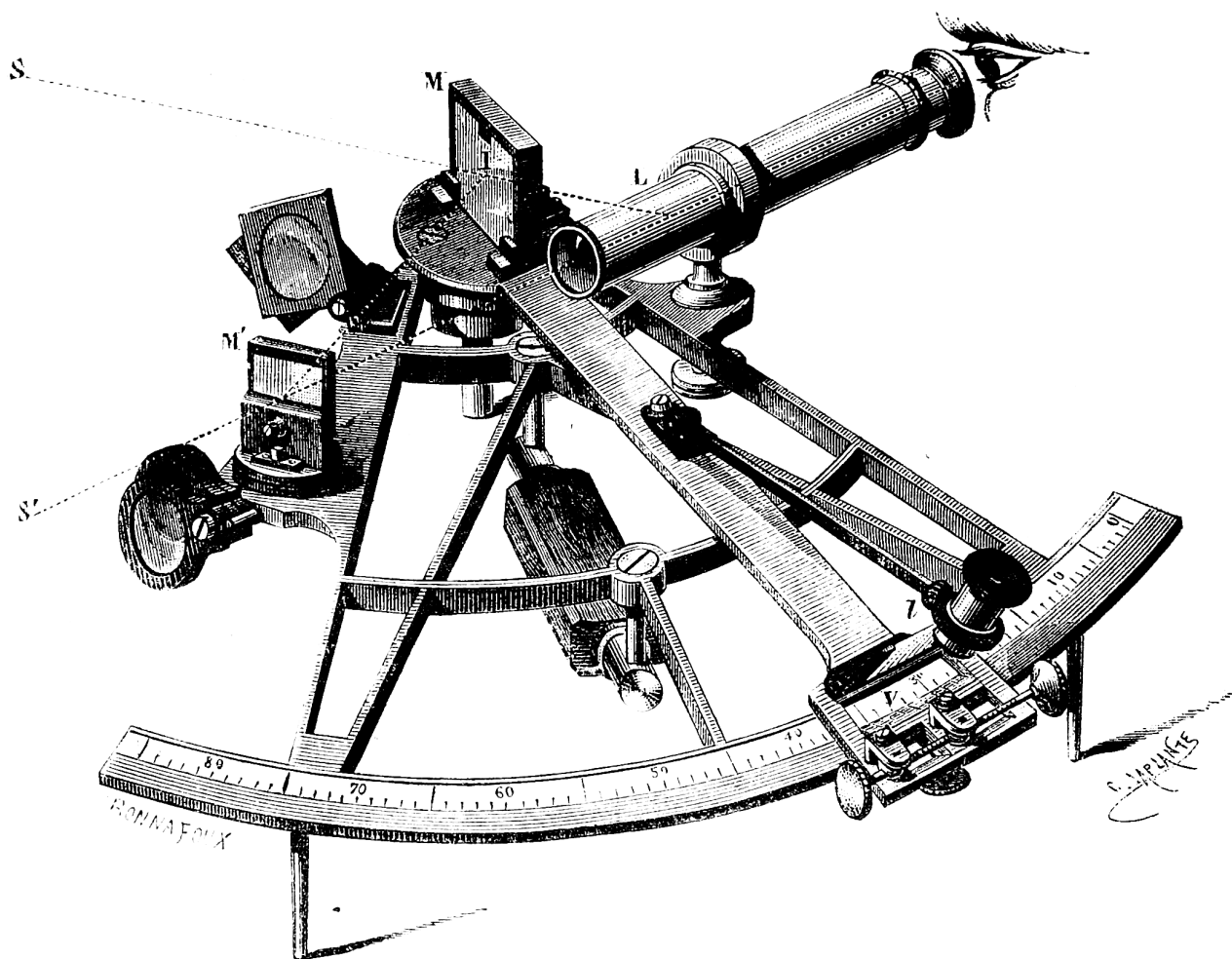




ALMANAQUE NÁUTICO PERSEIS 2000

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

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Introducción

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

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

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

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

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

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

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'3 PMG: 12 ^h 03 ^m 3				Edad: 24 ^d 1 PHE { SD: 14'9 PMG: 8 ^h 01 ^m R°: 44 ^m 4 ^h : 54'6 12 ^h : 54'5 20 ^h : 54'4													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	179	14.3	-23	04.3	243	17.7	-8	59.7	60 N	7 09	8 06	9 03	3 00	74	12 50	16		
1	194	14.0		04.1	257	51.3 ¹⁴⁶	-9	09.4 ⁹⁷	58	7 02	7 54	8 46	2 55	71	12 56	18		
2	209	13.7		03.9	272	24.9 ¹⁴⁶		19.2 ⁹⁸	56	6 56	44	31	50	69	13 02	20		
3	224	13.4		03.7	286	58.5 ¹⁴⁶		28.9 ⁹⁷	54	50	36	19	45	67	07	22		
4	239	13.1		03.5	301	32.1 ¹⁴⁶		38.5 ⁹⁶	52	44	28	8 08	41	66	11	24		
5	254	12.8	-23	03.3	316	05.6 ¹⁴⁵	-9	48.1 ⁹⁶	50	6 39	7 20	7 59	2 38	63	13 16	25		
6	269	12.5	-23	03.1	330	39.2 ¹⁴⁶	-9	57.7 ⁹⁶	45	6 28	7 05	7 38	2 30	60	13 25	28		
7	284	12.2		02.9	345	12.8 ¹⁴⁶	-10	07.2 ⁹⁵	40	17	6 51	22	23	58	32	31		
8	299	11.9		02.7	359	46.3 ¹⁴⁵		16.7 ⁹⁵	35	08	40	7 08	18	55	39	33		
9	314	11.6		02.5	14	19.8 ¹⁴⁵		26.1 ⁹⁴	30	6 00	29	6 56	13	53	44	36		
10	329	11.3		02.3	28	53.3 ¹⁴⁵		35.4 ⁹³	20	5 44	6 11	35	2 05	49	13 54	39		
11	344	11.0	-23	02.1	43	26.8 ¹⁴⁵	-10	44.8 ⁹⁴	10 N	5 28	5 54	6 17	1 57	47	14 03	42		
12	359	10.7	-23	01.9	58	00.3 ¹⁴⁵	-10	54.0 ⁹²	0	5 11	5 37	6 00	1 50	44	14 11	45		
13	14	10.4		01.7	72	33.8 ¹⁴⁵	-11	03.3 ⁹³	10 S	4 52	5 19	5 42	44	41	20	47		
14	29	10.1		01.5	87	07.2 ¹⁴⁴		12.4 ⁹¹	20	30	4 59	24	36	38	29	49		
15	44	09.8		01.3	101	40.6 ¹⁴⁴		21.5 ⁹¹	30	4 01	35	5 02	28	35	39	53		
16	59	09.5		01.1	116	14.0 ¹⁴⁴		30.6 ⁹¹	35	3 43	20	4 49	24	32	45	55		
17	74	09.2	-23	00.9	130	47.4 ¹⁴⁴	-11	39.6 ⁹⁰	40	3 20	4 02	4 34	1 18	31	14 51	58		
18	89	08.9	-23	00.7	145	20.8 ¹⁴⁴	-11	48.6 ⁹⁰	45	2 50	3 40	4 17	1 12	28	14 59	60		
19	104	08.6		00.5	159	54.2 ¹⁴⁴	-11	57.5 ⁸⁹	50	2 06	3 10	3 55	05	24	15 08	64		
20	119	08.4		00.3	174	27.5 ¹⁴³	-12	06.4 ⁸⁹	52	1 40	2 56	44	1 02	22	13	65		
21	134	08.1	-23	00.1	189	00.8 ¹⁴³		15.2 ⁸⁸	54	0 59	38	32	0 58	21	18	66		
22	149	07.8	-22	59.9	203	34.1 ¹⁴³		23.9 ⁸⁷	56	** **	2 17	18	54	19	23	68		
23	164	07.5		59.7	218	07.4 ¹⁴³		32.6 ⁸⁷	58	** **	1 49	3 02	49	17	29	71		
24	179	07.2	-22	59.5	232	40.6 ¹⁴²	-12	41.2 ⁸⁶	60 S	** **	1 04	2 42	0 44	15	15 36	73		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 17 ^h 17 ^m 3		Mag: -4.1 PMG: 9 ^h 18 ^m				Mag: +1.0 PMG: 15 ^h 20 ^m				Mag: -2.6 PMG: 18 ^h 53 ^m				Mag: +0.1 PMG: 19 ^h 52 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	99	57.9	220	41.5	-18	18.8	129	49.1	-13	19.3	76	06.9	+8	35.1	61	11.3	+12	36.9
1	115	00.3	235	40.9		19.5	144	49.7		18.6	91	09.2		35.1	76	13.8		36.9
2	130	02.8	250	40.2		20.2	159	50.4		17.9	106	11.6		35.2	91	16.3		36.9
3	145	05.2	265	39.6		20.9	174	51.0		17.2	121	14.0		35.2	106	18.8		36.9
4	160	07.7	280	39.0		21.5	189	51.6		16.5	136	16.4		35.3	121	21.4		36.9
5	175	10.2	295	38.3	-18	22.2	204	52.2	-13	15.8	151	18.7	+8	35.3	136	23.9	+12	36.9
6	190	12.6	310	37.7	-18	22.9	219	52.8	-13	15.1	166	21.1	+8	35.4	151	26.4	+12	36.9
7	205	15.1	325	37.1		23.6	234	53.4		14.4	181	23.5		35.4	166	28.9		36.9
8	220	17.6	340	36.4		24.2	249	54.0		13.7	196	25.9		35.5	181	31.4		36.9
9	235	20.0	355	35.8		24.9	264	54.6		13.1	211	28.2		35.5	196	33.9		36.9
10	250	22.5	10	35.1		25.6	279	55.2		12.3	226	30.6		35.6	211	36.5		36.9
11	265	25.0	25	34.5	-18	26.3	294	55.8	-13	11.6	241	33.0	+8	35.6	226	39.0	+12	36.9
12	280	27.4	40	33.9	-18	26.9	309	56.4	-13	10.9	256	35.4	+8	35.7	241	41.5	+12	36.9
13	295	29.9	55	33.2		27.6	324	57.0		10.2	271	37.7		35.7	256	44.0		36.9
14	310	32.4	70	32.6		28.3	339	57.6		09.5	286	40.1		35.8	271	46.5		36.9
15	325	34.8	85	31.9		28.9	354	58.2		08.8	301	42.5		35.8	286	49.0		36.9
16	340	37.3	100	31.3		29.6	9	58.8		08.1	316	44.8		35.9	301	51.6		36.9
17	355	39.7	115	30.6	-18	30.3	24	59.5	-13	07.4	331	47.2	+8	35.9	316	54.1	+12	36.9
18	10	42.2	130	30.0	-18	31.0	40	00.1	-13	06.7	346	49.6	+8	36.0	331	56.6	+12	36.9
19	25	44.7	145	29.4		31.6	55	00.7		06.0	1	52.0		36.0	346	59.1		36.9
20	40	47.1	160	28.7		32.3	70	01.3		05.3	16	54.3		36.1	2	01.6		36.9
21	55	49.6	175	28.1		32.9	85	01.9		04.6	31	56.7		36.1	17	04.1		36.9
22	70	52.1	190	27.4		33.6	100	02.5		03.9	46	59.1		36.2	32	06.7		36.8
23	85	54.5	205	26.8		34.3	115	03.1		03.2	62	01.4		36.2	47	09.2		36.8
24	100	57.0	220	26.1	-18	34.9	130	03.7	-13	02.5	77	03.8	+8	36.3	62	11.7	+12	36.8
Dif	—		-6		-7		+6		+7		+24		0		+25		0	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'3			Edad: 25 ^d 1 PHE	SD: 14'8				Final del crepúsculo		Salida de Luna		Puesta de Luna	
	PMG: 12 ^h 03 ^m 8				PMG: 8 ^h 45 ^m									
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	Rº	Hora	Rº
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	179	07.2	-22 59.5	232	40.6	-12 41.2		60 N	15 06	16 02	16 59	4 14 73	13 06 20	
1	194	06.9		247	13.9 ¹⁴³	49.8 ⁸⁶		58	22	14	17 06	4 06 70	14 23	23
2	209	06.6	59.1	261	47.1 ¹⁴²	-12 58.3 ⁸⁵		56	37	23	12	3 59 67	22 25	
3	224	06.3	58.9	276	20.3 ¹⁴²	-13 06.8 ⁸⁵		54	15 49	32	18	52 66	29 26	
4	239	06.0	58.7	290	53.4 ¹⁴¹	15.2 ⁸⁴		52	16 00	40	24	47 64	35 28	
5	254	05.7	-22 58.5	305	26.6 ¹⁴²	-13 23.6 ⁸⁴		50	16 09	16 47	17 29	3 41 63	13 41 29	
6	269	05.4	-22 58.2	319	59.7 ¹⁴¹	-13 31.9 ⁸³		45	16 29	17 03	17 40	3 30 60	13 53 32	
7	284	05.1	58.0	334	32.8 ¹⁴¹	40.1 ⁸²		40	16 46	16	50	21 57	14 03 35	
8	299	04.8	57.8	349	05.8 ¹⁴⁰	48.3 ⁸²		35	17 00	28	17 59	13 55	12 36	
9	314	04.5	57.6	3	38.9 ¹⁴¹	-13 56.4 ⁸¹		30	12	38	18 08	3 06 53	20 38	
10	329	04.2	57.4	18	11.9 ¹⁴⁰	-14 04.4 ⁸⁰		20	32	17 56	24	2 54 50	33 41	
11	344	03.9	-22 57.2	32	44.9 ¹⁴⁰	-14 12.4 ⁸⁰		10 N	17 50	18 13	18 39	2 44 47	14 45 43	
12	359	03.6	-22 57.0	47	17.9 ¹⁴⁰	-14 20.3 ⁷⁹		0	18 07	18 30	18 56	2 34 45	14 56 45	
13	14	03.3	56.7	61	50.8 ¹³⁹	28.2 ⁷⁹		10 S	25	18 48	19 15	25 42	15 07 47	
14	29	03.0	56.5	76	23.7 ¹³⁹	36.0 ⁷⁸		20	18 43	19 08	19 37	14 40	18 50	
15	44	02.8	56.3	90	56.6 ¹³⁹	43.7 ⁷⁷		30	19 05	32	20 05	2 03 36	32 53	
16	59	02.5	56.1	105	29.4 ¹³⁸	51.4 ⁷⁷		35	17	19 47	23	1 56 35	40 54	
17	74	02.2	-22 55.9	120	02.3 ¹³⁹	-14 59.0 ⁷⁶		40	19 32	20 05	20 46	1 49 32	15 49 56	
18	89	01.9	-22 55.6	134	35.1 ¹³⁸	-15 06.5 ⁷⁵		45	19 50	20 27	21 16	1 40 30	15 59 59	
19	104	01.6	55.4	149	07.8 ¹³⁷	14.0 ⁷⁵		50	20 12	20 55	21 59	29 27	16 12 61	
20	119	01.3	55.2	163	40.6 ¹³⁸	21.4 ⁷⁴		52	22	21 10	22 25	24 26	18 62	
21	134	01.0	55.0	178	13.3 ¹³⁷	28.8 ⁷⁴		54	34	27	23 04	19 24	24 64	
22	149	00.7	54.7	192	46.0 ¹³⁷	36.0 ⁷²		56	20 48	21 48	** **	13 22	31 67	
23	164	00.4	54.5	207	18.6 ¹³⁶	43.2 ⁷²		58	21 04	22 16	** **	1 06 21	40 68	
24	179	00.1	-22 54.3	221	51.2 ¹³⁶	-15 50.4 ⁷²		60 S	21 23	22 58	** **	0 59 18	16 49 71	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 17 ^h 13 ^m 4		Mag: -4.1 PMG: 9 ^h 19 ^m		Mag: +1.0 PMG: 15 ^h 19 ^m		Mag: -2.6 PMG: 18 ^h 49 ^m		Mag: +0.1 PMG: 19 ^h 48 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	100	57.0	220	26.1	130	03.7	77	03.8	62	11.7				
1	115	59.5	235	25.5	145	04.3	92	06.2	77	14.2				
2	131	01.9	250	24.8	160	04.9	107	08.5	92	16.7				
3	146	04.4	265	24.2	175	05.5	122	10.9	107	19.2				
4	161	06.9	280	23.5	190	06.2	137	13.3	122	21.7				
5	176	09.3	295	22.9	205	06.8	152	15.6	137	24.3				
6	191	11.8	310	22.2	220	07.4	167	18.0	152	26.8				
7	206	14.2	325	21.6	235	08.0	182	20.4	167	29.3				
8	221	16.7	340	20.9	250	08.6	197	22.7	182	31.8				
9	236	19.2	355	20.3	265	09.2	212	25.1	197	34.3				
10	251	21.6	10	19.6	280	09.8	227	27.5	212	36.8				
11	266	24.1	25	19.0	295	10.4	242	29.8	227	39.3				
12	281	26.6	40	18.3	310	11.0	257	32.2	242	41.8				
13	296	29.0	55	17.7	325	11.6	272	34.6	257	44.4				
14	311	31.5	70	17.0	340	12.3	287	36.9	272	46.9				
15	326	34.0	85	16.4	355	12.9	302	39.3	287	49.4				
16	341	36.4	100	15.7	10	13.5	317	41.7	302	51.9				
17	356	38.9	115	15.0	25	14.1	332	44.0	317	54.4				
18	11	41.3	130	14.4	40	14.7	347	46.4	332	56.9				
19	26	43.8	145	13.7	55	15.3	2	48.8	347	59.4				
20	41	46.3	160	13.1	70	15.9	17	51.1	3	01.9				
21	56	48.7	175	12.4	85	16.5	32	53.5	18	04.4				
22	71	51.2	190	11.8	100	17.2	47	55.8	33	07.0				
23	86	53.7	205	11.1	115	17.8	62	58.2	48	09.5				
24	101	56.1	220	10.4	130	18.4	78	00.6	63	12.0				
Dif	—		-7	-7	+6	+7	+24	+1	+25	0				

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'3 PMG: 12 ^h 04 ^m 2				Edad: 26 ^d 1 PHE { 4 ^h : 54'1 12 ^h : 54'0 20 ^h : 54'0 PMG: 9 ^h 30 ^m R°: 46 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	179	00.1	-22	54.3	221	51.2	-15	50.4	60 N	7 09	8 05	9 02	5 27	69	13 26	26		
1	193	59.8		54.1	236	23.8 ¹³⁶	-15	57.4	70 58	7 02	7 54	8 45		16 66		37	28	
2	208	59.5		53.8	250	56.4 ¹³⁶	-16	04.4	70 56	6 55	44	31		5 06	65	47	30	
3	223	59.2		53.6	265	28.9 ¹³⁵		11.4	70 54	50	35	19		4 58	63	13 55	32	
4	238	59.0		53.4	280	01.4 ¹³⁵		18.2	68 52	44	27	8 08		51	61	14 03	33	
5	253	58.7	-22	53.1	294	33.9 ¹³⁵	-16	25.0	68 50	6 39	7 20	7 58		4 44	60	14 10	35	
6	268	58.4	-22	52.9	309	06.3 ¹³⁴	-16	31.7	67 45	6 28	7 05	7 38		4 30	57	14 25	37	
7	283	58.1		52.7	323	38.8 ¹³⁵		38.4	67 40	18	6 52	22		18	56		38 38	
8	298	57.8		52.5	338	11.1 ¹³³		44.9	65 35	09	40	7 08		4 08	54		48 40	
9	313	57.5		52.2	352	43.5 ¹³⁴		51.4	65 30	6 00	30	6 56		3 59	53		14 58 41	
10	328	57.2		52.0	7	15.8 ¹³³	-16	57.8	64 20	5 44	6 12	36		44	50		15 14 43	
11	343	56.9	-22	51.7	21	48.1 ¹³³	-17	04.2	64 10 N	5 28	5 55	6 18		3 31	48		15 28 45	
12	358	56.6	-22	51.5	36	20.3 ¹³²	-17	10.5	63 0	5 12	5 38	6 00		3 19	46		15 41 47	
13	13	56.3		51.3	50	52.6 ¹³³		16.7	62 10 S	4 53	20	5 43		3 07	44		15 54 49	
14	28	56.0		51.0	65	24.8 ¹³²		22.8	61 20	31	5 00	25		2 54	42		16 08 51	
15	43	55.8		50.8	79	56.9 ¹³¹		28.8	60 30	4 03	4 36	5 03		39	40		25 52	
16	58	55.5		50.6	94	29.1 ¹³²		34.8	60 35	3 45	21	4 51		31	38		34 54	
17	73	55.2	-22	50.3	109	01.2 ¹³¹	-17	40.7	59 40	3 22	4 03	4 36		2 21	37		16 45 55	
18	88	54.9	-22	50.1	123	33.2 ¹³⁰	-17	46.5	58 45	2 53	3 42	4 19		2 10	34		16 58 56	
19	103	54.6		49.8	138	05.3 ¹³¹		52.2	57 50	2 09	3 13	3 57		1 56	32		17 13 59	
20	118	54.3		49.6	152	37.3 ¹³⁰	-17	57.9	57 52	1 44	2 58	46		50	30		20 60	
21	133	54.0		49.4	167	09.2 ¹²⁹	-18	03.5	56 54	1 04	41	34		43	29		28 62	
22	148	53.7		49.1	181	41.2 ¹³⁰		09.0	55 56	** **	2 20	21		35	28		38 62	
23	163	53.4		48.9	196	13.1 ¹²⁹		14.4	54 58	** **	1 53	3 05		27	25		17 48 64	
24	178	53.2	-22	48.6	210	45.0 ¹²⁹	-18	19.7	53 60 S	** **	1 10	2 45		1 17	23		18 00 66	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 17 ^h 09 ^m 4		Mag: -4.1 PMG: 9 ^h 20 ^m		Mag: +1.0 PMG: 15 ^h 18 ^m		Mag: -2.6 PMG: 18 ^h 45 ^m		Mag: +0.2 PMG: 19 ^h 44 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	101	56.1	220	10.4	-18	50.6	130	18.4	-12	45.6	78	00.6	+8	37.5	63	12.0	+12	36.8
1	116	58.6	235	09.8		51.3	145	19.0		44.9	93	02.9		37.6	78	14.5		36.8
2	132	01.1	250	09.1		51.9	160	19.6		44.2	108	05.3		37.6	93	17.0		36.8
3	147	03.5	265	08.5		52.5	175	20.2		43.5	123	07.6		37.7	108	19.5		36.8
4	162	06.0	280	07.8		53.2	190	20.8		42.8	138	10.0		37.7	123	22.0		36.8
5	177	08.5	295	07.1	-18	53.8	205	21.4	-12	42.0	153	12.4	+8	37.8	138	24.5	+12	36.8
6	192	10.9	310	06.5	-18	54.5	220	22.1	-12	41.3	168	14.7	+8	37.8	153	27.0	+12	36.8
7	207	13.4	325	05.8		55.1	235	22.7		40.6	183	17.1		37.9	168	29.5		36.8
8	222	15.8	340	05.1		55.7	250	23.3		39.9	198	19.4		37.9	183	32.0		36.8
9	237	18.3	355	04.5		56.4	265	23.9		39.2	213	21.8		38.0	198	34.6		36.8
10	252	20.8	10	03.8		57.0	280	24.5		38.5	228	24.2		38.0	213	37.1		36.8
11	267	23.2	25	03.1	-18	57.6	295	25.1	-12	37.8	243	26.5	+8	38.1	228	39.6	+12	36.8
12	282	25.7	40	02.5	-18	58.3	310	25.8	-12	37.1	258	28.9	+8	38.2	243	42.1	+12	36.8
13	297	28.2	55	01.8		58.9	325	26.4		36.4	273	31.2		38.2	258	44.6		36.8
14	312	30.6	70	01.1	-18	59.5	340	27.0		35.7	288	33.6		38.3	273	47.1		36.8
15	327	33.1	85	00.5	-19	00.2	355	27.6		34.9	303	35.9		38.3	288	49.6		36.8
16	342	35.6	99	59.8		00.8	10	28.2		34.2	318	38.3		38.4	303	52.1		36.8
17	357	38.0	114	59.1	-19	01.4	25	28.8	-12	33.5	333	40.7	+8	38.4	318	54.6	+12	36.8
18	12	40.5	129	58.5	-19	02.1	40	29.4	-12	32.8	348	43.0	+8	38.5	333	57.1	+12	36.7
19	27	43.0	144	57.8		02.7	55	30.1		32.1	3	45.4		38.5	348	59.6		36.7
20	42	45.4	159	57.1		03.3	70	30.7		31.4	18	47.7		38.6	4	02.1		36.7
21	57	47.9	174	56.5		03.9	85	31.3		30.7	33	50.1		38.7	19	04.6		36.7
22	72	50.3	189	55.8		04.6	100	31.9		30.0	48	52.4		38.7	34	07.1		36.7
23	87	52.8	204	55.1		05.2	115	32.5		29.3	63	54.8		38.8	49	09.6		36.7
24	102	55.3	219	54.5	-19	05.8	130	33.1	-12	28.5	78	57.1	+8	38.8	64	12.2	+12	36.7
Dif	—		-7		-6		+6		+7		+24		+1		+25		0	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:3 PMG: 12 ^h 04 ^m 7			Edad: 27 ^d 1 PHE { 4 ^h : 54/0 12 ^h : 54/0 20 ^h : 54/0 PMG: 10 ^h 16 ^m Rº: 48 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	Rº	Hora
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m
0	178	53.2	-22	48.6	210	45.0	-18	19.7	60 N	15 09	16 05	17 01	6 36 63	13 52 34
1	193	52.9		48.4	225	16.8 ¹²⁸		25.0 ⁵³	58	25	16	08	22 62	14 05 37
2	208	52.6		48.1	239	48.6 ¹²⁸		30.1 ⁵¹	56	39	26	14	11 60	17 38
3	223	52.3		47.9	254	20.4 ¹²⁸		35.2 ⁵¹	54	15 51	34	20	6 01 59	27 39
4	238	52.0		47.6	268	52.2 ¹²⁸		40.2 ⁵⁰	52	16 02	42	26	5 52 58	36 40
5	253	51.7	-22	47.4	283	23.9 ¹²⁷	-18	45.2 ⁵⁰	50	16 11	16 49	17 31	5 44 57	14 45 40
6	268	51.4	-22	47.1	297	55.6 ¹²⁷	-18	50.0 ⁴⁸	45	16 31	17 05	17 42	5 27 56	15 02 42
7	283	51.1		46.9	312	27.2 ¹²⁶		54.8 ⁴⁸	40	16 47	18	17 52	14 53	16 43
8	298	50.9		46.6	326	58.9 ¹²⁷	-18	59.4 ⁴⁶	35	17 01	29	18 01	5 02 53	28 44
9	313	50.6		46.4	341	30.5 ¹²⁶	-19	04.0 ⁴⁶	30	13	39	09	4 52 51	39 44
10	328	50.3		46.1	356	02.0 ¹²⁵		08.5 ⁴⁵	20	34	17 57	25	34 50	15 57 46
11	343	50.0	-22	45.9	10	33.6 ¹²⁶	-19	12.9 ⁴⁴	10 N	17 52	18 14	18 40	4 19 49	16 13 47
12	358	49.7	-22	45.6	25	05.1 ¹²⁵	-19	17.3 ⁴⁴	0	18 08	18 31	18 57	4 05 47	16 28 48
13	13	49.4		45.4	39	36.6 ¹²⁵		21.5 ⁴²	10 S	25	18 48	19 15	3 51 46	43 48
14	28	49.1		45.1	54	08.0 ¹²⁴		25.7 ⁴²	20	18 44	19 08	19 37	36 44	16 59 49
15	43	48.9		44.8	68	39.5 ¹²⁵		29.7 ⁴⁰	30	19 05	32	20 05	19 43	17 17 51
16	58	48.6		44.6	83	10.9 ¹²⁴		33.7 ⁴⁰	35	18	19 47	23	3 09 42	28 51
17	73	48.3	-22	44.3	97	42.2 ¹²³	-19	37.6 ³⁹	40	19 32	20 05	20 46	2 58 40	17 40 52
18	88	48.0	-22	44.1	112	13.6 ¹²⁴	-19	41.4 ³⁸	45	19 50	20 26	21 15	2 44 39	17 54 54
19	103	47.7		43.8	126	44.9 ¹²³		45.1 ³⁷	50	20 11	20 55	21 58	28 37	18 12 55
20	118	47.4		43.5	141	16.2 ¹²³		48.8 ³⁷	52	22	21 09	22 23	20 37	20 55
21	133	47.1		43.3	155	47.4 ¹²²		52.3 ³⁵	54	33	26	22 59	12 35	30 55
22	148	46.9		43.0	170	18.7 ¹²³		55.8 ³⁵	56	20 47	21 47	** ** *	2 03 33	40 57
23	163	46.6		42.8	184	49.9 ¹²²	-19	59.1 ³³	58	21 03	22 13	** ** *	1 52 32	18 52 58
24	178	46.3	-22	42.5	199	21.1 ¹²²	-20	02.4 ³³	60 S	21 22	22 53	** ** *	1 40 30	19 06 59
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 17 ^h 05 ^m 5		Mag: -4.1 PMG: 9 ^h 21 ^m		Mag: +1.1 PMG: 15 ^h 17 ^m		Mag: -2.6 PMG: 18 ^h 41 ^m		Mag: +0.2 PMG: 19 ^h 40 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	102	55.3	219	54.5	130	33.1	78	57.1	64	12.2				
1	117	57.7	234	53.8	145	33.8	93	59.5	79	14.7				
2	133	00.2	249	53.1	160	34.4	109	01.8	94	17.2				
3	148	02.7	264	52.4	175	35.0	124	04.2	109	19.7				
4	163	05.1	279	51.8	190	35.6	139	06.5	124	22.2				
5	178	07.6	294	51.1	205	36.2	154	08.9	139	24.7				
6	193	10.1	309	50.4	220	36.8	169	11.2	154	27.2				
7	208	12.5	324	49.7	235	37.5	184	13.6	169	29.7				
8	223	15.0	339	49.1	250	38.1	199	15.9	184	32.2				
9	238	17.5	354	48.4	265	38.7	214	18.3	199	34.7				
10	253	19.9	9	47.7	280	39.3	229	20.6	214	37.2				
11	268	22.4	24	47.0	295	39.9	244	23.0	229	39.7				
12	283	24.8	39	46.3	310	40.6	259	25.3	244	42.2				
13	298	27.3	54	45.7	325	41.2	274	27.7	259	44.7				
14	313	29.8	69	45.0	340	41.8	289	30.0	274	47.2				
15	328	32.2	84	44.3	355	42.4	304	32.4	289	49.7				
16	343	34.7	99	43.6	10	43.0	319	34.7	304	52.2				
17	358	37.2	114	43.0	25	43.7	334	37.1	319	54.7				
18	13	39.6	129	42.3	40	44.3	349	39.4	334	57.2				
19	28	42.1	144	41.6	55	44.9	4	41.8	349	59.7				
20	43	44.6	159	40.9	70	45.5	19	44.1	5	02.2				
21	58	47.0	174	40.2	85	46.1	34	46.5	20	04.7				
22	73	49.5	189	39.5	100	46.8	49	48.8	35	07.2				
23	88	51.9	204	38.9	115	47.4	64	51.2	50	09.7				
24	103	54.4	219	38.2	130	48.0	79	53.5	65	12.2				
Dif	—		-7		-6		+23		+1					
					+6		+7		+25					
									0					

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna						
	SD: 16 ^h 3 PMG: 12 ^h 05 ^m 1			Edad: 28 ^d 1 PHE { SD: 14 ^h 7 PMG: 11 ^h 04 ^m															
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°				
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m	m			
0	178	46.3	-22	42.5	199	21.1	-20	02.4	32	60 N	7 08	8 04	9 00	7 39	54	14 26 46			
1	193	46.0		42.2	213	52.2 ¹²¹		05.6	30	58	7 01	7 53	8 44	24	53	42 46			
2	208	45.7		42.0	228	23.4 ¹²²		08.6	30	56	6 55	44	30	11	53	14 55 46			
3	223	45.4		41.7	242	54.5 ¹²¹		11.6	30	54	49	35	18	7 00	53	15 06 46			
4	238	45.2		41.4	257	25.5 ¹²⁰		14.5	29	52	44	27	8 07	6 50	52	16 47			
5	253	44.9	-22	41.2	271	56.6 ¹²¹	-20	17.3	28	50	6 39	7 20	7 58	6 41	52	15 25 47			
6	268	44.6	-22	40.9	286	27.6 ¹²⁰	-20	20.1	28	45	6 28	7 05	7 38	6 23	51	15 44 47			
7	283	44.3		40.6	300	58.7 ¹²¹		22.7	26	40	18	6 52	22	6 07	51	15 59 48			
8	298	44.0		40.4	315	29.6 ¹¹⁹		25.2	25	35	09	41	7 08	5 55	50	16 12 48			
9	313	43.7		40.1	330	00.6 ¹²⁰		27.7	25	30	6 01	30	6 57	43	51	23 48			
10	328	43.5		39.8	344	31.6 ¹²⁰		30.0	23	20	5 45	6 12	36	24	50	16 43 48			
11	343	43.2	-22	39.5	359	02.5 ¹¹⁹	-20	32.2	22	10 N	5 29	5 56	6 18	5 08	49	17 00 48			
12	358	42.9	-22	39.3	13	33.4 ¹¹⁹	-20	34.4	22	0	5 13	5 39	6 01	4 52	49	17 16 48			
13	13	42.6		39.0	28	04.3 ¹¹⁹		36.4	20	10 S	4 55	21	5 44	37	48	31 49			
14	28	42.3		38.7	42	35.1 ¹¹⁸		38.4	20	20	33	5 02	26	20	48	17 48 49			
15	43	42.0		38.4	57	06.0 ¹¹⁹		40.3	19	30	4 05	4 38	5 05	4 02	46	18 08 49			
16	58	41.8		38.2	71	36.8 ¹¹⁸		42.1	18	35	3 47	23	4 52	3 51	45	19 49			
17	73	41.5	-22	37.9	86	07.6 ¹¹⁸	-20	43.7	16	40	3 24	4 05	4 38	3 38	45	18 32 49			
18	88	41.2	-22	37.6	100	38.4 ¹¹⁸	-20	45.3	16	45	2 55	3 44	4 20	3 23	45	18 48 49			
19	103	40.9		37.3	115	09.2 ¹¹⁸		46.8	15	50	2 13	15	3 59	3 05	44	19 07 49			
20	118	40.6		37.0	129	39.9 ¹¹⁷		48.2	14	52	1 48	3 01	49	2 57	43	15 50			
21	133	40.4		36.8	144	10.6 ¹¹⁷		49.5	13	54	1 11	2 44	37	47	43	25 50			
22	148	40.1		36.5	158	41.4 ¹¹⁸		50.7	12	56	** ** *	2 24	23	36	42	37 49			
23	163	39.8		36.2	173	12.1 ¹¹⁷		51.8	11	58	** ** *	1 57	3 08	24	41	19 50 49			
24	178	39.5	-22	35.9	187	42.8 ¹¹⁷	-20	52.8	10	60 S	** ** *	1 17	2 49	2 10	40	20 05 49			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 17 ^h 01 ^m 6		Mag: -4.1 PMG: 9 ^h 22 ^m			Mag: +1.1 PMG: 15 ^h 16 ^m			Mag: -2.6 PMG: 18 ^h 38 ^m			Mag: +0.2 PMG: 19 ^h 36 ^m							
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec						
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	'			
0	103	54.4	219	38.2	-19	20.5	130	48.0	-12	11.4	79	53.5	+8	40.2	65	12.2	+12	36.8	
1	118	56.9	234	37.5		21.1	145	48.6		10.7	94	55.9		40.3	80	14.7		36.8	
2	133	59.3	249	36.8		21.7	160	49.2		09.9	109	58.2		40.3	95	17.2		36.8	
3	149	01.8	264	36.1		22.3	175	49.9		09.2	125	00.5		40.4	110	19.7		36.8	
4	164	04.3	279	35.4		22.9	190	50.5		08.5	140	02.9		40.5	125	22.2		36.8	
5	179	06.7	294	34.7	-19	23.5	205	51.1	-12	07.8	155	05.2	+8	40.5	140	24.7	+12	36.8	
6	194	09.2	309	34.1	-19	24.1	220	51.7	-12	07.1	170	07.6	+8	40.6	155	27.2	+12	36.8	
7	209	11.7	324	33.4		24.7	235	52.4		06.4	185	09.9		40.6	170	29.7		36.8	
8	224	14.1	339	32.7		25.3	250	53.0		05.6	200	12.3		40.7	185	32.2		36.8	
9	239	16.6	354	32.0		25.9	265	53.6		04.9	215	14.6		40.8	200	34.7		36.8	
10	254	19.1	9	31.3		26.5	280	54.2		04.2	230	16.9		40.8	215	37.2		36.8	
11	269	21.5	24	30.6	-19	27.1	295	54.8	-12	03.5	245	19.3	+8	40.9	230	39.7	+12	36.8	
12	284	24.0	39	29.9	-19	27.7	310	55.5	-12	02.8	260	21.6	+8	40.9	245	42.2	+12	36.8	
13	299	26.4	54	29.2		28.3	325	56.1		02.0	275	24.0		41.0	260	44.7		36.8	
14	314	28.9	69	28.6		28.9	340	56.7		01.3	290	26.3		41.1	275	47.2		36.8	
15	329	31.4	84	27.9		29.5	355	57.3	-12	00.6	305	28.7		41.1	290	49.7		36.8	
16	344	33.8	99	27.2		30.1	10	58.0	-11	59.9	320	31.0		41.2	305	52.2		36.8	
17	359	36.3	114	26.5	-19	30.7	25	58.6	-11	59.2	335	33.3	+8	41.3	320	54.7	+12	36.8	
18	14	38.8	129	25.8	-19	31.2	40	59.2	-11	58.4	350	35.7	+8	41.3	335	57.2	+12	36.8	
19	29	41.2	144	25.1		31.8	55	59.8		57.7	5	38.0		41.4	350	59.7		36.8	
20	44	43.7	159	24.4		32.4	71	00.5		57.0	20	40.4		41.4	6	02.2		36.8	
21	59	46.2	174	23.7		33.0	86	01.1		56.3	35	42.7		41.5	21	04.7		36.8	
22	74	48.6	189	23.0		33.6	101	01.7		55.6	50	45.0		41.6	36	07.2		36.8	
23	89	51.1	204	22.3		34.2	116	02.3		54.8	65	47.4		41.6	51	09.7		36.8	
24	104	53.6	219	21.6	-19	34.8	131	03.0	-11	54.1	80	49.7	+8	41.7	66	12.2	+12	36.8	
Dif	—		-7		-6		+6		+7		+23		+1		+25			0	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16:3 PMG: 12 ^h 05 ^m 6			Edad: 29 ^d 1 PHE { 4 ^h : 54:1 12 ^h : 54:1 20 ^h : 54:2 Rº: 49 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	Rº	Hora	Rº			
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	h m	h m	h m	h m		
0	178	39.5	-22	35.9	187	42.8	-20	52.8	60 N	15 12	16 08	17 04	8 33	44	15 12	57		
1	193	39.2		35.6	202	13.4 ¹¹⁶		53.7	58	28	19	10	17	45	28	55		
2	208	39.0		35.3	216	44.1 ¹¹⁷		54.5	56	42	28	17	8	04	45	55		
3	223	38.7		35.1	231	14.8 ¹¹⁷		55.2	54	15 54	37	22	7	53	45	55		
4	238	38.4		34.8	245	45.4 ¹¹⁶		55.8	52	16 04	44	28	42	46	16	03		
5	253	38.1	-22	34.5	260	16.0 ¹¹⁶	-20	56.3	50	16 14	16 52	17 33	7	33	46	53		
6	268	37.8	-22	34.2	274	46.6 ¹¹⁶	-20	56.7	45	16 33	17 07	17 44	7	14	47	53		
7	283	37.6		33.9	289	17.2 ¹¹⁶		57.0	40	16 49	20	17 53	6	58	47	52		
8	298	37.3		33.6	303	47.8 ¹¹⁶		57.2	35	17 03	31	18 02	45	47	17	00		
9	313	37.0		33.3	318	18.4 ¹¹⁶		57.3	30	15	41	10	34	47	11	51		
10	328	36.7		33.0	332	49.0 ¹¹⁶		57.4	20	35	17 59	26	6	14	48	50		
11	343	36.5	-22	32.8	347	19.6 ¹¹⁶	-20	57.3	10 N	17 53	18 15	18 41	5	57	48	50		
12	358	36.2	-22	32.5	1	50.1 ¹¹⁵	-20	57.1	0	18 09	18 32	18 58	5	41	48	49		
13	13	35.9		32.2	16	20.7 ¹¹⁶		56.8	10 S	26	18 49	19 16	25	49	20	48		
14	28	35.6		31.9	30	51.2 ¹¹⁵		56.4	20	18 44	19 09	19 38	5	08	49	47		
15	43	35.3		31.6	45	21.8 ¹¹⁶		56.0	30	19 05	33	20 05	4	48	50	46		
16	58	35.1		31.3	59	52.3 ¹¹⁵		55.4	35	18	19 47	23	36	50	19	08		
17	73	34.8	-22	31.0	74	22.8 ¹¹⁵	-20	54.7	40	19 32	20 04	20 45	4	23	50	45		
18	88	34.5	-22	30.7	88	53.3 ¹¹⁵	-20	53.9	45	19 49	20 26	21 14	4	08	50	43		
19	103	34.2		30.4	103	23.9 ¹¹⁶		53.1	50	20 11	20 54	21 56	3	49	50	44		
20	118	34.0		30.1	117	54.4 ¹¹⁵		52.1	52	21	21 08	22 20	40	50	20	05		
21	133	33.7		29.8	132	24.9 ¹¹⁵		51.0	54	32	24	22 55	30	50	15	41		
22	148	33.4		29.5	146	55.4 ¹¹⁵		49.9	56	20 46	21 45	** ** *	18	51	26	41		
23	163	33.1		29.2	161	25.9 ¹¹⁵		48.6	58	21 01	22 10	** ** *	3	05	51	40		
24	178	32.9	-22	28.9	175	56.4 ¹¹⁵	-20	47.2	60 S	21 20	22 48	** ** *	2	50	51	39		
UT	ARIES		VENUS			MARTE			JÚPITER				SATURNO					
	PMG: 16 ^h 57 ^m 6		Mag: -4.0 PMG: 9 ^h 23 ^m			Mag: +1.1 PMG: 15 ^h 15 ^m			Mag: -2.6 PMG: 18 ^h 34 ^m				Mag: +0.2 PMG: 19 ^h 32 ^m					
	hG ♈		hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec	hG ♅		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	
0	104	53.6	219	21.6	-19	34.8	131	03.0	-11	54.1	80	49.7	+8	41.7	66	12.2	+12	
1	119	56.0	234	20.9		35.3	146	03.6		53.4	95	52.0		41.8	81	14.7		
2	134	58.5	249	20.2		35.9	161	04.2		52.7	110	54.4		41.8	96	17.2		
3	150	00.9	264	19.5		36.5	176	04.8		51.9	125	56.7		41.9	111	19.7		
4	165	03.4	279	18.8		37.1	191	05.5		51.2	140	59.1		41.9	126	22.2		
5	180	05.9	294	18.1	-19	37.7	206	06.1	-11	50.5	156	01.4	+8	42.0	141	24.7	+12	
6	195	08.3	309	17.4	-19	38.2	221	06.7	-11	49.8	171	03.7	+8	42.1	156	27.2	+12	
7	210	10.8	324	16.7		38.8	236	07.3		49.1	186	06.1		42.1	171	29.7		
8	225	13.3	339	16.0		39.4	251	08.0		48.3	201	08.4		42.2	186	32.2		
9	240	15.7	354	15.3		40.0	266	08.6		47.6	216	10.7		42.3	201	34.7		
10	255	18.2	9	14.6		40.5	281	09.2		46.9	231	13.1		42.3	216	37.1		
11	270	20.7	24	13.9	-19	41.1	296	09.8	-11	46.2	246	15.4	+8	42.4	231	39.6	+12	
12	285	23.1	39	13.2	-19	41.7	311	10.5	-11	45.4	261	17.7	+8	42.4	246	42.1	+12	
13	300	25.6	54	12.5		42.2	326	11.1		44.7	276	20.1		42.5	261	44.6		
14	315	28.1	69	11.8		42.8	341	11.7		44.0	291	22.4		42.6	276	47.1		
15	330	30.5	84	11.1		43.4	356	12.3		43.3	306	24.7		42.6	291	49.6		
16	345	33.0	99	10.4		44.0	11	13.0		42.5	321	27.1		42.7	306	52.1		
17	0	35.4	114	09.7	-19	44.5	26	13.6	-11	41.8	336	29.4	+8	42.8	321	54.6	+12	
18	15	37.9	129	09.0	-19	45.1	41	14.2	-11	41.1	351	31.7	+8	42.8	336	57.1	+12	
19	30	40.4	144	08.3		45.7	56	14.9		40.4	6	34.1		42.9	351	59.6		
20	45	42.8	159	07.6		46.2	71	15.5		39.6	21	36.4		43.0	7	02.1		
21	60	45.3	174	06.9		46.8	86	16.1		38.9	36	38.7		43.0	22	04.6		
22	75	47.8	189	06.2		47.4	101	16.7		38.2	51	41.1		43.1	37	07.1		
23	90	50.2	204	05.5		47.9	116	17.4		37.5	66	43.4		43.2	52	09.6		
24	105	52.7	219	04.8	-19	48.5	131	18.0	-11	36.7	81	45.7	+8	43.2	67	12.0	+12	
Dif	—		-7		-6		+6		+7		+23		+1		+25		0	

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'3 PMG: 12 ^h 06 ^m 0				Edad: 0 ^d 2 PHE { SD: 14'8 PMG: 12 ^h 41 ^m R°: 49 ^m 4 ^h : 54'3 12 ^h : 54'3 20 ^h : 54'4													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	178	32.9	-22	28.9	175	56.4	-20	47.2	60 N	7 08	8 03	8 59	9 17	34	16 09	66		
1	193	32.6		28.6	190	26.9 ¹¹⁵		45.8 ¹⁴	58	7 01	7 52	43	9 02	35	23	65		
2	208	32.3		28.3	204	57.4 ¹¹⁵		44.2 ¹⁶	56	6 54	43	29	8 49	37	36	63		
3	223	32.0		28.0	219	28.0 ¹¹⁶		42.5 ¹⁷	54	49	34	17	38	38	47	6		
4	238	31.8		27.7	233	58.5 ¹¹⁵		40.8 ¹⁷	52	44	27	8 07	28	39	16 57	60		
5	253	31.5	-22	27.4	248	29.0 ¹¹⁵	-20	38.9 ¹⁹	50	6 39	7 20	7 58	8 19	40	17 05	60		
6	268	31.2	-22	27.1	262	59.5 ¹¹⁵	-20	37.0 ¹⁹	45	6 28	7 05	7 38	8 01	41	17 24	57		
7	283	30.9		26.8	277	30.0 ¹¹⁵		34.9 ²¹	40	18	6 52	22	7 45	43	39	55		
8	298	30.7		26.5	292	00.5 ¹¹⁵		32.8 ²¹	35	09	41	7 09	32	44	17 51	55		
9	313	30.4		26.1	306	31.1 ¹¹⁶		30.5 ²³	30	6 01	31	6 57	21	45	18 02	54		
10	328	30.1		25.8	321	01.6 ¹¹⁵		28.1 ²⁴	20	5 45	6 13	37	7 02	46	21	52		
11	343	29.8	-22	25.5	335	32.1 ¹¹⁵	-20	25.7 ²⁴	10 N	5 30	5 56	6 19	6 45	48	18 38	49		
12	358	29.6	-22	25.2	350	02.7 ¹¹⁶	-20	23.1 ²⁶	0	5 14	5 40	6 02	6 29	49	18 53	48		
13	13	29.3		24.9	4	33.2 ¹¹⁵		20.5 ²⁶	10 S	4 56	23	5 46	6 14	49	19 08	47		
14	28	29.0		24.6	19	03.8 ¹¹⁶		17.8 ²⁷	20	34	5 03	27	5 57	51	24	46		
15	43	28.8		24.3	33	34.4 ¹¹⁶		14.9 ²⁹	30	4 06	4 39	5 06	38	52	43	43		
16	58	28.5		24.0	48	04.9 ¹¹⁵		12.0 ²⁹	35	3 49	25	4 54	26	53	19 54	42		
17	73	28.2	-22	23.7	62	35.5 ¹¹⁶	-20	09.0 ³⁰	40	3 27	4 07	4 40	5 13	54	20 06	41		
18	88	27.9	-22	23.3	77	06.1 ¹¹⁶	-20	05.8 ³²	45	2 58	3 46	4 23	4 58	55	20 21	39		
19	103	27.7		23.0	91	36.7 ¹¹⁶	-20	02.6 ³²	50	2 16	18	4 01	39	57	39	37		
20	118	27.4		22.7	106	07.3 ¹¹⁶	-19	59.3 ³³	52	1 52	3 04	3 51	30	58	47	36		
21	133	27.1		22.4	120	37.9 ¹¹⁶		55.9 ³⁴	54	1 17	2 47	40	20	59	20 56	35		
22	148	26.9		22.1	135	08.6 ¹¹⁷		52.3 ³⁶	56	** **	27	26	4 09	59	21 07	33		
23	163	26.6		21.7	149	39.2 ¹¹⁶		48.7 ³⁶	58	** **	2 01	3 11	3 56	61	19	31		
24	178	26.3	-22	21.4	164	09.9 ¹¹⁷	-19	45.0 ³⁷	60 S	** **	1 24	2 52	3 41	62	21 33	29		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 16 ^h 53 ^m 7		Mag: -4.0 PMG: 9 ^h 24 ^m				Mag: +1.1 PMG: 15 ^h 14 ^m				Mag: -2.5 PMG: 18 ^h 30 ^m				Mag: +0.2 PMG: 19 ^h 28 ^m			
h	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
0	105	52.7	219	04.8	-19	48.5	131	18.0	-11	36.7	81	45.7	+8	43.2	67	12.0	+12	36.9
1	120	55.2	234	04.1		49.0	146	18.6		36.0	96	48.0		43.3	82	14.5		36.9
2	135	57.6	249	03.4		49.6	161	19.3		35.3	111	50.4		43.4	97	17.0		36.9
3	151	00.1	264	02.7		50.2	176	19.9		34.6	126	52.7		43.4	112	19.5		36.9
4	166	02.6	279	01.9		50.7	191	20.5		33.8	141	55.0		43.5	127	22.0		36.9
5	181	05.0	294	01.2	-19	51.3	206	21.1	-11	33.1	156	57.4	+8	43.6	142	24.5	+12	36.9
6	196	07.5	309	00.5	-19	51.8	221	21.8	-11	32.4	171	59.7	+8	43.6	157	27.0	+12	36.9
7	211	09.9	323	59.8		52.4	236	22.4		31.6	187	02.0		43.7	172	29.5		36.9
8	226	12.4	338	59.1		52.9	251	23.0		30.9	202	04.3		43.8	187	32.0		36.9
9	241	14.9	353	58.4		53.5	266	23.7		30.2	217	06.7		43.8	202	34.5		36.9
10	256	17.3	8	57.7		54.0	281	24.3		29.5	232	09.0		43.9	217	37.0		36.9
11	271	19.8	23	57.0	-19	54.6	296	24.9	-11	28.7	247	11.3	+8	44.0	232	39.4	+12	36.9
12	286	22.3	38	56.3	-19	55.1	311	25.6	-11	28.0	262	13.6	+8	44.0	247	41.9	+12	36.9
13	301	24.7	53	55.5		55.7	326	26.2		27.3	277	16.0		44.1	262	44.4		36.9
14	316	27.2	68	54.8		56.2	341	26.8		26.6	292	18.3		44.2	277	46.9		36.9
15	331	29.7	83	54.1		56.8	356	27.5		25.8	307	20.6		44.2	292	49.4		36.9
16	346	32.1	98	53.4		57.3	11	28.1		25.1	322	22.9		44.3	307	51.9		36.9
17	1	34.6	113	52.7	-19	57.9	26	28.7	-11	24.4	337	25.3	+8	44.4	322	54.4	+12	37.0
18	16	37.0	128	52.0	-19	58.4	41	29.3	-11	23.6	352	27.6	+8	44.4	337	56.9	+12	37.0
19	31	39.5	143	51.3		59.0	56	30.0		22.9	7	29.9		44.5	352	59.4		37.0
20	46	42.0	158	50.5	-19	59.5	71	30.6		22.2	22	32.2		44.6	8	01.8		37.0
21	61	44.4	173	49.8	-20	00.1	86	31.2		21.4	37	34.6		44.6	23	04.3		37.0
22	76	46.9	188	49.1		00.6	101	31.9		20.7	52	36.9		44.7	38	06.8		37.0
23	91	49.4	203	48.4		01.1	116	32.5		20.0	67	39.2		44.8	53	09.3		37.0
24	106	51.8	218	47.7	-20	01.7	131	33.1	-11	19.3	82	41.5	+8	44.8	68	11.8	+12	37.0
Dif	—		-7		-6		+6		+7		+23		+1		+25		0	

UT	SOL				● LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16:3 PMG: 12 ^h 06 ^m 5				Edad: 1 ^d 2 PHE { 4 ^h : 54 ^m 5 12 ^h : 54 ^m 6 20 ^h : 54 ^m 7 R°: 47 ^m													
	hG ☉		Dec		hG ☾		Dif				Civil		Náutico		Hora R°		Hora R°	
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	m	h m	m	h m	R°
0	178	26.3	-22	21.4	164	09.9	-19	45.0	60 N	15 16	16 11	17 06	9 51	25	17 15	72		
1	193	26.0		21.1	178	40.5 ¹¹⁶		41.2 ³⁸	58	32	22	13	37	28	28	70		
2	208	25.8		20.8	193	11.2 ¹¹⁷		37.3 ³⁹	56	45	31	19	26	30	39	68		
3	223	25.5		20.5	207	41.9 ¹¹⁷		33.4 ³⁹	54	15 57	39	25	16	32	48	66		
4	238	25.2		20.1	222	12.6 ¹¹⁷		29.3 ⁴¹	52	16 07	47	30	9 07	33	17 57	65		
5	253	25.0	-22	19.8	236	43.3 ¹¹⁷	-19	25.1 ⁴²	50	16 16	16 54	17 35	8 59	34	18 05	63		
6	268	24.7	-22	19.5	251	14.1 ¹¹⁸	-19	20.8 ⁴³	45	16 35	17 09	17 46	8 42	37	18 21	60		
7	283	24.4		19.2	265	44.8 ¹¹⁷		16.5 ⁴³	40	16 51	21	17 55	28	39	34	59		
8	298	24.2		18.8	280	15.6 ¹¹⁸		12.0 ⁴⁵	35	17 04	32	18 04	16	41	46	56		
9	313	23.9		18.5	294	46.4 ¹¹⁸		07.5 ⁴⁵	30	16	17 42	12	8 06	42	18 56	54		
10	328	23.6		18.2	309	17.2 ¹¹⁸	-19	02.8 ⁴⁷	20	36	18 00	27	7 48	44	19 13	52		
11	343	23.4	-22	17.9	323	48.0 ¹¹⁸	-18	58.1 ⁴⁷	10 N	17 54	18 16	18 42	7 33	46	19 27	50		
12	358	23.1	-22	17.5	338	18.8 ¹¹⁸	-18	53.3 ⁴⁸	0	18 10	18 33	18 59	7 18	48	19 41	48		
13	13	22.8		17.2	352	49.7 ¹¹⁹		48.4 ⁴⁹	10 S	27	18 50	19 16	7 03	50	19 55	45		
14	28	22.6		16.9	7	20.5 ¹¹⁸		43.3 ⁵¹	20	18 45	19 09	19 38	6 48	52	20 10	43		
15	43	22.3		16.5	21	51.4 ¹¹⁹		38.3 ⁵⁰	30	19 06	33	20 05	30	54	26	41		
16	58	22.0		16.2	36	22.3 ¹¹⁹		33.1 ⁵²	35	18	19 47	23	19	56	36	39		
17	73	21.8	-22	15.9	50	53.2 ¹¹⁹	-18	27.8 ⁵³	40	19 32	20 04	20 45	6 07	57	20 47	37		
18	88	21.5	-22	15.5	65	24.1 ¹¹⁹	-18	22.4 ⁵⁴	45	19 49	20 25	21 13	5 53	59	21 00	34		
19	103	21.2		15.2	79	55.1 ¹²⁰		17.0 ⁵⁴	50	20 10	20 53	21 54	36	61	16	31		
20	118	21.0		14.9	94	26.1 ¹²⁰		11.4 ⁵⁶	52	20	21 07	22 17	28	62	23	30		
21	133	20.7		14.5	108	57.1 ¹²⁰		05.8 ⁵⁶	54	31	23	22 50	19	64	31	29		
22	148	20.4		14.2	123	28.1 ¹²⁰	-18	00.1 ⁵⁷	56	44	21 42	** **	5 08	66	40	27		
23	163	20.2		13.9	137	59.1 ¹²⁰	-17	54.3 ⁵⁸	58	20 59	22 07	** **	4 57	67	21 50	25		
24	178	19.9	-22	13.5	152	30.2 ¹²¹	-17	48.4 ⁵⁹	60 S	21 17	22 43	** **	4 43	70	22 02	23		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 16 ^h 49 ^m 8		Mag: -4.0 PMG: 9 ^h 25 ^m				Mag: +1.1 PMG: 15 ^h 13 ^m				Mag: -2.5 PMG: 18 ^h 26 ^m				Mag: +0.2 PMG: 19 ^h 24 ^m			
h	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
0	106	51.8	218	47.7	-20	01.7	131	33.1	-11	19.3	82	41.5	+8	44.8	68	11.8	+12	37.0
1	121	54.3	233	47.0		02.2	146	33.8		18.5	97	43.9		44.9	83	14.3		37.0
2	136	56.8	248	46.2		02.8	161	34.4		17.8	112	46.2		45.0	98	16.8		37.0
3	151	59.2	263	45.5		03.3	176	35.0		17.1	127	48.5		45.0	113	19.3		37.0
4	167	01.7	278	44.8		03.8	191	35.7		16.3	142	50.8		45.1	128	21.7		37.0
5	182	04.2	293	44.1	-20	04.4	206	36.3	-11	15.6	157	53.1	+8	45.2	143	24.2	+12	37.0
6	197	06.6	308	43.4	-20	04.9	221	36.9	-11	14.9	172	55.5	+8	45.2	158	26.7	+12	37.0
7	212	09.1	323	42.6		05.4	236	37.6		14.1	187	57.8		45.3	173	29.2		37.0
8	227	11.5	338	41.9		06.0	251	38.2		13.4	203	00.1		45.4	188	31.7		37.0
9	242	14.0	353	41.2		06.5	266	38.8		12.7	218	02.4		45.4	203	34.2		37.0
10	257	16.5	8	40.5		07.0	281	39.5		11.9	233	04.7		45.5	218	36.7		37.0
11	272	18.9	23	39.7	-20	07.6	296	40.1	-11	11.2	248	07.1	+8	45.6	233	39.1	+12	37.1
12	287	21.4	38	39.0	-20	08.1	311	40.7	-11	10.5	263	09.4	+8	45.7	248	41.6	+12	37.1
13	302	23.9	53	38.3		08.6	326	41.4		09.7	278	11.7		45.7	263	44.1		37.1
14	317	26.3	68	37.6		09.1	341	42.0		09.0	293	14.0		45.8	278	46.6		37.1
15	332	28.8	83	36.8		09.7	356	42.7		08.3	308	16.3		45.9	293	49.1		37.1
16	347	31.3	98	36.1		10.2	11	43.3		07.6	323	18.6		45.9	308	51.6		37.1
17	2	33.7	113	35.4	-20	10.7	26	43.9	-11	06.8	338	21.0	+8	46.0	323	54.1	+12	37.1
18	17	36.2	128	34.7	-20	11.2	41	44.6	-11	06.1	353	23.3	+8	46.1	338	56.5	+12	37.1
19	32	38.7	143	33.9		11.8	56	45.2		05.4	8	25.6		46.1	353	59.0		37.1
20	47	41.1	158	33.2		12.3	71	45.8		04.6	23	27.9		46.2	9	01.5		37.1
21	62	43.6	173	32.5		12.8	86	46.5		03.9	38	30.2		46.3	24	04.0		37.1
22	77	46.0	188	31.8		13.3	101	47.1		03.2	53	32.5		46.4	39	06.5		37.1
23	92	48.5	203	31.0		13.8	116	47.7		02.4	68	34.9		46.4	54	09.0		37.1
24	107	51.0	218	30.3	-20	14.4	131	48.4	-11	01.7	83	37.2	+8	46.5	69	11.4	+12	37.1
Dif	—		-7		-5		+6		+7		+23		+1		+25			

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16 ^h 3 PMG: 12 ^h 06 ^m 9				Edad: 2 ^d 2 PHE { 4 ^h : 54 ^m 9 12 ^h : 55 ^m 0 20 ^h : 55 ^m 1 PMG: 14 ^h 17 ^m R°: 47 ^m															
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m		
0	178	19.9	-22	13.5	152	30.2	-17	48.4	60 N	7 06	8 02	8 56	10 16	20	18 27	77				
1	193	19.6		13.2	167	01.2 ¹²⁰		42.4	60	58	7 00	7 51	41	10 05	23	38	73			
2	208	19.4		12.8	181	32.3 ¹²¹		36.4	60	56	6 54	42	28	9 56	24	47	71			
3	223	19.1		12.5	196	03.4 ¹²¹		30.2	62	54	48	33	16	48 26	18 54	70				
4	238	18.8		12.2	210	34.5 ¹²¹		24.0	62	52	43	26	8 06	40 28	19 02	67				
5	253	18.6	-22	11.8	225	05.7 ¹²²	-17	17.7	63	50	6 38	7 19	7 57	9 33	30	19 08	66			
6	268	18.3	-22	11.5	239	36.9 ¹²²	-17	11.3	64	45	6 28	7 04	7 38	9 19	33	19 21	63			
7	283	18.1		11.1	254	08.1 ¹²²	-17	04.8	65	40	18	6 52	22	9 07	35	33	60			
8	298	17.8		10.8	268	39.3 ¹²²	-16	58.2	66	35	09	41	7 09	8 57	37	42	58			
9	313	17.5		10.4	283	10.5 ¹²²		51.6	66	30	6 01	31	6 57	48 39	19 50	56				
10	328	17.3		10.1	297	41.8 ¹²³		44.8	68	20	5 46	6 13	37	32 42	20 05	52				
11	343	17.0	-22	09.8	312	13.0 ¹²²	-16	38.0	68	10 N	5 31	5 57	6 20	8 19	44	20 17	50			
12	358	16.7	-22	09.4	326	44.3 ¹²³	-16	31.1	69	0	5 15	5 41	6 03	8 06	47	20 29	46			
13	13	16.5		09.1	341	15.6 ¹²³		24.1	70	10 S	4 57	24	5 47	7 53	50	40	44			
14	28	16.2		08.7	355	47.0 ¹²⁴		17.1	70	20	36	5 04	29	40 52	20 53	41				
15	43	16.0		08.4	10	18.3 ¹²³		09.9	72	30	4 08	4 41	5 08	24 55	21 07	37				
16	58	15.7		08.0	24	49.7 ¹²⁴	-16	02.7	72	35	3 51	27	4 56	15 57	15	35				
17	73	15.4	-22	07.7	39	21.1 ¹²⁴	-15	55.4	73	40	3 29	4 09	4 42	7 04	60	21 24	33			
18	88	15.2	-22	07.3	53	52.5 ¹²⁴	-15	48.1	73	45	3 01	3 48	4 25	6 52	62	21 34	31			
19	103	14.9		07.0	68	24.0 ¹²⁵		40.6	75	50	2 20	21	4 04	37 65	47	28				
20	118	14.7		06.6	82	55.4 ¹²⁴		33.1	75	52	1 56	3 07	3 54	30 67	21 53	26				
21	133	14.4		06.2	97	26.9 ¹²⁵		25.5	76	54	1 24	2 51	43	23 67	22 00	24				
22	148	14.1		05.9	111	58.4 ¹²⁵		17.8	77	56	** ** *	31	30	14 70	07	23				
23	163	13.9		05.5	126	29.9 ¹²⁵		10.1	77	58	** ** *	2 06	3 14	6 04	72	15	21			
24	178	13.6	-22	05.2	141	01.5 ¹²⁶	-15	02.2	79	60 S	** ** *	1 31	2 56	5 53	74	22 25	17			
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 16 ^h 45 ^m 8				Mag: -4.0 PMG: 9 ^h 26 ^m				Mag: +1.1 PMG: 15 ^h 12 ^m				Mag: -2.5 PMG: 18 ^h 23 ^m				Mag: +0.2 PMG: 19 ^h 20 ^m			
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	107	51.0	218	30.3	-20	14.4			131	48.4	-11	01.7	83	37.2	+8	46.5	69	11.4	+12	37.1
1	122	53.4	233	29.6		14.9			146	49.0		00.9	98	39.5		46.6	84	13.9		37.1
2	137	55.9	248	28.8		15.4			161	49.6	-11	00.2	113	41.8		46.6	99	16.4		37.2
3	152	58.4	263	28.1		15.9			176	50.3	-10	59.5	128	44.1		46.7	114	18.9		37.2
4	168	00.8	278	27.4		16.4			191	50.9		58.7	143	46.4		46.8	129	21.4		37.2
5	183	03.3	293	26.6	-20	16.9			206	51.6	-10	58.0	158	48.7	+8	46.9	144	23.8	+12	37.2
6	198	05.8	308	25.9	-20	17.5			221	52.2	-10	57.3	173	51.0	+8	46.9	159	26.3	+12	37.2
7	213	08.2	323	25.2		18.0			236	52.8		56.5	188	53.4		47.0	174	28.8		37.2
8	228	10.7	338	24.5		18.5			251	53.5		55.8	203	55.7		47.1	189	31.3		37.2
9	243	13.2	353	23.7		19.0			266	54.1		55.1	218	58.0		47.1	204	33.8		37.2
10	258	15.6	8	23.0		19.5			281	54.7		54.3	234	00.3		47.2	219	36.3		37.2
11	273	18.1	23	22.3	-20	20.0			296	55.4	-10	53.6	249	02.6	+8	47.3	234	38.7	+12	37.2
12	288	20.5	38	21.5	-20	20.5			311	56.0	-10	52.9	264	04.9	+8	47.4	249	41.2	+12	37.2
13	303	23.0	53	20.8		21.0			326	56.7		52.1	279	07.2		47.4	264	43.7		37.2
14	318	25.5	68	20.0		21.5			341	57.3		51.4	294	09.5		47.5	279	46.2		37.2
15	333	27.9	83	19.3		22.0			356	57.9		50.7	309	11.8		47.6	294	48.7		37.2
16	348	30.4	98	18.6		22.5			11	58.6		49.9	324	14.2		47.7	309	51.1		37.3
17	3	32.9	113	17.8	-20	23.0			26	59.2	-10	49.2	339	16.5	+8	47.7	324	53.6	+12	37.3
18	18	35.3	128	17.1	-20	23.5			41	59.9	-10	48.4	354	18.8	+8	47.8	339	56.1	+12	37.3
19	33	37.8	143	16.4		24.0			57	00.5		47.7	9	21.1		47.9	354	58.6		37.3
20	48	40.3	158	15.6		24.5			72	01.1		47.0	24	23.4		48.0	10	01.1		37.3
21	63	42.7	173	14.9		25.0			87	01.8		46.2	39	25.7		48.0	25	03.5		37.3
22	78	45.2	188	14.2		25.5			102	02.4		45.5	54	28.0		48.1	40	06.0		37.3
23	93	47.6	203	13.4		26.0			117	03.1		44.8	69	30.3		48.2	55	08.5		37.3
24	108	50.1	218	12.7	-20	26.5			132	03.7	-10	44.0	84	32.6	+8	48.2	70	11.0	+12	37.3
Dif	—		-7		-5		+6		+7		+23		+1		+25		0			

UT	SOL				● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16/3 PMG: 12 ^h 07 ^m 3				Edad: 3 ^d 2 PHE { 4 ^h : 55/3 12 ^h : 55/4 20 ^h : 55/6 PMG: 15 ^h 04 ^m R°: 47 ^m															
	hG ☉	Dec			hG ☾	Dif					Civil	Náutico	Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m				
0	178	13.6	-22	05.2	141	01.5	-15	02.2	60 N	15 20	16 14	17 09	10 36 16	19 44 79						
1	193	13.4		04.8	155	33.0 ¹²⁵	-14	54.3 ⁷⁹	58	35	25	16	28 18	51 76						
2	208	13.1		04.5	170	04.6 ¹²⁶		46.4 ⁷⁹	56	15 48	34	22	20 21	19 58 74						
3	223	12.8		04.1	184	36.2 ¹²⁶		38.3 ⁸¹	54	16 00	42	27	14 23	20 04 71						
4	238	12.6		03.7	199	07.9 ¹²⁷		30.2 ⁸¹	52	10	49	32	08 25	09 70						
5	253	12.3	-22	03.4	213	39.5 ¹²⁶	-14	22.0 ⁸²	50	16 19	16 56	17 37	10 03 26	20 14 68						
6	268	12.1	-22	03.0	228	11.2 ¹²⁷	-14	13.8 ⁸²	45	16 38	17 11	17 48	9 52 29	20 24 64						
7	283	11.8		02.7	242	42.8 ¹²⁶	-14	05.4 ⁸⁴	40	16 53	23	17 57	42 32	33 61						
8	298	11.5		02.3	257	14.5 ¹²⁷	-13	57.0 ⁸⁴	35	17 06	34	18 05	34 35	40 58						
9	313	11.3		01.9	271	46.3 ¹²⁸		48.5 ⁸⁵	30	18	17 44	13	27 37	46 57						
10	328	11.0		01.6	286	18.0 ¹²⁷		40.0 ⁸⁵	20	37	18 01	28	14 41	20 57 53						
11	343	10.8	-22	01.2	300	49.8 ¹²⁸	-13	31.4 ⁸⁶	10 N	17 55	18 17	18 43	9 03 44	21 07 49						
12	358	10.5	-22	00.8	315	21.5 ¹²⁷	-13	22.7 ⁸⁷	0	18 11	18 33	18 59	8 53 47	21 15 47						
13	13	10.3		00.5	329	53.3 ¹²⁸		14.0 ⁸⁷	10 S	27	18 50	19 17	43 49	24 43						
14	28	10.0	-22	00.1	344	25.1 ¹²⁸	-13	05.2 ⁸⁸	20	18 45	19 09	19 38	32 52	34 39						
15	43	09.8	-21	59.7	358	57.0 ¹²⁹	-12	56.3 ⁸⁹	30	19 06	33	20 05	19 56	44 36						
16	58	09.5		59.4	13	28.8 ¹²⁸		47.3 ⁹⁰	35	18	19 47	23	12 58	50 34						
17	73	09.2	-21	59.0	28	00.7 ¹²⁹	-12	38.3 ⁹⁰	40	19 32	20 04	20 44	8 04 60	21 57 32						
18	88	09.0	-21	58.6	42	32.5 ¹²⁸	-12	29.3 ⁹⁰	45	19 48	20 24	21 12	7 54 63	22 05 29						
19	103	08.7		58.3	57	04.4 ¹²⁹		20.1 ⁹²	50	20 09	20 51	21 51	42 67	15 25						
20	118	08.5		57.9	71	36.3 ¹²⁹		10.9 ⁹²	52	19	21 05	22 14	37 68	19 24						
21	133	08.2		57.5	86	08.2 ¹²⁹	-12	01.7 ⁹²	54	30	21	22 45	30 71	24 22						
22	148	08.0		57.1	100	40.2 ¹³⁰	-11	52.4 ⁹³	56	42	21 40	** **	24 72	30 19						
23	163	07.7		56.8	115	12.1 ¹²⁹		43.0 ⁹⁴	58	20 57	22 04	** **	16 75	36 17						
24	178	07.5	-21	56.4	129	44.1 ¹³⁰	-11	33.5 ⁹⁵	60 S	21 15	22 37	** **	7 07 78	22 42 15						
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 16 ^h 41 ^m 9			Mag: -4.0 PMG: 9 ^h 28 ^m			Mag: +1.1 PMG: 15 ^h 11 ^m			Mag: -2.5 PMG: 18 ^h 19 ^m			Mag: +0.2 PMG: 19 ^h 16 ^m							
	hG ♈			hG ♀			hG ♂			hG ♃			hG ♄							
h	°	'		°	'		°	'		°	'		°	'		°	'			
0	108	50.1		218	12.7	-20	132	03.7	-10	84	32.6	+8	70	11.0	+12	37.3				
1	123	52.6		233	11.9		147	04.3		99	34.9		85	13.4		37.3				
2	138	55.0		248	11.2		162	05.0		114	37.2		100	15.9		37.3				
3	153	57.5		263	10.5		177	05.6		129	39.5		115	18.4		37.3				
4	169	00.0		278	09.7		192	06.3		144	41.8		130	20.9		37.4				
5	184	02.4		293	09.0	-20	207	06.9	-10	159	44.2	+8	145	23.4	+12	37.4				
6	199	04.9		308	08.2	-20	222	07.5	-10	174	46.5	+8	160	25.8	+12	37.4				
7	214	07.4		323	07.5		237	08.2		189	48.8		175	28.3		37.4				
8	229	09.8		338	06.7		252	08.8		204	51.1		190	30.8		37.4				
9	244	12.3		353	06.0		267	09.5		219	53.4		205	33.3		37.4				
10	259	14.8		8	05.3		282	10.1		234	55.7		220	35.7		37.4				
11	274	17.2		23	04.5	-20	297	10.7	-10	249	58.0	+8	235	38.2	+12	37.4				
12	289	19.7		38	03.8	-20	312	11.4	-10	265	00.3	+8	250	40.7	+12	37.4				
13	304	22.1		53	03.0		327	12.0		280	02.6		265	43.2		37.4				
14	319	24.6		68	02.3		342	12.7		295	04.9		280	45.6		37.4				
15	334	27.1		83	01.5		357	13.3		310	07.2		295	48.1		37.5				
16	349	29.5		98	00.8		12	14.0		325	09.5		310	50.6		37.5				
17	4	32.0		113	00.0	-20	27	14.6	-10	340	11.8	+8	325	53.1	+12	37.5				
18	19	34.5		127	59.3	-20	42	15.2	-10	355	14.1	+8	340	55.5	+12	37.5				
19	34	36.9		142	58.5		57	15.9		10	16.4		355	58.0		37.5				
20	49	39.4		157	57.8		72	16.5		25	18.7		11	00.5		37.5				
21	64	41.9		172	57.0		87	17.2		40	21.0		26	03.0		37.5				
22	79	44.3		187	56.3		102	17.8		55	23.3		41	05.4		37.5				
23	94	46.8		202	55.5		117	18.5		70	25.6		56	07.9		37.5				
24	109	49.3		217	54.8	-20	132	19.1	-10	85	27.9	+8	71	10.4	+12	37.5				
Dif	—			-7			+6			+7			+23			+1			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 7				Edad: 4 ^d 2 PHE { SD: 15 ^h 51 ^m R°: 46 ^m 4 ^h : 55 ^m 8 12 ^h : 56 ^m 0 20 ^h : 56 ^m 1													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	178	07.5	-21	56.4	129	44.1	-11	33.5	60 N	7 05	8 00	8 54	10 52	14	21 03	80		
1	193	07.2		56.0	144	16.1		24.0	58	6 59	7 50	39	46	17		07	78	
2	208	07.0		55.7	158	48.1		14.5	56	53	41	26	41	19		12	75	
3	223	06.7		55.3	173	20.1	-11	04.9	54	47	32	15	37	20		15	73	
4	238	06.5		54.9	187	52.1	-10	55.2	52	42	25	8 05	33	22		19	71	
5	253	06.2	-21	54.5	202	24.1	-10	45.5	50	6 38	7 18	7 56	10 29	24	21 22	69		
6	268	06.0	-21	54.1	216	56.1	-10	35.7	45	6 27	7 04	7 37	10 21	28	21 28	66		
7	283	05.7		53.8	231	28.2		25.8	40	18	6 51	21	14	31		34	62	
8	298	05.4		53.4	246	00.2		15.9	35	09	41	7 08	09	33		38	60	
9	313	05.2		53.0	260	32.3	-10	06.0	30	6 01	31	6 57	10 04	35		43	57	
10	328	04.9		52.6	275	04.4	-9	56.0	20	5 46	6 14	37	9 55	39		50	53	
11	343	04.7	-21	52.2	289	36.5	-9	45.9	10 N	5 32	5 58	6 20	9 47	43	21 56	49		
12	358	04.4	-21	51.9	304	08.6	-9	35.8	0	5 16	5 42	6 04	9 40	46	22 02	46		
13	13	04.2		51.5	318	40.7		25.6	10 S	4 58	25	5 48	32	49		07	43	
14	28	03.9		51.1	333	12.8		15.4	20	37	5 06	30	24	53		13	40	
15	43	03.7		50.7	347	44.9	-9	05.2	30	4 10	4 43	5 10	15	57		20	35	
16	58	03.4		50.3	2	17.0	-8	54.9	35	3 53	28	4 58	10	59		24	33	
17	73	03.2	-21	49.9	16	49.1	-8	44.5	40	3 31	4 12	4 44	9 04	62	22 29	30		
18	88	03.0	-21	49.5	31	21.3	-8	34.1	45	3 04	3 51	4 27	8 57	65	22 34	27		
19	103	02.7		49.2	45	53.4		23.6	50	2 24	24	4 07	49	69		40	23	
20	118	02.5		48.8	60	25.5		13.1	52	2 01	3 10	3 57	45	71		43	21	
21	133	02.2		48.4	74	57.7	-8	02.6	54	1 30	2 55	46	41	72		46	20	
22	148	02.0		48.0	89	29.8	-7	52.0	56	** **	36	33	36	75		49	18	
23	163	01.7		47.6	104	02.0		41.3	58	** **	2 12	18	31	77		53	15	
24	178	01.5	-21	47.2	118	34.1	-7	30.6	60 S	** **	1 38	3 01	8 25	80	22 57	13		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 16 ^h 38 ^m 0		Mag: -4.0 PMG: 9 ^h 29 ^m		Mag: +1.1 PMG: 15 ^h 10 ^m		Mag: -2.5 PMG: 18 ^h 15 ^m		Mag: +0.2 PMG: 19 ^h 12 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	109	49.3	217	54.8	-20	38.1	132	19.1	-10	26.3	85	27.9	+8	50.1	71	10.4	+12	37.5
1	124	51.7	232	54.0		38.6	147	19.8		25.5	100	30.2		50.1	86	12.9		37.6
2	139	54.2	247	53.3		39.1	162	20.4		24.8	115	32.5		50.2	101	15.3		37.6
3	154	56.6	262	52.5		39.5	177	21.0		24.0	130	34.8		50.3	116	17.8		37.6
4	169	59.1	277	51.8		40.0	192	21.7		23.3	145	37.1		50.4	131	20.3		37.6
5	185	01.6	292	51.0	-20	40.5	207	22.3	-10	22.5	160	39.4	+8	50.4	146	22.8	+12	37.6
6	200	04.0	307	50.3	-20	40.9	222	23.0	-10	21.8	175	41.7	+8	50.5	161	25.2	+12	37.6
7	215	06.5	322	49.5		41.4	237	23.6		21.1	190	44.0		50.6	176	27.7		37.6
8	230	09.0	337	48.8		41.9	252	24.3		20.3	205	46.3		50.7	191	30.2		37.6
9	245	11.4	352	48.0		42.3	267	24.9		19.6	220	48.6		50.8	206	32.6		37.6
10	260	13.9	7	47.3		42.8	282	25.6		18.8	235	50.9		50.8	221	35.1		37.6
11	275	16.4	22	46.5	-20	43.2	297	26.2	-10	18.1	250	53.2	+8	50.9	236	37.6	+12	37.7
12	290	18.8	37	45.8	-20	43.7	312	26.8	-10	17.3	265	55.5	+8	51.0	251	40.1	+12	37.7
13	305	21.3	52	45.0		44.2	327	27.5		16.6	280	57.8		51.1	266	42.5		37.7
14	320	23.7	67	44.3		44.6	342	28.1		15.9	296	00.1		51.1	281	45.0		37.7
15	335	26.2	82	43.5		45.1	357	28.8		15.1	311	02.3		51.2	296	47.5		37.7
16	350	28.7	97	42.7		45.5	12	29.4		14.4	326	04.6		51.3	311	49.9		37.7
17	5	31.1	112	42.0	-20	46.0	27	30.1	-10	13.6	341	06.9	+8	51.4	326	52.4	+12	37.7
18	20	33.6	127	41.2	-20	46.4	42	30.7	-10	12.9	356	09.2	+8	51.5	341	54.9	+12	37.7
19	35	36.1	142	40.5		46.9	57	31.4		12.1	11	11.5		51.5	356	57.4		37.7
20	50	38.5	157	39.7		47.4	72	32.0		11.4	26	13.8		51.6	11	59.8		37.8
21	65	41.0	172	39.0		47.8	87	32.7		10.6	41	16.1		51.7	27	02.3		37.8
22	80	43.5	187	38.2		48.3	102	33.3		09.9	56	18.4		51.8	42	04.8		37.8
23	95	45.9	202	37.4		48.7	117	34.0		09.2	71	20.7		51.9	57	07.2		37.8
24	110	48.4	217	36.7	-20	49.2	132	34.6	-10	08.4	86	23.0	+8	51.9	72	09.7	+12	37.8
Dif	—		-8		-5		+6		+7		+23		+1		+25		0	

UT	SOL				 LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16:3 PMG: 12 ^h 08 ^m 1				Edad: 5 ^d 2 PHE { 4 ^h : 56:3 12 ^h : 56:6 20 ^h : 56:8 R°: 46 ^m SD: 15:3 PMG: 16 ^h 37 ^m												
	hG ☉	Dec	hG ☾	Dif	Dec	Dif	Civil	Náutico			Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m	
0	178	01.5	-21	47.2	118	34.1	-7	30.6	60 N	15 24	16 18	17 12	11 06 13	22 23 82			
1	193	01.2		46.8	133	06.2 ¹³¹		19.9 ¹⁰⁷	58	39	28	19	03 15	25 80			
2	208	01.0		46.4	147	38.4 ¹³²		-7 09.1 ¹⁰⁸	56	15 52	37	25	11 00 18	27 77			
3	223	00.7		46.0	162	10.5 ¹³¹		-6 58.3 ¹⁰⁸	54	16 03	45	30	10 57 20	28 75			
4	238	00.5		45.6	176	42.7 ¹³²		47.5 ¹⁰⁸	52	13	52	35	55 22	30 73			
5	253	00.2	-21	45.2	191	14.8 ¹³¹		-6 36.6 ¹⁰⁹	50	16 21	16 59	17 39	10 53 23	22 31 71			
6	268	00.0	-21	44.8	205	46.9 ¹³¹		-6 25.6 ¹¹⁰	45	16 40	17 13	17 50	10 49 27	22 34 67			
7	282	59.7		44.4	220	19.1 ¹³²		14.7 ¹⁰⁹	40	16 55	25	17 59	45 30	36 64			
8	297	59.5		44.0	234	51.2 ¹³¹		-6 03.6 ¹¹¹	35	17 08	36	18 07	42 33	38 61			
9	312	59.3		43.6	249	23.3 ¹³¹		-5 52.6 ¹¹⁰	30	19	17 45	15	39 35	40 58			
10	327	59.0		43.2	263	55.4 ¹³¹		41.5 ¹¹¹	20	39	18 02	30	34 39	43 54			
11	342	58.8	-21	42.8	278	27.5 ¹³¹		-5 30.4 ¹¹¹	10 N	17 56	18 18	18 44	10 30 43	22 45 51			
12	357	58.5	-21	42.4	292	59.6 ¹³¹		-5 19.2 ¹¹²	0	18 12	18 34	19 00	10 26 46	22 48 46			
13	12	58.3		42.0	307	31.7 ¹³¹		-5 08.0 ¹¹²	10 S	28	18 51	17	21 50	50 43			
14	27	58.0		41.6	322	03.8 ¹³¹		-4 56.8 ¹¹²	20	18 45	19 09	19 38	17 54	53 39			
15	42	57.8		41.2	336	35.9 ¹³¹		45.5 ¹¹³	30	19 05	32	20 05	12 58	55 36			
16	57	57.5		40.8	351	07.9 ¹³⁰		34.3 ¹¹²	35	17	19 46	22	09 61	57 33			
17	72	57.3	-21	40.4	5	40.0 ¹³¹		-4 22.9 ¹¹⁴	40	19 31	20 03	20 43	10 06 63	22 59 30			
18	87	57.1	-21	40.0	20	12.0 ¹³⁰		-4 11.6 ¹¹³	45	19 47	20 23	21 10	10 02 67	23 01 27			
19	102	56.8		39.6	34	44.0 ¹³⁰		-4 00.2 ¹¹⁴	50	20 08	20 50	21 49	9 58 70	03 24			
20	117	56.6		39.2	49	16.0 ¹³⁰		-3 48.8 ¹¹⁴	52	17	21 03	22 11	56 72	04 22			
21	132	56.3		38.8	63	48.0 ¹³⁰		37.3 ¹¹⁵	54	28	18	22 40	53 74	06 19			
22	147	56.1		38.4	78	20.0 ¹³⁰		25.9 ¹¹⁴	56	40	21 37	23 32	51 76	07 18			
23	162	55.9		38.0	92	52.0 ¹³⁰		14.4 ¹¹⁵	58	20 55	22 00	** **	48 79	08 16			
24	177	55.6	-21	37.6	107	23.9 ¹²⁹		-3 02.8 ¹¹⁶	60 S	21 12	22 31	** **	9 45 81	23 10 13			
UT	ARIES		VENUS				MARTE				JÚPITER			SATURNO			
	PMG: 16 ^h 34 ^m 1		Mag: -4.0 PMG: 9 ^h 30 ^m				Mag: +1.1 PMG: 15 ^h 09 ^m				Mag: -2.5 PMG: 18 ^h 12 ^m			Mag: +0.2 PMG: 19 ^h 08 ^m			
	hG ♈		hG ♀	Dec			hG ♂	Dec			hG ♃	Dec			hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	110	48.4	217	36.7	-20	49.2	132	34.6	-10	08.4	86	23.0	+8	51.9	72	09.7	
1	125	50.9	232	35.9		49.6	147	35.3		07.7	101	25.3		52.0	87	12.2	
2	140	53.3	247	35.2		50.0	162	35.9		06.9	116	27.6		52.1	102	14.6	
3	155	55.8	262	34.4		50.5	177	36.6		06.2	131	29.9		52.2	117	17.1	
4	170	58.2	277	33.6		50.9	192	37.2		05.4	146	32.1		52.2	132	19.6	
5	186	00.7	292	32.9	-20	51.4	207	37.9	-10	04.7	161	34.4	+8	52.3	147	22.0	
6	201	03.2	307	32.1	-20	51.8	222	38.5	-10	03.9	176	36.7	+8	52.4	162	24.5	
7	216	05.6	322	31.3		52.3	237	39.1		03.2	191	39.0		52.5	177	27.0	
8	231	08.1	337	30.6		52.7	252	39.8		02.4	206	41.3		52.6	192	29.4	
9	246	10.6	352	29.8		53.2	267	40.4		01.7	221	43.6		52.7	207	31.9	
10	261	13.0	7	29.1		53.6	282	41.1		01.0	236	45.9		52.7	222	34.4	
11	276	15.5	22	28.3	-20	54.0	297	41.7	-10	00.2	251	48.2	+8	52.8	237	36.8	
12	291	18.0	37	27.5	-20	54.5	312	42.4	-9	59.5	266	50.5	+8	52.9	252	39.3	
13	306	20.4	52	26.8		54.9	327	43.0		58.7	281	52.8		53.0	267	41.8	
14	321	22.9	67	26.0		55.3	342	43.7		58.0	296	55.0		53.1	282	44.2	
15	336	25.4	82	25.2		55.8	357	44.3		57.2	311	57.3		53.1	297	46.7	
16	351	27.8	97	24.5		56.2	12	45.0		56.5	326	59.6		53.2	312	49.2	
17	6	30.3	112	23.7	-20	56.6	27	45.6	-9	55.7	342	01.9	+8	53.3	327	51.6	
18	21	32.7	127	22.9	-20	57.1	42	46.3	-9	55.0	357	04.2	+8	53.4	342	54.1	
19	36	35.2	142	22.2		57.5	57	46.9		54.2	12	06.5		53.5	357	56.6	
20	51	37.7	157	21.4		57.9	72	47.6		53.5	27	08.8		53.5	12	59.0	
21	66	40.1	172	20.6		58.4	87	48.2		52.7	42	11.0		53.6	28	01.5	
22	81	42.6	187	19.9		58.8	102	48.9		52.0	57	13.3		53.7	43	04.0	
23	96	45.1	202	19.1		59.2	117	49.6		51.2	72	15.6		53.8	58	06.4	
24	111	47.5	217	18.3	-20	59.6	132	50.2	-9	50.5	87	17.9	+8	53.9	73	08.9	
Dif	—		-8		-4		+6		+7		+23		+1		+25		

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna			
	SD: 16 ^h 3 PMG: 12 ^h 08 ^m 5				Edad: 6 ^d 2 PHE { SD: 15 ^h 5 PMG: 17 ^h 23 ^m														
	hG ☉		Dec		hG ☾		Dif			Dec			Dif						
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m
0	177	55.6	-21	37.6	107	23.9	-3	02.8	60 N	7	03	7	58	8	52	11	19	13	23 45 85
1	192	55.4		37.2	121	55.8 ¹²⁹	-2	51.3 ¹¹⁵	58	6	57	48	37		18	16		45	82
2	207	55.1		36.8	136	27.8 ¹³⁰		39.7 ¹¹⁶	56		51	39	24		18	18		44	79
3	222	54.9		36.3	150	59.6 ¹²⁸		28.1 ¹¹⁶	54		46	31	13		17	20		43	70
4	237	54.7		35.9	165	31.5 ¹²⁹		16.5 ¹¹⁶	52		41	24	8 03		17	22		43	75
5	252	54.4	-21	35.5	180	03.4 ¹²⁹	-2	04.9 ¹¹⁶	50	6	37	7 17	7 55		11	16	24	23	42 73
6	267	54.2	-21	35.1	194	35.2 ¹²⁸	-1	53.2 ¹¹⁷	45	6	27	7 03	7 36		11	16	27	23	41 69
7	282	53.9		34.7	209	07.0 ¹²⁸		41.5 ¹¹⁷	40		18	6 51	21		15	31		40	66
8	297	53.7		34.3	223	38.8 ¹²⁸		29.8 ¹¹⁷	35		09	41	7 08		15	33		39	63
9	312	53.5		33.9	238	10.5 ¹²⁷		18.1 ¹¹⁷	30	6	02	31	6 57		14	36		38	60
10	327	53.2		33.4	252	42.2 ¹²⁷	-1	06.3 ¹¹⁸	20	5	47	6 14	38		13	41		37	56
11	342	53.0	-21	33.0	267	13.9 ¹²⁷	-0	54.6 ¹¹⁷	10 N	5	32	5 58	6 21		11	13	44	23	36 52
12	357	52.8	-21	32.6	281	45.6 ¹²⁷	-0	42.8 ¹¹⁸	0	5	17	5 43	6 05		11	12	48	23	34 49
13	12	52.5		32.2	296	17.2 ¹²⁶		31.0 ¹¹⁸	10 S	4	59	26	5 49		11	51		33	45
14	27	52.3		31.8	310	48.9 ¹²⁷		19.2 ¹¹⁸	20		39	5 07	31		11	55		32	41
15	42	52.0		31.3	325	20.4 ¹²⁵	-0	07.4 ¹¹⁸	30	4	12	4 44	5 11		10	59		31	36
16	57	51.8		30.9	339	52.0 ¹²⁶	+0	04.4 ¹¹⁸	35	3	55	30	4 59		10	61		30	34
17	72	51.6	-21	30.5	354	23.5 ¹²⁵	+0	16.3 ¹¹⁹	40	3	34	4 14	4 46		11	09	65	23	29 31
18	87	51.3	-21	30.1	8	55.0 ¹²⁵	+0	28.1 ¹¹⁸	45	3	07	3 54	4 30		11	09	68	23	28 28
19	102	51.1		29.7	23	26.5 ¹²⁵		40.0 ¹¹⁹	50	2	28	27	09		08	72		27	24
20	117	50.9		29.2	37	57.9 ¹²⁴	+0	51.8 ¹¹⁸	52	2	06	3 14	4 00		08	74		26	23
21	132	50.6		28.8	52	29.3 ¹²⁴	+1	03.7 ¹¹⁹	54	1	37	2 59	3 49		07	76		25	21
22	147	50.4		28.4	67	00.6 ¹²³		15.6 ¹¹⁹	56	0	44	40	37		07	78		25	18
23	162	50.2		28.0	81	31.9 ¹²³		27.5 ¹¹⁹	58	** **		2 17	22		07	80		24	16
24	177	49.9	-21	27.5	96	03.2 ¹²³	+1	39.4 ¹¹⁹	60 S	** **		1 46	3 05		11	06	84	23	23 13

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 16 ^h 30 ^m 1		Mag: -4.0 PMG: 9 ^h 31 ^m		Mag: +1.1 PMG: 15 ^h 08 ^m		Mag: -2.5 PMG: 18 ^h 08 ^m		Mag: +0.2 PMG: 19 ^h 04 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	111	47.5	217	18.3	-20	59.6	132	50.2	-9	50.5
1	126	50.0	232	17.6	-21	00.1	147	50.9		49.7
2	141	52.5	247	16.8		00.5	162	51.5		49.0
3	156	54.9	262	16.0		00.9	177	52.2		48.2
4	171	57.4	277	15.2		01.3	192	52.8		47.5
5	186	59.8	292	14.5	-21	01.7	207	53.5	-9	46.7
6	202	02.3	307	13.7	-21	02.2	222	54.1	-9	46.0
7	217	04.8	322	12.9		02.6	237	54.8		45.2
8	232	07.2	337	12.2		03.0	252	55.4		44.5
9	247	09.7	352	11.4		03.4	267	56.1		43.7
10	262	12.2	7	10.6		03.8	282	56.7		43.0
11	277	14.6	22	09.8	-21	04.2	297	57.4	-9	42.2
12	292	17.1	37	09.1	-21	04.7	312	58.0	-9	41.5
13	307	19.6	52	08.3		05.1	327	58.7		40.7
14	322	22.0	67	07.5		05.5	342	59.3		40.0
15	337	24.5	82	06.7		05.9	358	00.0		39.2
16	352	27.0	97	06.0		06.3	13	00.6		38.5
17	7	29.4	112	05.2	-21	06.7	28	01.3	-9	37.7
18	22	31.9	127	04.4	-21	07.1	43	02.0	-9	37.0
19	37	34.3	142	03.6		07.5	58	02.6		36.2
20	52	36.8	157	02.9		07.9	73	03.3		35.5
21	67	39.3	172	02.1		08.3	88	03.9		34.7
22	82	41.7	187	01.3		08.7	103	04.6		34.0
23	97	44.2	202	00.5		09.1	118	05.2		33.2
24	112	46.7	216	59.7	-21	09.5	133	05.9	-9	32.5
Dif	—		-8		-4		+7		+8	

	+23		+1		+25		0	

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:3 PMG: 12 ^h 08 ^m 9				Edad: 7 ^d 2 PHE { 4 ^h : 57/7 12 ^h : 58/0 20 ^h : 58/2 PMG: 18 ^h 11 ^m R°: 50 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif	Civil	Náutico			Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m	h m m	
0	177	49.9	-21	27.5	96	03.2	+1	39.4	60 N	15 28	16 21	17 16	11 32 14	** ** *	**	
1	192	49.7		27.1	110	34.4 ¹²²	+1	51.3 ¹¹⁹	58	43	31	22	34 17	** ** *	**	
2	207	49.5		26.7	125	05.6 ¹²²	+2	03.2 ¹¹⁹	56	15 55	40	27	36 19	** ** *	**	
3	222	49.2		26.2	139	36.7 ¹²¹		15.1 ¹¹⁹	54	16 06	48	33	37 22	** ** *	**	
4	237	49.0		25.8	154	07.9 ¹²²		27.0 ¹¹⁹	52	16	16 55	37	39 24	** ** *	**	
5	252	48.8	-21	25.4	168	38.9 ¹²⁰	+2	38.9 ¹¹⁹	50	16 24	17 01	17 42	11 40 26	** ** *	**	
6	267	48.5	-21	25.0	183	09.9 ¹²⁰	+2	50.8 ¹¹⁹	45	16 42	17 15	17 52	11 43 30	** ** *	**	
7	282	48.3		24.5	197	40.9 ¹²⁰	+3	02.8 ¹²⁰	40	16 57	27	18 01	46 33	** ** *	**	
8	297	48.1		24.1	212	11.8 ¹¹⁹		14.7 ¹¹⁹	35	17 10	38	09	48 36	** ** *	**	
9	312	47.8		23.7	226	42.7 ¹¹⁹		26.6 ¹¹⁹	30	21	17 47	16	50 38	** ** *	**	
10	327	47.6		23.2	241	13.6 ¹¹⁹		38.5 ¹¹⁹	20	40	18 04	31	54 42	** ** *	**	
11	342	47.4	-21	22.8	255	44.3 ¹¹⁷	+3	50.4 ¹¹⁹	10 N	17 57	18 19	18 45	11 57 46	** ** *	**	
12	357	47.1	-21	22.3	270	15.1 ¹¹⁸	+4	02.2 ¹¹⁸	0	18 13	18 35	19 01	12 00 49	** ** *	**	
13	12	46.9		21.9	284	45.8 ¹¹⁷		14.1 ¹¹⁹	10 S	28	18 51	18	02 54	** ** *	**	
14	27	46.7		21.5	299	16.4 ¹¹⁶		26.0 ¹¹⁹	20	18 45	19 10	19 38	06 57	** ** *	**	
15	42	46.5		21.0	313	47.0 ¹¹⁶		37.9 ¹¹⁹	30	19 05	32	20 04	09 62	** ** *	**	
16	57	46.2		20.6	328	17.5 ¹¹⁵	+4	49.7 ¹¹⁸	35	17	19 46	21	11 65	** ** *	**	
17	72	46.0	-21	20.2	342	48.0 ¹¹⁵	+5	01.5 ¹¹⁸	40	19 30	20 02	20 42	12 14 67	** ** *	**	
18	87	45.8	-21	19.7	357	18.4 ¹¹⁴	+5	13.4 ¹¹⁹	45	19 46	20 22	21 09	12 17 70	23 56 31		
19	102	45.5		19.3	11	48.7 ¹¹³		25.2 ¹¹⁸	50	20 06	20 48	21 46	20 75	51 27		
20	117	45.3		18.8	26	19.1 ¹¹⁴		37.0 ¹¹⁸	52	16	21 01	22 07	22 76	49 25		
21	132	45.1		18.4	40	49.3 ¹¹²	+5	48.8 ¹¹⁸	54	26	16	22 34	23 79	46 23		
22	147	44.9		18.0	55	19.5 ¹¹²	+6	00.5 ¹¹⁷	56	38	34	23 20	25 81	43 21		
23	162	44.6		17.5	69	49.6 ¹¹¹		12.3 ¹¹⁸	58	20 52	21 56	** ** *	27 84	40 19		
24	177	44.4	-21	17.1	84	19.7 ¹¹¹	+6	24.0 ¹¹⁷	60 S	21 09	22 25	** ** *	12 30 86	23 36 16		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 16 ^h 26 ^m 2		Mag: -4.0 PMG: 9 ^h 33 ^m		Mag: +1.1 PMG: 15 ^h 07 ^m		Mag: -2.5 PMG: 18 ^h 04 ^m		Mag: +0.2 PMG: 19 ^h 00 ^m							
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'						
0	112	46.7	216	59.7	133	05.9	88	12.6	74	08.0						
1	127	49.1	231	59.0	148	06.5	103	14.9	89	10.4						
2	142	51.6	246	58.2	163	07.2	118	17.2	104	12.9						
3	157	54.1	261	57.4	178	07.8	133	19.5	119	15.4						
4	172	56.5	276	56.6	193	08.5	148	21.7	134	17.8						
5	187	59.0	291	55.9	208	09.2	163	24.0	149	20.3						
6	203	01.5	306	55.1	223	09.8	178	26.3	164	22.7						
7	218	03.9	321	54.3	238	10.5	193	28.6	179	25.2						
8	233	06.4	336	53.5	253	11.1	208	30.8	194	27.7						
9	248	08.8	351	52.7	268	11.8	223	33.1	209	30.1						
10	263	11.3	6	51.9	283	12.4	238	35.4	224	32.6						
11	278	13.8	21	51.2	298	13.1	253	37.7	239	35.0						
12	293	16.2	36	50.4	313	13.8	268	39.9	254	37.5						
13	308	18.7	51	49.6	328	14.4	283	42.2	269	40.0						
14	323	21.2	66	48.8	343	15.1	298	44.5	284	42.4						
15	338	23.6	81	48.0	358	15.7	313	46.8	299	44.9						
16	353	26.1	96	47.2	13	16.4	328	49.0	314	47.3						
17	8	28.6	111	46.5	28	17.0	343	51.3	329	49.8						
18	23	31.0	126	45.7	43	17.7	358	53.6	344	52.2						
19	38	33.5	141	44.9	58	18.4	13	55.8	359	54.7						
20	53	35.9	156	44.1	73	19.0	28	58.1	14	57.1						
21	68	38.4	171	43.3	88	19.7	44	00.4	29	59.6						
22	83	40.9	186	42.5	103	20.3	59	02.7	45	02.1						
23	98	43.3	201	41.7	118	21.0	74	04.9	60	04.5						
24	113	45.8	216	41.0	133	21.6	89	07.2	75	07.0						
Dif	—		-8	-4	+7	+8	+23	+1	+25	0						

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'3			Edad: 8 ^d 2	PHE { 4 ^h : 58'5 12 ^h : 58'8 20 ^h : 59'0										
	PMG: 12 ^h 09 ^m 2					SD: 15'9		PMG: 19 ^h 01 ^m			R°: 54 ^m				
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	
0	177	44.4	-21	17.1	84	19.7	+6 24.0	60 N	7 02	7 56	8 49	11 46	18	1 10	88
1	192	44.2		16.6	98	49.7 ¹¹⁰	35.7 ¹¹⁷	58	6 55	46	34	51	21	07	84
2	207	43.9		16.2	113	19.6 ¹⁰⁹	47.4 ¹¹⁷	56	50	37	22	55	24	03	82
3	222	43.7		15.7	127	49.5 ¹⁰⁹	+6 59.1 ¹¹⁷	54	45	30	11	11 59	26	1 00	80
4	237	43.5		15.3	142	19.3 ¹⁰⁸	+7 10.7 ¹¹⁶	52	40	23	8 02	12 03	27	0 58	77
5	252	43.3	-21	14.8	156	49.1 ¹⁰⁸	+7 22.3 ¹¹⁶	50	6 36	7 16	7 53	12 06	29	0 55	76
6	267	43.0	-21	14.4	171	18.8 ¹⁰⁷	+7 33.9 ¹¹⁶	45	6 26	7 02	7 35	12 13	33	0 50	71
7	282	42.8		13.9	185	48.4 ¹⁰⁶	45.4 ¹¹⁵	40	17	6 51	20	19	36	46	68
8	297	42.6		13.5	200	17.9 ¹⁰⁵	+7 57.0 ¹¹⁶	35	09	40	7 08	24	39	42	65
9	312	42.4		13.0	214	47.4 ¹⁰⁵	+8 08.5 ¹¹⁵	30	6 02	31	6 57	28	42	38	63
10	327	42.1		12.6	229	16.8 ¹⁰⁴	19.9 ¹¹⁴	20	5 47	6 14	38	36	46	33	58
11	342	41.9	-21	12.1	243	46.2 ¹⁰⁴	+8 31.4 ¹¹⁵	10 N	5 33	5 59	6 21	12 43	49	0 28	54
12	357	41.7	-21	11.7	258	15.4 ¹⁰²	+8 42.8 ¹¹⁴	0	5 18	5 43	6 06	12 49	53	0 23	51
13	12	41.5		11.2	272	44.7 ¹⁰³	+8 54.1 ¹¹³	10 S	5 00	27	5 50	12 56	56	18	48
14	27	41.3		10.8	287	13.8 ¹⁰¹	+9 05.5 ¹¹⁴	20	4 40	5 09	33	13 03	60	13	44
15	42	41.0		10.3	301	42.8 ¹⁰⁰	16.8 ¹¹³	30	4 14	4 46	13	11	64	07	40
16	57	40.8		09.9	316	11.8 ¹⁰⁰	28.0 ¹¹²	35	3 57	32	5 01	16	66	04	37
17	72	40.6	-21	09.4	330	40.7 ⁹⁹	+9 39.2 ¹¹²	40	3 37	4 16	4 48	13 21	69	0 00	35
18	87	40.4	-21	09.0	345	09.6 ⁹⁹	+9 50.4 ¹¹²	45	3 10	3 56	4 32	13 27	73	*** ** *	*** ** *
19	102	40.1		08.5	359	38.3 ⁹⁷	+10 01.5 ¹¹¹	50	2 32	30	12	35	77	*** ** *	*** ** *
20	117	39.9		08.0	14	07.0 ⁹⁷	12.6 ¹¹¹	52	2 12	18	4 03	38	79	*** ** *	*** ** *
21	132	39.7		07.6	28	35.6 ⁹⁶	23.6 ¹¹⁰	54	1 44	3 03	3 52	42	81	*** ** *	*** ** *
22	147	39.5		07.1	43	04.1 ⁹⁵	34.6 ¹¹⁰	56	0 59	2 45	40	46	84	*** ** *	*** ** *
23	162	39.3		06.7	57	32.6 ⁹⁵	45.6 ¹¹⁰	58	*** ** *	2 23	26	51	86	23 59	23
24	177	39.0	-21	06.2	72	00.9 ⁹³	+10 56.5 ¹⁰⁹	60 S	*** ** *	1 53	3 10	13 56	90	23 52	20

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 16 ^h 22 ^m 3		Mag: -4.0 PMG: 9 ^h 34 ^m		Mag: +1.1 PMG: 15 ^h 06 ^m		Mag: -2.5 PMG: 18 ^h 01 ^m		Mag: +0.2 PMG: 18 ^h 56 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	113	45.8	216	41.0	-21	18.9	133	21.6	-9	14.4
1	128	48.3	231	40.2		19.2	148	22.3		13.6
2	143	50.7	246	39.4		19.6	163	23.0		12.9
3	158	53.2	261	38.6		20.0	178	23.6		12.1
4	173	55.7	276	37.8		20.3	193	24.3		11.4
5	188	58.1	291	37.0	-21	20.7	208	24.9	-9	10.6
6	204	00.6	306	36.2	-21	21.1	223	25.6	-9	09.9
7	219	03.1	321	35.4		21.5	238	26.3		09.1
8	234	05.5	336	34.7		21.8	253	26.9		08.3
9	249	08.0	351	33.9		22.2	268	27.6		07.6
10	264	10.4	6	33.1		22.6	283	28.2		06.8
11	279	12.9	21	32.3	-21	22.9	298	28.9	-9	06.1
12	294	15.4	36	31.5	-21	23.3	313	29.6	-9	05.3
13	309	17.8	51	30.7		23.7	328	30.2		04.6
14	324	20.3	66	29.9		24.0	343	30.9		03.8
15	339	22.8	81	29.1		24.4	358	31.5		03.0
16	354	25.2	96	28.3		24.7	13	32.2		02.3
17	9	27.7	111	27.5	-21	25.1	28	32.9	-9	01.5
18	24	30.2	126	26.7	-21	25.5	43	33.5	-9	00.8
19	39	32.6	141	25.9		25.8	58	34.2	-9	00.0
20	54	35.1	156	25.1		26.2	73	34.9	-8	59.3
21	69	37.6	171	24.4		26.5	88	35.5		58.5
22	84	40.0	186	23.6		26.9	103	36.2		57.7
23	99	42.5	201	22.8		27.2	118	36.8		57.0
24	114	44.9	216	22.0	-21	27.6	133	37.5	-8	56.2
Dif	—		-8		-4		+7		+8	
							+23		+1	
									+25	
									0	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:3			Edad: 9 ^d 2	PHE {	4 ^h : 59:3 12 ^h : 59:5 20 ^h : 59:8			Final del crepúsculo			Salida de Luna		Puesta de Luna	
	PMG: 12 ^h 09 ^m 6								SD: 16:1			PMG: 19 ^h 55 ^m			R°: 57 ^m
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m		h m m	
0	177	39.0	-21 06.2	72	00.9	+10 56.5	60 N	15 33	16 25	17 19	12 04 24		2 38 90		
1	192	38.8	05.7	86	29.2	+11 07.3	58	47	35	25	12 27		31 87		
2	207	38.6	05.3	100	57.4	+11 18.1	56	15 59	43	31	19 29		25 84		
3	222	38.4	04.8	115	25.5	+11 28.8	54	16 09	51	35	25 32		20 81		
4	237	38.2	04.3	129	53.6	+11 39.5	52	19	16 58	40	30 34		15 79		
5	252	37.9	-21 03.9	144	21.5	+11 50.1	50	16 27	17 04	17 44	12 35 36		2 11 77		
6	267	37.7	-21 03.4	158	49.4	+12 00.7	45	16 45	17 18	17 54	12 46 39		2 01 74		
7	282	37.5	03.0	173	17.2	+12 11.2	40	17 00	29	18 03	12 55 42		1 54 70		
8	297	37.3	02.5	187	44.9	+12 21.7	35	12	39	10	13 03 44		47 68		
9	312	37.1	02.0	202	12.5	+12 32.1	30	23	17 49	18	10 46		41 65		
10	327	36.9	01.6	216	40.1	+12 42.4	20	41	18 05	32	22 50		31 61		
11	342	36.6	-21 01.1	231	07.5	+12 52.6	10 N	17 58	18 20	18 46	13 32 54		1 22 58		
12	357	36.4	-21 00.6	245	34.9	+13 02.8	0	18 13	18 35	19 01	13 42 56		1 14 54		
13	12	36.2	-21 00.1	260	02.2	+13 12.9	10 S	29	18 51	18	13 52 59		1 06 51		
14	27	36.0	-20 59.7	274	29.4	+13 23.0	20	18 46	19 10	19 38	14 03 62		0 57 48		
15	42	35.8	59.2	288	56.5	+13 33.0	30	19 05	32	20 04	15 66		47 44		
16	57	35.6	58.7	303	23.5	+13 42.9	35	16	19 45	20	22 69		41 42		
17	72	35.4	-20 58.3	317	50.4	+13 52.7	40	19 30	20 01	20 41	14 30 71		0 35 38		
18	87	35.1	-20 57.8	332	17.3	+14 02.5	45	19 45	20 21	21 07	14 40 74		0 27 36		
19	102	34.9	57.3	346	44.0	+14 12.2	50	20 05	46	21 43	52 77		18 32		
20	117	34.7	56.8	1	10.7	+14 21.8	52	14	20 58	22 03	14 57 80		14 30		
21	132	34.5	56.4	15	37.3	+14 31.3	54	24	21 13	22 29	15 03 82		09 28		
22	147	34.3	55.9	30	03.8	+14 40.7	56	36	30	23 09	10 84		0 04 26		
23	162	34.1	55.4	44	30.2	+14 50.1	58	20 49	21 51	** ** *	17 87		** ** *		
24	177	33.9	-20 54.9	58	56.5	+14 59.4	60 S	21 05	22 19	** ** *	15 26 90		** ** *		

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 16 ^h 18 ^m 3		Mag: -4.0 PMG: 9 ^h 35 ^m			Mag: +1.1 PMG: 15 ^h 05 ^m			Mag: -2.5 PMG: 17 ^h 57 ^m			Mag: +0.2 PMG: 18 ^h 53 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	114	44.9	216	22.0	-21 27.6	133	37.5	-8 56.2	90	01.6	+9 00.1	76	05.8	+12 39.2
1	129	47.4	231	21.2	27.9	148	38.2	55.5	105	03.8	00.2	91	08.3	39.2
2	144	49.9	246	20.4	28.3	163	38.8	54.7	120	06.1	00.3	106	10.7	39.2
3	159	52.3	261	19.6	28.6	178	39.5	53.9	135	08.4	00.4	121	13.2	39.2
4	174	54.8	276	18.8	29.0	193	40.1	53.2	150	10.6	00.4	136	15.6	39.3
5	189	57.3	291	18.0	-21 29.3	208	40.8	-8 52.4	165	12.9	+9 00.5	151	18.1	+12 39.3
6	204	59.7	306	17.2	-21 29.7	223	41.5	-8 51.7	180	15.2	+9 00.6	166	20.5	+12 39.3
7	220	02.2	321	16.4	30.0	238	42.1	50.9	195	17.4	00.7	181	23.0	39.3
8	235	04.7	336	15.6	30.4	253	42.8	50.2	210	19.7	00.8	196	25.4	39.3
9	250	07.1	351	14.8	30.7	268	43.5	49.4	225	21.9	00.9	211	27.9	39.3
10	265	09.6	6	14.0	31.0	283	44.1	48.6	240	24.2	01.0	226	30.3	39.4
11	280	12.0	21	13.2	-21 31.4	298	44.8	-8 47.9	255	26.5	+9 01.1	241	32.8	+12 39.4
12	295	14.5	36	12.4	-21 31.7	313	45.5	-8 47.1	270	28.7	+9 01.2	256	35.2	+12 39.4
13	310	17.0	51	11.6	32.1	328	46.1	46.4	285	31.0	01.3	271	37.7	39.4
14	325	19.4	66	10.8	32.4	343	46.8	45.6	300	33.2	01.4	286	40.1	39.4
15	340	21.9	81	10.0	32.7	358	47.4	44.8	315	35.5	01.4	301	42.6	39.5
16	355	24.4	96	09.2	33.1	13	48.1	44.1	330	37.7	01.5	316	45.0	39.5
17	10	26.8	111	08.4	-21 33.4	28	48.8	-8 43.3	345	40.0	+9 01.6	331	47.5	+12 39.5
18	25	29.3	126	07.6	-21 33.7	43	49.4	-8 42.6	0	42.3	+9 01.7	346	49.9	+12 39.5
19	40	31.8	141	06.8	34.1	58	50.1	41.8	15	44.5	01.8	1	52.4	39.5
20	55	34.2	156	06.0	34.4	73	50.8	41.0	30	46.8	01.9	16	54.8	39.5
21	70	36.7	171	05.2	34.7	88	51.4	40.3	45	49.0	02.0	31	57.3	39.6
22	85	39.2	186	04.4	35.0	103	52.1	39.5	60	51.3	02.1	46	59.7	39.6
23	100	41.6	201	03.6	35.4	118	52.8	38.8	75	53.5	02.2	62	02.2	39.6
24	115	44.1	216	02.8	-21 35.7	133	53.4	-8 38.0	90	55.8	+9 02.3	77	04.6	+12 39.6
Dif	—		-8		-3	+7		+8	+23		+1	+24		

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16/3 PMG: 12 ^h 09 ^m 9			Edad: 10 ^d 2 PHE { 4 ^h : 60/0 12 ^h : 60/2 20 ^h : 60/4 R°: 61 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°		
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	177	33.9	-20 54.9	58	56.5	+14	59.4	92	60 N	7	00	7	53	8	46	12	28
1	192	33.6	54.4	73	22.7	+15	08.6	92	58	6	54	44	32	39	36	3	58
2	207	33.4	54.0	87	48.9	72	17.7	91	56	48	35	20	48	39	49	83	
3	222	33.2	53.5	102	14.9	70	26.7	90	54	43	28	09	12	57	40	41	
4	237	33.0	53.0	116	40.9	70	35.6	89	52	39	21	8	00	13	04	34	
5	252	32.8	-20 52.5	131	06.8	69	+15	44.4	88	50	6	35	7	15	7	52	
6	267	32.6	-20 52.0	145	32.5	67	+15	53.2	88	45	6	25	7	01	7	34	
7	282	32.4	51.6	159	58.2	67	+16	01.8	86	40	17	6	50	20	37	49	
8	297	32.2	51.1	174	23.9	67	10.4	86	35	09	40	7	07	47	51	2	
9	312	32.0	50.6	188	49.4	65	18.8	84	30	6	01	31	6	56	13	56	
10	327	31.7	50.1	203	14.8	64	27.2	84	20	5	47	6	14	38	14	12	
11	342	31.5	-20 49.6	217	40.1	63	+16	35.4	82	10 N	5	33	5	59	6	22	
12	357	31.3	-20 49.1	232	05.4	63	+16	43.6	82	0	5	18	5	44	6	06	
13	12	31.1	48.7	246	30.6	62	51.6	80	10 S	5	02	28	5	51	14	51	
14	27	30.9	48.2	260	55.7	61	+16	59.5	79	20	4	42	5	10	15	05	
15	42	30.7	47.7	275	20.7	60	+17	07.4	79	30	4	16	4	48	15	21	
16	57	30.5	47.2	289	45.6	59	15.1	77	35	3	59	35	5	03	31	69	
17	72	30.3	-20 46.7	304	10.4	58	+17	22.7	76	40	3	39	4	19	4	50	
18	87	30.1	-20 46.2	318	35.1	57	+17	30.2	75	45	3	13	3	59	4	35	
19	102	29.9	45.7	332	59.8	57	37.6	74	50	2	37	34	15	16	09	76	
20	117	29.7	45.2	347	24.4	56	44.9	73	52	2	17	21	4	06	17	77	
21	132	29.5	44.7	1	48.9	55	52.0	71	54	1	51	3	07	3	56	25	
22	147	29.3	44.2	16	13.3	54	+17	59.1	71	56	1	11	2	50	44	34	
23	162	29.1	43.7	30	37.6	53	+18	06.0	69	58	** **	29	31	44	83	22	
24	177	28.8	-20 43.3	45	01.9	53	+18	12.8	68	60 S	** **	2	01	3	15	16	56

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG 16 ^h 14 ^m 4		Mag: -4.0 PMG: 9 ^h 36 ^m			Mag: +1.1 PMG: 15 ^h 04 ^m			Mag: -2.5 PMG: 17 ^h 54 ^m			Mag: +0.2 PMG: 18 ^h 49 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	115	44.1	216	02.8	-21 35.7	133	53.4	-8 38.0	90	55.8	+9 02.3	77	04.6	+12 39.6
1	130	46.5	231	02.0	36.0	148	54.1	37.2	105	58.1	02.4	92	07.0	39.6
2	145	49.0	246	01.2	36.4	163	54.8	36.5	121	00.3	02.5	107	09.5	39.7
3	160	51.5	261	00.4	36.7	178	55.4	35.7	136	02.6	02.6	122	11.9	39.7
4	175	53.9	275	59.6	37.0	193	56.1	34.9	151	04.8	02.6	137	14.4	39.7
5	190	56.4	290	58.8	-21 37.3	208	56.8	-8 34.2	166	07.1	+9 02.7	152	16.8	+12 39.7
6	205	58.9	305	58.0	-21 37.6	223	57.4	-8 33.4	181	09.3	+9 02.8	167	19.3	+12 39.7
7	221	01.3	320	57.1	38.0	238	58.1	32.7	196	11.6	02.9	182	21.7	39.8
8	236	03.8	335	56.3	38.3	253	58.8	31.9	211	13.8	03.0	197	24.2	39.8
9	251	06.3	350	55.5	38.6	268	59.4	31.1	226	16.1	03.1	212	26.6	39.8
10	266	08.7	5	54.7	38.9	284	00.1	30.4	241	18.3	03.2	227	29.1	39.8
11	281	11.2	20	53.9	-21 39.2	299	00.8	-8 29.6	256	20.6	+9 03.3	242	31.5	+12 39.8
12	296	13.7	35	53.1	-21 39.5	314	01.4	-8 28.9	271	22.8	+9 03.4	257	33.9	+12 39.9
13	311	16.1	50	52.3	39.8	329	02.1	28.1	286	25.1	03.5	272	36.4	39.9
14	326	18.6	65	51.5	40.2	344	02.8	27.3	301	27.3	03.6	287	38.8	39.9
15	341	21.0	80	50.7	40.5	359	03.4	26.6	316	29.6	03.7	302	41.3	39.9
16	356	23.5	95	49.9	40.8	14	04.1	25.8	331	31.8	03.8	317	43.7	39.9
17	11	26.0	110	49.1	-21 41.1	29	04.8	-8 25.0	346	34.1	+9 03.9	332	46.2	+12 39.9
18	26	28.4	125	48.3	-21 41.4	44	05.4	-8 24.3	1	36.3	+9 04.0	347	48.6	+12 40.0
19	41	30.9	140	47.5	41.7	59	06.1	23.5	16	38.6	04.1	2	51.0	40.0
20	56	33.4	155	46.6	42.0	74	06.8	22.7	31	40.8	04.2	17	53.5	40.0
21	71	35.8	170	45.8	42.3	89	07.4	22.0	46	43.1	04.2	32	55.9	40.0
22	86	38.3	185	45.0	42.6	104	08.1	21.2	61	45.3	04.3	47	58.4	40.0
23	101	40.8	200	44.2	42.9	119	08.8	20.5	76	47.6	04.4	63	00.8	40.1
24	116	43.2	215	43.4	-21 43.2	134	09.5	-8 19.7	91	49.8	+9 04.5	78	03.3	+12 40.1
Dif	—		-8 -3			+7 +8			+23 +1			+24 0		

UT	SOL			LUNA					Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:3 PMG: 12 ^h 10 ^m 2			Edad: 11 ^d 2 PHE { 4 ^h : 60'6 12 ^h : 60'7 20 ^h : 60'8 R°: 63 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif						Civil	Náutico	Hora	R°	Hora
h	°	'	°	°	'	°	'	°		h m	h m	h m	h m m		h m m		
0	177	28.8	-20 43.3	45	01.9	+18 12.8		60 N		15 37	16 29	17 23	13 02 48		5 36 81		
1	192	28.6		59	26.0	19.5	67	58		15 51		38 28	15 50		23 79		
2	207	28.4		73	50.1	26.1	66	56		16 03		47 34	27 51		12 77		
3	222	28.2		88	14.1	32.5	64	54		13	16 54	38	37 53		5 02 75		
4	237	28.0		102	38.1	38.8	63	52		22	17 01	43	46 54		4 53 74		
5	252	27.8	-20 40.8	117	02.0	+18 45.0	62	50		16 30	17 07	17 47	13 54 55		4 45 73		
6	267	27.6	-20 40.3	131	25.7	+18 51.1	61	45		16 47	17 20	17 56	14 12 56		4 29 71		
7	282	27.4		145	49.5	+18 57.0	59	40		17 02		31 18 05	26 57		15 69		
8	297	27.2		160	13.1	+19 02.8	58	35		14	41	12	38 59		4 03 68		
9	312	27.0		174	36.7	08.5	57	30		24	17 50	19	14 49 59		3 53 67		
10	327	26.8		189	00.2	14.0	55	20		43	18 06	33	15 07 61		36 65		
11	342	26.6	-20 37.8	203	23.6	+19 19.4	54	10 N		17 59	18 21	18 47	15 23 62		3 21 63		
12	357	26.4	-20 37.3	217	47.0	+19 24.7	53	0		18 14	18 36	19 02	15 39 62		3 07 61		
13	12	26.2		232	10.3	29.8	51	10 S		29	18 52	18	15 54 63		2 52 60		
14	27	26.0		246	33.5	34.8	50	20		18 46	19 10	19 38	16 10 65		37 58		
15	42	25.8		260	56.7	39.6	48	30		19 05	31	20 03	29 65		20 56		
16	57	25.6		275	19.8	44.4	48	35		16	19 44	19	40 66		2 10 55		
17	72	25.4	-20 34.8	289	42.8	+19 48.9	45	40		19 29	20 00	20 39	16 52 68		1 59 53		
18	87	25.2	-20 34.2	304	05.8	+19 53.4	45	45		19 44	20 19	21 04	17 07 68		1 45 51		
19	102	25.0		318	28.8	+19 57.7	43	50		20 03		44 40	25 70		29 49		
20	117	24.8		332	51.6	+20 01.8	41	52		12	20 56	21 59	34 70		21 48		
21	132	24.6		347	14.5	05.8	40	54		22	21 10	22 24	44 71		13 46		
22	147	24.4		1	37.2	09.7	39	56		33	27	22 59	17 55 71		1 03 45		
23	162	24.2		31.7	15 59.9	13.4	37	58		20 46	21 47	** **	18 07 73		0 52 43		
24	177	24.0	-20 31.2	30	22.6	+20 16.9	35	60 S		21 02	22 13	** **	18 22 74		0 40 40		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO				
	PMG 16 ^h 10 ^m 5			Mag: -4.0 PMG: 9 ^h 38 ^m			Mag: +1.1 PMG: 15 ^h 03 ^m			Mag: -2.5 PMG: 17 ^h 50 ^m			Mag: +0.2 PMG: 18 ^h 45 ^m				
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°		
0	116	43.2	215 43.4	-21 43.2		134 09.5	-8 19.7		91 49.8	+9 04.5		78 03.3	+12 40.1				
1	131	45.7	230 42.6	43.5		149 10.1	18.9		106 52.1	04.6		93 05.7	40.1				
2	146	48.2	245 41.8	43.8		164 10.8	18.2		121 54.3	04.7		108 08.1	40.1				
3	161	50.6	260 41.0	44.1		179 11.5	17.4		136 56.6	04.8		123 10.6	40.2				
4	176	53.1	275 40.2	44.4		194 12.1	16.6		151 58.8	04.9		138 13.0	40.2				
5	191	55.5	290 39.3	-21 44.7		209 12.8	-8 15.9		167 01.1	+9 05.0		153 15.5	+12 40.2				
6	206	58.0	305 38.5	-21 45.0		224 13.5	-8 15.1		182 03.3	+9 05.1		168 17.9	+12 40.2				
7	222	00.5	320 37.7	45.3		239 14.1	14.3		197 05.6	05.2		183 20.3	40.2				
8	237	02.9	335 36.9	45.6		254 14.8	13.6		212 07.8	05.3		198 22.8	40.3				
9	252	05.4	350 36.1	45.9		269 15.5	12.8		227 10.1	05.4		213 25.2	40.3				
10	267	07.9	5 35.3	46.2		284 16.2	12.1		242 12.3	05.5		228 27.7	40.3				
11	282	10.3	20 34.5	-21 46.5		299 16.8	-8 11.3		257 14.6	+9 05.6		243 30.1	+12 40.3				
12	297	12.8	35 33.7	-21 46.7		314 17.5	-8 10.5		272 16.8	+9 05.7		258 32.5	+12 40.3				
13	312	15.3	50 32.8	47.0		329 18.2	09.8		287 19.1	05.8		273 35.0	40.4				
14	327	17.7	65 32.0	47.3		344 18.8	09.0		302 21.3	05.9		288 37.4	40.4				
15	342	20.2	80 31.2	47.6		359 19.5	08.2		317 23.5	06.0		303 39.9	40.4				
16	357	22.6	95 30.4	47.9		14 20.2	07.5		332 25.8	06.1		318 42.3	40.4				
17	12	25.1	110 29.6	-21 48.2		29 20.8	-8 06.7		347 28.0	+9 06.2		333 44.7	+12 40.4				
18	27	27.6	125 28.8	-21 48.5		44 21.5	-8 05.9		2 30.3	+9 06.3		348 47.2	+12 40.5				
19	42	30.0	140 27.9	48.7		59 22.2	05.2		17 32.5	06.4		3 49.6	40.5				
20	57	32.5	155 27.1	49.0		74 22.9	04.4		32 34.8	06.5		18 52.0	40.5				
21	72	35.0	170 26.3	49.3		89 23.5	03.6		47 37.0	06.6		33 54.5	40.5				
22	87	37.4	185 25.5	49.6		104 24.2	02.9		62 39.2	06.7		48 56.9	40.6				
23	102	39.9	200 24.7	49.8		119 24.9	02.1		77 41.5	06.8		63 59.4	40.6				
24	117	42.4	215 23.9	-21 50.1		134 25.6	-8 01.3		92 43.7	+9 06.9		79 01.8	+12 40.6				
Dif	—			-8 -3			+7 +8			+22 +1			+24 0				

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna		
	SD: 16'3 PMG: 12 ^h 10 ^m 6				Edad: 12 ^d 2 PHE { SD: 16'6 PMG: 22 ^h 56 ^m 4 ^h : 60'9 12 ^h : 61'0 20 ^h : 61'0 R°: 63 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	177	24.0	-20	31.2	30	22.6	+20	16.9	60 N	6 57	7 51	8 42	13 50	66	6 57	65		
1	192	23.8		30.7	44	45.2	36	20.3	58	52	41	29	14 05	66	42	65		
2	207	23.6		30.2	59	07.8	36	23.6	56	46	33	17	18 66		29	65		
3	222	23.4		29.7	73	30.3	35	26.7	54	42	26	8 07	30 65		17	65		
4	237	23.2		29.1	87	52.8	35	29.7	52	37	19	7 58	40 65		6 07	65		
5	252	23.0	-20	28.6	102	15.3	35	+20 32.5	50	6 33	7 13	7 50	14 49	65	5 58	65		
6	267	22.8	-20	28.1	116	37.7	34	+20 35.1	45	6 24	7 00	7 33	15 08	65	5 40	64		
7	282	22.6		27.6	131	00.1	34	37.6	40	16	6 49	19	23 65		24	65		
8	297	22.5		27.1	145	22.4	33	40.0	35	08	39	7 07	37 64		11	65		
9	312	22.3		26.6	159	44.7	33	42.2	30	6 01	30	6 56	15 48	64	5 00	64		
10	327	22.1		26.1	174	07.0	33	44.2	20	5 47	14	38	16 08	64	4 41	64		
11	342	21.9	-20	25.5	188	29.2	32	+20 46.1	10 N	5 34	6 00	6 22	16 25	64	4 24	63		
12	357	21.7	-20	25.0	202	51.5	33	+20 47.9	0	5 19	5 45	6 07	16 41	63	4 08	63		
13	12	21.5		24.5	217	13.7	32	49.4	10 S	5 03	29	5 52	16 57	63	3 52	63		
14	27	21.3		24.0	231	35.8	31	50.9	20	4 43	5 11	35	17 15	62	35	63		
15	42	21.1		23.5	245	58.0	32	52.1	30	18	4 50	16	34 62		16	62		
16	57	20.9		22.9	260	20.1	31	53.2	35	4 02	37	5 05	17 46	62	3 05	61		
17	72	20.7	-20	22.4	274	42.3	32	+20 54.2	40	3 42	4 21	4 53	18 00	60	2 52	61		
18	87	20.5	-20	21.9	289	04.4	31	+20 55.0	45	3 17	4 02	4 37	18 15	61	2 36	61		
19	102	20.3		21.4	303	26.5	31	55.6	50	2 41	3 37	18	35 59		18	60		
20	117	20.1		20.8	317	48.6	31	56.1	52	2 22	25	10	44 59		2 09	59		
21	132	20.0		20.3	332	10.6	30	56.4	54	1 58	3 11	4 00	18 55	58	1 59	59		
22	147	19.8		19.8	346	32.7	31	56.6	56	1 22	2 55	3 48	19 06	58	48	58		
23	162	19.6		19.3	0	54.8	31	56.6	58	** **	34	35	20 57		35	58		
24	177	19.4	-20	18.7	15	16.9	31	+20 56.4	60 S	** **	2 08	3 20	19 36	56	1 20	57		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 16 ^h 06 ^m 5		Mag: -4.0 PMG: 9 ^h 39 ^m		Mag: +1.1 PMG: 15 ^h 02 ^m		Mag: -2.5 PMG: 17 ^h 46 ^m		Mag: +0.2 PMG: 18 ^h 41 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	117	42.4	215	23.9	-21	50.1	134	25.6	+9	06.9
1	132	44.8	230	23.0		50.4	149	26.2		07.0
2	147	47.3	245	22.2		50.7	164	26.9		07.0
3	162	49.8	260	21.4		50.9	179	27.6		07.1
4	177	52.2	275	20.6		51.2	194	28.2		07.2
5	192	54.7	290	19.8	-21	51.5	209	28.9	+9	07.3
6	207	57.1	305	18.9	-21	51.8	224	29.6	+9	07.4
7	222	59.6	320	18.1		52.0	239	30.3		07.5
8	238	02.1	335	17.3		52.3	254	30.9		07.6
9	253	04.5	350	16.5		52.6	269	31.6		07.7
10	268	07.0	5	15.7		52.8	284	32.3		07.8
11	283	09.5	20	14.8	-21	53.1	299	33.0	+9	07.9
12	298	11.9	35	14.0	-21	53.3	314	33.6	+9	08.0
13	313	14.4	50	13.2		53.6	329	34.3		08.1
14	328	16.9	65	12.4		53.9	344	35.0		08.2
15	343	19.3	80	11.6		54.1	359	35.7		08.3
16	358	21.8	95	10.7		54.4	14	36.3		08.4
17	13	24.3	110	09.9	-21	54.6	29	37.0	+9	08.5
18	28	26.7	125	09.1	-21	54.9	44	37.7	+9	08.6
19	43	29.2	140	08.3		55.1	59	38.4		08.7
20	58	31.6	155	07.4		55.4	74	39.0		08.8
21	73	34.1	170	06.6		55.7	89	39.7		08.9
22	88	36.6	185	05.8		55.9	104	40.4		09.0
23	103	39.0	200	05.0		56.2	119	41.1		09.1
24	118	41.5	215	04.1	-21	56.4	134	41.7	+9	09.2
Dif	—		-8 -3		+7 +8		+22 +1		+24 0	

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16'3 PMG: 12 ^h 10 ^m 9				Edad: 13 ^d 2 PHE { 4 ^h : 61'0 12 ^h : 61'0 20 ^h : 60'9 R°: 61 ^m													
	hG ☉		Dec		hG ☾		Dif							Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m		
0	177	19.4	-20	18.7	15	16.9	+20	56.4	60 N	15 42	16 33	17 26	14 56 81	8 02 48				
1	192	19.2		18.2	29	38.9		56.1	58	15 55	42	32	15 11 79	7 47 49				
2	207	19.0		17.7	44	01.0		55.6	56	16 06	50	37	24 77	34 51				
3	222	18.8		17.2	58	23.1		55.0	54	16	16 57	41	35 76	22 55				
4	237	18.6		16.6	72	45.2		54.2	52	25	17 04	46	45 75	12 54				
5	252	18.4	-20	16.1	87	07.3	+20	53.2	50	16 33	17 10	17 50	15 54 74	7 03 54				
6	267	18.2	-20	15.6	101	29.4	+20	52.1	45	16 50	17 23	17 59	16 13 71	6 44 56				
7	282	18.1		15.0	115	51.5		50.9	40	17 04	33	18 07	28 70	29 57				
8	297	17.9		14.5	130	13.7		49.4	35	16	43	14	41 68	16 58				
9	312	17.7		14.0	144	35.8		47.9	30	26	17 52	21	16 52 67	6 04 59				
10	327	17.5		13.4	158	58.0		46.1	20	17 44	18 07	34	17 12 65	5 45 60				
11	342	17.3	-20	12.9	173	20.2	+20	44.2	10 N	18 00	18 22	18 48	17 29 63	5 27 62				
12	357	17.1	-20	12.4	187	42.4	+20	42.2	0	18 14	18 37	19 02	17 44 62	5 11 63				
13	12	16.9		11.8	202	04.7		40.0	10 S	29	18 52	18	18 00 60	4 55 64				
14	27	16.8		11.3	216	27.0		37.6	20	18 45	19 09	19 38	17 58	38 65				
15	42	16.6		10.8	230	49.3		35.1	30	19 04	31	20 02	36 56	18 66				
16	57	16.4		10.2	245	11.7		32.5	35	15	43	18	18 48 54	4 06 67				
17	72	16.2	-20	09.7	259	34.0	+20	29.7	40	19 28	19 59	20 37	19 00 53	3 53 68				
18	87	16.0	-20	09.2	273	56.5	+20	26.7	45	19 42	20 17	21 02	19 16 51	3 37 69				
19	102	15.8		08.6	288	18.9		23.6	50	20 01	41	36	34 49	18 70				
20	117	15.7		08.1	302	41.4		20.3	52	09	20 53	21 55	43 48	3 08 71				
21	132	15.5		07.5	317	04.0		16.9	54	19	21 07	22 18	19 53 46	2 58 71				
22	147	15.3		07.0	331	26.6		13.3	56	30	23	22 50	20 04 44	46 72				
23	162	15.1		06.4	345	49.2		09.6	58	43	21 42	** **	17 42	33 73				
24	177	14.9	-20	05.9	0	11.9	+20	05.7	60 S	20 58	22 07	** **	20 32 39	2 17 74				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 16 ^h 02 ^m 6		Mag: -4.0 PMG: 9 ^h 40 ^m				Mag: +1.1 PMG: 15 ^h 01 ^m				Mag: -2.5 PMG: 17 ^h 43 ^m				Mag: +0.2 PMG: 18 ^h 37 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	118	41.5	215	04.1	-21	56.4	134	41.7	-7	42.9	93	37.4	+9	09.2	80	00.2	+12	41.1
1	133	44.0	230	03.3		56.7	149	42.4		42.1	108	39.7		09.3	95	02.7		41.2
2	148	46.4	245	02.5		56.9	164	43.1		41.4	123	41.9		09.4	110	05.1		41.2
3	163	48.9	260	01.7		57.1	179	43.8		40.6	138	44.1		09.5	125	07.5		41.2
4	178	51.4	275	00.8		57.4	194	44.4		39.8	153	46.4		09.6	140	10.0		41.2
5	193	53.8	290	00.0	-21	57.6	209	45.1	-7	39.1	168	48.6	+9	09.7	155	12.4	+12	41.3
6	208	56.3	304	59.2	-21	57.9	224	45.8	-7	38.3	183	50.8	+9	09.8	170	14.8	+12	41.3
7	223	58.8	319	58.4		58.1	239	46.5		37.5	198	53.1		09.9	185	17.3		41.3
8	239	01.2	334	57.5		58.4	254	47.1		36.8	213	55.3		10.0	200	19.7		41.3
9	254	03.7	349	56.7		58.6	269	47.8		36.0	228	57.5		10.1	215	22.1		41.3
10	269	06.1	4	55.9		58.8	284	48.5		35.2	243	59.8		10.2	230	24.5		41.4
11	284	08.6	19	55.1	-21	59.1	299	49.2	-7	34.5	259	02.0	+9	10.3	245	27.0	+12	41.4
12	299	11.1	34	54.2	-21	59.3	314	49.9	-7	33.7	274	04.2	+9	10.4	260	29.4	+12	41.4
13	314	13.5	49	53.4		59.5	329	50.5		32.9	289	06.5		10.5	275	31.8		41.4
14	329	16.0	64	52.6	-21	59.8	344	51.2		32.1	304	08.7		10.6	290	34.3		41.5
15	344	18.5	79	51.7	-22	00.0	359	51.9		31.4	319	10.9		10.7	305	36.7		41.5
16	359	20.9	94	50.9	-22	00.2	14	52.6		30.6	334	13.2		10.9	320	39.1		41.5
17	14	23.4	109	50.1	-22	00.5	29	53.2	-7	29.8	349	15.4	+9	11.0	335	41.6	+12	41.5
18	29	25.9	124	49.3	-22	00.7	44	53.9	-7	29.1	4	17.6	+9	11.1	350	44.0	+12	41.6
19	44	28.3	139	48.4		00.9	59	54.6		28.3	19	19.8		11.2	5	46.4		41.6
20	59	30.8	154	47.6		01.2	74	55.3		27.5	34	22.1		11.3	20	48.8		41.6
21	74	33.3	169	46.8		01.4	89	56.0		26.8	49	24.3		11.4	35	51.3		41.6
22	89	35.7	184	45.9		01.6	104	56.6		26.0	64	26.5		11.5	50	53.7		41.7
23	104	38.2	199	45.1		01.8	119	57.3		25.2	79	28.8		11.6	65	56.1		41.7
24	119	40.6	214	44.3	-22	02.1	134	58.0	-7	24.4	94	31.0	+9	11.7	80	58.6	+12	41.7
Dif	—		-8		-2		+7		+8		+22		+1		+24		0	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'3 PMG: 12 ^h 11 ^m 2			Edad: 14 ^d 2 PHE { 4 ^h : 60'8 12 ^h : 60'7 20 ^h : 60'5 R°: ***													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	177	14.9	-20	05.9	0	11.9	+20	05.7	60 N	6 55	7 48	8 39	16 17	89	8 50	33	
1	192	14.7		05.4	14	34.6	+20	01.7	58	49	39	26	30	86	36	36	
2	207	14.6		04.8	28	57.4	+19	57.6	56	44	31	14	41	83	25	38	
3	222	14.4		04.3	43	20.3		53.2	54	40	24	8 05	16 51	81	15	40	
4	237	14.2		03.7	57	43.2		48.8	52	36	18	7 56	17 00	79	8 06	42	
5	252	14.0	-20	03.2	72	06.1	+19	44.2	50	6 32	7 12	7 48	17 08	77	7 57	44	
6	267	13.8	-20	02.6	86	29.1	+19	39.5	45	6 23	6 59	7 31	17 24	74	7 40	47	
7	282	13.7		02.1	100	52.2		34.6	40	15	48	18	38	71	26	49	
8	297	13.5		01.5	115	15.4		29.6	35	08	39	7 06	49	69	14	51	
9	312	13.3		01.0	129	38.6		24.5	30	6 01	30	6 56	17 59	68	7 03	53	
10	327	13.1	-20	00.4	144	01.8		19.2	20	5 47	14	38	18 17	63	6 45	55	
11	342	12.9	-19	59.9	158	25.2	+19	13.7	10 N	5 34	6 00	6 22	18 32	61	6 29	58	
12	357	12.8	-19	59.3	172	48.6	+19	08.2	0	5 20	5 46	6 08	18 46	58	6 14	60	
13	12	12.6		58.8	187	12.0	+19	02.5	10 S	5 04	30	5 53	19 00	55	5 59	62	
14	27	12.4		58.2	201	35.6	+18	56.7	20	4 45	5 13	37	15	53	43	64	
15	42	12.2		57.7	215	59.2		50.7	30	20	4 52	18	32	49	24	67	
16	57	12.1		57.1	230	22.9		44.6	35	4 04	39	5 07	42	47	13	69	
17	72	11.9	-19	56.6	244	46.6	+18	38.4	40	3 45	4 24	4 55	19 53	45	5 01	71	
18	87	11.7	-19	56.0	259	10.5	+18	32.1	45	3 20	4 05	4 40	20 07	42	4 46	73	
19	102	11.5		55.5	273	34.4		25.6	50	2 46	3 41	22	23	39	28	76	
20	117	11.4		54.9	287	58.4		19.0	52	28	29	13	31	37	19	78	
21	132	11.2		54.4	302	22.5		12.3	54	2 05	16	4 03	39	35	4 09	80	
22	147	11.0		53.8	316	46.6	+18	05.5	56	1 32	3 00	3 52	48	33	3 58	82	
23	162	10.8		53.3	331	10.9	+17	58.5	58	** **	2 40	40	20 59	30	46	83	
24	177	10.7	-19	52.7	345	35.2	+17	51.5	60 S	** **	2 16	3 25	21 11	28	3 31	87	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 15 ^h 58 ^m 7		Mag: -4.0 PMG: 9 ^h 42 ^m			Mag: +1.1 PMG: 14 ^h 59 ^m			Mag: -2.4 PMG: 17 ^h 39 ^m			Mag: +0.2 PMG: 18 ^h 33 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	119	40.6	214	44.3	-22	02.1	134	58.0	-7	24.4	94	31.0	+9	11.7	80	58.6	+12	41.7
1	134	43.1	229	43.4		02.3	149	58.7		23.7	109	33.2		11.8	96	01.0		41.7
2	149	45.6	244	42.6		02.5	164	59.4		22.9	124	35.4		11.9	111	03.4		41.8
3	164	48.0	259	41.8		02.7	180	00.0		22.1	139	37.7		12.0	126	05.8		41.8
4	179	50.5	274	41.0		02.9	195	00.7		21.4	154	39.9		12.1	141	08.3		41.8
5	194	53.0	289	40.1	-22	03.2	210	01.4	-7	20.6	169	42.1	+9	12.2	156	10.7	+12	41.8
6	209	55.4	304	39.3	-22	03.4	225	02.1	-7	19.8	184	44.3	+9	12.3	171	13.1	+12	41.9
7	224	57.9	319	38.5		03.6	240	02.7		19.0	199	46.6		12.4	186	15.5		41.9
8	240	00.4	334	37.6		03.8	255	03.4		18.3	214	48.8		12.5	201	18.0		41.9
9	255	02.8	349	36.8		04.0	270	04.1		17.5	229	51.0		12.6	216	20.4		41.9
10	270	05.3	4	36.0		04.2	285	04.8		16.7	244	53.2		12.7	231	22.8		42.0
11	285	07.8	19	35.1	-22	04.4	300	05.5	-7	16.0	259	55.5	+9	12.8	246	25.2	+12	42.0
12	300	10.2	34	34.3	-22	04.7	315	06.2	-7	15.2	274	57.7	+9	12.9	261	27.7	+12	42.0
13	315	12.7	49	33.5		04.9	330	06.8		14.4	289	59.9		13.0	276	30.1		42.0
14	330	15.1	64	32.6		05.1	345	07.5		13.6	305	02.1		13.1	291	32.5		42.1
15	345	17.6	79	31.8		05.3	0	08.2		12.9	320	04.4		13.2	306	35.0		42.1
16	0	20.1	94	31.0		05.5	15	08.9		12.1	335	06.6		13.3	321	37.4		42.1
17	15	22.5	109	30.1	-22	05.7	30	09.6	-7	11.3	350	08.8	+9	13.4	336	39.8	+12	42.1
18	30	25.0	124	29.3	-22	05.9	45	10.2	-7	10.5	5	11.0	+9	13.5	351	42.2	+12	42.2
19	45	27.5	139	28.5		06.1	60	10.9		09.8	20	13.3		13.6	6	44.7		42.2
20	60	29.9	154	27.6		06.3	75	11.6		09.0	35	15.5		13.7	21	47.1		42.2
21	75	32.4	169	26.8		06.5	90	12.3		08.2	50	17.7		13.9	36	49.5		42.2
22	90	34.9	184	25.9		06.7	105	13.0		07.5	65	19.9		14.0	51	51.9		42.3
23	105	37.3	199	25.1		06.9	120	13.6		06.7	80	22.1		14.1	66	54.3		42.3
24	120	39.8	214	24.3	-22	07.1	135	14.3	-7	05.9	95	24.4	+9	14.2	81	56.8	+12	42.3
Dif	—		-8			-2	+7			+8	+22		+1	+24				

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:3 PMG: 12 ^h 11 ^m 4			Edad: 15 ^d 2 PHE { 4 ^h : 60:3 12 ^h : 60:1 20 ^h : 59:8 SD: 16:4 PMG: 1 ^h 00 ^m R°: 57 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m
0	177	10.7	-19	52.7	345	35.2	+17	51.5	60 N	15 47	16 37	17 30	17 46 90	9 23 24
1	192	10.5		52.1	359	59.6	54	44.3	58	15 59	16 46	17 35	17 56 86	12 27
2	207	10.3		51.6	14	24.1	55	37.0	56	16 10	16 54	17 40	18 04 84	9 03 29
3	222	10.1		51.0	28	48.6	55	29.6	54	20	17 01	17 45	18 12 81	8 55 31
4	237	10.0		50.5	43	13.3	57	22.0	52	29	17 07	17 49	18 19 79	48 33
5	252	09.8	-19	49.9	57	38.0	57	14.4	50	16 36	17 13	17 52	18 25 77	8 41 35
6	267	09.6	-19	49.3	72	02.9	59	06.6	45	16 53	17 25	18 01	18 38 74	8 27 39
7	282	09.4		48.8	86	27.8	59	58.8	40	17 06	17 36	17 09	18 49 70	15 42
8	297	09.3		48.2	100	52.8	60	50.8	35	18	17 45	17 16	18 58 68	8 05 44
9	312	09.1		47.7	115	17.9	61	42.7	30	28	17 53	17 23	19 07 65	7 56 46
10	327	08.9		47.1	129	43.1	62	34.5	20	17 45	18 09	17 36	20 01 61	40 51
11	342	08.8	-19	46.5	144	08.4	63	26.3	10 N	18 01	18 23	18 49	19 33 57	7 27 53
12	357	08.6	-19	46.0	158	33.7	63	17.9	0	18 15	18 37	19 03	19 44 54	7 14 56
13	12	08.4		45.4	172	59.2	65	09.4	10 S	30	18 52	18	19 55 51	7 01 60
14	27	08.2		44.8	187	24.7	65	00.8	20	18 45	19 09	19 37	20 08 47	6 47 63
15	42	08.1		44.3	201	50.4	67	52.2	30	19 03	19 30	20 01	21 44	31 67
16	57	07.9		43.7	216	16.1	67	43.4	35	14	19 42	17	22 42	22 69
17	72	07.7	-19	43.1	230	41.9	68	34.5	40	19 26	19 57	20 36	20 38 39	6 12 71
18	87	07.6	-19	42.5	245	07.9	70	25.6	45	19 41	20 15	21 00	20 49 35	5 59 74
19	102	07.4		42.0	259	33.9	70	16.6	50	19 59	20 39	21 33	21 02 31	44 78
20	117	07.2		41.4	274	00.0	71	07.4	52	20 07	20 50	21 50	20 08 29	37 79
21	132	07.1		40.8	288	26.2	72	58.2	54	17	21 03	22 12	21 14 28	29 81
22	147	06.9		40.3	302	52.5	73	48.9	56	27	21 19	22 42	21 21 26	20 84
23	162	06.7		39.7	317	18.8	73	39.5	58	39	21 37	23 36	21 29 23	5 09 87
24	177	06.6	-19	39.1	331	45.3	75	30.1	60 S	20 54	22 01	** **	21 39 20	4 58 90
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 15 ^h 54 ^m 7		Mag: -4.0 PMG: 9 ^h 43 ^m		Mag: +1.1 PMG: 14 ^h 58 ^m		Mag: -2.4 PMG: 17 ^h 36 ^m		Mag: +0.2 PMG: 18 ^h 29 ^m					
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄					
h	°	'	°	'	°	'	°	'	°	'				
0	120	39.8	214	24.3	135	14.3	95	24.4	81	56.8				
1	135	42.2	229	23.4	150	15.0	110	26.6	96	59.2				
2	150	44.7	244	22.6	165	15.7	125	28.8	112	01.6				
3	165	47.2	259	21.8	180	16.4	140	31.0	127	04.0				
4	180	49.6	274	20.9	195	17.1	155	33.3	142	06.5				
5	195	52.1	289	20.1	210	17.7	170	35.5	157	08.9				
6	210	54.6	304	19.3	225	18.4	185	37.7	172	11.3				
7	225	57.0	319	18.4	240	19.1	200	39.9	187	13.7				
8	240	59.5	334	17.6	255	19.8	215	42.1	202	16.2				
9	256	02.0	349	16.7	270	20.5	230	44.3	217	18.6				
10	271	04.4	4	15.9	285	21.2	245	46.6	232	21.0				
11	286	06.9	19	15.1	300	21.8	260	48.8	247	23.4				
12	301	09.4	34	14.2	315	22.5	275	51.0	262	25.8				
13	316	11.8	49	13.4	330	23.2	290	53.2	277	28.3				
14	331	14.3	64	12.5	345	23.9	305	55.4	292	30.7				
15	346	16.7	79	11.7	0	24.6	320	57.7	307	33.1				
16	1	19.2	94	10.9	15	25.3	335	59.9	322	35.5				
17	16	21.7	109	10.0	30	25.9	351	02.1	337	37.9				
18	31	24.1	124	09.2	45	26.6	6	04.3	352	40.4				
19	46	26.6	139	08.3	60	27.3	21	06.5	7	42.8				
20	61	29.1	154	07.5	75	28.0	36	08.7	22	45.2				
21	76	31.5	169	06.7	90	28.7	51	11.0	37	47.6				
22	91	34.0	184	05.8	105	29.4	66	13.2	52	50.0				
23	106	36.5	199	05.0	120	30.0	81	15.4	67	52.5				
24	121	38.9	214	04.1	135	30.7	96	17.6	82	54.9				
Dif	—		-8		-2		+7		+24					

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'3			Edad: 16 ^d 2 PHE { 4 ^h : 59'5 12 ^h : 59'3 20 ^h : 59'0												
	PMG: 12 ^h 11 ^m 7			SD: 16'3 PMG: 1 ^h 57 ^m R°: 54 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	177	06.6	-19 39.1	331	45.3	+14 30.1	96	60 N	6 52	7 44	8 35	19 16	87	9 47	17	
1	192	06.4		346	11.9	76	20.5	58	47	36	22	22 84		39	21	
2	207	06.2		0	38.6	77	10.9	56	42	28	12	28 81		32	24	
3	222	06.1		15	05.3	77	+14 01.2	97	54	38	22	8 02	33 79	26	26	
4	237	05.9		29	32.2	79	+13 51.4	98	52	34	16	7 54	38 77	21	27	
5	252	05.7	-19 36.2	43	59.1	79	+13 41.6	98	50	6 30	7 10	7 46	19 42	75	9 16	29
6	267	05.6	-19 35.7	58	26.2	81	+13 31.7	99	45	6 22	6 58	7 30	19 52	70	9 06	33
7	282	05.4		72	53.3	81	21.7	100	40	14	47	16	19 59	68	8 57	36
8	297	05.3		87	20.5	82	11.6	101	35	07	38	7 05	20 06	64	49	39
9	312	05.1		101	47.9	84	+13 01.5	101	30	6 00	29	6 55	12 62		42	42
10	327	04.9		116	15.3	84	+12 51.3	102	20	5 47	14	38	21 58		31	45
11	342	04.8	-19 32.8	130	42.8	85	+12 41.1	102	10 N	5 34	6 00	6 22	20 30	54	8 20	49
12	357	04.6	-19 32.2	145	10.4	86	+12 30.8	103	0	5 21	5 46	6 08	20 38	51	8 10	53
13	12	04.4		159	38.1	87	20.4	104	10 S	5 05	31	5 54	46 47		8 01	55
14	27	04.3		174	05.8	87	+12 09.9	105	20	4 46	5 14	38	20 55	43	7 50	60
15	42	04.1		188	33.7	89	+11 59.4	105	30	22	4 54	20	21 05	39	38	64
16	57	04.0		203	01.7	90	48.9	105	35	4 07	41	5 09	11 36		31	66
17	72	03.8	-19 29.3	217	29.7	90	+11 38.3	106	40	3 48	4 26	4 57	21 17	34	7 23	69
18	87	03.6	-19 28.7	231	57.9	92	+11 27.6	107	45	3 24	4 08	4 43	21 24	31	7 13	73
19	102	03.5		246	26.1	92	16.9	107	50	2 51	3 45	25	33 27		7 02	76
20	117	03.3		260	54.4	93	+11 06.1	108	52	33	33	17	37 25		6 56	79
21	132	03.2		275	22.8	94	+10 55.3	108	54	2 11	20	4 07	42 23		50	81
22	147	03.0		289	51.3	95	44.5	108	56	1 42	3 05	3 57	47 21		44	83
23	162	02.8		304	19.9	96	33.6	109	58	0 47	2 47	44	52 19		36	86
24	177	02.7	-19 25.2	318	48.5	96	+10 22.6	110	60 S	** **	2 23	3 30	21 59	15	6 28	89

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG 15 ^h 50 ^m 8		Mag: -4.0 PMG: 9 ^h 44 ^m		Mag: +1.1 PMG: 14 ^h 57 ^m		Mag: -2.4 PMG: 17 ^h 32 ^m		Mag: +0.3 PMG: 18 ^h 25 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	121	38.9	214	04.1	-22 11.5	135	30.7	-6 47.3	96	17.6	+12 43.0
1	136	41.4	229	03.3	11.6	150	31.4	46.6	111	19.8	97 57.3
2	151	43.9	244	02.5	11.8	165	32.1	45.8	126	22.0	112 59.7
3	166	46.3	259	01.6	12.0	180	32.8	45.0	141	24.2	128 02.1
4	181	48.8	274	00.8	12.1	195	33.5	44.2	156	26.5	143 04.6
5	196	51.2	288	59.9	-22 12.3	210	34.2	-6 43.5	171	28.7	+12 43.1
6	211	53.7	303	59.1	-22 12.5	225	34.8	-6 42.7	186	30.9	+12 43.1
7	226	56.2	318	58.2	12.6	240	35.5	41.9	201	33.1	173 09.4
8	241	58.6	333	57.4	12.8	255	36.2	41.1	216	35.3	188 11.8
9	257	01.1	348	56.6	12.9	270	36.9	40.4	231	37.5	203 14.2
10	272	03.6	3 55.7	13.1	12.9	285	37.6	39.6	246	39.7	218 16.6
11	287	06.0	18 54.9	-22 13.3	13.3	300	38.3	-6 38.8	261	41.9	+12 43.2
12	302	08.5	33 54.0	-22 13.4	13.4	315	39.0	-6 38.0	276	44.1	+12 43.3
13	317	11.0	48 53.2	13.6	13.6	330	39.7	37.2	291	46.4	263 23.9
14	332	13.4	63 52.3	13.7	13.7	345	40.3	36.5	291 46.4	18.1	278 26.3
15	347	15.9	78 51.5	13.9	13.9	0 41.0	35.7	35.7	306 48.6	18.2	283 28.7
16	2 18.4	93 50.6	14.0	14.0	14.0	15 41.7	34.9	34.9	321 50.8	18.3	293 28.7
17	17 20.8	108 49.8	-22 14.2	14.2	14.2	30 42.4	-6 34.1	34.1	336 53.0	18.4	308 31.1
18	32 23.3	123 49.0	-22 14.3	14.3	14.3	45 43.1	-6 33.4	33.4	351 55.2	+9 18.6	323 33.6
19	47 25.7	138 48.1	14.5	14.5	14.5	60 43.8	32.6	32.6	351 55.2	+9 18.6	338 36.0
20	62 28.2	153 47.3	14.6	14.6	14.6	75 44.5	31.8	31.8	6 57.4	+9 18.7	+12 43.4
21	77 30.7	168 46.4	14.8	14.8	14.8	90 45.1	31.0	31.0	21 59.6	18.8	353 38.4
22	92 33.1	183 45.6	14.9	14.9	14.9	105 45.8	30.3	30.3	37 01.8	18.9	8 40.8
23	107 35.6	198 44.7	15.1	15.1	15.1	120 46.5	29.5	29.5	52 04.0	19.0	23 43.2
24	122 38.1	213 43.9	-22 15.2	15.2	15.2	135 47.2	-6 28.7	28.7	67 06.2	19.1	38 45.6
Dif	—	-8	-2	-2	-2	+7	+8	+8	82 08.5	19.2	53 48.1
									87 10.7	+9 19.3	68 50.5
											83 52.9
											+12 43.6

UT	SOL				☉ LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 12 ^h 11 ^m 9				Edad: 17 ^d 2 PHE { SD: 16:0 PMG: 2 ^h 51 ^m R°: 49 ^m 4 ^h : 58:7 12 ^h : 58:3 20 ^h : 58:0												
	hG ☉		Dec		hG ☾		Dif				Civil			Náutico			Hora R°
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m		
0	177	02.7	-19	25.2	318	48.5	+10	22.6	60 N	15 52	16 42	17 34	20 43 83		10 04 15		
1	192	02.5		24.6	333	17.3 98		11.6 110	58	16 04	50	39	46 81		10 00 17		
2	207	02.4		24.0	347	46.1 98	+10	00.6 110	56	15	16 57	44	49 79		9 56 19		
3	222	02.2		23.4	2	15.1 100	+9	49.5 111	54	24	17 04	48	52 76		52 21		
4	237	02.1		22.8	16	44.1 100		38.4 111	52	32	10	52	55 74		48 24		
5	252	01.9	-19	22.2	31	13.2 101	+9	27.2 112	50	16 40	17 16	17 55	20 57 72		9 45 26		
6	267	01.7	-19	21.6	45	42.3 101	+9	16.0 112	45	16 56	17 28	18 03	21 02 68		9 39 29		
7	282	01.6		21.0	60	11.6 103	+9	04.8 112	40	17 09	38	11	07 64		33 32		
8	297	01.4		20.4	74	40.9 103	+8	53.5 113	35	20	47	18	10 62		28 35		
9	312	01.3		19.9	89	10.4 105		42.2 113	30	30	17 55	24	14 59		24 37		
10	327	01.1		19.3	103	39.9 105		30.9 113	20	17 47	18 10	37	19 55		16 42		
11	342	01.0	-19	18.7	118	09.4 105	+8	19.6 113	10 N	18 01	18 24	18 49	21 24 51		9 09 46		
12	357	00.8	-19	18.1	132	39.1 107	+8	08.2 114	0	18 16	18 37	19 03	21 29 47		9 03 49		
13	12	00.7		17.5	147	08.8 107	+7	56.8 114	10 S	30	18 52	18	33 45		8 56 53		
14	27	00.5		16.9	161	38.6 108		45.3 115	20	18 45	19 09	19 37	38 41		50 56		
15	42	00.3		16.3	176	08.5 109		33.9 114	30	19 03	29	20 00	44 36		42 60		
16	57	00.2		15.7	190	38.5 110		22.4 115	35	13	41	15	47 34		37 63		
17	72	00.0	-19	15.1	205	08.5 110	+7	10.9 115	40	19 25	19 56	20 34	21 51 31		8 32 66		
18	86	59.9	-19	14.5	219	38.7 112	+6	59.3 116	45	19 39	20 13	20 57	21 55 28		8 26 69		
19	101	59.7		13.9	234	08.8 111		47.8 115	50	19 56	36	21 29	22 00 24		18 74		
20	116	59.6		13.3	248	39.1 113		36.2 116	52	20 04	20 47	21 46	02 22		15 75		
21	131	59.4		12.7	263	09.4 113		24.6 116	54	14	21 00	22 07	05 20		11 78		
22	146	59.3		12.1	277	39.8 114		13.0 116	56	24	14	22 34	08 18		07 80		
23	161	59.1		11.5	292	10.3 115	+6	01.4 116	58	36	32	23 18	11 16		8 02 83		
24	176	59.0	-19	10.9	306	40.8 115	+5	49.8 116	60 S	20 50	21 54	** **	22 14 13		7 57 86		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 15 ^h 46 ^m 9		Mag: -4.0 PMG: 9 ^h 46 ^m		Mag: +1.1 PMG: 14 ^h 56 ^m		Mag: -2.4 PMG: 17 ^h 29 ^m		Mag: +0.3 PMG: 18 ^h 22 ^m	
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'
0	122	38.1	213	43.9	-22	15.2	135	47.2	-6	28.7
1	137	40.5	228	43.0		15.4	150	47.9		27.9
2	152	43.0	243	42.2		15.5	165	48.6		27.2
3	167	45.5	258	41.3		15.6	180	49.3		26.4
4	182	47.9	273	40.5		15.8	195	50.0		25.6
5	197	50.4	288	39.7	-22	15.9	210	50.7	-6	24.8
6	212	52.8	303	38.8	-22	16.0	225	51.3	-6	24.0
7	227	55.3	318	38.0		16.2	240	52.0		23.3
8	242	57.8	333	37.1		16.3	255	52.7		22.5
9	258	00.2	348	36.3		16.4	270	53.4		21.7
10	273	02.7	3	35.4		16.6	285	54.1		20.9
11	288	05.2	18	34.6	-22	16.7	300	54.8	-6	20.2
12	303	07.6	33	33.7	-22	16.8	315	55.5	-6	19.4
13	318	10.1	48	32.9		17.0	330	56.2		18.6
14	333	12.6	63	32.0		17.1	345	56.9		17.8
15	348	15.0	78	31.2		17.2	0	57.5		17.0
16	3	17.5	93	30.3		17.3	15	58.2		16.3
17	18	20.0	108	29.5	-22	17.5	30	58.9	-6	15.5
18	33	22.4	123	28.6	-22	17.6	45	59.6	-6	14.7
19	48	24.9	138	27.8		17.7	61	00.3		13.9
20	63	27.3	153	26.9		17.8	76	01.0		13.2
21	78	29.8	168	26.1		18.0	91	01.7		12.4
22	93	32.3	183	25.2		18.1	106	02.4		11.6
23	108	34.7	198	24.4		18.2	121	03.1		10.8
24	123	37.2	213	23.5	-22	18.3	136	03.8	-6	10.0
Dif	—		-8		-1		+7		+8	
							+22		+1	
									+24	
									0	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16:2			Edad: 18 ^d 2 PHE { 4 ^h : 57:7 12 ^h : 57:4 20 ^h : 57:1											
	PMG: 12 ^h 12 ^m 2			SD: 15:8 PMG: 3 ^h 40 ^m R°: 47 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	h	m	h	m	h	m	m	
0	176	59.0	-19	10.9	306	40.8	+5	49.8	60 N	6 49	7 41	8 31	22 06	80	10 19 13
1	191	58.8		10.3	321	11.5 ¹¹⁷		38.1 ¹¹⁷	58	44	33	19	07 77		17 15
2	206	58.7		09.7	335	42.1 ¹¹⁶		26.5 ¹¹⁶	56	40	26	8 08	08 75		15 18
3	221	58.5		09.1	350	12.9 ¹¹⁸		14.8 ¹¹⁷	54	36	19	7 59	08 73		13 20
4	236	58.4		08.5	4	43.7 ¹¹⁸	+5	03.1 ¹¹⁷	52	32	13	51	09 71		12 21
5	251	58.2	-19	07.9	19	14.6 ¹¹⁹	+4	51.4 ¹¹⁷	50	6 28	7 08	7 44	22 09	70	10 11 23
6	266	58.1	-19	07.2	33	45.5 ¹¹⁹	+4	39.7 ¹¹⁷	45	6 20	6 56	7 28	22 10	66	10 08 27
7	281	57.9		06.6	48	16.5 ¹²⁰		28.0 ¹¹⁷	40	13	46	15	11 63		05 30
8	296	57.8		06.0	62	47.6 ¹²¹		16.3 ¹¹⁷	35	06	37	7 04	12 60		03 33
9	311	57.6		05.4	77	18.7 ¹²¹	+4	04.6 ¹¹⁷	30	6 00	29	6 54	13 57		10 01 35
10	326	57.5		04.8	91	49.9 ¹²²	+3	52.9 ¹¹⁷	20	5 47	14	37	14 53		9 58 39
11	341	57.4	-19	04.2	106	21.1 ¹²²	+3	41.2 ¹¹⁷	10 N	5 35	6 00	6 23	22 15	49	9 55 43
12	356	57.2	-19	03.6	120	52.4 ¹²³	+3	29.5 ¹¹⁷	0	5 21	5 47	6 09	22 16	46	9 52 46
13	11	57.1		03.0	135	23.8 ¹²⁴		17.7 ¹¹⁸	10 S	5 06	32	5 55	18 42		49 50
14	26	56.9		02.4	149	55.2 ¹²⁴	+3	06.0 ¹¹⁷	20	4 48	5 16	39	19 38		46 54
15	41	56.8		01.8	164	26.7 ¹²⁵	+2	54.3 ¹¹⁷	30	24	4 56	22	20 34		42 59
16	56	56.6		01.1	178	58.2 ¹²⁵		42.6 ¹¹⁷	35	4 09	43	11	21 32		40 61
17	71	56.5	-19	00.5	193	29.8 ¹²⁶	+2	30.9 ¹¹⁷	40	3 51	4 29	5 00	22 22	29	9 38 63
18	86	56.3	-18	59.9	208	01.4 ¹²⁶	+2	19.2 ¹¹⁷	45	3 27	4 11	4 46	22 23	26	9 35 67
19	101	56.2		59.3	222	33.1 ¹²⁷	+2	07.5 ¹¹⁷	50	2 56	3 49	28	24 23		32 71
20	116	56.0		58.7	237	04.8 ¹²⁷	+1	55.8 ¹¹⁷	52	39	38	20	24 21		30 73
21	131	55.9		58.1	251	36.6 ¹²⁸		44.1 ¹¹⁷	54	2 18	25	11	25 19		29 74
22	146	55.8		57.5	266	08.5 ¹²⁹		32.4 ¹¹⁷	56	1 51	3 10	4 01	26 17		27 77
23	161	55.6		56.8	280	40.3 ¹²⁸		20.8 ¹¹⁶	58	1 07	2 53	3 49	27 14		25 79
24	176	55.5	-18	56.2	295	12.3 ¹³⁰	+1	09.1 ¹¹⁷	60 S	** **	2 31	3 35	22 27	13	9 23 82

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 15 ^h 42 ^m 9		Mag: -4.0 PMG: 9 ^h 47 ^m			Mag: +1.1 PMG: 14 ^h 55 ^m			Mag: -2.4 PMG: 17 ^h 25 ^m			Mag: +0.3 PMG: 18 ^h 18 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'				
0	123	37.2	213	23.5	-22	18.3	136	03.8	-6	10.0	98	03.6	+9	22.0	84	50.8	+12	44.3
1	138	39.7	228	22.7		18.4	151	04.4		09.3	113	05.8		22.1	99	53.2		44.4
2	153	42.1	243	21.8		18.5	166	05.1		08.5	128	08.0		22.2	114	55.6		44.4
3	168	44.6	258	21.0		18.6	181	05.8		07.7	143	10.2		22.3	129	58.0		44.4
4	183	47.1	273	20.1		18.8	196	06.5		06.9	158	12.4		22.4	145	00.4		44.5
5	198	49.5	288	19.3	-22	18.9	211	07.2	-6	06.1	173	14.6	+9	22.5	160	02.8	+12	44.5
6	213	52.0	303	18.4	-22	19.0	226	07.9	-6	05.4	188	16.8	+9	22.7	175	05.2	+12	44.5
7	228	54.4	318	17.6		19.1	241	08.6		04.6	203	19.0		22.8	190	07.6		44.6
8	243	56.9	333	16.7		19.2	256	09.3		03.8	218	21.2		22.9	205	10.0		44.6
9	258	59.4	348	15.9		19.3	271	10.0		03.0	233	23.4		23.0	220	12.5		44.6
10	274	01.8	3	15.0		19.4	286	10.7		02.2	248	25.6		23.1	235	14.9		44.7
11	289	04.3	18	14.2	-22	19.5	301	11.4	-6	01.5	263	27.8	+9	23.2	250	17.3	+12	44.7
12	304	06.8	33	13.3	-22	19.6	316	12.1	-6	00.7	278	30.0	+9	23.3	265	19.7	+12	44.7
13	319	09.2	48	12.5		19.7	331	12.7	-5	59.9	293	32.2		23.5	280	22.1		44.7
14	334	11.7	63	11.6		19.8	346	13.4		59.1	308	34.4		23.6	295	24.5		44.8
15	349	14.2	78	10.8		19.9	1	14.1		58.3	323	36.6		23.7	310	26.9		44.8
16	4	16.6	93	09.9		20.0	16	14.8		57.6	338	38.8		23.8	325	29.3		44.8
17	19	19.1	108	09.1	-22	20.1	31	15.5	-5	56.8	353	40.9	+9	23.9	340	31.7	+12	44.9
18	34	21.6	123	08.2	-22	20.2	46	16.2	-5	56.0	8	43.1	+9	24.0	355	34.1	+12	44.9
19	49	24.0	138	07.3		20.3	61	16.9		55.2	23	45.3		24.1	10	36.5		44.9
20	64	26.5	153	06.5		20.4	76	17.6		54.4	38	47.5		24.2	25	38.9		45.0
21	79	28.9	168	05.6		20.5	91	18.3		53.7	53	49.7		24.4	40	41.3		45.0
22	94	31.4	183	04.8		20.6	106	19.0		52.9	68	51.9		24.5	55	43.7		45.0
23	109	33.9	198	03.9		20.7	121	19.7		52.1	83	54.1		24.6	70	46.2		45.1
24	124	36.3	213	03.1	-22	20.7	136	20.4	-5	51.3	98	56.3	+9	24.7	85	48.6	+12	45.1
Dif	—		-9	-1			+7	+8			+22	+1			+24			

UT	SOL		LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16 ^h 2		Edad: 19 ^d 2 PHE { 4 ^h : 56 ^m 8 12 ^h : 56 ^m 5 20 ^h : 56 ^m 2												
	PMG: 12 ^h 12 ^m 4		SD: 15 ^h 5 PMG: 4 ^h 27 ^m R°: 46 ^m												
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m		
0	176	55.5	-18 56.2		295	12.3	+1 09.1	60 N	15 57	16 46	17 38	23 26 78	10 32 12		
1	191	55.3		55.6	309	44.2 ¹²⁹	+0 57.4 ¹¹⁷	58	16 08	16 54	43	24 75	32 15		
2	206	55.2		55.0	324	16.3 ¹³¹	45.8 ¹¹⁶	56	19	17 01	47	23 72	33 17		
3	221	55.1		54.4	338	48.3 ¹³⁰	34.2 ¹¹⁶	54	28	07	51	21 71	33 19		
4	236	54.9		53.7	353	20.5 ¹³²	22.6 ¹¹⁶	52	36	13	55	20 68	33 21		
5	251	54.8	-18 53.1		7	52.6 ¹³¹	+0 11.0 ¹¹⁶	50	16 43	17 19	17 58	23 19 66	10 34 22		
6	266	54.6	-18 52.5		22	24.8 ¹³²	-0 00.6 ¹¹⁶	45	16 58	17 30	18 06	23 16 63	10 35 26		
7	281	54.5		51.9	36	57.0 ¹³²	12.2 ¹¹⁶	40	17 11	40	13	14 60	35 29		
8	296	54.3		51.3	51	29.3 ¹³³	23.7 ¹¹⁵	35	22	49	19	12 57	36 31		
9	311	54.2		50.6	66	01.6 ¹³³	35.3 ¹¹⁶	30	31	17 57	26	10 55	36 34		
10	326	54.1		50.0	80	34.0 ¹³⁴	46.8 ¹¹⁵	20	17 48	18 11	38	07 51	37 38		
11	341	53.9	-18 49.4		95	06.4 ¹³⁴	-0 58.3 ¹¹⁵	10 N	18 02	18 24	18 50	23 04 48	10 38 41		
12	356	53.8	-18 48.8		109	38.8 ¹³⁴	-1 09.8 ¹¹⁵	0	18 16	18 38	19 03	23 02 44	10 38 45		
13	11	53.7		48.1	124	11.3 ¹³⁵	21.2 ¹¹⁴	10 S	30	18 52	18	23 00 41	39 48		
14	26	53.5		47.5	138	43.8 ¹³⁵	32.6 ¹¹⁴	20	18 45	19 08	36	22 57 38	40 52		
15	41	53.4		46.9	153	16.3 ¹³⁵	44.1 ¹¹⁵	30	19 02	28	19 59	54 34	41 56		
16	56	53.2		46.3	167	48.9 ¹³⁶	-1 55.4 ¹¹³	35	12	40	20 14	53 31	41 58		
17	71	53.1	-18 45.6		182	21.5 ¹³⁶	-2 06.8 ¹¹⁴	40	19 23	19 54	20 32	22 51 29	10 41 62		
18	86	53.0	-18 45.0		196	54.1 ¹³⁶	-2 18.2 ¹¹⁴	45	19 37	20 11	20 54	22 49 26	10 42 64		
19	101	52.8		44.4	211	26.8 ¹³⁷	29.5 ¹¹³	50	19 54	33	21 25	47 22	43 68		
20	116	52.7		43.7	225	59.5 ¹³⁷	40.8 ¹¹³	52	20 02	44	21 41	45 21	43 70		
21	131	52.6		43.1	240	32.2 ¹³⁷	-2 52.0 ¹¹²	54	11	20 56	22 01	44 19	43 72		
22	146	52.4		42.5	255	04.9 ¹³⁷	-3 03.3 ¹¹³	56	21	21 10	22 26	43 17	44 74		
23	161	52.3		41.8	269	37.7 ¹³⁸	14.5 ¹¹²	58	32	27	23 04	41 15	44 76		
24	176	52.2	-18 41.2		284	10.5 ¹³⁸	-3 25.7 ¹¹²	60 S	20 45	21 48	** **	22 40 12	10 45 79		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 15 ^h 39 ^m 0		Mag: -4.0 PMG: 9 ^h 48 ^m			Mag: +1.2 PMG: 14 ^h 54 ^m			Mag: -2.4 PMG: 17 ^h 22 ^m			Mag: +0.3 PMG: 18 ^h 14 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	124	36.3	213 03.1	-22 20.7		136 20.4	-5 51.3		98 56.3	+9 24.7		85 48.6	+12 45.1		
1	139	38.8	228 02.2		20.8	151 21.1	50.5		113 58.5	24.8		100 51.0	45.1		
2	154	41.3	243 01.4		20.9	166 21.8	49.8		129 00.7	24.9		115 53.4	45.2		
3	169	43.7	258 00.5		21.0	181 22.5	49.0		144 02.9	25.0		130 55.8	45.2		
4	184	46.2	272 59.7		21.1	196 23.1	48.2		159 05.1	25.2		145 58.2	45.2		
5	199	48.7	287 58.8	-22 21.2		211 23.8	-5 47.4		174 07.3	+9 25.3		161 00.6	+12 45.2		
6	214	51.1	302 58.0	-22 21.3		226 24.5	-5 46.6		189 09.5	+9 25.4		176 03.0	+12 45.3		
7	229	53.6	317 57.1		21.3	241 25.2	45.9		204 11.7	25.5		191 05.4	45.3		
8	244	56.1	332 56.2		21.4	256 25.9	45.1		219 13.9	25.6		206 07.8	45.3		
9	259	58.5	347 55.4		21.5	271 26.6	44.3		234 16.1	25.7		221 10.2	45.4		
10	275	01.0	2 54.5		21.6	286 27.3	43.5		249 18.2	25.9		236 12.6	45.4		
11	290	03.4	17 53.7	-22 21.6		301 28.0	-5 42.7		264 20.4	+9 26.0		251 15.0	+12 45.4		
12	305	05.9	32 52.8	-22 21.7		316 28.7	-5 42.0		279 22.6	+9 26.1		266 17.4	+12 45.5		
13	320	08.4	47 52.0		21.8	331 29.4	41.2		294 24.8	26.2		281 19.8	45.5		
14	335	10.8	62 51.1		21.9	346 30.1	40.4		309 27.0	26.3		296 22.2	45.5		
15	350	13.3	77 50.3		21.9	1 30.8	39.6		324 29.2	26.4		311 24.6	45.6		
16	5 15.8	92 49.4		22.0		16 31.5	38.8		339 31.4	26.5		326 27.0	45.6		
17	20 18.2	107 48.5	-22 22.1		31 32.2	-5 38.1			354 33.6	+9 26.7		341 29.4	+12 45.6		
18	35 20.7	122 47.7	-22 22.1		46 32.9	-5 37.3			9 35.8	+9 26.8		356 31.8	+12 45.7		
19	50 23.2	137 46.8		22.2	61 33.6	36.5			24 38.0	26.9		11 34.2	45.7		
20	65 25.6	152 46.0		22.3	76 34.3	35.7			39 40.2	27.0		26 36.6	45.7		
21	80 28.1	167 45.1		22.3	91 35.0	34.9			54 42.3	27.1		41 39.0	45.8		
22	95 30.5	182 44.3		22.4	106 35.7	34.1			69 44.5	27.2		56 41.4	45.8		
23	110 33.0	197 43.4		22.5	121 36.4	33.4			84 46.7	27.4		71 43.8	45.8		
24	125 35.5	212 42.6	-22 22.5		136 37.0	-5 32.6			99 48.9	+9 27.5		86 46.2	+12 45.9		
Dif	—		-9		-1	+7	+8		+22	+1		+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 6				Edad: 20 ^d 2 PHE { 4 ^h : 56'0 12 ^h : 55'7 20 ^h : 55'5 SD: 15'3 PMG: 5 ^h 13 ^m R°: 44 ^m																	
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°						
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	h	m			
0	176	52.2	-18	41.2	284	10.5	-3	25.7	60 N	6 46	7 38	8 27	** ** *			10 44	13					
1	191	52.0		40.6	298	43.3 ¹³⁸		36.8 ¹¹¹	58	41	30	15	** ** *			47	16					
2	206	51.9		40.0	313	16.2 ¹³⁹		47.9 ¹¹¹	56	37	23	8 05	** ** *			50	18					
3	221	51.8		39.3	327	49.1 ¹³⁹	-3	59.0 ¹¹¹	54	33	17	7 56	** ** *			52	20					
4	236	51.6		38.7	342	21.9 ¹³⁸	-4	10.1 ¹¹¹	52	30	11	48	** ** *			54	22					
5	251	51.5	-18	38.0	356	54.9 ¹⁴⁰	-4	21.1 ¹¹⁰	50	6 26	7 06	7 41	** ** *			10 56	23					
6	266	51.4	-18	37.4	11	27.8 ¹³⁹	-4	32.1 ¹¹⁰	45	6 19	6 54	7 26	** ** *			11 01	26					
7	281	51.2		36.8	26	00.7 ¹³⁹		43.1 ¹¹⁰	40	12	44	13	** ** *			04	30					
8	296	51.1		36.1	40	33.7 ¹⁴⁰	-4	54.0 ¹⁰⁹	35	6 05	36	7 03	** ** *			07	32					
9	311	51.0		35.5	55	06.7 ¹⁴⁰	-5	04.9 ¹⁰⁹	30	5 59	28	6 53	** ** *			10	34					
10	326	50.8		34.9	69	39.7 ¹⁴⁰		15.8 ¹⁰⁹	20	47	14	37	23 58 51			15	38					
11	341	50.7	-18	34.2	84	12.7 ¹⁴⁰	-5	26.6 ¹⁰⁸	10 N	5 35	6 01	6 23	23 52 47			11 19	42					
12	356	50.6	-18	33.6	98	45.8 ¹⁴¹	-5	37.4 ¹⁰⁸	0	5 22	5 47	6 09	23 46 45			11 23	45					
13	11	50.5		32.9	113	18.8 ¹⁴⁰		48.2 ¹⁰⁸	10 S	5 07	33	5 55	41 41			27	48					
14	26	50.3		32.3	127	51.9 ¹⁴¹	-5	58.9 ¹⁰⁷	20	4 49	5 17	41	35 38			32	51					
15	41	50.2		31.7	142	25.0 ¹⁴¹	-6	09.6 ¹⁰⁷	30	26	4 57	24	28 35			37	54					
16	56	50.1		31.0	156	58.1 ¹⁴¹		20.2 ¹⁰⁶	35	4 11	46	14	24 33			39	57					
17	71	49.9	-18	30.4	171	31.2 ¹⁴¹	-6	30.8 ¹⁰⁶	40	3 54	4 31	5 02	23 20 30			11 43	59					
18	86	49.8	-18	29.7	186	04.3 ¹⁴¹	-6	41.4 ¹⁰⁶	45	3 31	4 14	4 48	23 15 27			11 46	63					
19	101	49.7		29.1	200	37.4 ¹⁴¹	-6	51.9 ¹⁰⁵	50	3 00	3 53	32	09 24			51	66					
20	116	49.6		28.5	215	10.6 ¹⁴²	-7	02.4 ¹⁰⁵	52	2 44	42	24	06 23			53	68					
21	131	49.4		27.8	229	43.7 ¹⁴¹		12.8 ¹⁰⁴	54	2 25	30	15	03 21			55	70					
22	146	49.3		27.2	244	16.9 ¹⁴²		23.2 ¹⁰⁴	56	1 59	3 16	4 05	23 00 19			11 58	71					
23	161	49.2		26.5	258	50.0 ¹⁴¹		33.6 ¹⁰⁴	58	1 22	2 59	3 54	22 56 17			12 00	74					
24	176	49.0	-18	25.9	273	23.2 ¹⁴²	-7	43.9 ¹⁰³	60 S	** ** *	2 38	3 41	22 52 14			12 04	76					
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO							
	PMG 15 ^h 35 ^m 1		Mag: -4.0 PMG: 9 ^h 50 ^m				Mag: +1.2 PMG: 14 ^h 53 ^m				Mag: -2.4 PMG: 17 ^h 18 ^m				Mag: +0.3 PMG: 18 ^h 10 ^m							
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	125	35.5	212	42.6	-22	22.5	136	37.0	-5	32.6	99	48.9	+9	27.5	86	46.2	+12	45.9				
1	140	37.9	227	41.7		22.6	151	37.7		31.8	114	51.1		27.6	101	48.6		45.9				
2	155	40.4	242	40.8		22.7	166	38.4		31.0	129	53.3		27.7	116	51.0		45.9				
3	170	42.9	257	40.0		22.7	181	39.1		30.2	144	55.5		27.8	131	53.4		46.0				
4	185	45.3	272	39.1		22.8	196	39.8		29.5	159	57.7		27.9	146	55.8		46.0				
5	200	47.8	287	38.3	-22	22.8	211	40.5	-5	28.7	174	59.8	+9	28.1	161	58.2	+12	46.0				
6	215	50.3	302	37.4	-22	22.9	226	41.2	-5	27.9	190	02.0	+9	28.2	177	00.6	+12	46.1				
7	230	52.7	317	36.6		22.9	241	41.9		27.1	205	04.2		28.3	192	03.0		46.1				
8	245	55.2	332	35.7		23.0	256	42.6		26.3	220	06.4		28.4	207	05.4		46.1				
9	260	57.7	347	34.8		23.0	271	43.3		25.5	235	08.6		28.5	222	07.8		46.2				
10	276	00.1	2	34.0		23.1	286	44.0		24.8	250	10.8		28.6	237	10.2		46.2				
11	291	02.6	17	33.1	-22	23.1	301	44.7	-5	24.0	265	13.0	+9	28.8	252	12.6	+12	46.2				
12	306	05.0	32	32.3	-22	23.2	316	45.4	-5	23.2	280	15.2	+9	28.9	267	15.0	+12	46.3				
13	321	07.5	47	31.4		23.2	331	46.1		22.4	295	17.3		29.0	282	17.4		46.3				
14	336	10.0	62	30.6		23.3	346	46.8		21.6	310	19.5		29.1	297	19.8		46.3				
15	351	12.4	77	29.7		23.3	1	47.5		20.8	325	21.7		29.2	312	22.2		46.4				
16	6	14.9	92	28.8		23.4	16	48.2		20.1	340	23.9		29.3	327	24.6		46.4				
17	21	17.4	107	28.0	-22	23.4	31	48.9	-5	19.3	355	26.1	+9	29.5	342	27.0	+12	46.4				
18	36	19.8	122	27.1	-22	23.4	46	49.6	-5	18.5	10	28.3	+9	29.6	357	29.4	+12	46.5				
19	51	22.3	137	26.3		23.5	61	50.3		17.7	25	30.4		29.7	12	31.8		46.5				
20	66	24.8	152	25.4		23.5	76	51.0		16.9	40	32.6		29.8	27	34.2		46.5				
21	81	27.2	167	24.5		23.6	91	51.7		16.1	55	34.8		29.9	42	36.6		46.6				
22	96	29.7	182	23.7		23.6	106	52.4		15.4	70	37.0		30.1	57	39.0		46.6				
23	111	32.2	197	22.8		23.6	121	53.1		14.6	85	39.2		30.2	72	41.4		46.6				
24	126	34.6	212	22.0	-22	23.7	136	53.8	-5	13.8	100	41.4	+9	30.3	87	43.8	+12	46.7				
Dif	—		-9				+7				+22				+1				+24			
			0																0			

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16:2 PMG: 12 ^h 12 ^m 8			Edad: 21 ^d 2 PHE { 4 ^h : 55:3 12 ^h : 55:1 20 ^h : 54:9 PMG: 5 ^h 57 ^m R°: 44 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	m	h m	m	
0	176	49.0	-18	25.9	273	23.2	-7	43.9	60 N	16 02	16 51	17 42	0 44	76	10 57	15
1	191	48.9		25.2	287	56.4 ¹⁴²	-7	54.2 ¹⁰³	58	13	16 58	47	39	73	11 03	17
2	206	48.8		24.6	302	29.5 ¹⁴¹	-8	04.4 ¹⁰²	56	23	17 05	51	35	71	08	19
3	221	48.7		23.9	317	02.7 ¹⁴²		14.6 ¹⁰²	54	32	11	54	32	68	12	22
4	236	48.5		23.3	331	35.9 ¹⁴²		24.7 ¹⁰¹	52	39	17	58	28	67	16	23
5	251	48.4	-18	22.6	346	09.1 ¹⁴²	-8	34.8 ¹⁰¹	50	16 46	17 22	18 01	0 25	66	11 19	25
6	266	48.3	-18	22.0	0	42.3 ¹⁴²	-8	44.9 ¹⁰¹	45	17 01	17 33	18 08	0 19	62	11 27	28
7	281	48.2		21.3	15	15.5 ¹⁴²	-8	54.9 ¹⁰⁰	40	13	42	15	14	58	34	31
8	296	48.1		20.7	29	48.7 ¹⁴²	-9	04.8 ⁹⁹	35	24	51	21	09	56	39	33
9	311	47.9		20.0	44	21.8 ¹⁴¹		14.7 ⁹⁹	30	33	17 58	27	0 05	54	44	35
10	326	47.8		19.4	58	55.0 ¹⁴²		24.6 ⁹⁹	20	17 49	18 12	39	** ** *		11 53	39
11	341	47.7	-18	18.7	73	28.2 ¹⁴²	-9	34.4 ⁹⁸	10 N	18 03	18 25	18 51	** ** *		12 01	41
12	356	47.6	-18	18.1	88	01.4 ¹⁴²	-9	44.1 ⁹⁷	0	18 16	18 38	19 03	** ** *		12 08	44
13	11	47.4		17.4	102	34.6 ¹⁴²	-9	53.8 ⁹⁷	10 S	30	18 52	18	** ** *		15	47
14	26	47.3		16.8	117	07.8 ¹⁴²	-10	03.5 ⁹⁷	20	18 44	19 08	36	** ** *		23	50
15	41	47.2		16.1	131	40.9 ¹⁴¹		13.1 ⁹⁶	30	19 01	27	19 58	** ** *		31	54
16	56	47.1		15.5	146	14.1 ¹⁴²		22.6 ⁹⁵	35	11	38	20 12	23 57	34	36	56
17	71	47.0	-18	14.8	160	47.2 ¹⁴¹	-10	32.1 ⁹⁵	40	19 22	19 52	20 30	23 50	32	12 42	58
18	86	46.8	-18	14.1	175	20.4 ¹⁴²	-10	41.6 ⁹⁵	45	19 35	20 09	20 52	23 42	29	12 49	61
19	101	46.7		13.5	189	53.5 ¹⁴¹	-10	51.0 ⁹⁴	50	51	30	21 21	33	26	12 57	64
20	116	46.6		12.8	204	26.7 ¹⁴²	-11	00.3 ⁹³	52	19 59	40	37	29	24	13 01	66
21	131	46.5		12.2	218	59.8 ¹⁴¹		09.6 ⁹³	54	20 07	20 52	21 55	24	23	05	68
22	146	46.4		11.5	233	32.9 ¹⁴¹		18.9 ⁹³	56	17	21 06	22 19	19	21	09	70
23	161	46.2		10.9	248	06.0 ¹⁴¹		28.0 ⁹¹	58	28	22	22 52	13	19	14	72
24	176	46.1	-18	10.2	262	39.1 ¹⁴¹	-11	37.2 ⁹²	60 S	20 40	21 41	** ** *	23 06	17	13 20	75
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 15 ^h 31 ^m 1		Mag: -4.0 PMG: 9 ^h 51 ^m		Mag: +1.2 PMG: 14 ^h 52 ^m		Mag: -2.4 PMG: 17 ^h 15 ^m		Mag: +0.3 PMG: 18 ^h 06 ^m							
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'						
0	126	34.6	212	22.0	136	53.8	-5	13.8	100	41.4						
1	141	37.1	227	21.1	151	54.5		13.0	115	43.5						
2	156	39.5	242	20.3	166	55.2		12.2	130	45.7						
3	171	42.0	257	19.4	181	55.9		11.4	145	47.9						
4	186	44.5	272	18.5	196	56.6		10.7	160	50.1						
5	201	46.9	287	17.7	211	57.3	-5	09.9	175	52.3						
6	216	49.4	302	16.8	226	58.0	-5	09.1	190	54.4						
7	231	51.9	317	16.0	241	58.7		08.3	205	56.6						
8	246	54.3	332	15.1	256	59.4		07.5	220	58.8						
9	261	56.8	347	14.2	272	00.1		06.7	236	01.0						
10	276	59.3	2	13.4	287	00.8		06.0	251	03.2						
11	292	01.7	17	12.5	302	01.5	-5	05.2	266	05.3						
12	307	04.2	32	11.7	317	02.2	-5	04.4	281	07.5						
13	322	06.6	47	10.8	332	02.9		03.6	296	09.7						
14	337	09.1	62	09.9	347	03.6		02.8	311	11.9						
15	352	11.6	77	09.1	2	04.3		02.0	326	14.1						
16	7	14.0	92	08.2	17	05.0		01.3	341	16.2						
17	22	16.5	107	07.4	32	05.7	-5	00.5	356	18.4						
18	37	19.0	122	06.5	47	06.4	-4	59.7	11	20.6						
19	52	21.4	137	05.6	62	07.1		58.9	26	22.8						
20	67	23.9	152	04.8	77	07.8		58.1	41	24.9						
21	82	26.4	167	03.9	92	08.5		57.3	56	27.1						
22	97	28.8	182	03.1	107	09.2		56.6	71	29.3						
23	112	31.3	197	02.2	122	09.9		55.8	86	31.5						
24	127	33.8	212	01.3	137	10.6	-4	55.0	101	33.6						
Dif	—		-9		0		+7		+22							
							+8		+1							
									+24							
									0							

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'2 PMG: 12 ^h 13 ^m 0			Edad: 22 ^d 2 PHE { 4 ^h : 54'7 12 ^h : 54'6 20 ^h : 54'4 PMG: 6 ^h 41 ^m R°: 45 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	176	46.1	-18	10.2	262	39.1	-11 37.2	60 N	6 43	7 34	8 22	2 00	73	11 12	19
1	191	46.0		09.5	277	12.2 ¹⁴¹	46.2 90	58	38	26	11	1 52	71	20	21
2	206	45.9		08.9	291	45.3 ¹⁴¹	-11 55.2 90	56	34	20	8 02	46	69	27	23
3	221	45.8		08.2	306	18.4 ¹⁴¹	-12 04.2 90	54	31	14	7 53	40	67	33	25
4	236	45.7		07.6	320	51.4 ¹⁴⁰	13.1 89	52	27	08	46	35	65	39	27
5	251	45.5	-18	06.9	335	24.5 ¹⁴¹	-12 21.9 88	50	6 24	7 03	7 39	1 31	63	11 44	28
6	266	45.4	-18	06.2	349	57.5 ¹⁴⁰	-12 30.7 88	45	6 17	6 52	7 24	1 21	60	11 55	31
7	281	45.3		05.6	4	30.5 ¹⁴⁰	39.4 87	40	10	43	12	12	58	12 05	33
8	296	45.2		04.9	19	03.5 ¹⁴⁰	48.1 87	35	6 04	35	7 01	1 05	56	12	36
9	311	45.1		04.2	33	36.5 ¹⁴⁰	-12 56.7 86	30	5 58	27	6 52	0 59	54	19	38
10	326	45.0		03.6	48	09.5 ¹⁴⁰	-13 05.2 85	20	47	13	37	49	50	32	40
11	341	44.9	-18	02.9	62	42.4 ¹³⁹	-13 13.7 85	10 N	5 35	6 01	6 23	0 39	48	12 42	43
12	356	44.7	-18	02.2	77	15.4 ¹⁴⁰	-13 22.1 84	0	5 22	5 48	6 09	0 31	44	12 52	45
13	11	44.6		01.6	91	48.3 ¹³⁹	30.5 84	10 S	5 08	34	5 56	22	42	13 02	48
14	26	44.5		00.9	106	21.2 ¹³⁹	38.8 83	20	4 51	5 18	42	13	39	13	50
15	41	44.4	-18	00.2	120	54.1 ¹³⁹	47.0 82	30	28	4 59	25	0 03	36	25	53
16	56	44.3	-17	59.6	135	26.9 ¹³⁸	-13 55.2 82	35	4 14	48	16	** ** *	**	32	55
17	71	44.2	-17	58.9	149	59.8 ¹³⁹	-14 03.3 81	40	3 57	4 34	5 04	** ** *	**	13	40
18	86	44.1	-17	58.2	164	32.6 ¹³⁸	-14 11.3 80	45	3 35	4 17	4 51	** ** *	**	13	50
19	101	44.0		57.6	179	05.4 ¹³⁸	19.3 80	50	3 05	3 56	35	23	59	30	14
20	116	43.8		56.9	193	38.2 ¹³⁸	27.2 79	52	2 50	46	28	53	29	07	64
21	131	43.7		56.2	208	11.0 ¹³⁸	35.0 78	54	31	34	19	47	27	13	65
22	146	43.6		55.5	222	43.7 ¹³⁷	42.8 78	56	2 08	21	4 10	40	25	19	68
23	161	43.5		54.9	237	16.4 ¹³⁷	50.5 77	58	1 34	3 05	3 59	32	23	26	70
24	176	43.4	-17	54.2	251	49.1 ¹³⁷	-14 58.2 77	60 S	** ** *	2 45	3 46	23	23	21	14

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 15 ^h 27 ^m 2		Mag: -3.9 PMG: 9 ^h 52 ^m			Mag: +1.2 PMG: 14 ^h 51 ^m			Mag: -2.4 PMG: 17 ^h 11 ^m			Mag: +0.3 PMG: 18 ^h 02 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	127	33.8	212	01.3	-22 24.1	137	10.6	-4 55.0	101	33.6	+9 33.2	88	41.3	+12 47.5
1	142	36.2	227	00.5	24.1	152	11.3	54.2	116	35.8	33.3	103	43.7	47.5
2	157	38.7	241	59.6	24.1	167	12.0	53.4	131	38.0	33.4	118	46.1	47.6
3	172	41.1	256	58.8	24.1	182	12.7	52.6	146	40.2	33.5	133	48.5	47.6
4	187	43.6	271	57.9	24.1	197	13.4	51.8	161	42.3	33.7	148	50.8	47.7
5	202	46.1	286	57.0	-22 24.1	212	14.1	-4 51.1	176	44.5	+9 33.8	163	53.2	+12 47.7
6	217	48.5	301	56.2	-22 24.1	227	14.8	-4 50.3	191	46.7	+9 33.9	178	55.6	+12 47.7
7	232	51.0	316	55.3	24.1	242	15.5	49.5	206	48.9	34.0	193	58.0	47.8
8	247	53.5	331	54.4	24.1	257	16.2	48.7	221	51.0	34.1	209	00.4	47.8
9	262	55.9	346	53.6	24.1	272	16.9	47.9	236	53.2	34.3	224	02.8	47.8
10	277	58.4	1	52.7	24.1	287	17.6	47.1	251	55.4	34.4	239	05.2	47.9
11	293	00.9	16	51.9	-22 24.1	302	18.3	-4 46.3	266	57.6	+9 34.5	254	07.6	+12 47.9
12	308	03.3	31	51.0	-22 24.1	317	19.0	-4 45.6	281	59.7	+9 34.6	269	10.0	+12 47.9
13	323	05.8	46	50.1	24.1	332	19.7	44.8	297	01.9	34.7	284	12.4	48.0
14	338	08.3	61	49.3	24.1	347	20.4	44.0	312	04.1	34.9	299	14.7	48.0
15	353	10.7	76	48.4	24.1	2	21.1	43.2	327	06.2	35.0	314	17.1	48.1
16	8	13.2	91	47.6	24.1	17	21.8	42.4	342	08.4	35.1	329	19.5	48.1
17	23	15.6	106	46.7	-22 24.1	32	22.5	-4 41.6	357	10.6	+9 35.2	344	21.9	+12 48.1
18	38	18.1	121	45.8	-22 24.0	47	23.2	-4 40.9	12	12.8	+9 35.4	359	24.3	+12 48.2
19	53	20.6	136	45.0	24.0	62	23.9	40.1	27	14.9	35.5	14	26.7	48.2
20	68	23.0	151	44.1	24.0	77	24.6	39.3	42	17.1	35.6	29	29.1	48.2
21	83	25.5	166	43.2	24.0	92	25.3	38.5	57	19.3	35.7	44	31.5	48.3
22	98	28.0	181	42.4	24.0	107	26.0	37.7	72	21.4	35.9	59	33.9	48.3
23	113	30.4	196	41.5	24.0	122	26.7	36.9	87	23.6	36.0	74	36.2	48.4
24	128	32.9	211	40.7	-22 23.9	137	27.4	-4 36.1	102	25.8	+9 36.1	89	38.6	+12 48.4
Dif	—		-9	0		+7	+8		+22	+1		+24		

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:2			Edad: 23 ^d 2	PHE { 4 ^h : 54:3 12 ^h : 54:2 20 ^h : 54:2	Civil			Hora		Hora				
	PMG: 12 ^h 13 ^m 2					Dec			R°		R°				
	hG ☉	Dec		hG ☾	Dif	Dec	Dif								
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	h m	m
0	176	43.4	-17 54.2	251	49.1	-14 58.2	75	60 N	16 07	16 55	17 47	3 13	71	11 31	23
1	191	43.3	53.5	266	21.8 ¹³⁷	-15 05.7	75	58	18	17 02	51	3 03	68	41	26
2	206	43.2	52.8	280	54.5 ¹³⁷	13.2	75	56	27	09	54	2 55	66	50	28
3	221	43.1	52.2	295	27.1 ¹³⁶	20.7	75	54	35	15	17 58	47	64	11 58	30
4	236	43.0	51.5	309	59.7 ¹³⁶	28.1	74	52	43	20	18 01	40	63	12 06	31
5	251	42.9	-17 50.8	324	32.3 ¹³⁶	-15 35.3	72	50	16 50	17 25	18 04	2 34	61	12 12	32
6	266	42.8	-17 50.1	339	04.9 ¹³⁶	-15 42.6	73	45	17 04	17 35	18 11	2 21	58	12 26	35
7	281	42.7	49.5	353	37.4 ¹³⁵	49.7	71	40	16	45	17	10	56	38	37
8	296	42.5	48.8	8	09.9 ¹³⁵	-15 56.8	71	35	26	17 53	23	2 01	54	48	38
9	311	42.4	48.1	22	42.4 ¹³⁵	-16 03.8	70	30	35	18 00	29	1 53	53	12 57	39
10	326	42.3	47.4	37	14.9 ¹³⁵	10.8	70	20	17 50	13	40	39	50	13 12	42
11	341	42.2	-17 46.7	51	47.3 ¹³⁴	-16 17.7	69	10 N	18 04	18 26	18 51	1 27	48	13 25	44
12	356	42.1	-17 46.1	66	19.7 ¹³⁴	-16 24.5	68	0	18 17	18 38	19 04	1 15	46	13 37	47
13	11	42.0	45.4	80	52.1 ¹³⁴	31.2	67	10 S	30	18 52	18	1 04	44	13 50	48
14	26	41.9	44.7	95	24.5 ¹³⁴	37.8	66	20	18 44	19 07	35	0 52	41	14 03	50
15	41	41.8	44.0	109	56.8 ¹³³	44.4	66	30	19 00	26	19 57	39	38	18	53
16	56	41.7	43.3	124	29.1 ¹³³	50.9	65	35	09	37	20 10	31	37	27	54
17	71	41.6	-17 42.7	139	01.4 ¹³³	-16 57.3	64	40	19 20	19 50	20 27	0 22	35	14 37	56
18	86	41.5	-17 42.0	153	33.6 ¹³²	-17 03.7	64	45	19 33	20 06	20 49	0 11	33	14 49	58
19	101	41.4	41.3	168	05.9 ¹³³	10.0	63	50	48	27	21 17	** ** *	**	15 04	60
20	116	41.3	40.6	182	38.1 ¹³²	16.2	62	52	19 56	37	32	** ** *	**	11	61
21	131	41.2	39.9	197	10.2 ¹³¹	22.3	61	54	20 04	20 48	21 49	** ** *	**	18	63
22	146	41.1	39.2	211	42.4 ¹³²	28.3	60	56	13	21 01	22 11	** ** *	**	27	64
23	161	41.0	38.6	226	14.5 ¹³¹	34.3	60	58	24	16	22 41	23 55	29	36	66
24	176	40.9	-17 37.9	240	46.6 ¹³¹	-17 40.2	59	60 S	20 36	21 35	23 36	23 44	27	15 47	68

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 15 ^h 23 ^m 3		Mag: -3.9 PMG: 9 ^h 54 ^m		Mag: +1.2 PMG: 14 ^h 49 ^m		Mag: -2.4 PMG: 17 ^h 08 ^m		Mag: +0.3 PMG: 17 ^h 59 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	128	32.9	211 40.7	-22 23.9	137 27.4	-4 36.1	102 25.8	+9 36.1	89 38.6	+12 48.4
1	143	35.4	226 39.8	23.9	152 28.1	35.4	117 27.9	36.2	104 41.0	48.4
2	158	37.8	241 38.9	23.9	167 28.8	34.6	132 30.1	36.3	119 43.4	48.5
3	173	40.3	256 38.1	23.9	182 29.5	33.8	147 32.3	36.5	134 45.8	48.5
4	188	42.7	271 37.2	23.8	197 30.3	33.0	162 34.5	36.6	149 48.2	48.5
5	203	45.2	286 36.4	-22 23.8	212 31.0	-4 32.2	177 36.6	+9 36.7	164 50.6	+12 48.6
6	218	47.7	301 35.5	-22 23.8	227 31.7	-4 31.4	192 38.8	+9 36.8	179 53.0	+12 48.6
7	233	50.1	316 34.6	23.7	242 32.4	30.6	207 41.0	37.0	194 55.3	48.6
8	248	52.6	331 33.8	23.7	257 33.1	29.9	222 43.1	37.1	209 57.7	48.7
9	263	55.1	346 32.9	23.7	272 33.8	29.1	237 45.3	37.2	225 00.1	48.7
10	278	57.5	1 32.0	23.7	287 34.5	28.3	252 47.5	37.3	240 02.5	48.8
11	294	00.0	16 31.2	-22 23.6	302 35.2	-4 27.5	267 49.6	+9 37.5	255 04.9	+12 48.8
12	309	02.5	31 30.3	-22 23.6	317 35.9	-4 26.7	282 51.8	+9 37.6	270 07.3	+12 48.8
13	324	04.9	46 29.5	23.5	332 36.6	25.9	297 54.0	37.7	285 09.7	48.9
14	339	07.4	61 28.6	23.5	347 37.3	25.1	312 56.1	37.8	300 12.0	48.9
15	354	09.9	76 27.7	23.5	2 38.0	24.3	327 58.3	38.0	315 14.4	49.0
16	9	12.3	91 26.9	23.4	17 38.7	23.6	343 00.5	38.1	330 16.8	49.0
17	24	14.8	106 26.0	-22 23.4	32 39.4	-4 22.8	358 02.6	+9 38.2	345 19.2	+12 49.0
18	39	17.2	121 25.1	-22 23.3	47 40.1	-4 22.0	13 04.8	+9 38.3	0 21.6	+12 49.1
19	54	19.7	136 24.3	23.3	62 40.8	21.2	28 06.9	38.4	15 24.0	49.1
20	69	22.2	151 23.4	23.3	77 41.5	20.4	43 09.1	38.6	30 26.4	49.1
21	84	24.6	166 22.6	23.2	92 42.2	19.6	58 11.3	38.7	45 28.7	49.2
22	99	27.1	181 21.7	23.2	107 42.9	18.8	73 13.4	38.8	60 31.1	49.2
23	114	29.6	196 20.8	23.1	122 43.6	18.1	88 15.6	38.9	75 33.5	49.3
24	129	32.0	211 20.0	-22 23.1	137 44.3	-4 17.3	103 17.8	+9 39.1	90 35.9	+12 49.3
Dif	—		-9	0	+7	+8	+22	+1	+24	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 4			Edad: 24 ^d 2 PHE { 4 ^h : 54'1 12 ^h : 54'1 20 ^h : 54'1 PMG: 8 ^h 12 ^m R°: 47 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	176	40.9	-17	37.9	240	46.6	-17	40.2	60 N	6 39	7 30	8 18	4 24	65	11 54	32
1	191	40.8		37.2	255	18.6 ¹³⁰		46.0 ⁵⁸	58	35	23	8 07	11 64		12 07	33
2	206	40.7		36.5	269	50.7 ¹³¹		51.7 ⁵⁷	56	31	17	7 58	4 01	62	18	35
3	221	40.6		35.8	284	22.7 ¹³⁰	-17	57.4 ⁵⁷	54	28	11	50	3 51	61	28	36
4	236	40.5		35.1	298	54.6 ¹²⁹	-18	03.0 ⁵⁶	52	25	06	43	43	59	37	37
5	251	40.4	-17	34.4	313	26.6 ¹³⁰	-18	08.5 ⁵⁵	50	6 22	7 01	7 36	3 35	59	12 44	38
6	266	40.3	-17	33.7	327	58.5 ¹²⁹	-18	13.9 ⁵⁴	45	6 15	6 50	7 22	3 19	57	13 01	40
7	281	40.2		33.0	342	30.4 ¹²⁹		19.2 ⁵³	40	09	41	10	3 06	55	15	41
8	296	40.1		32.4	357	02.3 ¹²⁹		24.5 ⁵³	35	6 03	33	7 00	2 55	53	26	42
9	311	40.0		31.7	11	34.1 ¹²⁸		29.6 ⁵¹	30	5 57	26	6 51	46	52	36	44
10	326	39.9		31.0	26	05.9 ¹²⁸		34.7 ⁵¹	20	46	13	36	29	50	13 54	45
11	341	39.8	-17	30.3	40	37.7 ¹²⁸	-18	39.7 ⁵⁰	10 N	5 35	6 01	6 23	2 15	48	14 09	46
12	356	39.7	-17	29.6	55	09.4 ¹²⁷	-18	44.6 ⁴⁹	0	5 23	5 48	6 10	2 01	47	14 24	47
13	11	39.6		28.9	69	41.1 ¹²⁷		49.5 ⁴⁹	10 S	5 09	35	5 57	1 48	45	38	48
14	26	39.5		28.2	84	12.8 ¹²⁷		54.2 ⁴⁷	20	4 52	20	43	33	44	14 53	50
15	41	39.4		27.5	98	44.5 ¹²⁷	-18	58.9 ⁴⁷	30	30	5 01	27	17	42	15 11	51
16	56	39.3		26.8	113	16.1 ¹²⁶	-19	03.5 ⁴⁶	35	16	4 50	18	1 08	40	21	52
17	71	39.2	-17	26.1	127	47.7 ¹²⁶	-19	07.9 ⁴⁴	40	4 00	4 37	5 07	0 57	39	15 33	53
18	86	39.1	-17	25.4	142	19.3 ¹²⁶	-19	12.4 ⁴⁵	45	3 38	4 21	4 54	0 44	37	15 47	54
19	101	39.0		24.7	156	50.9 ¹²⁶		16.7 ⁴³	50	3 10	4 00	39	29	35	16 04	56
20	116	38.9		24.0	171	22.4 ¹²⁵		20.9 ⁴²	52	2 55	3 50	31	22	34	12	57
21	131	38.8		23.3	185	53.9 ¹²⁵		25.1 ⁴²	54	38	39	23	14	32	21	57
22	146	38.8		22.6	200	25.3 ¹²⁴		29.1 ⁴⁰	56	2 16	26	14	0 05	31	31	59
23	161	38.7		21.9	214	56.8 ¹²⁵		33.1 ⁴⁰	58	1 46	3 11	4 04	** ** *	**	42	60
24	176	38.6	-17	21.2	229	28.2 ¹²⁴	-19	37.0 ³⁹	60 S	0 51	2 52	3 52	** ** *	**	16 55	62

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 15 ^h 19 ^m 3		Mag: -3.9 PMG: 9 ^h 55 ^m		Mag: +1.2 PMG: 14 ^h 48 ^m		Mag: -2.4 PMG: 17 ^h 04 ^m		Mag: +0.3 PMG: 17 ^h 55 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	129	32.0	211	20.0	-22	23.1	137	44.3	-4	17.3	103	17.8	+9	39.1	90	35.9	+12	49.3
1	144	34.5	226	19.1		23.0	152	45.1		16.5	118	19.9		39.2	105	38.3		49.3
2	159	37.0	241	18.2		23.0	167	45.8		15.7	133	22.1		39.3	120	40.7		49.4
3	174	39.4	256	17.4		22.9	182	46.5		14.9	148	24.3		39.4	135	43.0		49.4
4	189	41.9	271	16.5		22.9	197	47.2		14.1	163	26.4		39.6	150	45.4		49.4
5	204	44.4	286	15.7	-22	22.8	212	47.9	-4	13.3	178	28.6	+9	39.7	165	47.8	+12	49.5
6	219	46.8	301	14.8	-22	22.8	227	48.6	-4	12.5	193	30.7	+9	39.8	180	50.2	+12	49.5
7	234	49.3	316	13.9		22.7	242	49.3		11.8	208	32.9		40.0	195	52.6		49.6
8	249	51.7	331	13.1		22.6	257	50.0		11.0	223	35.1		40.1	210	54.9		49.6
9	264	54.2	346	12.2		22.6	272	50.7		10.2	238	37.2		40.2	225	57.3		49.6
10	279	56.7	1	11.3		22.5	287	51.4		09.4	253	39.4		40.3	240	59.7		49.7
11	294	59.1	16	10.5	-22	22.5	302	52.1	-4	08.6	268	41.5	+9	40.5	256	02.1	+12	49.7
12	310	01.6	31	09.6	-22	22.4	317	52.8	-4	07.8	283	43.7	+9	40.6	271	04.5	+12	49.8
13	325	04.1	46	08.8		22.3	332	53.5		07.0	298	45.9		40.7	286	06.9		49.8
14	340	06.5	61	07.9		22.3	347	54.2		06.3	313	48.0		40.8	301	09.2		49.8
15	355	09.0	76	07.0		22.2	2	54.9		05.5	328	50.2		41.0	316	11.6		49.9
16	10	11.5	91	06.2		22.1	17	55.7		04.7	343	52.3		41.1	331	14.0		49.9
17	25	13.9	106	05.3	-22	22.1	32	56.4	-4	03.9	358	54.5	+9	41.2	346	16.4	+12	50.0
18	40	16.4	121	04.5	-22	22.0	47	57.1	-4	03.1	13	56.7	+9	41.3	1	18.8	+12	50.0
19	55	18.8	136	03.6		21.9	62	57.8		02.3	28	58.8		41.5	16	21.1		50.0
20	70	21.3	151	02.7		21.8	77	58.5		01.5	44	01.0		41.6	31	23.5		50.1
21	85	23.8	166	01.9		21.8	92	59.2	-4	00.7	59	03.1		41.7	46	25.9		50.1
22	100	26.2	181	01.0		21.7	107	59.9	-4	00.0	74	05.3		41.8	61	28.3		50.2
23	115	28.7	196	00.1		21.6	123	00.6	-3	59.2	89	07.5		42.0	76	30.7		50.2
24	130	31.2	210	59.3	-22	21.5	138	01.3	-3	58.4	104	09.6	+9	42.1	91	33.0	+12	50.2
Dif	—		-9		+1		+7		+8		+22		+1		+24		0	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 12 ^h 13 ^m 5			Edad: 25 ^d 2 PHE { 4 ^h : 54:1 12 ^h : 54:1 20 ^h : 54:1 SD: 14:7 PMG: 8 ^h 59 ^m R°: 48 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	176	38.6	-17	21.2	229	28.2	-19 37.0	60 N	16 12	17 00	17 51	5 29 58	12 26 41	
1	191	38.5		20.5	243	59.6 ¹²⁴	40.8 38	58	23	07	54	15 57	40 43	
2	206	38.4		19.8	258	30.9 ¹²³	44.5 37	56	32	13	17 58	5 03 55	12 53 43	
3	221	38.3		19.1	273	02.3 ¹²⁴	48.1 36	54	39	18	18 01	4 52 55	13 04 44	
4	236	38.2		18.4	287	33.6 ¹²³	51.6 35	52	47	23	04	42 55	14 44	
5	251	38.1	-17	17.7	302	04.8 ¹²²	-19 55.1 35	50	16 53	17 28	18 07	4 34 54	13 22 45	
6	266	38.0	-17	17.0	316	36.1 ¹²³	-19 58.4 33	45	17 07	17 38	18 13	4 16 52	13 41 45	
7	281	37.9		16.3	331	07.3 ¹²²	-20 01.7 33	40	18	47	19	4 01 52	13 56 46	
8	296	37.8		15.6	345	38.5 ¹²²	04.8 31	35	28	17 55	25	3 48 52	14 08 47	
9	311	37.7		14.9	0	09.7 ¹²²	07.9 31	30	37	18 02	30	38 50	20 46	
10	326	37.7		14.2	14	40.8 ¹²¹	10.9 30	20	17 51	14	41	19 50	39 47	
11	341	37.6	-17	13.5	29	12.0 ¹²²	-20 13.8 29	10 N	18 05	18 27	18 52	3 03 49	14 55 48	
12	356	37.5	-17	12.8	43	43.1 ¹²¹	-20 16.6 28	0	18 17	18 39	19 04	2 48 48	15 11 48	
13	11	37.4		12.1	58	14.1 ¹²⁰	19.3 27	10 S	30	18 52	17	33 47	26 49	
14	26	37.3		11.4	72	45.2 ¹²¹	21.9 26	20	43	19 06	34	2 17 46	15 43 49	
15	41	37.2		10.7	87	16.2 ¹²⁰	24.4 25	30	18 59	24	19 55	1 59 45	16 02 50	
16	56	37.1		10.0	101	47.2 ¹²⁰	26.9 25	35	19 08	35	20 09	48 44	13 50	
17	71	37.0	-17	09.3	116	18.2 ¹²⁰	-20 29.2 23	40	19 18	19 48	20 25	1 36 43	16 26 51	
18	86	37.0	-17	08.5	130	49.1 ¹¹⁹	-20 31.4 22	45	19 31	20 04	20 45	1 21 43	16 41 51	
19	101	36.9		07.8	145	20.1 ¹²⁰	33.6 22	50	46	23	21 13	1 04 41	17 00 51	
20	116	36.8		07.1	159	51.0 ¹¹⁹	35.6 20	52	19 53	33	27	0 56 40	09 51	
21	131	36.7		06.4	174	21.9 ¹¹⁹	37.6 20	54	20 00	44	21 44	46 40	18 52	
22	146	36.6		05.7	188	52.7 ¹¹⁸	39.5 19	56	09	20 56	22 04	36 39	30 52	
23	161	36.5		05.0	203	23.6 ¹¹⁹	41.2 17	58	19	21 11	22 31	24 38	42 53	
24	176	36.4	-17	04.3	217	54.4 ¹¹⁸	-20 42.9 17	60 S	20 31	21 28	23 15	0 11 36	17 57 53	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 15 ^h 15 ^m 4		Mag: -3.9 PMG: 9 ^h 57 ^m		Mag: +1.2 PMG: 14 ^h 47 ^m		Mag: -2.4 PMG: 17 ^h 01 ^m		Mag: +0.3 PMG: 17 ^h 51 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	130	31.2	210	59.3	-22	21.5	138	01.3	-3	58.4
1	145	33.6	225	58.4		21.5	153	02.0		57.6
2	160	36.1	240	57.6		21.4	168	02.7		56.8
3	175	38.6	255	56.7		21.3	183	03.4		56.0
4	190	41.0	270	55.8		21.2	198	04.1		55.2
5	205	43.5	285	55.0	-22	21.1	213	04.9	-3	54.4
6	220	46.0	300	54.1	-22	21.1	228	05.6	-3	53.7
7	235	48.4	315	53.2		21.0	243	06.3		52.9
8	250	50.9	330	52.4		20.9	258	07.0		52.1
9	265	53.3	345	51.5		20.8	273	07.7		51.3
10	280	55.8	0	50.7		20.7	288	08.4		50.5
11	295	58.3	15	49.8	-22	20.6	303	09.1	-3	49.7
12	311	00.7	30	48.9	-22	20.5	318	09.8	-3	48.9
13	326	03.2	45	48.1		20.4	333	10.5		48.1
14	341	05.7	60	47.2		20.3	348	11.2		47.3
15	356	08.1	75	46.3		20.3	3	11.9		46.6
16	11	10.6	90	45.5		20.2	18	12.7		45.8
17	26	13.1	105	44.6	-22	20.1	33	13.4	-3	45.0
18	41	15.5	120	43.8	-22	20.0	48	14.1	-3	44.2
19	56	18.0	135	42.9		19.9	63	14.8		43.4
20	71	20.5	150	42.0		19.8	78	15.5		42.6
21	86	22.9	165	41.2		19.7	93	16.2		41.8
22	101	25.4	180	40.3		19.6	108	16.9		41.0
23	116	27.8	195	39.5		19.5	123	17.6		40.3
24	131	30.3	210	38.6	-22	19.4	138	18.3	-3	39.5
Dif	—		-9		+1		+7		+8	

+22		+1		+24	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16:2 PMG: 12 ^h 13 ^m 6			Edad: 26 ^d 2 PHE { 4 ^h : 54:1 12 ^h : 54:2 20 ^h : 54:3 SD: 14:7 PMG: 9 ^h 47 ^m R°: 49 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	
0	176	36.4	-17	04.3	217	54.4	-20	42.9	16	60 N	6 35	7 26	8 13	6 27	48	13 07	53
1	191	36.4		03.6	232	25.2 ¹¹⁸		44.5	16	58	32	19	8 03	6 12	48	23	52
2	206	36.3		02.9	246	56.0 ¹¹⁸		45.9	14	56	28	13	7 54	5 58	48	36	52
3	221	36.2		02.1	261	26.8 ¹¹⁸		47.3	14	54	25	08	47	47	48	47	52
4	236	36.1		01.4	275	57.5 ¹¹⁷		48.6	13	52	22	7 03	40	37	48	13 58	51
5	251	36.0	-17	00.7	290	28.3 ¹¹⁸	-20	49.8	12	50	6 20	6 58	7 33	5 28	48	14 07	51
6	266	35.9	-17	00.0	304	59.0 ¹¹⁷	-20	50.9	11	45	6 13	6 48	7 20	5 08	49	14 26	51
7	281	35.9	-16	59.3	319	29.7 ¹¹⁷		51.9	10	40	07	40	7 08	4 53	48	42	50
8	296	35.8		58.6	334	00.3 ¹¹⁶		52.8	9	35	6 02	32	6 59	40	48	14 55	50
9	311	35.7		57.8	348	31.0 ¹¹⁷		53.6	8	30	5 57	25	50	28	49	15 06	51
10	326	35.6		57.1	3	01.7 ¹¹⁷		54.3	7	20	46	12	35	4 09	48	26	50
11	341	35.5	-16	56.4	17	32.3 ¹¹⁶	-20	54.9	6	10 N	5 35	6 01	6 22	3 52	48	15 43	50
12	356	35.5	-16	55.7	32	02.9 ¹¹⁶	-20	55.4	5	0	5 23	5 49	6 10	3 36	48	15 59	49
13	11	35.4		55.0	46	33.5 ¹¹⁶		55.8	4	10 S	5 10	36	5 58	20	49	16 15	49
14	26	35.3		54.3	61	04.1 ¹¹⁶		56.1	3	20	4 53	21	44	3 03	49	32	48
15	41	35.2		53.5	75	34.6 ¹¹⁵		56.3	2	30	32	5 03	29	2 44	48	16 52	47
16	56	35.1		52.8	90	05.2 ¹¹⁶		56.4	1	35	19	4 52	20	32	49	17 03	47
17	71	35.1	-16	52.1	104	35.7 ¹¹⁵	-20	56.4	0	40	4 03	4 39	5 09	2 19	49	17 17	46
18	86	35.0	-16	51.4	119	06.3 ¹¹⁶	-20	56.3	1	45	3 42	4 24	4 57	2 04	48	17 32	46
19	101	34.9		50.6	133	36.8 ¹¹⁵		56.1	2	50	15	4 04	42	1 45	48	17 51	45
20	116	34.8		49.9	148	07.3 ¹¹⁵		55.8	3	52	3 01	3 55	35	36	48	18 00	45
21	131	34.8		49.2	162	37.8 ¹¹⁵		55.4	4	54	2 44	44	27	26	48	10	45
22	146	34.7		48.5	177	08.3 ¹¹⁵		55.0	4	56	2 24	32	19	15	48	22	44
23	161	34.6		47.8	191	38.8 ¹¹⁵		54.4	6	58	1 56	3 17	4 09	1 02	48	35	43
24	176	34.5	-16	47.0	206	09.2 ¹¹⁴	-20	53.7	7	60 S	1 13	2 59	3 57	0 47	47	18 50	43

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 15 ^h 11 ^m 5		Mag: -3.9 PMG: 9 ^h 58 ^m		Mag: +1.2 PMG: 14 ^h 46 ^m		Mag: -2.4 PMG: 16 ^h 57 ^m		Mag: +0.3 PMG: 17 ^h 47 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	131	30.3	210	38.6	-22	19.4	105	01.3	+9	45.2
1	146	32.8	225	37.7		19.3	120	03.5		45.3
2	161	35.2	240	36.9		19.1	135	05.6		45.4
3	176	37.7	255	36.0		19.0	150	07.8		45.6
4	191	40.2	270	35.1		18.9	165	09.9		45.7
5	206	42.6	285	34.3	-22	18.8	180	12.1	+9	45.8
6	221	45.1	300	33.4	-22	18.7	195	14.2	+9	46.0
7	236	47.6	315	32.6		18.6	210	16.4		46.1
8	251	50.0	330	31.7		18.5	225	18.5		46.2
9	266	52.5	345	30.8		18.4	240	20.7		46.3
10	281	55.0	0	30.0		18.2	255	22.8		46.5
11	296	57.4	15	29.1	-22	18.1	270	24.9	+9	46.6
12	311	59.9	30	28.3	-22	18.0	285	27.1	+9	46.7
13	327	02.3	45	27.4		17.9	300	29.2		46.9
14	342	04.8	60	26.5		17.8	315	31.4		47.0
15	357	07.3	75	25.7		17.7	330	33.5		47.1
16	12	09.7	90	24.8		17.5	345	35.7		47.3
17	27	12.2	105	24.0	-22	17.4	0	37.8	+9	47.4
18	42	14.7	120	23.1	-22	17.3	15	40.0	+9	47.5
19	57	17.1	135	22.2		17.2	30	42.1		47.6
20	72	19.6	150	21.4		17.0	45	44.3		47.8
21	87	22.1	165	20.5		16.9	60	46.4		47.9
22	102	24.5	180	19.7		16.8	75	48.6		48.0
23	117	27.0	195	18.8		16.6	90	50.7		48.2
24	132	29.4	210	17.9	-22	16.5	105	52.9	+9	48.3
Dif	—		-9		+1		+21		+1	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'2			Edad: 27 ^d 2	PHE {	4 ^h : 54'3 12 ^h : 54'4 20 ^h : 54'5								
	PMG: 12 ^h 13 ^m 8													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	Rº	Hora	Rº
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	176	34.5	-16 47.0	206	09.2	-20 53.7	8	60 N	16 18	17 05	17 55	7 15 37	14 00 63	
1	191	34.5		220	39.7 ¹¹⁵	52.9	9	58	27	11	17 58	7 00 38	15 62	
2	206	34.4		235	10.2 ¹¹⁵	52.0	10	56	36	17	18 02	6 46 40	28 61	
3	221	34.3		249	40.6 ¹¹⁴	51.0	10	54	43	22	05	35 41	39 60	
4	236	34.2		264	11.0 ¹¹⁴	49.9	11	52	50	27	07	25 42	49 59	
5	251	34.2	-16 43.4	278	41.5 ¹¹⁵	-20 48.8	11	50	16 56	17 31	18 10	6 16 42	14 58 58	
6	266	34.1	-16 42.7	293	11.9 ¹¹⁴	-20 47.5	13	45	17 10	17 41	18 16	5 57 44	15 17 56	
7	281	34.0		307	42.3 ¹¹⁴	46.1	14	40	21	49	21	41 45	32 55	
8	296	33.9		322	12.7 ¹¹⁴	44.6	15	35	30	17 57	27	28 46	45 54	
9	311	33.9		336	43.1 ¹¹⁴	43.0	16	30	38	18 03	32	5 17 46	15 57 52	
10	326	33.8		351	13.6 ¹¹⁵	41.3	17	20	17 53	16	42	4 57 48	16 16 51	
11	341	33.7	-16 39.0	5	44.0 ¹¹⁴	-20 39.6	17	10 N	18 05	18 27	18 52	4 40 49	16 33 50	
12	356	33.6	-16 38.3	20	14.4 ¹¹⁴	-20 37.7	19	0	18 17	18 39	19 04	4 24 49	16 48 49	
13	11	33.6		34	44.8 ¹¹⁴	35.7	20	10 S	29	18 51	17	4 09 49	17 04 47	
14	26	33.5		49	15.2 ¹¹⁴	33.6	21	20	42	19 06	33	3 52 50	20 47	
15	41	33.4		63	45.6 ¹¹⁴	31.4	22	30	18 57	23	19 54	32 52	39 45	
16	56	33.4		78	16.0 ¹¹⁴	29.1	23	35	19 06	34	20 07	21 52	17 50 44	
17	71	33.3	-16 34.6	92	46.3 ¹¹³	-20 26.8	23	40	19 16	19 46	20 22	3 08 52	18 03 43	
18	86	33.2	-16 33.9	107	16.7 ¹¹⁴	-20 24.3	25	45	19 28	20 01	20 42	2 52 54	18 18 41	
19	101	33.2		121	47.1 ¹¹⁴	21.7	26	50	43	20	21 09	33 55	36 40	
20	116	33.1		136	17.5 ¹¹⁴	19.0	27	52	49	29	22	24 55	45 39	
21	131	33.0		150	47.9 ¹¹⁴	16.3	27	54	19 57	40	38	14 56	18 55 37	
22	146	32.9		165	18.3 ¹¹⁴	13.4	29	56	20 05	20 51	21 57	2 03 56	19 06 36	
23	161	32.9		179	48.8 ¹¹⁵	10.4	30	58	15	21 05	22 22	1 50 57	18 35	
24	176	32.8	-16 29.5	194	19.2 ¹¹⁴	-20 07.3	31	60 S	20 26	21 22	22 59	1 34 59	19 33 32	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 15 ^h 07 ^m 6		Mag: -3.9 PMG: 9 ^h 59 ^m			Mag: +1.2 PMG: 14 ^h 45 ^m			Mag: -2.4 PMG: 16 ^h 54 ^m			Mag: +0.3 PMG: 17 ^h 43 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	132	29.4	210	17.9	-22	16.5	138	35.4	-3	20.5	105	52.9	+9	48.3
1	147	31.9	225	17.1		16.4	153	36.1		19.7	120	55.0		48.4
2	162	34.4	240	16.2		16.2	168	36.8		19.0	135	57.1		48.6
3	177	36.8	255	15.4		16.1	183	37.5		18.2	150	59.3		48.7
4	192	39.3	270	14.5		16.0	198	38.2		17.4	166	01.4		48.8
5	207	41.8	285	13.6	-22	15.8	213	39.0	-3	16.6	181	03.6	+9	49.0
6	222	44.2	300	12.8	-22	15.7	228	39.7	-3	15.8	196	05.7	+9	49.1
7	237	46.7	315	11.9		15.5	243	40.4		15.0	211	07.9		49.2
8	252	49.2	330	11.1		15.4	258	41.1		14.2	226	10.0		49.4
9	267	51.6	345	10.2		15.3	273	41.8		13.4	241	12.1		49.5
10	282	54.1	0	09.3		15.1	288	42.5		12.6	256	14.3		49.6
11	297	56.6	15	08.5	-22	15.0	303	43.2	-3	11.9	271	16.4	+9	49.7
12	312	59.0	30	07.6	-22	14.8	318	43.9	-3	11.1	286	18.6	+9	49.9
13	328	01.5	45	06.8		14.7	333	44.7		10.3	301	20.7		50.0
14	343	03.9	60	05.9		14.5	348	45.4		09.5	316	22.9		50.1
15	358	06.4	75	05.0		14.4	3	46.1		08.7	331	25.0		50.3
16	13	08.9	90	04.2		14.2	18	46.8		07.9	346	27.1		50.4
17	28	11.3	105	03.3	-22	14.1	33	47.5	-3	07.1	1	29.3	+9	50.5
18	43	13.8	120	02.5	-22	13.9	48	48.2	-3	06.3	16	31.4	+9	50.7
19	58	16.3	135	01.6		13.8	63	48.9		05.5	31	33.6		50.8
20	73	18.7	150	00.7		13.6	78	49.6		04.8	46	35.7		50.9
21	88	21.2	164	59.9		13.5	93	50.4		04.0	61	37.8		51.1
22	103	23.7	179	59.0		13.3	108	51.1		03.2	76	40.0		51.2
23	118	26.1	194	58.2		13.1	123	51.8		02.4	91	42.1		51.3
24	133	28.6	209	57.3	-22	13.0	138	52.5	-3	01.6	106	44.3	+9	51.5
Dif	—		-9	+1		+7	+8		+21	+1		+24		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: 28 ^d 2 PHE { 4 ^h : 54'6 12 ^h : 54'7 20 ^h : 54'9 R°: 49 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	h	m
0	176	32.8	-16	29.5	194	19.2	-20	07.3	60 N	6 31	7 22	8 08	7 52	29	15	03	72	
1	191	32.7		28.7	208	49.6 ¹¹⁴		04.2	58	28	15	7 59	38	31	17	69		
2	206	32.7		28.0	223	20.0 ¹¹⁴	-20	00.9	56	25	10	50	26	33	29	67		
3	221	32.6		27.3	237	50.4 ¹¹⁴	-19	57.5	54	22	05	43	16	34	39	66		
4	236	32.5		26.5	252	20.9 ¹¹⁵		54.1	52	20	7 00	36	7 07	35	48	64		
5	251	32.5	-16	25.8	266	51.3 ¹¹⁴	-19	50.5	50	6 17	6 56	7 30	6 58	37	15	56	63	
6	266	32.4	-16	25.1	281	21.7 ¹¹⁴	-19	46.8	45	6 11	6 46	7 17	6 41	38	16	13	60	
7	281	32.3		24.3	295	52.2 ¹¹⁵		43.1	40	06	38	7 06	26	41	27	58		
8	296	32.3		23.6	310	22.6 ¹¹⁴		39.2	35	6 00	31	6 57	14	42	39	56		
9	311	32.2		22.8	324	53.1 ¹¹⁵		35.3	30	5 55	24	49	6 03	43	16	49	55	
10	326	32.2		22.1	339	23.6 ¹¹⁵		31.2	20	45	12	35	5 45	45	17	07	53	
11	341	32.1	-16	21.3	353	54.1 ¹¹⁵	-19	27.1	10 N	5 35	6 00	6 22	5 29	47	17	23	50	
12	356	32.0	-16	20.6	8	24.6 ¹¹⁵	-19	22.9	0	5 24	5 49	6 10	5 13	49	17	37	48	
13	11	32.0		19.9	22	55.1 ¹¹⁵		18.5	10 S	5 11	36	5 58	4 58	51	17	51	47	
14	26	31.9		19.1	37	25.6 ¹¹⁵		14.1	20	4 55	22	45	42	52	18	07	44	
15	41	31.8		18.4	51	56.1 ¹¹⁵		09.6	30	34	5 05	31	24	54	24	42		
16	56	31.8		17.6	66	26.6 ¹¹⁵		04.9	35	21	4 54	22	13	55	34	40		
17	71	31.7	-16	16.9	80	57.2 ¹¹⁶	-19	00.2	40	4 06	4 42	5 12	4 00	57	18	46	38	
18	86	31.7	-16	16.1	95	27.8 ¹¹⁶	-18	55.4	45	3 46	4 27	5 00	3 46	58	18	59	37	
19	101	31.6		15.4	109	58.3 ¹¹⁵		50.5	50	20	4 08	4 46	28	60	19	16	34	
20	116	31.5		14.6	124	28.9 ¹¹⁶		45.5	50	3 06	3 59	39	19	62	24	32		
21	131	31.5		13.9	138	59.5 ¹¹⁶		40.4	51	2 50	49	31	3 10	63	32	31		
22	146	31.4		13.2	153	30.1 ¹¹⁶		35.3	51	31	37	23	2 59	64	42	29		
23	161	31.4		12.4	168	00.7 ¹¹⁶		30.0	53	2 06	23	14	47	66	19	53	27	
24	176	31.3	-16	11.7	182	31.4 ¹¹⁷	-18	24.6	54	1 30	3 06	4 03	2 33	67	20	05	25	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 15 ^h 03 ^m 6		Mag: -3.9 PMG: 10 ^h 01 ^m		Mag: +1.2 PMG: 14 ^h 44 ^m		Mag: -2.3 PMG: 16 ^h 51 ^m		Mag: +0.3 PMG: 17 ^h 40 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	133	28.6	209	57.3	-22	13.0	138	52.5	-3	01.6	106	44.3	+9	51.5	94	23.9	+12	53.2
1	148	31.1	224	56.5		12.8	153	53.2	-3	00.8	121	46.4		51.6	109	26.2		53.3
2	163	33.5	239	55.6		12.7	168	53.9	-3	00.0	136	48.5		51.7	124	28.6		53.3
3	178	36.0	254	54.7		12.5	183	54.6	-2	59.2	151	50.7		51.9	139	30.9		53.4
4	193	38.4	269	53.9		12.3	198	55.4		58.4	166	52.8		52.0	154	33.3		53.4
5	208	40.9	284	53.0	-22	12.2	213	56.1	-2	57.7	181	55.0	+9	52.1	169	35.7	+12	53.5
6	223	43.4	299	52.2	-22	12.0	228	56.8	-2	56.9	196	57.1	+9	52.3	184	38.0	+12	53.5
7	238	45.8	314	51.3		11.8	243	57.5		56.1	211	59.2		52.4	199	40.4		53.5
8	253	48.3	329	50.4		11.7	258	58.2		55.3	227	01.4		52.5	214	42.8		53.6
9	268	50.8	344	49.6		11.5	273	58.9		54.5	242	03.5		52.7	229	45.1		53.6
10	283	53.2	359	48.7		11.3	288	59.6		53.7	257	05.6		52.8	244	47.5		53.7
11	298	55.7	14	47.9	-22	11.1	304	00.4	-2	52.9	272	07.8	+9	52.9	259	49.9	+12	53.7
12	313	58.2	29	47.0	-22	11.0	319	01.1	-2	52.1	287	09.9	+9	53.1	274	52.2	+12	53.8
13	329	00.6	44	46.2		10.8	334	01.8		51.3	302	12.1		53.2	289	54.6		53.8
14	344	03.1	59	45.3		10.6	349	02.5		50.5	317	14.2		53.3	304	57.0		53.9
15	359	05.6	74	44.4		10.4	4	03.2		49.8	332	16.3		53.5	319	59.3		53.9
16	14	08.0	89	43.6		10.3	19	03.9		49.0	347	18.5		53.6	335	01.7		53.9
17	29	10.5	104	42.7	-22	10.1	34	04.7	-2	48.2	2	20.6	+9	53.7	350	04.0	+12	54.0
18	44	12.9	119	41.9	-22	09.9	49	05.4	-2	47.4	17	22.7	+9	53.9	5	06.4	+12	54.0
19	59	15.4	134	41.0		09.7	64	06.1		46.6	32	24.9		54.0	20	08.8		54.1
20	74	17.9	149	40.2		09.5	79	06.8		45.8	47	27.0		54.1	35	11.1		54.1
21	89	20.3	164	39.3		09.4	94	07.5		45.0	62	29.1		54.3	50	13.5		54.2
22	104	22.8	179	38.5		09.2	109	08.2		44.2	77	31.3		54.4	65	15.9		54.2
23	119	25.3	194	37.6		09.0	124	08.9		43.4	92	33.4		54.6	80	18.2		54.3
24	134	27.7	209	36.7	-22	08.8	139	09.7	-2	42.6	107	35.5	+9	54.7	95	20.6	+12	54.3
Dif	—		-9		+2		+7		+8		+21		+1		+24		0	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16:2 PMG: 12 ^h 14 ^m 0			Edad: 29 ^d 2 PHE { 4 ^h : 55:0 12 ^h : 55:1 20 ^h : 55:3 R°: 48 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m				
0	176	31.3	-16	11.7	182	31.4	-18	24.6	60 N	16 23	17 09	18 00	8 21 21	16 15 76				
1	191	31.2		10.9	197	02.0 ¹¹⁶		19.2 ⁵⁴	58	32	15	03	8 09 24	26 74				
2	206	31.2		10.2	211	32.7 ¹¹⁷		13.6 ⁵⁶	56	40	21	05	7 59 26	36 71				
3	221	31.1		09.4	226	03.4 ¹¹⁷		08.0 ⁵⁶	54	47	26	08	50 28	44 70				
4	236	31.1		08.7	240	34.1 ¹¹⁷		-18 02.3 ⁵⁷	52	16 54	30	11	42 30	52 67				
5	251	31.0	-16	07.9	255	04.8 ¹¹⁷		-17 56.4 ⁵⁹	50	17 00	17 34	18 13	7 35 31	16 59 66				
6	266	30.9	-16	07.2	269	35.5 ¹¹⁷		-17 50.5 ⁵⁹	45	17 13	17 44	18 19	7 19 35	17 13 63				
7	281	30.9		06.4	284	06.3 ¹¹⁸		44.5 ⁶⁰	40	23	51	24	7 07 36	25 60				
8	296	30.8		05.7	298	37.0 ¹¹⁷		38.4 ⁶¹	35	32	17 58	29	6 56 38	35 59				
9	311	30.8		04.9	313	07.8 ¹¹⁸		32.3 ⁶¹	30	40	18 05	33	46 41	17 44 57				
10	326	30.7		04.1	327	38.6 ¹¹⁸		26.0 ⁶³	20	17 54	17	43	30 43	18 00 53				
11	341	30.7	-16	03.4	342	09.4 ¹¹⁸		-17 19.7 ⁶³	10 N	18 06	18 28	18 53	6 16 45	18 13 50				
12	356	30.6	-16	02.6	356	40.2 ¹¹⁸		-17 13.2 ⁶⁵	0	18 17	18 39	19 04	6 02 48	18 25 48				
13	11	30.6		01.9	11	11.1 ¹¹⁹		06.7 ⁶⁵	10 S	29	18 51	17	5 49 50	38 45				
14	26	30.5		01.1	25	41.9 ¹¹⁸		-17 00.1 ⁶⁶	20	42	19 05	32	34 53	18 51 42				
15	41	30.5	-16	00.4	40	12.8 ¹¹⁹		-16 53.4 ⁶⁷	30	18 56	22	19 52	18 55	19 06 39				
16	56	30.4	-15	59.6	54	43.7 ¹¹⁹		46.6 ⁶⁸	35	19 04	32	20 05	5 08 57	14 38				
17	71	30.3	-15	58.9	69	14.7 ¹²⁰		-16 39.8 ⁶⁸	40	19 14	19 44	20 20	4 57 59	19 24 35				
18	86	30.3	-15	58.1	83	45.6 ¹¹⁹		-16 32.8 ⁷⁰	45	19 26	19 58	20 39	4 44 62	19 36 32				
19	101	30.2		57.3	98	16.5 ¹¹⁹		25.8 ⁷⁰	50	39	20 17	21 04	28 65	50 29				
20	116	30.2		56.6	112	47.5 ¹²⁰		18.7 ⁷¹	52	46	25	17	21 66	19 56 28				
21	131	30.1		55.8	127	18.5 ¹²⁰		11.5 ⁷²	54	19 53	35	32	13 67	20 03 26				
22	146	30.1		55.1	141	49.5 ¹²⁰		-16 04.2 ⁷³	56	20 01	20 47	21 50	4 03 70	11 24				
23	161	30.0		54.3	156	20.6 ¹²¹		-15 56.8 ⁷⁴	58	10	21 00	22 13	3 53 71	20 22				
24	176	30.0	-15	53.5	170	51.6 ¹²⁰		-15 49.4 ⁷⁴	60 S	20 21	21 15	22 45	3 40 75	20 30 19				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 14 ^h 59 ^m 7		Mag: -3.9 PMG: 10 ^h 02 ^m			Mag: +1.2 PMG: 14 ^h 43 ^m			Mag: -2.3 PMG: 16 ^h 47 ^m			Mag: +0.3 PMG: 17 ^h 36 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♎	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	134	27.7	209	36.7	-22	08.8	139	09.7	-2	42.6	107	35.5	+9	54.7	95	20.6	+12	54.3
1	149	30.2	224	35.9		08.6	154	10.4		41.9	122	37.7		54.8	110	22.9		54.3
2	164	32.7	239	35.0		08.4	169	11.1		41.1	137	39.8		55.0	125	25.3		54.4
3	179	35.1	254	34.2		08.2	184	11.8		40.3	152	41.9		55.1	140	27.7		54.4
4	194	37.6	269	33.3		08.0	199	12.5		39.5	167	44.1		55.2	155	30.0		54.5
5	209	40.0	284	32.5	-22	07.8	214	13.2	-2	38.7	182	46.2	+9	55.4	170	32.4	+12	54.5
6	224	42.5	299	31.6	-22	07.7	229	14.0	-2	37.9	197	48.3	+9	55.5	185	34.8	+12	54.6
7	239	45.0	314	30.8		07.5	244	14.7		37.1	212	50.5		55.6	200	37.1		54.6
8	254	47.4	329	29.9		07.3	259	15.4		36.3	227	52.6		55.8	215	39.5		54.7
9	269	49.9	344	29.0		07.1	274	16.1		35.5	242	54.7		55.9	230	41.8		54.7
10	284	52.4	359	28.2		06.9	289	16.8		34.7	257	56.9		56.0	245	44.2		54.8
11	299	54.8	14	27.3	-22	06.7	304	17.5	-2	34.0	272	59.0	+9	56.2	260	46.6	+12	54.8
12	314	57.3	29	26.5	-22	06.5	319	18.3	-2	33.2	288	01.1	+9	56.3	275	48.9	+12	54.8
13	329	59.8	44	25.6		06.3	334	19.0		32.4	303	03.2		56.4	290	51.3		54.9
14	345	02.2	59	24.8		06.1	349	19.7		31.6	318	05.4		56.6	305	53.6		54.9
15	0	04.7	74	23.9		05.9	4	20.4		30.8	333	07.5		56.7	320	56.0		55.0
16	15	07.2	89	23.1		05.6	19	21.1		30.0	348	09.6		56.9	335	58.3		55.0
17	30	09.6	104	22.2	-22	05.4	34	21.8	-2	29.2	3	11.8	+9	57.0	351	00.7	+12	55.1
18	45	12.1	119	21.4	-22	05.2	49	22.6	-2	28.4	18	13.9	+9	57.1	6	03.1	+12	55.1
19	60	14.5	134	20.5		05.0	64	23.3		27.6	33	16.0		57.3	21	05.4		55.2
20	75	17.0	149	19.6		04.8	79	24.0		26.8	48	18.1		57.4	36	07.8		55.2
21	90	19.5	164	18.8		04.6	94	24.7		26.1	63	20.3		57.5	51	10.1		55.3
22	105	21.9	179	17.9		04.4	109	25.4		25.3	78	22.4		57.7	66	12.5		55.3
23	120	24.4	194	17.1		04.2	124	26.1		24.5	93	24.5		57.8	81	14.9		55.4
24	135	26.9	209	16.2	-22	04.0	139	26.9	-2	23.7	108	26.7	+9	57.9	96	17.2	+12	55.4
Dif	—		-9		+2		+7		+8		+21		+1		+24			

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: 0 ^d 5 PHE { 4 ^h : 55:4 12 ^h : 55:5 20 ^h : 55:7 R°: 47 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	176	30.0	-15	53.5	170	51.6	-15	49.4	60 N	6 27	7 17	8 03	8 42	18	17 31 80
1	191	29.9		52.8	185	22.7 ¹²¹		41.9 ⁷⁵	58	24	11	7 54	33	20	40 76
2	206	29.9		52.0	199	53.8 ¹²¹		34.3 ⁷⁶	56	22	06	46	25	23	47 74
3	221	29.8		51.3	214	24.9 ¹²¹		26.6 ⁷⁷	54	19	7 01	39	18	24	54 71
4	236	29.8		50.5	228	56.0 ¹²¹		18.9 ⁷⁷	52	17	6 57	33	12	26	17 59 70
5	251	29.7	-15	49.7	243	27.2 ¹²²	-15	11.0 ⁷⁹	50	6 14	6 53	7 27	8 06	28	18 05 68
6	266	29.7	-15	49.0	257	58.3 ¹²¹	-15	03.1 ⁷⁹	45	6 09	6 44	7 15	7 54	31	18 16 65
7	281	29.6		48.2	272	29.5 ¹²²	-14	55.1 ⁸⁰	40	6 04	36	7 04	43	34	25 62
8	296	29.6		47.4	287	00.7 ¹²²		47.1 ⁸⁰	35	5 59	29	6 55	34	36	34 59
9	311	29.5		46.7	301	31.9 ¹²²		38.9 ⁸²	30	54	23	48	27	38	41 56
10	326	29.5		45.9	316	03.2 ¹²³		30.7 ⁸²	20	45	11	34	13	42	18 53 53
11	341	29.4	-15	45.2	330	34.4 ¹²²	-14	22.4 ⁸³	10 N	5 35	6 00	6 22	7 01	45	19 03 50
12	356	29.4	-15	44.4	345	05.7 ¹²³	-14	14.1 ⁸³	0	5 24	5 49	6 11	6 50	47	19 13 47
13	11	29.4		43.6	359	37.0 ¹²³	-14	05.6 ⁸⁵	10 S	5 11	37	5 59	39	50	23 44
14	26	29.3		42.9	14	08.3 ¹²³	-13	57.1 ⁸⁵	20	4 56	23	47	27	53	33 41
15	41	29.3		42.1	28	39.7 ¹²⁴		48.6 ⁸⁵	30	36	5 07	32	13	57	45 37
16	56	29.2		41.3	43	11.0 ¹²³		39.9 ⁸⁷	35	24	4 57	24	6 05	59	52 34
17	71	29.2	-15	40.6	57	42.4 ¹²⁴	-13	31.2 ⁸⁷	40	4 09	4 45	5 14	5 56	61	19 59 33
18	86	29.1	-15	39.8	72	13.8 ¹²⁴	-13	22.4 ⁸⁸	45	3 50	4 30	5 03	5 46	64	20 08 30
19	101	29.1		39.0	86	45.2 ¹²⁴		13.5 ⁸⁹	50	24	12	4 49	33	67	19 26
20	116	29.0		38.2	101	16.7 ¹²⁵	-13	04.6 ⁸⁹	52	3 12	4 03	43	27	69	24 24
21	131	29.0		37.5	115	48.1 ¹²⁴	-12	55.6 ⁹⁰	54	2 57	3 53	36	20	71	29 23
22	146	29.0		36.7	130	19.6 ¹²⁵		46.6 ⁹⁰	56	39	42	28	13	73	35 21
23	161	28.9		35.9	144	51.1 ¹²⁵		37.5 ⁹¹	58	2 16	29	19	5 04	76	42 18
24	176	28.9	-15	35.2	159	22.6 ¹²⁵	-12	28.3 ⁹²	60 S	1 43	3 13	4 08	4 55	78	20 49 16

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 14 ^h 55 ^m 8		Mag: -3.9 PMG: 10 ^h 03 ^m		Mag: +1.2 PMG: 14 ^h 42 ^m		Mag: -2.3 PMG: 16 ^h 44 ^m		Mag: +0.3 PMG: 17 ^h 32 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	135	26.9	209	16.2	-22	04.0	139	26.9	-2	23.7
1	150	29.3	224	15.4		03.7	154	27.6		22.9
2	165	31.8	239	14.5		03.5	169	28.3		22.1
3	180	34.3	254	13.7		03.3	184	29.0		21.3
4	195	36.7	269	12.8		03.1	199	29.7		20.5
5	210	39.2	284	12.0	-22	02.9	214	30.5	-2	19.7
6	225	41.7	299	11.1	-22	02.6	229	31.2	-2	18.9
7	240	44.1	314	10.3		02.4	244	31.9		18.2
8	255	46.6	329	09.4		02.2	259	32.6		17.4
9	270	49.0	344	08.6		02.0	274	33.3		16.6
10	285	51.5	359	07.7		01.7	289	34.0		15.8
11	300	54.0	14	06.9	-22	01.5	304	34.8	-2	15.0
12	315	56.4	29	06.0	-22	01.3	319	35.5	-2	14.2
13	330	58.9	44	05.2		01.1	334	36.2		13.4
14	346	01.4	59	04.3		00.8	349	36.9		12.6
15	1	03.8	74	03.5		00.6	4	37.6		11.8
16	16	06.3	89	02.6		00.4	19	38.4		11.0
17	31	08.8	104	01.8	-22	00.1	34	39.1	-2	10.3
18	46	11.2	119	00.9	-21	59.9	49	39.8	-2	09.5
19	61	13.7	134	00.1		59.7	64	40.5		08.7
20	76	16.1	148	59.2		59.4	79	41.2		07.9
21	91	18.6	163	58.4		59.2	94	42.0		07.1
22	106	21.1	178	57.5		58.9	109	42.7		06.3
23	121	23.5	193	56.7		58.7	124	43.4		05.5
24	136	26.0	208	55.8	-21	58.5	139	44.1	-2	04.7
Dif	—		-9 +2		+7 +8		+21 +1		+24 0	

UT	SOL				● LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 16:2 PMG: 12 ^h 14 ^m 1				Edad: 1 ^d 5 PHE { 4 ^h : 55:8 12 ^h : 56:0 20 ^h : 56:2 PMG: 13 ^h 49 ^m R°: 46 ^m															
	hG ☉		Dec		hG ☾		Dif				Civil		Náutico		Hora R°		Hora R°			
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	h m	h m	h m			
0	176	28.9	-15	35.2	159	22.6	-12	28.3	60 N	16 28	17 14	18 04	9 00	14	18 51	80				
1	191	28.8		34.4	173	54.1 ¹²⁵		19.0 ⁹³	58	37	20	07	8 53	17	18 56	78				
2	206	28.8		33.6	188	25.6 ¹²⁵		09.7 ⁹³	56	45	25	09	48	19	19 01	75				
3	221	28.7		32.8	202	57.2 ¹²⁶	-12	00.3 ⁹⁴	54	52	29	12	42	22	05	74				
4	236	28.7		32.1	217	28.7 ¹²⁵	-11	50.9 ⁹⁴	52	16 58	34	14	38	23	09	72				
5	251	28.7	-15	31.3	232	00.3 ¹²⁶	-11	41.4 ⁹⁵	50	17 03	17 38	18 16	8 34	24	19 13	69				
6	266	28.6	-15	30.5	246	31.9 ¹²⁶	-11	31.8 ⁹⁶	45	17 15	17 46	18 21	8 25	28	19 21	65				
7	281	28.6		29.8	261	03.5 ¹²⁶		22.2 ⁹⁶	40	25	17 54	26	17	31	27	63				
8	296	28.5		29.0	275	35.2 ¹²⁷		12.5 ⁹⁷	35	34	18 00	30	10	34	33	59				
9	311	28.5		28.2	290	06.8 ¹²⁶	-11	02.7 ⁹⁸	30	42	06	35	8 05	36	37	58				
10	326	28.5		27.4	304	38.5 ¹²⁷	-10	52.9 ⁹⁸	20	17 55	18	44	7 55	40	46	53				
11	341	28.4	-15	26.6	319	10.1 ¹²⁶	-10	43.1 ⁹⁸	10 N	18 07	18 28	18 53	7 46	43	19 53	50				
12	356	28.4	-15	25.9	333	41.8 ¹²⁷	-10	33.1 ¹⁰⁰	0	18 18	18 39	19 04	7 37	47	20 00	46				
13	11	28.4		25.1	348	13.5 ¹²⁷		23.2 ⁹⁹	10 S	29	18 51	16	29	50	07	43				
14	26	28.3		24.3	2	45.3 ¹²⁸		13.1 ¹⁰¹	20	41	19 04	31	20	53	14	39				
15	41	28.3		23.5	17	17.0 ¹²⁷	-10	03.1 ¹⁰⁰	30	18 55	20	19 50	10	57	22	35				
16	56	28.2		22.8	31	48.7 ¹²⁷	-9	52.9 ¹⁰²	35	19 03	30	20 02	7 04	60	26	34				
17	71	28.2	-15	22.0	46	20.5 ¹²⁸	-9	42.7 ¹⁰²	40	19 12	19 41	20 17	6 57	63	20 32	30				
18	86	28.2	-15	21.2	60	52.2 ¹²⁷	-9	32.5 ¹⁰²	45	19 23	19 55	20 36	6 50	65	20 38	27				
19	101	28.1		20.4	75	24.0 ¹²⁸		22.2 ¹⁰³	50	36	20 13	21 00	40	69	45	24				
20	116	28.1		19.6	89	55.8 ¹²⁸		11.8 ¹⁰⁴	52	42	21	12	36	70	48	22				
21	131	28.1		18.9	104	27.6 ¹²⁸	-9	01.4 ¹⁰⁴	54	49	31	26	31	73	52	20				
22	146	28.0		18.1	118	59.4 ¹²⁸	-8	51.0 ¹⁰⁴	56	19 57	42	21 43	26	74	20 56	18				
23	161	28.0		17.3	133	31.2 ¹²⁸		40.5 ¹⁰⁵	58	20 05	20 54	22 05	20	77	21 00	16				
24	176	28.0	-15	16.5	148	03.1 ¹²⁹	-8	30.0 ¹⁰⁵	60 S	20 15	21 09	22 33	6 13	80	21 05	14				
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 14 ^h 51 ^m 8				Mag: -3.9 PMG: 10 ^h 05 ^m				Mag: +1.2 PMG: 14 ^h 40 ^m				Mag: -2.3 PMG: 16 ^h 40 ^m				Mag: +0.3 PMG: 17 ^h 28 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	136	26.0	208	55.8	-21	58.5	139	44.1	-2	04.7	109	17.7	+10	01.3	97	13.7	+12	56.5		
1	151	28.5	223	55.0		58.2	154	44.8		03.9	124	19.8		01.4	112	16.1		56.6		
2	166	30.9	238	54.1		58.0	169	45.5		03.1	139	21.9		01.5	127	18.4		56.6		
3	181	33.4	253	53.3		57.7	184	46.3		02.4	154	24.0		01.7	142	20.8		56.7		
4	196	35.9	268	52.4		57.5	199	47.0		01.6	169	26.1		01.8	157	23.2		56.7		
5	211	38.3	283	51.6	-21	57.2	214	47.7	-2	00.8	184	28.3	+10	01.9	172	25.5	+12	56.8		
6	226	40.8	298	50.7	-21	57.0	229	48.4	-2	00.0	199	30.4	+10	02.1	187	27.9	+12	56.8		
7	241	43.3	313	49.9		56.7	244	49.1	-1	59.2	214	32.5		02.2	202	30.2		56.9		
8	256	45.7	328	49.0		56.5	259	49.9		58.4	229	34.6		02.4	217	32.6		56.9		
9	271	48.2	343	48.2		56.2	274	50.6		57.6	244	36.7		02.5	232	34.9		57.0		
10	286	50.6	358	47.3		56.0	289	51.3		56.8	259	38.9		02.6	247	37.3		57.0		
11	301	53.1	13	46.5	-21	55.7	304	52.0	-1	56.0	274	41.0	+10	02.8	262	39.6	+12	57.0		
12	316	55.6	28	45.6	-21	55.5	319	52.7	-1	55.2	289	43.1	+10	02.9	277	42.0	+12	57.1		
13	331	58.0	43	44.8		55.2	334	53.5		54.5	304	45.2		03.1	292	44.3		57.1		
14	347	00.5	58	43.9		54.9	349	54.2		53.7	319	47.3		03.2	307	46.7		57.2		
15	2	03.0	73	43.1		54.7	4	54.9		52.9	334	49.5		03.3	322	49.0		57.2		
16	17	05.4	88	42.3		54.4	19	55.6		52.1	349	51.6		03.5	337	51.4		57.3		
17	32	07.9	103	41.4	-21	54.2	34	56.3	-1	51.3	4	53.7	+10	03.6	352	53.7	+12	57.3		
18	47	10.4	118	40.6	-21	53.9	49	57.1	-1	50.5	19	55.8	+10	03.8	7	56.1	+12	57.4		
19	62	12.8	133	39.7		53.6	64	57.8		49.7	34	57.9		03.9	22	58.4		57.4		
20	77	15.3	148	38.9		53.4	79	58.5		48.9	50	00.0		04.0	38	00.8		57.5		
21	92	17.8	163	38.0		53.1	94	59.2		48.1	65	02.2		04.2	53	03.1		57.5		
22	107	20.2	178	37.2		52.8	110	00.0		47.3	80	04.3		04.3	68	05.5		57.6		
23	122	22.7	193	36.3		52.6	125	00.7		46.6	95	06.4		04.5	83	07.8		57.6		
24	137	25.1	208	35.5	-21	52.3	140	01.4	-1	45.8	110	08.5	+10	04.6	98	10.2	+12	57.7		
Dif	—		-8		+3		+7		+8		+21		+1		+24		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: 2 ^d 5 PHE { 4 ^h : 56:3 12 ^h : 56:5 20 ^h : 56:6 R°: 47 ^m																	
	hG ☉		Dec		hG ☾ Dif		Dec Dif			Náutico	Civil		Hora	R°	Hora	R°						
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m				
0	176	28.0	-15	16.5	148	03.1	-8	30.0	60 N	6	23	7	13	7	58	9	14	13				
1	191	27.9		15.7	162	34.9 ¹²⁸		19.4 ¹⁰⁶	58	21	07		50		10	16		14	79			
2	206	27.9		14.9	177	06.7 ¹²⁸	-8	08.7 ¹⁰⁷	56	18	7	02	42		07	18		16	77			
3	221	27.9		14.2	191	38.6 ¹²⁹	-7	58.1 ¹⁰⁶	54	16	6	58	36		04	20		19	74			
4	236	27.8		13.4	206	10.4 ¹²⁸		47.3 ¹⁰⁸	52	14		54	29		9	01	22		21	72		
5	251	27.8	-15	12.6	220	42.3 ¹²⁹	-7	36.6 ¹⁰⁷	50	6	12	6	50	7	24	8	58	24	20	22	71	
6	266	27.8	-15	11.8	235	14.2 ¹²⁹	-7	25.8 ¹⁰⁸	45	6	07	6	41	7	12	8	53	27	20	26	67	
7	281	27.7		11.0	249	46.0 ¹²⁸		14.9 ¹⁰⁹	40	6	02		34	7	02	48	31		30	63		
8	296	27.7		10.2	264	17.9 ¹²⁹	-7	04.0 ¹⁰⁹	35	5	57		27	6	54	44	33		32	61		
9	311	27.7		09.5	278	49.8 ¹²⁹	-6	53.1 ¹⁰⁹	30		53		21	46		41	35		35	58		
10	326	27.6		08.7	293	21.7 ¹²⁹		42.1 ¹¹⁰	20		44		10	33		35	39		39	54		
11	341	27.6	-15	07.9	307	53.6 ¹²⁹	-6	31.1 ¹¹⁰	10 N	5	35		6	00	6	22	8	29	43	20	43	50
12	356	27.6	-15	07.1	322	25.5 ¹²⁹	-6	20.1 ¹¹⁰	0	5	24		5	49	6	11	8	24	47	20	46	47
13	11	27.6		06.3	336	57.4 ¹²⁹	-6	09.0 ¹¹¹	10 S	5	12		38	6	00	19	50		50	43		
14	26	27.5		05.5	351	29.3 ¹²⁹	-5	57.8 ¹¹²	20	4	57		25	5	48	13	54		53	40		
15	41	27.5		04.7	6	01.2 ¹²⁹		46.7 ¹¹¹	30		38	5	09		34	07	58		20	57	35	
16	56	27.5		03.9	20	33.1 ¹²⁹		35.5 ¹¹²	35		26	4	59		26	04	60		21	00	32	
17	71	27.4	-15	03.1	35	05.0 ¹²⁹	-5	24.3 ¹¹²	40	4	12		4	47	5	17	8	00	63	21	02	30
18	86	27.4	-15	02.4	49	36.9 ¹²⁹	-5	13.0 ¹¹³	45	3	53		4	33	5	06	7	55	66	21	05	27
19	101	27.4		01.6	64	08.8 ¹²⁹	-5	01.7 ¹¹³	50		29		16	4	53	49	70		09	23		
20	116	27.4	-15	00.8	78	40.7 ¹²⁹	-4	50.4 ¹¹³	52		17		4	08		47	46	72		10	22	
21	131	27.3	-15	00.0	93	12.6 ¹²⁹		39.0 ¹¹⁴	54	3	03		3	58		40	44	73		12	20	
22	146	27.3	-14	59.2	107	44.5 ¹²⁹		27.7 ¹¹³	56		2	46		47		32	40	76		14	18	
23	161	27.3		58.4	122	16.3 ¹²⁸		16.3 ¹¹⁴	58		2	24		35		24	37	78		16	16	
24	176	27.3	-14	57.6	136	48.2 ¹²⁹	-4	04.8 ¹¹⁵	60 S	1	56		3	20	4	14	7	33	81	21	19	13
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO					
	PMG: 14 ^h 47 ^m 9				Mag: -3.9 PMG: 10 ^h 06 ^m				Mag: +1.2 PMG: 14 ^h 39 ^m				Mag: -2.3 PMG: 16 ^h 37 ^m				Mag: +0.3 PMG: 17 ^h 25 ^m					
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	137	25.1		52.3	208	35.5	-21	52.3	140	01.4	-1	45.8	110	08.5	+10	04.6	98	10.2	+12	57.7		
1	152	27.6		52.0	223	34.6		52.0	155	02.1		45.0	125	10.6		04.7	113	12.5		57.7		
2	167	30.1		51.8	238	33.8		51.8	170	02.8		44.2	140	12.7		04.9	128	14.9		57.8		
3	182	32.5		51.5	253	33.0		51.5	185	03.6		43.4	155	14.9		05.0	143	17.2		57.8		
4	197	35.0		51.2	268	32.1		51.2	200	04.3		42.6	170	17.0		05.2	158	19.6		57.9		
5	212	37.5	-21	50.9	283	31.3	-21	50.9	215	05.0	-1	41.8	185	19.1	+10	05.3	173	21.9	+12	57.9		
6	227	39.9	-21	50.7	298	30.4	-21	50.7	230	05.7	-1	41.0	200	21.2	+10	05.4	188	24.3	+12	58.0		
7	242	42.4		50.4	313	29.6		50.4	245	06.4		40.2	215	23.3		05.6	203	26.6		58.0		
8	257	44.9		50.1	328	28.7		50.1	260	07.2		39.4	230	25.4		05.7	218	29.0		58.1		
9	272	47.3		49.8	343	27.9		49.8	275	07.9		38.7	245	27.5		05.9	233	31.3		58.1		
10	287	49.8		49.5	358	27.0		49.5	290	08.6		37.9	260	29.7		06.0	248	33.6		58.2		
11	302	52.2	-21	49.3	13	26.2	-21	49.3	305	09.3	-1	37.1	275	31.8	+10	06.1	263	36.0	+12	58.2		
12	317	54.7	-21	49.0	28	25.4	-21	49.0	320	10.1	-1	36.3	290	33.9	+10	06.3	278	38.3	+12	58.3		
13	332	57.2		48.7	43	24.5		48.7	335	10.8		35.5	305	36.0		06.4	293	40.7		58.3		
14	347	59.6		48.4	58	23.7		48.4	350	11.5		34.7	320	38.1		06.6	308	43.0		58.4		
15	3	02.1		48.1	73	22.8		48.1	5	12.2		33.9	335	40.2		06.7	323	45.4		58.4		
16	18	04.6		47.8	88	22.0		47.8	20	12.9		33.1	350	42.3		06.9	338	47.7		58.5		
17	33	07.0	-21	47.5	103	21.2	-21	47.5	35	13.7	-1	32.3	5	44.4	+10	07.0	353	50.1	+12	58.5		
18	48	09.5	-21	47.3	118	20.3	-21	47.3	50	14.4	-1	31.5	20	46.6	+10	07.1	8	52.4	+12	58.6		
19	63	12.0		47.0	133	19.5		47.0	65	15.1		30.8	35	48.7		07.3	23	54.8		58.6		
20	78	14.4		46.7	148	18.6		46.7	80	15.8		30.0	50	50.8		07.4	38	57.1		58.7		
21	93	16.9		46.4	163	17.8		46.4	95	16.6		29.2	65	52.9		07.6	53	59.5		58.7		
22	108	19.4		46.1	178	16.9		46.1	110	17.3		28.4	80	55.0		07.7	69	01.8		58.8		
23	123	21.8		45.8	193	16.1		45.8	125	18.0		27.6	95	57.1		07.8	84	04.1		58.8		
24	138	24.3	-21	45.5	208	15.3	-21	45.5	140	18.7	-1	26.8	110	59.2	+10	08.0	99	06.5	+12	58.9		
Dif	—		-8		+3		+7		+8		+21		+1		+23							

