 09	22	1 14	76		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 2 ^h 14 ^m 4		Mag: -4.5 PMG: 14 ^h 52 ^m			Mag: -2.4 PMG: 22 ^h 22 ^m			Mag: -2.0 PMG: 17 ^h 05 ^m			Mag: +0.3 PMG: 20 ^h 24 ^m						
	hG ♈		hG ♀			hG ♂			hG ♃			hG ♄						
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'		
0	326	18.5	136	53.1	-5	46.5	23	28.3	-26	29.5	103	02.6	-15	36.3	53	13.6	-22	39.2
1	341	21.0	151	53.4		47.7	38	31.1		29.5	118	04.8		36.4	68	16.2		39.3
2	356	23.5	166	53.8		48.9	53	34.0		29.5	133	07.0		36.5	83	18.7		39.3
3	11	25.9	181	54.2		50.1	68	36.8		29.5	148	09.2		36.5	98	21.3		39.3
4	26	28.4	196	54.5		51.3	83	39.6		29.4	163	11.4		36.6	113	23.8		39.3
5	41	30.9	211	54.9	-5	52.5	98	42.4	-26	29.4	178	13.6	-15	36.7	128	26.4	-22	39.3
6	56	33.3	226	55.2	-5	53.6	113	45.3	-26	29.4	193	15.8	-15	36.8	143	28.9	-22	39.3
7	71	35.8	241	55.6		54.8	128	48.1		29.4	208	18.0		36.9	158	31.5		39.3
8	86	38.3	256	56.0		56.0	143	50.9		29.4	223	20.2		37.0	173	34.0		39.3
9	101	40.7	271	56.3		57.2	158	53.7		29.3	238	22.4		37.1	188	36.6		39.3
10	116	43.2	286	56.7		58.4	173	56.5		29.3	253	24.6		37.1	203	39.1		39.3
11	131	45.6	301	57.1	-5	59.6	188	59.4	-26	29.3	268	26.8	-15	37.2	218	41.7	-22	39.3
12	146	48.1	316	57.4	-6	00.8	204	02.2	-26	29.3	283	29.0	-15	37.3	233	44.2	-22	39.3
13	161	50.6	331	57.8		01.9	219	05.0		29.2	298	31.2		37.4	248	46.7		39.3
14	176	53.0	346	58.2		03.1	234	07.8		29.2	313	33.4		37.5	263	49.3		39.4
15	191	55.5	1	58.5		04.3	249	10.6		29.2	328	35.6		37.6	278	51.8		39.4
16	206	58.0	16	58.9		05.5	264	13.4		29.2	343	37.8		37.7	293	54.4		39.4
17	222	00.4	31	59.3	-6	06.7	279	16.2	-26	29.1	358	40.0	-15	37.8	308	56.9	-22	39.4
18	237	02.9	46	59.7	-6	07.9	294	19.0	-26	29.1	13	42.2	-15	37.8	323	59.5	-22	39.4
19	252	05.4	62	00.0		09.0	309	21.8		29.1	28	44.4		37.9	339	02.0		39.4
20	267	07.8	77	00.4		10.2	324	24.6		29.1	43	46.6		38.0	354	04.5		39.4
21	282	10.3	92	00.8		11.4	339	27.5		29.0	58	48.8		38.1	9	07.1		39.4
22	297	12.8	107	01.2		12.6	354	30.3		29.0	73	51.0		38.2	24	09.6		39.4
23	312	15.2	122	01.5		13.8	9	33.1		29.0	88	53.2		38.3	39	12.2		39.4
24	327	17.7	137	01.9	-6	15.0	24	35.9	-26	28.9	103	55.4	-15	38.4	54	14.7	-22	39.4
Dif	—		+4			-12	+28		0		+22		-1		+25		0	

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 15°8 PMG: 12 ^h 03 ^m 6			Edad: 7 ^d 6 SD: 15°0 PMG: 18 ^h 58 ^m	PHE { 4 ^h : 55°3 12 ^h : 55°1 20 ^h : 54°9 R°: 48 ^m												
	hG ☉	Dec				hG ☾		Dif	Dec		Dif	Náutico	Civil	Hora	R°	Hora	R°
h	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m	h	m
0	179	03.8	+12 51.3	84	38.2	-16 19.3	60 N	2 23	3 34	4 24	15 08	67	22 42	32			
1	194	03.9		99	09.4 ¹²²	26.2 ⁶⁹	58	2 44	46	31	14 56	64	22 54	35			
2	209	04.1		113	40.5 ¹²¹	33.1 ⁶⁹	56	3 00	3 56	38	45 63		23 05	36			
3	224	04.2		128	11.6 ¹²¹	39.8 ⁶⁷	54	14	4 05	45	36 62		15	37			
4	239	04.3		142	42.7 ¹²¹	46.5 ⁶⁷	52	25	13	50	27 61		24	37			
5	254	04.5	+12 47.3	157	13.8 ¹²¹	-16 53.1 ⁶⁶	50	3 35	4 20	4 55	14 20	60	23 31	39			
6	269	04.6	+12 46.5	171	44.9 ¹²¹	-16 59.6 ⁶⁵	45	3 56	4 35	5 06	14 04	58	23 48	40			
7	284	04.8		186	16.0 ¹²¹	-17 06.0 ⁶⁴	40	4 12	47	15	13 51	56	***	***	***		
8	299	04.9		200	47.1 ¹²¹	12.3 ⁶³	35	25	4 56	23	40 55		***	***	***		
9	314	05.1		215	18.1 ¹²⁰	18.5 ⁶²	30	35	5 05	30	31 53		***	***	***		
10	329	05.2		229	49.2 ¹²¹	24.7 ⁶²	20	4 52	18	41	14 52		***	***	***		
11	344	05.4	+12 42.4	244	20.2 ¹²⁰	-17 30.7 ⁶⁰	10 N	5 04	5 29	5 51	13 00	50	0 09	46			
12	359	05.5	+12 41.6	258	51.3 ¹²¹	-17 36.7 ⁶⁰	0	5 14	5 39	6 00	12 47	48	0 22	48			
13	14	05.6		273	22.3 ¹²⁰	42.6 ⁵⁹	10 S	23	48	09	33 47		34	50			
14	29	05.8		287	53.3 ¹²⁰	48.4 ⁵⁸	20	31	5 56	19	19 45		0 47	52			
15	44	05.9		302	24.3 ¹²⁰	54.1 ⁵⁷	30	37	6 05	30	12 03	43	1 02	55			
16	59	06.1		316	55.3 ¹²⁰	-17 59.7 ⁵⁶	35	40	10	36	11 54	41	11	56			
17	74	06.2	+12 37.5	331	26.3 ¹²⁰	-18 05.3 ⁵⁶	40	5 43	6 15	6 43	11 43	40	1 21	57			
18	89	06.4	+12 36.7	345	57.3 ¹²⁰	-18 10.7 ⁵⁴	45	5 47	6 21	6 51	11 30	39	1 33	59			
19	104	06.5		0	28.3 ¹²⁰	16.1 ⁵⁴	50	50	27	7 01	15 36	47	62				
20	119	06.7		14	59.3 ¹²⁰	21.3 ⁵²	52	51	30	05	08 35		1 54	63			
21	134	06.8		29	30.2 ¹¹⁹	26.5 ⁵²	54	52	33	10	11 01	33	2 01	65			
22	149	07.0		44	01.2 ¹²⁰	31.6 ⁵¹	56	53	37	16	10 52	32	09	67			
23	164	07.1		58	32.1 ¹¹⁹	36.6 ⁵⁰	58	55	41	22	42 30		19	68			
24	179	07.3	+12 31.7	73	03.0 ¹¹⁹	-18 41.5 ⁴⁹	60 S	5 56	6 45	7 29	10 31	28	2 30	70			

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG 2 ^h 10 ^m 5		Mag: -4.5 PMG: 14 ^h 51 ^m		Mag: -2.4 PMG: 22 ^h 17 ^m		Mag: -2.0 PMG: 17 ^h 02 ^m		Mag: +0.3 PMG: 20 ^h 20 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	o	'	o	'	o	'	o	'	o	'	
0	327	17.7	137	01.9	-6 15.0	24 35.9	-26 28.9	103 55.4	-15 38.4	54 14.7	-22 39.4
1	342	20.1	152	02.3	16.1	39 38.7	28.9	118 57.6	38.5	69 17.3	39.4
2	357	22.6	167	02.7	17.3	54 41.4	28.9	133 59.8	38.5	84 19.8	39.4
3	12	25.1	182	03.0	18.5	69 44.2	28.8	149 02.0	38.6	99 22.3	39.4
4	27	27.5	197	03.4	19.7	84 47.0	28.8	164 04.2	38.7	114 24.9	39.5
5	42	30.0	212	03.8	-6 20.9	99 49.8	-26 28.8	179 06.4	-15 38.8	129 27.4	-22 39.5
6	57	32.5	227	04.2	-6 22.0	114 52.6	-26 28.7	194 08.6	-15 38.9	144 30.0	-22 39.5
7	72	34.9	242	04.5	23.2	129 55.4	28.7	209 10.8	39.0	159 32.5	39.5
8	87	37.4	257	04.9	24.4	144 58.2	28.7	224 12.9	39.1	174 35.1	39.5
9	102	39.9	272	05.3	25.6	160 01.0	28.6	239 15.1	39.2	189 37.6	39.5
10	117	42.3	287	05.7	26.8	175 03.8	28.6	254 17.3	39.2	204 40.1	39.5
11	132	44.8	302	06.1	-6 27.9	190 06.5	-26 28.6	269 19.5	-15 39.3	219 42.7	-22 39.5
12	147	47.3	317	06.5	-6 29.1	205 09.3	-26 28.5	284 21.7	-15 39.4	234 45.2	-22 39.5
13	162	49.7	332	06.8	30.3	220 12.1	28.5	299 23.9	39.5	249 47.8	39.5
14	177	52.2	347	07.2	31.5	235 14.9	28.5	314 26.1	39.6	264 50.3	39.5
15	192	54.6	2	07.6	32.7	250 17.7	28.4	329 28.3	39.7	279 52.8	39.5
16	207	57.1	17	08.0	33.8	265 20.4	28.4	344 30.5	39.8	294 55.4	39.5
17	222	59.6	32	08.4	-6 35.0	280 23.2	-26 28.3	359 32.7	-15 39.9	309 57.9	-22 39.6
18	238	02.0	47	08.8	-6 36.2	295 26.0	-26 28.3	14 34.9	-15 40.0	325 00.5	-22 39.6
19	253	04.5	62	09.2	37.4	310 28.8	28.3	29 37.1	40.0	340 03.0	39.6
20	268	07.0	77	09.5	38.5	325 31.5	28.2	44 39.3	40.1	355 05.5	39.6
21	283	09.4	92	09.9	39.7	340 34.3	28.2	59 41.5	40.2	10 08.1	39.6
22	298	11.9	107	10.3	40.9	355 37.1	28.1	74 43.7	40.3	25 10.6	39.6
23	313	14.4	122	10.7	42.1	10 39.8	28.1	89 45.8	40.4	40 13.2	39.6
24	328	16.8	137	11.1	-6 43.2	25 42.6	-26 28.1	104 48.0	-15 40.5	55 15.7	-22 39.6
Dif	—		+4 -12		+28 0		+22 -1		+25 0		

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 15 ^h 8 PMG: 12 ^h 03 ^m 4			Edad: 8 ^d 6 PHE { 4 ^h : 54 ^m 8 12 ^h : 54 ^m 6 20 ^h : 54 ^m 5 SD: 14 ^h 9 PMG: 19 ^h 46 ^m R°: 49 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	o	'	o	'	o	'	o	'	h	m	h	m	h	m	h	m	m	
0	179	07.3	+12	31.7	73	03.0	-18	41.5	60 N	19 39	20 28	21 36	16 15	58	23 14	42		
1	194	07.4		30.9	87	34.0 ¹²⁰		46.3 ⁴⁸	58	32	17	17	16 00	57	29	42		
2	209	07.6		30.1	102	04.9 ¹¹⁹		51.0 ⁴⁷	56	25	20 07	21 02	15 48	56	41	43		
3	224	07.7		29.3	116	35.8 ¹¹⁹	-18	55.6 ⁴⁶	54	19	19 58	20 49	38 55		23 52	44		
4	239	07.9		28.4	131	06.7 ¹¹⁹	-19	00.2 ⁴⁶	52	14	51	38	28 55		***	***	**	
5	254	08.0	+12	27.6	145	37.6 ¹¹⁹	-19	04.6 ⁴⁴	50	19 09	19 44	20 28	15 20	54	***	***	***	
6	269	08.1	+12	26.8	160	08.4 ¹¹⁸	-19	09.0 ⁴⁴	45	18 59	19 30	20 08	15 02	53	***	***	***	
7	284	08.3		26.0	174	39.3 ¹¹⁹		13.2 ⁴²	40	50	18	19 53	14 47	52	0 01	42		
8	299	08.4		25.1	189	10.2 ¹¹⁹		17.4 ⁴²	35	43	09	41	35 51		13	43		
9	314	08.6		24.3	203	41.0 ¹¹⁸		21.5 ⁴¹	30	36	19 01	30	24 51		23	44		
10	329	08.7		23.5	218	11.9 ¹¹⁹		25.5 ⁴⁰	20	25	18 48	14	14 06	50	40	46		
11	344	08.9	+12	22.7	232	42.7 ¹¹⁸	-19	29.3 ³⁸	10 N	18 16	18 37	19 02	13 50	49	0 55	47		
12	359	09.0	+12	21.8	247	13.5 ¹¹⁸	-19	33.1 ³⁸	0	18 07	18 28	18 52	13 35	48	1 10	48		
13	14	09.2		21.0	261	44.4 ¹¹⁹		36.8 ³⁷	10 S	17 58	19	44	20 47		24	49		
14	29	09.3		20.2	276	15.2 ¹¹⁸		40.4 ³⁶	20	49	11	37	13 04	46	39	51		
15	44	09.5		19.4	290	46.0 ¹¹⁸		43.9 ³⁵	30	38	18 03	31	12 46	45	1 57	52		
16	59	09.7		18.5	305	16.8 ¹¹⁸		47.4 ³⁵	35	32	17 58	28	35 45		2 07	53		
17	74	09.8	+12	17.7	319	47.6 ¹¹⁸	-19	50.7 ³³	40	17 26	17 53	18 25	12 23	44	2 18	55		
18	89	10.0	+12	16.9	334	18.4 ¹¹⁸	-19	53.9 ³²	45	17 18	17 48	18 22	12 09	43	2 32	56		
19	104	10.1		16.1	348	49.2 ¹¹⁸	-19	57.0 ³¹	50	09	42	20	11 51	42	49	57		
20	119	10.3		15.2	3	20.0 ¹¹⁸	-20	00.1 ³¹	52	04	39	19	43 41		2 57	58		
21	134	10.4		14.4	17	50.7 ¹¹⁷		03.0 ²⁹	54	17 00	36	18	34 41		3 06	58		
22	149	10.6		13.6	32	21.5 ¹¹⁸		05.9 ²⁹	56	16 54	33	17	24 39		16	59		
23	164	10.7		12.7	46	52.3 ¹¹⁸		08.6 ²⁷	58	49	30	16	11 12	39	27	61		
24	179	10.9	+12	11.9	61	23.0 ¹¹⁷	-20	11.3 ²⁷	60 S	16 42	17 26	18 14	10 59	37	3 40	63		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 2 ^h 06 ^m 5		Mag: -4.5 PMG: 14 ^h 51 ^m			Mag: -2.4 PMG: 22 ^h 13 ^m			Mag: -2.0 PMG: 16 ^h 58 ^m			Mag: +0.3 PMG: 20 ^h 16 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		hG ♅	Dec		
h	o	'	o	'	o	o	'	o	o	'	o	'	o	'	o	o	'	
0	328	16.8	137	11.1	-6	43.2	25	42.6	-26	28.1	104	48.0	-15	40.5	55	15.7	-22	39.6
1	343	19.3	152	11.5		44.4	40	45.4		28.0	119	50.2		40.6	70	18.2		39.6
2	358	21.8	167	11.9		45.6	55	48.1		28.0	134	52.4		40.7	85	20.8		39.6
3	13	24.2	182	12.3		46.8	70	50.9		27.9	149	54.6		40.8	100	23.3		39.6
4	28	26.7	197	12.7		47.9	85	53.7		27.9	164	56.8		40.8	115	25.8		39.6
5	43	29.1	212	13.1	-6	49.1	100	56.4	-26	27.8	179	59.0	-15	40.9	130	28.4	-22	39.6
6	58	31.6	227	13.5	-6	50.3	115	59.2	-26	27.8	195	01.2	-15	41.0	145	30.9	-22	39.6
7	73	34.1	242	13.9		51.5	131	01.9		27.7	210	03.4		41.1	160	33.5		39.7
8	88	36.5	257	14.3		52.6	146	04.7		27.7	225	05.6		41.2	175	36.0		39.7
9	103	39.0	272	14.6		53.8	161	07.4		27.6	240	07.8		41.3	190	38.5		39.7
10	118	41.5	287	15.0		55.0	176	10.2		27.6	255	09.9		41.4	205	41.1		39.7
11	133	43.9	302	15.4	-6	56.1	191	12.9	-26	27.6	270	12.1	-15	41.5	220	43.6	-22	39.7
12	148	46.4	317	15.8	-6	57.3	206	15.7	-26	27.5	285	14.3	-15	41.6	235	46.1	-22	39.7
13	163	48.9	332	16.2		58.5	221	18.4		27.5	300	16.5		41.6	250	48.7		39.7
14	178	51.3	347	16.6	-6	59.7	236	21.2		27.4	315	18.7		41.7	265	51.2		39.7
15	193	53.8	2	17.0	-7	00.8	251	23.9		27.4	330	20.9		41.8	280	53.7		39.7
16	208	56.2	17	17.4		02.0	266	26.7		27.3	345	23.1		41.9	295	56.3		39.7
17	223	58.7	32	17.8	-7	03.2	281	29.4	-26	27.3	0	25.3	-15	42.0	310	58.8	-22	39.7
18	239	01.2	47	18.2	-7	04.3	296	32.1	-26	27.2	15	27.4	-15	42.1	326	01.4	-22	39.7
19	254	03.6	62	18.7		05.5	311	34.9		27.2	30	29.6		42.2	341	03.9		39.7
20	269	06.1	77	19.1		06.7	326	37.6		27.1	45	31.8		42.3	356	06.4		39.8
21	284	08.6	92	19.5		07.9	341	40.3		27.1	60	34.0		42.4	11	09.0		39.8
22	299	11.0	107	19.9		09.0	356	43.1		27.0	75	36.2		42.5	26	11.5		39.8
23	314	13.5	122	20.3		10.2	11	45.8		26.9	90	38.4		42.5	41	14.0		39.8
24	329	16.0	137	20.7	-7	11.4	26	48.5	-26	26.9	105	40.6	-15	42.6	56	16.6	-22	39.8
Dif	—		+4		-12		+27		0		+22		-1		+25		0	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15/8 PMG: 12 ^h 03 ^m 2			Edad: 9 ^d 6 PHE { 4 ^h : 54/4 12 ^h : 54/3 20 ^h : 54/2 PMG: 20 ^h 35 ^m R°: 48 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°		
h	o	'	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m
0	179	10.9	+12	11.9	61	23.0	-20	11.3	25	60 N	2 31	3 40	4 28	17 13	47	23 56	52
1	194	11.0		11.1	75	53.8 ¹¹⁸		13.8	25	58	2 50	3 51	36	16 57	48	***	***
2	209	11.2		10.3	90	24.6 ¹¹⁸		16.3	25	56	3 06	4 01	42	44	48	***	***
3	224	11.3		09.4	104	55.3 ¹¹⁷		18.7	24	54	19	09	48	33	47	***	***
4	239	11.5		08.6	119	26.1 ¹¹⁸		20.9	22	52	30	17	54	23	47	0 01	45
5	254	11.6	+12	07.8	133	56.8 ¹¹⁷	-20	23.1	22	50	3 39	4 23	4 58	16 14	48	0 10	45
6	269	11.8	+12	06.9	148	27.5 ¹¹⁷	-20	25.2	21	45	3 59	4 37	5 09	15 55	48	0 28	46
7	284	11.9		06.1	162	58.3 ¹¹⁸		27.2	20	40	4 14	49	17	39	48	43	46
8	299	12.1		05.3	177	29.0 ¹¹⁷		29.0	18	35	26	4 58	24	26	48	0 56	47
9	314	12.3		04.4	191	59.8 ¹¹⁸		30.8	18	30	36	5 06	31	15 15	48	1 07	47
10	329	12.4		03.6	206	30.5 ¹¹⁷		32.5	17	20	4 52	19	42	14 56	48	26	47
11	344	12.6	+12	02.8	221	01.2 ¹¹⁷	-20	34.1	16	10 N	5 04	5 30	5 51	14 39	48	1 42	48
12	359	12.7	+12	01.9	235	32.0 ¹¹⁸	-20	35.6	15	0	5 14	5 39	6 00	14 23	48	1 58	48
13	14	12.9		01.1	250	02.7 ¹¹⁷		37.0	14	10 S	22	47	08	14 07	48	2 13	49
14	29	13.0	+12	00.3	264	33.4 ¹¹⁷		38.3	13	20	29	5 55	17	13 50	49	30	49
15	44	13.2	+11	59.4	279	04.2 ¹¹⁸		39.5	12	30	35	6 03	28	31	48	2 49	50
16	59	13.3		58.6	293	34.9 ¹¹⁷		40.6	11	35	38	08	34	20	48	3 00	50
17	74	13.5	+11	57.8	308	05.6 ¹¹⁷	-20	41.6	10	40	5 41	6 13	6 40	13 07	48	3 13	50
18	89	13.7	+11	56.9	322	36.4 ¹¹⁸	-20	42.5	9	45	5 43	6 18	6 48	12 52	48	3 28	50
19	104	13.8		56.1	337	07.1 ¹¹⁷		43.4	9	50	46	24	6 57	33	48	46	51
20	119	14.0		55.3	351	37.9 ¹¹⁸		44.1	7	52	47	26	7 01	24	48	3 55	51
21	134	14.1		54.4	6	08.6 ¹¹⁷		44.7	6	54	48	29	06	15	47	4 04	52
22	149	14.3		53.6	20	39.4 ¹¹⁸		45.2	5	56	49	32	11	12 03	48	15	52
23	164	14.4		52.7	35	10.1 ¹¹⁷		45.7	5	58	50	36	17	11 51	47	28	52
24	179	14.6	+11	51.9	49	40.9 ¹¹⁸	-20	46.0	3	60 S	5 51	6 40	7 23	11 36	47	4 43	52
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 2 ^h 02 ^m 6			Mag: -4.5 PMG: 14 ^h 50 ^m			Mag: -2.4 PMG: 22 ^h 09 ^m			Mag: -2.0 PMG: 16 ^h 55 ^m			Mag: +0.3 PMG: 20 ^h 11 ^m				
h	hG ♈		Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec				
0	329	16.0	137 20.7	-7 11.4		26 48.5	-26 26.9	105 40.6	-15 42.6	56 16.6	-22 39.8						
1	344	18.4	152 21.1	12.5		41 51.3	26.8	120 42.7	42.7	71 19.1	39.8						
2	359	20.9	167 21.5	13.7		56 54.0	26.8	135 44.9	42.8	86 21.6	39.8						
3	14	23.4	182 21.9	14.9		71 56.7	26.7	150 47.1	42.9	101 24.2	39.8						
4	29	25.8	197 22.3	16.0		86 59.4	26.7	165 49.3	43.0	116 26.7	39.8						
5	44	28.3	212 22.7	-7 17.2		102 02.2	-26 26.6	180 51.5	-15 43.1	131 29.2	-22 39.8						
6	59	30.7	227 23.1	-7 18.4		117 04.9	-26 26.6	195 53.7	-15 43.2	146 31.8	-22 39.8						
7	74	33.2	242 23.5	19.5		132 07.6	26.5	210 55.9	43.3	161 34.3	39.8						
8	89	35.7	257 24.0	20.7		147 10.3	26.4	225 58.0	43.4	176 36.8	39.8						
9	104	38.1	272 24.4	21.9		162 13.0	26.4	241 00.2	43.5	191 39.4	39.8						
10	119	40.6	287 24.8	23.0		177 15.8	26.3	256 02.4	43.5	206 41.9	39.9						
11	134	43.1	302 25.2	-7 24.2		192 18.5	-26 26.3	271 04.6	-15 43.6	221 44.4	-22 39.9						
12	149	45.5	317 25.6	-7 25.3		207 21.2	-26 26.2	286 06.8	-15 43.7	236 47.0	-22 39.9						
13	164	48.0	332 26.0	26.5		222 23.9	26.1	301 09.0	43.8	251 49.5	39.9						
14	179	50.5	347 26.4	27.7		237 26.6	26.1	316 11.1	43.9	266 52.0	39.9						
15	194	52.9	2 26.9	28.8		252 29.3	26.0	331 13.3	44.0	281 54.6	39.9						
16	209	55.4	17 27.3	30.0		267 32.0	26.0	346 15.5	44.1	296 57.1	39.9						
17	224	57.9	32 27.7	-7 31.2		282 34.7	-26 25.9	1 17.7	-15 44.2	311 59.6	-22 39.9						
18	240	00.3	47 28.1	-7 32.3		297 37.4	-26 25.8	16 19.9	-15 44.3	327 02.2	-22 39.9						
19	255	02.8	62 28.5	33.5		312 40.1	25.8	31 22.0	44.4	342 04.7	39.9						
20	270	05.2	77 29.0	34.6		327 42.8	25.7	46 24.2	44.5	357 07.2	39.9						
21	285	07.7	92 29.4	35.8		342 45.5	25.6	61 26.4	44.5	12 09.7	39.9						
22	300	10.2	107 29.8	37.0		357 48.2	25.6	76 28.6	44.6	27 12.3	39.9						
23	315	12.6	122 30.2	38.1		12 50.9	25.5	91 30.8	44.7	42 14.8	40.0						
24	330	15.1	137 30.6	-7 39.3		27 53.6	-26 25.5	106 32.9	-15 44.8	57 17.3	-22 40.0						
Dif	—		+4	-12		+27	+1	+22	-1	+25							

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8			Edad: 10 ^d 6	PHE { 4 ^h : 54 ^m 1 12 ^h : 54 ^m 1 20 ^h : 54 ^m 1	SD: 14 ^h 7			PMG: 21 ^h 23 ^m	R°: 48 ^m						
	hG ☉	Dec									hG ☾	Dif	Dec	Dif	Civil	Náutico
h	o	'	o	'	o	'	o	'	h	m	h	m	h	m	h	m
0	179	14.6	+11	51.9	49	40.9	-20	46.0	60 N	19 33	20 21	21 27	18 00	36	***	***
1	194	14.8		51.1	64	11.6 ¹¹⁷		46.2	58	26	11	21 10	17 45	38	0 11	52
2	209	14.9		50.2	78	42.4 ¹¹⁸		46.4	56	20	20 01	20 55	32	39	24	52
3	224	15.1		49.4	93	13.2 ¹¹⁸		46.4	54	14	19 53	43	20	40	36	51
4	239	15.2		48.6	107	44.0 ¹¹⁸		46.3	52	09	46	32	10	41	46	51
5	254	15.4	+11	47.7	122	14.7 ¹¹⁷		-20 46.2	50	19 05	19 40	20 23	17 02	41	0 55	51
6	269	15.6	+11	46.9	136	45.5 ¹¹⁸		-20 45.9	45	18 55	19 26	20 04	16 43	42	1 14	50
7	284	15.7		46.0	151	16.3 ¹¹⁸		45.6	40	47	15	19 50	27	44	29	50
8	299	15.9		45.2	165	47.1 ¹¹⁸		45.1	35	40	19 06	38	14	45	43	49
9	314	16.0		44.4	180	17.9 ¹¹⁸		44.6	30	34	18 59	28	16 03	45	1 54	49
10	329	16.2		43.5	194	48.8 ¹¹⁹		44.0	20	24	46	13	15 44	46	2 13	49
11	344	16.3	+11	42.7	209	19.6 ¹¹⁸		-20 43.2	10 N	18 15	18 36	19 01	15 27	47	2 30	49
12	359	16.5	+11	41.8	223	50.4 ¹¹⁸		-20 42.4	0	18 06	18 27	18 52	15 11	48	2 46	48
13	14	16.7		41.0	238	21.3 ¹¹⁹		41.5	10 S	17 58	19	44	14 55	49	3 02	48
14	29	16.8		40.2	252	52.1 ¹¹⁸		40.4	20	49	12	38	39	49	19	47
15	44	17.0		39.3	267	23.0 ¹¹⁹		39.3	30	40	04	32	19	51	39	46
16	59	17.2		38.5	281	53.9 ¹¹⁹		38.1	35	34	18 00	29	14 08	51	3 50	46
17	74	17.3	+11	37.6	296	24.7 ¹¹⁸		-20 36.8	40	17 28	17 55	18 27	13 55	52	4 03	46
18	89	17.5	+11	36.8	310	55.6 ¹¹⁹		-20 35.4	45	17 20	17 50	18 25	13 40	52	4 18	46
19	104	17.6		35.9	325	26.5 ¹¹⁹		33.9	50	12	45	22	21	54	37	45
20	119	17.8		35.1	339	57.5 ¹²⁰		32.3	52	07	42	22	12	54	46	44
21	134	18.0		34.3	354	28.4 ¹¹⁹		30.6	54	17 03	40	21	13 02	55	4 56	44
22	149	18.1		33.4	8	59.3 ¹¹⁹		28.8	56	16 58	37	20	12 51	55	5 07	44
23	164	18.3		32.6	23	30.3 ¹²⁰		26.9	58	53	33	19	38	56	20	43
24	179	18.4	+11	31.7	38	01.3 ¹²⁰		-20 24.9	60 S	16 47	17 30	18 19	12 23	57	5 35	42

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG		Mag: -4.5		Mag: -2.4		Mag: -2.0		Mag: +0.3	
	1 ^h 58 ^m 7		PMG: 14 ^h 50 ^m		PMG: 22 ^h 04 ^m		PMG: 16 ^h 51 ^m		PMG: 20 ^h 07 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	o	'	o	'	o	'	o	'	o	'
0	330	15.1	137	30.6	-7	39.3	27	53.6	-15	44.8
1	345	17.6	152	31.1		40.5	42	56.3		44.9
2	0	20.0	167	31.5		41.6	57	59.0		45.0
3	15	22.5	182	31.9		42.8	73	01.7		45.1
4	30	25.0	197	32.3		43.9	88	04.4		45.2
5	45	27.4	212	32.8	-7	45.1	103	07.1	-15	45.3
6	60	29.9	227	33.2	-7	46.2	118	09.8	-15	45.4
7	75	32.4	242	33.6		47.4	133	12.5		45.5
8	90	34.8	257	34.0		48.6	148	15.1		45.6
9	105	37.3	272	34.5		49.7	163	17.8		45.7
10	120	39.7	287	34.9		50.9	178	20.5		45.7
11	135	42.2	302	35.3	-7	52.0	193	23.2	-15	45.8
12	150	44.7	317	35.8	-7	53.2	208	25.9	-15	45.9
13	165	47.1	332	36.2		54.3	223	28.5		46.0
14	180	49.6	347	36.6		55.5	238	31.2		46.1
15	195	52.1	2	37.1		56.7	253	33.9		46.2
16	210	54.5	17	37.5		57.8	268	36.6		46.3
17	225	57.0	32	37.9	-7	59.0	283	39.2	-15	46.4
18	240	59.5	47	38.4	-8	00.1	298	41.9	-15	46.5
19	256	01.9	62	38.8		01.3	313	44.6		46.6
20	271	04.4	77	39.2		02.4	328	47.2		46.7
21	286	06.8	92	39.7		03.6	343	49.9		46.8
22	301	09.3	107	40.1		04.7	358	52.6		46.9
23	316	11.8	122	40.6		05.9	13	55.2		47.0
24	331	14.2	137	41.0	-8	07.0	28	57.9	-15	47.0
Dif	—		+4		-12		+27		-1	

UT	SOL			O 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: 11 ^d 6 PHE { 4 ^h : 54 ^o 0 12 ^h : 54 ^o 0 20 ^h : 54 ^o 0 PMG: 22 ^h 11 ^m R ^o : 46 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	o	'	o	'	o	'	o	'	h	m	h	m	h	m	h	m
0	179	18.4	+11	31.7	38	01.3	-20	24.9	60 N	2 39	3 45	4 33	18 36	28	0 48	62
1	194	18.6		30.9	52	32.3 ¹²⁰		22.9 ²⁰	58	2 57	3 56	40	23	29	1 03	60
2	209	18.8		30.0	67	03.3 ¹²⁰		20.7 ²²	56	3 11	4 05	46	11	31	16	59
3	224	18.9		29.2	81	34.3 ¹²⁰		18.4 ²³	54	23	13	52	18 00	33	27	58
4	239	19.1		28.3	96	05.3 ¹²⁰		16.1 ²³	52	34	20	4 57	17 51	35	37	57
5	254	19.3	+11	27.5	110	36.3 ¹²⁰	-20	13.6 ²⁵	50	3 43	4 26	5 01	17 43	35	1 46	56
6	269	19.4	+11	26.6	125	07.4 ¹²¹	-20	11.1 ²⁵	45	4 02	4 40	5 11	17 25	38	2 04	55
7	284	19.6		25.8	139	38.5 ¹²¹		08.5 ²⁶	40	16	4 51	19	17 11	39	19	54
8	299	19.8		24.9	154	09.6 ¹²¹		05.7 ²⁸	35	28	5 00	26	16 59	41	32	53
9	314	19.9		24.1	168	40.7 ¹²¹	-20	02.9 ²⁸	30	38	07	32	48	42	2 43	52
10	329	20.1		23.2	183	11.8 ¹²¹	-20	00.0 ²⁹	20	4 53	20	42	30	44	3 02	50
11	344	20.2	+11	22.4	197	43.0 ¹²²	-19	57.0 ³⁰	10 N	5 05	5 30	5 51	16 14	46	3 19	49
12	359	20.4	+11	21.6	212	14.1 ¹²¹	-19	53.9 ³¹	0	5 14	5 38	5 59	15 59	47	3 34	48
13	14	20.6		20.7	226	45.3 ¹²²		50.7 ³²	10 S	21	46	6 07	44	49	3 50	46
14	29	20.7		19.9	241	16.5 ¹²²		47.5 ³²	20	28	5 54	16	28	50	4 06	45
15	44	20.9		19.0	255	47.7 ¹²²		44.1 ³⁴	30	33	6 01	26	15 10	52	25	44
16	59	21.1		18.2	270	19.0 ¹²³		40.6 ³⁵	35	36	05	31	14 59	53	36	43
17	74	21.2	+11	17.3	284	50.2 ¹²²	-19	37.1 ³⁵	40	5 38	6 10	6 37	14 47	54	4 49	41
18	89	21.4	+11	16.5	299	21.5 ¹²³	-19	33.4 ³⁷	45	5 40	6 15	6 44	14 32	57	5 04	40
19	104	21.6		15.6	313	52.8 ¹²³		29.7 ³⁷	50	42	20	53	15	58	22	38
20	119	21.7		14.8	328	24.1 ¹²³		25.9 ³⁸	52	43	22	6 57	14 06	59	30	38
21	134	21.9		13.9	342	55.4 ¹²³		22.0 ³⁹	54	44	25	7 01	13 57	60	40	36
22	149	22.1		13.0	357	26.8 ¹²⁴		18.0 ⁴⁰	56	45	28	06	46	62	5 51	35
23	164	22.2		12.2	11	58.2 ¹²⁴		13.9 ⁴¹	58	45	31	11	34	63	6 03	34
24	179	22.4	+11	11.3	26	29.6 ¹²⁴	-19	09.7 ⁴²	60 S	5 46	6 34	7 17	13 20	65	6 17	32

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 1 ^h 54 ^m 7		Mag: -4.5 PMG: 14 ^h 49 ^m		Mag: -2.3 PMG: 22 ^h 00 ^m		Mag: -2.0 PMG: 16 ^h 48 ^m		Mag: +0.3 PMG: 20 ^h 03 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	o	'	o	'	o	'	o	'	o	'
0	331	14.2	137	41.0	-8	07.0	107	25.2	-15	47.0
1	346	16.7	152	41.4		08.2	122	27.4		47.1
2	1	19.2	167	41.9		09.3	137	29.5		47.2
3	16	21.6	182	42.3		10.5	152	31.7		47.3
4	31	24.1	197	42.8		11.6	167	33.9		47.4
5	46	26.6	212	43.2	-8	12.8	182	36.0	-15	47.5
6	61	29.0	227	43.7	-8	13.9	197	38.2	-15	47.6
7	76	31.5	242	44.1		15.1	212	40.4		47.7
8	91	34.0	257	44.5		16.2	227	42.6		47.8
9	106	36.4	272	45.0		17.4	242	44.7		47.9
10	121	38.9	287	45.4		18.5	257	46.9		48.0
11	136	41.3	302	45.9	-8	19.7	272	49.1	-15	48.1
12	151	43.8	317	46.3	-8	20.8	287	51.3	-15	48.2
13	166	46.3	332	46.8		22.0	302	53.4		48.3
14	181	48.7	347	47.2		23.1	317	55.6		48.4
15	196	51.2	2	47.7		24.3	332	57.8		48.4
16	211	53.7	17	48.1		25.4	347	59.9		48.5
17	226	56.1	32	48.6	-8	26.6	3	02.1	-15	48.6
18	241	58.6	47	49.0	-8	27.7	18	04.3	-15	48.7
19	257	01.1	62	49.5		28.9	33	06.4		48.8
20	272	03.5	77	49.9		30.0	48	08.6		48.9
21	287	06.0	92	50.4		31.1	63	10.8		49.0
22	302	08.5	107	50.9		32.3	78	13.0		49.1
23	317	10.9	122	51.3		33.4	93	15.1		49.2
24	332	13.4	137	51.8	-8	34.6	108	17.3	-15	49.3
Dif	—		+4		-11		+22		-1	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8 PMG: 12 ^h 02 ^m 4			Edad: 12 ^d 6 PHE { 4 ^h : 54 ^m 1 12 ^h : 54 ^m 1 20 ^h : 54 ^m 1 SD: 14 ^h 7 PMG: 22 ^h 57 ^m R°: 46 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	o	'	o	'	o	'	o	'	h m	h m	h m	h m	m	h m	m
0	179	22.4	+11	11.3	26	29.6	-19	09.7	60 N	19 28	20 15	21 19	19 04	21	1 50 68
1	194	22.6		10.5	41	01.0 ¹²⁴		05.5 ⁴²	58	21	20 05	21 02	18 52	24	2 03 66
2	209	22.7		09.6	55	32.4 ¹²⁴	-19	01.1 ⁴⁴	56	15	19 56	20 49	42	26	15 64
3	224	22.9		08.8	70	03.9 ¹²⁵	-18	56.7 ⁴⁴	54	10	48	37	33	28	25 66
4	239	23.1		07.9	84	35.4 ¹²⁵		52.1 ⁴⁶	52	05	42	27	26	29	34 61
5	254	23.2	+11	07.1	99	06.9 ¹²⁵	-18	47.5 ⁴⁶	50	19 01	19 35	20 18	18 18	31	2 42 60
6	269	23.4	+11	06.2	113	38.4 ¹²⁵	-18	42.8 ⁴⁷	45	18 52	19 23	20 00	18 03	33	2 59 58
7	284	23.6		05.4	128	10.0 ¹²⁶		38.1 ⁴⁷	40	44	12	19 46	17 50	36	3 13 55
8	299	23.8		04.5	142	41.6 ¹²⁶		33.2 ⁴⁹	35	38	19 04	35	40	37	25 54
9	314	23.9		03.7	157	13.2 ¹²⁶		28.2 ⁵⁰	30	32	18 56	26	30	39	35 53
10	329	24.1		02.8	171	44.8 ¹²⁶		23.2 ⁵⁰	20	22	45	11	14	41	3 52 51
11	344	24.3	+11	01.9	186	16.5 ¹²⁷	-18	18.1 ⁵¹	10 N	18 14	18 35	19 00	17 00	43	4 08 48
12	359	24.4	+11	01.1	200	48.1 ¹²⁶	-18	12.9 ⁵²	0	18 06	18 27	18 51	16 46	46	4 22 47
13	14	24.6	+11	00.2	215	19.8 ¹²⁷		07.6 ⁵³	10 S	17 58	19	44	33	48	36 45
14	29	24.8	+10	59.4	229	51.5 ¹²⁷	-18	02.2 ⁵⁴	20	50	12	38	18	51	4 51 43
15	44	24.9		58.5	244	23.3 ¹²⁸	-17	56.8 ⁵⁴	30	41	05	33	16 02	53	5 09 40
16	59	25.1		57.7	258	55.1 ¹²⁸		51.2 ⁵⁶	35	35	18 01	31	15 52	55	19 39
17	74	25.3	+10	56.8	273	26.9 ¹²⁸	-17	45.6 ⁵⁶	40	17 29	17 57	18 29	15 41	57	5 30 37
18	89	25.4	+10	55.9	287	58.7 ¹²⁸	-17	39.9 ⁵⁷	45	17 23	17 53	18 27	15 29	58	5 44 35
19	104	25.6		55.1	302	30.5 ¹²⁸		34.1 ⁵⁸	50	14	47	25	13	61	6 00 33
20	119	25.8		54.2	317	02.4 ¹²⁹		28.3 ⁵⁸	52	11	45	25	15 05	63	08 31
21	134	26.0		53.4	331	34.3 ¹²⁹		22.4 ⁵⁹	54	07	43	24	14 57	65	16 30
22	149	26.1		52.5	346	06.2 ¹²⁹		16.3 ⁶¹	56	17 02	40	24	48	66	26 28
23	164	26.3		51.7	0	38.1 ¹²⁹		10.2 ⁶¹	58	16 57	37	23	37	69	37 26
24	179	26.5	+10	50.8	15	10.1 ¹³⁰	-17	04.1 ⁶¹	60 S	16 51	17 34	18 23	14 25	71	6 49 25

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 1 ^h 50 ^m 8		Mag: -4.5 PMG: 14 ^h 48 ^m		Mag: -2.3 PMG: 21 ^h 56 ^m		Mag: -2.0 PMG: 16 ^h 44 ^m		Mag: +0.3 PMG: 19 ^h 59 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	o	'	o	'	o	'	o	'	o	'
0	332	13.4	137	51.8	-8	34.6	30	01.3	-26	21.8
1	347	15.8	152	52.2		35.7	45	03.9		21.7
2	2	18.3	167	52.7		36.9	60	06.5		21.6
3	17	20.8	182	53.1		38.0	75	09.1		21.5
4	32	23.2	197	53.6		39.1	90	11.8		21.4
5	47	25.7	212	54.1	-8	40.3	105	14.4	-26	21.3
6	62	28.2	227	54.5	-8	41.4	120	17.0	-26	21.2
7	77	30.6	242	55.0		42.6	135	19.6		21.1
8	92	33.1	257	55.5		43.7	150	22.2		21.1
9	107	35.6	272	55.9		44.9	165	24.8		21.0
10	122	38.0	287	56.4		46.0	180	27.4		20.9
11	137	40.5	302	56.8	-8	47.1	195	30.0	-26	20.8
12	152	42.9	317	57.3	-8	48.3	210	32.6	-26	20.7
13	167	45.4	332	57.8		49.4	225	35.3		20.6
14	182	47.9	347	58.2		50.5	240	37.9		20.5
15	197	50.3	2	58.7		51.7	255	40.5		20.4
16	212	52.8	17	59.2		52.8	270	43.1		20.3
17	227	55.3	32	59.7	-8	54.0	285	45.7	-26	20.2
18	242	57.7	48	00.1	-8	55.1	300	48.3	-26	20.1
19	258	00.2	63	00.6		56.2	315	50.8		20.0
20	273	02.7	78	01.1		57.4	330	53.4		19.9
21	288	05.1	93	01.5		58.5	345	56.0		19.8
22	303	07.6	108	02.0	-8	59.6	0	58.6		19.7
23	318	10.1	123	02.5	-9	00.8	16	01.2		19.6
24	333	12.5	138	03.0	-9	01.9	31	03.8	-26	19.5
Dif	—		+5		-11		+26		+1	
							+22		-1	
									+25	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8 PMG: 12 ^h 02 ^m 1			Edad: 13 ^d 6 PHE { 4 ^h : 54 ^m 2 12 ^h : 54 ^m 3 20 ^h : 54 ^m 3 PMG: 23 ^h 43 ^m R°: 45 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	o	'	o	'	o	'	o	'	h	m	h	m	h	m	h	m
0	179	26.5	+10	50.8	15	10.1	-17	04.1	60 N	2 46	3 51	4 38	19 25	17	2 58	73
1	194	26.6		49.9	29	42.1 ¹³⁰	-16	57.8 ⁶³	58	3 03	4 01	44	16	20	3 09	70
2	209	26.8		49.1	44	14.1 ¹³⁰		51.5 ⁶³	56	17	09	50	08	22	19	68
3	224	27.0		48.2	58	46.2 ¹³¹		45.1 ⁶⁴	54	28	17	4 55	19 01	23	28	65
4	239	27.2		47.4	73	18.2 ¹³⁰		38.6 ⁶⁵	52	38	24	5 00	18 55	25	35	64
5	254	27.3	+10	46.5	87	50.3 ¹³¹	-16	32.0 ⁶⁶	50	3 47	4 30	5 04	18 49	26	3 42	63
6	269	27.5	+10	45.6	102	22.5 ¹³²	-16	25.4 ⁶⁶	45	4 05	4 42	5 13	18 36	30	3 57	59
7	284	27.7		44.8	116	54.6 ¹³¹		18.7 ⁶⁷	40	19	4 53	21	26	32	4 08	58
8	299	27.9		43.9	131	26.8 ¹³²		11.9 ⁶⁸	35	30	5 01	27	17	34	19	55
9	314	28.0		43.0	145	59.0 ¹³²	-16	05.1 ⁶⁸	30	39	08	33	18 09	36	28	53
10	329	28.2		42.2	160	31.2 ¹³²	-15	58.1 ⁷⁰	20	4 54	20	43	17 55	40	43	50
11	344	28.4	+10	41.3	175	03.5 ¹³³	-15	51.1 ⁷⁰	10 N	5 05	5 30	5 51	17 43	43	4 56	48
12	359	28.5	+10	40.5	189	35.7 ¹³²	-15	44.1 ⁷⁰	0	5 13	5 38	5 59	17 32	45	5 09	45
13	14	28.7		39.6	204	08.0 ¹³³		36.9 ⁷²	10 S	20	45	6 06	21	48	21	43
14	29	28.9		38.7	218	40.3 ¹³³		29.7 ⁷²	20	26	52	14	17 09	50	34	41
15	44	29.1		37.9	233	12.7 ¹³⁴		22.4 ⁷³	30	31	5 59	23	16 55	54	49	37
16	59	29.2		37.0	247	45.1 ¹³⁴		15.1 ⁷³	35	33	6 03	29	47	56	5 58	35
17	74	29.4	+10	36.1	262	17.5 ¹³⁴	-15	07.6 ⁷⁵	40	5 35	6 07	6 34	16 38	58	6 07	34
18	89	29.6	+10	35.3	276	49.9 ¹³⁴	-15	00.1 ⁷⁵	45	5 37	6 11	6 41	16 27	61	6 19	31
19	104	29.8		34.4	291	22.3 ¹³⁴	-14	52.6 ⁷⁵	50	39	16	49	14	64	33	28
20	119	29.9		33.5	305	54.8 ¹³⁵		44.9 ⁷⁷	52	39	18	53	08	66	39	27
21	134	30.1		32.7	320	27.3 ¹³⁵		37.2 ⁷⁷	54	40	21	6 57	16 02	67	46	26
22	149	30.3		31.8	334	59.8 ¹³⁵		29.5 ⁷⁷	56	40	23	7 01	15 54	69	6 54	24
23	164	30.5		30.9	349	32.4 ¹³⁶		21.6 ⁷⁹	58	40	26	06	46	71	7 03	22
24	179	30.6	+10	30.1	4	04.9 ¹³⁵	-14	13.7 ⁷⁹	60 S	5 41	6 29	7 12	15 36	74	7 14	18

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 1 ^h 46 ^m 9		Mag: -4.5 PMG: 14 ^h 47 ^m		Mag: -2.3 PMG: 21 ^h 52 ^m		Mag: -2.0 PMG: 16 ^h 41 ^m		Mag: +0.3 PMG: 19 ^h 55 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	o	'	o	'	o	'	o	'	o	'
0	333	12.5	138	03.0	-9	01.9	31	03.8	-26	19.5
1	348	15.0	153	03.4		03.0	46	06.4		19.4
2	3	17.4	168	03.9		04.2	61	09.0		19.3
3	18	19.9	183	04.4		05.3	76	11.6		19.2
4	33	22.4	198	04.9		06.4	91	14.1		19.1
5	48	24.8	213	05.4	-9	07.6	106	16.7	-26	19.0
6	63	27.3	228	05.8	-9	08.7	121	19.3	-26	18.9
7	78	29.8	243	06.3		09.8	136	21.9		18.8
8	93	32.2	258	06.8		11.0	151	24.5		18.7
9	108	34.7	273	07.3		12.1	166	27.0		18.6
10	123	37.2	288	07.8		13.2	181	29.6		18.5
11	138	39.6	303	08.2	-9	14.4	196	32.2	-26	18.4
12	153	42.1	318	08.7	-9	15.5	211	34.8	-26	18.3
13	168	44.6	333	09.2		16.6	226	37.3		18.2
14	183	47.0	348	09.7		17.7	241	39.9		18.1
15	198	49.5	3	10.2		18.9	256	42.5		18.0
16	213	51.9	18	10.7		20.0	271	45.0		17.9
17	228	54.4	33	11.2	-9	21.1	286	47.6	-26	17.8
18	243	56.9	48	11.6	-9	22.3	301	50.1	-26	17.7
19	258	59.3	63	12.1		23.4	316	52.7		17.6
20	274	01.8	78	12.6		24.5	331	55.3		17.5
21	289	04.3	93	13.1		25.6	346	57.8		17.4
22	304	06.7	108	13.6		26.8	2	00.4		17.3
23	319	09.2	123	14.1		27.9	17	02.9		17.2
24	334	11.7	138	14.6	-9	29.0	32	05.5	-26	17.1
Dif	—		+5		-11		+26		+1	
							+22		-1	
									+25	
									0	

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 15 ^h 8 PMG: 12 ^h 01 ^m 8				Edad: 14 ^d 6 PHE { 4 ^h : 54 ^m 4 12 ^h : 54 ^m 5 20 ^h : 54 ^m 6 SD: 14 ^h 8 PMG: *** ^h *** ^m R°: *** ^m															
	hG ☉		Dec		hG ☾ Dif		Dec Dif				Civil		Náutico		Hora R°		Hora R°			
h	o	'	o	'	o	'	o	'	o	h m	h m	h m	h m m	h m m	h m m	h m m				
0	179	30.6	+10	30.1	4	04.9	-14	13.7	60 N	19 22	20 08	21 11	19 42 14	4 11 75						
1	194	30.8		29.2	18	37.5 ¹³⁶	-14	05.8 ⁷⁹	58	16	19 59	20 55	36 16	19 72						
2	209	31.0		28.3	33	10.1 ¹³⁶	-13	57.8 ⁸⁰	56	10	51	42	30 18	27 70						
3	224	31.2		27.5	47	42.8 ¹³⁷		49.7 ⁸¹	54	05	43	31	24 21	33 68						
4	239	31.4		26.6	62	15.4 ¹³⁶		41.5 ⁸²	52	19 01	37	22	20 22	39 66						
5	254	31.5	+10	25.7	76	48.1 ¹³⁷	-13	33.3 ⁸²	50	18 57	19 31	20 13	19 15 24	4 45 64						
6	269	31.7	+10	24.9	91	20.8 ¹³⁷	-13	25.0 ⁸³	45	18 48	19 19	19 56	19 06 27	4 56 61						
7	284	31.9		24.0	105	53.6 ¹³⁸		16.7 ⁸⁴	40	41	09	43	18 58 30	5 06 58						
8	299	32.1		23.1	120	26.3 ¹³⁷	-13	08.3 ⁸³	35	35	19 01	32	51 33	14 56						
9	314	32.2		22.3	134	59.1 ¹³⁸	-12	59.8 ⁸⁵	30	30	18 54	23	45 35	21 54						
10	329	32.4		21.4	149	31.9 ¹³⁸		51.3 ⁸⁵	20	20	43	19 09	35 38	33 51						
11	344	32.6	+10	20.5	164	04.7 ¹³⁸	-12	42.7 ⁸⁶	10 N	18 12	18 34	18 59	18 26 41	5 44 47						
12	359	32.8	+10	19.6	178	37.5 ¹³⁸	-12	34.0 ⁸⁷	0	18 05	18 26	18 51	18 17 44	5 54 45						
13	14	33.0		18.8	193	10.4 ¹³⁹		25.3 ⁸⁷	10 S	17 58	19	44	18 09 47	6 04 42						
14	29	33.1		17.9	207	43.3 ¹³⁹		16.6 ⁸⁷	20	50	13	38	17 59 51	15 38						
15	44	33.3		17.0	222	16.2 ¹³⁹	-12	07.8 ⁸⁸	30	42	06	34	49 54	26 36						
16	59	33.5		16.2	236	49.1 ¹³⁹	-11	58.9 ⁸⁹	35	37	18 02	32	43 56	33 34						
17	74	33.7	+10	15.3	251	22.0 ¹³⁹	-11	50.0 ⁸⁹	40	17 31	17 59	18 30	17 36 59	6 41 31						
18	89	33.8	+10	14.4	265	55.0 ¹⁴⁰	-11	41.0 ⁹⁰	45	17 25	17 55	18 29	17 28 61	6 50 29						
19	104	34.0		13.6	280	28.0 ¹⁴⁰		32.0 ⁹⁰	50	17	50	28	18 65	7 01 25						
20	119	34.2		12.7	295	01.0 ¹⁴⁰		22.9 ⁹¹	52	14	48	27	14 66	06 24						
21	134	34.4		11.8	309	34.0 ¹⁴⁰		13.7 ⁹²	54	10	46	27	09 68	12 22						
22	149	34.6		10.9	324	07.0 ¹⁴⁰	-11	04.5 ⁹²	56	06	44	27	17 03 70	18 20						
23	164	34.7		10.1	338	40.1 ¹⁴¹	-10	55.3 ⁹²	58	17 01	41	27	16 57 73	25 18						
24	179	34.9	+10	09.2	353	13.1 ¹⁴⁰	-10	46.0 ⁹³	60 S	16 56	17 39	18 27	16 50 75	7 32 16						
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 1 ^h 42 ^m 9				Mag: -4.6 PMG: 14 ^h 47 ^m				Mag: -2.3 PMG: 21 ^h 48 ^m				Mag: -2.0 PMG: 16 ^h 38 ^m				Mag: +0.3 PMG: 19 ^h 51 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♎		Dec			
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'		
0	334	11.7	138	14.6	-9	29.0	32	05.5	-26	17.1	110	01.1	-15	53.9	61	19.4	-22	40.6		
1	349	14.1	153	15.1		30.1	47	08.0		16.9	125	03.2		54.0	76	22.0		40.7		
2	4	16.6	168	15.6		31.3	62	10.6		16.8	140	05.4		54.1	91	24.5		40.7		
3	19	19.0	183	16.1		32.4	77	13.1		16.7	155	07.6		54.2	106	27.0		40.7		
4	34	21.5	198	16.6		33.5	92	15.7		16.6	170	09.7		54.3	121	29.5		40.7		
5	49	24.0	213	17.1	-9	34.6	107	18.2	-26	16.5	185	11.9	-15	54.4	136	32.0	-22	40.7		
6	64	26.4	228	17.6	-9	35.8	122	20.8	-26	16.4	200	14.0	-15	54.5	151	34.5	-22	40.7		
7	79	28.9	243	18.1		36.9	137	23.3		16.3	215	16.2		54.6	166	37.0		40.7		
8	94	31.4	258	18.6		38.0	152	25.8		16.2	230	18.3		54.7	181	39.6		40.7		
9	109	33.8	273	19.1		39.1	167	28.4		16.1	245	20.5		54.8	196	42.1		40.7		
10	124	36.3	288	19.6		40.2	182	30.9		15.9	260	22.7		54.9	211	44.6		40.7		
11	139	38.8	303	20.1	-9	41.4	197	33.5	-26	15.8	275	24.8	-15	55.0	226	47.1	-22	40.7		
12	154	41.2	318	20.6	-9	42.5	212	36.0	-26	15.7	290	27.0	-15	55.1	241	49.6	-22	40.7		
13	169	43.7	333	21.1		43.6	227	38.5		15.6	305	29.1		55.2	256	52.1		40.7		
14	184	46.2	348	21.6		44.7	242	41.1		15.5	320	31.3		55.3	271	54.6		40.7		
15	199	48.6	3	22.1		45.8	257	43.6		15.4	335	33.4		55.4	286	57.1		40.8		
16	214	51.1	18	22.6		47.0	272	46.1		15.3	350	35.6		55.5	301	59.6		40.8		
17	229	53.5	33	23.1	-9	48.1	287	48.6	-26	15.1	5	37.7	-15	55.6	317	02.2	-22	40.8		
18	244	56.0	48	23.6	-9	49.2	302	51.2	-26	15.0	20	39.9	-15	55.7	332	04.7	-22	40.8		
19	259	58.5	63	24.1		50.3	317	53.7		14.9	35	42.0		55.8	347	07.2		40.8		
20	275	00.9	78	24.6		51.4	332	56.2		14.8	50	44.2		55.9	2	09.7		40.8		
21	290	03.4	93	25.1		52.5	347	58.7		14.7	65	46.3		56.0	17	12.2		40.8		
22	305	05.9	108	25.7		53.7	3	01.2		14.6	80	48.5		56.1	32	14.7		40.8		
23	320	08.3	123	26.2		54.8	18	03.8		14.4	95	50.6		56.2	47	17.2		40.8		
24	335	10.8	138	26.7	-9	55.9	33	06.3	-26	14.3	110	52.8	-15	56.3	62	19.7	-22	40.8		
Dif	—		+5		-11		+25		+1		+22		-1		+25					

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8 PMG: 12 ^h 01 ^m 5			Edad: 15 ^d 6 PHE { 4 ^h : 54 ^m 7 12 ^h : 54 ^m 8 20 ^h : 54 ^m 9 PMG: 0 ^h 28 ^m R°: 44 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m
0	179	34.9	+10	09.2	353	13.1	-10 46.0	60 N	2 54	3 56	4 43	19 56	13	5 26	75
1	194	35.1		08.3	7	46.2 ¹⁴¹	36.7 ⁹³	58	3 09	4 06	49	52	15	31	74
2	209	35.3		07.4	22	19.3 ¹⁴¹	27.3 ⁹⁴	56	22	14	54	48	18	37	71
3	224	35.5		06.6	36	52.5 ¹⁴²	17.8 ⁹⁵	54	33	21	4 59	45	19	41	69
4	239	35.6		05.7	51	25.6 ¹⁴¹	-10 08.3 ⁹⁵	52	42	27	5 03	42	21	45	68
5	254	35.8	+10	04.8	65	58.7 ¹⁴¹	-9 58.8 ⁹⁵	50	3 51	4 33	5 07	19 39	23	5 49	66
6	269	36.0	+10	03.9	80	31.9 ¹⁴²	-9 49.2 ⁹⁶	45	4 08	4 45	5 16	19 33	26	5 57	62
7	284	36.2		03.1	95	05.1 ¹⁴²	39.6 ⁹⁶	40	21	4 55	23	28	29	6 04	59
8	299	36.4		02.2	109	38.3 ¹⁴²	29.9 ⁹⁷	35	32	5 03	29	24	31	10	56
9	314	36.5		01.3	124	11.5 ¹⁴²	20.1 ⁹⁸	30	41	10	34	20	33	15	54
10	329	36.7	+10	00.4	138	44.7 ¹⁴²	10.4 ⁹⁷	20	4 54	21	43	13	37	24	50
11	344	36.9	+9	59.6	153	17.9 ¹⁴²	-9 00.5 ⁹⁹	10 N	5 05	5 30	5 51	19 07	41	6 31	48
12	359	37.1	+9	58.7	167	51.2 ¹⁴³	-8 50.7 ⁹⁸	0	5 13	5 37	5 58	19 01	44	6 39	44
13	14	37.3		57.8	182	24.4 ¹⁴²	40.8 ⁹⁹	10 S	19	44	6 05	18 56	47	46	41
14	29	37.5		56.9	196	57.7 ¹⁴³	30.8 ¹⁰⁰	20	25	51	13	50	50	6 53	38
15	44	37.6		56.0	211	31.0 ¹⁴³	20.9 ⁹⁹	30	29	5 57	21	43	55	7 02	34
16	59	37.8		55.2	226	04.3 ¹⁴³	10.8 ¹⁰¹	35	31	6 00	26	39	57	07	31
17	74	38.0	+9	54.3	240	37.6 ¹⁴³	-8 00.8 ¹⁰⁰	40	5 33	6 04	6 31	18 35	59	7 12	30
18	89	38.2	+9	53.4	255	10.9 ¹⁴³	-7 50.7 ¹⁰¹	45	5 34	6 08	6 38	18 29	63	7 19	26
19	104	38.4		52.5	269	44.2 ¹⁴³	40.5 ¹⁰²	50	35	12	45	23	66	26	23
20	119	38.6		51.7	284	17.6 ¹⁴⁴	30.3 ¹⁰²	52	35	14	48	20	68	30	21
21	134	38.7		50.8	298	50.9 ¹⁴³	20.1 ¹⁰²	54	35	16	52	17	70	34	19
22	149	38.9		49.9	313	24.2 ¹⁴³	-7 09.8 ¹⁰³	56	35	18	6 56	13	72	38	18
23	164	39.1		49.0	327	57.6 ¹⁴⁴	-6 59.5 ¹⁰³	58	35	21	7 01	10	73	43	15
24	179	39.3	+9	48.1	342	30.9 ¹⁴³	-6 49.2 ¹⁰³	60 S	5 35	6 23	7 06	18 05	77	7 48	13

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 1 ^h 39 ^m 0		Mag: -4.6 PMG: 14 ^h 46 ^m		Mag: -2.2 PMG: 21 ^h 44 ^m		Mag: -2.0 PMG: 16 ^h 34 ^m		Mag: +0.3 PMG: 19 ^h 47 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	o	'	o	'	o	'	o	'	o	'
0	335	10.8	138	26.7	-9	55.9	33	06.3	-15	56.3
1	350	13.3	153	27.2		57.0	48	08.8		56.3
2	5	15.7	168	27.7		58.1	63	11.3		56.4
3	20	18.2	183	28.2	-9	59.2	78	13.8		56.5
4	35	20.6	198	28.7	-10	00.3	93	16.3		56.6
5	50	23.1	213	29.2	-10	01.5	108	18.8	-26	13.7
6	65	25.6	228	29.8	-10	02.6	123	21.3	-26	13.6
7	80	28.0	243	30.3		03.7	138	23.9		13.5
8	95	30.5	258	30.8		04.8	153	26.4		13.3
9	110	33.0	273	31.3		05.9	168	28.9		13.2
10	125	35.4	288	31.8		07.0	183	31.4		13.1
11	140	37.9	303	32.4	-10	08.1	198	33.9	-26	13.0
12	155	40.4	318	32.9	-10	09.2	213	36.4	-26	12.9
13	170	42.8	333	33.4		10.3	228	38.9		12.7
14	185	45.3	348	33.9		11.4	243	41.4		12.6
15	200	47.8	3	34.5		12.6	258	43.8		12.5
16	215	50.2	18	35.0		13.7	273	46.3		12.4
17	230	52.7	33	35.5	-10	14.8	288	48.8	-26	12.2
18	245	55.1	48	36.0	-10	15.9	303	51.3	-26	12.1
19	260	57.6	63	36.6		17.0	318	53.8		12.0
20	276	00.1	78	37.1		18.1	333	56.3		11.8
21	291	02.5	93	37.6		19.2	348	58.8		11.7
22	306	05.0	108	38.2		20.3	4	01.3		11.6
23	321	07.5	123	38.7		21.4	19	03.7		11.5
24	336	09.9	138	39.2	-10	22.5	34	06.2	-26	11.3
Dif	—		+5		-11		+25		+1	
							+21		-1	
									+25	
									0	

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: 16 ^d 6 PHE { SD: 15°0 PMG: 1 ^h 12 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°	
h	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m	
0	179	39.3	+9	48.1	342	30.9	-6 49.2	60 N	19 16	20 02	21 02	20 09	12	6 41	77	
1	194	39.5		47.3	357	04.3 ¹⁴⁴	38.9 ¹⁰³	58	10	19 53	20 48	07 15		45	74	
2	209	39.7		46.4	11	37.7 ¹⁴⁴	28.5 ¹⁰⁴	56	05	45	36	06 16		48	72	
3	224	39.8		45.5	26	11.0 ¹⁴³	18.0 ¹⁰⁵	54	19 00	38	25	04 19		50	70	
4	239	40.0		44.6	40	44.4 ¹⁴⁴	-6 07.6 ¹⁰⁴	52	18 56	32	16	03 20		53	68	
5	254	40.2	+9	43.7	55	17.8 ¹⁴⁴	-5 57.1 ¹⁰⁵	50	18 53	19 27	20 08	20 02	22	6 55	66	
6	269	40.4	+9	42.9	69	51.2 ¹⁴⁴	-5 46.5 ¹⁰⁶	45	18 45	19 15	19 52	19 59	26	6 59	63	
7	284	40.6		42.0	84	24.6 ¹⁴⁴	36.0 ¹⁰⁵	40	38	19 06	39	57 28		7 03	60	
8	299	40.8		41.1	98	58.0 ¹⁴⁴	25.4 ¹⁰⁶	35	32	18 58	29	55 31		06	57	
9	314	41.0		40.2	113	31.4 ¹⁴⁴	14.8 ¹⁰⁶	30	27	52	21	53 34		09	55	
10	329	41.1		39.3	128	04.7 ¹⁴³	-5 04.1 ¹⁰⁷	20	19	41	19 07	50 38		14	51	
11	344	41.3	+9	38.4	142	38.1 ¹⁴⁴	-4 53.5 ¹⁰⁶	10 N	18 11	18 33	18 58	19 48	41	7 19	47	
12	359	41.5	+9	37.6	157	11.5 ¹⁴⁴	-4 42.8 ¹⁰⁷	0	18 05	18 25	18 50	19 45	45	7 23	44	
13	14	41.7		36.7	171	44.9 ¹⁴⁴	32.0 ¹⁰⁸	10 S	17 58	19	44	43 48		27	40	
14	29	41.9		35.8	186	18.3 ¹⁴⁴	21.3 ¹⁰⁷	20	51	13	39	40 52		31	37	
15	44	42.1		34.9	200	51.7 ¹⁴⁴	-4 10.5 ¹⁰⁸	30	43	07	35	38 55		36	33	
16	59	42.3		34.0	215	25.1 ¹⁴⁴	-3 59.7 ¹⁰⁸	35	38	04	33	36 57		38	31	
17	74	42.4	+9	33.1	229	58.5 ¹⁴⁴	-3 48.9 ¹⁰⁸	40	17 33	18 01	18 32	19 34	60	7 42	28	
18	89	42.6	+9	32.3	244	31.8 ¹⁴³	-3 38.0 ¹⁰⁹	45	17 27	17 57	18 31	19 32	63	7 45	26	
19	104	42.8		31.4	259	05.2 ¹⁴⁴	27.2 ¹⁰⁸	50	20	53	31	29 67		49	22	
20	119	43.0		30.5	273	38.6 ¹⁴⁴	16.3 ¹⁰⁹	52	17	51	30	28 69		51	21	
21	134	43.2		29.6	288	11.9 ¹⁴³	-3 05.4 ¹⁰⁹	54	14	49	30	27 70		53	19	
22	149	43.4		28.7	302	45.3 ¹⁴⁴	-2 54.4 ¹¹⁰	56	10	47	31	25 73		56	17	
23	164	43.6		27.8	317	18.6 ¹⁴³	43.5 ¹⁰⁹	58	05	45	31	23 75		7 58	15	
24	179	43.7	+9	26.9	331	51.9 ¹⁴³	-2 32.5 ¹¹⁰	60 S	17 00	17 43	18 31	19 22	77	8 01	12	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 1 ^h 35 ^m 1		Mag: -4.6 PMG: 14 ^h 45 ^m			Mag: -2.2 PMG: 21 ^h 40 ^m			Mag: -2.0 PMG: 16 ^h 31 ^m			Mag: +0.3 PMG: 19 ^h 43 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'		
0	336	09.9	138	39.2	-10	22.5	34	06.2	-26	111	44.4	-15	58.6	63	19.9	
1	351	12.4	153	39.8		23.6	49	08.7		126	46.5		58.7	78	22.4	
2	6	14.9	168	40.3		24.7	64	11.2		141	48.7		58.8	93	24.9	
3	21	17.3	183	40.8		25.8	79	13.7		156	50.8		58.9	108	27.4	
4	36	19.8	198	41.4		26.9	94	16.1		171	52.9		59.0	123	29.9	
5	51	22.3	213	41.9	-10	28.0	109	18.6	-26	186	55.1	-15	59.1	138	32.4	
6	66	24.7	228	42.4	-10	29.1	124	21.1	-26	201	57.2	-15	59.2	153	34.9	
7	81	27.2	243	43.0		30.2	139	23.5		216	59.4		59.3	168	37.4	
8	96	29.6	258	43.5		31.3	154	26.0		232	01.5		59.4	183	39.9	
9	111	32.1	273	44.1		32.4	169	28.5		247	03.7		59.5	198	42.4	
10	126	34.6	288	44.6		33.5	184	30.9		262	05.8		59.6	213	44.9	
11	141	37.0	303	45.1	-10	34.6	199	33.4	-26	277	08.0	-15	59.7	228	47.4	
12	156	39.5	318	45.7	-10	35.7	214	35.9	-26	292	10.1	-15	59.8	243	49.9	
13	171	42.0	333	46.2		36.8	229	38.3		307	12.2	-15	59.9	258	52.5	
14	186	44.4	348	46.8		37.9	244	40.8		322	14.4	-16	00.0	273	55.0	
15	201	46.9	3	47.3		39.0	259	43.2		337	16.5	-16	00.1	288	57.5	
16	216	49.4	18	47.9		40.1	274	45.7		352	18.7		00.2	304	00.0	
17	231	51.8	33	48.4	-10	41.2	289	48.2	-26	7	20.8	-16	00.3	319	02.5	
18	246	54.3	48	48.9	-10	42.3	304	50.6	-26	22	23.0	-16	00.4	334	05.0	
19	261	56.7	63	49.5		43.4	319	53.1		37	25.1		00.5	349	07.5	
20	276	59.2	78	50.0		44.5	334	55.5		52	27.2		00.6	4	10.0	
21	292	01.7	93	50.6		45.6	349	58.0		67	29.4		00.7	19	12.5	
22	307	04.1	108	51.1		46.7	5	00.4		82	31.5		00.8	34	15.0	
23	322	06.6	123	51.7		47.8	20	02.9		97	33.7		00.9	49	17.5	
24	337	09.1	138	52.3	-10	48.9	35	05.3	-26	112	35.8	-16	01.0	64	20.0	
Dif	—		+5			-11	+25		+1	+21		-1		+25		0

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna	
	SD: 15°8 PMG: 12 ^h 00 ^m 9			Edad: 17 ^d 6 PHE { 4 ^h : 55°5 12 ^h : 55°6 20 ^h : 55°8 PMG: 1 ^h 56 ^m R°: 44 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°		
h	o	'	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m
0	179	43.7	+9 26.9	331	51.9	–2 32.5	110	58 N	3 01	4 01	4 47	20 21	13	7 58	79		
1	194	43.9	26.0	346	25.3 ¹⁴⁴	21.5 ¹¹⁰		58	15	10	53	22	15	7 59	76		
2	209	44.1	25.2	0	58.6 ¹⁴³	–2 10.5 ¹¹⁰		56	27	18	4 58	22	18	8 00	73		
3	224	44.3	24.3	15	31.9 ¹⁴³	–1 59.5 ¹¹⁰		54	37	25	5 03	23	19	00	77		
4	239	44.5	23.4	30	05.2 ¹⁴³	48.5 ¹¹⁰		52	46	31	07	23	22	01	69		
5	254	44.7	+9 22.5	44	38.5 ¹⁴³	–1 37.4 ¹¹¹		50	3 54	4 36	5 10	20 24	23	8 01	68		
6	269	44.9	+9 21.6	59	11.8 ¹⁴³	–1 26.4 ¹¹⁰		45	4 11	4 48	5 18	20 25	26	8 02	64		
7	284	45.1	20.7	73	45.0 ¹⁴²	15.3 ¹¹¹		40	23	4 57	25	25	30	03	60		
8	299	45.3	19.8	88	18.3 ¹⁴³	–1 04.2 ¹¹¹		35	33	5 04	30	26	32	03	58		
9	314	45.4	18.9	102	51.5 ¹⁴²	–0 53.1 ¹¹¹		30	42	11	35	27	34	04	56		
10	329	45.6	18.1	117	24.7 ¹⁴²	42.0 ¹¹¹		20	4 55	21	44	28	38	05	51		
11	344	45.8	+9 17.2	131	57.9 ¹⁴²	–0 30.9 ¹¹¹		10 N	5 05	5 30	5 51	20 29	42	8 06	48		
12	359	46.0	+9 16.3	146	31.1 ¹⁴²	–0 19.8 ¹¹¹		0	5 12	5 37	5 58	20 30	45	8 07	44		
13	14	46.2	15.4	161	04.3 ¹⁴²	–0 08.6 ¹¹²		10 S	18	43	6 04	31	48	07	41		
14	29	46.4	14.5	175	37.4 ¹⁴¹	+0 02.5 ¹¹¹		20	23	49	11	32	52	08	38		
15	44	46.6	13.6	190	10.5 ¹⁴¹	13.7 ¹¹²		30	27	55	19	33	56	09	34		
16	59	46.8	12.7	204	43.6 ¹⁴¹	24.8 ¹¹¹		35	28	5 58	23	33	59	09	32		
17	74	47.0	+9 11.8	219	16.7 ¹⁴¹	+0 36.0 ¹¹²		40	5 30	6 01	6 28	20 34	61	8 10	29		
18	89	47.1	+9 10.9	233	49.8 ¹⁴¹	+0 47.2 ¹¹²		45	5 30	6 04	6 34	20 35	65	8 11	25		
19	104	47.3	10.0	248	22.9 ¹⁴¹	+0 58.3 ¹¹¹		50	31	08	41	36	68	11	23		
20	119	47.5	09.2	262	55.9 ¹⁴⁰	+1 09.5 ¹¹²		52	31	10	44	37	70	12	20		
21	134	47.7	08.3	277	28.9 ¹⁴⁰	20.7 ¹¹²		54	31	12	47	37	72	12	19		
22	149	47.9	07.4	292	01.9 ¹⁴⁰	31.9 ¹¹²		56	31	14	51	38	74	13	16		
23	164	48.1	06.5	306	34.8 ¹³⁹	43.0 ¹¹¹		58	30	16	6 56	38	77	13	15		
24	179	48.3	+9 05.6	321	07.8 ¹⁴⁰	+1 54.2 ¹¹²		60 S	5 30	6 18	7 00	20 39	79	8 13	13		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG		Mag: –4.6		Mag: –2.2		Mag: –2.0		Mag: +0.4						
	1 ^h 31 ^m 1		PMG: 14 ^h 44 ^m		PMG: 21 ^h 36 ^m		PMG: 16 ^h 27 ^m		PMG: 19 ^h 39 ^m						
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	o	'	o	'	o	'	o	'	o	'					
0	337	09.1	138	52.3	–10 48.9	35	05.3	–26 08.1	112	35.8	–16 01.0	64	20.0	–22 41.1	
1	352	11.5	153	52.8	50.0	50	07.7	08.0	127	37.9	01.1	79	22.5	41.2	
2	7	14.0	168	53.4	51.1	65	10.2	07.8	142	40.1	01.2	94	25.0	41.2	
3	22	16.5	183	53.9	52.2	80	12.6	07.7	157	42.2	01.3	109	27.5	41.2	
4	37	18.9	198	54.5	53.3	95	15.1	07.6	172	44.4	01.4	124	30.0	41.2	
5	52	21.4	213	55.0	–10 54.3	110	17.5	–26 07.4	187	46.5	–16 01.5	139	32.5	–22 41.2	
6	67	23.9	228	55.6	–10 55.4	125	19.9	–26 07.3	202	48.6	–16 01.6	154	35.0	–22 41.2	
7	82	26.3	243	56.1	56.5	140	22.4	07.1	217	50.8	01.7	169	37.5	41.2	
8	97	28.8	258	56.7	57.6	155	24.8	07.0	232	52.9	01.8	184	40.0	41.2	
9	112	31.2	273	57.3	58.7	170	27.2	06.8	247	55.1	01.9	199	42.5	41.2	
10	127	33.7	288	57.8	–10 59.8	185	29.7	06.7	262	57.2	02.1	214	45.0	41.2	
11	142	36.2	303	58.4	–11 00.9	200	32.1	–26 06.6	277	59.3	–16 02.2	229	47.5	–22 41.2	
12	157	38.6	318	59.0	–11 02.0	215	34.5	–26 06.4	293	01.5	–16 02.3	244	50.0	–22 41.2	
13	172	41.1	333	59.5	03.1	230	36.9	06.3	308	03.6	02.4	259	52.5	41.2	
14	187	43.6	349	00.1	04.1	245	39.4	06.1	323	05.8	02.5	274	55.0	41.2	
15	202	46.0	4	00.6	05.2	260	41.8	06.0	338	07.9	02.6	289	57.5	41.2	
16	217	48.5	19	01.2	06.3	275	44.2	05.8	353	10.0	02.7	305	00.0	41.3	
17	232	51.0	34	01.8	–11 07.4	290	46.6	–26 05.7	8	12.2	–16 02.8	320	02.5	–22 41.3	
18	247	53.4	49	02.4	–11 08.5	305	49.0	–26 05.5	23	14.3	–16 02.9	335	05.0	–22 41.3	
19	262	55.9	64	02.9	09.6	320	51.4	05.4	38	16.4	03.0	350	07.5	41.3	
20	277	58.3	79	03.5	10.7	335	53.9	05.3	53	18.6	03.1	5	10.0	41.3	
21	293	00.8	94	04.1	11.7	350	56.3	05.1	68	20.7	03.2	20	12.5	41.3	
22	308	03.3	109	04.6	12.8	5	58.7	05.0	83	22.8	03.3	35	14.9	41.3	
23	323	05.7	124	05.2	13.9	21	01.1	04.8	98	25.0	03.4	50	17.4	41.3	
24	338	08.2	139	05.8	–11 15.0	36	03.5	–26 04.7	113	27.1	–16 03.5	65	19.9	–22 41.3	
Dif	—		+6		–11	+24		+1	+21		–1	+25		0	

UT	SOL		LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 15°8 PMG: 12 ^h 00 ^m 6		Edad: 18 ^d 6 PHE { 4 ^h : 55/9 12 ^h : 56/1 20 ^h : 56/3 PMG: 2 ^h 40 ^m R°: 46 ^m															
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°				
h	o	/	o	/	o	/	o	h m	h m	h m	h m	h m	h m	h m				
0	179	48.3	+9	05.6	321	07.8	+1 54.2	60 N	19 10	19 55	20 54	20 34	15	9 17 80				
1	194	48.5		04.7	335	40.7 ¹³⁹	+2 05.4 ¹¹²	58	05	47	41	37	17	15 77				
2	209	48.7		03.8	350	13.5 ¹³⁸	16.6 ¹¹²	56	19 00	40	30	40	19	13 75				
3	224	48.9		02.9	4	46.4 ¹³⁹	27.8 ¹¹²	54	18 56	33	20	42	22	11 73				
4	239	49.1		02.0	19	19.2 ¹³⁸	38.9 ¹¹¹	52	52	27	11	45	23	10 71				
5	254	49.2	+9	01.1	33	52.0 ¹³⁸	+2 50.1 ¹¹²	50	18 48	19 22	20 04	20 47	24	9 09 69				
6	269	49.4	+9	00.2	48	24.8 ¹³⁸	+3 01.3 ¹¹²	45	18 41	19 11	19 48	20 51	28	9 06 65				
7	284	49.6	+8	59.3	62	57.5 ¹³⁷	12.4 ¹¹¹	40	35	19 03	36	55	31	03 62				
8	299	49.8		58.4	77	30.2 ¹³⁷	23.6 ¹¹²	35	30	18 56	26	20 58	34	01 60				
9	314	50.0		57.5	92	02.9 ¹³⁷	34.7 ¹¹¹	30	25	49	18	21 01	36	9 00 56				
10	329	50.2		56.6	106	35.5 ¹³⁶	45.9 ¹¹²	20	17	39	19 06	06	40	8 56 53				
11	344	50.4	+8	55.7	121	08.1 ¹³⁶	+3 57.0 ¹¹¹	10 N	18 10	18 32	18 56	21 11	43	8 54 49				
12	359	50.6	+8	54.8	135	40.7 ¹³⁶	+4 08.1 ¹¹¹	0	18 04	18 25	18 49	21 15	47	8 51 46				
13	14	50.8		54.0	150	13.2 ¹³⁵	19.2 ¹¹¹	10 S	17 58	19	43	19	50	48 43				
14	29	51.0		53.1	164	45.7 ¹³⁵	30.3 ¹¹¹	20	51	13	39	24	53	46 39				
15	44	51.2		52.2	179	18.2 ¹³⁵	41.4 ¹¹¹	30	44	08	36	29	58	43 35				
16	59	51.4		51.3	193	50.6 ¹³⁴	+4 52.4 ¹¹⁰	35	40	05	35	32	60	41 33				
17	74	51.6	+8	50.4	208	23.0 ¹³⁴	+5 03.5 ¹¹¹	40	17 35	18 02	18 34	21 35	63	8 39 30				
18	89	51.8	+8	49.5	222	55.3 ¹³³	+5 14.5 ¹¹⁰	45	17 30	17 59	18 33	21 40	66	8 36 28				
19	104	51.9		48.6	237	27.6 ¹³³	25.6 ¹¹¹	50	23	56	33	44	70	34 23				
20	119	52.1		47.7	251	59.9 ¹³³	36.6 ¹¹⁰	52	20	54	33	47	71	32 22				
21	134	52.3		46.8	266	32.1 ¹³²	47.6 ¹¹⁰	54	17	53	34	49	74	31 20				
22	149	52.5		45.9	281	04.3 ¹³²	+5 58.5 ¹⁰⁹	56	13	51	34	52	76	29 18				
23	164	52.7		45.0	295	36.4 ¹³¹	+6 09.5 ¹¹⁰	58	09	49	35	55	78	28 15				
24	179	52.9	+8	44.1	310	08.5 ¹³¹	+6 20.4 ¹⁰⁹	60 S	17 05	17 47	18 36	21 58	81	8 26 13				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 1 ^h 27 ^m 2		Mag: -4.6 PMG: 14 ^h 43 ^m			Mag: -2.1 PMG: 21 ^h 32 ^m			Mag: -2.0 PMG: 16 ^h 24 ^m			Mag: +0.4 PMG: 19 ^h 35 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	o	/	o	/	o	/	o	/	o	/	o	/	o	/				
0	338	08.2	139	05.8	-11	15.0	36	03.5	-26	04.7	113	27.1	-16	03.5	65	19.9	-22	41.3
1	353	10.7	154	06.4		16.1	51	05.9		04.5	128	29.3		03.6	80	22.4		41.3
2	8	13.1	169	06.9		17.1	66	08.3		04.4	143	31.4		03.7	95	24.9		41.3
3	23	15.6	184	07.5		18.2	81	10.7		04.2	158	33.5		03.8	110	27.4		41.3
4	38	18.1	199	08.1		19.3	96	13.1		04.1	173	35.7		03.9	125	29.9		41.3
5	53	20.5	214	08.7	-11	20.4	111	15.5	-26	03.9	188	37.8	-16	04.0	140	32.4	-22	41.3
6	68	23.0	229	09.2	-11	21.5	126	17.9	-26	03.8	203	39.9	-16	04.1	155	34.9	-22	41.3
7	83	25.5	244	09.8		22.5	141	20.3		03.6	218	42.1		04.2	170	37.4		41.4
8	98	27.9	259	10.4		23.6	156	22.7		03.5	233	44.2		04.3	185	39.9		41.4
9	113	30.4	274	11.0		24.7	171	25.1		03.3	248	46.3		04.4	200	42.4		41.4
10	128	32.8	289	11.6		25.8	186	27.5		03.2	263	48.5		04.5	215	44.9		41.4
11	143	35.3	304	12.2	-11	26.9	201	29.9	-26	03.0	278	50.6	-16	04.6	230	47.4	-22	41.4
12	158	37.8	319	12.7	-11	27.9	216	32.3	-26	02.8	293	52.7	-16	04.7	245	49.9	-22	41.4
13	173	40.2	334	13.3		29.0	231	34.7		02.7	308	54.9		04.8	260	52.4		41.4
14	188	42.7	349	13.9		30.1	246	37.1		02.5	323	57.0		04.9	275	54.9		41.4
15	203	45.2	4	14.5		31.2	261	39.4		02.4	338	59.1		05.0	290	57.4		41.4
16	218	47.6	19	15.1		32.2	276	41.8		02.2	354	01.3		05.1	305	59.9		41.4
17	233	50.1	34	15.7	-11	33.3	291	44.2	-26	02.1	9	03.4	-16	05.2	321	02.4	-22	41.4
18	248	52.6	49	16.3	-11	34.4	306	46.6	-26	01.9	24	05.5	-16	05.3	336	04.9	-22	41.4
19	263	55.0	64	16.9		35.4	321	49.0		01.8	39	07.6		05.4	351	07.3		41.4
20	278	57.5	79	17.5		36.5	336	51.4		01.6	54	09.8		05.5	6	09.8		41.4
21	293	59.9	94	18.0		37.6	351	53.7		01.5	69	11.9		05.6	21	12.3		41.4
22	309	02.4	109	18.6		38.7	6	56.1		01.3	84	14.0		05.7	36	14.8		41.5
23	324	04.9	124	19.2		39.7	21	58.5		01.1	99	16.2		05.8	51	17.3		41.5
24	339	07.3	139	19.8	-11	40.8	37	00.9	-26	01.0	114	18.3	-16	05.9	66	19.8	-22	41.5
Dif	—		+6			-11	+24		+2		+21		-1		+25		0	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna											
	SD: 15'8 PMG: 12 ^h 00 ^m 3			Edad: 19 ^d 6 PHE { 4 ^h : 56'5 12 ^h : 56'7 20 ^h : 56'9 SD: 15'4 PMG: 3 ^h 26 ^m R°: 47 ^m																				
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°									
h	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m									
0	179	52.9	+8	44.1	310	08.5	+6	20.4	60 N	3 07	4 07	4 52	20 49	17	10 37 81									
1	194	53.1		43.2	324	40.6 ¹³¹		31.3 ¹⁰⁹	58	21	15	4 57	54	21	32 79									
2	209	53.3		42.3	339	12.6 ¹³⁰		42.2 ¹⁰⁹	56	32	22	5 02	20 59	23	28 76									
3	224	53.5		41.4	353	44.6 ¹³⁰	+6	53.1 ¹⁰⁹	54	42	29	06	21 04	25	24 74									
4	239	53.7		40.5	8	16.5 ¹²⁹	+7	03.9 ¹⁰⁸	52	51	34	10	08	26	21 72									
5	254	53.9	+8	39.6	22	48.3 ¹²⁸	+7	14.7 ¹⁰⁸	50	3 58	4 39	5 13	21 11	29	10 18 70									
6	269	54.1	+8	38.7	37	20.2 ¹²⁹	+7	25.5 ¹⁰⁸	45	4 13	4 50	5 21	21 19	32	10 11 67									
7	284	54.3		37.8	51	51.9 ¹²⁷		36.3 ¹⁰⁸	40	25	4 59	27	26	35	05 64									
8	299	54.5		36.9	66	23.7 ¹²⁸		47.0 ¹⁰⁷	35	35	5 06	32	32	37	10 01 61									
9	314	54.7		36.0	80	55.3 ¹²⁶	+7	57.7 ¹⁰⁷	30	43	12	36	37	40	9 56 59									
10	329	54.9		35.1	95	26.9 ¹²⁶	+8	08.4 ¹⁰⁷	20	4 56	22	44	46	43	49 55									
11	344	55.1	+8	34.2	109	58.5 ¹²⁶	+8	19.1 ¹⁰⁷	10 N	5 05	5 30	5 51	21 54	47	9 43 51									
12	359	55.3	+8	33.3	124	30.0 ¹²⁵	+8	29.7 ¹⁰⁶	0	5 12	5 36	5 57	22 02	49	9 37 48									
13	14	55.5		32.4	139	01.5 ¹²⁵		40.3 ¹⁰⁶	10 S	17	42	6 03	09	53	31 45									
14	29	55.7		31.5	153	32.9 ¹²⁴	+8	50.8 ¹⁰⁵	20	22	47	09	17	56	25 41									
15	44	55.8		30.6	168	04.2 ¹²³	+9	01.4 ¹⁰⁶	30	25	53	17	27	59	18 37									
16	59	56.0		29.7	182	35.5 ¹²³		11.8 ¹⁰⁴	35	26	55	21	32	62	14 35									
17	74	56.2	+8	28.8	197	06.8 ¹²³	+9	22.3 ¹⁰⁵	40	5 27	5 58	6 25	22 38	65	9 09 33									
18	89	56.4	+8	27.9	211	38.0 ¹²²	+9	32.7 ¹⁰⁴	45	5 27	6 01	6 31	22 46	67	9 04 29									
19	104	56.6		27.0	226	09.1 ¹²¹		43.1 ¹⁰⁴	50	27	04	37	54	71	8 57 26									
20	119	56.8		26.1	240	40.2 ¹²¹	+9	53.4 ¹⁰³	52	27	06	40	22 58	73	54 25									
21	134	57.0		25.2	255	11.2 ¹²⁰	+10	03.7 ¹⁰³	54	26	07	43	23 03	75	51 23									
22	149	57.2		24.3	269	42.1 ¹¹⁹		13.9 ¹⁰²	56	26	09	46	08	77	47 21									
23	164	57.4		23.3	284	13.0 ¹¹⁹		24.2 ¹⁰³	58	25	10	50	13	80	43 19									
24	179	57.6	+8	22.4	298	43.9 ¹¹⁹	+10	34.3 ¹⁰¹	60 S	5 24	6 12	6 54	23 19	83	8 39 16									
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO											
	PMG 1 ^h 23 ^m 3			Mag: -4.6 PMG: 14 ^h 42 ^m			Mag: -2.1 PMG: 21 ^h 29 ^m			Mag: -2.0 PMG: 16 ^h 20 ^m			Mag: +0.4 PMG: 19 ^h 31 ^m											
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec										
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o									
0	339	07.3	139	19.8	-11	40.8	37	00.9	-26	01.0	114	18.3	-16	05.9	66	19.8	-22	41.5						
1	354	09.8	154	20.4		41.9	52	03.2		00.8	129	20.4		06.0	81	22.3		41.5						
2	9	12.3	169	21.0		42.9	67	05.6		00.7	144	22.6		06.1	96	24.8		41.5						
3	24	14.7	184	21.6		44.0	82	08.0		00.5	159	24.7		06.3	111	27.3		41.5						
4	39	17.2	199	22.2		45.1	97	10.3		00.3	174	26.8		06.4	126	29.8		41.5						
5	54	19.7	214	22.8	-11	46.1	112	12.7	-26	00.2	189	28.9	-16	06.5	141	32.3	-22	41.5						
6	69	22.1	229	23.4	-11	47.2	127	15.1	-26	00.0	204	31.1	-16	06.6	156	34.8	-22	41.5						
7	84	24.6	244	24.0		48.3	142	17.4	-25	59.9	219	33.2		06.7	171	37.3		41.5						
8	99	27.1	259	24.6		49.3	157	19.8		59.7	234	35.3		06.8	186	39.7		41.5						
9	114	29.5	274	25.2		50.4	172	22.1		59.5	249	37.5		06.9	201	42.2		41.5						
10	129	32.0	289	25.8		51.5	187	24.5		59.4	264	39.6		07.0	216	44.7		41.5						
11	144	34.4	304	26.4	-11	52.5	202	26.9	-25	59.2	279	41.7	-16	07.1	231	47.2	-22	41.5						
12	159	36.9	319	27.1	-11	53.6	217	29.2	-25	59.1	294	43.8	-16	07.2	246	49.7	-22	41.5						
13	174	39.4	334	27.7		54.7	232	31.6		58.9	309	46.0		07.3	261	52.2		41.6						
14	189	41.8	349	28.3		55.7	247	33.9		58.7	324	48.1		07.4	276	54.7		41.6						
15	204	44.3	4	28.9		56.8	262	36.3		58.6	339	50.2		07.5	291	57.2		41.6						
16	219	46.8	19	29.5		57.9	277	38.6		58.4	354	52.4		07.6	306	59.7		41.6						
17	234	49.2	34	30.1	-11	58.9	292	41.0	-25	58.2	9	54.5	-16	07.7	322	02.2	-22	41.6						
18	249	51.7	49	30.7	-12	00.0	307	43.3	-25	58.1	24	56.6	-16	07.8	337	04.6	-22	41.6						
19	264	54.2	64	31.3	-12	01.0	322	45.6		57.9	39	58.7		07.9	352	07.1		41.6						
20	279	56.6	79	31.9		02.1	337	48.0		57.7	55	00.9		08.0	7	09.6		41.6						
21	294	59.1	94	32.6		03.2	352	50.3		57.6	70	03.0		08.1	22	12.1		41.6						
22	310	01.6	109	33.2		04.2	7	52.7		57.4	85	05.1		08.2	37	14.6		41.6						
23	325	04.0	124	33.8		05.3	22	55.0		57.2	100	07.2		08.3	52	17.1		41.6						
24	340	06.5	139	34.4	-12	06.3	37	57.3	-25	57.1	115	09.4	-16	08.4	67	19.6	-22	41.6						
Dif	—			+6			-11			+24			+2			+21			-1			+25		

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 15'8 PMG: 12 ^h 00 ^m 0			Edad: 20 ^d 6 SD: 15'6 PMG: 4 ^h 13 ^m	PHE { 4 ^h : 57'1 12 ^h : 57'3 20 ^h : 57'5 R°: 51 ^m													
	hG ☉	Dec				hG ☾			Dif	Dec	Dif	Civil	Náutico	Hora	R°	Hora	R°	
h	o	'	o	'	o	'	o	h	m	h	m	h	m	m				
0	179	57.6	+8	22.4	298	43.9	+10	34.3	60 N	19 04	19 49	20 47	21 06	24	11 58	83		
1	194	57.8		21.5	313	14.6 ¹¹⁷		44.5 ¹⁰²	58	18 59	41	34	15	26	51	79		
2	209	58.0		20.6	327	45.3 ¹¹⁷	+10	54.5 ¹⁰⁰	56	55	34	23	22	29	44	77		
3	224	58.2		19.7	342	16.0 ¹¹⁷	+11	04.6 ¹⁰¹	54	51	28	14	29	30	38	75		
4	239	58.4		18.8	356	46.5 ¹¹⁵		14.6 ¹⁰⁰	52	47	23	20 06	34	33	33	73		
5	254	58.6	+8	17.9	11	17.1 ¹¹⁶	+11	24.5 ⁹⁹	50	18 44	19 18	19 59	21 40	34	11 28	71		
6	269	58.8	+8	17.0	25	47.5 ¹¹⁴	+11	34.4 ⁹⁹	45	18 37	19 08	19 44	21 51	38	11 18	67		
7	284	59.0		16.1	40	17.9 ¹¹⁴		44.2 ⁹⁸	40	32	18 59	33	22 01	40		09 65		
8	299	59.2		15.2	54	48.2 ¹¹³	+11	54.0 ⁹⁸	35	27	53	23	09	42	11	02	62	
9	314	59.4		14.3	69	18.5 ¹¹³	+12	03.7 ⁹⁷	30	23	47	16	17	44	10	55	61	
10	329	59.6		13.4	83	48.7 ¹¹²		13.4 ⁹⁷	20	15	38	19 04	29	48		44	57	
11	344	59.8	+8	12.5	98	18.8 ¹¹¹	+12	23.1 ⁹⁷	10 N	18 09	18 30	18 55	22 41	50	10	34	54	
12	360	00.0	+8	11.6	112	48.8 ¹¹⁰	+12	32.6 ⁹⁵	0	18 03	18 24	18 48	22 51	53	10	25	51	
13	15	00.2		10.7	127	18.8 ¹¹⁰		42.1 ⁹⁵	10 S	17 58	19	43	23	02	55		16	48
14	30	00.4		09.8	141	48.7 ¹⁰⁹	+12	51.6 ⁹⁵	20	52	14	39	13	58	10	06	45	
15	45	00.6		08.8	156	18.6 ¹⁰⁹	+13	01.0 ⁹⁴	30	45	09	37	26	62	9	55	42	
16	60	00.8		07.9	170	48.3 ¹⁰⁷		10.3 ⁹³	35	41	07	36	34	63	49	39		
17	75	01.0	+8	07.0	185	18.0 ¹⁰⁷	+13	19.6 ⁹³	40	17 37	18 04	18 36	23 43	65	9	42	37	
18	90	01.2	+8	06.1	199	47.6 ¹⁰⁶	+13	28.8 ⁹²	45	17 32	18 02	18 36	23 53	68	9	33	35	
19	105	01.4		05.2	214	17.2 ¹⁰⁶		38.0 ⁹²	50	26	17 59	36	** ** *	**	23	31		
20	120	01.6		04.3	228	46.7 ¹⁰⁵		47.1 ⁹¹	52	23	57	37	** ** *	**	19	29		
21	135	01.8		03.4	243	16.1 ¹⁰⁴	+13	56.1 ⁹⁰	54	21	56	37	** ** *	**	14	27		
22	150	02.0		02.5	257	45.4 ¹⁰³	+14	05.1 ⁹⁰	56	17	55	38	** ** *	**		08	25	
23	165	02.2		01.6	272	14.7 ¹⁰³		14.0 ⁸⁹	58	14	53	39	** ** *	**	9	02	22	
24	180	02.4	+8	00.7	286	43.9 ¹⁰²	+14	22.8 ⁸⁸	60 S	17 10	17 52	18 40	** ** *	**	8	55	20	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 1 ^h 19 ^m 4		Mag: -4.6 PMG: 14 ^h 41 ^m			Mag: -2.1 PMG: 21 ^h 25 ^m			Mag: -2.0 PMG: 16 ^h 17 ^m			Mag: +0.4 PMG: 19 ^h 27 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'				
0	340	06.5	139	34.4	-12	06.3	37	57.3	-25	57.1	115	09.4	-16	08.4	67	19.6	-22	41.6
1	355	08.9	154	35.0		07.4	52	59.7		56.9	130	11.5		08.5	82	22.1		41.6
2	10	11.4	169	35.7		08.4	68	02.0		56.7	145	13.6		08.6	97	24.5		41.6
3	25	13.9	184	36.3		09.5	83	04.3		56.6	160	15.7		08.7	112	27.0		41.6
4	40	16.3	199	36.9		10.6	98	06.7		56.4	175	17.9		08.9	127	29.5		41.7
5	55	18.8	214	37.5	-12	11.6	113	09.0	-25	56.2	190	20.0	-16	09.0	142	32.0	-22	41.7
6	70	21.3	229	38.2	-12	12.7	128	11.3	-25	56.1	205	22.1	-16	09.1	157	34.5	-22	41.7
7	85	23.7	244	38.8		13.7	143	13.7		55.9	220	24.2		09.2	172	37.0		41.7
8	100	26.2	259	39.4		14.8	158	16.0		55.7	235	26.3		09.3	187	39.5		41.7
9	115	28.7	274	40.0		15.8	173	18.3		55.6	250	28.5		09.4	202	42.0		41.7
10	130	31.1	289	40.7		16.9	188	20.6		55.4	265	30.6		09.5	217	44.4		41.7
11	145	33.6	304	41.3	-12	17.9	203	22.9	-25	55.2	280	32.7	-16	09.6	232	46.9	-22	41.7
12	160	36.0	319	41.9	-12	19.0	218	25.3	-25	55.0	295	34.8	-16	09.7	247	49.4	-22	41.7
13	175	38.5	334	42.6		20.0	233	27.6		54.9	310	37.0		09.8	262	51.9		41.7
14	190	41.0	349	43.2		21.1	248	29.9		54.7	325	39.1		09.9	277	54.4		41.7
15	205	43.4	4	43.8		22.1	263	32.2		54.5	340	41.2		10.0	292	56.9		41.7
16	220	45.9	19	44.5		23.2	278	34.5		54.3	355	43.3		10.1	307	59.4		41.7
17	235	48.4	34	45.1	-12	24.2	293	36.8	-25	54.2	10	45.4	-16	10.2	323	01.8	-22	41.7
18	250	50.8	49	45.7	-12	25.3	308	39.2	-25	54.0	25	47.6	-16	10.3	338	04.3	-22	41.7
19	265	53.3	64	46.4		26.3	323	41.5		53.8	40	49.7		10.4	353	06.8		41.7
20	280	55.8	79	47.0		27.4	338	43.8		53.7	55	51.8		10.5	8	09.3		41.8
21	295	58.2	94	47.6		28.4	353	46.1		53.5	70	53.9		10.6	23	11.8		41.8
22	311	00.7	109	48.3		29.5	8	48.4		53.3	85	56.0		10.7	38	14.3		41.8
23	326	03.2	124	48.9		30.5	23	50.7		53.1	100	58.2		10.9	53	16.7		41.8
24	341	05.6	139	49.6	-12	31.6	38	53.0	-25	52.9	116	00.3	-16	11.0	68	19.2	-22	41.8
Dif	—		+6			-11	+23		+2		+21		-1		+25		0	

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15°9 PMG: 11 ^h 59 ^m 7				Edad: 21 ^d 6 PHE { 4 ^h : 57/7 12 ^h : 58/0 20 ^h : 58/2 PMG: 5 ^h 04 ^m R°: 53 ^m													
	hG ☉		Dec		hG ☾		Dif			Dif			Náutico	Civil	Hora	R°	Hora	R°
h	o	'	o	'	o	'	o	'	o	'	h	m	h	m	h	m	h	m
0	180	02.4	+8	00.7	286	43.9	+14	22.8	60 N	3	14	4	57	21	30	33	13	21
1	195	02.6	+7	59.8	301	13.0		31.6	58	27	20	5	02	41	35		10	78
2	210	02.8		58.8	315	42.0		40.2	56	37	27	06		51	37		13	01
3	225	03.0		57.9	330	11.0		48.9	54	46	33	10		21	59		12	53
4	240	03.2		57.0	344	39.9	+14	57.4	52	3	55	38	13	22	07		46	72
5	255	03.4	+7	56.1	359	08.7	+15	05.9	50	4	02	4	43	22	14		12	39
6	270	03.6	+7	55.2	13	37.4	+15	14.3	45	4	16	4	53	22	29		12	25
7	285	03.8		54.3	28	06.1		22.6	40	28	5	01	28	41	46		14	65
8	300	04.0		53.4	42	34.7		30.8	35	37	07	33		22	51		12	04
9	315	04.2		52.5	57	03.2		39.0	30	44	13	37		23	01		11	56
10	330	04.4		51.6	71	31.6		47.1	20	4	56	22	45	17	52		41	59
11	345	04.6	+7	50.6	86	00.0	+15	55.1	10 N	5	05	5	29	23	31		11	28
12	0	04.8	+7	49.7	100	28.2	+16	03.0	0	5	11	5	36	23	44		11	16
13	15	05.0		48.8	114	56.4		10.8	10 S	16	41	6	02	23	57		11	04
14	30	05.2		47.9	129	24.5		18.6	20	20	46	08		** ** *	**		10	51
15	45	05.4		47.0	143	52.6		26.2	30	22	50	14		** ** *	**		37	46
16	60	05.6		46.1	158	20.5		33.8	35	23	53	18		** ** *	**		28	45
17	75	05.8	+7	45.2	172	48.4	+16	41.3	40	5	24	5	55	** ** *	**		10	19
18	90	06.0	+7	44.2	187	16.2	+16	48.7	45	5	24	5	57	** ** *	**		10	08
19	105	06.2		43.3	201	43.9	+16	56.0	50	23	6	00	33	0	05		9	54
20	120	06.4		42.4	216	11.6	+17	03.2	52	22	01	35		11	73		48	36
21	135	06.6		41.5	230	39.2		10.4	54	22	02	38		18	75		41	34
22	150	06.8		40.6	245	06.6		17.4	56	21	04	41		25	77		33	32
23	165	07.0		39.7	259	34.1		24.4	58	20	05	45		33	79		24	30
24	180	07.2	+7	38.8	274	01.4	+17	31.2	60 S	5	19	6	07	0	42		9	15
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 1 ^h 15 ^m 4		Mag: -4.6 PMG: 14 ^h 40 ^m				Mag: -2.1 PMG: 21 ^h 21 ^m				Mag: -2.0 PMG: 16 ^h 14 ^m				Mag: +0.4 PMG: 19 ^h 24 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'
0	341	05.6	139	49.6	-12	31.6	38	53.0	-25	52.9	116	00.3	-16	11.0	68	19.2	-22	41.8
1	356	08.1	154	50.2		32.6	53	55.3		52.8	131	02.4		11.1	83	21.7		41.8
2	11	10.5	169	50.9		33.7	68	57.6		52.6	146	04.5		11.2	98	24.2		41.8
3	26	13.0	184	51.5		34.7	83	59.9		52.4	161	06.6		11.3	113	26.7		41.8
4	41	15.5	199	52.1		35.7	99	02.2		52.2	176	08.8		11.4	128	29.2		41.8
5	56	17.9	214	52.8	-12	36.8	114	04.5	-25	52.1	191	10.9	-16	11.5	143	31.6	-22	41.8
6	71	20.4	229	53.4	-12	37.8	129	06.8	-25	51.9	206	13.0	-16	11.6	158	34.1	-22	41.8
7	86	22.9	244	54.1		38.9	144	09.0		51.7	221	15.1		11.7	173	36.6		41.8
8	101	25.3	259	54.7		39.9	159	11.3		51.5	236	17.2		11.8	188	39.1		41.8
9	116	27.8	274	55.4		40.9	174	13.6		51.3	251	19.4		11.9	203	41.6		41.8
10	131	30.3	289	56.0		42.0	189	15.9		51.2	266	21.5		12.0	218	44.1		41.8
11	146	32.7	304	56.7	-12	43.0	204	18.2	-25	51.0	281	23.6	-16	12.1	233	46.5	-22	41.9
12	161	35.2	319	57.4	-12	44.1	219	20.5	-25	50.8	296	25.7	-16	12.2	248	49.0	-22	41.9
13	176	37.7	334	58.0		45.1	234	22.8		50.6	311	27.8		12.3	263	51.5		41.9
14	191	40.1	349	58.7		46.1	249	25.0		50.4	326	29.9		12.4	278	54.0		41.9
15	206	42.6	4	59.3		47.2	264	27.3		50.3	341	32.1		12.5	293	56.5		41.9
16	221	45.0	20	00.0		48.2	279	29.6		50.1	356	34.2		12.7	308	58.9		41.9
17	236	47.5	35	00.6	-12	49.2	294	31.9	-25	49.9	11	36.3	-16	12.8	324	01.4	-22	41.9
18	251	50.0	50	01.3	-12	50.3	309	34.1	-25	49.7	26	38.4	-16	12.9	339	03.9	-22	41.9
19	266	52.4	65	02.0		51.3	324	36.4		49.5	41	40.5		13.0	354	06.4		41.9
20	281	54.9	80	02.6		52.4	339	38.7		49.3	56	42.6		13.1	9	08.9		41.9
21	296	57.4	95	03.3		53.4	354	41.0		49.2	71	44.8		13.2	24	11.3		41.9
22	311	59.8	110	04.0		54.4	9	43.2		49.0	86	46.9		13.3	39	13.8		41.9
23	327	02.3	125	04.6		55.5	24	45.5		48.8	101	49.0		13.4	54	16.3		41.9
24	342	04.8	140	05.3	-12	56.5	39	47.8	-25	48.6	116	51.1	-16	13.5	69	18.8	-22	41.9
Dif	—		+7		-10		+23		+2		+21		-1		+25			

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15'9 PMG: 11 ^h 59 ^m 4			Edad: 22 ^d 6 PHE { 4 ^h : 58'4 12 ^h : 58'6 20 ^h : 58'9 SD: 16'0 PMG: 5 ^h 57 ^m R°: 57 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m
0	180	07.2	+7	38.8	274	01.4	+17	31.2	60 N	18 58	19 42	20 39	22 03	46	14 41
1	195	07.4		37.8	288	28.6	82	38.0	58	53	35	27	16	48	28
2	210	07.6		36.9	302	55.8	82	44.6	56	50	29	17	28	49	17
3	225	07.8		36.0	317	22.9	81	51.2	54	46	23	08	38	50	14
4	240	08.0		35.1	331	49.9	80	+17	52	43	18	20 01	47	51	13
5	255	08.2	+7	34.2	346	16.9	80	+18	50	18 40	19 13	19 54	22 56	51	13
6	270	08.5	+7	33.3	0	43.7	78	+18	45	18 34	19 04	19 40	23 13	53	13
7	285	08.7		32.3	15	10.5	78	16.4	40	29	18 56	29	27	55	19
8	300	08.9		31.4	29	37.2	77	22.4	35	24	50	20	40	55	13
9	315	09.1		30.5	44	03.8	76	28.4	30	20	45	13	23 50	56	12
10	330	09.3		29.6	58	30.4	76	34.2	20	14	36	19 02	** ** *	**	40
11	345	09.5	+7	28.7	72	56.9	75	+18	10 N	18 08	18 29	18 54	** ** *	**	12
12	0	09.7	+7	27.8	87	23.3	74	+18	0	18 03	18 23	18 48	** ** *	**	12
13	15	09.9		26.8	101	49.6	73	51.0	10 S	17 57	19	43	** ** *	**	11
14	30	10.1		25.9	116	15.9	73	+18	56.4	54	20	52	14	40	0
15	45	10.3		25.0	130	42.0	71	+19	01.7	53	30	46	10	38	28
16	60	10.5		24.1	145	08.1	71	06.9	52	35	43	08	37	37	64
17	75	10.7	+7	23.2	159	34.2	71	+19	11.9	50	40	17 39	18 06	18 37	0
18	90	10.9	+7	22.2	174	00.1	69	+19	16.9	48	45	17 34	18 04	18 38	1
19	105	11.1		21.3	188	26.0	69	21.7	48	50	29	02	39	17	70
20	120	11.3		20.4	202	51.8	68	26.4	47	52	27	01	40	24	71
21	135	11.5		19.5	217	17.6	68	31.0	46	54	24	18 00	40	33	72
22	150	11.7		18.6	231	43.2	66	35.4	44	56	21	17 59	42	42	74
23	165	11.9		17.6	246	08.8	66	39.8	44	58	18	57	43	1	52
24	180	12.1	+7	16.7	260	34.4	66	+19	44.0	42	60 S	17 14	17 56	18 44	2

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 1 ^h 11 ^m 5		Mag: -4.6 PMG: 14 ^h 39 ^m		Mag: -2.0 PMG: 21 ^h 18 ^m		Mag: -2.0 PMG: 16 ^h 10 ^m		Mag: +0.4 PMG: 19 ^h 20 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	o	'	o	'	o	'	o	'	o	'
0	342	04.8	140	05.3	-12	56.5	39	47.8	-25	48.6
1	357	07.2	155	06.0		57.5	54	50.0		48.4
2	12	09.7	170	06.6		58.5	69	52.3		48.2
3	27	12.1	185	07.3	-12	59.6	84	54.6		48.1
4	42	14.6	200	08.0	-13	00.6	99	56.8		47.9
5	57	17.1	215	08.6	-13	01.6	114	59.1	-25	47.7
6	72	19.5	230	09.3	-13	02.7	130	01.3	-25	47.5
7	87	22.0	245	10.0		03.7	145	03.6		47.3
8	102	24.5	260	10.7		04.7	160	05.8		47.1
9	117	26.9	275	11.4		05.7	175	08.1		46.9
10	132	29.4	290	12.0		06.8	190	10.3		46.7
11	147	31.9	305	12.7	-13	07.8	205	12.6	-25	46.5
12	162	34.3	320	13.4	-13	08.8	220	14.8	-25	46.4
13	177	36.8	335	14.1		09.8	235	17.1		46.2
14	192	39.3	350	14.8		10.9	250	19.3		46.0
15	207	41.7	5	15.4		11.9	265	21.6		45.8
16	222	44.2	20	16.1		12.9	280	23.8		45.6
17	237	46.6	35	16.8	-13	13.9	295	26.1	-25	45.4
18	252	49.1	50	17.5	-13	15.0	310	28.3	-25	45.2
19	267	51.6	65	18.2		16.0	325	30.5		45.0
20	282	54.0	80	18.9		17.0	340	32.8		44.8
21	297	56.5	95	19.6		18.0	355	35.0		44.6
22	312	59.0	110	20.2		19.0	10	37.2		44.4
23	328	01.4	125	20.9		20.1	25	39.5		44.2
24	343	03.9	140	21.6	-13	21.1	40	41.7	-25	44.1
Dif	—		+7		-10		+22		+2	

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15°9 PMG: 11 ^h 59 ^m 0			Edad: 23 ^d 6 PHE { 4 ^h : 59°1 12 ^h : 59°3 20 ^h : 59°5 SD: 16°2 PMG: 6 ^h 54 ^m R°: 59 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	o	'	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m	
0	180	12.1	+7	16.7	260	34.4	+19	44.0	60 N	3	20	4	17	5	02	22	49	
1	195	12.3		15.8	274	59.8	64	48.1	58	32	24		06	23	04	63	40	
2	210	12.5		14.9	289	25.2	64	52.1	40	42	31		10	17	63	27	62	
3	225	12.8		14.0	303	50.6	64	56.0	39	51	36		13	28	63	16	62	
4	240	13.0		13.0	318	15.8	62	+19	59.7	52	41		16	38	63	15	06	
5	255	13.2	+7	12.1	332	41.0	62	+20	03.3	50	4	05	4	46	5	19	23	
6	270	13.4	+7	11.2	347	06.2	62	+20	06.8	45	4	19	4	55	5	25	**	
7	285	13.6		10.3	1	31.2	60	10.1	33	40	30	5	03	30	**	**	14	
8	300	13.8		09.4	15	56.2	60	13.3	32	35	39	09	35	**	**	**	14	
9	315	14.0		08.4	30	21.2	60	16.4	31	30	46	14	39	**	**	**	13	
10	330	14.2		07.5	44	46.1	59	19.4	30	20	4	57	23	45	0	09	57	
11	345	14.4	+7	06.6	59	10.9	58	+20	22.2	10 N	5	05	5	29	5	51	0	
12	0	14.6	+7	05.7	73	35.7	58	+20	24.9	0	5	11	5	35	5	56	0	
13	15	14.8		04.7	88	00.4	57	27.5	26	10 S	15	40	6	01	0	55	60	
14	30	15.0		03.8	102	25.0	56	29.9	24	20	18	44	06		1	11	61	
15	45	15.2		02.9	116	49.6	56	32.2	23	30	20	48	12		30	62	16	
16	60	15.4		02.0	131	14.2	56	34.4	22	35	21	50	15		41	62	12	
17	75	15.6	+7	01.1	145	38.7	55	+20	36.4	40	5	21	5	52	6	19	1	
18	90	15.9	+7	00.1	160	03.1	54	+20	38.3	45	5	20	5	54	6	23	2	
19	105	16.1	+6	59.2	174	27.5	54	40.0	17	50	19	56	28		27	65	18	
20	120	16.3		58.3	188	51.9	54	41.6	16	52	18	57	31		35	66	11	
21	135	16.5		57.4	203	16.2	53	43.1	15	54	17	58	33		45	66	10	
22	150	16.7		56.4	217	40.4	52	44.5	14	56	16	5	59	36	2	56	67	
23	165	16.9		55.5	232	04.6	52	45.6	11	58	15	6	00	39	3	08	68	
24	180	17.1	+6	54.6	246	28.8	52	+20	46.7	60 S	5	13	6	01	3	23	69	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 1 ^h 07 ^m 6		Mag: -4.6 PMG: 14 ^h 38 ^m				Mag: -2.0 PMG: 21 ^h 14 ^m				Mag: -2.0 PMG: 16 ^h 07 ^m				Mag: +0.4 PMG: 19 ^h 16 ^m			
	hG ♈		hG ♀	Dec			hG ♂	Dec			hG ♃	Dec			hG ♄	Dec		
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'
0	343	03.9	140	21.6	-13	21.1	40	41.7	-25	44.1	117	41.8	-16	16.1	70	18.2	-22	42.1
1	358	06.4	155	22.3		22.1	55	43.9		43.9	132	43.9		16.2	85	20.7		42.1
2	13	08.8	170	23.0		23.1	70	46.2		43.7	147	46.0		16.3	100	23.2		42.1
3	28	11.3	185	23.7		24.1	85	48.4		43.5	162	48.1		16.4	115	25.7		42.1
4	43	13.8	200	24.4		25.1	100	50.6		43.3	177	50.2		16.5	130	28.1		42.1
5	58	16.2	215	25.1	-13	26.2	115	52.8	-25	43.1	192	52.3	-16	16.6	145	30.6	-22	42.1
6	73	18.7	230	25.8	-13	27.2	130	55.1	-25	42.9	207	54.4	-16	16.7	160	33.1	-22	42.1
7	88	21.1	245	26.5		28.2	145	57.3		42.7	222	56.5		16.8	175	35.6		42.1
8	103	23.6	260	27.2		29.2	160	59.5		42.5	237	58.6		16.9	190	38.0		42.1
9	118	26.1	275	27.9		30.2	176	01.7		42.3	253	00.8		17.0	205	40.5		42.1
10	133	28.5	290	28.6		31.2	191	03.9		42.1	268	02.9		17.2	220	43.0		42.1
11	148	31.0	305	29.3	-13	32.2	206	06.2	-25	41.9	283	05.0	-16	17.3	235	45.4	-22	42.2
12	163	33.5	320	30.0	-13	33.2	221	08.4	-25	41.7	298	07.1	-16	17.4	250	47.9	-22	42.2
13	178	35.9	335	30.7		34.3	236	10.6		41.5	313	09.2		17.5	265	50.4		42.2
14	193	38.4	350	31.5		35.3	251	12.8		41.3	328	11.3		17.6	280	52.9		42.2
15	208	40.9	5	32.2		36.3	266	15.0		41.1	343	13.4		17.7	295	55.3		42.2
16	223	43.3	20	32.9		37.3	281	17.2		40.9	358	15.5		17.8	310	57.8		42.2
17	238	45.8	35	33.6	-13	38.3	296	19.4	-25	40.7	13	17.6	-16	17.9	326	00.3	-22	42.2
18	253	48.3	50	34.3	-13	39.3	311	21.6	-25	40.5	28	19.7	-16	18.0	341	02.8	-22	42.2
19	268	50.7	65	35.0		40.3	326	23.8		40.3	43	21.8		18.1	356	05.2		42.2
20	283	53.2	80	35.7		41.3	341	26.0		40.1	58	23.9		18.2	11	07.7		42.2
21	298	55.6	95	36.4		42.3	356	28.2		39.9	73	26.0		18.3	26	10.2		42.2
22	313	58.1	110	37.2		43.3	11	30.4		39.7	88	28.1		18.5	41	12.6		42.2
23	329	00.6	125	37.9		44.3	26	32.6		39.5	103	30.2		18.6	56	15.1		42.2
24	344	03.0	140	38.6	-13	45.3	41	34.8	-25	39.3	118	32.3	-16	18.7	71	17.6	-22	42.2
Dif	—		+7		-10		+22		+2		+21		-1		+25			