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 16:2 PMG: 12 ^h 14 ^m 2			Edad: 3 ^d 5 PHE { 4 ^h : 56:8 12 ^h : 57:0 20 ^h : 57:2 PMG: 15 ^h 22 ^m R°: 47 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	m	h m	m			
0	176	27.3	-14	57.6	136	48.2	-4	04.8	60 N	16 33	17 19	18 08	9 27	13	21 33 84			
1	191	27.2		56.8	151	20.1 ¹²⁹	-3	53.4 ¹¹⁴	58	42	24	11	26	15	33 81			
2	206	27.2		56.0	165	52.0 ¹²⁹		41.9 ¹¹⁵	56	49	29	13	25	18	33 78			
3	221	27.2		55.2	180	23.8 ¹²⁸		30.3 ¹¹⁶	54	16 56	33	15	24	20	33 76			
4	236	27.2		54.4	194	55.7 ¹²⁹		18.8 ¹¹⁵	52	17 01	37	17	23	21	33 74			
5	251	27.1	-14	53.6	209	27.5 ¹²⁸	-3	07.2 ¹¹⁶	50	17 07	17 41	18 19	9 22	23	21 33 72			
6	266	27.1	-14	52.8	223	59.4 ¹²⁹	-2	55.7 ¹¹⁵	45	17 18	17 49	18 24	9 20	27	21 33 68			
7	281	27.1		52.0	238	31.2 ¹²⁸		44.0 ¹¹⁷	40	28	17 56	28	19	30	33 65			
8	296	27.1		51.2	253	03.0 ¹²⁸		32.4 ¹¹⁶	35	36	18 02	32	17	33	33 62			
9	311	27.0		50.5	267	34.8 ¹²⁸		20.8 ¹¹⁶	30	43	08	36	16	36	33 59			
10	326	27.0		49.7	282	06.6 ¹²⁸	-2	09.1 ¹¹⁷	20	17 56	19	45	14	40	33 55			
11	341	27.0	-14	48.9	296	38.4 ¹²⁸	-1	57.4 ¹¹⁷	10 N	18 07	18 29	18 54	9 12	44	21 33 51			
12	356	27.0	-14	48.1	311	10.2 ¹²⁸	-1	45.7 ¹¹⁷	0	18 18	18 39	19 04	9 11	46	21 33 47			
13	11	27.0		47.3	325	41.9 ¹²⁷		34.0 ¹¹⁷	10 S	28	18 50	16	09	50	33 44			
14	26	26.9		46.5	340	13.7 ¹²⁸		22.3 ¹¹⁷	20	40	19 03	30	07	54	33 40			
15	41	26.9		45.7	354	45.4 ¹²⁷	-1	10.5 ¹¹⁸	30	18 53	18	19 48	05	59	32 36			
16	56	26.9		44.9	9	17.1 ¹²⁷	-0	58.7 ¹¹⁸	35	19 01	28	20 00	04	61	32 34			
17	71	26.9	-14	44.1	23	48.8 ¹²⁷	-0	47.0 ¹¹⁷	40	19 10	19 39	20 14	9 03	64	21 32 31			
18	86	26.9	-14	43.3	38	20.5 ¹²⁷	-0	35.2 ¹¹⁸	45	19 20	19 52	20 32	9 01	67	21 32 28			
19	101	26.8		42.5	52	52.1 ¹²⁶		23.4 ¹¹⁸	50	33	20 09	20 55	8 59	72	32 24			
20	116	26.8		41.7	67	23.8 ¹²⁷	-0	11.6 ¹¹⁸	52	39	17	21 07	58	74	32 22			
21	131	26.8		40.9	81	55.4 ¹²⁶	+0	00.2 ¹¹⁸	54	45	26	20	57	76	32 20			
22	146	26.8		40.1	96	27.0 ¹²⁶		12.1 ¹¹⁹	56	19 52	37	37	56	78	32 18			
23	161	26.8		39.3	110	58.5 ¹²⁵		23.9 ¹¹⁸	58	20 01	20 48	21 56	55	80	32 15			
24	176	26.8	-14	38.4	125	30.1 ¹²⁶	+0	35.7 ¹¹⁸	60 S	20 10	21 02	22 22	8 54	83	21 32 13			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 14 ^h 44 ^m 0		Mag: -3.9 PMG: 10 ^h 08 ^m				Mag: +1.2 PMG: 14 ^h 38 ^m				Mag: -2.3 PMG: 16 ^h 34 ^m				Mag: +0.3 PMG: 17 ^h 21 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	138	24.3	208	15.3	-21	45.5	140	18.7	-1	26.8	110	59.2	+10	08.0	99	06.5	+12	58.9
1	153	26.7	223	14.4		45.2	155	19.4		26.0	126	01.3		08.1	114	08.8		58.9
2	168	29.2	238	13.6		44.9	170	20.2		25.2	141	03.4		08.3	129	11.2		59.0
3	183	31.7	253	12.7		44.6	185	20.9		24.4	156	05.6		08.4	144	13.5		59.0
4	198	34.1	268	11.9		44.3	200	21.6		23.6	171	07.7		08.6	159	15.9		59.1
5	213	36.6	283	11.1	-21	44.0	215	22.3	-1	22.9	186	09.8	+10	08.7	174	18.2	+12	59.1
6	228	39.1	298	10.2	-21	43.7	230	23.1	-1	22.1	201	11.9	+10	08.8	189	20.6	+12	59.2
7	243	41.5	313	09.4		43.4	245	23.8		21.3	216	14.0		09.0	204	22.9		59.2
8	258	44.0	328	08.6		43.1	260	24.5		20.5	231	16.1		09.1	219	25.2		59.3
9	273	46.5	343	07.7		42.8	275	25.2		19.7	246	18.2		09.3	234	27.6		59.3
10	288	48.9	358	06.9		42.5	290	25.9		18.9	261	20.3		09.4	249	29.9		59.4
11	303	51.4	13	06.0	-21	42.2	305	26.7	-1	18.1	276	22.4	+10	09.6	264	32.3	+12	59.4
12	318	53.8	28	05.2	-21	41.8	320	27.4	-1	17.3	291	24.5	+10	09.7	279	34.6	+12	59.5
13	333	56.3	43	04.4		41.5	335	28.1		16.5	306	26.6		09.8	294	37.0		59.5
14	348	58.8	58	03.5		41.2	350	28.8		15.8	321	28.8		10.0	309	39.3		59.6
15	4	01.2	73	02.7		40.9	5	29.6		15.0	336	30.9		10.1	324	41.6		59.6
16	19	03.7	88	01.9		40.6	20	30.3		14.2	351	33.0		10.3	339	44.0		59.7
17	34	06.2	103	01.0	-21	40.3	35	31.0	-1	13.4	6	35.1	+10	10.4	354	46.3	+12	59.7
18	49	08.6	118	00.2	-21	40.0	50	31.7	-1	12.6	21	37.2	+10	10.6	9	48.7	+12	59.8
19	64	11.1	132	59.3		39.6	65	32.5		11.8	36	39.3		10.7	24	51.0		59.8
20	79	13.6	147	58.5		39.3	80	33.2		11.0	51	41.4		10.8	39	53.4		59.9
21	94	16.0	162	57.7		39.0	95	33.9		10.2	66	43.5		11.0	54	55.7	+12	59.9
22	109	18.5	177	56.8		38.7	110	34.6		09.4	81	45.6		11.1	69	58.0	+13	00.0
23	124	21.0	192	56.0		38.4	125	35.4		08.6	96	47.7		11.3	85	00.4	+13	00.0
24	139	23.4	207	55.2	-21	38.0	140	36.1	-1	07.9	111	49.8	+10	11.4	100	02.7	+13	00.1
Dif	—		-8		+3		+7		+8		+21		+1		+23		+	

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna								
	SD: 16:2 PMG: 12 ^h 14 ^m 2			Edad: 4 ^d 5 PHE { SD: 15:6 PMG: 16 ^h 09 ^m																	
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº						
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m						
0	176	26.8	-14	38.4	125	30.1	+0	35.7	60 N	6	19	7	08	7	53	9	40	14	22	57	85
1	191	26.7		37.6	140	01.6		47.6	58	17	7	03	45	41	17		54	82			
2	206	26.7		36.8	154	33.1	+0	59.4	56	14	6	58	38	43	18		51	80			
3	221	26.7		36.0	169	04.6	+1	11.3	54	12	54	32	32	44	20		49	78			
4	236	26.7		35.2	183	36.1		23.1	52	10	50	26	26	44	23		47	75			
5	251	26.7	-14	34.4	198	07.5	+1	35.0	50	6	09	6	47	7	21	9	45	25	22	45	74
6	266	26.7	-14	33.6	212	38.9	+1	46.8	45	6	04	6	39	7	09	9	47	29	22	41	70
7	281	26.6		32.8	227	10.3	+1	58.7	40	6	00	32	7	00		49	31		38	66	
8	296	26.6		32.0	241	41.6	+2	10.5	35	5	56	26	6	52		50	35		35	63	
9	311	26.6		31.2	256	12.9		22.4	30		52	20	45	52	36		32	61			
10	326	26.6		30.4	270	44.2		34.2	20		43	10	32	54	41		28	56			
11	341	26.6	-14	29.6	285	15.5	+2	46.1	10 N	5	35	6	00	6	21	9	56	44	22	24	53
12	356	26.6	-14	28.8	299	46.7	+2	57.9	0	5	25	5	49	6	11	9	57	49	22	20	50
13	11	26.6		28.0	314	17.9	+3	09.8	10 S	5	13	38	6	00		9	59	52		17	45
14	26	26.6		27.2	328	49.1		21.6	20	4	59	26	5	49	10	01	56		13	42	
15	41	26.5		26.3	343	20.2		33.4	30		40	10	36	04	60		08	38			
16	56	26.5		25.5	357	51.3		45.2	35		29	5	01	28	05	63		06	35		
17	71	26.5	-14	24.7	12	22.3	+3	57.0	40	4	15	4	50	5	19	10	07	65	22	03	33
18	86	26.5	-14	23.9	26	53.3	+4	08.8	45	3	57	4	37	5	09	10	08	69	22	00	29
19	101	26.5		23.1	41	24.3		20.5	50		34	20	4	56	11	73		21	56	25	
20	116	26.5		22.3	55	55.2		32.3	52		22	12	50	12	74		54	24			
21	131	26.5		21.5	70	26.1		44.0	54	3	09	4	03	44	13	77		52	22		
22	146	26.5		20.7	84	57.0	+4	55.8	56	2	53	3	53	37	14	79		50	19		
23	161	26.5		19.9	99	27.8	+5	07.5	58		33	41	29	15	82		47	18			
24	176	26.4	-14	19.0	113	58.6	+5	19.2	60 S	2	07	3	27	4	19	10	17	84	21	45	14

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 14 ^h 40 ^m 0		Mag: -3.9 PMG: 10 ^h 09 ^m			Mag: +1.2 PMG: 14 ^h 37 ^m			Mag: -2.3 PMG: 16 ^h 30 ^m			Mag: +0.3 PMG: 17 ^h 17 ^m							
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'					
0	139	23.4	207	55.2	-21	38.0	140	36.1	-1	07.9	111	49.8	+10	11.4	100	02.7	+13	00.1	
1	154	25.9	222	54.3		37.7	155	36.8		07.1	126	51.9		11.6	115	05.1		00.1	
2	169	28.3	237	53.5		37.4	170	37.5		06.3	141	54.0		11.7	130	07.4		00.2	
3	184	30.8	252	52.7		37.1	185	38.3		05.5	156	56.1		11.9	145	09.7		00.2	
4	199	33.3	267	51.8		36.7	200	39.0		04.7	171	58.2		12.0	160	12.1		00.3	
5	214	35.7	282	51.0	-21	36.4	215	39.7	-1	03.9	187	00.3	+10	12.1	175	14.4	+13	00.3	
6	229	38.2	297	50.2	-21	36.1	230	40.4	-1	03.1	202	02.4	+10	12.3	190	16.8	+13	00.4	
7	244	40.7	312	49.3		35.7	245	41.2		02.3	217	04.6		12.4	205	19.1		00.4	
8	259	43.1	327	48.5		35.4	260	41.9		01.5	232	06.7		12.6	220	21.4		00.5	
9	274	45.6	342	47.7		35.1	275	42.6	-1	00.8	247	08.8		12.7	235	23.8		00.5	
10	289	48.1	357	46.8		34.7	290	43.3	-1	00.0	262	10.9		12.9	250	26.1		00.6	
11	304	50.5	12	46.0	-21	34.4	305	44.1	-0	59.2	277	13.0	+10	13.0	265	28.5	+13	00.6	
12	319	53.0	27	45.2	-21	34.1	320	44.8	-0	58.4	292	15.1	+10	13.2	280	30.8	+13	00.7	
13	334	55.5	42	44.3		33.7	335	45.5		57.6	307	17.2		13.3	295	33.1		00.7	
14	349	57.9	57	43.5		33.4	350	46.2		56.8	322	19.3		13.4	310	35.5		00.8	
15	5	00.4	72	42.7		33.0	5	47.0		56.0	337	21.4		13.6	325	37.8		00.8	
16	20	02.8	87	41.8		32.7	20	47.7		55.2	352	23.5		13.7	340	40.1		00.9	
17	35	05.3	102	41.0	-21	32.4	35	48.4	-0	54.4	7	25.6	+10	13.9	355	42.5	+13	00.9	
18	50	07.8	117	40.2	-21	32.0	50	49.1	-0	53.6	22	27.7	+10	14.0	10	44.8	+13	01.0	
19	65	10.2	132	39.3		31.7	65	49.9		52.9	37	29.8		14.2	25	47.2		01.1	
20	80	12.7	147	38.5		31.3	80	50.6		52.1	52	31.9		14.3	40	49.5		01.1	
21	95	15.2	162	37.7		31.0	95	51.3		51.3	67	34.0		14.5	55	51.8		01.2	
22	110	17.6	177	36.9		30.6	110	52.0		50.5	82	36.1		14.6	70	54.2		01.2	
23	125	20.1	192	36.0		30.3	125	52.8		49.7	97	38.2		14.7	85	56.5		01.3	
24	140	22.6	207	35.2	-21	29.9	140	53.5	-0	48.9	112	40.3	+10	14.9	100	58.8	+13	01.3	
Dif	—		-8		+3		+7		+8		+21		+1		+23			+1	

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 12 ^h 14 ^m 2			Edad: 5 ^d 5 PHE { 4 ^h : 57:9 12 ^h : 58:0 20 ^h : 58:2 R°: 51 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	h m	h m	h m
0	176	26.4	-14	19.0	113	58.6	+5 19.2	60 N	16 39	17 24	18 13	9 54 16	** ** *	** ** *	** ** *
1	191	26.4		18.2	128	29.3 ¹¹⁷	30.8 ¹¹⁶	58	47		29	15	9 58 19	** ** *	** ** *
2	206	26.4		17.4	143	00.0 ¹¹⁷	42.5 ¹¹⁷	56	16 53	33	17	10 01 22	** ** *	** ** *	** ** *
3	221	26.4		16.6	157	30.7 ¹¹⁷	+5 54.1 ¹¹⁶	54	17 00	37	19	04 24	** ** *	** ** *	** ** *
4	236	26.4		15.8	172	01.3 ¹¹⁶	+6 05.7 ¹¹⁶	52	05	41	21	07 26	** ** *	** ** *	** ** *
5	251	26.4	-14	15.0	186	31.8 ¹¹⁵	+6 17.3 ¹¹⁶	50	17 10	17 44	18 22	10 10 27	23 59 74		
6	266	26.4	-14	14.2	201	02.3 ¹¹⁵	+6 28.9 ¹¹⁶	45	17 21	17 52	18 26	10 16 31	23 51 70		
7	281	26.4		13.3	215	32.8 ¹¹⁵	40.4 ¹¹⁵	40	30	17 58	30	20 35	44 68		
8	296	26.4		12.5	230	03.2 ¹¹⁴	+6 52.0 ¹¹⁶	35	38	18 04	34	25 36	38 65		
9	311	26.4		11.7	244	33.6 ¹¹⁴	+7 03.4 ¹¹⁴	30	45	10	38	28 40	33 63		
10	326	26.4		10.9	259	03.9 ¹¹³	14.9 ¹¹⁵	20	17 57	20	46	35 43	24 59		
11	341	26.4	-14	10.1	273	34.2 ¹¹³	+7 26.3 ¹¹⁴	10 N	18 08	18 29	18 54	10 40 47	23 17 55		
12	356	26.4	-14	09.3	288	04.4 ¹¹²	+7 37.7 ¹¹⁴	0	18 18	18 39	19 04	10 46 50	23 10 51		
13	11	26.4		08.4	302	34.6 ¹¹²	+7 49.1 ¹¹⁴	10 S	28	18 50	15	51 54	23 02 49		
14	26	26.4		07.6	317	04.7 ¹¹¹	+8 00.4 ¹¹³	20	39	19 02	29	10 57 58	22 55 45		
15	41	26.4		06.8	331	34.7 ¹¹⁰	11.7 ¹¹³	30	52	17	47	11 04 62	46 41		
16	56	26.4		06.0	346	04.7 ¹¹⁰	23.0 ¹¹³	35	18 59	26	19 58	08 64	41 39		
17	71	26.4	-14	05.2	0	34.7 ¹¹⁰	+8 34.2 ¹¹²	40	19 07	19 36	20 12	11 12 67	22 36 36		
18	86	26.3	-14	04.3	15	04.6 ¹⁰⁹	+8 45.4 ¹¹²	45	19 17	19 49	20 29	11 17 71	22 29 33		
19	101	26.3		03.5	29	34.4 ¹⁰⁸	+8 56.6 ¹¹²	50	29	20 05	20 51	24 74	21 29		
20	116	26.3		02.7	44	04.2 ¹⁰⁸	+9 07.7 ¹¹¹	52	35	13	21 02	26 77	18 27		
21	131	26.3		01.9	58	33.9 ¹⁰⁷	18.8 ¹¹¹	54	41	22	15	30 78	14 25		
22	146	26.3		01.0	73	03.6 ¹⁰⁷	29.8 ¹¹⁰	56	48	31	30	33 81	09 24		
23	161	26.3	-14	00.2	87	33.2 ¹⁰⁶	40.8 ¹¹⁰	58	19 56	43	21 48	37 83	22 05 20		
24	176	26.3	-13	59.4	102	02.7 ¹⁰⁵	+9 51.7 ¹⁰⁹	60 S	20 05	20 56	22 12	11 41 87	21 59 18		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 14 ^h 36 ^m 1		Mag: -3.9 PMG: 10 ^h 10 ^m		Mag: +1.2 PMG: 14 ^h 36 ^m		Mag: -2.3 PMG: 16 ^h 27 ^m		Mag: +0.3 PMG: 17 ^h 13 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	140	22.6	207	35.2	140	53.5	112	40.3	100	58.8
1	155	25.0	222	34.4	155	54.2	127	42.4	116	01.2
2	170	27.5	237	33.5	170	54.9	142	44.5	131	03.5
3	185	29.9	252	32.7	185	55.7	157	46.6	146	05.9
4	200	32.4	267	31.9	200	56.4	172	48.7	161	08.2
5	215	34.9	282	31.1	215	57.1	187	50.8	176	10.5
6	230	37.3	297	30.2	230	57.8	202	52.9	191	12.9
7	245	39.8	312	29.4	245	58.6	217	55.0	206	15.2
8	260	42.3	327	28.6	260	59.3	232	57.1	221	17.5
9	275	44.7	342	27.7	276	00.0	247	59.2	236	19.9
10	290	47.2	357	26.9	291	00.7	263	01.3	251	22.2
11	305	49.7	12	26.1	306	01.5	278	03.4	266	24.5
12	320	52.1	27	25.3	321	02.2	293	05.5	281	26.9
13	335	54.6	42	24.4	336	02.9	308	07.6	296	29.2
14	350	57.1	57	23.6	351	03.6	323	09.7	311	31.5
15	5	59.5	72	22.8	6	04.4	338	11.8	326	33.9
16	21	02.0	87	22.0	24.2	21 05.1	353	13.8	341	36.2
17	36	04.4	102	21.1	36	05.8	8	15.9	356	38.5
18	51	06.9	117	20.3	51	06.6	23	18.0	11	40.9
19	66	09.4	132	19.5	66	07.3	38	20.1	26	43.2
20	81	11.8	147	18.7	81	08.0	53	22.2	41	45.5
21	96	14.3	162	17.8	96	08.7	68	24.3	56	47.9
22	111	16.8	177	17.0	111	09.5	83	26.4	71	50.2
23	126	19.2	192	16.2	126	10.2	98	28.5	86	52.5
24	141	21.7	207	15.4	141	10.9	113	30.6	101	54.9
Dif	—		-8	+4	+7	+8	+21	+1	+23	+

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16:2 PMG: 12 ^h 14 ^m 2			Edad: 6 ^d 5 SD: 15:9 PMG: 17 ^h 49 ^m	PHE { 4 ^h : 58'4 12 ^h : 58'6 20 ^h : 58'7 R°: 54 ^m											
	hG ☉	Dec				hG ☾		Dif	Dec		Dif	Náutico	Civil	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	176	26.3	-13	59.4	102	02.7	+9	51.7	60 N	6 14	7 03	7 48	10 10	21	0 22	87
1	191	26.3		58.6	116	32.2 ¹⁰⁵	+10	02.6 ¹⁰⁹	58	12	6 59	40	17	23	16	84
2	206	26.3		57.8	131	01.6 ¹⁰⁴		13.5 ¹⁰⁹	56	11	54	34	23	26	11	81
3	221	26.3		56.9	145	31.0 ¹⁰⁴		24.3 ¹⁰⁸	54	09	50	28	28	28	07	78
4	236	26.3		56.1	160	00.3 ¹⁰³		35.0 ¹⁰⁷	52	07	47	22	33	30	0 02	77
5	251	26.3	-13	55.3	174	29.5 ¹⁰²	+10	45.7 ¹⁰⁷	50	6 05	6 44	7 17	10 37	32	**	**
6	266	26.3	-13	54.5	188	58.7 ¹⁰²	+10	56.4 ¹⁰⁷	45	6 02	6 36	7 07	10 47	35	**	**
7	281	26.3		53.6	203	27.8 ¹⁰¹	+11	07.0 ¹⁰⁶	40	5 58	30	6 58	10 55	38	**	**
8	296	26.3		52.8	217	56.8 ¹⁰⁰		17.5 ¹⁰⁵	35	54	24	50	11 01	42	**	**
9	311	26.3		52.0	232	25.8 ¹⁰⁰		28.0 ¹⁰⁵	30	50	19	43	08	43	**	**
10	326	26.4		51.1	246	54.7 ⁹⁹		38.5 ¹⁰⁵	20	43	6 09	31	18	47	**	**
11	341	26.4	-13	50.3	261	23.6 ⁹⁹	+11	48.9 ¹⁰⁴	10 N	5 34	5 59	6 21	11 27	51	**	**
12	356	26.4	-13	49.5	275	52.4 ⁹⁸	+11	59.2 ¹⁰³	0	5 25	5 50	6 11	11 36	54	**	**
13	11	26.4		48.7	290	21.1 ⁹⁷	+12	09.4 ¹⁰²	10 S	14	39	6 01	45	57	23	51
14	26	26.4		47.8	304	49.7 ⁹⁶		19.7 ¹⁰³	20	5 00	27	5 50	11 55	59	40	49
15	41	26.4		47.0	319	18.3 ⁹⁶		29.8 ¹⁰¹	30	4 42	12	37	12 06	63	27	46
16	56	26.4		46.2	333	46.8 ⁹⁵		39.9 ¹⁰¹	35	31	5 03	30	12	66	20	43
17	71	26.4	-13	45.3	348	15.2 ⁹⁴	+12	49.9 ¹⁰⁰	40	4 17	4 53	5 22	12 19	69	23	12
18	86	26.4	-13	44.5	2	43.6 ⁹⁴	+12	59.8 ⁹⁹	45	4 00	4 40	5 12	12 28	71	23	02
19	101	26.4		43.7	17	11.9 ⁹³	+13	09.7 ⁹⁹	50	3 38	24	5 00	38	75	22	50
20	116	26.4		42.9	31	40.1 ⁹²		19.5 ⁹⁸	52	27	16	4 54	43	77	45	33
21	131	26.4		42.0	46	08.2 ⁹¹		29.3 ⁹⁸	54	3 15	4 08	48	48	79	39	31
22	146	26.4		41.2	60	36.3 ⁹¹		38.9 ⁹⁶	56	2 59	3 58	41	12	54	81	33
23	161	26.4		40.4	75	04.3 ⁹⁰		48.5 ⁹⁶	58	41	47	34	13	00	85	25
24	176	26.4	-13	39.5	89	32.3 ⁹⁰	+13	58.1 ⁹⁶	60 S	2 17	3 33	4 25	13	08	87	22

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 14 ^h 32 ^m 2		Mag: -3.9 PMG: 10 ^h 12 ^m		Mag: +1.2 PMG: 14 ^h 35 ^m		Mag: -2.3 PMG: 16 ^h 24 ^m		Mag: +0.3 PMG: 17 ^h 10 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	141	21.7	207	15.4	-21	21.2	141	10.9	-0	30.0
1	156	24.2	222	14.6		20.8	156	11.6		29.2
2	171	26.6	237	13.7		20.4	171	12.4		28.4
3	186	29.1	252	12.9		20.1	186	13.1		27.6
4	201	31.5	267	12.1		19.7	201	13.8		26.8
5	216	34.0	282	11.3	-21	19.3	216	14.6	-0	26.0
6	231	36.5	297	10.4	-21	18.9	231	15.3	-0	25.2
7	246	38.9	312	09.6		18.5	246	16.0		24.5
8	261	41.4	327	08.8		18.1	261	16.7		23.7
9	276	43.9	342	08.0		17.8	276	17.5		22.9
10	291	46.3	357	07.2		17.4	291	18.2		22.1
11	306	48.8	12	06.3	-21	17.0	306	18.9	-0	21.3
12	321	51.3	27	05.5	-21	16.6	321	19.6	-0	20.5
13	336	53.7	42	04.7		16.2	336	20.4		19.7
14	351	56.2	57	03.9		15.8	351	21.1		18.9
15	6	58.7	72	03.1		15.4	6	21.8		18.2
16	22	01.1	87	02.2		15.0	21	22.6		17.4
17	37	03.6	102	01.4	-21	14.6	36	23.3	-0	16.6
18	52	06.0	117	00.6	-21	14.2	51	24.0	-0	15.8
19	67	08.5	131	59.8		13.8	66	24.7		15.0
20	82	11.0	146	59.0		13.4	81	25.5		14.2
21	97	13.4	161	58.2		13.0	96	26.2		13.4
22	112	15.9	176	57.3		12.6	111	26.9		12.6
23	127	18.4	191	56.5		12.2	126	27.7		11.9
24	142	20.8	206	55.7	-21	11.8	141	28.4	-0	11.1
Dif	—		-8		+4		+7		+8	
							+21		+1	
									+23	
									+1	

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 16:2 PMG: 12 ^h 14 ^m 2			Edad: 7 ^d 5 SD: 16:0 PMG: 18 ^h 43 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	°	'	°	'	h	m	h	m	h	m	h	m	m	
0	176	26.4	-13 39.5	89	32.3	+13 58.1	88	60 N	16 44	17 28	18 18	10 31 28	1 49 86				
1	191	26.4		104	00.1	+14 07.5	94	58	51	33	19	40 31	40 83				
2	206	26.4		118	27.9		88	56	16 58	37	21	49 33	32 81				
3	221	26.5		132	55.6		87	54	17 04	41	22	10 56 36	25 79				
4	236	26.5		147	23.3		87	52	09	44	24	11 03 37	19 77				
5	251	26.5	-13 35.4	161	50.8	+14 44.6	85	50	17 14	17 47	18 25	11 09 39	1 13 75				
6	266	26.5	-13 34.5	176	18.3	+14 53.6	85	45	17 24	17 54	18 29	11 22 42	1 01 72				
7	281	26.5		190	45.8	+15 02.6	85	40	33	18 01	32	33 45	0 52 68				
8	296	26.5		205	13.1		83	35	40	06	36	43 46	43 66				
9	311	26.5		219	40.4		83	30	47	11	39	11 51 48	36 64				
10	326	26.5		234	07.6		82	20	17 58	21	47	12 05 52	23 60				
11	341	26.5	-13 30.3	248	34.7	+15 37.7	81	10 N	18 08	18 30	18 55	12 18 54	0 12 57				
12	356	26.5	-13 29.5	263	01.7	+15 46.2	80	0	18 18	18 39	19 04	12 30 56	0 01 55				
13	11	26.6		277	28.7	+15 54.7	80	10 S	27	18 49	14	42 58	** ** *				
14	26	26.6		291	55.6	+16 03.0	79	20	38	19 01	27	12 54 62	** ** *				
15	41	26.6		306	22.4		78	30	50	15	45	13 09 65	** ** *				
16	56	26.6		320	49.2		78	35	18 57	24	19 55	18 66	** ** *				
17	71	26.6	-13 25.3	335	15.9	+16 27.6	77	40	19 05	19 34	20 09	13 28 68	23 53 48				
18	86	26.6	-13 24.5	349	42.5	+16 35.6	76	45	19 14	19 46	20 25	13 39 71	23 40 46				
19	101	26.6		4	09.0		75	50	26	20 01	46	13 53 74	25 43				
20	116	26.7		18	35.4		74	52	31	09	20 57	14 00 76	18 42				
21	131	26.7		33	01.8	+16 59.0	74	54	37	17	21 09	07 78	10 40				
22	146	26.7		47	28.1	+17 06.6	73	56	43	26	23	15 80	23 02 38				
23	161	26.7		61	54.3		72	58	51	37	21 40	25 82	22 52 35				
24	176	26.7	-13 19.4	76	20.5	+17 21.5	72	60 S	19 59	20 49	22 02	14 35 85	22 40 33				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG 14 ^h 28 ^m 2		Mag: -3.9 PMG: 10 ^h 13 ^m			Mag: +1.2 PMG: 14 ^h 33 ^m			Mag: -2.3 PMG: 16 ^h 20 ^m			Mag: +0.3 PMG: 17 ^h 06 ^m					
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	°	'	°	'	°	°	'	°	°	'	°	'	°	
0	142	20.8	206 55.7	-21 11.8	141 28.4	-0 11.1	114 20.8	+10 22.0	102 50.8	+13 03.9							
1	157	23.3	221 54.9	11.4	156 29.1	10.3	129 22.9	22.1	117 53.1	03.9							
2	172	25.8	236 54.1	11.0	171 29.8	09.5	144 25.0	22.3	132 55.5	04.0							
3	187	28.2	251 53.3	10.6	186 30.6	08.7	159 27.1	22.4	147 57.8	04.0							
4	202	30.7	266 52.4	10.2	201 31.3	07.9	174 29.2	22.6	163 00.1	04.1							
5	217	33.2	281 51.6	-21 09.8	216 32.0	-0 07.1	189 31.3	+10 22.7	178 02.4	+13 04.2							
6	232	35.6	296 50.8	-21 09.4	231 32.8	-0 06.3	204 33.4	+10 22.8	193 04.8	+13 04.2							
7	247	38.1	311 50.0	09.0	246 33.5	05.5	219 35.4	23.0	208 07.1	04.3							
8	262	40.5	326 49.2	08.5	261 34.2	04.8	234 37.5	23.1	223 09.4	04.3							
9	277	43.0	341 48.4	08.1	276 34.9	04.0	249 39.6	23.3	238 11.8	04.4							
10	292	45.5	356 47.6	07.7	291 35.7	03.2	264 41.7	23.4	253 14.1	04.4							
11	307	47.9	11 46.7	-21 07.3	306 36.4	-0 02.4	279 43.8	+10 23.6	268 16.4	+13 04.5							
12	322	50.4	26 45.9	-21 06.9	321 37.1	-0 01.6	294 45.9	+10 23.7	283 18.7	+13 04.5							
13	337	52.9	41 45.1	06.5	336 37.9	-0 00.8	309 48.0	23.9	298 21.1	04.6							
14	352	55.3	56 44.3	06.1	351 38.6	+0 00.0	324 50.0	24.0	313 23.4	04.6							
15	7	57.8	71 43.5	05.6	6 39.3	+0 00.8	339 52.1	24.2	328 25.7	04.7							
16	23	00.3	86 42.7	05.2	21 40.0	01.5	354 54.2	24.3	343 28.0	04.8							
17	38	02.7	101 41.9	-21 04.8	36 40.8	+0 02.3	9 56.3	+10 24.5	358 30.4	+13 04.8							
18	53	05.2	116 41.1	-21 04.4	51 41.5	+0 03.1	24 58.4	+10 24.6	13 32.7	+13 04.9							
19	68	07.6	131 40.2	03.9	66 42.2	03.9	40 00.5	24.8	28 35.0	04.9							
20	83	10.1	146 39.4	03.5	81 43.0	04.7	55 02.6	24.9	43 37.3	05.0							
21	98	12.6	161 38.6	03.1	96 43.7	05.5	70 04.6	25.1	58 39.7	05.0							
22	113	15.0	176 37.8	02.7	111 44.4	06.3	85 06.7	25.2	73 42.0	05.1							
23	128	17.5	191 37.0	02.2	126 45.2	07.1	100 08.8	25.4	88 44.3	05.1							
24	143	20.0	206 36.2	-21 01.8	141 45.9	+0 07.8	115 10.9	+10 25.5	103 46.6	+13 05.2							
Dif	—		-8		+4	+7		+8	+21		+1	+23		+			

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16:2 PMG: 12 ^h 14 ^m 2			Edad: 8 ^d 5 PHE { 4 ^h : 59/4 12 ^h : 59/5 20 ^h : 59/7 PMG: 19 ^h 40 ^m R°: 60 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec		Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	176	26.7	-13	19.4	76	20.5	+17	21.5	73	60 N	6 10	6 59	7 43	10 59	40	3 15	81
1	191	26.7		18.6	90	46.6		28.8	71	58	08	54	36	11 11	42	3 03	79
2	206	26.7		17.7	105	12.6		35.9	71	56	07	50	29	22 44		2 53	77
3	221	26.8		16.9	119	38.5		43.0	71	54	05	47	24	32 45		44	75
4	236	26.8		16.1	134	04.4		50.0	70	52	04	43	18	40 47		36	73
5	251	26.8	-13	15.2	148	30.1	67	+17 56.8	68	50	6 02	6 40	7 14	11 48	47	2 28	73
6	266	26.8	-13	14.4	162	55.9	68	+18 03.6	68	45	5 59	6 33	7 04	12 04	50	2 13	69
7	281	26.8		13.5	177	21.5	66	10.2	66	40	56	27	6 55	18 51		2 00	68
8	296	26.8		12.7	191	47.1	66	16.7	65	35	52	22	48	29 53		1 49	66
9	311	26.9		11.8	206	12.6	65	23.2	65	30	49	17	41	39 54		40	64
10	326	26.9		11.0	220	38.0	64	29.4	62	20	42	6 08	30	12 57	56	23	63
11	341	26.9	-13	10.1	235	03.4	64	+18 35.6	62	10 N	5 34	5 59	6 20	13 12	58	1 09	60
12	356	26.9	-13	09.3	249	28.7	63	+18 41.7	61	0	5 25	5 50	6 11	13 26	59	0 56	58
13	11	26.9		08.5	263	53.9	62	47.6	59	10 S	14	40	6 01	40 61		43	56
14	26	27.0		07.6	278	19.1	62	53.5	59	20	5 01	28	5 51	13 56	62	29	54
15	41	27.0		06.8	292	44.2	61	+18 59.2	57	30	4 44	14	39	14 14	64	13	51
16	56	27.0		05.9	307	09.2	60	+19 04.7	55	35	33	5 05	32	24 65		0 03	50
17	71	27.0	-13	05.1	321	34.2	60	+19 10.2	55	40	4 20	4 55	5 24	14 36	66	*** ** *	
18	86	27.0	-13	04.2	335	59.1	59	+19 15.5	53	45	4 04	4 43	5 15	14 50	68	*** ** *	
19	101	27.1		03.4	350	23.9	58	20.7	52	50	3 43	28	5 03	15 07	70	*** ** *	
20	116	27.1		02.5	4	48.7	58	25.8	51	52	32	20	4 58	16 70		*** ** *	
21	131	27.1		01.7	19	13.4	57	30.8	50	54	20	12	52	25 72		23 50	51
22	146	27.1	-13	00.8	33	38.1	57	35.6	48	56	3 06	4 03	46	35 73		40	50
23	161	27.2	-13	00.0	48	02.7	56	40.3	47	58	2 49	3 52	39	15 47	74	27	49
24	176	27.2	-12	59.1	62	27.2	55	+19 44.9	46	60 S	2 27	3 40	4 30	16 00	77	23 13	48

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG 14 ^h 24 ^m 3		Mag: -3.9 PMG: 10 ^h 14 ^m			Mag: +1.2 PMG: 14 ^h 32 ^m			Mag: -2.3 PMG: 16 ^h 17 ^m			Mag: +0.3 PMG: 17 ^h 02 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	143	20.0	206	36.2	-21	01.8	141	45.9	+0	07.8	115	10.9	+10	25.5
1	158	22.4	221	35.4		01.4	156	46.6		08.6	130	13.0		25.7
2	173	24.9	236	34.6		00.9	171	47.3		09.4	145	15.1		25.8
3	188	27.4	251	33.8		00.5	186	48.1		10.2	160	17.2		26.0
4	203	29.8	266	33.0	-21	00.1	201	48.8		11.0	175	19.2		26.1
5	218	32.3	281	32.2	-20	59.6	216	49.5	+0	11.8	190	21.3	+10	26.3
6	233	34.8	296	31.3	-20	59.2	231	50.3	+0	12.6	205	23.4	+10	26.4
7	248	37.2	311	30.5		58.8	246	51.0		13.3	220	25.5		26.6
8	263	39.7	326	29.7		58.3	261	51.7		14.1	235	27.6		26.7
9	278	42.1	341	28.9		57.9	276	52.5		14.9	250	29.7		26.9
10	293	44.6	356	28.1		57.5	291	53.2		15.7	265	31.7		27.0
11	308	47.1	11	27.3	-20	57.0	306	53.9	+0	16.5	280	33.8	+10	27.2
12	323	49.5	26	26.5	-20	56.6	321	54.6	+0	17.3	295	35.9	+10	27.4
13	338	52.0	41	25.7		56.1	336	55.4		18.1	310	38.0		27.5
14	353	54.5	56	24.9		55.7	351	56.1		18.9	325	40.1		27.7
15	8	56.9	71	24.1		55.2	6	56.8		19.6	340	42.1		27.8
16	23	59.4	86	23.3		54.8	21	57.6		20.4	355	44.2		28.0
17	39	01.9	101	22.5	-20	54.3	36	58.3	+0	21.2	10	46.3	+10	28.1
18	54	04.3	116	21.7	-20	53.9	51	59.0	+0	22.0	25	48.4	+10	28.3
19	69	06.8	131	20.9		53.4	66	59.8		22.8	40	50.5		28.4
20	84	09.3	146	20.1		53.0	82	00.5		23.6	55	52.5		28.6
21	99	11.7	161	19.3		52.5	97	01.2		24.4	70	54.6		28.7
22	114	14.2	176	18.5		52.1	112	01.9		25.1	85	56.7		28.9
23	129	16.6	191	17.7		51.6	127	02.7		25.9	100	58.8		29.0
24	144	19.1	206	16.9	-20	51.2	142	03.4	+0	26.7	116	00.9	+10	29.2
Dif	—		-8 +4			+7 +8			+21 +2			+23 +1		

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'2			Edad: 9 ^d 5	PHE { 4 ^h : 59'8 12 ^h : 59'9 20 ^h : 60'0 R°: 61 ^m									
	PMG: 12 ^h 14 ^m 2					SD: 16'3			PMG: 20 ^h 40 ^m					
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	176	27.2	-12 59.1	62	27.2	+19 44.9	55	60 N	16 49	17 33	18 22	11 39 55	4 36 70	
1	191	27.2	58.3	76	51.7	49.3	44	58	16 56	37	24	11 53 57	22 69	
2	206	27.2	57.4	91	16.1	53.6	43	56	17 02	41	25	12 06 57	4 10 68	
3	221	27.3	56.6	105	40.5	+19 57.8	42	54	08	45	26	17 58	3 59 67	
4	236	27.3	55.7	120	04.8	+20 01.8	40	52	13	48	27	27 58	49 67	
5	251	27.3	-12 54.9	134	29.1	+20 05.7	39	50	17 17	17 51	18 28	12 35 59	3 41 66	
6	266	27.3	-12 54.0	148	53.3	+20 09.5	38	45	17 27	17 57	18 32	12 54 59	3 22 66	
7	281	27.4	53.2	163	17.5	13.1	36	40	35	18 03	35	13 09 60	3 08 64	
8	296	27.4	52.3	177	41.6	16.6	35	35	42	08	38	22 60	2 55 64	
9	311	27.4	51.4	192	05.6	20.0	34	30	48	13	41	33 60	44 63	
10	326	27.4	50.6	206	29.7	23.2	32	20	17 59	21	47	13 53 60	26 62	
11	341	27.5	-12 49.7	220	53.6	+20 26.3	31	10 N	18 08	18 30	18 55	14 10 60	2 09 61	
12	356	27.5	-12 48.9	235	17.6	+20 29.3	30	0	18 18	18 39	19 03	14 25 61	1 54 60	
13	11	27.5	48.0	249	41.4	32.1	28	10 S	27	48	14	41 61	39 59	
14	26	27.5	47.2	264	05.3	34.7	26	20	37	18 59	26	14 58 62	23 58	
15	41	27.6	46.3	278	29.1	37.2	25	30	48	19 13	43	15 18 61	1 04 57	
16	56	27.6	45.5	292	52.9	39.6	24	35	18 55	21	19 53	29 62	0 53 56	
17	71	27.6	-12 44.6	307	16.6	+20 41.9	23	40	19 02	19 31	20 06	15 42 62	0 41 55	
18	86	27.7	-12 43.7	321	40.3	+20 43.9	20	45	19 11	19 43	20 21	15 58 62	0 26 54	
19	101	27.7	42.9	336	03.9	45.9	20	50	22	19 57	42	16 17 62	0 08 53	
20	116	27.7	42.0	350	27.6	47.7	18	52	27	20 04	20 52	26 63	0 00 52	
21	131	27.8	41.2	4	51.2	49.4	17	54	33	12	21 03	37 62	** ** *	
22	146	27.8	40.3	19	14.7	50.9	15	56	39	21	17	16 48 62	** ** *	
23	161	27.8	39.5	33	38.3	52.2	13	58	46	31	33	17 01 63	** ** *	
24	176	27.8	-12 38.6	48	01.8	+20 53.4	12	60 S	19 54	20 43	21 53	17 17 62	** ** *	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 14 ^h 20 ^m 4		Mag: -3.9 PMG: 10 ^h 15 ^m			Mag: +1.2 PMG: 14 ^h 31 ^m			Mag: -2.3 PMG: 16 ^h 14 ^m			Mag: +0.3 PMG: 16 ^h 59 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	144	19.1	206 16.9	-20 51.2	142 03.4	+0 26.7	116 00.9	+10 29.2	104 42.4	+13 06.6				
1	159	21.6	221 16.1	50.7	157 04.1	27.5	131 02.9	29.3	119 44.7	06.6				
2	174	24.0	236 15.3	50.3	172 04.9	28.3	146 05.0	29.5	134 47.0	06.7				
3	189	26.5	251 14.5	49.8	187 05.6	29.1	161 07.1	29.6	149 49.3	06.7				
4	204	29.0	266 13.7	49.3	202 06.3	29.9	176 09.2	29.8	164 51.7	06.8				
5	219	31.4	281 12.9	-20 48.9	217 07.1	+0 30.6	191 11.3	+10 29.9	179 54.0	+13 06.8				
6	234	33.9	296 12.1	-20 48.4	232 07.8	+0 31.4	206 13.3	+10 30.1	194 56.3	+13 06.9				
7	249	36.4	311 11.3	48.0	247 08.5	32.2	221 15.4	30.2	209 58.6	07.0				
8	264	38.8	326 10.5	47.5	262 09.3	33.0	236 17.5	30.4	225 00.9	07.0				
9	279	41.3	341 09.7	47.0	277 10.0	33.8	251 19.6	30.5	240 03.3	07.1				
10	294	43.8	356 08.9	46.6	292 10.7	34.6	266 21.6	30.7	255 05.6	07.1				
11	309	46.2	11 08.1	-20 46.1	307 11.5	+0 35.4	281 23.7	+10 30.8	270 07.9	+13 07.2				
12	324	48.7	26 07.3	-20 45.6	322 12.2	+0 36.1	296 25.8	+10 31.0	285 10.2	+13 07.2				
13	339	51.1	41 06.5	45.2	337 12.9	36.9	311 27.9	31.1	300 12.5	07.3				
14	354	53.6	56 05.7	44.7	352 13.6	37.7	326 30.0	31.3	315 14.9	07.4				
15	9	56.1	71 04.9	44.2	7 14.4	38.5	341 32.0	31.5	330 17.2	07.4				
16	24	58.5	86 04.1	43.8	22 15.1	39.3	356 34.1	31.6	345 19.5	07.5				
17	40	01.0	101 03.3	-20 43.3	37 15.8	+0 40.1	11 36.2	+10 31.8	0 21.8	+13 07.5				
18	55	03.5	116 02.5	-20 42.8	52 16.6	+0 40.9	26 38.3	+10 31.9	15 24.1	+13 07.6				
19	70	05.9	131 01.7	42.3	67 17.3	41.6	41 40.3	32.1	30 26.4	07.6				
20	85	08.4	146 00.9	41.9	82 18.0	42.4	56 42.4	32.2	45 28.8	07.7				
21	100	10.9	161 00.1	41.4	97 18.8	43.2	71 44.5	32.4	60 31.1	07.8				
22	115	13.3	175 59.3	40.9	112 19.5	44.0	86 46.6	32.5	75 33.4	07.8				
23	130	15.8	190 58.5	40.4	127 20.2	44.8	101 48.6	32.7	90 35.7	07.9				
24	145	18.3	205 57.7	-20 39.9	142 21.0	+0 45.6	116 50.7	+10 32.8	105 38.0	+13 07.9				
Dif	—		-8		+5	+7		+8	+21		+2	+23		+1

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16/2 PMG: 12 ^h 14 ^m 1			Edad: 10 ^d 5 PHE { 4 ^h : 60/1 12 ^h : 60/1 20 ^h : 60/2 Rº: 60 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Náutico	Civil		Hora	Rº	Hora	Rº
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	176	27.8	-12	38.6	48	01.8	+20	53.4	60 N	6 05	6 54	7 37	12 34	73	5 46	54
1	191	27.9		37.7	62	25.3	45	54.5	58	04	50	31	12 50	71	31	55
2	206	27.9		36.9	76	48.8	45	55.4	56	03	46	25	13 03	70	18	56
3	221	27.9		36.0	91	12.2	44	56.2	54	01	43	19	15 69		5 06	57
4	236	28.0		35.2	105	35.6	44	56.9	52	6 00	40	15	25 68		4 56	57
5	251	28.0	-12	34.3	119	59.0	44	+20	50	5 59	6 37	7 10	13 34	68	4 47	57
6	266	28.0	-12	33.4	134	22.4	44	+20	45	5 56	6 30	7 01	13 53	67	4 28	58
7	281	28.1		32.6	148	45.8	44	57.9	40	53	25	6 53	14 09	65	4 12	59
8	296	28.1		31.7	163	09.2	44	57.9	35	50	20	46	22 65		3 59	59
9	311	28.1		30.9	177	32.5	43	57.8	30	47	15	40	33 64		47	60
10	326	28.2		30.0	191	55.9	44	57.5	20	41	6 07	29	14 53	63	28	60
11	341	28.2	-12	29.1	206	19.2	43	+20	10 N	5 33	5 58	6 20	15 10	62	3 10	61
12	356	28.2	-12	28.3	220	42.5	43	+20	0	5 25	5 50	6 11	15 26	61	2 54	61
13	11	28.3		27.4	235	05.9	44	55.8	10 S	15	40	6 02	15 42	60	38	62
14	26	28.3		26.5	249	29.2	43	55.0	20	5 02	29	5 52	16 00	58	21	62
15	41	28.4		25.7	263	52.5	43	54.0	30	4 46	16	41	19 58		2 01	62
16	56	28.4		24.8	278	15.8	43	52.8	35	36	5 07	34	31 56		1 49	63
17	71	28.4	-12	23.9	292	39.2	44	+20	40	4 23	4 58	5 26	16 44	56	1 36	63
18	86	28.5	-12	23.1	307	02.5	43	+20	45	4 08	4 46	5 18	17 00	54	1 20	63
19	101	28.5		22.2	321	25.8	43	48.5	50	3 47	32	07	19 53		1 01	63
20	116	28.5		21.3	335	49.2	44	46.7	52	37	25	5 02	29 51		0 52	63
21	131	28.6		20.5	350	12.6	44	44.8	54	26	17	4 56	39 50		41	64
22	146	28.6		19.6	4	35.9	43	42.8	56	3 12	4 08	50	17 50	50	30	64
23	161	28.7		18.7	18	59.3	44	40.6	58	2 56	3 58	44	18 04	47	16	64
24	176	28.7	-12	17.9	33	22.7	44	+20	60 S	2 36	3 46	4 36	18 19	46	0 01	64
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO			
	PMG 14 ^h 16 ^m 4			Mag: -3.9 PMG: 10 ^h 17 ^m			Mag: +1.2 PMG: 14 ^h 30 ^m			Mag: -2.3 PMG: 16 ^h 10 ^m			Mag: +0.3 PMG: 16 ^h 55 ^m			
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♅	Dec	hG ♄	Dec	hG ♆	Dec			
h	°	'	°	°	'	°	'	°	'	°	'	°	'	°	'	°
0	145	18.3		205	57.7	-20	142	21.0	+0	116	50.7	+10	105	38.0	+13	07.9
1	160	20.7		220	56.9		157	21.7		131	52.8		120	40.3		08.0
2	175	23.2		235	56.1		172	22.4		146	54.9		135	42.7		08.1
3	190	25.6		250	55.3		187	23.2		161	56.9		150	45.0		08.1
4	205	28.1		265	54.5		202	23.9		176	59.0		165	47.3		08.2
5	220	30.6		280	53.8	-20	217	24.6	+0	192	01.1	+10	180	49.6	+13	08.2
6	235	33.0		295	53.0	-20	232	25.4	+0	207	03.1	+10	195	51.9	+13	08.3
7	250	35.5		310	52.2		247	26.1		222	05.2		210	54.2		08.3
8	265	38.0		325	51.4		262	26.8		237	07.3		225	56.6		08.4
9	280	40.4		340	50.6		277	27.6		252	09.4		240	58.9		08.5
10	295	42.9		355	49.8		292	28.3		267	11.4		256	01.2		08.5
11	310	45.4		10	49.0	-20	307	29.0	+0	282	13.5	+10	271	03.5	+13	08.6
12	325	47.8		25	48.2	-20	322	29.8	+0	297	15.6	+10	286	05.8	+13	08.6
13	340	50.3		40	47.4		337	30.5		312	17.7		301	08.1		08.7
14	355	52.7		55	46.6		352	31.2		327	19.7		316	10.4		08.8
15	10	55.2		70	45.9		7	32.0		342	21.8		331	12.8		08.8
16	25	57.7		85	45.1		22	32.7		357	23.9		346	15.1		08.9
17	41	00.1		100	44.3	-20	37	33.4	+0	12	25.9	+10	1	17.4	+13	08.9
18	56	02.6		115	43.5	-20	52	34.2	+0	27	28.0	+10	16	19.7	+13	09.0
19	71	05.1		130	42.7		67	34.9	+1	42	30.1		31	22.0		09.0
20	86	07.5		145	41.9		82	35.6		57	32.1		46	24.3		09.1
21	101	10.0		160	41.1		97	36.4		72	34.2		61	26.6		09.2
22	116	12.5		175	40.3		112	37.1		87	36.3		76	29.0		09.2
23	131	14.9		190	39.6		127	37.8		102	38.4		91	31.3		09.3
24	146	17.4		205	38.8	-20	142	38.5	+1	117	40.4	+10	106	33.6	+13	09.3
Dif	—			-8	+5		+7	+8		+21	+2		+23	+1		

UT	SOL				LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'2 PMG: 12 ^h 14 ^m 1				Edad: 11 ^d 5 PHE { SD: 16'4 PMG: 22 ^h 41 ^m											
	hG ☉		Dec		hG ☾		Dif				Dif		Civil	Náutico	Hora	R°
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m	
0	176	28.7	-12	17.9	33	22.7	+20	38.2	60 N	16 55	17 38	18 27	13 47 84		6 40 39	
1	191	28.7		17.0	47	46.1		35.8	58	17 01	42	28	14 01 82		26 41	
2	206	28.8		16.1	62	09.5		33.1	56	07	45	29	13 80		14 43	
3	221	28.8		15.3	76	33.0		30.4	54	12	48	30	24 78		6 03 45	
4	236	28.9		14.4	90	56.5		27.4	52	16	51	31	33 76		5 53 46	
5	251	28.9	-12	13.5	105	20.0	+20	24.4	50	17 21	17 54	18 32	14 42 75		5 44 48	
6	266	28.9	-12	12.7	119	43.5	+20	21.1	45	17 30	18 00	18 34	15 00 72		5 26 50	
7	281	29.0		11.8	134	07.0		17.8	40	37	05	37	14 70		5 11 52	
8	296	29.0		10.9	148	30.6		14.3	35	44	10	39	27 67		4 58 53	
9	311	29.1		10.1	162	54.2		10.6	30	17 50	14	42	37 67		47 54	
10	326	29.1		09.2	177	17.9		06.9	20	18 00	22	48	15 56 63		28 56	
11	341	29.1	-12	08.3	191	41.5	+20	02.9	10 N	18 09	18 30	18 55	16 12 61		4 11 59	
12	356	29.2	-12	07.4	206	05.2	+19	58.9	0	18 17	18 39	19 03	16 27 59		3 55 60	
13	11	29.2		06.6	220	29.0		54.7	10 S	26	48	13	42 57		40 61	
14	26	29.3		05.7	234	52.8		50.3	20	35	18 58	25	16 58 55		23 63	
15	41	29.3		04.8	249	16.6		45.8	30	46	19 11	40	17 17 51		3 03 66	
16	56	29.4		04.0	263	40.4		41.2	35	18 53	19	19 50	27 50		2 52 67	
17	71	29.4	-12	03.1	278	04.4	+19	36.4	40	19 00	19 28	20 03	17 40 48		2 39 68	
18	86	29.4	-12	02.2	292	28.3	+19	31.5	45	19 08	19 39	20 18	17 54 46		2 23 70	
19	101	29.5		01.3	306	52.3		26.5	50	18	19 53	37	18 12 42		2 04 72	
20	116	29.5	-12	00.5	321	16.3		21.3	52	23	20 00	46	20 41		1 55 73	
21	131	29.6	-11	59.6	335	40.4		16.0	54	28	07	20 57	29 40		45 74	
22	146	29.6		58.7	350	04.5		10.6	56	34	16	21 10	40 37		34 75	
23	161	29.7		57.8	4	28.7	+19	05.0	58	41	25	25	18 51 36		20 78	
24	176	29.7	-11	57.0	18	53.0	+18	59.3	60 S	19 48	20 36	21 44	19 05 32		1 05 79	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 14 ^h 12 ^m 5		Mag: -3.9 PMG: 10 ^h 18 ^m		Mag: +1.3 PMG: 14 ^h 29 ^m		Mag: -2.3 PMG: 16 ^h 07 ^m		Mag: +0.3 PMG: 16 ^h 51 ^m	
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'
0	146	17.4	205	38.8	-20	28.1	142	38.5	+1	04.4
1	161	19.9	220	38.0		27.6	157	39.3		05.2
2	176	22.3	235	37.2		27.1	172	40.0		06.0
3	191	24.8	250	36.4		26.6	187	40.7		06.7
4	206	27.2	265	35.6		26.0	202	41.5		07.5
5	221	29.7	280	34.8	-20	25.5	217	42.2	+1	08.3
6	236	32.2	295	34.1	-20	25.0	232	42.9	+1	09.1
7	251	34.6	310	33.3		24.5	247	43.7		09.9
8	266	37.1	325	32.5		24.0	262	44.4		10.7
9	281	39.6	340	31.7		23.5	277	45.1		11.5
10	296	42.0	355	30.9		23.0	292	45.9		12.2
11	311	44.5	10	30.1	-20	22.4	307	46.6	+1	13.0
12	326	47.0	25	29.4	-20	21.9	322	47.4	+1	13.8
13	341	49.4	40	28.6		21.4	337	48.1		14.6
14	356	51.9	55	27.8		20.9	352	48.8		15.4
15	11	54.4	70	27.0		20.4	7	49.6		16.1
16	26	56.8	85	26.2		19.8	22	50.3		16.9
17	41	59.3	100	25.5	-20	19.3	37	51.0	+1	17.7
18	57	01.7	115	24.7	-20	18.8	52	51.8	+1	18.5
19	72	04.2	130	23.9		18.3	67	52.5		19.3
20	87	06.7	145	23.1		17.7	82	53.2		20.1
21	102	09.1	160	22.3		17.2	97	54.0		20.8
22	117	11.6	175	21.6		16.7	112	54.7		21.6
23	132	14.1	190	20.8		16.2	127	55.4		22.4
24	147	16.5	205	20.0	-20	15.6	142	56.2	+1	23.2
Dif	—		-8		+5		+7		+8	

	+21	+2	+23	+1

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16:2			Edad: 12 ^d 5 PHE { 4 ^h : 60'0 12 ^h : 59'9 20 ^h : 59'8													
	PMG: 12 ^h 14 ^m 0			SD: 16:4 PMG: 23 ^h 40 ^m Rº: 55 ^m													
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Náutico	Civil		Hora	Rº	Hora	Rº	
h	°	'	°	°	'	°	'	°	°	h	m	h	m	h	m	h	m
0	176	29.7	-11 57.0	18	53.0	+18	59.3	58	60 N	6	00	6	48	7	32	15	11 90
1	191	29.8		33	17.2		53.5	58	58	5	59		45	26		23	86
2	206	29.8		47	41.6		47.6	59	56		58		42	20		33	83
3	221	29.9		62	06.0		41.5	61	54		57		39	15		42	81
4	236	29.9		76	30.4		35.3	62	52		57		36	11		49	80
5	251	30.0	-11 52.6	90	54.9	55	+18 28.9	64	50	5	56	6	33	7	06	15	57 77
6	266	30.0	-11 51.7	105	19.5	56	+18 22.5	64	45	5	53	6	27	6	58	16	12 73
7	281	30.1		119	44.1	56		66	40		51		22	50		24	71
8	296	30.1		134	08.8	57		67	35		48		18	44		34	69
9	311	30.2		148	33.6	58	+18 02.4	68	30		46		14	38		44	66
10	326	30.2		162	58.4	58	+17 55.4	70	20		40	6	05	28		16	59 63
11	341	30.3	-11 47.3	177	23.2	58	+17 48.4	70	10 N	5	33	5	58	6	19	17	13 59
12	356	30.3	-11 46.4	191	48.2	60	+17 41.2	72	0	5	25	5	49	6	11	17	26 56
13	11	30.4		206	13.2	60		73	10 S		15		41	6	02	39	53
14	26	30.4		220	38.2	60		74	20	5	04	30		5	53	17	53 49
15	41	30.5		235	03.4	62		75	30	4	48	17		42		18	08 46
16	56	30.5		249	28.6	62		77	35		38	10		36		17	44
17	71	30.6	-11 42.0	263	53.8	62	+17 03.6	77	40	4	26	5	00	5	29	18	28 41
18	86	30.6	-11 41.1	278	19.2	64	+16 55.8	78	45	4	11	4	49	5	21	18	40 38
19	101	30.7		292	44.6	64		80	50	3	52	35		10		18	54 35
20	116	30.7		307	10.1	65		81	52		42	29		06		19	01 33
21	131	30.8		321	35.6	65		81	54		31	21		5	01	09	31
22	146	30.8		336	01.2	66		83	56		19	13		4	55	17	29
23	161	30.9		350	26.9	67		84	58	3	04	4	04	48		27	26
24	176	30.9	-11 35.8	4	52.7	68	+16 06.4	85	60 S	2	45	3	53	4	41	19	37 23

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG 14 ^h 08 ^m 6		Mag: -3.9 PMG: 10 ^h 19 ^m			Mag: +1.3 PMG: 14 ^h 28 ^m			Mag: -2.3 PMG: 16 ^h 04 ^m			Mag: +0.3 PMG: 16 ^h 47 ^m		
	hG ♈		hG ♀ Dec			hG ♂ Dec			hG ♃ Dec			hG ♄ Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	147	16.5	205	20.0	-20 15.6	142	56.2	+1 23.2	118	30.0	+10 40.3	107	29.0	+13 10.8
1	162	19.0	220	19.2		157	56.9		133	32.1		122	31.4	
2	177	21.5	235	18.5		172	57.6		148	34.2		137	33.7	
3	192	23.9	250	17.7		187	58.4		163	36.2		152	36.0	
4	207	26.4	265	16.9		202	59.1		178	38.3		167	38.3	
5	222	28.9	280	16.1	-20 13.0	217	59.8	+1 27.1	193	40.4	+10 41.0	182	40.6	+13 11.1
6	237	31.3	295	15.4	-20 12.4	233	00.6	+1 27.9	208	42.4	+10 41.2	197	42.9	+13 11.1
7	252	33.8	310	14.6		248	01.3		223	44.5		212	45.2	
8	267	36.2	325	13.8		263	02.0		238	46.5		227	47.5	
9	282	38.7	340	13.0		278	02.8		253	48.6		242	49.8	
10	297	41.2	355	12.3		293	03.5		268	50.7		257	52.1	
11	312	43.6	10	11.5	-20 09.7	308	04.2	+1 31.8	283	52.7	+10 42.0	272	54.4	+13 11.4
12	327	46.1	25	10.7	-20 09.2	323	05.0	+1 32.6	298	54.8	+10 42.1	287	56.7	+13 11.5
13	342	48.6	40	09.9		338	05.7		313	56.9		302	59.0	
14	357	51.0	55	09.2		353	06.4		328	58.9		318	01.4	
15	12	53.5	70	08.4		8	07.2		344	01.0		333	03.7	
16	27	56.0	85	07.6		23	07.9		359	03.0		348	06.0	
17	42	58.4	100	06.9	-20 06.4	38	08.6	+1 36.5	14	05.1	+10 42.9	3	08.3	+13 11.8
18	58	00.9	115	06.1	-20 05.9	53	09.4	+1 37.3	29	07.2	+10 43.1	18	10.6	+13 11.9
19	73	03.3	130	05.3		68	10.1		44	09.2		33	12.9	
20	88	05.8	145	04.5		83	10.8		59	11.3		48	15.2	
21	103	08.3	160	03.8		98	11.6		74	13.3		63	17.5	
22	118	10.7	175	03.0		113	12.3		89	15.4		78	19.8	
23	133	13.2	190	02.2		128	13.1		104	17.5		93	22.1	
24	148	15.7	205	01.5	-20 02.6	143	13.8	+1 42.0	119	19.5	+10 44.0	108	24.4	+13 12.2
Dif	—		-8 +5			+7 +8			+21 +2			+23 +1		

UT	SOL			☉ LUNA					Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16 ^h 2 PMG: 12 ^h 13 ^m 9			Edad: 13 ^d 5 PHE { 4 ^h : 59/7 12 ^h : 59/5 20 ^h : 59/3 PMG: ***h ***m R°: ***m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif			Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m		
0	176	30.9	-11	35.8	4	52.7	+16	06.4	60 N	17 00	17 43	18 32	16 41 89		7 47 20			
1	191	31.0		35.0	19	18.5	+15	57.8	58	06	46	32	49 86		38 23			
2	206	31.0		34.1	33	44.5		49.2	56	11	49	33	16 56 84		30 26			
3	221	31.1		33.2	48	10.4		40.4	54	16	52	33	17 03 81		23 28			
4	236	31.1		32.3	62	36.5		31.5	52	20	55	34	09 79		16 30			
5	251	31.2	-11	31.4	77	02.6	+15	22.6	50	17 24	17 57	18 35	17 14 77		7 10 32			
6	266	31.3	-11	30.5	91	28.9	+15	13.5	45	17 32	18 02	18 37	17 25 73		6 58 36			
7	281	31.3		29.7	105	55.1	+15	04.4	40	40	07	39	35 69		47 39			
8	296	31.4		28.8	120	21.5	+14	55.1	35	46	12	41	43 66		38 42			
9	311	31.4		27.9	134	47.9		45.8	30	17 51	16	44	17 50 64		30 44			
10	326	31.5		27.0	149	14.5		36.4	20	18 01	23	49	18 02 60		17 47			
11	341	31.5	-11	26.1	163	41.0	+14	26.9	10 N	18 09	18 31	18 55	18 12 57		6 05 51			
12	356	31.6	-11	25.2	178	07.7	+14	17.3	0	18 17	18 38	19 03	18 22 53		5 53 55			
13	11	31.7		24.3	192	34.5	+14	07.6	10 S	25	47	12	32 49		42 57			
14	26	31.7		23.5	207	01.3	+13	57.9	20	34	18 57	23	42 46		29 62			
15	41	31.8		22.6	221	28.2		48.1	30	44	19 09	38	18 54 42		15 66			
16	56	31.8		21.7	235	55.2		38.2	35	50	17	48	19 01 39		5 07 68			
17	71	31.9	-11	20.8	250	22.2	+13	28.2	40	18 57	19 25	19 59	19 09 36		4 57 71			
18	86	31.9	-11	19.9	264	49.3	+13	18.2	45	19 05	19 36	20 14	19 18 33		4 46 74			
19	101	32.0		19.0	279	16.5	+13	08.0	50	14	49	32	29 29		33 78			
20	116	32.1		18.1	293	43.8	+12	57.8	52	19	19 55	41	34 28		27 79			
21	131	32.1		17.2	308	11.2		47.6	54	24	20 02	20 52	40 25		19 82			
22	146	32.2		16.3	322	38.6		37.2	56	29	10	21 04	46 23		12 84			
23	161	32.2		15.4	337	06.1		26.8	58	35	19	18	19 53 20		4 03 87			
24	176	32.3	-11	14.6	351	33.7	+12	16.4	60 S	19 42	20 30	21 35	20 00 18		3 53 90			
UT	ARIES		VENUS			MARTE			JÚPITER				SATURNO					
	PMG: 14 ^h 04 ^m 6		Mag: -3.9 PMG: 10 ^h 20 ^m			Mag: +1.3 PMG: 14 ^h 26 ^m			Mag: -2.3 PMG: 16 ^h 01 ^m				Mag: +0.3 PMG: 16 ^h 44 ^m					
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec			hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	148	15.7	205	01.5	-20	02.6	143	13.8	+1	42.0	119	19.5	+10	44.0	108	24.4	+13	12.2
1	163	18.1	220	00.7		02.0	158	14.5		42.7	134	21.6		44.2	123	26.7		12.3
2	178	20.6	234	59.9		01.5	173	15.3		43.5	149	23.6		44.3	138	29.0		12.3
3	193	23.1	249	59.2		00.9	188	16.0		44.3	164	25.7		44.5	153	31.3		12.4
4	208	25.5	264	58.4	-20	00.3	203	16.7		45.1	179	27.8		44.6	168	33.6		12.5
5	223	28.0	279	57.6	-19	59.8	218	17.5	+1	45.9	194	29.8	+10	44.8	183	35.9	+13	12.5
6	238	30.5	294	56.9	-19	59.2	233	18.2	+1	46.6	209	31.9	+10	45.0	198	38.2	+13	12.6
7	253	32.9	309	56.1		58.7	248	18.9		47.4	224	33.9		45.1	213	40.5		12.7
8	268	35.4	324	55.3		58.1	263	19.7		48.2	239	36.0		45.3	228	42.9		12.7
9	283	37.8	339	54.6		57.5	278	20.4		49.0	254	38.1		45.4	243	45.2		12.8
10	298	40.3	354	53.8		57.0	293	21.1		49.8	269	40.1		45.6	258	47.5		12.8
11	313	42.8	9	53.0	-19	56.4	308	21.9	+1	50.5	284	42.2	+10	45.7	273	49.8	+13	12.9
12	328	45.2	24	52.3	-19	55.8	323	22.6	+1	51.3	299	44.2	+10	45.9	288	52.1	+13	13.0
13	343	47.7	39	51.5		55.3	338	23.3		52.1	314	46.3		46.1	303	54.4		13.0
14	358	50.2	54	50.7		54.7	353	24.1		52.9	329	48.3		46.2	318	56.7		13.1
15	13	52.6	69	50.0		54.1	8	24.8		53.7	344	50.4		46.4	333	59.0		13.1
16	28	55.1	84	49.2		53.5	23	25.6		54.4	359	52.5		46.5	349	01.3		13.2
17	43	57.6	99	48.5	-19	53.0	38	26.3	+1	55.2	14	54.5	+10	46.7	4	03.6	+13	13.3
18	59	00.0	114	47.7	-19	52.4	53	27.0	+1	56.0	29	56.6	+10	46.9	19	05.9	+13	13.3
19	74	02.5	129	46.9		51.8	68	27.8		56.8	44	58.6		47.0	34	08.2		13.4
20	89	05.0	144	46.2		51.2	83	28.5		57.6	60	00.7		47.2	49	10.5		13.5
21	104	07.4	159	45.4		50.7	98	29.2		58.3	75	02.7		47.3	64	12.8		13.5
22	119	09.9	174	44.7		50.1	113	30.0		59.1	90	04.8		47.5	79	15.1		13.6
23	134	12.3	189	43.9		49.5	128	30.7	+1	59.9	105	06.9		47.6	94	17.4		13.6
24	149	14.8	204	43.1	-19	48.9	143	31.4	+2	00.7	120	08.9	+10	47.8	109	19.7	+13	13.7
Dif	—		-8 +6			+7 +8			+21 +2				+23 +1					

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16:2 PMG: 12 ^h 13 ^m 8			Edad: 14 ^d 5 PHE { SD: 16:1 PMG: 0 ^h 35 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	h m	h m			
0	176	32.3	-11	14.6	351	33.7	+12	16.4	5 55	6 43	7 26	18 10	87	8 07	16		
1	191	32.4		13.7	6	01.4	87	+12	05.8	54	40	21	15	84	8 01	19	
2	206	32.4		12.8	20	29.1	87	+11	55.2	54	37	15	20	81	7 56	21	
3	221	32.5		11.9	34	57.0	89		44.6	53	34	11	24	79	51	23	
4	236	32.5		11.0	49	24.9	89		33.9	53	32	07	28	76	46	26	
5	251	32.6	-11	10.1	63	52.8	89	+11	23.1	5 52	6 30	7 03	18 31	75	7 42	28	
6	266	32.7	-11	09.2	78	20.9	91	+11	12.2	5 50	6 24	6 54	18 38	71	7 34	31	
7	281	32.7		08.3	92	49.0	91	+11	01.4	48	20	47	44	67	26	35	
8	296	32.8		07.4	107	17.2	92	+10	50.4	46	16	41	49	65	20	37	
9	311	32.9		06.5	121	45.5	93		39.4	44	12	36	18 54	62	14	40	
10	326	32.9		05.6	136	13.8	93		28.4	38	6 04	27	19 02	57	7 04	45	
11	341	33.0	-11	04.7	150	42.2	94	+10	17.3	5 32	5 57	6 18	19 09	53	6 56	48	
12	356	33.1	-11	03.8	165	10.7	95	+10	06.1	5 25	5 49	6 10	19 15	50	6 48	51	
13	11	33.1		03.0	179	39.3	96	+9	54.9	16	41	6 02	21	47	39	55	
14	26	33.2		02.1	194	08.0	97		43.7	20	5 05	31	5 54	28	43	31	58
15	41	33.2		01.2	208	36.7	97		32.4	4 50	19	44	36	38	21	63	
16	56	33.3	-11	00.3	223	05.5	98		21.1	40	12	38	40	36	15	65	
17	71	33.4	-10	59.4	237	34.3	98	+9	09.7	4 29	5 03	5 31	19 45	33	6 08	69	
18	86	33.4	-10	58.5	252	03.2	99	+8	58.3	4 15	4 52	5 23	19 51	30	6 00	72	
19	101	33.5		57.6	266	32.2	100		46.9	3 56	39	14	19 58	26	5 51	76	
20	116	33.6		56.7	281	01.3	101		35.4	47	33	10	20 02	23	46	78	
21	131	33.6		55.8	295	30.4	101		23.9	37	26	5 05	05	22	41	81	
22	146	33.7		54.9	309	59.6	102		12.3	25	18	4 59	09	19	36	83	
23	161	33.8		54.0	324	28.9	103	+8	00.8	3 11	4 09	53	13	17	30	85	
24	176	33.8	-10	53.1	338	58.3	104	+7	49.1	2 54	3 59	4 47	20 18	14	5 23	88	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 14 ^h 00 ^m 7		Mag: -3.9 PMG: 10 ^h 22 ^m		Mag: +1.3 PMG: 14 ^h 25 ^m		Mag: -2.3 PMG: 15 ^h 57 ^m		Mag: +0.3 PMG: 16 ^h 40 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	149	14.8	204	43.1	143	31.4	120	08.9	109	19.7
1	164	17.3	219	42.4	158	32.2	135	11.0	124	22.0
2	179	19.7	234	41.6	173	32.9	150	13.0	139	24.3
3	194	22.2	249	40.9	188	33.6	165	15.1	154	26.6
4	209	24.7	264	40.1	203	34.4	180	17.1	169	28.9
5	224	27.1	279	39.3	218	35.1	195	19.2	184	31.2
6	239	29.6	294	38.6	233	35.9	210	21.2	199	33.5
7	254	32.1	309	37.8	248	36.6	225	23.3	214	35.8
8	269	34.5	324	37.1	263	37.3	240	25.3	229	38.1
9	284	37.0	339	36.3	278	38.1	255	27.4	244	40.4
10	299	39.4	354	35.6	293	38.8	270	29.4	259	42.7
11	314	41.9	9	34.8	308	39.5	285	31.5	274	45.0
12	329	44.4	24	34.1	323	40.3	300	33.6	289	47.3
13	344	46.8	39	33.3	338	41.0	315	35.6	304	49.6
14	359	49.3	54	32.5	353	41.7	330	37.7	319	51.9
15	14	51.8	69	31.8	8	42.5	345	39.7	334	54.2
16	29	54.2	84	31.0	23	43.2	0	41.8	349	56.5
17	44	56.7	99	30.3	38	43.9	15	43.8	4	58.8
18	59	59.2	114	29.5	53	44.7	30	45.9	20	01.1
19	75	01.6	129	28.8	68	45.4	45	47.9	35	03.4
20	90	04.1	144	28.0	83	46.2	60	50.0	50	05.7
21	105	06.6	159	27.3	98	46.9	75	52.0	65	08.0
22	120	09.0	174	26.5	113	47.6	90	54.1	80	10.3
23	135	11.5	189	25.8	128	48.4	105	56.1	95	12.6
24	150	13.9	204	25.0	143	49.1	120	58.2	110	14.9
Dif	—		-8		+6		+21		+2	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16:2 PMG: 12 ^h 13 ^m 7			Edad: 15 ^d 5 PHE { 4 ^h : 58 ^m 4 12 ^h : 58 ^m 2 20 ^h : 57 ^m 9 PMG: 1 ^h 27 ^m R°: 49 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m
0	176	33.8	-10 53.1	338	58.3	+7 49.1	60 N	17 05	17 48	18 36	19 37	84	8 23	14	
1	191	33.9	52.2	353	27.7 ¹⁰⁴	37.5 ¹¹⁶	58	10	51	36	39	81	20	16	
2	206	34.0	51.3	7	57.2 ¹⁰⁵	25.8 ¹¹⁷	56	15	54	37	41	79	17	19	
3	221	34.0	50.4	22	26.7 ¹⁰⁵	14.1 ¹¹⁷	54	20	56	37	43	76	14	21	
4	236	34.1	49.5	36	56.3 ¹⁰⁶	+7 02.4 ¹¹⁷	52	24	17 58	38	44	74	12	23	
5	251	34.2	-10 48.6	51	26.0 ¹⁰⁷	+6 50.6 ¹¹⁸	50	17 27	18 00	18 38	19 46	72	8 10	24	
6	266	34.3	-10 47.7	65	55.7 ¹⁰⁷	+6 38.9 ¹¹⁷	45	17 35	18 05	18 39	19 49	68	8 05	28	
7	281	34.3	46.8	80	25.5 ¹⁰⁸	27.1 ¹¹⁸	40	42	09	41	51	65	8 01	31	
8	296	34.4	45.9	94	55.4 ¹⁰⁹	15.2 ¹¹⁹	35	48	13	43	54	62	7 57	35	
9	311	34.5	45.0	109	25.3 ¹⁰⁹	+6 03.4 ¹¹⁸	30	17 53	17	45	56	59	54	37	
10	326	34.5	44.1	123	55.3 ¹¹⁰	+5 51.5 ¹¹⁹	20	18 02	24	50	19 59	55	49	41	
11	341	34.6	-10 43.2	138	25.4 ¹¹¹	+5 39.7 ¹¹⁸	10 N	18 10	18 31	18 56	20 02	51	7 44	45	
12	356	34.7	-10 42.3	152	55.5 ¹¹¹	+5 27.8 ¹¹⁹	0	18 17	18 38	19 02	20 05	47	7 39	49	
13	11	34.7	41.4	167	25.7 ¹¹²	15.9 ¹¹⁹	10 S	25	46	11	08	44	34	53	
14	26	34.8	40.5	181	55.9 ¹¹²	+5 03.9 ¹²⁰	20	33	18 55	22	11	40	29	57	
15	41	34.9	39.6	196	26.2 ¹¹³	+4 52.0 ¹¹⁹	30	42	19 07	36	14	36	24	60	
16	56	35.0	38.7	210	56.5 ¹¹³	40.1 ¹¹⁹	35	48	14	45	16	33	20	64	
17	71	35.0	-10 37.8	225	26.9 ¹¹⁴	+4 28.1 ¹²⁰	40	18 54	19 22	19 56	20 18	31	7 17	66	
18	86	35.1	-10 36.9	239	57.4 ¹¹⁵	+4 16.2 ¹¹⁹	45	19 02	19 33	20 10	20 21	27	7 12	70	
19	101	35.2	36.0	254	27.9 ¹¹⁵	+4 04.2 ¹²⁰	50	11	45	28	24	23	07	74	
20	116	35.3	35.1	268	58.5 ¹¹⁶	+3 52.2 ¹²⁰	52	15	51	36	25	22	04	76	
21	131	35.3	34.2	283	29.1 ¹¹⁶	40.2 ¹²⁰	54	19	19 58	46	27	20	7 02	77	
22	146	35.4	33.3	297	59.8 ¹¹⁷	28.2 ¹²⁰	56	24	20 05	20 57	28	18	6 59	80	
23	161	35.5	32.4	312	30.5 ¹¹⁷	16.2 ¹²⁰	58	30	14	21 11	30	16	55	83	
24	176	35.6	-10 31.5	327	01.3 ¹¹⁸	+3 04.3 ¹¹⁹	60 S	19 36	20 23	21 27	20 32	13	6 51	86	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 13 ^h 56 ^m 8		Mag: -3.9 PMG: 10 ^h 23 ^m		Mag: +1.3 PMG: 14 ^h 24 ^m		Mag: -2.2 PMG: 15 ^h 54 ^m		Mag: +0.3 PMG: 16 ^h 36 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	150	13.9	204	25.0	-19 34.7	143 49.1	+2 19.4	120 58.2	+10 51.6	110 14.9	+13 15.2
1	165	16.4	219	24.3	34.1	158 49.8	20.2	136 00.2	51.8	125 17.2	15.3
2	180	18.9	234	23.5	33.5	173 50.6	20.9	151 02.3	51.9	140 19.5	15.3
3	195	21.3	249	22.8	32.9	188 51.3	21.7	166 04.3	52.1	155 21.8	15.4
4	210	23.8	264	22.0	32.3	203 52.0	22.5	181 06.4	52.3	170 24.1	15.5
5	225	26.3	279	21.3	-19 31.7	218 52.8	+2 23.3	196 08.4	+10 52.4	185 26.4	+13 15.5
6	240	28.7	294	20.5	-19 31.1	233 53.5	+2 24.0	211 10.5	+10 52.6	200 28.7	+13 15.6
7	255	31.2	309	19.8	30.5	248 54.3	24.8	226 12.5	52.7	215 31.0	15.7
8	270	33.7	324	19.0	29.8	263 55.0	25.6	241 14.6	52.9	230 33.3	15.7
9	285	36.1	339	18.3	29.2	278 55.7	26.4	256 16.6	53.1	245 35.6	15.8
10	300	38.6	354	17.5	28.6	293 56.5	27.2	271 18.7	53.2	260 37.9	15.8
11	315	41.0	9	16.8	-19 28.0	308 57.2	+2 27.9	286 20.7	+10 53.4	275 40.2	+13 15.9
12	330	43.5	24	16.1	-19 27.4	323 57.9	+2 28.7	301 22.8	+10 53.5	290 42.4	+13 16.0
13	345	46.0	39	15.3	26.8	338 58.7	29.5	316 24.8	53.7	305 44.7	16.0
14	0	48.4	54	14.6	26.2	353 59.4	30.3	331 26.9	53.9	320 47.0	16.1
15	15	50.9	69	13.8	25.5	9 00.1	31.0	346 28.9	54.0	335 49.3	16.2
16	30	53.4	84	13.1	24.9	24 00.9	31.8	1 31.0	54.2	350 51.6	16.2
17	45	55.8	99	12.3	-19 24.3	39 01.6	+2 32.6	16 33.0	+10 54.4	5 53.9	+13 16.3
18	60	58.3	114	11.6	-19 23.7	54 02.4	+2 33.4	31 35.1	+10 54.5	20 56.2	+13 16.4
19	76	00.8	129	10.8	23.1	69 03.1	34.1	46 37.1	54.7	35 58.5	16.4
20	91	03.2	144	10.1	22.4	84 03.8	34.9	61 39.1	54.8	51 00.8	16.5
21	106	05.7	159	09.4	21.8	99 04.6	35.7	76 41.2	55.0	66 03.1	16.5
22	121	08.2	174	08.6	21.2	114 05.3	36.5	91 43.2	55.2	81 05.4	16.6
23	136	10.6	189	07.9	20.6	129 06.0	37.2	106 45.3	55.3	96 07.7	16.7
24	151	13.1	204	07.1	-19 19.9	144 06.8	+2 38.0	121 47.3	+10 55.5	111 10.0	+13 16.7
Dif	—		-7	+6		+7	+8	+20	+2	+23	+1

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna														
	SD: 16:2 PMG: 12 ^h 13 ^m 6			Edad: 16 ^d 5 PHE { 4 ^h : 57/6 12 ^h : 57/4 20 ^h : 57/1 PMG: 2 ^h 16 ^m R ^o : 47 ^m																							
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°												
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m											
0	176	35.6	-10	31.5	327	01.3	+3	04.3	60 N	5 50	6 38	7 21	21 01	81	8 37	13											
1	191	35.6		30.6	341	32.1 ¹¹⁸	+2	52.3 ¹²⁰	58	50	35	15	00	78	36	16											
2	206	35.7		29.6	356	03.0 ¹¹⁹		40.3 ¹²⁰	56	49	33	11	21 00	75	36	17											
3	221	35.8		28.7	10	34.0 ¹²⁰		28.3 ¹²⁰	54	49	30	06	20 59	74	35	20											
4	236	35.8		27.8	25	05.0 ¹²⁰		16.3 ¹²⁰	52	49	28	7 02	58	72	35	21											
5	251	35.9	-10	26.9	39	36.0 ¹²⁰	+2	04.3 ¹²⁰	50	5 48	6 26	6 59	20 58	70	8 34	23											
6	266	36.0	-10	26.0	54	07.1 ¹²¹	+1	52.3 ¹²⁰	45	5 47	6 21	6 51	20 57	66	8 33	27											
7	281	36.1		25.1	68	38.2 ¹²¹		40.3 ¹²⁰	40	46	17	45	56	63	32	30											
8	296	36.2		24.2	83	09.4 ¹²²		28.4 ¹¹⁹	35	44	13	39	56	60	32	32											
9	311	36.2		23.3	97	40.6 ¹²²		16.4 ¹²⁰	30	42	10	34	55	57	31	35											
10	326	36.3		22.4	112	11.9 ¹²³	+1	04.5 ¹¹⁹	20	37	6 03	25	54	53	30	39											
11	341	36.4	-10	21.5	126	43.2 ¹²³	+0	52.5 ¹²⁰	10 N	5 32	5 56	6 18	20 53	50	8 29	43											
12	356	36.5	-10	20.6	141	14.5 ¹²³	+0	40.6 ¹¹⁹	0	5 25	5 49	6 10	20 52	46	8 28	47											
13	11	36.5		19.7	155	45.9 ¹²⁴		28.7 ¹¹⁹	10 S	16	41	6 03	52	42	27	50											
14	26	36.6		18.8	170	17.4 ¹²⁵		16.8 ¹¹⁹	20	5 06	32	5 55	51	39	26	54											
15	41	36.7		17.9	184	48.8 ¹²⁴	+0	04.9 ¹¹⁹	30	4 52	21	45	50	35	24	59											
16	56	36.8		16.9	199	20.3 ¹²⁵	-0	07.0 ¹¹⁹	35	42	14	40	49	33	24	61											
17	71	36.9	-10	16.0	213	51.9 ¹²⁶	-0	18.9 ¹¹⁹	40	4 32	5 05	5 34	20 49	30	8 23	64											
18	86	36.9	-10	15.1	228	23.5 ¹²⁶	-0	30.7 ¹¹⁸	45	4 18	4 55	5 26	20 48	27	8 22	67											
19	101	37.0		14.2	242	55.1 ¹²⁶		42.6 ¹¹⁹	50	4 00	43	17	47	23	21	71											
20	116	37.1		13.3	257	26.8 ¹²⁷	-0	54.4 ¹¹⁸	52	3 52	37	13	47	21	20	73											
21	131	37.2		12.4	271	58.5 ¹²⁷	-1	06.2 ¹¹⁸	54	42	31	09	47	19	19	75											
22	146	37.3		11.5	286	30.2 ¹²⁷		17.9 ¹¹⁷	56	31	23	5 04	46	18	19	77											
23	161	37.3		10.6	301	02.0 ¹²⁸		29.7 ¹¹⁸	58	18	15	4 58	46	15	18	80											
24	176	37.4	-10	09.7	315	33.8 ¹²⁸	-1	41.4 ¹¹⁷	60 S	3 02	4 05	4 52	20 45	13	8 17	83											
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO														
	PMG 13 ^h 52 ^m 8			Mag: -3.9 PMG: 10 ^h 24 ^m			Mag: +1.3 PMG: 14 ^h 23 ^m			Mag: -2.2 PMG: 15 ^h 51 ^m			Mag: +0.3 PMG: 16 ^h 33 ^m														
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec												
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'											
0	151	13.1			204	07.1	-19	19.9	144	06.8	+2	38.0	121	47.3	+10	55.5	111	10.0	+13	16.7							
1	166	15.5			219	06.4		19.3	159	07.5		38.8	136	49.4		55.6	126	12.3		16.8							
2	181	18.0			234	05.7		18.7	174	08.3		39.6	151	51.4		55.8	141	14.6		16.9							
3	196	20.5			249	04.9		18.0	189	09.0		40.4	166	53.5		56.0	156	16.9		16.9							
4	211	22.9			264	04.2		17.4	204	09.7		41.1	181	55.5		56.1	171	19.2		17.0							
5	226	25.4			279	03.4	-19	16.8	219	10.5	+2	41.9	196	57.6	+10	56.3	186	21.5	+13	17.1							
6	241	27.9			294	02.7	-19	16.1	234	11.2	+2	42.7	211	59.6	+10	56.4	201	23.8	+13	17.1							
7	256	30.3			309	02.0		15.5	249	11.9		43.5	227	01.6		56.6	216	26.0		17.2							
8	271	32.8			324	01.2		14.9	264	12.7		44.2	242	03.7		56.8	231	28.3		17.3							
9	286	35.3			339	00.5		14.2	279	13.4		45.0	257	05.7		56.9	246	30.6		17.3							
10	301	37.7			353	59.8		13.6	294	14.2		45.8	272	07.8		57.1	261	32.9		17.4							
11	316	40.2			8	59.0	-19	13.0	309	14.9	+2	46.6	287	09.8	+10	57.3	276	35.2	+13	17.4							
12	331	42.7			23	58.3	-19	12.3	324	15.6	+2	47.3	302	11.9	+10	57.4	291	37.5	+13	17.5							
13	346	45.1			38	57.5		11.7	339	16.4		48.1	317	13.9		57.6	306	39.8		17.6							
14	1	47.6			53	56.8		11.0	354	17.1		48.9	332	16.0		57.7	321	42.1		17.6							
15	16	50.0			68	56.1		10.4	9	17.8		49.7	347	18.0		57.9	336	44.4		17.7							
16	31	52.5			83	55.3		09.8	24	18.6		50.4	2	20.0		58.1	351	46.7		17.8							
17	46	55.0			98	54.6	-19	09.1	39	19.3	+2	51.2	17	22.1	+10	58.2	6	49.0	+13	17.8							
18	61	57.4			113	53.9	-19	08.5	54	20.0	+2	52.0	32	24.1	+10	58.4	21	51.3	+13	17.9							
19	76	59.9			128	53.1		07.8	69	20.8		52.8	47	26.2		58.5	36	53.5		18.0							
20	92	02.4			143	52.4		07.2	84	21.5		53.5	62	28.2		58.7	51	55.8		18.0							
21	107	04.8			158	51.7		06.5	99	22.3		54.3	77	30.3		58.9	66	58.1		18.1							
22	122	07.3			173	50.9		05.9	114	23.0		55.1	92	32.3		59.0	82	00.4		18.2							
23	137	09.8			188	50.2		05.2	129	23.7		55.9	107	34.3		59.2	97	02.7		18.2							
24	152	12.2			203	49.5	-19	04.6	144	24.5	+2	56.6	122	36.4	+10	59.4	112	05.0	+13	18.3							
Dif	—			-7			+6			+7			+8			+20			+2			+23			+		

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:2			Edad: 17 ^d 5 PHE { 4 ^h : 56/8 12 ^h : 56/6 20 ^h : 56/3										
	PMG: 12 ^h 13 ^m 4			SD: 15:5 PMG: 3 ^h 03 ^m R°: 46 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	176	37.4	-10 09.7	315	33.8	-1 41.4		60 N	17 10	17 53	18 41	22 22 78	8 50 13	
1	191	37.5	08.8	330	05.7 ¹²⁹	-1 53.1 ¹¹⁷		58	15	55	41	18 76	52 15	
2	206	37.6	07.8	344	37.5 ¹²⁸	-2 04.8 ¹¹⁷		56	20	17 58	41	15 74	53 18	
3	221	37.7	06.9	359	09.4 ¹²⁹	16.5 ¹¹⁷		54	24	18 00	41	13 71	55 20	
4	236	37.7	06.0	13	41.4 ¹³⁰	28.1 ¹¹⁶		52	27	02	41	10 69	56 22	
5	251	37.8	-10 05.1	28	13.3 ¹²⁹	-2 39.7 ¹¹⁶		50	17 31	18 04	18 41	22 08 67	8 57 24	
6	266	37.9	-10 04.2	42	45.3 ¹³⁰	-2 51.3 ¹¹⁶		45	17 38	18 08	18 42	22 03 64	9 00 27	
7	281	38.0	03.3	57	17.3 ¹³⁰	-3 02.8 ¹¹⁵		40	44	12	43	21 59 61	02 30	
8	296	38.1	02.4	71	49.4 ¹³¹	14.3 ¹¹⁵		35	50	15	45	56 58	04 33	
9	311	38.2	01.4	86	21.5 ¹³¹	25.8 ¹¹⁵		30	17 54	18	46	52 56	06 35	
10	326	38.2	-10 00.5	100	53.6 ¹³¹	37.3 ¹¹⁵		20	18 02	25	51	47 52	09 39	
11	341	38.3	-9 59.6	115	25.7 ¹³¹	-3 48.7 ¹¹⁴		10 N	18 10	18 31	18 56	21 43 48	9 12 42	
12	356	38.4	-9 58.7	129	57.9 ¹³²	-4 00.1 ¹¹⁴		0	18 17	18 38	19 02	21 38 46	9 15 45	
13	11	38.5	57.8	144	30.0 ¹³¹	11.5 ¹¹⁴		10 S	24	45	10	34 42	17 49	
14	26	38.6	56.9	159	02.2 ¹³²	22.8 ¹¹³		20	32	18 54	20	30 39	20 52	
15	41	38.7	56.0	173	34.5 ¹³³	34.1 ¹¹³		30	40	19 05	34	25 35	23 57	
16	56	38.7	55.0	188	06.7 ¹³²	45.4 ¹¹³		35	46	12	43	22 32	25 59	
17	71	38.8	-9 54.1	202	39.0 ¹³³	-4 56.6 ¹¹²		40	18 51	19 19	19 53	21 19 30	9 27 61	
18	86	38.9	-9 53.2	217	11.2 ¹³²	-5 07.8 ¹¹²		45	18 58	19 29	20 06	21 15 27	9 29 65	
19	101	39.0	52.3	231	43.5 ¹³³	19.0 ¹¹²		50	19 07	41	23	10 24	32 68	
20	116	39.1	51.4	246	15.9 ¹³⁴	30.1 ¹¹¹		52	11	46	31	08 22	33 71	
21	131	39.2	50.5	260	48.2 ¹³³	41.2 ¹¹¹		54	15	19 53	40	06 20	34 73	
22	146	39.3	49.5	275	20.6 ¹³⁴	-5 52.2 ¹¹⁰		56	19	20 00	20 51	04 18	36 75	
23	161	39.3	48.6	289	52.9 ¹³³	-6 03.2 ¹¹⁰		58	25	08	21 03	21 01 16	38 77	
24	176	39.4	-9 47.7	304	25.3 ¹³⁴	-6 14.2 ¹¹⁰		60 S	19 31	20 17	21 18	20 58 13	9 40 79	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 13 ^h 48 ^m 9		Mag: -3.9 PMG: 10 ^h 25 ^m		Mag: +1.3 PMG: 14 ^h 22 ^m		Mag: -2.2 PMG: 15 ^h 47 ^m		Mag: +0.3 PMG: 16 ^h 29 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	152	12.2	203	49.5	-19 04.6		122	36.4	+10 59.4	112 05.0	+13 18.3			
1	167	14.7	218	48.8	03.9	159 25.2	137 38.4	59.5	127 07.3		18.4			
2	182	17.1	233	48.0	03.3	174 25.9	152 40.5	59.7	142 09.6		18.4			
3	197	19.6	248	47.3	02.6	189 26.7	167 42.5	+10 59.8	157 11.9		18.5			
4	212	22.1	263	46.6	02.0	204 27.4	+2 59.7	+11 00.0	172 14.2		18.5			
5	227	24.5	278	45.8	-19 01.3	219 28.2	+3 00.5	+11 00.2	187 16.5	+13	18.6			
6	242	27.0	293	45.1	-19 00.6	234 28.9	+3 01.3	+11 00.3	202 18.7	+13	18.7			
7	257	29.5	308	44.4	-19 00.0	249 29.6	02.0	00.5	217 21.0		18.7			
8	272	31.9	323	43.7	-18 59.3	264 30.4	02.8	00.7	232 23.3		18.8			
9	287	34.4	338	42.9	58.7	279 31.1	03.6	00.8	247 25.6		18.9			
10	302	36.9	353	42.2	58.0	294 31.8	04.4	01.0	262 27.9		18.9			
11	317	39.3	8 41.5	-18 57.4	309 32.6	+3 05.1	287 58.8	+11 01.1	277 30.2	+13	19.0			
12	332	41.8	23 40.7	-18 56.7	324 33.3	+3 05.9	303 00.9	+11 01.3	292 32.5	+13	19.1			
13	347	44.3	38 40.0	56.0	339 34.1	06.7	318 02.9	01.5	307 34.8		19.1			
14	2 46.7	53 39.3	55.4	354 34.8	07.5	333 04.9	01.6	01.6	322 37.1		19.2			
15	17 49.2	68 38.6	54.7	9 35.5	08.2	348 07.0	01.8	01.8	337 39.3		19.3			
16	32 51.6	83 37.9	54.0	24 36.3	09.0	3 09.0	02.0	02.0	352 41.6		19.3			
17	47 54.1	98 37.1	-18 53.4	39 37.0	+3 09.8	18 11.1	+11 02.1		7 43.9	+13	19.4			
18	62 56.6	113 36.4	-18 52.7	54 37.7	+3 10.6	33 13.1	+11 02.3		22 46.2	+13	19.5			
19	77 59.0	128 35.7	52.0	69 38.5	11.3	48 15.1	02.5		37 48.5		19.5			
20	93 01.5	143 35.0	51.4	84 39.2	12.1	63 17.2	02.6		52 50.8		19.6			
21	108 04.0	158 34.2	50.7	99 40.0	12.9	78 19.2	02.8		67 53.1		19.7			
22	123 06.4	173 33.5	50.0	114 40.7	13.6	93 21.2	02.9		82 55.4		19.7			
23	138 08.9	188 32.8	49.3	129 41.4	14.4	108 23.3	03.1		97 57.6		19.8			
24	153 11.4	203 32.1	-18 48.7	144 42.2	+3 15.2	123 25.3	+11 03.3		112 59.9	+13	19.9			
Dif	—		-7 +7		+7 +8		+20 +2		+23 +1					

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna								
	SD: 16 ^d 2 PMG: 12 ^h 13 ^m 3			Edad: 18 ^d 5 PHE { 4 ^h : 56 ^m 0 12 ^h : 55 ^m 8 20 ^h : 55 ^m 6 PMG: 3 ^h 49 ^m R°: 46 ^m																			
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Náutico	Civil		Hora	R°	Hora	R°							
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m							
0	176	39.4	-9	47.7	304	25.3	-6	14.2	60 N	5	44	6	33	7	15	23	40						
1	191	39.5		46.8	318	57.7 ¹³⁴		25.1 ¹⁰⁹	58	45	30		10		34	73							
2	206	39.6		45.9	333	30.1 ¹³⁴		36.0 ¹⁰⁹	56	45	28		06		29	71							
3	221	39.7		45.0	348	02.6 ¹³⁵		46.8 ¹⁰⁸	54	45	26		7	02	24	69							
4	236	39.8		44.0	2	35.0 ¹³⁴		-6	57.6 ¹⁰⁸	52	45	24		6	58	19	68						
5	251	39.9	-9	43.1	17	07.5 ¹³⁵		-7	08.3 ¹⁰⁷	50	5	45	6	22	23	15	66						
6	266	40.0	-9	42.2	31	40.0 ¹³⁵		-7	19.0 ¹⁰⁷	45	5	44	6	18	23	07	62						
7	281	40.0		41.3	46	12.4 ¹³⁴		29.7 ¹⁰⁷	40	43	14		42		23	00	59						
8	296	40.1		40.4	60	44.9 ¹³⁵		40.3 ¹⁰⁶	35	42	11		37		22	54	57						
9	311	40.2		39.4	75	17.4 ¹³⁵		-7	50.9 ¹⁰⁶	30	40	08		32		48	55	41	35				
10	326	40.3		38.5	89	49.9 ¹³⁵		-8	01.4 ¹⁰⁵	20	36	6	02	24		39	52	48	39				
11	341	40.4	-9	37.6	104	22.4 ¹³⁵		-8	11.9 ¹⁰⁵	10 N	5	31	5	56	22	31	48	9	54	43			
12	356	40.5	-9	36.7	118	55.0 ¹³⁶		-8	22.3 ¹⁰⁴	0	5	25	5	49	22	24	45	10	00	46			
13	11	40.6		35.8	133	27.5 ¹³⁵		32.7 ¹⁰⁴	10 S	17	42		6	03		16	43	06	48				
14	26	40.7		34.8	148	00.0 ¹³⁵		43.0 ¹⁰³	20	5	07	33		5	55		09	39	12	52			
15	41	40.8		33.9	162	32.6 ¹³⁶		-8	53.2 ¹⁰²	30	4	53	22		47		22	00	36	20	55		
16	56	40.9		33.0	177	05.1 ¹³⁵		-9	03.5 ¹⁰³	35	45	16		42		21	54	34	24	57			
17	71	40.9	-9	32.1	191	37.7 ¹³⁶		-9	13.6 ¹⁰¹	40	4	34	5	08	5	36		21	49	31	10	28	61
18	86	41.0	-9	31.1	206	10.2 ¹³⁵		-9	23.8 ¹⁰²	45	4	21	4	58	5	29		21	42	29	10	34	63
19	101	41.1		30.2	220	42.8 ¹³⁶		33.8 ¹⁰⁰	50	4	05	47		21		34	26		40	67			
20	116	41.2		29.3	235	15.4 ¹³⁶		43.8 ¹⁰⁰	52	3	57	41		17		30	24		44	68			
21	131	41.3		28.4	249	47.9 ¹³⁵		-9	53.8 ¹⁰⁰	54	47	35		13		26	23		47	70			
22	146	41.4		27.5	264	20.5 ¹³⁶		-10	03.7 ⁹⁹	56	37	28		08		22	20		51	72			
23	161	41.5		26.5	278	53.1 ¹³⁶		13.5 ⁹⁸	58	24	20		5	03		17	18		55	74			
24	176	41.6	-9	25.6	293	25.6 ¹³⁵		-10	23.3 ⁹⁸	60 S	3	09	4	11	4	57		21	11	16	10	59	78

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 13 ^h 45 ^m 0		Mag: -3.9 PMG: 10 ^h 26 ^m			Mag: +1.3 PMG: 14 ^h 20 ^m			Mag: -2.2 PMG: 15 ^h 44 ^m			Mag: +0.3 PMG: 16 ^h 26 ^m							
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec						
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'					
0	153	11.4	203	32.1	-18	48.7	144	42.2	+3	15.2	123	25.3	+11	03.3	112	59.9	+13	19.9	
1	168	13.8	218	31.4		48.0	159	42.9		16.0	138	27.4		03.4	128	02.2		19.9	
2	183	16.3	233	30.6		47.3	174	43.7		16.7	153	29.4		03.6	143	04.5		20.0	
3	198	18.7	248	29.9		46.6	189	44.4		17.5	168	31.4		03.8	158	06.8		20.1	
4	213	21.2	263	29.2		46.0	204	45.1		18.3	183	33.5		03.9	173	09.1		20.1	
5	228	23.7	278	28.5	-18	45.3	219	45.9	+3	19.0	198	35.5	+11	04.1	188	11.4	+13	20.2	
6	243	26.1	293	27.8	-18	44.6	234	46.6	+3	19.8	213	37.5	+11	04.3	203	13.6	+13	20.3	
7	258	28.6	308	27.0		43.9	249	47.3		20.6	228	39.6		04.4	218	15.9		20.3	
8	273	31.1	323	26.3		43.2	264	48.1		21.4	243	41.6		04.6	233	18.2		20.4	
9	288	33.5	338	25.6		42.6	279	48.8		22.1	258	43.6		04.7	248	20.5		20.5	
10	303	36.0	353	24.9		41.9	294	49.6		22.9	273	45.7		04.9	263	22.8		20.5	
11	318	38.5	8	24.2	-18	41.2	309	50.3	+3	23.7	288	47.7	+11	05.1	278	25.1	+13	20.6	
12	333	40.9	23	23.5	-18	40.5	324	51.0	+3	24.4	303	49.7	+11	05.2	293	27.4	+13	20.7	
13	348	43.4	38	22.7		39.8	339	51.8		25.2	318	51.8		05.4	308	29.6		20.7	
14	3	45.9	53	22.0		39.1	354	52.5		26.0	333	53.8		05.6	323	31.9		20.8	
15	18	48.3	68	21.3		38.4	9	53.2		26.8	348	55.9		05.7	338	34.2		20.9	
16	33	50.8	83	20.6		37.8	24	54.0		27.5	3	57.9		05.9	353	36.5		20.9	
17	48	53.2	98	19.9	-18	37.1	39	54.7	+3	28.3	18	59.9	+11	06.1	8	38.8	+13	21.0	
18	63	55.7	113	19.2	-18	36.4	54	55.5	+3	29.1	34	02.0	+11	06.2	23	41.1	+13	21.1	
19	78	58.2	128	18.5		35.7	69	56.2		29.8	49	04.0		06.4	38	43.4		21.1	
20	94	00.6	143	17.7		35.0	84	56.9		30.6	64	06.0		06.6	53	45.6		21.2	
21	109	03.1	158	17.0		34.3	99	57.7		31.4	79	08.1		06.7	68	47.9		21.3	
22	124	05.6	173	16.3		33.6	114	58.4		32.2	94	10.1		06.9	83	50.2		21.3	
23	139	08.0	188	15.6		32.9	129	59.1		32.9	109	12.1		07.0	98	52.5		21.4	
24	154	10.5	203	14.9	-18	32.2	144	59.9	+3	33.7	124	14.2	+11	07.2	113	54.8	+13	21.5	
Dif	—		-7			+7	+7			+8	+20		+2		+23			+1	

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:2		Edad: 19 ^d 5 PHE { 4 ^h : 55/4 12 ^h : 55/2 20 ^h : 55/0						Civil		Náutico		Hora R°	
	PMG: 12 ^h 13 ^m 2		PMG: 4 ^h 35 ^m	R°: 45 ^m										
	hG ☉	Dec	hG ☾	Dif	Dec	Dif								
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	176	41.6	-9 25.6	293	25.6	-10 23.3	98	60 N	17 15	17 58	18 46	** ** *	** ** *	9 17 17
1	191	41.7	24.7	307	58.2 ¹³⁶	33.1	98	58	20	18 00	45	** ** *	** ** *	24 20
2	206	41.8	23.8	322	30.8 ¹³⁶	42.7	96	56	24	02	45	** ** *	** ** *	30 22
3	221	41.9	22.8	337	03.3 ¹³⁵	-10 52.4	97	54	28	04	45	** ** *	** ** *	36 23
4	236	42.0	21.9	351	35.9 ¹³⁶	-11 01.9	95	52	31	05	44	** ** *	** ** *	41 25
5	251	42.1	-9 21.0	6	08.4 ¹³⁵	-11 11.4	95	50	17 34	18 07	18 44	** ** *	** ** *	9 45 27
6	266	42.2	-9 20.1	20	41.0 ¹³⁶	-11 20.9	95	45	17 41	18 11	18 45	** ** *	** ** *	9 55 30
7	281	42.2	19.1	35	13.5 ¹³⁵	30.3	94	40	46	14	45	23 59	58	10 03 33
8	296	42.3	18.2	49	46.1 ¹³⁶	39.6	93	35	51	17	46	51 55		10 35
9	311	42.4	17.3	64	18.6 ¹³⁵	48.9	93	30	17 56	20	48	43 54		16 37
10	326	42.5	16.4	78	51.2 ¹³⁶	-11 58.1	92	20	18 03	26	51	31 50		27 40
11	341	42.6	-9 15.4	93	23.7 ¹³⁵	-12 07.2	91	10 N	18 10	18 31	18 56	23 19	49	10 37 43
12	356	42.7	-9 14.5	107	56.2 ¹³⁵	-12 16.3	91	0	18 16	18 37	19 02	23 09	46	10 46 45
13	11	42.8	13.6	122	28.7 ¹³⁵	25.3	90	10 S	23	44	09	22 59	43	10 54 49
14	26	42.9	12.6	137	01.3 ¹³⁶	34.3	90	20	30	18 53	19	48 41		11 04 51
15	41	43.0	11.7	151	33.8 ¹³⁵	43.2	89	30	38	19 03	32	36 37		15 54
16	56	43.1	10.8	166	06.3 ¹³⁵	-12 52.0	88	35	43	09	40	28 36		21 57
17	71	43.2	-9 09.9	180	38.7 ¹³⁴	-13 00.8	88	40	18 49	19 16	19 50	22 20	34	11 29 58
18	86	43.3	-9 08.9	195	11.2 ¹³⁵	-13 09.5	87	45	18 55	19 25	20 02	22 11	31	11 37 61
19	101	43.4	08.0	209	43.7 ¹³⁵	18.1	86	50	19 03	37	18	22 00	28	47 65
20	116	43.5	07.1	224	16.1 ¹³⁴	26.7	86	52	06	42	26	21 54	27	52 66
21	131	43.6	06.1	238	48.6 ¹³⁵	35.2	85	54	10	48	35	49 25		11 57 68
22	146	43.7	05.2	253	21.0 ¹³⁴	43.7	85	56	14	19 54	45	42 24		12 03 70
23	161	43.8	04.3	267	53.4 ¹³⁴	-13 52.0	83	58	19	20 02	20 56	35 22		09 72
24	176	43.9	-9 03.4	282	25.8 ¹³⁴	-14 00.3	83	60 S	19 25	20 10	21 10	21 27	19	12 17 74

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 13 ^h 41 ^m 1		Mag: -3.9 PMG: 10 ^h 28 ^m		Mag: +1.3 PMG: 14 ^h 19 ^m		Mag: -2.2 PMG: 15 ^h 41 ^m		Mag: +0.3 PMG: 16 ^h 22 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	154	10.5	203	14.9	144	59.9	124	14.2	113	54.8
1	169	13.0	218	14.2	160	00.6	139	16.2	128	57.1
2	184	15.4	233	13.5	175	01.4	154	18.2	143	59.3
3	199	17.9	248	12.8	190	02.1	169	20.2	159	01.6
4	214	20.4	263	12.1	205	02.8	184	22.3	174	03.9
5	229	22.8	278	11.4	220	03.6	199	24.3	189	06.2
6	244	25.3	293	10.6	235	04.3	214	26.3	204	08.5
7	259	27.7	308	09.9	250	05.1	229	28.4	219	10.8
8	274	30.2	323	09.2	265	05.8	244	30.4	234	13.0
9	289	32.7	338	08.5	280	06.5	259	32.4	249	15.3
10	304	35.1	353	07.8	295	07.3	274	34.5	264	17.6
11	319	37.6	8	07.1	310	08.0	289	36.5	279	19.9
12	334	40.1	23	06.4	325	08.7	304	38.5	294	22.2
13	349	42.5	38	05.7	340	09.5	319	40.6	309	24.4
14	4	45.0	53	05.0	355	10.2	334	42.6	324	26.7
15	19	47.5	68	04.3	10	11.0	349	44.6	339	29.0
16	34	49.9	83	03.6	25	11.7	4	46.7	354	31.3
17	49	52.4	98	02.9	40	12.4	19	48.7	9	33.6
18	64	54.8	113	02.2	55	13.2	34	50.7	24	35.8
19	79	57.3	128	01.5	70	13.9	49	52.7	39	38.1
20	94	59.8	143	00.8	85	14.6	64	54.8	54	40.4
21	110	02.2	158	00.1	100	15.4	79	56.8	69	42.7
22	125	04.7	172	59.4	115	16.1	94	58.8	84	45.0
23	140	07.2	187	58.7	130	16.9	110	00.9	99	47.2
24	155	09.6	202	58.0	145	17.6	125	02.9	114	49.5
Dif	—		-7	+7	+7	+8	+20	+2	+23	+1

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'2 PMG: 12 ^h 13 ^m 0			Edad: 20 ^d 5 PHE { 4 ^h : 54'8 12 ^h : 54'7 20 ^h : 54'6 R°: 46 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	176	43.9	-9 03.4	282	25.8	-14 00.3	83	60 N	5 39	6 27	7 09	0 56 73	9 34 22	
1	191	44.0	02.4	296	58.2 ¹³⁴	08.6	81	58	40	25	05	47 71	44 24	
2	206	44.1	01.5	311	30.6 ¹³⁴	16.7	81	56	40	23	7 01	40 68	52 26	
3	221	44.2	-9 00.6	326	03.0 ¹³⁴	24.8	81	54	41	21	6 57	33 66	9 59 28	
4	236	44.3	-8 59.6	340	35.3 ¹³³	32.9	81	52	41	20	54	27 64	10 06 29	
5	251	44.4	-8 58.7	355	07.7 ¹³⁴	-14 40.8	79	50	5 41	6 18	6 51	0 21 63	10 12 31	
6	266	44.5	-8 57.8	9	40.0 ¹³³	-14 48.7	79	45	5 41	6 15	6 44	0 09 60	10 25 33	
7	281	44.6	56.8	24	12.3 ¹³³	-14 56.5	78	40	40	12	39	** ** *	36 36	
8	296	44.7	55.9	38	44.6 ¹³³	-15 04.3	78	35	39	09	34	** ** *	45 38	
9	311	44.8	55.0	53	16.9 ¹³³	11.9	76	30	38	06	30	** ** *	10 53 39	
10	326	44.9	54.0	67	49.2 ¹³³	19.5	76	20	35	6 00	23	** ** *	11 07 42	
11	341	45.0	-8 53.1	82	21.4 ¹³²	-15 27.1	76	10 N	5 30	5 55	6 16	** ** *	11 20 44	
12	356	45.1	-8 52.2	96	53.7 ¹³³	-15 34.5	74	0	5 24	5 49	6 10	23 55 47	11 31 46	
13	11	45.2	51.3	111	25.9 ¹³²	41.9	74	10 S		17	42	42 45	43 48	
14	26	45.3	50.3	125	58.1 ¹³²	49.2	73	20	5 08	34	5 56	29 43	11 55 51	
15	41	45.4	49.4	140	30.3 ¹³²	-15 56.5	73	30	4 55	24	48	13 41	12 09 54	
16	56	45.5	48.5	155	02.4 ¹³¹	-16 03.6	71	35	47	18	44	23 04 40	18 55	
17	71	45.6	-8 47.5	169	34.6 ¹³²	-16 10.7	71	40	4 37	5 10	5 38	22 54 38	12 27 57	
18	86	45.7	-8 46.6	184	06.7 ¹³¹	-16 17.7	70	45	4 25	5 01	5 32	22 42 36	12 38 59	
19	101	45.8	45.7	198	38.8 ¹³¹	24.6	69	50	09	4 50	24	28 33	52 61	
20	116	45.9	44.7	213	10.9 ¹³¹	31.5	69	52	4 01	45	21	21 32	12 58 63	
21	131	46.0	43.8	227	43.0 ¹³¹	38.3	68	54	3 52	39	17	14 31	13 05 64	
22	146	46.1	42.8	242	15.0 ¹³⁰	45.0	67	56	42	33	13	22 06 29	13 66	
23	161	46.2	41.9	256	47.1 ¹³¹	51.6	66	58	31	25	08	21 57 27	21 69	
24	176	46.3	-8 41.0	271	19.1 ¹³⁰	-16 58.1	65	60 S	3 17	4 17	5 02	21 46 25	13 31 71	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 13 ^h 37 ^m 1		Mag: -3.9 PMG: 10 ^h 29 ^m		Mag: +1.3 PMG: 14 ^h 18 ^m		Mag: -2.2 PMG: 15 ^h 38 ^m		Mag: +0.3 PMG: 16 ^h 18 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	155	09.6	202	58.0	-18	15.2	145	17.6	+3	52.2	125	02.9	+11	11.2	114	49.5	+13	23.1
1	170	12.1	217	57.3		14.5	160	18.3		52.9	140	04.9		11.3	129	51.8		23.1
2	185	14.6	232	56.6		13.8	175	19.1		53.7	155	06.9		11.5	144	54.1		23.2
3	200	17.0	247	55.9		13.1	190	19.8		54.5	170	09.0		11.7	159	56.4		23.3
4	215	19.5	262	55.2		12.4	205	20.6		55.2	185	11.0		11.8	174	58.6		23.4
5	230	22.0	277	54.5	-18	11.6	220	21.3	+3	56.0	200	13.0	+11	12.0	190	00.9	+13	23.4
6	245	24.4	292	53.8	-18	10.9	235	22.0	+3	56.8	215	15.0	+11	12.2	205	03.2	+13	23.5
7	260	26.9	307	53.1		10.2	250	22.8		57.5	230	17.1		12.3	220	05.5		23.6
8	275	29.3	322	52.4		09.5	265	23.5		58.3	245	19.1		12.5	235	07.8		23.6
9	290	31.8	337	51.7		08.7	280	24.2		59.1	260	21.1		12.7	250	10.0		23.7
10	305	34.3	352	51.0		08.0	295	25.0	+3	59.8	275	23.2		12.8	265	12.3		23.8
11	320	36.7	7	50.3	-18	07.3	310	25.7	+4	00.6	290	25.2	+11	13.0	280	14.6	+13	23.8
12	335	39.2	22	49.6	-18	06.5	325	26.5	+4	01.4	305	27.2	+11	13.2	295	16.9	+13	23.9
13	350	41.7	37	48.9		05.8	340	27.2		02.1	320	29.2		13.3	310	19.2		24.0
14	5	44.1	52	48.2		05.1	355	27.9		02.9	335	31.3		13.5	325	21.4		24.0
15	20	46.6	67	47.5		04.3	10	28.7		03.7	350	33.3		13.7	340	23.7		24.1
16	35	49.1	82	46.8		03.6	25	29.4		04.4	5	35.3		13.8	355	26.0		24.2
17	50	51.5	97	46.1	-18	02.9	40	30.1	+4	05.2	20	37.3	+11	14.0	10	28.3	+13	24.2
18	65	54.0	112	45.4	-18	02.1	55	30.9	+4	06.0	35	39.4	+11	14.2	25	30.5	+13	24.3
19	80	56.4	127	44.8		01.4	70	31.6		06.7	50	41.4		14.3	40	32.8		24.4
20	95	58.9	142	44.1	-18	00.7	85	32.4		07.5	65	43.4		14.5	55	35.1		24.4
21	111	01.4	157	43.4	-17	59.9	100	33.1		08.3	80	45.4		14.7	70	37.4		24.5
22	126	03.8	172	42.7		59.2	115	33.8		09.0	95	47.5		14.8	85	39.6		24.6
23	141	06.3	187	42.0		58.5	130	34.6		09.8	110	49.5		15.0	100	41.9		24.7
24	156	08.8	202	41.3	-17	57.7	145	35.3	+4	10.6	125	51.5	+11	15.2	115	44.2	+13	24.7
Dif	—		-7		+7		+7		+8		+20		+2		+23		+1	

UT	SOL		 LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16:2		Edad: 21 ^d 5		PHE { 4 ^h : 54/4 12 ^h : 54/4 20 ^h : 54/3	SD: 14'8			Final del crepúsculo		Salida de Luna		Puesta de Luna		
	PMG: 12 ^h 12 ^m 8		PMG: 6 ^h 06 ^m			Rº: 47 ^m			Civil		Náutico		Hora		Rº
	hG ☉	Dec	hG ☾	Dif	Dec	Dif									
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m	h m m
0	176	46.3	-8	41.0	271	19.1	-16 58.1	60 N	17 20	18 03	18 51	2 09 69	9 56 28		
1	191	46.5		40.0	285	51.1 ¹³⁰	-17 04.6 ⁶⁵	58	25	04	50	1 58 66	10 08 30		
2	206	46.6		39.1	300	23.1 ¹³⁰	11.0 ⁶⁴	56	28	06	49	48 64	18 32		
3	221	46.7		38.2	314	55.0 ¹²⁹	17.3 ⁶³	54	32	07	48	39 63	27 34		
4	236	46.8		37.2	329	26.9 ¹²⁹	23.5 ⁶²	52	35	09	48	31 61	35 35		
5	251	46.9	-8	36.3	343	58.9 ¹³⁰	-17 29.7 ⁶²	50	17 38	18 10	18 48	1 24 60	10 43 35		
6	266	47.0	-8	35.4	358	30.7 ¹²⁸	-17 35.8 ⁶¹	45	17 44	18 13	18 47	1 09 58	10 58 38		
7	281	47.1		34.4	13	02.6 ¹²⁹	41.7 ⁵⁹	40	49	16	47	0 57 55	11 12 39		
8	296	47.2		33.5	27	34.5 ¹²⁹	47.7 ⁶⁰	35	53	19	48	46 54	23 40		
9	311	47.3		32.5	42	06.3 ¹²⁸	53.5 ⁵⁸	30	17 57	21	49	37 53	32 42		
10	326	47.4		31.6	56	38.1 ¹²⁸	-17 59.2 ⁵⁷	20	18 04	26	52	21 51	11 49 44		
11	341	47.5	-8	30.7	71	09.9 ¹²⁸	-18 04.9 ⁵⁷	10 N	18 10	18 31	18 56	0 08 48	12 04 45		
12	356	47.6	-8	29.7	85	41.7 ¹²⁸	-18 10.5 ⁵⁶	0	18 16	18 37	19 01	** ** *	12 17 48		
13	11	47.7		28.8	100	13.4 ¹²⁷	15.9 ⁵⁴	10 S	22	43	08	** ** *	31 49		
14	26	47.8		27.9	114	45.1 ¹²⁷	21.4 ⁵⁵	20	29	18 51	17	** ** *	12 46 50		
15	41	47.9		26.9	129	16.8 ¹²⁷	26.7 ⁵³	30	36	19 01	29	23 54 44	13 03 52		
16	56	48.1		26.0	143	48.5 ¹²⁷	31.9 ⁵²	35	41	06	37	44 42	13 53		
17	71	48.2	-8	25.0	158	20.2 ¹²⁷	-18 37.1 ⁵²	40	18 46	19 13	19 47	23 32 42	13 24 54		
18	86	48.3	-8	24.1	172	51.8 ¹²⁶	-18 42.1 ⁵⁰	45	18 52	19 22	19 58	23 18 40	13 37 56		
19	101	48.4		23.2	187	23.4 ¹²⁶	47.1 ⁵⁰	50	18 59	32	20 13	23 01 39	13 53 58		
20	116	48.5		22.2	201	55.0 ¹²⁶	52.0 ⁴⁹	52	19 02	37	21	22 53 38	14 01 59		
21	131	48.6		21.3	216	26.6 ¹²⁶	-18 56.8 ⁴⁸	54	05	43	29	45 36	09 60		
22	146	48.7		20.3	230	58.1 ¹²⁵	-19 01.6 ⁴⁸	56	09	49	38	35 35	19 61		
23	161	48.8		19.4	245	29.6 ¹²⁵	06.2 ⁴⁶	58	14	19 56	20 49	24 34	30 63		
24	176	48.9	-8	18.5	260	01.1 ¹²⁵	-19 10.8 ⁴⁶	60 S	19 19	20 04	21 02	22 11 32	14 42 65		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 13 ^h 33 ^m 2		Mag: -3.9 PMG: 10 ^h 30 ^m		Mag: +1.3 PMG: 14 ^h 17 ^m		Mag: -2.2 PMG: 15 ^h 34 ^m		Mag: +0.3 PMG: 16 ^h 15 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	156	08.8	202	41.3	145	35.3	125	51.5	115	44.2
1	171	11.2	217	40.6	160	36.1	140	53.5	130	46.5
2	186	13.7	232	39.9	175	36.8	155	55.6	145	48.8
3	201	16.2	247	39.2	190	37.5	170	57.6	160	51.0
4	216	18.6	262	38.5	205	38.3	185	59.6	175	53.3
5	231	21.1	277	37.9	220	39.0	201	01.6	190	55.6
6	246	23.6	292	37.2	235	39.7	216	03.6	205	57.9
7	261	26.0	307	36.5	250	40.5	231	05.7	221	00.1
8	276	28.5	322	35.8	265	41.2	246	07.7	236	02.4
9	291	30.9	337	35.1	280	42.0	261	09.7	251	04.7
10	306	33.4	352	34.4	295	42.7	276	11.7	266	07.0
11	321	35.9	7	33.7	310	43.4	291	13.8	281	09.2
12	336	38.3	22	33.1	325	44.2	306	15.8	296	11.5
13	351	40.8	37	32.4	340	44.9	321	17.8	311	13.8
14	6	43.3	52	31.7	355	45.7	336	19.8	326	16.1
15	21	45.7	67	31.0	10	46.4	351	21.8	341	18.3
16	36	48.2	82	30.3	25	47.1	6	23.9	356	20.6
17	51	50.7	97	29.6	40	47.9	21	25.9	11	22.9
18	66	53.1	112	29.0	55	48.6	36	27.9	26	25.1
19	81	55.6	127	28.3	70	49.3	51	29.9	41	27.4
20	96	58.1	142	27.6	85	50.1	66	32.0	56	29.7
21	112	00.5	157	26.9	100	50.8	81	34.0	71	32.0
22	127	03.0	172	26.2	115	51.6	96	36.0	86	34.2
23	142	05.4	187	25.6	130	52.3	111	38.0	101	36.5
24	157	07.9	202	24.9	145	53.0	126	40.0	116	38.8
Dif	—		-7	+8	+7	+8	+20	+2	+23	+1

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'1 PMG: 12 ^h 12 ^m 6			Edad: 22 ^d 5 SD: 14'8 PMG: 6 ^h 53 ^m	PHE { 4 ^h : 54'2 12 ^h : 54'2 20 ^h : 54'2 R°: 48 ^m										
	hG ☉	Dec				hG ☾		Dif	Dec		Dif	Náutico	Civil	Hora	R°
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	176	48.9	-8 18.5	260	01.1	-19 10.8	60 N	5 34	6 22	7 04	3 18	61	10 24	37	
1	191	49.0		274	32.6 ¹²⁵	15.2 44	58	35	20	6 59	3 04	60	38 38		
2	206	49.2		289	04.1 ¹²⁵	19.6 44	56	36	18	56	2 52	58	10 50	40	
3	221	49.3		303	35.5 ¹²⁴	23.9 43	54	36	17	53	42	57	11 01	40	
4	236	49.4		318	06.9 ¹²⁴	28.1 42	52	37	16	50	32	57	10 41		
5	251	49.5	-8 13.8	332	38.3 ¹²⁴	-19 32.2 41	50	5 37	6 14	6 47	2 24	56	11 18	42	
6	266	49.6	-8 12.8	347	09.7 ¹²⁴	-19 36.2 40	45	5 38	6 12	6 41	2 07	54	11 36	43	
7	281	49.7	11.9	1	41.0 ¹²³	40.2 40	40	37	09	36	1 52	54	11 51	44	
8	296	49.8	10.9	16	12.3 ¹²³	44.0 38	35	37	06	32	40	53	12 03	45	
9	311	49.9	10.0	30	43.6 ¹²³	47.8 38	30	36	6 04	28	30	51	14 46		
10	326	50.0	09.0	45	14.9 ¹²³	51.4 36	20	33	5 59	21	1 12	50	33 46		
11	341	50.2	-8 08.1	59	46.2 ¹²³	-19 55.0 36	10 N	5 29	5 54	6 15	0 56	49	12 49	48	
12	356	50.3	-8 07.2	74	17.4 ¹²²	-19 58.5 35	0	5 24	5 48	6 09	0 42	47	13 05	48	
13	11	50.4	06.2	88	48.7 ¹²³	-20 01.9 34	10 S	17	42	6 03	27	47	20 48		
14	26	50.5	05.3	103	19.8 ¹²¹	05.2 33	20	5 09	35	5 57	0 12	45	36 50		
15	41	50.6	04.3	117	51.0 ¹²²	08.4 32	30	4 57	25	50	** ** *	**	13 55	50	
16	56	50.7	03.4	132	22.2 ¹²²	11.5 31	35	49	19	45	** ** *	**	14 06	51	
17	71	50.8	-8 02.4	146	53.3 ¹²¹	-20 14.5 30	40	4 39	5 13	5 40	** ** *	**	14 18	52	
18	86	51.0	-8 01.5	161	24.4 ¹²¹	-20 17.4 29	45	4 28	5 04	5 35	23 58	46	14 33	52	
19	101	51.1	-8 00.6	175	55.5 ¹²¹	20.3 29	50	13	4 54	28	40	45	14 51	54	
20	116	51.2	-7 59.6	190	26.6 ¹²¹	23.0 27	52	4 06	49	24	31	45	15 00	54	
21	131	51.3	58.7	204	57.7 ¹²¹	25.7 27	54	3 57	44	21	21	45	09 55		
22	146	51.4	57.7	219	28.7 ¹²⁰	28.2 25	56	48	38	17	23 10	44	20 55		
23	161	51.5	56.8	233	59.7 ¹²⁰	30.7 25	58	37	31	13	22 58	43	33 55		
24	176	51.6	-7 55.8	248	30.7 ¹²⁰	-20 33.1 24	60 S	3 24	4 23	5 08	22 43	43	15 47	57	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG 13 ^h 29 ^m 3			Mag: -3.9 PMG: 10 ^h 31 ^m			Mag: +1.3 PMG: 14 ^h 16 ^m			Mag: -2.2 PMG: 15 ^h 31 ^m			Mag: +0.3 PMG: 16 ^h 11 ^m		
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	157	07.9	202 24.9	-17 39.7	145 53.0	+4 28.9	126 40.0	+11 19.2	116 38.8	+13 26.4					
1	172	10.4	217 24.2	38.9	160 53.8	29.7	141 42.1	19.3	131 41.1	26.5					
2	187	12.8	232 23.5	38.2	175 54.5	30.4	156 44.1	19.5	146 43.3	26.5					
3	202	15.3	247 22.8	37.4	190 55.2	31.2	171 46.1	19.7	161 45.6	26.6					
4	217	17.8	262 22.2	36.6	205 56.0	32.0	186 48.1	19.9	176 47.9	26.7					
5	232	20.2	277 21.5	-17 35.9	220 56.7	+4 32.7	201 50.1	+11 20.0	191 50.1	+13 26.7					
6	247	22.7	292 20.8	-17 35.1	235 57.5	+4 33.5	216 52.1	+11 20.2	206 52.4	+13 26.8					
7	262	25.2	307 20.1	34.3	250 58.2	34.3	231 54.2	20.4	221 54.7	26.9					
8	277	27.6	322 19.5	33.6	265 58.9	35.0	246 56.2	20.5	236 57.0	26.9					
9	292	30.1	337 18.8	32.8	280 59.7	35.8	261 58.2	20.7	251 59.2	27.0					
10	307	32.6	352 18.1	32.0	296 00.4	36.5	277 00.2	20.9	267 01.5	27.1					
11	322	35.0	7 17.4	-17 31.3	311 01.2	+4 37.3	292 02.2	+11 21.0	282 03.8	+13 27.2					
12	337	37.5	22 16.8	-17 30.5	326 01.9	+4 38.1	307 04.3	+11 21.2	297 06.0	+13 27.2					
13	352	39.9	37 16.1	29.7	341 02.6	38.8	322 06.3	21.4	312 08.3	27.3					
14	7	42.4	52 15.4	29.0	356 03.4	39.6	337 08.3	21.5	327 10.6	27.4					
15	22	44.9	67 14.7	28.2	11 04.1	40.4	352 10.3	21.7	342 12.9	27.4					
16	37	47.3	82 14.1	27.4	26 04.8	41.1	7 12.3	21.9	357 15.1	27.5					
17	52	49.8	97 13.4	-17 26.6	41 05.6	+4 41.9	22 14.3	+11 22.0	12 17.4	+13 27.6					
18	67	52.3	112 12.7	-17 25.9	56 06.3	+4 42.6	37 16.4	+11 22.2	27 19.7	+13 27.6					
19	82	54.7	127 12.1	25.1	71 07.1	43.4	52 18.4	22.4	42 21.9	27.7					
20	97	57.2	142 11.4	24.3	86 07.8	44.2	67 20.4	22.5	57 24.2	27.8					
21	112	59.7	157 10.7	23.5	101 08.5	44.9	82 22.4	22.7	72 26.5	27.9					
22	128	02.1	172 10.1	22.7	116 09.3	45.7	97 24.4	22.9	87 28.8	27.9					
23	143	04.6	187 09.4	22.0	131 10.0	46.4	112 26.4	23.1	102 31.0	28.0					
24	158	07.0	202 08.7	-17 21.2	146 10.8	+4 47.2	127 28.5	+11 23.2	117 33.3	+13 28.1					
Dif	—		-7	+8	+7	+8	+20	+2	+23	+1					

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1			Edad: 23 ^d 5 PHE { 4 ^h : 54/2 12 ^h : 54/2 20 ^h : 54/3											
	PMG: 12 ^h 12 ^m 5			SD: 14 ^h 8 PMG: 7 ^h 41 ^m R°: 48 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m		
0	176	51.6	-7 55.8	248	30.7	-20 33.1	22	60 N	17 25	18 07	18 56	4 19 52	11 01 48		
1	191	51.8	54.9	263	01.7 ¹²⁰	35.3	22	58	29	09	54	4 04 51	16 49		
2	206	51.9	53.9	277	32.7 ¹²⁰	37.5	21	56	33	10	53	3 50 51	30 48		
3	221	52.0	53.0	292	03.6 ¹¹⁹	39.6	20	54	36	11	52	39 51	41 49		
4	236	52.1	52.0	306	34.5 ¹¹⁹	41.6	19	52	38	12	51	29 51	11 51 49		
5	251	52.2	-7 51.1	321	05.4 ¹¹⁹	-20 43.5	18	50	17 41	18 13	18 51	3 20 50	12 00 49		
6	266	52.3	-7 50.1	335	36.3 ¹¹⁹	-20 45.3	17	45	17 46	18 16	18 50	3 01 50	12 19 49		
7	281	52.5	49.2	350	07.2 ¹¹⁹	47.0	16	40	51	18	50	2 46 49	35 49		
8	296	52.6	48.3	4	38.0 ¹¹⁸	48.6	15	35	55	20	50	33 49	12 48 49		
9	311	52.7	47.3	19	08.9 ¹¹⁹	50.1	14	30	17 59	23	50	21 50	13 00 48		
10	326	52.8	46.4	33	39.7 ¹¹⁸	51.5	13	20	18 05	27	53	2 02 49	19 49		
11	341	52.9	-7 45.4	48	10.5 ¹¹⁸	-20 52.8	12	10 N	18 10	18 32	18 56	1 45 49	13 37 48		
12	356	53.0	-7 44.5	62	41.3 ¹¹⁸	-20 54.0	11	0	18 16	18 37	19 01	1 29 49	13 53 48		
13	11	53.2	43.5	77	12.1 ¹¹⁸	55.1	10	10 S	21	42	07	1 14 48	14 08 49		
14	26	53.3	42.6	91	42.8 ¹¹⁷	56.1	9	20	27	49	16	0 57 47	26 48		
15	41	53.4	41.6	106	13.6 ¹¹⁸	57.1	8	30	34	18 58	27	38 47	45 48		
16	56	53.5	40.7	120	44.3 ¹¹⁷	57.9	7	35	38	19 04	34	26 47	14 57 48		
17	71	53.6	-7 39.7	135	15.0 ¹¹⁷	-20 58.6	6	40	18 43	19 10	19 43	0 14 46	15 10 48		
18	86	53.8	-7 38.8	149	45.7 ¹¹⁷	-20 59.3	5	45	18 48	19 18	19 54	*** ** *	15 25 48		
19	101	53.9	37.8	164	16.4 ¹¹⁷	-20 59.8	4	50	54	28	20 09	*** ** *	45 47		
20	116	54.0	36.9	178	47.1 ¹¹⁷	-21 00.2	3	52	18 57	33	16	*** ** *	15 54 47		
21	131	54.1	35.9	193	17.7 ¹¹⁶	00.6	2	54	19 01	38	23	*** ** *	16 04 47		
22	146	54.2	35.0	207	48.4 ¹¹⁷	00.8	1	56	04	43	32	23 54 54	15 47		
23	161	54.4	34.0	222	19.0 ¹¹⁶	00.9	0	58	08	50	43	41 54	28 47		
24	176	54.5	-7 33.1	236	49.6 ¹¹⁶	-21 01.0	0	60 S	19 13	19 57	20 55	23 26 54	16 44 46		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 13 ^h 25 ^m 3		Mag: -3.9 PMG: 10 ^h 32 ^m			Mag: +1.3 PMG: 14 ^h 15 ^m			Mag: -2.2 PMG: 15 ^h 28 ^m			Mag: +0.3 PMG: 16 ^h 07 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	158	07.0	202	08.7	-17 21.2	146	10.8	+4 47.2	127	28.5	+11 23.2	117	33.3	+13 28.1	
1	173	09.5	217	08.0	20.4	161	11.5	48.0	142	30.5	23.4	132	35.6	28.1	
2	188	12.0	232	07.4	19.6	176	12.2	48.7	157	32.5	23.6	147	37.8	28.2	
3	203	14.4	247	06.7	18.8	191	13.0	49.5	172	34.5	23.7	162	40.1	28.3	
4	218	16.9	262	06.0	18.0	206	13.7	50.2	187	36.5	23.9	177	42.4	28.3	
5	233	19.4	277	05.4	-17 17.2	221	14.4	+4 51.0	202	38.5	+11 24.1	192	44.6	+13 28.4	
6	248	21.8	292	04.7	-17 16.5	236	15.2	+4 51.8	217	40.6	+11 24.2	207	46.9	+13 28.5	
7	263	24.3	307	04.0	15.7	251	15.9	52.5	232	42.6	24.4	222	49.2	28.6	
8	278	26.8	322	03.4	14.9	266	16.7	53.3	247	44.6	24.6	237	51.4	28.6	
9	293	29.2	337	02.7	14.1	281	17.4	54.1	262	46.6	24.7	252	53.7	28.7	
10	308	31.7	352	02.1	13.3	296	18.1	54.8	277	48.6	24.9	267	56.0	28.8	
11	323	34.2	7 01.4	-17 12.5	311	18.9	+4 55.6	55.6	292	50.6	+11 25.1	282	58.2	+13 28.8	
12	338	36.6	22 00.7	-17 11.7	326	19.6	+4 56.3	56.3	307	52.6	+11 25.3	298	00.5	+13 28.9	
13	353	39.1	37 00.1	10.9	341	20.3	57.1	57.1	322	54.6	25.4	313	02.8	29.0	
14	8	41.5	51 59.4	10.1	356	21.1	57.8	57.8	337	56.7	25.6	328	05.0	29.1	
15	23	44.0	66 58.7	09.3	11 21.8	58.6	58.6	58.6	352	58.7	25.8	343	07.3	29.1	
16	38	46.5	81 58.1	08.5	26 22.6	+4 59.4	59.4	59.4	8 00.7	25.9	25.9	358	09.6	29.2	
17	53	48.9	96 57.4	-17 07.7	41 23.3	+5 00.1	00.1	00.1	23 02.7	+11 26.1	26.1	13 11.9	+13 29.3		
18	68	51.4	111 56.8	-17 07.0	56 24.0	+5 00.9	00.9	00.9	38 04.7	+11 26.3	26.3	28 14.1	+13 29.3		
19	83	53.9	126 56.1	06.2	71 24.8	01.6	01.6	01.6	53 06.7	26.4	26.4	43 16.4	29.4		
20	98	56.3	141 55.4	05.4	86 25.5	02.4	02.4	02.4	68 08.7	26.6	26.6	58 18.7	29.5		
21	113	58.8	156 54.8	04.6	101 26.3	03.2	03.2	03.2	83 10.8	26.8	26.8	73 20.9	29.6		
22	129	01.3	171 54.1	03.8	116 27.0	03.9	03.9	03.9	98 12.8	26.9	26.9	88 23.2	29.6		
23	144	03.7	186 53.5	03.0	131 27.7	04.7	04.7	04.7	113 14.8	27.1	27.1	103 25.4	29.7		
24	159	06.2	201 52.8	-17 02.1	146 28.5	+5 05.4	05.4	05.4	128 16.8	+11 27.3	27.3	118 27.7	+13 29.8		
Dif	—		-7		+8	+7		+8	+20		+2	+23		+1	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16'1 PMG: 12 ^h 12 ^m 3			Edad: 24 ^d 5 SD: 14'8 PMG: 8 ^h 29 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m		
0	176	54.5	-7	33.1	236	49.6	-21	01.0	58	28	6	16	6	58	5	11	
1	191	54.6		32.1	251	20.3	117	00.9	58	29	15	54	4	55	42	12	
2	206	54.7		31.2	265	50.9	116	00.8	56	31	14	51	41	43		18	
3	221	54.8		30.2	280	21.4	115	00.5	54	32	12	48	30	43		30	
4	236	55.0		29.3	294	52.0	116	-21	00.1	52	32	11	45	20	44	40	
5	251	55.1	-7	28.3	309	22.6	116	-20	59.7	50	5	33	6	10	4	10	
6	266	55.2	-7	27.4	323	53.2	116	-20	59.1	45	5	34	6	08	3	51	
7	281	55.3		26.4	338	23.7	115	58.5	40	35	06	33	35	47		24	
8	296	55.5		25.5	352	54.3	116	57.7	35	35	04	29	22	47		37	
9	311	55.6		24.5	7	24.8	115	56.9	30	34	6	02	26	3	11	47	
10	326	55.7		23.6	21	55.3	115	55.9	20	32	5	58	20	2	51	48	
11	341	55.8	-7	22.6	36	25.8	115	-20	54.9	10	10	N	5	29	2	34	
12	356	56.0	-7	21.7	50	56.4	116	-20	53.7	12	0		5	24	2	18	
13	11	56.1		20.7	65	26.9	115	52.5	10	18	42	6	04	2	02	49	
14	26	56.2		19.8	79	57.4	115	51.1	20	5	09	36	5	58	1	44	
15	41	56.3		18.8	94	27.9	115	49.7	30	4	58	27	51	25	50	33	
16	56	56.4		17.8	108	58.3	114	48.1	35	51	21	47	13	51		45	
17	71	56.6	-7	16.9	123	28.8	115	-20	46.5	40	4	42	5	15	1	00	
18	86	56.7	-7	15.9	137	59.3	115	-20	44.7	45	4	31	5	07	0	44	
19	101	56.8		15.0	152	29.8	115	42.9	50	17	4	58	31	25	52	32	
20	116	56.9		14.0	167	00.3	115	40.9	52	10	53	28	16	53		41	
21	131	57.1		13.1	181	30.7	114	38.9	54	4	02	48	25	0	06	53	
22	146	57.2		12.1	196	01.2	115	36.7	56	3	53	42	21	**	**	**	
23	161	57.3		11.2	210	31.7	115	34.5	58	43	36	17	17	**	**	**	
24	176	57.4	-7	10.2	225	02.1	114	-20	32.1	60	3	31	4	28	**	**	**

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 13 ^h 21 ^m 4		Mag: -3.9 PMG: 10 ^h 33 ^m		Mag: +1.3 PMG: 14 ^h 13 ^m		Mag: -2.2 PMG: 15 ^h 25 ^m		Mag: +0.3 PMG: 16 ^h 04 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	159	06.2	201	52.8	146	28.5	+5	05.4	128	16.8					
1	174	08.7	216	52.2	161	29.2		06.2	143	18.8					
2	189	11.1	231	51.5	176	29.9		07.0	158	20.8					
3	204	13.6	246	50.8	191	30.7		07.7	173	22.8					
4	219	16.0	261	50.2	206	31.4		08.5	188	24.8					
5	234	18.5	276	49.5	221	32.2	+5	09.2	203	26.8					
6	249	21.0	291	48.9	236	32.9	+5	10.0	218	28.9					
7	264	23.4	306	48.2	251	33.6		10.7	233	30.9					
8	279	25.9	321	47.6	266	34.4		11.5	248	32.9					
9	294	28.4	336	46.9	281	35.1		12.3	263	34.9					
10	309	30.8	351	46.3	296	35.8		13.0	278	36.9					
11	324	33.3	6	45.6	311	36.6	+5	13.8	293	38.9					
12	339	35.8	21	45.0	326	37.3	+5	14.5	308	40.9					
13	354	38.2	36	44.3	341	38.1		15.3	323	42.9					
14	9	40.7	51	43.7	356	38.8		16.0	338	44.9					
15	24	43.1	66	43.0	11	39.5		16.8	353	46.9					
16	39	45.6	81	42.4	49.2	26	40.3	17.6	8	48.9					
17	54	48.1	96	41.7	-16	48.4	+5	18.3	23	51.0					
18	69	50.5	111	41.1	-16	47.6	+5	19.1	38	53.0					
19	84	53.0	126	40.4		46.7		19.8	53	55.0					
20	99	55.5	141	39.8	45.9	86	43.2	20.6	68	57.0					
21	114	57.9	156	39.1	45.1	101	44.0	21.3	83	59.0					
22	130	00.4	171	38.5	44.3	116	44.7	22.1	99	01.0					
23	145	02.9	186	37.8	43.5	131	45.4	22.8	114	03.0					
24	160	05.3	201	37.2	-16	42.6	+5	23.6	129	05.0					
Dif	—		-7	+8	+7	+8		+20	+2		+23		+1		

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1			Edad: 25 ^d 5 PHE { 4 ^h : 54 ^m 6 12 ^h : 54 ^m 7 20 ^h : 54 ^m 9					Civil			Hora		Hora	
	PMG: 12 ^h 12 ^m 1			SD: 14 ^h 9 PMG: 9 ^h 18 ^m R°: 49 ^m					Náutico			R°		R°	
	hG ☉	Dec		hG ☾	Dif	Dec	Dif								
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	h m	m
0	176	57.4	-7 10.2	225	02.1	-20 32.1	24	60 N	17 31	18 12	19 01	5 52	31	12 49	69
1	191	57.6	09.3	239	32.6 ¹¹⁵	29.7	24	58	34	13	18 59	37 33	13	03	67
2	206	57.7	08.3	254	03.0 ¹¹⁴	27.1	26	56	37	14	57	24 35	16	65	
3	221	57.8	07.3	268	33.5 ¹¹⁵	24.5	26	54	40	15	56	13 37	26	66	
4	236	58.0	06.4	283	03.9 ¹¹⁴	21.7	28	52	42	16	55	5 04	37	36	62
5	251	58.1	-7 05.4	297	34.4 ¹¹⁵	-20 18.9	28	50	17 44	18 17	18 54	4 55	39	13 44	62
6	266	58.2	-7 04.5	312	04.9 ¹¹⁵	-20 15.9	30	45	17 49	18 18	18 52	4 37	40	14 02	59
7	281	58.3	03.5	326	35.3 ¹¹⁴	12.9	30	40	53	20	52	22 42	17	57	
8	296	58.5	02.6	341	05.8 ¹¹⁵	09.7	32	35	17 57	22	51	4 09	43	30	55
9	311	58.6	01.6	355	36.2 ¹¹⁴	06.5	32	30	18 00	24	52	3 58	44	40	55
10	326	58.7	-7 00.7	10	06.7 ¹¹⁵	-20 03.2	33	20	06	28	53	39 46	14 59	52	
11	341	58.8	-6 59.7	24	37.2 ¹¹⁵	-19 59.7	35	10 N	18 11	18 32	18 56	3 22	47	15 15	50
12	356	59.0	-6 58.7	39	07.6 ¹¹⁴	-19 56.2	35	0	18 15	18 36	19 00	3 06	49	15 30	49
13	11	59.1	57.8	53	38.1 ¹¹⁵	52.6	36	10 S	20	41	06	2 51	50	15 45	47
14	26	59.2	56.8	68	08.6 ¹¹⁵	48.8	38	20	26	48	14	34 52	16	01	45
15	41	59.4	55.9	82	39.0 ¹¹⁴	45.0	38	30	32	18 56	25	15 53	19	43	
16	56	59.5	54.9	97	09.5 ¹¹⁵	41.1	39	35	35	19 01	31	2 04	54	30	41
17	71	59.6	-6 54.0	111	40.0 ¹¹⁵	-19 37.0	41	40	18 40	19 07	19 40	1 51	55	16 42	40
18	86	59.7	-6 53.0	126	10.5 ¹¹⁵	-19 32.9	41	45	18 44	19 14	19 50	1 36	57	16 56	38
19	101	59.9	52.0	140	41.0 ¹¹⁵	28.7	42	50	50	24	20 04	17 59	17	14	35
20	117	00.0	51.1	155	11.5 ¹¹⁵	24.4	43	52	53	28	10	1 09	59	22	34
21	132	00.1	50.1	169	42.0 ¹¹⁵	20.0	44	54	56	33	18	0 59	60	31	33
22	147	00.3	49.2	184	12.5 ¹¹⁵	15.5	45	56	18 59	38	26	48 61	41	32	
23	162	00.4	48.2	198	43.0 ¹¹⁵	10.9	46	58	19 03	44	36	35 63	17 53	29	
24	177	00.5	-6 47.2	213	13.5 ¹¹⁵	-19 06.2	47	60 S	19 07	19 51	20 47	0 20	65	18 06	28

UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO		
	PMG 13 ^h 17 ^m 5		Mag: -3.9 PMG: 10 ^h 34 ^m		Mag: +1.3 PMG: 14 ^h 12 ^m		Mag: -2.2 PMG: 15 ^h 22 ^m			Mag: +0.3 PMG: 16 ^h 00 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'
0	160	05.3	201 37.2	-16 42.6	146 46.2	+5 23.6	129 05.0	+11 31.4	119 22.1	+13 31.5		
1	175	07.8	216 36.5	41.8	161 46.9	24.4	144 07.0	31.5	134 24.3	31.6		
2	190	10.3	231 35.9	41.0	176 47.6	25.1	159 09.0	31.7	149 26.6	31.6		
3	205	12.7	246 35.2	40.2	191 48.4	25.9	174 11.0	31.9	164 28.8	31.7		
4	220	15.2	261 34.6	39.3	206 49.1	26.6	189 13.0	32.1	179 31.1	31.8		
5	235	17.6	276 33.9	-16 38.5	221 49.9	+5 27.4	204 15.1	+11 32.2	194 33.4	+13 31.9		
6	250	20.1	291 33.3	-16 37.7	236 50.6	+5 28.1	219 17.1	+11 32.4	209 35.6	+13 31.9		
7	265	22.6	306 32.7	36.9	251 51.3	28.9	234 19.1	32.6	224 37.9	32.0		
8	280	25.0	321 32.0	36.0	266 52.1	29.6	249 21.1	32.7	239 40.2	32.1		
9	295	27.5	336 31.4	35.2	281 52.8	30.4	264 23.1	32.9	254 42.4	32.1		
10	310	30.0	351 30.7	34.4	296 53.6	31.2	279 25.1	33.1	269 44.7	32.2		
11	325	32.4	6 30.1	-16 33.5	311 54.3	+5 31.9	294 27.1	+11 33.3	284 46.9	+13 32.3		
12	340	34.9	21 29.4	-16 32.7	326 55.0	+5 32.7	309 29.1	+11 33.4	299 49.2	+13 32.4		
13	355	37.4	36 28.8	31.9	341 55.8	33.4	324 31.1	33.6	314 51.5	32.4		
14	10	39.8	51 28.2	31.0	356 56.5	34.2	339 33.1	33.8	329 53.7	32.5		
15	25	42.3	66 27.5	30.2	11 57.2	34.9	354 35.1	33.9	344 56.0	32.6		
16	40	44.8	81 26.9	29.4	26 58.0	35.7	9 37.1	34.1	359 58.2	32.7		
17	55	47.2	96 26.2	-16 28.5	41 58.7	+5 36.4	24 39.1	+11 34.3	15 00.5	+13 32.7		
18	70	49.7	111 25.6	-16 27.7	56 59.5	+5 37.2	39 41.1	+11 34.5	30 02.8	+13 32.8		
19	85	52.1	126 25.0	26.9	72 00.2	37.9	54 43.1	34.6	45 05.0	32.9		
20	100	54.6	141 24.3	26.0	87 00.9	38.7	69 45.1	34.8	60 07.3	33.0		
21	115	57.1	156 23.7	25.2	102 01.7	39.4	84 47.1	35.0	75 09.5	33.0		
22	130	59.5	171 23.1	24.4	117 02.4	40.2	99 49.1	35.1	90 11.8	33.1		
23	146	02.0	186 22.4	23.5	132 03.1	40.9	114 51.1	35.3	105 14.1	33.2		
24	161	04.5	201 21.8	-16 22.7	147 03.9	+5 41.7	129 53.1	+11 35.5	120 16.3	+13 33.2		
Dif	—		-6 +8		+7 +8		+20 +2		+23 +1			

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16 ^h 1			Edad: 26 ^d 5	PHE { 4 ^h : 55 ^o 0 12 ^h : 55 ^o 2 20 ^h : 55 ^o 3										
	PMG: 12 ^h 11 ^m 9					SD: 15 ^o		PMG: 10 ^h 07 ^m			R ^o : 48 ^m				
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R ^o	Hora	R ^o	
h	°	'	°	°	'	°	'	h	m	h	m	h	m	h	m
0	177	00.5	-6 47.2	213	13.5	-19 06.2		60 N	5 22	6 10	6 52	6 23	24	13 58	75
1	192	00.7		227	44.1 ¹¹⁶	-19 01.4	48	58	24	09	49	6 10	27	14 10	73
2	207	00.8		242	14.6 ¹¹⁵	-18 56.5	49	56	26	09	46	5 59	29	21	70
3	222	00.9		256	45.2 ¹¹⁶		50	54	27	08	43	50	30	30	68
4	237	01.1		271	15.7 ¹¹⁵		51	52	28	07	41	41	32	38	67
5	252	01.2	-6 42.4	285	46.3 ¹¹⁶	-18 41.2	52	50	5 29	6 06	6 39	5 34	33	14 46	65
6	267	01.3	-6 41.5	300	16.8 ¹¹⁵	-18 36.0	52	45	5 31	6 05	6 34	5 17	36	15 01	63
7	282	01.5		314	47.4 ¹¹⁶		54	40	32	03	30	5 04	38	14	60
8	297	01.6		329	18.0 ¹¹⁶		55	35	32	01	27	4 52	40	25	58
9	312	01.7		343	48.6 ¹¹⁶		55	30	32	6 00	24	42	41	35	56
10	327	01.8		358	19.2 ¹¹⁶		56	20	30	5 56	18	25	44	15 51	53
11	342	02.0	-6 36.7	12	49.8 ¹¹⁶	-18 08.2	58	10 N	5 28	5 52	6 13	4 09	47	16 05	51
12	357	02.1	-6 35.7	27	20.5 ¹¹⁷	-18 02.4	58	0	5 24	5 48	6 09	3 55	49	16 19	48
13	12	02.2		41	51.1 ¹¹⁶	-17 56.5	59	10 S	18	43	6 04	41	51	32	46
14	27	02.4		56	21.8 ¹¹⁷		60	20	10	36	5 59	26	53	16 46	43
15	42	02.5		70	52.4 ¹¹⁶		61	30	5 00	28	52	3 08	56	17 02	40
16	57	02.6		85	23.1 ¹¹⁷		62	35	4 53	23	49	2 58	57	11	39
17	72	02.8	-6 30.9	99	53.8 ¹¹⁷	-17 31.9	63	40	4 45	5 17	5 45	2 46	59	17 22	36
18	87	02.9	-6 30.0	114	24.5 ¹¹⁷	-17 25.5	64	45	4 34	5 10	5 40	2 33	60	17 34	34
19	102	03.1		128	55.2 ¹¹⁷		64	50	21	5 01	34	16	63	49	31
20	117	03.2		143	25.9 ¹¹⁷		66	52	14	4 57	32	2 08	65	17 56	30
21	132	03.3		157	56.6 ¹¹⁷	-17 05.9	66	54	4 07	52	29	1 59	66	18 04	28
22	147	03.5		172	27.3 ¹¹⁷	-16 59.2	67	56	3 59	47	26	49	68	13	26
23	162	03.6		186	58.1 ¹¹⁸		69	58	49	41	22	38	70	22	24
24	177	03.7	-6 24.2	201	28.9 ¹¹⁸	-16 45.4	69	60 S	3 38	4 34	5 18	1 25	72	18 34	21
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 13 ^h 13 ^m 5			Mag: -3.9 PMG: 10 ^h 35 ^m			Mag: +1.3 PMG: 14 ^h 11 ^m			Mag: -2.2 PMG: 15 ^h 18 ^m			Mag: +0.3 PMG: 15 ^h 57 ^m		
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	'	°	'	°	'	°	°	'	°
0	161	04.5	201 21.8	-16 22.7	147 03.9	+5 41.7		129 53.1	+11 35.5	120 16.3	+13 33.2				
1	176	06.9	216 21.1		162 04.6	42.5		144 55.2		135 18.6					
2	191	09.4	231 20.5		177 05.4	43.2		159 57.2		150 20.8					
3	206	11.9	246 19.9		192 06.1	44.0		174 59.2		165 23.1					
4	221	14.3	261 19.2		207 06.8	44.7		190 01.2		180 25.4					
5	236	16.8	276 18.6	-16 18.4	222 07.6	+5 45.5		205 03.2	+11 36.3	195 27.6	+13 33.6				
6	251	19.3	291 18.0	-16 17.6	237 08.3	+5 46.2		220 05.2	+11 36.5	210 29.9	+13 33.7				
7	266	21.7	306 17.3		252 09.0	47.0		235 07.2		225 32.1					
8	281	24.2	321 16.7		267 09.8	47.7		250 09.2		240 34.4					
9	296	26.6	336 16.1		282 10.5	48.5		265 11.2		255 36.6					
10	311	29.1	351 15.5		297 11.3	49.2		280 13.2		270 38.9					
11	326	31.6	6 14.8	-16 13.4	312 12.0	+5 50.0		295 15.2	+11 37.4	285 41.2	+13 34.0				
12	341	34.0	21 14.2	-16 12.5	327 12.7	+5 50.7		310 17.2	+11 37.6	300 43.4	+13 34.1				
13	356	36.5	36 13.6		342 13.5	51.5		325 19.2		315 45.7					
14	11	39.0	51 12.9		357 14.2	52.2		340 21.2		330 47.9					
15	26	41.4	66 12.3		12 14.9	53.0		355 23.2		345 50.2					
16	41	43.9	81 11.7		27 15.7	53.7		10 25.2		0 52.5					
17	56	46.4	96 11.0	-16 08.2	42 16.4	+5 54.5		25 27.2	+11 38.4	15 54.7	+13 34.5				
18	71	48.8	111 10.4	-16 07.4	57 17.1	+5 55.2		40 29.2	+11 38.6	30 57.0	+13 34.6				
19	86	51.3	126 09.8		72 17.9	56.0		55 31.2		45 59.2					
20	101	53.7	141 09.2		87 18.6	56.7		70 33.2		61 01.5					
21	116	56.2	156 08.5		102 19.4	57.5		85 35.2		76 03.7					
22	131	58.7	171 07.9		117 20.1	58.2		100 37.2		91 06.0					
23	147	01.1	186 07.3		132 20.8	59.0		115 39.2		106 08.2					
24	162	03.6	201 06.7	-16 02.2	147 21.6	+5 59.7		130 41.2	+11 39.6	121 10.5	+13 35.0				
Dif	—		-6	+9	+7	+8		+20	+2	+23	+1				

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:1			Edad: 27 ^d 5 PHE { 4 ^h : 55 ^s /5 12 ^h : 55 ^s /7 20 ^h : 55 ^s /8 R°: 48 ^m											
	PMG: 12 ^h 11 ^m 6			PMG: 10 ^h 55 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	h m	m
0	177	03.7	-6 24.2	201	28.9	-16 45.4	69	60 N	17 36	18 17	19 06	6 47	19	15 13	80
1	192	03.9		215	59.6 ¹¹⁷	38.5	71	58	38	18	03	37	21	23	76
2	207	04.0		230	30.4 ¹¹⁸	31.4	72	56	41	18	01	28	24	31	74
3	222	04.1		245	01.2 ¹¹⁸	24.2	72	54	43	19	00	20	26	38	72
4	237	04.3		259	32.0 ¹¹⁸	17.0	72	52	46	19	58	13	28	45	70
5	252	04.4	-6 19.4	274	02.9 ¹¹⁹	-16 09.6	74	50	17 47	18 20	18 57	6 07	29	15 51	68
6	267	04.5	-6 18.4	288	33.7 ¹¹⁸	-16 02.2	74	45	17 52	18 21	18 55	5 53	32	16 04	65
7	282	04.7		303	04.5 ¹¹⁸	-15 54.7	75	40	55	22	54	42	35	14	62
8	297	04.8		317	35.4 ¹¹⁹	47.2	75	35	17 58	24	53	32	37	23	60
9	312	05.0		332	06.3 ¹¹⁹	39.5	77	30	18 01	25	53	23	40	31	57
10	327	05.1		346	37.2 ¹¹⁹	31.7	78	20	06	28	54	5 09	42	44	54
11	342	05.2	-6 13.6	1	08.1 ¹¹⁹	-15 23.9	78	10 N	18 11	18 32	18 56	4 56	45	16 56	51
12	357	05.4	-6 12.6	15	39.0 ¹¹⁹	-15 16.0	79	0	18 15	18 36	19 00	4 44	48	17 07	48
13	12	05.5		30	09.9 ¹¹⁹	-15 08.0	80	10 S	19	40	05	32	50	18	44
14	27	05.6		44	40.9 ¹²⁰	-15 00.0	80	20	24	46	12	19	53	29	42
15	42	05.8		59	11.8 ¹¹⁹	-14 51.8	82	30	30	54	22	4 04	57	42	38
16	57	05.9		73	42.8 ¹²⁰	43.6	82	35	33	18 58	29	3 55	59	50	36
17	72	06.1	-6 07.8	88	13.8 ¹²⁰	-14 35.3	83	40	18 37	19 04	19 37	3 45	61	17 58	34
18	87	06.2	-6 06.8	102	44.8 ¹²⁰	-14 26.9	84	45	18 41	19 11	19 46	3 33	64	18 08	31
19	102	06.3		117	15.8 ¹²⁰	18.4	85	50	46	19	59	19	67	20	27
20	117	06.5		131	46.8 ¹²⁰	09.9	85	52	49	23	20 05	13	68	26	25
21	132	06.6		146	17.8 ¹²⁰	-14 01.3	86	54	51	28	12	3 05	71	32	24
22	147	06.8		160	48.9 ¹²¹	-13 52.6	87	56	54	33	20	2 57	73	39	21
23	162	06.9		175	19.9 ¹²⁰	43.8	88	58	18 57	38	29	48	75	46	20
24	177	07.0	-6 01.0	189	51.0 ¹²¹	-13 35.0	88	60 S	19 01	19 45	20 40	2 37	78	18 55	17

UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO					
	PMG: 13 ^h 09 ^m 6		Mag: -3.9 PMG: 10 ^h 36 ^m		Mag: +1.3 PMG: 14 ^h 10 ^m		Mag: -2.2 PMG: 15 ^h 15 ^m			Mag: +0.3 PMG: 15 ^h 53 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec		hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'			
0	162	03.6	201	06.7	-16 02.2	147	21.6	+5 59.7	130	41.2	+11 39.6	121	10.5	+13 35.0	
1	177	06.1	216	06.0	01.4	162	22.3	+6 00.5	145	43.2	39.8	136	12.8	35.1	
2	192	08.5	231	05.4	-16 00.5	177	23.0	01.2	160	45.2	40.0	151	15.0	35.2	
3	207	11.0	246	04.8	-15 59.6	192	23.8	02.0	175	47.2	40.1	166	17.3	35.2	
4	222	13.5	261	04.2	58.8	207	24.5	02.7	190	49.2	40.3	181	19.5	35.3	
5	237	15.9	276	03.6	-15 57.9	222	25.3	+6 03.5	205	51.2	+11 40.5	196	21.8	+13 35.4	
6	252	18.4	291	02.9	-15 57.1	237	26.0	+6 04.2	220	53.2	+11 40.7	211	24.0	+13 35.5	
7	267	20.9	306	02.3	56.2	252	26.7	05.0	235	55.2	40.8	226	26.3	35.5	
8	282	23.3	321	01.7	55.3	267	27.5	05.7	250	57.2	41.0	241	28.5	35.6	
9	297	25.8	336	01.1	54.4	282	28.2	06.5	265	59.2	41.2	256	30.8	35.7	
10	312	28.2	351	00.4	53.6	297	28.9	07.2	281	01.2	41.3	271	33.1	35.7	
11	327	30.7	5	59.8	-15 52.7	312	29.7	+6 08.0	296	03.2	+11 41.5	286	35.3	+13 35.8	
12	342	33.2	20	59.2	-15 51.8	327	30.4	+6 08.7	311	05.2	+11 41.7	301	37.6	+13 35.9	
13	357	35.6	35	58.6	51.0	342	31.2	09.5	326	07.2	41.9	316	39.8	36.0	
14	12	38.1	50	58.0	50.1	357	31.9	10.2	341	09.2	42.0	331	42.1	36.0	
15	27	40.6	65	57.4	49.2	12	32.6	11.0	356	11.2	42.2	346	44.3	36.1	
16	42	43.0	80	56.7	48.4	27	33.4	11.7	11	13.2	42.4	1	46.6	36.2	
17	57	45.5	95	56.1	-15 47.5	42	34.1	+6 12.5	26	15.2	+11 42.6	16	48.8	+13 36.3	
18	72	48.0	110	55.5	-15 46.6	57	34.8	+6 13.2	41	17.2	+11 42.7	31	51.1	+13 36.3	
19	87	50.4	125	54.9	45.7	72	35.6	14.0	56	19.2	42.9	46	53.3	36.4	
20	102	52.9	140	54.3	44.9	87	36.3	14.7	71	21.1	43.1	61	55.6	36.5	
21	117	55.3	155	53.7	44.0	102	37.0	15.4	86	23.1	43.3	76	57.9	36.6	
22	132	57.8	170	53.0	43.1	117	37.8	16.2	101	25.1	43.4	92	00.1	36.6	
23	148	00.3	185	52.4	42.2	132	38.5	16.9	116	27.1	43.6	107	02.4	36.7	
24	163	02.7	200	51.8	-15 41.3	147	39.3	+6 17.7	131	29.1	+11 43.8	122	04.6	+13 36.8	
Dif	—		-6	+9		+7	+7		+20		+2	+23		+	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1			Edad: 28 ^d 5	PHE { 4 ^h : 56 ^m 0 12 ^h : 56 ^m 2 20 ^h : 56 ^m 4 R°: 48 ^m									
	PMG: 12 ^h 11 ^m 4													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	h m	h m
0	177	07.0	-6 01.0	189	51.0	-13 35.0		60 N	5 16	6 04	6 46	7 06	15	16 33 82
1	192	07.2	-6 00.1	204	22.1 ¹²¹	26.1 ⁸⁹		58	19	04	43	6 58	18	39 79
2	207	07.3	-5 59.1	218	53.2 ¹²¹	17.1 ⁹⁰		56	21	04	41	52	20	45 77
3	222	07.5	58.1	233	24.3 ¹²¹	-13 08.0	91	54	22	03	38	46	22	50 75
4	237	07.6	57.2	247	55.4 ¹²¹	-12 58.9	91	52	24	03	36	41	24	55 72
5	252	07.7	-5 56.2	262	26.5 ¹²¹	-12 49.7	92	50	5 25	6 02	6 35	6 36	26	16 59 71
6	267	07.9	-5 55.2	276	57.7 ¹²²	-12 40.5	92	45	5 27	6 01	6 30	6 25	30	17 09 66
7	282	08.0	54.3	291	28.8 ¹²¹	31.1 ⁹⁴		40	29	6 00	27	17	32	16 63
8	297	08.2	53.3	306	00.0 ¹²²	21.7 ⁹⁴		35	29	5 59	24	09	35	23 60
9	312	08.3	52.3	320	31.2 ¹²²	12.2 ⁹⁵		30	30	57	21	6 03	37	28 59
10	327	08.4	51.4	335	02.4 ¹²²	-12 02.7	95	20	29	54	17	5 51	41	38 54
11	342	08.6	-5 50.4	349	33.5 ¹²¹	-11 53.1	96	10 N	5 27	5 51	6 12	5 41	45	17 47 50
12	357	08.7	-5 49.4	4	04.8 ¹²³	-11 43.4	97	0	5 23	5 47	6 08	5 32	47	17 55 47
13	12	08.9	48.5	18	36.0 ¹²²	33.7 ⁹⁷		10 S	18	43	6 04	22	51	18 02 44
14	27	09.0	47.5	33	07.2 ¹²²	23.9 ⁹⁸		20	11	37	5 59	12	54	11 40
15	42	09.2	46.5	47	38.4 ¹²²	14.0 ⁹⁹		30	5 01	30	54	5 01	57	20 37
16	57	09.3	45.6	62	09.7 ¹²³	-11 04.1	99	35	4 55	25	51	4 54	60	26 34
17	72	09.4	-5 44.6	76	40.9 ¹²²	-10 54.1	100	40	4 47	5 20	5 47	4 46	63	18 32 31
18	87	09.6	-5 43.6	91	12.2 ¹²³	-10 44.1	100	45	4 37	5 13	5 43	4 37	66	18 39 29
19	102	09.7	42.6	105	43.5 ¹²³	33.9 ¹⁰²		50	25	05	38	26	70	47 25
20	117	09.9	41.7	120	14.8 ¹²³	23.8 ¹⁰¹		52	19	5 01	35	21	72	51 24
21	132	10.0	40.7	134	46.1 ¹²³	13.5 ¹⁰³		54	12	4 56	33	16	73	18 56 21
22	147	10.2	39.7	149	17.4 ¹²³	-10 03.3	102	56	4 04	51	30	10	75	19 00 20
23	162	10.3	38.8	163	48.7 ¹²³	-9 52.9	104	58	3 55	46	27	4 03	78	06 17
24	177	10.4	-5 37.8	178	20.0 ¹²³	-9 42.5	104	60 S	3 44	4 40	5 23	3 55	81	19 12 14

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO								
	PMG: 13 ^h 05 ^m 7		Mag: -3.9 PMG: 10 ^h 37 ^m		Mag: +1.3 PMG: 14 ^h 09 ^m		Mag: -2.2 PMG: 15 ^h 12 ^m		Mag: +0.3 PMG: 15 ^h 49 ^m								
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec							
h	°	'	°	'	°	'	°	'	°	'							
0	163	02.7	200	51.8	-15 41.3		147	39.3	+6 17.7		131	29.1	+11 43.8		122	04.6	+13 36.8
1	178	05.2	215	51.2	40.5		162	40.0	18.4		146	31.1	43.9		137	06.9	36.9
2	193	07.7	230	50.6	39.6		177	40.7	19.2		161	33.1	44.1		152	09.1	36.9
3	208	10.1	245	50.0	38.7		192	41.5	19.9		176	35.1	44.3		167	11.4	37.0
4	223	12.6	260	49.4	37.8		207	42.2	20.7		191	37.1	44.5		182	13.6	37.1
5	238	15.1	275	48.8	-15 36.9		222	42.9	+6 21.4		206	39.1	+11 44.6		197	15.9	+13 37.2
6	253	17.5	290	48.1	-15 36.1		237	43.7	+6 22.2		221	41.1	+11 44.8		212	18.1	+13 37.2
7	268	20.0	305	47.5	35.2		252	44.4	22.9		236	43.1	45.0		227	20.4	37.3
8	283	22.5	320	46.9	34.3		267	45.1	23.7		251	45.1	45.2		242	22.6	37.4
9	298	24.9	335	46.3	33.4		282	45.9	24.4		266	47.1	45.3		257	24.9	37.5
10	313	27.4	350	45.7	32.5		297	46.6	25.2		281	49.1	45.5		272	27.1	37.5
11	328	29.8	5 45.1	-15 31.6	31.2	47.4	+6 25.9	296	51.1	+11 45.7		287	29.4	+13 37.6			
12	343	32.3	20 44.5	-15 30.7	327	48.1	+6 26.6	311	53.1	+11 45.9		302	31.6	+13 37.7			
13	358	34.8	35 43.9	29.8	342	48.8	27.4	326	55.1	46.0		317	33.9	37.8			
14	13	37.2	50 43.3	29.0	357	49.6	28.1	341	57.1	46.2		332	36.1	37.8			
15	28	39.7	65 42.7	28.1	12	50.3	28.9	356	59.1	46.4		347	38.4	37.9			
16	43	42.2	80 42.1	27.2	27	51.0	29.6	12	01.0	46.6		2	40.6	38.0			
17	58	44.6	95 41.4	-15 26.3	42	51.8	+6 30.4	27	03.0	+11 46.7		17	42.9	+13 38.1			
18	73	47.1	110 40.8	-15 25.4	57	52.5	+6 31.1	42	05.0	+11 46.9		32	45.1	+13 38.1			
19	88	49.6	125 40.2	24.5	72	53.2	31.9	57	07.0	47.1		47	47.4	38.2			
20	103	52.0	140 39.6	23.6	87	54.0	32.6	72	09.0	47.2		62	49.6	38.3			
21	118	54.5	155 39.0	22.7	102	54.7	33.3	87	11.0	47.4		77	51.9	38.4			
22	133	57.0	170 38.4	21.8	117	55.5	34.1	102	13.0	47.6		92	54.1	38.4			
23	148	59.4	185 37.8	20.9	132	56.2	34.8	117	15.0	47.8		107	56.4	38.5			
24	164	01.9	200 37.2	-15 20.0	147	56.9	+6 35.6	132	17.0	+11 47.9		122	58.6	+13 38.6			

Dif	—	-6	+9	+7	+7	+20	+2	+23	+

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1			Edad: 29 ^d 5 PHE { 4 ^h : 56 ^m 6 12 ^h : 56 ^m 8 20 ^h : 56 ^m 9 R°: 47 ^m											
	PMG: 12 ^h 11 ^m 2	PMG: 12 ^h 31 ^m		hG ☾	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	h m	h m	h m	h m m	h m m	h m m			
0	177	10.4	-5 37.8	178	20.0	-9 42.5	60 N	17 41	18 22	19 11	7 21 14	17 55 83			
1	192	10.6		192	51.3 ¹²³	32.0 ¹⁰⁵	58	43	22	08	16 17	17 58 81			
2	207	10.7		207	22.6 ¹²³	21.5 ¹⁰⁵	56	45	22	06	12 19	18 02 78			
3	222	10.9		221	54.0 ¹²⁴	11.0 ¹⁰⁵	54	47	23	04	08 21	05 75			
4	237	11.0		236	25.3 ¹²³	-9 00.3 ¹⁰⁷	52	49	23	02	05 22	07 74			
5	252	11.2	-5 32.9	250	56.6 ¹²³	-8 49.7 ¹⁰⁶	50	17 51	18 23	19 01	7 02 24	18 10 72			
6	267	11.3	-5 32.0	265	28.0 ¹²⁴	-8 38.9 ¹⁰⁸	45	17 54	18 24	18 58	6 55 28	18 15 68			
7	282	11.5		279	59.3 ¹²³	28.2 ¹⁰⁷	40	17 58	25	56	49 31	19 65			
8	297	11.6		294	30.7 ¹²⁴	17.3 ¹⁰⁹	35	18 00	26	55	44 34	23 62			
9	312	11.8		309	02.0 ¹²³	-8 06.5 ¹⁰⁸	30	03	27	54	40 36	27 59			
10	327	11.9		323	33.4 ¹²⁴	-7 55.5 ¹¹⁰	20	07	29	55	32 40	32 55			
11	342	12.0	-5 27.1	338	04.8 ¹²⁴	-7 44.6 ¹⁰⁹	10 N	18 11	18 32	18 56	6 26 43	18 37 51			
12	357	12.2	-5 26.1	352	36.1 ¹²³	-7 33.6 ¹¹⁰	0	18 14	18 35	18 59	6 19 48	18 42 47			
13	12	12.3		7	07.5 ¹²⁴	22.5 ¹¹¹	10 S	18	39	19 04	13 51	46 44			
14	27	12.5		21	38.9 ¹²⁴	11.4 ¹¹¹	20	22	45	10	6 06 55	51 40			
15	42	12.6		36	10.3 ¹²⁴	-7 00.2 ¹¹²	30	27	51	20	5 58 59	18 57 36			
16	57	12.8		50	41.6 ¹²³	-6 49.0 ¹¹²	35	30	18 56	26	54 61	19 00 33			
17	72	12.9	-5 21.3	65	13.0 ¹²⁴	-6 37.8 ¹¹²	40	18 33	19 01	19 33	5 49 64	19 03 31			
18	87	13.1	-5 20.3	79	44.4 ¹²⁴	-6 26.5 ¹¹³	45	18 37	19 07	19 42	5 43 67	19 08 27			
19	102	13.2		94	15.8 ¹²⁴	15.2 ¹¹³	50	42	15	19 54	36 71	12 24			
20	117	13.4		108	47.1 ¹²³	-6 03.8 ¹¹⁴	52	44	18	20 00	33 73	15 22			
21	132	13.5		123	18.5 ¹²⁴	-5 52.4 ¹¹⁴	54	46	23	07	29 75	17 20			
22	147	13.7		137	49.9 ¹²⁴	41.0 ¹¹⁴	56	49	27	14	25 77	20 18			
23	162	13.8		152	21.2 ¹²³	29.5 ¹¹⁵	58	52	32	23	21 79	23 15			
24	177	14.0	-5 14.5	166	52.6 ¹²⁴	-5 18.0 ¹¹⁵	60 S	18 55	19 38	20 32	5 16 82	19 26 13			

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 13 ^h 01 ^m 7	Mag: -3.8 PMG: 10 ^h 38 ^m	Mag: +1.3 PMG: 14 ^h 08 ^m	Mag: -2.2 PMG: 15 ^h 09 ^m	Mag: +0.3 PMG: 15 ^h 46 ^m						
	hG ♈	hG ♀	hG ♂	hG ♃	hG ♄						
h	°	'	°	°	'	°	'	°	'	°	'
0	164	01.9	200 37.2	-15 20.0		147 56.9	+6 35.6	132 17.0	+11 47.9	122 58.6	+13 38.6
1	179	04.3	215 36.6	19.1		162 57.7	36.3	147 19.0	48.1	138 00.9	38.7
2	194	06.8	230 36.0	18.2		177 58.4	37.1	162 21.0	48.3	153 03.1	38.7
3	209	09.3	245 35.4	17.3		192 59.1	37.8	177 23.0	48.5	168 05.4	38.8
4	224	11.7	260 34.8	16.4		207 59.9	38.5	192 25.0	48.6	183 07.6	38.9
5	239	14.2	275 34.2	-15 15.5		223 00.6	+6 39.3	207 26.9	+11 48.8	198 09.9	+13 39.0
6	254	16.7	290 33.6	-15 14.6		238 01.3	+6 40.0	222 28.9	+11 49.0	213 12.1	+13 39.0
7	269	19.1	305 33.0	13.7		253 02.1	40.8	237 30.9	49.2	228 14.4	39.1
8	284	21.6	320 32.4	12.8		268 02.8	41.5	252 32.9	49.3	243 16.6	39.2
9	299	24.1	335 31.8	11.9		283 03.6	42.3	267 34.9	49.5	258 18.9	39.3
10	314	26.5	350 31.2	11.0		298 04.3	43.0	282 36.9	49.7	273 21.1	39.3
11	329	29.0	5 30.6	-15 10.1		313 05.0	+6 43.7	297 38.9	+11 49.9	288 23.4	+13 39.4
12	344	31.4	20 30.0	-15 09.2		328 05.8	+6 44.5	312 40.9	+11 50.0	303 25.6	+13 39.5
13	359	33.9	35 29.4	08.3		343 06.5	45.2	327 42.9	50.2	318 27.9	39.6
14	14	36.4	50 28.8	07.4		358 07.2	46.0	342 44.9	50.4	333 30.1	39.7
15	29	38.8	65 28.2	06.5		13 08.0	46.7	357 46.9	50.6	348 32.4	39.7
16	44	41.3	80 27.6	05.6		28 08.7	47.5	12 48.8	50.7	3 34.6	39.8
17	59	43.8	95 27.0	-15 04.7		43 09.4	+6 48.2	27 50.8	+11 50.9	18 36.9	+13 39.9
18	74	46.2	110 26.5	-15 03.7		58 10.2	+6 48.9	42 52.8	+11 51.1	33 39.1	+13 40.0
19	89	48.7	125 25.9	02.8		73 10.9	49.7	57 54.8	51.3	48 41.4	40.0
20	104	51.2	140 25.3	01.9		88 11.6	50.4	72 56.8	51.4	63 43.6	40.1
21	119	53.6	155 24.7	01.0		103 12.4	51.2	87 58.8	51.6	78 45.9	40.2
22	134	56.1	170 24.1	-15 00.1		118 13.1	51.9	103 00.8	51.8	93 48.1	40.3
23	149	58.6	185 23.5	-14 59.2		133 13.9	52.6	118 02.8	52.0	108 50.3	40.3
24	165	01.0	200 22.9	-14 58.3		148 14.6	+6 53.4	133 04.8	+11 52.1	123 52.6	+13 40.4
Dif	—		-6	+9		+7	+7	+20	+2	+22	+1

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16 ^h 1			Edad: 0 ^d 8	PHE {	R°: 48 ^m									
	PMG: 12 ^h 10 ^m 9					SD: 15 ^h 5		PMG: 13 ^h 18 ^m							
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	177	14.0	-5 14.5	166	52.6	-5 18.0		60 N	5 10	5 59	6 40	7 35	13	19 18	85
1	192	14.1		181	24.0 ¹²⁴	-5 06.5 ¹¹⁵		58		13	59	38	33	15	19 82
2	207	14.3		195	55.3 ¹²³	-4 54.9 ¹¹⁶		56		16	59	36	31	17	20 79
3	222	14.4		210	26.7 ¹²⁴	43.3 ¹¹⁶		54		18	58	34	29	20	20 77
4	237	14.6		224	58.0 ¹²³	31.7 ¹¹⁶		52		19	58	32	27	22	21 75
5	252	14.7	-5 09.6	239	29.3 ¹²³	-4 20.0 ¹¹⁷		50	5 21	5 58	6 30	7 26	24	19 22	73
6	267	14.9	-5 08.6	254	00.7 ¹²⁴	-4 08.3 ¹¹⁷		45	5 24	5 58	6 27	7 23	27	19 23	69
7	282	15.0		268	32.0 ¹²³	-3 56.6 ¹¹⁷		40		26	57	24	20	31	24 66
8	297	15.2		283	03.3 ¹²³	44.8 ¹¹⁸		35		27	56	21	18	33	25 63
9	312	15.3		297	34.6 ¹²³	33.0 ¹¹⁸		30		27	55	19	16	36	26 60
10	327	15.5		312	05.9 ¹²³	21.2 ¹¹⁸		20		27	53	15	12	41	27 56
11	342	15.6	-5 03.8	326	37.2 ¹²³	-3 09.4 ¹¹⁸		10 N	5 26	5 50	6 11	7 09	45	19 28	52
12	357	15.8	-5 02.8	341	08.5 ¹²³	-2 57.5 ¹¹⁹		0	5 23	5 47	6 08	7 07	47	19 29	48
13	12	15.9		355	39.8 ¹²³	45.6 ¹¹⁹		10 S		18	43	04	04	51	30 45
14	27	16.1	-5 00.9	10	11.0 ¹²²	33.7 ¹¹⁹		20		12	38	6 00	7 01	55	31 41
15	42	16.2	-4 59.9	24	42.3 ¹²³	21.8 ¹¹⁹		30	5 03		31	5 55	6 57	60	33 36
16	57	16.4		39	13.5 ¹²²	-2 09.8 ¹²⁰		35	4 57		27	52	55	62	33 34
17	72	16.5	-4 57.9	53	44.7 ¹²²	-1 57.9 ¹¹⁹		40	4 49	5 22	5 49	6 53	65	19 34	31
18	87	16.7	-4 57.0	68	15.9 ¹²²	-1 45.9 ¹²⁰		45	4 40	5 16	5 46	6 50	69	19 35	28
19	102	16.8		82	47.1 ¹²²	33.9 ¹²⁰		50		28	08	41	47	73	36 24
20	117	17.0		97	18.3 ¹²²	21.9 ¹²⁰		52		23	05	39	46	74	37 22
21	132	17.1		111	49.5 ¹²²	-1 09.8 ¹²¹		54		16	5 01	37	44	77	37 20
22	147	17.3		126	20.6 ¹²¹	-0 57.8 ¹²⁰		56		09	4 56	34	42	79	38 18
23	162	17.4		140	51.7 ¹²¹	45.7 ¹²¹		58	4 01		51	31	40	82	38 16
24	177	17.6	-4 51.1	155	22.9 ¹²²	-0 33.6 ¹²¹		60 S	3 51		4 45	5 28	6 38	84	19 39 13

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 12 ^h 57 ^m 8		Mag: -3.8 PMG: 10 ^h 39 ^m		Mag: +1.3 PMG: 14 ^h 06 ^m		Mag: -2.2 PMG: 15 ^h 06 ^m		Mag: +0.3 PMG: 15 ^h 42 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	165	01.0	200 22.9	-14 58.3	148 14.6	+6 53.4	133 04.8	+11 52.1	123 52.6	+13 40.4
1	180	03.5	215 22.3	57.3	163 15.3	54.1	148 06.7	52.3	138 54.8	40.5
2	195	05.9	230 21.7	56.4	178 16.1	54.9	163 08.7	52.5	153 57.1	40.6
3	210	08.4	245 21.1	55.5	193 16.8	55.6	178 10.7	52.7	168 59.3	40.6
4	225	10.9	260 20.5	54.6	208 17.5	56.3	193 12.7	52.8	184 01.6	40.7
5	240	13.3	275 19.9	-14 53.7	223 18.3	+6 57.1	208 14.7	+11 53.0	199 03.8	+13 40.8
6	255	15.8	290 19.4	-14 52.8	238 19.0	+6 57.8	223 16.7	+11 53.2	214 06.1	+13 40.9
7	270	18.3	305 18.8	51.8	253 19.7	58.6	238 18.7	53.4	229 08.3	40.9
8	285	20.7	320 18.2	50.9	268 20.5	+6 59.3	253 20.7	53.5	244 10.6	41.0
9	300	23.2	335 17.6	50.0	283 21.2	+7 00.0	268 22.6	53.7	259 12.8	41.1
10	315	25.7	350 17.0	49.1	298 21.9	+7 00.8	283 24.6	53.9	274 15.1	41.2
11	330	28.1	5 16.4	-14 48.2	313 22.7	+7 01.5	298 26.6	+11 54.1	289 17.3	+13 41.3
12	345	30.6	20 15.8	-14 47.2	328 23.4	+7 02.3	313 28.6	+11 54.2	304 19.5	+13 41.3
13	0	33.0	35 15.2	46.3	343 24.1	03.0	328 30.6	54.4	319 21.8	41.4
14	15	35.5	50 14.7	45.4	358 24.9	03.7	343 32.6	54.6	334 24.0	41.5
15	30	38.0	65 14.1	44.5	13 25.6	04.5	358 34.6	54.8	349 26.3	41.6
16	45	40.4	80 13.5	43.5	28 26.4	05.2	13 36.6	54.9	4 28.5	41.6
17	60	42.9	95 12.9	-14 42.6	43 27.1	+7 05.9	28 38.5	+11 55.1	19 30.8	+13 41.7
18	75	45.4	110 12.3	-14 41.7	58 27.8	+7 06.7	43 40.5	+11 55.3	34 33.0	+13 41.8
19	90	47.8	125 11.7	40.7	73 28.6	07.4	58 42.5	55.5	49 35.3	41.9
20	105	50.3	140 11.2	39.8	88 29.3	08.2	73 44.5	55.6	64 37.5	41.9
21	120	52.8	155 10.6	38.9	103 30.0	08.9	88 46.5	55.8	79 39.7	42.0
22	135	55.2	170 10.0	38.0	118 30.8	09.6	103 48.5	56.0	94 42.0	42.1
23	150	57.7	185 09.4	37.0	133 31.5	10.4	118 50.4	56.2	109 44.2	42.2
24	166	00.2	200 08.8	-14 36.1	148 32.2	+7 11.1	133 52.4	+11 56.3	124 46.5	+13 42.2
Dif	—		-6	+9	+7	+7	+20	+2	+22	+1

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:1 PMG: 12 ^h 10 ^m 7			Edad: 1 ^d 8 PHE { 4 ^h : 57/6 12 ^h : 57/8 20 ^h : 57/9 R°: 49 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif				Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m		h m m	
0	177	17.6	-4 51.1	155	22.9	-0 33.6	60 N	17 46	18 27	19 16	7 48 13		20 43 86		
1	192	17.7		169	54.0 ¹²¹	21.6 ¹²⁰	58	48	27	12	48 16		41 83		
2	207	17.9	49.2	184	25.0 ¹²⁰	-0 09.5 ¹²¹	56	49	27	10	48 19		39 81		
3	222	18.0	48.2	198	56.1 ¹²¹	+0 02.6 ¹²¹	54	51	26	07	49 20		37 79		
4	237	18.2	47.2	213	27.1 ¹²⁰	14.8 ¹²²	52	53	26	05	49 23		36 76		
5	252	18.3	-4 46.2	227	58.1 ¹²⁰	+0 26.9 ¹²¹	50	17 54	18 26	19 04	7 50 24		20 35 74		
6	267	18.5	-4 45.2	242	29.1 ¹²⁰	+0 39.0 ¹²¹	45	17 57	18 26	19 00	7 50 28		20 32 70		
7	282	18.7	44.3	257	00.1 ¹²⁰	+0 51.1 ¹²¹	40	18 00	27	18 58	51 31		30 66		
8	297	18.8	43.3	271	31.1 ¹²⁰	+1 03.3 ¹²²	35	02	27	57	51 35		28 63		
9	312	19.0	42.3	286	02.0 ¹¹⁹	15.4 ¹²¹	30	04	28	56	52 37		26 61		
10	327	19.1	41.3	300	32.9 ¹¹⁹	27.5 ¹²¹	20	08	30	55	53 41		23 57		
11	342	19.3	-4 40.4	315	03.8 ¹¹⁹	+1 39.7 ¹²²	10 N	18 11	18 32	18 56	7 54 45		20 20 53		
12	357	19.4	-4 39.4	329	34.6 ¹¹⁸	+1 51.8 ¹²¹	0	18 14	18 35	18 59	7 54 49		20 17 50		
13	12	19.6	38.4	344	05.5 ¹¹⁹	+2 03.9 ¹²¹	10 S	17	38	19 03	55 52		15 46		
14	27	19.7	37.4	358	36.3 ¹¹⁸	16.0 ¹²¹	20	21	43	09	56 56		12 42		
15	42	19.9	36.5	13	07.0 ¹¹⁷	28.2 ¹²²	30	25	49	17	57 61		09 37		
16	57	20.0	35.5	27	37.8 ¹¹⁸	40.3 ¹²¹	35	28	53	23	57 64		07 35		
17	72	20.2	-4 34.5	42	08.5 ¹¹⁷	+2 52.4 ¹²¹	40	18 30	18 58	19 30	7 58 66		20 05 32		
18	87	20.4	-4 33.5	56	39.2 ¹¹⁷	+3 04.5 ¹²¹	45	18 34	19 03	19 39	7 59 70		20 03 29		
19	102	20.5	32.5	71	09.9 ¹¹⁷	16.6 ¹²¹	50	38	10	50	8 00 74		20 00 25		
20	117	20.7	31.6	85	40.5 ¹¹⁶	28.7 ¹²¹	52	39	14	55	00 76		19 59 23		
21	132	20.8	30.6	100	11.1 ¹¹⁶	40.8 ¹²¹	54	42	17	20 01	01 78		57 21		
22	147	21.0	29.6	114	41.7 ¹¹⁶	+3 52.8 ¹²⁰	56	44	22	08	01 80		56 19		
23	162	21.1	28.6	129	12.2 ¹¹⁵	+4 04.9 ¹²¹	58	46	26	16	02 83		54 17		
24	177	21.3	-4 27.7	143	42.7 ¹¹⁵	+4 16.9 ¹²⁰	60 S	18 49	19 32	20 25	8 02 86		19 52 14		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 12 ^h 53 ^m 9		Mag: -3.8 PMG: 10 ^h 40 ^m			Mag: +1.3 PMG: 14 ^h 05 ^m			Mag: -2.2 PMG: 15 ^h 03 ^m			Mag: +0.3 PMG: 15 ^h 39 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°	
0	166	00.2	200	08.8	-14 36.1	148	32.2	+7 11.1	133	52.4	+11 56.3	124	46.5	+13 42.2	
1	181	02.6	215	08.2	35.2	163	33.0	11.8	148	54.4	56.5	139	48.7	42.3	
2	196	05.1	230	07.7	34.2	178	33.7	12.6	163	56.4	56.7	154	51.0	42.4	
3	211	07.5	245	07.1	33.3	193	34.4	13.3	178	58.4	56.9	169	53.2	42.5	
4	226	10.0	260	06.5	32.4	208	35.2	14.1	194	00.4	57.0	184	55.4	42.6	
5	241	12.5	275	05.9	-14 31.4	223	35.9	+7 14.8	209	02.4	+11 57.2	199	57.7	+13 42.6	
6	256	14.9	290	05.4	-14 30.5	238	36.6	+7 15.5	224	04.3	+11 57.4	214	59.9	+13 42.7	
7	271	17.4	305	04.8	29.6	253	37.4	16.3	239	06.3	57.6	230	02.2	42.8	
8	286	19.9	320	04.2	28.6	268	38.1	17.0	254	08.3	57.7	245	04.4	42.9	
9	301	22.3	335	03.6	27.7	283	38.8	17.7	269	10.3	57.9	260	06.7	42.9	
10	316	24.8	350	03.0	26.7	298	39.6	18.5	284	12.3	58.1	275	08.9	43.0	
11	331	27.3	5 02.5	-14 25.8	313 40.3	+7 19.2	313 40.3	+7 19.2	299 14.3	+11 58.3	290 11.1	+13 43.1			
12	346	29.7	20 01.9	-14 24.9	328 41.1	+7 19.9	328 41.1	+7 19.9	314 16.2	+11 58.5	305 13.4	+13 43.2			
13	1	32.2	35 01.3	23.9	343 41.8	20.7	343 41.8	20.7	329 18.2	58.6	320 15.6	43.2			
14	16	34.6	50 00.7	23.0	358 42.5	21.4	358 42.5	21.4	344 20.2	58.8	335 17.9	43.3			
15	31	37.1	65 00.2	22.0	13 43.3	22.1	13 43.3	22.1	359 22.2	59.0	350 20.1	43.4			
16	46	39.6	79 59.6	21.1	28 44.0	22.9	28 44.0	22.9	14 24.2	59.2	5 22.4	43.5			
17	61	42.0	94 59.0	-14 20.1	43 44.7	+7 23.6	43 44.7	+7 23.6	29 26.2	+11 59.3	20 24.6	+13 43.6			
18	76	44.5	109 58.4	-14 19.2	58 45.5	+7 24.3	58 45.5	+7 24.3	44 28.1	+11 59.5	35 26.8	+13 43.6			
19	91	47.0	124 57.9	18.3	73 46.2	25.1	73 46.2	25.1	59 30.1	59.7	50 29.1	43.7			
20	106	49.4	139 57.3	17.3	88 46.9	25.8	88 46.9	25.8	74 32.1	+11 59.9	65 31.3	43.8			
21	121	51.9	154 56.7	16.4	103 47.7	26.5	103 47.7	26.5	89 34.1	+12 00.0	80 33.6	43.9			
22	136	54.4	169 56.2	15.4	118 48.4	27.3	118 48.4	27.3	104 36.1	+12 00.2	95 35.8	43.9			
23	151	56.8	184 55.6	14.5	133 49.1	28.0	133 49.1	28.0	119 38.0	00.4	110 38.0	44.0			
24	166	59.3	199 55.0	-14 13.5	148 49.9	+7 28.7	148 49.9	+7 28.7	134 40.0	+12 00.6	125 40.3	+13 44.1			
Dif	—		-6		+9	+7		+7	+20		+2		+22		+

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'1 PMG: 12 ^h 10 ^m 5			Edad: 2 ^d 8 SD: 15'8 PMG: 14 ^h 55 ^m	PHE { 4 ^h : 58'1 12 ^h : 58'2 20 ^h : 58'3 R°: 51 ^m										
	hG ☉	Dec		hG ☾		Dif		Dec	Dif		Náutico	Civil	Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	177	21.3	-4	27.7	143	42.7	+4	16.9	60 N	5 04	5 53	6 34	8 01	15	22 09 88
1	192	21.5		26.7	158	13.2 ¹¹⁵		28.9 ¹²⁰	58	08	53	32	04	18	04 85
2	207	21.6		25.7	172	43.6 ¹¹⁴		40.9 ¹²⁰	56	10	53	30	07	20	22 00 81
3	222	21.8		24.7	187	14.0 ¹¹⁴	+4	52.9 ¹²⁰	54	13	54	29	09	23	21 56 79
4	237	21.9		23.7	201	44.4 ¹¹⁴	+5	04.9 ¹²⁰	52	15	54	27	12	24	52 78
5	252	22.1	-4	22.8	216	14.7 ¹¹³	+5	16.8 ¹¹⁹	50	5 17	5 54	6 26	8 14	26	21 49 75
6	267	22.2	-4	21.8	230	45.0 ¹¹³	+5	28.8 ¹²⁰	45	5 20	5 54	6 23	8 18	31	21 42 71
7	282	22.4		20.8	245	15.2 ¹¹²		40.7 ¹¹⁹	40	22	54	21	22	34	36 68
8	297	22.6		19.8	259	45.4 ¹¹²	+5	52.5 ¹¹⁸	35	24	53	19	26	36	31 66
9	312	22.7		18.9	274	15.6 ¹¹²	+6	04.4 ¹¹⁹	30	25	53	17	29	39	27 63
10	327	22.9		17.9	288	45.7 ¹¹¹		16.2 ¹¹⁸	20	26	51	13	34	43	20 58
11	342	23.0	-4	16.9	303	15.8 ¹¹¹	+6	28.0 ¹¹⁸	10 N	5 25	5 49	6 10	8 39	46	21 13 55
12	357	23.2	-4	15.9	317	45.9 ¹¹¹	+6	39.8 ¹¹⁸	0	5 22	5 46	6 07	8 43	50	21 07 51
13	12	23.3		14.9	332	15.9 ¹¹⁰	+6	51.6 ¹¹⁸	10 S	18	43	04	47	54	21 01 47
14	27	23.5		14.0	346	45.9 ¹¹⁰	+7	03.3 ¹¹⁷	20	13	38	6 01	52	58	20 54 44
15	42	23.7		13.0	1	15.8 ¹⁰⁹		15.0 ¹¹⁷	30	5 04	32	5 57	8 58	62	46 41
16	57	23.8		12.0	15	45.7 ¹⁰⁹		26.6 ¹¹⁶	35	4 59	29	54	9 01	64	42 38
17	72	24.0	-4	11.0	30	15.5 ¹⁰⁸	+7	38.2 ¹¹⁶	40	4 52	5 24	5 51	9 04	68	20 37 35
18	87	24.1	-4	10.0	44	45.3 ¹⁰⁸	+7	49.8 ¹¹⁶	45	4 43	5 19	5 48	9 09	70	20 32 32
19	102	24.3		09.1	59	15.1 ¹⁰⁸	+8	01.3 ¹¹⁵	50	32	12	44	14	75	25 28
20	117	24.5		08.1	73	44.8 ¹⁰⁷		12.9 ¹¹⁶	52	27	08	43	16	77	22 26
21	132	24.6		07.1	88	14.4 ¹⁰⁶		24.3 ¹¹⁴	54	21	05	41	19	79	18 25
22	147	24.8		06.1	102	44.0 ¹⁰⁶		35.7 ¹¹⁴	56	14	5 00	38	21	82	15 22
23	162	24.9		05.1	117	13.6 ¹⁰⁶		47.1 ¹¹⁴	58	4 06	4 56	36	25	84	11 19
24	177	25.1	-4	04.2	131	43.1 ¹⁰⁵	+8	58.5 ¹¹⁴	60 S	3 57	4 50	5 33	9 28	87	20 06 17
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 12 ^h 49 ^m 9		Mag: -3.8 PMG: 10 ^h 41 ^m			Mag: +1.3 PMG: 14 ^h 04 ^m			Mag: -2.2 PMG: 14 ^h 59 ^m			Mag: +0.3 PMG: 15 ^h 35 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	'	°	°	'	°	°	'	°	
0	166	59.3	199	55.0	-14	13.5	148	49.9	+7	28.7	134	40.0	+12	00.6	
1	182	01.8	214	54.5		12.6	163	50.6		29.5	149	42.0		00.7	
2	197	04.2	229	53.9		11.6	178	51.3		30.2	164	44.0		00.9	
3	212	06.7	244	53.3		10.7	193	52.1		30.9	179	46.0		01.1	
4	227	09.1	259	52.7		09.7	208	52.8		31.7	194	48.0		01.3	
5	242	11.6	274	52.2	-14	08.8	223	53.5	+7	32.4	209	49.9	+12	01.5	
6	257	14.1	289	51.6	-14	07.8	238	54.3	+7	33.1	224	51.9	+12	01.6	
7	272	16.5	304	51.0		06.9	253	55.0		33.9	239	53.9		01.8	
8	287	19.0	319	50.5		05.9	268	55.7		34.6	254	55.9		02.0	
9	302	21.5	334	49.9		05.0	283	56.5		35.3	269	57.9		02.2	
10	317	23.9	349	49.3		04.0	298	57.2		36.1	284	59.8		02.3	
11	332	26.4	4	48.8	-14	03.0	313	57.9	+7	36.8	300	01.8	+12	02.5	
12	347	28.9	19	48.2	-14	02.1	328	58.7	+7	37.5	315	03.8	+12	02.7	
13	2	31.3	34	47.6		01.1	343	59.4		38.3	330	05.8		02.9	
14	17	33.8	49	47.1	-14	00.2	359	00.1		39.0	345	07.8		03.0	
15	32	36.2	64	46.5	-13	59.2	14	00.9		39.7	0	09.7		03.2	
16	47	38.7	79	46.0		58.3	29	01.6		40.5	15	11.7		03.4	
17	62	41.2	94	45.4	-13	57.3	44	02.3	+7	41.2	30	13.7	+12	03.6	
18	77	43.6	109	44.8	-13	56.3	59	03.1	+7	41.9	45	15.7	+12	03.7	
19	92	46.1	124	44.3		55.4	74	03.8		42.7	60	17.6		03.9	
20	107	48.6	139	43.7		54.4	89	04.5		43.4	75	19.6		04.1	
21	122	51.0	154	43.2		53.4	104	05.3		44.1	90	21.6		04.3	
22	137	53.5	169	42.6		52.5	119	06.0		44.8	105	23.6		04.5	
23	152	56.0	184	42.0		51.5	134	06.7		45.6	120	25.6		04.6	
24	167	58.4	199	41.5	-13	50.6	149	07.5	+7	46.3	135	27.5	+12	04.8	
Dif	—		-6		+10	+7		+7	+20		+2		+22		+1

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16 ^h 1			Edad: 3 ^d 8	PHE { 4 ^h : 58'4 12 ^h : 58'6 20 ^h : 58'7	PMG: 15 ^h 46 ^m			R°: 53 ^m							
	hG ☉	Dec								hG ☾	Dif	Dec	Dif	Civil	Náutico	Hora
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	177	25.1	-4	04.2	131	43.1	+8	58.5	60 N	17 51	18 32	19 21	8 16	19	23 37	86
1	192	25.3		03.2	146	12.6 ¹⁰⁵	+9	09.8 ¹¹³	58	52	31	17	22	22	29	83
2	207	25.4		02.2	160	42.0 ¹⁰⁴		21.0 ¹¹²	56	54	31	14	27	25	21	82
3	222	25.6		01.2	175	11.4 ¹⁰⁴		32.2 ¹¹²	54	55	30	11	32	27	15	79
4	237	25.7	-4	00.2	189	40.7 ¹⁰³		43.4 ¹¹²	52	56	30	09	36	29	10	76
5	252	25.9	-3	59.3	204	10.0 ¹⁰³	+9	54.5 ¹¹¹	50	17 57	18 30	19 07	8 40	31	23 04	75
6	267	26.1	-3	58.3	218	39.2 ¹⁰²	+10	05.6 ¹¹¹	45	18 00	18 29	19 03	8 49	34	22 53	72
7	282	26.2		57.3	233	08.3 ¹⁰¹		16.6 ¹¹⁰	40	02	29	19 00	8 56	37	44	69
8	297	26.4		56.3	247	37.5 ¹⁰²		27.6 ¹¹⁰	35	04	29	18 58	9 02	40	37	65
9	312	26.5		55.3	262	06.5 ¹⁰⁰		38.5 ¹⁰⁹	30	05	29	57	08	42	30	63
10	327	26.7		54.4	276	35.5 ¹⁰⁰	+10	49.3 ¹⁰⁸	20	08	30	56	17	46	18	60
11	342	26.9	-3	53.4	291	04.5 ¹⁰⁰	+11	00.1 ¹⁰⁸	10 N	18 11	18 32	18 56	9 25	50	22 08	56
12	357	27.0	-3	52.4	305	33.4 ⁹⁹	+11	10.9 ¹⁰⁸	0	18 13	18 34	18 58	9 33	53	21 58	54
13	12	27.2		51.4	320	02.2 ⁹⁸		21.6 ¹⁰⁷	10 S	16	37	19 02	41	56	48	51
14	27	27.4		50.4	334	31.0 ⁹⁸		32.2 ¹⁰⁶	20	19	41	07	9 50	59	38	48
15	42	27.5		49.4	348	59.7 ⁹⁷		42.7 ¹⁰⁵	30	23	47	15	10 00	63	27	44
16	57	27.7		48.5	3	28.4 ⁹⁷	+11	53.2 ¹⁰⁵	35	25	50	20	05	66	20	42
17	72	27.8	-3	47.5	17	57.1 ⁹⁷	+12	03.7 ¹⁰⁵	40	18 27	18 54	19 26	10 12	68	21 12	40
18	87	28.0	-3	46.5	32	25.6 ⁹⁵	+12	14.1 ¹⁰⁴	45	18 30	19 00	19 35	10 19	72	21 04	36
19	102	28.2		45.5	46	54.1 ⁹⁵		24.4 ¹⁰³	50	33	06	45	29	75	20 53	33
20	117	28.3		44.5	61	22.6 ⁹⁵		34.6 ¹⁰²	52	35	09	50	33	77	48	31
21	132	28.5		43.6	75	51.0 ⁹⁴		44.8 ¹⁰²	54	37	12	19 56	38	79	43	29
22	147	28.7		42.6	90	19.3 ⁹³	+12	54.9 ¹⁰¹	56	39	16	20 02	43	82	37	27
23	162	28.8		41.6	104	47.6 ⁹³	+13	04.9 ¹⁰⁰	58	41	21	10	49	84	30	24
24	177	29.0	-3	40.6	119	15.8 ⁹²	+13	14.9 ¹⁰⁰	60 S	18 43	19 26	20 18	10 55	88	20 23	21

UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO								
	PMG: 12 ^h 46 ^m 0		Mag: -3.8 PMG: 10 ^h 42 ^m		Mag: +1.3 PMG: 14 ^h 03 ^m		Mag: -2.2 PMG: 14 ^h 56 ^m			Mag: +0.3 PMG: 15 ^h 31 ^m								
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec		hG ♄	Dec							
h	°	'	°	'	°	'	°	'	°	'	°	'						
0	167	58.4	199	41.5	-13	50.6	149	07.5	+7	46.3	135	27.5	+12	04.8	126	34.0	+13	46.0
1	183	00.9	214	40.9		49.6	164	08.2		47.0	150	29.5		05.0	141	36.3		46.0
2	198	03.4	229	40.4		48.6	179	08.9		47.8	165	31.5		05.2	156	38.5		46.1
3	213	05.8	244	39.8		47.7	194	09.7		48.5	180	33.5		05.3	171	40.7		46.2
4	228	08.3	259	39.2		46.7	209	10.4		49.2	195	35.4		05.5	186	43.0		46.3
5	243	10.7	274	38.7	-13	45.7	224	11.1	+7	50.0	210	37.4	+12	05.7	201	45.2	+13	46.4
6	258	13.2	289	38.1	-13	44.8	239	11.9	+7	50.7	225	39.4	+12	05.9	216	47.4	+13	46.4
7	273	15.7	304	37.6		43.8	254	12.6		51.4	240	41.4		06.0	231	49.7		46.5
8	288	18.1	319	37.0		42.8	269	13.3		52.1	255	43.4		06.2	246	51.9		46.6
9	303	20.6	334	36.5		41.8	284	14.1		52.9	270	45.3		06.4	261	54.1		46.7
10	318	23.1	349	35.9		40.9	299	14.8		53.6	285	47.3		06.6	276	56.4		46.8
11	333	25.5	4	35.3	-13	39.9	314	15.5	+7	54.3	300	49.3	+12	06.8	291	58.6	+13	46.8
12	348	28.0	19	34.8	-13	38.9	329	16.3	+7	55.1	315	51.3	+12	06.9	307	00.9	+13	46.9
13	3	30.5	34	34.2		38.0	344	17.0		55.8	330	53.2		07.1	322	03.1		47.0
14	18	32.9	49	33.7		37.0	359	17.7		56.5	345	55.2		07.3	337	05.3		47.1
15	33	35.4	64	33.1		36.0	14	18.5		57.2	0	57.2		07.5	352	07.6		47.1
16	48	37.9	79	32.6		35.0	29	19.2		58.0	15	59.2		07.6	7	09.8		47.2
17	63	40.3	94	32.0	-13	34.1	44	19.9	+7	58.7	31	01.1	+12	07.8	22	12.0	+13	47.3
18	78	42.8	109	31.5	-13	33.1	59	20.7	+7	59.4	46	03.1	+12	08.0	37	14.3	+13	47.4
19	93	45.2	124	30.9		32.1	74	21.4	+8	00.1	61	05.1		08.2	52	16.5		47.5
20	108	47.7	139	30.4		31.1	89	22.1		00.9	76	07.1		08.4	67	18.7		47.5
21	123	50.2	154	29.8		30.1	104	22.9		01.6	91	09.0		08.5	82	21.0		47.6
22	138	52.6	169	29.3		29.2	119	23.6		02.3	106	11.0		08.7	97	23.2		47.7
23	153	55.1	184	28.7		28.2	134	24.3		03.1	121	13.0		08.9	112	25.4		47.8
24	168	57.6	199	28.2	-13	27.2	149	25.1	+8	03.8	136	15.0	+12	09.1	127	27.7	+13	47.9
Dif	—		-6		+10		+7		+7		+20		+2		+22		+1	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16 ^h 1 PMG: 12 ^h 09 ^m 9			Edad: 4 ^d 8 PHE { 4 ^h : 58 ^m 8 12 ^h : 58 ^m 8 20 ^h : 58 ^m 9 PMG: 16 ^h 39 ^m R°: 56 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	h	m	h	m	h	m	h	m	m
0	177	29.0	-3	119	15.8	+13	14.9	60 N	4 58	5 47	6 28	8 35	25	***	***	***
1	192	29.2		133	44.0		24.8	58	5 02	48	27	44	28	***	***	***
2	207	29.3		148	12.1		34.6	56	05	48	25	52	30	***	***	***
3	222	29.5		162	40.1		44.4	54	08	49	24	8 59	32	***	***	***
4	237	29.6		177	08.1	+13	54.0	52	10	49	23	9 05	34	***	***	***
5	252	29.8	-3	191	36.0	+14	03.6	50	5 12	5 50	6 22	9 11	36	***	***	***
6	267	30.0	-3	206	03.9	+14	13.1	45	5 16	5 50	6 20	9 23	39	***	***	***
7	282	30.1		220	31.7		22.6	40	19	51	18	33	42	23 53	67	
8	297	30.3		234	59.5		31.9	35	21	51	16	42	44	42	66	
9	312	30.5		249	27.2		41.2	30	23	51	14	9 50	46	33	64	
10	327	30.6		263	54.8		50.4	20	24	50	12	10 03	50	18	61	
11	342	30.8	-3	278	22.3	+14	59.5	10 N	5 24	5 48	6 09	10 15	52	23 04	59	
12	357	31.0	-3	292	49.9	+15	08.5	0	5 22	5 46	6 07	10 26	55	22 52	56	
13	12	31.1		307	17.3		17.4	10 S	19	43	04	37	58	39	54	
14	27	31.3		321	44.7		26.3	20	13	39	6 01	10 49	61	26	52	
15	42	31.5		336	12.0		35.0	30	06	34	5 58	11 03	64	11	48	
16	57	31.6		350	39.3		43.7	35	5 01	30	56	11	66	22 02	47	
17	72	31.8	-3	5	06.5	+15	52.2	40	4 54	5 26	5 54	11 20	68	21 52	45	
18	87	32.0	-3	19	33.6	+16	00.7	45	4 46	5 21	5 51	11 31	71	21 40	43	
19	102	32.1		34	00.7		09.1	50	36	15	48	44	74	26	39	
20	117	32.3		48	27.7		17.4	52	31	12	46	50	76	19	38	
21	132	32.5		62	54.7		25.6	54	25	09	45	11 57	78	12	36	
22	147	32.6		77	21.6		33.7	56	19	05	43	12 05	80	21 04	34	
23	162	32.8		91	48.4		41.7	58	12	5 01	41	13	83	20 54	32	
24	177	33.0	-3	106	15.2	+16	49.6	60 S	4 03	4 56	5 38	12 23	86	20 44	29	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 12 ^h 42 ^m 1		Mag: -3.8 PMG: 10 ^h 43 ^m		Mag: +1.4 PMG: 14 ^h 02 ^m		Mag: -2.2 PMG: 14 ^h 53 ^m		Mag: +0.3 PMG: 15 ^h 28 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	168	57.6	199	28.2	-13	27.2	149	25.1	+8	03.8
1	184	00.0	214	27.6		26.2	164	25.8		04.5
2	199	02.5	229	27.1		25.2	179	26.5		05.2
3	214	05.0	244	26.5		24.3	194	27.3		06.0
4	229	07.4	259	26.0		23.3	209	28.0		06.7
5	244	09.9	274	25.4	-13	22.3	224	28.7	+8	07.4
6	259	12.3	289	24.9	-13	21.3	239	29.5	+8	08.1
7	274	14.8	304	24.3		20.3	254	30.2		08.9
8	289	17.3	319	23.8		19.3	269	30.9		09.6
9	304	19.7	334	23.3		18.4	284	31.7		10.3
10	319	22.2	349	22.7		17.4	299	32.4		11.0
11	334	24.7	4	22.2	-13	16.4	314	33.1	+8	11.8
12	349	27.1	19	21.6	-13	15.4	329	33.9	+8	12.5
13	4	29.6	34	21.1		14.4	344	34.6		13.2
14	19	32.1	49	20.5		13.4	359	35.3		13.9
15	34	34.5	64	20.0		12.4	14	36.1		14.7
16	49	37.0	79	19.5		11.4	29	36.8		15.4
17	64	39.5	94	18.9	-13	10.4	44	37.5	+8	16.1
18	79	41.9	109	18.4	-13	09.5	59	38.3	+8	16.8
19	94	44.4	124	17.8		08.5	74	39.0		17.5
20	109	46.8	139	17.3		07.5	89	39.7		18.3
21	124	49.3	154	16.8		06.5	104	40.5		19.0
22	139	51.8	169	16.2		05.5	119	41.2		19.7
23	154	54.2	184	15.7		04.5	134	41.9		20.4
24	169	56.7	199	15.1	-13	03.5	149	42.7	+8	21.2
Dif	—		-5	+10			+7	+7		+20
										+2
										+22
										+

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16'1 PMG: 12 ^h 09 ^m 7			Edad: 5 ^d 8 PHE { 4 ^h : 59'0 12 ^h : 59'1 20 ^h : 59'1 R°: 57 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	177	33.0	-3 17.0	106	15.2	+16 49.6	78	60 N	17 56	18 37	19 26	9 00 35	1 03 83		
1	192	33.1		120	42.0	+16 57.4	78	58	57	36	22	12 37	0 52 80		
2	207	33.3		135	08.6	+17 05.1	77	56	58	35	18	22 40	43 77		
3	222	33.5		149	35.2		76	54	17 59	34	15	31 41	34 74		
4	237	33.6		164	01.8		76	52	18 00	33	13	39 43	26 74		
5	252	33.8	-3 12.1	178	28.3	+17 27.5	74	50	18 01	18 33	19 10	9 47 44	0 19 73		
6	267	34.0	-3 11.1	192	54.7	+17 34.8	73	45	18 02	18 32	19 06	10 02 47	0 05 69		
7	282	34.1		207	21.1		72	40	04	31	02	15 49	** ** *		
8	297	34.3		221	47.4		73	35	05	31	19 00	26 50	** ** *		
9	312	34.5		236	13.7	+17 56.0	70	30	07	30	18 58	36 51	** ** *		
10	327	34.6		250	39.9	+18 02.8	68	20	09	31	56	10 53 53	** ** *		
11	342	34.8	-3 06.2	265	06.0	+18 09.6	68	10 N	18 11	18 32	18 56	11 07 56	** ** *		
12	357	35.0	-3 05.2	279	32.1	+18 16.2	66	0	18 13	18 34	18 58	11 21 57	23 48 58		
13	12	35.1		293	58.1		65	10 S	15	36	19 01	35 59	33 57		
14	27	35.3		308	24.1		64	20	17	40	05	11 50 61	23 18 55		
15	42	35.5		322	50.1		63	30	20	44	12	12 07 63	22 59 54		
16	57	35.7		337	15.9		61	35	22	47	17	17 64	49 53		
17	72	35.8	-3 00.3	351	41.8	+18 47.6	61	40	18 24	18 51	19 23	12 28 66	22 37 52		
18	87	36.0	-2 59.3	6	07.5	+18 53.5	59	45	18 26	18 56	19 31	12 42 68	22 23 50		
19	102	36.2		20	33.3	+18 59.3	58	50	29	19 02	40	12 58 71	22 05 49		
20	117	36.3		34	58.9	+19 05.0	57	52	30	04	45	13 06 72	21 57 48		
21	132	36.5		49	24.5		56	54	32	07	50	15 73	48 46		
22	147	36.7		63	50.1		54	56	33	11	19 56	25 74	38 45		
23	162	36.8		78	15.6		54	58	35	15	20 03	36 76	26 44		
24	177	37.0	-2 53.4	92	41.1	+19 26.6	52	60 S	18 37	19 19	20 11	13 49 79	21 13 41		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 12 ^h 38 ^m 1		Mag: -3.8 PMG: 10 ^h 43 ^m			Mag: +1.4 PMG: 14 ^h 00 ^m			Mag: -2.1 PMG: 14 ^h 50 ^m			Mag: +0.3 PMG: 15 ^h 24 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	169	56.7	199	15.1	-13 03.5	149	42.7	+8 21.2	137	02.3	+12 13.3	128	21.3	+13 49.8	
1	184	59.2	214	14.6	02.5	164	43.4	21.9	152	04.3	13.5	143	23.5	49.8	
2	200	01.6	229	14.1	01.5	179	44.1	22.6	167	06.2	13.7	158	25.7	49.9	
3	215	04.1	244	13.5	-13 00.5	194	44.9	23.3	182	08.2	13.9	173	28.0	50.0	
4	230	06.6	259	13.0	-12 59.5	209	45.6	24.0	197	10.2	14.1	188	30.2	50.1	
5	245	09.0	274	12.4	-12 58.5	224	46.3	+8 24.8	212	12.2	+12 14.2	203	32.4	+13 50.2	
6	260	11.5	289	11.9	-12 57.5	239	47.0	+8 25.5	227	14.1	+12 14.4	218	34.7	+13 50.2	
7	275	14.0	304	11.4	56.5	254	47.8	26.2	242	16.1	14.6	233	36.9	50.3	
8	290	16.4	319	10.8	55.5	269	48.5	26.9	257	18.1	14.8	248	39.1	50.4	
9	305	18.9	334	10.3	54.5	284	49.2	27.7	272	20.0	14.9	263	41.4	50.5	
10	320	21.3	349	09.8	53.5	299	50.0	28.4	287	22.0	15.1	278	43.6	50.6	
11	335	23.8	4	09.2	-12 52.5	314	50.7	+8 29.1	302	24.0	+12 15.3	293	45.8	+13 50.6	
12	350	26.3	19	08.7	-12 51.5	329	51.4	+8 29.8	317	25.9	+12 15.5	308	48.0	+13 50.7	
13	5	28.7	34	08.2	50.5	344	52.2	30.5	332	27.9	15.7	323	50.3	50.8	
14	20	31.2	49	07.6	49.5	359	52.9	31.3	347	29.9	15.8	338	52.5	50.9	
15	35	33.7	64	07.1	48.5	14	53.6	32.0	2	31.9	16.0	353	54.7	51.0	
16	50	36.1	79	06.6	47.5	29	54.4	32.7	17	33.8	16.2	8	57.0	51.0	
17	65	38.6	94	06.0	-12 46.5	44	55.1	+8 33.4	32	35.8	+12 16.4	23	59.2	+13 51.1	
18	80	41.1	109	05.5	-12 45.5	59	55.8	+8 34.1	47	37.8	+12 16.6	39	01.4	+13 51.2	
19	95	43.5	124	05.0	44.5	74	56.6	34.9	62	39.7	16.7	54	03.6	51.3	
20	110	46.0	139	04.5	43.5	89	57.3	35.6	77	41.7	16.9	69	05.9	51.4	
21	125	48.4	154	03.9	42.4	104	58.0	36.3	92	43.7	17.1	84	08.1	51.4	
22	140	50.9	169	03.4	41.4	119	58.8	37.0	107	45.6	17.3	99	10.3	51.5	
23	155	53.4	184	02.9	40.4	134	59.5	37.7	122	47.6	17.4	114	12.6	51.6	
24	170	55.8	199	02.3	-12 39.4	150	00.2	+8 38.4	137	49.6	+12 17.6	129	14.8	+13 51.7	
Dif	—		-5		+10	+7		+7	+20		+2	+22		+	

UT	SOL			 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16 ^h 1			Edad: 6 ^d 8	PHE {	4 ^h : 59/2			R ^o : 60 ^m								
	PMG: 12 ^h 09 ^m 4					12 ^h : 59/2											
	PMG: 18 ^h 32 ^m					20 ^h : 59/3											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R ^o	Hora	R ^o		
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	177	37.0	-2 53.4	92	41.1	+19 26.6	51	60 N	4 52	5 41	6 22	9 35	49	2 26	73		
1	192	37.2	52.4	107	06.5	31.7	64	58	4 56	42	21	9 49	51	12	71		
2	207	37.3	51.4	121	31.9	36.6	49	56	5 00	43	20	10 02	51	2 00	70		
3	222	37.5	50.4	135	57.2	41.4	48	54	03	44	19	12 53		1 50	68		
4	237	37.7	49.4	150	22.5	46.1	47	52	06	45	18	22 53		40	68		
5	252	37.9	-2 48.5	164	47.8	+19 50.7	46	50	5 08	5 45	6 18	10 31	53	1 32	67		
6	267	38.0	-2 47.5	179	13.0	+19 55.2	45	45	5 13	5 47	6 16	10 49	54	1 14	66		
7	282	38.2	46.5	193	38.1	+19 59.5	43	40	16	48	14	11 04	55	1 00	64		
8	297	38.4	45.5	208	03.3	+20 03.7	42	35	19	48	13	16 56		0 48	63		
9	312	38.5	44.5	222	28.3	07.7	40	30	20	48	12	27 57		37	62		
10	327	38.7	43.5	236	53.4	11.7	40	20	22	48	10	11 46	58	19	61		
11	342	38.9	-2 42.5	251	18.4	+20 15.5	38	10 N	5 23	5 47	6 08	12 03	58	0 03	60		
12	357	39.1	-2 41.6	265	43.3	+20 19.1	36	0	5 21	5 45	6 06	12 18	59	** ** *	**		
13	12	39.2	40.6	280	08.3	22.7	36	10 S	19	43	04	34	60	** ** *	**		
14	27	39.4	39.6	294	33.2	26.1	34	20	14	40	6 02	12 51	60	** ** *	**		
15	42	39.6	38.6	308	58.0	29.3	32	30	07	35	5 59	13 10	61	23 53	59		
16	57	39.7	37.6	323	22.8	32.5	32	35	5 02	32	58	21	62	42	59		
17	72	39.9	-2 36.6	337	47.6	+20 35.5	30	40	4 57	5 29	5 56	13 34	62	23 29	58		
18	87	40.1	-2 35.6	352	12.4	+20 38.3	28	45	4 49	5 24	5 54	13 50	62	23 13	58		
19	102	40.3	34.7	6	37.1	41.1	28	50	40	18	51	14 09	63	22 54	58		
20	117	40.4	33.7	21	01.9	43.6	25	52	35	16	50	18	63	45	58		
21	132	40.6	32.7	35	26.5	46.1	25	54	30	13	48	28	64	34	58		
22	147	40.8	31.7	49	51.2	48.4	23	56	24	09	47	39	65	23	57		
23	162	41.0	30.7	64	15.8	50.6	22	58	17	05	45	14 52	65	22 10	57		
24	177	41.1	-2 29.7	78	40.4	+20 52.6	20	60 S	4 09	5 01	5 43	15 08	65	21 54	57		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 12 ^h 34 ^m 2		Mag: -3.8 PMG: 10 ^h 44 ^m		Mag: +1.4 PMG: 13 ^h 59 ^m		Mag: -2.1 PMG: 14 ^h 47 ^m		Mag: +0.3 PMG: 15 ^h 21 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	170	55.8	199	02.3	150	00.2	137	49.6	129	14.8
1	185	58.3	214	01.8	165	00.9	152	51.5	144	17.0
2	201	00.8	229	01.3	180	01.7	167	53.5	159	19.3
3	216	03.2	244	00.8	195	02.4	182	55.5	174	21.5
4	231	05.7	259	00.2	210	03.1	197	57.4	189	23.7
5	246	08.2	273	59.7	225	03.9	212	59.4	204	25.9
6	261	10.6	288	59.2	240	04.6	228	01.4	219	28.2
7	276	13.1	303	58.7	255	05.3	243	03.3	234	30.4
8	291	15.6	318	58.1	270	06.1	258	05.3	249	32.6
9	306	18.0	333	57.6	285	06.8	273	07.3	264	34.8
10	321	20.5	348	57.1	300	07.5	288	09.2	279	37.1
11	336	22.9	3	56.6	315	08.3	303	11.2	294	39.3
12	351	25.4	18	56.0	330	09.0	318	13.2	309	41.5
13	6	27.9	33	55.5	345	09.7	333	15.1	324	43.8
14	21	30.3	48	55.0	0	10.4	348	17.1	339	46.0
15	36	32.8	63	54.5	15	11.2	3	19.1	354	48.2
16	51	35.3	78	53.9	30	11.9	18	21.0	9	50.4
17	66	37.7	93	53.4	45	12.6	33	23.0	24	52.7
18	81	40.2	108	52.9	60	13.4	48	25.0	39	54.9
19	96	42.7	123	52.4	75	14.1	63	26.9	54	57.1
20	111	45.1	138	51.9	90	14.8	78	28.9	69	59.3
21	126	47.6	153	51.3	105	15.6	93	30.9	85	01.6
22	141	50.1	168	50.8	120	16.3	108	32.8	100	03.8
23	156	52.5	183	50.3	135	17.0	123	34.8	115	06.0
24	171	55.0	198	49.8	150	17.8	138	36.8	130	08.3
Dif	—		-5	+10	+7	+7	+20	+2	+22	+1

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1 PMG: 12 ^h 09 ^m 1			Edad: 7 ^d 8 PHE { SD: 16 ^h 1 PMG: 19 ^h 32 ^m 4 ^h : 59/3 12 ^h : 59/3 20 ^h : 59/3 R°: 59 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	177	41.1	-2 29.7	78	40.4	+20 52.6	19	60 N	18 00	18 42	19 31	10 24 65	3 39 58		
1	192	41.3	28.7	93	05.0	56 54.5	18	58	01	40	27	40 64	23 58		
2	207	41.5	27.8	107	29.6	56 56.3	18	56	02	39	23	10 53 64	3 10 58		
3	222	41.7	26.8	121	54.1	55 57.9	16	54	03	38	19	11 05 63	2 58 59		
4	237	41.8	25.8	136	18.6	55 +20 59.4	15	52	03	37	16	15 63	48 59		
5	252	42.0	-2 24.8	150	43.1	55 +21 00.7	13	50	18 04	18 36	19 14	11 24 63	2 39 59		
6	267	42.2	-2 23.8	165	07.6	55 +21 01.9	12	45	18 05	18 34	19 08	11 43 63	2 20 59		
7	282	42.3	22.8	179	32.1	55 03.0	11	40	06	33	04	11 59 62	2 04 59		
8	297	42.5	21.8	193	56.6	55 03.9	9	35	07	32	19 02	12 12 62	1 51 59		
9	312	42.7	20.8	208	21.0	54 04.7	8	30	08	32	18 59	24 61	39 60		
10	327	42.9	19.9	222	45.5	55 05.3	6	20	09	31	57	12 44 60	20 59		
11	342	43.0	-2 18.9	237	09.9	54 +21 05.8	5	10 N	18 11	18 32	18 56	13 01 60	1 03 59		
12	357	43.2	-2 17.9	251	34.3	54 +21 06.2	4	0	18 12	18 33	18 57	13 17 60	0 46 60		
13	12	43.4	16.9	265	58.8	55 06.4	2	10 S	14	35	18 59	34 58	30 60		
14	27	43.6	15.9	280	23.2	54 06.5	1	20	16	38	19 03	13 51 58	0 13 59		
15	42	43.7	14.9	294	47.6	54 06.4	1	30	18	42	10	14 11 57	** ** *		
16	57	43.9	13.9	309	12.0	54 06.2	2	35	19	45	14	23 56	** ** *		
17	72	44.1	-2 13.0	323	36.4	54 +21 05.8	4	40	18 21	18 48	19 20	14 36 56	** ** *		
18	87	44.3	-2 12.0	338	00.8	54 +21 05.3	5	45	18 23	18 52	19 27	14 52 55	** ** *		
19	102	44.4	11.0	352	25.2	54 04.7	6	50	25	18 57	36	15 12 54	23 52 67		
20	117	44.6	10.0	6	49.6	54 03.9	8	52	26	19 00	40	21 54	43 67		
21	132	44.8	09.0	21	14.0	54 03.0	9	54	27	02	45	32 53	32 69		
22	147	45.0	08.0	35	38.5	55 01.9	11	56	28	05	50	44 52	20 70		
23	162	45.1	07.0	50	02.9	54 +21 00.7	12	58	29	09	19 57	15 57 51	23 07 71		
24	177	45.3	-2 06.0	64	27.3	54 +20 59.4	13	60 S	18 31	19 13	20 04	16 13 50	22 51 72		

UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO		
	PMG: 12 ^h 30 ^m 3		Mag: -3.8 PMG: 10 ^h 45 ^m		Mag: +1.4 PMG: 13 ^h 58 ^m		Mag: -2.1 PMG: 14 ^h 44 ^m			Mag: +0.3 PMG: 15 ^h 17 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'
0	171	55.0	198 49.8	-12 15.0	150 17.8	+8 55.6	138 36.8	+12 21.9	130 08.3	+13 53.6		
1	186	57.4	213 49.3	14.0	165 18.5	56.4	153 38.7	22.1	145 10.5	53.7		
2	201	59.9	228 48.8	12.9	180 19.2	57.1	168 40.7	22.3	160 12.7	53.8		
3	217	02.4	243 48.2	11.9	195 19.9	57.8	183 42.6	22.5	175 14.9	53.9		
4	232	04.8	258 47.7	10.9	210 20.7	58.5	198 44.6	22.6	190 17.2	53.9		
5	247	07.3	273 47.2	-12 09.9	225 21.4	+8 59.2	213 46.6	+12 22.8	205 19.4	+13 54.0		
6	262	09.8	288 46.7	-12 08.8	240 22.1	+8 59.9	228 48.5	+12 23.0	220 21.6	+13 54.1		
7	277	12.2	303 46.2	07.8	255 22.9	+9 00.6	243 50.5	23.2	235 23.8	54.2		
8	292	14.7	318 45.7	06.8	270 23.6	01.3	258 52.5	23.4	250 26.1	54.3		
9	307	17.2	333 45.1	05.8	285 24.3	02.1	273 54.4	23.5	265 28.3	54.3		
10	322	19.6	348 44.6	04.7	300 25.1	02.8	288 56.4	23.7	280 30.5	54.4		
11	337	22.1	3 44.1	-12 03.7	315 25.8	+9 03.5	303 58.4	+12 23.9	295 32.7	+13 54.5		
12	352	24.6	18 43.6	-12 02.7	330 26.5	+9 04.2	319 00.3	+12 24.1	310 35.0	+13 54.6		
13	7	27.0	33 43.1	01.6	345 27.2	04.9	334 02.3	24.3	325 37.2	54.7		
14	22	29.5	48 42.6	-12 00.6	0 28.0	05.6	349 04.2	24.4	340 39.4	54.7		
15	37	31.9	63 42.1	-11 59.6	15 28.7	06.3	4 06.2	24.6	355 41.6	54.8		
16	52	34.4	78 41.6	58.5	30 29.4	07.0	19 08.2	24.8	10 43.9	54.9		
17	67	36.9	93 41.0	-11 57.5	45 30.2	+9 07.8	34 10.1	+12 25.0	25 46.1	+13 55.0		
18	82	39.3	108 40.5	-11 56.5	60 30.9	+9 08.5	49 12.1	+12 25.2	40 48.3	+13 55.1		
19	97	41.8	123 40.0	55.4	75 31.6	09.2	64 14.1	25.3	55 50.5	55.2		
20	112	44.3	138 39.5	54.4	90 32.3	09.9	79 16.0	25.5	70 52.7	55.2		
21	127	46.7	153 39.0	53.4	105 33.1	10.6	94 18.0	25.7	85 55.0	55.3		
22	142	49.2	168 38.5	52.3	120 33.8	11.3	109 19.9	25.9	100 57.2	55.4		
23	157	51.7	183 38.0	51.3	135 34.5	12.0	124 21.9	26.1	115 59.4	55.5		
24	172	54.1	198 37.5	-11 50.2	150 35.3	+9 12.7	139 23.9	+12 26.2	131 01.6	+13 55.6		
Dif	—		-5	+10	+7	+7	+20	+2	+22	+1		

ALMANAQUE NÁUTICO PERSEIS

UT	SOL			LUNA					Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'1 PMG: 12 ^h 08 ^m 6			Edad: 9 ^d 8 PHE { SD: 16'1 PMG: 21 ^h 28 ^m 4 ^h : 59/3 12 ^h : 59/2 20 ^h : 59/2 R°: 55 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Civil			Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	m	h m	m	
0	177	49.6	-1 42.3	50	19.9	+19 45.7	61	60 N	18 05	18 47	19 36	12 47 86	5 19 30			
1	192	49.8		64	45.0	41.0	47	58	06	45	31	13 00 83	5 06 33			
2	207	49.9		79	10.1	36.1	49	56	06	43	27	11 80	4 54 36			
3	222	50.1		93	35.3	31.1	50	54	06	42	23	21 78	44 37			
4	237	50.3		108	00.5	26.0	51	52	07	40	20	29 77	35 39			
5	252	50.5	-1 37.4	122	25.7	+19 20.7	53	50	18 07	18 39	19 17	13 37 75	4 27 41			
6	267	50.6	-1 36.4	136	51.0	+19 15.3	54	45	18 08	18 37	19 11	13 54 71	4 10 43			
7	282	50.8		151	16.3	09.8	55	40	08	35	07	14 07 69	3 56 46			
8	297	51.0		165	41.7	+19 04.2	56	35	09	34	03	19 66	44 48			
9	312	51.2		180	07.1	+18 58.4	58	30	09	33	19 01	29 64	33 50			
10	327	51.4		194	32.6	52.6	58	20	10	32	18 58	14 46 61	3 15 52			
11	342	51.5	-1 31.5	208	58.1	+18 46.6	60	10 N	18 11	18 32	18 56	15 01 58	2 59 55			
12	357	51.7	-1 30.5	223	23.7	+18 40.4	62	0	18 12	18 32	18 56	15 14 56	2 44 57			
13	12	51.9		237	49.3	34.2	62	10 S	13	34	18 58	28 53	29 60			
14	27	52.1		252	15.0	27.9	63	20	14	36	19 02	15 43 50	2 13 62			
15	42	52.3		266	40.8	21.4	65	30	16	39	07	16 00 47	1 55 64			
16	57	52.4		281	06.5	14.8	66	35	16	42	11	10 45	44 66			
17	72	52.6	-1 25.5	295	32.4	+18 08.1	67	40	18 18	18 45	19 16	16 21 43	1 32 67			
18	87	52.8	-1 24.6	309	58.3	+18 01.3	68	45	18 19	18 48	19 23	16 35 39	1 17 70			
19	102	53.0		324	24.2	+17 54.4	69	50	20	53	31	51 36	0 59 73			
20	117	53.2		338	50.2	47.3	71	52	21	55	35	16 58 35	50 75			
21	132	53.3		353	16.3	40.2	71	54	22	18 57	40	17 06 33	41 76			
22	147	53.5		7	42.4	32.9	73	56	23	19 00	45	16 31	30 78			
23	162	53.7		22	08.6	25.5	74	58	24	03	51	26 29	18 80			
24	177	53.9	-1 18.6	36	34.8	+17 18.0	75	60 S	18 25	19 07	19 57	17 38 26	0 03 83			

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 12 ^h 22 ^m 4		Mag: -3.8 PMG: 10 ^h 47 ^m		Mag: +1.4 PMG: 13 ^h 56 ^m		Mag: -2.1 PMG: 14 ^h 37 ^m		Mag: +0.3 PMG: 15 ^h 10 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	173	53.3	198 25.4	-11 25.2	150 52.8	+9 29.7	140 10.9	+12 30.6	131 55.0	+13 57.5
1	188	55.7	213 24.9	24.1	165 53.5	30.4	155 12.9	30.7	146 57.2	57.6
2	203	58.2	228 24.4	23.1	180 54.2	31.1	170 14.8	30.9	161 59.4	57.7
3	219	00.7	243 23.9	22.0	195 54.9	31.8	185 16.8	31.1	177 01.6	57.8
4	234	03.1	258 23.4	21.0	210 55.7	32.6	200 18.7	31.3	192 03.9	57.8
5	249	05.6	273 22.9	-11 19.9	225 56.4	+9 33.3	215 20.7	+12 31.5	207 06.1	+13 57.9
6	264	08.0	288 22.4	-11 18.9	240 57.1	+9 34.0	230 22.7	+12 31.6	222 08.3	+13 58.0
7	279	10.5	303 21.9	17.8	255 57.9	34.7	245 24.6	31.8	237 10.5	58.1
8	294	13.0	318 21.4	16.7	270 58.6	35.4	260 26.6	32.0	252 12.7	58.2
9	309	15.4	333 20.9	15.7	285 59.3	36.1	275 28.5	32.2	267 14.9	58.3
10	324	17.9	348 20.4	14.6	301 00.0	36.8	290 30.5	32.4	282 17.2	58.3
11	339	20.4	3 19.9	-11 13.6	316 00.8	+9 37.5	305 32.4	+12 32.5	297 19.4	+13 58.4
12	354	22.8	18 19.4	-11 12.5	331 01.5	+9 38.2	320 34.4	+12 32.7	312 21.6	+13 58.5
13	9	25.3	33 18.9	11.5	346 02.2	38.9	335 36.4	32.9	327 23.8	58.6
14	24	27.8	48 18.4	10.4	1 03.0	39.6	350 38.3	33.1	342 26.0	58.7
15	39	30.2	63 18.0	09.3	16 03.7	40.3	5 40.3	33.3	357 28.3	58.7
16	54	32.7	78 17.5	08.3	31 04.4	41.0	20 42.2	33.4	12 30.5	58.8
17	69	35.2	93 17.0	-11 07.2	46 05.1	+9 41.7	35 44.2	+12 33.6	27 32.7	+13 58.9
18	84	37.6	108 16.5	-11 06.2	61 05.9	+9 42.4	50 46.1	+12 33.8	42 34.9	+13 59.0
19	99	40.1	123 16.0	05.1	76 06.6	43.1	65 48.1	34.0	57 37.1	59.1
20	114	42.5	138 15.5	04.0	91 07.3	43.8	80 50.0	34.2	72 39.4	59.2
21	129	45.0	153 15.0	03.0	106 08.0	44.5	95 52.0	34.4	87 41.6	59.2
22	144	47.5	168 14.5	01.9	121 08.8	45.2	110 54.0	34.5	102 43.8	59.3
23	159	49.9	183 14.0	-11 00.9	136 09.5	45.9	125 55.9	34.7	117 46.0	59.4
24	174	52.4	198 13.5	-10 59.8	151 10.2	+9 46.6	140 57.9	+12 34.9	132 48.2	+13 59.5
Dif	—	-5	+11		+7	+7	+20	+2	+22	+

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 {	SD: 16 ^h 1	SD: 22 ^h 23 ^m	4 ^h : 59 ^h 1 12 ^h : 59 ^h 0 20 ^h : 58 ^h 9 Rº: 52 ^m												
	hG ☉	Dec							hG ☾		Dif	Dec		Dif	Náutico	Civil	Hora	Rº	Hora	Rº
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m	
0	177	53.9	-1	18.6	36	34.8		+17	18.0	75	60 N	4	39	5	29	6	10	14	13	88
1	192	54.1		17.6	51	01.1	73		10.5	75	58		44		31	10		23	85	
2	207	54.2		16.7	65	27.4	73	+17	02.8	77	56		49		33	10		31	83	
3	222	54.4		15.7	79	53.8	74	+16	55.0	78	54		53		34	09		39	80	
4	237	54.6		14.7	94	20.3	75		47.1	79	52		56		36	09		46	77	
5	252	54.8	-1	13.7	108	46.8	75	+16	39.1	80	50	4	59	5	37	6	09	14	52	76
6	267	55.0	-1	12.7	123	13.4	76	+16	31.0	81	45	5	05	5	39	6	08	15	05	72
7	282	55.2		11.7	137	40.1	77		22.8	82	40	10		41		08		16	68	
8	297	55.3		10.7	152	06.8	77		14.5	83	35	13		42		08		25	66	
9	312	55.5		09.7	166	33.6	78	+16	06.1	84	30	16		43		07		33	64	
10	327	55.7		08.7	181	00.4	78	+15	57.6	85	20	19		45		07		47	59	
11	342	55.9	-1	07.8	195	27.3	79	+15	49.0	86	10 N	5	20		5	45	6	06	15	59
12	357	56.1	-1	06.8	209	54.3	80	+15	40.3	87	0	5	20		5	44	6	05	16	10
13	12	56.2		05.8	224	21.3	80		31.5	88	10 S	19		43		04		21	50	
14	27	56.4		04.8	238	48.4	81		22.7	88	20	15		41		03		33	47	
15	42	56.6		03.8	253	15.5	81		13.7	90	30	10		38		02		47	42	
16	57	56.8		02.8	267	42.7	82	+15	04.7	90	35	06		36		01		16	55	
17	72	57.0	-1	01.8	282	10.0	83	+14	55.5	92	40	5	01	5	33	6	00	17	04	
18	87	57.2	-1	00.8	296	37.3	83	+14	46.3	92	45	4	55	5	29	5	59	17	14	
19	102	57.3	-0	59.9	311	04.7	84		37.0	93	50	47		25		57		27	30	
20	117	57.5		58.9	325	32.2	85		27.6	94	52	43		23		57		33	29	
21	132	57.7		57.9	339	59.7	85		18.2	94	54	38		20		56		39	27	
22	147	57.9		56.9	354	27.3	86	+14	08.6	96	56	33		18		55		47	24	
23	162	58.1		55.9	8	55.0	87	+13	59.0	96	58	27		15		54		17	55	
24	177	58.2	-0	54.9	23	22.7	87	+13	49.3	97	60 S	4	21	5	11	5	53	18	04	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 12 ^h 18 ^m 5		Mag: -3.8 PMG: 10 ^h 47 ^m		Mag: +1.4 PMG: 13 ^h 55 ^m		Mag: -2.1 PMG: 14 ^h 34 ^m		Mag: +0.3 PMG: 15 ^h 07 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	174	52.4	198	13.5	-10	59.8	151	10.2	+9	46.6
1	189	54.9	213	13.0		58.7	166	11.0		47.3
2	204	57.3	228	12.6		57.7	181	11.7		48.0
3	219	59.8	243	12.1		56.6	196	12.4		48.7
4	235	02.3	258	11.6		55.5	211	13.1		49.4
5	250	04.7	273	11.1	-10	54.5	226	13.9	+9	50.1
6	265	07.2	288	10.6	-10	53.4	241	14.6	+9	50.8
7	280	09.6	303	10.1		52.3	256	15.3		51.5
8	295	12.1	318	09.6		51.3	271	16.0		52.2
9	310	14.6	333	09.1		50.2	286	16.8		52.9
10	325	17.0	348	08.7		49.1	301	17.5		53.6
11	340	19.5	3	08.2	-10	48.1	316	18.2	+9	54.3
12	355	22.0	18	07.7	-10	47.0	331	19.0	+9	55.0
13	10	24.4	33	07.2		45.9	346	19.7		55.7
14	25	26.9	48	06.7		44.8	1	20.4		56.4
15	40	29.4	63	06.2		43.8	16	21.1		57.1
16	55	31.8	78	05.7		42.7	31	21.9		57.8
17	70	34.3	93	05.3	-10	41.6	46	22.6	+9	58.5
18	85	36.8	108	04.8	-10	40.6	61	23.3	+9	59.2
19	100	39.2	123	04.3		39.5	76	24.0	+9	59.9
20	115	41.7	138	03.8		38.4	91	24.8	+10	00.6
21	130	44.1	153	03.3		37.3	106	25.5		01.3
22	145	46.6	168	02.9		36.3	121	26.2		02.0
23	160	49.1	183	02.4		35.2	136	26.9		02.7
24	175	51.5	198	01.9	-10	34.1	151	27.7	+10	03.4
Dif	—		-5		+11		+7		+7	

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 { 4 ^h : 58 ^m 8 12 ^h : 58 ^m 6 20 ^h : 58 ^m 5 R°: 50 ^m										
	PMG: 12 ^h 08 ^m 0					SD: 16 ^h 0				PMG: 23 ^h 15 ^m		R°: 50 ^m			
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	° ' "	° ' "		° ' "		° ' "		°	h m	h m	h m	h m m	h m m	h m m	h m m
0	177 58.2	-0 54.9		23 22.7		+13 49.3		60 N	18 10	18 52	19 42	15 41 88	6 11 17		
1	192 58.4		53.9	37 50.5	88	39.5	98	58	10	49	36	48 84	6 04 19		
2	207 58.6		52.9	52 18.4	89	29.6	99	56	10	47	31	54 81	5 57 22		
3	222 58.8		51.9	66 46.3	89	19.7	99	54	10	45	27	15 59 79	51 25		
4	237 59.0		51.0	81 14.3	90	+13 09.7	100	52	10	44	24	16 03 77	46 26		
5	252 59.2	-0 50.0		95 42.3	90	+12 59.6	101	50	18 10	18 42	19 20	16 08 75	5 41 28		
6	267 59.3	-0 49.0		110 10.4	91	+12 49.4	102	45	18 10	18 39	19 14	16 17 71	5 30 33		
7	282 59.5		48.0	124 38.6	92	39.2	102	40	10	37	09	24 68	22 35		
8	297 59.7		47.0	139 06.8	92	28.9	103	35	10	35	05	31 65	14 38		
9	312 59.9		46.0	153 35.1	93	18.6	103	30	10	34	19 02	37 62	5 07 41		
10	328 00.1		45.0	168 03.5	94	+12 08.1	105	20	11	33	18 58	46 58	4 56 44		
11	343 00.3	-0 44.0		182 31.9	94	+11 57.7	104	10 N	18 11	18 32	18 56	16 55 54	4 45 49		
12	358 00.4	-0 43.1		197 00.4	95	+11 47.1	106	0	18 11	18 32	18 56	17 03 51	4 36 51		
13	13 00.6		42.1	211 28.9	95	36.5	106	10 S	12	33	18 57	11 47	26 55		
14	28 00.8		41.1	225 57.5	96	25.8	107	20	12	34	19 00	20 43	15 59		
15	43 01.0		40.1	240 26.2	97	15.1	107	30	13	37	05	29 39	4 03 64		
16	58 01.2		39.1	254 54.9	97	+11 04.3	108	35	14	39	08	35 36	3 56 66		
17	73 01.4	-0 38.1		269 23.7	98	+10 53.5	108	40	18 14	18 41	19 13	17 41 34	3 48 69		
18	88 01.5	-0 37.1		283 52.6	99	+10 42.6	109	45	18 15	18 44	19 19	17 49 30	3 39 72		
19	103 01.7		36.1	298 21.5	99	31.6	110	50	16	48	26	17 57 27	28 76		
20	118 01.9		35.2	312 50.5	100	20.6	110	52	16	50	30	18 02 24	22 78		
21	133 02.1		34.2	327 19.5	100	+10 09.5	111	54	17	52	34	06 23	17 79		
22	148 02.3		33.2	341 48.6	101	+9 58.4	111	56	17	55	39	11 20	10 82		
23	163 02.5		32.2	356 17.8	102	47.3	111	58	18	57	44	16 18	3 03 85		
24	178 02.7	-0 31.2		10 47.0	102	+9 36.1	112	60 S	18 19	19 00	19 51	18 22 16	2 54 89		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 12 ^h 14 ^m 6		Mag: -3.8 PMG: 10 ^h 48 ^m		Mag: +1.4 PMG: 13 ^h 53 ^m		Mag: -2.1 PMG: 14 ^h 31 ^m		Mag: +0.3 PMG: 15 ^h 03 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "
0	175 51.5	198 01.9	-10 34.1		151 27.7	+10 03.4	141 44.8	+12 39.2	133 41.4	+14 01.5
1	190 54.0	213 01.4		33.0	166 28.4	04.1	156 46.7	39.4	148 43.6	01.6
2	205 56.5	228 00.9		32.0	181 29.1	04.8	171 48.7	39.6	163 45.9	01.6
3	220 58.9	243 00.5		30.9	196 29.8	05.5	186 50.6	39.8	178 48.1	01.7
4	236 01.4	258 00.0		29.8	211 30.6	06.2	201 52.6	40.0	193 50.3	01.8
5	251 03.9	272 59.5	-10 28.7		226 31.3	+10 06.9	216 54.5	+12 40.1	208 52.5	+14 01.9
6	266 06.3	287 59.0	-10 27.6		241 32.0	+10 07.6	231 56.5	+12 40.3	223 54.7	+14 02.0
7	281 08.8	302 58.5		26.6	256 32.8	08.3	246 58.4	40.5	238 56.9	02.1
8	296 11.3	317 58.1		25.5	271 33.5	09.0	262 00.4	40.7	253 59.2	02.1
9	311 13.7	332 57.6		24.4	286 34.2	09.7	277 02.3	40.9	269 01.4	02.2
10	326 16.2	347 57.1		23.3	301 34.9	10.4	292 04.3	41.1	284 03.6	02.3
11	341 18.6	2 56.6	-10 22.2		316 35.7	+10 11.1	307 06.2	+12 41.2	299 05.8	+14 02.4
12	356 21.1	17 56.2	-10 21.2		331 36.4	+10 11.8	322 08.2	+12 41.4	314 08.0	+14 02.5
13	11 23.6	32 55.7		20.1	346 37.1	12.5	337 10.1	41.6	329 10.2	02.6
14	26 26.0	47 55.2		19.0	1 37.8	13.1	352 12.1	41.8	344 12.4	02.6
15	41 28.5	62 54.7		17.9	16 38.6	13.8	7 14.0	42.0	359 14.6	02.7
16	56 31.0	77 54.3		16.8	31 39.3	14.5	22 16.0	42.1	14 16.9	02.8
17	71 33.4	92 53.8	-10 15.7		46 40.0	+10 15.2	37 17.9	+12 42.3	29 19.1	+14 02.9
18	86 35.9	107 53.3	-10 14.7		61 40.7	+10 15.9	52 19.9	+12 42.5	44 21.3	+14 03.0
19	101 38.4	122 52.8		13.6	76 41.5	16.6	67 21.8	42.7	59 23.5	03.1
20	116 40.8	137 52.4		12.5	91 42.2	17.3	82 23.8	42.9	74 25.7	03.1
21	131 43.3	152 51.9		11.4	106 42.9	18.0	97 25.7	43.0	89 27.9	03.2
22	146 45.7	167 51.4		10.3	121 43.6	18.7	112 27.7	43.2	104 30.1	03.3
23	161 48.2	182 50.9		09.2	136 44.4	19.4	127 29.6	43.4	119 32.4	03.4
24	176 50.7	197 50.5	-10 08.1		151 45.1	+10 20.1	142 31.6	+12 43.6	134 34.6	+14 03.5
Dif	—	-5	+11		+7	+7	+20	+2	+22	+1

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	SD: 15 ^h 9										
	PMG: 12 ^h 07 ^m 7				PMG: **h **m			R°: **m							
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	178	02.7	-0 31.2	10	47.0	+9 36.1		60 N	4 33	5 23	6 04	17 09	85	6 28	14
1	193	02.8		25	16.2 ¹⁰²	24.8 ¹¹³		58	38	25	04	12 82		23	17
2	208	03.0		39	45.6 ¹⁰⁴	13.5 ¹¹³		56	43	27	04	15 80		19	20
3	223	03.2		54	15.0 ¹⁰⁴	+9 02.2 ¹¹³		54	47	29	04	18 77		16	21
4	238	03.4		68	44.4 ¹⁰⁴	+8 50.8 ¹¹⁴		52	51	31	04	20 76		12	24
5	253	03.6	-0 26.3	83	13.9 ¹⁰⁵	+8 39.4 ¹¹⁴		50	4 54	5 32	6 05	17 23	73	6 09	25
6	268	03.8	-0 25.3	97	43.5 ¹⁰⁶	+8 27.9 ¹¹⁵		45	5 01	5 35	6 05	17 28	69	6 03	29
7	283	03.9		112	13.1 ¹⁰⁶	16.4 ¹¹⁵		40	06	38	05	32 66		5 57	32
8	298	04.1		126	42.7 ¹⁰⁶	+8 04.9 ¹¹⁵		35	10	40	05	36 62		52	35
9	313	04.3		141	12.5 ¹⁰⁸	+7 53.3 ¹¹⁶		30	13	41	05	39 60		48	37
10	328	04.5		155	42.2 ¹⁰⁷	41.7 ¹¹⁶		20	17	43	05	44 56		40	42
11	343	04.7	-0 20.3	170	12.1 ¹⁰⁹	+7 30.1 ¹¹⁶		10 N	5 19	5 44	6 05	17 49	52	5 34	45
12	358	04.9	-0 19.3	184	41.9 ¹⁰⁸	+7 18.4 ¹¹⁷		0	5 20	5 44	6 04	17 54	48	5 27	50
13	13	05.1		199	11.9 ¹¹⁰	+7 06.7 ¹¹⁷		10 S	19	43	04	17 58	45	21	53
14	28	05.2		213	41.9 ¹¹⁰	+6 55.0 ¹¹⁷		20	16	42	04	18 03	41	14	57
15	43	05.4		228	11.9 ¹¹⁰	43.2 ¹¹⁸		30	11	39	03	08 37		07	61
16	58	05.6		242	42.0 ¹¹¹	31.5 ¹¹⁷		35	08	37	03	11 34		5 02	64
17	73	05.8	-0 14.4	257	12.1 ¹¹¹	+6 19.7 ¹¹⁸		40	5 03	5 35	6 02	18 15	31	4 57	67
18	88	06.0	-0 13.4	271	42.3 ¹¹²	+6 07.8 ¹¹⁹		45	4 58	5 32	6 01	18 19	28	4 51	70
19	103	06.2		286	12.6 ¹¹³	+5 56.0 ¹¹⁸		50	50	28	01	24 24		44	74
20	118	06.4		300	42.8 ¹¹²	44.1 ¹¹⁹		52	46	26	00	26 22		40	77
21	133	06.5		315	13.2 ¹¹⁴	32.2 ¹¹⁹		54	42	24	6 00	29 20		36	79
22	148	06.7		329	43.6 ¹¹⁴	20.3 ¹¹⁹		56	38	22	5 59	31 18		32	81
23	163	06.9		08.5	344 14.0 ¹¹⁴	+5 08.3 ¹²⁰		58	32	19	59	34 16		28	83
24	178	07.1	-0 07.5	358	44.5 ¹¹⁵	+4 56.4 ¹¹⁹		60 S	4 26	5 16	5 58	18 38	13	4 23	86

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG 12 ^h 10 ^m 6		Mag: -3.8 PMG: 10 ^h 49 ^m		Mag: +1.4 PMG: 13 ^h 52 ^m		Mag: -2.1 PMG: 14 ^h 28 ^m		Mag: +0.3 PMG: 14 ^h 59 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	176	50.7	197	50.5	-10 08.1	151 45.1	+10 20.1	142 31.6	+12 43.6	134 34.6	+14 03.5
1	191	53.1	212	50.0	07.1	166 45.8	20.8	157 33.5	43.8	149 36.8	03.6
2	206	55.6	227	49.5	06.0	181 46.5	21.5	172 35.5	44.0	164 39.0	03.6
3	221	58.1	242	49.1	04.9	196 47.3	22.2	187 37.4	44.1	179 41.2	03.7
4	237	00.5	257	48.6	03.8	211 48.0	22.8	202 39.4	44.3	194 43.4	03.8
5	252	03.0	272	48.1	-10 02.7	226 48.7	+10 23.5	217 41.3	+12 44.5	209 45.6	+14 03.9
6	267	05.5	287	47.6	-10 01.6	241 49.4	+10 24.2	232 43.3	+12 44.7	224 47.8	+14 04.0
7	282	07.9	302	47.2	-10 00.5	256 50.2	24.9	247 45.2	44.9	239 50.1	04.1
8	297	10.4	317	46.7	-9 59.4	271 50.9	25.6	262 47.2	45.0	254 52.3	04.1
9	312	12.9	332	46.2	58.3	286 51.6	26.3	277 49.1	45.2	269 54.5	04.2
10	327	15.3	347	45.8	57.2	301 52.3	27.0	292 51.1	45.4	284 56.7	04.3
11	342	17.8	2 45.3	-9 56.1	316 53.1	+10 27.7	307 53.0	+12 45.6	299 58.9	+14 04.4	
12	357	20.2	17 44.8	-9 55.1	331 53.8	+10 28.4	322 55.0	+12 45.8	315 01.1	+14 04.5	
13	12	22.7	32 44.4	54.0	346 54.5	29.1	337 56.9	46.0	330 03.3	04.6	
14	27	25.2	47 43.9	52.9	1 55.2	29.8	352 58.9	46.1	345 05.5	04.6	
15	42	27.6	62 43.4	51.8	16 56.0	30.4	8 00.8	46.3	0 07.7	04.7	
16	57	30.1	77 43.0	50.7	31 56.7	31.1	23 02.8	46.5	15 10.0	04.8	
17	72	32.6	92 42.5	-9 49.6	46 57.4	+10 31.8	38 04.7	+12 46.7	30 12.2	+14 04.9	
18	87	35.0	107 42.0	-9 48.5	61 58.1	+10 32.5	53 06.7	+12 46.9	45 14.4	+14 05.0	
19	102	37.5	122 41.6	47.4	76 58.8	33.2	68 08.6	47.0	60 16.6	05.1	
20	117	40.0	137 41.1	46.3	91 59.6	33.9	83 10.5	47.2	75 18.8	05.1	
21	132	42.4	152 40.6	45.2	107 00.3	34.6	98 12.5	47.4	90 21.0	05.2	
22	147	44.9	167 40.2	44.1	122 01.0	35.3	113 14.4	47.6	105 23.2	05.3	
23	162	47.3	182 39.7	43.0	137 01.7	36.0	128 16.4	47.8	120 25.4	05.4	
24	177	49.8	197 39.2	-9 41.9	152 02.5	+10 36.6	143 18.3	+12 48.0	135 27.6	+14 05.5	
Dif	—		-5	+11	+7	+7	+19	+2	+22	+1	

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1 PMG: 12 ^h 07 ^m 4			Edad: 13 ^d 8 PHE { 4 ^h : 57 ^m 8 12 ^h : 57 ^m 6 20 ^h : 57 ^m 4 PMG: 0 ^h 05 ^m R°: 48 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	178	07.1	-0 07.5	358	44.5	+4 56.4	120	60 N	18 15	18 57	19 47	18 34 83	6 42 13	
1	193	07.3	06.5	13	15.0 ¹¹⁵	44.4	120	58	15	54	41	34 80	40 16	
2	208	07.5	05.5	27	45.6 ¹¹⁶	32.4	120	56	14	52	36	35 77	39 17	
3	223	07.7	04.5	42	16.2 ¹¹⁶	20.4	120	54	14	49	31	35 76	37 20	
4	238	07.8	03.5	56	46.8 ¹¹⁶	+4 08.4	120	52	14	47	27	36 73	36 21	
5	253	08.0	-0 02.6	71	17.5 ¹¹⁷	+3 56.4	120	50	18 13	18 46	19 24	18 36 72	6 34 24	
6	268	08.2	-0 01.6	85	48.3 ¹¹⁸	+3 44.3	121	45	18 13	18 42	19 16	18 37 68	6 32 27	
7	283	08.4	-0 00.6	100	19.1 ¹¹⁸	32.3	120	40	12	39	11	38 64	29 31	
8	298	08.6	+0 00.4	114	49.9 ¹¹⁸	20.3	120	35	12	37	07	38 62	27 34	
9	313	08.8	01.4	129	20.8 ¹¹⁹	+3 08.2	121	30	12	35	19 03	39 59	25 36	
10	328	09.0	02.4	143	51.7 ¹¹⁹	+2 56.1	121	20	11	33	18 59	40 54	22 40	
11	343	09.1	+0 03.4	158	22.6 ¹¹⁹	+2 44.1	120	10 N	18 11	18 32	18 56	18 41 50	6 19 44	
12	358	09.3	+0 04.4	172	53.6 ¹²⁰	+2 32.0	121	0	18 11	18 31	18 55	18 42 47	6 17 47	
13	13	09.5	05.3	187	24.6 ¹²⁰	19.9	121	10 S	11	32	56	43 43	14 51	
14	28	09.7	06.3	201	55.7 ¹²¹	+2 07.8	121	20	11	33	18 58	44 39	11 55	
15	43	09.9	07.3	216	26.8 ¹²¹	+1 55.8	120	30	11	35	19 02	45 35	08 59	
16	58	10.1	08.3	230	57.9 ¹²¹	43.7	121	35	11	36	06	45 33	06 62	
17	73	10.3	+0 09.3	245	29.1 ¹²²	+1 31.6	121	40	18 11	18 38	19 10	18 46 30	6 04 65	
18	88	10.5	+0 10.3	260	00.3 ¹²²	+1 19.6	120	45	18 11	18 41	19 15	18 47 27	6 01 69	
19	103	10.6	11.3	274	31.5 ¹²²	+1 07.5	121	50	12	44	22	48 23	5 58 73	
20	118	10.8	12.3	289	02.8 ¹²³	+0 55.4	121	52	12	45	25	48 22	57 74	
21	133	11.0	13.2	303	34.1 ¹²³	43.4	120	54	12	47	29	49 19	55 76	
22	148	11.2	14.2	318	05.5 ¹²⁴	31.4	120	56	12	49	33	49 18	53 79	
23	163	11.4	15.2	332	36.8 ¹²³	19.3	121	58	12	52	38	50 15	51 82	
24	178	11.6	+0 16.2	347	08.2 ¹²⁴	+0 07.3	120	60 S	18 13	18 54	19 44	18 51 12	5 49 84	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 12 ^h 06 ^m 7		Mag: -3.8 PMG: 10 ^h 50 ^m			Mag: +1.4 PMG: 13 ^h 51 ^m			Mag: -2.1 PMG: 14 ^h 25 ^m			Mag: +0.3 PMG: 14 ^h 56 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	177	49.8	197	39.2	-9 41.9	152	02.5	+10 36.6	143	18.3	+12 48.0	135	27.6	+14 05.5
1	192	52.3	212	38.8	40.8	167	03.2	37.3	158	20.3	48.1	150	29.9	05.6
2	207	54.7	227	38.3	39.7	182	03.9	38.0	173	22.2	48.3	165	32.1	05.7
3	222	57.2	242	37.9	38.6	197	04.6	38.7	188	24.2	48.5	180	34.3	05.7
4	237	59.7	257	37.4	37.5	212	05.4	39.4	203	26.1	48.7	195	36.5	05.8
5	253	02.1	272	36.9	-9 36.4	227	06.1	+10 40.1	218	28.1	+12 48.9	210	38.7	+14 05.9
6	268	04.6	287	36.5	-9 35.3	242	06.8	+10 40.8	233	30.0	+12 49.0	225	40.9	+14 06.0
7	283	07.1	302	36.0	34.2	257	07.5	41.5	248	32.0	49.2	240	43.1	06.1
8	298	09.5	317	35.6	33.1	272	08.3	42.1	263	33.9	49.4	255	45.3	06.2
9	313	12.0	332	35.1	32.0	287	09.0	42.8	278	35.8	49.6	270	47.5	06.2
10	328	14.5	347	34.6	30.9	302	09.7	43.5	293	37.8	49.8	285	49.7	06.3
11	343	16.9	2	34.2	-9 29.8	317	10.4	+10 44.2	308	39.7	+12 50.0	300	52.0	+14 06.4
12	358	19.4	17	33.7	-9 28.7	332	11.1	+10 44.9	323	41.7	+12 50.1	315	54.2	+14 06.5
13	13	21.8	32	33.3	27.6	347	11.9	45.6	338	43.6	50.3	330	56.4	06.6
14	28	24.3	47	32.8	26.5	2	12.6	46.3	353	45.6	50.5	345	58.6	06.7
15	43	26.8	62	32.3	25.4	17	13.3	46.9	8	47.5	50.7	1	00.8	06.7
16	58	29.2	77	31.9	24.3	32	14.0	47.6	23	49.5	50.9	16	03.0	06.8
17	73	31.7	92	31.4	-9 23.1	47	14.8	+10 48.3	38	51.4	+12 51.0	31	05.2	+14 06.9
18	88	34.2	107	31.0	-9 22.0	62	15.5	+10 49.0	53	53.4	+12 51.2	46	07.4	+14 07.0
19	103	36.6	122	30.5	20.9	77	16.2	49.7	68	55.3	51.4	61	09.6	07.1
20	118	39.1	137	30.1	19.8	92	16.9	50.4	83	57.2	51.6	76	11.8	07.2
21	133	41.6	152	29.6	18.7	107	17.7	51.0	98	59.2	51.8	91	14.0	07.3
22	148	44.0	167	29.1	17.6	122	18.4	51.7	114	01.1	52.0	106	16.2	07.3
23	163	46.5	182	28.7	16.5	137	19.1	52.4	129	03.1	52.1	121	18.5	07.4
24	178	48.9	197	28.2	-9 15.4	152	19.8	+10 53.1	144	05.0	+12 52.3	136	20.7	+14 07.5
Dif	—		-5		+11	+7		+7	+19		+2	+22		+1