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15'9 PMG: 11 ^h 58 ^m 7			Edad: 24 ^d 6 PHE { 4 ^h : 59'7 12 ^h : 59'9 20 ^h : 60'1 PMG: 7 ^h 53 ^m R°: 61 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°	
h	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m	
0	180	17.1	+6	54.6	246	28.8	+20	46.7	18 52	19 36	20 31	23 52	80	16 57	46	
1	195	17.3		53.7	260	52.9	51	47.6	48	29	20	** ** *	**	42	48	
2	210	17.5		52.7	275	17.0	51	48.4	44	23	11	** ** *	**	29	50	
3	225	17.7		51.8	289	41.0	50	49.0	41	18	20 03	** ** *	**	18	50	
4	240	17.9		50.9	304	05.0	50	49.5	38	13	19 55	** ** *	**	16 08	51	
5	255	18.1	+6	49.9	318	28.9	49	+20	18 36	19 09	19 49	** ** *	**	15 59	52	
6	270	18.3	+6	49.0	332	52.9	50	+20	18 30	19 00	19 36	0 06	62	15 40	54	
7	285	18.6		48.1	347	16.8	49	50.1	25	18 53	26	22	62	24	56	
8	300	18.8		47.2	1	40.6	48	50.0	21	47	17	35	61	11	57	
9	315	19.0		46.2	16	04.4	48	49.8	18	42	10	0 46	62	15 00	57	
10	330	19.2		45.3	30	28.2	48	49.4	12	34	19 00	1 06	61	14 40	59	
11	345	19.4	+6	44.4	44	52.0	48	+20	18 07	18 28	18 52	1 23	61	14 23	60	
12	0	19.6	+6	43.5	59	15.7	47	+20	18 02	18 23	18 47	1 39	60	14 07	61	
13	15	19.8		42.5	73	39.5	48	47.4	17 57	18	43	1 55	60	13 51	62	
14	30	20.0		41.6	88	03.2	47	46.5	52	15	40	2 12	60	34	63	
15	45	20.2		40.7	102	26.8	46	45.4	47	11	39	32	59	15	63	
16	60	20.4		39.7	116	50.5	47	44.1	44	09	39	43	59	13 03	65	
17	75	20.6	+6	38.8	131	14.1	46	+20	17 41	18 08	18 39	2 56	59	12 50	65	
18	90	20.9	+6	37.9	145	37.7	46	+20	17 37	18 06	18 40	3 12	58	12 34	66	
19	105	21.1		37.0	160	01.3	46	39.5	32	04	42	32	57	15	67	
20	120	21.3		36.0	174	24.9	46	37.7	30	04	43	41	56	12 06	68	
21	135	21.5		35.1	188	48.5	46	35.7	28	03	44	3 51	56	11 55	69	
22	150	21.7		34.2	203	12.0	45	33.5	25	02	45	4 03	55	44	69	
23	165	21.9		33.2	217	35.6	46	31.3	22	01	47	16	55	30	71	
24	180	22.1	+6	32.3	231	59.1	45	+20	17 19	18 01	18 49	4 32	54	11 15	71	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 1 ^h 03 ^m 6		Mag: -4.7 PMG: 14 ^h 37 ^m			Mag: -2.0 PMG: 21 ^h 11 ^m			Mag: -1.9 PMG: 16 ^h 04 ^m			Mag: +0.4 PMG: 19 ^h 12 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	
0	344	03.0	140	38.6	-13	45.3	41	34.8	-25	39.3	118	32.3	-16	18.7	71	
1	359	05.5	155	39.3		46.3	56	37.0		39.1	133	34.4		18.8	86	
2	14	08.0	170	40.0		47.3	71	39.2		38.9	148	36.5		18.9	101	
3	29	10.4	185	40.8		48.3	86	41.4		38.7	163	38.7		19.0	116	
4	44	12.9	200	41.5		49.3	101	43.6		38.5	178	40.8		19.1	131	
5	59	15.4	215	42.2	-13	50.3	116	45.8	-25	38.3	193	42.9	-16	19.2	146	
6	74	17.8	230	42.9	-13	51.3	131	48.0	-25	38.1	208	45.0	-16	19.3	161	
7	89	20.3	245	43.7		52.3	146	50.2		37.9	223	47.1		19.4	176	
8	104	22.7	260	44.4		53.3	161	52.3		37.7	238	49.2		19.5	191	
9	119	25.2	275	45.1		54.3	176	54.5		37.5	253	51.3		19.7	206	
10	134	27.7	290	45.9		55.3	191	56.7		37.3	268	53.4		19.8	221	
11	149	30.1	305	46.6	-13	56.3	206	58.9	-25	37.0	283	55.5	-16	19.9	236	
12	164	32.6	320	47.3	-13	57.3	222	01.1	-25	36.8	298	57.6	-16	20.0	251	
13	179	35.1	335	48.1		58.3	237	03.2		36.6	313	59.7		20.1	266	
14	194	37.5	350	48.8	-13	59.3	252	05.4		36.4	329	01.8		20.2	281	
15	209	40.0	5	49.5	-14	00.3	267	07.6		36.2	344	03.9		20.3	296	
16	224	42.5	20	50.3		01.3	282	09.8		36.0	359	06.0		20.4	311	
17	239	44.9	35	51.0	-14	02.3	297	11.9	-25	35.8	14	08.1	-16	20.5	326	
18	254	47.4	50	51.8	-14	03.3	312	14.1	-25	35.6	29	10.2	-16	20.6	342	
19	269	49.9	65	52.5		04.3	327	16.3		35.4	44	12.3		20.8	357	
20	284	52.3	80	53.2		05.3	342	18.4		35.2	59	14.4		20.9	12	
21	299	54.8	95	54.0		06.3	357	20.6		35.0	74	16.5		21.0	27	
22	314	57.2	110	54.7		07.3	12	22.8		34.8	89	18.6		21.1	42	
23	329	59.7	125	55.5		08.3	27	24.9		34.5	104	20.7		21.2	57	
24	345	02.2	140	56.2	-14	09.2	42	27.1	-25	34.3	119	22.8	-16	21.3	72	
Dif	—		+7		-10		+22		+2		+21		-1		+25	
															0	

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15'9 PMG: 11 ^h 58 ^m 4			Edad: 25 ^d 6 PHE { 4 ^h : 60'2 12 ^h : 60'4 20 ^h : 60'5 PMG: 8 ^h 54 ^m R°: 60 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	o	'	o	'	o	'	o	'	h	m	h	m	h	m	h	m
0	180	22.1	+6	32.3	231	59.1	+20	28.8	25	60 N	3 27	4 22	5 06	*** **	17 43	34
1	195	22.3		31.4	246	22.6		26.3	25	58	38	29	10	0 07	78	30 36
2	210	22.5		30.5	260	46.2		23.6	27	56	47	35	14	20	76	19 38
3	225	22.7		29.5	275	09.7		20.7	29	54	3 55	40	17	31	74	17 08 43
4	240	22.9		28.6	289	33.2		17.7	30	52	4 02	45	20	41	73	16 59 43
5	255	23.2	+6	27.7	303	56.7	+20	14.5	32	50	4 09	4 49	5 22	0 50	72	16 51 44
6	270	23.4	+6	26.7	318	20.2	+20	11.2	33	45	4 22	4 58	5 28	1 08	70	16 34 47
7	285	23.6		25.8	332	43.8		07.8	34	40	32	5 05	32	24	68	20 49
8	300	23.8		24.9	347	07.3		04.2	36	35	40	11	36	36	68	16 08 51
9	315	24.0		23.9	1	30.8	+20	00.5	37	30	47	15	40	1 48	66	15 57 53
10	330	24.2		23.0	15	54.4	+19	56.6	39	20	4 57	23	45	2 07	64	39 56
11	345	24.4	+6	22.1	30	17.9	+19	52.6	40	10 N	5 05	5 29	5 50	2 24	62	15 23 58
12	0	24.6	+6	21.1	44	41.5	+19	48.4	42	0	5 10	5 34	5 55	2 39	61	15 08 60
13	15	24.8		20.2	59	05.0		44.1	43	10 S	14	39	6 00	2 55	59	14 53 62
14	30	25.1		19.3	73	28.6		39.7	44	20	17	42	04	3 12	57	37 65
15	45	25.3		18.3	87	52.2		35.1	46	30	18	46	10	31	55	18 68
16	60	25.5		17.4	102	15.9		30.3	48	35	18	47	12	42	54	14 08 68
17	75	25.7	+6	16.5	116	39.5	+19	25.4	49	40	5 17	5 49	6 16	3 55	52	13 55 71
18	90	25.9	+6	15.5	131	03.1	+19	20.4	50	45	5 16	5 50	6 20	4 10	51	13 40 73
19	105	26.1		14.6	145	26.8		15.3	51	50	14	52	24	29	48	22 76
20	120	26.3		13.7	159	50.5		10.0	53	52	13	52	26	37	47	14 77
21	135	26.5		12.7	174	14.2	+19	04.6	54	54	12	53	28	47	46	13 04 79
22	150	26.7		11.8	188	38.0	+18	59.0	56	56	11	54	31	4 58	44	12 53 81
23	165	27.0		10.9	203	01.7		53.3	57	58	09	54	34	5 11	42	41 83
24	180	27.2	+6	09.9	217	25.5	+18	47.4	59	60 S	5 07	5 55	6 37	5 26	39	12 26 86

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 0 ^h 59 ^m 7		Mag: -4.7 PMG: 14 ^h 36 ^m		Mag: -2.0 PMG: 21 ^h 07 ^m		Mag: -1.9 PMG: 16 ^h 00 ^m		Mag: +0.4 PMG: 19 ^h 08 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	o	'	o	'	o	'	o	'	o	'
0	345	02.2	140	56.2	-14	09.2	42	27.1	-25	34.3
1	0	04.6	155	57.0		10.2	57	29.3		34.1
2	15	07.1	170	57.7		11.2	72	31.4		33.9
3	30	09.6	185	58.5		12.2	87	33.6		33.7
4	45	12.0	200	59.2		13.2	102	35.7		33.5
5	60	14.5	216	00.0	-14	14.2	117	37.9	-25	33.3
6	75	17.0	231	00.7	-14	15.2	132	40.0	-25	33.1
7	90	19.4	246	01.5		16.1	147	42.2		32.9
8	105	21.9	261	02.3		17.1	162	44.3		32.6
9	120	24.4	276	03.0		18.1	177	46.5		32.4
10	135	26.8	291	03.8		19.1	192	48.6		32.2
11	150	29.3	306	04.5	-14	20.1	207	50.8	-25	32.0
12	165	31.7	321	05.3	-14	21.1	222	52.9	-25	31.8
13	180	34.2	336	06.1		22.0	237	55.1		31.6
14	195	36.7	351	06.8		23.0	252	57.2		31.3
15	210	39.1	6	07.6		24.0	267	59.4		31.1
16	225	41.6	21	08.4		25.0	283	01.5		30.9
17	240	44.1	36	09.1	-14	26.0	298	03.6	-25	30.7
18	255	46.5	51	09.9	-14	26.9	313	05.8	-25	30.5
19	270	49.0	66	10.7		27.9	328	07.9		30.3
20	285	51.5	81	11.5		28.9	343	10.0		30.0
21	300	53.9	96	12.2		29.9	358	12.2		29.8
22	315	56.4	111	13.0		30.8	13	14.3		29.6
23	330	58.9	126	13.8		31.8	28	16.4		29.4
24	346	01.3	141	14.6	-14	32.8	43	18.6	-25	29.2
Dif	—		+8		-10		+21		+2	
									+21	
									-1	
									+25	
									0	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna												
	SD: 15'9 PMG: 11 ^h 58 ^m 0			Edad: 26 ^d 6 PHE { 4 ^h : 60'6 12 ^h : 60'6 20 ^h : 60'7 PMG: 9 ^h 54 ^m R°: 59 ^m																							
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°												
h	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m												
0	180	27.2	+6	09.9	217	25.5	+18	47.4	60 N	18 46	19 29	20 24	1 12	89	18 17	25											
1	195	27.4		09.0	231	49.4	49	41.5	59	58	42	23	14	25	86	18 06	28										
2	210	27.6		08.1	246	13.2	48	35.3	62	56	39	17	20 05	36	84	17 57	31										
3	225	27.8		07.1	260	37.1	49	29.1	62	54	36	13	19 57	45	82	49	33										
4	240	28.0		06.2	275	01.0	49	22.7	64	52	34	08	50	1 54	80	42	34										
5	255	28.2	+6	05.3	289	25.0	50	+18	16.2	65	50	18 31	19 04	19 44	2 02	78	17 35	37									
6	270	28.4	+6	04.3	303	49.0	50	+18	09.6	66	45	18 26	18 56	19 32	2 18	75	17 21	40									
7	285	28.7		03.4	318	13.0	50	+18	02.8	68	40	22	50	22	32	72	17 09	43									
8	300	28.9		02.5	332	37.0	50	+17	55.9	69	35	19	44	14	44	70	16 59	46									
9	315	29.1		01.5	347	01.1	51	48.9	70	30	15	40	19 08	2 54	68	50	48										
10	330	29.3	+6	00.6	1	25.3	52	41.7	72	20	10	32	18 58	3 11	65	35	51										
11	345	29.5	+5	59.6	15	49.5	52	+17	34.4	73	10 N	18 05	18 27	18 51	3 26	62	16 21	55									
12	0	29.7	+5	58.7	30	13.7	52	+17	27.0	74	0	18 01	18 22	18 46	3 40	59	16 08	58									
13	15	29.9		57.8	44	37.9	52	19.5	75	10 S	17 57	18	43	3 54	56	15 55	62										
14	30	30.1		56.8	59	02.2	53	11.8	77	20	53	15	41	4 09	53	42	64										
15	45	30.4		55.9	73	26.6	54	+17	04.1	77	30	48	12	40	26	50	26	68									
16	60	30.6		55.0	87	51.0	54	+16	56.2	79	35	45	11	40	36	48	16	71									
17	75	30.8	+5	54.0	102	15.4	54	+16	48.2	80	40	17 42	18 10	18 41	4 47	46	15 06	73									
18	90	31.0	+5	53.1	116	39.9	55	+16	40.0	82	45	17 39	18 08	18 42	5 01	43	14 53	77									
19	105	31.2		52.2	131	04.4	55	31.8	82	50	35	07	45	17	39	38	80										
20	120	31.4		51.2	145	29.0	56	23.4	84	52	33	07	46	24	38	31	82										
21	135	31.6		50.3	159	53.6	56	14.9	85	54	31	06	47	33	36	23	84										
22	150	31.9		49.3	174	18.3	57	+16	06.3	86	56	29	06	49	42	34	14	86									
23	165	32.1		48.4	188	43.1	58	+15	57.6	87	58	26	06	51	5 53	31	14 04	89									
24	180	32.3	+5	47.5	203	07.9	58	+15	48.8	88	60 S	17 24	18 05	18 53	6 05	28	13 52	93									
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO														
	PMG: 0 ^h 55 ^m 8			Mag: -4.7 PMG: 14 ^h 34 ^m			Mag: -1.9 PMG: 21 ^h 04 ^m			Mag: -1.9 PMG: 15 ^h 57 ^m			Mag: +0.4 PMG: 19 ^h 04 ^m														
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♃	Dec	hG ♄	Dec	hG ♄	Dec	hG ♅	Dec												
h	o	'	o	'	o	'	o	o	'	o	'	o	'	o	'												
0	346	01.3	141	14.6	-14	32.8	43	18.6	-25	29.2	120	13.1	-16	23.9	73	16.0	-22	42.5									
1	1	03.8	156	15.3		33.8	58	20.7		29.0	135	15.2		24.1	88	18.4		42.5									
2	16	06.2	171	16.1		34.7	73	22.8		28.7	150	17.3		24.2	103	20.9		42.5									
3	31	08.7	186	16.9		35.7	88	24.9		28.5	165	19.4		24.3	118	23.3		42.6									
4	46	11.2	201	17.7		36.7	103	27.0		28.3	180	21.5		24.4	133	25.8		42.6									
5	61	13.6	216	18.5	-14	37.6	118	29.2	-25	28.1	195	23.6	-16	24.5	148	28.3	-22	42.6									
6	76	16.1	231	19.2	-14	38.6	133	31.3	-25	27.9	210	25.7	-16	24.6	163	30.7	-22	42.6									
7	91	18.6	246	20.0		39.6	148	33.4		27.6	225	27.8		24.7	178	33.2		42.6									
8	106	21.0	261	20.8		40.6	163	35.5		27.4	240	29.8		24.8	193	35.6		42.6									
9	121	23.5	276	21.6		41.5	178	37.6		27.2	255	31.9		24.9	208	38.1		42.6									
10	136	26.0	291	22.4		42.5	193	39.7		27.0	270	34.0		25.1	223	40.6		42.6									
11	151	28.4	306	23.2	-14	43.5	208	41.9	-25	26.7	285	36.1	-16	25.2	238	43.0	-22	42.6									
12	166	30.9	321	24.0	-14	44.4	223	44.0	-25	26.5	300	38.2	-16	25.3	253	45.5	-22	42.6									
13	181	33.3	336	24.8		45.4	238	46.1		26.3	315	40.3		25.4	268	47.9		42.6									
14	196	35.8	351	25.6		46.3	253	48.2		26.1	330	42.4		25.5	283	50.4		42.6									
15	211	38.3	6	26.4		47.3	268	50.3		25.9	345	44.5		25.6	298	52.9		42.6									
16	226	40.7	21	27.2		48.3	283	52.4		25.6	0	46.6		25.7	313	55.3		42.6									
17	241	43.2	36	28.0	-14	49.2	298	54.5	-25	25.4	15	48.7	-16	25.8	328	57.8	-22	42.6									
18	256	45.7	51	28.8	-14	50.2	313	56.6	-25	25.2	30	50.8	-16	25.9	344	00.2	-22	42.6									
19	271	48.1	66	29.6		51.2	328	58.7		25.0	45	52.9		26.1	359	02.7		42.6									
20	286	50.6	81	30.4		52.1	344	00.8		24.7	60	54.9		26.2	14	05.1		42.7									
21	301	53.1	96	31.2		53.1	359	02.9		24.5	75	57.0		26.3	29	07.6		42.7									
22	316	55.5	111	32.0		54.0	14	05.0		24.3	90	59.1		26.4	44	10.1		42.7									
23	331	58.0	126	32.8		55.0	29	07.1		24.0	106	01.2		26.5	59	12.5		42.7									
24	347	00.5	141	33.6	-14	56.0	44	09.2	-25	23.8	121	03.3	-16	26.6	74	15.0	-22	42.7									
Dif	—			+8			-10			+21			+2			+21			-1			+25			0		

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'9 PMG: 11 ^h 57 ^m 7			Edad: 27 ^d 6 PHE { 4 ^h : 60'7 12 ^h : 60'7 20 ^h : 60'6 PMG: 10 ^h 53 ^m R°: 56 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m
0	180	32.3	+5 47.5	203	07.9	+15 48.8	60 N	3 33	4 28	5 11	2 41	94	18 42	19	
1	195	32.5	46.5	217	32.7	58 39.9	58	43	34	15	2 51	90	34	22	
2	210	32.7	45.6	231	57.6	59 30.9	56	52	39	18	3 00	87	28	24	
3	225	32.9	44.6	246	22.5	59 21.7	54	3 59	44	20	07	85	22	27	
4	240	33.1	43.7	260	47.5	60 12.5	52	4 06	48	23	14	83	16	29	
5	255	33.4	+5 42.8	275	12.6	61 +15 03.1	50	4 12	4 52	5 25	3 20	81	18 12	30	
6	270	33.6	+5 41.8	289	37.7	61 +14 53.7	45	4 25	5 00	5 30	3 33	77	18 01	35	
7	285	33.8	40.9	304	02.8	61 44.1	40	34	07	34	44	74	17 52	39	
8	300	34.0	39.9	318	28.1	63 34.5	35	42	12	38	3 54	70	45	41	
9	315	34.2	39.0	332	53.3	62 24.8	30	48	17	41	4 02	68	38	44	
10	330	34.4	38.1	347	18.7	64 14.9	20	4 58	24	46	16	63	26	49	
11	345	34.6	+5 37.1	1	44.1	64 +14 05.0	10 N	5 05	5 29	5 50	4 28	60	17 16	52	
12	0	34.9	+5 36.2	16	09.5	64 +13 54.9	0	5 10	5 34	5 54	4 39	57	17 06	56	
13	15	35.1	35.2	30	35.0	65 44.8	10 S	13	37	5 58	4 50	54	16 57	59	
14	30	35.3	34.3	45	00.6	66 34.6	20	15	40	6 03	5 02	50	46	63	
15	45	35.5	33.4	59	26.2	66 24.3	30	15	43	07	16	46	34	68	
16	60	35.7	32.4	73	51.9	67 13.9	35	15	44	10	24	44	27	70	
17	75	35.9	+5 31.5	88	17.7	68 +13 03.4	40	5 14	5 46	6 13	5 33	41	16 19	73	
18	90	36.1	+5 30.5	102	43.5	68 +12 52.9	45	5 13	5 47	6 16	5 44	37	16 10	76	
19	105	36.4	29.6	117	09.3	68 42.2	50	10	48	20	5 56	34	15 58	81	
20	120	36.6	28.7	131	35.3	70 31.5	52	09	48	22	6 02	32	53	83	
21	135	36.8	27.7	146	01.2	69 20.7	54	07	48	24	09	29	47	85	
22	150	37.0	26.8	160	27.3	71 +12 09.8	56	06	49	26	16	27	40	88	
23	165	37.2	25.8	174	53.4	71 +11 58.9	58	04	49	28	24	24	33	91	
24	180	37.4	+5 24.9	189	19.6	72 +11 47.9	60 S	5 01	5 49	6 31	6 33	21	15 25	94	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 0 ^h 51 ^m 8		Mag: -4.7 PMG: 14 ^h 33 ^m		Mag: -1.9 PMG: 21 ^h 00 ^m		Mag: -1.9 PMG: 15 ^h 54 ^m		Mag: +0.4 PMG: 19 ^h 00 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	o	'	o	'	o	'	o	'	o	'				
0	347	00.5	141	33.6	-14 56.0	44 09.2	-25 23.8	121 03.3	-16 26.6	74 15.0	-22 42.7			
1	2	02.9	156	34.4	56.9	59 11.3	23.6	136 05.4	26.7	89 17.4	42.7			
2	17	05.4	171	35.2	57.9	74 13.4	23.4	151 07.5	26.8	104 19.9	42.7			
3	32	07.8	186	36.0	58.8	89 15.5	23.1	166 09.6	27.0	119 22.3	42.7			
4	47	10.3	201	36.8	-14 59.8	104 17.5	22.9	181 11.7	27.1	134 24.8	42.7			
5	62	12.8	216	37.7	-15 00.7	119 19.6	-25 22.7	196 13.7	-16 27.2	149 27.3	-22 42.7			
6	77	15.2	231	38.5	-15 01.7	134 21.7	-25 22.4	211 15.8	-16 27.3	164 29.7	-22 42.7			
7	92	17.7	246	39.3	02.6	149 23.8	22.2	226 17.9	27.4	179 32.2	42.7			
8	107	20.2	261	40.1	03.6	164 25.9	22.0	241 20.0	27.5	194 34.6	42.7			
9	122	22.6	276	40.9	04.5	179 28.0	21.8	256 22.1	27.6	209 37.1	42.7			
10	137	25.1	291	41.8	05.5	194 30.0	21.5	271 24.2	27.7	224 39.5	42.7			
11	152	27.6	306	42.6	-15 06.4	209 32.1	-25 21.3	286 26.3	-16 27.9	239 42.0	-22 42.7			
12	167	30.0	321	43.4	-15 07.4	224 34.2	-25 21.1	301 28.4	-16 28.0	254 44.5	-22 42.7			
13	182	32.5	336	44.2	08.3	239 36.3	20.8	316 30.4	28.1	269 46.9	42.8			
14	197	35.0	351	45.1	09.3	254 38.4	20.6	331 32.5	28.2	284 49.4	42.8			
15	212	37.4	6	45.9	10.2	269 40.4	20.4	346 34.6	28.3	299 51.8	42.8			
16	227	39.9	21	46.7	11.2	284 42.5	20.1	1	36.7	314 54.3	42.8			
17	242	42.3	36	47.5	-15 12.1	299 44.6	-25 19.9	16 38.8	-16 28.5	329 56.7	-22 42.8			
18	257	44.8	51	48.4	-15 13.1	314 46.6	-25 19.7	31 40.9	-16 28.6	344 59.2	-22 42.8			
19	272	47.3	66	49.2	14.0	329 48.7	19.4	46 43.0	28.8	0	01.6	42.8		
20	287	49.7	81	50.1	15.0	344 50.8	19.2	61 45.0	28.9	15	04.1	42.8		
21	302	52.2	96	50.9	15.9	359 52.8	19.0	76 47.1	29.0	30	06.5	42.8		
22	317	54.7	111	51.7	16.9	14 54.9	18.7	91 49.2	29.1	45	09.0	42.8		
23	332	57.1	126	52.6	17.8	29 57.0	18.5	106 51.3	29.2	60	11.4	42.8		
24	347	59.6	141	53.4	-15 18.7	44 59.0	-25 18.3	121 53.4	-16 29.3	75 13.9	-22 42.8			
Dif	—		+8		-9	+21		+2	+21		-1	+25		0

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 15:9 PMG: 11 ^h 57 ^m 3			Edad: 28 ^d 6 PHE { SD: 16:4 PMG: 11 ^h 49 ^m					Civil			R°		R°				
	hG ☉	Dec		hG ☾	Dif	Dec			Dif				Hora	R°	Hora	R°		
h	o	'	o	'	o	'	o	h m	h m	h m	h m m		h m m					
0	180	37.4	+5	24.9	189	19.6	+11	47.9	18 40	19 23	20 17	4 15 93	19 01 15					
1	195	37.6		23.9	203	45.8	72	36.8 ¹¹¹	37	17	20 07	21 91	18 56 19					
2	210	37.9		23.0	218	12.1	73	25.6 ¹¹²	34	12	19 59	27 88	52 21					
3	225	38.1		22.1	232	38.4	73	14.3 ¹¹³	31	07	51	32 85	49 23					
4	240	38.3		21.1	247	04.9	75	+11 03.0 ¹¹³	29	03	45	37 82	45 26					
5	255	38.5	+5	20.2	261	31.3	74	+10 51.6 ¹¹⁴	18 27	19 00	19 39	4 41 81	18 42 28					
6	270	38.7	+5	19.2	275	57.9	76	+10 40.2 ¹¹⁴	18 23	18 52	19 28	4 50 76	18 36 32					
7	285	38.9		18.3	290	24.5	76	28.7 ¹¹⁵	19	46	19	4 58 72	31 35					
8	300	39.2		17.3	304	51.1	76	17.1 ¹¹⁶	16	41	11	5 04 70	26 38					
9	315	39.4		16.4	319	17.8	77	+10 05.5 ¹¹⁶	13	37	19 05	10 66	22 40					
10	330	39.6		15.5	333	44.6	78	+9 53.8 ¹¹⁷	08	30	18 56	19 63	15 45					
11	345	39.8	+5	14.5	348	11.4	78	+9 42.0 ¹¹⁸	18 04	18 25	18 50	5 28 58	18 08 49					
12	0	40.0	+5	13.6	2	38.3	79	+9 30.2 ¹¹⁸	18 01	18 21	18 45	5 36 54	18 02 53					
13	15	40.2		12.6	17	05.3	80	18.4 ¹¹⁸	17 57	18	42	44 50	17 56 57					
14	30	40.5		11.7	31	32.3	80	+9 06.5 ¹¹⁹	53	15	41	5 52 47	49 61					
15	45	40.7		10.7	45	59.4	81	+8 54.5 ¹²⁰	49	13	41	6 02 42	42 66					
16	60	40.9		09.8	60	26.5	81	42.5 ¹²⁰	47	12	42	08 39	37 69					
17	75	41.1	+5	08.8	74	53.7	82	+8 30.4 ¹²¹	17 44	18 11	18 43	6 14 36	17 32 72					
18	90	41.3	+5	07.9	89	21.0	83	+8 18.3 ¹²¹	17 41	18 11	18 45	6 21 33	17 26 76					
19	105	41.5		07.0	103	48.3	83	+8 06.2 ¹²¹	38	10	48	30 29	19 80					
20	120	41.8		06.0	118	15.6	83	+7 54.0 ¹²²	36	10	49	34 27	16 82					
21	135	42.0		05.1	132	43.1	85	41.8 ¹²²	35	10	51	38 25	12 85					
22	150	42.2		04.1	147	10.5	84	29.5 ¹²³	33	10	53	43 22	08 87					
23	165	42.4		03.2	161	38.1	86	17.2 ¹²³	31	10	55	48 20	17 04 89					
24	180	42.6	+5	02.2	176	05.7	86	+7 04.8 ¹²⁴	17 28	18 10	18 58	6 54 17	16 59 93					
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 0 ^h 47 ^m 9		Mag: -4.7 PMG: 14 ^h 32 ^m			Mag: -1.9 PMG: 20 ^h 57 ^m			Mag: -1.9 PMG: 15 ^h 50 ^m			Mag: +0.4 PMG: 18 ^h 56 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'		
0	347	59.6	141	53.4	-15	18.7	44	59.0	-25	18.3	121	53.4	-16	29.3	75	13.9	-22	42.8
1	3	02.1	156	54.2		19.7	60	01.1		18.0	136	55.5		29.4	90	16.4		42.8
2	18	04.5	171	55.1		20.6	75	03.1		17.8	151	57.6		29.5	105	18.8		42.8
3	33	07.0	186	55.9		21.6	90	05.2		17.6	166	59.6		29.7	120	21.3		42.8
4	48	09.4	201	56.8		22.5	105	07.2		17.3	182	01.7		29.8	135	23.7		42.8
5	63	11.9	216	57.6	-15	23.4	120	09.3	-25	17.1	197	03.8	-16	29.9	150	26.2	-22	42.9
6	78	14.4	231	58.5	-15	24.4	135	11.3	-25	16.9	212	05.9	-16	30.0	165	28.6	-22	42.9
7	93	16.8	246	59.3		25.3	150	13.4		16.6	227	08.0		30.1	180	31.1		42.9
8	108	19.3	262	00.2		26.2	165	15.4		16.4	242	10.1		30.2	195	33.5		42.9
9	123	21.8	277	01.0		27.2	180	17.5		16.1	257	12.1		30.3	210	36.0		42.9
10	138	24.2	292	01.9		28.1	195	19.5		15.9	272	14.2		30.4	225	38.4		42.9
11	153	26.7	307	02.7	-15	29.1	210	21.6	-25	15.7	287	16.3	-16	30.6	240	40.9	-22	42.9
12	168	29.2	322	03.6	-15	30.0	225	23.6	-25	15.4	302	18.4	-16	30.7	255	43.3	-22	42.9
13	183	31.6	337	04.5		30.9	240	25.7		15.2	317	20.5		30.8	270	45.8		42.9
14	198	34.1	352	05.3		31.8	255	27.7		14.9	332	22.6		30.9	285	48.2		42.9
15	213	36.6	7	06.2		32.8	270	29.8		14.7	347	24.6		31.0	300	50.7		42.9
16	228	39.0	22	07.0		33.7	285	31.8		14.5	2	26.7		31.1	315	53.1		42.9
17	243	41.5	37	07.9	-15	34.6	300	33.8	-25	14.2	17	28.8	-16	31.2	330	55.6	-22	42.9
18	258	43.9	52	08.8	-15	35.6	315	35.9	-25	14.0	32	30.9	-16	31.3	345	58.0	-22	42.9
19	273	46.4	67	09.6		36.5	330	37.9		13.7	47	33.0		31.5	1	00.5		42.9
20	288	48.9	82	10.5		37.4	345	39.9		13.5	62	35.0		31.6	16	02.9		42.9
21	303	51.3	97	11.4		38.3	0	42.0		13.3	77	37.1		31.7	31	05.4		42.9
22	318	53.8	112	12.3		39.3	15	44.0		13.0	92	39.2		31.8	46	07.8		43.0
23	333	56.3	127	13.1		40.2	30	46.0		12.8	107	41.3		31.9	61	10.3		43.0
24	348	58.7	142	14.0	-15	41.1	45	48.0	-25	12.5	122	43.4	-16	32.0	76	12.7	-22	43.0
Dif	—		+9 -9			+20 +2			+21 -1			+25 0						

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'9 PMG: 11 ^h 57 ^m 0			Edad: 0 ^d 2 PHE { 4 ^h : 60'1 12 ^h : 59'9 20 ^h : 59'7 R°: 51 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Náutico	Civil		Hora	R°	Hora	R°	
h	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m
0	180	42.6	+5	02.2	176	05.7	+7 04.8	60 N	3 39	4 33	5 16	5 48	91	19 16	15
1	195	42.8		01.3	190	33.3	+6 52.5	58	48	38	19	52	88	15	17
2	210	43.1	+5	00.3	205	01.0	40.1	56	3 57	43	22	55	85	13	20
3	225	43.3	+4	59.4	219	28.8	27.6	54	4 04	48	24	57	83	12	22
4	240	43.5		58.4	233	56.6	15.1	52	10	52	26	5 59	81	11	24
5	255	43.7	+4	57.5	248	24.5	+6 02.6	50	4 16	4 55	5 28	6 02	78	19 10	26
6	270	43.9	+4	56.5	262	52.4	+5 50.1	45	4 27	5 03	5 32	6 06	75	19 08	29
7	285	44.1		55.6	277	20.4	37.6	40	36	09	36	10	71	06	33
8	300	44.4		54.6	291	48.4	25.0	35	44	14	39	14	67	04	36
9	315	44.6		53.7	306	16.5	+5 12.4	30	49	18	42	16	65	02	39
10	330	44.8		52.8	320	44.6	+4 59.8	20	4 58	24	46	22	60	19 00	43
11	345	45.0	+4	51.8	335	12.8	+4 47.1	10 N	5 05	5 29	5 50	6 26	56	18 57	48
12	0	45.2	+4	50.9	349	41.1	+4 34.5	0	5 09	5 33	5 54	6 30	52	18 55	51
13	15	45.5		49.9	4	09.4	21.8	10 S	12	36	5 57	34	49	53	55
14	30	45.7		49.0	18	37.7	+4 09.1	20	13	39	6 01	39	44	50	60
15	45	45.9		48.0	33	06.1	+3 56.4	30	13	41	05	44	39	48	63
16	60	46.1		47.1	47	34.5	43.7	35	12	42	07	47	37	46	67
17	75	46.3	+4	46.1	62	03.0	+3 31.0	40	5 11	5 42	6 09	6 50	34	18 44	70
18	90	46.5	+4	45.2	76	31.6	+3 18.2	45	5 09	5 43	6 12	6 54	30	18 42	73
19	105	46.8		44.2	91	00.2	+3 05.5	50	06	43	15	6 59	26	39	78
20	120	47.0		43.3	105	28.8	+2 52.8	52	04	43	17	7 01	24	38	80
21	135	47.2		42.3	119	57.5	40.0	54	03	43	19	03	22	37	81
22	150	47.4		41.4	134	26.2	27.3	56	5 00	43	20	05	21	35	84
23	165	47.6		40.4	148	55.0	14.5	58	4 58	43	22	08	18	33	87
24	180	47.9	+4	39.5	163	23.8	+2 01.8	60 S	4 55	5 43	6 25	7 11	15	18 32	90

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 0 ^h 44 ^m 0		Mag: -4.7 PMG: 14 ^h 30 ^m		Mag: -1.9 PMG: 20 ^h 54 ^m		Mag: -1.9 PMG: 15 ^h 47 ^m		Mag: +0.4 PMG: 18 ^h 52 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	o	'	o	'	o	'	o	'	o	'
0	348	58.7	142	14.0	-15	41.1	45	48.0	-25	12.5
1	4	01.2	157	14.9		42.0	60	50.1		12.3
2	19	03.7	172	15.8		43.0	75	52.1		12.0
3	34	06.1	187	16.6		43.9	90	54.1		11.8
4	49	08.6	202	17.5		44.8	105	56.1		11.6
5	64	11.0	217	18.4	-15	45.7	120	58.2	-25	11.3
6	79	13.5	232	19.3	-15	46.7	136	00.2	-25	11.1
7	94	16.0	247	20.2		47.6	151	02.2		10.8
8	109	18.4	262	21.1		48.5	166	04.2		10.6
9	124	20.9	277	21.9		49.4	181	06.2		10.3
10	139	23.4	292	22.8		50.3	196	08.2		10.1
11	154	25.8	307	23.7	-15	51.2	211	10.3	-25	09.8
12	169	28.3	322	24.6	-15	52.2	226	12.3	-25	09.6
13	184	30.8	337	25.5		53.1	241	14.3		09.3
14	199	33.2	352	26.4		54.0	256	16.3		09.1
15	214	35.7	7	27.3		54.9	271	18.3		08.8
16	229	38.2	22	28.2		55.8	286	20.3		08.6
17	244	40.6	37	29.1	-15	56.7	301	22.3	-25	08.4
18	259	43.1	52	30.0	-15	57.6	316	24.3	-25	08.1
19	274	45.5	67	30.9		58.5	331	26.3		07.9
20	289	48.0	82	31.8	-15	59.5	346	28.3		07.6
21	304	50.5	97	32.7	-16	00.4	1	30.3		07.4
22	319	52.9	112	33.6		01.3	16	32.3		07.1
23	334	55.4	127	34.5		02.2	31	34.3		06.9
24	349	57.9	142	35.4	-16	03.1	46	36.3	-25	06.6
Dif	—		+9 -9		+20 +2		+21 -1		+24 0	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 15°9 PMG: 11 ^h 56 ^m 6			Edad: 1. ^d 2 PHE { 4 ^h : 59/4 12 ^h : 59/2 20 ^h : 58/9 SD: 16°1 PMG: 13 ^h 34 ^m R°: 50 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m			
0	180	47.9	+4	39.5	163	23.8	+2 01.8	60 N	18 34	19 16	20 10	7 19	89	19 31	14			
1	195	48.1		38.5	177	52.6	+1 49.0 ¹²⁸	58	31	11	20 00	20	85	32	17			
2	210	48.3		37.6	192	21.5	36.3 ¹²⁷	56	29	06	19 53	20	83	33	20			
3	225	48.5		36.6	206	50.5	23.5 ¹⁰⁰	54	26	19 02	46	20	80	34	22			
4	240	48.7		35.7	221	19.5	+1 10.8 ¹²⁷	52	24	18 59	40	20	78	35	23			
5	255	48.9	+4	34.7	235	48.5	+0 58.1 ¹²⁷	50	18 23	18 55	19 35	7 20	77	19 36	25			
6	270	49.2	+4	33.8	250	17.6	+0 45.3 ¹²⁸	45	18 19	18 48	19 24	7 21	72	19 37	30			
7	285	49.4		32.8	264	46.7	32.6 ¹²⁷	40	16	43	15	21	68	39	32			
8	300	49.6		31.9	279	15.8	19.9 ¹²⁷	35	13	38	08	21	65	40	36			
9	315	49.8		30.9	293	45.0	+0 07.2 ¹²⁷	30	11	35	19 03	21	63	41	38			
10	330	50.0		30.0	308	14.2	-0 05.5 ¹²⁷	20	06	29	18 54	22	58	43	42			
11	345	50.3	+4	29.0	322	43.5	-0 18.1 ¹²⁶	10 N	18 03	18 24	18 49	7 22	54	19 45	46			
12	0	50.5	+4	28.1	337	12.8	-0 30.8 ¹²⁷	0	18 00	18 21	18 45	7 22	51	19 46	50			
13	15	50.7		27.1	351	42.1	43.4 ¹²⁶	10 S	17 57	18	42	23	46	48	53			
14	30	50.9		26.2	6	11.5	-0 56.0 ¹²⁶	20	54	16	41	23	43	50	57			
15	45	51.1		25.2	20	40.9	-1 08.6 ¹²⁶	30	50	14	42	23	39	51	62			
16	60	51.4		24.3	35	10.3	21.2 ¹²⁶	35	48	14	43	24	35	53	64			
17	75	51.6	+4	23.3	49	39.8	-1 33.7 ¹²⁵	40	17 46	18 13	18 45	7 24	33	19 54	67			
18	90	51.8	+4	22.4	64	09.3	-1 46.2 ¹²⁵	45	17 44	18 13	18 47	7 24	30	19 55	71			
19	105	52.0		21.4	78	38.9	-1 58.7 ¹²⁵	50	41	13	51	25	25	57	75			
20	120	52.2		20.4	93	08.4	-2 11.2 ¹²⁵	52	40	13	52	25	24	58	77			
21	135	52.5		19.5	107	38.1	23.7 ¹²⁵	54	38	13	54	25	22	58	80			
22	150	52.7		18.5	122	07.7	36.1 ¹²⁴	56	36	14	18 57	26	19	19 59	82			
23	165	52.9		17.6	136	37.4	-2 48.5 ¹²⁴	58	35	14	19 00	26	17	20 00	84			
24	180	53.1	+4	16.6	151	07.1	-3 00.8 ¹²³	60 S	17 33	18 14	19 03	7 26	14	20 02	87			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 0 ^h 40 ^m 0		Mag: -4.7 PMG: 14 ^h 29 ^m			Mag: -1.8 PMG: 20 ^h 51 ^m			Mag: -1.9 PMG: 15 ^h 44 ^m			Mag: +0.4 PMG: 18 ^h 48 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♅	Dec					
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o			
0	349	57.9	142	35.4	-16	03.1	46	36.3	-25	06.6	123	33.2	-16	34.8	77	11.4	-22	43.1
1	5	00.3	157	36.3		04.0	61	38.3		06.4	138	35.3		34.9	92	13.9		43.1
2	20	02.8	172	37.3		04.9	76	40.3		06.1	153	37.4		35.0	107	16.3		43.1
3	35	05.3	187	38.2		05.8	91	42.3		05.9	168	39.4		35.1	122	18.7		43.1
4	50	07.7	202	39.1		06.7	106	44.2		05.6	183	41.5		35.2	137	21.2		43.1
5	65	10.2	217	40.0	-16	07.6	121	46.2	-25	05.3	198	43.6	-16	35.3	152	23.6	-22	43.1
6	80	12.6	232	40.9	-16	08.5	136	48.2	-25	05.1	213	45.7	-16	35.5	167	26.1	-22	43.1
7	95	15.1	247	41.9		09.4	151	50.2		04.8	228	47.7		35.6	182	28.5		43.1
8	110	17.6	262	42.8		10.3	166	52.2		04.6	243	49.8		35.7	197	31.0		43.1
9	125	20.0	277	43.7		11.2	181	54.2		04.3	258	51.9		35.8	212	33.4		43.2
10	140	22.5	292	44.6		12.1	196	56.2		04.1	273	54.0		35.9	227	35.8		43.2
11	155	25.0	307	45.6	-16	13.0	211	58.1	-25	03.8	288	56.0	-16	36.0	242	38.3	-22	43.2
12	170	27.4	322	46.5	-16	13.9	227	00.1	-25	03.6	303	58.1	-16	36.1	257	40.7	-22	43.2
13	185	29.9	337	47.4		14.8	242	02.1		03.3	319	00.2		36.3	272	43.2		43.2
14	200	32.4	352	48.3		15.7	257	04.1		03.1	334	02.2		36.4	287	45.6		43.2
15	215	34.8	7	49.3		16.6	272	06.0		02.8	349	04.3		36.5	302	48.1		43.2
16	230	37.3	22	50.2		17.5	287	08.0		02.6	4	06.4		36.6	317	50.5		43.2
17	245	39.8	37	51.1	-16	18.4	302	10.0	-25	02.3	19	08.5	-16	36.7	332	52.9	-22	43.2
18	260	42.2	52	52.1	-16	19.3	317	12.0	-25	02.0	34	10.5	-16	36.8	347	55.4	-22	43.2
19	275	44.7	67	53.0		20.2	332	13.9		01.8	49	12.6		36.9	2	57.8		43.2
20	290	47.1	82	54.0		21.1	347	15.9		01.5	64	14.7		37.1	18	00.3		43.2
21	305	49.6	97	54.9		21.9	2	17.9		01.3	79	16.7		37.2	33	02.7		43.2
22	320	52.1	112	55.9		22.8	17	19.8		01.0	94	18.8		37.3	48	05.1		43.2
23	335	54.5	127	56.8		23.7	32	21.8		00.8	109	20.9		37.4	63	07.6		43.2
24	350	57.0	142	57.8	-16	24.6	47	23.7	-25	00.5	124	23.0	-16	37.5	78	10.0	-22	43.2
Dif	—		+9		-9		+20		+3		+21		-1		+24		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 3			Edad: 2 ^d 2 PHE { 4 ^h : 58'6 12 ^h : 58'3 20 ^h : 58'0 SD: 15'9 PMG: 14 ^h 24 ^m R°: 50 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Náutico	Civil		Hora	R°	Hora	R°	
h	o	'	o	o	'	o	o	h	m	h	m	h	m	h	m
0	180	53.1	+4	151	07.1	-3	00.8	60 N	3 44	4 38	5 20	8 48	85	19 45	16
1	195	53.3		165	36.8 ¹⁰⁷		13.2 ¹²⁴	58	3 53	43	23	45	83	49	18
2	210	53.5		180	06.5 ¹⁰⁷		25.4 ¹²²	56	4 01	47	25	43	79	53	20
3	225	53.8		194	36.3 ¹⁰⁸		37.7 ¹²³	54	08	51	28	40	78	56	22
4	240	54.0		209	06.1 ¹⁰⁸	-3	49.9 ¹²²	52	14	55	29	38	76	19 58	25
5	255	54.2	+4	223	36.0 ¹⁰⁹	-4	02.1 ¹²²	50	4 19	4 58	5 31	8 37	73	20 01	27
6	270	54.4	+4	238	05.8 ¹⁰⁸	-4	14.3 ¹²²	45	4 30	5 05	5 35	8 33	69	20 07	30
7	285	54.6		252	35.7 ¹⁰⁹		26.4 ¹²¹	40	38	11	38	29	67	11	34
8	300	54.9		267	05.6 ¹⁰⁹		38.5 ¹²¹	35	45	15	41	26	64	16	35
9	315	55.1		281	35.6 ¹¹⁰	-4	50.5 ¹²⁰	30	51	19	43	24	61	19	38
10	330	55.3		296	05.5 ¹⁰⁹	-5	02.5 ¹²⁰	20	4 59	25	47	20	56	25	43
11	345	55.5	+4	310	35.5 ¹¹⁰	-5	14.4 ¹¹⁹	10 N	5 04	5 29	5 50	8 16	53	20 31	46
12	0	55.7	+4	325	05.5 ¹¹⁰	-5	26.3 ¹¹⁹	0	5 08	5 32	5 53	8 13	49	20 36	49
13	15	56.0		339	35.5 ¹¹⁰		38.2 ¹¹⁹	10 S	11	35	56	09	46	41	53
14	30	56.2		354	05.6 ¹¹¹	-5	50.0 ¹¹⁸	20	11	37	5 59	06	42	47	56
15	45	56.4		8	35.7 ¹¹¹	-6	01.8 ¹¹⁸	30	11	38	6 02	8 02	37	53	60
16	60	56.6		23	05.7 ¹¹⁰		13.5 ¹¹⁷	35	10	39	04	7 59	36	20 57	63
17	75	56.9	+4	37	35.9 ¹¹²	-6	25.2 ¹¹⁷	40	5 08	5 39	6 06	7 57	32	21 01	65
18	90	57.1	+3	52	06.0 ¹¹¹	-6	36.8 ¹¹⁶	45	5 05	5 39	6 08	7 54	29	21 06	68
19	105	57.3		66	36.1 ¹¹¹		48.4 ¹¹⁶	50	02	39	11	50	26	12	72
20	120	57.5		81	06.3 ¹¹²	-6	59.9 ¹¹⁵	52	5 00	39	12	49	23	15	74
21	135	57.7		95	36.5 ¹¹²	-7	11.4 ¹¹⁵	54	4 58	39	14	47	22	18	76
22	150	58.0		110	06.7 ¹¹²		22.8 ¹¹⁴	56	55	38	15	45	20	21	78
23	165	58.2		124	36.9 ¹¹²		34.2 ¹¹⁴	58	52	38	17	43	17	24	81
24	180	58.4	+3	139	07.1 ¹¹²	-7	45.5 ¹¹³	60 S	4 49	5 37	6 19	7 40	15	21 29	83
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG 0 ^h 36 ^m 1			Mag: -4.7 PMG: 14 ^h 27 ^m			Mag: -1.8 PMG: 20 ^h 48 ^m			Mag: -1.9 PMG: 15 ^h 40 ^m			Mag: +0.4 PMG: 18 ^h 44 ^m		
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	o	'	o	o	'	o	o	'	o	o	'	o	o	'	o
0	350	57.0		142	57.8	-16	24.6	47	23.7	-25	00.5	124	23.0	-16	37.5
1	5	59.5		157	58.7		25.5	62	25.7	-25	00.2	139	25.0		37.6
2	21	01.9		172	59.7		26.4	77	27.7	-25	00.0	154	27.1		37.8
3	36	04.4		188	00.6		27.3	92	29.6	-24	59.7	169	29.2		37.9
4	51	06.9		203	01.6		28.2	107	31.6		59.5	184	31.2		38.0
5	66	09.3		218	02.5	-16	29.0	122	33.5	-24	59.2	199	33.3	-16	38.1
6	81	11.8		233	03.5	-16	29.9	137	35.5	-24	58.9	214	35.4	-16	38.2
7	96	14.2		248	04.4		30.8	152	37.4		58.7	229	37.4		38.3
8	111	16.7		263	05.4		31.7	167	39.4		58.4	244	39.5		38.4
9	126	19.2		278	06.4		32.6	182	41.3		58.2	259	41.6		38.6
10	141	21.6		293	07.3		33.5	197	43.3		57.9	274	43.7		38.7
11	156	24.1		308	08.3	-16	34.3	212	45.2	-24	57.6	289	45.7	-16	38.8
12	171	26.6		323	09.3	-16	35.2	227	47.2	-24	57.4	304	47.8	-16	38.9
13	186	29.0		338	10.2		36.1	242	49.1		57.1	319	49.9		39.0
14	201	31.5		353	11.2		37.0	257	51.1		56.8	334	51.9		39.1
15	216	34.0		8	12.2		37.8	272	53.0		56.6	349	54.0		39.3
16	231	36.4		23	13.1		38.7	287	55.0		56.3	4	56.1		39.4
17	246	38.9		38	14.1	-16	39.6	302	56.9	-24	56.1	19	58.1	-16	39.5
18	261	41.4		53	15.1	-16	40.5	317	58.8	-24	55.8	35	00.2	-16	39.6
19	276	43.8		68	16.1		41.3	333	00.8		55.5	50	02.3		39.7
20	291	46.3		83	17.0		42.2	348	02.7		55.3	65	04.3		39.8
21	306	48.7		98	18.0		43.1	3	04.7		55.0	80	06.4		39.9
22	321	51.2		113	19.0		44.0	18	06.6		54.7	95	08.5		40.1
23	336	53.7		128	20.0		44.8	33	08.5		54.5	110	10.5		40.2
24	351	56.1		143	21.0	-16	45.7	48	10.4	-24	54.2	125	12.6	-16	40.3
Dif	—			+10			-9			+19			+3		

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 : 57'7 12 ^h : 57'5 20 ^h : 57'2										
	PMG: 11 ^h 55 ^m 9														SD: 15°6	
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°		
h	o	'	o	'	o	'	o	'	h	m	h	m	h	m		
0	180	58.4	+3	53.7	139	07.1	-7 45.5	60 N	18 28	19 10	20 02	10 13 82	20 01 18			
1	195	58.6		52.8	153	37.4 ¹¹³	-7 56.7 ¹¹²	58	25	05	19 54	08 79	07 21			
2	210	58.8		51.8	168	07.6 ¹¹²	-8 07.9 ¹¹²	56	23	19 01	47	10 02 77	13 24			
3	225	59.1		50.9	182	37.9 ¹¹³	19.1 ¹¹²	54	21	18 57	40	9 58 74	18 26			
4	240	59.3		49.9	197	08.2 ¹¹³	30.2 ¹¹¹	52	20	54	35	54 72	23 27			
5	255	59.5	+3	49.0	211	38.5 ¹¹³	-8 41.2 ¹¹⁰	50	18 18	18 51	19 30	9 50 71	20 28 28			
6	270	59.7	+3	48.0	226	08.8 ¹¹³	-8 52.1 ¹⁰⁹	45	18 15	18 45	19 20	9 42 67	20 37 32			
7	285	59.9		47.0	240	39.1 ¹¹³	-9 03.0 ¹⁰⁹	40	12	40	12	36 64	45 35			
8	301	00.2		46.1	255	09.5 ¹¹⁴	13.9 ¹⁰⁹	35	10	35	05	30 61	51 38			
9	316	00.4		45.1	269	39.8 ¹¹³	24.7 ¹⁰⁸	30	08	32	19 00	25 59	20 57 40			
10	331	00.6		44.2	284	10.2 ¹¹⁴	35.4 ¹⁰⁷	20	05	27	18 52	16 56	21 08 43			
11	346	00.8	+3	43.2	298	40.5 ¹¹³	-9 46.0 ¹⁰⁶	10 N	18 02	18 23	18 47	9 09 52	21 17 46			
12	1	01.0	+3	42.3	313	10.9 ¹¹⁴	-9 56.6 ¹⁰⁶	0	17 59	18 20	18 44	9 02 49	21 25 49			
13	16	01.3		41.3	327	41.3 ¹¹⁴	-10 07.2 ¹⁰⁶	10 S	57	18	42	8 55 46	34 52			
14	31	01.5		40.3	342	11.7 ¹¹⁴	17.6 ¹⁰⁴	20	54	16	42	48 42	43 55			
15	46	01.7		39.4	356	42.1 ¹¹⁴	28.0 ¹⁰⁴	30	51	15	43	39 39	21 53 59			
16	61	01.9		38.4	11	12.5 ¹¹⁴	38.3 ¹⁰³	35	50	15	44	35 36	22 00 60			
17	76	02.2	+3	37.5	25	42.9 ¹¹⁴	-10 48.6 ¹⁰³	40	17 48	18 15	18 46	8 29 34	22 06 63			
18	91	02.4	+3	36.5	40	13.3 ¹¹⁴	-10 58.8 ¹⁰²	45	17 46	18 15	18 49	8 23 31	22 14 66			
19	106	02.6		35.6	54	43.8 ¹¹⁵	-11 08.9 ¹⁰¹	50	44	16	54	16 27	24 69			
20	121	02.8		34.6	69	14.2 ¹¹⁴	19.0 ¹⁰¹	52	43	16	56	12 26	29 70			
21	136	03.0		33.6	83	44.7 ¹¹⁵	28.9 ⁹⁹	54	42	17	18 58	09 24	34 72			
22	151	03.3		32.7	98	15.1 ¹¹⁴	38.8 ⁹⁹	56	40	17	19 01	05 21	39 75			
23	166	03.5		31.7	112	45.6 ¹¹⁵	48.7 ⁹⁹	58	39	18	04	8 00 20	45 78			
24	181	03.7	+3	30.8	127	16.0 ¹¹⁴	-11 58.4 ⁹⁷	60 S	17 37	18 19	19 08	7 55 17	22 52 80			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 0 ^h 32 ^m 2		Mag: -4.7 PMG: 14 ^h 26 ^m			Mag: -1.8 PMG: 20 ^h 45 ^m			Mag: -1.9 PMG: 15 ^h 37 ^m			Mag: +0.4 PMG: 18 ^h 40 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'		
0	351	56.1	143	21.0	-16	45.7	48	10.4	-24	54.2	125	12.6	-16	40.3		
1	6	58.6	158	22.0		46.6	63	12.4		53.9	140	14.7		40.4		
2	22	01.1	173	23.0		47.4	78	14.3		53.7	155	16.7		40.5		
3	37	03.5	188	24.0		48.3	93	16.2		53.4	170	18.8		40.6		
4	52	06.0	203	25.0		49.2	108	18.2		53.1	185	20.9		40.8		
5	67	08.5	218	25.9	-16	50.0	123	20.1	-24	52.9	200	22.9	-16	40.9		
6	82	10.9	233	26.9	-16	50.9	138	22.0	-24	52.6	215	25.0	-16	41.0		
7	97	13.4	248	27.9		51.8	153	23.9		52.3	230	27.0		41.1		
8	112	15.9	263	28.9		52.6	168	25.8		52.1	245	29.1		41.2		
9	127	18.3	278	29.9		53.5	183	27.8		51.8	260	31.2		41.3		
10	142	20.8	293	31.0		54.3	198	29.7		51.5	275	33.2		41.5		
11	157	23.2	308	32.0	-16	55.2	213	31.6	-24	51.3	290	35.3	-16	41.6		
12	172	25.7	323	33.0	-16	56.1	228	33.5	-24	51.0	305	37.4	-16	41.7		
13	187	28.2	338	34.0		56.9	243	35.4		50.7	320	39.4		41.8		
14	202	30.6	353	35.0		57.8	258	37.3		50.5	335	41.5		41.9		
15	217	33.1	8	36.0		58.6	273	39.3		50.2	350	43.6		42.0		
16	232	35.6	23	37.0	-16	59.5	288	41.2		49.9	5	45.6		42.2		
17	247	38.0	38	38.0	-17	00.3	303	43.1	-24	49.6	20	47.7	-16	42.3		
18	262	40.5	53	39.0	-17	01.2	318	45.0	-24	49.4	35	49.7	-16	42.4		
19	277	43.0	68	40.1		02.1	333	46.9		49.1	50	51.8		42.5		
20	292	45.4	83	41.1		02.9	348	48.8		48.8	65	53.9		42.6		
21	307	47.9	98	42.1		03.8	3	50.7		48.6	80	55.9		42.7		
22	322	50.3	113	43.1		04.6	18	52.6		48.3	95	58.0		42.9		
23	337	52.8	128	44.2		05.5	33	54.5		48.0	111	00.1		43.0		
24	352	55.3	143	45.2	-17	06.3	48	56.4	-24	47.7	126	02.1	-16	43.1		
Dif	—		+10			-9			+19		+3		+21		-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 6			Edad: 4 ^d 2 SD: 15'4 PMG: 16 ^h 02 ^m	PHE { 4 ^h : 56'9 12 ^h : 56'6 20 ^h : 56'3 R°: 49 ^m														
	hG ☉	Dec				hG ☾		Dif	Dec		Dif	Náutico	Civil	Hora	R°	Hora	R°		
h	o	'		o	'		o	'		h	m	h	m	h	m		h	m	
0	181	03.7	+3	30.8	127	16.0	-11	58.4	97	60 N	3 50	4 43	5 25	11 35	78		20 19	23	
1	196	03.9		29.8	141	46.5 ¹¹⁵	-12	08.1	97	58	3 58	47	27	27	74		28	26	
2	211	04.2		28.8	156	17.0 ¹¹⁵		17.7	96	56	4 06	52	29	19	73		37	27	
3	226	04.4		27.9	170	47.4 ¹¹⁴		27.3	96	54	12	55	31	12	71		44	29	
4	241	04.6		26.9	185	17.9 ¹¹⁵		36.7	94	52	18	4 59	33	06	69		50	32	
5	256	04.8	+3	26.0	199	48.4 ¹¹⁵	-12	46.1	94	50	4 22	5 01	5 34	11 01	67		20 56	33	
6	271	05.0	+3	25.0	214	18.9 ¹¹⁵	-12	55.4	93	45	4 33	5 08	5 37	10 49	64		21 09	36	
7	286	05.3		24.0	228	49.4 ¹¹⁵	-13	04.7	93	40	40	13	40	40	61		20	38	
8	301	05.5		23.1	243	19.9 ¹¹⁵		13.8	91	35	47	17	42	31	59		29	40	
9	316	05.7		22.1	257	50.4 ¹¹⁵		22.9	91	30	52	20	44	24	57		37	41	
10	331	05.9		21.2	272	20.8 ¹¹⁴		31.9	90	20	4 59	25	47	12	54		21 51	44	
11	346	06.1	+3	20.2	286	51.3 ¹¹⁵	-13	40.8	89	10 N	5 04	5 29	5 50	10 01	51		22 03	46	
12	1	06.4	+3	19.2	301	21.8 ¹¹⁵	-13	49.7	89	0	5 08	5 32	5 52	9 51	49		22 14	49	
13	16	06.6		18.3	315	52.3 ¹¹⁵	-13	58.5	88	10 S	09	34	55	41	46		26	51	
14	31	06.8		17.3	330	22.8 ¹¹⁵	-14	07.1	86	20	10	35	5 57	30	44		38	53	
15	46	07.0		16.4	344	53.3 ¹¹⁵		15.7	86	30	08	36	6 00	18	40		22 52	56	
16	61	07.3		15.4	359	23.8 ¹¹⁵		24.3	86	35	07	36	01	11	39		23 00	58	
17	76	07.5	+3	14.4	13	54.3 ¹¹⁵	-14	32.7	84	40	5 04	5 36	6 03	9 03	37		23 09	60	
18	91	07.7	+3	13.5	28	24.8 ¹¹⁵	-14	41.1	84	45	5 01	5 35	6 05	8 54	34		23 20	62	
19	106	07.9		12.5	42	55.3 ¹¹⁵		49.3	82	50	4 57	35	07	43	31		33	65	
20	121	08.1		11.6	57	25.8 ¹¹⁵	-14	57.5	82	52	55	34	08	38	29		39	67	
21	136	08.4		10.6	71	56.3 ¹¹⁵	-15	05.6	81	54	53	34	09	33	27		46	68	
22	151	08.6		09.6	86	26.8 ¹¹⁵		13.6	80	56	50	33	10	26	26		23 54	70	
23	166	08.8		08.7	100	57.3 ¹¹⁵		21.6	80	58	47	32	11	20	23		*** **	***	
24	181	09.0	+3	07.7	115	27.8 ¹¹⁵	-15	29.4	78	60 S	4 43	5 31	6 13	8 12	20		*** **	***	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO						
	PMG 0 ^h 28 ^m 2			Mag: -4.7 PMG: 14 ^h 24 ^m			Mag: -1.7 PMG: 20 ^h 42 ^m			Mag: -1.9 PMG: 15 ^h 34 ^m			Mag: +0.4 PMG: 18 ^h 37 ^m						
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	o	'		o	'		o	'		o	'		o	'		o	'		
0	352	55.3		143	45.2	-17	06.3	48	56.4	-24	47.7	126	02.1	-16	43.1	80	06.9	-22	43.5
1	7	57.7		158	46.2		07.2	63	58.3		47.5	141	04.2		43.2	95	09.3		43.5
2	23	00.2		173	47.3		08.0	79	00.2		47.2	156	06.2		43.3	110	11.8		43.5
3	38	02.7		188	48.3		08.8	94	02.1		46.9	171	08.3		43.4	125	14.2		43.5
4	53	05.1		203	49.3		09.7	109	04.0		46.6	186	10.4		43.6	140	16.6		43.5
5	68	07.6		218	50.4	-17	10.5	124	05.9	-24	46.4	201	12.4	-16	43.7	155	19.0	-22	43.5
6	83	10.1		233	51.4	-17	11.4	139	07.8	-24	46.1	216	14.5	-16	43.8	170	21.5	-22	43.5
7	98	12.5		248	52.4		12.2	154	09.7		45.8	231	16.5		43.9	185	23.9		43.5
8	113	15.0		263	53.5		13.1	169	11.6		45.5	246	18.6		44.0	200	26.3		43.5
9	128	17.5		278	54.5		13.9	184	13.4		45.3	261	20.7		44.1	215	28.8		43.6
10	143	19.9		293	55.6		14.8	199	15.3		45.0	276	22.7		44.3	230	31.2		43.6
11	158	22.4		308	56.6	-17	15.6	214	17.2	-24	44.7	291	24.8	-16	44.4	245	33.6	-22	43.6
12	173	24.8		323	57.7	-17	16.4	229	19.1	-24	44.4	306	26.8	-16	44.5	260	36.1	-22	43.6
13	188	27.3		338	58.7		17.3	244	21.0		44.2	321	28.9		44.6	275	38.5		43.6
14	203	29.8		353	59.8		18.1	259	22.9		43.9	336	31.0		44.7	290	40.9		43.6
15	218	32.2		9	00.8		18.9	274	24.7		43.6	351	33.0		44.8	305	43.3		43.6
16	233	34.7		24	01.9		19.8	289	26.6		43.3	6	35.1		45.0	320	45.8		43.6
17	248	37.2		39	03.0	-17	20.6	304	28.5	-24	43.1	21	37.1	-16	45.1	335	48.2	-22	43.6
18	263	39.6		54	04.0	-17	21.4	319	30.4	-24	42.8	36	39.2	-16	45.2	350	50.6	-22	43.6
19	278	42.1		69	05.1		22.3	334	32.3		42.5	51	41.2		45.3	5	53.0		43.6
20	293	44.6		84	06.1		23.1	349	34.1		42.2	66	43.3		45.4	20	55.5		43.6
21	308	47.0		99	07.2		23.9	4	36.0		41.9	81	45.4		45.6	35	57.9		43.6
22	323	49.5		114	08.3		24.8	19	37.9		41.7	96	47.4		45.7	51	00.3		43.6
23	338	52.0		129	09.3		25.6	34	39.7		41.4	111	49.5		45.8	66	02.8		43.6
24	353	54.4		144	10.4	-17	26.4	49	41.6	-24	41.1	126	51.5	-16	45.9	81	05.2	-22	43.6
Dif	—			+11 -8			+19 +3			+21 -1			-1			+24			

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15°9 PMG: 11 ^h 55 ^m 2			Edad: 5 ^d 2 PHE { 4 ^h : 56/1 12 ^h : 55/8 20 ^h : 55/6 PMG: 16 ^h 51 ^m R°: 49 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m
0	181	09.0	+3	07.7	115	27.8	-15 29.4	60 N	18 22	19 04	19 55	12 53	71	20 42	30
1	196	09.3		06.8	129	58.3 ¹¹⁵	37.2 ⁷⁸	58	20	18 59	48	41	69	20 54	32
2	211	09.5		05.8	144	28.8 ¹¹⁵	44.9 ⁷⁷	56	18	55	41	32	66	21 04	34
3	226	09.7		04.8	158	59.2 ¹¹⁴	-15 52.5 ⁷⁶	54	16	52	35	23	65	13	35
4	241	09.9		03.9	173	29.7 ¹¹⁵	-16 00.0 ⁷⁵	52	15	49	30	15	64	22	36
5	256	10.2	+3	02.9	188	00.2 ¹¹⁵	-16 07.4 ⁷⁴	50	18 14	18 46	19 25	12 08	63	21 29	37
6	271	10.4	+3	02.0	202	30.7 ¹¹⁵	-16 14.7 ⁷³	45	18 11	18 41	19 16	11 53	60	21 45	39
7	286	10.6	+3	01.0	217	01.2 ¹¹⁵	21.9 ⁷²	40	09	36	08	41	58	21 58	41
8	301	10.8	+3	00.0	231	31.6 ¹¹⁴	29.1 ⁷²	35	07	33	19 02	30	57	22 09	42
9	316	11.0	+2	59.1	246	02.1 ¹¹⁵	36.2 ⁷¹	30	06	29	18 58	21	56	18	44
10	331	11.3		58.1	260	32.6 ¹¹⁵	43.1 ⁶⁹	20	03	25	51	11 06	53	35	46
11	346	11.5	+2	57.1	275	03.1 ¹¹⁵	-16 50.0 ⁶⁹	10 N	18 01	18 22	18 46	10 52	51	22 49	48
12	1	11.7	+2	56.2	289	33.5 ¹¹⁴	-16 56.8 ⁶⁸	0	17 58	18 19	18 43	10 40	48	23 03	49
13	16	11.9		55.2	304	04.0 ¹¹⁵	-17 03.5 ⁶⁷	10 S	57	18	42	27	47	17	50
14	31	12.2		54.3	318	34.5 ¹¹⁵	10.1 ⁶⁶	20	55	17	42	10 14	45	31	53
15	46	12.4		53.3	333	04.9 ¹¹⁴	16.6 ⁶⁵	30	52	16	44	9 58	43	48	54
16	61	12.6		52.3	347	35.4 ¹¹⁵	23.1 ⁶⁵	35	51	16	46	50	41	23 58	55
17	76	12.8	+2	51.4	2	05.8 ¹¹⁴	-17 29.4 ⁶³	40	17 50	18 17	18 48	9 40	39	***	***
18	91	13.0	+2	50.4	16	36.3 ¹¹⁵	-17 35.6 ⁶²	45	17 48	18 18	18 52	9 28	37	***	***
19	106	13.3		49.4	31	06.7 ¹¹⁴	41.8 ⁶²	50	47	19	57	14	34	***	***
20	121	13.5		48.5	45	37.2 ¹¹⁵	47.9 ⁶¹	52	46	20	18 59	07	34	***	***
21	136	13.7		47.5	60	07.6 ¹¹⁴	53.8 ⁵⁹	54	45	20	19 02	9 00	32	***	***
22	151	13.9		46.6	74	38.1 ¹¹⁵	-17 59.7 ⁵⁹	56	44	21	05	8 52	30	***	***
23	166	14.2		45.6	89	08.5 ¹¹⁴	-18 05.5 ⁵⁸	58	43	22	08	43	28	0 03	72
24	181	14.4	+2	44.6	103	38.9 ¹¹⁴	-18 11.2 ⁵⁷	60 S	17 42	18 24	19 12	8 32	26	0 12	75

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 0 ^h 24 ^m 3		Mag: -4.7 PMG: 14 ^h 22 ^m		Mag: -1.7 PMG: 20 ^h 39 ^m		Mag: -1.9 PMG: 15 ^h 30 ^m		Mag: +0.4 PMG: 18 ^h 33 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	o	'	o	'	o	'	o	'	o	'
0	353	54.4	144	10.4	-17	26.4	49	41.6	-24	41.1
1	8	56.9	159	11.5		27.3	64	43.5		40.8
2	23	59.3	174	12.6		28.1	79	45.4		40.5
3	39	01.8	189	13.6		28.9	94	47.2		40.3
4	54	04.3	204	14.7		29.7	109	49.1		40.0
5	69	06.7	219	15.8	-17	30.6	124	50.9	-24	39.7
6	84	09.2	234	16.9	-17	31.4	139	52.8	-24	39.4
7	99	11.7	249	18.0		32.2	154	54.7		39.1
8	114	14.1	264	19.1		33.0	169	56.5		38.8
9	129	16.6	279	20.2		33.9	184	58.4		38.6
10	144	19.1	294	21.2		34.7	200	00.2		38.3
11	159	21.5	309	22.3	-17	35.5	215	02.1	-24	38.0
12	174	24.0	324	23.4	-17	36.3	230	04.0	-24	37.7
13	189	26.4	339	24.5		37.1	245	05.8		37.4
14	204	28.9	354	25.6		37.9	260	07.7		37.1
15	219	31.4	9	26.7		38.8	275	09.5		36.9
16	234	33.8	24	27.8		39.6	290	11.4		36.6
17	249	36.3	39	28.9	-17	40.4	305	13.2	-24	36.3
18	264	38.8	54	30.0	-17	41.2	320	15.1	-24	36.0
19	279	41.2	69	31.1		42.0	335	16.9		35.7
20	294	43.7	84	32.3		42.8	350	18.8		35.4
21	309	46.2	99	33.4		43.6	5	20.6		35.1
22	324	48.6	114	34.5		44.4	20	22.4		34.9
23	339	51.1	129	35.6		45.3	35	24.3		34.6
24	354	53.6	144	36.7	-17	46.1	50	26.1	-24	34.3
Dif	—		+11		-8		+19		+3	
							+21		-1	
									+24	
									0	

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15'9 PMG: 11 ^h 54 ^m 9			Edad: 6 ^d 2 PHE { 4 ^h : 55'4 12 ^h : 55'2 20 ^h : 55'0 SD: 15'0 PMG: 17 ^h 40 ^m R°: 49 ^m										
	hG ☉		Dec	hG ☾ Dif		Dec Dif		Náutico	Civil		Hora R°	Hora R°		
h	o	'	o	'	o	'	o	h m	h m	h m	h m	m	m	
0	181	14.4	+2	44.6	103	38.9	-18 11.2	60 N	3 56	4 48	5 30	14 04	62	
1	196	14.6		43.7	118	09.4 ¹¹⁵	16.7 ⁵⁵	58	4 03	52	32	13 50	61	
2	211	14.8		42.7	132	39.8 ¹¹⁴	22.2 ⁵⁵	56	10	56	33	38	60	
3	226	15.1		41.7	147	10.2 ¹¹⁴	27.6 ⁵⁴	54	16	4 59	35	28	59	
4	241	15.3		40.8	161	40.7 ¹¹⁵	33.0 ⁵⁴	52	21	5 02	36	19	58	
5	256	15.5	+2	39.8	176	11.1 ¹¹⁴	-18 38.2 ⁵²	50	4 26	5 05	5 37	13 11	57	
6	271	15.7	+2	38.8	190	41.5 ¹¹⁴	-18 43.3 ⁵¹	45	4 35	5 10	5 40	12 53	56	
7	286	15.9		37.9	205	11.9 ¹¹⁴	48.3 ⁵⁰	40	43	15	42	39	54	
8	301	16.2		36.9	219	42.3 ¹¹⁴	53.2 ⁴⁹	35	48	18	43	27	53	
9	316	16.4		36.0	234	12.8 ¹¹⁵	-18 58.1 ⁴⁹	30	4 53	21	45	12 17	52	
10	331	16.6		35.0	248	43.2 ¹¹⁴	-19 02.8 ⁴⁷	20	5 00	25	48	11 59	51	
11	346	16.8	+2	34.0	263	13.6 ¹¹⁴	-19 07.4 ⁴⁶	10 N	5 04	5 29	5 50	11 43	50	
12	1	17.1	+2	33.1	277	44.0 ¹¹⁴	-19 12.0 ⁴⁶	0	5 07	5 31	5 52	11 28	49	
13	16	17.3		32.1	292	14.4 ¹¹⁴	16.4 ⁴⁴	10 S	08	32	53	11 14	48	
14	31	17.5		31.1	306	44.8 ¹¹⁴	20.8 ⁴⁴	20	08	33	55	10 59	46	
15	46	17.7		30.2	321	15.3 ¹¹⁵	25.0 ⁴²	30	06	33	57	41	45	
16	61	18.0		29.2	335	45.7 ¹¹⁴	29.2 ⁴²	35	04	33	58	31	44	
17	76	18.2	+2	28.2	350	16.1 ¹¹⁴	-19 33.2 ⁴⁰	40	5 01	5 33	5 59	10 19	43	
18	91	18.4	+2	27.3	4	46.5 ¹¹⁴	-19 37.2 ⁴⁰	45	4 58	5 32	6 01	10 05	42	
19	106	18.6		26.3	19	16.9 ¹¹⁴	41.0 ³⁸	50	53	30	02	9 48	40	
20	121	18.8		25.3	33	47.3 ¹¹⁴	44.8 ³⁸	52	50	30	03	41	39	
21	136	19.1		24.4	48	17.7 ¹¹⁴	48.5 ³⁷	54	48	29	04	32	38	
22	151	19.3		23.4	62	48.2 ¹¹⁵	52.0 ³⁵	56	44	28	05	22	37	
23	166	19.5		22.4	77	18.6 ¹¹⁴	55.5 ³⁵	58	41	27	06	9 11	35	
24	181	19.7	+2	21.5	91	49.0 ¹¹⁴	-19 58.9 ³⁴	60 S	4 37	5 25	6 07	8 58	34	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 0 ^h 20 ^m 4		Mag: -4.7 PMG: 14 ^h 20 ^m		Mag: -1.7 PMG: 20 ^h 36 ^m		Mag: -1.9 PMG: 15 ^h 27 ^m		Mag: +0.4 PMG: 18 ^h 29 ^m	
	hG ♈		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec	
h	o	'	o	'	o	'	o	'	o	'
0	354	53.6	144	36.7	-17	46.1	50	26.1	-24	34.3
1	9	56.0	159	37.8		46.9	65	28.0		34.0
2	24	58.5	174	39.0		47.7	80	29.8		33.7
3	40	00.9	189	40.1		48.5	95	31.6		33.4
4	55	03.4	204	41.2		49.3	110	33.5		33.1
5	70	05.9	219	42.3	-17	50.1	125	35.3	-24	32.8
6	85	08.3	234	43.5	-17	50.9	140	37.1	-24	32.6
7	100	10.8	249	44.6		51.7	155	39.0		32.3
8	115	13.3	264	45.7		52.5	170	40.8		32.0
9	130	15.7	279	46.9		53.3	185	42.6		31.7
10	145	18.2	294	48.0		54.1	200	44.5		31.4
11	160	20.7	309	49.1	-17	54.9	215	46.3	-24	31.1
12	175	23.1	324	50.3	-17	55.7	230	48.1	-24	30.8
13	190	25.6	339	51.4		56.5	245	49.9		30.5
14	205	28.1	354	52.6		57.3	260	51.8		30.2
15	220	30.5	9	53.7		58.1	275	53.6		29.9
16	235	33.0	24	54.9		58.9	290	55.4		29.6
17	250	35.4	39	56.0	-17	59.6	305	57.2	-24	29.4
18	265	37.9	54	57.2	-18	00.4	320	59.0	-24	29.1
19	280	40.4	69	58.3		01.2	336	00.9		28.8
20	295	42.8	84	59.5		02.0	351	02.7		28.5
21	310	45.3	100	00.6		02.8	6	04.5		28.2
22	325	47.8	115	01.8		03.6	21	06.3		27.9
23	340	50.2	130	03.0		04.4	36	08.1		27.6
24	355	52.7	145	04.1	-18	05.2	51	09.9	-24	27.3
Dif	—		+11		-8		+18		+3	
							+21		-1	
									+24	

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15'9			Edad: 7 ^d 2	PHE {	4 ^h : 54'8 12 ^h : 54'7 20 ^h : 54'5			Final del crepúsculo			Salida de Luna		Puesta de Luna	
	PMG: 11 ^h 54 ^m 5								R°: 49 ^m						
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	o	'	o	o	'	o	'	o	h m	h m	h m	h m	m	h m	m
0	181	19.7	+2 21.5	91	49.0	-19 58.9	33	60 N	18 15	18 57	19 49	15 06	52	21 50	49
1	196	20.0	20.5	106	19.4 ¹¹⁴	-20 02.2	31	58	14	53	41	14 51	51	22 06	48
2	211	20.2	19.6	120	49.8 ¹¹⁴	05.3	31	56	13	50	35	38 51		19 49	
3	226	20.4	18.6	135	20.3 ¹¹⁵	08.4	31	54	11	47	29	27 50		30 49	
4	241	20.6	17.6	149	50.7 ¹¹⁴	11.4	30	52	10	44	25	17 50		40 49	
5	256	20.9	+2 16.7	164	21.1 ¹¹⁴	-20 14.3	29	50	18 09	18 42	19 20	14 08	50	22 49	49
6	271	21.1	+2 15.7	178	51.5 ¹¹⁴	-20 17.0	27	45	18 07	18 37	19 11	13 49	50	23 08	49
7	286	21.3	14.7	193	22.0 ¹¹⁵	19.7	27	40	06	33	19 05	33 50		24 49	
8	301	21.5	13.8	207	52.4 ¹¹⁴	22.3	26	35	04	30	18 59	20 50		37 49	
9	316	21.7	12.8	222	22.8 ¹¹⁴	24.8	25	30	03	27	55	13 09	50	23 48	49
10	331	22.0	11.8	236	53.3 ¹¹⁵	27.2	24	20	18 01	23	49	12 50	49	***	**
11	346	22.2	+2 10.9	251	23.7 ¹¹⁴	-20 29.4	22	10 N	17 59	18 20	18 45	12 33	49	***	**
12	1	22.4	+2 09.9	265	54.2 ¹¹⁵	-20 31.6	22	0	17 58	18 18	18 42	12 17	49	***	**
13	16	22.6	08.9	280	24.6 ¹¹⁴	33.7	21	10 S	56	17	42	12 02	48	0 07	50
14	31	22.9	08.0	294	55.1 ¹¹⁵	35.7	20	20	55	17	43	11 45	48	24 50	
15	46	23.1	07.0	309	25.6 ¹¹⁵	37.6	19	30	53	17	45	26 47		42 51	
16	61	23.3	06.0	323	56.0 ¹¹⁴	39.4	18	35	53	18	47	15 47		0 53	52
17	76	23.5	+2 05.1	338	26.5 ¹¹⁵	-20 41.1	17	40	17 52	18 19	18 50	11 02	47	1 06	52
18	91	23.8	+2 04.1	352	57.0 ¹¹⁵	-20 42.6	15	45	17 51	18 20	18 54	10 47	46	1 20	53
19	106	24.0	03.1	7	27.5 ¹¹⁵	44.1	15	50	50	22	19 00	28 46		38 54	
20	121	24.2	02.2	21	58.0 ¹¹⁵	45.5	14	52	49	23	02	20 45		47 54	
21	136	24.4	01.2	36	28.5 ¹¹⁵	46.8	13	54	49	24	05	10 10	45	1 57	54
22	151	24.7	+2 00.2	50	59.0 ¹¹⁵	48.0	12	56	48	25	09	9 59	45	2 07	56
23	166	24.9	+1 59.3	65	29.5 ¹¹⁵	49.1	11	58	47	27	13	46 45		20 56	
24	181	25.1	+1 58.3	80	00.0 ¹¹⁵	-20 50.1	10	60 S	17 47	18 28	19 17	9 32	43	2 34	57

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG		Mag: -4.8		Mag: -1.7		Mag: -1.9		Mag: +0.4	
	0 ^h 16 ^m 4		PMG: 14 ^h 19 ^m		PMG: 20 ^h 33 ^m		PMG: 15 ^h 24 ^m		PMG: 18 ^h 25 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	o	'	o	'	o	'	o	'	o	'
0	355	52.7	145	04.1	-18	05.2	51	09.9	-24	27.3
1	10	55.2	160	05.3		05.9	66	11.7		27.0
2	25	57.6	175	06.5		06.7	81	13.5		26.7
3	41	00.1	190	07.6		07.5	96	15.4		26.4
4	56	02.5	205	08.8		08.3	111	17.2		26.1
5	71	05.0	220	10.0	-18	09.1	126	19.0	-24	25.8
6	86	07.5	235	11.2	-18	09.9	141	20.8	-24	25.5
7	101	09.9	250	12.3		10.6	156	22.6		25.2
8	116	12.4	265	13.5		11.4	171	24.4		24.9
9	131	14.9	280	14.7		12.2	186	26.2		24.6
10	146	17.3	295	15.9		13.0	201	28.0		24.3
11	161	19.8	310	17.1	-18	13.7	216	29.8	-24	24.0
12	176	22.3	325	18.3	-18	14.5	231	31.6	-24	23.7
13	191	24.7	340	19.5		15.3	246	33.4		23.4
14	206	27.2	355	20.7		16.1	261	35.2		23.1
15	221	29.7	10	21.9		16.8	276	37.0		22.9
16	236	32.1	25	23.1		17.6	291	38.7		22.6
17	251	34.6	40	24.3	-18	18.4	306	40.5	-24	22.3
18	266	37.0	55	25.5	-18	19.1	321	42.3	-24	22.0
19	281	39.5	70	26.7		19.9	336	44.1		21.7
20	296	42.0	85	27.9		20.7	351	45.9		21.4
21	311	44.4	100	29.1		21.4	6	47.7		21.1
22	326	46.9	115	30.3		22.2	21	49.5		20.8
23	341	49.4	130	31.5		23.0	36	51.3		20.5
24	356	51.8	145	32.7	-18	23.7	51	53.0	-24	20.2
Dif	—		+12		-8		+18		+3	
									+20	-1
										+24

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15°9 PMG: 11 ^h 54 ^m 1			Edad: 8 ^d 2 SD: 14°8 PMG: 19 ^h 18 ^m				PHE { 4 ^h : 54°4 12 ^h : 54°3 20 ^h : 54°3 R°: 48 ^m			Hora R°		Hora R°			
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	o	'	o	'	o	'	o	'	h	m	h	m	h	m	h	m
0	181	25.1	+1 58.3	80	00.0	-20 50.1	9	60 N	4 01	4 52	5 35	15 58	40	22 39	59	
1	196	25.3		94	30.6 ¹¹⁶	51.0	8	58	08	4 56	36	42	41	22 54	58	
2	211	25.5		109	01.1 ¹¹⁵	51.8	7	56	15	5 00	37	29	42	23 08	56	
3	226	25.8		123	31.7 ¹¹⁶	52.5	6	54	20	03	38	17	43	19	56	
4	241	26.0		138	02.2 ¹¹⁵	53.1	5	52	25	05	39	15	07	43	29	55
5	256	26.2	+1 53.5	152	32.8 ¹¹⁶	-20 53.6	4	50	4 29	5 08	5 40	14 58	44	23 38	55	
6	271	26.4	+1 52.5	167	03.4 ¹¹⁶	-20 54.0	3	45	4 38	5 13	5 42	14 39	45	23 57	54	
7	286	26.7		181	34.0 ¹¹⁶	54.3	2	40	45	16	44	23	46	***	***	***
8	301	26.9		196	04.6 ¹¹⁶	54.5	1	35	50	20	45	14 10	46	***	***	***
9	316	27.1		210	35.2 ¹¹⁶	54.6	0	30	4 54	22	46	13 59	46	***	***	***
10	331	27.3		225	05.8 ¹¹⁶	54.6	1	20	5 00	26	48	39	47	0 08	49	
11	346	27.6	+1 47.6	239	36.4 ¹¹⁶	-20 54.5	2	10 N	5 04	5 29	5 50	13 22	48	0 25	49	
12	1	27.8	+1 46.7	254	07.1 ¹¹⁷	-20 54.3	3	0	5 06	5 30	5 51	13 06	48	0 41	48	
13	16	28.0		268	37.7 ¹¹⁶	54.0	4	10 S	07	31	52	12 50	49	0 57	48	
14	31	28.2		283	08.4 ¹¹⁷	53.6	5	20	06	31	53	33	49	1 14	48	
15	46	28.4		297	39.1 ¹¹⁷	53.1	6	30	03	31	55	13	50	33	48	
16	61	28.7		312	09.8 ¹¹⁷	52.5	7	35	5 01	30	55	12 02	50	45	48	
17	76	28.9	+1 41.8	326	40.5 ¹¹⁷	-20 51.9	8	40	4 58	5 29	5 56	11 49	51	1 58	48	
18	91	29.1	+1 40.9	341	11.2 ¹¹⁷	-20 51.1	9	45	4 54	5 28	5 57	11 33	52	2 13	48	
19	106	29.3		355	42.0 ¹¹⁸	50.2	10	50	48	26	58	14	52	32	48	
20	121	29.6		10	12.7 ¹¹⁷	49.2	11	52	45	25	58	11 05	53	41	47	
21	136	29.8		24	43.5 ¹¹⁸	48.2	12	54	42	24	59	10 55	53	2 51	47	
22	151	30.0		39	14.3 ¹¹⁸	47.0	13	56	39	22	5 59	44	53	3 03	46	
23	166	30.2		53	45.1 ¹¹⁸	45.7	14	58	35	21	6 00	31	53	16	46	
24	181	30.5	+1 35.1	68	15.9 ¹¹⁸	-20 44.4	15	60 S	4 30	5 19	6 01	10 15	54	3 31	46	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG 0 ^h 12 ^m 5		Mag: -4.8 PMG: 14 ^h 17 ^m		Mag: -1.6 PMG: 20 ^h 30 ^m		Mag: -1.9 PMG: 15 ^h 21 ^m		Mag: +0.4 PMG: 18 ^h 21 ^m							
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	o	'	o	'	o	'	o	'	o	'						
0	356	51.8	145	32.7	-18 23.7	51	53.0	-24 20.2	129	19.1	-16 54.5	83	59.4	-22 44.0		
1	11	54.3	160	33.9	24.5	66	54.8	19.8	144	21.2	54.6	99	01.8	44.0		
2	26	56.8	175	35.2	25.2	81	56.6	19.5	159	23.2	54.7	114	04.2	44.0		
3	41	59.2	190	36.4	26.0	96	58.4	19.2	174	25.3	54.8	129	06.6	44.0		
4	57	01.7	205	37.6	26.8	112	00.2	18.9	189	27.3	54.9	144	09.0	44.0		
5	72	04.2	220	38.8	-18 27.5	127	01.9	-24 18.6	204	29.4	-16 55.1	159	11.4	-22 44.0		
6	87	06.6	235	40.1	-18 28.3	142	03.7	-24 18.3	219	31.4	-16 55.2	174	13.9	-22 44.0		
7	102	09.1	250	41.3	29.0	157	05.5	18.0	234	33.4	55.3	189	16.3	44.0		
8	117	11.5	265	42.5	29.8	172	07.3	17.7	249	35.5	55.4	204	18.7	44.1		
9	132	14.0	280	43.8	30.5	187	09.0	17.4	264	37.5	55.5	219	21.1	44.1		
10	147	16.5	295	45.0	31.3	202	10.8	17.1	279	39.6	55.7	234	23.5	44.1		
11	162	18.9	310	46.2	-18 32.0	217	12.6	-24 16.8	294	41.6	-16 55.8	249	25.9	-22 44.1		
12	177	21.4	325	47.5	-18 32.8	232	14.4	-24 16.5	309	43.7	-16 55.9	264	28.3	-22 44.1		
13	192	23.9	340	48.7	33.5	247	16.1	16.2	324	45.7	56.0	279	30.7	44.1		
14	207	26.3	355	50.0	34.3	262	17.9	15.9	339	47.7	56.1	294	33.1	44.1		
15	222	28.8	10	51.2	35.0	277	19.7	15.6	354	49.8	56.3	309	35.6	44.1		
16	237	31.3	25	52.5	35.8	292	21.4	15.3	9	51.8	56.4	324	38.0	44.1		
17	252	33.7	40	53.7	-18 36.5	307	23.2	-24 15.0	24	53.9	-16 56.5	339	40.4	-22 44.1		
18	267	36.2	55	55.0	-18 37.3	322	24.9	-24 14.7	39	55.9	-16 56.6	354	42.8	-22 44.1		
19	282	38.6	70	56.2	38.0	337	26.7	14.4	54	57.9	56.7	9	45.2	44.1		
20	297	41.1	85	57.5	38.8	352	28.5	14.1	70	00.0	56.9	24	47.6	44.1		
21	312	43.6	100	58.8	39.5	7	30.2	13.8	85	02.0	57.0	39	50.0	44.1		
22	327	46.0	116	00.0	40.2	22	32.0	13.5	100	04.1	57.1	54	52.4	44.1		
23	342	48.5	131	01.3	41.0	37	33.7	13.1	115	06.1	57.2	69	54.8	44.1		
24	357	51.0	146	02.6	-18 41.7	52	35.5	-24 12.8	130	08.1	-16 57.3	84	57.2	-22 44.1		
Dif	—		+12		-7	+18		+3	+20		-1	+24				

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15°9 PMG: 11 ^h 53 ^m 8			Edad: 9 ^d 2 SD: 14°8 PMG: 20 ^h 06 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	Rº	Hora
h	o	'	o	'	o	'	o	h m	h m	h m	h m m	h m m	h m m	
0	181	30.5	+1 35.1	68	15.9	-20 44.4	15	60 N	18 09	18 51	19 42	16 38 30	23 38 66	
1	196	30.7	34.1	82	46.7 ¹¹⁸	42.9	15	58	08	48	35	23 33	23 52 64	
2	211	30.9	33.1	97	17.5 ¹¹⁸	41.4	15	56	07	45	29	11 34	*** ** *	
3	226	31.1	32.2	111	48.4 ¹¹⁹	39.7	17	54	06	42	24	16 00 35	*** ** *	
4	241	31.4	31.2	126	19.3 ¹¹⁹	38.0	17	52	06	39	20	15 50 37	*** ** *	
5	256	31.6	+1 30.2	140	50.2 ¹¹⁹	-20 36.1	19	50	18 05	18 37	19 16	15 42 37	*** ** *	
6	271	31.8	+1 29.2	155	21.1 ¹¹⁹	-20 34.2	20	45	18 04	18 33	19 07	15 24 39	*** ** *	
7	286	32.0	28.3	169	52.0 ¹¹⁹	32.2	20	40	02	29	19 01	15 09 40	0 13 52	
8	301	32.2	27.3	184	22.9 ¹¹⁹	30.0	22	35	01	27	18 56	14 56 42	26 51	
9	316	32.5	26.3	198	53.9 ¹²⁰	27.8	22	30	18 01	24	52	45 43	37 51	
10	331	32.7	25.4	213	24.9 ¹²⁰	25.5	23	20	17 59	21	47	26 45	0 57 49	
11	346	32.9	+1 24.4	227	55.9 ¹²⁰	-20 23.1	24	10 N	17 58	18 19	18 43	14 10 46	1 14 48	
12	1	33.1	+1 23.4	242	26.9 ¹²⁰	-20 20.6	25	0	17 57	18 18	18 42	13 54 48	1 29 48	
13	16	33.4	22.5	256	57.9 ¹²⁰	18.0	26	10 S	56	17	42	39 49	1 45 47	
14	31	33.6	21.5	271	29.0 ¹²¹	15.3	27	20	55	17	43	22 50	2 02 46	
15	46	33.8	20.5	286	00.1 ¹²¹	12.5	28	30	55	18	46	13 03 52	21 45	
16	61	34.0	19.6	300	31.2 ¹²¹	09.6	29	35	54	19	49	12 52 53	33 44	
17	76	34.3	+1 18.6	315	02.3 ¹²¹	-20 06.7	29	40	17 54	18 21	18 52	12 40 53	2 46 43	
18	91	34.5	+1 17.6	329	33.4 ¹²¹	-20 03.6	31	45	17 53	18 23	18 57	12 25 55	3 01 42	
19	106	34.7	16.6	344	04.6 ¹²²	-20 00.5	31	50	53	25	19 03	12 06 57	20 40	
20	121	34.9	15.7	358	35.8 ¹²²	-19 57.2	33	52	52	26	06	11 58 57	28 40	
21	136	35.1	14.7	13	06.9 ¹²¹	53.9	33	54	52	28	09	48 58	38 39	
22	151	35.4	13.7	27	38.2 ¹²³	50.4	35	56	52	29	13	37 60	3 49 38	
23	166	35.6	12.8	42	09.4 ¹²²	46.9	35	58	52	31	17	24 61	4 02 37	
24	181	35.8	+1 11.8	56	40.7 ¹²³	-19 43.3	36	60 S	17 51	18 33	19 22	11 09 63	4 17 35	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 0 ^h 08 ^m 6		Mag: -4.8 PMG: 14 ^h 15 ^m			Mag: -1.6 PMG: 20 ^h 27 ^m			Mag: -1.9 PMG: 15 ^h 17 ^m			Mag: +0.4 PMG: 18 ^h 17 ^m		
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♃	Dec	hG ♃	Dec	hG ♄	Dec	
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'
0	357	51.0	146 02.6	-18 41.7	52 35.5	-24 12.8	130 08.1	-16 57.3	84 57.2	-22 44.1	44.1	99 59.6	44.1	
1	12	53.4	161 03.8	42.4	67 37.3	12.5	145 10.2	57.5	99 59.6	44.1	44.1	115 02.1	44.1	
2	27	55.9	176 05.1	43.2	82 39.0	12.2	160 12.2	57.6	145 06.9	44.2	44.2	145 06.9	44.2	
3	42	58.4	191 06.4	43.9	97 40.8	11.9	175 14.3	57.7	160 09.3	-22 44.2	44.2	175 14.3	57.7	
4	58	00.8	206 07.7	44.7	112 42.5	11.6	190 16.3	57.8	205 18.3	-16 57.9	160 09.3	-22 44.2	205 18.3	
5	73	03.3	221 08.9	-18 45.4	127 44.3	-24 11.3	205 18.3	-16 57.9	220 20.4	-16 58.1	175 11.7	-22 44.2	220 20.4	
6	88	05.8	236 10.2	-18 46.1	142 46.0	-24 11.0	220 20.4	-16 58.1	235 22.4	58.2	190 14.1	44.2	235 22.4	
7	103	08.2	251 11.5	46.8	157 47.8	10.7	235 22.4	58.2	250 24.5	58.3	205 16.5	44.2	250 24.5	
8	118	10.7	266 12.8	47.6	172 49.5	10.4	250 24.5	58.3	265 26.5	58.4	220 18.9	44.2	265 26.5	
9	133	13.1	281 14.1	48.3	187 51.3	10.0	265 26.5	58.4	280 28.5	58.5	235 21.3	44.2	280 28.5	
10	148	15.6	296 15.4	49.0	202 53.0	09.7	280 28.5	58.5	295 30.6	-16 58.7	250 23.7	-22 44.2	295 30.6	
11	163	18.1	311 16.7	-18 49.8	217 54.7	-24 09.4	295 30.6	-16 58.7	310 32.6	-16 58.8	265 26.1	-22 44.2	310 32.6	
12	178	20.5	326 18.0	-18 50.5	232 56.5	-24 09.1	310 32.6	-16 58.8	325 34.6	58.9	280 28.5	44.2	325 34.6	
13	193	23.0	341 19.2	51.2	247 58.2	08.8	325 34.6	58.9	340 36.7	59.0	295 30.9	44.2	340 36.7	
14	208	25.5	356 20.5	51.9	263 00.0	08.5	340 36.7	59.0	355 38.7	59.1	310 33.3	44.2	355 38.7	
15	223	27.9	11 21.9	52.7	278 01.7	08.2	355 38.7	59.1	10 40.7	59.3	325 35.7	44.2	10 40.7	
16	238	30.4	26 23.2	53.4	293 03.4	07.9	10 40.7	59.3	25 42.8	-16 59.4	340 38.2	-22 44.2	25 42.8	
17	253	32.9	41 24.5	-18 54.1	308 05.2	-24 07.6	25 42.8	-16 59.4	40 44.8	-16 59.5	355 40.6	-22 44.2	40 44.8	
18	268	35.3	56 25.8	-18 54.8	323 06.9	-24 07.2	40 44.8	-16 59.5	55 46.9	59.6	10 43.0	44.2	55 46.9	
19	283	37.8	71 27.1	55.5	338 08.6	06.9	55 46.9	59.6	70 48.9	59.7	25 45.4	44.2	70 48.9	
20	298	40.3	86 28.4	56.3	353 10.4	06.6	70 48.9	59.7	85 50.9	-16 59.9	40 47.8	44.2	85 50.9	
21	313	42.7	101 29.7	57.0	8 12.1	06.3	85 50.9	-16 59.9	100 53.0	-17 00.0	55 50.2	44.2	100 53.0	
22	328	45.2	116 31.0	57.7	23 13.8	06.0	100 53.0	-17 00.0	115 55.0	-17 00.1	70 52.6	44.2	115 55.0	
23	343	47.6	131 32.4	58.4	38 15.6	05.7	115 55.0	-17 00.1	130 57.0	-17 00.2	85 55.0	-22 44.2	130 57.0	
24	358	50.1	146 33.7	-18 59.1	53 17.3	-24 05.4	130 57.0	-17 00.2						
Dif	—		+13	-7	+17	+3	+20	-1	+24	0				

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15°9 PMG: 11 ^h 53 ^m 4			Edad: 10 ^d 2 PHE { 4 ^h : 54/2 12 ^h : 54/2 20 ^h : 54/2 PMG: 20 ^h 53 ^m R°: 46 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m
0	181	35.8	+1	11.8	56	40.7	-19 43.3	60 N	4 07	4 57	5 39	17 08	23	***	***
1	196	36.0		10.8	71	12.0 ¹²³	39.6 ³⁷	58	13	5 01	40	16 56	25	***	***
2	211	36.3		09.9	85	43.3 ¹²³	35.8 ³⁸	56	19	04	41	45	27	0 04	63
3	226	36.5		08.9	100	14.6 ¹²³	31.9 ³⁹	54	24	06	42	35	29	15	60
4	241	36.7		07.9	114	45.9 ¹²³	28.0 ³⁹	52	28	09	42	27	30	24	60
5	256	36.9	+1	06.9	129	17.3 ¹²⁴	-19 23.9 ⁴¹	50	4 32	5 11	5 43	16 19	32	0 33	59
6	271	37.2	+1	06.0	143	48.7 ¹²⁴	-19 19.8 ⁴¹	45	4 40	5 15	5 44	16 03	34	0 51	56
7	286	37.4		05.0	158	20.1 ¹²⁴	15.5 ⁴³	40	47	18	45	15 49	37	1 05	55
8	301	37.6		04.0	172	51.5 ¹²⁴	11.2 ⁴³	35	51	21	46	38	38	17	54
9	316	37.8		03.1	187	23.0 ¹²⁵	06.8 ⁴⁴	30	4 55	23	47	28	40	28	53
10	331	38.0		02.1	201	54.5 ¹²⁵	-19 02.3 ⁴⁵	20	5 01	26	48	15 11	42	1 46	51
11	346	38.3	+1	01.1	216	26.0 ¹²⁵	-18 57.7 ⁴⁶	10 N	5 04	5 28	5 49	14 56	44	2 02	49
12	1	38.5	+1	00.1	230	57.5 ¹²⁵	-18 53.0 ⁴⁷	0	5 06	5 30	5 50	14 42	46	2 17	47
13	16	38.7	+0	59.2	245	29.1 ¹²⁶	48.3 ⁴⁷	10 S	06	30	51	28	48	32	45
14	31	38.9		58.2	260	00.7 ¹²⁶	43.4 ⁴⁹	20	04	30	52	14 12	51	2 48	43
15	46	39.2		57.2	274	32.3 ¹²⁶	38.5 ⁴⁹	30	5 01	28	52	13 55	53	3 06	41
16	61	39.4		56.3	289	03.9 ¹²⁶	33.5 ⁵⁰	35	4 58	27	53	45	54	17	40
17	76	39.6	+0	55.3	303	35.5 ¹²⁶	-18 28.4 ⁵¹	40	4 54	5 26	5 53	13 33	57	3 29	38
18	91	39.8	+0	54.3	318	07.2 ¹²⁷	-18 23.2 ⁵²	45	4 50	5 24	5 53	13 20	58	3 43	36
19	106	40.0		53.4	332	38.9 ¹²⁷	17.9 ⁵³	50	44	21	54	13 03	61	4 00	34
20	121	40.3		52.4	347	10.6 ¹²⁷	12.6 ⁵³	52	41	20	54	12 55	62	08	33
21	136	40.5		51.4	1	42.4 ¹²⁸	07.1 ⁵⁵	54	37	19	54	46	64	17	32
22	151	40.7		50.4	16	14.1 ¹²⁷	-18 01.6 ⁵⁵	56	33	17	54	37	65	27	31
23	166	40.9		49.5	30	45.9 ¹²⁸	-17 56.0 ⁵⁶	58	29	15	54	25	67	39	28
24	181	41.2	+0	48.5	45	17.7 ¹²⁸	-17 50.3 ⁵⁷	60 S	4 24	5 13	5 54	12 12	70	4 52	27

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 0 ^h 04 ^m 6		Mag: -4.8 PMG: 14 ^h 12 ^m		Mag: -1.6 PMG: 20 ^h 25 ^m		Mag: -1.9 PMG: 15 ^h 14 ^m		Mag: +0.5 PMG: 18 ^h 13 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	o	'	o	'	o	'	o	'	o	'
0	358	50.1	146	33.7	53	17.3	130	57.0	85	55.0
1	13	52.6	161	35.0	68	19.0	145	59.1	100	57.4
2	28	55.0	176	36.3	83	20.8	161	01.1	115	59.8
3	43	57.5	191	37.7	98	22.5	176	03.1	131	02.2
4	59	00.0	206	39.0	113	24.2	191	05.2	146	04.6
5	74	02.4	221	40.3	128	25.9	206	07.2	161	07.0
6	89	04.9	236	41.7	143	27.7	221	09.2	176	09.4
7	104	07.4	251	43.0	158	29.4	236	11.3	191	11.8
8	119	09.8	266	44.3	173	31.1	251	13.3	206	14.2
9	134	12.3	281	45.7	188	32.8	266	15.3	221	16.6
10	149	14.8	296	47.0	203	34.5	281	17.4	236	19.0
11	164	17.2	311	48.4	218	36.3	296	19.4	251	21.4
12	179	19.7	326	49.7	233	38.0	311	21.4	266	23.8
13	194	22.1	341	51.1	248	39.7	326	23.5	281	26.2
14	209	24.6	356	52.4	263	41.4	341	25.5	296	28.6
15	224	27.1	11	53.8	278	43.1	356	27.5	311	31.0
16	239	29.5	26	55.2	293	44.8	11	29.6	326	33.4
17	254	32.0	41	56.5	308	46.5	26	31.6	341	35.8
18	269	34.5	56	57.9	323	48.2	41	33.6	356	38.2
19	284	36.9	71	59.3	338	50.0	56	35.7	11	40.6
20	299	39.4	87	00.6	353	51.7	71	37.7	26	43.0
21	314	41.9	102	02.0	8	53.4	86	39.7	41	45.4
22	329	44.3	117	03.4	23	55.1	101	41.8	56	47.8
23	344	46.8	132	04.8	38	56.8	116	43.8	71	50.2
24	359	49.2	147	06.1	53	58.5	131	45.8	86	52.6
Dif	—		+14		-7		+20		+24	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 15'9 PMG: 11 ^h 53 ^m 1			Edad: 11 ^d 2 PHE { SD: 14'8 PMG: 21 ^h 39 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°	
h	o	'	o	'	o	'	o	h m	h m	h m	h m	h m	h m	h m	h m	
0	181	41.2	+0 48.5	45	17.7	-17 50.3	57	60 N	18 03	18 45	19 35	17 31	18	0 44	72	
1	196	41.4		47.5	59	49.6 ¹²⁹	44.6	58	03	42	29	21	21	0 57	69	
2	211	41.6		46.6	74	21.4 ¹²⁸	38.7	56	02	39	23	12	23	1 07	67	
3	226	41.8		45.6	88	53.3 ¹²⁹	32.8	54	02	37	19	17	04	25	16	
4	241	42.0		44.6	103	25.2 ¹²⁹	26.8	52	01	35	15	16	57	27	24	
5	256	42.3	+0 43.6	117	57.1 ¹²⁹	-17 20.7	61	50	18 01	18 33	19 11	16	51	28	1 32	
6	271	42.5	+0 42.7	132	29.1 ¹³⁰	-17 14.5	62	45	18 00	18 29	19 03	16	37	31	1 47	
7	286	42.7		41.7	147	01.1 ¹³⁰	08.3	40	17 59	26	18 58	26	33	2 00	57	
8	301	42.9		40.7	161	33.1 ¹³⁰	-17 02.0	63	35	59	24	53	16	36	11	
9	316	43.2		39.8	176	05.1 ¹³⁰	-16 55.6	64	30	58	22	50	16	08	37	
10	331	43.4		38.8	190	37.2 ¹³¹	49.1	65	20	57	19	45	15	53	40	
11	346	43.6	+0 37.8	205	09.2 ¹³⁰	-16 42.5	66	10 N	17 57	18 18	18 42	15	40	43	2 51	
12	1	43.8	+0 36.8	219	41.3 ¹³¹	-16 35.9	66	0	17 56	18 17	18 41	15	28	46	3 04	
13	16	44.0		35.9	234	13.5 ¹³²	29.2	67	10 S	56	17	41	16	48	17	
14	31	44.3		34.9	248	45.6 ¹³¹	22.4	68	20	56	18	43	15	03	51	
15	46	44.5		33.9	263	17.8 ¹³²	15.5	69	30	56	20	47	14	48	54	
16	61	44.7		33.0	277	50.0 ¹³²	08.6	69	35	56	21	50	39	56	3 57	
17	76	44.9	+0 32.0	292	22.2 ¹³²	-16 01.6	70	40	17 56	18 23	18 54	14	30	57	4 07	
18	91	45.2	+0 31.0	306	54.4 ¹³²	-15 54.5	71	45	17 56	18 25	18 59	14	18	60	4 19	
19	106	45.4		30.0	321	26.7 ¹³³	47.4	71	50	56	28	19	06	63	34	
20	121	45.6		29.1	335	59.0 ¹³³	40.1	73	52	56	29	09	13	57	65	
21	136	45.8		28.1	350	31.3 ¹³³	32.8	73	54	56	31	13	50	66	49	
22	151	46.0		27.1	5	03.6 ¹³³	25.5	73	56	56	33	17	42	68	4 58	
23	166	46.3		26.2	19	36.0 ¹³⁴	18.0	75	58	56	35	22	32	71	5 07	
24	181	46.5	+0 25.2	34	08.3 ¹³³	-15 10.5	75	60 S	17 56	18 38	19 28	13	22	73	5 19	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 0 ^h 00 ^m 7		Mag: -4.8 PMG: 14 ^h 10 ^m			Mag: -1.6 PMG: 20 ^h 22 ^m			Mag: -1.9 PMG: 15 ^h 11 ^m			Mag: +0.5 PMG: 18 ^h 10 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'
0	359	49.2	147	06.1	-19	15.9	53	58.5	-23	57.7	131	45.8	-17	03.1	86	52.6
1	14	51.7	162	07.5		16.6	69	00.2		57.4	146	47.9		03.3	101	55.0
2	29	54.2	177	08.9		17.3	84	01.9		57.1	161	49.9		03.4	116	57.4
3	44	56.6	192	10.3		18.0	99	03.6		56.7	176	51.9		03.5	131	59.8
4	59	59.1	207	11.7		18.6	114	05.3		56.4	191	54.0		03.6	147	02.2
5	75	01.6	222	13.1	-19	19.3	129	07.0	-23	56.1	206	56.0	-17	03.7	162	04.6
6	90	04.0	237	14.5	-19	20.0	144	08.7	-23	55.8	221	58.0	-17	03.9	177	07.0
7	105	06.5	252	15.9		20.7	159	10.4		55.5	237	00.1		04.0	192	09.4
8	120	09.0	267	17.3		21.4	174	12.1		55.1	252	02.1		04.1	207	11.8
9	135	11.4	282	18.7		22.0	189	13.8		54.8	267	04.1		04.2	222	14.2
10	150	13.9	297	20.1		22.7	204	15.5		54.5	282	06.1		04.4	237	16.6
11	165	16.4	312	21.5	-19	23.4	219	17.2	-23	54.2	297	08.2	-17	04.5	252	19.0
12	180	18.8	327	22.9	-19	24.1	234	18.8	-23	53.8	312	10.2	-17	04.6	267	21.4
13	195	21.3	342	24.3		24.7	249	20.5		53.5	327	12.2		04.7	282	23.8
14	210	23.7	357	25.7		25.4	264	22.2		53.2	342	14.3		04.8	297	26.2
15	225	26.2	12	27.2		26.1	279	23.9		52.9	357	16.3		05.0	312	28.6
16	240	28.7	27	28.6		26.8	294	25.6		52.5	12	18.3		05.1	327	31.0
17	255	31.1	42	30.0	-19	27.4	309	27.3	-23	52.2	27	20.3	-17	05.2	342	33.4
18	270	33.6	57	31.4	-19	28.1	324	29.0	-23	51.9	42	22.4	-17	05.3	357	35.8
19	285	36.1	72	32.8		28.8	339	30.6		51.6	57	24.4		05.4	12	38.2
20	300	38.5	87	34.3		29.4	354	32.3		51.2	72	26.4		05.6	27	40.6
21	315	41.0	102	35.7		30.1	9	34.0		50.9	87	28.5		05.7	42	43.0
22	330	43.5	117	37.1		30.7	24	35.7		50.6	102	30.5		05.8	57	45.4
23	345	45.9	132	38.6		31.4	39	37.4		50.2	117	32.5		05.9	72	47.8
24	0	48.4	147	40.0	-19	32.1	54	39.0	-23	49.9	132	34.5	-17	06.1	87	50.2
Dif	—		+14		-7		+17		+3		+20		-1		+24	
															0	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15'9 PMG: 11 ^h 52 ^m 7			Edad: 12 ^d 2 PHE { 4 ^h : 54'5 12 ^h : 54'6 20 ^h : 54'7 PMG: 22 ^h 24 ^m R°: 45 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°			
h	o	'	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m	
0	181	46.5	+0	25.2	34	08.3	-15	10.5	60 N	4 12	5 02	5 44	17 49	15	1 56	75		
1	196	46.7		24.2	48	40.7 ¹³⁴	-15	02.9	76 58	18	05	44	42	17	2 06	72		
2	211	46.9		23.2	63	13.2 ¹³⁵	-14	55.3	76 56	23	08	45	35	19	14	70		
3	226	47.2		22.3	77	45.6 ¹³⁴		47.5	78 54	28	10	45	29	21	21	68		
4	241	47.4		21.3	92	18.0 ¹³⁴		39.7	78 52	32	12	46	24	23	28	66		
5	256	47.6	+0	20.3	106	50.5 ¹³⁵	-14	31.9	78 50	4 36	5 14	5 46	17 19	24	2 34	64		
6	271	47.8	+0	19.3	121	23.0 ¹³⁵	-14	23.9	80 45	4 43	5 17	5 47	17 08	28	2 47	61		
7	286	48.0		18.4	135	55.6 ¹³⁶		15.9	80 40	49	20	47	16 59	31	2 57	58		
8	301	48.3		17.4	150	28.1 ¹³⁵	-14	07.9	80 35	53	23	48	52	33	3 06	56		
9	316	48.5		16.4	165	00.7 ¹³⁶	-13	59.8	81 30	4 56	24	48	45	35	14	54		
10	331	48.7		15.5	179	33.2 ¹³⁵		51.6	82 20	5 01	27	49	33	39	27	51		
11	346	48.9	+0	14.5	194	05.8 ¹³⁶	-13	43.3	83 10 N	5 04	5 28	5 49	16 23	42	3 39	48		
12	1	49.1	+0	13.5	208	38.5 ¹³⁷	-13	35.0	83 0	5 05	5 29	5 49	16 14	44	3 50	45		
13	16	49.4		12.5	223	11.1 ¹³⁶		26.6	84 10 S	04	29	50	16 04	48	4 01	42		
14	31	49.6		11.6	237	43.8 ¹³⁷		18.1	85 20	5 02	28	50	15 54	50	13	39		
15	46	49.8		10.6	252	16.5 ¹³⁷		09.6	85 30	4 58	26	50	42	54	26	36		
16	61	50.0		09.6	266	49.2 ¹³⁷	-13	01.0	86 35	55	24	50	35	56	33	34		
17	76	50.2	+0	08.7	281	21.9 ¹³⁷	-12	52.4	86 40	4 51	5 23	5 50	15 27	59	4 42	32		
18	91	50.5	+0	07.7	295	54.6 ¹³⁷	-12	43.7	87 45	4 46	5 20	5 49	15 18	62	4 52	29		
19	106	50.7		06.7	310	27.4 ¹³⁸		34.9	88 50	39	17	49	07	65	5 04	26		
20	121	50.9		05.7	325	00.1 ¹³⁷		26.1	88 52	36	15	49	15 02	67	10	24		
21	136	51.1		04.8	339	32.9 ¹³⁸		17.3	88 54	32	14	49	14 56	69	16	23		
22	151	51.3		03.8	354	05.7 ¹³⁸	-12	08.3	90 56	28	12	49	50	71	23	21		
23	166	51.6		02.8	8	38.5 ¹³⁸	-11	59.3	90 58	23	10	49	43	73	30	19		
24	181	51.8	+0	01.8	23	11.4 ¹³⁹	-11	50.3	90 60 S	4 17	5 07	5 48	14 35	76	5 39	16		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG 23 ^h 52 ^m 9			Mag: -4.8 PMG: 14 ^h 08 ^m			Mag: -1.5 PMG: 20 ^h 19 ^m			Mag: -1.9 PMG: 15 ^h 08 ^m			Mag: +0.5 PMG: 18 ^h 06 ^m					
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'		
0	0	48.4	147	40.0	-19	32.1	54	39.0	-23	49.9	132	34.5	-17	06.1	87	50.2	-22	44.5
1	15	50.8	162	41.5		32.7	69	40.7		49.6	147	36.6		06.2	102	52.6		44.5
2	30	53.3	177	42.9		33.4	84	42.4		49.3	162	38.6		06.3	117	55.0		44.5
3	45	55.8	192	44.4		34.0	99	44.1		48.9	177	40.6		06.4	132	57.4		44.5
4	60	58.2	207	45.8		34.7	114	45.7		48.6	192	42.6		06.5	147	59.8		44.5
5	76	00.7	222	47.3	-19	35.4	129	47.4	-23	48.3	207	44.7	-17	06.7	163	02.2	-22	44.5
6	91	03.2	237	48.7	-19	36.0	144	49.1	-23	47.9	222	46.7	-17	06.8	178	04.5	-22	44.5
7	106	05.6	252	50.2		36.7	159	50.8		47.6	237	48.7		06.9	193	06.9		44.5
8	121	08.1	267	51.6		37.3	174	52.4		47.3	252	50.8		07.0	208	09.3		44.5
9	136	10.6	282	53.1		38.0	189	54.1		47.0	267	52.8		07.2	223	11.7		44.5
10	151	13.0	297	54.6		38.6	204	55.8		46.6	282	54.8		07.3	238	14.1		44.5
11	166	15.5	312	56.0	-19	39.3	219	57.4	-23	46.3	297	56.8	-17	07.4	253	16.5	-22	44.5
12	181	18.0	327	57.5	-19	39.9	234	59.1	-23	46.0	312	58.9	-17	07.5	268	18.9	-22	44.5
13	196	20.4	342	59.0		40.5	250	00.8		45.6	328	00.9		07.6	283	21.3		44.5
14	211	22.9	358	00.5		41.2	265	02.4		45.3	343	02.9		07.8	298	23.7		44.5
15	226	25.3	13	01.9		41.8	280	04.1		45.0	358	04.9		07.9	313	26.1		44.6
16	241	27.8	28	03.4		42.5	295	05.8		44.6	13	07.0		08.0	328	28.5		44.6
17	256	30.3	43	04.9	-19	43.1	310	07.4	-23	44.3	28	09.0	-17	08.1	343	30.9	-22	44.6
18	271	32.7	58	06.4	-19	43.8	325	09.1	-23	44.0	43	11.0	-17	08.3	358	33.3	-22	44.6
19	286	35.2	73	07.9		44.4	340	10.7		43.6	58	13.0		08.4	13	35.7		44.6
20	301	37.7	88	09.4		45.0	355	12.4		43.3	73	15.1		08.5	28	38.1		44.6
21	316	40.1	103	10.9		45.7	10	14.1		43.0	88	17.1		08.6	43	40.4		44.6
22	331	42.6	118	12.4		46.3	25	15.7		42.6	103	19.1		08.7	58	42.8		44.6
23	346	45.1	133	13.9		46.9	40	17.4		42.3	118	21.1		08.9	73	45.2		44.6
24	1	47.5	148	15.4	-19	47.6	55	19.0	-23	42.0	133	23.1	-17	09.0	88	47.6	-22	44.6
Dif	—			+15 -6			+17 +3			+20 -1			+24 0					