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1			Edad: 14 ^d 8 PHE { 4 ^h : 57 ^h 1 12 ^h : 56 ^h 9 20 ^h : 56 ^h 7										
	PMG: 12 ^h 07 ^m 1			SD: 15 ^h 6 PMG: 0 ^h 53 ^m R°: 47 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	h	m	h	m		h	m
0	178	11.6	+0 16.2	347	08.2	+0 07.3	120	4 26	5 16	5 58	19 57	80	6 55	12
1	193	11.8		1	39.7 ¹²⁵	-0 04.7 ¹²⁰		32	19	59	54	79	56	15
2	208	11.9		16	11.1 ¹²⁴	16.7 ¹²⁰		38	22	59	52	76	56	18
3	223	12.1		30	42.6 ¹²⁵	28.7 ¹²⁰		42	24	5 59	51	73	57	19
4	238	12.3		45	14.1 ¹²⁵	40.7 ¹²⁰		46	26	6 00	49	72	57	22
5	253	12.5	+0 21.1	59	45.7 ¹²⁶	-0 52.7 ¹²⁰		4 50	5 28	6 00	19 48	69	6 58	23
6	268	12.7	+0 22.1	74	17.3 ¹²⁶	-1 04.6 ¹¹⁹		4 57	5 32	6 01	19 45	65	6 59	27
7	283	12.9		88	48.9 ¹²⁶	16.5 ¹¹⁹		5 03	35	02	42	62	7 00	30
8	298	13.1		103	20.5 ¹²⁶	28.4 ¹¹⁹		07	37	02	40	60	01	32
9	313	13.3		117	52.1 ¹²⁶	40.3 ¹¹⁹		11	39	02	38	57	01	35
10	328	13.4		132	23.8 ¹²⁷	-1 52.2 ¹¹⁹		15	41	03	34	54	02	40
11	343	13.6	+0 27.1	146	55.5 ¹²⁷	-2 04.1 ¹¹⁹	10 N	5 18	5 43	6 04	19 31	50	7 03	43
12	358	13.8	+0 28.1	161	27.2 ¹²⁷	-2 15.9 ¹¹⁸	0	5 19	5 43	6 04	19 29	46	7 04	47
13	13	14.0		175	59.0 ¹²⁸	27.7 ¹¹⁸	10 S	19	43	04	26	43	05	50
14	28	14.2		190	30.8 ¹²⁸	39.5 ¹¹⁸	20	17	42	04	23	39	06	54
15	43	14.4		205	02.5 ¹²⁷	-2 51.3 ¹¹⁸	30	12	40	04	20	35	07	58
16	58	14.6		219	34.4 ¹²⁹	-3 03.0 ¹¹⁷	35	09	39	04	18	33	08	61
17	73	14.8	+0 33.0	234	06.2 ¹²⁸	-3 14.7 ¹¹⁷	40	5 05	5 37	6 04	19 16	30	7 09	63
18	88	14.9	+0 34.0	248	38.0 ¹²⁸	-3 26.4 ¹¹⁷	45	5 00	5 35	6 04	19 14	27	7 10	66
19	103	15.1		263	09.9 ¹²⁹	38.0 ¹¹⁶	50	4 53	31	04	11	23	11	70
20	118	15.3		277	41.8 ¹²⁹	-3 49.7 ¹¹⁷	52	50	30	04	10	21	11	72
21	133	15.5		292	13.7 ¹²⁹	-4 01.3 ¹¹⁶	54	46	28	04	08	20	11	75
22	148	15.7		306	45.6 ¹²⁹	12.8 ¹¹⁵	56	42	26	03	07	17	12	77
23	163	15.9		321	17.6 ¹³⁰	24.4 ¹¹⁶	58	37	24	03	05	15	13	79
24	178	16.1	+0 39.9	335	49.5 ¹²⁹	-4 35.9 ¹¹⁵	60 S	4 32	5 21	6 03	19 03	13	7 13	82
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 12 ^h 02 ^m 8		Mag: -3.8 PMG: 10 ^h 50 ^m			Mag: +1.4 PMG: 13 ^h 50 ^m			Mag: -2.1 PMG: 14 ^h 22 ^m			Mag: +0.3 PMG: 14 ^h 52 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	178	48.9	197	28.2	-9 15.4	152	19.8	+10 53.1	144	05.0	+12 52.3	136	20.7	+14 07.5
1	193	51.4	212	27.8		167	20.5	53.8	159	07.0	52.5	151	22.9	07.6
2	208	53.9	227	27.3		182	21.3	54.5	174	08.9	52.7	166	25.1	07.7
3	223	56.3	242	26.9		197	22.0	55.1	189	10.8	52.9	181	27.3	07.8
4	238	58.8	257	26.4		212	22.7	55.8	204	12.8	53.0	196	29.5	07.8
5	254	01.3	272	26.0	-9 09.8	227	23.4	+10 56.5	219	14.7	+12 53.2	211	31.7	+14 07.9
6	269	03.7	287	25.5	-9 08.7	242	24.2	+10 57.2	234	16.7	+12 53.4	226	33.9	+14 08.0
7	284	06.2	302	25.0	07.6	257	24.9	57.9	249	18.6	53.6	241	36.1	08.1
8	299	08.7	317	24.6	06.5	272	25.6	58.6	264	20.6	53.8	256	38.3	08.2
9	314	11.1	332	24.1	05.4	287	26.3	59.2	279	22.5	54.0	271	40.5	08.3
10	329	13.6	347	23.7	04.3	302	27.0	+10 59.9	294	24.4	54.1	286	42.7	08.4
11	344	16.1	2	23.2	-9 03.2	317	27.8	+11 00.6	309	26.4	+12 54.3	301	44.9	+14 08.4
12	359	18.5	17	22.8	-9 02.0	332	28.5	+11 01.3	324	28.3	+12 54.5	316	47.2	+14 08.5
13	14	21.0	32	22.3	-9 00.9	347	29.2	02.0	339	30.3	54.7	331	49.4	08.6
14	29	23.4	47	21.9	-8 59.8	2	29.9	02.6	354	32.2	54.9	346	51.6	08.7
15	44	25.9	62	21.4	58.7	17	30.6	03.3	9	34.2	55.1	1	53.8	08.8
16	59	28.4	77	21.0	57.6	32	31.4	04.0	24	36.1	55.2	16	56.0	08.9
17	74	30.8	92	20.5	-8 56.5	47	32.1	+11 04.7	39	38.0	+12 55.4	31	58.2	+14 08.9
18	89	33.3	107	20.1	-8 55.3	62	32.8	+11 05.4	54	40.0	+12 55.6	47	00.4	+14 09.0
19	104	35.8	122	19.6	54.2	77	33.5	06.0	69	41.9	55.8	62	02.6	09.1
20	119	38.2	137	19.2	53.1	92	34.3	06.7	84	43.9	56.0	77	04.8	09.2
21	134	40.7	152	18.7	52.0	107	35.0	07.4	99	45.8	56.1	92	07.0	09.3
22	149	43.2	167	18.3	50.9	122	35.7	08.1	114	47.8	56.3	107	09.2	09.4
23	164	45.6	182	17.8	49.8	137	36.4	08.8	129	49.7	56.5	122	11.4	09.5
24	179	48.1	197	17.4	-8 48.6	152	37.1	+11 09.4	144	51.6	+12 56.7	137	13.6	+14 09.5
Dif	—		-5	+11		+7	+7		+19	+2		+22	+1	

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1 PMG: 12 ^h 06 ^m 8			Edad: 15 ^d 8 PHE { 4 ^h : 56 ^s 5 12 ^h : 56 ^s 3 20 ^h : 56 ^s 1 PMG: 1 ^h 40 ^m R°: 46 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m	
0	178	16.1	+0	39.9	335	49.5	-4 35.9	60 N	18 20	19 02	19 53	21 17 79	7 07 14	
1	193	16.3			350	21.5 ¹³⁰	47.4 ¹¹⁵	58	19	18 59	46	13 75	11 16	
2	208	16.5			4	53.5 ¹³⁰	-4 58.8 ¹¹⁴	56	18	56	40	08 74	14 18	
3	223	16.6			19	25.5 ¹³⁰	-5 10.2 ¹¹⁴	54	18	53	35	04 71	16 21	
4	238	16.8			33	57.5 ¹³⁰	21.6 ¹¹⁴	52	17	51	31	21 01 69	19 22	
5	253	17.0	+0	44.8	48	29.5 ¹³⁰	-5 32.9 ¹¹³	50	18 16	18 49	19 27	20 57 68	7 21 24	
6	268	17.2	+0	45.8	63	01.5 ¹³⁰	-5 44.2 ¹¹³	45	18 15	18 45	19 19	20 50 64	7 26 27	
7	283	17.4			77	33.6 ¹³¹	-5 55.4 ¹¹²	40	14	41	13	44 62	30 30	
8	298	17.6			92	05.6 ¹³⁰	-6 06.7 ¹¹³	35	13	39	08	40 58	33 33	
9	313	17.8			106	37.7 ¹³¹	17.8 ¹¹¹	30	13	37	19 05	35 56	36 36	
10	328	18.0			121	09.8 ¹³¹	29.0 ¹¹²	20	12	34	18 59	28 52	42 39	
11	343	18.1	+0	50.7	135	41.8 ¹³⁰	-6 40.1 ¹¹¹	10 N	18 11	18 32	18 56	20 21 49	7 46 43	
12	358	18.3	+0	51.7	150	13.9 ¹³¹	-6 51.1 ¹¹⁰	0	18 10	18 31	18 55	20 15 46	7 51 46	
13	13	18.5			164	46.0 ¹³¹	-7 02.1 ¹¹⁰	10 S	09	30	55	09 43	7 55 50	
14	28	18.7			179	18.2 ¹³²	13.1 ¹¹⁰	20	09	31	18 56	20 02 40	8 00 53	
15	43	18.9			193	50.3 ¹³¹	24.0 ¹⁰⁹	30	08	32	19 00	19 55 36	05 57	
16	58	19.1			208	22.4 ¹³¹	34.9 ¹⁰⁹	35	08	33	03	51 33	09 59	
17	73	19.3	+0	56.6	222	54.5 ¹³¹	-7 45.7 ¹⁰⁸	40	18 08	18 35	19 06	19 46 31	8 12 62	
18	88	19.5	+0	57.6	237	26.6 ¹³¹	-7 56.5 ¹⁰⁸	45	18 08	18 37	19 11	19 41 28	8 16 65	
19	103	19.7			251	58.8 ¹³²	-8 07.3 ¹⁰⁸	50	07	39	17	34 25	21 69	
20	118	19.8	+0	59.6	266	30.9 ¹³¹	17.9 ¹⁰⁶	52	07	41	20	31 23	23 71	
21	133	20.0	+1	00.6	281	03.1 ¹³²	28.6 ¹⁰⁷	54	07	42	24	28 21	26 72	
22	148	20.2			295	35.2 ¹³¹	39.2 ¹⁰⁶	56	07	44	28	24 20	29 74	
23	163	20.4			310	07.4 ¹³²	-8 49.7 ¹⁰⁵	58	07	46	32	20 17	32 77	
24	178	20.6	+1	03.5	324	39.5 ¹³¹	-9 00.2 ¹⁰⁵	60 S	18 07	18 48	19 38	19 16 14	8 35 80	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 11 ^h 58 ^m 8		Mag: -3.8 PMG: 10 ^h 51 ^m			Mag: +1.4 PMG: 13 ^h 49 ^m			Mag: -2.1 PMG: 14 ^h 19 ^m			Mag: +0.3 PMG: 14 ^h 49 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	179	48.1	197	17.4	-8 48.6	152	37.1	+11 09.4	144	51.6	+12 56.7	137	13.6	+14 09.5
1	194	50.5	212	16.9	47.5	167	37.9	10.1	159	53.6	56.9	152	15.8	09.6
2	209	53.0	227	16.5	46.4	182	38.6	10.8	174	55.5	57.1	167	18.0	09.7
3	224	55.5	242	16.1	45.3	197	39.3	11.5	189	57.5	57.2	182	20.2	09.8
4	239	57.9	257	15.6	44.2	212	40.0	12.2	204	59.4	57.4	197	22.4	09.9
5	255	00.4	272	15.2	-8 43.0	227	40.7	+11 12.8	220	01.3	+12 57.6	212	24.6	+14 10.0
6	270	02.9	287	14.7	-8 41.9	242	41.5	+11 13.5	235	03.3	+12 57.8	227	26.9	+14 10.0
7	285	05.3	302	14.3	40.8	257	42.2	14.2	250	05.2	58.0	242	29.1	10.1
8	300	07.8	317	13.8	39.7	272	42.9	14.9	265	07.2	58.2	257	31.3	10.2
9	315	10.3	332	13.4	38.5	287	43.6	15.5	280	09.1	58.3	272	33.5	10.3
10	330	12.7	347	12.9	37.4	302	44.3	16.2	295	11.0	58.5	287	35.7	10.4
11	345	15.2	2	12.5	-8 36.3	317	45.1	+11 16.9	310	13.0	+12 58.7	302	37.9	+14 10.5
12	0	17.7	17	12.0	-8 35.2	332	45.8	+11 17.6	325	14.9	+12 58.9	317	40.1	+14 10.6
13	15	20.1	32	11.6	34.0	347	46.5	18.2	340	16.9	59.1	332	42.3	10.6
14	30	22.6	47	11.2	32.9	2	47.2	18.9	355	18.8	59.3	347	44.5	10.7
15	45	25.0	62	10.7	31.8	17	47.9	19.6	10	20.7	59.4	2	46.7	10.8
16	60	27.5	77	10.3	30.7	32	48.7	20.3	25	22.7	59.6	17	48.9	10.9
17	75	30.0	92	09.8	-8 29.5	47	49.4	+11 20.9	40	24.6	+12 59.8	32	51.1	+14 11.0
18	90	32.4	107	09.4	-8 28.4	62	50.1	+11 21.6	55	26.6	+13 00.0	47	53.3	+14 11.1
19	105	34.9	122	09.0	27.3	77	50.8	22.3	70	28.5	+13 00.2	62	55.5	11.2
20	120	37.4	137	08.5	26.2	92	51.5	23.0	85	30.4	00.3	77	57.7	11.2
21	135	39.8	152	08.1	25.0	107	52.3	23.6	100	32.4	00.5	92	59.9	11.3
22	150	42.3	167	07.6	23.9	122	53.0	24.3	115	34.3	00.7	108	02.1	11.4
23	165	44.8	182	07.2	22.8	137	53.7	25.0	130	36.2	00.9	123	04.3	11.5
24	180	47.2	197	06.7	-8 21.6	152	54.4	+11 25.7	145	38.2	+13 01.1	138	06.5	+14 11.6
Dif	—		-4		+11	+7		+7	+19		+2	+22		+1

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'0 PMG: 12 ^h 06 ^m 5			Edad: 16 ^d 8 PHE { 4 ^h : 55'9 12 ^h : 55'7 20 ^h : 55'5 SD: 15'2 PMG: 2 ^h 26 ^m R°: 46 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°			
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	178	20.6	+1	03.5	324	39.5	-9	00.2	60 N	4	20	5	10	5	52	22	36	
1	193	20.8		04.5	339	11.7 ¹³²		10.7 ¹⁰⁵	58		26	14		53	28	74		
2	208	21.0		05.5	353	43.8 ¹³¹		21.0 ¹⁰³	56		32	17		54	22	70		
3	223	21.2		06.5	8	16.0 ¹³²		31.4 ¹⁰⁴	54		37	19		55	15	69		
4	238	21.4		07.5	22	48.1 ¹³¹		41.7 ¹⁰³	52		41	21		55	10	67		
5	253	21.5	+1	08.5	37	20.3 ¹³²	-9	51.9 ¹⁰²	50	4	45	5	24	5	56	22	05	
6	268	21.7	+1	09.5	51	52.5 ¹³²	-10	02.1 ¹⁰²	45	4	53	5	28	5	57	21	54	
7	283	21.9		10.4	66	24.6 ¹³¹		12.2 ¹⁰¹	40	5	00		31		58	46	59	
8	298	22.1		11.4	80	56.8 ¹³²		22.2 ¹⁰⁰	35		04	34		5	59	38	57	
9	313	22.3		12.4	95	28.9 ¹³¹		32.2 ¹⁰⁰	30		08	36		6	00	31	56	
10	328	22.5		13.4	110	01.1 ¹³²		42.2 ¹⁰⁰	20		14	39		01	20	52		
11	343	22.7	+1	14.4	124	33.2 ¹³¹	-10	52.1 ⁹⁹	10 N	5	17	5	41	6	02	21	10	
12	358	22.9	+1	15.4	139	05.3 ¹³¹	-11	01.9 ⁹⁸	0	5	19	5	43	6	03	21	01	
13	13	23.1		16.3	153	37.5 ¹³²		11.7 ⁹⁸	10 S		19	43		04	20	52		
14	28	23.2		17.3	168	09.6 ¹³¹		21.4 ⁹⁷	20		17	43		05	42	41		
15	43	23.4		18.3	182	41.7 ¹³¹		31.0 ⁹⁶	30		14	41		05	31	37		
16	58	23.6		19.3	197	13.8 ¹³¹		40.6 ⁹⁶	35		11	40		06	24	36		
17	73	23.8	+1	20.3	211	46.0 ¹³²	-11	50.1 ⁹⁵	40	5	08	5	39	6	06	20	17	
18	88	24.0	+1	21.3	226	18.1 ¹³¹	-11	59.6 ⁹⁵	45	5	03	5	37	6	06	20	09	
19	103	24.2		22.3	240	50.2 ¹³¹	-12	09.0 ⁹⁴	50	4	57	35		07	19	59		
20	118	24.4		23.2	255	22.3 ¹³¹		18.3 ⁹³	52		54	33		07	54	26		
21	133	24.6		24.2	269	54.3 ¹³⁰		27.6 ⁹³	54		50	32		07	49	24		
22	148	24.8		25.2	284	26.4 ¹³¹		36.8 ⁹²	56		46	30		07	44	22		
23	163	24.9		26.2	298	58.5 ¹³¹		45.9 ⁹¹	58		42	29		08	37	20		
24	178	25.1	+1	27.2	313	30.6 ¹³¹	-12	55.0 ⁹¹	60 S	4	37	5	26	6	08	19	30	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 11 ^h 54 ^m 9		Mag: -3.8 PMG: 10 ^h 52 ^m			Mag: +1.4 PMG: 13 ^h 48 ^m			Mag: -2.1 PMG: 14 ^h 16 ^m			Mag: +0.3 PMG: 14 ^h 45 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		hG ♅	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	180	47.2	197	06.7	-8	21.6	152	54.4	+11	25.7	145	38.2	+13	01.1	138	06.5	+14	11.6
1	195	49.7	212	06.3		20.5	167	55.1		26.3	160	40.1		01.3	153	08.7		11.7
2	210	52.2	227	05.9		19.4	182	55.9		27.0	175	42.1		01.4	168	10.9		11.7
3	225	54.6	242	05.4		18.2	197	56.6		27.7	190	44.0		01.6	183	13.1		11.8
4	240	57.1	257	05.0		17.1	212	57.3		28.4	205	45.9		01.8	198	15.3		11.9
5	255	59.5	272	04.6	-8	16.0	227	58.0	+11	29.0	220	47.9	+13	02.0	213	17.5	+14	12.0
6	271	02.0	287	04.1	-8	14.9	242	58.7	+11	29.7	235	49.8	+13	02.2	228	19.7	+14	12.1
7	286	04.5	302	03.7		13.7	257	59.5		30.4	250	51.8		02.4	243	21.9		12.2
8	301	06.9	317	03.2		12.6	273	00.2		31.0	265	53.7		02.5	258	24.1		12.3
9	316	09.4	332	02.8		11.5	288	00.9		31.7	280	55.6		02.7	273	26.3		12.3
10	331	11.9	347	02.4		10.3	303	01.6		32.4	295	57.6		02.9	288	28.5		12.4
11	346	14.3	2	01.9	-8	09.2	318	02.3	+11	33.1	310	59.5	+13	03.1	303	30.8	+14	12.5
12	1	16.8	17	01.5	-8	08.1	333	03.0	+11	33.7	326	01.4	+13	03.3	318	33.0	+14	12.6
13	16	19.3	32	01.1		06.9	348	03.8		34.4	341	03.4		03.5	333	35.2		12.7
14	31	21.7	47	00.6		05.8	3	04.5		35.1	356	05.3		03.6	348	37.4		12.8
15	46	24.2	62	00.2		04.6	18	05.2		35.7	11	07.2		03.8	3	39.6		12.9
16	61	26.6	76	59.7		03.5	33	05.9		36.4	26	09.2		04.0	18	41.8		12.9
17	76	29.1	91	59.3	-8	02.4	48	06.6	+11	37.1	41	11.1	+13	04.2	33	44.0	+14	13.0
18	91	31.6	106	58.9	-8	01.2	63	07.4	+11	37.8	56	13.1	+13	04.4	48	46.2	+14	13.1
19	106	34.0	121	58.4	-8	00.1	78	08.1		38.4	71	15.0		04.6	63	48.4		13.2
20	121	36.5	136	58.0	-7	59.0	93	08.8		39.1	86	16.9		04.7	78	50.6		13.3
21	136	39.0	151	57.6		57.8	108	09.5		39.8	101	18.9		04.9	93	52.8		13.4
22	151	41.4	166	57.1		56.7	123	10.2		40.4	116	20.8		05.1	108	55.0		13.5
23	166	43.9	181	56.7		55.6	138	10.9		41.1	131	22.7		05.3	123	57.2		13.5
24	181	46.4	196	56.3	-7	54.4	153	11.7	+11	41.8	146	24.7	+13	05.5	138	59.4	+14	13.6
Dif	—		-4		+11		+7		+7		+19		+2		+22		+1	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 0			Edad: 17 ^d 8 PHE { 4 ^h : 55 ^m 3 12 ^h : 55 ^m 1 20 ^h : 54 ^m 9										
	PMG: 12 ^h 06 ^m 2			SD: 15 ^h 1 PMG: 3 ^h 12 ^m R°: 46 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	178	25.1	+1 27.2	313	30.6	-12 55.0	90	60 N	18 25	19 07	19 58	23 52 72	7 37 19	
1	193	25.3	28.2	328	02.6 ¹³⁰	-13 04.0	90	58	24	03	51	42 69	45 22	
2	208	25.5	29.1	342	34.7 ¹³¹	13.0	90	56	22	19 00	45	32 68	53 24	
3	223	25.7	30.1	357	06.7 ¹³⁰	21.8	88	54	21	18 57	40	24 66	7 59 26	
4	238	25.9	31.1	11	38.7 ¹³⁰	30.6	88	52	20	54	35	17 64	8 05 28	
5	253	26.1	+1 32.1	26	10.7 ¹³⁰	-13 39.4	88	50	18 20	18 52	19 31	23 10 63	8 11 29	
6	268	26.3	+1 33.1	40	42.7 ¹³⁰	-13 48.0	86	45	18 18	18 47	19 22	22 56 60	8 23 32	
7	283	26.5	34.1	55	14.7 ¹³⁰	-13 56.6	86	40	16	43	15	45 57	32 35	
8	298	26.7	35.0	69	46.7 ¹³⁰	-14 05.2	86	35	15	40	10	35 56	41 37	
9	313	26.8	36.0	84	18.7 ¹³⁰	13.6	84	30	14	38	06	27 54	8 48 39	
10	328	27.0	37.0	98	50.6 ¹²⁹	22.0	84	20	12	34	19 00	22 12 51	9 01 42	
11	343	27.2	+1 38.0	113	22.6 ¹³⁰	-14 30.3	83	10 N	18 11	18 32	18 56	21 59 49	9 12 45	
12	358	27.4	+1 39.0	127	54.5 ¹²⁹	-14 38.6	83	0	18 09	18 30	18 54	21 47 47	9 23 47	
13	13	27.6	40.0	142	26.4 ¹²⁹	46.7	81	10 S	08	29	54	35 45	34 49	
14	28	27.8	40.9	156	58.3 ¹²⁹	-14 54.8	81	20	07	29	55	23 42	45 52	
15	43	28.0	41.9	171	30.2 ¹²⁹	-15 02.8	80	30	06	30	18 57	08 40	9 58 55	
16	58	28.2	42.9	186	02.1 ¹²⁹	10.8	80	35	05	30	19 00	21 00 38	10 06 56	
17	73	28.4	+1 43.9	200	34.0 ¹²⁹	-15 18.7	79	40	18 05	18 32	19 03	20 51 36	10 14 59	
18	88	28.5	+1 44.9	215	05.9 ¹²⁹	-15 26.4	77	45	18 04	18 33	19 07	20 40 34	10 24 61	
19	103	28.7	45.9	229	37.7 ¹²⁸	34.2	78	50	03	35	13	26 32	37 64	
20	118	28.9	46.8	244	09.5 ¹²⁸	41.8	76	52	03	36	16	20 30	42 66	
21	133	29.1	47.8	258	41.3 ¹²⁸	49.4	76	54	02	37	19	13 29	49 67	
22	148	29.3	48.8	273	13.1 ¹²⁸	-15 56.9	75	56	02	39	22	20 06 26	10 56 69	
23	163	29.5	49.8	287	44.9 ¹²⁸	-16 04.3	74	58	01	40	26	19 57 25	11 04 71	
24	178	29.7	+1 50.8	302	16.7 ¹²⁸	-16 11.6	73	60 S	18 01	18 42	19 31	19 48 22	11 13 74	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG 11 ^h 51 ^m 0		Mag: -3.8 PMG: 10 ^h 53 ^m			Mag: +1.4 PMG: 13 ^h 47 ^m			Mag: -2.1 PMG: 14 ^h 13 ^m			Mag: +0.3 PMG: 14 ^h 42 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	'	°	°	'	°	°	'	°
0	181	46.4	196	56.3	-7 54.4	153	11.7	+11 41.8	146	24.7	+13 05.5	138	59.4	+14 13.6
1	196	48.8	211	55.8	53.3	168	12.4	42.4	161	26.6	05.6	154	01.6	13.7
2	211	51.3	226	55.4	52.1	183	13.1	43.1	176	28.5	05.8	169	03.8	13.8
3	226	53.8	241	55.0	51.0	198	13.8	43.8	191	30.5	06.0	184	06.0	13.9
4	241	56.2	256	54.5	49.9	213	14.5	44.4	206	32.4	06.2	199	08.2	14.0
5	256	58.7	271	54.1	-7 48.7	228	15.3	+11 45.1	221	34.4	+13 06.4	214	10.4	+14 14.1
6	272	01.1	286	53.7	-7 47.6	243	16.0	+11 45.8	236	36.3	+13 06.6	229	12.6	+14 14.1
7	287	03.6	301	53.3	46.4	258	16.7	46.4	251	38.2	06.7	244	14.8	14.2
8	302	06.1	316	52.8	45.3	273	17.4	47.1	266	40.2	06.9	259	17.0	14.3
9	317	08.5	331	52.4	44.1	288	18.1	47.8	281	42.1	07.1	274	19.2	14.4
10	332	11.0	346	52.0	43.0	303	18.8	48.4	296	44.0	07.3	289	21.4	14.5
11	347	13.5	1 51.5	-7 41.9	318	19.6	+11 49.1	311	46.0	+13 07.5	304	23.6	+14 14.6	
12	2 15.9	16 51.1	-7 40.7	333	20.3	+11 49.8	326	47.9	+13 07.7	319	25.8	+14 14.7		
13	17 18.4	31 50.7	39.6	348	21.0	50.4	341	49.8	07.8	334	28.0	14.7		
14	32 20.9	46 50.2	38.4	3 21.7	51.1	356	51.8	08.0	349	30.2	14.8			
15	47 23.3	61 49.8	37.3	18 22.4	51.8	11 53.7	08.2	4 32.4	19 34.6	15.0				
16	62 25.8	76 49.4	36.1	33 23.1	52.4	26 55.6	08.4	34 36.8	+14 15.1					
17	77 28.2	91 49.0	-7 35.0	48 23.9	+11 53.1	41 57.6	+13 08.6	49 39.0	+14 15.2					
18	92 30.7	106 48.5	-7 33.8	63 24.6	+11 53.8	56 59.5	+13 08.8	64 41.2	15.3					
19	107 33.2	121 48.1	32.7	78 25.3	54.4	72 01.4	08.9	79 43.4	15.4					
20	122 35.6	136 47.7	31.6	93 26.0	55.1	87 03.4	09.1	94 45.6	15.5					
21	137 38.1	151 47.2	30.4	108 26.7	55.8	102 05.3	09.3	109 47.8	15.6					
22	152 40.6	166 46.8	29.3	123 27.4	56.4	117 07.2	09.5	124 50.0	15.7					
23	167 43.0	181 46.4	28.1	138 28.2	57.1	132 09.2	09.7	139 52.2	+14 15.7					
24	182 45.5	196 46.0	-7 27.0	153 28.9	+11 57.8	147 11.1	+13 09.9							
Dif	—		-4	+11		+7	+7		+19	+2		+22		+1

UT	SOL			LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'0 PMG: 12 ^h 05 ^m 9			Edad: 18 ^d 8 PHE { 4 ^h : 54'8 12 ^h : 54'7 20 ^h : 54'6 PMG: 3 ^h 58 ^m R°: 47 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m	m	
0	178	29.7	+1	302	16.7	-16	11.6	73	60 N	4	13	5	04	5	46	** ** *	7 56 25
1	193	29.9		316	48.4		18.9	71	58		20		08		47	** ** *	8 07 27
2	208	30.1		331	20.2		26.0	71	56		26		11		48	** ** *	17 29
3	223	30.3		345	51.9		33.1	71	54		32		14		50	** ** *	25 3
4	238	30.4		0	23.6		40.1	70	52		36		17		51	** ** *	33 33
5	253	30.6	+1	14	55.3	-16	47.1	70	50	4	41	5	19	5	51	** ** *	8 40 34
6	268	30.8	+1	29	27.0	-16	53.9	68	45	4	49	5	24	5	53	23 56 56	8 55 36
7	283	31.0		43	58.6	-17	00.7	68	40	4	56		28		55	42 55	9 07 38
8	298	31.2		58	30.3		07.4	67	35	5	02		31		56	31 53	18 39
9	313	31.4	+1	73	01.9		14.0	66	30		06		34	5	58	21 52	27 41
10	328	31.6	+2	87	33.5		20.5	65	20		12		38	6	00	23 03 51	43 43
11	343	31.8	+2	102	05.1	-17	27.0	65	10 N	5	16	5	40	6	01	22 48 49	9 57 45
12	358	32.0	+2	116	36.7	-17	33.3	63	0	5	18	5	42	6	03	22 34 48	10 10 47
13	13	32.1		131	08.3		39.6	63	10 S		19		43		04	20 46	23 49
14	28	32.3		145	39.8		45.8	62	20		18		43	05	22	05 45	37 51
15	43	32.5		160	11.3		51.9	61	30		15		43	07	21	48 43	10 53 53
16	58	32.7		174	42.9	-17	58.0	61	35		13		42	07	38	42	11 02 55
17	73	32.9	+2	189	14.4	-18	03.9	59	40	5	10	5	41	6	08	21 27 40	11 13 56
18	88	33.1	+2	203	45.8	-18	09.7	58	45	5	06	5	40	6	09	21 14 38	11 25 60
19	103	33.3		218	17.3		15.5	58	50	5	00		38		10	20 58 36	41 58
20	118	33.5		232	48.7		21.2	57	52	4	57		37		10	50 35	48 61
21	133	33.7		247	20.2		26.8	56	54		54		36	11	42	34	11 56 63
22	148	33.9		261	51.6		32.3	55	56		51		34	12	32	33	12 05 64
23	163	34.0		276	23.0		37.7	54	58		47		33	12	22	31	15 66
24	178	34.2	+2	290	54.4	-18	43.1	54	60 S	4	42	5	31	6	13	20 10 28	12 27 69

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 11 ^h 47 ^m 0		Mag: -3.8 PMG: 10 ^h 53 ^m		Mag: +1.4 PMG: 13 ^h 45 ^m		Mag: -2.1 PMG: 14 ^h 09 ^m		Mag: +0.3 PMG: 14 ^h 38 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	182	45.5	196	46.0	-7	27.0	153	28.9	+11	57.8
1	197	48.0	211	45.5		25.8	168	29.6		58.4
2	212	50.4	226	45.1		24.7	183	30.3		59.1
3	227	52.9	241	44.7		23.5	198	31.0	+11	59.7
4	242	55.4	256	44.3		22.4	213	31.7	+12	00.4
5	257	57.8	271	43.8	-7	21.2	228	32.5	+12	01.1
6	273	00.3	286	43.4	-7	20.1	243	33.2	+12	01.7
7	288	02.7	301	43.0		18.9	258	33.9		02.4
8	303	05.2	316	42.6		17.8	273	34.6		03.1
9	318	07.7	331	42.1		16.6	288	35.3		03.7
10	333	10.1	346	41.7		15.5	303	36.0		04.4
11	348	12.6	1	41.3	-7	14.3	318	36.8	+12	05.0
12	3	15.1	16	40.9	-7	13.2	333	37.5	+12	05.7
13	18	17.5	31	40.4		12.0	348	38.2		06.4
14	33	20.0	46	40.0		10.9	3	38.9		07.0
15	48	22.5	61	39.6		09.7	18	39.6		07.7
16	63	24.9	76	39.2		08.6	33	40.3		08.3
17	78	27.4	91	38.8	-7	07.4	48	41.0	+12	09.0
18	93	29.9	106	38.3	-7	06.3	63	41.8	+12	09.7
19	108	32.3	121	37.9		05.1	78	42.5		10.3
20	123	34.8	136	37.5		03.9	93	43.2		11.0
21	138	37.2	151	37.1		02.8	108	43.9		11.6
22	153	39.7	166	36.7		01.6	123	44.6		12.3
23	168	42.2	181	36.2	-7	00.5	138	45.3		13.0
24	183	44.6	196	35.8	-6	59.3	153	46.0	+12	13.6
Dif	—		-4	+12			+7	+7		
								+19	+2	
									+22	+1

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'0			Edad: 19 ^d 8 PHE	SD: 14'8				R°: 48 ^m		R°		R°	
	PMG: 12 ^h 05 ^m 6	hG ☉	Dec		hG ☾	Dif			Dec	Dif	Civil	Náutico	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	178	34.2	+2 14.3	290	54.4	-18 43.1	52	60 N	18 30	19 12	20 04	1 04 65	8 21 33	
1	193	34.4	15.3	305	25.7 ¹²³	48.3	52	58	28	08	19 56	0 51 63	34 36	
2	208	34.6	16.3	319	57.1 ¹²⁴	53.5	52	56	27	04	50	40 61	46 37	
3	223	34.8	17.3	334	28.4 ¹²³	-18 58.5	50	54	25	19 01	44	30 60	8 56 38	
4	238	35.0	18.2	348	59.7 ¹²³	-19 03.5	50	52	24	18 58	39	21 59	9 06 38	
5	253	35.2	+2 19.2	3	31.0 ¹²³	-19 08.4	49	50	18 23	18 55	19 34	0 13 58	9 14 39	
6	268	35.4	+2 20.2	18	02.3 ¹²³	-19 13.2	48	45	18 20	18 50	19 25	** ** *	9 31 41	
7	283	35.6	21.2	32	33.6 ¹²³	17.9	47	40	18	46	17	** ** *	45 43	
8	298	35.7	22.2	47	04.8 ¹²²	22.5	46	35	17	42	12	** ** *	9 57 44	
9	313	35.9	23.1	61	36.0 ¹²²	27.1	46	30	15	39	07	** ** *	10 08 44	
10	328	36.1	24.1	76	07.2 ¹²²	31.5	44	20	13	35	19 00	23 54 49	26 46	
11	343	36.3	+2 25.1	90	38.4 ¹²²	-19 35.8	43	10 N	18 11	18 32	18 56	23 37 49	10 42 47	
12	358	36.5	+2 26.1	105	09.6 ¹²²	-19 40.1	43	0	18 09	18 30	18 54	23 22 48	10 57 48	
13	13	36.7	27.1	119	40.8 ¹²²	44.3	42	10 S	07	28	52	23 06 48	11 12 49	
14	28	36.9	28.0	134	11.9 ¹²¹	48.3	40	20	05	27	53	22 50 46	28 50	
15	43	37.1	29.0	148	43.1 ¹²²	52.3	40	30	03	27	55	31 46	46 52	
16	58	37.3	30.0	163	14.2 ¹²¹	-19 56.2	39	35	02	28	18 57	20 45	11 57 52	
17	73	37.5	+2 31.0	177	45.3 ¹²¹	-20 00.0	38	40	18 01	18 28	19 00	22 07 45	12 09 53	
18	88	37.6	+2 32.0	192	16.4 ¹²¹	-20 03.7	37	45	18 00	18 29	19 03	21 52 44	12 23 55	
19	103	37.8	32.9	206	47.5 ¹²¹	07.3	36	50	17 59	31	08	34 43	41 56	
20	118	38.0	33.9	221	18.5 ¹²⁰	10.8	35	52	58	31	11	25 43	49 57	
21	133	38.2	34.9	235	49.6 ¹²¹	14.2	34	54	57	32	14	16 41	12 59 57	
22	148	38.4	35.9	250	20.6 ¹²⁰	17.6	34	56	56	33	17	21 05 41	13 09 59	
23	163	38.6	36.9	264	51.6 ¹²⁰	20.8	32	58	56	35	20	20 53 39	21 60	
24	178	38.8	+2 37.8	279	22.6 ¹²⁰	-20 23.9	31	60 S	17 55	18 36	19 25	20 38 39	13 36 60	

UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO	
	PMG: 11 ^h 43 ^m 1		Mag: -3.8 PMG: 10 ^h 54 ^m		Mag: +1.4 PMG: 13 ^h 44 ^m		Mag: -2.1 PMG: 14 ^h 06 ^m		Mag: +0.3 PMG: 14 ^h 35 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	183	44.6	196	35.8	-6 59.3	153	46.0	+12 13.6	147	57.5	+13 14.3
1	198	47.1	211	35.4	58.2	168	46.8	14.3	162	59.4	14.4
2	213	49.6	226	35.0	57.0	183	47.5	14.9	178	01.3	14.6
3	228	52.0	241	34.6	55.9	198	48.2	15.6	193	03.2	14.8
4	243	54.5	256	34.1	54.7	213	48.9	16.2	208	05.2	15.0
5	258	57.0	271	33.7	-6 53.5	228	49.6	+12 16.9	223	07.1	+13 15.2
6	273	59.4	286	33.3	-6 52.4	243	50.3	+12 17.6	238	09.0	+13 15.4
7	289	01.9	301	32.9	51.2	258	51.0	18.2	253	11.0	15.5
8	304	04.3	316	32.5	50.1	273	51.8	18.9	268	12.9	15.7
9	319	06.8	331	32.1	48.9	288	52.5	19.5	283	14.8	15.9
10	334	09.3	346	31.6	47.7	303	53.2	20.2	298	16.8	16.1
11	349	11.7	1	31.2	-6 46.6	318	53.9	+12 20.8	313	18.7	+13 16.3
12	4	14.2	16	30.8	-6 45.4	333	54.6	+12 21.5	328	20.6	+13 16.5
13	19	16.7	31	30.4	44.3	348	55.3	22.2	343	22.5	16.6
14	34	19.1	46	30.0	43.1	3	56.0	22.8	358	24.5	16.8
15	49	21.6	61	29.6	41.9	18	56.8	23.5	13	26.4	17.0
16	64	24.1	76	29.1	40.8	33	57.5	24.1	28	28.3	17.2
17	79	26.5	91	28.7	-6 39.6	48	58.2	+12 24.8	43	30.3	+13 17.4
18	94	29.0	106	28.3	-6 38.5	63	58.9	+12 25.4	58	32.2	+13 17.6
19	109	31.5	121	27.9	37.3	78	59.6	26.1	73	34.1	17.7
20	124	33.9	136	27.5	36.1	94	00.3	26.7	88	36.0	17.9
21	139	36.4	151	27.1	35.0	109	01.0	27.4	103	38.0	18.1
22	154	38.8	166	26.6	33.8	124	01.7	28.0	118	39.9	18.3
23	169	41.3	181	26.2	32.6	139	02.5	28.7	133	41.8	18.5
24	184	43.8	196	25.8	-6 31.5	154	03.2	+12 29.4	148	43.8	+13 18.7
Dif	—		-4	+12		+7	+7		+19	+2	

UT	SOL			☾ LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG: 12 ^h 05 ^m 3			Edad: 20 ^d 8 PHE { 4 ^h : 54'3 12 ^h : 54'3 20 ^h : 54'3 PMG: 5 ^h 33 ^m R°: 49 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	38.8	+2 37.8	279	22.6	-20 23.9	31	60 N	4 06	4 58	5 40	2 09 56	8 54 44			
1	193	39.0	38.8	293	53.6 ¹²⁰	27.0	29	58	14	5 02	42	1 54 55	9 10 44			
2	208	39.2	39.8	308	24.6 ¹²⁰	29.9	29	56	20	06	43	41 54	23 44			
3	223	39.3	40.8	322	55.6 ¹²⁰	32.8	28	54	26	09	45	30 54	34 45			
4	238	39.5	41.7	337	26.5 ¹¹⁹	35.6	28	52	31	12	46	20 53	44 46			
5	253	39.7	+2 42.7	351	57.4 ¹¹⁹	-20 38.2	26	50	4 36	5 15	5 47	1 11 53	9 53 46			
6	268	39.9	+2 43.7	6	28.4 ¹²⁰	-20 40.8	26	45	4 45	5 20	5 50	0 52 52	10 12 47			
7	283	40.1	44.7	20	59.3 ¹¹⁹	43.3	25	40	53	25	52	37 51	28 47			
8	298	40.3	45.7	35	30.2 ¹¹⁹	45.6	23	35	4 59	28	54	24 51	41 47			
9	313	40.5	46.6	50	01.0 ¹¹⁸	47.9	23	30	5 03	31	55	0 13 50	10 52 48			
10	328	40.7	47.6	64	31.9 ¹¹⁹	50.1	22	20	10	36	5 58	** ** *	11 12 48			
11	343	40.9	+2 48.6	79	02.8 ¹¹⁹	-20 52.2	21	10 N	5 15	5 39	6 00	** ** *	11 29 48			
12	358	41.1	+2 49.6	93	33.6 ¹¹⁸	-20 54.2	20	0	5 17	5 41	6 02	** ** *	11 45 48			
13	13	41.2	50.5	108	04.5 ¹¹⁹	56.1	19	10 S	19	43	04	23 54 48	12 01 48			
14	28	41.4	51.5	122	35.3 ¹¹⁸	57.9	18	20	18	44	06	36 49	18 49			
15	43	41.6	52.5	137	06.1 ¹¹⁸	-20 59.5	16	30	16	44	08	17 48	38 49			
16	58	41.8	53.5	151	36.9 ¹¹⁸	-21 01.1	16	35	14	44	09	23 05 49	12 49 49			
17	73	42.0	+2 54.4	166	07.7 ¹¹⁸	-21 02.6	15	40	5 12	5 43	6 10	22 52 49	13 02 50			
18	88	42.2	+2 55.4	180	38.5 ¹¹⁸	-21 04.1	15	45	5 08	5 42	6 12	22 36 49	13 18 49			
19	103	42.4	56.4	195	09.3 ¹¹⁸	05.4	13	50	03	41	13	17 49	37 50			
20	118	42.6	57.4	209	40.0 ¹¹⁷	06.6	12	52	5 01	40	14	22 08 49	46 50			
21	133	42.8	58.4	224	10.8 ¹¹⁸	07.7	11	54	4 58	39	15	21 57 50	13 56 50			
22	148	42.9	+2 59.3	238	41.6 ¹¹⁸	08.7	10	56	55	39	16	46 49	14 08 50			
23	163	43.1	+3 00.3	253	12.3 ¹¹⁷	09.6	9	58	51	37	17	32 50	21 50			
24	178	43.3	+3 01.3	267	43.0 ¹¹⁷	-21 10.4	8	60 S	4 47	5 36	6 18	21 17 49	14 36 51			

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 11 ^h 39 ^m 2		Mag: -3.8 PMG: 10 ^h 55 ^m		Mag: +1.4 PMG: 13 ^h 43 ^m		Mag: -2.1 PMG: 14 ^h 03 ^m		Mag: +0.3 PMG: 14 ^h 31 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	184	43.8	196	25.8	-6 31.5	154	03.2	+12 29.4	148	43.8	+13 18.7	141	37.6	+14 19.8
1	199	46.2	211	25.4	30.3	169	03.9	30.0	163	45.7	18.8	156	39.8	19.9
2	214	48.7	226	25.0	29.2	184	04.6	30.7	178	47.6	19.0	171	42.0	20.0
3	229	51.2	241	24.6	28.0	199	05.3	31.3	193	49.5	19.2	186	44.2	20.1
4	244	53.6	256	24.2	26.8	214	06.0	32.0	208	51.5	19.4	201	46.3	20.2
5	259	56.1	271	23.8	-6 25.7	229	06.7	+12 32.6	223	53.4	+13 19.6	216	48.5	+14 20.3
6	274	58.6	286	23.3	-6 24.5	244	07.5	+12 33.3	238	55.3	+13 19.8	231	50.7	+14 20.4
7	290	01.0	301	22.9	23.3	259	08.2	33.9	253	57.3	19.9	246	52.9	20.5
8	305	03.5	316	22.5	22.2	274	08.9	34.6	268	59.2	20.1	261	55.1	20.5
9	320	06.0	331	22.1	21.0	289	09.6	35.2	284	01.1	20.3	276	57.3	20.6
10	335	08.4	346	21.7	19.8	304	10.3	35.9	299	03.0	20.5	291	59.5	20.7
11	350	10.9	1	21.3	-6 18.7	319	11.0	+12 36.5	314	05.0	+13 20.7	307	01.7	+14 20.8
12	5	13.3	16	20.9	-6 17.5	334	11.7	+12 37.2	329	06.9	+13 20.9	322	03.9	+14 20.9
13	20	15.8	31	20.5	16.3	349	12.4	37.8	344	08.8	21.0	337	06.1	21.0
14	35	18.3	46	20.1	15.2	4	13.1	38.5	359	10.7	21.2	352	08.3	21.1
15	50	20.7	61	19.6	14.0	19	13.9	39.1	14	12.7	21.4	7	10.5	21.2
16	65	23.2	76	19.2	12.8	34	14.6	39.8	29	14.6	21.6	22	12.7	21.2
17	80	25.7	91	18.8	-6 11.7	49	15.3	+12 40.4	44	16.5	+13 21.8	37	14.9	+14 21.3
18	95	28.1	106	18.4	-6 10.5	64	16.0	+12 41.1	59	18.4	+13 22.0	52	17.0	+14 21.4
19	110	30.6	121	18.0	09.3	79	16.7	41.7	74	20.4	22.1	67	19.2	21.5
20	125	33.1	136	17.6	08.1	94	17.4	42.4	89	22.3	22.3	82	21.4	21.6
21	140	35.5	151	17.2	07.0	109	18.1	43.0	104	24.2	22.5	97	23.6	21.7
22	155	38.0	166	16.8	05.8	124	18.8	43.7	119	26.1	22.7	112	25.8	21.8
23	170	40.5	181	16.4	04.6	139	19.6	44.3	134	28.1	22.9	127	28.0	21.8
24	185	42.9	196	16.0	-6 03.5	154	20.3	+12 45.0	149	30.0	+13 23.1	142	30.2	+14 21.9
Dif	—		-4	+12		+7		+7	+19		+2	+22		+1

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16'0			Edad: 21 ^d 8 PHE { 4 ^h : 54'3 12 ^h : 54'3 20 ^h : 54'4	SD: 14'8				Final del crepúsculo		Salida de Luna		Puesta de Luna		
	PMG: 12 ^h 05 ^m 0				PMG: 6 ^h 22 ^m R°: 48 ^m				Final del crepúsculo		Salida de Luna		Puesta de Luna		
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	178	43.3	+3 01.3	267	43.0	-21 10.4	7	60 N	18 35	19 17	20 10	3 05 45	9 38 55		
1	193	43.5		282	13.8 ¹¹⁸		11.1	58	33	12	20 01	2 49 46	9 54 54		
2	208	43.7	03.2	296	44.5 ¹¹⁷		11.7	56	31	08	19 54	35 46	10 07 54		
3	223	43.9	04.2	311	15.2 ¹¹⁷		12.3	54	29	05	48	24 46	19 54		
4	238	44.1	05.2	325	45.9 ¹¹⁷		12.7	52	27	19 01	42	13 47	30 53		
5	253	44.3	+3 06.2	340	16.6 ¹¹⁷	-21 13.0	3	50	18 26	18 59	19 38	2 04 47	10 39 53		
6	268	44.5	+3 07.1	354	47.3 ¹¹⁷	-21 13.2	2	45	18 23	18 52	19 28	1 44 48	10 59 51		
7	283	44.6	08.1	9	18.0 ¹¹⁷		13.4	40	20	48	20	28 48	11 15 51		
8	298	44.8	09.1	23	48.6 ¹¹⁶		13.4	35	18	44	14	15 48	28 51		
9	313	45.0	10.1	38	19.3 ¹¹⁷		13.3	30	16	40	09	1 03 48	11 40 50		
10	328	45.2	11.0	52	50.0 ¹¹⁷		13.1	20	13	35	19 01	0 43 49	12 00 49		
11	343	45.4	+3 12.0	67	20.6 ¹¹⁶	-21 12.9	2	10 N	18 11	18 32	18 56	0 26 48	12 17 49		
12	358	45.6	+3 13.0	81	51.3 ¹¹⁷	-21 12.5	4	0	18 08	18 29	18 53	0 10 48	12 33 49		
13	13	45.8	14.0	96	22.0 ¹¹⁷		12.0	10 S	06	27	51	** ** *	12 49 48		
14	28	46.0	14.9	110	52.6 ¹¹⁶		11.4	20	04	26	51	** ** *	13 07 47		
15	43	46.2	15.9	125	23.3 ¹¹⁷		10.8	30	01	25	53	** ** *	27 46		
16	58	46.3	16.9	139	53.9 ¹¹⁶		10.0	35	18 00	25	54	23 54 53	38 46		
17	73	46.5	+3 17.9	154	24.5 ¹¹⁶	-21 09.1	9	40	17 58	18 25	18 56	23 41 53	13 52 45		
18	88	46.7	+3 18.8	168	55.2 ¹¹⁷	-21 08.1	10	45	17 56	18 26	19 00	23 25 55	14 07 45		
19	103	46.9	19.8	183	25.8 ¹¹⁶		07.1	50	54	26	04	23 06 56	27 43		
20	118	47.1	20.8	197	56.5 ¹¹⁷		05.9	52	53	27	06	22 57 56	36 43		
21	133	47.3	21.8	212	27.1 ¹¹⁶		04.6	54	52	27	09	47 57	46 43		
22	148	47.5	22.7	226	57.7 ¹¹⁶		03.3	56	51	28	11	35 58	14 58 42		
23	163	47.7	23.7	241	28.4 ¹¹⁷		01.8	58	50	29	15	22 59	15 11 41		
24	178	47.9	+3 24.7	255	59.0 ¹¹⁶	-21 00.2	16	60 S	17 49	18 30	19 18	22 06 61	15 27 39		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 11 ^h 35 ^m 2		Mag: -3.8 PMG: 10 ^h 55 ^m			Mag: +1.4 PMG: 13 ^h 42 ^m			Mag: -2.1 PMG: 14 ^h 00 ^m			Mag: +0.3 PMG: 14 ^h 28 ^m			
	hG ♈	Dec	hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	185	42.9	196	16.0	-6 03.5	154	20.3	+12 45.0	149	30.0	+13 23.1	142	30.2	+14 21.9	
1	200	45.4	211	15.6	02.3	169	21.0	45.6	164	31.9	23.2	157	32.4	22.0	
2	215	47.8	226	15.1	-6 01.1	184	21.7	46.3	179	33.9	23.4	172	34.6	22.1	
3	230	50.3	241	14.7	-5 59.9	199	22.4	46.9	194	35.8	23.6	187	36.8	22.2	
4	245	52.8	256	14.3	58.8	214	23.1	47.6	209	37.7	23.8	202	39.0	22.3	
5	260	55.2	271	13.9	-5 57.6	229	23.8	+12 48.2	224	39.6	+13 24.0	217	41.2	+14 22.4	
6	275	57.7	286	13.5	-5 56.4	244	24.5	+12 48.8	239	41.6	+13 24.2	232	43.3	+14 22.5	
7	291	00.2	301	13.1	55.3	259	25.2	49.5	254	43.5	24.3	247	45.5	22.5	
8	306	02.6	316	12.7	54.1	274	25.9	50.1	269	45.4	24.5	262	47.7	22.6	
9	321	05.1	331	12.3	52.9	289	26.7	50.8	284	47.3	24.7	277	49.9	22.7	
10	336	07.6	346	11.9	51.7	304	27.4	51.4	299	49.2	24.9	292	52.1	22.8	
11	351	10.0	1	11.5	-5 50.6	319	28.1	+12 52.1	314	51.2	+13 25.1	307	54.3	+14 22.9	
12	6	12.5	16	11.1	-5 49.4	334	28.8	+12 52.7	329	53.1	+13 25.3	322	56.5	+14 23.0	
13	21	14.9	31	10.7	48.2	349	29.5	53.4	344	55.0	25.5	337	58.7	23.1	
14	36	17.4	46	10.3	47.0	4	30.2	54.0	359	56.9	25.6	353	00.9	23.2	
15	51	19.9	61	09.9	45.9	19	30.9	54.7	14	58.9	25.8	8	03.1	23.2	
16	66	22.3	76	09.5	44.7	34	31.6	55.3	30	00.8	26.0	23	05.3	23.3	
17	81	24.8	91	09.1	-5 43.5	49	32.3	+12 55.9	45	02.7	+13 26.2	38	07.4	+14 23.4	
18	96	27.3	106	08.7	-5 42.3	64	33.0	+12 56.6	60	04.6	+13 26.4	53	09.6	+14 23.5	
19	111	29.7	121	08.3	41.2	79	33.8	57.2	75	06.6	26.6	68	11.8	23.6	
20	126	32.2	136	07.9	40.0	94	34.5	57.9	90	08.5	26.7	83	14.0	23.7	
21	141	34.7	151	07.4	38.8	109	35.2	58.5	105	10.4	26.9	98	16.2	23.8	
22	156	37.1	166	07.0	37.6	124	35.9	59.2	120	12.3	27.1	113	18.4	23.9	
23	171	39.6	181	06.6	36.5	139	36.6	+12 59.8	135	14.3	27.3	128	20.6	23.9	
24	186	42.1	196	06.2	-5 35.3	154	37.3	+13 00.4	150	16.2	+13 27.5	143	22.8	+14 24.0	
Dif	—		-4	+12		+7	+6		+19		+2		+22	+1	

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'0			Edad: 22 ^d 8	PHE {	4 ^h : 54'4 12 ^h : 54'5 20 ^h : 54'6										
	PMG: 12 ^h 04 ^m 7							SD: 14'8			PMG: 7 ^h 10 ^m		R°: 49 ^m			
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	47.9	+3	24.7	255	59.0	-21 00.2	60 N	3 59	4 51	5 34	3 50	35	10 33	65	
1	193	48.0			270	29.6	-20 58.6	58	4 07	4 56	36	35	36	10 48	64	
2	208	48.2			285	00.2	56.8	56	15	5 00	38	21	38	11 01	62	
3	223	48.4			299	30.9	54.9	54	21	04	40	10	39	13	60	
4	238	48.6			314	01.5	53.0	52	26	07	41	3	00	23	59	
5	253	48.8	+3	29.6	328	32.1	-20 50.9	50	4 31	5 10	5 43	2 51	40	11 32	58	
6	268	49.0	+3	30.5	343	02.8	-20 48.8	45	4 41	5 16	5 46	2 32	42	11 50	57	
7	283	49.2			357	33.4	46.5	40	49	21	49	16	43	12 06	55	
8	298	49.4			12	04.0	44.1	35	4 56	25	51	2	03	19	54	
9	313	49.5			26	34.7	41.7	30	5 01	29	53	1	51	30	53	
10	328	49.7			41	05.3	39.1	20	08	34	56	32	46	12 49	52	
11	343	49.9	+3	35.4	55	36.0	-20 36.5	10 N	5 13	5 38	5 59	1 14	48	13 06	50	
12	358	50.1	+3	36.4	70	06.6	-20 33.7	0	5 17	5 41	6 01	0 58	49	13 22	48	
13	13	50.3			84	37.3	30.9	10 S	18	43	04	42	50	37	47	
14	28	50.5			99	07.9	27.9	20	19	44	06	25	51	13 54	46	
15	43	50.7			113	38.6	24.9	30	17	45	09	0	05	14 13	44	
16	58	50.9			128	09.2	21.7	32	16	45	11	**	**	24	43	
17	73	51.0	+3	41.2	142	39.9	-20 18.5	40	5 14	5 45	6 12	**	**	14 37	41	
18	88	51.2	+3	42.2	157	10.6	-20 15.1	45	5 11	5 45	6 14	**	**	14 52	40	
19	103	51.4			171	41.2	11.7	50	07	44	16	**	**	15 10	38	
20	118	51.6			186	11.9	08.1	52	04	44	17	23	53	19	37	
21	133	51.8			200	42.6	04.5	54	5 02	43	18	44	63	29	35	
22	148	52.0			215	13.3	-20 00.8	56	4 59	43	20	33	65	40	33	
23	163	52.2			229	44.0	-19 56.9	58	56	42	21	21	67	15 52	32	
24	178	52.4	+3	48.0	244	14.7	-19 53.0	60 S	4 52	5 41	6 22	23	07	16 06	31	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 11 ^h 31 ^m 3		Mag: -3.8 PMG: 10 ^h 56 ^m		Mag: +1.4 PMG: 13 ^h 41 ^m		Mag: -2.1 PMG: 13 ^h 57 ^m		Mag: +0.3 PMG: 14 ^h 24 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	186	42.1	196	06.2	-5	35.3	154	37.3	+13	00.4	150	16.2	+13	27.5	143	22.8	+14	24.0
1	201	44.5	211	05.8		34.1	169	38.0		01.1	165	18.1		27.7	158	25.0		24.1
2	216	47.0	226	05.4		32.9	184	38.7		01.7	180	20.0		27.8	173	27.2		24.2
3	231	49.4	241	05.0		31.7	199	39.4		02.4	195	22.0		28.0	188	29.3		24.3
4	246	51.9	256	04.6		30.6	214	40.1		03.0	210	23.9		28.2	203	31.5		24.4
5	261	54.4	271	04.2	-5	29.4	229	40.9	+13	03.7	225	25.8	+13	28.4	218	33.7	+14	24.5
6	276	56.8	286	03.8	-5	28.2	244	41.6	+13	04.3	240	27.7	+13	28.6	233	35.9	+14	24.6
7	291	59.3	301	03.4		27.0	259	42.3		04.9	255	29.6		28.8	248	38.1		24.6
8	307	01.8	316	03.0		25.8	274	43.0		05.6	270	31.6		28.9	263	40.3		24.7
9	322	04.2	331	02.6		24.7	289	43.7		06.2	285	33.5		29.1	278	42.5		24.8
10	337	06.7	346	02.2		23.5	304	44.4		06.9	300	35.4		29.3	293	44.7		24.9
11	352	09.2	1	01.8	-5	22.3	319	45.1	+13	07.5	315	37.3	+13	29.5	308	46.9	+14	25.0
12	7	11.6	16	01.4	-5	21.1	334	45.8	+13	08.1	330	39.3	+13	29.7	323	49.0	+14	25.1
13	22	14.1	31	01.0		19.9	349	46.5		08.8	345	41.2		29.9	338	51.2		25.2
14	37	16.6	46	00.6		18.8	4	47.2		09.4	0	43.1		30.0	353	53.4		25.3
15	52	19.0	61	00.2		17.6	19	47.9		10.1	15	45.0		30.2	8	55.6		25.3
16	67	21.5	75	59.8		16.4	34	48.6		10.7	30	46.9		30.4	23	57.8		25.4
17	82	23.9	90	59.4	-5	15.2	49	49.4	+13	11.3	45	48.9	+13	30.6	39	00.0	+14	25.5
18	97	26.4	105	59.0	-5	14.0	64	50.1	+13	12.0	60	50.8	+13	30.8	54	02.2	+14	25.6
19	112	28.9	120	58.6		12.8	79	50.8		12.6	75	52.7		31.0	69	04.4		25.7
20	127	31.3	135	58.2		11.7	94	51.5		13.2	90	54.6		31.1	84	06.5		25.8
21	142	33.8	150	57.8		10.5	109	52.2		13.9	105	56.5		31.3	99	08.7		25.9
22	157	36.3	165	57.4		09.3	124	52.9		14.5	120	58.5		31.5	114	10.9		26.0
23	172	38.7	180	57.0		08.1	139	53.6		15.2	136	00.4		31.7	129	13.1		26.1
24	187	41.2	195	56.6	-5	06.9	154	54.3	+13	15.8	151	02.3	+13	31.9	144	15.3	+14	26.1
Dif	—		-4	+12			+7	+6			+19	+2			+22			

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16'0 PMG: 12 ^h 04 ^m 4			Edad: 23 ^d 8 PHE { 4 ^h : 54'8 12 ^h : 54'9 20 ^h : 55'1 SD: 14'9 PMG: 7 ^h 59 ^m R°: 48 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	h m	m
0	178	52.4	+3 48.0	244	14.7	-19 53.0	40	60 N	18 40	19 22	20 16	4 25 26	11 38 73		
1	193	52.5		258	45.4 ¹¹⁷	49.0	40	58	37	17	20 07	4 11 29	11 52 70		
2	208	52.7	50.0	273	16.1 ¹¹⁷	44.9	41	56	35	13	19 59	3 59 31	12 03 68		
3	223	52.9	50.9	287	46.8 ¹¹⁷	40.7	42	54	33	09	52	49 32	13 67		
4	238	53.1	51.9	302	17.6 ¹¹⁸	36.3	44	52	31	05	46	40 33	22 65		
5	253	53.3	+3 52.9	316	48.3 ¹¹⁷	-19 31.9	44	50	18 29	19 02	19 41	3 31 35	12 30 64		
6	268	53.5	+3 53.8	331	19.0 ¹¹⁷	-19 27.4	45	45	18 25	18 55	19 30	3 14 37	12 47 61		
7	283	53.7	54.8	345	49.8 ¹¹⁸	22.8	46	40	22	50	22	2 59 40	13 01 59		
8	298	53.9	55.8	0	20.5 ¹¹⁷	18.1	47	35	20	45	15	47 41	13 57		
9	313	54.0	56.8	14	51.3 ¹¹⁸	13.4	47	30	18	42	10	36 43	23 55		
10	328	54.2	57.7	29	22.1 ¹¹⁸	08.5	49	20	14	36	19 02	18 44	41 52		
11	343	54.4	+3 58.7	43	52.9 ¹¹⁸	-19 03.5	50	10 N	18 11	18 32	18 56	2 02 46	13 56 50		
12	358	54.6	+3 59.7	58	23.6 ¹¹⁷	-18 58.4	51	0	18 08	18 28	18 52	1 47 48	14 10 48		
13	13	54.8	+4 00.6	72	54.4 ¹¹⁸	53.3	51	10 S	05	26	50	32 50	24 46		
14	28	55.0	01.6	87	25.2 ¹¹⁸	48.0	53	20	18 02	24	49	1 16 52	40 43		
15	43	55.2	02.6	101	56.1 ¹¹⁹	42.7	53	30	17 59	23	50	0 57 55	14 57 41		
16	58	55.4	03.5	116	26.9 ¹¹⁸	37.2	55	35	57	22	51	47 55	15 07 39		
17	73	55.5	+4 04.5	130	57.7 ¹¹⁸	-18 31.7	55	40	17 55	18 22	18 53	0 34 57	15 18 38		
18	88	55.7	+4 05.5	145	28.5 ¹¹⁸	-18 26.0	57	45	17 53	18 22	18 56	0 20 58	15 32 35		
19	103	55.9	06.4	159	59.4 ¹¹⁹	20.3	57	50	50	22	19 00	0 02 61	48 32		
20	118	56.1	07.4	174	30.2 ¹¹⁸	14.5	58	52	49	22	01	** ** *	15 56 31		
21	133	56.3	08.4	189	01.1 ¹¹⁹	08.6	59	54	47	23	04	** ** *	16 04 29		
22	148	56.5	09.4	203	32.0 ¹¹⁹	-18 02.6	60	56	46	23	06	** ** *	13 28		
23	163	56.7	10.3	218	02.9 ¹¹⁹	-17 56.5	61	58	44	23	09	** ** *	24 26		
24	178	56.9	+4 11.3	232	33.8 ¹¹⁹	-17 50.3	62	60 S	17 43	18 24	19 12	** ** *	16 37 23		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 11 ^h 27 ^m 4		Mag: -3.8 PMG: 10 ^h 57 ^m			Mag: +1.4 PMG: 13 ^h 40 ^m			Mag: -2.1 PMG: 13 ^h 54 ^m			Mag: +0.3 PMG: 14 ^h 21 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	'	°	°	'	°	°	'	°	'
0	187	41.2	195 56.6	-5 06.9	154 54.3	+13 15.8	151 02.3	+13 31.9	144 15.3	+14 26.1					
1	202	43.7	210 56.2	05.7	169 55.0	16.4	166 04.2	32.1	159 17.5	26.2					
2	217	46.1	225 55.8	04.6	184 55.7	17.1	181 06.1	32.2	174 19.7	26.3					
3	232	48.6	240 55.4	03.4	199 56.4	17.7	196 08.1	32.4	189 21.9	26.4					
4	247	51.0	255 55.1	02.2	214 57.1	18.3	211 10.0	32.6	204 24.0	26.5					
5	262	53.5	270 54.7	-5 01.0	229 57.8	+13 19.0	226 11.9	+13 32.8	219 26.2	+14 26.6					
6	277	56.0	285 54.3	-4 59.8	244 58.5	+13 19.6	241 13.8	+13 33.0	234 28.4	+14 26.7					
7	292	58.4	300 53.9	58.6	259 59.3	20.2	256 15.7	33.2	249 30.6	26.8					
8	308	00.9	315 53.5	57.4	275 00.0	20.9	271 17.7	33.4	264 32.8	26.8					
9	323	03.4	330 53.1	56.3	290 00.7	21.5	286 19.6	33.5	279 35.0	26.9					
10	338	05.8	345 52.7	55.1	305 01.4	22.2	301 21.5	33.7	294 37.2	27.0					
11	353	08.3	0 52.3	-4 53.9	320 02.1	+13 22.8	316 23.4	+13 33.9	309 39.4	+14 27.1					
12	8	10.8	15 51.9	-4 52.7	335 02.8	+13 23.4	331 25.3	+13 34.1	324 41.5	+14 27.2					
13	23	13.2	30 51.5	51.5	350 03.5	24.1	346 27.3	34.3	339 43.7	27.3					
14	38	15.7	45 51.1	50.3	5 04.2	24.7	1 29.2	34.5	354 45.9	27.4					
15	53	18.2	60 50.7	49.1	20 04.9	25.3	16 31.1	34.6	9 48.1	27.5					
16	68	20.6	75 50.3	47.9	35 05.6	26.0	31 33.0	34.8	24 50.3	27.5					
17	83	23.1	90 49.9	-4 46.8	50 06.3	+13 26.6	46 34.9	+13 35.0	39 52.5	+14 27.6					
18	98	25.5	105 49.5	-4 45.6	65 07.0	+13 27.2	61 36.9	+13 35.2	54 54.7	+14 27.7					
19	113	28.0	120 49.1	44.4	80 07.7	27.9	76 38.8	35.4	69 56.8	27.8					
20	128	30.5	135 48.7	43.2	95 08.4	28.5	91 40.7	35.6	84 59.0	27.9					
21	143	32.9	150 48.3	42.0	110 09.1	29.1	106 42.6	35.7	100 01.2	28.0					
22	158	35.4	165 47.9	40.8	125 09.9	29.7	121 44.5	35.9	115 03.4	28.1					
23	173	37.9	180 47.6	39.6	140 10.6	30.4	136 46.5	36.1	130 05.6	28.2					
24	188	40.3	195 47.2	-4 38.4	155 11.3	+13 31.0	151 48.4	+13 36.3	145 07.8	+14 28.3					
Dif	—		-4	+12	+7	+6	+19	+2	+22	+1					

UT	SOL			☾ LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna						
	SD: 16 ^h 0 PMG: 12 ^h 04 ^m 1			Edad: 24 ^d 8 PHE { 4 ^h : 55 ^m /2 12 ^h : 55 ^m /4 20 ^h : 55 ^m /6 PMG: 8 ^h 47 ^m R°: 48 ^m																	
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Náutico	Civil		Hora	R°	Hora	R°					
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m	m				
0	178	56.9	+4	11.3	232	33.8	-17	50.3	60 N	3	52	4	45	5	28	4	51	20	12	51	78
1	193	57.0		12.3	247	04.7 ¹¹⁹		44.1 ⁶²	58	4	01		50	30		40	22		13	02	75
2	208	57.2		13.2	261	35.6 ¹¹⁹		37.7 ⁶⁴	56		09		55	33		30	25		11	73	
3	223	57.4		14.2	276	06.5 ¹¹⁹		31.3 ⁶⁴	54		15	4	59	35		21	27		20	70	
4	238	57.6		15.2	290	37.4 ¹¹⁹		24.7 ⁶⁶	52		21	5	02	37		13	29		27	69	
5	253	57.8	+4	16.1	305	08.4 ¹²⁰	-17	18.1 ⁶⁶	50	4	27	5	06	5	38	4	06	30	13	34	67
6	268	58.0	+4	17.1	319	39.3 ¹¹⁹	-17	11.4 ⁶⁷	45	4	37	5	13	5	42	3	51	33	13	48	64
7	283	58.2		18.1	334	10.3 ¹²⁰	-17	04.6 ⁶⁸	40		46		18	45		39	35		14	00	61
8	298	58.3		19.0	348	41.3 ¹²⁰	-16	57.7 ⁶⁹	35		53		23	48		28	38		10	58	
9	313	58.5		20.0	3	12.2 ¹¹⁹		50.7 ⁷⁰	30	4	58		26	50		19	39		18	57	
10	328	58.7		21.0	17	43.2 ¹²⁰		43.7 ⁷⁰	20	5	06		32	54		3	02	43	33	54	
11	343	58.9	+4	21.9	32	14.2 ¹²⁰	-16	36.5 ⁷²	10 N	5	12	5	37	5	58	2	48	46	14	46	51
12	358	59.1	+4	22.9	46	45.2 ¹²⁰	-16	29.3 ⁷²	0	5	16	5	40	6	01	2	35	48	14	58	48
13	13	59.3		23.9	61	16.2 ¹²⁰		22.0 ⁷³	10 S		18		43	04		22	50		15	10	45
14	28	59.5		24.8	75	47.3 ¹²¹		14.6 ⁷⁴	20		19		45	07		2	08	53	23	42	
15	43	59.6		25.8	90	18.3 ¹²⁰	-16	07.1 ⁷⁵	30		19		46	10		1	52	56	38	38	
16	58	59.8		26.8	104	49.3 ¹²⁰	-15	59.5 ⁷⁶	35		17		47	12		42	58		46	37	
17	74	00.0	+4	27.7	119	20.4 ¹²¹	-15	51.8 ⁷⁷	40	5	16	5	47	6	14	1	31	60	15	56	34
18	89	00.2	+4	28.7	133	51.5 ¹²¹	-15	44.1 ⁷⁷	45	5	13	5	47	6	17	1	18	63	16	07	31
19	104	00.4		29.7	148	22.5 ¹²⁰		36.3 ⁷⁸	50		10		47	19		1	03	65	20	29	
20	119	00.6		30.6	162	53.6 ¹²¹		28.4 ⁷⁹	52		08		47	21		0	56	67	27	26	
21	134	00.8		31.6	177	24.7 ¹²¹		20.4 ⁸⁰	54		06		47	22		47	69		33	25	
22	149	00.9		32.5	191	55.8 ¹²¹		12.3 ⁸¹	56		03		47	24		38	71		41	23	
23	164	01.1		33.5	206	26.9 ¹²¹	-15	04.2 ⁸¹	58	5	01		46	25		28	73	16	50	20	
24	179	01.3	+4	34.5	220	58.0 ¹²¹	-14	55.9 ⁸³	60 S	4	57	5	46	6	27	0	16	76	17	00	18

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 11 ^h 23 ^m 4		Mag: -3.8 PMG: 10 ^h 57 ^m		Mag: +1.4 PMG: 13 ^h 39 ^m		Mag: -2.1 PMG: 13 ^h 51 ^m		Mag: +0.3 PMG: 14 ^h 17 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	188	40.3	195	47.2	-4	38.4	155	11.3	+13	31.0	151	48.4	+13	36.3	145	07.8	+14	28.3
1	203	42.8	210	46.8		37.2	170	12.0		31.6	166	50.3		36.5	160	10.0		28.3
2	218	45.3	225	46.4		36.1	185	12.7		32.3	181	52.2		36.7	175	12.1		28.4
3	233	47.7	240	46.0		34.9	200	13.4		32.9	196	54.1		36.8	190	14.3		28.5
4	248	50.2	255	45.6		33.7	215	14.1		33.5	211	56.0		37.0	205	16.5		28.6
5	263	52.7	270	45.2	-4	32.5	230	14.8	+13	34.2	226	58.0	+13	37.2	220	18.7	+14	28.7
6	278	55.1	285	44.8	-4	31.3	245	15.5	+13	34.8	241	59.9	+13	37.4	235	20.9	+14	28.8
7	293	57.6	300	44.4		30.1	260	16.2		35.4	257	01.8		37.6	250	23.1		28.9
8	309	00.0	315	44.0		28.9	275	16.9		36.1	272	03.7		37.8	265	25.3		29.0
9	324	02.5	330	43.6		27.7	290	17.6		36.7	287	05.6		37.9	280	27.4		29.0
10	339	05.0	345	43.2		26.5	305	18.3		37.3	302	07.6		38.1	295	29.6		29.1
11	354	07.4	0	42.8	-4	25.3	320	19.0	+13	37.9	317	09.5	+13	38.3	310	31.8	+14	29.2
12	9	09.9	15	42.5	-4	24.1	335	19.7	+13	38.6	332	11.4	+13	38.5	325	34.0	+14	29.3
13	24	12.4	30	42.1		22.9	350	20.4		39.2	347	13.3		38.7	340	36.2		29.4
14	39	14.8	45	41.7		21.8	5	21.1		39.8	2	15.2		38.9	355	38.4		29.5
15	54	17.3	60	41.3		20.6	20	21.8		40.5	17	17.1		39.1	10	40.5		29.6
16	69	19.8	75	40.9		19.4	35	22.5		41.1	32	19.1		39.2	25	42.7		29.7
17	84	22.2	90	40.5	-4	18.2	50	23.2	+13	41.7	47	21.0	+13	39.4	40	44.9	+14	29.8
18	99	24.7	105	40.1	-4	17.0	65	23.9	+13	42.3	62	22.9	+13	39.6	55	47.1	+14	29.8
19	114	27.1	120	39.7		15.8	80	24.7		43.0	77	24.8		39.8	70	49.3		29.9
20	129	29.6	135	39.3		14.6	95	25.4		43.6	92	26.7		40.0	85	51.5		30.0
21	144	32.1	150	39.0		13.4	110	26.1		44.2	107	28.6		40.2	100	53.6		30.1
22	159	34.5	165	38.6		12.2	125	26.8		44.8	122	30.6		40.3	115	55.8		30.2
23	174	37.0	180	38.2		11.0	140	27.5		45.5	137	32.5		40.5	130	58.0		30.3
24	189	39.5	195	37.8	-4	09.8	155	28.2	+13	46.1	152	34.4	+13	40.7	146	00.2	+14	30.4
Dif	—		-4	+12		+7	+6			+6	+19		+2		+22		+1	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG: 12 ^h 03 ^m 8			Edad: 25 ^d 8 PHE { 4 ^h : 55'8 12 ^h : 56'1 20 ^h : 56'3 PMG: 0 ^h 35 ^m R°: 47 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	179	01.3	+4 34.5	220	58.0	-14 55.9	83	60 N	18 44	19 28	20 22	5 11 16	14 09 82	
1	194	01.5	35.4	235	29.1 ¹²¹	47.6	83	58	41	22	12	5 02 19	17 79	
2	209	01.7	36.4	250	00.3 ¹²²	39.2	84	56	39	17	20 04	4 55 21	24 76	
3	224	01.9	37.4	264	31.4 ¹²¹	30.8	84	54	36	13	19 57	48 23	30 76	
4	239	02.1	38.3	279	02.6 ¹²²	22.2	86	52	34	09	50	42 25	36 72	
5	254	02.2	+4 39.3	293	33.7 ¹²¹	-14 13.6	86	50	18 32	19 05	19 45	4 36 27	14 41 70	
6	269	02.4	+4 40.3	308	04.9 ¹²²	-14 04.9	87	45	18 28	18 58	19 33	4 24 31	14 52 66	
7	284	02.6	41.2	322	36.0 ¹²¹	-13 56.1	88	40	24	52	24	14 34	15 01 63	
8	299	02.8	42.2	337	07.2 ¹²²	47.2	89	35	21	47	17	4 06 36	08 61	
9	314	03.0	43.2	351	38.4 ¹²²	38.3	89	30	19	43	11	3 58 38	15 58	
10	329	03.2	44.1	6	09.6 ¹²²	29.3	90	20	14	36	19 02	45 42	27 54	
11	344	03.4	+4 45.1	20	40.8 ¹²²	-13 20.2	91	10 N	18 11	18 32	18 56	3 34 44	15 37 50	
12	359	03.5	+4 46.0	35	12.0 ¹²²	-13 11.1	91	0	18 07	18 28	18 52	3 23 48	15 46 47	
13	14	03.7	47.0	49	43.2 ¹²²	-13 01.8	93	10 S	04	25	49	12 51	15 55 45	
14	29	03.9	48.0	64	14.4 ¹²²	-12 52.5	93	20	18 00	22	48	3 01 54	16 05 41	
15	44	04.1	48.9	78	45.6 ¹²²	43.2	93	30	17 56	20	48	2 48 57	16 37	
16	59	04.3	49.9	93	16.8 ¹²²	33.7	95	35	54	19	49	40 60	23 35	
17	74	04.5	+4 50.9	107	48.0 ¹²²	-12 24.2	95	40	17 52	18 19	18 50	2 31 62	16 30 32	
18	89	04.6	+4 51.8	122	19.3 ¹²³	-12 14.6	96	45	17 49	18 18	18 52	2 21 65	16 38 30	
19	104	04.8	52.8	136	50.5 ¹²²	-12 05.0	96	50	46	18	55	08 69	49 25	
20	119	05.0	53.7	151	21.7 ¹²²	-11 55.2	98	52	44	18	57	2 03 70	53 24	
21	134	05.2	54.7	165	53.0 ¹²³	45.4	98	54	43	18	18 59	1 56 73	16 58 22	
22	149	05.4	55.7	180	24.2 ¹²²	35.6	98	56	41	18	19 01	49 75	17 04 20	
23	164	05.6	56.6	194	55.5 ¹²³	25.6 ¹⁰⁰	99	58	39	18	03	41 77	10 18	
24	179	05.7	+4 57.6	209	26.7 ¹²²	-11 15.7	99	60 S	17 37	18 18	19 06	1 32 80	17 18 14	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 11 ^h 19 ^m 5		Mag: -3.8 PMG: 10 ^h 58 ^m		Mag: +1.4 PMG: 13 ^h 37 ^m		Mag: -2.1 PMG: 13 ^h 48 ^m		Mag: +0.3 PMG: 14 ^h 14 ^m						
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	189	39.5	195	37.8	-4 09.8	155	28.2	+13 46.1	152	34.4	+13 40.7	146	00.2	+14 30.4	
1	204	41.9	210	37.4	08.6	170	28.9	46.7	167	36.3	40.9	161	02.4	30.5	
2	219	44.4	225	37.0	07.4	185	29.6	47.3	182	38.2	41.1	176	04.6	30.5	
3	234	46.9	240	36.6	06.2	200	30.3	48.0	197	40.1	41.3	191	06.7	30.6	
4	249	49.3	255	36.2	05.0	215	31.0	48.6	212	42.1	41.4	206	08.9	30.7	
5	264	51.8	270	35.8	-4 03.8	230	31.7	+13 49.2	227	44.0	+13 41.6	221	11.1	+14 30.8	
6	279	54.3	285	35.5	-4 02.6	245	32.4	+13 49.8	242	45.9	+13 41.8	236	13.3	+14 30.9	
7	294	56.7	300	35.1	01.4	260	33.1	50.5	257	47.8	42.0	251	15.5	31.0	
8	309	59.2	315	34.7	-4 00.2	275	33.8	51.1	272	49.7	42.2	266	17.7	31.1	
9	325	01.6	330	34.3	-3 59.0	290	34.5	51.7	287	51.6	42.4	281	19.8	31.2	
10	340	04.1	345	33.9	57.8	305	35.2	52.3	302	53.5	42.5	296	22.0	31.3	
11	355	06.6	0	33.5	-3 56.6	320	35.9	+13 53.0	317	55.5	+13 42.7	311	24.2	+14 31.3	
12	10	09.0	15	33.1	-3 55.5	335	36.6	+13 53.6	332	57.4	+13 42.9	326	26.4	+14 31.4	
13	25	11.5	30	32.7	54.3	350	37.3	54.2	347	59.3	43.1	341	28.6	31.5	
14	40	14.0	45	32.4	53.1	5	38.0	54.8	3	01.2	43.3	356	30.8	31.6	
15	55	16.4	60	32.0	51.9	20	38.7	55.5	18	03.1	43.5	11	32.9	31.7	
16	70	18.9	75	31.6	50.7	35	39.4	56.1	33	05.0	43.6	26	35.1	31.8	
17	85	21.4	90	31.2	-3 49.5	50	40.1	+13 56.7	48	06.9	+13 43.8	41	37.3	+14 31.9	
18	100	23.8	105	30.8	-3 48.3	65	40.8	+13 57.3	63	08.9	+13 44.0	56	39.5	+14 32.0	
19	115	26.3	120	30.4	47.1	80	41.5	57.9	78	10.8	44.2	71	41.7	32.1	
20	130	28.8	135	30.0	45.9	95	42.2	58.6	93	12.7	44.4	86	43.9	32.1	
21	145	31.2	150	29.7	44.7	110	42.9	59.2	108	14.6	44.6	101	46.0	32.2	
22	160	33.7	165	29.3	43.5	125	43.6	+13 59.8	123	16.5	44.8	116	48.2	32.3	
23	175	36.1	180	28.9	42.3	140	44.3	+14 00.4	138	18.4	44.9	131	50.4	32.4	
24	190	38.6	195	28.5	-3 41.1	155	45.0	+14 01.0	153	20.3	+13 45.1	146	52.6	+14 32.5	
Dif	—		-4	+12		+7	+6		+19		+2		+22		+1

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16 ^h 0 PMG: 12 ^h 03 ^m 5			Edad: 26 ^d 8 PHE { 4 ^h : 56 ^m 5 12 ^h : 56 ^m 8 20 ^h : 57 ^m 0 PMG: 10 ^h 22 ^m R°: 48 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	179	05.7	+4	57.6	209	26.7	-11	15.7	60 N	3	45	4	39	5	22
1	194	05.9		58.5	223	58.0 ¹²³	-11	05.6 ¹⁰¹	58	3	54	44	25	5	27
2	209	06.1	+4	59.5	238	29.2 ¹²²	-10	55.5 ¹⁰¹	56	4	03	49	27	16	19
3	224	06.3	+5	00.5	253	00.5 ¹²³		45.3 ¹⁰²	54	10	54	30	11	21	44
4	239	06.5		01.4	267	31.7 ¹²²		35.0 ¹⁰³	52	16	4	58	32	07	23
5	254	06.7	+5	02.4	282	03.0 ¹²³	-10	24.7 ¹⁰³	50	4	22	5	01	5	03
6	269	06.9	+5	03.4	296	34.3 ¹²³	-10	14.3 ¹⁰⁴	45	4	33	5	09	4	55
7	284	07.0		04.3	311	05.5 ¹²²	-10	03.9 ¹⁰⁴	40	42	15	42	48	31	16
8	299	07.2		05.3	325	36.8 ¹²³	-9	53.4 ¹⁰⁵	35	50	20	45	42	34	09
9	314	07.4		06.2	340	08.0 ¹²²		42.8 ¹⁰⁶	30	4	56	24	48	36	37
10	329	07.6		07.2	354	39.3 ¹²³		32.2 ¹⁰⁶	20	5	05	30	53	27	40
11	344	07.8	+5	08.2	9	10.5 ¹²²	-9	21.5 ¹⁰⁷	10 N	5	11	5	35	4	18
12	359	08.0	+5	09.1	23	41.8 ¹²³	-9	10.8 ¹⁰⁷	0	5	15	5	39	4	11
13	14	08.1		10.1	38	13.0 ¹²²	-9	00.0 ¹⁰⁸	10 S	18	43	04	4	03	51
14	29	08.3		11.0	52	44.3 ¹²³	-8	49.2 ¹⁰⁸	20	20	45	07	3	55	54
15	44	08.5		12.0	67	15.5 ¹²²		38.3 ¹⁰⁹	30	20	47	11	45	59	53
16	59	08.7		12.9	81	46.7 ¹²²		27.3 ¹¹⁰	35	19	48	14	40	61	16
17	74	08.9	+5	13.9	96	18.0 ¹²³	-8	16.3 ¹¹⁰	40	5	18	5	49	3	33
18	89	09.1	+5	14.9	110	49.2 ¹²²	-8	05.2 ¹¹¹	45	5	16	5	50	3	26
19	104	09.2		15.8	125	20.4 ¹²²	-7	54.1 ¹¹¹	50	13	50	23	17	71	14
20	119	09.4		16.8	139	51.6 ¹²²		42.9 ¹¹²	52	11	50	24	13	73	17
21	134	09.6		17.7	154	22.8 ¹²²		31.7 ¹¹²	54	10	51	26	09	75	20
22	149	09.8		18.7	168	54.0 ¹²²		20.5 ¹¹²	56	07	51	28	3	04	77
23	164	10.0		19.7	183	25.2 ¹²²	-7	09.1 ¹¹⁴	58	05	51	30	2	58	80
24	179	10.1	+5	20.6	197	56.4 ¹²²	-6	57.8 ¹¹³	60 S	5	02	5	51	2	52
							</								

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG: 12 ^h 03 ^m 2			Edad: 27 ^d 8 PHE { 4 ^h : 57/2 12 ^h : 57/5 20 ^h : 57/7 R°: 48 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	179	10.1	+5 20.6	197	56.4	-6 57.8	122	60 N	18 49	19 33	20 28	5 41 13	16 54 86		
1	194	10.3		212	27.6	46.4	114	58	46	27	17	38 16	56 84		
2	209	10.5	22.5	226	58.8	34.9	115	56	43	21	09	35 18	16 58 81		
3	224	10.7	23.5	241	29.9	23.4	115	54	40	17	20 01	32 21	17 00 78		
4	239	10.9	24.4	256	01.1	11.9	115	52	38	12	19 54	30 22	02 76		
5	254	11.1	+5 25.4	270	32.2	-6 00.3	116	50	18 35	19 08	19 48	5 28 24	17 03 74		
6	269	11.2	+5 26.4	285	03.3	-5 48.6	117	45	18 31	19 00	19 36	5 23 28	17 06 70		
7	284	11.4	27.3	299	34.4	37.0	116	40	26	18 54	26	19 31	08 67		
8	299	11.6	28.3	314	05.5	25.2	118	35	23	49	19	16 33	11 63		
9	314	11.8	29.2	328	36.6	13.5	117	30	20	44	13	13 36	12 61		
10	329	12.0	30.2	343	07.7	-5 01.7	118	20	15	37	19 03	07 41	16 56		
11	344	12.2	+5 31.1	357	38.8	-4 49.9	118	10 N	18 10	18 32	18 56	5 03 44	17 19 52		
12	359	12.3	+5 32.1	12	09.8	-4 38.0	119	0	18 06	18 27	18 51	4 58 48	17 21 49		
13	14	12.5	33.0	26	40.9	26.1	119	10 S	18 03	24	48	54 52	24 45		
14	29	12.7	34.0	41	11.9	14.2	119	20	17 58	21	46	49 56	26 41		
15	44	12.9	35.0	55	42.9	-4 02.2	120	30	54	18	46	44 60	30 36		
16	59	13.1	35.9	70	13.9	-3 50.2	120	35	51	17	46	41 62	31 34		
17	74	13.2	+5 36.9	84	44.8	-3 38.1	121	40	17 49	18 16	18 47	4 37 66	17 33 31		
18	89	13.4	+5 37.8	99	15.8	-3 26.1	120	45	17 45	18 15	18 48	4 33 69	17 36 27		
19	104	13.6	38.8	113	46.7	14.0	121	50	41	14	51	28 74	38 24		
20	119	13.8	39.7	128	17.6	-3 01.8	122	52	40	13	52	26 75	39 22		
21	134	14.0	40.7	142	48.5	-2 49.7	121	54	38	13	54	24 77	41 20		
22	149	14.1	41.6	157	19.4	37.5	122	56	36	13	56	21 79	42 18		
23	164	14.3	42.6	171	50.3	25.3	122	58	33	12	18 58	18 82	44 15		
24	179	14.5	+5 43.5	186	21.1	-2 13.1	122	60 S	17 31	18 12	19 00	4 14 85	17 46 12		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 11 ^h 11 ^m 6		Mag: -3.8 PMG: 10 ^h 59 ^m			Mag: +1.4 PMG: 13 ^h 35 ^m			Mag: -2.1 PMG: 13 ^h 42 ^m			Mag: +0.3 PMG: 14 ^h 07 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	191	37.7	195	19.3	-3 12.2	156	01.8	+14 15.8	154	06.3	+13 49.5	147	44.9	+14 34.6	
1	206	40.2	210	18.9	11.0	171	02.5	16.5	169	08.2	49.7	162	47.1	34.7	
2	221	42.7	225	18.6	09.8	186	03.2	17.1	184	10.1	49.9	177	49.3	34.8	
3	236	45.1	240	18.2	08.6	201	03.9	17.7	199	12.0	50.1	192	51.4	34.9	
4	251	47.6	255	17.8	07.4	216	04.6	18.3	214	13.9	50.3	207	53.6	35.0	
5	266	50.1	270	17.4	-3 06.2	231	05.3	+14 18.9	229	15.8	+13 50.5	222	55.8	+14 35.1	
6	281	52.5	285	17.0	-3 05.0	246	06.0	+14 19.5	244	17.7	+13 50.6	237	58.0	+14 35.2	
7	296	55.0	300	16.7	03.8	261	06.7	20.1	259	19.6	50.8	253	00.2	35.3	
8	311	57.5	315	16.3	02.6	276	07.4	20.7	274	21.5	51.0	268	02.3	35.3	
9	326	59.9	330	15.9	01.4	291	08.1	21.4	289	23.5	51.2	283	04.5	35.4	
10	342	02.4	345	15.5	-3 00.2	306	08.8	22.0	304	25.4	51.4	298	06.7	35.5	
11	357	04.8	0	15.1	-2 58.9	321	09.5	+14 22.6	319	27.3	+13 51.6	313	08.9	+14 35.6	
12	12	07.3	15	14.8	-2 57.7	336	10.2	+14 23.2	334	29.2	+13 51.7	328	11.1	+14 35.7	
13	27	09.8	30	14.4	56.5	351	10.9	23.8	349	31.1	51.9	343	13.2	35.8	
14	42	12.2	45	14.0	55.3	6	11.6	24.4	4	33.0	52.1	358	15.4	35.9	
15	57	14.7	60	13.6	54.1	21	12.3	25.0	19	34.9	52.3	13	17.6	36.0	
16	72	17.2	75	13.2	52.9	36	13.0	25.6	34	36.8	52.5	28	19.8	36.1	
17	87	19.6	90	12.9	-2 51.7	51	13.7	+14 26.2	49	38.7	+13 52.7	43	22.0	+14 36.1	
18	102	22.1	105	12.5	-2 50.5	66	14.4	+14 26.9	64	40.7	+13 52.8	58	24.1	+14 36.2	
19	117	24.6	120	12.1	49.3	81	15.1	27.5	79	42.6	53.0	73	26.3	36.3	
20	132	27.0	135	11.7	48.1	96	15.8	28.1	94	44.5	53.2	88	28.5	36.4	
21	147	29.5	150	11.4	46.9	111	16.5	28.7	109	46.4	53.4	103	30.7	36.5	
22	162	32.0	165	11.0	45.7	126	17.2	29.3	124	48.3	53.6	118	32.8	36.6	
23	177	34.4	180	10.6	44.5	141	17.9	29.9	139	50.2	53.8	133	35.0	36.7	
24	192	36.9	195	10.2	-2 43.3	156	18.6	+14 30.5	154	52.1	+13 53.9	148	37.2	+14 36.8	
Dif	—		-4		+12	+7		+6	+19		+2	+22		+1	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16 ^h 0 PMG: 12 ^h 02 ^m 9			Edad: 28 ^d 8 PHE { SD: 15 ^h 7 PMG: 11 ^h 58 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora
h	°	'	°	'	°	'	°	h	m	h	m	h	m	m
0	179	14.5	+5	43.5	186	21.1	-2 13.1	60 N	3 37	4 32	5 16	5 54	13	18 20 89
1	194	14.7		44.5	200	51.9 ¹¹⁸	-2 00.8 ¹²³	58	48	38	19	54	15	20 85
2	209	14.9		45.4	215	22.7 ¹¹⁸	-1 48.5 ¹²³	56	3 57	44	22	53	18	19 82
3	224	15.0		46.4	229	53.4 ¹¹⁷	36.2 ¹²³	54	4 04	49	25	53	20	18 80
4	239	15.2		47.4	244	24.2 ¹¹⁸	23.9 ¹²³	52	11	53	28	52	22	18 77
5	254	15.4	+5	48.3	258	54.9 ¹¹⁷	-1 11.6 ¹²³	50	4 17	4 57	5 30	5 52	24	18 17 76
6	269	15.6	+5	49.3	273	25.6 ¹¹⁷	-0 59.2 ¹²⁴	45	4 29	5 05	5 35	5 51	28	18 16 71
7	284	15.8		50.2	287	56.3 ¹¹⁷	46.8 ¹²⁴	40	39	12	39	50	32	15 68
8	299	16.0		51.2	302	26.9 ¹¹⁶	34.4 ¹²⁴	35	47	17	43	49	35	14 65
9	314	16.1		52.1	316	57.5 ¹¹⁶	22.0 ¹²⁴	30	4 53	21	46	49	37	13 63
10	329	16.3		53.1	331	28.1 ¹¹⁶	-0 09.6 ¹²⁴	20	5 03	29	51	48	41	12 58
11	344	16.5	+5	54.0	345	58.6 ¹¹⁵	+0 02.8 ¹²⁴	10 N	5 10	5 34	5 55	5 47	46	18 11 53
12	359	16.7	+5	55.0	0	29.2 ¹¹⁶	+0 15.3 ¹²⁵	0	5 15	5 39	6 00	5 46	50	18 10 50
13	14	16.9		55.9	14	59.7 ¹¹⁵	27.7 ¹²⁴	10 S	18	43	04	46	53	09 46
14	29	17.0		56.9	29	30.1 ¹¹⁴	40.2 ¹²⁵	20	20	46	08	45	57	07 42
15	44	17.2		57.8	44	00.6 ¹¹⁵	+0 52.7 ¹²⁵	30	21	49	13	44	62	06 38
16	59	17.4		58.8	58	31.0 ¹¹⁴	+1 05.1 ¹²⁴	35	21	50	15	43	65	05 35
17	74	17.6	+5	59.7	73	01.3 ¹¹³	+1 17.6 ¹²⁵	40	5 20	5 51	6 18	5 43	67	18 04 32
18	89	17.8	+6	00.7	87	31.7 ¹¹⁴	+1 30.1 ¹²⁵	45	5 18	5 52	6 22	5 42	71	18 03 29
19	104	17.9		01.6	102	02.0 ¹¹³	42.6 ¹²⁵	50	16	53	26	42	75	02 25
20	119	18.1		02.6	116	32.2 ¹¹²	+1 55.1 ¹²⁵	52	15	54	28	41	77	01 23
21	134	18.3		03.5	131	02.5 ¹¹³	+2 07.6 ¹²⁵	54	13	54	30	41	79	01 21
22	149	18.5		04.5	145	32.7 ¹¹²	20.1 ¹²⁵	56	11	55	32	40	82	18 00 19
23	164	18.6		05.4	160	02.8 ¹¹¹	32.6 ¹²⁵	58	09	55	34	40	84	17 59 16
24	179	18.8	+6	06.4	174	33.0 ¹¹²	+2 45.1 ¹²⁵	60 S	5 07	5 55	6 37	5 39	88	17 58 14

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 11 ^h 07 ^m 7		Mag: -3.8 PMG: 11 ^h 00 ^m		Mag: +1.4 PMG: 13 ^h 34 ^m		Mag: -2.1 PMG: 13 ^h 39 ^m		Mag: +0.3 PMG: 14 ^h 03 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	192	36.9	195	10.2	-2 43.3	156	18.6	+14 30.5	154	52.1	+13 53.9
1	207	39.3	210	09.8	42.0	171	19.3	31.1	169	54.0	54.1
2	222	41.8	225	09.5	40.8	186	20.0	31.7	184	55.9	54.3
3	237	44.3	240	09.1	39.6	201	20.7	32.3	199	57.8	54.5
4	252	46.7	255	08.7	38.4	216	21.4	32.9	214	59.8	54.7
5	267	49.2	270	08.3	-2 37.2	231	22.1	+14 33.5	230	01.7	+13 54.9
6	282	51.7	285	08.0	-2 36.0	246	22.8	+14 34.2	245	03.6	+13 55.0
7	297	54.1	300	07.6	34.8	261	23.5	34.8	260	05.5	55.2
8	312	56.6	315	07.2	33.6	276	24.2	35.4	275	07.4	55.4
9	327	59.1	330	06.8	32.4	291	24.9	36.0	290	09.3	55.6
10	343	01.5	345	06.4	31.2	306	25.6	36.6	305	11.2	55.8
11	358	04.0	0 06.1	-2 30.0	32.1	321	26.3	+14 37.2	320	13.1	+13 56.0
12	13	06.4	15	05.7	-2 28.7	336	27.0	+14 37.8	335	15.0	+13 56.1
13	28	08.9	30	05.3	27.5	351	27.7	38.4	350	16.9	56.3
14	43	11.4	45	04.9	26.3	6	28.4	39.0	5	18.8	56.5
15	58	13.8	60	04.6	25.1	21	29.1	39.6	20	20.7	56.7
16	73	16.3	75	04.2	23.9	36	29.8	40.2	35	22.7	56.9
17	88	18.8	90	03.8	-2 22.7	51	30.5	+14 40.8	50	24.6	+13 57.1
18	103	21.2	105	03.4	-2 21.5	66	31.2	+14 41.4	65	26.5	+13 57.3
19	118	23.7	120	03.1	20.3	81	31.9	42.0	80	28.4	57.4
20	133	26.2	135	02.7	19.1	96	32.6	42.6	95	30.3	57.6
21	148	28.6	150	02.3	17.8	111	33.2	43.2	110	32.2	57.8
22	163	31.1	165	01.9	16.6	126	33.9	43.8	125	34.1	58.0
23	178	33.6	180	01.6	15.4	141	34.6	44.4	140	36.0	58.2
24	193	36.0	195	01.2	-2 14.2	156	35.3	+14 45.0	155	37.9	+13 58.4
Dif	—		-4 +12		+7 +6		+19 +2		+22 +1		

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna				
	SD: 16'0 PMG: 12 ^h 02 ^m 6			Edad: 29 ^d 8 PHE { 4 ^h : 58'5 12 ^h : 58'7 20 ^h : 58'8 R°: 51 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	°	'	°	'	h	m	h	m	h	m	m	h	m	m
0	179	18.8	+6 06.4	174	33.0	+2 45.1	60 N	18 54	19 38	20 34	6 07 15		19 49 90				
1	194	19.0		189	03.1 ¹¹¹	+2 57.5 ¹²⁴	58	50	31	23	09 18		45 86				
2	209	19.2		203	33.1 ¹¹⁰	+3 10.0 ¹²⁵	56	47	26	14	11 20		41 84				
3	224	19.4		218	03.1 ¹¹⁰	22.5 ¹²⁵	54	44	20	20 05	13 22		38 82				
4	239	19.5		232	33.1 ¹¹⁰	35.0 ¹²⁵	52	41	16	19 58	14 24		35 80				
5	254	19.7	+6 11.1	247	03.0 ¹⁰⁹	+3 47.4 ¹²⁴	50	18 39	19 12	19 52	6 16 26		19 33 77				
6	269	19.9	+6 12.1	261	32.9 ¹⁰⁹	+3 59.9 ¹²⁵	45	18 33	19 03	19 39	6 19 30		19 27 74				
7	284	20.1		276	02.8 ¹⁰⁹	+4 12.3 ¹²⁴	40	29	18 56	29	22 33		23 70				
8	299	20.3		290	32.6 ¹⁰⁸	24.7 ¹²⁴	35	25	50	21	24 36		19 67				
9	314	20.4		305	02.4 ¹⁰⁸	37.1 ¹²⁴	30	21	45	14	26 39		16 64				
10	329	20.6		319	32.1 ¹⁰⁷	+4 49.5 ¹²⁴	20	15	38	19 04	29 44		10 59				
11	344	20.8	+6 16.8	334	01.8 ¹⁰⁷	+5 01.9 ¹²⁴	10 N	18 10	18 32	18 56	6 33 47		19 04 56				
12	359	21.0	+6 17.7	348	31.4 ¹⁰⁶	+5 14.2 ¹²³	0	18 06	18 27	18 51	6 36 50		19 00 51				
13	14	21.1		3	01.0 ¹⁰⁶	26.6 ¹²⁴	10 S	18 01	23	47	39 54		18 55 48				
14	29	21.3		17	30.6 ¹⁰⁶	38.9 ¹²³	20	17 57	19	44	42 59		49 45				
15	44	21.5		32	00.1 ¹⁰⁵	+5 51.2 ¹²³	30	52	16	43	46 63		44 40				
16	59	21.7		46	29.6 ¹⁰⁵	+6 03.5 ¹²³	35	49	14	43	48 66		40 38				
17	74	21.9	+6 22.5	60	59.0 ¹⁰⁴	+6 15.7 ¹²²	40	17 45	18 12	18 44	6 50 69		18 36 35				
18	89	22.0	+6 23.4	75	28.4 ¹⁰⁴	+6 27.9 ¹²²	45	17 42	18 11	18 45	6 53 73		18 32 31				
19	104	22.2		89	57.7 ¹⁰³	40.1 ¹²²	50	37	09	47	57 77		27 27				
20	119	22.4		104	27.0 ¹⁰³	+6 52.3 ¹²²	52	35	09	48	6 58 79		24 25				
21	134	22.6		118	56.2 ¹⁰²	+7 04.4 ¹²¹	54	33	08	49	7 00 81		22 23				
22	149	22.7		133	25.4 ¹⁰²	16.5 ¹²¹	56	30	08	50	02 84		19 21				
23	164	22.9		147	54.5 ¹⁰¹	28.6 ¹²¹	58	28	07	52	04 86		15 19				
24	179	23.1	+6 29.1	162	23.6 ¹⁰¹	+7 40.6 ¹²⁰	60 S	17 25	18 06	18 54	7 07 89		18 12 15				

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 11 ^h 03 ^m 8		Mag: -3.8 PMG: 11 ^h 00 ^m		Mag: +1.4 PMG: 13 ^h 33 ^m		Mag: -2.1 PMG: 13 ^h 36 ^m		Mag: +0.3 PMG: 14 ^h 00 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	193	36.0	195	01.2	-2	14.2	155	37.9	+13	58.4	149	29.4	+14	38.9
1	208	38.5	210	00.8		13.0	170	39.8		58.5	164	31.6		39.0
2	223	40.9	225	00.4		11.8	185	41.7		58.7	179	33.8		39.1
3	238	43.4	240	00.1		10.6	201	37.4		46.8	194	36.0		39.2
4	253	45.9	254	59.7		09.4	216	38.1		47.4	209	38.1		39.3
5	268	48.3	269	59.3	-2	08.2	231	38.8	+14	48.0	224	40.3	+14	39.4
6	283	50.8	284	58.9	-2	06.9	246	39.5	+14	48.6	245	49.4	+13	59.5
7	298	53.3	299	58.6		05.7	261	40.2		49.2	260	51.3		59.6
8	313	55.7	314	58.2		04.5	276	40.9		49.8	275	53.2	+13	59.8
9	328	58.2	329	57.8		03.3	291	41.6		50.4	290	55.1	+14	00.0
10	344	00.7	344	57.4		02.1	306	42.3		51.0	305	57.0	+14	00.2
11	359	03.1	359	57.1	-2	00.9	321	43.0	+14	51.6	320	58.9	+14	00.4
12	14	05.6	14	56.7	-1	59.7	336	43.7	+14	52.2	336	00.8	+14	00.6
13	29	08.0	29	56.3		58.4	351	44.4		52.8	351	02.7		00.7
14	44	10.5	44	55.9		57.2	6	45.1		53.4	6	04.6		00.9
15	59	13.0	59	55.6		56.0	21	45.8		54.0	21	06.5		01.1
16	74	15.4	74	55.2		54.8	36	46.5		54.6	36	08.4		01.3
17	89	17.9	89	54.8	-1	53.6	51	47.1	+14	55.2	51	10.3	+14	01.5
18	104	20.4	104	54.5	-1	52.4	66	47.8	+14	55.8	66	12.2	+14	01.7
19	119	22.8	119	54.1		51.2	81	48.5		56.4	81	14.2		01.8
20	134	25.3	134	53.7		50.0	96	49.2		57.0	96	16.1		02.0
21	149	27.8	149	53.3		48.7	111	49.9		57.6	111	18.0		02.2
22	164	30.2	164	53.0		47.5	126	50.6		58.2	126	19.9		02.4
23	179	32.7	179	52.6		46.3	141	51.3		58.8	141	21.8		02.6
24	194	35.2	194	52.2	-1	45.1	156	52.0	+14	59.4	156	23.7	+14	02.8
Dif	—		-4	+12		+7	+6		+19	+2		+22		+1

UT	SOL		● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'0		Edad: 1 ^d 2	PHE { 4 ^h : 59'0 12 ^h : 59'1 20 ^h : 59'2	SD: 16'0			R°: 54 ^m							
	PMG: 12 ^h 02 ^m 3				PMG: 13 ^h 39 ^m										
	hG ☉	Dec	hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	179	23.1	+6	29.1	162	23.6	+7 40.6	60 N	3 30	4 26	5 10	6 22	17	21 19	90
1	194	23.3		30.0	176	52.6 ¹⁰⁰	+7 52.6 ¹²⁰	58	41	32	13	27	20	11	87
2	209	23.5		31.0	191	21.6 ¹⁰⁰	+8 04.6 ¹²⁰	56	50	38	17	31	23	05	88
3	224	23.6		31.9	205	50.5 ⁹⁹	16.5 ¹¹⁹	54	3 59	44	20	35	25	21	00
4	239	23.8		32.9	220	19.3 ⁹⁸	28.4 ¹¹⁹	52	4 06	48	23	38	28	20	55
5	254	24.0	+6	33.8	234	48.2 ⁹⁹	+8 40.2 ¹¹⁸	50	4 12	4 52	5 26	6 42	29	20	50
6	269	24.2	+6	34.8	249	16.9 ⁹⁷	+8 52.0 ¹¹⁸	45	4 25	5 01	5 31	6 49	33	20	41
7	284	24.3		35.7	263	45.6 ⁹⁷	+9 03.8 ¹¹⁸	40	36	08	36	6 55	36	33	70
8	299	24.5		36.6	278	14.3 ⁹⁷	15.5 ¹¹⁷	35	44	14	40	7 00	39	26	67
9	314	24.7		37.6	292	42.9 ⁹⁶	27.1 ¹¹⁶	30	4 51	19	43	05	41	20	65
10	329	24.9		38.5	307	11.4 ⁹⁵	38.8 ¹¹⁷	20	5 01	27	49	13	46	09	61
11	344	25.0	+6	39.5	321	39.9 ⁹⁵	+9 50.3 ¹¹⁵	10 N	5 09	5 33	5 54	7 20	49	20	00
12	359	25.2	+6	40.4	336	08.4 ⁹⁵	+10 01.8 ¹¹⁵	0	5 14	5 38	5 59	7 26	54	19	51
13	14	25.4		41.4	350	36.8 ⁹⁴	13.3 ¹¹⁵	10 S	18	43	6 04	33	57	43	51
14	29	25.6		42.3	5	05.1 ⁹³	24.7 ¹¹⁴	20	21	46	08	41	60	34	48
15	44	25.7		43.2	19	33.4 ⁹³	36.1 ¹¹⁴	30	22	50	14	49	65	24	43
16	59	25.9		44.2	34	01.6 ⁹²	47.4 ¹¹³	35	22	51	17	54	67	18	41
17	74	26.1	+6	45.1	48	29.7 ⁹¹	+10 58.6 ¹¹²	40	5 22	5 53	6 20	7 59	70	19	11
18	89	26.3	+6	46.1	62	57.8 ⁹¹	+11 09.8 ¹¹²	45	5 21	5 55	6 24	8 06	73	19	03
19	104	26.4		47.0	77	25.9 ⁹¹	20.9 ¹¹¹	50	19	56	29	14	77	18	54
20	119	26.6		47.9	91	53.9 ⁹⁰	32.0 ¹¹¹	52	18	57	31	17	80	49	30
21	134	26.8		48.9	106	21.8 ⁸⁹	43.0 ¹¹⁰	54	17	58	33	21	82	45	27
22	149	27.0		49.8	120	49.6 ⁸⁸	+11 53.9 ¹⁰⁹	56	15	58	36	26	84	40	25
23	164	27.1		50.8	135	17.5 ⁸⁹	+12 04.8 ¹⁰⁹	58	14	5 59	39	30	88	34	22
24	179	27.3	+6	51.7	149	45.2 ⁸⁷	+12 15.5 ¹⁰⁷	60 S	5 12	6 00	6 42	8 36	91	18	27

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 10 ^h 59 ^m 8		Mag: -3.8 PMG: 11 ^h 01 ^m		Mag: +1.4 PMG: 13 ^h 32 ^m		Mag: -2.1 PMG: 13 ^h 33 ^m		Mag: +0.3 PMG: 13 ^h 57 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	194	35.2	194	52.2	-1	45.1	156	23.7	+14	02.8	
1	209	37.6	209	51.8		43.9	171	25.6		02.9	
2	224	40.1	224	51.5		42.7	186	27.5		03.1	
3	239	42.5	239	51.1		41.5	201	29.4		03.3	
4	254	45.0	254	50.7		40.2	216	31.3		03.5	
5	269	47.5	269	50.4	-1	39.0	231	33.2	+14	03.7	
6	284	49.9	284	50.0	-1	37.8	246	35.1	+14	03.9	
7	299	52.4	299	49.6		36.6	261	37.0		04.0	
8	314	54.9	314	49.2		35.4	276	38.9		04.2	
9	329	57.3	329	48.9		34.2	291	40.8		04.4	
10	344	59.8	344	48.5		32.9	306	42.7		04.6	
11	0	02.3	359	48.1	-1	31.7	321	44.6	+14	04.8	
12	15	04.7	14	47.7	-1	30.5	336	46.5	+14	05.0	
13	30	07.2	29	47.4		29.3	351	48.4		05.1	
14	45	09.7	44	47.0		28.1	6	50.4		05.3	
15	60	12.1	59	46.6		26.9	21	52.3		05.5	
16	75	14.6	74	46.3		25.6	36	54.2		05.7	
17	90	17.0	89	45.9	-1	24.4	51	56.1	+14	05.9	
18	105	19.5	104	45.5	-1	23.2	66	58.0	+14	06.1	
19	120	22.0	119	45.1		22.0	81	59.9		06.2	
20	135	24.4	134	44.8		20.8	97	01.8		06.4	
21	150	26.9	149	44.4		19.6	112	03.7		06.6	
22	165	29.4	164	44.0		18.4	127	05.6		06.8	
23	180	31.8	179	43.7		17.1	142	07.5		07.0	
24	195	34.3	194	43.3	-1	15.9	157	09.4	+14	07.2	
Dif	—		-4	+12		+7	+6	+19		+2	
										+22	+1

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna			
	SD: 16:0 PMG: 12 ^h 02 ^m 0			Edad: 2 ^d 2 PHE	SD: 16:1 PMG: 14 ^h 33 ^m	4 ^h : 59/3 12 ^h : 59/4 20 ^h : 59/5 R°: 56 ^m											
	hG ☉	Dec							hG ☾	Dif	Dec	Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m
0	179	27.3	+6	51.7	149	45.2	+12 15.5	60 N	18 59	19 43	20 40	6 39 23	22 49 87				
1	194	27.5		52.6	164	12.9	87 26.3	58	55	36	29	47 26	38 84				
2	209	27.7		53.6	178	40.5	86 36.9	56	51	30	19	6 54 28	29 82				
3	224	27.8		54.5	193	08.1	86 47.5	54	48	24	10	7 00 31	21 80				
4	239	28.0		55.5	207	35.6	85 +12 58.0	52	44	20	20 02	06 33	14 78				
5	254	28.2	+6	56.4	222	03.1	85 +13 08.5	50	18 42	19 15	19 56	7 11 34	22 08 76				
6	269	28.4	+6	57.3	236	30.5	84 +13 18.8	45	18 36	19 06	19 42	7 22 38	21 54 72				
7	284	28.5		58.3	250	57.8	83 29.1	40	31	18 58	31	31 42	43 69				
8	299	28.7	+6	59.2	265	25.1	83 39.3	35	26	52	22	39 44	33 68				
9	314	28.9	+7	00.2	279	52.3	82 49.5	30	22	47	15	46 46	25 65				
10	329	29.1		01.1	294	19.4	81 +13 59.5	20	16	38	19 04	7 59 49	21 10 63				
11	344	29.2	+7	02.0	308	46.5	81 +14 09.5	10 N	18 10	18 32	18 56	8 09 53	20 58 59				
12	359	29.4	+7	03.0	323	13.6	81 +14 19.3	0	18 05	18 26	18 50	8 20 55	20 46 57				
13	14	29.6		03.9	337	40.6	80 29.1	10 S	18 00	21	46	30 59	34 54				
14	29	29.8		04.8	352	07.5	79 38.9	20	17 55	17	43	41 62	22 51				
15	44	29.9		05.8	6	34.3	78 48.5	30	49	13	41	8 54 65	20 07 48				
16	59	30.1		06.7	21	01.1	78 +14 58.0	35	46	11	41	9 01 68	19 59 46				
17	74	30.3	+7	07.7	35	27.9	78 +15 07.4	40	17 42	18 09	18 41	9 09 71	19 50 43				
18	89	30.5	+7	08.6	49	54.6	77 +15 16.8	45	17 38	18 07	18 41	9 19 74	19 39 41				
19	104	30.6		09.5	64	21.2	76 26.1	50	33	05	43	31 78	25 38				
20	119	30.8		10.5	78	47.7	75 35.2	52	31	04	43	37 79	19 36				
21	134	31.0		11.4	93	14.3	76 44.3	54	28	04	44	43 81	12 35				
22	149	31.1		12.3	107	40.7	74 +15 53.3	56	25	03	45	50 84	19 05 32				
23	164	31.3		13.3	122	07.1	74 +16 02.1	58	22	02	47	9 58 86	18 56 30				
24	179	31.5	+7	14.2	136	33.4	73 +16 10.9	60 S	17 19	18 01	18 48	10 07 89	18 47 26				

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 10 ^h 55 ^m 9		Mag: -3.8 PMG: 11 ^h 01 ^m		Mag: +1.4 PMG: 13 ^h 31 ^m		Mag: -2.1 PMG: 13 ^h 30 ^m		Mag: +0.3 PMG: 13 ^h 53 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	195	34.3	194	43.3	-1	15.9	157	08.6	+15	13.6
1	210	36.8	209	42.9		14.7	172	09.3		14.2
2	225	39.2	224	42.6		13.5	187	10.0		14.8
3	240	41.7	239	42.2		12.3	202	10.7		15.4
4	255	44.1	254	41.8		11.0	217	11.4		16.0
5	270	46.6	269	41.4	-1	09.8	232	12.1	+15	16.6
6	285	49.1	284	41.1	-1	08.6	247	12.8	+15	17.2
7	300	51.5	299	40.7		07.4	262	13.5		17.7
8	315	54.0	314	40.3		06.2	277	14.2		18.3
9	330	56.5	329	40.0		05.0	292	14.8		18.9
10	345	58.9	344	39.6		03.7	307	15.5		19.5
11	1	01.4	359	39.2	-1	02.5	322	16.2	+15	20.1
12	16	03.9	14	38.9	-1	01.3	337	16.9	+15	20.7
13	31	06.3	29	38.5	-1	00.1	352	17.6		21.3
14	46	08.8	44	38.1	-0	58.9	7	18.3		21.9
15	61	11.3	59	37.7		57.7	22	19.0		22.4
16	76	13.7	74	37.4		56.4	37	19.7		23.0
17	91	16.2	89	37.0	-0	55.2	52	20.4	+15	23.6
18	106	18.6	104	36.6	-0	54.0	67	21.1	+15	24.2
19	121	21.1	119	36.3		52.8	82	21.8		24.8
20	136	23.6	134	35.9		51.6	97	22.4		25.4
21	151	26.0	149	35.5		50.3	112	23.1		26.0
22	166	28.5	164	35.2		49.1	127	23.8		26.5
23	181	31.0	179	34.8		47.9	142	24.5		27.1
24	196	33.4	194	34.4	-0	46.7	157	25.2	+15	27.7
Dif	—		-4		+12		+7		+6	
									+19	+2
										+22
										+1

UT	SOL			● LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16/0 PMG: 12 ^h 01 ^m 8			Edad: 3 ^d 2 PHE { 4 ^h : 59/5 12 ^h : 59/5 20 ^h : 59/5 PMG: 15 ^h 29 ^m R°: 58 ^m															
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Náutico	Civil		Hora	R°	Hora	R°			
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m	m		
0	179	31.5	+7	14.2	136	33.4	+16	10.9	60 N	3	22	4	19	5	04	7	02	31	
1	194	31.7			150	59.7	73	19.6	58		34		27		08	13	34	*** ** *	
2	209	31.8			165	25.9	72	28.1	56		44		33		12	22	37	23 51 74	
3	224	32.0			179	52.1	72	36.6	54	3	53		38		15	31	39	41 72	
4	239	32.2			194	18.2	71	45.0	52	4	01		43		18	39	40	32 71	
5	254	32.4	+7	18.9	208	44.2	70	+16	53.2	50	4	07	4	48	5	21	7	45	23 24 70
6	269	32.5	+7	19.8	223	10.2	70	+17	01.4	45	4	21	4	57	5	28	8	00	23 06 69
7	284	32.7			237	36.2	70		09.4	40		32	5	05		33	13	47	22 52 67
8	299	32.9			252	02.1	69		17.4	35		41		11		37	23	49	41 65
9	314	33.0			266	27.9	68		25.2	30		48		17		41	32	51	30 64
10	329	33.2			280	53.7	68		32.9	20	4	59		25		48	8	48	22 13 62
11	344	33.4	+7	24.5	295	19.4	67	+17	40.5	10 N	5	07	5	32	5	53	9	02	21 57 60
12	359	33.6	+7	25.4	309	45.1	67	+17	48.0	0	5	13	5	38	5	58	9	15	21 43 58
13	14	33.7			324	10.7	66	+17	55.4	10 S		18		42	6	04	29	60	28 57
14	29	33.9			338	36.3	66	+18	02.6	20		21		47		09	43	62	21 13 55
15	44	34.1			353	01.8	65		09.8	30		23		51		15	9	59	20 55 54
16	59	34.2			7	27.3	65		16.8	35		24		53		18	10	09	45 52
17	74	34.4	+7	30.1	21	52.7	64	+18	23.7	40	5	24	5	55	6	22	10	20	20 33 51
18	89	34.6	+7	31.0	36	18.1	64	+18	30.5	45	5	23	5	57	6	27	10	33	20 20 48
19	104	34.8			50	43.4	63		37.1	50		22		59		32	49	73	20 03 46
20	119	34.9			65	08.7	63		43.7	52		21	6	00		34	10	56	19 55 45
21	134	35.1			79	33.9	62		50.1	54		20		01		37	11	04	47 43
22	149	35.3			93	59.1	62	+18	56.4	56		19		02		40	14	78	37 42
23	164	35.4			108	24.3	62	+19	02.6	58		18		03		43	24	81	26 39
24	179	35.6	+7	36.6	122	49.4	61	+19	08.6	60 S	5	16	6	05	6	47	11	36	19 13 37
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 10 ^h 52 ^m 0		Mag: -3.8 PMG: 11 ^h 02 ^m			Mag: +1.5 PMG: 13 ^h 30 ^m			Mag: -2.1 PMG: 13 ^h 27 ^m			Mag: +0.3 PMG: 13 ^h 50 ^m							
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		hG ♅	Dec			
h	°	'	°	°	'	°	'	°	°	'	°	°	'	°	°	'	°		
0	196	33.4		194	34.4	-0	157	25.2	+15	157	55.1	+14	152	05.9	+14	152	05.9	45.4	
1	211	35.9		209	34.1		172	25.9		172	57.0		167	08.1		167	08.1	45.5	
2	226	38.4		224	33.7		187	26.6		187	58.9		182	10.3		182	10.3	45.5	
3	241	40.8		239	33.3		202	27.3		203	00.8		197	12.4		197	12.4	45.6	
4	256	43.3		254	32.9		217	28.0		218	02.7		212	14.6		212	14.6	45.7	
5	271	45.8		269	32.6	-0	232	28.6	+15	233	04.6	+14	227	16.8	+14	227	16.8	45.8	
6	286	48.2		284	32.2	-0	247	29.3	+15	248	06.5	+14	242	18.9	+14	242	18.9	45.9	
7	301	50.7		299	31.8		262	30.0		263	08.4		257	21.1		257	21.1	46.0	
8	316	53.1		314	31.5		277	30.7		278	10.3		272	23.3		272	23.3	46.1	
9	331	55.6		329	31.1		292	31.4		293	12.2		287	25.5		287	25.5	46.2	
10	346	58.1		344	30.7		307	32.1		308	14.1		302	27.6		302	27.6	46.3	
11	2	00.5		359	30.4	-0	322	32.8	+15	323	16.0	+14	317	29.8	+14	317	29.8	46.4	
12	17	03.0		14	30.0	-0	337	33.5	+15	338	17.9	+14	332	32.0	+14	332	32.0	46.4	
13	32	05.5		29	29.6		352	34.2		353	19.8		347	34.1		347	34.1	46.5	
14	47	07.9		44	29.3		7	34.8		8	21.7		2	36.3		2	36.3	46.6	
15	62	10.4		59	28.9		22	35.5		23	23.6		17	38.5		17	38.5	46.7	
16	77	12.9		74	28.5		37	36.2		38	25.5		32	40.6		32	40.6	46.8	
17	92	15.3		89	28.2	-0	52	36.9	+15	53	27.4	+14	47	42.8	+14	47	42.8	46.9	
18	107	17.8		104	27.8	-0	67	37.6	+15	68	29.3	+14	62	45.0	+14	62	45.0	47.0	
19	122	20.2		119	27.4		82	38.3		83	31.2		77	47.2		77	47.2	47.1	
20	137	22.7		134	27.1		97	39.0		98	33.1		92	49.3		92	49.3	47.2	
21	152	25.2		149	26.7		112	39.7		113	35.0		107	51.5		107	51.5	47.3	
22	167	27.6		164	26.3		127	40.4		128	36.9		122	53.7		122	53.7	47.3	
23	182	30.1		179	26.0		142	41.0		143	38.8		137	55.8		137	55.8	47.4	
24	197	32.6		194	25.6	-0	157	41.7	+15	158	40.7	+14	152	58.0	+14	152	58.0	47.5	
Dif	—		-4		+12	+7		+6	+19		+2		+22		+1				

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 16'0 PMG: 12 ^h 01 ^m 5			Edad: 4 ^d 2 PHE { 4 ^h : 59'5 12 ^h : 59'5 20 ^h : 59'5 PMG: 16 ^h 27 ^m R°: 60 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m				
0	179	35.6	+7 36.6	122	49.4	+19 08.6	60 N	19 04	19 49	20 47	7 33 45	0 16 78					
1	194	35.8		137	14.5	14.6	60	58	18 59	41	34	47 47	0 02 76				
2	209	35.9	38.4	151	39.5	20.4	58	56	55	34	24	7 59 48	** ** *				
3	224	36.1	39.4	166	04.5	26.0	56	54	51	28	15	8 10 49	** ** *				
4	239	36.3	40.3	180	29.4	31.6	56	52	48	23	20 06	19 50	** ** *				
5	254	36.5	+7 41.2	194	54.3	+19 37.0	54	50	18 45	19 18	19 59	8 27 51	** ** *				
6	269	36.6	+7 42.2	209	19.2	+19 42.3	53	45	18 38	19 08	19 45	8 45 53	** ** *				
7	284	36.8	43.1	223	44.0	47.4	51	40	33	19 00	33	9 00 53	23 59 61				
8	299	37.0	44.0	238	08.8	52.4	50	35	28	18 54	24	12 55	46 61				
9	314	37.1	44.9	252	33.6	+19 57.3	49	30	24	48	17	23 56	34 61				
10	329	37.3	45.9	266	58.3	+20 02.1	48	20	17	39	19 05	42 57	23 15 60				
11	344	37.5	+7 46.8	281	23.0	+20 06.7	46	10 N	18 10	18 32	18 56	9 58 58	22 57 60				
12	359	37.6	+7 47.7	295	47.7	+20 11.1	44	0	18 05	18 26	18 50	10 13 60	22 41 60				
13	14	37.8	48.6	310	12.3	15.5	44	10 S	17 59	20	45	29 60	25 59				
14	29	38.0	49.6	324	36.9	19.7	42	20	53	16	41	10 45 62	22 08 59				
15	44	38.1	50.5	339	01.5	23.8	41	30	47	11	39	11 04 63	21 49 57				
16	59	38.3	51.4	353	26.1	27.7	39	35	43	09	38	15 64	37 58				
17	74	38.5	+7 52.3	7	50.6	+20 31.5	38	40	17 39	18 06	18 38	11 28 64	21 24 57				
18	89	38.6	+7 53.3	22	15.1	+20 35.2	37	45	17 34	18 04	18 38	11 43 65	21 08 57				
19	104	38.8	54.2	36	39.6	38.7	35	50	29	01	39	12 02 66	20 49 56				
20	119	39.0	55.1	51	04.1	42.1	34	52	26	18 00	39	11 67	40 55				
21	134	39.2	56.1	65	28.5	45.3	32	54	23	17 59	40	21 67	30 55				
22	149	39.3	57.0	79	52.9	48.4	31	56	20	58	40	32 69	19 54				
23	164	39.5	57.9	94	17.4	51.4	30	58	17	56	42	12 45 69	20 05 54				
24	179	39.7	+7 58.8	108	41.7	+20 54.2	28	60 S	17 13	17 55	18 43	13 00 71	19 50 52				

UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO				
	PMG: 10 ^h 48 ^m 1		Mag: -3.8 PMG: 11 ^h 03 ^m		Mag: +1.5 PMG: 13 ^h 29 ^m		Mag: -2.1 PMG: 13 ^h 24 ^m			Mag: +0.3 PMG: 13 ^h 46 ^m				
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'		
0	197	32.6	194	25.6	-0 17.4	157	41.7	+15 41.6	158	40.7	+14 16.0	152	58.0	+14 47.5
1	212	35.0	209	25.2	16.2	172	42.4	42.2	173	42.6	16.1	168	00.2	47.6
2	227	37.5	224	24.9	15.0	187	43.1	42.8	188	44.5	16.3	183	02.3	47.7
3	242	40.0	239	24.5	13.8	202	43.8	43.4	203	46.4	16.5	198	04.5	47.8
4	257	42.4	254	24.1	12.5	217	44.5	43.9	218	48.3	16.7	213	06.7	47.9
5	272	44.9	269	23.7	-0 11.3	232	45.2	+15 44.5	233	50.2	+14 16.9	228	08.8	+14 48.0
6	287	47.4	284	23.4	-0 10.1	247	45.8	+15 45.1	248	52.1	+14 17.1	243	11.0	+14 48.1
7	302	49.8	299	23.0	08.9	262	46.5	45.7	263	54.0	17.2	258	13.2	48.2
8	317	52.3	314	22.6	07.7	277	47.2	46.2	278	55.9	17.4	273	15.4	48.2
9	332	54.7	329	22.3	06.4	292	47.9	46.8	293	57.8	17.6	288	17.5	48.3
10	347	57.2	344	21.9	05.2	307	48.6	47.4	308	59.7	17.8	303	19.7	48.4
11	2	59.7	359	21.5	-0 04.0	322	49.3	+15 48.0	324	01.6	+14 18.0	318	21.9	+14 48.5
12	18	02.1	14	21.2	-0 02.8	337	50.0	+15 48.5	339	03.5	+14 18.2	333	24.0	+14 48.6
13	33	04.6	29	20.8	01.6	352	50.7	49.1	354	05.4	18.3	348	26.2	48.7
14	48	07.1	44	20.4	-0 00.3	7	51.3	49.7	9	07.3	18.5	3	28.4	48.8
15	63	09.5	59	20.1	+0 00.9	22	52.0	50.3	24	09.2	18.7	18	30.5	48.9
16	78	12.0	74	19.7	02.1	37	52.7	50.8	39	11.1	18.9	33	32.7	49.0
17	93	14.5	89	19.3	+0 03.3	52	53.4	+15 51.4	54	13.0	+14 19.1	48	34.9	+14 49.1
18	108	16.9	104	19.0	+0 04.5	67	54.1	+15 52.0	69	14.9	+14 19.3	63	37.0	+14 49.1
19	123	19.4	119	18.6	05.8	82	54.8	52.5	84	16.8	19.4	78	39.2	49.2
20	138	21.9	134	18.2	07.0	97	55.5	53.1	99	18.7	19.6	93	41.4	49.3
21	153	24.3	149	17.9	08.2	112	56.1	53.7	114	20.6	19.8	108	43.5	49.4
22	168	26.8	164	17.5	09.4	127	56.8	54.3	129	22.5	20.0	123	45.7	49.5
23	183	29.2	179	17.1	10.7	142	57.5	54.8	144	24.4	20.2	138	47.9	49.6
24	198	31.7	194	16.8	+0 11.9	157	58.2	+15 55.4	159	26.3	+14 20.4	153	50.0	+14 49.7
Dif	—		-4	+12		+7	+6		+19	+2		+22	+1	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16/0 PMG: 12 ^h 01 ^m 2			Edad: 5 ^d 2	PHE { 4 ^h : 59/4 12 ^h : 59/4 20 ^h : 59/3 R°: 59 ^m										
	hG ☉	Dec				hG ☾		Dif	Dec		Dif	Náutico	Civil	Hora	R°
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	179	39.7	+7 58.8	108	41.7	+20 54.2	27	60 N	3 15	4 13	4 58	8 18	60	1 34	62
1	194	39.8	+7 59.7	123	06.1	54	56.9	58	27	21	5 02	34	60	18	63
2	209	40.0	+8 00.7	137	30.5	54	26	56	38	27	07	47	60	1 05	62
3	224	40.2	01.6	151	54.8	53	24	54	47	33	10	8 59	60	0 53	66
4	239	40.3	02.5	166	19.2	54	22	52	3 55	39	14	9 09	60	43	62
5	254	40.5	+8 03.4	180	43.5	53	21	50	4 03	4 44	5 17	9 18	60	0 34	62
6	269	40.7	+8 04.4	195	07.8	53	20	45	4 17	4 54	5 24	9 38	60	0 15	61
7	284	40.8	05.3	209	32.2	54	18	40	29	5 02	30	9 53	61	** ** *	**
8	299	41.0	06.2	223	56.5	53	17	35	38	09	34	10 07	60	** ** *	**
9	314	41.2	07.1	238	20.8	53	16	30	46	14	39	19	59	** ** *	**
10	329	41.3	08.1	252	45.1	53	14	20	4 57	24	46	39	59	** ** *	**
11	344	41.5	+8 09.0	267	09.4	53	12	10 N	5 06	5 31	5 52	10 56	60	23 57	58
12	359	41.7	+8 09.9	281	33.7	53	11	0	5 13	5 37	5 58	11 13	59	23 41	59
13	14	41.8	10.8	295	58.0	53	10	10 S	18	42	6 04	29	59	24	60
14	29	42.0	11.7	310	22.3	53	9	20	22	47	10	11 47	58	23 07	60
15	44	42.2	12.7	324	46.6	53	6	30	24	52	16	12 07	58	22 46	62
16	59	42.3	13.6	339	11.0	54	6	35	25	55	20	19	58	35	62
17	74	42.5	+8 14.5	353	35.3	53	4	40	5 26	5 57	6 24	12 32	58	22 21	63
18	89	42.7	+8 15.4	7	59.6	53	2	45	5 26	6 00	6 29	12 48	58	22 05	63
19	104	42.8	16.3	22	24.0	54	1	50	25	02	35	13 08	57	21 45	64
20	119	43.0	17.3	36	48.3	53	0	52	25	04	38	18	56	35	65
21	134	43.2	18.2	51	12.7	54	2	54	24	05	41	28	57	25	65
22	149	43.3	19.1	65	37.1	54	3	56	23	06	44	41	55	21 13	66
23	164	43.5	20.0	80	01.5	54	4	58	22	08	47	13 54	55	20 59	67
24	179	43.6	+8 20.9	94	25.9	54	6	60 S	5 21	6 09	6 51	14 11	54	20 42	68

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 10 ^h 44 ^m 1		Mag: -3.8 PMG: 11 ^h 03 ^m		Mag: +1.5 PMG: 13 ^h 28 ^m		Mag: -2.1 PMG: 13 ^h 21 ^m		Mag: +0.3 PMG: 13 ^h 43 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	198	31.7	194	16.8	+0 11.9	157	58.2	+15 55.4	159	26.3	+14 20.4
1	213	34.2	209	16.4	13.1	172	58.9	56.0	174	28.2	20.5
2	228	36.6	224	16.0	14.3	187	59.6	56.5	189	30.1	20.7
3	243	39.1	239	15.7	15.5	203	00.3	57.1	204	32.0	20.9
4	258	41.6	254	15.3	16.8	218	00.9	57.7	219	33.9	21.1
5	273	44.0	269	14.9	+0 18.0	233	01.6	+15 58.2	234	35.8	+14 21.3
6	288	46.5	284	14.6	+0 19.2	248	02.3	+15 58.8	249	37.7	+14 21.4
7	303	49.0	299	14.2	20.4	263	03.0	+15 59.4	264	39.6	21.6
8	318	51.4	314	13.8	21.6	278	03.7	+16 00.0	279	41.5	21.8
9	333	53.9	329	13.5	22.9	293	04.4	+16 00.5	294	43.3	22.0
10	348	56.4	344	13.1	24.1	308	05.1	01.1	309	45.2	22.2
11	3	58.8	359	12.7	+0 25.3	323	05.7	+16 01.7	324	47.1	+14 22.4
12	19	01.3	14	12.4	+0 26.5	338	06.4	+16 02.2	339	49.0	+14 22.5
13	34	03.7	29	12.0	27.7	353	07.1	02.8	354	50.9	22.7
14	49	06.2	44	11.6	29.0	8	07.8	03.4	9	52.8	22.9
15	64	08.7	59	11.3	30.2	23	08.5	03.9	24	54.7	23.1
16	79	11.1	74	10.9	31.4	38	09.2	04.5	39	56.6	23.3
17	94	13.6	89	10.5	+0 32.6	53	09.8	+16 05.1	54	58.5	+14 23.5
18	109	16.1	104	10.2	+0 33.9	68	10.5	+16 05.6	70	00.4	+14 23.6
19	124	18.5	119	09.8	35.1	83	11.2	06.2	85	02.3	23.8
20	139	21.0	134	09.4	36.3	98	11.9	06.8	100	04.2	24.0
21	154	23.5	149	09.1	37.5	113	12.6	07.3	115	06.1	24.2
22	169	25.9	164	08.7	38.7	128	13.3	07.9	130	08.0	24.4
23	184	28.4	179	08.3	40.0	143	13.9	08.5	145	09.9	24.6
24	199	30.8	194	08.0	+0 41.2	158	14.6	+16 09.0	160	11.8	+14 24.7
Dif	—		-4	+12		+7	+6		+19	+2	

UT	SOL		 LUNA					Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:0		Edad: 6 ^d 2	PHE {	4 ^h : 59/3 12 ^h : 59/2 20 ^h : 59/1		Final del crepúsculo			Salida de Luna		Puesta de Luna			
	PMG: 12 ^h 01 ^m 0				SD: 16:1		R°: 57 ^m			Civil		Náutico		Hora R°	
	hG ☉	Dec	hG ☾	Dif	Dec	Dif									
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m		
0	179	43.6	+8 20.9	94	25.9	+21 19.3	8	60 N	19 09	19 54	20 54	9 18 75	2 36 47		
1	194	43.8		108	50.4	18.5	9	58	19 04	46	40	34 72	21 47		
2	209	44.0	22.8	123	14.8	17.6	10	56	18 59	39	29	47 71	2 07 49		
3	224	44.1	23.7	137	39.3	16.6	11	54	55	32	19	9 59 70	1 55 50		
4	239	44.3	24.6	152	03.8	15.4	12	52	51	27	11	10 09 69	45 51		
5	254	44.5	+8 25.5	166	28.3	+21 14.1	13	50	18 48	19 22	20 03	10 18 68	1 36 51		
6	269	44.6	+8 26.4	180	52.9	+21 12.7	14	45	18 41	19 11	19 48	10 38 66	1 16 53		
7	284	44.8	27.4	195	17.4	11.1	15	40	35	19 02	36	10 54 64	1 00 54		
8	299	45.0	28.3	209	42.0	09.3	16	35	29	18 55	26	11 07 63	0 47 55		
9	314	45.1	29.2	224	06.7	07.5	17	30	25	49	18	18 63	35 56		
10	329	45.3	30.1	238	31.3	05.5	18	20	17	40	19 06	38 61	0 15 57		
11	344	45.5	+8 31.0	252	56.0	+21 03.3	19	10 N	18 10	18 32	18 57	11 56 59	** ** *		
12	359	45.6	+8 31.9	267	20.8	+21 01.0	23	0	18 04	18 25	18 49	12 12 57	** ** *		
13	14	45.8	32.8	281	45.5	+20 58.6	24	10 S	17 58	19	44	28 56	** ** *		
14	29	45.9	33.8	296	10.3	56.0	26	20	52	14	40	12 45 55	** ** *		
15	44	46.1	34.7	310	35.1	53.3	27	30	45	09	37	13 05 53	23 48 63		
16	59	46.3	35.6	325	00.0	50.5	28	35	41	06	35	17 51	37 64		
17	74	46.4	+8 36.5	339	24.9	+20 47.5	30	40	17 36	18 03	18 35	13 30 50	23 24 66		
18	89	46.6	+8 37.4	353	49.8	+20 44.4	31	45	17 31	18 00	18 34	13 46 49	23 08 68		
19	104	46.8	38.3	8	14.8	41.2	32	50	25	17 57	35	14 05 47	22 49 71		
20	119	46.9	39.2	22	39.8	37.8	34	52	22	56	35	14 46	40 72		
21	134	47.1	40.2	37	04.9	34.3	35	54	19	54	35	25 44	30 74		
22	149	47.2	41.1	51	30.0	30.6	37	56	15	53	36	36 43	19 75		
23	164	47.4	42.0	65	55.2	26.9	37	58	11	51	36	14 49 41	22 06 77		
24	179	47.6	+8 42.9	80	20.4	+20 23.0	39	60 S	17 07	17 49	18 37	15 05 38	21 50 80		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 10 ^h 40 ^m 2		Mag: -3.8 PMG: 11 ^h 04 ^m		Mag: +1.5 PMG: 13 ^h 26 ^m		Mag: -2.1 PMG: 13 ^h 18 ^m		Mag: +0.3 PMG: 13 ^h 39 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	199	30.8	194 08.0	+0 41.2	158 14.6	+16 09.0	160 11.8	+14 24.7	154 42.1	+14 51.9
1	214	33.3	209 07.6	42.4	173 15.3	09.6	175 13.7	24.9	169 44.2	51.9
2	229	35.8	224 07.2	43.6	188 16.0	10.1	190 15.6	25.1	184 46.4	52.0
3	244	38.2	239 06.9	44.8	203 16.7	10.7	205 17.5	25.3	199 48.5	52.1
4	259	40.7	254 06.5	46.1	218 17.4	11.3	220 19.4	25.5	214 50.7	52.2
5	274	43.2	269 06.1	+0 47.3	233 18.0	+16 11.8	235 21.3	+14 25.7	229 52.9	+14 52.3
6	289	45.6	284 05.8	+0 48.5	248 18.7	+16 12.4	250 23.2	+14 25.8	244 55.0	+14 52.4
7	304	48.1	299 05.4	49.7	263 19.4	13.0	265 25.1	26.0	259 57.2	52.5
8	319	50.6	314 05.0	51.0	278 20.1	13.5	280 27.0	26.2	274 59.4	52.6
9	334	53.0	329 04.7	52.2	293 20.8	14.1	295 28.9	26.4	290 01.5	52.7
10	349	55.5	344 04.3	53.4	308 21.5	14.6	310 30.8	26.6	305 03.7	52.8
11	4	58.0	359 03.9	+0 54.6	323 22.1	+16 15.2	325 32.7	+14 26.7	320 05.9	+14 52.8
12	20	00.4	14 03.6	+0 55.8	338 22.8	+16 15.8	340 34.6	+14 26.9	335 08.0	+14 52.9
13	35	02.9	29 03.2	57.1	353 23.5	16.3	355 36.5	27.1	350 10.2	53.0
14	50	05.3	44 02.8	58.3	8 24.2	16.9	10 38.4	27.3	5 12.4	53.1
15	65	07.8	59 02.5	+0 59.5	23 24.9	17.4	25 40.3	27.5	20 14.5	53.2
16	80	10.3	74 02.1	+1 00.7	38 25.6	18.0	40 42.1	27.7	35 16.7	53.3
17	95	12.7	89 01.7	+1 01.9	53 26.2	+16 18.6	55 44.0	+14 27.8	50 18.9	+14 53.4
18	110	15.2	104 01.4	+1 03.2	68 26.9	+16 19.1	70 45.9	+14 28.0	65 21.0	+14 53.5
19	125	17.7	119 01.0	04.4	83 27.6	19.7	85 47.8	28.2	80 23.2	53.6
20	140	20.1	134 00.6	05.6	98 28.3	20.2	100 49.7	28.4	95 25.4	53.7
21	155	22.6	149 00.3	06.8	113 29.0	20.8	115 51.6	28.6	110 27.5	53.7
22	170	25.1	163 59.9	08.1	128 29.7	21.4	130 53.5	28.8	125 29.7	53.8
23	185	27.5	178 59.6	09.3	143 30.3	21.9	145 55.4	28.9	140 31.9	53.9
24	200	30.0	193 59.2	+1 10.5	158 31.0	+16 22.5	160 57.3	+14 29.1	155 34.0	+14 54.0
Dif	—		-4	+12	+7	+6	+19	+2	+22	+1

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16:0 PMG: 12 ^h 00 ^m 7			Edad: 7 ^d 2 SD: 16:1 PMG: 19 ^h 23 ^m	PHE { 4 ^h : 59:0 12 ^h : 58:9 20 ^h : 58:8 Rº: 55 ^m											
	hG ☉	Dec				hG ☾		Dif	Dec		Dif	Náutico	Civil	Hora	Rº	Hora
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	179	47.6	+8	80	20.4	+20	23.0	60 N	3 07	4 06	4 52	10 33	83	3 23	32	
1	194	47.7		94	45.6	62	18.9	58	21	15	4 57	46	81	3 08	36	
2	209	47.9		109	10.9	63	14.8	56	32	22	5 02	10 58	78	2 56	38	
3	224	48.1		123	36.3	64	10.5	54	42	28	06	11 09	75	45	40	
4	239	48.2		138	01.7	64	06.1	52	50	34	09	18	74	36	41	
5	254	48.4	+8	152	27.1	64	+20	50	3 58	4 39	5 13	11 26	73	2 27	42	
6	269	48.5	+8	166	52.6	65	+19	45	4 13	4 50	5 20	11 44	69	2 09	45	
7	284	48.7		181	18.1	65	52.1	40	25	4 59	26	11 58	67	1 54	47	
8	299	48.9		195	43.7	66	47.1	35	35	5 06	32	12 10	65	42	48	
9	314	49.0		210	09.4	67	42.1	30	43	12	36	21	63	31	50	
10	329	49.2		224	35.1	67	36.9	20	4 56	22	44	39	60	1 12	52	
11	344	49.3	+8	239	00.9	68	+19	10 N	5 05	5 30	5 51	12 55	57	0 55	55	
12	359	49.5	+8	253	26.7	68	+19	0	5 12	5 36	5 57	13 09	56	0 40	56	
13	14	49.7		267	52.5	68	20.7	10 S	18	42	6 04	24	53	24	59	
14	29	49.8		282	18.5	70	15.0	20	22	48	10	40	50	0 07	61	
15	44	50.0		296	44.5	70	09.3	30	25	53	17	13 58	47	***	***	***
16	59	50.1		311	10.5	70	+19	35	27	56	22	14 08	46	***	***	***
17	74	50.3	+8	325	36.6	71	+18	40	5 27	5 59	6 26	14 20	44	***	***	***
18	89	50.5	+8	340	02.8	72	+18	45	5 28	6 02	6 32	14 35	40	***	***	***
19	104	50.6	+9	354	29.0	72	45.0	50	28	05	38	14 52	37	***	***	***
20	119	50.8		8	55.3	73	38.7	52	28	07	41	15 00	36	23	52	76
21	134	50.9		23	21.6	73	32.2	54	27	08	44	09	34	44	77	
22	149	51.1		37	48.0	74	25.6	56	27	10	48	19	32	34	80	
23	164	51.3		52	14.5	75	19.0	58	26	12	52	30	30	23	82	
24	179	51.4	+9	66	41.0	75	+18	60 S	5 26	6 14	6 56	15 43	27	23	10	86

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 10 ^h 36 ^m 3		Mag: -3.8 PMG: 11 ^h 04 ^m		Mag: +1.5 PMG: 13 ^h 25 ^m		Mag: -2.1 PMG: 13 ^h 15 ^m		Mag: +0.3 PMG: 13 ^h 36 ^m							
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'						
0	200	30.0	193	59.2	+1	158	31.0	+16	160	57.3	+14	155	34.0	+14	154.0	
1	215	32.5	208	58.8		173	31.7		175	59.2		170	36.2		54.1	
2	230	34.9	223	58.5		188	32.4		191	01.1		185	38.4		54.2	
3	245	37.4	238	58.1		203	33.1		206	03.0		200	40.5		54.3	
4	260	39.8	253	57.7		218	33.7		221	04.9		215	42.7		54.4	
5	275	42.3	268	57.4	+1	233	34.4	+16	236	06.8	+14	230	44.8	+14	54.5	
6	290	44.8	283	57.0	+1	248	35.1	+16	251	08.7	+14	245	47.0	+14	54.6	
7	305	47.2	298	56.6		263	35.8		266	10.6		260	49.2		54.7	
8	320	49.7	313	56.3		278	36.5		281	12.5		275	51.3		54.7	
9	335	52.2	328	55.9		293	37.1		296	14.4		290	53.5		54.8	
10	350	54.6	343	55.5		308	37.8		311	16.3		305	55.7		54.9	
11	5	57.1	358	55.2	+1	323	38.5	+16	326	18.2	+14	320	57.8	+14	55.0	
12	20	59.6	13	54.8	+1	338	39.2	+16	341	20.0	+14	336	00.0	+14	55.1	
13	36	02.0	28	54.4		353	39.9		356	21.9		351	02.2		55.2	
14	51	04.5	43	54.1		8	40.5		11	23.8		6	04.3		55.3	
15	66	07.0	58	53.7		23	41.2		26	25.7		21	06.5		55.4	
16	81	09.4	73	53.3		38	41.9		41	27.6		36	08.6		55.5	
17	96	11.9	88	53.0	+1	53	42.6	+16	56	29.5	+14	51	10.8	+14	55.6	
18	111	14.3	103	52.6	+1	68	43.3	+16	71	31.4	+14	66	13.0	+14	55.6	
19	126	16.8	118	52.2		83	43.9		86	33.3		81	15.1		55.7	
20	141	19.3	133	51.9		98	44.6		101	35.2		96	17.3		55.8	
21	156	21.7	148	51.5		113	45.3		116	37.1		111	19.5		55.9	
22	171	24.2	163	51.1		128	46.0		131	39.0		126	21.6		56.0	
23	186	26.7	178	50.8		143	46.7		146	40.9		141	23.8		56.1	
24	201	29.1	193	50.4	+1	158	47.3	+16	161	42.8	+14	156	26.0	+14	56.2	
Dif	—		-4	+12		+7	+6		+19	+2		+22			+	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG: 12 ^h 00 ^m 4			Edad: 8 ^d 2 SD: 16'0 PMG: 20 ^h 18 ^m					PHE { 4 ^h : 58'7 12 ^h : 58'5 20 ^h : 58'4 R°: 52 ^m					
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m
0	179	51.4	+9	04.7	66	41.0	+18	12.2	60 N	19 14	20 00	21 01	11 56 86	3 55 23
1	194	51.6		05.6	81	07.6	+18	05.3	58	08	19 51	20 46	12 07 83	44 26
2	209	51.7		06.5	95	34.3	+17	58.3	56	19 03	43	34	16 80	34 28
3	224	51.9		07.4	110	01.0		51.2	54	18 59	37	24	24 78	25 30
4	239	52.1		08.3	124	27.8		43.9	52	55	31	15	32 76	17 32
5	254	52.2	+9	09.2	138	54.7	+17	36.6	50	18 51	19 25	20 07	12 39 74	3 09 35
6	269	52.4	+9	10.1	153	21.6	+17	29.2	45	18 43	19 14	19 51	12 53 71	2 54 38
7	284	52.5		11.1	167	48.6		21.7	40	37	19 05	38	13 05 67	41 41
8	299	52.7		12.0	182	15.6		14.0	35	31	18 57	28	15 65	30 43
9	314	52.8		12.9	196	42.7	+17	06.3	30	26	51	20	24 63	21 45
10	329	53.0		13.8	211	09.9	+16	58.5	20	18	40	19 06	39 59	2 04 49
11	344	53.2	+9	14.7	225	37.1	+16	50.6	10 N	18 10	18 32	18 57	13 52 56	1 50 51
12	359	53.3	+9	15.6	240	04.4	+16	42.5	0	18 04	18 25	18 49	14 05 52	1 36 54
13	14	53.5		16.5	254	31.8		34.4	10 S	17 57	18	43	17 50	23 56
14	29	53.6		17.4	268	59.2		26.2	20	50	12	38	30 47	1 08 60
15	44	53.8		18.3	283	26.7		17.9	30	42	07	34	45 43	0 51 63
16	59	53.9		19.2	297	54.3		09.5	35	38	04	33	14 54 40	41 65
17	74	54.1	+9	20.1	312	21.9	+16	01.0	40	17 33	18 00	18 32	15 04 38	0 30 67
18	89	54.3	+9	21.0	326	49.7	+15	52.4	45	17 27	17 57	18 31	15 15 35	0 16 71
19	104	54.4		21.9	341	17.4		43.8	50	21	53	31	29 32	0 00 74
20	119	54.6		22.8	355	45.3		35.0	52	17	52	31	36 29	** ** *
21	134	54.7		23.7	10	13.2		26.2	54	14	50	31	43 28	** ** *
22	149	54.9		24.6	24	41.1		17.3	56	10	48	31	15 51 25	** ** *
23	164	55.0		25.5	39	09.2	+15	08.3	58	06	46	31	16 00 23	** ** *
24	179	55.2	+9	26.4	53	37.2	+14	59.2	60 S	17 01	17 44	18 32	16 10 20	** ** *
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 10 ^h 32 ^m 3		Mag: -3.8 PMG: 11 ^h 05 ^m			Mag: +1.5 PMG: 13 ^h 24 ^m			Mag: -2.0 PMG: 13 ^h 11 ^m			Mag: +0.3 PMG: 13 ^h 32 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	201	29.1	193	50.4	+1	39.8	158	47.3	+16	35.8	161	42.8	+14	33.5
1	216	31.6	208	50.0		41.0	173	48.0		36.3	176	44.7		33.7
2	231	34.1	223	49.7		42.2	188	48.7		36.9	191	46.6		33.9
3	246	36.5	238	49.3		43.5	203	49.4		37.4	206	48.5		34.0
4	261	39.0	253	48.9		44.7	218	50.1		38.0	221	50.3		34.2
5	276	41.4	268	48.6	+1	45.9	233	50.7	+16	38.5	236	52.2	+14	34.4
6	291	43.9	283	48.2	+1	47.1	248	51.4	+16	39.1	251	54.1	+14	34.6
7	306	46.4	298	47.8		48.3	263	52.1		39.6	266	56.0		34.8
8	321	48.8	313	47.5		49.6	278	52.8		40.2	281	57.9		34.9
9	336	51.3	328	47.1		50.8	293	53.5		40.7	296	59.8		35.1
10	351	53.8	343	46.7		52.0	308	54.1		41.3	312	01.7		35.3
11	6	56.2	358	46.4	+1	53.2	323	54.8	+16	41.8	327	03.6	+14	35.5
12	21	58.7	13	46.0	+1	54.4	338	55.5	+16	42.4	342	05.5	+14	35.7
13	37	01.2	28	45.6		55.7	353	56.2		42.9	357	07.4		35.9
14	52	03.6	43	45.2		56.9	8	56.9		43.4	12	09.3		36.0
15	67	06.1	58	44.9		58.1	23	57.5		44.0	27	11.2		36.2
16	82	08.6	73	44.5	+1	59.3	38	58.2		44.5	42	13.1		36.4
17	97	11.0	88	44.1	+2	00.5	53	58.9	+16	45.1	57	15.0	+14	36.6
18	112	13.5	103	43.8	+2	01.8	68	59.6	+16	45.6	72	16.8	+14	36.8
19	127	15.9	118	43.4		03.0	84	00.2		46.2	87	18.7		36.9
20	142	18.4	133	43.0		04.2	99	00.9		46.7	102	20.6		37.1
21	157	20.9	148	42.7		05.4	114	01.6		47.3	117	22.5		37.3
22	172	23.3	163	42.3		06.6	129	02.3		47.8	132	24.4		37.5
23	187	25.8	178	41.9		07.9	144	03.0		48.4	147	26.3		37.7
24	202	28.3	193	41.6	+2	09.1	159	03.6	+16	48.9	162	28.2	+14	37.9
Dif	—		-4		+12		+7		+5		+19		+2	
													+22	
													+1	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15'9 PMG: 12 ^h 00 ^m 2			Edad: 9 ^d 2 PHE { SD: 15'9 PMG: 21 ^h 10 ^m										
				R ^e : 49 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	h	m	h	m	h	m	m
0	179	55.2	+9 26.4	53	37.2	+14 59.2		60 N	2 59	4 00	4 46	13 22	86	4 18 18
1	194	55.4	27.3	68	05.4	92 50.0	92	58	3 13	09	51	30	82	10 20
2	209	55.5	28.2	82	33.6	92 40.8	92	56	26	16	4 56	36	81	4 02 23
3	224	55.7	29.1	97	01.9	93 31.4	94	54	36	23	5 01	42	78	3 55 25
4	239	55.8	30.0	111	30.3	94 22.0	94	52	45	29	05	48	76	49 27
5	254	56.0	+9 30.9	125	58.7	94 12.5	95	50	3 53	4 35	5 09	13 53	74	3 44 29
6	269	56.1	+9 31.8	140	27.2	95 14 03.0	95	45	4 09	4 46	5 17	14 04	69	3 32 32
7	284	56.3	32.7	154	55.8	96 13 53.4	96	40	22	4 55	23	12	67	22 36
8	299	56.4	33.6	169	24.4	96 43.6	98	35	32	5 03	29	20	64	13 39
9	314	56.6	34.5	183	53.1	97 33.9	97	30	41	10	34	27	61	3 06 40
10	329	56.7	35.4	198	21.8	97 24.0	99	20	4 54	20	43	38	57	2 53 44
11	344	56.9	+9 36.3	212	50.6	98 13 14.1	99	10 N	5 04	5 29	5 50	14 48	53	2 41 48
12	359	57.1	+9 37.2	227	19.5	99 13 04.1	100	0	5 12	5 36	5 57	14 57	50	2 30 52
13	14	57.2	38.1	241	48.4	99 12 54.1	100	10 S	18	42	6 04	15 07	46	19 55
14	29	57.4	39.0	256	17.4	100 43.9	102	20	23	48	11	17	43	2 08 58
15	44	57.5	39.8	270	46.5	101 33.7	102	30	27	54	19	28	39	1 54 62
16	59	57.7	40.7	285	15.6	101 23.5	102	35	28	5 58	23	34	37	46 65
17	74	57.8	+9 41.6	299	44.8	102 12 13.2	103	40	5 29	6 01	6 28	15 42	33	1 37 67
18	89	58.0	+9 42.5	314	14.0	102 12 02.8	104	45	5 30	6 04	6 34	15 50	31	1 27 70
19	104	58.1	43.4	328	43.3	103 11 52.4	104	50	31	08	41	16 01	26	14 74
20	119	58.3	44.3	343	12.7	104 41.9	105	52	31	10	44	05	25	08 76
21	134	58.4	45.2	357	42.1	104 31.3	106	54	31	12	48	11	22	1 01 78
22	149	58.6	46.1	12	11.6	105 20.7	106	56	31	14	52	16	21	0 54 80
23	164	58.7	47.0	26	41.1	105 11 10.1	106	58	31	16	6 56	23	18	45 84
24	179	58.9	+9 47.9	41	10.7	106 10 59.3	108	60 S	5 30	6 18	7 01	16 30	15	0 36 86

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 10 ^h 28 ^m 4		Mag: -3.8 PMG: 11 ^h 06 ^m		Mag: +1.5 PMG: 13 ^h 23 ^m		Mag: -2.0 PMG: 13 ^h 08 ^m		Mag: +0.3 PMG: 13 ^h 29 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	202	28.3	193	41.6	+2 09.1	159	03.6	+16 48.9	162	28.2	+14 37.9	157	17.9	+14 58.4
1	217	30.7	208	41.2	10.3	174	04.3	49.4	177	30.1	38.0	172	20.0	58.5
2	232	33.2	223	40.8	11.5	189	05.0	50.0	192	32.0	38.2	187	22.2	58.5
3	247	35.7	238	40.5	12.7	204	05.7	50.5	207	33.9	38.4	202	24.3	58.6
4	262	38.1	253	40.1	14.0	219	06.3	51.1	222	35.8	38.6	217	26.5	58.7
5	277	40.6	268	39.7	+2 15.2	234	07.0	+16 51.6	237	37.7	+14 38.8	232	28.7	+14 58.8
6	292	43.1	283	39.4	+2 16.4	249	07.7	+16 52.2	252	39.6	+14 38.9	247	30.8	+14 58.9
7	307	45.5	298	39.0	17.6	264	08.4	52.7	267	41.4	39.1	262	33.0	59.0
8	322	48.0	313	38.6	18.8	279	09.0	53.2	282	43.3	39.3	277	35.2	59.1
9	337	50.4	328	38.3	20.1	294	09.7	53.8	297	45.2	39.5	292	37.3	59.2
10	352	52.9	343	37.9	21.3	309	10.4	54.3	312	47.1	39.7	307	39.5	59.3
11	7	55.4	358	37.5	+2 22.5	324	11.1	+16 54.9	327	49.0	+14 39.9	322	41.6	+14 59.4
12	22	57.8	13	37.2	+2 23.7	339	11.8	+16 55.4	342	50.9	+14 40.0	337	43.8	+14 59.4
13	38	00.3	28	36.8	24.9	354	12.4	55.9	357	52.8	40.2	352	46.0	59.5
14	53	02.8	43	36.4	26.1	9	13.1	56.5	12	54.7	40.4	7	48.1	59.6
15	68	05.2	58	36.1	27.4	24	13.8	57.0	27	56.6	40.6	22	50.3	59.7
16	83	07.7	73	35.7	28.6	39	14.5	57.6	42	58.5	40.8	37	52.4	59.8
17	98	10.2	88	35.3	+2 29.8	54	15.1	+16 58.1	58	00.4	+14 40.9	52	54.6	+14 59.9
18	113	12.6	103	35.0	+2 31.0	69	15.8	+16 58.6	73	02.2	+14 41.1	67	56.8	+15 00.0
19	128	15.1	118	34.6	32.2	84	16.5	59.2	88	04.1	41.3	82	58.9	+15 00.1
20	143	17.5	133	34.2	33.5	99	17.2	+16 59.7	103	06.0	41.5	98	01.1	00.2
21	158	20.0	148	33.8	34.7	114	17.8	+17 00.3	118	07.9	41.7	113	03.2	00.3
22	173	22.5	163	33.5	35.9	129	18.5	00.8	133	09.8	41.9	128	05.4	00.4
23	188	24.9	178	33.1	37.1	144	19.2	01.3	148	11.7	42.0	143	07.6	00.4
24	203	27.4	193	32.7	+2 38.3	159	19.9	+17 01.9	163	13.6	+14 42.2	158	09.7	+15 00.5
Dif	—		-4	+12		+7	+5		+19	+2		+22		+1

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15°9 PMG: 12 ^h 00 ^m 0			Edad: 10 ^d 2 PHE { SD: 15°8 PMG: 21 ^h 59 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	Rº	Hora
h	°	'	°	°	'	°	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	179	58.9	+9 47.9	41	10.7	+10 59.3	60 N	19 19	20 05	21 08	14 48 84		4 36 14	
1	194	59.0		55	40.4 ¹⁰⁷	48.6 ¹⁰⁷	58	13	19 56	20 52	52 82		30 17	
2	209	59.2		70	10.1 ¹⁰⁷	37.8 ¹⁰⁸	56	07	48	40	14 57 79		25 19	
3	224	59.3		84	39.9 ¹⁰⁸	26.9 ¹⁰⁹	54	19 02	41	29	15 00 77		20 22	
4	239	59.5		99	09.7 ¹⁰⁸	16.0 ¹⁰⁹	52	18 58	34	19	04 74		16 24	
5	254	59.6	+9 52.4	113	39.6 ¹⁰⁹	+10 05.0 ¹¹⁰	50	18 54	19 29	20 11	15 07 72		4 13 25	
6	269	59.8	+9 53.2	128	09.5 ¹⁰⁹	+9 54.0 ¹¹⁰	45	18 46	19 16	19 54	15 13 69		4 04 29	
7	285	00.0		142	39.5 ¹¹⁰	42.9 ¹¹¹	40	39	19 07	40	19 65		3 58 32	
8	300	00.1		157	09.6 ¹¹¹	31.8 ¹¹¹	35	33	18 59	30	24 62		52 35	
9	315	00.3		171	39.7 ¹¹¹	20.6 ¹¹²	30	27	52	21	28 60		46 38	
10	330	00.4		186	09.8 ¹¹¹	+9 09.4 ¹¹²	20	18	41	19 07	35 55		37 42	
11	345	00.6	+9 57.7	200	40.0 ¹¹²	+8 58.2 ¹¹²	10 N	18 11	18 32	18 57	15 41 52		3 29 46	
12	0	00.7	+9 58.6	215	10.3 ¹¹³	+8 46.9 ¹¹³	0	18 03	18 24	18 49	15 47 48		3 22 48	
13	15	00.9	+9 59.5	229	40.6 ¹¹³	35.6 ¹¹³	10 S	17 56	17	42	15 53 45		14 52	
14	30	01.0	+10 00.4	244	10.9 ¹¹³	24.2 ¹¹⁴	20	49	11	37	16 00 40		3 06 56	
15	45	01.2		258	41.3 ¹¹⁴	12.9 ¹¹³	30	40	04	32	07 36		2 56 61	
16	60	01.3		273	11.8 ¹¹⁵	+8 01.4 ¹¹⁵	35	36	18 01	31	11 34		51 63	
17	75	01.5	+10 03.0	287	42.3 ¹¹⁵	+7 50.0 ¹¹⁴	40	17 30	17 58	18 29	16 15 31		2 44 66	
18	90	01.6	+10 03.9	302	12.9 ¹¹⁶	+7 38.5 ¹¹⁵	45	17 24	17 54	18 28	16 21 28		2 37 69	
19	105	01.8		316	43.5 ¹¹⁶	26.9 ¹¹⁶	50	16	49	27	27 24		28 74	
20	120	01.9		331	14.1 ¹¹⁶	15.4 ¹¹⁵	52	13	47	26	30 22		24 75	
21	135	02.1		345	44.8 ¹¹⁷	+7 03.8 ¹¹⁶	54	09	45	26	33 20		19 78	
22	150	02.2		0	15.6 ¹¹⁸	+6 52.2 ¹¹⁶	56	05	43	26	37 18		14 80	
23	165	02.3		14	46.3 ¹¹⁷	40.5 ¹¹⁷	58	17 01	41	26	41 15		09 82	
24	180	02.5	+10 09.2	29	17.2 ¹¹⁹	+6 28.8 ¹¹⁷	60 S	16 55	17 38	18 26	16 45 13		2 02 86	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 10 ^h 24 ^m 5		Mag: -3.8 PMG: 11 ^h 06 ^m			Mag: +1.5 PMG: 13 ^h 22 ^m			Mag: -2.0 PMG: 13 ^h 05 ^m			Mag: +0.3 PMG: 13 ^h 25 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	203	27.4	193	32.7	+2 38.3	159	19.9	+17 01.9	163	13.6	+14 42.2	158	09.7	+15 00.5
1	218	29.9	208	32.4		174	20.5	02.4	178	15.5	42.4	173	11.9	00.6
2	233	32.3	223	32.0		189	21.2	02.9	193	17.4	42.6	188	14.1	00.7
3	248	34.8	238	31.6		204	21.9	03.5	208	19.3	42.8	203	16.2	00.8
4	263	37.3	253	31.3		219	22.6	04.0	223	21.2	42.9	218	18.4	00.9
5	278	39.7	268	30.9	+2 44.4	234	23.2	+17 04.6	238	23.0	+14 43.1	233	20.5	+15 01.0
6	293	42.2	283	30.5	+2 45.6	249	23.9	+17 05.1	253	24.9	+14 43.3	248	22.7	+15 01.1
7	308	44.7	298	30.2		264	24.6	05.6	268	26.8	43.5	263	24.9	01.2
8	323	47.1	313	29.8		279	25.3	06.2	283	28.7	43.7	278	27.0	01.3
9	338	49.6	328	29.4		294	25.9	06.7	298	30.6	43.8	293	29.2	01.3
10	353	52.0	343	29.0		309	26.6	07.2	313	32.5	44.0	308	31.3	01.4
11	8	54.5	358	28.7	+2 51.7	324	27.3	+17 07.8	328	34.4	+14 44.2	323	33.5	+15 01.5
12	23	57.0	13	28.3	+2 52.9	339	28.0	+17 08.3	343	36.3	+14 44.4	338	35.7	+15 01.6
13	38	59.4	28	27.9		354	28.6	08.8	358	38.2	44.6	353	37.8	01.7
14	54	01.9	43	27.6		9	29.3	09.4	13	40.1	44.8	8	40.0	01.8
15	69	04.4	58	27.2		24	30.0	09.9	28	41.9	44.9	23	42.1	01.9
16	84	06.8	73	26.8		39	30.7	10.4	43	43.8	45.1	38	44.3	02.0
17	99	09.3	88	26.5	+2 59.0	54	31.3	+17 11.0	58	45.7	+14 45.3	53	46.5	+15 02.1
18	114	11.8	103	26.1	+3 00.2	69	32.0	+17 11.5	73	47.6	+14 45.5	68	48.6	+15 02.2
19	129	14.2	118	25.7		84	32.7	12.0	88	49.5	45.7	83	50.8	02.3
20	144	16.7	133	25.3		99	33.4	12.6	103	51.4	45.8	98	52.9	02.3
21	159	19.1	148	25.0		114	34.0	13.1	118	53.3	46.0	113	55.1	02.4
22	174	21.6	163	24.6		129	34.7	13.6	133	55.2	46.2	128	57.3	02.5
23	189	24.1	178	24.2		144	35.4	14.1	148	57.1	46.4	143	59.4	02.6
24	204	26.5	193	23.9	+3 07.5	159	36.1	+17 14.7	163	58.9	+14 46.6	159	01.6	+15 02.7
Dif	—		-4	+12		+7	+5		+19	+2		+22		+1

UT	SOL			O LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 9			Edad: 11 ^d 2	PHE { 4 ^h : 57.4 12 ^h : 57.3 20 ^h : 57.1									
	PMG: 11 ^h 59 ^m 7					SD: 15 ^h 7		PMG: 22 ^h 46 ^m			R°: 47 ^m			
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	180	02.5	+10 09.2	29	17.2	+6 28.8		60 N	2 51	3 53	4 40	16 12 83	4 50 12	
1	195	02.6		43	48.1 ¹¹⁹	17.1 ¹¹⁷		58	3 06	4 03	46	14 80	47 15	
2	210	02.8		58	19.0 ¹¹⁹	+6 05.4 ¹¹⁷		56	19	11	51	16 77	44 18	
3	225	02.9		72	49.9 ¹¹⁹	+5 53.7 ¹¹⁷		54	30	18	4 56	17 75	42 19	
4	240	03.1		87	20.9 ¹²⁰	41.9 ¹¹⁸		52	40	25	5 01	18 73	40 21	
5	255	03.2	+10 13.7	101	52.0 ¹²¹	+5 30.1 ¹¹⁸		50	3 48	4 30	5 05	16 19 72	4 38 23	
6	270	03.4	+10 14.5	116	23.1 ¹²¹	+5 18.3 ¹¹⁸		45	4 05	4 43	5 13	16 22 67	4 33 27	
7	285	03.5		130	54.2 ¹²¹	+5 06.4 ¹¹⁹		40	19	4 52	20	24 64	30 30	
8	300	03.7		145	25.3 ¹²¹	+4 54.6 ¹¹⁸		35	29	5 00	27	26 61	27 33	
9	315	03.8		159	56.5 ¹²²	42.7 ¹¹⁹		30	38	07	32	28 58	24 35	
10	330	04.0		174	27.8 ¹²³	30.8 ¹¹⁹		20	4 52	19	41	30 54	19 40	
11	345	04.1	+10 19.0	188	59.1 ¹²³	+4 18.9 ¹¹⁹		10 N	5 03	5 28	5 49	16 33 50	4 15 43	
12	0	04.3	+10 19.8	203	30.4 ¹²³	+4 07.0 ¹¹⁹		0	5 11	5 35	5 56	16 35 47	4 10 48	
13	15	04.4		218	01.7 ¹²³	+3 55.1 ¹¹⁹		10 S	18	42	6 04	38 42	06 51	
14	30	04.6		232	33.1 ¹²⁴	43.1 ¹²⁰		20	23	49	11	40 39	4 02 54	
15	45	04.7		247	04.5 ¹²⁴	31.2 ¹¹⁹		30	28	56	20	43 35	3 57 59	
16	60	04.9		261	36.0 ¹²⁵	19.2 ¹²⁰		35	30	5 59	25	45 32	54 61	
17	75	05.0	+10 24.3	276	07.5 ¹²⁵	+3 07.3 ¹¹⁹		40	5 31	6 03	6 30	16 46 30	3 50 65	
18	90	05.1	+10 25.1	290	39.0 ¹²⁵	+2 55.3 ¹²⁰		45	5 33	6 07	6 37	16 49 26	3 46 68	
19	105	05.3		305	10.5 ¹²⁵	43.3 ¹²⁰		50	34	11	44	51 23	42 72	
20	120	05.4		319	42.1 ¹²⁶	31.3 ¹²⁰		52	34	13	48	52 21	39 74	
21	135	05.6		334	13.7 ¹²⁶	19.3 ¹²⁰		54	34	15	52	53 19	37 76	
22	150	05.7		348	45.3 ¹²⁶	+2 07.3 ¹²⁰		56	34	18	6 56	55 17	34 79	
23	165	05.9		3	17.0 ¹²⁷	+1 55.3 ¹²⁰		58	35	20	7 00	56 15	31 81	
24	180	06.0	+10 30.4	17	48.7 ¹²⁷	+1 43.3 ¹²⁰		60 S	5 35	6 23	7 06	16 58 12	3 28 84	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG 10 ^h 20 ^m 5		Mag: -3.8 PMG: 11 ^h 07 ^m			Mag: +1.5 PMG: 13 ^h 21 ^m			Mag: -2.0 PMG: 13 ^h 02 ^m			Mag: +0.3 PMG: 13 ^h 22 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	'	°	°	'	°	°	'	°
0	204	26.5	193	23.9	+3 07.5	159	36.1	+17 14.7	163	58.9	+14 46.6	159	01.6	+15 02.7
1	219	29.0	208	23.5	08.8	174	36.7	15.2	179	00.8	46.7	174	03.7	02.8
2	234	31.5	223	23.1	10.0	189	37.4	15.7	194	02.7	46.9	189	05.9	02.9
3	249	33.9	238	22.8	11.2	204	38.1	16.3	209	04.6	47.1	204	08.0	03.0
4	264	36.4	253	22.4	12.4	219	38.7	16.8	224	06.5	47.3	219	10.2	03.1
5	279	38.9	268	22.0	+3 13.6	234	39.4	+17 17.3	239	08.4	+14 47.5	234	12.4	+15 03.2
6	294	41.3	283	21.6	+3 14.8	249	40.1	+17 17.9	254	10.3	+14 47.6	249	14.5	+15 03.2
7	309	43.8	298	21.3	16.1	264	40.8	18.4	269	12.2	47.8	264	16.7	03.3
8	324	46.3	313	20.9	17.3	279	41.4	18.9	284	14.1	48.0	279	18.8	03.4
9	339	48.7	328	20.5	18.5	294	42.1	19.4	299	15.9	48.2	294	21.0	03.5
10	354	51.2	343	20.2	19.7	309	42.8	20.0	314	17.8	48.4	309	23.2	03.6
11	9	53.6	358	19.8	+3 20.9	324	43.5	+17 20.5	329	19.7	+14 48.6	324	25.3	+15 03.7
12	24	56.1	13	19.4	+3 22.1	339	44.1	+17 21.0	344	21.6	+14 48.7	339	27.5	+15 03.8
13	39	58.6	28	19.0	23.3	354	44.8	21.5	359	23.5	48.9	354	29.6	03.9
14	55	01.0	43	18.7	24.6	9	45.5	22.1	14	25.4	49.1	9	31.8	04.0
15	70	03.5	58	18.3	25.8	24	46.1	22.6	29	27.3	49.3	24	34.0	04.1
16	85	06.0	73	17.9	27.0	39	46.8	23.1	44	29.2	49.5	39	36.1	04.2
17	100	08.4	88	17.6	+3 28.2	54	47.5	+17 23.6	59	31.1	+14 49.6	54	38.3	+15 04.2
18	115	10.9	103	17.2	+3 29.4	69	48.2	+17 24.2	74	32.9	+14 49.8	69	40.4	+15 04.3
19	130	13.4	118	16.8	30.6	84	48.8	24.7	89	34.8	50.0	84	42.6	04.4
20	145	15.8	133	16.4	31.8	99	49.5	25.2	104	36.7	50.2	99	44.7	04.5
21	160	18.3	148	16.1	33.1	114	50.2	25.7	119	38.6	50.4	114	46.9	04.6
22	175	20.8	163	15.7	34.3	129	50.9	26.3	134	40.5	50.5	129	49.1	04.7
23	190	23.2	178	15.3	35.5	144	51.5	26.8	149	42.4	50.7	144	51.2	04.8
24	205	25.7	193	14.9	+3 36.7	159	52.2	+17 27.3	164	44.3	+14 50.9	159	53.4	+15 04.9
Dif	—		-4		+12	+7		+5	+19		+2	+22		+1

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15°9 PMG: 11 ^h 59 ^m 5			Edad: 12 ^d 2 PHE { SD: 15°5 PMG: 23 ^h 33 ^m 4 ^h : 56°9 12 ^h : 56°8 20 ^h : 56°6 R°: 46 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	180	06.0	+10 30.4	17	48.7	+1 43.3	60 N	19 24	20 11	21 15	17 35 81		5 02 12	
1	195	06.2	31.3	32	20.4 ¹²⁷	31.3 ¹²⁰	58	17	20 01	20 59	34 78		02 14	
2	210	06.3	32.2	46	52.2 ¹²⁸	19.3 ¹²⁰	56	11	19 52	45	33 76		02 16	
3	225	06.5	33.0	61	24.0 ¹²⁸	+1 07.3 ¹²⁰	54	06	45	33	32 74		01 19	
4	240	06.6	33.9	75	55.8 ¹²⁸	+0 55.3 ¹²⁰	52	19 02	38	23	31 72		01 21	
5	255	06.7	+10 34.8	90	27.6 ¹²⁸	+0 43.3 ¹²⁰	50	18 57	19 32	20 15	17 31 70		5 01 22	
6	270	06.9	+10 35.7	104	59.4 ¹²⁸	+0 31.3 ¹²⁰	45	18 48	19 19	19 57	17 29 66		5 00 27	
7	285	07.0	36.6	119	31.3 ¹²⁹	19.4 ¹¹⁹	40	41	09	43	28 63		00 29	
8	300	07.2	37.4	134	03.2 ¹²⁹	+0 07.4 ¹²⁰	35	34	19 00	32	27 60		5 00 32	
9	315	07.3	38.3	148	35.1 ¹²⁹	-0 04.6 ¹²⁰	30	29	18 53	22	26 57		4 59 35	
10	330	07.5	39.2	163	07.1 ¹³⁰	16.6 ¹²⁰	20	19	41	19 08	24 54		59 38	
11	345	07.6	+10 40.1	177	39.0 ¹²⁹	-0 28.5 ¹¹⁹	10 N	18 11	18 32	18 57	17 23 49		4 58 43	
12	0	07.7	+10 40.9	192	11.0 ¹³⁰	-0 40.4 ¹¹⁹	0	18 03	18 24	18 48	17 22 46		4 58 46	
13	15	07.9	41.8	206	43.0 ¹³⁰	-0 52.4 ¹²⁰	10 S	17 55	17	41	20 43		57 50	
14	30	08.0	42.7	221	15.0 ¹³⁰	-1 04.3 ¹¹⁹	20	47	10	35	19 39		56 54	
15	45	08.2	43.6	235	47.0 ¹³⁰	16.2 ¹¹⁹	30	38	18 02	30	18 34		56 58	
16	60	08.3	44.4	250	19.1 ¹³¹	28.1 ¹¹⁹	35	33	17 59	28	17 32		55 61	
17	75	08.5	+10 45.3	264	51.2 ¹³¹	-1 40.0 ¹¹⁹	40	17 27	17 55	18 26	17 16 29		4 55 63	
18	90	08.6	+10 46.2	279	23.2 ¹³⁰	-1 51.8 ¹¹⁸	45	17 20	17 50	18 24	17 15 26		4 54 67	
19	105	08.7	47.0	293	55.3 ¹³¹	-2 03.7 ¹¹⁹	50	12	45	23	14 22		54 70	
20	120	08.9	47.9	308	27.5 ¹³²	15.5 ¹¹⁸	52	09	43	22	13 21		53 73	
21	135	09.0	48.8	322	59.6 ¹³¹	27.3 ¹¹⁸	54	05	41	22	12 19		53 75	
22	150	09.2	49.7	337	31.7 ¹³¹	39.1 ¹¹⁸	56	17 00	38	22	12 17		53 76	
23	165	09.3	50.5	352	03.9 ¹³²	-2 50.9 ¹¹⁸	58	16 55	36	21	11 14		52 79	
24	180	09.4	+10 51.4	6	36.0 ¹³¹	-3 02.6 ¹¹⁷	60 S	16 50	17 33	18 21	17 10 12		4 52 82	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG 10 ^h 16 ^m 6		Mag: -3.8 PMG: 11 ^h 07 ^m			Mag: +1.5 PMG: 13 ^h 20 ^m			Mag: -2.0 PMG: 12 ^h 59 ^m			Mag: +0.3 PMG: 13 ^h 19 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	205	25.7	193	14.9	+3 36.7	159	52.2	+17 27.3	164	44.3	+14 50.9	159	53.4	+15 04.9
1	220	28.1	208	14.6	37.9	174	52.9	27.8	179	46.2	51.1	174	55.5	05.0
2	235	30.6	223	14.2	39.1	189	53.5	28.4	194	48.0	51.3	189	57.7	05.1
3	250	33.1	238	13.8	40.3	204	54.2	28.9	209	49.9	51.4	204	59.9	05.1
4	265	35.5	253	13.5	41.5	219	54.9	29.4	224	51.8	51.6	220	02.0	05.2
5	280	38.0	268	13.1	+3 42.8	234	55.6	+17 29.9	239	53.7	+14 51.8	235	04.2	+15 05.3
6	295	40.5	283	12.7	+3 44.0	249	56.2	+17 30.4	254	55.6	+14 52.0	250	06.3	+15 05.4
7	310	42.9	298	12.3	45.2	264	56.9	31.0	269	57.5	52.2	265	08.5	05.5
8	325	45.4	313	12.0	46.4	279	57.6	31.5	284	59.4	52.3	280	10.6	05.6
9	340	47.9	328	11.6	47.6	294	58.2	32.0	300	01.3	52.5	295	12.8	05.7
10	355	50.3	343	11.2	48.8	309	58.9	32.5	315	03.1	52.7	310	15.0	05.8
11	10	52.8	358	10.8	+3 50.0	324	59.6	+17 33.0	330	05.0	+14 52.9	325	17.1	+15 05.9
12	25	55.2	13	10.5	+3 51.2	340	00.2	+17 33.6	345	06.9	+14 53.1	340	19.3	+15 06.0
13	40	57.7	28	10.1	52.5	355	00.9	34.1	0	08.8	53.2	355	21.4	06.1
14	56	00.2	43	09.7	53.7	10	01.6	34.6	15	10.7	53.4	10	23.6	06.1
15	71	02.6	58	09.3	54.9	25	02.3	35.1	30	12.6	53.6	25	25.7	06.2
16	86	05.1	73	09.0	56.1	40	02.9	35.6	45	14.5	53.8	40	27.9	06.3
17	101	07.6	88	08.6	+3 57.3	55	03.6	+17 36.2	60	16.4	+14 54.0	55	30.1	+15 06.4
18	116	10.0	103	08.2	+3 58.5	70	04.3	+17 36.7	75	18.2	+14 54.2	70	32.2	+15 06.5
19	131	12.5	118	07.8	+3 59.7	85	04.9	37.2	90	20.1	54.3	85	34.4	06.6
20	146	15.0	133	07.5	+4 00.9	100	05.6	37.7	105	22.0	54.5	100	36.5	06.7
21	161	17.4	148	07.1	02.2	115	06.3	38.2	120	23.9	54.7	115	38.7	06.8
22	176	19.9	163	06.7	03.4	130	06.9	38.7	135	25.8	54.9	130	40.8	06.9
23	191	22.4	178	06.3	04.6	145	07.6	39.3	150	27.7	55.1	145	43.0	07.0
24	206	24.8	193	06.0	+4 05.8	160	08.3	+17 39.8	165	29.6	+14 55.2	160	45.2	+15 07.0
Dif	—		-4		+12	+7		+5	+19		+2	+22		+1

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 9 PMG: 11 ^h 59 ^m 3				Edad: 13 ^d 2 PHE { 4 ^h : 56 ^h 4 12 ^h : 56 ^h 3 20 ^h : 56 ^h 1 PMG: **h **m R°: **m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m		
0	180	09.4	+10	51.4	6	36.0	-3	02.6	60 N	2	43	3	47	4	34			
1	195	09.6		52.3	21	08.2 ¹³²		14.3 ¹¹⁷	58	2	59	3	57	41	52	77		
2	210	09.7		53.2	35	40.4 ¹³²		26.0 ¹¹⁷	56	3	13	4	06	46	49	75		
3	225	09.9		54.0	50	12.6 ¹³²		37.7 ¹¹⁷	54	24		13		52	46	72		
4	240	10.0		54.9	64	44.8 ¹³²	-3	49.4 ¹¹⁷	52	35		20		4	56	43		
5	255	10.1	+10	55.8	79	17.0 ¹³²	-4	01.0 ¹¹⁶	50	3	43	4	26	5	01	18		
6	270	10.3	+10	56.6	93	49.3 ¹³³	-4	12.6 ¹¹⁶	45	4	01	4	39	5	10	18		
7	285	10.4		57.5	108	21.5 ¹³²		24.2 ¹¹⁶	40	15		49		18	31	61		
8	300	10.6		58.4	122	53.7 ¹³²		35.7 ¹¹⁵	35	27	4	58	24		27	59		
9	315	10.7	+10	59.2	137	26.0 ¹³³		47.2 ¹¹⁵	30	36		5	05	30	23	57		
10	330	10.8	+11	00.1	151	58.2 ¹³²	-4	58.7 ¹¹⁵	20	4	51		17	40	18	52		
11	345	11.0	+11	01.0	166	30.5 ¹³³	-5	10.1 ¹¹⁴	10 N	5	02	5	27	5	48	18		
12	0	11.1	+11	01.8	181	02.8 ¹³³	-5	21.6 ¹¹⁵	0	5	10	5	35	5	56	18		
13	15	11.3		02.7	195	35.0 ¹³²		32.9 ¹¹³	10 S	18		42	6	04	18	03		
14	30	11.4		03.6	210	07.3 ¹³³		44.3 ¹¹⁴	20	24		49	12		17	58		
15	45	11.5		04.4	224	39.6 ¹³³	-5	55.6 ¹¹³	30	29	5	57	21		52	35		
16	60	11.7		05.3	239	11.8 ¹³²	-6	06.9 ¹¹³	35	31	6	01	26		49	33		
17	75	11.8	+11	06.2	253	44.1 ¹³³	-6	18.1 ¹¹²	40	5	33	6	05	6	32	17		
18	90	11.9	+11	07.0	268	16.4 ¹³³	-6	29.4 ¹¹³	45	5	35	6	09	6	39	17		
19	105	12.1		07.9	282	48.7 ¹³³		40.5 ¹¹¹	50	37		14		47	36	24		
20	120	12.2		08.8	297	21.0 ¹³³	-6	51.7 ¹¹²	52	37		16		51	34	22		
21	135	12.4		09.6	311	53.2 ¹³²	-7	02.8 ¹¹¹	54	38		19	6	55	31	20		
22	150	12.5		10.5	326	25.5 ¹³³		13.8 ¹¹⁰	56	38		21	7	00	29	18		
23	165	12.6		11.4	340	57.8 ¹³³		24.8 ¹¹⁰	58	39		24		05	25	16		
24	180	12.8	+11	12.2	355	30.1 ¹³³	-7	35.8 ¹¹⁰	60 S	5	39	6	27	7	11	17	22	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 10 ^h 12 ^m 7		Mag: -3.8 PMG: 11 ^h 08 ^m				Mag: +1.5 PMG: 13 ^h 19 ^m				Mag: -2.0 PMG: 12 ^h 56 ^m				Mag: +0.3 PMG: 13 ^h 15 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	206	24.8	193	06.0	+4	05.8	160	08.3	+17	39.8	165	29.6	+14	55.2	160	45.2	+15	07.0
1	221	27.3	208	05.6		07.0	175	09.0		40.3	180	31.4		55.4	175	47.3		07.1
2	236	29.7	223	05.2		08.2	190	09.6		40.8	195	33.3		55.6	190	49.5		07.2
3	251	32.2	238	04.8		09.4	205	10.3		41.3	210	35.2		55.8	205	51.6		07.3
4	266	34.7	253	04.5		10.6	220	11.0		41.8	225	37.1		56.0	220	53.8		07.4
5	281	37.1	268	04.1	+4	11.8	235	11.6	+17	42.4	240	39.0	+14	56.1	235	55.9	+15	07.5
6	296	39.6	283	03.7	+4	13.0	250	12.3	+17	42.9	255	40.9	+14	56.3	250	58.1	+15	07.6
7	311	42.1	298	03.3		14.3	265	13.0		43.4	270	42.8		56.5	266	00.3		07.7
8	326	44.5	313	03.0		15.5	280	13.6		43.9	285	44.6		56.7	281	02.4		07.8
9	341	47.0	328	02.6		16.7	295	14.3		44.4	300	46.5		56.9	296	04.6		07.9
10	356	49.5	343	02.2		17.9	310	15.0		44.9	315	48.4		57.0	311	06.7		08.0
11	11	51.9	358	01.8	+4	19.1	325	15.6	+17	45.4	330	50.3	+14	57.2	326	08.9	+15	08.0
12	26	54.4	13	01.5	+4	20.3	340	16.3	+17	45.9	345	52.2	+14	57.4	341	11.0	+15	08.1
13	41	56.8	28	01.1		21.5	355	17.0		46.5	0	54.1		57.6	356	13.2		08.2
14	56	59.3	43	00.7		22.7	10	17.6		47.0	15	56.0		57.8	11	15.4		08.3
15	72	01.8	58	00.3		23.9	25	18.3		47.5	30	57.8		57.9	26	17.5		08.4
16	87	04.2	72	59.9		25.1	40	19.0		48.0	45	59.7		58.1	41	19.7		08.5
17	102	06.7	87	59.6	+4	26.3	55	19.6	+17	48.5	61	01.6	+14	58.3	56	21.8	+15	08.6
18	117	09.2	102	59.2	+4	27.5	70	20.3	+17	49.0	76	03.5	+14	58.5	71	24.0	+15	08.7
19	132	11.6	117	58.8		28.8	85	21.0		49.5	91	05.4		58.7	86	26.1		08.8
20	147	14.1	132	58.4		30.0	100	21.7		50.0	106	07.3		58.8	101	28.3		08.9
21	162	16.6	147	58.1		31.2	115	22.3		50.5	121	09.2		59.0	116	30.4		08.9
22	177	19.0	162	57.7		32.4	130	23.0		51.1	136	11.0		59.2	131	32.6		09.0
23	192	21.5	177	57.3		33.6	145	23.7		51.6	151	12.9		59.4	146	34.8		09.1
24	207	24.0	192	56.9	+4	34.8	160	24.3	+17	52.1	166	14.8	+14	59.6	161	36.9	+15	09.2
Dif	—		-4		+12		+7		+5		+19		+2		+22		+1	

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15'9 PMG: 11 ^h 59 ^m 0			Edad: 14 ^d 2 PHE { 4 ^h : 55'9 12 ^h : 55'7 20 ^h : 55'6 SD: 15'2 PMG: 0 ^h 19 ^m R°: 45 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	m	h m	m	
0	180	12.8	+11	12.2	355	30.1	-7	35.8	60 N	19 29	20 17	21 23	20 16	78	5 27	14
1	195	12.9		13.1	10	02.4 ¹³³		46.7 ¹⁰⁹	58	22	20 06	21 05	09	76	31	17
2	210	13.0		14.0	24	34.6 ¹³²	-7	57.6 ¹⁰⁹	56	15	19 57	20 51	20 04	72	36	19
3	225	13.2		14.8	39	06.9 ¹³³	-8	08.4 ¹⁰⁸	54	10	49	38	19 58	71	40	21
4	240	13.3		15.7	53	39.2 ¹³³		19.2 ¹⁰⁸	52	05	42	28	54	68	43	23
5	255	13.4	+11	16.5	68	11.4 ¹³²	-8	30.0 ¹⁰⁸	50	19 00	19 35	20 19	19 49	67	5 46	25
6	270	13.6	+11	17.4	82	43.7 ¹³³	-8	40.7 ¹⁰⁷	45	18 51	19 22	20 00	19 40	63	5 53	28
7	285	13.7		18.3	97	15.9 ¹³²	-8	51.3 ¹⁰⁶	40	43	11	19 45	32	61	5 59	31
8	300	13.9		19.1	111	48.2 ¹³³	-9	01.9 ¹⁰⁶	35	36	19 02	34	26	58	6 04	34
9	315	14.0		20.0	126	20.4 ¹³²		12.5 ¹⁰⁶	30	30	18 55	24	20	56	09	35
10	330	14.1		20.9	140	52.7 ¹³³		23.0 ¹⁰⁵	20	20	42	19 09	10	52	16	40
11	345	14.3	+11	21.7	155	24.9 ¹³²	-9	33.5 ¹⁰⁵	10 N	18 11	18 32	18 57	19 01	50	6 23	43
12	0	14.4	+11	22.6	169	57.1 ¹³²	-9	43.9 ¹⁰⁴	0	18 02	18 23	18 48	18 53	47	6 30	46
13	15	14.5		23.4	184	29.3 ¹³²	-9	54.2 ¹⁰³	10 S	17 54	16	40	45	44	36	49
14	30	14.7		24.3	199	01.5 ¹³²	-10	04.5 ¹⁰³	20	46	08	34	37	40	43	52
15	45	14.8		25.1	213	33.7 ¹³²		14.8 ¹⁰³	30	36	18 00	28	27	37	51	56
16	60	14.9		26.0	228	05.9 ¹³²		25.0 ¹⁰²	35	31	17 56	26	22	34	6 55	59
17	75	15.1	+11	26.9	242	38.1 ¹³²	-10	35.1 ¹⁰¹	40	17 24	17 52	18 23	18 16	32	7 00	62
18	90	15.2	+11	27.7	257	10.2 ¹³¹	-10	45.2 ¹⁰¹	45	17 17	17 47	18 21	18 08	30	7 06	65
19	105	15.3		28.6	271	42.4 ¹³²	-10	55.2 ¹⁰⁰	50	09	42	19	18 00	26	14	68
20	120	15.5		29.4	286	14.5 ¹³¹	-11	05.2 ¹⁰⁰	52	05	39	18	17 56	24	17	70
21	135	15.6		30.3	300	46.7 ¹³²		15.1 ⁹⁹	54	17 00	37	18	51	23	21	71
22	150	15.7		31.2	315	18.8 ¹³¹		24.9 ⁹⁸	56	16 55	34	17	47	20	25	73
23	165	15.9		32.0	329	50.9 ¹³¹		34.7 ⁹⁸	58	50	31	16	41	18	29	77
24	180	16.0	+11	32.9	344	23.0 ¹³¹	-11	44.5 ⁹⁸	60 S	16 44	17 27	18 16	17 35	16	7 34	79

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 10 ^h 08 ^m 7		Mag: -3.8 PMG: 11 ^h 08 ^m		Mag: +1.5 PMG: 13 ^h 18 ^m		Mag: -2.0 PMG: 12 ^h 53 ^m		Mag: +0.3 PMG: 13 ^h 12 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	207	24.0	192	56.9	+4	34.8	160	24.3	+17	52.1	166	14.8	+14	59.6	161	36.9	+15	09.2
1	222	26.4	207	56.5		36.0	175	25.0		52.6	181	16.7		59.7	176	39.1		09.3
2	237	28.9	222	56.2		37.2	190	25.7		53.1	196	18.6	+14	59.9	191	41.2		09.4
3	252	31.3	237	55.8		38.4	205	26.3		53.6	211	20.5	+15	00.1	206	43.4		09.5
4	267	33.8	252	55.4		39.6	220	27.0		54.1	226	22.4		00.3	221	45.5		09.6
5	282	36.3	267	55.0	+4	40.8	235	27.7	+17	54.6	241	24.2	+15	00.4	236	47.7	+15	09.7
6	297	38.7	282	54.6	+4	42.0	250	28.3	+17	55.1	256	26.1	+15	00.6	251	49.8	+15	09.8
7	312	41.2	297	54.3		43.2	265	29.0		55.6	271	28.0		00.8	266	52.0		09.9
8	327	43.7	312	53.9		44.4	280	29.7		56.1	286	29.9		01.0	281	54.2		09.9
9	342	46.1	327	53.5		45.7	295	30.3		56.6	301	31.8		01.2	296	56.3		10.0
10	357	48.6	342	53.1		46.9	310	31.0		57.1	316	33.7		01.3	311	58.5		10.1
11	12	51.1	357	52.7	+4	48.1	325	31.7	+17	57.7	331	35.5	+15	01.5	327	00.6	+15	10.2
12	27	53.5	12	52.4	+4	49.3	340	32.3	+17	58.2	346	37.4	+15	01.7	342	02.8	+15	10.3
13	42	56.0	27	52.0		50.5	355	33.0		58.7	1	39.3		01.9	357	04.9		10.4
14	57	58.4	42	51.6		51.7	10	33.7		59.2	16	41.2		02.1	12	07.1		10.5
15	73	00.9	57	51.2		52.9	25	34.3	+17	59.7	31	43.1		02.2	27	09.2		10.6
16	88	03.4	72	50.8		54.1	40	35.0	+18	00.2	46	45.0		02.4	42	11.4		10.7
17	103	05.8	87	50.5	+4	55.3	55	35.7	+18	00.7	61	46.9	+15	02.6	57	13.6	+15	10.8
18	118	08.3	102	50.1	+4	56.5	70	36.3	+18	01.2	76	48.7	+15	02.8	72	15.7	+15	10.8
19	133	10.8	117	49.7		57.7	85	37.0		01.7	91	50.6		03.0	87	17.9		10.9
20	148	13.2	132	49.3	+4	58.9	100	37.7		02.2	106	52.5		03.1	102	20.0		11.0
21	163	15.7	147	48.9	+5	00.1	115	38.3		02.7	121	54.4		03.3	117	22.2		11.1
22	178	18.2	162	48.6		01.3	130	39.0		03.2	136	56.3		03.5	132	24.3		11.2
23	193	20.6	177	48.2		02.5	145	39.6		03.7	151	58.2		03.7	147	26.5		11.3
24	208	23.1	192	47.8	+5	03.7	160	40.3	+18	04.2	167	00.0	+15	03.9	162	28.6	+15	11.4
Dif	—		-4		+12		+7		+5		+19		+2		+22		+1	

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 9 PMG: 11 ^h 58 ^m 8				Edad: 15 ^d 2 PHE { 4 ^h : 55 ^h 4 12 ^h : 55 ^h 3 20 ^h : 55 ^h 1 PMG: 1 ^h 04 ^m R°: 47 ^m												
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	16.0	+11	32.9	344	23.0	-11	44.5	60 N	2	34	3	40	4	28	21	34
1	195	16.1		33.7	358	55.1 ¹³¹	-11	54.1	96	58	2	52	3	51	35	25	72
2	210	16.3		34.6	13	27.2 ¹³¹	-12	03.7	96	56	3	06	4	00	42	16	70
3	225	16.4		35.4	27	59.2 ¹³⁰		13.3	96	54	19		08	47	09	68	6
4	240	16.5		36.3	42	31.3 ¹³¹		22.8	95	52	29		15	52	21	02	66
5	255	16.7	+11	37.1	57	03.3 ¹³⁰	-12	32.2	94	50	3	39	4	22	4	57	20
6	270	16.8	+11	38.0	71	35.4 ¹³¹	-12	41.6	94	45	3	57	4	35	5	06	20
7	285	16.9		38.8	86	07.4 ¹³⁰	-12	50.9	93	40	4	12		46	15	33	59
8	300	17.0		39.7	100	39.4 ¹³⁰	-13	00.1	92	35	24		4	55	22	24	57
9	315	17.2		40.6	115	11.3 ¹²⁹		09.3	92	30	34		5	03	28	16	55
10	330	17.3		41.4	129	43.3 ¹³⁰		18.4	91	20	4	49		15	38	20	02
11	345	17.4	+11	42.3	144	15.2 ¹²⁹	-13	27.4	90	10 N	5	01	5	26	5	47	19
12	0	17.6	+11	43.1	158	47.2 ¹³⁰	-13	36.4	90	0	5	10	5	34	5	55	19
13	15	17.7		44.0	173	19.1 ¹²⁹		45.3	89	10 S	18		42	6	04	29	44
14	30	17.8		44.8	187	51.0 ¹²⁹	-13	54.1	88	20	24		50	12	17	42	35
15	45	18.0		45.7	202	22.9 ¹²⁹	-14	02.8	87	30	30		5	58	22	19	04
16	60	18.1		46.5	216	54.8 ¹²⁹		11.5	87	35	32		6	02	28	18	56
17	75	18.2	+11	47.4	231	26.6 ¹²⁸	-14	20.2	87	40	5	35	6	07	6	34	18
18	90	18.3	+11	48.2	245	58.5 ¹²⁹	-14	28.7	85	45	5	37	6	11	6	42	18
19	105	18.5		49.1	260	30.3 ¹²⁸		37.2	85	50	39		17	50	26	29	22
20	120	18.6		49.9	275	02.1 ¹²⁸		45.6	84	52	40		20	54	20	28	27
21	135	18.7		50.8	289	33.9 ¹²⁸	-14	53.9	83	54	41		22	6	59	14	26
22	150	18.9		51.6	304	05.6 ¹²⁷	-15	02.2	83	56	42		25	7	04	18	07
23	165	19.0		52.5	318	37.4 ¹²⁸		10.3	81	58	43		28	09	17	59	22
24	180	19.1	+11	53.3	333	09.1 ¹²⁷	-15	18.4	81	60 S	5	43	6	32	7	15	17

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 10 ^h 04 ^m 8		Mag: -3.8 PMG: 11 ^h 09 ^m		Mag: +1.5 PMG: 13 ^h 17 ^m		Mag: -2.0 PMG: 12 ^h 50 ^m		Mag: +0.2 PMG: 13 ^h 08 ^m	
	hG ♈		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec	
h	°	'	°	'	°	'	°	'	°	'
0	208	23.1	192	47.8	+5	03.7	167	00.0	+15	03.9
1	223	25.6	207	47.4		04.9	182	01.9		04.0
2	238	28.0	222	47.0		06.1	197	03.8		04.2
3	253	30.5	237	46.7		07.3	212	05.7		04.4
4	268	32.9	252	46.3		08.5	227	07.6		04.6
5	283	35.4	267	45.9	+5	09.7	242	09.5	+15	04.8
6	298	37.9	282	45.5	+5	10.9	257	11.3	+15	04.9
7	313	40.3	297	45.1		12.1	272	13.2		05.1
8	328	42.8	312	44.7		13.3	287	15.1		05.3
9	343	45.3	327	44.4		14.5	302	17.0		05.5
10	358	47.7	342	44.0		15.7	317	18.9		05.7
11	13	50.2	357	43.6	+5	16.9	332	20.8	+15	05.8
12	28	52.7	12	43.2	+5	18.1	347	22.6	+15	06.0
13	43	55.1	27	42.8		19.3	2	24.5		06.2
14	58	57.6	42	42.4		20.5	17	26.4		06.4
15	74	00.1	57	42.1		21.7	32	28.3		06.5
16	89	02.5	72	41.7		22.9	47	30.2		06.7
17	104	05.0	87	41.3	+5	24.1	62	32.1	+15	06.9
18	119	07.4	102	40.9	+5	25.3	77	33.9	+15	07.1
19	134	09.9	117	40.5		26.5	92	35.8		07.3
20	149	12.4	132	40.1		27.7	107	37.7		07.4
21	164	14.8	147	39.7		28.9	122	39.6		07.6
22	179	17.3	162	39.4		30.1	137	41.5		07.8
23	194	19.8	177	39.0		31.3	152	43.4		08.0
24	209	22.2	192	38.6	+5	32.5	167	45.2	+15	08.2
Dif	—		-4		+12		+7		+19	
									+2	
									+22	
									+1	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'9 PMG: 11 ^h 58 ^m 6			Edad: 16 ^d 2 PHE { 4 ^h : 55'0 12 ^h : 54'8 20 ^h : 54'7 SD: 15'0 PMG: 1 ^h 51 ^m R°: 47 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	180	19.1	+11 53.3	333	09.1	-15 18.4	81	60 N	19 34	20 22	21 31	22 49 69	5 58 22	
1	195	19.2	54.2	347	40.8 ¹²⁷	26.5	81	58	26	11	21 12	37 66	6 08 25	
2	210	19.4	55.0	2	12.5 ¹²⁷	34.4	79	56	20	20 01	20 56	26 65	17 27	
3	225	19.5	55.9	16	44.2 ¹²⁷	42.3	79	54	14	19 53	43	17 63	25 29	
4	240	19.6	56.7	31	15.9 ¹²⁷	50.1	78	52	08	45	32	08 62	32 30	
5	255	19.7	+11 57.5	45	47.5 ¹²⁶	-15 57.8	77	50	19 04	19 39	20 23	22 01 60	6 38 32	
6	270	19.9	+11 58.4	60	19.2 ¹²⁷	-16 05.5	77	45	18 53	19 25	20 03	21 45 58	6 52 35	
7	285	20.0	+11 59.2	74	50.8 ¹²⁶	13.1	76	40	45	13	19 48	32 56	7 04 36	
8	300	20.1	+12 00.1	89	22.4 ¹²⁶	20.5	74	35	37	19 04	36	21 55	13 39	
9	315	20.2	00.9	103	53.9 ¹²⁵	27.9	74	30	31	18 56	25	21 11 54	22 40	
10	330	20.4	01.8	118	25.5 ¹²⁶	35.3	74	20	20	43	19 10	20 54 52	37 43	
11	345	20.5	+12 02.6	132	57.0 ¹²⁵	-16 42.5	72	10 N	18 11	18 32	18 57	20 40 49	7 50 45	
12	0	20.6	+12 03.5	147	28.6 ¹²⁶	-16 49.7	72	0	18 02	18 23	18 48	20 27 47	8 02 48	
13	15	20.7	04.3	162	00.1 ¹²⁵	-16 56.8	71	10 S	17 53	15	40	20 13 46	14 50	
14	30	20.9	05.1	176	31.5 ¹²⁴	-17 03.8	70	20	44	18 07	33	19 59 44	28 51	
15	45	21.0	06.0	191	03.0 ¹²⁵	10.7	69	30	34	17 58	26	43 41	43 54	
16	60	21.1	06.8	205	34.5 ¹²⁵	17.5	68	35	28	54	24	33 41	8 51 56	
17	75	21.2	+12 07.7	220	05.9 ¹²⁴	-17 24.3	68	40	17 22	17 49	18 21	19 23 38	9 01 58	
18	90	21.4	+12 08.5	234	37.3 ¹²⁴	-17 31.0	67	45	17 14	17 44	18 18	19 10 37	9 13 60	
19	105	21.5	09.4	249	08.7 ¹²⁴	37.6	66	50	05	38	16	18 55 34	27 63	
20	120	21.6	10.2	263	40.1 ¹²⁴	44.1	65	52	17 00	35	15	48 33	34 64	
21	135	21.7	11.0	278	11.4 ¹²³	50.5	64	54	16 56	32	14	40 32	42 65	
22	150	21.9	11.9	292	42.8 ¹²⁴	-17 56.8	63	56	51	29	13	31 30	50 67	
23	165	22.0	12.7	307	14.1 ¹²³	-18 03.0	62	58	45	26	12	21 28	9 59 70	
24	180	22.1	+12 13.6	321	45.4 ¹²³	-18 09.2	62	60 S	16 39	17 22	18 11	18 10 26	10 10 72	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 10 ^h 00 ^m 9		Mag: -3.8 PMG: 11 ^h 10 ^m		Mag: +1.5 PMG: 13 ^h 16 ^m		Mag: -2.0 PMG: 12 ^h 47 ^m		Mag: +0.2 PMG: 13 ^h 05 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	209	22.2	192 38.6	+5 32.5	160 56.2	+18 16.1	167 45.2	+15 08.2	163 20.3	+15 13.6
1	224	24.7	207 38.2	33.7	175 56.9	16.6	182 47.1	08.3	178 22.5	13.6
2	239	27.2	222 37.8	34.9	190 57.6	17.1	197 49.0	08.5	193 24.6	13.7
3	254	29.6	237 37.4	36.1	205 58.2	17.6	212 50.9	08.7	208 26.8	13.8
4	269	32.1	252 37.0	37.3	220 58.9	18.1	227 52.8	08.9	223 29.0	13.9
5	284	34.5	267 36.7	+5 38.5	235 59.6	+18 18.6	242 54.7	+15 09.1	238 31.1	+15 14.0
6	299	37.0	282 36.3	+5 39.7	251 00.2	+18 19.1	257 56.5	+15 09.2	253 33.3	+15 14.1
7	314	39.5	297 35.9	40.9	266 00.9	19.6	272 58.4	09.4	268 35.4	14.2
8	329	41.9	312 35.5	42.1	281 01.6	20.1	288 00.3	09.6	283 37.6	14.3
9	344	44.4	327 35.1	43.3	296 02.2	20.6	303 02.2	09.8	298 39.7	14.4
10	359	46.9	342 34.7	44.5	311 02.9	21.1	318 04.1	09.9	313 41.9	14.5
11	14	49.3	357 34.3	+5 45.7	326 03.5	+18 21.6	333 05.9	+15 10.1	328 44.0	+15 14.6
12	29	51.8	12 33.9	+5 46.9	341 04.2	+18 22.1	348 07.8	+15 10.3	343 46.2	+15 14.6
13	44	54.3	27 33.6	48.1	356 04.9	22.5	3 09.7	10.5	358 48.3	14.7
14	59	56.7	42 33.2	49.3	11 05.5	23.0	18 11.6	10.7	13 50.5	14.8
15	74	59.2	57 32.8	50.5	26 06.2	23.5	33 13.5	10.8	28 52.6	14.9
16	90	01.7	72 32.4	51.7	41 06.8	24.0	48 15.4	11.0	43 54.8	15.0
17	105	04.1	87 32.0	+5 52.9	56 07.5	+18 24.5	63 17.2	+15 11.2	58 56.9	+15 15.1
18	120	06.6	102 31.6	+5 54.1	71 08.2	+18 25.0	78 19.1	+15 11.4	73 59.1	+15 15.2
19	135	09.0	117 31.2	55.3	86 08.8	25.5	93 21.0	11.6	89 01.3	15.3
20	150	11.5	132 30.8	56.5	101 09.5	26.0	108 22.9	11.7	104 03.4	15.4
21	165	14.0	147 30.4	57.7	116 10.2	26.5	123 24.8	11.9	119 05.6	15.5
22	180	16.4	162 30.1	+5 58.9	131 10.8	27.0	138 26.6	12.1	134 07.7	15.5
23	195	18.9	177 29.7	+6 00.1	146 11.5	27.4	153 28.5	12.3	149 09.9	15.6
24	210	21.4	192 29.3	+6 01.2	161 12.1	+18 27.9	168 30.4	+15 12.4	164 12.0	+15 15.7
Dif	—		-4	+12	+7	+5	+19	+2	+22	+1

UT	SOL				LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 9 PMG: 11 ^h 58 ^m 4				Edad: 17 ^d 2 PHE { 4 ^h : 54 ^m 6 12 ^h : 54 ^m 5 20 ^h : 54 ^m 4 PMG: 2 ^h 38 ^m R°: 48 ^m															
	hG ☉		Dec		hG ☾		Dif		Dec			Dif			Náutico	Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m	
0	180	22.1	+12	13.6	321	45.4	-18	09.2	61	58	60 N	2 25	3 34	4 22	23 58	61	6 20	29		
1	195	22.2		14.4	336	16.7 ¹²³		15.3	61	58	58	2 44	45	30	43	60	33	31		
2	210	22.4		15.2	350	47.9 ¹²²		21.3	60	56	56	3 00	3 55	37	31	58	44	33		
3	225	22.5		16.1	5	19.2 ¹²³		27.2	59	54	54	13	4 03	43	20	57	6 54	34		
4	240	22.6		16.9	19	50.4 ¹²²		33.0	58	52	52	24	11	48	10	56	7 02	36		
5	255	22.7	+12	17.8	34	21.6 ¹²²	-18	38.7	57	50	50	3 34	4 18	4 53	23 01	56	7 10	37		
6	270	22.8	+12	18.6	48	52.8 ¹²²	-18	44.3	56	45	45	3 54	4 32	5 03	22 43	54	7 27	39		
7	285	23.0		19.4	63	24.0 ¹²²		49.9	56	40	40	4 09	43	12	28	53	40	41		
8	300	23.1		20.3	77	55.2 ¹²²	-18	55.3	54	35	35	21	4 53	19	16	52	7 52	42		
9	315	23.2		21.1	92	26.3 ¹²¹	-19	00.7	54	30	30	31	5 01	26	22 05	51	8 02	43		
10	330	23.3		21.9	106	57.4 ¹²¹		05.9	52	20	20	4 47	14	37	21 46	50	20	45		
11	345	23.5	+12	22.8	121	28.6 ¹²²	-19	11.1	52	10 N	10 N	5 00	5 25	5 46	21 29	50	8 35	47		
12	0	23.6	+12	23.6	135	59.7 ¹²¹	-19	16.2	51	0	0	5 09	5 34	5 55	21 14	49	8 50	48		
13	15	23.7		24.4	150	30.7 ¹²⁰		21.2	50	10 S	10 S	18	42	6 04	20 59	47	9 04	49		
14	30	23.8		25.3	165	01.8 ¹²¹		26.1	49	20	20	25	51	13	43	46	19	51		
15	45	23.9		26.1	179	32.9 ¹²¹		30.9	48	30	30	31	5 59	23	24	45	37	53		
16	60	24.1		27.0	194	03.9 ¹²⁰		35.6	47	35	35	34	6 04	29	14	44	47	54		
17	75	24.2	+12	27.8	208	34.9 ¹²⁰	-19	40.3	47	40	40	5 37	6 08	6 36	20 01	43	9 59	55		
18	90	24.3	+12	28.6	223	05.9 ¹²⁰	-19	44.8	45	45	45	5 39	6 14	6 44	19 47	42	10 13	57		
19	105	24.4		29.5	237	36.9 ¹²⁰		49.2	44	50	50	42	20	53	29	40	30	59		
20	120	24.5		30.3	252	07.9 ¹²⁰		53.6	44	52	52	43	23	6 58	21	39	38	60		
21	135	24.6		31.1	266	38.8 ¹¹⁹	-19	57.8	42	54	54	44	26	7 02	12	38	47	61		
22	150	24.8		31.9	281	09.8 ¹²⁰	-20	02.0	42	56	56	45	29	08	19 01	37	10 57	62		
23	165	24.9		32.8	295	40.7 ¹¹⁹		06.1	41	58	58	46	32	14	18 49	36	11 09	63		
24	180	25.0	+12	33.6	310	11.7 ¹²⁰	-20	10.0	39	60 S	60 S	5 48	6 36	7 20	18 36	34	11 22	66		

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG 9 ^h 56 ^m 9		Mag: -3.8 PMG: 11 ^h 10 ^m			Mag: +1.5 PMG: 13 ^h 15 ^m			Mag: -2.0 PMG: 12 ^h 44 ^m			Mag: +0.2 PMG: 13 ^h 01 ^m				
	hG ♈		hG ♀		Dec	hG ♂		Dec		hG ♃		Dec		hG ♄		Dec
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	210	21.4	192	29.3	+6	01.2	161	12.1	+18	27.9	168	30.4	+15	12.4	164	12.0
1	225	23.8	207	28.9		02.4	176	12.8		28.4	183	32.3		12.6	179	14.2
2	240	26.3	222	28.5		03.6	191	13.5		28.9	198	34.2		12.8	194	16.3
3	255	28.8	237	28.1		04.8	206	14.1		29.4	213	36.1		13.0	209	18.5
4	270	31.2	252	27.7		06.0	221	14.8		29.9	228	37.9		13.2	224	20.6
5	285	33.7	267	27.3	+6	07.2	236	15.4	+18	30.4	243	39.8	+15	13.3	239	22.8
6	300	36.2	282	26.9	+6	08.4	251	16.1	+18	30.8	258	41.7	+15	13.5	254	24.9
7	315	38.6	297	26.5		09.6	266	16.8		31.3	273	43.6		13.7	269	27.1
8	330	41.1	312	26.2		10.8	281	17.4		31.8	288	45.5		13.9	284	29.2
9	345	43.5	327	25.8		12.0	296	18.1		32.3	303	47.3		14.1	299	31.4
10	0	46.0	342	25.4		13.2	311	18.7		32.8	318	49.2		14.2	314	33.5
11	15	48.5	357	25.0	+6	14.4	326	19.4	+18	33.3	333	51.1	+15	14.4	329	35.7
12	30	50.9	12	24.6	+6	15.6	341	20.1	+18	33.7	348	53.0	+15	14.6	344	37.8
13	45	53.4	27	24.2		16.7	356	20.7		34.2	3	54.9		14.8	359	40.0
14	60	55.9	42	23.8		17.9	11	21.4		34.7	18	56.7		14.9	14	42.1
15	75	58.3	57	23.4		19.1	26	22.0		35.2	33	58.6		15.1	29	44.3
16	91	00.8	72	23.0		20.3	41	22.7		35.7	49	00.5		15.3	44	46.5
17	106	03.3	87	22.6	+6	21.5	56	23.4	+18	36.2	64	02.4	+15	15.5	59	48.6
18	121	05.7	102	22.2	+6	22.7	71	24.0	+18	36.6	79	04.3	+15	15.7	74	50.8
19	136	08.2	117	21.8		23.9	86	24.7		37.1	94	06.1		15.8	89	52.9
20	151	10.7	132	21.4		25.1	101	25.3		37.6	109	08.0		16.0	104	55.1
21	166	13.1	147	21.0		26.3	116	26.0		38.1	124	09.9		16.2	119	57.2
22	181	15.6	162	20.7		27.5	131	26.7		38.6	139	11.8		16.4	134	59.4
23	196	18.0	177	20.3		28.6	146	27.3		39.0	154	13.7		16.5	150	01.5
24	211	20.5	192	19.9	+6	29.8	161	28.0	+18	39.5	169	15.6	+15	16.7	165	03.7
Dif	—		-4 +12				+7 +5				+19 +2				+22 +1	

UT	SOL				LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'9 PMG: 11 ^h 58 ^m 2				Edad: 18 ^d 2 PHE { SD: 14'8 PMG: 3 ^h 26 ^m R°: 48 ^m 4 ^h : 54'3 12 ^h : 54'3 20 ^h : 54'2											
	hG ☉		Dec		hG ☾		Dif				Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m	
0	180	25.0	+12	33.6	310	11.7	-20	10.0	60 N	19 39	20 28	21 39	** ** *		6 49	39
1	195	25.1		34.4	324	42.6 ¹¹⁹		13.9 ³⁹	58	31	16	19	** ** *		7 04	41
2	210	25.2		35.3	339	13.5 ¹¹⁹		17.7 ³⁸	56	24	20 06	21 02	** ** *		17	41
3	225	25.4		36.1	353	44.3 ¹¹⁸		21.4 ³⁷	54	17	19 57	20 49	** ** *		28	42
4	240	25.5		36.9	8	15.2 ¹¹⁹		25.0 ³⁶	52	12	49	37	** ** *		38	43
5	255	25.6	+12	37.8	22	46.1 ¹¹⁹	-20	28.5 ³⁵	50	19 07	19 42	20 27	23 57	50	7 47	43
6	270	25.7	+12	38.6	37	16.9 ¹¹⁸	-20	31.9 ³⁴	45	18 56	19 27	20 06	23 37	50	8 06	44
7	285	25.8		39.4	51	47.8 ¹¹⁹		35.2 ³³	40	47	16	19 50	21 50		21	45
8	300	25.9		40.3	66	18.6 ¹¹⁸		38.4 ³²	35	39	19 06	37	23 08	49	34	46
9	315	26.1		41.1	80	49.4 ¹¹⁸		41.5 ³¹	30	32	18 57	27	22 56	49	8 45	47
10	330	26.2		41.9	95	20.2 ¹¹⁸		44.5 ³⁰	20	21	44	19 10	36 49		9 05	47
11	345	26.3	+12	42.7	109	51.0 ¹¹⁸	-20	47.4 ²⁹	10 N	18 11	18 32	18 58	22 19	48	9 22	48
12	0	26.4	+12	43.6	124	21.8 ¹¹⁸	-20	50.2 ²⁸	0	18 02	18 23	18 47	22 03	48	9 38	48
13	15	26.5		44.4	138	52.6 ¹¹⁸		52.9 ²⁷	10 S	17 52	14	39	21 46	49	9 53	49
14	30	26.6		45.2	153	23.3 ¹¹⁷		55.5 ²⁶	20	43	18 05	31	29 48		10 10	50
15	45	26.7		46.0	167	54.1 ¹¹⁸	-20	58.1 ²⁶	30	32	17 56	25	21 09	48	30	50
16	60	26.9		46.9	182	24.8 ¹¹⁷	-21	00.5 ²⁴	35	26	52	21	20 58	47	41	51
17	75	27.0	+12	47.7	196	55.6 ¹¹⁸	-21	02.8 ²³	40	17 19	17 47	18 18	20 44	48	10 54	51
18	90	27.1	+12	48.5	211	26.3 ¹¹⁷	-21	05.0 ²²	45	17 11	17 41	18 15	20 29	47	11 10	52
19	105	27.2		49.3	225	57.0 ¹¹⁷		07.2 ²²	50	17 01	34	12	09 47		29	52
20	120	27.3		50.2	240	27.8 ¹¹⁸		09.2 ²⁰	52	16 56	31	11	20 00	46	38	53
21	135	27.4		51.0	254	58.5 ¹¹⁷		11.1 ¹⁹	54	51	28	10	19 50	46	48	53
22	150	27.5		51.8	269	29.2 ¹¹⁷		12.9 ¹⁸	56	46	25	08	38 46		11 59	54
23	165	27.7		52.6	283	59.9 ¹¹⁷		14.7 ¹⁸	58	40	21	07	25 45		12 12	55
24	180	27.8	+12	53.5	298	30.6 ¹¹⁷	-21	16.3 ¹⁶	60 S	16 33	17 17	18 06	19 10	44	12 28	55

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 9 ^h 53 ^m 0		Mag: -3.8 PMG: 11 ^h 11 ^m		Mag: +1.5 PMG: 13 ^h 14 ^m		Mag: -2.0 PMG: 12 ^h 41 ^m		Mag: +0.2 PMG: 12 ^h 58 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	211	20.5	192	19.9	161	28.0	169	15.6	165	03.7
1	226	23.0	207	19.5	176	28.6	184	17.4	180	05.8
2	241	25.4	222	19.1	191	29.3	199	19.3	195	08.0
3	256	27.9	237	18.7	206	30.0	214	21.2	210	10.1
4	271	30.4	252	18.3	221	30.6	229	23.1	225	12.3
5	286	32.8	267	17.9	236	31.3	244	25.0	240	14.4
6	301	35.3	282	17.5	251	31.9	259	26.8	255	16.6
7	316	37.8	297	17.1	266	32.6	274	28.7	270	18.7
8	331	40.2	312	16.7	281	33.2	289	30.6	285	20.9
9	346	42.7	327	16.3	296	33.9	304	32.5	300	23.0
10	1	45.1	342	15.9	311	34.6	319	34.4	315	25.2
11	16	47.6	357	15.5	326	35.2	334	36.2	330	27.3
12	31	50.1	12	15.1	341	35.9	349	38.1	345	29.5
13	46	52.5	27	14.7	356	36.5	4	40.0	0	31.6
14	61	55.0	42	14.3	46.4	11 37.2	19	41.9	15	33.8
15	76	57.5	57	13.9	47.6	26 37.8	34	43.8	30	35.9
16	91	59.9	72	13.5	48.8	41 38.5	49	45.6	45	38.1
17	107	02.4	87	13.1	50.0	56 39.2	64	47.5	60	40.2
18	122	04.9	102	12.7	51.2	71 39.8	79	49.4	75	42.4
19	137	07.3	117	12.3	52.4	86 40.5	94	51.3	90	44.5
20	152	09.8	132	11.9	53.6	101 41.1	109	53.1	105	46.7
21	167	12.3	147	11.5	54.7	116 41.8	124	55.0	120	48.8
22	182	14.7	162	11.1	55.9	131 42.4	139	56.9	135	51.0
23	197	17.2	177	10.7	57.1	146 43.1	154	58.8	150	53.1
24	212	19.6	192	10.3	58.3	161 43.8	170	00.7	165	55.3
Dif	—		-4		+12		+19		+22	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 9 PMG: 11 ^h 58 ^m 1			Edad: 19 ^d 2 PHE { 4 ^h : 54 ^m 2 12 ^h : 54 ^m 2 20 ^h : 54 ^m 2 PMG: 4 ^h 14 ^m R°: 49 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec		Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	h	m	h	m	h	m	m
0	180	27.8	+12 53.5	298	30.6	-21 16.3	60 N	2 16	3 27	4 17		0 59 49	7 28 51	
1	195	27.9		313	01.3 ¹¹⁷	17.8	58		37	39	25	43 49	45 50	
2	210	28.0		327	32.0 ¹¹⁷	19.3	56	2 53	49	32		29 49	7 58 50	
3	225	28.1		342	02.6 ¹¹⁶	20.6	54	3 07	3 58	38		17 49	8 10 50	
4	240	28.2		356	33.3 ¹¹⁷	21.8	52		19	4 06	44	0 06 50	21 50	
5	255	28.3	+12 57.6	11	04.0 ¹¹⁷	-21 23.0	50	3 29	4 13	4 49		** ** *	8 30 50	
6	270	28.4	+12 58.4	25	34.7 ¹¹⁷	-21 24.0	45	3 50	4 28	5 00		** ** *	8 50 50	
7	285	28.6	+12 59.2	40	05.3 ¹¹⁶	24.9	40	4 06	40	09		** ** *	9 06 50	
8	300	28.7	+13 00.0	54	36.0 ¹¹⁷	25.8	35		18	50	17	23 57 46	20 49	
9	315	28.8	+13 00.8	69	06.7 ¹¹⁷	26.5	30		29	4 59	24	45 46	32 49	
10	330	28.9		83	37.3 ¹¹⁶	27.1	20		46	5 12	35	25 47	9 52 49	
11	345	29.0	+13 02.5	98	08.0 ¹¹⁷	-21 27.7	10 N	4 58	5 24	5 45		23 07 48	10 10 48	
12	0	29.1	+13 03.3	112	38.7 ¹¹⁷	-21 28.1	0	5 09	5 33	5 55		22 51 48	10 26 48	
13	15	29.2		127	09.3 ¹¹⁶	28.5	10 S		18	42	6 04	35 49	10 42 49	
14	30	29.3		141	40.0 ¹¹⁷	28.7	20		25	5 51	14	22 17 50	11 00 48	
15	45	29.4		156	10.6 ¹¹⁶	28.8	30		32	6 00	25	21 57 50	20 48	
16	60	29.6		170	41.3 ¹¹⁷	28.9	35		35	05	31	45 51	32 47	
17	75	29.7	+13 07.4	185	12.0 ¹¹⁷	-21 28.8	40	5 39	6 10	6 38		21 32 51	11 45 48	
18	90	29.8	+13 08.2	199	42.6 ¹¹⁶	-21 28.6	45	5 42	6 16	6 46		21 16 52	12 02 46	
19	105	29.9		214	13.3 ¹¹⁷	28.4	50		45	23	6 56	20 56 53	21 46	
20	120	30.0		228	44.0 ¹¹⁷	28.0	52		46	26	7 01	46 54	31 45	
21	135	30.1		243	14.6 ¹¹⁶	27.5	54		48	29	06	36 54	41 46	
22	150	30.2		257	45.3 ¹¹⁷	27.0	56		49	33	12	24 55	12 53 45	
23	165	30.3		272	16.0 ¹¹⁷	26.3	58		50	36	18	20 10 55	13 07 44	
24	180	30.4	+13 13.1	286	46.7 ¹¹⁷	-21 25.5	60 S	5 52	6 41	7 25		19 54 56	13 23 44	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG 9 ^h 49 ^m 1		Mag: -3.8 PMG: 11 ^h 12 ^m		Mag: +1.5 PMG: 13 ^h 13 ^m		Mag: -2.0 PMG: 12 ^h 38 ^m		Mag: +0.2 PMG: 12 ^h 54 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	212	19.6	192	10.3	+6 58.3	161	43.8	+18 50.9	170	00.7	+15 21.0
1	227	22.1	207	09.9	+6 59.5	176	44.4	51.4	185	02.5	21.2
2	242	24.6	222	09.5	+7 00.6	191	45.1	51.9	200	04.4	21.3
3	257	27.0	237	09.1	01.8	206	45.7	52.4	215	06.3	21.5
4	272	29.5	252	08.7	03.0	221	46.4	52.8	230	08.2	21.7
5	287	32.0	267	08.3	+7 04.2	236	47.0	+18 53.3	245	10.1	+15 21.9
6	302	34.4	282	07.9	+7 05.4	251	47.7	+18 53.8	260	11.9	+15 22.0
7	317	36.9	297	07.5	06.6	266	48.4	54.2	275	13.8	22.2
8	332	39.4	312	07.1	07.7	281	49.0	54.7	290	15.7	22.4
9	347	41.8	327	06.7	08.9	296	49.7	55.2	305	17.6	22.6
10	2	44.3	342	06.3	10.1	311	50.3	55.7	320	19.5	22.8
11	17	46.8	357	05.9	+7 11.3	326	51.0	+18 56.1	335	21.3	+15 22.9
12	32	49.2	12	05.5	+7 12.5	341	51.6	+18 56.6	350	23.2	+15 23.1
13	47	51.7	27	05.1	13.6	356	52.3	57.1	5	25.1	23.3
14	62	54.1	42	04.7	14.8	11	52.9	57.5	20	27.0	23.5
15	77	56.6	57	04.3	16.0	26	53.6	58.0	35	28.8	23.6
16	92	59.1	72	03.9	17.2	41	54.3	58.5	50	30.7	23.8
17	108	01.5	87	03.5	+7 18.3	56	54.9	+18 58.9	65	32.6	+15 24.0
18	123	04.0	102	03.1	+7 19.5	71	55.6	+18 59.4	80	34.5	+15 24.2
19	138	06.5	117	02.7	20.7	86	56.2	+18 59.9	95	36.4	24.4
20	153	08.9	132	02.3	21.9	101	56.9	+19 00.3	110	38.2	24.5
21	168	11.4	147	01.9	23.1	116	57.5	00.8	125	40.1	24.7
22	183	13.9	162	01.5	24.2	131	58.2	01.3	140	42.0	24.9
23	198	16.3	177	01.1	25.4	146	58.8	01.7	155	43.9	25.1
24	213	18.8	192	00.7	+7 26.6	161	59.5	+19 02.2	170	45.8	+15 25.2
Dif	—		-4	+12		+7	+5		+19		+2

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 15'9 PMG: 11 ^h 57 ^m 9				Edad: 20 ^d 2 PHE { 4 ^h : 54'2 12 ^h : 54'3 20 ^h : 54'3 SD: 14'8 PMG: 5 ^h 03 ^m R°: 48 ^m													
	hG ☉		Dec		hG ☾		Dif							Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m		
0	180	30.4	+13	13.1	286	46.7	-21	25.5	60 N	19 44	20 34	21 48	1 48 39	8 19 61				
1	195	30.5		13.9	301	17.3 ¹¹⁶		24.7 ⁸	58	35	22	26	32 40	35 59				
2	210	30.6		14.7	315	48.0 ¹¹⁷		23.7 ¹⁰	56	28	11	21 08	18 41	8 48 59				
3	225	30.7		15.5	330	18.7 ¹¹⁷		22.6 ¹¹	54	21	20 01	20 54	1 06 42	9 00 58				
4	240	30.8		16.3	344	49.4 ¹¹⁷		21.5 ¹¹	52	15	19 53	41	0 56 42	11 56				
5	255	31.0	+13	17.2	359	20.1 ¹¹⁷	-21	20.2 ¹³	50	19 10	19 46	20 31	0 47 42	9 20 56				
6	270	31.1	+13	18.0	13	50.8 ¹¹⁷	-21	18.8 ¹⁴	45	18 58	19 30	20 09	0 27 44	9 40 54				
7	285	31.2		18.8	28	21.5 ¹¹⁷		17.4 ¹⁴	40	49	18	19 53	0 11 44	9 56 53				
8	300	31.3		19.6	42	52.3 ¹¹⁸		15.8 ¹⁶	35	41	19 07	39	** ** *	10 09 53				
9	315	31.4		20.4	57	23.0 ¹¹⁷		14.2 ¹⁶	30	34	18 59	28	** ** *	21 52				
10	330	31.5		21.2	71	53.7 ¹¹⁷		12.4 ¹⁸	20	22	44	19 11	** ** *	41 50				
11	345	31.6	+13	22.0	86	24.5 ¹¹⁸	-21	10.5 ¹⁹	10 N	18 11	18 33	18 58	23 55 47	10 58 49				
12	0	31.7	+13	22.8	100	55.2 ¹¹⁷	-21	08.6 ¹⁹	0	18 01	18 23	18 47	23 39 48	11 14 49				
13	15	31.8		23.6	115	26.0 ¹¹⁸		06.5 ²¹	10 S	17 52	13	38	24 49	31 47				
14	30	31.9		24.4	129	56.7 ¹¹⁷		04.4 ²¹	20	42	18 04	30	23 07 51	11 48 46				
15	45	32.0		25.3	144	27.5 ¹¹⁸	-21	02.1 ²³	30	30	17 55	23	22 47 53	12 08 44				
16	60	32.1		26.1	158	58.3 ¹¹⁸	-20	59.8 ²³	35	24	50	19	36 54	19 44				
17	75	32.2	+13	26.9	173	29.1 ¹¹⁸	-20	57.3 ²⁵	40	17 16	17 44	18 16	22 23 55	12 33 42				
18	90	32.3	+13	27.7	187	59.9 ¹¹⁸	-20	54.8 ²⁵	45	17 07	17 38	18 12	22 08 56	12 48 41				
19	105	32.4		28.5	202	30.7 ¹¹⁸		52.1 ²⁷	50	16 57	31	09	21 49 59	13 07 40				
20	120	32.5		29.3	217	01.5 ¹¹⁸		49.4 ²⁷	52	52	28	07	40 60	16 39				
21	135	32.6		30.1	231	32.3 ¹¹⁸		46.5 ²⁹	54	47	24	06	30 61	27 37				
22	150	32.7		30.9	246	03.2 ¹¹⁹		43.6 ²⁹	56	41	20	04	19 62	38 37				
23	165	32.8		31.7	260	34.0 ¹¹⁸		40.6 ³⁰	58	35	16	03	21 05 64	13 51 35				
24	180	32.9	+13	32.5	275	04.9 ¹¹⁹	-20	37.4 ³²	60 S	16 28	17 12	18 01	20 50 66	14 07 33				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 9 ^h 45 ^m 1		Mag: -3.8 PMG: 11 ^h 12 ^m				Mag: +1.5 PMG: 13 ^h 11 ^m				Mag: -2.0 PMG: 12 ^h 35 ^m				Mag: +0.2 PMG: 12 ^h 51 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	213	18.8	192	00.7	+7	26.6	161	59.5	+19	02.2	170	45.8	+15	25.2	166	46.9	+15	22.2
1	228	21.3	207	00.3		27.8	177	00.2		02.7	185	47.6		25.4	181	49.0		22.3
2	243	23.7	221	59.9		28.9	192	00.8		03.1	200	49.5		25.6	196	51.2		22.4
3	258	26.2	236	59.4		30.1	207	01.5		03.6	215	51.4		25.8	211	53.3		22.5
4	273	28.6	251	59.0		31.3	222	02.1		04.0	230	53.3		25.9	226	55.5		22.6
5	288	31.1	266	58.6	+7	32.5	237	02.8	+19	04.5	245	55.1	+15	26.1	241	57.6	+15	22.7
6	303	33.6	281	58.2	+7	33.6	252	03.4	+19	05.0	260	57.0	+15	26.3	256	59.8	+15	22.8
7	318	36.0	296	57.8		34.8	267	04.1		05.4	275	58.9		26.5	272	01.9		22.8
8	333	38.5	311	57.4		36.0	282	04.7		05.9	291	00.8		26.7	287	04.1		22.9
9	348	41.0	326	57.0		37.2	297	05.4		06.4	306	02.7		26.8	302	06.2		23.0
10	3	43.4	341	56.6		38.3	312	06.0		06.8	321	04.5		27.0	317	08.4		23.1
11	18	45.9	356	56.2	+7	39.5	327	06.7	+19	07.3	336	06.4	+15	27.2	332	10.5	+15	23.2
12	33	48.4	11	55.8	+7	40.7	342	07.3	+19	07.7	351	08.3	+15	27.4	347	12.7	+15	23.3
13	48	50.8	26	55.4		41.9	357	08.0		08.2	6	10.2		27.5	2	14.8		23.4
14	63	53.3	41	55.0		43.0	12	08.7		08.7	21	12.0		27.7	17	17.0		23.5
15	78	55.7	56	54.6		44.2	27	09.3		09.1	36	13.9		27.9	32	19.1		23.6
16	93	58.2	71	54.1		45.4	42	10.0		09.6	51	15.8		28.1	47	21.3		23.7
17	109	00.7	86	53.7	+7	46.5	57	10.6	+19	10.0	66	17.7	+15	28.2	62	23.4	+15	23.7
18	124	03.1	101	53.3	+7	47.7	72	11.3	+19	10.5	81	19.6	+15	28.4	77	25.6	+15	23.8
19	139	05.6	116	52.9		48.9	87	11.9		11.0	96	21.4		28.6	92	27.7		23.9
20	154	08.1	131	52.5		50.1	102	12.6		11.4	111	23.3		28.8	107	29.9		24.0
21	169	10.5	146	52.1		51.2	117	13.2		11.9	126	25.2		28.9	122	32.0		24.1
22	184	13.0	161	51.7		52.4	132	13.9		12.3	141	27.1		29.1	137	34.2		24.2
23	199	15.5	176	51.3		53.6	147	14.5		12.8	156	28.9		29.3	152	36.3		24.3
24	214	17.9	191	50.9	+7	54.7	162	15.2	+19	13.2	171	30.8	+15	29.5	167	38.5	+15	24.4
Dif	—		-4		+12		+7		+5		+19		+2		+21		+1	

UT	SOL			☾ LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15'9 PMG: 11 ^h 57 ^m 7			Edad: 21 ^d 2 PHE { 4 ^h : 54'4 12 ^h : 54'5 20 ^h : 54'6 PMG: 5 ^h 51 ^m R°: 48 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif		Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	180	32.9	+13	32.5	275	04.9	-20	37.4	60 N	2 07	3 20	4 11	2 27	29	9 20	69		
1	195	33.0		33.3	289	35.7 ¹¹⁸		34.2 ³²	58	29	33	20	2 12	31	34	68		
2	210	33.1		34.1	304	06.6 ¹¹⁹		30.9 ³³	56	2 47	44	27	1 59	33	47	65		
3	225	33.3		34.9	318	37.5 ¹¹⁹		27.4 ³⁵	54	3 01	3 54	34	48	34	9 58	63		
4	240	33.4		35.7	333	08.4 ¹¹⁹		23.9 ³⁵	52	14	4 02	40	38	36	10 07	63		
5	255	33.5	+13	36.5	347	39.3 ¹¹⁹	-20	20.3 ³⁶	50	3 24	4 09	4 45	1 29	37	10 16	61		
6	270	33.6	+13	37.3	2	10.3 ¹²⁰	-20	16.6 ³⁷	45	3 46	4 25	4 57	1 11	38	10 34	59		
7	285	33.7		38.1	16	41.2 ¹¹⁹		12.8 ³⁸	40	4 02	37	5 06	0 55	41	10 49	57		
8	300	33.8		38.9	31	12.1 ¹¹⁹		08.9 ³⁹	35	16	48	14	43	41	11 02	55		
9	315	33.9		39.7	45	43.1 ¹²⁰		04.9 ⁴⁰	30	27	4 57	22	31	43	13	53		
10	330	34.0		40.5	60	14.1 ¹²⁰	-20	00.8 ⁴¹	20	44	5 11	34	0 12	45	31	52		
11	345	34.1	+13	41.3	74	45.1 ¹²⁰	-19	56.6 ⁴²	10 N	4 58	5 23	5 44	** ** *	**	11 47	50		
12	0	34.2	+13	42.1	89	16.1 ¹²⁰	-19	52.3 ⁴³	0	5 08	5 33	5 54	** ** *	**	12 03	47		
13	15	34.3		42.9	103	47.1 ¹²⁰		48.0 ⁴³	10 S	18	43	6 04	** ** *	**	18	45		
14	30	34.4		43.7	118	18.1 ¹²⁰		43.5 ⁴⁵	20	26	5 52	14	23	58	34	44		
15	45	34.5		44.5	132	49.2 ¹²¹		38.9 ⁴⁶	30	33	6 01	26	40	55	12 52	42		
16	60	34.6		45.3	147	20.2 ¹²⁰		34.3 ⁴⁶	35	37	07	33	30	56	13 03	40		
17	75	34.7	+13	46.1	161	51.3 ¹²¹	-19	29.5 ⁴⁸	40	5 40	6 12	6 40	23	18	13 15	38		
18	90	34.8	+13	46.9	176	22.4 ¹²¹	-19	24.7 ⁴⁸	45	5 44	6 18	6 49	23	04	13 29	37		
19	105	34.9		47.7	190	53.5 ¹²¹		19.8 ⁴⁹	50	48	26	6 59	22	48	47	34		
20	120	34.9		48.5	205	24.6 ¹²¹		14.7 ⁵¹	52	49	29	7 04	40	64	13 55	33		
21	135	35.0		49.3	219	55.7 ¹²¹		09.6 ⁵¹	54	51	32	10	31	66	14 04	32		
22	150	35.1		50.1	234	26.8 ¹²¹	-19	04.4 ⁵²	56	52	36	16	21	68	15	29		
23	165	35.2		50.9	248	58.0 ¹²²	-18	59.1 ⁵³	58	54	40	22	22	09	26	28		
24	180	35.3	+13	51.7	263	29.2 ¹²²	-18	53.7 ⁵⁴	60 S	5 56	6 45	7 30	21	56	14 40	25		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 9 ^h 41 ^m 2		Mag: -3.8 PMG: 11 ^h 13 ^m			Mag: +1.5 PMG: 13 ^h 10 ^m			Mag: -2.0 PMG: 12 ^h 32 ^m			Mag: +0.2 PMG: 12 ^h 48 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	214	17.9	191	50.9	+7	54.7	162	15.2	+19	13.2	171	30.8	+15	29.5	167	38.5	+15	24.4
1	229	20.4	206	50.5		55.9	177	15.8		13.7	186	32.7		29.7	182	40.6		24.5
2	244	22.9	221	50.0		57.1	192	16.5		14.2	201	34.6		29.8	197	42.8		24.6
3	259	25.3	236	49.6		58.2	207	17.1		14.6	216	36.5		30.0	212	44.9		24.6
4	274	27.8	251	49.2	+7	59.4	222	17.8		15.1	231	38.3		30.2	227	47.1		24.7
5	289	30.2	266	48.8	+8	00.6	237	18.4	+19	15.5	246	40.2	+15	30.4	242	49.2	+15	24.8
6	304	32.7	281	48.4	+8	01.7	252	19.1	+19	16.0	261	42.1	+15	30.5	257	51.4	+15	24.9
7	319	35.2	296	48.0		02.9	267	19.7		16.4	276	44.0		30.7	272	53.5		25.0
8	334	37.6	311	47.6		04.1	282	20.4		16.9	291	45.8		30.9	287	55.7		25.1
9	349	40.1	326	47.2		05.2	297	21.1		17.3	306	47.7		31.1	302	57.8		25.2
10	4	42.6	341	46.7		06.4	312	21.7		17.8	321	49.6		31.2	318	00.0		25.3
11	19	45.0	356	46.3	+8	07.6	327	22.4	+19	18.3	336	51.5	+15	31.4	333	02.1	+15	25.4
12	34	47.5	11	45.9	+8	08.7	342	23.0	+19	18.7	351	53.3	+15	31.6	348	04.3	+15	25.5
13	49	50.0	26	45.5		09.9	357	23.7		19.2	6	55.2		31.8	3	06.4		25.5
14	64	52.4	41	45.1		11.1	12	24.3		19.6	21	57.1		31.9	18	08.6		25.6
15	79	54.9	56	44.7		12.2	27	25.0		20.1	36	59.0		32.1	33	10.7		25.7
16	94	57.4	71	44.3		13.4	42	25.6		20.5	52	00.8		32.3	48	12.9		25.8
17	109	59.8	86	43.8	+8	14.6	57	26.3	+19	21.0	67	02.7	+15	32.5	63	15.0	+15	25.9
18	125	02.3	101	43.4	+8	15.7	72	26.9	+19	21.4	82	04.6	+15	32.6	78	17.2	+15	26.0
19	140	04.7	116	43.0		16.9	87	27.6		21.9	97	06.5		32.8	93	19.3		26.1
20	155	07.2	131	42.6		18.1	102	28.2		22.3	112	08.4		33.0	108	21.5		26.2
21	170	09.7	146	42.2		19.2	117	28.9		22.8	127	10.2		33.2	123	23.6		26.3
22	185	12.1	161	41.8		20.4	132	29.5		23.2	142	12.1		33.3	138	25.8		26.4
23	200	14.6	176	41.3		21.5	147	30.2		23.7	157	14.0		33.5	153	27.9		26.4
24	215	17.1	191	40.9	+8	22.7	162	30.8	+19	24.1	172	15.9	+15	33.7	168	30.0	+15	26.5
Dif	—		-4		+12		+7		+5		+19		+2		+21		+1	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 15'9 PMG: 11 ^h 57 ^m 6			Edad: 22 ^d 2 PHE { 4 ^h : 54'8 12 ^h : 54'9 20 ^h : 55'1 SD: 14'9 PMG: 6 ^h 39 ^m R°: 47 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m					
0	180	35.3	+13	51.7	263	29.2	-18 53.7	60 N	19 49	20 40	21 57	2 56 21	10 29 76					
1	195	35.4		52.5	278	00.3 ¹²¹	48.2 ⁵⁵	58	40	27	33	43 24	42 72					
2	210	35.5		53.3	292	31.5 ¹²²	42.7 ⁵⁵	56	32	15	21 14	32 26	10 52 70					
3	225	35.6		54.1	307	02.7 ¹²²	37.0 ⁵⁷	54	25	20 05	20 59	22 29	11 01 69					
4	240	35.7		54.9	321	34.0 ¹²³	31.2 ⁵⁸	52	19	19 57	46	14 30	10 66					
5	255	35.8	+13	55.7	336	05.2 ¹²²	-18 25.4 ⁵⁸	50	19 13	19 49	20 35	2 06 31	11 17 65					
6	270	35.9	+13	56.5	350	36.4 ¹²²	-18 19.5 ⁵⁹	45	19 01	19 33	20 12	1 49 35	11 33 62					
7	285	36.0		57.3	5	07.7 ¹²³	13.4 ⁶¹	40	18 51	20	19 55	36 36	46 59					
8	300	36.1		58.1	19	39.0 ¹²³	07.3 ⁶¹	35	42	09	41	24 39	11 57 57					
9	315	36.2		58.8	34	10.3 ¹²³	-18 01.1 ⁶²	30	35	19 00	30	1 14 40	12 06 56					
10	330	36.3	+13	59.6	48	41.6 ¹²³	-17 54.9 ⁶²	20	22	18 45	19 12	0 57 43	23 52					
11	345	36.4	+14	00.4	63	12.9 ¹²³	-17 48.5 ⁶⁴	10 N	18 11	18 33	18 58	0 42 45	12 37 50					
12	0	36.5	+14	01.2	77	44.2 ¹²³	-17 42.0 ⁶⁵	0	18 01	18 22	18 47	0 27 48	12 50 47					
13	15	36.6		02.0	92	15.6 ¹²⁴	35.5 ⁶⁵	10 S	17 51	12	37	0 13 50	13 03 45					
14	30	36.7		02.8	106	46.9 ¹²³	28.8 ⁶⁷	20	40	18 03	29	*** ** *	18 41					
15	45	36.8		03.6	121	18.3 ¹²⁴	22.1 ⁶⁷	30	28	17 53	21	*** ** *	34 38					
16	60	36.9		04.4	135	49.7 ¹²⁴	15.3 ⁶⁸	35	21	47	17	*** ** *	43 37					
17	75	37.0	+14	05.2	150	21.1 ¹²⁴	-17 08.4 ⁶⁹	40	17 13	17 41	18 13	*** ** *	13 53 35					
18	90	37.1	+14	06.0	164	52.5 ¹²⁴	-17 01.5 ⁶⁹	45	17 04	17 35	18 09	*** ** *	14 06 32					
19	105	37.1		06.7	179	23.9 ¹²⁴	-16 54.4 ⁷¹	50	16 54	27	05	23 51 66	21 29					
20	120	37.2		07.5	193	55.3 ¹²⁴	47.3 ⁷¹	52	48	24	04	44 68	28 27					
21	135	37.3		08.3	208	26.8 ¹²⁵	40.0 ⁷³	54	43	20	02	37 70	36 26					
22	150	37.4		09.1	222	58.2 ¹²⁴	32.7 ⁷³	56	37	16	18 00	29 72	44 24					
23	165	37.5		09.9	237	29.7 ¹²⁵	25.3 ⁷⁴	58	30	12	17 58	19 75	14 54 22					
24	180	37.6	+14	10.7	252	01.2 ¹²⁵	-16 17.8 ⁷⁵	60 S	16 22	17 07	17 56	23 09 77	15 05 19					
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 9 ^h 37 ^m 3		Mag: -3.8 PMG: 11 ^h 14 ^m			Mag: +1.5 PMG: 13 ^h 09 ^m			Mag: -2.0 PMG: 12 ^h 29 ^m			Mag: +0.2 PMG: 12 ^h 44 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	215	17.1	191	40.9	+8	22.7	162	30.8	+19	24.1	172	15.9	+15	33.7	168	30.0	+15	26.5
1	230	19.5	206	40.5		23.9	177	31.5		24.6	187	17.7		33.9	183	32.2		26.6
2	245	22.0	221	40.1		25.0	192	32.1		25.0	202	19.6		34.1	198	34.3		26.7
3	260	24.5	236	39.7		26.2	207	32.8		25.5	217	21.5		34.2	213	36.5		26.8
4	275	26.9	251	39.3		27.3	222	33.4		25.9	232	23.4		34.4	228	38.6		26.9
5	290	29.4	266	38.8	+8	28.5	237	34.1	+19	26.4	247	25.2	+15	34.6	243	40.8	+15	27.0
6	305	31.8	281	38.4	+8	29.7	252	34.7	+19	26.8	262	27.1	+15	34.8	258	42.9	+15	27.1
7	320	34.3	296	38.0		30.8	267	35.4		27.3	277	29.0		34.9	273	45.1		27.2
8	335	36.8	311	37.6		32.0	282	36.0		27.7	292	30.9		35.1	288	47.2		27.3
9	350	39.2	326	37.2		33.1	297	36.7		28.2	307	32.7		35.3	303	49.4		27.3
10	5	41.7	341	36.7		34.3	312	37.3		28.6	322	34.6		35.5	318	51.5		27.4
11	20	44.2	356	36.3	+8	35.5	327	38.0	+19	29.1	337	36.5	+15	35.6	333	53.7	+15	27.5
12	35	46.6	11	35.9	+8	36.6	342	38.6	+19	29.5	352	38.4	+15	35.8	348	55.8	+15	27.6
13	50	49.1	26	35.5		37.8	357	39.3		29.9	7	40.2		36.0	3	58.0		27.7
14	65	51.6	41	35.1		38.9	12	39.9		30.4	22	42.1		36.2	19	00.1		27.8
15	80	54.0	56	34.6		40.1	27	40.6		30.8	37	44.0		36.3	34	02.3		27.9
16	95	56.5	71	34.2		41.3	42	41.2		31.3	52	45.9		36.5	49	04.4		28.0
17	110	59.0	86	33.8	+8	42.4	57	41.9	+19	31.7	67	47.8	+15	36.7	64	06.6	+15	28.1
18	126	01.4	101	33.4	+8	43.6	72	42.5	+19	32.2	82	49.6	+15	36.9	79	08.7	+15	28.1
19	141	03.9	116	32.9		44.7	87	43.2		32.6	97	51.5		37.0	94	10.9		28.2
20	156	06.3	131	32.5		45.9	102	43.8		33.1	112	53.4		37.2	109	13.0		28.3
21	171	08.8	146	32.1		47.0	117	44.5		33.5	127	55.3		37.4	124	15.1		28.4
22	186	11.3	161	31.7		48.2	132	45.1		33.9	142	57.1		37.6	139	17.3		28.5
23	201	13.7	176	31.3		49.3	147	45.8		34.4	157	59.0		37.7	154	19.4		28.6
24	216	16.2	191	30.8	+8	50.5	162	46.4	+19	34.8	173	00.9	+15	37.9	169	21.6	+15	28.7
Dif	—		-4		+12		+6		+4		+19		+2		+21		+1	

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15'9 PMG: 11 ^h 57 ^m 4				Edad: 23 ^d 2 PHE { SD: 15'0 PMG: 7 ^h 26 ^m											
					R°: 47 ^m											
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m	
0	180	37.6	+14	10.7	252	01.2	-16	17.8	60 N	1 57	3 14	4 06	3 17 17		11 45 79	
1	195	37.7		11.5	266	32.7 ¹²⁵		10.3 ⁷⁵	58	2 21	27	15	3 07 20		11 54 76	
2	210	37.8		12.2	281	04.2 ¹²⁵	-16	02.7 ⁷⁶	56	40	39	22	2 58 23		12 02 74	
3	225	37.9		13.0	295	35.7 ¹²⁵	-15	54.9 ⁷⁸	54	2 55	49	29	51 24		10 7	
4	240	38.0		13.8	310	07.2 ¹²⁵		47.1 ⁷⁸	52	3 08	3 58	36	44 26		16 70	
5	255	38.1	+14	14.6	324	38.8 ¹²⁶	-15	39.2 ⁷⁹	50	3 20	4 05	4 41	2 37 28		12 22 68	
6	270	38.2	+14	15.4	339	10.3 ¹²⁵	-15	31.3 ⁷⁹	45	3 42	4 22	4 54	2 24 31		12 35 64	
7	285	38.2		16.2	353	41.9 ¹²⁶		23.2 ⁸¹	40	3 59	35	5 04	12 34		45 61	
8	300	38.3		16.9	8	13.5 ¹²⁶		15.1 ⁸¹	35	4 13	45	12	2 03 36		12 54 59	
9	315	38.4		17.7	22	45.0 ¹²⁵	-15	06.9 ⁸²	30	25	4 55	20	1 54 38		13 02 56	
10	330	38.5		18.5	37	16.6 ¹²⁶	-14	58.7 ⁸²	20	43	5 10	33	40 41		15 53	
11	345	38.6	+14	19.3	51	48.2 ¹²⁶	-14	50.3 ⁸⁴	10 N	4 57	5 22	5 44	1 27 44		13 27 49	
12	0	38.7	+14	20.1	66	19.8 ¹²⁶	-14	41.9 ⁸⁴	0	5 08	5 33	5 54	1 15 47		13 37 47	
13	15	38.8		20.9	80	51.4 ¹²⁶		33.4 ⁸⁵	10 S	18	43	6 04	1 03 49		48 44	
14	30	38.9		21.6	95	23.1 ¹²⁷		24.8 ⁸⁶	20	26	5 52	15	0 50 52		13 59 41	
15	45	39.0		22.4	109	54.7 ¹²⁶		16.1 ⁸⁷	30	34	6 03	27	35 56		14 12 37	
16	60	39.0		23.2	124	26.3 ¹²⁶	-14	07.4 ⁸⁷	35	38	08	34	26 58		20 35	
17	75	39.1	+14	24.0	138	58.0 ¹²⁷	-13	58.6 ⁸⁸	40	5 42	6 14	6 42	0 16 61		14 28 33	
18	90	39.2	+14	24.8	153	29.6 ¹²⁶	-13	49.7 ⁸⁹	45	5 46	6 21	6 51	0 05 63		14 38 30	
19	105	39.3		25.5	168	01.3 ¹²⁷		40.7 ⁹⁰	50	50	29	7 02	** ** *		50 26	
20	120	39.4		26.3	182	33.0 ¹²⁷		31.7 ⁹⁰	52	52	32	08	** ** *		14 55 25	
21	135	39.5		27.1	197	04.6 ¹²⁶		22.6 ⁹¹	54	54	36	13	** ** *		15 02 22	
22	150	39.6		27.9	211	36.3 ¹²⁷		13.4 ⁹²	56	56	40	19	** ** *		08 21	
23	165	39.7		28.6	226	08.0 ¹²⁷	-13	04.2 ⁹²	58	5 58	44	27	** ** *		16 18	
24	180	39.7	+14	29.4	240	39.7 ¹²⁷	-12	54.8 ⁹⁴	60 S	6 00	6 49	7 34	** ** *		15 24 16	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 9 ^h 33 ^m 4		Mag: -3.9 PMG: 11 ^h 14 ^m		Mag: +1.5 PMG: 13 ^h 08 ^m		Mag: -2.0 PMG: 12 ^h 26 ^m		Mag: +0.2 PMG: 12 ^h 41 ^m	
	hG ♀	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	216	16.2	191	30.8	+8	50.5	162	46.4	+15	37.9
1	231	18.7	206	30.4		51.6	177	47.1		38.1
2	246	21.1	221	30.0		52.8	192	47.7		38.3
3	261	23.6	236	29.6		54.0	207	48.4		38.4
4	276	26.1	251	29.1		55.1	222	49.0		38.6
5	291	28.5	266	28.7	+8	56.3	237	49.6	+19	37.0
6	306	31.0	281	28.3	+8	57.4	252	50.3	+19	37.5
7	321	33.5	296	27.9		58.6	267	50.9		37.9
8	336	35.9	311	27.4	+8	59.7	282	51.6		38.3
9	351	38.4	326	27.0	+9	00.9	297	52.2		38.8
10	6	40.8	341	26.6		02.0	312	52.9		39.2
11	21	43.3	356	26.1	+9	03.2	327	53.5	+19	39.7
12	36	45.8	11	25.7	+9	04.3	342	54.2	+19	40.1
13	51	48.2	26	25.3		05.5	357	54.8		40.5
14	66	50.7	41	24.9		06.6	12	55.5		41.0
15	81	53.2	56	24.4		07.8	27	56.1		41.4
16	96	55.6	71	24.0		08.9	42	56.8		41.8
17	111	58.1	86	23.6	+9	10.1	57	57.4	+19	42.3
18	127	00.6	101	23.1	+9	11.2	72	58.1	+19	42.7
19	142	03.0	116	22.7		12.4	87	58.7		43.2
20	157	05.5	131	22.3		13.5	102	59.4		43.6
21	172	07.9	146	21.9		14.6	118	00.0		44.0
22	187	10.4	161	21.4		15.8	133	00.7		44.5
23	202	12.9	176	21.0		16.9	148	01.3		44.9
24	217	15.3	191	20.6	+9	18.1	163	01.9	+19	45.3
Dif	—		-4		+11		+6		+4	

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: 24 ^d 2 PHE { SD: 15:2 PMG: 8 ^h 13 ^m 4 ^h : 56/0 12 ^h : 56/2 20 ^h : 56/5 R°: 47 ^m													
	hG ☉	Dec	hG ☾	Dif	Dec	Dif	Civil	Náutico			Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	180	39.7	+14	29.4	240	39.7	-12	54.8	60 N	19	54	20	46	22	07	3	34	
1	195	39.8		30.2	255	11.4 ¹²⁷		45.4 ⁹⁴	58	44		32	21	41	27	17	10	
2	210	39.9		31.0	269	43.0 ¹²⁶		36.0 ⁹⁴	56	36		20	21		21	19	16	
3	225	40.0		31.7	284	14.7 ¹²⁷		26.5 ⁹⁵	54	28		10	21	04	15	21	21	
4	240	40.1		32.5	298	46.4 ¹²⁷		16.9 ⁹⁶	52	22		20	01	20	51	10	23	
5	255	40.2	+14	33.3	313	18.1 ¹²⁷	-12	07.2 ⁹⁷	50	19	16	19	52	20	39	3	05	
6	270	40.3	+14	34.1	327	49.8 ¹²⁷	-11	57.5 ⁹⁷	45	19	03	19	36	20	16	2	55	
7	285	40.3		34.8	342	21.5 ¹²⁷		47.6 ⁹⁹	40	18	53	22	19	58	46	31	46	
8	300	40.4		35.6	356	53.2 ¹²⁷		37.8 ⁹⁸	35	44		11	43		39	34	53	
9	315	40.5		36.4	11	25.0 ¹²⁸		27.8 ¹⁰⁰	30	36	19	01	32		32	36	13	
10	330	40.6		37.2	25	56.7 ¹²⁷		17.8 ¹⁰⁰	20	23		18	46	19	13	21	40	
11	345	40.7	+14	37.9	40	28.4 ¹²⁷	-11	07.8 ¹⁰⁰	10 N	18	11	18	33	18	59	2	11	
12	0	40.8	+14	38.7	55	00.1 ¹²⁷	-10	57.6 ¹⁰²	0	18	01	18	22	18	47	2	02	
13	15	40.8		39.5	69	31.8 ¹²⁷		47.4 ¹⁰²	10 S	17	50	12	37		1	52	50	
14	30	40.9		40.2	84	03.5 ¹²⁷		37.2 ¹⁰²	20	39	18	02	28		42	54	40	
15	45	41.0		41.0	98	35.2 ¹²⁷		26.9 ¹⁰³	30	26	17	51	19		31	57	49	
16	60	41.1		41.8	113	06.8 ¹²⁶		16.5 ¹⁰⁴	35	19		45	15		24	60	14	
17	75	41.2	+14	42.5	127	38.5 ¹²⁷	-10	06.0 ¹⁰⁵	40	17	11	17	39	18	11	1	17	
18	90	41.3	+14	43.3	142	10.2 ¹²⁷	-9	55.5 ¹⁰⁵	45	17	01	17	32	18	07	1	08	
19	105	41.3		44.1	156	41.9 ¹²⁷		45.0 ¹⁰⁵	50	16	50	24	02		0	57	70	
20	120	41.4		44.8	171	13.6 ¹²⁷		34.3 ¹⁰⁷	52	45		20	18	00	52	71	20	
21	135	41.5		45.6	185	45.2 ¹²⁶		23.7 ¹⁰⁶	54	39		16	17	58	47	73	24	
22	150	41.6		46.4	200	16.9 ¹²⁷		12.9 ¹⁰⁸	56	32		12	56		41	75	29	
23	165	41.7		47.1	214	48.6 ¹²⁷	-9	02.1 ¹⁰⁸	58	25		07	54		34	78	34	
24	180	41.7	+14	47.9	229	20.2 ¹²⁶	-8	51.3 ¹⁰⁸	60 S	16	17	17	02	17	51	0	26	
UT	ARIES		VENUS			MARTE			JÚPITER				SATURNO					
	PMG: 9 ^h 29 ^m 4		Mag: -3.9 PMG: 11 ^h 15 ^m			Mag: +1.5 PMG: 13 ^h 07 ^m			Mag: -2.0 PMG: 12 ^h 23 ^m				Mag: +0.2 PMG: 12 ^h 37 ^m					
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	217	15.3	191	20.6	+9	18.1	163	01.9	+19	45.3	173	45.9	+15	42.1	170	13.1	+15	30.8
1	232	17.8	206	20.1		19.2	178	02.6		45.8	188	47.8		42.3	185	15.3		30.9
2	247	20.3	221	19.7		20.4	193	03.2		46.2	203	49.6		42.5	200	17.4		31.0
3	262	22.7	236	19.3		21.5	208	03.9		46.6	218	51.5		42.6	215	19.6		31.1
4	277	25.2	251	18.8		22.7	223	04.5		47.1	233	53.4		42.8	230	21.7		31.2
5	292	27.7	266	18.4	+9	23.8	238	05.2	+19	47.5	248	55.2	+15	43.0	245	23.9	+15	31.3
6	307	30.1	281	18.0	+9	25.0	253	05.8	+19	47.9	263	57.1	+15	43.2	260	26.0	+15	31.4
7	322	32.6	296	17.5		26.1	268	06.5		48.4	278	59.0		43.3	275	28.1		31.5
8	337	35.1	311	17.1		27.2	283	07.1		48.8	294	00.9		43.5	290	30.3		31.6
9	352	37.5	326	16.7		28.4	298	07.8		49.2	309	02.7		43.7	305	32.4		31.6
10	7	40.0	341	16.2		29.5	313	08.4		49.7	324	04.6		43.8	320	34.6		31.7
11	22	42.4	356	15.8	+9	30.7	328	09.0	+19	50.1	339	06.5	+15	44.0	335	36.7	+15	31.8
12	37	44.9	11	15.4	+9	31.8	343	09.7	+19	50.5	354	08.4	+15	44.2	350	38.9	+15	31.9
13	52	47.4	26	14.9		32.9	358	10.3		50.9	9	10.2		44.4	5	41.0		32.0
14	67	49.8	41	14.5		34.1	13	11.0		51.4	24	12.1		44.5	20	43.2		32.1
15	82	52.3	56	14.1		35.2	28	11.6		51.8	39	14.0		44.7	35	45.3		32.2
16	97	54.8	71	13.6		36.4	43	12.3		52.2	54	15.9		44.9	50	47.5		32.3
17	112	57.2	86	13.2	+9	37.5	58	12.9	+19	52.7	69	17.7	+15	45.1	65	49.6	+15	32.4
18	127	59.7	101	12.8	+9	38.6	73	13.6	+19	53.1	84	19.6	+15	45.2	80	51.8	+15	32.4
19	143	02.2	116	12.3		39.8	88	14.2		53.5	99	21.5		45.4	95	53.9		32.5
20	158	04.6	131	11.9		40.9	103	14.9		53.9	114	23.4		45.6	110	56.0		32.6
21	173	07.1	146	11.4		42.1	118	15.5		54.4	129	25.2		45.8	125	58.2		32.7
22	188	09.6	161	11.0		43.2	133	16.1		54.8	144	27.1		45.9	141	00.3		32.8
23	203	12.0	176	10.6		44.3	148	16.8		55.2	159	29.0		46.1	156	02.5		32.9
24	218	14.5	191	10.1	+9	45.5	163	17.4	+19	55.7	174	30.9	+15	46.3	171	04.6	+15	33.0
Dif	—		-4		+11		+6		+4		+19		+2		+21		+1	

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna						
	SD: 15°9 PMG: 11 ^h 57 ^m 2				Edad: 25 ^d 2 PHE { SD: 15°4 PMG: 9 ^h 00 ^m 4 ^h : 56/8 12 ^h : 57/0 20 ^h : 57/3 R°: 47 ^m																
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°					
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m			
0	180	41.7	+14	47.9	229	20.2	-8	51.3	60 N	1	46	3	07	4	00	3	48	85			
1	195	41.8		48.7	243	51.8 ¹²⁶		40.4 ¹⁰⁹	58	2	13		22	10		44	15	30	81		
2	210	41.9		49.4	258	23.5 ¹²⁷		29.4 ¹¹⁰	56		33		34	18		40	17	33	79		
3	225	42.0		50.2	272	55.1 ¹²⁶		18.4 ¹¹⁰	54	2	50		44	25		36	20	36	76		
4	240	42.1		51.0	287	26.7 ¹²⁶	-8	07.3 ¹¹¹	52	3	03	3	53	32		33	21	38	75		
5	255	42.1	+14	51.7	301	58.3 ¹²⁶	-7	56.2 ¹¹¹	50	3	15	4	01	4	38	3	30	23	14	40	73
6	270	42.2	+14	52.5	316	29.9 ¹²⁶	-7	45.0 ¹¹²	45	3	38	4	18	4	51	3	23	27	14	45	69
7	285	42.3		53.3	331	01.4 ¹²⁵		33.8 ¹¹²	40	3	56		32	5	01	17	31		50	65	
8	300	42.4		54.0	345	33.0 ¹²⁶		22.5 ¹¹³	35	4	11		43	10		13	33		53	63	
9	315	42.5		54.8	0	04.6 ¹²⁶	-7	11.1 ¹¹⁴	30		23	4	53	18		08	36	14	56	60	
10	330	42.5		55.6	14	36.1 ¹²⁵	-6	59.7 ¹¹⁴	20		41	5	08	31		3	01	40	15	02	55
11	345	42.6	+14	56.3	29	07.6 ¹²⁵	-6	48.3 ¹¹⁴	10 N	4	56	5	21	5	43	2	55	43	15	07	51
12	0	42.7	+14	57.1	43	39.1 ¹²⁵	-6	36.8 ¹¹⁵	0	5	08	5	32	5	54	2	48	48	15	11	48
13	15	42.8		57.8	58	10.6 ¹²⁵		25.3 ¹¹⁵	10 S		18		43	6	04	42	51		15	44	
14	30	42.8		58.6	72	42.1 ¹²⁵		13.7 ¹¹⁶	20		27	5	53	16		36	54	20	40		
15	45	42.9	+14	59.4	87	13.5 ¹²⁴	-6	02.1 ¹¹⁶	30		35	6	04	28		28	59	25	36		
16	60	43.0	+15	00.1	101	45.0 ¹²⁵	-5	50.5 ¹¹⁶	35		40		10	36		24	61	28	33		
17	75	43.1	+15	00.9	116	16.4 ¹²⁴	-5	38.7 ¹¹⁸	40	5	44	6	16	6	44	2	19	64	15	31	31
18	90	43.1	+15	01.6	130	47.8 ¹²⁴	-5	27.0 ¹¹⁷	45	5	48	6	23	6	54	2	13	68	15	35	27
19	105	43.2		02.4	145	19.1 ¹²³		15.2 ¹¹⁸	50		53		31	7	05	07	71		40	23	
20	120	43.3		03.1	159	50.5 ¹²⁴	-5	03.4 ¹¹⁸	52		55		35	11		03	74	42	21		
21	135	43.4		03.9	174	21.8 ¹²³	-4	51.5 ¹¹⁹	54		57		39	17		2	00	76	44	20	
22	150	43.5		04.7	188	53.2 ¹²⁴		39.6 ¹¹⁹	56	5	59		43	23		1	56	78	47	17	
23	165	43.5		05.4	203	24.4 ¹²²		27.6 ¹²⁰	58	6	02		48	31		52	80	50	15		
24	180	43.6	+15	06.2	217	55.7 ¹²³	-4	15.6 ¹²⁰	60 S	6	04	6	54	7	39	1	47	83	15	53	12
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO				
	PMG: 9 ^h 25 ^m 5				Mag: -3.9 PMG: 11 ^h 16 ^m				Mag: +1.5 PMG: 13 ^h 06 ^m				Mag: -2.0 PMG: 12 ^h 20 ^m				Mag: +0.2 PMG: 12 ^h 34 ^m				
	hG ♈		hG ♀		hG ♂		hG ♎		hG ♊		hG ♋		hG ♏		hG ♐		hG ♑		hG ♒		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	218	14.5	191	10.1	+9	45.5	163	17.4	+19	55.7	174	30.9	+15	46.3	171	04.6	+15	33.0			
1	233	16.9	206	09.7		46.6	178	18.1		56.1	189	32.7		46.5	186	06.8		33.1			
2	248	19.4	221	09.3		47.7	193	18.7		56.5	204	34.6		46.6	201	08.9		33.2			
3	263	21.9	236	08.8		48.9	208	19.4		56.9	219	36.5		46.8	216	11.1		33.2			
4	278	24.3	251	08.4		50.0	223	20.0		57.4	234	38.3		47.0	231	13.2		33.3			
5	293	26.8	266	07.9	+9	51.2	238	20.7	+19	57.8	249	40.2	+15	47.2	246	15.4	+15	33.4			
6	308	29.3	281	07.5	+9	52.3	253	21.3	+19	58.2	264	42.1	+15	47.3	261	17.5	+15	33.5			
7	323	31.7	296	07.1		53.4	268	21.9		58.6	279	44.0		47.5	276	19.7		33.6			
8	338	34.2	311	06.6		54.6	283	22.6		59.1	294	45.8		47.7	291	21.8		33.7			
9	353	36.7	326	06.2		55.7	298	23.2		59.5	309	47.7		47.9	306	23.9		33.8			
10	8	39.1	341	05.7		56.8	313	23.9	+19	59.9	324	49.6		48.0	321	26.1		33.9			
11	23	41.6	356	05.3	+9	58.0	328	24.5	+20	00.3	339	51.5	+15	48.2	336	28.2	+15	34.0			
12	38	44.0	11	04.9	+9	59.1	343	25.2	+20	00.7	354	53.3	+15	48.4	351	30.4	+15	34.1			
13	53	46.5	26	04.4	+10	00.2	358	25.8		01.2	9	55.2		48.5	6	32.5		34.1			
14	68	49.0	41	04.0		01.4	13	26.4		01.6	24	57.1		48.7	21	34.7		34.2			
15	83	51.4	56	03.5		02.5	28	27.1		02.0	39	59.0		48.9	36	36.8		34.3			
16	98	53.9	71	03.1		03.6	43	27.7		02.4	55	00.8		49.1	51	39.0		34.4			
17	113	56.4	86	02.6	+10	04.7	58	28.4	+20	02.9	70	02.7	+15	49.2	66	41.1	+15	34.5			
18	128	58.8	101	02.2	+10	05.9	73	29.0	+20	03.3	85	04.6	+15	49.4	81	43.3	+15	34.6			
19	144	01.3	116	01.7		07.0	88	29.7		03.7	100	06.4		49.6	96	45.4		34.7			
20	159	03.8	131	01.3		08.1	103	30.3		04.1	115	08.3		49.8	111	47.5		34.8			
21	174	06.2	146	00.9		09.3	118	30.9		04.5	130	10.2		49.9	126	49.7		34.9			
22	189	08.7	161	00.4		10.4	133	31.6		05.0	145	12.1		50.1	141	51.8		34.9			
23	204	11.2	176	00.0		11.5	148	32.2		05.4	160	13.9		50.3	156	54.0		35.0			
24	219	13.6	190	59.5	+10	12.6	163	32.9	+20	05.8	175	15.8	+15	50.5	171	56.1	+15	35.1			
Dif	—		-4		+11		+6		+4		+19		+2		+21		+1				