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15°9 PMG: 11 ^h 52 ^m 4			Edad: 13 ^d 2 PHE { 4 ^h : 54 ^m 8 12 ^h : 54 ^m 9 20 ^h : 55 ^m 0 PMG: 23 ^h 09 ^m R°: 44 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°	
h	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m	
0	181	51.8	+0	01.8	23	11.4	-11 50.3	60 N	17 57	18 39	19 28	18 04	13	3 11	76	
1	196	52.0	+0	00.9	37	44.2 ¹³⁸	41.2 ⁹¹	58	57	36	23	17 59	15	18	73	
2	211	52.2	-0	00.1	52	17.1 ¹³⁹	32.0 ⁹²	56	57	34	18	54	18	24	71	
3	226	52.5		01.1	66	50.0 ¹³⁹	22.8 ⁹²	54	57	32	13	50	20	29	69	
4	241	52.7		02.0	81	22.9 ¹³⁹	13.5 ⁹³	52	56	30	10	47	21	34	67	
5	256	52.9	-0	03.0	95	55.8 ¹³⁹	-11 04.2 ⁹³	50	17 56	18 28	19 06	17 43	23	3 38	66	
6	271	53.1	-0	04.0	110	28.7 ¹³⁹	-10 54.8 ⁹⁴	45	17 56	18 25	19 00	17 36	27	3 48	62	
7	286	53.3		05.0	125	01.6 ¹³⁹	45.3 ⁹⁵	40	56	23	18 54	30	29	3 55	60	
8	301	53.6		05.9	139	34.6 ¹⁴⁰	35.8 ⁹⁵	35	56	21	50	25	32	4 02	57	
9	316	53.8		06.9	154	07.5 ¹³⁹	26.3 ⁹⁵	30	56	19	47	20	34	08	55	
10	331	54.0		07.9	168	40.5 ¹⁴⁰	16.7 ⁹⁶	20	55	17	43	12	38	18	51	
11	346	54.2	-0	08.9	183	13.5 ¹⁴⁰	-10 07.1 ⁹⁶	10 N	17 55	18 16	18 41	17 05	41	4 27	47	
12	1	54.4	-0	09.8	197	46.5 ¹⁴⁰	-9 57.4 ⁹⁷	0	17 56	18 16	18 40	16 58	45	4 35	45	
13	16	54.7		10.8	212	19.5 ¹⁴⁰	47.6 ⁹⁸	10 S	56	17	41	52	47	4 52	48	
14	31	54.9		11.8	226	52.5 ¹⁴⁰	37.8 ⁹⁸	20	56	18	44	44	51	4 52	32	
15	46	55.1		12.7	241	25.5 ¹⁴⁰	28.0 ⁹⁸	30	57	21	48	36	55	5 02	34	
16	61	55.3		13.7	255	58.6 ¹⁴¹	18.1 ⁹⁹	35	57	22	52	31	58	07	33	
17	76	55.5	-0	14.7	270	31.6 ¹⁴⁰	-9 08.2 ⁹⁹	40	17 58	18 25	18 56	16 26	60	5 14	30	
18	91	55.8	-0	15.7	285	04.7 ¹⁴¹	-8 58.2 ¹⁰⁰	45	17 58	18 27	19 02	16 20	63	5 21	27	
19	106	56.0		16.6	299	37.7 ¹⁴⁰	48.1 ¹⁰¹	50	59	31	09	12	67	30	24	
20	121	56.2		17.6	314	10.8 ¹⁴¹	38.1 ¹⁰⁰	52	59	33	13	09	68	34	22	
21	136	56.4		18.6	328	43.9 ¹⁴¹	28.0 ¹⁰¹	54	17 59	35	17	05	70	39	20	
22	151	56.6		19.6	343	17.0 ¹⁴¹	17.8 ¹⁰²	56	18 00	37	21	16 01	72	44	18	
23	166	56.8		20.5	357	50.1 ¹⁴¹	-8 07.6 ¹⁰²	58	00	40	27	15 56	74	49	16	
24	181	57.1	-0	21.5	12	23.1 ¹⁴⁰	-7 57.3 ¹⁰³	60 S	18 01	18 42	19 33	15 51	77	5 55	14	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 23 ^h 48 ^m 9		Mag: -4.8 PMG: 14 ^h 06 ^m			Mag: -1.5 PMG: 20 ^h 17 ^m			Mag: -1.9 PMG: 15 ^h 04 ^m			Mag: +0.5 PMG: 18 ^h 02 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'
0	1	47.5	148	15.4	-19	47.6	55	19.0	-23	42.0	133	23.1	-17	09.0	88	47.6
1	16	50.0	163	16.9		48.2	70	20.7		41.6	148	25.2		09.1	103	50.0
2	31	52.5	178	18.4		48.8	85	22.3		41.3	163	27.2		09.2	118	52.4
3	46	54.9	193	19.9		49.5	100	24.0		41.0	178	29.2		09.4	133	54.8
4	61	57.4	208	21.4		50.1	115	25.6		40.6	193	31.2		09.5	148	57.2
5	76	59.8	223	22.9	-19	50.7	130	27.3	-23	40.3	208	33.3	-17	09.6	163	59.6
6	92	02.3	238	24.5	-19	51.3	145	28.9	-23	39.9	223	35.3	-17	09.7	179	02.0
7	107	04.8	253	26.0		52.0	160	30.6		39.6	238	37.3		09.9	194	04.4
8	122	07.2	268	27.5		52.6	175	32.2		39.3	253	39.3		10.0	209	06.7
9	137	09.7	283	29.0		53.2	190	33.9		38.9	268	41.3		10.1	224	09.1
10	152	12.2	298	30.6		53.8	205	35.5		38.6	283	43.4		10.2	239	11.5
11	167	14.6	313	32.1	-19	54.4	220	37.1	-23	38.3	298	45.4	-17	10.3	254	13.9
12	182	17.1	328	33.6	-19	55.1	235	38.8	-23	37.9	313	47.4	-17	10.5	269	16.3
13	197	19.6	343	35.2		55.7	250	40.4		37.6	328	49.4		10.6	284	18.7
14	212	22.0	358	36.7		56.3	265	42.1		37.2	343	51.5		10.7	299	21.1
15	227	24.5	373	38.2		56.9	280	43.7		36.9	358	53.5		10.8	314	23.5
16	242	26.9	388	39.8		57.5	295	45.3		36.6	373	55.5		11.0	329	25.9
17	257	29.4	403	41.3	-19	58.1	310	47.0	-23	36.2	388	57.5	-17	11.1	344	28.2
18	272	31.9	418	42.9	-19	58.7	325	48.6	-23	35.9	403	59.5	-17	11.2	359	30.6
19	287	34.3	433	44.4	-19	59.4	340	50.2		35.5	418	01.6		11.3	374	33.0
20	302	36.8	448	46.0	-20	00.0	355	51.9		35.2	433	03.6		11.4	389	35.4
21	317	39.3	463	47.6	-20	00.6	370	53.5		34.9	448	05.6		11.6	404	37.8
22	332	41.7	478	49.1		01.2	385	55.1		34.5	463	07.6		11.7	419	40.2
23	347	44.2	493	50.7		01.8	400	56.8		34.2	478	09.6		11.8	434	42.6
24	2	46.7	508	52.3	-20	02.4	415	58.4	-23	33.8	493	11.7	-17	11.9	449	45.0
Dif	—		+15			-6	+16		+3		+20		-1		+24	
															0	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15'9 PMG: 11 ^h 52 ^m 0			Edad: 14 ^d 2 PHE { SD: 15'1 PMG: 23 ^h 53 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m	
0	181	57.1	-0	21.5	12	23.1	-7	57.3	4	17	5	07	5	49	18	17
1	196	57.3		22.5	26	56.2 ¹⁴¹		47.1 ¹⁰²	23	09		49		14	15	
2	211	57.5		23.4	41	29.4 ¹⁴²		36.7 ¹⁰⁴	28	12		49		12	17	
3	226	57.7		24.4	56	02.5 ¹⁴¹		26.4 ¹⁰³	32	14		49		10	19	
4	241	57.9		25.4	70	35.6 ¹⁴¹		16.0 ¹⁰⁴	36	15		49		08	21	
5	256	58.2	-0	26.4	85	08.7 ¹⁴¹	-7	05.5 ¹⁰⁵	4	39	5	17	5	49	18	06
6	271	58.4	-0	27.3	99	41.8 ¹⁴¹	-6	55.0 ¹⁰⁵	4	46	5	20	5	49	18	03
7	286	58.6		28.3	114	14.9 ¹⁴¹		44.5 ¹⁰⁵	51	22		49		17	59	
8	301	58.8		29.3	128	48.1 ¹⁴²		33.9 ¹⁰⁶	55	24		49		57	31	
9	316	59.0		30.3	143	21.2 ¹⁴¹		23.4 ¹⁰⁵	4	58	25	49		54	34	
10	331	59.3		31.2	157	54.3 ¹⁴¹		12.7 ¹⁰⁷	5	02	27	49		50	38	
11	346	59.5	-0	32.2	172	27.4 ¹⁴¹	-6	02.1 ¹⁰⁶	5	04	5	28	5	49	17	46
12	1	59.7	-0	33.2	187	00.6 ¹⁴²	-5	51.4 ¹⁰⁷	5	04	5	28	5	49	17	43
13	16	59.9		34.2	201	33.7 ¹⁴¹		40.6 ¹⁰⁸	03	27		48		39	48	
14	32	00.1		35.1	216	06.8 ¹⁴¹		29.9 ¹⁰⁷	5	00	26	48		35	52	
15	47	00.3		36.1	230	39.9 ¹⁴¹		19.1 ¹⁰⁸	4	56	23	47		31	56	
16	62	00.6		37.1	245	13.1 ¹⁴²	-5	08.3 ¹⁰⁸	52	22		47		29	58	
17	77	00.8	-0	38.0	259	46.2 ¹⁴¹	-4	57.4 ¹⁰⁹	4	48	5	19	5	46	17	26
18	92	01.0	-0	39.0	274	19.3 ¹⁴¹	-4	46.5 ¹⁰⁹	4	42	5	16	5	46	17	23
19	107	01.2		40.0	288	52.4 ¹⁴¹		35.6 ¹⁰⁹	34	13		45		19	67	
20	122	01.4		41.0	303	25.5 ¹⁴¹		24.7 ¹⁰⁹	31	11		44		17	69	
21	137	01.7		41.9	317	58.6 ¹⁴¹		13.7 ¹¹⁰	27	09		44		15	71	
22	152	01.9		42.9	332	31.7 ¹⁴¹	-4	02.7 ¹¹⁰	22	06		43		13	73	
23	167	02.1		43.9	347	04.8 ¹⁴¹	-3	51.7 ¹¹⁰	17	04		43		10	76	
24	182	02.3	-0	44.9	1	37.8 ¹⁴⁰	-3	40.6 ¹¹¹	4	11	5	01	5	42	17	08
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 23 ^h 45 ^m 0			Mag: -4.8 PMG: 14 ^h 03 ^m			Mag: -1.5 PMG: 20 ^h 14 ^m			Mag: -1.9 PMG: 15 ^h 01 ^m			Mag: +0.5 PMG: 17 ^h 58 ^m			
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'
0	2	46.7	148	52.3	-20	02.4	55	58.4	-23	33.8	134	11.7	-17	11.9	89	45.0
1	17	49.1	163	53.8		03.0	71	00.0		33.5	149	13.7		12.1	104	47.3
2	32	51.6	178	55.4		03.6	86	01.7		33.2	164	15.7		12.2	119	49.7
3	47	54.1	193	57.0		04.2	101	03.3		32.8	179	17.7		12.3	134	52.1
4	62	56.5	208	58.6		04.8	116	04.9		32.5	194	19.7		12.4	149	54.5
5	77	59.0	224	00.1	-20	05.4	131	06.5	-23	32.1	209	21.8	-17	12.6	164	56.9
6	93	01.4	239	01.7	-20	06.0	146	08.2	-23	31.8	224	23.8	-17	12.7	179	59.3
7	108	03.9	254	03.3		06.6	161	09.8		31.4	239	25.8		12.8	195	01.7
8	123	06.4	269	04.9		07.2	176	11.4		31.1	254	27.8		12.9	210	04.0
9	138	08.8	284	06.5		07.7	191	13.0		30.8	269	29.8		13.0	225	06.4
10	153	11.3	299	08.1		08.3	206	14.6		30.4	284	31.8		13.2	240	08.8
11	168	13.8	314	09.7	-20	08.9	221	16.3	-23	30.1	299	33.9	-17	13.3	255	11.2
12	183	16.2	329	11.3	-20	09.5	236	17.9	-23	29.7	314	35.9	-17	13.4	270	13.6
13	198	18.7	344	12.9		10.1	251	19.5		29.4	329	37.9		13.5	285	16.0
14	213	21.2	359	14.5		10.7	266	21.1		29.0	344	39.9		13.7	300	18.4
15	228	23.6	14	16.1		11.3	281	22.7		28.7	359	41.9		13.8	315	20.7
16	243	26.1	29	17.7		11.9	296	24.3		28.3	14	43.9		13.9	330	23.1
17	258	28.5	44	19.3	-20	12.4	311	26.0	-23	28.0	29	46.0	-17	14.0	345	25.5
18	273	31.0	59	21.0	-20	13.0	326	27.6	-23	27.7	44	48.0	-17	14.2	0	27.9
19	288	33.5	74	22.6		13.6	341	29.2		27.3	59	50.0		14.3	15	30.3
20	303	35.9	89	24.2		14.2	356	30.8		27.0	74	52.0		14.4	30	32.7
21	318	38.4	104	25.8		14.8	11	32.4		26.6	89	54.0		14.5	45	35.0
22	333	40.9	119	27.5		15.3	26	34.0		26.3	104	56.0		14.7	60	37.4
23	348	43.3	134	29.1		15.9	41	35.6		25.9	119	58.1		14.8	75	39.8
24	3	45.8	149	30.7	-20	16.5	56	37.2	-23	25.6	135	00.1	-17	14.9	90	42.2
Dif	—		+16	-6			+16	+3			+20	-1			+24	0

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 : 55/6 12 ^h : 55/8 20 ^h : 55/9	SD: 15 ^h 2			Civil	Náutico	Hora	R°	Hora	R°		
	PMG: 11 ^h 51 ^m 7					PMG: *** ^h ** ^m										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif									
h	o	'	o	'	o	'	o	°	h m	h m	h m	h m m	h m m	h m m	h m m	
0	182	02.3	-0	44.9	1	37.8	-3	40.6	60 N	17 51	18 32	19 22	18 29 13	5 45 79		
1	197	02.5		45.8	16	10.9 ¹⁴¹		29.6 ¹¹⁰	58	51	30	17	29 15	46 77		
2	212	02.7		46.8	30	44.0 ¹⁴¹		18.5 ¹¹¹	56	51	28	12	29 17	48 74		
3	227	03.0		47.8	45	17.0 ¹⁴⁰	-3	07.4 ¹¹¹	54	52	27	08	29 19	49 72		
4	242	03.2		48.7	59	50.1 ¹⁴¹	-2	56.2 ¹¹²	52	52	25	05	29 21	50 70		
5	257	03.4	-0	49.7	74	23.1 ¹⁴⁰	-2	45.1 ¹¹¹	50	17 52	18 24	19 02	18 29 22	5 51 68		
6	272	03.6	-0	50.7	88	56.1 ¹⁴⁰	-2	33.9 ¹¹²	45	17 52	18 21	18 56	18 28 26	5 53 64		
7	287	03.8		51.7	103	29.1 ¹⁴⁰		22.7 ¹¹²	40	52	19	51	28 29	55 61		
8	302	04.1		52.6	118	02.1 ¹⁴⁰		11.5 ¹¹²	35	53	18	47	28 32	56 59		
9	317	04.3		53.6	132	35.1 ¹⁴⁰	-2	00.2 ¹¹³	30	53	17	45	28 34	5 58 56		
10	332	04.5		54.6	147	08.1 ¹⁴⁰	-1	49.0 ¹¹²	20	54	16	41	28 38	6 00 52		
11	347	04.7	-0	55.6	161	41.0 ¹³⁹	-1	37.7 ¹¹³	10 N	17 54	18 15	18 40	18 27 42	6 02 48		
12	2	04.9	-0	56.5	176	14.0 ¹⁴⁰	-1	26.4 ¹¹³	0	17 55	18 16	18 40	18 27 46	6 04 45		
13	17	05.1		57.5	190	46.9 ¹³⁹		15.1 ¹¹³	10 S	56	17	41	27 49	06 41		
14	32	05.4		58.5	205	19.8 ¹³⁹	-1	03.8 ¹¹³	20	57	19	44	27 52	08 38		
15	47	05.6	-0	59.5	219	52.7 ¹³⁹	-0	52.5 ¹¹³	30	58	22	50	27 56	10 34		
16	62	05.8	-1	00.4	234	25.6 ¹³⁹		41.2 ¹¹³	35	59	24	53	27 59	11 32		
17	77	06.0	-1	01.4	248	58.5 ¹³⁹	-0	29.8 ¹¹⁴	40	17 59	18 27	18 58	18 27 61	6 13 28		
18	92	06.2	-1	02.4	263	31.3 ¹³⁸	-0	18.5 ¹¹³	45	18 00	18 30	19 04	18 26 66	6 14 26		
19	107	06.4		03.3	278	04.1 ¹³⁸	-0	07.1 ¹¹⁴	50	02	34	12	26 69	16 22		
20	122	06.7		04.3	292	36.9 ¹³⁸	+0	04.3 ¹¹⁴	52	02	36	16	26 71	17 20		
21	137	06.9		05.3	307	09.7 ¹³⁸		15.6 ¹¹³	54	03	38	21	26 73	18 19		
22	152	07.1		06.3	321	42.5 ¹³⁸		27.0 ¹¹⁴	56	04	41	26	26 75	19 17		
23	167	07.3		07.2	336	15.2 ¹³⁷		38.4 ¹¹⁴	58	05	44	31	26 77	20 15		
24	182	07.5	-1	08.2	350	47.9 ¹³⁷	+0	49.8 ¹¹⁴	60 S	18 05	18 47	19 38	18 26 80	6 21 12		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 23 ^h 41 ^m 1			Mag: -4.8 PMG: 14 ^h 00 ^m			Mag: -1.5 PMG: 20 ^h 11 ^m			Mag: -1.9 PMG: 14 ^h 58 ^m			Mag: +0.5 PMG: 17 ^h 54 ^m			
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'
0	3	45.8	149	30.7	-20	16.5	56	37.2	-23	25.6	135	00.1	-17	14.9	90	42.2
1	18	48.3	164	32.4		17.0	71	38.8		25.2	150	02.1		15.0	105	44.6
2	33	50.7	179	34.0		17.6	86	40.4		24.9	165	04.1		15.1	120	47.0
3	48	53.2	194	35.7		18.2	101	42.0		24.5	180	06.1		15.3	135	49.3
4	63	55.7	209	37.3		18.8	116	43.6		24.2	195	08.1		15.4	150	51.7
5	78	58.1	224	39.0	-20	19.3	131	45.3	-23	23.8	210	10.1	-17	15.5	165	54.1
6	94	00.6	239	40.6	-20	19.9	146	46.9	-23	23.5	225	12.2	-17	15.6	180	56.5
7	109	03.0	254	42.3		20.4	161	48.5		23.1	240	14.2		15.8	195	58.9
8	124	05.5	269	43.9		21.0	176	50.1		22.8	255	16.2		15.9	211	01.2
9	139	08.0	284	45.6		21.6	191	51.6		22.4	270	18.2		16.0	226	03.6
10	154	10.4	299	47.3		22.1	206	53.2		22.1	285	20.2		16.1	241	06.0
11	169	12.9	314	48.9	-20	22.7	221	54.8	-23	21.7	300	22.2	-17	16.3	256	08.4
12	184	15.4	329	50.6	-20	23.2	236	56.4	-23	21.4	315	24.2	-17	16.4	271	10.8
13	199	17.8	344	52.3		23.8	251	58.0		21.0	330	26.3		16.5	286	13.1
14	214	20.3	359	54.0		24.4	266	59.6		20.7	345	28.3		16.6	301	15.5
15	229	22.8	14	55.6		24.9	282	01.2		20.3	0	30.3		16.8	316	17.9
16	244	25.2	29	57.3		25.5	297	02.8		20.0	15	32.3		16.9	331	20.3
17	259	27.7	44	59.0	-20	26.0	312	04.4	-23	19.6	30	34.3	-17	17.0	346	22.7
18	274	30.1	60	00.7	-20	26.6	327	06.0	-23	19.3	45	36.3	-17	17.1	1	25.0
19	289	32.6	75	02.4		27.1	342	07.6		18.9	60	38.3		17.2	16	27.4
20	304	35.1	90	04.1		27.7	357	09.2		18.6	75	40.3		17.4	31	29.8
21	319	37.5	105	05.8		28.2	12	10.8		18.2	90	42.4		17.5	46	32.2
22	334	40.0	120	07.5		28.7	27	12.3		17.9	105	44.4		17.6	61	34.6
23	349	42.5	135	09.2		29.3	42	13.9		17.5	120	46.4		17.7	76	36.9
24	4	44.9	150	10.9	-20	29.8	57	15.5	-23	17.1	135	48.4	-17	17.9	91	39.3
Dif	—			+17 -6			+16 +4			+20 -1			+24 0			

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'0 PMG: 11 ^h 51 ^m 3			Edad: 16 ^d 2 PHE { 4 ^h : 56'1 12 ^h : 56'2 20 ^h : 56'4 SD: 15'3 PMG: 0 ^h 38 ^m R°: 46 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	o	'	o	'	o	'	o	'	h	m	h	m	h	m	h	m		
0	182	07.5	-1	08.2	350	47.9	+0	49.8	60 N	4 22	5 12	5 53	18 42	13	7 04	81		
1	197	07.7		09.2	5	20.6 ¹³⁷	+1	01.2 ¹¹⁴	58	27	14	53	44	16	03	78		
2	212	07.9		10.2	19	53.3 ¹³⁷		12.6 ¹¹⁴	56	32	16	53	46	19	02	75		
3	227	08.2		11.1	34	25.9 ¹³⁶		24.1 ¹¹⁵	54	36	17	53	48	20	01	73		
4	242	08.4		12.1	48	58.5 ¹³⁶		35.5 ¹¹⁴	52	39	19	52	50	22	7 00	71		
5	257	08.6	-1	13.1	63	31.1 ¹³⁶	+1	46.9 ¹¹⁴	50	4 42	5 20	5 52	18 51	24	6 59	70		
6	272	08.8	-1	14.1	78	03.7 ¹³⁶	+1	58.3 ¹¹⁴	45	4 48	5 22	5 52	18 54	28	6 57	66		
7	287	09.0		15.0	92	36.2 ¹³⁵	+2	09.7 ¹¹⁴	40	53	24	51	18 57	31	56	63		
8	302	09.2		16.0	107	08.8 ¹³⁶		21.1 ¹¹⁴	35	56	26	51	19 00	33	55	60		
9	317	09.5		17.0	121	41.2 ¹³⁴		32.5 ¹¹⁴	30	4 59	27	50	02	36	54	57		
10	332	09.7		17.9	136	13.7 ¹³⁵		43.9 ¹¹⁴	20	5 02	28	50	06	40	52	53		
11	347	09.9	-1	18.9	150	46.1 ¹³⁴	+2	55.3 ¹¹⁴	10 N	5 04	5 28	5 49	19 09	44	6 50	50		
12	2	10.1	-1	19.9	165	18.5 ¹³⁴	+3	06.7 ¹¹⁴	0	5 03	5 27	5 48	19 13	46	6 49	46		
13	17	10.3		20.9	179	50.9 ¹³⁴		18.1 ¹¹⁴	10 S	5 02	26	47	16	50	47	43		
14	32	10.5		21.8	194	23.2 ¹³³		29.5 ¹¹⁴	20	4 58	24	46	19	54	46	39		
15	47	10.7		22.8	208	55.5 ¹³³		40.9 ¹¹⁴	30	53	21	45	23	59	44	35		
16	62	11.0		23.8	223	27.8 ¹³³	+3	52.2 ¹¹³	35	49	19	44	26	60	43	32		
17	77	11.2	-1	24.8	238	00.0 ¹³²	+4	03.6 ¹¹⁴	40	4 44	5 16	5 43	19 28	64	6 41	30		
18	92	11.4	-1	25.7	252	32.2 ¹³²	+4	14.9 ¹¹³	45	4 38	5 12	5 42	19 32	66	6 40	27		
19	107	11.6		26.7	267	04.4 ¹³²		26.3 ¹¹⁴	50	30	08	40	35	71	38	23		
20	122	11.8		27.7	281	36.5 ¹³¹		37.6 ¹¹³	52	26	06	40	37	72	37	22		
21	137	12.0		28.6	296	08.6 ¹³¹	+4	48.9 ¹¹³	54	21	04	39	39	74	37	19		
22	152	12.2		29.6	310	40.6 ¹³⁰	+5	00.2 ¹¹³	56	16	5 01	38	41	76	36	17		
23	167	12.5		30.6	325	12.7 ¹³¹		11.5 ¹¹³	58	11	4 58	37	43	79	35	15		
24	182	12.7	-1	31.6	339	44.6 ¹²⁹	+5	22.7 ¹¹²	60 S	4 04	4 54	5 36	19 46	82	6 33	13		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 23 ^h 37 ^m 1		Mag: -4.8 PMG: 13 ^h 58 ^m				Mag: -1.4 PMG: 20 ^h 09 ^m				Mag: -1.9 PMG: 14 ^h 55 ^m				Mag: +0.5 PMG: 17 ^h 51 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'
0	4	44.9	150	10.9	-20	29.8	57	15.5	-23	17.1	135	48.4	-17	17.9	91	39.3	-22	44.9
1	19	47.4	165	12.6		30.4	72	17.1		16.8	150	50.4		18.0	106	41.7		44.9
2	34	49.9	180	14.3		30.9	87	18.7		16.4	165	52.4		18.1	121	44.1		44.9
3	49	52.3	195	16.0		31.4	102	20.3		16.1	180	54.4		18.2	136	46.5		44.9
4	64	54.8	210	17.7		32.0	117	21.8		15.7	195	56.4		18.4	151	48.8		44.9
5	79	57.3	225	19.5	-20	32.5	132	23.4	-23	15.4	210	58.5	-17	18.5	166	51.2	-22	44.9
6	94	59.7	240	21.2	-20	33.0	147	25.0	-23	15.0	226	00.5	-17	18.6	181	53.6	-22	44.9
7	110	02.2	255	22.9		33.6	162	26.6		14.7	241	02.5		18.7	196	56.0		44.9
8	125	04.6	270	24.6		34.1	177	28.2		14.3	256	04.5		18.9	211	58.3		44.9
9	140	07.1	285	26.4		34.6	192	29.7		14.0	271	06.5		19.0	227	00.7		44.9
10	155	09.6	300	28.1		35.2	207	31.3		13.6	286	08.5		19.1	242	03.1		44.9
11	170	12.0	315	29.8	-20	35.7	222	32.9	-23	13.2	301	10.5	-17	19.2	257	05.5	-22	45.0
12	185	14.5	330	31.6	-20	36.2	237	34.5	-23	12.9	316	12.5	-17	19.4	272	07.8	-22	45.0
13	200	17.0	345	33.3		36.7	252	36.0		12.5	331	14.5		19.5	287	10.2		45.0
14	215	19.4	0	35.1		37.3	267	37.6		12.2	346	16.5		19.6	302	12.6		45.0
15	230	21.9	15	36.8		37.8	282	39.2		11.8	1	18.6		19.7	317	15.0		45.0
16	245	24.4	30	38.6		38.3	297	40.7		11.4	16	20.6		19.9	332	17.3		45.0
17	260	26.8	45	40.4	-20	38.8	312	42.3	-23	11.1	31	22.6	-17	20.0	347	19.7	-22	45.0
18	275	29.3	60	42.1	-20	39.3	327	43.9	-23	10.7	46	24.6	-17	20.1	2	22.1	-22	45.0
19	290	31.7	75	43.9		39.8	342	45.4		10.4	61	26.6		20.2	17	24.5		45.0
20	305	34.2	90	45.6		40.4	357	47.0		10.0	76	28.6		20.3	32	26.8		45.0
21	320	36.7	105	47.4		40.9	12	48.6		09.7	91	30.6		20.5	47	29.2		45.0
22	335	39.1	120	49.2		41.4	27	50.1		09.3	106	32.6		20.6	62	31.6		45.0
23	350	41.6	135	51.0		41.9	42	51.7		08.9	121	34.6		20.7	77	34.0		45.0
24	5	44.1	150	52.7	-20	42.4	57	53.3	-23	08.6	136	36.6	-17	20.8	92	36.3	-22	45.0
Dif	—		+17		-5		+16		+4		+20		-1		+24			

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16°0 PMG: 11 ^h 51 ^m 0			Edad: 17 ^d 2 PHE { 4 ^h : 56'6 12 ^h : 56'7 20 ^h : 56'9 R°: 47 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°	
h	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m	
0	182	12.7	-1	31.6	339	44.6	+5 22.7	60 N	17 45	18 26	19 15	18 55	17	8 25	82	
1	197	12.9		32.5	354	16.6 ¹³⁰	34.0 ¹¹³	58	46	25	11	19 00	19	21	79	
2	212	13.1		33.5	8	48.5 ¹²⁹	45.2 ¹¹²	56	46	23	07	05	21	17	77	
3	227	13.3		34.5	23	20.3 ¹²⁸	+5 56.4 ¹¹²	54	47	22	03	08	24	14	77	
4	242	13.5		35.5	37	52.2 ¹²⁹	+6 07.6 ¹¹²	52	47	21	19 00	12	25	11	73	
5	257	13.7	-1	36.4	52	23.9 ¹²⁷	+6 18.8 ¹¹²	50	17 47	18 20	18 57	19 15	27	8 09	71	
6	272	14.0	-1	37.4	66	55.7 ¹²⁸	+6 29.9 ¹¹¹	45	17 48	18 18	18 52	19 22	31	8 03	67	
7	287	14.2		38.4	81	27.4 ¹²⁷	41.0 ¹¹¹	40	49	16	48	28	34	7 59	63	
8	302	14.4		39.3	95	59.0 ¹²⁶	+6 52.1 ¹¹¹	35	50	15	44	33	37	55	61	
9	317	14.6		40.3	110	30.6 ¹²⁶	+7 03.2 ¹¹¹	30	51	14	42	38	39	51	59	
10	332	14.8		41.3	125	02.2 ¹²⁶	14.2 ¹¹⁰	20	52	14	39	46	42	45	55	
11	347	15.0	-1	42.3	139	33.7 ¹²⁵	+7 25.2 ¹¹⁰	10 N	17 53	18 14	18 38	19 53	46	7 40	51	
12	2	15.2	-1	43.2	154	05.2 ¹²⁵	+7 36.2 ¹¹⁰	0	17 54	18 15	18 39	19 59	50	7 35	48	
13	17	15.4		44.2	168	36.6 ¹²⁴	47.2 ¹¹⁰	10 S	56	17	41	20 06	52	30	44	
14	32	15.7		45.2	183	08.0 ¹²⁴	+7 58.1 ¹⁰⁹	20	57	19	45	13	56	25	41	
15	47	15.9		46.2	197	39.3 ¹²³	+8 09.0 ¹⁰⁹	30	17 59	23	51	22	59	19	37	
16	62	16.1		47.1	212	10.6 ¹²³	19.9 ¹⁰⁹	35	18 00	25	18 55	26	62	15	35	
17	77	16.3	-1	48.1	226	41.8 ¹²²	+8 30.7 ¹⁰⁸	40	18 01	18 28	19 00	20 32	64	7 11	32	
18	92	16.5	-1	49.1	241	13.0 ¹²²	+8 41.5 ¹⁰⁸	45	18 03	18 32	19 07	20 38	68	7 07	29	
19	107	16.7		50.0	255	44.1 ¹²¹	+8 52.2 ¹⁰⁷	50	05	37	16	46	71	7 01	26	
20	122	16.9		51.0	270	15.2 ¹²¹	+9 03.0 ¹⁰⁸	52	06	40	20	49	74	6 59	23	
21	137	17.1		52.0	284	46.2 ¹²⁰	13.7 ¹⁰⁷	54	07	42	25	53	76	56	22	
22	152	17.4		53.0	299	17.2 ¹²⁰	24.3 ¹⁰⁶	56	08	45	30	20 57	78	53	20	
23	167	17.6		53.9	313	48.2 ¹²⁰	34.9 ¹⁰⁶	58	09	48	36	21 02	81	50	17	
24	182	17.8	-1	54.9	328	19.0 ¹¹⁸	+9 45.5 ¹⁰⁶	60 S	18 10	18 52	19 43	21 08	83	6 46	15	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 23 ^h 33 ^m 2		Mag: -4.8 PMG: 13 ^h 55 ^m			Mag: -1.4 PMG: 20 ^h 06 ^m			Mag: -1.8 PMG: 14 ^h 52 ^m			Mag: +0.5 PMG: 17 ^h 47 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	o	'	o	'	o	o	'	o	o	'	o	o	'	o	'	
0	5	44.1	150	52.7	-20	57	53.3	-23	136	36.6	-17	92	36.3	-22	45.0	
1	20	46.5	165	54.5		72	54.8		151	38.6		107	38.7		45.0	
2	35	49.0	180	56.3		87	56.4		166	40.6		122	41.1		45.0	
3	50	51.5	195	58.1		102	57.9		181	42.7		137	43.5		45.0	
4	65	53.9	210	59.9		117	59.5		196	44.7		152	45.8		45.0	
5	80	56.4	226	01.7	-20	133	01.1	-23	211	46.7	-17	167	48.2	-22	45.0	
6	95	58.9	241	03.5	-20	148	02.6	-23	226	48.7	-17	182	50.6	-22	45.0	
7	111	01.3	256	05.3		163	04.2		241	50.7		197	53.0		45.0	
8	126	03.8	271	07.1		178	05.7		256	52.7		212	55.3		45.0	
9	141	06.2	286	08.9		193	07.3		271	54.7		227	57.7		45.0	
10	156	08.7	301	10.7		208	08.8		286	56.7		243	00.1		45.0	
11	171	11.2	316	12.5	-20	223	10.4	-23	301	58.7	-17	258	02.4	-22	45.1	
12	186	13.6	331	14.3	-20	238	11.9	-23	317	00.7	-17	273	04.8	-22	45.1	
13	201	16.1	346	16.2		253	13.5		332	02.7		288	07.2		45.1	
14	216	18.6	1	18.0		268	15.0		347	04.7		303	09.6		45.1	
15	231	21.0	16	19.8		283	16.6		2	06.7		318	11.9		45.1	
16	246	23.5	31	21.6		298	18.1		17	08.7		333	14.3		45.1	
17	261	26.0	46	23.5	-20	313	19.7	-23	32	10.7	-17	348	16.7	-22	45.1	
18	276	28.4	61	25.3	-20	328	21.2	-23	47	12.7	-17	3	19.1	-22	45.1	
19	291	30.9	76	27.1		343	22.8		62	14.8		18	21.4		45.1	
20	306	33.4	91	29.0		358	24.3		77	16.8		33	23.8		45.1	
21	321	35.8	106	30.8		13	25.9		92	18.8		48	26.2		45.1	
22	336	38.3	121	32.7		28	27.4		107	20.8		63	28.5		45.1	
23	351	40.7	136	34.5		43	29.0	-23	122	22.8		78	30.9		45.1	
24	6	43.2	151	36.4	-20	58	30.5	-22	137	24.8	-17	93	33.3	-22	45.1	
Dif	—		+18			-5			+20			-1			+24	

UT	SOL		LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'0		Edad: 18 ^d 2 PHE { 4 ^h : 57'1 12 ^h : 57'2 20 ^h : 57'4												
	PMG: 11 ^h 50 ^m 6		SD: 15'6 PMG: 2 ^h 11 ^m R°: 50 ^m												
	hG ☉	Dec	hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m
0	182	17.8	-1	54.9	328	19.0	+9 45.5	60 N	4 27	5 17	5 58	19 12	21	9 47	83
1	197	18.0		55.9	342	49.8 ¹¹⁸	+9 56.0 ¹⁰⁵	58	32	18	57	19 24		40	80
2	212	18.2		56.9	357	20.6 ¹¹⁸	+10 06.5 ¹⁰⁵	56	36	20	57	26 26		34	78
3	227	18.4		57.8	11	51.3 ¹¹⁷	16.9 ¹⁰⁴	54	39	21	56	32 28		29	75
4	242	18.6		58.8	26	22.0 ¹¹⁷	27.3 ¹⁰⁴	52	43	22	56	37 31		24	73
5	257	18.8	-1	59.8	40	52.6 ¹¹⁶	+10 37.7 ¹⁰⁴	50	4 45	5 23	5 55	19 42	32	9 20	71
6	272	19.0	-2	00.7	55	23.1 ¹¹⁵	+10 48.0 ¹⁰³	45	4 51	5 25	5 54	19 53	35	9 10	68
7	287	19.3		01.7	69	53.6 ¹¹⁵	+10 58.2 ¹⁰²	40	55	26	53	20 02	38	9 02	65
8	302	19.5		02.7	84	24.0 ¹¹⁴	+11 08.4 ¹⁰²	35	4 58	27	52	10 40		8 56	62
9	317	19.7		03.7	98	54.4 ¹¹⁴	18.6 ¹⁰²	30	5 00	28	52	17 42		50	60
10	332	19.9		04.6	113	24.7 ¹¹³	28.7 ¹⁰¹	20	03	28	50	28 46		40	56
11	347	20.1	-2	05.6	127	55.0 ¹¹³	+11 38.8 ¹⁰¹	10 N	5 03	5 28	5 49	20 39	49	8 31	53
12	2	20.3	-2	06.6	142	25.2 ¹¹²	+11 48.8 ¹⁰⁰	0	5 03	5 27	5 47	20 49	51	8 23	50
13	17	20.5		07.5	156	55.3 ¹¹¹	+11 58.7 ⁹⁹	10 S	5 01	25	46	20 58	55	14	48
14	32	20.7		08.5	171	25.4 ¹¹¹	+12 08.6 ⁹⁹	20	4 57	22	44	21 09	58	8 06	44
15	47	20.9		09.5	185	55.4 ¹¹⁰	18.4 ⁹⁸	30	50	18	42	21 61		7 56	40
16	62	21.1		10.5	200	25.4 ¹¹⁰	28.2 ⁹⁸	35	46	16	41	28 63		50	38
17	77	21.4	-2	11.4	214	55.3 ¹⁰⁹	+12 37.9 ⁹⁷	40	4 41	5 13	5 40	21 36	66	7 43	36
18	92	21.6	-2	12.4	229	25.1 ¹⁰⁸	+12 47.6 ⁹⁷	45	4 34	5 09	5 38	21 46	68	7 36	32
19	107	21.8		13.4	243	54.9 ¹⁰⁸	+12 57.2 ⁹⁶	50	25	04	36	21 57	72	27	29
20	122	22.0		14.4	258	24.6 ¹⁰⁷	+13 06.7 ⁹⁵	52	21	5 01	35	22 03	73	22	28
21	137	22.2		15.3	272	54.2 ¹⁰⁶	16.2 ⁹⁵	54	16	4 59	34	09 75		18	25
22	152	22.4		16.3	287	23.8 ¹⁰⁶	25.6 ⁹⁴	56	11	56	33	15 78		13	23
23	167	22.6		17.3	301	53.3 ¹⁰⁵	35.0 ⁹⁴	58	4 04	52	32	23 80		07	21
24	182	22.8	-2	18.2	316	22.8 ¹⁰⁵	+13 44.2 ⁹²	60 S	3 57	4 48	5 30	22 31	83	7 01	18
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG 23 ^h 29 ^m 3		Mag: -4.8 PMG: 13 ^h 52 ^m		Mag: -1.4 PMG: 20 ^h 04 ^m		Mag: -1.8 PMG: 14 ^h 48 ^m		Mag: +0.5 PMG: 17 ^h 43 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	o	'	o	'	o	'	o	'	o	'					
0	6	43.2	151	36.4	-20	54.2	58	30.5	-22	59.8					
1	21	45.7	166	38.2		54.6	73	32.0		59.5					
2	36	48.1	181	40.1		55.1	88	33.6		59.1					
3	51	50.6	196	42.0		55.6	103	35.1		58.7					
4	66	53.1	211	43.8		56.0	118	36.7		58.4					
5	81	55.5	226	45.7	-20	56.5	133	38.2	-22	58.0					
6	96	58.0	241	47.6	-20	57.0	148	39.7	-22	57.6					
7	112	00.5	256	49.5		57.4	163	41.3		57.3					
8	127	02.9	271	51.3		57.9	178	42.8		56.9					
9	142	05.4	286	53.2		58.4	193	44.3		56.5					
10	157	07.8	301	55.1		58.8	208	45.9		56.2					
11	172	10.3	316	57.0	-20	59.3	223	47.4	-22	55.8					
12	187	12.8	331	58.9	-20	59.7	238	48.9	-22	55.4					
13	202	15.2	347	00.8	-21	00.2	253	50.5		55.0					
14	217	17.7	2	02.7		00.6	268	52.0		54.7					
15	232	20.2	17	04.6		01.1	283	53.5		54.3					
16	247	22.6	32	06.5		01.5	298	55.0		53.9					
17	262	25.1	47	08.4	-21	02.0	313	56.6	-22	53.6					
18	277	27.6	62	10.3	-21	02.4	328	58.1	-22	53.2					
19	292	30.0	77	12.2		02.9	343	59.6		52.8					
20	307	32.5	92	14.2		03.3	359	01.1		52.4					
21	322	35.0	107	16.1		03.8	14	02.7		52.1					
22	337	37.4	122	18.0		04.2	29	04.2		51.7					
23	352	39.9	137	19.9		04.7	44	05.7		51.3					
24	7	42.3	152	21.9	-21	05.1	59	07.2	-22	51.0					
Dif	—		+19		-5		+15		+4						
							+20		-1						
									+24						
									0						

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16/0 PMG: 11 ^h 50 ^m 3			Edad: 19 ^d 2 PHE { SD: 15/7 PMG: 3 ^h 01 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°	
h	o	'	o	o	'	o	'	o	h	m	h	m	h	m	h	m
0	182	22.8	-2	316	22.8	+13	44.2	60 N	17 39	18 20	19 09	19 33	29	11 10	82	
1	197	23.0		330	52.2 ¹⁰⁴	+13	53.4	58	40	19	05	43	32	11 00	79	
2	212	23.2		345	21.5 ¹⁰³	+14	02.6	56	41	18	19 01	19 52	34	10 52	76	
3	227	23.5		359	50.8 ¹⁰³		11.7	54	42	17	18 58	20 00	36	44	75	
4	242	23.7		14	20.0 ¹⁰²		20.7	52	42	16	55	08	37	37	73	
5	257	23.9	-2	28	49.1 ¹⁰¹	+14	29.6	50	17 43	18 15	18 53	20 14	39	10 31	71	
6	272	24.1	-2	43	18.2 ¹⁰¹	+14	38.5	45	17 45	18 14	18 48	20 28	42	10 18	68	
7	287	24.3		57	47.2 ¹⁰⁰		47.2	40	46	13	44	40	44	10 07	66	
8	302	24.5		72	16.1 ⁹⁹	+14	56.0	35	47	12	42	50	46	9 58	63	
9	317	24.7		86	45.0 ⁹⁹	+15	04.6	30	48	12	40	20 59	47	50	62	
10	332	24.9		101	13.8 ⁹⁸		13.1	20	50	12	38	21 14	50	36	59	
11	347	25.1	-2	115	42.5 ⁹⁷	+15	21.6	10 N	17 52	18 13	18 37	21 28	52	9 24	56	
12	2	25.3	-2	130	11.2 ⁹⁷	+15	30.0	0	17 54	18 14	18 38	21 40	55	9 13	53	
13	17	25.5		144	39.8 ⁹⁶		38.3	10 S	55	16	41	21 53	57	9 02	50	
14	32	25.7		159	08.4 ⁹⁶		46.6	20	17 58	20	45	22 07	58	8 50	47	
15	47	25.9		173	36.8 ⁹⁴	+15	54.7	30	18 00	24	52	22	62	36	45	
16	62	26.2		188	05.3 ⁹⁵	+16	02.8	35	02	27	18 57	31	64	28	43	
17	77	26.4	-2	202	33.6 ⁹³	+16	10.8	40	18 03	18 30	19 02	22 42	65	8 19	41	
18	92	26.6	-2	217	01.9 ⁹³	+16	18.7	45	18 05	18 35	19 10	22 54	67	8 08	39	
19	107	26.8		231	30.1 ⁹²		26.5	50	08	40	19	23 09	70	7 56	35	
20	122	27.0		245	58.2 ⁹¹		34.2	52	09	43	24	16	72	50	33	
21	137	27.2		260	26.3 ⁹¹		41.9	54	10	46	29	24	73	43	32	
22	152	27.4		274	54.3 ⁹⁰		49.4	56	12	49	35	33	75	36	30	
23	167	27.6		289	22.3 ⁹⁰	+16	56.9	58	13	53	41	43	77	28	27	
24	182	27.8	-2	303	50.1 ⁸⁸	+17	04.3	60 S	18 15	18 57	19 49	23 54	80	7 19	24	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 23 ^h 25 ^m 3		Mag: -4.8 PMG: 13 ^h 49 ^m		Mag: -1.4 PMG: 20 ^h 01 ^m		Mag: -1.8 PMG: 14 ^h 45 ^m		Mag: +0.5 PMG: 17 ^h 39 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	o	'	o	'	o	'	o	'	o	'
0	7	42.3	152	21.9	-21	05.1	59	07.2	-22	51.0
1	22	44.8	167	23.8		05.5	74	08.7		50.6
2	37	47.3	182	25.7		06.0	89	10.3		50.2
3	52	49.7	197	27.7		06.4	104	11.8		49.8
4	67	52.2	212	29.6		06.8	119	13.3		49.5
5	82	54.7	227	31.6	-21	07.3	134	14.8	-22	49.1
6	97	57.1	242	33.5	-21	07.7	149	16.3	-22	48.7
7	112	59.6	257	35.5		08.1	164	17.8		48.3
8	128	02.1	272	37.5		08.5	179	19.4		48.0
9	143	04.5	287	39.4		09.0	194	20.9		47.6
10	158	07.0	302	41.4		09.4	209	22.4		47.2
11	173	09.4	317	43.3	-21	09.8	224	23.9	-22	46.8
12	188	11.9	332	45.3	-21	10.2	239	25.4	-22	46.5
13	203	14.4	347	47.3		10.6	254	26.9		46.1
14	218	16.8	2	49.3		11.1	269	28.4		45.7
15	233	19.3	17	51.3		11.5	284	29.9		45.3
16	248	21.8	32	53.2		11.9	299	31.4		45.0
17	263	24.2	47	55.2	-21	12.3	314	33.0	-22	44.6
18	278	26.7	62	57.2	-21	12.7	329	34.5	-22	44.2
19	293	29.2	77	59.2		13.1	344	36.0		43.8
20	308	31.6	93	01.2		13.5	359	37.5		43.4
21	323	34.1	108	03.2		13.9	14	39.0		43.1
22	338	36.6	123	05.2		14.3	29	40.5		42.7
23	353	39.0	138	07.2		14.7	44	42.0		42.3
24	8	41.5	153	09.3	-21	15.1	59	43.5	-22	41.9
Dif	—		+20		-4		+15		+4	

UT	SOL		☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'0 PMG: 11 ^h 50 ^m 0		Edad: 20 ^d 2 PHE { 4 ^h : 58'0 12 ^h : 58'2 20 ^h : 58'3 SD: 15'8 PMG: 3 ^h 53 ^m R°: 55 ^m												
	hG ☉	Dec	hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m
0	182	27.8	-2	41.5	303	50.1	+17 04.3	60 N	4 32	5 21	6 03	20 02	40	12 32	76
1	197	28.0		42.5	318	17.9	88 11.5	58	37	23	02	15	42	19	74
2	212	28.2		43.5	332	45.7	88 18.7	56	40	24	01	26	44	12 08	72
3	227	28.4		44.5	347	13.4	87 25.8	54	43	25	6 00	36	46	11 59	70
4	242	28.6		45.4	1	41.0	86 32.8	52	46	25	5 59	45	47	50	69
5	257	28.8	-2	46.4	16	08.5	+17 39.7	50	4 48	5 26	5 58	20 53	47	11 42	68
6	272	29.0	-2	47.4	30	36.0	+17 46.4	45	4 53	5 27	5 57	21 10	49	11 26	66
7	287	29.2		48.3	45	03.4	84 53.1	40	57	28	55	24	51	13	64
8	302	29.5		49.3	59	30.8	+17 59.7	35	4 59	29	54	36	52	11 01	63
9	317	29.7		50.3	73	58.1	+18 06.2	30	5 01	29	53	21 46	53	10 52	61
10	332	29.9		51.3	88	25.3	82 12.6	20	03	29	51	22 04	55	35	59
11	347	30.1	-2	52.2	102	52.4	+18 18.9	10 N	5 03	5 28	5 49	22 20	56	10 20	57
12	2	30.3	-2	53.2	117	19.5	+18 25.1	0	5 02	5 26	5 47	22 35	57	10 06	56
13	17	30.5		54.2	131	46.6	81 31.1	10 S	4 59	24	45	22 50	58	9 52	54
14	32	30.7		55.1	146	13.5	79 37.1	20	55	20	42	23 05	60	37	53
15	47	30.9		56.1	160	40.4	79 43.0	30	48	16	40	24	61	21	50
16	62	31.1		57.1	175	07.3	79 48.7	35	43	13	38	35	61	11	48
17	77	31.3	-2	58.0	189	34.0	+18 54.4	40	4 37	5 09	5 36	23 47	63	9 00	47
18	92	31.5	-2	59.0	204	00.8	+18 59.9	45	4 30	5 05	5 34	***	***	8 47	45
19	107	31.7	-3	00.0	218	27.4	+19 05.3	50	20	4 59	32	***	***	31	42
20	122	31.9	-3	01.0	232	54.0	76 10.6	52	16	56	30	***	***	23	42
21	137	32.1		01.9	247	20.6	76 15.8	54	11	53	29	***	***	15	40
22	152	32.3		02.9	261	47.0	74 20.9	56	4 05	50	28	***	***	8 06	38
23	167	32.5		03.9	276	13.5	75 25.9	58	3 58	46	26	***	***	7 55	37
24	182	32.7	-3	04.8	290	39.8	+19 30.7	60 S	3 50	4 42	5 24	***	***	7 43	34
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 23 ^h 21 ^m 4		Mag: -4.8 PMG: 13 ^h 46 ^m		Mag: -1.3 PMG: 19 ^h 59 ^m		Mag: -1.8 PMG: 14 ^h 42 ^m		Mag: +0.5 PMG: 17 ^h 35 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	o	'	o	'	o	'	o	'	o	'					
0	8	41.5	153	09.3	-21	15.1	59	43.5	-22	29.8					
1	23	43.9	168	11.3		15.5	74	45.0		30.0					
2	38	46.4	183	13.3		15.9	89	46.5		30.1					
3	53	48.9	198	15.3		16.3	104	48.0		30.2					
4	68	51.3	213	17.3		16.7	119	49.5		30.3					
5	83	53.8	228	19.4	-21	17.1	134	51.0	-22	30.5					
6	98	56.3	243	21.4	-21	17.5	149	52.5	-22	30.6					
7	113	58.7	258	23.4		17.9	164	54.0		30.7					
8	129	01.2	273	25.5		18.3	179	55.5		30.8					
9	144	03.7	288	27.5		18.7	194	56.9		31.0					
10	159	06.1	303	29.6		19.1	209	58.4		31.1					
11	174	08.6	318	31.6	-21	19.4	224	59.9	-22	31.2					
12	189	11.1	333	33.7	-21	19.8	240	01.4	-22	31.3					
13	204	13.5	348	35.7		20.2	255	02.9		31.5					
14	219	16.0	3	37.8		20.6	270	04.4		31.6					
15	234	18.4	18	39.9		21.0	285	05.9		31.7					
16	249	20.9	33	41.9		21.3	300	07.4		31.8					
17	264	23.4	48	44.0	-21	21.7	315	08.9	-22	32.0					
18	279	25.8	63	46.1	-21	22.1	330	10.3	-22	32.1					
19	294	28.3	78	48.2		22.5	345	11.8		32.2					
20	309	30.8	93	50.2		22.8	0	13.3		32.3					
21	324	33.2	108	52.3		23.2	15	14.8		32.5					
22	339	35.7	123	54.4		23.6	30	16.3		32.6					
23	354	38.2	138	56.5		23.9	45	17.8		32.7					
24	9	40.6	153	58.6	-21	24.3	60	19.2	-22	32.7					
Dif	—		+21	-4		+15	+4		+20	-1					
										+24	0				

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16'0 PMG: 11 ^h 49 ^m 7			Edad: 21 ^d 2 PHE { 4 ^h : 58'5 12 ^h : 58'6 20 ^h : 58'8 SD: 16'0 PMG: 4 ^h 48 ^m R°: 58 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°	
h	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m	
0	182	32.7	-3	04.8	290	39.8	+ 19 30.7	60 N	17 33	18 14	19 03	20 42 56	13 48 64			
1	197	32.9		05.8	305	06.1	73 35.5	58	34	13	18 59	20 57 57	33 64			
2	212	33.1		06.8	319	32.4	73 40.1	56	36	12	56	21 10 57	20 63			
3	227	33.3		07.7	333	58.6	72 44.6	54	37	12	53	22 57	13 09 63			
4	242	33.5		08.7	348	24.7	71 49.0	52	38	11	50	32 57	12 59 63			
5	257	33.7	-3	09.7	2	50.8	71 + 19 53.2	50	17 39	18 11	18 48	21 40 58	12 50 63			
6	272	33.9	-3	10.6	17	16.8	70 + 19 57.4	45	17 41	18 10	18 44	21 59 58	12 32 61			
7	287	34.1		11.6	31	42.8	70 + 20 01.4	40	43	10	41	22 15 58	17 61			
8	302	34.3		12.6	46	08.7	69 05.3	35	44	09	39	28 58	12 04 60			
9	317	34.5		13.6	60	34.6	69 09.0	30	46	10	37	39 58	11 53 60			
10	332	34.7		14.5	75	00.4	68 12.7	20	48	10	36	22 59 58	34 59			
11	347	35.0	-3	15.5	89	26.2	68 + 20 16.2	10 N	17 51	18 12	18 36	23 16 58	11 17 59			
12	2	35.2	-3	16.5	103	51.9	67 + 20 19.6	0	17 53	18 14	18 38	23 32 58	11 02 58			
13	17	35.4		17.4	118	17.6	67 22.9	10 S	55	16	41	23 48 58	10 46 57			
14	32	35.6		18.4	132	43.2	66 26.0	20	17 58	20	46	*** ** *	30 56			
15	47	35.8		19.4	147	08.8	66 29.1	30	18 01	25	53	*** ** *	10 11 55			
16	62	36.0		20.3	161	34.3	65 31.9	35	03	29	18 58	*** ** *	9 59 55			
17	77	36.2	-3	21.3	175	59.8	65 + 20 34.7	40	18 05	18 33	19 05	*** ** *	9 47 54			
18	92	36.4	-3	22.3	190	25.2	64 + 20 37.3	45	18 08	18 37	19 12	0 01 64	9 32 53			
19	107	36.6		23.2	204	50.6	64 39.8	50	11	44	23	19 66	13 53			
20	122	36.8		24.2	219	16.0	64 42.2	52	12	46	27	28 66	9 05 51			
21	137	37.0		25.2	233	41.3	63 44.5	54	14	50	33	37 67	8 55 51			
22	152	37.2		26.2	248	06.6	63 46.6	56	16	53	39	0 48 68	44 50			
23	167	37.4		27.1	262	31.8	62 48.5	58	18	18 58	46	1 00 69	32 49			
24	182	37.6	-3	28.1	276	57.0	62 + 20 50.4	60 S	18 20	19 02	19 55	1 14 71	8 17 48			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 23 ^h 17 ^m 5		Mag: -4.8 PMG: 13 ^h 42 ^m			Mag: -1.3 PMG: 19 ^h 57 ^m			Mag: -1.8 PMG: 14 ^h 39 ^m			Mag: +0.5 PMG: 17 ^h 32 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'
0	9	40.6	153	58.6	-21	24.3	60	19.2	-22	32.7	139	48.7	-17	32.8	96	23.4
1	24	43.1	169	00.7		24.6	75	20.7		32.4	154	50.7		33.0	111	25.8
2	39	45.6	184	02.8		25.0	90	22.2		32.0	169	52.7		33.1	126	28.2
3	54	48.0	199	04.9		25.4	105	23.7		31.6	184	54.7		33.2	141	30.5
4	69	50.5	214	07.0		25.7	120	25.2		31.2	199	56.6		33.4	156	32.9
5	84	52.9	229	09.1	-21	26.1	135	26.6	-22	30.8	214	58.6	-17	33.5	171	35.2
6	99	55.4	244	11.2	-21	26.4	150	28.1	-22	30.4	230	00.6	-17	33.6	186	37.6
7	114	57.9	259	13.4		26.8	165	29.6		30.0	245	02.6		33.7	201	39.9
8	130	00.3	274	15.5		27.1	180	31.1		29.6	260	04.6		33.9	216	42.3
9	145	02.8	289	17.6		27.5	195	32.5		29.3	275	06.6		34.0	231	44.7
10	160	05.3	304	19.7		27.8	210	34.0		28.9	290	08.6		34.1	246	47.0
11	175	07.7	319	21.9	-21	28.2	225	35.5	-22	28.5	305	10.6	-17	34.2	261	49.4
12	190	10.2	334	24.0	-21	28.5	240	37.0	-22	28.1	320	12.6	-17	34.4	276	51.7
13	205	12.7	349	26.2		28.8	255	38.4		27.7	335	14.6		34.5	291	54.1
14	220	15.1	4	28.3		29.2	270	39.9		27.3	350	16.6		34.6	306	56.4
15	235	17.6	19	30.5		29.5	285	41.4		26.9	5	18.6		34.7	321	58.8
16	250	20.0	34	32.6		29.8	300	42.8		26.5	20	20.5		34.9	337	01.1
17	265	22.5	49	34.8	-21	30.2	315	44.3	-22	26.1	35	22.5	-17	35.0	352	03.5
18	280	25.0	64	36.9	-21	30.5	330	45.8	-22	25.8	50	24.5	-17	35.1	7	05.8
19	295	27.4	79	39.1		30.8	345	47.2		25.4	65	26.5		35.2	22	08.2
20	310	29.9	94	41.3		31.2	0	48.7		25.0	80	28.5		35.4	37	10.6
21	325	32.4	109	43.4		31.5	15	50.2		24.6	95	30.5		35.5	52	12.9
22	340	34.8	124	45.6		31.8	30	51.6		24.2	110	32.5		35.6	67	15.3
23	355	37.3	139	47.8		32.1	45	53.1		23.8	125	34.5		35.7	82	17.6
24	10	39.8	154	50.0	-21	32.5	60	54.6	-22	23.4	140	36.5	-17	35.9	97	20.0
Dif	—		+21 -3			+15 +4			+20 -1			+24 0				

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'0 PMG: 11 ^h 49 ^m 3			Edad: 22 ^d 2 PHE { 4 ^h : 58'9 12 ^h : 59'0 20 ^h : 59'2 SD: 16'1 PMG: 5 ^h 46 ^m R°: 58 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m	
0	182	37.6	-3	28.1	276	57.0	+20 50.4	60 N	4 37	5 26	6 07	21 38	72	14 52	50	
1	197	37.8		29.1	291	22.2	62 52.1	58	41	27	06	21 54	70	37	51	
2	212	38.0		30.0	305	47.3	61 53.7	56	44	28	05	22 07	70	23	53	
3	227	38.2		31.0	320	12.4	61 55.1	54	47	28	03	19 68		12	55	
4	242	38.4		32.0	334	37.5	61 56.4	52	49	29	02	29 67		14 02	53	
5	257	38.6	-3	32.9	349	02.5	60 +20 57.6	50	4 51	5 29	6 01	22 38	67	13 53	54	
6	272	38.8	-3	33.9	3	27.5	60 +20 58.6	45	4 56	5 30	5 59	22 57	65	13 33	55	
7	287	39.0		34.9	17	52.5	60 +20 59.5	40	4 59	30	57	23 13	64	18	55	
8	302	39.2		35.8	32	17.4	59 +21 00.3	35	5 01	30	55	26 63		13 04	57	
9	317	39.4		36.8	46	42.4	60 00.9	30	02	30	54	37 63		12 53	57	
10	332	39.6		37.8	61	07.3	59 01.4	20	03	29	51	23 57	61	33	58	
11	347	39.8	-3	38.7	75	32.1	58 +21 01.8	10 N	5 03	5 28	5 49	** ** *	**	12 16	58	
12	2	40.0	-3	39.7	89	57.0	59 +21 02.0	0	5 01	5 25	5 46	** ** *	**	12 00	58	
13	17	40.2		40.7	104	21.8	58 02.1	10 S	4 58	22	44	** ** *	**	11 43	60	
14	32	40.3		41.6	118	46.6	58 02.0	20	53	19	41	0 05	59	26	60	
15	47	40.5		42.6	133	11.4	58 01.8	30	45	13	37	25	58	11 06	61	
16	62	40.7		43.6	147	36.1	57 01.5	35	40	10	35	36	59	10 54	61	
17	77	40.9	-3	44.5	162	00.9	58 +21 01.0	40	4 34	5 06	5 33	0 50	58	10 41	61	
18	92	41.1	-3	45.5	176	25.6	57 +21 00.4	45	4 26	5 01	5 30	1 05	59	10 25	62	
19	107	41.3		46.5	190	50.3	57 +20 59.6	50	16	4 55	27	25	58	10 06	62	
20	122	41.5		47.4	205	15.0	57 58.7	52	11	52	26	34	58	9 56	63	
21	137	41.7		48.4	219	39.7	57 57.7	54	4 05	48	24	44	58	46	63	
22	152	41.9		49.4	234	04.4	57 56.5	56	3 59	45	22	1 56	58	34	63	
23	167	42.1		50.3	248	29.0	56 55.2	58	52	40	20	2 09	58	21	63	
24	182	42.3	-3	51.3	262	53.7	57 +20 53.8	60 S	3 43	4 36	5 18	2 25	58	9 05	64	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 23 ^h 13 ^m 5		Mag: -4.7 PMG: 13 ^h 39 ^m			Mag: -1.3 PMG: 19 ^h 54 ^m			Mag: -1.8 PMG: 14 ^h 36 ^m			Mag: +0.5 PMG: 17 ^h 28 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'		
0	10	39.8	154	50.0	-21	32.5	60	54.6	-22	140	36.5	-17	97	20.0		
1	25	42.2	169	52.1		32.8	75	56.0		155	38.5		112	22.3		
2	40	44.7	184	54.3		33.1	90	57.5		170	40.4		127	24.7		
3	55	47.2	199	56.5		33.4	105	58.9		185	42.4		142	27.0		
4	70	49.6	214	58.7		33.7	121	00.4		200	44.4		157	29.4		
5	85	52.1	230	00.9	-21	34.1	136	01.9	-22	215	46.4	-17	172	31.7		
6	100	54.5	245	03.1	-21	34.4	151	03.3	-22	230	48.4	-17	187	34.1		
7	115	57.0	260	05.3		34.7	166	04.8		245	50.4		202	36.4		
8	130	59.5	275	07.5		35.0	181	06.2		260	52.4		217	38.8		
9	146	01.9	290	09.7		35.3	196	07.7		275	54.4		232	41.1		
10	161	04.4	305	12.0		35.6	211	09.1		290	56.4		247	43.5		
11	176	06.9	320	14.2	-21	35.9	226	10.6	-22	305	58.3	-17	262	45.8		
12	191	09.3	335	16.4	-21	36.2	241	12.0	-22	321	00.3	-17	277	48.2		
13	206	11.8	350	18.6		36.5	256	13.5		336	02.3		292	50.5		
14	221	14.3	5	20.9		36.8	271	14.9		351	04.3		307	52.9		
15	236	16.7	20	23.1		37.1	286	16.4		6	06.3		322	55.2		
16	251	19.2	35	25.3		37.4	301	17.8		21	08.3		337	57.6		
17	266	21.7	50	27.6	-21	37.7	316	19.3	-22	36	10.3	-17	352	59.9		
18	281	24.1	65	29.8	-21	38.0	331	20.7	-22	51	12.3	-17	8	02.3		
19	296	26.6	80	32.1		38.3	346	22.2		66	14.2		23	04.6		
20	311	29.0	95	34.3		38.5	1	23.6		81	16.2		38	07.0		
21	326	31.5	110	36.6		38.8	16	25.1		96	18.2		53	09.3		
22	341	34.0	125	38.8		39.1	31	26.5		111	20.2		68	11.7		
23	356	36.4	140	41.1		39.4	46	28.0		126	22.2		83	14.0		
24	11	38.9	155	43.4	-21	39.7	61	29.4	-22	141	24.2	-17	98	16.4		
Dif	—		+22		-3		+15		+4		+20		-1		+24	

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: 23 ^d 2 PHE { 4 ^h : 59/3 12 ^h : 59/4 20 ^h : 59/5 PMG: 6 ^h 44 ^m R°: 59 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico		Hora	R°	Hora
h	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m
0	182	42.3	-3	51.3	262	53.7	+20 53.8	60 N	17 27	18 08	18 57	22 50	84	15 42	37
1	197	42.5		52.3	277	18.3	56 52.2	58	29	08	53	23 04	82	28	39
2	212	42.7		53.2	291	43.0	57 50.4	56	30	07	50	17	78	16	40
3	227	42.9		54.2	306	07.6	56 48.6	54	32	07	48	27	77	15 05	42
4	242	43.1		55.2	320	32.3	57 46.6	52	33	07	46	36	76	14 55	44
5	257	43.3	-3	56.1	334	56.9	56 +20 44.4	50	17 34	18 07	18 44	23 45	74	14 47	45
6	272	43.5	-3	57.1	349	21.5	56 +20 42.1	45	17 37	18 06	18 40	** ** *	**	14 28	48
7	287	43.7		58.1	3	46.1	56 39.7	40	39	06	38	** ** *	**	13	50
8	302	43.9	-3	59.0	18	10.8	57 37.1	35	41	07	36	** ** *	**	14 01	51
9	317	44.1	-4	00.0	32	35.4	56 34.4	30	43	07	35	** ** *	**	13 50	52
10	332	44.3	-4	01.0	47	00.1	57 31.6	20	46	08	34	** ** *	**	31	54
11	347	44.5	-4	01.9	61	24.7	56 +20 28.6	10 N	17 49	18 10	18 35	0 14	60	13 14	57
12	2	44.7	-4	02.9	75	49.3	56 +20 25.5	0	17 52	18 13	18 37	0 30	59	12 58	59
13	17	44.9		03.9	90	14.0	57 22.2	10 S	55	16	41	0 46	58	43	60
14	32	45.1		04.8	104	38.7	57 18.9	20	17 59	21	46	1 04	56	26	62
15	47	45.3		05.8	119	03.3	56 15.3	30	18 02	26	18 55	23 55		12 07	64
16	62	45.4		06.8	133	28.0	57 11.7	35	05	30	19 00	35 54		11 55	66
17	77	45.6	-4	07.7	147	52.7	57 +20 07.9	40	18 07	18 35	19 07	1 48	53	11 42	67
18	92	45.8	-4	08.7	162	17.5	58 +20 03.9	45	18 10	18 40	19 15	2 04	51	11 27	68
19	107	46.0		09.7	176	42.2	57 +19 59.8	50	14	47	26	23 50		11 08	71
20	122	46.2		10.6	191	06.9	57 55.6	52	16	50	31	32 49		10 59	72
21	137	46.4		11.6	205	31.7	58 51.3	54	18	54	37	42 48		49	73
22	152	46.6		12.5	219	56.5	58 46.8	56	20	18 58	44	2 54	46	37	75
23	167	46.8		13.5	234	21.3	58 42.2	58	22	19 02	19 52	3 07	45	24	77
24	182	47.0	-4	14.5	248	46.1	58 +19 37.5	60 S	18 25	19 07	20 01	3 23	42	10 09	79
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 23 ^h 09 ^m 6			Mag: -4.7 PMG: 13 ^h 35 ^m			Mag: -1.3 PMG: 19 ^h 52 ^m			Mag: -1.8 PMG: 14 ^h 32 ^m			Mag: +0.5 PMG: 17 ^h 24 ^m		
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o
0	11	38.9	155	43.4	-21	39.7	61	29.4	-22	13.9	141	24.2	-17	38.9	98
1	26	41.4	170	45.6		40.0	76	30.9		13.5	156	26.2		39.0	113
2	41	43.8	185	47.9		40.2	91	32.3		13.1	171	28.1		39.1	128
3	56	46.3	200	50.2		40.5	106	33.7		12.7	186	30.1		39.3	143
4	71	48.8	215	52.5		40.8	121	35.2		12.3	201	32.1		39.4	158
5	86	51.2	230	54.8	-21	41.0	136	36.6	-22	11.9	216	34.1	-17	39.5	173
6	101	53.7	245	57.0	-21	41.3	151	38.1	-22	11.5	231	36.1	-17	39.7	188
7	116	56.2	260	59.3		41.6	166	39.5		11.1	246	38.1		39.8	203
8	131	58.6	276	01.6		41.8	181	40.9		10.7	261	40.1		39.9	218
9	147	01.1	291	03.9		42.1	196	42.4		10.3	276	42.0		40.0	233
10	162	03.5	306	06.2		42.4	211	43.8		09.9	291	44.0		40.2	248
11	177	06.0	321	08.5	-21	42.6	226	45.3	-22	09.5	306	46.0	-17	40.3	263
12	192	08.5	336	10.9	-21	42.9	241	46.7	-22	09.1	321	48.0	-17	40.4	278
13	207	10.9	351	13.2		43.1	256	48.1		08.7	336	50.0		40.5	293
14	222	13.4	6	15.5		43.4	271	49.6		08.3	351	52.0		40.7	308
15	237	15.9	21	17.8		43.7	286	51.0		07.9	6	53.9		40.8	323
16	252	18.3	36	20.1		43.9	301	52.4		07.5	21	55.9		40.9	338
17	267	20.8	51	22.5	-21	44.2	316	53.8	-22	07.1	36	57.9	-17	41.0	353
18	282	23.3	66	24.8	-21	44.4	331	55.3	-22	06.7	51	59.9	-17	41.2	8
19	297	25.7	81	27.1		44.6	346	56.7		06.3	67	01.9		41.3	24
20	312	28.2	96	29.5		44.9	1	58.1		05.9	82	03.9		41.4	39
21	327	30.6	111	31.8		45.1	16	59.6		05.5	97	05.9		41.5	54
22	342	33.1	126	34.2		45.4	32	01.0		05.1	112	07.8		41.7	69
23	357	35.6	141	36.5		45.6	47	02.4		04.7	127	09.8		41.8	84
24	12	38.0	156	38.9	-21	45.8	62	03.8	-22	04.3	142	11.8	-17	41.9	99
Dif	—			+23 -3			+14 +4			+20 -1			+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: 24 ^d 2 PHE { 4 ^h : 59'6 12 ^h : 59'7 20 ^h : 59'7 PMG: 7 ^h 43 ^m R°: 57 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	o	'	o	'	o	'	o	'	h	m	h	m	h	m	m
0	182	47.0	-4	14.5	248	46.1	+19 37.5	60 N	4 42	5 31	6 12	***	***	16 19	26
1	197	47.2			263	10.9	32.6 49	58	46	31	10	***	***	16 07	29
2	212	47.4			277	35.8	27.6 50	56	48	32	09	***	***	15 56	32
3	227	47.6			292	00.7	22.4 52	54	51	32	07	***	***	47	34
4	242	47.8			306	25.6	17.2 52	52	53	32	06	***	***	39	36
5	257	48.0	-4	19.3	320	50.5	+19 11.7 55	50	4 55	5 32	6 04	***	***	15 32	37
6	272	48.1	-4	20.3	335	15.5	+19 06.2 55	45	4 58	5 32	6 01	0 02	72	15 16	41
7	287	48.3			349	40.5	+19 00.6 56	40	5 01	32	5 59	17 69		15 03	44
8	302	48.5			4	05.5	+18 54.8 58	35	02	32	57	29 67		14 52	46
9	317	48.7			18	30.5	48.9 59	30	03	31	55	40 65		42 48	
10	332	48.9			32	55.6	42.8 61	20	04	30	52	0 58	63	25	52
11	347	49.1	-4	25.1	47	20.7	+18 36.6 62	10 N	5 03	5 27	5 48	1 14	60	14 11	54
12	2	49.3	-4	26.0	61	45.8	+18 30.3 63	0	5 01	5 25	5 45	1 29	58	13 57	57
13	17	49.5			76	11.0	23.9 64	10 S	4 57	21	42	1 44	56	43	60
14	32	49.7			90	36.2	17.4 65	20	51	17	39	2 00	53	28	63
15	47	49.9			105	01.4	10.7 67	30	43	11	35	18 50		11 66	
16	62	50.1			119	26.7	+18 03.9 68	35	37	07	33	29 48		13 01	67
17	77	50.2	-4	30.9	133	52.0	+17 57.0 69	40	4 30	5 03	5 30	2 41	47	12 49	70
18	92	50.4	-4	31.8	148	17.4	+17 50.0 70	45	4 22	4 57	5 27	2 55	44	12 35	73
19	107	50.6			162	42.8	42.9 71	50	11	50	23	3 13	41	19	76
20	122	50.8			177	08.2	35.6 73	52	06	47	21	21 39		11 78	
21	137	51.0			191	33.6	28.2 74	54	4 00	43	19	30 38		12 02	80
22	152	51.2			205	59.1	20.7 75	56	3 53	39	17	40 36		11 52	82
23	167	51.4			220	24.7	13.1 76	58	45	35	15	3 52	33	41	85
24	182	51.6	-4	37.6	234	50.2	+17 05.4 77	60 S	3 36	4 29	5 12	4 05	31	11 28	88

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 23 ^h 05 ^m 7		Mag: -4.7 PMG: 13 ^h 31 ^m		Mag: -1.2 PMG: 19 ^h 50 ^m		Mag: -1.8 PMG: 14 ^h 29 ^m		Mag: +0.5 PMG: 17 ^h 20 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	o	'	o	'	o	'	o	'	o	'								
0	12	38.0	156	38.9	-21	45.8	62	03.8	-22	04.3	142	11.8	-17	41.9	99	12.7	-22	45.6
1	27	40.5	171	41.2		46.1	77	05.3		03.9	157	13.8		42.1	114	15.1		45.6
2	42	43.0	186	43.6		46.3	92	06.7		03.5	172	15.8		42.2	129	17.4		45.6
3	57	45.4	201	46.0		46.5	107	08.1		03.1	187	17.7		42.3	144	19.8		45.6
4	72	47.9	216	48.3		46.8	122	09.5		02.7	202	19.7		42.4	159	22.1		45.6
5	87	50.4	231	50.7	-21	47.0	137	11.0	-22	02.3	217	21.7	-17	42.6	174	24.4	-22	45.6
6	102	52.8	246	53.1	-21	47.2	152	12.4	-22	01.9	232	23.7	-17	42.7	189	26.8	-22	45.6
7	117	55.3	261	55.5		47.5	167	13.8		01.5	247	25.7		42.8	204	29.1		45.6
8	132	57.8	276	57.9		47.7	182	15.2		01.0	262	27.7		42.9	219	31.5		45.6
9	148	00.2	292	00.3		47.9	197	16.6		00.6	277	29.6		43.1	234	33.8		45.6
10	163	02.7	307	02.6		48.1	212	18.1	-22	00.2	292	31.6		43.2	249	36.2		45.6
11	178	05.1	322	05.0	-21	48.3	227	19.5	-21	59.8	307	33.6	-17	43.3	264	38.5	-22	45.6
12	193	07.6	337	07.4	-21	48.5	242	20.9	-21	59.4	322	35.6	-17	43.4	279	40.8	-22	45.6
13	208	10.1	352	09.9		48.8	257	22.3		59.0	337	37.6		43.6	294	43.2		45.6
14	223	12.5	7	12.3		49.0	272	23.7		58.6	352	39.5		43.7	309	45.5		45.7
15	238	15.0	22	14.7		49.2	287	25.1		58.2	7	41.5		43.8	324	47.9		45.7
16	253	17.5	37	17.1		49.4	302	26.6		57.8	22	43.5		44.0	339	50.2		45.7
17	268	19.9	52	19.5	-21	49.6	317	28.0	-21	57.4	37	45.5	-17	44.1	354	52.6	-22	45.7
18	283	22.4	67	21.9	-21	49.8	332	29.4	-21	57.0	52	47.5	-17	44.2	9	54.9	-22	45.7
19	298	24.9	82	24.4		50.0	347	30.8		56.6	67	49.4		44.3	24	57.2		45.7
20	313	27.3	97	26.8		50.2	2	32.2		56.1	82	51.4		44.5	39	59.6		45.7
21	328	29.8	112	29.2		50.4	17	33.6		55.7	97	53.4		44.6	55	01.9		45.7
22	343	32.3	127	31.7		50.6	32	35.0		55.3	112	55.4		44.7	70	04.3		45.7
23	358	34.7	142	34.1		50.8	47	36.4		54.9	127	57.4		44.8	85	06.6		45.7
24	13	37.2	157	36.5	-21	51.0	62	37.8	-21	54.5	142	59.3	-17	45.0	100	08.9	-22	45.7
Dif	—		+24		-2		+14		+4		+20		-1		+23			

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16°0			Edad: 25 ^d 2 PHE	SD: 16°3				Final del crepúsculo		Salida de Luna		Puesta de Luna	
	PMG: 11 ^h 48 ^m 4				PMG: 8 ^h 40 ^m				R°: 56 ^m					
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	o	'	o	'	o	'	o	'	h	m	h	m	h	m
0	182	51.6	-4	37.6	234	50.2	+17 05.4	60 N	17 21	18 02	18 51	0 14	90	16 45
1	197	51.8		38.6	249	15.9	+16 57.5	58	23	02	48	26	86	36
2	212	52.0		39.5	263	41.5	66 49.6	56	25	02	45	35	85	28
3	227	52.1		40.5	278	07.2	67 41.5	54	27	02	43	44	82	21
4	242	52.3		41.5	292	33.0	68 33.3	52	29	02	41	52	80	15
5	257	52.5	-4	42.4	306	58.8	+16 25.0	50	17 30	18 02	18 40	0 59	78	16 09
6	272	52.7	-4	43.4	321	24.6	+16 16.6	45	17 33	18 03	18 37	1 14	74	15 57
7	287	52.9		44.3	335	50.5	+16 08.1	40	36	03	35	26	71	47
8	302	53.1		45.3	350	16.4	+15 59.5	35	39	04	33	36	68	38
9	317	53.3		46.3	4	42.4	70 50.8	30	41	05	32	1 45	66	30
10	332	53.5		47.2	19	08.4	70 42.0	20	45	07	32	2 01	62	17
11	347	53.6	-4	48.2	33	34.4	+15 33.1	10 N	17 48	18 09	18 34	2 14	59	15 05
12	2	53.8	-4	49.1	48	00.6	+15 24.1	0	17 52	18 12	18 37	2 27	56	14 54
13	17	54.0		50.1	62	26.7	71 15.0	10 S	55	16	41	40	53	43
14	32	54.2		51.1	76	52.9	+15 05.7	20	17 59	21	47	2 53	50	31
15	47	54.4		52.0	91	19.1	+14 56.4	30	18 04	28	18 56	3 08	46	17
16	62	54.6		53.0	105	45.4	73 47.0	35	06	32	19 02	17	44	14 08
17	77	54.8	-4	54.0	120	11.8	+14 37.5	40	18 09	18 37	19 09	3 28	41	13 59
18	92	55.0	-4	54.9	134	38.2	+14 27.9	45	18 13	18 43	19 18	3 39	39	13 48
19	107	55.1		55.9	149	04.6	74 18.2	50	17	50	30	3 54	34	35
20	122	55.3		56.8	163	31.1	+14 08.4	52	19	54	35	4 00	33	29
21	137	55.5		57.8	177	57.6	+13 58.5	54	21	18 57	42	08	30	22
22	152	55.7		58.8	192	24.2	76 48.6	56	24	19 02	49	16	28	14
23	167	55.9	-4	59.7	206	50.8	76 38.5	58	26	07	19 57	25	26	13 06
24	182	56.1	-5	00.7	221	17.5	+13 28.4	60 S	18 29	19 13	20 07	4 36	22	12 56

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 23 ^h 01 ^m 7		Mag: -4.7 PMG: 13 ^h 27 ^m		Mag: -1.2 PMG: 19 ^h 48 ^m		Mag: -1.8 PMG: 14 ^h 26 ^m		Mag: +0.5 PMG: 17 ^h 17 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	o	'	o	'	o	'	o	'	o	'
0	13	37.2	157	36.5	-21	51.0	62	37.8	-21	54.5
1	28	39.6	172	39.0		51.1	77	39.2		54.1
2	43	42.1	187	41.5		51.3	92	40.7		53.7
3	58	44.6	202	43.9		51.5	107	42.1		53.3
4	73	47.0	217	46.4		51.7	122	43.5		52.9
5	88	49.5	232	48.8	-21	51.9	137	44.9	-21	52.5
6	103	52.0	247	51.3	-21	52.1	152	46.3	-21	52.0
7	118	54.4	262	53.8		52.2	167	47.7		51.6
8	133	56.9	277	56.3		52.4	182	49.1		51.2
9	148	59.4	292	58.7		52.6	197	50.5		50.8
10	164	01.8	308	01.2		52.8	212	51.9		50.4
11	179	04.3	323	03.7	-21	52.9	227	53.3	-21	50.0
12	194	06.7	338	06.2	-21	53.1	242	54.7	-21	49.6
13	209	09.2	353	08.7		53.3	257	56.1		49.2
14	224	11.7	8	11.2		53.4	272	57.5		48.7
15	239	14.1	23	13.7		53.6	287	58.9		48.3
16	254	16.6	38	16.2		53.7	303	00.3		47.9
17	269	19.1	53	18.7	-21	53.9	318	01.7	-21	47.5
18	284	21.5	68	21.2	-21	54.1	333	03.1	-21	47.1
19	299	24.0	83	23.7		54.2	348	04.5		46.7
20	314	26.5	98	26.3		54.4	3	05.9		46.2
21	329	28.9	113	28.8		54.5	18	07.2		45.8
22	344	31.4	128	31.3		54.7	33	08.6		45.4
23	359	33.9	143	33.9		54.8	48	10.0		45.0
24	14	36.3	158	36.4	-21	55.0	63	11.4	-21	44.6
Dif	—		+25	-2			+14	+4		

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: 26 ^d 2 PHE { 4 ^h : 59'8 12 ^h : 59'8 20 ^h : 59'8 SD: 16'3 PMG: 9 ^h 36 ^m R°: 53 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	o	'	o	'	o	'	o	'	h	m	h	m	h	m	h	m
0	182	56.1	-5	00.7	221	17.5	+13	28.4	60 N	4 47	5 36	6 17	1 44	92	17 05	16
1	197	56.2		01.6	235	44.3	78	18.1	58	50	36	15	1 52	89	16 59	19
2	212	56.4		02.6	250	11.0	77	+13 07.8	56	52	36	13	2 00	85	54	22
3	227	56.6		03.6	264	37.9	79	+12 57.4	54	54	35	11	06	83	49	24
4	242	56.8		04.5	279	04.7	78	47.0	52	56	35	09	12	81	45	26
5	257	57.0	-5	05.5	293	31.7	80	+12 36.4	50	4 58	5 35	6 07	2 17	79	16 41	28
6	272	57.2	-5	06.4	307	58.6	79	+12 25.8	45	5 01	5 35	6 04	2 28	74	16 33	32
7	287	57.4		07.4	322	25.6	80	15.1	40	03	34	6 01	37	71	26	35
8	302	57.5		08.4	336	52.7	81	+12 04.3	35	04	33	5 58	44	69	20	38
9	317	57.7		09.3	351	19.8	81	+11 53.4	30	04	32	56	2 51	66	14	41
10	332	57.9		10.3	5	47.0	82	42.5	20	04	30	52	3 03	61	16 05	45
11	347	58.1	-5	11.2	20	14.2	82	+11 31.5	10 N	5 03	5 27	5 48	3 13	58	15 57	49
12	2	58.3	-5	12.2	34	41.5	83	+11 20.4	0	5 00	5 24	5 45	3 23	54	15 49	53
13	17	58.5		13.1	49	08.8	83	+11 09.3	10 S	4 56	20	41	33	50	41	57
14	32	58.6		14.1	63	36.2	84	+10 58.1	20	49	15	37	43	46	33	60
15	47	58.8		15.1	78	03.6	84	46.8	30	40	08	33	3 54	43	23	65
16	62	59.0		16.0	92	31.0	84	35.5	35	34	5 04	30	4 01	40	17	68
17	77	59.2	-5	17.0	106	58.5	85	+10 24.0	40	4 27	4 59	5 27	4 09	37	15 11	71
18	92	59.4	-5	17.9	121	26.1	86	+10 12.6	45	4 18	4 53	5 23	4 18	33	15 03	75
19	107	59.5		18.9	135	53.7	86	+10 01.1	50	06	46	19	28	30	14 54	79
20	122	59.7		19.9	150	21.3	86	+9 49.5	52	4 01	42	17	33	28	50	81
21	137	59.9		20.8	164	49.0	87	37.8	54	3 54	38	14	38	26	45	83
22	153	00.1		21.8	179	16.8	88	26.1	56	47	34	12	44	24	40	86
23	168	00.3		22.7	193	44.6	88	14.4	58	39	29	09	51	21	34	89
24	183	00.5	-5	23.7	208	12.4	88	+9 02.6	60 S	3 29	4 23	5 06	4 58	18	14 27	92
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO			
	PMG 22 ^h 57 ^m 8			Mag: -4.7 PMG: 13 ^h 23 ^m			Mag: -1.2 PMG: 19 ^h 45 ^m			Mag: -1.8 PMG: 14 ^h 23 ^m			Mag: +0.5 PMG: 17 ^h 13 ^m			
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec	
h	o	'	o	'	o	'	o	'	o	o	'	o	o	'	o	'
0	14	36.3	158	36.4	-21	55.0	63	11.4	-21 44.6	143	46.8	-17 48.0	101	05.1	-22 45.8	
1	29	38.8	173	38.9		55.1	78	12.8	44.2	158	48.8	48.1	116	07.4	45.8	
2	44	41.2	188	41.5		55.2	93	14.2	43.7	173	50.8	48.3	131	09.7	45.8	
3	59	43.7	203	44.0		55.4	108	15.6	43.3	188	52.7	48.4	146	12.1	45.8	
4	74	46.2	218	46.6		55.5	123	17.0	42.9	203	54.7	48.5	161	14.4	45.8	
5	89	48.6	233	49.1	-21	55.6	138	18.4	42.5	218	56.7	-17 48.6	176	16.8	-22 45.8	
6	104	51.1	248	51.7	-21	55.8	153	19.8	42.1	233	58.7	-17 48.8	191	19.1	-22 45.8	
7	119	53.6	263	54.3		55.9	168	21.1	41.7	249	00.6	48.9	206	21.4	45.8	
8	134	56.0	278	56.8		56.0	183	22.5	41.2	264	02.6	49.0	221	23.8	45.8	
9	149	58.5	293	59.4		56.2	198	23.9	40.8	279	04.6	49.2	236	26.1	45.8	
10	165	01.0	309	02.0		56.3	213	25.3	40.4	294	06.6	49.3	251	28.4	45.8	
11	180	03.4	324	04.6	-21	56.4	228	26.7	-21 40.0	309	08.5	-17 49.4	266	30.8	-22 45.8	
12	195	05.9	339	07.1	-21	56.5	243	28.1	-21 39.6	324	10.5	-17 49.5	281	33.1	-22 45.8	
13	210	08.4	354	09.7		56.6	258	29.4	39.1	339	12.5	49.7	296	35.4	45.8	
14	225	10.8	9	12.3		56.8	273	30.8	38.7	354	14.5	49.8	311	37.8	45.8	
15	240	13.3	24	14.9		56.9	288	32.2	38.3	9	16.4	49.9	326	40.1	45.8	
16	255	15.7	39	17.5		57.0	303	33.6	37.9	24	18.4	50.0	341	42.4	45.8	
17	270	18.2	54	20.1	-21	57.1	318	35.0	-21 37.5	39	20.4	-17 50.2	356	44.8	-22 45.8	
18	285	20.7	69	22.7	-21	57.2	333	36.3	-21 37.0	54	22.3	-17 50.3	11	47.1	-22 45.8	
19	300	23.1	84	25.3		57.3	348	37.7	36.6	69	24.3	50.4	26	49.4	45.8	
20	315	25.6	99	27.9		57.4	3	39.1	36.2	84	26.3	50.6	41	51.8	45.8	
21	330	28.1	114	30.6		57.5	18	40.5	35.8	99	28.3	50.7	56	54.1	45.8	
22	345	30.5	129	33.2		57.6	33	41.8	35.4	114	30.2	50.8	71	56.4	45.8	
23	0	33.0	144	35.8		57.7	48	43.2	34.9	129	32.2	50.9	86	58.8	45.8	
24	15	35.5	159	38.4	-21	57.8	63	44.6	-21 34.5	144	34.2	-17 51.1	102	01.1	-22 45.8	
Dif	—		+26		-1		+14		+4	+20		-1		+23		

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16'0 PMG: 11 ^h 47 ^m 8			Edad: 27 ^d 2 PHE { 4 ^h : 59'7 12 ^h : 59'6 20 ^h : 59'5 R°: 52 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°	
h	o	'	o	'	o	'	o	'	h m	h m	h m	h m m	h m m	h m m		
0	183	00.5	-5	23.7	208	12.4	+9	02.6	60 N	17 15	17 56	18 45	3 16 91	17 21 14		
1	198	00.6		24.6	222	40.3	+8	50.7 ¹¹⁹	58	18	57	42	21 88	18 17		
2	213	00.8		25.6	237	08.2		38.8 ¹¹⁹	56	20	57	40	25 86	16 19		
3	228	01.0		26.6	251	36.1		26.8 ¹²⁰	54	22	57	38	29 83	13 22		
4	243	01.2		27.5	266	04.2		14.8 ¹²⁰	52	24	58	37	33 80	11 24		
5	258	01.4	-5	28.5	280	32.2	+8	02.8 ¹²⁰	50	17 26	17 58	18 35	3 36 78	17 09 26		
6	273	01.5	-5	29.4	295	00.3	+7	50.7 ¹²¹	45	17 30	17 59	18 33	3 42 75	17 05 30		
7	288	01.7		30.4	309	28.5		38.5 ¹²²	40	33	18 00	31	48 71	17 01 33		
8	303	01.9		31.3	323	56.6		26.3 ¹²²	35	36	01	30	53 67	16 58 36		
9	318	02.1		32.3	338	24.9		14.1 ¹²²	30	38	02	30	3 57 65	55 39		
10	333	02.3		33.3	352	53.1	+7	01.9 ¹²²	20	43	05	31	4 04 61	50 44		
11	348	02.4	-5	34.2	7	21.4	+6	49.6 ¹²³	10 N	17 47	18 08	18 33	4 11 56	16 46 48		
12	3	02.6	-5	35.2	21	49.8	+6	37.2 ¹²⁴	0	17 51	18 12	18 36	4 17 52	16 42 51		
13	18	02.8		36.1	36	18.2		24.9 ¹²³	10 S	17 55	16	41	23 48	38 55		
14	33	03.0		37.1	50	46.6	+6	12.5 ¹²⁴	20	18 00	22	48	29 45	33 60		
15	48	03.1		38.0	65	15.1	+6	00.0 ¹²⁵	30	05	29	18 57	37 39	28 64		
16	63	03.3		39.0	79	43.6	+5	47.5 ¹²⁵	35	08	33	19 04	41 37	25 67		
17	78	03.5	-5	39.9	94	12.2	+5	35.1 ¹²⁴	40	18 11	18 39	19 11	4 46 34	16 22 70		
18	93	03.7	-5	40.9	108	40.7	+5	22.5 ¹²⁶	45	18 15	18 45	19 21	4 51 31	16 18 73		
19	108	03.9		41.9	123	09.4	+5	10.0 ¹²⁵	50	20	53	33	4 58 26	13 78		
20	123	04.0		42.8	137	38.0	+4	57.4 ¹²⁶	52	23	18 57	39	5 01 24	11 80		
21	138	04.2		43.8	152	06.7		44.8 ¹²⁶	54	25	19 01	46	04 22	08 83		
22	153	04.4		44.7	166	35.5		32.2 ¹²⁶	56	28	06	19 54	08 20	06 84		
23	168	04.6		45.7	181	04.3		19.6 ¹²⁶	58	31	12	20 02	12 17	16 03 87		
24	183	04.7	-5	46.6	195	33.1	+4	06.9 ¹²⁷	60 S	18 34	19 18	20 13	5 16 15	15 59 91		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 22 ^h 53 ^m 9		Mag: -4.7 PMG: 13 ^h 19 ^m			Mag: -1.2 PMG: 19 ^h 43 ^m			Mag: -1.8 PMG: 14 ^h 20 ^m			Mag: +0.5 PMG: 17 ^h 09 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'		
0	15	35.5	159	38.4	-21	57.8	63	44.6	-21	34.5	144	34.2	-17	51.1		
1	30	37.9	174	41.1		57.9	78	46.0		34.1	159	36.2		51.2		
2	45	40.4	189	43.7		58.0	93	47.3		33.7	174	38.1		51.3		
3	60	42.8	204	46.4		58.1	108	48.7		33.2	189	40.1		51.4		
4	75	45.3	219	49.0		58.2	123	50.1		32.8	204	42.1		51.6		
5	90	47.8	234	51.7	-21	58.2	138	51.5	-21	32.4	219	44.0	-17	51.7		
6	105	50.2	249	54.3	-21	58.3	153	52.8	-21	32.0	234	46.0	-17	51.8		
7	120	52.7	264	57.0		58.4	168	54.2		31.5	249	48.0		51.9		
8	135	55.2	279	59.6		58.5	183	55.6		31.1	264	50.0		52.1		
9	150	57.6	295	02.3		58.6	198	56.9		30.7	279	51.9		52.2		
10	166	00.1	310	05.0		58.6	213	58.3		30.3	294	53.9		52.3		
11	181	02.6	325	07.6	-21	58.7	228	59.7	-21	29.8	309	55.9	-17	52.5		
12	196	05.0	340	10.3	-21	58.8	244	01.0	-21	29.4	324	57.8	-17	52.6		
13	211	07.5	355	13.0		58.8	259	02.4		29.0	339	59.8		52.7		
14	226	10.0	10	15.7		58.9	274	03.8		28.6	355	01.8		52.8		
15	241	12.4	25	18.4		59.0	289	05.1		28.1	10	03.8		53.0		
16	256	14.9	40	21.1		59.0	304	06.5		27.7	25	05.7		53.1		
17	271	17.3	55	23.7	-21	59.1	319	07.9	-21	27.3	40	07.7	-17	53.2		
18	286	19.8	70	26.4	-21	59.2	334	09.2	-21	26.9	55	09.7	-17	53.3		
19	301	22.3	85	29.2		59.2	349	10.6		26.4	70	11.6		53.5		
20	316	24.7	100	31.9		59.3	4	11.9		26.0	85	13.6		53.6		
21	331	27.2	115	34.6		59.3	19	13.3		25.6	100	15.6		53.7		
22	346	29.7	130	37.3		59.4	34	14.7		25.1	115	17.6		53.9		
23	1	32.1	145	40.0		59.4	49	16.0		24.7	130	19.5		54.0		
24	16	34.6	160	42.7	-21	59.5	64	17.4	-21	24.3	145	21.5	-17	54.1		
Dif	—		+27			-1			+14		+4		+20		-1	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'0 PMG: 11 ^h 47 ^m 5			Edad: 28 ^d 2 PHE { SD: 16'1 PMG: 11 ^h 21 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº	
h	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m	
0	183	04.7	-5 46.6	195	33.1	+4 06.9	60 N	4 52	5 40	6 22	4 47	90	17 35	14		
1	198	04.9	47.6	210	01.9	+3 54.2 ¹²⁷	58	54	40	19	49	87	35	17		
2	213	05.1	48.5	224	30.8	41.5 ¹²⁷	56	56	39	17	51	83	35	19		
3	228	05.3	49.5	238	59.7	28.8 ¹²⁷	54	4 58	39	14	52	81	35	21		
4	243	05.4	50.4	253	28.7	16.1 ¹²⁷	52	5 00	39	12	53	79	35	23		
5	258	05.6	-5 51.4	267	57.6	+3 03.4 ¹²⁷	50	5 01	5 38	6 11	4 54	77	17 35	25		
6	273	05.8	-5 52.4	282	26.6	+2 50.6 ¹²⁸	45	5 03	5 37	6 06	4 57	73	17 35	29		
7	288	06.0	53.3	296	55.7	37.9 ¹²⁷	40	05	36	03	4 59	69	34	33		
8	303	06.1	54.3	311	24.8	25.1 ¹²⁸	35	05	35	6 00	5 00	67	34	36		
9	318	06.3	55.2	325	53.9	+2 12.4 ¹²⁷	30	06	33	5 57	02	63	34	38		
10	333	06.5	56.2	340	23.0	+1 59.6 ¹²⁸	20	05	31	53	05	58	34	42		
11	348	06.7	-5 57.1	354	52.2	+1 46.8 ¹²⁸	10 N	5 03	5 27	5 48	5 07	54	17 34	46		
12	3	06.8	-5 58.1	9	21.4	+1 34.0 ¹²⁸	0	4 59	5 23	5 44	5 09	51	17 33	51		
13	18	07.0	-5 59.0	23	50.6	21.3 ¹²⁷	10 S	54	19	40	11	47	33	54		
14	33	07.2	-6 00.0	38	19.8	+1 08.5 ¹²⁸	20	47	13	35	14	43	33	58		
15	48	07.4	-6 00.9	52	49.1	+0 55.7 ¹²⁸	30	38	06	30	16	39	32	63		
16	63	07.5	01.9	67	18.4	42.9 ¹²⁸	35	31	5 01	27	18	36	32	66		
17	78	07.7	-6 02.8	81	47.8	+0 30.2 ¹²⁷	40	4 24	4 56	5 23	5 20	32	17 32	68		
18	93	07.9	-6 03.8	96	17.1	+0 17.4 ¹²⁸	45	4 14	4 49	5 19	5 22	29	17 31	73		
19	108	08.1	04.7	110	46.5	+0 04.6 ¹²⁸	50	4 01	41	14	24	25	31	77		
20	123	08.2	05.7	125	15.9	-0 08.1 ¹²⁷	52	3 55	37	12	25	24	31	78		
21	138	08.4	06.6	139	45.3	20.8 ¹²⁷	54	49	33	09	26	22	31	80		
22	153	08.6	07.6	154	14.8	33.6 ¹²⁸	56	41	28	07	28	19	30	84		
23	168	08.7	08.5	168	44.3	46.3 ¹²⁷	58	32	23	03	29	17	30	86		
24	183	08.9	-6 09.5	183	13.8	-0 59.0 ¹²⁷	60 S	3 22	4 16	5 00	5 31	14	17 30	89		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 22 ^h 49 ^m 9		Mag: -4.6 PMG: 13 ^h 15 ^m			Mag: -1.1 PMG: 19 ^h 41 ^m			Mag: -1.8 PMG: 14 ^h 17 ^m			Mag: +0.5 PMG: 17 ^h 06 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'		
0	16	34.6	160	42.7	-21 59.5	64	17.4	-21 24.3	145	21.5	-17 54.1	102	57.0	-22 45.9		
1	31	37.1	175	45.5	59.5	79	18.7	23.9	160	23.5	54.2	117	59.4	45.9		
2	46	39.5	190	48.2	59.5	94	20.1	23.4	175	25.4	54.4	133	01.7	45.9		
3	61	42.0	205	50.9	59.6	109	21.4	23.0	190	27.4	54.5	148	04.0	45.9		
4	76	44.4	220	53.7	59.6	124	22.8	22.6	205	29.4	54.6	163	06.4	45.9		
5	91	46.9	235	56.4	-21 59.6	139	24.2	-21 22.1	220	31.3	-17 54.7	178	08.7	-22 45.9		
6	106	49.4	250	59.1	-21 59.7	154	25.5	-21 21.7	235	33.3	-17 54.9	193	11.0	-22 45.9		
7	121	51.8	266	01.9	59.7	169	26.9	21.3	250	35.3	55.0	208	13.3	45.9		
8	136	54.3	281	04.7	59.7	184	28.2	20.8	265	37.2	55.1	223	15.7	45.9		
9	151	56.8	296	07.4	59.8	199	29.6	20.4	280	39.2	55.3	238	18.0	45.9		
10	166	59.2	311	10.2	59.8	214	30.9	20.0	295	41.2	55.4	253	20.3	45.9		
11	182	01.7	326	12.9	-21 59.8	229	32.3	-21 19.6	310	43.1	-17 55.5	268	22.6	-22 45.9		
12	197	04.2	341	15.7	-21 59.8	244	33.6	-21 19.1	325	45.1	-17 55.6	283	25.0	-22 45.9		
13	212	06.6	356	18.5	59.8	259	35.0	18.7	340	47.1	55.8	298	27.3	45.9		
14	227	09.1	11	21.3	59.8	274	36.3	18.3	355	49.1	55.9	313	29.6	45.9		
15	242	11.6	26	24.0	59.9	289	37.7	17.8	10	51.0	56.0	328	32.0	45.9		
16	257	14.0	41	26.8	59.9	304	39.0	17.4	25	53.0	56.1	343	34.3	45.9		
17	272	16.5	56	29.6	-21 59.9	319	40.4	-21 17.0	40	55.0	-17 56.3	358	36.6	-22 45.9		
18	287	18.9	71	32.4	-21 59.9	334	41.7	-21 16.5	55	56.9	-17 56.4	13	38.9	-22 45.9		
19	302	21.4	86	35.2	59.9	349	43.1	16.1	70	58.9	56.5	28	41.3	45.9		
20	317	23.9	101	38.0	59.9	4	44.4	15.7	86	00.9	56.7	43	43.6	45.9		
21	332	26.3	116	40.8	59.9	19	45.7	15.2	101	02.8	56.8	58	45.9	45.9		
22	347	28.8	131	43.6	59.9	34	47.1	14.8	116	04.8	56.9	73	48.2	45.9		
23	2	31.3	146	46.4	59.9	49	48.4	14.4	131	06.8	57.0	88	50.6	45.9		
24	17	33.7	161	49.3	-21 59.9	64	49.8	-21 13.9	146	08.7	-17 57.2	103	52.9	-22 45.9		
Dif	—		+28			0			+20			-1			+23	

UT	SOL		● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'0		Edad: 29 ^d 2 PHE { 4 ^h : 58'9 12 ^h : 58'7 20 ^h : 58'5											
	PMG: 11 ^h 47 ^m 3		SD: 16'0 PMG: 12 ^h 12 ^m R°: 50 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°	
h	o	'	o	'	o	'	o	h m	h m	h m	h m m	h m m	h m m	
0	183	08.9	-6	09.5	183	13.8	-0 59.0	60 N	17 09	17 51	18 39	6 17 88	17 49 15	
1	198	09.1		10.4	197	43.3 ¹⁰⁵	-1 11.7 ¹²⁷	58	12	51	37	16 84	52 17	
2	213	09.3		11.4	212	12.8 ¹⁰⁵	24.3 ¹²⁶	56	15	52	35	14 82	54 20	
3	228	09.4		12.3	226	42.4 ¹⁰⁶	37.0 ¹²⁷	54	17	53	33	13 80	56 22	
4	243	09.6		13.3	241	12.0 ¹⁰⁶	-1 49.6 ¹²⁶	52	20	53	32	12 78	17 58 24	
5	258	09.8	-6	14.2	255	41.6 ¹⁰⁶	-2 02.2 ¹²⁶	50	17 22	17 54	18 31	6 11 76	18 00 26	
6	273	09.9	-6	15.2	270	11.2 ¹⁰⁶	-2 14.8 ¹²⁶	45	17 26	17 55	18 29	6 10 71	18 04 29	
7	288	10.1		16.1	284	40.8 ¹⁰⁶	27.4 ¹²⁶	40	30	57	28	08 68	07 33	
8	303	10.3		17.1	299	10.5 ¹⁰⁷	39.9 ¹²⁵	35	33	17 59	28	07 64	10 35	
9	318	10.5		18.0	313	40.2 ¹⁰⁷	-2 52.5 ¹²⁶	30	36	18 00	28	05 63	12 38	
10	333	10.6		19.0	328	09.9 ¹⁰⁷	-3 05.0 ¹²⁵	20	41	03	29	03 58	16 43	
11	348	10.8	-6	19.9	342	39.6 ¹⁰⁷	-3 17.4 ¹²⁴	10 N	17 46	18 07	18 32	6 01 54	18 20 46	
12	3	11.0	-6	20.9	357	09.3 ¹⁰⁷	-3 29.9 ¹²⁵	0	17 51	18 11	18 36	6 00 50	18 24 50	
13	18	11.1		21.8	11	39.0 ¹⁰⁷	42.3 ¹²⁴	10 S	17 55	16	41	5 58 46	27 54	
14	33	11.3		22.8	26	08.8 ¹⁰⁸	-3 54.6 ¹²³	20	18 00	22	48	57 42	31 57	
15	48	11.5		23.7	40	38.5 ¹⁰⁷	-4 07.0 ¹²⁴	30	06	30	18 59	55 38	35 62	
16	63	11.6		24.7	55	08.3 ¹⁰⁸	19.3 ¹²³	35	09	35	19 05	54 35	38 64	
17	78	11.8	-6	25.6	69	38.1 ¹⁰⁸	-4 31.6 ¹²³	40	18 13	18 41	19 14	5 52 33	18 40 68	
18	93	12.0	-6	26.6	84	07.9 ¹⁰⁸	-4 43.8 ¹²²	45	18 18	18 48	19 24	5 51 29	18 44 70	
19	108	12.1		27.5	98	37.7 ¹⁰⁸	-4 56.0 ¹²²	50	23	18 57	37	49 25	48 74	
20	123	12.3		28.5	113	07.6 ¹⁰⁹	-5 08.2 ¹²²	52	26	19 01	43	49 23	49 77	
21	138	12.5		29.4	127	37.4 ¹⁰⁸	20.3 ¹²¹	54	29	05	50	48 21	51 79	
22	153	12.7		30.4	142	07.3 ¹⁰⁹	32.4 ¹²¹	56	32	11	19 59	47 19	54 81	
23	168	12.8		31.3	156	37.1 ¹⁰⁸	44.5 ¹²¹	58	35	16	20 08	46 17	56 84	
24	183	13.0	-6	32.3	171	07.0 ¹⁰⁹	-5 56.5 ¹²⁰	60 S	18 39	19 23	20 19	5 45 14	18 59 86	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 22 ^h 46 ^m 0		Mag: -4.6 PMG: 13 ^h 10 ^m		Mag: -1.1 PMG: 19 ^h 39 ^m		Mag: -1.8 PMG: 14 ^h 14 ^m		Mag: +0.5 PMG: 17 ^h 02 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	o	'	o	'	o	'	o	'	o	'				
0	17	33.7	161	49.3	64	49.8	146	08.7	103	52.9				
1	32	36.2	176	52.1	79	51.1	161	10.7	118	55.2				
2	47	38.7	191	54.9	94	52.5	176	12.7	133	57.5				
3	62	41.1	206	57.7	109	53.8	191	14.6	148	59.9				
4	77	43.6	222	00.6	124	55.1	206	16.6	164	02.2				
5	92	46.0	237	03.4	139	56.5	221	18.5	179	04.5				
6	107	48.5	252	06.2	154	57.8	236	20.5	194	06.8				
7	122	51.0	267	09.1	169	59.2	251	22.5	209	09.1				
8	137	53.4	282	11.9	185	00.5	266	24.4	224	11.5				
9	152	55.9	297	14.8	200	01.8	281	26.4	239	13.8				
10	167	58.4	312	17.6	215	03.2	296	28.4	254	16.1				
11	183	00.8	327	20.5	230	04.5	311	30.3	269	18.4				
12	198	03.3	342	23.4	245	05.8	326	32.3	284	20.8				
13	213	05.8	357	26.2	260	07.2	341	34.3	299	23.1				
14	228	08.2	12	29.1	275	08.5	356	36.2	314	25.4				
15	243	10.7	27	32.0	290	09.8	11	38.2	329	27.7				
16	258	13.2	42	34.8	305	11.2	26	40.2	344	30.1				
17	273	15.6	57	37.7	320	12.5	41	42.1	359	32.4				
18	288	18.1	72	40.6	335	13.8	56	44.1	14	34.7				
19	303	20.5	87	43.5	350	15.2	71	46.1	29	37.0				
20	318	23.0	102	46.4	5	16.5	86	48.0	44	39.3				
21	333	25.5	117	49.3	20	17.8	101	50.0	59	41.7				
22	348	27.9	132	52.2	35	19.1	116	51.9	74	44.0				
23	3	30.4	147	55.1	50	20.5	131	53.9	89	46.3				
24	18	32.9	162	58.0	65	21.8	146	55.9	104	48.6				
Dif	—		+29	0	+13	+4	+20	-1	+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: 0 ^d 8 PHE { 4 ^h : 58'2 12 ^h : 58'0 20 ^h : 57'8 PMG: 13 ^h 02 ^m R°: 49 ^m													
	hG ☉	Dec	hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°		
h	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m	
0	183	13.0	-6	32.3	171	07.0	-5 56.5	60 N	4 57	5 45	6 27	7 45	85	18 04	17	
1	198	13.2		33.2	185	36.9 ¹⁰⁹	-6 08.4 ¹¹⁹	58	4 59	44	24	40	83	09	20	
2	213	13.3		34.2	200	06.8 ¹⁰⁹	20.3 ¹¹⁹	56	5 00	43	21	36	80	14	22	
3	228	13.5		35.1	214	36.7 ¹⁰⁹	32.2 ¹¹⁹	54	02	43	18	33	77	18	24	
4	243	13.7		36.1	229	06.6 ¹⁰⁹	44.0 ¹¹⁸	52	03	42	16	30	75	22	26	
5	258	13.8	-6	37.0	243	36.5 ¹⁰⁹	-6 55.8 ¹¹⁸	50	5 04	5 41	6 14	7 27	73	18 26	27	
6	273	14.0	-6	38.0	258	06.4 ¹⁰⁹	-7 07.5 ¹¹⁷	45	5 06	5 40	6 09	7 21	69	18 33	32	
7	288	14.2		38.9	272	36.3 ¹⁰⁹	19.2 ¹¹⁷	40	07	38	05	16	66	40	34	
8	303	14.3		39.9	287	06.3 ¹¹⁰	30.8 ¹¹⁶	35	07	36	6 02	11	64	45	37	
9	318	14.5		40.8	301	36.2 ¹⁰⁹	42.4 ¹¹⁶	30	07	35	5 59	08	60	50	40	
10	333	14.6		41.8	316	06.2 ¹¹⁰	-7 53.9 ¹¹⁵	20	05	31	53	7 01	57	18 59	43	
11	348	14.8	-6	42.7	330	36.1 ¹⁰⁹	-8 05.4 ¹¹⁵	10 N	5 03	5 27	5 48	6 55	53	19 06	47	
12	3	15.0	-6	43.6	345	06.1 ¹¹⁰	-8 16.8 ¹¹⁴	0	4 59	5 23	5 44	6 50	49	19 14	49	
13	18	15.1		44.6	359	36.0 ¹⁰⁹	28.2 ¹¹⁴	10 S	53	18	39	44	47	21	53	
14	33	15.3		45.5	14	06.0 ¹¹⁰	39.5 ¹¹³	20	46	12	34	39	43	28	57	
15	48	15.5		46.5	28	35.9 ¹⁰⁹	-8 50.7 ¹¹²	30	35	5 04	28	33	38	37	60	
16	63	15.6		47.4	43	05.9 ¹¹⁰	-9 01.9 ¹¹²	35	28	4 59	24	29	36	42	62	
17	78	15.8	-6	48.4	57	35.9 ¹¹⁰	-9 13.0 ¹¹¹	40	4 20	4 53	5 20	6 25	33	19 48	65	
18	93	16.0	-6	49.3	72	05.9 ¹¹⁰	-9 24.1 ¹¹¹	45	4 10	4 46	5 16	6 20	30	19 54	69	
19	108	16.1		50.3	86	35.8 ¹⁰⁹	35.1 ¹¹⁰	50	3 57	37	10	14	27	20 02	72	
20	123	16.3		51.2	101	05.8 ¹¹⁰	46.1 ¹¹⁰	52	50	33	07	12	25	06	74	
21	138	16.5		52.2	115	35.8 ¹¹⁰	-9 56.9 ¹⁰⁸	54	43	28	05	09	23	10	76	
22	153	16.6		53.1	130	05.8 ¹¹⁰	-10 07.7 ¹⁰⁸	56	35	23	5 01	06	21	15	78	
23	168	16.8		54.0	144	35.7 ¹⁰⁹	18.5 ¹⁰⁸	58	25	17	4 58	6 03	18	20	80	
24	183	16.9	-6	55.0	159	05.7 ¹¹⁰	-10 29.2 ¹⁰⁷	60 S	3 14	4 10	4 54	5 59	15	20 25	84	
UT	ARIES		VENUS				MARTE			JÚPITER			SATURNO			
	PMG: 22 ^h 42 ^m 1		Mag: -4.6 PMG: 13 ^h 06 ^m				Mag: -1.1 PMG: 19 ^h 37 ^m			Mag: -1.8 PMG: 14 ^h 10 ^m			Mag: +0.5 PMG: 16 ^h 58 ^m			
	hG ♈		hG ♀ Dec				hG ♂ Dec			hG ♃ Dec			hG ♄ Dec			
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'
0	18	32.9	162	58.0	-21	59.0	65	21.8	-21	03.4	146	55.9	-18	00.2	104	48.6
1	33	35.3	178	00.9		58.9	80	23.1		03.0	161	57.8		00.3	119	50.9
2	48	37.8	193	03.8		58.9	95	24.4		02.5	176	59.8		00.5	134	53.3
3	63	40.3	208	06.8		58.8	110	25.8		02.1	192	01.8		00.6	149	55.6
4	78	42.7	223	09.7		58.7	125	27.1		01.6	207	03.7		00.7	164	57.9
5	93	45.2	238	12.6	-21	58.7	140	28.4	-21	01.2	222	05.7	-18	00.9	180	00.2
6	108	47.7	253	15.6	-21	58.6	155	29.7	-21	00.8	237	07.6	-18	01.0	195	02.5
7	123	50.1	268	18.5		58.5	170	31.1	-21	00.3	252	09.6		01.1	210	04.9
8	138	52.6	283	21.4		58.4	185	32.4	-20	59.9	267	11.6		01.2	225	07.2
9	153	55.0	298	24.4		58.3	200	33.7		59.4	282	13.5		01.4	240	09.5
10	168	57.5	313	27.3		58.3	215	35.0		59.0	297	15.5		01.5	255	11.8
11	184	00.0	328	30.3	-21	58.2	230	36.4	-20	58.5	312	17.5	-18	01.6	270	14.1
12	199	02.4	343	33.2	-21	58.1	245	37.7	-20	58.1	327	19.4	-18	01.7	285	16.5
13	214	04.9	358	36.2		58.0	260	39.0		57.6	342	21.4		01.9	300	18.8
14	229	07.4	13	39.2		57.9	275	40.3		57.2	357	23.3		02.0	315	21.1
15	244	09.8	28	42.1		57.8	290	41.6		56.8	12	25.3		02.1	330	23.4
16	259	12.3	43	45.1		57.7	305	42.9		56.3	27	27.3		02.3	345	25.7
17	274	14.8	58	48.1	-21	57.6	320	44.3	-20	55.9	42	29.2	-18	02.4	0	28.1
18	289	17.2	73	51.0	-21	57.5	335	45.6	-20	55.4	57	31.2	-18	02.5	15	30.4
19	304	19.7	88	54.0		57.4	350	46.9		55.0	72	33.1		02.6	30	32.7
20	319	22.1	103	57.0		57.3	5	48.2		54.5	87	35.1		02.8	45	35.0
21	334	24.6	119	00.0		57.2	20	49.5		54.1	102	37.1		02.9	60	37.3
22	349	27.1	134	03.0		57.1	35	50.8		53.6	117	39.0		03.0	75	39.6
23	4	29.5	149	06.0		57.0	50	52.1		53.2	132	41.0		03.2	90	42.0
24	19	32.0	164	09.0	-21	56.8	65	53.5	-20	52.7	147	42.9	-18	03.3	105	44.3
Dif	—		+30 +1				+13 +4			+20 -1			+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: 1 ^d 8 PHE { 4 ^h : 57/5 12 ^h : 57/2 20 ^h : 57/0 SD: 15°6 PMG: 13 ^h 51 ^m R°: 50 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif		Civil	Náutico	Hora	R°	Hora
h	o	'	o	'	o	'	o	h m	h m	h m	h m	h m	h m	h m	h m
0	183	16.9	-6	55.0	159	05.7	-10 29.2	60 N	17 03	17 45	18 33	9 10	82	18 21	20
1	198	17.1		55.9	173	35.7 ¹¹⁰	39.8 ¹⁰⁶	58	07	46	31	9 03	79	29	23
2	213	17.3		56.9	188	05.7 ¹¹⁰	-10 50.3 ¹⁰⁵	56	10	47	30	8 56	77	36	26
3	228	17.4		57.8	202	35.7 ¹¹⁰	-11 00.8 ¹⁰⁵	54	13	48	29	50	75	42	28
4	243	17.6		58.8	217	05.6 ¹⁰⁹	11.2 ¹⁰⁴	52	15	49	28	45	72	48	30
5	258	17.7	-6	59.7	231	35.6 ¹¹⁰	-11 21.6 ¹⁰⁴	50	17 17	17 50	18 27	8 40	71	18 53	32
6	273	17.9	-7	00.6	246	05.6 ¹¹⁰	-11 31.8 ¹⁰²	45	17 22	17 52	18 26	8 30	67	19 05	34
7	288	18.1		01.6	260	35.6 ¹¹⁰	42.0 ¹⁰²	40	27	54	25	22	64	14	37
8	303	18.2		02.5	275	05.6 ¹¹⁰	-11 52.2 ¹⁰²	35	31	56	25	15	61	22	40
9	318	18.4		03.5	289	35.5 ¹⁰⁹	-12 02.2 ¹⁰⁰	30	34	17 58	26	8 08	60	30	41
10	333	18.6		04.4	304	05.5 ¹¹⁰	12.2 ¹⁰⁰	20	40	18 02	27	7 58	55	42	45
11	348	18.7	-7	05.4	318	35.5 ¹¹⁰	-12 22.1 ⁹⁹	10 N	17 45	18 06	18 31	7 48	53	19 53	47
12	3	18.9	-7	06.3	333	05.4 ¹⁰⁹	-12 31.9 ⁹⁸	0	17 50	18 11	18 35	7 39	50	20 03	50
13	18	19.0		07.2	347	35.4 ¹¹⁰	41.7 ⁹⁸	10 S	17 55	16	41	31	47	14	52
14	33	19.2		08.2	2	05.4 ¹¹⁰	-12 51.4 ⁹⁷	20	18 01	23	18 49	22	43	25	55
15	48	19.4		09.1	16	35.3 ¹⁰⁹	-13 01.0 ⁹⁶	30	07	32	19 00	11	40	37	59
16	63	19.5		10.1	31	05.3 ¹¹⁰	10.5 ⁹⁵	35	11	37	07	7 05	38	44	61
17	78	19.7	-7	11.0	45	35.2 ¹⁰⁹	-13 19.9 ⁹⁴	40	18 15	18 43	19 16	6 58	36	20 53	63
18	93	19.8	-7	11.9	60	05.2 ¹¹⁰	-13 29.3 ⁹⁴	45	18 21	18 51	19 27	6 50	33	21 03	65
19	108	20.0		12.9	74	35.1 ¹⁰⁹	38.6 ⁹³	50	27	19 00	41	41	29	14	69
20	123	20.1		13.8	89	05.0 ¹⁰⁹	47.8 ⁹²	52	29	05	47	37	27	20	70
21	138	20.3		14.8	103	35.0 ¹¹⁰	-13 56.9 ⁹¹	54	33	09	19 55	32	26	26	72
22	153	20.5		15.7	118	04.9 ¹⁰⁹	-14 05.9 ⁹⁰	56	36	15	20 04	27	23	33	74
23	168	20.6		16.7	132	34.8 ¹⁰⁹	14.9 ⁹⁰	58	40	21	14	21	21	40	77
24	183	20.8	-7	17.6	147	04.8 ¹¹⁰	-14 23.7 ⁸⁸	60 S	18 44	19 29	20 26	6 14	19	21 49	80
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 22 ^h 38 ^m 1		Mag: -4.6 PMG: 13 ^h 01 ^m			Mag: -1.1 PMG: 19 ^h 35 ^m			Mag: -1.8 PMG: 14 ^h 07 ^m			Mag: +0.5 PMG: 16 ^h 54 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o
0	19	32.0	164	09.0	-21	56.8	65	53.5	-20	52.7	147	42.9	-18	03.3	105
1	34	34.5	179	12.0		56.7	80	54.8		52.3	162	44.9		03.4	120
2	49	36.9	194	15.0		56.6	95	56.1		51.8	177	46.9		03.5	135
3	64	39.4	209	18.0		56.5	110	57.4		51.4	192	48.8		03.7	150
4	79	41.9	224	21.0		56.3	125	58.7		51.0	207	50.8		03.8	165
5	94	44.3	239	24.1	-21	56.2	141	00.0	-20	50.5	222	52.7	-18	03.9	180
6	109	46.8	254	27.1	-21	56.1	156	01.3	-20	50.1	237	54.7	-18	04.0	195
7	124	49.3	269	30.1		55.9	171	02.6		49.6	252	56.7		04.2	211
8	139	51.7	284	33.2		55.8	186	03.9		49.2	267	58.6		04.3	226
9	154	54.2	299	36.2		55.7	201	05.2		48.7	283	00.6		04.4	241
10	169	56.6	314	39.2		55.5	216	06.5		48.3	298	02.5		04.6	256
11	184	59.1	329	42.3	-21	55.4	231	07.8	-20	47.8	313	04.5	-18	04.7	271
12	200	01.6	344	45.3	-21	55.2	246	09.2	-20	47.4	328	06.5	-18	04.8	286
13	215	04.0	359	48.4		55.1	261	10.5		46.9	343	08.4		04.9	301
14	230	06.5	14	51.4		54.9	276	11.8		46.5	358	10.4		05.1	316
15	245	09.0	29	54.5		54.8	291	13.1		46.0	13	12.3		05.2	331
16	260	11.4	44	57.5		54.6	306	14.4		45.6	28	14.3		05.3	346
17	275	13.9	60	00.6	-21	54.5	321	15.7	-20	45.1	43	16.3	-18	05.4	1
18	290	16.4	75	03.7	-21	54.3	336	17.0	-20	44.7	58	18.2	-18	05.6	16
19	305	18.8	90	06.8		54.2	351	18.3		44.2	73	20.2		05.7	31
20	320	21.3	105	09.8		54.0	6	19.6		43.7	88	22.1		05.8	46
21	335	23.7	120	12.9		53.8	21	20.9		43.3	103	24.1		06.0	61
22	350	26.2	135	16.0		53.7	36	22.2		42.8	118	26.0		06.1	76
23	5	28.7	150	19.1		53.5	51	23.5		42.4	133	28.0		06.2	91
24	20	31.1	165	22.2	-21	53.3	66	24.8	-20	41.9	148	30.0	-18	06.3	106
Dif	—		+30 +1			+13 +5			+20 -1			+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: 2 ^d 8 SD: 15'4 PMG: 14 ^h 41 ^m	PHE { 4 ^h : 56'7 12 ^h : 56'5 20 ^h : 56'2	R°: 50 ^m										
	hG ☉	Dec						hG ☾	Dif		Dec	Dif	Náutico	Civil	Hora	R°
h	o	'	o	'	o	'	o	'	h	m	h	m	h	m	h	m
0	183	20.8	-7	17.6	147	04.8	-14	23.7	60 N	5 02	5 50	6 32	10 32	76	18 41	27
1	198	20.9		18.5	161	34.7		32.5	88	58	03	49	28	22	73	18 52
2	213	21.1		19.5	176	04.6		41.2	87	56	04	47	25	13	71	19 02
3	228	21.2		20.4	190	34.5		49.8	86	54	05	46	22	10 05	69	10
4	243	21.4		21.4	205	04.4	-14	58.3	85	52	06	45	19	9 57	68	18
5	258	21.6	-7	22.3	219	34.3	-15	06.8	85	50	5 07	5 44	6 17	9 51	66	19 25
6	273	21.7	-7	23.2	234	04.2	-15	15.1	83	45	5 08	5 42	6 12	9 37	64	19 39
7	288	21.9		24.2	248	34.1		23.4	83	40	09	40	07	26	61	19 51
8	303	22.0		25.1	263	04.0		31.6	82	35	08	38	03	16	59	20 02
9	318	22.2		26.0	277	33.9		39.7	81	30	08	36	6 00	9 08	57	11
10	333	22.3		27.0	292	03.8		47.7	80	20	06	32	5 54	8 53	55	27
11	348	22.5	-7	27.9	306	33.7	-15	55.6	79	10 N	5 03	5 27	5 48	8 41	52	20 40
12	3	22.6	-7	28.9	321	03.6	-16	03.4	78	0	4 58	5 22	5 43	8 29	50	20 53
13	18	22.8		29.8	335	33.4		11.1	77	10 S	52	17	38	18	47	21 06
14	33	23.0		30.7	350	03.3		18.7	76	20	44	10	32	8 05	45	20 54
15	48	23.1		31.7	4	33.2		26.3	76	30	33	5 01	26	7 51	42	36
16	63	23.3		32.6	19	03.0		33.7	74	35	26	4 56	22	43	41	45
17	78	23.4	-7	33.5	33	32.9	-16	41.1	74	40	4 17	4 50	5 17	7 34	38	21 56
18	93	23.6	-7	34.5	48	02.7	-16	48.4	73	45	4 06	4 42	5 12	7 23	36	22 08
19	108	23.7		35.4	62	32.6	-16	55.5	71	50	3 52	32	06	10	33	23
20	123	23.9		36.4	77	02.4	-17	02.6	71	52	45	28	03	7 04	32	30
21	138	24.0		37.3	91	32.3		09.6	70	54	37	23	5 00	6 58	30	38
22	153	24.2		38.2	106	02.1		16.5	69	56	29	17	4 56	50	28	47
23	168	24.3		39.2	120	31.9		23.3	68	58	19	11	52	42	26	22 57
24	183	24.5	-7	40.1	135	01.8	-17	30.0	67	60 S	3 07	4 04	4 48	6 33	23	23 09

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 22 ^h 34 ^m 2		Mag: -4.5 PMG: 12 ^h 56 ^m		Mag: -1.0 PMG: 19 ^h 33 ^m		Mag: -1.8 PMG: 14 ^h 04 ^m		Mag: +0.5 PMG: 16 ^h 51 ^m							
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	o	'	o	'	o	'	o	'	o	'						
0	20	31.1	165	22.2	-21	53.3	66	24.8	-20	41.9						
1	35	33.6	180	25.3		53.1	81	26.1		41.5						
2	50	36.1	195	28.4		53.0	96	27.4		41.0						
3	65	38.5	210	31.5		52.8	111	28.7		40.6						
4	80	41.0	225	34.6		52.6	126	30.0		40.1						
5	95	43.5	240	37.7	-21	52.4	141	31.2	-20	39.7						
6	110	45.9	255	40.8	-21	52.2	156	32.5	-20	39.2						
7	125	48.4	270	43.9		52.0	171	33.8		38.8						
8	140	50.9	285	47.1		51.8	186	35.1		38.3						
9	155	53.3	300	50.2		51.6	201	36.4		37.8						
10	170	55.8	315	53.3		51.4	216	37.7		37.4						
11	185	58.2	330	56.5	-21	51.2	231	39.0	-20	36.9						
12	201	00.7	345	59.6	-21	51.0	246	40.3	-20	36.5						
13	216	03.2	1	02.7		50.8	261	41.6		36.0						
14	231	05.6	16	05.9		50.6	276	42.9		35.6						
15	246	08.1	31	09.0		50.4	291	44.2		35.1						
16	261	10.6	46	12.2		50.2	306	45.5		34.7						
17	276	13.0	61	15.3	-21	50.0	321	46.7	-20	34.2						
18	291	15.5	76	18.5	-21	49.8	336	48.0	-20	33.7						
19	306	18.0	91	21.7		49.5	351	49.3		33.3						
20	321	20.4	106	24.8		49.3	6	50.6		32.8						
21	336	22.9	121	28.0		49.1	21	51.9		32.4						
22	351	25.4	136	31.2		48.9	36	53.2		31.9						
23	6	27.8	151	34.3		48.6	51	54.5		31.4						
24	21	30.3	166	37.5	-21	48.4	66	55.7	-20	31.0						
Dif	—		+31	+2	+13		+5		+20		-1		+23		0	

ALMANAQUE NÁUTICO PERSEIS

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16'0			Edad: 4 ^d 8	PHE { 4 ^h : 55'4 12 ^h : 55'2 20 ^h : 55'0	R ^o : 49 ^m		Náutico			Civil		Hora R ^o		Hora R ^o		
	PMG: 11 ^h 46 ^m 0																
	hG ☉	Dec		hG ☾	Dif	Dec	Dif										
h	o	'	o	o	'	o	'	o	h	m	h	m	h	m	h	m	m
0	183	28.1	-8 02.5	122	57.5	-19 41.1	42	60 N	5 06	5 54	6 37	12 56	57	19 43	45		
1	198	28.2	03.4	137	27.3	108 45.3	42	58	07	53	33	41	56	19 58	46		
2	213	28.4	04.4	151	57.2	109 49.5	40	56	08	51	29	28	56	20 11	46		
3	228	28.5	05.3	166	27.0	108 53.5	40	54	09	50	26	17	55	22	47		
4	243	28.7	06.2	180	56.9	109 -19 57.4	39	52	10	49	23	12 07	55	32	47		
5	258	28.8	-8 07.2	195	26.7	108 -20 01.2	38	50	5 10	5 47	6 20	11 58	54	20 41	48		
6	273	29.0	-8 08.1	209	56.6	109 -20 04.8	36	45	5 11	5 45	6 14	11 40	53	21 00	48		
7	288	29.1	09.0	224	26.4	108 08.4	36	40	11	42	09	24	53	16	48		
8	303	29.2	09.9	238	56.3	109 11.9	35	35	10	39	05	11	53	29	48		
9	318	29.4	10.9	253	26.2	109 15.3	34	30	09	37	6 01	11 00	52	21 40	49		
10	333	29.5	11.8	267	56.1	109 18.6	33	20	07	32	5 54	10 41	51	22 00	49		
11	348	29.7	-8 12.7	282	26.0	109 -20 21.8	32	10 N	5 03	5 27	5 48	10 25	50	22 17	49		
12	3	29.8	-8 13.7	296	55.9	109 -20 24.8	30	0	4 58	5 22	5 43	10 09	50	22 33	49		
13	18	30.0	14.6	311	25.8	109 27.8	30	10 S	51	16	37	9 54	48	22 49	49		
14	33	30.1	15.5	325	55.7	109 30.7	29	20	42	5 08	31	37	48	23 06	50		
15	48	30.3	16.4	340	25.6	109 33.4	27	30	30	4 59	23	18	47	26	50		
16	63	30.4	17.4	354	55.5	109 36.1	27	35	23	53	19	9 07	47	37	50		
17	78	30.5	-8 18.3	9	25.5	110 -20 38.7	26	40	4 13	4 46	5 14	8 55	46	23 50	50		
18	93	30.7	-8 19.2	23	55.4	109 -20 41.1	24	45	4 02	4 38	5 08	8 40	45	*** **	***		
19	108	30.8	20.2	38	25.4	110 43.5	24	50	3 47	28	5 02	22	44	*** **	***		
20	123	31.0	21.1	52	55.3	109 45.7	22	52	40	23	4 58	13	44	*** **	***		
21	138	31.1	22.0	67	25.3	110 47.9	22	54	32	18	55	8 04	42	*** **	***		
22	153	31.3	22.9	81	55.3	110 49.9	20	56	22	12	51	7 53	42	*** **	***		
23	168	31.4	23.9	96	25.3	110 51.8	19	58	3 12	4 05	47	41	41	0 07	62		
24	183	31.5	-8 24.8	110	55.3	110 -20 53.7	19	60 S	2 59	3 57	4 42	7 26	40	0 21	63		

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 22 ^h 26 ^m 4		Mag: -4.5 PMG: 12 ^h 46 ^m			Mag: -1.0 PMG: 19 ^h 29 ^m			Mag: -1.8 PMG: 13 ^h 58 ^m			Mag: +0.5 PMG: 16 ^h 43 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	o	'	o	'	o	o	'	o	o	'	o	o	'	o	
0	22	29.4	167	55.0	-21 42.1	67	26.4	-20 19.9	150	03.8	-18 12.5	108	30.7	-22 46.2	
1	37	31.9	182	58.2	41.8	82	27.7	19.4	165	05.7	12.6	123	33.0	46.2	
2	52	34.3	198	01.5	41.5	97	28.9	19.0	180	07.7	12.7	138	35.3	46.2	
3	67	36.8	213	04.8	41.2	112	30.2	18.5	195	09.6	12.8	153	37.6	46.2	
4	82	39.3	228	08.1	40.9	127	31.5	18.0	210	11.6	13.0	168	39.9	46.2	
5	97	41.7	243	11.4	-21 40.6	142	32.7	-20 17.6	225	13.5	-18 13.1	183	42.2	-22 46.2	
6	112	44.2	258	14.6	-21 40.3	157	34.0	-20 17.1	240	15.5	-18 13.2	198	44.5	-22 46.2	
7	127	46.7	273	17.9	40.0	172	35.3	16.6	255	17.4	13.3	213	46.8	46.2	
8	142	49.1	288	21.2	39.7	187	36.5	16.2	270	19.4	13.5	228	49.1	46.2	
9	157	51.6	303	24.5	39.3	202	37.8	15.7	285	21.3	13.6	243	51.4	46.2	
10	172	54.1	318	27.8	39.0	217	39.1	15.2	300	23.3	13.7	258	53.7	46.2	
11	187	56.5	333	31.1	-21 38.7	232	40.3	-20 14.8	315	25.2	-18 13.9	273	56.0	-22 46.2	
12	202	59.0	348	34.5	-21 38.4	247	41.6	-20 14.3	330	27.2	-18 14.0	288	58.3	-22 46.2	
13	218	01.5	3	37.8	38.1	262	42.9	13.8	345	29.1	14.1	304	00.6	46.2	
14	233	03.9	18	41.1	37.7	277	44.1	13.4	0	31.1	14.2	319	02.9	46.2	
15	248	06.4	33	44.4	37.4	292	45.4	12.9	15	33.0	14.4	334	05.2	46.2	
16	263	08.8	48	47.7	37.1	307	46.6	12.4	30	35.0	14.5	349	07.5	46.2	
17	278	11.3	63	51.0	-21 36.7	322	47.9	-20 12.0	45	36.9	-18 14.6	4	09.8	-22 46.2	
18	293	13.8	78	54.4	-21 36.4	337	49.2	-20 11.5	60	38.9	-18 14.7	19	12.1	-22 46.2	
19	308	16.2	93	57.7	36.1	352	50.4	11.0	75	40.8	14.9	34	14.4	46.2	
20	323	18.7	109	01.0	35.7	7	51.7	10.5	90	42.8	15.0	49	16.7	46.2	
21	338	21.2	124	04.4	35.4	22	52.9	10.1	105	44.7	15.1	64	19.0	46.2	
22	353	23.6	139	07.7	35.0	37	54.2	09.6	120	46.7	15.3	79	21.3	46.2	
23	8	26.1	154	11.1	34.7	52	55.5	09.1	135	48.6	15.4	94	23.6	46.2	
24	23	28.6	169	14.4	-21 34.3	67	56.7	-20 08.7	150	50.6	-18 15.5	109	25.9	-22 46.2	
Dif	—		+33	+3		+13	+5		+19	-1		+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 8			Edad: 5 ^d 8 SD: 14'9 PMG: 17 ^h 10 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	o	'	o	'	o	'		h m	h m	h m	h m	h m	h m	h m	h m
0	183	31.5	-8 24.8	110	55.3	-20 53.7	17	60 N	16 51	17 34	18 22	13 53	45	20 28	55
1	198	31.7	25.7	125	25.4 ¹¹¹	55.4	17	58	16 56	35	21	37	46	44	54
2	213	31.8	26.6	139	55.4 ¹¹⁰	57.0	16	56	17 00	37	20	24	46	20 57	54
3	228	32.0	27.6	154	25.4 ¹¹⁰	-20 58.6	16	54	03	39	20	12	46	21 09	55
4	243	32.1	28.5	168	55.5 ¹¹¹	-21 00.0	14	52	06	40	19	13 02	46	19	54
5	258	32.2	-8 29.4	183	25.6 ¹¹¹	-21 01.3	13	50	17 09	17 42	18 19	12 52	47	21 29	52
6	273	32.4	-8 30.3	197	55.7 ¹¹¹	-21 02.5	12	45	17 15	17 45	18 19	12 33	47	21 48	52
7	288	32.5	31.3	212	25.8 ¹¹¹	03.6	11	40	21	48	19	17	48	22 04	51
8	303	32.7	32.2	226	55.9 ¹¹¹	04.6	10	35	25	51	20	12 04	48	17	51
9	318	32.8	33.1	241	26.0 ¹¹¹	05.6	10	30	29	53	21	11 52	48	29	50
10	333	32.9	34.0	255	56.2 ¹¹²	06.4	8	20	37	17 59	24	32	49	22 49	50
11	348	33.1	-8 35.0	270	26.4 ¹¹²	-21 07.1	7	10 N	17 43	18 04	18 29	11 15	48	23 06	49
12	3	33.2	-8 35.9	284	56.5 ¹¹¹	-21 07.7	6	0	17 49	18 10	18 34	10 59	49	23 22	49
13	18	33.4	36.8	299	26.8 ¹¹³	08.2	5	10 S	17 55	17	41	42	50	38	48
14	33	33.5	37.7	313	57.0 ¹¹²	08.6	4	20	18 02	24	18 51	25	50	23 56	47
15	48	33.6	38.7	328	27.2 ¹¹²	08.9	3	30	10	34	19 03	10 05	50	***	***
16	63	33.8	39.6	342	57.5 ¹¹³	09.0	1	35	14	40	11	9 54	50	***	***
17	78	33.9	-8 40.5	357	27.7 ¹¹²	-21 09.1	1	40	18 20	18 48	19 21	9 41	49	***	***
18	93	34.0	-8 41.4	11	58.0 ¹¹³	-21 09.1	0	45	18 26	18 56	19 33	9 25	50	0 06	50
19	108	34.2	42.4	26	28.3 ¹¹³	09.0	1	50	33	19 07	48	9 06	50	25	50
20	123	34.3	43.3	40	58.7 ¹¹⁴	08.8	2	52	37	12	19 56	8 57	50	34	50
21	138	34.5	44.2	55	29.0 ¹¹³	08.5	3	54	40	18	20 04	46	51	44	51
22	153	34.6	45.1	69	59.4 ¹¹⁴	08.1	4	56	44	24	14	35	50	0 55	51
23	168	34.7	46.0	84	29.8 ¹¹⁴	07.6	5	58	49	31	26	22	50	1 09	50
24	183	34.9	-8 47.0	99	00.2 ¹¹⁴	-21 07.0	6	60 S	18 54	19 40	20 39	8 06	50	1 24	51

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 22 ^h 22 ^m 4		Mag: -4.4 PMG: 12 ^h 40 ^m		Mag: -1.0 PMG: 19 ^h 27 ^m		Mag: -1.8 PMG: 13 ^h 55 ^m		Mag: +0.5 PMG: 16 ^h 40 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	o	'	o	'	o	'	o	'	o	'
0	23	28.6	169	14.4	-21	34.3	67	56.7	-20	08.7
1	38	31.0	184	17.8		34.0	82	58.0		08.2
2	53	33.5	199	21.1		33.6	97	59.2		07.7
3	68	36.0	214	24.5		33.3	113	00.5		07.3
4	83	38.4	229	27.9		32.9	128	01.7		06.8
5	98	40.9	244	31.2	-21	32.5	143	03.0	-20	06.3
6	113	43.3	259	34.6	-21	32.2	158	04.3	-20	05.8
7	128	45.8	274	38.0		31.8	173	05.5		05.4
8	143	48.3	289	41.3		31.4	188	06.8		04.9
9	158	50.7	304	44.7		31.0	203	08.0		04.4
10	173	53.2	319	48.1		30.7	218	09.3		03.9
11	188	55.7	334	51.5	-21	30.3	233	10.5	-20	03.5
12	203	58.1	349	54.9	-21	29.9	248	11.8	-20	03.0
13	219	00.6	4	58.3		29.5	263	13.0		02.5
14	234	03.1	20	01.7		29.1	278	14.3		02.0
15	249	05.5	35	05.1		28.7	293	15.5		01.6
16	264	08.0	50	08.5		28.4	308	16.8		01.1
17	279	10.4	65	11.9	-21	28.0	323	18.0	-20	00.6
18	294	12.9	80	15.3	-21	27.6	338	19.3	-20	00.1
19	309	15.4	95	18.7		27.2	353	20.5	-19	59.7
20	324	17.8	110	22.1		26.8	8	21.8		59.2
21	339	20.3	125	25.5		26.4	23	23.0		58.7
22	354	22.8	140	29.0		25.9	38	24.3		58.2
23	9	25.2	155	32.4		25.5	53	25.5		57.8
24	24	27.7	170	35.8	-21	25.1	68	26.8	-19	57.3
Dif	—		+34		+4		+13		+5	
									+19	
									-1	
									+23	

UT	SOL		 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'0 PMG: 11 ^h 45 ^m 6		Edad: 6 ^d 8 SD: 14'8 PMG: 17 ^h 59 ^m	PHE { 4 ^h : 54'5 12 ^h : 54'4 20 ^h : 54'3 R°: 48 ^m	Dec	Dif					Hora	R°	Hora	R°				
	hG ☉	Dec						hG ☾	Dif						Náutico	Civil		
h	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m	h	m	
0	183	34.9	-8	47.0	99	00.2	-21	07.0	8	51	5	59	6	41	14	38	34	
1	198	35.0		47.9	113	30.6 ¹¹⁴		06.2	8	12	57		37		23	35		
2	213	35.1		48.8	128	01.1 ¹¹⁵		05.4	9	12	55		33		14	10	37	
3	228	35.3		49.7	142	31.5 ¹¹⁴		04.5	10	13	54		29		13	58	38	
4	243	35.4		50.6	157	02.0 ¹¹⁵		03.5	11	13	52		26		48	39	13	
5	258	35.5	-8	51.6	171	32.5 ¹¹⁵	-21	02.4	12	5	13	5	51	6	23	13	39	40
6	273	35.7	-8	52.5	186	03.1 ¹¹⁶	-21	01.2	13	5	13	5	47	6	17	13	20	42
7	288	35.8		53.4	200	33.6 ¹¹⁵	-20	59.9	14	13	44		11		13	05	42	
8	303	35.9		54.3	215	04.2 ¹¹⁶		58.5	15	12	41		07		12	52	43	
9	318	36.1		55.2	229	34.8 ¹¹⁶		57.0	16	10	38		6	02	40	44	19	
10	333	36.2		56.2	244	05.5 ¹¹⁷		55.4	17	07	33		5	55	21	45	39	
11	348	36.3	-8	57.1	258	36.1 ¹¹⁶	-20	53.7	18	5	03	5	27	5	49	12	03	47
12	3	36.5	-8	58.0	273	06.8 ¹¹⁷	-20	51.9	19	4	57	5	21	5	42	11	48	47
13	18	36.6		58.9	287	37.5 ¹¹⁷		50.0	20	50	15		36		32	49	***	
14	33	36.7	-8	59.8	302	08.2 ¹¹⁷		48.0	21	40	5	07	29		11	15	50	***
15	48	36.9	-9	00.8	316	39.0 ¹¹⁸		45.9	22	28	4	57	21		10	55	51	0
16	63	37.0		01.7	331	09.8 ¹¹⁸		43.7	23	20	50		16		44	52		27
17	78	37.1	-9	02.6	345	40.6 ¹¹⁸	-20	41.4	24	4	10	4	43	5	11	10	30	53
18	93	37.3	-9	03.5	0	11.4 ¹¹⁸	-20	39.0	25	3	58	4	35	5	05	10	15	54
19	108	37.4		04.4	14	42.2 ¹¹⁸		36.6	26	42	24		4	57	9	56	55	1
20	123	37.5		05.3	29	13.1 ¹¹⁹		34.0	27	35	19		54		47	56		24
21	138	37.7		06.3	43	44.0 ¹¹⁹		31.3	28	26	13		50		37	56		35
22	153	37.8		07.2	58	15.0 ¹²⁰		28.6	29	16	4	06	46		25	58		46
23	168	37.9		08.1	72	45.9 ¹¹⁹		25.7	30	3	05	3	59	41	9	12	59	1
24	183	38.0	-9	09.0	87	16.9 ¹²⁰	-20	22.8	31	2	51	3	51	4	36	8	56	61

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 22 ^h 18 ^m 5		Mag: -4.4 PMG: 12 ^h 35 ^m		Mag: -0.9 PMG: 19 ^h 25 ^m		Mag: -1.8 PMG: 13 ^h 52 ^m		Mag: +0.5 PMG: 16 ^h 36 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	o	'	o	'	o	'	o	'	o	'
0	24	27.7	170	35.8	-21	25.1	151	37.3	-18	18.6
1	39	30.2	185	39.2		24.7	166	39.2		18.7
2	54	32.6	200	42.7		24.3	181	41.2		18.8
3	69	35.1	215	46.1		23.9	196	43.1		19.0
4	84	37.6	230	49.6		23.5	211	45.1		19.1
5	99	40.0	245	53.0	-21	23.0	226	47.0	-18	19.2
6	114	42.5	260	56.4	-21	22.6	241	49.0	-18	19.3
7	129	44.9	275	59.9		22.2	256	50.9		19.5
8	144	47.4	291	03.3		21.7	271	52.8		19.6
9	159	49.9	306	06.8		21.3	286	54.8		19.7
10	174	52.3	321	10.3		20.9	301	56.7		19.8
11	189	54.8	336	13.7	-21	20.4	316	58.7	-18	20.0
12	204	57.3	351	17.2	-21	20.0	332	00.6	-18	20.1
13	219	59.7	6	20.7		19.5	347	02.6		20.2
14	235	02.2	21	24.1		19.1	2	04.5		20.4
15	250	04.7	36	27.6		18.6	17	06.5		20.5
16	265	07.1	51	31.1		18.2	32	08.4		20.6
17	280	09.6	66	34.6	-21	17.7	47	10.3	-18	20.7
18	295	12.1	81	38.0	-21	17.3	62	12.3	-18	20.9
19	310	14.5	96	41.5		16.8	77	14.2		21.0
20	325	17.0	111	45.0		16.4	92	16.2		21.1
21	340	19.4	126	48.5		15.9	107	18.1		21.2
22	355	21.9	141	52.0		15.4	122	20.1		21.4
23	10	24.4	156	55.5		15.0	137	22.0		21.5
24	25	26.8	171	59.0	-21	14.5	152	23.9	-18	21.6
Dif	—		+35	+4	+12	+5	+19	-1	+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 4			Edad: 7 ^d 8 PHE { 4 ^h : 54'3 12 ^h : 54'3 20 ^h : 54'2 SD: 14'8 PMG: 18 ^h 47 ^m R°: 46 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	o	'	o	'	o	'		h m	h m	h m	h m	h m	h m	h m	h m
0	183	38.0	-9	09.0	87	16.9	-20 22.8	60 N	16 46	17 28	18 16	15 12 25	22 28 70		
1	198	38.2		09.9	101	47.9 ¹²⁰	19.8 ³⁰	58	50	30	16	14 58 28	41 68		
2	213	38.3		10.8	116	19.0 ¹²¹	16.6 ³²	56	55	32	15	47 29	22 52 66		
3	228	38.4		11.8	130	50.0 ¹²⁰	13.4 ³²	54	16 58	34	15	36 31	23 02 66		
4	243	38.6		12.7	145	21.1 ¹²¹	10.1 ³³	52	17 02	36	15	27 33	11 62		
5	258	38.7	-9	13.6	159	52.2 ¹²¹	-20 06.7 ³⁴	50	17 05	17 38	18 15	14 19 34	23 19 61		
6	273	38.8	-9	14.5	174	23.4 ¹²²	-20 03.2 ³⁵	45	17 12	17 42	18 16	14 02 36	23 36 58		
7	288	39.0		15.4	188	54.6 ¹²²	-19 59.6 ³⁶	40	18	45	17	13 47 38	23 50 56		
8	303	39.1		16.3	203	25.8 ¹²²	55.9 ³⁷	35	23	48	18	35 40	*** **		
9	318	39.2		17.2	217	57.0 ¹²²	52.1 ³⁸	30	27	51	19	24 41	*** **		
10	333	39.3		18.2	232	28.3 ¹²³	48.3 ³⁸	20	35	17 57	23	13 06 43	*** **		
11	348	39.5	-9	19.1	246	59.5 ¹²²	-19 44.3 ⁴⁰	10 N	17 42	18 03	18 28	12 50 45	*** **		
12	3	39.6	-9	20.0	261	30.9 ¹²⁴	-19 40.3 ⁴⁰	0	17 49	18 10	18 34	12 35 47	0 11 47		
13	18	39.7		20.9	276	02.2 ¹²³	36.2 ⁴¹	10 S	17 55	17	42	21 48	26 46		
14	33	39.8		21.8	290	33.6 ¹²⁴	31.9 ⁴³	20	18 03	25	18 51	12 05 50	0 43 44		
15	48	40.0		22.7	305	05.0 ¹²⁴	27.6 ⁴³	30	11	36	19 05	11 46 53	1 02 42		
16	63	40.1		23.6	319	36.4 ¹²⁴	23.2 ⁴⁴	35	16	42	13	36 53	13 41		
17	78	40.2	-9	24.5	334	07.9 ¹²⁵	-19 18.8 ⁴⁴	40	18 22	18 50	19 23	11 23 56	1 25 41		
18	93	40.3	-9	25.5	348	39.3 ¹²⁴	-19 14.2 ⁴⁶	45	18 28	18 59	19 36	11 09 57	1 40 39		
19	108	40.5		26.4	3	10.9 ¹²⁶	09.5 ⁴⁷	50	36	19 10	19 52	10 51 60	1 59 36		
20	123	40.6		27.3	17	42.4 ¹²⁵	-19 04.8 ⁴⁷	52	40	16	20 00	43 60	2 07 36		
21	138	40.7		28.2	32	14.0 ¹²⁶	-18 59.9 ⁴⁹	54	44	22	09	33 62	17 34		
22	153	40.8		29.1	46	45.6 ¹²⁶	55.0 ⁴⁹	56	49	29	20	23 63	27 33		
23	168	41.0		30.0	61	17.2 ¹²⁶	50.0 ⁵⁰	58	54	36	32	10 11 65	40 31		
24	183	41.1	-9	30.9	75	48.9 ¹²⁷	-18 44.9 ⁵¹	60 S	18 59	19 45	20 46	9 57 67	2 54 29		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 22 ^h 14 ^m 6		Mag: -4.3 PMG: 12 ^h 29 ^m		Mag: -0.9 PMG: 19 ^h 23 ^m		Mag: -1.8 PMG: 13 ^h 49 ^m		Mag: +0.5 PMG: 16 ^h 32 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	o	'	o	'	o	'	o	'	o	'
0	25	26.8	171	59.0	-21	14.5	68	56.5	-19	45.8
1	40	29.3	187	02.5		14.0	83	57.7		45.3
2	55	31.8	202	06.0		13.5	98	59.0		44.8
3	70	34.2	217	09.5		13.0	114	00.2		44.3
4	85	36.7	232	13.0		12.6	129	01.4		43.8
5	100	39.2	247	16.5	-21	12.1	144	02.7	-19	43.4
6	115	41.6	262	20.1	-21	11.6	159	03.9	-19	42.9
7	130	44.1	277	23.6		11.1	174	05.1		42.4
8	145	46.6	292	27.1		10.6	189	06.3		41.9
9	160	49.0	307	30.6		10.1	204	07.6		41.4
10	175	51.5	322	34.2		09.6	219	08.8		40.9
11	190	53.9	337	37.7	-21	09.1	234	10.0	-19	40.5
12	205	56.4	352	41.2	-21	08.6	249	11.3	-19	40.0
13	220	58.9	7	44.8		08.1	264	12.5		39.5
14	236	01.3	22	48.3		07.6	279	13.7		39.0
15	251	03.8	37	51.9		07.1	294	14.9		38.5
16	266	06.3	52	55.4		06.6	309	16.2		38.0
17	281	08.7	67	58.9	-21	06.1	324	17.4	-19	37.5
18	296	11.2	83	02.5	-21	05.5	339	18.6	-19	37.1
19	311	13.7	98	06.0		05.0	354	19.8		36.6
20	326	16.1	113	09.6		04.5	9	21.1		36.1
21	341	18.6	128	13.2		04.0	24	22.3		35.6
22	356	21.0	143	16.7		03.5	39	23.5		35.1
23	11	23.5	158	20.3		02.9	54	24.7		34.6
24	26	26.0	173	23.9	-21	02.4	69	26.0	-19	34.1
Dif	—		+35		+5		+12		+5	
							+19		-1	
									+23	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16'1 PMG: 11 ^h 45 ^m 2			Edad: 8 ^d 8 PHE { 4 ^h : 54'3 12 ^h : 54'3 20 ^h : 54'3 SD: 14'8 PMG: 19 ^h 33 ^m R°: 46 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°		
h	o	'	o	'	o	'	o	'	h	m	h	m	h	m	h	m	m
0	183	41.1	-9	30.9	75	48.9	-18	44.9	60 N	5 16	6 04	6 46	15 37	19	23 38	74	
1	198	41.2		31.8	90	20.5 ¹²⁶		39.8 ⁵¹	58	16	6 01	42	26 22		49 71		
2	213	41.3		32.7	104	52.3 ¹²⁸		34.5 ⁵³	56	16	5 59	37	16 24		23 58	69	
3	228	41.5		33.6	119	24.0 ¹²⁷		29.2 ⁵³	54	16	57	33	07 26		***	***	
4	243	41.6		34.6	133	55.8 ¹²⁸		23.8 ⁵⁴	52	16	55	30	15 00	27	***	***	
5	258	41.7	-9	35.5	148	27.6 ¹²⁸	-18	18.2 ⁵⁶	50	5 16	5 54	6 26	14 53	28	***	***	
6	273	41.8	-9	36.4	162	59.4 ¹²⁸	-18	12.7 ⁵⁵	45	5 16	5 50	6 19	14 38	31	***	***	
7	288	42.0		37.3	177	31.2 ¹²⁸		07.0 ⁵⁷	40	15	46	13	25 34		***	***	
8	303	42.1		38.2	192	03.1 ¹²⁹	-18	01.2 ⁵⁸	35	13	43	08	15 36		0 01	55	
9	318	42.2		39.1	206	35.0 ¹²⁹	-17	55.4 ⁵⁸	30	12	40	6 04	14 05	38	11	53	
10	333	42.3		40.0	221	07.0 ¹³⁰		49.5 ⁵⁹	20	08	33	5 56	13 49	41	29	50	
11	348	42.4	-9	40.9	235	38.9 ¹²⁹	-17	43.5 ⁶⁰	10 N	5 03	5 27	5 49	13 35	44	0 44	48	
12	3	42.6	-9	41.8	250	10.9 ¹³⁰	-17	37.4 ⁶¹	0	4 57	5 21	5 42	13 22	46	0 58	46	
13	18	42.7		42.7	264	42.9 ¹³⁰		31.3 ⁶¹	10 S	49	14	35	13 09	48	1 12	44	
14	33	42.8		43.6	279	15.0 ¹³¹		25.0 ⁶³	20	39	5 05	27	12 55	50	27	42	
15	48	42.9		44.5	293	47.1 ¹³¹		18.7 ⁶³	30	25	4 54	19	39 53		44 40		
16	63	43.0		45.4	308	19.2 ¹³¹		12.3 ⁶⁴	35	17	48	14	29 56		1 54	38	
17	78	43.2	-9	46.4	322	51.3 ¹³¹	-17	05.9 ⁶⁴	40	4 07	4 40	5 08	12 19	57	2 06	36	
18	93	43.3	-9	47.3	337	23.4 ¹³¹	-16	59.3 ⁶⁶	45	3 54	4 31	5 01	12 06	59	2 19	34	
19	108	43.4		48.2	351	55.6 ¹³²		52.7 ⁶⁶	50	37	19	4 53	11 51	62	35	31	
20	123	43.5		49.1	6	27.8 ¹³²		46.0 ⁶⁷	52	29	14	50	43 64		43 29		
21	138	43.6		50.0	21	00.1 ¹³³		39.2 ⁶⁸	54	20	08	46	35 66		2 51	28	
22	153	43.8		50.9	35	32.3 ¹³²		32.4 ⁶⁸	56	3 10	4 01	41	26 68		3 00	27	
23	168	43.9		51.8	50	04.6 ¹³³		25.5 ⁶⁹	58	2 58	3 53	36	16 69		11 25		
24	183	44.0	-9	52.7	64	36.9 ¹³³	-16	18.5 ⁷⁰	60 S	2 43	3 44	4 30	11 04	72	3 23	22	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 22 ^h 10 ^m 6		Mag: -4.3 PMG: 12 ^h 23 ^m		Mag: -0.9 PMG: 19 ^h 21 ^m		Mag: -1.8 PMG: 13 ^h 46 ^m		Mag: +0.5 PMG: 16 ^h 29 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	o	'	o	'	o	'	o	'	o	'
0	26	26.0	173	23.9	-21	02.4	69	26.0	-19	34.1
1	41	28.4	188	27.4		01.9	84	27.2		33.6
2	56	30.9	203	31.0		01.3	99	28.4		33.2
3	71	33.4	218	34.6		00.8	114	29.6		32.7
4	86	35.8	233	38.2	-21	00.2	129	30.8		32.2
5	101	38.3	248	41.7	-20	59.7	144	32.1	-19	31.7
6	116	40.8	263	45.3	-20	59.1	159	33.3	-19	31.2
7	131	43.2	278	48.9		58.6	174	34.5		30.7
8	146	45.7	293	52.5		58.0	189	35.7		30.2
9	161	48.2	308	56.1		57.5	204	36.9		29.7
10	176	50.6	323	59.7		56.9	219	38.2		29.2
11	191	53.1	339	03.3	-20	56.4	234	39.4	-19	28.7
12	206	55.5	354	06.9	-20	55.8	249	40.6	-19	28.3
13	221	58.0	9	10.5		55.2	264	41.8		27.8
14	237	00.5	24	14.1		54.7	279	43.0		27.3
15	252	02.9	39	17.7		54.1	294	44.2		26.8
16	267	05.4	54	21.3		53.5	309	45.5		26.3
17	282	07.9	69	24.9	-20	53.0	324	46.7	-19	25.8
18	297	10.3	84	28.5	-20	52.4	339	47.9	-19	25.3
19	312	12.8	99	32.1		51.8	354	49.1		24.8
20	327	15.3	114	35.7		51.2	9	50.3		24.3
21	342	17.7	129	39.4		50.6	24	51.5		23.8
22	357	20.2	144	43.0		50.1	39	52.7		23.3
23	12	22.7	159	46.6		49.5	54	53.9		22.8
24	27	25.1	174	50.2	-20	48.9	69	55.2	-19	22.3
Dif	—		+36		+6		+12		+5	
							+19		-1	
									+23	
									0	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 16:1 PMG: 11 ^h 45 ^m 0			Edad: 9 ^d 8 PHE { 4 ^h : 54/4 12 ^h : 54/5 20 ^h : 54/6 Rº: 44 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	Rº	Hora	Rº			
h	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m			
0	183	44.0	-9	52.7	64	36.9	-16	18.5	60 N	16 40	17 23	18 11	15 56	16	*** **			
1	198	44.1		53.6	79	09.2 ¹³³		11.4	58	45	25	11	48	18	*** **			
2	213	44.2		54.5	93	41.6 ¹³⁴		04.2	56	50	28	11	40	20	*** **			
3	228	44.3		55.4	108	14.0 ¹³⁴		57.0	54	54	30	11	33	22	0 06 66			
4	243	44.5		56.3	122	46.4 ¹³⁴		49.7	52	16 58	32	11	27	24	13 66			
5	258	44.6	-9	57.2	137	18.8 ¹³⁴		42.4	50	17 01	17 34	18 11	15 21	26	0 20 64			
6	273	44.7	-9	58.1	151	51.3 ¹³⁵		34.9	45	17 09	17 38	18 12	15 09	29	0 34 61			
7	288	44.8		59.0	166	23.7 ¹³⁴		27.4	40	15	42	14	14 59	32	46 58			
8	303	44.9	-9	59.9	180	56.2 ¹³⁵		19.9	35	20	46	15	51	33	0 56 55			
9	318	45.0	-10	00.8	195	28.8 ¹³⁶		12.2	30	25	49	17	43	36	1 04 54			
10	333	45.1		01.7	210	01.3 ¹³⁵		04.5	20	34	17 56	22	30	39	19 51			
11	348	45.3	-10	02.6	224	33.9 ¹³⁶		56.7	10 N	17 41	18 02	18 27	14 19	42	1 32 48			
12	3	45.4	-10	03.5	239	06.5 ¹³⁶		48.8	0	17 48	18 09	18 34	14 08	45	1 44 46			
13	18	45.5		04.4	253	39.1 ¹³⁶		40.9	10 S	17 56	17	42	13 57	48	1 56 43			
14	33	45.6		05.3	268	11.7 ¹³⁶		32.9	20	18 03	26	18 52	45	51	2 09 40			
15	48	45.7		06.2	282	44.4 ¹³⁷		24.9	30	13	37	19 06	32	54	24 36			
16	63	45.8		07.1	297	17.0 ¹³⁶		16.8	35	18	44	15	25	56	32 35			
17	78	45.9	-10	08.0	311	49.7 ¹³⁷		08.6	40	18 24	18 52	19 26	13 16	58	2 42 32			
18	93	46.1	-10	08.9	326	22.4 ¹³⁷		00.3	45	18 31	19 02	19 39	13 05	62	2 53 30			
19	108	46.2		09.8	340	55.2 ¹³⁸		52.0	50	40	14	19 56	12 53	64	3 06 27			
20	123	46.3		10.7	355	27.9 ¹³⁷		43.6	52	44	20	20 05	47	66	12 26			
21	138	46.4		11.6	10	00.7 ¹³⁸		35.1	54	48	26	14	41	68	19 24			
22	153	46.5		12.5	24	33.5 ¹³⁸		26.6	56	53	33	25	34	69	27 22			
23	168	46.6		13.4	39	06.3 ¹³⁸		18.1	58	18 58	42	38	25	73	36 19			
24	183	46.7	-10	14.3	53	39.1 ¹³⁸		09.4	60 S	19 04	19 51	20 54	12 16	75	3 45 18			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 22 ^h 06 ^m 7		Mag: -4.2 PMG: 12 ^h 18 ^m			Mag: -0.9 PMG: 19 ^h 19 ^m			Mag: -1.8 PMG: 13 ^h 42 ^m			Mag: +0.5 PMG: 16 ^h 25 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'				
0	27	25.1	174	50.2	-20	48.9	69	55.2	-19	22.3	153	57.1	-18	27.7	113	06.2	-22	46.3
1	42	27.6	189	53.9		48.3	84	56.4		21.9	168	59.0		27.9	128	08.4		46.3
2	57	30.0	204	57.5		47.7	99	57.6		21.4	184	01.0		28.0	143	10.7		46.3
3	72	32.5	220	01.1		47.1	114	58.8		20.9	199	02.9		28.1	158	13.0		46.3
4	87	35.0	235	04.8		46.5	130	00.0		20.4	214	04.8		28.2	173	15.3		46.3
5	102	37.4	250	08.4	-20	45.9	145	01.2	-19	19.9	229	06.8	-18	28.4	188	17.6	-22	46.3
6	117	39.9	265	12.1	-20	45.3	160	02.4	-19	19.4	244	08.7	-18	28.5	203	19.9	-22	46.3
7	132	42.4	280	15.7		44.7	175	03.6		18.9	259	10.7		28.6	218	22.2		46.3
8	147	44.8	295	19.3		44.1	190	04.8		18.4	274	12.6		28.7	233	24.4		46.3
9	162	47.3	310	23.0		43.4	205	06.0		17.9	289	14.5		28.9	248	26.7		46.3
10	177	49.8	325	26.6		42.8	220	07.2		17.4	304	16.5		29.0	263	29.0		46.3
11	192	52.2	340	30.3	-20	42.2	235	08.5	-19	16.9	319	18.4	-18	29.1	278	31.3	-22	46.3
12	207	54.7	355	33.9	-20	41.6	250	09.7	-19	16.4	334	20.3	-18	29.3	293	33.6	-22	46.3
13	222	57.1	10	37.6		41.0	265	10.9		15.9	349	22.3		29.4	308	35.9		46.3
14	237	59.6	25	41.3		40.3	280	12.1		15.4	4	24.2		29.5	323	38.1		46.3
15	253	02.1	40	44.9		39.7	295	13.3		14.9	19	26.1		29.6	338	40.4		46.3
16	268	04.5	55	48.6		39.1	310	14.5		14.4	34	28.1		29.8	353	42.7		46.3
17	283	07.0	70	52.3	-20	38.5	325	15.7	-19	13.9	49	30.0	-18	29.9	8	45.0	-22	46.3
18	298	09.5	85	55.9	-20	37.8	340	16.9	-19	13.4	64	32.0	-18	30.0	23	47.3	-22	46.3
19	313	11.9	100	59.6		37.2	355	18.1		12.9	79	33.9		30.1	38	49.6		46.3
20	328	14.4	116	03.3		36.5	10	19.3		12.4	94	35.8		30.3	53	51.9		46.3
21	343	16.9	131	06.9		35.9	25	20.5		11.9	109	37.8		30.4	68	54.1		46.3
22	358	19.3	146	10.6		35.3	40	21.7		11.4	124	39.7		30.5	83	56.4		46.3
23	13	21.8	161	14.3		34.6	55	22.9		10.9	139	41.6		30.7	98	58.7		46.3
24	28	24.3	176	18.0	-20	34.0	70	24.1	-19	10.4	154	43.6	-18	30.8	114	01.0	-22	46.3
Dif	—		+37		+6		+12		+5		+19		-1		+23		0	

UT	SOL			O LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1			Edad: 10 ^d 8 PHE { 4 ^h : 54 ^m 7 12 ^h : 54 ^m 8 20 ^h : 55 ^m 0 R ^o : 45 ^m													
	PMG: 11 ^h 44 ^m 8			PMG: 21 ^h 03 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°		
h	o	'	o	'	o	'	o	'	h	m	h	m	h	m	h	m	
0	183	46.7	-10	14.3	53	39.1	-13	09.4	60 N	5 20	6 09	6 51	16 12	13	0 52	75	
1	198	46.8		15.2	68	12.0 ¹³⁹	-13	00.7 ⁸⁷	58	20	06	46	06	15	1 00	73	
2	213	47.0		16.1	82	44.8 ¹³⁸	-12	51.9 ⁸⁸	56	20	03	41	16 00	18	07	70	
3	228	47.1		17.0	97	17.7 ¹³⁹		43.1 ⁸⁸	54	20	6 01	37	15 55	20	13	69	
4	243	47.2		17.9	111	50.6 ¹³⁹		34.2 ⁸⁹	52	20	5 59	33	51	21	19	66	
5	258	47.3	-10	18.8	126	23.5 ¹³⁹	-12	25.3 ⁸⁹	50	5 19	5 57	6 30	15 47	23	1 24	65	
6	273	47.4	-10	19.7	140	56.4 ¹³⁹	-12	16.3 ⁹⁰	45	5 18	5 52	6 22	15 38	27	1 35	61	
7	288	47.5		20.6	155	29.3 ¹³⁹	-12	07.2 ⁹¹	40	17	48	16	31	29	44	59	
8	303	47.6		21.5	170	02.3 ¹⁴⁰	-11	58.1 ⁹¹	35	15	44	10	24	32	51	57	
9	318	47.7		22.4	184	35.2 ¹³⁹		48.9 ⁹²	30	13	41	6 05	19	34	1 58	54	
10	333	47.8		23.3	199	08.2 ¹⁴⁰		39.7 ⁹²	20	08	34	5 56	09	38	2 10	50	
11	348	47.9	-10	24.2	213	41.2 ¹⁴⁰	-11	30.4 ⁹³	10 N	5 03	5 27	5 49	15 01	41	2 20	47	
12	3	48.0	-10	25.1	228	14.2 ¹⁴⁰	-11	21.0 ⁹⁴	0	4 56	5 20	5 41	14 53	44	2 30	44	
13	18	48.2		26.0	242	47.2 ¹⁴⁰		11.6 ⁹⁴	10 S	48	13	34	45	47	39	41	
14	33	48.3		26.9	257	20.2 ¹⁴⁰	-11	02.2 ⁹⁴	20	37	5 04	26	36	51	2 49	38	
15	48	48.4		27.8	271	53.3 ¹⁴¹	-10	52.6 ⁹⁶	30	23	4 52	17	26	55	3 00	35	
16	63	48.5		28.6	286	26.3 ¹⁴⁰		43.1 ⁹⁵	35	14	45	11	21	56	07	33	
17	78	48.6	-10	29.5	300	59.4 ¹⁴¹	-10	33.5 ⁹⁶	40	4 03	4 37	5 05	14 14	60	3 14	31	
18	93	48.7	-10	30.4	315	32.4 ¹⁴⁰	-10	23.8 ⁹⁷	45	3 50	4 27	4 58	14 07	62	3 23	27	
19	108	48.8		31.3	330	05.5 ¹⁴¹		14.1 ⁹⁷	50	33	15	49	13 57	66	33	24	
20	123	48.9		32.2	344	38.6 ¹⁴¹	-10	04.3 ⁹⁸	52	24	09	45	53	68	38	22	
21	138	49.0		33.1	359	11.7 ¹⁴¹	-9	54.4 ⁹⁹	54	15	4 03	41	49	69	43	21	
22	153	49.1		34.0	13	44.8 ¹⁴¹		44.6 ⁹⁸	56	3 04	3 55	36	43	72	49	19	
23	168	49.2		34.9	28	17.9 ¹⁴¹		34.6 ¹⁰⁰	58	2 51	47	30	38	74	3 55	17	
24	183	49.3	-10	35.8	42	51.0 ¹⁴¹	-9	24.7 ⁹⁹	60 S	2 35	3 38	4 24	13 31	77	4 03	14	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 22 ^h 02 ^m 8		Mag: -4.2 PMG: 12 ^h 12 ^m		Mag: -0.9 PMG: 19 ^h 17 ^m		Mag: -1.8 PMG: 13 ^h 39 ^m		Mag: +0.5 PMG: 16 ^h 21 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	o	'	o	'	o	'	o	'	o	'								
0	28	24.3	176	18.0	-20	34.0	70	24.1	-19	10.4	154	43.6	-18	30.8	114	01.0	-22	46.3
1	43	26.7	191	21.6		33.3	85	25.3		09.9	169	45.5		30.9	129	03.3		46.3
2	58	29.2	206	25.3		32.7	100	26.5		09.4	184	47.4		31.0	144	05.6		46.3
3	73	31.6	221	29.0		32.0	115	27.7		08.9	199	49.4		31.2	159	07.8		46.3
4	88	34.1	236	32.7		31.3	130	28.9		08.4	214	51.3		31.3	174	10.1		46.3
5	103	36.6	251	36.4	-20	30.7	145	30.1	-19	07.9	229	53.2	-18	31.4	189	12.4	-22	46.3
6	118	39.0	266	40.1	-20	30.0	160	31.3	-19	07.4	244	55.2	-18	31.5	204	14.7	-22	46.3
7	133	41.5	281	43.8		29.4	175	32.5		06.9	259	57.1		31.7	219	17.0		46.3
8	148	44.0	296	47.5		28.7	190	33.7		06.4	274	59.1		31.8	234	19.2		46.3
9	163	46.4	311	51.2		28.0	205	34.9		05.9	290	01.0		31.9	249	21.5		46.3
10	178	48.9	326	54.9		27.3	220	36.1		05.4	305	02.9		32.0	264	23.8		46.3
11	193	51.4	341	58.6	-20	26.7	235	37.3	-19	04.9	320	04.9	-18	32.2	279	26.1	-22	46.3
12	208	53.8	357	02.3	-20	26.0	250	38.5	-19	04.4	335	06.8	-18	32.3	294	28.4	-22	46.3
13	223	56.3	12	06.0		25.3	265	39.7		03.9	350	08.7		32.4	309	30.7		46.3
14	238	58.7	27	09.7		24.6	280	40.9		03.4	5	10.7		32.6	324	32.9		46.3
15	254	01.2	42	13.4		24.0	295	42.1		02.9	20	12.6		32.7	339	35.2		46.3
16	269	03.7	57	17.1		23.3	310	43.3		02.4	35	14.5		32.8	354	37.5		46.3
17	284	06.1	72	20.8	-20	22.6	325	44.4	-19	01.9	50	16.5	-18	32.9	9	39.8	-22	46.3
18	299	08.6	87	24.5	-20	21.9	340	45.6	-19	01.4	65	18.4	-18	33.1	24	42.1	-22	46.3
19	314	11.1	102	28.2		21.2	355	46.8		00.9	80	20.3		33.2	39	44.3		46.3
20	329	13.5	117	32.0		20.5	10	48.0	-19	00.4	95	22.3		33.3	54	46.6		46.3
21	344	16.0	132	35.7		19.8	25	49.2	-18	59.9	110	24.2		33.4	69	48.9		46.3
22	359	18.5	147	39.4		19.1	40	50.4		59.4	125	26.1		33.6	84	51.2		46.3
23	14	20.9	162	43.1		18.4	55	51.6		58.9	140	28.1		33.7	99	53.5		46.3
24	29	23.4	177	46.9	-20	17.7	70	52.8	-18	58.4	155	30.0	-18	33.8	114	55.7	-22	46.3
Dif	—		+37 +7		+12 +5		+19		-1		+23							

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1			Edad: 11 ^d 8 PHE	SD: 15 ^h 1				Final del crepúsculo			Salida de Luna		Puesta de Luna	
	PMG: 11 ^h 44 ^m 6				PMG: 21 ^h 48 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	Rº	Hora	Rº
h	o	/	o	/	o	/		h m	h m	h m	h m	h m m	h m m	h m m	h m m
0	183	49.3	–10	35.8	42	51.0	–9 24.7	60 N	16 34	17 17	18 05	16 25	12	2 07	78
1	198	49.4		36.7	57	24.1 ¹⁴¹	14.6 ¹⁰¹	58	40	20	06	21	15	13	75
2	213	49.5		37.6	71	57.2 ¹⁴¹	–9 04.5 ¹⁰¹	56	45	23	06	18	17	17	73
3	228	49.6		38.5	86	30.3 ¹⁴¹	–8 54.4 ¹⁰¹	54	49	26	07	15	19	22	70
4	243	49.7		39.4	101	03.4 ¹⁴¹	44.3 ¹⁰¹	52	53	28	07	12	21	25	69
5	258	49.8	–10	40.2	115	36.6 ¹⁴²	–8 34.0 ¹⁰³	50	16 57	17 30	18 08	16 10	22	2 29	67
6	273	49.9	–10	41.1	130	09.7 ¹⁴¹	–8 23.8 ¹⁰²	45	17 05	17 35	18 09	16 05	25	2 36	63
7	288	50.0		42.0	144	42.8 ¹⁴¹	13.5 ¹⁰³	40	12	40	11	16 00	29	43	60
8	303	50.1		42.9	159	16.0 ¹⁴²	–8 03.1 ¹⁰⁴	35	18	44	13	15 56	32	48	57
9	318	50.2		43.8	173	49.1 ¹⁴¹	–7 52.7 ¹⁰⁴	30	23	47	15	53	34	2 52	56
10	333	50.3		44.7	188	22.2 ¹⁴¹	42.3 ¹⁰⁴	20	32	17 55	20	47	38	3 00	52
11	348	50.4	–10	45.6	202	55.4 ¹⁴²	–7 31.8 ¹⁰⁵	10 N	17 40	18 02	18 26	15 42	41	3 07	48
12	3	50.6	–10	46.5	217	28.5 ¹⁴¹	–7 21.3 ¹⁰⁵	0	17 48	18 09	18 33	15 37	45	3 14	44
13	18	50.7		47.4	232	01.6 ¹⁴¹	10.7 ¹⁰⁶	10 S	17 56	17	42	32	48	20	42
14	33	50.8		48.2	246	34.8 ¹⁴²	–7 00.1 ¹⁰⁶	20	18 04	27	18 53	27	51	27	38
15	48	50.9		49.1	261	07.9 ¹⁴¹	–6 49.5 ¹⁰⁶	30	14	39	19 08	21	55	35	34
16	63	51.0		50.0	275	41.0 ¹⁴¹	38.8 ¹⁰⁷	35	20	46	17	17	58	40	31
17	78	51.1	–10	50.9	290	14.1 ¹⁴¹	–6 28.1 ¹⁰⁷	40	18 26	18 54	19 28	15 14	60	3 45	29
18	93	51.2	–10	51.8	304	47.2 ¹⁴¹	–6 17.3 ¹⁰⁸	45	18 34	19 05	19 42	15 09	64	3 50	26
19	108	51.3		52.7	319	20.3 ¹⁴¹	–6 06.5 ¹⁰⁸	50	43	18	20 00	03	68	3 57	23
20	123	51.4		53.6	333	53.5 ¹⁴²	–5 55.7 ¹⁰⁸	52	47	24	09	15 01	69	4 00	21
21	138	51.4		54.4	348	26.5 ¹⁴⁰	44.8 ¹⁰⁹	54	52	30	19	14 58	71	04	19
22	153	51.5		55.3	2	59.6 ¹⁴¹	33.9 ¹⁰⁹	56	18 57	38	31	55	74	08	17
23	168	51.6		56.2	17	32.7 ¹⁴¹	23.0 ¹⁰⁹	58	19 03	47	20 45	52	76	12	15
24	183	51.7	–10	57.1	32	05.8 ¹⁴¹	–5 12.0 ¹¹⁰	60 S	19 10	19 57	21 01	14 48	78	4 17	12

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 21 ^h 58 ^m 8		Mag: –4.2 PMG: 12 ^h 06 ^m		Mag: –0.8 PMG: 19 ^h 15 ^m		Mag: –1.8 PMG: 13 ^h 36 ^m		Mag: +0.5 PMG: 16 ^h 18 ^m						
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	o	/	o	/	o	/	o	/	o	/					
0	29	23.4	177	46.9	–20	70	52.8	–18	155	30.0	–18	114	55.7	–22	46.3
1	44	25.9	192	50.6		85	54.0		170	31.9		129	58.0		46.3
2	59	28.3	207	54.3		100	55.2		185	33.9		145	00.3		46.3
3	74	30.8	222	58.0		115	56.4		200	35.8		160	02.6		46.3
4	89	33.2	238	01.8		130	57.5		215	37.7		175	04.9		46.3
5	104	35.7	253	05.5	–20	145	58.7	–18	230	39.7	–18	190	07.1	–22	46.3
6	119	38.2	268	09.2	–20	160	59.9	–18	245	41.6	–18	205	09.4	–22	46.3
7	134	40.6	283	13.0		176	01.1		260	43.5		220	11.7		46.3
8	149	43.1	298	16.7		191	02.3		275	45.5		235	14.0		46.3
9	164	45.6	313	20.4		206	03.5		290	47.4		250	16.2		46.3
10	179	48.0	328	24.2		221	04.7		305	49.3		265	18.5		46.3
11	194	50.5	343	27.9	–20	236	05.9	–18	320	51.2	–18	280	20.8	–22	46.3
12	209	53.0	358	31.7	–20	251	07.0	–18	335	53.2	–18	295	23.1	–22	46.3
13	224	55.4	13	35.4		266	08.2		350	55.1		310	25.4		46.3
14	239	57.9	28	39.2		281	09.4		5	57.0		325	27.6		46.3
15	255	00.4	43	42.9		296	10.6		20	59.0		340	29.9		46.3
16	270	02.8	58	46.7		311	11.8		36	00.9		355	32.2		46.3
17	285	05.3	73	50.4	–20	326	13.0	–18	51	02.8	–18	10	34.5	–22	46.3
18	300	07.7	88	54.2	–20	341	14.2	–18	66	04.8	–18	25	36.7	–22	46.3
19	315	10.2	103	57.9		356	15.3		81	06.7		40	39.0		46.3
20	330	12.7	119	01.7		11	16.5		96	08.6		55	41.3		46.3
21	345	15.1	134	05.4		26	17.7		111	10.6		70	43.6		46.3
22	0	17.6	149	09.2		41	18.9		126	12.5		85	45.9		46.3
23	15	20.1	164	12.9		56	20.1		141	14.4		100	48.1		46.3
24	30	22.5	179	16.7	–20	71	21.2	–18	156	16.4	–18	115	50.4	–22	46.3
Dif	—		+37		+7	+12		+5	+19		–1	+23			

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16 ^h 1			Edad: 12 ^d 8	PHE {	4 ^h : 55 ^m 6		12 ^h : 55 ^m 8	20 ^h : 56 ^m 0		R°: 46 ^m	R°	R°	R°		
	PMG: 11 ^h 44 ^m 5															
hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil	Hora	R°	Hora	R°				
0	183	51.7	-10	57.1	32	05.8	-5	12.0	60 N	5 25	6 13	6 56	16 37	12	3 25	79
1	198	51.8		58.0	46	38.9 ¹⁴¹	-5	01.0 ¹¹⁰	58	24	10	51	36	14	28	76
2	213	51.9		58.9	61	11.9 ¹⁴⁰	-4	50.0 ¹¹⁰	56	24	07	46	35	16	30	74
3	228	52.0	-10	59.8	75	45.0 ¹⁴¹		38.9 ¹¹¹	54	23	05	41	34	19	32	72
4	243	52.1	-11	00.6	90	18.0 ¹⁴⁰		27.8 ¹¹¹	52	23	02	37	33	20	34	70
5	258	52.2	-11	01.5	104	51.0 ¹⁴⁰	-4	16.7 ¹¹¹	50	5 22	6 00	6 33	16 32	22	3 36	68
6	273	52.3	-11	02.4	119	24.0 ¹⁴⁰	-4	05.5 ¹¹²	45	5 20	5 55	6 25	16 30	26	3 39	65
7	288	52.4		03.3	133	57.0 ¹⁴⁰	-3	54.3 ¹¹²	40	19	50	18	29	29	43	61
8	303	52.5		04.2	148	30.0 ¹⁴⁰		43.1 ¹¹²	35	16	46	12	28	31	45	59
9	318	52.6		05.1	163	03.0 ¹⁴⁰		31.9 ¹¹²	30	14	42	6 06	27	34	48	56
10	333	52.7		05.9	177	35.9 ¹³⁹		20.6 ¹¹³	20	09	35	5 57	25	38	52	51
11	348	52.8	-11	06.8	192	08.9 ¹⁴⁰	-3	09.3 ¹¹³	10 N	5 03	5 28	5 49	16 23	42	3 55	48
12	3	52.9	-11	07.7	206	41.8 ¹³⁹	-2	58.0 ¹¹³	0	4 56	5 20	5 41	16 22	45	3 58	45
13	18	53.0		08.6	221	14.7 ¹³⁹		46.6 ¹¹⁴	10 S	47	12	33	20	49	4 02	41
14	33	53.1		09.5	235	47.6 ¹³⁹		35.3 ¹¹³	20	36	5 02	25	18	53	05	38
15	48	53.2		10.3	250	20.4 ¹³⁸		23.9 ¹¹⁴	30	21	4 50	15	16	57	09	34
16	63	53.3		11.2	264	53.3 ¹³⁹		12.5 ¹¹⁴	35	11	43	09	15	60	11	31
17	78	53.4	-11	12.1	279	26.1 ¹³⁸	-2	01.1 ¹¹⁴	40	4 00	4 34	5 02	16 14	62	4 14	28
18	93	53.5	-11	13.0	293	58.9 ¹³⁸	-1	49.6 ¹¹⁵	45	3 46	4 24	4 55	16 13	65	4 16	26
19	108	53.5		13.9	308	31.7 ¹³⁸		38.1 ¹¹⁵	50	28	11	45	11	69	20	22
20	123	53.6		14.7	323	04.5 ¹³⁸		26.7 ¹¹⁴	52	19	4 05	41	10	71	21	21
21	138	53.7		15.6	337	37.2 ¹³⁷		15.2 ¹¹⁵	54	3 09	3 58	36	09	74	23	18
22	153	53.8		16.5	352	09.9 ¹³⁷	-1	03.6 ¹¹⁶	56	2 57	50	31	09	75	25	16
23	168	53.9		17.4	6	42.6 ¹³⁷	-0	52.1 ¹¹⁵	58	43	41	25	08	77	27	14
24	183	54.0	-11	18.3	21	15.3 ¹³⁷	-0	40.5 ¹¹⁶	60 S	2 27	3 31	4 18	16 06	81	4 29	12

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 21 ^h 54 ^m 9		Mag: -4.2 PMG: 12 ^h 00 ^m		Mag: -0.8 PMG: 19 ^h 13 ^m		Mag: -1.8 PMG: 13 ^h 33 ^m		Mag: +0.5 PMG: 16 ^h 14 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
0	30	22.5	179	16.7	-20	00.1	71	21.2	-18	46.2	156	16.4	-18	36.9	115	50.4	-22	46.3
1	45	25.0	194	20.5	-19	59.4	86	22.4		45.7	171	18.3		37.0	130	52.7		46.3
2	60	27.5	209	24.2		58.6	101	23.6		45.2	186	20.2		37.1	145	55.0		46.3
3	75	29.9	224	28.0		57.8	116	24.8		44.6	201	22.1		37.2	160	57.2		46.3
4	90	32.4	239	31.8		57.1	131	26.0		44.1	216	24.1		37.4	175	59.5		46.3
5	105	34.8	254	35.5	-19	56.3	146	27.1	-18	43.6	231	26.0	-18	37.5	191	01.8	-22	46.3
6	120	37.3	269	39.3	-19	55.5	161	28.3	-18	43.1	246	27.9	-18	37.6	206	04.1	-22	46.3
7	135	39.8	284	43.1		54.8	176	29.5		42.6	261	29.9		37.7	221	06.3		46.3
8	150	42.2	299	46.8		54.0	191	30.7		42.1	276	31.8		37.9	236	08.6		46.3
9	165	44.7	314	50.6		53.2	206	31.9		41.6	291	33.7		38.0	251	10.9		46.3
10	180	47.2	329	54.4		52.4	221	33.0		41.1	306	35.7		38.1	266	13.2		46.3
11	195	49.6	344	58.1	-19	51.7	236	34.2	-18	40.5	321	37.6	-18	38.2	281	15.4	-22	46.3
12	210	52.1	0	01.9	-19	50.9	251	35.4	-18	40.0	336	39.5	-18	38.4	296	17.7	-22	46.3
13	225	54.6	15	05.7		50.1	266	36.6		39.5	351	41.4		38.5	311	20.0		46.3
14	240	57.0	30	09.5		49.3	281	37.7		39.0	6	43.4		38.6	326	22.3		46.3
15	255	59.5	45	13.2		48.5	296	38.9		38.5	21	45.3		38.8	341	24.5		46.3
16	271	02.0	60	17.0		47.7	311	40.1		38.0	36	47.2		38.9	356	26.8		46.3
17	286	04.4	75	20.8	-19	46.9	326	41.3	-18	37.5	51	49.2	-18	39.0	11	29.1	-22	46.3
18	301	06.9	90	24.6	-19	46.1	341	42.4	-18	36.9	66	51.1	-18	39.1	26	31.3	-22	46.3
19	316	09.3	105	28.4		45.4	356	43.6		36.4	81	53.0		39.3	41	33.6		46.3
20	331	11.8	120	32.1		44.6	11	44.8		35.9	96	54.9		39.4	56	35.9		46.3
21	346	14.3	135	35.9		43.8	26	46.0		35.4	111	56.9		39.5	71	38.2		46.3
22	1	16.7	150	39.7		42.9	41	47.1		34.9	126	58.8		39.6	86	40.4		46.3
23	16	19.2	165	43.5		42.1	56	48.3		34.4	142	00.7		39.8	101	42.7		46.3
24	31	21.7	180	47.3	-19	41.3	71	49.5	-18	33.9	157	02.7	-18	39.9	116	45.0	-22	46.3
Dif	—		+38		+8		+12		+5		+19		-1		+23			

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16 ^h 1			Edad: 13 ^d 8 PHE	SD: 15 ^h 4				R°: 47 ^m									
	PMG: 11 ^h 44 ^m 3				PMG: 23 ^h 18 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°				
h	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m			
0	183	54.0	-11	18.3	21	15.3	-0	40.5	60 N	16 29	17 12	18 00	16 49	13	4 44	82		
1	198	54.1		19.1	35	48.0 ¹³⁷		29.0 ¹¹⁵	58	35	15	01	50	16	44	79		
2	213	54.2		20.0	50	20.6 ¹³⁶		17.4 ¹¹⁶	56	40	18	02	51	18	44	76		
3	228	54.3		20.9	64	53.2 ¹³⁶		-0	55.8 ¹¹⁶	54	45	21	02	53	19	44	74	
4	243	54.4		21.8	79	25.7 ¹³⁵		+0	05.8 ¹¹⁶	52	49	24	03	53	22	44	72	
5	258	54.5	-11	22.6	93	58.3 ¹³⁶		+0	17.4 ¹¹⁶	50	16 53	17 26	18 04	16 54	24	4 44	70	
6	273	54.5	-11	23.5	108	30.8 ¹³⁵		+0	29.0 ¹¹⁶	45	17 02	17 32	18 06	16 56	28	4 44	66	
7	288	54.6		24.4	123	03.3 ¹³⁵		40.7 ¹¹⁷	40	09	37	08	58	30	44	63		
8	303	54.7		25.3	137	35.7 ¹³⁴		+0	52.3 ¹¹⁶	35	16	41	11	16 59	34	44	60	
9	318	54.8		26.1	152	08.1 ¹³⁴		+1	04.0 ¹¹⁷	30	21	45	13	17 01	35	44	57	
10	333	54.9		27.0	166	40.5 ¹³⁴		15.6 ¹¹⁶	20	31	17 53	19	03	40	43	54		
11	348	55.0	-11	27.9	181	12.9 ¹³⁴		+1	27.3 ¹¹⁷	10 N	17 39	18 01	18 26	17 05	43	4 43	50	
12	3	55.1	-11	28.8	195	45.2 ¹³³		+1	38.9 ¹¹⁶	0	17 48	18 09	18 33	17 07	47	4 43	46	
13	18	55.2		29.6	210	17.5 ¹³³		+1	50.6 ¹¹⁷	10 S	17 56	18	43	09	50	43	42	
14	33	55.2		30.5	224	49.8 ¹³³		+2	02.3 ¹¹⁷	20	18 05	28	18 54	11	54	43	39	
15	48	55.3		31.4	239	22.0 ¹³²		14.0 ¹¹⁷	30	15	40	19 10	13	59	43	34		
16	63	55.4		32.3	253	54.2 ¹³²		25.6 ¹¹⁶	35	21	48	19	15	61	42	33		
17	78	55.5	-11	33.1	268	26.3 ¹³¹		+2	37.3 ¹¹⁷	40	18 28	18 57	19 31	17 16	64	4 42	30	
18	93	55.6	-11	34.0	282	58.4 ¹³¹		+2	49.0 ¹¹⁷	45	18 36	19 08	19 46	17 18	67	4 42	26	
19	108	55.7		34.9	297	30.5 ¹³¹		+3	00.6 ¹¹⁶	50	46	21	20 05	20	72	42	22	
20	123	55.8		35.8	312	02.5 ¹³⁰		12.3 ¹¹⁷	52	51	28	14	21	74	42	21		
21	138	55.8		36.6	326	34.5 ¹³⁰		24.0 ¹¹⁷	54	18 56	35	25	23	75	41	20		
22	153	55.9		37.5	341	06.5 ¹³⁰		35.6 ¹¹⁶	56	19 01	43	37	24	77	41	17		
23	168	56.0		38.4	355	38.4 ¹²⁹		47.3 ¹¹⁷	58	08	19 52	20 52	25	80	41	15		
24	183	56.1	-11	39.2	10	10.3 ¹²⁹		+3	58.9 ¹¹⁶	60 S	19 15	20 03	21 09	17 27	83	4 41	12	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 21 ^h 51 ^m 0		Mag: -4.2 PMG: 11 ^h 54 ^m		Mag: -0.8 PMG: 19 ^h 11 ^m		Mag: -1.8 PMG: 13 ^h 30 ^m		Mag: +0.5 PMG: 16 ^h 11 ^m									
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec							
h	o	'	o	'	o	'	o	'	o	'	o	'						
0	31	21.7	180	47.3	-19	41.3	71	49.5	-18	33.9	157	02.7	-18	39.9	116	45.0	-22	46.3
1	46	24.1	195	51.1		40.5	86	50.6		33.3	172	04.6		40.0	131	47.3		46.3
2	61	26.6	210	54.9		39.7	101	51.8		32.8	187	06.5		40.1	146	49.5		46.3
3	76	29.1	225	58.7		38.9	116	53.0		32.3	202	08.4		40.3	161	51.8		46.3
4	91	31.5	241	02.4		38.1	131	54.2		31.8	217	10.4		40.4	176	54.1		46.3
5	106	34.0	256	06.2	-19	37.3	146	55.3	-18	31.3	232	12.3	-18	40.5	191	56.3	-22	46.3
6	121	36.4	271	10.0	-19	36.5	161	56.5	-18	30.8	247	14.2	-18	40.6	206	58.6	-22	46.3
7	136	38.9	286	13.8		35.6	176	57.7		30.2	262	16.2		40.8	222	00.9		46.3
8	151	41.4	301	17.6		34.8	191	58.8		29.7	277	18.1		40.9	237	03.2		46.3
9	166	43.8	316	21.4		34.0	207	00.0		29.2	292	20.0		41.0	252	05.4		46.3
10	181	46.3	331	25.2		33.2	222	01.2		28.7	307	21.9		41.1	267	07.7		46.3
11	196	48.8	346	29.0	-19	32.3	237	02.3	-18	28.2	322	23.9	-18	41.3	282	10.0	-22	46.3
12	211	51.2	1	32.8	-19	31.5	252	03.5	-18	27.6	337	25.8	-18	41.4	297	12.2	-22	46.3
13	226	53.7	16	36.6		30.7	267	04.7		27.1	352	27.7		41.5	312	14.5		46.3
14	241	56.2	31	40.4		29.8	282	05.8		26.6	7	29.6		41.7	327	16.8		46.3
15	256	58.6	46	44.2		29.0	297	07.0		26.1	22	31.6		41.8	342	19.1		46.3
16	272	01.1	61	48.0		28.2	312	08.2		25.6	37	33.5		41.9	357	21.3		46.3
17	287	03.6	76	51.8	-19	27.3	327	09.3	-18	25.0	52	35.4	-18	42.0	12	23.6	-22	46.3
18	302	06.0	91	55.6	-19	26.5	342	10.5	-18	24.5	67	37.3	-18	42.2	27	25.9	-22	46.3
19	317	08.5	106	59.4		25.6	357	11.7		24.0	82	39.3		42.3	42	28.1		46.3
20	332	10.9	122	03.2		24.8	12	12.8		23.5	97	41.2		42.4	57	30.4		46.3
21	347	13.4	137	07.0		23.9	27	14.0		23.0	112	43.1		42.5	72	32.7		46.3
22	2	15.9	152	10.8		23.1	42	15.2		22.4	127	45.1		42.7	87	34.9		46.3
23	17	18.3	167	14.6		22.2	57	16.3		21.9	142	47.0		42.8	102	37.2		46.3
24	32	20.8	182	18.4	-19	21.4	72	17.5	-18	21.4	157	48.9	-18	42.9	117	39.5	-22	46.3
Dif	—		+38		+8		+12		+5		+19		-1		+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 2			Edad: 14 ^d 8 PHE { 4 ^h : 56'8 12 ^h : 57'0 20 ^h : 57'2 SD: 15'5 PMG: ***h***m R°: ***m													
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°		
h	o	'	o	'	o	'	o	'	h	m	h	m	h	m	h	m	m
0	183	56.1	-11	39.2	10	10.3	+3	58.9	60 N	5 29	6 18	7 01	17 02	15	6 06	84	
1	198	56.2		40.1	24	42.1 ¹²⁸	+4	10.6 ¹¹⁷	58	29	14	6 55	06 18		03	81	
2	213	56.3		41.0	39	13.9 ¹²⁸		22.2 ¹¹⁶	56	28	11	50	09 21		6 00	79	
3	228	56.3		41.8	53	45.7 ¹²⁸		33.8 ¹¹⁶	54	27	08	45	12 23		5 58	76	
4	243	56.4		42.7	68	17.4 ¹²⁷		45.4 ¹¹⁶	52	26	05	40	15 25		56	74	
5	258	56.5	-11	43.6	82	49.0 ¹²⁶	+4	57.0 ¹¹⁶	50	5 25	6 03	6 36	17 18	26	5 54	72	
6	273	56.6	-11	44.5	97	20.6 ¹²⁶	+5	08.6 ¹¹⁶	45	5 23	5 57	6 27	17 24	30	5 50	68	
7	288	56.7		45.3	111	52.2 ¹²⁶		20.2 ¹¹⁶	40	21	52	20	28 33		47	64	
8	303	56.8		46.2	126	23.7 ¹²⁵		31.7 ¹¹⁵	35	18	48	14	33 35		44	62	
9	318	56.8		47.1	140	55.2 ¹²⁵		43.3 ¹¹⁶	30	15	43	6 08	36 38		41	60	
10	333	56.9		47.9	155	26.6 ¹²⁴	+5	54.8 ¹¹⁵	20	10	36	5 58	43 42		37	55	
11	348	57.0	-11	48.8	169	58.0 ¹²⁴	+6	06.3 ¹¹⁵	10 N	5 03	5 28	5 49	17 48	46	5 33	51	
12	3	57.1	-11	49.7	184	29.3 ¹²³	+6	17.8 ¹¹⁵	0	4 55	5 20	5 41	17 54	49	5 29	48	
13	18	57.2		50.5	199	00.6 ¹²³		29.2 ¹¹⁴	10 S	46	11	32	17 59	53	25	45	
14	33	57.2		51.4	213	31.9 ¹²³		40.7 ¹¹⁵	20	34	5 01	23	18 05	56	22	40	
15	48	57.3		52.3	228	03.0 ¹²¹	+6	52.1 ¹¹⁴	30	19	4 48	13	12 60		17	37	
16	63	57.4		53.1	242	34.2 ¹²²	+7	03.5 ¹¹⁴	35	4 09	40	07	16 63		15	34	
17	78	57.5	-11	54.0	257	05.3 ¹²¹	+7	14.8 ¹¹³	40	3 57	4 31	5 00	18 20	66	5 12	31	
18	93	57.6	-11	54.9	271	36.3 ¹²⁰	+7	26.2 ¹¹⁴	45	3 42	4 20	4 51	18 25	69	5 08	29	
19	108	57.6		55.7	286	07.2 ¹¹⁹		37.5 ¹¹³	50	23	07	41	32 73		04	25	
20	123	57.7		56.6	300	38.2 ¹²⁰	+7	48.8 ¹¹³	52	14	4 00	37	35 74		03	22	
21	138	57.8		57.5	315	09.0 ¹¹⁸	+8	00.0 ¹¹²	54	3 03	3 53	32	38 77		5 01	20	
22	153	57.9		58.3	329	39.8 ¹¹⁸	+8	11.3 ¹¹³	56	2 51	45	26	41 80		4 58	19	
23	168	57.9	-11	59.2	344	10.6 ¹¹⁸		22.5 ¹¹²	58	36	35	20	45 82		56	16	
24	183	58.0	-12	00.0	358	41.3 ¹¹⁷	+8	33.6 ¹¹¹	60 S	2 18	3 25	4 13	18 50	85	4 53	14	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 21 ^h 47 ^m 0		Mag: -4.3 PMG: 11 ^h 48 ^m		Mag: -0.8 PMG: 19 ^h 09 ^m		Mag: -1.8 PMG: 13 ^h 27 ^m		Mag: +0.5 PMG: 16 ^h 07 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	o	'	o	'	o	'	o	'	o	'
0	32	20.8	182	18.4	-19	21.4	72	17.5	-18	42.9
1	47	23.3	197	22.2		20.5	87	18.7		43.0
2	62	25.7	212	26.0		19.7	102	19.8		43.2
3	77	28.2	227	29.8		18.8	117	21.0		43.3
4	92	30.7	242	33.6		18.0	132	22.1		43.4
5	107	33.1	257	37.4	-19	17.1	147	23.3	-18	43.5
6	122	35.6	272	41.2	-19	16.2	162	24.5	-18	43.7
7	137	38.0	287	45.0		15.4	177	25.6		43.8
8	152	40.5	302	48.8		14.5	192	26.8		43.9
9	167	43.0	317	52.6		13.6	207	27.9		44.0
10	182	45.4	332	56.4		12.8	222	29.1		44.2
11	197	47.9	348	00.3	-19	11.9	237	30.3	-18	44.3
12	212	50.4	3	04.1	-19	11.0	252	31.4	-18	44.4
13	227	52.8	18	07.9		10.1	267	32.6		44.5
14	242	55.3	33	11.7		09.3	282	33.7		44.7
15	257	57.8	48	15.5		08.4	297	34.9		44.8
16	273	00.2	63	19.3		07.5	312	36.0		44.9
17	288	02.7	78	23.1	-19	06.6	327	37.2	-18	45.1
18	303	05.2	93	26.9	-19	05.7	342	38.4	-18	45.2
19	318	07.6	108	30.7		04.9	357	39.5		45.3
20	333	10.1	123	34.5		04.0	12	40.7		45.4
21	348	12.5	138	38.3		03.1	27	41.8		45.6
22	3	15.0	153	42.2		02.2	42	43.0		45.7
23	18	17.5	168	46.0		01.3	57	44.1		45.8
24	33	19.9	183	49.8	-19	00.4	72	45.3	-18	45.9
Dif	—		+38		+9		+12		+5	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:1 PMG: 11 ^h 44 ^m 1			Edad: 15 ^d 8 PHE { SD: 15:7 PMG: 0 ^h 05 ^m					Civil			Náutico		Hora R°	
	hG ☉	Dec		hG ☾	Dif	Dec			Dif						
h	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m
0	183	58.0	-12	00.0	358	41.3	+8 33.6	60 N	16 23	17 07	17 55	17 17	19	7 30	85
1	198	58.1	-12	00.9	13	11.9 ¹¹⁶	44.7 ¹¹¹	58	30	11	56	24	22	24	82
2	213	58.2		01.8	27	42.5 ¹¹⁶	+8 55.8 ¹¹¹	56	35	14	57	30	24	19	79
3	228	58.2		02.6	42	13.0 ¹¹⁵	+9 06.9 ¹¹¹	54	41	17	17 58	35	27	14	77
4	243	58.3		03.5	56	43.5 ¹¹⁵	17.9 ¹¹⁰	52	45	20	18 00	40	28	10	75
5	258	58.4	-12	04.4	71	13.9 ¹¹⁴	+9 28.9 ¹¹⁰	50	16 50	17 23	18 01	17 44	30	7 06	74
6	273	58.5	-12	05.2	85	44.3 ¹¹⁴	+9 39.8 ¹⁰⁹	45	16 59	17 29	18 03	17 54	34	6 58	70
7	288	58.5		06.1	100	14.6 ¹¹³	+9 50.7 ¹⁰⁹	40	17 07	34	06	18 01	38	51	67
8	303	58.6		06.9	114	44.8 ¹¹²	+10 01.6 ¹⁰⁹	35	13	39	09	08	40	46	63
9	318	58.7		07.8	129	15.0 ¹¹²	12.4 ¹⁰⁸	30	19	44	12	14	42	41	61
10	333	58.8		08.7	143	45.1 ¹¹¹	23.2 ¹⁰⁸	20	30	17 52	18	25	46	32	57
11	348	58.8	-12	09.5	158	15.1 ¹¹⁰	+10 33.9 ¹⁰⁷	10 N	17 39	18 00	18 25	18 34	49	6 24	54
12	3	58.9	-12	10.4	172	45.1 ¹¹⁰	+10 44.6 ¹⁰⁷	0	17 47	18 09	18 33	18 43	52	6 17	51
13	18	59.0		11.2	187	15.1 ¹¹⁰	+10 55.2 ¹⁰⁶	10 S	17 56	18	43	18 52	55	10	47
14	33	59.0		12.1	201	44.9 ¹⁰⁸	+11 05.8 ¹⁰⁶	20	18 06	29	18 55	19 01	59	6 02	44
15	48	59.1		13.0	216	14.7 ¹⁰⁸	16.3 ¹⁰⁵	30	17	42	19 11	12	62	5 54	39
16	63	59.2		13.8	230	44.5 ¹⁰⁸	26.8 ¹⁰⁵	35	23	50	21	19	64	49	37
17	78	59.3	-12	14.7	245	14.1 ¹⁰⁶	+11 37.2 ¹⁰⁴	40	18 31	18 59	19 34	19 26	67	5 43	35
18	93	59.3	-12	15.5	259	43.7 ¹⁰⁶	+11 47.6 ¹⁰⁴	45	18 39	19 11	19 49	19 34	70	5 37	31
19	108	59.4		16.4	274	13.3 ¹⁰⁶	+11 57.9 ¹⁰³	50	50	25	20 09	45	74	29	28
20	123	59.5		17.2	288	42.8 ¹⁰⁵	+12 08.2 ¹⁰³	52	18 54	32	19	49	76	25	26
21	138	59.5		18.1	303	12.2 ¹⁰⁴	18.4 ¹⁰²	54	19 00	39	30	19 55	77	21	24
22	153	59.6		19.0	317	41.5 ¹⁰³	28.5 ¹⁰¹	56	06	48	43	20 01	80	17	22
23	168	59.7		19.8	332	10.8 ¹⁰³	38.6 ¹⁰¹	58	12	19 58	20 59	07	83	12	20
24	183	59.8	-12	20.7	346	40.0 ¹⁰²	+12 48.7 ¹⁰¹	60 S	19 20	20 09	21 18	20 15	86	5 07	16

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 21 ^h 43 ^m 1		Mag: -4.3 PMG: 11 ^h 42 ^m		Mag: -0.7 PMG: 19 ^h 08 ^m		Mag: -1.8 PMG: 13 ^h 24 ^m		Mag: +0.5 PMG: 16 ^h 03 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	o	'	o	'	o	'	o	'	o	'
0	33	19.9	183	49.8	-19	00.4	72	45.3	-18	08.8
1	48	22.4	198	53.6	-18	59.5	87	46.4		08.3
2	63	24.9	213	57.4		58.6	102	47.6		07.8
3	78	27.3	229	01.2		57.7	117	48.8		07.2
4	93	29.8	244	05.0		56.8	132	49.9		06.7
5	108	32.3	259	08.8	-18	55.9	147	51.1	-18	06.2
6	123	34.7	274	12.6	-18	55.0	162	52.2	-18	05.7
7	138	37.2	289	16.5		54.1	177	53.4		05.1
8	153	39.7	304	20.3		53.2	192	54.5		04.6
9	168	42.1	319	24.1		52.3	207	55.7		04.1
10	183	44.6	334	27.9		51.4	222	56.8		03.5
11	198	47.0	349	31.7	-18	50.5	237	58.0	-18	03.0
12	213	49.5	4	35.5	-18	49.5	252	59.1	-18	02.5
13	228	52.0	19	39.3		48.6	268	00.3		02.0
14	243	54.4	34	43.1		47.7	283	01.4		01.4
15	258	56.9	49	46.9		46.8	298	02.6		00.9
16	273	59.4	64	50.7		45.9	313	03.7	-18	00.4
17	289	01.8	79	54.6	-18	45.0	328	04.9	-17	59.8
18	304	04.3	94	58.4	-18	44.0	343	06.0	-17	59.3
19	319	06.8	110	02.2		43.1	358	07.2		58.8
20	334	09.2	125	06.0		42.2	13	08.3		58.2
21	349	11.7	140	09.8		41.3	28	09.5		57.7
22	4	14.1	155	13.6		40.3	43	10.6		57.2
23	19	16.6	170	17.4		39.4	58	11.8		56.6
24	34	19.1	185	21.2	-18	38.5	73	12.9	-17	56.1
Dif	—		+38		+9		+12		+5	
									+19	-1
										+23

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1				Edad: 16 ^d 8 PHE { 4 ^h : 57/9 12 ^h : 58/1 20 ^h : 58/2											
	PMG: 11 ^h 44 ^m 0				SD: 15 ^h 8 PMG: 0 ^h 55 ^m R°: 53 ^m											
	hG ☉		Dec		hG ☾ Dif		Dec Dif			Náutico	Civil		Hora	R°	Hora	R°
h	o	'	o	'	o	'	o	'	o	h m	h m	h m	h m m	m	h m m	m
0	183	59.8	-12	20.7	346	40.0	+12	48.7	99	60 N	5 34	6 23	7 07	17 36	26	8 55 85
1	198	59.8		21.5	1	09.2	+12	58.6	102	58	33	19	7 00	46	29	46 82
2	213	59.9		22.4	15	38.3	+13	08.5	99	56	32	15	6 54	17 54	31	38 80
3	229	00.0		23.2	30	07.3		18.3	100	54	30	12	49	18 02	33	31 78
4	244	00.0		24.1	44	36.2		28.1	99	52	29	09	44	08	35	25 75
5	259	00.1	-12	24.9	59	05.1	+13	37.8	97	50	5 28	6 06	6 39	18 14	37	8 20 73
6	274	00.2	-12	25.8	73	33.9	+13	47.4	96	45	5 25	6 00	6 30	18 28	40	8 08 70
7	289	00.2		26.6	88	02.7	+13	57.0	96	40	23	5 54	22	39	42	7 58 67
8	304	00.3		27.5	102	31.4	+14	06.5	95	35	20	49	15	48	45	49 65
9	319	00.4		28.3	117	00.0		15.9	94	30	17	45	6 09	18 56	47	42 62
10	334	00.4		29.2	131	28.5		25.3	94	20	10	36	5 59	19 11	49	29 59
11	349	00.5	-12	30.1	145	57.0	+14	34.5	92	10 N	5 03	5 28	5 49	19 23	52	7 18 56
12	4	00.6	-12	30.9	160	25.4	+14	43.7	92	0	4 55	5 19	5 41	19 35	55	7 08 53
13	19	00.6		31.8	174	53.7	+14	52.8	91	10 S	45	5 10	32	19 47	57	6 57 51
14	34	00.7		32.6	189	22.0	+15	01.9	91	20	33	4 59	22	20 00	60	46 48
15	49	00.7		33.5	203	50.2		10.8	89	30	16	46	11	14	63	33 44
16	64	00.8		34.3	218	18.4		19.7	89	35	4 06	38	5 04	23	65	26 42
17	79	00.9	-12	35.2	232	46.4	+15	28.5	88	40	3 54	4 28	4 57	20 33	67	6 18 39
18	94	00.9	-12	36.0	247	14.4	+15	37.2	87	45	3 38	4 17	4 48	20 44	70	6 08 37
19	109	01.0		36.9	261	42.4		45.8	86	50	19	4 02	38	20 59	72	5 57 33
20	124	01.1		37.7	276	10.2	+15	54.4	86	52	3 09	3 56	33	21 05	74	51 32
21	139	01.1		38.6	290	38.0	+16	02.8	84	54	2 57	48	27	12	77	45 30
22	154	01.2		39.4	305	05.8		11.2	84	56	44	39	21	21	78	39 27
23	169	01.2		40.2	319	33.4		19.5	83	58	29	30	15	30	81	32 24
24	184	01.3	-12	41.1	334	01.0	+16	27.7	82	60 S	2 09	3 18	4 07	21 41	83	5 23 22

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 21 ^h 39 ^m 2		Mag: -4.3 PMG: 11 ^h 36 ^m				Mag: -0.7 PMG: 19 ^h 06 ^m				Mag: -1.8 PMG: 13 ^h 21 ^m				Mag: +0.5 PMG: 16 ^h 00 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'
0	34	19.1	185	21.2	-18	38.5	73	12.9	-17	56.1	159	21.2	-18	48.9	119	28.2	-22	46.2
1	49	21.5	200	25.0		37.5	88	14.0		55.6	174	23.2		49.1	134	30.5		46.2
2	64	24.0	215	28.8		36.6	103	15.2		55.0	189	25.1		49.2	149	32.8		46.2
3	79	26.5	230	32.6		35.7	118	16.3		54.5	204	27.0		49.3	164	35.0		46.2
4	94	28.9	245	36.4		34.7	133	17.5		54.0	219	28.9		49.4	179	37.3		46.2
5	109	31.4	260	40.2	-18	33.8	148	18.6	-17	53.4	234	30.8	-18	49.6	194	39.6	-22	46.2
6	124	33.9	275	44.0	-18	32.9	163	19.8	-17	52.9	249	32.8	-18	49.7	209	41.8	-22	46.2
7	139	36.3	290	47.9		31.9	178	20.9		52.4	264	34.7		49.8	224	44.1		46.2
8	154	38.8	305	51.7		31.0	193	22.1		51.8	279	36.6		49.9	239	46.3		46.2
9	169	41.3	320	55.5		30.0	208	23.2		51.3	294	38.5		50.1	254	48.6		46.2
10	184	43.7	335	59.3		29.1	223	24.3		50.8	309	40.4		50.2	269	50.9		46.2
11	199	46.2	351	03.1	-18	28.1	238	25.5	-17	50.2	324	42.4	-18	50.3	284	53.1	-22	46.2
12	214	48.6	6	06.9	-18	27.2	253	26.6	-17	49.7	339	44.3	-18	50.4	299	55.4	-22	46.2
13	229	51.1	21	10.7		26.2	268	27.8		49.2	354	46.2		50.6	314	57.6		46.2
14	244	53.6	36	14.5		25.3	283	28.9		48.6	9	48.1		50.7	329	59.9		46.2
15	259	56.0	51	18.3		24.3	298	30.1		48.1	24	50.0		50.8	345	02.2		46.2
16	274	58.5	66	22.1		23.4	313	31.2		47.6	39	52.0		50.9	0	04.4		46.2
17	290	01.0	81	25.9	-18	22.4	328	32.3	-17	47.0	54	53.9	-18	51.1	15	06.7	-22	46.2
18	305	03.4	96	29.7	-18	21.5	343	33.5	-17	46.5	69	55.8	-18	51.2	30	08.9	-22	46.2
19	320	05.9	111	33.5		20.5	358	34.6		46.0	84	57.7		51.3	45	11.2		46.2
20	335	08.4	126	37.3		19.6	13	35.8		45.4	99	59.6		51.4	60	13.5		46.2
21	350	10.8	141	41.1		18.6	28	36.9		44.9	115	01.6		51.6	75	15.7		46.2
22	5	13.3	156	44.9		17.6	43	38.0		44.3	130	03.5		51.7	90	18.0		46.2
23	20	15.8	171	48.7		16.7	58	39.2		43.8	145	05.4		51.8	105	20.2		46.2
24	35	18.2	186	52.5	-18	15.7	73	40.3	-17	43.3	160	07.3	-18	51.9	120	22.5	-22	46.2
Dif	—		+38		+9		+11		+5		+19		-1		+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: 17 ^d 8 PHE { 4 ^h : 58 ^m /3 12 ^h : 58 ^m /5 20 ^h : 58 ^m /6 PMG: 1 ^h 48 ^m R°: 55 ^m												
	hG ☉	Dec	hG ☾	Dif	Dec	Dif	Civil	Náutico			Hora	R°	Hora	R°			
h	o	'	o	'	o	'	o	'	o	h m	h m	h m	h m m	h m	m	h m	m
0	184	01.3	-12	41.1	334	01.0	+16	27.7	60 N	16 18	17 02	17 50	18 02 37	10 20	80		
1	199	01.4		41.9	348	28.5	85	35.8	58	25	06	52	15 39	10 08	78		
2	214	01.4		42.8	2	56.0	85	43.8	56	31	10	53	25 41	9 58	75		
3	229	01.5		43.6	17	23.4	84	51.7	54	36	13	55	35 42	49	73		
4	244	01.5		44.5	31	50.7	83	+16	59.5	52	41	16	56	43 44	40	73	
5	259	01.6	-12	45.3	46	18.0	83	+17	07.2	50	16 46	17 19	17 57	18 51	45	9 33	71
6	274	01.7	-12	46.2	60	45.2	82	+17	14.8	45	16 56	17 26	18 00	19 08	47	9 18	68
7	289	01.7		47.0	75	12.3	81	22.3	75	40	17 04	32	04	21 49		9 05	66
8	304	01.8		47.9	89	39.4	81	29.8	75	35	11	37	07	33 50		8 54	64
9	319	01.8		48.7	104	06.4	80	37.1	73	30	17	42	10	19 43	52	44	63
10	334	01.9		49.6	118	33.3	79	44.3	72	20	28	17 51	17	20 00	54	28	60
11	349	02.0	-12	50.4	133	00.2	79	+17	51.4	10 N	17 38	18 00	18 24	20 15	56	8 14	58
12	4	02.0	-12	51.2	147	27.0	78	+17	58.4	0	17 47	18 08	18 33	20 30	57	8 01	56
13	19	02.1		52.1	161	53.8	78	+18	05.3	10 S	17 57	18	43	20 44	59	7 48	54
14	34	02.1		52.9	176	20.5	77	12.1	68	20	18 07	29	18 56	21 00	60	34	51
15	49	02.2		53.8	190	47.1	76	18.8	67	30	18	43	19 13	17	63	17	49
16	64	02.2		54.6	205	13.7	76	25.4	66	35	25	18 52	24	28	63	7 08	48
17	79	02.3	-12	55.4	219	40.2	75	+18	31.9	40	18 33	19 02	19 36	21 40	65	6 57	46
18	94	02.4	-12	56.3	234	06.6	74	+18	38.2	45	18 42	19 14	19 52	21 54	66	6 45	43
19	109	02.4		57.1	248	33.0	74	44.5	63	50	53	29	20 13	22 11	69	30	40
20	124	02.5		58.0	262	59.3	73	50.6	61	52	18 58	36	23	19	70	23	39
21	139	02.5		58.8	277	25.6	73	+18	56.7	54	19 04	44	35	29	70	15	37
22	154	02.6	-12	59.7	291	51.8	72	+19	02.6	56	10	19 53	20 49	39	72	6 06	36
23	169	02.6	-13	00.5	306	17.9	71	08.4	58	58	17	20 03	21 06	22 51	74	5 56	34
24	184	02.7	-13	01.3	320	44.0	71	+19	14.0	60 S	19 25	20 15	21 27	23 04	76	5 45	31

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 21 ^h 35 ^m 2		Mag: -4.3 PMG: 11 ^h 30 ^m		Mag: -0.7 PMG: 19 ^h 04 ^m		Mag: -1.8 PMG: 13 ^h 18 ^m		Mag: +0.5 PMG: 15 ^h 56 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	o	'	o	'	o	'	o	'	o	'
0	35	18.2	186	52.5	-18	15.7	73	40.3	-17	43.3
1	50	20.7	201	56.2		14.8	88	41.5		42.7
2	65	23.1	217	00.0		13.8	103	42.6		42.2
3	80	25.6	232	03.8		12.8	118	43.7		41.7
4	95	28.1	247	07.6		11.9	133	44.9		41.1
5	110	30.5	262	11.4	-18	10.9	148	46.0	-17	40.6
6	125	33.0	277	15.2	-18	09.9	163	47.1	-17	40.0
7	140	35.5	292	19.0		08.9	178	48.3		39.5
8	155	37.9	307	22.8		08.0	193	49.4		39.0
9	170	40.4	322	26.6		07.0	208	50.5		38.4
10	185	42.9	337	30.4		06.0	223	51.7		37.9
11	200	45.3	352	34.1	-18	05.1	238	52.8	-17	37.3
12	215	47.8	7	37.9	-18	04.1	253	54.0	-17	36.8
13	230	50.2	22	41.7		03.1	268	55.1		36.3
14	245	52.7	37	45.5		02.1	283	56.2		35.7
15	260	55.2	52	49.3		01.1	298	57.4		35.2
16	275	57.6	67	53.1	-18	00.2	313	58.5		34.6
17	291	00.1	82	56.8	-17	59.2	328	59.6	-17	34.1
18	306	02.6	98	00.6	-17	58.2	344	00.8	-17	33.6
19	321	05.0	113	04.4		57.2	359	01.9		33.0
20	336	07.5	128	08.2		56.2	14	03.0		32.5
21	351	10.0	143	11.9		55.2	29	04.2		31.9
22	6	12.4	158	15.7		54.2	44	05.3		31.4
23	21	14.9	173	19.5		53.3	59	06.4		30.8
24	36	17.4	188	23.3	-17	52.3	74	07.5	-17	30.3
Dif	—		+38		+10		+11		+5	
							+19		-1	
									+23	
									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 8				Edad: 18 ^d 8 PHE { 4 ^h : 58'7 12 ^h : 58'8 20 ^h : 58'9 SD: 16'0 PMG: 2 ^h 43 ^m R°: 58 ^m																
	hG ☉		Dec		hG ☾		Dif		Dec		Dif		Náutico	Civil		Hora	R°	Hora	R°		
h	o	'	o	'	o	'	o	'	o	'	o	'	h	m	h	m	h	m	h	m	m
0	184	02.7	-13	01.3	320	44.0			+19	14.0			60 N	5 38	6 27	7 12	18 39	51	11 40	70	
1	199	02.7		02.2	335	10.1	71			19.6	56	58	37	23	7 04	18 54	52	26	68		
2	214	02.8		03.0	349	36.1	70			25.0	54	56	35	19	6 58	19 06	53	13	68		
3	229	02.8		03.8	4	02.0	69			30.4	54	54	34	16	53	17 54		11 02	67		
4	244	02.9		04.7	18	27.9	69			35.6	52	52	33	12	47	27 55		10 53	65		
5	259	02.9	-13	05.5	32	53.7	68			+19	40.7	51	50	5 31	6 09	6 43	19 36	55	10 44	65	
6	274	03.0	-13	06.4	47	19.5	68			+19	45.6	49	45	5 28	6 02	6 33	19 55	55	10 26	64	
7	289	03.0		07.2	61	45.2	67			50.5	49	40	25	5 56	24	20 10	56	10 11	63		
8	304	03.1		08.0	76	10.9	67			55.2	47	35	21	51	17	23 57		9 58	62		
9	319	03.1		08.9	90	36.5	66			+19	59.8	46	30	18	46	11 35	57	47	62		
10	334	03.2		09.7	105	02.1	66			+20	04.2	44	20	11	37	6 00	20 54	58	28	61	
11	349	03.2	-13	10.5	119	27.7	66			+20	08.6	44	10 N	5 03	5 28	5 50	21 11	58	9 12	59	
12	4	03.3	-13	11.4	133	53.2	65			+20	12.8	42	0	4 55	5 19	5 40	21 27	59	8 57	58	
13	19	03.3		12.2	148	18.6	64			16.9	41	10 S	44	5 09	31	21 43	59	42	57		
14	34	03.4		13.0	162	44.0	64			20.8	39	20	31	4 58	21	22 00	60	25	56		
15	49	03.4		13.9	177	09.4	64			24.7	39	30	14	44	09	20 60		8 06	55		
16	64	03.5		14.7	191	34.7	63			28.4	37	35	4 04	35	5 02	31 61		7 56	53		
17	79	03.5	-13	15.5	206	00.0	63			+20	31.9	35	40	3 51	4 25	4 54	22 45	60	7 43	53	
18	94	03.6	-13	16.4	220	25.2	62			+20	35.4	35	45	3 35	4 13	4 45	23 00	61	7 28	52	
19	109	03.6		17.2	234	50.4	62			38.7	33	50	14	3 58	34	20 61		10	50		
20	124	03.7		18.0	249	15.6	62			41.8	31	52	3 04	51	29	29 61		7 02	49		
21	139	03.7		18.9	263	40.7	61			44.9	31	54	2 52	43	23	39 62		6 52	48		
22	154	03.8		19.7	278	05.8	61			47.8	29	56	38	34	17	23 51	62	42	46		
23	169	03.8		20.5	292	30.9	61			50.6	28	58	21	24	09	*** **	***	30	45		
24	184	03.9	-13	21.4	306	55.9	60			+20	53.2	26	60 S	2 00	3 12	4 01	*** **	**	6 16	43	

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 21 ^h 31 ^m 3		Mag: -4.3 PMG: 11 ^h 24 ^m				Mag: -0.7 PMG: 19 ^h 02 ^m				Mag: -1.8 PMG: 13 ^h 15 ^m				Mag: +0.5 PMG: 15 ^h 53 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'
0	36	17.4	188	23.3	-17	52.3	74	07.5	-17	30.3	160	53.4	-18	54.9	121	16.7	-22	46.1
1	51	19.8	203	27.0		51.3	89	08.7		29.8	175	55.3		55.1	136	18.9		46.1
2	66	22.3	218	30.8		50.3	104	09.8		29.2	190	57.2		55.2	151	21.2		46.1
3	81	24.7	233	34.6		49.3	119	10.9		28.7	205	59.1		55.3	166	23.4		46.1
4	96	27.2	248	38.3		48.3	134	12.1		28.1	221	01.0		55.4	181	25.7		46.1
5	111	29.7	263	42.1	-17	47.3	149	13.2	-17	27.6	236	02.9	-18	55.6	196	28.0	-22	46.1
6	126	32.1	278	45.9	-17	46.3	164	14.3	-17	27.0	251	04.9	-18	55.7	211	30.2	-22	46.1
7	141	34.6	293	49.6		45.3	179	15.5		26.5	266	06.8		55.8	226	32.5		46.1
8	156	37.1	308	53.4		44.3	194	16.6		26.0	281	08.7		55.9	241	34.7		46.1
9	171	39.5	323	57.2		43.3	209	17.7		25.4	296	10.6		56.1	256	37.0		46.1
10	186	42.0	339	00.9		42.3	224	18.8		24.9	311	12.5		56.2	271	39.2		46.1
11	201	44.5	354	04.7	-17	41.3	239	20.0	-17	24.3	326	14.4	-18	56.3	286	41.5	-22	46.1
12	216	46.9	9	08.4	-17	40.3	254	21.1	-17	23.8	341	16.4	-18	56.4	301	43.7	-22	46.1
13	231	49.4	24	12.2		39.3	269	22.2		23.2	356	18.3		56.6	316	46.0		46.1
14	246	51.9	39	16.0		38.3	284	23.3		22.7	11	20.2		56.7	331	48.2		46.1
15	261	54.3	54	19.7		37.3	299	24.5		22.1	26	22.1		56.8	346	50.5		46.1
16	276	56.8	69	23.5		36.3	314	25.6		21.6	41	24.0		56.9	1	52.8		46.1
17	291	59.2	84	27.2	-17	35.3	329	26.7	-17	21.0	56	25.9	-18	57.1	16	55.0	-22	46.1
18	307	01.7	99	31.0	-17	34.3	344	27.9	-17	20.5	71	27.9	-18	57.2	31	57.3	-22	46.1
19	322	04.2	114	34.7		33.3	359	29.0		20.0	86	29.8		57.3	46	59.5		46.1
20	337	06.6	129	38.5		32.3	14	30.1		19.4	101	31.7		57.4	62	01.8		46.1
21	352	09.1	144	42.2		31.3	29	31.2		18.9	116	33.6		57.6	77	04.0		46.1
22	7	11.6	159	45.9		30.3	44	32.4		18.3	131	35.5		57.7	92	06.3		46.1
23	22	14.0	174	49.7		29.3	59	33.5		17.8	146	37.4		57.8	107	08.5		46.1
24	37	16.5	189	53.4	-17	28.3	74	34.6	-17	17.2	161	39.3	-18	57.9	122	10.8	-22	46.1
Dif	—		+38		+10		+11		+5		+19		-1		+23			

ALMANAQUE NÁUTICO PERSEIS

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16.1 PMG: 11 ^h 43 ^m 7			Edad: 20 ^d 8 PHE { SD: 16.1 PMG: 4 ^h 40 ^m R°: 58 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	o	'	o	'	o	'	o	'	h	m	h	m	h	m	h	m
0	184	04.8	-13	41.2	292	50.5	+21	15.2	60 N	5 43	6 32	7 17	20 37	80	13 44	40
1	199	04.9		42.0	307	15.2		14.4	58	41	27	09	20 52	78	29	42
2	214	04.9		42.8	321	39.8		13.4	56	39	23	7 02	21 05	76	16	44
3	229	04.9		43.7	336	04.5		12.3	54	37	19	6 56	16	74	13 05	45
4	244	05.0		44.5	350	29.2		11.1	52	36	16	51	26	73	12 55	46
5	259	05.0	-13	45.3	4	53.8	+21	09.7	50	5 34	6 12	6 46	21 35	71	12 46	47
6	274	05.0	-13	46.1	19	18.5	+21	08.2	45	5 30	6 05	6 35	21 54	68	12 27	49
7	289	05.1		46.9	33	43.2		06.5	40	27	5 59	27	22 09	67	12 11	51
8	304	05.1		47.8	48	07.9		04.7	35	23	53	19	22	65	11 58	52
9	319	05.1		48.6	62	32.6		02.7	30	19	48	12	33	64	47	53
10	334	05.2		49.4	76	57.4	+21	00.6	20	12	38	6 00	22 52	61	27	55
11	349	05.2	-13	50.2	91	22.1	+20	58.4	10 N	5 04	5 29	5 50	23 09	59	11 10	57
12	4	05.2	-13	51.0	105	46.9	+20	56.1	0	4 54	5 19	5 40	23 24	58	10 54	58
13	19	05.3		51.8	120	11.6		53.5	10 S	43	5 09	30	40	55	37	60
14	34	05.3		52.7	134	36.4		50.9	20	30	4 57	20	23 56	54	20	61
15	49	05.3		53.5	149	01.2		48.1	28	12	42	07	***	***	10 00	63
16	64	05.4		54.3	163	26.1		45.2	29	4 01	33	5 00	***	***	9 48	64
17	79	05.4	-13	55.1	177	50.9	+20	42.2	30	3 48	4 23	4 52	***	***	9 35	65
18	94	05.4	-13	55.9	192	15.8	+20	39.0	32	3 31	4 10	4 42	0 01	54	9 19	66
19	109	05.5		56.7	206	40.7		35.7	33	3 09	3 54	30	21	52	8 59	69
20	124	05.5		57.5	221	05.6		32.2	35	2 58	47	25	30	52	50	69
21	139	05.5		58.4	235	30.5		28.6	36	46	38	19	41	50	40	70
22	154	05.6	-13	59.2	249	55.5		24.9	37	31	29	12	0 53	49	28	71
23	169	05.6	-14	00.0	264	20.5		21.0	39	2 13	18	4 04	1 07	48	8 14	73
24	184	05.6	-14	00.8	278	45.6	+20	17.0	40	1 51	3 05	3 56	1 23	46	7 58	75

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 21 ^h 23 ^m 4		Mag: -4.3 PMG: 11 ^h 12 ^m		Mag: -0.6 PMG: 18 ^h 58 ^m		Mag: -1.8 PMG: 13 ^h 09 ^m		Mag: +0.6 PMG: 15 ^h 45 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	o	'	o	'	o	'	o	'	o	'
0	38	15.6	191	22.7	-17	03.9	75	01.5	-17	04.0
1	53	18.1	206	26.4		02.8	90	02.6		03.5
2	68	20.6	221	30.1		01.8	105	03.7		02.9
3	83	23.0	236	33.8	-17	00.8	120	04.8		02.3
4	98	25.5	251	37.5	-16	59.8	135	05.9		01.8
5	113	28.0	266	41.2	-16	58.7	150	07.1	-17	01.2
6	128	30.4	281	44.9	-16	57.7	165	08.2	-17	00.7
7	143	32.9	296	48.5		56.7	180	09.3	-17	00.1
8	158	35.3	311	52.2		55.6	195	10.4	-16	59.6
9	173	37.8	326	55.9		54.6	210	11.5		59.0
10	188	40.3	341	59.6		53.6	225	12.6		58.5
11	203	42.7	357	03.3	-16	52.6	240	13.7	-16	57.9
12	218	45.2	12	06.9	-16	51.5	255	14.9	-16	57.4
13	233	47.7	27	10.6		50.5	270	16.0		56.8
14	248	50.1	42	14.3		49.5	285	17.1		56.2
15	263	52.6	57	18.0		48.4	300	18.2		55.7
16	278	55.1	72	21.6		47.4	315	19.3		55.1
17	293	57.5	87	25.3	-16	46.4	330	20.4	-16	54.6
18	309	00.0	102	29.0	-16	45.4	345	21.5	-16	54.0
19	324	02.5	117	32.6		44.3	0	22.6		53.5
20	339	04.9	132	36.3		43.3	15	23.8		52.9
21	354	07.4	147	39.9		42.3	30	24.9		52.3
22	9	09.8	162	43.6		41.2	45	26.0		51.8
23	24	12.3	177	47.2		40.2	60	27.1		51.2
24	39	14.8	192	50.9	-16	39.2	75	28.2	-16	50.7
Dif	—		+37		+10		+11		+6	
									+19	-1
										+22

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16'1			Edad: 21 ^d 8 PHE { 4 ^h : 59'2 12 ^h : 59'2 20 ^h : 59'2														
	PMG: 11 ^h 43 ^m 6			SD: 16'1 PMG: 5 ^h 38 ^m R°: 57 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°				
h	o	'	o	'	o	'	o	h m	h m	h m	h m m	h m m	h m m	h m m				
0	184	05.6	-14	00.8	278	45.6	+20 17.0	60 N	16 07	16 52	17 41	21 57 88	14 24 28					
1	199	05.6		01.6	293	10.6	12.9 41	58	15	16 57	43	22 10 84	11 31					
2	214	05.7		02.4	307	35.7	08.6 43	56	22	17 01	45	21 81	14 00 33					
3	229	05.7		03.2	322	00.8	+20 04.2 44	54	28	05	47	30 79	13 50 35					
4	244	05.7		04.0	336	26.0	+19 59.7 45	52	34	09	49	39 77	41 37					
5	259	05.8	-14	04.9	350	51.2	+19 55.1 46	50	16 39	17 13	17 51	22 46 76	13 33 39					
6	274	05.8	-14	05.7	5	16.4	+19 50.3 48	45	16 50	17 20	17 55	23 02 72	13 16 42					
7	289	05.8		06.5	19	41.7	45.4 49	40	16 59	27	17 59	16 69	13 02 45					
8	304	05.8		07.3	34	07.0	40.3 51	35	17 07	33	18 03	27 66	12 50 47					
9	319	05.9		08.1	48	32.3	35.2 51	30	14	39	07	37 64	40 49					
10	334	05.9		08.9	62	57.7	29.9 53	20	26	49	15	23 53 61	22 52					
11	349	05.9	-14	09.7	77	23.1	+19 24.5 54	10 N	17 37	17 58	18 23	** ** *	12 07 54					
12	4	05.9	-14	10.5	91	48.6	+19 18.9 56	0	17 47	18 08	18 33	** ** *	11 52 56					
13	19	06.0		11.3	106	14.1	13.3 56	10 S	17 57	19	45	** ** *	37 59					
14	34	06.0		12.1	120	39.6	07.5 58	20	18 09	31	18 58	** ** *	21 62					
15	49	06.0		12.9	135	05.2	+19 01.6 59	30	21	47	19 17	0 16 50	11 03 64					
16	64	06.0		13.8	149	30.8	+18 55.5 61	35	29	18 56	28	27 49	10 52 66					
17	79	06.0	-14	14.6	163	56.5	+18 49.4 61	40	18 37	19 07	19 42	0 39 48	10 40 68					
18	94	06.1	-14	15.4	178	22.2	+18 43.1 63	45	18 48	19 20	19 59	0 55 45	10 25 71					
19	109	06.1		16.2	192	48.0	36.7 64	50	19 00	36	20 22	1 13 43	10 08 73					
20	124	06.1		17.0	207	13.8	30.2 65	52	06	44	33	22 41	9 59 76					
21	139	06.1		17.8	221	39.6	23.6 66	54	12	19 53	20 46	31 40	50 77					
22	154	06.2		18.6	236	05.5	16.8 68	56	19	20 03	21 02	42 38	39 79					
23	169	06.2		19.4	250	31.5	09.9 69	58	27	14	21	1 55 35	27 82					
24	184	06.2	-14	20.2	264	57.5	+18 03.0 69	60 S	19 36	20 28	21 46	2 09 33	9 13 84					
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 21 ^h 19 ^m 5		Mag: -4.2 PMG: 11 ^h 06 ^m			Mag: -0.6 PMG: 18 ^h 57 ^m			Mag: -1.8 PMG: 13 ^h 06 ^m			Mag: +0.6 PMG: 15 ^h 42 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	o	'	o	'	o	o	'	o	o	'	o	o	'	o	'			
0	39	14.8	192	50.9	-16	39.2	75	28.2	-16	50.7	163	11.2	-19	03.9	123	58.8	-22	46.0
1	54	17.2	207	54.5		38.1	90	29.3		50.1	178	13.1		04.0	139	01.0		46.0
2	69	19.7	222	58.2		37.1	105	30.4		49.6	193	15.0		04.1	154	03.2		46.0
3	84	22.2	238	01.8		36.1	120	31.5		49.0	208	16.9		04.3	169	05.5		46.0
4	99	24.6	253	05.5		35.0	135	32.6		48.4	223	18.8		04.4	184	07.7		46.0
5	114	27.1	268	09.1	-16	34.0	150	33.7	-16	47.9	238	20.7	-19	04.5	199	10.0	-22	46.0
6	129	29.6	283	12.8	-16	33.0	165	34.8	-16	47.3	253	22.6	-19	04.6	214	12.2	-22	46.0
7	144	32.0	298	16.4		31.9	180	36.0		46.8	268	24.5		04.8	229	14.5		46.0
8	159	34.5	313	20.0		30.9	195	37.1		46.2	283	26.4		04.9	244	16.7		46.0
9	174	37.0	328	23.6		29.9	210	38.2		45.6	298	28.4		05.0	259	19.0		46.0
10	189	39.4	343	27.3		28.8	225	39.3		45.1	313	30.3		05.1	274	21.2		46.0
11	204	41.9	358	30.9	-16	27.8	240	40.4	-16	44.5	328	32.2	-19	05.2	289	23.5	-22	46.0
12	219	44.3	13	34.5	-16	26.8	255	41.5	-16	44.0	343	34.1	-19	05.4	304	25.7	-22	46.0
13	234	46.8	28	38.1		25.7	270	42.6		43.4	358	36.0		05.5	319	27.9		46.0
14	249	49.3	43	41.8		24.7	285	43.7		42.8	13	37.9		05.6	334	30.2		46.0
15	264	51.7	58	45.4		23.7	300	44.8		42.3	28	39.8		05.7	349	32.4		46.0
16	279	54.2	73	49.0		22.6	315	45.9		41.7	43	41.7		05.9	4	34.7		46.0
17	294	56.7	88	52.6	-16	21.6	330	47.0	-16	41.2	58	43.6	-19	06.0	19	36.9	-22	46.0
18	309	59.1	103	56.2	-16	20.6	345	48.1	-16	40.6	73	45.5	-19	06.1	34	39.2	-22	45.9
19	325	01.6	118	59.8		19.5	0	49.2		40.0	88	47.5		06.2	49	41.4		45.9
20	340	04.1	134	03.4		18.5	15	50.3		39.5	103	49.4		06.4	64	43.7		45.9
21	355	06.5	149	07.0		17.5	30	51.4		38.9	118	51.3		06.5	79	45.9		45.9
22	10	09.0	164	10.6		16.4	45	52.5		38.3	133	53.2		06.6	94	48.1		45.9
23	25	11.5	179	14.2		15.4	60	53.6		37.8	148	55.1		06.7	109	50.4		45.9
24	40	13.9	194	17.8	-16	14.4	75	54.7	-16	37.2	163	57.0	-19	06.9	124	52.6	-22	45.9
Dif	—		+36		+10		+11		+6		+19		-1		+22		0	

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16.1 PMG: 11 ^h 43 ^m 6				Edad: 22 ^d 8 PHE { 4 ^h : 59/2 12 ^h : 59/2 20 ^h : 59/2 PMG: 6 ^h 35 ^m R°: 55 ^m												
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	o	'	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m
0	184	06.2	-14	20.2	264	57.5	+18	03.0	60 N	5 47	6 37	7 22	23 25	89	14 52	21	
1	199	06.2		21.0	279	23.5	+17	55.9	58	45	32	14	34	86	42	24	
2	214	06.2		21.8	293	49.6		48.7	56	43	27	07	42	83	33	27	
3	229	06.3		22.6	308	15.7		41.3	54	41	23	7 00	49	81	25	29	
4	244	06.3		23.4	322	41.9		33.9	52	39	19	6 55	23 56	79	18	31	
5	259	06.3	-14	24.2	337	08.2	+17	26.4	50	5 37	6 15	6 49	** ** *	**	14 12	32	
6	274	06.3	-14	25.0	351	34.5	+17	18.7	45	5 33	6 08	6 38	** ** *	**	13 58	36	
7	289	06.3		25.8	6	00.8		11.0	40	29	6 01	29	** ** *	**	47	39	
8	304	06.3		26.6	20	27.2	+17	03.1	35	25	5 55	21	** ** *	**	37	42	
9	319	06.4		27.4	34	53.7	+16	55.1	30	21	49	14	** ** *	**	29	44	
10	334	06.4		28.2	49	20.2		47.1	20	13	39	6 01	** ** *	**	14	47	
11	349	06.4	-14	29.0	63	46.7	+16	38.9	10 N	5 04	5 29	5 50	0 08	58	13 01	51	
12	4	06.4	-14	29.8	78	13.4	+16	30.6	0	4 54	5 19	5 40	0 22	55	12 48	54	
13	19	06.4		30.6	92	40.0		22.2	10 S	43	5 08	30	35	53	36	57	
14	34	06.4		31.4	107	06.7		13.8	20	28	4 55	18	0 50	49	23	60	
15	49	06.5		32.2	121	33.5	+16	05.2	30	4 10	40	5 05	1 06	47	12 07	65	
16	64	06.5		33.0	136	00.3	+15	56.5	35	3 59	31	4 58	16	44	11 58	67	
17	79	06.5	-14	33.8	150	27.2	+15	47.7	40	3 45	4 20	4 49	1 27	42	11 48	70	
18	94	06.5	-14	34.6	164	54.1	+15	38.9	45	3 27	4 07	4 39	1 40	39	11 36	73	
19	109	06.5		35.4	179	21.1		29.9	50	3 05	3 51	27	1 56	35	21	77	
20	124	06.5		36.2	193	48.1		20.8	52	2 53	43	21	2 03	34	15	78	
21	139	06.5		37.0	208	15.2		11.7	54	40	34	15	11	32	11 07	80	
22	154	06.5		37.8	222	42.4	+15	02.4	56	24	24	4 07	20	30	10 58	83	
23	169	06.6		38.6	237	09.6	+14	53.1	58	2 05	3 12	3 59	30	27	49	85	
24	184	06.6	-14	39.4	251	36.8	+14	43.7	60 S	1 41	2 58	3 50	2 42	24	10 37	89	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 21 ^h 15 ^m 6		Mag: -4.2 PMG: 11 ^h 00 ^m		Mag: -0.6 PMG: 18 ^h 55 ^m		Mag: -1.8 PMG: 13 ^h 03 ^m		Mag: +0.6 PMG: 15 ^h 38 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	o	'	o	'	o	'	o	'	o	'
0	40	13.9	194	17.8	-16	14.4	75	54.7	-16	37.2
1	55	16.4	209	21.4		13.3	90	55.8		36.7
2	70	18.8	224	25.0		12.3	105	57.0		36.1
3	85	21.3	239	28.6		11.3	120	58.1		35.5
4	100	23.8	254	32.2		10.2	135	59.2		35.0
5	115	26.2	269	35.7	-16	09.2	151	00.3	-16	34.4
6	130	28.7	284	39.3	-16	08.1	166	01.4	-16	33.8
7	145	31.2	299	42.9		07.1	181	02.5		33.3
8	160	33.6	314	46.5		06.1	196	03.6		32.7
9	175	36.1	329	50.0		05.0	211	04.7		32.1
10	190	38.6	344	53.6		04.0	226	05.8		31.6
11	205	41.0	359	57.2	-16	03.0	241	06.9	-16	31.0
12	220	43.5	15	00.7	-16	01.9	256	08.0	-16	30.4
13	235	45.9	30	04.3	-16	00.9	271	09.1		29.9
14	250	48.4	45	07.9	-15	59.9	286	10.2		29.3
15	265	50.9	60	11.4		58.8	301	11.3		28.7
16	280	53.3	75	15.0		57.8	316	12.4		28.2
17	295	55.8	90	18.5	-15	56.8	331	13.5	-16	27.6
18	310	58.3	105	22.1	-15	55.7	346	14.6	-16	27.1
19	326	00.7	120	25.6		54.7	1	15.7		26.5
20	341	03.2	135	29.1		53.7	16	16.8		25.9
21	356	05.7	150	32.7		52.7	31	17.9		25.3
22	11	08.1	165	36.2		51.6	46	18.9		24.8
23	26	10.6	180	39.7		50.6	61	20.0		24.2
24	41	13.1	195	43.3	-15	49.6	76	21.1	-16	23.6
Dif	—		+36		+10		+11		+6	
							+19		-1	
									+22	