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 15'9 PMG: 11 ^h 57 ^m 0		Edad: 26 ^d 2 PHE { 4 ^h : 57'6 12 ^h : 57'9 20 ^h : 58'1 PMG: 9 ^h 47 ^m R°: 49 ^m															
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	h m	h m				
0	180	43.6	+15	06.2	217	55.7	-4 15.6	60 N	19 59	20 52	22 18	4 01	12	15 51 87				
1	195	43.7		06.9	232	26.9 ¹²²	-4 03.6 ¹²⁰	58	49	37	21 49	3 59	15	51 85				
2	210	43.7		07.7	246	58.2 ¹²³	-3 51.5 ¹²¹	56	40	25	27	57	18	52 82				
3	225	43.8		08.4	261	29.4 ¹²²	39.4 ¹²¹	54	32	14	21 10	56	20	52 80				
4	240	43.9		09.2	276	00.5 ¹²¹	27.3 ¹²¹	52	25	20 04	20 55	54	22	53 77				
5	255	44.0	+15	09.9	290	31.7 ¹²²	-3 15.1 ¹²²	50	19 19	19 56	20 43	3 53	24	15 53 76				
6	270	44.0	+15	10.7	305	02.8 ¹²¹	-3 03.0 ¹²¹	45	19 06	19 38	20 19	3 50	28	15 54 71				
7	285	44.1		11.5	319	33.8 ¹²⁰	-2 50.7 ¹²³	40	18 55	24	20 00	48	31	55 68				
8	300	44.2		12.2	334	04.9 ¹²¹	38.5 ¹²²	35	46	13	19 45	46	34	56 64				
9	315	44.3		13.0	348	35.9 ¹²⁰	26.2 ¹²³	30	37	19 03	33	44	36	56 62				
10	330	44.3		13.7	3	06.9 ¹²⁰	13.9 ¹²³	20	24	18 47	19 14	41	41	57 57				
11	345	44.4	+15	14.5	17	37.9 ¹²⁰	-2 01.5 ¹²⁴	10 N	18 12	18 33	18 59	3 38	45	15 58 53				
12	0	44.5	+15	15.2	32	08.8 ¹¹⁹	-1 49.1 ¹²⁴	0	18 00	18 22	18 47	3 36	48	15 59 49				
13	15	44.6		16.0	46	39.7 ¹¹⁹	36.7 ¹²⁴	10 S	17 49	11	36	33	52	15 59 46				
14	30	44.6		16.7	61	10.5 ¹¹⁸	24.3 ¹²⁴	20	38	18 01	27	30	57	16 00 41				
15	45	44.7		17.5	75	41.4 ¹¹⁹	-1 11.9 ¹²⁴	30	25	17 49	18	27	61	01 37				
16	60	44.8		18.2	90	12.1 ¹¹⁷	-0 59.4 ¹²⁵	35	17	43	13	25	64	01 34				
17	75	44.8	+15	19.0	104	42.9 ¹¹⁸	-0 46.9 ¹²⁵	40	17 08	17 37	18 09	3 23	67	16 02 31				
18	90	44.9	+15	19.7	119	13.6 ¹¹⁷	-0 34.4 ¹²⁵	45	16 59	17 29	18 04	3 21	70	16 02 28				
19	105	45.0		20.5	133	44.3 ¹¹⁷	21.9 ¹²⁵	50	46	21	17 59	18	75	03 24				
20	120	45.0		21.2	148	14.9 ¹¹⁶	-0 09.3 ¹²⁶	52	41	17	57	17	76	03 22				
21	135	45.1		21.9	162	45.5 ¹¹⁶	+0 03.2 ¹²⁵	54	35	13	55	16	78	04 20				
22	150	45.2		22.7	177	16.1 ¹¹⁶	15.8 ¹²⁶	56	28	08	52	14	81	04 18				
23	165	45.3		23.4	191	46.6 ¹¹⁵	28.4 ¹²⁶	58	20	17 03	50	12	84	05 15				
24	180	45.3	+15	24.2	206	17.1 ¹¹⁵	+0 41.0 ¹²⁶	60 S	16 12	16 57	17 47	3 10	87	16 05 12				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 9 ^h 21 ^m 6		Mag: -3.9 PMG: 11 ^h 16 ^m			Mag: +1.5 PMG: 13 ^h 05 ^m			Mag: -2.0 PMG: 12 ^h 17 ^m			Mag: +0.2 PMG: 12 ^h 30 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	219	13.6	190	59.5	+10	12.6	163	32.9	+20	05.8	175	15.8	+15	50.5	171	56.1	+15	35.1
1	234	16.1	205	59.1		13.8	178	33.5		06.2	190	17.7		50.6	186	58.3		35.2
2	249	18.5	220	58.6		14.9	193	34.2		06.6	205	19.6		50.8	202	00.4		35.3
3	264	21.0	235	58.2		16.0	208	34.8		07.0	220	21.4		51.0	217	02.6		35.4
4	279	23.5	250	57.7		17.1	223	35.4		07.5	235	23.3		51.1	232	04.7		35.5
5	294	25.9	265	57.3	+10	18.3	238	36.1	+20	07.9	250	25.2	+15	51.3	247	06.9	+15	35.6
6	309	28.4	280	56.8	+10	19.4	253	36.7	+20	08.3	265	27.1	+15	51.5	262	09.0	+15	35.7
7	324	30.9	295	56.4		20.5	268	37.4		08.7	280	28.9		51.7	277	11.1		35.7
8	339	33.3	310	55.9		21.6	283	38.0		09.1	295	30.8		51.8	292	13.3		35.8
9	354	35.8	325	55.5		22.8	298	38.7		09.5	310	32.7		52.0	307	15.4		35.9
10	9	38.3	340	55.0		23.9	313	39.3		10.0	325	34.5		52.2	322	17.6		36.0
11	24	40.7	355	54.6	+10	25.0	328	39.9	+20	10.4	340	36.4	+15	52.4	337	19.7	+15	36.1
12	39	43.2	10	54.1	+10	26.1	343	40.6	+20	10.8	355	38.3	+15	52.5	352	21.9	+15	36.2
13	54	45.6	25	53.7		27.3	358	41.2		11.2	10	40.2		52.7	7	24.0		36.3
14	69	48.1	40	53.2		28.4	13	41.9		11.6	25	42.0		52.9	22	26.2		36.4
15	84	50.6	55	52.8		29.5	28	42.5		12.0	40	43.9		53.0	37	28.3		36.5
16	99	53.0	70	52.3		30.6	43	43.1		12.4	55	45.8		53.2	52	30.4		36.5
17	114	55.5	85	51.9	+10	31.7	58	43.8	+20	12.9	70	47.6	+15	53.4	67	32.6	+15	36.6
18	129	58.0	100	51.4	+10	32.9	73	44.4	+20	13.3	85	49.5	+15	53.6	82	34.7	+15	36.7
19	145	00.4	115	51.0		34.0	88	45.1		13.7	100	51.4		53.7	97	36.9		36.8
20	160	02.9	130	50.5		35.1	103	45.7		14.1	115	53.3		53.9	112	39.0		36.9
21	175	05.4	145	50.1		36.2	118	46.3		14.5	130	55.1		54.1	127	41.2		37.0
22	190	07.8	160	49.6		37.3	133	47.0		14.9	145	57.0		54.3	142	43.3		37.1
23	205	10.3	175	49.2		38.5	148	47.6		15.3	160	58.9		54.4	157	45.5		37.2
24	220	12.8	190	48.7	+10	39.6	163	48.3	+20	15.7	176	00.8	+15	54.6	172	47.6	+15	37.3
Dif	—		-4		+11		+6		+4		+19		+2		+21		+1	

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15'9 PMG: 11 ^h 56 ^m 9				Edad: 27 ^d 2 PHE { SD: 15'9 PMG: 10 ^h 36 ^m R°: 51 ^m 4 ^h : 58'4 12 ^h : 58'7 20 ^h : 58'9													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	180	45.3	+15	24.2	206	17.1	+0	41.0	60 N	1 35	3 01	3 55	4 13	14	17 18	91		
1	195	45.4		24.9	220	47.5 ¹¹⁴	+0	53.6 ¹²⁶	58	2 05	16	4 05	14	16	16	88		
2	210	45.5		25.7	235	17.9 ¹¹⁴	+1	06.3 ¹²⁷	56	26	28	13	15	18	14	85		
3	225	45.5		26.4	249	48.3 ¹¹⁴		18.9 ¹²⁶	54	44	39	21	16	20	12	82		
4	240	45.6		27.2	264	18.6 ¹¹³		31.6 ¹²⁷	52	2 58	49	28	16	23	10	80		
5	255	45.7	+15	27.9	278	48.8 ¹¹²	+1	44.2 ¹²⁶	50	3 10	3 57	4 34	4 17	24	17 09	78		
6	270	45.7	+15	28.6	293	19.0 ¹¹²	+1	56.9 ¹²⁷	45	3 35	4 15	4 48	4 18	29	17 05	74		
7	285	45.8		29.4	307	49.2 ¹¹²	+2	09.6 ¹²⁷	40	3 53	29	4 59	19	32	03	69		
8	300	45.9		30.1	322	19.3 ¹¹¹		22.2 ¹²⁶	35	4 08	41	5 08	20	35	17 00	67		
9	315	45.9		30.9	336	49.4 ¹¹¹		34.9 ¹²⁷	30	20	4 51	16	20	38	16 58	64		
10	330	46.0		31.6	351	19.4 ¹¹⁰	+2	47.6 ¹²⁷	20	40	5 07	30	22	42	54	60		
11	345	46.1	+15	32.4	5	49.4 ¹¹⁰	+3	00.3 ¹²⁷	10 N	4 55	5 20	5 42	4 23	46	16 51	55		
12	0	46.1	+15	33.1	20	19.3 ¹⁰⁹	+3	12.9 ¹²⁶	0	5 07	5 32	5 53	4 24	50	16 48	51		
13	15	46.2		33.8	34	49.2 ¹⁰⁹		25.6 ¹²⁷	10 S	18	43	6 05	25	55	45	47		
14	30	46.3		34.6	49	19.0 ¹⁰⁸		38.3 ¹²⁷	20	27	5 54	16	27	58	41	44		
15	45	46.3		35.3	63	48.7 ¹⁰⁷	+3	51.0 ¹²⁷	30	36	6 05	30	28	63	38	39		
16	60	46.4		36.0	78	18.5 ¹⁰⁸	+4	03.6 ¹²⁶	35	41	11	37	29	66	35	37		
17	75	46.5	+15	36.8	92	48.1 ¹⁰⁶	+4	16.3 ¹²⁷	40	5 46	6 18	6 46	4 30	69	16 33	33		
18	90	46.5	+15	37.5	107	17.7 ¹⁰⁶	+4	28.9 ¹²⁶	45	5 50	6 25	6 56	4 31	73	16 30	30		
19	105	46.6		38.3	121	47.3 ¹⁰⁶		41.6 ¹²⁷	50	56	34	7 08	33	76	27	26		
20	120	46.7		39.0	136	16.8 ¹⁰⁵	+4	54.2 ¹²⁶	52	5 58	38	14	33	79	25	24		
21	135	46.7		39.7	150	46.2 ¹⁰⁴	+5	06.8 ¹²⁶	54	6 00	42	20	34	81	24	21		
22	150	46.8		40.5	165	15.6 ¹⁰⁴		19.4 ¹²⁶	56	03	47	27	35	83	22	19		
23	165	46.8		41.2	179	44.9 ¹⁰³		32.0 ¹²⁶	58	05	52	35	36	86	20	17		
24	180	46.9	+15	41.9	194	14.2 ¹⁰³	+5	44.5 ¹²⁵	60 S	6 08	6 58	7 44	4 37	89	16 17	14		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 9 ^h 17 ^m 6		Mag: -3.9 PMG: 11 ^h 17 ^m				Mag: +1.5 PMG: 13 ^h 04 ^m				Mag: -2.0 PMG: 12 ^h 14 ^m				Mag: +0.2 PMG: 12 ^h 27 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	220	12.8	190	48.7	+10	39.6	163	48.3	+20	15.7	176	00.8	+15	54.6	172	47.6	+15	37.3
1	235	15.2	205	48.3		40.7	178	48.9		16.1	191	02.6		54.8	187	49.7		37.3
2	250	17.7	220	47.8		41.8	193	49.6		16.6	206	04.5		54.9	202	51.9		37.4
3	265	20.1	235	47.4		42.9	208	50.2		17.0	221	06.4		55.1	217	54.0		37.5
4	280	22.6	250	46.9		44.0	223	50.8		17.4	236	08.2		55.3	232	56.2		37.6
5	295	25.1	265	46.5	+10	45.2	238	51.5	+20	17.8	251	10.1	+15	55.5	247	58.3	+15	37.7
6	310	27.5	280	46.0	+10	46.3	253	52.1	+20	18.2	266	12.0	+15	55.6	263	00.5	+15	37.8
7	325	30.0	295	45.5		47.4	268	52.8		18.6	281	13.9		55.8	278	02.6		37.9
8	340	32.5	310	45.1		48.5	283	53.4		19.0	296	15.7		56.0	293	04.8		38.0
9	355	34.9	325	44.6		49.6	298	54.0		19.4	311	17.6		56.2	308	06.9		38.1
10	10	37.4	340	44.2		50.7	313	54.7		19.8	326	19.5		56.3	323	09.1		38.1
11	25	39.9	355	43.7	+10	51.8	328	55.3	+20	20.2	341	21.3	+15	56.5	338	11.2	+15	38.2
12	40	42.3	10	43.3	+10	53.0	343	56.0	+20	20.6	356	23.2	+15	56.7	353	13.3	+15	38.3
13	55	44.8	25	42.8		54.1	358	56.6		21.0	11	25.1		56.8	8	15.5		38.4
14	70	47.2	40	42.3		55.2	13	57.2		21.4	26	27.0		57.0	23	17.6		38.5
15	85	49.7	55	41.9		56.3	28	57.9		21.9	41	28.8		57.2	38	19.8		38.6
16	100	52.2	70	41.4		57.4	43	58.5		22.3	56	30.7		57.4	53	21.9		38.7
17	115	54.6	85	41.0	+10	58.5	58	59.1	+20	22.7	71	32.6	+15	57.5	68	24.1	+15	38.8
18	130	57.1	100	40.5	+10	59.6	73	59.8	+20	23.1	86	34.4	+15	57.7	83	26.2	+15	38.9
19	145	59.6	115	40.0	+11	00.7	89	00.4		23.5	101	36.3		57.9	98	28.3		38.9
20	161	02.0	130	39.6		01.8	104	01.1		23.9	116	38.2		58.0	113	30.5		39.0
21	176	04.5	145	39.1		03.0	119	01.7		24.3	131	40.1		58.2	128	32.6		39.1
22	191	07.0	160	38.7		04.1	134	02.3		24.7	146	41.9		58.4	143	34.8		39.2
23	206	09.4	175	38.2		05.2	149	03.0		25.1	161	43.8		58.6	158	36.9		39.3
24	221	11.9	190	37.7	+11	06.3	164	03.6	+20	25.5	176	45.7	+15	58.7	173	39.1	+15	39.4
Dif	—		-5		+11		+6		+4		+19		+2		+21		+1	

UT	SOL		● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15°9		Edad: 28 ^d 2 PHE { 4 ^h : 59/2 12 ^h : 59/4 20 ^h : 59/6 R°: 53 ^m						Civil		Náutico	Hora	R°	Hora	R°
	hG ☉	Dec	hG ☾	Dif	Dec	Dif									
h	°	'	°	'	°	'	°	h m	h m	h m	h m	m	h m	m	
0	180	46.9	+15	41.9	194	14.2	+5 44.5	60 N	20 03	20 59	22 29	4 27 15	18 49 93		
1	195	47.0		42.7	208	43.4 ¹⁰²	+5 57.1 ¹²⁶	58	19 53	43	21 57	30 19	44 89		
2	210	47.0		43.4	223	12.5 ¹⁰¹	+6 09.6 ¹²⁵	56	44	29	33	33 22	39 86		
3	225	47.1		44.1	237	41.6 ¹⁰¹	22.1 ¹²⁵	54	36	18	15	36 24	34 84		
4	240	47.2		44.9	252	10.6 ¹⁰⁰	34.6 ¹²⁵	52	29	20 08	21 00	39 26	30 82		
5	255	47.2	+15	45.6	266	39.6 ¹⁰⁰	+6 47.0 ¹²⁴	50	19 22	19 59	20 47	4 41 28	18 27 80		
6	270	47.3	+15	46.3	281	08.5 ⁹⁹	+6 59.5 ¹²⁵	45	19 08	19 41	20 22	4 47 31	18 19 75		
7	285	47.3		47.1	295	37.3 ⁹⁸	+7 11.9 ¹²⁴	40	18 57	27	20 03	51 35	12 72		
8	300	47.4		47.8	310	06.1 ⁹⁸	24.3 ¹²⁴	35	47	15	19 47	55 38	07 69		
9	315	47.5		48.5	324	34.8 ⁹⁷	36.6 ¹²³	30	39	19 04	35	4 58 41	18 02 66		
10	330	47.5		49.3	339	03.4 ⁹⁶	+7 48.9 ¹²³	20	24	18 48	19 15	5 04 45	17 54 61		
11	345	47.6	+15	50.0	353	32.0 ⁹⁶	+8 01.2 ¹²³	10 N	18 12	18 34	18 59	5 09 50	17 46 58		
12	0	47.7	+15	50.7	8	00.5 ⁹⁵	+8 13.5 ¹²³	0	18 00	18 22	18 47	5 14 53	17 39 55		
13	15	47.7		51.4	22	28.9 ⁹⁴	25.7 ¹²²	10 S	17 49	11	36	20 56	32 51		
14	30	47.8		52.2	36	57.3 ⁹⁴	37.8 ¹²¹	20	37	18 00	26	25 61	25 47		
15	45	47.8		52.9	51	25.6 ⁹³	+8 50.0 ¹²²	30	23	17 48	16	31 66	17 42		
16	60	47.9		53.6	65	53.9 ⁹³	+9 02.1 ¹²¹	35	15	41	12	35 68	12 40		
17	75	48.0	+15	54.4	80	22.0 ⁹¹	+9 14.1 ¹²⁰	40	17 06	17 34	18 07	5 39 71	17 06 38		
18	90	48.0	+15	55.1	94	50.1 ⁹¹	+9 26.1 ¹²⁰	45	16 56	17 27	18 02	5 44 75	17 00 34		
19	105	48.1		55.8	109	18.2 ⁹¹	38.1 ¹²⁰	50	43	18	17 56	49 80	16 53 29		
20	120	48.1		56.5	123	46.1 ⁸⁹	+9 50.0 ¹¹⁹	52	37	13	54	52 81	49 28		
21	135	48.2		57.3	138	14.0 ⁸⁹	+10 01.9 ¹¹⁹	54	31	09	51	55 84	45 26		
22	150	48.2		58.0	152	41.9 ⁸⁹	13.7 ¹¹⁸	56	24	17 04	49	5 58 87	41 23		
23	165	48.3		58.7	167	09.6 ⁸⁷	25.5 ¹¹⁸	58	16	16 59	46	6 02 89	37 20		
24	180	48.4	+15	59.4	181	37.3 ⁸⁷	+10 37.2 ¹¹⁷	60 S	16 06	16 53	17 43	6 06 93	16 31 18		
UT	ARIES		VENUS			MARTE			JÚPITER		SATURNO				
	PMG: 9 ^h 13 ^m 7		Mag: -3.9 PMG: 11 ^h 18 ^m			Mag: +1.5 PMG: 13 ^h 03 ^m			Mag: -2.0 PMG: 12 ^h 11 ^m		Mag: +0.2 PMG: 12 ^h 24 ^m				
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	221	11.9	190	37.7	+11	06.3	164	03.6	+20	25.5	176	45.7	+15	58.7	
1	236	14.4	205	37.3		07.4	179	04.3		25.9	191	47.6		58.9	
2	251	16.8	220	36.8		08.5	194	04.9		26.3	206	49.4		59.1	
3	266	19.3	235	36.3		09.6	209	05.5		26.7	221	51.3		59.3	
4	281	21.7	250	35.9		10.7	224	06.2		27.1	236	53.2		59.4	
5	296	24.2	265	35.4	+11	11.8	239	06.8	+20	27.5	251	55.0	+15	59.6	
6	311	26.7	280	35.0	+11	12.9	254	07.4	+20	27.9	266	56.9	+15	59.8	
7	326	29.1	295	34.5		14.0	269	08.1		28.3	281	58.8	+15	59.9	
8	341	31.6	310	34.0		15.1	284	08.7		28.7	297	00.7	+16	00.1	
9	356	34.1	325	33.6		16.2	299	09.4		29.1	312	02.5		00.3	
10	11	36.5	340	33.1		17.3	314	10.0		29.5	327	04.4		00.5	
11	26	39.0	355	32.6	+11	18.4	329	10.6	+20	29.9	342	06.3	+16	00.6	
12	41	41.5	10	32.2	+11	19.5	344	11.3	+20	30.3	357	08.1	+16	00.8	
13	56	43.9	25	31.7		20.6	359	11.9		30.7	12	10.0		01.0	
14	71	46.4	40	31.2		21.7	14	12.6		31.1	27	11.9		01.1	
15	86	48.9	55	30.8		22.8	29	13.2		31.5	42	13.8		01.3	
16	101	51.3	70	30.3		23.9	44	13.8		31.9	57	15.6		01.5	
17	116	53.8	85	29.8	+11	25.0	59	14.5	+20	32.3	72	17.5	+16	01.7	
18	131	56.2	100	29.4	+11	26.1	74	15.1	+20	32.7	87	19.4	+16	01.8	
19	146	58.7	115	28.9		27.2	89	15.7		33.1	102	21.2		02.0	
20	162	01.2	130	28.4		28.3	104	16.4		33.5	117	23.1		02.2	
21	177	03.6	145	27.9		29.4	119	17.0		33.9	132	25.0		02.3	
22	192	06.1	160	27.5		30.5	134	17.7		34.3	147	26.8		02.5	
23	207	08.6	175	27.0		31.6	149	18.3		34.7	162	28.7		02.7	
24	222	11.0	190	26.5	+11	32.7	164	18.9	+20	35.1	177	30.6	+16	02.9	
Dif	—		-5	+11		+6	+4		+19	+2		+21	+1		

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ⁹ PMG: 11 ^h 56 ^m 7				Edad: 29 ^d 2 PHE { 4 ^h : 59 ⁸ 12 ^h : 60 ⁰ 20 ^h : 60 ¹ PMG: 12 ^h 20 ^m R°: 57 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	180	48.4	+15	59.4	181	37.3	+10	37.2	60 N	1 23	2 54	3 49	4 42	20	20	22	93	
1	195	48.4	+16	00.2	196	04.9	+10	48.9 ¹¹⁷	58	1 56	3 10	4 00	49	23	13	89		
2	210	48.5		00.9	210	32.5	+11	00.5 ¹¹⁶	56	2 19	23	09	4 55	26	20	05	86	
3	225	48.5		01.6	224	59.9		12.0 ¹¹⁵	54	38	35	17	5 00	28	19	58	8	
4	240	48.6		02.3	239	27.3		23.5 ¹¹⁵	52	2 53	45	24	05	30	52	82		
5	255	48.6	+16	03.0	253	54.7	+11	34.9 ¹¹⁴	50	3 06	3 54	4 31	5 09	32	19	47	79	
6	270	48.7	+16	03.8	268	21.9	+11	46.3 ¹¹⁴	45	3 31	4 12	4 45	5 18	37	19	34	76	
7	285	48.8		04.5	282	49.1	+11	57.6 ¹¹³	40	3 50	27	4 56	26	40	24	73		
8	300	48.8		05.2	297	16.2	+12	08.9 ¹¹³	35	4 06	39	5 06	33	43	16	70		
9	315	48.9		05.9	311	43.2		20.0 ¹¹¹	30	18	4 49	14	39	45	19	08	68	
10	330	48.9		06.6	326	10.2		31.1 ¹¹¹	20	38	5 06	29	49	50	18	55	64	
11	345	49.0	+16	07.4	340	37.1	+12	42.2 ¹¹¹	10 N	4 54	5 20	5 42	5 59	52	18	44	61	
12	0	49.0	+16	08.1	355	03.9	+12	53.1 ¹⁰⁹	0	5 07	5 32	5 53	6 07	57	18	34	57	
13	15	49.1		08.8	9	30.6	+13	04.0 ¹⁰⁹	10 S	18	43	6 05	16	60	23	55		
14	30	49.1		09.5	23	57.3		14.8 ¹⁰⁸	20	28	5 54	17	26	63	18	12	51	
15	45	49.2		10.2	38	23.9		25.6 ¹⁰⁸	30	38	6 06	31	37	67	17	59	48	
16	60	49.2		10.9	52	50.4		36.2 ¹⁰⁶	35	42	13	39	43	70	52	45		
17	75	49.3	+16	11.7	67	16.9	+13	46.8 ¹⁰⁶	40	5 47	6 20	6 48	6 50	73	17	44	42	
18	90	49.4	+16	12.4	81	43.2	+13	57.3 ¹⁰⁵	45	5 53	6 28	6 59	6 59	76	17	34	39	
19	105	49.4		13.1	96	09.5	+14	07.7 ¹⁰⁴	50	5 58	37	7 11	7 09	80	22	36		
20	120	49.5		13.8	110	35.8		18.0 ¹⁰³	52	6 01	41	17	13	83	17	34		
21	135	49.5		14.5	125	01.9		28.3 ¹⁰³	54	03	46	24	19	84	11	32		
22	150	49.6		15.2	139	28.0		38.4 ¹⁰¹	56	06	51	31	25	87	17	04	30	
23	165	49.6		15.9	153	54.0		48.5 ¹⁰¹	58	09	6 56	39	31	90	16	57	26	
24	180	49.7	+16	16.7	168	19.9	+14	58.5 ¹⁰⁰	60 S	6 12	7 02	7 49	7 39	93	16	49	23	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 9 ^h 09 ^m 8		Mag: -3.9 PMG: 11 ^h 19 ^m		Mag: +1.5 PMG: 13 ^h 02 ^m		Mag: -2.0 PMG: 12 ^h 08 ^m		Mag: +0.2 PMG: 12 ^h 20 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	222	11.0	190	26.5	+11	32.7	164	18.9	+20	35.1	177	30.6	+16	02.9	174	30.5	+15	41.5
1	237	13.5	205	26.1		33.8	179	19.6		35.4	192	32.5		03.0	189	32.7		41.6
2	252	16.0	220	25.6		34.9	194	20.2		35.8	207	34.3		03.2	204	34.8		41.7
3	267	18.4	235	25.1		36.0	209	20.8		36.2	222	36.2		03.4	219	37.0		41.8
4	282	20.9	250	24.7		37.1	224	21.5		36.6	237	38.1		03.5	234	39.1		41.9
5	297	23.3	265	24.2	+11	38.2	239	22.1	+20	37.0	252	39.9	+16	03.7	249	41.2	+15	42.0
6	312	25.8	280	23.7	+11	39.3	254	22.7	+20	37.4	267	41.8	+16	03.9	264	43.4	+15	42.0
7	327	28.3	295	23.2		40.4	269	23.4		37.8	282	43.7		04.0	279	45.5		42.1
8	342	30.7	310	22.8		41.5	284	24.0		38.2	297	45.6		04.2	294	47.7		42.2
9	357	33.2	325	22.3		42.6	299	24.7		38.6	312	47.4		04.4	309	49.8		42.3
10	12	35.7	340	21.8		43.6	314	25.3		39.0	327	49.3		04.6	324	52.0		42.4
11	27	38.1	355	21.3	+11	44.7	329	25.9	+20	39.4	342	51.2	+16	04.7	339	54.1	+15	42.5
12	42	40.6	10	20.9	+11	45.8	344	26.6	+20	39.8	357	53.0	+16	04.9	354	56.2	+15	42.6
13	57	43.1	25	20.4		46.9	359	27.2		40.1	12	54.9		05.1	9	58.4		42.7
14	72	45.5	40	19.9		48.0	14	27.8		40.5	27	56.8		05.2	25	00.5		42.7
15	87	48.0	55	19.4		49.1	29	28.5		40.9	42	58.7		05.4	40	02.7		42.8
16	102	50.5	70	19.0		50.2	44	29.1		41.3	58	00.5		05.6	55	04.8		42.9
17	117	52.9	85	18.5	+11	51.3	59	29.7	+20	41.7	73	02.4	+16	05.8	70	07.0	+15	43.0
18	132	55.4	100	18.0	+11	52.4	74	30.4	+20	42.1	88	04.3	+16	05.9	85	09.1	+15	43.1
19	147	57.8	115	17.5		53.4	89	31.0		42.5	103	06.1		06.1	100	11.3		43.2
20	163	00.3	130	17.1		54.5	104	31.6		42.9	118	08.0		06.3	115	13.4		43.3
21	178	02.8	145	16.6		55.6	119	32.3		43.3	133	09.9		06.4	130	15.5		43.4
22	193	05.2	160	16.1		56.7	134	32.9		43.6	148	11.7		06.6	145	17.7		43.5
23	208	07.7	175	15.6		57.8	149	33.6		44.0	163	13.6		06.8	160	19.8		43.5
24	223	10.2	190	15.1	+11	58.9	164	34.2	+20	44.4	178	15.5	+16	07.0	175	22.0	+15	43.6
Dif	—		-5		+11		+6		+4		+19		+2		+21		+1	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'9 PMG: 11 ^h 56 ^m 6			Edad: 30 ^d 2 PHE { 4 ^h : 60'2 12 ^h : 60'3 20 ^h : 60'3 R°: 60 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m
0	180	49.7	+16	16.7	168	19.9	+14	58.5	60 N	20 08	21 05	22 43	5 02	28 21
1	195	49.7		17.4	182	45.8	69	+15	08.3	58	19 57	20 48	22 05	12 31
2	210	49.8		18.1	197	11.6	68		18.1	56		48	34	21 40
3	225	49.8		18.8	211	37.3	67		27.8	54		39	22	21
4	240	49.9		19.5	226	03.0	67		37.4	52		32	12	21 05
5	255	49.9	+16	20.2	240	28.5	65	+15	46.9	50	19 25	20 03	20 51	5 41
6	270	50.0	+16	20.9	254	54.1	66	+15	56.3	45	19 11	19 44	20 25	5 55
7	285	50.0		21.6	269	19.5	64	+16	05.6	40	18 59		29	20 05
8	300	50.1		22.3	283	44.9	64		14.8	35		49	16	19 49
9	315	50.1		23.1	298	10.2	63		23.9	30		40	19 06	36
10	330	50.2		23.8	312	35.4	62		32.9	20		25	18 48	16
11	345	50.2	+16	24.5	327	00.5	61	+16	41.7	10 N	18 12	18 34	19 00	6 51
12	0	50.3	+16	25.2	341	25.6	61	+16	50.5	0	18 00	18 22	18 47	7 04
13	15	50.3		25.9	355	50.7	61	+16	59.2	10 S	17 48	18 10		35
14	30	50.4		26.6	10	15.6	59	+17	07.7	20		36	17 59	25
15	45	50.4		27.3	24	40.5	59		16.1	30		21	46	15
16	60	50.5		28.0	39	05.4	59		24.5	35		13	40	10
17	75	50.5	+16	28.7	53	30.1	57	+17	32.7	40	17 04	17 32	18 05	8 03
18	90	50.6	+16	29.4	67	54.8	57	+17	40.7	45	16 53	17 24	17 59	8 15
19	105	50.6		30.1	82	19.5	57		48.7	50		40	14	53
20	120	50.7		30.8	96	44.1	56	+17	56.5	52		34	10	51
21	135	50.7		31.5	111	08.6	55	+18	04.3	54		27	05	48
22	150	50.7		32.2	125	33.0	54		11.9	56		20	17 00	45
23	165	50.8		32.9	139	57.4	54		19.4	58		11	16 55	42
24	180	50.8	+16	33.6	154	21.8	54	+18	26.7	60 S	16 01	16 48	17 39	9 12

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 9 ^h 05 ^m 8		Mag: -3.9 PMG: 11 ^h 19 ^m		Mag: +1.5 PMG: 13 ^h 01 ^m		Mag: -2.0 PMG: 12 ^h 05 ^m		Mag: +0.2 PMG: 12 ^h 17 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	223	10.2	190	15.1	+11	58.9	164	34.2	+20	44.4
1	238	12.6	205	14.7	+12	00.0	179	34.8		44.8
2	253	15.1	220	14.2	+12	01.0	194	35.5		45.2
3	268	17.6	235	13.7		02.1	209	36.1		45.6
4	283	20.0	250	13.2		03.2	224	36.7		46.0
5	298	22.5	265	12.7	+12	04.3	239	37.4	+20	46.3
6	313	25.0	280	12.3	+12	05.4	254	38.0	+20	46.7
7	328	27.4	295	11.8		06.5	269	38.6		47.1
8	343	29.9	310	11.3		07.5	284	39.3		47.5
9	358	32.3	325	10.8		08.6	299	39.9		47.9
10	13	34.8	340	10.3		09.7	314	40.5		48.3
11	28	37.3	355	09.8	+12	10.8	329	41.2	+20	48.6
12	43	39.7	10	09.4	+12	11.9	344	41.8	+20	49.0
13	58	42.2	25	08.9		12.9	359	42.4		49.4
14	73	44.7	40	08.4		14.0	14	43.1		49.8
15	88	47.1	55	07.9		15.1	29	43.7		50.2
16	103	49.6	70	07.4		16.2	44	44.3		50.6
17	118	52.1	85	06.9	+12	17.2	59	45.0	+20	50.9
18	133	54.5	100	06.4	+12	18.3	74	45.6	+20	51.3
19	148	57.0	115	06.0		19.4	89	46.2		51.7
20	163	59.5	130	05.5		20.5	104	46.9		52.1
21	179	01.9	145	05.0		21.5	119	47.5		52.5
22	194	04.4	160	04.5		22.6	134	48.1		52.8
23	209	06.8	175	04.0		23.7	149	48.8		53.2
24	224	09.3	190	03.5	+12	24.8	164	49.4	+20	53.6
Dif	—		-5		+11		+6		+4	

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ALMANAQUE NÁUTICO PERSEIS

UT	SOL				● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 5				Edad: 2 ^d 8 PHE { 4 ^h : 60 ^h 3 12 ^h : 60 ^h 2 20 ^h : 60 ^h 1 R°: 61 ^m											
	hG ☉		Dec		hG ☾		Dif				Civil		Náutico		Hora R°	
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	180	51.9	+16	50.3	139	51.9	+20	42.9	60 N	20 13	21 11	22 58	6 10 56	***	***	***
1	195	51.9		51.0	154	15.2 43		46.8 39	58	20 02	20 54	22 14	26 56	***	***	***
2	210	51.9		51.7	168	38.5 43		50.5 37	56	19 52	39	21 47	39 57	***	***	***
3	225	52.0		52.4	183	01.8 43		54.1 36	54	43	26	26	6 50 58	23	49	56
4	240	52.0		53.1	197	25.0 42	+20	57.5 34	52	35	16	21 10	7 01 58		39	56
5	255	52.1	+16	53.7	211	48.2 42	+21	00.8 33	50	19 28	20 06	20 56	7 10 58	23	29	57
6	270	52.1	+16	54.4	226	11.4 42	+21	04.0 32	45	19 13	19 46	20 28	7 29 59	23	09	58
7	285	52.1		55.1	240	34.6 42		07.0 30	40	19 01	31	20 08	45 59	22	53	58
8	300	52.2		55.8	254	57.8 42		09.8 28	35	18 50	18	19 51	7 58 60		40	58
9	315	52.2		56.5	269	21.0 42		12.5 27	30	41	19 07	38	8 10 60		28	59
10	330	52.3		57.2	283	44.2 42		15.0 25	20	26	18 49	17	30 60	22	07	60
11	345	52.3	+16	57.9	298	07.4 42	+21	17.4 24	10 N	18 12	18 35	19 00	8 47 61	21	49	61
12	0	52.3	+16	58.5	312	30.5 41	+21	19.7 23	0	18 00	18 22	18 47	9 03 62	21	33	61
13	15	52.4		59.2	326	53.7 42		21.7 20	10 S	17 48	18 10	35	20 61	21	16	61
14	30	52.4	+16	59.9	341	16.8 41		23.7 20	20	35	17 58	24	37 62	20	58	62
15	45	52.4	+17	00.6	355	40.0 42		25.4 17	30	20	45	13	9 58 62		38	62
16	60	52.5		01.3	10	03.1 41		27.1 17	35	11	38	08	10 10 62		26	62
17	75	52.5	+17	02.0	24	26.3 42	+21	28.5 14	40	17 02	17 30	18 03	10 23 62	20	12	62
18	90	52.5	+17	02.6	38	49.5 42	+21	29.9 14	45	16 50	17 22	17 57	10 39 63	19	55	63
19	105	52.6		03.3	53	12.6 41		31.0 11	50	37	12	50	10 59 63		35	64
20	120	52.6		04.0	67	35.8 42		32.0 9	52	30	07	48	11 09 62		26	63
21	135	52.7		04.7	81	59.0 42		32.9 7	54	23	17 02	45	20 62		15	64
22	150	52.7		05.4	96	22.2 42		33.6 5	56	15	16 57	41	32 62	19	03	64
23	165	52.7		06.0	110	45.4 42		34.1 4	58	16 07	51	38	11 46 62	18	49	64
24	180	52.8	+17	06.7	125	08.7 43	+21	34.5 4	60 S	15 57	16 44	17 34	12 02 63	18	32	64

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 8 ^h 58 ^m 0		Mag: -3.9 PMG: 11 ^h 21 ^m		Mag: +1.5 PMG: 12 ^h 59 ^m		Mag: -2.0 PMG: 11 ^h 59 ^m		Mag: +0.2 PMG: 12 ^h 10 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	225	08.4	189	51.7	+12	50.4	165	04.6	+21	02.6
1	240	10.9	204	51.2		51.4	180	05.2		02.9
2	255	13.4	219	50.7		52.5	195	05.9		03.3
3	270	15.8	234	50.2		53.5	210	06.5		03.7
4	285	18.3	249	49.7		54.6	225	07.1		04.1
5	300	20.8	264	49.2	+12	55.7	240	07.7	+21	04.4
6	315	23.2	279	48.7	+12	56.7	255	08.4	+21	04.8
7	330	25.7	294	48.2		57.8	270	09.0		05.2
8	345	28.2	309	47.7		58.8	285	09.6		05.5
9	0	30.6	324	47.2	+12	59.9	300	10.3		05.9
10	15	33.1	339	46.7	+13	00.9	315	10.9		06.3
11	30	35.6	354	46.2	+13	02.0	330	11.5	+21	06.6
12	45	38.0	9	45.7	+13	03.0	345	12.2	+21	07.0
13	60	40.5	24	45.2		04.1	0	12.8		07.4
14	75	42.9	39	44.7		05.2	15	13.4		07.7
15	90	45.4	54	44.2		06.2	30	14.1		08.1
16	105	47.9	69	43.7		07.3	45	14.7		08.5
17	120	50.3	84	43.2	+13	08.3	60	15.3	+21	08.8
18	135	52.8	99	42.6	+13	09.4	75	15.9	+21	09.2
19	150	55.3	114	42.1		10.4	90	16.6		09.5
20	165	57.7	129	41.6		11.5	105	17.2		09.9
21	181	00.2	144	41.1		12.5	120	17.8		10.3
22	196	02.7	159	40.6		13.6	135	18.5		10.6
23	211	05.1	174	40.1		14.6	150	19.1		11.0
24	226	07.6	189	39.6	+13	15.7	165	19.7	+21	11.4
Dif	—		-5		+11		+6		+4	
							+19		+2	
									+21	
									+1	

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 5				Edad: 3 ^d 8 PHE { 4 ^h : 60 ^o 0 12 ^h : 59 ^o 9 20 ^h : 59 ^o 8 PMG: 16 ^h 19 ^m R ^o : 59 ^m													
	hG ☉	Dec			hG ☾	Dif				Náutico	Civil		Hora	R ^o	Hora	R ^o		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	180	52.8	+17	06.7	125	08.7	+21	34.5	60 N	0 54	2 41	3 39	7 06	72	0 32	53		
1	195	52.8		07.4	139	31.9	42	34.8	3 58	1 38	2 59	3 50	22	71	15	55		
2	210	52.8		08.1	153	55.2	43	34.9	1 56	2 05	3 13	4 00	36	70	0 02	55		
3	225	52.9		08.7	168	18.5	43	34.8	1 54	26	26	09	48	69	**	**	*	
4	240	52.9		09.4	182	41.8	43	34.6	2 52	43	37	17	7 59	68	**	*	*	*
5	255	52.9	+17	10.1	197	05.2	44	34.2	4 50	2 57	3 46	4 24	8 08	68	**	*	*	*
6	270	53.0	+17	10.8	211	28.5	43	33.7	5 45	3 24	4 06	4 39	8 28	66	**	*	*	*
7	285	53.0		11.4	225	51.9	44	33.0	7 40	3 45	22	4 52	44	65	23	51	51	
8	300	53.0		12.1	240	15.4	45	32.2	8 35	4 01	35	5 02	8 58	64	38	52		
9	315	53.1		12.8	254	38.8	44	31.2	10 30	15	4 46	11	9 10	63	27	53		
10	330	53.1		13.5	269	02.3	45	30.1	11 20	36	5 04	27	30	62	23	07	55	
11	345	53.1	+17	14.1	283	25.8	45	28.8	13 10 N	4 53	5 18	5 40	9 48	61	22	50	57	
12	0	53.2	+17	14.8	297	49.4	46	27.4	14 0	5 06	5 31	5 53	10 05	60	22	34	58	
13	15	53.2		15.5	312	13.0	46	25.8	16 10 S	18	43	6 05	21	59	17	60		
14	30	53.2		16.1	326	36.7	47	24.1	17 20	29	5 56	19	10 39	58	22	00	62	
15	45	53.2		16.8	341	00.3	46	22.3	18 30	40	6 08	34	11 00	56	21	40	64	
16	60	53.3		17.5	355	24.1	48	20.2	21 35	45	16	42	12	55	28	65		
17	75	53.3	+17	18.2	9	47.8	47	18.1	21 40	5 51	6 23	6 52	11 25	54	21	14	67	
18	90	53.3	+17	18.8	24	11.6	48	15.8	23 45	5 57	6 32	7 03	11 42	52	20	58	69	
19	105	53.4		19.5	38	35.5	49	13.3	25 50	6 03	42	17	12 02	51	39	79		
20	120	53.4		20.2	52	59.4	49	10.7	26 52	06	47	24	11	50	29	72		
21	135	53.4		20.8	67	23.4	50	08.0	27 54	09	52	31	22	49	19	73		
22	150	53.5		21.5	81	47.4	50	05.1	29 56	12	6 57	39	34	48	20	07	74	
23	165	53.5		22.2	96	11.5	51	02.1	30 58	16	7 04	48	12	48	46	19	53	76
24	180	53.5	+17	22.8	110	35.6	51	20	31 60 S	6 20	7 10	7 58	13 05	44	19	36	79	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 8 ^h 54 ^m 0		Mag: -3.9 PMG: 11 ^h 22 ^m				Mag: +1.5 PMG: 12 ^h 58 ^m				Mag: -2.0 PMG: 11 ^h 57 ^m				Mag: +0.2 PMG: 12 ^h 07 ^m			
	hG ♈		hG ♀	Dec			hG ♂	Dec			hG ♃	Dec			hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	226	07.6	189	39.6	+13	15.7	165	19.7	+21	11.4	180	30.1	+16	19.1	177	56.2	+15	49.9
1	241	10.1	204	39.1		16.7	180	20.4		11.7	195	32.0		19.3	192	58.4		50.0
2	256	12.5	219	38.6		17.7	195	21.0		12.1	210	33.8		19.5	208	00.5		50.1
3	271	15.0	234	38.1		18.8	210	21.6		12.4	225	35.7		19.6	223	02.7		50.2
4	286	17.4	249	37.6		19.8	225	22.2		12.8	240	37.6		19.8	238	04.8		50.3
5	301	19.9	264	37.1	+13	20.9	240	22.9	+21	13.2	255	39.5	+16	20.0	253	07.0	+15	50.4
6	316	22.4	279	36.6	+13	21.9	255	23.5	+21	13.5	270	41.3	+16	20.1	268	09.1	+15	50.5
7	331	24.8	294	36.0		23.0	270	24.1		13.9	285	43.2		20.3	283	11.2		50.6
8	346	27.3	309	35.5		24.0	285	24.8		14.2	300	45.1		20.5	298	13.4		50.6
9	1	29.8	324	35.0		25.1	300	25.4		14.6	315	46.9		20.6	313	15.5		50.7
10	16	32.2	339	34.5		26.1	315	26.0		15.0	330	48.8		20.8	328	17.7		50.8
11	31	34.7	354	34.0	+13	27.1	330	26.7	+21	15.3	345	50.7	+16	21.0	343	19.8	+15	50.9
12	46	37.2	9	33.5	+13	28.2	345	27.3	+21	15.7	0	52.5	+16	21.2	358	21.9	+15	51.0
13	61	39.6	24	33.0		29.2	0	27.9		16.0	15	54.4		21.3	13	24.1		51.1
14	76	42.1	39	32.5		30.3	15	28.5		16.4	30	56.3		21.5	28	26.2		51.2
15	91	44.6	54	32.0		31.3	30	29.2		16.7	45	58.2		21.7	43	28.4		51.3
16	106	47.0	69	31.4		32.3	45	29.8		17.1	61	00.0		21.8	58	30.5		51.3
17	121	49.5	84	30.9	+13	33.4	60	30.4	+21	17.5	76	01.9	+16	22.0	73	32.7	+15	51.4
18	136	51.9	99	30.4	+13	34.4	75	31.1	+21	17.8	91	03.8	+16	22.2	88	34.8	+15	51.5
19	151	54.4	114	29.9		35.5	90	31.7		18.2	106	05.6		22.3	103	36.9		51.6
20	166	56.9	129	29.4		36.5	105	32.3		18.5	121	07.5		22.5	118	39.1		51.7
21	181	59.3	144	28.9		37.5	120	32.9		18.9	136	09.4		22.7	133	41.2		51.8
22	197	01.8	159	28.3		38.6	135	33.6		19.2	151	11.2		22.8	148	43.4		51.9
23	212	04.3	174	27.8		39.6	150	34.2		19.6	166	13.1		23.0	163	45.5		52.0
24	227	06.7	189	27.3	+13	40.6	165	34.8	+21	19.9	181	15.0	+16	23.2	178	47.7	+15	52.0
Dif	—		-5 +10				+6 +4				+19 +2				+21 +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 4			Edad: 4 ^d 8 PHE { 4 ^h : 59'6 12 ^h : 59'4 20 ^h : 59'3 R°: 57 ^m SD: 16'3 PMG: 17 ^h 18 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	m	m	m	m
0	180	53.5	+17	22.8	110	35.6	+20	59.0	60 N	20 18	21 18	23 19	8 18 83	1 25 37		
1	195	53.5		23.5	124	59.7		55.7	58	20 06	20 59	22 24	33 80	1 10 39		
2	210	53.6		24.2	139	24.0		52.2	56	19 56		44	21 54	0 57 41		
3	225	53.6		24.8	153	48.3		48.6	54		47	31	32	8 57 76	45	43
4	240	53.6		25.5	168	12.6		44.9	52		38	19	14	9 07 74	35	45
5	255	53.7	+17	26.1	182	37.0	+20	41.1	50	19 31	20 10	21 00	9 16 72	0 26 46		
6	270	53.7	+17	26.8	197	01.5	+20	37.1	45	19 16	19 49	20 31	9 34 70	0 07 48		
7	285	53.7		27.5	211	26.0		32.9	40	19 03		33	20 10	9 49 68	** ** *	
8	300	53.7		28.1	225	50.6		28.7	35	18 52		20	19 53	10 02 66	** ** *	
9	315	53.8		28.8	240	15.2		24.3	30		43	19 09	40	13 64	** ** *	
10	330	53.8		29.5	254	40.0		19.8	20		27	18 50	18	32 62	** ** *	
11	345	53.8	+17	30.1	269	04.8	+20	15.1	10 N	18 13	18 35	19 01	10 49 59	23 47 52		
12	0	53.8	+17	30.8	283	29.6	+20	10.3	0	18 00	18 22	18 47	11 05 56	23 32 55		
13	15	53.9		31.4	297	54.5		05.4	10 S	17 47	18 09	35	20 55	17 58		
14	30	53.9		32.1	312	19.5	+20	00.4	20		34	17 57	23	37 52	23 02 61	
15	45	53.9		32.8	326	44.6	+19	55.2	30		18	44	12	11 56 49	22 44 64	
16	60	53.9		33.4	341	09.7		49.9	35		10	36	07	12 07 48	33 66	
17	75	54.0	+17	34.1	355	34.9	+19	44.5	40	17 00	17 28	18 01	12 19 46	22 21 68		
18	90	54.0	+17	34.7	10	00.2	+19	38.9	45	16 48	17 19	17 54	12 34 44	22 07 70		
19	105	54.0		35.4	24	25.5		33.3	50		34	09	48	12 53 40	21 49 74	
20	120	54.0		36.0	38	51.0		27.5	52		27	17 04	45	13 01 39	41 76	
21	135	54.1		36.7	53	16.5		21.6	54		20	16 59	42	11 37	32 77	
22	150	54.1		37.3	67	42.0		15.5	56		12	53	38	22 35	21 80	
23	165	54.1		38.0	82	07.7		09.4	58	16 02		47	35	34 33	21 09 83	
24	180	54.1	+17	38.7	96	33.4	+19	03.1	60 S	15 52	16 40	17 31	13 49 29	20 55 86		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 8 ^h 50 ^m 1		Mag: -3.9 PMG: 11 ^h 23 ^m		Mag: +1.5 PMG: 12 ^h 57 ^m		Mag: -2.0 PMG: 11 ^h 54 ^m		Mag: +0.2 PMG: 12 ^h 03 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	227	06.7	189	27.3	165	34.8	181	15.0	178	47.7
1	242	09.2	204	26.8	180	35.5	196	16.8	193	49.8
2	257	11.7	219	26.3	195	36.1	211	18.7	208	51.9
3	272	14.1	234	25.8	210	36.7	226	20.6	223	54.1
4	287	16.6	249	25.2	225	37.4	241	22.4	238	56.2
5	302	19.0	264	24.7	240	38.0	256	24.3	253	58.4
6	317	21.5	279	24.2	255	38.6	271	26.2	269	00.5
7	332	24.0	294	23.7	270	39.2	286	28.1	284	02.6
8	347	26.4	309	23.2	285	39.9	301	29.9	299	04.8
9	2	28.9	324	22.6	300	40.5	316	31.8	314	06.9
10	17	31.4	339	22.1	315	41.1	331	33.7	329	09.1
11	32	33.8	354	21.6	330	41.7	346	35.5	344	11.2
12	47	36.3	9	21.1	345	42.4	1	37.4	359	13.4
13	62	38.8	24	20.5	0	43.0	16	39.3	14	15.5
14	77	41.2	39	20.0	15	43.6	31	41.1	29	17.6
15	92	43.7	54	19.5	30	44.3	46	43.0	44	19.8
16	107	46.2	69	19.0	45	44.9	61	44.9	59	21.9
17	122	48.6	84	18.5	60	45.5	76	46.7	74	24.1
18	137	51.1	99	17.9	75	46.1	91	48.6	89	26.2
19	152	53.5	114	17.4	90	46.8	106	50.5	104	28.3
20	167	56.0	129	16.9	105	47.4	121	52.3	119	30.5
21	182	58.5	144	16.4	120	48.0	136	54.2	134	32.6
22	198	00.9	159	15.8	135	48.7	151	56.1	149	34.8
23	213	03.4	174	15.3	150	49.3	166	58.0	164	36.9
24	228	05.9	189	14.8	165	49.9	181	59.8	179	39.1
Dif	—		-5		+10		+19		+21	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8			Edad: 5 ^d 8	PHE	4 ^h : 59 ^m 1 12 ^h : 58 ^m 9 20 ^h : 58 ^m 7				Hora			R°	Hora		R°		
	PMG: 11 ^h 56 ^m 4					SD: 16 ^h 1				R°: 52 ^m			R°		R°			
	hG ☉	Dec		hG ☾	Dif		Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m		
0	180	54.1	+17	38.7	96	33.4	+19	03.1	60 N	0	33	2	35	3	34	2	02	25
1	195	54.2		39.3	110	59.2	+18	56.8	58	1	28	2	53	4	36	9	53	83
2	210	54.2		40.0	125	25.1		50.3	56	1	58	3	09	3	56	10	03	81
3	225	54.2		40.6	139	51.0		43.7	54	2	20	22		4	06	10	03	81
4	240	54.2		41.3	154	17.1		36.9	52		38	33		14		21	76	
5	255	54.2	+17	41.9	168	43.2	+18	30.1	50	2	52	3	43	4	21	10	28	75
6	270	54.3	+17	42.6	183	09.4	+18	23.2	45	3	21	4	03	4	37	10	44	71
7	285	54.3		43.2	197	35.6		16.1	40		42	19		4	50	10	57	68
8	300	54.3		43.9	212	02.0		09.0	35	3	59	33		5	00	11	08	65
9	315	54.3		44.5	226	28.4	+18	01.7	30	4	13	4	44	10		17	64	
10	330	54.3		45.2	240	54.9	+17	54.4	20		35	5	03	26		34	59	0
11	345	54.4	+17	45.8	255	21.5	+17	46.9	10 N	4	52	5	18	5	40	11	48	57
12	0	54.4	+17	46.5	269	48.1	+17	39.3	0	5	06	5	31	5	53	12	01	54
13	15	54.4		47.1	284	14.9		31.6	10 S		18	44		6	06	15	50	
14	30	54.4		47.7	298	41.7		23.9	20		30	5	56	19		29	48	
15	45	54.4		48.4	313	08.6		16.0	30		41	6	10	35		45	44	
16	60	54.5		49.0	327	35.6	+17	08.0	35		47	17		44		12	55	42
17	75	54.5	+17	49.7	342	02.7	+17	00.0	40	5	52	6	25	6	54	13	05	40
18	90	54.5	+17	50.3	356	29.8	+16	51.8	45	5	59	6	34	7	06	13	18	36
19	105	54.5		51.0	10	57.1		43.6	50	6	06	45		20		33	33	
20	120	54.5		51.6	25	24.4		35.2	52		09	50		27		40	31	
21	135	54.6		52.3	39	51.8		26.8	54		12	6	55	34		48	29	
22	150	54.6		52.9	54	19.2		18.2	56		15	7	01	42		13	57	27
23	165	54.6		53.5	68	46.8		09.6	58		19	07		7	52	14	07	24
24	180	54.6	+17	54.2	83	14.4	+16	00.9	60 S	6	23	7	14	8	03	14	18	22

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 8 ^h 46 ^m 2		Mag: -3.9 PMG: 11 ^h 23 ^m			Mag: +1.5 PMG: 12 ^h 56 ^m			Mag: -2.0 PMG: 11 ^h 51 ^m			Mag: +0.2 PMG: 12 ^h 00 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	228	05.9	189	14.8	+14	05.3	165	49.9	+21	28.3	181	59.8	+16	27.2	179	39.1	+15	54.1
1	243	08.3	204	14.2		06.3	180	50.5		28.7	197	01.7		27.3	194	41.2		54.2
2	258	10.8	219	13.7		07.3	195	51.2		29.0	212	03.6		27.5	209	43.3		54.3
3	273	13.3	234	13.2		08.3	210	51.8		29.4	227	05.4		27.7	224	45.5		54.4
4	288	15.7	249	12.7		09.3	225	52.4		29.7	242	07.3		27.8	239	47.6		54.5
5	303	18.2	264	12.1	+14	10.4	240	53.0	+21	30.0	257	09.2	+16	28.0	254	49.8	+15	54.6
6	318	20.7	279	11.6	+14	11.4	255	53.7	+21	30.4	272	11.0	+16	28.2	269	51.9	+15	54.6
7	333	23.1	294	11.1		12.4	270	54.3		30.7	287	12.9		28.3	284	54.1		54.7
8	348	25.6	309	10.5		13.4	285	54.9		31.1	302	14.8		28.5	299	56.2		54.8
9	3	28.0	324	10.0		14.4	300	55.6		31.4	317	16.6		28.7	314	58.3		54.9
10	18	30.5	339	09.5		15.4	315	56.2		31.8	332	18.5		28.8	330	00.5		55.0
11	33	33.0	354	08.9	+14	16.5	330	56.8	+21	32.1	347	20.4	+16	29.0	345	02.6	+15	55.1
12	48	35.4	9	08.4	+14	17.5	345	57.4	+21	32.4	2	22.2	+16	29.2	0	04.8	+15	55.2
13	63	37.9	24	07.9		18.5	0	58.1		32.8	17	24.1		29.3	15	06.9		55.3
14	78	40.4	39	07.3		19.5	15	58.7		33.1	32	26.0		29.5	30	09.0		55.3
15	93	42.8	54	06.8		20.5	30	59.3		33.5	47	27.9		29.7	45	11.2		55.4
16	108	45.3	69	06.3		21.5	45	59.9		33.8	62	29.7		29.8	60	13.3		55.5
17	123	47.8	84	05.7	+14	22.5	61	00.6	+21	34.1	77	31.6	+16	30.0	75	15.5	+15	55.6
18	138	50.2	99	05.2	+14	23.5	76	01.2	+21	34.5	92	33.5	+16	30.2	90	17.6	+15	55.7
19	153	52.7	114	04.7		24.5	91	01.8		34.8	107	35.3		30.3	105	19.8		55.8
20	168	55.2	129	04.1		25.5	106	02.4		35.2	122	37.2		30.5	120	21.9		55.9
21	183	57.6	144	03.6		26.6	121	03.1		35.5	137	39.1		30.7	135	24.0		55.9
22	199	00.1	159	03.1		27.6	136	03.7		35.8	152	40.9		30.8	150	26.2		56.0
23	214	02.5	174	02.5		28.6	151	04.3		36.2	167	42.8		31.0	165	28.3		56.1
24	229	05.0	189	02.0	+14	29.6	166	04.9	+21	36.5	182	44.7	+16	31.2	180	30.5	+15	56.2
Dif	—		-5 +10			+6 +3			+19 +2			+21 +1						

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 3			Edad: 6 ^d 8 PHE { 4 ^h : 58 ^h 5 12 ^h : 58 ^h 3 20 ^h : 58 ^h 1 PMG: 19 ^h 07 ^m R°: 50 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	°	'	°	'	h m	h m	h m	h m m	h m m	h m m	
0	180	54.6	+17 54.2	83	14.4	+16 00.9	88	60 N	20 23	21 24	** **	11 07 86	2 27 19	
1	195	54.6	54.8	97	42.1	+15 52.1	88	58	10	21 04	22 35	16 83	17 22	
2	210	54.6	55.5	112	09.9	43.3	88	56	20 00	20 48	22 01	24 80	09 24	
3	225	54.7	56.1	126	37.8	34.3	90	54	19 50	35	21 38	31 78	2 01 24	
4	240	54.7	56.7	141	05.8	25.3	90	52	42	23	19	37 76	1 55 28	
5	255	54.7	+17 57.4	155	33.8	+15 16.2	91	50	19 34	20 13	21 04	11 43 73	1 49 29	
6	270	54.7	+17 58.0	170	01.9	+15 07.0	92	45	19 18	19 52	20 35	11 55 69	1 35 34	
7	285	54.7	58.7	184	30.1	+14 57.7	93	40	19 05	35	20 13	12 05 66	24 37	
8	300	54.7	59.3	198	58.4	48.3	94	35	18 54	22	19 55	13 64	15 39	
9	315	54.8	+17 59.9	213	26.7	38.9	94	30	44	19 10	41	21 61	1 06 42	
10	330	54.8	+18 00.6	227	55.1	29.4	95	20	27	18 51	19	33 58	0 52 46	
11	345	54.8	+18 01.2	242	23.6	+14 19.8	96	10 N	18 13	18 35	19 01	12 45 53	0 39 49	
12	0	54.8	+18 01.8	256	52.2	+14 10.2	96	0	18 00	18 22	18 47	12 55 50	0 27 52	
13	15	54.8	02.5	271	20.9	+14 00.4	97	10 S	17 47	18 09	34	13 05 47	15 56	
14	30	54.8	03.1	285	49.6	+13 50.7	97	20	33	17 56	22	17 43	0 03 58	
15	45	54.8	03.7	300	18.4	40.8	99	30	17	42	11	29 40	** ** *	
16	60	54.9	04.4	314	47.3	30.9	99	35	17 08	35	18 05	37 37	** ** *	
17	75	54.9	+18 05.0	329	16.3	+13 20.9	100	40	16 57	17 26	17 59	13 45 34	** ** *	
18	90	54.9	+18 05.6	343	45.3	+13 10.8	101	45	16 45	17 17	17 52	13 54 32	** ** *	
19	105	54.9	06.3	358	14.4	+13 00.7	101	50	31	06	45	14 06 27	** ** *	
20	120	54.9	06.9	12	43.6	+12 50.5	102	52	24	17 01	42	11 26	** ** *	
21	135	54.9	07.5	27	12.8	40.3	102	54	16	16 56	39	17 24	** ** *	
22	150	54.9	08.1	41	42.1	30.0	103	56	16 08	50	35	24 21	** ** *	
23	165	54.9	08.8	56	11.5	19.6	104	58	15 58	43	31	31 19	23 55 83	
24	180	54.9	+18 09.4	70	41.0	+12 09.2	104	60 S	15 47	16 35	17 27	14 40 15	23 48 85	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 8 ^h 42 ^m 2		Mag: -3.9 PMG: 11 ^h 24 ^m			Mag: +1.5 PMG: 12 ^h 55 ^m			Mag: -2.0 PMG: 11 ^h 48 ^m			Mag: +0.2 PMG: 11 ^h 56 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	229	05.0	189	02.0	+14 29.6	166	04.9	+21 36.5	182	44.7	+16 31.2	180	30.5	+15 56.2
1	244	07.5	204	01.4	30.6	181	05.6	36.8	197	46.5	31.3	195	32.6	56.3
2	259	09.9	219	00.9	31.6	196	06.2	37.2	212	48.4	31.5	210	34.7	56.4
3	274	12.4	234	00.4	32.6	211	06.8	37.5	227	50.3	31.7	225	36.9	56.5
4	289	14.9	248	59.8	33.6	226	07.4	37.9	242	52.1	31.8	240	39.0	56.6
5	304	17.3	263	59.3	+14 34.6	241	08.1	+21 38.2	257	54.0	+16 32.0	255	41.2	+15 56.6
6	319	19.8	278	58.8	+14 35.6	256	08.7	+21 38.5	272	55.9	+16 32.2	270	43.3	+15 56.7
7	334	22.3	293	58.2	36.6	271	09.3	38.9	287	57.7	32.3	285	45.5	56.8
8	349	24.7	308	57.7	37.6	286	10.0	39.2	302	59.6	32.5	300	47.6	56.9
9	4	27.2	323	57.1	38.6	301	10.6	39.5	318	01.5	32.7	315	49.7	57.0
10	19	29.6	338	56.6	39.6	316	11.2	39.9	333	03.4	32.8	330	51.9	57.1
11	34	32.1	353	56.0	+14 40.6	331	11.8	+21 40.2	348	05.2	+16 33.0	345	54.0	+15 57.2
12	49	34.6	8	55.5	+14 41.6	346	12.5	+21 40.5	3	07.1	+16 33.2	0	56.2	+15 57.2
13	64	37.0	23	55.0	42.6	1	13.1	40.9	18	09.0	33.3	15	58.3	57.3
14	79	39.5	38	54.4	43.6	16	13.7	41.2	33	10.8	33.5	31	00.4	57.4
15	94	42.0	53	53.9	44.6	31	14.3	41.5	48	12.7	33.6	46	02.6	57.5
16	109	44.4	68	53.3	45.6	46	15.0	41.9	63	14.6	33.8	61	04.7	57.6
17	124	46.9	83	52.8	+14 46.6	61	15.6	+21 42.2	78	16.4	+16 34.0	76	06.9	+15 57.7
18	139	49.4	98	52.2	+14 47.6	76	16.2	+21 42.5	93	18.3	+16 34.1	91	09.0	+15 57.8
19	154	51.8	113	51.7	48.6	91	16.8	42.8	108	20.2	34.3	106	11.2	57.8
20	169	54.3	128	51.1	49.6	106	17.5	43.2	123	22.0	34.5	121	13.3	57.9
21	184	56.8	143	50.6	50.5	121	18.1	43.5	138	23.9	34.6	136	15.4	58.0
22	199	59.2	158	50.1	51.5	136	18.7	43.8	153	25.8	34.8	151	17.6	58.1
23	215	01.7	173	49.5	52.5	151	19.3	44.2	168	27.6	35.0	166	19.7	58.2
24	230	04.1	188	49.0	+14 53.5	166	20.0	+21 44.5	183	29.5	+16 35.1	181	21.9	+15 58.3
Dif	—		-5	+10		+6	+3		+19	+2		+21	+1	

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: 7 ^d 8 PHE { 4 ^h : 57'9 12 ^h : 57'7 20 ^h : 57'5 Rº: 47 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	Rº	Hora	Rº			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m		
0	180	54.9	+18	09.4	70	41.0	+12	09.2	60 N	**	**	2 28	3 29	12 33	84	2 46	14	
1	195	55.0		10.0	85	10.5 ¹⁰⁵	+11	58.7 ¹⁰⁵	58	1 17	2 48	42		39 81		39 17		
2	210	55.0		10.7	99	40.1 ¹⁰⁶		48.2 ¹⁰⁵	56	1 51	3 04	3 52		44 79		33 20		
3	225	55.0		11.3	114	09.8 ¹⁰⁷		37.6 ¹⁰⁶	54	2 14	17	4 02		49 76		28 2		
4	240	55.0		11.9	128	39.6 ¹⁰⁸		26.9 ¹⁰⁷	52		33	29	10	53 74		23 24		
5	255	55.0	+18	12.5	143	09.4 ¹⁰⁸	+11	16.2 ¹⁰⁷	50	2 48	3 39	4 18		12 56	73	2 18	26	
6	270	55.0	+18	13.2	157	39.3 ¹⁰⁹	+11	05.5 ¹⁰⁷	45	3 18	4 00	4 34		13 04	69	2 09	29	
7	285	55.0		13.8	172	09.2 ¹⁰⁹	+10	54.7 ¹⁰⁸	40		40	17	47	11 65		2 01	33	
8	300	55.0		14.4	186	39.2 ¹¹⁰		43.9 ¹⁰⁸	35	3 57	31	4 59		17 62		1 54	35	
9	315	55.0		15.0	201	09.3 ¹¹¹		33.0 ¹⁰⁹	30	4 11	4 42	5 08		22 59		48 38		
10	330	55.1		15.7	215	39.4 ¹¹¹		22.0 ¹¹⁰	20		34	5 02	25	31 55		38 41		
11	345	55.1	+18	16.3	230	09.6 ¹¹²	+10	11.1 ¹⁰⁹	10 N	4 51	5 17	5 39		13 38	52	1 28	46	
12	0	55.1	+18	16.9	244	39.9 ¹¹³	+10	00.0 ¹¹¹	0	5 06	5 31	5 53		13 45	48	1 19	49	
13	15	55.1		17.5	259	10.2 ¹¹³	+9	49.0 ¹¹⁰	10 S		19	44	6 06	13 52	45		11 52	
14	30	55.1		18.1	273	40.6 ¹¹⁴		37.9 ¹¹¹	20		30	5 57	20	14 00	41	1 01	56	
15	45	55.1		18.8	288	11.1 ¹¹⁵		26.7 ¹¹²	30	42	6 11	36		09 36		0 50	61	
16	60	55.1		19.4	302	41.6 ¹¹⁵		15.5 ¹¹²	35	48		18	45	14 33		44 63		
17	75	55.1	+18	20.0	317	12.2 ¹¹⁶	+9	04.3 ¹¹²	40	5 54	6 27	6 56		14 19	31	0 37	65	
18	90	55.1	+18	20.6	331	42.8 ¹¹⁶	+8	53.0 ¹¹³	45	6 01	6 36	7 08		14 26	27	0 28	69	
19	105	55.1		21.2	346	13.5 ¹¹⁷		41.7 ¹¹³	50		08	47	23	33 24	18	73		
20	120	55.1		21.9	0	44.2 ¹¹⁷		30.4 ¹¹³	52		11	53	30	37 22		13 75		
21	135	55.1		22.5	15	15.0 ¹¹⁸		19.0 ¹¹⁴	54	15	6 58	38		41 20		08 77		
22	150	55.1		23.1	29	45.9 ¹¹⁹	+8	07.6 ¹¹⁴	56		19	7 04	46	45 18		0 02	80	
23	165	55.1		23.7	44	16.8 ¹¹⁹	+7	56.2 ¹¹⁴	58		22	11	7 56	50 16		** ** *	**	
24	180	55.2	+18	24.3	58	47.8 ¹²⁰	+7	44.7 ¹¹⁵	60 S	6 27	7 18	8 07		14 55	13	** ** *	**	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 8 ^h 38 ^m 3		Mag: -3.9 PMG: 11 ^h 25 ^m				Mag: +1.5 PMG: 12 ^h 54 ^m				Mag: -2.0 PMG: 11 ^h 45 ^m				Mag: +0.2 PMG: 11 ^h 53 ^m			
	hG ♈		hG ♀	Dec			hG ♂	Dec			hG ♃	Dec			hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	230	04.1	188	49.0	+14	53.5	166	20.0	+21	44.5	183	29.5	+16	35.1	181	21.9	+15	58.3
1	245	06.6	203	48.4		54.5	181	20.6		44.8	198	31.4		35.3	196	24.0		58.4
2	260	09.1	218	47.9		55.5	196	21.2		45.1	213	33.2		35.5	211	26.1		58.4
3	275	11.5	233	47.3		56.5	211	21.8		45.5	228	35.1		35.6	226	28.3		58.5
4	290	14.0	248	46.8		57.5	226	22.5		45.8	243	37.0		35.8	241	30.4		58.6
5	305	16.5	263	46.2	+14	58.5	241	23.1	+21	46.1	258	38.9	+16	36.0	256	32.6	+15	58.7
6	320	18.9	278	45.7	+14	59.4	256	23.7	+21	46.5	273	40.7	+16	36.1	271	34.7	+15	58.8
7	335	21.4	293	45.1	+15	00.4	271	24.3		46.8	288	42.6		36.3	286	36.9		58.9
8	350	23.9	308	44.6		01.4	286	24.9		47.1	303	44.5		36.4	301	39.0		59.0
9	5	26.3	323	44.0		02.4	301	25.6		47.4	318	46.3		36.6	316	41.1		59.0
10	20	28.8	338	43.4		03.4	316	26.2		47.8	333	48.2		36.8	331	43.3		59.1
11	35	31.3	353	42.9	+15	04.4	331	26.8	+21	48.1	348	50.1	+16	36.9	346	45.4	+15	59.2
12	50	33.7	8	42.3	+15	05.4	346	27.4	+21	48.4	3	51.9	+16	37.1	1	47.6	+15	59.3
13	65	36.2	23	41.8		06.3	1	28.1		48.7	18	53.8		37.3	16	49.7		59.4
14	80	38.6	38	41.2		07.3	16	28.7		49.1	33	55.7		37.4	31	51.8		59.5
15	95	41.1	53	40.7		08.3	31	29.3		49.4	48	57.5		37.6	46	54.0		59.6
16	110	43.6	68	40.1		09.3	46	29.9		49.7	63	59.4		37.8	61	56.1		59.7
17	125	46.0	83	39.6	+15	10.3	61	30.6	+21	50.0	79	01.3	+16	37.9	76	58.3	+15	59.7
18	140	48.5	98	39.0	+15	11.2	76	31.2	+21	50.3	94	03.1	+16	38.1	92	00.4	+15	59.8
19	155	51.0	113	38.5		12.2	91	31.8		50.7	109	05.0		38.3	107	02.6	+15	59.9
20	170	53.4	128	37.9		13.2	106	32.4		51.0	124	06.9		38.4	122	04.7	+16	00.0
21	185	55.9	143	37.3		14.2	121	33.1		51.3	139	08.7		38.6	137	06.8	+16	00.1
22	200	58.4	158	36.8		15.1	136	33.7		51.6	154	10.6		38.7	152	09.0		00.2
23	216	00.8	173	36.2		16.1	151	34.3		51.9	169	12.5		38.9	167	11.1		00.3
24	231	03.3	188	35.7	+15	17.1	166	34.9	+21	52.3	184	14.3	+16	39.1	182	13.3	+16	00.3
Dif	—		-6		+10		+6		+3		+19		+2		+21		+	

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: 8 ^d 8 PHE { SD: 15'6 PMG: 20 ^h 44 ^m 4 ^h : 57'3 12 ^h : 57'1 20 ^h : 56'9 Rº: 46 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	Rº	Hora	Rº
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	180	55.2	+18 24.3	58	47.8	+7 44.7		60 N	20 28	21 30	** **	13 57 83	3 00 12		
1	195	55.2	24.9	73	18.8 ¹²⁰	33.2 ¹¹⁵		58	15	21 10	22 46	14 00 80	2 56 15		
2	210	55.2	25.6	87	49.9 ¹²¹	21.7 ¹¹⁵		56	20 03	20 53	22 09	03 76	53 17		
3	225	55.2	26.2	102	21.0 ¹²¹	+7 10.2 ¹¹⁵		54	19 54	39	21 44	05 74	49 20		
4	240	55.2	26.8	116	52.2 ¹²²	+6 58.6 ¹¹⁶		52	45	27	24	07 72	47 21		
5	255	55.2	+18 27.4	131	23.4 ¹²²	+6 47.0 ¹¹⁶		50	19 37	20 16	21 08	14 09 70	2 44 23		
6	270	55.2	+18 28.0	145	54.7 ¹²³	+6 35.3 ¹¹⁷		45	19 20	19 54	20 38	14 13 66	2 38 27		
7	285	55.2	28.6	160	26.0 ¹²³	23.7 ¹¹⁶		40	19 07	37	20 15	16 63	34 30		
8	300	55.2	29.2	174	57.3 ¹²³	12.0 ¹¹⁷		35	18 55	23	19 57	19 60	29 33		
9	315	55.2	29.8	189	28.8 ¹²⁵	+6 00.3 ¹¹⁷		30	45	19 11	43	21 58	26 35		
10	330	55.2	30.4	204	00.2 ¹²⁴	+5 48.6 ¹¹⁷		20	28	18 52	20	26 53	19 40		
11	345	55.2	+18 31.1	218	31.7 ¹²⁵	+5 36.9 ¹¹⁷		10 N	18 14	18 36	19 02	14 30 49	2 14 43		
12	0	55.2	+18 31.7	233	03.3 ¹²⁶	+5 25.1 ¹¹⁸		0	18 00	18 22	18 47	14 33 46	2 08 47		
13	15	55.2	32.3	247	34.9 ¹²⁶	13.4 ¹¹⁷		10 S	17 46	18 08	34	37 42	2 03 50		
14	30	55.2	32.9	262	06.5 ¹²⁶	+5 01.6 ¹¹⁸		20	32	17 55	22	41 38	1 57 55		
15	45	55.2	33.5	276	38.2 ¹²⁷	+4 49.8 ¹¹⁸		30	16	41	10	45 34	51 58		
16	60	55.2	34.1	291	09.9 ¹²⁷	38.0 ¹¹⁸		35	17 06	33	18 04	47 32	47 61		
17	75	55.2	+18 34.7	305	41.7 ¹²⁸	+4 26.1 ¹¹⁹		40	16 56	17 25	17 57	14 50 29	1 42 64		
18	90	55.2	+18 35.3	320	13.5 ¹²⁸	+4 14.3 ¹¹⁸		45	16 43	17 15	17 50	14 53 26	1 37 68		
19	105	55.2	35.9	334	45.3 ¹²⁸	+4 02.4 ¹¹⁹		50	28	17 03	43	57 22	31 72		
20	120	55.2	36.5	349	17.2 ¹²⁹	+3 50.6 ¹¹⁸		52	21	16 58	39	14 59 20	28 74		
21	135	55.2	37.1	3	49.1 ¹²⁹	38.7 ¹¹⁹		54	13	52	36	15 01 19	25 76		
22	150	55.2	37.7	18	21.0 ¹²⁹	26.8 ¹¹⁹		56	16 04	46	32	03 17	22 77		
23	165	55.2	38.3	32	53.0 ¹³⁰	14.9 ¹¹⁹		58	15 54	39	28	06 14	18 80		
24	180	55.2	+18 38.9	47	25.0 ¹³⁰	+3 03.0 ¹¹⁹		60 S	15 43	16 32	17 23	15 08 12	1 13 84		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 8 ^h 34 ^m 4		Mag: -3.9 PMG: 11 ^h 26 ^m			Mag: +1.5 PMG: 12 ^h 53 ^m			Mag: -2.0 PMG: 11 ^h 42 ^m			Mag: +0.2 PMG: 11 ^h 49 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	231	03.3	188 35.7	+15 17.1	17.1	166 34.9	+21 52.3	184 14.3	+16 39.1	182 13.3	+16 00.3				
1	246	05.7	203 35.1	18.1	18.1	181 35.6	52.6	199 16.2	39.2	197 15.4	00.4				
2	261	08.2	218 34.5	19.0	19.0	196 36.2	52.9	214 18.1	39.4	212 17.5	00.5				
3	276	10.7	233 34.0	20.0	20.0	211 36.8	53.2	229 20.0	39.6	227 19.7	00.6				
4	291	13.1	248 33.4	21.0	21.0	226 37.4	53.5	244 21.8	39.7	242 21.8	00.7				
5	306	15.6	263 32.9	+15 22.0	22.0	241 38.0	+21 53.9	259 23.7	+16 39.9	257 24.0	+16 00.8				
6	321	18.1	278 32.3	+15 22.9	22.9	256 38.7	+21 54.2	274 25.6	+16 40.1	272 26.1	+16 00.9				
7	336	20.5	293 31.7	23.9	23.9	271 39.3	54.5	289 27.4	40.2	287 28.3	00.9				
8	351	23.0	308 31.2	24.9	24.9	286 39.9	54.8	304 29.3	40.4	302 30.4	01.0				
9	6	25.5	323 30.6	25.8	25.8	301 40.5	55.1	319 31.2	40.6	317 32.5	01.1				
10	21	27.9	338 30.1	26.8	26.8	316 41.2	55.5	334 33.0	40.7	332 34.7	01.2				
11	36	30.4	353 29.5	+15 27.8	27.8	331 41.8	+21 55.8	349 34.9	+16 40.9	347 36.8	+16 01.3				
12	51	32.9	8 28.9	+15 28.7	28.7	346 42.4	+21 56.1	4	36.8	+16 41.0	+16 01.4				
13	66	35.3	23 28.4	29.7	29.7	1 43.0	56.4	19 38.6	41.2	17 41.1	01.5				
14	81	37.8	38 27.8	30.7	30.7	16 43.7	56.7	34 40.5	41.4	32 43.2	01.5				
15	96	40.2	53 27.2	31.6	31.6	31 44.3	57.0	49 42.4	41.5	47 45.4	01.6				
16	111	42.7	68 26.7	32.6	32.6	46 44.9	57.3	64 44.2	41.7	62 47.5	01.7				
17	126	45.2	83 26.1	+15 33.6	33.6	61 45.5	+21 57.7	79 46.1	+16 41.9	77 49.7	+16 01.8				
18	141	47.6	98 25.5	+15 34.5	34.5	76 46.1	+21 58.0	94 48.0	+16 42.0	92 51.8	+16 01.9				
19	156	50.1	113 25.0	35.5	35.5	91 46.8	58.3	109 49.8	42.2	107 54.0	02.0				
20	171	52.6	128 24.4	36.5	36.5	106 47.4	58.6	124 51.7	42.4	122 56.1	02.0				
21	186	55.0	143 23.8	37.4	37.4	121 48.0	58.9	139 53.6	42.5	137 58.2	02.1				
22	201	57.5	158 23.3	38.4	38.4	136 48.6	59.2	154 55.4	42.7	153 00.4	02.2				
23	217	00.0	173 22.7	39.3	39.3	151 49.3	59.5	169 57.3	42.8	168 02.5	02.3				
24	232	02.4	188 22.1	+15 40.3	40.3	166 49.9	+21 59.8	184 59.2	+16 43.0	183 04.7	+16 02.4				
Dif	—		-6		+10	+6		+3	+19		+2	+21		+1	

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 3				Edad: 9 ^d 8 PHE { SD: 15 ^h 5 PMG: 21 ^h 30 ^m 4 ^h : 56 ^m 7 12 ^h : 56 ^m 6 20 ^h : 56 ^m 4 R°: 45 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	180	55.2	+18	38.9	47	25.0	+3	03.0	60 N	**	**	2	21	3	24	15	20	80
1	195	55.2		39.5	61	57.1 ¹³¹	+2	51.1 ¹¹⁹	58	1	06	42	37			20	77	11 14
2	210	55.2		40.1	76	29.2 ¹³¹		39.2 ¹¹⁹	56	1	43	2	59	49		19	76	10 16
3	225	55.2		40.7	91	01.3 ¹³¹		27.3 ¹¹⁹	54	2	08	3	13	3	59	19	74	09 18
4	240	55.2		41.3	105	33.4 ¹³¹		15.4 ¹¹⁹	52		28	25	4	07		19	72	08 20
5	255	55.2	+18	41.9	120	05.6 ¹³²	+2	03.4 ¹²⁰	50	2	44	3	36	4	15	15	19	70
6	270	55.2	+18	42.5	134	37.8 ¹³²	+1	51.5 ¹¹⁹	45	3	15	3	58	4	32	15	19	66
7	285	55.2		43.1	149	10.0 ¹³²		39.6 ¹¹⁹	40		37	4	15	46		19	62	04 28
8	300	55.2		43.7	163	42.3 ¹³³		27.7 ¹¹⁹	35	3	55	29	4	57		19	59	02 32
9	315	55.2		44.3	178	14.6 ¹³³		15.8 ¹¹⁹	30	4	10	4	41	5	07	19	57	3 01 34
10	330	55.2		44.9	192	46.9 ¹³³	+1	03.9 ¹¹⁹	20		33	5	01	24		19	53	2 59 38
11	345	55.2	+18	45.5	207	19.2 ¹³³	+0	51.9 ¹²⁰	10 N	4	51	5	17	5	39	15	19	49
12	0	55.2	+18	46.1	221	51.6 ¹³⁴	+0	40.0 ¹¹⁹	0	5	06	5	31	5	53	15	19	45
13	15	55.2		46.7	236	24.0 ¹³⁴		28.1 ¹¹⁹	10 S		19	44	6	06		19	42	53 50
14	30	55.2		47.3	250	56.4 ¹³⁴		16.2 ¹¹⁹	20	31	5	58	21			19	38	52 52
15	45	55.2		47.9	265	28.8 ¹³⁴	+0	04.3 ¹¹⁹	30	43	6	12	37			19	34	49 58
16	60	55.2		48.5	280	01.3 ¹³⁵	-0	07.5 ¹¹⁸	35		49	20	47			19	32	48 60
17	75	55.2	+18	49.1	294	33.7 ¹³⁴	-0	19.4 ¹¹⁹	40	5	56	6	29	6	58	15	19	29
18	90	55.2	+18	49.7	309	06.2 ¹³⁵	-0	31.3 ¹¹⁹	45	6	03	6	38	7	10	15	19	26
19	105	55.2		50.3	323	38.8 ¹³⁶		43.1 ¹¹⁸	50		11	50	26			19	22	43 70
20	120	55.2		50.9	338	11.3 ¹³⁵	-0	55.0 ¹¹⁹	52	14	6	55	33			19	20	42 72
21	135	55.2		51.5	352	43.8 ¹³⁵	-1	06.8 ¹¹⁸	54	18	7	01	41			20	18	41 74
22	150	55.2		52.0	7	16.4 ¹³⁶		18.6 ¹¹⁸	56	21		07	7	50		20	16	39 77
23	165	55.1		52.6	21	49.0 ¹³⁶		30.4 ¹¹⁸	58	26	14	8	00			20	13	38 79
24	180	55.1	+18	53.2	36	21.6 ¹³⁶	-1	42.2 ¹¹⁸	60 S	6	30	7	22	8	12	15	20	11
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 8 ^h 30 ^m 4		Mag: -3.9 PMG: 11 ^h 27 ^m				Mag: +1.5 PMG: 12 ^h 52 ^m				Mag: -2.0 PMG: 11 ^h 39 ^m				Mag: +0.2 PMG: 11 ^h 46 ^m			
	hG ♀		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	232	02.4	188	22.1	+15	40.3	166	49.9	+21	59.8	184	59.2	+16	43.0	183	04.7	+16	02.4
1	247	04.9	203	21.5		41.3	181	50.5	+22	00.2	200	01.1		43.2	198	06.8		02.5
2	262	07.3	218	21.0		42.2	196	51.1		00.5	215	02.9		43.3	213	08.9		02.6
3	277	09.8	233	20.4		43.2	211	51.7		00.8	230	04.8		43.5	228	11.1		02.6
4	292	12.3	248	19.8		44.1	226	52.4		01.1	245	06.7		43.7	243	13.2		02.7
5	307	14.7	263	19.3	+15	45.1	241	53.0	+22	01.4	260	08.5	+16	43.8	258	15.4	+16	02.8
6	322	17.2	278	18.7	+15	46.0	256	53.6	+22	01.7	275	10.4	+16	44.0	273	17.5	+16	02.9
7	337	19.7	293	18.1		47.0	271	54.2		02.0	290	12.3		44.1	288	19.6		03.0
8	352	22.1	308	17.5		47.9	286	54.9		02.3	305	14.1		44.3	303	21.8		03.1
9	7	24.6	323	17.0		48.9	301	55.5		02.6	320	16.0		44.5	318	23.9		03.2
10	22	27.1	338	16.4		49.9	316	56.1		02.9	335	17.9		44.6	333	26.1		03.2
11	37	29.5	353	15.8	+15	50.8	331	56.7	+22	03.2	350	19.7	+16	44.8	348	28.2	+16	03.3
12	52	32.0	8	15.2	+15	51.8	346	57.3	+22	03.6	5	21.6	+16	45.0	3	30.4	+16	03.4
13	67	34.5	23	14.7		52.7	1	58.0		03.9	20	23.5		45.1	18	32.5		03.5
14	82	36.9	38	14.1		53.7	16	58.6		04.2	35	25.3		45.3	33	34.6		03.6
15	97	39.4	53	13.5		54.6	31	59.2		04.5	50	27.2		45.4	48	36.8		03.7
16	112	41.8	68	12.9		55.5	46	59.8		04.8	65	29.1		45.6	63	38.9		03.8
17	127	44.3	83	12.4	+15	56.5	62	00.4	+22	05.1	80	30.9	+16	45.8	78	41.1	+16	03.8
18	142	46.8	98	11.8	+15	57.4	77	01.1	+22	05.4	95	32.8	+16	45.9	93	43.2	+16	03.9
19	157	49.2	113	11.2		58.4	92	01.7		05.7	110	34.7		46.1	108	45.3		04.0
20	172	51.7	128	10.6	+15	59.3	107	02.3		06.0	125	36.5		46.3	123	47.5		04.1
21	187	54.2	143	10.0	+16	00.3	122	02.9		06.3	140	38.4		46.4	138	49.6		04.2
22	202	56.6	158	09.5		01.2	137	03.6		06.6	155	40.3		46.6	153	51.8		04.3
23	217	59.1	173	08.9		02.2	152	04.2		06.9	170	42.1		46.7	168	53.9		04.3
24	233	01.6	188	08.3	+16	03.1	167	04.8	+22	07.2	185	44.0	+16	46.9	183	56.1	+16	04.4
Dif	—		-6		+10		+6		+3		+19		+2		+21		+1	

UT	SOL			LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 10 ^d 8	PHE { 4 ^h : 56 ^m /2 12 ^h : 56 ^m /0 20 ^h : 55 ^m /9 R°: 45 ^m										
	PMG: 11 ^h 56 ^m 3					SD: 15 ^h 3				PMG: 22 ^h 15 ^m		R°: 45 ^m			
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	m	h m m	m
0	180	55.1	+18 53.2	36	21.6	-1 42.2		60 N	20 33	21 37	** **	16 40	80	3 23	12
1	195	55.1	53.8	50	54.2 ¹³⁶	-1 54.0 ¹¹⁸		58	19	21 15	23 00	37 77		25 14	
2	210	55.1	54.4	65	26.8 ¹³⁶	-2 05.8 ¹¹⁸		56	20 07	20 58	22 17	35 74		26 16	
3	225	55.1	55.0	79	59.4 ¹³⁶	17.5 ¹¹⁷		54	19 57	43	21 50	33 72		27 18	
4	240	55.1	55.6	94	32.1 ¹³⁷	29.2 ¹¹⁷		52	48	30	29	31 70		28 20	
5	255	55.1	+18 56.2	109	04.7 ¹³⁶	-2 40.9 ¹¹⁷		50	19 40	20 19	21 12	16 29	68	3 29	22
6	270	55.1	+18 56.7	123	37.4 ¹³⁷	-2 52.6 ¹¹⁷		45	19 23	19 57	20 41	16 25	64	3 31	25
7	285	55.1	57.3	138	10.1 ¹³⁷	-3 04.3 ¹¹⁷		40	19 09	39	20 17	21 62		32 29	
8	300	55.1	57.9	152	42.8 ¹³⁷	15.9 ¹¹⁶		35	18 57	25	19 59	18 59		34 31	
9	315	55.1	58.5	167	15.5 ¹³⁷	27.6 ¹¹⁷		30	47	19 13	44	16 56		35 34	
10	330	55.1	59.1	181	48.2 ¹³⁷	39.2 ¹¹⁶		20	29	18 53	21	12 52		37 38	
11	345	55.1	+18 59.7	196	20.9 ¹³⁷	-3 50.7 ¹¹⁵		10 N	18 14	18 36	19 02	16 08	48	3 39	42
12	0	55.1	+19 00.2	210	53.6 ¹³⁷	-4 02.3 ¹¹⁶		0	18 00	18 22	18 47	16 04	45	3 41	45
13	15	55.0	00.8	225	26.3 ¹³⁷	13.8 ¹¹⁵		10 S	17 46	18 08	34	16 01	41	43 48	
14	30	55.0	01.4	239	59.0 ¹³⁷	25.3 ¹¹⁵		20	31	17 54	21	15 57	38	44 53	
15	45	55.0	02.0	254	31.8 ¹³⁸	36.8 ¹¹⁵		30	14	40	09	53 34		47 56	
16	60	55.0	02.6	269	04.5 ¹³⁷	48.2 ¹¹⁴		35	17 05	32	18 02	51 31		48 59	
17	75	55.0	+19 03.1	283	37.2 ¹³⁷	-4 59.6 ¹¹⁴		40	16 54	17 23	17 56	15 48	29	3 49	62
18	90	55.0	+19 03.7	298	10.0 ¹³⁸	-5 11.0 ¹¹⁴		45	16 41	17 13	17 48	15 45	26	3 51	65
19	105	55.0	04.3	312	42.7 ¹³⁷	22.4 ¹¹⁴		50	25	17 01	40	41 23		53 69	
20	120	55.0	04.9	327	15.4 ¹³⁷	33.7 ¹¹³		52	18	16 55	37	39 21		54 70	
21	135	55.0	05.5	341	48.2 ¹³⁸	45.0 ¹¹³		54	10	50	33	38 18		55 72	
22	150	55.0	06.0	356	20.9 ¹³⁷	-5 56.3 ¹¹³		56	16 00	43	29	36 16		56 74	
23	165	54.9	06.6	10	53.7 ¹³⁸	-6 07.5 ¹¹²		58	15 50	36	25	33 15		57 77	
24	180	54.9	+19 07.2	25	26.4 ¹³⁷	-6 18.7 ¹¹²		60 S	15 38	16 28	17 20	15 31	12	3 58	80

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 8 ^h 26 ^m 5		Mag: -3.9 PMG: 11 ^h 28 ^m		Mag: +1.5 PMG: 12 ^h 51 ^m		Mag: -2.0 PMG: 11 ^h 36 ^m		Mag: +0.2 PMG: 11 ^h 43 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	233	01.6	188	08.3	+16 03.1	167 04.8	+22 07.2	185 44.0	+16 46.9	183 56.1	+16 04.4
1	248	04.0	203	07.7	04.0	182 05.4	07.5	200 45.9	47.1	198 58.2	04.5
2	263	06.5	218	07.1	05.0	197 06.0	07.8	215 47.8	47.2	214 00.3	04.6
3	278	09.0	233	06.6	05.9	212 06.7	08.1	230 49.6	47.4	229 02.5	04.7
4	293	11.4	248	06.0	06.9	227 07.3	08.4	245 51.5	47.6	244 04.6	04.8
5	308	13.9	263	05.4	+16 07.8	242 07.9	+22 08.7	260 53.4	+16 47.7	259 06.8	+16 04.9
6	323	16.3	278	04.8	+16 08.7	257 08.5	+22 09.0	275 55.2	+16 47.9	274 08.9	+16 04.9
7	338	18.8	293	04.2	09.7	272 09.1	09.3	290 57.1	48.0	289 11.0	05.0
8	353	21.3	308	03.6	10.6	287 09.8	09.6	305 59.0	48.2	304 13.2	05.1
9	8	23.7	323	03.1	11.6	302 10.4	09.9	321 00.8	48.4	319 15.3	05.2
10	23	26.2	338	02.5	12.5	317 11.0	10.2	336 02.7	48.5	334 17.5	05.3
11	38	28.7	353	01.9	+16 13.4	332 11.6	+22 10.5	351 04.6	+16 48.7	349 19.6	+16 05.4
12	53	31.1	8	01.3	+16 14.4	347 12.2	+22 10.8	6 06.4	+16 48.8	4 21.8	+16 05.5
13	68	33.6	23	00.7	15.3	2 12.9	11.1	21 08.3	49.0	19 23.9	05.5
14	83	36.1	38	00.1	16.2	17 13.5	11.4	36 10.2	49.2	34 26.0	05.6
15	98	38.5	52	59.5	17.2	32 14.1	11.7	51 12.0	49.3	49 28.2	05.7
16	113	41.0	67	59.0	18.1	47 14.7	12.0	66 13.9	49.5	64 30.3	05.8
17	128	43.4	82	58.4	+16 19.0	62 15.3	+22 12.3	81 15.8	+16 49.7	79 32.5	+16 05.9
18	143	45.9	97	57.8	+16 20.0	77 16.0	+22 12.6	96 17.6	+16 49.8	94 34.6	+16 06.0
19	158	48.4	112	57.2	20.9	92 16.6	12.9	111 19.5	50.0	109 36.7	06.0
20	173	50.8	127	56.6	21.8	107 17.2	13.2	126 21.4	50.1	124 38.9	06.1
21	188	53.3	142	56.0	22.7	122 17.8	13.5	141 23.2	50.3	139 41.0	06.2
22	203	55.8	157	55.4	23.7	137 18.4	13.8	156 25.1	50.5	154 43.2	06.3
23	218	58.2	172	54.8	24.6	152 19.1	14.1	171 27.0	50.6	169 45.3	06.4
24	234	00.7	187	54.2	+16 25.5	167 19.7	+22 14.4	186 28.9	+16 50.8	184 47.5	+16 06.5
Dif	—		-6	+9		+6	+3	+19	+2	+21	+1

UT	SOL			O LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15/8 PMG: 11 ^h 56 ^m 3			Edad: 11 ^d 8 PHE SD: 15/2 PMG: 23 ^h 00 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora
h	°	'	°	°	'	°	°	h	m	h	m	h	m	m
0	180	54.9	+19 07.2	25	26.4	-6 18.7	60 N	** **	2 15	3 19	18 00	78	3 35	13
1	195	54.9	07.8	39	59.1 ¹³⁷	29.9 ¹¹²	58	0 52	37	33	17 54	76	39	15
2	210	54.9	08.3	54	31.9 ¹³⁸	41.0 ¹¹¹	56	1 35	2 55	45	49	73	42	18
3	225	54.9	08.9	69	04.6 ¹³⁷	-6 52.1 ¹¹¹	54	2 03	3 09	3 55	45	70	45	20
4	240	54.9	09.5	83	37.3 ¹³⁷	-7 03.1 ¹¹⁰	52	23	22	4 04	41	69	48	22
5	255	54.9	+19 10.1	98	10.0 ¹³⁷	-7 14.1 ¹¹⁰	50	2 40	3 33	4 12	17 37	67	3 51	23
6	270	54.9	+19 10.6	112	42.8 ¹³⁸	-7 25.1 ¹¹⁰	45	3 12	3 55	4 30	17 29	64	3 56	27
7	285	54.8	11.2	127	15.5 ¹³⁷	36.0 ¹⁰⁹	40	35	4 13	44	23	60	4 01	30
8	300	54.8	11.8	141	48.2 ¹³⁷	46.9 ¹⁰⁹	35	3 53	27	4 56	17 58		05	33
9	315	54.8	12.3	156	20.9 ¹³⁷	-7 57.8 ¹⁰⁹	30	4 08	4 40	5 06	12 56		09	34
10	330	54.8	12.9	170	53.5 ¹³⁶	-8 08.6 ¹⁰⁸	20	32	5 00	23	17 04	51	15	39
11	345	54.8	+19 13.5	185	26.2 ¹³⁷	-8 19.4 ¹⁰⁸	10 N	4 50	5 16	5 39	16 56	49	4 21	42
12	0	54.8	+19 14.1	199	58.9 ¹³⁷	-8 30.1 ¹⁰⁷	0	5 05	5 31	5 53	16 49	46	4 26	45
13	15	54.8	14.6	214	31.6 ¹³⁷	40.8 ¹⁰⁷	10 S	19	45	6 07	42	43	31	49
14	30	54.7	15.2	229	04.2 ¹³⁶	-8 51.4 ¹⁰⁶	20	32	5 58	22	35	39	37	52
15	45	54.7	15.8	243	36.8 ¹³⁶	-9 02.0 ¹⁰⁶	30	44	6 13	39	27	35	43	56
16	60	54.7	16.3	258	09.5 ¹³⁷	12.6 ¹⁰⁶	35	51	21	48	22	34	47	58
17	75	54.7	+19 16.9	272	42.1 ¹³⁶	-9 23.0 ¹⁰⁴	40	5 57	6 30	6 59	16 17	31	4 51	61
18	90	54.7	+19 17.5	287	14.7 ¹³⁶	-9 33.5 ¹⁰⁵	45	6 05	6 40	7 13	16 11	28	4 56	64
19	105	54.7	18.0	301	47.3 ¹³⁶	43.9 ¹⁰⁴	50	13	52	28	04	24	5 02	67
20	120	54.6	18.6	316	19.9 ¹³⁶	-9 54.3 ¹⁰⁴	52	16	6 58	36	16 00	23	04	70
21	135	54.6	19.1	330	52.4 ¹³⁵	-10 04.6 ¹⁰³	54	20	7 04	44	15 56	21	07	72
22	150	54.6	19.7	345	25.0 ¹³⁶	14.8 ¹⁰²	56	24	11	7 53	52	19	10	74
23	165	54.6	20.3	359	57.5 ¹³⁵	25.0 ¹⁰²	58	29	18	8 04	48	16	14	76
24	180	54.6	+19 20.8	14	30.1 ¹³⁶	-10 35.2 ¹⁰²	60 S	6 34	7 26	8 16	15 43	14	5 18	79

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 8 ^h 22 ^m 6		Mag: -3.9 PMG: 11 ^h 29 ^m		Mag: +1.5 PMG: 12 ^h 50 ^m		Mag: -2.0 PMG: 11 ^h 33 ^m		Mag: +0.2 PMG: 11 ^h 39 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	234	00.7	187 54.2	+16 25.5	167 19.7	+22 14.4	186 28.9	+16 50.8	184 47.5	+16 06.5
1	249	03.2	202 53.6	26.4	182 20.3	14.7	201 30.7	50.9	199 49.6	06.6
2	264	05.6	217 53.0	27.4	197 20.9	15.0	216 32.6	51.1	214 51.7	06.6
3	279	08.1	232 52.5	28.3	212 21.5	15.3	231 34.5	51.3	229 53.9	06.7
4	294	10.6	247 51.9	29.2	227 22.2	15.6	246 36.3	51.4	244 56.0	06.8
5	309	13.0	262 51.3	+16 30.1	242 22.8	+22 15.8	261 38.2	+16 51.6	259 58.2	+16 06.9
6	324	15.5	277 50.7	+16 31.1	257 23.4	+22 16.1	276 40.1	+16 51.8	275 00.3	+16 07.0
7	339	17.9	292 50.1	32.0	272 24.0	16.4	291 41.9	51.9	290 02.4	07.1
8	354	20.4	307 49.5	32.9	287 24.6	16.7	306 43.8	52.1	305 04.6	07.1
9	9	22.9	322 48.9	33.8	302 25.3	17.0	321 45.7	52.2	320 06.7	07.2
10	24	25.3	337 48.3	34.7	317 25.9	17.3	336 47.5	52.4	335 08.9	07.3
11	39	27.8	352 47.7	+16 35.6	332 26.5	+22 17.6	351 49.4	+16 52.6	350 11.0	+16 07.4
12	54	30.3	7 47.1	+16 36.6	347 27.1	+22 17.9	6 51.3	+16 52.7	5 13.2	+16 07.5
13	69	32.7	22 46.5	37.5	2 27.7	18.2	21 53.1	52.9	20 15.3	07.6
14	84	35.2	37 45.9	38.4	17 28.4	18.5	36 55.0	53.0	35 17.4	07.6
15	99	37.7	52 45.3	39.3	32 29.0	18.8	51 56.9	53.2	50 19.6	07.7
16	114	40.1	67 44.7	40.2	47 29.6	19.0	66 58.7	53.4	65 21.7	07.8
17	129	42.6	82 44.1	+16 41.1	62 30.2	+22 19.3	82 00.6	+16 53.5	80 23.9	+16 07.9
18	144	45.1	97 43.5	+16 42.0	77 30.8	+22 19.6	97 02.5	+16 53.7	95 26.0	+16 08.0
19	159	47.5	112 42.9	43.0	92 31.5	19.9	112 04.3	53.8	110 28.1	08.1
20	174	50.0	127 42.3	43.9	107 32.1	20.2	127 06.2	54.0	125 30.3	08.2
21	189	52.4	142 41.7	44.8	122 32.7	20.5	142 08.1	54.2	140 32.4	08.2
22	204	54.9	157 41.1	45.7	137 33.3	20.8	157 09.9	54.3	155 34.6	08.3
23	219	57.4	172 40.5	46.6	152 33.9	21.1	172 11.8	54.5	170 36.7	08.4
24	234	59.8	187 39.9	+16 47.5	167 34.6	+22 21.3	187 13.7	+16 54.6	185 38.9	+16 08.5
Dif	—		-6	+9	+6	+3	+19	+2	+21	+1

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna				
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 4			Edad: 12 ^d 8 PHE { SD: 15 ^h 1 PMG: 23 ^h 46 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m
0	180	54.6	+19	20.8	14	30.1	-10	35.2	60 N	20 37	21 44	** **	19 18	76	3 48	15	
1	195	54.6		21.4	29	02.6 ¹³⁵		45.3 ¹⁰¹	58	23	20	23 17	10	73	3 54	18	
2	210	54.5		22.0	43	35.1 ¹³⁵		-10 55.3 ¹⁰⁰	56	11	21 02	22 25	19 02	71	4 00	20	
3	225	54.5		22.5	58	07.5 ¹³⁴		-11 05.3 ¹⁰⁰	54	20 00	20 47	21 56	18 55	69	05	22	
4	240	54.5		23.1	72	40.0 ¹³⁵		15.2 ⁹⁹	52	19 51	34	34	50	67	10	24	
5	255	54.5	+19	23.6	87	12.4 ¹³⁴		-11 25.1 ⁹⁹	50	19 43	20 23	21 16	18 44	66	4 14	26	
6	270	54.5	+19	24.2	101	44.9 ¹³⁵		-11 34.9 ⁹⁸	45	19 25	19 59	20 44	18 33	62	4 23	29	
7	285	54.4		24.8	116	17.3 ¹³⁴		44.7 ⁹⁸	40	19 10	41	20	23	59	31	32	
8	300	54.4		25.3	130	49.7 ¹³⁴		-11 54.4 ⁹⁷	35	18 58	27	20 01	15	57	38	34	
9	315	54.4		25.9	145	22.1 ¹³⁴		-12 04.0 ⁹⁶	30	48	19 14	19 46	18 08	55	43	37	
10	330	54.4		26.4	159	54.4 ¹³³		13.6 ⁹⁶	20	30	18 54	22	17 55	52	4 54	40	
11	345	54.4	+19	27.0	174	26.7 ¹³³		-12 23.2 ⁹⁶	10 N	18 14	18 37	19 03	17 45	49	5 03	43	
12	0	54.3	+19	27.5	188	59.1 ¹³⁴		-12 32.6 ⁹⁴	0	18 00	18 22	18 47	17 35	46	5 11	46	
13	15	54.3		28.1	203	31.4 ¹³³		42.0 ⁹⁴	10 S	17 46	18 08	34	25	44	20	48	
14	30	54.3		28.6	218	03.6 ¹³²		-12 51.4 ⁹⁴	20	31	17 54	21	14	41	29	51	
15	45	54.3		29.2	232	35.9 ¹³³		-13 00.7 ⁹³	30	13	39	08	17 02	38	39	55	
16	60	54.3		29.7	247	08.1 ¹³²		09.9 ⁹²	35	17 03	31	18 01	16 56	35	45	57	
17	75	54.2	+19	30.3	261	40.4 ¹³³		-13 19.0 ⁹¹	40	16 52	17 21	17 54	16 48	33	5 52	60	
18	90	54.2	+19	30.9	276	12.6 ¹³²		-13 28.1 ⁹¹	45	16 39	17 11	17 47	16 39	30	6 00	63	
19	105	54.2		31.4	290	44.7 ¹³¹		37.2 ⁹¹	50	23	16 59	38	28	27	09	67	
20	120	54.2		32.0	305	16.9 ¹³²		46.1 ⁸⁹	52	15	53	35	23	26	14	68	
21	135	54.2		32.5	319	49.0 ¹³¹		-13 55.0 ⁸⁹	54	16 07	47	31	17	24	19	70	
22	150	54.1		33.1	334	21.2 ¹³²		-14 03.9 ⁸⁹	56	15 57	40	26	11	22	24	72	
23	165	54.1		33.6	348	53.2 ¹³⁰		12.6 ⁸⁷	58	46	33	22	16 04	20	30	75	
24	180	54.1	+19	34.2	3	25.3 ¹³¹		-14 21.3 ⁸⁷	60 S	15 34	16 24	17 17	15 57	17	6 37	78	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 8 ^h 18 ^m 6		Mag: -3.9 PMG: 11 ^h 30 ^m			Mag: +1.5 PMG: 12 ^h 49 ^m			Mag: -2.0 PMG: 11 ^h 30 ^m			Mag: +0.2 PMG: 11 ^h 36 ^m					
	hG ♈		hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'			
0	234	59.8	187	39.9	+16 47.5	167	34.6	+22 21.3	187	13.7	+16 54.6	185	38.9	+16 08.5			
1	250	02.3	202	39.3	48.4	182	35.2	21.6	202	15.6	54.8	200	41.0	08.6			
2	265	04.8	217	38.7	49.3	197	35.8	21.9	217	17.4	55.0	215	43.1	08.7			
3	280	07.2	232	38.1	50.2	212	36.4	22.2	232	19.3	55.1	230	45.3	08.7			
4	295	09.7	247	37.5	51.1	227	37.0	22.5	247	21.2	55.3	245	47.4	08.8			
5	310	12.2	262	36.9	+16 52.0	242	37.7	+22 22.8	262	23.0	+16 55.4	260	49.6	+16 08.9			
6	325	14.6	277	36.2	+16 52.9	257	38.3	+22 23.0	277	24.9	+16 55.6	275	51.7	+16 09.0			
7	340	17.1	292	35.6	53.8	272	38.9	23.3	292	26.8	55.8	290	53.8	09.1			
8	355	19.5	307	35.0	54.7	287	39.5	23.6	307	28.6	55.9	305	56.0	09.2			
9	10	22.0	322	34.4	55.6	302	40.1	23.9	322	30.5	56.1	320	58.1	09.2			
10	25	24.5	337	33.8	56.5	317	40.7	24.2	337	32.4	56.2	336	00.3	09.3			
11	40	26.9	352	33.2	+16 57.4	332	41.4	+22 24.5	352	34.2	+16 56.4	351	02.4	+16 09.4			
12	55	29.4	7	32.6	+16 58.3	347	42.0	+22 24.7	7	36.1	+16 56.6	6	04.6	+16 09.5			
13	70	31.9	22	32.0	+16 59.2	2	42.6	25.0	22	38.0	56.7	21	06.7	09.6			
14	85	34.3	37	31.4	+17 00.1	17	43.2	25.3	37	39.8	56.9	36	08.8	09.7			
15	100	36.8	52	30.8	01.0	32	43.8	25.6	52	41.7	57.0	51	11.0	09.8			
16	115	39.3	67	30.2	01.9	47	44.5	25.9	67	43.6	57.2	66	13.1	09.8			
17	130	41.7	82	29.5	+17 02.8	62	45.1	+22 26.1	82	45.4	+16 57.4	81	15.3	+16 09.9			
18	145	44.2	97	28.9	+17 03.7	77	45.7	+22 26.4	97	47.3	+16 57.5	96	17.4	+16 10.0			
19	160	46.7	112	28.3	04.6	92	46.3	26.7	112	49.2	57.7	111	19.5	10.1			
20	175	49.1	127	27.7	05.5	107	46.9	27.0	127	51.0	57.8	126	21.7	10.2			
21	190	51.6	142	27.1	06.4	122	47.5	27.3	142	52.9	58.0	141	23.8	10.3			
22	205	54.0	157	26.5	07.3	137	48.2	27.5	157	54.8	58.2	156	26.0	10.3			
23	220	56.5	172	25.9	08.2	152	48.8	27.8	172	56.7	58.3	171	28.1	10.4			
24	235	59.0	187	25.3	+17 09.1	167	49.4	+22 28.1	187	58.5	+16 58.5	186	30.3	+16 10.5			
Dif	—		-6		+9	+6		+3	+19		+2	+21		+1			

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 4			Edad: 13 ^d 8 PHE { SD: 15 ^h 0 PMG: **h **m R°: **m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	180	54.1	+19 34.2	3	25.3	-14 21.3	86	60 N	** **	2 09	3 15	20 34	73	4 03	19
1	195	54.1	34.7	17	57.4 ¹³¹	29.9	86	58	0 36	32	29	23	69	12	22
2	210	54.0	35.2	32	29.4 ¹³⁰	38.5	86	56	1 27	2 50	41	13	67	20	25
3	225	54.0	35.8	47	01.4 ¹³⁰	47.0	85	54	1 57	3 05	3 52	20 04	66	27	22
4	240	54.0	36.3	61	33.4 ¹³⁰	-14 55.4	84	52	2 18	18	4 01	19 57	63	34	28
5	255	54.0	+19 36.9	76	05.3 ¹²⁹	-15 03.7	83	50	2 36	3 30	4 10	19 50	62	4 40	29
6	270	53.9	+19 37.4	90	37.3 ¹³⁰	-15 12.0	83	45	3 09	3 53	4 28	19 35	59	4 52	33
7	285	53.9	38.0	105	09.2 ¹²⁹	20.2	82	40	33	4 11	42	22	58	5 03	35
8	300	53.9	38.5	119	41.1 ¹²⁹	28.3	81	35	3 51	26	4 54	12	56	12	37
9	315	53.9	39.1	134	12.9 ¹²⁸	36.4	81	30	4 07	38	5 05	19 03	54	20	39
10	330	53.8	39.6	148	44.8 ¹²⁹	44.3	79	20	31	4 59	23	18 47	52	34	42
11	345	53.8	+19 40.1	163	16.6 ¹²⁸	-15 52.2	79	10 N	4 50	5 16	5 38	18 34	49	5 46	44
12	0	53.8	+19 40.7	177	48.4 ¹²⁸	-16 00.0	78	0	5 05	5 31	5 53	18 21	48	5 57	47
13	15	53.8	41.2	192	20.1 ¹²⁷	-16 07.8	78	10 S	19	45	6 07	18 09	45	6 08	50
14	30	53.7	41.8	206	51.9 ¹²⁸	15.5	77	20	32	5 59	22	17 55	43	20	52
15	45	53.7	42.3	221	23.6 ¹²⁷	23.1	76	30	45	6 14	40	40	40	34	55
16	60	53.7	42.8	235	55.3 ¹²⁷	30.6	75	35	52	23	6 50	31	39	42	57
17	75	53.7	+19 43.4	250	27.0 ¹²⁷	-16 38.0	74	40	5 59	6 32	7 01	17 21	37	6 52	58
18	90	53.6	+19 43.9	264	58.6 ¹²⁶	-16 45.4	74	45	6 07	6 42	7 15	17 09	35	7 03	61
19	105	53.6	44.5	279	30.3 ¹²⁷	52.6	72	50	15	6 55	31	16 55	32	16	64
20	120	53.6	45.0	294	01.9 ¹²⁶	-16 59.8	72	52	19	7 01	39	49	30	22	66
21	135	53.5	45.5	308	33.4 ¹²⁵	-17 07.0	72	54	23	07	47	41	29	29	67
22	150	53.5	46.1	323	05.0 ¹²⁶	14.0	70	56	27	14	7 57	33	28	36	70
23	165	53.5	46.6	337	36.5 ¹²⁵	20.9	69	58	32	21	8 08	24	25	45	71
24	180	53.5	+19 47.1	352	08.0 ¹²⁵	-17 27.8	69	60 S	6 37	7 30	8 20	16 14	22	7 55	74
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG 8 ^h 14 ^m 7		Mag: -3.9 PMG: 11 ^h 31 ^m			Mag: +1.6 PMG: 12 ^h 48 ^m			Mag: -2.0 PMG: 11 ^h 27 ^m			Mag: +0.2 PMG: 11 ^h 32 ^m			
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°
0	235	59.0	187	25.3	+17 09.1	167	49.4	+22 28.1	187	58.5	+16 58.5	186	30.3	+16 10.5	
1	251	01.4	202	24.6	10.0	182	50.0	28.4	203	00.4	58.6	201	32.4	10.6	
2	266	03.9	217	24.0	10.9	197	50.6	28.6	218	02.3	58.8	216	34.5	10.7	
3	281	06.4	232	23.4	11.7	212	51.3	28.9	233	04.1	59.0	231	36.7	10.8	
4	296	08.8	247	22.8	12.6	227	51.9	29.2	248	06.0	59.1	246	38.8	10.8	
5	311	11.3	262	22.2	+17 13.5	242	52.5	+22 29.5	263	07.9	+16 59.3	261	41.0	+16 10.9	
6	326	13.8	277	21.6	+17 14.4	257	53.1	+22 29.7	278	09.7	+16 59.4	276	43.1	+16 11.0	
7	341	16.2	292	20.9	15.3	272	53.7	30.0	293	11.6	59.6	291	45.2	11.1	
8	356	18.7	307	20.3	16.2	287	54.3	30.3	308	13.5	59.8	306	47.4	11.2	
9	11	21.2	322	19.7	17.0	302	55.0	30.6	323	15.3	+16 59.9	321	49.5	11.3	
10	26	23.6	337	19.1	17.9	317	55.6	30.8	338	17.2	+17 00.1	336	51.7	11.3	
11	41	26.1	352	18.5	+17 18.8	332	56.2	+22 31.1	353	19.1	+17 00.2	351	53.8	+16 11.4	
12	56	28.5	7	17.8	+17 19.7	347	56.8	+22 31.4	8	20.9	+17 00.4	6	56.0	+16 11.5	
13	71	31.0	22	17.2	20.6	2	57.4	31.7	23	22.8	00.6	21	58.1	11.6	
14	86	33.5	37	16.6	21.5	17	58.0	31.9	38	24.7	00.7	37	00.2	11.7	
15	101	35.9	52	16.0	22.3	32	58.7	32.2	53	26.5	00.9	52	02.4	11.8	
16	116	38.4	67	15.4	23.2	47	59.3	32.5	68	28.4	01.0	67	04.5	11.8	
17	131	40.9	82	14.7	+17 24.1	62	59.9	+22 32.8	83	30.3	+17 01.2	82	06.7	+16 11.9	
18	146	43.3	97	14.1	+17 25.0	78	00.5	+22 33.0	98	32.2	+17 01.3	97	08.8	+16 12.0	
19	161	45.8	112	13.5	25.8	93	01.1	33.3	113	34.0	01.5	112	11.0	12.1	
20	176	48.3	127	12.9	26.7	108	01.8	33.6	128	35.9	01.7	127	13.1	12.2	
21	191	50.7	142	12.2	27.6	123	02.4	33.8	143	37.8	01.8	142	15.2	12.3	
22	206	53.2	157	11.6	28.5	138	03.0	34.1	158	39.6	02.0	157	17.4	12.3	
23	221	55.6	172	11.0	29.3	153	03.6	34.4	173	41.5	02.1	172	19.5	12.4	
24	236	58.1	187	10.4	+17 30.2	168	04.2	+22 34.6	188	43.4	+17 02.3	187	21.7	+16 12.5	
Dif	—		-6 +9			+6 +3			+19 +2		+21 +1				

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 5			Edad: 14 ^d 8 PHE { 4 ^h : 54 ^m 6 12 ^h : 54 ^m 5 20 ^h : 54 ^m 4 PMG: 0 ^h 32 ^m R°: 48 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	h m	
0	180	53.5	+19 47.1	352	08.0	-17 27.8	68	60 N	20 42	21 50	** **	21 47 64	4 22 26	
1	195	53.4	47.7	6	39.5 ¹²⁵	34.6	68	58	27	26	** **	32 63	34 28	
2	210	53.4	48.2	21	11.0 ¹²⁵	41.3	67	56	14	21 07	22 33	20 62	45 30	
3	225	53.4	48.7	35	42.4 ¹²⁴	47.9	66	54	20 03	20 51	22 02	10 60	4 54 32	
4	240	53.3	49.3	50	13.8 ¹²⁴	-17 54.5	66	52	19 54	37	21 39	21 00 60	5 02 33	
5	255	53.3	+19 49.8	64	45.2 ¹²⁴	-18 00.9	64	50	19 45	20 26	21 21	20 52 58	5 09 35	
6	270	53.3	+19 50.3	79	16.6 ¹²⁴	-18 07.3	64	45	19 27	20 02	20 47	20 34 57	5 25 37	
7	285	53.2	50.9	93	48.0 ¹²⁴	13.6	63	40	12	19 43	22	20 55	38 39	
8	300	53.2	51.4	108	19.3 ¹²³	19.8	62	35	19 00	28	20 03	20 08 54	49 41	
9	315	53.2	51.9	122	50.6 ¹²³	25.9	61	30	18 49	19 16	19 47	19 57 53	5 59 42	
10	330	53.2	52.4	137	21.9 ¹²³	31.9	60	20	31	18 54	23	39 51	6 16 44	
11	345	53.1	+19 53.0	151	53.1 ¹²²	-18 37.8	59	10 N	18 15	18 37	19 04	19 23 50	6 30 46	
12	0	53.1	+19 53.5	166	24.4 ¹²³	-18 43.7	59	0	18 00	18 22	18 48	19 09 48	6 44 48	
13	15	53.1	54.0	180	55.6 ¹²²	49.4	57	10 S	17 45	18 08	33	18 54 47	6 58 49	
14	30	53.0	54.6	195	26.8 ¹²²	-18 55.1	57	20	30	17 53	20	38 45	7 12 52	
15	45	53.0	55.1	209	57.9 ¹²¹	-19 00.7	56	30	12	38	07	20 44	29 54	
16	60	53.0	55.6	224	29.1 ¹²²	06.1	54	35	17 02	29	18 00	18 10 42	39 55	
17	75	52.9	+19 56.1	239	00.2 ¹²¹	-19 11.5	54	40	16 50	17 20	17 53	17 58 41	7 50 57	
18	90	52.9	+19 56.7	253	31.3 ¹²¹	-19 16.9	54	45	16 37	17 09	17 45	17 44 40	8 04 58	
19	105	52.9	57.2	268	02.4 ¹²¹	22.1	52	50	20	16 56	36	27 38	20 60	
20	120	52.8	57.7	282	33.5 ¹²¹	27.2	51	52	12	51	32	19 37	28 61	
21	135	52.8	58.2	297	04.6 ¹²¹	32.2	50	54	16 04	44	28	10 36	36 63	
22	150	52.8	58.7	311	35.6 ¹²⁰	37.2	50	56	15 54	37	24	17 01 33	46 64	
23	165	52.7	59.3	326	06.6 ¹²⁰	42.0	48	58	43	29	19	16 49 32	8 56 67	
24	180	52.7	+19 59.8	340	37.6 ¹²⁰	-19 46.8	48	60 S	15 30	16 21	17 14	16 36 30	9 09 69	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 8 ^h 10 ^m 8		Mag: -3.9 PMG: 11 ^h 32 ^m		Mag: +1.6 PMG: 12 ^h 47 ^m		Mag: -2.0 PMG: 11 ^h 24 ^m		Mag: +0.2 PMG: 11 ^h 29 ^m	
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'
0	236	58.1	187 10.4	+17 30.2	168 04.2	+22 34.6	188 43.4	+17 02.3	187 21.7	+16 12.5
1	252	00.6	202 09.7	31.1	183 04.8	34.9	203 45.2	02.5	202 23.8	12.6
2	267	03.0	217 09.1	31.9	198 05.5	35.2	218 47.1	02.6	217 25.9	12.7
3	282	05.5	232 08.5	32.8	213 06.1	35.4	233 49.0	02.8	232 28.1	12.8
4	297	08.0	247 07.8	33.7	228 06.7	35.7	248 50.8	02.9	247 30.2	12.8
5	312	10.4	262 07.2	+17 34.5	243 07.3	+22 36.0	263 52.7	+17 03.1	262 32.4	+16 12.9
6	327	12.9	277 06.6	+17 35.4	258 07.9	+22 36.2	278 54.6	+17 03.2	277 34.5	+16 13.0
7	342	15.4	292 06.0	36.3	273 08.5	36.5	293 56.4	03.4	292 36.7	13.1
8	357	17.8	307 05.3	37.1	288 09.2	36.8	308 58.3	03.6	307 38.8	13.2
9	12	20.3	322 04.7	38.0	303 09.8	37.0	324 00.2	03.7	322 40.9	13.3
10	27	22.8	337 04.1	38.9	318 10.4	37.3	339 02.0	03.9	337 43.1	13.3
11	42	25.2	352 03.4	+17 39.7	333 11.0	+22 37.6	354 03.9	+17 04.0	352 45.2	+16 13.4
12	57	27.7	7 02.8	+17 40.6	348 11.6	+22 37.8	9 05.8	+17 04.2	7 47.4	+16 13.5
13	72	30.1	22 02.2	41.5	3 12.2	38.1	24 07.7	04.4	22 49.5	13.6
14	87	32.6	37 01.5	42.3	18 12.9	38.4	39 09.5	04.5	37 51.7	13.7
15	102	35.1	52 00.9	43.2	33 13.5	38.6	54 11.4	04.7	52 53.8	13.8
16	117	37.5	67 00.3	44.0	48 14.1	38.9	69 13.3	04.8	67 55.9	13.8
17	132	40.0	81 59.6	+17 44.9	63 14.7	+22 39.1	84 15.1	+17 05.0	82 58.1	+16 13.9
18	147	42.5	96 59.0	+17 45.8	78 15.3	+22 39.4	99 17.0	+17 05.1	98 00.2	+16 14.0
19	162	44.9	111 58.4	46.6	93 15.9	39.7	114 18.9	05.3	113 02.4	14.1
20	177	47.4	126 57.7	47.5	108 16.6	39.9	129 20.7	05.5	128 04.5	14.2
21	192	49.9	141 57.1	48.3	123 17.2	40.2	144 22.6	05.6	143 06.6	14.3
22	207	52.3	156 56.4	49.2	138 17.8	40.5	159 24.5	05.8	158 08.8	14.3
23	222	54.8	171 55.8	50.0	153 18.4	40.7	174 26.3	05.9	173 10.9	14.4
24	237	57.3	186 55.2	+17 50.9	168 19.0	+22 41.0	189 28.2	+17 06.1	188 13.1	+16 14.5
Dif	—	—	-6	+9	+6	+3	+19	+2	+21	+

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: 15 ^d 8 PHE SD: 14 ^h 8 PMG: 1 ^h 20 ^m R°: 48 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	180	52.7	+19	59.8	340	37.6	-19	46.8	60 N	** **	2 02	3 11	22 51	55	4 48	35		
1	195	52.7	+20	00.3	355	08.6 ¹²⁰		51.4 ⁴⁶	58	** **	27	25	35 54		5 02	37		
2	210	52.6		00.8	9	39.5 ¹¹⁹	-19	56.0 ⁴⁶	56	1 19	2 46	38	22 53		15	38		
3	225	52.6		01.3	24	10.5 ¹²⁰	-20	00.5 ⁴⁵	54	1 51	3 02	49	10 53		26	39		
4	240	52.5		01.9	38	41.4 ¹¹⁹		04.8 ⁴³	52	2 14	15	3 59	22 00	52	35	40		
5	255	52.5	+20	02.4	53	12.3 ¹¹⁹	-20	09.1 ⁴³	50	2 32	3 27	4 07	21 50	52	5 44	41		
6	270	52.5	+20	02.9	67	43.2 ¹¹⁹	-20	13.3 ⁴²	45	3 06	3 51	4 26	21 31	51	6 02	42		
7	285	52.4		03.4	82	14.1 ¹¹⁹		17.4 ⁴¹	40	31	4 09	40	15 51		17	43		
8	300	52.4		03.9	96	44.9 ¹¹⁸		21.4 ⁴⁰	35	3 50	24	4 53	21 02	50	30	44		
9	315	52.4		04.4	111	15.8 ¹¹⁹		25.3 ³⁹	30	4 05	37	5 04	20 50	50	6 41	45		
10	330	52.3		05.0	125	46.6 ¹¹⁸		29.1 ³⁸	20	30	4 58	22	30 50		7 00	46		
11	345	52.3	+20	05.5	140	17.4 ¹¹⁸	-20	32.8 ³⁷	10 N	4 49	5 16	5 38	20 13	49	7 16	48		
12	0	52.3	+20	06.0	154	48.2 ¹¹⁸	-20	36.4 ³⁶	0	5 05	5 31	5 53	19 57	48	7 32	48		
13	15	52.2		06.5	169	19.0 ¹¹⁸		40.0 ³⁶	10 S	20	5 45	6 08	41 48		7 47	50		
14	30	52.2		07.0	183	49.8 ¹¹⁸		43.4 ³⁴	20	33	6 00	23	23 48		8 04	50		
15	45	52.1		07.5	198	20.6 ¹¹⁸		46.7 ³³	30	46	15	41	19 04	47	23	51		
16	60	52.1		08.0	212	51.3 ¹¹⁷		49.9 ³²	35	5 53	24	6 51	18 52	47	34	52		
17	75	52.1	+20	08.5	227	22.1 ¹¹⁸	-20	53.0 ³¹	40	6 00	6 34	7 03	18 39	46	8 47	53		
18	90	52.0	+20	09.0	241	52.8 ¹¹⁷	-20	56.1 ³¹	45	6 08	6 44	7 17	18 24	45	9 02	54		
19	105	52.0		09.6	256	23.5 ¹¹⁷	-20	59.0 ²⁹	50	17	6 57	34	18 05	44	20	56		
20	120	51.9		10.1	270	54.2 ¹¹⁷	-21	01.8 ²⁸	52	21	7 03	42	17 56	43	29	56		
21	135	51.9		10.6	285	24.9 ¹¹⁷		04.6 ²⁸	54	25	10	7 50	46 43		39	57		
22	150	51.9		11.1	299	55.6 ¹¹⁷		07.2 ²⁶	56	30	17	8 00	34 43		9 50	58		
23	165	51.8		11.6	314	26.3 ¹¹⁷		09.7 ²⁵	58	35	24	11	21 42		10 03	59		
24	180	51.8	+20	12.1	328	56.9 ¹¹⁶	-21	12.2 ²⁵	60 S	6 40	7 33	8 25	17 06	40	10 18	60		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 8 ^h 06 ^m 9		Mag: -3.9 PMG: 11 ^h 33 ^m		Mag: +1.6 PMG: 12 ^h 46 ^m		Mag: -2.0 PMG: 11 ^h 21 ^m		Mag: +0.2 PMG: 11 ^h 25 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	237	57.3	186	55.2	+17	50.9	168	19.0	+22	41.0
1	252	59.7	201	54.5		51.7	183	19.6		41.2
2	268	02.2	216	53.9		52.6	198	20.3		41.5
3	283	04.6	231	53.3		53.4	213	20.9		41.8
4	298	07.1	246	52.6		54.3	228	21.5		42.0
5	313	09.6	261	52.0	+17	55.1	243	22.1	+22	42.3
6	328	12.0	276	51.3	+17	56.0	258	22.7	+22	42.5
7	343	14.5	291	50.7		56.8	273	23.3		42.8
8	358	17.0	306	50.0		57.7	288	23.9		43.0
9	13	19.4	321	49.4		58.5	303	24.6		43.3
10	28	21.9	336	48.8	+17	59.4	318	25.2		43.6
11	43	24.4	351	48.1	+18	00.2	333	25.8	+22	43.8
12	58	26.8	6	47.5	+18	01.0	348	26.4	+22	44.1
13	73	29.3	21	46.8		01.9	3	27.0		44.3
14	88	31.8	36	46.2		02.7	18	27.6		44.6
15	103	34.2	51	45.5		03.6	33	28.3		44.8
16	118	36.7	66	44.9		04.4	48	28.9		45.1
17	133	39.1	81	44.2	+18	05.3	63	29.5	+22	45.3
18	148	41.6	96	43.6	+18	06.1	78	30.1	+22	45.6
19	163	44.1	111	43.0		06.9	93	30.7		45.8
20	178	46.5	126	42.3		07.8	108	31.3		46.1
21	193	49.0	141	41.7		08.6	123	31.9		46.4
22	208	51.5	156	41.0		09.4	138	32.6		46.6
23	223	53.9	171	40.4		10.3	153	33.2		46.9
24	238	56.4	186	39.7	+18	11.1	168	33.8	+22	47.1
Dif	—		-6 +8		+6 +3		+19 +2		+21 +1	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8			Edad: 16 ^d 8 PHE { 4 ^h : 54 ^m 1 12 ^h : 54 ^m 1 20 ^h : 54 ^m 1											
	PMG: 11 ^h 56 ^m 6			SD: 14 ^h 8 PMG: 2 ^h 08 ^m Rº: 49 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	Rº	Hora	Rº
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	m	h m m	m
0	180	51.8	+20	12.1	328	56.9	-21	12.2	60 N	20 46	21 57	** **	23 46	42	5 23 46
1	195	51.7		12.6	343	27.6 ¹¹⁷		14.5	58	31	31	** **	29 44		39 46
2	210	51.7		13.1	357	58.2 ¹¹⁶		16.7	56	18	21 11	22 42	15 44		5 53 46
3	225	51.7		13.6	12	28.9 ¹¹⁷		18.9	54	20 07	20 55	22 08	23 03 44		6 05 47
4	240	51.6		14.1	26	59.5 ¹¹⁶		20.9	52	19 57	41	21 43	22 52 45		15 47
5	255	51.6	+20	14.6	41	30.2 ¹¹⁷	-21	22.8	50	19 48	20 29	21 25	22 42 46		6 25 47
6	270	51.5	+20	15.1	56	00.8 ¹¹⁶	-21	24.7	45	19 29	20 04	20 50	22 22 46		6 44 48
7	285	51.5		15.6	70	31.4 ¹¹⁶		26.4	40	14	19 45	24	22 06 47		7 00 48
8	300	51.5		16.1	85	02.0 ¹¹⁶		28.0	35	19 01	30	20 05	21 52 47		14 48
9	315	51.4		16.6	99	32.6 ¹¹⁶		29.6	30	18 50	19 17	19 49	40 47		26 48
10	330	51.4		17.1	114	03.2 ¹¹⁶		31.0	20	31	18 55	24	20 47		7 46 48
11	345	51.3	+20	17.6	128	33.9 ¹¹⁷	-21	32.3	10 N	18 15	18 38	19 04	21 02 48		8 04 48
12	0	51.3	+20	18.1	143	04.5 ¹¹⁶	-21	33.6	0	18 00	18 22	18 48	20 45 49		8 20 49
13	15	51.2		18.6	157	35.1 ¹¹⁶		34.7	10 S	17 45	18 08	33	29 48		37 48
14	30	51.2		19.1	172	05.7 ¹¹⁶		35.7	20	29	17 53	20	20 11 49		8 54 49
15	45	51.2		19.6	186	36.3 ¹¹⁶		36.7	30	11	37	18 06	19 51 49		9 14 49
16	60	51.1		20.1	201	06.9 ¹¹⁶		37.5	35	17 01	28	17 59	39 49		26 49
17	75	51.1	+20	20.6	215	37.4 ¹¹⁵	-21	38.2	40	16 49	17 18	17 52	19 25 50		9 40 49
18	90	51.0	+20	21.1	230	08.0 ¹¹⁶	-21	38.8	45	16 35	17 07	17 43	19 09 50		9 56 49
19	105	51.0		21.6	244	38.6 ¹¹⁶		39.4	50	18	16 54	34	18 49 50		10 16 49
20	120	50.9		22.1	259	09.2 ¹¹⁶		39.8	52	10	48	30	39 51		25 49
21	135	50.9		22.6	273	39.8 ¹¹⁶		40.1	54	16 01	42	26	29 51		36 49
22	150	50.8		23.1	288	10.5 ¹¹⁷		40.3	56	15 51	35	21	17 51		10 48 48
23	165	50.8		23.6	302	41.1 ¹¹⁶		40.4	58	39	27	16	18 03 51		11 02 48
24	180	50.8	+20	24.1	317	11.7 ¹¹⁶	-21	40.5	60 S	15 26	16 18	17 11	17 46 52		11 18 48

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 8 ^h 02 ^m 9		Mag: -3.9 PMG: 11 ^h 34 ^m		Mag: +1.6 PMG: 12 ^h 45 ^m		Mag: -2.0 PMG: 11 ^h 18 ^m		Mag: +0.2 PMG: 11 ^h 22 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	238	56.4	186	39.7	+18	11.1	168	33.8	+22	47.1
1	253	58.9	201	39.1		11.9	183	34.4		47.4
2	269	01.3	216	38.4		12.8	198	35.0		47.6
3	284	03.8	231	37.8		13.6	213	35.6		47.9
4	299	06.2	246	37.1		14.4	228	36.3		48.1
5	314	08.7	261	36.5	+18	15.3	243	36.9	+22	48.4
6	329	11.2	276	35.8	+18	16.1	258	37.5	+22	48.6
7	344	13.6	291	35.1		16.9	273	38.1		48.9
8	359	16.1	306	34.5		17.7	288	38.7		49.1
9	14	18.6	321	33.8		18.6	303	39.3		49.4
10	29	21.0	336	33.2		19.4	318	39.9		49.6
11	44	23.5	351	32.5	+18	20.2	333	40.6	+22	49.8
12	59	26.0	6	31.9	+18	21.0	348	41.2	+22	50.1
13	74	28.4	21	31.2		21.9	3	41.8		50.3
14	89	30.9	36	30.6		22.7	18	42.4		50.6
15	104	33.4	51	29.9		23.5	33	43.0		50.8
16	119	35.8	66	29.2		24.3	48	43.6		51.1
17	134	38.3	81	28.6	+18	25.1	63	44.3	+22	51.3
18	149	40.7	96	27.9	+18	26.0	78	44.9	+22	51.6
19	164	43.2	111	27.3		26.8	93	45.5		51.8
20	179	45.7	126	26.6		27.6	108	46.1		52.1
21	194	48.1	141	25.9		28.4	123	46.7		52.3
22	209	50.6	156	25.3		29.2	138	47.3		52.5
23	224	53.1	171	24.6		30.0	153	47.9		52.8
24	239	55.5	186	24.0	+18	30.8	168	48.6	+22	53.0

Dif	—	-7	+8	+6	+2	+19	+2	+21	+

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 7				Edad: 17 ^d 8 PHE { 4 ^h : 54 ^m 1 12 ^h : 54 ^m 1 20 ^h : 54 ^m 1 PMG: 2 ^h 57 ^m R°: 48 ^m											
	hG ☉	Dec			hG ☾	Dif	Dec Dif			Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m
0	180	50.8	+20	24.1	317	11.7	-21	40.5	60 N	** **	1 56	3 06	** **	**	6 09	57
1	195	50.7		24.5	331	42.3 ¹¹⁶		40.4	58	** **	2 22	22	** **	**	25	56
2	210	50.7		25.0	346	12.9 ¹¹⁶		40.2	56	1 11	42	35	23 59	36	39	56
3	225	50.6		25.5	0	43.5 ¹¹⁶		39.9	54	1 45	2 58	46	47 37		6 52	54
4	240	50.6		26.0	15	14.2 ¹¹⁷		39.5	52	2 09	3 12	3 56	37 38		7 02	54
5	255	50.5	+20	26.5	29	44.8 ¹¹⁶	-21	39.0	50	2 28	3 24	4 05	23 28 39		7 12	53
6	270	50.5	+20	27.0	44	15.4 ¹¹⁶	-21	38.4	45	3 03	3 49	4 24	23 08 41		7 32	53
7	285	50.4		27.5	58	46.1 ¹¹⁷		37.8	40	29	4 08	39	22 53 41		7 48	52
8	300	50.4		28.0	73	16.7 ¹¹⁶		37.0	35	3 48	23	4 52	39 43		8 02	51
9	315	50.3		28.4	87	47.4 ¹¹⁷		36.1	30	4 04	36	5 03	27 44		14	51
10	330	50.3		28.9	102	18.1 ¹¹⁷		35.1	20	29	4 58	22	22 07 46		34	50
11	345	50.2	+20	29.4	116	48.8 ¹¹⁷	-21	34.0	10 N	4 49	5 15	5 38	21 50 47		8 52	49
12	0	50.2	+20	29.9	131	19.5 ¹¹⁷	-21	32.8	0	5 05	5 31	5 53	21 34 48		9 09	48
13	15	50.1		30.4	145	50.2 ¹¹⁷		31.5	10 S	20	5 46	6 08	17 50		25	48
14	30	50.1		30.9	160	20.9 ¹¹⁷		30.1	20	34	6 01	24	21 00 50		9 43	47
15	45	50.0		31.3	174	51.6 ¹¹⁷		28.7	30	47	16	42	20 40 52		10 03	46
16	60	50.0		31.8	189	22.3 ¹¹⁷		27.1	35	5 54	25	6 53	28 53		15	45
17	75	49.9	+20	32.3	203	53.1 ¹¹⁸	-21	25.4	40	6 02	6 35	7 05	20 15 53		10 29	44
18	90	49.9	+20	32.8	218	23.8 ¹¹⁷	-21	23.6	45	6 10	6 46	7 19	19 59 55		10 45	43
19	105	49.8		33.3	232	54.6 ¹¹⁸		21.7	50	19	7 00	36	39 57		11 05	42
20	120	49.8		33.8	247	25.4 ¹¹⁸		19.7	52	23	06	44	30 57		14	41
21	135	49.7		34.2	261	56.2 ¹¹⁸		17.6	54	28	12	7 53	20 58		25	40
22	150	49.7		34.7	276	27.0 ¹¹⁸		15.5	56	33	19	8 03	19 08 59		36	40
23	165	49.6		35.2	290	57.8 ¹¹⁸		13.2	58	38	28	15	18 54 60		11 50	39
24	180	49.6	+20	35.7	305	28.6 ¹¹⁸	-21	10.8	60 S	6 43	7 37	8 29	18 38 62		12 06	38

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 7 ^h 59 ^m 0		Mag: -3.9 PMG: 11 ^h 35 ^m		Mag: +1.6 PMG: 12 ^h 44 ^m		Mag: -2.0 PMG: 11 ^h 15 ^m		Mag: +0.2 PMG: 11 ^h 19 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	239	55.5	186	24.0	+18	30.8	168	48.6	+22	53.0	190	57.9	+17	13.6	189	55.9	+16	18.5
1	254	58.0	201	23.3		31.7	183	49.2		53.3	205	59.8		13.8	204	58.1		18.5
2	270	00.5	216	22.6		32.5	198	49.8		53.5	221	01.6		13.9	220	00.2		18.6
3	285	02.9	231	22.0		33.3	213	50.4		53.8	236	03.5		14.1	235	02.3		18.7
4	300	05.4	246	21.3		34.1	228	51.0		54.0	251	05.4		14.2	250	04.5		18.8
5	315	07.9	261	20.7	+18	34.9	243	51.6	+22	54.2	266	07.3	+17	14.4	265	06.6	+16	18.9
6	330	10.3	276	20.0	+18	35.7	258	52.2	+22	54.5	281	09.1	+17	14.5	280	08.8	+16	19.0
7	345	12.8	291	19.3		36.5	273	52.9		54.7	296	11.0		14.7	295	10.9		19.0
8	0	15.2	306	18.7		37.3	288	53.5		55.0	311	12.9		14.9	310	13.1		19.1
9	15	17.7	321	18.0		38.1	303	54.1		55.2	326	14.7		15.0	325	15.2		19.2
10	30	20.2	336	17.3		38.9	318	54.7		55.4	341	16.6		15.2	340	17.3		19.3
11	45	22.6	351	16.7	+18	39.7	333	55.3	+22	55.7	356	18.5	+17	15.3	355	19.5	+16	19.4
12	60	25.1	6	16.0	+18	40.5	348	55.9	+22	55.9	11	20.3	+17	15.5	10	21.6	+16	19.5
13	75	27.6	21	15.3		41.3	3	56.5		56.1	26	22.2		15.6	25	23.8		19.5
14	90	30.0	36	14.7		42.1	18	57.2		56.4	41	24.1		15.8	40	25.9		19.6
15	105	32.5	51	14.0		42.9	33	57.8		56.6	56	25.9		15.9	55	28.1		19.7
16	120	35.0	66	13.3		43.7	48	58.4		56.9	71	27.8		16.1	70	30.2		19.8
17	135	37.4	81	12.6	+18	44.5	63	59.0	+22	57.1	86	29.7	+17	16.2	85	32.3	+16	19.9
18	150	39.9	96	12.0	+18	45.3	78	59.6	+22	57.3	101	31.6	+17	16.4	100	34.5	+16	19.9
19	165	42.4	111	11.3		46.1	94	00.2		57.6	116	33.4		16.6	115	36.6		20.0
20	180	44.8	126	10.6		46.9	109	00.8		57.8	131	35.3		16.7	130	38.8		20.1
21	195	47.3	141	10.0		47.7	124	01.5		58.0	146	37.2		16.9	145	40.9		20.2
22	210	49.7	156	09.3		48.5	139	02.1		58.3	161	39.0		17.0	160	43.1		20.3
23	225	52.2	171	08.6		49.3	154	02.7		58.5	176	40.9		17.2	175	45.2		20.3
24	240	54.7	186	07.9	+18	50.1	169	03.3	+22	58.7	191	42.8	+17	17.3	190	47.4	+16	20.4
Dif	—		-7	+8		+8	+6	+2		+2	+19	+2		+2	+21		+1	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 18 ^d 8	PHE {	4 ^h : 54 ^h /2 12 ^h : 54 ^h /2 20 ^h : 54 ^h /3									
	PMG: 11 ^h 56 ^m 7								SD: 14 ^h 7			PMG: 3 ^h 45 ^m			R°: 48 ^m
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m		h m m	
0	180	49.6	+20 35.7	305	28.6	-21 10.8	25	60 N	20 51	22 04	** **	0 28 32		7 06 66	
1	195	49.5		319	59.5 ¹¹⁹	08.3	25	58	35	21 36	** **	0 13 34		21 65	
2	210	49.5		334	30.3 ¹¹⁸	05.7	26	56	21	21 15	22 52	** ** *		35 62	
3	225	49.4		349	01.2 ¹¹⁹	03.1	26	54	20 10	20 58	22 14	** ** *		46 61	
4	240	49.4		3	32.1 ¹¹⁹	-21 00.3	28	52	19 59	44	21 48	** ** *		7 56 60	
5	255	49.3	+20 38.0	18	03.0 ¹¹⁹	-20 57.4	29	50	19 50	20 32	21 28	** ** *		8 05 59	
6	270	49.3	+20 38.5	32	33.9 ¹¹⁹	-20 54.5	29	45	19 31	20 07	20 52	23 49 35		8 25 56	
7	285	49.2		47	04.9 ¹²⁰	51.4	31	40	16	19 47	27	34 38		40 55	
8	300	49.2		61	35.8 ¹¹⁹	48.3	31	35	19 03	32	20 07	22 39		8 53 54	
9	315	49.1		76	06.8 ¹²⁰	45.0	33	30	18 52	19 18	19 50	23 11 41		9 05 52	
10	330	49.1		90	37.8 ¹²⁰	41.6	34	20	32	18 56	25	22 53 43		24 51	
11	345	49.0	+20 40.9	105	08.8 ¹²⁰	-20 38.2	34	10 N	18 16	18 38	19 05	22 37 45		9 41 49	
12	0	48.9	+20 41.3	119	39.8 ¹²⁰	-20 34.7	35	0	18 00	18 22	18 48	22 22 47		9 57 48	
13	15	48.9		134	10.9 ¹²¹	31.0	37	10 S	17 45	18 07	33	22 07 49		10 13 46	
14	30	48.8		148	41.9 ¹²⁰	27.3	37	20	29	17 52	19	21 50 51		30 44	
15	45	48.8		163	13.0 ¹²¹	23.5	38	30	10	36	18 06	32 53		10 49 42	
16	60	48.7		177	44.1 ¹²¹	19.6	39	35	17 00	27	17 58	21 55		11 00 41	
17	75	48.7	+20 43.7	192	15.3 ¹²²	-20 15.5	41	40	16 48	17 17	17 50	21 08 57		11 13 40	
18	90	48.6	+20 44.1	206	46.4 ¹²¹	-20 11.4	41	45	16 33	17 06	17 42	20 54 58		11 28 38	
19	105	48.6		221	17.6 ¹²²	07.2	42	50	16	16 52	33	36 61		47 35	
20	120	48.5		235	48.7 ¹²¹	-20 02.9	43	52	16 07	46	28	27 62		11 55 35	
21	135	48.4		250	19.9 ¹²²	-19 58.6	43	54	15 58	40	24	18 63		12 05 33	
22	150	48.4		264	51.2 ¹²³	54.1	45	56	48	32	19	20 07 65		16 32	
23	165	48.3		279	22.4 ¹²²	49.5	46	58	36	24	14	19 54 68		29 30	
24	180	48.3	+20 46.9	293	53.7 ¹²³	-19 44.9	46	60 S	15 22	16 14	17 08	19 40 70		12 44 27	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 7 ^h 55 ^m 1		Mag: -3.9 PMG: 11 ^h 36 ^m		Mag: +1.6 PMG: 12 ^h 43 ^m		Mag: -2.0 PMG: 11 ^h 12 ^m		Mag: +0.2 PMG: 11 ^h 15 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	240	54.7	186 07.9	+18 50.1	169 03.3	+22 58.7	191 42.8	+17 17.3	190 47.4	+16 20.4
1	255	57.1	201 07.3	50.9	184 03.9	59.0	206 44.6	17.5	205 49.5	20.5
2	270	59.6	216 06.6	51.7	199 04.5	59.2	221 46.5	17.6	220 51.6	20.6
3	286	02.1	231 05.9	52.5	214 05.1	59.4	236 48.4	17.8	235 53.8	20.7
4	301	04.5	246 05.2	53.3	229 05.8	59.7	251 50.2	17.9	250 55.9	20.8
5	316	07.0	261 04.6	+18 54.1	244 06.4	+22 59.9	266 52.1	+17 18.1	265 58.1	+16 20.8
6	331	09.5	276 03.9	+18 54.8	259 07.0	+23 00.1	281 54.0	+17 18.3	281 00.2	+16 20.9
7	346	11.9	291 03.2	55.6	274 07.6	00.4	296 55.9	18.4	296 02.4	21.0
8	1	14.4	306 02.5	56.4	289 08.2	00.6	311 57.7	18.6	311 04.5	21.1
9	16	16.9	321 01.9	57.2	304 08.8	00.8	326 59.6	18.7	326 06.6	21.2
10	31	19.3	336 01.2	58.0	319 09.4	01.1	342 01.5	18.9	341 08.8	21.2
11	46	21.8	351 00.5	+18 58.8	334 10.0	+23 01.3	357 03.3	+17 19.0	356 10.9	+16 21.3
12	61	24.2	5 59.8	+18 59.6	349 10.7	+23 01.5	12 05.2	+17 19.2	11 13.1	+16 21.4
13	76	26.7	20 59.1	+19 00.3	4 11.3	01.7	27 07.1	19.3	26 15.2	21.5
14	91	29.2	35 58.5	01.1	19 11.9	02.0	42 08.9	19.5	41 17.4	21.6
15	106	31.6	50 57.8	01.9	34 12.5	02.2	57 10.8	19.6	56 19.5	21.7
16	121	34.1	65 57.1	02.7	49 13.1	02.4	72 12.7	19.8	71 21.6	21.7
17	136	36.6	80 56.4	+19 03.5	64 13.7	+23 02.7	87 14.6	+17 20.0	86 23.8	+16 21.8
18	151	39.0	95 55.7	+19 04.2	79 14.3	+23 02.9	102 16.4	+17 20.1	101 25.9	+16 21.9
19	166	41.5	110 55.1	05.0	94 15.0	03.1	117 18.3	20.3	116 28.1	22.0
20	181	44.0	125 54.4	05.8	109 15.6	03.3	132 20.2	20.4	131 30.2	22.1
21	196	46.4	140 53.7	06.6	124 16.2	03.6	147 22.0	20.6	146 32.4	22.1
22	211	48.9	155 53.0	07.3	139 16.8	03.8	162 23.9	20.7	161 34.5	22.2
23	226	51.3	170 52.3	08.1	154 17.4	04.0	177 25.8	20.9	176 36.7	22.3
24	241	53.8	185 51.6	+19 08.9	169 18.0	+23 04.2	192 27.6	+17 21.0	191 38.8	+16 22.4
Dif	—		-7 +8		+6 +2		+19 +2		+21 +1	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15'8 PMG: 11 ^h 56 ^m 8			Edad: 19 ^d 8 PHE { 4 ^h : 54'4 12 ^h : 54'5 20 ^h : 54'6 PMG: 4 ^h 33 ^m R°: 47 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora
h	°	'	°	'	°	'	°	h	m	h	m	h	m	m
0	180	48.3	+20	46.9	293	53.7	-19 44.9	60 N	** **	1 50	3 03	1 00	24	8 12 73
1	195	48.2		47.4	308	24.9 ¹²²	40.1 48	58	** **	2 17	18	0 47	26	26 70
2	210	48.2		47.8	322	56.2 ¹²³	35.3 48	56	1 01	38	32	35	28	37 68
3	225	48.1		48.3	337	27.6 ¹²⁴	30.3 50	54	1 40	2 55	43	24	30	47 66
4	240	48.0		48.8	351	58.9 ¹²³	25.3 50	52	2 05	3 09	3 54	15	31	8 56 64
5	255	48.0	+20	49.2	6	30.3 ¹²⁴	-19 20.2 51	50	2 25	3 22	4 03	0 07	32	9 04 63
6	270	47.9	+20	49.7	21	01.6 ¹²³	-19 15.0 52	45	3 01	3 47	4 22	** **	**	9 21 60
7	285	47.9		50.1	35	33.0 ¹²⁴	09.7 53	40	27	4 06	37	** **	**	35 58
8	300	47.8		50.6	50	04.5 ¹²⁵	-19 04.3 54	35	3 47	22	4 51	** **	**	47 56
9	315	47.8		51.1	64	35.9 ¹²⁴	-18 58.8 55	30	4 03	35	5 02	23 52	38	9 57 54
10	330	47.7		51.5	79	07.4 ¹²⁵	53.3 55	20	29	4 57	21	36	41	10 15 51
11	345	47.6	+20	52.0	93	38.9 ¹²⁵	-18 47.6 57	10 N	4 49	5 15	5 38	23 22	44	10 30 49
12	0	47.6	+20	52.4	108	10.4 ¹²⁵	-18 41.9 57	0	5 05	5 31	5 53	23 09	46	10 45 46
13	15	47.5		52.9	122	41.9 ¹²⁵	36.1 58	10 S	20	5 46	6 09	22 56	48	10 59 44
14	30	47.5		53.3	137	13.5 ¹²⁶	30.2 59	20	34	6 01	25	41	52	11 14 42
15	45	47.4		53.8	151	45.0 ¹²⁵	24.2 60	30	48	18	43	25	55	31 39
16	60	47.3		54.2	166	16.6 ¹²⁶	18.1 61	35	5 56	27	6 54	16	56	41 38
17	75	47.3	+20	54.7	180	48.2 ¹²⁶	-18 11.9 62	40	6 03	6 37	7 06	22 05	59	11 53 35
18	90	47.2	+20	55.1	195	19.9 ¹²⁷	-18 05.7 62	45	6 12	6 48	7 21	21 52	61	12 06 33
19	105	47.2		55.6	209	51.5 ¹²⁶	-17 59.3 64	50	21	7 02	39	37	64	22 31
20	120	47.1		56.0	224	23.2 ¹²⁷	52.9 64	52	26	08	47	29	66	30 29
21	135	47.0		56.5	238	54.9 ¹²⁷	46.4 65	54	30	15	7 56	21	68	38 28
22	150	47.0		56.9	253	26.6 ¹²⁷	39.8 66	56	35	22	8 07	12	70	48 25
23	165	46.9		57.4	267	58.4 ¹²⁸	33.2 66	58	40	31	19	21 02	72	12 59 23
24	180	46.8	+20	57.8	282	30.1 ¹²⁷	-17 26.4 68	60 S	6 46	7 40	8 33	20 50	75	13 11 21

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 7 ^h 51 ^m 1		Mag: -3.9 PMG: 11 ^h 37 ^m		Mag: +1.6 PMG: 12 ^h 42 ^m		Mag: -2.0 PMG: 11 ^h 09 ^m		Mag: +0.2 PMG: 11 ^h 12 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	241	53.8	185	51.6	+19 08.9	169	18.0	+23 04.2	192	27.6	+17 21.0	191	38.8	+16 22.4
1	256	56.3	200	50.9	09.6	184	18.6	04.5	207	29.5	21.2	206	40.9	22.5
2	271	58.7	215	50.3	10.4	199	19.2	04.7	222	31.4	21.3	221	43.1	22.5
3	287	01.2	230	49.6	11.2	214	19.9	04.9	237	33.3	21.5	236	45.2	22.6
4	302	03.7	245	48.9	12.0	229	20.5	05.1	252	35.1	21.6	251	47.4	22.7
5	317	06.1	260	48.2	+19 12.7	244	21.1	+23 05.4	267	37.0	+17 21.8	266	49.5	+16 22.8
6	332	08.6	275	47.5	+19 13.5	259	21.7	+23 05.6	282	38.9	+17 22.0	281	51.7	+16 22.9
7	347	11.1	290	46.8	14.3	274	22.3	05.8	297	40.7	22.1	296	53.8	23.0
8	2	13.5	305	46.1	15.0	289	22.9	06.0	312	42.6	22.3	311	55.9	23.0
9	17	16.0	320	45.4	15.8	304	23.5	06.3	327	44.5	22.4	326	58.1	23.1
10	32	18.5	335	44.8	16.5	319	24.2	06.5	342	46.3	22.6	342	00.2	23.2
11	47	20.9	350	44.1	+19 17.3	334	24.8	+23 06.7	357	48.2	+17 22.7	357	02.4	+16 23.3
12	62	23.4	5	43.4	+19 18.1	349	25.4	+23 06.9	12	50.1	+17 22.9	12	04.5	+16 23.4
13	77	25.8	20	42.7	18.8	4	26.0	07.1	27	52.0	23.0	27	06.7	23.4
14	92	28.3	35	42.0	19.6	19	26.6	07.4	42	53.8	23.2	42	08.8	23.5
15	107	30.8	50	41.3	20.3	34	27.2	07.6	57	55.7	23.3	57	11.0	23.6
16	122	33.2	65	40.6	21.1	49	27.8	07.8	72	57.6	23.5	72	13.1	23.7
17	137	35.7	80	39.9	+19 21.9	64	28.4	+23 08.0	87	59.4	+17 23.6	87	15.2	+16 23.8
18	152	38.2	95	39.2	+19 22.6	79	29.1	+23 08.2	103	01.3	+17 23.8	102	17.4	+16 23.8
19	167	40.6	110	38.5	23.4	94	29.7	08.5	118	03.2	23.9	117	19.5	23.9
20	182	43.1	125	37.8	24.1	109	30.3	08.7	133	05.0	24.1	132	21.7	24.0
21	197	45.6	140	37.1	24.9	124	30.9	08.9	148	06.9	24.2	147	23.8	24.1
22	212	48.0	155	36.4	25.6	139	31.5	09.1	163	08.8	24.4	162	26.0	24.2
23	227	50.5	170	35.7	26.4	154	32.1	09.3	178	10.7	24.6	177	28.1	24.2
24	242	53.0	185	35.0	+19 27.1	169	32.7	+23 09.5	193	12.5	+17 24.7	192	30.2	+16 24.3
Dif	—		-7	+8		+6	+2		+19	+2		+21	+1	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 9			Edad: 20 ^d 8 PHE { 4 ^h : 54 ^m 7 12 ^h : 54 ^m 9 20 ^h : 55 ^m 1 PMG: 5 ^h 20 ^m R°: 46 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	h m	h m	h m
0	180	46.8	+20 57.8	282	30.1	-17 26.4	68	60 N	20 55	22 10	** **	1 24 18		9 25 76	
1	195	46.8	58.3	297	01.9 ¹²⁸	19.6	68	58	38	21 41	** **	13 21		36 73	
2	210	46.7	58.7	311	33.7 ¹²⁸	12.6	70	56	25	19	23 02	1 03 23		45 71	
3	225	46.7	59.2	326	05.5 ¹²⁸	-17 05.6	70	54	13	21 02	22 20	0 54 25		9 53 69	
4	240	46.6	+20 59.6	340	37.3 ¹²⁸	-16 58.6	70	52	20 02	20 47	21 53	46 27		10 00 68	
5	255	46.5	+21 00.1	355	09.2 ¹²⁹	-16 51.4	72	50	19 53	20 35	21 32	0 39 29		10 07 66	
6	270	46.5	+21 00.5	9	41.1 ¹²⁹	-16 44.2	72	45	19 33	20 09	20 55	0 24 32		10 21 62	
7	285	46.4	00.9	24	13.0 ¹²⁹	36.8	74	40	18	19 49	29	12 34		33 59	
8	300	46.3	01.4	38	44.9 ¹²⁹	29.4	74	35	19 04	33	20 08	0 01 36		43 57	
9	315	46.3	01.8	53	16.8 ¹²⁹	22.0	74	30	18 53	19 19	19 52	** ** *		10 51 56	
10	330	46.2	02.3	67	48.8 ¹³⁰	14.4	76	20	33	18 57	26	** ** *		11 06 52	
11	345	46.1	+21 02.7	82	20.7 ¹²⁹	-16 06.8	76	10 N	18 16	18 39	19 05	** ** *		11 19 49	
12	0	46.1	+21 03.1	96	52.7 ¹³⁰	-15 59.1	77	0	18 01	18 23	18 48	23 55 46		11 31 46	
13	15	46.0	03.6	111	24.7 ¹³⁰	51.3	78	10 S	17 45	18 07	33	44 49		43 43	
14	30	45.9	04.0	125	56.7 ¹³⁰	43.4	79	20	29	17 52	19	33 52		11 56 40	
15	45	45.9	04.5	140	28.8 ¹³¹	35.5	79	30	17 10	36	18 05	20 56		12 10 37	
16	60	45.8	04.9	155	00.8 ¹³⁰	27.4	81	35	16 59	26	17 57	12 58		19 35	
17	75	45.8	+21 05.3	169	32.9 ¹³¹	-15 19.3	81	40	16 46	17 16	17 49	23 04 60		12 28 33	
18	90	45.7	+21 05.8	184	05.0 ¹³¹	-15 11.2	81	45	16 32	17 04	17 41	22 53 64		12 39 30	
19	105	45.6	06.2	198	37.1 ¹³¹	-15 02.9	83	50	14	16 51	31	41 67		53 26	
20	120	45.6	06.6	213	09.2 ¹³¹	-14 54.6	83	52	16 05	44	27	35 69		12 59 25	
21	135	45.5	07.1	227	41.3 ¹³¹	46.2	84	54	15 56	37	22	29 70		13 06 23	
22	150	45.4	07.5	242	13.5 ¹³²	37.8	84	56	45	30	17	22 73		13 21	
23	165	45.3	07.9	256	45.6 ¹³¹	29.2	86	58	33	21	12	14 75		22 19	
24	180	45.3	+21 08.4	271	17.8 ¹³²	-14 20.6	86	60 S	15 19	16 12	17 06	22 05 78		13 32 16	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 7 ^h 47 ^m 2		Mag: -3.9 PMG: 11 ^h 38 ^m			Mag: +1.6 PMG: 12 ^h 41 ^m			Mag: -2.0 PMG: 11 ^h 06 ^m			Mag: +0.2 PMG: 11 ^h 08 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	242	53.0	185 35.0	+19 27.1	169 32.7	+23 09.5	193 12.5	+17 24.7	192 30.2	+16 24.3					
1	257	55.4	200 34.4	27.9	184 33.3	09.8	208 14.4	24.9	207 32.4	24.4					
2	272	57.9	215 33.7	28.6	199 34.0	10.0	223 16.3	25.0	222 34.5	24.5					
3	288	00.3	230 33.0	29.4	214 34.6	10.2	238 18.1	25.2	237 36.7	24.6					
4	303	02.8	245 32.3	30.1	229 35.2	10.4	253 20.0	25.3	252 38.8	24.6					
5	318	05.3	260 31.6	+19 30.9	244 35.8	+23 10.6	268 21.9	+17 25.5	267 41.0	+16 24.7					
6	333	07.7	275 30.9	+19 31.6	259 36.4	+23 10.8	283 23.7	+17 25.6	282 43.1	+16 24.8					
7	348	10.2	290 30.2	32.4	274 37.0	11.0	298 25.6	25.8	297 45.3	24.9					
8	3	12.7	305 29.5	33.1	289 37.6	11.3	313 27.5	25.9	312 47.4	25.0					
9	18	15.1	320 28.8	33.8	304 38.2	11.5	328 29.4	26.1	327 49.5	25.1					
10	33	17.6	335 28.1	34.6	319 38.9	11.7	343 31.2	26.2	342 51.7	25.1					
11	48	20.1	350 27.4	+19 35.3	334 39.5	+23 11.9	358 33.1	+17 26.4	357 53.8	+16 25.2					
12	63	22.5	5 26.6	+19 36.1	349 40.1	+23 12.1	13 35.0	+17 26.5	12 56.0	+16 25.3					
13	78	25.0	20 25.9	36.8	4 40.7	12.3	28 36.8	26.7	27 58.1	25.4					
14	93	27.4	35 25.2	37.5	19 41.3	12.5	43 38.7	26.8	43 00.3	25.5					
15	108	29.9	50 24.5	38.3	34 41.9	12.7	58 40.6	27.0	58 02.4	25.5					
16	123	32.4	65 23.8	39.0	49 42.5	12.9	73 42.4	27.1	73 04.6	25.6					
17	138	34.8	80 23.1	+19 39.8	64 43.1	+23 13.2	88 44.3	+17 27.3	88 06.7	+16 25.7					
18	153	37.3	95 22.4	+19 40.5	79 43.8	+23 13.4	103 46.2	+17 27.4	103 08.8	+16 25.8					
19	168	39.8	110 21.7	41.2	94 44.4	13.6	118 48.1	27.6	118 11.0	25.9					
20	183	42.2	125 21.0	42.0	109 45.0	13.8	133 49.9	27.7	133 13.1	25.9					
21	198	44.7	140 20.3	42.7	124 45.6	14.0	148 51.8	27.9	148 15.3	26.0					
22	213	47.2	155 19.6	43.4	139 46.2	14.2	163 53.7	28.1	163 17.4	26.1					
23	228	49.6	170 18.9	44.1	154 46.8	14.4	178 55.5	28.2	178 19.6	26.2					
24	243	52.1	185 18.2	+19 44.9	169 47.4	+23 14.6	193 57.4	+17 28.4	193 21.7	+16 26.3					
Dif	—		-7 +7		+6 +2		+19 +2		+21 +1						

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 0			Edad: 21 ^d 8 PHE { SD: 15 ^h 0 PMG: 6 ^h 06 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	h	m	h	m	h	m	m	
0	180	45.3	+21 08.4	271	17.8	-14 20.6	60 N	** **	1 43	2 59	1 42	15	10 41	80	
1	195	45.2	08.8	285	50.0 ¹³²	11.9 87	58	** **	2 12	3 15	34 17		49 77		
2	210	45.1	09.2	300	22.2 ¹³²	-14 03.2 87	56	0 51	34	29	26 20		10 56	74	
3	225	45.1	09.7	314	54.4 ¹³²	-13 54.4 88	54	1 34	2 52	41	19 22		11 02	72	
4	240	45.0	10.1	329	26.6 ¹³²	45.5 89	52	2 01	3 06	3 51	13 24		08 69		
5	255	44.9	+21 10.5	343	58.8 ¹³²	-13 36.5 90	50	2 21	3 19	4 01	1 08 25		11 13	68	
6	270	44.9	+21 10.9	358	31.1 ¹³³	-13 27.5 90	45	2 59	3 45	4 20	0 56 28		11 23	65	
7	285	44.8	11.4	13	03.3 ¹³²	18.4 91	40	3 25	4 05	36	46 31		32 61		
8	300	44.7	11.8	27	35.6 ¹³³	-13 09.2 92	35	3 45	21	4 50	37 34		40 58		
9	315	44.7	12.2	42	07.8 ¹³²	-13 00.0 92	30	4 02	34	5 01	30 36		47 56		
10	330	44.6	12.7	56	40.1 ¹³³	-12 50.7 93	20	28	4 57	21	17 40		11 58	52	
11	345	44.5	+21 13.1	71	12.4 ¹³³	-12 41.4 93	10 N	4 48	5 15	5 38	0 06 43		12 08	49	
12	0	44.5	+21 13.5	85	44.7 ¹³³	-12 31.9 95	0	5 05	5 31	5 53	** ** *		12 17	46	
13	15	44.4	13.9	100	17.0 ¹³³	22.4 95	10 S	21	5 47	6 09	** ** *		26 43		
14	30	44.3	14.4	114	49.3 ¹³³	12.9 95	20	35	6 02	26	** ** *		36 39		
15	45	44.2	14.8	129	21.6 ¹³³	-12 03.2 97	30	49	19	45	** ** *		47 35		
16	60	44.2	15.2	143	54.0 ¹³⁴	-11 53.5 97	35	5 57	28	6 55	** ** *		12 54	33	
17	75	44.1	+21 15.6	158	26.3 ¹³³	-11 43.8 97	40	6 05	6 38	7 08	** ** *		13 01	30	
18	90	44.0	+21 16.0	172	58.6 ¹³³	-11 34.0 98	45	6 14	6 50	7 23	23 57 65		13 09	28	
19	105	44.0	16.5	187	30.9 ¹³³	24.1 99	50	23	7 04	41	48 69		19 24		
20	120	43.9	16.9	202	03.3 ¹³⁴	14.2 99	52	28	10	49	44 71		24 22		
21	135	43.8	17.3	216	35.6 ¹³³	-11 04.2 ¹⁰⁰	54	32	17	7 59	39 73		29 20		
22	150	43.7	17.7	231	08.0 ¹³⁴	-10 54.1 ¹⁰¹	56	38	25	8 10	35 75		34 19		
23	165	43.7	18.1	245	40.3 ¹³³	44.0 ¹⁰¹	58	43	34	22	29 78		41 16		
24	180	43.6	+21 18.5	260	12.7 ¹³⁴	-10 33.8 ¹⁰²	60 S	6 49	7 43	8 36	23 23 80		13 48	13	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG 7 ^h 43 ^m 3			Mag: -3.9 PMG: 11 ^h 39 ^m			Mag: +1.6 PMG: 12 ^h 40 ^m			Mag: -2.0 PMG: 11 ^h 03 ^m			Mag: +0.2 PMG: 11 ^h 05 ^m		
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	243	52.1	185 18.2	+19 44.9	169 47.4	+23 14.6	193 57.4	+17 28.4	193 57.4	+17 28.4	193 57.4	+16 26.3	193 57.4	+16 26.3	193 57.4
1	258	54.6	200 17.5	45.6	184 48.0	14.8	208 59.3	28.5	208 59.3	28.5	208 59.3	26.3	208 59.3	26.3	208 59.3
2	273	57.0	215 16.8	46.3	199 48.7	15.0	224 01.2	28.7	224 01.2	28.7	224 01.2	26.4	224 01.2	26.4	224 01.2
3	288	59.5	230 16.1	47.1	214 49.3	15.2	239 03.0	28.8	239 03.0	28.8	238 28.1	26.5	238 28.1	26.5	238 28.1
4	304	01.9	245 15.3	47.8	229 49.9	15.4	254 04.9	29.0	254 04.9	29.0	253 30.3	26.6	253 30.3	26.6	253 30.3
5	319	04.4	260 14.6	+19 48.5	244 50.5	+23 15.7	269 06.8	+17 29.1	269 06.8	+17 29.1	268 32.4	26.7	268 32.4	26.7	268 32.4
6	334	06.9	275 13.9	+19 49.2	259 51.1	+23 15.9	284 08.6	+17 29.3	284 08.6	+17 29.3	283 34.6	26.7	283 34.6	26.7	283 34.6
7	349	09.3	290 13.2	49.9	274 51.7	16.1	299 10.5	29.4	299 10.5	29.4	298 36.7	26.8	298 36.7	26.8	298 36.7
8	4	11.8	305 12.5	50.7	289 52.3	16.3	314 12.4	29.6	314 12.4	29.6	313 38.9	26.9	313 38.9	26.9	313 38.9
9	19	14.3	320 11.8	51.4	304 52.9	16.5	329 14.2	29.7	329 14.2	29.7	328 41.0	27.0	328 41.0	27.0	328 41.0
10	34	16.7	335 11.1	52.1	319 53.6	16.7	344 16.1	29.9	344 16.1	29.9	343 43.2	27.1	343 43.2	27.1	343 43.2
11	49	19.2	350 10.4	+19 52.8	334 54.2	+23 16.9	359 18.0	+17 30.0	359 18.0	+17 30.0	358 45.3	27.1	358 45.3	27.1	358 45.3
12	64	21.7	5 09.6	+19 53.5	349 54.8	+23 17.1	14 19.9	+17 30.2	14 19.9	+17 30.2	13 47.4	27.2	13 47.4	27.2	13 47.4
13	79	24.1	20 08.9	54.3	4 55.4	17.3	29 21.7	30.3	29 21.7	30.3	28 49.6	27.3	28 49.6	27.3	28 49.6
14	94	26.6	35 08.2	55.0	19 56.0	17.5	44 23.6	30.5	44 23.6	30.5	43 51.7	27.4	43 51.7	27.4	43 51.7
15	109	29.1	50 07.5	55.7	34 56.6	17.7	59 25.5	30.6	59 25.5	30.6	58 53.9	27.5	58 53.9	27.5	58 53.9
16	124	31.5	65 06.8	56.4	49 57.2	17.9	74 27.3	30.8	74 27.3	30.8	73 56.0	27.5	73 56.0	27.5	73 56.0
17	139	34.0	80 06.1	+19 57.1	64 57.8	+23 18.1	89 29.2	+17 30.9	89 29.2	+17 30.9	88 58.2	27.6	88 58.2	27.6	88 58.2
18	154	36.4	95 05.4	+19 57.8	79 58.4	+23 18.3	104 31.1	+17 31.1	104 31.1	+17 31.1	104 00.3	27.7	104 00.3	27.7	104 00.3
19	169	38.9	110 04.6	58.5	94 59.1	18.5	119 33.0	31.2	119 33.0	31.2	119 02.5	27.8	119 02.5	27.8	119 02.5
20	184	41.4	125 03.9	+19 59.3	109 59.7	18.7	134 34.8	31.4	134 34.8	31.4	134 04.6	27.9	134 04.6	27.9	134 04.6
21	199	43.8	140 03.2	+20 00.0	125 00.3	18.9	149 36.7	31.5	149 36.7	31.5	149 06.7	27.9	149 06.7	27.9	149 06.7
22	214	46.3	155 02.5	+20 00.7	140 00.9	19.1	164 38.6	31.7	164 38.6	31.7	164 08.9	28.0	164 08.9	28.0	164 08.9
23	229	48.8	170 01.8	01.4	155 01.5	19.3	179 40.4	31.8	179 40.4	31.8	179 11.0	28.1	179 11.0	28.1	179 11.0
24	244	51.2	185 01.0	+20 02.1	170 02.1	+23 19.5	194 42.3	+17 32.0	194 42.3	+17 32.0	194 13.2	28.2	194 13.2	28.2	194 13.2
Dif	—			-7	+7	+6	+2	+19	+2	+2	+21	+1	+21	+1	+21

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 15°8 PMG: 11 ^h 57 ^m 2				Edad: 22 ^d 8 PHE { 4 ^h : 55/9 12 ^h : 56/2 20 ^h : 56/5 SD: 15/2 PMG: 6 ^h 52 ^m R°: 46 ^m													
	hG ☉		Dec		hG ☾		Dif							Hora R°		Hora R°		
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m		
0	180	43.6	+21	18.5	260	12.7	-10	33.8	60 N	20 59	22 17	** **	1 57 12	12 01 81				
1	195	43.5		19.0	274	45.0 ¹³³		23.6 ¹⁰²	58	42	21 46	** **	51 15	06 78				
2	210	43.5		19.4	289	17.4 ¹³⁴		13.3 ¹⁰³	56	28	24	23 14	46 17	10 76				
3	225	43.4		19.8	303	49.7 ¹³³	-10	02.9 ¹⁰⁴	54	15	21 05	22 26	41 19	14 74				
4	240	43.3		20.2	318	22.1 ¹³⁴	-9	52.5 ¹⁰⁴	52	20 05	20 50	21 57	37 21	17 72				
5	255	43.2	+21	20.6	332	54.4 ¹³³	-9	42.0 ¹⁰⁵	50	19 55	20 37	21 36	1 33 23	12 21 70				
6	270	43.2	+21	21.0	347	26.7 ¹³³	-9	31.5 ¹⁰⁵	45	19 35	20 11	20 58	1 24 27	12 28 66				
7	285	43.1		21.4	1	59.1 ¹³⁴		20.9 ¹⁰⁶	40	19	19 51	31	17 30	33 63				
8	300	43.0		21.9	16	31.4 ¹³³	-9	10.3 ¹⁰⁶	35	19 06	35	20 10	11 33	38 60				
9	315	42.9		22.3	31	03.7 ¹³³	-8	59.6 ¹⁰⁷	30	18 54	19 21	19 53	1 06 35	43 57				
10	330	42.9		22.7	45	36.0 ¹³³		48.9 ¹⁰⁷	20	34	18 58	27	0 57 39	50 53				
11	345	42.8	+21	23.1	60	08.4 ¹³⁴	-8	38.1 ¹⁰⁸	10 N	18 17	18 39	19 06	0 49 42	12 57 49				
12	0	42.7	+21	23.5	74	40.7 ¹³³	-8	27.2 ¹⁰⁹	0	18 01	18 23	18 49	0 41 46	13 03 46				
13	15	42.6		23.9	89	13.0 ¹³³		16.3 ¹⁰⁹	10 S	17 45	18 07	33	33 49	09 42				
14	30	42.6		24.3	103	45.3 ¹³³	-8	05.4 ¹⁰⁹	20	28	17 52	19	25 53	15 39				
15	45	42.5		24.7	118	17.5 ¹³²	-7	54.4 ¹¹⁰	30	17 09	35	18 04	16 56	22 35				
16	60	42.4		25.1	132	49.8 ¹³³		43.3 ¹¹¹	35	16 58	26	17 57	10 59	27 32				
17	75	42.3	+21	25.5	147	22.1 ¹³³	-7	32.3 ¹¹⁰	40	16 45	17 15	17 49	0 04 62	13 31 30				
18	90	42.3	+21	25.9	161	54.3 ¹³²	-7	21.1 ¹¹²	45	16 30	17 03	17 40	** ** *	13 37 26				
19	105	42.2		26.3	176	26.5 ¹³²	-7	09.9 ¹¹²	50	12	16 49	30	** ** *	43 23				
20	120	42.1		26.8	190	58.8 ¹³³	-6	58.7 ¹¹²	52	16 03	43	25	** ** *	46 21				
21	135	42.0		27.2	205	31.0 ¹³²		47.4 ¹¹³	54	15 54	35	20	** ** *	49 19				
22	150	41.9		27.6	220	03.2 ¹³²		36.1 ¹¹³	56	43	28	15	** ** *	53 17				
23	165	41.9		28.0	234	35.4 ¹³²		24.7 ¹¹⁴	58	30	19	10	** ** *	13 57 14				
24	180	41.8	+21	28.4	249	07.5 ¹³¹	-6	13.3 ¹¹⁴	60 S	15 16	16 09	17 03	** ** *	14 01 12				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 7 ^h 39 ^m 3		Mag: -3.9 PMG: 11 ^h 40 ^m				Mag: +1.6 PMG: 12 ^h 39 ^m				Mag: -2.0 PMG: 11 ^h 00 ^m				Mag: +0.2 PMG: 11 ^h 02 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	244	51.2	185	01.0	+20	02.1	170	02.1	+23	19.5	194	42.3	+17	32.0	194	13.2	+16	28.2
1	259	53.7	200	00.3		02.8	185	02.7		19.7	209	44.2		32.1	209	15.3		28.3
2	274	56.2	214	59.6		03.5	200	03.3		19.9	224	46.1		32.3	224	17.5		28.3
3	289	58.6	229	58.9		04.2	215	04.0		20.1	239	47.9		32.4	239	19.6		28.4
4	305	01.1	244	58.2		04.9	230	04.6		20.3	254	49.8		32.6	254	21.8		28.5
5	320	03.5	259	57.4	+20	05.6	245	05.2	+23	20.5	269	51.7	+17	32.7	269	23.9	+16	28.6
6	335	06.0	274	56.7	+20	06.3	260	05.8	+23	20.7	284	53.5	+17	32.9	284	26.1	+16	28.7
7	350	08.5	289	56.0		07.0	275	06.4		20.9	299	55.4		33.0	299	28.2		28.7
8	5	10.9	304	55.3		07.7	290	07.0		21.1	314	57.3		33.2	314	30.3		28.8
9	20	13.4	319	54.5		08.4	305	07.6		21.3	329	59.2		33.3	329	32.5		28.9
10	35	15.9	334	53.8		09.1	320	08.2		21.5	345	01.0		33.5	344	34.6		29.0
11	50	18.3	349	53.1	+20	09.8	335	08.8	+23	21.7	0	02.9	+17	33.6	359	36.8	+16	29.1
12	65	20.8	4	52.4	+20	10.5	350	09.5	+23	21.8	15	04.8	+17	33.8	14	38.9	+16	29.1
13	80	23.3	19	51.6		11.2	5	10.1		22.0	30	06.6		33.9	29	41.1		29.2
14	95	25.7	34	50.9		11.9	20	10.7		22.2	45	08.5		34.1	44	43.2		29.3
15	110	28.2	49	50.2		12.6	35	11.3		22.4	60	10.4		34.2	59	45.4		29.4
16	125	30.7	64	49.5		13.3	50	11.9		22.6	75	12.3		34.4	74	47.5		29.4
17	140	33.1	79	48.7	+20	13.9	65	12.5	+23	22.8	90	14.1	+17	34.5	89	49.7	+16	29.5
18	155	35.6	94	48.0	+20	14.6	80	13.1	+23	23.0	105	16.0	+17	34.7	104	51.8	+16	29.6
19	170	38.0	109	47.3		15.3	95	13.7		23.2	120	17.9		34.8	119	53.9		29.7
20	185	40.5	124	46.5		16.0	110	14.3		23.4	135	19.7		35.0	134	56.1		29.8
21	200	43.0	139	45.8		16.7	125	15.0		23.6	150	21.6		35.1	149	58.2		29.8
22	215	45.4	154	45.1		17.4	140	15.6		23.8	165	23.5		35.3	165	00.4		29.9
23	230	47.9	169	44.4		18.1	155	16.2		24.0	180	25.4		35.4	180	02.5		30.0
24	245	50.4	184	43.6	+20	18.8	170	16.8	+23	24.1	195	27.2	+17	35.6	195	04.7	+16	30.1
Dif	—		-7		+7		+6		+2		+19		+2		+21		+1	

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 3				Edad: 23 ^d 8 PHE { 4 ^h : 56 ^m 7 12 ^h : 57 ^m 0 20 ^h : 57 ^m 3 PMG: 7 ^h 38 ^m R°: 47 ^m																
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°					
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m			
0	180	41.8	+21	28.4	249	07.5	-6	13.3	60 N	**	**	1	37	2	09	12	13	22	85		
1	195	41.7		28.8	263	39.7 ¹³²	-6	01.8 ¹¹⁵	58	**	**	2	08	3	12	06	14	24	82		
2	210	41.6		29.2	278	11.8 ¹³¹	-5	50.3 ¹¹⁵	56	0	40	31	26	03	17	26	79				
3	225	41.6		29.6	292	43.9 ¹³¹		38.7 ¹¹⁶	54	1	28	2	49	39	2	00	19	28	77		
4	240	41.5		30.0	307	16.0 ¹³¹		27.1 ¹¹⁶	52	1	57	3	04	49	1	58	21	29	75		
5	255	41.4	+21	30.4	321	48.1 ¹³¹	-5	15.5 ¹¹⁶	50	2	18	3	17	3	59	1	56	22	13	72	
6	270	41.3	+21	30.8	336	20.1 ¹³⁰	-5	03.8 ¹¹⁷	45	2	56	3	43	4	19	1	51	27	13	68	
7	285	41.2		31.2	350	52.1 ¹³⁰	-4	52.1 ¹¹⁷	40	3	23	4	03	35	47	30	36	65			
8	300	41.2		31.5	5	24.1 ¹³⁰		40.4 ¹¹⁷	35	3	44	20	4	49	44	32	38	62			
9	315	41.1		31.9	19	56.1 ¹³⁰		28.6 ¹¹⁸	30	4	01	34	5	00	41	35	40	60			
10	330	41.0		32.3	34	28.1 ¹³⁰		16.7 ¹¹⁹	20	28	4	56	20	36	39	43	55				
11	345	40.9	+21	32.7	49	00.0 ¹²⁹	-4	04.9 ¹¹⁸	10 N	4	48	5	15	5	38	1	31	43	13	46	51
12	0	40.8	+21	33.1	63	31.9 ¹²⁹	-3	53.0 ¹¹⁹	0	5	06	5	31	5	54	1	27	46	13	49	47
13	15	40.8		33.5	78	03.8 ¹²⁹		41.1 ¹¹⁹	10 S	21	5	47	6	10	22	51	51	44			
14	30	40.7		33.9	92	35.6 ¹²⁸		29.1 ¹²⁰	20	36	6	03	26	18	54	54	40				
15	45	40.6		34.3	107	07.4 ¹²⁸		17.1 ¹²⁰	30	50	20	46	12	59	57	35					
16	60	40.5		34.7	121	39.2 ¹²⁸	-3	05.1 ¹²⁰	35	5	58	29	6	57	09	61	13	59	32		
17	75	40.4	+21	35.1	136	11.0 ¹²⁸	-2	53.0 ¹²¹	40	6	06	6	40	7	10	1	06	64	14	01	29
18	90	40.4	+21	35.5	150	42.7 ¹²⁷	-2	40.9 ¹²¹	45	6	15	6	52	7	25	1	02	67	14	03	26
19	105	40.3		35.9	165	14.4 ¹²⁷		28.8 ¹²¹	50	25	7	06	43	0	57	72	06	22			
20	120	40.2		36.3	179	46.1 ¹²⁷		16.6 ¹²²	52	30	12	7	52	55	73	07	21				
21	135	40.1		36.6	194	17.7 ¹²⁶	-2	04.4 ¹²²	54	35	20	8	02	52	76	08	19				
22	150	40.0		37.0	208	49.3 ¹²⁶	-1	52.2 ¹²²	56	40	28	13	50	77	10	16					
23	165	39.9		37.4	223	20.9 ¹²⁶		40.0 ¹²²	58	46	36	25	47	80	11	14					
24	180	39.9	+21	37.8	237	52.4 ¹²⁵	-1	27.7 ¹²³	60 S	6	52	7	46	8	40	0	43	83	14	13	12

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 7 ^h 35 ^m 4		Mag: -3.9 PMG: 11 ^h 42 ^m		Mag: +1.6 PMG: 12 ^h 38 ^m		Mag: -2.0 PMG: 10 ^h 57 ^m		Mag: +0.2 PMG: 10 ^h 58 ^m									
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄									
h	°	'	°	'	°	'	°	'	°	'								
0	245	50.4	184	43.6	+20	18.8	170	16.8	+23	24.1	195	27.2	+17	35.6	195	04.7	+16	30.1
1	260	52.8	199	42.9		19.4	185	17.4		24.3	210	29.1		35.7	210	06.8		30.2
2	275	55.3	214	42.2		20.1	200	18.0		24.5	225	31.0		35.9	225	09.0		30.2
3	290	57.8	229	41.4		20.8	215	18.6		24.7	240	32.8		36.0	240	11.1		30.3
4	306	00.2	244	40.7		21.5	230	19.2		24.9	255	34.7		36.2	255	13.3		30.4
5	321	02.7	259	40.0	+20	22.2	245	19.9	+23	25.1	270	36.6	+17	36.3	270	15.4	+16	30.5
6	336	05.2	274	39.2	+20	22.8	260	20.5	+23	25.3	285	38.5	+17	36.5	285	17.5	+16	30.6
7	351	07.6	289	38.5		23.5	275	21.1		25.5	300	40.3		36.6	300	19.7		30.6
8	6	10.1	304	37.8		24.2	290	21.7		25.7	315	42.2		36.8	315	21.8		30.7
9	21	12.5	319	37.0		24.9	305	22.3		25.8	330	44.1		36.9	330	24.0		30.8
10	36	15.0	334	36.3		25.5	320	22.9		26.0	345	45.9		37.1	345	26.1		30.9
11	51	17.5	349	35.6	+20	26.2	335	23.5	+23	26.2	0	47.8	+17	37.2	0	28.3	+16	31.0
12	66	19.9	4	34.8	+20	26.9	350	24.1	+23	26.4	15	49.7	+17	37.4	15	30.4	+16	31.0
13	81	22.4	19	34.1		27.6	5	24.7		26.6	30	51.6		37.5	30	32.6		31.1
14	96	24.9	34	33.3		28.2	20	25.4		26.8	45	53.4		37.7	45	34.7		31.2
15	111	27.3	49	32.6		28.9	35	26.0		27.0	60	55.3		37.8	60	36.9		31.3
16	126	29.8	64	31.9		29.6	50	26.6		27.1	75	57.2		38.0	75	39.0		31.3
17	141	32.3	79	31.1	+20	30.2	65	27.2	+23	27.3	90	59.1	+17	38.1	90	41.2	+16	31.4
18	156	34.7	94	30.4	+20	30.9	80	27.8	+23	27.5	106	00.9	+17	38.3	105	43.3	+16	31.5
19	171	37.2	109	29.6		31.6	95	28.4		27.7	121	02.8		38.4	120	45.4		31.6
20	186	39.6	124	28.9		32.2	110	29.0		27.9	136	04.7		38.6	135	47.6		31.7
21	201	42.1	139	28.2		32.9	125	29.6		28.1	151	06.5		38.7	150	49.7		31.7
22	216	44.6	154	27.4		33.6	140	30.2		28.2	166	08.4		38.9	165	51.9		31.8
23	231	47.0	169	26.7		34.2	155	30.9		28.4	181	10.3		39.0	180	54.0		31.9
24	246	49.5	184	25.9	+20	34.9	170	31.5	+23	28.6	196	12.2	+17	39.2	195	56.2	+16	32.0
Dif	—		-7		+7		+6		+2		+19		+1		+21		+1	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8			Edad: 24 ^d 8	PHE { 4 ^h : 57 ^m 6 12 ^h : 57 ^m 9 20 ^h : 58 ^m 3	SD: 15 ^h 7			Final del crepúsculo		Salida de Luna		Puesta de Luna		
	PMG: 11 ^h 57 ^m 4					PMG: 8 ^h 25 ^m			R°: 48 ^m						
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	180	39.9	+21 37.8	237	52.4	-1 27.7		60 N	21 03	22 23	** **	2 21 12	14 47 88		
1	195	39.8		252	23.9 ¹²⁵	15.5 ¹²²		58	20 45	21 51	** **	20 15	46 85		
2	210	39.7		266	55.3 ¹²⁴	-1 03.2 ¹²³		56	31	27	23 30	20 17	45 83		
3	225	39.6		281	26.7 ¹²⁴	-0 50.8 ¹²⁴		54	18	21 09	22 32	19 20	45 80		
4	240	39.5		295	58.1 ¹²⁴	38.5 ¹²³		52	20 07	20 53	22 02	19 21	44 78		
5	255	39.4	+21 39.7	310	29.4 ¹²³	-0 26.1 ¹²⁴		50	19 57	20 40	21 39	2 18 24	14 43 76		
6	270	39.4	+21 40.1	325	00.7 ¹²³	-0 13.7 ¹²⁴		45	19 37	20 13	21 00	2 18 27	14 42 72		
7	285	39.3		339	31.9 ¹²²	-0 01.3 ¹²⁴		40	21	19 53	20 33	17 30	41 68		
8	300	39.2		354	03.1 ¹²²	+0 11.1 ¹²⁴		35	19 07	36	20 12	16 34	40 65		
9	315	39.1		8	34.3 ¹²²	23.6 ¹²⁵		30	18 55	19 22	19 55	16 36	40 62		
10	330	39.0		23	05.4 ¹²¹	36.0 ¹²⁴		20	35	18 59	28	15 40	38 58		
11	345	38.9	+21 42.0	37	36.4 ¹²⁰	+0 48.5 ¹²⁵		10 N	18 17	18 40	19 07	2 14 45	14 37 53		
12	0	38.9	+21 42.4	52	07.4 ¹²⁰	+1 01.0 ¹²⁵		0	18 01	18 23	18 49	2 13 49	14 36 49		
13	15	38.8		66	38.4 ¹²⁰	13.5 ¹²⁵		10 S	17 45	18 08	34	13 52	35 45		
14	30	38.7		81	09.3 ¹¹⁹	26.0 ¹²⁵		20	28	17 52	19	12 56	34 41		
15	45	38.6		95	40.2 ¹¹⁹	38.5 ¹²⁵		30	17 08	34	18 04	11 61	32 37		
16	60	38.5		110	11.0 ¹¹⁸	+1 51.1 ¹²⁶		35	16 57	25	17 56	10 64	31 35		
17	75	38.4	+21 44.3	124	41.7 ¹¹⁷	+2 03.6 ¹²⁵		40	16 44	17 14	17 48	2 10 66	14 30 32		
18	90	38.3	+21 44.6	139	12.4 ¹¹⁷	+2 16.2 ¹²⁶		45	16 29	17 02	17 39	2 09 70	14 29 28		
19	105	38.3		153	43.1 ¹¹⁷	28.7 ¹²⁵		50	10	16 48	28	09 74	28 24		
20	120	38.2		168	13.7 ¹¹⁶	41.3 ¹²⁶		52	16 01	41	24	08 76	28 22		
21	135	38.1		182	44.2 ¹¹⁵	+2 53.9 ¹²⁶		54	15 52	34	19	08 78	27 20		
22	150	38.0		197	14.7 ¹¹⁵	+3 06.4 ¹²⁵		56	40	26	13	07 81	26 18		
23	165	37.9		211	45.1 ¹¹⁴	19.0 ¹²⁶		58	28	17	08	07 83	25 16		
24	180	37.8	+21 46.9	226	15.5 ¹¹⁴	+3 31.6 ¹²⁶		60 S	15 13	16 07	17 01	2 06 87	14 25 12		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 7 ^h 31 ^m 5		Mag: -3.9 PMG: 11 ^h 43 ^m			Mag: +1.6 PMG: 12 ^h 37 ^m			Mag: -2.0 PMG: 10 ^h 54 ^m			Mag: +0.2 PMG: 10 ^h 55 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	°	'	°	°	'	°	°	'		
0	246	49.5	184	25.9	+20 34.9	170	31.5	+23 28.6	196	12.2	+17 39.2	195	56.2	+16 32.0	
1	261	52.0	199	25.2	35.5	185	32.1	28.8	211	14.0	39.3	210	58.3	32.1	
2	276	54.4	214	24.5	36.2	200	32.7	29.0	226	15.9	39.5	226	00.5	32.1	
3	291	56.9	229	23.7	36.8	215	33.3	29.1	241	17.8	39.6	241	02.6	32.2	
4	306	59.4	244	23.0	37.5	230	33.9	29.3	256	19.6	39.8	256	04.8	32.3	
5	322	01.8	259	22.2	+20 38.2	245	34.5	+23 29.5	271	21.5	+17 39.9	271	06.9	+16 32.4	
6	337	04.3	274	21.5	+20 38.8	260	35.1	+23 29.7	286	23.4	+17 40.0	286	09.1	+16 32.4	
7	352	06.8	289	20.7	39.5	275	35.7	29.9	301	25.3	40.2	301	11.2	32.5	
8	7	09.2	304	20.0	40.1	290	36.4	30.0	316	27.1	40.3	316	13.3	32.6	
9	22	11.7	319	19.2	40.8	305	37.0	30.2	331	29.0	40.5	331	15.5	32.7	
10	37	14.1	334	18.5	41.4	320	37.6	30.4	346	30.9	40.6	346	17.6	32.8	
11	52	16.6	349	17.7	+20 42.1	335	38.2	+23 30.6	1	32.8	+17 40.8	1	19.8	+16 32.8	
12	67	19.1	4	17.0	+20 42.7	350	38.8	+23 30.7	16	34.6	+17 40.9	16	21.9	+16 32.9	
13	82	21.5	19	16.2	43.4	5	39.4	30.9	31	36.5	41.1	31	24.1	33.0	
14	97	24.0	34	15.5	44.0	20	40.0	31.1	46	38.4	41.2	46	26.2	33.1	
15	112	26.5	49	14.7	44.7	35	40.6	31.3	61	40.2	41.4	61	28.4	33.2	
16	127	28.9	64	14.0	45.3	50	41.2	31.4	76	42.1	41.5	76	30.5	33.2	
17	142	31.4	79	13.2	+20 46.0	65	41.9	+23 31.6	91	44.0	+17 41.7	91	32.7	+16 33.3	
18	157	33.9	94	12.5	+20 46.6	80	42.5	+23 31.8	106	45.9	+17 41.8	106	34.8	+16 33.4	
19	172	36.3	109	11.7	47.2	95	43.1	32.0	121	47.7	42.0	121	37.0	33.5	
20	187	38.8	124	11.0	47.9	110	43.7	32.1	136	49.6	42.1	136	39.1	33.5	
21	202	41.3	139	10.2	48.5	125	44.3	32.3	151	51.5	42.3	151	41.3	33.6	
22	217	43.7	154	09.5	49.2	140	44.9	32.5	166	53.4	42.4	166	43.4	33.7	
23	232	46.2	169	08.7	49.8	155	45.5	32.7	181	55.2	42.6	181	45.5	33.8	
24	247	48.6	184	08.0	+20 50.4	170	46.1	+23 32.8	196	57.1	+17 42.7	196	47.7	+16 33.9	
Dif	—		-7	+6		+6	+2		+19	+1		+21	+1		

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 5				Edad: 25 ^d 8 PHE SD: 15 ^h 9 PMG: 9 ^h 13 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	180	37.8	+21	46.9	226	15.5	+3	31.6	60 N	** **	1 31	2 52	2 33	14	16 15	92		
1	195	37.7		47.2	240	45.8 ¹¹³		44.1 ¹²⁵	58	** **	2 04	3 09	35	17	11	89		
2	210	37.6		47.6	255	16.0 ¹¹²	+3	56.7 ¹²⁶	56	0 25	27	24	37	19	08	85		
3	225	37.6		48.0	269	46.2 ¹¹²	+4	09.3 ¹²⁶	54	1 23	2 46	36	39	21	05	83		
4	240	37.5		48.3	284	16.3 ¹¹¹		21.8 ¹²⁵	52	1 53	3 01	47	40	24	16	02	80	
5	255	37.4	+21	48.7	298	46.4 ¹¹¹	+4	34.4 ¹²⁶	50	2 15	3 15	3 57	2 42	25	15	59	79	
6	270	37.3	+21	49.1	313	16.4 ¹¹⁰	+4	47.0 ¹²⁶	45	2 54	3 41	4 18	2 45	29	15	54	74	
7	285	37.2		49.4	327	46.3 ¹⁰⁹	+4	59.5 ¹²⁵	40	3 22	4 02	34	47	33	49	71		
8	300	37.1		49.8	342	16.2 ¹⁰⁹	+5	12.0 ¹²⁵	35	3 43	19	4 48	50	36	45	68		
9	315	37.0		50.2	356	46.0 ¹⁰⁸		24.5 ¹²⁵	30	4 00	33	5 00	52	38	42	65		
10	330	36.9		50.5	11	15.7 ¹⁰⁷		37.1 ¹²⁶	20	27	4 56	20	55	43	36	60		
11	345	36.8	+21	50.9	25	45.4 ¹⁰⁷	+5	49.6 ¹²⁵	10 N	4 48	5 15	5 38	2 59	47	15	30	57	
12	0	36.8	+21	51.3	40	14.9 ¹⁰⁵	+6	02.0 ¹²⁴	0	5 06	5 32	5 54	3 02	50	15	25	53	
13	15	36.7		51.6	54	44.5 ¹⁰⁶		14.5 ¹²⁵	10 S	21	5 47	6 10	05	54	20	49		
14	30	36.6		52.0	69	13.9 ¹⁰⁴		27.0 ¹²⁵	20	36	6 03	27	08	59	15	45		
15	45	36.5		52.3	83	43.3 ¹⁰⁴		39.4 ¹²⁴	30	51	21	47	12	63	09	40		
16	60	36.4		52.7	98	12.6 ¹⁰³	+6	51.8 ¹²⁴	35	5 59	30	6 58	14	66	06	37		
17	75	36.3	+21	53.1	112	41.8 ¹⁰²	+7	04.2 ¹²⁴	40	6 08	6 41	7 11	3 16	70	15	02	34	
18	90	36.2	+21	53.4	127	11.0 ¹⁰²	+7	16.6 ¹²⁴	45	6 17	6 53	7 26	3 19	73	14	57	32	
19	105	36.1		53.8	141	40.1 ¹⁰¹		28.9 ¹²³	50	27	7 08	45	23	77	52	27		
20	120	36.0		54.1	156	09.1 ¹⁰⁰		41.2 ¹²³	52	32	15	7 54	24	80	50	25		
21	135	35.9		54.5	170	38.0 ⁹⁹	+7	53.5 ¹²³	54	37	22	8 04	26	82	47	23		
22	150	35.9		54.8	185	06.9 ⁹⁹	+8	05.8 ¹²³	56	42	30	15	28	84	44	20		
23	165	35.8		55.2	199	35.7 ⁹⁸		18.0 ¹²²	58	48	39	28	30	88	41	18		
24	180	35.7	+21	55.6	214	04.4 ⁹⁷	+8	30.2 ¹²²	60 S	6 54	7 49	8 44	3 33	90	14	37	15	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 7 ^h 27 ^m 5		Mag: -3.9 PMG: 11 ^h 44 ^m				Mag: +1.6 PMG: 12 ^h 36 ^m				Mag: -2.0 PMG: 10 ^h 51 ^m				Mag: +0.2 PMG: 10 ^h 51 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	247	48.6	184	08.0	+20	50.4	170	46.1	+23	32.8	196	57.1	+17	42.7	196	47.7	+16	33.9
1	262	51.1	199	07.2		51.1	185	46.7		33.0	211	59.0		42.9	211	49.8		33.9
2	277	53.6	214	06.5		51.7	200	47.4		33.2	227	00.8		43.0	226	52.0		34.0
3	292	56.0	229	05.7		52.3	215	48.0		33.3	242	02.7		43.2	241	54.1		34.1
4	307	58.5	244	05.0		53.0	230	48.6		33.5	257	04.6		43.3	256	56.3		34.2
5	323	01.0	259	04.2	+20	53.6	245	49.2	+23	33.7	272	06.5	+17	43.4	271	58.4	+16	34.2
6	338	03.4	274	03.5	+20	54.2	260	49.8	+23	33.9	287	08.3	+17	43.6	287	00.6	+16	34.3
7	353	05.9	289	02.7		54.9	275	50.4		34.0	302	10.2		43.7	302	02.7		34.4
8	8	08.4	304	01.9		55.5	290	51.0		34.2	317	12.1		43.9	317	04.9		34.5
9	23	10.8	319	01.2		56.1	305	51.6		34.4	332	14.0		44.0	332	07.0		34.6
10	38	13.3	334	00.4		56.7	320	52.2		34.5	347	15.8		44.2	347	09.2		34.6
11	53	15.7	348	59.7	+20	57.4	335	52.9	+23	34.7	2	17.7	+17	44.3	2	11.3	+16	34.7
12	68	18.2	3	58.9	+20	58.0	350	53.5	+23	34.9	17	19.6	+17	44.5	17	13.5	+16	34.8
13	83	20.7	18	58.2		58.6	5	54.1		35.0	32	21.5		44.6	32	15.6		34.9
14	98	23.1	33	57.4		59.2	20	54.7		35.2	47	23.3		44.8	47	17.8		34.9
15	113	25.6	48	56.6	+20	59.9	35	55.3		35.4	62	25.2		44.9	62	19.9		35.0
16	128	28.1	63	55.9	+21	00.5	50	55.9		35.5	77	27.1		45.1	77	22.1		35.1
17	143	30.5	78	55.1	+21	01.1	65	56.5	+23	35.7	92	28.9	+17	45.2	92	24.2	+16	35.2
18	158	33.0	93	54.3	+21	01.7	80	57.1	+23	35.9	107	30.8	+17	45.4	107	26.3	+16	35.3
19	173	35.5	108	53.6		02.3	95	57.7		36.0	122	32.7		45.5	122	28.5		35.3
20	188	37.9	123	52.8		03.0	110	58.3		36.2	137	34.6		45.6	137	30.6		35.4
21	203	40.4	138	52.1		03.6	125	59.0		36.4	152	36.4		45.8	152	32.8		35.5
22	218	42.9	153	51.3		04.2	140	59.6		36.5	167	38.3		45.9	167	34.9		35.6
23	233	45.3	168	50.5		04.8	156	00.2		36.7	182	40.2		46.1	182	37.1		35.6
24	248	47.8	183	49.8	+21	05.4	171	00.8	+23	36.9	197	42.1	+17	46.2	197	39.2	+16	35.7
Dif	—		-8		+6		+6		+2		+19		+1		+21		+1	

UT	SOL				● LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 15'8 PMG: 11 ^h 57 ^m .7				Edad: 26 ^d .8 PHE { 4 ^h : 59'5 12 ^h : 59'7 20 ^h : 60'0 R°: 55 ^m													
	hG ☉ Dec		hG ☾ Dif Dec Dif					Civil			Náutico	Hora R°	Hora R°					
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m		
0	180	35.7	+21	55.6	214	04.4	+8	30.2	60 N	21 06	22 30	** **	2 47 17	17 47 94				
1	195	35.6		55.9	228	33.0	96	42.4	58	20 48	21 56	** **	52 20	40 90				
2	210	35.5		56.3	243	01.6	96	+8 54.5	56	33	31	** **	2 56 23	33 88				
3	225	35.4		56.6	257	30.0	94	+9 06.6	54	21	21 12	22 38	3 00 25	28 8				
4	240	35.3		57.0	271	58.4	94	18.7	52	10	20 56	22 06	04 27	22 83				
5	255	35.2	+21	57.3	286	26.7	93	+9 30.7	50	20 00	20 42	21 43	3 07 29	17 18 81				
6	270	35.1	+21	57.7	300	54.9	92	+9 42.7	45	19 39	20 15	21 03	3 14 34	17 08 76				
7	285	35.0		58.0	315	23.1	92	+9 54.6	40	22	19 54	20 35	20 37	17 00 73				
8	300	34.9		58.4	329	51.1	90	+10 06.5	35	19 08	37	20 13	26 40	16 53 70				
9	315	34.8		58.7	344	19.1	90	18.4	30	18 56	23	19 56	30 43	47 67				
10	330	34.7		59.1	358	47.0	89	30.2	20	35	19 00	29	38 47	36 63				
11	345	34.6	+21	59.4	13	14.8	88	+10 41.9	10 N	18 18	18 41	19 07	3 46 50	16 27 59				
12	0	34.6	+21	59.8	27	42.5	87	+10 53.6	0	18 01	18 24	18 50	3 52 55	16 18 56				
13	15	34.5	+22	00.1	42	10.1	86	+11 05.3	10 S	17 45	18 08	34	3 59 58	09 53				
14	30	34.4		00.4	56	37.7	86	16.9	20	28	17 51	19	4 07 62	16 00 49				
15	45	34.3		00.8	71	05.1	84	28.5	30	17 08	34	18 04	15 67	15 49 45				
16	60	34.2		01.1	85	32.5	84	39.9	35	16 56	24	17 56	20 69	43 43				
17	75	34.1	+22	01.5	99	59.8	83	+11 51.4	40	16 43	17 13	17 47	4 26 72	15 36 40				
18	90	34.0	+22	01.8	114	26.9	81	+12 02.8	45	16 28	17 01	17 38	4 32 76	15 29 36				
19	105	33.9		02.2	128	54.1	82	14.1	50	09	16 46	27	40 80	19 32				
20	120	33.8		02.5	143	21.1	80	25.3	52	16 00	40	22	44 82	15 30				
21	135	33.7		02.8	157	48.0	79	36.5	54	15 50	32	17	48 85	10 28				
22	150	33.6		03.2	172	14.8	78	47.6	56	38	24	12	52 88	15 04 26				
23	165	33.5		03.5	186	41.6	78	+12 58.7	58	25	15	17 06	4 58 90	14 59 22				
24	180	33.4	+22	03.9	201	08.2	76	+13 09.7	60 S	15 10	16 04	16 59	5 03 94	14 52 19				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 7 ^h 23 ^m .6		Mag: -3.9 PMG: 11 ^h 45 ^m				Mag: +1.6 PMG: 12 ^h 35 ^m				Mag: -2.0 PMG: 10 ^h 48 ^m				Mag: +0.2 PMG: 10 ^h 48 ^m			
	hG ♈ Dec		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec		hG ♅ Dec		hG ♆ Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	248	47.8	183	49.8	+21	05.4	171	00.8	+23	36.9	197	42.1	+17	46.2	197	39.2	+16	35.7
1	263	50.2	198	49.0		06.0	186	01.4		37.0	212	43.9		46.4	212	41.4		35.8
2	278	52.7	213	48.2		06.6	201	02.0		37.2	227	45.8		46.5	227	43.5		35.9
3	293	55.2	228	47.5		07.3	216	02.6		37.3	242	47.7		46.7	242	45.7		36.0
4	308	57.6	243	46.7		07.9	231	03.2		37.5	257	49.6		46.8	257	47.8		36.0
5	324	00.1	258	45.9	+21	08.5	246	03.8	+23	37.7	272	51.4	+17	47.0	272	50.0	+16	36.1
6	339	02.6	273	45.2	+21	09.1	261	04.5	+23	37.8	287	53.3	+17	47.1	287	52.1	+16	36.2
7	354	05.0	288	44.4		09.7	276	05.1		38.0	302	55.2		47.3	302	54.3		36.3
8	9	07.5	303	43.6		10.3	291	05.7		38.2	317	57.1		47.4	317	56.4		36.3
9	24	10.0	318	42.9		10.9	306	06.3		38.3	332	58.9		47.5	332	58.6		36.4
10	39	12.4	333	42.1		11.5	321	06.9		38.5	348	00.8		47.7	348	00.7		36.5
11	54	14.9	348	41.3	+21	12.1	336	07.5	+23	38.6	3	02.7	+17	47.8	3	02.9	+16	36.6
12	69	17.3	3	40.6	+21	12.7	351	08.1	+23	38.8	18	04.6	+17	48.0	18	05.0	+16	36.7
13	84	19.8	18	39.8		13.3	6	08.7		38.9	33	06.4		48.1	33	07.2		36.7
14	99	22.3	33	39.0		13.9	21	09.3		39.1	48	08.3		48.3	48	09.3		36.8
15	114	24.7	48	38.3		14.5	36	10.0		39.3	63	10.2		48.4	63	11.4		36.9
16	129	27.2	63	37.5		15.1	51	10.6		39.4	78	12.0		48.6	78	13.6		37.0
17	144	29.7	78	36.7	+21	15.7	66	11.2	+23	39.6	93	13.9	+17	48.7	93	15.7	+16	37.0
18	159	32.1	93	35.9	+21	16.3	81	11.8	+23	39.7	108	15.8	+17	48.9	108	17.9	+16	37.1
19	174	34.6	108	35.2		16.9	96	12.4		39.9	123	17.7		49.0	123	20.0		37.2
20	189	37.1	123	34.4		17.5	111	13.0		40.0	138	19.5		49.1	138	22.2		37.3
21	204	39.5	138	33.6		18.1	126	13.6		40.2	153	21.4		49.3	153	24.3		37.3
22	219	42.0	153	32.9		18.6	141	14.2		40.4	168	23.3		49.4	168	26.5		37.4
23	234	44.5	168	32.1		19.2	156	14.8		40.5	183	25.2		49.6	183	28.6		37.5
24	249	46.9	183	31.3	+21	19.8	171	15.5	+23	40.7	198	27.0	+17	49.7	198	30.8	+16	37.6
Dif	—		-8 +6		+6 +2		+6 +2		+19 +1		+19 +1		+21 +1		+21 +1			

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8 PMG: 11 ^h 57 ^m 9				Edad: 27 ^d 8 PHE { 4 ^h : 60 ^m 2 12 ^h : 60 ^m 4 20 ^h : 60 ^m 6 R°: 59 ^m													
	hG ☉		Dec		hG ☾ Dif		Dec Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	180	33.4	+22	03.9	201	08.2	+13	09.7	60 N	** **	1 25	2 49	3 04	23	19 21	92		
1	195	33.3		04.2	215	34.8	76	20.6	58	** **	2 00	3 07	12	26	10	89		
2	210	33.2		04.5	230	01.3	75	31.4	56	** **	24	22	19	29	19 01	86		
3	225	33.1		04.9	244	27.7	74	42.2	54	1 18	43	35	25	32	18 53	83		
4	240	33.0		05.2	258	54.0	73	+13 52.9	52	1 50	2 59	46	31	34	45	82		
5	255	32.9	+22	05.5	273	20.2	72	+14 03.5	50	2 12	3 13	3 56	3 36	36	18 39	79		
6	270	32.8	+22	05.9	287	46.3	71	+14 14.0	45	2 53	3 40	4 16	3 48	40	18 24	77		
7	285	32.7		06.2	302	12.3	70	24.4	40	3 21	4 01	33	3 57	43	13	73		
8	300	32.6		06.5	316	38.2	69	34.8	35	3 42	18	47	4 06	45	18 03	71		
9	315	32.5		06.9	331	04.1	69	45.1	30	4 00	32	4 59	13	48	17 54	69		
10	330	32.4		07.2	345	29.9	68	+14 55.3	20	27	4 56	5 20	25	52	39	66		
11	345	32.3	+22	07.5	359	55.5	66	+15 05.4	10 N	4 48	5 15	5 38	4 36	55	17 26	63		
12	0	32.2	+22	07.9	14	21.1	66	+15 15.4	0	5 06	5 32	5 54	4 47	58	17 14	60		
13	15	32.1		08.2	28	46.6	65	25.3	10 S	22	5 48	6 11	4 57	62	17 02	57		
14	30	32.0		08.5	43	12.0	64	35.1	20	37	6 04	28	5 09	64	16 49	54		
15	45	31.9		08.9	57	37.3	63	44.8	30	5 52	22	48	22	68	34	51		
16	60	31.8		09.2	72	02.5	62	+15 54.5	35	6 00	32	6 59	29	71	26	48		
17	75	31.7	+22	09.5	86	27.6	61	+16 04.0	40	6 09	6 42	7 13	5 38	74	16 16	46		
18	90	31.6	+22	09.8	100	52.7	61	+16 13.4	45	6 18	6 55	7 28	5 48	77	16 05	43		
19	105	31.5		10.2	115	17.6	59	22.8	50	29	7 10	47	6 00	81	15 51	40		
20	120	31.4		10.5	129	42.5	59	32.0	52	34	17	7 56	06	83	45	38		
21	135	31.3		10.8	144	07.3	58	41.1	54	39	24	8 07	13	85	38	36		
22	150	31.2		11.1	158	32.0	57	50.1	56	44	32	18	20	87	30	33		
23	165	31.1		11.5	172	56.6	56	+16 59.1	58	50	42	31	28	90	21	31		
24	180	31.0	+22	11.8	187	21.1	55	+17 07.8	60 S	6 57	7 52	8 47	6 37	94	15 11	27		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 7 ^h 19 ^m 7		Mag: -3.9 PMG: 11 ^h 47 ^m				Mag: +1.6 PMG: 12 ^h 34 ^m				Mag: -2.0 PMG: 10 ^h 45 ^m				Mag: +0.2 PMG: 10 ^h 44 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	249	46.9	183	31.3	+21	19.8	171	15.5	+23	40.7	198	27.0	+17	49.7	198	30.8	+16	37.6
1	264	49.4	198	30.5		20.4	186	16.1		40.8	213	28.9		49.9	213	32.9		37.7
2	279	51.8	213	29.8		21.0	201	16.7		41.0	228	30.8		50.0	228	35.1		37.7
3	294	54.3	228	29.0		21.6	216	17.3		41.1	243	32.7		50.2	243	37.2		37.8
4	309	56.8	243	28.2		22.2	231	17.9		41.3	258	34.5		50.3	258	39.4		37.9
5	324	59.2	258	27.4	+21	22.7	246	18.5	+23	41.4	273	36.4	+17	50.5	273	41.5	+16	38.0
6	340	01.7	273	26.6	+21	23.3	261	19.1	+23	41.6	288	38.3	+17	50.6	288	43.7	+16	38.0
7	355	04.2	288	25.9		23.9	276	19.7		41.7	303	40.2		50.7	303	45.8		38.1
8	10	06.6	303	25.1		24.5	291	20.3		41.9	318	42.0		50.9	318	48.0		38.2
9	25	09.1	318	24.3		25.1	306	21.0		42.0	333	43.9		51.0	333	50.1		38.3
10	40	11.6	333	23.5		25.7	321	21.6		42.2	348	45.8		51.2	348	52.3		38.3
11	55	14.0	348	22.8	+21	26.2	336	22.2	+23	42.3	3	47.7	+17	51.3	3	54.4	+16	38.4
12	70	16.5	3	22.0	+21	26.8	351	22.8	+23	42.5	18	49.5	+17	51.5	18	56.6	+16	38.5
13	85	19.0	18	21.2		27.4	6	23.4		42.6	33	51.4		51.6	33	58.7		38.6
14	100	21.4	33	20.4		28.0	21	24.0		42.8	48	53.3		51.8	49	00.9		38.7
15	115	23.9	48	19.6		28.5	36	24.6		42.9	63	55.2		51.9	64	03.0		38.7
16	130	26.3	63	18.9		29.1	51	25.2		43.1	78	57.0		52.0	79	05.2		38.8
17	145	28.8	78	18.1	+21	29.7	66	25.8	+23	43.2	93	58.9	+17	52.2	94	07.3	+16	38.9
18	160	31.3	93	17.3	+21	30.2	81	26.5	+23	43.4	109	00.8	+17	52.3	109	09.5	+16	39.0
19	175	33.7	108	16.5		30.8	96	27.1		43.5	124	02.7		52.5	124	11.6		39.0
20	190	36.2	123	15.7		31.4	111	27.7		43.7	139	04.5		52.6	139	13.8		39.1
21	205	38.7	138	14.9		31.9	126	28.3		43.8	154	06.4		52.8	154	15.9		39.2
22	220	41.1	153	14.2		32.5	141	28.9		44.0	169	08.3		52.9	169	18.1		39.3
23	235	43.6	168	13.4		33.1	156	29.5		44.1	184	10.2		53.1	184	20.2		39.3
24	250	46.1	183	12.6	+21	33.6	171	30.1	+23	44.3	199	12.0	+17	53.2	199	22.4	+16	39.4
Dif	—		-8 +6				+6 +1				+19 +1				+21 +1			

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15'8 PMG: 11 ^h 58 ^m 0			Edad: 28 ^d 8 PHE { 4 ^h : 60'8 12 ^h : 60'9 20 ^h : 61'0 R°: 63 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m		
0	180	31.0	+22	11.8	187	21.1	+17	07.8	60 N	21 10	22 36	** **	3 27 34	20 53 82		
1	195	30.9		12.1	201	45.5		16.5	58	20 51	22 00	** **	38 37	39 79		
2	210	30.8		12.4	216	09.9		25.1	56	36	21 35	** **	48 40	27 78		
3	225	30.7		12.8	230	34.2		33.6	54	23	21 15	22 43	3 57 41	16 77		
4	240	30.6		13.1	244	58.4		41.9	52	12	20 59	22 10	4 05 43	20 07 75		
5	255	30.5	+22	13.4	259	22.5	+17	50.1	50	20 02	20 45	21 46	4 12 45	19 58 75		
6	270	30.4	+22	13.7	273	46.5	+17	58.2	45	19 41	20 17	21 05	4 28 47	19 41 72		
7	285	30.3		14.0	288	10.4	+18	06.2	40	24	19 56	20 37	40 50	26 71		
8	300	30.2		14.3	302	34.3		14.0	35	19 09	39	20 15	4 51 52	14 69		
9	315	30.1		14.7	316	58.1		21.8	30	18 57	24	19 57	5 01 54	19 03 68		
10	330	30.0		15.0	331	21.8		29.4	20	36	19 01	29	17 57	18 45 66		
11	345	29.9	+22	15.3	345	45.5	+18	36.9	10 N	18 18	18 41	19 08	5 31 60	18 29 64		
12	0	29.8	+22	15.6	0	09.0	+18	44.2	0	18 02	18 24	18 50	5 45 62	18 14 63		
13	15	29.7		15.9	14	32.5		51.4	10 S	17 45	18 08	34	5 59 63	17 59 61		
14	30	29.6		16.2	28	56.0	+18	58.5	20	28	17 51	19	6 13 67	43 59		
15	45	29.5		16.5	43	19.3	+19	05.4	30	17 08	34	18 03	30 69	25 57		
16	60	29.4		16.9	57	42.6		12.3	35	16 56	24	17 55	40 71	14 56		
17	75	29.3	+22	17.2	72	05.8	+19	18.9	40	16 43	17 13	17 46	6 52 72	17 02 55		
18	90	29.2	+22	17.5	86	29.0	+19	25.5	45	16 27	17 00	17 37	7 05 75	16 48 52		
19	105	29.1		17.8	100	52.0		31.9	50	16 07	16 45	26	21 78	31 50		
20	120	29.0		18.1	115	15.1		38.2	52	15 58	38	21	29 79	23 48		
21	135	28.9		18.4	129	38.0		44.3	54	48	31	16	38 81	14 47		
22	150	28.8		18.7	144	00.9		50.3	56	36	22	11	47 83	16 03 46		
23	165	28.7		19.0	158	23.8	+19	56.1	58	23	13	17 04	7 58 86	15 52 43		
24	180	28.6	+22	19.3	172	46.5	+20	01.8	60 S	15 07	16 02	16 58	8 11 89	15 38 41		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 7 ^h 15 ^m 7		Mag: -3.9 PMG: 11 ^h 48 ^m			Mag: +1.6 PMG: 12 ^h 33 ^m			Mag: -2.0 PMG: 10 ^h 42 ^m			Mag: +0.2 PMG: 10 ^h 41 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	250	46.1	183	12.6	+21	33.6	171	30.1	+23	199	12.0	+17	53.2	199	22.4	
1	265	48.5	198	11.8		34.2	186	30.7		214	13.9		53.3	214	24.5	
2	280	51.0	213	11.0		34.8	201	31.3		229	15.8		53.5	229	26.7	
3	295	53.5	228	10.2		35.3	216	31.9		244	17.7		53.6	244	28.8	
4	310	55.9	243	09.4		35.9	231	32.6		259	19.5		53.8	259	31.0	
5	325	58.4	258	08.7	+21	36.4	246	33.2	+23	274	21.4	+17	53.9	274	33.1	
6	341	00.8	273	07.9	+21	37.0	261	33.8	+23	289	23.3	+17	54.1	289	35.3	
7	356	03.3	288	07.1		37.6	276	34.4		304	25.2		54.2	304	37.4	
8	11	05.8	303	06.3		38.1	291	35.0		319	27.0		54.4	319	39.6	
9	26	08.2	318	05.5		38.7	306	35.6		334	28.9		54.5	334	41.7	
10	41	10.7	333	04.7		39.2	321	36.2		349	30.8		54.6	349	43.9	
11	56	13.2	348	03.9	+21	39.8	336	36.8	+23	4	32.7	+17	54.8	4	46.0	
12	71	15.6	3	03.1	+21	40.3	351	37.4	+23	19	34.6	+17	54.9	19	48.1	
13	86	18.1	18	02.3		40.9	6	38.1		34	36.4		55.1	34	50.3	
14	101	20.6	33	01.6		41.4	21	38.7		49	38.3		55.2	49	52.4	
15	116	23.0	48	00.8		42.0	36	39.3		64	40.2		55.4	64	54.6	
16	131	25.5	63	00.0		42.5	51	39.9		79	42.1		55.5	79	56.7	
17	146	28.0	77	59.2	+21	43.1	66	40.5	+23	94	43.9	+17	55.6	94	58.9	
18	161	30.4	92	58.4	+21	43.6	81	41.1	+23	109	45.8	+17	55.8	110	01.0	
19	176	32.9	107	57.6		44.1	96	41.7		124	47.7		55.9	125	03.2	
20	191	35.3	122	56.8		44.7	111	42.3		139	49.6		56.1	140	05.3	
21	206	37.8	137	56.0		45.2	126	42.9		154	51.4		56.2	155	07.5	
22	221	40.3	152	55.2		45.8	141	43.6		169	53.3		56.4	170	09.6	
23	236	42.7	167	54.4		46.3	156	44.2		184	55.2		56.5	185	11.8	
24	251	45.2	182	53.6	+21	46.8	171	44.8	+23	199	57.1	+17	56.6	200	13.9	
Dif	—		-8			+6	+6			+1	+19		+1	+21		+1

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8 PMG: 11 ^h 58 ^m 2			Edad: 0 ^d 5 SD: 16 ^h 6 PMG: 13 ^h 02 ^m	PHE { 4 ^h : 61 ^h 0 12 ^h : 61 ^h 1 20 ^h : 61 ^h 1 R ^o : 63 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m
0	180	28.6	+22	19.3	172	46.5	+20	01.8	60 N	** **	1 20	2 46	4 01	49	22 15 64
1	195	28.5		19.6	187	09.3	38	07.3	58	** **	1 56	3 04	15 51		21 58 64
2	210	28.4		19.9	201	31.9	36	12.7	56	** **	2 21	20	28 52		45 64
3	225	28.3		20.2	215	54.6	37	18.0	54	1 13	41	33	38 54		33 64
4	240	28.2		20.5	230	17.1	35	23.1	52	1 46	2 57	44	48 55		22 64
5	255	28.1	+22	20.8	244	39.6	35	+20 28.0	50	2 10	3 11	3 54	4 57	55	21 13 64
6	270	28.0	+22	21.1	259	02.1	35	+20 32.8	45	2 51	3 39	4 15	5 15	57	20 53 64
7	285	27.9		21.4	273	24.5	34	37.5	40	3 19	4 00	32	30 59		37 64
8	300	27.8		21.7	287	46.9	34	42.0	35	41	17	47	43 60		23 64
9	315	27.6		22.0	302	09.3	34	46.3	30	3 59	32	4 59	5 55	60	20 11 64
10	330	27.5		22.3	316	31.6	33	50.5	20	4 27	4 55	5 20	6 14	61	19 51 64
11	345	27.4	+22	22.6	330	53.8	32	+20 54.5	10 N	4 48	5 15	5 38	6 31	62	19 33 64
12	0	27.3	+22	22.9	345	16.1	33	+20 58.4	0	5 06	5 32	5 55	6 47	63	19 17 63
13	15	27.2		23.2	359	38.2	31	+21 02.1	10 S	22	5 48	6 11	7 02	65	19 00 63
14	30	27.1		23.5	14	00.4	32	05.6	20	38	6 05	29	20 65		18 42 63
15	45	27.0		23.8	28	22.5	31	09.0	30	5 53	23	6 49	39 67		22 63
16	60	26.9		24.1	42	44.7	32	12.3	35	6 01	33	7 01	7 51	67	18 10 62
17	75	26.8	+22	24.4	57	06.7	30	+21 15.4	40	6 10	6 44	7 14	8 04	68	17 57 62
18	90	26.7	+22	24.7	71	28.8	31	+21 18.3	45	6 20	6 56	7 30	8 20	68	17 40 62
19	105	26.6		25.0	85	50.8	30	21.0	50	30	7 11	49	39 70		21 61
20	120	26.5		25.3	100	12.8	30	23.6	52	35	18	7 58	48 71		11 61
21	135	26.4		25.6	114	34.8	30	26.1	54	40	26	8 09	8 59	71	17 01 60
22	150	26.3		25.9	128	56.8	30	28.3	56	46	34	20	9 10	72	16 49 59
23	165	26.2		26.2	143	18.8	30	30.4	58	52	44	34	24 72		35 59
24	180	26.0	+22	26.5	157	40.8	30	+21 32.4	60 S	6 59	7 55	8 50	9 40	73	16 19 58

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG 7 ^h 11 ^m 8		Mag: -4.0 PMG: 11 ^h 49 ^m		Mag: +1.6 PMG: 12 ^h 33 ^m		Mag: -2.0 PMG: 10 ^h 39 ^m		Mag: +0.2 PMG: 10 ^h 38 ^m						
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	251	45.2	182	53.6	+21 46.8	171	44.8	+23 47.7	199	57.1	+17 56.6				
1	266	47.7	197	52.8	47.4	186	45.4	47.8	214	58.9	56.8				
2	281	50.1	212	52.0	47.9	201	46.0	47.9	230	00.8	56.9				
3	296	52.6	227	51.2	48.5	216	46.6	48.1	245	02.7	57.1				
4	311	55.1	242	50.4	49.0	231	47.2	48.2	260	04.6	57.2				
5	326	57.5	257	49.7	+21 49.5	246	47.8	+23 48.3	275	06.4	+17 57.4				
6	342	00.0	272	48.9	+21 50.1	261	48.5	+23 48.5	290	08.3	+17 57.5				
7	357	02.4	287	48.1	50.6	276	49.1	48.6	305	10.2	57.6				
8	12	04.9	302	47.3	51.1	291	49.7	48.7	320	12.1	57.8				
9	27	07.4	317	46.5	51.6	306	50.3	48.9	335	14.0	57.9				
10	42	09.8	332	45.7	52.2	321	50.9	49.0	350	15.8	58.1				
11	57	12.3	347	44.9	+21 52.7	336	51.5	+23 49.1	5	17.7	+17 58.2				
12	72	14.8	2	44.1	+21 53.2	351	52.1	+23 49.3	20	19.6	+17 58.4				
13	87	17.2	17	43.3	53.8	6	52.7	49.4	35	21.5	58.5				
14	102	19.7	32	42.5	54.3	21	53.3	49.5	50	23.3	58.6				
15	117	22.2	47	41.7	54.8	36	54.0	49.7	65	25.2	58.8				
16	132	24.6	62	40.9	55.3	51	54.6	49.8	80	27.1	58.9				
17	147	27.1	77	40.1	+21 55.8	66	55.2	+23 49.9	95	29.0	+17 59.1				
18	162	29.6	92	39.3	+21 56.4	81	55.8	+23 50.1	110	30.8	+17 59.2				
19	177	32.0	107	38.5	56.9	96	56.4	50.2	125	32.7	59.4				
20	192	34.5	122	37.7	57.4	111	57.0	50.3	140	34.6	59.5				
21	207	36.9	137	36.9	57.9	126	57.6	50.4	155	36.5	59.6				
22	222	39.4	152	36.0	58.4	141	58.2	50.6	170	38.4	59.8				
23	237	41.9	167	35.2	58.9	156	58.8	50.7	185	40.2	+17 59.9				
24	252	44.3	182	34.4	+21 59.5	171	59.5	+23 50.8	200	42.1	+18 00.1				
Dif	—		-8		+5	+6		+1	+19		+1	+22		+1	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 11 ^h 58 ^m 4			Edad: 1 ^d 5 PHE { 4 ^h : 61'0 12 ^h : 60'9 20 ^h : 60'8 R°: 62 ^m SD: 16'6 PMG: 14 ^h 05 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	180	26.0	+22 26.5	157	40.8	+21 32.4	18	60 N	21 13	22 42	** **	4 50 67	23 19 44	
1	195	25.9	26.8	172	02.7	34.2	18	58	20 54	22 04	** **	5 06 67	23 02 47	
2	210	25.8	27.0	186	24.7	35.8	16	56	39	21 38	** **	20 67	22 49 48	
3	225	25.7	27.3	200	46.6	37.2	14	54	25	18	22 49	32 67	37 50	
4	240	25.6	27.6	215	08.6	38.5	13	52	14	21 01	22 14	43 66	26 51	
5	255	25.5	+22 27.9	229	30.5	+21 39.7	12	50	20 03	20 47	21 49	5 52 67	22 17 52	
6	270	25.4	+22 28.2	243	52.4	+21 40.6	9	45	19 42	20 19	21 07	6 12 66	21 57 54	
7	285	25.3	28.5	258	14.4	41.4	8	40	25	19 57	20 38	29 65	41 55	
8	300	25.2	28.8	272	36.4	42.1	7	35	19 11	40	20 16	43 64	27 57	
9	315	25.1	29.0	286	58.3	42.5	4	30	18 58	25	19 58	6 55 64	21 15 58	
10	330	25.0	29.3	301	20.3	42.8	3	20	37	19 01	30	7 15 64	20 55 59	
11	345	24.9	+22 29.6	315	42.3	+21 43.0	2	10 N	18 19	18 42	19 09	7 33 64	20 37 60	
12	0	24.7	+22 29.9	330	04.3	+21 43.0	0	0	18 02	18 24	18 50	7 50 63	20 20 62	
13	15	24.6	30.2	344	26.3	42.8	2	10 S	17 45	18 08	34	8 07 62	20 03 63	
14	30	24.5	30.5	358	48.4	42.4	4	20	28	17 51	19	25 61	19 45 65	
15	45	24.4	30.7	13	10.5	41.9	5	30	17 07	33	18 03	46 61	25 66	
16	60	24.3	31.0	27	32.6	41.3	6	35	16 55	23	17 55	8 58 60	19 12 67	
17	75	24.2	+22 31.3	41	54.7	+21 40.4	9	40	16 42	17 12	17 46	9 12 60	18 59 67	
18	90	24.1	+22 31.6	56	16.9	+21 39.4	10	45	16 26	16 59	17 36	9 28 59	18 42 69	
19	105	24.0	31.8	70	39.0	38.3	11	50	16 06	44	25	49 58	22 70	
20	120	23.9	32.1	85	01.3	37.0	13	52	15 57	37	20	9 59 57	12 71	
21	135	23.8	32.4	99	23.5	35.5	15	54	47	30	15	10 10 56	18 01 72	
22	150	23.6	32.7	113	45.8	33.9	16	56	35	21	09	22 56	17 48 74	
23	165	23.5	33.0	128	08.1	32.1	18	58	21	11	17 03	36 55	34 75	
24	180	23.4	+22 33.2	142	30.5	+21 30.1	20	60 S	15 05	16 01	16 56	10 53 54	17 17 76	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 7 ^h 07 ^m 9		Mag: -4.0 PMG: 11 ^h 50 ^m		Mag: +1.6 PMG: 12 ^h 32 ^m		Mag: -2.0 PMG: 10 ^h 36 ^m		Mag: +0.2 PMG: 10 ^h 34 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	252	44.3	182	34.4	+21 59.5	171	59.5	+23 50.8	200	42.1	+18 00.1	201	05.6	+16 43.1
1	267	46.8	197	33.6	+22 00.0	187	00.1	51.0	215	44.0	00.2	216	07.7	43.1
2	282	49.3	212	32.8	+22 00.5	202	00.7	51.1	230	45.9	00.3	231	09.9	43.2
3	297	51.7	227	32.0	01.0	217	01.3	51.2	245	47.7	00.5	246	12.0	43.3
4	312	54.2	242	31.2	01.5	232	01.9	51.3	260	49.6	00.6	261	14.2	43.4
5	327	56.7	257	30.4	+22 02.0	247	02.5	+23 51.5	275	51.5	+18 00.8	276	16.3	+16 43.4
6	342	59.1	272	29.6	+22 02.5	262	03.1	+23 51.6	290	53.4	+18 00.9	291	18.5	+16 43.5
7	358	01.6	287	28.8	03.0	277	03.7	51.7	305	55.3	01.1	306	20.6	43.6
8	13	04.1	302	28.0	03.5	292	04.4	51.8	320	57.1	01.2	321	22.8	43.7
9	28	06.5	317	27.2	04.0	307	05.0	52.0	335	59.0	01.3	336	24.9	43.7
10	43	09.0	332	26.4	04.5	322	05.6	52.1	351	00.9	01.5	351	27.1	43.8
11	58	11.4	347	25.6	+22 05.0	337	06.2	+23 52.2	6	02.8	+18 01.6	6	29.2	+16 43.9
12	73	13.9	2	24.8	+22 05.5	352	06.8	+23 52.3	21	04.6	+18 01.8	21	31.4	+16 44.0
13	88	16.4	17	24.0	06.0	7	07.4	52.5	36	06.5	01.9	36	33.5	44.0
14	103	18.8	32	23.1	06.5	22	08.0	52.6	51	08.4	02.0	51	35.7	44.1
15	118	21.3	47	22.3	07.0	37	08.6	52.7	66	10.3	02.2	66	37.8	44.2
16	133	23.8	62	21.5	07.5	52	09.2	52.8	81	12.2	02.3	81	40.0	44.3
17	148	26.2	77	20.7	+22 08.0	67	09.9	+23 52.9	96	14.0	+18 02.5	96	42.1	+16 44.3
18	163	28.7	92	19.9	+22 08.5	82	10.5	+23 53.1	111	15.9	+18 02.6	111	44.3	+16 44.4
19	178	31.2	107	19.1	09.0	97	11.1	53.2	126	17.8	02.8	126	46.4	44.5
20	193	33.6	122	18.3	09.5	112	11.7	53.3	141	19.7	02.9	141	48.6	44.6
21	208	36.1	137	17.5	10.0	127	12.3	53.4	156	21.5	03.0	156	50.7	44.6
22	223	38.6	152	16.7	10.5	142	12.9	53.6	171	23.4	03.2	171	52.9	44.7
23	238	41.0	167	15.8	10.9	157	13.5	53.7	186	25.3	03.3	186	55.0	44.8
24	253	43.5	182	15.0	+22 11.4	172	14.1	+23 53.8	201	27.2	+18 03.5	201	57.2	+16 44.9
Dif	—		-8	+5		+6	+1		+19	+1		+22	+1	

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 11 ^h 58 ^m 5				Edad: 2 ^d 5 PHE { 4 ^h : 60 ^h /7 SD: 16 ^h 5 12 ^h : 60 ^h /5 PMG: 15 ^h 07 ^m R ^o : 60 ^m											
	hG ☉		Dec		hG ☾		Dif									
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	m	h m	m
0	180	23.4	+22	33.2	142	30.5	+21	30.1	21	60 N	** **	1 14	2 44	5 57	83	** ** *
1	195	23.3		33.5	156	52.9	34	28.0	23	58	** **	1 53	3 02	6 13	80	23 49 34
2	210	23.2		33.8	171	15.4	35	25.7	24	56	** **	2 19	18	27	78	37 36
3	225	23.1		34.0	185	37.9	35	23.3	26	54	1 08	39	31	39	76	27 38
4	240	23.0		34.3	200	00.5	36	20.7	27	52	1 43	2 56	43	49	75	17 40
5	255	22.9	+22	34.6	214	23.1	36	+21 18.0	29	50	2 08	3 10	3 53	6 59	73	23 09 41
6	270	22.7	+22	34.9	228	45.8	37	+21 15.1	30	45	2 50	3 38	4 15	7 18	71	22 51 44
7	285	22.6		35.1	243	08.5	37	12.1	32	40	3 19	3 59	32	34	69	36 47
8	300	22.5		35.4	257	31.3	38	08.9	34	35	41	4 17	46	47	68	24 49
9	315	22.4		35.7	271	54.1	38	05.5	34	30	3 58	31	4 59	7 59	66	22 13 51
10	330	22.3		35.9	286	17.0	39	+21 02.1	34	20	4 26	4 55	5 20	8 19	64	21 54 54
11	345	22.2	+22	36.2	300	39.9	39	+20 58.4	37	10 N	4 48	5 15	5 38	8 37	62	21 37 57
12	0	22.1	+22	36.5	315	03.0	41	+20 54.6	39	0	5 06	5 32	5 55	8 53	60	21 22 59
13	15	22.0		36.7	329	26.0	40	50.7	39	10 S	23	5 49	6 12	9 09	59	21 06 61
14	30	21.8		37.0	343	49.2	42	46.6	41	20	38	6 06	29	26	57	20 50 63
15	45	21.7		37.2	358	12.4	42	42.4	42	30	5 54	24	6 50	47	54	31 66
16	60	21.6		37.5	12	35.7	43	38.0	44	35	6 02	34	7 02	9 58	53	19 68
17	75	21.5	+22	37.8	26	59.1	44	+20 33.5	45	40	6 11	6 45	7 15	10 12	51	20 06 70
18	90	21.4	+22	38.0	41	22.5	44	+20 28.8	47	45	6 21	6 58	7 31	10 27	49	19 51 73
19	105	21.3		38.3	55	46.0	45	24.0	48	50	32	7 13	7 51	47	46	32 76
20	120	21.2		38.6	70	09.6	46	19.1	49	52	37	20	8 00	10 56	45	23 77
21	135	21.1		38.8	84	33.2	46	14.0	51	54	42	28	11	11 06	44	13 79
22	150	20.9		39.1	98	57.0	48	08.8	52	56	48	36	23	18	41	19 02 81
23	165	20.8		39.3	113	20.8	48	+20 03.4	54	58	6 54	46	37	31	39	18 49 83
24	180	20.7	+22	39.6	127	44.7	49	+19 57.9	55	60 S	7 01	7 57	8 53	11 47	36	18 33 87

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 7 ^h 03 ^m 9		Mag: -4.0 PMG: 11 ^h 52 ^m		Mag: +1.6 PMG: 12 ^h 31 ^m		Mag: -2.0 PMG: 10 ^h 33 ^m		Mag: +0.2 PMG: 10 ^h 31 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	253	43.5	182	15.0	172	14.1	201	27.2	201	57.2
1	268	45.9	197	14.2	187	14.8	216	29.1	216	59.4
2	283	48.4	212	13.4	202	15.4	231	30.9	232	01.5
3	298	50.9	227	12.6	217	16.0	246	32.8	247	03.7
4	313	53.3	242	11.8	232	16.6	261	34.7	262	05.8
5	328	55.8	257	11.0	247	17.2	276	36.6	277	08.0
6	343	58.3	272	10.1	262	17.8	291	38.4	292	10.1
7	359	00.7	287	09.3	277	18.4	306	40.3	307	12.3
8	14	03.2	302	08.5	292	19.0	321	42.2	322	14.4
9	29	05.7	317	07.7	307	19.6	336	44.1	337	16.6
10	44	08.1	332	06.9	322	20.3	351	46.0	352	18.7
11	59	10.6	347	06.1	337	20.9	6 47.8	+18 05.0	7 20.9	+16 45.7
12	74	13.1	2 05.2	+22 17.2	352	21.5	21 49.7	+18 05.1	22 23.0	+16 45.8
13	89	15.5	17 04.4	17.7	7 22.1	55.3	36 51.6	05.3	37 25.2	45.8
14	104	18.0	32 03.6	18.1	22 22.7	55.4	51 53.5	05.4	52 27.3	45.9
15	119	20.4	47 02.8	18.6	37 23.3	55.5	66 55.4	05.6	67 29.5	46.0
16	134	22.9	62 02.0	19.1	52 23.9	55.6	81 57.2	05.7	82 31.6	46.1
17	149	25.4	77 01.1	+22 19.5	67 24.5	+23 55.8	96 59.1	+18 05.8	97 33.8	+16 46.1
18	164	27.8	92 00.3	+22 20.0	82 25.2	+23 55.9	112 01.0	+18 06.0	112 35.9	+16 46.2
19	179	30.3	106 59.5	20.5	97 25.8	56.0	127 02.9	06.1	127 38.1	46.3
20	194	32.8	121 58.7	20.9	112 26.4	56.1	142 04.8	06.3	142 40.2	46.4
21	209	35.2	136 57.9	21.4	127 27.0	56.2	157 06.6	06.4	157 42.4	46.4
22	224	37.7	151 57.0	21.9	142 27.6	56.3	172 08.5	06.5	172 44.6	46.5
23	239	40.2	166 56.2	22.3	157 28.2	56.4	187 10.4	06.7	187 46.7	46.6
24	254	42.6	181 55.4	+22 22.8	172 28.8	+23 56.5	202 12.3	+18 06.8	202 48.9	+16 46.7
Dif	—		-8		+5		+19		+1	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 3 ^d 5	PHE { 4 ^h : 60 ^h 1 12 ^h : 59 ^h 9 20 ^h : 59 ^h 7 R°: 56 ^m										
	PMG: 11 ^h 58 ^m 7					SD: 16 ^h 4			PMG: 16 ^h 07 ^m						
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	h m	m
0	180	20.7	+22 39.6	127	44.7	+19 57.9	56	60 N	21 16	22 48	** **	7 20	88	0 03	30
1	195	20.6	39.8	142	08.7	50	56	58	20 57	22 08	** **	33	85	** **	**
2	210	20.5	40.1	156	32.7	50	57	56	41	21 41	** **	45	82	** **	**
3	225	20.4	40.4	170	56.8	51	59	54	27	20	22 54	7 55	80	** **	**
4	240	20.3	40.6	185	21.1	53	60	52	16	21 03	22 17	8 04	78	23 57	31
5	255	20.1	+22 40.9	199	45.4	53	62	50	20 05	20 49	21 52	8 12	77	23 50	33
6	270	20.0	+22 41.1	214	09.8	54	62	45	19 44	20 20	21 09	8 29	73	23 35	37
7	285	19.9	41.4	228	34.2	54	64	40	26	19 59	20 40	43	70	23 40	
8	300	19.8	41.6	242	58.8	56	65	35	19 12	41	20 17	8 55	68	13	42
9	315	19.7	41.9	257	23.5	57	67	30	18 59	26	19 59	9 05	66	23 04	44
10	330	19.6	42.1	271	48.2	57	67	20	38	19 02	31	23	63	22 48	48
11	345	19.4	+22 42.4	286	13.0	58	69	10 N	18 19	18 42	19 09	9 39	59	22 34	51
12	0	19.3	+22 42.6	300	38.0	60	70	0	18 02	18 25	18 51	9 53	57	22 21	54
13	15	19.2	42.9	315	03.0	60	71	10 S	17 45	18 08	34	10 08	53	22 07	58
14	30	19.1	43.1	329	28.1	61	73	20	28	17 51	19	23	51	21 53	61
15	45	19.0	43.4	343	53.3	62	73	30	17 07	33	18 03	41	47	37	65
16	60	18.9	43.6	358	18.6	63	75	35	16 55	23	17 55	10 51	45	27	68
17	75	18.7	+22 43.8	12	43.9	63	75	40	16 41	17 12	17 46	11 03	43	21 16	70
18	90	18.6	+22 44.1	27	09.4	65	77	45	16 25	16 59	17 36	11 16	40	21 04	73
19	105	18.5	44.3	41	35.0	66	78	50	16 05	43	25	33	36	20 48	77
20	120	18.4	44.6	56	00.6	66	79	52	15 56	36	20	41	35	40	79
21	135	18.3	44.8	70	26.4	68	80	54	45	28	14	50	32	32	81
22	150	18.2	45.1	84	52.3	69	81	56	33	20	08	11 59	31	23	83
23	165	18.0	45.3	99	18.2	69	82	58	19	16 10	17 02	12 10	28	12	87
24	180	17.9	+22 45.5	113	44.2	70	83	60 S	15 03	15 59	16 55	12 23	25	20 00	90

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO				
	PMG: 7 ^h 00 ^m 0		Mag: -4.0 PMG: 11 ^h 53 ^m		Mag: +1.6 PMG: 12 ^h 30 ^m		Mag: -2.0 PMG: 10 ^h 30 ^m		Mag: +0.2 PMG: 10 ^h 27 ^m				
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'			
0	254	42.6	181	55.4	+22 22.8	172	28.8	+23 56.5	202	12.3	+18 06.8		
1	269	45.1	196	54.6	23.2	187	29.4	56.7	217	14.2	07.0		
2	284	47.6	211	53.8	23.7	202	30.1	56.8	232	16.0	07.1		
3	299	50.0	226	52.9	24.2	217	30.7	56.9	247	17.9	07.2		
4	314	52.5	241	52.1	24.6	232	31.3	57.0	262	19.8	07.4		
5	329	54.9	256	51.3	+22 25.1	247	31.9	+23 57.1	277	21.7	+18 07.5		
6	344	57.4	271	50.5	+22 25.5	262	32.5	+23 57.2	292	23.5	+18 07.7		
7	359	59.9	286	49.6	26.0	277	33.1	57.3	307	25.4	07.8		
8	15	02.3	301	48.8	26.4	292	33.7	57.4	322	27.3	07.9		
9	30	04.8	316	48.0	26.9	307	34.4	57.5	337	29.2	08.1		
10	45	07.3	331	47.2	27.3	322	35.0	57.6	352	31.1	08.2		
11	60	09.7	346	46.3	+22 27.8	337	35.6	+23 57.7	7	32.9	+18 08.4		
12	75	12.2	1	45.5	+22 28.2	352	36.2	+23 57.8	22	34.8	+18 08.5		
13	90	14.7	16	44.7	28.7	7	36.8	57.9	37	36.7	08.6		
14	105	17.1	31	43.9	29.1	22	37.4	58.0	52	38.6	08.8		
15	120	19.6	46	43.0	29.6	37	38.0	58.2	67	40.5	08.9		
16	135	22.1	61	42.2	30.0	52	38.6	58.3	82	42.4	09.0		
17	150	24.5	76	41.4	+22 30.4	67	39.3	+23 58.4	97	44.2	+18 09.2		
18	165	27.0	91	40.5	+22 30.9	82	39.9	+23 58.5	112	46.1	+18 09.3		
19	180	29.4	106	39.7	31.3	97	40.5	58.6	127	48.0	09.5		
20	195	31.9	121	38.9	31.8	112	41.1	58.7	142	49.9	09.6		
21	210	34.4	136	38.1	32.2	127	41.7	58.8	157	51.8	09.7		
22	225	36.8	151	37.2	32.6	142	42.3	58.9	172	53.6	09.9		
23	240	39.3	166	36.4	33.1	157	42.9	59.0	187	55.5	10.0		
24	255	41.8	181	35.6	+22 33.5	172	43.5	+23 59.1	202	57.4	+18 10.2		
Dif	—		-8	+4		+6	+1		+19	+1		+22	+1

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15/8 PMG: 11 ^h 58 ^m 9				Edad: 4 ^d 5 PHE { 4 ^h : 59/4 12 ^h : 59/2 20 ^h : 58/9 PMG: 17 ^h 03 ^m R°: 51 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	180	17.9	+22	45.5	113	44.2	+17	09.4	60 N	** **	1 09	2 41	8 48	89	0 33	21		
1	195	17.8		45.8	128	10.4	+17	01.0	58	** **	1 50	3 01	8 58	86	23	24		
2	210	17.7		46.0	142	36.6	+16	52.5	56	** **	2 16	16	9 07	83	13	27		
3	225	17.6		46.3	157	02.9		43.9	54	1 03	37	30	15	80	0 05	29		
4	240	17.5		46.5	171	29.3		35.3	52	1 40	2 54	42	22	78	** **	**		
5	255	17.3	+22	46.7	185	55.9	+16	26.5	50	2 06	3 09	3 52	9 29	76	** **	**		
6	270	17.2	+22	47.0	200	22.5	+16	17.6	45	2 48	3 37	4 14	9 42	72	** **	**		
7	285	17.1		47.2	214	49.2	+16	08.6	40	3 18	3 59	31	9 53	69	** **	**		
8	300	17.0		47.4	229	16.0	+15	59.6	35	40	4 16	46	10 03	66	23	55		
9	315	16.9		47.7	243	42.9		50.4	30	3 58	31	4 58	11 64		48	40		
10	330	16.8		47.9	258	09.8		41.2	20	4 26	4 55	5 20	26	59	36	44		
11	345	16.6	+22	48.1	272	36.9	+15	31.9	10 N	4 48	5 15	5 38	10 38	56	23	25		
12	0	16.5	+22	48.4	287	04.1	+15	22.5	0	5 07	5 33	5 55	10 50	52	23	15		
13	15	16.4		48.6	301	31.4		13.0	10 S	23	5 49	6 12	11 01	50	23	05		
14	30	16.3		48.8	315	58.7	+15	03.5	20	39	6 06	30	14	46	22	54		
15	45	16.2		49.1	330	26.2	+14	53.9	30	5 55	24	6 51	28	42	42	62		
16	60	16.0		49.3	344	53.7		44.1	35	6 03	35	7 03	36	40	35	65		
17	75	15.9	+22	49.5	359	21.4	+14	34.4	40	6 12	6 46	7 16	11 46	36	22	26		
18	90	15.8	+22	49.8	13	49.1	+14	24.5	45	6 22	6 59	7 33	11 56	34	22	17		
19	105	15.7		50.0	28	16.9		14.6	50	33	7 15	7 53	12 09	30	22	05		
20	120	15.6		50.2	42	44.9	+14	04.6	52	38	22	8 02	16	27	21	59		
21	135	15.4		50.4	57	12.9	+13	54.5	54	44	30	13	22	26	53	80		
22	150	15.3		50.7	71	41.0		44.3	56	50	38	25	30	23	46	82		
23	165	15.2		50.9	86	09.2		34.1	58	6 56	48	39	38	21	39	85		
24	180	15.1	+22	51.1	100	37.4	+13	23.9	60 S	7 03	7 59	8 55	12 48	17	21	30		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 6 ^h 56 ^m 1		Mag: -4.0 PMG: 11 ^h 54 ^m				Mag: +1.6 PMG: 12 ^h 29 ^m				Mag: -2.0 PMG: 10 ^h 27 ^m				Mag: +0.2 PMG: 10 ^h 24 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	255	41.8	181	35.6	+22	33.5	172	43.5	+23	59.1	202	57.4	+18	10.2	203	40.5	+16	48.4
1	270	44.2	196	34.7		33.9	187	44.2		59.2	217	59.3		10.3	218	42.7		48.5
2	285	46.7	211	33.9		34.4	202	44.8		59.3	233	01.2		10.4	233	44.9		48.6
3	300	49.2	226	33.1		34.8	217	45.4		59.4	248	03.0		10.6	248	47.0		48.7
4	315	51.6	241	32.2		35.2	232	46.0		59.5	263	04.9		10.7	263	49.2		48.7
5	330	54.1	256	31.4	+22	35.7	247	46.6	+23	59.6	278	06.8	+18	10.8	278	51.3	+16	48.8
6	345	56.5	271	30.6	+22	36.1	262	47.2	+23	59.7	293	08.7	+18	11.0	293	53.5	+16	48.9
7	0	59.0	286	29.7		36.5	277	47.8		59.8	308	10.6		11.1	308	55.6		48.9
8	16	01.5	301	28.9		36.9	292	48.5	+23	59.9	323	12.4		11.3	323	57.8		49.0
9	31	03.9	316	28.1		37.4	307	49.1	+24	00.0	338	14.3		11.4	338	59.9		49.1
10	46	06.4	331	27.2		37.8	322	49.7	+24	00.1	353	16.2		11.5	354	02.1		49.2
11	61	08.9	346	26.4	+22	38.2	337	50.3	+24	00.2	8	18.1	+18	11.7	9	04.2	+16	49.2
12	76	11.3	1	25.6	+22	38.6	352	50.9	+24	00.3	23	20.0	+18	11.8	24	06.4	+16	49.3
13	91	13.8	16	24.7		39.0	7	51.5		00.4	38	21.8		12.0	39	08.6		49.4
14	106	16.3	31	23.9		39.5	22	52.1		00.5	53	23.7		12.1	54	10.7		49.5
15	121	18.7	46	23.1		39.9	37	52.8		00.6	68	25.6		12.2	69	12.9		49.5
16	136	21.2	61	22.2		40.3	52	53.4		00.7	83	27.5		12.4	84	15.0		49.6
17	151	23.7	76	21.4	+22	40.7	67	54.0	+24	00.7	98	29.4	+18	12.5	99	17.2	+16	49.7
18	166	26.1	91	20.6	+22	41.1	82	54.6	+24	00.8	113	31.3	+18	12.6	114	19.3	+16	49.8
19	181	28.6	106	19.7		41.5	97	55.2		00.9	128	33.1		12.8	129	21.5		49.8
20	196	31.0	121	18.9		42.0	112	55.8		01.0	143	35.0		12.9	144	23.6		49.9
21	211	33.5	136	18.1		42.4	127	56.4		01.1	158	36.9		13.1	159	25.8		50.0
22	226	36.0	151	17.2		42.8	142	57.0		01.2	173	38.8		13.2	174	27.9		50.0
23	241	38.4	166	16.4		43.2	157	57.7		01.3	188	40.7		13.3	189	30.1		50.1
24	256	40.9	181	15.5	+22	43.6	172	58.3	+24	01.4	203	42.5	+18	13.5	204	32.3	+16	50.2
Dif	—		-8 +4				+6 +1				+19 +1				+22 +1			

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8			Edad: 5 ^d 5	PHE { 4 ^h : 58'6 12 ^h : 58'4 20 ^h : 58'1										
	PMG: 11 ^h 59 ^m 1					SD: 16'0			PMG: 17 ^h 54 ^m		Rº: 49 ^m				
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	Rº	Hora	Rº
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m		h m m	
0	180	15.1	+22 51.1	100	37.4	+13 23.9		60 N	21 19	22 54	** **	10 17 86		0 54 16	
1	195	15.0	51.3	115	05.8 ⁹⁴	13.5 ¹⁰⁴		58	20 59	22 11	** **	24 83		47 18	
2	210	14.8	51.5	129	34.3 ⁹⁵	+13 03.1 ¹⁰⁴		56	43	21 44	** **	30 80		40 21	
3	225	14.7	51.8	144	02.8 ⁹⁵	+12 52.7 ¹⁰⁴		54	29	22	23 00	35 78		34 23	
4	240	14.6	52.0	158	31.4 ⁹⁶	42.1 ¹⁰⁶		52	17	21 05	22 20	40 76		28 25	
5	255	14.5	+22 52.2	173	00.1 ⁹⁷	+12 31.6 ¹⁰⁵		50	20 07	20 51	21 54	10 45 74		0 23 27	
6	270	14.4	+22 52.4	187	29.0 ⁹⁹	+12 20.9 ¹⁰⁷		45	19 45	20 22	21 11	10 54 70		0 12 31	
7	285	14.2	52.7	201	57.8 ⁹⁸	+12 10.2 ¹⁰⁷		40	27	20 00	20 41	11 02 67		0 03 34	
8	300	14.1	52.9	216	26.8 ¹⁰⁰	+11 59.5 ¹⁰⁷		35	13	19 42	19	09 63	** **	** **	
9	315	14.0	53.1	230	55.9 ¹⁰¹	48.7 ¹⁰⁸		30	19 00	27	20 00	15 61	** **	** **	
10	330	13.9	53.3	245	25.0 ¹⁰¹	37.8 ¹⁰⁹		20	18 38	19 03	19 32	25 57	** **	** **	
11	345	13.8	+22 53.5	259	54.2 ¹⁰²	+11 26.9 ¹⁰⁹		10 N	18 20	18 43	19 10	11 34 53	** **	** **	
12	0	13.6	+22 53.7	274	23.5 ¹⁰³	+11 16.0 ¹⁰⁹		0	18 03	18 25	18 51	11 42 50	** **	** **	
13	15	13.5	53.9	288	52.9 ¹⁰⁴	+11 05.0 ¹¹⁰		10 S	17 46	18 08	35	11 51 45	** **	** **	
14	30	13.4	54.2	303	22.4 ¹⁰⁵	+10 53.9 ¹¹¹		20	28	17 52	19	12 00 42	23 52	56	
15	45	13.3	54.4	317	51.9 ¹⁰⁵	42.8 ¹¹¹		30	17 07	33	18 03	10 37	44 60		
16	60	13.2	54.6	332	21.6 ¹⁰⁷	31.7 ¹¹¹		35	16 55	23	17 54	16 35	40 62		
17	75	13.0	+22 54.8	346	51.3 ¹⁰⁷	+10 20.5 ¹¹²		40	16 41	17 11	17 45	12 22 32	23 34	65	
18	90	12.9	+22 55.0	1	21.0 ¹⁰⁷	+10 09.3 ¹¹²		45	16 25	16 58	17 35	12 30 29	23 28	69	
19	105	12.8	55.2	15	50.9 ¹⁰⁹	+9 58.0 ¹¹³		50	16 05	43	24	39 25	20 73		
20	120	12.7	55.4	30	20.8 ¹⁰⁹	46.7 ¹¹³		52	15 55	36	19	43 23	17 74		
21	135	12.5	55.6	44	50.8 ¹¹⁰	35.3 ¹¹⁴		54	44	28	14	48 21	13 77		
22	150	12.4	55.8	59	20.9 ¹¹¹	24.0 ¹¹³		56	32	19	08	53 19	08 80		
23	165	12.3	56.1	73	51.1 ¹¹²	12.5 ¹¹⁵		58	18	16 09	17 01	12 59 16	23 04	82	
24	180	12.2	+22 56.3	88	21.3 ¹¹²	+9 01.1 ¹¹⁴		60 S	15 01	15 58	16 54	13 05 14	22 58	85	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 6 ^h 52 ^m 1		Mag: -4.0 PMG: 11 ^h 56 ^m		Mag: +1.6 PMG: 12 ^h 28 ^m		Mag: -2.0 PMG: 10 ^h 24 ^m		Mag: +0.2 PMG: 10 ^h 20 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	256	40.9	181 15.5	+22 43.6	172 58.3	+24 01.4	203 42.5	+18 13.5	204 32.3	+16 50.2
1	271	43.4	196 14.7	44.0	187 58.9	01.5	218 44.4	13.6	219 34.4	50.3
2	286	45.8	211 13.9	44.4	202 59.5	01.6	233 46.3	13.7	234 36.6	50.3
3	301	48.3	226 13.0	44.8	218 00.1	01.7	248 48.2	13.9	249 38.7	50.4
4	316	50.8	241 12.2	45.2	233 00.7	01.8	263 50.1	14.0	264 40.9	50.5
5	331	53.2	256 11.3	+22 45.6	248 01.3	+24 01.9	278 52.0	+18 14.2	279 43.0	+16 50.6
6	346	55.7	271 10.5	+22 46.0	263 02.0	+24 02.0	293 53.8	+18 14.3	294 45.2	+16 50.6
7	1	58.2	286 09.7	46.4	278 02.6	02.0	308 55.7	14.4	309 47.3	50.7
8	17	00.6	301 08.8	46.8	293 03.2	02.1	323 57.6	14.6	324 49.5	50.8
9	32	03.1	316 08.0	47.2	308 03.8	02.2	338 59.5	14.7	339 51.7	50.8
10	47	05.5	331 07.1	47.6	323 04.4	02.3	354 01.4	14.8	354 53.8	50.9
11	62	08.0	346 06.3	+22 48.0	338 05.0	+24 02.4	9 03.2	+18 15.0	9 56.0	+16 51.0
12	77	10.5	1 05.5	+22 48.4	353 05.6	+24 02.5	24 05.1	+18 15.1	24 58.1	+16 51.1
13	92	12.9	16 04.6	48.8	8 06.3	02.6	39 07.0	15.2	40 00.3	51.1
14	107	15.4	31 03.8	49.2	23 06.9	02.7	54 08.9	15.4	55 02.4	51.2
15	122	17.9	46 02.9	49.6	38 07.5	02.7	69 10.8	15.5	70 04.6	51.3
16	137	20.3	61 02.1	49.9	53 08.1	02.8	84 12.7	15.7	85 06.7	51.4
17	152	22.8	76 01.2	+22 50.3	68 08.7	+24 02.9	99 14.5	+18 15.8	100 08.9	+16 51.4
18	167	25.3	91 00.4	+22 50.7	83 09.3	+24 03.0	114 16.4	+18 15.9	115 11.1	+16 51.5
19	182	27.7	105 59.6	51.1	98 10.0	03.1	129 18.3	16.1	130 13.2	51.6
20	197	30.2	120 58.7	51.5	113 10.6	03.2	144 20.2	16.2	145 15.4	51.6
21	212	32.6	135 57.9	51.9	128 11.2	03.3	159 22.1	16.3	160 17.5	51.7
22	227	35.1	150 57.0	52.2	143 11.8	03.3	174 24.0	16.5	175 19.7	51.8
23	242	37.6	165 56.2	52.6	158 12.4	03.4	189 25.8	16.6	190 21.8	51.9
24	257	40.0	180 55.3	+22 53.0	173 13.0	+24 03.5	204 27.7	+18 16.7	205 24.0	+16 51.9
Dif	—		-8	+4	+6	+1	+19	+1	+22	+1

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna			
	SD: 15 ^h 8 PMG: 11 ^h 59 ^m 3				Edad: 6 ^d 5 PHE SD: 15 ^h 8 PMG: 18 ^h 43 ^m R°: 46 ^m														
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m
0	180	12.2	+22	56.3	88	21.3	+9	01.1	60 N	** **	1 04	2 40	11 43	84	1 10	13			
1	195	12.1		56.5	102	51.6 ¹¹³	+8	49.6 ¹¹⁵	58	** **	1 47	2 59	47	81		05 15			
2	210	11.9		56.7	117	21.9 ¹¹³		38.1 ¹¹⁵	56	** **	2 15	3 15	50	78	1 01	18			
3	225	11.8		56.9	131	52.4 ¹¹⁵		26.5 ¹¹⁶	54	0 59	36	29	53	76	0 57	20			
4	240	11.7		57.1	146	22.9 ¹¹⁵		15.0 ¹¹⁵	52	1 38	2 53	41	56	74	53	22			
5	255	11.6	+22	57.3	160	53.4 ¹¹⁵	+8	03.3 ¹¹⁷	50	2 04	3 07	3 51	11 59	71	0 50	24			
6	270	11.4	+22	57.5	175	24.1 ¹¹⁷	+7	51.7 ¹¹⁶	45	2 47	3 36	4 13	12 04	68	0 43	28			
7	285	11.3		57.7	189	54.8 ¹¹⁷		40.0 ¹¹⁷	40	3 17	3 58	31	09	64	37	31			
8	300	11.2		57.9	204	25.6 ¹¹⁸		28.4 ¹¹⁶	35	40	4 16	46	12	62	32	34			
9	315	11.1		58.1	218	56.4 ¹¹⁸		16.6 ¹¹⁸	30	3 58	31	4 58	16	58	28	36			
10	330	11.0		58.3	233	27.3 ¹¹⁹	+7	04.9 ¹¹⁷	20	4 26	4 55	5 20	22	54	20	40			
11	345	10.8	+22	58.5	247	58.2 ¹¹⁹	+6	53.2 ¹¹⁷	10 N	4 48	5 15	5 38	12 27	50	0 13	44			
12	0	10.7	+22	58.7	262	29.3 ¹²¹	+6	41.4 ¹¹⁸	0	5 07	5 33	5 56	12 32	46	0 06	48			
13	15	10.6		58.9	277	00.3 ¹²⁰		29.6 ¹¹⁸	10 S	24	5 50	6 13	36	43	0 00	51			
14	30	10.5		59.1	291	31.5 ¹²²		17.8 ¹¹⁸	20	39	6 07	31	42	39	** ** *	**			
15	45	10.3		59.3	306	02.7 ¹²²	+6	05.9 ¹¹⁹	30	5 56	25	6 52	47	35	** ** *	**			
16	60	10.2		59.5	320	33.9 ¹²²	+5	54.1 ¹¹⁸	35	6 04	36	7 04	51	32	** ** *	**			
17	75	10.1	+22	59.7	335	05.2 ¹²³	+5	42.2 ¹¹⁹	40	6 13	6 47	7 18	12 54	30	** ** *	**			
18	90	10.0	+22	59.9	349	36.6 ¹²⁴	+5	30.3 ¹¹⁹	45	6 23	7 00	7 34	12 59	26	** ** *	**			
19	105	09.8	+23	00.1	4	08.0 ¹²⁴		18.4 ¹¹⁹	50	35	16	7 54	13 04	23	** ** *	**			
20	120	09.7		00.3	18	39.5 ¹²⁵	+5	06.5 ¹¹⁹	52	40	23	8 04	06	21	** ** *	**			
21	135	09.6		00.4	33	11.0 ¹²⁵	+4	54.6 ¹¹⁹	54	45	31	14	09	19	** ** *	**			
22	150	09.5		00.6	47	42.6 ¹²⁶		42.6 ¹²⁰	56	51	40	27	12	17	** ** *	**			
23	165	09.3		00.8	62	14.2 ¹²⁶		30.7 ¹¹⁹	58	6 58	7 50	41	15	14	** ** *	**			
24	180	09.2	+23	01.0	76	45.9 ¹²⁷	+4	18.8 ¹¹⁹	60 S	7 05	8 01	8 58	13 19	11	** ** *	**			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO				
	PMG 6 ^h 48 ^m 2		Mag: -4.0 PMG: 11 ^h 57 ^m				Mag: +1.6 PMG: 12 ^h 27 ^m				Mag: -2.0 PMG: 10 ^h 21 ^m				Mag: +0.2 PMG: 10 ^h 17 ^m				
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	257	40.0	180	55.3	+22	53.0	173	13.0	+24	03.5	204	27.7	+18	16.7	205	24.0	+16	51.9	
1	272	42.5	195	54.5		53.4	188	13.6		03.6	219	29.6		16.9	220	26.2		52.0	
2	287	45.0	210	53.6		53.8	203	14.3		03.7	234	31.5		17.0	235	28.3		52.1	
3	302	47.4	225	52.8		54.1	218	14.9		03.8	249	33.4		17.2	250	30.5		52.1	
4	317	49.9	240	51.9		54.5	233	15.5		03.8	264	35.3		17.3	265	32.6		52.2	
5	332	52.4	255	51.1	+22	54.9	248	16.1	+24	03.9	279	37.1	+18	17.4	280	34.8	+16	52.3	
6	347	54.8	270	50.2	+22	55.3	263	16.7	+24	04.0	294	39.0	+18	17.6	295	36.9	+16	52.4	
7	2	57.3	285	49.4		55.6	278	17.3		04.1	309	40.9		17.7	310	39.1		52.4	
8	17	59.8	300	48.6		56.0	293	17.9		04.2	324	42.8		17.8	325	41.3		52.5	
9	33	02.2	315	47.7		56.4	308	18.6		04.3	339	44.7		18.0	340	43.4		52.6	
10	48	04.7	330	46.9		56.7	323	19.2		04.3	354	46.6		18.1	355	45.6		52.7	
11	63	07.1	345	46.0	+22	57.1	338	19.8	+24	04.4	9	48.4	+18	18.2	10	47.7	+16	52.7	
12	78	09.6	0	45.2	+22	57.5	353	20.4	+24	04.5	24	50.3	+18	18.4	25	49.9	+16	52.8	
13	93	12.1	15	44.3		57.8	8	21.0		04.6	39	52.2		18.5	40	52.0		52.9	
14	108	14.5	30	43.5		58.2	23	21.6		04.6	54	54.1		18.6	55	54.2		52.9	
15	123	17.0	45	42.6		58.6	38	22.3		04.7	69	56.0		18.8	70	56.3		53.0	
16	138	19.5	60	41.8		58.9	53	22.9		04.8	84	57.9		18.9	85	58.5		53.1	
17	153	21.9	75	40.9	+22	59.3	68	23.5	+24	04.9	99	59.7	+18	19.1	101	00.7	+16	53.2	
18	168	24.4	90	40.1	+22	59.6	83	24.1	+24	05.0	115	01.6	+18	19.2	116	02.8	+16	53.2	
19	183	26.9	105	39.2	+23	00.0	98	24.7		05.0	130	03.5		19.3	131	05.0		53.3	
20	198	29.3	120	38.4	+23	00.4	113	25.3		05.1	145	05.4		19.5	146	07.1		53.4	
21	213	31.8	135	37.5		00.7	128	25.9		05.2	160	07.3		19.6	161	09.3		53.4	
22	228	34.3	150	36.7		01.1	143	26.6		05.3	175	09.2		19.7	176	11.5		53.5	
23	243	36.7	165	35.8		01.4	158	27.2		05.3	190	11.1		19.9	191	13.6		53.6	
24	258	39.2	180	35.0	+23	01.8	173	27.8	+24	05.4	205	12.9	+18	20.0	206	15.8	+16	53.7	
Dif	—		-8		+4		+6		+1		+19		+1		+22		+1		

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'8 PMG: 11 ^h 59 ^m 5			Edad: 7 ^d 5 SD: 15'6 PMG: 19 ^h 29 ^m	PHE { 4 ^h : 57'1 12 ^h : 56'8 20 ^h : 56'6 R°: 45 ^m									
	hG ☉	Dec				hG ☾			Dif	Dec	Dif	Civil	Náutico	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	180	09.2	+23	01.0	76	45.9	+4 18.8	60 N	21 21	22 59	** **	13 07 81	1 23 11	
1	195	09.1		01.2	91	17.6 ¹²⁷	+4 06.8 ¹²⁰	58	21 01	22 14	** **	08 78	20 14	
2	210	09.0		01.4	105	49.4 ¹²⁸	+3 54.8 ¹²⁰	56	20 45	21 46	** **	08 76	19 16	
3	225	08.8		01.6	120	21.2 ¹²⁸	42.8 ¹²⁰	54	31	25	23 04	09 73	17 18	
4	240	08.7		01.8	134	53.1 ¹²⁹	30.9 ¹¹⁹	52	19	21 07	22 23	10 71	15 21	
5	255	08.6	+23	02.0	149	25.0 ¹²⁹	+3 18.9 ¹²⁰	50	20 08	20 52	21 57	13 10 70	1 14 22	
6	270	08.5	+23	02.1	163	56.9 ¹²⁹	+3 06.9 ¹²⁰	45	19 46	20 23	21 12	13 12 65	1 11 26	
7	285	08.3		02.3	178	28.9 ¹³⁰	+2 54.9 ¹²⁰	40	28	20 01	20 43	13 62	08 29	
8	300	08.2		02.5	193	01.0 ¹³¹	42.9 ¹²⁰	35	14	19 43	20	14 59	06 32	
9	315	08.1		02.7	207	33.1 ¹³¹	30.9 ¹²⁰	30	19 01	28	20 01	14 57	04 34	
10	330	08.0		02.9	222	05.2 ¹³¹	18.9 ¹²⁰	20	18 39	19 04	19 33	16 52	1 00 39	
11	345	07.8	+23	03.1	236	37.3 ¹³¹	+2 06.9 ¹²⁰	10 N	18 20	18 43	19 10	13 17 49	0 57 42	
12	0	07.7	+23	03.2	251	09.5 ¹³²	+1 55.0 ¹¹⁹	0	18 03	18 26	18 52	13 18 45	0 54 46	
13	15	07.6		03.4	265	41.8 ¹³³	43.0 ¹²⁰	10 S	17 46	18 09	35	19 42	51 50	
14	30	07.5		03.6	280	14.0 ¹³²	31.0 ¹²⁰	20	28	17 52	19	21 38	48 53	
15	45	07.3		03.8	294	46.3 ¹³³	19.0 ¹²⁰	30	17 07	33	18 03	22 34	44 58	
16	60	07.2		04.0	309	18.7 ¹³⁴	+1 07.0 ¹²⁰	35	16 55	23	17 54	23 31	42 60	
17	75	07.1	+23	04.1	323	51.1 ¹³⁴	+0 55.1 ¹¹⁹	40	16 41	17 11	17 45	13 24 28	0 39 64	
18	90	07.0	+23	04.3	338	23.5 ¹³⁴	+0 43.1 ¹²⁰	45	16 24	16 58	17 35	13 25 25	0 37 66	
19	105	06.8		04.5	352	55.9 ¹³⁴	31.2 ¹¹⁹	50	16 04	42	24	27 21	33 71	
20	120	06.7		04.7	7	28.4 ¹³⁵	19.2 ¹²⁰	52	15 54	35	18	27 20	31 73	
21	135	06.6		04.8	22	00.9 ¹³⁵	+0 07.3 ¹¹⁹	54	44	27	13	28 18	30 74	
22	150	06.5		05.0	36	33.4 ¹³⁵	-0 04.6 ¹¹⁹	56	31	18	07	29 15	28 77	
23	165	06.3		05.2	51	06.0 ¹³⁶	16.5 ¹¹⁹	58	17	16 08	17 00	29 14	26 79	
24	180	06.2	+23	05.4	65	38.5 ¹³⁵	-0 28.4 ¹¹⁹	60 S	15 00	15 57	16 53	13 30 11	0 23 82	
UT	ARIES		VENUS			MARTE			JÚPITER		SATURNO			
	PMG: 6 ^h 44 ^m 3		Mag: -4.0 PMG: 11 ^h 58 ^m			Mag: +1.6 PMG: 12 ^h 26 ^m			Mag: -2.1 PMG: 10 ^h 18 ^m		Mag: +0.2 PMG: 10 ^h 13 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	258	39.2	180	35.0	+23	01.8	173	27.8	+24	05.4	205	12.9	+18	20.0
1	273	41.6	195	34.1		02.1	188	28.4		05.5	220	14.8		20.1
2	288	44.1	210	33.2		02.5	203	29.0		05.6	235	16.7		20.3
3	303	46.6	225	32.4		02.8	218	29.6		05.6	250	18.6		20.4
4	318	49.0	240	31.5		03.2	233	30.3		05.7	265	20.5		20.5
5	333	51.5	255	30.7	+23	03.5	248	30.9	+24	05.8	280	22.4	+18	20.7
6	348	54.0	270	29.8	+23	03.9	263	31.5	+24	05.9	295	24.2	+18	20.8
7	3	56.4	285	29.0		04.2	278	32.1		05.9	310	26.1		20.9
8	18	58.9	300	28.1		04.6	293	32.7		06.0	325	28.0		21.1
9	34	01.4	315	27.3		04.9	308	33.3		06.1	340	29.9		21.2
10	49	03.8	330	26.4		05.2	323	34.0		06.1	355	31.8		21.3
11	64	06.3	345	25.6	+23	05.6	338	34.6	+24	06.2	10	33.7	+18	21.5
12	79	08.7	0	24.7	+23	05.9	353	35.2	+24	06.3	25	35.6	+18	21.6
13	94	11.2	15	23.8		06.3	8	35.8		06.4	40	37.4		21.7
14	109	13.7	30	23.0		06.6	23	36.4		06.4	55	39.3		21.9
15	124	16.1	45	22.1		06.9	38	37.0		06.5	70	41.2		22.0
16	139	18.6	60	21.3		07.3	53	37.7		06.6	85	43.1		22.1
17	154	21.1	75	20.4	+23	07.6	68	38.3	+24	06.6	100	45.0	+18	22.3
18	169	23.5	90	19.6	+23	07.9	83	38.9	+24	06.7	115	46.9	+18	22.4
19	184	26.0	105	18.7		08.3	98	39.5		06.8	130	48.8		22.5
20	199	28.5	120	17.9		08.6	113	40.1		06.8	145	50.6		22.7
21	214	30.9	135	17.0		08.9	128	40.7		06.9	160	52.5		22.8
22	229	33.4	150	16.1		09.2	143	41.4		07.0	175	54.4		23.0
23	244	35.9	165	15.3		09.6	158	42.0		07.0	190	56.3		23.1
24	259	38.3	180	14.4	+23	09.9	173	42.6	+24	07.1	205	58.2	+18	23.2
Dif	—		-9	+3			+6	+1			+19	+1		

UT	SOL			☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8 PMG: 11 ^h 59 ^m 7			Edad: 8 ^d 5 PHE { 4 ^h : 56 ^m 4 12 ^h : 56 ^m 2 20 ^h : 56 ^m 0 PMG: 20 ^h 14 ^m R°: 45 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	06.2	+23 05.4	65	38.5	-0 28.4	136	60 N	** *	1 00	2 38	14 28	79	1 34	11	
1	195	06.1	05.5	80	11.1	40.3	119	58	** *	1 45	2 58	26	76	34	14	
2	210	06.0	05.7	94	43.8	52.2	119	56	** *	2 13	3 14	24	74	35	16	
3	225	05.8	05.9	109	16.4	04.0	118	54	0 55	34	28	22	72	35	18	
4	240	05.7	06.0	123	49.1	15.9	119	52	1 36	2 52	40	21	70	36	19	
5	255	05.6	+23 06.2	138	21.8	27.7	118	50	2 02	3 07	3 51	14 20	68	1 36	21	
6	270	05.4	+23 06.4	152	54.5	39.5	118	45	2 47	3 36	4 13	14 17	64	1 37	25	
7	285	05.3	06.6	167	27.3	51.3	118	40	3 17	3 58	31	15	61	37	28	
8	300	05.2	06.7	182	00.1	03.1	118	35	39	4 16	45	13	58	38	31	
9	315	05.1	06.9	196	32.8	14.8	117	30	3 58	31	4 58	11	56	38	33	
10	330	04.9	07.1	211	05.6	26.5	117	20	4 26	4 55	5 20	08	52	39	37	
11	345	04.8	+23 07.2	225	38.5	38.2	117	10 N	4 49	5 16	5 39	14 06	48	1 39	42	
12	0	04.7	+23 07.4	240	11.3	49.9	117	0	5 07	5 34	5 56	14 03	45	1 40	45	
13	15	04.6	07.5	254	44.2	01.6	117	10 S	24	5 50	6 13	14 01	41	41	48	
14	30	04.4	07.7	269	17.0	13.2	116	20	40	6 08	31	13 59	37	41	52	
15	45	04.3	07.9	283	49.9	24.8	116	30	5 56	26	6 52	56	33	42	56	
16	60	04.2	08.0	298	22.8	36.4	116	35	6 05	36	7 05	54	31	42	59	
17	75	04.0	+23 08.2	312	55.7	48.0	116	40	6 14	6 48	7 19	13 52	29	1 43	61	
18	90	03.9	+23 08.4	327	28.6	59.5	115	45	6 24	7 01	7 35	13 50	26	1 43	65	
19	105	03.8	08.5	342	01.5	11.1	116	50	36	17	7 55	48	22	44	69	
20	120	03.7	08.7	356	34.5	22.5	114	52	41	24	8 05	47	20	44	71	
21	135	03.5	08.8	11	07.4	34.0	115	54	46	32	16	46	18	44	73	
22	150	03.4	09.0	25	40.4	45.4	114	56	52	41	28	44	16	45	75	
23	165	03.3	09.1	40	13.3	56.8	114	58	6 59	7 51	8 43	43	14	45	77	
24	180	03.1	+23 09.3	54	46.3	08.2	114	60 S	7 06	8 03	9 00	13 41	12	1 45	81	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 6 ^h 40 ^m 3		Mag: -4.0 PMG: 12 ^h 00 ^m			Mag: +1.6 PMG: 12 ^h 25 ^m			Mag: -2.1 PMG: 10 ^h 15 ^m			Mag: +0.2 PMG: 10 ^h 10 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	'
0	259	38.3	180	14.4	+23 09.9	173	42.6	+24 07.1	205	58.2	+18 23.2	207	07.6	+16 55.4		
1	274	40.8	195	13.6	10.2	188	43.2	07.2	221	00.1	23.4	222	09.7	55.4		
2	289	43.2	210	12.7	10.6	203	43.8	07.2	236	02.0	23.5	237	11.9	55.5		
3	304	45.7	225	11.8	10.9	218	44.4	07.3	251	03.8	23.6	252	14.0	55.6		
4	319	48.2	240	11.0	11.2	233	45.1	07.4	266	05.7	23.8	267	16.2	55.7		
5	334	50.6	255	10.1	+23 11.5	248	45.7	+24 07.4	281	07.6	+18 23.9	282	18.4	+16 55.7		
6	349	53.1	270	09.3	+23 11.9	263	46.3	+24 07.5	296	09.5	+18 24.0	297	20.5	+16 55.8		
7	4	55.6	285	08.4	12.2	278	46.9	07.6	311	11.4	24.2	312	22.7	55.9		
8	19	58.0	300	07.5	12.5	293	47.5	07.6	326	13.3	24.3	327	24.8	55.9		
9	35	00.5	315	06.7	12.8	308	48.1	07.7	341	15.2	24.4	342	27.0	56.0		
10	50	03.0	330	05.8	13.1	323	48.8	07.7	356	17.0	24.6	357	29.2	56.1		
11	65	05.4	345	04.9	+23 13.4	338	49.4	+24 07.8	11	18.9	+18 24.7	12	31.3	+16 56.2		
12	80	07.9	0	04.0	+23 13.7	353	50.0	+24 07.9	26	20.8	+18 24.8	27	33.5	+16 56.2		
13	95	10.4	15	03.2	14.1	8	50.6	07.9	41	22.7	25.0	42	35.6	56.3		
14	110	12.8	30	02.3	14.4	23	51.2	08.0	56	24.6	25.1	57	37.8	56.4		
15	125	15.3	45	01.4	14.7	38	51.9	08.0	71	26.5	25.2	72	40.0	56.4		
16	140	17.7	60	00.6	15.0	53	52.5	08.1	86	28.4	25.4	87	42.1	56.5		
17	155	20.2	74	59.7	+23 15.3	68	53.1	+24 08.2	101	30.3	+18 25.5	102	44.3	+16 56.6		
18	170	22.7	89	58.8	+23 15.6	83	53.7	+24 08.2	116	32.1	+18 25.6	117	46.4	+16 56.6		
19	185	25.1	104	58.0	15.9	98	54.3	08.3	131	34.0	25.7	132	48.6	56.7		
20	200	27.6	119	57.1	16.1	113	54.9	08.3	146	35.9	25.9	147	50.8	56.8		
21	215	30.1	134	56.2	16.4	128	55.6	08.4	161	37.8	26.0	162	52.9	56.9		
22	230	32.5	149	55.4	16.7	143	56.2	08.5	176	39.7	26.1	177	55.1	56.9		
23	245	35.0	164	54.5	17.0	158	56.8	08.5	191	41.6	26.3	192	57.2	57.0		
24	260	37.5	179	53.6	+23 17.3	173	57.4	+24 08.6	206	43.5	+18 26.4	207	59.4	+16 57.1		
Dif	—		-9	+3		+6	+1		+19		+1		+22		+1	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 9 ^d 5 PHE { 4 ^h : 55 ^m /8 12 ^h : 55 ^m /6 20 ^h : 55 ^m /4										
	PMG: 11 ^h 59 ^m 9			SD: 15 ^h 2 PMG: 20 ^h 59 ^m					R°: 45 ^m					
hG ☉		Dec	hG ☾		Dif	Dec	Dif	Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	180	03.1	+23	09.3	54	46.3	-5 08.2	60 N	21 23	23 04	** **	15 47 78	1 45 12	
1	195	03.0		09.5	69	19.3 ¹⁴⁰	19.5 ¹¹³	58	21 03	22 17	** **	42 76	48 14	
2	210	02.9		09.6	83	52.2 ¹³⁹	30.8 ¹¹³	56	20 46	21 48	** **	38 73	51 16	
3	225	02.8		09.8	98	25.2 ¹⁴⁰	42.1 ¹¹³	54	32	26	23 09	34 71	53 19	
4	240	02.6		09.9	112	58.2 ¹⁴⁰	-5 53.4 ¹¹³	52	20	21 09	22 26	31 69	55 21	
5	255	02.5	+23	10.1	127	31.2 ¹⁴⁰	-6 04.6 ¹¹²	50	20 09	20 54	21 59	15 28 67	1 57 23	
6	270	02.4	+23	10.2	142	04.2 ¹⁴⁰	-6 15.7 ¹¹¹	45	19 47	20 24	21 14	15 21 64	2 02 26	
7	285	02.2		10.4	156	37.2 ¹⁴⁰	26.9 ¹¹²	40	29	20 02	20 44	16 60	05 29	
8	300	02.1		10.5	171	10.2 ¹⁴⁰	38.0 ¹¹¹	35	14	19 44	21	11 58	09 31	
9	315	02.0		10.7	185	43.2 ¹⁴⁰	-6 49.0 ¹¹⁰	30	19 02	29	20 02	07 55	11 34	
10	330	01.9		10.8	200	16.1 ¹³⁹	-7 00.0 ¹¹⁰	20	18 40	19 04	19 33	15 00 51	16 38	
11	345	01.7	+23	11.0	214	49.1 ¹⁴⁰	-7 11.0 ¹¹⁰	10 N	18 21	18 44	19 11	14 54 48	2 21 41	
12	0	01.6	+23	11.1	229	22.1 ¹⁴⁰	-7 22.0 ¹¹⁰	0	18 04	18 26	18 52	14 48 45	2 25 44	
13	15	01.5		11.3	243	55.1 ¹⁴⁰	32.9 ¹⁰⁹	10 S	17 46	18 09	35	42 42	29 48	
14	30	01.3		11.4	258	28.1 ¹⁴⁰	43.7 ¹⁰⁸	20	28	17 52	19	36 38	33 52	
15	45	01.2		11.6	273	01.0 ¹³⁹	-7 54.6 ¹⁰⁹	30	17 07	33	18 03	29 35	38 56	
16	60	01.1		11.7	287	34.0 ¹⁴⁰	-8 05.3 ¹⁰⁷	35	16 55	23	17 54	25 33	41 58	
17	75	01.0	+23	11.8	302	07.0 ¹⁴⁰	-8 16.1 ¹⁰⁸	40	16 41	17 11	17 45	14 21 30	2 44 61	
18	90	00.8	+23	12.0	316	39.9 ¹³⁹	-8 26.8 ¹⁰⁷	45	16 24	16 58	17 35	14 16 27	2 48 64	
19	105	00.7		12.1	331	12.9 ¹⁴⁰	37.4 ¹⁰⁶	50	16 04	42	23	10 23	53 67	
20	120	00.6		12.3	345	45.8 ¹³⁹	48.0 ¹⁰⁶	52	15 54	35	18	07 21	55 69	
21	135	00.4		12.4	0	18.8 ¹⁴⁰	-8 58.6 ¹⁰⁶	54	43	27	13	04 20	2 57 71	
22	150	00.3		12.6	14	51.7 ¹³⁹	-9 09.1 ¹⁰⁵	56	30	18	07	14 00 18	3 00 73	
23	165	00.2		12.7	29	24.6 ¹³⁹	19.6 ¹⁰⁵	58	15 16	16 07	17 00	13 57 15	02 76	
24	180	00.0	+23	12.8	43	57.5 ¹³⁹	-9 30.0 ¹⁰⁴	60 S	14 59	15 56	16 53	13 53 12	3 06 78	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 6 ^h 36 ^m 4		Mag: -4.0 PMG: 12 ^h 01 ^m		Mag: +1.6 PMG: 12 ^h 24 ^m		Mag: -2.1 PMG: 10 ^h 12 ^m		Mag: +0.2 PMG: 10 ^h 07 ^m					
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄					
h	°	'	°	'	°	'	°	'	°	'				
0	260	37.5	179	53.6	+23 17.3	173	57.4	+24 08.6	206	43.5	+18 26.4			
1	275	39.9	194	52.8	17.6	188	58.0	08.6	221	45.3	26.5			
2	290	42.4	209	51.9	17.9	203	58.7	08.7	236	47.2	26.7			
3	305	44.8	224	51.0	18.2	218	59.3	08.7	251	49.1	26.8			
4	320	47.3	239	50.2	18.5	233	59.9	08.8	266	51.0	26.9			
5	335	49.8	254	49.3	+23 18.8	249	00.5	+24 08.9	281	52.9	+18 27.1			
6	350	52.2	269	48.5	+23 19.1	264	01.1	+24 08.9	296	54.8	+18 27.2			
7	5	54.7	284	47.6	19.4	279	01.7	09.0	311	56.7	27.3			
8	20	57.2	299	46.7	19.6	294	02.4	09.0	326	58.6	27.5			
9	35	59.6	314	45.9	19.9	309	03.0	09.1	342	00.4	27.6			
10	51	02.1	329	45.0	20.2	324	03.6	09.1	357	02.3	27.7			
11	66	04.6	344	44.1	+23 20.5	339	04.2	+24 09.2	12	04.2	+18 27.9			
12	81	07.0	359	43.2	+23 20.8	354	04.8	+24 09.2	27	06.1	+18 28.0			
13	96	09.5	14	42.4	21.1	9	05.5	09.3	42	08.0	28.1			
14	111	12.0	29	41.5	21.3	24	06.1	09.3	57	09.9	28.3			
15	126	14.4	44	40.6	21.6	39	06.7	09.4	72	11.8	28.4			
16	141	16.9	59	39.8	21.9	54	07.3	09.4	87	13.7	28.5			
17	156	19.3	74	38.9	+23 22.2	69	07.9	+24 09.5	102	15.6	+18 28.7			
18	171	21.8	89	38.0	+23 22.4	84	08.5	+24 09.5	117	17.4	+18 28.8			
19	186	24.3	104	37.2	22.7	99	09.2	09.6	132	19.3	28.9			
20	201	26.7	119	36.3	23.0	114	09.8	09.6	147	21.2	29.1			
21	216	29.2	134	35.4	23.3	129	10.4	09.7	162	23.1	29.2			
22	231	31.7	149	34.6	23.5	144	11.0	09.7	177	25.0	29.3			
23	246	34.1	164	33.7	23.8	159	11.6	09.8	192	26.9	29.4			
24	261	36.6	179	32.8	+23 24.1	174	12.3	+24 09.8	207	28.8	+18 29.6			
Dif	—		-9		+3	+6		+1	+19		+1	+22		+

UT	SOL				LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 15'7 PMG: 12 ^h 00 ^m 1				Edad: 10 ^d 5 PHE { SD: 15'1 PMG: 21 ^h 44 ^m R°: 45 ^m 4 ^h : 55'2 12 ^h : 55'1 20 ^h : 55'0																
	hG ☉		Dec		hG ☾		Dif		Dec			Dif			Náutico	Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m
0	180	00.0	+23	12.8	43	57.5	-9	30.0	60 N	** **	0	56	2	37	17	05	77	1	57	14	
1	194	59.9		13.0	58	30.4 ¹³⁹		40.4 ¹⁰⁴	58	** **	1	43	2	57	16	58	73	2	02	17	
2	209	59.8		13.1	73	03.3 ¹³⁹	-9	50.7 ¹⁰³	56	** **	2	12	3	13	51	71		07	19		
3	224	59.7		13.2	87	36.1 ¹³⁸	-10	01.0 ¹⁰³	54	0	51	34	28	45	69		12	2			
4	239	59.5		13.4	102	09.0 ¹³⁹		11.2 ¹⁰²	52	1	34	2	51	40	40	67		16	23		
5	254	59.4	+23	13.5	116	41.8 ¹³⁸	-10	21.4 ¹⁰²	50	2	01	3	06	3	50	16	35	66	2	20	24
6	269	59.3	+23	13.7	131	14.7 ¹³⁹	-10	31.5 ¹⁰¹	45	2	46	3	35	4	13	16	25	62	2	28	28
7	284	59.1		13.8	145	47.5 ¹³⁸		41.6 ¹⁰¹	40	3	16	3	58	31	16	59		34	31		
8	299	59.0		13.9	160	20.3 ¹³⁸	-10	51.6 ¹⁰⁰	35	39	4	16	45	09	57	40	33				
9	314	58.9		14.0	174	53.1 ¹³⁸	-11	01.6 ¹⁰⁰	30	3	58	31	4	58	16	02	55	45	36		
10	329	58.7		14.2	189	25.8 ¹³⁷		11.5 ⁹⁹	20	4	26	4	56	5	20	15	51	52	2	54	39
11	344	58.6	+23	14.3	203	58.6 ¹³⁸	-11	21.4 ⁹⁹	10 N	4	49	5	16	5	39	15	42	48	3	02	42
12	359	58.5	+23	14.4	218	31.3 ¹³⁷	-11	31.2 ⁹⁸	0	5	08	5	34	5	56	15	33	45	3	09	46
13	14	58.4		14.6	233	04.0 ¹³⁷		40.9 ⁹⁷	10 S	25	5	51	6	14	24	43		17	48		
14	29	58.2		14.7	247	36.8 ¹³⁸	-11	50.6 ⁹⁷	20	41	6	08	32	14	40	25	51				
15	44	58.1		14.8	262	09.4 ¹³⁶	-12	00.2 ⁹⁶	30	5	57	27	6	53	15	04	36	34	55		
16	59	58.0		15.0	276	42.1 ¹³⁷		09.8 ⁹⁶	35	6	06	37	7	05	14	58	34	39	57		
17	74	57.8	+23	15.1	291	14.7 ¹³⁶	-12	19.3 ⁹⁵	40	6	15	6	49	7	19	14	51	32	3	45	60
18	89	57.7	+23	15.2	305	47.4 ¹³⁷	-12	28.8 ⁹⁵	45	6	25	7	02	7	36	14	43	29	3	52	63
19	104	57.6		15.3	320	20.0 ¹³⁶		38.2 ⁹⁴	50	37	18	7	57	33	26	4	00	67			
20	119	57.4		15.5	334	52.6 ¹³⁶		47.5 ⁹³	52	42	26	8	06	28	25	04	68				
21	134	57.3		15.6	349	25.1 ¹³⁵	-12	56.8 ⁹³	54	48	34	17		24	22	08	70				
22	149	57.2		15.7	3	57.7 ¹³⁶	-13	06.0 ⁹²	56	6	54	43	30	18	21	13	72				
23	164	57.0		15.8	18	30.2 ¹³⁵		15.2 ⁹²	58	7	00	7	53	8	44	12	18	18	75		
24	179	56.9	+23	16.0	33	02.7 ¹³⁵	-13	24.3 ⁹¹	60 S	7	08	8	04	9	02	14	05	16	4	24	78

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 6 ^h 32 ^m 5		Mag: -4.0 PMG: 12 ^h 03 ^m		Mag: +1.6 PMG: 12 ^h 23 ^m		Mag: -2.1 PMG: 10 ^h 09 ^m		Mag: +0.2 PMG: 10 ^h 03 ^m									
	hG ♈		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec									
h	°	'	°	'	°	'	°	'	°	'								
0	261	36.6	179	32.8	+23	24.1	174	12.3	+24	09.8	207	28.8	+18	29.6	208	51.3	+16	58.8
1	276	39.1	194	31.9		24.3	189	12.9		09.9	222	30.7		29.7	223	53.4		58.8
2	291	41.5	209	31.1		24.6	204	13.5		09.9	237	32.6		29.8	238	55.6		58.9
3	306	44.0	224	30.2		24.9	219	14.1		10.0	252	34.4		30.0	253	57.7		59.0
4	321	46.4	239	29.3		25.1	234	14.7		10.0	267	36.3		30.1	268	59.9		59.0
5	336	48.9	254	28.5	+23	25.4	249	15.4	+24	10.1	282	38.2	+18	30.2	284	02.1	+16	59.1
6	351	51.4	269	27.6	+23	25.6	264	16.0	+24	10.1	297	40.1	+18	30.4	299	04.2	+16	59.2
7	6	53.8	284	26.7		25.9	279	16.6		10.2	312	42.0		30.5	314	06.4		59.2
8	21	56.3	299	25.8		26.2	294	17.2		10.2	327	43.9		30.6	329	08.5		59.3
9	36	58.8	314	25.0		26.4	309	17.8		10.3	342	45.8		30.8	344	10.7		59.4
10	52	01.2	329	24.1		26.7	324	18.5		10.3	357	47.7		30.9	359	12.9		59.4
11	67	03.7	344	23.2	+23	26.9	339	19.1	+24	10.3	12	49.6	+18	31.0	14	15.0	+16	59.5
12	82	06.2	359	22.3	+23	27.2	354	19.7	+24	10.4	27	51.4	+18	31.1	29	17.2	+16	59.6
13	97	08.6	14	21.5		27.4	9	20.3		10.4	42	53.3		31.3	44	19.4		59.7
14	112	11.1	29	20.6		27.7	24	20.9		10.5	57	55.2		31.4	59	21.5		59.7
15	127	13.6	44	19.7		27.9	39	21.6		10.5	72	57.1		31.5	74	23.7		59.8
16	142	16.0	59	18.9		28.2	54	22.2		10.6	87	59.0		31.7	89	25.8		59.9
17	157	18.5	74	18.0	+23	28.4	69	22.8	+24	10.6	103	00.9	+18	31.8	104	28.0	+16	59.9
18	172	20.9	89	17.1	+23	28.7	84	23.4	+24	10.6	118	02.8	+18	31.9	119	30.2	+17	00.0
19	187	23.4	104	16.2		28.9	99	24.0		10.7	133	04.7		32.1	134	32.3	+17	00.1
20	202	25.9	119	15.4		29.2	114	24.7		10.7	148	06.6		32.2	149	34.5		00.1
21	217	28.3	134	14.5		29.4	129	25.3		10.8	163	08.5		32.3	164	36.7		00.2
22	232	30.8	149	13.6		29.6	144	25.9		10.8	178	10.3		32.5	179	38.8		00.3
23	247	33.3	164	12.7		29.9	159	26.5		10.9	193	12.2		32.6	194	41.0		00.3
24	262	35.7	179	11.9	+23	30.1	174	27.1	+24	10.9	208	14.1	+18	32.7	209	43.1	+17	00.4
Dif	—		-9		+3		+6		0		+19		+1		+22		+1	

UT	SOL				LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7 PMG: 12 ^h 00 ^m 3				Edad: 11 ^d 5 PHE { SD: 14 ^h 9 PMG: 22 ^h 29 ^m													
	hG ☉		Dec		hG ☾		Dif				Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	'	h m	h m	h m	h m	m	m	m	m
0	179	56.9	+23	16.0	33	02.7	-13	24.3	60 N	21 25	23 08	** **	18 22	73	2 11	17		
1	194	56.8		16.1	47	35.2 ¹³⁵		33.3 ⁹⁰	58	21 04	22 19	** **	11 71		19 20			
2	209	56.7		16.2	62	07.7 ¹³⁵		42.3 ⁹⁰	56	20 48	21 50	** **	18 02	69	26 23			
3	224	56.5		16.3	76	40.1 ¹³⁴	-13	51.2 ⁸⁹	54	34	28	23 12	17 54	67	33 24			
4	239	56.4		16.4	91	12.5 ¹³⁴	-14	00.0 ⁸⁸	52	21	21 10	22 28	47 65		39 26			
5	254	56.3	+23	16.6	105	44.9 ¹³⁴	-14	08.8 ⁸⁸	50	20 11	20 55	22 00	17 41	63	2 44	28		
6	269	56.1	+23	16.7	120	17.3 ¹³⁴	-14	17.5 ⁸⁷	45	19 48	20 26	21 15	17 27	60	2 56	30		
7	284	56.0		16.8	134	49.6 ¹³³		26.1 ⁸⁶	40	30	20 03	20 45	15 58		3 05	34		
8	299	55.9		16.9	149	21.9 ¹³³		34.7 ⁸⁶	35	15	19 45	22	17 06	56	13 36			
9	314	55.7		17.0	163	54.2 ¹³³		43.2 ⁸⁵	30	19 02	30	20 03	16 57	55	21 37			
10	329	55.6		17.1	178	26.5 ¹³³	-14	51.6 ⁸⁴	20	18 40	19 05	19 34	43 51		33 41			
11	344	55.5	+23	17.2	192	58.7 ¹³²	-15	00.0 ⁸⁴	10 N	18 21	18 45	19 12	16 30	49	3 44	44		
12	359	55.3	+23	17.4	207	30.9 ¹³²	-15	08.2 ⁸³	0	18 04	18 27	18 53	16 18	47	3 55	46		
13	14	55.2		17.5	222	03.1 ¹³²		16.5 ⁸³	10 S	17 47	18 09	36	16 07	44	4 05	49		
14	29	55.1		17.6	236	35.3 ¹³²		24.6 ⁸¹	20	28	17 52	20	15 54	42	16 52			
15	44	54.9		17.7	251	07.4 ¹³¹		32.7 ⁸¹	30	17 07	33	18 03	40 39		29 55			
16	59	54.8		17.8	265	39.6 ¹³²		40.7 ⁸⁰	35	16 55	23	17 55	32 37		36 57			
17	74	54.7	+23	17.9	280	11.6 ¹³⁰	-15	48.6 ⁷⁹	40	16 41	17 11	17 45	15 23	35	4 45	58		
18	89	54.5	+23	18.0	294	43.7 ¹³¹	-15	56.5 ⁷⁹	45	16 24	16 58	17 35	15 12	33	4 55	61		
19	104	54.4		18.1	309	15.8 ¹³¹	-16	04.3 ⁷⁸	50	16 03	42	23	14 59	30	5 07	64		
20	119	54.3		18.2	323	47.8 ¹³⁰		12.0 ⁷⁷	52	15 54	34	18	53 28		12 66			
21	134	54.1		18.3	338	19.7 ¹²⁹		19.6 ⁷⁶	54	43	26	12	46 27		18 68			
22	149	54.0		18.5	352	51.7 ¹³⁰		27.2 ⁷⁶	56	30	17	06	39 24		25 70			
23	164	53.9		18.6	7	23.6 ¹²⁹		34.6 ⁷⁴	58	15 15	16 07	17 00	30 23		33 72			
24	179	53.7	+23	18.7	21	55.5 ¹²⁹	-16	42.0 ⁷⁴	60 S	14 58	15 55	16 52	14 21	20	5 42	75		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 6 ^h 28 ^m 6		Mag: -4.0 PMG: 12 ^h 04 ^m				Mag: +1.6 PMG: 12 ^h 22 ^m				Mag: -2.1 PMG: 10 ^h 06 ^m				Mag: +0.2 PMG: 10 ^h 00 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	262	35.7	179	11.9	+23	30.1	174	27.1	+24	10.9	208	14.1	+18	32.7	209	43.1	+17	00.4
1	277	38.2	194	11.0		30.4	189	27.8		10.9	223	16.0		32.8	224	45.3		00.5
2	292	40.7	209	10.1		30.6	204	28.4		11.0	238	17.9		33.0	239	47.5		00.6
3	307	43.1	224	09.2		30.8	219	29.0		11.0	253	19.8		33.1	254	49.6		00.6
4	322	45.6	239	08.3		31.1	234	29.6		11.0	268	21.7		33.2	269	51.8		00.7
5	337	48.1	254	07.5	+23	31.3	249	30.2	+24	11.1	283	23.6	+18	33.4	284	54.0	+17	00.8
6	352	50.5	269	06.6	+23	31.5	264	30.9	+24	11.1	298	25.5	+18	33.5	299	56.1	+17	00.8
7	7	53.0	284	05.7		31.8	279	31.5		11.2	313	27.4		33.6	314	58.3		00.9
8	22	55.4	299	04.8		32.0	294	32.1		11.2	328	29.2		33.7	330	00.4		01.0
9	37	57.9	314	04.0		32.2	309	32.7		11.2	343	31.1		33.9	345	02.6		01.0
10	53	00.4	329	03.1		32.4	324	33.4		11.3	358	33.0		34.0	0	04.8		01.1
11	68	02.8	344	02.2	+23	32.7	339	34.0	+24	11.3	13	34.9	+18	34.1	15	06.9	+17	01.2
12	83	05.3	359	01.3	+23	32.9	354	34.6	+24	11.3	28	36.8	+18	34.3	30	09.1	+17	01.2
13	98	07.8	14	00.4		33.1	9	35.2		11.4	43	38.7		34.4	45	11.3		01.3
14	113	10.2	28	59.6		33.3	24	35.8		11.4	58	40.6		34.5	60	13.4		01.4
15	128	12.7	43	58.7		33.6	39	36.5		11.4	73	42.5		34.7	75	15.6		01.5
16	143	15.2	58	57.8		33.8	54	37.1		11.5	88	44.4		34.8	90	17.8		01.5
17	158	17.6	73	56.9	+23	34.0	69	37.7	+24	11.5	103	46.3	+18	34.9	105	19.9	+17	01.6
18	173	20.1	88	56.0	+23	34.2	84	38.3	+24	11.5	118	48.2	+18	35.0	120	22.1	+17	01.7
19	188	22.6	103	55.2		34.4	99	38.9		11.6	133	50.0		35.2	135	24.2		01.7
20	203	25.0	118	54.3		34.7	114	39.6		11.6	148	51.9		35.3	150	26.4		01.8
21	218	27.5	133	53.4		34.9	129	40.2		11.6	163	53.8		35.4	165	28.6		01.9
22	233	29.9	148	52.5		35.1	144	40.8		11.7	178	55.7		35.6	180	30.7		01.9
23	248	32.4	163	51.6		35.3	159	41.4		11.7	193	57.6		35.7	195	32.9		02.0
24	263	34.9	178	50.8	+23	35.5	174	42.1	+24	11.7	208	59.5	+18	35.8	210	35.1	+17	02.1
Dif	—		-9		+2		+6		0		+19		+1		+22		+1	

ALMANAQUE NÁUTICO PERSEIS

UT	SOL				☉ LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 15 ^h 7				Edad: 13 ^d 5 PHE { 4 ^h : 54/2 12 ^h : 54/2 20 ^h : 54/1 R°: ***m														
	PMG: 12 ^h 00 ^m 7				PMG: ***h ***m														
	hG ☉		Dec		hG ☾		Dif				Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m			
0	179	50.6	+23	21.0	10	33.3	-19	15.2	60 N	21 26	23 11	*** **	20 43 59	2 51 31					
1	194	50.4		21.0	25	04.6 ¹²³		20.5 ⁵³	58	21 06	22 21	*** **	28 57	3 05 33					
2	209	50.3		21.1	39	35.8 ¹²²		25.7 ⁵²	56	20 49	21 51	*** **	14 57	16 35					
3	224	50.2		21.2	54	07.0 ¹²²		30.9 ⁵²	54	35	29	23 15	20 03 56	27 36					
4	239	50.0		21.3	68	38.2 ¹²²		35.9 ⁵⁰	52	22	21 11	22 29	19 53 55	36 37					
5	254	49.9	+23	21.4	83	09.4 ¹²²	-19	40.8 ⁴⁹	50	20 11	20 56	22 02	19 44 54	3 44 38					
6	269	49.8	+23	21.5	97	40.5 ¹²¹	-19	45.7 ⁴⁹	45	19 49	20 26	21 16	19 25 53	4 01 41					
7	284	49.6		21.6	112	11.6 ¹²¹		50.5 ⁴⁸	40	31	20 04	20 46	19 09 53	16 41					
8	299	49.5		21.6	126	42.7 ¹²¹		55.1 ⁴⁶	35	16	19 46	22	18 56 52	28 43					
9	314	49.4		21.7	141	13.8 ¹²¹	-19	59.7 ⁴⁶	30	19 03	30	20 04	45 51	39 43					
10	329	49.2		21.8	155	44.8 ¹²⁰	-20	04.2 ⁴⁵	20	18 41	19 05	19 35	25 50	4 57 45					
11	344	49.1	+23	21.9	170	15.9 ¹²¹	-20	08.6 ⁴⁴	10 N	18 22	18 45	19 12	18 08 50	5 13 47					
12	359	49.0	+23	22.0	184	46.9 ¹²⁰	-20	12.9 ⁴³	0	18 04	18 27	18 53	17 53 48	5 28 48					
13	14	48.8		22.0	199	17.9 ¹²⁰		17.1 ⁴²	10 S	17 47	18 10	36	37 48	43 49					
14	29	48.7		22.1	213	48.8 ¹¹⁹		21.2 ⁴¹	20	28	17 53	20	20 47	5 59 51					
15	44	48.5		22.2	228	19.8 ¹²⁰		25.2 ⁴⁰	30	17 07	34	18 04	17 01 45	6 17 53					
16	59	48.4		22.3	242	50.7 ¹¹⁹		29.1 ³⁹	35	16 55	23	17 55	16 50 45	28 53					
17	74	48.3	+23	22.3	257	21.6 ¹¹⁹	-20	32.9 ³⁸	40	16 41	17 11	17 45	16 37 44	6 40 55					
18	89	48.1	+23	22.4	271	52.5 ¹¹⁹	-20	36.6 ³⁷	45	16 24	16 58	17 35	16 22 43	6 55 56					
19	104	48.0		22.5	286	23.4 ¹¹⁹		40.3 ³⁷	50	16 03	42	23	16 04 41	7 13 57					
20	119	47.9		22.6	300	54.2 ¹¹⁸		43.8 ³⁵	52	15 53	34	18	15 55 41	21 59					
21	134	47.7		22.6	315	25.1 ¹¹⁹		47.2 ³⁴	54	42	26	12	45 40	31 59					
22	149	47.6		22.7	329	55.9 ¹¹⁸		50.6 ³⁴	56	30	17	06	34 39	42 60					
23	164	47.5		22.8	344	26.7 ¹¹⁸		53.8 ³²	58	15 15	16 07	17 00	22 37	7 54 61					
24	179	47.3	+23	22.8	358	57.5 ¹¹⁸	-20	57.0 ³²	60 S	14 58	15 55	16 52	15 07 36	8 08 64					
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO				
	PMG: 6 ^h 20 ^m 7		Mag: -4.0 PMG: 12 ^h 07 ^m				Mag: +1.6 PMG: 12 ^h 20 ^m				Mag: -2.1 PMG: 10 ^h 00 ^m				Mag: +0.2 PMG: 9 ^h 53 ^m				
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	264	34.0	178	29.6	+23	40.2	174	57.0	+24	12.4	209	44.9	+18	38.9	211	27.0	+17	03.7	
1	279	36.5	193	28.7		40.4	189	57.6		12.4	224	46.8		39.0	226	29.2		03.8	
2	294	38.9	208	27.8		40.6	204	58.2		12.4	239	48.7		39.1	241	31.4		03.8	
3	309	41.4	223	26.9		40.7	219	58.9		12.4	254	50.6		39.3	256	33.5		03.9	
4	324	43.9	238	26.0		40.9	234	59.5		12.5	269	52.5		39.4	271	35.7		04.0	
5	339	46.3	253	25.2	+23	41.1	250	00.1	+24	12.5	284	54.4	+18	39.5	286	37.9	+17	04.0	
6	354	48.8	268	24.3	+23	41.3	265	00.7	+24	12.5	299	56.3	+18	39.7	301	40.0	+17	04.1	
7	9	51.3	283	23.4		41.4	280	01.4		12.5	314	58.2		39.8	316	42.2		04.2	
8	24	53.7	298	22.5		41.6	295	02.0		12.5	330	00.1		39.9	331	44.4		04.2	
9	39	56.2	313	21.6		41.8	310	02.6		12.5	345	02.0		40.0	346	46.5		04.3	
10	54	58.7	328	20.7		41.9	325	03.2		12.6	0	03.9		40.2	1	48.7		04.4	
11	70	01.1	343	19.8	+23	42.1	340	03.9	+24	12.6	15	05.8	+18	40.3	16	50.9	+17	04.4	
12	85	03.6	358	19.0	+23	42.3	355	04.5	+24	12.6	30	07.7	+18	40.4	31	53.0	+17	04.5	
13	100	06.0	13	18.1		42.4	10	05.1		12.6	45	09.6		40.5	46	55.2		04.6	
14	115	08.5	28	17.2		42.6	25	05.7		12.6	60	11.4		40.7	61	57.4		04.6	
15	130	11.0	43	16.3		42.8	40	06.4		12.7	75	13.3		40.8	76	59.5		04.7	
16	145	13.4	58	15.4		42.9	55	07.0		12.7	90	15.2		40.9	92	01.7		04.8	
17	160	15.9	73	14.5	+23	43.1	70	07.6	+24	12.7	105	17.1	+18	41.1	107	03.9	+17	04.9	
18	175	18.4	88	13.6	+23	43.3	85	08.2	+24	12.7	120	19.0	+18	41.2	122	06.0	+17	04.9	
19	190	20.8	103	12.7		43.4	100	08.9		12.7	135	20.9		41.3	137	08.2		05.0	
20	205	23.3	118	11.9		43.6	115	09.5		12.7	150	22.8		41.4	152	10.4		05.1	
21	220	25.8	133	11.0		43.7	130	10.1		12.7	165	24.7		41.6	167	12.5		05.1	
22	235	28.2	148	10.1		43.9	145	10.7		12.8	180	26.6		41.7	182	14.7		05.2	
23	250	30.7	163	09.2		44.0	160	11.4		12.8	195	28.5		41.8	197	16.9		05.3	
24	265	33.2	178	08.3	+23	44.2	175	12.0	+24	12.8	210	30.4	+18	41.9	212	19.0	+17	05.3	
Dif	—		-9		+2		+6		0		+19		+1		+22		+1		

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'7 PMG: 12 ^h 01 ^m 0			Edad: 14 ^d 5 PHE SD: 14'7 PMG: 0 ^h 04 ^m R°: 49 ^m											
	hG ☉	Dec		hG ☾	Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	179	47.3	+23	22.8	358	57.5	-20 57.0	60 N	** **	0 50	2 36	21 42	47	3 22	41
1	194	47.2		22.9	13	28.3 ¹¹⁸	-21 00.0	30 58	** **	1 41	2 56		25 47		38 42
2	209	47.1		23.0	27	59.0 ¹¹⁷	-21 02.9	29 56	** **	2 10	3 13	21 11	47	3 51	43
3	224	46.9		23.1	42	29.8 ¹¹⁸	05.8	29 54	0 46	33	27	20 59	47	4 03	44
4	239	46.8		23.1	57	00.5 ¹¹⁷	08.5	27 52	1 32	2 50	39		48 48		13 44
5	254	46.7	+23	23.2	71	31.2 ¹¹⁷	-21 11.2	27 50	2 00	3 06	3 50	20 38	48	4 22	45
6	269	46.5	+23	23.3	86	01.9 ¹¹⁷	-21 13.7	25 45	2 46	3 35	4 13	20 18	48	4 42	45
7	284	46.4		23.3	100	32.6 ¹¹⁷	16.2	25 40	3 16	3 58	31	20 02	48	4 57	47
8	299	46.3		23.4	115	03.3 ¹¹⁷	18.5	23 35	39	4 16	46	19 48	48	5 11	46
9	314	46.1		23.4	129	34.0 ¹¹⁷	20.8	23 30	3 58	31	4 59		36 48		22 47
10	329	46.0		23.5	144	04.7 ¹¹⁷	23.0	22 20	4 27	4 56	5 21	19 15	49	5 42	48
11	344	45.9	+23	23.6	158	35.3 ¹¹⁶	-21 25.0	20 10 N	4 50	5 17	5 40	18 58	48	6 00	48
12	359	45.7	+23	23.6	173	06.0 ¹¹⁷	-21 27.0	20 0	5 09	5 35	5 57	18 41	49	6 16	49
13	14	45.6		23.7	187	36.6 ¹¹⁶	28.8	18 10 S	26	5 52	6 15		25 48		32 49
14	29	45.5		23.8	202	07.2 ¹¹⁶	30.6	18 20	42	6 09	33	18 07	48	6 50	49
15	44	45.3		23.8	216	37.9 ¹¹⁷	32.2	16 30	5 58	28	6 54	17 46	49	7 10	50
16	59	45.2		23.9	231	08.5 ¹¹⁶	33.8	16 35	6 07	39	7 07		35 48		21 51
17	74	45.1	+23	23.9	245	39.1 ¹¹⁶	-21 35.2	14 40	6 16	6 50	7 21	17 21	48	7 35	50
18	89	44.9	+23	24.0	260	09.7 ¹¹⁶	-21 36.6	14 45	6 27	7 04	7 38	17 05	48	7 51	51
19	104	44.8		24.0	274	40.3 ¹¹⁶	37.8	12 50	38	20	7 58	16 45	48	8 10	52
20	119	44.7		24.1	289	10.9 ¹¹⁶	39.0	12 52	44	27	8 08		36 48		20 51
21	134	44.5		24.2	303	41.5 ¹¹⁶	40.0	10 54	49	36	19		25 48		30 52
22	149	44.4		24.2	318	12.1 ¹¹⁶	40.9	9 56	6 56	45	32	16 13	48	42	52
23	164	44.2		24.3	332	42.6 ¹¹⁵	41.8	9 58	7 02	7 55	8 47	15 59	48	8 55	53
24	179	44.1	+23	24.3	347	13.2 ¹¹⁶	-21 42.5	7 60 S	7 10	8 07	9 04	15 43	48	9 12	53

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 6 ^h 16 ^m 8		Mag: -4.0 PMG: 12 ^h 08 ^m		Mag: +1.6 PMG: 12 ^h 19 ^m		Mag: -2.1 PMG: 9 ^h 57 ^m		Mag: +0.2 PMG: 9 ^h 49 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	265	33.2	178	08.3	+23	44.2	175	12.0	+24	12.8	210	30.4	+18	41.9	212	19.0	+17	05.3
1	280	35.6	193	07.4		44.3	190	12.6		12.8	225	32.3		42.1	227	21.2		05.4
2	295	38.1	208	06.5		44.5	205	13.2		12.8	240	34.2		42.2	242	23.4		05.5
3	310	40.5	223	05.6		44.6	220	13.9		12.8	255	36.1		42.3	257	25.5		05.5
4	325	43.0	238	04.8		44.8	235	14.5		12.8	270	38.0		42.4	272	27.7		05.6
5	340	45.5	253	03.9	+23	44.9	250	15.1	+24	12.9	285	39.9	+18	42.6	287	29.9	+17	05.7
6	355	47.9	268	03.0	+23	45.1	265	15.7	+24	12.9	300	41.8	+18	42.7	302	32.0	+17	05.7
7	10	50.4	283	02.1		45.2	280	16.4		12.9	315	43.7		42.8	317	34.2		05.8
8	25	52.9	298	01.2		45.4	295	17.0		12.9	330	45.6		43.0	332	36.4		05.9
9	40	55.3	313	00.3		45.5	310	17.6		12.9	345	47.5		43.1	347	38.5		05.9
10	55	57.8	327	59.4		45.6	325	18.2		12.9	0	49.3		43.2	2	40.7		06.0
11	71	00.3	342	58.5	+23	45.8	340	18.9	+24	12.9	15	51.2	+18	43.3	17	42.9	+17	06.1
12	86	02.7	357	57.6	+23	45.9	355	19.5	+24	12.9	30	53.1	+18	43.5	32	45.0	+17	06.1
13	101	05.2	12	56.7		46.1	10	20.1		12.9	45	55.0		43.6	47	47.2		06.2
14	116	07.7	27	55.9		46.2	25	20.7		12.9	60	56.9		43.7	62	49.4		06.3
15	131	10.1	42	55.0		46.3	40	21.4		12.9	75	58.8		43.8	77	51.5		06.3
16	146	12.6	57	54.1		46.5	55	22.0		13.0	91	00.7		44.0	92	53.7		06.4
17	161	15.0	72	53.2	+23	46.6	70	22.6	+24	13.0	106	02.6	+18	44.1	107	55.9	+17	06.5
18	176	17.5	87	52.3	+23	46.7	85	23.2	+24	13.0	121	04.5	+18	44.2	122	58.0	+17	06.5
19	191	20.0	102	51.4		46.9	100	23.9		13.0	136	06.4		44.3	138	00.2		06.6
20	206	22.4	117	50.5		47.0	115	24.5		13.0	151	08.3		44.5	153	02.4		06.7
21	221	24.9	132	49.6		47.1	130	25.1		13.0	166	10.2		44.6	168	04.5		06.7
22	236	27.4	147	48.7		47.2	145	25.7		13.0	181	12.1		44.7	183	06.7		06.8
23	251	29.8	162	47.8		47.4	160	26.4		13.0	196	14.0		44.8	198	08.9		06.9
24	266	32.3	177	47.0	+23	47.5	175	27.0	+24	13.0	211	15.9	+18	45.0	213	11.0	+17	06.9
Dif	—		-9 +1		+6		0		+19		+1		+22		+1			

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 15 ^d 5 PHE { 4 ^h : 54 ^m 0 12 ^h : 54 ^m 0 20 ^h : 54 ^m 0										
	PMG: 12 ^h 01 ^m 2			SD: 14 ^h 7 PMG: 0 ^h 53 ^m R°: 48 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	179	44.1	+23 24.3	347	13.2	-21 42.5	7	60 N	21 27	23 13	** **	22 29 35	4 03 53	
1	194	44.0	24.4	1	43.8 ¹¹⁶	43.2	5	58	21 07	22 22	** **	22 12 38	20 53	
2	209	43.8	24.4	16	14.4 ¹¹⁶	43.7	4	56	20 50	21 52	** **	21 58 39	34 53	
3	224	43.7	24.5	30	45.0 ¹¹⁶	44.1	5	54	35	30	23 17	46 40	47 51	
4	239	43.6	24.5	45	15.5 ¹¹⁵	44.5	4	52	23	21 12	22 30	36 40	4 57 52	
5	254	43.4	+23 24.6	59	46.1 ¹¹⁶	-21 44.7	2	50	20 12	20 57	22 03	21 26 41	5 07 51	
6	269	43.3	+23 24.6	74	16.7 ¹¹⁶	-21 44.8	1	45	19 50	20 27	21 17	21 06 43	5 27 51	
7	284	43.2	24.7	88	47.3 ¹¹⁶	44.9	1	40	32	20 04	20 46	20 50 44	44 50	
8	299	43.0	24.7	103	17.9 ¹¹⁶	44.8	1	35	17	19 46	23	36 45	5 57 51	
9	314	42.9	24.8	117	48.5 ¹¹⁶	44.6	2	30	19 04	31	20 04	24 46	6 09 50	
10	329	42.8	24.8	132	19.0 ¹¹⁵	44.3	3	20	18 41	19 06	19 35	20 04 46	30 49	
11	344	42.6	+23 24.9	146	49.6 ¹¹⁶	-21 44.0	3	10 N	18 22	18 46	19 13	19 46 48	6 48 49	
12	359	42.5	+23 24.9	161	20.2 ¹¹⁶	-21 43.5	5	0	18 05	18 27	18 54	19 30 48	7 05 48	
13	14	42.4	24.9	175	50.9 ¹¹⁷	42.9	6	10 S	17 47	18 10	37	19 13 49	21 48	
14	29	42.2	25.0	190	21.5 ¹¹⁶	42.2	7	20	29	17 53	20	18 55 50	7 39 48	
15	44	42.1	25.0	204	52.1 ¹¹⁶	41.5	7	30	17 08	34	18 04	35 51	8 00 46	
16	59	42.0	25.1	219	22.7 ¹¹⁶	40.6	9	35	16 55	23	17 55	23 52	12 46	
17	74	41.8	+23 25.1	233	53.4 ¹¹⁷	-21 39.6	10	40	16 41	17 12	17 46	18 09 53	8 25 46	
18	89	41.7	+23 25.2	248	24.0 ¹¹⁶	-21 38.5	11	45	16 24	16 58	17 35	17 53 54	8 42 45	
19	104	41.5	25.2	262	54.6 ¹¹⁶	37.3	12	50	16 03	42	24	33 55	9 02 44	
20	119	41.4	25.2	277	25.3 ¹¹⁷	36.0	13	52	15 54	35	18	24 55	11 44	
21	134	41.3	25.3	291	56.0 ¹¹⁷	34.6	14	54	42	26	13	13 56	22 44	
22	149	41.1	25.3	306	26.7 ¹¹⁷	33.2	14	56	30	17	06	17 01 56	34 43	
23	164	41.0	25.3	320	57.4 ¹¹⁷	31.6	16	58	15 15	16 07	17 00	16 47 57	9 48 42	
24	179	40.9	+23 25.4	335	28.1 ¹¹⁷	-21 29.9	17	60 S	14 57	15 55	16 52	16 31 58	10 05 41	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 6 ^h 12 ^m 8		Mag: -4.0 PMG: 12 ^h 10 ^m		Mag: +1.6 PMG: 12 ^h 18 ^m		Mag: -2.1 PMG: 9 ^h 54 ^m		Mag: +0.2 PMG: 9 ^h 46 ^m	
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	°	'	°	'	°	'	
0	266	32.3	177 47.0	+23 47.5	175 27.0	+24 13.0	211 15.9	+18 45.0	213 11.0	+17 06.9
1	281	34.8	192 46.1	47.6	190 27.6	13.0	226 17.8	45.1	228 13.2	07.0
2	296	37.2	207 45.2	47.7	205 28.3	13.0	241 19.7	45.2	243 15.4	07.1
3	311	39.7	222 44.3	47.8	220 28.9	13.0	256 21.6	45.3	258 17.6	07.1
4	326	42.1	237 43.4	48.0	235 29.5	13.0	271 23.5	45.5	273 19.7	07.2
5	341	44.6	252 42.5	+23 48.1	250 30.1	+24 13.0	286 25.4	+18 45.6	288 21.9	+17 07.3
6	356	47.1	267 41.6	+23 48.2	265 30.8	+24 13.0	301 27.3	+18 45.7	303 24.1	+17 07.3
7	11	49.5	282 40.7	48.3	280 31.4	13.0	316 29.2	45.8	318 26.2	07.4
8	26	52.0	297 39.8	48.4	295 32.0	13.0	331 31.1	46.0	333 28.4	07.5
9	41	54.5	312 38.9	48.5	310 32.6	13.0	346 33.0	46.1	348 30.6	07.5
10	56	56.9	327 38.0	48.6	325 33.3	13.0	1 34.9	46.2	3 32.7	07.6
11	71	59.4	342 37.1	+23 48.8	340 33.9	+24 13.0	16 36.8	+18 46.3	18 34.9	+17 07.7
12	87	01.9	357 36.3	+23 48.9	355 34.5	+24 13.0	31 38.7	+18 46.5	33 37.1	+17 07.7
13	102	04.3	12 35.4	49.0	10 35.2	13.0	46 40.6	46.6	48 39.2	07.8
14	117	06.8	27 34.5	49.1	25 35.8	13.0	61 42.5	46.7	63 41.4	07.9
15	132	09.3	42 33.6	49.2	40 36.4	13.0	76 44.4	46.8	78 43.6	07.9
16	147	11.7	57 32.7	49.3	55 37.0	13.0	91 46.3	47.0	93 45.8	08.0
17	162	14.2	72 31.8	+23 49.4	70 37.7	+24 13.0	106 48.2	+18 47.1	108 47.9	+17 08.0
18	177	16.6	87 30.9	+23 49.5	85 38.3	+24 13.0	121 50.1	+18 47.2	123 50.1	+17 08.1
19	192	19.1	102 30.0	49.6	100 38.9	13.0	136 51.9	47.3	138 52.3	08.2
20	207	21.6	117 29.1	49.7	115 39.5	13.0	151 53.8	47.5	153 54.4	08.2
21	222	24.0	132 28.2	49.8	130 40.2	13.0	166 55.7	47.6	168 56.6	08.3
22	237	26.5	147 27.3	49.9	145 40.8	13.0	181 57.6	47.7	183 58.8	08.4
23	252	29.0	162 26.4	50.0	160 41.4	13.0	196 59.5	47.8	199 00.9	08.4
24	267	31.4	177 25.5	+23 50.1	175 42.1	+24 13.0	212 01.4	+18 47.9	214 03.1	+17 08.5
Dif	—	—	-9	+1	+6	0	+19	+1	+22	+

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7				Edad: 16 ^d 5 PHE { 4 ^h : 54 ^m 0 12 ^h : 54 ^m 0 20 ^h : 54 ^m 1													
	PMG: 12 ^h 01 ^m 4				SD: 14 ^h 7 PMG: 1 ^h 41 ^m R°: 48 ^m													
	hG ☉		Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m		
0	179	40.9	+23	25.4	335	28.1	-21	29.9	60 N	** **	0 49	2 35	23 04	26	4 56	64		
1	194	40.7		25.4	349	58.8 ¹¹⁷		28.1	58	** **	1 40	2 56	22 50	28	5 13	61		
2	209	40.6		25.5	4	29.5 ¹¹⁷		26.2	56	** **	2 10	3 13	37 30		27	60		
3	224	40.5		25.5	19	00.3 ¹¹⁸		24.2	54	0 45	33	27	26 32		38	59		
4	239	40.3		25.5	33	31.0 ¹¹⁷		22.1	52	1 32	2 51	39	16 34		49	58		
5	254	40.2	+23	25.6	48	01.8 ¹¹⁸	-21	20.0	50	2 00	3 06	3 50	22 07	35	5 58	58		
6	269	40.1	+23	25.6	62	32.6 ¹¹⁸	-21	17.7	45	2 46	3 35	4 13	21 49	37	6 18	56		
7	284	39.9		25.6	77	03.4 ¹¹⁸		15.3	40	3 16	3 58	31	34 39		34	54		
8	299	39.8		25.6	91	34.2 ¹¹⁸		12.8	35	40	4 16	46	21 40		48	53		
9	314	39.7		25.7	106	05.0 ¹¹⁸		10.2	30	3 58	32	4 59	21 10	41	6 59	52		
10	329	39.5		25.7	120	35.9 ¹¹⁹		07.6	20	4 27	4 57	5 21	20 50	44	7 19	51		
11	344	39.4	+23	25.7	135	06.8 ¹¹⁹	-21	04.8	10 N	4 50	5 17	5 40	20 34	45	7 37	49		
12	359	39.3	+23	25.8	149	37.7 ¹¹⁹	-21	01.9	0	5 09	5 35	5 58	20 18	47	7 53	48		
13	14	39.1		25.8	164	08.6 ¹¹⁹	-20	59.0	10 S	26	5 52	6 15	20 02	49	8 09	47		
14	29	39.0		25.8	178	39.5 ¹¹⁹		55.9	20	42	6 10	34	19 45	51	27	45		
15	44	38.8		25.8	193	10.4 ¹¹⁹		52.7	32	5 59	29	6 55	26 53		46	44		
16	59	38.7		25.9	207	41.4 ¹²⁰		49.5	35	6 07	39	7 07	15 54		8 58	43		
17	74	38.6	+23	25.9	222	12.4 ¹²⁰	-20	46.1	40	6 17	6 51	7 22	19 02	55	9 11	42		
18	89	38.4	+23	25.9	236	43.4 ¹²⁰	-20	42.7	45	6 27	7 05	7 38	18 47	57	9 27	40		
19	104	38.3		25.9	251	14.4 ¹²⁰		39.1	50	39	21	7 59	28 59		46	38		
20	119	38.2		26.0	265	45.4 ¹²⁰		35.5	52	44	28	8 09	19 60		9 55	37		
21	134	38.0		26.0	280	16.5 ¹²¹		31.7	54	50	36	20	18 09	62	10 06	35		
22	149	37.9		26.0	294	47.6 ¹²¹		27.9	56	6 56	45	33	17 57	64	17	34		
23	164	37.8		26.0	309	18.7 ¹²¹		24.0	58	7 03	7 56	8 48	44 66		30	33		
24	179	37.6	+23	26.0	323	49.8 ¹²¹	-20	20.0	60 S	7 11	8 07	9 05	17 29	68	10 46	30		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 6 ^h 08 ^m 9		Mag: -4.0 PMG: 12 ^h 11 ^m				Mag: +1.6 PMG: 12 ^h 17 ^m				Mag: -2.1 PMG: 9 ^h 51 ^m				Mag: +0.2 PMG: 9 ^h 42 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	267	31.4	177	25.5	+23	50.1	175	42.1	+24	13.0	212	01.4	+18	47.9	214	03.1	+17	08.5
1	282	33.9	192	24.6		50.2	190	42.7		13.0	227	03.3		48.1	229	05.3		08.6
2	297	36.4	207	23.8		50.3	205	43.3		13.0	242	05.2		48.2	244	07.5		08.6
3	312	38.8	222	22.9		50.3	220	43.9		13.0	257	07.1		48.3	259	09.6		08.7
4	327	41.3	237	22.0		50.4	235	44.6		13.0	272	09.0		48.4	274	11.8		08.8
5	342	43.8	252	21.1	+23	50.5	250	45.2	+24	13.0	287	10.9	+18	48.6	289	14.0	+17	08.8
6	357	46.2	267	20.2	+23	50.6	265	45.8	+24	13.0	302	12.8	+18	48.7	304	16.1	+17	08.9
7	12	48.7	282	19.3		50.7	280	46.5		13.0	317	14.7		48.8	319	18.3		09.0
8	27	51.1	297	18.4		50.8	295	47.1		13.0	332	16.6		48.9	334	20.5		09.0
9	42	53.6	312	17.5		50.9	310	47.7		13.0	347	18.5		49.1	349	22.7		09.1
10	57	56.1	327	16.6		50.9	325	48.3		13.0	2	20.4		49.2	4	24.8		09.2
11	72	58.5	342	15.7	+23	51.0	340	49.0	+24	12.9	17	22.3	+18	49.3	19	27.0	+17	09.2
12	88	01.0	357	14.8	+23	51.1	355	49.6	+24	12.9	32	24.2	+18	49.4	34	29.2	+17	09.3
13	103	03.5	12	13.9		51.2	10	50.2		12.9	47	26.1		49.6	49	31.3		09.4
14	118	05.9	27	13.0		51.3	25	50.9		12.9	62	28.0		49.7	64	33.5		09.4
15	133	08.4	42	12.1		51.3	40	51.5		12.9	77	29.9		49.8	79	35.7		09.5
16	148	10.9	57	11.2		51.4	55	52.1		12.9	92	31.8		49.9	94	37.9		09.6
17	163	13.3	72	10.3	+23	51.5	70	52.7	+24	12.9	107	33.7	+18	50.0	109	40.0	+17	09.6
18	178	15.8	87	09.4	+23	51.6	85	53.4	+24	12.9	122	35.6	+18	50.2	124	42.2	+17	09.7
19	193	18.3	102	08.6		51.6	100	54.0		12.9	137	37.5		50.3	139	44.4		09.8
20	208	20.7	117	07.7		51.7	115	54.6		12.9	152	39.4		50.4	154	46.5		09.8
21	223	23.2	132	06.8		51.8	130	55.3		12.8	167	41.3		50.5	169	48.7		09.9
22	238	25.6	147	05.9		51.8	145	55.9		12.8	182	43.2		50.7	184	50.9		09.9
23	253	28.1	162	05.0		51.9	160	56.5		12.8	197	45.1		50.8	199	53.1		10.0
24	268	30.6	177	04.1	+23	52.0	175	57.2	+24	12.8	212	47.0	+18	50.9	214	55.2	+17	10.1
Dif	—		-9		+1		+6		0		+19		+1		+22		+1	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 17 ^d 5	PHE { 4 ^h : 54 ^m 1 12 ^h : 54 ^m 2 20 ^h : 54 ^m 3										
	PMG: 12 ^h 01 ^m 6					SD: 14 ^h 7			R°: 48 ^m						
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	m	h m m	m
0	179	37.6	+23 26.0	323	49.8	-20 20.0	41	60 N	21 28	23 14	** **	23 30	20	6 00	71
1	194	37.5	26.1	338	21.0 ¹²²	15.9	41	58	21 07	22 23	** **	18	22	14	68
2	209	37.4	26.1	352	52.1 ¹²¹	11.7	42	56	20 50	21 53	** **	23 07	25	27	66
3	224	37.2	26.1	7	23.3 ¹²²	07.4	43	54	36	31	23 18	22 58	26	37	65
4	239	37.1	26.1	21	54.6 ¹²³	-20 03.0	44	52	24	21 13	22 31	50	28	47	63
5	254	36.9	+23 26.1	36	25.8 ¹²²	-19 58.5	45	50	20 13	20 57	22 03	22 42	30	6 56	61
6	269	36.8	+23 26.1	50	57.1 ¹²³	-19 53.9	46	45	19 50	20 28	21 17	22 26	32	7 14	58
7	284	36.7	26.1	65	28.4 ¹²³	49.3	46	40	32	20 05	20 47	13	35	28	57
8	299	36.5	26.2	79	59.7 ¹²³	44.5	48	35	17	19 47	24	22 01	37	41	55
9	314	36.4	26.2	94	31.0 ¹²³	39.7	48	30	19 04	31	20 05	21 51	39	7 51	54
10	329	36.3	26.2	109	02.4 ¹²⁴	34.7	50	20	18 42	19 06	19 36	34	42	8 10	51
11	344	36.1	+23 26.2	123	33.8 ¹²⁴	-19 29.7	50	10 N	18 23	18 46	19 13	21 19	44	8 26	49
12	359	36.0	+23 26.2	138	05.2 ¹²⁴	-19 24.6	51	0	18 05	18 28	18 54	21 05	47	8 41	47
13	14	35.9	26.2	152	36.6 ¹²⁴	19.4	52	10 S	17 48	18 11	37	20 51	49	8 56	45
14	29	35.7	26.2	167	08.1 ¹²⁵	14.1	53	20	29	17 53	21	36	51	9 12	42
15	44	35.6	26.2	181	39.6 ¹²⁵	08.7	54	30	17 08	34	18 04	19	54	30	40
16	59	35.5	26.2	196	11.1 ¹²⁵	-19 03.2	55	35	16 56	24	17 55	20 09	55	41	38
17	74	35.3	+23 26.2	210	42.7 ¹²⁶	-18 57.7	55	40	16 41	17 12	17 46	19 57	58	9 53	36
18	89	35.2	+23 26.2	225	14.2 ¹²⁵	-18 52.0	57	45	16 25	16 58	17 36	19 44	60	10 07	34
19	104	35.1	26.3	239	45.8 ¹²⁶	46.3	57	50	16 04	42	24	27	63	24	32
20	119	34.9	26.3	254	17.4 ¹²⁶	40.5	58	52	15 54	35	19	19	65	32	31
21	134	34.8	26.3	268	49.1 ¹²⁷	34.6	59	54	43	27	13	11	66	41	29
22	149	34.6	26.3	283	20.8 ¹²⁷	28.6	60	56	30	17	07	19 01	68	10 51	28
23	164	34.5	26.3	297	52.5 ¹²⁷	22.6	60	58	15 15	16 07	17 00	18 50	70	11 03	25
24	179	34.4	+23 26.3	312	24.2 ¹²⁷	-18 16.4	62	60 S	14 58	15 55	16 52	18 37	73	11 16	23

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 6 ^h 05 ^m 0		Mag: -4.0 PMG: 12 ^h 12 ^m		Mag: +1.6 PMG: 12 ^h 16 ^m		Mag: -2.1 PMG: 9 ^h 48 ^m		Mag: +0.2 PMG: 9 ^h 39 ^m						
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	268	30.6	177	04.1	+23 52.0	175	57.2	+24 12.8	212	47.0	+18 50.9	214	55.2	+17 10.1	
1	283	33.0	192	03.2	52.0	190	57.8	12.8	227	48.9	51.0	229	57.4	10.1	
2	298	35.5	207	02.3	52.1	205	58.4	12.8	242	50.8	51.2	244	59.6	10.2	
3	313	38.0	222	01.4	52.2	220	59.0	12.8	257	52.7	51.3	260	01.7	10.3	
4	328	40.4	237	00.5	52.2	235	59.7	12.8	272	54.6	51.4	275	03.9	10.3	
5	343	42.9	251	59.6	+23 52.3	251	00.3	+24 12.7	287	56.5	+18 51.5	290	06.1	+17 10.4	
6	358	45.4	266	58.7	+23 52.3	266	00.9	+24 12.7	302	58.4	+18 51.6	305	08.3	+17 10.5	
7	13	47.8	281	57.8	52.4	281	01.6	12.7	318	00.3	51.8	320	10.4	10.5	
8	28	50.3	296	56.9	52.4	296	02.2	12.7	333	02.2	51.9	335	12.6	10.6	
9	43	52.8	311	56.0	52.5	311	02.8	12.7	348	04.1	52.0	350	14.8	10.7	
10	58	55.2	326	55.1	52.5	326	03.5	12.7	3	06.0	52.1	5	16.9	10.7	
11	73	57.7	341	54.2	+23 52.6	341	04.1	+24 12.6	18	07.9	+18 52.3	20	19.1	+17 10.8	
12	89	00.1	356	53.3	+23 52.6	356	04.7	+24 12.6	33	09.8	+18 52.4	35	21.3	+17 10.9	
13	104	02.6	11	52.4	52.7	11	05.3	12.6	48	11.7	52.5	50	23.5	10.9	
14	119	05.1	26	51.5	52.7	26	06.0	12.6	63	13.6	52.6	65	25.6	11.0	
15	134	07.5	41	50.6	52.8	41	06.6	12.6	78	15.5	52.7	80	27.8	11.1	
16	149	10.0	56	49.8	52.8	56	07.2	12.6	93	17.4	52.9	95	30.0	11.1	
17	164	12.5	71	48.9	+23 52.9	71	07.9	+24 12.5	108	19.4	+18 53.0	110	32.2	+17 11.2	
18	179	14.9	86	48.0	+23 52.9	86	08.5	+24 12.5	123	21.3	+18 53.1	125	34.3	+17 11.2	
19	194	17.4	101	47.1	53.0	101	09.1	12.5	138	23.2	53.2	140	36.5	11.3	
20	209	19.9	116	46.2	53.0	116	09.8	12.5	153	25.1	53.4	155	38.7	11.4	
21	224	22.3	131	45.3	53.0	131	10.4	12.5	168	27.0	53.5	170	40.8	11.4	
22	239	24.8	146	44.4	53.1	146	11.0	12.4	183	28.9	53.6	185	43.0	11.5	
23	254	27.2	161	43.5	53.1	161	11.7	12.4	198	30.8	53.7	200	45.2	11.6	
24	269	29.7	176	42.6	+23 53.1	176	12.3	+24 12.4	213	32.7	+18 53.8	215	47.4	+17 11.6	
Dif	—		-9		0	+6		0	+19		+1	+22		+1	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 18 ^d 5 PHE { 4 ^h : 54 ^m 4 12 ^h : 54 ^m 5 20 ^h : 54 ^m 6										
	PMG: 12 ^h 01 ^m 8			SD: 14 ^h 8 PMG: 3 ^h 17 ^m R°: 46 ^m										
	hG ☉		Dec	hG ☾ Dif		Dec Dif		Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	h m	h m	h m	h m m		h m m	
0	179	34.4	+23 26.3	312	24.2	-18 16.4	60 N	** **	0 49	2 36	23 50 15		7 11 74	
1	194	34.2	26.3	326	56.0 ¹²⁸	10.2 ⁶²	58	** **	1 40	2 56	40 18		22 72	
2	209	34.1	26.3	341	27.7 ¹²⁷	-18 03.8 ⁶⁴	56	** **	2 10	3 13	32 20		33 69	
3	224	34.0	26.3	355	59.5 ¹²⁸	-17 57.4 ⁶⁴	54	0 45	33	27	24 23		42 67	
4	239	33.8	26.3	10	31.4 ¹²⁹	51.0 ⁶⁴	52	1 32	2 51	40	18 24		50 65	
5	254	33.7	+23 26.3	25	03.2 ¹²⁸	-17 44.4 ⁶⁶	50	2 00	3 06	3 51	23 12 25		7 57 64	
6	269	33.6	+23 26.3	39	35.1 ¹²⁹	-17 37.7 ⁶⁷	45	2 46	3 36	4 13	22 58 29		8 12 61	
7	284	33.4	26.3	54	07.0 ¹²⁹	31.0 ⁶⁷	40	3 17	3 58	31	48 31		25 58	
8	299	33.3	26.3	68	39.0 ¹³⁰	24.2 ⁶⁸	35	40	4 17	46	38 34		36 56	
9	314	33.2	26.3	83	10.9 ¹²⁹	17.3 ⁶⁹	30	3 59	32	4 59	30 36		8 45 54	
10	329	33.0	26.2	97	42.9 ¹³⁰	10.3 ⁷⁰	20	4 28	4 57	5 22	16 39		9 01 51	
11	344	32.9	+23 26.2	112	14.9 ¹³⁰	-17 03.3 ⁷⁰	10 N	4 50	5 17	5 41	22 03 43		9 15 48	
12	359	32.8	+23 26.2	126	47.0 ¹³¹	-16 56.2 ⁷¹	0	5 09	5 36	5 58	21 52 45		9 28 45	
13	14	32.6	26.2	141	19.0 ¹³⁰	49.0 ⁷²	10 S	26	5 53	6 16	40 48		41 43	
14	29	32.5	26.2	155	51.1 ¹³¹	41.7 ⁷³	20	43	6 10	34	27 51		9 54 41	
15	44	32.4	26.2	170	23.2 ¹³¹	34.3 ⁷⁴	30	5 59	29	6 55	13 54		10 10 37	
16	59	32.2	26.2	184	55.4 ¹³²	26.9 ⁷⁴	35	6 08	40	7 08	21 04 57		19 35	
17	74	32.1	+23 26.2	199	27.5 ¹³¹	-16 19.4 ⁷⁵	40	6 17	6 51	7 22	20 55 59		10 29 34	
18	89	31.9	+23 26.2	213	59.7 ¹³²	-16 11.8 ⁷⁶	45	6 28	7 05	7 39	20 44 61		10 41 31	
19	104	31.8	26.2	228	31.9 ¹³²	-16 04.1 ⁷⁷	50	40	21	8 00	30 65		10 56 27	
20	119	31.7	26.2	243	04.2 ¹³³	-15 56.4 ⁷⁷	52	45	29	10	24 67		11 03 26	
21	134	31.5	26.1	257	36.4 ¹³²	48.6 ⁷⁸	54	51	37	21	17 68		10 25	
22	149	31.4	26.1	272	08.7 ¹³³	40.7 ⁷⁹	56	6 57	46	33	09 71		19 22	
23	164	31.3	26.1	286	41.0 ¹³³	32.7 ⁸⁰	58	7 04	7 56	8 48	20 00 73		28 20	
24	179	31.1	+23 26.1	301	13.4 ¹³⁴	-15 24.7 ⁸⁰	60 S	7 11	8 08	9 06	19 50 76		11 39 17	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG 6 ^h 01 ^m 0		Mag: -4.0 PMG: 12 ^h 14 ^m			Mag: +1.6 PMG: 12 ^h 15 ^m			Mag: -2.1 PMG: 9 ^h 45 ^m			Mag: +0.2 PMG: 9 ^h 35 ^m		
	hG ♈		hG ♀ Dec			hG ♂ Dec			hG ♃ Dec			hG ♄ Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	269	29.7	176 42.6	+23 53.1	176 12.3	+24 12.4	213 32.7	+18 53.8	215 47.4	+17 11.6				
1	284	32.2	191 41.7	53.2	191 12.9	12.4	228 34.6	54.0	230 49.5	11.7				
2	299	34.6	206 40.8	53.2	206 13.6	12.4	243 36.5	54.1	245 51.7	11.8				
3	314	37.1	221 39.9	53.2	221 14.2	12.3	258 38.4	54.2	260 53.9	11.8				
4	329	39.6	236 39.0	53.3	236 14.8	12.3	273 40.3	54.3	275 56.1	11.9				
5	344	42.0	251 38.1	+23 53.3	251 15.5	+24 12.3	288 42.2	+18 54.4	290 58.2	+17 12.0				
6	359	44.5	266 37.2	+23 53.3	266 16.1	+24 12.3	303 44.1	+18 54.6	306 00.4	+17 12.0				
7	14	47.0	281 36.3	53.4	281 16.7	12.2	318 46.0	54.7	321 02.6	12.1				
8	29	49.4	296 35.4	53.4	296 17.3	12.2	333 47.9	54.8	336 04.8	12.1				
9	44	51.9	311 34.5	53.4	311 18.0	12.2	348 49.8	54.9	351 06.9	12.2				
10	59	54.4	326 33.6	53.4	326 18.6	12.2	3 51.7	55.0	6 09.1	12.3				
11	74	56.8	341 32.7	+23 53.5	341 19.2	+24 12.1	18 53.6	+18 55.2	21 11.3	+17 12.3				
12	89	59.3	356 31.8	+23 53.5	356 19.9	+24 12.1	33 55.5	+18 55.3	36 13.5	+17 12.4				
13	105	01.7	11 30.9	53.5	11 20.5	12.1	48 57.4	55.4	51 15.6	12.5				
14	120	04.2	26 30.0	53.5	26 21.1	12.1	63 59.3	55.5	66 17.8	12.5				
15	135	06.7	41 29.1	53.5	41 21.8	12.0	79 01.2	55.7	81 20.0	12.6				
16	150	09.1	56 28.2	53.5	56 22.4	12.0	94 03.1	55.8	96 22.2	12.7				
17	165	11.6	71 27.3	+23 53.6	71 23.0	+24 12.0	109 05.0	+18 55.9	111 24.3	+17 12.7				
18	180	14.1	86 26.4	+23 53.6	86 23.7	+24 12.0	124 06.9	+18 56.0	126 26.5	+17 12.8				
19	195	16.5	101 25.5	53.6	101 24.3	11.9	139 08.8	56.1	141 28.7	12.8				
20	210	19.0	116 24.7	53.6	116 24.9	11.9	154 10.7	56.3	156 30.9	12.9				
21	225	21.5	131 23.8	53.6	131 25.6	11.9	169 12.6	56.4	171 33.0	13.0				
22	240	23.9	146 22.9	53.6	146 26.2	11.8	184 14.5	56.5	186 35.2	13.0				
23	255	26.4	161 22.0	53.6	161 26.8	11.8	199 16.4	56.6	201 37.4	13.1				
24	270	28.9	176 21.1	+23 53.6	176 27.5	+24 11.8	214 18.3	+18 56.7	216 39.6	+17 13.2				
Dif	—		-9	0	+6		0	+19	+1	+22		+1		

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 19 ^d 5	PHE { 4 ^h : 54 ^m 7 12 ^h : 54 ^m 9 20 ^h : 55 ^m 0	Final del crepúsculo			Salida de Luna		Puesta de Luna			
	PMG: 12 ^h 02 ^m 0					Civil			Náutico		Hora R°			
	hG ☉	Dec		hG ☾	Dif	Dec	Dif							
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	179	31.1	+23 26.1	301	13.4	-15 24.7	81	60 N	21 28	23 14	** **	** **	** **	8 25 78
1	194	31.0	26.1	315	45.7 ¹³³	16.6	81	58	21 07	22 23	** **	** **	23 58 16	34 75
2	209	30.9	26.1	330	18.1 ¹³⁴	08.4	82	56	20 51	21 53	** **	** **	52 18	42 72
3	224	30.7	26.0	344	50.5 ¹³⁴	-15 00.2	82	54	36	31	23 18	47 19	49 70	
4	239	30.6	26.0	359	22.9 ¹³⁴	-14 51.9	83	52	24	21 13	22 31	42 21	8 55 68	
5	254	30.5	+23 26.0	13	55.4 ¹³⁵	-14 43.5	84	50	20 13	20 58	22 03	23 37 23	9 01 66	
6	269	30.3	+23 26.0	28	27.8 ¹³⁴	-14 35.0	85	45	19 51	20 28	21 18	23 27 27	9 13 63	
7	284	30.2	26.0	43	00.3 ¹³⁵	26.5	85	40	32	20 05	20 47	19 30	23 60	
8	299	30.1	25.9	57	32.8 ¹³⁵	17.9	86	35	17	19 47	24	12 32	32 57	
9	314	29.9	25.9	72	05.3 ¹³⁵	09.3	86	30	19 04	32	20 05	23 06 34	39 55	
10	329	29.8	25.9	86	37.9 ¹³⁶	-14 00.6	87	20	18 42	19 07	19 36	22 55 39	9 52 51	
11	344	29.7	+23 25.9	101	10.4 ¹³⁵	-13 51.8	88	10 N	18 23	18 46	19 13	22 46 41	10 03 48	
12	359	29.5	+23 25.8	115	43.0 ¹³⁶	-13 42.9	89	0	18 06	18 28	18 54	22 37 45	10 13 45	
13	14	29.4	25.8	130	15.6 ¹³⁶	34.0	89	10 S	17 48	18 11	37	28 48	24 42	
14	29	29.2	25.8	144	48.2 ¹³⁶	25.0	90	20	30	17 54	21	18 52	35 39	
15	44	29.1	25.8	159	20.9 ¹³⁷	16.0	90	30	17 08	35	18 05	07 56	47 35	
16	59	29.0	25.7	173	53.5 ¹³⁶	-13 06.8	91	35	16 56	24	17 56	22 01 58	10 54 33	
17	74	28.8	+23 25.7	188	26.2 ¹³⁷	-12 57.7	92	40	16 42	17 12	17 47	21 54 60	11 03 30	
18	89	28.7	+23 25.7	202	58.9 ¹³⁷	-12 48.4	93	45	16 25	16 59	17 36	21 45 64	11 12 28	
19	104	28.6	25.7	217	31.6 ¹³⁷	39.1	93	50	16 04	43	24	35 67	23 25	
20	119	28.4	25.6	232	04.3 ¹³⁷	29.8	93	52	15 54	35	19	31 68	29 22	
21	134	28.3	25.6	246	37.0 ¹³⁷	20.3	95	54	43	27	13	25 71	35 20	
22	149	28.2	25.6	261	09.8 ¹³⁸	10.8	95	56	31	18	07	20 72	41 19	
23	164	28.0	25.5	275	42.5 ¹³⁷	-12 01.3	95	58	15 16	16 08	17 00	13 75	48 17	
24	179	27.9	+23 25.5	290	15.3 ¹³⁸	-11 51.7	96	60 S	14 58	15 56	16 53	21 06 78	11 56 14	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 5 ^h 57 ^m 1		Mag: -3.9 PMG: 12 ^h 15 ^m		Mag: +1.6 PMG: 12 ^h 14 ^m		Mag: -2.1 PMG: 9 ^h 42 ^m		Mag: +0.2 PMG: 9 ^h 32 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	270	28.9	176	21.1	176	27.5	214	18.3	216	39.6
1	285	31.3	191	20.2	191	28.1	229	20.2	231	41.7
2	300	33.8	206	19.3	206	28.7	244	22.2	246	43.9
3	315	36.2	221	18.4	221	29.4	259	24.1	261	46.1
4	330	38.7	236	17.5	236	30.0	274	26.0	276	48.3
5	345	41.2	251	16.6	251	30.6	289	27.9	291	50.4
6	0	43.6	266	15.7	266	31.3	304	29.8	306	52.6
7	15	46.1	281	14.8	281	31.9	319	31.7	321	54.8
8	30	48.6	296	13.9	296	32.5	334	33.6	336	57.0
9	45	51.0	311	13.0	311	33.2	349	35.5	351	59.1
10	60	53.5	326	12.1	326	33.8	4	37.4	7	01.3
11	75	56.0	341	11.2	341	34.5	19	39.3	22	03.5
12	90	58.4	356	10.3	356	35.1	34	41.2	37	05.7
13	106	00.9	11	09.4	11	35.7	49	43.1	52	07.8
14	121	03.3	26	08.5	26	36.4	64	45.0	67	10.0
15	136	05.8	41	07.6	41	37.0	79	46.9	82	12.2
16	151	08.3	56	06.7	56	37.6	94	48.8	97	14.4
17	166	10.7	71	05.8	71	38.3	109	50.7	112	16.5
18	181	13.2	86	04.9	86	38.9	124	52.6	127	18.7
19	196	15.7	101	04.0	101	39.5	139	54.5	142	20.9
20	211	18.1	116	03.1	116	40.2	154	56.4	157	23.1
21	226	20.6	131	02.2	131	40.8	169	58.4	172	25.3
22	241	23.1	146	01.3	146	41.4	185	00.3	187	27.4
23	256	25.5	161	00.4	161	42.1	200	02.2	202	29.6
24	271	28.0	175	59.5	175	42.7	215	04.1	217	31.8
Dif	—		-9	0	+6	0	+19	+1	+22	+1

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15 ^h 7 PMG: 12 ^h 02 ^m 2			Edad: 20 ^d 5 PHE { SD: 15 ^h 0 PMG: 4 ^h 48 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m	
0	179	27.9	+23	25.5	290	15.3	-11	51.7	60 N	** **	0 50	2 36	0 05	13	9 43	79		
1	194	27.8		25.5	304	48.1 ¹³⁸		42.0 ⁹⁷	58	** **	1 41	2 57	** **	**	49	76		
2	209	27.6		25.4	319	20.9 ¹³⁸		32.3 ⁹⁸	56	** **	2 11	3 14	** **	**	54	74		
3	224	27.5		25.4	333	53.7 ¹³⁸		22.5 ⁹⁸	54	0 46	33	28	** **	**	9 59	71		
4	239	27.4		25.4	348	26.5 ¹³⁸		12.7 ⁹⁸	52	1 33	2 51	40	** **	**	10 03	70		
5	254	27.2	+23	25.3	2	59.3 ¹³⁸	-11	02.8 ⁹⁹	50	2 01	3 07	3 51	** **	**	10 07	68		
6	269	27.1	+23	25.3	17	32.2 ¹³⁹	-10	52.8 ¹⁰⁰	45	2 47	3 36	4 14	23 54	26	10 16	64		
7	284	27.0		25.3	32	05.0 ¹³⁸		42.8 ¹⁰⁰	40	3 17	3 59	32	49	29	23	60		
8	299	26.8		25.2	46	37.9 ¹³⁹		32.8 ¹⁰⁰	35	40	4 17	4 47	44	32	29	58		
9	314	26.7		25.2	61	10.7 ¹³⁸		22.7 ¹⁰¹	30	3 59	32	5 00	40	34	34	56		
10	329	26.6		25.1	75	43.6 ¹³⁹		12.5 ¹⁰²	20	4 28	4 57	22	34	37	43	52		
11	344	26.4	+23	25.1	90	16.5 ¹³⁹	-10	02.3 ¹⁰²	10 N	4 51	5 18	5 41	23 27	42	10 51	48		
12	359	26.3	+23	25.1	104	49.4 ¹³⁹	-9	52.0 ¹⁰³	0	5 10	5 36	5 59	23 22	45	10 58	45		
13	14	26.2		25.0	119	22.2 ¹³⁸		41.7 ¹⁰³	10 S	27	5 53	6 16	16	48	11 06	41		
14	29	26.0		25.0	133	55.1 ¹³⁹		31.3 ¹⁰⁴	20	5 43	6 11	35	10	52	14	37		
15	44	25.9		24.9	148	28.0 ¹³⁹		20.9 ¹⁰⁴	30	6 00	29	6 56	23 03	56	22	34		
16	59	25.8		24.9	163	00.9 ¹³⁹	-9	10.4 ¹⁰⁵	35	08	40	7 08	22 59	58	27	32		
17	74	25.6	+23	24.8	177	33.8 ¹³⁹	-8	59.9 ¹⁰⁵	40	6 18	6 52	7 22	22 54	62	11 33	29		
18	89	25.5	+23	24.8	192	06.7 ¹³⁹	-8	49.3 ¹⁰⁶	45	6 28	7 05	7 39	22 49	64	11 40	26		
19	104	25.4		24.7	206	39.6 ¹³⁹		38.7 ¹⁰⁶	50	40	21	8 00	42	69	48	22		
20	119	25.2		24.7	221	12.5 ¹³⁹		28.0 ¹⁰⁷	52	45	29	10	39	71	51	21		
21	134	25.1		24.6	235	45.4 ¹³⁹		17.3 ¹⁰⁷	54	51	37	21	36	73	11 55	19		
22	149	25.0		24.6	250	18.3 ¹³⁹	-8	06.5 ¹⁰⁸	56	6 57	46	34	32	75	12 00	16		
23	164	24.8		24.6	264	51.2 ¹³⁹	-7	55.7 ¹⁰⁸	58	7 04	7 56	8 48	28	78	05	14		
24	179	24.7	+23	24.5	279	24.1 ¹³⁹	-7	44.9 ¹⁰⁸	60 S	7 11	8 08	9 06	22 24	80	12 10	12		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 5 ^h 53 ^m 2		Mag: -3.9 PMG: 12 ^h 17 ^m				Mag: +1.6 PMG: 12 ^h 13 ^m				Mag: -2.1 PMG: 9 ^h 39 ^m				Mag: +0.2 PMG: 9 ^h 29 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	271	28.0	175	59.5	+23	53.4	176	42.7	+24	11.0	215	04.1	+18	59.6	217	31.8	+17	14.7
1	286	30.5	190	58.6		53.4	191	43.3		10.9	230	06.0		59.7	232	34.0		14.8
2	301	32.9	205	57.8		53.3	206	44.0		10.9	245	07.9	+18	59.8	247	36.1		14.8
3	316	35.4	220	56.9		53.3	221	44.6		10.9	260	09.8	+19	00.0	262	38.3		14.9
4	331	37.8	235	56.0		53.3	236	45.3		10.8	275	11.7	+19	00.1	277	40.5		14.9
5	346	40.3	250	55.1	+23	53.3	251	45.9	+24	10.8	290	13.6	+19	00.2	292	42.7	+17	15.0
6	1	42.8	265	54.2	+23	53.2	266	46.5	+24	10.7	305	15.5	+19	00.3	307	44.8	+17	15.1
7	16	45.2	280	53.3		53.2	281	47.2		10.7	320	17.4		00.4	322	47.0		15.1
8	31	47.7	295	52.4		53.2	296	47.8		10.7	335	19.3		00.6	337	49.2		15.2
9	46	50.2	310	51.5		53.1	311	48.4		10.6	350	21.2		00.7	352	51.4		15.3
10	61	52.6	325	50.6		53.1	326	49.1		10.6	5	23.1		00.8	7	53.6		15.3
11	76	55.1	340	49.7	+23	53.1	341	49.7	+24	10.5	20	25.0	+19	00.9	22	55.7	+17	15.4
12	91	57.6	355	48.8	+23	53.0	356	50.3	+24	10.5	35	27.0	+19	01.0	37	57.9	+17	15.4
13	107	00.0	10	47.9		53.0	11	51.0		10.4	50	28.9		01.1	53	00.1		15.5
14	122	02.5	25	47.0		52.9	26	51.6		10.4	65	30.8		01.3	68	02.3		15.6
15	137	05.0	40	46.1		52.9	41	52.2		10.4	80	32.7		01.4	83	04.4		15.6
16	152	07.4	55	45.2		52.8	56	52.9		10.3	95	34.6		01.5	98	06.6		15.7
17	167	09.9	70	44.3	+23	52.8	71	53.5	+24	10.3	110	36.5	+19	01.6	113	08.8	+17	15.8
18	182	12.3	85	43.4	+23	52.8	86	54.2	+24	10.2	125	38.4	+19	01.7	128	11.0	+17	15.8
19	197	14.8	100	42.5		52.7	101	54.8		10.2	140	40.3		01.9	143	13.2		15.9
20	212	17.3	115	41.6		52.7	116	55.4		10.1	155	42.2		02.0	158	15.3		15.9
21	227	19.7	130	40.7		52.6	131	56.1		10.1	170	44.1		02.1	173	17.5		16.0
22	242	22.2	145	39.8		52.6	146	56.7		10.0	185	46.0		02.2	188	19.7		16.1
23	257	24.7	160	38.9		52.5	161	57.3		10.0	200	47.9		02.3	203	21.9		16.1
24	272	27.1	175	38.0	+23	52.5	176	58.0	+24	09.9	215	49.8	+19	02.4	218	24.1	+17	16.2
Dif	—		-9		0		+6		0		+19		+1		+22		+1	

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna						
	SD: 15 ^h 7				Edad: 21 ^d 5	PHE { 4 ^h : 55/8 12 ^h : 56/1 20 ^h : 56/3	SD: 15/2				R°: 45 ^m	Final del crepúsculo			Salida de Luna		Puesta de Luna					
	PMG: 12 ^h 02 ^m 5						PMG: 5 ^h 32 ^m															
	hG ☉		Dec		hG ☾		Dif		Dec		Dif			Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m			
0	179	24.7	+23	24.5	279	24.1	-7	44.9	60 N	21	28	23	13	** ** *	0	18	11	11	02	81		
1	194	24.5		24.5	293	57.0 ¹³⁹		34.0 ¹⁰⁹	58	21	07	22	23	** ** *		14	14		05	78		
2	209	24.4		24.4	308	29.9 ¹³⁹		23.0 ¹¹⁰	56	20	51	21	53	** ** *		10	16		08	75		
3	224	24.3		24.3	323	02.8 ¹³⁹		12.0 ¹¹⁰	54		36		31	23	17		06	19	10	74		
4	239	24.1		24.3	337	35.6 ¹³⁸		-7 01.0 ¹¹⁰	52		24		21	13	22	31		03	20	13	71	
5	254	24.0	+23	24.2	352	08.5 ¹³⁹		-6 49.9 ¹¹¹	50	20	13	20	58	22	03		0	00	22	11	15	69
6	269	23.9	+23	24.2	6	41.4 ¹³⁹		-6 38.8 ¹¹¹	45	19	51	20	28	21	18	** ** *	** ** *		11	20	65	
7	284	23.7		24.1	21	14.2 ¹³⁸		27.6 ¹¹²	40		33	20	06	20	47	** ** *	** ** *		23	63		
8	299	23.6		24.1	35	47.1 ¹³⁹		16.5 ¹¹¹	35		18	19	47		24	** ** *	** ** *		27	59		
9	314	23.5		24.0	50	19.9 ¹³⁸		-6 05.2 ¹¹³	30	19	05		32	20	06	** ** *	** ** *		30	57		
10	329	23.3		24.0	64	52.7 ¹³⁸		-5 53.9 ¹¹³	20	18	43	19	07	19	36	** ** *	** ** *		35	52		
11	344	23.2	+23	23.9	79	25.5 ¹³⁸		-5 42.6 ¹¹³	10 N	18	24	18	47	19	14	** ** *	** ** *		11	39	49	
12	359	23.1	+23	23.8	93	58.3 ¹³⁸		-5 31.3 ¹¹³	0	18	06	18	29	18	55	** ** *	** ** *		11	43	45	
13	14	22.9		23.8	108	31.1 ¹³⁸		19.9 ¹¹⁴	10 S	17	49	18	12		38	** ** *	** ** *		47	42		
14	29	22.8		23.7	123	03.9 ¹³⁸		-5 08.5 ¹¹⁴	20		30	17	54		22	** ** *	** ** *		51	38		
15	44	22.7		23.7	137	36.7 ¹³⁸		-4 57.0 ¹¹⁵	30	17	09		35	18	05	23	59	58		56	34	
16	59	22.5		23.6	152	09.4 ¹³⁷		45.5 ¹¹⁵	35	16	57		25	17	56		57	61	11	59	31	
17	74	22.4	+23	23.5	166	42.1 ¹³⁷		-4 34.0 ¹¹⁵	40	16	42		17	13	17	47	23	56	63	12	02	29
18	89	22.3	+23	23.5	181	14.8 ¹³⁷		-4 22.4 ¹¹⁶	45	16	26	16	59	17	37	23	53	67		12	06	25
19	104	22.1		23.4	195	47.5 ¹³⁷		-4 10.8 ¹¹⁶	50	16	05		43		25		51	71		10	22	
20	119	22.0		23.4	210	20.2 ¹³⁷		-3 59.2 ¹¹⁶	52	15	55		36		20		50	73		12	20	
21	134	21.9		23.3	224	52.8 ¹³⁶		47.6 ¹¹⁶	54		44		28		14		49	74		14	18	
22	149	21.8		23.2	239	25.5 ¹³⁷		35.9 ¹¹⁷	56		31		19		08		47	77		16	16	
23	164	21.6		23.2	253	58.1 ¹³⁶		24.2 ¹¹⁷	58	15	17	16	08	17	01		46	79		19	14	
24	179	21.5	+23	23.1	268	30.6 ¹³⁵		-3 12.4 ¹¹⁸	60 S	14	59	15	57	16	54	23	44	82		12	22	11
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO							
	PMG: 5 ^h 49 ^m 2		Mag: -3.9 PMG: 12 ^h 18 ^m				Mag: +1.6 PMG: 12 ^h 12 ^m				Mag: -2.1 PMG: 9 ^h 35 ^m				Mag: +0.2 PMG: 9 ^h 25 ^m							
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	272	27.1	175	38.0	+23	52.5	176	58.0	+24	09.9	215	49.8	+19	02.4	218	24.1	+17	16.2				
1	287	29.6	190	37.1		52.4	191	58.6		09.9	230	51.8		02.6	233	26.2		16.3				
2	302	32.1	205	36.2		52.3	206	59.3		09.9	245	53.7		02.7	248	28.4		16.3				
3	317	34.5	220	35.3		52.3	221	59.9		09.8	260	55.6		02.8	263	30.6		16.4				
4	332	37.0	235	34.4		52.2	237	00.5		09.8	275	57.5		02.9	278	32.8		16.4				
5	347	39.4	250	33.6	+23	52.2	252	01.2	+24	09.7	290	59.4	+19	03.0	293	34.9	+17	16.5				
6	2	41.9	265	32.7	+23	52.1	267	01.8	+24	09.7	306	01.3	+19	03.1	308	37.1	+17	16.6				
7	17	44.4	280	31.8		52.0	282	02.4		09.6	321	03.2		03.3	323	39.3		16.6				
8	32	46.8	295	30.9		52.0	297	03.1		09.6	336	05.1		03.4	338	41.5		16.7				
9	47	49.3	310	30.0		51.9	312	03.7		09.5	351	07.0		03.5	353	43.7		16.7				
10	62	51.8	325	29.1		51.9	327	04.4		09.5	6	08.9		03.6	8	45.8		16.8				
11	77	54.2	340	28.2	+23	51.8	342	05.0	+24	09.4	21	10.8	+19	03.7	23	48.0	+17	16.9				
12	92	56.7	355	27.3	+23	51.7	357	05.6	+24	09.4	36	12.8	+19	03.9	38	50.2	+17	16.9				
13	107	59.2	10	26.4		51.6	12	06.3		09.3	51	14.7		04.0	53	52.4		17.0				
14	123	01.6	25	25.5		51.6	27	06.9		09.3	66	16.6		04.1	68	54.6		17.1				
15	138	04.1	40	24.6		51.5	42	07.6		09.2	81	18.5		04.2	83	56.7		17.1				
16	153	06.6	55	23.7		51.4	57	08.2		09.1	96	20.4		04.3	98	58.9		17.2				
17	168	09.0	70	22.8	+23	51.4	72	08.8	+24	09.1	111	22.3	+19	04.4	114	01.1	+17	17.2				
18	183	11.5	85	21.9	+23	51.3	87	09.5	+24	09.0	126	24.2	+19	04.6	129	03.3	+17	17.3				
19	198	13.9	100	21.0		51.2	102	10.1		09.0	141	26.1		04.7	144	05.5		17.4				
20	213	16.4	115	20.1		51.1	117	10.8		08.9	156	28.0		04.8	159	07.6		17.4				
21	228	18.9	130	19.2		51.1	132	11.4		08.9	171	29.9		04.9	174	09.8		17.5				
22	243	21.3	145	18.3		51.0	147	12.0		08.8	186	31.9		05.0	189	12.0		17.5				
23	258	23.8	160	17.4		50.9	162	12.7		08.8	201	33.8		05.1	204	14.2		17.6				
24	273	26.3	175	16.5	+23	50.8	177	13.3	+24	08.7	216	35.7	+19	05.3	219	16.4	+17	17.7				
Dif	—		-9		-1		+6		-1		+19		+1		+22		+1					

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15'7 PMG: 12 ^h 02 ^m 7				Edad: 22 ^d 5 PHE { SD: 15'4 PMG: 6 ^h 17 ^m											
					R°: 47 ^m											
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m	
0	179	21.5	+23	23.1	268	30.6	-3	12.4	60 N	** **	0 52	2 37	0 29 12		12 23 83	
1	194	21.4		23.0	283	03.2 ¹³⁶	-3	00.6 ¹¹⁸	58	** **	1 42	2 58	28 14		23 81	
2	209	21.2		23.0	297	35.7 ¹³⁵	-2	48.8 ¹¹⁸	56	** **	2 12	3 15	26 16		23 79	
3	224	21.1		22.9	312	08.2 ¹³⁵		37.0 ¹¹⁸	54	0 48	34	29	25 18		24 76	
4	239	21.0		22.8	326	40.7 ¹³⁵		25.1 ¹¹⁹	52	1 34	2 52	41	23 21		24 74	
5	254	20.8	+23	22.7	341	13.2 ¹³⁵	-2	13.3 ¹¹⁸	50	2 02	3 07	3 52	0 22 22		12 24 73	
6	269	20.7	+23	22.7	355	45.6 ¹³⁴	-2	01.4 ¹¹⁹	45	2 47	3 37	4 14	0 20 26		12 25 68	
7	284	20.6		22.6	10	18.0 ¹³⁴	-1	49.4 ¹²⁰	40	3 18	4 00	32	18 29		26 64	
8	299	20.4		22.5	24	50.4 ¹³⁴		37.5 ¹¹⁹	35	3 41	18	4 47	16 32		26 62	
9	314	20.3		22.5	39	22.7 ¹³³		25.5 ¹²⁰	30	4 00	33	5 00	14 34		27 58	
10	329	20.2		22.4	53	55.0 ¹³³		13.5 ¹²⁰	20	29	4 58	22	11 39		27 55	
11	344	20.0	+23	22.3	68	27.3 ¹³³	-1	01.5 ¹²⁰	10 N	4 51	5 18	5 41	0 09 42		12 28 50	
12	359	19.9	+23	22.2	82	59.5 ¹³²	-0	49.4 ¹²¹	0	5 10	5 36	5 59	0 07 46		12 28 47	
13	14	19.8		22.1	97	31.7 ¹³²		37.4 ¹²⁰	10 S	27	5 54	6 16	04 50		29 43	
14	29	19.6		22.1	112	03.9 ¹³²		25.3 ¹²¹	20	5 43	6 11	35	0 02 53		29 40	
15	44	19.5		22.0	126	36.0 ¹³¹		13.2 ¹²¹	30	6 00	30	6 56	** ** *		30 35	
16	59	19.4		21.9	141	08.1 ¹³¹	-0	01.1 ¹²¹	35	09	40	7 08	** ** *		30 33	
17	74	19.2	+23	21.8	155	40.1 ¹³⁰	+0	11.0 ¹²¹	40	6 18	6 52	7 23	** ** *		12 31 29	
18	89	19.1	+23	21.8	170	12.1 ¹³⁰	+0	23.2 ¹²²	45	6 28	7 06	7 39	** ** *		12 31 26	
19	104	19.0		21.7	184	44.1 ¹³⁰		35.3 ¹²¹	50	40	22	8 00	** ** *		32 22	
20	119	18.8		21.6	199	16.0 ¹²⁹		47.5 ¹²²	52	45	29	10	** ** *		32 20	
21	134	18.7		21.5	213	47.9 ¹²⁹	+0	59.7 ¹²²	54	51	37	21	** ** *		32 19	
22	149	18.6		21.4	228	19.7 ¹²⁸	+1	11.8 ¹²¹	56	6 57	46	34	** ** *		32 17	
23	164	18.4		21.3	242	51.5 ¹²⁸		24.0 ¹²²	58	7 04	7 57	8 48	** ** *		33 14	
24	179	18.3	+23	21.3	257	23.3 ¹²⁸	+1	36.3 ¹²³	60 S	7 11	8 08	9 06	** ** *		12 33 11	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG 5 ^h 45 ^m 3		Mag: -3.9 PMG: 12 ^h 20 ^m		Mag: +1.6 PMG: 12 ^h 11 ^m		Mag: -2.1 PMG: 9 ^h 32 ^m		Mag: +0.2 PMG: 9 ^h 22 ^m		
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄		
h	°	'	°	'	°	'	°	'	°	'	
0	273	26.3	175	16.5	177	13.3	216	35.7	219	16.4	
1	288	28.7	190	15.6	192	14.0	231	37.6	234	18.5	
2	303	31.2	205	14.8	207	14.6	246	39.5	249	20.7	
3	318	33.7	220	13.9	222	15.2	261	41.4	264	22.9	
4	333	36.1	235	13.0	237	15.9	276	43.3	279	25.1	
5	348	38.6	250	12.1	252	16.5	291	45.2	294	27.3	
6	3	41.1	265	11.2	267	17.2	306	47.1	309	29.5	
7	18	43.5	280	10.3	282	17.8	321	49.0	324	31.6	
8	33	46.0	295	09.4	297	18.4	336	51.0	339	33.8	
9	48	48.4	310	08.5	312	19.1	351	52.9	354	36.0	
10	63	50.9	325	07.6	327	19.7	6	54.8	9	38.2	
11	78	53.4	340	06.7	342	20.4	21	56.7	24	40.4	
12	93	55.8	355	05.8	357	21.0	36	58.6	39	42.5	
13	108	58.3	10	04.9	12	21.6	52	00.5	54	44.7	
14	124	00.8	25	04.0	27	22.3	67	02.4	69	46.9	
15	139	03.2	40	03.1	42	22.9	82	04.3	84	49.1	
16	154	05.7	55	02.2	49.3	57	97	06.3	99	51.3	
17	169	08.2	70	01.3	49.2	72	112	08.2	114	53.5	
18	184	10.6	85	00.5	49.1	87	127	10.1	129	55.6	
19	199	13.1	99	59.6	49.0	102	142	12.0	144	57.8	
20	214	15.5	114	58.7	48.9	117	157	13.9	160	00.0	
21	229	18.0	129	57.8	48.8	132	172	15.8	175	02.2	
22	244	20.5	144	56.9	48.7	147	187	17.7	190	04.4	
23	259	22.9	159	56.0	48.6	162	202	19.6	205	06.5	
24	274	25.4	174	55.1	48.4	177	217	21.5	220	08.7	
Dif	—		-9		-1	+6	+19		+1	+22	+1

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7			Edad: 23 ^d 5 PHE { 4 ^h : 57 ^m 5 12 ^h : 57 ^m 8 20 ^h : 58 ^m 1												
	PMG: 12 ^h 02 ^m 9			SD: 15 ^h 6 PMG: 7 ^h 04 ^m R°: 48 ^m												
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	°	'	°	h m	h m	h m	h m	h m	m	
0	179	18.3	+23	21.3	257	23.3	+1	36.3	60 N	21 27	23 11	** **	0 41	12	88	
1	194	18.2		21.2	271	55.0 ¹²⁷	+1	48.5 ¹²²	58	21 07	22 22	** **	42 14		84	
2	209	18.1		21.1	286	26.6 ¹²⁶	+2	00.7 ¹²²	56	20 50	21 53	** **	42 18		81	
3	224	17.9		21.0	300	58.2 ¹²⁶		12.9 ¹²²	54	36	31	23 15	43 20		77	
4	239	17.8		20.9	315	29.8 ¹²⁶		25.2 ¹²³	52	24	21 13	22 30	44 21		70	
5	254	17.7	+23	20.8	330	01.2 ¹²⁴	+2	37.4 ¹²²	50	20 13	20 58	22 03	0 44 24	13 37	75	
6	269	17.5	+23	20.7	344	32.7 ¹²⁵	+2	49.7 ¹²³	45	19 51	20 28	21 18	0 46 27	13 33	71	
7	284	17.4		20.7	359	04.1 ¹²⁴	+3	01.9 ¹²²	40	33	20 06	20 47	47 30		67	
8	299	17.3		20.6	13	35.4 ¹²³		14.2 ¹²³	35	18	19 48	24	48 33		64	
9	314	17.1		20.5	28	06.7 ¹²³		26.4 ¹²²	30	19 05	32	20 06	48 36		62	
10	329	17.0		20.4	42	37.9 ¹²²		38.7 ¹²³	20	18 43	19 08	19 37	50 40		57	
11	344	16.9	+23	20.3	57	09.1 ¹²²	+3	50.9 ¹²²	10 N	18 24	18 47	19 14	0 51 45	13 18	53	
12	359	16.7	+23	20.2	71	40.2 ¹²¹	+4	03.2 ¹²³	0	18 07	18 29	18 55	0 53 48	13 15	50	
13	14	16.6		20.1	86	11.3 ¹²¹		15.4 ¹²²	10 S	17 49	18 12	38	54 52		46	
14	29	16.5		20.0	100	42.3 ¹²⁰		27.7 ¹²³	20	31	17 55	22	55 56		41	
15	44	16.3		19.9	115	13.2 ¹¹⁹		39.9 ¹²²	30	17 10	36	18 06	57 60		37	
16	59	16.2		19.8	129	44.1 ¹¹⁹	+4	52.1 ¹²²	35	16 57	25	17 57	58 63		34	
17	74	16.1	+23	19.7	144	14.9 ¹¹⁸	+5	04.4 ¹²³	40	16 43	17 14	17 48	0 59 66	13 00	32	
18	89	16.0	+23	19.6	158	45.6 ¹¹⁷	+5	16.6 ¹²²	45	16 26	17 00	17 37	1 00 70	12 57	29	
19	104	15.8		19.5	173	16.3 ¹¹⁷		28.8 ¹²²	50	16 06	16 44	26	02 74		24	
20	119	15.7		19.4	187	46.9 ¹¹⁶		41.0 ¹²²	52	15 56	37	20	03 75		23	
21	134	15.6		19.3	202	17.5 ¹¹⁶	+5	53.2 ¹²²	54	45	29	15	03 78		20	
22	149	15.4		19.2	216	47.9 ¹¹⁴	+6	05.3 ¹²¹	56	32	20	09	04 80		18	
23	164	15.3		19.1	231	18.3 ¹¹⁴		17.5 ¹²²	58	18	16 09	17 02	05 83		15	
24	179	15.2	+23	19.0	245	48.7 ¹¹⁴	+6	29.6 ¹²¹	60 S	15 00	15 58	16 55	1 06 86	12 44	13	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 5 ^h 41 ^m 4			Mag: -3.9 PMG: 12 ^h 21 ^m			Mag: +1.6 PMG: 12 ^h 10 ^m			Mag: -2.1 PMG: 9 ^h 29 ^m			Mag: +0.2 PMG: 9 ^h 18 ^m			
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	
0	274	25.4	174	55.1	+23	48.4	177	28.7	+24	07.3	217	21.5	+19	08.0	220	08.7
1	289	27.9	189	54.2		48.3	192	29.3		07.2	232	23.5		08.1	235	10.9
2	304	30.3	204	53.3		48.2	207	30.0		07.2	247	25.4		08.3	250	13.1
3	319	32.8	219	52.4		48.1	222	30.6		07.1	262	27.3		08.4	265	15.3
4	334	35.3	234	51.5		48.0	237	31.3		07.0	277	29.2		08.5	280	17.5
5	349	37.7	249	50.6	+23	47.9	252	31.9	+24	07.0	292	31.1	+19	08.6	295	19.6
6	4	40.2	264	49.7	+23	47.7	267	32.5	+24	06.9	307	33.0	+19	08.7	310	21.8
7	19	42.7	279	48.8		47.6	282	33.2		06.8	322	34.9		08.8	325	24.0
8	34	45.1	294	48.0		47.5	297	33.8		06.8	337	36.9		09.0	340	26.2
9	49	47.6	309	47.1		47.4	312	34.5		06.7	352	38.8		09.1	355	28.4
10	64	50.0	324	46.2		47.3	327	35.1		06.6	7	40.7		09.2	10	30.6
11	79	52.5	339	45.3	+23	47.1	342	35.8	+24	06.6	22	42.6	+19	09.3	25	32.7
12	94	55.0	354	44.4	+23	47.0	357	36.4	+24	06.5	37	44.5	+19	09.4	40	34.9
13	109	57.4	9	43.5		46.9	12	37.0		06.4	52	46.4		09.5	55	37.1
14	124	59.9	24	42.6		46.7	27	37.7		06.4	67	48.3		09.6	70	39.3
15	140	02.4	39	41.7		46.6	42	38.3		06.3	82	50.2		09.8	85	41.5
16	155	04.8	54	40.8		46.5	57	39.0		06.2	97	52.2		09.9	100	43.7
17	170	07.3	69	39.9	+23	46.4	72	39.6	+24	06.2	112	54.1	+19	10.0	115	45.8
18	185	09.8	84	39.0	+23	46.2	87	40.3	+24	06.1	127	56.0	+19	10.1	130	48.0
19	200	12.2	99	38.1		46.1	102	40.9		06.0	142	57.9		10.2	145	50.2
20	215	14.7	114	37.3		45.9	117	41.5		05.9	157	59.8		10.3	160	52.4
21	230	17.2	129	36.4		45.8	132	42.2		05.9	173	01.7		10.4	175	54.6
22	245	19.6	144	35.5		45.7	147	42.8		05.8	188	03.6		10.6	190	56.8
23	260	22.1	159	34.6		45.5	162	43.5		05.7	203	05.6		10.7	205	58.9
24	275	24.5	174	33.7	+23	45.4	177	44.1	+24	05.7	218	07.5	+19	10.8	221	01.1
Dif	—		-9		-1	+6		-1	+19		+1		+22		+	

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7 ^m PMG: 12 ^h 03 ^m 1				Edad: 24 ^d 5 PHE SD: 15 ^h 9 ^m PMG: 7 ^h 52 ^m R°: 52 ^m													
	hG ☉	Dec			hG ☾	Dif				Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	179	15.2	+23	19.0	245	48.7	+6	29.6	60 N	** **	0 55	2 39	0 53	14	15	14	91	
1	194	15.0		18.9	260	18.9 ¹¹²		41.7 ¹²¹	58	** **	1 44	2 59	0 56	18		08	88	
2	209	14.9		18.8	274	49.1 ¹¹²	+6	53.9 ¹²²	56	** **	2 13	3 16	1 00	20	15	03	85	
3	224	14.8		18.7	289	19.3 ¹¹²	+7	05.9 ¹²⁰	54	0 51	35	30	03	22	14	59	82	
4	239	14.7		18.6	303	49.3 ¹¹⁰		18.0 ¹²¹	52	1 36	2 53	42	05	25		55	80	
5	254	14.5	+23	18.5	318	19.3 ¹¹⁰	+7	30.0 ¹²⁰	50	2 03	3 08	3 53	1 08	26	14	52	78	
6	269	14.4	+23	18.4	332	49.2 ¹⁰⁹	+7	42.1 ¹²¹	45	2 48	3 38	4 15	1 13	30	14	44	74	
7	284	14.3		18.3	347	19.0 ¹⁰⁸	+7	54.1 ¹²⁰	40	3 19	4 00	33	17	34		37	71	
8	299	14.1		18.2	1	48.7 ¹⁰⁷	+8	06.0 ¹¹⁹	35	3 42	18	4 48	21	37		32	67	
9	314	14.0		18.1	16	18.4 ¹⁰⁷		18.0 ¹²⁰	30	4 00	34	5 01	24	40		27	65	
10	329	13.9		18.0	30	48.0 ¹⁰⁶		29.9 ¹¹⁹	20	29	4 58	23	30	44		19	60	
11	344	13.7	+23	17.9	45	17.5 ¹⁰⁵	+8	41.8 ¹¹⁹	10 N	4 52	5 19	5 42	1 36	47	14	11	57	
12	359	13.6	+23	17.8	59	46.9 ¹⁰⁴	+8	53.6 ¹¹⁸	0	5 11	5 37	5 59	1 41	51	14	05	52	
13	14	13.5		17.6	74	16.3 ¹⁰⁴	+9	05.5 ¹¹⁹	10 S	28	5 54	6 17	46	54	13	58	49	
14	29	13.4		17.5	88	45.5 ¹⁰²		17.3 ¹¹⁸	20	5 44	6 11	35	51	59		50	46	
15	44	13.2		17.4	103	14.7 ¹⁰²		29.0 ¹¹⁷	30	6 00	30	6 56	1 57	64		42	41	
16	59	13.1		17.3	117	43.8 ¹⁰¹		40.7 ¹¹⁷	35	09	40	7 09	2 01	66		37	39	
17	74	13.0	+23	17.2	132	12.8 ¹⁰⁰	+9	52.4 ¹¹⁷	40	6 18	6 52	7 23	2 05	69	13	32	36	
18	89	12.8	+23	17.1	146	41.7 ⁹⁹	+10	04.1 ¹¹⁷	45	6 28	7 06	7 39	2 10	72	13	26	32	
19	104	12.7		17.0	161	10.5 ⁹⁸		15.7 ¹¹⁶	50	40	22	8 00	16	76		18	29	
20	119	12.6		16.8	175	39.3 ⁹⁸		27.2 ¹¹⁵	52	45	29	10	18	79		15	26	
21	134	12.5		16.7	190	08.0 ⁹⁷		38.7 ¹¹⁵	54	51	37	21	21	81		11	24	
22	149	12.3		16.6	204	36.5 ⁹⁵	+10	50.2 ¹¹⁵	56	6 57	46	33	24	84		07	22	
23	164	12.2		16.5	219	05.0 ⁹⁵	+11	01.6 ¹¹⁴	58	7 04	7 56	8 48	28	87	13	02	20	
24	179	12.1	+23	16.4	233	33.4 ⁹⁴	+11	13.0 ¹¹⁴	60 S	7 11	8 08	9 05	2 32	90	12	57	16	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 5 ^h 37 ^m 4		Mag: -3.9 PMG: 12 ^h 22 ^m		Mag: +1.6 PMG: 12 ^h 09 ^m		Mag: -2.1 PMG: 9 ^h 26 ^m		Mag: +0.2 PMG: 9 ^h 15 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	275	24.5	174	33.7	+23	45.4	177	44.1	+24	05.7	218	07.5	+19	10.8	221	01.1	+17	20.6
1	290	27.0	189	32.8		45.2	192	44.8		05.6	233	09.4		10.9	236	03.3		20.6
2	305	29.5	204	31.9		45.1	207	45.4		05.5	248	11.3		11.0	251	05.5		20.7
3	320	31.9	219	31.0		45.0	222	46.1		05.4	263	13.2		11.1	266	07.7		20.8
4	335	34.4	234	30.1		44.8	237	46.7		05.4	278	15.1		11.2	281	09.9		20.8
5	350	36.9	249	29.2	+23	44.7	252	47.3	+24	05.3	293	17.1	+19	11.3	296	12.1	+17	20.9
6	5	39.3	264	28.4	+23	44.5	267	48.0	+24	05.2	308	19.0	+19	11.5	311	14.2	+17	20.9
7	20	41.8	279	27.5		44.4	282	48.6		05.1	323	20.9		11.6	326	16.4		21.0
8	35	44.3	294	26.6		44.2	297	49.3		05.1	338	22.8		11.7	341	18.6		21.1
9	50	46.7	309	25.7		44.1	312	49.9		05.0	353	24.7		11.8	356	20.8		21.1
10	65	49.2	324	24.8		43.9	327	50.6		04.9	8	26.6		11.9	11	23.0		21.2
11	80	51.6	339	23.9	+23	43.7	342	51.2	+24	04.8	23	28.5	+19	12.0	26	25.2	+17	21.2
12	95	54.1	354	23.0	+23	43.6	357	51.9	+24	04.8	38	30.5	+19	12.1	41	27.4	+17	21.3
13	110	56.6	9	22.1		43.4	12	52.5		04.7	53	32.4		12.3	56	29.5		21.4
14	125	59.0	24	21.2		43.3	27	53.1		04.6	68	34.3		12.4	71	31.7		21.4
15	141	01.5	39	20.4		43.1	42	53.8		04.5	83	36.2		12.5	86	33.9		21.5
16	156	04.0	54	19.5		42.9	57	54.4		04.5	98	38.1		12.6	101	36.1		21.5
17	171	06.4	69	18.6	+23	42.8	72	55.1	+24	04.4	113	40.0	+19	12.7	116	38.3	+17	21.6
18	186	08.9	84	17.7	+23	42.6	87	55.7	+24	04.3	128	42.0	+19	12.8	131	40.5	+17	21.7
19	201	11.4	99	16.8		42.5	102	56.4		04.2	143	43.9		12.9	146	42.7		21.7
20	216	13.8	114	15.9		42.3	117	57.0		04.1	158	45.8		13.0	161	44.8		21.8
21	231	16.3	129	15.0		42.1	132	57.7		04.1	173	47.7		13.2	176	47.0		21.8
22	246	18.8	144	14.1		42.0	147	58.3		04.0	188	49.6		13.3	191	49.2		21.9
23	261	21.2	159	13.3		41.8	162	59.0		03.9	203	51.5		13.4	206	51.4		22.0
24	276	23.7	174	12.4	+23	41.6	177	59.6	+24	03.8	218	53.5	+19	13.5	221	53.6	+17	22.0
Dif	—		-9		-2		+6		-1		+19		+1		+22		+1	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 25 ^d 5	PHE { 4 ^h : 59 ^m 3 12 ^h : 59 ^m 6 20 ^h : 59 ^m 9	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	PMG: 12 ^h 03 ^m 3					SD: 16 ^h 1			R°: 56 ^m		R°: 56 ^m		R°: 56 ^m		
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	m	h m m	m
0	179	12.1	+23 16.4	233	33.4	+11 13.0	113	60 N	21 27	23 08	** **	1 07 20	16 45 92		
1	194	11.9		248	01.7	93 24.3	113	58	21 07	22 21	** **	14 22	36 89		
2	209	11.8		262	29.9	92 35.6	113	56	20 50	21 52	** **	20 25	28 86		
3	224	11.7		276	58.0	91 46.9	113	54	36	30	23 13	25 27	21 84		
4	239	11.6		291	26.0	90 58.0	111	52	24	21 12	22 29	30 29	15 82		
5	254	11.4	+23 15.8	305	54.0	90 09.1	111	50	20 13	20 57	22 02	1 34 31	16 10 79		
6	269	11.3	+23 15.7	320	21.8	88 20.2	111	45	19 51	20 28	21 17	1 43 36	15 58 75		
7	284	11.2		334	49.5	87 31.2	110	40	33	20 06	20 47	51 39	48 72		
8	299	11.0		349	17.2	87 42.2	110	35	18	19 48	24	1 58 41	39 70		
9	314	10.9		3	44.7	+12 53.0	108	30	19 05	32	20 06	2 04 43	32 67		
10	329	10.8		18	12.2	85 03.9	109	20	18 43	19 08	19 37	14 48	19 63		
11	344	10.7	+23 15.0	32	39.5	83 14.6	107	10 N	18 24	18 47	19 14	2 23 52	15 08 60		
12	359	10.5	+23 14.9	47	06.8	83 25.3	107	0	18 07	18 29	18 56	2 32 55	14 57 57		
13	14	10.4		61	34.0	82 35.9	106	10 S	17 50	18 12	39	40 59	47 54		
14	29	10.3		76	01.0	80 46.5	106	20	31	17 55	23	2 50 62	36 50		
15	44	10.2		90	28.0	80 57.0	105	30	17 10	37	18 06	3 01 66	23 47		
16	59	10.0		104	54.9	79 07.4	104	35	16 58	26	17 58	07 69	16 44		
17	74	09.9	+23 14.3	119	21.6	77 17.7	103	40	16 44	17 14	17 48	3 14 72	14 08 42		
18	89	09.8	+23 14.1	133	48.3	77 28.0	103	45	16 27	17 01	17 38	3 22 75	13 58 39		
19	104	09.6		148	14.9	76 38.1	101	50	16 07	16 45	27	32 80	47 34		
20	119	09.5		162	41.3	74 48.2	101	52	15 57	38	21	37 81	41 33		
21	134	09.4		177	07.7	74 58.2	100	54	46	30	16	42 84	35 31		
22	149	09.3		191	34.0	+15 08.2	100	56	33	21	10	48 86	29 28		
23	164	09.1		206	00.2	72 18.0	98	58	19	16 11	17 03	3 55 89	22 25		
24	179	09.0	+23 13.3	220	26.2	+15 27.8	98	60 S	15 02	15 59	16 56	4 02 93	13 13 22		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 5 ^h 33 ^m 5		Mag: -3.9 PMG: 12 ^h 24 ^m			Mag: +1.6 PMG: 12 ^h 08 ^m			Mag: -2.1 PMG: 9 ^h 23 ^m			Mag: +0.2 PMG: 9 ^h 11 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	'	°	'
0	276	23.7	174	12.4	+23 41.6	177 59.6	+24 03.8	218 53.5	+19 13.5	221 53.6	+17 22.0				
1	291	26.1	189	11.5	41.4	193 00.3	03.7	233 55.4	13.6	236 55.8	22.1				
2	306	28.6	204	10.6	41.3	208 00.9	03.7	248 57.3	13.7	251 58.0	22.1				
3	321	31.1	219	09.7	41.1	223 01.5	03.6	263 59.2	13.8	267 00.1	22.2				
4	336	33.5	234	08.8	40.9	238 02.2	03.5	279 01.1	13.9	282 02.3	22.3				
5	351	36.0	249	07.9	+23 40.7	253 02.8	+24 03.4	294 03.1	+19 14.1	297 04.5	+17 22.3				
6	6	38.5	264	07.0	+23 40.6	268 03.5	+24 03.3	309 05.0	+19 14.2	312 06.7	+17 22.4				
7	21	40.9	279	06.2	40.4	283 04.1	03.2	324 06.9	14.3	327 08.9	22.4				
8	36	43.4	294	05.3	40.2	298 04.8	03.2	339 08.8	14.4	342 11.1	22.5				
9	51	45.9	309	04.4	40.0	313 05.4	03.1	354 10.7	14.5	357 13.3	22.5				
10	66	48.3	324	03.5	39.8	328 06.1	03.0	9 12.6	14.6	12 15.5	22.6				
11	81	50.8	339	02.6	+23 39.6	343 06.7	+24 02.9	24 14.6	+19 14.7	27 17.6	+17 22.7				
12	96	53.3	354	01.7	+23 39.5	358 07.4	+24 02.8	39 16.5	+19 14.8	42 19.8	+17 22.7				
13	111	55.7	9	00.8	39.3	13 08.0	02.7	54 18.4	15.0	57 22.0	22.8				
14	126	58.2	24	00.0	39.1	28 08.7	02.7	69 20.3	15.1	72 24.2	22.8				
15	142	00.6	38	59.1	38.9	43 09.3	02.6	84 22.2	15.2	87 26.4	22.9				
16	157	03.1	53	58.2	38.7	58 10.0	02.5	99 24.2	15.3	102 28.6	23.0				
17	172	05.6	68	57.3	+23 38.5	73 10.6	+24 02.4	114 26.1	+19 15.4	117 30.8	+17 23.0				
18	187	08.0	83	56.4	+23 38.3	88 11.3	+24 02.3	129 28.0	+19 15.5	132 33.0	+17 23.1				
19	202	10.5	98	55.5	38.1	103 11.9	02.2	144 29.9	15.6	147 35.1	23.1				
20	217	13.0	113	54.7	37.9	118 12.6	02.1	159 31.8	15.7	162 37.3	23.2				
21	232	15.4	128	53.8	37.7	133 13.2	02.1	174 33.7	15.8	177 39.5	23.3				
22	247	17.9	143	52.9	37.5	148 13.9	02.0	189 35.7	16.0	192 41.7	23.3				
23	262	20.4	158	52.0	37.3	163 14.5	01.9	204 37.6	16.1	207 43.9	23.4				
24	277	22.8	173	51.1	+23 37.1	178 15.2	+24 01.8	219 39.5	+19 16.2	222 46.1	+17 23.4				
Dif	—		-9	-2	-2	+6	-1	+19	+1	+22	+1				

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 15 ^h 7				Edad: 26 ^d 5	PHE { 4 ^h : 60 ^m /2 12 ^h : 60 ^m /4 20 ^h : 60 ^m /7	SD: 16 ^d 4	PMG: 9 ^h 40 ^m		R°: 61 ^m									
	PMG: 12 ^h 03 ^m 5																		
	hG ☉		Dec		hG ☾		Dif		Dec		Dif		Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	m	h m m	m
0	179	09.0	+23	13.3	220	26.2			+15	27.8	60 N		** **	0 59	2 40	1 27	27	18 17	89
1	194	08.9		13.2	234	52.2	70	37.5	97	58		** **	** **	1 46	3 00	36	30	18 05	85
2	209	08.8		13.1	249	18.1	69	47.1	96	56		** **	** **	2 15	17	45	33	17 54	83
3	224	08.6		12.9	263	43.9	68	+15	56.6	95	54		0 54	37	31	52	36	45	8
4	239	08.5		12.8	278	09.5	66	+16	06.0	94	52		1 38	2 55	43	1 59	37	37	79
5	254	08.4	+23	12.6	292	35.1	66	+16	15.3	93	50		2 05	3 10	3 54	2 05	39	17 29	78
6	269	08.3	+23	12.5	307	00.6	65	+16	24.5	92	45		2 49	3 39	4 16	2 19	42	17 13	75
7	284	08.1		12.4	321	25.9	63		33.6	91	40		3 20	4 01	34	30	45	17 00	72
8	299	08.0		12.2	335	51.2	63		42.6	90	35		3 43	19	4 49	39	48	16 49	70
9	314	07.9		12.1	350	16.4	62	+16	51.5	89	30		4 01	34	5 02	2 47	51	39	69
10	329	07.7		11.9	4	41.5	61	+17	00.4	89	20		30	4 59	24	3 02	53	22	66
11	344	07.6	+23	11.8	19	06.5	60	+17	09.1	87	10 N		4 52	5 19	5 42	3 15	56	16 08	63
12	359	07.5	+23	11.6	33	31.3	58	+17	17.7	86	0		5 11	5 37	6 00	3 27	59	15 54	61
13	14	07.4		11.5	47	56.1	58		26.2	85	10 S		28	5 54	17	39	62	41	59
14	29	07.2		11.4	62	20.8	57		34.6	84	20		5 44	6 11	35	3 52	65	26	57
15	44	07.1		11.2	76	45.4	56		42.8	82	30		6 00	30	6 56	4 07	68	10	53
16	59	07.0		11.1	91	09.9	55		51.0	82	35		09	41	7 09	16	70	15 00	52
17	74	06.9	+23	10.9	105	34.3	54	+17	59.0	80	40		6 18	6 52	7 23	4 26	72	14 50	49
18	89	06.7	+23	10.8	119	58.6	53	+18	07.0	80	45		6 28	7 06	7 39	4 37	76	14 37	47
19	104	06.6		10.6	134	22.8	52		14.8	78	50		40	22	8 00	52	79	21	44
20	119	06.5		10.5	148	46.9	51		22.5	77	52		45	29	10	4 58	82	14	42
21	134	06.4		10.3	163	11.0	51		30.0	75	54		51	37	21	5 06	83	14 06	40
22	149	06.2		10.2	177	34.9	49		37.5	75	56		6 57	46	33	14	86	13 57	38
23	164	06.1		10.0	191	58.7	48		44.8	73	58		7 04	7 56	8 47	24	88	47	35
24	179	06.0	+23	09.9	206	22.5	48	+18	52.0	72	60 S		7 11	8 07	9 05	5 35	92	13 35	33

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 5 ^h 29 ^m 6		Mag: -3.9 PMG: 12 ^h 25 ^m		Mag: +1.6 PMG: 12 ^h 06 ^m		Mag: -2.1 PMG: 9 ^h 20 ^m		Mag: +0.2 PMG: 9 ^h 08 ^m	
	hG ♈		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec	
h	°	'	°	'	°	'	°	'	°	'
0	277	22.8	173	51.1	+23	37.1	178	15.2	+24	01.8
1	292	25.3	188	50.2		36.9	193	15.8		01.7
2	307	27.7	203	49.3		36.7	208	16.5		01.6
3	322	30.2	218	48.5		36.5	223	17.1		01.5
4	337	32.7	233	47.6		36.3	238	17.7		01.4
5	352	35.1	248	46.7	+23	36.1	253	18.4	+24	01.3
6	7	37.6	263	45.8	+23	35.9	268	19.0	+24	01.2
7	22	40.1	278	44.9		35.7	283	19.7		01.2
8	37	42.5	293	44.1		35.5	298	20.3		01.1
9	52	45.0	308	43.2		35.3	313	21.0		01.0
10	67	47.5	323	42.3		35.1	328	21.6		00.9
11	82	49.9	338	41.4	+23	34.9	343	22.3	+24	00.8
12	97	52.4	353	40.5	+23	34.6	358	22.9	+24	00.7
13	112	54.9	8	39.6		34.4	13	23.6		00.6
14	127	57.3	23	38.8		34.2	28	24.2		00.5
15	142	59.8	38	37.9		34.0	43	24.9		00.4
16	158	02.2	53	37.0		33.8	58	25.5		00.3
17	173	04.7	68	36.1	+23	33.5	73	26.2	+24	00.2
18	188	07.2	83	35.2	+23	33.3	88	26.8	+24	00.1
19	203	09.6	98	34.4		33.1	103	27.5	+24	00.0
20	218	12.1	113	33.5		32.9	118	28.2	+23	59.9
21	233	14.6	128	32.6		32.6	133	28.8		59.8
22	248	17.0	143	31.7		32.4	148	29.5		59.7
23	263	19.5	158	30.8		32.2	163	30.1		59.6
24	278	22.0	173	30.0	+23	32.0	178	30.8	+23	59.6
Dif	—		-9 -2		-2		+7 -1		-1	
									+19 +1	
									+1	
									+22 +1	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 27 ^d 5 PHE { 4 ^h : 60 ^h 9 12 ^h : 61 ^h 0 20 ^h : 61 ^h 2											
	PMG: 12 ^h 03 ^m 7			SD: 16 ^h 5 PMG: 10 ^h 41 ^m R°: 63 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	h m	m
0	179	06.0	+23 09.9	206	22.5	+18 52.0		60 N	21 25	23 04	** **	1 54	40	19 46	74
1	194	05.9		220	46.2	+18 59.1	71	58	21 06	22 19	** **	2 06	43	30	74
2	209	05.8		235	09.7	+19 06.0	69	56	20 49	21 51	** **	18 45		17	73
3	224	05.6		249	33.2		45	54	35	29	23 09	28 46		19	06
4	239	05.5		263	56.6		44	52	23	21 12	22 28	36 49		18	56
5	254	05.4	+23 09.1	278	20.0	+19 26.1	66	50	20 13	20 57	22 01	2 44	50	18 47	70
6	269	05.3	+23 08.9	292	43.2	+19 32.5	64	45	19 51	20 28	21 17	3 01	52	18 28	69
7	284	05.1		307	06.4		42	40	33	20 05	20 47	15 54		18 12	69
8	299	05.0		321	29.5		41	35	18	19 48	24	27 56		17 59	68
9	314	04.9		335	52.5		40	30	19 05	33	20 06	38 57		48	67
10	329	04.8		350	15.4	+19 56.7	58	20	18 43	19 08	19 37	3 55	60	28	66
11	344	04.6	+23 08.1	4	38.2	+20 02.5	58	10 N	18 25	18 48	19 15	4 11	61	17 11	65
12	359	04.5	+23 08.0	19	01.0	+20 08.0	55	0	18 07	18 30	18 56	4 26	63	16 55	64
13	14	04.4		33	23.7		55	10 S	17 50	18 13	39	41 64		40	62
14	29	04.3		47	46.3		52	20	32	17 56	23	4 57	66	23	61
15	44	04.1		62	08.9		52	30	17 11	37	18 07	5 15	69	16 03	61
16	59	04.0		76	31.4		50	35	16 59	27	17 58	26 70		15 52	59
17	74	03.9	+23 07.2	90	53.8	+20 33.7	48	40	16 45	17 15	17 49	5 38	71	15 39	58
18	89	03.8	+23 07.0	105	16.2	+20 38.4	47	45	16 28	17 02	17 39	5 53	73	15 24	57
19	104	03.7		119	38.5		45	50	16 08	16 46	28	6 11	75	15 05	55
20	119	03.5		134	00.7		44	52	15 58	39	22	20 76		14 56	55
21	134	03.4		148	22.9		42	54	47	31	17	29 77		46	54
22	149	03.3		162	45.0		41	56	35	22	11	40 79		35	52
23	164	03.2		177	07.1	+20 59.5	39	58	20	12	17 04	6 52	81	22	51
24	179	03.0	+23 06.0	191	29.1	+21 03.3	38	60 S	15 03	16 00	16 57	7 07	83	14 08	48

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 5 ^h 25 ^m 6		Mag: -3.9 PMG: 12 ^h 27 ^m		Mag: +1.6 PMG: 12 ^h 05 ^m		Mag: -2.1 PMG: 9 ^h 17 ^m		Mag: +0.2 PMG: 9 ^h 04 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	278	22.0	173	30.0	+23 32.0	178	30.8	+23 59.6	220	25.6	+19 18.8				
1	293	24.4	188	29.1	31.7	193	31.4	59.5	235	27.5	18.9				
2	308	26.9	203	28.2	31.5	208	32.1	59.4	250	29.5	19.1				
3	323	29.4	218	27.3	31.3	223	32.7	59.3	265	31.4	19.2				
4	338	31.8	233	26.4	31.0	238	33.4	59.2	280	33.3	19.3				
5	353	34.3	248	25.6	+23 30.8	253	34.0	+23 59.1	295	35.2	+19 19.4				
6	8	36.7	263	24.7	+23 30.6	268	34.7	+23 59.0	310	37.1	+19 19.5				
7	23	39.2	278	23.8	30.3	283	35.3	58.9	325	39.1	19.6				
8	38	41.7	293	22.9	30.1	298	36.0	58.8	340	41.0	19.7				
9	53	44.1	308	22.1	29.8	313	36.6	58.7	355	42.9	19.8				
10	68	46.6	323	21.2	29.6	328	37.3	58.6	10	44.8	19.9				
11	83	49.1	338	20.3	+23 29.4	343	37.9	+23 58.5	25	46.8	+19 20.0				
12	98	51.5	353	19.4	+23 29.1	358	38.6	+23 58.4	40	48.7	+19 20.2				
13	113	54.0	8	18.5	28.9	13	39.2	58.3	55	50.6	20.3				
14	128	56.5	23	17.7	28.6	28	39.9	58.2	70	52.5	20.4				
15	143	58.9	38	16.8	28.4	43	40.5	58.1	85	54.5	20.5				
16	159	01.4	53	15.9	28.1	58	41.2	58.0	100	56.4	20.6				
17	174	03.9	68	15.0	+23 27.9	73	41.8	+23 57.9	115	58.3	+19 20.7				
18	189	06.3	83	14.2	+23 27.6	88	42.5	+23 57.7	131	00.2	+19 20.8				
19	204	08.8	98	13.3	27.4	103	43.2	57.6	146	02.1	20.9				
20	219	11.2	113	12.4	27.1	118	43.8	57.5	161	04.1	21.0				
21	234	13.7	128	11.5	26.9	133	44.5	57.4	176	06.0	21.1				
22	249	16.2	143	10.7	26.6	148	45.1	57.3	191	07.9	21.2				
23	264	18.6	158	09.8	26.4	163	45.8	57.2	206	09.8	21.4				
24	279	21.1	173	08.9	+23 26.1	178	46.4	+23 57.1	221	11.8	+19 21.5				
Dif	—		-9	-2		+7	-1		+19	+1		+22		+1	

UT	SOL			● LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7			Edad: 28 ^d 5	PHE	4 ^h : 61 ^m 3 12 ^h : 61 ^m 3 20 ^h : 61 ^m 4				Civil			Hora		R°		
	PMG: 12 ^h 03 ^m 9					SD: 16 ^h 7				R°: 64 ^m			R°		R°		
	hG ☉	Dec		hG ☾	Dif		Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	°	h	m	h	m	h	m	h	m
0	179	03.0	+23 06.0	191	29.1	+21 03.3			60 N	** **	1 04	2 42	2 34	58	21 00	56	
1	194	02.9	05.8	205	51.0	06.9	36		58	** **	1 49	3 02	2 49	60	20 44	57	
2	209	02.8	05.7	220	12.9	10.3	34		56	** **	2 17	19	3 03	60	30	58	
3	224	02.7	05.5	234	34.8	13.6	33		54	0 59	39	32	14	61	18	58	
4	239	02.6	05.3	248	56.6	16.7	31		52	1 40	2 56	44	25	61	20 07	59	
5	254	02.4	+23 05.1	263	18.4	+21 19.7	30		50	2 07	3 11	3 55	3 34	62	19 57	60	
6	269	02.3	+23 05.0	277	40.1	+21 22.5	28		45	2 51	3 40	4 17	3 53	63	19 37	61	
7	284	02.2	04.8	292	01.8	25.1	26		40	3 21	4 02	35	4 09	63	21	61	
8	299	02.1	04.6	306	23.5	27.6	25		35	3 44	20	4 50	23	63	19 07	62	
9	314	02.0	04.4	320	45.1	29.9	23		30	4 02	4 35	5 03	35	63	18 55	62	
10	329	01.8	04.3	335	06.7	32.0	21		20	31	5 00	24	4 55	63	34	63	
11	344	01.7	+23 04.1	349	28.3	+21 34.0	20		10 N	4 53	5 20	5 43	5 12	64	18 16	64	
12	359	01.6	+23 03.9	3	49.8	+21 35.8	18		0	5 12	5 38	6 00	5 29	64	17 59	65	
13	14	01.5	03.7	18	11.3	37.5	17		10 S	28	5 55	17	5 45	65	42	65	
14	29	01.4	03.6	32	32.8	38.9	14		20	5 44	6 12	36	6 03	65	24	66	
15	44	01.2	03.4	46	54.3	40.2	13		30	6 00	30	6 57	24	65	17 04	65	
16	59	01.1	03.2	61	15.8	41.4	12		35	09	41	7 09	36	65	16 51	67	
17	74	01.0	+23 03.0	75	37.2	+21 42.4	10		40	6 18	6 52	7 23	6 49	66	16 37	67	
18	89	00.9	+23 02.8	89	58.6	+21 43.2	8		45	6 28	7 05	7 39	7 06	65	16 21	67	
19	104	00.8	02.7	104	20.0	43.8	6		50	40	21	7 59	26	65	16 00	68	
20	119	00.6	02.5	118	41.5	44.3	5		52	45	28	8 09	36	65	15 51	67	
21	134	00.5	02.3	133	02.9	44.6	3		54	50	36	20	46	66	40	67	
22	149	00.4	02.1	147	24.3	44.7	1		56	6 56	45	32	7 59	65	27	68	
23	164	00.3	01.9	161	45.7	44.7	0		58	7 03	7 55	8 47	8 13	65	15 13	68	
24	179	00.2	+23 01.7	176	07.1	+21 44.5	2		60 S	7 10	8 07	9 04	8 30	65	14 56	69	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 5 ^h 21 ^m 7		Mag: -3.9 PMG: 12 ^h 28 ^m			Mag: +1.6 PMG: 12 ^h 04 ^m			Mag: -2.1 PMG: 9 ^h 14 ^m			Mag: +0.2 PMG: 9 ^h 01 ^m					
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'			
0	279	21.1	173	08.9	+23 26.1	178	46.4	+23 57.1	221	11.8	+19 21.5	224	31.2	+17 26.2			
1	294	23.6	188	08.0	25.8	193	47.1	57.0	236	13.7	21.6	239	33.4	26.3			
2	309	26.0	203	07.2	25.6	208	47.7	56.9	251	15.6	21.7	254	35.6	26.3			
3	324	28.5	218	06.3	25.3	223	48.4	56.8	266	17.5	21.8	269	37.8	26.4			
4	339	31.0	233	05.4	25.0	238	49.0	56.7	281	19.5	21.9	284	40.0	26.4			
5	354	33.4	248	04.5	+23 24.8	253	49.7	+23 56.6	296	21.4	+19 22.0	299	42.2	+17 26.5			
6	9	35.9	263	03.7	+23 24.5	268	50.4	+23 56.5	311	23.3	+19 22.1	314	44.4	+17 26.5			
7	24	38.4	278	02.8	24.3	283	51.0	56.4	326	25.2	22.2	329	46.6	26.6			
8	39	40.8	293	01.9	24.0	298	51.7	56.3	341	27.2	22.3	344	48.8	26.7			
9	54	43.3	308	01.1	23.7	313	52.3	56.2	356	29.1	22.4	359	51.0	26.7			
10	69	45.7	323	00.2	23.4	328	53.0	56.1	11	31.0	22.5	14	53.2	26.8			
11	84	48.2	337	59.3	+23 23.2	343	53.6	+23 55.9	26	32.9	+19 22.7	29	55.4	+17 26.8			
12	99	50.7	352	58.4	+23 22.9	358	54.3	+23 55.8	41	34.9	+19 22.8	44	57.6	+17 26.9			
13	114	53.1	7	57.6	22.6	13	54.9	55.7	56	36.8	22.9	59	59.8	26.9			
14	129	55.6	22	56.7	22.3	28	55.6	55.6	71	38.7	23.0	75	01.9	27.0			
15	144	58.1	37	55.8	22.1	43	56.2	55.5	86	40.6	23.1	90	04.1	27.1			
16	160	00.5	52	55.0	21.8	58	56.9	55.4	101	42.6	23.2	105	06.3	27.1			
17	175	03.0	67	54.1	+23 21.5	73	57.6	+23 55.3	116	44.5	+19 23.3	120	08.5	+17 27.2			
18	190	05.5	82	53.2	+23 21.2	88	58.2	+23 55.2	131	46.4	+19 23.4	135	10.7	+17 27.2			
19	205	07.9	97	52.3	21.0	103	58.9	55.1	146	48.4	23.5	150	12.9	27.3			
20	220	10.4	112	51.5	20.7	118	59.5	54.9	161	50.3	23.6	165	15.1	27.3			
21	235	12.9	127	50.6	20.4	134	00.2	54.8	176	52.2	23.7	180	17.3	27.4			
22	250	15.3	142	49.7	20.1	149	00.8	54.7	191	54.1	23.8	195	19.5	27.4			
23	265	17.8	157	48.9	19.8	164	01.5	54.6	206	56.1	23.9	210	21.7	27.5			
24	280	20.2	172	48.0	+23 19.5	179	02.2	+23 54.5	221	58.0	+19 24.1	225	23.9	+17 27.6			
Dif	—		-9		-3	+7		-1	+19		+1	+22		+1			

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 29 ^d 5 PHE { 4 ^h : 61 ^h 3 12 ^h : 61 ^h 3 20 ^h : 61 ^h 2 R°: 63 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	m	h m	m
0	179	00.2	+23 01.7	176	07.1	+21 44.5	4	60 N	21 24	23 00	** **	3 32	78	21 56	38
1	194	00.0	01.5	190	28.5	24 44.1	5	58	21 04	22 17	** **	3 49	76	41	40
2	208	59.9	01.4	204	49.9	24 43.6	8	56	20 48	21 49	** **	4 03	75	28	42
3	223	59.8	01.2	219	11.3	24 42.8	8	54	35	28	23 05	15	74	16	45
4	238	59.7	01.0	233	32.7	24 42.0	8	52	23	21 11	22 26	26	73	21 06	46
5	253	59.6	+23 00.8	247	54.2	25 +21 40.9	11	50	20 12	20 56	22 00	4 36	72	20 57	48
6	268	59.4	+23 00.6	262	15.6	24 +21 39.7	12	45	19 50	20 27	21 16	4 56	70	20 38	50
7	283	59.3	00.4	276	37.1	25 38.3	14	40	33	20 05	20 46	5 12	69	22	53
8	298	59.2	+23 00.2	290	58.6	25 36.8	15	35	18	19 47	24	26	68	20	09
9	313	59.1	+23 00.0	305	20.2	26 35.1	17	30	19 05	32	20 06	38	67	19 57	56
10	328	59.0	+22 59.8	319	41.7	25 33.2	19	20	18 44	19 08	19 37	5 58	66	37	59
11	343	58.9	+22 59.6	334	03.3	26 +21 31.1	21	10 N	18 25	18 48	19 15	6 16	65	19 20	60
12	358	58.7	+22 59.4	348	24.9	26 +21 28.9	22	0	18 08	18 30	18 56	6 33	64	19 04	62
13	13	58.6	59.2	2	46.6	27 26.5	24	10 S	17 51	18 13	40	6 50	62	18 47	64
14	28	58.5	59.1	17	08.2	26 24.0	25	20	33	17 56	24	7 08	61	30	66
15	43	58.4	58.9	31	30.0	28 21.3	27	30	12	38	18 08	29	59	18 09	69
16	58	58.3	58.7	45	51.7	27 18.4	29	35	17 00	28	17 59	41	58	17 58	69
17	73	58.2	+22 58.5	60	13.5	28 +21 15.4	30	40	16 46	17 16	17 50	7 55	57	17 44	71
18	88	58.0	+22 58.3	74	35.4	29 +21 12.2	32	45	16 29	17 03	17 40	8 11	56	17 28	73
19	103	57.9	58.1	88	57.2	28 08.9	33	50	09	16 47	29	31	54	17 08	76
20	118	57.8	57.9	103	19.2	30 05.4	35	52	16 00	40	24	41	52	16 58	77
21	133	57.7	57.7	117	41.2	30 +21 01.7	37	54	15 49	32	18	8 52	51	47	79
22	148	57.6	57.5	132	03.2	30 +20 57.9	38	56	37	23	12	9 04	50	35	81
23	163	57.5	57.3	146	25.3	31 53.9	40	58	22	13	17 06	18	48	21	83
24	178	57.3	+22 57.1	160	47.5	32 +20 49.8	41	60 S	15 05	16 02	16 58	9 35	46	16 05	85

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 5 ^h 17 ^m 8		Mag: -3.9 PMG: 12 ^h 30 ^m		Mag: +1.6 PMG: 12 ^h 03 ^m		Mag: -2.1 PMG: 9 ^h 11 ^m		Mag: +0.2 PMG: 8 ^h 57 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	280	20.2	172	48.0	+23 19.5	179	02.2	+23 54.5	221	58.0	+19 24.1			
1	295	22.7	187	47.1	19.2	194	02.8	54.4	236	59.9	24.2			
2	310	25.2	202	46.3	19.0	209	03.5	54.3	252	01.8	24.3			
3	325	27.6	217	45.4	18.7	224	04.1	54.1	267	03.8	24.4			
4	340	30.1	232	44.5	18.4	239	04.8	54.0	282	05.7	24.5			
5	355	32.6	247	43.7	+23 18.1	254	05.4	+23 53.9	297	07.6	+19 24.6			
6	10	35.0	262	42.8	+23 17.8	269	06.1	+23 53.8	312	09.6	+19 24.7			
7	25	37.5	277	41.9	17.5	284	06.8	53.7	327	11.5	24.8			
8	40	40.0	292	41.1	17.2	299	07.4	53.6	342	13.4	24.9			
9	55	42.4	307	40.2	16.9	314	08.1	53.5	357	15.3	25.0			
10	70	44.9	322	39.3	16.6	329	08.7	53.3	12	17.3	25.1			
11	85	47.4	337	38.5	+23 16.3	344	09.4	+23 53.2	27	19.2	+19 25.2			
12	100	49.8	352	37.6	+23 16.0	359	10.0	+23 53.1	42	21.1	+19 25.3			
13	115	52.3	7	36.7	15.7	14	10.7	53.0	57	23.1	25.4			
14	130	54.7	22	35.9	15.4	29	11.4	52.9	72	25.0	25.6			
15	145	57.2	37	35.0	15.1	44	12.0	52.7	87	26.9	25.7			
16	160	59.7	52	34.1	14.8	59	12.7	52.6	102	28.8	25.8			
17	176	02.1	67	33.3	+23 14.5	74	13.3	+23 52.5	117	30.8	+19 25.9			
18	191	04.6	82	32.4	+23 14.2	89	14.0	+23 52.4	132	32.7	+19 26.0			
19	206	07.1	97	31.5	13.8	104	14.7	52.3	147	34.6	26.1			
20	221	09.5	112	30.7	13.5	119	15.3	52.2	162	36.6	26.2			
21	236	12.0	127	29.8	13.2	134	16.0	52.0	177	38.5	26.3			
22	251	14.5	142	28.9	12.9	149	16.6	51.9	192	40.4	26.4			
23	266	16.9	157	28.1	12.6	164	17.3	51.8	207	42.3	26.5			
24	281	19.4	172	27.2	+23 12.3	179	18.0	+23 51.7	222	44.3	+19 26.6			
Dif	—		-9		-3	+7		-1	+19		+1	+22		+1

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna								
	SD: 15 ^h 7				Edad: 1 ^d 2	PHE	$\left\{ \begin{array}{l} 4^h: 61'1 \\ 12^h: 61'0 \\ 20^h: 60'8 \\ R^o: 60^m \end{array} \right.$																	
	PMG: 12 ^h 04 ^m 3																							
	hG ☉	Dec			hG ☾	Dif				Náutico	Civil		Hora	R°	Hora	R°								
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m					
0	178	57.3	+22	57.1	160	47.5	+20	49.8	60 N	** **	1 09	2 45	4 50	89		22 34	25							
1	193	57.2		56.9	175	09.7	32	45.5	58	** **	1 52	3 04	5 05	86		21	29							
2	208	57.1		56.6	189	31.9	32	41.0	56	** **	2 20	20	18	83		10	32							
3	223	57.0		56.4	203	54.3	34	36.4	54	1 03	41	34	29	81		22	01	34						
4	238	56.9		56.2	218	16.7	34	31.7	52	1 43	2 58	46	39	79		21	52	36						
5	253	56.8	+22	56.0	232	39.1	34	+20	50	2 09	3 13	3 56	5 48	78		21	45	37						
6	268	56.6	+22	55.8	247	01.7	36	+20	45	2 52	3 41	4 18	6 06	75		21	28	42						
7	283	56.5		55.6	261	24.2	35		40	3 22	4 03	36	21	73		15	44							
8	298	56.4		55.4	275	46.9	37		35	3 45	21	4 51	34	70		21	03	47						
9	313	56.3		55.2	290	09.7	38		30	4 03	4 36	5 03	6 45	69		20	53	49						
10	328	56.2		55.0	304	32.5	38	+20	20	31	5 00	25	7 04	66		36	52							
11	343	56.1	+22	54.8	318	55.4	39	+19	10 N	4 53	5 20	5 43	7 21	63		20	20	56						
12	358	56.0	+22	54.6	333	18.3	39	+19	0	5 12	5 38	6 01	7 37	60		20	06	58						
13	13	55.8		54.4	347	41.4	41		10 S	29	5 55	18	7 52	58		19	51	62						
14	28	55.7		54.1	2	04.5	41		20	5 44	6 12	36	8 09	55		36	64							
15	43	55.6		53.9	16	27.7	42		30	6 00	30	6 56	28	52		18	68							
16	58	55.5		53.7	30	51.0	43		35	09	41	7 09	39	50		19	07	71						
17	73	55.4	+22	53.5	45	14.3	43	+19	40	6 18	6 52	7 22	8 52	48		18	55	73						
18	88	55.3	+22	53.3	59	37.8	45	+19	45	6 28	7 05	7 39	9 07	45		18	41	76						
19	103	55.2		53.1	74	01.3	45	+19	50	39	21	7 59	25	42		24	79							
20	118	55.0		52.9	88	25.0	47	+18	52	44	28	8 08	33	41		15	82							
21	133	54.9		52.6	102	48.7	47		54	50	36	19	43	39		18	06	84						
22	148	54.8		52.4	117	12.5	48		56	6 56	45	31	9 54	36		17	56	86						
23	163	54.7		52.2	131	36.4	49		58	7 02	7 54	8 45	10 06	34		44	89							
24	178	54.6	+22	52.0	146	00.4	50	+18	60 S	7 10	8 06	9 02	10 21	30		17	30	92						
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO									
	PMG: 5 ^h 13 ^m 8		Mag: -3.9 PMG: 12 ^h 31 ^m				Mag: +1.6 PMG: 12 ^h 02 ^m				Mag: -2.1 PMG: 9 ^h 08 ^m				Mag: +0.2 PMG: 8 ^h 54 ^m									
	hG ♈		hG ♀	Dec			hG ♂	Dec			hG ♃	Dec			hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'						
0	281	19.4	172	27.2	+23	12.3	179	18.0	+23	51.7	222	44.3	+19	26.6	226	16.6	+17	28.9						
1	296	21.8	187	26.4		12.0	194	18.6		51.5	237	46.2		26.7	241	18.8		29.0						
2	311	24.3	202	25.5		11.6	209	19.3		51.4	252	48.1		26.8	256	21.0		29.0						
3	326	26.8	217	24.6		11.3	224	19.9		51.3	267	50.1		26.9	271	23.2		29.1						
4	341	29.2	232	23.8		11.0	239	20.6		51.2	282	52.0		27.0	286	25.4		29.1						
5	356	31.7	247	22.9	+23	10.7	254	21.3	+23	51.1	297	53.9	+19	27.1	301	27.6	+17	29.2						
6	11	34.2	262	22.0	+23	10.4	269	21.9	+23	50.9	312	55.9	+19	27.3	316	29.8	+17	29.2						
7	26	36.6	277	21.2		10.0	284	22.6		50.8	327	57.8		27.4	331	32.0		29.3						
8	41	39.1	292	20.3		09.7	299	23.2		50.7	342	59.7		27.5	346	34.2		29.3						
9	56	41.6	307	19.5		09.4	314	23.9		50.6	358	01.7		27.6	1	36.4		29.4						
10	71	44.0	322	18.6		09.1	329	24.6		50.4	13	03.6		27.7	16	38.6		29.5						
11	86	46.5	337	17.7	+23	08.7	344	25.2	+23	50.3	28	05.5	+19	27.8	31	40.8	+17	29.5						
12	101	49.0	352	16.9	+23	08.4	359	25.9	+23	50.2	43	07.4	+19	27.9	46	43.0	+17	29.6						
13	116	51.4	7	16.0		08.1	14	26.5		50.1	58	09.4		28.0	61	45.2		29.6						
14	131	53.9	22	15.2		07.7	29	27.2		49.9	73	11.3		28.1	76	47.4		29.7						
15	146	56.3	37	14.3		07.4	44	27.9		49.8	88	13.2		28.2	91	49.6		29.7						
16	161	58.8	52	13.5		07.1	59	28.5		49.7	103	15.2		28.3	106	51.8		29.8						
17	177	01.3	67	12.6	+23	06.7	74	29.2	+23	49.5	118	17.1	+19	28.4	121	54.0	+17	29.8						
18	192	03.7	82	11.7	+23	06.4	89	29.8	+23	49.4	133	19.0	+19	28.5	136	56.2	+17	29.9						
19	207	06.2	97	10.9		06.0	104	30.5		49.3	148	21.0		28.6	151	58.4		30.0						
20	222	08.7	112	10.0		05.7	119	31.2		49.2	163	22.9		28.7	167	00.6		30.0						
21	237	11.1	127	09.2		05.4	134	31.8		49.0	178	24.8		28.8	182	02.8		30.1						
22	252	13.6	142	08.3		05.0	149	32.5		48.9	193	26.8		28.9	197	05.0		30.1						
23	267	16.1	157	07.5		04.7	164	33.2		48.8	208	28.7		29.0	212	07.2		30.2						
24	282	18.5	172	06.6	+23	04.3	179	33.8	+23	48.6	223	30.6	+19	29.1	227	09.4	+17	30.2						
Dif	—		-9				-3				+19				+1				+22				+1	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 2 ^d 2	PHE { 4 ^h : 60/6 12 ^h : 60/3 20 ^h : 60/1										
	PMG: 12 ^h 04 ^m 5					SD: 16 ^h 5			PMG: 14 ^h 51 ^m			R°: 55 ^m			
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	m	h m m	m
0	178	54.6	+22 52.0	146	00.4	+18 26.9	76	60 N	21 22	22 55	** **	6 19 93		22 59 18	
1	193	54.5	51.8	160	24.4	19.3	76	58	21 03	22 14	** **	31 89		50 21	
2	208	54.4	51.5	174	48.6	11.5	78	56	20 47	21 47	** **	41 87		42 24	
3	223	54.3	51.3	189	12.9	53	78	54	33	26	23 01	50 84		35 26	
4	238	54.1	51.1	203	37.2	53	80	52	22	21 09	22 23	6 58 82		28 29	
5	253	54.0	+22 50.9	218	01.7	55	81	50	20 11	20 55	21 58	7 06 79		22 22 31	
6	268	53.9	+22 50.7	232	26.2	55	82	45	19 50	20 26	21 15	7 21 75		22 10 34	
7	283	53.8	50.4	246	50.8	56	83	40	32	20 05	20 46	34 72		21 59 38	
8	298	53.7	50.2	261	15.6	58	85	35	18	19 47	23	44 70		50 41	
9	313	53.6	50.0	275	40.4	58	85	30	19 05	32	20 05	7 54 67		42 43	
10	328	53.5	49.8	290	05.3	59	87	20	18 44	19 08	19 37	8 10 63		28 47	
11	343	53.4	+22 49.5	304	30.4	61	87	10 N	18 25	18 48	19 15	8 24 60		21 16 51	
12	358	53.3	+22 49.3	318	55.5	61	89	0	18 08	18 31	18 57	8 37 56		21 04 55	
13	13	53.1	49.1	333	20.7	62	89	10 S	17 51	18 14	40	8 50 53		20 53 58	
14	28	53.0	48.8	347	46.0	63	91	20	33	17 57	24	9 04 50		40 62	
15	43	52.9	48.6	2	11.4	64	91	30	13	39	09	20 46		26 66	
16	58	52.8	48.4	16	37.0	66	93	35	17 01	29	18 00	29 44		18 68	
17	73	52.7	+22 48.2	31	02.6	66	93	40	16 47	17 17	17 51	9 40 40		20 08 71	
18	88	52.6	+22 47.9	45	28.3	67	95	45	16 31	17 04	17 41	9 52 38		19 57 75	
19	103	52.5	47.7	59	54.1	68	95	50	11	16 49	30	10 07 33		43 79	
20	118	52.4	47.5	74	20.0	69	96	52	16 01	42	25	14 31		37 81	
21	133	52.3	47.2	88	46.1	71	98	54	15 50	34	20	22 29		30 83	
22	148	52.2	47.0	103	12.2	72	98	56	38	25	14	30 27		22 86	
23	163	52.0	46.8	117	38.4	72	99	58	24	15	07	40 24		13 89	
24	178	51.9	+22 46.5	132	04.7	73	99	60 S	15 08	16 04	17 00	10 51 21		19 02 93	

UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO		
	PMG: 5 ^h 09 ^m 9		Mag: -3.9 PMG: 12 ^h 32 ^m		Mag: +1.6 PMG: 12 ^h 01 ^m		Mag: -2.1 PMG: 9 ^h 05 ^m			Mag: +0.2 PMG: 8 ^h 50 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'
0	282	18.5	172	06.6	+23 04.3	179 33.8	+23 48.6	223 30.6	+19 29.1	227 09.4	+17 30.2	
1	297	21.0	187	05.7	04.0	194 34.5	48.5	238 32.6	29.3	242 11.6	30.3	
2	312	23.5	202	04.9	03.6	209 35.1	48.4	253 34.5	29.4	257 13.8	30.3	
3	327	25.9	217	04.0	03.3	224 35.8	48.3	268 36.4	29.5	272 16.0	30.4	
4	342	28.4	232	03.2	02.9	239 36.5	48.1	283 38.4	29.6	287 18.2	30.4	
5	357	30.8	247	02.3	+23 02.6	254 37.1	+23 48.0	298 40.3	+19 29.7	302 20.4	+17 30.5	
6	12	33.3	262	01.5	+23 02.2	269 37.8	+23 47.9	313 42.2	+19 29.8	317 22.6	+17 30.6	
7	27	35.8	277	00.6	01.9	284 38.5	47.7	328 44.2	29.9	332 24.8	30.6	
8	42	38.2	291	59.8	01.5	299 39.1	47.6	343 46.1	30.0	347 27.0	30.7	
9	57	40.7	306	58.9	01.2	314 39.8	47.5	358 48.0	30.1	2 29.2	30.7	
10	72	43.2	321	58.0	00.8	329 40.5	47.3	13 50.0	30.2	17 31.4	30.8	
11	87	45.6	336	57.2	+23 00.5	344 41.1	+23 47.2	28 51.9	+19 30.3	32 33.6	+17 30.8	
12	102	48.1	351	56.3	+23 00.1	359 41.8	+23 47.1	43 53.8	+19 30.4	47 35.8	+17 30.9	
13	117	50.6	6 55.5	+22 59.8		14 42.4	46.9	58 55.8	30.5	62 38.0	30.9	
14	132	53.0	21 54.6	59.4		29 43.1	46.8	73 57.7	30.6	77 40.2	31.0	
15	147	55.5	36 53.8	59.0		44 43.8	46.7	88 59.6	30.7	92 42.4	31.0	
16	162	58.0	51 52.9	58.7		59 44.4	46.5	104 01.6	30.8	107 44.6	31.1	
17	178	00.4	66 52.1	+22 58.3		74 45.1	+23 46.4	119 03.5	+19 30.9	122 46.8	+17 31.1	
18	193	02.9	81 51.2	+22 57.9		89 45.8	+23 46.3	134 05.4	+19 31.0	137 49.0	+17 31.2	
19	208	05.3	96 50.4	57.6		104 46.4	46.1	149 07.4	31.1	152 51.2	31.3	
20	223	07.8	111 49.5	57.2		119 47.1	46.0	164 09.3	31.2	167 53.4	31.3	
21	238	10.3	126 48.7	56.8		134 47.8	45.8	179 11.2	31.3	182 55.6	31.4	
22	253	12.7	141 47.8	56.5		149 48.4	45.7	194 13.2	31.4	197 57.8	31.4	
23	268	15.2	156 47.0	56.1		164 49.1	45.6	209 15.1	31.5	213 00.0	31.5	
24	283	17.7	171 46.1	+22 55.7		179 49.8	+23 45.4	224 17.0	+19 31.6	228 02.2	+17 31.5	
Dif	—		-9	-4		+7	-1	+19	+1	+22	+1	

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15 ^h 7 PMG: 12 ^h 04 ^m 6				Edad: 3 ^d 2 PHE { 4 ^h : 59 ^m 8 12 ^h : 59 ^m 5 20 ^h : 59 ^m 2 Rº: 52 ^m															
	hG ☉		Dec		hG ☾		Dif													
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m			
0	178	51.9	+22	46.5	132	04.7	+14	54.1	60 N	** **	1 15	2 47	7 52	90	23 17	14				
1	193	51.8		46.3	146	31.1	74	44.0	58	** **	1 55	3 06	8 00	88	11 17					
2	208	51.7		46.0	160	57.6	75	33.9	56	** **	2 22	22	08	84	06 19					
3	223	51.6		45.8	175	24.2	76	23.7	54	1 08	2 43	36	14	82	23 01	22				
4	238	51.5		45.6	189	50.9	77	13.4	52	1 46	3 00	48	20	79	22 57	24				
5	253	51.4	+22	45.3	204	17.8	79	+14 03.0	50	2 11	3 14	3 58	8 25	78	22 53	25				
6	268	51.3	+22	45.1	218	44.7	79	+13 52.6	45	2 54	3 43	4 20	8 36	74	22 44	30				
7	283	51.2		44.8	233	11.7	80	42.1	40	3 23	4 05	37	46	70	37 33					
8	298	51.1		44.6	247	38.8	81	31.5	35	3 46	22	4 52	8 54	67	31 36					
9	313	51.0		44.4	262	06.0	82	20.8	30	4 04	4 37	5 04	9 01	64	25 39					
10	328	50.9		44.1	276	33.3	83	+13 10.1	20	32	5 01	26	13	60	15 43					
11	343	50.8	+22	43.9	291	00.7	84	+12 59.3	10 N	4 54	5 21	5 44	9 24	55	22 07	47				
12	358	50.6	+22	43.6	305	28.1	84	+12 48.5	0	5 12	5 39	6 01	9 33	53	21 59	50				
13	13	50.5		43.4	319	55.7	86	37.6	10 S	29	5 55	18	43	49	51 54					
14	28	50.4		43.1	334	23.4	87	26.6	20	5 45	6 12	36	9 54	45	42 58					
15	43	50.3		42.9	348	51.2	88	15.6	30	6 00	30	6 56	10 06	40	32 63					
16	58	50.2		42.6	3	19.0	88	+12 04.5	35	09	40	7 08	13	38	26 66					
17	73	50.1	+22	42.4	17	47.0	90	+11 53.3	40	6 18	6 52	7 22	10 20	35	21 19	69				
18	88	50.0	+22	42.2	32	15.1	91	+11 42.1	45	6 28	7 05	7 38	10 30	31	21 12	72				
19	103	49.9		41.9	46	43.2	91	30.9	50	39	20	7 58	40	28	21 02	77				
20	118	49.8		41.7	61	11.4	92	19.6	52	44	27	8 07	45	26	20 58	78				
21	133	49.7		41.4	75	39.8	94	+11 08.2	54	49	35	18	51	24	53 81					
22	148	49.6		41.2	90	08.2	94	+10 56.8	56	6 55	44	30	10 57	21	48 83					
23	163	49.5		40.9	104	36.7	95	45.3	58	7 01	7 53	8 44	11 04	18	42 86					
24	178	49.4	+22	40.6	119	05.3	96	+10 33.8	60 S	7 09	8 04	9 01	11 12	15	20 35	89				
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG 5 ^h 06 ^m 0				Mag: -3.9 PMG: 12 ^h 34 ^m				Mag: +1.6 PMG: 12 ^h 00 ^m				Mag: -2.1 PMG: 9 ^h 02 ^m				Mag: +0.2 PMG: 8 ^h 47 ^m			
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	283	17.7			171	46.1	+22	55.7	179	49.8	+23	45.4	224	17.0	+19	31.6	228	02.2	+17	31.5
1	298	20.1			186	45.3		55.3	194	50.4		45.3	239	19.0		31.8	243	04.4		31.6
2	313	22.6			201	44.4		55.0	209	51.1		45.2	254	20.9		31.9	258	06.6		31.6
3	328	25.1			216	43.6		54.6	224	51.8		45.0	269	22.9		32.0	273	08.8		31.7
4	343	27.5			231	42.7		54.2	239	52.4		44.9	284	24.8		32.1	288	11.0		31.7
5	358	30.0			246	41.9	+22	53.8	254	53.1	+23	44.7	299	26.7	+19	32.2	303	13.2	+17	31.8
6	13	32.5			261	41.0	+22	53.5	269	53.8	+23	44.6	314	28.7	+19	32.3	318	15.4	+17	31.8
7	28	34.9			276	40.2		53.1	284	54.4		44.5	329	30.6		32.4	333	17.6		31.9
8	43	37.4			291	39.4		52.7	299	55.1		44.3	344	32.5		32.5	348	19.8		32.0
9	58	39.8			306	38.5		52.3	314	55.8		44.2	359	34.5		32.6	3	22.0		32.0
10	73	42.3			321	37.7		51.9	329	56.4		44.0	14	36.4		32.7	18	24.2		32.1
11	88	44.8			336	36.8	+22	51.5	344	57.1	+23	43.9	29	38.3	+19	32.8	33	26.4	+17	32.1
12	103	47.2			351	36.0	+22	51.2	359	57.8	+23	43.7	44	40.3	+19	32.9	48	28.6	+17	32.2
13	118	49.7			6	35.1		50.8	14	58.4		43.6	59	42.2		33.0	63	30.8		32.2
14	133	52.2			21	34.3		50.4	29	59.1		43.5	74	44.2		33.1	78	33.0		32.3
15	148	54.6			36	33.4		50.0	44	59.8		43.3	89	46.1		33.2	93	35.2		32.3
16	163	57.1			51	32.6		49.6	60	00.4		43.2	104	48.0		33.3	108	37.4		32.4
17	178	59.6			66	31.7	+22	49.2	75	01.1	+23	43.0	119	50.0	+19	33.4	123	39.6	+17	32.4
18	194	02.0			81	30.9	+22	48.8	90	01.8	+23	42.9	134	51.9	+19	33.5	138	41.8	+17	32.5
19	209	04.5			96	30.1		48.4	105	02.4		42.7	149	53.8		33.6	153	44.0		32.5
20	224	06.9			111	29.2		48.0	120	03.1		42.6	164	55.8		33.7	168	46.2		32.6
21	239	09.4			126	28.4		47.6	135	03.8		42.5	179	57.7		33.8	183	48.4		32.7
22	254	11.9			141	27.5		47.2	150	04.4		42.3	194	59.7		33.9	198	50.6		32.7
23	269	14.3			156	26.7		46.8	165	05.1		42.2	210	01.6		34.0	213	52.8		32.8
24	284	16.8			171	25.9	+22	46.4	180	05.8	+23	42.0	225	03.5	+19	34.1	228	55.1	+17	32.8
Dif	—				-8 -4				+7 -1				+19 +1				+22 +1			

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7			Edad: 4 ^d 2	PHE { 4 ^h : 58'9 12 ^h : 58'6 20 ^h : 58'3											
	PMG: 12 ^h 04 ^m 8					SD: 16'1			PMG: 16 ^h 38 ^m			R°: 48 ^m				
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m	
0	178	49.4	+22 40.6	119	05.3	+10 33.8		60 N	21 20	22 50	** **	9 22 87	23 31 12			
1	193	49.3	40.4	133	34.0 ⁹⁷	22.3 ¹¹⁵		58	21 01	22 11	** **	28 83	28 15			
2	208	49.2	40.1	148	02.7 ⁹⁷	+10 10.7 ¹¹⁶		56	20 45	21 45	** **	32 81	25 18			
3	223	49.1	39.9	162	31.6 ⁹⁹	+9 59.1 ¹¹⁶		54	32	25	22 56	36 79	23 19			
4	238	49.0	39.6	177	00.5 ⁹⁹	47.4 ¹¹⁷		52	21	21 08	22 20	39 77	21 21			
5	253	48.8	+22 39.4	191	29.6 ¹⁰¹	+9 35.7 ¹¹⁷		50	20 10	20 54	21 56	9 43 74	23 18 24			
6	268	48.7	+22 39.1	205	58.7 ¹⁰¹	+9 24.0 ¹¹⁷		45	19 49	20 26	21 14	9 50 70	23 14 27			
7	283	48.6	38.9	220	27.9 ¹⁰²	12.2 ¹¹⁸		40	32	20 04	20 45	9 56 67	10 30			
8	298	48.5	38.6	234	57.1 ¹⁰²	+9 00.4 ¹¹⁸		35	17	19 47	23	10 01 64	07 33			
9	313	48.4	38.3	249	26.5 ¹⁰⁴	+8 48.5 ¹¹⁹		30	19 05	32	20 05	05 61	23 04 35			
10	328	48.3	38.1	263	55.9 ¹⁰⁴	36.6 ¹¹⁹		20	18 44	19 08	19 37	13 56	22 58 41			
11	343	48.2	+22 37.8	278	25.4 ¹⁰⁵	+8 24.7 ¹¹⁹		10 N	18 25	18 48	19 15	10 19 53	22 54 44			
12	358	48.1	+22 37.6	292	55.0 ¹⁰⁶	+8 12.8 ¹¹⁹		0	18 08	18 31	18 57	10 26 49	22 49 48			
13	13	48.0	37.3	307	24.7 ¹⁰⁷	+8 00.8 ¹²⁰		10 S	17 52	18 14	41	32 45	45 51			
14	28	47.9	37.0	321	54.5 ¹⁰⁸	+7 48.8 ¹²⁰		20	34	17 58	25	39 41	40 56			
15	43	47.8	36.8	336	24.3 ¹⁰⁸	36.8 ¹²⁰		30	13	40	09	46 37	35 60			
16	58	47.7	36.5	350	54.2 ¹⁰⁹	24.8 ¹²⁰		35	17 02	30	18 01	51 34	32 62			
17	73	47.6	+22 36.3	5	24.2 ¹¹⁰	+7 12.7 ¹²¹		40	16 48	17 18	17 52	10 55 32	22 28 66			
18	88	47.5	+22 36.0	19	54.2 ¹¹⁰	+7 00.6 ¹²¹		45	16 32	17 05	17 42	11 01 28	22 24 69			
19	103	47.4	35.7	34	24.4 ¹¹²	+6 48.5 ¹²¹		50	12	16 50	31	08 24	19 73			
20	118	47.3	35.5	48	54.5 ¹¹¹	36.4 ¹²¹		52	16 03	43	26	11 22	16 76			
21	133	47.2	35.2	63	24.8 ¹¹³	24.2 ¹²²		54	15 52	35	21	15 20	14 77			
22	148	47.1	34.9	77	55.2 ¹¹⁴	+6 12.1 ¹²¹		56	40	27	15	18 18	11 80			
23	163	47.0	34.7	92	25.6 ¹¹⁴	+5 59.9 ¹²²		58	27	17	09	22 16	08 82			
24	178	46.9	+22 34.4	106	56.0 ¹¹⁴	+5 47.7 ¹²²		60 S	15 10	16 06	17 02	11 27 13	22 04 85			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 5 ^h 02 ^m 1		Mag: -3.9 PMG: 12 ^h 35 ^m			Mag: +1.6 PMG: 11 ^h 59 ^m			Mag: -2.1 PMG: 8 ^h 59 ^m			Mag: +0.2 PMG: 8 ^h 43 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	°	'	°	°	'	°	'	°	'	°	'
0	284	16.8	171	25.9	+22 46.4	180	05.8	+23 42.0	225	03.5	+19 34.1	228	55.1	+17 32.8		
1	299	19.3	186	25.0	46.0	195	06.4	41.9	240	05.5	34.2	243	57.3	32.9		
2	314	21.7	201	24.2	45.6	210	07.1	41.7	255	07.4	34.3	258	59.5	32.9		
3	329	24.2	216	23.3	45.2	225	07.8	41.6	270	09.4	34.4	274	01.7	33.0		
4	344	26.7	231	22.5	44.8	240	08.4	41.4	285	11.3	34.5	289	03.9	33.0		
5	359	29.1	246	21.6	+22 44.4	255	09.1	+23 41.3	300	13.2	+19 34.6	304	06.1	+17 33.1		
6	14	31.6	261	20.8	+22 44.0	270	09.8	+23 41.1	315	15.2	+19 34.7	319	08.3	+17 33.1		
7	29	34.1	276	20.0	43.6	285	10.5	41.0	330	17.1	34.8	334	10.5	33.2		
8	44	36.5	291	19.1	43.2	300	11.1	40.8	345	19.0	34.9	349	12.7	33.2		
9	59	39.0	306	18.3	42.8	315	11.8	40.7	0	21.0	35.0	4	14.9	33.3		
10	74	41.4	321	17.5	42.4	330	12.5	40.5	15	22.9	35.1	19	17.1	33.3		
11	89	43.9	336	16.6	+22 41.9	345	13.1	+23 40.4	30	24.9	+19 35.2	34	19.3	+17 33.4		
12	104	46.4	351	15.8	+22 41.5	0	13.8	+23 40.2	45	26.8	+19 35.3	49	21.5	+17 33.4		
13	119	48.8	6	14.9	41.1	15	14.5	40.1	60	28.7	35.4	64	23.7	33.5		
14	134	51.3	21	14.1	40.7	30	15.1	39.9	75	30.7	35.5	79	25.9	33.5		
15	149	53.8	36	13.3	40.3	45	15.8	39.8	90	32.6	35.6	94	28.1	33.6		
16	164	56.2	51	12.4	39.9	60	16.5	39.6	105	34.6	35.7	109	30.3	33.7		
17	179	58.7	66	11.6	+22 39.4	75	17.2	+23 39.5	120	36.5	+19 35.8	124	32.5	+17 33.7		
18	195	01.2	81	10.8	+22 39.0	90	17.8	+23 39.3	135	38.4	+19 35.9	139	34.7	+17 33.8		
19	210	03.6	96	09.9	38.6	105	18.5	39.2	150	40.4	36.0	154	37.0	33.8		
20	225	06.1	111	09.1	38.2	120	19.2	39.0	165	42.3	36.1	169	39.2	33.9		
21	240	08.5	126	08.3	37.7	135	19.8	38.9	180	44.3	36.3	184	41.4	33.9		
22	255	11.0	141	07.4	37.3	150	20.5	38.7	195	46.2	36.4	199	43.6	34.0		
23	270	13.5	156	06.6	36.9	165	21.2	38.6	210	48.2	36.5	214	45.8	34.0		
24	285	15.9	171	05.8	+22 36.5	180	21.9	+23 38.4	225	50.1	+19 36.6	229	48.0	+17 34.1		
Dif	—		-8		-4	+7		-1	+19		+1	+22		+1		

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15'7 PMG: 12 ^h 05 ^m 0			Edad: 5 ^d 2 SD: 15'8 PMG: 17 ^h 26 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m	
0	178	46.9	+22	34.4	106	56.0	+5	47.7	60 N	** **	1 20	2 50	10 49	84	23 43	12		
1	193	46.8		34.1	121	26.6 ¹¹⁶		35.5 ¹²²	58	** *	1 59	3 09	51 81		43 14			
2	208	46.7		33.9	135	57.2 ¹¹⁶		23.3 ¹²²	56	** *	2 25	25	53 78		43 16			
3	223	46.6		33.6	150	27.8 ¹¹⁶	+5	11.1 ¹²²	54	1 14	2 45	38	55 75		42 18			
4	238	46.5		33.3	164	58.6 ¹¹⁸	+4	58.8 ¹²³	52	1 50	3 02	3 49	56 74		42 20			
5	253	46.4	+22	33.0	179	29.4 ¹¹⁸	+4	46.6 ¹²²	50	2 14	3 16	4 00	10 57	72	23 42	21		
6	268	46.3	+22	32.8	194	00.2 ¹¹⁸	+4	34.3 ¹²³	45	2 56	3 44	4 21	11 00	68	23 41	26		
7	283	46.2		32.5	208	31.2 ¹²⁰		22.1 ¹²²	40	3 25	4 06	38	03 64		40 29			
8	298	46.1		32.2	223	02.1 ¹¹⁹	+4	09.8 ¹²³	35	3 47	23	4 53	05 61		40 31			
9	313	46.0		31.9	237	33.2 ¹²¹	+3	57.6 ¹²²	30	4 05	4 38	5 05	06 59		39 34			
10	328	45.9		31.7	252	04.3 ¹²¹		45.3 ¹²³	20	33	5 02	26	09 55		39 38			
11	343	45.8	+22	31.4	266	35.4 ¹²¹	+3	33.0 ¹²³	10 N	4 55	5 22	5 44	11 12	50	23 38	42		
12	358	45.7	+22	31.1	281	06.6 ¹²²	+3	20.7 ¹²³	0	5 13	5 39	6 01	11 15	46	23 37	46		
13	13	45.6		30.8	295	37.9 ¹²³	+3	08.5 ¹²²	10 S	29	5 55	18	17 43		36 50			
14	28	45.5		30.6	310	09.2 ¹²³	+2	56.2 ¹²³	20	5 45	6 12	36	20 39		36 53			
15	43	45.4		30.3	324	40.6 ¹²⁴		43.9 ¹²³	30	6 00	30	6 56	23 35		35 57			
16	58	45.3		30.0	339	12.0 ¹²⁴		31.6 ¹²³	35	09	40	7 08	25 32		34 60			
17	73	45.2	+22	29.7	353	43.5 ¹²⁵	+2	19.4 ¹²²	40	6 17	6 51	7 21	11 27	29	23 34	63		
18	88	45.1	+22	29.4	8	15.0 ¹²⁵	+2	07.1 ¹²³	45	6 27	7 04	7 37	11 29	26	23 33	66		
19	103	45.0		29.2	22	46.6 ¹²⁶	+1	54.9 ¹²²	50	38	19	7 57	32 22		32 71			
20	118	44.9		28.9	37	18.2 ¹²⁶		42.6 ¹²³	52	43	26	8 06	33 21		32 72			
21	133	44.8		28.6	51	49.9 ¹²⁷		30.4 ¹²²	54	48	34	17	35 18		31 75			
22	148	44.7		28.3	66	21.6 ¹²⁷		18.2 ¹²²	56	6 54	42	29	36 16		31 76			
23	163	44.6		28.0	80	53.3 ¹²⁷	+1	05.9 ¹²³	58	7 00	7 52	42	38 14		30 79			
24	178	44.5	+22	27.7	95	25.1 ¹²⁸	+0	53.7 ¹²²	60 S	7 07	8 03	8 59	11 40	11	23 29	83		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG 4 ^h 58 ^m 1			Mag: -3.9 PMG: 12 ^h 36 ^m			Mag: +1.6 PMG: 11 ^h 58 ^m			Mag: -2.1 PMG: 8 ^h 56 ^m			Mag: +0.2 PMG: 8 ^h 40 ^m					
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	285	15.9	171	05.8	+22	36.5	180	21.9	+23	38.4	225	50.1	+19	36.6	229	48.0		
1	300	18.4	186	04.9		36.0	195	22.5		38.3	240	52.0		36.7	244	50.2		
2	315	20.9	201	04.1		35.6	210	23.2		38.1	255	54.0		36.8	259	52.4		
3	330	23.3	216	03.3		35.2	225	23.9		38.0	270	55.9		36.9	274	54.6		
4	345	25.8	231	02.4		34.7	240	24.5		37.8	285	57.9		37.0	289	56.8		
5	0	28.3	246	01.6	+22	34.3	255	25.2	+23	37.6	300	59.8	+19	37.1	304	59.0		
6	15	30.7	261	00.8	+22	33.9	270	25.9	+23	37.5	316	01.7	+19	37.2	320	01.2		
7	30	33.2	275	59.9		33.4	285	26.6		37.3	331	03.7		37.3	335	03.4		
8	45	35.7	290	59.1		33.0	300	27.2		37.2	346	05.6		37.4	350	05.6		
9	60	38.1	305	58.3		32.6	315	27.9		37.0	1	07.6		37.5	5	07.9		
10	75	40.6	320	57.4		32.1	330	28.6		36.9	16	09.5		37.6	20	10.1		
11	90	43.0	335	56.6	+22	31.7	345	29.2	+23	36.7	31	11.5	+19	37.7	35	12.3		
12	105	45.5	350	55.8	+22	31.2	0	29.9	+23	36.6	46	13.4	+19	37.8	50	14.5		
13	120	48.0	5	55.0		30.8	15	30.6		36.4	61	15.3		37.9	65	16.7		
14	135	50.4	20	54.1		30.4	30	31.3		36.2	76	17.3		38.0	80	18.9		
15	150	52.9	35	53.3		29.9	45	31.9		36.1	91	19.2		38.1	95	21.1		
16	165	55.4	50	52.5		29.5	60	32.6		35.9	106	21.2		38.2	110	23.3		
17	180	57.8	65	51.6	+22	29.0	75	33.3	+23	35.8	121	23.1	+19	38.3	125	25.5		
18	196	00.3	80	50.8	+22	28.6	90	34.0	+23	35.6	136	25.1	+19	38.4	140	27.7		
19	211	02.8	95	50.0		28.1	105	34.6		35.4	151	27.0		38.5	155	29.9		
20	226	05.2	110	49.2		27.7	120	35.3		35.3	166	28.9		38.6	170	32.1		
21	241	07.7	125	48.3		27.2	135	36.0		35.1	181	30.9		38.7	185	34.4		
22	256	10.2	140	47.5		26.8	150	36.7		35.0	196	32.8		38.8	200	36.6		
23	271	12.6	155	46.7		26.3	165	37.3		34.8	211	34.8		38.9	215	38.8		
24	286	15.1	170	45.9	+22	25.8	180	38.0	+23	34.6	226	36.7	+19	39.0	230	41.0		
Dif	—		-8		-4		+7		-2		+19		+1		+22		+1	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 15 ^h 7			Edad: 6 ^d 2	PHE { 4 ^h : 57 ^h /1 12 ^h : 56 ^h /8 20 ^h : 56 ^h /6	Final del crepúsculo			Salida de Luna			Puesta de Luna					
	PMG: 12 ^h 05 ^m 1					PMG: 18 ^h 12 ^m			R°: 45 ^m								
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m			
0	178	44.5	+22 27.7	95	25.1	+0 53.7		60 N	21 17	22 44	** **	12 13 81	23 55 11				
1	193	44.4	27.5	109	57.0 ¹²⁹	41.5 ¹²²		58	20 59	22 08	** **	12 78	57 14				
2	208	44.3	27.2	124	28.9 ¹²⁹	29.3 ¹²²		56	44	21 42	** **	11 76	23 59 16				
3	223	44.2	26.9	139	00.8 ¹²⁹	17.2 ¹²¹		54	31	22 22 51	10 74	** **	** **				
4	238	44.1	26.6	153	32.8 ¹³⁰	+0 05.0 ¹²²		52	19	21 06	22 17	10 71	** **	** **			
5	253	44.0	+22 26.3	168	04.8 ¹³⁰	-0 07.1 ¹²¹		50	20 09	20 52	21 54	12 09 70	** **	** **			
6	268	43.9	+22 26.0	182	36.8 ¹³⁰	-0 19.3 ¹²²		45	19 48	20 25	21 12	12 08 65	** **	** **			
7	283	43.9	25.7	197	08.9 ¹³¹	31.4 ¹²¹		40	31	20 03	20 44	07 62	** **	** **			
8	298	43.8	25.4	211	41.0 ¹³¹	43.5 ¹²¹		35	17	19 46	22	06 59	** **	** **			
9	313	43.7	25.1	226	13.2 ¹³²	-0 55.6 ¹²¹		30	19 04	32	20 04	05 57	** **	** **			
10	328	43.6	24.9	240	45.3 ¹³¹	-1 07.6 ¹²⁰		20	18 43	19 08	19 37	04 52	** **	** **			
11	343	43.5	+22 24.6	255	17.6 ¹³³	-1 19.6 ¹²⁰		10 N	18 25	18 48	19 15	12 02 49	** **	** **			
12	358	43.4	+22 24.3	269	49.8 ¹³²	-1 31.7 ¹²¹		0	18 09	18 31	18 57	12 01 45	** **	** **			
13	13	43.3	24.0	284	22.1 ¹³³	43.7 ¹²⁰		10 S	17 52	18 15	41	12 00 42	** **	** **			
14	28	43.2	23.7	298	54.4 ¹³³	-1 55.6 ¹¹⁹		20	35	17 58	26	11 59 38	** **	** **			
15	43	43.1	23.4	313	26.8 ¹³⁴	-2 07.6 ¹²⁰		30	14	41	10	58 33	** **	** **			
16	58	43.0	23.1	327	59.1 ¹³³	19.5 ¹¹⁹		35	17 03	31	18 02	57 31	** **	** **			
17	73	42.9	+22 22.8	342	31.5 ¹³⁴	-2 31.4 ¹¹⁹		40	16 49	17 19	17 53	11 56 29	** **	** **			
18	88	42.8	+22 22.5	357	03.9 ¹³⁴	-2 43.3 ¹¹⁹		45	16 33	17 07	17 44	11 55 26	** **	** **			
19	103	42.7	22.2	11	36.4 ¹³⁵	-2 55.1 ¹¹⁸		50	14	16 52	33	54 22	** **	** **			
20	118	42.6	21.9	26	08.9 ¹³⁵	-3 06.9 ¹¹⁸		52	16 05	45	28	54 20	** **	** **			
21	133	42.5	21.6	40	41.4 ¹³⁵	18.7 ¹¹⁸		54	15 54	37	23	53 18	** **	** **			
22	148	42.4	21.3	55	13.9 ¹³⁵	30.5 ¹¹⁸		56	43	29	17	52 16	** **	** **			
23	163	42.3	21.0	69	46.4 ¹³⁵	42.2 ¹¹⁷		58	29	19	11	52 14	** **	** **			
24	178	42.3	+22 20.7	84	19.0 ¹³⁶	-3 53.9 ¹¹⁷		60 S	15 13	16 08	17 04	11 51 11	** **	** **			
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO								
	PMG: 4 ^h 54 ^m 2		Mag: -3.9 PMG: 12 ^h 38 ^m		Mag: +1.6 PMG: 11 ^h 57 ^m		Mag: -2.1 PMG: 8 ^h 52 ^m		Mag: +0.2 PMG: 8 ^h 36 ^m								
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	°	°	°	°	°	°	°	°								
0	286	15.1	170 45.9	+22 25.8	180 38.0	+23 34.6	226 36.7	+19 39.0	230 41.0								
1	301	17.5	185 45.0	25.4	195 38.7	34.5	241 38.7	39.1	245 43.2								
2	316	20.0	200 44.2	24.9	210 39.4	34.3	256 40.6	39.2	260 45.4								
3	331	22.5	215 43.4	24.5	225 40.0	34.1	271 42.6	39.3	275 47.6								
4	346	24.9	230 42.6	24.0	240 40.7	34.0	286 44.5	39.4	290 49.8								
5	1	27.4	245 41.8	+22 23.5	255 41.4	+23 33.8	301 46.5	+19 39.5	305 52.0								
6	16	29.9	260 40.9	+22 23.1	270 42.1	+23 33.7	316 48.4	+19 39.6	320 54.2								
7	31	32.3	275 40.1	22.6	285 42.7	33.5	331 50.3	39.7	335 56.4								
8	46	34.8	290 39.3	22.2	300 43.4	33.3	346 52.3	39.8	350 58.7								
9	61	37.3	305 38.5	21.7	315 44.1	33.2	1	54.2	39.9								
10	76	39.7	320 37.6	21.2	330 44.8	33.0	16	56.2	39.9								
11	91	42.2	335 36.8	+22 20.8	345 45.4	+23 32.8	31	58.1	+19 40.0								
12	106	44.6	350 36.0	+22 20.3	0	46.1	+23 32.7	47 00.1	+19 40.1								
13	121	47.1	5	35.2	15	46.8	32.5	62 02.0	40.2								
14	136	49.6	20	34.4	30	47.5	32.3	77 04.0	40.3								
15	151	52.0	35	33.5	45	48.2	32.2	92 05.9	40.4								
16	166	54.5	50	32.7	60	48.8	32.0	107 07.9	40.5								
17	181	57.0	65	31.9	75	49.5	+23 31.8	122 09.8	+19 40.6								
18	196	59.4	80	31.1	90	50.2	+23 31.7	137 11.7	+19 40.7								
19	212	01.9	95	30.3	105	50.9	31.5	152 13.7	40.8								
20	227	04.4	110	29.5	120	51.5	31.3	167 15.6	40.9								
21	242	06.8	125	28.6	135	52.2	31.2	182 17.6	41.0								
22	257	09.3	140	27.8	150	52.9	31.0	197 19.5	41.1								
23	272	11.8	155	27.0	165	53.6	30.8	212 21.5	41.2								
24	287	14.2	170	26.2	180	54.3	+23 30.7	227 23.4	+19 41.3								
Dif	—	—	-8	-5	+7	-2	+19	+1	+22	+1							

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7			Edad: 7 ^d 2	PHE { 4 ^h : 56 ^h /3 12 ^h : 56 ^h /1 20 ^h : 55 ^h /8 R°: 45 ^m										
	PMG: 12 ^h 05 ^m 3					SD: 15 ^h 4		PMG: 18 ^h 57 ^m	Náutico		Civil	Hora	R°	Hora	R°
	hG ☉	Dec		hG ☾	Dif	Dec	Dif								
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	178	42.3	+22	84	19.0	-3	53.9	60 N	*** **	1 27	2 53	13 34	79	*** ** *	
1	193	42.2		98	51.6 ¹³⁶	-4	05.6 ¹¹⁷	58	*** **	2 03	3 12	30	76	*** ** *	
2	208	42.1		113	24.2 ¹³⁶		17.2 ¹¹⁶	56	*** **	28	27	27	73	*** ** *	
3	223	42.0		127	56.8 ¹³⁶		28.8 ¹¹⁶	54	1 19	2 48	40	24	71	0 00 19	
4	238	41.9		142	29.4 ¹³⁶		40.4 ¹¹⁶	52	1 53	3 05	3 51	21	70	02 20	
5	253	41.8	+22	157	02.1 ¹³⁷	-4	52.0 ¹¹⁶	50	2 17	3 18	4 02	13 19	67	0 03 23	
6	268	41.7	+22	171	34.8 ¹³⁷	-5	03.5 ¹¹⁵	45	2 58	3 46	4 23	13 13	64	0 07 25	
7	283	41.6		186	07.4 ¹³⁶		14.9 ¹¹⁴	40	3 27	4 07	40	09	61	09 29	
8	298	41.5		200	40.1 ¹³⁷		26.4 ¹¹⁵	35	3 48	24	4 54	05	58	11 32	
9	313	41.4		215	12.9 ¹³⁸		37.8 ¹¹⁴	30	4 06	4 39	5 06	13 02	56	13 34	
10	328	41.3		229	45.6 ¹³⁷	-5	49.1 ¹¹³	20	34	5 03	27	12 56	52	17 38	
11	343	41.3	+22	244	18.3 ¹³⁷	-6	00.5 ¹¹⁴	10 N	4 55	5 22	5 45	12 51	48	0 20 42	
12	358	41.2	+22	258	51.1 ¹³⁸	-6	11.8 ¹¹³	0	5 13	5 39	6 02	12 46	45	0 23 45	
13	13	41.1		273	23.8 ¹³⁷		23.0 ¹¹²	10 S	29	5 56	18	42	41	26 48	
14	28	41.0		287	56.6 ¹³⁸		34.2 ¹¹²	20	5 45	6 12	36	37	38	29 52	
15	43	40.9		302	29.3 ¹³⁷		45.4 ¹¹²	30	6 00	30	6 56	31	35	32 57	
16	58	40.8		317	02.1 ¹³⁸	-6	56.5 ¹¹¹	35	08	40	7 07	28	32	34 59	
17	73	40.7	+22	331	34.9 ¹³⁸	-7	07.6 ¹¹¹	40	6 17	6 51	7 21	12 25	29	0 37 61	
18	88	40.6	+22	346	07.7 ¹³⁸	-7	18.6 ¹¹⁰	45	6 26	7 03	7 37	12 21	26	0 39 65	
19	103	40.5		0	40.5 ¹³⁸		29.6 ¹¹⁰	50	37	18	7 56	16	22	43 68	
20	118	40.4		15	13.3 ¹³⁸		40.6 ¹¹⁰	52	42	25	8 05	14	21	44 70	
21	133	40.4		29	46.1 ¹³⁸	-7	51.5 ¹⁰⁹	54	47	33	15	11	19	46 72	
22	148	40.3		44	18.9 ¹³⁸	-8	02.4 ¹⁰⁹	56	53	41	27	08	18	47 75	
23	163	40.2		58	51.7 ¹³⁸		13.2 ¹⁰⁸	58	6 59	7 50	40	06	14	49 78	
24	178	40.1	+22	73	24.5 ¹³⁸	-8	24.0 ¹⁰⁸	60 S	7 06	8 01	8 56	12 02	12	0 52 80	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 4 ^h 50 ^m 3		Mag: -3.9 PMG: 12 ^h 39 ^m			Mag: +1.6 PMG: 11 ^h 56 ^m			Mag: -2.1 PMG: 8 ^h 49 ^m			Mag: +0.2 PMG: 8 ^h 32 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'				
0	287	14.2	170	26.2	+22	14.6	180	54.3	+23	30.7	227	23.4	+19	41.3	231	34.0	+17	36.5
1	302	16.7	185	25.4		14.1	195	54.9		30.5	242	25.4		41.4	246	36.2		36.6
2	317	19.1	200	24.6		13.6	210	55.6		30.3	257	27.3		41.5	261	38.5		36.6
3	332	21.6	215	23.7		13.1	225	56.3		30.1	272	29.3		41.6	276	40.7		36.7
4	347	24.1	230	22.9		12.6	240	57.0		30.0	287	31.2		41.7	291	42.9		36.7
5	2	26.5	245	22.1	+22	12.1	255	57.6	+23	29.8	302	33.2	+19	41.8	306	45.1	+17	36.8
6	17	29.0	260	21.3	+22	11.6	270	58.3	+23	29.6	317	35.1	+19	41.9	321	47.3	+17	36.8
7	32	31.5	275	20.5		11.2	285	59.0		29.5	332	37.1		42.0	336	49.5		36.9
8	47	33.9	290	19.7		10.7	300	59.7		29.3	347	39.0		42.1	351	51.7		36.9
9	62	36.4	305	18.9		10.2	316	00.4		29.1	2	41.0		42.2	6	53.9		37.0
10	77	38.9	320	18.1		09.7	331	01.0		28.9	17	42.9		42.3	21	56.2		37.0
11	92	41.3	335	17.2	+22	09.2	346	01.7	+23	28.8	32	44.9	+19	42.4	36	58.4	+17	37.1
12	107	43.8	350	16.4	+22	08.7	1	02.4	+23	28.6	47	46.8	+19	42.5	52	00.6	+17	37.1
13	122	46.3	5	15.6		08.2	16	03.1		28.4	62	48.8		42.6	67	02.8		37.2
14	137	48.7	20	14.8		07.7	31	03.8		28.2	77	50.7		42.7	82	05.0		37.2
15	152	51.2	35	14.0		07.2	46	04.4		28.1	92	52.7		42.8	97	07.2		37.3
16	167	53.6	50	13.2		06.7	61	05.1		27.9	107	54.6		42.9	112	09.4		37.3
17	182	56.1	65	12.4	+22	06.2	76	05.8	+23	27.7	122	56.6	+19	43.0	127	11.6	+17	37.4
18	197	58.6	80	11.6	+22	05.7	91	06.5	+23	27.5	137	58.5	+19	43.1	142	13.9	+17	37.4
19	213	01.0	95	10.8		05.2	106	07.2		27.4	153	00.5		43.2	157	16.1		37.5
20	228	03.5	110	10.0		04.7	121	07.8		27.2	168	02.4		43.3	172	18.3		37.5
21	243	06.0	125	09.2		04.2	136	08.5		27.0	183	04.4		43.4	187	20.5		37.6
22	258	08.4	140	08.3		03.7	151	09.2		26.8	198	06.3		43.5	202	22.7		37.6
23	273	10.9	155	07.5		03.2	166	09.9		26.7	213	08.3		43.6	217	24.9		37.7
24	288	13.4	170	06.7	+22	02.6	181	10.6	+23	26.5	228	10.2	+19	43.7	232	27.1	+17	37.7
Dif	—		-8		-5		+7		-2		+19		+1		+22		+1	

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 15 ^h 7 PMG: 12 ^h 05 ^m 4				Edad: 8 ^d 2 PHE { SD: 15 ^h 2 PMG: 19 ^h 42 ^m 4 ^h : 55 ^m 6 12 ^h : 55 ^m 4 20 ^h : 55 ^m 2 R°: 46 ^m															
	hG ☉		Dec		hG ☾		Dif				Civil	Náutico	Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m					
0	178	40.1	+22	13.3	73	24.5	-8	24.0	60 N	21 15	22 39	** **	14 53	77	0 06	13				
1	193	40.0		13.0	87	57.3 ¹³⁸		34.7 ¹⁰⁷	58	20 57	22 04	** **	46	74	11	16				
2	208	39.9		12.6	102	30.1 ¹³⁸		45.4 ¹⁰⁷	56	42	21 39	** **	40	72	15	18				
3	223	39.8		12.3	117	02.9 ¹³⁸	-8	56.0 ¹⁰⁶	54	29	20	22 46	35	70	19	20				
4	238	39.7		12.0	131	35.8 ¹³⁹	-9	06.6 ¹⁰⁶	52	18	21 04	22 14	31	67	22	22				
5	253	39.7	+22	11.7	146	08.6 ¹³⁸	-9	17.1 ¹⁰⁵	50	20 08	20 51	21 51	14 26	66	0 26	23				
6	268	39.6	+22	11.4	160	41.4 ¹³⁸	-9	27.6 ¹⁰⁵	45	19 47	20 23	21 11	14 17	63	0 32	27				
7	283	39.5		11.0	175	14.2 ¹³⁸		38.0 ¹⁰⁴	40	30	20 02	20 43	10	59	38	30				
8	298	39.4		10.7	189	46.9 ¹³⁷		48.4 ¹⁰⁴	35	16	19 45	21	14 03	57	43	33				
9	313	39.3		10.4	204	19.7 ¹³⁸	-9	58.7 ¹⁰³	30	19 04	31	20 04	13 58	54	47	35				
10	328	39.2		10.1	218	52.5 ¹³⁸	-10	09.0 ¹⁰³	20	18 43	19 08	19 36	48	51	0 55	39				
11	343	39.1	+22	09.7	233	25.3 ¹³⁸	-10	19.2 ¹⁰²	10 N	18 26	18 48	19 15	13 39	48	1 02	42				
12	358	39.1	+22	09.4	247	58.0 ¹³⁷	-10	29.4 ¹⁰²	0	18 09	18 31	18 57	13 31	46	1 08	45				
13	13	39.0		09.1	262	30.8 ¹³⁸		39.5 ¹⁰¹	10 S	17 53	18 15	41	23	43	14	48				
14	28	38.9		08.8	277	03.6 ¹³⁸		49.6 ¹⁰¹	20	35	17 59	26	15	39	21	52				
15	43	38.8		08.4	291	36.3 ¹³⁷	-10	59.6 ¹⁰⁰	30	15	41	11	06	35	29	55				
16	58	38.7		08.1	306	09.0 ¹³⁷	-11	09.5 ⁹⁹	35	17 04	32	18 03	13 00	34	33	58				
17	73	38.6	+22	07.8	320	41.8 ¹³⁸	-11	19.4 ⁹⁹	40	16 51	17 21	17 54	12 54	31	1 38	60				
18	88	38.5	+22	07.5	335	14.5 ¹³⁷	-11	29.2 ⁹⁸	45	16 35	17 08	17 45	12 47	28	1 44	63				
19	103	38.5		07.1	349	47.2 ¹³⁷		39.0 ⁹⁸	50	16	16 53	34	38	25	51	67				
20	118	38.4		06.8	4	19.9 ¹³⁷		48.7 ⁹⁷	52	16 07	47	30	35	23	54	69				
21	133	38.3		06.5	18	52.5 ¹³⁶	-11	58.4 ⁹⁷	54	15 57	39	24	30	22	1 58	71				
22	148	38.2		06.1	33	25.2 ¹³⁷	-12	08.0 ⁹⁶	56	45	31	19	26	19	2 02	73				
23	163	38.1		05.8	47	57.8 ¹³⁶		17.5 ⁹⁵	58	32	22	13	20	17	07	75				
24	178	38.0	+22	05.5	62	30.5 ¹³⁷	-12	27.0 ⁹⁵	60 S	15 16	16 11	17 06	12 14	15	2 12	78				
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 4 ^h 46 ^m 3				Mag: -3.9 PMG: 12 ^h 40 ^m				Mag: +1.6 PMG: 11 ^h 55 ^m				Mag: -2.1 PMG: 8 ^h 46 ^m				Mag: +0.2 PMG: 8 ^h 29 ^m			
	hG ♈		hG ♀		Dec		Dec		Dec		Dec		Dec		Dec		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	288	13.4	170	06.7	+22	02.6	181	10.6	+23	26.5	228	10.2	+19	43.7	232	27.1	+17	37.7		
1	303	15.8	185	05.9		02.1	196	11.3		26.3	243	12.2		43.8	247	29.4		37.8		
2	318	18.3	200	05.1		01.6	211	11.9		26.1	258	14.1		43.9	262	31.6		37.8		
3	333	20.7	215	04.3		01.1	226	12.6		26.0	273	16.1		44.0	277	33.8		37.9		
4	348	23.2	230	03.5		00.6	241	13.3		25.8	288	18.0		44.1	292	36.0		37.9		
5	3	25.7	245	02.7	+22	00.1	256	14.0	+23	25.6	303	20.0	+19	44.2	307	38.2	+17	38.0		
6	18	28.1	260	01.9	+21	59.6	271	14.7	+23	25.4	318	21.9	+19	44.2	322	40.4	+17	38.0		
7	33	30.6	275	01.1		59.0	286	15.3		25.2	333	23.9		44.3	337	42.6		38.1		
8	48	33.1	290	00.3		58.5	301	16.0		25.1	348	25.8		44.4	352	44.9		38.1		
9	63	35.5	304	59.5		58.0	316	16.7		24.9	3	27.8		44.5	7	47.1		38.2		
10	78	38.0	319	58.7		57.5	331	17.4		24.7	18	29.7		44.6	22	49.3		38.2		
11	93	40.5	334	57.9	+21	57.0	346	18.1	+23	24.5	33	31.7	+19	44.7	37	51.5	+17	38.3		
12	108	42.9	349	57.1	+21	56.4	1	18.8	+23	24.3	48	33.6	+19	44.8	52	53.7	+17	38.3		
13	123	45.4	4	56.3		55.9	16	19.4		24.2	63	35.6		44.9	67	55.9		38.4		
14	138	47.9	19	55.5		55.4	31	20.1		24.0	78	37.5		45.0	82	58.2		38.4		
15	153	50.3	34	54.7		54.9	46	20.8		23.8	93	39.5		45.1	98	00.4		38.5		
16	168	52.8	49	53.9		54.3	61	21.5		23.6	108	41.4		45.2	113	02.6		38.5		
17	183	55.2	64	53.1	+21	53.8	76	22.2	+23	23.4	123	43.4	+19	45.3	128	04.8	+17	38.6		
18	198	57.7	79	52.3	+21	53.3	91	22.9	+23	23.2	138	45.3	+19	45.4	143	07.0	+17	38.6		
19	214	00.2	94	51.5		52.7	106	23.6		23.1	153	47.3		45.5	158	09.2		38.7		
20	229	02.6	109	50.7		52.2	121	24.2		22.9	168	49.3		45.6	173	11.5		38.7		
21	244	05.1	124	49.9		51.7	136	24.9		22.7	183	51.2		45.7	188	13.7		38.8		
22	259	07.6	139	49.1		51.2	151	25.6		22.5	198	53.2		45.8	203	15.9		38.8		
23	274	10.0	154	48.3		50.6	166	26.3		22.3	213	55.1		45.9	218	18.1		38.9		
24	289	12.5	169	47.5	+21	50.1	181	27.0	+23	22.1	228	57.1	+19	46.0	233	20.3	+17	38.9		
Dif	—				-8 -5				+7 -2				+20 +1				+22 0			

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7			Edad: 9 ^d 2	PHE	4 ^h : 55 ^m 0 12 ^h : 54 ^m 9 20 ^h : 54 ^m 7											
	PMG: 12 ^h 05 ^m 5					SD: 15 ^h 0				PMG: 20 ^h 28 ^m			Rº: 46 ^m				
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Náutico	Civil		Hora	Rº	Hora	Rº	
h	°	'	°	°	'	°	°	'	°	h	m	h	m	h	m	h	m
0	178	38.0	+22 05.5	62	30.5	-12 27.0			60 N	** *	1 33	2 57	16 10	74	0 19	16	
1	193	38.0	05.1	77	03.1 ¹³⁶	36.4	94		58	** *	2 07	3 15	16 00	72	27	18	
2	208	37.9	04.8	91	35.7 ¹³⁶	45.8	94		56	** *	32	30	15 52	70	33	21	
3	223	37.8	04.5	106	08.3 ¹³⁶	-12 55.1	93		54	1 25	2 51	42	45 67		39	23	
4	238	37.7	04.1	120	40.9 ¹³⁶	-13 04.3	92		52	1 57	3 07	3 54	38 66		44	25	
5	253	37.6	+22 03.8	135	13.4 ¹³⁵	-13 13.4	91		50	2 20	3 21	4 03	15 32	64	0 49	26	
6	268	37.6	+22 03.5	149	46.0 ¹³⁶	-13 22.5	91		45	3 00	3 48	4 24	15 20	60	0 59	30	
7	283	37.5	03.1	164	18.5 ¹³⁵	31.6	91		40	28	4 09	41	09 58		1 08	33	
8	298	37.4	02.8	178	51.0 ¹³⁵	40.6	90		35	3 50	26	4 55	15 00	56	16	34	
9	313	37.3	02.4	193	23.5 ¹³⁵	49.5	89		30	4 07	4 40	5 07	14 52	55	22	37	
10	328	37.2	02.1	207	55.9 ¹³⁴	-13 58.3	88		20	35	5 03	28	39 51		34	40	
11	343	37.1	+22 01.8	222	28.4 ¹³⁵	-14 07.1	88		10 N	4 56	5 23	5 45	14 27	49	1 44	42	
12	358	37.1	+22 01.4	237	00.8 ¹³⁴	-14 15.8	87		0	5 14	5 40	6 02	14 17	46	1 53	46	
13	13	37.0	01.1	251	33.2 ¹³⁴	24.4	86		10 S	30	5 56	18	14 06	43	2 02	49	
14	28	36.9	00.7	266	05.6 ¹³⁴	33.0	86		20	5 45	6 12	36	13 54	41	13	51	
15	43	36.8	00.4	280	38.0 ¹³⁴	41.5	85		30	6 00	29	6 55	41 38		24	55	
16	58	36.7	+22 00.1	295	10.3 ¹³³	49.9	84		35	08	39	7 07	34 36		31	56	
17	73	36.7	+21 59.7	309	42.6 ¹³³	-14 58.3	84		40	6 16	6 50	7 20	13 25	34	2 38	59	
18	88	36.6	+21 59.4	324	15.0 ¹³⁴	-15 06.5	82		45	6 26	7 02	7 36	13 15	32	2 47	62	
19	103	36.5	59.0	338	47.2 ¹³²	14.8	83		50	36	17	7 55	13 03	28	2 58	65	
20	118	36.4	58.7	353	19.5 ¹³³	22.9	81		52	41	24	8 04	12 58	26	3 03	67	
21	133	36.4	58.3	7	51.7 ¹³²	31.0	81		54	46	31	14	52 25		09	68	
22	148	36.3	58.0	22	23.9 ¹³²	39.0	80		56	52	40	25	45 23		15	71	
23	163	36.2	57.6	36	56.1 ¹³²	46.9	79		58	6 58	49	38	37 21		22	73	
24	178	36.1	+21 57.3	51	28.3 ¹³²	-15 54.8	79		60 S	7 04	7 59	8 54	12 29	18	3 30	76	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 4 ^h 42 ^m 4		Mag: -3.9 PMG: 12 ^h 42 ^m			Mag: +1.6 PMG: 11 ^h 54 ^m			Mag: -2.1 PMG: 8 ^h 43 ^m			Mag: +0.2 PMG: 8 ^h 25 ^m					
	hG ♈		hG ♀			hG ♂			hG ♃			hG ♄					
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°		
0	289	12.5	169 47.5	+21 50.1		181 27.0	+23 22.1		228 57.1	+19 46.0		233 20.3	+17 38.9				
1	304	15.0	184 46.7	49.5		196 27.7	22.0		243 59.0	46.1		248 22.5	39.0				
2	319	17.4	199 45.9	49.0		211 28.3	21.8		259 01.0	46.2		263 24.8	39.0				
3	334	19.9	214 45.1	48.5		226 29.0	21.6		274 02.9	46.3		278 27.0	39.1				
4	349	22.4	229 44.3	47.9		241 29.7	21.4		289 04.9	46.4		293 29.2	39.1				
5	4	24.8	244 43.5	+21 47.4		256 30.4	+23 21.2		304 06.8	+19 46.5		308 31.4	+17 39.2				
6	19	27.3	259 42.7	+21 46.8		271 31.1	+23 21.0		319 08.8	+19 46.5		323 33.6	+17 39.2				
7	34	29.7	274 41.9	46.3		286 31.8	20.8		334 10.7	46.6		338 35.8	39.3				
8	49	32.2	289 41.2	45.8		301 32.5	20.6		349 12.7	46.7		353 38.1	39.3				
9	64	34.7	304 40.4	45.2		316 33.1	20.5		4	14.7	46.8	8 40.3	39.4				
10	79	37.1	319 39.6	44.7		331 33.8	20.3		19 16.6	46.9		23 42.5	39.4				
11	94	39.6	334 38.8	+21 44.1		346 34.5	+23 20.1		34 18.6	+19 47.0		38 44.7	+17 39.5				
12	109	42.1	349 38.0	+21 43.6		1 35.2	+23 19.9		49 20.5	+19 47.1		53 46.9	+17 39.5				
13	124	44.5	4 37.2	43.0		16 35.9	19.7		64 22.5	47.2		68 49.2	39.6				
14	139	47.0	19 36.4	42.5		31 36.6	19.5		79 24.4	47.3		83 51.4	39.6				
15	154	49.5	34 35.6	41.9		46 37.3	19.3		94 26.4	47.4		98 53.6	39.7				
16	169	51.9	49 34.8	41.4		61 38.0	19.1		109 28.3	47.5		113 55.8	39.7				
17	184	54.4	64 34.0	+21 40.8		76 38.6	+23 18.9		124 30.3	+19 47.6		128 58.0	+17 39.8				
18	199	56.8	79 33.3	+21 40.2		91 39.3	+23 18.8		139 32.3	+19 47.7		144 00.2	+17 39.8				
19	214	59.3	94 32.5	39.7		106 40.0	18.6		154 34.2	47.8		159 02.5	39.9				
20	230	01.8	109 31.7	39.1		121 40.7	18.4		169 36.2	47.9		174 04.7	39.9				
21	245	04.2	124 30.9	38.6		136 41.4	18.2		184 38.1	48.0		189 06.9	40.0				
22	260	06.7	139 30.1	38.0		151 42.1	18.0		199 40.1	48.1		204 09.1	40.0				
23	275	09.2	154 29.3	37.4		166 42.8	17.8		214 42.0	48.2		219 11.3	40.0				
24	290	11.6	169 28.5	+21 36.9		181 43.5	+23 17.6		229 44.0	+19 48.3		234 13.6	+17 40.1				
Dif	—		-8			-5			+20			+1			+22		

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15:7 PMG: 12 ^h 05 ^m 7			Edad: 10 ^d 2 PHE { 4 ^h : 54/6 12 ^h : 54/5 20 ^h : 54/4 R°: 47 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	178	36.1	+21 57.3	51	28.3	-15 54.8	77	60 N	21 12	22 33	** **	17 24 70	0 35 21	
1	193	36.0	56.9	66	00.5 ¹³²	-16 02.5	77	58	20 54	22 00	** **	12 67	45 24	
2	208	36.0	56.6	80	32.6 ¹³¹	10.2	77	56	40	21 36	** **	17 02 65	0 54 26	
3	223	35.9	56.2	95	04.7 ¹³¹	17.9	77	54	27	18	22 41	16 52 64	1 02 26	
4	238	35.8	55.9	109	36.7 ¹³⁰	25.4	75	52	16	21 02	22 11	44 62	09 29	
5	253	35.7	+21 55.5	124	08.8 ¹³¹	-16 32.9	75	50	20 06	20 49	21 48	16 36 61	1 15 31	
6	268	35.7	+21 55.2	138	40.8 ¹³⁰	-16 40.3	74	45	19 46	20 22	21 09	16 20 59	1 29 34	
7	283	35.6	54.8	153	12.8 ¹³⁰	47.6	73	40	29	20 01	20 41	16 07 57	41 35	
8	298	35.5	54.5	167	44.8 ¹³⁰	-16 54.8	72	35	15	19 45	20	15 56 55	50 38	
9	313	35.4	54.1	182	16.7 ¹²⁹	-17 02.0	72	30	19 03	30	20 03	47 53	1 59 39	
10	328	35.3	53.8	196	48.7 ¹³⁰	09.1	71	20	18 43	19 07	19 36	30 51	2 14 42	
11	343	35.3	+21 53.4	211	20.6 ¹²⁹	-17 16.1	70	10 N	18 26	18 48	19 15	15 16 49	2 26 45	
12	358	35.2	+21 53.1	225	52.4 ¹²⁸	-17 23.0	69	0	18 09	18 32	18 57	15 03 47	2 39 46	
13	13	35.1	52.7	240	24.3 ¹²⁹	29.9	69	10 S	17 53	16	42	14 49 46	2 51 49	
14	28	35.0	52.3	254	56.1 ¹²⁸	36.6	67	20	36	18 00	27	35 43	3 04 51	
15	43	35.0	52.0	269	27.9 ¹²⁸	43.3	67	30	16	17 42	12	19 41	19 54	
16	58	34.9	51.6	283	59.7 ¹²⁸	49.9	66	35	17 05	33	18 04	14 10 39	27 56	
17	73	34.8	+21 51.3	298	31.4 ¹²⁷	-17 56.4	65	40	16 52	17 22	17 56	13 59 38	3 37 58	
18	88	34.7	+21 50.9	313	03.1 ¹²⁷	-18 02.9	65	45	16 37	17 10	17 46	13 47 35	3 49 60	
19	103	34.7	50.5	327	34.8 ¹²⁷	09.2	63	50	18	16 55	36	31 33	4 03 63	
20	118	34.6	50.2	342	06.5 ¹²⁷	15.5	63	52	16 09	48	31	24 32	10 64	
21	133	34.5	49.8	356	38.2 ¹²⁷	21.7	62	54	15 59	41	26	17 30	17 66	
22	148	34.4	49.5	11	09.8 ¹²⁶	27.7	60	56	48	33	21	13 08 28	26 67	
23	163	34.4	49.1	25	41.4 ¹²⁶	33.8	61	58	35	24	15	12 58 26	35 70	
24	178	34.3	+21 48.7	40	12.9 ¹²⁵	-18 39.7	59	60 S	15 19	16 14	17 09	12 47 24	4 46 72	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 4 ^h 38 ^m 5		Mag: -3.9 PMG: 12 ^h 43 ^m		Mag: +1.6 PMG: 11 ^h 53 ^m		Mag: -2.2 PMG: 8 ^h 40 ^m		Mag: +0.2 PMG: 8 ^h 22 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	290	11.6	169	28.5	+21 36.9	181	43.5	+23 17.6	229	44.0	+19 48.3	234	13.6	+17 40.1
1	305	14.1	184	27.7	36.3	196	44.1	17.4	244	46.0	48.3	249	15.8	40.1
2	320	16.6	199	27.0	35.8	211	44.8	17.2	259	47.9	48.4	264	18.0	40.2
3	335	19.0	214	26.2	35.2	226	45.5	17.0	274	49.9	48.5	279	20.2	40.2
4	350	21.5	229	25.4	34.6	241	46.2	16.8	289	51.8	48.6	294	22.4	40.3
5	5	24.0	244	24.6	+21 34.1	256	46.9	+23 16.6	304	53.8	+19 48.7	309	24.7	+17 40.3
6	20	26.4	259	23.8	+21 33.5	271	47.6	+23 16.4	319	55.7	+19 48.8	324	26.9	+17 40.4
7	35	28.9	274	23.0	32.9	286	48.3	16.2	334	57.7	48.9	339	29.1	40.4
8	50	31.3	289	22.3	32.3	301	49.0	16.0	349	59.7	49.0	354	31.3	40.5
9	65	33.8	304	21.5	31.8	316	49.7	15.8	5	01.6	49.1	9	33.5	40.5
10	80	36.3	319	20.7	31.2	331	50.3	15.7	20	03.6	49.2	24	35.8	40.6
11	95	38.7	334	19.9	+21 30.6	346	51.0	+23 15.5	35	05.5	+19 49.3	39	38.0	+17 40.6
12	110	41.2	349	19.1	+21 30.1	1	51.7	+23 15.3	50	07.5	+19 49.4	54	40.2	+17 40.7
13	125	43.7	4	18.3	29.5	16	52.4	15.1	65	09.5	49.5	69	42.4	40.7
14	140	46.1	19	17.6	28.9	31	53.1	14.9	80	11.4	49.6	84	44.6	40.8
15	155	48.6	34	16.8	28.3	46	53.8	14.7	95	13.4	49.7	99	46.9	40.8
16	170	51.1	49	16.0	27.7	61	54.5	14.5	110	15.3	49.8	114	49.1	40.9
17	185	53.5	64	15.2	+21 27.2	76	55.2	+23 14.3	125	17.3	+19 49.8	129	51.3	+17 40.9
18	200	56.0	79	14.5	+21 26.6	91	55.9	+23 14.1	140	19.3	+19 49.9	144	53.5	+17 41.0
19	215	58.5	94	13.7	26.0	106	56.6	13.9	155	21.2	50.0	159	55.8	41.0
20	231	00.9	109	12.9	25.4	121	57.3	13.7	170	23.2	50.1	174	58.0	41.1
21	246	03.4	124	12.1	24.8	136	57.9	13.5	185	25.1	50.2	190	00.2	41.1
22	261	05.8	139	11.3	24.2	151	58.6	13.3	200	27.1	50.3	205	02.4	41.1
23	276	08.3	154	10.6	23.7	166	59.3	13.1	215	29.1	50.4	220	04.6	41.2
24	291	10.8	169	09.8	+21 23.1	182	00.0	+23 12.9	230	31.0	+19 50.5	235	06.9	+17 41.2
Dif	—		-8		-6	+7		-2	+20		+1	+22		0

UT	SOL			O LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 11 ^d 2	PHE { 4 ^h : 54 ^m 3 12 ^h : 54 ^m 2 20 ^h : 54 ^m 1	SD: 14 ^h 8	PMG: 22 ^h 01 ^m	R°: 49 ^m								
	PMG: 12 ^h 05 ^m 8															
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	m	m	m
0	178	34.3	+21 48.7	40	12.9	-18 39.7	58	60 N	*** **	1 39	3 00	18 34	62	0 56	28	
1	193	34.2	48.4	54	44.5 ¹²⁶	45.5	58	58	*** **	2 12	18	19	61	1 09	30	
2	208	34.2	48.0	69	16.0 ¹²⁵	51.3	58	56	0 31	35	32	18 07	59	20	32	
3	223	34.1	47.6	83	47.5 ¹²⁵	-18 56.9	56	54	1 31	2 54	45	17 56	58	29	34	
4	238	34.0	47.3	98	19.0 ¹²⁵	-19 02.5	56	52	2 01	3 10	3 56	46	57	38	35	
5	253	33.9	+21 46.9	112	50.4 ¹²⁴	-19 08.0	55	50	2 23	3 23	4 06	17 37	57	1 46	36	
6	268	33.9	+21 46.5	127	21.8 ¹²⁴	-19 13.4	54	45	3 03	3 50	4 26	17 19	55	2 03	38	
7	283	33.8	46.2	141	53.2 ¹²⁴	18.7	53	40	30	4 10	42	17 04	53	16	40	
8	298	33.7	45.8	156	24.6 ¹²⁴	23.9	52	35	3 51	27	4 56	16 51	53	28	41	
9	313	33.7	45.4	170	55.9 ¹²³	29.1	52	30	4 09	4 41	5 08	40	52	38	43	
10	328	33.6	45.0	185	27.2 ¹²³	34.1	50	20	35	5 04	28	21	51	2 56	44	
11	343	33.5	+21 44.7	199	58.5 ¹²³	-19 39.1	50	10 N	4 56	5 23	5 46	16 05	49	3 11	46	
12	358	33.4	+21 44.3	214	29.8 ¹²³	-19 43.9	48	0	5 14	5 40	6 02	15 50	48	3 25	48	
13	13	33.4	43.9	229	01.1 ¹²³	48.7	48	10 S	30	5 56	18	35	46	40	49	
14	28	33.3	43.6	243	32.3 ¹²²	53.4	47	20	44	6 12	35	18	46	3 55	51	
15	43	33.2	43.2	258	03.5 ¹²²	-19 58.0	46	30	5 59	29	6 55	15 00	44	4 13	52	
16	58	33.2	42.8	272	34.7 ¹²²	-20 02.5	45	35	6 07	38	7 06	14 49	43	23	54	
17	73	33.1	+21 42.4	287	05.8 ¹²¹	-20 06.9	44	40	6 16	6 49	7 19	14 37	42	4 35	55	
18	88	33.0	+21 42.1	301	37.0 ¹²²	-20 11.2	43	45	6 25	7 01	7 34	14 22	41	4 49	57	
19	103	33.0	41.7	316	08.1 ¹²¹	15.4	42	50	35	16	7 53	14 04	40	5 06	59	
20	118	32.9	41.3	330	39.2 ¹²¹	19.5	41	52	40	22	8 02	13 56	38	14	60	
21	133	32.8	40.9	345	10.2 ¹²⁰	23.6	41	54	45	30	12	47	37	23	61	
22	148	32.7	40.5	359	41.3 ¹²¹	27.5	39	56	50	38	23	36	36	33	62	
23	163	32.7	40.2	14	12.3 ¹²⁰	31.3	38	58	6 56	47	36	24	35	45	64	
24	178	32.6	+21 39.8	28	43.3 ¹²⁰	-20 35.1	38	60 S	7 02	7 57	8 51	13 11	32	5 58	66	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG 4 ^h 34 ^m 5		Mag: -3.9 PMG: 12 ^h 44 ^m			Mag: +1.6 PMG: 11 ^h 51 ^m			Mag: -2.2 PMG: 8 ^h 37 ^m			Mag: +0.2 PMG: 8 ^h 18 ^m				
	hG ♈		hG ♀ Dec			hG ♂ Dec			hG ♃ Dec			hG ♄ Dec				
h	°	'	°	°	'	°	°	°	°	'	°	°	'	°	°	
0	291	10.8	169 09.8	+21 23.1	182 00.0	+23 12.9	230 31.0	+19 50.5	235 06.9	+17 41.2						
1	306	13.2	184 09.0	22.5	197 00.7	12.7	245 33.0	50.6	250 09.1	41.3						
2	321	15.7	199 08.2	21.9	212 01.4	12.5	260 34.9	50.7	265 11.3	41.3						
3	336	18.2	214 07.5	21.3	227 02.1	12.3	275 36.9	50.8	280 13.5	41.4						
4	351	20.6	229 06.7	20.7	242 02.8	12.1	290 38.9	50.9	295 15.8	41.4						
5	6	23.1	244 05.9	+21 20.1	257 03.5	+23 11.9	305 40.8	+19 51.0	310 18.0	+17 41.5						
6	21	25.6	259 05.1	+21 19.5	272 04.2	+23 11.7	320 42.8	+19 51.1	325 20.2	+17 41.5						
7	36	28.0	274 04.4	18.9	287 04.9	11.5	335 44.7	51.1	340 22.4	41.6						
8	51	30.5	289 03.6	18.3	302 05.6	11.3	350 46.7	51.2	355 24.6	41.6						
9	66	33.0	304 02.8	17.7	317 06.3	11.1	5 48.7	51.3	10 26.9	41.7						
10	81	35.4	319 02.1	17.1	332 07.0	10.9	20 50.6	51.4	25 29.1	41.7						
11	96	37.9	334 01.3	+21 16.5	347 07.6	+23 10.7	35 52.6	+19 51.5	40 31.3	+17 41.8						
12	111	40.3	349 00.5	+21 15.9	2 08.3	+23 10.4	50 54.5	+19 51.6	55 33.5	+17 41.8						
13	126	42.8	3 59.7	15.3	17 09.0	10.2	65 56.5	51.7	70 35.8	41.9						
14	141	45.3	18 59.0	14.7	32 09.7	10.0	80 58.5	51.8	85 38.0	41.9						
15	156	47.7	33 58.2	14.1	47 10.4	09.8	96 00.4	51.9	100 40.2	41.9						
16	171	50.2	48 57.4	13.5	62 11.1	09.6	111 02.4	52.0	115 42.4	42.0						
17	186	52.7	63 56.7	+21 12.9	77 11.8	+23 09.4	126 04.4	+19 52.1	130 44.7	+17 42.0						
18	201	55.1	78 55.9	+21 12.3	92 12.5	+23 09.2	141 06.3	+19 52.2	145 46.9	+17 42.1						
19	216	57.6	93 55.1	11.7	107 13.2	09.0	156 08.3	52.3	160 49.1	42.1						
20	232	00.1	108 54.4	11.1	122 13.9	08.8	171 10.2	52.3	175 51.3	42.2						
21	247	02.5	123 53.6	10.5	137 14.6	08.6	186 12.2	52.4	190 53.6	42.2						
22	262	05.0	138 52.8	09.9	152 15.3	08.4	201 14.2	52.5	205 55.8	42.3						
23	277	07.4	153 52.1	09.2	167 16.0	08.2	216 16.1	52.6	220 58.0	42.3						
24	292	09.9	168 51.3	+21 08.6	182 16.7	+23 08.0	231 18.1	+19 52.7	236 00.2	+17 42.4						
Dif	—		-8			-6	+7		-2	+20		+1	+22			0

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 12 ^d 2 PHE { 4 ^h : 54 ^m 1 12 ^h : 54 ^m 0 20 ^h : 54 ^m 0										
	PMG: 12 ^h 05 ^m 9			SD: 14 ^h 7 PMG: 22 ^h 50 ^m R°: 48 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	h m	h m
0	178	32.6	+21 39.8	28	43.3	-20 35.1	36	60 N	21 08	22 27	** **	19 36 51	1 24 37	
1	193	32.5	39.4	43	14.3 ¹²⁰	38.7	36	58	20 51	21 56	** **	20 51	39 39	
2	208	32.5	39.0	57	45.3 ¹²⁰	42.3	36	56	37	33	23 25	19 06 50	1 52 40	
3	223	32.4	38.6	72	16.2 ¹¹⁹	45.7	34	54	25	15	22 35	18 54 50	2 03 44	
4	238	32.3	38.3	86	47.2 ¹²⁰	49.1	34	52	14	21 00	22 07	43 50	13 42	
5	253	32.3	+21 37.9	101	18.1 ¹¹⁹	-20 52.4	33	50	20 04	20 47	21 45	18 34 50	2 22 42	
6	268	32.2	+21 37.5	115	49.0 ¹¹⁹	-20 55.5	31	45	19 44	20 20	21 07	18 14 50	2 41 43	
7	283	32.1	37.1	130	19.9 ¹¹⁹	-20 58.6	31	40	28	20 00	20 40	17 57 50	2 56 45	
8	298	32.1	36.7	144	50.7 ¹¹⁸	-21 01.6	30	35	15	19 44	19	44 49	3 09 45	
9	313	32.0	36.3	159	21.6 ¹¹⁹	04.4	28	30	19 03	30	20 02	32 49	21 45	
10	328	31.9	36.0	173	52.4 ¹¹⁸	07.2	28	20	18 43	19 07	19 36	17 12 49	40 47	
11	343	31.9	+21 35.6	188	23.2 ¹¹⁸	-21 09.9	27	10 N	18 26	18 48	19 15	16 54 49	3 57 48	
12	358	31.8	+21 35.2	202	54.0 ¹¹⁸	-21 12.5	26	0	18 09	18 32	18 58	16 38 48	4 13 48	
13	13	31.7	34.8	217	24.8 ¹¹⁸	15.0	25	10 S	17 54	16	42	21 49	29 49	
14	28	31.7	34.4	231	55.6 ¹¹⁸	17.3	23	20	37	18 00	28	16 04 48	4 46 50	
15	43	31.6	34.0	246	26.3 ¹¹⁷	19.6	23	30	17	17 43	13	15 44 47	5 05 51	
16	58	31.6	33.6	260	57.1 ¹¹⁸	21.8	22	35	17 06	34	18 05	32 47	17 51	
17	73	31.5	+21 33.2	275	27.8 ¹¹⁷	-21 23.9	21	40	16 53	17 23	17 57	15 19 47	5 30 52	
18	88	31.4	+21 32.8	289	58.5 ¹¹⁷	-21 25.9	20	45	16 38	17 11	17 48	15 03 46	5 46 52	
19	103	31.4	32.5	304	29.2 ¹¹⁷	27.8	19	50	20	16 57	38	14 44 45	6 05 53	
20	118	31.3	32.1	318	59.9 ¹¹⁷	29.6	18	52	11	51	33	34 46	14 54	
21	133	31.2	31.7	333	30.6 ¹¹⁷	31.2	16	54	16 01	43	28	24 45	24 54	
22	148	31.2	31.3	348	01.3 ¹¹⁷	32.8	16	56	15 50	35	23	14 12 45	35 55	
23	163	31.1	30.9	2	32.0 ¹¹⁷	34.3	15	58	38	27	17	13 59 44	6 49 55	
24	178	31.0	+21 30.5	17	02.6 ¹¹⁶	-21 35.7	14	60 S	15 23	16 16	17 11	13 43 43	7 04 57	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 4 ^h 30 ^m 6		Mag: -3.9 PMG: 12 ^h 45 ^m		Mag: +1.6 PMG: 11 ^h 50 ^m		Mag: -2.2 PMG: 8 ^h 34 ^m		Mag: +0.2 PMG: 8 ^h 15 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	292	09.9	168 51.3	+21 08.6	182 16.7	+23 08.0	231 18.1	+19 52.7	236 00.2	+17 42.4
1	307	12.4	183 50.5	08.0	197 17.4	07.8	246 20.1	52.8	251 02.5	42.4
2	322	14.8	198 49.8	07.4	212 18.1	07.6	261 22.0	52.9	266 04.7	42.5
3	337	17.3	213 49.0	06.8	227 18.8	07.3	276 24.0	53.0	281 06.9	42.5
4	352	19.8	228 48.3	06.2	242 19.5	07.1	291 26.0	53.1	296 09.1	42.6
5	7	22.2	243 47.5	+21 05.5	257 20.2	+23 06.9	306 27.9	+19 53.2	311 11.4	+17 42.6
6	22	24.7	258 46.7	+21 04.9	272 20.8	+23 06.7	321 29.9	+19 53.3	326 13.6	+17 42.6
7	37	27.2	273 46.0	04.3	287 21.5	06.5	336 31.9	53.4	341 15.8	42.7
8	52	29.6	288 45.2	03.7	302 22.2	06.3	351 33.8	53.4	356 18.0	42.7
9	67	32.1	303 44.4	03.1	317 22.9	06.1	6 35.8	53.5	11 20.3	42.8
10	82	34.6	318 43.7	02.4	332 23.6	05.9	21 37.8	53.6	26 22.5	42.8
11	97	37.0	333 42.9	+21 01.8	347 24.3	+23 05.7	36 39.7	+19 53.7	41 24.7	+17 42.9
12	112	39.5	348 42.2	+21 01.2	2 25.0	+23 05.5	51 41.7	+19 53.8	56 26.9	+17 42.9
13	127	41.9	3 41.4	+21 00.6	17 25.7	05.2	66 43.6	53.9	71 29.2	43.0
14	142	44.4	18 40.7	+20 59.9	32 26.4	05.0	81 45.6	54.0	86 31.4	43.0
15	157	46.9	33 39.9	59.3	47 27.1	04.8	96 47.6	54.1	101 33.6	43.1
16	172	49.3	48 39.1	58.7	62 27.8	04.6	111 49.5	54.2	116 35.8	43.1
17	187	51.8	63 38.4	+20 58.0	77 28.5	+23 04.4	126 51.5	+19 54.3	131 38.1	+17 43.2
18	202	54.3	78 37.6	+20 57.4	92 29.2	+23 04.2	141 53.5	+19 54.4	146 40.3	+17 43.2
19	217	56.7	93 36.9	56.8	107 29.9	04.0	156 55.4	54.4	161 42.5	43.2
20	232	59.2	108 36.1	56.1	122 30.6	03.8	171 57.4	54.5	176 44.8	43.3
21	248	01.7	123 35.4	55.5	137 31.3	03.5	186 59.4	54.6	191 47.0	43.3
22	263	04.1	138 34.6	54.9	152 32.0	03.3	202 01.3	54.7	206 49.2	43.4
23	278	06.6	153 33.8	54.2	167 32.7	03.1	217 03.3	54.8	221 51.4	43.4
24	293	09.1	168 33.1	+20 53.6	182 33.4	+23 02.9	232 05.3	+19 54.9	236 53.7	+17 43.5
Dif	—		-8	-6	+7	-2	+20	+1	+22	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 0				Edad: 13 ^d 2 PHE { 4 ^h : 54 ⁰ 12 ^h : 54 ⁰ 20 ^h : 54 ⁰ Rº: 49 ^m															
	hG ☉		Dec		hG ☾		Dif		Dec			Dif			Náutico	Civil	Hora	Rº	Hora	Rº
h	°	'	°	'	°	'	°	'	°	'	°	'	h m	h m	h m	h m	h m	h m		
0	178	31.0	+21	30.5	17	02.6	−21	35.7	13	58	60 N	** *	1 46	3 04	20 27	40	2 01	49		
1	193	31.0		30.1	31	33.3 ¹¹⁷		37.0	12	56	58	** *	2 16	21	20 11	40	18	49		
2	208	30.9		29.7	46	03.9 ¹¹⁶		38.2	10	54	56	0 47	39	35	19 56	42	32	49		
3	223	30.9		29.3	60	34.5 ¹¹⁶		39.2	10	52	54	1 37	2 57	47	44	42	44	49		
4	238	30.8		28.9	75	05.2 ¹¹⁷		40.2	9	50	52	2 06	3 13	3 58	33	43	2 55	49		
5	253	30.7	+21	28.5	89	35.8 ¹¹⁶	−21	41.1	8	45	50	2 27	3 26	4 08	19 24	43	3 04	49		
6	268	30.7	+21	28.1	104	06.4 ¹¹⁶	−21	41.9	6	40	45	3 05	3 52	4 28	19 04	44	3 24	49		
7	283	30.6		27.7	118	37.0 ¹¹⁶		42.5	6	35	40	32	4 12	44	18 47	46	41	49		
8	298	30.6		27.3	133	07.6 ¹¹⁶		43.1	5	30	35	3 53	28	4 57	33	46	3 54	49		
9	313	30.5		26.9	147	38.2 ¹¹⁶		43.6	4	20	30	4 10	4 42	5 09	21	47	4 06	49		
10	328	30.4		26.5	162	08.8 ¹¹⁶		44.0	2	10 N	20	36	5 05	29	18 01	47	27	49		
11	343	30.4	+21	26.1	176	39.4 ¹¹⁶	−21	44.2	1	0	10 N	4 57	5 24	5 46	17 43	48	4 45	48		
12	358	30.3	+21	25.7	191	10.0 ¹¹⁶	−21	44.4	1	20 S	0	5 14	5 40	6 02	17 26	49	5 01	49		
13	13	30.3		25.3	205	40.6 ¹¹⁶		44.5	1	10 S	10	30	5 56	18	17 10	49	18	48		
14	28	30.2		24.9	220	11.2 ¹¹⁶		44.4	1	20	20	44	6 11	35	16 52	50	36	48		
15	43	30.1		24.5	234	41.8 ¹¹⁶		44.3	1	30	30	5 59	28	6 54	31	51	5 56	48		
16	58	30.1		24.1	249	12.4 ¹¹⁶		44.1	2	35	35	6 07	38	7 05	19	51	6 08	48		
17	73	30.0	+21	23.7	263	43.0 ¹¹⁶	−21	43.7	4	40	40	6 15	6 48	7 18	16 06	51	6 22	47		
18	88	30.0	+21	23.3	278	13.6 ¹¹⁶	−21	43.3	4	45	45	6 24	7 00	7 33	15 49	52	6 38	47		
19	103	29.9		22.9	292	44.2 ¹¹⁶		42.7	6	50	50	34	14	7 51	29	53	6 58	47		
20	118	29.8		22.5	307	14.8 ¹¹⁶		42.1	6	52	52	38	21	8 00	20	53	7 08	46		
21	133	29.8		22.0	321	45.4 ¹¹⁶		41.3	8	54	54	43	28	10	15 09	53	18	47		
22	148	29.7		21.6	336	16.0 ¹¹⁶		40.5	8	56	56	48	36	21	14 57	54	30	47		
23	163	29.7		21.2	350	46.6 ¹¹⁶		39.5	10	58	58	6 54	45	33	43	54	7 44	46		
24	178	29.6	+21	20.8	5	17.2 ¹¹⁶	−21	38.5	10	60 S	60 S	7 00	7 55	8 48	14 26	55	8 01	45		
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG 4 ^h 26 ^m 7				Mag: −3.9 PMG: 12 ^h 46 ^m				Mag: +1.6 PMG: 11 ^h 49 ^m				Mag: −2.2 PMG: 8 ^h 31 ^m				Mag: +0.2 PMG: 8 ^h 11 ^m			
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	293	09.1	+20	53.6	182	33.4	+23	02.9	232	05.3	+19	54.9	236	53.7	+17	43.5				
1	308	11.5		52.9	197	34.1		02.7	247	07.2		55.0	251	55.9		43.5				
2	323	14.0		52.3	212	34.8		02.5	262	09.2		55.1	266	58.1		43.6				
3	338	16.4		51.7	227	35.5		02.2	277	11.2		55.2	282	00.3		43.6				
4	353	18.9		51.0	242	36.2		02.0	292	13.2		55.3	297	02.6		43.7				
5	8	21.4	+20	50.4	257	36.9	+23	01.8	307	15.1	+19	55.3	312	04.8	+17	43.7				
6	23	23.8	+20	49.7	272	37.6	+23	01.6	322	17.1	+19	55.4	327	07.0	+17	43.8				
7	38	26.3		49.1	287	38.3		01.4	337	19.1		55.5	342	09.3		43.8				
8	53	28.8		48.4	302	39.0		01.2	352	21.0		55.6	357	11.5		43.8				
9	68	31.2		47.8	317	39.7		00.9	7	23.0		55.7	12	13.7		43.9				
10	83	33.7		47.1	332	40.4		00.7	22	25.0		55.8	27	15.9		43.9				
11	98	36.2	+20	46.5	347	41.1	+23	00.5	37	26.9	+19	55.9	42	18.2	+17	44.0				
12	113	38.6	+20	45.8	2	41.8	+23	00.3	52	28.9	+19	56.0	57	20.4	+17	44.0				
13	128	41.1		45.2	17	42.5	+23	00.1	67	30.9		56.1	72	22.6		44.1				
14	143	43.6		44.5	32	43.2	+22	59.8	82	32.8		56.2	87	24.9		44.1				
15	158	46.0		43.9	47	43.9		59.6	97	34.8		56.2	102	27.1		44.2				
16	173	48.5		43.2	62	44.6		59.4	112	36.8		56.3	117	29.3		44.2				
17	188	50.9	+20	42.6	77	45.3	+22	59.2	127	38.7	+19	56.4	132	31.6	+17	44.2				
18	203	53.4	+20	41.9	92	46.0	+22	59.0	142	40.7	+19	56.5	147	33.8	+17	44.3				
19	218	55.9		41.3	107	46.7		58.7	157	42.7		56.6	162	36.0		44.3				
20	233	58.3		40.6	122	47.4		58.5	172	44.7		56.7	177	38.2		44.4				
21	249	00.8		39.9	137	48.1		58.3	187	46.6		56.8	192	40.5		44.4				
22	264	03.3		39.3	152	48.8		58.1	202	48.6		56.9	207	42.7		44.5				
23	279	05.7		38.6	167	49.5		57.9	217	50.6		57.0	222	44.9		44.5				
24	294	08.2	+20	38.0	182	50.2	+22	57.6	232	52.5	+19	57.0	237	47.2	+17	44.6				
Dif	—				−7				+7				+20				+1			

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15:7 PMG: 12 ^h 06 ^m 1			Edad: 14 ^d 2 PHE { 4 ^h : 54:0 12 ^h : 54:0 20 ^h : 54:0 SD: 14:7 PMG: **h **m R°: **m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	178	29.6	+21 20.8	5	17.2	-21 38.5	12	60 N	21 05	22 21	** **	21 07 29	2 50 61	
1	193	29.6	20.4	19	47.9 ¹¹⁷	37.3	12	58	20 48	21 51	** **	20 51 31	3 07 59	
2	208	29.5	20.0	34	18.5 ¹¹⁶	36.1	12	56	34	29	23 13	38 33	21 58	
3	223	29.4	19.6	48	49.1 ¹¹⁶	34.7	14	54	22	21 12	22 30	26 35	33 55	
4	238	29.4	19.2	63	19.8 ¹¹⁷	33.3	14	52	12	20 57	22 03	16 36	44 56	
5	253	29.3	+21 18.8	77	50.4 ¹¹⁶	-21 31.7	16	50	20 03	20 44	21 42	20 07 37	3 53 56	
6	268	29.3	+21 18.3	92	21.1 ¹¹⁷	-21 30.1	16	45	19 43	20 19	21 05	19 48 39	4 13 55	
7	283	29.2	17.9	106	51.8 ¹¹⁷	28.3	18	40	27	19 59	20 38	33 40	30 53	
8	298	29.2	17.5	121	22.5 ¹¹⁷	26.5	18	35	14	43	18	19 42	43 53	
9	313	29.1	17.1	135	53.2 ¹¹⁷	24.5	20	30	19 02	29	20 01	19 08 43	4 55 52	
10	328	29.0	16.7	150	23.9 ¹¹⁷	22.5	20	20	18 42	19 07	19 35	18 48 45	5 16 50	
11	343	29.0	+21 16.3	164	54.6 ¹¹⁷	-21 20.3	22	10 N	18 25	18 48	19 15	18 31 46	5 33 50	
12	358	28.9	+21 15.8	179	25.3 ¹¹⁷	-21 18.0	23	0	18 10	18 32	18 58	18 15 48	5 50 48	
13	13	28.9	15.4	193	56.1 ¹¹⁸	15.7	23	10 S	17 54	16	42	17 59 49	6 06 48	
14	28	28.8	15.0	208	26.8 ¹¹⁷	13.2	25	20	37	18 01	28	42 50	24 46	
15	43	28.8	14.6	222	57.6 ¹¹⁸	10.7	25	30	18	17 44	14	22 52	44 45	
16	58	28.7	14.2	237	28.4 ¹¹⁸	08.0	27	35	17 07	35	18 06	17 10 54	6 56 44	
17	73	28.7	+21 13.7	251	59.2 ¹¹⁸	-21 05.3	27	40	16 55	17 25	17 58	16 57 55	7 09 43	
18	88	28.6	+21 13.3	266	30.0 ¹¹⁸	-21 02.4	29	45	16 40	17 13	17 49	16 41 56	7 25 42	
19	103	28.6	12.9	281	00.8 ¹¹⁸	-20 59.5	29	50	22	16 59	39	22 58	45 40	
20	118	28.5	12.5	295	31.7 ¹¹⁹	56.4	31	52	13	53	35	13 59	7 54 40	
21	133	28.5	12.1	310	02.5 ¹¹⁸	53.3	31	54	16 04	46	30	16 02 61	8 05 38	
22	148	28.4	11.6	324	33.4 ¹¹⁹	50.1	32	56	15 53	38	25	15 51 61	17 37	
23	163	28.4	11.2	339	04.3 ¹¹⁹	46.7	34	58	41	29	20	37 63	30 36	
24	178	28.3	+21 10.8	353	35.2 ¹¹⁹	-20 43.3	34	60 S	15 26	16 19	17 14	15 21 65	8 46 34	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 4 ^h 22 ^m 7		Mag: -3.9 PMG: 12 ^h 48 ^m		Mag: +1.7 PMG: 11 ^h 48 ^m		Mag: -2.2 PMG: 8 ^h 27 ^m		Mag: +0.2 PMG: 8 ^h 08 ^m	
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	°	°	°	°	°	°	°	°	
0	294	08.2	168 15.1 +20 38.0	182 50.2 +22 57.6	232 52.5 +19 57.0	237 47.2 +17 44.6				
1	309	10.7	183 14.4 37.3	197 50.9 57.4	247 54.5 57.1	252 49.4 44.6				
2	324	13.1	198 13.7 36.6	212 51.6 57.2	262 56.5 57.2	267 51.6 44.7				
3	339	15.6	213 12.9 36.0	227 52.3 57.0	277 58.5 57.3	282 53.9 44.7				
4	354	18.1	228 12.2 35.3	242 53.0 56.7	293 00.4 57.4	297 56.1 44.7				
5	9	20.5	243 11.4 +20 34.6	257 53.7 +22 56.5	308 02.4 +19 57.5	312 58.3 +17 44.8				
6	24	23.0	258 10.7 +20 34.0	272 54.5 +22 56.3	323 04.4 +19 57.6	328 00.6 +17 44.8				
7	39	25.4	273 10.0 33.3	287 55.2 56.1	338 06.3 57.7	343 02.8 44.9				
8	54	27.9	288 09.2 32.6	302 55.9 55.8	353 08.3 57.8	358 05.0 44.9				
9	69	30.4	303 08.5 31.9	317 56.6 55.6	8 10.3 57.8	13 07.2 45.0				
10	84	32.8	318 07.7 31.3	332 57.3 55.4	23 12.3 57.9	28 09.5 45.0				
11	99	35.3	333 07.0 +20 30.6	347 58.0 +22 55.2	38 14.2 +19 58.0	43 11.7 +17 45.1				
12	114	37.8	348 06.3 +20 29.9	2 58.7 +22 54.9	53 16.2 +19 58.1	58 13.9 +17 45.1				
13	129	40.2	3 05.5 29.2	17 59.4 54.7	68 18.2 58.2	73 16.2 45.1				
14	144	42.7	18 04.8 28.6	33 00.1 54.5	83 20.1 58.3	88 18.4 45.2				
15	159	45.2	33 04.1 27.9	48 00.8 54.2	98 22.1 58.4	103 20.6 45.2				
16	174	47.6	48 03.3 27.2	63 01.5 54.0	113 24.1 58.5	118 22.9 45.3				
17	189	50.1	63 02.6 +20 26.5	78 02.2 +22 53.8	128 26.1 +19 58.6	133 25.1 +17 45.3				
18	204	52.5	78 01.9 +20 25.8	93 02.9 +22 53.6	143 28.0 +19 58.6	148 27.3 +17 45.4				
19	219	55.0	93 01.1 25.2	108 03.6 53.3	158 30.0 58.7	163 29.6 45.4				
20	234	57.5	108 00.4 24.5	123 04.3 53.1	173 32.0 58.8	178 31.8 45.5				
21	249	59.9	122 59.7 23.8	138 05.0 52.9	188 34.0 58.9	193 34.0 45.5				
22	265	02.4	137 58.9 23.1	153 05.7 52.6	203 35.9 59.0	208 36.3 45.5				
23	280	04.9	152 58.2 22.4	168 06.4 52.4	218 37.9 59.1	223 38.5 45.6				
24	295	07.3	167 57.5 +20 21.7	183 07.1 +22 52.2	233 39.9 +19 59.2	238 40.7 +17 45.6				
Dif	—	—	-7 -7	+7 -2	+20 +1	+22 0				

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7				Edad: 15 ^d 2	PHE { 4 ^h : 54 ^m 1 12 ^h : 54 ^m 1 20 ^h : 54 ^m 2	SD: 14 ^h 7			PMG: 12 ^h 06 ^m 2			R ^o : 47 ^m		Hora	R ^o	Hora	R ^o
	hG ☉	Dec	hG ☾	Dif			Dec	Dif		Náutico	Civil							
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	178	28.3	+21	10.8	353	35.2	-20	43.3	60 N	*** **	1 52	3 08	21 36	21	3 51	69		
1	193	28.2		10.4	8	06.2 ¹²⁰		39.8 ³⁵	58	*** **	2 21	24	22 25		4 06	66		
2	208	28.2		09.9	22	37.1 ¹¹⁹		36.1 ³⁷	56	1 00	2 43	38	11 26		19	64		
3	223	28.1		09.5	37	08.1 ¹²⁰		32.4 ³⁷	54	1 43	3 01	3 50	21 01	28	30	63		
4	238	28.1		09.1	51	39.1 ¹²⁰		28.6 ³⁸	52	2 10	16	4 01	20 52	30	40	62		
5	253	28.0	+21	08.7	66	10.1 ¹²⁰	-20	24.7 ³⁹	50	2 30	3 28	4 10	20 44	31	4 49	60		
6	268	28.0	+21	08.2	80	41.1 ¹²⁰	-20	20.7 ⁴⁰	45	3 08	3 54	4 30	20 27	34	5 08	58		
7	283	27.9		07.8	95	12.2 ¹²¹		16.6 ⁴¹	40	34	4 14	45	13 36		23	56		
8	298	27.9		07.4	109	43.3 ¹²¹		12.4 ⁴²	35	3 55	30	4 59	20 01	38	36	54		
9	313	27.8		06.9	124	14.4 ¹²¹		08.1 ⁴³	30	4 11	4 44	5 10	19 51	40	5 47	53		
10	328	27.8		06.5	138	45.5 ¹²¹	-20	03.7 ⁴⁴	20	37	5 06	30	33 42		6 06	51		
11	343	27.7	+21	06.1	153	16.6 ¹²¹	-19	59.2 ⁴⁵	10 N	4 58	5 24	5 47	19 17	45	6 23	49		
12	358	27.7	+21	05.6	167	47.8 ¹²²	-19	54.7 ⁴⁵	0	5 15	5 40	6 03	19 03	46	6 38	47		
13	13	27.6		05.2	182	19.0 ¹²²		50.0 ⁴⁷	10 S	30	5 56	18	18 48	49	6 54	45		
14	28	27.6		04.8	196	50.2 ¹²²		45.3 ⁴⁷	20	44	6 11	35	32 51		7 10	44		
15	43	27.5		04.3	211	21.5 ¹²³		40.4 ⁴⁹	30	5 58	28	6 53	14 54		29	41		
16	58	27.5		03.9	225	52.7 ¹²²		35.5 ⁴⁹	35	6 06	37	7 04	18 04	55	40	40		
17	73	27.5	+21	03.5	240	24.0 ¹²³	-19	30.5 ⁵⁰	40	6 14	6 47	7 17	17 52	57	7 52	39		
18	88	27.4	+21	03.0	254	55.3 ¹²³	-19	25.3 ⁵²	45	6 22	6 59	7 32	17 37	60	8 07	37		
19	103	27.4		02.6	269	26.7 ¹²⁴		20.1 ⁵²	50	32	7 13	50	20 62		25	34		
20	118	27.3		02.2	283	58.0 ¹²³		14.9 ⁵²	52	37	19	7 58	12 63		34	32		
21	133	27.3		01.7	298	29.4 ¹²⁴		09.5 ⁵⁴	54	41	26	8 08	17 03	65	43	31		
22	148	27.2		01.3	313	00.9 ¹²⁵	-19	04.0 ⁵⁵	56	46	34	18	16 52	67	8 54	29		
23	163	27.2		00.8	327	32.3 ¹²⁴	-18	58.4 ⁵⁶	58	52	42	30	40 69		9 06	28		
24	178	27.1	+21	00.4	342	03.8 ¹²⁵	-18	52.8 ⁵⁶	60 S	6 58	7 52	8 45	16 26	72	9 20	25		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 4 ^h 18 ^m 8		Mag: -3.9 PMG: 12 ^h 49 ^m		Mag: +1.7 PMG: 11 ^h 47 ^m		Mag: -2.2 PMG: 8 ^h 24 ^m		Mag: +0.2 PMG: 8 ^h 04 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	295	07.3	167	57.5	+20	21.7	183	07.1	+22	52.2	233	39.9	+19	59.2	238	40.7	+17	45.6
1	310	09.8	182	56.7		21.0	198	07.8		52.0	248	41.9		59.3	253	43.0		45.7
2	325	12.3	197	56.0		20.4	213	08.6		51.7	263	43.8		59.3	268	45.2		45.7
3	340	14.7	212	55.3		19.7	228	09.3		51.5	278	45.8		59.4	283	47.4		45.8
4	355	17.2	227	54.5		19.0	243	10.0		51.3	293	47.8		59.5	298	49.7		45.8
5	10	19.7	242	53.8	+20	18.3	258	10.7	+22	51.0	308	49.8	+19	59.6	313	51.9	+17	45.9
6	25	22.1	257	53.1	+20	17.6	273	11.4	+22	50.8	323	51.7	+19	59.7	328	54.1	+17	45.9
7	40	24.6	272	52.4		16.9	288	12.1		50.6	338	53.7		59.8	343	56.4		45.9
8	55	27.0	287	51.6		16.2	303	12.8		50.3	353	55.7	+19	59.9	358	58.6		46.0
9	70	29.5	302	50.9		15.5	318	13.5		50.1	8	57.7	+20	00.0	14	00.8		46.0
10	85	32.0	317	50.2		14.8	333	14.2		49.9	23	59.6	+20	00.0	29	03.1		46.1
11	100	34.4	332	49.5	+20	14.1	348	14.9	+22	49.6	39	01.6	+20	00.1	44	05.3	+17	46.1
12	115	36.9	347	48.7	+20	13.4	3	15.6	+22	49.4	54	03.6	+20	00.2	59	07.5	+17	46.2
13	130	39.4	2	48.0		12.7	18	16.3		49.2	69	05.6		00.3	74	09.8		46.2
14	145	41.8	17	47.3		12.0	33	17.0		48.9	84	07.5		00.4	89	12.0		46.2
15	160	44.3	32	46.6		11.3	48	17.8		48.7	99	09.5		00.5	104	14.2		46.3
16	175	46.8	47	45.8		10.6	63	18.5		48.5	114	11.5		00.6	119	16.5		46.3
17	190	49.2	62	45.1	+20	09.9	78	19.2	+22	48.2	129	13.5	+20	00.6	134	18.7	+17	46.4
18	205	51.7	77	44.4	+20	09.2	93	19.9	+22	48.0	144	15.5	+20	00.7	149	21.0	+17	46.4
19	220	54.2	92	43.7		08.5	108	20.6		47.8	159	17.4		00.8	164	23.2		46.5
20	235	56.6	107	42.9		07.8	123	21.3		47.5	174	19.4		00.9	179	25.4		46.5
21	250	59.1	122	42.2		07.1	138	22.0		47.3	189	21.4		01.0	194	27.7		46.5
22	266	01.5	137	41.5		06.3	153	22.7		47.0	204	23.4		01.1	209	29.9		46.6
23	281	04.0	152	40.8		05.6	168	23.4		46.8	219	25.3		01.2	224	32.1		46.6
24	296	06.5	167	40.1	+20	04.9	183	24.1	+22	46.6	234	27.3	+20	01.3	239	34.4	+17	46.7
Dif	—		-7		-7		+7		-2		+20		+1		+22			