UT	SOL			☾ LUNA					Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16'1 PMG: 11 ^h 43 ^m 6			Edad: 23 ^d 8 PHE { 4 ^h : 59'2 12 ^h : 59'1 20 ^h : 59'1 PMG: 7 ^h 30 ^m R°: 52 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif						Civil	Náutico	Hora	R°	Hora
h	o	'	o	'	o	'	o	'	o	h m	h m	h m	h m	m	h m	m	
0	184	06.6	-14	39.4	251	36.8	+14	43.7	60 N	16 02	16 47	17 37	*** **	**	15 13	16	
1	199	06.6		40.1	266	04.1		34.2	58	10	52	39	*** **	**	06	19	
2	214	06.6		40.9	280	31.5		24.6	56	17	16 57	41	*** **	**	15 00	21	
3	229	06.6		41.7	294	58.9		14.9	54	24	17 02	44	*** **	**	14 54	24	
4	244	06.6		42.5	309	26.4	+14	05.1	52	30	06	46	*** **	**	49	26	
5	259	06.6	-14	43.3	323	53.9	+13	55.3	50	16 35	17 09	17 48	0 02	76	14 44	28	
6	274	06.6	-14	44.1	338	21.5	+13	45.4	45	16 47	17 18	17 52	0 14	73	14 34	32	
7	289	06.6		44.9	352	49.1		35.3	40	16 57	25	17 57	25	69	26	35	
8	304	06.7		45.7	7	16.8		25.2	35	17 05	31	18 01	33	67	19	38	
9	319	06.7		46.5	21	44.5		15.1	30	12	37	05	41	64	13	40	
10	334	06.7		47.3	36	12.3	+13	04.8	20	25	48	14	0 54	61	14 01	45	
11	349	06.7	-14	48.1	50	40.1	+12	54.5	10 N	17 36	17 58	18 23	1 06	57	13 52	48	
12	4	06.7	-14	48.8	65	08.0	+12	44.1	0	17 47	18 08	18 33	1 17	53	13 42	53	
13	19	06.7		49.6	79	36.0		33.6	10 S	17 58	20	18 45	28	50	33	56	
14	34	06.7		50.4	94	04.0		23.1	20	18 09	33	19 00	39	46	23	60	
15	49	06.7		51.2	108	32.0		12.5	30	23	48	18	1 53	42	12	64	
16	64	06.7		52.0	123	00.1	+12	01.8	35	31	18 58	30	2 00	40	13 05	67	
17	79	06.7	-14	52.8	137	28.2	+11	51.0	40	18 40	19 09	19 45	2 09	37	12 58	69	
18	94	06.7	-14	53.6	151	56.4	+11	40.2	45	18 50	19 23	20 03	2 19	34	12 49	72	
19	109	06.7		54.4	166	24.7		29.3	50	19 03	40	26	31	30	38	77	
20	124	06.7		55.1	180	53.0		18.4	52	09	48	38	37	27	33	79	
21	139	06.7		55.9	195	21.3	+11	07.4	54	16	19 57	20 52	43	26	27	82	
22	154	06.7		56.7	209	49.7	+10	56.3	56	23	20 08	21 09	50	23	21	84	
23	169	06.7		57.5	224	18.2		45.1	58	32	20	29	2 57	21	14	87	
24	184	06.7	-14	58.3	238	46.7	+10	33.9	60 S	19 41	20 34	21 56	3 06	18	12 06	90	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 21 ^h 11 ^m 6		Mag: -4.2 PMG: 10 ^h 55 ^m			Mag: -0.6 PMG: 18 ^h 53 ^m			Mag: -1.8 PMG: 12 ^h 59 ^m			Mag: +0.6 PMG: 15 ^h 35 ^m					
	hG ♈		hG ♀			hG ♂			hG ♃			hG ♎					
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'			
0	41	13.1	195	43.3	-15	49.6	76	21.1	-16	23.6	164	42.8	-19	09.8			
1	56	15.5	210	46.8		48.5	91	22.2		23.1	179	44.7		09.9			
2	71	18.0	225	50.3		47.5	106	23.3		22.5	194	46.6		10.1			
3	86	20.4	240	53.8		46.5	121	24.4		21.9	209	48.5		10.2			
4	101	22.9	255	57.4		45.4	136	25.5		21.4	224	50.4		10.3			
5	116	25.4	271	00.9	-15	44.4	151	26.6	-16	20.8	239	52.3	-19	10.4			
6	131	27.8	286	04.4	-15	43.4	166	27.7	-16	20.2	254	54.2	-19	10.5			
7	146	30.3	301	07.9		42.3	181	28.8		19.7	269	56.1		10.7			
8	161	32.8	316	11.4		41.3	196	29.9		19.1	284	58.1		10.8			
9	176	35.2	331	14.9		40.3	211	31.0		18.5	300	00.0		10.9			
10	191	37.7	346	18.4		39.3	226	32.1		18.0	315	01.9		11.0			
11	206	40.2	1	21.9	-15	38.2	241	33.2	-16	17.4	330	03.8	-19	11.2			
12	221	42.6	16	25.4	-15	37.2	256	34.3	-16	16.8	345	05.7	-19	11.3			
13	236	45.1	31	28.9		36.2	271	35.4		16.2	0	07.6		11.4			
14	251	47.6	46	32.4		35.2	286	36.5		15.7	15	09.5		11.5			
15	266	50.0	61	35.9		34.1	301	37.6		15.1	30	11.4		11.6			
16	281	52.5	76	39.4		33.1	316	38.7		14.5	45	13.3		11.8			
17	296	54.9	91	42.8	-15	32.1	331	39.7	-16	14.0	60	15.2	-19	11.9			
18	311	57.4	106	46.3	-15	31.1	346	40.8	-16	13.4	75	17.1	-19	12.0			
19	326	59.9	121	49.8		30.0	1	41.9		12.8	90	19.0		12.1			
20	342	02.3	136	53.3		29.0	16	43.0		12.2	105	20.9		12.3			
21	357	04.8	151	56.7		28.0	31	44.1		11.7	120	22.8		12.4			
22	12	07.3	167	00.2		27.0	46	45.2		11.1	135	24.7		12.5			
23	27	09.7	182	03.7		25.9	61	46.3		10.5	150	26.6		12.6			
24	42	12.2	197	07.1	-15	24.9	76	47.4	-16	10.0	165	28.5	-19	12.7			
Dif	—		+35			+10			+11			+19			-1		
															+22		

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16.1 PMG: 11 ^h 43 ^m 5				Edad: 24 ^d 8 PHE { 4 ^h : 59'0 12 ^h : 59'0 20 ^h : 58'9 SD: 16.1 PMG: 8 ^h 22 ^m R°: 51 ^m												
	hG ☉		Dec		hG ☾ Dif		Dec Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	o	'	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m
0	184	06.7	-14	58.3	238	46.7	+10	33.9	60 N	5 52	6 41	7 27	0 54	89	15 29	14	
1	199	06.7		59.1	253	15.2		22.7	58	49	36	18	1 00	86	25	17	
2	214	06.7	-14	59.8	267	43.8	+10	11.4	56	47	31	11	05	84	21	19	
3	229	06.8	-15	00.6	282	12.4	+10	00.0	54	44	26	7 04	10	81	18	20	
4	244	06.8		01.4	296	41.1	+9	48.6	52	42	22	6 58	15	78	15	23	
5	259	06.8	-15	02.2	311	09.8	+9	37.1	50	5 40	6 19	6 53	1 18	77	15 12	25	
6	274	06.8	-15	03.0	325	38.6	+9	25.6	45	5 35	6 10	6 41	1 27	72	15 06	29	
7	289	06.8		03.8	340	07.4		14.0	40	31	6 03	31	34	69	15 01	33	
8	304	06.8		04.5	354	36.3	+9	02.3	35	26	5 56	23	40	66	14 57	35	
9	319	06.8		05.3		9	05.2	+9	50.7	30	22	50	15	45	64	53	
10	334	06.8		06.1	23	34.1		38.9	20	13	40	6 02	1 55	58	46	43	
11	349	06.8	-15	06.9	38	03.1	+8	27.2	10 N	5 04	5 29	5 51	2 03	54	14 40	47	
12	4	06.8	-15	07.6	52	32.1	+8	15.3	0	4 54	5 19	5 40	2 10	51	14 35	50	
13	19	06.8		08.4	67	01.2	+8	03.5	10 S	42	5 07	29	18	47	29	54	
14	34	06.7		09.2	81	30.3	+7	51.6	20	27	4 54	17	25	44	23	58	
15	49	06.7		10.0	95	59.4		39.6	30	4 08	39	5 04	35	39	16	62	
16	64	06.7		10.8	110	28.6		27.6	35	3 56	29	4 56	40	36	12	65	
17	79	06.7	-15	11.5	124	57.9	+7	15.6	40	3 42	4 18	4 47	2 46	33	14 07	68	
18	94	06.7	-15	12.3	139	27.1	+7	03.5	45	3 24	4 04	4 36	2 53	30	14 01	73	
19	109	06.7		13.1	153	56.4	+6	51.4	50	3 00	3 47	23	3 01	26	13 55	76	
20	124	06.7		13.9	168	25.8		39.3	52	2 48	38	17	04	25	52	78	
21	139	06.7		14.6	182	55.2		27.1	54	34	29	10	09	22	49	80	
22	154	06.7		15.4	197	24.6		14.9	56	2 18	19	4 03	13	20	45	83	
23	169	06.7		16.2	211	54.0	+6	02.7	58	1 57	3 06	3 55	18	18	41	85	
24	184	06.7	-15	17.0	226	23.5	+5	50.4	60 S	1 30	2 52	3 45	3 24	15	13 36	89	

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 21 ^h 07 ^m 7		Mag: -4.2 PMG: 10 ^h 49 ^m				Mag: -0.6 PMG: 18 ^h 51 ^m				Mag: -1.8 PMG: 12 ^h 56 ^m				Mag: +0.6 PMG: 15 ^h 31 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'
0	42	12.2	197	07.1	-15	24.9			76	47.4	-16	10.0	165	28.5	-19	12.7	126	40.1
1	57	14.7	212	10.6		23.9			91	48.5		09.4	180	30.5		12.9	141	42.4
2	72	17.1	227	14.0		22.9			106	49.6		08.8	195	32.4		13.0	156	44.6
3	87	19.6	242	17.5		21.9			121	50.7		08.2	210	34.3		13.1	171	46.9
4	102	22.0	257	20.9		20.8			136	51.7		07.7	225	36.2		13.2	186	49.1
5	117	24.5	272	24.4	-15	19.8			151	52.8	-16	07.1	240	38.1	-19	13.4	201	51.3
6	132	27.0	287	27.8	-15	18.8			166	53.9	-16	06.5	255	40.0	-19	13.5	216	53.6
7	147	29.4	302	31.3		17.8			181	55.0		05.9	270	41.9		13.6	231	55.8
8	162	31.9	317	34.7		16.8			196	56.1		05.4	285	43.8		13.7	246	58.0
9	177	34.4	332	38.1		15.7			211	57.2		04.8	300	45.7		13.8	262	00.3
10	192	36.8	347	41.5		14.7			226	58.3		04.2	315	47.6		14.0	277	02.5
11	207	39.3	2	45.0	-15	13.7			241	59.4	-16	03.6	330	49.5	-19	14.1	292	04.7
12	222	41.8	17	48.4	-15	12.7			257	00.5	-16	03.1	345	51.4	-19	14.2	307	07.0
13	237	44.2	32	51.8		11.7			272	01.5		02.5	0	53.3		14.3	322	09.2
14	252	46.7	47	55.2		10.7			287	02.6		01.9	15	55.2		14.5	337	11.5
15	267	49.2	62	58.6		09.7			302	03.7		01.3	30	57.1		14.6	352	13.7
16	282	51.6	78	02.1		08.6			317	04.8		00.8	45	59.0		14.7	7	15.9
17	297	54.1	93	05.5	-15	07.6			332	05.9	-16	00.2	61	00.9	-19	14.8	22	18.2
18	312	56.5	108	08.9	-15	06.6			347	07.0	-15	59.6	76	02.8	-19	14.9	37	20.4
19	327	59.0	123	12.3		05.6			2	08.1		59.0	91	04.7		15.1	52	22.6
20	343	01.5	138	15.7		04.6			17	09.1		58.5	106	06.6		15.2	67	24.9
21	358	03.9	153	19.1		03.6			32	10.2		57.9	121	08.5		15.3	82	27.1
22	13	06.4	168	22.4		02.6			47	11.3		57.3	136	10.4		15.4	97	29.3
23	28	08.9	183	25.8		01.6			62	12.4		56.7	151	12.4		15.6	112	31.6
24	43	11.3	198	29.2	-15	00.6			77	13.5	-15	56.1	166	14.3	-19	15.7	127	33.8
Dif	—		+34		+10		+11		+6		+19		-1		+22			

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna			
	SD: 16:1 PMG: 11 ^h 43 ^m 6			Edad: 25 ^d 8 PHE { 4 ^h : 58 ^m /8 12 ^h : 58 ^m /7 20 ^h : 58 ^m /6 PMG: 9 ^h 13 ^m R°: 50 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°		
h	o	'	o	'	o	'	o	'	h m	h m	h m	h m	m	h m	m	h m	m
0	184	06.7	-15	17.0	226	23.5	+5	50.4	60 N	15 57	16 43	17 32	2 23	88	15 43	13	
1	199	06.7		17.7	240	53.0 ¹⁰⁵		38.2 ¹²²	58	16 05	48	35	26	85	42	15	
2	214	06.7		18.5	255	22.6 ¹⁰⁶		25.8 ¹²⁴	56	13	53	38	29	82	40	19	
3	229	06.7		19.3	269	52.2 ¹⁰⁶		13.5 ¹²³	54	20	16 58	40	31	80	39	2	
4	244	06.7		20.1	284	21.8 ¹⁰⁶		+5 01.1 ¹²⁴	52	26	17 02	42	33	78	38	23	
5	259	06.7	-15	20.8	298	51.4 ¹⁰⁶		+4 48.7 ¹²⁴	50	16 32	17 06	17 45	2 35	76	15 37	25	
6	274	06.7	-15	21.6	313	21.1 ¹⁰⁷		+4 36.3 ¹²⁴	45	16 44	17 15	17 50	2 39	72	15 35	29	
7	289	06.7		22.4	327	50.8 ¹⁰⁷		23.9 ¹²⁴	40	16 54	23	55	43	68	34	31	
8	304	06.6		23.1	342	20.6 ¹⁰⁸		+4 11.4 ¹²⁵	35	17 03	29	17 59	46	65	32	35	
9	319	06.6		23.9	356	50.3 ¹⁰⁷		+3 59.0 ¹²⁴	30	11	36	18 04	49	62	31	37	
10	334	06.6		24.7	11	20.1 ¹⁰⁸		46.5 ¹²⁵	20	24	47	13	53	58	29	41	
11	349	06.6	-15	25.4	25	50.0 ¹⁰⁹		+3 34.0 ¹²⁵	10 N	17 36	17 58	18 23	2 57	54	15 27	45	
12	4	06.6	-15	26.2	40	19.8 ¹⁰⁸		+3 21.4 ¹²⁶	0	17 47	18 08	18 33	3 01	50	15 25	49	
13	19	06.6		27.0	54	49.7 ¹⁰⁹		+3 08.9 ¹²⁵	10 S	17 58	20	18 46	05	46	23	53	
14	34	06.6		27.7	69	19.6 ¹⁰⁹		+2 56.3 ¹²⁶	20	18 10	34	19 01	09	42	21	57	
15	49	06.6		28.5	83	49.5 ¹⁰⁹		43.8 ¹²⁵	30	25	18 50	20	14	37	18	62	
16	64	06.6		29.3	98	19.5 ¹¹⁰		31.2 ¹²⁶	35	33	19 00	33	16	35	17	65	
17	79	06.6	-15	30.0	112	49.4 ¹⁰⁹		+2 18.6 ¹²⁶	40	18 42	19 12	19 48	3 19	32	15 15	68	
18	94	06.5	-15	30.8	127	19.4 ¹¹⁰		+2 06.0 ¹²⁶	45	18 53	19 26	20 06	3 23	28	15 14	71	
19	109	06.5		31.6	141	49.5 ¹¹¹		+1 53.5 ¹²⁵	50	19 07	44	31	27	24	11	76	
20	124	06.5		32.3	156	19.5 ¹¹⁰		40.9 ¹²⁶	52	13	19 52	43	29	22	10	78	
21	139	06.5		33.1	170	49.6 ¹¹¹		28.3 ¹²⁶	54	20	20 02	20 58	31	20	09	80	
22	154	06.5		33.9	185	19.6 ¹¹⁰		15.6 ¹²⁷	56	28	13	21 16	33	19	08	82	
23	169	06.5		34.6	199	49.8 ¹¹²		+1 03.0 ¹²⁶	58	37	26	21 38	36	16	06	85	
24	184	06.5	-15	35.4	214	19.9 ¹¹¹		+0 50.4 ¹²⁶	60 S	19 47	20 41	22 08	3 39	13	15 05	88	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 21 ^h 03 ^m 8		Mag: -4.3 PMG: 10 ^h 44 ^m			Mag: -0.5 PMG: 18 ^h 50 ^m			Mag: -1.8 PMG: 12 ^h 53 ^m			Mag: +0.6 PMG: 15 ^h 27 ^m					
	hG ♈		hG ♀			hG ♂			hG ♃			hG ♄					
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'	
0	43	11.3	198	29.2	-15	00.6	77	13.5	-15	56.1	166	14.3	-19	15.7	127	33.8	-22 45.7
1	58	13.8	213	32.6	-14	59.6	92	14.6		55.6	181	16.2		15.8	142	36.0	45.7
2	73	16.3	228	36.0		58.5	107	15.7		55.0	196	18.1		15.9	157	38.3	45.7
3	88	18.7	243	39.3		57.5	122	16.7		54.4	211	20.0		16.0	172	40.5	45.7
4	103	21.2	258	42.7		56.5	137	17.8		53.8	226	21.9		16.2	187	42.7	45.7
5	118	23.6	273	46.1	-14	55.5	152	18.9	-15	53.3	241	23.8	-19	16.3	202	45.0	-22 45.7
6	133	26.1	288	49.5	-14	54.5	167	20.0	-15	52.7	256	25.7	-19	16.4	217	47.2	-22 45.7
7	148	28.6	303	52.8		53.5	182	21.1		52.1	271	27.6		16.5	232	49.4	45.7
8	163	31.0	318	56.2		52.5	197	22.1		51.5	286	29.5		16.7	247	51.7	45.7
9	178	33.5	333	59.5		51.5	212	23.2		50.9	301	31.4		16.8	262	53.9	45.7
10	193	36.0	349	02.9		50.5	227	24.3		50.4	316	33.3		16.9	277	56.1	45.7
11	208	38.4	4	06.2	-14	49.5	242	25.4	-15	49.8	331	35.2	-19	17.0	292	58.4	-22 45.7
12	223	40.9	19	09.6	-14	48.5	257	26.5	-15	49.2	346	37.1	-19	17.1	308	00.6	-22 45.7
13	238	43.4	34	12.9		47.5	272	27.6		48.6	1	39.0		17.3	323	02.8	45.7
14	253	45.8	49	16.2		46.5	287	28.6		48.0	16	40.9		17.4	338	05.1	45.7
15	268	48.3	64	19.6		45.5	302	29.7		47.5	31	42.8		17.5	353	07.3	45.7
16	283	50.8	79	22.9		44.5	317	30.8		46.9	46	44.7		17.6	8	09.5	45.7
17	298	53.2	94	26.2	-14	43.6	332	31.9	-15	46.3	61	46.6	-19	17.7	23	11.8	-22 45.7
18	313	55.7	109	29.6	-14	42.6	347	33.0	-15	45.7	76	48.5	-19	17.9	38	14.0	-22 45.6
19	328	58.1	124	32.9		41.6	2	34.0		45.1	91	50.4		18.0	53	16.2	45.6
20	344	00.6	139	36.2		40.6	17	35.1		44.5	106	52.3		18.1	68	18.5	45.6
21	359	03.1	154	39.5		39.6	32	36.2		44.0	121	54.2		18.2	83	20.7	45.6
22	14	05.5	169	42.8		38.6	47	37.3		43.4	136	56.1		18.4	98	22.9	45.6
23	29	08.0	184	46.1		37.6	62	38.4		42.8	151	58.0		18.5	113	25.1	45.6
24	44	10.5	199	49.4	-14	36.6	77	39.4	-15	42.2	166	59.9	-19	18.6	128	27.4	-22 45.6
Dif	—		+33			+10		+11		+6		+19		-1		+22	

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 6				Edad: 26 ^d 8 PHE { 4 ^h : 58 ^m 5 12 ^h : 58 ^m 3 20 ^h : 58 ^m 2 SD: 15 ^h 9 PMG: 10 ^h 03 ^m R°: 49 ^m													
	hG ☉		Dec		hG ☾ Dif		Dec Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	o	'	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m	
0	184	06.5	-15	35.4	214	19.9	+0	50.4	60 N	5 56	6 46	7 32	3 51	87	15 56	13		
1	199	06.4		36.2	228	50.0 ¹¹¹		37.8 ¹²⁶	58	53	40	23	51	84	57	16		
2	214	06.4		36.9	243	20.2 ¹¹²		25.2 ¹²⁶	56	50	35	15	51	82	15 59	18		
3	229	06.4		37.7	257	50.3 ¹¹¹	+0	12.6 ¹²⁶	54	48	30	08	51	79	16 00	20		
4	244	06.4		38.4	272	20.5 ¹¹²	+0	00.0 ¹²⁶	52	45	26	7 02	51	77	01	22		
5	259	06.4	-15	39.2	286	50.7 ¹¹²	-0	12.6 ¹²⁶	50	5 43	6 22	6 56	3 51	75	16 02	24		
6	274	06.4	-15	40.0	301	21.0 ¹¹³	-0	25.1 ¹²⁵	45	5 38	6 13	6 44	3 51	71	16 04	28		
7	289	06.4		40.7	315	51.2 ¹¹²		37.7 ¹²⁶	40	33	6 05	33	51	67	05	32		
8	304	06.3		41.5	330	21.4 ¹¹²	-0	50.3 ¹²⁶	35	28	5 58	25	51	64	07	34		
9	319	06.3		42.2	344	51.7 ¹¹³	-1	02.8 ¹²⁵	30	23	52	17	51	61	08	37		
10	334	06.3		43.0	359	22.0 ¹¹³		15.4 ¹²⁶	20	14	40	6 03	51	57	10	42		
11	349	06.3	-15	43.8	13	52.3 ¹¹³	-1	27.9 ¹²⁵	10 N	5 04	5 30	5 51	3 51	53	16 12	46		
12	4	06.3	-15	44.5	28	22.6 ¹¹³	-1	40.4 ¹²⁵	0	4 54	5 19	5 40	3 51	49	16 14	49		
13	19	06.2		45.3	42	52.9 ¹¹³	-1	52.9 ¹²⁵	10 S	41	5 07	29	51	45	16	53		
14	34	06.2		46.0	57	23.2 ¹¹³	-2	05.4 ¹²⁵	20	26	4 53	16	51	41	18	57		
15	49	06.2		46.8	71	53.5 ¹¹³		17.9 ¹²⁵	30	4 07	37	5 02	51	37	20	62		
16	64	06.2		47.5	86	23.8 ¹¹³		30.4 ¹²⁵	35	3 54	27	4 54	51	34	22	63		
17	79	06.2	-15	48.3	100	54.2 ¹¹⁴	-2	42.8 ¹²⁴	40	3 39	4 15	4 45	3 51	32	16 23	67		
18	94	06.1	-15	49.1	115	24.5 ¹¹³	-2	55.2 ¹²⁴	45	3 20	4 01	4 33	3 51	28	16 25	70		
19	109	06.1		49.8	129	54.9 ¹¹⁴	-3	07.6 ¹²⁴	50	2 56	3 43	20	51	24	27	74		
20	124	06.1		50.6	144	25.2 ¹¹³		20.0 ¹²⁴	52	43	34	14	51	23	28	76		
21	139	06.1		51.3	158	55.6 ¹¹⁴		32.3 ¹²³	54	28	25	4 06	51	21	29	78		
22	154	06.1		52.1	173	26.0 ¹¹⁴		44.6 ¹²³	56	2 11	14	3 59	52	18	30	81		
23	169	06.0		52.8	187	56.4 ¹¹⁴	-3	56.9 ¹²³	58	1 49	3 01	50	52	15	31	84		
24	184	06.0	-15	53.6	202	26.7 ¹¹³	-4	09.2 ¹²³	60 S	1 18	2 45	3 40	3 52	13	16 33	86		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 20 ^h 59 ^m 9		Mag: -4.3 PMG: 10 ^h 38 ^m				Mag: -0.5 PMG: 18 ^h 48 ^m				Mag: -1.8 PMG: 12 ^h 50 ^m				Mag: +0.6 PMG: 15 ^h 24 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'
0	44	10.5	199	49.4	-14	36.6	77	39.4	-15	42.2	166	59.9	-19	18.6	128	27.4	-22	45.6
1	59	12.9	214	52.7		35.6	92	40.5		41.6	182	01.8		18.7	143	29.6		45.6
2	74	15.4	229	56.0		34.6	107	41.6		41.0	197	03.7		18.8	158	31.8		45.6
3	89	17.9	244	59.3		33.7	122	42.7		40.5	212	05.6		19.0	173	34.1		45.6
4	104	20.3	260	02.6		32.7	137	43.7		39.9	227	07.5		19.1	188	36.3		45.6
5	119	22.8	275	05.9	-14	31.7	152	44.8	-15	39.3	242	09.4	-19	19.2	203	38.5	-22	45.6
6	134	25.2	290	09.2	-14	30.7	167	45.9	-15	38.7	257	11.3	-19	19.3	218	40.8	-22	45.6
7	149	27.7	305	12.5		29.7	182	47.0		38.1	272	13.2		19.4	233	43.0		45.6
8	164	30.2	320	15.7		28.8	197	48.1		37.5	287	15.1		19.6	248	45.2		45.6
9	179	32.6	335	19.0		27.8	212	49.1		37.0	302	17.0		19.7	263	47.5		45.6
10	194	35.1	350	22.3		26.8	227	50.2		36.4	317	18.9		19.8	278	49.7		45.6
11	209	37.6	5	25.5	-14	25.8	242	51.3	-15	35.8	332	20.8	-19	19.9	293	51.9	-22	45.6
12	224	40.0	20	28.8	-14	24.8	257	52.4	-15	35.2	347	22.7	-19	20.1	308	54.1	-22	45.6
13	239	42.5	35	32.1		23.9	272	53.4		34.6	2	24.6		20.2	323	56.4		45.6
14	254	45.0	50	35.3		22.9	287	54.5		34.0	17	26.5		20.3	338	58.6		45.6
15	269	47.4	65	38.6		21.9	302	55.6		33.5	32	28.4		20.4	354	00.8		45.6
16	284	49.9	80	41.8		20.9	317	56.7		32.9	47	30.3		20.5	9	03.1		45.6
17	299	52.4	95	45.1	-14	20.0	332	57.7	-15	32.3	62	32.2	-19	20.7	24	05.3	-22	45.6
18	314	54.8	110	48.3	-14	19.0	347	58.8	-15	31.7	77	34.1	-19	20.8	39	07.5	-22	45.6
19	329	57.3	125	51.5		18.0	2	59.9		31.1	92	36.0		20.9	54	09.7		45.6
20	344	59.7	140	54.8		17.1	18	01.0		30.5	107	37.9		21.0	69	12.0		45.5
21	0	02.2	155	58.0		16.1	33	02.0		29.9	122	39.8		21.1	84	14.2		45.5
22	15	04.7	171	01.2		15.1	48	03.1		29.3	137	41.7		21.3	99	16.4		45.5
23	30	07.1	186	04.4		14.2	63	04.2		28.8	152	43.6		21.4	114	18.7		45.5
24	45	09.6	201	07.7	-14	13.2	78	05.2	-15	28.2	167	45.5	-19	21.5	129	20.9	-22	45.5
Dif	—		+33		+10		+11		+6		+19		-1		+22			

UT	SOL		● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16°1		Edad: 27 ^d 8 PHE { 4 ^h : 58'0 12 ^h : 57'9 20 ^h : 57'7						Civil		Náutico	Hora	R°	Hora	R°
	PMG: 11 ^h 43 ^m 6	PMG: 10 ^h 52 ^m	R°: 49 ^m												
	hG ☉	Dec	hG ☾	Dif	Dec	Dif									
h	o	'	o	'	o	'	o	h m	h m	h m	h m m	h m m	h m m	h m m	
0	184	06.0	-15	53.6	202	26.7	-4 09.2	60 N	15 52	16 38	17 28	5 18 86	16 09 15		
1	199	06.0		54.3	216	57.1 ¹¹⁴	21.4 ¹²²	58	16 01	44	31	15 83	13 18		
2	214	06.0		55.1	231	27.5 ¹¹⁴	33.6 ¹²²	56	09	50	34	13 80	17 20		
3	229	05.9		55.8	245	57.9 ¹¹⁴	45.8 ¹²²	54	16	55	37	10 78	20 23		
4	244	05.9		56.6	260	28.3 ¹¹⁴	-4 57.9 ¹²¹	52	23	16 59	39	08 76	23 25		
5	259	05.9	-15	57.3	274	58.7 ¹¹⁴	-5 10.0 ¹²¹	50	16 29	17 03	17 42	5 06 74	16 26 26		
6	274	05.9	-15	58.1	289	29.0 ¹¹³	-5 22.1 ¹²¹	45	16 42	17 13	17 48	5 02 69	16 32 30		
7	289	05.8		58.8	303	59.4 ¹¹⁴	34.1 ¹²⁰	40	16 52	21	53	4 58 66	37 33		
8	304	05.8	-15	59.6	318	29.8 ¹¹⁴	46.1 ¹²⁰	35	17 01	28	17 58	55 63	41 36		
9	319	05.8	-16	00.3	333	00.2 ¹¹⁴	-5 58.1 ¹²⁰	30	09	34	18 03	52 61	45 38		
10	334	05.8		01.1	347	30.6 ¹¹⁴	-6 10.0 ¹¹⁹	20	23	46	12	48 56	52 42		
11	349	05.7	-16	01.8	2	01.0 ¹¹⁴	-6 21.9 ¹¹⁹	10 N	17 35	17 57	18 23	4 44 52	16 58 46		
12	4	05.7	-16	02.6	16	31.4 ¹¹⁴	-6 33.8 ¹¹⁹	0	17 47	18 09	18 34	4 40 49	17 03 50		
13	19	05.7		03.3	31	01.7 ¹¹³	45.6 ¹¹⁸	10 S	17 59	21	18 46	36 46	09 53		
14	34	05.6		04.1	45	32.1 ¹¹⁴	-6 57.3 ¹¹⁷	20	18 12	35	19 02	32 42	15 56		
15	49	05.6		04.8	60	02.5 ¹¹⁴	-7 09.0 ¹¹⁷	30	26	18 52	22	28 37	22 60		
16	64	05.6		05.5	74	32.8 ¹¹³	20.7 ¹¹⁷	35	35	19 02	35	25 35	25 63		
17	79	05.6	-16	06.3	89	03.2 ¹¹⁴	-7 32.3 ¹¹⁶	40	18 44	19 14	19 50	4 23 32	17 30 66		
18	94	05.5	-16	07.0	103	33.6 ¹¹⁴	-7 43.9 ¹¹⁶	45	18 56	19 29	20 10	4 19 29	17 35 69		
19	109	05.5		07.8	118	03.9 ¹¹³	-7 55.5 ¹¹⁶	50	19 10	47	36	15 26	41 73		
20	124	05.5		08.5	132	34.2 ¹¹³	-8 06.9 ¹¹⁴	52	17	19 56	20 49	14 23	44 75		
21	139	05.4		09.3	147	04.6 ¹¹⁴	18.4 ¹¹⁵	54	24	20 06	21 04	12 21	47 77		
22	154	05.4		10.0	161	34.9 ¹¹³	29.8 ¹¹⁴	56	32	18	23	10 19	51 79		
23	169	05.4		10.7	176	05.2 ¹¹³	41.1 ¹¹³	58	41	32	21 47	07 17	55 82		
24	184	05.3	-16	11.5	190	35.5 ¹¹³	-8 52.4 ¹¹³	60 S	19 52	20 48	22 21	4 05 14	17 59 85		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 20 ^h 55 ^m 9	Mag: -4.4 PMG: 10 ^h 33 ^m	Mag: -0.4 PMG: 18 ^h 46 ^m	Mag: -0.5 PMG: 12 ^h 47 ^m	Mag: +0.6 PMG: 15 ^h 20 ^m										
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	o	'	o	'	o	'	o	'	o	'					
0	45	09.6	201	07.7	78	05.2	-15 28.2	167	45.5	-19 21.5	129	20.9	-22 45.5		
1	60	12.1	216	10.9	93	06.3	27.6	182	47.4	21.6	144	23.1	45.5		
2	75	14.5	231	14.1	113	08.7	27.0	197	49.3	21.7	159	25.3	45.5		
3	90	17.0	246	17.3	10.3	123	08.5	26.4	212	51.2	21.9	174	27.6	45.5	
4	105	19.5	261	20.5	09.4	138	09.5	25.8	227	53.1	22.0	189	29.8	45.5	
5	120	21.9	276	23.7	-14 08.4	153	10.6	-15 25.2	242	55.0	-19 22.1	204	32.0	-22 45.5	
6	135	24.4	291	26.9	-14 07.5	168	11.7	-15 24.6	257	56.9	-19 22.2	219	34.3	-22 45.5	
7	150	26.9	306	30.1	06.5	183	12.8	24.1	272	58.8	22.3	234	36.5	45.5	
8	165	29.3	321	33.3	05.5	198	13.8	23.5	288	00.7	22.5	249	38.7	45.5	
9	180	31.8	336	36.5	04.6	213	14.9	22.9	303	02.6	22.6	264	40.9	45.5	
10	195	34.2	351	39.7	03.6	228	16.0	22.3	318	04.5	22.7	279	43.2	45.5	
11	210	36.7	6	42.8	-14 02.7	243	17.0	-15 21.7	333	06.4	-19 22.8	294	45.4	-22 45.5	
12	225	39.2	21	46.0	-14 01.7	258	18.1	-15 21.1	348	08.3	-19 23.0	309	47.6	-22 45.5	
13	240	41.6	36	49.2	-14 00.8	273	19.2	20.5	3	10.2	23.1	324	49.8	45.5	
14	255	44.1	51	52.4	-13 59.8	288	20.2	19.9	18	12.1	23.2	339	52.1	45.5	
15	270	46.6	66	55.5	58.9	303	21.3	19.3	33	14.0	23.3	354	54.3	45.5	
16	285	49.0	81	58.7	58.0	318	22.4	18.7	48	15.9	23.4	9	56.5	45.5	
17	300	51.5	97	01.8	-13 57.0	333	23.5	-15 18.2	63	17.8	-19 23.6	24	58.7	-22 45.5	
18	315	54.0	112	05.0	-13 56.1	348	24.5	-15 17.6	78	19.7	-19 23.7	40	01.0	-22 45.5	
19	330	56.4	127	08.1	55.1	3	25.6	17.0	93	21.6	23.8	55	03.2	45.5	
20	345	58.9	142	11.3	54.2	18	26.7	16.4	108	23.5	23.9	70	05.4	45.4	
21	1	01.3	157	14.4	53.2	33	27.7	15.8	123	25.4	24.0	85	07.7	45.4	
22	16	03.8	172	17.6	52.3	48	28.8	15.2	138	27.3	24.2	100	09.9	45.4	
23	31	06.3	187	20.7	51.4	63	29.9	14.6	153	29.2	24.3	115	12.1	45.4	
24	46	08.7	202	23.8	-13 50.4	78	30.9	-15 14.0	168	31.1	-19 24.4	130	14.3	-22 45.4	
Dif	—		+32	+9	+11	+6	+19		-1		+22		0		

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16 ^h 1 PMG: 11 ^h 43 ^m 7				Edad: 28 ^d 8 PHE { 4 ^h : 57/5 12 ^h : 57/3 20 ^h : 57/1 R°: 49 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	o	'	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m	m
0	184	05.3	-16	11.5	190	35.5	-8	52.4	60 N	6 00	6 51	7 37	6 44	84	16 24	18		
1	199	05.3		12.2	205	05.8 ¹¹³	-9	03.6 ¹¹²	58	5 57	44	28	38	81	31	21		
2	214	05.3		13.0	219	36.1 ¹¹³		14.8 ¹¹²	56	54	39	19	33	78	37	23		
3	229	05.2		13.7	234	06.4 ¹¹³		25.9 ¹¹¹	54	51	34	12	28	76	43	25		
4	244	05.2		14.4	248	36.7 ¹¹³		36.9 ¹¹⁰	52	49	29	7 05	24	73	48	27		
5	259	05.2	-16	15.2	263	07.0 ¹¹³	-9	47.9 ¹¹⁰	50	5 46	6 25	6 59	6 20	72	16 52	29		
6	274	05.1	-16	15.9	277	37.2 ¹¹²	-9	58.9 ¹¹⁰	45	5 40	6 15	6 46	6 11	68	17 02	33		
7	289	05.1		16.7	292	07.5 ¹¹³	-10	09.7 ¹⁰⁸	40	35	07	36	6 04	65	10	36		
8	304	05.1		17.4	306	37.7 ¹¹²		20.6 ¹⁰⁹	35	30	6 00	27	5 58	63	17	38		
9	319	05.0		18.1	321	07.9 ¹¹²		31.3 ¹⁰⁷	30	25	5 53	18	53	60	23	40		
10	334	05.0		18.9	335	38.1 ¹¹²		42.0 ¹⁰⁷	20	15	41	6 04	44	56	34	44		
11	349	05.0	-16	19.6	350	08.4 ¹¹³	-10	52.7 ¹⁰⁷	10 N	5 05	5 30	5 52	5 36	53	17 44	47		
12	4	04.9	-16	20.3	4	38.5 ¹¹¹	-11	03.2 ¹⁰⁵	0	4 54	5 19	5 40	5 29	49	17 53	49		
13	19	04.9		21.1	19	08.7 ¹¹²		13.7 ¹⁰⁵	10 S	41	5 06	28	22	46	18 02	52		
14	34	04.9		21.8	33	38.9 ¹¹²		24.2 ¹⁰⁵	20	25	4 52	16	14	43	11	56		
15	49	04.8		22.5	48	09.0 ¹¹¹		34.5 ¹⁰³	30	4 05	35	5 01	05	39	22	60		
16	64	04.8		23.3	62	39.2 ¹¹²		44.8 ¹⁰³	35	3 52	25	4 52	5 00	37	28	62		
17	79	04.7	-16	24.0	77	09.3 ¹¹¹	-11	55.1 ¹⁰³	40	3 36	4 13	4 42	4 55	34	18 36	64		
18	94	04.7	-16	24.7	91	39.4 ¹¹¹	-12	05.2 ¹⁰¹	45	3 17	3 58	4 31	4 48	31	18 44	67		
19	109	04.7		25.5	106	09.5 ¹¹¹		15.3 ¹⁰¹	50	2 51	39	17	41	27	54	71		
20	124	04.6		26.2	120	39.6 ¹¹¹		25.3 ¹⁰⁰	52	38	30	10	37	26	18 59	73		
21	139	04.6		26.9	135	09.7 ¹¹¹		35.3 ¹⁰⁰	54	23	20	4 03	33	24	19 04	75		
22	154	04.5		27.7	149	39.8 ¹¹¹		45.2 ⁹⁹	56	2 04	3 09	3 54	29	21	10	77		
23	169	04.5		28.4	164	09.8 ¹¹⁰	-12	55.0 ⁹⁸	58	1 40	2 55	45	24	19	17	79		
24	184	04.5	-16	29.1	178	39.9 ¹¹¹	-13	04.7 ⁹⁷	60 S	1 06	2 39	3 34	4 19	16	19 24	82		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 20 ^h 52 ^m 0		Mag: -4.4 PMG: 10 ^h 28 ^m				Mag: -0.5 PMG: 18 ^h 45 ^m				Mag: -1.7 PMG: 12 ^h 44 ^m				Mag: +0.6 PMG: 15 ^h 17 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'
0	46	08.7	202	23.8	-13	50.4	78	30.9	-15	14.0	168	31.1	-19	24.4	130	14.3	-22	45.4
1	61	11.2	217	27.0		49.5	93	32.0		13.4	183	33.0		24.5	145	16.6		45.4
2	76	13.7	232	30.1		48.6	108	33.1		12.8	198	34.9		24.6	160	18.8		45.4
3	91	16.1	247	33.2		47.6	123	34.1		12.2	213	36.8		24.8	175	21.0		45.4
4	106	18.6	262	36.3		46.7	138	35.2		11.6	228	38.7		24.9	190	23.2		45.4
5	121	21.1	277	39.4	-13	45.8	153	36.3	-15	11.1	243	40.6	-19	25.0	205	25.5	-22	45.4
6	136	23.5	292	42.5	-13	44.9	168	37.3	-15	10.5	258	42.5	-19	25.1	220	27.7	-22	45.4
7	151	26.0	307	45.7		43.9	183	38.4		09.9	273	44.4		25.2	235	29.9		45.4
8	166	28.5	322	48.8		43.0	198	39.5		09.3	288	46.3		25.4	250	32.1		45.4
9	181	30.9	337	51.9		42.1	213	40.5		08.7	303	48.2		25.5	265	34.4		45.4
10	196	33.4	352	54.9		41.2	228	41.6		08.1	318	50.1		25.6	280	36.6		45.4
11	211	35.8	7	58.0	-13	40.2	243	42.7	-15	07.5	333	52.0	-19	25.7	295	38.8	-22	45.4
12	226	38.3	23	01.1	-13	39.3	258	43.7	-15	06.9	348	53.9	-19	25.8	310	41.0	-22	45.4
13	241	40.8	38	04.2		38.4	273	44.8		06.3	3	55.8		26.0	325	43.2		45.4
14	256	43.2	53	07.3		37.5	288	45.8		05.7	18	57.7		26.1	340	45.5		45.4
15	271	45.7	68	10.4		36.6	303	46.9		05.1	33	59.6		26.2	355	47.7		45.4
16	286	48.2	83	13.4		35.7	318	48.0		04.5	49	01.5		26.3	10	49.9		45.4
17	301	50.6	98	16.5	-13	34.8	333	49.0	-15	03.9	64	03.4	-19	26.4	25	52.1	-22	45.4
18	316	53.1	113	19.6	-13	33.8	348	50.1	-15	03.3	79	05.3	-19	26.6	40	54.4	-22	45.4
19	331	55.6	128	22.6		32.9	3	51.2		02.7	94	07.2		26.7	55	56.6		45.3
20	346	58.0	143	25.7		32.0	18	52.2		02.1	109	09.1		26.8	70	58.8		45.3
21	2	00.5	158	28.7		31.1	33	53.3		01.5	124	11.0		26.9	86	01.0		45.3
22	17	03.0	173	31.8		30.2	48	54.4		00.9	139	12.9		27.0	101	03.3		45.3
23	32	05.4	188	34.8		29.3	63	55.4	-15	00.3	154	14.8		27.2	116	05.5		45.3
24	47	07.9	203	37.9	-13	28.4	78	56.5	-14	59.7	169	16.7	-19	27.3	131	07.7	-22	45.3
Dif	—		+31		+9		+11		+6		+19		-1		+22			

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:1 PMG: 11 ^h 43 ^m 7			Edad: 29 ^d 8 PHE { 4 ^h : 56:9 12 ^h : 56:7 20 ^h : 56:5 PMG: 12 ^h 30 ^m R°: 51 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	o	'	o	'	o	'		h	m	h	m	h	m	h	m
0	184	04.5	-16	29.1	178	39.9	-13 04.7	60 N	15 47	16 34	17 24	8 08	80	16 42	23
1	199	04.4		29.9	193	09.9 ¹¹⁰	14.3 ⁹⁶	58	15 57	40	28	7 59	77	16 52	26
2	214	04.4		30.6	207	39.9 ¹¹⁰	23.9 ⁹⁶	56	16 05	46	31	51	75	17 00	29
3	229	04.3		31.3	222	09.9 ¹¹⁰	33.4 ⁹⁵	54	13	51	34	44	72	08	30
4	244	04.3		32.0	236	39.9 ¹¹⁰	42.8 ⁹⁴	52	20	16 56	37	37	71	15	32
5	259	04.3	-16	32.8	251	09.8 ¹⁰⁹	-13 52.2 ⁹⁴	50	16 26	17 01	17 39	7 32	69	17 21	33
6	274	04.2	-16	33.5	265	39.8 ¹¹⁰	-14 01.4 ⁹²	45	16 39	17 10	17 45	7 19	66	17 35	36
7	289	04.2		34.2	280	09.7 ¹⁰⁹	10.6 ⁹²	40	16 50	19	51	09	63	46	38
8	304	04.1		35.0	294	39.6 ¹⁰⁹	19.7 ⁹¹	35	17 00	26	17 56	7 01	61	17 55	41
9	319	04.1		35.7	309	09.5 ¹⁰⁹	28.7 ⁹⁰	30	08	33	18 02	6 53	59	18 03	43
10	334	04.0		36.4	323	39.4 ¹⁰⁹	37.7 ⁹⁰	20	22	45	12	40	56	18	45
11	349	04.0	-16	37.1	338	09.3 ¹⁰⁹	-14 46.5 ⁸⁸	10 N	17 35	17 57	18 22	6 29	53	18 31	48
12	4	04.0	-16	37.9	352	39.2 ¹⁰⁹	-14 55.3 ⁸⁸	0	17 47	18 09	18 34	6 18	50	18 42	51
13	19	03.9		38.6	7	09.0 ¹⁰⁸	-15 04.0 ⁸⁷	10 S	17 59	21	18 47	6 08	47	18 54	53
14	34	03.9		39.3	21	38.9 ¹⁰⁹	12.6 ⁸⁶	20	18 13	36	19 03	5 57	44	19 07	55
15	49	03.8		40.0	36	08.7 ¹⁰⁸	21.1 ⁸⁵	30	28	18 53	24	44	42	22	58
16	64	03.8		40.7	50	38.5 ¹⁰⁸	29.5 ⁸⁴	35	37	19 04	37	37	39	30	60
17	79	03.7	-16	41.5	65	08.3 ¹⁰⁸	-15 37.8 ⁸³	40	18 47	19 17	19 53	5 29	37	19 40	62
18	94	03.7	-16	42.2	79	38.1 ¹⁰⁸	-15 46.1 ⁸³	45	18 59	19 32	20 13	5 19	35	19 51	64
19	109	03.6		42.9	94	07.9 ¹⁰⁸	-15 54.3 ⁸²	50	19 13	19 51	40	08	31	20 05	67
20	124	03.6		43.6	108	37.6 ¹⁰⁷	-16 02.3 ⁸⁰	52	20	20 01	20 54	5 03	29	12	68
21	139	03.5		44.3	123	07.4 ¹⁰⁸	10.3 ⁸⁰	54	28	11	21 10	4 57	27	19	70
22	154	03.5		45.1	137	37.1 ¹⁰⁷	18.2 ⁷⁹	56	37	23	30	50	26	27	72
23	169	03.4		45.8	152	06.8 ¹⁰⁷	26.0 ⁷⁸	58	46	37	21 56	43	23	36	74
24	184	03.4	-16	46.5	166	36.5 ¹⁰⁷	-16 33.7 ⁷⁷	60 S	19 57	20 54	22 35	4 35	20	20 46	77
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 20 ^h 48 ^m 1		Mag: -4.5 PMG: 10 ^h 23 ^m		Mag: -0.5 PMG: 18 ^h 43 ^m		Mag: -1.7 PMG: 12 ^h 41 ^m		Mag: +0.6 PMG: 15 ^h 13 ^m						
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄						
h	o	'	o	'	o	'	o	'	o	'					
0	47	07.9	203	37.9	-13	28.4	169	16.7	-19	27.3					
1	62	10.3	218	40.9		27.5	184	18.6		27.4					
2	77	12.8	233	43.9		26.6	199	20.5		27.5					
3	92	15.3	248	47.0		25.7	214	22.4		27.6					
4	107	17.7	263	50.0		24.8	229	24.3		27.8					
5	122	20.2	278	53.0	-13	23.9	244	26.2	-19	27.9					
6	137	22.7	293	56.0	-13	23.0	259	28.1	-19	28.0					
7	152	25.1	308	59.1		22.1	274	30.0		28.1					
8	167	27.6	324	02.1		21.2	289	31.9		28.2					
9	182	30.1	339	05.1		20.4	304	33.8		28.4					
10	197	32.5	354	08.1		19.5	319	35.6		28.5					
11	212	35.0	9	11.1	-13	18.6	334	37.5	-19	28.6					
12	227	37.4	24	14.1	-13	17.7	349	39.4	-19	28.7					
13	242	39.9	39	17.1		16.8	4	41.3		28.8					
14	257	42.4	54	20.0		15.9	19	43.2		29.0					
15	272	44.8	69	23.0		15.0	34	45.1		29.1					
16	287	47.3	84	26.0		14.2	49	47.0		29.2					
17	302	49.8	99	29.0	-13	13.3	64	48.9	-19	29.3					
18	317	52.2	114	32.0	-13	12.4	79	50.8	-19	29.4					
19	332	54.7	129	34.9		11.5	94	52.7		29.6					
20	347	57.2	144	37.9		10.7	109	54.6		29.7					
21	2	59.6	159	40.9		09.8	124	56.5		29.8					
22	18	02.1	174	43.8		08.9	139	58.4		29.9					
23	33	04.6	189	46.8		08.1	155	00.3		30.0					
24	48	07.0	204	49.7	-13	07.2	170	02.2	-19	30.2					
Dif	—		+30		+9		+11		+6						

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16 ^h 1			Edad: 1 ^d 3	PHE {											
	PMG: 11 ^h 43 ^m 8					SD: 15 ^h 3		SD: 15 ^h 3			SD: 15 ^h 3					
hG ☉	Dec	hG ☾	Dif	Dec	Dif	Náutico	Civil	Hora	Rº	Hora	Rº					
h	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m	
0	184	03.4	-16	46.5	166	36.5	-16	33.7	60 N	6 04	6 55	7 42	9 28	74	17 05	31
1	199	03.3		47.2	181	06.2		41.3	58	6 01	49	32	16	71	18	33
2	214	03.3		47.9	195	35.9		48.9	56	5 58	43	24	9 06	69	29	35
3	229	03.2		48.7	210	05.6		56.3	54	55	37	16	8 56	68	38	37
4	244	03.2		49.4	224	35.2		03.6	52	52	32	09	48	66	47	37
5	259	03.1	-16	50.1	239	04.9		10.9	50	5 49	6 28	7 03	8 41	64	17 54	39
6	274	03.1	-16	50.8	253	34.5		18.0	45	5 43	6 18	6 49	8 25	62	18 11	41
7	289	03.0		51.5	268	04.1		25.1	40	37	09	38	12	60	24	43
8	304	03.0		52.2	282	33.8		32.1	35	32	6 02	28	8 02	58	36	44
9	319	02.9		52.9	297	03.4		38.9	30	26	5 55	20	7 52	57	18 46	45
10	334	02.9		53.7	311	33.0		45.7	20	16	42	6 05	36	54	19 03	48
11	349	02.8	-16	54.4	326	02.5		52.4	10 N	5 05	5 31	5 52	7 22	52	19 19	49
12	4	02.8	-16	55.1	340	32.1		58.9	0	4 54	5 19	5 40	7 08	51	19 33	50
13	19	02.7		55.8	355	01.7		05.4	10 S	40	5 06	28	6 55	49	19 47	52
14	34	02.7		56.5	9	31.2		11.8	20	24	4 51	5 15	41	47	20 02	54
15	49	02.6		57.2	24	00.8		18.0	30	4 03	34	4 59	26	43	20	55
16	64	02.5		57.9	38	30.3		24.2	35	3 50	23	51	16	43	30	57
17	79	02.5	-16	58.6	52	59.9		30.3	40	3 34	4 10	4 40	6 06	41	20 42	58
18	94	02.4	-16	59.3	67	29.4		36.3	45	3 14	3 55	4 28	5 54	38	20 55	60
19	109	02.4	-17	00.1	81	58.9		42.1	50	2 47	36	13	39	36	21 12	62
20	124	02.3		00.8	96	28.4		47.9	52	33	26	4 07	32	35	20	63
21	139	02.3		01.5	110	57.9		53.6	54	2 17	16	3 59	24	33	29	64
22	154	02.2		02.2	125	27.4		59.2	56	1 57	3 04	50	16	31	39	65
23	169	02.1		02.9	139	56.9		04.6	58	1 31	2 49	40	5 06	29	21 50	67
24	184	02.1	-17	03.6	154	26.4		10.0	60 S	0 51	2 32	3 29	4 55	27	22 03	69

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 20 ^h 44 ^m 1		Mag: -4.5 PMG: 10 ^h 19 ^m		Mag: -0.4 PMG: 18 ^h 41 ^m		Mag: -1.7 PMG: 12 ^h 38 ^m		Mag: +0.6 PMG: 15 ^h 10 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	o	'	o	'	o	'	o	'	o	'
0	48	07.0	204	49.7	-13	07.2	79	21.9	-14	45.4
1	63	09.5	219	52.7		06.3	94	23.0		44.8
2	78	11.9	234	55.6		05.5	109	24.0		44.2
3	93	14.4	249	58.5		04.6	124	25.1		43.6
4	108	16.9	265	01.5		03.7	139	26.1		43.0
5	123	19.3	280	04.4	-13	02.9	154	27.2	-14	42.4
6	138	21.8	295	07.3	-13	02.0	169	28.2	-14	41.7
7	153	24.3	310	10.2		01.2	184	29.3		40.1
8	168	26.7	325	13.2	-13	00.3	199	30.4		40.5
9	183	29.2	340	16.1	-12	59.5	214	31.4		39.9
10	198	31.7	355	19.0		58.6	229	32.5		39.3
11	213	34.1	10	21.9	-12	57.8	244	33.5	-14	38.7
12	228	36.6	25	24.8	-12	56.9	259	34.6	-14	38.1
13	243	39.1	40	27.7		56.1	274	35.6		37.5
14	258	41.5	55	30.6		55.2	289	36.7		36.9
15	273	44.0	70	33.5		54.4	304	37.7		36.3
16	288	46.4	85	36.4		53.6	319	38.8		35.7
17	303	48.9	100	39.3	-12	52.7	334	39.8	-14	35.1
18	318	51.4	115	42.1	-12	51.9	349	40.9	-14	34.5
19	333	53.8	130	45.0		51.0	4	41.9		33.9
20	348	56.3	145	47.9		50.2	19	43.0		33.3
21	3	58.8	160	50.7		49.4	34	44.1		32.7
22	19	01.2	175	53.6		48.5	49	45.1		32.1
23	34	03.7	190	56.5		47.7	64	46.2		31.5
24	49	06.2	205	59.3	-12	46.9	79	47.2	-14	30.9
Dif	—		+29		+8		+11		+6	
									+19	-1
										+22

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna				
	SD: 16:2 PMG: 11 ^h 43 ^m 9			Edad: 2 ^d 3 SD: 15:1 PMG: 14 ^h 11 ^m	PHE { 4 ^h : 55:7 12 ^h : 55:5 20 ^h : 55:4 R°: 51 ^m												
	hG ☉	Dec				hG ☾			Dif	Dec	Dif	Civil	Náutico	Hora	R°	Hora	R°
h	o	'	o	'	o	'	o	'	h m	h m	h m	h m	m	m	h m	m	
0	184	02.1	-17	03.6	154	26.4	-19	10.0	60 N	15 42	16 30	17 20	10 42	63	17 36	41	
1	199	02.0		04.3	168	55.9 ¹⁰⁵		15.3 ⁵³	58	15 52	36	24	27	62	17 51	42	
2	214	02.0		05.0	183	25.4 ¹⁰⁵		20.4 ⁵¹	56	16 01	43	28	15	60	18 04	42	
3	229	01.9		05.7	197	54.8 ¹⁰⁴		25.5 ⁵¹	54		09	48	31	10 04	59	15	
4	244	01.8		06.4	212	24.3 ¹⁰⁵		30.4 ⁴⁹	52		16	53	34	9 54	59	24	
5	259	01.8	-17	07.1	226	53.8 ¹⁰⁵	-19	35.3 ⁴⁹	50	16 23	16 58	17 37	9 45	59	18 33	45	
6	274	01.7	-17	07.8	241	23.3 ¹⁰⁵	-19	40.0 ⁴⁷	45	16 37	17 08	17 43	9 27	57	18 52	46	
7	289	01.7		08.5	255	52.7 ¹⁰⁴		44.7 ⁴⁷	40	48	17	49	12	56	19 07	47	
8	304	01.6		09.2	270	22.2 ¹⁰⁵		49.2 ⁴⁵	35	16 58	25	17 55	9 00	55	20	48	
9	319	01.5		09.9	284	51.7 ¹⁰⁵		53.6 ⁴⁴	30	17 07	32	18 00	8 49	54	31	48	
10	334	01.5		10.6	299	21.1 ¹⁰⁴	-19	58.0 ⁴⁴	20	22	45	11	30	53	19 51	49	
11	349	01.4	-17	11.3	313	50.6 ¹⁰⁵	-20	02.2 ⁴²	10 N	17 35	17 57	18 22	8 14	52	20 08	49	
12	4	01.4	-17	12.0	328	20.1 ¹⁰⁵	-20	06.3 ⁴¹	0	17 47	18 09	18 34	7 59	50	20 23	51	
13	19	01.3		12.7	342	49.5 ¹⁰⁴		10.3 ⁴⁰	10 S	18 00	22	18 48	44	49	39	51	
14	34	01.2		13.4	357	19.0 ¹⁰⁵		14.2 ³⁹	20	14	37	19 05	28	48	20 56	51	
15	49	01.2		14.1	11	48.5 ¹⁰⁵		18.0 ³⁸	30	29	18 55	26	7 09	47	21 15	53	
16	64	01.1		14.8	26	18.0 ¹⁰⁵		21.7 ³⁷	35	39	19 06	40	6 59	46	27	52	
17	79	01.0	-17	15.5	40	47.4 ¹⁰⁴	-20	25.3 ³⁶	40	18 49	19 19	19 56	6 47	44	21 40	53	
18	94	01.0	-17	16.2	55	16.9 ¹⁰⁵	-20	28.8 ³⁵	45	19 02	19 35	20 17	6 32	44	21 55	54	
19	109	00.9		16.9	69	46.4 ¹⁰⁵		32.1 ³³	50	17	19 55	45	15	42	22 14	54	
20	124	00.8		17.6	84	15.9 ¹⁰⁵		35.4 ³³	52	24	20 05	20 59	6 07	41	23	55	
21	139	00.8		18.3	98	45.4 ¹⁰⁵		38.6 ³²	54	32	16	21 16	5 57	40	33	55	
22	154	00.7		19.0	113	14.9 ¹⁰⁵		41.6 ³⁰	56	41	28	21 37	47	39	44	56	
23	169	00.6		19.7	127	44.4 ¹⁰⁵		44.6 ³⁰	58	19 51	20 43	22 06	35	38	22 57	57	
24	184	00.6	-17	20.4	142	14.0 ¹⁰⁶	-20	47.4 ²⁸	60 S	20 03	21 01	22 54	5 22	35	23 12	58	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 20 ^h 40 ^m 2		Mag: -4.6 PMG: 10 ^h 14 ^m			Mag: -0.4 PMG: 18 ^h 40 ^m			Mag: -1.7 PMG: 12 ^h 35 ^m			Mag: +0.6 PMG: 15 ^h 06 ^m					
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'	
0	49	06.2	205	59.3	-12	46.9	79	47.2	-14	30.9	170	47.7	-19	33.0	132	54.2	
1	64	08.6	221	02.2		46.1	94	48.3		30.3	185	49.6		33.1	147	56.5	
2	79	11.1	236	05.0		45.2	109	49.3		29.7	200	51.5		33.2	162	58.7	
3	94	13.6	251	07.9		44.4	124	50.4		29.1	215	53.4		33.4	178	00.9	
4	109	16.0	266	10.7		43.6	139	51.4		28.4	230	55.2		33.5	193	03.1	
5	124	18.5	281	13.5	-12	42.8	154	52.5	-14	27.8	245	57.1	-19	33.6	208	05.3	
6	139	20.9	296	16.4	-12	42.0	169	53.5	-14	27.2	260	59.0	-19	33.7	223	07.5	
7	154	23.4	311	19.2		41.1	184	54.6		26.6	276	00.9		33.8	238	09.8	
8	169	25.9	326	22.0		40.3	199	55.6		26.0	291	02.8		34.0	253	12.0	
9	184	28.3	341	24.8		39.5	214	56.7		25.4	306	04.7		34.1	268	14.2	
10	199	30.8	356	27.7		38.7	229	57.7		24.8	321	06.6		34.2	283	16.4	
11	214	33.3	11	30.5	-12	37.9	244	58.8	-14	24.2	336	08.5	-19	34.3	298	18.6	
12	229	35.7	26	33.3	-12	37.1	259	59.8	-14	23.6	351	10.4	-19	34.4	313	20.8	
13	244	38.2	41	36.1		36.3	275	00.9		23.0	6	12.3		34.5	328	23.1	
14	259	40.7	56	38.9		35.5	290	01.9		22.4	21	14.2		34.7	343	25.3	
15	274	43.1	71	41.7		34.7	305	03.0		21.8	36	16.1		34.8	358	27.5	
16	289	45.6	86	44.5		33.9	320	04.0		21.2	51	18.0		34.9	13	29.7	
17	304	48.0	101	47.3	-12	33.1	335	05.1	-14	20.5	66	19.9	-19	35.0	28	31.9	
18	319	50.5	116	50.1	-12	32.3	350	06.1	-14	19.9	81	21.8	-19	35.1	43	34.1	
19	334	53.0	131	52.8		31.5	5	07.2		19.3	96	23.7		35.3	58	36.3	
20	349	55.4	146	55.6		30.7	20	08.2		18.7	111	25.5		35.4	73	38.6	
21	4	57.9	161	58.4		29.9	35	09.3		18.1	126	27.4		35.5	88	40.8	
22	20	00.4	177	01.2		29.1	50	10.3		17.5	141	29.3		35.6	103	43.0	
23	35	02.8	192	03.9		28.3	65	11.4		16.9	156	31.2		35.7	118	45.2	
24	50	05.3	207	06.7	-12	27.5	80	12.4	-14	16.3	171	33.1	-19	35.8	133	47.4	
Dif	—		+28			+8			+10			+19			-1		
																+22	

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'2 PMG: 11 ^h 44 ^m 0				Edad: 3 ^d 3 PHE { 4 ^h : 55'2 12 ^h : 55'0 20 ^h : 54'9 SD: 15'0 PMG: 15 ^h 02 ^m R°: 49 ^m													
	hG ☉		Dec		hG ☾ Dif		Dec Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	o	'	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m	
0	184	00.6	-17	20.4	142	14.0	-20	47.4	60 N	6 09	7 00	7 48	11 45	51	18 17	51		
1	199	00.5		21.1	156	43.5 ¹⁰⁵		50.2 ²⁸	58	05	6 53	37	29	51	33	51		
2	214	00.4		21.8	171	13.0 ¹⁰⁵		52.8 ²⁶	56	6 01	46	28	15	51	46	52		
3	229	00.4		22.5	185	42.6 ¹⁰⁶		55.3 ²⁵	54	5 58	41	20	11 03	51	18 58	52		
4	244	00.3		23.2	200	12.2 ¹⁰⁶	-20	57.7 ²⁴	52	55	36	13	10 53	51	19 09	51		
5	259	00.2	-17	23.8	214	41.7 ¹⁰⁵	-21	00.0 ²³	50	5 52	6 31	7 06	10 44	50	19 18	51		
6	274	00.2	-17	24.5	229	11.3 ¹⁰⁶	-21	02.2 ²²	45	5 45	6 21	6 52	10 24	51	19 38	51		
7	289	00.1		25.2	243	40.9 ¹⁰⁶		04.3 ²⁰	40	39	12	40	10 08	51	19 54	51		
8	304	00.0		25.9	258	10.5 ¹⁰⁶		06.3 ¹⁹	35	33	6 04	30	9 55	50	20 08	50		
9	319	00.0		26.6	272	40.1 ¹⁰⁶		08.2 ¹⁸	30	28	5 56	22	43	50	19	51		
10	333	59.9		27.3	287	09.8 ¹⁰⁷		10.0 ¹⁶	20	17	43	6 06	23	50	40	50		
11	348	59.8	-17	28.0	301	39.4 ¹⁰⁶	-21	11.6 ¹⁴	10 N	5 06	5 31	5 53	9 06	50	20 57	50		
12	3	59.7	-17	28.7	316	09.1 ¹⁰⁷	-21	13.2 ¹⁴	0	4 54	5 19	5 40	8 49	50	21 14	49		
13	18	59.7		29.4	330	38.7 ¹⁰⁶		14.6 ¹⁴	10 S	40	5 06	28	33	50	30	49		
14	33	59.6		30.0	345	08.4 ¹⁰⁷		16.0 ¹²	20	23	4 51	5 14	8 16	49	21 47	49		
15	48	59.5		30.7	359	38.1 ¹⁰⁷		17.2 ¹⁰	30	4 02	32	4 58	7 56	49	22 08	48		
16	63	59.5		31.4	14	07.9 ¹⁰⁸		18.4 ¹²	35	3 48	21	49	45	49	19	49		
17	78	59.4	-17	32.1	28	37.6 ¹⁰⁷	-21	19.4 ⁹	40	3 31	4 08	4 38	7 31	49	22 33	48		
18	93	59.3	-17	32.8	43	07.3 ¹⁰⁷	-21	20.3 ⁸	45	3 10	3 52	4 26	7 16	48	22 49	47		
19	108	59.2		33.5	57	37.1 ¹⁰⁸		21.1 ⁷	50	2 42	32	10	6 57	48	23 08	47		
20	123	59.2		34.1	72	06.9 ¹⁰⁸		21.8 ⁵	52	28	23	4 03	48	47	18	46		
21	138	59.1		34.8	86	36.7 ¹⁰⁸		22.5 ⁵	54	2 11	3 12	3 55	37	48	28	46		
22	153	59.0		35.5	101	06.6 ¹⁰⁹		23.0 ⁴	56	1 50	2 59	46	26	47	40	46		
23	168	58.9		36.2	115	36.4 ¹⁰⁸		23.4 ²	58	1 21	44	36	6 13	46	23 54	45		
24	183	58.9	-17	36.9	130	06.3 ¹⁰⁹	-21	23.6	60 S	0 34	2 26	3 24	5 57	46	** ** *	**		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 20 ^h 36 ^m 3		Mag: -4.6 PMG: 10 ^h 10 ^m				Mag: -0.4 PMG: 18 ^h 38 ^m				Mag: -1.7 PMG: 12 ^h 32 ^m				Mag: +0.6 PMG: 15 ^h 03 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'
0	50	05.3	207	06.7	-12	27.5	80	12.4	-14	16.3	171	33.1	-19	35.8	133	47.4	-22	45.0
1	65	07.8	222	09.4		26.8	95	13.5		15.7	186	35.0		36.0	148	49.6		45.0
2	80	10.2	237	12.2		26.0	110	14.5		15.1	201	36.9		36.1	163	51.8		44.9
3	95	12.7	252	14.9		25.2	125	15.5		14.4	216	38.8		36.2	178	54.1		44.9
4	110	15.2	267	17.7		24.4	140	16.6		13.8	231	40.7		36.3	193	56.3		44.9
5	125	17.6	282	20.4	-12	23.6	155	17.6	-14	13.2	246	42.6	-19	36.4	208	58.5	-22	44.9
6	140	20.1	297	23.2	-12	22.9	170	18.7	-14	12.6	261	44.5	-19	36.6	224	00.7	-22	44.9
7	155	22.5	312	25.9		22.1	185	19.7		12.0	276	46.4		36.7	239	02.9		44.9
8	170	25.0	327	28.6		21.3	200	20.8		11.4	291	48.3		36.8	254	05.1		44.9
9	185	27.5	342	31.4		20.5	215	21.8		10.8	306	50.2		36.9	269	07.3		44.9
10	200	29.9	357	34.1		19.8	230	22.9		10.2	321	52.0		37.0	284	09.6		44.9
11	215	32.4	12	36.8	-12	19.0	245	23.9	-14	09.5	336	53.9	-19	37.1	299	11.8	-22	44.9
12	230	34.9	27	39.5	-12	18.2	260	25.0	-14	08.9	351	55.8	-19	37.3	314	14.0	-22	44.9
13	245	37.3	42	42.2		17.5	275	26.0		08.3	6	57.7		37.4	329	16.2		44.9
14	260	39.8	57	44.9		16.7	290	27.1		07.7	21	59.6		37.5	344	18.4		44.9
15	275	42.3	72	47.6		16.0	305	28.1		07.1	37	01.5		37.6	359	20.6		44.9
16	290	44.7	87	50.3		15.2	320	29.1		06.5	52	03.4		37.7	14	22.8		44.9
17	305	47.2	102	53.0	-12	14.5	335	30.2	-14	05.9	67	05.3	-19	37.9	29	25.0	-22	44.9
18	320	49.7	117	55.7	-12	13.7	350	31.2	-14	05.3	82	07.2	-19	38.0	44	27.3	-22	44.9
19	335	52.1	132	58.4		12.9	5	32.3		04.6	97	09.1		38.1	59	29.5		44.9
20	350	54.6	148	01.1		12.2	20	33.3		04.0	112	11.0		38.2	74	31.7		44.8
21	5	57.0	163	03.8		11.4	35	34.4		03.4	127	12.9		38.3	89	33.9		44.8
22	20	59.5	178	06.4		10.7	50	35.4		02.8	142	14.8		38.4	104	36.1		44.8
23	36	02.0	193	09.1		10.0	65	36.4		02.2	157	16.6		38.6	119	38.3		44.8
24	51	04.4	208	11.8	-12	09.2	80	37.5	-14	01.6	172	18.5	-19	38.7	134	40.5	-22	44.8
Dif	—		+27		+8		+10		+6		+19		-1		+22			

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16°2 PMG: 11 ^h 44 ^m 1			Edad: 4 ^d 3 PHE { SD: 14°9 PMG: 15 ^h 51 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m
0	183	58.9	-17	36.9	130	06.3	-21	23.6	60 N	15 37	16 26	17 17	12 36 38	19 08 62	
1	198	58.8		37.6	144	36.2 ¹⁰⁹		23.8	58	48	33	21	20 40	24 60	
2	213	58.7		38.2	159	06.1 ¹⁰⁹		23.9	56	15 58	39	24	12 06 41	38 59	
3	228	58.6		38.9	173	36.0 ¹⁰⁹		23.9	54	16 06	45	28	11 54 42	19 50 57	
4	243	58.6		39.6	188	06.0 ¹¹⁰		23.8	52	13	50	31	44 42	20 00 57	
5	258	58.5	-17	40.3	202	36.0 ¹¹⁰	-21	23.5	50	16 20	16 55	17 34	11 34 43	20 09 57	
6	273	58.4	-17	41.0	217	06.0 ¹¹⁰	-21	23.2	45	16 34	17 06	17 41	11 15 44	20 29 55	
7	288	58.3		41.6	231	36.0 ¹¹⁰		22.8	40	46	15	48	10 59 45	45 53	
8	303	58.2		42.3	246	06.1 ¹¹¹		22.2	35	16 57	23	54	45 46	20 58 53	
9	318	58.2		43.0	260	36.2 ¹¹¹		21.6	30	17 06	31	17 59	33 47	21 10 52	
10	333	58.1		43.7	275	06.3 ¹¹¹		20.8	20	21	44	18 11	10 13 47	30 50	
11	348	58.0	-17	44.3	289	36.4 ¹¹¹	-21	20.0	10 N	17 35	17 57	18 22	9 56 48	21 47 49	
12	3	57.9	-17	45.0	304	06.6 ¹¹²	-21	19.0	0	17 48	18 09	18 35	9 39 49	22 03 48	
13	18	57.8		45.7	318	36.8 ¹¹²		18.0	10 S	18 01	23	18 49	23 49	19 47	
14	33	57.8		46.4	333	07.0 ¹¹²		16.8	20	15	38	19 06	9 05 51	36 46	
15	48	57.7		47.0	347	37.2 ¹¹²		15.6	30	31	18 57	28	8 45 51	22 56 44	
16	63	57.6		47.7	2	07.5 ¹¹³		14.2	35	41	19 08	42	34 51	23 08 43	
17	78	57.5	-17	48.4	16	37.8 ¹¹³	-21	12.8	40	18 52	19 22	19 59	8 20 52	23 21 42	
18	93	57.4	-17	49.0	31	08.2 ¹¹⁴	-21	11.2	45	19 04	19 38	20 21	8 04 53	23 36 41	
19	108	57.4		49.7	45	38.5 ¹¹³		09.5	50	20	19 59	20 50	7 45 53	23 55 40	
20	123	57.3		50.4	60	08.9 ¹¹⁴		07.8	52	28	20 09	21 05	35 54	*** **	
21	138	57.2		51.1	74	39.3 ¹¹⁴		05.9	54	36	20	23	25 54	*** **	
22	153	57.1		51.7	89	09.8 ¹¹⁵		04.0	56	45	34	21 45	7 13 55	*** **	
23	168	57.0		52.4	103	40.3 ¹¹⁵	-21	01.9	58	19 56	20 49	22 17	6 59 56	*** **	
24	183	56.9	-17	53.1	118	10.8 ¹¹⁵	-20	59.8	60 S	20 08	21 08	23 23	6 43 57	0 10 44	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 20 ^h 32 ^m 3		Mag: -4.6 PMG: 10 ^h 05 ^m		Mag: -0.4 PMG: 18 ^h 36 ^m		Mag: -1.7 PMG: 12 ^h 29 ^m		Mag: +0.6 PMG: 14 ^h 59 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	o	'	o	'	o	'	o	'	o	'
0	51	04.4	208	11.8	-12	09.2	80	37.5	-14	01.6
1	66	06.9	223	14.4		08.5	95	38.5		01.0
2	81	09.4	238	17.1		07.7	110	39.6	-14	00.3
3	96	11.8	253	19.8		07.0	125	40.6	-13	59.7
4	111	14.3	268	22.4		06.3	140	41.7		59.1
5	126	16.8	283	25.1	-12	05.5	155	42.7	-13	58.5
6	141	19.2	298	27.7	-12	04.8	170	43.7	-13	57.9
7	156	21.7	313	30.3		04.1	185	44.8		57.3
8	171	24.2	328	33.0		03.3	200	45.8		56.6
9	186	26.6	343	35.6		02.6	215	46.9		56.0
10	201	29.1	358	38.2		01.9	230	47.9		55.4
11	216	31.5	13	40.9	-12	01.2	245	49.0	-13	54.8
12	231	34.0	28	43.5	-12	00.5	260	50.0	-13	54.2
13	246	36.5	43	46.1	-11	59.7	275	51.0		53.6
14	261	38.9	58	48.7		59.0	290	52.1		52.9
15	276	41.4	73	51.3		58.3	305	53.1		52.3
16	291	43.9	88	53.9		57.6	320	54.2		51.7
17	306	46.3	103	56.5	-11	56.9	335	55.2	-13	51.1
18	321	48.8	118	59.1	-11	56.2	350	56.2	-13	50.5
19	336	51.3	134	01.7		55.5	5	57.3		49.9
20	351	53.7	149	04.3		54.8	20	58.3		49.2
21	6	56.2	164	06.9		54.1	35	59.4		48.6
22	21	58.6	179	09.5		53.4	51	00.4		48.0
23	37	01.1	194	12.0		52.7	66	01.4		47.4
24	52	03.6	209	14.6	-11	52.0	81	02.5	-13	46.8
Dif	—		+26		+7		+10		+6	

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UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'2 PMG: 11 ^h 44 ^m 3				Edad: 5 ^d 3 PHE { 4 ^h : 54'4 12 ^h : 54'3 20 ^h : 54'3 R°: 47 ^m												
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	o	'	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m
0	183	56.9	-17	53.1	118	10.8	-20	59.8	60 N	6 13	7 04	7 53	13 14	28	20 10	68	
1	198	56.9		53.7	132	41.3 ¹¹⁵		57.5 ²³	58	09	6 57	42	13 00	30	24	66	
2	213	56.8		54.4	147	11.9 ¹¹⁶		55.2 ²³	56	05	50	32	12 47	32	37	64	
3	228	56.7		55.1	161	42.5 ¹¹⁶		52.7 ²⁵	54	6 01	44	24	36	34	47	63	
4	243	56.6		55.7	176	13.1 ¹¹⁶		50.2 ²⁵	52	5 58	39	16	26	35	20 57	61	
5	258	56.5	-17	56.4	190	43.8 ¹¹⁷	-20	47.5 ²⁷	50	5 55	6 34	7 09	12 17	36	21 06	59	
6	273	56.4	-17	57.1	205	14.5 ¹¹⁷	-20	44.8 ²⁷	45	5 48	6 23	6 55	11 59	38	21 24	57	
7	288	56.3		57.7	219	45.3 ¹¹⁸		42.0 ²⁸	40	41	14	43	44	40	38	56	
8	303	56.3		58.4	234	16.0 ¹¹⁷		39.1 ²⁹	35	35	6 06	32	31	41	21 51	54	
9	318	56.2		59.1	248	46.8 ¹¹⁸		36.0 ³¹	30	29	5 58	23	20	42	22 02	52	
10	333	56.1	-17	59.7	263	17.7 ¹¹⁹		32.9 ³¹	20	18	44	6 08	11 00	45	20	51	
11	348	56.0	-18	00.4	277	48.5 ¹¹⁸	-20	29.7 ³²	10 N	5 06	5 32	5 54	10 44	46	22 36	49	
12	3	55.9	-18	01.0	292	19.5 ¹²⁰	-20	26.4 ³³	0	4 54	5 19	5 41	10 28	48	22 51	47	
13	18	55.8		01.7	306	50.4 ¹¹⁹		23.0 ³⁴	10 S	39	5 05	28	10 12	49	23 06	45	
14	33	55.7		02.4	321	21.4 ¹²⁰		19.5 ³⁵	20	22	4 50	5 13	9 56	50	22	43	
15	48	55.6		03.0	335	52.4 ¹²⁰		15.9 ³⁶	30	4 00	31	4 57	36	53	40	41	
16	63	55.5		03.7	350	23.4 ¹²⁰		12.3 ³⁶	35	3 46	20	47	25	54	23 51	39	
17	78	55.5	-18	04.3	4	54.5 ¹²¹	-20	08.5 ³⁸	40	3 29	4 06	4 36	9 12	55	***	**	
18	93	55.4	-18	05.0	19	25.6 ¹²¹	-20	04.6 ³⁹	45	3 07	3 50	4 23	8 57	56	***	**	
19	108	55.3		05.7	33	56.8 ¹²²	-20	00.7 ³⁹	50	2 38	29	08	38	58	***	**	
20	123	55.2		06.3	48	28.0 ¹²²	-19	56.7 ⁴⁰	52	23	19	4 00	29	60	0 04	39	
21	138	55.1		07.0	62	59.2 ¹²²		52.5 ⁴²	54	2 05	3 07	3 52	19	61	14	38	
22	153	55.0		07.6	77	30.5 ¹²³		48.3 ⁴²	56	1 43	2 54	42	8 08	62	26	36	
23	168	54.9		08.3	92	01.7 ¹²²		44.0 ⁴³	58	1 11	38	32	7 55	63	39	35	
24	183	54.8	-18	08.9	106	33.1 ¹²⁴	-19	39.6 ⁴⁴	60 S	0 05	2 19	3 19	7 40	65	0 54	33	

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 20 ^h 28 ^m 4		Mag: -4.7 PMG: 10 ^h 01 ^m				Mag: -0.4 PMG: 18 ^h 35 ^m				Mag: -1.7 PMG: 12 ^h 26 ^m				Mag: +0.6 PMG: 14 ^h 56 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'
0	52	03.6	209	14.6	-11	52.0	81	02.5	-13	46.8	173	03.9	-19	41.5	135	33.6	-22	44.7
1	67	06.0	224	17.2		51.3	96	03.5		46.1	188	05.8		41.6	150	35.8		44.7
2	82	08.5	239	19.7		50.6	111	04.5		45.5	203	07.7		41.7	165	38.0		44.7
3	97	11.0	254	22.3		49.9	126	05.6		44.9	218	09.6		41.8	180	40.2		44.7
4	112	13.4	269	24.8		49.2	141	06.6		44.3	233	11.5		42.0	195	42.4		44.7
5	127	15.9	284	27.4	-11	48.5	156	07.7	-13	43.7	248	13.4	-19	42.1	210	44.6	-22	44.7
6	142	18.4	299	30.0	-11	47.8	171	08.7	-13	43.0	263	15.3	-19	42.2	225	46.8	-22	44.6
7	157	20.8	314	32.5		47.1	186	09.7		42.4	278	17.2		42.3	240	49.0		44.6
8	172	23.3	329	35.0		46.5	201	10.8		41.8	293	19.0		42.4	255	51.2		44.6
9	187	25.8	344	37.6		45.8	216	11.8		41.2	308	20.9		42.5	270	53.5		44.6
10	202	28.2	359	40.1		45.1	231	12.8		40.6	323	22.8		42.7	285	55.7		44.6
11	217	30.7	14	42.6	-11	44.4	246	13.9	-13	39.9	338	24.7	-19	42.8	300	57.9	-22	44.6
12	232	33.1	29	45.2	-11	43.7	261	14.9	-13	39.3	353	26.6	-19	42.9	316	00.1	-22	44.6
13	247	35.6	44	47.7		43.1	276	16.0		38.7	8	28.5		43.0	331	02.3		44.6
14	262	38.1	59	50.2		42.4	291	17.0		38.1	23	30.4		43.1	346	04.5		44.6
15	277	40.5	74	52.7		41.7	306	18.0		37.5	38	32.3		43.2	1	06.7		44.6
16	292	43.0	89	55.2		41.1	321	19.1		36.8	53	34.2		43.4	16	08.9		44.6
17	307	45.5	104	57.7	-11	40.4	336	20.1	-13	36.2	68	36.1	-19	43.5	31	11.1	-22	44.6
18	322	47.9	120	00.2	-11	39.7	351	21.1	-13	35.6	83	37.9	-19	43.6	46	13.3	-22	44.6
19	337	50.4	135	02.7		39.1	6	22.2		35.0	98	39.8		43.7	61	15.5		44.6
20	352	52.9	150	05.2		38.4	21	23.2		34.3	113	41.7		43.8	76	17.7		44.6
21	7	55.3	165	07.7		37.8	36	24.2		33.7	128	43.6		43.9	91	19.9		44.6
22	22	57.8	180	10.2		37.1	51	25.3		33.1	143	45.5		44.1	106	22.2		44.5
23	38	00.3	195	12.7		36.5	66	26.3		32.5	158	47.4		44.2	121	24.4		44.5
24	53	02.7	210	15.2	-11	35.8	81	27.4	-13	31.9	173	49.3	-19	44.3	136	26.6	-22	44.5
Dif	—		+25		+7		+10		+6		+19		-1		+22		0	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna				
	SD: 16°2 PMG: 11 ^h 44 ^m 4			Edad: 6 ^d 3 SD: 14°8 PMG: 17 ^h 27 ^m	PHE { 4 ^h : 54°3 12 ^h : 54°2 20 ^h : 54°2 R°: 45 ^m												
	hG ☉	Dec				hG ☾			Dif	Dec	Dif	Civil	Náutico	Hora	R°	Hora	R°
h	o	'	o	'	o	'	o	'	h	m	h	m	h	m	h	m	m
0	183	54.8	-18	08.9	106	33.1	-19	39.6	60 N	15 33	16 22	17 13	13 42	22	21 18	73	
1	198	54.7		09.6	121	04.4 ¹²³		35.1 ⁴⁵	58	44	29	18	30 24		30	70	
2	213	54.6		10.3	135	35.8 ¹²⁴		30.6 ⁴⁵	56	15 54	36	22	19 26		41	67	
3	228	54.5		10.9	150	07.3 ¹²⁵		25.9 ⁴⁷	54	16 03	42	25	10 27		50	65	
4	243	54.4		11.6	164	38.8 ¹²⁵		21.2 ⁴⁷	52	10	48	29	13 01	29	21 58	64	
5	258	54.3	-18	12.2	179	10.3 ¹²⁵	-19	16.3 ⁴⁹	50	16 17	16 53	17 32	12 53	31	22 05	63	
6	273	54.2	-18	12.9	193	41.8 ¹²⁵	-19	11.4 ⁴⁹	45	16 32	17 04	17 39	12 37	33	22 21	59	
7	288	54.1		13.5	208	13.4 ¹²⁶		06.4 ⁵⁰	40	45	14	46	24 35		34	57	
8	303	54.1		14.2	222	45.0 ¹²⁶	-19	01.3 ⁵¹	35	16 55	22	53	12 37		45	55	
9	318	54.0		14.8	237	16.7 ¹²⁷	-18	56.2 ⁵¹	30	17 04	30	17 59	12 02	39	22 54	53	
10	333	53.9		15.5	251	48.3 ¹²⁶		50.9 ⁵³	20	21	44	18 10	11 45	41	23 11	50	
11	348	53.8	-18	16.1	266	20.1 ¹²⁸	-18	45.6 ⁵³	10 N	17 35	17 57	18 22	11 30	43	23 25	47	
12	3	53.7	-18	16.8	280	51.8 ¹²⁷	-18	40.1 ⁵⁵	0	17 48	18 10	18 35	11 16	45	23 38	45	
13	18	53.6		17.4	295	23.6 ¹²⁸		34.6 ⁵⁵	10 S	18 01	24	18 50	11 01	48	23 51	43	
14	33	53.5		18.1	309	55.5 ¹²⁹		29.1 ⁵⁵	20	16	40	19 07	10 46	51	*** **	*** **	
15	48	53.4		18.7	324	27.3 ¹²⁸		23.4 ⁵⁷	30	33	18 59	30	29 53		*** **	*** **	
16	63	53.3		19.4	338	59.2 ¹²⁹		17.6 ⁵⁸	35	43	19 11	19 44	19 54		*** **	*** **	
17	78	53.2	-18	20.0	353	31.1 ¹²⁹	-18	11.8 ⁵⁸	40	18 54	19 24	20 02	10 07	56	0 03	38	
18	93	53.1	-18	20.6	8	03.1 ¹³⁰	-18	05.9 ⁵⁹	45	19 07	19 41	20 24	9 53	59	0 17	36	
19	108	53.0		21.3	22	35.1 ¹³⁰	-17	59.9 ⁶⁰	50	24	20 03	20 54	36 62		35	33	
20	123	52.9		21.9	37	07.2 ¹³¹		53.8 ⁶¹	52	31	13	21 10	29 62		43	32	
21	138	52.8		22.6	51	39.2 ¹³⁰		47.7 ⁶¹	54	40	25	29	20 64		0 52	31	
22	153	52.7		23.2	66	11.3 ¹³¹		41.5 ⁶²	56	19 50	39	21 53	9 10	66	1 02	29	
23	168	52.6		23.9	80	43.5 ¹³²		35.2 ⁶³	58	20 01	20 55	22 29	8 58	69	14	27	
24	183	52.5	-18	24.5	95	15.7 ¹³²	-17	28.8 ⁶⁴	60 S	20 14	21 15	*** **	8 45	71	1 27	25	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 20 ^h 24 ^m 5		Mag: -4.7 PMG: 9 ^h 57 ^m		Mag: -0.3 PMG: 18 ^h 33 ^m		Mag: -1.7 PMG: 12 ^h 23 ^m		Mag: +0.6 PMG: 14 ^h 52 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	o	'	o	'	o	'	o	'	o	'
0	53	02.7	210	15.2	-11	35.8	81	27.4	-13	31.9
1	68	05.2	225	17.6		35.2	96	28.4		31.2
2	83	07.6	240	20.1		34.5	111	29.4		30.6
3	98	10.1	255	22.6		33.9	126	30.5		30.0
4	113	12.6	270	25.0		33.2	141	31.5		29.4
5	128	15.0	285	27.5	-11	32.6	156	32.5	-13	28.7
6	143	17.5	300	30.0	-11	31.9	171	33.6	-13	28.1
7	158	20.0	315	32.4		31.3	186	34.6		27.5
8	173	22.4	330	34.9		30.7	201	35.6		26.9
9	188	24.9	345	37.3		30.0	216	36.7		26.2
10	203	27.4	0	39.7		29.4	231	37.7		25.6
11	218	29.8	15	42.2	-11	28.8	246	38.7	-13	25.0
12	233	32.3	30	44.6	-11	28.2	261	39.8	-13	24.4
13	248	34.8	45	47.0		27.5	276	40.8		23.7
14	263	37.2	60	49.5		26.9	291	41.8		23.1
15	278	39.7	75	51.9		26.3	306	42.9		22.5
16	293	42.1	90	54.3		25.7	321	43.9		21.9
17	308	44.6	105	56.7	-11	25.1	336	44.9	-13	21.2
18	323	47.1	120	59.1	-11	24.4	351	46.0	-13	20.6
19	338	49.5	136	01.5		23.8	6	47.0		20.0
20	353	52.0	151	03.9		23.2	21	48.0		19.4
21	8	54.5	166	06.3		22.6	36	49.0		18.7
22	23	56.9	181	08.7		22.0	51	50.1		18.1
23	38	59.4	196	11.1		21.4	66	51.1		17.5
24	54	01.9	211	13.5	-11	20.8	81	52.1	-13	16.8
Dif	—		+24		+6		+10		+6	
							+19		-1	
									+22	
									0	

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16'2 PMG: 11 ^h 44 ^m 6			Edad: 7 ^d 3 PHE { 4 ^h : 54'3 12 ^h : 54'3 20 ^h : 54'4 SD: 14'8 PMG: 18 ^h 12 ^m R°: 45 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°		
h	o	'	o	'	o	'	o	'	h	m	h	m	h	m	h	m	m
0	183	52.5	-18	24.5	95	15.7	-17	28.8	60 N	6 17	7 09	7 58	14 04	16	22 31	74	
1	198	52.4		25.1	109	47.9 ¹³²		22.3 ⁶⁵	58	12	7 01	46	13 54	19	40	72	
2	213	52.3		25.8	124	20.1 ¹³²		15.8 ⁶⁵	56	08	6 54	36	45	21	48	70	
3	228	52.2		26.4	138	52.4 ¹³³		09.2 ⁶⁶	54	04	48	27	37	23	22 55	68	
4	243	52.1		27.1	153	24.7 ¹³³	-17	02.5 ⁶⁷	52	6 01	42	20	30	25	23 02	66	
5	258	52.0	-18	27.7	167	57.0 ¹³³	-16	55.8 ⁶⁷	50	5 58	6 37	7 13	13 24	26	23 08	64	
6	273	51.9	-18	28.3	182	29.4 ¹³⁴	-16	48.9 ⁶⁹	45	5 50	6 26	6 57	13 10	30	23 20	61	
7	288	51.7		29.0	197	01.8 ¹³⁴		42.0 ⁶⁹	40	43	16	45	12 59	32	31	58	
8	303	51.6		29.6	211	34.2 ¹³⁴		35.0 ⁷⁰	35	37	07	34	49	35	40	55	
9	318	51.5		30.3	226	06.7 ¹³⁵		28.0 ⁷⁰	30	31	6 00	25	41	36	23 47	54	
10	333	51.4		30.9	240	39.2 ¹³⁵		20.9 ⁷¹	20	19	5 46	6 09	26	40	***	***	***
11	348	51.3	-18	31.5	255	11.7 ¹³⁵	-16	13.7 ⁷²	10 N	5 07	5 32	5 54	12 13	43	***	***	***
12	3	51.2	-18	32.2	269	44.3 ¹³⁶	-16	06.4 ⁷³	0	4 54	5 19	5 41	12 01	45	***	***	***
13	18	51.1		32.8	284	16.9 ¹³⁶	-15	59.1 ⁷³	10 S	39	5 05	27	11 49	48	***	***	***
14	33	51.0		33.4	298	49.5 ¹³⁶		51.6 ⁷⁵	20	4 21	4 49	5 13	37	50	0 05	40	
15	48	50.9		34.1	313	22.1 ¹³⁶		44.2 ⁷⁴	30	3 59	30	4 56	22	53	21	37	
16	63	50.8		34.7	327	54.8 ¹³⁷		36.6 ⁷⁶	35	44	18	46	13	55	30	36	
17	78	50.7	-18	35.3	342	27.5 ¹³⁷	-15	29.0 ⁷⁶	40	3 27	4 04	4 35	11 03	58	0 41	33	
18	93	50.6	-18	36.0	357	00.3 ¹³⁸	-15	21.3 ⁷⁷	45	3 04	3 47	4 21	10 52	60	0 53	31	
19	108	50.5		36.6	11	33.0 ¹³⁷		13.6 ⁷⁷	50	2 34	26	4 05	38	63	1 08	28	
20	123	50.4		37.2	26	05.8 ¹³⁸	-15	05.7 ⁷⁹	52	19	15	3 57	31	65	15	27	
21	138	50.3		37.9	40	38.6 ¹³⁸	-14	57.8 ⁷⁹	54	2 00	3 03	48	24	67	23	25	
22	153	50.1		38.5	55	11.5 ¹³⁹		49.9 ⁷⁹	56	1 35	2 50	39	16	68	31	23	
23	168	50.0		39.1	69	44.3 ¹³⁸		41.9 ⁸⁰	58	1 00	33	28	10 07	70	41	21	
24	183	49.9	-18	39.7	84	17.2 ¹³⁹	-14	33.8 ⁸¹	60 S	***	2 13	3 15	9 56	74	1 52	18	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG 20 ^h 20 ^m 5		Mag: -4.7 PMG: 9 ^h 54 ^m			Mag: -0.3 PMG: 18 ^h 31 ^m			Mag: -1.7 PMG: 12 ^h 20 ^m			Mag: +0.6 PMG: 14 ^h 49 ^m							
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec						
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'					
0	54	01.9	211	13.5	-11	20.8	81	52.1	-13	16.8	174	34.6	-19	47.1	137	19.5	-22	44.4	
1	69	04.3	226	15.9		20.2	96	53.2		16.2	189	36.5		47.2	152	21.7		44.4	
2	84	06.8	241	18.2		19.6	111	54.2		15.6	204	38.4		47.3	167	23.9		44.4	
3	99	09.2	256	20.6		19.0	126	55.2		15.0	219	40.3		47.4	182	26.1		44.4	
4	114	11.7	271	23.0		18.4	141	56.3		14.3	234	42.2		47.5	197	28.3		44.3	
5	129	14.2	286	25.4	-11	17.8	156	57.3	-13	13.7	249	44.0	-19	47.6	212	30.5	-22	44.3	
6	144	16.6	301	27.7	-11	17.2	171	58.3	-13	13.1	264	45.9	-19	47.8	227	32.7	-22	44.3	
7	159	19.1	316	30.1		16.6	186	59.4		12.5	279	47.8		47.9	242	34.9		44.3	
8	174	21.6	331	32.4		16.0	202	00.4		11.8	294	49.7		48.0	257	37.1		44.3	
9	189	24.0	346	34.8		15.5	217	01.4		11.2	309	51.6		48.1	272	39.3		44.3	
10	204	26.5	1	37.1		14.9	232	02.4		10.6	324	53.5		48.2	287	41.5		44.3	
11	219	29.0	16	39.5	-11	14.3	247	03.5	-13	09.9	339	55.4	-19	48.3	302	43.7	-22	44.3	
12	234	31.4	31	41.8	-11	13.7	262	04.5	-13	09.3	354	57.3	-19	48.4	317	45.9	-22	44.3	
13	249	33.9	46	44.1		13.1	277	05.5		08.7	9	59.2		48.6	332	48.1		44.3	
14	264	36.4	61	46.5		12.6	292	06.6		08.0	25	01.0		48.7	347	50.3		44.3	
15	279	38.8	76	48.8		12.0	307	07.6		07.4	40	02.9		48.8	2	52.5		44.3	
16	294	41.3	91	51.1		11.4	322	08.6		06.8	55	04.8		48.9	17	54.7		44.3	
17	309	43.7	106	53.4	-11	10.8	337	09.6	-13	06.2	70	06.7	-19	49.0	32	57.0	-22	44.3	
18	324	46.2	121	55.8	-11	10.3	352	10.7	-13	05.5	85	08.6	-19	49.1	47	59.2	-22	44.3	
19	339	48.7	136	58.1		09.7	7	11.7		04.9	100	10.5		49.3	63	01.4		44.2	
20	354	51.1	152	00.4		09.2	22	12.7		04.3	115	12.4		49.4	78	03.6		44.2	
21	9	53.6	167	02.7		08.6	37	13.8		03.6	130	14.3		49.5	93	05.8		44.2	
22	24	56.1	182	05.0		08.0	52	14.8		03.0	145	16.1		49.6	108	08.0		44.2	
23	39	58.5	197	07.3		07.5	67	15.8		02.4	160	18.0		49.7	123	10.2		44.2	
24	55	01.0	212	09.6	-11	06.9	82	16.8	-13	01.7	175	19.9	-19	49.8	138	12.4	-22	44.2	
Dif	—		+23			+6	+10			+6	+19			-1	+22				

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16'2			Edad: 8 ^d 3	PHE { 4 ^h : 54'4 12 ^h : 54'5 20 ^h : 54'6										
	PMG: 11 ^h 44 ^m 8					PMG: 18 ^h 57 ^m			Rº: 44 ^m						
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	Rº	Hora	Rº
h	o	'	o	o	'	o	'	o	h m	h m	h m	h m m		h m m	
0	183	49.9	-18 39.7	84	17.2	-14 33.8	82	60 N	15 29	16 18	17 10	14 20	13	23 45	77
1	198	49.8		98	50.2 ¹⁴⁰		25.6 ⁸²	58	40		26		15	13 15	52 73
2	213	49.7		113	23.1 ¹³⁹		17.4 ⁸²	56	15 51	33	19		06 18	23 58	71
3	228	49.6		127	56.1 ¹⁴⁰		09.1 ⁸³	54	16 00	39	23		14 00	*** **	*** **
4	243	49.5		142	29.1 ¹⁴⁰	-14 00.8	83	52	08	45	26		13 55	*** **	*** **
5	258	49.4	-18 42.9	157	02.1 ¹⁴⁰	-13 52.4	84	50	16 15	16 50	17 30		13 50	*** **	*** **
6	273	49.3	-18 43.5	171	35.1 ¹⁴⁰	-13 43.9	85	45	16 30	17 02	17 38		13 40	*** **	*** **
7	288	49.1		186	08.2 ¹⁴¹		35.4 ⁸⁶	40	43	12	45		31 30	*** **	*** **
8	303	49.0		200	41.3 ¹⁴¹		26.8 ⁸⁶	35	16 54	21	51		24 32	*** **	*** **
9	318	48.9		215	14.4 ¹⁴¹		18.1 ⁸⁷	30	17 04	29	17 58		17 34	*** **	*** **
10	333	48.8		229	47.5 ¹⁴¹		09.4 ⁸⁷	20	20	43	18 10		13 06	37	0 01 50
11	348	48.7	-18 46.6	244	20.6 ¹⁴¹	-13 00.7	87	10 N	17 35	17 57	18 22		12 56	41	0 12 47
12	3	48.6	-18 47.2	258	53.8 ¹⁴²	-12 51.8	89	0	17 48	18 10	18 36		12 46	44	0 23 44
13	18	48.5		273	27.0 ¹⁴²		42.9 ⁸⁹	10 S	18 02	25	18 51		37 47		34 41
14	33	48.3		288	00.2 ¹⁴²		34.0 ⁸⁹	20	17	18 41	19 09		27 50		45 39
15	48	48.2		302	33.4 ¹⁴²		25.0 ⁹⁰	30	34	19 01	32		15 54		0 58 35
16	63	48.1		317	06.7 ¹⁴³		15.9 ⁹¹	35	45	13	19 47		08 56		1 06 33
17	78	48.0	-18 50.3	331	39.9 ¹⁴²	-12 06.8	91	40	18 56	19 27	20 05		12 01	58	1 14 31
18	93	47.9	-18 51.0	346	13.2 ¹⁴³	-11 57.6	92	45	19 10	19 44	20 28		11 52	61	1 24 28
19	108	47.8		0	46.5 ¹⁴³		48.4 ⁹²	50	27	20 06	20 59		41 65		36 25
20	123	47.6		15	19.8 ¹⁴³		39.1 ⁹³	52	35	17	21 15		36 67		42 23
21	138	47.5		29	53.1 ¹⁴³		29.7 ⁹⁴	54	44	30	21 35		31 68		48 21
22	153	47.4		44	26.4 ¹⁴³		20.4 ⁹³	56	19 54	20 44	22 02		24 71		1 54 20
23	168	47.3		58	59.8 ¹⁴⁴		10.9 ⁹⁵	58	20 06	21 01	22 42		17 73		2 02 17
24	183	47.2	-18 54.6	73	33.1 ¹⁴³	-11 01.4	95	60 S	20 19	21 23	*** **		11 10	75	2 10 15

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 20 ^h 16 ^m 6		Mag: -4.8 PMG: 9 ^h 50 ^m		Mag: -0.3 PMG: 18 ^h 30 ^m		Mag: -1.7 PMG: 12 ^h 17 ^m		Mag: +0.6 PMG: 14 ^h 45 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	o	'	o	'	o	'	o	'	o	'
0	55	01.0	212	09.6	-11	06.9	82	16.8	-13	01.7
1	70	03.5	227	11.9		06.4	97	17.9		01.1
2	85	05.9	242	14.2		05.8	112	18.9	-13	00.5
3	100	08.4	257	16.4		05.3	127	19.9	-12	59.8
4	115	10.9	272	18.7		04.7	142	20.9		59.2
5	130	13.3	287	21.0	-11	04.2	157	22.0	-12	58.6
6	145	15.8	302	23.3	-11	03.6	172	23.0	-12	58.0
7	160	18.2	317	25.5		03.1	187	24.0		57.3
8	175	20.7	332	27.8		02.6	202	25.1		56.7
9	190	23.2	347	30.1		02.0	217	26.1		56.1
10	205	25.6	2	32.3		01.5	232	27.1		55.4
11	220	28.1	17	34.6	-11	01.0	247	28.1	-12	54.8
12	235	30.6	32	36.8	-11	00.4	262	29.2	-12	54.2
13	250	33.0	47	39.1	-10	59.9	277	30.2		53.5
14	265	35.5	62	41.3		59.4	292	31.2		52.9
15	280	38.0	77	43.5		58.8	307	32.2		52.3
16	295	40.4	92	45.8		58.3	322	33.3		51.6
17	310	42.9	107	48.0	-10	57.8	337	34.3	-12	51.0
18	325	45.3	122	50.2	-10	57.3	352	35.3	-12	50.4
19	340	47.8	137	52.4		56.8	7	36.3		49.7
20	355	50.3	152	54.7		56.3	22	37.4		49.1
21	10	52.7	167	56.9		55.7	37	38.4		48.4
22	25	55.2	182	59.1		55.2	52	39.4		47.8
23	40	57.7	198	01.3		54.7	67	40.4		47.2
24	56	00.1	213	03.5	-10	54.2	82	41.5	-12	46.5
Dif	—		+22		+5		+10		+6	
							+19		-1	
									+22	

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16:2 PMG: 11 ^h 45 ^m 0				Edad: 9 ^d 3 PHE { 4 ^h : 54 ^m 8 12 ^h : 54 ^m 9 20 ^h : 55 ^m 1 R°: 43 ^m												
	hG ☉		Dec		hG ☾ Dif		Dec Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	o	'	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m
0	183	47.2	-18	54.6	73	33.1	-11	01.4	60 N	6 21	7 13	8 03	14 33	12	***	***	***
1	198	47.0		55.3	88	06.5 ¹⁴⁴	-10	51.8 ⁹⁶	58	16	7 05	7 51	28	15	***	***	***
2	213	46.9		55.9	102	39.9 ¹⁴⁴		42.2 ⁹⁶	56	12	6 58	40	24	17	***	***	***
3	228	46.8		56.5	117	13.3 ¹⁴⁴		32.6 ⁹⁶	54	08	51	31	20	19	0 03	69	
4	243	46.7		57.1	131	46.7 ¹⁴⁴		22.9 ⁹⁷	52	04	45	23	17	20	08	67	
5	258	46.6	-18	57.7	146	20.1 ¹⁴⁴	-10	13.1 ⁹⁸	50	6 00	6 40	7 16	14 14	22	0 12	65	
6	273	46.4	-18	58.3	160	53.5 ¹⁴⁴	-10	03.3 ⁹⁸	45	5 52	6 28	7 00	14 07	25	0 21	62	
7	288	46.3		58.9	175	27.0 ¹⁴⁵	-9	53.4 ⁹⁹	40	45	18	6 47	14 01	28	29	59	
8	303	46.2	-18	59.5	190	00.4 ¹⁴⁴		43.5 ⁹⁹	35	39	09	36	13 56	31	35	57	
9	318	46.1	-19	00.2	204	33.8 ¹⁴⁴		33.6 ⁹⁹	30	32	6 01	27	51	33	41	54	
10	333	46.0		00.8	219	07.3 ¹⁴⁵		23.5 ¹⁰¹	20	20	5 47	6 10	43	38	51	50	
11	348	45.8	-19	01.4	233	40.8 ¹⁴⁵	-9	13.5 ¹⁰⁰	10 N	5 07	5 33	5 55	13 37	40	0 59	47	
12	3	45.7	-19	02.0	248	14.2 ¹⁴⁴	-9	03.4 ¹⁰¹	0	4 54	5 20	5 41	13 30	44	1 07	44	
13	18	45.6		02.6	262	47.7 ¹⁴⁵	-8	53.2 ¹⁰²	10 S	39	5 05	27	24	47	15	41	
14	33	45.5		03.2	277	21.2 ¹⁴⁵		43.1 ¹⁰¹	20	4 21	4 49	5 12	17	50	24	37	
15	48	45.3		03.8	291	54.6 ¹⁴⁴		32.8 ¹⁰³	30	3 57	29	4 55	09	54	33	34	
16	63	45.2		04.4	306	28.1 ¹⁴⁵		22.5 ¹⁰³	35	43	17	45	13 04	57	39	31	
17	78	45.1	-19	05.0	321	01.6 ¹⁴⁵	-8	12.2 ¹⁰³	40	3 24	4 02	4 33	12 59	60	1 45	29	
18	93	45.0	-19	05.6	335	35.1 ¹⁴⁵	-8	01.8 ¹⁰⁴	45	3 01	3 45	4 19	12 53	63	1 52	26	
19	108	44.8		06.2	350	08.6 ¹⁴⁵	-7	51.4 ¹⁰⁴	50	2 30	23	4 02	46	66	2 01	22	
20	123	44.7		06.8	4	42.0 ¹⁴⁴		41.0 ¹⁰⁴	52	2 14	12	3 54	43	68	05	21	
21	138	44.6		07.4	19	15.5 ¹⁴⁵		30.5 ¹⁰⁵	54	1 54	3 00	45	39	70	09	19	
22	153	44.5		08.0	33	49.0 ¹⁴⁵		19.9 ¹⁰⁶	56	1 27	2 45	35	35	72	14	17	
23	168	44.3		08.6	48	22.5 ¹⁴⁵	-7	09.4 ¹⁰⁵	58	0 47	28	24	30	75	19	15	
24	183	44.2	-19	09.2	62	55.9 ¹⁴⁴	-6	58.8 ¹⁰⁶	60 S	** **	2 06	3 10	12 25	77	2 25	13	

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 20 ^h 12 ^m 7		Mag: -4.8 PMG: 9 ^h 46 ^m				Mag: -0.3 PMG: 18 ^h 28 ^m				Mag: -1.7 PMG: 12 ^h 14 ^m				Mag: +0.6 PMG: 14 ^h 42 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'
0	56	00.1	213	03.5	-10	54.2	82	41.5	-12	46.5	176	05.2	-19	52.6	139	05.2	-22	44.0
1	71	02.6	228	05.7		53.7	97	42.5		45.9	191	07.1		52.7	154	07.4		44.0
2	86	05.1	243	07.9		53.2	112	43.5		45.3	206	09.0		52.8	169	09.6		44.0
3	101	07.5	258	10.1		52.7	127	44.5		44.6	221	10.9		52.9	184	11.8		44.0
4	116	10.0	273	12.3		52.2	142	45.6		44.0	236	12.7		53.0	199	14.0		44.0
5	131	12.5	288	14.5	-10	51.7	157	46.6	-12	43.4	251	14.6	-19	53.1	214	16.2	-22	44.0
6	146	14.9	303	16.6	-10	51.2	172	47.6	-12	42.7	266	16.5	-19	53.3	229	18.4	-22	44.0
7	161	17.4	318	18.8		50.7	187	48.6		42.1	281	18.4		53.4	244	20.6		44.0
8	176	19.8	333	21.0		50.2	202	49.6		41.5	296	20.3		53.5	259	22.8		44.0
9	191	22.3	348	23.2		49.8	217	50.7		40.8	311	22.2		53.6	274	25.0		44.0
10	206	24.8	3	25.3		49.3	232	51.7		40.2	326	24.1		53.7	289	27.2		44.0
11	221	27.2	18	27.5	-10	48.8	247	52.7	-12	39.5	341	25.9	-19	53.8	304	29.4	-22	44.0
12	236	29.7	33	29.6	-10	48.3	262	53.7	-12	38.9	356	27.8	-19	53.9	319	31.6	-22	44.0
13	251	32.2	48	31.8		47.8	277	54.8		38.3	11	29.7		54.1	334	33.8		43.9
14	266	34.6	63	34.0		47.4	292	55.8		37.6	26	31.6		54.2	349	36.0		43.9
15	281	37.1	78	36.1		46.9	307	56.8		37.0	41	33.5		54.3	4	38.2		43.9
16	296	39.6	93	38.2		46.4	322	57.8		36.4	56	35.4		54.4	19	40.4		43.9
17	311	42.0	108	40.4	-10	45.9	337	58.8	-12	35.7	71	37.3	-19	54.5	34	42.6	-22	43.9
18	326	44.5	123	42.5	-10	45.5	352	59.9	-12	35.1	86	39.1	-19	54.6	49	44.8	-22	43.9
19	341	47.0	138	44.7		45.0	8	00.9		34.4	101	41.0		54.7	64	47.0		43.9
20	356	49.4	153	46.8		44.5	23	01.9		33.8	116	42.9		54.9	79	49.1		43.9
21	11	51.9	168	48.9		44.1	38	02.9		33.2	131	44.8		55.0	94	51.3		43.9
22	26	54.3	183	51.0		43.6	53	04.0		32.5	146	46.7		55.1	109	53.5		43.9
23	41	56.8	198	53.2		43.1	68	05.0		31.9	161	48.6		55.2	124	55.7		43.9
24	56	59.3	213	55.3	-10	42.7	83	06.0	-12	31.3	176	50.5	-19	55.3	139	57.9	-22	43.9
Dif	—		+22		+5		+10		+6		+19		-1		+22			

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: 10 ^d 3 PHE { SD: 15:1 PMG: 20 ^h 24 ^m					Civil			R°		R°	
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	h m	h m	h m	h m	m	h m
h	o	'	o	o	'	o	'	o	h m	h m	h m	h m	m	h m	m
0	183	44.2	-19 09.2	62	55.9	-6 58.8		60 N	15 25	16 14	17 07	14 45	12	1 02	78
1	198	44.1	09.8	77	29.4 ¹⁴⁵	48.1 ¹⁰⁷		58	37	23	12	43	14	05	76
2	213	44.0	10.4	92	02.9 ¹⁴⁵	37.4 ¹⁰⁷		56	47	30	16	41	16	09	73
3	228	43.8	11.0	106	36.3 ¹⁴⁴	26.7 ¹⁰⁷		54	15 57	37	20	39	18	12	71
4	243	43.7	11.6	121	09.8 ¹⁴⁵	15.9 ¹⁰⁸		52	16 05	43	24	37	20	15	69
5	258	43.6	-19 12.2	135	43.2 ¹⁴⁴	-6 05.1 ¹⁰⁸		50	16 12	16 48	17 28	14 36	21	1 17	68
6	273	43.4	-19 12.8	150	16.6 ¹⁴⁴	-5 54.2 ¹⁰⁹		45	16 28	17 00	17 36	14 32	25	1 23	63
7	288	43.3	13.4	164	50.1 ¹⁴⁵	43.4 ¹⁰⁸		40	42	11	44	29	28	28	60
8	303	43.2	14.0	179	23.5 ¹⁴⁴	32.5 ¹⁰⁹		35	16 53	20	51	27	31	32	57
9	318	43.0	14.6	193	56.9 ¹⁴⁴	21.5 ¹¹⁰		30	17 03	28	17 57	24	34	35	55
10	333	42.9	15.2	208	30.3 ¹⁴⁴	-5 10.5 ¹¹⁰		20	20	43	18 10	21	37	41	51
11	348	42.8	-19 15.8	223	03.7 ¹⁴⁴	-4 59.5 ¹¹⁰		10 N	17 35	17 57	18 22	14 17	41	1 46	48
12	3	42.7	-19 16.4	237	37.0 ¹⁴³	-4 48.5 ¹¹⁰		0	17 49	18 11	18 36	14 14	44	1 51	44
13	18	42.5	17.0	252	10.4 ¹⁴⁴	37.4 ¹¹¹		10 S	18 03	25	18 52	11	48	1 56	41
14	33	42.4	17.6	266	43.7 ¹⁴³	26.3 ¹¹¹		20	18	18 42	19 10	07	52	2 01	37
15	48	42.3	18.1	281	17.1 ¹⁴⁴	15.1 ¹¹²		30	36	19 02	34	03	56	07	33
16	63	42.1	18.7	295	50.4 ¹⁴³	-4 03.9 ¹¹²		35	47	15	19 49	14 01	58	10	31
17	78	42.0	-19 19.3	310	23.7 ¹⁴³	-3 52.7 ¹¹²		40	18 59	19 29	20 08	13 59	61	2 14	28
18	93	41.9	-19 19.9	324	56.9 ¹⁴²	-3 41.5 ¹¹²		45	19 13	19 47	20 31	13 56	64	2 18	25
19	108	41.7	20.5	339	30.2 ¹⁴³	30.3 ¹¹²		50	30	20 10	21 04	52	68	23	22
20	123	41.6	21.1	354	03.4 ¹⁴²	19.0 ¹¹³		52	39	21	21	51	69	26	20
21	138	41.5	21.7	8	36.7 ¹⁴³	-3 07.7 ¹¹³		54	48	34	21 42	49	72	28	18
22	153	41.3	22.3	23	09.9 ¹⁴²	-2 56.3 ¹¹⁴		56	19 58	20 49	22 10	47	74	31	16
23	168	41.2	22.9	37	43.0 ¹⁴¹	45.0 ¹¹³		58	20 10	21 07	22 58	45	76	34	14
24	183	41.1	-19 23.4	52	16.2 ¹⁴²	-2 33.6 ¹¹⁴		60 S	20 24	21 30	** ** *	13 42	79	2 38	11

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 20 ^h 08 ^m 7		Mag: -4.8 PMG: 9 ^h 43 ^m		Mag: -0.3 PMG: 18 ^h 26 ^m		Mag: -1.7 PMG: 12 ^h 11 ^m		Mag: +0.6 PMG: 14 ^h 38 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	o	'	o	'	o	'	o	'	o	'
0	56	59.3	213	55.3	-10	42.7	83	06.0	-12	31.3
1	72	01.7	228	57.4	42.2		98	07.0		30.6
2	87	04.2	243	59.5	41.8		113	08.0		30.0
3	102	06.7	259	01.6	41.3		128	09.1		29.3
4	117	09.1	274	03.7	40.9		143	10.1		28.7
5	132	11.6	289	05.8	-10	40.4	158	11.1	-12	28.1
6	147	14.1	304	07.9	-10	40.0	173	12.1	-12	27.4
7	162	16.5	319	10.0	39.5		188	13.1		26.8
8	177	19.0	334	12.1	39.1		203	14.2		26.1
9	192	21.4	349	14.1	38.7		218	15.2		25.5
10	207	23.9	4	16.2	38.2		233	16.2		24.9
11	222	26.4	19	18.3	-10	37.8	248	17.2	-12	24.2
12	237	28.8	34	20.4	-10	37.4	263	18.2	-12	23.6
13	252	31.3	49	22.4	36.9		278	19.3		22.9
14	267	33.8	64	24.5	36.5		293	20.3		22.3
15	282	36.2	79	26.5	36.1		308	21.3		21.6
16	297	38.7	94	28.6	35.6		323	22.3		21.0
17	312	41.2	109	30.7	-10	35.2	338	23.3	-12	20.4
18	327	43.6	124	32.7	-10	34.8	353	24.3	-12	19.7
19	342	46.1	139	34.8	34.4		8	25.4		19.1
20	357	48.6	154	36.8	34.0		23	26.4		18.4
21	12	51.0	169	38.8	33.6		38	27.4		17.8
22	27	53.5	184	40.9	33.1		53	28.4		17.2
23	42	55.9	199	42.9	32.7		68	29.4		16.5
24	57	58.4	214	44.9	-10	32.3	83	30.5	-12	15.9
Dif	—		+21		+4		+10		+6	
							+19		-1	
									+22	