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 15'7			Edad: 16 ^d 2 PHE { 4 ^h : 54'3 12 ^h : 54'3 20 ^h : 54'4					Final del crepúsculo			Salida de Luna		Puesta de Luna		
	PMG: 12 ^h 06 ^m 2			SD: 14'8 PMG: 1 ^h 14 ^m Rº: 47 ^m					Final del crepúsculo			Salida de Luna		Puesta de Luna		
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	Rº	Hora	Rº	
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	m	h m m	m	
0	178	27.1	+21 00.4	342	03.8	-18 52.8		60 N	21 01	22 14	** **	21 57 17	5 00 74			
1	193	27.1	+21 00.0	356	35.3 ¹²⁵	47.1 ⁵⁷		58	20 45	21 47	** **	47 19	12 71			
2	208	27.0	+20 59.5	11	06.8 ¹²⁵	41.2 ⁵⁹		56	32	26	23 03	37 22	23 69			
3	223	27.0	59.1	25	38.3 ¹²⁵	35.3 ⁵⁹		54	20	21 09	22 24	29 24	33 67			
4	238	26.9	58.6	40	09.9 ¹²⁶	29.3 ⁶⁰		52	10	20 54	21 59	22 25	42 65			
5	253	26.9	+20 58.2	54	41.5 ¹²⁶	-18 23.3 ⁶⁰		50	20 01	20 42	21 39	21 15 27	5 49 64			
6	268	26.8	+20 57.7	69	13.2 ¹²⁷	-18 17.1 ⁶²		45	19 41	20 17	21 03	21 01 30	6 06 60			
7	283	26.8	57.3	83	44.8 ¹²⁶	10.9 ⁶²		40	26	19 57	20 37	20 49 33	19 58			
8	298	26.8	56.9	98	16.5 ¹²⁷	-18 04.5 ⁶⁴		35	13	41	17	39 35	30 56			
9	313	26.7	56.4	112	48.2 ¹²⁷	-17 58.1 ⁶⁴		30	19 01	28	20 00	31 36	40 54			
10	328	26.7	56.0	127	20.0 ¹²⁸	51.6 ⁶⁵		20	18 42	19 06	19 34	15 40	6 57 51			
11	343	26.6	+20 55.5	141	51.7 ¹²⁷	-17 45.1 ⁶⁵		10 N	18 25	18 48	19 14	20 02 43	7 12 48			
12	358	26.6	+20 55.1	156	23.5 ¹²⁸	-17 38.4 ⁶⁷		0	18 10	18 32	18 58	19 49 46	7 25 47			
13	13	26.5	54.6	170	55.4 ¹²⁹	31.7 ⁶⁷		10 S	17 54	17	43	37 48	39 44			
14	28	26.5	54.2	185	27.2 ¹²⁸	24.8 ⁶⁹		20	38	18 02	29	23 52	7 54 41			
15	43	26.5	53.7	199	59.1 ¹²⁹	17.9 ⁶⁹		30	20	17 45	15	19 08 55	8 10 38			
16	58	26.4	53.3	214	31.0 ¹²⁹	11.0 ⁶⁹		35	17 09	36	18 07	18 59 56	20 36			
17	73	26.4	+20 52.8	229	02.9 ¹²⁹	-17 03.9 ⁷¹		40	16 56	17 26	17 59	18 49 58	8 31 34			
18	88	26.3	+20 52.4	243	34.9 ¹³⁰	-16 56.8 ⁷¹		45	16 42	17 15	17 51	18 37 61	8 44 31			
19	103	26.3	51.9	258	06.9 ¹³⁰	49.5 ⁷³		50	24	17 01	41	22 65	8 59 29			
20	118	26.2	51.5	272	38.9 ¹³⁰	42.3 ⁷²		52	16	16 55	37	15 66	9 06 28			
21	133	26.2	51.0	287	11.0 ¹³¹	34.9 ⁷⁴		54	16 07	48	33	18 08 68	14 26			
22	148	26.2	50.6	301	43.1 ¹³¹	27.4 ⁷⁵		56	15 56	40	28	17 59 70	23 24			
23	163	26.1	50.1	316	15.2 ¹³¹	19.9 ⁷⁵		58	44	32	22	49 73	34 21			
24	178	26.1	+20 49.7	330	47.3 ¹³¹	-16 12.3 ⁷⁶		60 S	15 30	16 23	17 16	17 38 75	9 45 19			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 4 ^h 14 ^m 9		Mag: -3.9 PMG: 12 ^h 50 ^m			Mag: +1.7 PMG: 11 ^h 46 ^m			Mag: -2.2 PMG: 8 ^h 21 ^m			Mag: +0.2 PMG: 8 ^h 01 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	°	'	°	'	°	°	'	°	°	'	°	'	
0	296	06.5	167 40.1	+20 04.9	183 24.1	+22 46.6		234 27.3	+20 01.3		239 34.4	+17 46.7				
1	311	08.9	182 39.3	04.2	198 24.8	46.3		249 29.3	01.3		254 36.6	46.7				
2	326	11.4	197 38.6	03.5	213 25.6	46.1		264 31.3	01.4		269 38.8	46.8				
3	341	13.9	212 37.9	02.8	228 26.3	45.9		279 33.3	01.5		284 41.1	46.8				
4	356	16.3	227 37.2	02.1	243 27.0	45.6		294 35.2	01.6		299 43.3	46.9				
5	11	18.8	242 36.5	+20 01.4	258 27.7	+22 45.4		309 37.2	+20 01.7		314 45.6	+17 46.9				
6	26	21.3	257 35.8	+20 00.6	273 28.4	+22 45.1		324 39.2	+20 01.8		329 47.8	+17 46.9				
7	41	23.7	272 35.0	+19 59.9	288 29.1	44.9		339 41.2	01.9		344 50.0	47.0				
8	56	26.2	287 34.3	59.2	303 29.8	44.7		354 43.1	01.9		359 52.3	47.0				
9	71	28.7	302 33.6	58.5	318 30.5	44.4		9 45.1	02.0		14 54.5	47.1				
10	86	31.1	317 32.9	57.8	333 31.2	44.2		24 47.1	02.1		29 56.7	47.1				
11	101	33.6	332 32.2	+19 57.0	348 32.0	+22 43.9		39 49.1	+20 02.2		44 59.0	+17 47.2				
12	116	36.0	347 31.5	+19 56.3	3 32.7	+22 43.7		54 51.1	+20 02.3		60 01.2	+17 47.2				
13	131	38.5	2 30.8	55.6	18 33.4	43.5		69 53.0	02.4		75 03.5	47.2				
14	146	41.0	17 30.0	54.9	33 34.1	43.2		84 55.0	02.5		90 05.7	47.3				
15	161	43.4	32 29.3	54.1	48 34.8	43.0		99 57.0	02.5		105 07.9	47.3				
16	176	45.9	47 28.6	53.4	63 35.5	42.7		114 59.0	02.6		120 10.2	47.4				
17	191	48.4	62 27.9	+19 52.7	78 36.2	+22 42.5		130 01.0	+20 02.7		135 12.4	+17 47.4				
18	206	50.8	77 27.2	+19 52.0	93 36.9	+22 42.2		145 02.9	+20 02.8		150 14.6	+17 47.5				
19	221	53.3	92 26.5	51.2	108 37.7	42.0		160 04.9	02.9		165 16.9	47.5				
20	236	55.8	107 25.8	50.5	123 38.4	41.8		175 06.9	03.0		180 19.1	47.5				
21	251	58.2	122 25.1	49.8	138 39.1	41.5		190 08.9	03.1		195 21.4	47.6				
22	267	00.7	137 24.4	49.0	153 39.8	41.3		205 10.9	03.1		210 23.6	47.6				
23	282	03.1	152 23.7	48.3	168 40.5	41.0		220 12.9	03.2		225 25.8	47.7				
24	297	05.6	167 23.0	+19 47.6	183 41.2	+22 40.8		235 14.8	+20 03.3		240 28.1	+17 47.7				
Dif	—		-7		-7		+7		-2		+20		+1		+22	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 17 ^d 2	PHE { 4 ^h : 54 ^h 5 12 ^h : 54 ^h 6 20 ^h : 54 ^h 8									
	PMG: 12 ^h 06 ^m 3					SD: 14 ^h 8		PMG: 2 ^h 01 ^m			R ^o : 45 ^m			
	hG ☉		Dec	hG ☾ Dif		Dec Dif		Náutico	Civil		Hora	R ^o	Hora	R ^o
h	°	'	°	°	'	°	°	h m	h m	h m	h m m		h m m	
0	178	26.1	+20 49.7	330	47.3	-16 12.3	60 N	** **	1 59	3 12	22 14 13		6 14 76	
1	193	26.0	49.2	345	19.4 ¹³¹	-16 04.6 ⁷⁷	58	** **	2 26	28	22 06 16		23 74	
2	208	26.0	48.7	359	51.6 ¹³²	-15 56.9 ⁷⁸	56	1 10	2 47	41	21 59 18		32 71	
3	223	26.0	48.3	14	23.9 ¹³³	49.1 ⁷⁷	54	1 49	3 04	3 53	53 20		40 69	
4	238	25.9	47.8	28	56.1 ¹³²	41.2 ⁷⁹	52	2 14	19	4 03	47 22		47 67	
5	253	25.9	+20 47.4	43	28.4 ¹³³	-15 33.2 ⁸⁰	50	2 34	3 31	4 12	21 42 24		6 53 65	
6	268	25.8	+20 46.9	58	00.7 ¹³³	-15 25.2 ⁸⁰	45	3 10	3 56	4 32	21 31 27		7 06 62	
7	283	25.8	46.5	72	33.0 ¹³³	17.1 ⁸¹	40	36	4 16	4 47	22 30		17 59	
8	298	25.8	46.0	87	05.3 ¹³³	08.9 ⁸²	35	3 56	31	5 00	14 33		26 57	
9	313	25.7	45.5	101	37.7 ¹³⁴	-15 00.7 ⁸²	30	4 13	4 45	11	21 07 35		34 55	
10	328	25.7	45.1	116	10.1 ¹³⁴	-14 52.3 ⁸⁴	20	38	5 07	31	20 55 39		7 48 51	
11	343	25.6	+20 44.6	130	42.5 ¹³⁴	-14 44.0 ⁸³	10 N	4 58	5 25	5 47	20 45 42		8 00 48	
12	358	25.6	+20 44.1	145	15.0 ¹³⁵	-14 35.5 ⁸⁵	0	5 15	5 41	6 03	20 35 45		8 12 45	
13	13	25.6	43.7	159	47.4 ¹³⁴	27.0 ⁸⁵	10 S	30	5 56	18	25 48		23 42	
14	28	25.5	43.2	174	19.9 ¹³⁵	18.4 ⁸⁶	20	44	6 11	34	15 51		35 39	
15	43	25.5	42.8	188	52.5 ¹³⁶	09.7 ⁸⁷	30	5 58	27	6 53	20 03 54		48 36	
16	58	25.5	42.3	203	25.0 ¹³⁵	-14 01.0 ⁸⁷	35	6 05	36	7 03	19 55 58		8 56 34	
17	73	25.4	+20 41.8	217	57.6 ¹³⁶	-13 52.2 ⁸⁸	40	6 13	6 46	7 16	19 47 60		9 05 31	
18	88	25.4	+20 41.4	232	30.2 ¹³⁶	-13 43.4 ⁸⁸	45	6 21	6 57	7 30	19 38 63		9 15 29	
19	103	25.3	40.9	247	02.8 ¹³⁶	34.5 ⁸⁹	50	31	7 11	48	27 66		28 25	
20	118	25.3	40.4	261	35.5 ¹³⁷	25.5 ⁹⁰	52	35	17	7 56	21 68		34 23	
21	133	25.3	40.0	276	08.1 ¹³⁶	16.4 ⁹¹	54	39	24	8 05	16 69		40 22	
22	148	25.2	39.5	290	40.8 ¹³⁷	-13 07.3 ⁹¹	56	44	31	15	09 72		47 20	
23	163	25.2	39.0	305	13.5 ¹³⁷	-12 58.2 ⁹¹	58	50	40	27	19 02 74		9 55 17	
24	178	25.2	+20 38.6	319	46.2 ¹³⁷	-12 48.9 ⁹³	60 S	6 55	7 49	8 41	18 53 78		10 04 15	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 4 ^h 10 ^m 9		Mag: -3.9 PMG: 12 ^h 51 ^m		Mag: +1.7 PMG: 11 ^h 45 ^m		Mag: -2.2 PMG: 8 ^h 18 ^m		Mag: +0.2 PMG: 7 ^h 57 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	297	05.6	167	23.0	183	41.2	235	14.8	240	28.1
1	312	08.1	182	22.2	198	41.9	250	16.8	255	30.3
2	327	10.5	197	21.5	213	42.7	265	18.8	270	32.6
3	342	13.0	212	20.8	228	43.4	280	20.8	285	34.8
4	357	15.5	227	20.1	243	44.1	295	22.8	300	37.0
5	12	17.9	242	19.4	258	44.8	310	24.7	315	39.3
6	27	20.4	257	18.7	273	45.5	325	26.7	330	41.5
7	42	22.9	272	18.0	288	46.2	340	28.7	345	43.8
8	57	25.3	287	17.3	303	46.9	355	30.7	0	46.0
9	72	27.8	302	16.6	318	47.7	10	32.7	15	48.2
10	87	30.3	317	15.9	333	48.4	25	34.7	30	50.5
11	102	32.7	332	15.2	348	49.1	40	36.6	45	52.7
12	117	35.2	347	14.5	3	49.8	55	38.6	60	55.0
13	132	37.6	2	13.8	18	50.5	70	40.6	75	57.2
14	147	40.1	17	13.1	33	51.2	85	42.6	90	59.4
15	162	42.6	32	12.4	48	51.9	100	44.6	106	01.7
16	177	45.0	47	11.7	63	52.7	115	46.6	121	03.9
17	192	47.5	62	11.0	78	53.4	130	48.6	136	06.2
18	207	50.0	77	10.3	93	54.1	145	50.5	151	08.4
19	222	52.4	92	09.6	108	54.8	160	52.5	166	10.7
20	237	54.9	107	08.9	123	55.5	175	54.5	181	12.9
21	252	57.4	122	08.2	138	56.2	190	56.5	196	15.1
22	267	59.8	137	07.5	153	57.0	205	58.5	211	17.4
23	283	02.3	152	06.8	168	57.7	221	00.5	226	19.6
24	298	04.8	167	06.1	183	58.4	236	02.4	241	21.9
Dif	—		-7		+7		+20		+1	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 18 ^d 2	PHE { 4 ^h : 54 ^m /9 12 ^h : 55 ^m /0 20 ^h : 55 ^m /2									
	PMG: 12 ^h 06 ^m 3					SD: 14 ^h 9			PMG: 2 ^h 46 ^m		R°: 44 ^m			
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	178	25.2	+20 38.6	319	46.2	-12 48.9		60 N	20 57	22 08	** **	22 27 11	7 30 78	
1	193	25.1	38.1	334	19.0 ¹³⁸	39.7 ⁹²		58	42	21 42	** **	22 14	37 75	
2	208	25.1	37.6	348	51.8 ¹³⁸	30.3 ⁹⁴		56	29	22	22 54	17 17	43 73	
3	223	25.1	37.1	3	24.6 ¹³⁸	20.9 ⁹⁴		54	17	21 05	22 18	13 18	49 70	
4	238	25.0	36.7	17	57.4 ¹³⁸	11.4 ⁹⁵		52	20 07	20 51	21 54	09 21	54 68	
5	253	25.0	+20 36.2	32	30.2 ¹³⁸	-12 01.9 ⁹⁵		50	19 58	20 39	21 35	22 06 22	7 58 67	
6	268	25.0	+20 35.7	47	03.1 ¹³⁹	-11 52.3 ⁹⁶		45	19 40	20 15	21 00	21 58 26	8 08 63	
7	283	24.9	35.3	61	35.9 ¹³⁸	42.7 ⁹⁶		40	24	19 56	20 35	52 29	16 60	
8	298	24.9	34.8	76	08.8 ¹³⁹	33.0 ⁹⁷		35	12	40	20 15	47 31	23 57	
9	313	24.9	34.3	90	41.7 ¹³⁹	23.3 ⁹⁷		30	19 00	27	19 59	42 34	29 55	
10	328	24.8	33.8	105	14.6 ¹³⁹	13.5 ⁹⁸		20	18 41	19 05	34	34 37	39 51	
11	343	24.8	+20 33.4	119	47.6 ¹⁴⁰	-11 03.6 ⁹⁹		10 N	18 25	18 48	19 14	21 27 41	8 48 48	
12	358	24.8	+20 32.9	134	20.5 ¹³⁹	-10 53.7 ⁹⁹		0	18 10	18 32	18 58	21 20 44	8 57 44	
13	13	24.7	32.4	148	53.5 ¹⁴⁰	43.7 ¹⁰⁰		10 S	17 55	17	43	13 48	9 05 41	
14	28	24.7	31.9	163	26.5 ¹⁴⁰	33.7 ¹⁰⁰		20	39	18 02	29	21 06 51	14 38	
15	43	24.7	31.4	177	59.5 ¹⁴⁰	23.6 ¹⁰¹		30	21	17 46	16	20 57 56	24 34	
16	58	24.6	31.0	192	32.5 ¹⁴⁰	13.5 ¹⁰¹		35	17 10	37	08	53 57	30 32	
17	73	24.6	+20 30.5	207	05.5 ¹⁴⁰	-10 03.4 ¹⁰¹		40	16 58	17 28	18 01	20 47 60	9 36 30	
18	88	24.6	+20 30.0	221	38.6 ¹⁴¹	-9 53.1 ¹⁰³		45	16 44	17 16	17 53	20 41 63	9 44 26	
19	103	24.6	29.5	236	11.6 ¹⁴⁰	42.9 ¹⁰²		50	27	17 03	43	33 67	53 23	
20	118	24.5	29.0	250	44.7 ¹⁴¹	32.6 ¹⁰³		52	18	16 57	39	29 69	9 57 21	
21	133	24.5	28.6	265	17.8 ¹⁴¹	22.2 ¹⁰⁴		54	16 09	50	35	25 72	10 02 19	
22	148	24.5	28.1	279	50.8 ¹⁴⁰	11.8 ¹⁰⁴		56	15 59	43	30	21 73	07 17	
23	163	24.4	27.6	294	23.9 ¹⁴¹	-9 01.3 ¹⁰⁵		58	47	35	25	16 76	12 15	
24	178	24.4	+20 27.1	308	57.0 ¹⁴¹	-8 50.8 ¹⁰⁵		60 S	15 34	16 26	17 19	20 11 78	10 19 12	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 4 ^h 07 ^m 0		Mag: -3.9 PMG: 12 ^h 52 ^m		Mag: +1.7 PMG: 11 ^h 44 ^m		Mag: -2.2 PMG: 8 ^h 15 ^m		Mag: +0.2 PMG: 7 ^h 53 ^m							
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'						
0	298	04.8	167	06.1	183	58.4	+22 34.8	236	02.4	+20 05.3	241	21.9	+17 48.7			
1	313	07.2	182	05.4	198	59.1	34.6	251	04.4	05.4	256	24.1	48.8			
2	328	09.7	197	04.7	213	59.8	34.3	266	06.4	05.5	271	26.3	48.8			
3	343	12.1	212	04.0	229	00.6	34.1	281	08.4	05.6	286	28.6	48.8			
4	358	14.6	227	03.3	244	01.3	33.8	296	10.4	05.7	301	30.8	48.9			
5	13	17.1	242	02.7	259	02.0	+22 33.5	311	12.4	+20 05.8	316	33.1	+17 48.9			
6	28	19.5	257	02.0	+19 25.1	274	02.7	+22 33.3	326	14.4	+20 05.8	331	35.3	+17 49.0		
7	43	22.0	272	01.3	24.3	289	03.4	33.0	341	16.4	05.9	346	37.6	49.0		
8	58	24.5	287	00.6	23.5	304	04.1	32.8	356	18.3	06.0	1	39.8	49.0		
9	73	26.9	301	59.9	22.8	319	04.9	32.5	11	20.3	06.1	16	42.0	49.1		
10	88	29.4	316	59.2	22.0	334	05.6	32.3	26	22.3	06.2	31	44.3	49.1		
11	103	31.9	331	58.5	+19 21.2	349	06.3	+22 32.0	41	24.3	+20 06.3	46	46.5	+17 49.2		
12	118	34.3	346	57.8	+19 20.5	4	07.0	+22 31.8	56	26.3	+20 06.3	61	48.8	+17 49.2		
13	133	36.8	1	57.1	19.7	19	07.7	31.5	71	28.3	06.4	76	51.0	49.2		
14	148	39.2	16	56.4	18.9	34	08.5	31.3	86	30.3	06.5	91	53.3	49.3		
15	163	41.7	31	55.8	18.2	49	09.2	31.0	101	32.3	06.6	106	55.5	49.3		
16	178	44.2	46	55.1	17.4	64	09.9	30.7	116	34.2	06.7	121	57.8	49.4		
17	193	46.6	61	54.4	+19 16.6	79	10.6	+22 30.5	131	36.2	+20 06.8	137	00.0	+17 49.4		
18	208	49.1	76	53.7	+19 15.8	94	11.3	+22 30.2	146	38.2	+20 06.8	152	02.2	+17 49.5		
19	223	51.6	91	53.0	15.1	109	12.1	30.0	161	40.2	06.9	167	04.5	49.5		
20	238	54.0	106	52.3	14.3	124	12.8	29.7	176	42.2	07.0	182	06.7	49.5		
21	253	56.5	121	51.6	13.5	139	13.5	29.5	191	44.2	07.1	197	09.0	49.6		
22	268	59.0	136	50.9	12.7	154	14.2	29.2	206	46.2	07.2	212	11.2	49.6		
23	284	01.4	151	50.3	11.9	169	14.9	28.9	221	48.2	07.2	227	13.5	49.7		
24	299	03.9	166	49.6	+19 11.2	184	15.7	+22 28.7	236	50.2	+20 07.3	242	15.7	+17 49.7		
Dif	—		-7		-8		+7		+20		+1		+22		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 4				Edad: 19 ^d 2 PHE { SD: 15'1 PMG: 3 ^h 30 ^m													
	hG ☉		Dec		hG ☾ Dif		Dec Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	178	24.4	+20	27.1	308	57.0	-8	50.8	60 N	** **	2 05	3 16	22 38	11	8 48	79		
1	193	24.4		26.6	323	30.1 ¹⁴¹		40.3 ¹⁰⁵	58	** *	31	32		36	13	52	77	
2	208	24.3		26.1	338	03.3 ¹⁴²		29.7 ¹⁰⁶	56	1 20	2 51	45		34	15	56	74	
3	223	24.3		25.7	352	36.4 ¹⁴¹		19.1 ¹⁰⁶	54	1 55	3 08	3 56		31	18	8 59	72	
4	238	24.3		25.2	7	09.5 ¹⁴¹		-8 08.4 ¹⁰⁷	52	2 19	22	4 06		30	19	9 02	70	
5	253	24.3	+20	24.7	21	42.7 ¹⁴²		-7 57.7 ¹⁰⁷	50	2 38	3 34	4 15	22 28	21	9 05	68		
6	268	24.2	+20	24.2	36	15.8 ¹⁴¹		-7 46.9 ¹⁰⁸	45	3 13	3 58	4 34	22 24	25	9 11	64		
7	283	24.2		23.7	50	49.0 ¹⁴²		36.1 ¹⁰⁸	40	38	4 17	4 49		21	28	16	61	
8	298	24.2		23.2	65	22.1 ¹⁴¹		25.2 ¹⁰⁹	35	3 58	33	5 01		18	31	20	58	
9	313	24.1		22.7	79	55.3 ¹⁴²		14.4 ¹⁰⁸	30	4 14	4 46	13		16	33	24	56	
10	328	24.1		22.2	94	28.4 ¹⁴¹		-7 03.4 ¹¹⁰	20	39	5 07	31		11	38	30	52	
11	343	24.1	+20	21.8	109	01.6 ¹⁴²		-6 52.5 ¹⁰⁹	10 N	4 59	5 25	5 48	22 08	41	9 36	48		
12	358	24.1	+20	21.3	123	34.7 ¹⁴¹		-6 41.5 ¹¹⁰	0	5 15	5 41	6 03	22 04	45	9 41	44		
13	13	24.0		20.8	138	07.9 ¹⁴²		30.4 ¹¹¹	10 S	30	5 55	18	22 01	48	46	41		
14	28	24.0		20.3	152	41.1 ¹⁴²		19.4 ¹¹⁰	20	43	6 10	34	21 57	52	52	37		
15	43	24.0		19.8	167	14.2 ¹⁴¹		-6 08.3 ¹¹¹	30	5 57	26	6 52		53	56	9 58	33	
16	58	24.0		19.3	181	47.4 ¹⁴²		-5 57.1 ¹¹²	35	6 04	35	7 02		50	59	10 02	30	
17	73	23.9	+20	18.8	196	20.5 ¹⁴¹		-5 45.9 ¹¹²	40	6 12	6 45	7 14	21 47	62	10 06	28		
18	88	23.9	+20	18.3	210	53.7 ¹⁴²		-5 34.7 ¹¹²	45	6 20	6 56	7 28	21 44	65	10 10	25		
19	103	23.9		17.8	225	26.8 ¹⁴¹		23.5 ¹¹²	50	29	7 09	45		40	69	16	21	
20	118	23.9		17.3	240	00.0 ¹⁴²		12.2 ¹¹³	52	33	15	7 53		38	71	18	20	
21	133	23.8		16.8	254	33.1 ¹⁴¹		-5 00.9 ¹¹³	54	37	22	8 02		37	72	21	18	
22	148	23.8		16.3	269	06.2 ¹⁴¹		-4 49.5 ¹¹⁴	56	42	29	13		34	75	24	16	
23	163	23.8		15.8	283	39.3 ¹⁴¹		38.2 ¹¹³	58	47	37	24		32	77	27	14	
24	178	23.8	+20	15.3	298	12.4 ¹⁴¹		-4 26.8 ¹¹⁴	60 S	6 53	7 46	8 37	21 29	80	10 31	11		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 4 ^h 03 ^m 1		Mag: -3.9 PMG: 12 ^h 53 ^m				Mag: +1.7 PMG: 11 ^h 42 ^m				Mag: -2.2 PMG: 8 ^h 12 ^m				Mag: +0.2 PMG: 7 ^h 50 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	299	03.9	166	49.6	+19	11.2	184	15.7	+22	28.7	236	50.2	+20	07.3	242	15.7	+17	49.7
1	314	06.4	181	48.9		10.4	199	16.4		28.4	251	52.1		07.4	257	18.0		49.7
2	329	08.8	196	48.2		09.6	214	17.1		28.2	266	54.1		07.5	272	20.2		49.8
3	344	11.3	211	47.5		08.8	229	17.8		27.9	281	56.1		07.6	287	22.4		49.8
4	359	13.7	226	46.9		08.0	244	18.5		27.6	296	58.1		07.7	302	24.7		49.9
5	14	16.2	241	46.2	+19	07.2	259	19.3	+22	27.4	312	00.1	+20	07.7	317	26.9	+17	49.9
6	29	18.7	256	45.5	+19	06.5	274	20.0	+22	27.1	327	02.1	+20	07.8	332	29.2	+17	49.9
7	44	21.1	271	44.8		05.7	289	20.7		26.9	342	04.1		07.9	347	31.4		50.0
8	59	23.6	286	44.1		04.9	304	21.4		26.6	357	06.1		08.0	2	33.7		50.0
9	74	26.1	301	43.5		04.1	319	22.2		26.3	12	08.1		08.1	17	35.9		50.1
10	89	28.5	316	42.8		03.3	334	22.9		26.1	27	10.1		08.2	32	38.2		50.1
11	104	31.0	331	42.1	+19	02.5	349	23.6	+22	25.8	42	12.0	+20	08.2	47	40.4	+17	50.1
12	119	33.5	346	41.4	+19	01.7	4	24.3	+22	25.5	57	14.0	+20	08.3	62	42.7	+17	50.2
13	134	35.9	1	40.7		00.9	19	25.1		25.3	72	16.0		08.4	77	44.9		50.2
14	149	38.4	16	40.1	+19	00.1	34	25.8		25.0	87	18.0		08.5	92	47.2		50.3
15	164	40.9	31	39.4	+18	59.3	49	26.5		24.8	102	20.0		08.6	107	49.4		50.3
16	179	43.3	46	38.7		58.5	64	27.2		24.5	117	22.0		08.6	122	51.7		50.3
17	194	45.8	61	38.0	+18	57.8	79	27.9	+22	24.2	132	24.0	+20	08.7	137	53.9	+17	50.4
18	209	48.2	76	37.4	+18	57.0	94	28.7	+22	24.0	147	26.0	+20	08.8	152	56.1	+17	50.4
19	224	50.7	91	36.7		56.2	109	29.4		23.7	162	28.0		08.9	167	58.4		50.5
20	239	53.2	106	36.0		55.4	124	30.1		23.4	177	30.0		09.0	183	00.6		50.5
21	254	55.6	121	35.3		54.6	139	30.8		23.2	192	32.0		09.1	198	02.9		50.5
22	269	58.1	136	34.7		53.8	154	31.6		22.9	207	34.0		09.1	213	05.1		50.6
23	285	00.6	151	34.0		53.0	169	32.3		22.6	222	36.0		09.2	228	07.4		50.6
24	300	03.0	166	33.3	+18	52.2	184	33.0	+22	22.4	237	38.0	+20	09.3	243	09.6	+17	50.7
Dif	—		-7		-8		+7		-3		+20		+1		+22			

UT	SOL				LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 15 ^h 7				Edad: 20 ^d 2 PHE { 4 ^h : 55 ^m 9 12 ^h : 56 ^m 1 20 ^h : 56 ^m 3															
	PMG: 12 ^h 06 ^m 4				SD: 15 ^h 2 PMG: 4 ^h 15 ^m R°: 45 ^m															
	hG ☉		Dec		hG ☾		Dif		Dec		Dif		Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m		
0	178	23.8	+20	15.3	298	12.4	-4	26.8	60 N	20	53	22	02	** **	22	49	12	10 07 81		
1	193	23.7		14.8	312	45.6 ¹⁴²		15.3 ¹¹⁵	58	38	21	37	** **	49	14		09 78			
2	208	23.7		14.3	327	18.6 ¹⁴⁰	-4	03.9 ¹¹⁴	56	25	18	22	45		49	16	10 75			
3	223	23.7		13.8	341	51.7 ¹⁴¹	-3	52.4 ¹¹⁵	54	14	21	02	22	13	49	18	11 73			
4	238	23.7		13.3	356	24.8 ¹⁴¹		40.9 ¹¹⁵	52	20	05	20	48	21	50	49	20 12 71			
5	253	23.7	+20	12.8	10	57.9 ¹⁴¹	-3	29.4 ¹¹⁵	50	19	56	20	36	21	31	22	49 22 10 13 70			
6	268	23.6	+20	12.3	25	30.9 ¹⁴⁰	-3	17.8 ¹¹⁶	45	19	38	20	13	20	57	22	49 26 10 15 66			
7	283	23.6		11.8	40	03.9 ¹⁴⁰	-3	06.2 ¹¹⁶	40	23	19	54	33		49	29	17 62			
8	298	23.6		11.3	54	36.9 ¹⁴⁰	-2	54.6 ¹¹⁶	35	19	10	39	20	13	49	32	18 60			
9	313	23.6		10.8	69	09.9 ¹⁴⁰		43.0 ¹¹⁶	30	18	59	26	19	58	49	34	20 56			
10	328	23.5		10.3	83	42.9 ¹⁴⁰		31.3 ¹¹⁷	20	41	19	05	33		49	38	22 52			
11	343	23.5	+20	09.8	98	15.9 ¹⁴⁰	-2	19.6 ¹¹⁷	10 N	18	25	18	47	19	14	22	49 42 10 24 48			
12	358	23.5	+20	09.3	112	48.8 ¹³⁹	-2	07.9 ¹¹⁷	0	18	10	18	32	18	58	22	49 46 10 25 46			
13	13	23.5		08.8	127	21.8 ¹⁴⁰	-1	56.2 ¹¹⁷	10 S	17	55	18	43		49	49	27 42			
14	28	23.5		08.3	141	54.7 ¹³⁹		44.5 ¹¹⁷	20	40	18	03	30		49	53	29 38			
15	43	23.4		07.8	156	27.6 ¹³⁹		32.7 ¹¹⁸	30	22	17	47	17		49	58	31 34			
16	58	23.4		07.3	171	00.4 ¹³⁸		20.9 ¹¹⁸	35	11	39		10		49	60	32 31			
17	73	23.4	+20	06.8	185	33.3 ¹³⁹	-1	09.1 ¹¹⁸	40	17	00	17	29	18	02	22	49 63 10 34 28			
18	88	23.4	+20	06.3	200	06.1 ¹³⁸	-0	57.3 ¹¹⁸	45	16	46	17	18	17	54	22	49 67 10 35 25			
19	103	23.4		05.8	214	38.9 ¹³⁸		45.5 ¹¹⁸	50	29	05		45		49	71	37 21			
20	118	23.3		05.3	229	11.6 ¹³⁷		33.7 ¹¹⁸	52	21	17	00	41		49	73	38 19			
21	133	23.3		04.7	243	44.4 ¹³⁸		21.8 ¹¹⁹	54	12	16	53	37		49	75	39 17			
22	148	23.3		04.2	258	17.1 ¹³⁷	-0	10.0 ¹¹⁸	56	16	02	46	33		49	77	40 15			
23	163	23.3		03.7	272	49.8 ¹³⁷	+0	01.9 ¹¹⁹	58	15	51	38	28		49	80	41 13			
24	178	23.3	+20	03.2	287	22.4 ¹³⁶	+0	13.8 ¹¹⁹	60 S	15	38	16	29	17	22	22	49 83 10 42 11			
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 3 ^h 59 ^m 1				Mag: -3.9 PMG: 12 ^h 54 ^m				Mag: +1.7 PMG: 11 ^h 41 ^m				Mag: -2.2 PMG: 8 ^h 08 ^m				Mag: +0.2 PMG: 7 ^h 46 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	300	03.0	166	33.3	+18	52.2	184	33.0	+22	22.4	237	38.0	+20	09.3	243	09.6	+17	50.7		
1	315	05.5	181	32.7		51.4	199	33.7		22.1	252	39.9		09.4	258	11.9		50.7		
2	330	08.0	196	32.0		50.5	214	34.5		21.8	267	41.9		09.5	273	14.1		50.7		
3	345	10.4	211	31.3		49.7	229	35.2		21.6	282	43.9		09.5	288	16.4		50.8		
4	0	12.9	226	30.7		48.9	244	35.9		21.3	297	45.9		09.6	303	18.6		50.8		
5	15	15.3	241	30.0	+18	48.1	259	36.6	+22	21.0	312	47.9	+20	09.7	318	20.9	+17	50.9		
6	30	17.8	256	29.3	+18	47.3	274	37.4	+22	20.8	327	49.9	+20	09.8	333	23.1	+17	50.9		
7	45	20.3	271	28.6		46.5	289	38.1		20.5	342	51.9		09.9	348	25.4		50.9		
8	60	22.7	286	28.0		45.7	304	38.8		20.2	357	53.9		09.9	3	27.6		51.0		
9	75	25.2	301	27.3		44.9	319	39.5		20.0	12	55.9		10.0	18	29.9		51.0		
10	90	27.7	316	26.6		44.1	334	40.3		19.7	27	57.9		10.1	33	32.1		51.1		
11	105	30.1	331	26.0	+18	43.3	349	41.0	+22	19.4	42	59.9	+20	10.2	48	34.4	+17	51.1		
12	120	32.6	346	25.3	+18	42.5	4	41.7	+22	19.2	58	01.9	+20	10.3	63	36.6	+17	51.1		
13	135	35.1	1	24.7		41.6	19	42.5		18.9	73	03.9		10.3	78	38.9		51.2		
14	150	37.5	16	24.0		40.8	34	43.2		18.6	88	05.9		10.4	93	41.1		51.2		
15	165	40.0	31	23.3		40.0	49	43.9		18.3	103	07.9		10.5	108	43.4		51.3		
16	180	42.5	46	22.7		39.2	64	44.6		18.1	118	09.9		10.6	123	45.6		51.3		
17	195	44.9	61	22.0	+18	38.4	79	45.4	+22	17.8	133	11.9	+20	10.7	138	47.9	+17	51.3		
18	210	47.4	76	21.3	+18	37.6	94	46.1	+22	17.5	148	13.9	+20	10.7	153	50.1	+17	51.4		
19	225	49.8	91	20.7		36.7	109	46.8		17.3	163	15.9		10.8	168	52.4		51.4		
20	240	52.3	106	20.0		35.9	124	47.5		17.0	178	17.9		10.9	183	54.6		51.5		
21	255	54.8	121	19.4		35.1	139	48.3		16.7	193	19.9		11.0	198	56.9		51.5		
22	270	57.2	136	18.7		34.3	154	49.0		16.4	208	21.8		11.1	213	59.1		51.5		
23	285	59.7	151	18.0		33.4	169	49.7		16.2	223	23.8		11.1	229	01.4		51.6		
24	301	02.2	166	17.4	+18	32.6	184	50.5	+22	15.9	238	25.8	+20	11.2	244	03.6	+17	51.6		
Dif	—		-7		-8		+7		-3		+20		+1		+22		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: 21 ^d 2 PHE { 4 ^h : 56°6 12 ^h : 56°8 20 ^h : 57°1 PMG: 5 ^h 00 ^m R°: 46 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m		
0	178	23.3	+20	03.2	287	22.4	+0	13.8	60 N	** ** *	2 12	3 21	23 01	13	11 28	84		
1	193	23.3		02.7	301	55.1 ¹³⁷		25.7 ¹¹⁹	58	** ** *	36	35	03 16		27 80			
2	208	23.2		02.2	316	27.7 ¹³⁶		37.6 ¹¹⁹	56	1 29	2 56	48	05 19		25 79			
3	223	23.2		01.7	331	00.2 ¹³⁵		+0 49.5 ¹¹⁹	54	2 01	3 12	3 59	07 21		24 76			
4	238	23.2		01.2	345	32.7 ¹³⁵		+1 01.5 ¹²⁰	52	24	25	4 09	09 23		23 74			
5	253	23.2	+20	00.6	0	05.2 ¹³⁵		+1 13.4 ¹¹⁹	50	2 42	3 37	4 17	23 11	24	11 23	71		
6	268	23.2	+20	00.1	14	37.7 ¹³⁵		+1 25.3 ¹¹⁹	45	3 16	4 01	4 36	23 15	28	11 21	67		
7	283	23.2	+19	59.6	29	10.1 ¹³⁴		37.3 ¹²⁰	40	3 41	19	4 50	18 31		19 64			
8	298	23.1		59.1	43	42.5 ¹³⁴		+1 49.2 ¹¹⁹	35	4 00	34	5 03	21 34		18 61			
9	313	23.1		58.6	58	14.8 ¹³³		+2 01.2 ¹²⁰	30	15	4 47	14	23 37		16 59			
10	328	23.1		58.1	72	47.2 ¹³⁴		13.2 ¹²⁰	20	40	5 08	32	27 41		14 55			
11	343	23.1	+19	57.5	87	19.4 ¹³²		+2 25.1 ¹¹⁹	10 N	4 59	5 26	5 48	23 31	45	11 12	51		
12	358	23.1	+19	57.0	101	51.7 ¹³³		+2 37.1 ¹²⁰	0	5 15	5 41	6 03	23 35	48	11 11	46		
13	13	23.1		56.5	116	23.8 ¹³¹		+2 49.0 ¹¹⁹	10 S	30	5 55	18	38 52		09 43			
14	28	23.1		56.0	130	56.0 ¹³²		+3 01.0 ¹²⁰	20	43	6 10	33	42 56		07 39			
15	43	23.0		55.5	145	28.1 ¹³¹		13.0 ¹²⁰	30	5 56	25	6 51	47 60		05 35			
16	58	23.0		54.9	160	00.1 ¹³⁰		24.9 ¹¹⁹	35	6 03	34	7 01	49 63		03 33			
17	73	23.0	+19	54.4	174	32.1 ¹³⁰		+3 36.9 ¹²⁰	40	6 10	6 43	7 13	23 52	66	11 02	30		
18	88	23.0	+19	53.9	189	04.1 ¹³⁰		+3 48.8 ¹¹⁹	45	6 18	6 54	7 26	23 56	69	11 00	27		
19	103	23.0		53.4	203	36.0 ¹²⁹		+4 00.8 ¹²⁰	50	27	7 07	43	** ** *	**	10 58	23		
20	118	23.0		52.8	218	07.9 ¹²⁹		12.7 ¹¹⁹	52	31	13	7 51	** ** *	**	57 21			
21	133	23.0		52.3	232	39.7 ¹²⁸		24.7 ¹²⁰	54	35	19	8 00	** ** *	**	56 19			
22	148	22.9		51.8	247	11.5 ¹²⁸		36.6 ¹¹⁹	56	40	26	09	** ** *	**	55 17			
23	163	22.9		51.3	261	43.2 ¹²⁷		+4 48.5 ¹¹⁹	58	44	34	21	** ** *	**	54 15			
24	178	22.9	+19	50.7	276	14.8 ¹²⁶		+5 00.4 ¹¹⁹	60 S	6 50	7 43	8 34	** ** *	**	10 53	12		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG 3 ^h 55 ^m 2			Mag: -3.9 PMG: 12 ^h 55 ^m			Mag: +1.7 PMG: 11 ^h 40 ^m			Mag: -2.2 PMG: 8 ^h 05 ^m			Mag: +0.2 PMG: 7 ^h 43 ^m					
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	301	02.2		166	17.4	+18	184	50.5	+22	15.9	238	25.8	+20	11.2	244	03.6	+17	51.6
1	316	04.6		181	16.7		199	51.2		15.6	253	27.8		11.3	259	05.9		51.6
2	331	07.1		196	16.1		214	51.9		15.3	268	29.8		11.4	274	08.1		51.7
3	346	09.6		211	15.4		229	52.6		15.1	283	31.8		11.5	289	10.4		51.7
4	1	12.0		226	14.7		244	53.4		14.8	298	33.8		11.5	304	12.6		51.8
5	16	14.5		241	14.1	+18	259	54.1	+22	14.5	313	35.8	+20	11.6	319	14.9	+17	51.8
6	31	16.9		256	13.4	+18	274	54.8	+22	14.2	328	37.8	+20	11.7	334	17.1	+17	51.8
7	46	19.4		271	12.8		289	55.6		14.0	343	39.8		11.8	349	19.4		51.9
8	61	21.9		286	12.1		304	56.3		13.7	358	41.8		11.9	4	21.7		51.9
9	76	24.3		301	11.5		319	57.0		13.4	13	43.8		11.9	19	23.9		52.0
10	91	26.8		316	10.8		334	57.8		13.1	28	45.8		12.0	34	26.2		52.0
11	106	29.3		331	10.2	+18	349	58.5	+22	12.9	43	47.8	+20	12.1	49	28.4	+17	52.0
12	121	31.7		346	09.5	+18	4	59.2	+22	12.6	58	49.8	+20	12.2	64	30.7	+17	52.1
13	136	34.2		1	08.9		20	00.0		12.3	73	51.8		12.3	79	32.9		52.1
14	151	36.7		16	08.2		35	00.7		12.0	88	53.8		12.3	94	35.2		52.1
15	166	39.1		31	07.6		50	01.4		11.8	103	55.8		12.4	109	37.4		52.2
16	181	41.6		46	06.9		65	02.1		11.5	118	57.8		12.5	124	39.7		52.2
17	196	44.1		61	06.2	+18	80	02.9	+22	11.2	133	59.8	+20	12.6	139	41.9	+17	52.3
18	211	46.5		76	05.6	+18	95	03.6	+22	10.9	149	01.8	+20	12.7	154	44.2	+17	52.3
19	226	49.0		91	05.0		110	04.3		10.6	164	03.8		12.7	169	46.4		52.3
20	241	51.4		106	04.3		125	05.1		10.4	179	05.8		12.8	184	48.7		52.4
21	256	53.9		121	03.7		140	05.8		10.1	194	07.8		12.9	199	50.9		52.4
22	271	56.4		136	03.0		155	06.5		09.8	209	09.8		13.0	214	53.2		52.5
23	286	58.8		151	02.4		170	07.3		09.5	224	11.8		13.0	229	55.5		52.5
24	302	01.3		166	01.7	+18	185	08.0	+22	09.2	239	13.8	+20	13.1	244	57.7	+17	52.5
Dif	—			-7		-8	+7		-3		+20		+1		+23			

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 22 ^d 2	PHE { 4 ^h : 57 ^m /3 12 ^h : 57 ^m /6 20 ^h : 57 ^m /9									
	PMG: 12 ^h 06 ^m 5					SD: 15 ^h 6			PMG: 5 ^h 46 ^m		R°: 49 ^m			
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	178	22.9	+19 50.7	276	14.8	+5 00.4	60 N	20 49	21 55	** **	23 14 16	12 52 86		
1	193	22.9	50.2	290	46.5 ¹²⁷	12.3 ¹¹⁹	58	34	32	23 30	19 19	47 84		
2	208	22.9	49.7	305	18.0 ¹²⁵	24.2 ¹¹⁹	56	22	21 13	22 37	24 21	44 80		
3	223	22.9	49.2	319	49.5 ¹²⁵	36.1 ¹¹⁹	54	11	20 58	22 07	28 24	40 79		
4	238	22.9	48.6	334	20.9 ¹²⁴	47.9 ¹¹⁸	52	20 02	45	21 45	32 26	37 76		
5	253	22.9	+19 48.1	348	52.3 ¹²⁴	+5 59.8 ¹¹⁹	50	19 53	20 34	21 28	23 35 28	12 34 75		
6	268	22.9	+19 47.6	3	23.7 ¹²⁴	+6 11.6 ¹¹⁸	45	19 36	20 10	20 55	23 43 32	12 28 70		
7	283	22.8	47.1	17	54.9 ¹²²	23.4 ¹¹⁸	40	21	19 52	31	49 35	23 67		
8	298	22.8	46.5	32	26.1 ¹²²	35.2 ¹¹⁸	35	19 09	37	20 12	23 55 37	19 64		
9	313	22.8	46.0	46	57.3 ¹²²	47.0 ¹¹⁸	30	18 58	25	19 56	** ** *	15 61		
10	328	22.8	45.5	61	28.4 ¹²¹	+6 58.8 ¹¹⁸	20	40	19 04	32	** ** *	09 56		
11	343	22.8	+19 44.9	75	59.4 ¹²⁰	+7 10.5 ¹¹⁷	10 N	18 25	18 47	19 13	** ** *	12 03 53		
12	358	22.8	+19 44.4	90	30.3 ¹¹⁹	+7 22.2 ¹¹⁷	0	18 10	18 32	18 58	** ** *	11 57 50		
13	13	22.8	43.9	105	01.2 ¹¹⁹	33.9 ¹¹⁷	10 S	17 56	18	44	** ** *	52 46		
14	28	22.8	43.3	119	32.0 ¹¹⁸	45.6 ¹¹⁷	20	40	18 04	31	** ** *	46 43		
15	43	22.8	42.8	134	02.8 ¹¹⁸	+7 57.2 ¹¹⁶	30	23	17 48	18	** ** *	40 38		
16	58	22.8	42.3	148	33.5 ¹¹⁷	+8 08.9 ¹¹⁷	35	13	40	11	** ** *	36 36		
17	73	22.8	+19 41.7	163	04.1 ¹¹⁶	+8 20.4 ¹¹⁵	40	17 01	17 31	18 04	** ** *	11 32 32		
18	88	22.7	+19 41.2	177	34.7 ¹¹⁶	+8 32.0 ¹¹⁶	45	16 48	17 20	17 56	** ** *	11 27 29		
19	103	22.7	40.7	192	05.1 ¹¹⁴	43.5 ¹¹⁵	50	32	08	47	0 00 73	21 26		
20	118	22.7	40.1	206	35.5 ¹¹⁴	+8 55.0 ¹¹⁵	52	24	17 02	44	02 75	18 24		
21	133	22.7	39.6	221	05.9 ¹¹⁴	+9 06.5 ¹¹⁵	54	15	16 56	40	04 77	15 22		
22	148	22.7	39.0	235	36.1 ¹¹²	17.9 ¹¹⁴	56	16 06	49	35	06 80	12 20		
23	163	22.7	38.5	250	06.3 ¹¹²	29.4 ¹¹⁵	58	15 55	41	31	09 82	09 16		
24	178	22.7	+19 38.0	264	36.4 ¹¹¹	+9 40.7 ¹¹³	60 S	15 42	16 33	17 25	0 12 85	11 05 14		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 3 ^h 51 ^m 3		Mag: -3.9 PMG: 12 ^h 56 ^m		Mag: +1.7 PMG: 11 ^h 39 ^m		Mag: -2.2 PMG: 8 ^h 02 ^m		Mag: +0.2 PMG: 7 ^h 39 ^m					
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	°	°	°	°	°	°	°	°					
0	302	01.3	166 01.7	+18 12.6	185 08.0	+22 09.2	239 13.8	+20 13.1	244 57.7					
1	317	03.8	181 01.1	11.7	200 08.7	09.0	254 15.8	13.2	260 00.0					
2	332	06.2	196 00.4	10.9	215 09.5	08.7	269 17.8	13.3	275 02.2					
3	347	08.7	210 59.8	10.0	230 10.2	08.4	284 19.8	13.4	290 04.5					
4	2	11.2	225 59.1	09.2	245 10.9	08.1	299 21.8	13.4	305 06.7					
5	17	13.6	240 58.5	+18 08.3	260 11.7	+22 07.8	314 23.8	+20 13.5	320 09.0					
6	32	16.1	255 57.8	+18 07.5	275 12.4	+22 07.6	329 25.8	+20 13.6	335 11.2					
7	47	18.6	270 57.2	06.6	290 13.1	07.3	344 27.9	13.7	350 13.5					
8	62	21.0	285 56.6	05.8	305 13.9	07.0	359 29.9	13.7	5 15.8					
9	77	23.5	300 55.9	04.9	320 14.6	06.7	14 31.9	13.8	20 18.0					
10	92	25.9	315 55.3	04.1	335 15.3	06.4	29 33.9	13.9	35 20.3					
11	107	28.4	330 54.6	+18 03.2	350 16.1	+22 06.1	44 35.9	+20 14.0	50 22.5					
12	122	30.9	345 54.0	+18 02.4	5 16.8	+22 05.9	59 37.9	+20 14.1	65 24.8					
13	137	33.3	0 53.3	01.5	20 17.5	05.6	74 39.9	14.1	80 27.0					
14	152	35.8	15 52.7	+18 00.6	35 18.3	05.3	89 41.9	14.2	95 29.3					
15	167	38.3	30 52.1	+17 59.8	50 19.0	05.0	104 43.9	14.3	110 31.5					
16	182	40.7	45 51.4	58.9	65 19.7	04.7	119 45.9	14.4	125 33.8					
17	197	43.2	60 50.8	+17 58.1	80 20.5	+22 04.4	134 47.9	+20 14.4	140 36.1					
18	212	45.7	75 50.2	+17 57.2	95 21.2	+22 04.2	149 49.9	+20 14.5	155 38.3					
19	227	48.1	90 49.5	56.3	110 21.9	03.9	164 51.9	14.6	170 40.6					
20	242	50.6	105 48.9	55.5	125 22.7	03.6	179 53.9	14.7	185 42.8					
21	257	53.0	120 48.2	54.6	140 23.4	03.3	194 55.9	14.8	200 45.1					
22	272	55.5	135 47.6	53.7	155 24.2	03.0	209 57.9	14.8	215 47.3					
23	287	58.0	150 47.0	52.9	170 24.9	02.7	224 59.9	14.9	230 49.6					
24	303	00.4	165 46.3	+17 52.0	185 25.6	+22 02.4	240 01.9	+20 15.0	245 51.9					
Dif	—	—	-6 -9	+7 -3	+20 +1	+23 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: 23 ^d 2 PHE { SD: 15'8 PMG: 6 ^h 35 ^m											
					R ^o : 52 ^m											
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	m	h m	m
0	178	22.7	+19	38.0	264	36.4	+9	40.7	60 N	** **	2 18	3 25	23 30	22	14 18	89
1	193	22.7		37.4	279	06.5	+9	52.0	58	0 43	2 42	39	38 25		11 86	
2	208	22.7		36.9	293	36.4	+10	03.3	56	1 37	3 00	3 52	45 28		14 04	83
3	223	22.7		36.3	308	06.3		14.6	54	2 07	15	4 02	52 30		13 59	88
4	238	22.7		35.8	322	36.1		25.8	52	28	29	12	23 58	32	53	79
5	253	22.7	+19	35.3	337	05.8	+10	37.0	50	2 46	3 40	4 20	** ** *		13 49	76
6	268	22.7	+19	34.7	351	35.5	+10	48.1	45	3 19	4 03	4 38	** ** *		13 38	73
7	283	22.7		34.2	6	05.0	+10	59.2	40	3 43	21	4 52	** ** *		30	69
8	298	22.7		33.6	20	34.5	+11	10.2	35	4 02	36	5 04	** ** *		23	66
9	313	22.7		33.1	35	03.9		21.2	30	17	4 49	15	0 00	40	16	64
10	328	22.7		32.5	49	33.2		32.2	20	4 41	5 09	33	08 45		13 05	60
11	343	22.7	+19	32.0	64	02.4	+11	43.1	10 N	5 00	5 26	5 49	0 16	48	12 56	56
12	358	22.7	+19	31.4	78	31.6	+11	53.9	0	5 15	5 41	6 03	0 23	51	12 47	53
13	13	22.7		30.9	93	00.6	+12	04.7	10 S	29	5 55	17	30 55		38	50
14	28	22.7		30.3	107	29.6		15.4	20	42	6 09	32	38 58		29	46
15	43	22.7		29.8	121	58.5		26.1	30	5 55	24	6 50	47 63		18	42
16	58	22.6		29.2	136	27.3		36.8	35	6 02	33	7 00	52 65		12	40
17	73	22.6	+19	28.7	150	56.0	+12	47.3	40	6 09	6 42	7 11	0 58	68	12 04	38
18	88	22.6	+19	28.2	165	24.6	+12	57.8	45	6 16	6 52	7 24	1 05	71	11 56	35
19	103	22.6		27.6	179	53.1	+13	08.3	50	25	7 05	41	13 76		47	30
20	118	22.6		27.0	194	21.6		18.7	52	29	10	48	17 77		42	29
21	133	22.6		26.5	208	49.9		29.0	54	33	16	7 57	21 80		37	26
22	148	22.6		25.9	223	18.2		39.3	56	37	23	8 06	26 82		32	24
23	163	22.6		25.4	237	46.3		49.5	58	42	31	17	31 85		25	22
24	178	22.6	+19	24.8	252	14.4	+13	59.6	60 S	6 47	7 39	8 30	1 37	89	11 19	18

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 3 ^h 47 ^m 3		Mag: -3.9 PMG: 12 ^h 57 ^m		Mag: +1.7 PMG: 11 ^h 38 ^m		Mag: -2.2 PMG: 7 ^h 59 ^m		Mag: +0.2 PMG: 7 ^h 35 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	303	00.4	165	46.3	+17	52.0	185	25.6	+22	02.4
1	318	02.9	180	45.7		51.2	200	26.4		02.1
2	333	05.4	195	45.1		50.3	215	27.1		01.9
3	348	07.8	210	44.4		49.4	230	27.8		01.6
4	3	10.3	225	43.8		48.5	245	28.6		01.3
5	18	12.8	240	43.2	+17	47.7	260	29.3	+22	01.0
6	33	15.2	255	42.5	+17	46.8	275	30.1	+22	00.7
7	48	17.7	270	41.9		45.9	290	30.8		00.4
8	63	20.2	285	41.3		45.1	305	31.5	+22	00.1
9	78	22.6	300	40.7		44.2	320	32.3	+21	59.8
10	93	25.1	315	40.0		43.3	335	33.0		59.6
11	108	27.5	330	39.4	+17	42.4	350	33.7	+21	59.3
12	123	30.0	345	38.8	+17	41.6	5	34.5	+21	59.0
13	138	32.5	0	38.1		40.7	20	35.2		58.7
14	153	34.9	15	37.5		39.8	35	36.0		58.4
15	168	37.4	30	36.9		38.9	50	36.7		58.1
16	183	39.9	45	36.3		38.0	65	37.4		57.8
17	198	42.3	60	35.6	+17	37.2	80	38.2	+21	57.5
18	213	44.8	75	35.0	+17	36.3	95	38.9	+21	57.2
19	228	47.3	90	34.4		35.4	110	39.7		56.9
20	243	49.7	105	33.8		34.5	125	40.4		56.6
21	258	52.2	120	33.1		33.6	140	41.1		56.3
22	273	54.7	135	32.5		32.7	155	41.9		56.0
23	288	57.1	150	31.9		31.9	170	42.6		55.8
24	303	59.6	165	31.3	+17	31.0	185	43.4	+21	55.5
Dif	—		-6 -9		-9		+7 -3		-3	
									+20 +1	
									+23 0	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna						
	SD: 15 ^h 7			Edad: 24 ^d 2 PHE { 4 ^h : 59 ^m 0 12 ^h : 59 ^m 3 20 ^h : 59 ^m 6															
	PMG: 12 ^h 06 ^m 5			SD: 16 ^h 0 PMG: 7 ^h 27 ^m R°: 56 ^m															
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°				
h	°	'	°	°	'	°	°	'	°	h m	h m	h m	h m	m	h m	m			
0	178	22.6	+19	24.8	252	14.4	+13	59.6	60 N	20 44	21 49	** **	23 52	32	15 47	89			
1	193	22.6		24.3	266	42.4	+14	09.7	58	30	27	23 13	** **	**	37	85			
2	208	22.6		23.7	281	10.3		19.7	56	18	21 09	22 29	** **	**	27	83			
3	223	22.6		23.2	295	38.1		29.6	54	20 08	20 54	22 01	** **	**	19	80			
4	238	22.6		22.6	310	05.8		39.4	52	19 59	42	21 40	** **	**	12	78			
5	253	22.6	+19	22.1	324	33.4	+14	49.2	50	19 51	20 30	21 24	0 03	34	15 05	76			
6	268	22.6	+19	21.5	339	00.9	+14	58.9	45	19 34	20 08	20 52	0 15	37	14 51	73			
7	283	22.6		21.0	353	28.3	+15	08.5	40	19	19 50	28	24	41	39	70			
8	298	22.7		20.4	7	55.6		18.1	35	19 08	36	20 10	32	44	29	68			
9	313	22.7		19.8	22	22.8		27.5	30	18 57	23	19 55	40	45	20	66			
10	328	22.7		19.3	36	49.9		36.9	20	39	19 03	31	0 53	49	14 05	63			
11	343	22.7	+19	18.7	51	16.9	+15	46.2	10 N	18 24	18 47	19 13	1 04	52	13 52	60			
12	358	22.7	+19	18.2	65	43.9	+15	55.4	0	18 10	18 32	18 57	1 14	56	13 40	57			
13	13	22.7		17.6	80	10.7	+16	04.6	10 S	17 56	18	44	25	58	28	55			
14	28	22.7		17.0	94	37.4		13.6	20	41	18 04	31	36	62	15	52			
15	43	22.7		16.5	109	04.1		22.6	30	24	17 50	19	50	65	13 00	49			
16	58	22.7		15.9	123	30.6		31.4	35	14	41	12	1 57	68	12 52	46			
17	73	22.7	+19	15.4	137	57.0	+16	40.2	40	17 03	17 32	18 05	2 06	70	12 42	44			
18	88	22.7	+19	14.8	152	23.4	+16	48.9	45	16 50	17 22	17 58	2 16	73	12 31	41			
19	103	22.7		14.2	166	49.6	+16	57.4	50	34	10	50	29	77	17	38			
20	118	22.7		13.7	181	15.8	+17	05.9	52	27	17 04	46	34	79	11	36			
21	133	22.7		13.1	195	41.8		14.3	54	18	16 58	42	41	81	12 03	35			
22	148	22.7		12.5	210	07.8		22.6	56	16 09	52	38	48	84	11 56	31			
23	163	22.7		12.0	224	33.6		30.8	58	15 58	44	34	2 56	87	47	29			
24	178	22.7	+19	11.4	238	59.4	+17	38.8	60 S	15 46	16 36	17 29	3 06	89	11 37	26			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 3 ^h 43 ^m 4		Mag: -3.9 PMG: 12 ^h 58 ^m			Mag: +1.7 PMG: 11 ^h 37 ^m			Mag: -2.2 PMG: 7 ^h 56 ^m			Mag: +0.2 PMG: 7 ^h 32 ^m							
	hG ♈		hG ♀			hG ♂			hG ♃			hG ♄							
h	°	'	°	'	°	°	'	°	°	'	°	'	°	'	°	'			
0	303	59.6	165	31.3	+17	31.0	185	43.4	+21	55.5	240	50.1	+20	16.8	246	46.1	+17	54.3	
1	319	02.0	180	30.6		30.1	200	44.1		55.2	255	52.1		16.9	261	48.4		54.4	
2	334	04.5	195	30.0		29.2	215	44.8		54.9	270	54.1		17.0	276	50.6		54.4	
3	349	07.0	210	29.4		28.3	230	45.6		54.6	285	56.1		17.1	291	52.9		54.4	
4	4	09.4	225	28.8		27.4	245	46.3		54.3	300	58.2		17.1	306	55.1		54.5	
5	19	11.9	240	28.2	+17	26.5	260	47.1	+21	54.0	316	00.2	+20	17.2	321	57.4	+17	54.5	
6	34	14.4	255	27.5	+17	25.6	275	47.8	+21	53.7	331	02.2	+20	17.3	336	59.7	+17	54.5	
7	49	16.8	270	26.9		24.7	290	48.5		53.4	346	04.2		17.4	352	01.9		54.6	
8	64	19.3	285	26.3		23.8	305	49.3		53.1	1	06.2		17.4	7	04.2		54.6	
9	79	21.8	300	25.7		23.0	320	50.0		52.8	16	08.2		17.5	22	06.5		54.6	
10	94	24.2	315	25.1		22.1	335	50.8		52.5	31	10.2		17.6	37	08.7		54.7	
11	109	26.7	330	24.5	+17	21.2	350	51.5	+21	52.2	46	12.2	+20	17.7	52	11.0	+17	54.7	
12	124	29.1	345	23.8	+17	20.3	5	52.3	+21	51.9	61	14.3	+20	17.7	67	13.2	+17	54.8	
13	139	31.6	0	23.2		19.4	20	53.0		51.6	76	16.3		17.8	82	15.5		54.8	
14	154	34.1	15	22.6		18.5	35	53.7		51.3	91	18.3		17.9	97	17.8		54.8	
15	169	36.5	30	22.0		17.6	50	54.5		51.0	106	20.3		18.0	112	20.0		54.9	
16	184	39.0	45	21.4		16.7	65	55.2		50.7	121	22.3		18.0	127	22.3		54.9	
17	199	41.5	60	20.8	+17	15.8	80	56.0	+21	50.4	136	24.3	+20	18.1	142	24.6	+17	54.9	
18	214	43.9	75	20.2	+17	14.9	95	56.7	+21	50.1	151	26.3	+20	18.2	157	26.8	+17	55.0	
19	229	46.4	90	19.5		14.0	110	57.5		49.8	166	28.3		18.3	172	29.1		55.0	
20	244	48.9	105	18.9		13.1	125	58.2		49.5	181	30.4		18.3	187	31.3		55.0	
21	259	51.3	120	18.3		12.2	140	58.9		49.2	196	32.4		18.4	202	33.6		55.1	
22	274	53.8	135	17.7		11.3	155	59.7		48.9	211	34.4		18.5	217	35.9		55.1	
23	289	56.3	150	17.1		10.4	171	00.4		48.6	226	36.4		18.6	232	38.1		55.1	
24	304	58.7	165	16.5	+17	09.4	186	01.2	+21	48.3	241	38.4	+20	18.6	247	40.4	+17	55.2	
Dif	—		-6			-9	+7			-3	+20		+1		+23				

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: 25 ^d 2 PHE { 4 ^h : 59'8 12 ^h : 60'1 20 ^h : 60'3 SD: 16'3 PMG: 8 ^h 23 ^m R°: 61 ^m											
	hG ☉		Dec		hG ☾		Dif			Dif			Náutico	Civil	Hora	R°
h	°	'	°	'	°	'	°	'	°	'	h m	h m	h m	m	h m	m
0	178	22.7	+19	11.4	238	59.4	+17	38.8	60 N	** ** *	2 25	3 30	** ** *	17 16	80	
1	193	22.7		10.8	253	25.1		46.8	58	1 01	2 47	43	0 03	35	17 02	78
2	208	22.7		10.3	267	50.6	+17	54.7	56	1 45	3 05	3 55	13	38	16 50	76
3	223	22.7		09.7	282	16.1	+18	02.5	54	2 12	19	4 05	22	40	39	75
4	238	22.7		09.1	296	41.5		10.1	52	33	32	14	30	41	30	74
5	253	22.8	+19	08.6	311	06.7	+18	17.7	50	2 50	3 43	4 23	0 37	43	16 21	73
6	268	22.8	+19	08.0	325	31.9	+18	25.1	45	3 22	4 05	4 40	0 52	46	16 04	70
7	283	22.8		07.4	339	57.0		32.4	40	3 45	23	4 54	1 05	48	15 49	69
8	298	22.8		06.9	354	22.0		39.6	35	4 03	38	5 06	16	50	37	68
9	313	22.8		06.3	8	46.9		46.7	30	18	4 50	16	25	52	26	67
10	328	22.8		05.7	23	11.7	+18	53.7	20	4 42	5 10	34	42	54	15 08	65
11	343	22.8	+19	05.1	37	36.4	+19	00.5	10 N	5 00	5 27	5 49	1 56	57	14 52	63
12	358	22.8	+19	04.6	52	01.0	+19	07.2	0	5 16	5 41	6 03	2 10	59	14 37	62
13	13	22.8		04.0	66	25.6		13.9	10 S	29	5 55	17	23	62	23	59
14	28	22.8		03.4	80	50.0		20.3	20	42	6 08	32	38	64	14 07	57
15	43	22.8		02.8	95	14.4		26.7	30	5 54	23	49	2 55	67	13 49	55
16	58	22.8		02.3	109	38.6		32.9	35	6 01	31	6 58	3 05	68	38	54
17	73	22.9	+19	01.7	124	02.8	+19	39.0	40	6 07	6 40	7 09	3 16	70	13 26	53
18	88	22.9	+19	01.1	138	26.9	+19	45.0	45	6 15	6 50	7 22	3 29	73	13 12	51
19	103	22.9	+19	00.5	152	50.9		50.8	50	23	7 02	38	46	75	12 55	48
20	118	22.9	+19	00.0	167	14.8	+19	56.6	52	26	08	45	3 53	77	47	46
21	133	22.9	+18	59.4	181	38.6	+20	02.1	54	30	14	7 54	4 02	79	38	45
22	148	22.9		58.8	196	02.4		07.6	56	34	20	8 03	12	80	27	44
23	163	22.9		58.2	210	26.1		12.9	58	39	27	13	23	83	16	41
24	178	22.9	+18	57.6	224	49.6	+20	18.1	60 S	6 43	7 36	8 25	4 35	87	12 03	38

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 3 ^h 39 ^m 5		Mag: -3.9 PMG: 12 ^h 59 ^m		Mag: +1.7 PMG: 11 ^h 35 ^m		Mag: -2.2 PMG: 7 ^h 52 ^m		Mag: +0.2 PMG: 7 ^h 28 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	304	58.7	165	16.5	+17	09.4	186	01.2	+21	48.3
1	320	01.2	180	15.9		08.5	201	01.9		48.0
2	335	03.6	195	15.3		07.6	216	02.7		47.7
3	350	06.1	210	14.7		06.7	231	03.4		47.4
4	5	08.6	225	14.1		05.8	246	04.1		47.1
5	20	11.0	240	13.4	+17	04.9	261	04.9	+21	46.8
6	35	13.5	255	12.8	+17	04.0	276	05.6	+21	46.5
7	50	16.0	270	12.2		03.1	291	06.4		46.2
8	65	18.4	285	11.6		02.2	306	07.1		45.9
9	80	20.9	300	11.0		01.3	321	07.9		45.6
10	95	23.4	315	10.4	+17	00.3	336	08.6		45.3
11	110	25.8	330	09.8	+16	59.4	351	09.4	+21	45.0
12	125	28.3	345	09.2	+16	58.5	6	10.1	+21	44.7
13	140	30.8	0	08.6		57.6	21	10.9		44.4
14	155	33.2	15	08.0		56.7	36	11.6		44.1
15	170	35.7	30	07.4		55.8	51	12.4		43.8
16	185	38.1	45	06.8		54.8	66	13.1		43.5
17	200	40.6	60	06.2	+16	53.9	81	13.8	+21	43.2
18	215	43.1	75	05.6	+16	53.0	96	14.6	+21	42.9
19	230	45.5	90	05.0		52.1	111	15.3		42.6
20	245	48.0	105	04.4		51.1	126	16.1		42.3
21	260	50.5	120	03.8		50.2	141	16.8		41.9
22	275	52.9	135	03.2		49.3	156	17.6		41.6
23	290	55.4	150	02.6		48.4	171	18.3		41.3
24	305	57.9	165	02.0	+16	47.4	186	19.1	+21	41.0
Dif	—		-6		-9		+7		-3	

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: 26 ^d 2 PHE { 4 ^h : 60'5 12 ^h : 60'7 20 ^h : 60'8 Rº: 63 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	Rº	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	h m	m
0	178	22.9	+18 57.6	224	49.6	+20 18.1	50	60 N	20 39	21 42	** **	0 24 47	18 36	65
1	193	23.0		239	13.2	23.1	46	58	26	21	22 59	38 50	20	65
2	208	23.0	56.5	253	36.6	28.0	49	56	15	21 04	22 21	0 51 51	18 06	65
3	223	23.0	55.9	267	59.9	32.7	47	54	20 05	20 50	21 55	1 02 52	17 54	65
4	238	23.0	55.3	282	23.2	37.3	46	52	19 56	38	36	11 54	44	65
5	253	23.0	+18 54.7	296	46.4	+20 41.8	45	50	19 48	20 27	21 19	1 20 54	17 34	65
6	268	23.0	+18 54.2	311	09.6	+20 46.1	43	45	19 31	20 05	20 49	1 38 56	17 14	65
7	283	23.0	53.6	325	32.6	50.3	42	40	18	19 48	26	1 53 58	16 58	65
8	298	23.0	53.0	339	55.6	54.3	40	35	19 06	34	20 08	2 06 58	45	64
9	313	23.1	52.4	354	18.6	+20 58.2	39	30	18 56	22	19 53	17 59	33	64
10	328	23.1	51.8	8	41.4	+21 01.9	37	20	39	19 02	30	36 61	16 13	64
11	343	23.1	+18 51.2	23	04.2	+21 05.5	36	10 N	18 24	18 46	19 12	2 53 62	15 55	64
12	358	23.1	+18 50.6	37	26.9	+21 08.9	34	0	18 10	18 32	18 57	3 09 63	15 39	63
13	13	23.1	50.1	51	49.6	12.2	33	10 S	17 56	18	44	25 63	22	63
14	28	23.1	49.5	66	12.2	15.3	31	20	42	18 05	32	3 42 65	15 04	63
15	43	23.2	48.9	80	34.8	18.3	30	30	25	17 51	20	4 02 65	14 44	62
16	58	23.2	48.3	94	57.3	21.1	28	35	16	43	13	13 67	32	62
17	73	23.2	+18 47.7	109	19.7	+21 23.8	27	40	17 05	17 34	18 07	4 26 68	14 19	61
18	88	23.2	+18 47.1	123	42.1	+21 26.3	25	45	16 52	17 24	18 00	4 42 68	14 03	61
19	103	23.2	46.5	138	04.5	28.6	23	50	37	12	17 52	5 01 70	13 43	60
20	118	23.2	45.9	152	26.8	30.8	22	52	29	07	48	10 70	33	60
21	133	23.3	45.4	166	49.0	32.8	20	54	21	17 01	45	21 70	23	59
22	148	23.3	44.8	181	11.2	34.7	19	56	12	16 55	41	32 72	13 11	59
23	163	23.3	44.2	195	33.4	36.4	17	58	16 02	48	37	5 46 72	12 57	59
24	178	23.3	+18 43.6	209	55.5	+21 37.9	15	60 S	15 50	16 40	17 32	6 02 73	12 41	57

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 3 ^h 35 ^m 6		Mag: -3.9 PMG: 13 ^h 00 ^m		Mag: +1.7 PMG: 11 ^h 34 ^m		Mag: -2.2 PMG: 7 ^h 49 ^m		Mag: +0.2 PMG: 7 ^h 25 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	305	57.9	165	02.0	+16 47.4	186	19.1	+21 41.0	242	26.8	+20 20.4	248	34.8	+17 56.0
1	321	00.3	180	01.4	46.5	201	19.8	40.7	257	28.8	20.5	263	37.1	56.1
2	336	02.8	195	00.8	45.6	216	20.6	40.4	272	30.9	20.6	278	39.3	56.1
3	351	05.3	210	00.2	44.7	231	21.3	40.1	287	32.9	20.6	293	41.6	56.1
4	6	07.7	224	59.6	43.7	246	22.1	39.8	302	34.9	20.7	308	43.9	56.2
5	21	10.2	239	59.0	+16 42.8	261	22.8	+21 39.5	317	36.9	+20 20.8	323	46.1	+17 56.2
6	36	12.6	254	58.4	+16 41.9	276	23.6	+21 39.2	332	38.9	+20 20.8	338	48.4	+17 56.2
7	51	15.1	269	57.8	40.9	291	24.3	38.9	347	41.0	20.9	353	50.7	56.3
8	66	17.6	284	57.2	40.0	306	25.1	38.6	2	43.0	21.0	8	52.9	56.3
9	81	20.0	299	56.6	39.1	321	25.8	38.2	17	45.0	21.1	23	55.2	56.3
10	96	22.5	314	56.1	38.1	336	26.6	37.9	32	47.0	21.1	38	57.5	56.4
11	111	25.0	329	55.5	+16 37.2	351	27.3	+21 37.6	47	49.0	+20 21.2	53	59.7	+17 56.4
12	126	27.4	344	54.9	+16 36.3	6	28.1	+21 37.3	62	51.1	+20 21.3	69	02.0	+17 56.4
13	141	29.9	359	54.3	35.3	21	28.8	37.0	77	53.1	21.4	84	04.3	56.5
14	156	32.4	14	53.7	34.4	36	29.6	36.7	92	55.1	21.4	99	06.6	56.5
15	171	34.8	29	53.1	33.5	51	30.3	36.4	107	57.1	21.5	114	08.8	56.5
16	186	37.3	44	52.5	32.5	66	31.1	36.1	122	59.1	21.6	129	11.1	56.6
17	201	39.8	59	51.9	+16 31.6	81	31.8	+21 35.8	138	01.2	+20 21.6	144	13.4	+17 56.6
18	216	42.2	74	51.3	+16 30.7	96	32.6	+21 35.4	153	03.2	+20 21.7	159	15.6	+17 56.6
19	231	44.7	89	50.7	29.7	111	33.3	35.1	168	05.2	21.8	174	17.9	56.7
20	246	47.1	104	50.2	28.8	126	34.1	34.8	183	07.2	21.9	189	20.2	56.7
21	261	49.6	119	49.6	27.8	141	34.8	34.5	198	09.3	21.9	204	22.4	56.7
22	276	52.1	134	49.0	26.9	156	35.6	34.2	213	11.3	22.0	219	24.7	56.8
23	291	54.5	149	48.4	25.9	171	36.3	33.9	228	13.3	22.1	234	27.0	56.8
24	306	57.0	164	47.8	+16 25.0	186	37.1	+21 33.6	243	15.3	+20 22.2	249	29.3	+17 56.8
Dif	—		-6	-9		+8	-3		+20	+1		+23		

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8 PMG: 12 ^h 06 ^m 4			Edad: 27 ^d 2 PHE { SD: 16 ^h 6 PMG: 10 ^h 27 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	178	23.3	+18	43.6	209	55.5	+21	37.9	60 N	** *	2 31	3 34	1 11	68	19 41	47
1	193	23.3		43.0	224	17.6		39.3	58	1 14	2 52	47	28	67	25	49
2	208	23.3		42.4	238	39.7		40.6	56	1 53	3 09	3 59	42	67	19 11	50
3	223	23.4		41.8	253	01.7		41.6	54	2 18	23	4 09	1 54	67	18 59	52
4	238	23.4		41.2	267	23.7		42.5	52	38	35	17	2 05	66	49	52
5	253	23.4	+18	40.6	281	45.6	+21	43.2	50	2 54	3 46	4 25	2 14	67	18 39	54
6	268	23.4	+18	40.0	296	07.6	+21	43.8	45	3 25	4 08	4 42	2 34	66	18 19	56
7	283	23.4		39.4	310	29.5		44.2	40	3 47	25	4 56	2 51	65	18 03	57
8	298	23.5		38.8	324	51.4		44.5	35	4 05	39	5 07	3 04	66	17 49	58
9	313	23.5		38.2	339	13.2		44.5	30	20	4 51	17	16	65	37	59
10	328	23.5		37.6	353	35.1		44.4	20	4 43	5 11	34	37	65	17 17	61
11	343	23.5	+18	37.0	7	56.9	+21	44.2	10 N	5 01	5 27	5 49	3 55	64	16 59	62
12	358	23.5	+18	36.4	22	18.7	+21	43.8	0	5 16	5 41	6 03	4 12	63	16 42	63
13	13	23.6		35.8	36	40.5		43.2	10 S	29	5 54	17	28	64	25	65
14	28	23.6		35.2	51	02.3		42.4	20	41	6 08	31	4 47	62	16 07	66
15	43	23.6		34.6	65	24.1		41.5	30	53	22	47	5 07	62	15 46	68
16	58	23.6		34.0	79	45.9		40.4	35	5 59	30	6 57	20	61	34	68
17	73	23.7	+18	33.4	94	07.7	+21	39.2	40	6 06	6 38	7 07	5 34	61	15 20	69
18	88	23.7	+18	32.8	108	29.4	+21	37.8	45	6 13	6 48	7 20	5 50	61	15 04	70
19	103	23.7		32.2	122	51.2		36.2	50	20	7 00	35	6 11	59	14 43	72
20	118	23.7		31.6	137	13.0		34.4	52	24	05	43	20	59	33	73
21	133	23.8		31.0	151	34.8		32.5	54	27	11	50	31	59	22	74
22	148	23.8		30.4	165	56.6		30.4	56	31	17	7 59	44	57	14 10	74
23	163	23.8		29.8	180	18.4		28.2	58	35	24	8 09	6 58	57	13 56	75
24	178	23.8	+18	29.2	194	40.3	+21	25.8	60 S	6 40	7 32	8 21	7 15	56	13 38	78

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 3 ^h 31 ^m 6		Mag: -3.9 PMG: 13 ^h 01 ^m		Mag: +1.7 PMG: 11 ^h 33 ^m		Mag: -2.2 PMG: 7 ^h 46 ^m		Mag: +0.2 PMG: 7 ^h 21 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	306	57.0	164	47.8	+16	25.0	186	37.1	+21	33.6	243	15.3	+20	22.2	249	29.3	+17	56.8
1	321	59.5	179	47.2		24.1	201	37.8		33.3	258	17.3		22.2	264	31.5		56.9
2	337	01.9	194	46.6		23.1	216	38.6		32.9	273	19.4		22.3	279	33.8		56.9
3	352	04.4	209	46.1		22.2	231	39.3		32.6	288	21.4		22.4	294	36.1		56.9
4	7	06.9	224	45.5		21.2	246	40.1		32.3	303	23.4		22.4	309	38.3		57.0
5	22	09.3	239	44.9	+16	20.3	261	40.9	+21	32.0	318	25.4	+20	22.5	324	40.6	+17	57.0
6	37	11.8	254	44.3	+16	19.3	276	41.6	+21	31.7	333	27.5	+20	22.6	339	42.9	+17	57.0
7	52	14.2	269	43.7		18.4	291	42.4		31.4	348	29.5		22.7	354	45.2		57.1
8	67	16.7	284	43.1		17.4	306	43.1		31.0	3	31.5		22.7	9	47.4		57.1
9	82	19.2	299	42.6		16.5	321	43.9		30.7	18	33.5		22.8	24	49.7		57.1
10	97	21.6	314	42.0		15.5	336	44.6		30.4	33	35.6		22.9	39	52.0		57.2
11	112	24.1	329	41.4	+16	14.6	351	45.4	+21	30.1	48	37.6	+20	22.9	54	54.3	+17	57.2
12	127	26.6	344	40.8	+16	13.6	6	46.1	+21	29.8	63	39.6	+20	23.0	69	56.5	+17	57.2
13	142	29.0	359	40.2		12.6	21	46.9		29.5	78	41.6		23.1	84	58.8		57.3
14	157	31.5	14	39.7		11.7	36	47.6		29.1	93	43.7		23.2	100	01.1		57.3
15	172	34.0	29	39.1		10.7	51	48.4		28.8	108	45.7		23.2	115	03.3		57.3
16	187	36.4	44	38.5		09.8	66	49.2		28.5	123	47.7		23.3	130	05.6		57.4
17	202	38.9	59	37.9	+16	08.8	81	49.9	+21	28.2	138	49.8	+20	23.4	145	07.9	+17	57.4
18	217	41.4	74	37.4	+16	07.9	96	50.7	+21	27.9	153	51.8	+20	23.4	160	10.2	+17	57.4
19	232	43.8	89	36.8		06.9	111	51.4		27.6	168	53.8		23.5	175	12.4		57.5
20	247	46.3	104	36.2		05.9	126	52.2		27.2	183	55.8		23.6	190	14.7		57.5
21	262	48.7	119	35.6		05.0	141	52.9		26.9	198	57.9		23.7	205	17.0		57.5
22	277	51.2	134	35.1		04.0	156	53.7		26.6	213	59.9		23.7	220	19.3		57.6
23	292	53.7	149	34.5		03.1	171	54.4		26.3	229	01.9		23.8	235	21.5		57.6
24	307	56.1	164	33.9	+16	02.1	186	55.2	+21	26.0	244	03.9	+20	23.9	250	23.8	+17	57.6
Dif	—		-6		-10		+8		-3		+20		+1		+23			

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 28 ^d 2 PHE { 4 ^h : 61'2 12 ^h : 61'2 20 ^h : 61'1 R°: 62 ^m										
	PMG: 12 ^h 06 ^m 4			SD: 16'7 PMG: 11 ^h 30 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	178	23.8	+18 29.2	194	40.3	+21 25.8	26	60 N	20 35	21 36	** **	2 19 85	20 28 31	
1	193	23.8	28.6	209	02.1	23.2	26	58	22	16	22 47	35 82	14 34	
2	208	23.9	28.0	223	24.0	20.5	27	56	11	21 00	22 13	2 49 80	20 01 38	
3	223	23.9	27.4	237	45.9	17.6	29	54	20 01	20 46	21 49	3 01 78	19 51 39	
4	238	23.9	26.8	252	07.8	14.5	31	52	19 53	34	31	11 77	41 42	
5	253	24.0	+18 26.2	266	29.7	+21 11.3	32	50	19 45	20 24	21 15	3 21 75	19 33 43	
6	268	24.0	+18 25.6	280	51.7	+21 07.9	34	45	19 29	20 03	20 46	3 40 74	19 15 46	
7	283	24.0	24.9	295	13.7	04.4	35	40	16	19 46	23	3 56 72	19 00 49	
8	298	24.0	24.3	309	35.7	+21 00.7	37	35	19 04	32	20 06	4 10 70	18 47 52	
9	313	24.1	23.7	323	57.7	+20 56.8	39	30	18 55	21	19 52	21 69	36 54	
10	328	24.1	23.1	338	19.8	52.8	40	20	38	19 01	29	42 66	18 56	
11	343	24.1	+18 22.5	352	41.9	+20 48.6	42	10 N	18 23	18 46	19 12	4 59 65	18 01 59	
12	358	24.1	+18 21.9	7	04.1	+20 44.3	43	0	18 10	18 32	18 57	5 15 63	17 45 62	
13	13	24.2	21.3	21	26.3	39.8	45	10 S	17 57	19	44	32 60	30 64	
14	28	24.2	20.7	35	48.6	35.2	46	20	42	18 06	32	5 49 59	17 13 66	
15	43	24.2	20.1	50	10.9	30.4	48	30	26	17 52	21	6 09 57	16 54 69	
16	58	24.3	19.4	64	33.2	25.4	50	35	17	44	15	21 55	42 72	
17	73	24.3	+18 18.8	78	55.6	+20 20.3	51	40	17 07	17 36	18 08	6 35 53	16 29 74	
18	88	24.3	+18 18.2	93	18.0	+20 15.1	52	45	16 54	17 26	18 02	6 51 50	16 14 76	
19	103	24.3	17.6	107	40.5	09.6	55	50	39	15	17 54	7 10 48	15 55 79	
20	118	24.4	17.0	122	03.1	+20 04.1	55	52	32	10	51	19 47	46 81	
21	133	24.4	16.4	136	25.7	+19 58.4	57	54	25	17 04	47	30 45	36 82	
22	148	24.4	15.7	150	48.4	52.5	59	56	16	16 58	44	41 44	24 85	
23	163	24.5	15.1	165	11.1	46.5	60	58	16 06	51	40	7 55 41	15 11 87	
24	178	24.5	+18 14.5	179	33.9	+19 40.4	61	60 S	15 55	16 44	17 35	8 11 38	14 56 90	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 3 ^h 27 ^m 7		Mag: -3.9 PMG: 13 ^h 02 ^m		Mag: +1.7 PMG: 11 ^h 32 ^m		Mag: -2.2 PMG: 7 ^h 43 ^m		Mag: +0.2 PMG: 7 ^h 17 ^m					
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	°	°	°	°	°	°	°	°					
0	307	56.1	+16 02.1	186	55.2	+21 26.0	244	03.9	+20 23.9					
1	322	58.6	01.1	201	56.0	25.6	259	06.0	23.9					
2	338	01.1	+16 00.2	216	56.7	25.3	274	08.0	24.0					
3	353	03.5	+15 59.2	231	57.5	25.0	289	10.0	24.1					
4	8	06.0	224 31.6	246	58.2	24.7	304	12.1	24.1					
5	23	08.5	+15 57.3	261	59.0	+21 24.3	319	14.1	+20 24.2					
6	38	10.9	+15 56.3	276	59.7	+21 24.0	334	16.1	+20 24.3					
7	53	13.4	269 29.9	292	00.5	23.7	349	18.1	24.4					
8	68	15.9	284 29.3	307	01.3	23.4	4	20.2	24.4					
9	83	18.3	299 28.8	322	02.0	23.1	19	22.2	24.5					
10	98	20.8	314 28.2	337	02.8	22.7	34	24.2	24.6					
11	113	23.2	+15 51.5	352	03.5	+21 22.4	49	26.3	+20 24.6					
12	128	25.7	+15 50.5	7	04.3	+21 22.1	64	28.3	+20 24.7					
13	143	28.2	359 26.5	22	05.0	21.8	79	30.3	24.8					
14	158	30.6	14 25.9	37	05.8	21.4	94	32.4	24.8					
15	173	33.1	29 25.4	52	06.6	21.1	109	34.4	24.9					
16	188	35.6	44 24.8	67	07.3	20.8	124	36.4	25.0					
17	203	38.0	+15 45.6	82	08.1	+21 20.5	139	38.4	+20 25.1					
18	218	40.5	+15 44.6	97	08.8	+21 20.1	154	40.5	+20 25.1					
19	233	43.0	89 23.1	112	09.6	19.8	169	42.5	25.2					
20	248	45.4	104 22.5	127	10.4	19.5	184	44.5	25.3					
21	263	47.9	119 22.0	142	11.1	19.2	199	46.6	25.3					
22	278	50.4	134 21.4	157	11.9	18.8	214	48.6	25.4					
23	293	52.8	149 20.9	172	12.6	18.5	229	50.6	25.5					
24	308	55.3	+15 38.8	187	13.4	+21 18.2	244	52.7	+20 25.5					
Dif	—	—	-6 -10	+8 -3	+20 +1	+23 0								

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8 PMG: 12 ^h 06 ^m 3				Edad: 29 ^d 2 PHE { 4 ^h : 61 ^m 1 12 ^h : 61 ^m 0 20 ^h : 60 ^m 8 Rº: 59 ^m													
	hG ☉		Dec		hG ☾ Dif		Dec Dif			Náutico	Civil		Hora	Rº	Hora	Rº		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	178	24.5	+18	14.5	179	33.9	+19	40.4	60 N	** *	2	38	3	39	3	44	93	
1	193	24.5		13.9	193	56.7 38		34.1 63	58	1	26	2	57	3	57	90	48 25	
2	208	24.6		13.3	208	19.6 39		27.7 64	56	2	00	3	14	4	09	87	39 28	
3	223	24.6		12.7	222	42.6 40		21.1 66	54	24	27	12		19	85	30	33	
4	238	24.6		12.0	237	05.7 41		14.4 67	52	43	39	21		28	83	23	32	
5	253	24.6	+18	11.4	251	28.8 41	+19	07.6 68	50	2	58	3	49	4	36	81	20 16 34	
6	268	24.7	+18	10.8	265	52.0 42	+19	00.6 70	45	3	28	4	10	4	54	77	20 01 39	
7	283	24.7		10.2	280	15.2 42	+18	53.5 71	40	3	50	27	4	58	5	08	74	
8	298	24.7		09.6	294	38.6 44		46.2 73	35	4	07	41	5	09	20	71	39	44
9	313	24.8		08.9	309	02.0 44		38.8 74	30	21	4	52	18	30	69	30	46	
10	328	24.8		08.3	323	25.4 44		31.3 75	20	4	44	5	12	35	5	48	66	14 51
11	343	24.8	+18	07.7	337	49.0 46	+18	23.7 76	10 N	5	01	5	27	5	50	6	04	62
12	358	24.9	+18	07.1	352	12.6 46	+18	15.9 78	0	5	16	5	41	6	18	60	18	47 57
13	13	24.9		06.4	6	36.3 47	+18	08.0 79	10 S	29	5	54	16		32	57	34	61
14	28	25.0		05.8	21	00.1 48	+18	00.0 80	20	40	6	07	30		6	48	53	19 65
15	43	25.0		05.2	35	24.0 49	+17	51.9 81	30	52	21	46		7	06	49	18	03 69
16	58	25.0		04.6	49	47.9 49		43.6 83	35	5	58	28	6	55	16	48	17	54 71
17	73	25.1	+18	03.9	64	12.0 51	+17	35.2 84	40	6	04	6	37	7	28	45	17	43 74
18	88	25.1	+18	03.3	78	36.1 51	+17	26.7 85	45	6	11	6	46	7	41	42	17	30 77
19	103	25.1		02.7	93	00.3 52		18.1 86	50	18	6	57	33	7	58	38	14	81
20	118	25.2		02.1	107	24.6 53		09.3 88	52	21	7	02	39	8	06	36	17	07 83
21	133	25.2		01.4	121	49.0 54	+17	00.5 88	54	25	08	47		15	34	16	58	86
22	148	25.2		00.8	136	13.4 54	+16	51.5 90	56	28	14	7	56	25	31	49	88	
23	163	25.3	+18	00.2	150	38.0 56		42.5 90	58	32	20	8	05	36	29	38	92	
24	178	25.3	+17	59.5	165	02.6 56	+16	33.3 92	60 S	6	36	7	28	8	49	25	16	26 95
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 3 ^h 23 ^m 8		Mag: -3.9 PMG: 13 ^h 03 ^m				Mag: +1.7 PMG: 11 ^h 31 ^m				Mag: -2.2 PMG: 7 ^h 39 ^m				Mag: +0.2 PMG: 7 ^h 14 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	308	55.3	164	20.3	+15	38.8	187	13.4	+21	18.2	244	52.7	+20	25.5	251	18.5	+17	58.4
1	323	57.7	179	19.7		37.8	202	14.2		17.9	259	54.7		25.6	266	20.7		58.5
2	339	00.2	194	19.2		36.8	217	14.9		17.5	274	56.7		25.7	281	23.0		58.5
3	354	02.7	209	18.6		35.8	232	15.7		17.2	289	58.8		25.8	296	25.3		58.5
4	9	05.1	224	18.1		34.8	247	16.4		16.9	305	00.8		25.8	311	27.6		58.5
5	24	07.6	239	17.5	+15	33.8	262	17.2	+21	16.5	320	02.8	+20	25.9	326	29.8	+17	58.6
6	39	10.1	254	16.9	+15	32.9	277	18.0	+21	16.2	335	04.9	+20	26.0	341	32.1	+17	58.6
7	54	12.5	269	16.4		31.9	292	18.7		15.9	350	06.9		26.0	356	34.4		58.6
8	69	15.0	284	15.8		30.9	307	19.5		15.6	5	08.9		26.1	11	36.7		58.7
9	84	17.5	299	15.3		29.9	322	20.3		15.2	20	11.0		26.2	26	39.0		58.7
10	99	19.9	314	14.7		28.9	337	21.0		14.9	35	13.0		26.2	41	41.2		58.7
11	114	22.4	329	14.1	+15	27.9	352	21.8	+21	14.6	50	15.0	+20	26.3	56	43.5	+17	58.8
12	129	24.9	344	13.6	+15	26.9	7	22.5	+21	14.2	65	17.1	+20	26.4	71	45.8	+17	58.8
13	144	27.3	359	13.0		25.9	22	23.3		13.9	80	19.1		26.4	86	48.1		58.8
14	159	29.8	14	12.5		25.0	37	24.1		13.6	95	21.2		26.5	101	50.4		58.9
15	174	32.2	29	11.9		24.0	52	24.8		13.2	110	23.2		26.6	116	52.6		58.9
16	189	34.7	44	11.4		23.0	67	25.6		12.9	125	25.2		26.6	131	54.9		58.9
17	204	37.2	59	10.8	+15	22.0	82	26.4	+21	12.6	140	27.3	+20	26.7	146	57.2	+17	59.0
18	219	39.6	74	10.3	+15	21.0	97	27.1	+21	12.3	155	29.3	+20	26.8	161	59.5	+17	59.0
19	234	42.1	89	09.7		20.0	112	27.9		11.9	170	31.3		26.9	177	01.8		59.0
20	249	44.6	104	09.2		19.0	127	28.6		11.6	185	33.4		26.9	192	04.0		59.1
21	264	47.0	119	08.6		18.0	142	29.4		11.3	200	35.4		27.0	207	06.3		59.1
22	279	49.5	134	08.1		17.0	157	30.2		10.9	215	37.4		27.1	222	08.6		59.1
23	294	52.0	149	07.5		16.0	172	30.9		10.6	230	39.5		27.1	237	10.9		59.1
24	309	54.4	164	07.0	+15	15.0	187	31.7	+21	10.3	245	41.5	+20	27.2	252	13.2	+17	59.2
Dif	—		-6		-10		+8		-3		+20		+1		+23			

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: 30 ^d 2 PHE { 4 ^h : 60'7 12 ^h : 60'5 20 ^h : 60'2 PMG: 13 ^h 31 ^m R°: 55 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	178	25.3	+17 59.5	165	02.6	+16 33.3	93	60 N	20 30	21 29	** **	5 17 95	21 21 16	
1	193	25.3		179	27.3	24.0	93	58	18	21 10	22 37	27 91	13 20	
2	208	25.4		193	52.1	14.6	94	56	20 07	20 55	22 06	36 88	07 22	
3	223	25.4		208	17.0	+16 05.1	95	54	19 58	42	21 44	44 85	21 01 24	
4	238	25.5		222	42.0	+15 55.5	96	52	49	30	26	51 83	20 55 27	
5	253	25.5	+17 56.4	237	07.1	+15 45.8	97	50	19 42	20 21	21 11	5 57 81	20 50 29	
6	268	25.5	+17 55.7	251	32.2	+15 36.0	98	45	19 26	20 00	20 42	6 11 76	20 40 32	
7	283	25.6		265	57.5	26.1	99	40	13	19 44	21	22 73	31 36	
8	298	25.6		280	22.9	16.1	100	35	19 03	30	20 04	31 70	23 39	
9	313	25.7		294	48.3	+15 06.0	101	30	18 53	19	19 50	39 68	16 42	
10	328	25.7		309	13.8	+14 55.9	101	20	37	19 00	28	6 54 63	20 05 46	
11	343	25.7	+17 52.6	323	39.4	+14 45.6	103	10 N	18 23	18 45	19 11	7 06 59	19 54 50	
12	358	25.8	+17 51.9	338	05.2	+14 35.3	103	0	18 10	18 31	18 57	7 18 55	19 44 54	
13	13	25.8		352	31.0	24.8	105	10 S	17 57	19	44	29 52	35 57	
14	28	25.9		6	56.9	14.3	105	20	43	18 06	33	41 49	24 62	
15	43	25.9		21	22.9	+14 03.7	106	30	28	17 53	22	7 55 44	12 66	
16	58	25.9		35	48.9	+13 53.0	107	35	19	45	16	8 04 41	19 05 69	
17	73	26.0	+17 48.7	50	15.1	+13 42.3	107	40	17 08	17 37	18 10	8 13 38	18 57 72	
18	88	26.0	+17 48.1	64	41.4	+13 31.4	109	45	16 57	17 28	18 03	8 23 36	18 47 76	
19	103	26.1		79	07.7	20.5	109	50	42	17	17 56	36 31	35 81	
20	118	26.1		93	34.2	+13 09.5	110	52	35	12	53	42 29	30 82	
21	133	26.2		108	00.7	+12 58.5	110	54	28	07	50	49 27	24 85	
22	148	26.2		122	27.3	47.3	112	56	19	17 01	47	8 56 25	17 88	
23	163	26.2		136	54.1	36.1	112	58	16 10	16 55	43	9 05 21	10 90	
24	178	26.3	+17 44.3	151	20.9	+12 24.9	112	60 S	15 59	16 47	17 39	9 14 18	18 01 94	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 3 ^h 19 ^m 8		Mag: -3.9 PMG: 13 ^h 04 ^m			Mag: +1.7 PMG: 11 ^h 29 ^m			Mag: -2.2 PMG: 7 ^h 36 ^m			Mag: +0.2 PMG: 7 ^h 10 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	'	°	°	'	°	°	'	
0	309	54.4	164	07.0	+15 15.0	187	31.7	+21 10.3	245	41.5	+20 27.2	252	13.2	+17 59.2
1	324	56.9	179	06.4	14.0	202	32.5	09.9	260	43.6	27.3	267	15.5	59.2
2	339	59.3	194	05.9	13.0	217	33.2	09.6	275	45.6	27.3	282	17.7	59.2
3	355	01.8	209	05.3	12.0	232	34.0	09.3	290	47.6	27.4	297	20.0	59.3
4	10	04.3	224	04.8	11.0	247	34.8	08.9	305	49.7	27.5	312	22.3	59.3
5	25	06.7	239	04.2	+15 10.0	262	35.5	+21 08.6	320	51.7	+20 27.5	327	24.6	+17 59.3
6	40	09.2	254	03.7	+15 09.0	277	36.3	+21 08.3	335	53.8	+20 27.6	342	26.9	+17 59.4
7	55	11.7	269	03.1	08.0	292	37.1	07.9	350	55.8	27.7	357	29.2	59.4
8	70	14.1	284	02.6	07.0	307	37.8	07.6	5	57.8	27.7	12	31.4	59.4
9	85	16.6	299	02.0	06.0	322	38.6	07.2	20	59.9	27.8	27	33.7	59.5
10	100	19.1	314	01.5	05.0	337	39.4	06.9	36	01.9	27.9	42	36.0	59.5
11	115	21.5	329	01.0	+15 04.0	352	40.1	+21 06.6	51	03.9	+20 27.9	57	38.3	+17 59.5
12	130	24.0	344	00.4	+15 03.0	7	40.9	+21 06.2	66	06.0	+20 28.0	72	40.6	+17 59.5
13	145	26.5	358	59.9	02.0	22	41.7	05.9	81	08.0	28.1	87	42.9	59.6
14	160	28.9	13	59.3	+15 01.0	37	42.4	05.6	96	10.1	28.1	102	45.1	59.6
15	175	31.4	28	58.8	+15 00.0	52	43.2	05.2	111	12.1	28.2	117	47.4	59.6
16	190	33.8	43	58.2	+14 58.9	67	44.0	04.9	126	14.2	28.3	132	49.7	59.7
17	205	36.3	58	57.7	+14 57.9	82	44.7	+21 04.6	141	16.2	+20 28.3	147	52.0	+17 59.7
18	220	38.8	73	57.2	+14 56.9	97	45.5	+21 04.2	156	18.2	+20 28.4	162	54.3	+17 59.7
19	235	41.2	88	56.6	55.9	112	46.3	03.9	171	20.3	28.5	177	56.6	59.8
20	250	43.7	103	56.1	54.9	127	47.0	03.5	186	22.3	28.5	192	58.8	59.8
21	265	46.2	118	55.5	53.9	142	47.8	03.2	201	24.4	28.6	208	01.1	59.8
22	280	48.6	133	55.0	52.9	157	48.6	02.9	216	26.4	28.7	223	03.4	59.8
23	295	51.1	148	54.5	51.9	172	49.3	02.5	231	28.4	28.7	238	05.7	59.9
24	310	53.6	163	53.9	+14 50.8	187	50.1	+21 02.2	246	30.5	+20 28.8	253	08.0	+17 59.9
Dif	—		-5	-10		+8	-3		+20		+1	+23		0

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8 PMG: 12 ^h 06 ^m 2			Edad: 1 ^d 9 PHE { 4 ^h : 60 ^o 0 12 ^h : 59 ^o 7 20 ^h : 59 ^o 4 R°: 51 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	26.3	+17 44.3	151	20.9	+12 24.9	60 N	0 38	2 44	3 44	6 52	91	21 37	13	
1	193	26.3	43.6	165	47.8	79 13.5	58	1 37	3 03	3 56	6 58	88	33	16	
2	208	26.4	43.0	180	14.8	80 +12 02.1	56	2 07	18	4 06	7 04	85	29	18	
3	223	26.4	42.3	194	41.8	80 +11 50.7	54	30	31	15	09	83	25	21	
4	238	26.5	41.7	209	09.0	82 39.2	52	2 47	43	24	14	80	22	23	
5	253	26.5	+17 41.0	223	36.3	83 +11 27.6	50	3 02	3 53	4 31	7 18	79	21 19	25	
6	268	26.6	+17 40.4	238	03.6	83 +11 15.9	45	3 31	4 13	4 47	7 27	74	21 12	29	
7	283	26.6	39.8	252	31.0	84 +11 04.3	40	3 52	29	4 59	35	70	07	32	
8	298	26.6	39.1	266	58.6	86 +10 52.5	35	4 09	43	5 10	41	67	21 02	36	
9	313	26.7	38.5	281	26.2	86 40.7	30	23	4 54	20	47	64	20 58	38	
10	328	26.7	37.8	295	53.9	87 28.9	20	4 45	5 12	36	7 57	60	51	43	
11	343	26.8	+17 37.2	310	21.7	88 +10 17.0	10 N	5 02	5 28	5 50	8 05	56	20 44	47	
12	358	26.8	+17 36.5	324	49.5	88 +10 05.0	0	5 16	5 41	6 03	8 13	52	20 38	51	
13	13	26.9	35.9	339	17.5	90 +9 53.1	10 S	28	5 54	16	21	48	32	55	
14	28	26.9	35.2	353	45.5	90 41.0	20	40	6 06	29	30	44	26	58	
15	43	27.0	34.6	8	13.6	91 29.0	30	51	19	45	39	40	18	63	
16	58	27.0	33.9	22	41.8	92 16.9	35	5 56	27	6 53	45	37	14	66	
17	73	27.1	+17 33.3	37	10.1	93 +9 04.7	40	6 02	6 35	7 03	8 51	34	20 09	69	
18	88	27.1	+17 32.6	51	38.5	94 +8 52.5	45	6 09	6 44	7 15	8 59	30	20 03	72	
19	103	27.2	32.0	66	07.0	95 40.3	50	15	54	30	9 07	27	19 56	77	
20	118	27.2	31.3	80	35.5	95 28.0	52	18	6 59	36	11	25	52	80	
21	133	27.3	30.7	95	04.1	96 15.7	54	22	7 05	44	16	22	49	81	
22	148	27.3	30.0	109	32.8	97 +8 03.4	56	25	10	7 52	21	19	45	84	
23	163	27.4	29.4	124	01.6	98 +7 51.1	58	29	17	8 01	26	17	40	87	
24	178	27.4	+17 28.7	138	30.4	98 +7 38.7	60 S	6 33	7 24	8 12	9 32	14	19 35	90	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 3 ^h 15 ^m 9		Mag: -3.9 PMG: 13 ^h 05 ^m		Mag: +1.7 PMG: 11 ^h 28 ^m		Mag: -2.3 PMG: 7 ^h 33 ^m		Mag: +0.2 PMG: 7 ^h 06 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	310	53.6	163	53.9	+14 50.8	187	50.1	+21 02.2	246	30.5	+20 28.8	253	08.0	+17 59.9
1	325	56.0	178	53.4	49.8	202	50.9	01.8	261	32.5	28.9	268	10.3	+17 59.9
2	340	58.5	193	52.9	48.8	217	51.6	01.5	276	34.6	28.9	283	12.6	+18 00.0
3	356	01.0	208	52.3	47.8	232	52.4	01.2	291	36.6	29.0	298	14.8	00.0
4	11	03.4	223	51.8	46.8	247	53.2	00.8	306	38.7	29.1	313	17.1	+18 00.0
5	26	05.9	238	51.2	+14 45.8	262	53.9	+21 00.5	321	40.7	+20 29.1	328	19.4	+18 00.1
6	41	08.3	253	50.7	+14 44.7	277	54.7	+21 00.1	336	42.7	+20 29.2	343	21.7	+18 00.1
7	56	10.8	268	50.2	43.7	292	55.5	+20 59.8	351	44.8	29.3	358	24.0	00.1
8	71	13.3	283	49.6	42.7	307	56.3	59.5	6	46.8	29.3	13	26.3	00.2
9	86	15.7	298	49.1	41.7	322	57.0	59.1	21	48.9	29.4	28	28.6	00.2
10	101	18.2	313	48.6	40.7	337	57.8	58.8	36	50.9	29.5	43	30.8	00.2
11	116	20.7	328	48.0	+14 39.6	352	58.6	+20 58.4	51	53.0	+20 29.5	58	33.1	+18 00.2
12	131	23.1	343	47.5	+14 38.6	7	59.3	+20 58.1	66	55.0	+20 29.6	73	35.4	+18 00.3
13	146	25.6	358	47.0	37.6	23	00.1	57.7	81	57.1	29.7	88	37.7	00.3
14	161	28.1	13	46.4	36.6	38	00.9	57.4	96	59.1	29.7	103	40.0	00.3
15	176	30.5	28	45.9	35.5	53	01.7	57.1	112	01.1	29.8	118	42.3	00.4
16	191	33.0	43	45.4	34.5	68	02.4	56.7	127	03.2	29.9	133	44.6	00.4
17	206	35.4	58	44.9	+14 33.5	83	03.2	+20 56.4	142	05.2	+20 29.9	148	46.9	+18 00.4
18	221	37.9	73	44.3	+14 32.5	98	04.0	+20 56.0	157	07.3	+20 30.0	163	49.1	+18 00.4
19	236	40.4	88	43.8	31.4	113	04.7	55.7	172	09.3	30.1	178	51.4	00.5
20	251	42.8	103	43.3	30.4	128	05.5	55.3	187	11.4	30.1	193	53.7	00.5
21	266	45.3	118	42.7	29.4	143	06.3	55.0	202	13.4	30.2	208	56.0	00.5
22	281	47.8	133	42.2	28.3	158	07.1	54.6	217	15.5	30.3	223	58.3	00.6
23	296	50.2	148	41.7	27.3	173	07.8	54.3	232	17.5	30.3	239	00.6	00.6
24	311	52.7	163	41.2	+14 26.3	188	08.6	+20 54.0	247	19.6	+20 30.4	254	02.9	+18 00.6
Dif	—		-5	-10		+8	-3		+20		+1	+23		

UT	SOL		● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 15 ^h 8		Edad: 2 ^d 9	PHE	SD: 16 ^h 1	PMG: 15 ^h 17 ^m			Civil		Náutico	Hora	R°	Hora	R°			
	hG ☉	Dec							hG ☾	Dif						Dec	Dif	
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m				
0	178	27.4	+17	28.7	138	30.4	+7 38.7	60 N	20 25	21 23	23 12	8 23 88	21 50 12					
1	193	27.5		28.0	152	59.3 ⁹⁹	26.3 ¹²⁴	58	13	21 05	22 27	26 85	49 14					
2	208	27.5		27.4	167	28.3 ¹⁰⁰	13.9 ¹²⁴	56	20 03	20 50	21 59	29 82	47 17					
3	223	27.6		26.7	181	57.4 ¹⁰¹	+7 01.4 ¹²⁵	54	19 54	38	38	32 80	46 19					
4	238	27.6		26.1	196	26.6 ¹⁰²	+6 48.9 ¹²⁵	52	46	27	21	34 78	45 21					
5	253	27.7	+17	25.4	210	55.8 ¹⁰²	+6 36.4 ¹²⁵	50	19 39	20 17	21 07	8 37 75	21 44 23					
6	268	27.7	+17	24.8	225	25.1 ¹⁰³	+6 23.9 ¹²⁵	45	19 24	19 57	20 39	8 41 71	21 41 27					
7	283	27.8		24.1	239	54.4 ¹⁰³	+6 11.4 ¹²⁵	40	11	41	18	45 68	39 31					
8	298	27.8		23.4	254	23.9 ¹⁰⁵	+5 58.8 ¹²⁶	35	19 01	28	20 02	48 65	38 33					
9	313	27.9		22.8	268	53.4 ¹⁰⁵	46.2 ¹²⁶	30	18 52	19 17	19 48	51 62	36 36					
10	328	27.9		22.1	283	23.0 ¹⁰⁶	33.6 ¹²⁶	20	36	18 59	27	8 57 56	34 40					
11	343	28.0	+17	21.5	297	52.6 ¹⁰⁶	+5 21.0 ¹²⁶	10 N	18 22	18 44	19 10	9 01 53	21 31 44					
12	358	28.0	+17	20.8	312	22.3 ¹⁰⁷	+5 08.4 ¹²⁶	0	18 10	18 31	18 56	9 05 49	21 29 48					
13	13	28.1		20.2	326	52.1 ¹⁰⁸	+4 55.8 ¹²⁶	10 S	17 57	19	44	09 46	27 51					
14	28	28.1		19.5	341	22.0 ¹⁰⁹	43.2 ¹²⁶	20	44	18 07	33	14 41	24 56					
15	43	28.2		18.8	355	51.9 ¹⁰⁹	30.5 ¹²⁷	30	29	17 54	23	19 37	21 61					
16	58	28.2		18.2	10	21.9 ¹¹⁰	17.9 ¹²⁶	35	20	47	17	22 34	20 63					
17	73	28.3	+17	17.5	24	51.9 ¹¹⁰	+4 05.3 ¹²⁶	40	17 10	17 39	18 11	9 25 31	21 18 66					
18	88	28.4	+17	16.8	39	22.0 ¹¹¹	+3 52.6 ¹²⁷	45	16 59	17 30	18 05	9 29 28	21 15 70					
19	103	28.4		16.2	53	52.2 ¹¹²	39.9 ¹²⁷	50	45	20	17 59	34 23	13 74					
20	118	28.5		15.5	68	22.4 ¹¹²	27.3 ¹²⁶	52	38	15	56	36 21	12 76					
21	133	28.5		14.9	82	52.7 ¹¹³	14.6 ¹²⁷	54	31	10	53	38 20	10 78					
22	148	28.6		14.2	97	23.1 ¹¹⁴	+3 02.0 ¹²⁶	56	23	17 04	50	40 18	09 80					
23	163	28.6		13.5	111	53.5 ¹¹⁴	+2 49.3 ¹²⁷	58	14	16 58	46	43 15	07 83					
24	178	28.7	+17	12.9	126	23.9 ¹¹⁴	+2 36.7 ¹²⁶	60 S	16 04	16 51	17 42	9 46 13	21 05 86					
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 3 ^h 12 ^m 0		Mag: -3.9 PMG: 13 ^h 06 ^m			Mag: +1.7 PMG: 11 ^h 27 ^m			Mag: -2.3 PMG: 7 ^h 30 ^m			Mag: +0.2 PMG: 7 ^h 03 ^m						
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♃	Dec	hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'						
0	311	52.7	163	41.2	+14	26.3	188	08.6	+20	54.0	247	19.6	+20	30.4	254	02.9	+18	00.6
1	326	55.2	178	40.6		25.2	203	09.4		53.6	262	21.6		30.5	269	05.2		00.7
2	341	57.6	193	40.1		24.2	218	10.2		53.3	277	23.7		30.5	284	07.5		00.7
3	357	00.1	208	39.6		23.2	233	10.9		52.9	292	25.7		30.6	299	09.7		00.7
4	12	02.6	223	39.1		22.1	248	11.7		52.6	307	27.8		30.7	314	12.0		00.7
5	27	05.0	238	38.5	+14	21.1	263	12.5	+20	52.2	322	29.8	+20	30.7	329	14.3	+18	00.8
6	42	07.5	253	38.0	+14	20.1	278	13.2	+20	51.9	337	31.9	+20	30.8	344	16.6	+18	00.8
7	57	09.9	268	37.5		19.0	293	14.0		51.5	352	33.9		30.9	359	18.9		00.8
8	72	12.4	283	37.0		18.0	308	14.8		51.2	7	36.0		30.9	14	21.2		00.9
9	87	14.9	298	36.5		17.0	323	15.6		50.8	22	38.0		31.0	29	23.5		00.9
10	102	17.3	313	35.9		15.9	338	16.3		50.5	37	40.1		31.1	44	25.8		00.9
11	117	19.8	328	35.4	+14	14.9	353	17.1	+20	50.1	52	42.1	+20	31.1	59	28.1	+18	00.9
12	132	22.3	343	34.9	+14	13.9	8	17.9	+20	49.8	67	44.2	+20	31.2	74	30.4	+18	01.0
13	147	24.7	358	34.4		12.8	23	18.7		49.4	82	46.2		31.2	89	32.6		01.0
14	162	27.2	13	33.9		11.8	38	19.4		49.1	97	48.3		31.3	104	34.9		01.0
15	177	29.7	28	33.3		10.7	53	20.2		48.7	112	50.3		31.4	119	37.2		01.1
16	192	32.1	43	32.8		09.7	68	21.0		48.4	127	52.4		31.4	134	39.5		01.1
17	207	34.6	58	32.3	+14	08.6	83	21.8	+20	48.0	142	54.4	+20	31.5	149	41.8	+18	01.1
18	222	37.1	73	31.8	+14	07.6	98	22.6	+20	47.7	157	56.5	+20	31.6	164	44.1	+18	01.1
19	237	39.5	88	31.3		06.6	113	23.3		47.3	172	58.5		31.6	179	46.4		01.2
20	252	42.0	103	30.7		05.5	128	24.1		47.0	188	00.6		31.7	194	48.7		01.2
21	267	44.4	118	30.2		04.5	143	24.9		46.6	203	02.6		31.8	209	51.0		01.2
22	282	46.9	133	29.7		03.4	158	25.7		46.3	218	04.7		31.8	224	53.3		01.3
23	297	49.4	148	29.2		02.4	173	26.4		45.9	233	06.7		31.9	239	55.6		01.3
24	312	51.8	163	28.7	+14	01.3	188	27.2	+20	45.6	248	08.8	+20	32.0	254	57.9	+18	01.3
Dif	—		-5 -10		+8 -3		+21 +1		+23 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 0				Edad: 3 ^d 9 PHE { 4 ^h : 58 ^m 2 12 ^h : 57 ^m 9 20 ^h : 57 ^m 6 R°: 46 ^m															
	hG ☉		Dec		hG ☾ Dif		Dec Dif			Náutico	Civil		Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m			
0	178	28.7	+17	12.9	126	23.9	+2	36.7	60 N	1 01	2 50	3 48	9 51	84	22 02	12				
1	193	28.7		12.2	140	54.5 ¹¹⁶		24.0 ¹²⁷	58	1 46	3 08	4 00	51	82		03	15			
2	208	28.8		11.5	155	25.0 ¹¹⁵	+2	11.4 ¹²⁶	56	2 14	23	10	51	79		04	17			
3	223	28.9		10.9	169	55.7 ¹¹⁷	+1	58.7 ¹²⁷	54	35	35	19	52	76		05	19			
4	238	28.9		10.2	184	26.3 ¹¹⁶		46.1 ¹²⁶	52	2 52	46	27	52	74		06	21			
5	253	29.0	+17	09.5	198	57.1 ¹¹⁸	+1	33.5 ¹²⁶	50	3 06	3 56	4 34	9 52	72	22 07	22				
6	268	29.0	+17	08.9	213	27.9 ¹¹⁸	+1	20.9 ¹²⁶	45	3 34	4 16	4 49	9 52	69	22 08	27				
7	283	29.1		08.2	227	58.7 ¹¹⁸	+1	08.3 ¹²⁶	40	3 54	31	5 01	53	64		10	29			
8	298	29.2		07.5	242	29.6 ¹¹⁹	+0	55.7 ¹²⁶	35	4 11	44	12	53	62		11	32			
9	313	29.2		06.8	257	00.5 ¹¹⁹		43.1 ¹²⁶	30	24	4 55	21	53	59		12	35			
10	328	29.3		06.2	271	31.5 ¹²⁰		30.6 ¹²⁵	20	4 46	5 13	37	53	55		14	39			
11	343	29.3	+17	05.5	286	02.6 ¹²¹	+0	18.0 ¹²⁶	10 N	5 02	5 28	5 50	9 54	51	22 15	43				
12	358	29.4	+17	04.8	300	33.6 ¹²⁰	+0	05.5 ¹²⁵	0	5 16	5 41	6 03	9 54	47	22 17	46				
13	13	29.5		04.2	315	04.8 ¹²²	-0	07.0 ¹²⁵	10 S	28	5 53	15	55	43		18	50			
14	28	29.5		03.5	329	35.9 ¹²¹		19.5 ¹²⁵	20	39	6 05	28	55	40		20	54			
15	43	29.6		02.8	344	07.1 ¹²²		32.0 ¹²⁵	30	49	18	43	56	35		22	58			
16	58	29.6		02.1	358	38.4 ¹²³		44.4 ¹²⁴	35	5 55	25	6 52	56	32		23	61			
17	73	29.7	+17	01.5	13	09.7 ¹²³	-0	56.8 ¹²⁴	40	6 00	6 33	7 01	9 56	30	22 24	64				
18	88	29.8	+17	00.8	27	41.0 ¹²³	-1	09.2 ¹²⁴	45	6 06	6 41	7 13	9 57	26	22 25	67				
19	103	29.8	+17	00.1	42	12.4 ¹²⁴		21.6 ¹²⁴	50	13	52	26	57	23		27	71			
20	118	29.9	+16	59.4	56	43.8 ¹²⁴		34.0 ¹²⁴	52	16	6 56	33	57	21		28	73			
21	133	29.9		58.8	71	15.2 ¹²⁴		46.3 ¹²³	54	19	7 01	40	58	18		28	76			
22	148	30.0		58.1	85	46.7 ¹²⁵	-1	58.6 ¹²³	56	22	07	48	58	16		29	78			
23	163	30.1		57.4	100	18.3 ¹²⁶	-2	10.9 ¹²³	58	25	13	7 57	58	14		30	80			
24	178	30.1	+16	56.7	114	49.8 ¹²⁵	-2	23.2 ¹²³	60 S	6 29	7 20	8 07	9 59	11	22 31	83				
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG 3 ^h 08 ^m 0				Mag: -3.9 PMG: 13 ^h 07 ^m				Mag: +1.7 PMG: 11 ^h 26 ^m				Mag: -2.3 PMG: 7 ^h 26 ^m				Mag: +0.2 PMG: 6 ^h 59 ^m			
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	312	51.8	163	28.7	+14	01.3	188	27.2	+20	45.6	248	08.8	+20	32.0	254	57.9	+18	01.3		
1	327	54.3	178	28.2	+14	00.3	203	28.0		45.2	263	10.8		32.0	270	00.2		01.3		
2	342	56.8	193	27.7	+13	59.2	218	28.8		44.9	278	12.9		32.1	285	02.4		01.4		
3	357	59.2	208	27.1		58.2	233	29.5		44.5	293	14.9		32.1	300	04.7		01.4		
4	13	01.7	223	26.6		57.1	248	30.3		44.2	308	17.0		32.2	315	07.0		01.4		
5	28	04.2	238	26.1	+13	56.1	263	31.1	+20	43.8	323	19.0	+20	32.3	330	09.3	+18	01.5		
6	43	06.6	253	25.6	+13	55.0	278	31.9	+20	43.5	338	21.1	+20	32.3	345	11.6	+18	01.5		
7	58	09.1	268	25.1		54.0	293	32.7		43.1	353	23.1		32.4	0	13.9		01.5		
8	73	11.5	283	24.6		52.9	308	33.4		42.8	8	25.2		32.5	15	16.2		01.5		
9	88	14.0	298	24.1		51.9	323	34.2		42.4	23	27.3		32.5	30	18.5		01.6		
10	103	16.5	313	23.6		50.8	338	35.0		42.0	38	29.3		32.6	45	20.8		01.6		
11	118	18.9	328	23.1	+13	49.8	353	35.8	+20	41.7	53	31.4	+20	32.7	60	23.1	+18	01.6		
12	133	21.4	343	22.5	+13	48.7	8	36.6	+20	41.3	68	33.4	+20	32.7	75	25.4	+18	01.7		
13	148	23.9	358	22.0		47.7	23	37.3		41.0	83	35.5		32.8	90	27.7		01.7		
14	163	26.3	13	21.5		46.6	38	38.1		40.6	98	37.5		32.8	105	30.0		01.7		
15	178	28.8	28	21.0		45.5	53	38.9		40.3	113	39.6		32.9	120	32.3		01.7		
16	193	31.3	43	20.5		44.5	68	39.7		39.9	128	41.6		33.0	135	34.6		01.8		
17	208	33.7	58	20.0	+13	43.4	83	40.5	+20	39.6	143	43.7	+20	33.0	150	36.9	+18	01.8		
18	223	36.2	73	19.5	+13	42.4	98	41.2	+20	39.2	158	45.8	+20	33.1	165	39.2	+18	01.8		
19	238	38.7	88	19.0		41.3	113	42.0		38.8	173	47.8		33.2	180	41.5		01.8		
20	253	41.1	103	18.5		40.3	128	42.8		38.5	188	49.9		33.2	195	43.7		01.9		
21	268	43.6	118	18.0		39.2	143	43.6		38.1	203	51.9		33.3	210	46.0		01.9		
22	283	46.0	133	17.5		38.1	158	44.4		37.8	218	54.0		33.4	225	48.3		01.9		
23	298	48.5	148	17.0		37.1	173	45.1		37.4	233	56.0		33.4	240	50.6		02.0		
24	313	51.0	163	16.5	+13	36.0	188	45.9	+20	37.1	248	58.1	+20	33.5	255	52.9	+18	02.0		
Dif	—		-5		-11		+8		-4		+21		+1		+23					

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 4 ^d 9	PHE { 4 ^h : 57/3 12 ^h : 57/0 20 ^h : 56/7	Final del crepúsculo			Salida de Luna		Puesta de Luna			
	PMG: 12 ^h 05 ^m 9	hG ☉	Dec			hG ☾			Dif	Dec	Dif	Civil	Náutico	Hora
h	°	'	°	°	'	°	°	h m	h m	h m	h m m	h m m	h m m	
0	178	30.1	+16 56.7	114	49.8	-2 23.2	60 N	20 19	21 16	22 56	11 15 82	22 14 13		
1	193	30.2	56.1	129	21.4 ¹²⁶	35.4 ¹²²	58	20 08	20 59	22 17	13 78	18 15		
2	208	30.3	55.4	143	53.0 ¹²⁶	47.6 ¹²²	56	19 59	45	21 51	10 76	21 18		
3	223	30.3	54.7	158	24.7 ¹²⁷	-2 59.8 ¹²²	54	50	33	32	08 74	24 20		
4	238	30.4	54.0	172	56.4 ¹²⁷	-3 11.9 ¹²¹	52	43	23	16	06 72	27 21		
5	253	30.4	+16 53.3	187	28.1 ¹²⁷	-3 24.0 ¹²¹	50	19 36	20 13	21 02	11 04 70	22 29 24		
6	268	30.5	+16 52.7	201	59.8 ¹²⁷	-3 36.1 ¹²¹	45	19 21	19 54	20 35	11 01 66	22 35 27		
7	283	30.6	52.0	216	31.6 ¹²⁸	-3 48.1 ¹²⁰	40	19 09	39	20 15	10 57 63	39 30		
8	298	30.6	51.3	231	03.4 ¹²⁸	-4 00.1 ¹²⁰	35	18 59	26	19 59	55 60	43 33		
9	313	30.7	50.6	245	35.3 ¹²⁹	12.1 ¹²⁰	30	50	19 16	46	52 58	47 35		
10	328	30.8	49.9	260	07.1 ¹²⁸	24.0 ¹¹⁹	20	35	18 58	26	48 53	53 39		
11	343	30.8	+16 49.3	274	39.0 ¹²⁹	-4 35.9 ¹¹⁹	10 N	18 22	18 44	19 09	10 45 49	22 58 43		
12	358	30.9	+16 48.6	289	10.9 ¹²⁹	-4 47.7 ¹¹⁸	0	18 09	18 31	18 56	10 41 46	23 03 46		
13	13	31.0	47.9	303	42.8 ¹²⁹	-4 59.6 ¹¹⁹	10 S	17 57	19	44	38 43	08 50		
14	28	31.0	47.2	318	14.8 ¹³⁰	-5 11.3 ¹¹⁷	20	44	18 07	34	35 38	14 53		
15	43	31.1	46.5	332	46.8 ¹³⁰	23.1 ¹¹⁸	30	30	17 55	24	31 34	20 57		
16	58	31.2	45.8	347	18.8 ¹³⁰	34.8 ¹¹⁷	35	22	48	18	28 33	24 59		
17	73	31.2	+16 45.1	1	50.8 ¹³⁰	-5 46.4 ¹¹⁶	40	17 12	17 41	18 13	10 26 30	23 28 62		
18	88	31.3	+16 44.5	16	22.8 ¹³⁰	-5 58.0 ¹¹⁶	45	17 01	17 32	18 07	10 23 26	23 32 66		
19	103	31.4	43.8	30	54.9 ¹³¹	-6 09.6 ¹¹⁶	50	16 48	22	18 01	20 22	38 69		
20	118	31.4	43.1	45	26.9 ¹³⁰	21.1 ¹¹⁵	52	41	18	17 58	18 21	41 70		
21	133	31.5	42.4	59	59.0 ¹³¹	32.6 ¹¹⁵	54	34	13	56	16 19	44 72		
22	148	31.6	41.7	74	31.1 ¹³¹	44.1 ¹¹⁵	56	27	08	53	14 17	47 75		
23	163	31.7	41.0	89	03.2 ¹³¹	-6 55.5 ¹¹⁴	58	18	17 02	49	12 15	50 78		
24	178	31.7	+16 40.3	103	35.4 ¹³²	-7 06.8 ¹¹³	60 S	16 08	16 55	17 46	10 10 12	23 54 81		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG 3 ^h 04 ^m 1		Mag: -3.8 PMG: 13 ^h 07 ^m		Mag: +1.7 PMG: 11 ^h 24 ^m		Mag: -2.3 PMG: 7 ^h 23 ^m		Mag: +0.2 PMG: 6 ^h 55 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	313	51.0	163	16.5	+13 36.0	188 45.9	+20 37.1	248 58.1	+20 33.5	255 52.9	+18 02.0
1	328	53.4	178	16.0	34.9	203 46.7	36.7	264 00.2	33.5	270 55.2	02.0
2	343	55.9	193	15.5	33.9	218 47.5	36.3	279 02.2	33.6	285 57.5	02.0
3	358	58.4	208	15.0	32.8	233 48.3	36.0	294 04.3	33.7	300 59.8	02.1
4	14	00.8	223	14.5	31.8	248 49.0	35.6	309 06.3	33.7	316 02.1	02.1
5	29	03.3	238	14.0	+13 30.7	263 49.8	+20 35.3	324 08.4	+20 33.8	331 04.4	+18 02.1
6	44	05.8	253	13.5	+13 29.6	278 50.6	+20 34.9	339 10.4	+20 33.9	346 06.7	+18 02.1
7	59	08.2	268	13.0	28.6	293 51.4	34.5	354 12.5	33.9	1 09.0	02.2
8	74	10.7	283	12.5	27.5	308 52.2	34.2	9 14.6	34.0	16 11.3	02.2
9	89	13.1	298	12.0	26.4	323 53.0	33.8	24 16.6	34.0	31 13.6	02.2
10	104	15.6	313	11.5	25.4	338 53.7	33.5	39 18.7	34.1	46 15.9	02.3
11	119	18.1	328	11.0	+13 24.3	353 54.5	+20 33.1	54 20.7	+20 34.2	61 18.2	+18 02.3
12	134	20.5	343	10.5	+13 23.2	8 55.3	+20 32.7	69 22.8	+20 34.2	76 20.5	+18 02.3
13	149	23.0	358	10.0	22.1	23 56.1	32.4	84 24.9	34.3	91 22.8	02.3
14	164	25.5	13	09.5	21.1	38 56.9	32.0	99 26.9	34.4	106 25.1	02.4
15	179	27.9	28	09.0	20.0	53 57.7	31.7	114 29.0	34.4	121 27.4	02.4
16	194	30.4	43	08.5	18.9	68 58.4	31.3	129 31.0	34.5	136 29.7	02.4
17	209	32.9	58	08.0	+13 17.9	83 59.2	+20 30.9	144 33.1	+20 34.5	151 32.0	+18 02.4
18	224	35.3	73	07.5	+13 16.8	99 00.0	+20 30.6	159 35.2	+20 34.6	166 34.3	+18 02.5
19	239	37.8	88	07.0	15.7	114 00.8	30.2	174 37.2	34.7	181 36.6	02.5
20	254	40.3	103	06.5	14.6	129 01.6	29.8	189 39.3	34.7	196 38.9	02.5
21	269	42.7	118	06.0	13.6	144 02.4	29.5	204 41.4	34.8	211 41.2	02.6
22	284	45.2	133	05.5	12.5	159 03.2	29.1	219 43.4	34.9	226 43.5	02.6
23	299	47.6	148	05.0	11.4	174 03.9	28.8	234 45.5	34.9	241 45.8	02.6
24	314	50.1	163	04.5	+13 10.3	189 04.7	+20 28.4	249 47.5	+20 35.0	256 48.1	+18 02.6
Dif	—		-5	-11		+8	-4	+21	+1	+23	0

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15'8 PMG: 12 ^h 05 ^m 8			Edad: 5 ^d 9 SD: 15'4 PMG: 17 ^h 38 ^m	PHE { 4 ^h : 56'4 12 ^h : 56'1 20 ^h : 55'9 Rº: 46 ^m													
	hG ☉	Dec				hG ☾		Dif	Dec		Dif	Náutico	Civil	Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m		
0	178	31.7	+16	40.3	103	35.4	-7	06.8	60 N	1 17	2 56	3 53	12 37	79	22 27	15		
1	193	31.8		39.6	118	07.5 ¹³¹		18.1 ¹¹³	58	1 55	3 13	4 04	31 77		33 18			
2	208	31.9		39.0	132	39.7 ¹³²		29.3 ¹¹²	56	2 21	27	14	26 74		39 20			
3	223	31.9		38.3	147	11.9 ¹³²		40.6 ¹¹³	54	41	39	22	22 71		44 22			
4	238	32.0		37.6	161	44.0 ¹³¹		-7 51.7 ¹¹¹	52	2 57	50	30	18 70		48 24			
5	253	32.1	+16	36.9	176	16.2 ¹³²		-8 02.8 ¹¹¹	50	3 10	3 59	4 37	12 14	68	22 53	25		
6	268	32.1	+16	36.2	190	48.4 ¹³²		-8 13.9 ¹¹¹	45	3 37	4 18	4 51	12 07	64	23 02	29		
7	283	32.2		35.5	205	20.6 ¹³²		24.9 ¹¹⁰	40	3 57	33	5 03	12 00	61	09 32			
8	298	32.3		34.8	219	52.9 ¹³³		35.8 ¹⁰⁹	35	4 13	46	13	11 55	58	16 34			
9	313	32.4		34.1	234	25.1 ¹³²		46.7 ¹⁰⁹	30	26	4 56	22	50 56		22 36			
10	328	32.4		33.4	248	57.3 ¹³²		-8 57.5 ¹⁰⁸	20	4 46	5 14	37	41 53		32 40			
11	343	32.5	+16	32.7	263	29.6 ¹³³		-9 08.3 ¹⁰⁸	10 N	5 03	5 28	5 50	11 34	49	23 41	43		
12	358	32.6	+16	32.0	278	01.8 ¹³²		-9 19.1 ¹⁰⁸	0	5 16	5 41	6 02	11 27	46	23 49	46		
13	13	32.6		31.3	292	34.1 ¹³³		29.8 ¹⁰⁷	10 S	27	5 53	14	21 42		23 58	49		
14	28	32.7		30.6	307	06.3 ¹³²		40.4 ¹⁰⁶	20	38	6 04	27	13 40		** ** *	**		
15	43	32.8		30.0	321	38.6 ¹³³		-9 50.9 ¹⁰⁵	30	48	16	41	05 36		** ** *	**		
16	58	32.9		29.3	336	10.8 ¹³²		-10 01.5 ¹⁰⁶	35	53	23	50	11 01	33	** ** *	**		
17	73	32.9	+16	28.6	350	43.1 ¹³³		-10 11.9 ¹⁰⁴	40	5 58	6 31	6 59	10 56	30	** ** *	**		
18	88	33.0	+16	27.9	5	15.4 ¹³³		-10 22.3 ¹⁰⁴	45	6 04	6 39	7 10	10 49	28	** ** *	**		
19	103	33.1		27.2	19	47.6 ¹³²		32.6 ¹⁰³	50	10	49	23	42 25		** ** *	**		
20	118	33.2		26.5	34	19.9 ¹³³		42.9 ¹⁰³	52	13	53	29	39 23		** ** *	**		
21	133	33.2		25.8	48	52.1 ¹³²		-10 53.1 ¹⁰²	54	15	6 58	36	35 21		** ** *	**		
22	148	33.3		25.1	63	24.4 ¹³³		-11 03.3 ¹⁰²	56	18	7 03	44	31 19		** ** *	**		
23	163	33.4		24.4	77	56.7 ¹³³		13.4 ¹⁰¹	58	21	09	7 52	27 16		** ** *	**		
24	178	33.5	+16	23.7	92	28.9 ¹³²		-11 23.4 ¹⁰⁰	60 S	6 25	7 15	8 02	10 22	14	** ** *	**		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 3 ^h 00 ^m 2		Mag: -3.8 PMG: 13 ^h 08 ^m			Mag: +1.7 PMG: 11 ^h 23 ^m			Mag: -2.3 PMG: 7 ^h 20 ^m			Mag: +0.2 PMG: 6 ^h 52 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	314	50.1	163	04.5	+13	10.3	189	04.7	+20	28.4	249	47.5	+20	35.0	256	48.1	+18	02.6
1	329	52.6	178	04.0		09.3	204	05.5		28.0	264	49.6		35.0	271	50.4		02.7
2	344	55.0	193	03.6		08.2	219	06.3		27.7	279	51.7		35.1	286	52.7		02.7
3	359	57.5	208	03.1		07.1	234	07.1		27.3	294	53.7		35.2	301	55.0		02.7
4	15	00.0	223	02.6		06.0	249	07.9		26.9	309	55.8		35.2	316	57.3		02.7
5	30	02.4	238	02.1	+13	04.9	264	08.7	+20	26.6	324	57.9	+20	35.3	331	59.6	+18	02.8
6	45	04.9	253	01.6	+13	03.9	279	09.4	+20	26.2	339	59.9	+20	35.3	347	01.9	+18	02.8
7	60	07.4	268	01.1		02.8	294	10.2		25.8	355	02.0		35.4	2	04.2		02.8
8	75	09.8	283	00.6		01.7	309	11.0		25.5	10	04.1		35.5	17	06.5		02.8
9	90	12.3	298	00.1	+13	00.6	324	11.8		25.1	25	06.1		35.5	32	08.8		02.9
10	105	14.8	312	59.6	+12	59.5	339	12.6		24.7	40	08.2		35.6	47	11.1		02.9
11	120	17.2	327	59.2	+12	58.4	354	13.4	+20	24.4	55	10.2	+20	35.6	62	13.4	+18	02.9
12	135	19.7	342	58.7	+12	57.4	9	14.2	+20	24.0	70	12.3	+20	35.7	77	15.7	+18	02.9
13	150	22.1	357	58.2		56.3	24	15.0		23.6	85	14.4		35.8	92	18.0		03.0
14	165	24.6	12	57.7		55.2	39	15.7		23.3	100	16.4		35.8	107	20.3		03.0
15	180	27.1	27	57.2		54.1	54	16.5		22.9	115	18.5		35.9	122	22.6		03.0
16	195	29.5	42	56.7		53.0	69	17.3		22.5	130	20.6		36.0	137	24.9		03.1
17	210	32.0	57	56.2	+12	51.9	84	18.1	+20	22.2	145	22.6	+20	36.0	152	27.2	+18	03.1
18	225	34.5	72	55.8	+12	50.8	99	18.9	+20	21.8	160	24.7	+20	36.1	167	29.5	+18	03.1
19	240	36.9	87	55.3		49.7	114	19.7		21.4	175	26.8		36.1	182	31.8		03.1
20	255	39.4	102	54.8		48.7	129	20.5		21.1	190	28.8		36.2	197	34.1		03.2
21	270	41.9	117	54.3		47.6	144	21.3		20.7	205	30.9		36.3	212	36.4		03.2
22	285	44.3	132	53.8		46.5	159	22.1		20.3	220	33.0		36.3	227	38.7		03.2
23	300	46.8	147	53.3		45.4	174	22.9		20.0	235	35.0		36.4	242	41.0		03.2
24	315	49.2	162	52.9	+12	44.3	189	23.6	+20	19.6	250	37.1	+20	36.4	257	43.3	+18	03.3
Dif	—		-5		-11		+8		-4		+21		+1		+23			

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15/8 PMG: 12 ^h 05 ^m 7			Edad: 6 ^d 9 PHE { 4 ^h : 55/6 12 ^h : 55/4 20 ^h : 55/2 PMG: 18 ^h 24 ^m R°: 47 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m
0	178	33.5	+16	23.7	92	28.9	-11	23.4	60 N	20 14	21 10	22 42	13 56 76	22 42 18
1	193	33.5		23.0	107	01.2 ¹³³		33.4 ¹⁰⁰	58	20 04	20 54	22 08	48 73	51 21
2	208	33.6		22.3	121	33.4 ¹³²		43.3 ⁹⁹	56	19 54	40	21 44	40 71	22 59 24
3	223	33.7		21.6	136	05.7 ¹³³	-11	53.2 ⁹⁹	54	46	29	26	33 69	23 06 26
4	238	33.8		20.9	150	37.9 ¹³²	-12	02.9 ⁹⁷	52	39	18	21 11	28 67	12 28
5	253	33.8	+16	20.2	165	10.1 ¹³²	-12	12.7 ⁹⁸	50	19 32	20 10	20 58	13 22 66	23 18 29
6	268	33.9	+16	19.5	179	42.4 ¹³³	-12	22.3 ⁹⁶	45	19 18	19 51	20 32	13 11 62	23 31 32
7	283	34.0		18.8	194	14.6 ¹³²		31.9 ⁹⁶	40	19 07	36	20 13	13 01 59	41 35
8	298	34.1		18.1	208	46.8 ¹³²		41.4 ⁹⁵	35	18 57	24	19 57	12 53 57	50 37
9	313	34.2		17.4	223	19.0 ¹³²	-12	50.9 ⁹⁵	30	48	19 14	44	46 55	23 58 39
10	328	34.2		16.6	237	51.2 ¹³²	-13	00.3 ⁹⁴	20	34	18 57	24	34 51	** ** *
11	343	34.3	+16	15.9	252	23.4 ¹³²	-13	09.6 ⁹³	10 N	18 21	18 43	19 09	12 23 49	** ** *
12	358	34.4	+16	15.2	266	55.6 ¹³²	-13	18.9 ⁹³	0	18 09	18 31	18 56	12 13 46	** ** *
13	13	34.5		14.5	281	27.8 ¹³²		28.0 ⁹¹	10 S	17 57	19	45	12 03 44	** ** *
14	28	34.6		13.8	295	59.9 ¹³¹		37.2 ⁹²	20	45	18 08	34	11 53 40	0 07 52
15	43	34.6		13.1	310	32.1 ¹³²		46.2 ⁹⁰	30	31	17 56	25	41 37	17 56
16	58	34.7		12.4	325	04.2 ¹³¹	-13	55.2 ⁹⁰	35	23	50	20	34 35	23 58
17	73	34.8	+16	11.7	339	36.3 ¹³¹	-14	04.1 ⁸⁹	40	17 14	17 42	18 15	11 26 33	0 30 60
18	88	34.9	+16	11.0	354	08.4 ¹³¹	-14	12.9 ⁸⁸	45	17 03	17 34	18 09	11 17 31	0 38 63
19	103	35.0		10.3	8	40.5 ¹³¹		21.7 ⁸⁸	50	16 50	25	04	07 27	47 67
20	118	35.0		09.6	23	12.6 ¹³¹		30.4 ⁸⁷	52	44	21	18 01	11 02 25	51 69
21	133	35.1		08.9	37	44.7 ¹³¹		39.0 ⁸⁶	54	38	16	17 59	10 56 24	0 56 71
22	148	35.2		08.2	52	16.8 ¹³¹		47.6 ⁸⁶	56	30	11	56	50 22	1 02 72
23	163	35.3		07.5	66	48.8 ¹³⁰	-14	56.0 ⁸⁴	58	22	17 06	53	43 20	08 75
24	178	35.4	+16	06.7	81	20.9 ¹³¹	-15	04.4 ⁸⁴	60 S	16 13	16 59	17 50	10 36 16	1 15 78

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 2 ^h 56 ^m 2		Mag: -3.8 PMG: 13 ^h 09 ^m		Mag: +1.7 PMG: 11 ^h 22 ^m		Mag: -2.3 PMG: 7 ^h 17 ^m		Mag: +0.2 PMG: 6 ^h 48 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	315	49.2	162	52.9	+12	44.3	189	23.6	+20	19.6
1	330	51.7	177	52.4		43.2	204	24.4		19.2
2	345	54.2	192	51.9		42.1	219	25.2		18.8
3	0	56.6	207	51.4		41.0	234	26.0		18.5
4	15	59.1	222	50.9		39.9	249	26.8		18.1
5	31	01.6	237	50.5	+12	38.8	264	27.6	+20	17.7
6	46	04.0	252	50.0	+12	37.7	279	28.4	+20	17.4
7	61	06.5	267	49.5		36.6	294	29.2		17.0
8	76	09.0	282	49.0		35.5	309	30.0		16.6
9	91	11.4	297	48.6		34.4	324	30.8		16.2
10	106	13.9	312	48.1		33.4	339	31.6		15.9
11	121	16.4	327	47.6	+12	32.3	354	32.3	+20	15.5
12	136	18.8	342	47.1	+12	31.2	9	33.1	+20	15.1
13	151	21.3	357	46.7		30.1	24	33.9		14.7
14	166	23.7	12	46.2		29.0	39	34.7		14.4
15	181	26.2	27	45.7		27.9	54	35.5		14.0
16	196	28.7	42	45.2		26.8	69	36.3		13.6
17	211	31.1	57	44.8	+12	25.7	84	37.1	+20	13.3
18	226	33.6	72	44.3	+12	24.6	99	37.9	+20	12.9
19	241	36.1	87	43.8		23.5	114	38.7		12.5
20	256	38.5	102	43.3		22.3	129	39.5		12.1
21	271	41.0	117	42.9		21.2	144	40.3		11.8
22	286	43.5	132	42.4		20.1	159	41.1		11.4
23	301	45.9	147	41.9		19.0	174	41.9		11.0
24	316	48.4	162	41.5	+12	17.9	189	42.7	+20	10.6
Dif	—		-5		-11		+8		-4	

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8 PMG: 12 ^h 05 ^m 6				Edad: 7 ^d 9 PHE { 4 ^h : 55 ^o 0 12 ^h : 54 ^o 9 20 ^h : 54 ^o 7 R°: 47 ^m													
	hG ☉		Dec		hG ☾ Dif		Dec Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	178	35.4	+16	06.7	81	20.9	-15	04.4	83	60 N	1 30	3 02	3 58	15	12	72	23	00 26
1	193	35.4		06.0	95	52.9 ¹³⁰		12.7	83	58	2 04	18	4 08	15	01	69		12 28
2	208	35.5		05.3	110	24.9 ¹³⁰		21.0	82	56	28	32	18	14	51	67		23 29
3	223	35.6		04.6	124	56.9 ¹³⁰		29.2	83	54	2 46	43	26		42	66		32 31
4	238	35.7		03.9	139	28.8 ¹²⁹		37.3	81	52	3 01	3 53	33		35	63		40 33
5	253	35.8	+16	03.2	154	00.8 ¹³⁰	-15	45.3	80	50	3 14	4 02	4 40	14	28	62	23	47 34
6	268	35.9	+16	02.5	168	32.7 ¹²⁹	-15	53.2	79	45	3 40	4 21	4 54	14	13	59	**	** *
7	283	35.9		01.8	183	04.7 ¹³⁰	-16	01.1	79	40	3 59	35	5 05	14	00	58	**	** *
8	298	36.0		01.0	197	36.6 ¹²⁹		08.9	78	35	4 15	47	15	13	50	56	**	** *
9	313	36.1	+16	00.3	212	08.4 ¹²⁸		16.6	77	30	27	4 58	23		41	54	**	** *
10	328	36.2	+15	59.6	226	40.3 ¹²⁹		24.2	76	20	4 47	5 15	38		25	52	0	12 42
11	343	36.3	+15	58.9	241	12.2 ¹²⁹	-16	31.8	76	10 N	5 03	5 29	5 50	13	12	49	0	24 44
12	358	36.4	+15	58.2	255	44.0 ¹²⁸	-16	39.3	75	0	5 16	5 41	6 02	12	59	47	0	35 47
13	13	36.5		57.5	270	15.8 ¹²⁸		46.6	73	10 S	27	5 52	14		47	45		47 49
14	28	36.5		56.7	284	47.6 ¹²⁸	-16	54.0	74	20	37	6 03	26		33	43	0	59 51
15	43	36.6		56.0	299	19.4 ¹²⁸	-17	01.2	72	30	46	15	40		18	40	1	13 54
16	58	36.7		55.3	313	51.2 ¹²⁸		08.3	71	35	51	21	48	12	09	39		21 56
17	73	36.8	+15	54.6	328	22.9 ¹²⁷	-17	15.4	71	40	5 56	6 28	6 57	11	59	37	1	30 58
18	88	36.9	+15	53.9	342	54.6 ¹²⁷	-17	22.4	70	45	6 01	6 36	7 07	11	48	34	1	41 61
19	103	37.0		53.2	357	26.3 ¹²⁷		29.3	69	50	07	46	20		34	31	1	54 64
20	118	37.1		52.4	11	58.0 ¹²⁷		36.1	68	52	09	50	26		27	30	2	00 65
21	133	37.1		51.7	26	29.7 ¹²⁷		42.8	67	54	12	54	32		20	28		07 67
22	148	37.2		51.0	41	01.3 ¹²⁶		49.5	67	56	15	6 59	40		12	26		14 69
23	163	37.3		50.3	55	32.9 ¹²⁶	-17	56.1	66	58	17	7 05	48	11	03	24	23	71
24	178	37.4	+15	49.6	70	04.5 ¹²⁶	-18	02.5	64	60 S	6 21	7 11	7 57	10	52	22	2	33 74
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 2 ^h 52 ^m 3		Mag: -3.8 PMG: 13 ^h 10 ^m				Mag: +1.7 PMG: 11 ^h 21 ^m				Mag: -2.3 PMG: 7 ^h 13 ^m				Mag: +0.2 PMG: 6 ^h 44 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	316	48.4	162	41.5	+12	17.9	189	42.7	+20	10.6	251	26.8	+20	37.9	258	38.7	+18	03.9
1	331	50.9	177	41.0		16.8	204	43.5		10.3	266	28.9		37.9	273	41.0		03.9
2	346	53.3	192	40.5		15.7	219	44.2		09.9	281	31.0		38.0	288	43.3		03.9
3	1	55.8	207	40.0		14.6	234	45.0		09.5	296	33.0		38.0	303	45.6		03.9
4	16	58.2	222	39.6		13.5	249	45.8		09.1	311	35.1		38.1	318	47.9		04.0
5	32	00.7	237	39.1	+12	12.4	264	46.6	+20	08.7	326	37.2	+20	38.2	333	50.2	+18	04.0
6	47	03.2	252	38.6	+12	11.3	279	47.4	+20	08.4	341	39.3	+20	38.2	348	52.5	+18	04.0
7	62	05.6	267	38.2		10.2	294	48.2		08.0	356	41.3		38.3	3	54.8		04.0
8	77	08.1	282	37.7		09.1	309	49.0		07.6	11	43.4		38.3	18	57.2		04.1
9	92	10.6	297	37.2		08.0	324	49.8		07.2	26	45.5		38.4	33	59.5		04.1
10	107	13.0	312	36.8		06.8	339	50.6		06.9	41	47.6		38.5	49	01.8		04.1
11	122	15.5	327	36.3	+12	05.7	354	51.4	+20	06.5	56	49.6	+20	38.5	64	04.1	+18	04.1
12	137	18.0	342	35.8	+12	04.6	9	52.2	+20	06.1	71	51.7	+20	38.6	79	06.4	+18	04.2
13	152	20.4	357	35.4		03.5	24	53.0		05.7	86	53.8		38.6	94	08.7		04.2
14	167	22.9	12	34.9		02.4	39	53.8		05.3	101	55.9		38.7	109	11.0		04.2
15	182	25.3	27	34.4		01.3	54	54.6		05.0	116	57.9		38.7	124	13.3		04.2
16	197	27.8	42	34.0	+12	00.2	69	55.4		04.6	132	00.0		38.8	139	15.6		04.3
17	212	30.3	57	33.5	+11	59.1	84	56.2	+20	04.2	147	02.1	+20	38.9	154	17.9	+18	04.3
18	227	32.7	72	33.1	+11	57.9	99	57.0	+20	03.8	162	04.2	+20	38.9	169	20.3	+18	04.3
19	242	35.2	87	32.6		56.8	114	57.8		03.4	177	06.3		39.0	184	22.6		04.3
20	257	37.7	102	32.1		55.7	129	58.6		03.1	192	08.3		39.0	199	24.9		04.3
21	272	40.1	117	31.7		54.6	144	59.4		02.7	207	10.4		39.1	214	27.2		04.4
22	287	42.6	132	31.2		53.5	160	00.2		02.3	222	12.5		39.2	229	29.5		04.4
23	302	45.1	147	30.8		52.4	175	01.0		01.9	237	14.6		39.2	244	31.8		04.4
24	317	47.5	162	30.3	+11	51.2	190	01.8	+20	01.5	252	16.6	+20	39.3	259	34.1	+18	04.4
Dif	—		-5		-11		+8		-4		+21		+1		+23			

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8			Edad: 8 ^d 9	PHE { 4 ^h : 54 ^h /6 12 ^h : 54 ^h /4 20 ^h : 54 ^h /3										
	PMG: 12 ^h 05 ^m 4					SD: 14 ^h 9									PMG: 19 ^h 58 ^m
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	178	37.4	+15 49.6	70	04.5	-18 02.5	64	60 N	20 09	21 03	22 29	16 24 65	23 26 34		
1	193	37.5		84	36.1 ¹²⁶	08.9	64	58	19 59	20 48	21 59	16 10 63	40 36		
2	208	37.6		99	07.7 ¹²⁶	15.2	63	56		50	35	37	15 58 61	23 52 38	
3	223	37.7		113	39.2 ¹²⁵	21.5	63	54		42	24	20	48 60	*** ** *	**
4	238	37.8		128	10.7 ¹²⁵	27.6	61	52		35	14	21 05	38 59	*** ** *	**
5	253	37.9	+15 45.9	142	42.2 ¹²⁵	-18 33.7	61	50	19 29	20 06	20 53	15 30 58	*** ** *	*** ** *	**
6	268	37.9	+15 45.2	157	13.7 ¹²⁵	-18 39.6	59	45	19 15	19 48	20 28	15 12 56	0 03 37		
7	283	38.0		171	45.2 ¹²⁵	45.5	58	40	19 04	34	20 10	14 58 54	16 39		
8	298	38.1		186	16.6 ¹²⁴	51.3	59	35	18 55	22	19 55	46 53	27 40		
9	313	38.2		200	48.0 ¹²⁴	-18 57.0	57	30		47	19 12	42	35 52	37 41	
10	328	38.3		215	19.4 ¹²⁴	-19 02.6	56	20		32	18 56	23	17 50	0 54 43	
11	343	38.4	+15 41.6	229	50.8 ¹²⁴	-19 08.1	55	10 N	18 20	18 42	19 08	14 01 49	1 08 46		
12	358	38.5	+15 40.9	244	22.2 ¹²⁴	-19 13.5	54	0	18 09	18 30	18 55	13 46 48	1 22 47		
13	13	38.6		258	53.5 ¹²³	18.9	54	10 S	17 58	19	45	32 46	36 49		
14	28	38.7		273	24.8 ¹²³	24.1	52	20		46	18 09	35	13 16 45	1 50 51	
15	43	38.8		287	56.1 ¹²³	29.3	52	30		32	17 57	26	12 58 43	2 07 53	
16	58	38.9		302	27.4 ¹²³	34.4	51	35		25	51	21	48 42	17 55	
17	73	39.0	+15 37.2	316	58.6 ¹²²	-19 39.3	49	40	17 16	17 44	18 16	12 36 41	2 28 56		
18	88	39.0	+15 36.5	331	29.9 ¹²³	-19 44.2	49	45	17 06	17 36	18 11	12 22 39	2 42 58		
19	103	39.1		346	01.1 ¹²²	49.0	48	50	16 53	28	06	12 05 37	2 58 60		
20	118	39.2		0	32.3 ¹²²	53.7	47	52		48	24	04	11 57 36	3 05 62	
21	133	39.3		15	03.5 ¹²²	-19 58.3	46	54		41	19	18 01	48 35	14 63	
22	148	39.4		33	29.34 ¹²¹	-20 02.8	45	56		34	14	17 59	38 34	23 65	
23	163	39.5		44	05.8 ¹²²	07.3	45	58		26	09	56	27 32	34 67	
24	178	39.6	+15 32.1	58	36.9 ¹²¹	-20 11.6	43	60 S	16 17	17 03	17 53	11 14 29	3 47 69		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG 2 ^h 48 ^m 4		Mag: -3.8 PMG: 13 ^h 10 ^m		Mag: +1.7 PMG: 11 ^h 19 ^m		Mag: -2.3 PMG: 7 ^h 10 ^m		Mag: +0.2 PMG: 6 ^h 41 ^m						
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	°	°	°	°	°	°	°	°	°						
0	317	47.5	162 30.3	+11 51.2	190 01.8	+20 01.5	252 16.6	+20 39.3	259 34.1	+18 04.4					
1	332	50.0	177 29.8	50.1	205 02.6	01.2	267 18.7	39.3	274 36.4	04.5					
2	347	52.5	192 29.4	49.0	220 03.4	00.8	282 20.8	39.4	289 38.7	04.5					
3	2 54.9	207 28.9	47.9	235 04.2	+20 00.4	297 22.9	39.4	304 41.1	04.5						
4	17 57.4	222 28.5	46.8	250 05.0	+20 00.0	312 25.0	39.5	319 43.4	04.5						
5	32 59.8	237 28.0	+11 45.6	265 05.8	+19 59.6	327 27.0	+20 39.6	334 45.7	+18 04.6						
6	48 02.3	252 27.5	+11 44.5	280 06.6	+19 59.2	342 29.1	+20 39.6	349 48.0	+18 04.6						
7	63 04.8	267 27.1	43.4	295 07.4	58.9	357 31.2	39.7	4 50.3	04.6						
8	78 07.2	282 26.6	42.3	310 08.2	58.5	12 33.3	39.7	19 52.6	04.6						
9	93 09.7	297 26.2	41.1	325 09.0	58.1	27 35.4	39.8	34 54.9	04.7						
10	108 12.2	312 25.7	40.0	340 09.8	57.7	42 37.4	39.8	49 57.2	04.7						
11	123 14.6	327 25.3	+11 38.9	355 10.6	+19 57.3	57 39.5	+20 39.9	64 59.6	+18 04.7						
12	138 17.1	342 24.8	+11 37.8	10 11.4	+19 56.9	72 41.6	+20 40.0	80 01.9	+18 04.7						
13	153 19.6	357 24.3	36.6	25 12.2	56.6	87 43.7	40.0	95 04.2	04.8						
14	168 22.0	12 23.9	35.5	40 13.0	56.2	102 45.8	40.1	110 06.5	04.8						
15	183 24.5	27 23.4	34.4	55 13.8	55.8	117 47.9	40.1	125 08.8	04.8						
16	198 27.0	42 23.0	33.3	70 14.6	55.4	132 49.9	40.2	140 11.1	04.8						
17	213 29.4	57 22.5	+11 32.1	85 15.4	+19 55.0	147 52.0	+20 40.2	155 13.4	+18 04.8						
18	228 31.9	72 22.1	+11 31.0	100 16.2	+19 54.6	162 54.1	+20 40.3	170 15.8	+18 04.9						
19	243 34.3	87 21.6	29.9	115 17.0	54.2	177 56.2	40.4	185 18.1	04.9						
20	258 36.8	102 21.2	28.8	130 17.8	53.9	192 58.3	40.4	200 20.4	04.9						
21	273 39.3	117 20.7	27.6	145 18.6	53.5	208 00.4	40.5	215 22.7	04.9						
22	288 41.7	132 20.3	26.5	160 19.4	53.1	223 02.4	40.5	230 25.0	05.0						
23	303 44.2	147 19.8	25.4	175 20.2	52.7	238 04.5	40.6	245 27.3	05.0						
24	318 46.7	162 19.4	+11 24.2	190 21.0	+19 52.3	253 06.6	+20 40.6	260 29.6	+18 05.0						
Dif	—	-5	-11	+8	-4	+21	+1	+23							

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 3				Edad: 9 ^d 9 PHE { 4 ^h : 54 ^h 3 12 ^h : 54 ^h 2 20 ^h : 54 ^h 1 Rº: 48 ^m																
	hG ☉		Dec		hG ☾		Dif		Dec			Dif			Náutico	Civil	Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m
0	178	39.6	+15	32.1	58	36.9	-20	11.6	42	58	N	1	42	3	09	4	03	17	29	55	*** ** *
1	193	39.7		31.4	73	08.0		15.8	42	58		2	12		24	13	17	13	54	*** ** *	
2	208	39.8		30.7	87	39.1		20.0	40	56			34		36	22	16	59	54	*** ** *	
3	223	39.9		29.9	102	10.1		24.0	40	54		2	51		47	29		48	53	0 03 39	
4	238	40.0		29.2	116	41.2		28.0	40	52		3	06	3	57	36		37	53	13 39	
5	253	40.1	+15	28.5	131	12.2	-20	31.8	38	50		3	18	4	06	4	43	16	28	52	0 21 41
6	268	40.2	+15	27.7	145	43.2	-20	35.6	38	45		3	43	4	23	4	56	16	08	52	0 40 41
7	283	40.3		27.0	160	14.2		39.2	36	40		4	02		37	5	07	15	52	52	0 55 43
8	298	40.4		26.2	174	45.2		42.8	36	35			16		49	16		39	51		1 07 44
9	313	40.5		25.5	189	16.1		46.3	35	30			29	4	59	24		27	51		18 45
10	328	40.6		24.8	203	47.1		49.6	33	20		4	48	5	15	39		15	07	50	37 46
11	343	40.7	+15	24.0	218	18.0	-20	52.9	33	10 N		5	03	5	29	5	51	14	50	49	1 54 47
12	358	40.8	+15	23.3	232	48.9	-20	56.1	32	0		5	15	5	40	6	02	14	34	49	2 09 48
13	13	40.9		22.6	247	19.8	-20	59.2	31	10 S			26	5	51	13		18	48		25 49
14	28	41.0		21.8	261	50.7	-21	02.2	30	20			36	6	02	25		14	01	47	2 41 51
15	43	41.1		21.1	276	21.6		05.0	28	30			45		13	38		13	41	47	3 00 52
16	58	41.2		20.4	290	52.4		07.8	28	35			49		19	46		30	46		12 52
17	73	41.3	+15	19.6	305	23.2	-21	10.5	27	40		5	54	6	26	6	54	13	17	45	3 24 53
18	88	41.4	+15	18.9	319	54.1	-21	13.1	26	45		5	59	6	34	7	04	13	01	45	3 40 54
19	103	41.5		18.1	334	24.9		15.6	25	50		6	04		42	17		12	42	44	3 58 55
20	118	41.5		17.4	348	55.7		18.0	24	52			06		46	22		33	43		4 07 56
21	133	41.6		16.7	3	26.5		20.3	23	54			08		51	28		23	42		17 57
22	148	41.7		15.9	17	57.2		22.5	22	56			11	6	55	35		12	12	41	28 58
23	163	41.8		15.2	32	28.0		24.6	21	58			13	7	00	43		11	59	40	41 58
24	178	42.0	+15	14.4	46	58.7	-21	26.6	20	60 S		6	16	7	06	7	52	11	43	40	4 56 60

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 2 ^h 44 ^m 4		Mag: -3.8 PMG: 13 ^h 11 ^m				Mag: +1.7 PMG: 11 ^h 18 ^m				Mag: -2.3 PMG: 7 ^h 07 ^m				Mag: +0.2 PMG: 6 ^h 37 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	318	46.7	162	19.4	+11	24.2	190	21.0	+19	52.3	253	06.6	+20	40.6	260	29.6	+18	05.0
1	333	49.1	177	18.9		23.1	205	21.8		51.9	268	08.7		40.7	275	32.0		05.0
2	348	51.6	192	18.5		22.0	220	22.6		51.5	283	10.8		40.8	290	34.3		05.1
3	3	54.1	207	18.0		20.8	235	23.4		51.1	298	12.9		40.8	305	36.6		05.1
4	18	56.5	222	17.6		19.7	250	24.2		50.8	313	14.9		40.9	320	38.9		05.1
5	33	59.0	237	17.1	+11	18.6	265	25.0	+19	50.4	328	17.0	+20	40.9	335	41.2	+18	05.1
6	49	01.4	252	16.7	+11	17.4	280	25.8	+19	50.0	343	19.1	+20	41.0	350	43.5	+18	05.1
7	64	03.9	267	16.2		16.3	295	26.6		49.6	358	21.2		41.0	5	45.9		05.2
8	79	06.4	282	15.8		15.2	310	27.4		49.2	13	23.3		41.1	20	48.2		05.2
9	94	08.8	297	15.3		14.0	325	28.2		48.8	28	25.4		41.1	35	50.5		05.2
10	109	11.3	312	14.9		12.9	340	29.0		48.4	43	27.5		41.2	50	52.8		05.2
11	124	13.8	327	14.4	+11	11.8	355	29.8	+19	48.0	58	29.6	+20	41.3	65	55.1	+18	05.3
12	139	16.2	342	14.0	+11	10.6	10	30.6	+19	47.6	73	31.6	+20	41.3	80	57.4	+18	05.3
13	154	18.7	357	13.6		09.5	25	31.4		47.2	88	33.7		41.4	95	59.8		05.3
14	169	21.2	12	13.1		08.3	40	32.3		46.9	103	35.8		41.4	111	02.1		05.3
15	184	23.6	27	12.7		07.2	55	33.1		46.5	118	37.9		41.5	126	04.4		05.3
16	199	26.1	42	12.2		06.1	70	33.9		46.1	133	40.0		41.5	141	06.7		05.4
17	214	28.6	57	11.8	+11	04.9	85	34.7	+19	45.7	148	42.1	+20	41.6	156	09.0	+18	05.4
18	229	31.0	72	11.3	+11	03.8	100	35.5	+19	45.3	163	44.2	+20	41.6	171	11.4	+18	05.4
19	244	33.5	87	10.9		02.6	115	36.3		44.9	178	46.3		41.7	186	13.7		05.4
20	259	35.9	102	10.5		01.5	130	37.1		44.5	193	48.3		41.8	201	16.0		05.5
21	274	38.4	117	10.0	+11	00.4	145	37.9		44.1	208	50.4		41.8	216	18.3		05.5
22	289	40.9	132	09.6	+10	59.2	160	38.7		43.7	223	52.5		41.9	231	20.6		05.5
23	304	43.3	147	09.1		58.1	175	39.5		43.3	238	54.6		41.9	246	23.0		05.5
24	319	45.8	162	08.7	+10	56.9	190	40.3	+19	42.9	253	56.7	+20	42.0	261	25.3	+18	05.5
Dif	—		-4		-11		+8		-4		+21		+1		+23			

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 1			Edad: 10 ^d 9 PHE { SD: 14 ^h 7 PMG: 21 ^h 34 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	Rº	Hora	Rº
h	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	h m		
0	178	42.0	+15	14.4	46	58.7	-21 26.6	60 N	20 03	20 56	22 18	18 24	43	0 00	45
1	193	42.1		13.7	61	29.5 ¹¹⁸	28.5 ¹⁹	58	19 54	42	21 51	18 07	44	16	46
2	208	42.2		12.9	76	00.2 ¹¹⁷	30.3 ¹⁸	56	45	30	31	17 53	45	30	46
3	223	42.3		12.2	90	30.9 ¹¹⁷	32.0 ¹⁷	54	38	19	14	41	45	42	46
4	238	42.4		11.5	105	01.6 ¹¹⁷	33.6 ¹⁶	52	31	10	21 00	30	45	0 52	47
5	253	42.5	+15	10.7	119	32.3 ¹¹⁷	-21 35.1 ¹⁵	50	19 25	20 02	20 48	17 20	46	1 02	47
6	268	42.6	+15	10.0	134	03.0 ¹¹⁷	-21 36.4 ¹³	45	19 12	19 45	20 25	17 00	46	1 21	48
7	283	42.7		09.2	148	33.7 ¹¹⁷	37.7 ¹²	40	19 02	31	20 07	16 44	46	38	47
8	298	42.8		08.5	163	04.3 ¹¹⁶	38.9 ¹¹	35	18 53	20	19 52	30	47	1 51	48
9	313	42.9		07.7	177	35.0 ¹¹⁷	40.0 ¹⁰	30	45	19 10	40	16 18	47	2 03	48
10	328	43.0		07.0	192	05.7 ¹¹⁷	41.0 ⁹	20	31	18 54	21	15 57	48	23	49
11	343	43.1	+15	06.2	206	36.3 ¹¹⁶	-21 41.9 ⁸	10 N	18 19	18 41	19 07	15 39	48	2 41	48
12	358	43.2	+15	05.5	221	07.0 ¹¹⁷	-21 42.7 ⁷	0	18 09	18 30	18 55	15 23	48	2 57	49
13	13	43.3		04.7	235	37.6 ¹¹⁶	43.4 ⁶	10 S	17 58	19	45	15 06	49	3 14	49
14	28	43.4		04.0	250	08.2 ¹¹⁶	44.0 ⁴	20	46	18 09	35	14 48	49	32	48
15	43	43.5		03.3	264	38.9 ¹¹⁷	44.4 ⁴	30	33	17 58	27	28	49	3 52	49
16	58	43.6		02.5	279	09.5 ¹¹⁶	44.8 ³	35	26	52	22	16	49	4 04	49
17	73	43.7	+15	01.8	293	40.1 ¹¹⁶	-21 45.1 ²	40	17 18	17 46	18 18	14 02	50	4 17	49
18	88	43.8	+15	01.0	308	10.7 ¹¹⁶	-21 45.3 ¹	45	17 08	17 39	18 13	13 46	50	4 34	49
19	103	43.9	+15	00.3	322	41.3 ¹¹⁶	45.4 ¹	50	16 56	30	09	26	50	4 53	50
20	118	44.0	+14	59.5	337	11.9 ¹¹⁶	45.3 ¹	52	51	26	07	16	51	5 03	49
21	133	44.1		58.8	351	42.6 ¹¹⁷	45.2 ²	54	45	22	04	13 05	51	14	49
22	148	44.2		58.0	6	13.2 ¹¹⁶	45.0 ⁴	56	38	18	02	12 53	51	26	49
23	163	44.3		57.3	20	43.8 ¹¹⁶	44.6 ⁴	58	30	13	18 00	39	51	39	50
24	178	44.4	+14	56.5	35	14.4 ¹¹⁶	-21 44.2 ⁴	60 S	16 22	17 08	17 57	12 23	51	5 56	49

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 2 ^h 40 ^m 5		Mag: -3.8 PMG: 13 ^h 12 ^m		Mag: +1.7 PMG: 11 ^h 17 ^m		Mag: -2.3 PMG: 7 ^h 03 ^m		Mag: +0.2 PMG: 6 ^h 33 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	319	45.8	162	08.7	190	40.3	253	56.7	261	25.3
1	334	48.3	177	08.3	205	41.1	268	58.8	276	27.6
2	349	50.7	192	07.8	220	41.9	284	00.9	291	29.9
3	4	53.2	207	07.4	235	42.7	299	03.0	306	32.2
4	19	55.7	222	06.9	250	43.5	314	05.1	321	34.5
5	34	58.1	237	06.5	265	44.4	329	07.2	336	36.9
6	50	00.6	252	06.1	280	45.2	344	09.2	351	39.2
7	65	03.1	267	05.6	295	46.0	359	11.3	6	41.5
8	80	05.5	282	05.2	310	46.8	14	13.4	21	43.8
9	95	08.0	297	04.7	325	47.6	29	15.5	36	46.2
10	110	10.4	312	04.3	340	48.4	44	17.6	51	48.5
11	125	12.9	327	03.9	355	49.2	59	19.7	66	50.8
12	140	15.4	342	03.4	10	50.0	74	21.8	81	53.1
13	155	17.8	357	03.0	25	50.8	89	23.9	96	55.4
14	170	20.3	12	02.6	40	51.6	104	26.0	111	57.8
15	185	22.8	27	02.1	55	52.4	119	28.1	127	00.1
16	200	25.2	42	01.7	70	53.3	134	30.2	142	02.4
17	215	27.7	57	01.3	85	54.1	149	32.3	157	04.7
18	230	30.2	72	00.8	100	54.9	164	34.4	172	07.0
19	245	32.6	87	00.4	115	55.7	179	36.5	187	09.4
20	260	35.1	102	00.0	130	56.5	194	38.6	202	11.7
21	275	37.6	116	59.5	145	57.3	209	40.6	217	14.0
22	290	40.0	131	59.1	160	58.1	224	42.7	232	16.3
23	305	42.5	146	58.7	175	58.9	239	44.8	247	18.7
24	320	44.9	161	58.2	190	59.7	254	46.9	262	21.0
Dif	—		-4		+8		+21		+23	

UT	SOL			O LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 15 ^h 8 PMG: 12 ^h 05 ^m 0			Edad: 11 ^d 9 PHE { 4 ^h : 54 ^l 1 12 ^h : 54 ^l 1 20 ^h : 54 ^l 1 PMG: 22 ^h 23 ^m R°: 48 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°		
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	178	44.4	+14	56.5	35	14.4	-21	44.2	5	60 N	1 53	3 15	4 07	19 07	32	0 45	57
1	193	44.5		55.7	49	45.0 ¹¹⁶		43.7	5	58	2 20	29	17	18 51	34	1 02	56
2	208	44.7		55.0	64	15.6 ¹¹⁶		43.0	7	56	40	41	25	38 35		16	55
3	223	44.8		54.2	78	46.2 ¹¹⁶		42.3	7	54	2 57	3 52	33	26 37		28	55
4	238	44.9		53.5	93	16.8 ¹¹⁶		41.5	8	52	3 10	4 01	39	15 38		39	54
5	253	45.0	+14	52.7	107	47.5 ¹¹⁷	-21	40.5	10	50	3 22	4 09	4 45	18 06	39	1 49	53
6	268	45.1	+14	52.0	122	18.1 ¹¹⁶	-21	39.5	10	45	3 46	4 26	4 58	17 46	41	2 09	52
7	283	45.2		51.2	136	48.7 ¹¹⁶		38.3	12	40	4 04	40	5 09	30 43		25	52
8	298	45.3		50.5	151	19.3 ¹¹⁶		37.1	12	35	18	4 51	18	17 43		39	51
9	313	45.4		49.7	165	50.0 ¹¹⁷		35.7	14	30	30	5 00	26	17 05	44	2 51	51
10	328	45.5		49.0	180	20.6 ¹¹⁶		34.3	14	20	4 49	16	39	16 45	46	3 12	50
11	343	45.6	+14	48.2	194	51.3 ¹¹⁷	-21	32.7	16	10 N	5 03	5 29	5 51	16 27	48	3 29	50
12	358	45.7	+14	47.4	209	21.9 ¹¹⁶	-21	31.1	16	0	5 15	5 40	6 02	16 11	48	3 46	48
13	13	45.8		46.7	223	52.6 ¹¹⁷		29.3	18	10 S	25	5 51	12	15 55	49	4 03	47
14	28	46.0		45.9	238	23.2 ¹¹⁶		27.5	18	20	35	6 01	23	37 51		20	47
15	43	46.1		45.2	252	53.9 ¹¹⁷		25.5	20	30	43	11	36	17 52		41	46
16	58	46.2		44.4	267	24.6 ¹¹⁷		23.5	20	35	47	17	44	15 05	53	4 53	45
17	73	46.3	+14	43.7	281	55.3 ¹¹⁷	-21	21.3	22	40	5 52	6 24	6 52	14 52	54	5 06	45
18	88	46.4	+14	42.9	296	26.0 ¹¹⁷	-21	19.1	22	45	5 56	6 31	7 01	14 36	55	5 23	43
19	103	46.5		42.1	310	56.7 ¹¹⁷		16.7	24	50	6 01	39	13	16 57		43	42
20	118	46.6		41.4	325	27.4 ¹¹⁷		14.3	24	52	03	43	18	14 07	57	5 52	42
21	133	46.7		40.6	339	58.2 ¹¹⁸		11.7	26	54	05	47	24	13 56	58	6 03	41
22	148	46.8		39.9	354	28.9 ¹¹⁷		09.1	26	56	07	51	31	44 59		15	40
23	163	47.0		39.1	8	59.7 ¹¹⁸		06.3	28	58	09	6 56	38	30 61		29	38
24	178	47.1	+14	38.3	23	30.4 ¹¹⁷	-21	03.5	28	60 S	6 12	7 01	7 47	13 14	62	6 45	37
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO				
	PMG 2 ^h 36 ^m 6			Mag: -3.8 PMG: 13 ^h 12 ^m			Mag: +1.8 PMG: 11 ^h 15 ^m			Mag: -2.3 PMG: 7 ^h 00 ^m			Mag: +0.2 PMG: 6 ^h 30 ^m				
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	320	44.9		161	58.2	+10	190	59.7	+19	254	46.9	+20	262	21.0	+18	06.1	
1	335	47.4		176	57.8		206	00.6		269	49.0		277	23.3		06.1	
2	350	49.9		191	57.4		221	01.4		284	51.1		292	25.6		06.1	
3	5	52.3		206	57.0		236	02.2		299	53.2		307	28.0		06.1	
4	20	54.8		221	56.5		251	03.0		314	55.3		322	30.3		06.1	
5	35	57.3		236	56.1	+10	266	03.8	+19	329	57.4	+20	337	32.6	+18	06.2	
6	50	59.7		251	55.7	+10	281	04.6	+19	344	59.5	+20	352	34.9	+18	06.2	
7	66	02.2		266	55.2		296	05.4		0	01.6		7	37.3		06.2	
8	81	04.7		281	54.8		311	06.2		15	03.7		22	39.6		06.2	
9	96	07.1		296	54.4		326	07.1		30	05.8		37	41.9		06.3	
10	111	09.6		311	54.0		341	07.9		45	07.9		52	44.2		06.3	
11	126	12.0		326	53.5	+10	356	08.7	+19	60	10.0	+20	67	46.6	+18	06.3	
12	141	14.5		341	53.1	+10	11	09.5	+19	75	12.1	+20	82	48.9	+18	06.3	
13	156	17.0		356	52.7		26	10.3		90	14.2		97	51.2		06.3	
14	171	19.4		11	52.3		41	11.1		105	16.3		112	53.5		06.4	
15	186	21.9		26	51.8		56	11.9		120	18.4		127	55.9		06.4	
16	201	24.4		41	51.4		71	12.7		135	20.5		142	58.2		06.4	
17	216	26.8		56	51.0	+10	86	13.6	+19	150	22.6	+20	158	00.5	+18	06.4	
18	231	29.3		71	50.6	+10	101	14.4	+19	165	24.7	+20	173	02.8	+18	06.4	
19	246	31.8		86	50.1		116	15.2		180	26.8		188	05.2		06.5	
20	261	34.2		101	49.7		131	16.0		195	28.9		203	07.5		06.5	
21	276	36.7		116	49.3		146	16.8		210	31.0		218	09.8		06.5	
22	291	39.2		131	48.9		161	17.6		225	33.1		233	12.1		06.5	
23	306	41.6		146	48.4		176	18.5		240	35.2		248	14.5		06.5	
24	321	44.1		161	48.0	+10	191	19.3	+19	255	37.3	+20	263	16.8	+18	06.6	
Dif	—			-4	-12		+8	-4		+21	+1		+23				

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8			Edad: 12 ^d 9 PHE { 4 ^h : 54 ^m 1 12 ^h : 54 ^m 2 20 ^h : 54 ^m 2 R°: 47 ^m												
	PMG: 12 ^h 04 ^m 8			SD: 14 ^h 7 PMG: 23 ^h 11 ^m												
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	°	'	h	m	h	m	h	m	h	m
0	178	47.1	+14 38.3	23	30.4	-21 03.5	60 N	19 58	20 50	22 08	19 39 24	1 42 67				
1	193	47.2	37.6	38	01.2 ¹¹⁸	-21 00.5 ³⁰	58	49	36	21 43	25 27	1 58 64				
2	208	47.3	36.8	52	32.0 ¹¹⁸	-20 57.5 ³⁰	56	41	25	24	13 29	2 11 63				
3	223	47.4	36.0	67	02.8 ¹¹⁸	54.3 ³²	54	34	14	21 08	19 03 30	23 61				
4	238	47.5	35.3	81	33.7 ¹¹⁹	51.1 ³²	52	27	20 06	20 55	18 53 32	33 60				
5	253	47.6	+14 34.5	96	04.5 ¹¹⁸	-20 47.7 ³⁴	50	19 22	19 58	20 44	18 45 33	2 42 59				
6	268	47.7	+14 33.8	110	35.3 ¹¹⁸	-20 44.3 ³⁴	45	19 09	19 41	20 21	18 27 36	3 01 58				
7	283	47.9	33.0	125	06.2 ¹¹⁹	40.7 ³⁶	40	18 59	28	20 03	13 37	17 56				
8	298	48.0	32.2	139	37.1 ¹¹⁹	37.1 ³⁶	35	50	17	19 50	18 00 40	30 54				
9	313	48.1	31.5	154	08.0 ¹¹⁹	33.4 ³⁷	30	43	19 08	38	17 49 41	3 42 53				
10	328	48.2	30.7	168	38.9 ¹¹⁹	29.6 ³⁸	20	30	18 53	20	31 43	4 02 51				
11	343	48.3	+14 29.9	183	09.9 ¹²⁰	-20 25.6 ⁴⁰	10 N	18 19	18 40	19 06	17 15 45	4 19 49				
12	358	48.4	+14 29.2	197	40.8 ¹¹⁹	-20 21.6 ⁴⁰	0	18 08	18 29	18 54	16 59 48	4 34 48				
13	13	48.6	28.4	212	11.8 ¹²⁰	17.5 ⁴¹	10 S	17 58	19	44	44 49	4 50 47				
14	28	48.7	27.6	226	42.8 ¹²⁰	13.3 ⁴²	20	47	18 10	36	28 51	5 07 45				
15	43	48.8	26.9	241	13.8 ¹²⁰	09.0 ⁴³	30	35	17 59	28	16 09 54	27 42				
16	58	48.9	26.1	255	44.8 ¹²⁰	04.6 ⁴⁴	35	28	54	24	15 58 55	38 41				
17	73	49.0	+14 25.3	270	15.9 ¹²¹	-20 00.1 ⁴⁵	40	17 19	17 48	18 20	15 46 56	5 51 40				
18	88	49.1	+14 24.6	284	46.9 ¹²⁰	-19 55.5 ⁴⁶	45	17 10	17 41	18 15	15 31 59	6 06 38				
19	103	49.2	23.8	299	18.0 ¹²¹	50.8 ⁴⁷	50	16 59	33	11	13 61	25 36				
20	118	49.4	23.0	313	49.1 ¹²¹	46.0 ⁴⁸	52	54	29	09	15 04 62	34 35				
21	133	49.5	22.2	328	20.3 ¹²²	41.2 ⁴⁸	54	48	26	07	14 54 64	44 33				
22	148	49.6	21.5	342	51.4 ¹²¹	36.2 ⁵⁰	56	42	21	05	43 66	6 55 32				
23	163	49.7	20.7	357	22.6 ¹²²	31.2 ⁵⁰	58	35	17	03	31 68	7 07 31				
24	178	49.8	+14 19.9	11	53.8 ¹²²	-19 26.0 ⁵²	60 S	16 27	17 12	18 01	14 16 71	7 22 28				
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 2 ^h 32 ^m 6		Mag: -3.8 PMG: 13 ^h 13 ^m		Mag: +1.8 PMG: 11 ^h 14 ^m		Mag: -2.3 PMG: 6 ^h 57 ^m		Mag: +0.2 PMG: 6 ^h 26 ^m							
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	321	44.1	161	48.0	+10	01.5	191	19.3	+19	23.8	255	37.3	+20	44.6	263	16.8
1	336	46.5	176	47.6	+10	00.3	206	20.1		23.4	270	39.4		44.6	278	19.1
2	351	49.0	191	47.2	+9	59.1	221	20.9		23.0	285	41.5		44.7	293	21.5
3	6	51.5	206	46.8		58.0	236	21.7		22.6	300	43.6		44.7	308	23.8
4	21	53.9	221	46.3		56.8	251	22.5		22.2	315	45.7		44.8	323	26.1
5	36	56.4	236	45.9	+9	55.6	266	23.3	+19	21.8	330	47.8	+20	44.8	338	28.4
6	51	58.9	251	45.5	+9	54.5	281	24.2	+19	21.4	345	49.9	+20	44.9	353	30.8
7	67	01.3	266	45.1		53.3	296	25.0		21.0	0	52.0		44.9	8	33.1
8	82	03.8	281	44.7		52.1	311	25.8		20.6	15	54.1		45.0	23	35.4
9	97	06.3	296	44.2		51.0	326	26.6		20.2	30	56.2		45.0	38	37.8
10	112	08.7	311	43.8		49.8	341	27.4		19.7	45	58.3		45.1	53	40.1
11	127	11.2	326	43.4	+9	48.6	356	28.3	+19	19.3	61	00.4	+20	45.1	68	42.4
12	142	13.7	341	43.0	+9	47.4	11	29.1	+19	18.9	76	02.5	+20	45.2	83	44.7
13	157	16.1	356	42.6		46.3	26	29.9		18.5	91	04.6		45.2	98	47.1
14	172	18.6	11	42.2		45.1	41	30.7		18.1	106	06.7		45.3	113	49.4
15	187	21.0	26	41.7		43.9	56	31.5		17.7	121	08.8		45.4	128	51.7
16	202	23.5	41	41.3		42.7	71	32.3		17.3	136	10.9		45.4	143	54.1
17	217	26.0	56	40.9	+9	41.6	86	33.2	+19	16.9	151	13.1	+20	45.5	158	56.4
18	232	28.4	71	40.5	+9	40.4	101	34.0	+19	16.5	166	15.2	+20	45.5	173	58.7
19	247	30.9	86	40.1		39.2	116	34.8		16.1	181	17.3		45.6	189	01.0
20	262	33.4	101	39.7		38.0	131	35.6		15.7	196	19.4		45.6	204	03.4
21	277	35.8	116	39.3		36.9	146	36.4		15.3	211	21.5		45.7	219	05.7
22	292	38.3	131	38.8		35.7	161	37.3		14.9	226	23.6		45.7	234	08.0
23	307	40.8	146	38.4		34.5	176	38.1		14.4	241	25.7		45.8	249	10.4
24	322	43.2	161	38.0	+9	33.3	191	38.9	+19	14.0	256	27.8	+20	45.8	264	12.7
Dif	—		-4		-12		+8		-4		+21		+1		+23	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8			Edad: 13 ^d 9	PHE { 4 ^h : 54 ^m /3 12 ^h : 54 ^m /4 20 ^h : 54 ^m /5	SD: 14 ^h 8	PMG: 23 ^h 58 ^m	R ^o : 46 ^m		Náutico	Civil		Hora	R ^o	Hora	R ^o	
	hG ☉	Dec															hG ☾
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	178	49.8	+14	19.9	11	53.8	−19	26.0	60 N	2	02	3	20	4	12	20	03
1	193	50.0		19.2	26	25.0		20.8	58		27	34	21		19	52	
2	208	50.1		18.4	40	56.2		15.4	56	2	46	46	29		42	23	
3	223	50.2		17.6	55	27.5		10.0	54	3	02	3	56	36	33	25	
4	238	50.3		16.8	69	58.8		−19	52	15	4	04	43	25	27	33	
5	253	50.4	+14	16.1	84	30.1		−18	50	3	26	4	12	4	48	19	
6	268	50.6	+14	15.3	99	01.4		−18	45	3	49	4	29	5	01	19	
7	283	50.7		14.5	113	32.8		47.5	40	4	06	42	11	18	50	34	
8	298	50.8		13.8	128	04.2		41.6	35	20	4	52	19	40	36	24	
9	313	50.9		13.0	142	35.6		35.7	30	32	5	02	27	30	38	35	
10	328	51.0		12.2	157	07.0		29.6	20	4	50	17	40	14	41	4	
11	343	51.2	+14	11.4	171	38.5	−18	23.5	10 N	5	04	5	29	5	51	18	
12	358	51.3	+14	10.7	186	09.9	−18	17.3	0	5	15	5	40	6	01	17	
13	13	51.4		09.9	200	41.4		11.0	10 S	25	5	50	11	33	49	37	
14	28	51.5		09.1	215	13.0	−18	04.6	20	33	6	00	22	19	52	5	
15	43	51.6		08.3	229	44.5	−17	58.1	30	41	10		34	17	03	6	
16	58	51.8		07.5	244	16.1		51.6	35	45	15		41	16	53	19	
17	73	51.9	+14	06.8	258	47.7	−17	45.0	40	5	49	6	21	6	42	6	
18	88	52.0	+14	06.0	273	19.3	−17	38.2	45	5	53	6	28	6	58	16	
19	103	52.1		05.2	287	51.0		31.4	50	58	36	7	09	14	64	7	
20	118	52.2		04.4	302	22.7		24.6	52	5	59	39	15	16	06	09	
21	133	52.4		03.7	316	54.4		17.6	54	6	01	43	20	15	58	17	
22	148	52.5		02.9	331	26.1		10.5	56	03	47	26		49	70	27	
23	163	52.6		02.1	345	57.9	−17	03.4	58	05	51	33		39	72	38	
24	178	52.7	+14	01.3	0	29.6	−16	56.2	60 S	6	07	6	56	7	41	15	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG		Mag: −3.8		Mag: +1.8		Mag: −2.3		Mag: +0.2	
	2 ^h 28 ^m 7		PMG: 13 ^h 14 ^m		PMG: 11 ^h 13 ^m		PMG: 6 ^h 53 ^m		PMG: 6 ^h 22 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	322	43.2	161	38.0	+9	33.3	191	38.9	+19	14.0
1	337	45.7	176	37.6		32.2	206	39.7		13.6
2	352	48.2	191	37.2		31.0	221	40.5		13.2
3	7	50.6	206	36.8		29.8	236	41.4		12.8
4	22	53.1	221	36.4		28.6	251	42.2		12.4
5	37	55.5	236	36.0	+9	27.4	266	43.0	+19	12.0
6	52	58.0	251	35.5	+9	26.3	281	43.8	+19	11.6
7	68	00.5	266	35.1		25.1	296	44.6		11.2
8	83	02.9	281	34.7		23.9	311	45.5		10.7
9	98	05.4	296	34.3		22.7	326	46.3		10.3
10	113	07.9	311	33.9		21.5	341	47.1		09.9
11	128	10.3	326	33.5	+9	20.4	356	47.9	+19	09.5
12	143	12.8	341	33.1	+9	19.2	11	48.7	+19	09.1
13	158	15.3	356	32.7		18.0	26	49.6		08.7
14	173	17.7	11	32.3		16.8	41	50.4		08.3
15	188	20.2	26	31.9		15.6	56	51.2		07.9
16	203	22.6	41	31.5		14.4	71	52.0		07.5
17	218	25.1	56	31.0	+9	13.3	86	52.9	+19	07.0
18	233	27.6	71	30.6	+9	12.1	101	53.7	+19	06.6
19	248	30.0	86	30.2		10.9	116	54.5		06.2
20	263	32.5	101	29.8		09.7	131	55.3		05.8
21	278	35.0	116	29.4		08.5	146	56.2		05.4
22	293	37.4	131	29.0		07.3	161	57.0		05.0
23	308	39.9	146	28.6		06.1	176	57.8		04.6
24	323	42.4	161	28.2	+9	05.0	191	58.6	+19	04.1
Dif	—		−4	−12		+8	−4	+21	+1	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 14 ^d 9	PHE { 4 ^h : 54 ^m 6 12 ^h : 54 ^m 7 20 ^h : 54 ^m 8	Final del crepúsculo			Salida de Luna		Puesta de Luna			
	PMG: 12 ^h 04 ^m 4					R°: ***m								
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	178	52.7	+14 01.3	0	29.6	-16 56.2	73	60 N	19 52	20 43	21 58	20 21 14	4 02 76	
1	193	52.9	+14 00.5	15	01.5 ¹²⁹	48.9	73	58	44	30	35	12 17	13 73	
2	208	53.0	+13 59.8	29	33.3 ¹²⁸	41.6	73	56	36	19	17	20 05 19	22 71	
3	223	53.1	59.0	44	05.1 ¹²⁸	34.1	75	54	29	10	21 02	19 58 21	30 69	
4	238	53.2	58.2	58	37.0 ¹²⁹	26.6	75	52	23	20 01	20 50	52 23	38 67	
5	253	53.4	+13 57.4	73	08.9 ¹²⁹	-16 19.0	76	50	19 18	19 54	20 39	19 46 25	4 44 66	
6	268	53.5	+13 56.6	87	40.9 ¹³⁰	-16 11.3	77	45	19 06	19 38	20 17	19 34 28	4 59 62	
7	283	53.6	55.8	102	12.9 ¹³⁰	-16 03.6	77	40	18 56	25	20 00	24 31	5 10 60	
8	298	53.7	55.1	116	44.8 ¹²⁹	-15 55.7	79	35	48	15	19 47	16 33	20 57	
9	313	53.9	54.3	131	16.9 ¹³¹	47.8	79	30	41	19 06	36	19 08 36	29 55	
10	328	54.0	53.5	145	48.9 ¹³⁰	39.8	80	20	28	18 51	18	18 55 39	44 52	
11	343	54.1	+13 52.7	160	21.0 ¹³¹	-15 31.8	80	10 N	18 18	18 39	19 05	18 44 42	5 57 49	
12	358	54.2	+13 51.9	174	53.1 ¹³¹	-15 23.7	81	0	18 08	18 29	18 54	18 33 45	6 09 46	
13	13	54.4	51.1	189	25.2 ¹³¹	15.5	82	10 S	17 58	19	44	22 49	21 43	
14	28	54.5	50.3	203	57.3 ¹³¹	-15 07.2	83	20	47	10	36	18 11 51	34 40	
15	43	54.6	49.6	218	29.5 ¹³²	-14 58.9	83	30	36	18 00	29	17 57 56	49 36	
16	58	54.8	48.8	233	01.7 ¹³²	50.4	85	35	29	17 55	25	50 57	6 57 35	
17	73	54.9	+13 48.0	247	33.9 ¹³²	-14 42.0	84	40	17 21	17 49	18 21	17 41 60	7 07 32	
18	88	55.0	+13 47.2	262	06.1 ¹³²	-14 33.4	86	45	17 12	17 43	18 18	17 31 63	7 18 29	
19	103	55.1	46.4	276	38.4 ¹³³	24.8	86	50	17 02	36	14	18 67	31 27	
20	118	55.3	45.6	291	10.7 ¹³³	16.1	87	52	16 57	32	12	13 68	38 24	
21	133	55.4	44.8	305	43.0 ¹³³	-14 07.3	88	54	51	29	10	17 06 70	45 22	
22	148	55.5	44.0	320	15.4 ¹³⁴	-13 58.5	88	56	45	25	09	16 59 72	7 52 21	
23	163	55.7	43.3	334	47.7 ¹³³	49.6	89	58	39	21	07	51 74	8 01 18	
24	178	55.8	+13 42.5	349	20.1 ¹³⁴	-13 40.7	89	60 S	16 31	17 16	18 05	16 42 77	8 11 16	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG		Mag: -3.8		Mag: +1.8		Mag: -2.3		Mag: +0.2	
	2 ^h 24 ^m 8		PMG: 13 ^h 14 ^m		PMG: 11 ^h 11 ^m		PMG: 6 ^h 50 ^m		PMG: 6 ^h 18 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	323	42.4	161 28.2	+9 05.0	191 58.6	+19 04.1	257 18.4	+20 47.0	265 08.7	+18 07.5
1	338	44.8	176 27.8	03.8	206 59.4	03.7	272 20.6	47.1	280 11.0	07.5
2	353	47.3	191 27.4	02.6	222 00.3	03.3	287 22.7	47.1	295 13.4	07.5
3	8 49.8	206 27.0	01.4	237 01.1	02.9	302 24.8	47.2	310 15.7	07.5	
4	23 52.2	221 26.6	+9 00.2	252 01.9	02.5	317 26.9	47.2	325 18.1	07.6	
5	38 54.7	236 26.2	+8 59.0	267 02.7	+19 02.1	332 29.0	+20 47.3	340 20.4	+18 07.6	
6	53 57.1	251 25.8	+8 57.8	282 03.6	+19 01.6	347 31.1	+20 47.3	355 22.7	+18 07.6	
7	68 59.6	266 25.4	56.6	297 04.4	01.2	2 33.2	47.4	10 25.1	07.6	
8	84 02.1	281 25.0	55.4	312 05.2	00.8	17 35.4	47.4	25 27.4	07.6	
9	99 04.5	296 24.6	54.3	327 06.0	+19 00.4	32 37.5	47.5	40 29.7	07.7	
10	114 07.0	311 24.2	53.1	342 06.9	+19 00.0	47 39.6	47.5	55 32.1	07.7	
11	129 09.5	326 23.8	+8 51.9	357 07.7	+18 59.6	62 41.7	+20 47.6	70 34.4	+18 07.7	
12	144 11.9	341 23.4	+8 50.7	12 08.5	+18 59.1	77 43.8	+20 47.6	85 36.7	+18 07.7	
13	159 14.4	356 23.0	49.5	27 09.4	58.7	92 45.9	47.7	100 39.1	07.7	
14	174 16.9	11 22.6	48.3	42 10.2	58.3	107 48.1	47.7	115 41.4	07.7	
15	189 19.3	26 22.2	47.1	57 11.0	57.9	122 50.2	47.8	130 43.8	07.8	
16	204 21.8	41 21.8	45.9	72 11.8	57.5	137 52.3	47.8	145 46.1	07.8	
17	219 24.3	56 21.4	+8 44.7	87 12.7	+18 57.1	152 54.4	+20 47.9	160 48.4	+18 07.8	
18	234 26.7	71 21.0	+8 43.5	102 13.5	+18 56.6	167 56.5	+20 47.9	175 50.8	+18 07.8	
19	249 29.2	86 20.6	42.3	117 14.3	56.2	182 58.6	48.0	190 53.1	07.8	
20	264 31.6	101 20.2	41.1	132 15.1	55.8	198 00.8	48.0	205 55.5	07.9	
21	279 34.1	116 19.8	39.9	147 16.0	55.4	213 02.9	48.1	220 57.8	07.9	
22	294 36.6	131 19.4	38.7	162 16.8	55.0	228 05.0	48.1	236 00.1	07.9	
23	309 39.0	146 19.0	37.5	177 17.6	54.5	243 07.1	48.2	251 02.5	07.9	
24	324 41.5	161 18.6	+8 36.3	192 18.5	+18 54.1	258 09.2	+20 48.2	266 04.8	+18 07.9	
Dif	—	-4	-12	+8	-4	+21	0	+23	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 2			Edad: 15 ^d 9 PHE { 4 ^h : 54 ^m 9 12 ^h : 55 ^m 0 SD: 14 ^m 9 20 ^h : 55 ^m 2 PMG: 0 ^h 44 ^m R°: 45 ^m																			
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°								
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m					
0	178	55.8	+13	42.5	349	20.1	-13	40.7	91	60 N	2	12	3	26	4	17	20	35	12	5	18	78	
1	193	55.9		41.7	3	52.5	134	31.6	91	58		34	39	26		29	15		26	76			
2	208	56.0		40.9	18	24.9	134	22.6	90	56	2	52	3	50	33		24	17		33	73		
3	223	56.2		40.1	32	57.4	135	13.4	92	54	3	07	4	00	40		19	19		39	71		
4	238	56.3		39.3	47	29.9	135	-13	04.2	92	52		19	08	46		15	21		45	69		
5	253	56.4	+13	38.5	62	02.4	135	-12	54.9	93	50	3	30	4	16	4	51	20	11	22	5	50	67
6	268	56.6	+13	37.7	76	34.9	135	-12	45.6	93	45	3	52	4	31	5	03	20	02	27	6	01	63
7	283	56.7		36.9	91	07.4	135		36.2	94	40	4	09		44	13		19	55	29		10	60
8	298	56.8		36.1	105	40.0	136		26.7	95	35		22	4	54	21		49	32		17	58	
9	313	57.0		35.3	120	12.6	136		17.2	95	30		33	5	03	28		44	34		24	55	
10	328	57.1		34.5	134	45.2	136	-12	07.6	96	20	4	51	17	40		34	38		36	51		
11	343	57.2	+13	33.8	149	17.8	136	-11	58.0	96	10 N	5	04	5	29	5	51	19	26	42	6	46	48
12	358	57.3	+13	33.0	163	50.5	137	-11	48.3	97	0	5	15	5	40	6	01	19	18	45	6	55	45
13	13	57.5		32.2	178	23.1	136		38.5	98	10 S		24		49	11		11	47		7	04	42
14	28	57.6		31.4	192	55.8	137		28.7	98	20		32	5	58	21		19	02	52		14	39
15	43	57.7		30.6	207	28.5	137		18.9	98	30		40	6	08	32		18	53	55		25	35
16	58	57.9		29.8	222	01.2	137	-11	08.9	100	35		43	13	39		47	58		32	32		
17	73	58.0	+13	29.0	236	34.0	138	-10	59.0	99	40	5	47	6	19	6	47	18	41	60	7	39	30
18	88	58.1	+13	28.2	251	06.7	137	-10	48.9	101	45	5	50	6	25	6	55	18	34	63	7	47	27
19	103	58.3		27.4	265	39.5	138		38.9	100	50		54	32	7	06		25	67		7	58	23
20	118	58.4		26.6	280	12.3	138		28.7	102	52		56	35	11		21	69		8	02	22	
21	133	58.5		25.8	294	45.1	138		18.5	102	54		57	39	16		16	71		07	20		
22	148	58.7		25.0	309	17.9	138	-10	08.3	102	56	5	59	43	22		11	73		13	18		
23	163	58.8		24.2	323	50.7	138	-9	58.0	103	58	6	01	47	28		18	05	76	19	16		
24	178	58.9	+13	23.4	338	23.6	139	-9	47.7	103	60 S	6	02	6	51	7	36	17	59	79	8	27	13

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO								
	PMG: 2 ^h 20 ^m 8		Mag: -3.8 PMG: 13 ^h 15 ^m			Mag: +1.8 PMG: 11 ^h 10 ^m			Mag: -2.3 PMG: 6 ^h 46 ^m			Mag: +0.2 PMG: 6 ^h 15 ^m								
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'						
0	324	41.5	161	18.6	+8	36.3	192	18.5	+18	54.1	258	09.2	+20	48.2	266	04.8	+18	07.9		
1	339	44.0	176	18.2		35.1	207	19.3		53.7	273	11.3		48.3	281	07.2		07.9		
2	354	46.4	191	17.8		33.9	222	20.1		53.3	288	13.5		48.3	296	09.5		08.0		
3	9	48.9	206	17.4		32.7	237	20.9		52.9	303	15.6		48.4	311	11.8		08.0		
4	24	51.4	221	17.0		31.5	252	21.8		52.4	318	17.7		48.4	326	14.2		08.0		
5	39	53.8	236	16.6	+8	30.3	267	22.6	+18	52.0	333	19.8	+20	48.5	341	16.5	+18	08.0		
6	54	56.3	251	16.2	+8	29.1	282	23.4	+18	51.6	348	21.9	+20	48.5	356	18.9	+18	08.0		
7	69	58.7	266	15.8		27.9	297	24.3		51.2	3	24.1		48.6	11	21.2		08.0		
8	85	01.2	281	15.4		26.7	312	25.1		50.7	18	26.2		48.6	26	23.5		08.1		
9	100	03.7	296	15.1		25.5	327	25.9		50.3	33	28.3		48.7	41	25.9		08.1		
10	115	06.1	311	14.7		24.3	342	26.7		49.9	48	30.4		48.7	56	28.2		08.1		
11	130	08.6	326	14.3	+8	23.1	357	27.6	+18	49.5	63	32.6	+20	48.8	71	30.6	+18	08.1		
12	145	11.1	341	13.9	+8	21.9	12	28.4	+18	49.1	78	34.7	+20	48.8	86	32.9	+18	08.1		
13	160	13.5	356	13.5		20.7	27	29.2		48.6	93	36.8		48.9	101	35.2		08.1		
14	175	16.0	11	13.1		19.5	42	30.1		48.2	108	38.9		48.9	116	37.6		08.2		
15	190	18.5	26	12.7		18.3	57	30.9		47.8	123	41.0		49.0	131	39.9		08.2		
16	205	20.9	41	12.3		17.1	72	31.7		47.4	138	43.2		49.0	146	42.3		08.2		
17	220	23.4	56	11.9	+8	15.9	87	32.6	+18	46.9	153	45.3	+20	49.1	161	44.6	+18	08.2		
18	235	25.9	71	11.5	+8	14.7	102	33.4	+18	46.5	168	47.4	+20	49.1	176	47.0	+18	08.2		
19	250	28.3	86	11.1		13.5	117	34.2		46.1	183	49.5		49.2	191	49.3		08.2		
20	265	30.8	101	10.7		12.3	132	35.1		45.7	198	51.7		49.2	206	51.6		08.3		
21	280	33.2	116	10.4		11.1	147	35.9		45.2	213	53.8		49.2	221	54.0		08.3		
22	295	35.7	131	10.0		09.9	162	36.7		44.8	228	55.9		49.3	236	56.3		08.3		
23	310	38.2	146	09.6		08.7	177	37.5		44.4	243	58.0		49.3	251	58.7		08.3		
24	325	40.6	161	09.2	+8	07.5	192	38.4	+18	44.0	259	00.2	+20	49.4	267	01.0	+18	08.3		
Dif	—		-4		-12		+8		-4		+21		0		+23		0			

UT	SOL		☉ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15/8 PMG: 12 ^h 04 ^m 0		Edad: 16 ^d 9 PHE { 4 ^h : 55/3 12 ^h : 55/4 20 ^h : 55/6 PMG: 1 ^h 29 ^m R°: 45 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	178	58.9	+13	23.4	338	23.6	-9 47.7	60 N	19 47	20 37	21 48	20 47 11	6 36 80	
1	193	59.1		22.6	352	56.4 ¹³⁸	37.3 ¹⁰⁴	58	39	24	27	44 13	42 76	
2	208	59.2		21.8	7	29.3 ¹³⁹	26.9 ¹⁰⁴	56	31	14	21 10	41 15	46 74	
3	223	59.4		21.0	22	02.2 ¹³⁹	16.4 ¹⁰⁵	54	25	20 05	20 56	38 18	50 72	
4	238	59.5		20.2	36	35.1 ¹³⁹	-9 05.8 ¹⁰⁶	52	19	19 57	45	36 19	54 69	
5	253	59.6	+13	19.4	51	08.0 ¹³⁹	-8 55.3 ¹⁰⁵	50	19 14	19 50	20 34	20 33 22	6 57 68	
6	268	59.8	+13	18.6	65	40.9 ¹³⁹	-8 44.7 ¹⁰⁶	45	19 03	19 34	20 13	20 29 25	7 04 64	
7	283	59.9		17.8	80	13.9 ¹⁴⁰	34.0 ¹⁰⁷	40	18 54	22	19 57	24 29	10 61	
8	299	00.0		17.0	94	46.8 ¹³⁹	23.3 ¹⁰⁷	35	46	12	44	21 31	15 58	
9	314	00.2		16.2	109	19.8 ¹⁴⁰	12.5 ¹⁰⁸	30	39	19 04	34	18 33	19 56	
10	329	00.3		15.4	123	52.7 ¹³⁹	-8 01.7 ¹⁰⁸	20	27	18 50	17	12 38	27 52	
11	344	00.4	+13	14.6	138	25.7 ¹⁴⁰	-7 50.9 ¹⁰⁸	10 N	18 17	18 38	19 04	20 08 41	7 34 48	
12	359	00.6	+13	13.8	152	58.7 ¹⁴⁰	-7 40.0 ¹⁰⁹	0	18 07	18 29	18 53	20 03 45	7 40 44	
13	14	00.7		13.0	167	31.7 ¹⁴⁰	29.1 ¹⁰⁹	10 S	17 58	19	44	19 58 49	46 41	
14	29	00.9		12.2	182	04.7 ¹⁴⁰	18.2 ¹⁰⁹	20	48	11	37	54 51	7 53 37	
15	44	01.0		11.4	196	37.7 ¹⁴⁰	-7 07.2 ¹¹⁰	30	37	18 01	30	48 56	8 00 33	
16	59	01.1		10.6	211	10.7 ¹⁴⁰	-6 56.1 ¹¹¹	35	30	17 56	26	45 59	04 31	
17	74	01.3	+13	09.8	225	43.7 ¹⁴⁰	-6 45.1 ¹¹⁰	40	17 23	17 51	18 23	19 41 62	8 09 28	
18	89	01.4	+13	09.0	240	16.7 ¹⁴⁰	-6 34.0 ¹¹¹	45	17 15	17 45	18 20	19 37 65	8 14 26	
19	104	01.5		08.2	254	49.8 ¹⁴¹	22.8 ¹¹²	50	05	38	16	32 69	21 22	
20	119	01.7		07.4	269	22.8 ¹⁴⁰	11.6 ¹¹²	52	17 00	35	15	30 70	24 20	
21	134	01.8		06.5	283	55.8 ¹⁴⁰	-6 00.4 ¹¹²	54	16 55	32	13	27 73	27 18	
22	149	02.0		05.7	298	28.8 ¹⁴⁰	-5 49.2 ¹¹²	56	49	28	12	24 75	31 16	
23	164	02.1		04.9	313	01.9 ¹⁴¹	37.9 ¹¹³	58	43	24	11	21 77	35 14	
24	179	02.2	+13	04.1	327	34.9 ¹⁴⁰	-5 26.6 ¹¹³	60 S	16 36	17 20	18 09	19 18 80	8 40 11	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 2 ^h 16 ^m 9		Mag: -3.8 PMG: 13 ^h 16 ^m		Mag: +1.8 PMG: 11 ^h 09 ^m		Mag: -2.3 PMG: 6 ^h 43 ^m		Mag: +0.2 PMG: 6 ^h 11 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	325	40.6	161	09.2	+8	07.5	192	38.4	+18	44.0				
1	340	43.1	176	08.8		06.3	207	39.2		43.5				
2	355	45.6	191	08.4		05.1	222	40.0		43.1				
3	10	48.0	206	08.0		03.9	237	40.9		42.7				
4	25	50.5	221	07.6		02.7	252	41.7		42.3				
5	40	53.0	236	07.3	+8	01.4	267	42.5	+18	41.8				
6	55	55.4	251	06.9	+8	00.2	282	43.4	+18	41.4				
7	70	57.9	266	06.5	+7	59.0	297	44.2		41.0				
8	86	00.3	281	06.1		57.8	312	45.0		40.6				
9	101	02.8	296	05.7		56.6	327	45.9		40.1				
10	116	05.3	311	05.3		55.4	342	46.7		39.7				
11	131	07.7	326	04.9	+7	54.2	357	47.5	+18	39.3				
12	146	10.2	341	04.6	+7	53.0	12	48.4	+18	38.8				
13	161	12.7	356	04.2		51.8	27	49.2		38.4				
14	176	15.1	11	03.8		50.6	42	50.0		38.0				
15	191	17.6	26	03.4		49.3	57	50.9		37.6				
16	206	20.1	41	03.0		48.1	72	51.7		37.1				
17	221	22.5	56	02.6	+7	46.9	87	52.6	+18	36.7				
18	236	25.0	71	02.3	+7	45.7	102	53.4	+18	36.3				
19	251	27.5	86	01.9		44.5	117	54.2		35.8				
20	266	29.9	101	01.5		43.3	132	55.1		35.4				
21	281	32.4	116	01.1		42.1	147	55.9		35.0				
22	296	34.8	131	00.7		40.9	162	56.7		34.6				
23	311	37.3	146	00.3		39.6	177	57.6		34.1				
24	326	39.8	161	00.0	+7	38.4	192	58.4	+18	33.7				
Dif	—		-4		-12		+8		-4					
							+21		0					
									+23					
									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 7			Edad: 17 ^d 9 PHE { 4 ^h : 55°7 12 ^h : 55°9 20 ^h : 56°1 SD: 15°2 PMG: 2 ^h 14 ^m R°: 44 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	179	02.2	+13 04.1	327	34.9	-5 26.6	60 N	2 20	3 32	4 22	20 58	11	7 56	80	
1	194	02.4	03.3	342	07.9 ¹⁴⁰	15.3 ¹¹³	58	41	44	30	57	14	7 58	78	
2	209	02.5	02.5	356	41.0 ¹⁴¹	-5 03.9 ¹¹⁴	56	2 58	3 55	37	56	16	8 00	75	
3	224	02.7	01.7	11	14.0 ¹⁴⁰	-4 52.5 ¹¹⁴	54	3 12	4 04	43	56	18	02	73	
4	239	02.8	00.9	25	47.0 ¹⁴⁰	41.1 ¹¹⁴	52	24	12	49	55	20	03	71	
5	254	02.9	+13 00.1	40	20.1 ¹⁴¹	-4 29.6 ¹¹⁵	50	3 34	4 19	4 54	20 55	21	8 05	69	
6	269	03.1	+12 59.3	54	53.1 ¹⁴⁰	-4 18.1 ¹¹⁵	45	3 55	4 34	5 05	20 54	25	8 08	65	
7	284	03.2	58.5	69	26.1 ¹⁴⁰	-4 06.6 ¹¹⁵	40	4 11	46	15	53	28	11	62	
8	299	03.4	57.7	83	59.1 ¹⁴⁰	-3 55.1 ¹¹⁵	35	24	4 56	22	52	31	13	59	
9	314	03.5	56.8	98	32.1 ¹⁴⁰	43.5 ¹¹⁶	30	35	5 04	29	51	34	15	56	
10	329	03.6	56.0	113	05.1 ¹⁴⁰	32.0 ¹¹⁵	20	4 51	18	41	50	38	19	52	
11	344	03.8	+12 55.2	127	38.1 ¹⁴⁰	-3 20.4 ¹¹⁶	10 N	5 04	5 29	5 51	20 49	41	8 22	48	
12	359	03.9	+12 54.4	142	11.1 ¹⁴⁰	-3 08.7 ¹¹⁷	0	5 15	5 39	6 00	20 48	45	8 24	45	
13	14	04.1	53.6	156	44.1 ¹⁴⁰	-2 57.1 ¹¹⁶	10 S	23	48	10	47	48	27	41	
14	29	04.2	52.8	171	17.1 ¹⁴⁰	45.4 ¹¹⁷	20	31	5 57	19	45	53	30	38	
15	44	04.4	52.0	185	50.0 ¹³⁹	33.7 ¹¹⁷	30	38	6 06	30	44	57	33	34	
16	59	04.5	51.2	200	23.0 ¹⁴⁰	22.0 ¹¹⁷	35	41	11	37	44	59	35	31	
17	74	04.6	+12 50.3	214	55.9 ¹³⁹	-2 10.3 ¹¹⁷	40	5 44	6 16	6 44	20 43	62	8 37	28	
18	89	04.8	+12 49.5	229	28.9 ¹⁴⁰	-1 58.5 ¹¹⁸	45	5 47	6 22	6 52	20 42	66	8 40	25	
19	104	04.9	48.7	244	01.8 ¹³⁹	46.8 ¹¹⁷	50	51	29	7 02	41	70	43	21	
20	119	05.1	47.9	258	34.7 ¹³⁹	35.0 ¹¹⁸	52	52	32	07	40	72	44	20	
21	134	05.2	47.1	273	07.6 ¹³⁹	23.2 ¹¹⁸	54	53	35	12	40	73	45	18	
22	149	05.4	46.3	287	40.4 ¹³⁸	-1 11.4 ¹¹⁸	56	55	38	17	39	76	47	16	
23	164	05.5	45.5	302	13.3 ¹³⁹	-0 59.6 ¹¹⁸	58	56	42	23	38	79	49	13	
24	179	05.7	+12 44.6	316	46.1 ¹³⁸	-0 47.7 ¹¹⁹	60 S	5 58	6 46	7 30	20 38	81	8 51	11	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 2 ^h 13 ^m 0		Mag: -3.8 PMG: 13 ^h 16 ^m		Mag: +1.8 PMG: 11 ^h 07 ^m		Mag: -2.3 PMG: 6 ^h 40 ^m		Mag: +0.2 PMG: 6 ^h 07 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	326	39.8	161	00.0	+7 38.4	192	58.4	+18 33.7	259	51.2	+20 50.5
1	341	42.2	175	59.6	37.2	207	59.2	33.3	274	53.4	50.6
2	356	44.7	190	59.2	36.0	223	00.1	32.8	289	55.5	50.6
3	11	47.2	205	58.8	34.8	238	00.9	32.4	304	57.6	50.7
4	26	49.6	220	58.4	33.6	253	01.8	32.0	319	59.8	50.7
5	41	52.1	235	58.1	+7 32.3	268	02.6	+18 31.5	335	01.9	+20 50.8
6	56	54.6	250	57.7	+7 31.1	283	03.4	+18 31.1	350	04.0	+20 50.8
7	71	57.0	265	57.3	29.9	298	04.3	30.7	5	06.2	50.8
8	86	59.5	280	56.9	28.7	313	05.1	30.2	20	08.3	50.9
9	102	02.0	295	56.5	27.5	328	05.9	29.8	35	10.4	50.9
10	117	04.4	310	56.2	26.2	343	06.8	29.4	50	12.6	51.0
11	132	06.9	325	55.8	+7 25.0	358	07.6	+18 28.9	65	14.7	+20 51.0
12	147	09.3	340	55.4	+7 23.8	13	08.5	+18 28.5	80	16.8	+20 51.1
13	162	11.8	355	55.0	22.6	28	09.3	28.1	95	19.0	51.1
14	177	14.3	10	54.7	21.4	43	10.1	27.6	110	21.1	51.2
15	192	16.7	25	54.3	20.2	58	11.0	27.2	125	23.2	51.2
16	207	19.2	40	53.9	18.9	73	11.8	26.8	140	25.4	51.3
17	222	21.7	55	53.5	+7 17.7	88	12.6	+18 26.3	155	27.5	+20 51.3
18	237	24.1	70	53.1	+7 16.5	103	13.5	+18 25.9	170	29.6	+20 51.4
19	252	26.6	85	52.8	15.3	118	14.3	25.5	185	31.8	51.4
20	267	29.1	100	52.4	14.0	133	15.2	25.0	200	33.9	51.4
21	282	31.5	115	52.0	12.8	148	16.0	24.6	215	36.0	51.5
22	297	34.0	130	51.6	11.6	163	16.8	24.2	230	38.2	51.5
23	312	36.4	145	51.3	10.4	178	17.7	23.7	245	40.3	51.6
24	327	38.9	160	50.9	+7 09.2	193	18.5	+18 23.3	260	42.5	+20 51.6
Dif	—		-4	-12	+8	-4	+21	0	+23	0	

UT	SOL		LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8		Edad: 18 ^d 9	PHE { 4 ^h : 56 ^m 3 12 ^h : 56 ^m 4 20 ^h : 56 ^m 6	SD: 15 ^h 3				Final del crepúsculo		Salida de Luna		Puesta de Luna	
	PMG: 12 ^h 03 ^m 5	PMG: 2 ^h 58 ^m			R°: 46 ^m	Civil			Náutico	Hora	R°	Hora	R°	
	hG ☉	Dec	hG ☾	Dif	Dec	Dif								
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	179	05.7	+12 44.6		316	46.1	-0 47.7	60 N	19 41	20 30	21 39	21 09 12	9 16 82	
1	194	05.8			331	18.9 ¹³⁸	35.9 ¹¹⁸	58	33	18	20	11 14	16 79	
2	209	05.9			345	51.7 ¹³⁸	24.0 ¹¹⁹	56	27	09	21 04	12 17	15 77	
3	224	06.1			0	24.5 ¹³⁸	12.1 ¹¹⁹	54	20	20 00	20 51	14 19	15 74	
4	239	06.2			14	57.3 ¹³⁸	-0 00.3 ¹¹⁸	52	15	19 52	39	15 21	14 73	
5	254	06.4	+12 40.6		29	30.0 ¹³⁷	+0 11.6 ¹¹⁹	50	19 10	19 45	20 29	21 16 23	9 14 70	
6	269	06.5	+12 39.7		44	02.7 ¹³⁷	+0 23.5 ¹¹⁹	45	19 00	19 31	20 09	21 19 26	9 13 67	
7	284	06.7			58	35.4 ¹³⁷	35.4 ¹¹⁹	40	18 51	19	19 54	21 30	13 63	
8	299	06.8			73	08.1 ¹³⁷	47.3 ¹¹⁹	35	43	10	41	23 33	12 60	
9	314	07.0			87	40.8 ¹³⁷	+0 59.2 ¹¹⁹	30	37	19 02	31	25 35	11 58	
10	329	07.1			102	13.4 ¹³⁶	+1 11.2 ¹²⁰	20	26	18 48	15	28 39	11 53	
11	344	07.3	+12 35.6		116	46.0 ¹³⁶	+1 23.1 ¹¹⁹	10 N	18 16	18 37	19 03	21 30 43	9 10 49	
12	359	07.4	+12 34.8		131	18.6 ¹³⁶	+1 35.0 ¹¹⁹	0	18 07	18 28	18 53	21 33 47	9 09 46	
13	14	07.6			145	51.1 ¹³⁵	46.9 ¹¹⁹	10 S	17 58	19	44	35 51	08 43	
14	29	07.7			160	23.6 ¹³⁵	+1 58.9 ¹²⁰	20	49	11	37	38 54	08 38	
15	44	07.8			174	56.1 ¹³⁵	+2 10.8 ¹¹⁹	30	38	18 02	31	41 59	07 34	
16	59	08.0			189	28.5 ¹³⁴	22.7 ¹¹⁹	35	32	17 58	28	43 61	06 32	
17	74	08.1	+12 30.7		204	01.0 ¹³⁵	+2 34.6 ¹¹⁹	40	17 25	17 53	18 25	21 45 64	9 05 29	
18	89	08.3	+12 29.9		218	33.4 ¹³⁴	+2 46.6 ¹²⁰	45	17 17	17 47	18 22	21 48 67	9 05 25	
19	104	08.4			233	05.7 ¹³³	+2 58.5 ¹¹⁹	50	08	41	19	51 71	04 22	
20	119	08.6			247	38.0 ¹³³	+3 10.4 ¹¹⁹	52	17 03	38	18	52 73	04 20	
21	134	08.7			262	10.3 ¹³³	22.3 ¹¹⁹	54	16 58	35	17	53 76	03 18	
22	149	08.9			276	42.6 ¹³³	34.2 ¹¹⁹	56	53	32	15	55 78	03 16	
23	164	09.0			291	14.8 ¹³²	46.1 ¹¹⁹	58	47	28	14	57 80	02 14	
24	179	09.2	+12 25.0		305	47.0 ¹³²	+3 58.0 ¹¹⁹	60 S	16 40	17 24	18 13	21 59 83	9 02 11	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 2 ^h 09 ^m 1		Mag: -3.8 PMG: 13 ^h 17 ^m		Mag: +1.8 PMG: 11 ^h 06 ^m		Mag: -2.4 PMG: 6 ^h 36 ^m		Mag: +0.2 PMG: 6 ^h 03 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	327	38.9	160	50.9	193	18.5	260	42.5	268	53.7				
1	342	41.4	175	50.5	208	19.4	275	44.6	283	56.1				
2	357	43.8	190	50.1	223	20.2	290	46.7	298	58.4				
3	12	46.3	205	49.8	238	21.1	305	48.9	314	00.8				
4	27	48.8	220	49.4	253	21.9	320	51.0	329	03.1				
5	42	51.2	235	49.0	268	22.7	335	53.2	344	05.5				
6	57	53.7	250	48.7	283	23.6	350	55.3	359	07.8				
7	72	56.2	265	48.3	298	24.4	5	57.4	14	10.2				
8	87	58.6	280	47.9	+6	59.4	20	59.6	29	12.5				
9	103	01.1	295	47.5	58.1		36	01.7	44	14.9				
10	118	03.6	310	47.2	56.9		51	03.8	59	17.2				
11	133	06.0	325	46.8	+6	55.7	66	06.0	+20	52.1				
12	148	08.5	340	46.4	+6	54.4	81	08.1	+20	52.2				
13	163	10.9	355	46.1	53.2		96	10.3	52.2					
14	178	13.4	10	45.7	52.0		111	12.4	52.3					
15	193	15.9	25	45.3	50.8		126	14.6	52.3					
16	208	18.3	40	44.9	49.5		141	16.7	52.3					
17	223	20.8	55	44.6	+6	48.3	156	18.8	+20	52.4				
18	238	23.3	70	44.2	+6	47.1	171	21.0	+20	52.4				
19	253	25.7	85	43.8	45.8		186	23.1	52.5					
20	268	28.2	100	43.5	44.6		201	25.3	52.5					
21	283	30.7	115	43.1	43.4		216	27.4	52.6					
22	298	33.1	130	42.7	42.2		231	29.5	52.6					
23	313	35.6	145	42.4	40.9		246	31.7	52.7					
24	328	38.0	160	42.0	+6	39.7	261	33.8	+20	52.7				
Dif	—		-4	-12	+8	-4	+21	0		+24	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 3			Edad: 19 ^d 9 PHE { 4 ^h : 56'8 12 ^h : 57'0 20 ^h : 57'2 SD: 15°4 PMG: 3 ^h 44 ^m R°: 47 ^m																	
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°						
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	h	m			
0	179	09.2	+12	25.0	305	47.0	+3	58.0	60 N	2	29	3	38	4	27	21	21	14	10	38	84
1	194	09.3		24.1	320	19.1	+4	09.9	58	2	48		49		34	25	18		35	81	
2	209	09.5		23.3	334	51.2		21.7	56	3	04	3	59		41	29	20		32	78	
3	224	09.6		22.5	349	23.3		33.6	54		17	4	08		47	33	22		29	76	
4	239	09.8		21.7	3	55.3		45.4	52		28		15		52	36	24		27	74	
5	254	09.9	+12	20.8	18	27.3	+4	57.3	50	3	38	4	22	4	57	21	39	26	10	24	73
6	269	10.1	+12	20.0	32	59.3	+5	09.1	45	3	58	4	36	5	08	21	45	30	10	20	68
7	284	10.2		19.2	47	31.1		20.9	40	4	13		48		16	51	33		16	64	
8	299	10.4		18.3	62	03.0		32.7	35		26	4	57		24	21	56	35	12	62	
9	314	10.5		17.5	76	34.8		44.4	30		36	5	05		30	22	00	38	09	60	
10	329	10.7		16.7	91	06.6	+5	56.2	20	4	52		19		41	07	42	10	04	55	
11	344	10.8	+12	15.9	105	38.3	+6	07.9	10 N	5	04	5	29	5	51	22	13	46	9	59	52
12	359	11.0	+12	15.0	120	10.0	+6	19.6	0	5	14	5	39	6	00	22	20	49	9	55	48
13	14	11.2		14.2	134	41.6		31.3	10 S		22		47		09	26	52		51	44	
14	29	11.3		13.4	149	13.1		43.0	20		30	5	55		18	32	57		46	41	
15	44	11.5		12.6	163	44.7	+6	54.6	30		36	6	04		28	40	60		41	36	
16	59	11.6		11.7	178	16.1	+7	06.3	35		39		08		34	44	63		38	34	
17	74	11.8	+12	10.9	192	47.6	+7	17.9	40	5	42	6	13	6	41	22	49	66	9	34	31
18	89	11.9	+12	10.1	207	18.9	+7	29.5	45	5	44	6	19	6	49	22	55	69	9	30	28
19	104	12.1		09.2	221	50.2		41.0	50		47		25	6	58	23	02	73	26	24	
20	119	12.2		08.4	236	21.5	+7	52.5	52		48		28	7	02	05	76		24	22	
21	134	12.4		07.6	250	52.7	+8	04.0	54		49		31		07	09	77		21	20	
22	149	12.5		06.7	265	23.8		15.5	56		50		34		12	13	80		19	18	
23	164	12.7		05.9	279	54.9		26.9	58		51		37		18	17	83		16	15	
24	179	12.8	+12	05.1	294	26.0	+8	38.3	60 S	5	53	6	41	7	25	23	22	86	9	13	12
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO									
	PMG: 2 ^h 05 ^m 1		Mag: -3.8 PMG: 13 ^h 18 ^m			Mag: +1.8 PMG: 11 ^h 05 ^m			Mag: -2.4 PMG: 6 ^h 33 ^m			Mag: +0.1 PMG: 6 ^h 00 ^m									
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'							
0	328	38.0	160	42.0	+6	39.7	193	38.8	+18	12.8	261	33.8	+20	52.7	269	50.2	+18	09.4			
1	343	40.5	175	41.6		38.5	208	39.6		12.3	276	36.0		52.7	284	52.6		09.4			
2	358	43.0	190	41.3		37.2	223	40.4		11.9	291	38.1		52.8	299	54.9		09.5			
3	13	45.4	205	40.9		36.0	238	41.3		11.5	306	40.3		52.8	314	57.3		09.5			
4	28	47.9	220	40.5		34.8	253	42.1		11.0	321	42.4		52.9	329	59.6		09.5			
5	43	50.4	235	40.2	+6	33.5	268	43.0	+18	10.6	336	44.6	+20	52.9	345	02.0	+18	09.5			
6	58	52.8	250	39.8	+6	32.3	283	43.8	+18	10.1	351	46.7	+20	53.0	0	04.4	+18	09.5			
7	73	55.3	265	39.4		31.1	298	44.7		09.7	6	48.8		53.0	15	06.7		09.5			
8	88	57.8	280	39.1		29.8	313	45.5		09.3	21	51.0		53.0	30	09.1		09.5			
9	104	00.2	295	38.7		28.6	328	46.4		08.8	36	53.1		53.1	45	11.4		09.6			
10	119	02.7	310	38.3		27.4	343	47.2		08.4	51	55.3		53.1	60	13.8		09.6			
11	134	05.2	325	38.0	+6	26.1	358	48.1	+18	07.9	66	57.4	+20	53.2	75	16.1	+18	09.6			
12	149	07.6	340	37.6	+6	24.9	13	48.9	+18	07.5	81	59.6	+20	53.2	90	18.5	+18	09.6			
13	164	10.1	355	37.2		23.7	28	49.7		07.0	97	01.7		53.3	105	20.9		09.6			
14	179	12.5	10	36.9		22.4	43	50.6		06.6	112	03.9		53.3	120	23.2		09.6			
15	194	15.0	25	36.5		21.2	58	51.4		06.1	127	06.0		53.4	135	25.6		09.6			
16	209	17.5	40	36.1		20.0	73	52.3		05.7	142	08.2		53.4	150	27.9		09.6			
17	224	19.9	55	35.8	+6	18.7	88	53.1	+18	05.3	157	10.3	+20	53.4	165	30.3	+18	09.7			
18	239	22.4	70	35.4	+6	17.5	103	54.0	+18	04.8	172	12.5	+20	53.5	180	32.7	+18	09.7			
19	254	24.9	85	35.1		16.2	118	54.8		04.4	187	14.6		53.5	195	35.0		09.7			
20	269	27.3	100	34.7		15.0	133	55.7		03.9	202	16.8		53.6	210	37.4		09.7			
21	284	29.8	115	34.3		13.8	148	56.5		03.5	217	18.9		53.6	225	39.7		09.7			
22	299	32.3	130	34.0		12.5	163	57.4		03.0	232	21.1		53.7	240	42.1		09.7			
23	314	34.7	145	33.6		11.3	178	58.2		02.6	247	23.2		53.7	255	44.5		09.7			
24	329	37.2	160	33.2	+6	10.1	193	59.1	+18	02.1	262	25.4	+20	53.7	270	46.8	+18	09.7			
Dif	—		-4		-12		+8		-4		+21		0		+24						

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15°8 PMG: 12 ^h 03 ^m 0			Edad: 20 ^d 9 PHE { 4 ^h : 57/4 12 ^h : 57/6 20 ^h : 57/8 PMG: 4 ^h 31 ^m R°: 50 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	179	12.8	+12 05.1	294	26.0	+8 38.3	60 N	19 35	20 23	21 30	21 35 19	12 02 87			
1	194	13.0	04.2	308	56.9 ¹¹⁹	+8 49.7 ¹¹⁴	58	28	13	21 12	43 21	11 56 83			
2	209	13.1	03.4	323	27.9 ¹²⁰	+9 01.0 ¹¹³	56	22	20 03	20 57	49 25	50 81			
3	224	13.3	02.6	337	58.7 ¹¹⁸	12.3 ¹¹³	54	16	19 55	45	21 55 27	45 78			
4	239	13.5	01.7	352	29.5 ¹¹⁸	23.6 ¹¹³	52	11	48	34	22 00 29	41 76			
5	254	13.6	+12 00.9	7	00.2 ¹¹⁷	+9 34.8 ¹¹²	50	19 06	19 41	20 25	22 05 30	11 37 74			
6	269	13.8	+12 00.1	21	30.9 ¹¹⁷	+9 46.0 ¹¹²	45	18 56	19 27	20 05	22 15 34	11 28 70			
7	284	13.9	+11 59.2	36	01.5 ¹¹⁶	+9 57.1 ¹¹¹	40	48	16	19 51	24 37	20 67			
8	299	14.1	58.4	50	32.0 ¹¹⁵	+10 08.2 ¹¹¹	35	41	19 07	39	31 40	14 64			
9	314	14.2	57.6	65	02.5 ¹¹⁵	19.3 ¹¹¹	30	35	18 59	29	38 42	11 09 61			
10	329	14.4	56.7	79	32.9 ¹¹⁴	30.3 ¹¹⁰	20	24	47	13	49 46	10 59 57			
11	344	14.5	+11 55.9	94	03.3 ¹¹⁴	+10 41.3 ¹¹⁰	10 N	18 15	18 36	19 01	22 59 49	10 51 53			
12	359	14.7	+11 55.1	108	33.6 ¹¹³	+10 52.2 ¹⁰⁹	0	18 06	18 27	18 52	23 09 52	10 43 50			
13	14	14.9	54.2	123	03.8 ¹¹²	+11 03.1 ¹⁰⁹	10 S	17 58	19	44	18 56	35 47			
14	29	15.0	53.4	137	33.9 ¹¹¹	14.0 ¹⁰⁹	20	49	12	37	29 58	27 43			
15	44	15.2	52.5	152	04.0 ¹¹¹	24.8 ¹⁰⁸	30	39	18 03	32	40 63	17 40			
16	59	15.3	51.7	166	34.0 ¹¹⁰	35.5 ¹⁰⁷	35	33	17 59	29	47 65	12 37			
17	74	15.5	+11 50.9	181	03.9 ¹⁰⁹	+11 46.2 ¹⁰⁷	40	17 27	17 55	18 26	23 55 68	10 05 35			
18	89	15.6	+11 50.0	195	33.8 ¹⁰⁹	+11 56.8 ¹⁰⁶	45	17 19	17 50	18 24	*** ** *	9 58 32			
19	104	15.8	49.2	210	03.5 ¹⁰⁷	+12 07.4 ¹⁰⁶	50	11	44	22	*** ** *	50 27			
20	119	16.0	48.4	224	33.3 ¹⁰⁸	17.9 ¹⁰⁵	52	06	41	21	*** ** *	46 26			
21	134	16.1	47.5	239	02.9 ¹⁰⁶	28.4 ¹⁰⁵	54	17 02	38	20	*** ** *	41 24			
22	149	16.3	46.7	253	32.5 ¹⁰⁶	38.8 ¹⁰⁴	56	16 57	35	19	*** ** *	37 21			
23	164	16.4	45.8	268	02.0 ¹⁰⁵	49.2 ¹⁰⁴	58	51	32	18	*** ** *	31 19			
24	179	16.6	+11 45.0	282	31.4 ¹⁰⁴	+12 59.5 ¹⁰³	60 S	16 45	17 29	18 17	*** ** *	9 25 16			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 2 ^h 01 ^m 2		Mag: -3.8 PMG: 13 ^h 18 ^m			Mag: +1.8 PMG: 11 ^h 03 ^m			Mag: -2.4 PMG: 6 ^h 29 ^m			Mag: +0.1 PMG: 5 ^h 56 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	329	37.2	160	33.2	+6 10.1	193	59.1	+18 02.1	262	25.4	+20 53.7	270	46.8	+18 09.7	
1	344	39.6	175	32.9	08.8	208	59.9	01.7	277	27.5	53.8	285	49.2	09.8	
2	359	42.1	190	32.5	07.6	224	00.8	01.3	292	29.7	53.8	300	51.5	09.8	
3	14	44.6	205	32.2	06.3	239	01.6	00.8	307	31.8	53.9	315	53.9	09.8	
4	29	47.0	220	31.8	05.1	254	02.5	+18 00.4	322	34.0	53.9	330	56.3	09.8	
5	44	49.5	235	31.4	+6 03.9	269	03.3	+17 59.9	337	36.1	+20 54.0	345	58.6	+18 09.8	
6	59	52.0	250	31.1	+6 02.6	284	04.2	+17 59.5	352	38.3	+20 54.0	1	01.0	+18 09.8	
7	74	54.4	265	30.7	01.4	299	05.0	59.0	7	40.4	54.0	16	03.3	09.8	
8	89	56.9	280	30.4	+6 00.1	314	05.9	58.6	22	42.6	54.1	31	05.7	09.9	
9	104	59.4	295	30.0	+5 58.9	329	06.7	58.1	37	44.7	54.1	46	08.1	09.9	
10	120	01.8	310	29.6	57.6	344	07.6	57.7	52	46.9	54.2	61	10.4	09.9	
11	135	04.3	325	29.3	+5 56.4	359	08.4	+17 57.2	67	49.0	+20 54.2	76	12.8	+18 09.9	
12	150	06.8	340	28.9	+5 55.2	14	09.3	+17 56.8	82	51.2	+20 54.2	91	15.2	+18 09.9	
13	165	09.2	355	28.6	53.9	29	10.1	56.3	97	53.3	54.3	106	17.5	09.9	
14	180	11.7	10	28.2	52.7	44	11.0	55.9	112	55.5	54.3	121	19.9	09.9	
15	195	14.1	25	27.8	51.4	59	11.8	55.4	127	57.6	54.4	136	22.2	09.9	
16	210	16.6	40	27.5	50.2	74	12.7	55.0	142	59.8	54.4	151	24.6	10.0	
17	225	19.1	55	27.1	+5 49.0	89	13.5	+17 54.5	158	02.0	+20 54.5	166	27.0	+18 10.0	
18	240	21.5	70	26.8	+5 47.7	104	14.4	+17 54.1	173	04.1	+20 54.5	181	29.3	+18 10.0	
19	255	24.0	85	26.4	46.5	119	15.2	53.6	188	06.3	54.5	196	31.7	10.0	
20	270	26.5	100	26.1	45.2	134	16.1	53.2	203	08.4	54.6	211	34.1	10.0	
21	285	28.9	115	25.7	44.0	149	16.9	52.7	218	10.6	54.6	226	36.4	10.0	
22	300	31.4	130	25.3	42.7	164	17.8	52.3	233	12.7	54.7	241	38.8	10.0	
23	315	33.9	145	25.0	41.5	179	18.6	51.8	248	14.9	54.7	256	41.2	10.0	
24	330	36.3	160	24.6	+5 40.2	194	19.5	+17 51.4	263	17.0	+20 54.8	271	43.5	+18 10.0	
Dif	—		-4	-12		+9	-4		+22		0	+24		0	

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 8			Edad: 21 ^d 9 PHE { 4 ^h : 58 ^h /1 12 ^h : 58 ^h /3 20 ^h : 58 ^h /5 PMG: 5 ^h 21 ^m R ^o : 53 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	179	16.6	+11	45.0	282	31.4	+12	59.5	60 N	2	36	3	43	4	32	21 54 27
1	194	16.8		44.2	297	00.7 ¹⁰³	+13	09.7 ¹⁰²	58	2	55	3	54	39	22 04 30	19 83
2	209	16.9		43.3	311	30.0 ¹⁰³		19.9 ¹⁰²	56	3	09	4	03	45	14 32	11 80
3	224	17.1		42.5	325	59.2 ¹⁰²		30.0 ¹⁰¹	54	22		12		51	22 34	13 03 79
4	239	17.2		41.6	340	28.3 ¹⁰¹		40.1 ¹⁰¹	52	33		19		4	56	29 36
5	254	17.4	+11	40.8	354	57.3 ¹⁰⁰	+13	50.1 ¹⁰⁰	50	3	42	4	25	5	00	22 35 38
6	269	17.6	+11	39.9	9	26.3 ¹⁰⁰	+14	00.0 ⁹⁹	45	4	01	4	39	5	10	22 49 42
7	284	17.7		39.1	23	55.1 ⁹⁸	+14	09.9 ⁹⁸	40	16		50		18	23 01 44	27 68
8	299	17.9		38.3	38	23.9 ⁹⁸		19.7 ⁹⁸	35	28		4	59	25	11 46	18 65
9	314	18.0		37.4	52	52.6 ⁹⁷		29.4 ⁹⁷	30	37		5	07	31	20 48	12 10 63
10	329	18.2		36.6	67	21.3 ⁹⁷		39.0 ⁹⁶	20	4	53	19		42	35 51	11 56 60
11	344	18.4	+11	35.7	81	49.8 ⁹⁵	+14	48.6 ⁹⁶	10 N	5	04	5	30	5	51	23 48 54
12	359	18.5	+11	34.9	96	18.3 ⁹⁵	+14	58.1 ⁹⁵	0	5	14	5	38	5	59	** ** *
13	14	18.7		34.0	110	46.7 ⁹⁴	+15	07.5 ⁹⁴	10 S	22		46		6	08	** ** *
14	29	18.8		33.2	125	15.0 ⁹³		16.9 ⁹⁴	20	28		5	54	16	** ** *	
15	44	19.0		32.4	139	43.2 ⁹²		26.1 ⁹²	30	34		6	02	26	** ** *	
16	59	19.2		31.5	154	11.3 ⁹¹		35.3 ⁹²	35	37		06		32	** ** *	
17	74	19.3	+11	30.7	168	39.4 ⁹¹	+15	44.4 ⁹¹	40	5	39	6	11	6	38	** ** *
18	89	19.5	+11	29.8	183	07.4 ⁹⁰	+15	53.4 ⁹⁰	45	5	41	6	16	6	46	0 04 71
19	104	19.6		29.0	197	35.2 ⁸⁸	+16	02.4 ⁹⁰	50	44		21		54	15 75	17 34
20	119	19.8		28.1	212	03.1 ⁸⁹		11.3 ⁸⁹	52	44		24		6	58	21 76
21	134	20.0		27.3	226	30.8 ⁸⁷		20.0 ⁸⁷	54	45		26		7	03	26 79
22	149	20.1		26.4	240	58.4 ⁸⁶		28.7 ⁸⁷	56	46		29		08	33 81	9 58 28
23	164	20.3		25.6	255	26.0 ⁸⁶		37.3 ⁸⁶	58	47		32		13	40 84	50 25
24	179	20.5	+11	24.7	269	53.4 ⁸⁴	+16	45.8 ⁸⁵	60 S	5	47	6	36	7	19	0 48 87
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 1 ^h 57 ^m 3			Mag: -3.8 PMG: 13 ^h 19 ^m			Mag: +1.8 PMG: 11 ^h 02 ^m			Mag: -2.4 PMG: 6 ^h 26 ^m			Mag: +0.1 PMG: 5 ^h 52 ^m			
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	330	36.3			160	24.6	+5	40.2	194	19.5	+17	51.4	263	17.0	+20	54.8
1	345	38.8			175	24.3		39.0	209	20.3		50.9	278	19.2		54.8
2	0	41.3			190	23.9		37.7	224	21.2		50.5	293	21.4		54.8
3	15	43.7			205	23.6		36.5	239	22.0		50.0	308	23.5		54.9
4	30	46.2			220	23.2		35.3	254	22.9		49.6	323	25.7		54.9
5	45	48.6			235	22.9	+5	34.0	269	23.8	+17	49.1	338	27.8	+20	55.0
6	60	51.1			250	22.5	+5	32.8	284	24.6	+17	48.7	353	30.0	+20	55.0
7	75	53.6			265	22.1		31.5	299	25.5		48.2	8	32.1		55.0
8	90	56.0			280	21.8		30.3	314	26.3		47.8	23	34.3		55.1
9	105	58.5			295	21.4		29.0	329	27.2		47.3	38	36.5		55.1
10	121	01.0			310	21.1		27.8	344	28.0		46.9	53	38.6		55.2
11	136	03.4			325	20.7	+5	26.5	359	28.9	+17	46.4	68	40.8	+20	55.2
12	151	05.9			340	20.4	+5	25.3	14	29.7	+17	46.0	83	42.9	+20	55.2
13	166	08.4			355	20.0		24.0	29	30.6		45.5	98	45.1		55.3
14	181	10.8			10	19.7		22.8	44	31.4		45.1	113	47.3		55.3
15	196	13.3			25	19.3		21.5	59	32.3		44.6	128	49.4		55.4
16	211	15.7			40	19.0		20.3	74	33.2		44.2	143	51.6		55.4
17	226	18.2			55	18.6	+5	19.0	89	34.0	+17	43.7	158	53.7	+20	55.5
18	241	20.7			70	18.3	+5	17.8	104	34.9	+17	43.3	173	55.9	+20	55.5
19	256	23.1			85	17.9		16.5	119	35.7		42.8	188	58.1		55.5
20	271	25.6			100	17.6		15.3	134	36.6		42.3	204	00.2		55.6
21	286	28.1			115	17.2		14.0	149	37.4		41.9	219	02.4		55.6
22	301	30.5			130	16.9		12.8	164	38.3		41.4	234	04.6		55.7
23	316	33.0			145	16.5		11.5	179	39.1		41.0	249	06.7		55.7
24	331	35.5			160	16.1	+5	10.3	194	40.0	+17	40.5	264	08.9	+20	55.7
Dif	—			-4 -12			+9 -5			+22 0			+24 0			

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 22 ^d 9	PHE { 4 ^h : 58 ^m /7 12 ^h : 58 ^m /9 20 ^h : 59 ^m /2 R°: 57 ^m										
	PMG: 12 ^h 02 ^m 5					SD: 16 ^h 0			PMG: 6 ^h 14 ^m						
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m		h m m	
0	179	20.5	+11 24.7	269	53.4	+16 45.8		60 N	19 29	20 17	21 22	22 21 39		14 55 82	
1	194	20.6	23.9	284	20.8	+16 54.2	84	58	23	20 07	21 05	34 42		42 80	
2	209	20.8	23.0	298	48.1	+17 02.6	84	56	17	19 58	20 51	46 43		31 77	
3	224	21.0	22.2	313	15.3	10.8	82	54	11	50	39	22 56 45		22 75	
4	239	21.1	21.3	327	42.4	19.0	82	52	07	43	29	23 05 46		13 73	
5	254	21.3	+11 20.5	342	09.5	+17 27.0	80	50	19 02	19 37	20 20	23 13 48		14 05 72	
6	269	21.4	+11 19.6	356	36.4	+17 34.9	79	45	18 53	19 24	20 01	23 31 49		13 48 70	
7	284	21.6	18.8	11	03.3	42.8	79	40	45	13	19 47	45 51		35 67	
8	299	21.8	17.9	25	30.1	50.5	77	35	38	19 05	36	23 57 53		23 66	
9	314	21.9	17.1	39	56.8	+17 58.2	77	30	33	18 57	26	*** ** *		13 13 65	
10	329	22.1	16.2	54	23.4	+18 05.7	75	20	23	45	12	** ** *		12 56 62	
11	344	22.3	+11 15.4	68	49.9	+18 13.2	75	10 N	18 14	18 35	19 00	** ** *		12 41 60	
12	359	22.4	+11 14.5	83	16.3	+18 20.5	73	0	18 06	18 27	18 51	0 01 56		12 27 58	
13	14	22.6	13.7	97	42.7	27.7	72	10 S	17 58	19	44	14 58		12 13 56	
14	29	22.8	12.8	112	09.0	34.9	72	20	50	12	38	27 61		11 58 54	
15	44	22.9	12.0	126	35.2	41.9	70	30	40	05	33	43 64		41 51	
16	59	23.1	11.1	141	01.3	48.8	69	35	35	18 01	30	0 52 66		32 49	
17	74	23.3	+11 10.3	155	27.3	+18 55.6	68	40	17 29	17 56	18 28	1 03 68		11 20 48	
18	89	23.4	+11 09.4	169	53.2	+19 02.3	67	45	17 22	17 52	18 26	1 15 71		11 07 45	
19	104	23.6	08.6	184	19.1	08.8	65	50	13	47	24	30 74		10 51 42	
20	119	23.8	07.7	198	44.9	15.3	65	52	10	44	24	37 76		43 41	
21	134	23.9	06.9	213	10.6	21.6	63	54	05	42	23	45 77		35 39	
22	149	24.1	06.0	227	36.2	27.8	62	56	17 01	39	22	1 54 79		26 37	
23	164	24.3	05.1	242	01.7	33.9	61	58	16 55	36	22	2 04 82		15 35	
24	179	24.4	+11 04.3	256	27.2	+19 39.9	60	60 S	16 50	17 33	18 21	2 15 86		10 03 32	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 1 ^h 53 ^m 3		Mag: -3.8 PMG: 13 ^h 19 ^m		Mag: +1.8 PMG: 11 ^h 01 ^m		Mag: -2.4 PMG: 6 ^h 22 ^m		Mag: +0.1 PMG: 5 ^h 48 ^m						
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	331	35.5	160	16.1	+5 10.3	194	40.0	+17 40.5	264	08.9	+20 55.7	272	40.3	+18 10.3	
1	346	37.9	175	15.8	09.0	209	40.9	40.1	279	11.0	55.8	287	42.7	10.3	
2	1	40.4	190	15.4	07.8	224	41.7	39.6	294	13.2	55.8	302	45.1	10.3	
3	16	42.9	205	15.1	06.5	239	42.6	39.2	309	15.4	55.9	317	47.4	10.4	
4	31	45.3	220	14.7	05.3	254	43.4	38.7	324	17.5	55.9	332	49.8	10.4	
5	46	47.8	235	14.4	+5 04.0	269	44.3	+17 38.2	339	19.7	+20 55.9	347	52.2	+18 10.4	
6	61	50.2	250	14.0	+5 02.8	284	45.1	+17 37.8	354	21.9	+20 56.0	2	54.5	+18 10.4	
7	76	52.7	265	13.7	01.5	299	46.0	37.3	9	24.0	56.0	17	56.9	10.4	
8	91	55.2	280	13.3	+5 00.3	314	46.9	36.9	24	26.2	56.1	32	59.3	10.4	
9	106	57.6	295	13.0	+4 59.0	329	47.7	36.4	39	28.4	56.1	48	01.7	10.4	
10	122	00.1	310	12.7	57.7	344	48.6	36.0	54	30.5	56.1	63	04.0	10.4	
11	137	02.6	325	12.3	+4 56.5	359	49.4	+17 35.5	69	32.7	+20 56.2	78	06.4	+18 10.4	
12	152	05.0	340	12.0	+4 55.2	14	50.3	+17 35.0	84	34.9	+20 56.2	93	08.8	+18 10.5	
13	167	07.5	355	11.6	54.0	29	51.1	34.6	99	37.0	56.3	108	11.1	10.5	
14	182	10.0	10	11.3	52.7	44	52.0	34.1	114	39.2	56.3	123	13.5	10.5	
15	197	12.4	25	10.9	51.5	59	52.9	33.7	129	41.4	56.3	138	15.9	10.5	
16	212	14.9	40	10.6	50.2	74	53.7	33.2	144	43.5	56.4	153	18.3	10.5	
17	227	17.4	55	10.2	+4 49.0	89	54.6	+17 32.8	159	45.7	+20 56.4	168	20.6	+18 10.5	
18	242	19.8	70	09.9	+4 47.7	104	55.4	+17 32.3	174	47.9	+20 56.5	183	23.0	+18 10.5	
19	257	22.3	85	09.5	46.4	119	56.3	31.8	189	50.0	56.5	198	25.4	10.5	
20	272	24.7	100	09.2	45.2	134	57.2	31.4	204	52.2	56.5	213	27.7	10.5	
21	287	27.2	115	08.8	43.9	149	58.0	30.9	219	54.4	56.6	228	30.1	10.6	
22	302	29.7	130	08.5	42.7	164	58.9	30.5	234	56.5	56.6	243	32.5	10.6	
23	317	32.1	145	08.1	41.4	179	59.7	30.0	249	58.7	56.7	258	34.9	10.6	
24	332	34.6	160	07.8	+4 40.2	195	00.6	+17 29.5	265	00.9	+20 56.7	273	37.2	+18 10.6	
Dif	—		-3 -13		+9 -5		+22 0		+24 0		+24 0		0		

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8 PMG: 12 ^h 02 ^m 2				Edad: 23 ^d 9 PHE { 4 ^h : 59 ^m 4 12 ^h : 59 ^m 6 20 ^h : 59 ^m 8 PMG: 7 ^h 11 ^m R°: 60 ^m												
	hG ☉		Dec		hG ☾ Dif		Dec Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	179	24.4	+11	04.3	256	27.2	+19	39.9	60 N	2	44	3	49	4	36	23	00 57
1	194	24.6		03.4	270	52.5		45.8	58	3	01	3	59		43	16	57
2	209	24.8		02.6	285	17.8		51.5	56	15	4	08		49	29	58	
3	224	24.9		01.7	299	43.0	+19	57.1	54	27	16		54		41	59	
4	239	25.1	+11	00.9	314	08.2	+20	02.6	52	37	22	4	59		23	51 59	
5	254	25.3	+11	00.0	328	33.2	+20	08.0	50	3	46	4	29	5	03	** ** *	
6	269	25.4	+10	59.1	342	58.2	+20	13.2	45	4	04	4	42	5	13	** ** *	
7	284	25.6		58.3	357	23.1		18.3	40	18	4	52		20	** ** *		
8	299	25.8		57.4	11	48.0		23.3	35	29	5	01		27	** ** *		
9	314	25.9		56.6	26	12.7		28.1	30	39		08	33		0	08 54	
10	329	26.1		55.7	40	37.4		32.8	20	4	53		20	42		26 56	
11	344	26.3	+10	54.9	55	02.1	+20	37.4	10 N	5	05	5	30	5	51	0	42 58
12	359	26.5	+10	54.0	69	26.6	+20	41.9	0	5	13	5	38	5	59	0	57 59
13	14	26.6		53.1	83	51.1		46.2	10 S	21		45	6	07	1	12 61	
14	29	26.8		52.3	98	15.5		50.4	20	27	5	53	15		28	63	
15	44	27.0		51.4	112	39.9		54.4	30	32	6	00	24		47	64	
16	59	27.1		50.6	127	04.1	+20	58.3	39	34		04	29		1	58 65	
17	74	27.3	+10	49.7	141	28.4	+21	02.1	40	5	36	6	08	6	35	2	11 66
18	89	27.5	+10	48.8	155	52.5	+21	05.7	45	5	38	6	12	6	42	2	26 68
19	104	27.6		48.0	170	16.6		09.2	50	40		17	50		44	70	
20	119	27.8		47.1	184	40.6		12.5	52	40		20	54		2	53 71	
21	134	28.0		46.3	199	04.6		15.7	54	41		22	6	58	3	02 72	
22	149	28.2		45.4	213	28.5		18.8	56	41		25	7	03	13	74	
23	164	28.3		44.5	227	52.4		21.7	58	42		27	08		26	75	
24	179	28.5	+10	43.7	242	16.2	+21	24.4	60 S	5	42	6	31	7	14	3	41 77

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 1 ^h 49 ^m 4		Mag: -3.8 PMG: 13 ^h 20 ^m		Mag: +1.8 PMG: 10 ^h 59 ^m		Mag: -2.4 PMG: 6 ^h 19 ^m		Mag: +0.1 PMG: 5 ^h 45 ^m	
	hG ♈		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec	
h	°	'	°	'	°	'	°	'	°	'
0	332	34.6	160	07.8	+4	40.2	195	00.6	+17	29.5
1	347	37.1	175	07.4		38.9	210	01.5		29.1
2	2	39.5	190	07.1		37.6	225	02.3		28.6
3	17	42.0	205	06.8		36.4	240	03.2		28.2
4	32	44.5	220	06.4		35.1	255	04.0		27.7
5	47	46.9	235	06.1	+4	33.9	270	04.9	+17	27.2
6	62	49.4	250	05.7	+4	32.6	285	05.8	+17	26.8
7	77	51.9	265	05.4		31.4	300	06.6		26.3
8	92	54.3	280	05.0		30.1	315	07.5		25.9
9	107	56.8	295	04.7		28.8	330	08.4		25.4
10	122	59.2	310	04.3		27.6	345	09.2		24.9
11	138	01.7	325	04.0	+4	26.3	0	10.1	+17	24.5
12	153	04.2	340	03.7	+4	25.1	15	10.9	+17	24.0
13	168	06.6	355	03.3		23.8	30	11.8		23.5
14	183	09.1	10	03.0		22.5	45	12.7		23.1
15	198	11.6	25	02.6		21.3	60	13.5		22.6
16	213	14.0	40	02.3		20.0	75	14.4		22.2
17	228	16.5	55	01.9	+4	18.8	90	15.3	+17	21.7
18	243	19.0	70	01.6	+4	17.5	105	16.1	+17	21.2
19	258	21.4	85	01.3		16.2	120	17.0		20.8
20	273	23.9	100	00.9		15.0	135	17.9		20.3
21	288	26.3	115	00.6		13.7	150	18.7		19.8
22	303	28.8	130	00.2		12.4	165	19.6		19.4
23	318	31.3	144	59.9		11.2	180	20.4		18.9
24	333	33.7	159	59.5	+4	09.9	195	21.3	+17	18.4
Dif	—		-3 -13		+9 -5		+22 0		+24 0	

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 0			Edad: 24 ^d 9 PHE { 4 ^h : 59/9 12 ^h : 60/1 20 ^h : 60/2 PMG: 8 ^h 11 ^m R°: 61 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m				
0	179	28.5	+10	43.7	242	16.2	+21	24.4	60 N	19 24	20 10	21 13	23 57 75	17 27 53				
1	194	28.7		42.8	256	39.9	47	27.1	58	17	20 01	20 57	** ** *	17 10 55				
2	209	28.8		41.9	271	03.6	47	29.5	56	12	19 52	44	** ** *	16 56 55				
3	224	29.0		41.1	285	27.3	47	31.9	54	07	45	33	** ** *	44 56				
4	239	29.2		40.2	299	50.8	45	34.0	52	19 02	38	23	** ** *	33 57				
5	254	29.4	+10	39.3	314	14.4	46	+21 36.1	50	18 58	19 32	20 15	0 01 59	16 24 57				
6	269	29.5	+10	38.5	328	37.9	45	+21 37.9	45	18 49	19 20	19 57	0 20 60	16 03 58				
7	284	29.7		37.6	343	01.3	44	39.7	40	42	10	44	36 60	15 47 59				
8	299	29.9		36.8	357	24.7	44	41.2	35	36	19 02	33	0 50 60	33 59				
9	314	30.1		35.9	11	48.1	44	42.7	30	30	18 55	24	1 02 60	21 60				
10	329	30.2		35.0	26	11.4	43	43.9	20	21	43	19 10	22 61	15 00 61				
11	344	30.4	+10	34.2	40	34.7	43	+21 45.1	10 N	18 13	18 34	18 59	1 40 61	14 42 62				
12	359	30.6	+10	33.3	54	58.0	43	+21 46.0	0	18 05	18 26	18 51	1 56 62	14 25 62				
13	14	30.8		32.4	69	21.2	42	46.8	10 S	17 58	19	44	2 13 62	14 09 62				
14	29	30.9		31.6	83	44.4	42	47.5	20	50	12	38	3 11 61	13 50 63				
15	44	31.1		30.7	98	07.5	41	48.0	30	41	06	34	2 51 62	30 63				
16	59	31.3		29.8	112	30.6	41	48.3	35	36	18 02	31	3 03 62	17 64				
17	74	31.4	+10	29.0	126	53.7	41	+21 48.5	40	17 31	17 58	18 30	3 17 62	13 03 64				
18	89	31.6	+10	28.1	141	16.8	41	+21 48.6	45	17 24	17 54	18 28	3 34 62	12 47 64				
19	104	31.8		27.2	155	39.8	40	48.5	50	16	49	27	3 54 62	26 65				
20	119	32.0		26.3	170	02.8	40	48.2	52	13	47	26	4 04 62	17 65				
21	134	32.1		25.5	184	25.8	40	47.8	54	09	45	26	14 63	12 06 65				
22	149	32.3		24.6	198	48.8	40	47.2	56	05	43	26	27 62	11 53 66				
23	164	32.5		23.7	213	11.8	40	46.4	58	17 00	40	26	41 62	39 66				
24	179	32.7	+10	22.9	227	34.7	39	+21 45.5	60 S	16 54	17 37	18 26	4 58 62	11 22 66				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 1 ^h 45 ^m 5		Mag: -3.8 PMG: 13 ^h 20 ^m			Mag: +1.8 PMG: 10 ^h 58 ^m			Mag: -2.4 PMG: 6 ^h 16 ^m			Mag: +0.1 PMG: 5 ^h 41 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	333	33.7	159	59.5	+4	09.9	195	21.3	+17	18.4	265	53.0	+20	57.6	274	34.3	+18	10.8
1	348	36.2	174	59.2		08.7	210	22.2		18.0	280	55.2		57.7	289	36.6		10.8
2	3	38.7	189	58.9		07.4	225	23.0		17.5	295	57.4		57.7	304	39.0		10.8
3	18	41.1	204	58.5		06.1	240	23.9		17.1	310	59.6		57.7	319	41.4		10.8
4	33	43.6	219	58.2		04.9	255	24.8		16.6	326	01.7		57.8	334	43.8		10.9
5	48	46.1	234	57.8	+4	03.6	270	25.6	+17	16.1	341	03.9	+20	57.8	349	46.1	+18	10.9
6	63	48.5	249	57.5	+4	02.3	285	26.5	+17	15.7	356	06.1	+20	57.8	4	48.5	+18	10.9
7	78	51.0	264	57.2	+4	01.1	300	27.4		15.2	11	08.3		57.9	19	50.9		10.9
8	93	53.5	279	56.8	+3	59.8	315	28.2		14.7	26	10.5		57.9	34	53.3		10.9
9	108	55.9	294	56.5		58.5	330	29.1		14.3	41	12.6		58.0	49	55.7		10.9
10	123	58.4	309	56.1		57.3	345	30.0		13.8	56	14.8		58.0	64	58.0		10.9
11	139	00.8	324	55.8	+3	56.0	0	30.8	+17	13.3	71	17.0	+20	58.0	80	00.4	+18	10.9
12	154	03.3	339	55.5	+3	54.7	15	31.7	+17	12.9	86	19.2	+20	58.1	95	02.8	+18	10.9
13	169	05.8	354	55.1		53.5	30	32.6		12.4	101	21.4		58.1	110	05.2		10.9
14	184	08.2	9	54.8		52.2	45	33.4		11.9	116	23.5		58.1	125	07.6		10.9
15	199	10.7	24	54.4		50.9	60	34.3		11.5	131	25.7		58.2	140	09.9		11.0
16	214	13.2	39	54.1		49.7	75	35.2		11.0	146	27.9		58.2	155	12.3		11.0
17	229	15.6	54	53.8	+3	48.4	90	36.0	+17	10.5	161	30.1	+20	58.3	170	14.7	+18	11.0
18	244	18.1	69	53.4	+3	47.2	105	36.9	+17	10.1	176	32.3	+20	58.3	185	17.1	+18	11.0
19	259	20.6	84	53.1		45.9	120	37.8		09.6	191	34.4		58.3	200	19.5		11.0
20	274	23.0	99	52.7		44.6	135	38.6		09.1	206	36.6		58.4	215	21.9		11.0
21	289	25.5	114	52.4		43.4	150	39.5		08.6	221	38.8		58.4	230	24.2		11.0
22	304	28.0	129	52.1		42.1	165	40.4		08.2	236	41.0		58.4	245	26.6		11.0
23	319	30.4	144	51.7		40.8	180	41.2		07.7	251	43.2		58.5	260	29.0		11.0
24	334	32.9	159	51.4	+3	39.5	195	42.1	+17	07.2	266	45.4	+20	58.5	275	31.4	+18	11.0
Dif	—		-3		-13		+9		-5		+22		0		+24			

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15 ^h 8 PMG: 12 ^h 01 ^m 7			Edad: 25 ^d 9 PHE { 4 ^h : 60 ^h 3 12 ^h : 60 ^h 4 20 ^h : 60 ^h 5 PMG: 9 ^h 12 ^m R°: 62 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m	
0	179	32.7	+10	22.9	227	34.7	+21	45.5	10	60 N	2 51	3 54	4 41	**	**	**	18 20 37	
1	194	32.8		22.0	241	57.6	39	44.5	10	58	3 07	4 04	47	0 13	74		18 05 39	
2	209	33.0		21.1	256	20.6	40	43.2	13	56	20	12	53	27	73		17 51 42	
3	224	33.2		20.3	270	43.5	39	41.9	13	54	31	20	4 58	40	71		40 44	
4	239	33.4		19.4	285	06.4	39	40.3	16	52	41	26	5 02	0 50	71		30 45	
5	254	33.6	+10	18.5	299	29.3	39	+21 38.6	17	50	3 49	4 32	5 06	1 00	70		17 21 47	
6	269	33.7	+10	17.6	313	52.2	39	+21 36.8	18	45	4 07	4 44	5 15	1 20	69		17 01 50	
7	284	33.9		16.8	328	15.0	38	34.8	20	40	20	4 54	22	36	68		16 46 52	
8	299	34.1		15.9	342	37.9	39	32.6	22	35	31	5 02	28	1 50	67		32 54	
9	314	34.3		15.0	357	00.8	39	30.3	23	30	40	09	34	2 02	66		21 55	
10	329	34.4		14.2	11	23.7	39	27.8	25	20	4 54	20	43	23	64		16 01 57	
11	344	34.6	+10	13.3	25	46.6	39	+21 25.2	26	10 N	5 05	5 30	5 51	2 41	63		15 44 59	
12	359	34.8	+10	12.4	40	09.5	39	+21 22.4	28	0	5 13	5 37	5 58	2 58	61		15 27 61	
13	14	35.0		11.5	54	32.4	39	19.5	29	10 S	20	44	6 06	3 15	60		15 11 63	
14	29	35.1		10.7	68	55.4	40	16.4	31	20	25	51	13	32	60		14 53 65	
15	44	35.3		09.8	83	18.3	39	13.1	33	30	30	5 58	22	3 53	58		33 67	
16	59	35.5		08.9	97	41.3	40	09.7	34	35	32	6 01	27	4 05	57		21 69	
17	74	35.7	+10	08.0	112	04.2	39	+21 06.2	35	40	5 33	6 05	6 32	4 19	56		14 07 71	
18	89	35.9	+10	07.2	126	27.2	40	+21 02.5	37	45	5 35	6 09	6 39	4 36	54		13 51 72	
19	104	36.0		06.3	140	50.2	40	+20 58.6	39	50	36	13	46	4 56	52		31 75	
20	119	36.2		05.4	155	13.2	40	54.6	40	52	36	15	50	5 06	51		22 75	
21	134	36.4		04.5	169	36.3	41	50.4	42	54	37	18	54	17	49		13 11 77	
22	149	36.6		03.7	183	59.4	41	46.1	43	56	37	20	6 58	29	48		12 59 79	
23	164	36.8		02.8	198	22.5	41	41.6	45	58	37	22	7 03	5 43	47		45 81	
24	179	36.9	+10	01.9	212	45.6	41	+20 37.0	46	60 S	5 37	6 25	7 08	6 00	44		12 28 84	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 1 ^h 41 ^m 5		Mag: -3.8 PMG: 13 ^h 21 ^m				Mag: +1.8 PMG: 10 ^h 57 ^m				Mag: -2.4 PMG: 6 ^h 12 ^m				Mag: +0.1 PMG: 5 ^h 37 ^m			
	hG ♈		hG ♀	Dec			hG ♂	Dec			hG ♃	Dec			hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	334	32.9	159	51.4	+3	39.5	195	42.1	+17	07.2	266	45.4	+20	58.5	275	31.4	+18	11.0
1	349	35.3	174	51.1		38.3	210	43.0		06.8	281	47.5		58.6	290	33.8		11.0
2	4	37.8	189	50.7		37.0	225	43.8		06.3	296	49.7		58.6	305	36.1		11.0
3	19	40.3	204	50.4		35.7	240	44.7		05.8	311	51.9		58.6	320	38.5		11.1
4	34	42.7	219	50.0		34.5	255	45.6		05.4	326	54.1		58.7	335	40.9		11.1
5	49	45.2	234	49.7	+3	33.2	270	46.4	+17	04.9	341	56.3	+20	58.7	350	43.3	+18	11.1
6	64	47.7	249	49.4	+3	31.9	285	47.3	+17	04.4	356	58.5	+20	58.7	5	45.7	+18	11.1
7	79	50.1	264	49.0		30.7	300	48.2		04.0	12	00.7		58.8	20	48.1		11.1
8	94	52.6	279	48.7		29.4	315	49.1		03.5	27	02.8		58.8	35	50.4		11.1
9	109	55.1	294	48.4		28.1	330	49.9		03.0	42	05.0		58.8	50	52.8		11.1
10	124	57.5	309	48.0		26.9	345	50.8		02.5	57	07.2		58.9	65	55.2		11.1
11	140	00.0	324	47.7	+3	25.6	0	51.7	+17	02.1	72	09.4	+20	58.9	80	57.6	+18	11.1
12	155	02.5	339	47.4	+3	24.3	15	52.5	+17	01.6	87	11.6	+20	59.0	96	00.0	+18	11.1
13	170	04.9	354	47.0		23.1	30	53.4		01.1	102	13.8		59.0	111	02.4		11.1
14	185	07.4	9	46.7		21.8	45	54.3		00.7	117	16.0		59.0	126	04.7		11.1
15	200	09.8	24	46.4		20.5	60	55.2	+17	00.2	132	18.1		59.1	141	07.1		11.2
16	215	12.3	39	46.0		19.2	75	56.0	+16	59.7	147	20.3		59.1	156	09.5		11.2
17	230	14.8	54	45.7	+3	18.0	90	56.9	+16	59.2	162	22.5	+20	59.1	171	11.9	+18	11.2
18	245	17.2	69	45.3	+3	16.7	105	57.8	+16	58.8	177	24.7	+20	59.2	186	14.3	+18	11.2
19	260	19.7	84	45.0		15.4	120	58.6		58.3	192	26.9		59.2	201	16.7		11.2
20	275	22.2	99	44.7		14.2	135	59.5		57.8	207	29.1		59.2	216	19.1		11.2
21	290	24.6	114	44.3		12.9	151	00.4		57.3	222	31.3		59.3	231	21.4		11.2
22	305	27.1	129	44.0		11.6	166	01.3		56.9	237	33.5		59.3	246	23.8		11.2
23	320	29.6	144	43.7		10.3	181	02.1		56.4	252	35.7		59.4	261	26.2		11.2
24	335	32.0	159	43.3	+3	09.1	196	03.0	+16	55.9	267	37.8	+20	59.4	276	28.6	+18	11.2
Dif	—		-3		-13		+9		-5		+22		0		+24			

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15'8 PMG: 12 ^h 01 ^m 4			Edad: 26 ^d 9 PHE { 4 ^h : 60'6 12 ^h : 60'6 20 ^h : 60'6 R°: 60 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	h m	h m	h m
0	179	36.9	+10 01.9	212	45.6	+20 37.0	48	60 N	19 18	20 04	21 05	1 12 89	18 57 25		
1	194	37.1	01.0	227	08.8	32.2	48	58	12	19 55	20 50	27 86	44 29		
2	209	37.3	+10 00.2	241	32.0	27.2	50	56	07	47	38	40 83	33 32		
3	224	37.5	+9 59.3	255	55.2	22.2	50	54	19 02	40	27	1 51 81	24 33		
4	239	37.7	58.4	270	18.4	17.0	52	52	18 58	34	18	2 01 80	15 36		
5	254	37.8	+9 57.5	284	41.7	+20 11.6	54	50	18 54	19 28	20 10	2 10 78	18 08 37		
6	269	38.0	+9 56.6	299	05.1	+20 06.1	55	45	18 46	19 16	19 53	2 29 74	17 51 42		
7	284	38.2	55.8	313	28.4	+20 00.4	57	40	39	19 07	41	44 72	38 44		
8	299	38.4	54.9	327	51.9	+19 54.6	58	35	33	18 59	30	2 57 70	26 47		
9	314	38.6	54.0	342	15.3	48.7	59	30	28	53	21	3 08 68	17 16 49		
10	329	38.7	53.1	356	38.8	42.6	61	20	19	42	19 08	27 65	16 58 53		
11	344	38.9	+9 52.3	11	02.4	+19 36.3	63	10 N	18 12	18 33	18 58	3 44 62	16 43 56		
12	359	39.1	+9 51.4	25	26.0	+19 30.0	63	0	18 05	18 26	18 50	3 59 61	16 28 59		
13	14	39.3	50.5	39	49.6	23.5	65	10 S	17 58	19	44	4 15 58	16 14 62		
14	29	39.5	49.6	54	13.3	16.8	67	20	51	13	39	32 55	15 58 65		
15	44	39.6	48.7	68	37.1	10.0	68	30	42	07	34	4 51 52	40 69		
16	59	39.8	47.8	83	00.9	+19 03.1	69	35	38	03	33	5 02 50	30 70		
17	74	40.0	+9 47.0	97	24.7	+18 56.1	70	40	17 33	18 00	18 31	5 15 48	15 18 73		
18	89	40.2	+9 46.1	111	48.6	+18 48.9	72	45	17 26	17 56	18 30	5 30 45	15 03 76		
19	104	40.4	45.2	126	12.6	41.6	73	50	19	52	30	48 42	14 46 80		
20	119	40.6	44.3	140	36.6	34.1	75	52	16	50	29	5 57 40	37 82		
21	134	40.7	43.4	155	00.7	26.5	76	54	12	48	29	6 06 39	28 84		
22	149	40.9	42.6	169	24.8	18.8	77	56	08	46	29	17 36	18 86		
23	164	41.1	41.7	183	49.0	11.0	78	58	17 04	44	30	30 33	14 06 89		
24	179	41.3	+9 40.8	198	13.3	+18 03.0	80	60 S	16 59	17 42	18 30	6 44 30	13 52 93		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 1 ^h 37 ^m 6		Mag: -3.8 PMG: 13 ^h 21 ^m		Mag: +1.8 PMG: 10 ^h 55 ^m		Mag: -2.4 PMG: 6 ^h 09 ^m		Mag: +0.1 PMG: 5 ^h 33 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	335	32.0	159	43.3	+3 09.1	196 03.0	+16 55.9	267 37.8	+20 59.4	276 28.6	+18 11.2
1	350	34.5	174	43.0	07.8	211 03.9	55.5	282 40.0	59.4	291 31.0	11.2
2	5	37.0	189	42.7	06.5	226 04.7	55.0	297 42.2	59.5	306 33.4	11.2
3	20	39.4	204	42.3	05.3	241 05.6	54.5	312 44.4	59.5	321 35.8	11.2
4	35	41.9	219	42.0	04.0	256 06.5	54.0	327 46.6	59.5	336 38.2	11.2
5	50	44.3	234	41.7	+3 02.7	271 07.4	+16 53.6	342 48.8	+20 59.6	351 40.5	+18 11.3
6	65	46.8	249	41.3	+3 01.4	286 08.2	+16 53.1	357 51.0	+20 59.6	6 42.9	+18 11.3
7	80	49.3	264	41.0	+3 00.2	301 09.1	52.6	12 53.2	59.6	21 45.3	11.3
8	95	51.7	279	40.7	+2 58.9	316 10.0	52.1	27 55.4	59.7	36 47.7	11.3
9	110	54.2	294	40.3	57.6	331 10.9	51.7	42 57.6	59.7	51 50.1	11.3
10	125	56.7	309	40.0	56.3	346 11.7	51.2	57 59.8	59.7	66 52.5	11.3
11	140	59.1	324	39.7	+2 55.1	1 12.6	+16 50.7	73 02.0	+20 59.8	81 54.9	+18 11.3
12	156	01.6	339	39.3	+2 53.8	16 13.5	+16 50.2	88 04.2	+20 59.8	96 57.3	+18 11.3
13	171	04.1	354	39.0	52.5	31 14.4	49.8	103 06.3	59.8	111 59.7	11.3
14	186	06.5	9 38.7	51.2	46 15.2	49.3	118 08.5	59.9	127 02.0	11.3	
15	201	09.0	24 38.3	50.0	61 16.1	48.8	133 10.7	59.9	142 04.4	11.3	
16	216	11.4	39 38.0	48.7	76 17.0	48.3	148 12.9	+20 59.9	157 06.8	11.3	
17	231	13.9	54 37.7	+2 47.4	91 17.9	+16 47.9	163 15.1	+21 00.0	172 09.2	+18 11.3	
18	246	16.4	69 37.4	+2 46.2	106 18.7	+16 47.4	178 17.3	+21 00.0	187 11.6	+18 11.3	
19	261	18.8	84 37.0	44.9	121 19.6	46.9	193 19.5	+21 00.1	202 14.0	11.4	
20	276	21.3	99 36.7	43.6	136 20.5	46.4	208 21.7	00.1	217 16.4	11.4	
21	291	23.8	114 36.4	42.3	151 21.4	45.9	223 23.9	00.1	232 18.8	11.4	
22	306	26.2	129 36.0	41.0	166 22.2	45.5	238 26.1	00.2	247 21.2	11.4	
23	321	28.7	144 35.7	39.8	181 23.1	45.0	253 28.3	00.2	262 23.6	11.4	
24	336	31.2	159 35.4	+2 38.5	196 24.0	+16 44.5	268 30.5	+21 00.2	277 25.9	+18 11.4	
Dif	—	—	-3	-13	+9	-5	+22	0	+24	0	

UT	SOL			● LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 15 ^h 8			Edad: 27 ^d 9 PHE { 4 ^h : 60 ^h 5 12 ^h : 60 ^h 5 20 ^h : 60 ^h 4 R°: 56 ^m															
	PMG: 12 ^h 01 ^m 1			SD: 16 ^h 5 PMG: 11 ^h 14 ^m															
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°			
h	°	'	°	°	'	°	°	'	°	h	m	h	m	h	m	h	m		
0	179	41.3	+9	40.8	198	13.3	+18	03.0	60 N	2	58	4	00	4	46	2	41		
1	194	41.5		39.9	212	37.6	+17	55.0	58	3	13		09	52		2	53		
2	209	41.7		39.0	227	02.0		46.7	83	25	17	4	57		3	03			
3	224	41.8		38.1	241	26.4		38.4	83	36	23	5	01		12	86			
4	239	42.0		37.3	255	50.9		30.0	84	45	30		06		21	82			
5	254	42.2	+9	36.4	270	15.5	+17	21.4	86	3	53	4	35	5	09	3	28		
6	269	42.4	+9	35.5	284	40.1	+17	12.7	87	4	10	4	47	5	17	3	43		
7	284	42.6		34.6	299	04.8	+17	03.9	88	23	4	56		24		3	56		
8	299	42.8		33.7	313	29.6	+16	55.0	89	33	5	04	30		4	07			
9	314	42.9		32.8	327	54.5		46.0	90	41	10		35		16	68			
10	329	43.1		31.9	342	19.4		36.8	92	4	55	21	43		32	65			
11	344	43.3	+9	31.1	356	44.4	+16	27.6	92	5	05	5	30	5	51	4	46		
12	359	43.5	+9	30.2	11	09.4	+16	18.2	94	5	12	5	37	5	58	5	00		
13	14	43.7		29.3	25	34.6	+16	08.8	94	19	43	6	05		13	54			
14	29	43.9		28.4	39	59.8	+15	59.2	96	20	24	49	12		27	50			
15	44	44.1		27.5	54	25.0		49.5	97	28	55	20			43	46			
16	59	44.2		26.6	68	50.4		39.8	97	29	5	59	24		5	52			
17	74	44.4	+9	25.7	83	15.8	+15	29.9	99	5	31	6	02	6	29	6	03		
18	89	44.6	+9	24.9	97	41.3	+15	19.9	100	5	32	6	06	6	35	6	15		
19	104	44.8		24.0	112	06.9	+15	09.8	101	32	10		42		30	34			
20	119	45.0		23.1	126	32.5	+14	59.7	101	32	11	45			37	32			
21	134	45.2		22.2	140	58.2		49.4	103	32	13	49			45	29			
22	149	45.4		21.3	155	24.0		39.0	104	32	15	53			6	53			
23	164	45.5		20.4	169	49.9		28.6	104	32	17	6	57		7	03			
24	179	45.7	+9	19.5	184	15.8	+14	18.1	105	5	32	6	20	7	02	7	14		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG 1 ^h 33 ^m 7		Mag: -3.8 PMG: 13 ^h 22 ^m			Mag: +1.8 PMG: 10 ^h 54 ^m			Mag: -2.4 PMG: 6 ^h 05 ^m			Mag: +0.1 PMG: 5 ^h 29 ^m							
	hG ♈		hG ♀			hG ♂			hG ♃			hG ♄							
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'		
0	336	31.2	159	35.4	+2	38.5	196	24.0	+16	44.5	268	30.5	+21	00.2	277	25.9	+18		
1	351	33.6	174	35.0		37.2	211	24.9		44.0	283	32.7		00.3	292	28.3			
2	6	36.1	189	34.7		35.9	226	25.7		43.6	298	34.9		00.3	307	30.7			
3	21	38.6	204	34.4		34.7	241	26.6		43.1	313	37.1		00.3	322	33.1			
4	36	41.0	219	34.0		33.4	256	27.5		42.6	328	39.3		00.4	337	35.5			
5	51	43.5	234	33.7	+2	32.1	271	28.4	+16	42.1	343	41.5	+21	00.4	352	37.9	+18		
6	66	45.9	249	33.4	+2	30.8	286	29.2	+16	41.6	358	43.7	+21	00.4	7	40.3	+18		
7	81	48.4	264	33.1		29.6	301	30.1		41.2	13	45.9		00.5	22	42.7			
8	96	50.9	279	32.7		28.3	316	31.0		40.7	28	48.1		00.5	37	45.1			
9	111	53.3	294	32.4		27.0	331	31.9		40.2	43	50.3		00.5	52	47.5			
10	126	55.8	309	32.1		25.7	346	32.8		39.7	58	52.5		00.6	67	49.9			
11	141	58.3	324	31.7	+2	24.5	1	33.6	+16	39.2	73	54.7	+21	00.6	82	52.3	+18		
12	157	00.7	339	31.4	+2	23.2	16	34.5	+16	38.8	88	56.9	+21	00.6	97	54.7	+18		
13	172	03.2	354	31.1		21.9	31	35.4		38.3	103	59.1		00.7	112	57.0			
14	187	05.7	9	30.7		20.6	46	36.3		37.8	119	01.3		00.7	127	59.4			
15	202	08.1	24	30.4		19.3	61	37.1		37.3	134	03.5		00.7	143	01.8			
16	217	10.6	39	30.1		18.1	76	38.0		36.8	149	05.7		00.8	158	04.2			
17	232	13.1	54	29.8	+2	16.8	91	38.9	+16	36.4	164	07.9	+21	00.8	173	06.6	+18		
18	247	15.5	69	29.4	+2	15.5	106	39.8	+16	35.9	179	10.1	+21	00.8	188	09.0	+18		
19	262	18.0	84	29.1		14.2	121	40.7		35.4	194	12.3		00.9	203	11.4			
20	277	20.4	99	28.8		13.0	136	41.5		34.9	209	14.5		00.9	218	13.8			
21	292	22.9	114	28.4		11.7	151	42.4		34.4	224	16.7		00.9	233	16.2			
22	307	25.4	129	28.1		10.4	166	43.3		34.0	239	18.9		01.0	248	18.6			
23	322	27.8	144	27.8		09.1	181	44.2		33.5	254	21.1		01.0	263	21.0			
24	337	30.3	159	27.5	+2	07.8	196	45.1	+16	33.0	269	23.3	+21	01.0	278	23.4	+18		
Dif	—		-3			-13	+9			-5	+22			0			+24		

UT	SOL		● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8		Edad: 28 ^d 9	PHE { 4 ^h : 60 ^h /3 12 ^h : 60 ^h /1 20 ^h : 59 ^h /9 R°: 54 ^m	SD: 16 ^h 4				Final del crepúsculo		Salida de Luna		Puesta de Luna	
	PMG: 12 ^h 00 ^m 8	PMG: 12 ^h 10 ^m			Civil	Náutico			Hora	R°	Hora	R°		
	hG ☉	Dec	hG ☾	Dif	Dec	Dif								
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	179	45.7	+9	19.5	184	15.8	+14 18.1	60 N	19 12	19 57	20 57	4 15 95	19 41 14	
1	194	45.9			198	41.8	+14 07.4	58	06	49	43	24 90	35 17	
2	209	46.1			213	07.9	+13 56.7	56	19 02	41	32	31 88	30 20	
3	224	46.3			227	34.1	45.9	54	18 57	35	22	38 85	25 22	
4	239	46.5			242	00.3	35.1	52	53	29	13	43 83	20 25	
5	254	46.7	+9	15.1	256	26.6	+13 24.1	50	18 50	19 24	20 05	4 49 80	19 17 26	
6	269	46.9	+9	14.2	270	53.0	+13 13.1	45	18 42	19 13	19 49	5 00 76	19 08 31	
7	284	47.0			285	19.5	+13 01.9	40	36	19 04	37	09 73	19 01 34	
8	299	47.2			299	46.1	+12 50.7	35	30	18 56	27	17 70	18 55 37	
9	314	47.4			314	12.7	39.5	30	26	50	19	24 67	49 40	
10	329	47.6			328	39.4	28.1	20	18	40	19 06	37 62	40 44	
11	344	47.8	+9	09.7	343	06.2	+12 16.7	10 N	18 11	18 32	18 57	5 47 58	18 31 49	
12	359	48.0	+9	08.8	357	33.0	+12 05.3	0	18 04	18 25	18 49	5 57 54	18 23 53	
13	14	48.2			11	59.9	+11 53.7	10 S	17 58	19	44	6 07 50	15 57	
14	29	48.4			26	26.9	42.1	20	51	13	39	17 47	18 06 61	
15	44	48.6			40	54.0	30.4	30	44	08	35	29 42	17 56 66	
16	59	48.7			55	21.1	18.7	35	39	05	34	36 39	51 68	
17	74	48.9	+9	04.4	69	48.4	+11 06.9	40	17 34	18 02	18 33	6 44 36	17 44 72	
18	89	49.1	+9	03.5	84	15.7	+10 55.0	45	17 29	17 58	18 33	6 53 33	17 36 76	
19	104	49.3			98	43.0	43.1	50	22	55	32	7 04 28	27 80	
20	119	49.5			113	10.5	31.1	52	19	53	32	09 26	23 82	
21	134	49.7	+9	00.8	127	38.0	19.1	54	16	52	33	14 25	18 84	
22	149	49.9	+8	59.9	142	05.6	+10 07.0	56	12	50	33	21 21	13 86	
23	164	50.1			156	33.3	+9 54.9	58	08	48	33	27 19	07 89	
24	179	50.3	+8	58.1	171	01.0	+9 42.7	60 S	17 04	17 46	18 34	7 35 16	17 00 93	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 1 ^h 29 ^m 7	Mag: -3.8 PMG: 13 ^h 22 ^m	Mag: +1.8 PMG: 10 ^h 52 ^m	Mag: -2.4 PMG: 6 ^h 02 ^m	Mag: +0.1 PMG: 5 ^h 26 ^m					
	hG ♈	hG ♀	hG ♂	hG ♃	hG ♄					
h	°	'	°	'	°	'	°	'	°	'
0	337	30.3	159	27.5	+2	07.8	196	45.1	+16	33.0
1	352	32.8	174	27.1		06.6	211	45.9		32.5
2	7	35.2	189	26.8		05.3	226	46.8		32.0
3	22	37.7	204	26.5		04.0	241	47.7		31.5
4	37	40.2	219	26.2		02.7	256	48.6		31.1
5	52	42.6	234	25.8	+2	01.4	271	49.5	+16	30.6
6	67	45.1	249	25.5	+2	00.2	286	50.3	+16	30.1
7	82	47.5	264	25.2	+1	58.9	301	51.2		29.6
8	97	50.0	279	24.8		57.6	316	52.1		29.1
9	112	52.5	294	24.5		56.3	331	53.0		28.6
10	127	54.9	309	24.2		55.0	346	53.9		28.2
11	142	57.4	324	23.9	+1	53.8	1	54.8	+16	27.7
12	157	59.9	339	23.5	+1	52.5	16	55.6	+16	27.2
13	173	02.3	354	23.2		51.2	31	56.5		26.7
14	188	04.8	9	22.9		49.9	46	57.4		26.2
15	203	07.3	24	22.6		48.6	61	58.3		25.7
16	218	09.7	39	22.2		47.4	76	59.2		25.2
17	233	12.2	54	21.9	+1	46.1	92	00.1	+16	24.8
18	248	14.7	69	21.6	+1	44.8	107	00.9	+16	24.3
19	263	17.1	84	21.2		43.5	122	01.8		23.8
20	278	19.6	99	20.9		42.2	137	02.7		23.3
21	293	22.0	114	20.6		41.0	152	03.6		22.8
22	308	24.5	129	20.3		39.7	167	04.5		22.3
23	323	27.0	144	19.9		38.4	182	05.4		21.8
24	338	29.4	159	19.6	+1	37.1	197	06.2	+16	21.4
Dif	—		-3	-13		+9	-5		+22	0

UT	SOL			● LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8			Edad: 0 ^d 6	PHE {	4 ^h : 59 ^m 7 12 ^h : 59 ^m 5 20 ^h : 59 ^m 3	R°: 50 ^m										
	PMG: 12 ^h 00 ^m 5							SD: 16 ^h 3		PMG: 13 ^h 04 ^m							
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	°	'	°	h	m	h	m	h	m	h	m
0	179	50.3	+8 58.1	171	01.0	+9 42.7	185	28.8	88	60 N	3 05	4 05	4 51	5 50	91	19 55	13
1	194	50.5		185	28.8		199	56.7	89	58	19	14	4 56	54	89	52	16
2	209	50.6		199	56.7		214	24.6	89	56	31	21	5 01	5 59	85	50	17
3	224	50.8		214	24.6		228	52.7	91	54	41	27	05	6 03	82	47	20
4	239	51.0		228	52.7		243	20.8	91	52	49	33	09	06	81	45	22
5	254	51.2	+8 53.6	243	20.8		257	48.9	91	50	3 57	4 38	5 12	6 09	79	19 43	24
6	269	51.4	+8 52.7	257	48.9		272	17.1	92	45	4 13	4 49	5 20	6 16	74	19 39	28
7	284	51.6		272	17.1		286	45.4	93	40	25	4 58	26	22	70	35	32
8	299	51.8		286	45.4		301	13.8	94	35	35	5 05	31	27	67	32	35
9	314	52.0		301	13.8		315	42.2	94	30	43	12	36	31	64	29	38
10	329	52.2		315	42.2		330	10.7	95	20	4 55	22	44	39	59	24	42
11	344	52.4	+8 48.2	330	10.7		344	39.3	96	10 N	5 05	5 30	5 51	6 45	55	19 20	46
12	359	52.6	+8 47.3	344	39.3		359	07.9	96	0	5 12	5 36	5 57	6 51	51	19 16	50
13	14	52.8		359	07.9		13	36.6	97	10 S	18	42	6 03	6 57	48	12	54
14	29	52.9		13	36.6		28	05.4	98	20	22	48	10	7 04	43	07	58
15	44	53.1		28	05.4		42	34.2	98	30	25	53	17	11	39	19 02	63
16	59	53.3		42	34.2		57	03.1	99	35	27	56	22	15	36	18 59	66
17	74	53.5	+8 42.8	57	03.1		71	32.1	100	40	5 28	5 59	6 26	7 20	33	18 56	69
18	89	53.7	+8 41.9	71	32.1		86	01.1	100	45	5 28	6 02	6 32	7 26	29	18 52	72
19	104	53.9		86	01.1		100	30.2	100	50	28	06	38	32	25	47	77
20	119	54.1		100	30.2		114	59.3	101	52	28	07	41	35	23	45	79
21	134	54.3		114	59.3		129	28.5	102	54	28	09	44	39	21	42	82
22	149	54.5		129	28.5		143	57.8	103	56	27	10	48	42	19	39	84
23	164	54.7		143	57.8		158	27.1	103	58	27	12	52	46	16	36	87
24	179	54.9	+8 36.5	158	27.1					60 S	5 26	6 14	6 56	7 51	13	18 33	90

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 1 ^h 25 ^m 8		Mag: -3.8 PMG: 13 ^h 23 ^m			Mag: +1.8 PMG: 10 ^h 51 ^m			Mag: -2.4 PMG: 5 ^h 58 ^m			Mag: +0.1 PMG: 5 ^h 22 ^m		
	hG ♈		hG ♀			hG ♂			hG ♃			hG ♄		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	338	29.4	159 19.6	+1 37.1	197 06.2	+16 21.4	270 16.3	+21 01.8	279 20.9	+18 11.7			279 20.9	+18 11.7
1	353	31.9	174 19.3	35.8	212 07.1	20.9	285 18.5	01.9	294 23.3	11.7			294 23.3	11.7
2	8	34.4	189 19.0	34.5	227 08.0	20.4	300 20.8	01.9	309 25.7	11.7			309 25.7	11.7
3	23	36.8	204 18.6	33.3	242 08.9	19.9	315 23.0	01.9	324 28.1	11.7			324 28.1	11.7
4	38	39.3	219 18.3	32.0	257 09.8	19.4	330 25.2	01.9	339 30.5	11.7			339 30.5	11.7
5	53	41.8	234 18.0	+1 30.7	272 10.7	+16 18.9	345 27.4	+21 02.0	354 32.9	+18 11.7			354 32.9	+18 11.7
6	68	44.2	249 17.7	+1 29.4	287 11.5	+16 18.4	0 29.6	+21 02.0	9 35.3	+18 11.7			9 35.3	+18 11.7
7	83	46.7	264 17.3	28.1	302 12.4	18.0	15 31.8	02.0	24 37.8	11.7			24 37.8	11.7
8	98	49.1	279 17.0	26.8	317 13.3	17.5	30 34.0	02.1	39 40.2	11.7			39 40.2	11.7
9	113	51.6	294 16.7	25.6	332 14.2	17.0	45 36.2	02.1	54 42.6	11.7			54 42.6	11.7
10	128	54.1	309 16.4	24.3	347 15.1	16.5	60 38.5	02.1	69 45.0	11.7			69 45.0	11.7
11	143	56.5	324 16.0	+1 23.0	2 16.0	+16 16.0	75 40.7	+21 02.2	84 47.4	+18 11.7			84 47.4	+18 11.7
12	158	59.0	339 15.7	+1 21.7	17 16.9	+16 15.5	90 42.9	+21 02.2	99 49.8	+18 11.7			99 49.8	+18 11.7
13	174	01.5	354 15.4	20.4	32 17.7	15.0	105 45.1	02.2	114 52.2	11.7			114 52.2	11.7
14	189	03.9	9 15.1	19.2	47 18.6	14.5	120 47.3	02.3	129 54.6	11.7			129 54.6	11.7
15	204	06.4	24 14.7	17.9	62 19.5	14.0	135 49.5	02.3	144 57.0	11.7			144 57.0	11.7
16	219	08.9	39 14.4	16.6	77 20.4	13.6	150 51.8	02.3	159 59.4	11.7			159 59.4	11.7
17	234	11.3	54 14.1	+1 15.3	92 21.3	+16 13.1	165 54.0	+21 02.4	175 01.8	+18 11.7			175 01.8	+18 11.7
18	249	13.8	69 13.8	+1 14.0	107 22.2	+16 12.6	180 56.2	+21 02.4	190 04.2	+18 11.7			190 04.2	+18 11.7
19	264	16.3	84 13.4	12.7	122 23.1	12.1	195 58.4	02.4	205 06.6	11.7			205 06.6	11.7
20	279	18.7	99 13.1	11.4	137 24.0	11.6	211 00.6	02.5	220 09.0	11.7			220 09.0	11.7
21	294	21.2	114 12.8	10.2	152 24.8	11.1	226 02.8	02.5	235 11.4	11.8			235 11.4	11.8
22	309	23.6	129 12.5	08.9	167 25.7	10.6	241 05.1	02.5	250 13.8	11.8			250 13.8	11.8
23	324	26.1	144 12.2	07.6	182 26.6	10.1	256 07.3	02.5	265 16.2	11.8			265 16.2	11.8
24	339	28.6	159 11.8	+1 06.3	197 27.5	+16 09.6	271 09.5	+21 02.6	280 18.6	+18 11.8			280 18.6	+18 11.8
Dif	—		-3	-13	+9		+22		0		+24		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 2		Edad: 1 ^d 6 PHE { 4 ^h : 59°0 12 ^h : 58°8 20 ^h : 58°5 R°: 49 ^m												
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	h m		
0	179	54.9	+8	36.5	158	27.1	+4 39.4	60 N	19 06	19 51	20 49	7 21 88	20 08 11		
1	194	55.1		35.6	172	56.4 ¹⁰³	26.5 ¹²⁹	58	19 01	43	36	23 85	08 14		
2	209	55.3		34.7	187	25.9 ¹⁰⁵	13.6 ¹²⁹	56	18 56	36	25	24 82	07 17		
3	224	55.5		33.8	201	55.4 ¹⁰⁵	+4 00.7 ¹²⁹	54	52	30	16	25 80	07 20		
4	239	55.7		32.9	216	24.9 ¹⁰⁵	+3 47.7 ¹³⁰	52	49	24	08	27 77	07 22		
5	254	55.8	+8	32.0	230	54.5 ¹⁰⁶	+3 34.8 ¹²⁹	50	18 46	19 19	20 00	7 28 75	20 07 23		
6	269	56.0	+8	31.1	245	24.1 ¹⁰⁶	+3 21.8 ¹³⁰	45	18 39	19 09	19 45	7 30 71	20 07 27		
7	284	56.2		30.2	259	53.9 ¹⁰⁸	+3 08.8 ¹³⁰	40	33	19 01	34	32 68	07 30		
8	299	56.4		29.3	274	23.6 ¹⁰⁷	+2 55.9 ¹²⁹	35	28	18 54	24	34 64	07 33		
9	314	56.6		28.4	288	53.4 ¹⁰⁸	42.9 ¹³⁰	30	23	48	16	35 62	07 36		
10	329	56.8		27.5	303	23.3 ¹⁰⁹	30.0 ¹²⁹	20	16	38	19 04	38 57	06 41		
11	344	57.0	+8	26.6	317	53.2 ¹⁰⁹	+2 17.0 ¹³⁰	10 N	18 09	18 31	18 55	7 40 53	20 06 45		
12	359	57.2	+8	25.7	332	23.1 ¹⁰⁹	+2 04.0 ¹³⁰	0	18 03	18 24	18 49	7 42 49	20 06 48		
13	14	57.4		24.8	346	53.2 ¹¹¹	+1 51.1 ¹²⁹	10 S	17 58	19	43	45 45	06 52		
14	29	57.6		23.9	1	23.2 ¹¹⁰	38.1 ¹³⁰	20	51	14	39	47 41	05 57		
15	44	57.8		23.0	15	53.3 ¹¹¹	25.2 ¹²⁹	30	45	09	36	50 36	05 61		
16	59	58.0		22.1	30	23.5 ¹¹²	+1 12.3 ¹²⁹	35	41	06	36	51 34	05 63		
17	74	58.2	+8	21.2	44	53.7 ¹¹²	+0 59.4 ¹²⁹	40	17 36	18 04	18 35	7 53 31	20 05 66		
18	89	58.4	+8	20.3	59	23.9 ¹¹²	+0 46.4 ¹³⁰	45	17 31	18 01	18 35	7 55 27	20 04 71		
19	104	58.6		19.4	73	54.2 ¹¹³	33.5 ¹²⁹	50	25	17 58	35	57 24	04 75		
20	119	58.8		18.5	88	24.5 ¹¹³	20.7 ¹²⁸	52	22	56	36	7 58 22	04 76		
21	134	59.0		17.5	102	54.9 ¹¹⁴	+0 07.8 ¹²⁹	54	19	55	36	8 00 19	04 78		
22	149	59.2		16.6	117	25.3 ¹¹⁴	-0 05.1 ¹²⁹	56	16	54	37	01 17	03 82		
23	164	59.4		15.7	131	55.8 ¹¹⁵	17.9 ¹²⁸	58	12	52	37	02 15	03 84		
24	179	59.6	+8	14.8	146	26.2 ¹¹⁴	-0 30.7 ¹²⁸	60 S	17 08	17 50	18 38	8 04 12	20 03 87		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 1 ^h 21 ^m 9		Mag: -3.8 PMG: 13 ^h 23 ^m			Mag: +1.8 PMG: 10 ^h 50 ^m			Mag: -2.4 PMG: 5 ^h 54 ^m			Mag: +0.1 PMG: 5 ^h 18 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	339	28.6	159	11.8	+1 06.3	197 27.5	+16 09.6	271 09.5	+21 02.6	280 18.6	+18 11.8				
1	354	31.0	174	11.5	05.0	212 28.4	09.1	286 11.7	02.6	295 21.0	11.8				
2	9	33.5	189	11.2	03.7	227 29.3	08.7	301 13.9	02.6	310 23.4	11.8				
3	24	36.0	204	10.9	02.5	242 30.2	08.2	316 16.2	02.7	325 25.8	11.8				
4	39	38.4	219	10.5	+1 01.2	257 31.1	07.7	331 18.4	02.7	340 28.2	11.8				
5	54	40.9	234	10.2	+0 59.9	272 32.0	+16 07.2	346 20.6	+21 02.7	355 30.6	+18 11.8				
6	69	43.4	249	09.9	+0 58.6	287 32.8	+16 06.7	1 22.8	+21 02.8	10 33.0	+18 11.8				
7	84	45.8	264	09.6	57.3	302 33.7	06.2	16 25.0	02.8	25 35.4	11.8				
8	99	48.3	279	09.2	56.0	317 34.6	05.7	31 27.3	02.8	40 37.9	11.8				
9	114	50.8	294	08.9	54.8	332 35.5	05.2	46 29.5	02.9	55 40.3	11.8				
10	129	53.2	309	08.6	53.5	347 36.4	04.7	61 31.7	02.9	70 42.7	11.8				
11	144	55.7	324	08.3	+0 52.2	2 37.3	+16 04.2	76 33.9	+21 02.9	85 45.1	+18 11.8				
12	159	58.1	339	07.9	+0 50.9	17 38.2	+16 03.7	91 36.2	+21 02.9	100 47.5	+18 11.8				
13	175	00.6	354	07.6	49.6	32 39.1	03.2	106 38.4	03.0	115 49.9	11.8				
14	190	03.1	9	07.3	48.3	47 40.0	02.7	121 40.6	03.0	130 52.3	11.8				
15	205	05.5	24	07.0	47.0	62 40.9	02.3	136 42.8	03.0	145 54.7	11.8				
16	220	08.0	39	06.7	45.8	77 41.7	01.8	151 45.1	03.1	160 57.1	11.8				
17	235	10.5	54	06.3	+0 44.5	92 42.6	+16 01.3	166 47.3	+21 03.1	175 59.5	+18 11.8				
18	250	12.9	69	06.0	+0 43.2	107 43.5	+16 00.8	181 49.5	+21 03.1	191 01.9	+18 11.8				
19	265	15.4	84	05.7	41.9	122 44.4	+16 00.3	196 51.7	03.2	206 04.3	11.8				
20	280	17.9	99	05.4	40.6	137 45.3	+15 59.8	211 53.9	03.2	221 06.7	11.8				
21	295	20.3	114	05.0	39.3	152 46.2	59.3	226 56.2	03.2	236 09.2	11.8				
22	310	22.8	129	04.7	38.0	167 47.1	58.8	241 58.4	03.2	251 11.6	11.8				
23	325	25.2	144	04.4	36.8	182 48.0	58.3	257 00.6	03.3	266 14.0	11.8				
24	340	27.7	159	04.1	+0 35.5	197 48.9	+15 57.8	272 02.9	+21 03.3	281 16.4	+18 11.8				
Dif	—		-3		-13	+9		-5	+22		0		+24		0

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8 PMG: 11 ^h 59 ^m 9			Edad: 2 ^d 6 PHE { 4 ^h : 58 ^m 2 12 ^h : 57 ^m 9 20 ^h : 57 ^m 6 R°: 47 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	179	59.6	+8 14.8	146	26.2	-0 30.7	128	60 N	3 12	4 10	4 55	8 49	85	20 19	13	
1	194	59.8		160	56.8	43.5	116	58	25	18	5 00	48 82		22	15	
2	210	00.0		175	27.4	-0 56.3	128	56	36	25	05	46 80		24	18	
3	225	00.2		189	58.0	-1 09.1	128	54	45	31	09	45 78		27	19	
4	240	00.4		204	28.6	21.8	127	52	3 53	37	12	44 75		29	21	
5	255	00.6	+8 10.3	218	59.3	-1 34.5	127	50	4 00	4 42	5 15	8 43	74	20 30	24	
6	270	00.8	+8 09.4	233	30.0	-1 47.2	127	45	4 15	4 52	5 22	8 41	69	20 34	27	
7	285	01.0		248	00.8	-1 59.9	127	40	27	5 00	28	40 65		37	31	
8	300	01.2		262	31.6	-2 12.5	126	35	36	07	33	38 63		40	33	
9	315	01.3		277	02.4	25.1	126	30	44	13	37	37 60		43	35	
10	330	01.5		291	33.2	37.7	126	20	4 56	22	44	35 55		47	40	
11	345	01.7	+8 04.8	306	04.1	-2 50.2	125	10 N	5 05	5 29	5 51	8 33	52	20 51	44	
12	0	01.9	+8 03.9	320	35.0	-3 02.8	126	0	5 11	5 36	5 57	8 31	48	20 54	48	
13	15	02.1		335	06.0	15.2	124	10 S	17	41	6 02	30 44		20 58	51	
14	30	02.3		349	37.0	27.7	125	20	21	46	08	28 40		21 02	54	
15	45	02.5		4	08.0	40.1	124	30	23	51	15	26 36		06	59	
16	60	02.7	+8 00.3	18	39.0	-3 52.5	124	35	24	53	19	25 33		08	62	
17	75	02.9	+7 59.4	33	10.1	-4 04.9	124	40	5 25	5 56	6 23	8 24	30	21 11	65	
18	90	03.1	+7 58.5	47	41.1	-4 17.2	123	45	5 25	5 59	6 28	8 22	27	21 15	67	
19	105	03.3		62	12.2	29.4	122	50	24	6 01	34	21 23		19	72	
20	120	03.5		76	43.4	41.7	123	52	24	03	37	20 21		20	74	
21	135	03.7		91	14.5	-4 53.9	122	54	23	04	40	19 19		22	76	
22	150	03.9		105	45.7	-5 06.0	121	56	22	05	43	18 17		25	78	
23	165	04.1		120	16.9	18.2	122	58	22	07	46	17 14		27	81	
24	180	04.3	+7 53.0	134	48.2	-5 30.2	120	60 S	5 20	6 08	6 50	8 16	12	21 30	84	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG 1 ^h 17 ^m 9		Mag: -3.8 PMG: 13 ^h 24 ^m			Mag: +1.8 PMG: 10 ^h 48 ^m			Mag: -2.4 PMG: 5 ^h 51 ^m			Mag: +0.1 PMG: 5 ^h 14 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'		
0	340	27.7	159	04.1	+0 35.5	197	48.9	+15 57.8	272	02.9	+21 03.3	281	16.4	+18 11.8		
1	355	30.2	174	03.8	34.2	212	49.8	57.3	287	05.1	03.3	296	18.8	11.8		
2	10	32.6	189	03.4	32.9	227	50.7	56.8	302	07.3	03.4	311	21.2	11.8		
3	25	35.1	204	03.1	31.6	242	51.6	56.3	317	09.5	03.4	326	23.6	11.8		
4	40	37.6	219	02.8	30.3	257	52.4	55.8	332	11.8	03.4	341	26.0	11.9		
5	55	40.0	234	02.5	+0 29.0	272	53.3	+15 55.3	347	14.0	+21 03.4	356	28.4	+18 11.9		
6	70	42.5	249	02.1	+0 27.8	287	54.2	+15 54.8	2	16.2	+21 03.5	11	30.8	+18 11.9		
7	85	45.0	264	01.8	26.5	302	55.1	54.3	17	18.4	03.5	26	33.2	11.9		
8	100	47.4	279	01.5	25.2	317	56.0	53.8	32	20.7	03.5	41	35.7	11.9		
9	115	49.9	294	01.2	23.9	332	56.9	53.3	47	22.9	03.6	56	38.1	11.9		
10	130	52.4	309	00.9	22.6	347	57.8	52.9	62	25.1	03.6	71	40.5	11.9		
11	145	54.8	324	00.5	+0 21.3	2	58.7	+15 52.4	77	27.4	+21 03.6	86	42.9	+18 11.9		
12	160	57.3	339	00.2	+0 20.0	17	59.6	+15 51.9	92	29.6	+21 03.7	101	45.3	+18 11.9		
13	175	59.7	353	59.9	18.7	33	00.5	51.4	107	31.8	03.7	116	47.7	11.9		
14	191	02.2	8	59.6	17.5	48	01.4	50.9	122	34.1	03.7	131	50.1	11.9		
15	206	04.7	23	59.3	16.2	63	02.3	50.4	137	36.3	03.7	146	52.5	11.9		
16	221	07.1	38	58.9	14.9	78	03.2	49.9	152	38.5	03.8	161	55.0	11.9		
17	236	09.6	53	58.6	+0 13.6	93	04.1	+15 49.4	167	40.8	+21 03.8	176	57.4	+18 11.9		
18	251	12.1	68	58.3	+0 12.3	108	05.0	+15 48.9	182	43.0	+21 03.8	191	59.8	+18 11.9		
19	266	14.5	83	58.0	11.0	123	05.9	48.4	197	45.2	03.9	207	02.2	11.9		
20	281	17.0	98	57.6	09.7	138	06.7	47.9	212	47.4	03.9	222	04.6	11.9		
21	296	19.5	113	57.3	08.5	153	07.6	47.4	227	49.7	03.9	237	07.0	11.9		
22	311	21.9	128	57.0	07.2	168	08.5	46.9	242	51.9	03.9	252	09.4	11.9		
23	326	24.4	143	56.7	05.9	183	09.4	46.4	257	54.1	04.0	267	11.8	11.9		
24	341	26.8	158	56.4	+0 04.6	198	10.3	+15 45.9	272	56.4	+21 04.0	282	14.3	+18 11.9		
Dif	—		-3 -13			+9 -5			+22 0			+24 0				

UT	SOL		● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'9 PMG: 11 ^h 59 ^m 5		Edad: 3 ^d 6 SD: 15'6 PMG: 15 ^h 30 ^m	PHE { 4 ^h : 57'3 12 ^h : 57'0 20 ^h : 56'7 Rº: 47 ^m										
	hG ☉	Dec			hG ☾	Dif			Dec	Dif	Civil	Náutico	Hora	Rº
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	180	04.3	+7 53.0	134 48.2	-5 30.2	¹²²	60 N	19 00	19 44	20 41	10 14 83	20 32 14		
1	195	04.5	52.1	149 19.4 ¹²²	42.3 ¹²¹		58	18 55	37	29	10 79	37 17		
2	210	04.7	51.2	163 50.7 ¹²³	-5 54.2 ¹¹⁹		56	51	30	19	06 77	42 19		
3	225	04.9	50.3	178 22.0 ¹²³	-6 06.2 ¹²⁰		54	48	25	10	10 03 74	46 22		
4	240	05.1	49.3	192 53.3 ¹²³	18.1 ¹¹⁹		52	44	19	20 02	9 59 73	50 24		
5	255	05.3	+7 48.4	207 24.6 ¹²³	-6 29.9 ¹¹⁸		50	18 41	19 15	19 55	9 57 70	20 54 25		
6	270	05.5	+7 47.5	221 55.9 ¹²³	-6 41.7 ¹¹⁸		45	18 35	19 05	19 41	9 50 67	21 01 29		
7	285	05.7	46.6	236 27.3 ¹²⁴	-6 53.5 ¹¹⁸		40	30	18 57	30	45 64	08 32		
8	300	05.9	45.7	250 58.7 ¹²⁴	-7 05.2 ¹¹⁷		35	25	51	21	41 60	13 35		
9	315	06.1	44.8	265 30.1 ¹²⁴	16.9 ¹¹⁷		30	21	45	14	37 58	18 37		
10	330	06.3	43.9	280 01.5 ¹²⁴	28.5 ¹¹⁶		20	14	36	19 03	30 54	27 40		
11	345	06.6	+7 42.9	294 32.9 ¹²⁴	-7 40.0 ¹¹⁵		10 N	18 08	18 29	18 54	9 25 50	21 35 43		
12	0	06.8	+7 42.0	309 04.3 ¹²⁴	-7 51.5 ¹¹⁵		0	18 03	18 24	18 48	9 19 47	21 42 47		
13	15	07.0	41.1	323 35.8 ¹²⁵	-8 03.0 ¹¹⁵		10 S	17 57	19	43	14 43	49 50		
14	30	07.2	40.2	338 07.2 ¹²⁴	14.4 ¹¹⁴		20	52	14	40	08 40	21 56 54		
15	45	07.4	39.3	352 38.7 ¹²⁵	25.7 ¹¹³		30	46	10	37	9 02 36	22 05 58		
16	60	07.6	38.4	7 10.2 ¹²⁵	37.0 ¹¹³		35	42	08	37	8 58 34	10 60		
17	75	07.8	+7 37.4	21 41.7 ¹²⁵	-8 48.2 ¹¹²		40	17 38	18 05	18 37	8 54 31	22 16 62		
18	90	08.0	+7 36.5	36 13.1 ¹²⁴	-8 59.4 ¹¹²		45	17 34	18 03	18 37	8 49 28	22 22 66		
19	105	08.2	35.6	50 44.7 ¹²⁶	-9 10.5 ¹¹¹		50	28	01	38	44 24	31 69		
20	120	08.4	34.7	65 16.2 ¹²⁵	21.5 ¹¹⁰		52	26	18 00	39	41 22	34 71		
21	135	08.6	33.8	79 47.7 ¹²⁵	32.5 ¹¹⁰		54	23	17 58	39	38 20	38 74		
22	150	08.8	32.9	94 19.2 ¹²⁵	43.5 ¹¹⁰		56	20	57	40	35 18	43 75		
23	165	09.0	31.9	108 50.8 ¹²⁶	-9 54.4 ¹⁰⁹		58	17	56	41	31 16	48 78		
24	180	09.2	+7 31.0	123 22.3 ¹²⁵	-10 05.2 ¹⁰⁸		60 S	17 13	17 55	18 43	8 28 13	22 54 81		
UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO				
	PMG: 1 ^h 14 ^m 0		Mag: -3.8 PMG: 13 ^h 25 ^m		Mag: +1.8 PMG: 10 ^h 47 ^m		Mag: -2.4 PMG: 5 ^h 47 ^m			Mag: +0.1 PMG: 5 ^h 10 ^m				
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'		
0	341 26.8	158 56.4	+0 04.6	198 10.3	+15 45.9	272 56.4	+21 04.0	282 14.3	+18 11.9					
1	356 29.3	173 56.0	03.3	213 11.2	45.4	287 58.6	04.0	297 16.7	11.9					
2	11 31.8	188 55.7	02.0	228 12.1	44.9	303 00.8	04.1	312 19.1	11.9					
3	26 34.2	203 55.4	+0 00.7	243 13.0	44.4	318 03.1	04.1	327 21.5	11.9					
4	41 36.7	218 55.1	-0 00.6	258 13.9	43.9	333 05.3	04.1	342 23.9	11.9					
5	56 39.2	233 54.8	-0 01.8	273 14.8	+15 43.4	348 07.6	+21 04.1	357 26.3	+18 11.9					
6	71 41.6	248 54.4	-0 03.1	288 15.7	+15 42.9	3 09.8	+21 04.2	12 28.7	+18 11.9					
7	86 44.1	263 54.1	04.4	303 16.6	42.4	18 12.0	04.2	27 31.2	11.9					
8	101 46.6	278 53.8	05.7	318 17.5	41.9	33 14.3	04.2	42 33.6	11.9					
9	116 49.0	293 53.5	07.0	333 18.4	41.4	48 16.5	04.2	57 36.0	11.9					
10	131 51.5	308 53.2	08.3	348 19.3	40.9	63 18.7	04.3	72 38.4	11.9					
11	146 54.0	323 52.8	-0 09.6	3 20.2	+15 40.4	78 21.0	+21 04.3	87 40.8	+18 11.9					
12	161 56.4	338 52.5	-0 10.9	18 21.1	+15 39.9	93 23.2	+21 04.3	102 43.2	+18 11.9					
13	176 58.9	353 52.2	12.1	33 22.0	39.4	108 25.5	04.4	117 45.7	11.9					
14	192 01.3	8 51.9	13.4	48 22.9	38.9	123 27.7	04.4	132 48.1	11.9					
15	207 03.8	23 51.6	14.7	63 23.8	38.4	138 29.9	04.4	147 50.5	11.9					
16	222 06.3	38 51.2	16.0	78 24.7	37.9	153 32.2	04.4	162 52.9	11.9					
17	237 08.7	53 50.9	-0 17.3	93 25.6	+15 37.4	168 34.4	+21 04.5	177 55.3	+18 11.9					
18	252 11.2	68 50.6	-0 18.6	108 26.5	+15 36.9	183 36.6	+21 04.5	192 57.7	+18 11.9					
19	267 13.7	83 50.3	19.9	123 27.4	36.4	198 38.9	04.5	208 00.2	11.9					
20	282 16.1	98 50.0	21.2	138 28.3	35.9	213 41.1	04.6	223 02.6	11.9					
21	297 18.6	113 49.6	22.4	153 29.2	35.4	228 43.4	04.6	238 05.0	11.9					
22	312 21.1	128 49.3	23.7	168 30.1	34.9	243 45.6	04.6	253 07.4	11.9					
23	327 23.5	143 49.0	25.0	183 31.0	34.4	258 47.8	04.6	268 09.8	11.9					
24	342 26.0	158 48.7	-0 26.3	198 31.9	+15 33.9	273 50.1	+21 04.7	283 12.3	+18 11.9					
Dif	—	-3	-13	+9	-5	+22	0	+24	0					

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15'9 PMG: 11 ^h 59 ^m 2			Edad: 4 ^d 6 PHE { 4 ^h : 56'5 12 ^h : 56'2 20 ^h : 56'0 R°: 48 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m		
0	180	09.2	+7	31.0	123	22.3	-10	05.2	60 N	3	18	4	16	5	00	11	37	
1	195	09.4		30.1	137	53.8 ¹²⁵		15.9 ¹⁰⁷	58	30	23	05		29	77	20	54	
2	210	09.6		29.2	152	25.4 ¹²⁶		26.6 ¹⁰⁷	56	41	29	09		23	74	21	01	
3	225	09.8		28.3	166	57.0 ¹²⁶		37.3 ¹⁰⁷	54	49	35	12		17	72		08	
4	240	10.0		27.4	181	28.5 ¹²⁵		47.8 ¹⁰⁵	52	3	57	40	15		12	70	14	
5	255	10.2	+7	26.4	196	00.1 ¹²⁶	-10	58.3 ¹⁰⁵	50	4	04	4	45	5	18	11	07	
6	270	10.4	+7	25.5	210	31.6 ¹²⁵	-11	08.8 ¹⁰⁵	45	4	18	4	54	5	25	10	57	
7	285	10.6		24.6	225	03.2 ¹²⁶		19.1 ¹⁰³	40	29	5	02	30		49	61	40	
8	300	10.8		23.7	239	34.8 ¹²⁶		29.4 ¹⁰³	35	38	08	34		41	59		48	
9	315	11.0		22.8	254	06.3 ¹²⁵		39.7 ¹⁰³	30	45	14	38		35	57	21	55	
10	330	11.2		21.8	268	37.9 ¹²⁶	-11	49.9 ¹⁰²	20	4	57	23	45		24	53	22	
11	345	11.4	+7	20.9	283	09.5 ¹²⁶	-12	00.0 ¹⁰¹	10 N	5	05	5	29	5	51	10	15	
12	0	11.6	+7	20.0	297	41.0 ¹²⁵	-12	10.0 ¹⁰⁰	0	5	11	5	35	5	56	10	06	
13	15	11.8		19.1	312	12.6 ¹²⁶		20.0 ¹⁰⁰	10 S	16	40	6	01		9	57	44	
14	30	12.0		18.2	326	44.2 ¹²⁶		29.9 ⁹⁹	20	19	44	07		48	41	22	50	
15	45	12.2		17.2	341	15.7 ¹²⁵		39.7 ⁹⁸	30	21	49	13		38	37	23	03	
16	60	12.5		16.3	355	47.3 ¹²⁶		49.4 ⁹⁷	35	21	51	16		32	35		10	
17	75	12.7	+7	15.4	10	18.8 ¹²⁵	-12	59.1 ⁹⁷	40	5	22	5	53	6	20	9	25	
18	90	12.9	+7	14.5	24	50.4 ¹²⁶	-13	08.7 ⁹⁶	45	5	21	5	55	6	24	9	17	
19	105	13.1		13.6	39	21.9 ¹²⁵		18.3 ⁹⁶	50	20	57	30		08	26	40	66	
20	120	13.3		12.6	53	53.5 ¹²⁶		27.7 ⁹⁴	52	19	58	32		9	03	25	45	
21	135	13.5		11.7	68	25.0 ¹²⁵		37.1 ⁹⁴	54	19	5	59	35		8	58	23	
22	150	13.7		10.8	82	56.6 ¹²⁶		46.4 ⁹³	56	17	6	00	38		53	21	23	
23	165	13.9		09.9	97	28.1 ¹²⁵	-13	55.7 ⁹³	58	16	02	41		47	19	**	**	
24	180	14.1	+7	08.9	111	59.6 ¹²⁵	-14	04.9 ⁹²	60 S	5	15	6	03	6	45	8	41	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 1 ^h 10 ^m 1		Mag: -3.8 PMG: 13 ^h 25 ^m			Mag: +1.8 PMG: 10 ^h 45 ^m			Mag: -2.4 PMG: 5 ^h 44 ^m			Mag: +0.1 PMG: 5 ^h 06 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	342	26.0	158	48.7	-0	26.3	198	31.9	+15	33.9	273	50.1	+21	04.7	283	12.3	+18	11.9
1	357	28.4	173	48.4		27.6	213	32.8		33.4	288	52.3		04.7	298	14.7		11.9
2	12	30.9	188	48.0		28.9	228	33.7		32.9	303	54.6		04.7	313	17.1		11.9
3	27	33.4	203	47.7		30.2	243	34.6		32.4	318	56.8		04.7	328	19.5		11.9
4	42	35.8	218	47.4		31.5	258	35.5		31.9	333	59.1		04.8	343	21.9		11.9
5	57	38.3	233	47.1	-0	32.8	273	36.4	+15	31.4	349	01.3	+21	04.8	358	24.3	+18	11.9
6	72	40.8	248	46.7	-0	34.0	288	37.3	+15	30.8	4	03.5	+21	04.8	13	26.8	+18	11.9
7	87	43.2	263	46.4		35.3	303	38.2		30.3	19	05.8		04.9	28	29.2		11.9
8	102	45.7	278	46.1		36.6	318	39.1		29.8	34	08.0		04.9	43	31.6		11.9
9	117	48.2	293	45.8		37.9	333	40.0		29.3	49	10.3		04.9	58	34.0		11.9
10	132	50.6	308	45.5		39.2	348	40.9		28.8	64	12.5		04.9	73	36.4		11.9
11	147	53.1	323	45.1	-0	40.5	3	41.8	+15	28.3	79	14.8	+21	05.0	88	38.9	+18	11.9
12	162	55.6	338	44.8	-0	41.8	18	42.7	+15	27.8	94	17.0	+21	05.0	103	41.3	+18	11.9
13	177	58.0	353	44.5		43.1	33	43.6		27.3	109	19.3		05.0	118	43.7		11.9
14	193	00.5	8	44.2		44.3	48	44.5		26.8	124	21.5		05.0	133	46.1		11.9
15	208	02.9	23	43.9		45.6	63	45.4		26.3	139	23.7		05.1	148	48.6		11.9
16	223	05.4	38	43.5		46.9	78	46.3		25.8	154	26.0		05.1	163	51.0		11.9
17	238	07.9	53	43.2	-0	48.2	93	47.2	+15	25.3	169	28.2	+21	05.1	178	53.4	+18	11.9
18	253	10.3	68	42.9	-0	49.5	108	48.1	+15	24.8	184	30.5	+21	05.1	193	55.8	+18	11.9
19	268	12.8	83	42.6		50.8	123	49.0		24.3	199	32.7		05.2	208	58.2		11.9
20	283	15.3	98	42.3		52.1	138	49.9		23.8	214	35.0		05.2	224	00.7		11.9
21	298	17.7	113	41.9		53.4	153	50.8		23.3	229	37.2		05.2	239	03.1		11.9
22	313	20.2	128	41.6		54.7	168	51.7		22.8	244	39.5		05.3	254	05.5		11.9
23	328	22.7	143	41.3		55.9	183	52.6		22.3	259	41.7		05.3	269	07.9		11.9
24	343	25.1	158	41.0	-0	57.2	198	53.5	+15	21.8	274	44.0	+21	05.3	284	10.4	+18	11.9
Dif	—		-3		-13		+9		-5		+22		0		+24			

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: 5 ^d 6 SD: 15°2 PMG: 17 ^h 05 ^m	PHE { 4 ^h : 55°7 12 ^h : 55°5 20 ^h : 55°3 R°: 47 ^m										
	hG ☉	Dec				hG ☾			Dif	Dec	Dif	Civil	Náutico	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	180	14.1	+7 08.9	111	59.6	-14 04.9	91	60 N	18 54	19 38	20 34	12 56 76	21 03 23	21 03 23	
1	195	14.3	08.0	126	31.1 ¹²⁵	14.0	91	58	50	31	23	46 72	14 26	14 26	
2	210	14.5	07.1	141	02.6 ¹²⁵	23.0	90	56	46	25	13	37 70	24 27	24 27	
3	225	14.7	06.2	155	34.1 ¹²⁵	31.9	89	54	43	19	20 04	29 68	32 30	32 30	
4	240	14.9	05.3	170	05.6 ¹²⁵	40.8	89	52	40	15	19 57	22 66	40 31	40 31	
5	255	15.1	+7 04.3	184	37.1 ¹²⁵	-14 49.5	87	50	18 37	19 10	19 51	12 15 65	21 47 32	21 47 32	
6	270	15.3	+7 03.4	199	08.6 ¹²⁵	-14 58.3	88	45	18 31	19 01	19 37	12 01 62	22 02 35	22 02 35	
7	285	15.5	02.5	213	40.0 ¹²⁴	-15 06.9	86	40	26	18 54	27	11 50 59	14 37	14 37	
8	300	15.7	01.6	228	11.5 ¹²⁵	15.4	85	35	22	48	18	40 58	24 40	24 40	
9	315	16.0	+7 00.6	242	43.0 ¹²⁵	23.9	85	30	19	43	11	32 55	33 41	33 41	
10	330	16.2	+6 59.7	257	14.4 ¹²⁴	32.3	84	20	12	35	19 01	17 53	22 49 44	22 49 44	
11	345	16.4	+6 58.8	271	45.8 ¹²⁴	-15 40.6	83	10 N	18 07	18 28	18 53	11 05 50	23 03 46	23 03 46	
12	0	16.6	+6 57.9	286	17.2 ¹²⁴	-15 48.8	82	0	18 02	18 23	18 47	10 53 48	23 16 48	23 16 48	
13	15	16.8	56.9	300	48.6 ¹²⁴	-15 57.0	82	10 S	17 57	18	43	41 46	29 50	29 50	
14	30	17.0	56.0	315	20.0 ¹²⁴	-16 05.0	80	20	52	14	40	29 43	43 52	43 52	
15	45	17.2	55.1	329	51.4 ¹²⁴	13.0	80	30	47	11	38	15 39	23 59 54	23 59 54	
16	60	17.4	54.2	344	22.8 ¹²⁴	20.9	79	35	44	09	38	10 07 38	*** ** *	*** ** *	
17	75	17.6	+6 53.2	358	54.2 ¹²⁴	-16 28.7	78	40	17 40	18 07	18 39	9 58 35	*** ** *	*** ** *	
18	90	17.8	+6 52.3	13	25.5 ¹²³	-16 36.4	77	45	17 36	18 05	18 39	9 47 33	*** ** *	*** ** *	
19	105	18.0	51.4	27	56.9 ¹²⁴	44.1	77	50	31	03	41	34 30	*** ** *	*** ** *	
20	120	18.2	50.5	42	28.2 ¹²³	51.6	75	52	29	03	42	28 28	*** ** *	*** ** *	
21	135	18.5	49.5	56	59.5 ¹²³	-16 59.1	75	54	26	02	43	21 27	*** ** *	*** ** *	
22	150	18.7	48.6	71	30.8 ¹²³	-17 06.5	74	56	24	01	44	14 25	*** ** *	*** ** *	
23	165	18.9	47.7	86	02.1 ¹²³	13.8	73	58	21	18 00	46	9 06 22	0 06 75	0 06 75	
24	180	19.1	+6 46.7	100	33.4 ¹²³	-17 21.0	72	60 S	17 17	17 59	18 47	8 56 20	0 15 77	0 15 77	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 1 ^h 06 ^m 1		Mag: -3.8 PMG: 13 ^h 26 ^m		Mag: +1.8 PMG: 10 ^h 44 ^m		Mag: -2.5 PMG: 5 ^h 40 ^m		Mag: +0.1 PMG: 5 ^h 02 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	343	25.1	158	41.0	-0 57.2	198 53.5	+15 21.8	274 44.0	+21 05.3	284 10.4	+18 11.9
1	358	27.6	173	40.7	58.5	213 54.4	21.2	289 46.2	05.3	299 12.8	11.9
2	13	30.1	188	40.3	-0 59.8	228 55.3	20.7	304 48.5	05.4	314 15.2	11.9
3	28	32.5	203	40.0	-1 01.1	243 56.2	20.2	319 50.7	05.4	329 17.6	11.9
4	43	35.0	218	39.7	02.4	258 57.1	19.7	334 53.0	05.4	344 20.0	11.9
5	58	37.4	233	39.4	-1 03.7	273 58.0	+15 19.2	349 55.2	+21 05.4	359 22.5	+18 11.9
6	73	39.9	248	39.1	-1 05.0	288 59.0	+15 18.7	4 57.5	+21 05.5	14 24.9	+18 11.9
7	88	42.4	263	38.7	06.3	303 59.9	18.2	19 59.7	05.5	29 27.3	11.9
8	103	44.8	278	38.4	07.5	319 00.8	17.7	35 02.0	05.5	44 29.7	11.9
9	118	47.3	293	38.1	08.8	334 01.7	17.2	50 04.2	05.5	59 32.2	11.9
10	133	49.8	308	37.8	10.1	349 02.6	16.7	65 06.5	05.6	74 34.6	11.9
11	148	52.2	323	37.5	-1 11.4	4 03.5	+15 16.2	80 08.7	+21 05.6	89 37.0	+18 11.9
12	163	54.7	338	37.1	-1 12.7	19 04.4	+15 15.7	95 11.0	+21 05.6	104 39.4	+18 11.9
13	178	57.2	353	36.8	14.0	34 05.3	15.2	110 13.2	05.6	119 41.9	11.9
14	193	59.6	8 36.5	15.3	49 06.2	14.6	125 15.5	05.7	05.7	134 44.3	11.9
15	209	02.1	23 36.2	16.6	64 07.1	14.1	140 17.8	05.7	05.7	149 46.7	11.9
16	224	04.5	38 35.9	17.8	79 08.0	13.6	155 20.0	05.7	05.7	164 49.1	11.9
17	239	07.0	53 35.5	-1 19.1	94 08.9	+15 13.1	170 22.3	+21 05.7	05.7	179 51.6	+18 11.9
18	254	09.5	68 35.2	-1 20.4	109 09.8	+15 12.6	185 24.5	+21 05.8	05.8	194 54.0	+18 11.9
19	269	11.9	83 34.9	21.7	124 10.7	12.1	200 26.8	05.8	05.8	209 56.4	11.9
20	284	14.4	98 34.6	23.0	139 11.6	11.6	215 29.0	05.8	05.8	224 58.9	11.9
21	299	16.9	113 34.3	24.3	154 12.5	11.1	230 31.3	05.8	05.8	240 01.3	11.9
22	314	19.3	128 33.9	25.6	169 13.4	10.6	245 33.5	05.9	05.9	255 03.7	11.9
23	329	21.8	143 33.6	26.9	184 14.4	10.1	260 35.8	05.9	05.9	270 06.1	11.9
24	344	24.3	158 33.3	-1 28.2	199 15.3	+15 09.5	275 38.0	+21 05.9	05.9	285 08.6	+18 11.9
Dif	—	—	-3	-13	+9	-5	+23	0	0	+24	0

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 9			Edad: 6 ^d 6	PHE { 4 ^h : 55 ^m 1 12 ^h : 54 ^m 9 20 ^h : 54 ^m 8			Hora	R°		Hora	R°		
	PMG: 11 ^h 58 ^m 6					SD: 15 ^h 0							PMG: 17 ^h 52 ^m	
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil				
h	°	'	°	'	°	'	°	°	h	m	h	m	h	m
0	180	19.1	+6 46.7	100	33.4	-17 21.0	71	60 N	3 25	4 21	5 05	14 12	68	21 26 31
1	195	19.3	45.8	115	04.7 ¹²³	28.1	71	58	36	28	09	13 58	67	40 32
2	210	19.5	44.9	129	35.9 ¹²²	35.2	69	56	45	34	12	47 64		21 51 35
3	225	19.7	44.0	144	07.1 ¹²²	42.1	69	54	3 54	39	16	37 63		22 02 36
4	240	19.9	43.0	158	38.4 ¹²³	49.0	69	52	4 01	44	19	28 61		11 37
5	255	20.1	+6 42.1	173	09.6 ¹²²	-17 55.8	68	50	4 08	4 48	5 21	13 20	60	22 19 38
6	270	20.3	+6 41.2	187	40.8 ¹²²	-18 02.4	66	45	4 21	4 57	5 27	13 03	58	22 37 40
7	285	20.5	40.2	202	12.0 ¹²²	09.0	66	40	31	5 04	32	12 49	57	22 51 42
8	300	20.7	39.3	216	43.1 ¹²¹	15.6	66	35	40	10	36	38 54		23 04 42
9	315	21.0	38.4	231	14.3 ¹²²	22.0	64	30	47	15	39	27 54		14 44
10	330	21.2	37.5	245	45.5 ¹²²	28.3	63	20	4 57	23	45	12 10	51	33 45
11	345	21.4	+6 36.5	260	16.6 ¹²¹	-18 34.5	62	10 N	5 05	5 29	5 50	11 55	49	23 49 47
12	0	21.6	+6 35.6	274	47.7 ¹²¹	-18 40.7	62	0	5 10	5 34	5 55	11 41	48	*** ** *
13	15	21.8	34.7	289	18.8 ¹²¹	46.7	60	10 S	14	39	6 00	27 46		*** ** *
14	30	22.0	33.7	303	49.9 ¹²¹	52.7	60	20	17	43	05	11 12	44	*** ** *
15	45	22.2	32.8	318	21.0 ¹²¹	-18 58.6	59	30	19	46	10	10 54	43	*** ** *
16	60	22.4	31.9	332	52.0 ¹²⁰	-19 04.4	58	35	19	48	13	45 41		0 08 56
17	75	22.6	+6 31.0	347	23.1 ¹²¹	-19 10.0	56	40	5 18	5 50	6 17	10 33	40	0 19 58
18	90	22.9	+6 30.0	1	54.1 ¹²⁰	-19 15.6	56	45	5 17	5 51	6 21	10 20	38	0 31 60
19	105	23.1	29.1	16	25.1 ¹²⁰	21.1	55	50	16	53	25	10 04	35	46 63
20	120	23.3	28.2	30	56.1 ¹²⁰	26.5	54	52	15	54	28	9 56	34	0 54 64
21	135	23.5	27.2	45	27.1 ¹²⁰	31.9	54	54	14	55	30	48 33		1 02 65
22	150	23.7	26.3	59	58.1 ¹²⁰	37.1	52	56	12	55	33	39 31		11 67
23	165	23.9	25.4	74	29.1 ¹²⁰	42.2	51	58	11	56	35	28 29		21 69
24	180	24.1	+6 24.4	89	00.0 ¹¹⁹	-19 47.2	50	60 S	5 09	5 57	6 39	9 16	26	1 32 73

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG		Mag: -3.8		Mag: +1.8		Mag: -2.5		Mag: +0.1					
	1 ^h 02 ^m 2		PMG: 13 ^h 26 ^m		PMG: 10 ^h 42 ^m		PMG: 5 ^h 37 ^m		PMG: 4 ^h 59 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	344	24.3	158	33.3	-1 28.2	199	15.3	+15 09.5	275	38.0	+21 05.9	285	08.6	+18 11.9
1	359	26.7	173	33.0	29.4	214	16.2	09.0	290	40.3	05.9	300	11.0	11.9
2	14	29.2	188	32.7	30.7	229	17.1	08.5	305	42.6	06.0	315	13.4	11.9
3	29	31.7	203	32.3	32.0	244	18.0	08.0	320	44.8	06.0	330	15.8	11.9
4	44	34.1	218	32.0	33.3	259	18.9	07.5	335	47.1	06.0	345	18.3	11.9
5	59	36.6	233	31.7	-1 34.6	274	19.8	+15 07.0	350	49.3	+21 06.0	0	20.7	+18 11.9
6	74	39.0	248	31.4	-1 35.9	289	20.7	+15 06.5	5	51.6	+21 06.1	15	23.1	+18 11.9
7	89	41.5	263	31.1	37.2	304	21.6	06.0	20	53.9	06.1	30	25.6	11.9
8	104	44.0	278	30.7	38.5	319	22.5	05.5	35	56.1	06.1	45	28.0	11.9
9	119	46.4	293	30.4	39.7	334	23.4	05.0	50	58.4	06.1	60	30.4	11.9
10	134	48.9	308	30.1	41.0	349	24.3	04.4	66	00.6	06.2	75	32.9	11.9
11	149	51.4	323	29.8	-1 42.3	4	25.3	+15 03.9	81	02.9	+21 06.2	90	35.3	+18 11.9
12	164	53.8	338	29.5	-1 43.6	19	26.2	+15 03.4	96	05.2	+21 06.2	105	37.7	+18 11.9
13	179	56.3	353	29.1	44.9	34	27.1	02.9	111	07.4	06.2	120	40.1	11.9
14	194	58.8	8	28.8	46.2	49	28.0	02.4	126	09.7	06.3	135	42.6	11.9
15	210	01.2	23	28.5	47.5	64	28.9	01.9	141	11.9	06.3	150	45.0	11.9
16	225	03.7	38	28.2	48.8	79	29.8	01.4	156	14.2	06.3	165	47.4	11.9
17	240	06.2	53	27.9	-1 50.0	94	30.7	+15 00.9	171	16.5	+21 06.3	180	49.9	+18 11.9
18	255	08.6	68	27.5	-1 51.3	109	31.6	+15 00.3	186	18.7	+21 06.4	195	52.3	+18 11.9
19	270	11.1	83	27.2	52.6	124	32.5	+14 59.8	201	21.0	06.4	210	54.7	11.9
20	285	13.5	98	26.9	53.9	139	33.4	59.3	216	23.2	06.4	225	57.2	11.9
21	300	16.0	113	26.6	55.2	154	34.4	58.8	231	25.5	06.4	240	59.6	11.9
22	315	18.5	128	26.3	56.5	169	35.3	58.3	246	27.8	06.4	256	02.0	11.9
23	330	20.9	143	25.9	57.8	184	36.2	57.8	261	30.0	06.5	271	04.5	11.9
24	345	23.4	158	25.6	-1 59.1	199	37.1	+14 57.3	276	32.3	+21 06.5	286	06.9	+18 11.9
Dif	—		-3		-13	+9		-5	+23		0	+24		0

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna						
	SD: 15°9		Edad: 7 ^d 6 PHE { 4 ^h : 54/6 12 ^h : 54/5 20 ^h : 54/4 R°: 49 ^m	hG ☾	Dif	Dec			Dif	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	PMG: 11 ^h 58 ^m 2	hG ☉								Dec	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	h m	h m	m				
0	180	24.1	+6	24.4	89	00.0	-19 47.2	60 N	18 48	19 31	20 26	15 20 59	21 57 41						
1	195	24.3		23.5	103	31.0 ¹²⁰	52.2 ⁵⁰	58	44	25	16	15 05 57	22 12 43						
2	210	24.5		22.6	118	01.9 ¹¹⁹	-19 57.0	56	41	19	20 07	14 51 57	26 43						
3	225	24.7		21.6	132	32.8 ¹¹⁹	-20 01.7	54	38	14	19 59	40 56	38 44						
4	240	25.0		20.7	147	03.7 ¹¹⁹	06.4	52	35	10	52	29 56	48 44						
5	255	25.2	+6	19.8	161	34.6 ¹¹⁹	-20 10.9	50	18 33	19 06	19 46	14 20 55	22 57 45						
6	270	25.4	+6	18.8	176	05.5 ¹¹⁹	-20 15.4	45	18 28	18 57	19 33	14 01 54	23 17 46						
7	285	25.6		17.9	190	36.3 ¹¹⁸	19.7	40	23	51	23	13 46 52	33 46						
8	300	25.8		17.0	205	07.2 ¹¹⁹	24.0	35	19	45	15	32 52	46 47						
9	315	26.0		16.0	219	38.0 ¹¹⁸	28.2	30	16	40	19 09	21 51	23 58 47						
10	330	26.2		15.1	234	08.8 ¹¹⁸	32.2	20	11	33	18 59	13 01 51	** ** *						
11	345	26.4	+6	14.2	248	39.7 ¹¹⁹	-20 36.2	10 N	18 06	18 27	18 52	12 44 50	** ** *						
12	0	26.7	+6	13.2	263	10.5 ¹¹⁸	-20 40.1	0	18 01	18 22	18 46	12 29 48	0 04 48						
13	15	26.9		12.3	277	41.2 ¹¹⁷	43.8	10 S	17 57	18	43	12 13 47	19 49						
14	30	27.1		11.4	292	12.0 ¹¹⁸	47.5	20	53	15	40	11 56 47	35 51						
15	45	27.3		10.4	306	42.8 ¹¹⁸	51.1	30	48	12	40	37 45	0 53 53						
16	60	27.5		09.5	321	13.6 ¹¹⁸	54.6	35	45	10	40	26 44	1 04 54						
17	75	27.7	+6	08.6	335	44.3 ¹¹⁷	-20 57.9	40	17 42	18 09	18 40	11 13 44	1 17 54						
18	90	27.9	+6	07.6	350	15.0 ¹¹⁷	-21 01.2	45	17 38	18 08	18 42	10 58 42	1 31 56						
19	105	28.1		06.7	4	45.8 ¹¹⁸	04.4	50	34	06	44	39 41	49 58						
20	120	28.4		05.8	19	16.5 ¹¹⁷	07.5	52	32	06	45	30 41	1 58 58						
21	135	28.6		04.8	33	47.2 ¹¹⁷	10.4	54	30	05	46	21 39	2 07 60						
22	150	28.8		03.9	48	17.9 ¹¹⁷	13.3	56	28	05	48	10 10 38	18 61						
23	165	29.0		03.0	62	48.6 ¹¹⁷	16.1	58	25	04	50	9 57 37	30 63						
24	180	29.2	+6	02.0	77	19.2 ¹¹⁶	-21 18.8	60 S	17 22	18 04	18 52	9 42 36	2 45 64						
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 0 ^h 58 ^m 3		Mag: -3.8 PMG: 13 ^h 27 ^m			Mag: +1.8 PMG: 10 ^h 41 ^m			Mag: -2.5 PMG: 5 ^h 33 ^m			Mag: +0.1 PMG: 4 ^h 55 ^m							
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°				
0	345	23.4	158	25.6	-1	59.1	199	37.1	+14	57.3	276	32.3	+21	06.5	286	06.9	+18	11.9	
1	0	25.9	173	25.3	-2	00.3	214	38.0		56.7	291	34.6		06.5	301	09.3		11.9	
2	15	28.3	188	25.0		01.6	229	38.9		56.2	306	36.8		06.5	316	11.8		11.9	
3	30	30.8	203	24.7		02.9	244	39.8		55.7	321	39.1		06.6	331	14.2		11.9	
4	45	33.3	218	24.3		04.2	259	40.7		55.2	336	41.4		06.6	346	16.6		11.9	
5	60	35.7	233	24.0	-2	05.5	274	41.6	+14	54.7	351	43.6	+21	06.6	1	19.1	+18	11.9	
6	75	38.2	248	23.7	-2	06.8	289	42.6	+14	54.2	6	45.9	+21	06.6	16	21.5	+18	11.9	
7	90	40.6	263	23.4		08.1	304	43.5		53.7	21	48.2		06.7	31	23.9		11.9	
8	105	43.1	278	23.1		09.4	319	44.4		53.1	36	50.4		06.7	46	26.4		11.9	
9	120	45.6	293	22.7		10.6	334	45.3		52.6	51	52.7		06.7	61	28.8		11.9	
10	135	48.0	308	22.4		11.9	349	46.2		52.1	66	55.0		06.7	76	31.2		11.9	
11	150	50.5	323	22.1	-2	13.2	4	47.1	+14	51.6	81	57.2	+21	06.8	91	33.7	+18	11.9	
12	165	53.0	338	21.8	-2	14.5	19	48.0	+14	51.1	96	59.5	+21	06.8	106	36.1	+18	11.9	
13	180	55.4	353	21.4		15.8	34	48.9		50.6	112	01.8		06.8	121	38.5		11.9	
14	195	57.9	8	21.1		17.1	49	49.9		50.0	127	04.0		06.8	136	41.0		11.9	
15	211	00.4	23	20.8		18.4	64	50.8		49.5	142	06.3		06.8	151	43.4		11.9	
16	226	02.8	38	20.5		19.7	79	51.7		49.0	157	08.6		06.9	166	45.8		11.9	
17	241	05.3	53	20.2	-2	20.9	94	52.6	+14	48.5	172	10.8	+21	06.9	181	48.3	+18	11.9	
18	256	07.8	68	19.8	-2	22.2	109	53.5	+14	48.0	187	13.1	+21	06.9	196	50.7	+18	11.9	
19	271	10.2	83	19.5		23.5	124	54.4		47.5	202	15.4		06.9	211	53.1		11.9	
20	286	12.7	98	19.2		24.8	139	55.3		46.9	217	17.7		07.0	226	55.6		11.9	
21	301	15.1	113	18.9		26.1	154	56.3		46.4	232	19.9		07.0	241	58.0		11.9	
22	316	17.6	128	18.6		27.4	169	57.2		45.9	247	22.2		07.0	257	00.4		11.9	
23	331	20.1	143	18.2		28.7	184	58.1		45.4	262	24.5		07.0	272	02.9		11.9	
24	346	22.5	158	17.9	-2	29.9	199	59.0	+14	44.9	277	26.7	+21	07.1	287	05.3	+18	11.9	
Dif	—		-3		-13		+9		-5		+23		0		+24			0	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15'9 PMG: 11 ^h 57 ^m 9			Edad: 8 ^d 6 PHE { SD: 14'8 PMG: 19 ^h 29 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora
h	°	'	°	'	°	'	°	h	m	h	m	h	m	m
0	180	29.2	+6	02.0	77	19.2	-21 18.8	60 N	3 31	4 26	5 10	16 19	47	22 38 53
1	195	29.4		01.1	91	49.9 ¹¹⁷	21.4 ²⁶	58	41	32	13	16 02	48	22 55 52
2	210	29.6	+6	00.2	106	20.6 ¹¹⁷	23.8 ²⁴	56	50	38	16	15 48	48	23 09 52
3	225	29.9	+5	59.2	120	51.2 ¹¹⁶	26.2 ²⁴	54	3 58	43	19	36 47		22 5
4	240	30.1		58.3	135	21.9 ¹¹⁷	28.5 ²³	52	4 05	47	22	25 48		32 52
5	255	30.3	+5	57.3	149	52.5 ¹¹⁶	-21 30.7 ²²	50	4 11	4 51	5 24	15 15	48	23 42 52
6	270	30.5	+5	56.4	164	23.2 ¹¹⁷	-21 32.7 ²⁰	45	4 24	4 59	5 29	14 55	48	** ** *
7	285	30.7		55.5	178	53.8 ¹¹⁶	34.7 ²⁰	40	33	5 06	34	38 49		** ** *
8	300	30.9		54.5	193	24.4 ¹¹⁶	36.6 ¹⁹	35	41	12	37	24 49		** ** *
9	315	31.1		53.6	207	55.0 ¹¹⁶	38.3 ¹⁷	30	48	16	40	14 12	49	** ** *
10	330	31.4		52.7	222	25.6 ¹¹⁶	40.0 ¹⁷	20	4 58	24	46	13 52	48	0 18 48
11	345	31.6	+5	51.7	236	56.2 ¹¹⁶	-21 41.6 ¹⁶	10 N	5 05	5 29	5 50	13 34	48	0 36 48
12	0	31.8	+5	50.8	251	26.8 ¹¹⁶	-21 43.0 ¹⁴	0	5 10	5 34	5 55	13 17	49	0 52 49
13	15	32.0		49.8	265	57.4 ¹¹⁶	44.4 ¹⁴	10 S	13	38	5 59	13 00	49	1 08 49
14	30	32.2		48.9	280	28.0 ¹¹⁶	45.6 ¹²	20	15	41	6 03	12 43	48	26 49
15	45	32.4		48.0	294	58.6 ¹¹⁶	46.8 ¹²	30	16	44	08	22 49		46 50
16	60	32.6		47.0	309	29.2 ¹¹⁶	47.9 ¹¹	35	16	45	11	12 10	49	1 58 50
17	75	32.9	+5	46.1	323	59.8 ¹¹⁶	-21 48.8 ⁹	40	5 15	5 47	6 14	11 57	48	2 11 51
18	90	33.1	+5	45.1	338	30.4 ¹¹⁶	-21 49.7 ⁹	45	5 14	5 48	6 17	11 40	49	2 27 51
19	105	33.3		44.2	353	01.0 ¹¹⁶	50.4 ⁷	50	12	49	21	20 48		47 52
20	120	33.5		43.3	7	31.5 ¹¹⁵	51.0 ⁶	52	10	49	23	11 48		2 56 52
21	135	33.7		42.3	22	02.1 ¹¹⁶	51.6 ⁶	54	09	50	25	11 00	48	3 07 52
22	150	33.9		41.4	36	32.7 ¹¹⁶	52.0 ⁴	56	07	50	27	10 48	48	19 52
23	165	34.1		40.5	51	03.3 ¹¹⁶	52.4 ⁴	58	05	51	30	34 48		33 52
24	180	34.4	+5	39.5	65	33.8 ¹¹⁵	-21 52.6 ²	60 S	5 03	5 51	6 33	10 18	47	3 49 53

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 0 ^h 54 ^m 3		Mag: -3.8 PMG: 13 ^h 27 ^m		Mag: +1.8 PMG: 10 ^h 39 ^m		Mag: -2.5 PMG: 5 ^h 29 ^m		Mag: +0.1 PMG: 4 ^h 51 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	346	22.5	158	17.9	-2 29.9	199 59.0	+14 44.9	277 26.7	+21 07.1	287 05.3	+18 11.9
1	1	25.0	173	17.6	31.2	214 59.9	44.4	292 29.0	07.1	302 07.8	11.9
2	16	27.5	188	17.3	32.5	230 00.8	43.8	307 31.3	07.1	317 10.2	11.9
3	31	29.9	203	16.9	33.8	245 01.8	43.3	322 33.6	07.1	332 12.6	11.8
4	46	32.4	218	16.6	35.1	260 02.7	42.8	337 35.8	07.1	347 15.1	11.8
5	61	34.9	233	16.3	-2 36.4	275 03.6	+14 42.3	352 38.1	+21 07.2	2 17.5	+18 11.8
6	76	37.3	248	16.0	-2 37.7	290 04.5	+14 41.8	7 40.4	+21 07.2	17 19.9	+18 11.8
7	91	39.8	263	15.7	38.9	305 05.4	41.2	22 42.7	07.2	32 22.4	11.8
8	106	42.3	278	15.3	40.2	320 06.3	40.7	37 44.9	07.2	47 24.8	11.8
9	121	44.7	293	15.0	41.5	335 07.2	40.2	52 47.2	07.3	62 27.3	11.8
10	136	47.2	308	14.7	42.8	350 08.2	39.7	67 49.5	07.3	77 29.7	11.8
11	151	49.6	323	14.4	-2 44.1	5 09.1	+14 39.2	82 51.8	+21 07.3	92 32.1	+18 11.8
12	166	52.1	338	14.0	-2 45.4	20 10.0	+14 38.7	97 54.0	+21 07.3	107 34.6	+18 11.8
13	181	54.6	353	13.7	46.7	35 10.9	38.1	112 56.3	07.3	122 37.0	11.8
14	196	57.0	8	13.4	47.9	50 11.8	37.6	127 58.6	07.4	137 39.5	11.8
15	211	59.5	23	13.1	49.2	65 12.7	37.1	143 00.9	07.4	152 41.9	11.8
16	227	02.0	38	12.8	50.5	80 13.7	36.6	158 03.1	07.4	167 44.3	11.8
17	242	04.4	53	12.4	-2 51.8	95 14.6	+14 36.1	173 05.4	+21 07.4	182 46.8	+18 11.8
18	257	06.9	68	12.1	-2 53.1	110 15.5	+14 35.5	188 07.7	+21 07.5	197 49.2	+18 11.8
19	272	09.4	83	11.8	54.4	125 16.4	35.0	203 10.0	07.5	212 51.7	11.8
20	287	11.8	98	11.5	55.7	140 17.3	34.5	218 12.3	07.5	227 54.1	11.8
21	302	14.3	113	11.1	56.9	155 18.3	34.0	233 14.5	07.5	242 56.5	11.8
22	317	16.8	128	10.8	58.2	170 19.2	33.4	248 16.8	07.5	257 59.0	11.8
23	332	19.2	143	10.5	-2 59.5	185 20.1	32.9	263 19.1	07.6	273 01.4	11.8
24	347	21.7	158	10.2	-3 00.8	200 21.0	+14 32.4	278 21.4	+21 07.6	288 03.9	+18 11.8
Dif	—		-3	-13		+9	-5	+23	0	+24	0

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'9 PMG: 11 ^h 57 ^m 5			Edad: 9 ^d 6 PHE { SD: 14'8 PMG: 20 ^h 18 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	Rº	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	180	34.4	+5	39.5	65	33.8	-21 52.6	60 N	18 42	19 25	20 19	17 06 36	23 31 64	
1	195	34.6		38.6	80	04.4 ¹¹⁶	52.7	58	38	19	09	16 50 37	23 47 62	
2	210	34.8		37.6	94	35.0 ¹¹⁶	52.8	56	36	14	20 01	36 38	*** ** **	
3	225	35.0		36.7	109	05.6 ¹¹⁶	52.7	54	33	09	19 53	23 40	*** ** **	
4	240	35.2		35.8	123	36.2 ¹¹⁶	52.5	52	31	05	47	13 40	*** ** **	
5	255	35.4	+5	34.8	138	06.7 ¹¹⁵	-21 52.2	50	18 28	19 01	19 41	16 03 41	*** ** **	
6	270	35.7	+5	33.9	152	37.3 ¹¹⁶	-21 51.9	45	18 24	18 54	19 29	15 43 43	0 03 50	
7	285	35.9		32.9	167	07.9 ¹¹⁶	51.4	40	20	47	20	27 43	19 51	
8	300	36.1		32.0	181	38.5 ¹¹⁶	50.8	35	17	42	12	13 45	33 50	
9	315	36.3		31.0	196	09.1 ¹¹⁶	50.1	30	14	38	19 06	15 01 45	0 45 50	
10	330	36.5		30.1	210	39.7 ¹¹⁶	49.3	20	09	31	18 57	14 40 47	1 06 49	
11	345	36.7	+5	29.2	225	10.3 ¹¹⁶	-21 48.4	10 N	18 05	18 26	18 50	14 22 48	1 24 49	
12	0	37.0	+5	28.2	239	40.9 ¹¹⁶	-21 47.4	0	18 01	18 22	18 46	14 06 48	1 41 48	
13	15	37.2		27.3	254	11.5 ¹¹⁶	46.4	10 S	17 57	18	43	13 49 49	1 57 49	
14	30	37.4		26.3	268	42.1 ¹¹⁶	45.2	20	53	15	41	31 50	2 15 48	
15	45	37.6		25.4	283	12.8 ¹¹⁷	43.9	30	49	13	41	13 11 51	36 47	
16	60	37.8		24.5	297	43.4 ¹¹⁶	42.5	35	46	12	41	12 59 52	2 48 47	
17	75	38.0	+5	23.5	312	14.0 ¹¹⁶	-21 41.0	40	17 44	18 11	18 42	12 45 53	3 02 46	
18	90	38.3	+5	22.6	326	44.7 ¹¹⁷	-21 39.4	45	17 41	18 10	18 44	12 29 53	3 18 46	
19	105	38.5		21.6	341	15.3 ¹¹⁶	37.6	50	37	09	47	12 08 55	39 44	
20	120	38.7		20.7	355	46.0 ¹¹⁷	35.8	52	35	09	48	11 59 55	48 44	
21	135	38.9		19.7	10	16.7 ¹¹⁷	33.9	54	33	09	50	48 56	3 59 44	
22	150	39.1		18.8	24	47.4 ¹¹⁷	31.9	56	31	09	52	36 56	4 11 43	
23	165	39.3		17.9	39	18.1 ¹¹⁷	29.8	58	29	08	54	22 57	25 43	
24	180	39.6	+5	16.9	53	48.8 ¹¹⁷	-21 27.6	60 S	17 27	18 08	18 57	11 05 59	4 42 41	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 0 ^h 50 ^m 4		Mag: -3.8 PMG: 13 ^h 28 ^m		Mag: +1.8 PMG: 10 ^h 38 ^m		Mag: -2.5 PMG: 5 ^h 26 ^m		Mag: +0.1 PMG: 4 ^h 47 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	347	21.7	158	10.2	-3	00.8	200	21.0	+14	32.4	278	21.4	+21	07.6	288	03.9	+18	11.8
1	2	24.1	173	09.8		02.1	215	21.9		31.9	293	23.7		07.6	303	06.3		11.8
2	17	26.6	188	09.5		03.4	230	22.8		31.4	308	25.9		07.6	318	08.7		11.8
3	32	29.1	203	09.2		04.7	245	23.8		30.8	323	28.2		07.6	333	11.2		11.8
4	47	31.5	218	08.9		05.9	260	24.7		30.3	338	30.5		07.7	348	13.6		11.8
5	62	34.0	233	08.6	-3	07.2	275	25.6	+14	29.8	353	32.8	+21	07.7	3	16.1	+18	11.8
6	77	36.5	248	08.2	-3	08.5	290	26.5	+14	29.3	8	35.1	+21	07.7	18	18.5	+18	11.8
7	92	38.9	263	07.9		09.8	305	27.4		28.8	23	37.3		07.7	33	21.0		11.8
8	107	41.4	278	07.6		11.1	320	28.4		28.2	38	39.6		07.8	48	23.4		11.8
9	122	43.9	293	07.3		12.4	335	29.3		27.7	53	41.9		07.8	63	25.8		11.8
10	137	46.3	308	06.9		13.6	350	30.2		27.2	68	44.2		07.8	78	28.3		11.7
11	152	48.8	323	06.6	-3	14.9	5	31.1	+14	26.7	83	46.5	+21	07.8	93	30.7	+18	11.7
12	167	51.2	338	06.3	-3	16.2	20	32.0	+14	26.1	98	48.8	+21	07.8	108	33.2	+18	11.7
13	182	53.7	353	06.0		17.5	35	33.0		25.6	113	51.0		07.9	123	35.6		11.7
14	197	56.2	8	05.6		18.8	50	33.9		25.1	128	53.3		07.9	138	38.1		11.7
15	212	58.6	23	05.3		20.1	65	34.8		24.6	143	55.6		07.9	153	40.5		11.7
16	228	01.1	38	05.0		21.3	80	35.7		24.0	158	57.9		07.9	168	43.0		11.7
17	243	03.6	53	04.7	-3	22.6	95	36.6	+14	23.5	174	00.2	+21	07.9	183	45.4	+18	11.7
18	258	06.0	68	04.3	-3	23.9	110	37.6	+14	23.0	189	02.5	+21	08.0	198	47.8	+18	11.7
19	273	08.5	83	04.0		25.2	125	38.5		22.5	204	04.8		08.0	213	50.3		11.7
20	288	11.0	98	03.7		26.5	140	39.4		22.0	219	07.0		08.0	228	52.7		11.7
21	303	13.4	113	03.4		27.8	155	40.3		21.4	234	09.3		08.0	243	55.2		11.7
22	318	15.9	128	03.0		29.0	170	41.3		20.9	249	11.6		08.0	258	57.6		11.7
23	333	18.4	143	02.7		30.3	185	42.2		20.4	264	13.9		08.1	274	00.1		11.7
24	348	20.8	158	02.4	-3	31.6	200	43.1	+14	19.9	279	16.2	+21	08.1	289	02.5	+18	11.7
Dif	—		-3		-13		+9		-5		+23		0		+24			0

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15'9 PMG: 11 ^h 57 ^m 2			Edad: 10 ^d 6 SD: 14'8 PMG: 21 ^h 06 ^m	PHE { 4 ^h : 54'2 12 ^h : 54'2 20 ^h : 54'3 R°: 47 ^m											
	hG ☉	Dec				hG ☾		Dif	Dec		Dif	Náutico	Civil	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	180	39.6	+5	16.9	53	48.8	-21	27.6	60 N	3 37	4 31	5 14	17	42	26	*** ** *
1	195	39.8		16.0	68	19.5 ¹¹⁷		25.3 ²³	58	47	37	17	27	29		*** ** *
2	210	40.0		15.0	82	50.2 ¹¹⁷		22.9 ²⁴	56	3 55	42	20	14	31	0 01	6
3	225	40.2		14.1	97	20.9 ¹¹⁷		20.4 ²⁵	54	4 02	47	23	17	03	32	13
4	240	40.4		13.1	111	51.7 ¹¹⁸		17.8 ²⁶	52	09	51	25	16	53	34	24
5	255	40.6	+5	12.2	126	22.4 ¹¹⁷	-21	15.1 ²⁷	50	4 15	4 54	5 27	16	44	35	0 34
6	270	40.9	+5	11.2	140	53.2 ¹¹⁸	-21	12.3 ²⁸	45	4 26	5 02	5 32	16	26	37	0 53
7	285	41.1		10.3	155	24.0 ¹¹⁸		09.3 ³⁰	40	36	08	35	16	10	40	1 10
8	300	41.3		09.4	169	54.8 ¹¹⁸		06.3 ³⁰	35	43	13	39	15	58	40	23
9	315	41.5		08.4	184	25.6 ¹¹⁸	-21	03.2 ³¹	30	49	17	41	46	42	35	52
10	330	41.7		07.5	198	56.4 ¹¹⁸	-21	00.0 ³²	20	4 58	24	46	27	44	1 55	51
11	345	41.9	+5	06.5	213	27.2 ¹¹⁸	-20	56.7 ³³	10 N	5 05	5 29	5 50	15	10	46	2 13
12	0	42.2	+5	05.6	227	58.1 ¹¹⁹	-20	53.3 ³⁴	0	5 09	5 33	5 54	14	54	48	2 29
13	15	42.4		04.6	242	29.0 ¹¹⁹		49.8 ³⁵	10 S	12	37	5 58	38	50	2 46	48
14	30	42.6		03.7	256	59.8 ¹¹⁸		46.2 ³⁶	20	14	39	6 01	21	52	3 03	45
15	45	42.8		02.7	271	30.7 ¹¹⁹		42.5 ³⁷	30	14	42	05	14	02	53	23
16	60	43.0		01.8	286	01.6 ¹¹⁹		38.7 ³⁸	35	13	42	08	13	51	54	35
17	75	43.3	+5	00.8	300	32.6 ¹²⁰	-20	34.8 ³⁹	40	5 12	5 43	6 10	13	38	55	3 48
18	90	43.5	+4	59.9	315	03.5 ¹¹⁹	-20	30.8 ⁴⁰	45	5 10	5 44	6 13	13	22	58	4 04
19	105	43.7		59.0	329	34.5 ¹²⁰		26.8 ⁴⁰	50	07	45	17	13	03	60	23
20	120	43.9		58.0	344	05.5 ¹²⁰		22.6 ⁴²	52	06	45	18	12	54	61	32
21	135	44.1		57.1	358	36.5 ¹²⁰		18.3 ⁴³	54	04	45	20	44	62	43	36
22	150	44.4		56.1	13	07.5 ¹²⁰		13.9 ⁴⁴	56	02	45	22	32	64	4	54
23	165	44.6		55.2	27	38.5 ¹²⁰		09.5 ⁴⁴	58	5 00	45	24	19	66	5	08
24	180	44.8	+4	54.2	42	09.6 ¹²¹	-20	04.9 ⁴⁶	60 S	4 57	5 45	6 27	12	04	68	5 23

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 0 ^h 46 ^m 5		Mag: -3.8 PMG: 13 ^h 28 ^m		Mag: +1.8 PMG: 10 ^h 36 ^m		Mag: -2.5 PMG: 5 ^h 22 ^m		Mag: +0.1 PMG: 4 ^h 43 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	348	20.8	158	02.4	-3	31.6	200	43.1	+14	19.9	279	16.2	+21	08.1	289	02.5	+18	11.7
1	3	23.3	173	02.1		32.9	215	44.0		19.3	294	18.5		08.1	304	05.0		11.7
2	18	25.7	188	01.7		34.2	230	44.9		18.8	309	20.8		08.1	319	07.4		11.7
3	33	28.2	203	01.4		35.4	245	45.9		18.3	324	23.1		08.1	334	09.9		11.7
4	48	30.7	218	01.1		36.7	260	46.8		17.8	339	25.3		08.2	349	12.3		11.7
5	63	33.1	233	00.8	-3	38.0	275	47.7	+14	17.2	354	27.6	+21	08.2	4	14.8	+18	11.7
6	78	35.6	248	00.4	-3	39.3	290	48.6	+14	16.7	9	29.9	+21	08.2	19	17.2	+18	11.7
7	93	38.1	263	00.1		40.6	305	49.6		16.2	24	32.2		08.2	34	19.6		11.7
8	108	40.5	277	59.8		41.9	320	50.5		15.7	39	34.5		08.2	49	22.1		11.7
9	123	43.0	292	59.5		43.1	335	51.4		15.1	54	36.8		08.3	64	24.5		11.6
10	138	45.5	307	59.1		44.4	350	52.3		14.6	69	39.1		08.3	79	27.0		11.6
11	153	47.9	322	58.8	-3	45.7	5	53.3	+14	14.1	84	41.4	+21	08.3	94	29.4	+18	11.6
12	168	50.4	337	58.5	-3	47.0	20	54.2	+14	13.5	99	43.7	+21	08.3	109	31.9	+18	11.6
13	183	52.9	352	58.2		48.3	35	55.1		13.0	114	46.0		08.3	124	34.3		11.6
14	198	55.3	7	57.8		49.5	50	56.0		12.5	129	48.3		08.4	139	36.8		11.6
15	213	57.8	22	57.5		50.8	65	57.0		12.0	144	50.6		08.4	154	39.2		11.6
16	229	00.2	37	57.2		52.1	80	57.9		11.4	159	52.8		08.4	169	41.7		11.6
17	244	02.7	52	56.9	-3	53.4	95	58.8	+14	10.9	174	55.1	+21	08.4	184	44.1	+18	11.6
18	259	05.2	67	56.5	-3	54.7	110	59.7	+14	10.4	189	57.4	+21	08.4	199	46.6	+18	11.6
19	274	07.6	82	56.2		55.9	126	00.7		09.9	204	59.7		08.5	214	49.0		11.6
20	289	10.1	97	55.9		57.2	141	01.6		09.3	220	02.0		08.5	229	51.5		11.6
21	304	12.6	112	55.5		58.5	156	02.5		08.8	235	04.3		08.5	244	53.9		11.6
22	319	15.0	127	55.2	-3	59.8	171	03.4		08.3	250	06.6		08.5	259	56.4		11.6
23	334	17.5	142	54.9	-4	01.1	186	04.4		07.7	265	08.9		08.5	274	58.8		11.6
24	349	20.0	157	54.6	-4	02.3	201	05.3	+14	07.2	280	11.2	+21	08.6	290	01.3	+18	11.6
Dif	—		-3		-13		+9		-5		+23		0		+24			

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: 11 ^d 6 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	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m			
0	180	44.8	+4	54.2	42	09.6	-20 04.9	60 N	18 36	19 18	20 12	18 08	20	0 35	71			
1	195	45.0		53.3	56	40.6 ¹²⁰	-20 00.2	58	33	13	20 03	17 56	22	0 49	69			
2	210	45.2		52.3	71	11.7 ¹²¹	-19 55.5	56	30	08	19 55	45	25	1 02	67			
3	225	45.4		51.4	85	42.8 ¹²¹	50.7	54	28	04	48	35	27	13	65			
4	240	45.7		50.4	100	13.9 ¹²¹	45.7	52	26	19 00	42	27	28	22	64			
5	255	45.9	+4	49.5	114	45.1 ¹²²	-19 40.7	50	18 24	18 57	19 36	17 19	30	1 31	62			
6	270	46.1	+4	48.5	129	16.2 ¹²¹	-19 35.6	51	18 20	18 50	19 25	17 03	33	1 49	60			
7	285	46.3		47.6	143	47.4 ¹²²	30.3	53	17	44	16	16 50	35	2 04	57			
8	300	46.5		46.6	158	18.6 ¹²²	25.0	53	14	39	09	38	38	17	55			
9	315	46.8		45.7	172	49.9 ¹²³	19.6	54	11	35	19 04	28	39	27	54			
10	330	47.0		44.7	187	21.1 ¹²²	14.1	55	20	07	29	18 55	16 11	42	2 46	52		
11	345	47.2	+4	43.8	201	52.4 ¹²³	-19 08.6	55	10 N	18 03	18 24	18 49	15 56	44	3 02	50		
12	0	47.4	+4	42.8	216	23.6 ¹²²	-19 02.9	57	0	18 00	18 21	18 45	15 42	47	3 17	48		
13	15	47.6		41.9	230	55.0 ¹²⁴	-18 57.1	58	10 S	17 57	18	42	28	49	32	46		
14	30	47.9		40.9	245	26.3 ¹²³	51.3	58	20	54	16	41	15 13	51	3 48	43		
15	45	48.1		40.0	259	57.6 ¹²³	45.3	60	30	50	14	42	14 55	55	4 07	40		
16	60	48.3		39.0	274	29.0 ¹²⁴	39.3	60	35	48	13	42	45	56	17	39		
17	75	48.5	+4	38.1	289	00.4 ¹²⁴	-18 33.2	61	40	17 46	18 13	18 44	14 33	59	4 29	38		
18	90	48.7	+4	37.1	303	31.8 ¹²⁴	-18 27.0	62	45	17 43	18 12	18 46	14 20	61	4 44	35		
19	105	49.0		36.2	318	03.2 ¹²⁴	20.7	63	50	40	12	50	14 03	64	5 01	32		
20	120	49.2		35.2	332	34.7 ¹²⁵	14.3	64	52	38	12	51	13 55	65	09	31		
21	135	49.4		34.3	347	06.2 ¹²⁵	07.8	65	54	37	12	53	46	67	19	29		
22	150	49.6		33.3	1	37.7 ¹²⁵	-18 01.2	66	56	35	12	56	36	69	29	27		
23	165	49.8		32.4	16	09.2 ¹²⁵	-17 54.6	66	58	33	13	18 58	25	71	41	25		
24	180	50.1	+4	31.4	30	40.7 ¹²⁵	-17 47.9	67	60 S	17 31	18 13	19 01	13 12	74	5 54	23		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 0 ^h 42 ^m 6		Mag: -3.8 PMG: 13 ^h 29 ^m			Mag: +1.8 PMG: 10 ^h 35 ^m			Mag: -2.5 PMG: 5 ^h 18 ^m			Mag: 0.0 PMG: 4 ^h 39 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	349	20.0	157	54.6	-4	02.3	201	05.3	+14	07.2	280	11.2	+21	08.6	290	01.3	+18	11.6
1	4	22.4	172	54.2		03.6	216	06.2		06.7	295	13.5		08.6	305	03.7		11.6
2	19	24.9	187	53.9		04.9	231	07.1		06.2	310	15.8		08.6	320	06.2		11.6
3	34	27.3	202	53.6		06.2	246	08.1		05.6	325	18.1		08.6	335	08.6		11.6
4	49	29.8	217	53.3		07.5	261	09.0		05.1	340	20.4		08.6	350	11.1		11.6
5	64	32.3	232	52.9	-4	08.7	276	09.9	+14	04.6	355	22.7	+21	08.7	5	13.5	+18	11.5
6	79	34.7	247	52.6	-4	10.0	291	10.8	+14	04.0	10	25.0	+21	08.7	20	16.0	+18	11.5
7	94	37.2	262	52.3		11.3	306	11.8		03.5	25	27.3		08.7	35	18.4		11.5
8	109	39.7	277	51.9		12.6	321	12.7		03.0	40	29.6		08.7	50	20.9		11.5
9	124	42.1	292	51.6		13.9	336	13.6		02.5	55	31.9		08.7	65	23.4		11.5
10	139	44.6	307	51.3		15.1	351	14.5		01.9	70	34.2		08.7	80	25.8		11.5
11	154	47.1	322	51.0	-4	16.4	6	15.5	+14	01.4	85	36.5	+21	08.8	95	28.3	+18	11.5
12	169	49.5	337	50.6	-4	17.7	21	16.4	+14	00.9	100	38.8	+21	08.8	110	30.7	+18	11.5
13	184	52.0	352	50.3		19.0	36	17.3	+14	00.3	115	41.1		08.8	125	33.2		11.5
14	199	54.5	7	50.0		20.2	51	18.3	+13	59.8	130	43.4		08.8	140	35.6		11.5
15	214	56.9	22	49.6		21.5	66	19.2		59.3	145	45.7		08.8	155	38.1		11.5
16	229	59.4	37	49.3		22.8	81	20.1		58.7	160	48.0		08.9	170	40.5		11.5
17	245	01.8	52	49.0	-4	24.1	96	21.0	+13	58.2	175	50.3	+21	08.9	185	43.0	+18	11.5
18	260	04.3	67	48.7	-4	25.4	111	22.0	+13	57.7	190	52.6	+21	08.9	200	45.4	+18	11.5
19	275	06.8	82	48.3		26.6	126	22.9		57.2	205	54.9		08.9	215	47.9		11.5
20	290	09.2	97	48.0		27.9	141	23.8		56.6	220	57.2		08.9	230	50.3		11.5
21	305	11.7	112	47.7		29.2	156	24.8		56.1	235	59.5		08.9	245	52.8		11.5
22	320	14.2	127	47.3		30.5	171	25.7		55.6	251	01.8		09.0	260	55.3		11.5
23	335	16.6	142	47.0		31.7	186	26.6		55.0	266	04.1		09.0	275	57.7		11.4
24	350	19.1	157	46.7	-4	33.0	201	27.5	+13	54.5	281	06.4	+21	09.0	291	00.2	+18	11.4
Dif	—		-3		-13		+9		-5		+23		0		+25		0	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15'9			Edad: 12 ^d 6	PHE	4 ^h : 54'6 12 ^h : 54'8 20 ^h : 54'9				Náutico	Civil		Hora	R°	Hora	R°
	PMG: 11 ^h 56 ^m 5					PMG: 22 ^h 40 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif									
h	°	'	°	°	'	°	'	°		h	m	h	m	h	m	m
0	180	50.1	+4	30	40.7	-17	47.9	68	60 N	3	42	4	36	5	19	18 28 15
1	195	50.3		45	12.3 ¹²⁶		41.1	68	58	3	52		41	22		18 18 15 58 74
2	210	50.5		59	43.9 ¹²⁶		34.2	69	56	4	00		46	24		10 20 2 09 7
3	225	50.7		74	15.5 ¹²⁶		27.2	70	54		07		50	26		18 02 22 18 69
4	240	50.9		88	47.1 ¹²⁶		20.1	71	52		13		54	28		17 55 24 26 67
5	255	51.2	+4	103	18.8 ¹²⁷	-17	13.0	71	50	4	18	4	57	5	30	17 49 26 2 33 65
6	270	51.4	+4	117	50.5 ¹²⁷	-17	05.7	73	45	4	29	5	04	5	34	17 36 29 2 49 62
7	285	51.6		132	22.2 ¹²⁷	-16	58.4	73	40		38		10	37		25 32 3 01 60
8	300	51.8		146	53.9 ¹²⁷		51.0	74	35		45		15	40		16 34 12 57
9	315	52.0		161	25.6 ¹²⁷		43.6	74	30		50		18	42		17 07 37 21 56
10	330	52.3		175	57.4 ¹²⁸		36.0	76	20	4	59	24		47		16 53 40 38 51
11	345	52.5	+4	190	29.2 ¹²⁸	-16	28.4	76	10 N	5	04	5	29	5	50	16 40 44 3 52 49
12	0	52.7	+4	205	01.0 ¹²⁸	-16	20.7	77	0	5	08	5	33	5	53	16 29 46 4 05 46
13	15	52.9		219	32.8 ¹²⁸		12.9	78	10 S		11	35		56		17 49 18 43
14	30	53.1		234	04.7 ¹²⁹	-16	05.0	79	20		12	37	5	59	16	04 52 31 41
15	45	53.4		248	36.6 ¹²⁹	-15	57.0	80	30		11	39	6	03	15	50 55 47 38
16	60	53.6		263	08.5 ¹²⁹		49.0	80	35		10	40		05	41	58 4 56 36
17	75	53.8	+4	277	40.4 ¹²⁹	-15	40.9	81	40	5	09	5	40	6	07	15 32 60 5 07 33
18	90	54.0	+4	292	12.3 ¹²⁹	-15	32.7	82	45	5	06	5	40	6	10	15 21 62 5 19 31
19	105	54.3		306	44.3 ¹³⁰		24.5	82	50		03	40		13	07	66 33 28
20	120	54.5		321	16.3 ¹³⁰		16.1	84	52	5	01	40		14	15	00 69 40 26
21	135	54.7		335	48.3 ¹³⁰	-15	07.7	84	54	4	59	40		15	14	53 70 48 24
22	150	54.9		350	20.3 ¹³⁰	-14	59.3	84	56		57	40		17	45	73 5 56 22
23	165	55.1		09.5	4	52.4 ¹³¹	50.7	86	58		54	40		19	36	75 6 06 20
24	180	55.4	+4	19	24.4 ¹³⁰	-14	42.1	86	60 S	4	51	5	39	6	21	14 26 78 6 17 17

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 0 ^h 38 ^m 6		Mag: -3.8 PMG: 13 ^h 29 ^m		Mag: +1.8 PMG: 10 ^h 34 ^m		Mag: -2.5 PMG: 5 ^h 15 ^m		Mag: 0.0 PMG: 4 ^h 35 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	350	19.1	157	46.7	201	27.5	281	06.4	291	00.2
1	5	21.6	172	46.3	216	28.5	296	08.7	306	02.6
2	20	24.0	187	46.0	231	29.4	311	11.0	321	05.1
3	35	26.5	202	45.7	246	30.3	326	13.3	336	07.5
4	50	29.0	217	45.4	261	31.3	341	15.6	351	10.0
5	65	31.4	232	45.0	276	32.2	356	17.9	6	12.4
6	80	33.9	247	44.7	291	33.1	11	20.2	21	14.9
7	95	36.3	262	44.4	306	34.1	26	22.5	36	17.4
8	110	38.8	277	44.0	321	35.0	41	24.8	51	19.8
9	125	41.3	292	43.7	336	35.9	56	27.2	66	22.3
10	140	43.7	307	43.4	351	36.8	71	29.5	81	24.7
11	155	46.2	322	43.0	6	37.8	86	31.8	96	27.2
12	170	48.7	337	42.7	21	38.7	101	34.1	111	29.6
13	185	51.1	352	42.4	36	39.6	116	36.4	126	32.1
14	200	53.6	7	42.0	51	40.6	131	38.7	141	34.6
15	215	56.1	22	41.7	66	41.5	146	41.0	156	37.0
16	230	58.5	37	41.4	81	42.4	161	43.3	171	39.5
17	246	01.0	52	41.0	96	43.4	176	45.6	186	41.9
18	261	03.4	67	40.7	111	44.3	191	47.9	201	44.4
19	276	05.9	82	40.4	126	45.2	206	50.2	216	46.9
20	291	08.4	97	40.0	141	46.2	221	52.6	231	49.3
21	306	10.8	112	39.7	156	47.1	236	54.9	246	51.8
22	321	13.3	127	39.4	171	48.0	251	57.2	261	54.2
23	336	15.8	142	39.0	186	49.0	266	59.5	276	56.7
24	351	18.2	157	38.7	201	49.9	282	01.8	291	59.2
Dif	—		-3	-13	+9	-5	+23	0	+25	0

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 9 PMG: 11 ^h 56 ^m 1			Edad: 13 ^d 6 PHE { 4 ^h : 55/0 12 ^h : 55/1 20 ^h : 55/3 R°: 45 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	55.4	+4	08.6	19	24.4	-14	42.1	60 N	18 30	19 12	20 05	18 43	12	3 03 78
1	195	55.6		07.6	33	56.5 ¹³¹		33.4 ⁸⁷	58	27	07	19 56	36 15		12 75
2	210	55.8		06.7	48	28.6 ¹³¹		24.6 ⁸⁸	56	25	19 03	49	30 17		20 73
3	225	56.0		05.7	63	00.7 ¹³¹		15.8 ⁸⁸	54	23	18 59	42	24 20		27 71
4	240	56.2		04.8	77	32.9 ¹³²	-14	06.9 ⁸⁹	52	21	55	36	19 22		33 69
5	255	56.5	+4	03.8	92	05.1 ¹³²	-13	57.9 ⁹⁰	50	18 20	18 52	19 31	18 15 23	3 38	68
6	270	56.7	+4	02.9	106	37.2 ¹³¹	-13	48.9 ⁹⁰	45	18 16	18 46	19 21	18 05 27	3 51	63
7	285	56.9		01.9	121	09.5 ¹³³		39.8 ⁹¹	40	13	41	13	17 57 30	4 01	60
8	300	57.1	+4	01.0	135	41.7 ¹³²		30.6 ⁹²	35	11	36	06	50 32	09	58
9	315	57.4	+4	00.0	150	13.9 ¹³²		21.3 ⁹³	30	09	33	19 01	44 34	17	55
10	330	57.6	+3	59.1	164	46.2 ¹³³		12.0 ⁹³	20	05	27	18 53	33 39	29	52
11	345	57.8	+3	58.1	179	18.5 ¹³³	-13	02.6 ⁹⁴	10 N	18 02	18 23	18 48	17 24 42	4 41	48
12	0	58.0	+3	57.1	193	50.8 ¹³³	-12	53.2 ⁹⁵	0	17 59	18 20	18 44	17 15 45	4 51	46
13	15	58.2		56.2	208	23.1 ¹³³		43.7 ⁹⁵	10 S	57	18	42	17 06 48	5 01	43
14	30	58.5		55.2	222	55.4 ¹³³		34.1 ⁹⁶	20	54	16	42	16 56 52	12	40
15	45	58.7		54.3	237	27.8 ¹³⁴		24.5 ⁹⁶	30	51	15	43	45 56	25	35
16	60	58.9		53.3	252	00.1 ¹³³		14.8 ⁹⁷	35	49	15	44	39 58	32	33
17	75	59.1	+3	52.4	266	32.5 ¹³⁴	-12	05.0 ⁹⁸	40	17 47	18 14	18 46	16 32 61	5 40	31
18	90	59.4	+3	51.4	281	04.9 ¹³⁴	-11	55.2 ⁹⁸	45	17 45	18 15	18 49	16 23 65	5 50	28
19	105	59.6		50.5	295	37.3 ¹³⁴		45.3 ⁹⁹	50	43	15	53	13 68	6 01	24
20	120	59.8		49.5	310	09.8 ¹³⁵		35.4 ⁹⁹	52	42	15	55	09 69	06	23
21	136	00.0		48.5	324	42.2 ¹³⁴		25.4 ¹⁰⁰	54	40	16	57	16 03 72	12	21
22	151	00.2		47.6	339	14.7 ¹³⁵		15.3 ¹⁰¹	56	39	16	18 59	15 58 74	18	19
23	166	00.5		46.6	353	47.1 ¹³⁴	-11	05.2 ¹⁰¹	58	38	17	19 02	51 77	26	16
24	181	00.7	+3	45.7	8	19.6 ¹³⁵	-10	55.0 ¹⁰²	60 S	17 36	18 17	19 06	15 44 79	6 34	13

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 0 ^h 34 ^m 7		Mag: -3.8 PMG: 13 ^h 30 ^m		Mag: +1.8 PMG: 10 ^h 32 ^m		Mag: -2.5 PMG: 5 ^h 11 ^m		Mag: 0.0 PMG: 4 ^h 31 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	351	18.2	157	38.7	-5	03.6	201	49.9	+13	41.7	282	01.8	+21	09.4	291	59.2	+18	11.3
1	6	20.7	172	38.4		04.9	216	50.8		41.2	297	04.1		09.4	307	01.6		11.3
2	21	23.2	187	38.0		06.2	231	51.8		40.6	312	06.4		09.5	322	04.1		11.3
3	36	25.6	202	37.7		07.4	246	52.7		40.1	327	08.7		09.5	337	06.5		11.3
4	51	28.1	217	37.4		08.7	261	53.6		39.6	342	11.1		09.5	352	09.0		11.3
5	66	30.6	232	37.0	-5	10.0	276	54.6	+13	39.0	357	13.4	+21	09.5	7	11.5	+18	11.2
6	81	33.0	247	36.7	-5	11.2	291	55.5	+13	38.5	12	15.7	+21	09.5	22	13.9	+18	11.2
7	96	35.5	262	36.4		12.5	306	56.4		38.0	27	18.0		09.5	37	16.4		11.2
8	111	37.9	277	36.0		13.8	321	57.4		37.4	42	20.3		09.6	52	18.8		11.2
9	126	40.4	292	35.7		15.1	336	58.3		36.9	57	22.6		09.6	67	21.3		11.2
10	141	42.9	307	35.4		16.3	351	59.2		36.4	72	24.9		09.6	82	23.8		11.2
11	156	45.3	322	35.0	-5	17.6	7	00.2	+13	35.8	87	27.3	+21	09.6	97	26.2	+18	11.2
12	171	47.8	337	34.7	-5	18.9	22	01.1	+13	35.3	102	29.6	+21	09.6	112	28.7	+18	11.2
13	186	50.3	352	34.4		20.1	37	02.0		34.7	117	31.9		09.6	127	31.2		11.2
14	201	52.7	7	34.0		21.4	52	03.0		34.2	132	34.2		09.7	142	33.6		11.2
15	216	55.2	22	33.7		22.7	67	03.9		33.7	147	36.5		09.7	157	36.1		11.2
16	231	57.7	37	33.4		24.0	82	04.8		33.1	162	38.8		09.7	172	38.5		11.2
17	247	00.1	52	33.0	-5	25.2	97	05.8	+13	32.6	177	41.2	+21	09.7	187	41.0	+18	11.2
18	262	02.6	67	32.7	-5	26.5	112	06.7	+13	32.1	192	43.5	+21	09.7	202	43.5	+18	11.1
19	277	05.1	82	32.3		27.8	127	07.6		31.5	207	45.8		09.7	217	45.9		11.1
20	292	07.5	97	32.0		29.0	142	08.6		31.0	222	48.1		09.7	232	48.4		11.1
21	307	10.0	112	31.7		30.3	157	09.5		30.4	237	50.4		09.8	247	50.9		11.1
22	322	12.4	127	31.3		31.6	172	10.4		29.9	252	52.8		09.8	262	53.3		11.1
23	337	14.9	142	31.0		32.8	187	11.4		29.4	267	55.1		09.8	277	55.8		11.1
24	352	17.4	157	30.7	-5	34.1	202	12.3	+13	28.8	282	57.4	+21	09.8	292	58.3	+18	11.1
Dif	—		-3	-13		+9	-5			-5	+23	0			+25			

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'9 PMG: 11 ^h 55 ^m 8			Edad: 14 ^d 6 SD: 15'1 PMG: *** **m	PHE { 4 ^h : 55'4 12 ^h : 55'6 20 ^h : 55'8 R°: ***										
	hG ☉	Dec				hG ☾		Dif	Dec		Dif	Náutico	Civil	Hora	R°
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	181	00.7	+3 45.7	8	19.6	-10 55.0	60 N	3	48	4	41	5	24	18	55
1	196	00.9		44.7	22	52.1 ¹³⁵		58	3	57	46	26	51	14	27
2	211	01.1		43.8	37	24.6 ¹³⁵		56	4	04	50	28	47	16	33
3	226	01.4		42.8	51	57.2 ¹³⁶		54	11	54	30	30	44	18	38
4	241	01.6		41.8	66	29.7 ¹³⁵		52	16	4	57	32	41	20	42
5	256	01.8	+3 40.9	81	02.2 ¹³⁵	-10 03.3 ¹⁰⁵	50	4	21	5	00	5	33	18	38
6	271	02.0	+3 39.9	95	34.8 ¹³⁶	-9 52.8 ¹⁰⁵	45	4	32	5	07	5	36	18	32
7	286	02.2		39.0	110	07.4 ¹³⁶		40	40	12	39	39	27	28	5
8	301	02.5		38.0	124	40.0 ¹³⁶		35	46	16	41	41	22	32	07
9	316	02.7		37.1	139	12.6 ¹³⁶		30	51	20	44	44	18	34	12
10	331	02.9		36.1	153	45.2 ¹³⁶		20	4	59	25	47	12	38	21
11	346	03.1	+3 35.1	168	17.8 ¹³⁶	-8 59.6 ¹⁰⁷	10 N	5	04	5	29	5	50	18	06
12	1	03.4	+3 34.2	182	50.4 ¹³⁶	-8 48.8 ¹⁰⁸	0	5	08	5	32	5	53	18	00
13	16	03.6		33.2	197	23.0 ¹³⁶		10 S	10	34	55	55	17	54	44
14	31	03.8		32.3	211	55.7 ¹³⁷		20	10	36	5	58	48	53	5
15	46	04.0		31.3	226	28.3 ¹³⁶		30	09	37	6	00	41	57	6
16	61	04.2		30.4	241	00.9 ¹³⁶		35	08	37	02	02	37	60	05
17	76	04.5	+3 29.4	255	33.6 ¹³⁷	-7 54.1 ¹¹⁰	40	5	06	5	37	6	04	17	33
18	91	04.7	+3 28.4	270	06.3 ¹³⁷	-7 43.0 ¹¹¹	45	5	03	5	37	6	06	17	28
19	106	04.9		27.5	284	38.9 ¹³⁶		50	4	59	36	08	21	70	25
20	121	05.1		26.5	299	11.6 ¹³⁷		52	57	36	09	09	18	72	29
21	136	05.4		25.6	313	44.3 ¹³⁷		54	54	35	10	10	15	73	33
22	151	05.6		24.6	328	16.9 ¹³⁶		56	52	35	12	12	12	75	37
23	166	05.8		23.6	342	49.6 ¹³⁷		58	48	34	13	13	08	78	42
24	181	06.0	+3 22.7	357	22.3 ¹³⁷	-6 35.7 ¹¹⁴	60 S	4	45	5	33	6	15	17	03

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO				
	PMG: 0 ^h 30 ^m 8		Mag: -3.8 PMG: 13 ^h 30 ^m		Mag: +1.8 PMG: 10 ^h 31 ^m		Mag: -2.5 PMG: 5 ^h 07 ^m		Mag: 0.0 PMG: 4 ^h 27 ^m				
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'			
0	352	17.4	157	30.7	-5 34.1	202	12.3	+13 28.8	282	57.4	+21 09.8		
1	7	19.8	172	30.3	35.4	217	13.3	28.3	297	59.7	09.8		
2	22	22.3	187	30.0	36.6	232	14.2	27.8	313	02.0	09.8		
3	37	24.8	202	29.7	37.9	247	15.1	27.2	328	04.4	09.9		
4	52	27.2	217	29.3	39.2	262	16.1	26.7	343	06.7	09.9		
5	67	29.7	232	29.0	-5 40.4	277	17.0	+13 26.1	358	09.0	+21 09.9		
6	82	32.2	247	28.6	-5 41.7	292	17.9	+13 25.6	13	11.3	+21 09.9		
7	97	34.6	262	28.3	43.0	307	18.9	25.1	28	13.6	09.9		
8	112	37.1	277	28.0	44.2	322	19.8	24.5	43	16.0	09.9		
9	127	39.5	292	27.6	45.5	337	20.7	24.0	58	18.3	10.0		
10	142	42.0	307	27.3	46.8	352	21.7	23.4	73	20.6	10.0		
11	157	44.5	322	26.9	-5 48.0	7	22.6	+13 22.9	88	22.9	+21 10.0		
12	172	46.9	337	26.6	-5 49.3	22	23.6	+13 22.4	103	25.3	+21 10.0		
13	187	49.4	352	26.3	50.6	37	24.5	21.8	118	27.6	10.0		
14	202	51.9	7	25.9	51.8	52	25.4	21.3	133	29.9	10.0		
15	217	54.3	22	25.6	53.1	67	26.4	20.7	148	32.2	10.0		
16	232	56.8	37	25.3	54.4	82	27.3	20.2	163	34.6	10.1		
17	247	59.3	52	24.9	-5 55.6	97	28.3	+13 19.7	178	36.9	+21 10.1		
18	263	01.7	67	24.6	-5 56.9	112	29.2	+13 19.1	193	39.2	+21 10.1		
19	278	04.2	82	24.2	58.2	127	30.1	18.6	208	41.5	10.1		
20	293	06.7	97	23.9	-5 59.4	142	31.1	18.0	223	43.9	10.1		
21	308	09.1	112	23.5	-6 00.7	157	32.0	17.5	238	46.2	10.1		
22	323	11.6	127	23.2	02.0	172	32.9	17.0	253	48.5	10.1		
23	338	14.0	142	22.9	03.2	187	33.9	16.4	268	50.9	10.2		
24	353	16.5	157	22.5	-6 04.5	202	34.8	+13 15.9	283	53.2	+21 10.2		
Dif	—		-3	-13		+9	-5		+23	0		+25	0

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15°9			Edad: 15 ^d 6 PHE	SD: 15°2				Final del crepúsculo	Salida de Luna		Puesta de Luna			
	PMG: 11 ^h 55 ^m 4				PMG: 0 ^h 11 ^m					R°: 45 ^m					
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	h m	m
0	181	06.0	+3 22.7	357	22.3	-6 35.7		60 N	18 23	19 06	19 58	19 06	11	5 41	82
1	196	06.3		11	55.0 ¹³⁷	24.4 ¹¹³		58	21	19 01	50	05	13	45	78
2	211	06.5		26	27.7 ¹³⁷	13.0 ¹¹⁴		56	20	18 57	43	03	16	47	76
3	226	06.7		41	00.4 ¹³⁷	-6 01.6 ¹¹⁴		54	18	54	37	02	18	50	74
4	241	06.9		55	33.0 ¹³⁶	-5 50.1 ¹¹⁵		52	17	51	31	01	19	52	72
5	256	07.1	+3 17.9	70	05.7 ¹³⁷	-5 38.6 ¹¹⁵		50	18 15	18 48	19 27	19 00	21	5 54	70
6	271	07.4	+3 16.9	84	38.4 ¹³⁷	-5 27.1 ¹¹⁵		45	18 12	18 42	19 17	18 57	26	5 59	66
7	286	07.6		99	11.1 ¹³⁷	15.5 ¹¹⁶		40	10	37	09	55	29	6 03	62
8	301	07.8		113	43.8 ¹³⁷	-5 03.9 ¹¹⁶		35	08	33	19 03	54	31	06	59
9	316	08.0		128	16.4 ¹³⁶	-4 52.3 ¹¹⁶		30	06	30	18 58	52	34	09	57
10	331	08.3		142	49.1 ¹³⁷	40.7 ¹¹⁶		20	03	25	51	50	38	13	53
11	346	08.5	+3 12.1	157	21.8 ¹³⁷	-4 29.0 ¹¹⁷		10 N	18 01	18 22	18 46	18 47	42	6 18	48
12	1	08.7	+3 11.2	171	54.4 ¹³⁶	-4 17.3 ¹¹⁷		0	17 59	18 19	18 43	18 45	46	6 22	45
13	16	08.9		186	27.1 ¹³⁷	-4 05.5 ¹¹⁸		10 S	57	18	42	43	49	26	41
14	31	09.2		200	59.7 ¹³⁶	-3 53.7 ¹¹⁸		20	54	16	42	41	53	30	38
15	46	09.4		215	32.4 ¹³⁷	42.0 ¹¹⁷		30	52	16	44	38	58	34	34
16	61	09.6		230	05.0 ¹³⁶	30.1 ¹¹⁹		35	51	16	45	37	60	37	31
17	76	09.8	+3 06.4	244	37.7 ¹³⁷	-3 18.3 ¹¹⁸		40	17 49	18 16	18 48	18 35	63	6 40	28
18	91	10.1	+3 05.4	259	10.3 ¹³⁶	-3 06.4 ¹¹⁹		45	17 48	18 17	18 51	18 33	66	6 43	26
19	106	10.3		273	42.9 ¹³⁶	-2 54.5 ¹¹⁹		50	46	18	56	31	70	48	21
20	121	10.5		288	15.5 ¹³⁶	42.6 ¹¹⁹		52	45	19	58	30	72	49	20
21	136	10.7		302	48.1 ¹³⁶	30.7 ¹¹⁹		54	44	19	50	28	75	51	18
22	151	10.9		317	20.6 ¹³⁵	18.7 ¹²⁰		56	43	20	03	27	77	54	15
23	166	11.2	+3 00.6	331	53.2 ¹³⁶	-2 06.8 ¹¹⁹		58	42	21	07	26	79	56	14
24	181	11.4	+2 59.6	346	25.8 ¹³⁶	-1 54.8 ¹²⁰		60 S	17 41	18 22	19 11	18 24	82	6 59	11

UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO								
	PMG: 0 ^h 26 ^m 8		Mag: -3.8 PMG: 13 ^h 31 ^m		Mag: +1.8 PMG: 10 ^h 29 ^m		Mag: -2.5 PMG: 5 ^h 04 ^m			Mag: 0.0 PMG: 4 ^h 23 ^m								
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec		hG ♄	Dec							
h	°	'	°	'	°	'	°	'	°	'	°	'						
0	353	16.5	157	22.5	-6	04.5	202	34.8	+13	15.9	283	53.2	+21	10.2	293	57.5	+18	10.9
1	8	19.0	172	22.2		05.8	217	35.8		15.3	298	55.5		10.2	308	59.9		10.9
2	23	21.4	187	21.8		07.0	232	36.7		14.8	313	57.8		10.2	324	02.4		10.9
3	38	23.9	202	21.5		08.3	247	37.6		14.3	329	00.2		10.2	339	04.9		10.9
4	53	26.4	217	21.2		09.5	262	38.6		13.7	344	02.5		10.2	354	07.3		10.9
5	68	28.8	232	20.8	-6	10.8	277	39.5	+13	13.2	359	04.8	+21	10.2	9	09.8	+18	10.9
6	83	31.3	247	20.5	-6	12.1	292	40.5	+13	12.6	14	07.2	+21	10.3	24	12.3	+18	10.8
7	98	33.8	262	20.1		13.3	307	41.4		12.1	29	09.5		10.3	39	14.8		10.8
8	113	36.2	277	19.8		14.6	322	42.3		11.5	44	11.8		10.3	54	17.2		10.8
9	128	38.7	292	19.4		15.9	337	43.3		11.0	59	14.2		10.3	69	19.7		10.8
10	143	41.1	307	19.1		17.1	352	44.2		10.5	74	16.5		10.3	84	22.2		10.8
11	158	43.6	322	18.8	-6	18.4	7	45.2	+13	09.9	89	18.8	+21	10.3	99	24.6	+18	10.8
12	173	46.1	337	18.4	-6	19.6	22	46.1	+13	09.4	104	21.1	+21	10.3	114	27.1	+18	10.8
13	188	48.5	352	18.1		20.9	37	47.1		08.8	119	23.5		10.4	129	29.6		10.8
14	203	51.0	7	17.7		22.2	52	48.0		08.3	134	25.8		10.4	144	32.1		10.8
15	218	53.5	22	17.4		23.4	67	48.9		07.7	149	28.1		10.4	159	34.5		10.8
16	233	55.9	37	17.0		24.7	82	49.9		07.2	164	30.5		10.4	174	37.0		10.8
17	248	58.4	52	16.7	-6	25.9	97	50.8	+13	06.7	179	32.8	+21	10.4	189	39.5	+18	10.7
18	264	00.9	67	16.4	-6	27.2	112	51.8	+13	06.1	194	35.1	+21	10.4	204	41.9	+18	10.7
19	279	03.3	82	16.0		28.5	127	52.7		05.6	209	37.5		10.4	219	44.4		10.7
20	294	05.8	97	15.7		29.7	142	53.6		05.0	224	39.8		10.5	234	46.9		10.7
21	309	08.3	112	15.3		31.0	157	54.6		04.5	239	42.2		10.5	249	49.4		10.7
22	324	10.7	127	15.0		32.2	172	55.5		03.9	254	44.5		10.5	264	51.8		10.7
23	339	13.2	142	14.6		33.5	187	56.5		03.4	269	46.8		10.5	279	54.3		10.7
24	354	15.6	157	14.3	-6	34.8	202	57.4	+13	02.9	284	49.2	+21	10.5	294	56.8	+18	10.7
Dif	—		-3		-13		+9		-5		+23		0		+25		0	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15'9			Edad: 16 ^d 6 PHE { 4 ^h : 56'4 12 ^h : 56'6 20 ^h : 56'7												
	PMG: 11 ^h 55 ^m 1			SD: 15'3 PMG: 0 ^h 56 ^m R°: 46 ^m												
	hG ☉		Dec	hG ☾ Dif		Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	181	11.4	+2 59.6	346	25.8	-1 54.8		60 N	3 54	4 46	5 28	19 17	11	7 03	83	
1	196	11.6		0	58.3 ¹³⁵	42.8 ¹²⁰		58	4 02	50	30	18 14		03 80		
2	211	11.8		15	30.8 ¹³⁵	30.7 ¹²¹		56	09	54	32	19 16		03 78		
3	226	12.1		30	03.3 ¹³⁵	18.7 ¹²⁰		54	15	4 58	33	20 18		04 75		
4	241	12.3		44	35.8 ¹³⁵	-1 06.6 ¹²¹		52	20	5 01	35	20 21		04 73		
5	256	12.5	+2 54.8	59	08.3 ¹³⁵	-0 54.6 ¹²⁰		50	4 25	5 04	5 36	19 21	23	7 04	71	
6	271	12.7	+2 53.9	73	40.8 ¹³⁵	-0 42.5 ¹²¹		45	4 34	5 09	5 39	19 23	26	7 05	67	
7	286	13.0		88	13.2 ¹³⁴	30.4 ¹²¹		40	42	14	41	24 29		05 64		
8	301	13.2		102	45.6 ¹³⁴	18.3 ¹²¹		35	48	18	43	25 32		05 61		
9	316	13.4		117	18.0 ¹³⁴	-0 06.2 ¹²¹		30	4 53	21	45	26 35		06 58		
10	331	13.6		131	50.4 ¹³⁴	+0 06.0 ¹²²		20	5 00	25	47	28 39		06 54		
11	346	13.9	+2 49.0	146	22.8 ¹³⁴	+0 18.1 ¹²¹		10 N	5 04	5 29	5 50	19 29	43	7 06	50	
12	1	14.1	+2 48.1	160	55.1 ¹³³	+0 30.2 ¹²¹		0	5 07	5 31	5 52	19 31	46	7 07	46	
13	16	14.3		175	27.4 ¹³³	42.4 ¹²²		10 S	08	33	54	32 51		07 43		
14	31	14.5		189	59.7 ¹³³	+0 54.5 ¹²¹		20	08	34	56	34 54		08 38		
15	46	14.7		204	32.0 ¹³³	+1 06.7 ¹²²		30	06	34	58	36 58		08 34		
16	61	15.0		219	04.3 ¹³³	18.8 ¹²¹		35	05	34	5 59	37 61		08 32		
17	76	15.2	+2 43.3	233	36.5 ¹³²	+1 31.0 ¹²²		40	5 02	5 34	6 01	19 38	64	7 08	29	
18	91	15.4	+2 42.3	248	08.7 ¹³²	+1 43.2 ¹²²		45	4 59	5 33	6 02	19 39	68	7 09	25	
19	106	15.6		262	40.8 ¹³¹	+1 55.3 ¹²¹		50	54	32	04	41 72		09 22		
20	121	15.9		277	13.0 ¹³²	+2 07.5 ¹²²		52	52	31	05	42 74		09 20		
21	136	16.1		291	45.1 ¹³¹	19.6 ¹²¹		54	49	30	05	43 76		09 18		
22	151	16.3		306	17.2 ¹³¹	31.8 ¹²²		56	46	29	06	44 78		09 16		
23	166	16.5		320	49.3 ¹³¹	44.0 ¹²²		58	43	28	07	45 81		10 13		
24	181	16.8	+2 36.5	335	21.3 ¹³⁰	+2 56.1 ¹²¹		60 S	4 39	5 27	6 09	19 46	84	7 10	11	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 0 ^h 22 ^m 9		Mag: -3.8 PMG: 13 ^h 31 ^m		Mag: +1.8 PMG: 10 ^h 28 ^m		Mag: -2.5 PMG: 5 ^h 00 ^m		Mag: 0.0 PMG: 4 ^h 20 ^m	
	hG ♈		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec	
h	°	'	°	'	°	'	°	'	°	'
0	354	15.6	157	14.3	-6	34.8	202	57.4	+13	02.9
1	9	18.1	172	13.9		36.0	217	58.4		02.3
2	24	20.6	187	13.6		37.3	232	59.3		01.8
3	39	23.0	202	13.2		38.5	248	00.2		01.2
4	54	25.5	217	12.9		39.8	263	01.2		00.7
5	69	28.0	232	12.6	-6	41.1	278	02.1	+13	00.1
6	84	30.4	247	12.2	-6	42.3	293	03.1	+12	59.6
7	99	32.9	262	11.9		43.6	308	04.0		59.0
8	114	35.4	277	11.5		44.8	323	05.0		58.5
9	129	37.8	292	11.2		46.1	338	05.9		58.0
10	144	40.3	307	10.8		47.3	353	06.9		57.4
11	159	42.7	322	10.5	-6	48.6	8	07.8	+12	56.9
12	174	45.2	337	10.1	-6	49.8	23	08.7	+12	56.3
13	189	47.7	352	09.8		51.1	38	09.7		55.8
14	204	50.1	7	09.4		52.4	53	10.6		55.2
15	219	52.6	22	09.1		53.6	68	11.6		54.7
16	234	55.1	37	08.7		54.9	83	12.5		54.1
17	249	57.5	52	08.4	-6	56.1	98	13.5	+12	53.6
18	265	00.0	67	08.0	-6	57.4	113	14.4	+12	53.0
19	280	02.5	82	07.7		58.6	128	15.4		52.5
20	295	04.9	97	07.3	-6	59.9	143	16.3		51.9
21	310	07.4	112	07.0	-7	01.1	158	17.2		51.4
22	325	09.9	127	06.6		02.4	173	18.2		50.9
23	340	12.3	142	06.3		03.6	188	19.1		50.3
24	355	14.8	157	05.9	-7	04.9	203	20.1	+12	49.8
Dif	—		-3		-13		+9		-5	
							+23		0	
									+25	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 15°9			Edad: 17 ^d 6 PHE	4 ^h : 56'9 12 ^h : 57'1 20 ^h : 57'2				Civil			R°		R°				
	PMG: 11 ^h 54 ^m 7				SD: 15°5				Náutico			Hora		Hora				
	hG ☉	Dec		hG ☾	Dif	Dec	Dif											
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m			
0	181	16.8	+2 36.5	335	21.3	+2 56.1		60 N	18 17	18 59	19 51	19 28 14	8 26 84					
1	196	17.0		349	53.3 ¹³⁰	+3 08.2 ¹²¹		58	16	55	43	32 16	23 82					
2	211	17.2	34.6	4	25.2 ¹²⁹	20.4 ¹²²		56	14	52	37	35 19	21 79					
3	226	17.4	33.6	18	57.2 ¹³⁰	32.5 ¹²¹		54	13	49	31	38 21	19 77					
4	241	17.7	32.7	33	29.1 ¹²⁹	44.6 ¹²¹		52	12	46	26	41 23	17 75					
5	256	17.9	+2 31.7	48	00.9 ¹²⁸	+3 56.7 ¹²¹		50	18 11	18 43	19 22	19 44 24	8 15 73					
6	271	18.1	+2 30.7	62	32.8 ¹²⁹	+4 08.9 ¹²²		45	18 09	18 38	19 13	19 49 29	8 12 68					
7	286	18.3	29.8	77	04.6 ¹²⁸	20.9 ¹²⁰		40	07	34	06	53 32	09 65					
8	301	18.6	28.8	91	36.3 ¹²⁷	33.0 ¹²¹		35	05	30	19 00	19 57 35	06 62					
9	316	18.8	27.8	106	08.0 ¹²⁷	45.1 ¹²¹		30	04	28	18 56	20 01 37	04 59					
10	331	19.0	26.9	120	39.7 ¹²⁷	+4 57.1 ¹²⁰		20	02	24	49	07 41	8 00 55					
11	346	19.2	+2 25.9	135	11.4 ¹²⁷	+5 09.2 ¹²¹		10 N	18 00	18 21	18 45	20 12 45	7 56 51					
12	1	19.4	+2 25.0	149	43.0 ¹²⁶	+5 21.2 ¹²⁰		0	17 58	18 19	18 43	20 17 49	7 53 47					
13	16	19.7	24.0	164	14.6 ¹²⁶	33.2 ¹²⁰		10 S	56	17	42	23 52	50 43					
14	31	19.9	23.0	178	46.1 ¹²⁵	45.2 ¹²⁰		20	55	17	42	28 56	46 40					
15	46	20.1	22.1	193	17.6 ¹²⁵	+5 57.1 ¹¹⁹		30	53	17	45	34 61	42 36					
16	61	20.3	21.1	207	49.0 ¹²⁴	+6 09.1 ¹²⁰		35	52	17	47	38 63	40 33					
17	76	20.6	+2 20.1	222	20.4 ¹²⁴	+6 21.0 ¹¹⁹		40	17 51	18 18	18 50	20 42 66	7 37 31					
18	91	20.8	+2 19.2	236	51.8 ¹²⁴	+6 32.9 ¹¹⁹		45	17 50	18 19	18 53	20 47 70	7 34 27					
19	106	21.0	18.2	251	23.1 ¹²³	44.8 ¹¹⁹		50	49	21	18 59	53 74	31 23					
20	121	21.2	17.2	265	54.4 ¹²³	+6 56.6 ¹¹⁸		52	48	22	19 01	56 75	29 21					
21	136	21.5	16.3	280	25.6 ¹²²	+7 08.4 ¹¹⁸		54	47	23	04	20 59 77	27 20					
22	151	21.7	15.3	294	56.8 ¹²²	20.2 ¹¹⁸		56	47	24	07	21 02 80	25 17					
23	166	21.9	14.3	309	27.9 ¹²¹	32.0 ¹¹⁸		58	46	25	11	06 83	23 15					
24	181	22.1	+2 13.4	323	59.0 ¹²¹	+7 43.7 ¹¹⁷		60 S	17 45	18 27	19 16	21 10 86	7 21 12					
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 0 ^h 19 ^m 0		Mag: -3.8 PMG: 13 ^h 32 ^m			Mag: +1.8 PMG: 10 ^h 26 ^m			Mag: -2.5 PMG: 4 ^h 56 ^m			Mag: 0.0 PMG: 4 ^h 16 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	355	14.8	157	05.9	-7	04.9	203	20.1	+12	49.8	285	45.3	+21	10.8	295	56.2	+18	10.4
1	10	17.2	172	05.6		06.2	218	21.0		49.2	300	47.7		10.8	310	58.7		10.4
2	25	19.7	187	05.2		07.4	233	22.0		48.7	315	50.0		10.8	326	01.2		10.4
3	40	22.2	202	04.9		08.7	248	22.9		48.1	330	52.4		10.9	341	03.7		10.4
4	55	24.6	217	04.5		09.9	263	23.9		47.6	345	54.7		10.9	356	06.1		10.4
5	70	27.1	232	04.2	-7	11.2	278	24.8	+12	47.0	0	57.1	+21	10.9	11	08.6	+18	10.4
6	85	29.6	247	03.8	-7	12.4	293	25.8	+12	46.5	15	59.4	+21	10.9	26	11.1	+18	10.4
7	100	32.0	262	03.5		13.7	308	26.7		45.9	31	01.8		10.9	41	13.6		10.4
8	115	34.5	277	03.1		14.9	323	27.7		45.4	46	04.1		10.9	56	16.1		10.4
9	130	37.0	292	02.8		16.2	338	28.6		44.8	61	06.5		10.9	71	18.5		10.3
10	145	39.4	307	02.4		17.4	353	29.6		44.3	76	08.8		10.9	86	21.0		10.3
11	160	41.9	322	02.1	-7	18.7	8	30.5	+12	43.7	91	11.2	+21	11.0	101	23.5	+18	10.3
12	175	44.3	337	01.7	-7	19.9	23	31.4	+12	43.2	106	13.5	+21	11.0	116	26.0	+18	10.3
13	190	46.8	352	01.3		21.2	38	32.4		42.6	121	15.9		11.0	131	28.5		10.3
14	205	49.3	7	01.0		22.4	53	33.3		42.1	136	18.2		11.0	146	30.9		10.3
15	220	51.7	22	00.6		23.7	68	34.3		41.5	151	20.6		11.0	161	33.4		10.3
16	235	54.2	37	00.3		24.9	83	35.2		41.0	166	22.9		11.0	176	35.9		10.3
17	250	56.7	51	59.9	-7	26.2	98	36.2	+12	40.4	181	25.3	+21	11.0	191	38.4	+18	10.3
18	265	59.1	66	59.6	-7	27.4	113	37.1	+12	39.9	196	27.6	+21	11.0	206	40.9	+18	10.2
19	281	01.6	81	59.2		28.7	128	38.1		39.3	211	30.0		11.1	221	43.4		10.2
20	296	04.1	96	58.9		29.9	143	39.0		38.8	226	32.3		11.1	236	45.8		10.2
21	311	06.5	111	58.5		31.2	158	40.0		38.2	241	34.7		11.1	251	48.3		10.2
22	326	09.0	126	58.2		32.4	173	40.9		37.7	256	37.0		11.1	266	50.8		10.2
23	341	11.5	141	57.8		33.7	188	41.9		37.1	271	39.4		11.1	281	53.3		10.2
24	356	13.9	156	57.4	-7	34.9	203	42.8	+12	36.6	286	41.7	+21	11.1	296	55.8	+18	10.2
Dif	—		-4		-12		+9		-5		+23		0		+25		0	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 9 PMG: 11 ^h 54 ^m 3			Edad: 18 ^d 6 PHE { 4 ^h : 57 ^h 4 12 ^h : 57 ^h 5 20 ^h : 57 ^h 7 PMG: 2 ^h 29 ^m R°: 49 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif		Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	181	22.1	+2	13.4	323	59.0	+7	43.7	60 N	3	59	4	51	5	33	19	42	
1	196	22.4		12.4	338	30.0 ¹²⁰	+7	55.4 ¹¹⁷	58	4	07		55		34	48	20	
2	211	22.6		11.4	353	01.0 ¹²⁰	+8	07.1 ¹¹⁷	56	13		4	58		36	54	23	
3	226	22.8		10.5	7	31.9 ¹¹⁹		18.7 ¹¹⁶	54	19		5	01		37	19	59	
4	241	23.0		09.5	22	02.8 ¹¹⁹		30.3 ¹¹⁶	52	24		04		38		20	04	
5	256	23.2	+2	08.5	36	33.6 ¹¹⁸	+8	41.9 ¹¹⁶	50	4	28	5	07	5	39	20	08	
6	271	23.5	+2	07.6	51	04.4 ¹¹⁸	+8	53.4 ¹¹⁵	45	4	37	5	12	5	41	20	18	
7	286	23.7		06.6	65	35.1 ¹¹⁷	+9	04.9 ¹¹⁵	40		44		16	43		25	36	
8	301	23.9		05.6	80	05.8 ¹¹⁷		16.4 ¹¹⁵	35		49		19	44		32	38	
9	316	24.1		04.7	94	36.4 ¹¹⁶		27.8 ¹¹⁴	30	4	54		22	46		38	41	
10	331	24.4		03.7	109	07.0 ¹¹⁶		39.2 ¹¹⁴	20		5	00		26	48	48	45	
11	346	24.6	+2	02.7	123	37.5 ¹¹⁵	+9	50.5 ¹¹³	10 N		5	04		5	29	5	50	
12	1	24.8	+2	01.8	138	08.0 ¹¹⁵	+10	01.8 ¹¹³	0	5	06		5	30	5	51	21	
13	16	25.0	+2	00.8	152	38.4 ¹¹⁴		13.1 ¹¹³	10 S		07		32		53	15	54	
14	31	25.3	+1	59.8	167	08.7 ¹¹³		24.3 ¹¹²	20		06		32		54	24	58	
15	46	25.5		58.9	181	39.0 ¹¹³		35.4 ¹¹¹	30		04		32		56	35	62	
16	61	25.7		57.9	196	09.2 ¹¹²		46.5 ¹¹¹	35	5	02		31		56	41	65	
17	76	25.9	+1	56.9	210	39.4 ¹¹²	+10	57.6 ¹¹¹	40	4	59	5	30	5	57	21	48	
18	91	26.2	+1	56.0	225	09.5 ¹¹¹	+11	08.6 ¹¹⁰	45	4	55	5	29	5	58	21	57	
19	106	26.4		55.0	239	39.5 ¹¹⁰		19.6 ¹¹⁰	50		50		27	5	59	22	07	
20	121	26.6		54.0	254	09.5 ¹¹⁰		30.5 ¹⁰⁹	52		47		26	6	00		11	
21	136	26.8		53.1	268	39.4 ¹⁰⁹		41.3 ¹⁰⁸	54		44		25	00		16	79	
22	151	27.0		52.1	283	09.3 ¹⁰⁹	+11	52.1 ¹⁰⁸	56		41		24	01		22	81	
23	166	27.3		51.1	297	39.1 ¹⁰⁸	+12	02.9 ¹⁰⁸	58		37		23	02		29	84	
24	181	27.5	+1	50.2	312	08.8 ¹⁰⁷	+12	13.6 ¹⁰⁷	60 S	4	32		5	21	6	02	22	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG 0 ^h 15 ^m 0			Mag: -3.8 PMG: 13 ^h 32 ^m			Mag: +1.8 PMG: 10 ^h 24 ^m			Mag: -2.5 PMG: 4 ^h 52 ^m			Mag: 0.0 PMG: 4 ^h 12 ^m					
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	
0	356	13.9	156	57.4	-7	34.9	203	42.8	+12	36.6	286	41.7	+21	11.1	296	55.8	+18	
1	11	16.4	171	57.1		36.1	218	43.8		36.0	301	44.1		11.1	311	58.3		
2	26	18.8	186	56.7		37.4	233	44.7		35.5	316	46.4		11.1	327	00.7		
3	41	21.3	201	56.4		38.6	248	45.7		34.9	331	48.8		11.1	342	03.2		
4	56	23.8	216	56.0		39.9	263	46.6		34.4	346	51.2		11.2	357	05.7		
5	71	26.2	231	55.7	-7	41.1	278	47.6	+12	33.8	1	53.5	+21	11.2	12	08.2	+18	
6	86	28.7	246	55.3	-7	42.4	293	48.5	+12	33.3	16	55.9	+21	11.2	27	10.7	+18	
7	101	31.2	261	54.9		43.6	308	49.5		32.7	31	58.2		11.2	42	13.2		
8	116	33.6	276	54.6		44.9	323	50.4		32.2	47	00.6		11.2	57	15.6		
9	131	36.1	291	54.2		46.1	338	51.4		31.6	62	02.9		11.2	72	18.1		
10	146	38.6	306	53.9		47.4	353	52.3		31.1	77	05.3		11.2	87	20.6		
11	161	41.0	321	53.5	-7	48.6	8	53.3	+12	30.5	92	07.6	+21	11.2	102	23.1	+18	
12	176	43.5	336	53.2	-7	49.8	23	54.2	+12	30.0	107	10.0	+21	11.2	117	25.6	+18	
13	191	46.0	351	52.8		51.1	38	55.2		29.4	122	12.4		11.2	132	28.1		
14	206	48.4	6	52.4		52.3	53	56.1		28.9	137	14.7		11.3	147	30.6		
15	221	50.9	21	52.1		53.6	68	57.1		28.3	152	17.1		11.3	162	33.0		
16	236	53.3	36	51.7		54.8	83	58.0		27.8	167	19.4		11.3	177	35.5		
17	251	55.8	51	51.4	-7	56.1	98	59.0	+12	27.2	182	21.8	+21	11.3	192	38.0	+18	
18	266	58.3	66	51.0	-7	57.3	113	59.9	+12	26.7	197	24.2	+21	11.3	207	40.5	+18	
19	282	00.7	81	50.6		58.5	129	00.9		26.1	212	26.5		11.3	222	43.0		
20	297	03.2	96	50.3	-7	59.8	144	01.8		25.6	227	28.9		11.3	237	45.5		
21	312	05.7	111	49.9	-8	01.0	159	02.8		25.0	242	31.2		11.3	252	48.0		
22	327	08.1	126	49.5		02.3	174	03.7		24.5	257	33.6		11.3	267	50.4		
23	342	10.6	141	49.2		03.5	189	04.7		23.9	272	36.0		11.4	282	52.9		
24	357	13.1	156	48.8	-8	04.7	204	05.7	+12	23.3	287	38.3	+21	11.4	297	55.4	+18	
Dif	—			-4 -12			+10 -6			+24 0			+25 0					

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'9 PMG: 11 ^h 54 ^m 0			Edad: 19 ^d 6 PHE { 4 ^h : 57'8 12 ^h : 58'0 20 ^h : 58'2 R°: 52 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	181	27.5	+1 50.2	312	08.8	+12 13.6		60 N	18 11	18 53	19 44	19 59 23	11 17 87	
1	196	27.7		326	38.5 ¹⁰⁷	24.2 ¹⁰⁶		58	10	49	37	20 08 27	08 83	
2	211	27.9		341	08.1 ¹⁰⁶	34.8 ¹⁰⁶		56	09	46	31	17 29	11 00 81	
3	226	28.2		355	37.7 ¹⁰⁶	45.3 ¹⁰⁵		54	08	43	26	24 31	10 54 78	
4	241	28.4		10	07.1 ¹⁰⁴	+12 55.7 ¹⁰⁴		52	07	41	21	31 33	47 76	
5	256	28.6	+1 45.3	24	36.6 ¹⁰⁵	+13 06.1 ¹⁰⁴		50	18 06	18 39	19 17	20 37 35	10 42 74	
6	271	28.8	+1 44.4	39	05.9 ¹⁰³	+13 16.4 ¹⁰³		45	18 05	18 34	19 09	20 50 38	10 30 70	
7	286	29.1		53	35.2 ¹⁰³	26.7 ¹⁰³		40	03	30	19 02	21 01 41	20 67	
8	301	29.3		68	04.4 ¹⁰²	36.9 ¹⁰²		35	02	28	18 57	10 44	12 65	
9	316	29.5		82	33.6 ¹⁰²	47.0 ¹⁰¹		30	01	25	53	19 45	10 04 63	
10	331	29.7		97	02.6 ¹⁰⁰	+13 57.0 ¹⁰⁰		20	18 00	22	47	33 49	9 52 59	
11	346	30.0	+1 39.5	111	31.7 ¹⁰¹	+14 07.0 ¹⁰⁰		10 N	17 58	18 19	18 44	21 46 51	9 41 55	
12	1	30.2	+1 38.5	126	00.6 ⁹⁹	+14 16.9 ⁹⁹		0	17 57	18 18	18 42	21 57 55	9 30 53	
13	16	30.4		140	29.5 ⁹⁹	26.8 ⁹⁹		10 S	56	17	42	22 09 57	20 50	
14	31	30.6		154	58.3 ⁹⁸	36.5 ⁹⁷		20	55	17	43	22 60	9 09 46	
15	46	30.8		169	27.0 ⁹⁷	46.2 ⁹⁷		30	54	18	46	37 63	8 56 43	
16	61	31.1		183	55.7 ⁹⁷	+14 55.9 ⁹⁷		35	54	19	48	46 65	49 41	
17	76	31.3	+1 33.7	198	24.3 ⁹⁶	+15 05.4 ⁹⁵		40	17 53	18 20	18 52	22 55 68	8 41 38	
18	91	31.5	+1 32.7	212	52.8 ⁹⁵	+15 14.9 ⁹⁵		45	17 52	18 22	18 56	23 07 70	8 32 35	
19	106	31.7		227	21.3 ⁹⁵	24.2 ⁹³		50	52	24	19 02	21 74	20 31	
20	121	32.0		241	49.7 ⁹⁴	33.5 ⁹³		52	51	25	05	28 75	15 29	
21	136	32.2		256	18.0 ⁹³	42.8 ⁹³		54	51	26	08	35 78	09 27	
22	151	32.4		270	46.2 ⁹²	+15 51.9 ⁹¹		56	51	28	12	43 80	8 02 26	
23	166	32.6		285	14.4 ⁹²	+16 00.9 ⁹⁰		58	50	29	16	23 53 82	7 55 23	
24	181	32.9	+1 26.9	299	42.5 ⁹¹	+16 09.9 ⁹⁰		60 S	17 50	18 31	19 21	** ** *	7 47 19	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 0 ^h 11 ^m 1		Mag: -3.9 PMG: 13 ^h 33 ^m			Mag: +1.8 PMG: 10 ^h 23 ^m			Mag: -2.5 PMG: 4 ^h 49 ^m			Mag: 0.0 PMG: 4 ^h 08 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	357	13.1	156	48.8	-8 04.7	204	05.7	+12 23.3	287	38.3	+21 11.4	297	55.4	+18 09.9
1	12	15.5	171	48.5	06.0	219	06.6	22.8	302	40.7	11.4	312	57.9	09.9
2	27	18.0	186	48.1	07.2	234	07.6	22.2	317	43.0	11.4	328	00.4	09.9
3	42	20.4	201	47.7	08.5	249	08.5	21.7	332	45.4	11.4	343	02.9	09.9
4	57	22.9	216	47.4	09.7	264	09.5	21.1	347	47.8	11.4	358	05.4	09.8
5	72	25.4	231	47.0	-8 10.9	279	10.4	+12 20.6	2	50.1	+21 11.4	13	07.9	+18 09.8
6	87	27.8	246	46.6	-8 12.2	294	11.4	+12 20.0	17	52.5	+21 11.4	28	10.4	+18 09.8
7	102	30.3	261	46.3	13.4	309	12.3	19.5	32	54.9	11.4	43	12.8	09.8
8	117	32.8	276	45.9	14.6	324	13.3	18.9	47	57.2	11.4	58	15.3	09.8
9	132	35.2	291	45.6	15.9	339	14.2	18.4	62	59.6	11.5	73	17.8	09.8
10	147	37.7	306	45.2	17.1	354	15.2	17.8	78	02.0	11.5	88	20.3	09.8
11	162	40.2	321	44.8	-8 18.4	9	16.1	+12 17.3	93	04.3	+21 11.5	103	22.8	+18 09.8
12	177	42.6	336	44.5	-8 19.6	24	17.1	+12 16.7	108	06.7	+21 11.5	118	25.3	+18 09.7
13	192	45.1	351	44.1	20.8	39	18.0	16.1	123	09.1	11.5	133	27.8	09.7
14	207	47.6	6	43.7	22.1	54	19.0	15.6	138	11.4	11.5	148	30.3	09.7
15	222	50.0	21	43.4	23.3	69	20.0	15.0	153	13.8	11.5	163	32.8	09.7
16	237	52.5	36	43.0	24.5	84	20.9	14.5	168	16.2	11.5	178	35.3	09.7
17	252	54.9	51	42.6	-8 25.8	99	21.9	+12 13.9	183	18.5	+21 11.5	193	37.7	+18 09.7
18	267	57.4	66	42.3	-8 27.0	114	22.8	+12 13.4	198	20.9	+21 11.5	208	40.2	+18 09.7
19	282	59.9	81	41.9	28.2	129	23.8	12.8	213	23.3	11.5	223	42.7	09.6
20	298	02.3	96	41.5	29.5	144	24.7	12.3	228	25.6	11.6	238	45.2	09.6
21	313	04.8	111	41.2	30.7	159	25.7	11.7	243	28.0	11.6	253	47.7	09.6
22	328	07.3	126	40.8	31.9	174	26.6	11.2	258	30.4	11.6	268	50.2	09.6
23	343	09.7	141	40.4	33.2	189	27.6	10.6	273	32.7	11.6	283	52.7	09.6
24	358	12.2	156	40.1	-8 34.4	204	28.5	+12 10.0	288	35.1	+21 11.6	298	55.2	+18 09.6
Dif	—		-4	-12		+10	-6		+24	0		+25	0	

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15°9 PMG: 11 ^h 53 ^m 6			Edad: 20 ^d 6 PHE { 4 ^h : 58 ^h 3 12 ^h : 58 ^h 4 20 ^h : 58 ^h 6 PMG: 4 ^h 10 ^m R°: 55 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m	m
0	181	32.9	+1 26.9	299	42.5	+16 09.9	60 N	4 05	4 56	5 38	20 22	33	12 44	83		
1	196	33.1	25.9	314	10.6	18.8	58	12	4 59	39	35	36	31	80		
2	211	33.3	25.0	328	38.5	27.6	56	18	5 02	40	46	38	21	77		
3	226	33.5	24.0	343	06.4	36.3	54	23	05	41	20 55	41	12	75		
4	241	33.7	23.0	357	34.2	44.9	52	27	08	41	21 04	42	12 03	74		
5	256	34.0	+1 22.1	12	02.0	53.4	50	4 31	5 10	5 42	21 12	43	11 56	72		
6	271	34.2	+1 21.1	26	29.7	01.8	45	4 40	5 14	5 44	21 28	46	11 40	70		
7	286	34.4	20.1	40	57.3	10.2	40	46	18	45	42	48	27	67		
8	301	34.6	19.2	55	24.8	18.4	35	51	21	46	21 54	49	17	64		
9	316	34.9	18.2	69	52.3	26.6	30	4 55	23	47	22 04	51	11 07	63		
10	331	35.1	17.2	84	19.7	34.6	20	5 01	26	48	22 53	50	10 51	60		
11	346	35.3	+1 16.3	98	47.0	42.5	10 N	5 04	5 28	5 49	22 37	55	10 36	58		
12	1	35.5	+1 15.3	113	14.2	50.4	0	5 06	5 30	5 50	22 52	57	10 23	56		
13	16	35.7	14.3	127	41.4	58.1	10 S	06	30	51	23 06	59	10 10	53		
14	31	36.0	13.3	142	08.5	05.8	20	05	30	52	22 61	59	9 55	51		
15	46	36.2	12.4	156	35.5	13.3	30	5 01	29	53	40	63	39	48		
16	61	36.4	11.4	171	02.5	20.8	35	4 59	28	53	23 51	64	30	46		
17	76	36.6	+1 10.4	185	29.4	28.1	40	4 55	5 27	5 54	** ** *	**	9 19	44		
18	91	36.9	+1 09.5	199	56.2	35.3	45	4 51	5 25	5 54	** ** *	**	9 07	41		
19	106	37.1	08.5	214	23.0	42.4	50	45	23	55	** ** *	**	8 51	39		
20	121	37.3	07.5	228	49.7	49.4	52	42	22	55	** ** *	**	44	37		
21	136	37.5	06.6	243	16.3	56.3	54	39	20	55	** ** *	**	36	36		
22	151	37.7	05.6	257	42.8	03.1	56	35	19	56	** ** *	**	28	33		
23	166	38.0	04.6	272	09.3	09.8	58	31	17	56	** ** *	**	18	30		
24	181	38.2	+1 03.6	286	35.7	16.3	60 S	4 26	5 15	5 56	0 03	86	8 06	28		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG 0 ^h 07 ^m 2		Mag: -3.9 PMG: 13 ^h 34 ^m			Mag: +1.8 PMG: 10 ^h 21 ^m			Mag: -2.6 PMG: 4 ^h 45 ^m			Mag: 0.0 PMG: 4 ^h 04 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'		
0	358	12.2	156	40.1	-8 34.4	204	28.5	+12 10.0	288	35.1	+21 11.6	298	55.2	+18 09.6		
1	13	14.7	171	39.7	35.6	219	29.5	09.5	303	37.5	11.6	313	57.7	09.6		
2	28	17.1	186	39.3	36.9	234	30.5	08.9	318	39.9	11.6	329	00.2	09.6		
3	43	19.6	201	39.0	38.1	249	31.4	08.4	333	42.2	11.6	344	02.7	09.5		
4	58	22.0	216	38.6	39.3	264	32.4	07.8	348	44.6	11.6	359	05.2	09.5		
5	73	24.5	231	38.2	-8 40.6	279	33.3	+12 07.3	3	47.0	+21 11.6	14	07.7	+18 09.5		
6	88	27.0	246	37.8	-8 41.8	294	34.3	+12 06.7	18	49.3	+21 11.6	29	10.1	+18 09.5		
7	103	29.4	261	37.5	43.0	309	35.2	06.1	33	51.7	11.7	44	12.6	09.5		
8	118	31.9	276	37.1	44.3	324	36.2	05.6	48	54.1	11.7	59	15.1	09.5		
9	133	34.4	291	36.7	45.5	339	37.2	05.0	63	56.5	11.7	74	17.6	09.5		
10	148	36.8	306	36.4	46.7	354	38.1	04.5	78	58.8	11.7	89	20.1	09.5		
11	163	39.3	321	36.0	-8 48.0	9	39.1	+12 03.9	94	01.2	+21 11.7	104	22.6	+18 09.4		
12	178	41.8	336	35.6	-8 49.2	24	40.0	+12 03.4	109	03.6	+21 11.7	119	25.1	+18 09.4		
13	193	44.2	351	35.2	50.4	39	41.0	02.8	124	06.0	11.7	134	27.6	09.4		
14	208	46.7	6	34.9	51.6	54	41.9	02.2	139	08.3	11.7	149	30.1	09.4		
15	223	49.2	21	34.5	52.9	69	42.9	01.7	154	10.7	11.7	164	32.6	09.4		
16	238	51.6	36	34.1	54.1	84	43.8	01.1	169	13.1	11.7	179	35.1	09.4		
17	253	54.1	51	33.8	-8 55.3	99	44.8	+12 00.6	184	15.5	+21 11.7	194	37.6	+18 09.4		
18	268	56.5	66	33.4	-8 56.6	114	45.8	+12 00.0	199	17.8	+21 11.7	209	40.1	+18 09.3		
19	283	59.0	81	33.0	57.8	129	46.7	+11 59.5	214	20.2	11.8	224	42.6	09.3		
20	299	01.5	96	32.6	-8 59.0	144	47.7	58.9	229	22.6	11.8	239	45.1	09.3		
21	314	03.9	111	32.3	-9 00.2	159	48.6	58.3	244	25.0	11.8	254	47.6	09.3		
22	329	06.4	126	31.9	01.5	174	49.6	57.8	259	27.4	11.8	269	50.1	09.3		
23	344	08.9	141	31.5	02.7	189	50.6	57.2	274	29.7	11.8	284	52.6	09.3		
24	359	11.3	156	31.1	-9 03.9	204	51.5	+11 56.7	289	32.1	+21 11.8	299	55.1	+18 09.3		
Dif	—		-4		-12	+10		-6	+24		0		+25		0	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 15°9			Edad: 21 ^d 6 PHE	SD: 16°0				Final del crepúsculo	Salida de Luna		Puesta de Luna						
	PMG: 11 ^h 53 ^m 3				PMG: 5 ^h 05 ^m					R°: 58 ^m								
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico		Hora	R°	Hora	R°			
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m		h m m				
0	181	38.2	+1 03.6	286	35.7	+19 16.3	65	60 N	18 05	18 47	19 37	20 55 49		14 07 72				
1	196	38.4	02.7	301	02.0	73	22.8	58	04	44	31	21 11 50		13 51 72				
2	211	38.6	01.7	315	28.3	73	29.1	56	04	41	25	24 52		38 70				
3	226	38.9	+1 00.7	329	54.5	72	35.3	54	03	38	20	36 52		27 69				
4	241	39.1	+0 59.8	344	20.7	72	41.4	52	03	36	16	46 53		17 68				
5	256	39.3	+0 58.8	358	46.8	71	+19 47.4	50	18 02	18 34	19 12	21 55 54		13 08 67				
6	271	39.5	+0 57.8	13	12.8	70	+19 53.3	45	18 01	18 30	19 05	22 14 55		12 50 65				
7	286	39.7	56.8	27	38.7	69	+19 59.0	40	18 00	27	18 59	30 56		34 65				
8	301	40.0	55.9	42	04.6	69	+20 04.6	35	17 59	25	54	43 57		21 64				
9	316	40.2	54.9	56	30.4	68	10.1	30	59	23	51	22 55 57		12 10 62				
10	331	40.4	53.9	70	56.2	68	15.5	20	58	20	45	23 15 58		11 51 61				
11	346	40.6	+0 53.0	85	21.9	67	+20 20.7	10 N	17 57	18 18	18 42	23 32 59		11 34 60				
12	1	40.9	+0 52.0	99	47.5	66	+20 25.9	0	17 57	18 17	18 41	23 49 59		11 19 58				
13	16	41.1	51.0	114	13.1	66	30.8	10 S	56	17	41	** ** *		11 03 57				
14	31	41.3	50.0	128	38.6	65	35.7	20	56	18	43	** ** *		10 46 56				
15	46	41.5	49.1	143	04.1	65	40.4	30	55	19	47	** ** *		27 54				
16	61	41.7	48.1	157	29.5	64	45.1	35	55	20	50	** ** *		16 53				
17	76	42.0	+0 47.1	171	54.8	63	+20 49.5	40	17 55	18 22	18 54	0 03 66		10 03 52				
18	91	42.2	+0 46.2	186	20.1	63	+20 53.9	45	17 55	18 24	18 58	0 17 68		9 48 50				
19	106	42.4	45.2	200	45.3	62	+20 58.1	50	55	27	19 05	35 70		30 48				
20	121	42.6	44.2	215	10.5	62	+21 02.2	52	55	28	08	43 72		21 47				
21	136	42.8	43.2	229	35.6	61	06.1	54	55	30	12	0 53 72		12 45				
22	151	43.1	42.3	244	00.7	61	09.9	56	55	32	16	1 03 75		9 01 44				
23	166	43.3	41.3	258	25.7	60	13.6	58	55	34	20	15 77		8 48 43				
24	181	43.5	+0 40.3	272	50.7	60	+21 17.2	60 S	17 55	18 36	19 26	1 29 79		8 34 40				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 0 ^h 03 ^m 2		Mag: -3.9 PMG: 13 ^h 34 ^m			Mag: +1.8 PMG: 10 ^h 20 ^m			Mag: -2.6 PMG: 4 ^h 41 ^m			Mag: 0.0 PMG: 4 ^h 00 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	359	11.3	156	31.1	-9	03.9	204	51.5	+11	56.7	289	32.1	+21	11.8	299	55.1	+18	09.3
1	14	13.8	171	30.8	05.1	219	52.5	56.1	304	34.5	11.8	314	57.6	09.2	314	57.6	09.2	
2	29	16.3	186	30.4	06.4	234	53.4	55.5	319	36.9	11.8	330	00.1	09.2	330	00.1	09.2	
3	44	18.7	201	30.0	07.6	249	54.4	55.0	334	39.3	11.8	345	02.6	09.2	345	02.6	09.2	
4	59	21.2	216	29.6	08.8	264	55.3	54.4	349	41.6	11.8	0	05.1	09.2	0	05.1	09.2	
5	74	23.7	231	29.3	-9	10.0	279	56.3	+11	53.9	4	44.0	+21	11.8	15	07.6	+18	09.2
6	89	26.1	246	28.9	-9	11.3	294	57.3	+11	53.3	19	46.4	+21	11.8	30	10.1	+18	09.2
7	104	28.6	261	28.5	12.5	309	58.2	52.7	34	48.8	11.8	45	12.6	09.2	45	12.6	09.2	
8	119	31.0	276	28.1	13.7	324	59.2	52.2	49	51.2	11.9	60	15.1	09.1	60	15.1	09.1	
9	134	33.5	291	27.7	14.9	340	00.1	51.6	64	53.5	11.9	75	17.6	09.1	75	17.6	09.1	
10	149	36.0	306	27.4	16.1	355	01.1	51.1	79	55.9	11.9	90	20.1	09.1	90	20.1	09.1	
11	164	38.4	321	27.0	-9	17.4	10	02.1	+11	50.5	94	58.3	+21	11.9	105	22.5	+18	09.1
12	179	40.9	336	26.6	-9	18.6	25	03.0	+11	50.0	110	00.7	+21	11.9	120	25.0	+18	09.1
13	194	43.4	351	26.2	19.8	40	04.0	49.4	125	03.1	11.9	135	27.5	09.1	135	27.5	09.1	
14	209	45.8	6	25.9	21.0	55	04.9	48.8	140	05.5	11.9	150	30.0	09.1	150	30.0	09.1	
15	224	48.3	21	25.5	22.2	70	05.9	48.3	155	07.8	11.9	165	32.5	09.0	165	32.5	09.0	
16	239	50.8	36	25.1	23.5	85	06.9	47.7	170	10.2	11.9	180	35.0	09.0	180	35.0	09.0	
17	254	53.2	51	24.7	-9	24.7	100	07.8	+11	47.1	185	12.6	+21	11.9	195	37.5	+18	09.0
18	269	55.7	66	24.3	-9	25.9	115	08.8	+11	46.6	200	15.0	+21	11.9	210	40.0	+18	09.0
19	284	58.2	81	24.0	27.1	130	09.7	46.0	215	17.4	11.9	225	42.6	09.0	225	42.6	09.0	
20	300	00.6	96	23.6	28.3	145	10.7	45.5	230	19.8	11.9	240	45.1	09.0	240	45.1	09.0	
21	315	03.1	111	23.2	29.6	160	11.7	44.9	245	22.2	11.9	255	47.6	09.0	255	47.6	09.0	
22	330	05.5	126	22.8	30.8	175	12.6	44.3	260	24.5	12.0	270	50.1	08.9	270	50.1	08.9	
23	345	08.0	141	22.4	32.0	190	13.6	43.8	275	26.9	12.0	285	52.6	08.9	285	52.6	08.9	
24	0	10.5	156	22.0	-9	33.2	205	14.6	+11	43.2	290	29.3	+21	12.0	300	55.1	+18	08.9
Dif	—		-4	-12	+10	-6	+24	0	+25	0		+25	0					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 9			Edad: 22 ^d 6 SD: 16'1 PMG: 6 ^h 03 ^m	PHE { 4 ^h : 59'1 12 ^h : 59'2 20 ^h : 59'3 R°: 59 ^m	Dif		Dec	Dif		Hora	R°	Hora	R°				
	hG ☉	Dec							hG ☾						Dif	Dec	Dif	Náutico
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	h	m
0	181	43.5	+0	40.3	272	50.7	+21	17.2	60 N	4	10	5	01	5	42	21	44	67
1	196	43.7		39.4	287	15.6 ⁵⁹		20.6 ³⁴	58		16		04	43	22	01	67	
2	211	44.0		38.4	301	40.5 ⁵⁹		23.8 ³²	56		22		06	44		16	65	
3	226	44.2		37.4	316	05.4 ⁵⁹		27.0 ³²	54		27		09	44		28	65	
4	241	44.4		36.4	330	30.1 ⁵⁷		30.0 ³⁰	52		31		11	45		39	65	
5	256	44.6	+0	35.5	344	54.9 ⁵⁸	+21	32.8 ²⁸	50	4	35	5	13	5	45	22	49	
6	271	44.8	+0	34.5	359	19.6 ⁵⁷	+21	35.5 ²⁷	45	4	42	5	17	5	46	23	09	
7	286	45.1		33.5	13	44.2 ⁵⁶		38.1 ²⁶	40		48		20	47		26	63	
8	301	45.3		32.6	28	08.9 ⁵⁷		40.5 ²⁴	35		52		22	47		40	62	
9	316	45.5		31.6	42	33.4 ⁵⁵		42.8 ²³	30	4	56	24		48	23	52	62	
10	331	45.7		30.6	56	58.0 ⁵⁶		45.0 ²²	20	5	01	27		49	**	**	**	
11	346	45.9	+0	29.6	71	22.5 ⁵⁵	+21	47.0 ²⁰	10 N	5	04	5	28	5	49	**	**	**
12	1	46.2	+0	28.7	85	46.9 ⁵⁴	+21	48.8 ¹⁸	0	5	05	5	29	5	50	**	**	**
13	16	46.4		27.7	100	11.4 ⁵⁵		50.5 ¹⁷	10 S		05		29	50	0	05	60	
14	31	46.6		26.7	114	35.8 ⁵⁴		52.1 ¹⁶	20	5	03	28		50	23	60	60	
15	46	46.8		25.7	129	00.1 ⁵³		53.5 ¹⁴	30	4	59	27		50	43	61	21	
16	61	47.0		24.8	143	24.5 ⁵⁴		54.8 ¹³	35		56	25		51	0	55	62	
17	76	47.3	+0	23.8	157	48.8 ⁵³	+21	55.9 ¹¹	40	4	52	5	24	5	51	1	09	
18	91	47.5	+0	22.8	172	13.1 ⁵³	+21	56.9 ¹⁰	45	4	47	5	21	5	51	1	25	
19	106	47.7		21.9	186	37.3 ⁵²		57.8 ⁹	50		41	18		51	45	63	18	
20	121	47.9		20.9	201	01.6 ⁵³		58.5 ⁷	52		37	17		51	1	55	63	
21	136	48.1		19.9	215	25.8 ⁵²		59.0 ⁵	54		34	15		51	2	05	64	
22	151	48.4		18.9	229	50.0 ⁵²		59.4 ⁴	56		30	13		50	18	64	45	
23	166	48.6		18.0	244	14.1 ⁵¹		59.7 ³	58		25	11		50	32	65	31	
24	181	48.8	+0	17.0	258	38.3 ⁵²	+21	59.8 ¹	60 S	4	19	5	09	5	50	2	48	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 23 ^h 55 ^m 4		Mag: -3.9 PMG: 13 ^h 35 ^m		Mag: +1.8 PMG: 10 ^h 18 ^m		Mag: -2.6 PMG: 4 ^h 37 ^m		Mag: 0.0 PMG: 3 ^h 56 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	0	10.5	156	22.0	-9	33.2	205	14.6	+11	43.2
1	15	12.9	171	21.7		34.4	220	15.5		42.7
2	30	15.4	186	21.3		35.6	235	16.5		42.1
3	45	17.9	201	20.9		36.9	250	17.4		41.5
4	60	20.3	216	20.5		38.1	265	18.4		41.0
5	75	22.8	231	20.1	-9	39.3	280	19.4	+11	40.4
6	90	25.3	246	19.7	-9	40.5	295	20.3	+11	39.9
7	105	27.7	261	19.4		41.7	310	21.3		39.3
8	120	30.2	276	19.0		42.9	325	22.2		38.7
9	135	32.6	291	18.6		44.2	340	23.2		38.2
10	150	35.1	306	18.2		45.4	355	24.2		37.6
11	165	37.6	321	17.8	-9	46.6	10	25.1	+11	37.0
12	180	40.0	336	17.4	-9	47.8	25	26.1	+11	36.5
13	195	42.5	351	17.1		49.0	40	27.1		35.9
14	210	45.0	6	16.7		50.2	55	28.0		35.4
15	225	47.4	21	16.3		51.4	70	29.0		34.8
16	240	49.9	36	15.9		52.6	85	30.0		34.2
17	255	52.4	51	15.5	-9	53.9	100	30.9	+11	33.7
18	270	54.8	66	15.1	-9	55.1	115	31.9	+11	33.1
19	285	57.3	81	14.7		56.3	130	32.8		32.5
20	300	59.8	96	14.3		57.5	145	33.8		32.0
21	316	02.2	111	14.0		58.7	160	34.8		31.4
22	331	04.7	126	13.6	-9	59.9	175	35.7		30.8
23	346	07.1	141	13.2	-10	01.1	190	36.7		30.3
24	1	09.6	156	12.8	-10	02.3	205	37.7	+11	29.7
Dif	—		-4		-12		+10		-6	
								+24		0
									+25	

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'9 PMG: 11 ^h 52 ^m 6		Edad: 23 ^d 6 PHE { SD: 16'2 PMG: 7 ^h 02 ^m 4 ^h : 59'4 12 ^h : 59'5 20 ^h : 59'6 R°: 60 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	181	48.8	+0	17.0	258	38.3	+21 59.8	60 N	17 59	18 41	19 30	22 51 83	16 17 40	
1	196	49.0		16.0	273	02.4	51 59.7	58	59	38	25	23 08 79	16 00 43	
2	211	49.2		15.0	287	26.5	51 59.5	56	58	35	20	21 78	15 46 45	
3	226	49.5		14.1	301	50.6	51 59.2	54	58	33	15	33 76	34 47	
4	241	49.7		13.1	316	14.7	51 58.7	52	58	31	11	44 74	24 47	
5	256	49.9	+0	12.1	330	38.8	51 +21 58.0	50	17 58	18 30	19 08	23 53 73	15 14 49	
6	271	50.1	+0	11.2	345	02.9	51 +21 57.2	45	17 57	18 26	19 01	** ** *	14 54 51	
7	286	50.3		10.2	359	26.9	50 56.3	40	57	24	18 55	** ** *	38 52	
8	301	50.6		09.2	13	51.0	51 55.2	35	57	22	51	** ** *	24 54	
9	316	50.8		08.2	28	15.0	50 54.0	30	56	20	48	** ** *	14 12 55	
10	331	51.0		07.3	42	39.1	51 52.6	20	56	18	44	0 13 61	13 51 57	
11	346	51.2	+0	06.3	57	03.1	50 +21 51.0	10 N	17 56	18 17	18 41	0 31 61	13 33 59	
12	1	51.4	+0	05.3	71	27.2	51 +21 49.4	0	17 56	18 16	18 40	0 48 60	13 17 59	
13	16	51.7		04.3	85	51.2	50 47.5	10 S	56	17	41	1 05 59	13 00 61	
14	31	51.9		03.4	100	15.2	50 45.5	20	56	18	44	23 59	12 42 62	
15	46	52.1		02.4	114	39.3	51 43.4	21	56	20	48	44 58	21 64	
16	61	52.3		01.4	129	03.3	50 41.1	23	57	22	51	1 57 56	12 09 64	
17	76	52.5	+0	00.4	143	27.4	51 +21 38.7	40	17 57	18 24	18 56	2 11 56	11 54 67	
18	91	52.8	-0	00.5	157	51.5	51 +21 36.1	45	17 57	18 27	19 01	2 28 55	11 38 67	
19	106	53.0		01.5	172	15.5	50 33.4	50	58	30	08	48 54	17 69	
20	121	53.2		02.5	186	39.6	51 30.5	29	58	32	12	2 58 53	11 07 70	
21	136	53.4		03.4	201	03.7	51 27.5	30	58	34	15	3 09 53	10 56 71	
22	151	53.6		04.4	215	27.9	52 24.3	32	58	36	20	22 51	44 72	
23	166	53.8		05.4	229	52.0	51 21.0	33	58	38	25	37 50	29 74	
24	181	54.1	-0	06.4	244	16.1	51 +21 17.5	35	60 S	17 59	18 41	19 31	3 54 49	
10	ARIES PMG: 23 ^h 51 ^m 4		VENUS Mag: -3.9 PMG: 13 ^h 36 ^m			MARTE Mag: +1.8 PMG: 10 ^h 17 ^m			JÚPITER Mag: -2.6 PMG: 4 ^h 33 ^m			SATURNO Mag: 0.0 PMG: 3 ^h 52 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	°	'	°	°	'	°	
0	1	09.6	156	12.8	-10	02.3	205	37.7	+11	29.7	291	26.7	+21	12.1
1	16	12.1	171	12.4		03.5	220	38.6		29.2	306	29.1		12.1
2	31	14.5	186	12.0		04.7	235	39.6		28.6	321	31.5		12.1
3	46	17.0	201	11.6		05.9	250	40.6		28.0	336	33.9		12.1
4	61	19.5	216	11.2		07.1	265	41.5		27.5	351	36.3		12.1
5	76	21.9	231	10.8	-10	08.4	280	42.5	+11	26.9	6	38.7	+21	12.1
6	91	24.4	246	10.4	-10	09.6	295	43.5	+11	26.3	21	41.1	+21	12.2
7	106	26.9	261	10.0		10.8	310	44.4		25.8	36	43.5		12.2
8	121	29.3	276	09.7		12.0	325	45.4		25.2	51	45.9		12.2
9	136	31.8	291	09.3		13.2	340	46.3		24.6	66	48.3		12.2
10	151	34.3	306	08.9		14.4	355	47.3		24.1	81	50.7		12.2
11	166	36.7	321	08.5	-10	15.6	10	48.3	+11	23.5	96	53.1	+21	12.2
12	181	39.2	336	08.1	-10	16.8	25	49.2	+11	22.9	111	55.5	+21	12.2
13	196	41.6	351	07.7		18.0	40	50.2		22.4	126	57.9		12.2
14	211	44.1	6	07.3		19.2	55	51.2		21.8	142	00.3		12.2
15	226	46.6	21	06.9		20.4	70	52.1		21.2	157	02.7		12.2
16	241	49.0	36	06.5		21.6	85	53.1		20.7	172	05.1		12.2
17	256	51.5	51	06.1	-10	22.8	100	54.1	+11	20.1	187	07.5	+21	12.2
18	271	54.0	66	05.7	-10	24.0	115	55.0	+11	19.5	202	09.9	+21	12.2
19	286	56.4	81	05.3		25.2	130	56.0		19.0	217	12.3		12.2
20	301	58.9	96	04.9		26.4	145	57.0		18.4	232	14.7		12.2
21	317	01.4	111	04.5		27.6	160	57.9		17.8	247	17.1		12.2
22	332	03.8	126	04.1		28.8	175	58.9		17.3	262	19.5		12.2
23	347	06.3	141	03.7		30.0	190	59.9		16.7	277	22.0		12.2
24	2	08.8	156	03.3	-10	31.2	206	00.8	+11	16.2	292	24.4	+21	12.2
Dif	—		-4		-12		+10		-6		+24		0	
													+25	
													0	

ALMANAQUE NÁUTICO PERSEIS

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 9			Edad: 25 ^d 6	PHE { 4 ^h : 59 ^m 8 12 ^h : 59 ^m 8 20 ^h : 59 ^m 7									
	PMG: 11 ^h 51 ^m 9					SD: 16 ^h 3			PMG: 9 ^h 01 ^m		R°: 56 ^m			
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	181	59.3	-0 29.7	230	04.2	+19 12.1	69	60 N	17 53	18 34	19 24	0 14 90	17 25 20	
1	196	59.5	30.7	244	29.1	+19 05.2	69	58	53	32	19	27 87	15 23	
2	211	59.7	31.7	258	54.2	+18 58.1	71	56	53	30	14	39 84	17 05 26	
3	226	59.9	32.7	273	19.3	51.0	71	54	53	28	10	49 82	16 57 28	
4	242	00.2	33.6	287	44.4	43.7	73	52	53	27	06	0 58 80	49 31	
5	257	00.4	-0 34.6	302	09.6	+18 36.3	74	50	17 53	18 25	19 03	1 06 78	16 43 32	
6	272	00.6	-0 35.6	316	34.8	+18 28.7	76	45	17 53	18 23	18 57	1 23 74	16 28 37	
7	287	00.8	36.5	331	00.1	21.1	76	40	54	20	52	37 71	16 40	
8	302	01.0	37.5	345	25.4	13.3	78	35	54	19	48	49 69	16 06 42	
9	317	01.2	38.5	359	50.8	+18 05.4	79	30	54	18	45	1 59 67	15 57 45	
10	332	01.5	39.5	14	16.2	+17 57.4	80	20	54	16	42	2 17 63	41 49	
11	347	01.7	-0 40.4	28	41.7	+17 49.2	82	10 N	17 55	18 16	18 40	2 32 60	15 27 53	
12	2	01.9	-0 41.4	43	07.3	+17 41.0	82	0	17 55	18 16	18 40	2 47 57	15 14 56	
13	17	02.1	42.4	57	32.9	32.6	84	10 S	56	17	41	3 01 54	15 01 59	
14	32	02.3	43.4	71	58.5	24.1	85	20	56	18	44	17 50	14 47 63	
15	47	02.5	44.3	86	24.3	15.5	86	30	57	21	49	34 47	31 67	
16	62	02.8	45.3	100	50.0	+17 06.8	87	35	58	23	53	44 45	22 68	
17	77	03.0	-0 46.3	115	15.9	+16 58.0	88	40	17 59	18 26	18 58	3 56 42	14 11 71	
18	92	03.2	-0 47.3	129	41.7	+16 49.0	90	45	18 00	18 29	19 04	4 10 39	13 58 75	
19	107	03.4	48.2	144	07.7	40.0	90	50	01	33	11	26 36	42 80	
20	122	03.6	49.2	158	33.7	30.9	91	52	01	35	15	34 34	35 81	
21	137	03.8	50.2	172	59.8	21.6	93	54	02	37	19	43 31	27 83	
22	152	04.0	51.2	187	25.9	12.3	93	56	02	40	24	4 52 30	18 86	
23	167	04.3	52.1	201	52.1	+16 02.8	95	58	03	43	30	5 03 27	13 07 89	
24	182	04.5	-0 53.1	216	18.3	+15 53.3	95	60 S	18 04	18 46	19 36	5 16 23	12 55 93	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 23 ^h 43 ^m 6		Mag: -3.9 PMG: 13 ^h 37 ^m			Mag: +1.8 PMG: 10 ^h 14 ^m			Mag: -2.6 PMG: 4 ^h 26 ^m			Mag: 0.0 PMG: 3 ^h 44 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	3	07.9	155	53.7	-10	59.9	206	24.1	+11	02.5	293	22.2	+21	12.3
1	18	10.4	170	53.3	-11	01.1	221	25.1		02.0	308	24.6		12.3
2	33	12.8	185	52.9		02.2	236	26.0		01.4	323	27.0		12.3
3	48	15.3	200	52.5		03.4	251	27.0		00.8	338	29.4		12.3
4	63	17.7	215	52.1		04.6	266	28.0	+11	00.2	353	31.9		12.4
5	78	20.2	230	51.7	-11	05.8	281	28.9	+10	59.7	8	34.3	+21	12.4
6	93	22.7	245	51.2	-11	07.0	296	29.9	+10	59.1	23	36.7	+21	12.4
7	108	25.1	260	50.8		08.2	311	30.9		58.5	38	39.1		12.4
8	123	27.6	275	50.4		09.4	326	31.9		58.0	53	41.5		12.4
9	138	30.1	290	50.0		10.6	341	32.8		57.4	68	43.9		12.4
10	153	32.5	305	49.6		11.7	356	33.8		56.8	83	46.4		12.4
11	168	35.0	320	49.2	-11	12.9	11	34.8	+10	56.3	98	48.8	+21	12.4
12	183	37.5	335	48.8	-11	14.1	26	35.7	+10	55.7	113	51.2	+21	12.4
13	198	39.9	350	48.4		15.3	41	36.7		55.1	128	53.6		12.4
14	213	42.4	5	48.0		16.5	56	37.7		54.5	143	56.0		12.4
15	228	44.9	20	47.6		17.7	71	38.7		54.0	158	58.4		12.4
16	243	47.3	35	47.1		18.8	86	39.6		53.4	174	00.9		12.4
17	258	49.8	50	46.7	-11	20.0	101	40.6	+10	52.8	189	03.3	+21	12.4
18	273	52.2	65	46.3	-11	21.2	116	41.6	+10	52.3	204	05.7	+21	12.4
19	288	54.7	80	45.9		22.4	131	42.6		51.7	219	08.1		12.4
20	303	57.2	95	45.5		23.6	146	43.5		51.1	234	10.6		12.4
21	318	59.6	110	45.1		24.7	161	44.5		50.6	249	13.0		12.4
22	334	02.1	125	44.7		25.9	176	45.5		50.0	264	15.4		12.4
23	349	04.6	140	44.3		27.1	191	46.4		49.4	279	17.8		12.4
24	4	07.0	155	43.8	-11	28.3	206	47.4	+10	48.8	294	20.2	+21	12.4
Dif	—		-4	-12		+10	-6		+24	0		+25		0

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15'9 PMG: 11 ^h 51 ^m 5			Edad: 26 ^d 6 PHE { 4 ^h : 59'7 12 ^h : 59'6 20 ^h : 59'6 SD: 16'3 PMG: 9 ^h 57 ^m R°: 54 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	182	04.5	-0	53.1	216	18.3	+15	53.3	60 N	4	21	5	52	1	44	93
1	197	04.7		54.1	230	44.6	73	43.6	58	26	12	52	1	54	90	
2	212	04.9		55.1	245	11.0	74	33.8	56	30	14	51	2	03	87	
3	227	05.1		56.0	259	37.4	74	24.0	54	34	16	51		11	84	
4	242	05.3		57.0	274	03.9	75	14.1	52	38	18	51		18	81	
5	257	05.6	-0	58.0	288	30.5	76	+15	50	4	41	5	51	2	24	80
6	272	05.8	-0	59.0	302	57.1	76	+14	45	4	47	5	51	2	37	76
7	287	06.0	-0	59.9	317	23.8	77	43.7	40	52	24	51		48	72	
8	302	06.2	-1	00.9	331	50.5	77	33.3	35	56	25	50		2	58	68
9	317	06.4		01.9	346	17.3	78	22.9	30	4	58	26	50	3	06	66
10	332	06.6		02.8	0	44.2	79	12.4	20	5	02	27	49	20	62	
11	347	06.8	-1	03.8	15	11.1	79	+14	10 N	5	04	5	49	3	32	58
12	2	07.1	-1	04.8	29	38.1	80	+13	0	5	04	5	48	3	44	54
13	17	07.3		05.8	44	05.1	80	40.5	10 S	5	02	27	48	3	55	51
14	32	07.5		06.7	58	32.2	81	29.6	20	4	59	25	47	4	07	47
15	47	07.7		07.7	72	59.4	82	18.7	30	54	22	46		21	43	
16	62	07.9		08.7	87	26.7	83	+13	35	50	20	45		29	41	
17	77	08.1	-1	09.7	101	54.0	83	+12	40	4	45	5	44	4	38	38
18	92	08.3	-1	10.6	116	21.3	83	+12	45	4	39	5	43	4	49	34
19	107	08.5		11.6	130	48.7	84	34.3	50	31	09	42		5	02	30
20	122	08.8		12.6	145	16.2	85	23.0	52	27	07	41		08	28	
21	137	09.0		13.6	159	43.8	86	11.7	54	23	05	41		14	26	
22	152	09.2		14.5	174	11.4	86	+12	56	18	03	40		22	23	
23	167	09.4		15.5	188	39.0	86	+11	58	13	5	00	39	30	20	
24	182	09.6	-1	16.5	203	06.8	88	+11	60 S	4	06	4	56	5	39	17

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 23 ^h 39 ^m 6		Mag: -3.9 PMG: 13 ^h 37 ^m		Mag: +1.8 PMG: 10 ^h 12 ^m		Mag: -2.6 PMG: 4 ^h 22 ^m		Mag: 0.0 PMG: 3 ^h 40 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	°	°	'	°	°	°	'
0	4	07.0	155	43.8	-11	28.3	206	47.4	+10	48.8
1	19	09.5	170	43.4		29.5	221	48.4		48.3
2	34	12.0	185	43.0		30.6	236	49.4		47.7
3	49	14.4	200	42.6		31.8	251	50.3		47.1
4	64	16.9	215	42.2		33.0	266	51.3		46.6
5	79	19.3	230	41.8	-11	34.2	281	52.3	+10	46.0
6	94	21.8	245	41.3	-11	35.4	296	53.3	+10	45.4
7	109	24.3	260	40.9		36.5	311	54.2		44.8
8	124	26.7	275	40.5		37.7	326	55.2		44.3
9	139	29.2	290	40.1		38.9	341	56.2		43.7
10	154	31.7	305	39.7		40.1	356	57.2		43.1
11	169	34.1	320	39.3	-11	41.2	11	58.1	+10	42.6
12	184	36.6	335	38.8	-11	42.4	26	59.1	+10	42.0
13	199	39.1	350	38.4		43.6	42	00.1		41.4
14	214	41.5	5	38.0		44.7	57	01.1		40.8
15	229	44.0	20	37.6		45.9	72	02.0		40.3
16	244	46.5	35	37.2		47.1	87	03.0		39.7
17	259	48.9	50	36.7	-11	48.3	102	04.0	+10	39.1
18	274	51.4	65	36.3	-11	49.4	117	05.0	+10	38.5
19	289	53.8	80	35.9		50.6	132	05.9		38.0
20	304	56.3	95	35.5		51.8	147	06.9		37.4
21	319	58.8	110	35.1		52.9	162	07.9		36.8
22	335	01.2	125	34.6		54.1	177	08.9		36.2
23	350	03.7	140	34.2		55.3	192	09.8		35.7
24	5	06.2	155	33.8	-11	56.5	207	10.8	+10	35.1
Dif	—		-4		-12		+10		-6	
								+24		0
									+25	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16'0 PMG: 11 ^h 51 ^m 2			Edad: 27 ^d 6 PHE	SD: 16'2 PMG: 10 ^h 51 ^m											
	hG ☉	Dec			hG ☾	Dif			Dec	Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	182	09.6	-1	16.5	203	06.8	+11	37.2	60 N	17 47	18 28	19 17	3 17	92	18 01	12
1	197	09.8		17.5	217	34.5	87	25.6	58	47	26	13	24	89	17 56	16
2	212	10.0		18.4	232	02.4	89	13.9	56	48	25	08	30	85	52	19
3	227	10.3		19.4	246	30.3	89	+11 02.1	54	48	23	05	35	83	49	20
4	242	10.5		20.4	260	58.3	90	+10 50.3	52	49	22	19 02	39	81	46	22
5	257	10.7	-1	21.4	275	26.3	90	+10 38.4	50	17 49	18 21	18 59	3 44	78	17 43	24
6	272	10.9	-1	22.3	289	54.4	91	+10 26.5	45	17 50	18 19	18 53	3 53	74	17 37	28
7	287	11.1		23.3	304	22.5	91	14.5	40	50	17	49	4 00	70	31	32
8	302	11.3		24.3	318	50.7	92	+10 02.5	35	51	16	45	06	68	27	35
9	317	11.5		25.3	333	19.0	93	+9 50.4	30	51	15	43	12	65	22	39
10	332	11.7		26.2	347	47.3	93	38.2	20	52	14	40	22	60	15	43
11	347	12.0	-1	27.2	2	15.7	94	+9 26.0	10 N	17 53	18 14	18 39	4 30	56	17 09	47
12	2	12.2	-1	28.2	16	44.1	94	+9 13.8	0	17 54	18 15	18 39	4 38	52	17 03	51
13	17	12.4		29.1	31	12.6	95	+9 01.5	10 S	56	17	41	46	48	16 57	55
14	32	12.6		30.1	45	41.1	95	+8 49.1	20	57	19	45	4 54	44	50	59
15	47	12.8		31.1	60	09.7	96	36.7	30	17 59	23	50	5 04	39	43	64
16	62	13.0		32.1	74	38.4	97	24.3	35	18 00	25	18 55	10	36	39	66
17	77	13.2	-1	33.0	89	07.1	97	+8 11.8	40	18 01	18 28	19 00	5 16	33	16 34	70
18	92	13.4	-1	34.0	103	35.9	98	+7 59.3	45	18 02	18 32	19 06	5 23	30	16 28	73
19	107	13.7		35.0	118	04.7	98	46.8	50	04	36	15	32	25	21	78
20	122	13.9		36.0	132	33.6	99	34.2	52	05	38	19	36	23	18	80
21	137	14.1		36.9	147	02.5	99	21.6	54	05	41	23	40	22	14	83
22	152	14.3		37.9	161	31.4	99	+7 08.9	56	06	44	29	45	19	10	85
23	167	14.5		38.9	176	00.5	101	+6 56.2	58	07	47	35	50	17	06	88
24	182	14.7	-1	39.9	190	29.5	100	+6 43.5	60 S	18 09	18 51	19 42	5 56	14	16 01	91

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 23 ^h 35 ^m 7		Mag: -3.9 PMG: 13 ^h 38 ^m			Mag: +1.8 PMG: 10 ^h 11 ^m			Mag: -2.6 PMG: 4 ^h 18 ^m			Mag: 0.0 PMG: 3 ^h 36 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	5	06.2	155	33.8	-11	56.5	207	10.8	+10	35.1	295	18.5	+21	12.5	305	56.7	+18	06.9
1	20	08.6	170	33.4		57.6	222	11.8		34.5	310	20.9		12.5	320	59.2		06.9
2	35	11.1	185	32.9	-11	58.8	237	12.8		34.0	325	23.4		12.5	336	01.7		06.8
3	50	13.6	200	32.5	-12	00.0	252	13.7		33.4	340	25.8		12.5	351	04.2		06.8
4	65	16.0	215	32.1	-12	01.1	267	14.7		32.8	355	28.2		12.5	6	06.8		06.8
5	80	18.5	230	31.7	-12	02.3	282	15.7	+10	32.2	10	30.7	+21	12.5	21	09.3	+18	06.8
6	95	21.0	245	31.2	-12	03.5	297	16.7	+10	31.7	25	33.1	+21	12.5	36	11.8	+18	06.8
7	110	23.4	260	30.8		04.6	312	17.6		31.1	40	35.5		12.5	51	14.3		06.7
8	125	25.9	275	30.4		05.8	327	18.6		30.5	55	38.0		12.5	66	16.9		06.7
9	140	28.3	290	30.0		06.9	342	19.6		29.9	70	40.4		12.5	81	19.4		06.7
10	155	30.8	305	29.5		08.1	357	20.6		29.4	85	42.8		12.5	96	21.9		06.7
11	170	33.3	320	29.1	-12	09.3	12	21.5	+10	28.8	100	45.3	+21	12.5	111	24.4	+18	06.7
12	185	35.7	335	28.7	-12	10.4	27	22.5	+10	28.2	115	47.7	+21	12.5	126	27.0	+18	06.7
13	200	38.2	350	28.2		11.6	42	23.5		27.6	130	50.1		12.5	141	29.5		06.6
14	215	40.7	5	27.8		12.8	57	24.5		27.1	145	52.6		12.5	156	32.0		06.6
15	230	43.1	20	27.4		13.9	72	25.5		26.5	160	55.0		12.5	171	34.6		06.6
16	245	45.6	35	27.0		15.1	87	26.4		25.9	175	57.5		12.5	186	37.1		06.6
17	260	48.1	50	26.5	-12	16.2	102	27.4	+10	25.3	190	59.9	+21	12.5	201	39.6	+18	06.6
18	275	50.5	65	26.1	-12	17.4	117	28.4	+10	24.8	206	02.3	+21	12.5	216	42.1	+18	06.5
19	290	53.0	80	25.7		18.6	132	29.4		24.2	221	04.8		12.5	231	44.7		06.5
20	305	55.4	95	25.2		19.7	147	30.3		23.6	236	07.2		12.5	246	47.2		06.5
21	320	57.9	110	24.8		20.9	162	31.3		23.0	251	09.7		12.5	261	49.7		06.5
22	336	00.4	125	24.4		22.0	177	32.3		22.5	266	12.1		12.5	276	52.2		06.5
23	351	02.8	140	23.9		23.2	192	33.3		21.9	281	14.5		12.5	291	54.8		06.4
24	6	05.3	155	23.5	-12	24.4	207	34.3	+10	21.3	296	17.0	+21	12.5	306	57.3	+18	06.4
Dif	—		-4	-12			+10	-6			+24	0			+25		0	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'0 PMG: 11 ^h 50 ^m 9			Edad: 28 ^d 6 PHE { 4 ^h : 59'1 12 ^h : 58'9 20 ^h : 58'7 R°: 49 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	182	14.7	-1	39.9	190	29.5	+6 43.5	60 N	4 26	5 15	5 56	4 49	90	18 13	12	
1	197	14.9		40.8	204	58.7 ¹⁰²	30.7 ¹²⁸	58	30	17	56	53	86	12	14	
2	212	15.1		41.8	219	27.8 ¹⁰¹	18.0 ¹²⁷	56	35	18	55	55	84	11	16	
3	227	15.3		42.8	233	57.1 ¹⁰³	+6 05.1 ¹²⁹	54	38	20	55	4 58	81	09	20	
4	242	15.6		43.8	248	26.3 ¹⁰²	+5 52.3 ¹²⁸	52	41	21	55	5 00	79	08	22	
5	257	15.8	-1	44.7	262	55.7 ¹⁰⁴	+5 39.5 ¹²⁸	50	4 44	5 22	5 54	5 02	77	18 07	24	
6	272	16.0	-1	45.7	277	25.0 ¹⁰³	+5 26.6 ¹²⁹	45	4 50	5 24	5 53	5 07	72	18 05	28	
7	287	16.2		46.7	291	54.4 ¹⁰⁴	13.7 ¹²⁹	40	54	25	52	10	69	03	31	
8	302	16.4		47.6	306	23.9 ¹⁰⁵	+5 00.7 ¹³⁰	35	4 57	27	52	14	65	02	34	
9	317	16.6		48.6	320	53.4 ¹⁰⁵	+4 47.8 ¹²⁹	30	5 00	27	51	17	62	18 01	36	
10	332	16.8		49.6	335	23.0 ¹⁰⁶	34.8 ¹³⁰	20	02	28	50	22	58	17 58	41	
11	347	17.0	-1	50.6	349	52.6 ¹⁰⁶	+4 21.9 ¹²⁹	10 N	5 03	5 28	5 49	5 26	54	17 56	45	
12	2	17.2	-1	51.5	4	22.2 ¹⁰⁶	+4 08.9 ¹³⁰	0	5 03	5 27	5 48	5 30	50	17 54	49	
13	17	17.4		52.5	18	51.9 ¹⁰⁷	+3 55.9 ¹³⁰	10 S	5 01	25	46	34	46	52	53	
14	32	17.7		53.5	33	21.6 ¹⁰⁷	42.9 ¹³⁰	20	4 57	23	45	38	42	49	58	
15	47	17.9		54.5	47	51.4 ¹⁰⁸	29.8 ¹³¹	30	51	19	43	43	37	47	62	
16	62	18.1		55.4	62	21.2 ¹⁰⁸	16.8 ¹³⁰	35	47	17	42	46	34	45	65	
17	77	18.3	-1	56.4	76	51.0 ¹⁰⁸	+3 03.7 ¹³¹	40	4 42	5 14	5 41	5 49	31	17 44	68	
18	92	18.5	-1	57.4	91	20.9 ¹⁰⁹	+2 50.7 ¹³⁰	45	4 35	5 10	5 39	5 53	28	17 41	72	
19	107	18.7		58.4	105	50.8 ¹⁰⁹	37.6 ¹³¹	50	27	05	37	57	24	39	76	
20	122	18.9	-1	59.3	120	20.8 ¹¹⁰	24.6 ¹³⁰	52	22	03	37	5 59	22	38	78	
21	137	19.1	-2	00.3	134	50.8 ¹¹⁰	+2 11.5 ¹³¹	54	18	5 00	36	6 02	19	37	80	
22	152	19.3		01.3	149	20.8 ¹¹⁰	+1 58.5 ¹³⁰	56	12	4 57	35	04	17	35	83	
23	167	19.5		02.2	163	50.9 ¹¹¹	45.4 ¹³¹	58	4 06	54	33	07	14	34	85	
24	182	19.7	-2	03.2	178	21.0 ¹¹¹	+1 32.3 ¹³¹	60 S	3 59	4 50	5 32	6 10	11	17 32	89	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 23 ^h 31 ^m 8		Mag: -3.9 PMG: 13 ^h 39 ^m			Mag: +1.8 PMG: 10 ^h 09 ^m			Mag: -2.6 PMG: 4 ^h 14 ^m			Mag: 0.0 PMG: 3 ^h 32 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	6	05.3	155	23.5	-12	24.4	207	34.3	+10	21.3	296	17.0	+21	12.5	306	57.3
1	21	07.8	170	23.1		25.5	222	35.2		20.7	311	19.4		12.5	321	59.8
2	36	10.2	185	22.6		26.7	237	36.2		20.2	326	21.9		12.5	337	02.4
3	51	12.7	200	22.2		27.8	252	37.2		19.6	341	24.3		12.5	352	04.9
4	66	15.2	215	21.8		29.0	267	38.2		19.0	356	26.7		12.5	7	07.4
5	81	17.6	230	21.3	-12	30.1	282	39.2	+10	18.4	11	29.2	+21	12.5	22	10.0
6	96	20.1	245	20.9	-12	31.3	297	40.1	+10	17.9	26	31.6	+21	12.5	37	12.5
7	111	22.6	260	20.5		32.4	312	41.1		17.3	41	34.1		12.5	52	15.0
8	126	25.0	275	20.0		33.6	327	42.1		16.7	56	36.5		12.5	67	17.5
9	141	27.5	290	19.6		34.7	342	43.1		16.1	71	39.0		12.5	82	20.1
10	156	29.9	305	19.2		35.9	357	44.1		15.5	86	41.4		12.5	97	22.6
11	171	32.4	320	18.7	-12	37.1	12	45.0	+10	15.0	101	43.8	+21	12.5	112	25.1
12	186	34.9	335	18.3	-12	38.2	27	46.0	+10	14.4	116	46.3	+21	12.5	127	27.7
13	201	37.3	350	17.8		39.4	42	47.0		13.8	131	48.7		12.5	142	30.2
14	216	39.8	5	17.4		40.5	57	48.0		13.2	146	51.2		12.5	157	32.7
15	231	42.3	20	17.0		41.7	72	49.0		12.7	161	53.6		12.5	172	35.3
16	246	44.7	35	16.5		42.8	87	49.9		12.1	176	56.1		12.5	187	37.8
17	261	47.2	50	16.1	-12	44.0	102	50.9	+10	11.5	191	58.5	+21	12.5	202	40.3
18	276	49.7	65	15.7	-12	45.1	117	51.9	+10	10.9	207	01.0	+21	12.5	217	42.9
19	291	52.1	80	15.2		46.2	132	52.9		10.4	222	03.4		12.5	232	45.4
20	306	54.6	95	14.8		47.4	147	53.9		09.8	237	05.9		12.5	247	47.9
21	321	57.0	110	14.3		48.5	162	54.8		09.2	252	08.3		12.5	262	50.5
22	336	59.5	125	13.9		49.7	177	55.8		08.6	267	10.8		12.5	277	53.0
23	352	02.0	140	13.4		50.8	192	56.8		08.0	282	13.2		12.5	292	55.5
24	7	04.4	155	13.0	-12	52.0	207	57.8	+10	07.5	297	15.7	+21	12.5	307	58.1
Dif	—		-4		-12		+10		-6		+24		0		+25	

UT	SOL		● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna				
	SD: 16'0 PMG: 11 ^h 50 ^m 5		Edad: 29 ^d 6 SD: 16'0 PMG: 12 ^h 31 ^m	PHE { 4 ^h : 58'5 12 ^h : 58'3 20 ^h : 58'1 Rº: 49 ^m													
	hG ☉	Dec			hG ☾	Dif			Dec	Dif	Civil	Náutico	Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m		
0	182	19.7	-2	03.2	178	21.0	+1 32.3	60 N	17 41	18 22	19 11	6 19 88	18 25 12				
1	197	20.0		04.2	192	51.2 ¹¹²	19.3 ¹³⁰	58	42	21	07	19 85	26 15				
2	212	20.2		05.2	207	21.3 ¹¹¹	+1 06.2 ¹³¹	56	43	19	03	19 82	27 17				
3	227	20.4		06.1	221	51.5 ¹¹²	+0 53.2 ¹³⁰	54	43	18	19 00	19 79	29 19				
4	242	20.6		07.1	236	21.8 ¹¹³	40.1 ¹³¹	52	44	17	18 57	19 77	30 21				
5	257	20.8	-2	08.1	250	52.1 ¹¹³	+0 27.1 ¹³⁰	50	17 44	18 17	18 54	6 19 75	18 31 23				
6	272	21.0	-2	09.1	265	22.4 ¹¹³	+0 14.1 ¹³⁰	45	17 46	18 15	18 49	6 19 71	18 33 27				
7	287	21.2		10.0	279	52.7 ¹¹³	+0 01.1 ¹³⁰	40	47	14	45	19 67	34 31				
8	302	21.4		11.0	294	23.1 ¹¹⁴	-0 11.9 ¹³⁰	35	48	13	42	19 64	36 33				
9	317	21.6		12.0	308	53.5 ¹¹⁴	24.9 ¹³⁰	30	49	13	40	19 62	37 36				
10	332	21.8		12.9	323	23.9 ¹¹⁴	37.9 ¹³⁰	20	51	13	38	20 56	39 41				
11	347	22.0	-2	13.9	337	54.4 ¹¹⁵	-0 50.9 ¹³⁰	10 N	17 52	18 13	18 38	6 20 52	18 41 45				
12	2	22.2	-2	14.9	352	24.9 ¹¹⁵	-1 03.8 ¹²⁹	0	17 54	18 14	18 38	6 20 48	18 43 48				
13	17	22.5		15.9	6	55.4 ¹¹⁵	16.7 ¹²⁹	10 S	55	16	41	20 45	45 52				
14	32	22.7		16.8	21	25.9 ¹¹⁵	29.6 ¹²⁹	20	17 57	19	45	20 41	47 56				
15	47	22.9		17.8	35	56.5 ¹¹⁶	42.5 ¹²⁹	30	18 00	24	52	20 36	49 61				
16	62	23.1		18.8	50	27.1 ¹¹⁶	-1 55.4 ¹²⁹	35	01	26	18 56	20 34	50 63				
17	77	23.3	-2	19.8	64	57.7 ¹¹⁶	-2 08.2 ¹²⁸	40	18 03	18 30	19 02	6 20 31	18 52 66				
18	92	23.5	-2	20.7	79	28.3 ¹¹⁶	-2 21.1 ¹²⁹	45	18 05	18 34	19 09	6 21 27	18 53 70				
19	107	23.7		21.7	93	59.0 ¹¹⁷	33.8 ¹²⁷	50	07	39	18	21 23	55 74				
20	122	23.9		22.7	108	29.6 ¹¹⁶	46.6 ¹²⁸	52	08	42	22	21 21	56 76				
21	137	24.1		23.6	123	00.3 ¹¹⁷	-2 59.4 ¹²⁸	54	09	45	27	21 19	57 78				
22	152	24.3		24.6	137	31.1 ¹¹⁸	-3 12.1 ¹²⁷	56	10	48	33	21 17	58 81				
23	167	24.5		25.6	152	01.8 ¹¹⁷	24.8 ¹²⁷	58	12	52	40	21 14	18 59 84				
24	182	24.7	-2	26.6	166	32.6 ¹¹⁸	-3 37.4 ¹²⁶	60 S	18 13	18 56	19 47	6 21 12	19 01 86				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 23 ^h 27 ^m 8		Mag: -3.9 PMG: 13 ^h 40 ^m			Mag: +1.8 PMG: 10 ^h 07 ^m			Mag: -2.6 PMG: 4 ^h 10 ^m			Mag: -0.1 PMG: 3 ^h 28 ^m					
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	7	04.4	155	13.0	-12	52.0	207	57.8	+10	07.5	297	15.7	+21	12.5	307	58.1	
1	22	06.9	170	12.6		53.1	222	58.8		06.9	312	18.1		12.5	323	00.6	
2	37	09.4	185	12.1		54.3	237	59.7		06.3	327	20.6		12.5	338	03.1	
3	52	11.8	200	11.7		55.4	253	00.7		05.7	342	23.0		12.4	353	05.7	
4	67	14.3	215	11.2		56.6	268	01.7		05.1	357	25.5		12.4	8	08.2	
5	82	16.8	230	10.8	-12	57.7	283	02.7	+10	04.6	12	27.9	+21	12.4	23	10.7	
6	97	19.2	245	10.3	-12	58.8	298	03.7	+10	04.0	27	30.4	+21	12.4	38	13.3	
7	112	21.7	260	09.9	-13	00.0	313	04.7		03.4	42	32.8		12.4	53	15.8	
8	127	24.2	275	09.5	-13	01.1	328	05.6		02.8	57	35.3		12.4	68	18.3	
9	142	26.6	290	09.0		02.3	343	06.6		02.3	72	37.7		12.4	83	20.9	
10	157	29.1	305	08.6		03.4	358	07.6		01.7	87	40.2		12.4	98	23.4	
11	172	31.5	320	08.1	-13	04.5	13	08.6	+10	01.1	102	42.6	+21	12.4	113	25.9	
12	187	34.0	335	07.7	-13	05.7	28	09.6	+10	00.5	117	45.1	+21	12.4	128	28.5	
13	202	36.5	350	07.2		06.8	43	10.6	+9	59.9	132	47.5		12.4	143	31.0	
14	217	38.9	5	06.8		08.0	58	11.5		59.4	147	50.0		12.4	158	33.6	
15	232	41.4	20	06.3		09.1	73	12.5		58.8	162	52.5		12.4	173	36.1	
16	247	43.9	35	05.9		10.2	88	13.5		58.2	177	54.9		12.4	188	38.6	
17	262	46.3	50	05.4	-13	11.4	103	14.5	+9	57.6	192	57.4	+21	12.4	203	41.2	
18	277	48.8	65	05.0	-13	12.5	118	15.5	+9	57.0	207	59.8	+21	12.4	218	43.7	
19	292	51.3	80	04.5		13.6	133	16.5		56.5	223	02.3		12.4	233	46.2	
20	307	53.7	95	04.1		14.8	148	17.4		55.9	238	04.7		12.4	248	48.8	
21	322	56.2	110	03.6		15.9	163	18.4		55.3	253	07.2		12.4	263	51.3	
22	337	58.6	125	03.2		17.0	178	19.4		54.7	268	09.7		12.4	278	53.9	
23	353	01.1	140	02.7		18.2	193	20.4		54.1	283	12.1		12.4	293	56.4	
24	8	03.6	155	02.3	-13	19.3	208	21.4	+9	53.6	298	14.6	+21	12.4	308	58.9	
Dif	—		-4		-11		+10		-6		+25		0		+25		0

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16:0 PMG: 11 ^h 50 ^m 2			Edad: 1 ^d 2 PHE { 4 ^h : 57/8 12 ^h : 57/6 20 ^h : 57/3 Rº: 48 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	182	24.7	-2	26.6	166	32.6	-3 37.4	60 N	4 31	5 20	6 01	7 47	85	18 37	13
1	197	24.9		27.5	181	03.3	-3 50.0	58	35	21	6 00	44	82	41	16
2	212	25.1		28.5	195	34.1	-4 02.6	56	39	22	5 59	41	79	44	19
3	227	25.3		29.5	210	05.0	15.2	54	42	23	59	38	78	48	20
4	242	25.6		30.5	224	35.8	27.7	52	45	24	58	36	75	51	22
5	257	25.8	-2	31.4	239	06.6	-4 40.2	50	4 47	5 25	5 57	7 34	73	18 54	24
6	272	26.0	-2	32.4	253	37.5	-4 52.6	45	4 52	5 26	5 56	7 30	69	19 00	28
7	287	26.2		33.4	268	08.4	-5 05.1	40	56	27	54	26	66	05	31
8	302	26.4		34.3	282	39.3	17.4	35	4 59	28	53	23	63	09	34
9	317	26.6		35.3	297	10.2	29.8	30	5 01	28	52	21	60	13	37
10	332	26.8		36.3	311	41.1	42.1	20	03	28	50	16	55	20	40
11	347	27.0	-2	37.3	326	12.0	-5 54.3	10 N	5 03	5 28	5 49	7 12	52	19 26	44
12	2	27.2	-2	38.2	340	43.0	-6 06.5	0	5 02	5 26	5 47	7 08	48	19 31	48
13	17	27.4		39.2	355	13.9	18.7	10 S	5 00	24	45	05	44	37	51
14	32	27.6		40.2	9	44.9	30.8	20	4 55	21	43	7 01	40	43	55
15	47	27.8		41.1	24	15.9	42.9	30	49	17	41	6 56	36	50	59
16	62	28.0		42.1	38	46.9	-6 54.9	35	44	14	39	54	33	53	62
17	77	28.2	-2	43.1	53	17.9	-7 06.9	40	4 38	5 10	5 37	6 51	31	19 58	65
18	92	28.4	-2	44.1	67	48.9	-7 18.8	45	4 31	5 06	5 35	6 48	27	20 03	68
19	107	28.6		45.0	82	19.9	30.7	50	22	5 01	33	44	23	09	72
20	122	28.8		46.0	96	50.9	42.5	52	17	4 58	32	42	22	12	74
21	137	29.0		47.0	111	21.9	-7 54.3	54	12	55	31	40	20	15	77
22	152	29.2		47.9	125	53.0	-8 06.0	56	07	52	29	38	17	19	78
23	167	29.4		48.9	140	24.0	17.7	58	4 00	48	28	35	15	23	81
24	182	29.7	-2	49.9	154	55.1	-8 29.3	60 S	3 52	4 44	5 26	6 33	12	20 27	85

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 23 ^h 23 ^m 9		Mag: -3.9 PMG: 13 ^h 40 ^m		Mag: +1.8 PMG: 10 ^h 06 ^m		Mag: -2.6 PMG: 4 ^h 06 ^m		Mag: -0.1 PMG: 3 ^h 23 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	8	03.6	155	02.3	-13	19.3	298	14.6	+21	12.4
1	23	06.0	170	01.8		20.4	313	17.0		12.4
2	38	08.5	185	01.4		21.6	328	19.5		12.4
3	53	11.0	200	00.9		22.7	343	21.9		12.4
4	68	13.4	215	00.5		23.8	358	24.4		12.4
5	83	15.9	230	00.0	-13	25.0	13	26.9	+21	12.4
6	98	18.4	244	59.5	-13	26.1	28	29.3	+21	12.4
7	113	20.8	259	59.1		27.2	43	31.8		12.4
8	128	23.3	274	58.6		28.4	58	34.3		12.4
9	143	25.8	289	58.2		29.5	73	36.7		12.4
10	158	28.2	304	57.7		30.6	88	39.2		12.4
11	173	30.7	319	57.3	-13	31.7	103	41.6	+21	12.4
12	188	33.1	334	56.8	-13	32.9	118	44.1	+21	12.4
13	203	35.6	349	56.4		34.0	133	46.6		12.4
14	218	38.1	4	55.9		35.1	148	49.0		12.4
15	233	40.5	19	55.4		36.2	163	51.5		12.4
16	248	43.0	34	55.0		37.4	178	54.0		12.4
17	263	45.5	49	54.5	-13	38.5	193	56.4	+21	12.4
18	278	47.9	64	54.1	-13	39.6	208	58.9	+21	12.4
19	293	50.4	79	53.6		40.7	224	01.4		12.4
20	308	52.9	94	53.1		41.9	239	03.8		12.4
21	323	55.3	109	52.7		43.0	254	06.3		12.4
22	338	57.8	124	52.2		44.1	269	08.8		12.4
23	354	00.2	139	51.8		45.2	284	11.2		12.3
24	9	02.7	154	51.3	-13	46.3	299	13.7	+21	12.3
Dif	—		-5	-11	+10	-6	+25	0	+25	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 9		Edad: 2 ^d 2 PHE { 4 ^h : 57'1 12 ^h : 56'8 20 ^h : 56'6 PMG: 14 ^h 08 ^m R°: 48 ^m															
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m					
0	182	29.7	-2	49.9	154	55.1	-8 29.3	60 N	17 35	18 16	19 05	9 12 83	18 50 15					
1	197	29.9		50.9	169	26.1 ¹²⁰	40.9 ¹¹⁶	58	36	15	19 01	06 80	18 57 18					
2	212	30.1		51.8	183	57.2 ¹²¹	-8 52.4 ¹¹⁵	56	37	14	18 57	9 00 78	19 03 21					
3	227	30.3		52.8	198	28.2 ¹²⁰	-9 03.9 ¹¹⁵	54	38	13	55	8 56 74	08 24					
4	242	30.5		53.8	212	59.3 ¹²¹	15.3 ¹¹⁴	52	39	13	52	51 73	13 26					
5	257	30.7	-2	54.7	227	30.3 ¹²⁰	-9 26.6 ¹¹³	50	17 40	18 12	18 50	8 47 71	19 18 27					
6	272	30.9	-2	55.7	242	01.4 ¹²¹	-9 37.9 ¹¹³	45	17 42	18 11	18 45	8 39 67	19 28 30					
7	287	31.1		56.7	256	32.5 ¹²¹	-9 49.1 ¹¹²	40	44	11	42	32 64	36 34					
8	302	31.3		57.7	271	03.5 ¹²⁰	-10 00.3 ¹¹²	35	45	10	40	26 61	43 36					
9	317	31.5		58.6	285	34.6 ¹²¹	11.4 ¹¹¹	30	46	10	38	21 58	19 50 38					
10	332	31.7	-2	59.6	300	05.7 ¹²¹	22.4 ¹¹⁰	20	49	11	36	11 55	20 00 42					
11	347	31.9	-3	00.6	314	36.8 ¹²¹	-10 33.4 ¹¹⁰	10 N	17 51	18 12	18 36	8 04 51	20 10 45					
12	2	32.1	-3	01.5	329	07.8 ¹²⁰	-10 44.3 ¹⁰⁹	0	17 53	18 14	18 38	7 56 48	20 19 48					
13	17	32.3		02.5	343	38.9 ¹²¹	-10 55.1 ¹⁰⁸	10 S	55	16	41	49 44	28 51					
14	32	32.5		03.5	358	10.0 ¹²¹	-11 05.9 ¹⁰⁸	20	17 58	20	46	41 41	38 54					
15	47	32.7		04.4	12	41.0 ¹²⁰	16.6 ¹⁰⁷	30	18 01	25	53	32 37	49 58					
16	62	32.9		05.4	27	12.1 ¹²¹	27.2 ¹⁰⁶	35	03	28	18 58	27 35	20 55 60					
17	77	33.1	-3	06.4	41	43.1 ¹²⁰	-11 37.8 ¹⁰⁶	40	18 05	18 32	19 04	7 22 32	21 03 62					
18	92	33.3	-3	07.4	56	14.2 ¹²¹	-11 48.3 ¹⁰⁵	45	18 07	18 37	19 12	7 15 29	21 11 66					
19	107	33.5		08.3	70	45.2 ¹²⁰	-11 58.8 ¹⁰⁵	50	10	43	21	07 26	21 70					
20	122	33.7		09.3	85	16.3 ¹²¹	-12 09.1 ¹⁰³	52	11	45	26	04 23	26 71					
21	137	33.9		10.3	99	47.3 ¹²⁰	19.4 ¹⁰³	54	13	49	32	7 00 21	32 73					
22	152	34.1		11.2	114	18.4 ¹²¹	29.7 ¹⁰³	56	14	52	38	6 55 20	37 76					
23	167	34.3		12.2	128	49.4 ¹²⁰	39.8 ¹⁰¹	58	16	18 56	45	50 17	44 78					
24	182	34.5	-3	13.2	143	20.5 ¹²¹	-12 49.9 ¹⁰¹	60 S	18 18	19 01	19 53	6 45 14	21 52 81					
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 23 ^h 20 ^m 0		Mag: -3.9 PMG: 13 ^h 41 ^m			Mag: +1.8 PMG: 10 ^h 04 ^m			Mag: -2.6 PMG: 4 ^h 02 ^m			Mag: -0.1 PMG: 3 ^h 19 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	9	02.7	154	51.3	-13	46.3	208	45.0	+9	39.6	299	13.7	+21	12.3	309	59.9	+18	04.9
1	24	05.2	169	50.8		47.5	223	46.0		39.0	314	16.2		12.3	325	02.4		04.9
2	39	07.6	184	50.4		48.6	238	47.0		38.5	329	18.6		12.3	340	05.0		04.9
3	54	10.1	199	49.9		49.7	253	48.0		37.9	344	21.1		12.3	355	07.5		04.8
4	69	12.6	214	49.4		50.8	268	49.0		37.3	359	23.6		12.3	10	10.1		04.8
5	84	15.0	229	49.0	-13	51.9	283	50.0	+9	36.7	14	26.0	+21	12.3	25	12.6	+18	04.8
6	99	17.5	244	48.5	-13	53.0	298	50.9	+9	36.1	29	28.5	+21	12.3	40	15.2	+18	04.8
7	114	20.0	259	48.0		54.2	313	51.9		35.5	44	31.0		12.3	55	17.7		04.7
8	129	22.4	274	47.6		55.3	328	52.9		35.0	59	33.4		12.3	70	20.2		04.7
9	144	24.9	289	47.1		56.4	343	53.9		34.4	74	35.9		12.3	85	22.8		04.7
10	159	27.4	304	46.6		57.5	358	54.9		33.8	89	38.4		12.3	100	25.3		04.7
11	174	29.8	319	46.2	-13	58.6	13	55.9	+9	33.2	104	40.9	+21	12.3	115	27.9	+18	04.7
12	189	32.3	334	45.7	-13	59.7	28	56.9	+9	32.6	119	43.3	+21	12.3	130	30.4	+18	04.6
13	204	34.7	349	45.2	-14	00.8	43	57.9		32.0	134	45.8		12.3	145	33.0		04.6
14	219	37.2	4	44.8		02.0	58	58.9		31.5	149	48.3		12.3	160	35.5		04.6
15	234	39.7	19	44.3		03.1	73	59.8		30.9	164	50.7		12.3	175	38.1		04.6
16	249	42.1	34	43.8		04.2	89	00.8		30.3	179	53.2		12.3	190	40.6		04.5
17	264	44.6	49	43.4	-14	05.3	104	01.8	+9	29.7	194	55.7	+21	12.3	205	43.1	+18	04.5
18	279	47.1	64	42.9	-14	06.4	119	02.8	+9	29.1	209	58.2	+21	12.3	220	45.7	+18	04.5
19	294	49.5	79	42.4		07.5	134	03.8		28.5	225	00.6		12.3	235	48.2		04.5
20	309	52.0	94	42.0		08.6	149	04.8		28.0	240	03.1		12.3	250	50.8		04.4
21	324	54.5	109	41.5		09.7	164	05.8		27.4	255	05.6		12.3	265	53.3		04.4
22	339	56.9	124	41.0		10.8	179	06.8		26.8	270	08.1		12.3	280	55.9		04.4
23	354	59.4	139	40.5		11.9	194	07.8		26.2	285	10.5		12.3	295	58.4		04.4
24	10	01.9	154	40.1	-14	13.0	209	08.7	+9	25.6	300	13.0	+21	12.3	311	01.0	+18	04.4
Dif	—		-5		-11		+10		-6		+25		0		+25		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 5			Edad: 3 ^d 2 PHE { 4 ^h : 56'3 12 ^h : 56'1 20 ^h : 55'9 R°: 48 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°		
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	182	34.5	-3	143	20.5	-12	49.9	60 N	4	36	5	25	6	06	10	35	
1	197	34.7		157	51.5 ¹²⁰	-12	59.9 ¹⁰⁰	58	40	25	05			26	76	15	
2	212	34.9		172	22.5 ¹²⁰	-13	09.8 ⁹⁹	56	43	26	03			18	73	24	
3	227	35.1		186	53.5 ¹²⁰		19.7 ⁹⁹	54	46	27	02			10	72	32	
4	242	35.3		201	24.5 ¹²⁰		29.5 ⁹⁸	52	48	28	01			10	04	69	
5	257	35.5	-3	215	55.5 ¹²⁰	-13	39.2 ⁹⁷	50	4	50	5	28	6	00	9	58	
6	272	35.7	-3	230	26.5 ¹²⁰	-13	48.8 ⁹⁶	45	4	55	5	29	5	58	9	46	
7	287	35.9		244	57.5 ¹²⁰	-13	58.4 ⁹⁶	40	4	58	29	56		36	61	20	
8	302	36.1		259	28.5 ¹²⁰	-14	07.8 ⁹⁴	35	5	00	30	55		27	59	19	
9	317	36.3		273	59.4 ¹¹⁹		17.2 ⁹⁴	30	02	30	53			19	57	28	
10	332	36.5		288	30.4 ¹²⁰		26.5 ⁹³	20	03	29	51			9	06	54	
11	347	36.7	-3	303	01.4 ¹²⁰	-14	35.8 ⁹³	10 N	5	03	5	28	5	49	8	55	
12	2	36.9	-3	317	32.3 ¹¹⁹	-14	44.9 ⁹¹	0	5	02	5	26	5	46	8	44	
13	17	37.1		332	03.2 ¹¹⁹	-14	54.0 ⁹¹	10 S	4	58	23	44		33	46	19	
14	32	37.3		346	34.2 ¹²⁰	-15	03.0 ⁹⁰	20	53	19	41			22	43	32	
15	47	37.5		1	05.1 ¹¹⁹		11.9 ⁸⁹	30	46	14	38			09	40	47	
16	62	37.7		15	36.0 ¹¹⁹		20.7 ⁸⁸	35	41	11	36			8	02	37	
17	77	37.9	-3	30	06.9 ¹¹⁹	-15	29.5 ⁸⁸	40	4	35	5	07	5	34	7	54	
18	92	38.1	-3	44	37.8 ¹¹⁹	-15	38.1 ⁸⁶	45	4	27	5	02	5	32	7	44	
19	107	38.3		59	08.7 ¹¹⁹		46.7 ⁸⁶	50	17	4	56	29		33	28	31	
20	122	38.5		73	39.5 ¹¹⁸	-15	55.2 ⁸⁵	52	12	53	27			27	27	37	
21	137	38.7		88	10.4 ¹¹⁹	-16	03.6 ⁸⁴	54	07	50	26			21	25	45	
22	152	38.9		102	41.3 ¹¹⁹		11.9 ⁸³	56	4	01	46	24		15	23	22	
23	167	39.1		117	12.1 ¹¹⁸		20.2 ⁸³	58	3	54	42	22		7	07	21	
24	182	39.3	-3	131	42.9 ¹¹⁸	-16	28.3 ⁸¹	60 S	3	45	4	38	5	20	6	59	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 23 ^h 16 ^m 1			Mag: -3.9 PMG: 13 ^h 42 ^m			Mag: +1.8 PMG: 10 ^h 03 ^m			Mag: -2.6 PMG: 3 ^h 58 ^m			Mag: -0.1 PMG: 3 ^h 15 ^m				
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	°	'	°	'	°	'	°	'	°	°	'	°	'	
0	10	01.9	154	40.1	-14	13.0		209	08.7	+9	25.6	300	13.0	+21	12.3	311	
1	25	04.3	169	39.6		14.2		224	09.7		25.0	315	15.5		12.2	326	
2	40	06.8	184	39.1		15.3		239	10.7		24.5	330	18.0		12.2	341	
3	55	09.2	199	38.7		16.4		254	11.7		23.9	345	20.5		12.2	356	
4	70	11.7	214	38.2		17.5		269	12.7		23.3	0	22.9		12.2	11	
5	85	14.2	229	37.7	-14	18.6		284	13.7	+9	22.7	15	25.4	+21	12.2	26	
6	100	16.6	244	37.2	-14	19.7		299	14.7	+9	22.1	30	27.9	+21	12.2	41	
7	115	19.1	259	36.8		20.8		314	15.7		21.5	45	30.4		12.2	56	
8	130	21.6	274	36.3		21.9		329	16.7		20.9	60	32.8		12.2	71	
9	145	24.0	289	35.8		23.0		344	17.7		20.4	75	35.3		12.2	86	
10	160	26.5	304	35.3		24.1		359	18.6		19.8	90	37.8		12.2	101	
11	175	29.0	319	34.8	-14	25.2		14	19.6	+9	19.2	105	40.3	+21	12.2	116	
12	190	31.4	334	34.4	-14	26.3		29	20.6	+9	18.6	120	42.8	+21	12.2	131	
13	205	33.9	349	33.9		27.4		44	21.6		18.0	135	45.3		12.2	146	
14	220	36.3	4	33.4		28.5		59	22.6		17.4	150	47.7		12.2	161	
15	235	38.8	19	32.9		29.6		74	23.6		16.9	165	50.2		12.2	176	
16	250	41.3	34	32.5		30.7		89	24.6		16.3	180	52.7		12.2	191	
17	265	43.7	49	32.0	-14	31.8		104	25.6	+9	15.7	195	55.2	+21	12.2	206	
18	280	46.2	64	31.5	-14	32.9		119	26.6	+9	15.1	210	57.7	+21	12.2	221	
19	295	48.7	79	31.0		34.0		134	27.6		14.5	226	00.1		12.2	236	
20	310	51.1	94	30.5		35.1		149	28.6		13.9	241	02.6		12.2	251	
21	325	53.6	109	30.0		36.1		164	29.5		13.3	256	05.1		12.1	266	
22	340	56.1	124	29.6		37.2		179	30.5		12.8	271	07.6		12.1	281	
23	355	58.5	139	29.1		38.3		194	31.5		12.2	286	10.1		12.1	296	
24	11	01.0	154	28.6	-14	39.4		209	32.5	+9	11.6	301	12.6	+21	12.1	312	
Dif	—			-5 -11			+10 -6			+25 0			+25				

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 16:0			Edad: 4 ^d 2	PHE { 4 ^h : 55/7 12 ^h : 55/5 20 ^h : 55/3	Puesta de Sol			Salida de Luna		Puesta de Luna							
	PMG: 11 ^h 49 ^m 2																	
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico		Hora	Rº	Hora	Rº			
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	m	h m m	m			
0	182	39.3	-3 36.4	131	42.9	-16 28.3	81	60 N	17 29	18 10	18 59	11 54 74		19 25 27				
1	197	39.5	37.4	146	13.7 ¹¹⁸	36.4	81	58	30	09	55	42 70		38 30				
2	212	39.7	38.4	160	44.6 ¹¹⁹	44.4	80	56	32	09	52	31 69		49 32				
3	227	39.9	39.3	175	15.4 ¹¹⁸	-16 52.2	78	54	33	09	50	22 66		19 59 33				
4	242	40.1	40.3	189	46.1 ¹¹⁷	-17 00.0	78	52	35	08	47	13 65		20 08 35				
5	257	40.3	-3 41.3	204	16.9 ¹¹⁸	-17 07.7	77	50	17 36	18 08	18 45	11 06 64		20 16 36				
6	272	40.5	-3 42.2	218	47.7 ¹¹⁸	-17 15.4	77	45	17 38	18 07	18 41	10 50 61		20 32 39				
7	287	40.7	43.2	233	18.4 ¹¹⁷	22.9	75	40	40	07	39	37 59		46 41				
8	302	40.9	44.2	247	49.2 ¹¹⁸	30.3	74	35	42	08	37	26 57		20 58 42				
9	317	41.1	45.1	262	19.9 ¹¹⁷	37.7	74	30	44	08	36	16 56		21 08 43				
10	332	41.3	46.1	276	50.6 ¹¹⁷	44.9	72	20	47	09	35	10 00 53		26 45				
11	347	41.5	-3 47.1	291	21.4 ¹¹⁸	-17 52.1	72	10 N	17 50	18 11	18 35	9 46 50		21 41 47				
12	2	41.7	-3 48.0	305	52.1 ¹¹⁷	-17 59.1	70	0	17 52	18 13	18 37	9 32 49		21 56 48				
13	17	41.9	49.0	320	22.7 ¹¹⁶	-18 06.1	70	10 S	55	16	41	19 46		22 10 50				
14	32	42.1	50.0	334	53.4 ¹¹⁷	13.0	69	20	17 58	20	46	9 05 44		25 53				
15	47	42.2	50.9	349	24.1 ¹¹⁷	19.8	68	30	18 02	26	18 54	8 49 41		43 55				
16	62	42.4	51.9	3	54.7 ¹¹⁶	26.5	67	35	04	30	19 00	39 40		22 54 55				
17	77	42.6	-3 52.9	18	25.4 ¹¹⁷	-18 33.1	66	40	18 07	18 34	19 06	8 29 38		23 06 57				
18	92	42.8	-3 53.9	32	56.0 ¹¹⁶	-18 39.6	65	45	18 10	18 39	19 14	8 16 36		23 20 58				
19	107	43.0	54.8	47	26.6 ¹¹⁶	46.0	64	50	13	46	25	8 01 33		37 61				
20	122	43.2	55.8	61	57.3 ¹¹⁷	52.3	63	52	15	49	30	7 54 32		45 62				
21	137	43.4	56.8	76	27.9 ¹¹⁶	-18 58.5	62	54	16	52	36	46 31		23 54 63				
22	152	43.6	57.7	90	58.5 ¹¹⁶	-19 04.6	61	56	18	18 56	42	38 28		** * *	**			
23	167	43.8	58.7	105	29.0 ¹¹⁵	10.6	60	58	21	19 01	50	28 26		** * *	**			
24	182	44.0	-3 59.6	119	59.6 ¹¹⁶	-19 16.6	60	60 S	18 23	19 06	19 59	7 17 23		** * *	**			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 23 ^h 12 ^m 1		Mag: -3.9 PMG: 13 ^h 43 ^m			Mag: +1.8 PMG: 10 ^h 01 ^m			Mag: -2.6 PMG: 3 ^h 55 ^m			Mag: -0.1 PMG: 3 ^h 11 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°			
0	11	01.0	154	28.6	-14	39.4	209	32.5	+9	11.6	301	12.6	+21	12.1	312	02.2	+18	03.8
1	26	03.5	169	28.1		40.5	224	33.5		11.0	316	15.1		12.1	327	04.7		03.8
2	41	05.9	184	27.6		41.6	239	34.5		10.4	331	17.5		12.1	342	07.3		03.7
3	56	08.4	199	27.1		42.7	254	35.5		09.8	346	20.0		12.1	357	09.8		03.7
4	71	10.8	214	26.7		43.8	269	36.5		09.2	1	22.5		12.1	12	12.4		03.7
5	86	13.3	229	26.2	-14	44.9	284	37.5	+9	08.7	16	25.0	+21	12.1	27	14.9	+18	03.7
6	101	15.8	244	25.7	-14	46.0	299	38.5	+9	08.1	31	27.5	+21	12.1	42	17.5	+18	03.6
7	116	18.2	259	25.2		47.1	314	39.5		07.5	46	30.0		12.1	57	20.0		03.6
8	131	20.7	274	24.7		48.1	329	40.5		06.9	61	32.5		12.1	72	22.6		03.6
9	146	23.2	289	24.2		49.2	344	41.5		06.3	76	35.0		12.1	87	25.1		03.6
10	161	25.6	304	23.7		50.3	359	42.5		05.7	91	37.4		12.1	102	27.7		03.6
11	176	28.1	319	23.3	-14	51.4	14	43.4	+9	05.1	106	39.9	+21	12.1	117	30.2	+18	03.5
12	191	30.6	334	22.8	-14	52.5	29	44.4	+9	04.5	121	42.4	+21	12.1	132	32.8	+18	03.5
13	206	33.0	349	22.3		53.6	44	45.4		04.0	136	44.9		12.1	147	35.3		03.5
14	221	35.5	4	21.8		54.7	59	46.4		03.4	151	47.4		12.1	162	37.9		03.5
15	236	38.0	19	21.3		55.7	74	47.4		02.8	166	49.9		12.0	177	40.4		03.4
16	251	40.4	34	20.8		56.8	89	48.4		02.2	181	52.4		12.0	192	43.0		03.4
17	266	42.9	49	20.3	-14	57.9	104	49.4	+9	01.6	196	54.9	+21	12.0	207	45.6	+18	03.4
18	281	45.3	64	19.8	-14	59.0	119	50.4	+9	01.0	211	57.4	+21	12.0	222	48.1	+18	03.4
19	296	47.8	79	19.3	-15	00.1	134	51.4	+9	00.4	226	59.9		12.0	237	50.7		03.3
20	311	50.3	94	18.8		01.1	149	52.4	+8	59.8	242	02.4		12.0	252	53.2		03.3
21	326	52.7	109	18.4		02.2	164	53.4		59.3	257	04.9		12.0	267	55.8		03.3
22	341	55.2	124	17.9		03.3	179	54.4		58.7	272	07.3		12.0	282	58.3		03.3
23	356	57.7	139	17.4		04.4	194	55.4		58.1	287	09.8		12.0	298	00.9		03.2
24	12	00.1	154	16.9	-15	05.5	209	56.4	+8	57.5	302	12.3	+21	12.0	313	03.4	+18	03.2
Dif	—		-5		-11		+10		-6		+25		0		+26		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 9			Edad: 5 ^d 2	PHE { 4 ^h : 55'1 12 ^h : 54'9 20 ^h : 54'8 R°: 49 ^m											
	hG ☉	Dec		hG ☾		Dif		Dec	Dif		Náutico	Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	182	44.0	-3	59.6	119	59.6	-19	16.6	58	4	41	5	29	6	11	
1	197	44.2	-4	00.6	134	30.2	116	22.4	58	44	30	09	12	52	63	
2	212	44.4		01.6	149	00.7	115	28.1	57	47	30	07	40	61	21	40
3	227	44.6		02.5	163	31.3	116	33.8	57	50	31	06	28	60	32	40
4	242	44.8		03.5	178	01.8	115	39.3	55	52	31	05	18	59	43	41
5	257	45.0	-4	04.5	192	32.3	115	-19	44.7	54	4	54	5	31	6	03
6	272	45.2	-4	05.4	207	02.8	115	-19	50.1	54	4	57	5	31	6	01
7	287	45.4		06.4	221	33.4	116	-19	55.3	52	5	00	31	5	58	
8	302	45.6		07.4	236	03.8	114	-20	00.5	52	02	31	56	23	54	
9	317	45.8		08.3	250	34.3	115	05.5	50	30	03	31	55	11	12	
10	332	45.9		09.3	265	04.8	115	10.4	49	20	04	29	51	10	53	
11	347	46.1	-4	10.3	279	35.3	115	-20	15.3	49	5	03	5	27	5	48
12	2	46.3	-4	11.2	294	05.8	115	-20	20.0	47	5	01	5	25	5	46
13	17	46.5		12.2	308	36.2	114	24.7	47	10	4	57	22	43	10	05
14	32	46.7		13.2	323	06.7	115	29.2	45	20	52	17	39	9	49	
15	47	46.9		14.1	337	37.1	114	33.7	45	30	44	12	36	30	45	
16	62	47.1		15.1	352	07.5	114	38.0	43	35	38	08	33	19	44	
17	77	47.3	-4	16.1	6	38.0	115	-20	42.2	42	4	32	5	04	5	31
18	92	47.5	-4	17.0	21	08.4	114	-20	46.4	42	4	23	4	58	5	28
19	107	47.7		18.0	35	38.8	114	50.4	40	50	12	52	24	34	40	
20	122	47.9		19.0	50	09.2	114	54.3	39	52	07	48	23	26	38	
21	137	48.1		19.9	64	39.6	114	-20	58.2	39	4	01	45	21	17	
22	152	48.3		20.9	79	10.0	114	-21	01.9	37	3	55	41	19	8	06
23	167	48.4		21.9	93	40.4	114	05.5	36	58	47	36	16	7	54	
24	182	48.6	-4	22.8	108	10.8	114	-21	09.0	35	3	38	4	31	5	14

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 23 ^h 08 ^m 2		Mag: -3.9 PMG: 13 ^h 43 ^m		Mag: +1.8 PMG: 10 ^h 00 ^m		Mag: -2.6 PMG: 3 ^h 51 ^m		Mag: -0.1 PMG: 3 ^h 07 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	12	00.1	154	16.9	-15	05.5	209	56.4	+8	57.5
1	27	02.6	169	16.4		06.5	224	57.4		56.9
2	42	05.1	184	15.9		07.6	239	58.4		56.3
3	57	07.5	199	15.4		08.7	254	59.4		55.7
4	72	10.0	214	14.9		09.8	270	00.4		55.1
5	87	12.4	229	14.4	-15	10.8	285	01.3	+8	54.6
6	102	14.9	244	13.9	-15	11.9	300	02.3	+8	54.0
7	117	17.4	259	13.4		13.0	315	03.3		53.4
8	132	19.8	274	12.9		14.1	330	04.3		52.8
9	147	22.3	289	12.4		15.1	345	05.3		52.2
10	162	24.8	304	11.9		16.2	0	06.3		51.6
11	177	27.2	319	11.4	-15	17.3	15	07.3	+8	51.0
12	192	29.7	334	10.9	-15	18.3	30	08.3	+8	50.4
13	207	32.2	349	10.4		19.4	45	09.3		49.8
14	222	34.6	4	09.9		20.5	60	10.3		49.3
15	237	37.1	19	09.4		21.6	75	11.3		48.7
16	252	39.6	34	08.9		22.6	90	12.3		48.1
17	267	42.0	49	08.4	-15	23.7	105	13.3	+8	47.5
18	282	44.5	64	07.9	-15	24.8	120	14.3	+8	46.9
19	297	46.9	79	07.4		25.8	135	15.3		46.3
20	312	49.4	94	06.9		26.9	150	16.3		45.7
21	327	51.9	109	06.4		28.0	165	17.3		45.1
22	342	54.3	124	05.9		29.0	180	18.3		44.5
23	357	56.8	139	05.4		30.1	195	19.3		44.0
24	12	59.3	154	04.9	-15	31.1	210	20.3	+8	43.4
Dif	—		-5	-11		+10	-6	+25		0
										+26

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG: 11 ^h 48 ^m 6			Edad: 6 ^d 2 PHE { 4 ^h : 54'6 12 ^h : 54'5 20 ^h : 54'4 R°: 49 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	h m	h m	h m	h m m	h m m	h m m		
0	182	48.6	-4 22.8	108	10.8	-21 09.0	60 N	17 23	18 04	18 52	14 12 52	20 29 49			
1	197	48.8		122	41.2 ¹¹⁴	12.4 ³⁴	58	25	04	49	13 55 52	20 46 49			
2	212	49.0	24.7	137	11.6 ¹¹⁴	15.8 ³²	56	27	04	47	41 51	21 01 49			
3	227	49.2	25.7	151	41.9 ¹¹³	19.0 ³⁴	54	28	04	45	28 52	13 49			
4	242	49.4	26.7	166	12.3 ¹¹⁴	22.1 ³¹	52	30	04	43	17 52	24 49			
5	257	49.6	-4 27.6	180	42.7 ¹¹⁴	-21 25.1 ³⁰	50	17 31	18 04	18 41	13 08 51	21 34 49			
6	272	49.8	-4 28.6	195	13.0 ¹¹³	-21 28.0 ²⁹	45	17 35	18 04	18 38	12 47 51	21 55 49			
7	287	50.0	29.6	209	43.4 ¹¹⁴	30.8 ²⁸	40	37	04	36	31 50	22 11 49			
8	302	50.2	30.5	224	13.8 ¹¹⁴	33.5 ²⁷	35	40	05	34	17 50	25 49			
9	317	50.4	31.5	238	44.1 ¹¹³	36.1 ²⁶	30	42	05	33	12 05 50	37 50			
10	332	50.5	32.5	253	14.5 ¹¹⁴	38.6 ²⁵	20	45	07	33	11 44 50	22 58 49			
11	347	50.7	-4 33.4	267	44.8 ¹¹³	-21 40.9 ²³	10 N	17 49	18 10	18 34	11 26 50	23 16 49			
12	2	50.9	-4 34.4	282	15.2 ¹¹⁴	-21 43.2 ²³	0	17 52	18 13	18 37	11 10 49	23 33 49			
13	17	51.1	35.3	296	45.5 ¹¹³	45.4 ²²	10 S	55	16	41	10 53 49	23 50 49			
14	32	51.3	36.3	311	15.9 ¹¹⁴	47.5 ²¹	20	17 59	21	47	35 49	** ** *			
15	47	51.5	37.3	325	46.3 ¹¹⁴	49.4 ¹⁹	30	18 03	27	18 56	15 48	** ** *			
16	62	51.7	38.2	340	16.6 ¹¹³	51.3 ¹⁹	35	06	31	19 01	10 03 47	** ** *			
17	77	51.9	-4 39.2	354	47.0 ¹¹⁴	-21 53.1 ¹⁸	40	18 09	18 36	19 08	9 49 47	0 03 52			
18	92	52.1	-4 40.2	9	17.3 ¹¹³	-21 54.7 ¹⁶	45	18 12	18 42	19 17	9 33 47	0 18 54			
19	107	52.2	41.1	23	47.7 ¹¹⁴	56.3 ¹⁶	50	16	49	28	14 45	38 55			
20	122	52.4	42.1	38	18.1 ¹¹⁴	57.7 ¹⁴	52	18	52	34	9 04 45	47 55			
21	137	52.6	43.0	52	48.4 ¹¹³	-21 59.1 ¹⁴	54	20	18 56	40	8 54 44	0 57 56			
22	152	52.8	44.0	67	18.8 ¹¹⁴	-22 00.3 ¹²	56	22	19 01	47	42 44	1 09 57			
23	167	53.0	45.0	81	49.2 ¹¹⁴	01.4 ¹¹	58	25	05	19 55	28 44	23 57			
24	182	53.2	-4 45.9	96	19.5 ¹¹³	-22 02.4 ¹⁰	60 S	18 28	19 11	20 05	8 12 42	1 39 58			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 23 ^h 04 ^m 3		Mag: -3.9 PMG: 13 ^h 44 ^m			Mag: +1.8 PMG: 9 ^h 58 ^m			Mag: -2.7 PMG: 3 ^h 47 ^m			Mag: -0.1 PMG: 3 ^h 03 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	'	°	°	'	°	
0	12	59.3	154 04.9	-15 31.1		210 20.3	+8 43.4		303 12.3	+21 11.8		314 04.8	+18 02.6		
1	28	01.7	169 04.4	32.2		225 21.3	42.8		318 14.8	11.8		329 07.4	02.6		
2	43	04.2	184 03.9	33.3		240 22.3	42.2		333 17.3	11.8		344 09.9	02.6		
3	58	06.7	199 03.4	34.3		255 23.3	41.6		348 19.8	11.8		359 12.5	02.5		
4	73	09.1	214 02.9	35.4		270 24.3	41.0		3	22.3	11.8	14 15.1	02.5		
5	88	11.6	229 02.3	-15 36.4		285 25.3	+8 40.4		18 24.8	+21 11.8		29 17.6	+18 02.5		
6	103	14.1	244 01.8	-15 37.5		300 26.3	+8 39.8		33 27.3	+21 11.8		44 20.2	+18 02.5		
7	118	16.5	259 01.3	38.6		315 27.3	39.2		48 29.9	11.8		59 22.7	02.4		
8	133	19.0	274 00.8	39.6		330 28.3	38.7		63 32.4	11.7		74 25.3	02.4		
9	148	21.4	289 00.3	40.7		345 29.3	38.1		78 34.9	11.7		89 27.9	02.4		
10	163	23.9	303 59.8	41.7		0 30.3	37.5		93 37.4	11.7		104 30.4	02.4		
11	178	26.4	318 59.3	-15 42.8		15 31.3	+8 36.9		108 39.9	+21 11.7		119 33.0	+18 02.3		
12	193	28.8	333 58.8	-15 43.8		30 32.3	+8 36.3		123 42.4	+21 11.7		134 35.6	+18 02.3		
13	208	31.3	348 58.3	44.9		45 33.3	35.7		138 44.9	11.7		149 38.1	02.3		
14	223	33.8	3 57.8	46.0		60 34.2	35.1		153 47.4	11.7		164 40.7	02.3		
15	238	36.2	18 57.2	47.0		75 35.2	34.5		168 49.9	11.7		179 43.2	02.2		
16	253	38.7	33 56.7	48.1		90 36.2	33.9		183 52.4	11.7		194 45.8	02.2		
17	268	41.2	48 56.2	-15 49.1		105 37.2	+8 33.3		198 54.9	+21 11.7		209 48.4	+18 02.2		
18	283	43.6	63 55.7	-15 50.2		120 38.2	+8 32.7		213 57.4	+21 11.7		224 50.9	+18 02.2		
19	298	46.1	78 55.2	51.2		135 39.2	32.2		229 00.0	11.7		239 53.5	02.1		
20	313	48.6	93 54.7	52.3		150 40.2	31.6		244 02.5	11.6		254 56.1	02.1		
21	328	51.0	108 54.2	53.3		165 41.2	31.0		259 05.0	11.6		269 58.6	02.1		
22	343	53.5	123 53.7	54.4		180 42.2	30.4		274 07.5	11.6		285 01.2	02.0		
23	358	55.9	138 53.1	55.4		195 43.2	29.8		289 10.0	11.6		300 03.7	02.0		
24	13	58.4	153 52.6	-15 56.5		210 44.2	+8 29.2		304 12.5	+21 11.6		315 06.3	+18 02.0		
Dif	—		-5		-11	+10		-6	+25		0	+26			

UT	SOL			 LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'0 PMG: 11 ^h 48 ^m 3			Edad: 7 ^d 2	PHE { 4 ^h : 54'4 12 ^h : 54'3 20 ^h : 54'3 R°: 48 ^m	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°			
	hG ☉	Dec	hG ☾	Dif														
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	182	53.2	-4	45.9	96	19.5	-22	02.4	10	60 N	4 46	5 34	6 16	15 04	40	21 18	60	
1	197	53.4		46.9	110	49.9 ¹¹⁴		03.4	8	58	49	34	13	14 47	41	35	59	
2	212	53.6		47.9	125	20.3 ¹¹⁴		04.2	7	56	51	34	11	32 42		21 50	57	
3	227	53.8		48.8	139	50.7 ¹¹⁴		04.9	8	54	53	34	10	20 42		22 02	57	
4	242	53.9		49.8	154	21.1 ¹¹⁴		05.5	6	52	55	34	08	14 09	43	13	56	
5	257	54.1	-4	50.7	168	51.5 ¹¹⁴	-22	06.0	5	50	4 57	5 34	6 06	13 59	44	22 23	55	
6	272	54.3	-4	51.7	183	21.9 ¹¹⁴	-22	06.4	4	45	5 00	5 34	6 03	13 38	45	22 44	54	
7	287	54.5		52.7	197	52.3 ¹¹⁴		06.7	3	40	02	33	6 00		21 46		23 00	53
8	302	54.7		53.6	212	22.7 ¹¹⁴		06.9	2	35	03	33	5 58	13 07	46		14 53	
9	317	54.9		54.6	226	53.2 ¹¹⁵		07.0	1	30	04	32	56	12 55	47		27 51	
10	332	55.1		55.5	241	23.6 ¹¹⁴		07.0	0	20	04	30	52	34 47		23 47	51	
11	347	55.2	-4	56.5	255	54.0 ¹¹⁴	-22	06.9	1	10 N	5 03	5 27	5 48	12 16	48	** ** *	**	
12	2	55.4	-4	57.5	270	24.5 ¹¹⁵	-22	06.6	3	0	5 00	5 24	5 45	11 59	48	** ** *	**	
13	17	55.6		58.4	284	55.0 ¹¹⁵		06.3	3	10 S	4 56	20	42	42 49		** ** *	**	
14	32	55.8	-4	59.4	299	25.4 ¹¹⁴		05.9	4	20	50	16	38	24 49		0 08	49	
15	47	56.0	-5	00.3	313	55.9 ¹¹⁵		05.3	6	30	41	09	33	11 03	50		29 49	
16	62	56.2		01.3	328	26.4 ¹¹⁵		04.7	6	35	35	05	31	10 50	51		41 49	
17	77	56.4	-5	02.3	342	56.9 ¹¹⁵	-22	04.0	7	40	4 28	5 00	5 28	10 36	52	0 55	49	
18	92	56.5	-5	03.2	357	27.4 ¹¹⁵	-22	03.1	9	45	4 19	4 54	5 24	10 20	51	1 12	48	
19	107	56.7		04.2	11	57.9 ¹¹⁵		02.2	9	50	08	47	20	9 59	53		33 47	
20	122	56.9		05.1	26	28.5 ¹¹⁶	-22	01.1	11	52	4 02	44	18	49 53		42 48		
21	137	57.1		06.1	40	59.0 ¹¹⁵	-21	59.9	12	54	3 56	40	16	38 53		1 53	47	
22	152	57.3		07.1	55	29.6 ¹¹⁶		58.7	12	56	49	35	13	26 53		2 06	47	
23	167	57.5		08.0	70	00.1 ¹¹⁵		57.3	14	58	41	30	11	9 12	53		20 47	
24	182	57.7	-5	09.0	84	30.7 ¹¹⁶	-21	55.9	14	60 S	3 31	4 25	5 08	8 54	55	2 37	46	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 23 ^h 00 ^m 3			Mag: -3.9 PMG: 13 ^h 45 ^m			Mag: +1.8 PMG: 9 ^h 56 ^m			Mag: -2.7 PMG: 3 ^h 43 ^m			Mag: -0.1 PMG: 2 ^h 59 ^m					
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	13	58.4	153	52.6	-15	56.5	210	44.2	+8	29.2	304	12.5	+21	11.6	315	06.3	+18	02.0
1	29	00.9	168	52.1		57.5	225	45.2		28.6	319	15.0		11.6	330	08.9		02.0
2	44	03.3	183	51.6		58.5	240	46.2		28.0	334	17.5		11.6	345	11.4		01.9
3	59	05.8	198	51.1	-15	59.6	255	47.2		27.4	349	20.0		11.6	0	14.0		01.9
4	74	08.3	213	50.6	-16	00.6	270	48.2		26.8	4	22.6		11.6	15	16.6		01.9
5	89	10.7	228	50.0	-16	01.7	285	49.2	+8	26.2	19	25.1	+21	11.6	30	19.1	+18	01.9
6	104	13.2	243	49.5	-16	02.7	300	50.2	+8	25.7	34	27.6	+21	11.6	45	21.7	+18	01.8
7	119	15.7	258	49.0		03.8	315	51.2		25.1	49	30.1		11.6	60	24.3		01.8
8	134	18.1	273	48.5		04.8	330	52.2		24.5	64	32.6		11.5	75	26.8		01.8
9	149	20.6	288	48.0		05.8	345	53.2		23.9	79	35.1		11.5	90	29.4		01.8
10	164	23.0	303	47.4		06.9	0	54.2		23.3	94	37.7		11.5	105	32.0		01.7
11	179	25.5	318	46.9	-16	07.9	15	55.2	+8	22.7	109	40.2	+21	11.5	120	34.5	+18	01.7
12	194	28.0	333	46.4	-16	09.0	30	56.2	+8	22.1	124	42.7	+21	11.5	135	37.1	+18	01.7
13	209	30.4	348	45.9		10.0	45	57.2		21.5	139	45.2		11.5	150	39.7		01.7
14	224	32.9	3	45.3		11.0	60	58.3		20.9	154	47.7		11.5	165	42.2		01.6
15	239	35.4	18	44.8		12.1	75	59.3		20.3	169	50.2		11.5	180	44.8		01.6
16	254	37.8	33	44.3		13.1	91	00.3		19.7	184	52.8		11.5	195	47.4		01.6
17	269	40.3	48	43.8	-16	14.2	106	01.3	+8	19.1	199	55.3	+21	11.5	210	49.9	+18	01.5
18	284	42.8	63	43.2	-16	15.2	121	02.3	+8	18.6	214	57.8	+21	11.4	225	52.5	+18	01.5
19	299	45.2	78	42.7		16.2	136	03.3		18.0	230	00.3		11.4	240	55.1		01.5
20	314	47.7	93	42.2		17.3	151	04.3		17.4	245	02.8		11.4	255	57.6		01.5
21	329	50.2	108	41.7		18.3	166	05.3		16.8	260	05.4		11.4	271	00.2		01.4
22	344	52.6	123	41.1		19.3	181	06.3		16.2	275	07.9		11.4	286	02.8		01.4
23	359	55.1	138	40.6		20.4	196	07.3		15.6	290	10.4		11.4	301	05.3		01.4
24	14	57.5	153	40.1	-16	21.4	211	08.3	+8	15.0	305	12.9	+21	11.4	316	07.9	+18	01.4
Dif	—		-5	-10			+10	-6			+25	0			+26	0		

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16'0 PMG: 11 ^h 48 ^m 0		Edad: 8 ^d 2 PHE { 4 ^h : 54/3 12 ^h : 54/3 20 ^h : 54/3 PMG: 18 ^h 59 ^m R°: 48 ^m															
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m				
0	182	57.7	-5	09.0	84	30.7	-21 55.9	60 N	17 17	17 58	18 46	15 44 29	22 18 69					
1	197	57.8		09.9	99	01.3 ¹¹⁶	54.3 ¹⁶	58	19	58	44	28 31	34 67					
2	212	58.0		10.9	113	31.9 ¹¹⁶	52.6 ¹⁷	56	22	59	42	14 33	47 65					
3	227	58.2		11.9	128	02.5 ¹¹⁶	50.9 ¹⁷	54	24	59	40	15 02 35	22 59 63					
4	242	58.4		12.8	142	33.2 ¹¹⁷	49.0 ¹⁹	52	25	59	38	14 52 36	23 09 62					
5	257	58.6	-5	13.8	157	03.8 ¹¹⁶	-21 47.0 ²⁰	50	17 27	17 59	18 37	14 43 37	23 18 61					
6	272	58.8	-5	14.7	171	34.5 ¹¹⁷	-21 44.9 ²¹	45	17 31	18 00	18 34	14 23 39	23 38 58					
7	287	58.9		15.7	186	05.2 ¹¹⁷	42.8 ²¹	40	34	01	32	14 07 41	23 53 57					
8	302	59.1		16.7	200	35.9 ¹¹⁷	40.5 ²³	35	37	02	31	13 53 42	** ** *	**				
9	317	59.3		17.6	215	06.6 ¹¹⁷	38.1 ²⁴	30	39	03	31	42 43	** ** *	**				
10	332	59.5		18.6	229	37.3 ¹¹⁷	35.6 ²⁵	20	44	06	31	21 45	** ** *	**				
11	347	59.7	-5	19.5	244	08.1 ¹¹⁸	-21 33.1 ²⁵	10 N	17 47	18 09	18 33	13 04 46	0 05 50					
12	2	59.8	-5	20.5	258	38.8 ¹¹⁷	-21 30.4 ²⁷	0	17 51	18 12	18 36	12 47 48	0 22 49					
13	18	00.0		21.4	273	09.6 ¹¹⁸	27.6 ²⁸	10 S	55	16	41	31 49	39 47					
14	33	00.2		22.4	287	40.4 ¹¹⁸	24.7 ²⁹	20	17 59	22	47	12 13 51	0 57 46					
15	48	00.4		23.4	302	11.2 ¹¹⁸	21.7 ³⁰	30	18 04	29	18 57	11 53 53	1 18 45					
16	63	00.6		24.3	316	42.1 ¹¹⁹	18.7 ³⁰	35	07	33	19 03	41 54	30 44					
17	78	00.8	-5	25.3	331	12.9 ¹¹⁸	-21 15.5 ³²	40	18 11	18 38	19 11	11 28 54	1 44 43					
18	93	00.9	-5	26.2	345	43.8 ¹¹⁹	-21 12.2 ³³	45	18 15	18 44	19 20	11 11 57	2 00 42					
19	108	01.1		27.2	0	14.7 ¹¹⁹	08.8 ³⁴	50	19	52	32	10 52 58	20 41					
20	123	01.3		28.1	14	45.6 ¹¹⁹	05.4 ³⁴	52	21	18 56	38	42 59	30 39					
21	138	01.5		29.1	29	16.5 ¹¹⁹	-21 01.8 ³⁶	54	24	19 00	44	31 61	40 39					
22	153	01.7		30.1	43	47.4 ¹¹⁹	-20 58.1 ³⁷	56	26	05	19 52	19 62	2 53 37					
23	168	01.8		31.0	58	18.4 ¹²⁰	54.4 ³⁷	58	29	10	20 01	10 05 63	3 07 36					
24	183	02.0	-5	32.0	72	49.4 ¹²⁰	-20 50.5 ³⁹	60 S	18 33	19 16	20 11	9 49 65	3 23 34					
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 22 ^h 56 ^m 4		Mag: -3.9 PMG: 13 ^h 46 ^m			Mag: +1.8 PMG: 9 ^h 55 ^m			Mag: -2.7 PMG: 3 ^h 39 ^m			Mag: -0.1 PMG: 2 ^h 55 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	14	57.5	153	40.1	-16	21.4	211	08.3	+8	15.0	305	12.9	+21	11.4	316	07.9	+18	01.4
1	30	00.0	168	39.6		22.4	226	09.3		14.4	320	15.4		11.4	331	10.5		01.3
2	45	02.5	183	39.0		23.4	241	10.3		13.8	335	18.0		11.4	346	13.0		01.3
3	60	04.9	198	38.5		24.5	256	11.3		13.2	350	20.5		11.4	1	15.6		01.3
4	75	07.4	213	38.0		25.5	271	12.3		12.6	5	23.0		11.3	16	18.2		01.3
5	90	09.9	228	37.4	-16	26.5	286	13.3	+8	12.0	20	25.5	+21	11.3	31	20.7	+18	01.2
6	105	12.3	243	36.9	-16	27.6	301	14.3	+8	11.4	35	28.1	+21	11.3	46	23.3	+18	01.2
7	120	14.8	258	36.4		28.6	316	15.3		10.8	50	30.6		11.3	61	25.9		01.2
8	135	17.3	273	35.9		29.6	331	16.3		10.3	65	33.1		11.3	76	28.4		01.1
9	150	19.7	288	35.3		30.6	346	17.3		09.7	80	35.6		11.3	91	31.0		01.1
10	165	22.2	303	34.8		31.7	1	18.3		09.1	95	38.2		11.3	106	33.6		01.1
11	180	24.7	318	34.3	-16	32.7	16	19.3	+8	08.5	110	40.7	+21	11.3	121	36.2	+18	01.1
12	195	27.1	333	33.7	-16	33.7	31	20.3	+8	07.9	125	43.2	+21	11.3	136	38.7	+18	01.0
13	210	29.6	348	33.2		34.7	46	21.3		07.3	140	45.7		11.3	151	41.3		01.0
14	225	32.0	3	32.7		35.7	61	22.3		06.7	155	48.3		11.2	166	43.9		01.0
15	240	34.5	18	32.1		36.8	76	23.3		06.1	170	50.8		11.2	181	46.4		01.0
16	255	37.0	33	31.6		37.8	91	24.3		05.5	185	53.3		11.2	196	49.0		00.9
17	270	39.4	48	31.0	-16	38.8	106	25.3	+8	04.9	200	55.8	+21	11.2	211	51.6	+18	00.9
18	285	41.9	63	30.5	-16	39.8	121	26.3	+8	04.3	215	58.4	+21	11.2	226	54.1	+18	00.9
19	300	44.4	78	30.0		40.8	136	27.3		03.7	231	00.9		11.2	241	56.7		00.8
20	315	46.8	93	29.4		41.9	151	28.3		03.1	246	03.4		11.2	256	59.3		00.8
21	330	49.3	108	28.9		42.9	166	29.3		02.5	261	06.0		11.2	272	01.9		00.8
22	345	51.8	123	28.4		43.9	181	30.3		01.9	276	08.5		11.2	287	04.4		00.8
23	0	54.2	138	27.8		44.9	196	31.3		01.3	291	11.0		11.1	302	07.0		00.7
24	15	56.7	153	27.3	-16	45.9	211	32.3	+8	00.8	306	13.5	+21	11.1	317	09.6	+18	00.7
Dif	—		-5		-10		+10		-6		+25		0		+26		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 7			Edad: 9 ^d 2 PHE { 4 ^h : 54'3 12 ^h : 54'4 20 ^h : 54'5 R°: 46 ^m															
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico		Civil	Hora		R°	Hora	R°			
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m	
0	183	02.0	-5	32.0	72	49.4	-20	50.5	40	60 N	4 50	5 39	6 20	16	13	21	23	27 75	
1	198	02.2		32.9	87	20.4 ¹²⁰		46.5	40	58	53	38	18	15	59	24	41	72	
2	213	02.4		33.9	101	51.4 ¹²⁰		42.5	40	56	55	38	15	47	27	23	52	70	
3	228	02.6		34.8	116	22.5 ¹²¹		38.3	42	54	57	38	13	37	28	**	**	**	
4	243	02.7		35.8	130	53.5 ¹²⁰		34.1	42	52	4 58	38	11	28	30	**	**	**	
5	258	02.9	-5	36.8	145	24.6 ¹²¹	-20	29.7	44	50	5 00	5 37	6 10	15	20	31	**	**	**
6	273	03.1	-5	37.7	159	55.7 ¹²¹	-20	25.3	44	45	5 02	5 36	6 06	15	02	34	**	**	**
7	288	03.3		38.7	174	26.8 ¹²¹		20.8	45	40	04	35	02	14	48	36	**	**	**
8	303	03.5		39.6	188	58.0 ¹²²		16.1	47	35	05	34	6 00	35	39	0 07	54		
9	318	03.6		40.6	203	29.2 ¹²²		11.4	47	30	05	33	5 57	25	40	18	53		
10	333	03.8		41.5	218	00.4 ¹²²		06.6	48	20	05	30	52	14	06	43	38	51	
11	348	04.0	-5	42.5	232	31.6 ¹²²	-20	01.7	49	10 N	5 03	5 27	5 48	13	50	45	0 55	49	
12	3	04.2	-5	43.4	247	02.8 ¹²²	-19	56.7	50	0	5 00	5 24	5 44	13	35	47	1 11	47	
13	18	04.3		44.4	261	34.1 ¹²³		51.6	51	10 S	4 55	19	40	20	49	26	46		
14	33	04.5		45.3	276	05.3 ¹²²		46.4	52	20	48	14	36	13	04	51	1 43	44	
15	48	04.7		46.3	290	36.6 ¹²³		41.1	53	30	38	07	31	12	46	54	2 03	41	
16	63	04.9		47.3	305	08.0 ¹²⁴		35.7	54	35	32	5 02	28	35	55	14	40		
17	78	05.1	-5	48.2	319	39.3 ¹²³	-19	30.3	54	40	4 25	4 57	5 24	12	22	58	2 27	38	
18	93	05.2	-5	49.2	334	10.7 ¹²⁴	-19	24.7	56	45	4 15	4 51	5 20	12	08	59	2 42	36	
19	108	05.4		50.1	348	42.1 ¹²⁴		19.1	56	50	4 03	43	16	11	50	62	3 01	34	
20	123	05.6		51.1	3	13.5 ¹²⁴		13.3	58	52	3 57	39	13	41	64	09	33		
21	138	05.8		52.0	17	44.9 ¹²⁴		07.5	58	54	50	35	11	32	65	19	31		
22	153	05.9		53.0	32	16.4 ¹²⁵	-19	01.6	59	56	43	30	08	21	67	30	30		
23	168	06.1		53.9	46	47.8 ¹²⁴	-18	55.6	60	58	34	25	05	11	08	70	43	27	
24	183	06.3	-5	54.9	61	19.3 ¹²⁵	-18	49.5	61	60 S	3 24	4 18	5 02	10	54	72	3 57	25	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG 22 ^h 52 ^m 5		Mag: -3.9 PMG: 13 ^h 47 ^m			Mag: +1.8 PMG: 9 ^h 53 ^m			Mag: -2.7 PMG: 3 ^h 34 ^m			Mag: -0.1 PMG: 2 ^h 51 ^m							
	hG ♈		hG ♀ Dec			hG ♂ Dec			hG ♃ Dec			hG ♄ Dec							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	15	56.7	153	27.3	-16	45.9	211	32.3	+8	00.8	306	13.5	+21	11.1	317	09.6	+18	00.7	
1	30	59.1	168	26.7		46.9	226	33.4	+8	00.2	321	16.1		11.1	332	12.2		00.7	
2	46	01.6	183	26.2		47.9	241	34.4	+7	59.6	336	18.6		11.1	347	14.7		00.7	
3	61	04.1	198	25.7		49.0	256	35.4		59.0	351	21.1		11.1	2	17.3		00.6	
4	76	06.5	213	25.1		50.0	271	36.4		58.4	6	23.7		11.1	17	19.9		00.6	
5	91	09.0	228	24.6	-16	51.0	286	37.4	+7	57.8	21	26.2	+21	11.1	32	22.4	+18	00.6	
6	106	11.5	243	24.0	-16	52.0	301	38.4	+7	57.2	36	28.7	+21	11.1	47	25.0	+18	00.5	
7	121	13.9	258	23.5		53.0	316	39.4		56.6	51	31.3		11.1	62	27.6		00.5	
8	136	16.4	273	23.0		54.0	331	40.4		56.0	66	33.8		11.0	77	30.2		00.5	
9	151	18.9	288	22.4		55.0	346	41.4		55.4	81	36.3		11.0	92	32.7		00.5	
10	166	21.3	303	21.9		56.0	1	42.4		54.8	96	38.9		11.0	107	35.3		00.4	
11	181	23.8	318	21.3	-16	57.0	16	43.4	+7	54.2	111	41.4	+21	11.0	122	37.9	+18	00.4	
12	196	26.3	333	20.8	-16	58.0	31	44.4	+7	53.6	126	43.9	+21	11.0	137	40.5	+18	00.4	
13	211	28.7	348	20.2	-16	59.0	46	45.4		53.0	141	46.5		11.0	152	43.0		00.3	
14	226	31.2	3	19.7	-17	00.0	61	46.4		52.4	156	49.0		11.0	167	45.6		00.3	
15	241	33.6	18	19.1	-17	01.0	76	47.4		51.8	171	51.5		11.0	182	48.2		00.3	
16	256	36.1	33	18.6		02.0	91	48.4		51.2	186	54.1		11.0	197	50.8		00.3	
17	271	38.6	48	18.0	-17	03.1	106	49.4	+7	50.6	201	56.6	+21	10.9	212	53.3	+18	00.2	
18	286	41.0	63	17.5	-17	04.1	121	50.4	+7	50.0	216	59.1	+21	10.9	227	55.9	+18	00.2	
19	301	43.5	78	16.9		05.1	136	51.5		49.4	232	01.7		10.9	242	58.5		00.2	
20	316	46.0	93	16.4		06.1	151	52.5		48.9	247	04.2		10.9	258	01.1		00.2	
21	331	48.4	108	15.8		07.1	166	53.5		48.3	262	06.8		10.9	273	03.6		00.1	
22	346	50.9	123	15.3		08.1	181	54.5		47.7	277	09.3		10.9	288	06.2		00.1	
23	1	53.4	138	14.7		09.0	196	55.5		47.1	292	11.8		10.9	303	08.8	+18	00.1	
24	16	55.8	153	14.2	-17	10.0	211	56.5	+7	46.5	307	14.4	+21	10.9	318	11.4	+18	00.0	
Dif	—		-5			-10	+10			-6	+25		0		+26				