UT	SOL			O LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'2 PMG: 11 ^h 45 ^m 4			Edad: 11 ^d 3 PHE { 4 ^h : 55'9 12 ^h : 56'1 20 ^h : 56'4 SD: 15'3 PMG: 21 ^h 09 ^m R°: 47 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°			
h	o	'	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m	
0	183	41.1	-19	23.4	52	16.2	-2	33.6	60 N	6 25	7 17	8 08	14 57	12	2 20	80		
1	198	40.9		24.0	66	49.3 ¹⁴¹		22.2 ¹¹⁴	58	20	09	7 55	57	14	21	77		
2	213	40.8		24.6	81	22.4 ¹⁴¹	-2	10.7 ¹¹⁵	56	15	7 01	44	57	17	22	75		
3	228	40.6		25.2	95	55.5 ¹⁴¹	-1	59.3 ¹¹⁴	54	11	6 55	35	57	19	23	73		
4	243	40.5		25.8	110	28.6 ¹⁴¹		47.8 ¹¹⁵	52	07	48	27	57	21	24	71		
5	258	40.4	-19	26.4	125	01.6 ¹⁴⁰	-1	36.3 ¹¹⁵	50	6 03	6 43	7 19	14 57	22	2 25	69		
6	273	40.2	-19	26.9	139	34.6 ¹⁴⁰	-1	24.8 ¹¹⁵	45	5 55	6 31	7 03	14 57	26	2 26	65		
7	288	40.1		27.5	154	07.6 ¹⁴⁰		13.2 ¹¹⁶	40	47	20	6 49	57	30	28	62		
8	303	40.0		28.1	168	40.5 ¹³⁹	-1	01.7 ¹¹⁵	35	40	11	38	58	32	29	59		
9	318	39.8		28.7	183	13.5 ¹⁴⁰	-0	50.1 ¹¹⁶	30	34	6 03	28	58	34	30	57		
10	333	39.7		29.3	197	46.3 ¹³⁸		38.5 ¹¹⁶	20	21	5 48	6 11	58	39	32	52		
11	348	39.5	-19	29.8	212	19.2 ¹³⁹	-0	26.9 ¹¹⁶	10 N	5 08	5 34	5 56	14 58	43	2 34	48		
12	3	39.4	-19	30.4	226	52.0 ¹³⁸	-0	15.3 ¹¹⁶	0	4 54	5 20	5 42	14 58	46	2 35	45		
13	18	39.3		31.0	241	24.8 ¹³⁸	-0	03.6 ¹¹⁷	10 S	39	5 05	27	59	49	37	41		
14	33	39.1		31.6	255	57.6 ¹³⁸	+0	08.0 ¹¹⁶	20	4 20	4 48	5 12	59	53	38	38		
15	48	39.0		32.1	270	30.3 ¹³⁷		19.7 ¹¹⁷	30	3 56	28	4 54	59	58	40	34		
16	63	38.8		32.7	285	03.0 ¹³⁷		31.4 ¹¹⁷	35	41	15	44	14 59	61	41	31		
17	78	38.7	-19	33.3	299	35.6 ¹³⁶	+0	43.0 ¹¹⁶	40	3 22	4 01	4 32	15 00	63	2 42	29		
18	93	38.5	-19	33.9	314	08.3 ¹³⁷	+0	54.7 ¹¹⁷	45	2 59	3 43	4 17	15 00	66	2 43	26		
19	108	38.4		34.4	328	40.8 ¹³⁵	+1	06.5 ¹¹⁸	50	26	20	4 00	00	71	45	22		
20	123	38.3		35.0	343	13.4 ¹³⁶		18.2 ¹¹⁷	52	2 09	3 09	3 51	00	73	46	20		
21	138	38.1		35.6	357	45.9 ¹³⁵		29.9 ¹¹⁷	54	1 48	2 56	42	01	74	46	19		
22	153	38.0		36.2	12	18.3 ¹³⁴		41.6 ¹¹⁷	56	1 20	41	32	01	76	47	16		
23	168	37.8		36.7	26	50.8 ¹³⁵	+1	53.4 ¹¹⁸	58	0 32	23	20	01	79	48	14		
24	183	37.7	-19	37.3	41	23.1 ¹³³	+2	05.1 ¹¹⁷	60 S	** **	2 00	3 06	15 01	82	2 49	11		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 20 ^h 04 ^m 8			Mag: -4.8 PMG: 9 ^h 40 ^m			Mag: -0.2 PMG: 18 ^h 25 ^m			Mag: -1.7 PMG: 12 ^h 08 ^m			Mag: +0.6 PMG: 14 ^h 34 ^m					
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec			
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'		
0	57	58.4	214	44.9	-10	32.3	83	30.5	-12	15.9	177	35.7	-19	58.0	140	50.6	-22	43.7
1	73	00.9	229	47.0		31.9	98	31.5		15.2	192	37.6		58.1	155	52.8		43.7
2	88	03.3	244	49.0		31.5	113	32.5		14.6	207	39.5		58.2	170	55.0		43.7
3	103	05.8	259	51.0		31.1	128	33.5		13.9	222	41.3		58.4	185	57.2		43.6
4	118	08.3	274	53.0		30.7	143	34.5		13.3	237	43.2		58.5	200	59.4		43.6
5	133	10.7	289	55.0	-10	30.3	158	35.5	-12	12.7	252	45.1	-19	58.6	216	01.6	-22	43.6
6	148	13.2	304	57.0	-10	29.9	173	36.6	-12	12.0	267	47.0	-19	58.7	231	03.8	-22	43.6
7	163	15.7	319	59.0		29.5	188	37.6		11.4	282	48.9		58.8	246	06.0		43.6
8	178	18.1	335	01.0		29.1	203	38.6		10.7	297	50.8		58.9	261	08.2		43.6
9	193	20.6	350	03.0		28.7	218	39.6		10.1	312	52.7		59.0	276	10.4		43.6
10	208	23.0	5	05.0		28.3	233	40.6		09.4	327	54.5		59.1	291	12.6		43.6
11	223	25.5	20	07.0	-10	28.0	248	41.6	-12	08.8	342	56.4	-19	59.3	306	14.8	-22	43.6
12	238	28.0	35	09.0	-10	27.6	263	42.7	-12	08.1	357	58.3	-19	59.4	321	17.0	-22	43.6
13	253	30.4	50	11.0		27.2	278	43.7		07.5	13	00.2		59.5	336	19.2		43.6
14	268	32.9	65	12.9		26.8	293	44.7		06.9	28	02.1		59.6	351	21.4		43.6
15	283	35.4	80	14.9		26.4	308	45.7		06.2	43	04.0		59.7	6	23.6		43.6
16	298	37.8	95	16.9		26.1	323	46.7		05.6	58	05.8		59.8	21	25.7		43.5
17	313	40.3	110	18.9	-10	25.7	338	47.7	-12	04.9	73	07.7	-19	59.9	36	27.9	-22	43.5
18	328	42.8	125	20.8	-10	25.3	353	48.8	-12	04.3	88	09.6	-20	00.0	51	30.1	-22	43.5
19	343	45.2	140	22.8		24.9	8	49.8		03.6	103	11.5	-20	00.2	66	32.3		43.5
20	358	47.7	155	24.7		24.6	23	50.8		03.0	118	13.4		00.3	81	34.5		43.5
21	13	50.2	170	26.7		24.2	38	51.8		02.3	133	15.3		00.4	96	36.7		43.5
22	28	52.6	185	28.6		23.8	53	52.8		01.7	148	17.1		00.5	111	38.9		43.5
23	43	55.1	200	30.6		23.5	68	53.8		01.0	163	19.0		00.6	126	41.1		43.5
24	58	57.5	215	32.5	-10	23.1	83	54.8	-12	00.4	178	20.9	-20	00.7	141	43.3	-22	43.5
Dif	—		+20		+4		+10		+6		+19		-1		+22			

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 11 ^h 45 ^m 6			Edad: 12 ^d 3 PHE { SD: 15:5 PMG: 21 ^h 56 ^m										
				R°: 49 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	o	'	o	o	'	o	'	o	h	m	h	m	h	m
0	183	37.7	-19 37.3	41	23.1	+2 05.1		60 N	15 21	16 11	17 04	15 09	13	3 40 83
1	198	37.5		55	55.5 ¹³⁴	16.9 ¹¹⁸		58	33	20	09	11 16		38 80
2	213	37.4	38.5	70	27.7 ¹³²	28.6 ¹¹⁷		56	44	27	14	14 18		37 78
3	228	37.3	39.0	85	00.0 ¹³³	40.4 ¹¹⁸		54	15 54	34	18	16 21		36 75
4	243	37.1	39.6	99	32.2 ¹³²	+2 52.1 ¹¹⁷		52	16 03	41	22	18 23		35 73
5	258	37.0	-19 40.2	114	04.3 ¹³¹	+3 03.9 ¹¹⁸		50	16 10	16 46	17 26	15 19 25		3 34 71
6	273	36.8	-19 40.7	128	36.4 ¹³¹	+3 15.7 ¹¹⁸		45	16 27	16 59	17 35	15 23 29		3 31 68
7	288	36.7	41.3	143	08.5 ¹³¹	27.4 ¹¹⁷		40	40	17 10	43	27 31		30 64
8	303	36.5	41.9	157	40.5 ¹³⁰	39.2 ¹¹⁸		35	16 52	19	50	30 34		28 61
9	318	36.4	42.4	172	12.5 ¹³⁰	+3 50.9 ¹¹⁷		30	17 02	27	17 57	32 37		27 58
10	333	36.2	43.0	186	44.4 ¹²⁹	+4 02.7 ¹¹⁸		20	19	43	18 10	37 41		24 55
11	348	36.1	-19 43.5	201	16.2 ¹²⁸	+4 14.4 ¹¹⁷		10 N	17 35	17 57	18 23	15 41 44		3 22 51
12	3	35.9	-19 44.1	215	48.0 ¹²⁸	+4 26.2 ¹¹⁸		0	17 49	18 11	18 37	15 44 49		3 20 47
13	18	35.8	44.7	230	19.8 ¹²⁸	37.9 ¹¹⁷		10 S	18 04	26	18 53	48 52		18 44
14	33	35.6	45.2	244	51.5 ¹²⁷	+4 49.6 ¹¹⁷		20	20	18 43	19 12	52 56		16 40
15	48	35.5	45.8	259	23.1 ¹²⁶	+5 01.3 ¹¹⁷		30	38	19 04	36	15 57 60		14 35
16	63	35.3	46.4	273	54.7 ¹²⁶	13.0 ¹¹⁷		35	18 49	17	19 52	16 00 62		12 33
17	78	35.2	-19 46.9	288	26.3 ¹²⁶	+5 24.7 ¹¹⁷		40	19 01	19 32	20 11	16 03 65		3 11 30
18	93	35.0	-19 47.5	302	57.7 ¹²⁴	+5 36.4 ¹¹⁷		45	19 15	19 50	20 35	16 06 69		3 09 27
19	108	34.9	48.0	317	29.2 ¹²⁵	48.1 ¹¹⁷		50	33	20 14	21 08	11 73		07 23
20	123	34.7	48.6	332	00.5 ¹²³	+5 59.8 ¹¹⁷		52	42	25	26	13 74		06 21
21	138	34.6	49.2	346	31.8 ¹²³	+6 11.4 ¹¹⁶		54	19 52	39	21 49	15 77		05 19
22	153	34.4	49.7	1	03.1 ¹²³	23.0 ¹¹⁶		56	20 02	20 54	22 19	17 80		03 18
23	168	34.3	50.3	15	34.3 ¹²²	34.6 ¹¹⁶		58	15	21 13	23 22	20 82		02 15
24	183	34.1	-19 50.8	30	05.4 ¹²¹	+6 46.2 ¹¹⁶		60 S	20 29	21 37	** **	16 23 85		3 00 13

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 20 ^h 00 ^m 9		Mag: -4.8 PMG: 9 ^h 37 ^m		Mag: -0.2 PMG: 18 ^h 23 ^m		Mag: -1.7 PMG: 12 ^h 05 ^m		Mag: +0.6 PMG: 14 ^h 31 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	o	'	o	'	o	'	o	'	o	'
0	58	57.5	215	32.5	-10	23.1	83	54.8	-12	00.4
1	74	00.0	230	34.5		22.8	98	55.9	-11	59.7
2	89	02.5	245	36.4		22.4	113	56.9		59.1
3	104	04.9	260	38.3		22.1	128	57.9		58.5
4	119	07.4	275	40.3		21.7	143	58.9		57.8
5	134	09.9	290	42.2	-10	21.3	158	59.9	-11	57.2
6	149	12.3	305	44.1	-10	21.0	174	00.9	-11	56.5
7	164	14.8	320	46.0		20.7	189	01.9		55.9
8	179	17.3	335	47.9		20.3	204	03.0		55.2
9	194	19.7	350	49.9		20.0	219	04.0		54.6
10	209	22.2	5	51.8		19.6	234	05.0		53.9
11	224	24.7	20	53.7	-10	19.3	249	06.0	-11	53.3
12	239	27.1	35	55.6	-10	19.0	264	07.0	-11	52.6
13	254	29.6	50	57.5		18.6	279	08.0		52.0
14	269	32.0	65	59.4		18.3	294	09.0		51.3
15	284	34.5	81	01.2		18.0	309	10.1		50.7
16	299	37.0	96	03.1		17.6	324	11.1		50.0
17	314	39.4	111	05.0	-10	17.3	339	12.1	-11	49.4
18	329	41.9	126	06.9	-10	17.0	354	13.1	-11	48.7
19	344	44.4	141	08.8		16.7	9	14.1		48.1
20	359	46.8	156	10.7		16.3	24	15.1		47.4
21	14	49.3	171	12.5		16.0	39	16.1		46.8
22	29	51.8	186	14.4		15.7	54	17.1		46.1
23	44	54.2	201	16.3		15.4	69	18.2		45.5
24	59	56.7	216	18.1	-10	15.1	84	19.2	-11	44.8
Dif	—		+19		+3		+10		+6	
							+19		-1	
									+22	
									0	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16:2 PMG: 11 ^h 45 ^m 8			Edad: 13 ^d 3 PHE { 4 ^h : 57/4 12 ^h : 57/7 20 ^h : 57/9 SD: 15:7 PMG: 22 ^h 45 ^m R°: 52 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	o	'	o	'	o	'	o	'	h	m	h	m	h	m	h	m		
0	183	34.1	-19	50.8	30	05.4	+6	46.2	60 N	6 28	7 21	8 12	15 22	17	5 03	86		
1	198	34.0		51.4	44	36.4 ¹²⁰	+6	57.8 ¹¹⁶	58	23	13	7 59	27	20	4 58	83		
2	213	33.8		51.9	59	07.4 ¹²⁰	+7	09.3 ¹¹⁵	56	18	7 05	48	32	23	55	80		
3	228	33.7		52.5	73	38.4 ¹²⁰		20.9 ¹¹⁶	54	14	6 58	39	37	24	51	78		
4	243	33.5		53.0	88	09.2 ¹¹⁸		32.4 ¹¹⁵	52	10	52	30	41	26	48	76		
5	258	33.4	-19	53.6	102	40.0 ¹¹⁸	+7	43.8 ¹¹⁴	50	6 06	6 46	7 22	15 44	28	4 45	74		
6	273	33.2	-19	54.1	117	10.8 ¹¹⁸	+7	55.3 ¹¹⁵	45	5 57	6 33	7 05	15 52	32	4 39	70		
7	288	33.0		54.7	131	41.5 ¹¹⁷	+8	06.7 ¹¹⁴	40	49	22	6 52	15 58	36	34	66		
8	303	32.9		55.3	146	12.1 ¹¹⁶		18.1 ¹¹⁴	35	42	13	40	16 04	38	29	64		
9	318	32.7		55.8	160	42.6 ¹¹⁵		29.5 ¹¹⁴	30	35	6 04	30	09	40	25	61		
10	333	32.6		56.4	175	13.1 ¹¹⁵		40.8 ¹¹³	20	22	5 49	6 12	18	44	19	56		
11	348	32.4	-19	56.9	189	43.5 ¹¹⁴	+8	52.2 ¹¹⁴	10 N	5 09	5 35	5 57	16 25	48	4 13	53		
12	3	32.3	-19	57.4	204	13.8 ¹¹³	+9	03.4 ¹¹²	0	4 55	5 20	5 42	16 33	51	4 07	50		
13	18	32.1		58.0	218	44.1 ¹¹³		14.7 ¹¹³	10 S	39	5 05	28	40	55	4 02	46		
14	33	32.0		58.5	233	14.3 ¹¹²		25.9 ¹¹²	20	4 20	4 48	5 12	48	58	3 56	42		
15	48	31.8		59.1	247	44.4 ¹¹¹		37.1 ¹¹²	30	3 55	27	4 53	16 57	62	49	38		
16	63	31.6	-19	59.6	262	14.4 ¹¹⁰		48.2 ¹¹¹	35	40	4 14	43	17 02	65	45	36		
17	78	31.5	-20	00.2	276	44.4 ¹¹⁰	+9	59.3 ¹¹¹	40	3 21	3 59	4 30	17 08	68	3 41	33		
18	93	31.3	-20	00.7	291	14.3 ¹⁰⁹	+10	10.4 ¹¹¹	45	2 56	3 41	4 16	17 15	71	3 36	30		
19	108	31.2		01.3	305	44.1 ¹⁰⁸		21.4 ¹¹⁰	50	23	17	3 57	24	75	30	26		
20	123	31.0		01.8	320	13.9 ¹⁰⁸		32.4 ¹¹⁰	52	2 05	3 06	49	27	77	27	24		
21	138	30.8		02.4	334	43.6 ¹⁰⁷		43.3 ¹⁰⁹	54	1 42	2 52	39	32	79	24	22		
22	153	30.7		02.9	349	13.2 ¹⁰⁶	+10	54.2 ¹⁰⁹	56	1 12	37	29	37	81	21	20		
23	168	30.5		03.4	3	42.7 ¹⁰⁵	+11	05.0 ¹⁰⁸	58	0 09	2 18	16	42	84	17	18		
24	183	30.4	-20	04.0	18	12.2 ¹⁰⁵	+11	15.8 ¹⁰⁸	60 S	** ** *	1 54	3 01	17 48	88	3 13	15		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 19 ^h 56 ^m 9		Mag: -4.8 PMG: 9 ^h 34 ^m				Mag: -0.2 PMG: 18 ^h 21 ^m				Mag: -1.7 PMG: 12 ^h 02 ^m				Mag: +0.6 PMG: 14 ^h 27 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'
0	59	56.7	216	18.1	-10	15.1	84	19.2	-11	44.8	179	06.1	-20	03.4	142	35.9	-22	43.3
1	74	59.1	231	20.0		14.8	99	20.2		44.2	194	08.0		03.5	157	38.1		43.3
2	90	01.6	246	21.8		14.4	114	21.2		43.5	209	09.9		03.6	172	40.3		43.3
3	105	04.1	261	23.7		14.1	129	22.2		42.9	224	11.8		03.7	187	42.5		43.2
4	120	06.5	276	25.5		13.8	144	23.2		42.2	239	13.6		03.8	202	44.6		43.2
5	135	09.0	291	27.4	-10	13.5	159	24.2	-11	41.6	254	15.5	-20	03.9	217	46.8	-22	43.2
6	150	11.5	306	29.2	-10	13.2	174	25.2	-11	40.9	269	17.4	-20	04.1	232	49.0	-22	43.2
7	165	13.9	321	31.0		12.9	189	26.2		40.3	284	19.3		04.2	247	51.2		43.2
8	180	16.4	336	32.9		12.6	204	27.3		39.6	299	21.2		04.3	262	53.4		43.2
9	195	18.9	351	34.7		12.3	219	28.3		39.0	314	23.1		04.4	277	55.6		43.2
10	210	21.3	6	36.5		12.0	234	29.3		38.3	329	24.9		04.5	292	57.8		43.2
11	225	23.8	21	38.3	-10	11.8	249	30.3	-11	37.7	344	26.8	-20	04.6	308	00.0	-22	43.2
12	240	26.3	36	40.2	-10	11.5	264	31.3	-11	37.0	359	28.7	-20	04.7	323	02.2	-22	43.2
13	255	28.7	51	42.0		11.2	279	32.3		36.4	14	30.6		04.8	338	04.4		43.2
14	270	31.2	66	43.8		10.9	294	33.3		35.7	29	32.5		04.9	353	06.5		43.2
15	285	33.6	81	45.6		10.6	309	34.3		35.1	44	34.4		05.1	8	08.7		43.1
16	300	36.1	96	47.4		10.3	324	35.3		34.4	59	36.2		05.2	23	10.9		43.1
17	315	38.6	111	49.2	-10	10.1	339	36.4	-11	33.8	74	38.1	-20	05.3	38	13.1	-22	43.1
18	330	41.0	126	51.0	-10	09.8	354	37.4	-11	33.1	89	40.0	-20	05.4	53	15.3	-22	43.1
19	345	43.5	141	52.8		09.5	9	38.4		32.5	104	41.9		05.5	68	17.5		43.1
20	0	46.0	156	54.6		09.2	24	39.4		31.8	119	43.8		05.6	83	19.7		43.1
21	15	48.4	171	56.4		09.0	39	40.4		31.2	134	45.6		05.7	98	21.9		43.1
22	30	50.9	186	58.2		08.7	54	41.4		30.5	149	47.5		05.8	113	24.1		43.1
23	45	53.4	202	00.0		08.4	69	42.4		29.8	164	49.4		05.9	128	26.2		43.1
24	60	55.8	217	01.7	-10	08.2	84	43.4	-11	29.2	179	51.3	-20	06.0	143	28.4	-22	43.1
Dif	—		+18		+3		+10		+7		+19		-1		+22			

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16°2			Edad: 14 ^d 3 PHE { 4 ^h : 58'1 12 ^h : 58'4 20 ^h : 58'6										
	PMG: 11 ^h 46 ^m 1			SD: 15°9 PMG: 23 ^h 37 ^m R°: 55 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	o	'	o	o	'	o	'	o	h m	h m	h m	h m m	h m m	h m m
0	183	30.4	-20 04.0	18	12.2	+11 15.8		60 N	15 17	16 08	17 01	15 39 23		6 29 88
1	198	30.2	04.5	32	41.5 ¹⁰³	26.5 ¹⁰⁷		58	30	17	07	47 26		21 85
2	213	30.0	05.1	47	10.8 ¹⁰³	37.2 ¹⁰⁷		56	41	25	12	15 55 28		15 82
3	228	29.9	05.6	61	40.1 ¹⁰³	47.9 ¹⁰⁷		54	15 51	32	16	16 01 31		09 79
4	243	29.7	06.1	76	09.2 ¹⁰¹	+11 58.5 ¹⁰⁶		52	16 00	39	21	07 33		6 04 77
5	258	29.6	-20 06.7	90	38.3 ¹⁰¹	+12 09.0 ¹⁰⁵		50	16 08	16 45	17 25	16 12 35		5 59 75
6	273	29.4	-20 07.2	105	07.3 ¹⁰⁰	+12 19.5 ¹⁰⁵		45	16 25	16 58	17 34	16 24 38		5 49 71
7	288	29.2	07.7	119	36.2 ⁹⁹	29.9 ¹⁰⁴		40	39	17 08	42	34 41		40 69
8	303	29.1	08.3	134	05.0 ⁹⁸	40.3 ¹⁰⁴		35	16 51	18	49	42 43		33 66
9	318	28.9	08.8	148	33.7 ⁹⁷	+12 50.6 ¹⁰³		30	17 01	27	17 56	16 49 46		26 64
10	333	28.7	09.4	163	02.4 ⁹⁷	+13 00.8 ¹⁰²		20	19	43	18 10	17 02 49		15 60
11	348	28.6	-20 09.9	177	31.0 ⁹⁶	+13 11.0 ¹⁰²		10 N	17 35	17 57	18 23	17 13 52		5 06 56
12	3	28.4	-20 10.4	191	59.5 ⁹⁵	+13 21.1 ¹⁰¹		0	17 50	18 12	18 37	17 24 55		4 57 53
13	18	28.2	11.0	206	27.9 ⁹⁴	31.2 ¹⁰¹		10 S	18 05	27	18 54	35 57		48 50
14	33	28.1	11.5	220	56.3 ⁹⁴	41.2 ¹⁰⁰		20	21	18 45	19 13	46 61		38 47
15	48	27.9	12.0	235	24.5 ⁹²	+13 51.1 ⁹⁹		30	40	19 06	38	17 59 65		27 43
16	63	27.7	12.5	249	52.7 ⁹²	+14 00.9 ⁹⁸		35	18 51	19	19 54	18 07 67		21 40
17	78	27.6	-20 13.1	264	20.8 ⁹¹	+14 10.7 ⁹⁸		40	19 03	19 34	20 13	18 16 69		4 14 38
18	93	27.4	-20 13.6	278	48.9 ⁹¹	+14 20.4 ⁹⁷		45	19 18	19 53	20 38	18 26 72		4 06 34
19	108	27.2	14.1	293	16.8 ⁸⁹	30.0 ⁹⁶		50	37	20 17	21 13	39 75		3 56 31
20	123	27.1	14.7	307	44.7 ⁸⁹	39.6 ⁹⁶		52	45	29	32	44 78		51 29
21	138	26.9	15.2	322	12.4 ⁸⁷	49.1 ⁹⁵		54	19 55	43	21 55	51 79		46 27
22	153	26.7	15.7	336	40.1 ⁸⁷	+14 58.5 ⁹⁴		56	20 06	20 59	22 29	18 58 82		41 24
23	168	26.6	16.2	351	07.7 ⁸⁶	+15 07.8 ⁹³		58	19	21 19	** ** *	19 06 85		35 22
24	183	26.4	-20 16.8	5	35.3 ⁸⁶	+15 17.0 ⁹²		60 S	20 34	21 44	** ** *	19 16 88		3 28 19

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 19 ^h 53 ^m 0		Mag: -4.8 PMG: 9 ^h 31 ^m		Mag: -0.2 PMG: 18 ^h 20 ^m		Mag: -1.7 PMG: 11 ^h 59 ^m		Mag: +0.6 PMG: 14 ^h 24 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	o	'	o	'	o	'	o	'	o	'
0	60	55.8	217 01.7	-10 08.2	84 43.4	-11 29.2	179 51.3	-20 06.0	143 28.4	-22 43.1
1	75	58.3	232 03.5	07.9	99 44.4	28.5	194 53.2	06.2	158 30.6	43.1
2	91	00.8	247 05.3	07.6	114 45.4	27.9	209 55.1	06.3	173 32.8	43.0
3	106	03.2	262 07.1	07.4	129 46.5	27.2	224 56.9	06.4	188 35.0	43.0
4	121	05.7	277 08.8	07.1	144 47.5	26.6	239 58.8	06.5	203 37.2	43.0
5	136	08.1	292 10.6	-10 06.9	159 48.5	-11 25.9	255 00.7	-20 06.6	218 39.4	-22 43.0
6	151	10.6	307 12.3	-10 06.6	174 49.5	-11 25.3	270 02.6	-20 06.7	233 41.6	-22 43.0
7	166	13.1	322 14.1	06.3	189 50.5	24.6	285 04.5	06.8	248 43.8	43.0
8	181	15.5	337 15.8	06.1	204 51.5	24.0	300 06.4	06.9	263 45.9	43.0
9	196	18.0	352 17.6	05.8	219 52.5	23.3	315 08.2	07.0	278 48.1	43.0
10	211	20.5	7 19.3	05.6	234 53.5	22.6	330 10.1	07.1	293 50.3	43.0
11	226	22.9	22 21.1	-10 05.4	249 54.5	-11 22.0	345 12.0	-20 07.3	308 52.5	-22 43.0
12	241	25.4	37 22.8	-10 05.1	264 55.5	-11 21.3	0 13.9	-20 07.4	323 54.7	-22 43.0
13	256	27.9	52 24.6	04.9	279 56.5	20.7	15 15.8	07.5	338 56.9	42.9
14	271	30.3	67 26.3	04.6	294 57.5	20.0	30 17.6	07.6	353 59.1	42.9
15	286	32.8	82 28.0	04.4	309 58.6	19.4	45 19.5	07.7	9 01.2	42.9
16	301	35.2	97 29.8	04.2	324 59.6	18.7	60 21.4	07.8	24 03.4	42.9
17	316	37.7	112 31.5	-10 03.9	340 00.6	-11 18.1	75 23.3	-20 07.9	39 05.6	-22 42.9
18	331	40.2	127 33.2	-10 03.7	355 01.6	-11 17.4	90 25.2	-20 08.0	54 07.8	-22 42.9
19	346	42.6	142 34.9	03.5	10 02.6	16.7	105 27.1	08.1	69 10.0	42.9
20	1	45.1	157 36.6	03.2	25 03.6	16.1	120 28.9	08.2	84 12.2	42.9
21	16	47.6	172 38.3	03.0	40 04.6	15.4	135 30.8	08.4	99 14.4	42.9
22	31	50.0	187 40.0	02.8	55 05.6	14.8	150 32.7	08.5	114 16.6	42.9
23	46	52.5	202 41.7	02.6	70 06.6	14.1	165 34.6	08.6	129 18.7	42.9
24	61	55.0	217 43.5	-10 02.4	85 07.6	-11 13.5	180 36.5	-20 08.7	144 20.9	-22 42.8
Dif	—		+17	+2	+10	+7	+19	-1	+22	0

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16:2 PMG: 11 ^h 46 ^m 4			Edad: 15 ^d 3 PHE { SD: 16:1 PMG: *** ^h *** ^m R°: *** ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°		
h	o	'	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m
0	183	26.4	-20	16.8	5	35.3	+15	17.0	60 N	6 32	7 25	8 17	16 02	32	7 57	86	
1	198	26.2		17.3	20	02.7	84	26.2	92	58	27	16	8 04	13	35	46	83
2	213	26.1		17.8	34	30.1	84	35.3	91	56	21	08	7 52	23	37	37	80
3	228	25.9		18.3	48	57.4	83	44.3	90	54	17	7 01	42	32	39	28	79
4	243	25.7		18.9	63	24.6	82	+15	53.2	52	13	6 55	33	40	41	21	76
5	258	25.5	-20	19.4	77	51.7	81	+16	02.0	50	6 09	6 49	7 25	16 47	42	7 14	75
6	273	25.4	-20	19.9	92	18.7	80	+16	10.7	45	5 59	6 36	7 08	17 02	45	7 00	72
7	288	25.2		20.4	106	45.7	80		19.4	40	51	24	6 54	15	47	6 49	68
8	303	25.0		20.9	121	12.6	79		27.9	35	44	15	42	25	50	39	66
9	318	24.9		21.5	135	39.3	77		36.4	30	37	6 06	32	35	51	30	65
10	333	24.7		22.0	150	06.1	78		44.7	20	23	5 50	6 14	17 51	54	15	62
11	348	24.5	-20	22.5	164	32.7	76	+16	53.0	10 N	5 10	5 35	5 58	18 05	56	6 02	59
12	3	24.3	-20	23.0	178	59.3	76	+17	01.1	0	4 55	5 21	5 43	18 19	58	5 50	56
13	18	24.2		23.5	193	25.7	74		09.2	10 S	39	5 05	28	32	61	38	54
14	33	24.0		24.1	207	52.1	74		17.2	20	4 19	4 48	5 11	18 47	62	25	51
15	48	23.8		24.6	222	18.5	74		25.1	30	3 54	26	4 53	19 04	65	10	48
16	63	23.6		25.1	236	44.7	72		32.8	35	38	4 13	42	14	66	5 01	46
17	78	23.5	-20	25.6	251	10.9	72	+17	40.5	40	3 19	3 58	4 29	19 25	68	4 52	44
18	93	23.3	-20	26.1	265	37.0	71	+17	48.0	45	2 54	3 39	4 14	19 38	70	4 40	42
19	108	23.1		26.6	280	03.0	70	+17	55.5	50	19	15	3 55	19 54	73	27	37
20	123	22.9		27.1	294	28.9	69	+18	02.8	52	2 00	3 03	47	20 02	74	20	36
21	138	22.8		27.6	308	54.8	69		10.0	54	1 37	2 49	37	10	77	13	35
22	153	22.6		28.2	323	20.6	68		17.2	56	1 03	33	25	20	78	4 05	33
23	168	22.4		28.7	337	46.3	67		24.2	58	***	2 13	3 13	31	80	3 57	29
24	183	22.2	-20	29.2	352	11.9	66	+18	31.1	60 S	***	1 47	2 57	20 44	83	3 47	26

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 19 ^h 49 ^m 1		Mag: -4.8 PMG: 9 ^h 28 ^m			Mag: -0.2 PMG: 18 ^h 18 ^m			Mag: -1.7 PMG: 11 ^h 56 ^m			Mag: +0.6 PMG: 14 ^h 21 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'				
0	61	55.0	217	43.5	-10	02.4	85	07.6	-11	13.5	180	36.5	-20	08.7	144	20.9	-22	42.8
1	76	57.4	232	45.1		02.1	100	08.6		12.8	195	38.3		08.8	159	23.1		42.8
2	91	59.9	247	46.8		01.9	115	09.6		12.2	210	40.2		08.9	174	25.3		42.8
3	107	02.4	262	48.5		01.7	130	10.6		11.5	225	42.1		09.0	189	27.5		42.8
4	122	04.8	277	50.2		01.5	145	11.6		10.8	240	44.0		09.1	204	29.7		42.8
5	137	07.3	292	51.9	-10	01.3	160	12.7	-11	10.2	255	45.9	-20	09.2	219	31.9	-22	42.8
6	152	09.7	307	53.6	-10	01.1	175	13.7	-11	09.5	270	47.8	-20	09.3	234	34.0	-22	42.8
7	167	12.2	322	55.3		00.9	190	14.7		08.9	285	49.6		09.5	249	36.2		42.8
8	182	14.7	337	56.9		00.7	205	15.7		08.2	300	51.5		09.6	264	38.4		42.8
9	197	17.1	352	58.6		00.5	220	16.7		07.5	315	53.4		09.7	279	40.6		42.8
10	212	19.6	8	00.3		00.3	235	17.7		06.9	330	55.3		09.8	294	42.8		42.8
11	227	22.1	23	01.9	-10	00.1	250	18.7	-11	06.2	345	57.2	-20	09.9	309	45.0	-22	42.7
12	242	24.5	38	03.6	-9	59.9	265	19.7	-11	05.6	0	59.0	-20	10.0	324	47.2	-22	42.7
13	257	27.0	53	05.3		59.7	280	20.7		04.9	16	00.9		10.1	339	49.3		42.7
14	272	29.5	68	06.9		59.5	295	21.7		04.3	31	02.8		10.2	354	51.5		42.7
15	287	31.9	83	08.6		59.3	310	22.7		03.6	46	04.7		10.3	9	53.7		42.7
16	302	34.4	98	10.2		59.1	325	23.7		02.9	61	06.6		10.4	24	55.9		42.7
17	317	36.9	113	11.9	-9	58.9	340	24.7	-11	02.3	76	08.4	-20	10.5	39	58.1	-22	42.7
18	332	39.3	128	13.5	-9	58.7	355	25.7	-11	01.6	91	10.3	-20	10.7	55	00.3	-22	42.7
19	347	41.8	143	15.2		58.5	10	26.7		01.0	106	12.2		10.8	70	02.5		42.7
20	2	44.2	158	16.8		58.4	25	27.7	-11	00.3	121	14.1		10.9	85	04.6		42.7
21	17	46.7	173	18.4		58.2	40	28.7	-10	59.6	136	16.0		11.0	100	06.8		42.6
22	32	49.2	188	20.1		58.0	55	29.8		59.0	151	17.8		11.1	115	09.0		42.6
23	47	51.6	203	21.7		57.8	70	30.8		58.3	166	19.7		11.2	130	11.2		42.6
24	62	54.1	218	23.3	-9	57.6	85	31.8	-10	57.7	181	21.6	-20	11.3	145	13.4	-22	42.6
Dif	—		+17		+2		+10		+7		+19		-1		+22			

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 11 ^h 46 ^m 7			Edad: 16 ^d 3 PHE { SD: 16:2 PMG: 0 ^h 32 ^m 4 ^h : 59:3 12 ^h : 59:4 20 ^h : 59:6 R°: 59 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	o	'	o	'	o	'	o	'	h m	h m	h m	h m	h m	h m
0	183	22.2	-20	29.2	352	11.9	+18	31.1	60 N	15 13	16 05	16 59	16 34	46
1	198	22.1		29.7	6	37.5	66	37.9	58	27	15	17 04	16 48	48
2	213	21.9		30.2	21	03.0	65	44.5	56	39	23	10	17 00	50
3	228	21.7		30.7	35	28.4	64	51.1	54	49	30	14	11 51	47 72
4	243	21.5		31.2	49	53.8	64	+18 57.5	52	15 58	37	19	21 51	37 72
5	258	21.4	-20	31.7	64	19.1	63	+19 03.8	50	16 06	16 43	17 23	17 29	52
6	273	21.2	-20	32.2	78	44.3	62	+19 10.0	45	16 24	16 56	17 32	17 47	54
7	288	21.0		32.7	93	09.4	61	16.1	40	38	17 08	41	18 02	55
8	303	20.8		33.2	107	34.5	61	22.0	35	16 50	17	48	15 56	45 66
9	318	20.6		33.7	121	59.6	61	27.8	30	17 01	26	17 56	26 57	35 64
10	333	20.5		34.2	136	24.5	59	33.5	20	19	43	18 10	18 45	58
11	348	20.3	-20	34.7	150	49.4	59	+19 39.1	10 N	17 35	17 58	18 23	19 01	60
12	3	20.1	-20	35.2	165	14.3	59	+19 44.5	0	17 50	18 12	18 38	19 17	60
13	18	19.9		35.7	179	39.0	57	49.9	10 S	18 06	28	18 55	33 61	32 57
14	33	19.7		36.2	194	03.8	58	+19 55.1	20	22	18 46	19 15	19 49	62
15	48	19.5		36.7	208	28.4	56	+20 00.1	30	41	19 08	40	20 09	63
16	63	19.4		37.2	222	53.0	56	05.0	35	18 52	21	19 56	20 64	47 53
17	78	19.2	-20	37.7	237	17.6	56	+20 09.8	40	19 05	19 37	20 16	20 33	65
18	93	19.0	-20	38.2	251	42.1	55	+20 14.5	45	19 21	19 56	20 42	20 48	66
19	108	18.8		38.7	266	06.5	54	19.0	50	40	20 21	21 17	21 07	67
20	123	18.6		39.2	280	30.9	54	23.4	52	49	33	21 37	16 68	4 56 46
21	138	18.4		39.7	294	55.2	53	27.7	54	19 59	20 47	22 02	27 67	48 44
22	153	18.3		40.2	309	19.5	53	31.8	56	20 10	21 04	22 39	38 69	38 42
23	168	18.1		40.7	323	43.8	53	35.8	58	24	25	** ** *	21 51	70
24	183	17.9	-20	41.2	338	08.0	52	+20 39.6	60 S	20 39	21 52	** ** *	22 07	70

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 19 ^h 45 ^m 1		Mag: -4.9 PMG: 9 ^h 25 ^m		Mag: -0.2 PMG: 18 ^h 17 ^m		Mag: -1.7 PMG: 11 ^h 53 ^m		Mag: +0.6 PMG: 14 ^h 17 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	o	'	o	'	o	'	o	'	o	'
0	62	54.1	218	23.3	-9	57.6	181	21.6	-20	11.3
1	77	56.6	233	24.9		57.5	196	23.5		11.4
2	92	59.0	248	26.5		57.3	211	25.4		11.5
3	108	01.5	263	28.2		57.1	226	27.3		11.6
4	123	04.0	278	29.8		57.0	241	29.1		11.7
5	138	06.4	293	31.4	-9	56.8	256	31.0	-20	11.8
6	153	08.9	308	33.0	-9	56.6	271	32.9	-20	12.0
7	168	11.4	323	34.6		56.5	286	34.8		12.1
8	183	13.8	338	36.2		56.3	301	36.7		12.2
9	198	16.3	353	37.8		56.2	316	38.5		12.3
10	213	18.7	8	39.4		56.0	331	40.4		12.4
11	228	21.2	23	41.0	-9	55.8	346	42.3	-20	12.5
12	243	23.7	38	42.6	-9	55.7	1	44.2	-20	12.6
13	258	26.1	53	44.1		55.5	16	46.1		12.7
14	273	28.6	68	45.7		55.4	31	47.9		12.8
15	288	31.1	83	47.3		55.3	46	49.8		12.9
16	303	33.5	98	48.9		55.1	61	51.7		13.0
17	318	36.0	113	50.4	-9	55.0	76	53.6	-20	13.1
18	333	38.5	128	52.0	-9	54.8	91	55.5	-20	13.3
19	348	40.9	143	53.6		54.7	106	57.3		13.4
20	3	43.4	158	55.1		54.5	121	59.2		13.5
21	18	45.9	173	56.7		54.4	137	01.1		13.6
22	33	48.3	188	58.3		54.3	152	03.0		13.7
23	48	50.8	203	59.8		54.1	167	04.9		13.8
24	63	53.2	219	01.4	-9	54.0	182	06.7	-20	13.9
Dif	—		+16		+2		+10		+7	
							+19		-1	
									+22	
									0	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16'2 PMG: 11 ^h 47 ^m 0			Edad: 17 ^d 3 PHE { SD: 16'3 PMG: 1 ^h 31 ^m R°: 61 ^m															
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°				
h	o	'	o	'	o	'	o	'	o	'	h	m	h	m	h	m	h	m	m
0	183	17.9	-20	41.2	338	08.0	+20	39.6	60 N	6 36	7 29	8 22	17 20	64	10 40	63			
1	198	17.7		41.7	352	32.1		43.3	58	30	20	8 08	36	63	24	63			
2	213	17.5		42.2	6	56.2		46.9	56	25	12	7 56	17 50	63	10 11	62			
3	228	17.3		42.7	21	20.3		50.3	54	20	7 04	46	18 02	63	9 59	62			
4	243	17.1		43.2	35	44.3		53.6	52	15	6 57	36	12	63	49	62			
5	258	17.0	-20	43.7	50	08.3	+20	56.7	50	6 11	6 51	7 28	18 21	63	9 39	62			
6	273	16.8	-20	44.2	64	32.3	+20	59.7	45	6 02	6 38	7 11	18 41	63	9 20	62			
7	288	16.6		44.7	78	56.2	+21	02.6	40	5 53	26	6 56	18 57	62	9 04	62			
8	303	16.4		45.1	93	20.1		05.3	35	45	16	44	19 11	62	8 51	61			
9	318	16.2		45.6	107	43.9		07.8	30	38	6 07	33	23	61	39	61			
10	333	16.0		46.1	122	07.7		10.3	20	24	5 51	6 15	19 43	61	19	61			
11	348	15.8	-20	46.6	136	31.5	+21	12.5	10 N	5 10	5 36	5 59	20 01	60	8 02	61			
12	3	15.6	-20	47.1	150	55.3	+21	14.7	0	4 55	5 21	5 43	20 17	61	7 45	61			
13	18	15.5		47.6	165	19.0		16.6	10 S	39	5 05	28	34	60	29	60			
14	33	15.3		48.1	179	42.7		18.5	20	4 19	4 47	5 11	20 51	60	7 12	60			
15	48	15.1		48.5	194	06.4		20.2	17	3 53	26	4 52	21 12	59	6 52	59			
16	63	14.9		49.0	208	30.1		21.7	15	35	37	4 12	24	59	40	59			
17	78	14.7	-20	49.5	222	53.8	+21	23.1	40	3 17	3 56	4 28	21 38	58	6 27	59			
18	93	14.5	-20	50.0	237	17.4	+21	24.3	45	2 52	3 37	4 12	21 54	58	6 11	58			
19	108	14.3		50.5	251	41.0		25.4	50	2 16	12	3 53	22 14	57	5 51	58			
20	123	14.1		51.0	266	04.6		26.4	52	1 56	3 00	44	24	56	42	58			
21	138	13.9		51.4	280	28.2		27.2	8	54	1 31	2 46	34	57	32	57			
22	153	13.7		51.9	294	51.8		27.8	6	56	0 54	29	23	57	20	57			
23	168	13.5		52.4	309	15.4		28.3	5	58	** **	2 08	3 09	54	5 07	55			
24	183	13.3	-20	52.9	323	39.0	+21	28.7	60 S	** **	1 41	2 54	23 17	54	4 51	55			
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO						
	PMG 19 ^h 41 ^m 2			Mag: -4.9 PMG: 9 ^h 23 ^m			Mag: -0.1 PMG: 18 ^h 15 ^m			Mag: -1.7 PMG: 11 ^h 50 ^m			Mag: +0.5 PMG: 14 ^h 14 ^m						
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec				
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'			
0	63	53.2	219	01.4	-9	54.0	85	55.8	-10	41.8	182	06.7	-20	13.9	146	05.8			
1	78	55.7	234	02.9		53.9	100	56.9		41.1	197	08.6		14.0	161	08.0			
2	93	58.2	249	04.5		53.8	115	57.9		40.5	212	10.5		14.1	176	10.1			
3	109	00.6	264	06.0		53.6	130	58.9		39.8	227	12.4		14.2	191	12.3			
4	124	03.1	279	07.5		53.5	145	59.9		39.1	242	14.3		14.3	206	14.5			
5	139	05.6	294	09.1	-9	53.4	161	00.9	-10	38.5	257	16.1	-20	14.4	221	16.7			
6	154	08.0	309	10.6	-9	53.3	176	01.9	-10	37.8	272	18.0	-20	14.6	236	18.9			
7	169	10.5	324	12.1		53.1	191	02.9		37.1	287	19.9		14.7	251	21.0			
8	184	13.0	339	13.7		53.0	206	03.9		36.5	302	21.8		14.8	266	23.2			
9	199	15.4	354	15.2		52.9	221	04.9		35.8	317	23.7		14.9	281	25.4			
10	214	17.9	9	16.7		52.8	236	05.9		35.1	332	25.6		15.0	296	27.6			
11	229	20.3	24	18.2	-9	52.7	251	06.9	-10	34.5	347	27.4	-20	15.1	311	29.8			
12	244	22.8	39	19.7	-9	52.6	266	07.9	-10	33.8	2	29.3	-20	15.2	326	32.0			
13	259	25.3	54	21.2		52.5	281	08.9		33.1	17	31.2		15.3	341	34.1			
14	274	27.7	69	22.8		52.4	296	09.9		32.5	32	33.1		15.4	356	36.3			
15	289	30.2	84	24.3		52.3	311	10.9		31.8	47	35.0		15.5	11	38.5			
16	304	32.7	99	25.8		52.2	326	11.9		31.1	62	36.8		15.6	26	40.7			
17	319	35.1	114	27.3	-9	52.1	341	12.9	-10	30.5	77	38.7	-20	15.7	41	42.9			
18	334	37.6	129	28.8	-9	52.0	356	13.9	-10	29.8	92	40.6	-20	15.8	56	45.0			
19	349	40.1	144	30.3		51.9	11	14.9		29.1	107	42.5		15.9	71	47.2			
20	4	42.5	159	31.7		51.8	26	15.9		28.5	122	44.4		16.1	86	49.4			
21	19	45.0	174	33.2		51.7	41	16.9		27.8	137	46.2		16.2	101	51.6			
22	34	47.5	189	34.7		51.6	56	17.9		27.2	152	48.1		16.3	116	53.8			
23	49	49.9	204	36.2		51.5	71	18.9		26.5	167	50.0		16.4	131	55.9			
24	64	52.4	219	37.7	-9	51.4	86	19.9	-10	25.8	182	51.9	-20	16.5	146	58.1			
Dif	—			+15 +1			+10 +7			+19 -1			+22 0						

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16:2 PMG: 11 ^h 47 ^m 3			Edad: 18 ^d 3 PHE { SD: 16:3 PMG: 2 ^h 32 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°	
h	o	'	o	'	o	'	o	'	h	m	h	m	h	m	h	m
0	183	13.3	-20	52.9	323	39.0	+21	28.7	60 N	15 10	16 03	16 57	18 24	78	11 43	45
1	198	13.2		53.3	338	02.6		28.9	58	24	12	17 02	39	77	27	47
2	213	13.0		53.8	352	26.1		28.9	56	36	21	08	18 53	74	13	49
3	228	12.8		54.3	6	49.7		28.8	54	47	28	13	19 05	73	11 01	50
4	243	12.6		54.8	21	13.3		28.6	52	15 56	35	17	15	72	10 51	51
5	258	12.4	-20	55.2	35	36.8	+21	28.2	50	16 05	16 41	17 22	19 24	71	10 41	52
6	273	12.2	-20	55.7	50	00.4	+21	27.6	45	16 22	16 55	17 31	19 44	68	10 22	53
7	288	12.0		56.2	64	24.0		26.9	40	37	17 07	40	19 59	67	10 06	55
8	303	11.8		56.7	78	47.6		26.1	35	16 49	17	48	20 13	65	9 52	56
9	318	11.6		57.1	93	11.2		25.1	30	17 00	26	17 55	24	65	40	57
10	333	11.4		57.6	107	34.8		23.9	20	19	43	18 10	20 44	63	20	58
11	348	11.2	-20	58.1	121	58.4	+21	22.7	10 N	17 35	17 58	18 24	21 01	61	9 03	59
12	3	11.0	-20	58.5	136	22.0	+21	21.2	0	17 51	18 13	18 39	21 18	59	8 46	60
13	18	10.8		59.0	150	45.7		19.6	10 S	18 07	29	18 56	34	58	29	62
14	33	10.6	-20	59.5	165	09.4		17.9	20	23	18 47	19 16	21 51	56	8 12	62
15	48	10.4	-21	00.0	179	33.1		16.0	30	43	19 10	42	22 11	54	7 51	64
16	63	10.2	-21	00.4	193	56.8		14.0	35	18 54	23	19 58	23	52	39	64
17	78	10.0	-21	00.9	208	20.5	+21	11.8	40	19 08	19 39	20 19	22 36	51	7 26	65
18	93	09.8	-21	01.4	222	44.3	+21	09.5	45	19 23	19 59	20 45	22 52	49	7 09	66
19	108	09.6		01.8	237	08.0		07.0	50	43	20 24	21 22	23 11	47	6 49	67
20	123	09.4		02.3	251	31.9		04.4	52	19 52	37	21 42	20	46	40	67
21	138	09.2		02.7	265	55.7	+21	01.6	54	20 02	20 52	22 09	31	44	29	68
22	153	09.0		03.2	280	19.6	+20	58.7	56	14	21 09	22 50	42	42	17	69
23	168	08.8		03.7	294	43.5		55.6	58	28	31	** ** *	23 55	41	6 02	71
24	183	08.6	-21	04.1	309	07.4	+20	52.4	60 S	20 44	21 59	** ** *	** ** *	**	5 46	72
UT	ARIES		VENUS			MARTE			JÚPITER				SATURNO			
	PMG: 19 ^h 37 ^m 3		Mag: -4.9 PMG: 9 ^h 21 ^m			Mag: -0.1 PMG: 18 ^h 13 ^m			Mag: -1.7 PMG: 11 ^h 47 ^m				Mag: +0.5 PMG: 14 ^h 10 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'
0	64	52.4	219	37.7	-9	51.4	86	19.9	-10	25.8	182	51.9	-20	16.5	146	58.1
1	79	54.8	234	39.2		51.3	101	20.9		25.2	197	53.8		16.6	162	00.3
2	94	57.3	249	40.6		51.2	116	21.9		24.5	212	55.6		16.7	177	02.5
3	109	59.8	264	42.1		51.2	131	22.9		23.8	227	57.5		16.8	192	04.7
4	125	02.2	279	43.6		51.1	146	23.9		23.2	242	59.4		16.9	207	06.8
5	140	04.7	294	45.0	-9	51.0	161	24.9	-10	22.5	258	01.3	-20	17.0	222	09.0
6	155	07.2	309	46.5	-9	50.9	176	25.9	-10	21.8	273	03.2	-20	17.1	237	11.2
7	170	09.6	324	47.9		50.9	191	26.9		21.1	288	05.0		17.2	252	13.4
8	185	12.1	339	49.4		50.8	206	27.9		20.5	303	06.9		17.3	267	15.6
9	200	14.6	354	50.9		50.7	221	28.9		19.8	318	08.8		17.4	282	17.7
10	215	17.0	9	52.3		50.6	236	29.9		19.1	333	10.7		17.5	297	19.9
11	230	19.5	24	53.8	-9	50.6	251	30.9	-10	18.5	348	12.6	-20	17.7	312	22.1
12	245	22.0	39	55.2	-9	50.5	266	31.9	-10	17.8	3	14.4	-20	17.8	327	24.3
13	260	24.4	54	56.6		50.4	281	32.9		17.1	18	16.3		17.9	342	26.5
14	275	26.9	69	58.1		50.4	296	33.9		16.5	33	18.2		18.0	357	28.6
15	290	29.3	84	59.5		50.3	311	34.9		15.8	48	20.1		18.1	12	30.8
16	305	31.8	100	00.9		50.3	326	35.9		15.1	63	22.0		18.2	27	33.0
17	320	34.3	115	02.4	-9	50.2	341	36.9	-10	14.5	78	23.8	-20	18.3	42	35.2
18	335	36.7	130	03.8	-9	50.1	356	37.9	-10	13.8	93	25.7	-20	18.4	57	37.4
19	350	39.2	145	05.2		50.1	11	38.9		13.1	108	27.6		18.5	72	39.5
20	5	41.7	160	06.6		50.0	26	39.9		12.5	123	29.5		18.6	87	41.7
21	20	44.1	175	08.1		50.0	41	40.9		11.8	138	31.4		18.7	102	43.9
22	35	46.6	190	09.5		49.9	56	41.9		11.1	153	33.2		18.8	117	46.1
23	50	49.1	205	10.9		49.9	71	42.9		10.5	168	35.1		18.9	132	48.3
24	65	51.5	220	12.3	-9	49.8	86	43.9	-10	09.8	183	37.0	-20	19.0	147	50.4
Dif	—		+14		+1		+10		+7		+19		-1		+22	

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16/2 PMG: 11 ^h 47 ^m 6				Edad: 19 ^d ₃ PHE { 4 ^h : 59/8 12 ^h : 59/7 20 ^h : 59/7 R°: 59 ^m															
	hG ☉		Dec		hG ☾		Dif			Dif			Náutico	Civil	Hora	R°	Hora	R°		
h	o	'	o	'	o	'	o	'	o	'	h	m	h	m	h	m	h	m	h	m
0	183	08.6	-21	04.1	309	07.4	+20	52.4	60 N	6 39	7 33	8 26	19 42	87	12 28	32				
1	198	08.4		04.6	323	31.4		49.1	58	33	24	12	19 56	84	14	34				
2	213	08.2		05.0	337	55.4		45.6	56	28	15	8 00	20 07	82	12 02	37				
3	228	08.0		05.5	352	19.4		42.0	54	23	07	7 49	18 79		11 51	39				
4	243	07.8		06.0	6	43.5		38.2	52	18	7 00	39	27 77		42	40				
5	258	07.6	-21	06.4	21	07.6		+20 34.3	50	6 14	6 54	7 31	20 35	76	11 33	42				
6	273	07.4	-21	06.9	35	31.8		+20 30.3	45	6 04	6 40	7 13	20 52	72	11 15	45				
7	288	07.2		07.3	49	56.0		26.1	40	5 55	28	6 58	21 06	70	11 01	47				
8	303	07.0		07.8	64	20.3		21.8	35	47	18	46	18 68		10 48	49				
9	318	06.8		08.3	78	44.6		17.3	30	40	6 09	35	29 65		37	51				
10	333	06.6		08.7	93	08.9		12.8	20	25	5 52	6 16	21 47	62	18	54				
11	348	06.4	-21	09.2	107	33.3		+20 08.0	10 N	5 11	5 37	5 59	22 02	60	10 02	56				
12	3	06.2	-21	09.6	121	57.8		+20 03.2	0	4 56	5 22	5 44	22 17	57	9 46	58				
13	18	06.0		10.1	136	22.3		+19 58.2	10 S	39	5 06	28	32 54		31	60				
14	33	05.8		10.5	150	46.8		53.0	20	4 19	4 47	5 11	22 47	51	9 14	63				
15	48	05.6		11.0	165	11.4		47.8	30	3 53	25	4 52	23 05	48	8 55	65				
16	63	05.4		11.4	179	36.1		42.4	35	36	4 11	40	15 46		43	67				
17	78	05.1	-21	11.9	194	00.8		+19 36.9	40	3 16	3 55	4 27	23 27	44	8 31	68				
18	93	04.9	-21	12.3	208	25.6		+19 31.2	45	2 49	3 36	4 11	23 41	41	8 15	71				
19	108	04.7		12.8	222	50.4		25.4	50	2 13	3 10	3 52	23 58	37	7 56	74				
20	123	04.5		13.2	237	15.3		19.5	52	1 52	2 57	42	***	**	47	76				
21	138	04.3		13.7	251	40.2		13.5	60	1 26	43	32	***	**	37	77				
22	153	04.1		14.1	266	05.2		07.4	61	0 44	25	20	***	**	26	79				
23	168	03.9		14.6	280	30.3		+19 01.1	58	***	2 04	3 06	***	**	7 13	81				
24	183	03.7	-21	15.0	294	55.4		+18 54.7	60 S	***	1 35	2 50	0 11	38	6 58	84				

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 19 ^h 33 ^m 4		Mag: -4.9 PMG: 9 ^h 18 ^m		Mag: -0.1 PMG: 18 ^h 12 ^m		Mag: -1.7 PMG: 11 ^h 44 ^m		Mag: +0.5 PMG: 14 ^h 07 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	o	'	o	'	o	'	o	'	o	'
0	65	51.5	220	12.3	-9	49.8	86	43.9	-10	09.8
1	80	54.0	235	13.7		49.8	101	44.9		09.1
2	95	56.5	250	15.1		49.8	116	45.9		08.4
3	110	58.9	265	16.5		49.7	131	46.9		07.8
4	126	01.4	280	17.9		49.7	146	47.9		07.1
5	141	03.8	295	19.3	-9	49.6	161	48.9	-10	06.4
6	156	06.3	310	20.7	-9	49.6	176	49.9	-10	05.8
7	171	08.8	325	22.1		49.6	191	50.8		05.1
8	186	11.2	340	23.5		49.5	206	51.8		04.4
9	201	13.7	355	24.9		49.5	221	52.8		03.8
10	216	16.2	10	26.2		49.5	236	53.8		03.1
11	231	18.6	25	27.6	-9	49.4	251	54.8	-10	02.4
12	246	21.1	40	29.0	-9	49.4	266	55.8	-10	01.7
13	261	23.6	55	30.4		49.4	281	56.8		01.1
14	276	26.0	70	31.7		49.4	296	57.8	-10	00.4
15	291	28.5	85	33.1		49.3	311	58.8	-9	59.7
16	306	31.0	100	34.5		49.3	326	59.8		59.1
17	321	33.4	115	35.8	-9	49.3	342	00.8	-9	58.4
18	336	35.9	130	37.2	-9	49.3	357	01.8	-9	57.7
19	351	38.3	145	38.6		49.3	12	02.8		57.0
20	6	40.8	160	39.9		49.3	27	03.8		56.4
21	21	43.3	175	41.3		49.3	42	04.8		55.7
22	36	45.7	190	42.6		49.3	57	05.8		55.0
23	51	48.2	205	43.9		49.2	72	06.8		54.4
24	66	50.7	220	45.3	-9	49.2	87	07.8	-9	53.7
Dif	—		+14		0		+10		+7	
							+19		-1	
									+22	

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16'2 PMG: 11 ^h 47 ^m 9				Edad: 20 ^d 3 PHE { 4 ^h : 59'6 12 ^h : 59'5 20 ^h : 59'4 PMG: 4 ^h 31 ^m R°: 56 ^m													
	hG ☉	Dec			hG ☾	Dif					Civil	Náutico	Hora	R°	Hora	R°		
h	o	'	o	'	o	'	o	'	o	h m	h m	h m	h m m	h m m	h m m	h m m		
0	183	03.7	-21	15.0	294	55.4	+18	54.7	60 N	15 07	16 00	16 54	21 09 89	13 00 22				
1	198	03.5		15.4	309	20.6		48.2	58	21	10	17 01	20 86	12 48 26				
2	213	03.3		15.9	323	45.8		41.5	56	34	19	06	29 83	39 28				
3	228	03.1		16.3	338	11.1		34.7	54	45	27	11	37 81	30 31				
4	243	02.9		16.8	352	36.5		27.9	52	15 54	34	16	44 79	22 33				
5	258	02.6	-21	17.2	7	01.9	+18	20.9	50	16 03	16 40	17 21	21 51 76	12 15 35				
6	273	02.4	-21	17.7	21	27.4	+18	13.8	45	16 21	16 54	17 31	22 04 73	12 00 38				
7	288	02.2		18.1	35	53.0	+18	06.5	40	36	17 06	40	16 70	11 48 41				
8	303	02.0		18.5	50	18.6	+17	59.2	35	16 49	16	48	26 67	37 44				
9	318	01.8		19.0	64	44.3		51.7	30	17 00	26	17 55	34 65	28 46				
10	333	01.6		19.4	79	10.1		44.2	20	19	43	18 10	22 49 60	11 12 49				
11	348	01.4	-21	19.8	93	35.9	+17	36.5	10 N	17 36	17 58	18 24	23 02 57	10 58 52				
12	3	01.2	-21	20.3	108	01.8	+17	28.7	0	17 52	18 14	18 40	23 14 54	10 44 56				
13	18	01.0		20.7	122	27.8		20.8	10 S	18 07	30	18 57	26 50	31 58				
14	33	00.7		21.2	136	53.9		12.8	20	25	18 49	19 17	38 47	17 61				
15	48	00.5		21.6	151	20.0	+17	04.7	30	45	19 11	19 44	23 53 43	10 00 65				
16	63	00.3		22.0	165	46.1	+16	56.5	35	18 56	25	20 01	*** **	9 50 68				
17	78	00.1	-21	22.5	180	12.4	+16	48.2	40	19 10	19 42	20 21	*** **	9 39 70				
18	92	59.9	-21	22.9	194	38.7	+16	39.8	45	19 26	20 02	20 48	*** **	9 26 73				
19	107	59.7		23.3	209	05.1		31.3	50	46	28	21 26	*** **	10 77				
20	122	59.5		23.7	223	31.5		22.6	52	19 55	41	21 47	0 06 36	9 03 78				
21	137	59.2		24.2	237	58.1		13.9	54	20 06	20 56	22 16	15 34	8 54 81				
22	152	59.0		24.6	252	24.7	+16	05.1	56	18	21 14	23 03	24 32	45 83				
23	167	58.8		25.0	266	51.3	+15	56.2	58	32	21 36	*** **	36 29	34 86				
24	182	58.6	-21	25.5	281	18.1	+15	47.2	60 S	20 49	22 07	*** **	0 49 26	8 22 89				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 19 ^h 29 ^m 4		Mag: -4.9 PMG: 9 ^h 16 ^m				Mag: -0.1 PMG: 18 ^h 10 ^m				Mag: -1.7 PMG: 11 ^h 41 ^m				Mag: +0.5 PMG: 14 ^h 03 ^m			
	hG ♈		hG ♀	Dec			hG ♂	Dec			hG ♃	Dec			hG ♄	Dec		
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'
0	66	50.7	220	45.3	-9	49.2	87	07.8	-9	53.7	184	22.1	-20	21.6	148	42.7	-22	41.6
1	81	53.1	235	46.6		49.2	102	08.8		53.0	199	24.0		21.7	163	44.9		41.6
2	96	55.6	250	48.0		49.2	117	09.8		52.3	214	25.9		21.8	178	47.0		41.6
3	111	58.1	265	49.3		49.2	132	10.8		51.7	229	27.7		21.9	193	49.2		41.6
4	127	00.5	280	50.6		49.2	147	11.8		51.0	244	29.6		22.0	208	51.4		41.6
5	142	03.0	295	52.0	-9	49.2	162	12.8	-9	50.3	259	31.5	-20	22.1	223	53.6	-22	41.6
6	157	05.5	310	53.3	-9	49.2	177	13.8	-9	49.6	274	33.4	-20	22.2	238	55.8	-22	41.6
7	172	07.9	325	54.6		49.2	192	14.8		49.0	289	35.3		22.3	253	57.9		41.6
8	187	10.4	340	55.9		49.3	207	15.8		48.3	304	37.1		22.4	269	00.1		41.5
9	202	12.8	355	57.3		49.3	222	16.8		47.6	319	39.0		22.5	284	02.3		41.5
10	217	15.3	10	58.6		49.3	237	17.8		47.0	334	40.9		22.6	299	04.5		41.5
11	232	17.8	25	59.9	-9	49.3	252	18.7	-9	46.3	349	42.8	-20	22.7	314	06.6	-22	41.5
12	247	20.2	41	01.2	-9	49.3	267	19.7	-9	45.6	4	44.7	-20	22.9	329	08.8	-22	41.5
13	262	22.7	56	02.5		49.3	282	20.7		44.9	19	46.5		23.0	344	11.0		41.5
14	277	25.2	71	03.8		49.3	297	21.7		44.3	34	48.4		23.1	359	13.2		41.5
15	292	27.6	86	05.1		49.3	312	22.7		43.6	49	50.3		23.2	14	15.3		41.5
16	307	30.1	101	06.4		49.4	327	23.7		42.9	64	52.2		23.3	29	17.5		41.5
17	322	32.6	116	07.7	-9	49.4	342	24.7	-9	42.2	79	54.0	-20	23.4	44	19.7	-22	41.4
18	337	35.0	131	09.0	-9	49.4	357	25.7	-9	41.6	94	55.9	-20	23.5	59	21.9	-22	41.4
19	352	37.5	146	10.3		49.4	12	26.7		40.9	109	57.8		23.6	74	24.0		41.4
20	7	39.9	161	11.6		49.5	27	27.7		40.2	124	59.7		23.7	89	26.2		41.4
21	22	42.4	176	12.9		49.5	42	28.7		39.5	140	01.6		23.8	104	28.4		41.4
22	37	44.9	191	14.1		49.5	57	29.7		38.9	155	03.4		23.9	119	30.6		41.4
23	52	47.3	206	15.4		49.6	72	30.7		38.2	170	05.3		24.0	134	32.7		41.4
24	67	49.8	221	16.7	-9	49.6	87	31.7	-9	37.5	185	07.2	-20	24.1	149	34.9	-22	41.4
Dif	—		+13		0		+10		+7		+19		-1		+22		0	

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16/2 PMG: 11 ^h 48 ^m 3				Edad: 21 ^d 3 PHE { SD: 16/1 PMG: 5 ^h 27 ^m R°: 53 ^m															
	hG ☉		Dec		hG ☾		Dif			Dif			Náutico	Civil	Hora	R°	Hora	R°		
h	o	'	o	'	o	'	o	'	o	'	h	m	h	m	h	m	h	m		
0	182	58.6	-21	25.5	281	18.1	+15	47.2	60 N	6 42	7 37	8 31	22 38	89	13 22	17				
1	197	58.4		25.9	295	44.9	78	38.1	58	36	27	16	46	85	14	20				
2	212	58.2		26.3	310	11.8	79	29.0	56	31	18	8 03	52	83	07	22				
3	227	57.9		26.7	324	38.7	79	19.7	54	25	10	7 52	22 58	80	13 01	24				
4	242	57.7		27.2	339	05.7	80	10.3	52	20	7 03	42	23 03	78	12 55	27				
5	257	57.5	-21	27.6	353	32.8	81	+15 00.9	50	6 16	6 57	7 34	23 07	77	12 50	28				
6	272	57.3	-21	28.0	8	00.0	82	+14 51.4	45	6 06	6 42	7 15	23 17	72	12 38	33				
7	287	57.1		28.4	22	27.2	82	41.8	40	5 57	30	7 00	26	68	29	36				
8	302	56.9		28.9	36	54.5	83	32.1	35	49	20	6 48	33	65	21	38				
9	317	56.6		29.3	51	21.9	84	22.3	30	41	6 11	36	39	63	14	41				
10	332	56.4		29.7	65	49.3	84	12.4	20	26	5 54	17	49	59	12 01	45				
11	347	56.2	-21	30.1	80	16.8	85	+14 02.5	10 N	5 12	5 38	6 00	23 59	54	11 50	49				
12	2	56.0	-21	30.5	94	44.4	86	+13 52.5	0	4 57	5 22	5 45	** ** *	**	11 40	52				
13	17	55.8		31.0	109	12.0	86	42.4	10 S	39	5 06	29	** ** *	**	29	56				
14	32	55.5		31.4	123	39.8	88	32.2	20	4 19	4 47	5 11	** ** *	**	18	60				
15	47	55.3		31.8	138	07.5	87	21.9	30	3 52	25	4 51	** ** *	**	11 05	64				
16	62	55.1		32.2	152	35.4	89	11.6	35	35	4 11	40	0 01	41	10 58	66				
17	77	54.9	-21	32.6	167	03.3	89	+13 01.2	40	3 15	3 54	4 26	0 11	38	10 49	69				
18	92	54.7	-21	33.1	181	31.3	90	+12 50.8	45	2 48	3 34	4 10	0 22	35	10 39	73				
19	107	54.4		33.5	195	59.3	90	40.2	50	2 10	3 08	3 50	35	31	27	77				
20	122	54.2		33.9	210	27.5	92	29.6	52	1 48	2 55	41	42	29	21	79				
21	137	54.0		34.3	224	55.6	91	19.0	54	1 20	40	30	49	27	15	81				
22	152	53.8		34.7	239	23.9	93	+12 08.2	56	0 33	2 22	18	0 56	25	08	83				
23	167	53.5		35.1	253	52.2	93	+11 57.4	58	** ** *	1 59	3 04	1 05	22	10 00	86				
24	182	53.3	-21	35.5	268	20.6	94	+11 46.6	60 S	** ** *	1 29	2 47	1 15	19	9 51	89				
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 19 ^h 25 ^m 5				Mag: -4.9 PMG: 9 ^h 14 ^m				Mag: -0.1 PMG: 18 ^h 09 ^m				Mag: -1.7 PMG: 11 ^h 38 ^m				Mag: +0.5 PMG: 14 ^h 00 ^m			
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'
0	67	49.8	221	16.7	-9	49.6	87	31.7	-9	37.5	185	07.2	-20	24.1	149	34.9	-22	41.4		
1	82	52.3	236	18.0		49.6	102	32.7		36.8	200	09.1		24.2	164	37.1		41.4		
2	97	54.7	251	19.3		49.7	117	33.7		36.2	215	11.0		24.3	179	39.3		41.3		
3	112	57.2	266	20.5		49.7	132	34.7		35.5	230	12.8		24.4	194	41.4		41.3		
4	127	59.7	281	21.8		49.7	147	35.7		34.8	245	14.7		24.5	209	43.6		41.3		
5	143	02.1	296	23.1	-9	49.8	162	36.6	-9	34.1	260	16.6	-20	24.6	224	45.8	-22	41.3		
6	158	04.6	311	24.3	-9	49.8	177	37.6	-9	33.5	275	18.5	-20	24.7	239	48.0	-22	41.3		
7	173	07.1	326	25.6		49.9	192	38.6		32.8	290	20.4		24.8	254	50.1		41.3		
8	188	09.5	341	26.8		49.9	207	39.6		32.1	305	22.2		24.9	269	52.3		41.3		
9	203	12.0	356	28.1		50.0	222	40.6		31.4	320	24.1		25.1	284	54.5		41.3		
10	218	14.4	11	29.3		50.0	237	41.6		30.7	335	26.0		25.2	299	56.7		41.3		
11	233	16.9	26	30.6	-9	50.1	252	42.6	-9	30.1	350	27.9	-20	25.3	314	58.8	-22	41.2		
12	248	19.4	41	31.8	-9	50.1	267	43.6	-9	29.4	5	29.7	-20	25.4	330	01.0	-22	41.2		
13	263	21.8	56	33.1		50.2	282	44.6		28.7	20	31.6		25.5	345	03.2		41.2		
14	278	24.3	71	34.3		50.2	297	45.6		28.0	35	33.5		25.6	0	05.4		41.2		
15	293	26.8	86	35.6		50.3	312	46.6		27.4	50	35.4		25.7	15	07.5		41.2		
16	308	29.2	101	36.8		50.3	327	47.6		26.7	65	37.3		25.8	30	09.7		41.2		
17	323	31.7	116	38.0	-9	50.4	342	48.6	-9	26.0	80	39.1	-20	25.9	45	11.9	-22	41.2		
18	338	34.2	131	39.3	-9	50.4	357	49.6	-9	25.3	95	41.0	-20	26.0	60	14.1	-22	41.2		
19	353	36.6	146	40.5		50.5	12	50.5		24.7	110	42.9		26.1	75	16.2		41.1		
20	8	39.1	161	41.7		50.6	27	51.5		24.0	125	44.8		26.2	90	18.4		41.1		
21	23	41.6	176	42.9		50.6	42	52.5		23.3	140	46.7		26.3	105	20.6		41.1		
22	38	44.0	191	44.2		50.7	57	53.5		22.6	155	48.5		26.4	120	22.7		41.1		
23	53	46.5	206	45.4		50.8	72	54.5		21.9	170	50.4		26.5	135	24.9		41.1		
24	68	48.9	221	46.6	-9	50.8	87	55.5	-9	21.3	185	52.3	-20	26.6	150	27.1	-22	41.1		
Dif	—		+12		-1		+10		+7		+19		-1		+22					

UT	SOL				 LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16°2				Edad: 22 ^d 3 PHE { 4 ^h : 58'9 12 ^h : 58'8 20 ^h : 58'7												
	PMG: 11 ^h 48 ^m 6				SD: 16°0 PMG: 6 ^h 20 ^m												
	hG ☉		Dec		hG ☾		Dif				Civil	Náutico	Hora	R°	Hora	R°	
h	o	'	o	'	o	'	o	'	o	h m	h m	h m	h m m	h m m	h m m		
0	182	53.3	-21	35.5	268	20.6	+11	46.6	60 N	15 04	15 58	16 53	*** ** *	13 39	14		
1	197	53.1		35.9	282	49.0	94	35.7	58	19	16 08	16 59	*** ** *	34	17		
2	212	52.9		36.3	297	17.5	95	24.7	56	32	17	17 05	*** ** *	29	20		
3	227	52.6		36.8	311	46.1	96	13.6	54	43	25	10	*** ** *	25	22		
4	242	52.4		37.2	326	14.7	96	+11 02.6	52	15 53	32	15	*** ** *	22	23		
5	257	52.2	-21	37.6	340	43.4	97	+10 51.4	50	16 02	16 39	17 20	*** ** *	13 18	26		
6	272	52.0	-21	38.0	355	12.1	97	+10 40.2	45	16 20	16 53	17 30	*** ** *	13 11	29		
7	287	51.7		38.4	9	40.9	98	28.9	40	36	17 06	39	*** ** *	13 05	32		
8	302	51.5		38.8	24	09.8	99	17.6	35	16 49	16	47	*** ** *	12 59	36		
9	317	51.3		39.2	38	38.7	99	+10 06.3	30	17 00	26	17 55	*** ** *	55	38		
10	332	51.1		39.6	53	07.7	100	+9 54.8	20	19	43	18 10	*** ** *	46	43		
11	347	50.8	-21	40.0	67	36.8	101	+9 43.4	10 N	17 36	17 59	18 25	*** ** *	12 39	46		
12	2	50.6	-21	40.4	82	05.9	101	+9 31.9	0	17 52	18 15	18 40	0 08 51	12 32	50		
13	17	50.4		40.8	96	35.0	101	20.3	10 S	18 08	31	18 58	16 48	25	54		
14	32	50.2		41.2	111	04.2	102	+9 08.7	20	26	18 50	19 19	25 44	18	57		
15	47	49.9		41.6	125	33.5	103	+8 57.1	30	46	19 13	19 46	36 39	09	62		
16	62	49.7		42.0	140	02.8	103	45.4	35	18 58	27	20 03	42 37	12 04	65		
17	77	49.5	-21	42.4	154	32.2	104	+8 33.6	40	19 12	19 44	20 24	0 49 34	11 58	68		
18	92	49.2	-21	42.8	169	01.6	104	+8 21.9	45	19 28	20 04	20 51	0 57 31	11 52	71		
19	107	49.0		43.2	183	31.1	105	+8 10.1	50	49	31	21 30	1 06 27	44	75		
20	122	48.8		43.6	198	00.6	105	+7 58.2	52	19 58	20 44	21 52	11 25	40	78		
21	137	48.6		44.0	212	30.2	106	46.3	54	20 09	21 00	22 22	16 22	36	80		
22	152	48.3		44.4	226	59.9	107	34.4	56	22	18	23 19	21 20	31	83		
23	167	48.1		44.8	241	29.5	106	22.5	58	36	21 42	*** ** *	27 18	26	85		
24	182	47.9	-21	45.2	255	59.3	108	+7 10.5	60 S	20 54	22 14	*** ** *	1 34 15	11 20	89		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 19 ^h 21 ^m 6		Mag: -4.9 PMG: 9 ^h 12 ^m		Mag: 0.0 PMG: 18 ^h 07 ^m		Mag: -1.7 PMG: 11 ^h 35 ^m		Mag: +0.5 PMG: 13 ^h 56 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	o	'	o	'	o	'	o	'	o	'
0	68	48.9	221	46.6	-9	50.8	87	55.5	185	52.3
1	83	51.4	236	47.8		50.9	102	56.5	200	54.2
2	98	53.9	251	49.0		51.0	117	57.5	215	56.0
3	113	56.3	266	50.2		51.1	132	58.5	230	57.9
4	128	58.8	281	51.4		51.1	147	59.5	245	59.8
5	144	01.3	296	52.6	-9	51.2	163	00.5	261	01.7
6	159	03.7	311	53.8	-9	51.3	178	01.5	276	03.6
7	174	06.2	326	55.0		51.4	193	02.4	291	05.4
8	189	08.7	341	56.2		51.5	208	03.4	306	07.3
9	204	11.1	356	57.4		51.6	223	04.4	321	09.2
10	219	13.6	11	58.6		51.6	238	05.4	336	11.1
11	234	16.0	26	59.8	-9	51.7	253	06.4	351	13.0
12	249	18.5	42	01.0	-9	51.8	268	07.4	6	14.8
13	264	21.0	57	02.2		51.9	283	08.4	21	16.7
14	279	23.4	72	03.3		52.0	298	09.4	36	18.6
15	294	25.9	87	04.5		52.1	313	10.4	51	20.5
16	309	28.4	102	05.7		52.2	328	11.4	66	22.3
17	324	30.8	117	06.9	-9	52.3	343	12.4	81	24.2
18	339	33.3	132	08.0	-9	52.4	358	13.4	96	26.1
19	354	35.8	147	09.2		52.5	13	14.3	111	28.0
20	9	38.2	162	10.4		52.6	28	15.3	126	29.9
21	24	40.7	177	11.5		52.7	43	16.3	141	31.7
22	39	43.2	192	12.7		52.8	58	17.3	156	33.6
23	54	45.6	207	13.9		52.9	73	18.3	171	35.5
24	69	48.1	222	15.0	-9	53.0	88	19.3	186	37.4
Dif	—		+12		-1		+10		+19	

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'2 PMG: 11 ^h 49 ^m 0			Edad: 23 ^d 3 PHE { 4 ^h : 58'5 12 ^h : 58'4 20 ^h : 58'2 SD: 15'9 PMG: 7 ^h 10 ^m R°: 49 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	o	'	o	'	o	'	o	'	h	m	h	m	h	m	h	m
0	182	47.9	-21	45.2	255	59.3	+7	10.5	60 N	6 46	7 40	8 35	0 07	87	13 53	12
1	197	47.6		45.6	270	29.0 ¹⁰⁷	+6	58.5 ¹²⁰	58	39	30	20	11	84	51	15
2	212	47.4		46.0	284	58.9 ¹⁰⁹		46.4 ¹²¹	56	33	21	8 07	15	81	49	17
3	227	47.2		46.4	299	28.7 ¹⁰⁸		34.3 ¹²¹	54	28	13	7 55	18	79	47	20
4	242	46.9		46.8	313	58.6 ¹⁰⁹		22.2 ¹²¹	52	23	7 06	45	21	77	45	22
5	257	46.7	-21	47.1	328	28.6 ¹¹⁰	+6	10.1 ¹²¹	50	6 18	6 59	7 37	0 24	75	13 44	23
6	272	46.5	-21	47.5	342	58.6 ¹¹⁰	+5	57.9 ¹²²	45	6 08	6 45	7 18	0 29	71	13 40	28
7	287	46.2		47.9	357	28.7 ¹¹¹		45.7 ¹²²	40	5 59	32	7 02	34	67	37	31
8	302	46.0		48.3	11	58.7 ¹¹⁰		33.5 ¹²²	35	50	22	6 49	38	64	35	34
9	317	45.8		48.7	26	28.9 ¹¹²		21.3 ¹²²	30	43	6 12	38	42	61	33	36
10	332	45.5		49.1	40	59.0 ¹¹¹	+5	09.1 ¹²²	20	28	5 55	19	48	57	29	41
11	347	45.3	-21	49.5	55	29.2 ¹¹²	+4	56.8 ¹²³	10 N	5 13	5 39	6 01	0 53	53	13 25	45
12	2	45.1	-21	49.9	69	59.5 ¹¹³	+4	44.5 ¹²³	0	4 57	5 23	5 45	0 59	49	13 22	49
13	17	44.8		50.2	84	29.8 ¹¹³		32.2 ¹²³	10 S	40	5 06	29	1 04	45	19	52
14	32	44.6		50.6	99	00.1 ¹¹³		19.9 ¹²³	20	4 19	4 47	5 12	09	42	15	57
15	47	44.4		51.0	113	30.5 ¹¹⁴	+4	07.5 ¹²⁴	30	3 52	24	4 51	15	37	11	61
16	62	44.1		51.4	128	00.9 ¹¹⁴	+3	55.2 ¹²³	35	35	4 10	39	19	34	09	64
17	77	43.9	-21	51.8	142	31.3 ¹¹⁴	+3	42.8 ¹²⁴	40	3 13	3 54	4 26	1 23	31	13 06	67
18	92	43.7	-21	52.2	157	01.7 ¹¹⁴	+3	30.4 ¹²⁴	45	2 46	3 33	4 09	1 28	28	13 03	70
19	107	43.4		52.5	171	32.2 ¹¹⁵		18.0 ¹²⁴	50	2 07	3 06	3 49	33	24	12 59	75
20	122	43.2		52.9	186	02.8 ¹¹⁶	+3	05.6 ¹²⁴	52	1 45	2 53	39	36	22	58	76
21	137	43.0		53.3	200	33.3 ¹¹⁵	+2	53.2 ¹²⁴	54	1 15	38	28	38	21	56	78
22	152	42.7		53.7	215	03.9 ¹¹⁶		40.8 ¹²⁴	56	0 18	2 19	16	41	19	54	80
23	167	42.5		54.0	229	34.5 ¹¹⁶		28.4 ¹²⁴	58	** **	1 55	3 01	45	15	51	84
24	182	42.2	-21	54.4	244	05.2 ¹¹⁷	+2	15.9 ¹²⁵	60 S	** **	1 23	2 44	1 49	13	12 49	86

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 19 ^h 17 ^m 6		Mag: -4.9 PMG: 9 ^h 10 ^m		Mag: 0.0 PMG: 18 ^h 06 ^m		Mag: -1.7 PMG: 11 ^h 32 ^m		Mag: +0.5 PMG: 13 ^h 53 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	o	'	o	'	o	'	o	'	o	'
0	69	48.1	222	15.0	-9	53.0	186	37.4	-20	29.1
1	84	50.5	237	16.2		53.1	201	39.2		29.2
2	99	53.0	252	17.3		53.2	216	41.1		29.3
3	114	55.5	267	18.5		53.3	231	43.0		29.4
4	129	57.9	282	19.6		53.4	246	44.9		29.5
5	145	00.4	297	20.8	-9	53.5	261	46.8	-20	29.6
6	160	02.9	312	21.9	-9	53.7	276	48.6	-20	29.7
7	175	05.3	327	23.0		53.8	291	50.5		29.8
8	190	07.8	342	24.2		53.9	306	52.4		29.9
9	205	10.3	357	25.3		54.0	321	54.3		30.0
10	220	12.7	12	26.4		54.1	336	56.2		30.1
11	235	15.2	27	27.6	-9	54.3	351	58.0	-20	30.2
12	250	17.7	42	28.7	-9	54.4	268	31.2	-8	56.8
13	265	20.1	57	29.8		54.5	283	32.2		56.1
14	280	22.6	72	30.9		54.6	298	33.1		55.4
15	295	25.0	87	32.1		54.8	313	34.1		54.7
16	310	27.5	102	33.2		54.9	328	35.1		54.0
17	325	30.0	117	34.3	-9	55.0	343	36.1	-8	53.4
18	340	32.4	132	35.4	-9	55.2	358	37.1	-8	52.7
19	355	34.9	147	36.5		55.3	13	38.1		52.0
20	10	37.4	162	37.6		55.4	28	39.1		51.3
21	25	39.8	177	38.7		55.6	43	40.1		50.6
22	40	42.3	192	39.8		55.7	58	41.1		50.0
23	55	44.8	207	40.9		55.8	73	42.0		49.3
24	70	47.2	222	42.0	-9	56.0	88	43.0	-8	48.6
Dif	—		+11		-1		+10		+7	
							+19		-1	
									+22	
									0	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16'2 PMG: 11 ^h 49 ^m 4			Edad: 24 ^d 3 PHE { 4 ^h : 58'1 12 ^h : 57'9 20 ^h : 57'8 R°: 48 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°	
h	o	'	o	'	o	'	o	'	h	m	h	m	h	m	h	m
0	182	42.2	-21	54.4	244	05.2	+2 15.9	60 N	15 02	15 56	16 51	1 34	86	14 05	13	
1	197	42.0		54.8	258	35.8 ¹¹⁶	+2 03.5 ¹²⁴	58	17	16 07	16 58	35	83	06	15	
2	212	41.8		55.2	273	06.5 ¹¹⁷	+1 51.1 ¹²⁴	56	30	16	17 04	36	80	06	18	
3	227	41.5		55.5	287	37.3 ¹¹⁸	38.6 ¹²⁵	54	42	24	09	37	78	07	19	
4	242	41.3		55.9	302	08.0 ¹¹⁷	26.2 ¹²⁴	52	15 52	31	14	38	75	07	21	
5	257	41.0	-21	56.3	316	38.8 ¹¹⁸	+1 13.7 ¹²⁵	50	16 01	16 38	17 19	1 39	73	14 07	23	
6	272	40.8	-21	56.7	331	09.6 ¹¹⁸	+1 01.3 ¹²⁴	45	16 20	16 53	17 29	1 40	69	14 08	27	
7	287	40.6		57.0	345	40.4 ¹¹⁸	+0 48.9 ¹²⁴	40	35	17 05	39	41	66	08	31	
8	302	40.3		57.4	0	11.3 ¹¹⁹	36.4 ¹²⁵	35	16 48	16	47	42	63	09	33	
9	317	40.1		57.8	14	42.1 ¹¹⁸	24.0 ¹²⁴	30	17 00	26	17 55	43	61	09	36	
10	332	39.8		58.1	29	13.0 ¹¹⁹	+0 11.6 ¹²⁴	20	19	43	18 10	45	56	10	40	
11	347	39.6	-21	58.5	43	43.9 ¹¹⁹	-0 00.9 ¹²⁵	10 N	17 37	17 59	18 25	1 46	52	14 10	44	
12	2	39.4	-21	58.9	58	14.8 ¹¹⁹	-0 13.3 ¹²⁴	0	17 53	18 15	18 41	1 48	48	14 11	48	
13	17	39.1		59.3	72	45.8 ¹²⁰	25.7 ¹²⁴	10 S	18 09	32	18 59	49	44	11	52	
14	32	38.9	-21	59.6	87	16.7 ¹¹⁹	38.1 ¹²⁴	20	27	18 51	19 20	51	40	12	55	
15	47	38.6	-22	00.0	101	47.7 ¹²⁰	-0 50.5 ¹²⁴	30	18 48	19 15	19 48	52	36	12	60	
16	62	38.4	-22	00.3	116	18.7 ¹²⁰	-1 02.8 ¹²³	35	19 00	29	20 05	53	34	13	62	
17	77	38.2	-22	00.7	130	49.7 ¹²⁰	-1 15.2 ¹²⁴	40	19 14	19 46	20 26	1 54	31	14 13	65	
18	92	37.9	-22	01.1	145	20.7 ¹²⁰	-1 27.6 ¹²⁴	45	19 31	20 07	20 54	1 56	27	14 13	69	
19	107	37.7		01.4	159	51.7 ¹²⁰	39.9 ¹²³	50	19 51	34	21 35	57	23	14	73	
20	122	37.4		01.8	174	22.8 ¹²¹	-1 52.2 ¹²³	52	20 01	20 48	21 57	58	21	14	75	
21	137	37.2		02.2	188	53.8 ¹²⁰	-2 04.5 ¹²³	54	12	21 04	22 29	1 59	19	14	77	
22	152	36.9		02.5	203	24.9 ¹²¹	16.8 ¹²³	56	25	23	***	2 00	17	14	80	
23	167	36.7		02.9	217	56.0 ¹²¹	29.1 ¹²³	58	40	21 47	***	00	15	15	82	
24	182	36.5	-22	03.2	232	27.0 ¹²⁰	-2 41.3 ¹²²	60 S	20 58	22 21	***	2 02	12	14 15	85	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 19 ^h 13 ^m 7		Mag: -4.9 PMG: 9 ^h 09 ^m			Mag: 0.0 PMG: 18 ^h 04 ^m			Mag: -1.7 PMG: 11 ^h 29 ^m			Mag: +0.5 PMG: 13 ^h 49 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'
0	70	47.2	222	42.0	-9	56.0	88	43.0	-8	48.6	187	22.4	-20	31.6	152	11.3
1	85	49.7	237	43.1		56.1	103	44.0		47.9	202	24.3		31.7	167	13.5
2	100	52.1	252	44.2		56.3	118	45.0		47.2	217	26.2		31.8	182	15.7
3	115	54.6	267	45.3		56.4	133	46.0		46.5	232	28.1		31.9	197	17.8
4	130	57.1	282	46.4		56.6	148	47.0		45.8	247	30.0		32.0	212	20.0
5	145	59.5	297	47.5	-9	56.7	163	48.0	-8	45.2	262	31.8	-20	32.1	227	22.2
6	161	02.0	312	48.6	-9	56.8	178	49.0	-8	44.5	277	33.7	-20	32.2	242	24.3
7	176	04.5	327	49.6		57.0	193	49.9		43.8	292	35.6		32.3	257	26.5
8	191	06.9	342	50.7		57.2	208	50.9		43.1	307	37.5		32.4	272	28.7
9	206	09.4	357	51.8		57.3	223	51.9		42.4	322	39.4		32.5	287	30.8
10	221	11.9	12	52.9		57.5	238	52.9		41.7	337	41.2		32.6	302	33.0
11	236	14.3	27	53.9	-9	57.6	253	53.9	-8	41.1	352	43.1	-20	32.7	317	35.2
12	251	16.8	42	55.0	-9	57.8	268	54.9	-8	40.4	7	45.0	-20	32.8	332	37.4
13	266	19.3	57	56.1		57.9	283	55.9		39.7	22	46.9		32.9	347	39.5
14	281	21.7	72	57.1		58.1	298	56.9		39.0	37	48.7		33.0	2	41.7
15	296	24.2	87	58.2		58.3	313	57.8		38.3	52	50.6		33.1	17	43.9
16	311	26.6	102	59.3		58.4	328	58.8		37.6	67	52.5		33.2	32	46.0
17	326	29.1	118	00.3	-9	58.6	343	59.8	-8	36.9	82	54.4	-20	33.3	47	48.2
18	341	31.6	133	01.4	-9	58.7	359	00.8	-8	36.3	97	56.3	-20	33.4	62	50.4
19	356	34.0	148	02.4		58.9	14	01.8		35.6	112	58.1		33.5	77	52.5
20	11	36.5	163	03.5		59.1	29	02.8		34.9	128	00.0		33.6	92	54.7
21	26	39.0	178	04.5		59.3	44	03.8		34.2	143	01.9		33.7	107	56.9
22	41	41.4	193	05.6		59.4	59	04.7		33.5	158	03.8		33.8	122	59.0
23	56	43.9	208	06.6		59.6	74	05.7		32.8	173	05.6		33.9	138	01.2
24	71	46.4	223	07.7	-9	59.8	89	06.7	-8	32.1	188	07.5	-20	34.0	153	03.4
Dif	—		+11 -2			+10 +7			+19 -1			+22 0				

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'2 PMG: 11 ^h 49 ^m 8			Edad: 25 ^d 3 PHE { 4 ^h : 57'6 12 ^h : 57'5 20 ^h : 57'3 SD: 15'6 PMG: 8 ^h 47 ^m R°: 48 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	o	'	o	'	o	'	o	'	h	m	h	m	h	m	h	m		
0	182	36.5	-22	03.2	232	27.0	-2	41.3	60 N	6 49	7 44	8 39	3 00	84	14 18	13		
1	197	36.2		03.6	246	58.1 ¹²¹	-2	53.5 ¹²²	58	42	33	23	2 58	82	21	16		
2	212	36.0		04.0	261	29.2 ¹²¹	-3	05.7 ¹²²	56	36	24	8 10	56	79	24	18		
3	227	35.7		04.3	276	00.3 ¹²¹		17.9 ¹²²	54	30	16	7 58	55	76	26	21		
4	242	35.5		04.7	290	31.4 ¹²¹		30.1 ¹²²	52	25	08	48	53	75	28	23		
5	257	35.2	-22	05.0	305	02.5 ¹²¹	-3	42.2 ¹²¹	50	6 21	7 02	7 39	2 52	73	14 30	25		
6	272	35.0	-22	05.4	319	33.7 ¹²²	-3	54.3 ¹²¹	45	6 10	6 47	7 20	2 49	69	14 35	28		
7	287	34.7		05.7	334	04.8 ¹²¹	-4	06.4 ¹²¹	40	6 01	34	7 04	47	65	39	31		
8	302	34.5		06.1	348	35.9 ¹²¹		18.5 ¹²¹	35	5 52	23	6 51	45	62	42	34		
9	317	34.2		06.4	3	07.0 ¹²¹		30.5 ¹²⁰	30	44	6 14	40	44	59	45	36		
10	332	34.0		06.8	17	38.2 ¹²²		42.5 ¹²⁰	20	29	5 56	20	41	55	50	41		
11	347	33.8	-22	07.1	32	09.3 ¹²¹	-4	54.5 ¹²⁰	10 N	5 14	5 40	6 02	2 38	51	14 54	45		
12	2	33.5	-22	07.5	46	40.4 ¹²¹	-5	06.4 ¹¹⁹	0	4 58	5 24	5 46	2 36	47	14 59	47		
13	17	33.3		07.8	61	11.6 ¹²²		18.3 ¹¹⁹	10 S	40	5 07	30	33	45	15 03	51		
14	32	33.0		08.2	75	42.7 ¹²¹		30.2 ¹¹⁹	20	4 19	4 48	5 12	31	40	07	55		
15	47	32.8		08.5	90	13.8 ¹²¹		42.0 ¹¹⁸	30	3 51	24	4 51	28	36	12	60		
16	62	32.5		08.9	104	44.9 ¹²¹	-5	53.8 ¹¹⁸	35	34	4 10	39	27	33	15	62		
17	77	32.3	-22	09.2	119	16.1 ¹²²	-6	05.6 ¹¹⁸	40	3 12	3 53	4 25	2 25	31	15 18	65		
18	92	32.0	-22	09.6	133	47.2 ¹²¹	-6	17.3 ¹¹⁷	45	2 44	3 32	4 08	2 23	27	15 22	68		
19	107	31.8		09.9	148	18.3 ¹²¹		29.0 ¹¹⁷	50	2 04	3 05	3 48	20	24	27	72		
20	122	31.5		10.3	162	49.4 ¹²¹		40.7 ¹¹⁷	52	1 41	2 51	38	19	22	29	74		
21	137	31.3		10.6	177	20.5 ¹²¹	-6	52.3 ¹¹⁶	54	1 10	35	26	18	20	31	76		
22	152	31.0		11.0	191	51.6 ¹²¹	-7	03.8 ¹¹⁵	56	***	2 16	3 14	17	18	34	78		
23	167	30.8		11.3	206	22.7 ¹²¹		15.4 ¹¹⁶	58	***	1 52	2 59	15	16	37	81		
24	182	30.5	-22	11.6	220	53.8 ¹²¹	-7	26.9 ¹¹⁵	60 S	***	1 17	2 41	2 14	12	15 40	84		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 19 ^h 09 ^m 8			Mag: -4.9 PMG: 9 ^h 07 ^m			Mag: 0.0 PMG: 18 ^h 02 ^m			Mag: -1.7 PMG: 11 ^h 26 ^m			Mag: +0.5 PMG: 13 ^h 46 ^m					
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'		
0	71	46.4	223	07.7	-9	59.8	89	06.7	-8	32.1	188	07.5	-20	34.0	153	03.4		
1	86	48.8	238	08.7	-9	59.9	104	07.7		31.5	203	09.4		34.1	168	05.5		
2	101	51.3	253	09.7	-10	00.1	119	08.7		30.8	218	11.3		34.2	183	07.7		
3	116	53.7	268	10.8		00.3	134	09.7		30.1	233	13.2		34.3	198	09.9		
4	131	56.2	283	11.8		00.5	149	10.7		29.4	248	15.0		34.4	213	12.0		
5	146	58.7	298	12.8	-10	00.7	164	11.6	-8	28.7	263	16.9	-20	34.5	228	14.2		
6	162	01.1	313	13.9	-10	00.8	179	12.6	-8	28.0	278	18.8	-20	34.6	243	16.4		
7	177	03.6	328	14.9		01.0	194	13.6		27.3	293	20.7		34.7	258	18.6		
8	192	06.1	343	15.9		01.2	209	14.6		26.7	308	22.6		34.8	273	20.7		
9	207	08.5	358	16.9		01.4	224	15.6		26.0	323	24.4		34.9	288	22.9		
10	222	11.0	373	18.0		01.6	239	16.6		25.3	338	26.3		35.0	303	25.1		
11	237	13.5	388	19.0	-10	01.8	254	17.6	-8	24.6	353	28.2	-20	35.1	318	27.2		
12	252	15.9	403	20.0	-10	02.0	269	18.5	-8	23.9	8	30.1	-20	35.2	333	29.4		
13	267	18.4	418	21.0		02.2	284	19.5		23.2	23	31.9		35.3	348	31.6		
14	282	20.9	433	22.0		02.3	299	20.5		22.5	38	33.8		35.4	3	33.7		
15	297	23.3	448	23.0		02.5	314	21.5		21.8	53	35.7		35.5	18	35.9		
16	312	25.8	463	24.0		02.7	329	22.5		21.2	68	37.6		35.6	33	38.1		
17	327	28.2	478	25.0	-10	02.9	344	23.5	-8	20.5	83	39.5	-20	35.7	48	40.2		
18	342	30.7	493	26.0	-10	03.1	359	24.5	-8	19.8	98	41.3	-20	35.8	63	42.4		
19	357	33.2	508	27.0		03.3	374	25.4		19.1	113	43.2		35.9	78	44.6		
20	12	35.6	163	28.0		03.5	29	26.4		18.4	128	45.1		36.0	93	46.7		
21	27	38.1	178	29.0		03.7	44	27.4		17.7	143	47.0		36.1	108	48.9		
22	42	40.6	193	30.0		03.9	59	28.4		17.0	158	48.8		36.2	123	51.1		
23	57	43.0	208	31.0		04.1	74	29.4		16.3	173	50.7		36.3	138	53.2		
24	72	45.5	223	32.0	-10	04.3	89	30.4	-8	15.6	188	52.6	-20	36.4	153	55.4		
Dif	—			+10			-2			+10			+7			+19		

UT	SOL				● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16°2 PMG: 11 ^h 50 ^m 2				Edad: 26 ^d 3 PHE { 4 ^h : 57°1 12 ^h : 57°0 20 ^h : 56°8 PMG: 9 ^h 35 ^m R°: 48 ^m													
	hG ☉	Dec	hG ☾	Dif	Dec	Dif	Civil	Náutico			Hora	R°	Hora	R°				
h	o	/	o	/	o	/	o	/	o	h m	h m	h m	h m m	h m m	h m m	h m m		
0	182	30.5	-22	11.6	220	53.8	-7	26.9	60 N	14 59	15 54	16 50	4 24 84	14 31 16				
1	197	30.3		12.0	235	24.8 ¹²⁰		38.3 ¹¹⁴	58	15 15	16 05	16 57	20 80	37 19				
2	212	30.0		12.3	249	55.9 ¹²¹	-7	49.7 ¹¹⁴	56	29	15	17 03	15 78	42 21				
3	227	29.8		12.7	264	27.0 ¹²¹	-8	01.1 ¹¹⁴	54	40	23	08	11 76	47 23				
4	242	29.5		13.0	278	58.0 ¹²⁰		12.4 ¹¹³	52	15 51	30	14	08 73	51 25				
5	257	29.3	-22	13.3	293	29.0 ¹²⁰	-8	23.6 ¹¹²	50	16 00	16 37	17 18	4 05 71	14 55 27				
6	272	29.0	-22	13.7	308	00.1 ¹²¹	-8	34.8 ¹¹²	45	16 19	16 52	17 29	3 58 67	15 03 31				
7	287	28.8		14.0	322	31.1 ¹²⁰		46.0 ¹¹²	40	35	17 05	39	52 65	10 34				
8	302	28.5		14.3	337	02.1 ¹²⁰	-8	57.1 ¹¹¹	35	16 48	16	47	47 62	16 36				
9	317	28.2		14.7	351	33.1 ¹²⁰	-9	08.2 ¹¹¹	30	17 00	26	17 55	43 59	21 39				
10	332	28.0		15.0	6	04.0 ¹¹⁹		19.2 ¹¹⁰	20	20	17 44	18 11	36 55	31 42				
11	347	27.7	-22	15.3	20	35.0 ¹²⁰	-9	30.1 ¹⁰⁹	10 N	17 37	18 00	18 26	3 29 52	15 39 45				
12	2	27.5	-22	15.7	35	05.9 ¹¹⁹	-9	41.1 ¹¹⁰	0	17 54	18 16	18 42	3 23 49	15 46 49				
13	17	27.2		16.0	49	36.9 ¹²⁰	-9	51.9 ¹⁰⁸	10 S	18 11	33	19 00	18 44	15 54 52				
14	32	27.0		16.3	64	07.8 ¹¹⁹	-10	02.7 ¹⁰⁸	20	28	18 53	22	11 42	16 02 55				
15	47	26.7		16.7	78	38.7 ¹¹⁹		13.4 ¹⁰⁷	30	18 49	19 16	19 49	04 38	12 58				
16	62	26.5		17.0	93	09.6 ¹¹⁹		24.1 ¹⁰⁷	35	19 02	31	20 07	3 00 35	17 61				
17	77	26.2	-22	17.3	107	40.5 ¹¹⁹	-10	34.7 ¹⁰⁶	40	19 16	19 48	20 29	2 56 32	16 23 64				
18	92	26.0	-22	17.7	122	11.3 ¹¹⁸	-10	45.3 ¹⁰⁶	45	19 33	20 09	20 57	2 50 30	16 30 67				
19	107	25.7		18.0	136	42.2 ¹¹⁹	-10	55.8 ¹⁰⁵	50	19 54	37	21 38	44 26	39 71				
20	122	25.4		18.3	151	13.0 ¹¹⁸	-11	06.3 ¹⁰⁵	52	20 04	20 51	22 02	41 24	43 72				
21	137	25.2		18.6	165	43.8 ¹¹⁸		16.6 ¹⁰³	54	15	21 07	22 36	38 22	47 75				
22	152	24.9		19.0	180	14.6 ¹¹⁸		27.0 ¹⁰⁴	56	28	27	*** **	35 19	52 77				
23	167	24.7		19.3	194	45.4 ¹¹⁸		37.2 ¹⁰²	58	20 44	21 52	*** **	31 17	16 58 79				
24	182	24.4	-22	19.6	209	16.1 ¹¹⁷	-11	47.4 ¹⁰²	60 S	21 02	22 29	*** **	2 26 15	17 04 82				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 19 ^h 05 ^m 8		Mag: -4.9 PMG: 9 ^h 05 ^m				Mag: 0.0 PMG: 18 ^h 01 ^m				Mag: -1.7 PMG: 11 ^h 23 ^m				Mag: +0.5 PMG: 13 ^h 42 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	o	/	o	/	o	/	o	/	o	/	o	/	o	/	o	/	o	/
0	72	45.5	223	32.0	-10	04.3	89	30.4	-8	15.6	188	52.6	-20	36.4	153	55.4	-22	39.9
1	87	48.0	238	33.0		04.5	104	31.3		15.0	203	54.5		36.5	168	57.6		39.9
2	102	50.4	253	34.0		04.8	119	32.3		14.3	218	56.4		36.6	183	59.7		39.9
3	117	52.9	268	35.0		05.0	134	33.3		13.6	233	58.2		36.7	199	01.9		39.9
4	132	55.4	283	35.9		05.2	149	34.3		12.9	249	00.1		36.8	214	04.1		39.9
5	147	57.8	298	36.9	-10	05.4	164	35.3	-8	12.2	264	02.0	-20	36.9	229	06.2	-22	39.8
6	163	00.3	313	37.9	-10	05.6	179	36.3	-8	11.5	279	03.9	-20	37.0	244	08.4	-22	39.8
7	178	02.7	328	38.9		05.8	194	37.2		10.8	294	05.7		37.1	259	10.6		39.8
8	193	05.2	343	39.8		06.0	209	38.2		10.1	309	07.6		37.2	274	12.7		39.8
9	208	07.7	358	40.8		06.2	224	39.2		09.4	324	09.5		37.3	289	14.9		39.8
10	223	10.1	373	41.8		06.5	239	40.2		08.8	339	11.4		37.4	304	17.1		39.8
11	238	12.6	388	42.7	-10	06.7	254	41.2	-8	08.1	354	13.3	-20	37.5	319	19.2	-22	39.8
12	253	15.1	403	43.7	-10	06.9	269	42.2	-8	07.4	9	15.1	-20	37.6	334	21.4	-22	39.8
13	268	17.5	418	44.7		07.1	284	43.1		06.7	24	17.0		37.7	349	23.6		39.7
14	283	20.0	433	45.6		07.3	299	44.1		06.0	39	18.9		37.8	4	25.7		39.7
15	298	22.5	448	46.6		07.6	314	45.1		05.3	54	20.8		37.9	19	27.9		39.7
16	313	24.9	463	47.5		07.8	329	46.1		04.6	69	22.7		38.0	34	30.1		39.7
17	328	27.4	478	48.5	-10	08.0	344	47.1	-8	03.9	84	24.5	-20	38.1	49	32.2	-22	39.7
18	343	29.8	493	49.4	-10	08.3	359	48.1	-8	03.2	99	26.4	-20	38.2	64	34.4	-22	39.7
19	358	32.3	508	50.4		08.5	14	49.0		02.5	114	28.3		38.3	79	36.5		39.7
20	13	34.8	163	51.3		08.7	29	50.0		01.9	129	30.2		38.4	94	38.7		39.6
21	28	37.2	178	52.3		08.9	44	51.0		01.2	144	32.0		38.5	109	40.9		39.6
22	43	39.7	193	53.2		09.2	59	52.0	-8	00.5	159	33.9		38.6	124	43.0		39.6
23	58	42.2	208	54.1		09.4	74	53.0	-7	59.8	174	35.8		38.7	139	45.2		39.6
24	73	44.6	223	55.1	-10	09.6	89	54.0	-7	59.1	189	37.7	-20	38.8	154	47.4	-22	39.6
Dif	—		+10		-2		+10		+7		+19		-1		+22		0	

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16/2 PMG: 11 ^h 50 ^m 6				Edad: 27 ^d 3 PHE { 4 ^h : 56/7 12 ^h : 56/5 20 ^h : 56/3 PMG: 10 ^h 23 ^m R°: 49 ^m															
	hG ☉		Dec		hG ☾ Dif		Dec Dif			Náutico	Civil		Hora	R°	Hora	R°				
h	o	'	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m			
0	182	24.4	-22	19.6	209	16.1	-11	47.4	60 N	6 51	7 47	8 42	5 48	81	14 47	20				
1	197	24.2		19.9	223	46.8 ¹¹⁷	-11	57.5 ¹⁰¹	58	45	36	26	40	78	14 56	23				
2	212	23.9		20.2	238	17.5 ¹¹⁷	-12	07.6 ¹⁰¹	56	38	27	13	33	75	15 03	26				
3	227	23.7		20.6	252	48.2 ¹¹⁷		17.6 ¹⁰⁰	54	33	18	8 01	27	73	10	27				
4	242	23.4		20.9	267	18.9 ¹¹⁷		27.5 ⁹⁹	52	28	11	7 51	21	71	16	29				
5	257	23.1	-22	21.2	281	49.6 ¹¹⁷	-12	37.4 ⁹⁹	50	6 23	7 04	7 42	5 16	70	15 22	30				
6	272	22.9	-22	21.5	296	20.2 ¹¹⁶	-12	47.2 ⁹⁸	45	6 12	6 49	7 22	5 05	66	15 34	34				
7	287	22.6		21.8	310	50.8 ¹¹⁶	-12	56.9 ⁹⁷	40	6 02	36	7 06	4 57	63	44	36				
8	302	22.4		22.2	325	21.4 ¹¹⁶	-13	06.6 ⁹⁷	35	5 54	25	6 53	49	61	15 52	39				
9	317	22.1		22.5	339	52.0 ¹¹⁶		16.1 ⁹⁵	30	45	6 15	41	42	59	16 00	41				
10	332	21.8		22.8	354	22.5 ¹¹⁵		25.6 ⁹⁵	20	30	5 57	21	31	55	13	44				
11	347	21.6	-22	23.1	8	53.1 ¹¹⁶	-13	35.1 ⁹⁵	10 N	5 15	5 41	6 03	4 21	52	16 24	47				
12	2	21.3	-22	23.4	23	23.6 ¹¹⁵	-13	44.4 ⁹³	0	4 58	5 25	5 47	4 12	49	16 35	49				
13	17	21.1		23.7	37	54.1 ¹¹⁵	-13	53.7 ⁹³	10 S	40	5 07	30	4 02	46	46	52				
14	32	20.8		24.1	52	24.5 ¹¹⁴	-14	02.9 ⁹²	20	4 19	4 48	5 12	3 53	43	16 57	55				
15	47	20.5		24.4	66	55.0 ¹¹⁵		12.1 ⁹²	30	3 51	24	4 51	42	39	17 10	59				
16	62	20.3		24.7	81	25.4 ¹¹⁴		21.1 ⁹⁰	35	34	4 10	39	35	37	18	60				
17	77	20.0	-22	25.0	95	55.8 ¹¹⁴	-14	30.1 ⁹⁰	40	3 12	3 52	4 25	3 28	35	17 27	62				
18	92	19.8	-22	25.3	110	26.2 ¹¹⁴	-14	39.0 ⁸⁹	45	2 43	3 31	4 08	3 20	32	17 37	65				
19	107	19.5		25.6	124	56.6 ¹¹⁴		47.9 ⁸⁹	50	2 02	3 03	3 47	10	28	50	68				
20	122	19.2		25.9	139	26.9 ¹¹³	-14	56.6 ⁸⁷	52	1 38	2 50	37	05	27	17 55	70				
21	137	19.0		26.2	153	57.2 ¹¹³	-15	05.3 ⁸⁷	54	1 05	33	25	3 00	25	18 02	71				
22	152	18.7		26.5	168	27.5 ¹¹³		13.9 ⁸⁶	56	***	2 14	3 12	2 54	23	09	74				
23	167	18.5		26.8	182	57.8 ¹¹³		22.4 ⁸⁵	58	***	1 48	2 57	48	21	17	76				
24	182	18.2	-22	27.1	197	28.0 ¹¹²	-15	30.8 ⁸⁴	60 S	***	1 12	2 38	2 41	18	18 26	79				
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 19 ^h 01 ^m 9				Mag: -4.9 PMG: 9 ^h 04 ^m				Mag: 0.0 PMG: 17 ^h 59 ^m				Mag: -1.7 PMG: 11 ^h 20 ^m				Mag: +0.5 PMG: 13 ^h 39 ^m			
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'
0	73	44.6	223	55.1	-10	09.6	89	54.0	-7	59.1	189	37.7	-20	38.8	154	47.4	-22	39.6		
1	88	47.1	238	56.0		09.9	104	54.9		58.4	204	39.6		38.9	169	49.5		39.6		
2	103	49.6	253	56.9		10.1	119	55.9		57.7	219	41.4		39.0	184	51.7		39.6		
3	118	52.0	268	57.9		10.4	134	56.9		57.0	234	43.3		39.1	199	53.9		39.6		
4	133	54.5	283	58.8		10.6	149	57.9		56.3	249	45.2		39.2	214	56.0		39.5		
5	148	57.0	298	59.7	-10	10.8	164	58.9	-7	55.6	264	47.1	-20	39.3	229	58.2	-22	39.5		
6	163	59.4	314	00.7	-10	11.1	179	59.9	-7	54.9	279	48.9	-20	39.4	245	00.4	-22	39.5		
7	179	01.9	329	01.6		11.3	195	00.8		54.3	294	50.8		39.5	260	02.5		39.5		
8	194	04.3	344	02.5		11.6	210	01.8		53.6	309	52.7		39.6	275	04.7		39.5		
9	209	06.8	359	03.4		11.8	225	02.8		52.9	324	54.6		39.7	290	06.9		39.5		
10	224	09.3	14	04.3		12.1	240	03.8		52.2	339	56.5		39.8	305	09.0		39.5		
11	239	11.7	29	05.2	-10	12.3	255	04.8	-7	51.5	354	58.3	-20	39.9	320	11.2	-22	39.4		
12	254	14.2	44	06.2	-10	12.6	270	05.7	-7	50.8	10	00.2	-20	40.0	335	13.4	-22	39.4		
13	269	16.7	59	07.1		12.8	285	06.7		50.1	25	02.1		40.1	350	15.5		39.4		
14	284	19.1	74	08.0		13.1	300	07.7		49.4	40	04.0		40.2	5	17.7		39.4		
15	299	21.6	89	08.9		13.3	315	08.7		48.7	55	05.8		40.3	20	19.8		39.4		
16	314	24.1	104	09.8		13.6	330	09.7		48.0	70	07.7		40.4	35	22.0		39.4		
17	329	26.5	119	10.7	-10	13.8	345	10.6	-7	47.3	85	09.6	-20	40.5	50	24.2	-22	39.4		
18	344	29.0	134	11.6	-10	14.1	0	11.6	-7	46.6	100	11.5	-20	40.6	65	26.3	-22	39.3		
19	359	31.5	149	12.5		14.3	15	12.6		45.9	115	13.4		40.7	80	28.5		39.3		
20	14	33.9	164	13.4		14.6	30	13.6		45.3	130	15.2		40.8	95	30.7		39.3		
21	29	36.4	179	14.3		14.9	45	14.6		44.6	145	17.1		40.9	110	32.8		39.3		
22	44	38.8	194	15.2		15.1	60	15.5		43.9	160	19.0		41.0	125	35.0		39.3		
23	59	41.3	209	16.0		15.4	75	16.5		43.2	175	20.9		41.1	140	37.2		39.3		
24	74	43.8	224	16.9	-10	15.7	90	17.5	-7	42.5	190	22.8	-20	41.2	155	39.3	-22	39.3		
Dif	—		+9		-3		+10		+7		+19		-1		+22					

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16°2 PMG: 11 ^h 51 ^m 0			Edad: 28 ^d 3 PHE { 4 ^h : 56°2 12 ^h : 56°0 20 ^h : 55°9 SD: 15°3 PMG: 11 ^h 12 ^m R°: 50 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	o	'	o	'	o	'	o	h m	h m	h m	h m m	h m m	h m m	h m m
0	182	18.2	-22 27.1	197	28.0	-15 30.8	60 N	14 58	15 53	16 49	7 09 76	15 07 27		
1	197	17.9	27.4	211	58.3 ¹¹³	39.1 ⁸³	58	15 14	16 04	16 56	6 58 73	19 29		
2	212	17.7	27.7	226	28.5 ¹¹²	47.4 ⁸³	56	27	14	17 02	48 72	29 31		
3	227	17.4	28.0	240	58.6 ¹¹¹	-15 55.5 ⁸¹	54	39	22	08	40 69	37 33		
4	242	17.1	28.3	255	28.8 ¹¹²	-16 03.6 ⁸¹	52	50	30	13	32 68	45 35		
5	257	16.9	-22 28.7	269	59.0 ¹¹²	-16 11.6 ⁸⁰	50	15 59	16 37	17 18	6 26 66	15 52 36		
6	272	16.6	-22 29.0	284	29.1 ¹¹¹	-16 19.5 ⁷⁹	45	16 19	16 52	17 29	6 11 64	16 08 38		
7	287	16.3	29.3	298	59.2 ¹¹¹	27.4 ⁷⁹	40	35	17 05	39	6 00 61	20 41		
8	302	16.1	29.6	313	29.3 ¹¹¹	35.1 ⁷⁷	35	16 48	16	47	5 50 59	31 42		
9	317	15.8	29.8	327	59.3 ¹¹⁰	42.7 ⁷⁶	30	17 00	26	17 56	41 57	41 43		
10	332	15.6	30.1	342	29.3 ¹¹⁰	50.3 ⁷⁶	20	20	17 44	18 11	26 54	16 57 46		
11	347	15.3	-22 30.4	356	59.4 ¹¹¹	-16 57.8 ⁷⁵	10 N	17 38	18 01	18 27	5 13 52	17 11 48		
12	2	15.0	-22 30.7	11	29.4 ¹¹⁰	-17 05.1 ⁷³	0	17 55	18 17	18 43	5 01 49	17 24 51		
13	17	14.8	31.0	25	59.3 ¹⁰⁹	12.4 ⁷³	10 S	18 12	34	19 01	4 48 48	38 52		
14	32	14.5	31.3	40	29.3 ¹¹⁰	19.6 ⁷²	20	30	18 54	23	36 45	17 52 54		
15	47	14.2	31.6	54	59.2 ¹⁰⁹	26.7 ⁷¹	30	18 51	19 18	19 51	21 42	18 09 56		
16	62	14.0	31.9	69	29.1 ¹⁰⁹	33.7 ⁷⁰	35	19 03	33	20 09	12 41	18 58		
17	77	13.7	-22 32.2	83	59.0 ¹⁰⁹	-17 40.7 ⁷⁰	40	19 18	19 50	20 31	4 03 38	18 29 60		
18	92	13.4	-22 32.5	98	28.9 ¹⁰⁹	-17 47.5 ⁶⁸	45	19 35	20 12	21 00	3 52 36	18 42 62		
19	107	13.2	32.8	112	58.8 ¹⁰⁹	-17 54.2 ⁶⁷	50	19 56	40	21 42	38 33	18 58 64		
20	122	12.9	33.1	127	28.6 ¹⁰⁸	-18 00.9 ⁶⁷	52	20 07	20 54	22 06	32 32	19 05 65		
21	137	12.6	33.4	141	58.4 ¹⁰⁸	07.4 ⁶⁵	54	18	21 11	22 42	25 30	13 67		
22	152	12.4	33.7	156	28.2 ¹⁰⁸	13.8 ⁶⁴	56	31	31	***	17 28	23 68		
23	167	12.1	33.9	170	58.0 ¹⁰⁸	20.2 ⁶⁴	58	20 47	21 57	***	3 09 25	33 71		
24	182	11.8	-22 34.2	185	27.8 ¹⁰⁸	-18 26.4 ⁶²	60 S	21 06	22 36	***	2 59 23	19 45 73		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 18 ^h 58 ^m 0		Mag: -4.8 PMG: 9 ^h 02 ^m		Mag: +0.1 PMG: 17 ^h 58 ^m		Mag: -1.7 PMG: 11 ^h 17 ^m		Mag: +0.5 PMG: 13 ^h 35 ^m					
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄					
h	o	'	o	'	o	'	o	'	o	'				
0	74	43.8	224	16.9	90	17.5	190	22.8	155	39.3				
1	89	46.2	239	17.8	105	18.5	205	24.6	170	41.5				
2	104	48.7	254	18.7	120	19.5	220	26.5	185	43.7				
3	119	51.2	269	19.6	135	20.5	235	28.4	200	45.8				
4	134	53.6	284	20.5	150	21.4	250	30.3	215	48.0				
5	149	56.1	299	21.3	165	22.4	265	32.1	230	50.1				
6	164	58.6	314	22.2	180	23.4	280	34.0	245	52.3				
7	180	01.0	329	23.1	195	24.4	295	35.9	260	54.5				
8	195	03.5	344	24.0	210	25.4	310	37.8	275	56.6				
9	210	06.0	359	24.8	225	26.3	325	39.7	290	58.8				
10	225	08.4	14	25.7	240	27.3	340	41.5	306	01.0				
11	240	10.9	29	26.6	255	28.3	355	43.4	321	03.1				
12	255	13.3	44	27.4	270	29.3	10	45.3	336	05.3				
13	270	15.8	59	28.3	285	30.2	25	47.2	351	07.4				
14	285	18.3	74	29.1	300	31.2	40	49.0	6	09.6				
15	300	20.7	89	30.0	315	32.2	55	50.9	21	11.8				
16	315	23.2	104	30.8	330	33.2	70	52.8	36	13.9				
17	330	25.7	119	31.7	345	34.2	85	54.7	51	16.1				
18	345	28.1	134	32.5	0	35.1	100	56.6	66	18.3				
19	0	30.6	149	33.4	15	36.1	115	58.4	81	20.4				
20	15	33.1	164	34.2	30	37.1	131	00.3	96	22.6				
21	30	35.5	179	35.1	45	38.1	146	02.2	111	24.7				
22	45	38.0	194	35.9	60	39.1	161	04.1	126	26.9				
23	60	40.4	209	36.8	75	40.0	176	06.0	141	29.1				
24	75	42.9	224	37.6	90	41.0	191	07.8	156	31.2				
Dif	—		+9 -3		+10 +7		+19 -1		+22 0					

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16:2 PMG: 11 ^h 51 ^m 4			Edad: 29 ^d 3 PHE { SD: 15:1 PMG: 12 ^h 02 ^m												
				R°: 51 ^m												
	hG ☉		Dec	hG ☾ Dif		Dec Dif		Náutico	Civil		Hora	R°	Hora	R°		
h	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m	
0	182	11.8	-22	34.2	185	27.8	-18	26.4	60 N	6 54	7 50	8 46	8 25	69	15 34	35
1	197	11.6		34.5	199	57.6 ¹⁰⁸		32.6 ⁶²	58	47	39	30	11	67	15 48	37
2	212	11.3		34.8	214	27.3 ¹⁰⁷		38.6 ⁶⁰	56	41	29	16	8 00	64	16 00	39
3	227	11.0		35.1	228	57.0 ¹⁰⁷		44.6 ⁶⁰	54	35	21	8 04	7 49	64	10	41
4	242	10.7		35.4	243	26.7 ¹⁰⁷		50.5 ⁵⁹	52	30	13	7 53	40	62	20	41
5	257	10.5	-22	35.7	257	56.4 ¹⁰⁷	-18	56.2 ⁵⁷	50	6 25	7 06	7 44	7 32	61	16 28	42
6	272	10.2	-22	35.9	272	26.1 ¹⁰⁷	-19	01.9 ⁵⁷	45	6 14	6 51	7 24	7 15	59	16 46	44
7	287	09.9		36.2	286	55.8 ¹⁰⁷		07.4 ⁵⁵	40	6 04	38	7 08	7 01	57	17 01	45
8	302	09.7		36.5	301	25.4 ¹⁰⁶		12.9 ⁵⁵	35	5 55	27	6 55	6 49	56	13	47
9	317	09.4		36.8	315	55.1 ¹⁰⁷		18.3 ⁵⁴	30	47	6 16	43	38	56	24	47
10	332	09.1		37.1	330	24.7 ¹⁰⁶		23.5 ⁵²	20	31	5 58	22	20	54	43	48
11	347	08.9	-22	37.3	344	54.3 ¹⁰⁶	-19	28.7 ⁵²	10 N	5 16	5 42	6 04	6 05	52	17 59	50
12	2	08.6	-22	37.6	359	23.9 ¹⁰⁶	-19	33.7 ⁵⁰	0	4 59	5 25	5 48	5 50	51	18 15	50
13	17	08.3		37.9	13	53.5 ¹⁰⁶		38.7 ⁵⁰	10 S	41	5 08	31	36	49	30	51
14	32	08.0		38.2	28	23.1 ¹⁰⁶		43.5 ⁴⁸	20	4 19	4 48	5 13	21	47	18 46	53
15	47	07.8		38.4	42	52.6 ¹⁰⁵		48.3 ⁴⁸	30	3 51	24	4 51	5 03	46	19 05	54
16	62	07.5		38.7	57	22.2 ¹⁰⁶		52.9 ⁴⁶	35	33	4 10	39	4 53	44	16	55
17	77	07.2	-22	39.0	71	51.8 ¹⁰⁶	-19	57.5 ⁴⁶	40	3 11	3 52	4 25	4 41	43	19 29	55
18	92	07.0	-22	39.3	86	21.3 ¹⁰⁵	-20	01.9 ⁴⁴	45	2 42	3 31	4 07	4 28	41	19 44	56
19	107	06.7		39.5	100	50.8 ¹⁰⁵		06.2 ⁴³	50	2 00	3 02	3 46	11	39	20 02	58
20	122	06.4		39.8	115	20.4 ¹⁰⁶		10.5 ⁴³	52	1 36	2 48	36	4 04	37	10	59
21	137	06.1		40.1	129	49.9 ¹⁰⁵		14.6 ⁴¹	54	1 00	32	24	3 55	36	20	60
22	152	05.9		40.4	144	19.4 ¹⁰⁵		18.6 ⁴⁰	56	***	2 11	3 11	45	35	31	60
23	167	05.6		40.6	158	48.9 ¹⁰⁵		22.5 ³⁹	58	***	1 45	2 55	34	34	44	61
24	182	05.3	-22	40.9	173	18.4 ¹⁰⁵	-20	26.3 ³⁸	60 S	***	1 07	2 36	3 22	31	20 58	63

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 18 ^h 54 ^m 0		Mag: -4.8 PMG: 9 ^h 01 ^m		Mag: +0.1 PMG: 17 ^h 56 ^m		Mag: -1.7 PMG: 11 ^h 14 ^m		Mag: +0.5 PMG: 13 ^h 32 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	o	'	o	'	o	'	o	'	o	'
0	75	42.9	224	37.6	-10	22.3	191	07.8	-20	43.5
1	90	45.4	239	38.4		22.6	206	09.7		43.6
2	105	47.8	254	39.3		22.9	221	11.6		43.7
3	120	50.3	269	40.1		23.2	236	13.5		43.8
4	135	52.8	284	40.9		23.5	251	15.3		43.9
5	150	55.2	299	41.8	-10	23.8	266	17.2	-20	44.0
6	165	57.7	314	42.6	-10	24.1	281	19.1	-20	44.1
7	181	00.2	329	43.4		24.4	296	21.0		44.2
8	196	02.6	344	44.2		24.7	311	22.9		44.3
9	211	05.1	359	45.1		25.0	326	24.7		44.4
10	226	07.6	14	45.9		25.3	341	26.6		44.5
11	241	10.0	29	46.7	-10	25.6	356	28.5	-20	44.6
12	256	12.5	44	47.5	-10	25.9	11	30.4	-20	44.7
13	271	14.9	59	48.3		26.2	26	32.3		44.8
14	286	17.4	74	49.1		26.5	41	34.1		44.9
15	301	19.9	89	50.0		26.8	56	36.0		45.0
16	316	22.3	104	50.8		27.1	71	37.9		45.1
17	331	24.8	119	51.6	-10	27.4	86	39.8	-20	45.2
18	346	27.3	134	52.4	-10	27.8	101	41.6	-20	45.3
19	1	29.7	149	53.2		28.1	116	43.5		45.4
20	16	32.2	164	54.0		28.4	131	45.4		45.5
21	31	34.7	179	54.8		28.7	146	47.3		45.5
22	46	37.1	194	55.6		29.0	161	49.2		45.6
23	61	39.6	209	56.4		29.3	176	51.0		45.7
24	76	42.1	224	57.2	-10	29.6	191	52.9	-20	45.8
Dif	—		+8		-3		+19		-1	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:2			Edad: 30 ^d 3 PHE	SD: 15:0				Final del crepúsculo		Salida de Luna		Puesta de Luna	
	PMG: 11 ^h 51 ^m 9				PMG: 12 ^h 53 ^m				R°: 50 ^m					
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	o	'	o	'	o	'	o	°	h m	h m	h m	h m m	h m m	h m m
0	182	05.3	-22	40.9	173	18.4	-20 26.3	60 N	14 56	15 52	16 48	9 34 56	16 09 47	
1	197	05.0		41.2	187	47.9 ¹⁰⁵	30.0 37	58	15 12	16 03	16 55	18 56	25 48	
2	212	04.8		41.4	202	17.4 ¹⁰⁵	33.6 36	56	26	13	17 01	9 04 56	39 48	
3	227	04.5		41.7	216	46.9 ¹⁰⁵	37.1 35	54	38	22	07	8 53 55	16 51 48	
4	242	04.2		42.0	231	16.4 ¹⁰⁵	40.5 34	52	49	29	13	42 55	17 01 49	
5	257	04.0	-22	42.2	245	45.9 ¹⁰⁵	-20 43.8 33	50	15 58	16 36	17 18	8 33 55	17 10 49	
6	272	03.7	-22	42.5	260	15.4 ¹⁰⁵	-20 46.9 31	45	16 18	16 52	17 29	8 14 54	17 30 49	
7	287	03.4		42.7	274	44.9 ¹⁰⁵	50.0 31	40	35	17 05	39	7 58 53	17 46 49	
8	302	03.1		43.0	289	14.4 ¹⁰⁵	53.0 30	35	16 48	16	48	45 53	18 00 49	
9	317	02.9		43.3	303	43.9 ¹⁰⁵	55.8 28	30	17 00	26	17 56	34 52	11 50	
10	332	02.6		43.5	318	13.4 ¹⁰⁵	-20 58.5 27	20	21	17 45	18 12	7 14 51	31 50	
11	347	02.3	-22	43.8	332	42.9 ¹⁰⁵	-21 01.2 27	10 N	17 39	18 01	18 28	6 57 51	18 49 50	
12	2	02.0	-22	44.1	347	12.4 ¹⁰⁵	-21 03.7 25	0	17 56	18 18	18 44	6 41 50	19 05 50	
13	17	01.8		44.3	1	41.9 ¹⁰⁵	06.1 24	10 S	18 13	36	19 03	25 50	21 51	
14	32	01.5		44.6	16	11.4 ¹⁰⁵	08.4 23	20	31	18 55	24	6 08 49	39 50	
15	47	01.2		44.8	30	41.0 ¹⁰⁶	10.6 22	30	18 52	19 20	19 53	5 49 48	19 59 50	
16	62	00.9		45.1	45	10.5 ¹⁰⁵	12.7 21	35	19 05	34	20 11	37 48	20 11 50	
17	77	00.6	-22	45.3	59	40.0 ¹⁰⁵	-21 14.7 20	40	19 20	19 52	20 33	5 24 47	20 24 51	
18	92	00.4	-22	45.6	74	09.6 ¹⁰⁶	-21 16.6 19	45	19 37	20 14	21 03	5 09 46	20 40 51	
19	107	00.1		45.8	88	39.1 ¹⁰⁵	18.4 18	50	19 59	42	21 45	4 50 46	21 00 50	
20	121	59.8		46.1	103	08.7 ¹⁰⁶	20.1 17	52	20 09	20 57	22 11	41 45	09 51	
21	136	59.5		46.3	117	38.2 ¹⁰⁵	21.6 15	54	21	21 14	22 48	31 45	20 50	
22	151	59.3		46.6	132	07.8 ¹⁰⁶	23.1 15	56	34	21 34	** ** *	20 44	31 51	
23	166	59.0		46.9	146	37.4 ¹⁰⁶	24.4 13	58	20 50	22 01	** ** *	4 08 42	21 45 51	
24	181	58.7	-22	47.1	161	07.0 ¹⁰⁶	-21 25.7 13	60 S	21 09	22 42	** ** *	3 53 41	22 01 51	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 18 ^h 50 ^m 1		Mag: -4.8 PMG: 9 ^h 00 ^m			Mag: +0.1 PMG: 17 ^h 55 ^m			Mag: -1.7 PMG: 11 ^h 11 ^m			Mag: +0.5 PMG: 13 ^h 29 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'
0	76	42.1	224	57.2	-10	29.6	91	04.5	-7 09.1	191	52.9	-20 45.8	157	23.1
1	91	44.5	239	57.9		30.0	106	05.5	08.4	206	54.8	45.9	172	25.3
2	106	47.0	254	58.7		30.3	121	06.4	07.7	221	56.7	46.0	187	27.4
3	121	49.4	269	59.5		30.6	136	07.4	07.0	236	58.6	46.1	202	29.6
4	136	51.9	285	00.3		30.9	151	08.4	06.3	252	00.4	46.2	217	31.8
5	151	54.4	300	01.1	-10	31.2	166	09.4	-7 05.6	267	02.3	-20 46.3	232	33.9
6	166	56.8	315	01.9	-10	31.6	181	10.3	-7 04.9	282	04.2	-20 46.4	247	36.1
7	181	59.3	330	02.6		31.9	196	11.3	04.2	297	06.1	46.5	262	38.2
8	197	01.8	345	03.4		32.2	211	12.3	03.5	312	08.0	46.6	277	40.4
9	212	04.2	0	04.2		32.5	226	13.3	02.8	327	09.8	46.7	292	42.6
10	227	06.7	15	05.0		32.9	241	14.3	02.1	342	11.7	46.8	307	44.7
11	242	09.2	30	05.7	-10	33.2	256	15.2	-7 01.4	357	13.6	-20 46.9	322	46.9
12	257	11.6	45	06.5	-10	33.5	271	16.2	-7 00.7	12	15.5	-20 47.0	337	49.0
13	272	14.1	60	07.3		33.9	286	17.2	-7 00.0	27	17.3	47.1	352	51.2
14	287	16.6	75	08.0		34.2	301	18.2	-6 59.3	42	19.2	47.2	7	53.4
15	302	19.0	90	08.8		34.5	316	19.1	58.6	57	21.1	47.3	22	55.5
16	317	21.5	105	09.6		34.9	331	20.1	57.9	72	23.0	47.4	37	57.7
17	332	23.9	120	10.3	-10	35.2	346	21.1	-6 57.2	87	24.9	-20 47.5	52	59.8
18	347	26.4	135	11.1	-10	35.5	1	22.1	-6 56.5	102	26.7	-20 47.6	68	02.0
19	2	28.9	150	11.8		35.9	16	23.0	55.8	117	28.6	47.7	83	04.2
20	17	31.3	165	12.6		36.2	31	24.0	55.1	132	30.5	47.8	98	06.3
21	32	33.8	180	13.4		36.5	46	25.0	54.4	147	32.4	47.9	113	08.5
22	47	36.3	195	14.1		36.9	61	26.0	53.7	162	34.3	48.0	128	10.6
23	62	38.7	210	14.9		37.2	76	26.9	53.0	177	36.1	48.0	143	12.8
24	77	41.2	225	15.6	-10	37.6	91	27.9	-6 52.3	192	38.0	-20 48.1	158	15.0
Dif	—		+8 -3			+10 +7			+19 -1			+22 0		

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'2 PMG: 11 ^h 52 ^m 3			Edad: 1 ^d 7 PHE { 4 ^h : 54'8 12 ^h : 54'7 20 ^h : 54'6 SD: 14'9 PMG: 13 ^h 43 ^m R°: 50 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	o	'	o	'	o	'	o	'	h	m	h	m	h	m	h	m
0	181	58.7	-22	47.1	161	07.0	-21	25.7	60 N	6 57	7 53	8 49	10 30	44	16 56	58
1	196	58.4		47.4	175	36.6 ¹⁰⁶		26.8	58	50	42	32	14	45	17 13	57
2	211	58.1		47.6	190	06.2 ¹⁰⁶		27.8	56	43	32	18	10 00	45	27	56
3	226	57.9		47.8	204	35.9 ¹⁰⁷		28.7	54	37	23	8 06	9 48	46	39	55
4	241	57.6		48.1	219	05.5 ¹⁰⁶		29.5	52	32	15	7 56	37	46	50	55
5	256	57.3	-22	48.3	233	35.2 ¹⁰⁷	-21	30.2	50	6 27	7 08	7 46	9 28	46	17 59	55
6	271	57.0	-22	48.6	248	04.9 ¹⁰⁷	-21	30.8	45	6 16	6 53	7 26	9 08	47	18 19	54
7	286	56.8		48.8	262	34.6 ¹⁰⁷		31.3	40	6 06	40	7 10	8 51	48	35	53
8	301	56.5		49.1	277	04.3 ¹⁰⁷		31.7	35	5 57	28	6 56	38	48	18 49	52
9	316	56.2		49.3	291	34.1 ¹⁰⁸		32.0	30	48	18	44	26	48	19 01	51
10	331	55.9		49.6	306	03.8 ¹⁰⁷		32.2	20	32	6 00	24	8 05	49	21	51
11	346	55.6	-22	49.8	320	33.6 ¹⁰⁸	-21	32.2	10 N	5 17	5 43	6 06	7 48	49	19 39	50
12	1	55.4	-22	50.0	335	03.4 ¹⁰⁸	-21	32.2	0	5 00	5 26	5 49	7 31	50	19 55	49
13	16	55.1		50.3	349	33.2 ¹⁰⁸		32.0	10 S	4 42	5 09	31	7 15	50	20 12	48
14	31	54.8		50.5	4	03.0 ¹⁰⁸		31.8	20	4 20	4 49	5 13	6 57	50	29	48
15	46	54.5		50.8	18	32.9 ¹⁰⁹		31.4	30	3 51	24	4 52	37	50	20 49	47
16	61	54.2		51.0	33	02.8 ¹⁰⁹		31.0	35	33	4 10	39	25	51	21 01	46
17	76	54.0	-22	51.2	47	32.7 ¹⁰⁹	-21	30.4	40	3 11	3 52	4 24	6 11	51	21 15	45
18	91	53.7	-22	51.5	62	02.6 ¹⁰⁹	-21	29.7	45	2 41	3 30	4 07	5 55	52	21 31	44
19	106	53.4		51.7	76	32.6 ¹¹⁰		29.0	50	1 59	3 02	3 45	36	51	21 50	43
20	121	53.1		51.9	91	02.6 ¹¹⁰		28.1	52	1 33	2 47	35	26	52	22 00	42
21	136	52.8		52.2	105	32.6 ¹¹⁰		27.1	54	0 56	30	23	16	52	10	42
22	151	52.5		52.4	120	02.6 ¹¹⁰		26.0	56	***	2 09	3 10	5 04	52	22	40
23	166	52.3		52.6	134	32.7 ¹¹¹		24.8	58	***	1 42	2 54	4 50	52	36	39
24	181	52.0	-22	52.9	149	02.7 ¹¹⁰	-21	23.5	60 S	***	1 02	2 34	4 34	52	22 52	38
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 18 ^h 46 ^m 2			Mag: -4.8 PMG: 8 ^h 59 ^m			Mag: +0.1 PMG: 17 ^h 53 ^m			Mag: -1.8 PMG: 11 ^h 08 ^m			Mag: +0.5 PMG: 13 ^h 25 ^m			
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec	
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'
0	77	41.2	225	15.6	-10	37.6	91	27.9	-6	52.3	192	38.0	-20	48.1	158	15.0
1	92	43.7	240	16.4		37.9	106	28.9		51.6	207	39.9		48.2	173	17.1
2	107	46.1	255	17.1		38.2	121	29.9		50.9	222	41.8		48.3	188	19.3
3	122	48.6	270	17.8		38.6	136	30.8		50.2	237	43.7		48.4	203	21.4
4	137	51.1	285	18.6		38.9	151	31.8		49.5	252	45.5		48.5	218	23.6
5	152	53.5	300	19.3	-10	39.3	166	32.8	-6	48.8	267	47.4	-20	48.6	233	25.8
6	167	56.0	315	20.1	-10	39.6	181	33.8	-6	48.1	282	49.3	-20	48.7	248	27.9
7	182	58.4	330	20.8		40.0	196	34.7		47.4	297	51.2		48.8	263	30.1
8	198	00.9	345	21.5		40.3	211	35.7		46.7	312	53.0		48.9	278	32.2
9	213	03.4	0	22.3		40.7	226	36.7		46.0	327	54.9		49.0	293	34.4
10	228	05.8	15	23.0		41.0	241	37.7		45.3	342	56.8		49.1	308	36.6
11	243	08.3	30	23.7	-10	41.4	256	38.6	-6	44.6	357	58.7	-20	49.2	323	38.7
12	258	10.8	45	24.4	-10	41.7	271	39.6	-6	43.9	13	00.6	-20	49.3	338	40.9
13	273	13.2	60	25.2		42.1	286	40.6		43.2	28	02.4		49.4	353	43.0
14	288	15.7	75	25.9		42.4	301	41.6		42.5	43	04.3		49.5	8	45.2
15	303	18.2	90	26.6		42.8	316	42.5		41.8	58	06.2		49.6	23	47.4
16	318	20.6	105	27.3		43.2	331	43.5		41.1	73	08.1		49.7	38	49.5
17	333	23.1	120	28.0	-10	43.5	346	44.5	-6	40.4	88	10.0	-20	49.8	53	51.7
18	348	25.6	135	28.7	-10	43.9	1	45.5	-6	39.7	103	11.8	-20	49.9	68	53.8
19	3	28.0	150	29.5		44.2	16	46.4		39.0	118	13.7		49.9	83	56.0
20	18	30.5	165	30.2		44.6	31	47.4		38.3	133	15.6		50.0	98	58.1
21	33	32.9	180	30.9		45.0	46	48.4		37.6	148	17.5		50.1	114	00.3
22	48	35.4	195	31.6		45.3	61	49.3		36.9	163	19.4		50.2	129	02.5
23	63	37.9	210	32.3		45.7	76	50.3		36.2	178	21.2		50.3	144	04.6
24	78	40.3	225	33.0	-10	46.0	91	51.3	-6	35.5	193	23.1	-20	50.4	159	06.8
Dif	—		+7		-4		+10		+7		+19		-1		+22	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16°2 PMG: 11 ^h 52 ^m 8			Edad: 2 ^d 7 PHE { 4 ^h : 54/5 12 ^h : 54/4 20 ^h : 54/3 SD: 14°8 PMG: 14 ^h 33 ^m R°: 47 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	o	'	o	'	o	'	o	h m	h m	h m	h m	h m	h m	
0	181	52.0	-22 52.9	149	02.7	-21 23.5	14	60 N	14 55	15 51	16 47	11 14 32	17 54 67	
1	196	51.7		163	32.9 ¹¹²	22.1	15	58	15 11	16 02	16 55	10 59 34	18 10 64	
2	211	51.4	53.3	178	03.0 ¹¹¹	20.6	15	56	26	12	17 01	45 36	23 62	
3	226	51.1	53.6	192	33.2 ¹¹²	19.0	16	54	38	21	07	34 37	34 61	
4	241	50.8	53.8	207	03.4 ¹¹²	17.3	17	52	49	29	13	23 38	45 59	
5	256	50.6	-22 54.0	221	33.6 ¹¹²	-21 15.5	18	50	15 58	16 36	17 18	10 14 39	18 54 58	
6	271	50.3	-22 54.2	236	03.9 ¹¹³	-21 13.6	19	45	16 18	16 52	17 29	9 55 41	19 13 56	
7	286	50.0	54.5	250	34.2 ¹¹³	11.6	20	40	35	17 05	39	39 42	28 55	
8	301	49.7	54.7	265	04.5 ¹¹³	09.5	21	35	16 48	17	48	26 43	41 54	
9	316	49.4	54.9	279	34.8 ¹¹³	07.3	22	30	17 01	27	17 57	9 14 44	19 52 53	
10	331	49.1	55.1	294	05.2 ¹¹⁴	05.0	23	20	21	17 45	18 13	8 54 46	20 12 50	
11	346	48.9	-22 55.4	308	35.7 ¹¹⁵	-21 02.6	24	10 N	17 39	18 02	18 28	8 37 47	20 29 49	
12	1	48.6	-22 55.6	323	06.1 ¹¹⁴	-21 00.1	25	0	17 56	18 19	18 45	8 21 48	20 44 48	
13	16	48.3	55.8	337	36.6 ¹¹⁵	-20 57.5	26	10 S	18 14	37	19 04	8 05 49	21 00 46	
14	31	48.0	56.0	352	07.1 ¹¹⁵	54.8	27	20	32	18 57	26	7 47 51	17 44	
15	46	47.7	56.2	6	37.7 ¹¹⁶	52.1	27	30	18 54	19 21	19 54	27 53	36 42	
16	61	47.4	56.5	21	08.3 ¹¹⁶	49.2	29	35	19 07	36	20 13	16 53	21 47 41	
17	76	47.1	-22 56.7	35	38.9 ¹¹⁶	-20 46.2	30	40	19 21	19 54	20 35	7 02 54	22 00 39	
18	91	46.9	-22 56.9	50	09.6 ¹¹⁷	-20 43.1	31	45	19 39	20 16	21 05	6 47 55	22 15 38	
19	106	46.6	57.1	64	40.3 ¹¹⁷	39.9	32	50	20 01	45	21 49	27 57	33 36	
20	121	46.3	57.3	79	11.0 ¹¹⁷	36.6	33	52	11	20 59	22 14	18 57	42 34	
21	136	46.0	57.5	93	41.8 ¹¹⁸	33.3	33	54	23	21 17	22 54	6 08 58	22 52 33	
22	151	45.7	57.8	108	12.6 ¹¹⁸	29.8	35	56	37	21 38	*** **	5 56 59	23 02 32	
23	166	45.4	58.0	122	43.5 ¹¹⁹	26.3	35	58	20 53	22 06	*** **	42 61	15 30	
24	181	45.1	-22 58.2	137	14.3 ¹¹⁸	-20 22.6	37	60 S	21 13	22 49	*** **	5 26 63	23 30 27	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 18 ^h 42 ^m 2		Mag: -4.8 PMG: 8 ^h 57 ^m			Mag: +0.1 PMG: 17 ^h 51 ^m			Mag: -1.8 PMG: 11 ^h 05 ^m			Mag: +0.5 PMG: 13 ^h 22 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'
0	78	40.3	225 33.0	-10 46.0	91 51.3	-6 35.5	193 23.1	-20 50.4	159 06.8	-22 37.9				
1	93	42.8	240 33.7	46.4	106 52.3	34.8	208 25.0	50.5	174 08.9	37.9				
2	108	45.3	255 34.4	46.8	121 53.2	34.1	223 26.9	50.6	189 11.1	37.9				
3	123	47.7	270 35.1	47.1	136 54.2	33.4	238 28.8	50.7	204 13.3	37.8				
4	138	50.2	285 35.8	47.5	151 55.2	32.7	253 30.6	50.8	219 15.4	37.8				
5	153	52.7	300 36.5	-10 47.9	166 56.2	-6 32.0	268 32.5	-20 50.9	234 17.6	-22 37.8				
6	168	55.1	315 37.2	-10 48.3	181 57.1	-6 31.3	283 34.4	-20 51.0	249 19.7	-22 37.8				
7	183	57.6	330 37.9	48.6	196 58.1	30.6	298 36.3	51.1	264 21.9	37.8				
8	199	00.0	345 38.6	49.0	211 59.1	29.9	313 38.2	51.2	279 24.1	37.8				
9	214	02.5	0 39.3	49.4	227 00.1	29.2	328 40.0	51.3	294 26.2	37.8				
10	229	05.0	15 39.9	49.7	242 01.0	28.5	343 41.9	51.4	309 28.4	37.7				
11	244	07.4	30 40.6	-10 50.1	257 02.0	-6 27.8	358 43.8	-20 51.5	324 30.5	-22 37.7				
12	259	09.9	45 41.3	-10 50.5	272 03.0	-6 27.1	13 45.7	-20 51.6	339 32.7	-22 37.7				
13	274	12.4	60 42.0	50.9	287 03.9	26.4	28 47.6	51.6	354 34.8	37.7				
14	289	14.8	75 42.7	51.2	302 04.9	25.7	43 49.4	51.7	9 37.0	37.7				
15	304	17.3	90 43.4	51.6	317 05.9	24.9	58 51.3	51.8	24 39.2	37.7				
16	319	19.8	105 44.0	52.0	332 06.9	24.2	73 53.2	51.9	39 41.3	37.6				
17	334	22.2	120 44.7	-10 52.4	347 07.8	-6 23.5	88 55.1	-20 52.0	54 43.5	-22 37.6				
18	349	24.7	135 45.4	-10 52.8	2 08.8	-6 22.8	103 57.0	-20 52.1	69 45.6	-22 37.6				
19	4	27.2	150 46.0	53.1	17 09.8	22.1	118 58.8	52.2	84 47.8	37.6				
20	19	29.6	165 46.7	53.5	32 10.8	21.4	134 00.7	52.3	99 49.9	37.6				
21	34	32.1	180 47.4	53.9	47 11.7	20.7	149 02.6	52.4	114 52.1	37.6				
22	49	34.5	195 48.0	54.3	62 12.7	20.0	164 04.5	52.5	129 54.3	37.6				
23	64	37.0	210 48.7	54.7	77 13.7	19.3	179 06.4	52.6	144 56.4	37.5				
24	79	39.5	225 49.4	-10 55.1	92 14.6	-6 18.6	194 08.2	-20 52.7	159 58.6	-22 37.5				
Dif	—		+7 -4		+10 +7		+19 -1		+22 0					

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna											
	SD: 16'2 PMG: 11 ^h 53 ^m 2			Edad: 3 ^d 7 PHE { 4 ^h : 54'2 12 ^h : 54'2 20 ^h : 54'2 SD: 14'8 PMG: 15 ^h 20 ^m R°: 47 ^m																				
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°									
h	o	'	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m							
0	181	45.1	-22	58.2	137	14.3	-20	22.6	60 N	6 59	7 55	8 52	11 46	24	19 01	71								
1	196	44.9		58.4	151	45.3 ¹²⁰		18.9 ³⁷	58	52	44	35	33	26	14	69								
2	211	44.6		58.6	166	16.2 ¹¹⁹		15.0 ³⁹	56	45	34	21	21	28	25	67								
3	226	44.3		58.8	180	47.2 ¹²⁰		11.1 ⁴⁰	54	39	25	8 09	11	30	35	65								
4	241	44.0		59.0	195	18.3 ¹²¹		07.1 ⁴⁰	52	34	17	7 58	11 01	32	44	63								
5	256	43.7	-22	59.2	209	49.4 ¹²¹	-20	03.0 ⁴¹	50	6 29	7 10	7 48	10 53	33	19 52	62								
6	271	43.4	-22	59.4	224	20.5 ¹²¹	-19	58.8 ⁴²	45	6 17	6 54	7 28	10 36	35	20 09	59								
7	286	43.1		59.6	238	51.6 ¹²¹		54.5 ⁴³	40	6 07	41	7 12	21	38	23	57								
8	301	42.8	-22	59.8	253	22.8 ¹²²		50.1 ⁴⁴	35	5 58	30	6 58	10 09	39	35	54								
9	316	42.6	-23	00.1	267	54.1 ¹²³		45.7 ⁴⁴	30	49	19	46	9 58	41	20 45	53								
10	331	42.3		00.3	282	25.4 ¹²³		41.1 ⁴⁶	20	33	6 01	25	40	43	21 02	51								
11	346	42.0	-23	00.5	296	56.7 ¹²³	-19	36.5 ⁴⁶	10 N	5 18	5 44	6 07	9 24	45	21 18	48								
12	1	41.7	-23	00.7	311	28.0 ¹²³	-19	31.8 ⁴⁷	0	5 01	5 27	5 49	9 09	47	21 32	46								
13	16	41.4		00.9	325	59.4 ¹²⁴		26.9 ⁴⁹	10 S	4 42	5 09	32	8 54	49	21 46	44								
14	31	41.1		01.1	340	30.9 ¹²⁵		22.0 ⁴⁹	20	4 20	4 49	5 14	38	51	22 01	41								
15	46	40.8		01.3	355	02.4 ¹²⁵		17.0 ⁵⁰	30	3 52	25	4 52	20	52	18	39								
16	61	40.5		01.5	9	33.9 ¹²⁵		12.0 ⁵⁰	35	33	4 10	39	8 09	54	28	37								
17	76	40.2	-23	01.7	24	05.4 ¹²⁵	-19	06.8 ⁵²	40	3 11	3 52	4 25	7 56	56	22 39	35								
18	91	40.0	-23	01.9	38	37.0 ¹²⁶	-19	01.6 ⁵²	45	2 41	3 30	4 07	7 42	58	22 53	33								
19	106	39.7		02.1	53	08.7 ¹²⁷	-18	56.2 ⁵⁴	50	1 57	3 01	3 45	24	60	23 09	30								
20	121	39.4		02.3	67	40.4 ¹²⁷		50.8 ⁵⁴	52	1 31	2 46	34	15	62	16	29								
21	136	39.1		02.5	82	12.1 ¹²⁷		45.3 ⁵⁵	54	0 51	29	23	7 06	63	25	27								
22	151	38.8		02.6	96	43.9 ¹²⁸		39.8 ⁵⁵	56	***	2 08	3 09	6 55	65	34	26								
23	166	38.5		02.8	111	15.7 ¹²⁸		34.1 ⁵⁷	58	***	1 40	2 53	43	67	45	23								
24	181	38.2	-23	03.0	125	47.5 ¹²⁸	-18	28.4 ⁵⁷	60 S	***	0 57	2 33	6 29	69	23 57	21								
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO											
	PMG: 18 ^h 38 ^m 3			Mag: -4.8 PMG: 8 ^h 56 ^m			Mag: +0.1 PMG: 17 ^h 50 ^m			Mag: -1.8 PMG: 11 ^h 02 ^m			Mag: +0.5 PMG: 13 ^h 18 ^m											
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♅	Dec	hG ♄	Dec													
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'								
0	79	39.5	225	49.4	-10	55.1	92	14.6	-6	18.6	194	08.2	-20	52.7	159	58.6	-22	37.5						
1	94	41.9	240	50.0		55.5	107	15.6		17.9	209	10.1		52.8	175	00.7		37.5						
2	109	44.4	255	50.7		55.8	122	16.6		17.2	224	12.0		52.9	190	02.9		37.5						
3	124	46.9	270	51.4		56.2	137	17.6		16.5	239	13.9		53.0	205	05.0		37.5						
4	139	49.3	285	52.0		56.6	152	18.5		15.8	254	15.8		53.0	220	07.2		37.5						
5	154	51.8	300	52.7	-10	57.0	167	19.5	-6	15.1	269	17.6	-20	53.1	235	09.4	-22	37.4						
6	169	54.3	315	53.3	-10	57.4	182	20.5	-6	14.4	284	19.5	-20	53.2	250	11.5	-22	37.4						
7	184	56.7	330	54.0		57.8	197	21.4		13.7	299	21.4		53.3	265	13.7		37.4						
8	199	59.2	345	54.6		58.2	212	22.4		13.0	314	23.3		53.4	280	15.8		37.4						
9	215	01.7	0	55.3		58.6	227	23.4		12.3	329	25.2		53.5	295	18.0		37.4						
10	230	04.1	15	55.9		59.0	242	24.4		11.6	344	27.0		53.6	310	20.1		37.4						
11	245	06.6	30	56.5	-10	59.4	257	25.3	-6	10.9	359	28.9	-20	53.7	325	22.3	-22	37.4						
12	260	09.0	45	57.2	-10	59.8	272	26.3	-6	10.2	14	30.8	-20	53.8	340	24.5	-22	37.3						
13	275	11.5	60	57.8	-11	00.2	287	27.3		09.5	29	32.7		53.9	355	26.6		37.3						
14	290	14.0	75	58.5		00.6	302	28.2		08.8	44	34.6		54.0	10	28.8		37.3						
15	305	16.4	90	59.1		01.0	317	29.2		08.1	59	36.4		54.1	25	30.9		37.3						
16	320	18.9	105	59.7		01.4	332	30.2		07.3	74	38.3		54.2	40	33.1		37.3						
17	335	21.4	121	00.4	-11	01.8	347	31.2	-6	06.6	89	40.2	-20	54.3	55	35.2	-22	37.3						
18	350	23.8	136	01.0	-11	02.2	2	32.1	-6	05.9	104	42.1	-20	54.4	70	37.4	-22	37.2						
19	5	26.3	151	01.6		02.6	17	33.1		05.2	119	44.0		54.4	85	39.6		37.2						
20	20	28.8	166	02.3		03.0	32	34.1		04.5	134	45.8		54.5	100	41.7		37.2						
21	35	31.2	181	02.9		03.4	47	35.0		03.8	149	47.7		54.6	115	43.9		37.2						
22	50	33.7	196	03.5		03.8	62	36.0		03.1	164	49.6		54.7	130	46.0		37.2						
23	65	36.2	211	04.1		04.2	77	37.0		02.4	179	51.5		54.8	145	48.2		37.2						
24	80	38.6	226	04.8	-11	04.6	92	38.0	-6	01.7	194	53.4	-20	54.9	160	50.3	-22	37.2						
Dif	—			+6			-4			+10			+7			+19			-1			+22		

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16:2 PMG: 11 ^h 53 ^m 7			Edad: 4 ^d 7 SD: 14:7 PMG: 16 ^h 07 ^m	PHE { 4 ^h : 54:1 12 ^h : 54:1 20 ^h : 54:1 R°: 44 ^m											
	hG ☉	Dec				hG ☾			Dif	Dec	Dif	Civil	Náutico	Hora	R°	Hora
h	o	'	o	'	o	'	o	'	h	m	h	m	h	m	h	m
0	181	38.2	-23	03.0	125	47.5	-18	28.4	60 N	14 54	15 51	16 47	12 10	18	20 12	73
1	196	37.9		03.2	140	19.4 ¹²⁹		22.6 ⁵⁸	58	15 11	16 02	16 54	11 59	20	23	70
2	211	37.6		03.4	154	51.3 ¹²⁹		16.7 ⁵⁹	56	25	12	17 01	49	23	32	68
3	226	37.3		03.6	169	23.3 ¹³⁰		10.7 ⁶⁰	54	37	21	07	41	24	40	66
4	241	37.1		03.8	183	55.3 ¹³⁰	-18	04.6 ⁶¹	52	48	29	13	33	26	47	65
5	256	36.8	-23	04.0	198	27.4 ¹³¹	-17	58.5 ⁶¹	50	15 58	16 36	17 18	11 26	27	20 54	63
6	271	36.5	-23	04.2	212	59.5 ¹³¹	-17	52.3 ⁶²	45	16 18	16 52	17 29	11 11	31	21 08	60
7	286	36.2		04.4	227	31.6 ¹³¹		46.0 ⁶³	40	35	17 05	39	10 59	33	20	57
8	301	35.9		04.6	242	03.8 ¹³²		39.6 ⁶⁴	35	16 49	17	49	48	35	29	55
9	316	35.6		04.7	256	36.0 ¹³²		33.2 ⁶⁴	30	17 01	27	17 57	39	37	38	53
10	331	35.3		04.9	271	08.2 ¹³²		26.7 ⁶⁵	20	22	17 46	18 13	23	40	21 53	50
11	346	35.0	-23	05.1	285	40.5 ¹³³	-17	20.1 ⁶⁶	10 N	17 40	18 03	18 29	10 09	42	22 06	47
12	1	34.7	-23	05.3	300	12.8 ¹³³	-17	13.4 ⁶⁷	0	17 57	18 20	18 46	9 56	45	22 18	44
13	16	34.4		05.5	314	45.2 ¹³⁴	-17	06.7 ⁶⁷	10 S	18 15	38	19 05	43	47	30	41
14	31	34.1		05.7	329	17.6 ¹³⁴	-16	59.9 ⁶⁸	20	33	18 58	27	29	50	42	39
15	46	33.8		05.8	343	50.1 ¹³⁵		53.0 ⁶⁹	30	18 55	19 23	19 56	12	53	22 57	35
16	61	33.6		06.0	358	22.5 ¹³⁴		46.0 ⁷⁰	35	19 08	38	20 14	9 03	55	23 05	34
17	76	33.3	-23	06.2	12	55.1 ¹³⁶	-16	39.0 ⁷⁰	40	19 23	19 56	20 37	8 52	57	23 14	32
18	91	33.0	-23	06.4	27	27.6 ¹³⁵	-16	31.9 ⁷¹	45	19 41	20 18	21 07	8 40	59	23 26	28
19	106	32.7		06.6	42	00.2 ¹³⁶		24.7 ⁷²	50	20 03	20 47	21 51	24	63	39	26
20	121	32.4		06.7	56	32.9 ¹³⁷		17.5 ⁷²	52	13	21 02	22 18	17	64	45	24
21	136	32.1		06.9	71	05.5 ¹³⁶		10.2 ⁷³	54	25	19	23 00	09	65	23 52	22
22	151	31.8		07.1	85	38.2 ¹³⁷	-16	02.8 ⁷⁴	56	39	21 41	*** **	8 00	67	*** **	**
23	166	31.5		07.3	100	11.0 ¹³⁸	-15	55.4 ⁷⁴	58	20 56	22 09	*** **	7 50	69	*** **	**
24	181	31.2	-23	07.4	114	43.8 ¹³⁸	-15	47.9 ⁷⁵	60 S	21 16	22 55	*** **	7 38	72	*** **	**

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 18 ^h 34 ^m 4		Mag: -4.8 PMG: 8 ^h 55 ^m		Mag: +0.2 PMG: 17 ^h 48 ^m		Mag: -1.8 PMG: 10 ^h 59 ^m		Mag: +0.5 PMG: 13 ^h 15 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	o	'	o	'	o	'	o	'	o	'
0	80	38.6	226	04.8	-11	04.6	92	38.0	-6	01.7
1	95	41.1	241	05.4		05.0	107	38.9		01.0
2	110	43.5	256	06.0		05.4	122	39.9	-6	00.3
3	125	46.0	271	06.6		05.8	137	40.9	-5	59.6
4	140	48.5	286	07.2		06.2	152	41.8		58.9
5	155	50.9	301	07.8	-11	06.6	167	42.8	-5	58.2
6	170	53.4	316	08.5	-11	07.1	182	43.8	-5	57.5
7	185	55.9	331	09.1		07.5	197	44.7		56.8
8	200	58.3	346	09.7		07.9	212	45.7		56.1
9	216	00.8	1	10.3		08.3	227	46.7		55.4
10	231	03.3	16	10.9		08.7	242	47.7		54.6
11	246	05.7	31	11.5	-11	09.1	257	48.6	-5	53.9
12	261	08.2	46	12.1	-11	09.5	272	49.6	-5	53.2
13	276	10.6	61	12.7		10.0	287	50.6		52.5
14	291	13.1	76	13.3		10.4	302	51.5		51.8
15	306	15.6	91	13.9		10.8	317	52.5		51.1
16	321	18.0	106	14.5		11.2	332	53.5		50.4
17	336	20.5	121	15.1	-11	11.6	347	54.4	-5	49.7
18	351	23.0	136	15.7	-11	12.1	2	55.4	-5	49.0
19	6	25.4	151	16.3		12.5	17	56.4		48.3
20	21	27.9	166	16.8		12.9	32	57.4		47.6
21	36	30.4	181	17.4		13.3	47	58.3		46.9
22	51	32.8	196	18.0		13.7	62	59.3		46.2
23	66	35.3	211	18.6		14.2	78	00.3		45.5
24	81	37.8	226	19.2	-11	14.6	93	01.2	-5	44.8
Dif	—		+6		-4		+10		+7	
									+19	
									-1	
									+22	
									0	

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'2 PMG: 11 ^h 54 ^m 2			Edad: 5 ^d 7 SD: 14'8 PMG: 16 ^h 51 ^m	PHE { 4 ^h : 54'2 12 ^h : 54'2 20 ^h : 54'3 R°: 44 ^m													
	hG ☉	Dec				hG ☾		Dif	Dec		Dif	Náutico	Civil	Hora	R°	Hora	R°	
h	o	'	o	'	o	'	o	'	h	m	h	m	h	m	h	m	h	m
0	181	31.2	-23	07.4	114	43.8	-15	47.9	60 N	7 01	7 58	8 55	12 28	14	21 25	75		
1	196	30.9		07.6	129	16.6 ¹³⁸		40.3 ⁷⁶	58	6 54	46	38	19 17		33 72			
2	211	30.6		07.8	143	49.4 ¹³⁸		32.6 ⁷⁷	56	47	36	23	12 19		40 70			
3	226	30.3		08.0	158	22.3 ¹³⁹		24.9 ⁷⁷	54	41	27	11	12 05	21	46 68			
4	241	30.0		08.1	172	55.2 ¹³⁹		17.1 ⁷⁸	52	35	19	8 00	11 59	23	52 66			
5	256	29.7	-23	08.3	187	28.2 ¹⁴⁰	-15	09.3 ⁷⁸	50	6 30	7 12	7 50	11 53	25	21 57	64		
6	271	29.4	-23	08.5	202	01.2 ¹⁴⁰	-15	01.4 ⁷⁹	45	6 19	6 56	7 30	11 42	27	22 08	60		
7	286	29.1		08.6	216	34.2 ¹⁴⁰	-14	53.4 ⁸⁰	40	6 09	43	7 13	32 30		17 57			
8	301	28.8		08.8	231	07.3 ¹⁴¹		45.4 ⁸⁰	35	5 59	31	6 59	23 33		24 56			
9	316	28.6		09.0	245	40.3 ¹⁴⁰		37.3 ⁸¹	30	51	21	47	16 34		31 53			
10	331	28.3		09.1	260	13.5 ¹⁴²		29.1 ⁸²	20	35	6 02	26	11 03	38	43 49			
11	346	28.0	-23	09.3	274	46.6 ¹⁴¹	-14	20.9 ⁸²	10 N	5 19	5 45	6 08	10 51	41	22 53	46		
12	1	27.7	-23	09.5	289	19.8 ¹⁴²	-14	12.6 ⁸³	0	5 02	5 28	5 50	10 41	43	23 02	43		
13	16	27.4		09.6	303	53.0 ¹⁴²	-14	04.2 ⁸⁴	10 S	4 43	5 10	33	30 47		11 40			
14	31	27.1		09.8	318	26.3 ¹⁴³	-13	55.8 ⁸⁴	20	4 21	4 50	5 14	19 49	21	31 37			
15	46	26.8		10.0	332	59.5 ¹⁴²		47.4 ⁸⁴	30	3 52	25	4 53	10 05	53	32 34			
16	61	26.5		10.1	347	32.8 ¹⁴³		38.8 ⁸⁶	35	34	4 10	40	9 58	55	39 31			
17	76	26.2	-23	10.3	2	06.2 ¹⁴⁴	-13	30.3 ⁸⁵	40	3 11	3 52	4 25	9 49	58	23 46	29		
18	91	25.9	-23	10.4	16	39.5 ¹⁴³	-13	21.6 ⁸⁷	45	2 41	3 30	4 07	9 39	60	23 54	27		
19	106	25.6		10.6	31	12.9 ¹⁴⁴		12.9 ⁸⁷	50	1 56	3 01	3 45	27 63		*** ** *			
20	121	25.3		10.8	45	46.3 ¹⁴⁴	-13	04.2 ⁸⁷	52	1 30	2 46	34	21 65		*** ** *			
21	136	25.0		10.9	60	19.8 ¹⁴⁵	-12	55.3 ⁸⁹	54	0 48	28	22	14 68		*** ** *			
22	151	24.7		11.1	74	53.2 ¹⁴⁴		46.5 ⁸⁸	56	*** **	2 07	3 08	9 07	69	0 00	20		
23	166	24.4		11.2	89	26.7 ¹⁴⁵		37.6 ⁸⁹	58	*** **	1 38	2 52	8 59	72	08 18			
24	181	24.1	-23	11.4	104	00.2 ¹⁴⁵	-12	28.6 ⁹⁰	60 S	*** **	0 53	2 32	8 50	74	0 18	16		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 18 ^h 30 ^m 4		Mag: -4.8 PMG: 8 ^h 54 ^m		Mag: +0.2 PMG: 17 ^h 47 ^m		Mag: -1.8 PMG: 10 ^h 56 ^m		Mag: +0.5 PMG: 13 ^h 11 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	o	'	o	'	o	'	o	'	o	'								
0	81	37.8	226	19.2	-11	14.6	93	01.2	-5	44.8	195	38.5	-20	57.1	161	42.1	-22	36.8
1	96	40.2	241	19.8		15.0	108	02.2		44.0	210	40.4		57.2	176	44.2		36.8
2	111	42.7	256	20.3		15.5	123	03.2		43.3	225	42.3		57.3	191	46.4		36.7
3	126	45.1	271	20.9		15.9	138	04.1		42.6	240	44.1		57.4	206	48.5		36.7
4	141	47.6	286	21.5		16.3	153	05.1		41.9	255	46.0		57.5	221	50.7		36.7
5	156	50.1	301	22.1	-11	16.7	168	06.1	-5	41.2	270	47.9	-20	57.6	236	52.9	-22	36.7
6	171	52.5	316	22.6	-11	17.2	183	07.0	-5	40.5	285	49.8	-20	57.7	251	55.0	-22	36.7
7	186	55.0	331	23.2		17.6	198	08.0		39.8	300	51.7		57.8	266	57.2		36.7
8	201	57.5	346	23.8		18.0	213	09.0		39.1	315	53.5		57.8	281	59.3		36.6
9	216	59.9	1	24.4		18.5	228	09.9		38.4	330	55.4		57.9	297	01.5		36.6
10	232	02.4	16	24.9		18.9	243	10.9		37.7	345	57.3		58.0	312	03.6		36.6
11	247	04.9	31	25.5	-11	19.3	258	11.9	-5	37.0	0	59.2	-20	58.1	327	05.8	-22	36.6
12	262	07.3	46	26.0	-11	19.8	273	12.9	-5	36.3	16	01.1	-20	58.2	342	07.9	-22	36.6
13	277	09.8	61	26.6		20.2	288	13.8		35.6	31	03.0		58.3	357	10.1		36.6
14	292	12.3	76	27.2		20.6	303	14.8		34.8	46	04.8		58.4	12	12.2		36.5
15	307	14.7	91	27.7		21.1	318	15.8		34.1	61	06.7		58.5	27	14.4		36.5
16	322	17.2	106	28.3		21.5	333	16.7		33.4	76	08.6		58.6	42	16.6		36.5
17	337	19.6	121	28.8	-11	22.0	348	17.7	-5	32.7	91	10.5	-20	58.7	57	18.7	-22	36.5
18	352	22.1	136	29.4	-11	22.4	3	18.7	-5	32.0	106	12.4	-20	58.8	72	20.9	-22	36.5
19	7	24.6	151	29.9		22.8	18	19.6		31.3	121	14.2		58.8	87	23.0		36.5
20	22	27.0	166	30.5		23.3	33	20.6		30.6	136	16.1		58.9	102	25.2		36.4
21	37	29.5	181	31.0		23.7	48	21.6		29.9	151	18.0		59.0	117	27.3		36.4
22	52	32.0	196	31.6		24.2	63	22.5		29.2	166	19.9		59.1	132	29.5		36.4
23	67	34.4	211	32.1		24.6	78	23.5		28.5	181	21.8		59.2	147	31.6		36.4
24	82	36.9	226	32.7	-11	25.0	93	24.5	-5	27.8	196	23.7	-20	59.3	162	33.8	-22	36.4
Dif	—		+6 -4		+10 -7		+19 -7		+19 -1		+19 -1		-1		+22			

UT	SOL				 LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna				
	SD: 16:2 PMG: 11 ^h 54 ^m 6				Edad: 6 ^d 7 PHE { SD: 14 ^h 8 PMG: 17 ^h 35 ^m 4 ^h : 54:3 12 ^h : 54:4 20 ^h : 54:6 R°: 43 ^m														
	hG ☉		Dec		hG ☾		Dif						Civil	Náutico	Hora	R°	Hora	R°	
h	o	'	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m	h	m
0	181	24.1	-23	11.4	104	00.2	-12	28.6	60 N	14 53	15 50	16 47	12 42	12	22 40	76			
1	196	23.8		11.5	118	33.8 ¹⁴⁶		19.5 ⁹¹	58	15 10	16 02	16 54	36 14		45 74				
2	211	23.5		11.7	133	07.3 ¹⁴⁵		10.5 ⁹⁰	56	25	12	17 01	31 16		50 71				
3	226	23.2		11.8	147	40.9 ¹⁴⁶	-12	01.3 ⁹²	54	37	21	07	26 18		54 69				
4	241	22.9		12.0	162	14.5 ¹⁴⁶	-11	52.1 ⁹²	52	48	29	13	22 20		22 58 67				
5	256	22.6	-23	12.1	176	48.2 ¹⁴⁷	-11	42.9 ⁹²	50	15 58	16 37	17 18	12 18	22	23 01	65			
6	271	22.3	-23	12.3	191	21.8 ¹⁴⁶	-11	33.6 ⁹³	45	16 19	16 52	17 30	12 09	25	23 08	62			
7	286	22.0		12.4	205	55.5 ¹⁴⁷		24.2 ⁹⁴	40	35	17 06	40	12 02	28	14 59				
8	301	21.7		12.6	220	29.2 ¹⁴⁷		14.9 ⁹³	35	16 49	18	49	11 56	30	20 55				
9	316	21.4		12.7	235	02.9 ¹⁴⁷	-11	05.4 ⁹⁵	30	17 02	28	17 58	50 33		24 54				
10	331	21.1		12.9	249	36.6 ¹⁴⁷	-10	55.9 ⁹⁵	20	23	17 47	18 14	41 36		32 50				
11	346	20.8	-23	13.0	264	10.4 ¹⁴⁸	-10	46.4 ⁹⁵	10 N	17 41	18 04	18 30	11 32	40	23 39	46			
12	1	20.5	-23	13.2	278	44.1 ¹⁴⁷	-10	36.8 ⁹⁶	0	17 58	18 21	18 47	11 24	43	23 45	43			
13	16	20.2		13.3	293	17.9 ¹⁴⁸		27.1 ⁹⁷	10 S	18 16	39	19 06	17 46		51 40				
14	31	19.9		13.5	307	51.7 ¹⁴⁸		17.4 ⁹⁷	20	35	18 59	28	11 08	50	23 58	36			
15	46	19.6		13.6	322	25.5 ¹⁴⁸	-10	07.7 ⁹⁷	30	18 57	19 24	19 57	10 58	54	*** **	***			
16	61	19.3		13.7	336	59.4 ¹⁴⁹	-9	57.9 ⁹⁸	35	19 09	39	20 16	53 55		*** **	***			
17	76	19.0	-23	13.9	351	33.2 ¹⁴⁸	-9	48.1 ⁹⁸	40	19 24	19 57	20 39	10 47	58	*** **	***			
18	91	18.7	-23	14.0	6	07.1 ¹⁴⁹	-9	38.2 ⁹⁹	45	19 42	20 20	21 09	10 39	61	*** **	***			
19	106	18.4		14.2	20	40.9 ¹⁴⁸		28.3 ⁹⁹	50	20 05	20 49	21 54	30 65		0 05	22			
20	121	18.1		14.3	35	14.8 ¹⁴⁹		18.4 ⁹⁹	52	15	21 04	22 21	26 66		09 22				
21	136	17.8		14.4	49	48.7 ¹⁴⁹	-9	08.4 ¹⁰⁰	54	27	22	23 05	22 68		14 20				
22	151	17.5		14.6	64	22.6 ¹⁴⁹	-8	58.3 ¹⁰¹	56	42	21 43	*** **	16 71		20 18				
23	166	17.2		14.7	78	56.5 ¹⁴⁹		48.2 ¹⁰¹	58	20 58	22 13	*** **	11 72		26 16				
24	181	16.9	-23	14.9	93	30.4 ¹⁴⁹	-8	38.1 ¹⁰¹	60 S	21 18	23 00	*** **	10 04	76	0 34	13			

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 18 ^h 26 ^m 5		Mag: -4.8 PMG: 8 ^h 54 ^m		Mag: +0.2 PMG: 17 ^h 45 ^m		Mag: -1.8 PMG: 10 ^h 53 ^m		Mag: +0.5 PMG: 13 ^h 08 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	o	'	o	'	o	'	o	'	o	'
0	82	36.9	226	32.7	-11	25.0	93	24.5	-5	27.8
1	97	39.4	241	33.2		25.5	108	25.4		27.1
2	112	41.8	256	33.8		25.9	123	26.4		26.3
3	127	44.3	271	34.3		26.4	138	27.4		25.6
4	142	46.8	286	34.8		26.8	153	28.3		24.9
5	157	49.2	301	35.4	-11	27.3	168	29.3	-5	24.2
6	172	51.7	316	35.9	-11	27.7	183	30.3	-5	23.5
7	187	54.1	331	36.4		28.2	198	31.2		22.8
8	202	56.6	346	37.0		28.6	213	32.2		22.1
9	217	59.1	1	37.5		29.1	228	33.2		21.4
10	233	01.5	16	38.0		29.5	243	34.1		20.7
11	248	04.0	31	38.6	-11	30.0	258	35.1	-5	20.0
12	263	06.5	46	39.1	-11	30.4	273	36.1	-5	19.2
13	278	08.9	61	39.6		30.9	288	37.0		18.5
14	293	11.4	76	40.1		31.3	303	38.0		17.8
15	308	13.9	91	40.7		31.8	318	39.0		17.1
16	323	16.3	106	41.2		32.2	333	39.9		16.4
17	338	18.8	121	41.7	-11	32.7	348	40.9	-5	15.7
18	353	21.2	136	42.2	-11	33.2	3	41.9	-5	15.0
19	8	23.7	151	42.7		33.6	18	42.8		14.3
20	23	26.2	166	43.2		34.1	33	43.8		13.6
21	38	28.6	181	43.8		34.5	48	44.8		12.9
22	53	31.1	196	44.3		35.0	63	45.7		12.2
23	68	33.6	211	44.8		35.4	78	46.7		11.4
24	83	36.0	226	45.3	-11	35.9	93	47.7	-5	10.7
Dif	—		+5		-5		+10		+7	
							+19		-1	
									+22	
									0	

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'3 PMG: 11 ^h 55 ^m 1				Edad: 7 ^d 7 PHE { 4 ^h : 54'7 12 ^h : 54'9 20 ^h : 55'0 SD: 14'9 PMG: 18 ^h 18 ^m R°: 43 ^m												
	hG ☉		Dec		hG ☾		Dif			Náutico			Civil		Hora R°		Hora R°
h	o	'	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m
0	181	16.9	-23	14.9	93	30.4	-8	38.1	60 N	7	03	8	00	8	57	12	54
1	196	16.6		15.0	108	04.4 ¹⁵⁰		27.9 ¹⁰²	58	6	56	7	48	40		50	14
2	211	16.3		15.1	122	38.3 ¹⁴⁹		17.7 ¹⁰²	56		49	38	25		47	16	***
3	226	16.0		15.3	137	12.2 ¹⁴⁹	-8	07.4 ¹⁰³	54		43	29	13		44	18	***
4	241	15.7		15.4	151	46.2 ¹⁵⁰	-7	57.2 ¹⁰²	52		37	21	8	02	42	19	***
5	256	15.4	-23	15.5	166	20.1 ¹⁴⁹	-7	46.8 ¹⁰⁴	50	6	32	7	13	7	52	12	40
6	271	15.1	-23	15.7	180	54.1 ¹⁵⁰	-7	36.4 ¹⁰⁴	45	6	20	6	57	7	31	12	34
7	286	14.8		15.8	195	28.0 ¹⁴⁹		26.0 ¹⁰⁴	40		10	44	15		30	28	***
8	301	14.5		15.9	210	02.0 ¹⁵⁰		15.6 ¹⁰⁴	35	6	01	32	7	00	26	30	***
9	316	14.2		16.0	224	36.0 ¹⁵⁰	-7	05.1 ¹⁰⁵	30	5	52	22	6	48	23	32	***
10	331	13.9		16.2	239	09.9 ¹⁴⁹	-6	54.6 ¹⁰⁵	20		36	6	03	27	17	37	***
11	346	13.6	-23	16.3	253	43.9 ¹⁵⁰	-6	44.0 ¹⁰⁶	10 N	5	20	5	46	6	09	12	12
12	1	13.3	-23	16.4	268	17.9 ¹⁵⁰	-6	33.4 ¹⁰⁶	0	5	03	5	29	5	51	12	07
13	16	13.0		16.5	282	51.8 ¹⁴⁹		22.8 ¹⁰⁶	10 S	4	44	5	11	34		12	03
14	31	12.7		16.7	297	25.8 ¹⁵⁰		12.2 ¹⁰⁶	20	4	21	4	51	5	15	11	58
15	46	12.4		16.8	311	59.7 ¹⁴⁹	-6	01.5 ¹⁰⁷	30	3	52		26	4	53	52	54
16	61	12.1		16.9	326	33.7 ¹⁵⁰	-5	50.7 ¹⁰⁸	35		34	4	11	40		48	57
17	76	11.8	-23	17.0	341	07.6 ¹⁴⁹	-5	40.0 ¹⁰⁷	40	3	11	3	53	4	25	11	45
18	91	11.5	-23	17.2	355	41.6 ¹⁵⁰	-5	29.2 ¹⁰⁸	45	2	41	3	30	4	07	11	40
19	106	11.2		17.3	10	15.5 ¹⁴⁹		18.4 ¹⁰⁸	50	1	56	3	01	3	45	35	66
20	121	10.9		17.4	24	49.5 ¹⁵⁰	-5	07.5 ¹⁰⁹	52	1	29	2	46	34		32	68
21	136	10.6		17.5	39	23.4 ¹⁴⁹	-4	56.6 ¹⁰⁹	54	0	45	28	22		30	69	34
22	151	10.3		17.6	53	57.3 ¹⁴⁹		45.7 ¹⁰⁹	56	***		2	06	3	08	27	71
23	166	10.0		17.8	68	31.2 ¹⁴⁹		34.8 ¹⁰⁹	58	***		1	37	2	52	23	74
24	181	09.7	-23	17.9	83	05.1 ¹⁴⁹	-4	23.8 ¹¹⁰	60 S	***		0	50	2	31	11	20

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 18 ^h 22 ^m 6		Mag: -4.8 PMG: 8 ^h 53 ^m		Mag: +0.2 PMG: 17 ^h 44 ^m		Mag: -1.8 PMG: 10 ^h 50 ^m		Mag: +0.5 PMG: 13 ^h 04 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	o	'	o	'	o	'	o	'	o	'
0	83	36.0	226	45.3	-11	35.9	93	47.7	-5	10.7
1	98	38.5	241	45.8		36.4	108	48.6		10.0
2	113	41.0	256	46.3		36.8	123	49.6		09.3
3	128	43.4	271	46.8		37.3	138	50.6		08.6
4	143	45.9	286	47.3		37.8	153	51.5		07.9
5	158	48.4	301	47.8	-11	38.2	168	52.5	-5	07.2
6	173	50.8	316	48.3	-11	38.7	183	53.5	-5	06.5
7	188	53.3	331	48.8		39.2	198	54.4		05.8
8	203	55.7	346	49.3		39.6	213	55.4		05.0
9	218	58.2	1	49.8		40.1	228	56.4		04.3
10	234	00.7	16	50.3		40.6	243	57.3		03.6
11	249	03.1	31	50.8	-11	41.0	258	58.3	-5	02.9
12	264	05.6	46	51.2	-11	41.5	273	59.3	-5	02.2
13	279	08.1	61	51.7		42.0	289	00.2		01.5
14	294	10.5	76	52.2		42.4	304	01.2		00.8
15	309	13.0	91	52.7		42.9	319	02.2	-5	00.1
16	324	15.5	106	53.2		43.4	334	03.1	-4	59.4
17	339	17.9	121	53.7	-11	43.8	349	04.1	-4	58.6
18	354	20.4	136	54.1	-11	44.3	4	05.1	-4	57.9
19	9	22.8	151	54.6		44.8	19	06.0		57.2
20	24	25.3	166	55.1		45.3	34	07.0		56.5
21	39	27.8	181	55.6		45.7	49	08.0		55.8
22	54	30.2	196	56.1		46.2	64	08.9		55.1
23	69	32.7	211	56.5		46.7	79	09.9		54.4
24	84	35.2	226	57.0	-11	47.2	94	10.9	-4	53.7
Dif	—		+5		-5		+10		+7	
							+19		-1	
									+22	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16:3 PMG: 11 ^h 55 ^m 6			Edad: 8 ^d 7 PHE { SD: 15:1 PMG: 19 ^h 01 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	Rº	Hora	Rº	
h	o	'	o	'	o	'	o	'	h	m	h	m	h	m	h	m
0	181	09.7	-23	17.9	83	05.1	-4	23.8	60 N	14 53	15 51	16 47	13 05	11	***	***
1	196	09.4		18.0	97	39.0 ¹⁴⁹		12.8 ¹¹⁰	58	15 10	16 02	16 55	04 13		***	***
2	211	09.1		18.1	112	12.8 ¹⁴⁸	-4	01.7 ¹¹¹	56	25	12	17 01	03 16		0 01	72
3	226	08.8		18.2	126	46.7 ¹⁴⁹	-3	50.7 ¹¹⁰	54	38	21	08	02 18		03	70
4	241	08.5		18.3	141	20.5 ¹⁴⁸		39.6 ¹¹¹	52	49	30	13	01 20		05	68
5	256	08.2	-23	18.4	155	54.4 ¹⁴⁹	-3	28.5 ¹¹¹	50	15 59	16 37	17 18	13 00	22	0 06	67
6	271	07.9	-23	18.5	170	28.2 ¹⁴⁸	-3	17.4 ¹¹¹	45	16 19	16 53	17 30	12 59	25	0 10	63
7	286	07.6		18.7	185	02.0 ¹⁴⁸	-3	06.2 ¹¹²	40	36	17 06	41	58	27	13	60
8	301	07.3		18.8	199	35.7 ¹⁴⁷	-2	55.0 ¹¹²	35	16 50	18	50	56	31	15	57
9	316	07.0		18.9	214	09.5 ¹⁴⁸		43.8 ¹¹²	30	17 02	29	17 59	55	33	18	54
10	331	06.7		19.0	228	43.2 ¹⁴⁷		32.6 ¹¹²	20	23	17 47	18 15	54	37	22	50
11	346	06.4	-23	19.1	243	16.9 ¹⁴⁷	-2	21.4 ¹¹²	10 N	17 42	18 05	18 31	12 52	41	0 25	47
12	1	06.1	-23	19.2	257	50.6 ¹⁴⁷	-2	10.1 ¹¹³	0	17 59	18 22	18 48	12 51	44	0 28	43
13	16	05.8		19.3	272	24.3 ¹⁴⁷	-1	58.8 ¹¹³	10 S	18 17	18 40	19 07	49	48	31	40
14	31	05.5		19.4	286	58.0 ¹⁴⁷		47.5 ¹¹³	20	36	19 00	30	48	51	34	37
15	46	05.2		19.5	301	31.6 ¹⁴⁶		36.2 ¹¹³	30	18 58	25	19 59	46	55	38	33
16	61	04.9		19.6	316	05.2 ¹⁴⁶		24.8 ¹¹⁴	35	19 11	40	20 17	45	58	40	30
17	76	04.6	-23	19.7	330	38.8 ¹⁴⁶	-1	13.4 ¹¹⁴	40	19 26	19 59	20 40	12 44	60	0 43	27
18	91	04.3	-23	19.8	345	12.3 ¹⁴⁵	-1	02.1 ¹¹³	45	19 44	20 21	21 11	12 42	64	0 45	25
19	106	04.0		19.9	359	45.8 ¹⁴⁵	-0	50.6 ¹¹⁵	50	20 06	20 51	21 56	41	68	49	21
20	121	03.7		20.0	14	19.3 ¹⁴⁵		39.2 ¹¹⁴	52	17	21 06	22 24	40	70	50	19
21	136	03.4		20.1	28	52.8 ¹⁴⁵		27.8 ¹¹⁴	54	29	24	23 09	39	72	52	17
22	151	03.0		20.2	43	26.2 ¹⁴⁴		16.3 ¹¹⁵	56	20 43	21 46	*** **	38	74	54	15
23	166	02.7		20.3	57	59.6 ¹⁴⁴	-0	04.9 ¹¹⁴	58	21 00	22 15	*** **	37	76	56	13
24	181	02.4	-23	20.4	72	33.0 ¹⁴⁴	+0	06.6 ¹¹⁵	60 S	21 20	23 04	*** **	12 36	79	0 58	11
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 18 ^h 18 ^m 6		Mag: -4.8 PMG: 8 ^h 52 ^m			Mag: +0.2 PMG: 17 ^h 42 ^m			Mag: -1.8 PMG: 10 ^h 47 ^m			Mag: +0.5 PMG: 13 ^h 01 ^m				
	hG ♈		hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec		
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'		
0	84	35.2	226	57.0	-11	47.2	94	10.9	-4	53.7	197	54.0	-21	03.6		
1	99	37.6	241	57.5		47.6	109	11.8		53.0	212	55.9		03.7		
2	114	40.1	256	57.9		48.1	124	12.8		52.2	227	57.8		03.8		
3	129	42.6	271	58.4		48.6	139	13.7		51.5	242	59.7		03.9		
4	144	45.0	286	58.9		49.1	154	14.7		50.8	258	01.6		03.9		
5	159	47.5	301	59.3	-11	49.5	169	15.7	-4	50.1	273	03.4	-21	04.0		
6	174	50.0	316	59.8	-11	50.0	184	16.6	-4	49.4	288	05.3	-21	04.1		
7	189	52.4	332	00.3		50.5	199	17.6		48.7	303	07.2		04.2		
8	204	54.9	347	00.7		51.0	214	18.6		48.0	318	09.1		04.3		
9	219	57.3	2	01.2		51.5	229	19.5		47.3	333	11.0		04.4		
10	234	59.8	17	01.6		52.0	244	20.5		46.5	348	12.9		04.5		
11	250	02.3	32	02.1	-11	52.4	259	21.5	-4	45.8	3	14.7	-21	04.6		
12	265	04.7	47	02.5	-11	52.9	274	22.4	-4	45.1	18	16.6	-21	04.7		
13	280	07.2	62	03.0		53.4	289	23.4		44.4	33	18.5		04.7		
14	295	09.7	77	03.4		53.9	304	24.4		43.7	48	20.4		04.8		
15	310	12.1	92	03.9		54.4	319	25.3		43.0	63	22.3		04.9		
16	325	14.6	107	04.3		54.9	334	26.3		42.3	78	24.2		05.0		
17	340	17.1	122	04.8	-11	55.3	349	27.3	-4	41.6	93	26.0	-21	05.1		
18	355	19.5	137	05.2	-11	55.8	4	28.2	-4	40.8	108	27.9	-21	05.2		
19	10	22.0	152	05.7		56.3	19	29.2		40.1	123	29.8		05.3		
20	25	24.5	167	06.1		56.8	34	30.1		39.4	138	31.7		05.4		
21	40	26.9	182	06.6		57.3	49	31.1		38.7	153	33.6		05.4		
22	55	29.4	197	07.0		57.8	64	32.1		38.0	168	35.5		05.5		
23	70	31.8	212	07.4		58.3	79	33.0		37.3	183	37.3		05.6		
24	85	34.3	227	07.9	-11	58.8	94	34.0	-4	36.6	198	39.2	-21	05.7		
Dif	—		+5		-5		+10		+7		+19		-1		+22	
															0	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'3 PMG: 11 ^h 56 ^m 1			Edad: 9 ^d 7 PHE { 4 ^h : 55'9 12 ^h : 56'2 20 ^h : 56'4 SD: 15'3 PMG: 19 ^h 45 ^m R°: 47 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°		
h	o	'	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m
0	181	02.4	-23	20.4	72	33.0	+0	06.6	60 N	7 05	8 01	8 59	13 16	12	1 13	80	
1	196	02.1		20.5	87	06.3 ¹⁴³		18.1 ¹¹⁵	58	6 57	7 50	42	17 15		13 78		
2	211	01.8		20.6	101	39.6 ¹⁴³		29.6 ¹¹⁵	56	50	40	27	19 17		13 75		
3	226	01.5		20.7	116	12.9 ¹⁴³		41.1 ¹¹⁵	54	44	30	14	20 19		13 73		
4	241	01.2		20.8	130	46.1 ¹⁴²	+0	52.6 ¹¹⁵	52	39	22	8 03	21 21		13 71		
5	256	00.9	-23	20.9	145	19.3 ¹⁴²	+1	04.1 ¹¹⁵	50	6 33	7 15	7 53	13 22	22	1 13	69	
6	271	00.6	-23	21.0	159	52.4 ¹⁴¹	+1	15.7 ¹¹⁶	45	6 22	6 59	7 33	13 24	26	1 13	65	
7	286	00.3		21.1	174	25.5 ¹⁴¹		27.2 ¹¹⁵	40	11	45	16	25 30		13 61		
8	301	00.0		21.2	188	58.6 ¹⁴¹		38.8 ¹¹⁶	35	6 02	34	7 02	27 32		12 59		
9	315	59.7		21.3	203	31.6 ¹⁴⁰	+1	50.4 ¹¹⁶	30	5 53	23	6 49	28 35		12 57		
10	330	59.4		21.3	218	04.6 ¹⁴⁰	+2	01.9 ¹¹⁵	20	37	6 04	28	31 38		12 52		
11	345	59.1	-23	21.4	232	37.6 ¹⁴⁰	+2	13.5 ¹¹⁶	10 N	5 21	5 47	6 10	13 33	42	1 12	48	
12	0	58.8	-23	21.5	247	10.5 ¹³⁹	+2	25.1 ¹¹⁶	0	5 04	5 30	5 52	13 35	46	1 11	45	
13	15	58.5		21.6	261	43.3 ¹³⁸		36.7 ¹¹⁶	10 S	4 45	5 12	35	37 49		11 42		
14	30	58.2		21.7	276	16.1 ¹³⁸		48.2 ¹¹⁵	20	4 22	4 51	5 16	39 53		11 38		
15	45	57.9		21.8	290	48.9 ¹³⁸	+2	59.8 ¹¹⁶	30	3 53	26	4 54	41 58		11 33		
16	60	57.6		21.9	305	21.6 ¹³⁷	+3	11.4 ¹¹⁶	35	34	4 11	41	43 60		10 32		
17	75	57.3	-23	21.9	319	54.3 ¹³⁷	+3	23.0 ¹¹⁶	40	3 11	3 53	4 26	13 44	63	1 10	29	
18	90	56.9	-23	22.0	334	26.9 ¹³⁶	+3	34.6 ¹¹⁶	45	2 41	3 31	4 08	13 46	67	1 10	25	
19	105	56.6		22.1	348	59.4 ¹³⁵		46.2 ¹¹⁶	50	1 56	3 01	3 45	49 70		10 21		
20	120	56.3		22.2	3	31.9 ¹³⁵	+3	57.8 ¹¹⁶	52	1 28	2 46	35	50 72		09 20		
21	135	56.0		22.3	18	04.4 ¹³⁵	+4	09.4 ¹¹⁶	54	0 43	28	22	51 74		09 18		
22	150	55.7		22.3	32	36.8 ¹³⁴		20.9 ¹¹⁵	56	***	2 06	3 08	52 76		09 16		
23	165	55.4		22.4	47	09.2 ¹³⁴		32.5 ¹¹⁶	58	***	1 36	2 51	53 79		09 14		
24	180	55.1	-23	22.5	61	41.5 ¹³³	+4	44.1 ¹¹⁶	60 S	***	0 47	2 31	13 55	82	1 09	11	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 18 ^h 14 ^m 7		Mag: -4.8 PMG: 8 ^h 51 ^m		Mag: +0.2 PMG: 17 ^h 41 ^m		Mag: -1.8 PMG: 10 ^h 44 ^m		Mag: +0.5 PMG: 12 ^h 58 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	o	'	o	'	o	'	o	'	o	'
0	85	34.3	227	07.9	-11	58.8	94	34.0	-4	36.6
1	100	36.8	242	08.3		59.3	109	35.0		35.9
2	115	39.2	257	08.7	-11	59.8	124	35.9		35.1
3	130	41.7	272	09.2	-12	00.2	139	36.9		34.4
4	145	44.2	287	09.6		00.7	154	37.9		33.7
5	160	46.6	302	10.0	-12	01.2	169	38.8	-4	33.0
6	175	49.1	317	10.5	-12	01.7	184	39.8	-4	32.3
7	190	51.6	332	10.9		02.2	199	40.7		31.6
8	205	54.0	347	11.3		02.7	214	41.7		30.9
9	220	56.5	2	11.7		03.2	229	42.7		30.2
10	235	58.9	17	12.1		03.7	244	43.6		29.4
11	251	01.4	32	12.6	-12	04.2	259	44.6	-4	28.7
12	266	03.9	47	13.0	-12	04.7	274	45.6	-4	28.0
13	281	06.3	62	13.4		05.2	289	46.5		27.3
14	296	08.8	77	13.8		05.7	304	47.5		26.6
15	311	11.3	92	14.2		06.2	319	48.4		25.9
16	326	13.7	107	14.6		06.7	334	49.4		25.2
17	341	16.2	122	15.1	-12	07.2	349	50.4	-4	24.4
18	356	18.7	137	15.5	-12	07.7	4	51.3	-4	23.7
19	11	21.1	152	15.9		08.2	19	52.3		23.0
20	26	23.6	167	16.3		08.7	34	53.3		22.3
21	41	26.1	182	16.7		09.2	49	54.2		21.6
22	56	28.5	197	17.1		09.7	64	55.2		20.9
23	71	31.0	212	17.5		10.2	79	56.2		20.2
24	86	33.4	227	17.9	-12	10.7	94	57.1	-4	19.4
Dif	—		+4		-5		+10		+7	
							+19		-1	
									+22	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16/3 PMG: 11 ^h 56 ^m 6			Edad: 10 ^d 7 PHE { 4 ^h : 56/7 12 ^h : 57/0 20 ^h : 57/3 SD: 15/5 PMG: 20 ^h 32 ^m R°: 50 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°	
h	o	'	o	'	o	'	o	'	h	m	h	m	h	m	h	m
0	180	55.1	-23	22.5	61	41.5	+4	44.1	60 N	14 53	15 51	16 48	13 28	15	2 33	84
1	195	54.8		22.6	76	13.7 ¹³²	+4	55.6 ¹¹⁵	58	15 11	16 03	16 55	32 17		31	80
2	210	54.5		22.6	90	45.9 ¹³²	+5	07.2 ¹¹⁶	56	25	13	17 02	36 19		28	78
3	225	54.2		22.7	105	18.0 ¹³¹		18.8 ¹¹⁶	54	38	22	08	39 22		26	77
4	240	53.9		22.8	119	50.1 ¹³¹		30.3 ¹¹⁵	52	49	30	14	42 24		24	73
5	255	53.6	-23	22.9	134	22.1 ¹³⁰	+5	41.8 ¹¹⁵	50	15 59	16 38	17 19	13 44	26	2 22	71
6	270	53.3	-23	22.9	148	54.0 ¹²⁹	+5	53.3 ¹¹⁵	45	16 20	16 54	17 31	13 50	30	2 18	67
7	285	53.0		23.0	163	25.9 ¹²⁹	+6	04.8 ¹¹⁵	40	37	17 07	41	55 33		14	64
8	300	52.7		23.1	177	57.7 ¹²⁸		16.3 ¹¹⁵	35	16 51	19	51	13 59	36	11	62
9	315	52.4		23.2	192	29.5 ¹²⁸		27.8 ¹¹⁵	30	17 03	30	17 59	14 03	38	09	58
10	330	52.0		23.2	207	01.1 ¹²⁶		39.3 ¹¹⁵	20	24	17 48	18 16	09 42		04	55
11	345	51.7	-23	23.3	221	32.8 ¹²⁷	+6	50.7 ¹¹⁴	10 N	17 43	18 06	18 32	14 15	46	2 00	51
12	0	51.4	-23	23.4	236	04.3 ¹²⁵	+7	02.1 ¹¹⁴	0	18 00	18 23	18 49	14 21	49	1 56	48
13	15	51.1		23.4	250	35.8 ¹²⁵		13.6 ¹¹⁵	10 S	18	18 41	19 08	26 53		53	43
14	30	50.8		23.5	265	07.2 ¹²⁴		25.0 ¹¹⁴	20	37	19 01	19 31	32 56		49	40
15	45	50.5		23.6	279	38.6 ¹²⁴		36.3 ¹¹³	30	18 59	26	20 00	39 60		44	36
16	60	50.2		23.6	294	09.8 ¹²²		47.7 ¹¹⁴	35	19 12	19 42	18	43 63		42	33
17	75	49.9	-23	23.7	308	41.1 ¹²³	+7	59.0 ¹¹³	40	19 27	20 00	20 42	14 47	66	1 39	30
18	90	49.6	-23	23.7	323	12.2 ¹²¹	+8	10.3 ¹¹³	45	19 45	20 22	21 12	14 53	69	1 35	28
19	105	49.3		23.8	337	43.3 ¹²¹		21.6 ¹¹³	50	20 08	20 52	21 58	14 59	73	31	24
20	120	49.0		23.9	352	14.2 ¹¹⁹		32.8 ¹¹²	52	18	21 07	22 26	15 02	75	29	22
21	135	48.7		23.9	6	45.2 ¹²⁰		44.1 ¹¹³	54	31	25	23 12	05 77		27	20
22	150	48.4		24.0	21	16.0 ¹¹⁸	+8	55.3 ¹¹²	56	20 45	21 48	** ** *	08 80		25	18
23	165	48.1		24.1	35	46.8 ¹¹⁸	+9	06.4 ¹¹¹	58	21 02	22 17	** ** *	12 83		23	15
24	180	47.7	-23	24.1	50	17.4 ¹¹⁶	+9	17.6 ¹¹²	60 S	21 22	23 08	** ** *	15 17	85	1 20	13

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 18 ^h 10 ^m 8		Mag: -4.8 PMG: 8 ^h 51 ^m		Mag: +0.3 PMG: 17 ^h 39 ^m		Mag: -1.8 PMG: 10 ^h 41 ^m		Mag: +0.5 PMG: 12 ^h 54 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	o	'	o	'	o	'	o	'	o	'
0	86	33.4	227	17.9	-12	10.7	94	57.1	-4	19.4
1	101	35.9	242	18.3		11.2	109	58.1		18.7
2	116	38.4	257	18.7		11.7	124	59.0		18.0
3	131	40.8	272	19.1		12.2	140	00.0		17.3
4	146	43.3	287	19.5		12.7	155	01.0		16.6
5	161	45.8	302	19.9	-12	13.2	170	01.9	-4	15.9
6	176	48.2	317	20.3	-12	13.7	185	02.9	-4	15.2
7	191	50.7	332	20.7		14.3	200	03.9		14.4
8	206	53.2	347	21.1		14.8	215	04.8		13.7
9	221	55.6	2	21.5		15.3	230	05.8		13.0
10	236	58.1	17	21.8		15.8	245	06.7		12.3
11	252	00.6	32	22.2	-12	16.3	260	07.7	-4	11.6
12	267	03.0	47	22.6	-12	16.8	275	08.7	-4	10.9
13	282	05.5	62	23.0		17.3	290	09.6		10.2
14	297	07.9	77	23.4		17.8	305	10.6		09.4
15	312	10.4	92	23.8		18.3	320	11.5		08.7
16	327	12.9	107	24.1		18.8	335	12.5		08.0
17	342	15.3	122	24.5	-12	19.4	350	13.5	-4	07.3
18	357	17.8	137	24.9	-12	19.9	5	14.4	-4	06.6
19	12	20.3	152	25.3		20.4	20	15.4		05.9
20	27	22.7	167	25.7		20.9	35	16.4		05.2
21	42	25.2	182	26.0		21.4	50	17.3		04.4
22	57	27.7	197	26.4		21.9	65	18.3		03.7
23	72	30.1	212	26.8		22.4	80	19.2		03.0
24	87	32.6	227	27.1	-12	23.0	95	20.2	-4	02.3
Dif	—		+4		-5		+10		+7	
							+19		-1	
									+22	

UT	SOL			O LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16:3 PMG: 11 ^h 57 ^m 1			Edad: 11 ^d 7 PHE { 4 ^h : 57/6 12 ^h : 57/9 20 ^h : 58/2 PMG: 21 ^h 22 ^m R°: 54 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	o	'	o	'	o	'	o	'	h	m	h	m	h	m	h	m		
0	180	47.7	-23	24.1	50	17.4	+9	17.6	60 N	7 06	8 03	9 01	13 43	19	3 57	86		
1	195	47.4		24.2	64	48.0 ¹¹⁶		28.7 ¹¹¹	58	6 58	7 51	8 43	49	22	51	83		
2	210	47.1		24.2	79	18.6 ¹¹⁶		39.8 ¹¹¹	56	52	41	28	13 55	25	46	80		
3	225	46.8		24.3	93	49.0 ¹¹⁴		+9 50.8 ¹¹⁰	54	46	32	16	14 01	27	41	78		
4	240	46.5		24.3	108	19.4 ¹¹⁴		+10 01.8 ¹¹⁰	52	40	24	8 05	06	28	37	76		
5	255	46.2	-23	24.4	122	49.7 ¹¹³		+10 12.8 ¹¹⁰	50	6 35	7 16	7 55	14 10	31	3 33	74		
6	270	45.9	-23	24.4	137	19.9 ¹¹²		+10 23.7 ¹⁰⁹	45	6 23	7 00	7 34	14 20	34	3 25	70		
7	285	45.6		24.5	151	50.0 ¹¹¹		34.6 ¹⁰⁹	40	12	6 47	17	28	37	18	67		
8	300	45.3		24.5	166	20.0 ¹¹⁰		45.5 ¹⁰⁹	35	6 03	35	7 03	35	40	13	64		
9	315	45.0		24.6	180	50.0 ¹¹⁰		+10 56.3 ¹⁰⁸	30	5 54	24	6 51	41	42	3 07	62		
10	330	44.7		24.6	195	19.9 ¹⁰⁹		+11 07.1 ¹⁰⁸	20	38	6 05	29	14 51	47	2 59	57		
11	345	44.4	-23	24.7	209	49.6 ¹⁰⁷		+11 17.8 ¹⁰⁷	10 N	5 22	5 48	6 11	15 01	49	2 51	54		
12	0	44.1	-23	24.7	224	19.3 ¹⁰⁷		+11 28.5 ¹⁰⁷	0	5 05	5 31	5 53	15 10	52	2 44	50		
13	15	43.7		24.8	238	48.9 ¹⁰⁶		39.1 ¹⁰⁶	10 S	4 46	5 13	36	19	56	36	48		
14	30	43.4		24.8	253	18.5 ¹⁰⁶		+11 49.7 ¹⁰⁶	20	4 23	4 52	5 17	28	60	29	44		
15	45	43.1		24.9	267	47.9 ¹⁰⁴		+12 00.3 ¹⁰⁶	30	3 54	27	4 55	39	64	20	40		
16	60	42.8		24.9	282	17.2 ¹⁰³		10.8 ¹⁰⁵	35	35	4 12	42	46	65	15	37		
17	75	42.5	-23	25.0	296	46.5 ¹⁰³		+12 21.2 ¹⁰⁴	40	3 12	3 54	4 27	15 53	68	2 09	35		
18	90	42.2	-23	25.0	311	15.7 ¹⁰²		+12 31.6 ¹⁰⁴	45	2 41	3 31	4 09	16 02	71	2 03	31		
19	105	41.9		25.1	325	44.7 ¹⁰⁰		42.0 ¹⁰⁴	50	1 56	3 01	3 46	12	75	1 55	28		
20	120	41.6		25.1	340	13.7 ¹⁰⁰		+12 52.2 ¹⁰²	52	1 28	2 46	35	17	77	51	26		
21	135	41.3		25.1	354	42.6 ⁹⁹		+13 02.5 ¹⁰³	54	0 41	28	23	22	80	47	24		
22	150	41.0		25.2	9	11.4 ⁹⁸		12.6 ¹⁰¹	56	***	2 06	3 09	28	82	43	22		
23	165	40.7		25.2	23	40.1 ⁹⁷		22.7 ¹⁰¹	58	***	1 36	2 52	35	85	38	19		
24	180	40.4	-23	25.3	38	08.7 ⁹⁶		+13 32.8 ¹⁰¹	60 S	***	0 46	2 31	16 42	88	1 33	16		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 18 ^h 06 ^m 9			Mag: -4.7 PMG: 8 ^h 50 ^m			Mag: +0.3 PMG: 17 ^h 38 ^m			Mag: -1.8 PMG: 10 ^h 38 ^m			Mag: +0.5 PMG: 12 ^h 51 ^m					
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec			
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'		
0	87	32.6	227	27.1	-12	23.0	95	20.2	-4	02.3	200	09.7	-21	09.8	166	52.0	-22	34.3
1	102	35.0	242	27.5		23.5	110	21.2		01.6	215	11.6		09.9	181	54.2		34.3
2	117	37.5	257	27.9		24.0	125	22.1		00.9	230	13.5		10.0	196	56.3		34.3
3	132	40.0	272	28.2		24.5	140	23.1	-4	00.2	245	15.4		10.1	211	58.5		34.3
4	147	42.4	287	28.6		25.0	155	24.0	-3	59.4	260	17.3		10.2	227	00.6		34.2
5	162	44.9	302	29.0	-12	25.5	170	25.0	-3	58.7	275	19.2	-21	10.3	242	02.8	-22	34.2
6	177	47.4	317	29.3	-12	26.1	185	26.0	-3	58.0	290	21.0	-21	10.4	257	04.9	-22	34.2
7	192	49.8	332	29.7		26.6	200	26.9		57.3	305	22.9		10.4	272	07.1		34.2
8	207	52.3	347	30.0		27.1	215	27.9		56.6	320	24.8		10.5	287	09.2		34.2
9	222	54.8	2	30.4		27.6	230	28.9		55.9	335	26.7		10.6	302	11.4		34.1
10	237	57.2	17	30.7		28.1	245	29.8		55.1	350	28.6		10.7	317	13.5		34.1
11	252	59.7	32	31.1	-12	28.7	260	30.8	-3	54.4	5	30.5	-21	10.8	332	15.7	-22	34.1
12	268	02.2	47	31.5	-12	29.2	275	31.7	-3	53.7	20	32.4	-21	10.9	347	17.8	-22	34.1
13	283	04.6	62	31.8		29.7	290	32.7		53.0	35	34.2		10.9	2	20.0		34.1
14	298	07.1	77	32.2		30.2	305	33.7		52.3	50	36.1		11.0	17	22.1		34.1
15	313	09.5	92	32.5		30.8	320	34.6		51.6	65	38.0		11.1	32	24.3		34.0
16	328	12.0	107	32.9		31.3	335	35.6		50.8	80	39.9		11.2	47	26.4		34.0
17	343	14.5	122	33.2	-12	31.8	350	36.5	-3	50.1	95	41.8	-21	11.3	62	28.6	-22	34.0
18	358	16.9	137	33.5	-12	32.3	5	37.5	-3	49.4	110	43.7	-21	11.4	77	30.7	-22	34.0
19	13	19.4	152	33.9		32.9	20	38.5		48.7	125	45.6		11.5	92	32.9		34.0
20	28	21.9	167	34.2		33.4	35	39.4		48.0	140	47.5		11.5	107	35.0		33.9
21	43	24.3	182	34.6		33.9	50	40.4		47.3	155	49.3		11.6	122	37.2		33.9
22	58	26.8	197	34.9		34.4	65	41.3		46.6	170	51.2		11.7	137	39.3		33.9
23	73	29.3	212	35.2		35.0	80	42.3		45.8	185	53.1		11.8	152	41.5		33.9
24	88	31.7	227	35.6	-12	35.5	95	43.3	-3	45.1	200	55.0	-21	11.9	167	43.6	-22	33.9
Dif	—			+4			+10			+19			-1			+21		

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16°3 PMG: 11 ^h 57 ^m 6			Edad: 12 ^d 7 PHE { 4 ^h : 58'5 12 ^h : 58'8 20 ^h : 59'1 SD: 16'0 PMG: 22 ^h 16 ^m R°: 57 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	o	'	o	'	o	'	o	'	h m	h m	h m	h m m	h m m	h m m
0	180	40.4	-23	25.3	38	08.7	+13	32.8	60 N	14 54	15 52	16 48	14 02 26	5 23 88
1	195	40.0		25.3	52	37.3	96	42.8	58	15 11	16 03	16 56	11 30	14 85
2	210	39.7		25.3	67	05.7	94	+13	52.7	56	26	14	17 03	5 06 82
3	225	39.4		25.4	81	34.0	93	+14	02.5	54	39	23	09	20 32
4	240	39.1		25.4	96	02.2	92		12.3	52	15 50	31	15	28 34
5	255	38.8	-23	25.4	110	30.4	92	+14	22.0	50	16 00	16 38	17 20	4 59 80
6	270	38.5	-23	25.5	124	58.4	90	+14	31.7	45	16 21	16 54	17 32	4 47 76
7	285	38.2		25.5	139	26.4	90		41.3	40	37	17 08	42	14 41 38
8	300	37.9		25.5	153	54.2	88	+14	50.8	35	16 52	20	17 52	14 54 41
9	315	37.6		25.6	168	22.0	88	+15	00.2	30	17 04	30	18 00	4 35 72
10	330	37.3		25.6	182	49.7	87		09.6	20	25	17 49	17	25 69
11	345	37.0	-23	25.6	197	17.2	85	+15	18.9	10 N	17 44	18 07	18 33	15 46
12	0	36.6	-23	25.6	211	44.7	85	+15	28.1	0	18 01	18 24	18 50	23 48
13	15	36.3		25.7	226	12.1	84		37.2	10 S	19	18 42	19 09	3 56 61
14	30	36.0		25.7	240	39.4	83		46.2	20	18 38	19 02	19 32	3 45 58
15	45	35.7		25.7	255	06.5	81	+15	55.2	30	19 00	27	20 01	15 50 55
16	60	35.4		25.8	269	33.6	81	+16	04.1	35	13	19 43	20	16 02 57
17	75	35.1	-23	25.8	284	00.6	80	+16	12.9	40	19 28	20 01	20 43	15 59
18	90	34.8	-23	25.8	298	27.5	79	+16	21.6	45	19 46	20 24	21 13	24 52
19	105	34.5		25.8	312	54.3	78		30.2	50	20 09	20 53	21 59	3 34 55
20	120	34.2		25.8	327	21.0	77		38.7	52	20	21 09	22 27	15 59
21	135	33.9		25.9	341	47.6	76		47.1	54	32	27	23 14	24 52
22	150	33.6		25.9	356	14.1	75	+16	55.5	56	20 46	21 49	*** **	3 00 45
23	165	33.2		25.9	10	40.5	74	+17	03.7	58	21 03	22 19	*** **	3 00 45
24	180	32.9	-23	25.9	25	06.8	73	+17	11.8	60 S	21 24	23 10	*** **	2 52 43

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 18 ^h 02 ^m 9		Mag: -4.7 PMG: 8 ^h 49 ^m		Mag: +0.3 PMG: 17 ^h 36 ^m		Mag: -1.8 PMG: 10 ^h 35 ^m		Mag: +0.5 PMG: 12 ^h 47 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	o	'	o	'	o	'	o	'	o	'
0	88	31.7	227	35.6	-12	35.5	95	43.3	-21	11.9
1	103	34.2	242	35.9		36.0	110	44.2		12.0
2	118	36.7	257	36.2		36.5	125	45.2		12.0
3	133	39.1	272	36.6		37.1	140	46.1		12.1
4	148	41.6	287	36.9		37.6	155	47.1		12.2
5	163	44.0	302	37.2	-12	38.1	170	48.1	-3	12.3
6	178	46.5	317	37.6	-12	38.7	185	49.0	-3	12.4
7	193	49.0	332	37.9		39.2	200	50.0		12.5
8	208	51.4	347	38.2		39.7	215	50.9		12.6
9	223	53.9	2	38.5		40.2	230	51.9		12.6
10	238	56.4	17	38.9		40.8	245	52.9		12.7
11	253	58.8	32	39.2	-12	41.3	260	53.8	-3	12.8
12	269	01.3	47	39.5	-12	41.8	275	54.8	-3	12.9
13	284	03.8	62	39.8		42.4	290	55.7		13.0
14	299	06.2	77	40.1		42.9	305	56.7		13.1
15	314	08.7	92	40.5		43.4	320	57.7		13.1
16	329	11.2	107	40.8		44.0	335	58.6		13.2
17	344	13.6	122	41.1	-12	44.5	350	59.6	-3	13.3
18	359	16.1	137	41.4	-12	45.0	6	00.5	-3	13.4
19	14	18.5	152	41.7		45.6	21	01.5		13.5
20	29	21.0	167	42.0		46.1	36	02.5		13.6
21	44	23.5	182	42.3		46.7	51	03.4		13.6
22	59	25.9	197	42.6		47.2	66	04.4		13.7
23	74	28.4	212	42.9		47.7	81	05.3		13.8
24	89	30.9	227	43.3	-12	48.3	96	06.3	-3	13.9
Dif	—		+3		-5		+10		+7	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16/3 PMG: 11 ^h 58 ^m 1			Edad: 13 ^d 7 PHE { SD: 16/2 PMG: 23 ^h 13 ^m 4 ^h : 59/3 12 ^h : 59/6 20 ^h : 59/8 R°: 62 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°			
h	o	'	o	'	o	'	o	'	o	'	h	m	h	m	h	m	h	m
0	180	32.9	-23	25.9	25	06.8	+17	11.8	81	60 N	7 07	8 04	9 02	14 28	39	6 51	85	
1	195	32.6		25.9	39	33.0	72		19.9	58	7 00	7 52	8 44	41	42	39	81	
2	210	32.3		26.0	53	59.1	71		27.8	56	6 53	42	30	14 52	44	28	79	
3	225	32.0		26.0	68	25.1	70		35.7	54	47	33	17	15 02	45	19	77	
4	240	31.7		26.0	82	51.1	70		43.4	52	41	25	8 06	11	46	11	75	
5	255	31.4	-23	26.0	97	16.9	68	+17	51.1	50	6 36	7 17	7 56	15 19	47	6 03	74	
6	270	31.1	-23	26.0	111	42.6	67	+17	58.6	45	6 24	7 01	7 35	15 35	51	5 47	72	
7	285	30.8		26.0	126	08.3	67	+18	06.1	40	14	6 48	18	15 49	52	34	69	
8	300	30.5		26.0	140	33.8	65		13.4	35	6 04	36	7 04	16 01	54	23	68	
9	315	30.2		26.1	154	59.3	65		20.6	30	5 55	25	6 52	11	55	5 14	65	
10	330	29.8		26.1	169	24.7	64		27.7	20	39	6 06	30	29	57	4 57	63	
11	345	29.5	-23	26.1	183	50.0	63	+18	34.7	10 N	5 23	5 49	6 12	16 45	58	4 43	60	
12	0	29.2	-23	26.1	198	15.1	61	+18	41.5	0	5 06	5 32	5 54	16 59	61	4 29	59	
13	15	28.9		26.1	212	40.2	61		48.3	10 S	4 47	5 14	37	17 14	62	16	56	
14	30	28.6		26.1	227	05.2	60	+18	54.9	20	4 24	4 53	5 18	30	64	4 01	54	
15	45	28.3		26.1	241	30.2	60	+19	01.5	30	3 55	28	4 56	48	66	3 45	51	
16	60	28.0		26.1	255	55.0	58		07.9	35	36	4 13	43	17 59	67	35	50	
17	75	27.7	-23	26.1	270	19.8	58	+19	14.2	40	3 13	3 55	4 27	18 11	68	3 24	48	
18	90	27.4	-23	26.1	284	44.4	56	+19	20.3	45	2 42	3 32	4 09	18 25	70	3 12	45	
19	105	27.1		26.1	299	09.0	56		26.4	50	1 56	3 02	3 47	43	72	2 56	43	
20	120	26.7		26.1	313	33.5	55		32.3	52	1 28	2 47	36	18 52	73	49	41	
21	135	26.4		26.1	327	57.9	54		38.0	54	0 41	29	24	19 01	74	41	39	
22	150	26.1		26.1	342	22.2	53		43.7	56	***	2 07	3 09	12	75	32	37	
23	165	25.8		26.1	356	46.5	53		49.2	58	***	1 37	2 52	24	77	22	35	
24	180	25.5	-23	26.1	11	10.7	52	+19	54.6	60 S	***	0 45	2 32	19 38	80	2 11	31	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 17 ^h 59 ^m 0		Mag: -4.7 PMG: 8 ^h 49 ^m		Mag: +0.3 PMG: 17 ^h 34 ^m		Mag: -1.8 PMG: 10 ^h 32 ^m		Mag: +0.5 PMG: 12 ^h 44 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	o	'	o	'	o	'	o	'	o	'
0	89	30.9	227	43.3	-12	48.3	96	06.3	-3	27.9
1	104	33.3	242	43.6		48.8	111	07.3		27.2
2	119	35.8	257	43.9		49.3	126	08.2		26.5
3	134	38.3	272	44.2		49.9	141	09.2		25.8
4	149	40.7	287	44.5		50.4	156	10.1		25.1
5	164	43.2	302	44.8	-12	51.0	171	11.1	-3	24.3
6	179	45.6	317	45.1	-12	51.5	186	12.1	-3	23.6
7	194	48.1	332	45.3		52.0	201	13.0		22.9
8	209	50.6	347	45.6		52.6	216	14.0		22.2
9	224	53.0	2	45.9		53.1	231	14.9		21.5
10	239	55.5	17	46.2		53.7	246	15.9		20.8
11	254	58.0	32	46.5	-12	54.2	261	16.8	-3	20.0
12	270	00.4	47	46.8	-12	54.7	276	17.8	-3	19.3
13	285	02.9	62	47.1		55.3	291	18.8		18.6
14	300	05.4	77	47.4		55.8	306	19.7		17.9
15	315	07.8	92	47.7		56.4	321	20.7		17.2
16	330	10.3	107	47.9		56.9	336	21.6		16.4
17	345	12.8	122	48.2	-12	57.5	351	22.6	-3	15.7
18	0	15.2	137	48.5	-12	58.0	6	23.6	-3	15.0
19	15	17.7	152	48.8		58.5	21	24.5		14.3
20	30	20.1	167	49.1		59.1	36	25.5		13.6
21	45	22.6	182	49.3	-12	59.6	51	26.4		12.9
22	60	25.1	197	49.6	-13	00.2	66	27.4		12.1
23	75	27.5	212	49.9		00.7	81	28.3		11.4
24	90	30.0	227	50.2	-13	01.3	96	29.3	-3	10.7
Dif	—		+3		-5		+10		+7	
							+19		-1	
									+21	
									0	

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16'3 PMG: 11 ^h 58 ^m 5			Edad: 14 ^d 7 PHE { SD: 16'4 PMG: *** ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	o	'	o	'	o	'	o	'	h	m	h	m	h	m	h	m	m	
0	180	25.5	-23	26.1	11	10.7	+19	54.6	60 N	14 55	15 53	16 49	15 07	57	8 16	72		
1	195	25.2		26.1	25	34.8 51	+19	59.9 53	58	15 12	16 04	16 57	23 57		8 00	72		
2	210	24.9		26.1	39	58.8 50	+20	05.0 51	56	27	15	17 04	36 58		7 47	71		
3	225	24.6		26.1	54	22.7 49		10.0 50	54	40	24	10	47 59		36	70		
4	240	24.3		26.1	68	46.6 49		14.9 49	52	15 51	32	16	15 57	59	26	69		
5	255	24.0	-23	26.1	83	10.4 48	+20	19.6 47	50	16 01	16 39	17 21	16 06	60	7 17	69		
6	270	23.6	-23	26.1	97	34.1 47	+20	24.2 46	45	16 22	16 55	17 33	16 26	60	6 59	67		
7	285	23.3		26.1	111	57.8 47		28.6 44	40	38	17 09	43	41 61		43	67		
8	300	23.0		26.1	126	21.4 46		32.9 43	35	16 53	21	17 53	16 55	61	31	65		
9	315	22.7		26.1	140	44.9 45		37.1 42	30	17 05	31	18 01	17 06	62	19	65		
10	330	22.4		26.1	155	08.3 44		41.1 40	20	26	17 50	18	26 62		6 00	64		
11	345	22.1	-23	26.1	169	31.7 44	+20	45.0 39	10 N	17 45	18 08	18 34	17 43	63	5 43	63		
12	0	21.8	-23	26.0	183	55.1 44	+20	48.8 38	0	18 02	18 25	18 51	18 00	62	5 28	61		
13	15	21.5		26.0	198	18.3 42		52.3 35	10 S	20	18 43	19 10	16 63		5 12	61		
14	30	21.2		26.0	212	41.6 43		55.8 35	20	18 39	19 03	19 33	34 63		4 55	60		
15	45	20.9		26.0	227	04.7 41	+20	59.1 33	30	19 01	28	20 02	18 54	63	36	58		
16	60	20.5		26.0	241	27.8 41	+21	02.2 31	35	14	19 44	21	19 06	63	25	57		
17	75	20.2	-23	26.0	255	50.9 41	+21	05.2 30	40	19 29	20 02	20 44	19 19	64	4 12	57		
18	90	19.9	-23	26.0	270	13.9 40	+21	08.1 29	45	19 47	20 25	21 14	19 35	64	3 57	55		
19	105	19.6		25.9	284	36.8 39		10.8 27	50	20 10	20 54	22 00	19 55	64	39	53		
20	120	19.3		25.9	298	59.7 39		13.3 25	52	21	21 10	22 28	20 05	64	30	53		
21	135	19.0		25.9	313	22.6 39		15.7 24	54	33	28	23 15	15 65		20	52		
22	150	18.7		25.9	327	45.4 38		18.0 23	56	20 47	21 50	** **	27 65		3 09	51		
23	165	18.4		25.9	342	08.2 38		20.1 21	58	21 04	22 20	** **	41 65		2 57	49		
24	180	18.1	-23	25.9	356	30.9 37	+21	22.0 19	60 S	21 25	23 11	** **	20 58	64	2 42	47		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 17 ^h 55 ^m 1			Mag: -4.7 PMG: 8 ^h 48 ^m			Mag: +0.3 PMG: 17 ^h 33 ^m			Mag: -1.8 PMG: 10 ^h 29 ^m			Mag: +0.5 PMG: 12 ^h 40 ^m					
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'
0	90	30.0	227	50.2	-13	01.3	96	29.3	-3	10.7	202	25.6	-21	15.9	169	26.8	-22	33.0
1	105	32.5	242	50.4		01.8	111	30.3		10.0	217	27.5		16.0	184	28.9		33.0
2	120	34.9	257	50.7		02.4	126	31.2		09.3	232	29.4		16.0	199	31.1		32.9
3	135	37.4	272	51.0		02.9	141	32.2		08.6	247	31.3		16.1	214	33.2		32.9
4	150	39.9	287	51.3		03.5	156	33.1		07.8	262	33.2		16.2	229	35.4		32.9
5	165	42.3	302	51.5	-13	04.0	171	34.1	-3	07.1	277	35.1	-21	16.3	244	37.5	-22	32.9
6	180	44.8	317	51.8	-13	04.6	186	35.1	-3	06.4	292	37.0	-21	16.4	259	39.7	-22	32.9
7	195	47.3	332	52.1		05.1	201	36.0		05.7	307	38.9		16.4	274	41.8		32.8
8	210	49.7	347	52.3		05.7	216	37.0		05.0	322	40.8		16.5	289	44.0		32.8
9	225	52.2	2	52.6		06.2	231	37.9		04.2	337	42.6		16.6	304	46.1		32.8
10	240	54.6	17	52.8		06.8	246	38.9		03.5	352	44.5		16.7	319	48.3		32.8
11	255	57.1	32	53.1	-13	07.3	261	39.8	-3	02.8	7	46.4	-21	16.8	334	50.4	-22	32.8
12	270	59.6	47	53.4	-13	07.9	276	40.8	-3	02.1	22	48.3	-21	16.9	349	52.6	-22	32.7
13	286	02.0	62	53.6		08.4	291	41.8		01.4	37	50.2		16.9	4	54.7		32.7
14	301	04.5	77	53.9		09.0	306	42.7	-3	00.7	52	52.1		17.0	19	56.9		32.7
15	316	07.0	92	54.1		09.5	321	43.7	-2	59.9	67	54.0		17.1	34	59.0		32.7
16	331	09.4	107	54.4		10.1	336	44.6		59.2	82	55.9		17.2	50	01.2		32.7
17	346	11.9	122	54.6	-13	10.6	351	45.6	-2	58.5	97	57.8	-21	17.3	65	03.3	-22	32.6
18	1	14.4	137	54.9	-13	11.2	6	46.5	-2	57.8	112	59.7	-21	17.3	80	05.5	-22	32.6
19	16	16.8	152	55.1		11.7	21	47.5		57.1	128	01.6		17.4	95	07.6		32.6
20	31	19.3	167	55.4		12.3	36	48.5		56.3	143	03.4		17.5	110	09.8		32.6
21	46	21.8	182	55.6		12.8	51	49.4		55.6	158	05.3		17.6	125	11.9		32.6
22	61	24.2	197	55.9		13.4	66	50.4		54.9	173	07.2		17.7	140	14.0		32.5
23	76	26.7	212	56.1		13.9	81	51.3		54.2	188	09.1		17.7	155	16.2		32.5
24	91	29.1	227	56.4	-13	14.5	96	52.3	-2	53.5	203	11.0	-21	17.8	170	18.3	-22	32.5
Dif	—			+3 -6			+10 +7			+19 -1			+21 0					

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'3 PMG: 11 ^h 59 ^m 0			Edad: 15 ^d 7 PHE { 4 ^h : 60'5 12 ^h : 60'6 20 ^h : 60'7 SD: 16'5 PMG: 0 ^h 15 ^m R°: 62 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	o	'	o	'	o	'	o	'	h	m	h	m	h	m	h	m
0	180	18.1	-23	25.9	356	30.9	+21	22.0	60 N	7 08	8 05	9 03	16 04	75	9 28	55
1	195	17.8		25.8	10	53.6	37	23.8	58	7 01	7 53	8 45	20 73		9 12	56
2	210	17.5		25.8	25	16.2	36	25.4	56	6 54	43	31	34 72		8 58	57
3	225	17.1		25.8	39	38.9	37	26.9	54	48	34	18	46 71		46	58
4	240	16.8		25.8	54	01.5	36	28.2	52	42	26	8 07	16 56	71	35	59
5	255	16.5	-23	25.7	68	24.0	35	+21 29.4	50	6 37	7 18	7 57	17 06	70	8 26	59
6	270	16.2	-23	25.7	82	46.6	36	+21 30.4	45	6 25	7 02	7 36	17 26	68	8 06	60
7	285	15.9		25.7	97	09.1	35	31.2	40	14	6 49	19	42 68		7 50	60
8	300	15.6		25.7	111	31.5	34	31.9	35	6 05	37	7 05	17 56	66	36	61
9	315	15.3		25.6	125	54.0	35	32.4	30	5 56	26	6 53	18 08	66	24	61
10	330	15.0		25.6	140	16.5	35	32.8	20	40	6 07	31	28 65		7 04	62
11	345	14.7	-23	25.6	154	38.9	34	+21 33.0	10 N	5 24	5 50	6 13	18 46	63	6 46	62
12	0	14.4	-23	25.5	169	01.3	34	+21 33.0	0	5 07	5 33	5 55	19 02	63	6 29	63
13	15	14.0		25.5	183	23.7	34	32.9	10 S	4 48	5 15	38	19 61		6 13	63
14	30	13.7		25.5	197	46.1	34	32.7	20	4 25	4 54	5 19	37 60		5 55	63
15	45	13.4		25.4	212	08.5	34	32.2	30	3 56	29	4 57	19 57	59	34	64
16	60	13.1		25.4	226	30.8	33	31.6	35	37	4 14	44	20 09	58	22	65
17	75	12.8	-23	25.4	240	53.2	34	+21 30.9	40	3 14	3 56	4 28	20 23	56	5 09	64
18	90	12.5	-23	25.3	255	15.6	34	+21 30.0	45	2 43	3 33	4 10	20 39	55	4 52	65
19	105	12.2		25.3	269	38.0	34	28.9	50	1 57	3 03	3 48	20 59	54	32	65
20	120	11.9		25.3	284	00.3	33	27.7	52	1 30	2 48	37	21 09	52	23	65
21	135	11.6		25.2	298	22.7	34	26.3	54	0 42	30	25	20 51		12	65
22	150	11.3		25.2	312	45.1	34	24.8	56	***	2 08	3 10	32 50		4 00	65
23	165	10.9		25.2	327	07.5	34	23.1	58	***	1 38	2 54	21 46	48	3 46	65
24	180	10.6	-23	25.1	341	29.9	34	+21 21.2	60 S	***	0 46	2 33	22 02	46	3 29	66

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 17 ^h 51 ^m 1		Mag: -4.7 PMG: 8 ^h 48 ^m		Mag: +0.3 PMG: 17 ^h 31 ^m		Mag: -1.8 PMG: 10 ^h 26 ^m		Mag: +0.5 PMG: 12 ^h 37 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	o	'	o	'	o	'	o	'	o	'
0	91	29.1	227	56.4	-13	14.5	96	52.3	-2	53.5
1	106	31.6	242	56.6		15.0	111	53.2		52.8
2	121	34.1	257	56.8		15.6	126	54.2		52.0
3	136	36.5	272	57.1		16.2	141	55.2		51.3
4	151	39.0	287	57.3		16.7	156	56.1		50.6
5	166	41.5	302	57.6	-13	17.3	171	57.1	-2	49.9
6	181	43.9	317	57.8	-13	17.8	186	58.0	-2	49.2
7	196	46.4	332	58.0		18.4	201	59.0		48.4
8	211	48.9	347	58.3		18.9	216	59.9		47.7
9	226	51.3	2	58.5		19.5	232	00.9		47.0
10	241	53.8	17	58.7		20.0	247	01.9		46.3
11	256	56.3	32	59.0	-13	20.6	262	02.8	-2	45.6
12	271	58.7	47	59.2	-13	21.2	277	03.8	-2	44.8
13	287	01.2	62	59.4		21.7	292	04.7		44.1
14	302	03.6	77	59.6		22.3	307	05.7		43.4
15	317	06.1	92	59.9		22.8	322	06.6		42.7
16	332	08.6	108	00.1		23.4	337	07.6		42.0
17	347	11.0	123	00.3	-13	24.0	352	08.6	-2	41.3
18	2	13.5	138	00.5	-13	24.5	7	09.5	-2	40.5
19	17	16.0	153	00.7		25.1	22	10.5		39.8
20	32	18.4	168	01.0		25.6	37	11.4		39.1
21	47	20.9	183	01.2		26.2	52	12.4		38.4
22	62	23.4	198	01.4		26.8	67	13.3		37.7
23	77	25.8	213	01.6		27.3	82	14.3		36.9
24	92	28.3	228	01.8	-13	27.9	97	15.2	-2	36.2
Dif	—		+2		-6		+10		+7	

UT	SOL				LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16:3 PMG: 11 ^h 59 ^m 5				Edad: 16 ^d 7 PHE { 4 ^h : 60/7 12 ^h : 60/7 20 ^h : 60/7 R°: 62 ^m													
	hG ☉		Dec		hG ☾		Dif							Civil	Náutico	Hora	R°	Hora
h	o	'	o	'	o	'	o	'	o	h m	h m	h m	h m m	h m m	h m m	h m m		
0	180	10.6	-23	25.1	341	29.9	+21	21.2	60 N	14 56	15 54	16 51	17 19 87	10 23 39				
1	195	10.3		25.1	355	52.3	34	19.2	58	15 14	16 05	16 58	33 85	10 08 41				
2	210	10.0		25.0	10	14.7	34	17.0	56	28	16	17 05	46 82	9 55 44				
3	225	09.7		25.0	24	37.2	35	14.7	54	41	25	11	17 57 81	44 45				
4	240	09.4		24.9	38	59.7	35	12.2	52	15 52	33	17	18 07 79	34 46				
5	255	09.1	-23	24.9	53	22.1	34	+21 09.5	50	16 02	16 40	17 22	18 16 77	9 25 48				
6	270	08.8	-23	24.9	67	44.7	36	+21 06.7	45	16 23	16 57	17 34	18 34 74	9 06 50				
7	285	08.5		24.8	82	07.2	35	03.8	40	40	17 10	44	18 50 71	8 50 53				
8	300	08.2		24.8	96	29.8	36	+21 00.6	35	16 54	22	17 54	19 02 70	37 54				
9	315	07.8		24.7	110	52.4	36	+20 57.4	30	17 06	32	18 02	14 67	25 56				
10	330	07.5		24.7	125	15.0	36	53.9	20	27	17 51	19	33 65	8 06 57				
11	345	07.2	-23	24.6	139	37.6	36	+20 50.4	10 N	17 46	18 09	18 35	19 49 63	7 48 60				
12	0	06.9	-23	24.6	154	00.3	37	+20 46.6	0	18 03	18 26	18 52	20 05 60	7 32 62				
13	15	06.6		24.5	168	23.1	38	42.8	10 S	21	18 44	19 11	20 58	7 16 63				
14	30	06.3		24.5	182	45.8	37	38.7	20	18 40	19 04	19 34	37 55	6 58 66				
15	45	06.0		24.4	197	08.7	39	34.5	30	19 02	29	20 03	20 56 52	38 68				
16	60	05.7		24.4	211	31.5	38	30.2	35	15	19 45	21	21 07 50	27 68				
17	75	05.4	-23	24.3	225	54.4	39	+20 25.7	40	19 30	20 03	20 45	21 19 49	6 13 70				
18	90	05.1	-23	24.3	240	17.4	40	+20 21.1	45	19 48	20 25	21 15	21 34 46	5 57 72				
19	105	04.7		24.2	254	40.3	39	16.3	50	20 11	20 55	22 01	21 53 42	37 74				
20	120	04.4		24.1	269	03.4	41	11.4	52	21	21 10	22 29	22 01 41	28 75				
21	135	04.1		24.1	283	26.5	41	06.3	54	34	28	23 15	11 39	17 77				
22	150	03.8		24.0	297	49.6	41	+20 01.1	56	20 48	21 51	*** **	22 37	5 05 78				
23	165	03.5		24.0	312	12.8	42	+19 55.7	58	21 05	22 20	*** **	34 35	4 51 80				
24	180	03.2	-23	23.9	326	36.1	43	+19 50.3	60 S	21 25	23 11	*** **	22 48 32	4 35 83				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 17 ^h 47 ^m 2		Mag: -4.7 PMG: 8 ^h 48 ^m				Mag: +0.4 PMG: 17 ^h 30 ^m				Mag: -1.8 PMG: 10 ^h 23 ^m				Mag: +0.5 PMG: 12 ^h 34 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'
0	92	28.3	228	01.8	-13	27.9	97	15.2	-2	36.2	203	56.4	-21	19.8	171	09.9	-22	32.0
1	107	30.8	243	02.0		28.4	112	16.2		35.5	218	58.3		19.8	186	12.0		32.0
2	122	33.2	258	02.2		29.0	127	17.2		34.8	234	00.2		19.9	201	14.2		32.0
3	137	35.7	273	02.5		29.6	142	18.1		34.1	249	02.1		20.0	216	16.3		32.0
4	152	38.1	288	02.7		30.1	157	19.1		33.3	264	04.0		20.1	231	18.5		32.0
5	167	40.6	303	02.9	-13	30.7	172	20.0	-2	32.6	279	05.9	-21	20.2	246	20.6	-22	31.9
6	182	43.1	318	03.1	-13	31.3	187	21.0	-2	31.9	294	07.8	-21	20.2	261	22.8	-22	31.9
7	197	45.5	333	03.3		31.8	202	21.9		31.2	309	09.6		20.3	276	24.9		31.9
8	212	48.0	348	03.5		32.4	217	22.9		30.5	324	11.5		20.4	291	27.1		31.9
9	227	50.5	3	03.7		32.9	232	23.8		29.8	339	13.4		20.5	306	29.2		31.9
10	242	52.9	18	03.9		33.5	247	24.8		29.0	354	15.3		20.6	321	31.4		31.8
11	257	55.4	33	04.1	-13	34.1	262	25.8	-2	28.3	9	17.2	-21	20.6	336	33.5	-22	31.8
12	272	57.9	48	04.3	-13	34.6	277	26.7	-2	27.6	24	19.1	-21	20.7	351	35.6	-22	31.8
13	288	00.3	63	04.5		35.2	292	27.7		26.9	39	21.0		20.8	6	37.8		31.8
14	303	02.8	78	04.7		35.8	307	28.6		26.2	54	22.9		20.9	21	39.9		31.8
15	318	05.3	93	04.9		36.3	322	29.6		25.4	69	24.8		21.0	36	42.1		31.7
16	333	07.7	108	05.1		36.9	337	30.5		24.7	84	26.7		21.0	51	44.2		31.7
17	348	10.2	123	05.3	-13	37.5	352	31.5	-2	24.0	99	28.6	-21	21.1	66	46.4	-22	31.7
18	3	12.6	138	05.5	-13	38.0	7	32.4	-2	23.3	114	30.5	-21	21.2	81	48.5	-22	31.7
19	18	15.1	153	05.7		38.6	22	33.4		22.6	129	32.4		21.3	96	50.7		31.7
20	33	17.6	168	05.8		39.2	37	34.4		21.8	144	34.2		21.4	111	52.8		31.6
21	48	20.0	183	06.0		39.7	52	35.3		21.1	159	36.1		21.4	126	55.0		31.6
22	63	22.5	198	06.2		40.3	67	36.3		20.4	174	38.0		21.5	141	57.1		31.6
23	78	25.0	213	06.4		40.9	82	37.2		19.7	189	39.9		21.6	156	59.3		31.6
24	93	27.4	228	06.6	-13	41.4	97	38.2	-2	19.0	204	41.8	-21	21.7	172	01.4	-22	31.6
Dif	—		+2		-6		+10		+7		+19		-1		+21		0	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'3 PMG: 12 ^h 00 ^m 0			Edad: 17 ^d 7 PHE { 4 ^h : 60'7 12 ^h : 60'6 20 ^h : 60'5 SD: 16'5 PMG: 2 ^h 19 ^m R°: 60 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°			
h	o	'	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m	
0	180	03.2	-23	23.9	326	36.1	+19	50.3	60 N	7 09	8 06	9 03	18 46	93	11 02	27		
1	195	02.9		23.8	340	59.4		44.6	58	7 01	7 54	8 46	18 58	89	10 49	30		
2	210	02.6		23.8	355	22.7		38.8	58	6 55	44	31	19 08	87	39	32		
3	225	02.3		23.7	9	46.2		32.9	59	54	48	35	19	83	29	35		
4	240	02.0		23.7	24	09.7		26.9	60	52	43	26	8 07	26	81	20	37	
5	255	01.7	-23	23.6	38	33.2	+19	20.7	62	50	6 37	7 19	7 58	19 33	79	10 13	38	
6	270	01.3	-23	23.5	52	56.8	+19	14.3	64	45	6 26	7 03	7 37	19 48	76	9 56	42	
7	285	01.0		23.5	67	20.5		07.9	64	40	15	6 49	20	20 01	73	43	45	
8	300	00.7		23.4	81	44.3	+19	01.3	66	35	6 06	38	7 06	12	70	31	48	
9	315	00.4		23.3	96	08.1	+18	54.6	67	30	5 57	27	6 53	21	68	21	49	
10	330	00.1		23.3	110	31.9		47.7	69	20	41	6 08	32	38	63	9 03	53	
11	344	59.8	-23	23.2	124	55.9	+18	40.7	70	10 N	5 25	5 51	6 14	20 52	60	8 48	56	
12	359	59.5	-23	23.1	139	19.9	+18	33.6	71	0	5 08	5 34	5 56	21 05	57	8 34	58	
13	14	59.2		23.1	153	44.0		26.4	72	10 S	4 49	5 16	39	18	54	19	62	
14	29	58.9		23.0	168	08.2		19.0	74	20	4 26	4 55	5 20	32	51	8 04	64	
15	44	58.6		22.9	182	32.4		11.6	74	30	3 57	30	4 58	48	47	7 46	68	
16	59	58.3		22.8	196	56.7	+18	03.9	77	35	38	4 15	45	21 57	45	35	70	
17	74	57.9	-23	22.8	211	21.1	+17	56.2	77	40	3 15	3 57	4 30	22 08	42	7 23	72	
18	89	57.6	-23	22.7	225	45.6	+17	48.4	78	45	2 44	3 34	4 12	22 20	39	7 09	75	
19	104	57.3		22.6	240	10.1		40.4	80	50	1 59	3 04	3 49	35	35	6 51	79	
20	119	57.0		22.5	254	34.7		32.3	81	52	1 31	2 49	38	42	33	43	81	
21	134	56.7		22.5	268	59.4		24.1	82	54	0 45	31	26	50	31	34	83	
22	149	56.4		22.4	283	24.2		15.8	83	56	***	2 09	3 12	22 59	28	23	86	
23	164	56.1		22.3	297	49.0	+17	07.4	84	58	***	1 39	2 55	23 09	25	6 11	88	
24	179	55.8	-23	22.2	312	14.0	+16	58.9	85	60 S	***	0 49	2 34	23 20	22	5 58	91	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG 17 ^h 43 ^m 3			Mag: -4.7 PMG: 8 ^h 47 ^m			Mag: +0.4 PMG: 17 ^h 28 ^m			Mag: -1.8 PMG: 10 ^h 20 ^m			Mag: +0.5 PMG: 12 ^h 30 ^m					
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♅		Dec	
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'
0	93	27.4	228	06.6	-13	41.4	97	38.2	-2	19.0	204	41.8	-21	21.7	172	01.4	-22	31.6
1	108	29.9	243	06.8		42.0	112	39.1		18.2	219	43.7		21.8	187	03.6		31.5
2	123	32.4	258	07.0		42.6	127	40.1		17.5	234	45.6		21.8	202	05.7		31.5
3	138	34.8	273	07.1		43.1	142	41.0		16.8	249	47.5		21.9	217	07.9		31.5
4	153	37.3	288	07.3		43.7	157	42.0		16.1	264	49.4		22.0	232	10.0		31.5
5	168	39.8	303	07.5	-13	44.3	172	43.0	-2	15.4	279	51.3	-21	22.1	247	12.1	-22	31.5
6	183	42.2	318	07.7	-13	44.8	187	43.9	-2	14.6	294	53.2	-21	22.1	262	14.3	-22	31.4
7	198	44.7	333	07.8		45.4	202	44.9		13.9	309	55.1		22.2	277	16.4		31.4
8	213	47.1	348	08.0		46.0	217	45.8		13.2	324	57.0		22.3	292	18.6		31.4
9	228	49.6	3	08.2		46.5	232	46.8		12.5	339	58.9		22.4	307	20.7		31.4
10	243	52.1	18	08.4		47.1	247	47.7		11.8	355	00.8		22.5	322	22.9		31.4
11	258	54.5	33	08.5	-13	47.7	262	48.7	-2	11.0	10	02.7	-21	22.5	337	25.0	-22	31.3
12	273	57.0	48	08.7	-13	48.3	277	49.6	-2	10.3	25	04.5	-21	22.6	352	27.2	-22	31.3
13	288	59.5	63	08.9		48.8	292	50.6		09.6	40	06.4		22.7	7	29.3		31.3
14	304	01.9	78	09.0		49.4	307	51.5		08.9	55	08.3		22.8	22	31.5		31.3
15	319	04.4	93	09.2		50.0	322	52.5		08.2	70	10.2		22.9	37	33.6		31.3
16	334	06.9	108	09.4		50.5	337	53.5		07.5	85	12.1		22.9	52	35.8		31.2
17	349	09.3	123	09.5	-13	51.1	352	54.4	-2	06.7	100	14.0	-21	23.0	67	37.9	-22	31.2
18	4	11.8	138	09.7	-13	51.7	7	55.4	-2	06.0	115	15.9	-21	23.1	82	40.1	-22	31.2
19	19	14.2	153	09.9		52.3	22	56.3		05.3	130	17.8		23.2	97	42.2		31.2
20	34	16.7	168	10.0		52.8	37	57.3		04.6	145	19.7		23.2	112	44.3		31.2
21	49	19.2	183	10.2		53.4	52	58.2		03.9	160	21.6		23.3	127	46.5		31.1
22	64	21.6	198	10.3		54.0	67	59.2		03.1	175	23.5		23.4	142	48.6		31.1
23	79	24.1	213	10.5		54.5	83	00.1		02.4	190	25.4		23.5	157	50.8		31.1
24	94	26.6	228	10.7	-13	55.1	98	01.1	-2	01.7	205	27.3	-21	23.6	172	52.9	-22	31.1
Dif	—		+2		-6		+10		+7		+19		-1		+21			

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16'3 PMG: 12 ^h 00 ^m 5			Edad: 18 ^d 7 PHE { SD: 16'4 PMG: 3 ^h 19 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	o	'	o	'	o	'	o	'	h m	h m	h m	h m	m	h m	m			
0	179	55.8	-23	22.2	312	14.0	+16	58.9	60 N	14 58	15 55	16 52	20 19	92	11 29	19		
1	194	55.5		22.1	326	39.0		50.3	58	15 15	16 07	17 00	27	89	19	23		
2	209	55.2		22.1	341	04.1		41.5	56	30	17	06	35	85	11	25		
3	224	54.9		22.0	355	29.3		32.7	54	42	26	12	41	83	11 04	27		
4	239	54.5		21.9	9	54.5		23.7	52	15 53	34	18	47	81	10 57	30		
5	254	54.2	-23	21.8	24	19.8	+16	14.6	50	16 03	16 42	17 23	20 52	79	10 51	32		
6	269	53.9	-23	21.7	38	45.3	+16	05.5	45	16 24	16 58	17 35	21 04	75	10 38	36		
7	284	53.6		21.6	53	10.8	+15	56.2	40	41	17 11	45	14	71	28	38		
8	299	53.3		21.6	67	36.3		46.9	35	16 55	23	17 55	22	68	19	41		
9	314	53.0		21.5	82	02.0		37.4	30	17 07	34	18 03	29	65	10 10	44		
10	329	52.7		21.4	96	27.8		27.9	20	28	17 52	20	41	61	9 56	49		
11	344	52.4	-23	21.3	110	53.6	+15	18.2	10 N	17 47	18 10	18 36	21 52	57	9 44	52		
12	359	52.1	-23	21.2	125	19.5	+15	08.5	0	18 04	18 27	18 53	22 02	53	9 32	56		
13	14	51.8		21.1	139	45.5	+14	58.7	10 S	22	18 45	19 12	12	50	21	58		
14	29	51.5		21.0	154	11.6		48.8	20	18 41	19 05	19 35	23	46	9 08	62		
15	44	51.2		20.9	168	37.8		38.8	30	19 03	30	20 04	35	41	8 54	66		
16	59	50.8		20.8	183	04.0		28.7	35	16	19 45	22	42	39	45	69		
17	74	50.5	-23	20.8	197	30.3	+14	18.5	40	19 31	20 04	20 45	22 50	36	8 35	72		
18	89	50.2	-23	20.7	211	56.7	+14	08.3	45	19 49	20 26	21 16	22 59	33	8 24	76		
19	104	49.9		20.6	226	23.2	+13	57.9	50	20 11	20 56	22 01	23 10	29	10	80		
20	119	49.6		20.5	240	49.8		47.5	52	22	21 11	22 28	15	27	8 04	81		
21	134	49.3		20.4	255	16.5		37.0	54	34	29	23 14	21	24	7 57	84		
22	149	49.0		20.3	269	43.2		26.4	56	20 48	21 51	*** **	27	22	49	86		
23	164	48.7		20.2	284	10.1		15.8	58	21 05	22 20	*** **	34	19	39	90		
24	179	48.4	-23	20.1	298	37.0	+13	05.1	60 S	21 25	23 09	*** **	23 42	16	7 29	93		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 17 ^h 39 ^m 3		Mag: -4.7 PMG: 8 ^h 47 ^m			Mag: +0.4 PMG: 17 ^h 27 ^m			Mag: -1.8 PMG: 10 ^h 17 ^m			Mag: +0.5 PMG: 12 ^h 27 ^m						
h	hG ♈	Dec	hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
0	94	26.6	228	10.7	-13	55.1	98	01.1	-2	01.7	205	27.3	-21	23.6	172	52.9	-22	31.1
1	109	29.0	243	10.8		55.7	113	02.0		01.0	220	29.2		23.6	187	55.1		31.1
2	124	31.5	258	11.0		56.3	128	03.0	-2	00.3	235	31.1		23.7	202	57.2		31.0
3	139	34.0	273	11.1		56.8	143	03.9	-1	59.5	250	33.0		23.8	217	59.4		31.0
4	154	36.4	288	11.3		57.4	158	04.9		58.8	265	34.9		23.9	233	01.5		31.0
5	169	38.9	303	11.4	-13	58.0	173	05.9	-1	58.1	280	36.8	-21	23.9	248	03.7	-22	31.0
6	184	41.4	318	11.6	-13	58.5	188	06.8	-1	57.4	295	38.7	-21	24.0	263	05.8	-22	31.0
7	199	43.8	333	11.7		59.1	203	07.8		56.7	310	40.5		24.1	278	08.0		30.9
8	214	46.3	348	11.9	-13	59.7	218	08.7		55.9	325	42.4		24.2	293	10.1		30.9
9	229	48.7	3	12.0	-14	00.3	233	09.7		55.2	340	44.3		24.3	308	12.2		30.9
10	244	51.2	18	12.2		00.8	248	10.6		54.5	355	46.2		24.3	323	14.4		30.9
11	259	53.7	33	12.3	-14	01.4	263	11.6	-1	53.8	10	48.1	-21	24.4	338	16.5	-22	30.9
12	274	56.1	48	12.4	-14	02.0	278	12.5	-1	53.1	25	50.0	-21	24.5	353	18.7	-22	30.8
13	289	58.6	63	12.6		02.6	293	13.5		52.3	40	51.9		24.6	8	20.8		30.8
14	305	01.1	78	12.7		03.1	308	14.4		51.6	55	53.8		24.6	23	23.0		30.8
15	320	03.5	93	12.9		03.7	323	15.4		50.9	70	55.7		24.7	38	25.1		30.8
16	335	06.0	108	13.0		04.3	338	16.3		50.2	85	57.6		24.8	53	27.3		30.8
17	350	08.5	123	13.1	-14	04.9	353	17.3	-1	49.5	100	59.5	-21	24.9	68	29.4	-22	30.7
18	5	10.9	138	13.3	-14	05.4	8	18.2	-1	48.7	116	01.4	-21	25.0	83	31.6	-22	30.7
19	20	13.4	153	13.4		06.0	23	19.2		48.0	131	03.3		25.0	98	33.7		30.7
20	35	15.9	168	13.5		06.6	38	20.1		47.3	146	05.2		25.1	113	35.9		30.7
21	50	18.3	183	13.7		07.2	53	21.1		46.6	161	07.1		25.2	128	38.0		30.7
22	65	20.8	198	13.8		07.7	68	22.1		45.9	176	09.0		25.3	143	40.2		30.6
23	80	23.2	213	13.9		08.3	83	23.0		45.1	191	10.9		25.3	158	42.3		30.6
24	95	25.7	228	14.1	-14	08.9	98	24.0	-1	44.4	206	12.8	-21	25.4	173	44.4	-22	30.6
Dif	—		+1		-6		+10		+7		+19		-1		+21		0	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna									
	SD: 16/3 PMG: 12 ^h 01 ^m 0			Edad: 19 ^d 7 PHE { 4 ^h : 59/8 12 ^h : 59/6 20 ^h : 59/4 SD: 16/2 PMG: 4 ^h 15 ^m R°: 53 ^m																				
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Náutico	Civil		Hora	R°	Hora	R°								
h	o	'	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m							
0	179	48.4	-23	20.1	298	37.0	+13	05.1	60 N	7 09	8 06	9 04	21 51	89	11 48	15								
1	194	48.1		20.0	313	04.0	+12	54.3	58	7 02	7 54	8 46	21 56	86		42	18							
2	209	47.8		19.9	327	31.0		43.4	56	6 55	44	32	22 00	84		36	21							
3	224	47.5		19.8	341	58.2		32.5	54	49	35	19	04	81		31	23							
4	239	47.2		19.7	356	25.4		21.5	52	43	27	8 08	08	79		27	25							
5	254	46.9	-23	19.6	10	52.7	+12	10.5	50	6 38	7 20	7 58	22 11	77	11 23	27								
6	269	46.5	-23	19.5	25	20.1	+11	59.3	45	6 26	7 04	7 37	22 19	72	11 14	31								
7	284	46.2		19.4	39	47.6		48.2	40	16	6 50	21	25	68		06	35							
8	299	45.9		19.3	54	15.2		36.9	35	6 07	38	7 07	30	65	11 00	37								
9	314	45.6		19.2	68	42.8		25.6	30	5 58	28	6 54	34	63	10 54	40								
10	329	45.3		19.0	83	10.5		14.2	20	42	6 09	33	42	58		45	44							
11	344	45.0	-23	18.9	97	38.3	+11	02.8	10 N	5 25	5 52	6 15	22 49	54	10 36	48								
12	359	44.7	-23	18.8	112	06.1	+10	51.4	0	5 09	5 35	5 57	22 55	51	10 28	52								
13	14	44.4		18.7	126	34.1		39.8	10 S	4 50	5 17	40	23 02	46		19	56							
14	29	44.1		18.6	141	02.1		28.2	20	4 27	4 56	5 21	09	42	10	60								
15	44	43.8		18.5	155	30.2		16.6	30	3 58	31	4 59	16	38	10 00	65								
16	59	43.5		18.4	169	58.4	+10	04.9	35	40	4 16	46	21	35	9 54	67								
17	74	43.2	-23	18.3	184	26.6	+9	53.2	40	3 16	3 58	4 31	23 26	32	9 47	71								
18	89	42.9	-23	18.2	198	54.9	+9	41.4	45	2 46	3 36	4 13	23 32	29	9 40	73								
19	104	42.6		18.0	213	23.3		29.6	50	2 01	3 06	3 51	39	25	30	78								
20	119	42.2		17.9	227	51.7		17.7	52	1 33	2 51	40	42	23	25	81								
21	134	41.9		17.8	242	20.3	+9	05.8	54	0 48	33	27	45	21	21	82								
22	149	41.6		17.7	256	48.9	+8	53.9	56	** ** *	2 11	3 13	49	19	15	85								
23	164	41.3		17.6	271	17.5		41.9	58	** ** *	1 41	2 57	53	17	09	88								
24	179	41.0	-23	17.5	285	46.3	+8	29.9	60 S	** ** *	0 52	2 36	23 58	14	9 02	91								
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO											
	PMG 17 ^h 35 ^m 4			Mag: -4.7 PMG: 8 ^h 47 ^m			Mag: +0.4 PMG: 17 ^h 25 ^m			Mag: -1.8 PMG: 10 ^h 14 ^m			Mag: +0.5 PMG: 12 ^h 23 ^m											
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec									
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'								
0	95	25.7	228	14.1	-14	08.9	98	24.0	-1	44.4	206	12.8	-21	25.4	173	44.4								
1	110	28.2	243	14.2		09.5	113	24.9		43.7	221	14.7		25.5	188	46.6								
2	125	30.6	258	14.3		10.1	128	25.9		43.0	236	16.6		25.6	203	48.7								
3	140	33.1	273	14.4		10.6	143	26.8		42.3	251	18.5		25.6	218	50.9								
4	155	35.6	288	14.6		11.2	158	27.8		41.5	266	20.4		25.7	233	53.0								
5	170	38.0	303	14.7	-14	11.8	173	28.7	-1	40.8	281	22.3	-21	25.8	248	55.2								
6	185	40.5	318	14.8	-14	12.4	188	29.7	-1	40.1	296	24.2	-21	25.9	263	57.3								
7	200	43.0	333	14.9		12.9	203	30.6		39.4	311	26.0		26.0	278	59.5								
8	215	45.4	348	15.0		13.5	218	31.6		38.7	326	27.9		26.0	294	01.6								
9	230	47.9	3	15.2		14.1	233	32.5		37.9	341	29.8		26.1	309	03.8								
10	245	50.4	18	15.3		14.7	248	33.5		37.2	356	31.7		26.2	324	05.9								
11	260	52.8	33	15.4	-14	15.2	263	34.4	-1	36.5	11	33.6	-21	26.3	339	08.1								
12	275	55.3	48	15.5	-14	15.8	278	35.4	-1	35.8	26	35.5	-21	26.3	354	10.2								
13	290	57.7	63	15.6		16.4	293	36.3		35.1	41	37.4		26.4	9	12.3								
14	306	00.2	78	15.7		17.0	308	37.3		34.3	56	39.3		26.5	24	14.5								
15	321	02.7	93	15.9		17.6	323	38.2		33.6	71	41.2		26.6	39	16.6								
16	336	05.1	108	16.0		18.1	338	39.2		32.9	86	43.1		26.6	54	18.8								
17	351	07.6	123	16.1	-14	18.7	353	40.1	-1	32.2	101	45.0	-21	26.7	69	20.9								
18	6	10.1	138	16.2	-14	19.3	8	41.1	-1	31.5	116	46.9	-21	26.8	84	23.1								
19	21	12.5	153	16.3		19.9	23	42.0		30.7	131	48.8		26.9	99	25.2								
20	36	15.0	168	16.4		20.5	38	43.0		30.0	146	50.7		26.9	114	27.4								
21	51	17.5	183	16.5		21.0	53	44.0		29.3	161	52.6		27.0	129	29.5								
22	66	19.9	198	16.6		21.6	68	44.9		28.6	176	54.5		27.1	144	31.7								
23	81	22.4	213	16.7		22.2	83	45.9		27.9	191	56.4		27.2	159	33.8								
24	96	24.8	228	16.8	-14	22.8	98	46.8	-1	27.1	206	58.3	-21	27.2	174	35.9								
Dif	—			+1			-6			+10			+7			+19			-1			+21		

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16:3 PMG: 12 ^h 01 ^m 5				Edad: 20 ^d 7 PHE { 4 ^h : 59/2 12 ^h : 59/0 20 ^h : 58/7 PMG: 5 ^h 08 ^m R°: 50 ^m													
	hG ☉	Dec			hG ☾	Dif					Civil	Náutico	Hora	R°	Hora	R°		
h	o	'	o	'	o	'	o	'	o	h	m	h	m	h	m	h	m	
0	179	41.0	-23	17.5	285	46.3	+8	29.9	60 N	15 00	15 57	16 54	23 20	86	12 03	13		
1	194	40.7		17.3	300	15.1		17.8	58	17	16 09	17 01	22	83	12 00	15		
2	209	40.4		17.2	314	43.9	+8	05.7	56	32	19	08	24	81	11 57	18		
3	224	40.1		17.1	329	12.9	+7	53.6	54	44	28	14	25	79	54	20		
4	239	39.8		17.0	343	41.9		41.4	52	15 55	36	20	27	76	52	22		
5	254	39.5	-23	16.9	358	10.9	+7	29.2	50	16 05	16 43	17 25	23 28	75	11 50	24		
6	269	39.2	-23	16.7	12	40.1	+7	17.0	45	16 25	16 59	17 36	23 31	70	11 45	28		
7	284	38.9		16.6	27	09.3	+7	04.8	40	42	17 13	47	33	67	41	31		
8	299	38.6		16.5	41	38.5	+6	52.5	35	16 56	24	17 56	35	64	37	35		
9	314	38.3		16.4	56	07.8		40.2	30	17 08	35	18 05	37	61	34	37		
10	329	38.0		16.2	70	37.2		27.9	20	30	17 54	21	40	57	29	42		
11	344	37.7	-23	16.1	85	06.7	+6	15.5	10 N	17 48	18 11	18 37	23 43	52	11 24	46		
12	359	37.4	-23	16.0	99	36.2	+6	03.1	0	18 05	18 28	18 54	23 46	48	11 20	49		
13	14	37.0		15.8	114	05.7	+5	50.7	10 S	23	18 46	19 13	48	45	15	53		
14	29	36.7		15.7	128	35.3		38.3	20	18 42	19 06	19 35	51	41	10	58		
15	44	36.4		15.6	143	05.0		25.9	30	19 03	31	20 04	54	37	05	62		
16	59	36.1		15.5	157	34.7		13.5	35	16	19 46	23	56	34	11 01	65		
17	74	35.8	-23	15.3	172	04.5	+5	01.0	40	19 31	20 04	20 46	23 58	31	10 58	67		
18	89	35.5	-23	15.2	186	34.3	+4	48.5	45	19 49	20 26	21 16	** ** *	**	10 53	72		
19	104	35.2		15.1	201	04.2		36.0	50	20 11	20 56	22 01	** ** *	**	48	76		
20	119	34.9		14.9	215	34.2		23.5	52	22	21 11	22 28	** ** *	**	46	77		
21	134	34.6		14.8	230	04.1	+4	11.0	54	34	28	23 11	** ** *	**	43	80		
22	149	34.3		14.7	244	34.2	+3	58.5	56	20 48	21 50	** ** *	** ** *	**	40	82		
23	164	34.0		14.5	259	04.3		45.9	58	21 05	22 19	** ** *	** ** *	**	37	85		
24	179	33.7	-23	14.4	273	34.4	+3	33.4	60 S	21 25	23 07	** ** *	** ** *	**	10 33	88		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 17 ^h 31 ^m 5		Mag: -4.7 PMG: 8 ^h 47 ^m				Mag: +0.4 PMG: 17 ^h 24 ^m				Mag: -1.8 PMG: 10 ^h 11 ^m				Mag: +0.5 PMG: 12 ^h 20 ^m			
	hG ♈		hG ♀	Dec			hG ♂	Dec			hG ♃	Dec			hG ♄	Dec		
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'
0	96	24.8	228	16.8	-14	22.8	98	46.8	-1	27.1	206	58.3	-21	27.2	174	35.9	-22	30.1
1	111	27.3	243	16.9		23.4	113	47.8		26.4	222	00.2		27.3	189	38.1		30.1
2	126	29.8	258	17.0		23.9	128	48.7		25.7	237	02.1		27.4	204	40.2		30.0
3	141	32.2	273	17.1		24.5	143	49.7		25.0	252	04.0		27.5	219	42.4		30.0
4	156	34.7	288	17.2		25.1	158	50.6		24.2	267	05.9		27.5	234	44.5		30.0
5	171	37.2	303	17.3	-14	25.7	173	51.6	-1	23.5	282	07.8	-21	27.6	249	46.7	-22	30.0
6	186	39.6	318	17.4	-14	26.3	188	52.5	-1	22.8	297	09.7	-21	27.7	264	48.8	-22	30.0
7	201	42.1	333	17.5		26.8	203	53.5		22.1	312	11.6		27.8	279	51.0		29.9
8	216	44.6	348	17.6		27.4	218	54.4		21.4	327	13.5		27.9	294	53.1		29.9
9	231	47.0	3	17.7		28.0	233	55.4		20.6	342	15.4		27.9	309	55.3		29.9
10	246	49.5	18	17.8		28.6	248	56.3		19.9	357	17.3		28.0	324	57.4		29.9
11	261	52.0	33	17.8	-14	29.2	263	57.3	-1	19.2	12	19.2	-21	28.1	339	59.6	-22	29.9
12	276	54.4	48	17.9	-14	29.7	278	58.2	-1	18.5	27	21.1	-21	28.2	355	01.7	-22	29.8
13	291	56.9	63	18.0		30.3	293	59.2		17.8	42	23.0		28.2	10	03.8		29.8
14	306	59.3	78	18.1		30.9	309	00.1		17.0	57	24.9		28.3	25	06.0		29.8
15	322	01.8	93	18.2		31.5	324	01.1		16.3	72	26.8		28.4	40	08.1		29.8
16	337	04.3	108	18.3		32.1	339	02.0		15.6	87	28.7		28.5	55	10.3		29.8
17	352	06.7	123	18.4	-14	32.6	354	03.0	-1	14.9	102	30.6	-21	28.5	70	12.4	-22	29.7
18	7	09.2	138	18.4	-14	33.2	9	03.9	-1	14.2	117	32.5	-21	28.6	85	14.6	-22	29.7
19	22	11.7	153	18.5		33.8	24	04.9		13.4	132	34.4		28.7	100	16.7		29.7
20	37	14.1	168	18.6		34.4	39	05.8		12.7	147	36.3		28.8	115	18.9		29.7
21	52	16.6	183	18.7		35.0	54	06.8		12.0	162	38.2		28.8	130	21.0		29.6
22	67	19.1	198	18.7		35.5	69	07.7		11.3	177	40.1		28.9	145	23.2		29.6
23	82	21.5	213	18.8		36.1	84	08.7		10.6	192	42.0		29.0	160	25.3		29.6
24	97	24.0	228	18.9	-14	36.7	99	09.6	-1	09.8	207	43.9	-21	29.1	175	27.4	-22	29.6
Dif	—		+1 -6				+10 +7				+19 -1				+21 0			

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16°3 PMG: 12 ^h 02 ^m 0			Edad: 21 ^d 7 PHE { 4 ^h : 58 ^s 5 12 ^h : 58 ^s 3 20 ^h : 58 ^s 0 SD: 15 ^s 9 PMG: 5 ^h 58 ^m R°: 48 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	o	'	o	'	o	'	o	'	h	m	h	m	h	m	h	m
0	179	33.7	-23	14.4	273	34.4	+3	33.4	60 N	7 09	8 06	9 03	***	***	12 16	12
1	194	33.4		14.2	288	04.6 ¹¹²		20.9 ¹²⁵	58	7 02	7 55	8 46	***	***	15	15
2	209	33.1		14.1	302	34.8 ¹¹²	+3	08.3 ¹²⁶	56	6 55	44	32	***	***	15	17
3	224	32.8		14.0	317	05.1 ¹¹³	+2	55.8 ¹²⁵	54	49	35	19	***	***	14	20
4	239	32.5		13.8	331	35.4 ¹¹³		43.2 ¹²⁶	52	44	27	8 08	***	***	14	21
5	254	32.2	-23	13.7	346	05.8 ¹¹⁴	+2	30.6 ¹²⁶	50	6 39	7 20	7 58	***	***	12 14	23
6	269	31.9	-23	13.5	0	36.2 ¹¹⁴	+2	18.1 ¹²⁵	45	6 27	7 04	7 38	***	***	12 13	27
7	284	31.6		13.4	15	06.6 ¹¹⁴	+2	05.5 ¹²⁶	40	17	6 51	21	***	***	12	31
8	299	31.3		13.2	29	37.1 ¹¹⁵	+1	53.0 ¹²⁵	35	6 07	39	7 07	***	***	12	33
9	314	31.0		13.1	44	07.6 ¹¹⁵		40.4 ¹²⁶	30	5 59	29	6 55	***	***	11	36
10	329	30.7		13.0	58	38.2 ¹¹⁶		27.9 ¹²⁵	20	42	6 10	34	***	***	11	40
11	344	30.3	-23	12.8	73	08.8 ¹¹⁶	+1	15.3 ¹²⁶	10 N	5 26	5 53	6 16	***	***	12 10	44
12	359	30.0	-23	12.7	87	39.4 ¹¹⁶	+1	02.8 ¹²⁵	0	5 10	5 36	5 58	***	***	12 09	48
13	14	29.7		12.5	102	10.1 ¹¹⁷	+0	50.2 ¹²⁶	10 S	4 51	5 18	41	***	***	08	52
14	29	29.4		12.4	116	40.8 ¹¹⁷		37.7 ¹²⁵	20	4 28	4 57	22	***	***	08	55
15	44	29.1		12.2	131	11.5 ¹¹⁷		25.2 ¹²⁵	30	3 59	33	5 00	***	***	07	60
16	59	28.8		12.1	145	42.3 ¹¹⁸		12.7 ¹²⁵	35	41	18	4 47	***	***	06	63
17	74	28.5	-23	11.9	160	13.1 ¹¹⁸	+0	00.2 ¹²⁵	40	3 18	4 00	4 32	***	***	12 05	66
18	89	28.2	-23	11.8	174	44.0 ¹¹⁹	-0	12.3 ¹²⁵	45	2 48	3 37	4 14	0 01	27	12 05	69
19	104	27.9		11.6	189	14.8 ¹¹⁸		24.8 ¹²⁵	50	2 03	3 08	3 52	04	23	04	73
20	119	27.6		11.5	203	45.7 ¹¹⁹		37.2 ¹²⁴	52	1 36	2 53	41	05	22	03	76
21	134	27.3		11.3	218	16.6 ¹¹⁹	-0	49.7 ¹²⁵	54	0 52	35	29	06	20	03	77
22	149	27.0		11.1	232	47.6 ¹²⁰	-1	02.1 ¹²⁴	56	***	2 13	3 15	08	17	02	80
23	164	26.7		11.0	247	18.6 ¹²⁰		14.5 ¹²⁴	58	***	1 44	2 59	10	15	02	82
24	179	26.4	-23	10.8	261	49.6 ¹²⁰	-1	26.9 ¹²⁴	60 S	***	0 57	2 39	0 12	12	12 01	86
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO			
	PMG 17 ^h 27 ^m 5			Mag: -4.6 PMG: 8 ^h 47 ^m			Mag: +0.4 PMG: 17 ^h 22 ^m			Mag: -1.8 PMG: 10 ^h 08 ^m			Mag: +0.5 PMG: 12 ^h 16 ^m			
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec	
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'
0	97	24.0	228	18.9	-14	36.7	99	09.6	-1	09.8	207	43.9	-21	29.1	175	27.4
1	112	26.4	243	19.0		37.3	114	10.6		09.1	222	45.8		29.1	190	29.6
2	127	28.9	258	19.0		37.9	129	11.5		08.4	237	47.7		29.2	205	31.7
3	142	31.4	273	19.1		38.5	144	12.5		07.7	252	49.6		29.3	220	33.9
4	157	33.8	288	19.2		39.0	159	13.4		07.0	267	51.5		29.4	235	36.0
5	172	36.3	303	19.3	-14	39.6	174	14.4	-1	06.2	282	53.4	-21	29.4	250	38.2
6	187	38.8	318	19.3	-14	40.2	189	15.3	-1	05.5	297	55.3	-21	29.5	265	40.3
7	202	41.2	333	19.4		40.8	204	16.3		04.8	312	57.2		29.6	280	42.5
8	217	43.7	348	19.5		41.4	219	17.2		04.1	327	59.1		29.6	295	44.6
9	232	46.2	3	19.5		41.9	234	18.2		03.4	343	01.0		29.7	310	46.8
10	247	48.6	18	19.6		42.5	249	19.1		02.6	358	02.9		29.8	325	48.9
11	262	51.1	33	19.7	-14	43.1	264	20.1	-1	01.9	13	04.8	-21	29.9	340	51.0
12	277	53.6	48	19.7	-14	43.7	279	21.0	-1	01.2	28	06.7	-21	29.9	355	53.2
13	292	56.0	63	19.8		44.3	294	22.0	-1	00.5	43	08.6		30.0	10	55.3
14	307	58.5	78	19.8		44.9	309	22.9	-0	59.8	58	10.5		30.1	25	57.5
15	323	00.9	93	19.9		45.4	324	23.9		59.0	73	12.4		30.2	40	59.6
16	338	03.4	108	19.9		46.0	339	24.8		58.3	88	14.3		30.2	56	01.8
17	353	05.9	123	20.0	-14	46.6	354	25.8	-0	57.6	103	16.2	-21	30.3	71	03.9
18	8	08.3	138	20.1	-14	47.2	9	26.7	-0	56.9	118	18.1	-21	30.4	86	06.1
19	23	10.8	153	20.1		47.8	24	27.7		56.2	133	20.0		30.5	101	08.2
20	38	13.3	168	20.2		48.3	39	28.6		55.4	148	21.9		30.5	116	10.4
21	53	15.7	183	20.2		48.9	54	29.6		54.7	163	23.8		30.6	131	12.5
22	68	18.2	198	20.3		49.5	69	30.5		54.0	178	25.7		30.7	146	14.6
23	83	20.7	213	20.3		50.1	84	31.5		53.3	193	27.6		30.8	161	16.8
24	98	23.1	228	20.4	-14	50.7	99	32.4	-0	52.6	208	29.5	-21	30.8	176	18.9
Dif	—		+1		-6		+9		+7		+19		-1		+21	

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16:3 PMG: 12 ^h 02 ^m 5				Edad: 22 ^d 7 PHE { SD: 15:7 PMG: 6 ^h 46 ^m R°: 47 ^m													
	hG ☉	Dec			hG ☾	Dif					Civil	Náutico	Hora	R°	Hora	R°		
h	o	'	o	'	o	'	o	'	o	h m	h m	h m	h m m	h m m	h m m	h m m		
0	179	26.4	-23	10.8	261	49.6	-1	26.9	60 N	15 02	15 59	16 56	0 46 85	12 28 13				
1	194	26.1		10.7	276	20.6 ¹²⁰		39.2 ¹²³	58	19	16 11	17 03	45 82	30 15				
2	209	25.8		10.5	290	51.7 ¹²¹	-1	51.6 ¹²⁴	56	34	21	10	45 79	32 18				
3	224	25.5		10.3	305	22.7 ¹²⁰	-2	03.9 ¹²³	54	46	30	16	44 76	34 20				
4	239	25.2		10.2	319	53.8 ¹²¹		16.2 ¹²³	52	15 57	38	21	43 75	35 22				
5	254	24.9	-23	10.0	334	25.0 ¹²²	-2	28.5 ¹²³	50	16 07	16 45	17 26	0 43 72	12 37 24				
6	269	24.6	-23	09.9	348	56.1 ¹²¹	-2	40.8 ¹²³	45	16 27	17 01	17 38	0 41 69	12 40 28				
7	284	24.3		09.7	3	27.3 ¹²²	-2	53.0 ¹²²	40	44	14	48	40 65	43 31				
8	299	24.0		09.5	17	58.4 ¹²¹	-3	05.2 ¹²²	35	16 58	26	17 57	39 62	45 34				
9	314	23.7		09.4	32	29.6 ¹²²		17.4 ¹²²	30	17 10	36	18 06	38 60	47 36				
10	329	23.4		09.2	47	00.8 ¹²²		29.5 ¹²¹	20	31	17 55	22	37 55	51 40				
11	344	23.1	-23	09.0	61	32.1 ¹²³	-3	41.7 ¹²²	10 N	17 49	18 12	18 38	0 35 52	12 54 44				
12	359	22.8	-23	08.9	76	03.3 ¹²²	-3	53.8 ¹²¹	0	18 06	18 29	18 55	0 34 48	12 57 47				
13	14	22.5		08.7	90	34.6 ¹²³	-4	05.8 ¹²⁰	10 S	24	18 47	19 14	33 44	13 00 51				
14	29	22.2		08.5	105	05.8 ¹²²		17.9 ¹²¹	20	18 42	19 07	19 36	32 40	03 55				
15	44	21.9		08.4	119	37.1 ¹²³		29.9 ¹²⁰	30	19 04	31	20 05	31 35	07 59				
16	59	21.6		08.2	134	08.4 ¹²³		41.8 ¹¹⁹	35	17	19 46	23	30 33	09 61				
17	74	21.3	-23	08.0	148	39.7 ¹²³	-4	53.8 ¹²⁰	40	19 32	20 04	20 46	0 29 30	13 11 65				
18	89	21.0	-23	07.9	163	11.0 ¹²³	-5	05.7 ¹¹⁹	45	19 49	20 27	21 16	0 28 27	13 14 68				
19	104	20.7		07.7	177	42.4 ¹²⁴		17.5 ¹¹⁸	50	20 12	20 56	22 00	27 23	17 72				
20	119	20.4		07.5	192	13.7 ¹²³		29.3 ¹¹⁸	52	22	21 11	22 27	27 21	19 74				
21	134	20.1		07.3	206	45.0 ¹²³		41.1 ¹¹⁸	54	34	28	23 08	26 19	20 76				
22	149	19.8		07.2	221	16.4 ¹²⁴	-5	52.9 ¹¹⁸	56	20 48	21 50	*** **	25 18	22 78				
23	164	19.5		07.0	235	47.7 ¹²³	-6	04.6 ¹¹⁷	58	21 05	22 18	*** **	25 15	24 81				
24	179	19.2	-23	06.8	250	19.1 ¹²⁴	-6	16.3 ¹¹⁷	60 S	21 25	23 03	*** **	0 24 12	13 27 83				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 17 ^h 23 ^m 6		Mag: -4.6 PMG: 8 ^h 47 ^m				Mag: +0.4 PMG: 17 ^h 21 ^m				Mag: -1.8 PMG: 10 ^h 05 ^m				Mag: +0.5 PMG: 12 ^h 13 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♎	Dec					
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'		
0	98	23.1	228	20.4	-14	50.7	99	32.4	-0	52.6	208	29.5	-21	30.8	176	18.9		
1	113	25.6	243	20.4		51.3	114	33.4		51.8	223	31.4		30.9	191	21.1		
2	128	28.1	258	20.5		51.8	129	34.3		51.1	238	33.3		31.0	206	23.2		
3	143	30.5	273	20.5		52.4	144	35.3		50.4	253	35.2		31.1	221	25.4		
4	158	33.0	288	20.6		53.0	159	36.2		49.7	268	37.1		31.1	236	27.5		
5	173	35.4	303	20.6	-14	53.6	174	37.2	-0	48.9	283	39.0	-21	31.2	251	29.7		
6	188	37.9	318	20.6	-14	54.2	189	38.1	-0	48.2	298	40.9	-21	31.3	266	31.8		
7	203	40.4	333	20.7		54.8	204	39.0		47.5	313	42.8		31.3	281	34.0		
8	218	42.8	348	20.7		55.3	219	40.0		46.8	328	44.7		31.4	296	36.1		
9	233	45.3	3	20.8		55.9	234	40.9		46.1	343	46.6		31.5	311	38.2		
10	248	47.8	18	20.8		56.5	249	41.9		45.3	358	48.5		31.6	326	40.4		
11	263	50.2	33	20.8	-14	57.1	264	42.8	-0	44.6	13	50.4	-21	31.6	341	42.5		
12	278	52.7	48	20.9	-14	57.7	279	43.8	-0	43.9	28	52.3	-21	31.7	356	44.7		
13	293	55.2	63	20.9		58.3	294	44.7		43.2	43	54.2		31.8	11	46.8		
14	308	57.6	78	20.9		58.8	309	45.7		42.5	58	56.1		31.9	26	49.0		
15	324	00.1	93	21.0	-14	59.4	324	46.6		41.7	73	58.0		31.9	41	51.1		
16	339	02.5	108	21.0	-15	00.0	339	47.6		41.0	88	59.9		32.0	56	53.3		
17	354	05.0	123	21.0	-15	00.6	354	48.5	-0	40.3	104	01.8	-21	32.1	71	55.4		
18	9	07.5	138	21.1	-15	01.2	9	49.5	-0	39.6	119	03.7	-21	32.2	86	57.6		
19	24	09.9	153	21.1		01.8	24	50.4		38.9	134	05.6		32.2	101	59.7		
20	39	12.4	168	21.1		02.3	39	51.4		38.1	149	07.5		32.3	117	01.8		
21	54	14.9	183	21.1		02.9	54	52.3		37.4	164	09.4		32.4	132	04.0		
22	69	17.3	198	21.2		03.5	69	53.3		36.7	179	11.3		32.4	147	06.1		
23	84	19.8	213	21.2		04.1	84	54.2		36.0	194	13.2		32.5	162	08.3		
24	99	22.3	228	21.2	-15	04.7	99	55.2	-0	35.3	209	15.1	-21	32.6	177	10.4		
Dif	—		0		-6		+9		+7		+19		-1		+21		0	

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16:3 PMG: 12 ^h 03 ^m 0			Edad: 23 ^d 7 PHE { 4 ^h : 57/2 12 ^h : 56/9 20 ^h : 56/7 SD: 15:5 PMG: 7 ^h 33 ^m R°: 48 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	o	'	o	'	o	'	o	'	h	m	h	m	h	m	h	m	m	
0	179	19.2	-23	06.8	250	19.1	-6	16.3	60 N	7 09	8 06	9 03	2 11	83	12 41	14		
1	194	18.9		06.6	264	50.4 ¹²³		27.9 ¹¹⁶	58	7 02	7 54	8 46	07	80	45	18		
2	209	18.6		06.5	279	21.8 ¹²⁴		39.5 ¹¹⁶	56	6 56	44	31	04	77	50	20		
3	224	18.3		06.3	293	53.2 ¹²⁴		-6 51.0 ¹¹⁵	54	50	36	19	2 00	75	54	22		
4	239	18.0		06.1	308	24.5 ¹²³		-7 02.5 ¹¹⁵	52	44	28	8 08	1 58	72	12 57	24		
5	254	17.7	-23	05.9	322	55.9 ¹²⁴		-7 14.0 ¹¹⁵	50	6 39	7 20	7 59	1 55	71	13 01	25		
6	269	17.4	-23	05.7	337	27.3 ¹²⁴		-7 25.4 ¹¹⁴	45	6 27	7 04	7 38	1 50	67	13 08	29		
7	284	17.1		05.6	351	58.7 ¹²⁴		36.8 ¹¹⁴	40	17	6 51	22	45	64	14	32		
8	299	16.8		05.4	6	30.0 ¹²³		48.1 ¹¹³	35	6 08	40	7 08	41	61	19	34		
9	314	16.5		05.2	21	01.4 ¹²⁴		-7 59.4 ¹¹³	30	5 59	29	6 56	38	58	23	37		
10	329	16.2		05.0	35	32.8 ¹²⁴		-8 10.6 ¹¹²	20	43	6 11	35	32	54	31	41		
11	344	15.9	-23	04.8	50	04.1 ¹²³		-8 21.8 ¹¹²	10 N	5 27	5 54	6 16	1 27	50	13 38	44		
12	359	15.6	-23	04.6	64	35.5 ¹²⁴		-8 32.9 ¹¹¹	0	5 11	5 37	5 59	1 22	47	13 44	48		
13	14	15.3		04.4	79	06.8 ¹²³		44.0 ¹¹¹	10 S	4 52	5 19	42	17	44	51	51		
14	29	15.0		04.3	93	38.2 ¹²⁴		-8 55.0 ¹¹⁰	20	30	4 59	23	12	40	13 58	54		
15	44	14.7		04.1	108	09.5 ¹²³		-9 06.0 ¹¹⁰	30	4 01	34	5 01	06	37	14 06	58		
16	59	14.4		03.9	122	40.9 ¹²⁴		16.9 ¹⁰⁹	35	3 42	19	4 49	1 03	34	10	61		
17	74	14.1	-23	03.7	137	12.2 ¹²³		-9 27.8 ¹⁰⁹	40	3 20	4 01	4 34	0 59	32	14 16	63		
18	89	13.8	-23	03.5	151	43.5 ¹²³		-9 38.6 ¹⁰⁸	45	2 50	3 39	4 16	0 55	28	14 22	66		
19	104	13.5		03.3	166	14.9 ¹²⁴		-9 49.4 ¹⁰⁸	50	2 05	3 10	3 54	50	25	29	70		
20	119	13.2		03.1	180	46.2 ¹²³		-10 00.1 ¹⁰⁷	52	1 39	2 55	43	48	23	33	72		
21	134	12.9		02.9	195	17.5 ¹²³		10.7 ¹⁰⁶	54	0 57	38	31	45	21	36	74		
22	149	12.6		02.7	209	48.8 ¹²³		21.3 ¹⁰⁶	56	** ** *	2 16	17	43	18	40	77		
23	164	12.3		02.5	224	20.0 ¹²²		31.8 ¹⁰⁵	58	** ** *	1 48	3 01	40	16	45	79		
24	179	12.0	-23	02.3	238	51.3 ¹²³		-10 42.3 ¹⁰⁵	60 S	** ** *	1 02	2 41	0 36	14	14 50	82		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 17 ^h 19 ^m 7			Mag: -4.6 PMG: 8 ^h 47 ^m			Mag: +0.5 PMG: 17 ^h 19 ^m			Mag: -1.8 PMG: 10 ^h 02 ^m			Mag: +0.5 PMG: 12 ^h 10 ^m					
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'	o	'
0	99	22.3	228	21.2	-15	04.7	99	55.2	-0	35.3	209	15.1	-21	32.6	177	10.4	-22	28.5
1	114	24.7	243	21.2		05.3	114	56.1		34.5	224	17.0		32.7	192	12.6		28.5
2	129	27.2	258	21.3		05.8	129	57.1		33.8	239	18.9		32.7	207	14.7		28.5
3	144	29.7	273	21.3		06.4	144	58.0		33.1	254	20.8		32.8	222	16.9		28.5
4	159	32.1	288	21.3		07.0	159	58.9		32.4	269	22.7		32.9	237	19.0		28.5
5	174	34.6	303	21.3	-15	07.6	174	59.9	-0	31.7	284	24.6	-21	33.0	252	21.2	-22	28.4
6	189	37.0	318	21.3	-15	08.2	190	00.8	-0	30.9	299	26.5	-21	33.0	267	23.3	-22	28.4
7	204	39.5	333	21.4		08.7	205	01.8		30.2	314	28.4		33.1	282	25.4		28.4
8	219	42.0	348	21.4		09.3	220	02.7		29.5	329	30.3		33.2	297	27.6		28.4
9	234	44.4	3	21.4		09.9	235	03.7		28.8	344	32.3		33.2	312	29.7		28.4
10	249	46.9	18	21.4		10.5	250	04.6		28.1	359	34.2		33.3	327	31.9		28.3
11	264	49.4	33	21.4	-15	11.1	265	05.6	-0	27.3	14	36.1	-21	33.4	342	34.0	-22	28.3
12	279	51.8	48	21.4	-15	11.7	280	06.5	-0	26.6	29	38.0	-21	33.5	357	36.2	-22	28.3
13	294	54.3	63	21.4		12.2	295	07.5		25.9	44	39.9		33.5	12	38.3		28.3
14	309	56.8	78	21.4		12.8	310	08.4		25.2	59	41.8		33.6	27	40.5		28.2
15	324	59.2	93	21.4		13.4	325	09.4		24.5	74	43.7		33.7	42	42.6		28.2
16	340	01.7	108	21.5		14.0	340	10.3		23.7	89	45.6		33.7	57	44.8		28.2
17	355	04.2	123	21.5	-15	14.6	355	11.3	-0	23.0	104	47.5	-21	33.8	72	46.9	-22	28.2
18	10	06.6	138	21.5	-15	15.2	10	12.2	-0	22.3	119	49.4	-21	33.9	87	49.0	-22	28.2
19	25	09.1	153	21.5		15.7	25	13.1		21.6	134	51.3		34.0	102	51.2		28.1
20	40	11.5	168	21.5		16.3	40	14.1		20.9	149	53.2		34.0	117	53.3		28.1
21	55	14.0	183	21.5		16.9	55	15.0		20.1	164	55.1		34.1	132	55.5		28.1
22	70	16.5	198	21.5		17.5	70	16.0		19.4	179	57.0		34.2	147	57.6		28.1
23	85	18.9	213	21.5		18.1	85	16.9		18.7	194	58.9		34.2	162	59.8		28.0
24	100	21.4	228	21.5	-15	18.7	100	17.9	-0	18.0	210	00.8	-21	34.3	178	01.9	-22	28.0
Dif	—			0 -6			+9 +7			+19 -1			-1			+21		

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16°3			Edad: 24 ^d 7 PHE { 4 ^h : 56°6 12 ^h : 56°4 20 ^h : 56°2										
	PMG: 12 ^h 03 ^m 4			SD: 15°3 PMG: 8 ^h 21 ^m R°: 48 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	o	'	o	'	'	o	'	o	h m	h m	h m	h m m	h m m	h m m
0	179	12.0	-23	02.3		238	51.3	-10 42.3	15 05	16 02	16 58	3 34 80	12 55 18	
1	194	11.7		02.1		253	22.6 ¹²³	-10 52.7 ¹⁰⁴	22	13	17 05	27 77	13 03 21	
2	209	11.4		01.9		267	53.8 ¹²²	-11 03.0 ¹⁰³	36	23	12	21 75	10 23	
3	224	11.1		01.7		282	25.1 ¹²³	13.3 ¹⁰³	54	48	32	15 73	16 25	
4	239	10.8		01.5		296	56.3 ¹²²	23.6 ¹⁰³	52	15 59	40	23	10 71	21 27
5	254	10.5	-23	01.3		311	27.5 ¹²²	-11 33.7 ¹⁰¹	50	16 09	16 47	17 28	3 06 69	13 26 29
6	269	10.2	-23	01.1		325	58.7 ¹²²	-11 43.8 ¹⁰¹	45	16 29	17 02	17 40	2 57 65	13 37 32
7	284	09.9		00.9		340	29.9 ¹²²	-11 53.9 ¹⁰¹	40	45	16	50	49 62	46 35
8	299	09.6		00.7		355	01.0 ¹²¹	-12 03.8 ⁹⁹	35	16 59	27	17 59	42 60	13 53 38
9	314	09.3		00.5		9	32.2 ¹²²	13.7 ⁹⁹	30	17 11	37	18 07	36 58	14 00 39
10	329	09.0		00.3		24	03.3 ¹²¹	23.6 ⁹⁹	20	32	17 56	23	26 54	12 43
11	344	08.7	-23	00.1		38	34.4 ¹²¹	-12 33.3 ⁹⁷	10 N	17 50	18 13	18 39	2 17 51	14 22 46
12	359	08.5	-22	59.9		53	05.5 ¹²¹	-12 43.0 ⁹⁷	0	18 07	18 30	18 56	2 09 48	14 32 48
13	14	08.2		59.7		67	36.6 ¹²¹	-12 52.7 ⁹⁷	10 S	24	18 47	19 14	2 01 45	42 51
14	29	07.9		59.5		82	07.7 ¹²¹	-13 02.2 ⁹⁵	20	18 43	19 07	19 37	1 52 42	14 52 54
15	44	07.6		59.3		96	38.7 ¹²⁰	11.7 ⁹⁵	30	19 05	32	20 05	43 38	15 04 58
16	59	07.3		59.1		111	09.8 ¹²¹	21.2 ⁹⁵	35	17	19 47	23	37 36	11 60
17	74	07.0	-22	58.9		125	40.8 ¹²⁰	-13 30.5 ⁹³	40	19 32	20 05	20 46	1 31 33	15 19 62
18	89	06.7	-22	58.7		140	11.8 ¹²⁰	-13 39.8 ⁹³	45	19 50	20 27	21 16	1 23 31	15 28 65
19	104	06.4		58.5		154	42.8 ¹²⁰	49.0 ⁹²	50	20 12	20 56	21 59	15 26	39 68
20	119	06.1		58.3		169	13.7 ¹¹⁹	-13 58.1 ⁹¹	52	22	21 10	22 25	11 25	45 69
21	134	05.8		58.0		183	44.7 ¹²⁰	-14 07.2 ⁹¹	54	34	27	23 05	06 23	50 72
22	149	05.5		57.8		198	15.6 ¹¹⁹	16.2 ⁹⁰	56	20 48	21 49	*** **	1 01 21	15 57 73
23	164	05.2		57.6		212	46.5 ¹¹⁹	25.1 ⁸⁹	58	21 04	22 16	*** **	0 56 19	16 04 76
24	179	04.9	-22	57.4		227	17.4 ¹¹⁹	-14 33.9 ⁸⁸	60 S	21 23	22 59	*** **	0 50 16	16 12 79
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 17 ^h 15 ^m 7		Mag: -4.6 PMG: 8 ^h 47 ^m			Mag: +0.5 PMG: 17 ^h 18 ^m			Mag: -1.8 PMG: 9 ^h 59 ^m			Mag: +0.5 PMG: 12 ^h 06 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	o	'	o	'	'	o	'	'	o	'	'	o	'	'
0	100	21.4	228	21.5	-15 18.7	100	17.9	-0 18.0	210	00.8	-21 34.3	178	01.9	-22 28.0
1	115	23.9	243	21.5	19.2	115	18.8	17.2	225	02.7	34.4	193	04.1	28.0
2	130	26.3	258	21.5	19.8	130	19.8	16.5	240	04.6	34.5	208	06.2	28.0
3	145	28.8	273	21.5	20.4	145	20.7	15.8	255	06.5	34.5	223	08.3	28.0
4	160	31.3	288	21.5	21.0	160	21.7	15.1	270	08.4	34.6	238	10.5	27.9
5	175	33.7	303	21.5	-15 21.6	175	22.6	-0 14.4	285	10.3	-21 34.7	253	12.6	-22 27.9
6	190	36.2	318	21.4	-15 22.1	190	23.6	-0 13.6	300	12.2	-21 34.7	268	14.8	-22 27.9
7	205	38.6	333	21.4	22.7	205	24.5	12.9	315	14.1	34.8	283	16.9	27.9
8	220	41.1	348	21.4	23.3	220	25.4	12.2	330	16.1	34.9	298	19.1	27.8
9	235	43.6	3	21.4	23.9	235	26.4	11.5	345	18.0	35.0	313	21.2	27.8
10	250	46.0	18	21.4	24.5	250	27.3	10.8	0	19.9	35.0	328	23.4	27.8
11	265	48.5	33	21.4	-15 25.1	265	28.3	-0 10.0	15	21.8	-21 35.1	343	25.5	-22 27.8
12	280	51.0	48	21.4	-15 25.6	280	29.2	-0 09.3	30	23.7	-21 35.2	358	27.7	-22 27.7
13	295	53.4	63	21.4	26.2	295	30.2	08.6	45	25.6	35.2	13	29.8	27.7
14	310	55.9	78	21.3	26.8	310	31.1	07.9	60	27.5	35.3	28	31.9	27.7
15	325	58.4	93	21.3	27.4	325	32.1	07.2	75	29.4	35.4	43	34.1	27.7
16	341	00.8	108	21.3	28.0	340	33.0	06.4	90	31.3	35.5	58	36.2	27.7
17	356	03.3	123	21.3	-15 28.5	355	34.0	-0 05.7	105	33.2	-21 35.5	73	38.4	-22 27.6
18	11	05.8	138	21.3	-15 29.1	10	34.9	-0 05.0	120	35.1	-21 35.6	88	40.5	-22 27.6
19	26	08.2	153	21.3	29.7	25	35.8	04.3	135	37.0	35.7	103	42.7	27.6
20	41	10.7	168	21.2	30.3	40	36.8	03.6	150	38.9	35.7	118	44.8	27.6
21	56	13.1	183	21.2	30.9	55	37.7	02.8	165	40.8	35.8	133	47.0	27.5
22	71	15.6	198	21.2	31.5	70	38.7	02.1	180	42.7	35.9	148	49.1	27.5
23	86	18.1	213	21.2	32.0	85	39.6	01.4	195	44.6	35.9	163	51.3	27.5
24	101	20.5	228	21.1	-15 32.6	100	40.6	-0 00.7	210	46.5	-21 36.0	178	53.4	-22 27.5
Dif	—		0 -6			+9 +7			+19 -1			+21 0		

Nº	NOMBRE	Mag		Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
			o	/	/	/	/	/	/	/	/	/	/	/	/
1 - α And	<i>Alpheratz</i>	2.1	357	40.4	40.5	40.5	40.4	40.3	40.0	39.8	39.6	39.5	39.4	39.5	39.6
2 - β Cas	<i>Caph</i>	2.3	357	27.9	28.2	28.2	28.2	27.9	27.5	27.2	26.9	26.7	26.7	26.8	27.0
3 - γ Peg	<i>Algenib</i>	2.8	356	27.8	27.8	27.9	27.8	27.7	27.4	27.2	27.0	26.9	26.8	26.9	26.9
4 - α Phe	<i>Ankaa</i>	2.4	353	12.8	12.9	13.0	12.9	12.8	12.5	12.2	12.0	11.8	11.8	11.8	12.0
5 - α Cas	<i>Schedar</i>	2.2	349	37.0	37.2	37.3	37.3	37.1	36.8	36.4	36.1	35.9	35.8	35.9	36.0
6 - β Cet	<i>Diphda</i>	2.0	348	52.9	53.0	53.0	53.0	52.8	52.6	52.4	52.2	52.0	52.0	52.0	52.1
7 - γ Cas	<i>Navi</i>	1.6	345	32.9	33.2	33.3	33.3	33.1	32.8	32.4	32.0	31.8	31.7	31.7	31.9
8 - β And	<i>Mirach</i>	2.1	342	18.9	19.1	19.1	19.1	19.0	18.8	18.5	18.2	18.1	18.0	18.0	18.0
9 - α Eri	<i>Achernar</i>	0.5	335	24.5	24.8	24.9	25.0	24.9	24.6	24.3	23.9	23.7	23.5	23.5	23.7
10 - γ And	<i>Almak</i>	2.3	328	44.8	45.0	45.1	45.2	45.1	44.8	44.6	44.3	44.0	43.9	43.8	43.9
12 - α Ari	<i>Hamal</i>	2.0	327	57.2	57.3	57.4	57.4	57.3	57.2	56.9	56.7	56.5	56.3	56.3	56.3
11 - α UMi	<i>Polaris</i>	2.0	315	71.4	85.9	98.0	106.0	105.6	97.5	84.8	69.8	55.5	45.2	40.7	43.9
13 - θ Eri	<i>Acamar</i>	3.3	315	15.8	16.0	16.2	16.3	16.3	16.1	15.9	15.6	15.4	15.2	15.1	15.2
14 - α Cet	<i>Menkar</i>	2.5	314	11.7	11.8	11.9	12.0	11.9	11.8	11.6	11.4	11.1	11.0	10.9	10.9
15 - β Per	<i>Algol</i>	2.1	312	39.7	39.9	40.0	40.1	40.1	39.9	39.7	39.4	39.1	38.9	38.8	38.7
16 - α Per	<i>Mirfak</i>	1.8	308	35.6	35.8	36.0	36.1	36.1	35.9	35.6	35.3	35.0	34.7	34.6	34.5
17 - η Tau	<i>Alcyone</i>	2.9	302	51.6	51.7	51.8	51.9	51.9	51.8	51.6	51.3	51.1	50.9	50.8	50.7
18 - γ Eri	<i>Zaurak</i>	3.0	300	16.9	17.0	17.1	17.2	17.2	17.2	17.0	16.8	16.5	16.4	16.2	16.2
19 - α Tau	<i>Aldebaran</i>	0.9	290	45.6	45.6	45.8	45.9	45.9	45.8	45.7	45.5	45.2	45.0	44.8	44.8
20 - β Ori	<i>Rigel</i>	0.1	281	8.8	8.9	9.0	9.1	9.2	9.2	9.0	8.8	8.6	8.4	8.2	8.1
21 - α Aur	<i>Capella</i>	0.1	280	29.4	29.6	29.7	29.9	30.0	29.9	29.8	29.5	29.2	28.9	28.6	28.4
22 - γ Ori	<i>Bellatrix</i>	1.6	278	28.4	28.5	28.6	28.7	28.8	28.7	28.6	28.4	28.2	28.0	27.8	27.7
23 - β Tau	<i>Elnath</i>	1.7	278	8.4	8.4	8.6	8.7	8.8	8.7	8.6	8.4	8.1	7.9	7.7	7.5
24 - δ Ori	<i>Mintaka</i>	2.2	276	45.9	46.0	46.1	46.3	46.3	46.3	46.2	46.0	45.8	45.6	45.4	45.3
25 - ε Ori	<i>Alnilam</i>	1.7	275	42.9	43.0	43.1	43.2	43.3	43.3	43.2	43.0	42.8	42.6	42.4	42.2
26 - ζ Ori	<i>Alnitak</i>	1.9	274	34.8	34.9	35.0	35.1	35.2	35.2	35.1	34.9	34.7	34.5	34.3	34.1
27 - κ Ori	<i>Saiph</i>	2.1	272	50.7	50.7	50.8	51.0	51.1	51.1	50.9	50.8	50.6	50.4	50.2	50.0
28 - α Ori	<i>Betelgeuse</i>	0.4	270	57.6	57.7	57.8	57.9	58.0	58.0	57.9	57.7	57.5	57.3	57.1	56.9
29 - β Aur	<i>Menkalinan</i>	1.9	269	47.0	47.1	47.2	47.4	47.6	47.5	47.4	47.2	46.9	46.6	46.3	46.1
30 - β CMa	<i>Mirzam</i>	2.0	264	7.4	7.4	7.6	7.7	7.8	7.8	7.8	7.6	7.4	7.2	7.0	6.8
31 - α Car	<i>Canopus</i>	-0.7	263	54.2	54.4	54.6	54.9	55.1	55.2	55.1	55.0	54.7	54.4	54.1	53.9
32 - γ Gem	<i>Alhena</i>	1.9	260	18.5	18.6	18.7	18.8	18.9	18.9	18.8	18.7	18.5	18.2	18.0	17.8
33 - α CMa	<i>Sirius</i>	-1.5	258	30.7	30.7	30.8	31.0	31.1	31.1	31.0	30.9	30.7	30.5	30.3	30.1
34 - ε CMa	<i>Adhara</i>	1.5	255	9.7	9.7	9.9	10.0	10.2	10.2	10.2	10.1	9.9	9.6	9.4	9.2
35 - δ CMa	<i>Wezen</i>	1.9	252	42.9	42.9	43.0	43.2	43.3	43.4	43.3	43.2	43.0	42.8	42.6	42.4
36 - η CMa	<i>Aludra</i>	2.5	248	47.6	47.6	47.7	47.9	48.0	48.1	48.1	48.0	47.8	47.6	47.3	47.1
37 - α Gem	<i>Castor</i>	2.0	246	3.6	3.6	3.7	3.8	4.0	4.0	4.0	3.8	3.6	3.4	3.1	2.9
38 - α CMi	<i>Procyon</i>	0.4	244	56.2	56.1	56.2	56.4	56.5	56.5	56.5	56.4	56.2	56.0	55.8	55.6
39 - β Gem	<i>Pollux</i>	1.1	243	23.6	23.6	23.6	23.8	23.9	24.0	23.9	23.8	23.6	23.4	23.1	22.9
40 - ζ Pup	<i>Naos</i>	2.3	238	56.3	56.3	56.5	56.7	56.8	57.0	57.0	56.9	56.7	56.5	56.2	56.0
41 - γ Vel	<i>Regor</i>	1.8	237	28.2	28.2	28.3	28.6	28.8	28.9	29.0	28.9	28.7	28.5	28.2	27.9
42 - ε Car	<i>Avior</i>	1.9	234	16.1	16.1	16.3	16.6	16.9	17.1	17.2	17.2	17.0	16.7	16.3	16.0
43 - δ Velorum		2.0	228	41.4	41.4	41.5	41.8	42.0	42.2	42.3	42.3	42.2	41.9	41.5	41.2
44 - ζ Hydrae		3.1	225	54.7	54.6	54.6	54.7	54.9	54.9	54.9	54.9	54.8	54.6	54.3	54.1
45 - λ Vel	<i>Suhail</i>	2.2	222	49.7	49.6	49.7	49.9	50.1	50.2	50.3	50.3	50.2	50.0	49.7	49.4
46 - β Car	<i>Miaplacidus</i>	1.7	221	38.0	38.0	38.2	38.6	39.1	39.5	39.8	39.9	39.7	39.3	38.8	38.3
47 - ι Car	<i>Aspidiske</i>	2.3	220	35.7	35.7	35.8	36.1	36.3	36.6	36.8	36.8	36.7	36.4	36.0	35.7
48 - α Lyn	<i>Elvashak</i>	3.1	219	27.7	27.5	27.6	27.7	27.8	27.9	27.9	27.9	27.8	27.6	27.3	27.0
49 - α Hyd	<i>Alphard</i>	2.0	217	52.7	52.6	52.7	52.8	52.9	53.0	53.0	53.0	52.9	52.7	52.5	52.3
50 - α Leo	<i>Regulus</i>	1.4	207	40.0	39.8	39.8	39.9	40.0	40.1	40.1	40.1	40.1	39.9	39.7	39.4

ESTRELLAS, 2018
Posiciones aparentes377
DECLINACIÓN

Nº	NOMBRE	Mag		Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
			o	/	/	/	/	/	/	/	/	/	/	/	/
1 - α And	<i>Alpheratz</i>	2.1	+29	11.4	11.4	11.3	11.2	11.2	11.3	11.4	11.5	11.6	11.7	11.8	11.8
2 - β Cas	<i>Caph</i>	2.3	+59	15.1	15.0	14.9	14.8	14.7	14.7	14.8	14.9	15.1	15.3	15.4	15.4
3 - γ Peg	<i>Algenib</i>	2.8	+15	17.0	16.9	16.9	16.9	16.9	17.0	17.1	17.2	17.3	17.3	17.3	17.3
4 - α Phe	<i>Ankaa</i>	2.4	-42	12.8	12.8	12.7	12.5	12.4	12.3	12.2	12.2	12.2	12.3	12.5	12.5
5 - α Cas	<i>Schedar</i>	2.2	+56	38.3	38.2	38.1	38.0	37.9	37.9	38.0	38.1	38.3	38.4	38.6	38.6
6 - β Cet	<i>Diphda</i>	2.0	-17	53.5	53.5	53.5	53.4	53.3	53.2	53.1	53.0	53.0	53.0	53.1	53.2
7 - γ Cas	<i>Navi</i>	1.6	+60	49.0	48.9	48.8	48.7	48.6	48.6	48.6	48.7	48.9	49.1	49.2	49.3
8 - β And	<i>Mirach</i>	2.1	+35	43.0	42.9	42.9	42.8	42.7	42.8	42.8	42.9	43.1	43.2	43.3	43.3
9 - α Eri	<i>Achernar</i>	0.5	-57	9.2	9.1	9.0	8.8	8.7	8.5	8.4	8.4	8.4	8.6	8.7	8.8
10 - γ And	<i>Almak</i>	2.3	+42	25.0	25.0	24.9	24.8	24.7	24.7	24.8	24.8	25.0	25.1	25.2	25.3
12 - α Ari	<i>Hamal</i>	2.0	+23	32.8	32.7	32.7	32.7	32.6	32.7	32.7	32.8	32.9	33.0	33.0	33.1
11 - α UMi	<i>Polaris</i>	2.0	+89	20.6	20.6	20.6	20.4	20.3	20.2	20.1	20.1	20.2	20.4	20.5	20.7
13 - θ Eri	<i>Acamar</i>	3.3	-40	14.4	14.4	14.3	14.2	14.1	13.9	13.8	13.7	13.7	13.8	13.9	14.0
14 - α Cet	<i>Menkar</i>	2.5	+4	9.4	9.4	9.4	9.4	9.4	9.5	9.6	9.7	9.7	9.7	9.7	9.7
15 - β Per	<i>Algol</i>	2.1	+41	1.5	1.5	1.4	1.3	1.3	1.2	1.3	1.3	1.4	1.5	1.6	1.7
16 - α Per	<i>Mirfak</i>	1.8	+49	55.5	55.5	55.5	55.4	55.3	55.2	55.2	55.3	55.3	55.4	55.6	55.6
17 - η Tau	<i>Alcyone</i>	2.9	+24	9.5	9.5	9.5	9.4	9.4	9.4	9.5	9.5	9.6	9.6	9.7	9.7
18 - γ Eri	<i>Zaurak</i>	3.0	-13	27.8	27.8	27.8	27.7	27.7	27.5	27.4	27.3	27.3	27.3	27.4	27.5
19 - α Tau	<i>Aldebaran</i>	0.9	+16	32.5	32.5	32.5	32.5	32.5	32.5	32.6	32.6	32.7	32.7	32.7	32.7
20 - β Ori	<i>Rigel</i>	0.1	-8	11.1	11.2	11.2	11.2	11.1	11.0	10.9	10.8	10.8	10.8	10.9	11.0
21 - α Aur	<i>Capella</i>	0.1	+46	0.8	0.9	0.9	0.9	0.8	0.7	0.7	0.7	0.7	0.7	0.8	0.8
22 - γ Ori	<i>Bellatrix</i>	1.6	+6	21.7	21.7	21.7	21.7	21.7	21.8	21.8	21.9	21.9	21.9	21.9	21.8
23 - β Tau	<i>Elnath</i>	1.7	+28	37.2	37.2	37.2	37.2	37.2	37.1	37.1	37.2	37.2	37.2	37.2	37.2
24 - δ Ori	<i>Mintaka</i>	2.2	-0	17.4	17.5	17.5	17.4	17.4	17.3	17.3	17.2	17.2	17.2	17.2	17.3
25 - ϵ Ori	<i>Alnilam</i>	1.7	-1	11.7	11.7	11.7	11.7	11.7	11.6	11.5	11.5	11.4	11.4	11.5	11.5
26 - ζ Ori	<i>Alnitak</i>	1.9	-1	56.2	56.3	56.3	56.3	56.2	56.2	56.1	56.0	56.0	56.0	56.0	56.1
27 - κ Ori	<i>Saiph</i>	2.1	-9	40.1	40.1	40.2	40.1	40.1	40.0	39.9	39.8	39.8	39.8	39.8	39.9
28 - α Ori	<i>Betelgeuse</i>	0.4	+7	24.4	24.4	24.3	24.4	24.4	24.4	24.5	24.5	24.6	24.6	24.5	24.5
29 - β Aur	<i>Menkalinan</i>	1.9	+44	56.8	56.8	56.9	56.9	56.8	56.8	56.7	56.7	56.6	56.7	56.7	56.7
30 - β CMa	<i>Mirzam</i>	2.0	-17	58.2	58.2	58.3	58.3	58.2	58.1	58.0	57.9	57.8	57.8	57.9	58.0
31 - α Car	<i>Canopus</i>	-0.7	-52	42.6	42.7	42.8	42.8	42.7	42.5	42.4	42.2	42.1	42.1	42.2	42.4
32 - γ Gem	<i>Alhena</i>	1.9	+16	22.8	22.8	22.8	22.8	22.8	22.8	22.9	22.9	22.9	22.9	22.8	22.8
33 - α CMa	<i>Sirius</i>	-1.5	-16	44.7	44.8	44.8	44.8	44.8	44.7	44.6	44.5	44.4	44.4	44.5	44.6
34 - ϵ CMa	<i>Adhara</i>	1.5	-28	60.0	60.1	60.2	60.2	60.1	60.0	59.9	59.8	59.7	59.7	59.8	59.9
35 - δ CMa	<i>Wezen</i>	1.9	-26	25.5	25.6	25.7	25.7	25.7	25.6	25.4	25.3	25.2	25.2	25.3	25.4
36 - η CMa	<i>Aludra</i>	2.5	-29	20.5	20.6	20.7	20.7	20.7	20.6	20.4	20.3	20.2	20.2	20.3	20.4
37 - α Gem	<i>Castor</i>	2.0	+31	50.7	50.8	50.8	50.8	50.8	50.8	50.8	50.7	50.7	50.7	50.6	50.6
38 - α CMi	<i>Procyon</i>	0.4	+5	10.5	10.5	10.5	10.5	10.5	10.5	10.6	10.6	10.6	10.6	10.5	10.5
39 - β Gem	<i>Pollux</i>	1.1	+27	58.7	58.8	58.8	58.8	58.8	58.8	58.8	58.8	58.7	58.7	58.7	58.6
40 - ζ Pup	<i>Naos</i>	2.3	-40	3.4	3.5	3.6	3.7	3.6	3.5	3.4	3.3	3.2	3.1	3.2	3.3
41 - γ Vel	<i>Regor</i>	1.8	-47	23.5	23.7	23.8	23.8	23.8	23.7	23.6	23.4	23.3	23.3	23.3	23.4
42 - ϵ Car	<i>Avior</i>	1.9	-59	34.1	34.3	34.4	34.5	34.5	34.4	34.3	34.1	34.0	33.9	33.9	34.1
43 - δ Velorum		2.0	-54	46.5	46.7	46.8	46.9	46.9	46.9	46.7	46.6	46.4	46.4	46.4	46.5
44 - ζ Hydrae		3.1	+5	52.4	52.4	52.4	52.4	52.4	52.5	52.5	52.5	52.5	52.5	52.4	52.3
45 - λ Vel	<i>Suhail</i>	2.2	-43	30.3	30.5	30.6	30.7	30.7	30.7	30.6	30.4	30.3	30.2	30.3	30.4
46 - β Car	<i>Miaplacidus</i>	1.7	-69	47.4	47.6	47.8	47.9	47.9	47.9	47.7	47.6	47.4	47.3	47.3	47.4
47 - ι Car	<i>Aspidiske</i>	2.3	-59	21.0	21.2	21.3	21.5	21.5	21.4	21.3	21.2	21.0	20.9	20.9	21.0
48 - α Lyn	<i>Elvashak</i>	3.1	+34	18.8	18.8	18.9	18.9	19.0	19.0	18.9	18.9	18.8	18.7	18.6	18.6
49 - α Hyd	<i>Alphard</i>	2.0	-8	44.3	44.4	44.5	44.5	44.5	44.4	44.4	44.3	44.2	44.2	44.3	44.4
50 - α Leo	<i>Regulus</i>	1.4	+11	52.6	52.6	52.6	52.6	52.6	52.7	52.7	52.7	52.7	52.6	52.5	52.4

Nº	NOMBRE	Mag		Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
			o	/	/	/	/	/	/	/	/	/	/	/	/
51 - μ	Velorum	2.7	198	6.4	6.3	6.2	6.3	6.5	6.7	6.8	6.9	6.9	6.8	6.5	6.2
52 - ν	Hydrae	3.1	197	22.2	22.0	22.0	22.0	22.1	22.2	22.3	22.3	22.3	22.2	22.0	21.7
53 - β	UMa Merak	2.4	194	16.2	15.9	15.9	15.9	16.1	16.3	16.5	16.6	16.5	16.4	16.1	15.7
54 - α	UMa Dubhe	1.8	193	47.6	47.3	47.2	47.3	47.5	47.8	48.0	48.1	48.0	47.9	47.5	47.1
55 - β	Leo Denebola	2.1	182	30.4	30.2	30.1	30.1	30.1	30.2	30.3	30.4	30.4	30.3	30.1	29.9
56 - γ	Crv Gienah	2.6	175	49.0	48.8	48.7	48.6	48.7	48.8	48.8	48.9	49.0	48.9	48.8	48.5
57 - α	Cru Acrux	1.4	173	5.5	5.2	5.0	5.0	5.1	5.3	5.6	5.8	6.0	5.9	5.7	5.3
58 - γ	Cru Gacrux	1.6	171	57.2	56.9	56.7	56.7	56.8	56.9	57.1	57.4	57.5	57.4	57.2	56.9
59 - γ	Cen Muhlifain	2.2	169	22.1	21.9	21.7	21.7	21.7	21.8	22.0	22.1	22.2	22.2	22.0	21.8
60 - β	Cru Mimosa	1.3	167	48.1	47.7	47.5	47.5	47.5	47.7	47.9	48.2	48.3	48.3	48.1	47.7
61 - ε	UMa Alioth	1.8	166	17.9	17.6	17.4	17.3	17.4	17.6	17.8	18.0	18.1	18.1	18.0	17.7
62 - α^2	CVn Cor Caroli	2.9	165	47.1	46.9	46.7	46.7	46.7	46.8	46.9	47.0	47.1	47.1	47.0	46.8
63 - ε	Vir Vindemiatrix	2.8	164	14.0	13.8	13.7	13.6	13.6	13.7	13.8	13.8	13.9	13.9	13.8	13.6
64 - ζ	UMa Mizar	2.3	158	50.5	50.2	50.0	49.9	49.9	50.1	50.2	50.5	50.6	50.7	50.5	50.3
65 - α	Vir Spica	1.0	158	28.0	27.7	27.6	27.5	27.5	27.5	27.6	27.7	27.8	27.8	27.7	27.5
66 - η	UMa Alkaid	1.9	152	56.5	56.2	56.0	55.9	55.9	56.0	56.2	56.3	56.5	56.6	56.5	56.3
67 - β	Cen Hadar	0.6	148	43.5	43.1	42.8	42.6	42.5	42.6	42.8	43.1	43.3	43.4	43.3	43.0
68 - θ	Cen Menkent	2.1	148	3.9	3.7	3.5	3.3	3.3	3.3	3.4	3.5	3.7	3.7	3.6	3.4
69 - α	Boo Arcturus	0.0	145	53.0	52.7	52.6	52.5	52.4	52.4	52.5	52.6	52.7	52.8	52.7	52.6
70 - α^1	Cen Rigil Kentaurus	0.0	139	47.7	47.3	47.0	46.8	46.7	46.7	46.9	47.2	47.4	47.6	47.5	47.3
71 - α^2	Lib Zubenelgenubi	2.8	137	2.1	1.8	1.6	1.5	1.4	1.4	1.5	1.6	1.7	1.7	1.7	1.6
72 - β	UMi Kochab	2.1	137	20.7	20.0	19.4	19.1	19.0	19.3	19.7	20.3	20.9	21.2	21.3	21.1
73 - β	Lib Zubeneschamali	2.6	130	30.6	30.4	30.2	30.0	29.9	29.9	29.9	30.0	30.2	30.2	30.2	30.1
74 - α	CrB Alphecca	2.2	126	8.6	8.3	8.1	8.0	7.9	7.8	7.9	8.0	8.2	8.3	8.3	8.2
75 - α	Ser Unukalhai	2.7	123	43.0	42.8	42.6	42.4	42.3	42.2	42.3	42.4	42.5	42.6	42.6	42.5
76 - α	Sco Antares	0.9	112	22.7	22.5	22.2	22.0	21.8	21.8	21.7	21.8	22.0	22.1	22.1	22.1
77 - α	TrA Atria	1.9	107	22.2	21.6	21.1	20.5	20.1	19.9	20.0	20.2	20.6	21.0	21.2	21.1
78 - ε	Scorpii	2.3	107	10.5	10.2	10.0	9.7	9.5	9.4	9.4	9.5	9.7	9.8	9.9	9.8
79 - η	Oph Sabik	2.4	102	9.3	9.0	8.8	8.6	8.4	8.3	8.3	8.4	8.5	8.6	8.7	8.6
80 - α	Her Rasalgethi	3.1	101	8.4	8.2	8.0	7.8	7.6	7.5	7.5	7.6	7.7	7.8	7.9	7.9
81 - λ	Sco Shaula	1.6	96	18.1	17.8	17.6	17.3	17.1	16.9	16.8	16.9	17.1	17.2	17.3	17.3
82 - α	Oph Rasalhague	2.1	96	3.9	3.7	3.5	3.3	3.1	3.0	2.9	3.0	3.1	3.3	3.4	3.3
83 - θ	Sco Sargas	1.9	95	21.4	21.1	20.8	20.5	20.3	20.1	20.1	20.1	20.3	20.5	20.6	20.6
84 - γ	Dra Eltanin	2.2	90	45.2	45.0	44.7	44.4	44.2	44.0	44.0	44.2	44.4	44.7	44.9	45.0
85 - ε	Sgr Kaus Australis	1.9	83	40.1	39.9	39.6	39.4	39.1	38.9	38.8	38.9	39.0	39.2	39.3	39.3
86 - α	Lyr Vega	0.0	80	37.3	37.1	36.9	36.6	36.4	36.2	36.2	36.3	36.4	36.6	36.8	36.9
87 - σ	Sgr Nunki	2.0	75	54.9	54.7	54.5	54.2	54.0	53.8	53.7	53.7	53.8	53.9	54.0	54.1
88 - α	Aql Altair	0.8	62	5.5	5.4	5.3	5.1	4.9	4.7	4.5	4.5	4.6	4.7	4.8	4.9
89 - γ	Cyg Sadr	2.2	54	17.4	17.3	17.1	16.9	16.6	16.4	16.3	16.2	16.3	16.5	16.7	16.8
90 - α	Pav Peacock	1.9	53	15.0	14.9	14.6	14.3	13.9	13.5	13.3	13.2	13.3	13.5	13.7	13.9
91 - α	Cyg Deneb	1.3	49	29.8	29.7	29.6	29.4	29.1	28.8	28.7	28.6	28.7	28.9	29.1	29.3
92 - α	Cep Alderamin	2.4	40	15.4	15.5	15.3	15.0	14.6	14.2	14.0	13.9	14.1	14.3	14.6	15.0
93 - ε	Peg Enif	0.7	33	44.4	44.3	44.3	44.1	43.9	43.6	43.5	43.3	43.3	43.4	43.5	43.6
94 - δ	Cap Deneb Algedi	2.9	32	60.0	60.0	59.9	59.7	59.5	59.2	59.0	58.9	58.9	59.0	59.1	59.2
95 - α	Gru Al Na'ir	1.7	27	40.3	40.3	40.2	40.0	39.7	39.4	39.1	38.9	38.9	39.0	39.1	39.3
96 - β	Gruis	2.1	19	4.6	4.6	4.6	4.4	4.1	3.8	3.5	3.3	3.2	3.3	3.4	3.6
97 - α	PsA Fomalhaut	1.2	15	20.8	20.9	20.8	20.7	20.5	20.2	20.0	19.8	19.7	19.7	19.8	20.0
98 - β	Peg Scheat	2.4	13	50.6	50.6	50.6	50.5	50.3	50.0	49.8	49.6	49.6	49.6	49.7	49.8
99 - α	Peg Markab	2.5	13	35.4	35.5	35.4	35.3	35.2	34.9	34.7	34.5	34.5	34.5	34.6	34.7

ESTRELLAS, 2018
Posiciones aparentes379
DECLINACIÓN

Nº	NOMBRE	Mag	Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
			o	/	/	/	/	/	/	/	/	/	/	/
51 - μ	Velorum	2.7	-49	30.8	30.9	31.1	31.2	31.3	31.3	31.2	31.1	31.0	30.8	30.9
52 - ν	Hydrae	3.1	-16	17.3	17.4	17.5	17.5	17.5	17.4	17.4	17.3	17.3	17.3	17.4
53 - β	UMa Merak	2.4	+56	16.9	17.0	17.1	17.2	17.3	17.3	17.2	17.0	16.9	16.7	16.6
54 - α	UMa Dubhe	1.8	+61	39.0	39.0	39.2	39.3	39.4	39.3	39.2	39.1	38.9	38.8	38.7
55 - β	Leo Denebola	2.1	+14	28.2	28.2	28.2	28.2	28.2	28.3	28.3	28.3	28.2	28.1	28.0
56 - γ	Crv Gienah	2.6	-17	38.4	38.5	38.6	38.7	38.7	38.6	38.6	38.5	38.5	38.5	38.6
57 - α	Cru Acrux	1.4	-63	11.6	11.7	11.9	12.1	12.2	12.3	12.2	12.1	11.9	11.8	11.8
58 - γ	Cru Gacrux	1.6	-57	12.5	12.6	12.8	13.0	13.1	13.2	13.1	13.0	12.8	12.7	12.7
59 - γ	Cen Muhlifain	2.2	-49	3.2	3.3	3.5	3.6	3.7	3.8	3.7	3.6	3.5	3.4	3.4
60 - β	Cru Mimoso	1.3	-59	46.9	47.0	47.2	47.3	47.4	47.5	47.5	47.4	47.2	47.1	47.1
61 - ϵ	UMa Alioth	1.8	+55	51.5	51.5	51.6	51.8	51.9	52.0	51.9	51.8	51.6	51.4	51.3
62 - α^2	CVn Cor Caroli	2.9	+38	13.1	13.1	13.1	13.3	13.4	13.4	13.5	13.4	13.4	13.2	12.9
63 - ϵ	Vir Vindemiatrix	2.8	+10	51.7	51.7	51.6	51.7	51.7	51.8	51.8	51.8	51.7	51.7	51.5
64 - ζ	UMa Mizar	2.3	+54	49.7	49.7	49.8	49.9	50.0	50.1	50.2	50.1	50.0	49.8	49.5
65 - α	Vir Spica	1.0	-11	15.2	15.3	15.3	15.4	15.4	15.4	15.3	15.3	15.3	15.3	15.4
66 - η	UMa Alkaid	1.9	+49	13.2	13.2	13.3	13.4	13.5	13.6	13.7	13.7	13.6	13.4	13.2
67 - β	Cen Hadar	0.6	-60	27.2	27.2	27.4	27.5	27.7	27.8	27.8	27.7	27.6	27.5	27.4
68 - θ	Cen Menkent	2.1	-36	27.2	27.3	27.4	27.5	27.6	27.6	27.6	27.6	27.6	27.5	27.4
69 - α	Boo Arcturus	0.0	+19	5.3	5.2	5.2	5.3	5.4	5.4	5.5	5.5	5.4	5.3	5.1
70 - α^1	Cen Rigil Kentaurus	0.0	-60	54.1	54.2	54.3	54.5	54.6	54.7	54.8	54.7	54.6	54.5	54.4
71 - α^2	Lib Zubenelgenubi	2.8	-16	6.8	6.9	6.9	7.0	7.0	7.0	7.0	6.9	6.9	6.9	7.0
72 - β	UMi Kochab	2.1	+74	4.7	4.7	4.7	4.9	5.0	5.2	5.2	5.2	5.1	5.0	4.8
73 - β	Lib Zubeneshamali	2.6	-9	26.8	26.9	26.9	26.9	26.9	26.9	26.9	26.8	26.8	26.9	26.9
74 - α	CrB Alphecca	2.2	+26	39.3	39.2	39.1	39.2	39.3	39.4	39.5	39.5	39.5	39.3	39.2
75 - α	Ser Unukalhai	2.7	+6	22.2	22.2	22.1	22.1	22.2	22.3	22.3	22.4	22.4	22.3	22.2
76 - α	Sco Antares	0.9	-26	28.0	28.1	28.1	28.2	28.2	28.2	28.2	28.2	28.2	28.2	28.2
77 - α	TrA Atria	1.9	-69	3.2	3.1	3.2	3.2	3.3	3.5	3.6	3.7	3.7	3.6	3.4
78 - ϵ	Scorpii	2.3	-34	19.3	19.3	19.3	19.3	19.4	19.4	19.5	19.5	19.5	19.4	19.4
79 - η	Oph Sabik	2.4	-15	44.6	44.7	44.7	44.7	44.7	44.7	44.7	44.7	44.7	44.7	44.7
80 - α	Her Rasalgethi	3.1	+14	22.3	22.2	22.1	22.2	22.2	22.3	22.4	22.5	22.5	22.4	22.3
81 - λ	Sco Shaula	1.6	-37	6.7	6.7	6.7	6.8	6.8	6.8	6.9	6.9	6.9	6.9	6.8
82 - α	Oph Rasalhague	2.1	+12	32.9	32.8	32.8	32.8	32.9	33.0	33.1	33.1	33.1	33.1	33.0
83 - θ	Sco Sargas	1.9	-43	0.3	0.2	0.2	0.3	0.3	0.4	0.4	0.5	0.5	0.4	0.4
84 - γ	Dra Eltanin	2.2	+51	29.2	29.1	29.0	29.0	29.2	29.3	29.5	29.6	29.6	29.5	29.4
85 - ϵ	Sgr Kaus Australis	1.9	-34	22.3	22.3	22.3	22.3	22.3	22.3	22.4	22.4	22.4	22.4	22.4
86 - α	Lyr Vega	0.0	+38	48.1	47.9	47.9	47.9	48.0	48.1	48.3	48.4	48.5	48.4	48.3
87 - σ	Sgr Nunki	2.0	-26	16.3	16.3	16.3	16.3	16.2	16.2	16.2	16.2	16.3	16.3	16.3
88 - α	Aql Altair	0.8	+8	55.0	55.0	54.9	54.9	55.0	55.1	55.2	55.3	55.3	55.3	55.2
89 - γ	Cyg Sadr	2.2	+40	19.0	18.8	18.7	18.7	18.7	18.9	19.0	19.2	19.3	19.4	19.3
90 - α	Pav Peacock	1.9	-56	40.6	40.5	40.4	40.3	40.2	40.2	40.3	40.4	40.5	40.6	40.5
91 - α	Cyg Deneb	1.3	+45	20.8	20.6	20.5	20.5	20.7	20.8	21.0	21.1	21.2	21.2	21.1
92 - α	Cep Alderamin	2.4	+62	39.9	39.7	39.6	39.5	39.5	39.6	39.8	39.9	40.1	40.2	40.2
93 - ϵ	Peg Enif	0.7	+9	57.5	57.4	57.4	57.4	57.4	57.5	57.6	57.7	57.8	57.8	57.8
94 - δ	Cap Deneb Algedi	2.9	-16	2.8	2.8	2.7	2.7	2.6	2.5	2.5	2.4	2.4	2.5	2.5
95 - α	Gru Al Na'ir	1.7	-46	52.6	52.5	52.4	52.2	52.1	52.1	52.1	52.2	52.3	52.4	52.4
96 - β	Gruis	2.1	-46	47.6	47.5	47.4	47.3	47.2	47.1	47.1	47.1	47.2	47.3	47.4
97 - α	PsA Fomalhaut	1.2	-29	31.8	31.8	31.7	31.6	31.5	31.4	31.3	31.3	31.4	31.5	31.5
98 - β	Peg Scheat	2.4	+28	10.9	10.8	10.7	10.7	10.7	10.8	10.9	11.0	11.1	11.2	11.3
99 - α	Peg Markab	2.5	+15	18.1	18.1	18.0	18.0	18.0	18.1	18.2	18.3	18.4	18.5	18.5

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

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

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

Nº	NOMBRE	Mag	Ago	Sep	Oct	Nov	Dic	1ª CORRECCIÓN					
			h m	h m	h m	h m	h m						
1 - α Andromedae	<i>Alpheratz</i>	2.1	3 31	1 29	23 27	21 25	19 27	Se restará para obtener la hora del paso en otro día del mismo mes.					
2 - β Cassiopeae	<i>Caph</i>	2.3	3 31	1 30	23 28	21 26	19 28						
6 - β Ceti	<i>Diphda</i>	2.0	4 06	2 04	0 06	22 00	20 02						
9 - α Eridani	<i>Achernar</i>	0.5	4 59	2 57	1 00	22 54	20 56						
12 - α Arietis	<i>Hamal</i>	2.0	5 29	3 27	1 29	23 23	21 26	<table><tr><th>Día</th><th>Corr.</th></tr></table>	Día	Corr.			
Día	Corr.												
13 - θ Eridani	<i>Acamar</i>	3.3	6 20	4 18	2 20	0 18	22 16	<table><tr><td></td><td>h m</td></tr><tr><td>1</td><td>0 00</td></tr></table>		h m	1	0 00	
	h m												
1	0 00												
16 - α Persei	<i>Mirfak</i>	1.8	6 46	4 44	2 47	0 45	22 43	<table><tr><td>2</td><td>0 04</td></tr></table>	2	0 04			
2	0 04												
19 - α Tauri	<i>Aldebaran</i>	0.9	7 57	5 56	3 58	1 56	23 54	<table><tr><td>3</td><td>0 08</td></tr></table>	3	0 08			
3	0 08												
20 - β Orionis	<i>Rigel</i>	0.1	8 36	6 34	4 36	2 34	0 36	<table><tr><td>4</td><td>0 12</td></tr></table>	4	0 12			
4	0 12												
21 - α Aurigae	<i>Capella</i>	0.1	8 38	6 37	4 39	2 37	0 39	<table><tr><td>5</td><td>0 16</td></tr></table>	5	0 16			
5	0 16												
22 - γ Orionis	<i>Bellatrix</i>	1.6	8 46	6 45	4 47	2 45	0 47	<table><tr><td>6</td><td>0 20</td></tr></table>	6	0 20			
6	0 20												
28 - α Orionis	<i>Betelgeuse</i>	0.4	9 16	7 15	5 17	3 15	1 17	<table><tr><td>7</td><td>0 24</td></tr></table>	7	0 24			
7	0 24												
31 - α Carinae	<i>Canopus</i>	-0.7	9 45	7 43	5 45	3 43	1 45	<table><tr><td>8</td><td>0 28</td></tr></table>	8	0 28			
8	0 28												
33 - α Canis Majoris	<i>Sirius</i>	-1.5	10 06	8 04	6 06	4 04	2 06	<table><tr><td>9</td><td>0 31</td></tr></table>	9	0 31			
9	0 31												
34 - ϵ Canis Majoris	<i>Adhara</i>	1.5	10 19	8 18	6 20	4 18	2 20	<table><tr><td>10</td><td>0 35</td></tr></table>	10	0 35			
10	0 35												
								<table><tr><td>11</td><td>0 39</td></tr></table>	11	0 39			
11	0 39												
38 - α Canis Minoris	<i>Procyon</i>	0.4	11 00	8 58	7 00	4 59	3 01	<table><tr><td>12</td><td>0 43</td></tr></table>	12	0 43			
12	0 43												
39 - β Geminorum	<i>Pollux</i>	1.1	11 06	9 04	7 07	5 05	3 07	<table><tr><td>13</td><td>0 47</td></tr></table>	13	0 47			
13	0 47												
42 - ϵ Carinae	<i>Avior</i>	1.9	11 43	9 41	7 43	5 41	3 43	<table><tr><td>14</td><td>0 51</td></tr></table>	14	0 51			
14	0 51												
45 - λ Velorum	<i>Suhail</i>	2.2	12 28	10 27	8 29	6 27	4 29	<table><tr><td>15</td><td>0 55</td></tr></table>	15	0 55			
15	0 55												
46 - β Carinae	<i>Miaplacidus</i>	1.7	12 33	10 31	8 33	6 31	4 33	<table><tr><td>16</td><td>0 59</td></tr></table>	16	0 59			
16	0 59												
								<table><tr><td>17</td><td>1 03</td></tr></table>	17	1 03			
17	1 03												
49 - α Hydrae	<i>Alphard</i>	2.0	12 48	10 46	8 48	6 46	4 49	<table><tr><td>18</td><td>1 07</td></tr></table>	18	1 07			
18	1 07												
50 - α Leonis	<i>Regulus</i>	1.4	13 29	11 27	9 29	7 27	5 29	<table><tr><td>19</td><td>1 11</td></tr></table>	19	1 11			
19	1 11												
54 - α Ursae Majoris	<i>Dubhe</i>	1.8	14 24	12 22	10 24	8 23	6 25	<table><tr><td>20</td><td>1 15</td></tr></table>	20	1 15			
20	1 15												
55 - β Leonis	<i>Denebola</i>	2.1	15 09	13 07	11 09	9 08	7 10	<table><tr><td>21</td><td>1 19</td></tr></table>	21	1 19			
21	1 19												
57 - α Crucis	<i>Acrux</i>	1.4	15 47	13 45	11 47	9 45	7 47	<table><tr><td>22</td><td>1 23</td></tr></table>	22	1 23			
22	1 23												
								<table><tr><td>23</td><td>1 27</td></tr></table>	23	1 27			
23	1 27												
58 - γ Crucis	<i>Gacrux</i>	1.6	15 51	13 49	11 52	9 50	7 52	<table><tr><td>24</td><td>1 30</td></tr></table>	24	1 30			
24	1 30												
60 - β Crucis	<i>Mimosa</i>	1.3	16 08	14 06	12 08	10 06	8 08	<table><tr><td>25</td><td>1 34</td></tr></table>	25	1 34			
25	1 34												
61 - ϵ Ursae Majoris	<i>Alioth</i>	1.8	16 14	14 12	12 14	10 12	8 14	<table><tr><td>26</td><td>1 38</td></tr></table>	26	1 38			
26	1 38												
64 - ζ Ursae Majoris	<i>Mizar</i>	2.3	16 44	14 42	12 44	10 42	8 44	<table><tr><td>27</td><td>1 42</td></tr></table>	27	1 42			
27	1 42												
65 - α Virginis	<i>Spica</i>	1.0	16 45	14 43	12 45	10 43	8 46	<table><tr><td>28</td><td>1 46</td></tr></table>	28	1 46			
28	1 46												
								<table><tr><td>29</td><td>1 50</td></tr></table>	29	1 50			
29	1 50												
68 - θ Centauri	<i>Menkent</i>	2.1	17 27	15 25	13 27	11 25	9 27	<table><tr><td>30</td><td>1 54</td></tr></table>	30	1 54			
30	1 54												
69 - α Bootis	<i>Arcturus</i>	0.0	17 35	15 33	13 36	11 34	9 36	<table><tr><td>31</td><td>1 58</td></tr></table>	31	1 58			
31	1 58												
70 - α^1 Centauri	<i>Rigil Kentaurus</i>	0.0	18 00	15 58	14 00	11 58	10 00						
72 - β Ursae Minoris	<i>Kochab</i>	2.1	18 09	16 08	14 10	12 08	10 10	Si el resultado es negativo sumar 23 ^h 56 ^m .					
74 - α Coronae Borealis	<i>Alphecca</i>	2.2	18 54	16 52	14 54	12 52	10 54						
76 - α Scorpii	<i>Antares</i>	0.9	19 49	17 47	15 49	13 47	11 49	2ª CORRECCIÓN					
77 - α Trianguli Aust.	<i>Atria</i>	1.9	20 09	18 07	16 09	14 07	12 09						
81 - λ Scorpii	<i>Shaula</i>	1.6	20 53	18 51	16 53	14 51	12 54						
82 - α Ophiuchi	<i>Rasalhague</i>	2.1	20 54	18 52	16 54	14 52	12 54						
84 - γ Draconis	<i>Eltanin</i>	2.2	21 15	19 13	17 15	15 14	13 16	Se aplicará para tener la hora civil del paso por otro meridiano.					
85 - ϵ Sagittarii	<i>Kaus Australis</i>	1.9	21 44	19 42	17 44	15 42	13 44						
86 - α Lyrae	<i>Vega</i>	0.0	21 56	19 54	17 56	15 54	13 56	<table><tr><th>Long.</th><th>Corr.</th></tr></table>	Long.	Corr.			
Long.	Corr.												
87 - σ Sagittarii	<i>Nunki</i>	2.0	22 15	20 13	18 15	16 13	14 15	<table><tr><td>o</td><td>m</td></tr></table>	o	m			
o	m												
88 - α Aquilae	<i>Altair</i>	0.8	23 10	21 08	19 10	17 08	15 10	<table><tr><td>180 W</td><td>-2</td></tr></table>	180 W	-2			
180 W	-2												
90 - α Pavonis	<i>Peacock</i>	1.9	23 45	21 43	19 45	17 43	15 45	<table><tr><td>138 W</td><td>-1</td></tr></table>	138 W	-1			
138 W	-1												
								<table><tr><td>46 W</td><td>0</td></tr></table>	46 W	0			
46 W	0												
91 - α Cygni	<i>Deneb</i>	1.3	0 04	21 58	20 00	17 58	16 00	<table><tr><td>46 E</td><td>+1</td></tr></table>	46 E	+1			
46 E	+1												
93 - ϵ Pegasi	<i>Enif</i>	0.7	1 07	23 01	21 03	19 01	17 03	<table><tr><td>136 E</td><td>+2</td></tr></table>	136 E	+2			
136 E	+2												
95 - α Gruis	<i>Al Na'ir</i>	1.7	1 31	23 25	21 27	19 25	17 27						
97 - α Piscis Austrini	<i>Fomalhaut</i>	1.2	2 20	0 18	22 16	20 14	18 16						
99 - α Pegasi	<i>Markab</i>	2.5	2 27	0 25	22 23	20 21	18 23						

DETERMINACIÓN DE LA LATITUD
POR LA OBSERVACIÓN DE UNA ALTURA DE LA POLAR, 2018

TABLA I

h.L.Υ	Corr.	h.L.Υ	Corr.	h.L.Υ	Corr.	h.L.Υ	Corr.	h.L.Υ	Corr.	h.L.Υ	Corr.	h.L.Υ	Corr.
0 00	-28.6	26 00	-37.7	52 00	-39.2	78 00	-32.7	104 00	-19.7	130 00	-2.6	156 00	+15.0
0 30	-28.8	26 30	-37.8	52 30	-39.1	78 30	-32.5	104 30	-19.4	130 30	-2.3	156 30	+15.3
1 00	-29.1	27 00	-37.9	53 00	-39.1	79 00	-32.3	105 00	-19.1	131 00	-1.9	157 00	+15.6
1 30	-29.3	27 30	-38.0	53 30	-39.0	79 30	-32.1	105 30	-18.7	131 30	-1.6	157 30	+15.9
2 00	-29.5	28 00	-38.1	54 00	-39.0	80 00	-31.9	106 00	-18.4	132 00	-1.2	158 00	+16.2
2 30	-29.8	28 30	-38.2	54 30	-38.9	80 30	-31.7	106 30	-18.1	132 30	-0.9	158 30	+16.6
3 00	-30.0	29 00	-38.3	55 00	-38.8	81 00	-31.5	107 00	-17.8	133 00	-0.5	159 00	+16.9
3 30	-30.2	29 30	-38.4	55 30	-38.8	81 30	-31.3	107 30	-17.5	133 30	-0.2	159 30	+17.2
4 00	-30.4	30 00	-38.5	56 00	-38.7	82 00	-31.1	108 00	-17.2	134 00	+0.2	160 00	+17.5
4 30	-30.6	30 30	-38.5	56 30	-38.6	82 30	-30.9	108 30	-16.9	134 30	+0.5	160 30	+17.8
5 00	-30.9	31 00	-38.6	57 00	-38.5	83 00	-30.7	109 00	-16.6	135 00	+0.9	161 00	+18.1
5 30	-31.1	31 30	-38.7	57 30	-38.5	83 30	-30.4	109 30	-16.3	135 30	+1.2	161 30	+18.4
6 00	-31.3	32 00	-38.8	58 00	-38.4	84 00	-30.2	110 00	-16.0	136 00	+1.5	162 00	+18.7
6 30	-31.5	32 30	-38.8	58 30	-38.3	84 30	-30.0	110 30	-15.6	136 30	+1.9	162 30	+19.0
7 00	-31.7	33 00	-38.9	59 00	-38.2	85 00	-29.8	111 00	-15.3	137 00	+2.2	163 00	+19.3
7 30	-31.9	33 30	-39.0	59 30	-38.1	85 30	-29.5	111 30	-15.0	137 30	+2.6	163 30	+19.6
8 00	-32.1	34 00	-39.0	60 00	-38.0	86 00	-29.3	112 00	-14.7	138 00	+2.9	164 00	+19.9
8 30	-32.3	34 30	-39.1	60 30	-37.9	86 30	-29.1	112 30	-14.4	138 30	+3.3	164 30	+20.2
9 00	-32.5	35 00	-39.1	61 00	-37.8	87 00	-28.8	113 00	-14.0	139 00	+3.6	165 00	+20.5
9 30	-32.7	35 30	-39.2	61 30	-37.7	87 30	-28.6	113 30	-13.7	139 30	+4.0	165 30	+20.8
10 00	-32.9	36 00	-39.2	62 00	-37.6	88 00	-28.4	114 00	-13.4	140 00	+4.3	166 00	+21.1
10 30	-33.1	36 30	-39.3	62 30	-37.5	88 30	-28.1	114 30	-13.1	140 30	+4.6	166 30	+21.4
11 00	-33.3	37 00	-39.3	63 00	-37.4	89 00	-27.9	115 00	-12.7	141 00	+5.0	167 00	+21.7
11 30	-33.5	37 30	-39.4	63 30	-37.3	89 30	-27.6	115 30	-12.4	141 30	+5.3	167 30	+22.0
12 00	-33.7	38 00	-39.4	64 00	-37.1	90 00	-27.4	116 00	-12.1	142 00	+5.7	168 00	+22.3
12 30	-33.8	38 30	-39.4	64 30	-37.0	90 30	-27.1	116 30	-11.8	142 30	+6.0	168 30	+22.6
13 00	-34.0	39 00	-39.5	65 00	-36.9	91 00	-26.9	117 00	-11.4	143 00	+6.4	169 00	+22.8
13 30	-34.2	39 30	-39.5	65 30	-36.8	91 30	-26.6	117 30	-11.1	143 30	+6.7	169 30	+23.1
14 00	-34.4	40 00	-39.5	66 00	-36.6	92 00	-26.4	118 00	-10.8	144 00	+7.0	170 00	+23.4
14 30	-34.5	40 30	-39.5	66 30	-36.5	92 30	-26.1	118 30	-10.4	144 30	+7.4	170 30	+23.7
15 00	-34.7	41 00	-39.5	67 00	-36.4	93 00	-25.9	119 00	-10.1	145 00	+7.7	171 00	+24.0
15 30	-34.9	41 30	-39.6	67 30	-36.2	93 30	-25.6	119 30	-9.8	145 30	+8.0	171 30	+24.2
16 00	-35.0	42 00	-39.6	68 00	-36.1	94 00	-25.3	120 00	-9.4	146 00	+8.4	172 00	+24.5
16 30	-35.2	42 30	-39.6	68 30	-36.0	94 30	-25.1	120 30	-9.1	146 30	+8.7	172 30	+24.8
17 00	-35.3	43 00	-39.6	69 00	-35.8	95 00	-24.8	121 00	-8.7	147 00	+9.1	173 00	+25.0
17 30	-35.5	43 30	-39.6	69 30	-35.7	95 30	-24.5	121 30	-8.4	147 30	+9.4	173 30	+25.3
18 00	-35.7	44 00	-39.6	70 00	-35.5	96 00	-24.2	122 00	-8.1	148 00	+9.7	174 00	+25.6
18 30	-35.8	44 30	-39.6	70 30	-35.4	96 30	-24.0	122 30	-7.7	148 30	+10.1	174 30	+25.8
19 00	-35.9	45 00	-39.6	71 00	-35.2	97 00	-23.7	123 00	-7.4	149 00	+10.4	175 00	+26.1
19 30	-36.1	45 30	-39.6	71 30	-35.0	97 30	-23.4	123 30	-7.1	149 30	+10.7	175 30	+26.4
20 00	-36.2	46 00	-39.6	72 00	-34.9	98 00	-23.1	124 00	-6.7	150 00	+11.1	176 00	+26.6
20 30	-36.4	46 30	-39.5	72 30	-34.7	98 30	-22.9	124 30	-6.4	150 30	+11.4	176 30	+26.9
21 00	-36.5	47 00	-39.5	73 00	-34.5	99 00	-22.6	125 00	-6.0	151 00	+11.7	177 00	+27.1
21 30	-36.6	47 30	-39.5	73 30	-34.4	99 30	-22.3	125 30	-5.7	151 30	+12.1	177 30	+27.4
22 00	-36.8	48 00	-39.5	74 00	-34.2	100 00	-22.0	126 00	-5.4	152 00	+12.4	178 00	+27.6
22 30	-36.9	48 30	-39.5	74 30	-34.0	100 30	-21.7	126 30	-5.0	152 30	+12.7	178 30	+27.9
23 00	-37.0	49 00	-39.4	75 00	-33.9	101 00	-21.4	127 00	-4.7	153 00	+13.0	179 00	+28.1
23 30	-37.1	49 30	-39.4	75 30	-33.7	101 30	-21.1	127 30	-4.3	153 30	+13.4	179 30	+28.3
24 00	-37.3	50 00	-39.4	76 00	-33.5	102 00	-20.8	128 00	-4.0	154 00	+13.7	180 00	+28.6
24 30	-37.4	50 30	-39.3	76 30	-33.3	102 30	-20.5	128 30	-3.6	154 30	+14.0	180 30	+28.8
25 00	-37.5	51 00	-39.3	77 00	-33.1	103 00	-20.3	129 00	-3.3	155 00	+14.3	181 00	+29.1
25 30	-37.6	51 30	-39.2	77 30	-32.9	103 30	-20.0	129 30	-2.9	155 30	+14.7	181 30	+29.3
26 00	-37.7	52 00	-39.2	78 00	-32.7	104 00	-19.7	130 00	-2.6	156 00	+15.0	182 00	+29.5

DETERMINACIÓN DE LA LATITUD
POR LA OBSERVACIÓN DE UNA ALTURA DE LA POLAR, 2018

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TABLA I

h.L.Υ	Corr.	h.L.Υ	Corr.	h.L.Υ	Corr.	h.L.Υ	Corr.	h.L.Υ	Corr.	h.L.Υ	Corr.	h.L.Υ	Corr.
° /		° /		° /		° /		° /		° /		° /	
182 00	+29.5	208 00	+38.1	234 00	+39.0	260 00	+31.9	286 00	+18.4	312 00	+1.2	338 00	-16.2
182 30	+29.8	208 30	+38.2	234 30	+38.9	260 30	+31.7	286 30	+18.1	312 30	+0.9	338 30	-16.6
183 00	+30.0	209 00	+38.3	235 00	+38.8	261 00	+31.5	287 00	+17.8	313 00	+0.5	339 00	-16.9
183 30	+30.2	209 30	+38.4	235 30	+38.8	261 30	+31.3	287 30	+17.5	313 30	+0.2	339 30	-17.2
184 00	+30.4	210 00	+38.5	236 00	+38.7	262 00	+31.1	288 00	+17.2	314 00	-0.2	340 00	-17.5
184 30	+30.6	210 30	+38.5	236 30	+38.6	262 30	+30.9	288 30	+16.9	314 30	-0.5	340 30	-17.8
185 00	+30.9	211 00	+38.6	237 00	+38.5	263 00	+30.7	289 00	+16.6	315 00	-0.9	341 00	-18.1
185 30	+31.1	211 30	+38.7	237 30	+38.5	263 30	+30.4	289 30	+16.3	315 30	-1.2	341 30	-18.4
186 00	+31.3	212 00	+38.8	238 00	+38.4	264 00	+30.2	290 00	+16.0	316 00	-1.5	342 00	-18.7
186 30	+31.5	212 30	+38.8	238 30	+38.3	264 30	+30.0	290 30	+15.6	316 30	-1.9	342 30	-19.0
187 00	+31.7	213 00	+38.9	239 00	+38.2	265 00	+29.8	291 00	+15.3	317 00	-2.2	343 00	-19.3
187 30	+31.9	213 30	+39.0	239 30	+38.1	265 30	+29.5	291 30	+15.0	317 30	-2.6	343 30	-19.6
188 00	+32.1	214 00	+39.0	240 00	+38.0	266 00	+29.3	292 00	+14.7	318 00	-2.9	344 00	-19.9
188 30	+32.3	214 30	+39.1	240 30	+37.9	266 30	+29.1	292 30	+14.4	318 30	-3.3	344 30	-20.2
189 00	+32.5	215 00	+39.1	241 00	+37.8	267 00	+28.8	293 00	+14.0	319 00	-3.6	345 00	-20.5
189 30	+32.7	215 30	+39.2	241 30	+37.7	267 30	+28.6	293 30	+13.7	319 30	-4.0	345 30	-20.8
190 00	+32.9	216 00	+39.2	242 00	+37.6	268 00	+28.4	294 00	+13.4	320 00	-4.3	346 00	-21.1
190 30	+33.1	216 30	+39.3	242 30	+37.5	268 30	+28.1	294 30	+13.1	320 30	-4.6	346 30	-21.4
191 00	+33.3	217 00	+39.3	243 00	+37.4	269 00	+27.9	295 00	+12.7	321 00	-5.0	347 00	-21.7
191 30	+33.5	217 30	+39.4	243 30	+37.3	269 30	+27.6	295 30	+12.4	321 30	-5.3	347 30	-22.0
192 00	+33.7	218 00	+39.4	244 00	+37.1	270 00	+27.4	296 00	+12.1	322 00	-5.7	348 00	-22.3
192 30	+33.8	218 30	+39.4	244 30	+37.0	270 30	+27.1	296 30	+11.8	322 30	-6.0	348 30	-22.6
193 00	+34.0	219 00	+39.5	245 00	+36.9	271 00	+26.9	297 00	+11.4	323 00	-6.4	349 00	-22.8
193 30	+34.2	219 30	+39.5	245 30	+36.8	271 30	+26.6	297 30	+11.1	323 30	-6.7	349 30	-23.1
194 00	+34.4	220 00	+39.5	246 00	+36.6	272 00	+26.4	298 00	+10.8	324 00	-7.0	350 00	-23.4
194 30	+34.5	220 30	+39.5	246 30	+36.5	272 30	+26.1	298 30	+10.4	324 30	-7.4	350 30	-23.7
195 00	+34.7	221 00	+39.5	247 00	+36.4	273 00	+25.9	299 00	+10.1	325 00	-7.7	351 00	-24.0
195 30	+34.9	221 30	+39.6	247 30	+36.2	273 30	+25.6	299 30	+9.8	325 30	-8.0	351 30	-24.2
196 00	+35.0	222 00	+39.6	248 00	+36.1	274 00	+25.3	300 00	+9.4	326 00	-8.4	352 00	-24.5
196 30	+35.2	222 30	+39.6	248 30	+36.0	274 30	+25.1	300 30	+9.1	326 30	-8.7	352 30	-24.8
197 00	+35.3	223 00	+39.6	249 00	+35.8	275 00	+24.8	301 00	+8.7	327 00	-9.1	353 00	-25.0
197 30	+35.5	223 30	+39.6	249 30	+35.7	275 30	+24.5	301 30	+8.4	327 30	-9.4	353 30	-25.3
198 00	+35.7	224 00	+39.6	250 00	+35.5	276 00	+24.2	302 00	+8.1	328 00	-9.7	354 00	-25.6
198 30	+35.8	224 30	+39.6	250 30	+35.4	276 30	+24.0	302 30	+7.7	328 30	-10.1	354 30	-25.8
199 00	+35.9	225 00	+39.6	251 00	+35.2	277 00	+23.7	303 00	+7.4	329 00	-10.4	355 00	-26.1
199 30	+36.1	225 30	+39.6	251 30	+35.0	277 30	+23.4	303 30	+7.1	329 30	-10.7	355 30	-26.4
200 00	+36.2	226 00	+39.6	252 00	+34.9	278 00	+23.1	304 00	+6.7	330 00	-11.1	356 00	-26.6
200 30	+36.4	226 30	+39.5	252 30	+34.7	278 30	+22.9	304 30	+6.4	330 30	-11.4	356 30	-26.9
201 00	+36.5	227 00	+39.5	253 00	+34.5	279 00	+22.6	305 00	+6.0	331 00	-11.7	357 00	-27.1
201 30	+36.6	227 30	+39.5	253 30	+34.4	279 30	+22.3	305 30	+5.7	331 30	-12.1	357 30	-27.4
202 00	+36.8	228 00	+39.5	254 00	+34.2	280 00	+22.0	306 00	+5.4	332 00	-12.4	358 00	-27.6
202 30	+36.9	228 30	+39.5	254 30	+34.0	280 30	+21.7	306 30	+5.0	332 30	-12.7	358 30	-27.9
203 00	+37.0	229 00	+39.4	255 00	+33.9	281 00	+21.4	307 00	+4.7	333 00	-13.0	359 00	-28.1
203 30	+37.1	229 30	+39.4	255 30	+33.7	281 30	+21.1	307 30	+4.3	333 30	-13.4	359 30	-28.3
204 00	+37.3	230 00	+39.4	256 00	+33.5	282 00	+20.8	308 00	+4.0	334 00	-13.7	360 00	-28.6
204 30	+37.4	230 30	+39.3	256 30	+33.3	282 30	+20.5	308 30	+3.6	334 30	-14.0		
205 00	+37.5	231 00	+39.3	257 00	+33.1	283 00	+20.3	309 00	+3.3	335 00	-14.3		
205 30	+37.6	231 30	+39.2	257 30	+32.9	283 30	+20.0	309 30	+2.9	335 30	-14.7		
206 00	+37.7	232 00	+39.2	258 00	+32.7	284 00	+19.7	310 00	+2.6	336 00	-15.0		
206 30	+37.8	232 30	+39.1	258 30	+32.5	284 30	+19.4	310 30	+2.3	336 30	-15.3		
207 00	+37.9	233 00	+39.1	259 00	+32.3	285 00	+19.1	311 00	+1.9	337 00	-15.6		
207 30	+38.0	233 30	+39.0	259 30	+32.1	285 30	+18.7	311 30	+1.6	337 30	-15.9		
208 00	+38.1	234 00	+39.0	260 00	+31.9	286 00	+18.4	312 00	+1.2	338 00	-16.2		

DETERMINACIÓN DE LA LATITUD
POR LA OBSERVACIÓN DE UNA ALTURA DE LA POLAR, 2018

TABLA II

(SIEMPRE POSITIVA)

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

TABLA III

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

Dic 32 corresponde al 1 de enero del año siguiente

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

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

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

**CORRECCIONES PARA OBTENER LA ALTURA VERDADERA
DEL SOL (LIMBO INFERIOR), PLANETA O ESTRELLA, 2018**

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TABLA A				TABLA B = SOL (LIMBO INFERIOR)									
Depresión del horizonte				Semidiámetro, refracción y paralaje								Correc. adicional (2018)	
Elevación m del obsdor. en metros	Corrección	Elevación m del obsdor. en metros	Corrección	Altura apte. o /	Co- rrec- ción	Altura apte. o /	Co- rrec- ción	Altura apte. o /	Co- rrec- ción	Altura apte. o /	Co- rrec- ción		
				o /	/	o /	/	o /	/	o /	/		
1.6	-2.3	12.7	-6.4	6 15	+8.2	8 45	+10.2	13 23	+12.2	25 59	+14.2	Ene 1	+0/3
1.7	-2.4	13.1	-6.5	6 21	+8.3	8 54	+10.3	13 44	+12.3	27 12	+14.3	Ene 22	+0/2
1.9	-2.5	13.6	-6.6	6 27	+8.4	9 05	+10.4	14 06	+12.4	28 32	+14.4	Feb 27	+0/1
2.0	-2.6	14.0	-6.7	6 33	+8.5	9 15	+10.5	14 29	+12.5	29 59	+14.5	Mar 22	0/0
2.2	-2.7	14.4	-6.8	6 40	+8.6	9 26	+10.6	14 53	+12.6	31 34	+14.6	Abr 13	-0/1
2.3	-2.8	14.8	-6.9	6 46	+8.7	9 37	+10.7	15 18	+12.7	33 19	+14.7	May 7	-0/2
2.5	-2.9	15.3	-7.0	6 53	+8.8	9 47	+10.8	15 45	+12.8	35 16	+14.8	Jun 12	-0/3
2.7	-3.0	15.7	-7.1	7 00	+8.9	10 00	+10.9	16 13	+12.9	37 25	+14.9	Jul 27	-0/2
2.9	-3.1	16.2	-7.2	7 06	+9.0	10 12	+11.0	16 43	+13.0	39 49	+15.0	Sep 2	-0/1
3.1	-3.2	16.6	-7.3	7 14	+9.1	10 25	+11.1	17 14	+13.1	42 30	+15.1	Sep 26	0/0
3.3	-3.3	17.1	-7.4	7 21	+9.2	10 38	+11.2	17 47	+13.2	45 30	+15.2	Oct 18	+0/1
3.5	-3.4	17.6	-7.5	7 28	+9.3	10 52	+11.3	18 23	+13.3	48 53	+15.3	Nov 10	+0/2
3.7	-3.5	18.0	-7.6	7 36	+9.4	11 06	+11.4	19 01	+13.4	52 43	+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	57 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	61 51	+15.6		
4.4	-3.8	19.5	-7.9	8 00	+9.7	11 52	+11.7	21 10	+13.7	67 16	+15.7		
4.7	-3.9	20.0	-8.0	8 08	+9.8	12 09	+11.8	21 59	+13.8	73 14	+15.8		
4.9	-4.0	20.5	-8.1	8 17	+9.9	12 26	+11.9	22 53	+13.9	79 42	+15.9		
5.2	-4.1	21.0	-8.2	8 26	+10.0	12 44	+12.0	23 50	+14.0	86 30	+16.0		
5.4	-4.2	21.5	-8.3	8 35	+10.1	13 03	+12.1	24 52	+14.1	90 00			
5.7	-4.3	22.1	-8.4	8 45	+10.2	13 23	+12.2	25 59					
6.0	-4.4	22.6	-8.5										
6.2	-4.5	23.1	-8.6										
6.5	-4.6	23.7	-8.7										
6.8	-4.7	24.2	-8.8										
7.1	-4.8	24.8	-8.9										
7.4	-4.9	25.4	-9.0										
7.7	-5.0	25.9	-9.1										
8.0	-5.1	26.5	-9.2										
8.4	-5.2	27.1	-9.3										
8.7	-5.3	27.7	-9.4										
9.0	-5.4	28.3	-9.5										
9.4	-5.5	28.9	-9.6										
9.7	-5.6	29.5	-9.7										
10.1	-5.7	30.1	-9.8										
10.4	-5.8	30.7	-9.9										
10.8	-5.9	31.3	-10.0										
11.2	-6.0	32.0	-10.1										
11.6	-6.1	32.6	-10.2										
11.9	-6.2	33.3	-10.3										
12.3	-6.3	33.9	-10.4										
12.7		34.6											

TABLA C = PLANETAS Y ESTRELLAS									
Refracción				Paralaje (2018)					
Altura apte.	Co- rrec- ción	Altura apte.	Co- rrec- ción	Fechas	Venus para cualquier altura	Marte Altura aparente			
o /	/	o /	/			< 30°	> 30° < 60°	> 60°	
6 30	-7.8	14 00	-3.8	Ene 1	+0/1	+0/1	+0/1	0/0	
6 40	-7.6	15 00	-3.6	Abr 12	+0/1	+0/1	+0/1	+0/1	
6 50	-7.5	16 00	-3.3	Abr 22	+0/1	+0/2	+0/1	+0/1	
7 00	-7.3	17 00	-3.1	May 20	+0/1	+0/2	+0/2	+0/1	
7 15	-7.1	18 00	-3.0	Jun 10	+0/1	+0/3	+0/2	+0/1	
7 30	-6.9	19 00	-2.8	Jul 10	+0/1	+0/3	+0/3	+0/1	
7 45	-6.7	20 00	-2.6	Jul 20	+0/1	+0/4	+0/3	+0/1	
8 00	-6.5	21 00	-2.5	Jul 23	+0/2	+0/4	+0/3	+0/1	
8 15	-6.3	22 00	-2.4	Ago 11	+0/2	+0/3	+0/3	+0/1	
8 30	-6.2	24 00	-2.2	Ago 21	+0/2	+0/3	+0/3	+0/1	
8 45	-6.0	26 00	-2.0	Sep 6	+0/3	+0/3	+0/2	+0/1	
9 00	-5.9	28 00	-1.8	Sep 23	+0/3	+0/2	+0/2	+0/1	
9 20	-5.7	32 00	-1.6	Sep 27	+0/4	+0/2	+0/2	+0/1	
9 40	-5.5	36 00	-1.3	Oct 14	+0/5	+0/2	+0/2	+0/1	
10 00	-5.3	40 00	-1.2	Oct 17	+0/5	+0/2	+0/1	+0/1	
10 30	-5.1	45 00	-1.0	Nov 9	+0/4	+0/2	+0/1	+0/1	
11 00	-4.8	50 00	-0.8	Nov 19	+0/4	+0/1	+0/1	+0/1	
11 30	-4.6	60 00	-0.6	Nov 26	+0/3	+0/1	+0/1	+0/1	
12 00	-4.5	70 00	-0.4	Nov 30	+0/3	+0/1	+0/1	0/0	
12 30	-4.3	80 00	-0.2	Dic 18	+0/2	+0/1	+0/1	0/0	
13 00	-4.1	90 00	0.0	Dic 31	+0/2	+0/1	+0/1	0/0	

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