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna						
	SD: 16'0 PMG: 11 ^h 47 ^m 4			Edad: 10 ^d 2 PHE { 4 ^h : 54'5 12 ^h : 54'7 20 ^h : 54'8 Rº: 46 ^m															
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	Rº	Hora	Rº				
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m				
0	183	06.3	-5	54.9	61	19.3	-18 49.5	60 N	17 11	17 52	18 41	16 34	16	**	**	**			
1	198	06.5		55.8	75	50.9 ¹²⁶	43.3 ⁶²	58	14	53	38	23	19	**	**	**			
2	213	06.6		56.8	90	22.4 ¹²⁵	37.0 ⁶³	56	16	54	36	14	21	**	**	**			
3	228	06.8		57.7	104	54.0 ¹²⁶	30.7 ⁶³	54	19	54	35	16	05 24	0	02	68			
4	243	07.0		58.7	119	25.6 ¹²⁶	24.2 ⁶⁵	52	21	55	34	15	58 25	11	66				
5	258	07.2	-5	59.7	133	57.2 ¹²⁶	-18 17.7 ⁶⁵	50	17 23	17 55	18 33	15	51 27	0	19	64			
6	273	07.3	-6	00.6	148	28.8 ¹²⁶	-18 11.1 ⁶⁶	45	17 27	17 57	18 30	15	36 30	0	36	61			
7	288	07.5		01.6	163	00.5 ¹²⁷	-18 04.4 ⁶⁷	40	31	58	29	24	33	0	50	58			
8	303	07.7		02.5	177	32.1 ¹²⁶	-17 57.6 ⁶⁸	35	34	17 59	29	14	35	1	01	57			
9	318	07.9		03.5	192	03.8 ¹²⁷	50.7 ⁶⁹	30	37	18 01	29	15	05 37	11	55				
10	333	08.0		04.4	206	35.6 ¹²⁸	43.7 ⁷⁰	20	42	04	30	14	49 40	29	51				
11	348	08.2	-6	05.4	221	07.3 ¹²⁷	-17 36.7 ⁷⁰	10 N	17 46	18 07	18 32	14	35 44	1	44	49			
12	3	08.4	-6	06.3	235	39.1 ¹²⁸	-17 29.6 ⁷¹	0	17 51	18 12	18 36	14	22 46	1	58	47			
13	18	08.6		07.3	250	10.9 ¹²⁸	22.4 ⁷²	10 S	17 55	16	41	14	09 49	2	12	44			
14	33	08.7		08.2	264	42.7 ¹²⁸	15.1 ⁷³	20	18 00	22	48	13	55 52	27	42				
15	48	08.9		09.2	279	14.5 ¹²⁸	07.7 ⁷⁴	30	06	30	18 58	40	55	44	39				
16	63	09.1		10.1	293	46.3 ¹²⁸	-17 00.2 ⁷⁵	35	09	35	19 05	30	57	2	54	37			
17	78	09.3	-6	11.1	308	18.2 ¹²⁹	-16 52.7 ⁷⁵	40	18 13	18 40	19 13	13	20 59	3	05	35			
18	93	09.4	-6	12.0	322	50.1 ¹²⁹	-16 45.1 ⁷⁶	45	18 17	18 47	19 23	13	07 62	3	18	33			
19	108	09.6		13.0	337	22.0 ¹²⁹	37.4 ⁷⁷	50	22	18 56	36	12	52 66	35	28				
20	123	09.8		13.9	351	54.0 ¹³⁰	29.6 ⁷⁸	52	25	19 00	42	45	67	42	27				
21	138	09.9		14.9	6	25.9 ¹²⁹	21.7 ⁷⁹	54	28	04	49	37	69	3	50	26			
22	153	10.1		15.8	20	57.9 ¹³⁰	13.8 ⁷⁹	56	31	09	19 57	28	71	4	00	23			
23	168	10.3		16.8	35	29.9 ¹³⁰	-16 05.8 ⁸⁰	58	34	15	20 06	18	74	10	22				
24	183	10.5	-6	17.7	50	01.9 ¹³⁰	-15 57.7 ⁸¹	60 S	18 38	19 21	20 17	12	06 77	4	22	19			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 22 ^h 48 ^m 5		Mag: -3.9 PMG: 13 ^h 48 ^m			Mag: +1.8 PMG: 9 ^h 52 ^m			Mag: -2.7 PMG: 3 ^h 30 ^m			Mag: -0.1 PMG: 2 ^h 47 ^m							
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'			
0	16	55.8	153	14.2	-17	10.0	211	56.5	+7	46.5	307	14.4	+21	10.9	318	11.4	+18	00.0	
1	31	58.3	168	13.6		11.0	226	57.5		45.9	322	16.9		10.8	333	13.9		00.0	
2	47	00.8	183	13.1		12.0	241	58.5		45.3	337	19.5		10.8	348	16.5		00.0	
3	62	03.2	198	12.5		13.0	256	59.5		44.7	352	22.0		10.8	3	19.1	+18	00.0	
4	77	05.7	213	12.0		14.0	272	00.5		44.1	7	24.5		10.8	18	21.7	+17	59.9	
5	92	08.1	228	11.4	-17	15.0	287	01.5	+7	43.5	22	27.1	+21	10.8	33	24.2	+17	59.9	
6	107	10.6	243	10.9	-17	16.0	302	02.5	+7	42.9	37	29.6	+21	10.8	48	26.8	+17	59.9	
7	122	13.1	258	10.3		17.0	317	03.5		42.3	52	32.2		10.8	63	29.4		59.8	
8	137	15.5	273	09.8		18.0	332	04.5		41.7	67	34.7		10.8	78	32.0		59.8	
9	152	18.0	288	09.2		19.0	347	05.6		41.1	82	37.2		10.8	93	34.6		59.8	
10	167	20.5	303	08.7		20.0	2	06.6		40.5	97	39.8		10.7	108	37.1		59.8	
11	182	22.9	318	08.1	-17	21.0	17	07.6	+7	39.9	112	42.3	+21	10.7	123	39.7	+17	59.7	
12	197	25.4	333	07.5	-17	22.0	32	08.6	+7	39.3	127	44.9	+21	10.7	138	42.3	+17	59.7	
13	212	27.9	348	07.0		22.9	47	09.6		38.7	142	47.4		10.7	153	44.9		59.7	
14	227	30.3	3	06.4		23.9	62	10.6		38.1	157	50.0		10.7	168	47.4		59.6	
15	242	32.8	18	05.9		24.9	77	11.6		37.5	172	52.5		10.7	183	50.0		59.6	
16	257	35.2	33	05.3		25.9	92	12.6		36.9	187	55.0		10.7	198	52.6		59.6	
17	272	37.7	48	04.8	-17	26.9	107	13.6	+7	36.3	202	57.6	+21	10.6	213	55.2	+17	59.6	
18	287	40.2	63	04.2	-17	27.9	122	14.6	+7	35.7	218	00.1	+21	10.6	228	57.8	+17	59.5	
19	302	42.6	78	03.6		28.8	137	15.6		35.1	233	02.7		10.6	244	00.3		59.5	
20	317	45.1	93	03.1		29.8	152	16.6		34.5	248	05.2		10.6	259	02.9		59.5	
21	332	47.6	108	02.5		30.8	167	17.7		33.9	263	07.8		10.6	274	05.5		59.4	
22	347	50.0	123	02.0		31.8	182	18.7		33.4	278	10.3		10.6	289	08.1		59.4	
23	2	52.5	138	01.4		32.8	197	19.7		32.8	293	12.9		10.6	304	10.7		59.4	
24	17	55.0	153	00.8	-17	33.8	212	20.7	+7	32.2	308	15.4	+21	10.6	319	13.2	+17	59.4	
Dif	—		-6			-10	+10			-6			+25		0	+26			0

UT	SOL			O LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'0 PMG: 11 ^h 47 ^m 2			Edad: 11 ^d 2 PHE { SD: 14'9 PMG: 21 ^h 19 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m			
0	183	10.5	-6	17.7	50	01.9	-15 57.7	60 N	4 55	5 43	6 25	16 50	13	0 42	78			
1	198	10.6		18.7	64	33.9 ¹³⁰	49.5 ⁸²	58	57	43	22	42	16	0 53	75			
2	213	10.8		19.6	79	06.0 ¹³¹	41.3 ⁸²	56	4 59	42	19	35	18	1 02	72			
3	228	11.0		20.6	93	38.1 ¹³¹	32.9 ⁸⁴	54	5 01	42	17	29	20	10	70			
4	243	11.1		21.5	108	10.1 ¹³⁰	24.5 ⁸⁴	52	02	41	15	23	22	17	68			
5	258	11.3	-6	22.5	122	42.3 ¹³²	-15 16.1 ⁸⁴	50	5 03	5 40	6 13	16 18	24	1 23	67			
6	273	11.5	-6	23.4	137	14.4 ¹³¹	-15 07.5 ⁸⁶	45	5 05	5 39	6 08	16 06	28	1 37	63			
7	288	11.7		24.4	151	46.5 ¹³¹	-14 58.9 ⁸⁶	40	06	37	04	15 57	30	48	60			
8	303	11.8		25.3	166	18.7 ¹³²	50.2 ⁸⁷	35	06	36	6 01	49	33	1 58	57			
9	318	12.0		26.3	180	50.9 ¹³²	41.4 ⁸⁸	30	06	34	5 58	42	35	2 06	56			
10	333	12.2		27.2	195	23.1 ¹³²	32.6 ⁸⁸	20	05	31	53	29	39	20	52			
11	348	12.3	-6	28.2	209	55.3 ¹³²	-14 23.7 ⁸⁹	10 N	5 03	5 27	5 48	15 19	42	2 33	49			
12	3	12.5	-6	29.1	224	27.5 ¹³²	-14 14.7 ⁹⁰	0	4 59	5 23	5 44	15 08	46	2 45	45			
13	18	12.7		30.1	238	59.8 ¹³³	-14 05.6 ⁹¹	10 S	54	18	39	14 58	49	2 56	43			
14	33	12.8		31.0	253	32.0 ¹³²	-13 56.5 ⁹¹	20	46	12	34	47	52	3 09	39			
15	48	13.0		32.0	268	04.3 ¹³³	47.3 ⁹²	30	36	04	29	35	56	23	36			
16	63	13.2		32.9	282	36.6 ¹³³	38.0 ⁹³	35	29	5 00	25	27	59	31	34			
17	78	13.3	-6	33.8	297	08.9 ¹³³	-13 28.7 ⁹³	40	4 21	4 54	5 21	14 19	61	3 40	31			
18	93	13.5	-6	34.8	311	41.2 ¹³³	-13 19.3 ⁹⁴	45	4 11	4 47	5 17	14 09	64	3 51	28			
19	108	13.7		35.7	326	13.6 ¹³⁴	09.8 ⁹⁵	50	3 58	38	11	13 58	67	4 03	26			
20	123	13.8		36.7	340	45.9 ¹³³	-13 00.3 ⁹⁵	52	52	34	09	52	70	09	24			
21	138	14.0		37.6	355	18.3 ¹³⁴	-12 50.7 ⁹⁶	54	45	30	06	46	72	16	22			
22	153	14.2		38.6	9	50.7 ¹³⁴	41.0 ⁹⁷	56	37	24	03	39	74	23	20			
23	168	14.3		39.5	24	23.1 ¹³⁴	31.3 ⁹⁷	58	27	19	5 00	32	76	32	17			
24	183	14.5	-6	40.5	38	55.5 ¹³⁴	-12 21.5 ⁹⁸	60 S	3 17	4 12	4 56	13 23	79	4 41	14			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 22 ^h 44 ^m 6		Mag: -3.9 PMG: 13 ^h 48 ^m			Mag: +1.8 PMG: 9 ^h 50 ^m			Mag: -2.7 PMG: 3 ^h 26 ^m			Mag: -0.1 PMG: 2 ^h 43 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	17	55.0	153	00.8	-17	33.8	212	20.7	+7	32.2	308	15.4	+21	10.6	319	13.2	+17	59.4
1	32	57.4	168	00.3		34.7	227	21.7		31.6	323	18.0		10.5	334	15.8		59.3
2	47	59.9	182	59.7		35.7	242	22.7		31.0	338	20.5		10.5	349	18.4		59.3
3	63	02.4	197	59.1		36.7	257	23.7		30.4	353	23.1		10.5	4	21.0		59.3
4	78	04.8	212	58.6		37.7	272	24.7		29.8	8	25.6		10.5	19	23.6		59.2
5	93	07.3	227	58.0	-17	38.6	287	25.7	+7	29.2	23	28.2	+21	10.5	34	26.1	+17	59.2
6	108	09.7	242	57.4	-17	39.6	302	26.7	+7	28.6	38	30.7	+21	10.5	49	28.7	+17	59.2
7	123	12.2	257	56.9		40.6	317	27.7		28.0	53	33.3		10.5	64	31.3		59.1
8	138	14.7	272	56.3		41.6	332	28.8		27.4	68	35.8		10.5	79	33.9		59.1
9	153	17.1	287	55.7		42.5	347	29.8		26.8	83	38.4		10.4	94	36.5		59.1
10	168	19.6	302	55.2		43.5	2	30.8		26.2	98	40.9		10.4	109	39.1		59.1
11	183	22.1	317	54.6	-17	44.5	17	31.8	+7	25.6	113	43.5	+21	10.4	124	41.6	+17	59.0
12	198	24.5	332	54.0	-17	45.4	32	32.8	+7	25.0	128	46.0	+21	10.4	139	44.2	+17	59.0
13	213	27.0	347	53.5		46.4	47	33.8		24.4	143	48.6		10.4	154	46.8		59.0
14	228	29.5	2	52.9		47.4	62	34.8		23.8	158	51.1		10.4	169	49.4		58.9
15	243	31.9	17	52.3		48.3	77	35.8		23.2	173	53.7		10.4	184	52.0		58.9
16	258	34.4	32	51.8		49.3	92	36.8		22.6	188	56.2		10.3	199	54.5		58.9
17	273	36.9	47	51.2	-17	50.3	107	37.8	+7	22.0	203	58.8	+21	10.3	214	57.1	+17	58.9
18	288	39.3	62	50.6	-17	51.2	122	38.9	+7	21.4	219	01.3	+21	10.3	229	59.7	+17	58.8
19	303	41.8	77	50.0		52.2	137	39.9		20.8	234	03.9		10.3	245	02.3		58.8
20	318	44.2	92	49.5		53.2	152	40.9		20.2	249	06.5		10.3	260	04.9		58.8
21	333	46.7	107	48.9		54.1	167	41.9		19.6	264	09.0		10.3	275	07.5		58.7
22	348	49.2	122	48.3		55.1	182	42.9		19.0	279	11.6		10.3	290	10.0		58.7
23	3	51.6	137	47.8		56.1	197	43.9		18.4	294	14.1		10.2	305	12.6		58.7
24	18	54.1	152	47.2	-17	57.0	212	44.9	+7	17.8	309	16.7	+21	10.2	320	15.2	+17	58.6
Dif	—		-6		-10		+10		-6		+26		0		+26		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 9		Edad: 12 ^d 2 PHE { 4 ^h : 55'4 12 ^h : 55'6 20 ^h : 55'8 R°: 45 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	183	14.5	-6 40.5	38	55.5	-12 21.5	60 N	17 05	17 47	18 35	17 03 11	2 00 81		
1	198	14.7	41.4	53	27.9 ¹³⁴	11.6 ⁹⁹	58	08	48	33	16 58 14	08 77		
2	213	14.8	42.4	68	00.3 ¹³⁴	-12 01.7 ⁹⁹	56	11	49	31	53 16	14 75		
3	228	15.0	43.3	82	32.7 ¹³⁴	-11 51.7 ¹⁰⁰	54	14	49	30	49 18	20 72		
4	243	15.2	44.3	97	05.2 ¹³⁵	41.6 ¹⁰¹	52	16	50	29	45 20	25 70		
5	258	15.3	-6 45.2	111	37.7 ¹³⁵	-11 31.5 ¹⁰¹	50	17 19	17 51	18 28	16 42 22	2 30 68		
6	273	15.5	-6 46.1	126	10.1 ¹³⁴	-11 21.4 ¹⁰¹	45	17 24	17 53	18 27	16 34 26	2 40 64		
7	288	15.7	47.1	140	42.6 ¹³⁵	11.1 ¹⁰³	40	28	55	26	27 29	48 62		
8	303	15.8	48.0	155	15.1 ¹³⁵	-11 00.8 ¹⁰³	35	31	57	26	22 32	2 55 59		
9	318	16.0	49.0	169	47.6 ¹³⁵	-10 50.5 ¹⁰³	30	35	17 59	26	17 34	3 02 56		
10	333	16.2	49.9	184	20.1 ¹³⁵	40.1 ¹⁰⁴	20	40	18 02	28	08 39	12 52		
11	348	16.3	-6 50.9	198	52.6 ¹³⁵	-10 29.6 ¹⁰⁵	10 N	17 45	18 06	18 31	16 01 42	3 22 48		
12	3	16.5	-6 51.8	213	25.1 ¹³⁵	-10 19.1 ¹⁰⁵	0	17 50	18 11	18 35	15 54 45	3 30 46		
13	18	16.7	52.8	227	57.6 ¹³⁵	-10 08.5 ¹⁰⁶	10 S	17 55	16	41	47 49	39 42		
14	33	16.8	53.7	242	30.1 ¹³⁵	-9 57.9 ¹⁰⁶	20	18 01	23	18 49	39 53	48 39		
15	48	17.0	54.6	257	02.7 ¹³⁶	47.2 ¹⁰⁷	30	07	31	19 00	31 56	3 59 34		
16	63	17.2	55.6	271	35.2 ¹³⁵	36.4 ¹⁰⁸	35	11	36	07	26 59	4 05 32		
17	78	17.3	-6 56.5	286	07.8 ¹³⁶	-9 25.6 ¹⁰⁸	40	18 15	18 42	19 15	15 20 62	4 11 30		
18	93	17.5	-6 57.5	300	40.3 ¹³⁵	-9 14.8 ¹⁰⁸	45	18 20	18 50	19 26	15 13 66	4 19 27		
19	108	17.6	58.4	315	12.8 ¹³⁵	-9 03.9 ¹⁰⁹	50	26	18 59	39	05 70	29 22		
20	123	17.8	-6 59.4	329	45.4 ¹³⁶	-8 52.9 ¹¹⁰	52	28	19 03	46	15 02 71	33 21		
21	138	18.0	-7 00.3	344	17.9 ¹³⁵	41.9 ¹¹⁰	54	31	08	19 54	14 58 73	38 19		
22	153	18.1	01.3	358	50.5 ¹³⁶	30.9 ¹¹⁰	56	35	14	20 02	53 76	43 17		
23	168	18.3	02.2	373	23.0 ¹³⁵	19.8 ¹¹¹	58	38	20	12	48 78	49 14		
24	183	18.5	-7 03.1	387	55.6 ¹³⁶	-8 08.6 ¹¹²	60 S	18 43	19 27	20 23	14 42 81	4 55 12		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 22 ^h 40 ^m 7		Mag: -3.9 PMG: 13 ^h 49 ^m		Mag: +1.8 PMG: 9 ^h 48 ^m		Mag: -2.7 PMG: 3 ^h 22 ^m		Mag: -0.1 PMG: 2 ^h 39 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	18	54.1	152	47.2	212	44.9	309	16.7	320	15.2				
1	33	56.6	167	46.6	227	45.9	324	19.2	335	17.8				
2	48	59.0	182	46.0	242	46.9	339	21.8	350	20.4				
3	64	01.5	197	45.4	257	48.0	354	24.4	5	23.0				
4	79	04.0	212	44.9	272	49.0	9	26.9	20	25.6				
5	94	06.4	227	44.3	287	50.0	24	29.5	35	28.1				
6	109	08.9	242	43.7	302	51.0	39	32.0	50	30.7				
7	124	11.3	257	43.1	317	52.0	54	34.6	65	33.3				
8	139	13.8	272	42.6	332	53.0	69	37.1	80	35.9				
9	154	16.3	287	42.0	347	54.0	84	39.7	95	38.5				
10	169	18.7	302	41.4	2	55.0	99	42.3	110	41.1				
11	184	21.2	317	40.8	17	56.1	114	44.8	125	43.6				
12	199	23.7	332	40.2	32	57.1	129	47.4	140	46.2				
13	214	26.1	347	39.7	47	58.1	144	50.0	155	48.8				
14	229	28.6	2	39.1	62	59.1	159	52.5	170	51.4				
15	244	31.1	17	38.5	78	00.1	174	55.1	185	54.0				
16	259	33.5	32	37.9	93	01.1	189	57.6	200	56.6				
17	274	36.0	47	37.3	108	02.1	205	00.2	215	59.2				
18	289	38.5	62	36.7	123	03.1	220	02.8	231	01.8				
19	304	40.9	77	36.2	138	04.2	235	05.3	246	04.3				
20	319	43.4	92	35.6	153	05.2	250	07.9	261	06.9				
21	334	45.8	107	35.0	168	06.2	265	10.5	276	09.5				
22	349	48.3	122	34.4	183	07.2	280	13.0	291	12.1				
23	4	50.8	137	33.8	198	08.2	295	15.6	306	14.7				
24	19	53.2	152	33.2	213	09.2	310	18.2	321	17.3				
Dif	—		-6	-10	+10	-6	+26	0	+26	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 6			Edad: 13 ^d 2 PHE { 4 ^h : 56'0 12 ^h : 56'2 20 ^h : 56'4 Rº: 46 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	183	18.5	-7	03.1	27	55.6	-8	08.6	60 N	5 00	5 48	6 30	17 14	11	3 21	82
1	198	18.6		04.1	42	28.2 ¹³⁶	-7	57.4 ¹¹²	58	02	47	27	12	13	25	79
2	213	18.8		05.0	57	00.7 ¹³⁵		46.2 ¹¹²	56	03	46	23	09	16	29	76
3	228	18.9		06.0	71	33.3 ¹³⁶		34.9 ¹¹³	54	04	45	21	07	18	32	74
4	243	19.1		06.9	86	05.8 ¹³⁵		23.6 ¹¹³	52	05	44	18	05	20	35	73
5	258	19.3	-7	07.8	100	38.4 ¹³⁶	-7	12.2 ¹¹⁴	50	5 06	5 43	6 16	17 04	21	3 38	70
6	273	19.4	-7	08.8	115	10.9 ¹³⁵	-7	00.8 ¹¹⁴	45	5 07	5 41	6 11	17 00	25	3 44	67
7	288	19.6		09.7	129	43.4 ¹³⁵	-6	49.3 ¹¹⁵	40	08	39	06	16 56	29	50	62
8	303	19.7		10.7	144	16.0 ¹³⁶		37.8 ¹¹⁵	35	08	37	6 03	54	31	54	60
9	318	19.9		11.6	158	48.5 ¹³⁵		26.3 ¹¹⁵	30	08	35	5 59	51	34	3 58	57
10	333	20.1		12.5	173	21.0 ¹³⁵		14.7 ¹¹⁶	20	06	31	54	47	38	4 04	53
11	348	20.2	-7	13.5	187	53.5 ¹³⁵	-6	03.0 ¹¹⁷	10 N	5 03	5 27	5 48	16 43	42	4 10	49
12	3	20.4	-7	14.4	202	26.1 ¹³⁶	-5	51.4 ¹¹⁶	0	4 58	5 23	5 43	16 39	46	4 16	45
13	18	20.5		15.4	216	58.6 ¹³⁵		39.7 ¹¹⁷	10 S	52	17	38	36	49	21	42
14	33	20.7		16.3	231	31.0 ¹³⁴		27.9 ¹¹⁸	20	44	10	33	32	53	27	38
15	48	20.9		17.3	246	03.5 ¹³⁵		16.1 ¹¹⁸	30	33	5 02	26	27	58	33	34
16	63	21.0		18.2	260	36.0 ¹³⁵	-5	04.3 ¹¹⁸	35	26	4 57	22	25	60	37	31
17	78	21.2	-7	19.1	275	08.5 ¹³⁵	-4	52.5 ¹¹⁸	40	4 18	4 51	5 18	16 22	64	4 41	28
18	93	21.3	-7	20.1	289	40.9 ¹³⁴	-4	40.6 ¹¹⁹	45	4 07	4 43	5 13	16 19	67	4 46	25
19	108	21.5		21.0	304	13.4 ¹³⁵		28.7 ¹¹⁹	50	3 53	34	07	15	71	51	22
20	123	21.7		21.9	318	45.8 ¹³⁴		16.7 ¹²⁰	52	47	29	04	13	73	54	20
21	138	21.8		22.9	333	18.2 ¹³⁴	-4	04.8 ¹¹⁹	54	39	24	5 01	11	75	4 57	17
22	153	22.0		23.8	347	50.6 ¹³⁴	-3	52.7 ¹²¹	56	31	19	4 58	09	77	5 00	15
23	168	22.1		24.8	2	23.0 ¹³⁴		40.7 ¹²⁰	58	21	13	54	06	80	03	14
24	183	22.3	-7	25.7	16	55.4 ¹³⁴	-3	28.6 ¹²¹	60 S	3 09	4 06	4 50	16 03	83	5 07	11
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 22 ^h 36 ^m 7		Mag: -3.9 PMG: 13 ^h 50 ^m			Mag: +1.8 PMG: 9 ^h 47 ^m			Mag: -2.7 PMG: 3 ^h 18 ^m			Mag: -0.1 PMG: 2 ^h 34 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	19	53.2	152	33.2	-18	19.8	213	09.2	+7	03.4	310	18.2	+21	09.9	321	17.3
1	34	55.7	167	32.6		20.8	228	10.2		02.8	325	20.7		09.9	336	19.9
2	49	58.2	182	32.1		21.7	243	11.2		02.2	340	23.3		09.8	351	22.5
3	65	00.6	197	31.5		22.7	258	12.3		01.6	355	25.8		09.8	6	25.0
4	80	03.1	212	30.9		23.6	273	13.3		01.0	10	28.4		09.8	21	27.6
5	95	05.6	227	30.3	-18	24.5	288	14.3	+7	00.4	25	31.0	+21	09.8	36	30.2
6	110	08.0	242	29.7	-18	25.5	303	15.3	+6	59.8	40	33.6	+21	09.8	51	32.8
7	125	10.5	257	29.1		26.4	318	16.3		59.2	55	36.1		09.8	66	35.4
8	140	12.9	272	28.5		27.4	333	17.3		58.6	70	38.7		09.7	81	38.0
9	155	15.4	287	27.9		28.3	348	18.3		58.0	85	41.3		09.7	96	40.6
10	170	17.9	302	27.3		29.2	3	19.4		57.4	100	43.8		09.7	111	43.2
11	185	20.3	317	26.7	-18	30.2	18	20.4	+6	56.8	115	46.4	+21	09.7	126	45.8
12	200	22.8	332	26.2	-18	31.1	33	21.4	+6	56.2	130	49.0	+21	09.7	141	48.3
13	215	25.3	347	25.6		32.0	48	22.4		55.6	145	51.5		09.7	156	50.9
14	230	27.7	2	25.0		33.0	63	23.4		55.0	160	54.1		09.7	171	53.5
15	245	30.2	17	24.4		33.9	78	24.4		54.4	175	56.7		09.6	186	56.1
16	260	32.7	32	23.8		34.8	93	25.4		53.8	190	59.2		09.6	201	58.7
17	275	35.1	47	23.2	-18	35.7	108	26.5	+6	53.2	206	01.8	+21	09.6	217	01.3
18	290	37.6	62	22.6	-18	36.7	123	27.5	+6	52.6	221	04.4	+21	09.6	232	03.9
19	305	40.1	77	22.0		37.6	138	28.5		52.0	236	07.0		09.6	247	06.5
20	320	42.5	92	21.4		38.5	153	29.5		51.4	251	09.5		09.6	262	09.1
21	335	45.0	107	20.8		39.4	168	30.5		50.8	266	12.1		09.5	277	11.7
22	350	47.4	122	20.2		40.4	183	31.5		50.2	281	14.7		09.5	292	14.3
23	5	49.9	137	19.6		41.3	198	32.6		49.6	296	17.3		09.5	307	16.8
24	20	52.4	152	19.0	-18	42.2	213	33.6	+6	49.0	311	19.8	+21	09.5	322	19.4
Dif	—		-6	-9			+10	-6			+26	0			+26	0

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 0 PMG: 11 ^h 46 ^m 4			Edad: 14 ^d 2 PHE { SD: 15 ^h 4 PMG: 23 ^h 36 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	h m	
0	183	22.3	-7 25.7	16	55.4	-3 28.6	60 N	16 59	17 41	18 29	17 25 11	4 43 83		
1	198	22.4	26.6	31	27.8 ¹³⁴	16.5 ¹²¹	58	17 03	42	28	25 14	44 81		
2	213	22.6	27.6	46	00.1 ¹³³	-3 04.4 ¹²¹	56	06	44	26	25 16	45 79		
3	228	22.7	28.5	60	32.4 ¹³³	-2 52.3 ¹²¹	54	09	45	26	25 18	46 76		
4	243	22.9	29.5	75	04.7 ¹³³	40.1 ¹²²	52	12	46	25	25 20	48 73		
5	258	23.1	-7 30.4	89	37.0 ¹³³	-2 27.9 ¹²²	50	17 15	17 47	18 24	17 25 22	4 48 72		
6	273	23.2	-7 31.3	104	09.3 ¹³³	-2 15.7 ¹²²	45	17 20	17 50	18 23	17 25 26	4 51 67		
7	288	23.4	32.3	118	41.5 ¹³²	-2 03.4 ¹²³	40	25	52	23	25 29	52 65		
8	303	23.5	33.2	133	13.8 ¹³³	-1 51.2 ¹²²	35	29	54	23	25 32	54 61		
9	318	23.7	34.1	147	46.0 ¹³²	38.9 ¹²³	30	32	17 56	24	25 35	55 59		
10	333	23.8	35.1	162	18.2 ¹³²	26.6 ¹²³	20	39	18 01	26	25 39	57 54		
11	348	24.0	-7 36.0	176	50.3 ¹³¹	-1 14.2 ¹²⁴	10 N	17 44	18 05	18 30	17 25 43	4 59 50		
12	3	24.1	-7 36.9	191	22.5 ¹³²	-1 01.9 ¹²³	0	17 50	18 11	18 35	17 25 47	5 01 46		
13	18	24.3	37.9	205	54.6 ¹³¹	-0 49.5 ¹²⁴	10 S	17 55	16	41	25 51	03 42		
14	33	24.5	38.8	220	26.7 ¹³¹	37.2 ¹²³	20	18 01	24	18 50	25 55	05 38		
15	48	24.6	39.8	234	58.8 ¹³¹	24.8 ¹²⁴	30	08	32	19 01	25 60	07 34		
16	63	24.8	40.7	249	30.8 ¹³⁰	-0 12.4 ¹²⁴	35	12	38	09	25 63	08 32		
17	78	24.9	-7 41.6	264	02.8 ¹³⁰	+0 00.0 ¹²⁴	40	18 17	18 45	19 18	17 26 65	5 09 29		
18	93	25.1	-7 42.6	278	34.8 ¹³⁰	+0 12.5 ¹²⁵	45	18 22	18 53	19 29	17 26 68	5 11 25		
19	108	25.2	43.5	293	06.8 ¹³⁰	24.9 ¹²⁴	50	29	19 02	43	26 73	13 21		
20	123	25.4	44.4	307	38.7 ¹²⁹	37.4 ¹²⁵	52	32	07	50	26 75	14 19		
21	138	25.5	45.4	322	10.6 ¹²⁹	+0 49.8 ¹²⁴	54	35	12	19 58	26 77	14 18		
22	153	25.7	46.3	336	42.5 ¹²⁹	+1 02.3 ¹²⁵	56	39	18	20 07	26 80	15 16		
23	168	25.8	47.2	351	14.3 ¹²⁸	14.7 ¹²⁴	58	43	25	18	26 82	17 13		
24	183	26.0	-7 48.2	5	46.1 ¹²⁸	+1 27.2 ¹²⁵	60 S	18 48	19 32	20 30	17 26 85	5 18 10		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 22 ^h 32 ^m 8		Mag: -3.9 PMG: 13 ^h 51 ^m		Mag: +1.8 PMG: 9 ^h 45 ^m		Mag: -2.7 PMG: 3 ^h 14 ^m		Mag: -0.1 PMG: 2 ^h 30 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	20	52.4	152	19.0	-18	42.2	213	33.6	+6	49.0	
1	35	54.8	167	18.4	43.1	228	34.6	48.4	326	22.4	
2	50	57.3	182	17.8	44.1	243	35.6	47.8	341	25.0	
3	65	59.8	197	17.2	45.0	258	36.6	47.2	356	27.6	
4	81	02.2	212	16.6	45.9	273	37.6	46.6	11	30.1	
5	96	04.7	227	16.0	-18	46.8	288	38.6	+6	46.0	
6	111	07.2	242	15.4	-18	47.7	303	39.7	+6	45.4	
7	126	09.6	257	14.8	48.7	318	40.7	44.8	56	37.9	
8	141	12.1	272	14.2	49.6	333	41.7	44.2	71	40.4	
9	156	14.5	287	13.6	50.5	348	42.7	43.6	86	43.0	
10	171	17.0	302	13.0	51.4	3	43.7	43.0	101	45.6	
11	186	19.5	317	12.4	-18	52.3	18	44.7	+6	42.4	
12	201	21.9	332	11.8	-18	53.2	33	45.8	+6	41.8	
13	216	24.4	347	11.2	54.1	48	46.8	41.2	146	53.3	
14	231	26.9	2	10.6	55.0	63	47.8	40.6	161	55.9	
15	246	29.3	17	10.0	56.0	78	48.8	40.0	176	58.5	
16	261	31.8	32	09.4	56.9	93	49.8	39.4	192	01.1	
17	276	34.3	47	08.7	-18	57.8	108	50.8	+6	38.8	
18	291	36.7	62	08.1	-18	58.7	123	51.9	+6	38.2	
19	306	39.2	77	07.5	-18	59.6	138	52.9	37.6	237	08.8
20	321	41.7	92	06.9	-19	00.5	153	53.9	37.0	252	11.4
21	336	44.1	107	06.3	01.4	168	54.9	36.4	267	14.0	
22	351	46.6	122	05.7	02.3	183	55.9	35.8	282	16.6	
23	6	49.0	137	05.1	03.2	198	56.9	35.2	297	19.1	
24	21	51.5	152	04.5	-19	04.1	213	58.0	+6	34.6	
Dif	—		-6		-9		+10		-6		
									+26		
									0		
										+26	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna								
	SD: 16'0 PMG: 11 ^h 46 ^m 2			Edad: 15 ^d 2 PHE { 4 ^h : 57'2 12 ^h : 57'4 20 ^h : 57'6 R°: ***m																	
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°						
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m						
0	183	26.0	-7	48.2	5	46.1	+1 27.2	60 N	5 05	5 53	6 35	17 36	12	6 06	86						
1	198	26.1		49.1	20	17.9 ¹²⁸	39.7 ¹²⁵	58	06	51	31	39	15	05	83						
2	213	26.3		50.0	34	49.6 ¹²⁷	+1 52.2 ¹²⁵	56	07	50	28	41	18	04	80						
3	228	26.4		51.0	49	21.3 ¹²⁷	+2 04.7 ¹²⁵	54	08	49	24	43	20	02	78						
4	243	26.6		51.9	63	53.0 ¹²⁷	17.2 ¹²⁵	52	09	48	22	45	22	01	76						
5	258	26.7	-7	52.8	78	24.7 ¹²⁷	+2 29.7 ¹²⁵	50	5 09	5 46	6 19	17 47	24	6 00	74						
6	273	26.9	-7	53.8	92	56.3 ¹²⁶	+2 42.1 ¹²⁴	45	5 10	5 44	6 13	17 51	28	5 58	70						
7	288	27.0		54.7	107	27.8 ¹²⁵	+2 54.6 ¹²⁵	40	10	41	09	54	32	57	65						
8	303	27.2		55.6	121	59.3 ¹²⁵	+3 07.1 ¹²⁵	35	10	39	04	17 57	34	55	63						
9	318	27.3		56.6	136	30.8 ¹²⁵	19.6 ¹²⁵	30	09	37	6 01	18 00	37	54	60						
10	333	27.5		57.5	151	02.3 ¹²⁵	32.1 ¹²⁵	20	06	32	5 54	04	42	51	56						
11	348	27.6	-7	58.4	165	33.7 ¹²⁴	+3 44.5 ¹²⁴	10 N	5 03	5 27	5 48	18 08	46	5 49	52						
12	3	27.8	-7	59.4	180	05.1 ¹²⁴	+3 57.0 ¹²⁵	0	4 58	5 22	5 43	18 12	49	5 47	48						
13	18	27.9	-8	00.3	194	36.4 ¹²³	+4 09.4 ¹²⁴	10 S	51	16	37	16	53	45	44						
14	33	28.1		01.2	209	07.7 ¹²³	21.9 ¹²⁵	20	43	09	31	20	57	43	40						
15	48	28.2		02.1	223	38.9 ¹²²	34.3 ¹²⁴	30	31	5 00	24	25	61	41	36						
16	63	28.4		03.1	238	10.1 ¹²²	46.7 ¹²⁴	35	24	4 54	20	28	63	40	33						
17	78	28.5	-8	04.0	252	41.3 ¹²²	+4 59.1 ¹²⁴	40	4 14	4 47	5 15	18 31	67	5 38	30						
18	93	28.7	-8	04.9	267	12.4 ¹²¹	+5 11.5 ¹²⁴	45	4 03	4 39	5 10	18 34	71	5 36	27						
19	108	28.8		05.9	281	43.4 ¹²⁰	23.9 ¹²⁴	50	3 49	29	03	39	75	34	23						
20	123	29.0		06.8	296	14.5 ¹²¹	36.3 ¹²⁴	52	42	25	5 00	41	77	33	21						
21	138	29.1		07.7	310	45.4 ¹¹⁹	+5 48.6 ¹²³	54	34	19	4 56	43	79	32	19						
22	153	29.3		08.7	325	16.4 ¹²⁰	+6 00.9 ¹²³	56	24	14	53	46	81	31	16						
23	168	29.4		09.6	339	47.2 ¹¹⁸	13.2 ¹²³	58	14	4 07	49	48	85	30	14						
24	183	29.5	-8	10.5	354	18.1 ¹¹⁹	+6 25.5 ¹²³	60 S	3 01	3 59	4 44	18 51	88	5 28	11						
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO									
	PMG: 22 ^h 28 ^m 9		Mag: -3.9 PMG: 13 ^h 52 ^m			Mag: +1.8 PMG: 9 ^h 43 ^m			Mag: -2.7 PMG: 3 ^h 10 ^m			Mag: -0.1 PMG: 2 ^h 26 ^m									
	hG ♈		hG ♀			hG ♂			hG ♃			hG ♄									
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'					
0	21	51.5	152	04.5	-19	04.1	213	58.0	+6	34.6	312	21.7	+21	09.1	323	21.7	+17	56.4			
1	36	54.0	167	03.9		05.0	228	59.0		34.0	327	24.3		09.1	338	24.3		56.4			
2	51	56.4	182	03.3		05.9	244	00.0		33.4	342	26.9		09.0	353	26.9		56.4			
3	66	58.9	197	02.6		06.8	259	01.0		32.8	357	29.5		09.0	8	29.5		56.3			
4	82	01.4	212	02.0		07.7	274	02.0		32.2	12	32.1		09.0	23	32.1		56.3			
5	97	03.8	227	01.4	-19	08.6	289	03.0	+6	31.6	27	34.6	+21	09.0	38	34.7	+17	56.3			
6	112	06.3	242	00.8	-19	09.5	304	04.1	+6	31.0	42	37.2	+21	09.0	53	37.3	+17	56.3			
7	127	08.8	257	00.2		10.4	319	05.1		30.4	57	39.8		09.0	68	39.9		56.2			
8	142	11.2	271	59.6		11.3	334	06.1		29.8	72	42.4		08.9	83	42.5		56.2			
9	157	13.7	286	59.0		12.2	349	07.1		29.2	87	45.0		08.9	98	45.1		56.2			
10	172	16.2	301	58.3		13.1	4	08.1		28.6	102	47.6		08.9	113	47.7		56.1			
11	187	18.6	316	57.7	-19	14.0	19	09.2	+6	28.0	117	50.2	+21	08.9	128	50.3	+17	56.1			
12	202	21.1	331	57.1	-19	14.9	34	10.2	+6	27.4	132	52.7	+21	08.9	143	52.8	+17	56.1			
13	217	23.5	346	56.5		15.8	49	11.2		26.8	147	55.3		08.9	158	55.4		56.0			
14	232	26.0	1	55.9		16.7	64	12.2		26.2	162	57.9		08.8	173	58.0		56.0			
15	247	28.5	16	55.3		17.6	79	13.2		25.6	178	00.5		08.8	189	00.6		56.0			
16	262	30.9	31	54.6		18.4	94	14.2		24.9	193	03.1		08.8	204	03.2		55.9			
17	277	33.4	46	54.0	-19	19.3	109	15.3	+6	24.3	208	05.7	+21	08.8	219	05.8	+17	55.9			
18	292	35.9	61	53.4	-19	20.2	124	16.3	+6	23.7	223	08.3	+21	08.8	234	08.4	+17	55.9			
19	307	38.3	76	52.8		21.1	139	17.3		23.1	238	10.9		08.7	249	11.0		55.8			
20	322	40.8	91	52.2		22.0	154	18.3		22.5	253	13.4		08.7	264	13.6		55.8			
21	337	43.3	106	51.5		22.9	169	19.3		21.9	268	16.0		08.7	279	16.2		55.8			
22	352	45.7	121	50.9		23.8	184	20.4		21.3	283	18.6		08.7	294	18.8		55.7			
23	7	48.2	136	50.3		24.6	199	21.4		20.7	298	21.2		08.7	309	21.4		55.7			
24	22	50.6	151	49.7	-19	25.5	214	22.4	+6	20.1	313	23.8	+21	08.6	324	24.0	+17	55.7			
Dif	—		-6			-9	+10			-6			+26			0			+26		

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 16:0 PMG: 11 ^h 45 ^m 9			Edad: 16 ^d 2 PHE { 4 ^h : 57:7 12 ^h : 57:9 20 ^h : 58:1 PMG: 0 ^h 24 ^m R°: 49 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	
0	183	29.5	-8 10.5	354	18.1	+6 25.5	60 N	16 53	17 35	18 23	17 48	15	7 32	89			
1	198	29.7	11.4	8	48.8 ¹¹⁷	37.8 ¹²³	58	16 57	37	22	54	18	28	85			
2	213	29.8	12.4	23	19.6 ¹¹⁸	+6 50.0 ¹²²	56	17 01	39	22	17 59	21	24	82			
3	228	30.0	13.3	37	50.3 ¹¹⁷	+7 02.2 ¹²²	54	05	40	21	18 03	24	20	80			
4	243	30.1	14.2	52	20.9 ¹¹⁶	14.4 ¹²²	52	08	42	21	07	26	17	78			
5	258	30.3	-8 15.2	66	51.4 ¹¹⁵	+7 26.5 ¹²¹	50	17 10	17 43	18 20	18 11	27	7 14	76			
6	273	30.4	-8 16.1	81	22.0 ¹¹⁶	+7 38.7 ¹²²	45	17 17	17 46	18 20	18 19	31	7 08	71			
7	288	30.6	17.0	95	52.4 ¹¹⁴	+7 50.8 ¹²¹	40	22	49	20	26	34	7 02	68			
8	303	30.7	17.9	110	22.9 ¹¹⁵	+8 02.8 ¹²⁰	35	26	52	21	31	38	6 58	65			
9	318	30.8	18.9	124	53.2 ¹¹³	14.9 ¹²¹	30	30	54	22	37	40	54	62			
10	333	31.0	19.8	139	23.5 ¹¹³	26.9 ¹²⁰	20	37	17 59	25	46	44	47	58			
11	348	31.1	-8 20.7	153	53.8 ¹¹³	+8 38.8 ¹¹⁹	10 N	17 43	18 04	18 29	18 54	48	6 41	54			
12	3	31.3	-8 21.6	168	24.0 ¹¹²	+8 50.8 ¹²⁰	0	17 49	18 10	18 34	19 01	52	6 35	50			
13	18	31.4	22.6	182	54.1 ¹¹¹	+9 02.6 ¹¹⁸	10 S	17 55	17	41	09	55	29	47			
14	33	31.6	23.5	197	24.2 ¹¹¹	14.5 ¹¹⁹	20	18 02	24	18 50	17	58	23	43			
15	48	31.7	24.4	211	54.2 ¹¹⁰	26.3 ¹¹⁸	30	09	34	19 03	26	63	17	38			
16	63	31.8	25.4	226	24.1 ¹⁰⁹	38.1 ¹¹⁸	35	14	40	10	31	66	13	35			
17	78	32.0	-8 26.3	240	54.0 ¹⁰⁹	+9 49.8 ¹¹⁷	40	18 19	18 47	19 20	19 38	68	6 08	33			
18	93	32.1	-8 27.2	255	23.9 ¹⁰⁹	+10 01.5 ¹¹⁷	45	18 25	18 55	19 32	19 45	72	6 03	29			
19	108	32.3	28.1	269	53.7 ¹⁰⁸	13.1 ¹¹⁶	50	32	19 06	47	54	76	5 57	25			
20	123	32.4	29.1	284	23.4 ¹⁰⁷	24.7 ¹¹⁶	52	35	11	19 54	19 58	78	54	23			
21	138	32.6	30.0	298	53.0 ¹⁰⁶	36.3 ¹¹⁶	54	39	16	20 03	20 02	81	51	21			
22	153	32.7	30.9	313	22.6 ¹⁰⁶	47.8 ¹¹⁵	56	43	23	13	07	83	47	19			
23	168	32.8	31.8	327	52.2 ¹⁰⁶	+10 59.2 ¹¹⁴	58	48	30	24	13	86	44	16			
24	183	33.0	-8 32.8	342	21.6 ¹⁰⁴	+11 10.6 ¹¹⁴	60 S	18 53	19 38	20 37	20 19	89	5 39	14			

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 22 ^h 24 ^m 9		Mag: -3.9 PMG: 13 ^h 53 ^m		Mag: +1.8 PMG: 9 ^h 42 ^m		Mag: -2.7 PMG: 3 ^h 06 ^m		Mag: -0.2 PMG: 2 ^h 22 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	22	50.6	151	49.7	-19	25.5	214	22.4	+6	20.1	313	23.8	+21	08.6	324	24.0	+17	55.7
1	37	53.1	166	49.0		26.4	229	23.4		19.5	328	26.4		08.6	339	26.6		55.6
2	52	55.6	181	48.4		27.3	244	24.4		18.9	343	29.0		08.6	354	29.2		55.6
3	67	58.0	196	47.8		28.2	259	25.5		18.3	358	31.6		08.6	9	31.8		55.6
4	83	00.5	211	47.2		29.0	274	26.5		17.7	13	34.2		08.6	24	34.4		55.5
5	98	03.0	226	46.5	-19	29.9	289	27.5	+6	17.1	28	36.8	+21	08.6	39	37.0	+17	55.5
6	113	05.4	241	45.9	-19	30.8	304	28.5	+6	16.5	43	39.4	+21	08.5	54	39.6	+17	55.5
7	128	07.9	256	45.3		31.7	319	29.5		15.9	58	42.0		08.5	69	42.2		55.4
8	143	10.4	271	44.7		32.6	334	30.6		15.3	73	44.6		08.5	84	44.8		55.4
9	158	12.8	286	44.0		33.4	349	31.6		14.7	88	47.2		08.5	99	47.4		55.4
10	173	15.3	301	43.4		34.3	4	32.6		14.1	103	49.7		08.5	114	50.0		55.4
11	188	17.8	316	42.8	-19	35.2	19	33.6	+6	13.5	118	52.3	+21	08.4	129	52.6	+17	55.3
12	203	20.2	331	42.1	-19	36.0	34	34.6	+6	12.9	133	54.9	+21	08.4	144	55.2	+17	55.3
13	218	22.7	346	41.5		36.9	49	35.7		12.3	148	57.5		08.4	159	57.8		55.3
14	233	25.1	1	40.9		37.8	64	36.7		11.7	164	00.1		08.4	175	00.4		55.2
15	248	27.6	16	40.3		38.7	79	37.7		11.1	179	02.7		08.4	190	03.0		55.2
16	263	30.1	31	39.6		39.5	94	38.7		10.5	194	05.3		08.3	205	05.6		55.2
17	278	32.5	46	39.0	-19	40.4	109	39.7	+6	09.9	209	07.9	+21	08.3	220	08.2	+17	55.1
18	293	35.0	61	38.4	-19	41.3	124	40.8	+6	09.3	224	10.5	+21	08.3	235	10.8	+17	55.1
19	308	37.5	76	37.7		42.1	139	41.8		08.7	239	13.1		08.3	250	13.4		55.1
20	323	39.9	91	37.1		43.0	154	42.8		08.1	254	15.7		08.3	265	16.0		55.0
21	338	42.4	106	36.5		43.9	169	43.8		07.4	269	18.3		08.2	280	18.6		55.0
22	353	44.9	121	35.8		44.7	184	44.8		06.8	284	20.9		08.2	295	21.3		55.0
23	8	47.3	136	35.2		45.6	199	45.9		06.2	299	23.5		08.2	310	23.9		54.9
24	23	49.8	151	34.6	-19	46.4	214	46.9	+6	05.6	314	26.1	+21	08.2	325	26.5	+17	54.9
Dif	—		-6	-9		+10	-6			+26	0			+26				

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'0			Edad: 17 ^d 2 PHE { 4 ^h : 58'2 12 ^h : 58'4 20 ^h : 58'5													
	PMG: 11 ^h 45 ^m 7			SD: 15'8 PMG: 1 ^h 13 ^m R°: 52 ^m													
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	°	'	°	h	m	h	m	h	m	h	m
0	183	33.0	-8 32.8	342	21.6	+11 10.6			60 N	5 09	5 58	6 40	18 03	21	9 01	89	
1	198	33.1		356	51.1 ¹⁰⁵		21.9 ¹¹³		58	10	56	36	12 24		8 53	86	
2	213	33.3		11	20.4 ¹⁰³		33.2 ¹¹³		56	11	54	32	20 26		46	83	
3	228	33.4		25	49.7 ¹⁰³		44.5 ¹¹³		54	11	52	28	27 29		40	81	
4	243	33.5		40	18.9 ¹⁰²	+11 55.6 ¹¹¹			52	12	51	25	33 31		35	78	
5	258	33.7	-8 37.4	54	48.1 ¹⁰²	+12 06.8 ¹¹²			50	5 12	5 50	6 22	18 38	33	8 30	76	
6	273	33.8	-8 38.3	69	17.1 ¹⁰⁰	+12 17.8 ¹¹⁰			45	5 12	5 46	6 16	18 50	37	8 19	72	
7	288	33.9		83	46.2 ¹⁰¹		28.8 ¹¹⁰		40	12	43	11	19 00	40	10	69	
8	303	34.1		98	15.1 ⁹⁹		39.7 ¹⁰⁹		35	11	41	06	09 42		8 03	66	
9	318	34.2		112	44.0 ⁹⁹	+12 50.6 ¹⁰⁹			30	10	38	6 02	17 44		7 56	64	
10	333	34.4		127	12.8 ⁹⁸	+13 01.4 ¹⁰⁸			20	07	33	5 55	30 48		45	59	
11	348	34.5	-8 42.9	141	41.6 ⁹⁸	+13 12.1 ¹⁰⁷			10 N	5 03	5 27	5 48	19 42	51	7 35	56	
12	3	34.6	-8 43.8	156	10.3 ⁹⁷	+13 22.8 ¹⁰⁷			0	4 57	5 21	5 42	19 53	54	7 25	53	
13	18	34.8		170	38.9 ⁹⁶		33.4 ¹⁰⁶		10 S	50	15	36	20 04	57	16	49	
14	33	34.9		185	07.4 ⁹⁵		44.0 ¹⁰⁶		20	41	5 07	29	15 61		7 06	46	
15	48	35.0		199	35.9 ⁹⁵	+13 54.4 ¹⁰⁴			30	29	4 57	22	29 64		6 55	42	
16	63	35.2		214	04.3 ⁹⁴	+14 04.8 ¹⁰⁴			35	21	51	17	37 67		48	40	
17	78	35.3	-8 48.4	228	32.7 ⁹⁴	+14 15.1 ¹⁰³			40	4 11	4 44	5 12	20 46	69	6 41	37	
18	93	35.5	-8 49.4	243	01.0 ⁹³	+14 25.4 ¹⁰³			45	3 59	4 36	5 06	20 57	72	6 32	34	
19	108	35.6		257	29.2 ⁹²		35.5 ¹⁰¹		50	44	25	4 59	21 10	76	22	30	
20	123	35.7		271	57.3 ⁹¹		45.6 ¹⁰¹		52	36	20	55	16 78		17	28	
21	138	35.9		286	25.4 ⁹¹	+14 55.6 ¹⁰⁰			54	28	14	52	23 80		12	26	
22	153	36.0		300	53.4 ⁹⁰	+15 05.5 ⁹⁹			56	18	08	48	30 83		06	24	
23	168	36.1		315	21.3 ⁸⁹		15.4 ⁹⁹		58	3 07	4 01	43	39 85		6 00	21	
24	183	36.3	-8 54.9	329	49.2 ⁸⁹	+15 25.1 ⁹⁷			60 S	2 54	3 53	4 38	21 48	90	5 53	17	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO								
	PMG 22 ^h 21 ^m 0		Mag: -3.9 PMG: 13 ^h 54 ^m			Mag: +1.8 PMG: 9 ^h 40 ^m			Mag: -2.7 PMG: 3 ^h 02 ^m			Mag: -0.2 PMG: 2 ^h 18 ^m								
	hG ♈		hG ♀			hG ♂			hG ♃			hG ♄								
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'			
0	23	49.8	151 34.6	-19 46.4		214 46.9	+6 05.6		314 26.1	+21 08.2		325 26.5	+17 54.9							
1	38	52.2	166 33.9		47.3	229 47.9		05.0	329 28.7		08.2	340 29.1		54.9						
2	53	54.7	181 33.3		48.2	244 48.9		04.4	344 31.3		08.2	355 31.7		54.8						
3	68	57.2	196 32.6		49.0	259 49.9		03.8	359 33.9		08.1	10 34.3		54.8						
4	83	59.6	211 32.0		49.9	274 51.0		03.2	14 36.5		08.1	25 36.9		54.8						
5	99	02.1	226 31.4	-19 50.7		289 52.0	+6 02.6		29 39.1	+21 08.1		40 39.5	+17 54.7							
6	114	04.6	241 30.7	-19 51.6		304 53.0	+6 02.0		44 41.7	+21 08.1		55 42.1	+17 54.7							
7	129	07.0	256 30.1		52.4	319 54.0		01.4	59 44.3		08.1	70 44.7		54.7						
8	144	09.5	271 29.5		53.3	334 55.1		00.8	74 46.9		08.0	85 47.3		54.6						
9	159	12.0	286 28.8		54.2	349 56.1	+6 00.2		89 49.5		08.0	100 49.9		54.6						
10	174	14.4	301 28.2		55.0	4 57.1	+5 59.6		104 52.1		08.0	115 52.5		54.6						
11	189	16.9	316 27.5	-19 55.9		19 58.1	+5 59.0		119 54.7	+21 08.0		130 55.1	+17 54.5							
12	204	19.4	331 26.9	-19 56.7		34 59.1	+5 58.4		134 57.3	+21 08.0		145 57.7	+17 54.5							
13	219	21.8	346 26.2		57.6	50 00.2		57.8	149 59.9		07.9	161 00.3		54.5						
14	234	24.3	1 25.6		58.4	65 01.2		57.2	165 02.5		07.9	176 02.9		54.4						
15	249	26.7	16 25.0	-19 59.3		80 02.2		56.6	180 05.2		07.9	191 05.5		54.4						
16	264	29.2	31 24.3	-20 00.1		95 03.2		56.0	195 07.8		07.9	206 08.1		54.4						
17	279	31.7	46 23.7	-20 00.9		110 04.3	+5 55.4		210 10.4	+21 07.8		221 10.7	+17 54.3							
18	294	34.1	61 23.0	-20 01.8		125 05.3	+5 54.8		225 13.0	+21 07.8		236 13.3	+17 54.3							
19	309	36.6	76 22.4		02.6	140 06.3		54.1	240 15.6		07.8	251 15.9		54.3						
20	324	39.1	91 21.7		03.5	155 07.3		53.5	255 18.2		07.8	266 18.5		54.2						
21	339	41.5	106 21.1		04.3	170 08.3		52.9	270 20.8		07.8	281 21.2		54.2						
22	354	44.0	121 20.4		05.2	185 09.4		52.3	285 23.4		07.7	296 23.8		54.2						
23	9	46.5	136 19.8		06.0	200 10.4		51.7	300 26.0		07.7	311 26.4		54.1						
24	24	48.9	151 19.2	-20 06.8		215 11.4	+5 51.1		315 28.6	+21 07.7		326 29.0	+17 54.1							
Dif	—		-6			-9			+10			-6			+26			0		

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16'0			Edad: 18 ^d 2 PHE { 4 ^h : 58'6 12 ^h : 58'7 20 ^h : 58'8	SD: 16'0				Civil		Náutico		Hora R°		
	PMG: 11 ^h 45 ^m 5				PMG: 2 ^h 05 ^m R°: 55 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif								
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	183	36.3	-8 54.9	329	49.2	+15 25.1	88	60 N	16 47	17 30	18 18	18 24 30	10 30 87		
1	198	36.4	55.8	344	17.0	34.8	97	58	52	32	17	36 33	19 83		
2	213	36.5	56.7	358	44.7	44.4	96	56	16 56	34	17	46 36	09 81		
3	228	36.7	57.6	13	12.4	+15 53.9	95	54	17 00	36	17	18 56 37	10 01 78		
4	243	36.8	58.5	27	40.0	+16 03.3	94	52	03	37	16	19 04 39	9 53 76		
5	258	36.9	-8 59.5	42	07.5	+16 12.6	93	50	17 06	17 39	18 16	19 11 41	9 46 75		
6	273	37.1	-9 00.4	56	34.9	+16 21.8	92	45	17 13	17 43	18 17	19 27 44	9 31 71		
7	288	37.2	01.3	71	02.3	31.0	90	40	19	46	17	40 46	19 69		
8	303	37.3	02.2	85	29.6	40.0	90	35	24	49	18	19 51 49	09 66		
9	318	37.5	03.1	99	56.9	49.0	90	30	28	52	20	20 01 50	9 00 64		
10	333	37.6	04.1	114	24.0	+16 57.8	88	20	36	17 58	23	18 53	8 44 61		
11	348	37.7	-9 05.0	128	51.2	+17 06.6	88	10 N	17 42	18 04	18 28	20 33 55	8 31 58		
12	3	37.9	-9 05.9	143	18.2	+17 15.2	86	0	17 49	18 10	18 34	20 47 57	8 18 56		
13	18	38.0	06.8	157	45.2	23.8	86	10 S	17 55	17	42	21 01 59	8 05 54		
14	33	38.1	07.7	172	12.1	32.2	84	20	18 03	25	18 51	16 62	7 52 50		
15	48	38.2	08.6	186	38.9	40.6	84	30	11	35	19 04	33 65	37 47		
16	63	38.4	09.6	201	05.7	48.8	82	35	16	42	12	44 65	28 45		
17	78	38.5	-9 10.5	215	32.4	+17 57.0	82	40	18 21	18 49	19 22	21 55 68	7 18 43		
18	93	38.6	-9 11.4	229	59.0	+18 05.0	80	45	18 28	18 58	19 35	22 09 70	7 06 40		
19	108	38.8	12.3	244	25.6	12.9	79	50	35	19 09	51	26 73	6 52 36		
20	123	38.9	13.2	258	52.1	20.8	79	52	39	15	19 59	34 74	45 35		
21	138	39.0	14.1	273	18.5	28.5	77	54	43	21	20 08	43 76	38 33		
22	153	39.1	15.0	287	44.9	36.1	76	56	47	27	18	22 53 78	30 30		
23	168	39.3	16.0	302	11.2	43.6	75	58	52	35	30	23 04 81	21 27		
24	183	39.4	-9 16.9	316	37.4	+18 50.9	73	60 S	18 58	19 44	20 44	23 18 83	6 10 24		

UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO								
	PMG: 22 ^h 17 ^m 1		Mag: -3.9 PMG: 13 ^h 55 ^m		Mag: +1.8 PMG: 9 ^h 39 ^m		Mag: -2.7 PMG: 2 ^h 58 ^m			Mag: -0.2 PMG: 2 ^h 14 ^m								
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec		hG ♄	Dec							
h	°	'	°	'	°	'	°	'	°	'	°	'						
0	24	48.9	151	19.2	-20	06.8	215	11.4	+5	51.1	315	28.6	+21	07.7	326	29.0	+17	54.1
1	39	51.4	166	18.5		07.7	230	12.4		50.5	330	31.2		07.7	341	31.6		54.1
2	54	53.9	181	17.9		08.5	245	13.5		49.9	345	33.8		07.7	356	34.2		54.0
3	69	56.3	196	17.2		09.4	260	14.5		49.3	0	36.4		07.6	11	36.8		54.0
4	84	58.8	211	16.6		10.2	275	15.5		48.7	15	39.1		07.6	26	39.4		54.0
5	100	01.2	226	15.9	-20	11.0	290	16.5	+5	48.1	30	41.7	+21	07.6	41	42.0	+17	53.9
6	115	03.7	241	15.3	-20	11.9	305	17.6	+5	47.5	45	44.3	+21	07.6	56	44.6	+17	53.9
7	130	06.2	256	14.6		12.7	320	18.6		46.9	60	46.9		07.6	71	47.2		53.9
8	145	08.6	271	14.0		13.5	335	19.6		46.3	75	49.5		07.5	86	49.8		53.8
9	160	11.1	286	13.3		14.4	350	20.6		45.7	90	52.1		07.5	101	52.4		53.8
10	175	13.6	301	12.6		15.2	5	21.6		45.1	105	54.7		07.5	116	55.0		53.8
11	190	16.0	316	12.0	-20	16.0	20	22.7	+5	44.5	120	57.3	+21	07.5	131	57.6	+17	53.7
12	205	18.5	331	11.3	-20	16.9	35	23.7	+5	43.9	135	59.9	+21	07.5	147	00.3	+17	53.7
13	220	21.0	346	10.7		17.7	50	24.7		43.2	151	02.6		07.4	162	02.9		53.7
14	235	23.4	1	10.0		18.5	65	25.7		42.6	166	05.2		07.4	177	05.5		53.6
15	250	25.9	16	09.4		19.3	80	26.8		42.0	181	07.8		07.4	192	08.1		53.6
16	265	28.3	31	08.7		20.2	95	27.8		41.4	196	10.4		07.4	207	10.7		53.6
17	280	30.8	46	08.1	-20	21.0	110	28.8	+5	40.8	211	13.0	+21	07.3	222	13.3	+17	53.5
18	295	33.3	61	07.4	-20	21.8	125	29.8	+5	40.2	226	15.6	+21	07.3	237	15.9	+17	53.5
19	310	35.7	76	06.8		22.6	140	30.9		39.6	241	18.2		07.3	252	18.5		53.5
20	325	38.2	91	06.1		23.5	155	31.9		39.0	256	20.9		07.3	267	21.1		53.4
21	340	40.7	106	05.4		24.3	170	32.9		38.4	271	23.5		07.3	282	23.7		53.4
22	355	43.1	121	04.8		25.1	185	33.9		37.8	286	26.1		07.2	297	26.3		53.4
23	10	45.6	136	04.1		25.9	200	35.0		37.2	301	28.7		07.2	312	29.0		53.3
24	25	48.1	151	03.5	-20	26.7	215	36.0	+5	36.6	316	31.3	+21	07.2	327	31.6	+17	53.3
Dif	—		-7	-8		+10	-6			+26	0			+26				

UT	SOL			LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'0			Edad: 19 ^d 2 PHE { 4 ^h : 58'9 12 ^h : 59'0 20 ^h : 59'1														
	PMG: 11 ^h 45 ^m 3			SD: 16'0 PMG: 3 ^h 00 ^m R°: 58 ^m														
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	°	'	°	°	'	°	h	m	h	m	h	m	h	m	
0	183	39.4	-9	16.9	316	37.4	+18	50.9	60 N	5	14	6	02	6	45	18	54	
1	198	39.5		17.8	331	03.6	72	+18	58.2	58	15	6	00	40		19	09	
2	213	39.7		18.7	345	29.7	71	+19	05.3	56	15	5	58	36		22	47	
3	228	39.8		19.6	359	55.8	71		12.4	54	15		56	32		33	49	
4	243	39.9		20.5	14	21.8	70		19.3	52	15		54	29		43	50	
5	258	40.0	-9	21.4	28	47.7	69	+19	26.1	50	5	15	5	53	6	25	19	
6	273	40.2	-9	22.3	43	13.6	69	+19	32.7	45	5	15	5	49	6	19	20	
7	288	40.3		23.3	57	39.4	68		39.3	40	14		45	13		26	54	
8	303	40.4		24.2	72	05.2	68		45.7	35	13		42	08		40	54	
9	318	40.5		25.1	86	30.8	66		52.0	30	11		39	6	03	20	51	
10	333	40.7		26.0	100	56.5	67	+19	58.2	20	08		33	5	55	21	11	
11	348	40.8	-9	26.9	115	22.1	66	+20	04.2	10 N	5	03	5	27	5	49	21	
12	3	40.9	-9	27.8	129	47.6	65	+20	10.2	0	4	57	5	21	5	42	21	
13	18	41.0		28.7	144	13.1	65		16.0	10 S	49		14	35		22	00	
14	33	41.2		29.6	158	38.5	64		21.7	57	39		5	06	28	18	61	
15	48	41.3		30.5	173	03.9	64		27.2	55	26		4	55	20	38	62	
16	63	41.4		31.5	187	29.2	63		32.6	54	18		49	15		22	49	
17	78	41.5	-9	32.4	201	54.5	63	+20	37.9	40	4	08	4	41	5	09	23	
18	93	41.7	-9	33.3	216	19.7	62	+20	43.1	45	3	55	4	32	5	03	23	
19	108	41.8		34.2	230	44.8	61		48.1	50	39		21	4	55		39	
20	123	41.9		35.1	245	10.0	62		53.0	52	31		15	51		48	67	
21	138	42.0		36.0	259	35.0	60	+20	57.7	54	22		09	47		23	59	
22	153	42.1		36.9	274	00.1	61	+21	02.3	56	12		4	03	43	**	**	
23	168	42.3		37.8	288	25.0	59		06.8	58	3	00	3	55	38	**	**	
24	183	42.4	-9	38.7	302	50.0	60	+21	11.2	60 S	2	46	3	46	4	32	**	**
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 22 ^h 13 ^m 1			Mag: -3.9 PMG: 13 ^h 56 ^m			Mag: +1.8 PMG: 9 ^h 37 ^m			Mag: -2.7 PMG: 2 ^h 53 ^m			Mag: -0.2 PMG: 2 ^h 10 ^m					
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec			
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°			
0	25	48.1	151	03.5	-20	26.7	215	36.0	+5	36.6	316	31.3	+21	07.2	327	31.6	+17	53.3
1	40	50.5	166	02.8		27.6	230	37.0		36.0	331	33.9		07.2	342	34.2		53.3
2	55	53.0	181	02.1		28.4	245	38.0		35.4	346	36.6		07.2	357	36.8		53.2
3	70	55.5	196	01.5		29.2	260	39.1		34.8	1	39.2		07.1	12	39.4		53.2
4	85	57.9	211	00.8		30.0	275	40.1		34.2	16	41.8		07.1	27	42.0		53.1
5	101	00.4	226	00.1	-20	30.8	290	41.1	+5	33.6	31	44.4	+21	07.1	42	44.6	+17	53.1
6	116	02.8	240	59.5	-20	31.6	305	42.1	+5	32.9	46	47.0	+21	07.1	57	47.2	+17	53.1
7	131	05.3	255	58.8		32.4	320	43.2		32.3	61	49.7		07.0	72	49.8		53.0
8	146	07.8	270	58.2		33.2	335	44.2		31.7	76	52.3		07.0	87	52.5		53.0
9	161	10.2	285	57.5		34.1	350	45.2		31.1	91	54.9		07.0	102	55.1		53.0
10	176	12.7	300	56.8		34.9	5	46.2		30.5	106	57.5		07.0	117	57.7		52.9
11	191	15.2	315	56.2	-20	35.7	20	47.3	+5	29.9	122	00.1	+21	07.0	133	00.3	+17	52.9
12	206	17.6	330	55.5	-20	36.5	35	48.3	+5	29.3	137	02.8	+21	06.9	148	02.9	+17	52.9
13	221	20.1	345	54.8		37.3	50	49.3		28.7	152	05.4		06.9	163	05.5		52.8
14	236	22.6	0	54.2		38.1	65	50.3		28.1	167	08.0		06.9	178	08.1		52.8
15	251	25.0	15	53.5		38.9	80	51.4		27.5	182	10.6		06.9	193	10.7		52.8
16	266	27.5	30	52.8		39.7	95	52.4		26.9	197	13.2		06.8	208	13.3		52.7
17	281	30.0	45	52.2	-20	40.5	110	53.4	+5	26.3	212	15.9	+21	06.8	223	16.0	+17	52.7
18	296	32.4	60	51.5	-20	41.3	125	54.4	+5	25.7	227	18.5	+21	06.8	238	18.6	+17	52.7
19	311	34.9	75	50.8		42.1	140	55.5		25.1	242	21.1		06.8	253	21.2		52.6
20	326	37.3	90	50.2		42.9	155	56.5		24.5	257	23.7		06.7	268	23.8		52.6
21	341	39.8	105	49.5		43.7	170	57.5		23.8	272	26.4		06.7	283	26.4		52.6
22	356	42.3	120	48.8		44.5	185	58.5		23.2	287	29.0		06.7	298	29.0		52.5
23	11	44.7	135	48.1		45.3	200	59.6		22.6	302	31.6		06.7	313	31.6		52.5
24	26	47.2	150	47.5	-20	46.1	216	00.6	+5	22.0	317	34.2	+21	06.7	328	34.2	+17	52.5
Dif	—		-7		-8		+10		-6		+26		0		+26		0	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16'1			Edad: 20 ^d 2	PHE { 4 ^h : 59'1 12 ^h : 59'2 20 ^h : 59'2	SD: 16'1			R°: 59 ^m		Hora		R°			
	PMG: 11 ^h 45 ^m 1					PMG: 3 ^h 58 ^m					Hora		R°			
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico			Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m		h m m		h m m	
0	183	42.4	-9 38.7	302	50.0	+21 11.2	42	60 N	16 42	17 24	18 12		19 38 61		13 15 62	
1	198	42.5	39.6	317	14.9	59	15.4	58	47	27	12		19 55 61		12 58 62	
2	213	42.6	40.5	331	39.7	58	19.4	56	51	29	12		20 09 62		44 61	
3	228	42.8	41.5	346	04.5	58	23.4	54	55	31	12		22 61		31 62	
4	243	42.9	42.4	0	29.3	58	27.2	52	16 59	33	12		33 61		20 62	
5	258	43.0	-9 43.3	14	54.1	58	+21 30.8	50	17 02	17 35	18 13		20 43 61		12 11 61	
6	273	43.1	-9 44.2	29	18.8	57	+21 34.3	45	17 10	17 39	18 13		21 03 61		11 50 61	
7	288	43.2	45.1	43	43.4	56	37.7	40	16	43	15		20 61		34 61	
8	303	43.4	46.0	58	08.1	57	40.9	32	35	21	47	16	34 61		20 60	
9	318	43.5	46.9	72	32.7	56	44.0	31	30	26	50	18	21 46 61		11 08 60	
10	333	43.6	47.8	86	57.2	55	47.0	30	20	34	17 56	22	22 08 60		10 47 60	
11	348	43.7	-9 48.7	101	21.8	56	+21 49.8	10 N	17 41	18 03	18 27		22 26 60		10 29 60	
12	3	43.8	-9 49.6	115	46.3	55	+21 52.4	0	17 48	18 09	18 34		22 43 59		10 12 59	
13	18	43.9	50.5	130	10.8	55	54.9	25	10 S	17 56	17	42	23 00 59		9 55 59	
14	33	44.1	51.4	144	35.2	54	57.3	24	20	18 03	26	18 52	19 58		37 59	
15	48	44.2	52.3	158	59.7	55	+21 59.5	22	30	12	37	19 06	40 58		16 58	
16	63	44.3	53.2	173	24.1	54	+22 01.6	21	35	17	43	14	23 52 58		9 04 58	
17	78	44.4	-9 54.1	187	48.5	54	+22 03.5	19	40	18 23	18 51	19 25	** ** *		8 50 58	
18	93	44.5	-9 55.0	202	12.9	54	+22 05.3	18	45	18 30	19 01	19 38	** ** *		8 34 57	
19	108	44.6	55.9	216	37.2	53	06.9	16	50	39	13	19 55	** ** *		14 55	
20	123	44.8	56.8	231	01.6	54	08.4	15	52	42	18	20 03	** ** *		8 04 55	
21	138	44.9	57.7	245	25.9	53	09.8	14	54	47	25	13	** ** *		7 53 55	
22	153	45.0	58.6	259	50.2	53	11.0	12	56	51	32	23	0 11 68		41 54	
23	168	45.1	-9 59.6	274	14.5	53	12.0	10	58	18 57	40	36	25 69		27 53	
24	183	45.2	-10 00.5	288	38.8	53	+22 12.9	9	60 S	19 03	19 49	20 51	0 41 71		7 10 52	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 22 ^h 09 ^m 2			Mag: -3.9 PMG: 13 ^h 57 ^m			Mag: +1.8 PMG: 9 ^h 35 ^m			Mag: -2.7 PMG: 2 ^h 49 ^m			Mag: -0.2 PMG: 2 ^h 05 ^m			
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	
0	26	47.2	150 47.5	-20 46.1	216 00.6	+5 22.0	317 34.2	+21 06.7	328 34.2	+17 52.5						
1	41	49.7	165 46.8	46.9	231 01.6	21.4	332 36.9	06.6	343 36.9	52.4						
2	56	52.1	180 46.1	47.7	246 02.7	20.8	347 39.5	06.6	358 39.5	52.4						
3	71	54.6	195 45.5	48.5	261 03.7	20.2	2 42.1	06.6	13 42.1	52.4						
4	86	57.1	210 44.8	49.3	276 04.7	19.6	17 44.7	06.6	28 44.7	52.3						
5	101	59.5	225 44.1	-20 50.1	291 05.7	+5 19.0	32 47.4	+21 06.5	43 47.3	+17 52.3						
6	117	02.0	240 43.4	-20 50.8	306 06.8	+5 18.4	47 50.0	+21 06.5	58 49.9	+17 52.3						
7	132	04.5	255 42.8	51.6	321 07.8	17.8	62 52.6	06.5	73 52.5	52.2						
8	147	06.9	270 42.1	52.4	336 08.8	17.2	77 55.3	06.5	88 55.2	52.2						
9	162	09.4	285 41.4	53.2	351 09.8	16.6	92 57.9	06.5	103 57.8	52.1						
10	177	11.8	300 40.7	54.0	6 10.9	16.0	108 00.5	06.4	119 00.4	52.1						
11	192	14.3	315 40.0	-20 54.8	21 11.9	+5 15.3	123 03.1	+21 06.4	134 03.0	+17 52.1						
12	207	16.8	330 39.4	-20 55.6	36 12.9	+5 14.7	138 05.8	+21 06.4	149 05.6	+17 52.0						
13	222	19.2	345 38.7	56.4	51 13.9	14.1	153 08.4	06.4	164 08.2	52.0						
14	237	21.7	0 38.0	57.1	66 15.0	13.5	168 11.0	06.3	179 10.8	52.0						
15	252	24.2	15 37.3	57.9	81 16.0	12.9	183 13.7	06.3	194 13.5	51.9						
16	267	26.6	30 36.7	58.7	96 17.0	12.3	198 16.3	06.3	209 16.1	51.9						
17	282	29.1	45 36.0	-20 59.5	111 18.1	+5 11.7	213 18.9	+21 06.3	224 18.7	+17 51.9						
18	297	31.6	60 35.3	-21 00.3	126 19.1	+5 11.1	228 21.6	+21 06.2	239 21.3	+17 51.8						
19	312	34.0	75 34.6	01.0	141 20.1	10.5	243 24.2	06.2	254 23.9	51.8						
20	327	36.5	90 33.9	01.8	156 21.1	09.9	258 26.8	06.2	269 26.5	51.8						
21	342	38.9	105 33.2	02.6	171 22.2	09.3	273 29.5	06.2	284 29.2	51.7						
22	357	41.4	120 32.6	03.4	186 23.2	08.7	288 32.1	06.1	299 31.8	51.7						
23	12	43.9	135 31.9	04.1	201 24.2	08.1	303 34.7	06.1	314 34.4	51.7						
24	27	46.3	150 31.2	-21 04.9	216 25.2	+5 07.4	318 37.4	+21 06.1	329 37.0	+17 51.6						
Dif	—		-7	-8	+10	-6	+26	0	+26	0			+26		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 9			Edad: 21 ^d 2 PHE { 4 ^h : 59/2 12 ^h : 59/2 20 ^h : 59/2 SD: 16:1 PMG: 4 ^h 57 ^m R°: 60 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m		
0	183	45.2	-10	00.5	288	38.8	+22	12.9	60 N	5	19	6	07	6	50	20	39	
1	198	45.3		01.4	303	03.0		13.6	58	19		04	45	20	56	75	14	
2	213	45.5		02.3	317	27.3		14.2	56	19		02	40	21	11	73	13	
3	228	45.6		03.2	331	51.6		14.7	54	19		6	00	36	23	72	33	
4	243	45.7		04.1	346	15.8		15.0	52	18		5	58	32	34	71	22	
5	258	45.8	-10	05.0	0	40.1	+22	15.2	50	5	18	5	56	6	29	21	44	
6	273	45.9	-10	05.9	15	04.3	+22	15.2	45	5	17	5	51	6	21	22	04	
7	288	46.0		06.8	29	28.6		15.0	40	16		47	15	21	66		35	
8	303	46.1		07.7	43	52.8		14.7	35	14		44	09	35	64		20	
9	318	46.2		08.6	58	17.1		14.3	30	12		40	6	05	22	47	63	
10	333	46.4		09.5	72	41.3		13.7	20	08		34	5	56	23	08	61	
11	348	46.5	-10	10.4	87	05.6	+22	13.0	10 N	5	03	5	27	5	49	23	26	
12	3	46.6	-10	11.3	101	29.8	+22	12.1	0	4	56	5	21	5	42	23	42	
13	18	46.7		12.2	115	54.1		11.0	10 S	48		13	34	23	59	57	10	
14	33	46.8		13.1	130	18.4		09.9	20	38		5	04	26	**	**	36	
15	48	46.9		14.0	144	42.7		08.5	30	24		4	53	17	**	**	14	
16	63	47.0		14.9	159	07.0		07.1	35	15		46	12	**	**	**	10	
17	78	47.1	-10	15.8	173	31.3	+22	05.4	40	4	04	4	38	5	06	0	07	
18	93	47.2	-10	16.7	187	55.6	+22	03.7	45	3	51	4	28	4	59	0	24	
19	108	47.4		17.5	202	20.0	+22	01.7	50	34		16	51	45	56	9	09	
20	123	47.5		18.4	216	44.4	+21	59.7	52	26		11	47	0	55	56	8	
21	138	47.6		19.3	231	08.8		57.5	54	17		4	04	1	06	56	48	
22	153	47.7		20.2	245	33.2		55.1	56	3	06	3	57	38	19	55	35	
23	168	47.8		21.1	259	57.6		52.6	58	2	53	49	32	34	54	20	68	
24	183	47.9	-10	22.0	274	22.1	+21	49.9	60 S	2	38	3	40	4	26	1	52	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 22 ^h 05 ^m 3		Mag: -3.9 PMG: 13 ^h 59 ^m				Mag: +1.8 PMG: 9 ^h 34 ^m				Mag: -2.7 PMG: 2 ^h 45 ^m				Mag: -0.2 PMG: 2 ^h 01 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	27	46.3	150	31.2	-21	04.9	216	25.2	+5	07.4	318	37.4	+21	06.1	329	37.0	+17	51.6
1	42	48.8	165	30.5		05.7	231	26.3		06.8	333	40.0		06.1	344	39.6		51.6
2	57	51.3	180	29.8		06.5	246	27.3		06.2	348	42.6		06.0	359	42.2		51.6
3	72	53.7	195	29.1		07.2	261	28.3		05.6	3	45.3		06.0	14	44.9		51.5
4	87	56.2	210	28.5		08.0	276	29.4		05.0	18	47.9		06.0	29	47.5		51.5
5	102	58.7	225	27.8	-21	08.8	291	30.4	+5	04.4	33	50.5	+21	06.0	44	50.1	+17	51.4
6	118	01.1	240	27.1	-21	09.5	306	31.4	+5	03.8	48	53.2	+21	06.0	59	52.7	+17	51.4
7	133	03.6	255	26.4		10.3	321	32.4		03.2	63	55.8		05.9	74	55.3		51.4
8	148	06.1	270	25.7		11.1	336	33.5		02.6	78	58.4		05.9	89	57.9		51.3
9	163	08.5	285	25.0		11.8	351	34.5		02.0	94	01.1		05.9	105	00.6		51.3
10	178	11.0	300	24.3		12.6	6	35.5		01.4	109	03.7		05.9	120	03.2		51.3
11	193	13.4	315	23.6	-21	13.3	21	36.6	+5	00.8	124	06.3	+21	05.8	135	05.8	+17	51.2
12	208	15.9	330	22.9	-21	14.1	36	37.6	+5	00.1	139	09.0	+21	05.8	150	08.4	+17	51.2
13	223	18.4	345	22.3		14.9	51	38.6	+4	59.5	154	11.6		05.8	165	11.0		51.2
14	238	20.8	0	21.6		15.6	66	39.6		58.9	169	14.3		05.8	180	13.7		51.1
15	253	23.3	15	20.9		16.4	81	40.7		58.3	184	16.9		05.7	195	16.3		51.1
16	268	25.8	30	20.2		17.1	96	41.7		57.7	199	19.5		05.7	210	18.9		51.1
17	283	28.2	45	19.5	-21	17.9	111	42.7	+4	57.1	214	22.2	+21	05.7	225	21.5	+17	51.0
18	298	30.7	60	18.8	-21	18.7	126	43.8	+4	56.5	229	24.8	+21	05.7	240	24.1	+17	51.0
19	313	33.2	75	18.1		19.4	141	44.8		55.9	244	27.5		05.6	255	26.8		50.9
20	328	35.6	90	17.4		20.2	156	45.8		55.3	259	30.1		05.6	270	29.4		50.9
21	343	38.1	105	16.7		20.9	171	46.8		54.7	274	32.7		05.6	285	32.0		50.9
22	358	40.6	120	16.0		21.7	186	47.9		54.1	289	35.4		05.6	300	34.6		50.8
23	13	43.0	135	15.3		22.4	201	48.9		53.5	304	38.0		05.5	315	37.2		50.8
24	28	45.5	150	14.6	-21	23.2	216	49.9	+4	52.8	319	40.7	+21	05.5	330	39.9	+17	50.8
Dif	—		-7		-8		+10		-6		+26		0		+26			

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 16'1 PMG: 11 ^h 44 ^m 7			Edad: 22 ^d 2 PHE { 4 ^h : 59'2 12 ^h : 59'2 20 ^h : 59'2 Rº: 58 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	Rº	Hora	Rº			
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	m	h m	m			
0	183	47.9	-10	22.0	274	22.1	+21	49.9	60 N	16 36	17 19	18 07	21 57	87	15 02	30		
1	198	48.0		22.9	288	46.5	54	47.1	58	42	22	07	22 11	84	14 46	34		
2	213	48.1		23.8	303	11.0	55	44.2	56	46	24	08	24 81		33	36		
3	228	48.2		24.7	317	35.6	56	41.1	54	51	27	08	35 79		22	38		
4	243	48.3		25.6	332	00.1	55	37.9	52	55	29	08	45 77		12	40		
5	258	48.4	-10	26.5	346	24.7	56	+21 34.5	50	16 58	17 31	18 09	22 53	76	14 03	41		
6	273	48.5	-10	27.4	0	49.4	57	+21 31.0	45	17 06	17 36	18 10	23 12	71	13 44	44		
7	288	48.6		28.3	15	14.0	56	27.3	40	13	40	12	27 69		29	46		
8	303	48.7		29.2	29	38.7	57	23.6	37	19	44	14	39 67		15	49		
9	318	48.9		30.1	44	03.4	57	19.6	40	30	24	48	16	23 50	65	13 04	50	
10	333	49.0		31.0	58	28.2	58	15.5	41	20	33	17 55	21	** ** *	12 44	53		
11	348	49.1	-10	31.9	72	53.0	58	+21 11.3	42	10 N	17 41	18 02	18 27	** ** *	12 27	55		
12	3	49.2	-10	32.8	87	17.8	58	+21 07.0	43	0	17 48	18 09	18 34	** ** *	12 11	57		
13	18	49.3		33.7	101	42.7	59	+21 02.5	45	10 S	17 56	17	42	** ** *	11 54	60		
14	33	49.4		34.6	116	07.6	59	+20 57.8	47	20	18 04	27	18 53	0 17	56	37	62	
15	48	49.5		35.4	130	32.6	60	53.1	49	30	14	38	19 07	38	53	17	64	
16	63	49.6		36.3	144	57.6	60	48.2	47	35	19	45	16	0 50	52	11 05	66	
17	78	49.7	-10	37.2	159	22.6	60	+20 43.1	51	40	18 25	18 54	19 28	1 04	51	10 51	68	
18	93	49.8	-10	38.1	173	47.7	61	+20 38.0	51	45	18 33	19 04	19 41	1 21	48	10 35	70	
19	108	49.9		39.0	188	12.9	62	32.7	53	50	42	16	19 59	41	46	15	73	
20	123	50.0		39.9	202	38.0	61	27.2	55	52	46	22	20 08	1 51	45	10 06	74	
21	138	50.1		40.8	217	03.3	63	21.7	55	54	51	29	18	2 02	43	9 55	76	
22	153	50.2		41.7	231	28.6	63	15.9	58	56	18 56	37	29	14	42	43	78	
23	168	50.3		42.6	245	53.9	63	10.1	58	58	19 01	45	43	28	40	29	80	
24	183	50.4	-10	43.5	260	19.3	64	+20 04.2	59	60 S	19 08	19 55	20 59	2 45	37	9 12	84	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 22 ^h 01 ^m 4		Mag: -3.9 PMG: 14 ^h 00 ^m				Mag: +1.8 PMG: 9 ^h 32 ^m				Mag: -2.7 PMG: 2 ^h 41 ^m				Mag: -0.2 PMG: 1 ^h 57 ^m			
	hG ♈		hG ♀ Dec				hG ♂ Dec				hG ♃ Dec				hG ♄ Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	28	45.5	150	14.6	-21	23.2	216	49.9	+4	52.8	319	40.7	+21	05.5	330	39.9	+17	50.8
1	43	47.9	165	13.9		23.9	231	51.0		52.2	334	43.3		05.5	345	42.5		50.7
2	58	50.4	180	13.2		24.7	246	52.0		51.6	349	45.9		05.5	0	45.1		50.7
3	73	52.9	195	12.5		25.4	261	53.0		51.0	4	48.6		05.4	15	47.7		50.7
4	88	55.3	210	11.8		26.2	276	54.1		50.4	19	51.2		05.4	30	50.3		50.6
5	103	57.8	225	11.1	-21	26.9	291	55.1	+4	49.8	34	53.9	+21	05.4	45	53.0	+17	50.6
6	119	00.3	240	10.4	-21	27.6	306	56.1	+4	49.2	49	56.5	+21	05.4	60	55.6	+17	50.6
7	134	02.7	255	09.7		28.4	321	57.1		48.6	64	59.2		05.3	75	58.2		50.5
8	149	05.2	270	09.0		29.1	336	58.2		48.0	80	01.8		05.3	91	00.8		50.5
9	164	07.7	285	08.3		29.9	351	59.2		47.4	95	04.5		05.3	106	03.4		50.4
10	179	10.1	300	07.6		30.6	7	00.2		46.8	110	07.1		05.3	121	06.1		50.4
11	194	12.6	315	06.9	-21	31.3	22	01.3	+4	46.2	125	09.7	+21	05.2	136	08.7	+17	50.4
12	209	15.1	330	06.2	-21	32.1	37	02.3	+4	45.5	140	12.4	+21	05.2	151	11.3	+17	50.3
13	224	17.5	345	05.5		32.8	52	03.3		44.9	155	15.0		05.2	166	13.9		50.3
14	239	20.0	0	04.8		33.6	67	04.4		44.3	170	17.7		05.2	181	16.5		50.3
15	254	22.4	15	04.1		34.3	82	05.4		43.7	185	20.3		05.1	196	19.2		50.2
16	269	24.9	30	03.4		35.0	97	06.4		43.1	200	23.0		05.1	211	21.8		50.2
17	284	27.4	45	02.7	-21	35.8	112	07.4	+4	42.5	215	25.6	+21	05.1	226	24.4	+17	50.2
18	299	29.8	60	02.0	-21	36.5	127	08.5	+4	41.9	230	28.3	+21	05.1	241	27.0	+17	50.1
19	314	32.3	75	01.3		37.2	142	09.5		41.3	245	30.9		05.0	256	29.7		50.1
20	329	34.8	90	00.6		38.0	157	10.5		40.7	260	33.6		05.0	271	32.3		50.0
21	344	37.2	104	59.9		38.7	172	11.6		40.1	275	36.2		05.0	286	34.9		50.0
22	359	39.7	119	59.2		39.4	187	12.6		39.5	290	38.9		05.0	301	37.5		50.0
23	14	42.2	134	58.5		40.1	202	13.6		38.8	305	41.5		04.9	316	40.1		49.9
24	29	44.6	149	57.8	-21	40.9	217	14.7	+4	38.2	320	44.2	+21	04.9	331	42.8	+17	49.9
Dif	—		-7				+10				-6				+26			

UT	SOL			 LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16.1 PMG: 11 ^h 44 ^m 6			Edad: 23 ^d 2 PHE { 4 ^h : 59/2 12 ^h : 59/2 20 ^h : 59/1 SD: 16.1 PMG: 6 ^h 55 ^m R°: 55 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°			
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	183	50.4	-10	43.5	260	19.3	+20	04.2	60 N	5	23	6	12	6	55	23	24	
1	198	50.5		44.4	274	44.7	+19	58.1	58		23		09		49	35	87	
2	213	50.6		45.2	289	10.2		51.9	56		23		06		44	45	84	
3	228	50.7		46.1	303	35.7		45.5	54		22		03		40	23	54	
4	243	50.8		47.0	318	01.3		39.0	52		22		6	01	36	**	**	
5	258	50.9	-10	47.9	332	26.9	+19	32.5	50	5	21	5	59	6	32	**	**	
6	273	51.0	-10	48.8	346	52.6	+19	25.7	45	5	20	5	54	6	24	**	**	
7	288	51.1		49.7	1	18.4		18.9	40		18		49		17	**	**	
8	303	51.2		50.6	15	44.2		11.9	35		16		45		11	**	**	
9	318	51.3		51.5	30	10.0	+19	04.9	30		14		42	6	06	**	**	
10	333	51.4		52.3	44	36.0	+18	57.7	20		09		35	5	57	0	09	
11	348	51.5	-10	53.2	59	01.9	+18	50.3	10 N	5	03	5	28	5	49	0	26	
12	3	51.6	-10	54.1	73	28.0	+18	42.9	0	4	56	5	20	5	41	0	41	
13	18	51.7		55.0	87	54.1		35.4	10 S		47		12	33	0	56		
14	33	51.8		55.9	102	20.2		27.7	20		36		5	03	25	1	13	
15	48	51.9		56.8	116	46.4		19.9	30		22	4	51	15		31	48	
16	63	52.0		57.7	131	12.7		12.0	35		12		44	10		42	46	
17	78	52.1	-10	58.5	145	39.0	+18	04.0	40	4	01	4	35	5	03	1	55	
18	93	52.2	-10	59.4	160	05.4	+17	55.9	45	3	47	4	25	4	56	2	09	
19	108	52.3	-11	00.3	174	31.9		47.7	50		29		12	47		27	37	
20	123	52.4		01.2	188	58.4		39.3	52		21	4	06	42		36	35	
21	138	52.4		02.1	203	25.0		30.9	54	3	11	3	59	38		45	33	
22	153	52.5		03.0	217	51.6		22.3	56	2	59		52	33		2	56	
23	168	52.6		03.9	232	18.3		13.7	58		46		43	27		3	08	
24	183	52.7	-11	04.7	246	45.1	+17	04.9	60 S	2	29	3	33	4	20	3	22	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 21 ^h 57 ^m 4			Mag: -3.9 PMG: 14 ^h 01 ^m			Mag: +1.8 PMG: 9 ^h 30 ^m			Mag: -2.8 PMG: 2 ^h 37 ^m			Mag: -0.2 PMG: 1 ^h 53 ^m					
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	29	44.6	149	57.8	-21	40.9	217	14.7	+4	38.2	320	44.2	+21	04.9	331	42.8		
1	44	47.1	164	57.1		41.6	232	15.7		37.6	335	46.8		04.9	346	45.4		
2	59	49.5	179	56.4		42.3	247	16.7		37.0	350	49.5		04.8	1	48.0		
3	74	52.0	194	55.7		43.0	262	17.8		36.4	5	52.1		04.8	16	50.6		
4	89	54.5	209	54.9		43.8	277	18.8		35.8	20	54.8		04.8	31	53.3		
5	104	56.9	224	54.2	-21	44.5	292	19.8	+4	35.2	35	57.4	+21	04.8	46	55.9		
6	119	59.4	239	53.5	-21	45.2	307	20.9	+4	34.6	51	00.1	+21	04.7	61	58.5		
7	135	01.9	254	52.8		45.9	322	21.9		34.0	66	02.7		04.7	77	01.1		
8	150	04.3	269	52.1		46.6	337	22.9		33.4	81	05.4		04.7	92	03.8		
9	165	06.8	284	51.4		47.3	352	23.9		32.7	96	08.0		04.7	107	06.4		
10	180	09.3	299	50.7		48.1	7	25.0		32.1	111	10.7		04.6	122	09.0		
11	195	11.7	314	50.0	-21	48.8	22	26.0	+4	31.5	126	13.3	+21	04.6	137	11.6		
12	210	14.2	329	49.3	-21	49.5	37	27.0	+4	30.9	141	16.0	+21	04.6	152	14.3		
13	225	16.7	344	48.5		50.2	52	28.1		30.3	156	18.7		04.6	167	16.9		
14	240	19.1	359	47.8		50.9	67	29.1		29.7	171	21.3		04.5	182	19.5		
15	255	21.6	14	47.1		51.6	82	30.1		29.1	186	24.0		04.5	197	22.1		
16	270	24.0	29	46.4		52.3	97	31.2		28.5	201	26.6		04.5	212	24.8		
17	285	26.5	44	45.7	-21	53.0	112	32.2	+4	27.9	216	29.3	+21	04.4	227	27.4		
18	300	29.0	59	45.0	-21	53.8	127	33.2	+4	27.3	231	31.9	+21	04.4	242	30.0		
19	315	31.4	74	44.2		54.5	142	34.3		26.7	246	34.6		04.4	257	32.6		
20	330	33.9	89	43.5		55.2	157	35.3		26.0	261	37.2		04.4	272	35.3		
21	345	36.4	104	42.8		55.9	172	36.3		25.4	276	39.9		04.3	287	37.9		
22	0	38.8	119	42.1		56.6	187	37.4		24.8	291	42.6		04.3	302	40.5		
23	15	41.3	134	41.4		57.3	202	38.4		24.2	306	45.2		04.3	317	43.1		
24	30	43.8	149	40.7	-21	58.0	217	39.4	+4	23.6	321	47.9	+21	04.3	332	45.8		
Dif	—			-7			+10			-6			+27			0		
																+26		

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 16'1 PMG: 11 ^h 44 ^m 4			Edad: 24 ^d 2 PHE { SD: 16'1 PMG: 7 ^h 50 ^m 4 ^h : 59'1 12 ^h : 59'0 20 ^h : 58'9 R°: 53 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m	h	m	m
0	183	52.7	-11	04.7	246	45.1	+17	04.9	88	60 N	16 30	17 14	18 02	** ** *	** ** *	15 53	16	
1	198	52.8		05.6	261	11.9	+16	56.1	88	58	36	17	03	** ** *	** ** *	44	19	
2	213	52.9		06.5	275	38.8		47.1	90	56	42	20	03	** ** *	** ** *	37	21	
3	228	53.0		07.4	290	05.7		38.0	91	54	46	23	04	** ** *	** ** *	30	22	
4	243	53.1		08.3	304	32.7		28.9	91	52	51	25	04	0 02	79	24	26	
5	258	53.2	-11	09.1	318	59.8	+16	19.6	93	50	16 55	17 28	18 05	0 09	77	15 18	28	
6	273	53.3	-11	10.0	333	26.9	+16	10.3	93	45	17 03	17 33	18 07	0 23	74	15 06	32	
7	288	53.4		10.9	347	54.1	+16	00.8	95	40	10	38	09	36	70	14 56	35	
8	303	53.5		11.8	2	21.4	+15	51.3	95	35	16	42	12	46	67	47	38	
9	318	53.6		12.7	16	48.7		41.6	97	30	22	46	14	0 55	65	39	41	
10	333	53.7		13.5	31	16.1		31.9	97	20	31	17 54	19	1 11	60	26	45	
11	348	53.7	-11	14.4	45	43.6	+15	22.1	98	10 N	17 40	18 01	18 26	1 24	57	14 14	49	
12	3	53.8	-11	15.3	60	11.1	+15	12.2	99	0	17 48	18 09	18 33	1 37	54	14 03	52	
13	18	53.9		16.2	74	38.7	+15	02.2	100	10 S	17 56	17	42	1 50	50	13 52	56	
14	33	54.0		17.1	89	06.3	+14	52.1	101	20	18 05	27	18 54	2 03	47	40	60	
15	48	54.1		17.9	103	34.0		41.9	102	30	15	40	19 09	19	43	26	64	
16	63	54.2		18.8	118	01.8		31.7	102	35	21	47	19	28	40	18	67	
17	78	54.3	-11	19.7	132	29.6	+14	21.4	103	40	18 28	18 56	19 30	2 38	38	13 09	70	
18	93	54.4	-11	20.6	146	57.5	+14	10.9	105	45	18 36	19 07	19 45	2 50	34	12 58	73	
19	108	54.5		21.5	161	25.4	+14	00.4	105	50	45	20	20 03	3 04	30	45	78	
20	123	54.5		22.3	175	53.4	+13	49.9	105	52	50	26	12	11	28	39	79	
21	138	54.6		23.2	190	21.5		39.2	107	54	18 55	33	23	18	26	32	82	
22	153	54.7		24.1	204	49.6		28.5	107	56	19 00	41	35	27	23	24	85	
23	168	54.8		25.0	219	17.8		17.7	108	58	06	19 51	20 49	36	21	16	87	
24	183	54.9	-11	25.8	233	46.1	+13	06.8	109	60 S	19 13	20 01	21 07	3 46	18	12 06	91	

UT	ARIES		VENUS		MARTE		JÚPITER				SATURNO					
	PMG 21 ^h 53 ^m 5		Mag: -3.9 PMG: 14 ^h 02 ^m		Mag: +1.8 PMG: 9 ^h 29 ^m		Mag: -2.8 PMG: 2 ^h 32 ^m				Mag: -0.2 PMG: 1 ^h 49 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec			hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	30	43.8	149	40.7	-21	58.0	217	39.4	+4	23.6	321	47.9	+21	04.3	332	45.8
1	45	46.2	164	39.9		58.7	232	40.5		23.0	336	50.5		04.2	347	48.4
2	60	48.7	179	39.2	-21	59.4	247	41.5		22.4	351	53.2		04.2	2	51.0
3	75	51.2	194	38.5	-22	00.1	262	42.5		21.8	6	55.8		04.2	17	53.6
4	90	53.6	209	37.8		00.8	277	43.6		21.2	21	58.5		04.2	32	56.3
5	105	56.1	224	37.0	-22	01.5	292	44.6	+4	20.6	37	01.2	+21	04.1	47	58.9
6	120	58.5	239	36.3	-22	02.2	307	45.6	+4	19.9	52	03.8	+21	04.1	63	01.5
7	136	01.0	254	35.6		02.9	322	46.7		19.3	67	06.5		04.1	78	04.2
8	151	03.5	269	34.9		03.6	337	47.7		18.7	82	09.1		04.0	93	06.8
9	166	05.9	284	34.2		04.2	352	48.7		18.1	97	11.8		04.0	108	09.4
10	181	08.4	299	33.4		04.9	7	49.8		17.5	112	14.5		04.0	123	12.0
11	196	10.9	314	32.7	-22	05.6	22	50.8	+4	16.9	127	17.1	+21	04.0	138	14.7
12	211	13.3	329	32.0	-22	06.3	37	51.8	+4	16.3	142	19.8	+21	03.9	153	17.3
13	226	15.8	344	31.3		07.0	52	52.9		15.7	157	22.5		03.9	168	19.9
14	241	18.3	359	30.5		07.7	67	53.9		15.1	172	25.1		03.9	183	22.6
15	256	20.7	14	29.8		08.4	82	54.9		14.5	187	27.8		03.8	198	25.2
16	271	23.2	29	29.1		09.1	97	56.0		13.8	202	30.4		03.8	213	27.8
17	286	25.7	44	28.4	-22	09.7	112	57.0	+4	13.2	217	33.1	+21	03.8	228	30.4
18	301	28.1	59	27.6	-22	10.4	127	58.0	+4	12.6	232	35.8	+21	03.8	243	33.1
19	316	30.6	74	26.9		11.1	142	59.1		12.0	247	38.4		03.7	258	35.7
20	331	33.0	89	26.2		11.8	158	00.1		11.4	262	41.1		03.7	273	38.3
21	346	35.5	104	25.4		12.5	173	01.1		10.8	277	43.8		03.7	288	41.0
22	1	38.0	119	24.7		13.2	188	02.2		10.2	292	46.4		03.7	303	43.6
23	16	40.4	134	24.0		13.8	203	03.2		09.6	307	49.1		03.6	318	46.2
24	31	42.9	149	23.3	-22	14.5	218	04.2	+4	09.0	322	51.8	+21	03.6	333	48.8
Dif	—		-7		-7		+10		-6		+27		0		+26	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16'1 PMG: 11 ^h 44 ^m 3			Edad: 25 ^d 2 PHE { 4 ^h : 58'8 12 ^h : 58'8 20 ^h : 58'7 SD: 16'0 PMG: 8 ^h 43 ^m R°: 51 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	
0	183	54.9	-11	25.8	233	46.1	+13	06.8	60 N	5	28	6	16	7	00	0	54
1	198	55.0		26.7	248	14.4	+12	55.9 ¹⁰⁹	58	27	13		6	54	1	02	
2	213	55.1		27.6	262	42.8		44.8 ¹¹¹	56	27	10		48	09	84	15	
3	228	55.1		28.5	277	11.2		33.8 ¹¹⁰	54	26	07		44	15	82	54	
4	243	55.2		29.3	291	39.7		22.6 ¹¹²	52	25	04		39	21	79	50	
5	258	55.3	-11	30.2	306	08.2	+12	11.4 ¹¹²	50	5	24	6	02	6	35	1	26
6	273	55.4	-11	31.1	320	36.8	+12	00.1 ¹¹³	45	5	22	5	56	6	26	1	37
7	288	55.5		32.0	335	05.5	+11	48.7 ¹¹⁴	40	20	52		19	46	69	31	
8	303	55.6		32.8	349	34.2		37.3 ¹¹⁴	35	18	47		13	1	53	66	
9	318	55.7		33.7	4	03.0		25.8 ¹¹⁵	30	15	43	6	07	2	00	63	
10	333	55.7		34.6	18	31.8		14.3 ¹¹⁵	20	09	35	5	58	11	59	11	
11	348	55.8	-11	35.5	33	00.7	+11	02.7 ¹¹⁶	10 N	5	03	5	28	5	49	2	21
12	3	55.9	-11	36.3	47	29.7 ¹⁰⁰	+10	51.0 ¹¹⁷	0	4	55	5	20	5	41	2	31
13	18	56.0		37.2	61	58.7 ¹⁰⁰		39.3 ¹¹⁷	10 S	46	11		33	40	48	48	
14	33	56.1		38.1	76	27.7 ¹⁰⁰		27.5 ¹¹⁸	20	35	5	01	24	2	50	44	
15	48	56.2		38.9	90	56.8 ¹⁰¹		15.7 ¹¹⁸	30	19	4	49	13	3	02	39	
16	63	56.2		39.8	105	26.0 ¹⁰²	+10	03.8 ¹¹⁹	35	4	10	41	07	08	37	25	
17	78	56.3	-11	40.7	119	55.2 ¹⁰²	+9	51.9 ¹¹⁹	40	3	58	4	32	5	00	3	16
18	93	56.4	-11	41.6	134	24.5 ¹⁰³	+9	39.9 ¹²⁰	45	3	43	4	21	4	52	3	24
19	108	56.5		42.4	148	53.8 ¹⁰³		27.9 ¹²⁰	50	25	08		43	34	26	14	
20	123	56.6		43.3	163	23.2 ¹⁰⁴		15.8 ¹²¹	52	16	4	02	38	39	24	13	
21	138	56.6		44.2	177	52.6 ¹⁰⁴	+9	03.7 ¹²¹	54	3	05	3	54	44	22	54	
22	153	56.7		45.0	192	22.0 ¹⁰⁴	+8	51.5 ¹²²	56	2	53	46	28	50	20	49	
23	168	56.8		45.9	206	51.6 ¹⁰⁶		39.3 ¹²²	58	38	37		22	3	57	16	
24	183	56.9	-11	46.8	221	21.1 ¹⁰⁵	+8	27.0 ¹²³	60 S	2	21	3	27	4	15	4	04
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 21 ^h 49 ^m 6			Mag: -3.9 PMG: 14 ^h 03 ^m			Mag: +1.8 PMG: 9 ^h 27 ^m			Mag: -2.8 PMG: 2 ^h 28 ^m			Mag: -0.2 PMG: 1 ^h 44 ^m				
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	31	42.9	149	23.3	-22	14.5	218	04.2	+4	09.0	322	51.8	+21	03.6	333	48.8	
1	46	45.4	164	22.5		15.2	233	05.3		08.4	337	54.4		03.6	348	51.5	
2	61	47.8	179	21.8		15.9	248	06.3		07.7	352	57.1		03.5	3	54.1	
3	76	50.3	194	21.1		16.5	263	07.3		07.1	7	59.8		03.5	18	56.7	
4	91	52.8	209	20.3		17.2	278	08.4		06.5	23	02.4		03.5	33	59.4	
5	106	55.2	224	19.6	-22	17.9	293	09.4	+4	05.9	38	05.1	+21	03.5	49	02.0	
6	121	57.7	239	18.9	-22	18.5	308	10.4	+4	05.3	53	07.8	+21	03.4	64	04.6	
7	137	00.1	254	18.1		19.2	323	11.5		04.7	68	10.4		03.4	79	07.3	
8	152	02.6	269	17.4		19.9	338	12.5		04.1	83	13.1		03.4	94	09.9	
9	167	05.1	284	16.7		20.6	353	13.5		03.5	98	15.8		03.3	109	12.5	
10	182	07.5	299	15.9		21.2	8	14.6		02.9	113	18.4		03.3	124	15.1	
11	197	10.0	314	15.2	-22	21.9	23	15.6	+4	02.2	128	21.1	+21	03.3	139	17.8	
12	212	12.5	329	14.4	-22	22.5	38	16.6	+4	01.6	143	23.8	+21	03.3	154	20.4	
13	227	14.9	344	13.7		23.2	53	17.7		01.0	158	26.5		03.2	169	23.0	
14	242	17.4	359	13.0		23.9	68	18.7	+4	00.4	173	29.1		03.2	184	25.7	
15	257	19.9	14	12.2		24.5	83	19.7	+3	59.8	188	31.8		03.2	199	28.3	
16	272	22.3	29	11.5		25.2	98	20.8		59.2	203	34.5		03.1	214	30.9	
17	287	24.8	44	10.8	-22	25.9	113	21.8	+3	58.6	218	37.1	+21	03.1	229	33.6	
18	302	27.3	59	10.0	-22	26.5	128	22.8	+3	58.0	233	39.8	+21	03.1	244	36.2	
19	317	29.7	74	09.3		27.2	143	23.9		57.4	248	42.5		03.1	259	38.8	
20	332	32.2	89	08.5		27.8	158	24.9		56.8	263	45.2		03.0	274	41.5	
21	347	34.6	104	07.8		28.5	173	26.0		56.1	278	47.8		03.0	289	44.1	
22	2	37.1	119	07.1		29.1	188	27.0		55.5	293	50.5		03.0	304	46.7	
23	17	39.6	134	06.3		29.8	203	28.0		54.9	308	53.2		02.9	319	49.4	
24	32	42.0	149	05.6	-22	30.4	218	29.1	+3	54.3	323	55.9	+21	02.9	334	52.0	
Dif	—		-7		-7		+10		-6		+27		0		+26		

UT	SOL		● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16°1		Edad: 26 ^d 2	PHE { 4 ^h : 58/5 12 ^h : 58/4 20 ^h : 58/3	SD: 16°0	PMG: 9 ^h 34 ^m			R°: 49 ^m									
	PMG: 11 ^h 44 ^m 1																	
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	m	h m m	m				
0	183	56.9	-11	46.8	221	21.1	+8 27.0	60 N	16 25	17 08	17 57	2 25 88	16 21 11					
1	198	57.0		47.6	235	50.7 ¹⁰⁶	14.7 ¹²³	58	31	12	58	29 86	19 14					
2	213	57.0		48.5	250	20.4 ¹⁰⁷	+8 02.4 ¹²³	56	37	15	17 59	33 83	16 17					
3	228	57.1		49.4	264	50.1 ¹⁰⁷	+7 50.0 ¹²⁴	54	42	19	18 00	37 80	14 19					
4	243	57.2		50.3	279	19.9 ¹⁰⁸	37.6 ¹²⁴	52	47	21	01	40 78	12 21					
5	258	57.3	-11	51.1	293	49.7 ¹⁰⁸	+7 25.2 ¹²⁴	50	16 51	17 24	18 02	2 43 76	16 10 23					
6	273	57.3	-11	52.0	308	19.5 ¹⁰⁸	+7 12.7 ¹²⁵	45	17 00	17 30	18 04	2 49 72	16 06 27					
7	288	57.4		52.9	322	49.4 ¹⁰⁹	+7 00.2 ¹²⁵	40	07	35	07	55 68	03 30					
8	303	57.5		53.7	337	19.3 ¹⁰⁹	+6 47.6 ¹²⁶	35	14	40	09	2 59 65	16 00 34					
9	318	57.6		54.6	351	49.3 ¹¹⁰	35.0 ¹²⁶	30	20	44	12	3 03 62	15 58 36					
10	333	57.6		55.5	6	19.3 ¹¹⁰	22.4 ¹²⁶	20	30	17 52	18	10 57	53 41					
11	348	57.7	-11	56.3	20	49.4 ¹¹¹	+6 09.8 ¹²⁶	10 N	17 39	18 00	18 25	3 16 53	15 49 45					
12	3	57.8	-11	57.2	35	19.5 ¹¹¹	+5 57.1 ¹²⁷	0	17 48	18 09	18 33	3 22 49	15 46 48					
13	18	57.9		58.0	49	49.6 ¹¹¹	44.4 ¹²⁷	10 S	17 56	18	43	28 45	42 52					
14	33	57.9		58.9	64	19.8 ¹¹²	31.7 ¹²⁷	20	18 06	28	18 55	34 41	38 56					
15	48	58.0	-11	59.8	78	50.0 ¹¹²	19.0 ¹²⁷	30	16	41	19 11	41 36	33 62					
16	63	58.1	-12	00.6	93	20.2 ¹¹²	+5 06.2 ¹²⁸	35	23	49	21	45 33	30 65					
17	78	58.2	-12	01.5	107	50.5 ¹¹³	+4 53.4 ¹²⁸	40	18 30	18 58	19 33	3 49 31	15 27 68					
18	93	58.2	-12	02.4	122	20.8 ¹¹³	+4 40.6 ¹²⁸	45	18 38	19 10	19 48	3 54 28	15 24 71					
19	108	58.3		03.2	136	51.2 ¹¹⁴	27.8 ¹²⁸	50	49	24	20 07	4 00 24	19 76					
20	123	58.4		04.1	151	21.6 ¹¹⁴	15.0 ¹²⁸	52	53	30	17	03 21	17 78					
21	138	58.5		05.0	165	52.0 ¹¹⁴	+4 02.1 ¹²⁹	54	18 59	38	28	06 19	15 80					
22	153	58.5		05.8	180	22.5 ¹¹⁵	+3 49.2 ¹²⁹	56	19 04	46	41	10 17	13 82					
23	168	58.6		06.7	194	53.0 ¹¹⁵	36.4 ¹²⁸	58	11	19 56	20 56	13 15	10 85					
24	183	58.7	-12	07.5	209	23.5 ¹¹⁵	+3 23.5 ¹²⁹	60 S	19 18	20 07	21 15	4 18 11	15 07 88					
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 21 ^h 45 ^m 6		Mag: -3.9 PMG: 14 ^h 04 ^m			Mag: +1.8 PMG: 9 ^h 25 ^m			Mag: -2.8 PMG: 2 ^h 24 ^m			Mag: -0.2 PMG: 1 ^h 40 ^m						
	hG ♈	Dec	hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	32	42.0	149	05.6	-22	30.4	218	29.1	+3	54.3	323	55.9	+21	02.9	334	52.0	+17	47.2
1	47	44.5	164	04.8		31.1	233	30.1		53.7	338	58.5		02.9	349	54.6		47.2
2	62	47.0	179	04.1		31.7	248	31.1		53.1	354	01.2		02.9	4	57.2		47.2
3	77	49.4	194	03.4		32.4	263	32.2		52.5	9	03.9		02.8	19	59.9		47.1
4	92	51.9	209	02.6		33.0	278	33.2		51.9	24	06.6		02.8	35	02.5		47.1
5	107	54.4	224	01.9	-22	33.7	293	34.2	+3	51.3	39	09.2	+21	02.8	50	05.1	+17	47.0
6	122	56.8	239	01.1	-22	34.3	308	35.3	+3	50.6	54	11.9	+21	02.7	65	07.8	+17	47.0
7	137	59.3	254	00.4		35.0	323	36.3		50.0	69	14.6		02.7	80	10.4		47.0
8	153	01.7	268	59.6		35.6	338	37.3		49.4	84	17.3		02.7	95	13.0		46.9
9	168	04.2	283	58.9		36.3	353	38.4		48.8	99	19.9		02.6	110	15.7		46.9
10	183	06.7	298	58.1		36.9	8	39.4		48.2	114	22.6		02.6	125	18.3		46.8
11	198	09.1	313	57.4	-22	37.5	23	40.5	+3	47.6	129	25.3	+21	02.6	140	20.9	+17	46.8
12	213	11.6	328	56.6	-22	38.2	38	41.5	+3	47.0	144	28.0	+21	02.6	155	23.6	+17	46.8
13	228	14.1	343	55.9		38.8	53	42.5		46.4	159	30.6		02.5	170	26.2		46.7
14	243	16.5	358	55.2		39.4	68	43.6		45.8	174	33.3		02.5	185	28.9		46.7
15	258	19.0	13	54.4		40.1	83	44.6		45.1	189	36.0		02.5	200	31.5		46.7
16	273	21.5	28	53.7		40.7	98	45.6		44.5	204	38.7		02.4	215	34.1		46.6
17	288	23.9	43	52.9	-22	41.4	113	46.7	+3	43.9	219	41.4	+21	02.4	230	36.8	+17	46.6
18	303	26.4	58	52.2	-22	42.0	128	47.7	+3	43.3	234	44.0	+21	02.4	245	39.4	+17	46.5
19	318	28.9	73	51.4		42.6	143	48.7		42.7	249	46.7		02.3	260	42.0		46.5
20	333	31.3	88	50.7		43.2	158	49.8		42.1	264	49.4		02.3	275	44.7		46.5
21	348	33.8	103	49.9		43.9	173	50.8		41.5	279	52.1		02.3	290	47.3		46.4
22	3	36.2	118	49.2		44.5	188	51.9		40.9	294	54.8		02.3	305	49.9		46.4
23	18	38.7	133	48.4		45.1	203	52.9		40.3	309	57.4		02.2	320	52.6		46.4
24	33	41.2	148	47.6	-22	45.8	218	53.9	+3	39.6	325	00.1	+21	02.2	335	55.2	+17	46.3
Dif	—		-7		-6		+10		-6		+27		0		+26			0

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'1 PMG: 11 ^h 44 ^m 0			Edad: 27 ^d 2 PHE { 4 ^h : 58'2 12 ^h : 58'0 20 ^h : 57'8 R°: 48 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	h m	h m
0	183	58.7	-12 07.5	209	23.5	+3 23.5	60 N	5 32	6 21	7 05	3 53 88	16 32 11		
1	198	58.7	08.4	223	54.1 ¹¹⁶	+3 10.6 ¹²⁹	58	31	17	6 58	55 84	33 13		
2	213	58.8	09.3	238	24.7 ¹¹⁶	+2 57.6 ¹³⁰	56	30	14	53	56 81	33 16		
3	228	58.9	10.1	252	55.3 ¹¹⁶	44.7 ¹²⁹	54	29	11	47	57 79	33 18		
4	243	59.0	11.0	267	25.9 ¹¹⁶	31.8 ¹²⁹	52	28	08	43	58 77	33 20		
5	258	59.0	-12 11.8	281	56.6 ¹¹⁷	+2 18.9 ¹²⁹	50	5 27	6 05	6 38	3 59 75	16 33 22		
6	273	59.1	-12 12.7	296	27.3 ¹¹⁷	+2 05.9 ¹³⁰	45	5 25	5 59	6 29	4 01 70	16 33 26		
7	288	59.2	13.6	310	58.0 ¹¹⁷	+1 53.0 ¹²⁹	40	22	54	21	03 66	33 30		
8	303	59.2	14.4	325	28.8 ¹¹⁸	40.0 ¹³⁰	35	19	49	15	04 64	34 32		
9	318	59.3	15.3	339	59.6 ¹¹⁸	27.1 ¹²⁹	30	16	44	6 09	05 61	34 35		
10	333	59.4	16.1	354	30.4 ¹¹⁸	14.1 ¹³⁰	20	10	36	5 58	07 57	34 40		
11	348	59.4	-12 17.0	9	01.2 ¹¹⁸	+1 01.2 ¹²⁹	10 N	5 03	5 28	5 49	4 09 52	16 34 44		
12	3	59.5	-12 17.8	23	32.1 ¹¹⁹	+0 48.2 ¹³⁰	0	4 55	5 20	5 41	4 11 48	16 34 48		
13	18	59.6	18.7	38	03.0 ¹¹⁹	35.3 ¹²⁹	10 S	45	10	32	13 44	34 52		
14	33	59.6	19.6	52	33.9 ¹¹⁹	22.3 ¹³⁰	20	33	5 00	22	15 40	34 56		
15	48	59.7	20.4	67	04.8 ¹¹⁹	+0 09.4 ¹²⁹	30	17	4 47	11	17 36	35 60		
16	63	59.8	21.3	81	35.7 ¹¹⁹	-0 03.5 ¹²⁹	35	4 07	39	5 05	18 33	35 63		
17	78	59.8	-12 22.1	96	06.7 ¹²⁰	-0 16.4 ¹²⁹	40	3 55	4 29	4 58	4 20 30	16 35 66		
18	93	59.9	-12 23.0	110	37.7 ¹²⁰	-0 29.4 ¹³⁰	45	3 40	4 18	4 49	4 22 26	16 35 70		
19	109	00.0	23.8	125	08.7 ¹²⁰	42.3 ¹²⁹	50	20	4 04	39	24 22	35 74		
20	124	00.0	24.7	139	39.7 ¹²⁰	-0 55.1 ¹²⁸	52	3 10	3 57	34	24 21	35 76		
21	139	00.1	25.6	154	10.7 ¹²⁰	-1 08.0 ¹²⁹	54	2 59	50	29	25 19	35 78		
22	154	00.2	26.4	168	41.8 ¹²¹	20.9 ¹²⁹	56	46	41	23	27 16	35 81		
23	169	00.2	27.3	183	12.8 ¹²⁰	33.7 ¹²⁸	58	31	31	16	28 13	35 83		
24	184	00.3	-12 28.1	197	43.9 ¹²¹	-1 46.6 ¹²⁹	60 S	2 12	3 20	4 09	4 29 11	16 35 87		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 21 ^h 41 ^m 7		Mag: -3.9 PMG: 14 ^h 06 ^m			Mag: +1.8 PMG: 9 ^h 24 ^m			Mag: -2.8 PMG: 2 ^h 20 ^m			Mag: -0.2 PMG: 1 ^h 36 ^m		
	hG ♈		hG ♀ Dec			hG ♂ Dec			hG ♃ Dec			hG ♄ Dec		
h	°	'	°	°	'	°	'	°	°	'	°	°	'	
0	33	41.2	148	47.6	-22 45.8	218	53.9	+3 39.6	325	00.1	+21 02.2	335	55.2	+17 46.3
1	48	43.6	163	46.9	46.4	233	55.0	39.0	340	02.8	02.2	350	57.8	46.3
2	63	46.1	178	46.1	47.0	248	56.0	38.4	355	05.5	02.1	6	00.5	46.2
3	78	48.6	193	45.4	47.6	263	57.0	37.8	10	08.2	02.1	21	03.1	46.2
4	93	51.0	208	44.6	48.3	278	58.1	37.2	25	10.9	02.1	36	05.7	46.2
5	108	53.5	223	43.9	-22 48.9	293	59.1	+3 36.6	40	13.5	+21 02.0	51	08.4	+17 46.1
6	123	56.0	238	43.1	-22 49.5	309	00.2	+3 36.0	55	16.2	+21 02.0	66	11.0	+17 46.1
7	138	58.4	253	42.4	50.1	324	01.2	35.4	70	18.9	02.0	81	13.6	46.0
8	154	00.9	268	41.6	50.7	339	02.2	34.8	85	21.6	02.0	96	16.3	46.0
9	169	03.3	283	40.9	51.3	354	03.3	34.1	100	24.3	01.9	111	18.9	46.0
10	184	05.8	298	40.1	52.0	9	04.3	33.5	115	27.0	01.9	126	21.6	45.9
11	199	08.3	313	39.3	-22 52.6	24	05.3	+3 32.9	130	29.6	+21 01.9	141	24.2	+17 45.9
12	214	10.7	328	38.6	-22 53.2	39	06.4	+3 32.3	145	32.3	+21 01.8	156	26.8	+17 45.9
13	229	13.2	343	37.8	53.8	54	07.4	31.7	160	35.0	01.8	171	29.5	45.8
14	244	15.7	358	37.1	54.4	69	08.5	31.1	175	37.7	01.8	186	32.1	45.8
15	259	18.1	13	36.3	55.0	84	09.5	30.5	190	40.4	01.7	201	34.7	45.7
16	274	20.6	28	35.6	55.6	99	10.5	29.9	205	43.1	01.7	216	37.4	45.7
17	289	23.1	43	34.8	-22 56.2	114	11.6	+3 29.3	220	45.8	+21 01.7	231	40.0	+17 45.7
18	304	25.5	58	34.0	-22 56.8	129	12.6	+3 28.6	235	48.4	+21 01.6	246	42.7	+17 45.6
19	319	28.0	73	33.3	57.4	144	13.6	28.0	250	51.1	01.6	261	45.3	45.6
20	334	30.5	88	32.5	58.1	159	14.7	27.4	265	53.8	01.6	276	47.9	45.5
21	349	32.9	103	31.7	58.7	174	15.7	26.8	280	56.5	01.6	291	50.6	45.5
22	4	35.4	118	31.0	59.3	189	16.8	26.2	295	59.2	01.5	306	53.2	45.5
23	19	37.8	133	30.2	-22 59.9	204	17.8	25.6	311	01.9	01.5	321	55.8	45.4
24	34	40.3	148	29.5	-23 00.5	219	18.8	+3 25.0	326	04.6	+21 01.5	336	58.5	+17 45.4
Dif	—		-8 -6			+10 -6			+27 0			+26 0		

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna						
	SD: 16 ^h 1			Edad: 28 ^d 2 PHE { 4 ^h : 57 ^m 7 12 ^h : 57 ^m 5 20 ^h : 57 ^m 3 R°: 47 ^m															
	PMG: 11 ^h 43 ^m 9			PMG: 11 ^h 11 ^m															
	hG ☉		Dec	hG ☾ Dif		Dec Dif			Civil	Náutico	Hora	R°	Hora	R°					
h	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	h m	h m					
0	184	00.3	-12 28.1	197	43.9	-1 46.6	60 N	16 19	17 03	17 52	5 21	86	16 43	12					
1	199	00.4	29.0	212	15.0 ¹²¹	-1 59.4 ¹²⁸	58	26	07	53	19	83	46	15					
2	214	00.4	29.8	226	46.1 ¹²¹	-2 12.2 ¹²⁸	56	32	11	55	17	81	49	17					
3	229	00.5	30.7	241	17.2 ¹²¹	24.9 ¹²⁷	54	38	14	56	16	78	51	19					
4	244	00.6	31.5	255	48.3 ¹²¹	37.7 ¹²⁸	52	43	18	57	15	75	53	22					
5	259	00.6	-12 32.4	270	19.5 ¹²²	-2 50.4 ¹²⁷	50	16 47	17 20	17 58	5 14	73	16 55	23					
6	274	00.7	-12 33.2	284	50.6 ¹²¹	-3 03.1 ¹²⁷	45	16 57	17 27	18 01	5 11	70	16 59	28					
7	289	00.7	34.1	299	21.8 ¹²²	15.8 ¹²⁷	40	17 05	33	04	09	66	17 03	30					
8	304	00.8	34.9	313	53.0 ¹²²	28.5 ¹²⁷	35	12	38	07	08	62	06	33					
9	319	00.9	35.8	328	24.2 ¹²²	41.1 ¹²⁶	30	18	42	10	06	60	09	36					
10	334	00.9	36.6	342	55.4 ¹²²	-3 53.7 ¹²⁶	20	29	17 51	17	04	55	14	40					
11	349	01.0	-12 37.5	357	26.6 ¹²²	-4 06.3 ¹²⁶	10 N	17 38	18 00	18 25	5 01	52	17 18	44					
12	4	01.0	-12 38.3	11	57.8 ¹²²	-4 18.9 ¹²⁶	0	17 47	18 09	18 33	4 59	48	17 22	48					
13	19	01.1	39.2	26	29.0 ¹²²	31.4 ¹²⁵	10 S	17 57	18	43	57	44	26	51					
14	34	01.2	40.0	41	00.2 ¹²²	43.9 ¹²⁵	20	18 06	29	18 56	55	40	30	55					
15	49	01.2	40.9	55	31.4 ¹²²	-4 56.3 ¹²⁴	30	18	43	19 12	53	35	35	60					
16	64	01.3	41.7	70	02.6 ¹²²	-5 08.8 ¹²⁵	35	25	18 51	23	51	33	38	62					
17	79	01.3	-12 42.6	84	33.9 ¹²³	-5 21.2 ¹²⁴	40	18 32	19 01	19 36	4 50	29	17 41	65					
18	94	01.4	-12 43.4	99	05.1 ¹²²	-5 33.5 ¹²³	45	18 41	19 13	19 51	4 48	26	17 45	68					
19	109	01.5	44.3	113	36.3 ¹²²	45.8 ¹²³	50	52	27	20 12	46	22	49	73					
20	124	01.5	45.1	128	07.6 ¹²³	-5 58.1 ¹²³	52	18 57	34	22	45	20	51	75					
21	139	01.6	46.0	142	38.8 ¹²²	-6 10.4 ¹²³	54	19 03	42	34	44	18	53	77					
22	154	01.6	46.8	157	10.0 ¹²²	22.6 ¹²²	56	09	19 51	20 47	43	16	56	79					
23	169	01.7	47.7	171	41.3 ¹²³	34.7 ¹²¹	58	16	20 01	21 03	41	14	17 58	83					
24	184	01.7	-12 48.5	186	12.5 ¹²²	-6 46.8 ¹²¹	60 S	19 24	20 13	21 24	4 40	11	18 02	85					
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 21 ^h 37 ^m 8		Mag: -4.0 PMG: 14 ^h 07 ^m			Mag: +1.8 PMG: 9 ^h 22 ^m			Mag: -2.8 PMG: 2 ^h 15 ^m			Mag: -0.2 PMG: 1 ^h 32 ^m							
	hG ♈		hG ♀ Dec			hG ♂ Dec			hG ♊ Dec			hG ♎ Dec							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'					
0	34	40.3	148	29.5	-23	00.5	219	18.8	+3	25.0	326	04.6	+21	01.5	336	58.5	+17	45.4	
1	49	42.8	163	28.7		01.1	234	19.9		24.4	341	07.3		01.4	352	01.1		45.3	
2	64	45.2	178	27.9		01.7	249	20.9		23.8	356	10.0		01.4	7	03.8		45.3	
3	79	47.7	193	27.2		02.3	264	21.9		23.1	11	12.6		01.4	22	06.4		45.3	
4	94	50.2	208	26.4		02.8	279	23.0		22.5	26	15.3		01.3	37	09.0		45.2	
5	109	52.6	223	25.6	-23	03.4	294	24.0	+3	21.9	41	18.0	+21	01.3	52	11.7	+17	45.2	
6	124	55.1	238	24.9	-23	04.0	309	25.1	+3	21.3	56	20.7	+21	01.3	67	14.3	+17	45.2	
7	139	57.6	253	24.1		04.6	324	26.1		20.7	71	23.4		01.2	82	16.9		45.1	
8	155	00.0	268	23.3		05.2	339	27.1		20.1	86	26.1		01.2	97	19.6		45.1	
9	170	02.5	283	22.6		05.8	354	28.2		19.5	101	28.8		01.2	112	22.2		45.0	
10	185	05.0	298	21.8		06.4	9	29.2		18.9	116	31.5		01.1	127	24.9		45.0	
11	200	07.4	313	21.0	-23	07.0	24	30.3	+3	18.2	131	34.2	+21	01.1	142	27.5	+17	45.0	
12	215	09.9	328	20.3	-23	07.6	39	31.3	+3	17.6	146	36.9	+21	01.1	157	30.1	+17	44.9	
13	230	12.3	343	19.5		08.2	54	32.3		17.0	161	39.6		01.0	172	32.8		44.9	
14	245	14.8	358	18.7		08.7	69	33.4		16.4	176	42.3		01.0	187	35.4		44.8	
15	260	17.3	13	18.0		09.3	84	34.4		15.8	191	45.0		01.0	202	38.1		44.8	
16	275	19.7	28	17.2		09.9	99	35.5		15.2	206	47.6		01.0	217	40.7		44.8	
17	290	22.2	43	16.4	-23	10.5	114	36.5	+3	14.6	221	50.3	+21	00.9	232	43.3	+17	44.7	
18	305	24.7	58	15.7	-23	11.1	129	37.5	+3	14.0	236	53.0	+21	00.9	247	46.0	+17	44.7	
19	320	27.1	73	14.9		11.7	144	38.6		13.4	251	55.7		00.9	262	48.6		44.6	
20	335	29.6	88	14.1		12.2	159	39.6		12.7	266	58.4		00.8	277	51.3		44.6	
21	350	32.1	103	13.3		12.8	174	40.6		12.1	282	01.1		00.8	292	53.9		44.6	
22	5	34.5	118	12.6		13.4	189	41.7		11.5	297	03.8		00.8	307	56.5		44.5	
23	20	37.0	133	11.8		14.0	204	42.7		10.9	312	06.5		00.7	322	59.2		44.5	
24	35	39.4	148	11.0	-23	14.5	219	43.8	+3	10.3	327	09.2	+21	00.7	338	01.8	+17	44.4	
Dif	—		-8			-6	+10			-6	+27			0			+26		

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'1			Edad: 29 ^d 2	PHE {	4 ^h : 57'1 12 ^h : 56'9 20 ^h : 56'8		R°: 48 ^m							
	PMG: 11 ^h 43 ^m 8														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	h	m	h	m		h	m	m
0	184	01.7	-12 48.5	186	12.5	-6 46.8		5 37	6 26	7 10	6 47	84	16 55	14	
1	199	01.8	49.3	200	43.7 ¹²²	-6 58.9 ¹²¹		36	22	7 03	42	81	17 01	16	
2	214	01.8	50.2	215	15.0 ¹²³	-7 11.0 ¹²¹		34	18	6 57	38	78	06	19	
3	229	01.9	51.0	229	46.2 ¹²²	22.9 ¹¹⁹		33	14	51	34	76	10	22	
4	244	02.0	51.9	244	17.4 ¹²²	34.9 ¹²⁰		32	11	46	30	74	15	23	
5	259	02.0	-12 52.7	258	48.7 ¹²³	-7 46.8 ¹¹⁹		5 30	6 08	6 42	6 27	72	17 18	26	
6	274	02.1	-12 53.6	273	19.9 ¹²²	-7 58.6 ¹¹⁸		5 27	6 02	6 32	6 21	67	17 27	29	
7	289	02.1	54.4	287	51.1 ¹²²	-8 10.4 ¹¹⁸		24	5 56	24	15	65	33	33	
8	304	02.2	55.2	302	22.3 ¹²²	22.2 ¹¹⁸		21	51	17	10	62	39	35	
9	319	02.2	56.1	316	53.6 ¹²³	33.9 ¹¹⁷		18	46	6 10	6 06	59	45	37	
10	334	02.3	56.9	331	24.8 ¹²²	45.5 ¹¹⁶		11	37	5 59	5 59	55	17 54	41	
11	349	02.3	-12 57.8	345	56.0 ¹²²	-8 57.1 ¹¹⁶		5 03	5 28	5 50	5 53	51	18 02	45	
12	4	02.4	-12 58.6	0	27.1 ¹²¹	-9 08.7 ¹¹⁶		4 55	5 19	5 40	5 47	47	18 10	48	
13	19	02.4	-12 59.5	14	58.3 ¹²²	20.2 ¹¹⁵		44	5 10	31	41	44	17	51	
14	34	02.5	-13 00.3	29	29.5 ¹²²	31.6 ¹¹⁴		32	4 58	21	35	40	25	55	
15	49	02.5	01.1	44	00.7 ¹²²	43.0 ¹¹⁴		15	45	10	28	36	35	58	
16	64	02.6	02.0	58	31.8 ¹²¹	-9 54.3 ¹¹³		4 04	36	5 03	24	34	40	61	
17	79	02.6	-13 02.8	73	03.0 ¹²²	-10 05.6 ¹¹³		3 52	4 26	4 55	5 19	32	18 46	64	
18	94	02.7	-13 03.7	87	34.2 ¹²²	-10 16.8 ¹¹²		3 36	4 15	4 46	5 14	28	18 53	67	
19	109	02.7	04.5	102	05.3 ¹²¹	28.0 ¹¹²		15	4 00	35	08	24	19 02	71	
20	124	02.8	05.3	116	36.4 ¹²¹	39.0 ¹¹⁰		3 05	3 53	30	05	23	06	73	
21	139	02.8	06.2	131	07.5 ¹²¹	-10 50.1 ¹¹¹		2 54	45	24	5 02	20	10	75	
22	154	02.9	07.0	145	38.6 ¹²¹	-11 01.0 ¹⁰⁹		40	36	18	4 59	18	15	78	
23	169	02.9	07.8	160	09.7 ¹²¹	11.9 ¹⁰⁹		23	26	11	55	16	21	80	
24	184	03.0	-13 08.7	174	40.8 ¹²¹	-11 22.8 ¹⁰⁹		2 03	3 14	4 03	4 51	13	19 27	83	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 21 ^h 33 ^m 8		Mag: -4.0 PMG: 14 ^h 08 ^m		Mag: +1.8 PMG: 9 ^h 20 ^m		Mag: -2.8 PMG: 2 ^h 11 ^m		Mag: -0.2 PMG: 1 ^h 28 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	35	39.4	148	11.0	-23	14.5	219	43.8	+3	10.3
1	50	41.9	163	10.3		15.1	234	44.8		09.7
2	65	44.4	178	09.5		15.7	249	45.8		09.1
3	80	46.8	193	08.7		16.2	264	46.9		08.5
4	95	49.3	208	07.9		16.8	279	47.9		07.9
5	110	51.8	223	07.2	-23	17.4	294	49.0	+3	07.2
6	125	54.2	238	06.4	-23	17.9	309	50.0	+3	06.6
7	140	56.7	253	05.6		18.5	324	51.0		06.0
8	155	59.2	268	04.8		19.1	339	52.1		05.4
9	171	01.6	283	04.1		19.6	354	53.1		04.8
10	186	04.1	298	03.3		20.2	9	54.2		04.2
11	201	06.6	313	02.5	-23	20.8	24	55.2	+3	03.6
12	216	09.0	328	01.7	-23	21.3	39	56.2	+3	03.0
13	231	11.5	343	00.9		21.9	54	57.3		02.3
14	246	13.9	358	00.2		22.4	69	58.3		01.7
15	261	16.4	12	59.4		23.0	84	59.4		01.1
16	276	18.9	27	58.6		23.6	100	00.4	+3	00.5
17	291	21.3	42	57.8	-23	24.1	115	01.4	+2	59.9
18	306	23.8	57	57.1	-23	24.7	130	02.5	+2	59.3
19	321	26.3	72	56.3		25.2	145	03.5		58.7
20	336	28.7	87	55.5		25.8	160	04.6		58.1
21	351	31.2	102	54.7		26.3	175	05.6		57.5
22	6	33.7	117	53.9		26.9	190	06.7		56.8
23	21	36.1	132	53.1		27.4	205	07.7		56.2
24	36	38.6	147	52.4	-23	28.0	220	08.7	+2	55.6
Dif	—		-8 -6		+10 -6		+27 0		+26 0	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:1			Edad: 30 ^d 2 PHE { 4 ^h : 56:6 12 ^h : 56:4 20 ^h : 56:2					Final del crepúsculo			Salida de Luna		Puesta de Luna	
	PMG: 11 ^h 43 ^m 8			PMG: 12 ^h 46 ^m R°: 48 ^m					Civil			Náutico		Hora R°	
	hG ☉	Dec		hG ☾ Dif	Dec	Dif									
h	°	'	°	°	'	°	°	h m	h m	h m	h m	h m	h m	h m	m
0	184	03.0	-13 08.7	174	40.8	-11 22.8	60 N	16 14	16 58	17 47	8 11 82	17 09 17			
1	199	03.0	09.5	189	11.9 ¹²¹	33.6 ¹⁰⁸	58	21	17 03	49	8 03 79	17 21			
2	214	03.1	10.4	203	42.9 ¹²⁰	44.3 ¹⁰⁷	56	28	07	50	7 56 76	25 23			
3	229	03.1	11.2	218	14.0 ¹²¹	-11 54.9 ¹⁰⁶	54	33	10	52	50 74	32 25			
4	244	03.2	12.0	232	45.0 ¹²⁰	-12 05.5 ¹⁰⁶	52	39	14	53	44 72	38 27			
5	259	03.2	-13 12.9	247	16.1 ¹²¹	-12 16.0 ¹⁰⁵	50	16 43	17 17	17 55	7 39 70	17 44 28			
6	274	03.3	-13 13.7	261	47.1 ¹²⁰	-12 26.4 ¹⁰⁴	45	16 54	17 24	17 58	7 28 67	17 56 32			
7	289	03.3	14.5	276	18.1 ¹²⁰	36.8 ¹⁰⁴	40	17 02	30	18 02	20 63	18 06 35			
8	304	03.4	15.4	290	49.0 ¹¹⁹	47.1 ¹⁰³	35	10	36	05	12 60	14 38			
9	319	03.4	16.2	305	20.0 ¹²⁰	-12 57.3 ¹⁰²	30	16	41	09	7 05 59	22 39			
10	334	03.5	17.0	319	51.0 ¹²⁰	-13 07.5 ¹⁰²	20	28	50	16	6 54 54	35 43			
11	349	03.5	-13 17.9	334	21.9 ¹¹⁹	-13 17.6 ¹⁰¹	10 N	17 38	17 59	18 24	6 44 51	18 47 46			
12	4	03.5	-13 18.7	348	52.8 ¹¹⁹	-13 27.6 ¹⁰⁰	0	17 47	18 08	18 33	6 34 49	18 58 48			
13	19	03.6	19.5	3	23.7 ¹¹⁹	37.5 ⁹⁹	10 S	17 57	19	44	25 45	19 08 52			
14	34	03.6	20.4	17	54.6 ¹¹⁹	47.4 ⁹⁹	20	18 07	30	18 57	15 42	20 54			
15	49	03.7	21.2	32	25.5 ¹¹⁹	-13 57.1 ⁹⁷	30	19	44	19 14	6 04 38	33 58			
16	64	03.7	22.0	46	56.4 ¹¹⁹	-14 06.9 ⁹⁸	35	26	18 53	25	5 58 36	41 60			
17	79	03.8	-13 22.9	61	27.2 ¹¹⁸	-14 16.5 ⁹⁶	40	18 34	19 03	19 38	5 51 33	19 50 62			
18	94	03.8	-13 23.7	75	58.1 ¹¹⁹	-14 26.0 ⁹⁵	45	18 44	19 16	19 55	5 42 31	20 00 65			
19	109	03.8	24.5	90	28.9 ¹¹⁸	35.5 ⁹⁵	50	18 55	31	20 16	32 27	13 69			
20	124	03.9	25.3	104	59.7 ¹¹⁸	44.9 ⁹⁴	52	19 01	38	27	28 25	19 70			
21	139	03.9	26.2	119	30.5 ¹¹⁸	-14 54.2 ⁹³	54	07	47	39	22 24	25 73			
22	154	04.0	27.0	134	01.2 ¹¹⁷	-15 03.5 ⁹³	56	13	19 56	20 53	17 21	33 74			
23	169	04.0	27.8	148	32.0 ¹¹⁸	12.6 ⁹¹	58	21	20 07	21 11	11 18	41 77			
24	184	04.1	-13 28.7	163	02.7 ¹¹⁷	-15 21.7 ⁹¹	60 S	19 29	20 19	21 33	5 04 15	20 50 80			
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG 21 ^h 29 ^m 9		Mag: -4.0 PMG: 14 ^h 09 ^m		Mag: +1.8 PMG: 9 ^h 19 ^m		Mag: -2.8 PMG: 2 ^h 07 ^m		Mag: -0.2 PMG: 1 ^h 23 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	36	38.6	147	52.4	220	08.7	328	14.0	339	05.2					
1	51	41.0	162	51.6	235	09.8	343	16.7	354	07.9					
2	66	43.5	177	50.8	250	10.8	358	19.4	9	10.5					
3	81	46.0	192	50.0	265	11.9	13	22.1	24	13.2					
4	96	48.4	207	49.2	280	12.9	28	24.8	39	15.8					
5	111	50.9	222	48.4	295	13.9	43	27.5	54	18.5					
6	126	53.4	237	47.7	310	15.0	58	30.3	69	21.1					
7	141	55.8	252	46.9	325	16.0	73	33.0	84	23.7					
8	156	58.3	267	46.1	340	17.1	88	35.7	99	26.4					
9	172	00.8	282	45.3	355	18.1	103	38.4	114	29.0					
10	187	03.2	297	44.5	10	19.1	118	41.1	129	31.7					
11	202	05.7	312	43.7	25	20.2	133	43.8	144	34.3					
12	217	08.2	327	42.9	40	21.2	148	46.5	159	37.0					
13	232	10.6	342	42.2	55	22.3	163	49.2	174	39.6					
14	247	13.1	357	41.4	70	23.3	178	51.9	189	42.3					
15	262	15.5	12	40.6	85	24.4	193	54.6	204	44.9					
16	277	18.0	27	39.8	100	25.4	208	57.3	219	47.5					
17	292	20.5	42	39.0	115	26.4	224	00.0	234	50.2					
18	307	22.9	57	38.2	130	27.5	239	02.7	249	52.8					
19	322	25.4	72	37.4	145	28.5	254	05.5	264	55.5					
20	337	27.9	87	36.6	160	29.6	269	08.2	279	58.1					
21	352	30.3	102	35.8	175	30.6	284	10.9	295	00.8					
22	7	32.8	117	35.1	190	31.7	299	13.6	310	03.4					
23	22	35.3	132	34.3	205	32.7	314	16.3	325	06.1					
24	37	37.7	147	33.5	220	33.7	329	19.0	340	08.7					
Dif	—		-8	-5	+10	-6	+27	0	+26	0					

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16:1 PMG: 11 ^h 43 ^m 7			Edad: 1 ^d 7 PHE { SD: 15:3 PMG: 13 ^h 34 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	184	04.1	-13 28.7	163	02.7	-15 21.7		60 N	5 41	6 31	7 15	9 33	78	17 26	23
1	199	04.1		177	33.5 ¹¹⁸	30.7 ⁹⁰		58	40	26	08	22	75	38	26
2	214	04.1		192	04.2 ¹¹⁷	39.6 ⁸⁹		56	38	22	7 01	12	72	48	29
3	229	04.2		206	34.9 ¹¹⁷	48.4 ⁸⁸		54	36	18	6 55	9 04	70	17 57	31
4	244	04.2		221	05.5 ¹¹⁶	-15 57.1 ⁸⁷		52	35	15	50	8 56	68	18 05	32
5	259	04.2	-13 32.8	235	36.2 ¹¹⁷	-16 05.8 ⁸⁷		50	5 33	6 11	6 45	8 49	67	18 12	34
6	274	04.3	-13 33.6	250	06.8 ¹¹⁶	-16 14.3 ⁸⁵		45	5 30	6 04	6 35	8 35	63	18 28	37
7	289	04.3		264	37.4 ¹¹⁶	22.8 ⁸⁵		40	26	5 58	26	23	61	41	39
8	304	04.4		279	08.1 ¹¹⁷	31.2 ⁸⁴		35	23	52	18	12	59	18 52	41
9	319	04.4		293	38.6 ¹¹⁵	39.5 ⁸³		30	19	47	12	8 04	57	19 01	43
10	334	04.4		308	09.2 ¹¹⁶	47.7 ⁸²		20	12	38	6 00	7 48	54	18	45
11	349	04.5	-13 37.7	322	39.8 ¹¹⁶	-16 55.8 ⁸¹		10 N	5 03	5 28	5 50	7 35	51	19 33	47
12	4	04.5	-13 38.6	337	10.3 ¹¹⁵	-17 03.9 ⁸¹		0	4 54	5 19	5 40	7 23	49	19 46	49
13	19	04.5		351	40.8 ¹¹⁵	11.8 ⁷⁹		10 S	44	5 09	30	7 10	47	20 00	51
14	34	04.6		6	11.3 ¹¹⁵	19.7 ⁷⁹		20	30	4 57	20	6 57	44	14	54
15	49	04.6		20	41.8 ¹¹⁵	27.4 ⁷⁷		30	13	43	08	42	41	31	56
16	64	04.7		35	12.3 ¹¹⁵	35.1 ⁷⁷		35	4 02	34	5 01	34	39	41	58
17	79	04.7	-13 42.7	49	42.8 ¹¹⁵	-17 42.7 ⁷⁶		40	3 49	4 24	4 52	6 24	37	20 52	60
18	94	04.7	-13 43.5	64	13.2 ¹¹⁴	-17 50.2 ⁷⁵		45	3 32	4 11	4 43	6 13	34	21 05	62
19	109	04.8		78	43.6 ¹¹⁴	-17 57.6 ⁷⁴		50	11	3 56	31	5 59	31	22	64
20	124	04.8		93	14.1 ¹¹⁵	-18 04.9 ⁷³		52	3 00	48	26	53	29	29	66
21	139	04.8		107	44.5 ¹¹⁴	12.1 ⁷²		54	2 48	40	20	46	27	38	67
22	154	04.9		122	14.8 ¹¹³	19.2 ⁷¹		56	33	31	13	38	25	47	69
23	169	04.9		136	45.2 ¹¹⁴	26.2 ⁷⁰		58	2 16	20	4 06	29	23	21 58	71
24	184	04.9	-13 48.4	151	15.6 ¹¹⁴	-18 33.1 ⁶⁹		60 S	1 54	3 07	3 58	5 19	20	22 10	75

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 21 ^h 26 ^m 0		Mag: -4.0 PMG: 14 ^h 11 ^m		Mag: +1.8 PMG: 9 ^h 17 ^m		Mag: -2.8 PMG: 2 ^h 02 ^m		Mag: -0.3 PMG: 1 ^h 19 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	37	37.7	147	33.5	-23 40.7	220	33.7	+2 40.9	329	19.0	+20 59.1	340	08.7	+17 42.5
1	52	40.2	162	32.7	41.3	235	34.8	40.3	344	21.7	59.1	355	11.4	42.5
2	67	42.7	177	31.9	41.8	250	35.8	39.7	359	24.4	59.0	10	14.0	42.5
3	82	45.1	192	31.1	42.3	265	36.9	39.1	14	27.1	59.0	25	16.6	42.4
4	97	47.6	207	30.3	42.8	280	37.9	38.5	29	29.9	59.0	40	19.3	42.4
5	112	50.0	222	29.5	-23 43.3	295	38.9	+2 37.9	44	32.6	+20 58.9	55	21.9	+17 42.3
6	127	52.5	237	28.7	-23 43.8	310	40.0	+2 37.3	59	35.3	+20 58.9	70	24.6	+17 42.3
7	142	55.0	252	27.9	44.3	325	41.0	36.6	74	38.0	58.9	85	27.2	42.3
8	157	57.4	267	27.1	44.9	340	42.1	36.0	89	40.7	58.8	100	29.9	42.2
9	172	59.9	282	26.3	45.4	355	43.1	35.4	104	43.4	58.8	115	32.5	42.2
10	188	02.4	297	25.5	45.9	10	44.2	34.8	119	46.1	58.8	130	35.2	42.1
11	203	04.8	312	24.7	-23 46.4	25	45.2	+2 34.2	134	48.8	+20 58.7	145	37.8	+17 42.1
12	218	07.3	327	23.9	-23 46.9	40	46.2	+2 33.6	149	51.6	+20 58.7	160	40.5	+17 42.1
13	233	09.8	342	23.1	47.4	55	47.3	33.0	164	54.3	58.6	175	43.1	42.0
14	248	12.2	357	22.4	47.9	70	48.3	32.4	179	57.0	58.6	190	45.8	42.0
15	263	14.7	12	21.6	48.4	85	49.4	31.7	194	59.7	58.6	205	48.4	41.9
16	278	17.1	27	20.8	48.9	100	50.4	31.1	210	02.4	58.5	220	51.1	41.9
17	293	19.6	42	20.0	-23 49.4	115	51.5	+2 30.5	225	05.1	+20 58.5	235	53.7	+17 41.9
18	308	22.1	57	19.2	-23 49.9	130	52.5	+2 29.9	240	07.9	+20 58.5	250	56.4	+17 41.8
19	323	24.5	72	18.4	50.4	145	53.5	29.3	255	10.6	58.4	265	59.0	41.8
20	338	27.0	87	17.6	50.9	160	54.6	28.7	270	13.3	58.4	281	01.6	41.7
21	353	29.5	102	16.8	51.4	175	55.6	28.1	285	16.0	58.4	296	04.3	41.7
22	8	31.9	117	16.0	51.9	190	56.7	27.5	300	18.7	58.3	311	06.9	41.7
23	23	34.4	132	15.2	52.4	205	57.7	26.9	315	21.4	58.3	326	09.6	41.6
24	38	36.9	147	14.4	-23 52.9	220	58.8	+2 26.2	330	24.2	+20 58.3	341	12.2	+17 41.6
Dif	—		-8	-5		+10	-6		+27	0		+26	0	

UT	SOL		● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1		Edad: 2 ^d 7	PHE { 4 ^h : 55 ^m /4 12 ^h : 55 ^m /2 20 ^h : 55 ^m /1	SD: 15 ^h 1				Final del crepúsculo		Salida de Luna		Puesta de Luna	
	PMG: 11 ^h 43 ^m 6				PMG: 14 ^h 24 ^m				R°: 49 ^m					
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	m	h m m	m
0	184	04.9	-13	48.4	151	15.6	-18 33.1	60 N	16 09	16 53	17 43	10 51 70	17 49 33	
1	199	05.0		49.2	165	45.9 ¹¹³	39.9 ⁶⁸	58	16	16 58	45	37 67	18 04 35	
2	214	05.0		50.1	180	16.2 ¹¹³	46.7 ⁶⁸	56	23	17 03	46	24 66	17 36	
3	229	05.0		50.9	194	46.5 ¹¹³	53.3 ⁶⁶	54	29	07	48	14 64	28 37	
4	244	05.0		51.7	209	16.8 ¹¹³	-18 59.8 ⁶⁵	52	35	10	50	10 04 63	37 39	
5	259	05.1	-13	52.5	223	47.1 ¹¹³	-19 06.3 ⁶⁵	50	16 40	17 14	17 52	9 56 61	18 46 40	
6	274	05.1	-13	53.3	238	17.4 ¹¹³	-19 12.6 ⁶³	45	16 51	17 21	17 56	9 38 59	19 05 41	
7	289	05.1		54.2	252	47.6 ¹¹²	18.8 ⁶²	40	17 00	28	18 00	24 57	20 43	
8	304	05.2		55.0	267	17.9 ¹¹³	25.0 ⁶²	35	08	34	03	11 56	33 44	
9	319	05.2		55.8	281	48.1 ¹¹²	31.0 ⁶⁰	30	14	39	07	9 01 54	19 44 45	
10	334	05.2		56.6	296	18.3 ¹¹²	37.0 ⁶⁰	20	26	49	15	8 42 53	20 03 47	
11	349	05.3	-13	57.4	310	48.6 ¹¹³	-19 42.8 ⁵⁸	10 N	17 37	17 59	18 24	8 26 52	20 20 48	
12	4	05.3	-13	58.2	325	18.7 ¹¹¹	-19 48.5 ⁵⁷	0	17 47	18 08	18 33	8 12 49	20 35 50	
13	19	05.3		59.0	339	48.9 ¹¹²	54.2 ⁵⁷	10 S	17 57	19	44	7 57 48	20 51 51	
14	34	05.3	-13	59.9	354	19.1 ¹¹²	-19 59.7 ⁵⁵	20	18 08	31	18 58	41 46	21 08 52	
15	49	05.4	-14	00.7	8	49.3 ¹¹²	-20 05.1 ⁵⁴	30	21	46	19 16	23 44	27 54	
16	64	05.4		01.5	23	19.4 ¹¹¹	10.5 ⁵⁴	35	28	18 55	27	13 42	39 54	
17	79	05.4	-14	02.3	37	49.6 ¹¹²	-20 15.7 ⁵²	40	18 37	19 06	19 41	7 01 41	21 52 55	
18	94	05.5	-14	03.1	52	19.7 ¹¹¹	-20 20.8 ⁵¹	45	18 47	19 19	19 58	6 47 39	22 07 57	
19	109	05.5		03.9	66	49.8 ¹¹¹	25.8 ⁵⁰	50	18 59	35	20 21	30 37	26 58	
20	124	05.5		04.7	81	19.9 ¹¹¹	30.8 ⁵⁰	52	19 04	43	32	22 36	35 59	
21	139	05.5		05.5	95	50.1 ¹¹²	35.6 ⁴⁸	54	11	19 51	20 45	13 34	45 60	
22	154	05.6		06.4	110	20.2 ¹¹¹	40.3 ⁴⁷	56	18	20 01	21 00	6 03 33	22 56 62	
23	169	05.6		07.2	124	50.2 ¹¹⁰	44.9 ⁴⁶	58	25	12	19	5 52 30	23 09 63	
24	184	05.6	-14	08.0	139	20.3 ¹¹¹	-20 49.4 ⁴⁵	60 S	19 34	20 26	21 43	5 39 28	23 25 64	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 21 ^h 22 ^m 0		Mag: -4.0 PMG: 14 ^h 12 ^m		Mag: +1.8 PMG: 9 ^h 15 ^m		Mag: -2.8 PMG: 1 ^h 58 ^m		Mag: -0.3 PMG: 1 ^h 15 ^m					
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	°	°	°	°	°	°	°	°					
0	38	36.9	147 14.4	-23 52.9	220 58.8	+2 26.2	330 24.2	+20 58.3	341 12.2					
1	53	39.3	162 13.6	53.4	235 59.8	25.6	345 26.9	58.2	356 14.9					
2	68	41.8	177 12.8	53.8	251 00.9	25.0	0 29.6	58.2	11 17.5					
3	83	44.3	192 12.0	54.3	266 01.9	24.4	15 32.3	58.2	26 20.2					
4	98	46.7	207 11.2	54.8	281 02.9	23.8	30 35.0	58.1	41 22.8					
5	113	49.2	222 10.4	-23 55.3	296 04.0	+2 23.2	45 37.8	+20 58.1	56 25.5					
6	128	51.6	237 09.6	-23 55.8	311 05.0	+2 22.6	60 40.5	+20 58.0	71 28.1					
7	143	54.1	252 08.8	56.3	326 06.1	22.0	75 43.2	58.0	86 30.8					
8	158	56.6	267 08.0	56.8	341 07.1	21.3	90 45.9	58.0	101 33.4					
9	173	59.0	282 07.1	57.2	356 08.2	20.7	105 48.6	57.9	116 36.1					
10	189	01.5	297 06.3	57.7	11 09.2	20.1	120 51.4	57.9	131 38.7					
11	204	04.0	312 05.5	-23 58.2	26 10.2	+2 19.5	135 54.1	+20 57.9	146 41.4					
12	219	06.4	327 04.7	-23 58.7	41 11.3	+2 18.9	150 56.8	+20 57.8	161 44.0					
13	234	08.9	342 03.9	59.2	56 12.3	18.3	165 59.5	57.8	176 46.7					
14	249	11.4	357 03.1	-23 59.6	71 13.4	17.7	181 02.2	57.8	191 49.3					
15	264	13.8	12 02.3	-24 00.1	86 14.4	17.1	196 05.0	57.7	206 52.0					
16	279	16.3	27 01.5	00.6	101 15.5	16.4	211 07.7	57.7	221 54.6					
17	294	18.8	42 00.7	-24 01.1	116 16.5	+2 15.8	226 10.4	+20 57.7	236 57.3					
18	309	21.2	56 59.9	-24 01.5	131 17.6	+2 15.2	241 13.1	+20 57.6	251 59.9					
19	324	23.7	71 59.1	02.0	146 18.6	14.6	256 15.9	57.6	267 02.6					
20	339	26.1	86 58.3	02.5	161 19.6	14.0	271 18.6	57.5	282 05.2					
21	354	28.6	101 57.5	02.9	176 20.7	13.4	286 21.3	57.5	297 07.9					
22	9	31.1	116 56.7	03.4	191 21.7	12.8	301 24.0	57.5	312 10.5					
23	24	33.5	131 55.9	03.9	206 22.8	12.2	316 26.8	57.4	327 13.2					
24	39	36.0	146 55.1	-24 04.3	221 23.8	+2 11.6	331 29.5	+20 57.4	342 15.8					
Dif	—	—	-8	-5	+10	-6	+27	0	+26	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: 3 ^d 7 PHE { 4 ^h : 54'9 12 ^h : 54'8 20 ^h : 54'7 R°: 50 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m		
0	184	05.6	-14	08.0	139	20.3	-20	49.4	60 N	5	46	6	35	7	20	12	01	
1	199	05.6		08.8	153	50.4 ¹¹¹		53.8 ⁴⁴	58	44	30		12	11	44	58		
2	214	05.6		09.6	168	20.5 ¹¹¹	-20	58.1 ⁴³	56	42	26		7	05	30	57		
3	229	05.7		10.4	182	50.5 ¹¹⁰	-21	02.3 ⁴²	54	40	22		6	59	18	56		
4	244	05.7		11.2	197	20.6 ¹¹¹		06.4 ⁴¹	52	38	18		53	11	07	55		
5	259	05.7	-14	12.0	211	50.7 ¹¹¹	-21	10.3 ³⁹	50	5	36	6	14	6	48	10	57	
6	274	05.7	-14	12.8	226	20.7 ¹¹⁰	-21	14.2 ³⁹	45	5	32	6	07	6	37	10	37	
7	289	05.8		13.6	240	50.8 ¹¹¹		18.0 ³⁸	40	28	6	00		28	21	53		
8	304	05.8		14.4	255	20.8 ¹¹⁰		21.7 ³⁷	35	24	5	54		20	10	07		
9	319	05.8		15.2	269	50.8 ¹¹⁰		25.2 ³⁵	30	20	49		13	9	55	52		
10	334	05.8		16.1	284	20.9 ¹¹¹		28.7 ³⁵	20	12	38	6	01	35	51	20	50	
11	349	05.8	-14	16.9	298	50.9 ¹¹⁰	-21	32.0 ³³	10 N	5	04	5	29	5	50	9	18	
12	4	05.9	-14	17.7	313	21.0 ¹¹¹	-21	35.2 ³²	0	4	54	5	19	5	40	9	01	
13	19	05.9		18.5	327	51.0 ¹¹⁰		38.4 ³⁰	10 S	43	5	08		30	8	45		
14	34	05.9		19.3	342	21.0 ¹¹⁰		41.4 ²⁹	20	29	4	56	19		27	48		
15	49	05.9		20.1	356	51.1 ¹¹¹		44.3 ²⁸	30	11	41	5	06		8	07		
16	64	05.9		20.9	11	21.1 ¹¹⁰		47.1 ²⁷	35	4	00	32	4	59	7	55		
17	79	06.0	-14	21.7	25	51.1 ¹¹⁰	-21	49.8 ²⁶	40	3	46	4	21	4	50	7	42	
18	94	06.0	-14	22.5	40	21.2 ¹¹¹	-21	52.4 ²⁵	45	3	29	4	08	4	40	7	26	
19	109	06.0		23.3	54	51.2 ¹¹⁰		54.9 ²⁴	50	3	06	3	52	28	7	07		
20	124	06.0		24.1	69	21.2 ¹¹⁰		57.3 ²³	52	2	55	44	22		6	58		
21	139	06.0		24.9	83	51.3 ¹¹¹	-21	59.6 ²¹	54	42	35	16		47	42			
22	154	06.1		25.7	98	21.3 ¹¹⁰	-22	01.7 ²¹	56	27	25	09		36	40			
23	169	06.1		26.5	112	51.4 ¹¹¹		03.8 ¹⁹	58	2	08	14	4	01	22	40		
24	184	06.1	-14	27.3	127	21.4 ¹¹⁰	-22	05.7 ¹⁹	60 S	1	44	3	01	3	52	6	07	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 21 ^h 18 ^m 1		Mag: -4.0 PMG: 14 ^h 13 ^m				Mag: +1.8 PMG: 9 ^h 14 ^m				Mag: -2.8 PMG: 1 ^h 54 ^m				Mag: -0.3 PMG: 1 ^h 11 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	39	36.0	146	55.1	-24	04.3	221	23.8	+2	11.6	331	29.5	+20	57.4	342	15.8	+17	40.6
1	54	38.5	161	54.3		04.8	236	24.9		10.9	346	32.2		57.4	357	18.5		40.6
2	69	40.9	176	53.4		05.2	251	25.9		10.3	1	34.9		57.3	12	21.1		40.5
3	84	43.4	191	52.6		05.7	266	27.0		09.7	16	37.7		57.3	27	23.8		40.5
4	99	45.9	206	51.8		06.2	281	28.0		09.1	31	40.4		57.3	42	26.4		40.4
5	114	48.3	221	51.0	-24	06.6	296	29.1	+2	08.5	46	43.1	+20	57.2	57	29.1	+17	40.4
6	129	50.8	236	50.2	-24	07.1	311	30.1	+2	07.9	61	45.8	+20	57.2	72	31.7	+17	40.4
7	144	53.3	251	49.4		07.5	326	31.1		07.3	76	48.6		57.1	87	34.4		40.3
8	159	55.7	266	48.6		08.0	341	32.2		06.7	91	51.3		57.1	102	37.0		40.3
9	174	58.2	281	47.8		08.4	356	33.2		06.0	106	54.0		57.1	117	39.7		40.2
10	190	00.6	296	47.0		08.9	11	34.3		05.4	121	56.7		57.0	132	42.3		40.2
11	205	03.1	311	46.1	-24	09.3	26	35.3	+2	04.8	136	59.5	+20	57.0	147	45.0	+17	40.2
12	220	05.6	326	45.3	-24	09.8	41	36.4	+2	04.2	152	02.2	+20	57.0	162	47.6	+17	40.1
13	235	08.0	341	44.5		10.2	56	37.4		03.6	167	04.9		56.9	177	50.3		40.1
14	250	10.5	356	43.7		10.7	71	38.5		03.0	182	07.7		56.9	192	52.9		40.0
15	265	13.0	11	42.9		11.1	86	39.5		02.4	197	10.4		56.9	207	55.6		40.0
16	280	15.4	26	42.1		11.6	101	40.5		01.8	212	13.1		56.8	222	58.2		39.9
17	295	17.9	41	41.3	-24	12.0	116	41.6	+2	01.2	227	15.8	+20	56.8	238	00.9	+17	39.9
18	310	20.4	56	40.5	-24	12.5	131	42.6	+2	00.5	242	18.6	+20	56.7	253	03.5	+17	39.9
19	325	22.8	71	39.6		12.9	146	43.7	+1	59.9	257	21.3		56.7	268	06.2		39.8
20	340	25.3	86	38.8		13.4	161	44.7		59.3	272	24.0		56.7	283	08.9		39.8
21	355	27.7	101	38.0		13.8	176	45.8		58.7	287	26.8		56.6	298	11.5		39.7
22	10	30.2	116	37.2		14.2	191	46.8		58.1	302	29.5		56.6	313	14.2		39.7
23	25	32.7	131	36.4		14.7	206	47.9		57.5	317	32.2		56.6	328	16.8		39.7
24	40	35.1	146	35.6	-24	15.1	221	48.9	+1	56.9	332	35.0	+20	56.5	343	19.5	+17	39.6
Dif	—		-8		-4		+10		-6		+27		0		+27		0	

UT	SOL				LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1 PMG: 11 ^h 43 ^m 6				Edad: 4 ^d 7 PHE { 4 ^h : 54/5 12 ^h : 54/4 20 ^h : 54/4 PMG: 16 ^h 03 ^m R°: 48 ^m											
	hG ☉		Dec		hG ☾		Dif				Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	184	06.1	-14	27.3	127	21.4	-22	05.7	60 N	16 03	16 49	17 38	12 59 45		19 06 55	
1	199	06.1		28.1	141	51.5 ¹¹¹		07.6	58	12	54	40	42 45		23 55	
2	214	06.1		28.9	156	21.5 ¹¹⁰		09.3	56	19	16 59	43	27 46		38 55	
3	229	06.1		29.7	170	51.6 ¹¹¹		11.0	54	25	17 03	45	14 46		19 51 54	
4	244	06.1		30.5	185	21.7 ¹¹¹		12.5	52	31	07	47	12 02 47		20 03 53	
5	259	06.2	-14	31.3	199	51.8 ¹¹¹	-22	13.9	50	16 36	17 10	17 49	11 52 47		20 13 53	
6	274	06.2	-14	32.1	214	21.9 ¹¹¹	-22	15.2	45	16 48	17 18	17 53	11 31 48		20 34 52	
7	289	06.2		32.9	228	52.0 ¹¹¹		16.4	40	16 57	25	17 57	14 48		20 51 51	
8	304	06.2		33.7	243	22.1 ¹¹¹		17.5	35	17 06	32	18 02	11 00 48		21 05 51	
9	319	06.2		34.5	257	52.2 ¹¹¹		18.5	30	13	37	06	10 47 49		18 50	
10	334	06.2		35.3	272	22.3 ¹¹¹		19.4	20	25	48	14	26 49		39 50	
11	349	06.2	-14	36.1	286	52.4 ¹¹¹	-22	20.1	10 N	17 36	17 58	18 23	10 08 49		21 57 50	
12	4	06.3	-14	36.9	301	22.6 ¹¹²	-22	20.8	0	17 47	18 08	18 33	9 51 49		22 14 49	
13	19	06.3		37.7	315	52.7 ¹¹¹		21.4	10 S	17 58	19	45	33 50		32 48	
14	34	06.3		38.5	330	22.9 ¹¹²		21.8	20	18 09	32	18 59	9 15 50		22 50 47	
15	49	06.3		39.3	344	53.1 ¹¹²		22.2	30	22	48	19 18	8 54 50		23 11 47	
16	64	06.3		40.0	359	23.3 ¹¹²		22.4	35	30	18 57	30	42 49		24 46	
17	79	06.3	-14	40.8	13	53.5 ¹¹²	-22	22.5	40	18 39	19 08	19 44	8 27 50		23 38 45	
18	94	06.3	-14	41.6	28	23.7 ¹¹²	-22	22.6	45	18 50	19 22	20 02	8 11 50		23 55 44	
19	109	06.3		42.4	42	53.9 ¹¹²		22.5	50	19 02	39	25	7 50 50	** ** *	** ** *	
20	124	06.3		43.2	57	24.2 ¹¹³		22.3	52	08	47	37	40 50	** ** *	** ** *	
21	139	06.4		44.0	71	54.4 ¹¹²		22.0	54	15	19 56	20 50	29 50	** ** *	** ** *	
22	154	06.4		44.8	86	24.7 ¹¹³		21.6	56	22	20 06	21 07	16 50	** ** *	** ** *	
23	169	06.4		45.6	100	55.0 ¹¹³		21.1	58	30	18	27	7 02 50		0 12 52	
24	184	06.4	-14	46.4	115	25.3 ¹¹³	-22	20.5	60 S	19 40	20 32	21 53	6 44 50		0 29 52	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 21 ^h 14 ^m 2		Mag: -4.0 PMG: 14 ^h 14 ^m		Mag: +1.7 PMG: 9 ^h 12 ^m		Mag: -2.8 PMG: 1 ^h 49 ^m		Mag: -0.3 PMG: 1 ^h 07 ^m							
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄							
h	°	'	°	'	°	'	°	'	°	'						
0	40	35.1	146	35.6	221	48.9	332	35.0	343	19.5						
1	55	37.6	161	34.7	236	50.0	347	37.7	358	22.1						
2	70	40.1	176	33.9	251	51.0	2	40.4	13	24.8						
3	85	42.5	191	33.1	266	52.1	17	43.1	28	27.4						
4	100	45.0	206	32.3	281	53.1	32	45.9	43	30.1						
5	115	47.5	221	31.5	296	54.1	47	48.6	58	32.7						
6	130	49.9	236	30.7	311	55.2	62	51.3	73	35.4						
7	145	52.4	251	29.8	326	56.2	77	54.1	88	38.0						
8	160	54.9	266	29.0	341	57.3	92	56.8	103	40.7						
9	175	57.3	281	28.2	356	58.3	107	59.5	118	43.3						
10	190	59.8	296	27.4	11	59.4	123	02.3	133	46.0						
11	206	02.2	311	26.6	27	00.4	138	05.0	148	48.6						
12	221	04.7	326	25.8	42	01.5	153	07.7	163	51.3						
13	236	07.2	341	24.9	57	02.5	168	10.5	178	54.0						
14	251	09.6	356	24.1	72	03.6	183	13.2	193	56.6						
15	266	12.1	11	23.3	87	04.6	198	16.0	208	59.3						
16	281	14.6	26	22.5	102	05.7	213	18.7	224	01.9						
17	296	17.0	41	21.6	117	06.7	228	21.4	239	04.6						
18	311	19.5	56	20.8	132	07.8	243	24.2	254	07.2						
19	326	22.0	71	20.0	147	08.8	258	26.9	269	09.9						
20	341	24.4	86	19.2	162	09.8	273	29.6	284	12.5						
21	356	26.9	101	18.4	177	10.9	288	32.4	299	15.2						
22	11	29.4	116	17.5	192	11.9	303	35.1	314	17.8						
23	26	31.8	131	16.7	207	13.0	318	37.8	329	20.5						
24	41	34.3	146	15.9	222	14.0	333	40.6	344	23.1						
Dif	—		-8		-4		+10		+27							

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: 5 ^d 7 SD: 14'8 PMG: 16 ^h 51 ^m	PHE { 4 ^h : 54'3 12 ^h : 54'3 20 ^h : 54'2 R°: 48 ^m																				
	hG ☉	Dec				hG ☾		Dif	Dec		Dif	Náutico	Civil	Hora	R°	Hora	R°								
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m	m									
0	184	06.4	-14	46.4	115	25.3	-22	20.5	7	60 N	5	50	6	40	7	25	13	44	33	20	01	67			
1	199	06.4		47.2	129	55.6 ¹¹³		19.8	8	58	48	35		17		27	35		18	64					
2	214	06.4		48.0	144	26.0 ¹¹⁴		19.0	10	56	45	30		10		13	36		33	62					
3	229	06.4		48.8	158	56.3 ¹¹³		18.0	10	54	43	25		7	03	13	00	38	45	6					
4	244	06.4		49.5	173	26.7 ¹¹⁴		17.0	10	52	41	21		6	57	12	49	39	20	56	60				
5	259	06.4	-14	50.3	187	57.1 ¹¹⁴	-22	15.9	11	50	5	39	6	18	6	52	12	39	40	21	06	58			
6	274	06.4	-14	51.1	202	27.5 ¹¹⁴	-22	14.6	13	45	5	35	6	09	6	40	12	19	41	21	26	56			
7	289	06.4		51.9	216	58.0 ¹¹⁵		13.3	13	40	30	6	02		30	12	02	43		42	55				
8	304	06.4		52.7	231	28.4 ¹¹⁴		11.9	14	35	26	5	56		22	11	48	44	21	56	54				
9	319	06.4		53.5	245	58.9 ¹¹⁵		10.3	16	30	22	50		15		36	44		22	08	53				
10	334	06.4		54.3	260	29.4 ¹¹⁵		08.7	16	20	13	39		6	02	11	15	46		29	51				
11	349	06.4	-14	55.1	274	59.9 ¹¹⁵	-22	06.9	18	10 N	5	04	5	29	5	51	10	57	47	22	47	49			
12	4	06.4	-14	55.8	289	30.4 ¹¹⁵	-22	05.0	19	0	4	54	5	19	5	40	10	40	48	23	03	48			
13	19	06.4		56.6	304	01.0 ¹¹⁶		03.1	19	10 S	42	5	08		29		23	49		20	46				
14	34	06.5		57.4	318	31.6 ¹¹⁶	-22	01.0	21	20	28	4	55		18	10	05	50		37	45				
15	49	06.5		58.2	333	02.2 ¹¹⁶	-21	58.8	22	30	4	09	39		5	04	9	44	51	23	58	42			
16	64	06.5		59.0	347	32.8 ¹¹⁶		56.6	22	35	3	57	30		4	57		31	53	***	***	***			
17	79	06.5	-14	59.8	2	03.5 ¹¹⁷	-21	54.2	24	40	3	43	4	18	4	48	9	17	54	***	***	***			
18	94	06.5	-15	00.5	16	34.1 ¹¹⁶	-21	51.7	25	45	3	25	4	05	4	37	9	01	54	***	***	***			
19	109	06.5		01.3	31	04.8 ¹¹⁷		49.2	25	50	3	01	3	48		24	8	40	56	0	15	44			
20	124	06.5		02.1	45	35.5 ¹¹⁷		46.5	27	52	2	50	40		18		30	57		25	43				
21	139	06.5		02.9	60	06.3 ¹¹⁸		43.7	28	54		36	31		12		19	57		36	43				
22	154	06.5		03.7	74	37.1 ¹¹⁸		40.9	28	56		20	20		4	04	8	06	59	0	49	41			
23	169	06.5		04.4	89	07.8 ¹¹⁷		37.9	30	58	2	00	3	08	3	56	7	52	59	1	04	40			
24	184	06.5	-15	05.2	103	38.7 ¹¹⁹	-21	34.8	31	60 S	1	33	2	54	3	47	7	34	62	1	21	39			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO													
	PMG: 21 ^h 10 ^m 2		Mag: -4.0 PMG: 14 ^h 16 ^m			Mag: +1.7 PMG: 9 ^h 10 ^m			Mag: -2.8 PMG: 1 ^h 45 ^m			Mag: -0.3 PMG: 1 ^h 02 ^m													
	hG ♈		hG ♀			hG ♂			hG ♃			hG ♄													
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'		
0	41	34.3	146	15.9	-24	25.2	222	14.0	+1	42.2	333	40.6	+20	55.6	344	23.1	+17	38.6							
1	56	36.7	161	15.1		25.6	237	15.1		41.6	348	43.3		55.6	359	25.8		38.6							
2	71	39.2	176	14.2		26.0	252	16.1		41.0	3	46.1		55.5	14	28.5		38.5							
3	86	41.7	191	13.4		26.4	267	17.2		40.3	18	48.8		55.5	29	31.1		38.5							
4	101	44.1	206	12.6		26.8	282	18.2		39.7	33	51.5		55.5	44	33.8		38.5							
5	116	46.6	221	11.8	-24	27.2	297	19.3	+1	39.1	48	54.3	+20	55.4	59	36.4	+17	38.4							
6	131	49.1	236	11.0	-24	27.6	312	20.3	+1	38.5	63	57.0	+20	55.4	74	39.1	+17	38.4							
7	146	51.5	251	10.1		28.0	327	21.4		37.9	78	59.8		55.4	89	41.7		38.3							
8	161	54.0	266	09.3		28.4	342	22.4		37.3	94	02.5		55.3	104	44.4		38.3							
9	176	56.5	281	08.5		28.8	357	23.5		36.7	109	05.2		55.3	119	47.0		38.3							
10	191	58.9	296	07.7		29.2	12	24.5		36.1	124	08.0		55.2	134	49.7		38.2							
11	207	01.4	311	06.8	-24	29.6	27	25.6	+1	35.5	139	10.7	+20	55.2	149	52.4	+17	38.2							
12	222	03.9	326	06.0	-24	30.0	42	26.6	+1	34.8	154	13.5	+20	55.2	164	55.0	+17	38.1							
13	237	06.3	341	05.2		30.4	57	27.6		34.2	169	16.2		55.1	179	57.7		38.1							
14	252	08.8	356	04.3		30.8	72	28.7		33.6	184	18.9		55.1	195	00.3		38.0							
15	267	11.2	11	03.5		31.2	87	29.7		33.0	199	21.7		55.0	210	03.0		38.0							
16	282	13.7	26	02.7		31.6	102	30.8		32.4	214	24.4		55.0	225	05.6		38.0							
17	297	16.2	41	01.9	-24	31.9	117	31.8	+1	31.8	229	27.2	+20	55.0	240	08.3	+17	37.9							
18	312	18.6	56	01.0	-24	32.3	132	32.9	+1	31.2	244	29.9	+20	54.9	255	10.9	+17	37.9							
19	327	21.1	71	00.2		32.7	147	33.9		30.6	259	32.6		54.9	270	13.6		37.8							
20	342	23.6	85	59.4		33.1	162	35.0		30.0	274	35.4		54.8	285	16.3		37.8							
21	357	26.0	100	58.6		33.5	177	36.0		29.3	289	38.1		54.8	300	18.9		37.8							
22	12	28.5	115	57.7		33.9	192	37.1		28.7	304	40.9		54.8	315	21.6		37.7							
23	27	31.0	130	56.9		34.2	207	38.1		28.1	319	43.6		54.7	330	24.2		37.7							
24	42	33.4	145	56.1	-24	34.6	222	39.2	+1	27.5	334	46.4	+20	54.7	345	26.9	+17	37.6							
Dif	—		-8			-4	+10			-6	+27			0	+27										

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: 6 ^d 7 PHE { SD: 14:8 PMG: 17 ^h 39 ^m 4 ^h : 54:2 12 ^h : 54:2 20 ^h : 54:3 R°: 47 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m	h m m	h m m	
0	184	06.5	-15	05.2	103	38.7	-21	34.8	60 N	15 58	16 44	17 34	14 17 24	21 08 72			
1	199	06.5		06.0	118	09.5 ¹¹⁸		31.6 ³²	58	16 07	50	36	14 02 27	22 70			
2	214	06.5		06.8	132	40.4 ¹¹⁹		28.4 ³²	56	15	55	39	13 49 29	35 67			
3	229	06.5		07.6	147	11.3 ¹¹⁹		25.0 ³⁴	54	21	16 59	41	38 30	46 65			
4	244	06.5		08.3	161	42.2 ¹¹⁹		21.5 ³⁵	52	28	17 03	43	28 32	21 56 63			
5	259	06.5	-15	09.1	176	13.1 ¹¹⁹	-21	18.0 ³⁵	50	16 33	17 07	17 46	13 19 33	22 04 63			
6	274	06.5	-15	09.9	190	44.1 ¹²⁰	-21	14.3 ³⁷	45	16 45	17 16	17 51	13 00 36	22 22 60			
7	289	06.5		10.7	205	15.1 ¹²⁰		10.5 ³⁸	40	16 55	23	17 55	12 45 38	37 58			
8	304	06.5		11.5	219	46.1 ¹²⁰		06.7 ³⁸	35	17 04	30	18 00	32 39	22 50 55			
9	319	06.4		12.2	234	17.2 ¹²¹	-21	02.7 ⁴⁰	30	11	36	04	20 41	23 01 54			
10	334	06.4		13.0	248	48.3 ¹²¹	-20	58.7 ⁴⁰	20	24	47	13	12 01 43	20 51			
11	349	06.4	-15	13.8	263	19.4 ¹²¹	-20	54.5 ⁴²	10 N	17 36	17 58	18 23	11 44 45	23 36 48			
12	4	06.4	-15	14.6	277	50.5 ¹²¹	-20	50.3 ⁴²	0	17 47	18 08	18 33	11 28 47	23 51 46			
13	19	06.4		15.3	292	21.7 ¹²²		46.0 ⁴³	10 S	17 58	20	18 46	11 12 49	*** ** *			
14	34	06.4		16.1	306	52.9 ¹²²		41.5 ⁴⁵	20	18 10	33	19 00	10 55 51	*** ** *			
15	49	06.4		16.9	321	24.1 ¹²²		37.0 ⁴⁵	30	24	49	20	35 54	*** ** *			
16	64	06.4		17.7	335	55.3 ¹²²		32.4 ⁴⁶	35	32	18 59	32	24 54	0 10 41			
17	79	06.4	-15	18.4	350	26.6 ¹²³	-20	27.7 ⁴⁷	40	18 41	19 11	19 47	10 11 56	0 23 40			
18	94	06.4	-15	19.2	4	57.9 ¹²³	-20	22.9 ⁴⁸	45	18 52	19 25	20 05	9 55 58	0 39 39			
19	109	06.4		20.0	19	29.2 ¹²³		18.0 ⁴⁹	50	19 06	42	30	36 60	0 59 36			
20	124	06.4		20.7	34	00.6 ¹²⁴		13.0 ⁵⁰	52	12	19 51	42	27 61	1 08 35			
21	139	06.4		21.5	48	32.0 ¹²⁴		07.9 ⁵¹	54	19	20 00	20 56	16 64	19 33			
22	154	06.4		22.3	63	03.4 ¹²⁴	-20	02.7 ⁵²	56	26	11	21 13	9 05 65	30 33			
23	169	06.4		23.1	77	34.8 ¹²⁴	-19	57.5 ⁵²	58	35	24	21 35	8 51 67	1 44 30			
24	184	06.4	-15	23.8	92	06.3 ¹²⁵	-19	52.1 ⁵⁴	60 S	19 45	20 39	22 04	8 36 69	2 00 28			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 21 ^h 06 ^m 3		Mag: -4.0 PMG: 14 ^h 17 ^m			Mag: +1.7 PMG: 9 ^h 09 ^m			Mag: -2.8 PMG: 1 ^h 41 ^m			Mag: -0.3 PMG: 0 ^h 58 ^m					
	hG ♈		hG ♀			hG ♂			hG ♃			hG ♄			hG ♅		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	42	33.4	145	56.1	-24	34.6	222	39.2	+1	27.5	334	46.4	+20	54.7	345	26.9	
1	57	35.9	160	55.2		35.0	237	40.2		26.9	349	49.1		54.7	0	29.5	
2	72	38.3	175	54.4		35.4	252	41.3		26.3	4	51.9		54.6	15	32.2	
3	87	40.8	190	53.6		35.7	267	42.3		25.7	19	54.6		54.6	30	34.9	
4	102	43.3	205	52.7		36.1	282	43.4		25.1	34	57.3		54.5	45	37.5	
5	117	45.7	220	51.9	-24	36.5	297	44.4	+1	24.4	50	00.1	+20	54.5	60	40.2	
6	132	48.2	235	51.1	-24	36.9	312	45.5	+1	23.8	65	02.8	+20	54.5	75	42.8	
7	147	50.7	250	50.2		37.2	327	46.5		23.2	80	05.6		54.4	90	45.5	
8	162	53.1	265	49.4		37.6	342	47.6		22.6	95	08.3		54.4	105	48.1	
9	177	55.6	280	48.6		38.0	357	48.6		22.0	110	11.1		54.3	120	50.8	
10	192	58.1	295	47.8		38.3	372	49.7		21.4	125	13.8		54.3	135	53.5	
11	208	00.5	310	46.9	-24	38.7	387	50.7	+1	20.8	140	16.6	+20	54.3	150	56.1	
12	223	03.0	325	46.1	-24	39.1	402	51.8	+1	20.2	155	19.3	+20	54.2	165	58.8	
13	238	05.5	340	45.3		39.4	417	52.8		19.6	170	22.1		54.2	181	01.4	
14	253	07.9	355	44.4		39.8	432	53.9		18.9	185	24.8		54.1	196	04.1	
15	268	10.4	10	43.6		40.1	447	54.9		18.3	200	27.6		54.1	211	06.7	
16	283	12.8	25	42.8		40.5	462	56.0		17.7	215	30.3		54.1	226	09.4	
17	298	15.3	40	41.9	-24	40.9	477	57.0	+1	17.1	230	33.1	+20	54.0	241	12.1	
18	313	17.8	55	41.1	-24	41.2	492	58.1	+1	16.5	245	35.8	+20	54.0	256	14.7	
19	328	20.2	70	40.3		41.6	507	59.1		15.9	260	38.5		53.9	271	17.4	
20	343	22.7	85	39.4		41.9	522	00.1		15.3	275	41.3		53.9	286	20.0	
21	358	25.2	100	38.6		42.3	537	01.2		14.7	290	44.0		53.9	301	22.7	
22	13	27.6	115	37.8		42.6	542	02.2		14.1	305	46.8		53.8	316	25.4	
23	28	30.1	130	36.9		43.0	557	03.3		13.4	320	49.5		53.8	331	28.0	
24	43	32.6	145	36.1	-24	43.3	572	04.3	+1	12.8	335	52.3	+20	53.7	346	30.7	
Dif	—		-8			-4			+10			-6			+27		

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'1			Edad: 7 ^d 7	PHE { 4 ^h : 54'3 12 ^h : 54'4 20 ^h : 54'5											
	PMG: 11 ^h 43 ^m 6															
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	184	06.4	-15	92	06.3	-19	52.1	54	5	55	6	45	7	31	14	41
1	199	06.3		106	37.8 ¹²⁵		46.7	54	58	52	39	22	29	20	22	20
2	214	06.3		121	09.3 ¹²⁵		41.1	56	56	49	34	14	18	22	42	71
3	229	06.3		135	40.9 ¹²⁶		35.5	56	54	47	29	07	08	25	51	61
4	244	06.3		150	12.5 ¹²⁶		29.8	57	52	44	25	7	14	00	22	59
5	259	06.3	-15	164	44.1 ¹²⁶	-19	24.0	58	50	5	42	6	13	52	23	07
6	274	06.3	-15	179	15.7 ¹²⁶	-19	18.1	59	45	5	37	6	13	36	23	22
7	289	06.3		193	47.4 ¹²⁷		12.1	60	40	32	6	04	23	34	35	58
8	304	06.3		208	19.1 ¹²⁷	-19	06.0	61	35	28	5	58	11	36	45	57
9	319	06.3		222	50.8 ¹²⁷	-18	59.9	61	30	23	52	16	13	01	23	55
10	334	06.3		237	22.6 ¹²⁸		53.6	63	20	14	40	6	12	44	***	***
11	349	06.2	-15	251	54.4 ¹²⁸	-18	47.3	63	10 N	5	04	5	12	29	***	***
12	4	06.2	-15	266	26.2 ¹²⁸	-18	40.9	64	0	4	54	5	12	15	***	***
13	19	06.2		280	58.0 ¹²⁸		34.4	65	10 S	41	5	07	12	01	4	06
14	34	06.2		295	29.9 ¹²⁹		27.8	66	20	26	4	54	11	46	51	22
15	49	06.2		310	01.8 ¹²⁹		21.2	66	30	4	07	37	29	54	40	40
16	64	06.2		324	33.7 ¹²⁹		14.4	68	35	3	55	27	18	56	0	51
17	79	06.2	-15	339	05.6 ¹²⁹	-18	07.6	68	40	3	40	4	11	07	58	1
18	94	06.1	-15	353	37.6 ¹³⁰	-18	00.7	69	45	3	21	4	10	53	61	1
19	109	06.1		8	09.6 ¹³⁰	-17	53.7	70	50	2	57	3	36	64	35	31
20	124	06.1		22	41.6 ¹³⁰		46.6	71	52	45	36	15	28	66	43	29
21	139	06.1		37	13.7 ¹³¹		39.4	72	54	30	26	08	20	67	1	52
22	154	06.1		51	45.8 ¹³¹		32.2	72	56	2	13	15	10	10	69	2
23	169	06.1		66	17.9 ¹³¹		24.8	74	58	1	51	3	9	58	72	14
24	184	06.0	-15	80	50.0 ¹³¹	-17	17.4	74	60 S	1	22	2	9	45	75	2

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 21 ^h 02 ^m 4		Mag: -4.0 PMG: 14 ^h 18 ^m		Mag: +1.7 PMG: 9 ^h 07 ^m		Mag: -2.8 PMG: 1 ^h 36 ^m		Mag: -0.3 PMG: 0 ^h 54 ^m	
	hG ♂	Dec	hG ♀	Dec	hG ♂	Dec	hG ♀	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	43	32.6	145	36.1	-24	43.3	335	52.3	+20	53.7
1	58	35.0	160	35.2		43.7	350	55.0		53.7
2	73	37.5	175	34.4		44.0	5	57.8		53.7
3	88	40.0	190	33.6		44.4	21	00.5		53.6
4	103	42.4	205	32.7		44.7	36	03.3		53.6
5	118	44.9	220	31.9	-24	45.1	51	06.0	+20	53.5
6	133	47.3	235	31.1	-24	45.4	66	08.8	+20	53.5
7	148	49.8	250	30.2		45.7	81	11.6		53.5
8	163	52.3	265	29.4		46.1	96	14.3		53.4
9	178	54.7	280	28.6		46.4	111	17.1		53.4
10	193	57.2	295	27.7		46.8	126	19.8		53.3
11	208	59.7	310	26.9	-24	47.1	141	22.6	+20	53.3
12	224	02.1	325	26.0	-24	47.4	156	25.3	+20	53.3
13	239	04.6	340	25.2		47.8	171	28.1		53.2
14	254	07.1	355	24.4		48.1	186	30.8		53.2
15	269	09.5	10	23.5		48.4	201	33.6		53.1
16	284	12.0	25	22.7		48.7	216	36.3		53.1
17	299	14.5	40	21.9	-24	49.1	231	39.1	+20	53.1
18	314	16.9	55	21.0	-24	49.4	246	41.8	+20	53.0
19	329	19.4	70	20.2		49.7	261	44.6		53.0
20	344	21.8	85	19.3		50.1	276	47.3		52.9
21	359	24.3	100	18.5		50.4	291	50.1		52.9
22	14	26.8	115	17.7		50.7	306	52.9		52.9
23	29	29.2	130	16.8		51.0	321	55.6		52.8
24	44	31.7	145	16.0	-24	51.3	336	58.4	+20	52.8
Dif	—		-8	-3	+10	-6	+28	0	+27	0

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna					
	SD: 16:1 PMG: 11 ^h 43 ^m 6			Edad: 8 ^d 7 PHE { 4 ^h : 54 ^m 6 12 ^h : 54 ^m 7 20 ^h : 54 ^m 9 R°: 45 ^m															
	hG ☉	Dec		hG ☾	Dif	Dec			Dif				Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m	
0	184	06.0	-15 42.2	80	50.0	-17 17.4	75	60 N	15 53	16 39	17 29	14 58	14	58	14	23 37	79		
1	199	06.0	42.9	95	22.2 ¹³²	09.9	75	58	16 02	45	32	49 16		46	75				
2	214	06.0	43.7	109	54.3 ¹³¹	-17 02.4	75	56	10	51	35	40 19		23 53	73				
3	229	06.0	44.4	124	26.5 ¹³²	-16 54.7	77	54	18	16 56	38	33 21		** ** *	**				
4	244	06.0	45.2	138	58.8 ¹³³	47.0	77	52	24	17 00	40	26 23		** ** *	**				
5	259	06.0	-15 46.0	153	31.0 ¹³²	-16 39.2	78	50	16 30	17 04	17 43	14 20	25		** ** *	**			
6	274	05.9	-15 46.7	168	03.3 ¹³³	-16 31.3	79	45	16 42	17 13	17 48	14 07	28		** ** *	**			
7	289	05.9	47.5	182	35.6 ¹³³	23.4	79	40	16 53	21	53	13 57	30		** ** *	**			
8	304	05.9	48.2	197	07.9 ¹³³	15.3	81	35	17 02	28	17 58	47 34			** ** *	**			
9	319	05.9	49.0	211	40.3 ¹³⁴	-16 07.2	81	30	10	35	18 03	39 36			** ** *	**			
10	334	05.9	49.7	226	12.6 ¹³³	-15 59.1	81	20	23	46	13	25 39		0 11	51				
11	349	05.8	-15 50.5	240	45.0 ¹³⁴	-15 50.8	83	10 N	17 36	17 57	18 23	13 13	42		0 24	49			
12	4	05.8	-15 51.2	255	17.4 ¹³⁴	-15 42.5	83	0	17 47	18 09	18 34	13 01	45		0 37	46			
13	19	05.8	52.0	269	49.9 ¹³⁵	34.1	84	10 S	17 59	21	18 46	12 49	49		0 50	43			
14	34	05.8	52.8	284	22.3 ¹³⁴	25.6	85	20	18 11	34	19 02	37 51		1 04	40				
15	49	05.7	53.5	298	54.8 ¹³⁵	17.0	86	30	26	18 51	22	23 55		20	36				
16	64	05.7	54.3	313	27.3 ¹³⁵	-15 08.4	86	35	34	19 01	34	14 58		29	34				
17	79	05.7	-15 55.0	327	59.8 ¹³⁵	-14 59.7	87	40	18 44	19 13	19 50	12 05	60		1 39	32			
18	94	05.7	-15 55.8	342	32.4 ¹³⁶	-14 50.9	88	45	18 55	19 28	20 09	11 54	62		1 51	29			
19	109	05.7	56.5	357	04.9 ¹³⁵	42.1	88	50	19 09	46	34	40 67		2 06	26				
20	124	05.6	57.3	11	37.5 ¹³⁶	33.2	89	52	16	19 55	20 47	34 68		12	25				
21	139	05.6	58.0	26	10.1 ¹³⁶	24.2	90	54	23	20 05	21 02	27 70		20	22				
22	154	05.6	58.8	40	42.7 ¹³⁶	15.2	90	56	31	16	20	19 72		28	21				
23	169	05.6	-15 59.5	55	15.3 ¹³⁶	-14 06.0	92	58	40	30	21 44	10 75		38	18				
24	184	05.5	-16 00.3	69	47.9 ¹³⁶	-13 56.9	91	60 S	19 50	20 46	22 17	11 00	78		2 48	16			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 20 ^h 58 ^m 4		Mag: -4.0 PMG: 14 ^h 20 ^m			Mag: +1.7 PMG: 9 ^h 05 ^m			Mag: -2.8 PMG: 1 ^h 32 ^m			Mag: -0.3 PMG: 0 ^h 50 ^m							
	hG ♈		hG ♀ Dec			hG ♂ Dec			hG ♃ Dec			hG ♅ Dec							
h	°	'	°	°	'	°	'	°	°	'	°	°	'	°	°	'	°	'	
0	44	31.7	145 16.0	-24 51.3	223 29.5	+0 58.2	336 58.4	+20 52.8	347 34.5	+17 35.6									
1	59	34.2	160 15.1	51.7	238 30.6	57.6	352 01.1	52.7	2 37.2	35.6									
2	74	36.6	175 14.3	52.0	253 31.6	56.9	7 03.9	52.7	17 39.8	35.5									
3	89	39.1	190 13.4	52.3	268 32.7	56.3	22 06.6	52.7	32 42.5	35.5									
4	104	41.6	205 12.6	52.6	283 33.7	55.7	37 09.4	52.6	47 45.1	35.4									
5	119	44.0	220 11.8	-24 52.9	298 34.8	+0 55.1	52 12.1	+20 52.6	62 47.8	+17 35.4									
6	134	46.5	235 10.9	-24 53.2	313 35.8	+0 54.5	67 14.9	+20 52.5	77 50.5	+17 35.4									
7	149	48.9	250 10.1	53.5	328 36.9	53.9	82 17.7	52.5	92 53.1	35.3									
8	164	51.4	265 09.2	53.8	343 37.9	53.3	97 20.4	52.5	107 55.8	35.3									
9	179	53.9	280 08.4	54.2	358 39.0	52.7	112 23.2	52.4	122 58.4	35.2									
10	194	56.3	295 07.6	54.5	13 40.0	52.1	127 25.9	52.4	138 01.1	35.2									
11	209	58.8	310 06.7	-24 54.8	28 41.1	+0 51.5	142 28.7	+20 52.3	153 03.8	+17 35.1									
12	225	01.3	325 05.9	-24 55.1	43 42.1	+0 50.8	157 31.5	+20 52.3	168 06.4	+17 35.1									
13	240	03.7	340 05.0	55.4	58 43.2	50.2	172 34.2	52.2	183 09.1	35.1									
14	255	06.2	355 04.2	55.7	73 44.2	49.6	187 37.0	52.2	198 11.7	35.0									
15	270	08.7	10 03.3	56.0	88 45.3	49.0	202 39.7	52.2	213 14.4	35.0									
16	285	11.1	25 02.5	56.3	103 46.3	48.4	217 42.5	52.1	228 17.1	34.9									
17	300	13.6	40 01.7	-24 56.6	118 47.4	+0 47.8	232 45.2	+20 52.1	243 19.7	+17 34.9									
18	315	16.1	55 00.8	-24 56.9	133 48.4	+0 47.2	247 48.0	+20 52.0	258 22.4	+17 34.9									
19	330	18.5	70 00.0	57.2	148 49.5	46.6	262 50.8	52.0	273 25.0	34.8									
20	345	21.0	84 59.1	57.5	163 50.6	46.0	277 53.5	52.0	288 27.7	34.8									
21	0	23.4	99 58.3	57.8	178 51.6	45.3	292 56.3	51.9	303 30.4	34.7									
22	15	25.9	114 57.4	58.1	193 52.7	44.7	307 59.1	51.9	318 33.0	34.7									
23	30	28.4	129 56.6	58.3	208 53.7	44.1	323 01.8	51.8	333 35.7	34.6									
24	45	30.8	144 55.7	-24 58.6	223 54.8	+0 43.5	338 04.6	+20 51.8	348 38.4	+17 34.6									
Dif	—		-8			-3	+11			-6	+28			0	+27			0	

UT	SOL			LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'1 PMG: 11 ^h 43 ^m 7			Edad: 9 ^d 7 PHE { SD: 15'0 PMG: 19 ^h 57 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	Rº		Hora	Rº		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	184	05.5	-16	00.3	69	47.9	-13	56.9	60 N	5	59	6	49	7	36	15	12
1	199	05.5		01.0	84	20.6 ¹³⁷		47.6 ⁹³	58		56	43		26	15	05	
2	214	05.5		01.8	98	53.3 ¹³⁷		38.3 ⁹³	56		53	38		18	14	59	
3	229	05.5		02.5	113	26.0 ¹³⁷		28.9 ⁹⁴	54		50	33		11	54	18	
4	244	05.4		03.2	127	58.7 ¹³⁷		19.4 ⁹⁵	52		48	28	7	04	49	20	
5	259	05.4	-16	04.0	142	31.4 ¹³⁷	-13	09.9 ⁹⁵	50	5	45	6	24	6	58	14	45
6	274	05.4	-16	04.7	157	04.1 ¹³⁷	-13	00.3 ⁹⁶	45	5	40	6	15	6	46	14	35
7	289	05.3		05.5	171	36.9 ¹³⁸	-12	50.7 ⁹⁶	40	34	6	07		35	27	29	
8	304	05.3		06.2	186	09.6 ¹³⁷		41.0 ⁹⁷	35	29	5	59		26	21	31	
9	319	05.3		07.0	200	42.4 ¹³⁸		31.2 ⁹⁸	30	24		53		18	15	33	
10	334	05.3		07.7	215	15.2 ¹³⁸		21.3 ⁹⁹	20	15		41	6	04	14	04	
11	349	05.2	-16	08.5	229	48.0 ¹³⁸	-12	11.4 ⁹⁹	10 N	5	05	5	30	5	52	13	55
12	4	05.2	-16	09.2	244	20.8 ¹³⁸	-12	01.5 ⁹⁹	0	4	54	5	19	5	40	13	46
13	19	05.2		09.9	258	53.6 ¹³⁸	-11	51.4 ¹⁰¹	10 S		41	5	07		28	38	48
14	34	05.1		10.7	273	26.4 ¹³⁸		41.3 ¹⁰¹	20	25		4	53		16	28	52
15	49	05.1		11.4	287	59.2 ¹³⁸		31.2 ¹⁰¹	30	4	05		36	5	01	18	56
16	64	05.1		12.2	302	32.1 ¹³⁹		21.0 ¹⁰²	35	3	53		26	4	53	12	58
17	79	05.0	-16	12.9	317	04.9 ¹³⁸	-11	10.7 ¹⁰³	40	3	37	4	13	4	43	13	05
18	94	05.0	-16	13.6	331	37.8 ¹³⁹	-11	00.4 ¹⁰³	45	3	18	3	59	4	32	12	56
19	109	05.0		14.4	346	10.6 ¹³⁸	-10	50.0 ¹⁰⁴	50	2	53		40	18	47	68	
20	124	04.9		15.1	0	43.5 ¹³⁹		39.6 ¹⁰⁴	52		40		32	11	42	70	
21	139	04.9		15.9	15	16.4 ¹³⁹		29.1 ¹⁰⁵	54		25		22	4	04	37	72
22	154	04.9		16.6	29	49.2 ¹³⁸		18.5 ¹⁰⁶	56	2	06	3	10	3	56	31	74
23	169	04.8		17.3	44	22.1 ¹³⁹	-10	07.9 ¹⁰⁶	58	1	43	2	57	47	25	77	
24	184	04.8	-16	18.1	58	55.0 ¹³⁹	-9	57.2 ¹⁰⁷	60 S	1	10	2	41	3	36	12	18

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 20 ^h 54 ^m 5		Mag: -4.0 PMG: 14 ^h 21 ^m			Mag: +1.7 PMG: 9 ^h 04 ^m			Mag: -2.8 PMG: 1 ^h 27 ^m			Mag: -0.3 PMG: 0 ^h 45 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	45	30.8	144	55.7	-24	58.6	223	54.8	+0	43.5	338	04.6	+20	51.8
1	60	33.3	159	54.9		58.9	238	55.8		42.9	353	07.3		51.7
2	75	35.8	174	54.1		59.2	253	56.9		42.3	8	10.1		51.7
3	90	38.2	189	53.2		59.5	268	57.9		41.7	23	12.9		51.7
4	105	40.7	204	52.4	-24	59.8	283	59.0		41.1	38	15.6		51.6
5	120	43.2	219	51.5	-25	00.1	299	00.0	+0	40.5	53	18.4	+20	51.6
6	135	45.6	234	50.7	-25	00.3	314	01.1	+0	39.9	68	21.1	+20	51.5
7	150	48.1	249	49.8		00.6	329	02.1		39.2	83	23.9		51.5
8	165	50.6	264	49.0		00.9	344	03.2		38.6	98	26.7		51.5
9	180	53.0	279	48.1		01.2	359	04.2		38.0	113	29.4		51.4
10	195	55.5	294	47.3		01.5	14	05.3		37.4	128	32.2		51.4
11	210	57.9	309	46.4	-25	01.7	29	06.3	+0	36.8	143	35.0	+20	51.3
12	226	00.4	324	45.6	-25	02.0	44	07.4	+0	36.2	158	37.7	+20	51.3
13	241	02.9	339	44.7		02.3	59	08.4		35.6	173	40.5		51.2
14	256	05.3	354	43.9		02.6	74	09.5		35.0	188	43.3		51.2
15	271	07.8	9	43.0		02.8	89	10.5		34.4	203	46.0		51.2
16	286	10.3	24	42.2		03.1	104	11.6		33.8	218	48.8		51.1
17	301	12.7	39	41.4	-25	03.4	119	12.6	+0	33.1	233	51.5	+20	51.1
18	316	15.2	54	40.5	-25	03.6	134	13.7	+0	32.5	248	54.3	+20	51.0
19	331	17.7	69	39.7		03.9	149	14.7		31.9	263	57.1		51.0
20	346	20.1	84	38.8		04.2	164	15.8		31.3	278	59.8		51.0
21	1	22.6	99	38.0		04.4	179	16.8		30.7	294	02.6		50.9
22	16	25.0	114	37.1		04.7	194	17.9		30.1	309	05.4		50.9
23	31	27.5	129	36.3		05.0	209	18.9		29.5	324	08.1		50.8
24	46	30.0	144	35.4	-25	05.2	224	20.0	+0	28.9	339	10.9	+20	50.8
Dif	—		-8 -3			+11 -6			+28 0			+27 0		

UT	SOL				LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1				Edad: 10 ^d 7 PHE { 4 ^h : 55/6 12 ^h : 55/8 20 ^h : 56/0											
	PMG: 11 ^h 43 ^m 7				SD: 15 ^h 1 PMG: 20 ^h 42 ^m R°: 45 ^m											
	hG ☉		Dec		hG ☾ Dif		Dec Dif				Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m	
0	184	04.8	-16	18.1	58	55.0	-9	57.2	60 N	15 48	16 35	17 25	15 23 10		0 56 80	
1	199	04.8		18.8	73	27.9 ¹³⁹		46.5 ¹⁰⁷	58	15 58	41	29	19 13		1 01 78	
2	214	04.7		19.5	88	00.8 ¹³⁹		35.7 ¹⁰⁸	56	16 06	47	32	16 15		06 76	
3	229	04.7		20.3	102	33.7 ¹³⁹		24.9 ¹⁰⁸	54	14	52	35	12 18		11 73	
4	244	04.7		21.0	117	06.5 ¹³⁸		14.0 ¹⁰⁹	52	21	16 57	37	09 20		15 71	
5	259	04.6	-16	21.7	131	39.4 ¹³⁹	-9	03.1 ¹⁰⁹	50	16 27	17 01	17 40	15 07 21		1 19 69	
6	274	04.6	-16	22.5	146	12.3 ¹³⁹	-8	52.1 ¹¹⁰	45	16 40	17 11	17 46	15 01 25		1 27 65	
7	289	04.6		23.2	160	45.2 ¹³⁹		41.1 ¹¹⁰	40	16 51	19	52	14 56 28		34 61	
8	304	04.5		23.9	175	18.1 ¹³⁹		30.0 ¹¹¹	35	17 00	27	17 57	52 31		39 59	
9	319	04.5		24.7	189	51.0 ¹³⁹		18.9 ¹¹¹	30	08	33	18 02	48 34		44 57	
10	334	04.5		25.4	204	23.8 ¹³⁸	-8	07.7 ¹¹²	20	23	46	12	42 38		1 53 52	
11	349	04.4	-16	26.1	218	56.7 ¹³⁹	-7	56.5 ¹¹²	10 N	17 35	17 57	18 22	14 36 42		2 01 48	
12	4	04.4	-16	26.9	233	29.6 ¹³⁹	-7	45.2 ¹¹³	0	17 47	18 09	18 34	14 31 45		2 08 45	
13	19	04.3		27.6	248	02.4 ¹³⁸		33.9 ¹¹³	10 S	17 59	21	18 47	26 48		15 41	
14	34	04.3		28.3	262	35.3 ¹³⁹		22.5 ¹¹⁴	20	18 12	36	19 03	20 53		22 38	
15	49	04.3		29.1	277	08.1 ¹³⁸	-7	11.1 ¹¹⁴	30	27	18 53	24	14 57		31 33	
16	64	04.2		29.8	291	41.0 ¹³⁹	-6	59.6 ¹¹⁵	35	36	19 03	37	10 59		35 31	
17	79	04.2	-16	30.5	306	13.8 ¹³⁸	-6	48.1 ¹¹⁵	40	18 46	19 16	19 52	14 06 62		2 41 28	
18	94	04.1	-16	31.3	320	46.6 ¹³⁸	-6	36.6 ¹¹⁵	45	18 58	19 31	20 12	14 01 65		2 47 25	
19	109	04.1		32.0	335	19.4 ¹³⁸		25.0 ¹¹⁶	50	19 12	50	39	13 55 70		55 21	
20	124	04.1		32.7	349	52.2 ¹³⁸		13.4 ¹¹⁶	52	19	19 59	20 52	52 72		2 58 20	
21	139	04.0		33.4	4	25.0 ¹³⁸	-6	01.7 ¹¹⁷	54	27	20 10	21 08	49 74		3 02 17	
22	154	04.0		34.2	18	57.8 ¹³⁸	-5	50.0 ¹¹⁷	56	35	22	28	45 77		06 16	
23	169	03.9		34.9	33	30.5 ¹³⁷		38.2 ¹¹⁸	58	45	36	21 53	42 79		11 13	
24	184	03.9	-16	35.6	48	03.3 ¹³⁸	-5	26.4 ¹¹⁸	60 S	19 56	20 52	22 31	13 38 81		3 16 10	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 20 ^h 50 ^m 6		Mag: -4.0 PMG: 14 ^h 22 ^m		Mag: +1.7 PMG: 9 ^h 02 ^m		Mag: -2.8 PMG: 1 ^h 23 ^m		Mag: -0.3 PMG: 0 ^h 41 ^m							
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	46	30.0	144	35.4	-25	05.2	224	20.0	+0	28.9	339	10.9	+20	50.8	349	42.3
1	61	32.4	159	34.6		05.5	239	21.0		28.3	354	13.7		50.7	4	44.9
2	76	34.9	174	33.7		05.7	254	22.1		27.7	9	16.4		50.7	19	47.6
3	91	37.4	189	32.9		06.0	269	23.1		27.0	24	19.2		50.7	34	50.3
4	106	39.8	204	32.0		06.2	284	24.2		26.4	39	22.0		50.6	49	52.9
5	121	42.3	219	31.2	-25	06.5	299	25.3	+0	25.8	54	24.7	+20	50.6	64	55.6
6	136	44.8	234	30.3	-25	06.8	314	26.3	+0	25.2	69	27.5	+20	50.5	79	58.2
7	151	47.2	249	29.5		07.0	329	27.4		24.6	84	30.3		50.5	95	00.9
8	166	49.7	264	28.6		07.3	344	28.4		24.0	99	33.1		50.4	110	03.6
9	181	52.2	279	27.8		07.5	359	29.5		23.4	114	35.8		50.4	125	06.2
10	196	54.6	294	26.9		07.8	14	30.5		22.8	129	38.6		50.4	140	08.9
11	211	57.1	309	26.1	-25	08.0	29	31.6	+0	22.2	144	41.4	+20	50.3	155	11.6
12	226	59.5	324	25.2	-25	08.2	44	32.6	+0	21.6	159	44.1	+20	50.3	170	14.2
13	242	02.0	339	24.4		08.5	59	33.7		20.9	174	46.9		50.2	185	16.9
14	257	04.5	354	23.5		08.7	74	34.7		20.3	189	49.7		50.2	200	19.6
15	272	06.9	9	22.7		09.0	89	35.8		19.7	204	52.4		50.1	215	22.2
16	287	09.4	24	21.8		09.2	104	36.8		19.1	219	55.2		50.1	230	24.9
17	302	11.9	39	21.0	-25	09.4	119	37.9	+0	18.5	234	58.0	+20	50.1	245	27.5
18	317	14.3	54	20.1	-25	09.7	134	38.9	+0	17.9	250	00.7	+20	50.0	260	30.2
19	332	16.8	69	19.3		09.9	149	40.0		17.3	265	03.5		50.0	275	32.9
20	347	19.3	84	18.4		10.2	164	41.0		16.7	280	06.3		49.9	290	35.5
21	2	21.7	99	17.6		10.4	179	42.1		16.1	295	09.1		49.9	305	38.2
22	17	24.2	114	16.7		10.6	194	43.1		15.5	310	11.8		49.8	320	40.9
23	32	26.6	129	15.9		10.9	209	44.2		14.8	325	14.6		49.8	335	43.5
24	47	29.1	144	15.0	-25	11.1	224	45.3	+0	14.2	340	17.4	+20	49.8	350	46.2
Dif	—		-9		-2		+11		-6		+28		0		+27	

UT	SOL			O LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'1			Edad: 11 ^d 7 PHE { 4 ^h : 56'3 12 ^h : 56'5 20 ^h : 56'8 R°: 47 ^m	SD: 15'3											
	PMG: 11 ^h 43 ^m 8				PMG: 21 ^h 27 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	184	03.9	-16	35.6	48	03.3	-5	26.4	60 N	6 03	6 54	7 41	15 33	10	2 16	83
1	199	03.8		36.3	62	36.0 ¹³⁷		14.6 ¹¹⁸	58	6 00	47	31	32	13	19	80
2	214	03.8		37.1	77	08.7 ¹³⁷		-5 02.7 ¹¹⁹	56	5 57	41	22	31	15	22	77
3	229	03.8		37.8	91	41.4 ¹³⁷		-4 50.8 ¹¹⁹	54	54	36	15	30	17	24	75
4	244	03.7		38.5	106	14.1 ¹³⁷		38.9 ¹¹⁹	52	51	31	08	29	19	26	73
5	259	03.7	-16	39.2	120	46.8 ¹³⁷		-4 26.9 ¹²⁰	50	5 48	6 27	7 02	15 28	21	2 28	71
6	274	03.6	-16	40.0	135	19.4 ¹³⁶		-4 14.9 ¹²⁰	45	5 42	6 17	6 48	15 26	25	2 32	67
7	289	03.6		40.7	149	52.0 ¹³⁶		-4 02.9 ¹²⁰	40	36	09	37	24	29	35	64
8	304	03.5		41.4	164	24.7 ¹³⁷		-3 50.8 ¹²¹	35	31	6 01	28	23	32	38	61
9	319	03.5		42.1	178	57.2 ¹³⁵		38.7 ¹²¹	30	26	5 54	20	22	34	41	57
10	334	03.4		42.8	193	29.8 ¹³⁶		26.6 ¹²¹	20	16	42	6 05	20	38	45	53
11	349	03.4	-16	43.6	208	02.3 ¹³⁵		-3 14.4 ¹²²	10 N	5 05	5 30	5 52	15 18	42	2 49	49
12	4	03.4	-16	44.3	222	34.9 ¹³⁶		-3 02.2 ¹²²	0	4 54	5 19	5 40	15 16	46	2 53	45
13	19	03.3		45.0	237	07.3 ¹³⁴		-2 50.0 ¹²²	10 S	40	5 06	28	14	51	2 56	42
14	34	03.3		45.7	251	39.8 ¹³⁵		37.7 ¹²³	20	24	4 52	15	13	54	3 00	38
15	49	03.2		46.4	266	12.2 ¹³⁴		25.4 ¹²³	30	4 04	34	5 00	11	58	04	34
16	64	03.2		47.2	280	44.7 ¹³⁵		13.1 ¹²³	35	3 51	24	4 51	09	62	06	31
17	79	03.1	-16	47.9	295	17.0 ¹³³		-2 00.8 ¹²³	40	3 35	4 11	4 41	15 08	64	3 09	28
18	94	03.1	-16	48.6	309	49.4 ¹³⁴		-1 48.4 ¹²⁴	45	3 15	3 56	4 29	15 06	68	3 12	25
19	109	03.0		49.3	324	21.7 ¹³³		36.1 ¹²³	50	2 48	37	14	05	72	16	21
20	124	03.0		50.0	338	54.0 ¹³³		23.6 ¹²⁵	52	35	28	08	04	74	18	19
21	139	02.9		50.7	353	26.3 ¹³³		-1 11.2 ¹²⁴	54	2 19	17	4 00	03	76	19	18
22	154	02.9		51.4	7	58.5 ¹³²		-0 58.8 ¹²⁴	56	1 59	3 05	3 52	02	78	22	15
23	169	02.8		52.2	22	30.7 ¹³²		46.3 ¹²⁵	58	1 34	2 51	42	15 01	81	24	12
24	184	02.8	-16	52.9	37	02.9 ¹³²		-0 33.8 ¹²⁵	60 S	0 56	2 34	3 31	14 59	85	3 26	10

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 20 ^h 46 ^m 6		Mag: -4.0 PMG: 14 ^h 24 ^m		Mag: +1.7 PMG: 9 ^h 00 ^m		Mag: -2.8 PMG: 1 ^h 19 ^m		Mag: -0.3 PMG: 0 ^h 37 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	47	29.1	144	15.0	-25	11.1	224	45.3	+0	14.2	340	17.4	+20	49.8	350	46.2	+17	32.5
1	62	31.6	159	14.1		11.3	239	46.3		13.6	355	20.1		49.7	5	48.9		32.5
2	77	34.0	174	13.3		11.5	254	47.4		13.0	10	22.9		49.7	20	51.5		32.5
3	92	36.5	189	12.4		11.8	269	48.4		12.4	25	25.7		49.6	35	54.2		32.4
4	107	39.0	204	11.6		12.0	284	49.5		11.8	40	28.5		49.6	50	56.9		32.4
5	122	41.4	219	10.7	-25	12.2	299	50.5	+0	11.2	55	31.2	+20	49.5	65	59.5	+17	32.3
6	137	43.9	234	09.9	-25	12.4	314	51.6	+0	10.6	70	34.0	+20	49.5	81	02.2	+17	32.3
7	152	46.4	249	09.0		12.7	329	52.6		10.0	85	36.8		49.4	96	04.9		32.2
8	167	48.8	264	08.2		12.9	344	53.7		09.4	100	39.6		49.4	111	07.5		32.2
9	182	51.3	279	07.3		13.1	359	54.7		08.8	115	42.3		49.4	126	10.2		32.2
10	197	53.8	294	06.5		13.3	14	55.8		08.1	130	45.1		49.3	141	12.8		32.1
11	212	56.2	309	05.6	-25	13.5	29	56.8	+0	07.5	145	47.9	+20	49.3	156	15.5	+17	32.1
12	227	58.7	324	04.8	-25	13.7	44	57.9	+0	06.9	160	50.7	+20	49.2	171	18.2	+17	32.0
13	243	01.1	339	03.9		14.0	59	58.9		06.3	175	53.4		49.2	186	20.8		32.0
14	258	03.6	354	03.1		14.2	75	00.0		05.7	190	56.2		49.1	201	23.5		31.9
15	273	06.1	9	02.2		14.4	90	01.0		05.1	205	59.0		49.1	216	26.2		31.9
16	288	08.5	24	01.4		14.6	105	02.1		04.5	221	01.8		49.1	231	28.8		31.9
17	303	11.0	39	00.5	-25	14.8	120	03.2	+0	03.9	236	04.5	+20	49.0	246	31.5	+17	31.8
18	318	13.5	53	59.6	-25	15.0	135	04.2	+0	03.3	251	07.3	+20	49.0	261	34.2	+17	31.8
19	333	15.9	68	58.8		15.2	150	05.3		02.7	266	10.1		48.9	276	36.8		31.7
20	348	18.4	83	57.9		15.4	165	06.3		02.1	281	12.9		48.9	291	39.5		31.7
21	3	20.9	98	57.1		15.6	180	07.4		01.4	296	15.6		48.8	306	42.2		31.6
22	18	23.3	113	56.2		15.8	195	08.4		00.8	311	18.4		48.8	321	44.8		31.6
23	33	25.8	128	55.4		16.0	210	09.5	+0	00.2	326	21.2		48.7	336	47.5		31.6
24	48	28.3	143	54.5	-25	16.2	225	10.5	-0	00.4	341	24.0	+20	48.7	351	50.2	+17	31.5
Dif	—		-9		-2		+11		-6		+28		0		+27			

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16°1			Edad: 12 ^d 7 PHE { 4 ^h : 57°0 12 ^h : 57°3 20 ^h : 57°6											
	PMG: 11 ^h 43 ^m 9			SD: 15°5 PMG: 22 ^h 14 ^m R°: 49 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	h m	m
0	184	02.8	-16 52.9	37	02.9	-0 33.8		60 N	15 44	16 31	17 22	15 43 12	3 39 86		
1	199	02.7	53.6	51	35.0 ¹³¹	21.3 ¹²⁵		58	15 54	38	25	45 14	39 83		
2	214	02.7	54.3	66	07.1 ¹³¹	-0 08.8 ¹²⁵		56	16 02	44	29	46 17	39 80		
3	229	02.6	55.0	80	39.2 ¹³¹	+0 03.7 ¹²⁵		54	10	49	32	47 19	39 77		
4	244	02.6	55.7	95	11.2 ¹³⁰	16.3 ¹²⁶		52	17	54	35	48 21	39 75		
5	259	02.5	-16 56.4	109	43.2 ¹³⁰	+0 28.9 ¹²⁶		50	16 24	16 59	17 37	15 49 23	3 39 73		
6	274	02.4	-16 57.1	124	15.1 ¹²⁹	+0 41.4 ¹²⁵		45	16 37	17 09	17 44	15 51 27	3 39 69		
7	289	02.4	57.9	138	47.0 ¹²⁹	+0 54.0 ¹²⁶		40	49	17	50	53 30	39 65		
8	304	02.3	58.6	153	18.9 ¹²⁹	+1 06.6 ¹²⁶		35	16 59	25	17 55	55 33	39 62		
9	319	02.3	-16 59.3	167	50.7 ¹²⁸	19.2 ¹²⁶		30	17 07	32	18 01	56 36	38 60		
10	334	02.2	-17 00.0	182	22.5 ¹²⁸	31.9 ¹²⁷		20	22	45	11	15 58 41	38 55		
11	349	02.2	-17 00.7	196	54.3 ¹²⁸	+1 44.5 ¹²⁶		10 N	17 35	17 57	18 22	16 00 45	3 38 51		
12	4	02.1	-17 01.4	211	26.0 ¹²⁷	+1 57.1 ¹²⁶		0	17 47	18 09	18 34	16 02 49	3 38 47		
13	19	02.1	02.1	225	57.6 ¹²⁶	+2 09.8 ¹²⁷		10 S	18 00	22	18 48	05 52	38 43		
14	34	02.0	02.8	240	29.2 ¹²⁶	22.4 ¹²⁶		20	13	37	19 04	07 56	38 39		
15	49	01.9	03.5	255	00.8 ¹²⁶	35.1 ¹²⁷		30	29	18 55	25	09 61	38 34		
16	64	01.9	04.2	269	32.3 ¹²⁵	+2 47.7 ¹²⁶		35	38	19 06	39	11 63	37 32		
17	79	01.8	-17 04.9	284	03.8 ¹²⁵	+3 00.4 ¹²⁷		40	18 48	19 18	19 55	16 12 67	3 37 29		
18	94	01.8	-17 05.6	298	35.2 ¹²⁴	+3 13.1 ¹²⁷		45	19 01	19 34	20 16	16 14 71	3 37 26		
19	109	01.7	06.3	313	06.5 ¹²³	25.7 ¹²⁶		50	16	19 54	43	17 75	37 22		
20	124	01.7	07.0	327	37.9 ¹²⁴	38.4 ¹²⁷		52	23	20 03	20 58	18 77	37 20		
21	139	01.6	07.7	342	09.1 ¹²²	+3 51.0 ¹²⁶		54	31	14	21 14	19 79	37 17		
22	154	01.5	08.4	356	40.3 ¹²²	+4 03.7 ¹²⁷		56	40	27	21 35	20 82	37 15		
23	169	01.5	09.1	11	11.5 ¹²²	16.3 ¹²⁶		58	19 50	41	22 03	22 84	36 13		
24	184	01.4	-17 09.8	25	42.6 ¹²¹	+4 29.0 ¹²⁷		60 S	20 01	20 59	22 47	16 24 87	3 36 11		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO										
	PMG: 20 ^h 42 ^m 7		Mag: -4.0 PMG: 14 ^h 25 ^m		Mag: +1.7 PMG: 8 ^h 59 ^m		Mag: -2.8 PMG: 1 ^h 14 ^m		Mag: -0.3 PMG: 0 ^h 33 ^m										
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec									
h	°	'	°	'	°	'	°	'	°	'									
0	48	28.3	143	54.5	-25	16.2	225	10.5	-0	00.4	341	24.0	+20	48.7	351	50.2	+17	31.5	
1	63	30.7	158	53.7		16.4	240	11.6		01.0	356	26.7		48.7		6	52.8		31.5
2	78	33.2	173	52.8		16.6	255	12.6		01.6	11	29.5		48.6		21	55.5		31.4
3	93	35.6	188	52.0		16.8	270	13.7		02.2	26	32.3		48.6		36	58.2		31.4
4	108	38.1	203	51.1		17.0	285	14.7		02.8	41	35.1		48.5		52	00.8		31.3
5	123	40.6	218	50.2	-25	17.2	300	15.8	-0	03.4	56	37.8	+20	48.5		67	03.5	+17	31.3
6	138	43.0	233	49.4	-25	17.4	315	16.9	-0	04.0	71	40.6	+20	48.4		82	06.2	+17	31.3
7	153	45.5	248	48.5		17.6	330	17.9		04.6	86	43.4		48.4		97	08.8		31.2
8	168	48.0	263	47.7		17.8	345	19.0		05.2	101	46.2		48.4		112	11.5		31.2
9	183	50.4	278	46.8		18.0	0	20.0		05.9	116	49.0		48.3		127	14.2		31.1
10	198	52.9	293	46.0		18.2	15	21.1		06.5	131	51.7		48.3		142	16.8		31.1
11	213	55.4	308	45.1	-25	18.3	30	22.1	-0	07.1	146	54.5	+20	48.2		157	19.5	+17	31.0
12	228	57.8	323	44.3	-25	18.5	45	23.2	-0	07.7	161	57.3	+20	48.2		172	22.2	+17	31.0
13	244	00.3	338	43.4		18.7	60	24.2		08.3	177	00.1		48.1		187	24.8		31.0
14	259	02.7	353	42.5		18.9	75	25.3		08.9	192	02.9		48.1		202	27.5		30.9
15	274	05.2	8	41.7		19.1	90	26.3		09.5	207	05.6		48.0		217	30.2		30.9
16	289	07.7	23	40.8		19.2	105	27.4		10.1	222	08.4		48.0		232	32.8		30.8
17	304	10.1	38	40.0	-25	19.4	120	28.4	-0	10.7	237	11.2	+20	48.0		247	35.5	+17	30.8
18	319	12.6	53	39.1	-25	19.6	135	29.5	-0	11.3	252	14.0	+20	47.9		262	38.2	+17	30.7
19	334	15.1	68	38.3		19.8	150	30.6		11.9	267	16.8		47.9		277	40.8		30.7
20	349	17.5	83	37.4		20.0	165	31.6		12.6	282	19.5		47.8		292	43.5		30.7
21	4	20.0	98	36.6		20.1	180	32.7		13.2	297	22.3		47.8		307	46.2		30.6
22	19	22.5	113	35.7		20.3	195	33.7		13.8	312	25.1		47.7		322	48.8		30.6
23	34	24.9	128	34.8		20.5	210	34.8		14.4	327	27.9		47.7		337	51.5		30.5
24	49	27.4	143	34.0	-25	20.6	225	35.8	-0	15.0	342	30.7	+20	47.6		352	54.2	+17	30.5
Dif	—		-9	-2		-2	+11	-6		-6	+28	0		0		+27			

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: 13 ^d 7 PHE { 4 ^h : 57/8 12 ^h : 58/1 20 ^h : 58/3 Rº: 52 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		Rº	Hora	Rº		
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	184	01.4	-17 09.8	25	42.6	+4	29.0	60 N	6 07	6 58	7 46	15 55	13	5 05	89		
1	199	01.4	10.5	40	13.7 ¹²¹		41.6 ¹²⁶	58	04	51	36	15 59	16	5 02	85		
2	214	01.3	11.2	54	44.6 ¹¹⁹	+4	54.2 ¹²⁶	56	6 00	45	27	16 03	19	4 59	83		
3	229	01.2	11.9	69	15.6 ¹²⁰	+5	06.8 ¹²⁶	54	5 57	40	19	06 22		56	81		
4	244	01.2	12.6	83	46.5 ¹¹⁹		19.4 ¹²⁶	52	54	35	11	09 24		54	78		
5	259	01.1	-17 13.3	98	17.3 ¹¹⁸	+5	32.0 ¹²⁶	50	5 51	6 30	7 05	16 12 26		4 52	76		
6	274	01.1	-17 14.0	112	48.1 ¹¹⁸	+5	44.6 ¹²⁶	45	5 44	6 20	6 51	16 18 30		4 48	71		
7	289	01.0	14.7	127	18.8 ¹¹⁷	+5	57.2 ¹²⁶	40	38	11	40	23 34		44	68		
8	304	00.9	15.4	141	49.4 ¹¹⁶	+6	09.7 ¹²⁵	35	33	6 03	30	28 36		41	65		
9	319	00.9	16.1	156	20.0 ¹¹⁶		22.3 ¹²⁶	30	27	5 56	21	32 39		38	62		
10	334	00.8	16.8	170	50.5 ¹¹⁵		34.8 ¹²⁵	20	17	43	6 06	39 43		33	58		
11	349	00.7	-17 17.5	185	21.0 ¹¹⁵	+6	47.3 ¹²⁵	10 N	5 06	5 31	5 53	16 45 47		4 29	53		
12	4	00.7	-17 18.2	199	51.4 ¹¹⁴	+6	59.7 ¹²⁴	0	4 54	5 19	5 40	16 51 51		4 25	50		
13	19	00.6	18.9	214	21.7 ¹¹³	+7	12.2 ¹²⁵	10 S	40	5 06	28	16 57 55		21	46		
14	34	00.5	19.6	228	52.0 ¹¹³		24.6 ¹²⁴	20	23	4 51	5 14	17 03 59		17	42		
15	49	00.5	20.3	243	22.2 ¹¹²		37.0 ¹²⁴	30	4 02	33	4 59	10 64		12	37		
16	64	00.4	21.0	257	52.4 ¹¹²	+7	49.4 ¹²⁴	35	3 49	22	49	14 67		09	35		
17	79	00.3	-17 21.7	272	22.4 ¹¹⁰	+8	01.7 ¹²³	40	3 32	4 09	4 39	17 19 70		4 06	32		
18	94	00.3	-17 22.4	286	52.4 ¹¹⁰	+8	14.1 ¹²⁴	45	3 11	3 53	4 27	17 25 73		4 03	28		
19	109	00.2	23.1	301	22.4 ¹¹⁰		26.3 ¹²²	50	2 44	33	11	32 77		3 59	23		
20	124	00.1	23.8	315	52.2 ¹⁰⁸		38.6 ¹²³	52	30	24	4 04	35 79		57	22		
21	139	00.1	24.5	330	22.0 ¹⁰⁸	+8	50.8 ¹²²	54	2 13	13	3 56	38 82		54	20		
22	154	00.0	25.1	344	51.8 ¹⁰⁸	+9	03.0 ¹²²	56	1 52	3 00	48	42 85		52	18		
23	168	59.9	25.8	359	21.4 ¹⁰⁶		15.2 ¹²²	58	1 24	2 46	37	46 88		49	15		
24	183	59.9	-17 26.5	13	51.0 ¹⁰⁶	+9	27.3 ¹²¹	60 S	0 40	2 28	3 26	17 51 91		3 47	11		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG 20 ^h 38 ^m 8		Mag: -4.0 PMG: 14 ^h 27 ^m			Mag: +1.7 PMG: 8 ^h 57 ^m			Mag: -2.8 PMG: 1 ^h 10 ^m			Mag: -0.3 PMG: 0 ^h 28 ^m					
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	
0	49	27.4	143	34.0	-25 20.6	225	35.8	-0 15.0	342	30.7	+20 47.6	352	54.2	+17 30.5			
1	64	29.9	158	33.1	20.8	240	36.9	15.6	357	33.4	47.6	7	56.8	30.4			
2	79	32.3	173	32.3	21.0	255	37.9	16.2	12	36.2	47.5	22	59.5	30.4			
3	94	34.8	188	31.4	21.1	270	39.0	16.8	27	39.0	47.5	38	02.2	30.4			
4	109	37.2	203	30.6	21.3	285	40.0	17.4	42	41.8	47.5	53	04.8	30.3			
5	124	39.7	218	29.7	-25 21.5	300	41.1	-0 18.0	57	44.6	+20 47.4	68	07.5	+17 30.3			
6	139	42.2	233	28.8	-25 21.6	315	42.1	-0 18.6	72	47.4	+20 47.4	83	10.2	+17 30.2			
7	154	44.6	248	28.0	21.8	330	43.2	19.2	87	50.1	47.3	98	12.8	30.2			
8	169	47.1	263	27.1	21.9	345	44.3	19.8	102	52.9	47.3	113	15.5	30.1			
9	184	49.6	278	26.3	22.1	0	45.3	20.5	117	55.7	47.2	128	18.2	30.1			
10	199	52.0	293	25.4	22.3	15	46.4	21.1	132	58.5	47.2	143	20.8	30.1			
11	214	54.5	308	24.6	-25 22.4	30	47.4	-0 21.7	148	01.3	+20 47.1	158	23.5	+17 30.0			
12	229	57.0	323	23.7	-25 22.6	45	48.5	-0 22.3	163	04.1	+20 47.1	173	26.2	+17 30.0			
13	244	59.4	338	22.8	22.7	60	49.5	22.9	178	06.8	47.1	188	28.8	29.9			
14	260	01.9	353	22.0	22.9	75	50.6	23.5	193	09.6	47.0	203	31.5	29.9			
15	275	04.3	8	21.1	23.0	90	51.6	24.1	208	12.4	47.0	218	34.2	29.8			
16	290	06.8	23	20.3	23.2	105	52.7	24.7	223	15.2	46.9	233	36.8	29.8			
17	305	09.3	38	19.4	-25 23.3	120	53.7	-0 25.3	238	18.0	+20 46.9	248	39.5	+17 29.8			
18	320	11.7	53	18.6	-25 23.5	135	54.8	-0 25.9	253	20.8	+20 46.8	263	42.2	+17 29.7			
19	335	14.2	68	17.7	23.6	150	55.9	26.5	268	23.5	46.8	278	44.9	29.7			
20	350	16.7	83	16.8	23.8	165	56.9	27.1	283	26.3	46.7	293	47.5	29.6			
21	5	19.1	98	16.0	23.9	180	58.0	27.7	298	29.1	46.7	308	50.2	29.6			
22	20	21.6	113	15.1	24.0	195	59.0	28.4	313	31.9	46.6	323	52.9	29.5			
23	35	24.1	128	14.3	24.2	211	00.1	29.0	328	34.7	46.6	338	55.5	29.5			
24	50	26.5	143	13.4	-25 24.3	226	01.1	-0 29.6	343	37.5	+20 46.6	353	58.2	+17 29.4			
Dif	—		-9 -2			+11 -6			+28 0			+27 0					

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16:2			Edad: 14 ^d 7 PHE { 4 ^h : 58:5 12 ^h : 58:8 20 ^h : 59:0					Final del crepúsculo			Salida de Luna		Puesta de Luna		
	PMG: 11 ^h 44 ^m 1			PMG: 23 ^h 55 ^m R°: 55 ^m					Civil			Náutico		Hora R°		
	hG ☉	Dec		hG ☾	Dif	Dec	Dif									
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m	
0	183	59.9	-17	26.5	13	51.0	+9	27.3	60 N	15 39	16 27	17 18	16 08 18	6 34 91		
1	198	59.8		27.2	28	20.5 ¹⁰⁵		39.4 ¹²¹	58	49	34	22	15 22	27 89		
2	213	59.7		27.9	42	50.0 ¹⁰⁵	+9	51.4 ¹²⁰	56	15 59	40	25	22 24	22 85		
3	228	59.7		28.6	57	19.4 ¹⁰⁴	+10	03.4 ¹²⁰	54	16 07	46	29	28 26	17 82		
4	243	59.6		29.3	71	48.7 ¹⁰³		15.4 ¹²⁰	52	14	51	32	33 29	12 80		
5	258	59.5	-17	30.0	86	17.9 ¹⁰²	+10	27.3 ¹¹⁹	50	16 21	16 56	17 35	16 38 31	6 08 78		
6	273	59.4	-17	30.6	100	47.0 ¹⁰¹	+10	39.2 ¹¹⁹	45	16 35	17 07	17 42	16 48 35	5 59 74		
7	288	59.4		31.3	115	16.1 ¹⁰¹	+10	51.0 ¹¹⁸	40	47	16	48	16 57 38	52 70		
8	303	59.3		32.0	129	45.1 ¹⁰⁰	+11	02.7 ¹¹⁷	35	16 57	24	17 54	17 04 41	46 67		
9	318	59.2		32.7	144	14.0 ⁹⁹		14.5 ¹¹⁸	30	17 06	31	18 00	11 43	40 65		
10	333	59.2		33.4	158	42.9 ⁹⁹		26.1 ¹¹⁶	20	21	44	11	22 48	31 60		
11	348	59.1	-17	34.1	173	11.6 ⁹⁷	+11	37.8 ¹¹⁷	10 N	17 35	17 57	18 22	17 32 52	5 22 57		
12	3	59.0	-17	34.7	187	40.3 ⁹⁷	+11	49.3 ¹¹⁵	0	17 48	18 09	18 35	17 42 54	5 15 52		
13	18	58.9		35.4	202	08.9 ⁹⁶	+12	00.8 ¹¹⁵	10 S	18 01	23	18 49	17 52 57	5 07 49		
14	33	58.9		36.1	216	37.5 ⁹⁶		12.3 ¹¹⁵	20	14	38	19 06	18 02 61	4 59 45		
15	48	58.8		36.8	231	05.9 ⁹⁴		23.7 ¹¹⁴	30	31	18 56	27	14 66	49 41		
16	63	58.7		37.5	245	34.3 ⁹⁴		35.0 ¹¹³	35	40	19 08	41	21 68	44 38		
17	78	58.6	-17	38.2	260	02.6 ⁹³	+12	46.3 ¹¹³	40	18 51	19 21	19 58	18 29 71	4 38 35		
18	93	58.6	-17	38.8	274	30.8 ⁹²	+12	57.5 ¹¹²	45	19 04	19 37	20 19	18 38 74	4 31 32		
19	108	58.5		39.5	288	58.9 ⁹¹	+13	08.6 ¹¹¹	50	19	19 58	20 48	49 79	22 28		
20	123	58.4		40.2	303	27.0 ⁹¹		19.7 ¹¹¹	52	27	20 08	21 03	18 54 81	19 25		
21	138	58.3		40.9	317	55.0 ⁹⁰		30.7 ¹¹⁰	54	35	19	21	19 00 83	14 24		
22	153	58.3		41.5	332	22.8 ⁸⁸		41.6 ¹⁰⁹	56	44	32	21 43	07 86	10 21		
23	168	58.2		42.2	346	50.7 ⁸⁹	+13	52.5 ¹⁰⁹	58	19 54	20 47	22 13	14 89	4 04 19		
24	183	58.1	-17	42.9	1	18.4 ⁸⁷	+14	03.3 ¹⁰⁸	60 S	20 07	21 06	23 11	19 22 93	3 58 16		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 20 ^h 34 ^m 9		Mag: -4.0 PMG: 14 ^h 28 ^m			Mag: +1.7 PMG: 8 ^h 55 ^m			Mag: -2.8 PMG: 1 ^h 05 ^m			Mag: -0.3 PMG: 0 ^h 24 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♎	Dec			
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°	'	
0	50	26.5	143	13.4	-25	24.3	226	01.1	-0	29.6	343	37.5	+20	46.6	353	58.2
1	65	29.0	158	12.6		24.5	241	02.2		30.2	358	40.3		46.5	9	00.9
2	80	31.5	173	11.7		24.6	256	03.2		30.8	13	43.0		46.5	24	03.5
3	95	33.9	188	10.8		24.7	271	04.3		31.4	28	45.8		46.4	39	06.2
4	110	36.4	203	10.0		24.9	286	05.4		32.0	43	48.6		46.4	54	08.9
5	125	38.8	218	09.1	-25	25.0	301	06.4	-0	32.6	58	51.4	+20	46.3	69	11.5
6	140	41.3	233	08.3	-25	25.1	316	07.5	-0	33.2	73	54.2	+20	46.3	84	14.2
7	155	43.8	248	07.4		25.3	331	08.5		33.8	88	57.0		46.2	99	16.9
8	170	46.2	263	06.6		25.4	346	09.6		34.4	103	59.8		46.2	114	19.5
9	185	48.7	278	05.7		25.5	1	10.6		35.0	119	02.6		46.1	129	22.2
10	200	51.2	293	04.8		25.6	16	11.7		35.6	134	05.3		46.1	144	24.9
11	215	53.6	308	04.0	-25	25.8	31	12.7	-0	36.3	149	08.1	+20	46.1	159	27.5
12	230	56.1	323	03.1	-25	25.9	46	13.8	-0	36.9	164	10.9	+20	46.0	174	30.2
13	245	58.6	338	02.3		26.0	61	14.8		37.5	179	13.7		46.0	189	32.9
14	261	01.0	353	01.4		26.1	76	15.9		38.1	194	16.5		45.9	204	35.6
15	276	03.5	8	00.6		26.2	91	17.0		38.7	209	19.3		45.9	219	38.2
16	291	06.0	22	59.7		26.4	106	18.0		39.3	224	22.1		45.8	234	40.9
17	306	08.4	37	58.8	-25	26.5	121	19.1	-0	39.9	239	24.9	+20	45.8	249	43.6
18	321	10.9	52	58.0	-25	26.6	136	20.1	-0	40.5	254	27.7	+20	45.7	264	46.2
19	336	13.3	67	57.1		26.7	151	21.2		41.1	269	30.4		45.7	279	48.9
20	351	15.8	82	56.3		26.8	166	22.2		41.7	284	33.2		45.6	294	51.6
21	6	18.3	97	55.4		26.9	181	23.3		42.3	299	36.0		45.6	309	54.2
22	21	20.7	112	54.5		27.1	196	24.3		42.9	314	38.8		45.5	324	56.9
23	36	23.2	127	53.7		27.2	211	25.4		43.5	329	41.6		45.5	339	59.6
24	51	25.7	142	52.8	-25	27.3	226	26.5	-0	44.1	344	44.4	+20	45.5	355	02.2
Dif	—		-9		-1	+11		-6		+28		0		+27		

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna	
	SD: 16/2 PMG: 11 ^h 44 ^m 2			Edad: 15 ^d 7 PHE { SD: 16/1 PMG: *** **m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	183	58.1	-17	42.9	1	18.4	+14	03.3	60 N	6	11	7	03	7	51	16	26
1	198	58.0		43.6	15	46.0		14.0	58	07	6	56	40		37	29	7
2	213	58.0		44.2	30	13.6		24.7	56	04	49	31	46	32		47	85
3	228	57.9		44.9	44	41.1		35.2	54	6	00	43	22	16	54	35	39
4	243	57.8		45.6	59	08.5		45.7	52	5	57	38	15	17	02	36	32
5	258	57.7	-17	46.3	73	35.8	+14	56.1	50	5	54	6	33	7	08	17	26
6	273	57.6	-17	46.9	88	03.0	+15	06.5	45	5	47	6	22	6	54	17	13
7	288	57.6		47.6	102	30.2		16.7	40	40	13	42	35	45		7	02
8	303	57.5		48.3	116	57.3		26.9	35	35	6	05	32	45	47	6	53
9	318	57.4		49.0	131	24.3		36.9	30	29	5	58	23	17	54	49	45
10	333	57.3		49.6	145	51.2		46.9	20	18	44	6	07	18	10	52	31
11	348	57.2	-17	50.3	160	18.0	+15	56.8	10 N	5	06	5	32	5	54	18	19
12	3	57.1	-17	51.0	174	44.7	+16	06.6	0	4	54	5	19	5	41	18	07
13	18	57.1		51.6	189	11.4		16.3	10 S	40	5	05	28	18	49	61	5
14	33	57.0		52.3	203	38.0		25.9	20	22	4	50	5	14	19	03	64
15	48	56.9		53.0	218	04.5		35.5	30	4	00	31	4	57	20	66	30
16	63	56.8		53.6	232	30.9		44.9	35	3	47	20	48	29	69	22	44
17	78	56.7	-17	54.3	246	57.2	+16	54.2	40	3	30	4	07	4	37	19	13
18	93	56.6	-17	55.0	261	23.5	+17	03.4	45	3	08	3	51	4	24	19	52
19	108	56.6		55.6	275	49.7		12.6	50	2	40	30	08	20	08	77	4
20	123	56.5		56.3	290	15.8		21.6	52	25	20	4	01	15	79	44	32
21	138	56.4		57.0	304	41.8		30.5	54	2	07	3	09	3	53	23	38
22	153	56.3		57.6	319	07.7		39.3	56	1	45	2	56	44	33	83	31
23	168	56.2		58.3	333	33.6		48.0	58	1	14	40	33	43	86	23	24
24	183	56.1	-17	59.0	347	59.4	+17	56.6	60 S	0	17	2	21	3	21	20	14
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 20 ^h 30 ^m 9		Mag: -4.0 PMG: 14 ^h 29 ^m			Mag: +1.7 PMG: 8 ^h 54 ^m			Mag: -2.8 PMG: 1 ^h 01 ^m			Mag: -0.3 PMG: 0 ^h 20 ^m					
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'			
0	51	25.7	142	52.8	-25	27.3	226	26.5	-0	44.1	344	44.4	+20	45.5	355	02.2	+17
1	66	28.1	157	52.0		27.4	241	27.5		44.7	359	47.2		45.4	10	04.9	28.4
2	81	30.6	172	51.1		27.5	256	28.6		45.4	14	50.0		45.4	25	07.6	28.3
3	96	33.1	187	50.3		27.6	271	29.6		46.0	29	52.8		45.3	40	10.3	28.3
4	111	35.5	202	49.4		27.7	286	30.7		46.6	44	55.6		45.3	55	12.9	28.2
5	126	38.0	217	48.5	-25	27.8	301	31.7	-0	47.2	59	58.3	+20	45.2	70	15.6	+17
6	141	40.4	232	47.7	-25	27.9	316	32.8	-0	47.8	75	01.1	+20	45.2	85	18.3	+17
7	156	42.9	247	46.8		28.0	331	33.8		48.4	90	03.9		45.1	100	20.9	28.1
8	171	45.4	262	46.0		28.1	346	34.9		49.0	105	06.7		45.1	115	23.6	28.1
9	186	47.8	277	45.1		28.2	1	36.0		49.6	120	09.5		45.0	130	26.3	28.0
10	201	50.3	292	44.3		28.3	16	37.0		50.2	135	12.3		45.0	145	28.9	28.0
11	216	52.8	307	43.4	-25	28.4	31	38.1	-0	50.8	150	15.1	+20	44.9	160	31.6	+17
12	231	55.2	322	42.5	-25	28.5	46	39.1	-0	51.4	165	17.9	+20	44.9	175	34.3	+17
13	246	57.7	337	41.7		28.6	61	40.2		52.0	180	20.7		44.8	190	36.9	27.8
14	262	00.2	352	40.8		28.6	76	41.2		52.6	195	23.5		44.8	205	39.6	27.8
15	277	02.6	7	40.0		28.7	91	42.3		53.2	210	26.3		44.8	220	42.3	27.8
16	292	05.1	22	39.1		28.8	106	43.3		53.8	225	29.1		44.7	235	45.0	27.7
17	307	07.6	37	38.2	-25	28.9	121	44.4	-0	54.5	240	31.9	+20	44.7	250	47.6	+17
18	322	10.0	52	37.4	-25	29.0	136	45.5	-0	55.1	255	34.6	+20	44.6	265	50.3	+17
19	337	12.5	67	36.5		29.1	151	46.5		55.7	270	37.4		44.6	280	53.0	27.6
20	352	14.9	82	35.7		29.2	166	47.6		56.3	285	40.2		44.5	295	55.6	27.5
21	7	17.4	97	34.8		29.2	181	48.6		56.9	300	43.0		44.5	310	58.3	27.5
22	22	19.9	112	34.0		29.3	196	49.7		57.5	315	45.8		44.4	326	01.0	27.5
23	37	22.3	127	33.1		29.4	211	50.7		58.1	330	48.6		44.4	341	03.6	27.4
24	52	24.8	142	32.2	-25	29.5	226	51.8	-0	58.7	345	51.4	+20	44.3	356	06.3	+17
Dif	—		-9	-1			+11	-6			+28	0			+27		

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16'2 PMG: 11 ^h 44 ^m 3			Edad: 16 ^d 7 PHE { SD: 16'2 PMG: 0 ^h 50 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	Rº	Hora	Rº			
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m				
0	183	56.1	-17 59.0	347	59.4	+17 56.6	85	60 N	15 34	16 23	17 14	16 52 39	9 37 86					
1	198	56.0	-17 59.6	2	25.1	+18 05.1	84	58	45	30	19	17 06 42	24 82					
2	213	56.0	-18 00.3	16	50.7	13.5	84	56	15 55	37	22	18 44	12 80					
3	228	55.9	01.0	31	16.3	21.7	82	54	16 04	43	26	29 45	9 02 78					
4	243	55.8	01.6	45	41.8	29.9	82	52	11	49	30	38 47	8 53 76					
5	258	55.7	-18 02.3	60	07.2	+18 37.9	80	50	16 18	16 54	17 33	17 47 48	8 45 75					
6	273	55.6	-18 02.9	74	32.5	+18 45.8	79	45	16 33	17 05	17 40	18 05 50	8 27 72					
7	288	55.5	03.6	88	57.8	+18 53.6	77	40	45	14	47	20 52	13 70					
8	303	55.4	04.3	103	22.9	+19 01.3	77	35	16 56	22	53	32 54	8 02 67					
9	318	55.3	04.9	117	48.1	08.8	75	30	17 05	30	17 59	18 43 55	7 51 67					
10	333	55.2	05.6	132	13.1	16.3	75	20	21	44	18 10	19 02 57	33 64					
11	348	55.2	-18 06.2	146	38.1	+19 23.6	73	10 N	17 35	17 57	18 22	19 19 59	7 18 61					
12	3	55.1	-18 06.9	161	03.0	+19 30.8	72	0	17 48	18 10	18 35	19 34 61	7 04 59					
13	18	55.0	07.5	175	27.8	37.8	70	10 S	18 01	23	18 49	19 50 62	6 49 57					
14	33	54.9	08.2	189	52.6	44.7	69	20	16	39	19 07	20 07 63	34 55					
15	48	54.8	08.9	204	17.3	51.5	68	30	32	18 58	29	26 66	16 52					
16	63	54.7	09.5	218	41.9	+19 58.2	67	35	42	19 10	19 44	38 66	6 06 50					
17	78	54.6	-18 10.2	233	06.5	+20 04.7	65	40	18 53	19 24	20 01	20 51 68	5 55 48					
18	93	54.5	-18 10.8	247	31.0	+20 11.1	64	45	19 06	19 40	20 23	21 06 70	5 41 46					
19	108	54.4	11.5	261	55.4	17.4	63	50	23	20 01	20 53	25 72	24 43					
20	123	54.3	12.1	276	19.8	23.5	61	52	30	12	21 08	34 73	16 42					
21	138	54.2	12.8	290	44.2	29.5	60	54	39	24	27	45 73	5 08 39					
22	153	54.1	13.4	305	08.4	35.4	59	56	48	37	21 51	21 56 75	4 58 37					
23	168	54.0	14.1	319	32.6	41.1	57	58	19 59	20 53	22 25	22 09 77	47 35					
24	183	53.9	-18 14.7	333	56.8	+20 46.7	56	60 S	20 12	21 13	** **	22 25 79	4 35 31					
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 20 ^h 27 ^m 0		Mag: -4.0 PMG: 14 ^h 31 ^m			Mag: +1.7 PMG: 8 ^h 52 ^m			Mag: -2.8 PMG: 0 ^h 56 ^m			Mag: -0.3 PMG: 0 ^h 16 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	'	'	°	'	°	'	'	'				
0	52	24.8	142	32.2	-25	29.5	226	51.8	-0	58.7	345	51.4	+20	44.3	356	06.3	+17	27.4
1	67	27.3	157	31.4		29.6	241	52.9		59.3	0	54.2		44.3	11	09.0		27.3
2	82	29.7	172	30.5		29.6	256	53.9	-0	59.9	15	57.0		44.2	26	11.7		27.3
3	97	32.2	187	29.7		29.7	271	55.0	-1	00.5	30	59.8		44.2	41	14.3		27.2
4	112	34.7	202	28.8		29.8	286	56.0		01.1	46	02.6		44.1	56	17.0		27.2
5	127	37.1	217	28.0	-25	29.8	301	57.1	-1	01.7	61	05.4	+20	44.1	71	19.7	+17	27.2
6	142	39.6	232	27.1	-25	29.9	316	58.1	-1	02.3	76	08.2	+20	44.0	86	22.3	+17	27.1
7	157	42.1	247	26.2		30.0	331	59.2		02.9	91	11.0		44.0	101	25.0		27.1
8	172	44.5	262	25.4		30.1	347	00.2		03.5	106	13.8		44.0	116	27.7		27.0
9	187	47.0	277	24.5		30.1	2	01.3		04.1	121	16.6		43.9	131	30.3		27.0
10	202	49.4	292	23.7		30.2	17	02.4		04.8	136	19.4		43.9	146	33.0		26.9
11	217	51.9	307	22.8	-25	30.2	32	03.4	-1	05.4	151	22.2	+20	43.8	161	35.7	+17	26.9
12	232	54.4	322	22.0	-25	30.3	47	04.5	-1	06.0	166	25.0	+20	43.8	176	38.4	+17	26.9
13	247	56.8	337	21.1		30.4	62	05.5		06.6	181	27.7		43.7	191	41.0		26.8
14	262	59.3	352	20.2		30.4	77	06.6		07.2	196	30.5		43.7	206	43.7		26.8
15	278	01.8	7	19.4		30.5	92	07.6		07.8	211	33.3		43.6	221	46.4		26.7
16	293	04.2	22	18.5		30.5	107	08.7		08.4	226	36.1		43.6	236	49.0		26.7
17	308	06.7	37	17.7	-25	30.6	122	09.8	-1	09.0	241	38.9	+20	43.5	251	51.7	+17	26.6
18	323	09.2	52	16.8	-25	30.7	137	10.8	-1	09.6	256	41.7	+20	43.5	266	54.4	+17	26.6
19	338	11.6	67	16.0		30.7	152	11.9		10.2	271	44.5		43.4	281	57.1		26.5
20	353	14.1	82	15.1		30.8	167	12.9		10.8	286	47.3		43.4	296	59.7		26.5
21	8	16.6	97	14.2		30.8	182	14.0		11.4	301	50.1		43.3	312	02.4		26.5
22	23	19.0	112	13.4		30.9	197	15.0		12.0	316	52.9		43.3	327	05.1		26.4
23	38	21.5	127	12.5		30.9	212	16.1		12.6	331	55.7		43.2	342	07.7		26.4
24	53	23.9	142	11.7	-25	31.0	227	17.1	-1	13.2	346	58.5	+20	43.2	357	10.4	+17	26.3
Dif	—		-9	-1			+11	-6			+28	0			+27			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 5				Edad: 17 ^d 7 PHE { 4 ^h : 59'8 12 ^h : 59'9 20 ^h : 59'9 SD: 16'3 PMG: 1 ^h 49 ^m R°: 60 ^m																
	hG ☉		Dec		hG ☾		Dif		Dec			Dif			Náutico	Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	
0	183	53.9	-18	14.7	333	56.8	+20	46.7	54	58	60 N	6	16	7	07	7	56	17	31	56	11 03 70
1	198	53.8		15.4	348	20.9		52.1	54	58		11	7	00	45			17	48	57	10 46 70
2	213	53.8		16.0	2	45.0	+20	57.4	53	56		07	6	53	35			18	02	58	32 69
3	228	53.7		16.7	17	09.0	+21	02.6	50	54		03		47	26			14	59		20 68
4	243	53.6		17.3	31	32.9		07.6	50	52		6	00	41	19			25	59		09 68
5	258	53.5	-18	18.0	45	56.8	+21	12.5	49	50		5	57	6	36	7	12	18	35	59	10 00 67
6	273	53.4	-18	18.6	60	20.7	+21	17.2	47	45		5	49	6	25	6	57	18	55	60	9 39 66
7	288	53.3		19.3	74	44.5		21.8	46	40		43		15	44			19	12	60	23 65
8	303	53.2		19.9	89	08.3		26.2	44	35		36	6	07	34			26	60		9 09 65
9	318	53.1		20.6	103	32.0		30.5	43	30		30	5	59	24			38	61		8 58 63
10	333	53.0		21.2	117	55.7		34.6	41	20		19		45	6	08		19	59	61	37 63
11	348	52.9	-18	21.8	132	19.3	+21	38.6	40	10 N		5	07	5	32	5	54	20	18	61	8 19 62
12	3	52.8	-18	22.5	146	42.9	+21	42.5	39	0		4	54	5	19	5	41	20	35	61	8 03 61
13	18	52.7		23.1	161	06.5		46.1	36	10 S		39		5	05	27		20	52	61	7 46 60
14	33	52.6		23.8	175	30.0		49.7	36	20		4	22	4	49	5	13	21	10	62	29 59
15	48	52.5		24.4	189	53.5		53.1	34	30		3	59	30	4	56		32	61		7 08 58
16	63	52.4		25.1	204	17.0		56.3	32	35		45		19	46			44	62		6 56 58
17	78	52.3	-18	25.7	218	40.4	+21	59.4	31	40		3	27	4	05	4	35	21	59	61	6 43 56
18	93	52.2	-18	26.3	233	03.9	+22	02.3	29	45		3	05	3	48	4	22	22	16	61	6 27 55
19	108	52.1		27.0	247	27.3		05.1	28	50		2	35	27	4	06		37	62		6 07 53
20	123	52.0		27.6	261	50.6		07.7	26	52		20		16	3	58		47	62		5 58 52
21	138	51.9		28.3	276	14.0		10.1	24	54		2	01	3	05	49		22	58	62	47 52
22	153	51.8		28.9	290	37.3		12.4	23	56		1	37	2	51	40		23	11	62	35 51
23	168	51.6		29.5	305	00.6		14.6	22	58		1	03	35	29			26	62		22 48
24	183	51.5	-18	30.2	319	23.9	+22	16.6	20	60 S		** **		2	15	3	16	23	44	62	5 06 46

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 20 ^h 23 ^m 1		Mag: -4.0 PMG: 14 ^h 32 ^m				Mag: +1.7 PMG: 8 ^h 50 ^m				Mag: -2.8 PMG: 0 ^h 52 ^m				Mag: -0.3 PMG: 0 ^h 11 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	53	23.9	142	11.7	-25	31.0	227	17.1	-1	13.2	346	58.5	+20	43.2	357	10.4	+17	26.3
1	68	26.4	157	10.8		31.0	242	18.2		13.8	2	01.3		43.1	12	13.1		26.3
2	83	28.9	172	10.0		31.0	257	19.3		14.4	17	04.1		43.1	27	15.7		26.2
3	98	31.3	187	09.1		31.1	272	20.3		15.0	32	06.9		43.1	42	18.4		26.2
4	113	33.8	202	08.2		31.1	287	21.4		15.6	47	09.7		43.0	57	21.1		26.2
5	128	36.3	217	07.4	-25	31.2	302	22.4	-1	16.3	62	12.5	+20	43.0	72	23.8	+17	26.1
6	143	38.7	232	06.5	-25	31.2	317	23.5	-1	16.9	77	15.3	+20	42.9	87	26.4	+17	26.1
7	158	41.2	247	05.7		31.2	332	24.5		17.5	92	18.1		42.9	102	29.1		26.0
8	173	43.7	262	04.8		31.3	347	25.6		18.1	107	20.9		42.8	117	31.8		26.0
9	188	46.1	277	04.0		31.3	2	26.7		18.7	122	23.7		42.8	132	34.4		25.9
10	203	48.6	292	03.1		31.4	17	27.7		19.3	137	26.5		42.7	147	37.1		25.9
11	218	51.1	307	02.3	-25	31.4	32	28.8	-1	19.9	152	29.3	+20	42.7	162	39.8	+17	25.9
12	233	53.5	322	01.4	-25	31.4	47	29.8	-1	20.5	167	32.1	+20	42.6	177	42.5	+17	25.8
13	248	56.0	337	00.5		31.4	62	30.9		21.1	182	34.9		42.6	192	45.1		25.8
14	263	58.4	351	59.7		31.5	77	31.9		21.7	197	37.7		42.5	207	47.8		25.7
15	279	00.9	6	58.8		31.5	92	33.0		22.3	212	40.5		42.5	222	50.5		25.7
16	294	03.4	21	58.0		31.5	107	34.1		22.9	227	43.3		42.4	237	53.1		25.6
17	309	05.8	36	57.1	-25	31.6	122	35.1	-1	23.5	242	46.1	+20	42.4	252	55.8	+17	25.6
18	324	08.3	51	56.3	-25	31.6	137	36.2	-1	24.1	257	48.9	+20	42.3	267	58.5	+17	25.6
19	339	10.8	66	55.4		31.6	152	37.2		24.7	272	51.7		42.3	283	01.2		25.5
20	354	13.2	81	54.6		31.6	167	38.3		25.3	287	54.5		42.2	298	03.8		25.5
21	9	15.7	96	53.7		31.6	182	39.3		25.9	302	57.3		42.2	313	06.5		25.4
22	24	18.2	111	52.8		31.7	197	40.4		26.5	318	00.1		42.1	328	09.2		25.4
23	39	20.6	126	52.0		31.7	212	41.5		27.1	333	02.9		42.1	343	11.8		25.3
24	54	23.1	141	51.1	-25	31.7	227	42.5	-1	27.7	348	05.7	+20	42.0	358	14.5	+17	25.3
Dif	—		-9		0		+11		-6		+28		0		+27		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 6				Edad: 18 ^d 7 PHE { SD: 16'3 PMG: 2 ^h 49 ^m													
	hG ☉		Dec		hG ☾		Dif							Civil	Náutico	Hora	Rº	Hora
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m		
0	183	51.5	-18	30.2	319	23.9	+22	16.6	60 N	15 30	16 19	17 11	18 27 75	12 13 52				
1	198	51.4		30.8	333	47.2		18.4	58	42	27	16	18 45 73	11 56 53				
2	213	51.3		31.4	348	10.4		20.1	56	15 52	34	20	19 00 71	41 54				
3	228	51.2		32.1	2	33.7		21.6	54	16 01	40	24	13 70	28 55				
4	243	51.1		32.7	16	56.9		23.0	52	08	46	27	24 69	17 55				
5	258	51.0	-18	33.3	31	20.2		24.2	50	16 16	16 51	17 31	19 34 69	11 07 56				
6	273	50.9	-18	34.0	45	43.4		25.3	45	16 31	17 03	17 38	19 55 67	10 45 58				
7	288	50.8		34.6	60	06.6		26.2	40	44	13	45	20 12 66	28 58				
8	303	50.7		35.2	74	29.9		26.9	35	16 54	21	52	26 65	14 58				
9	318	50.6		35.9	88	53.1		27.5	30	17 04	29	17 58	20 39 64	10 01 59				
10	333	50.5		36.5	103	16.3		27.9	20	20	43	18 10	21 00 63	9 40 60				
11	348	50.4	-18	37.1	117	39.6		28.1	10 N	17 35	17 57	18 22	21 19 61	9 21 61				
12	3	50.3	-18	37.8	132	02.8		28.3	0	17 48	18 10	18 35	21 36 60	9 04 61				
13	18	50.2		38.4	146	26.0		28.2	10 S	18 02	24	18 50	21 53 59	8 46 62				
14	33	50.0		39.0	160	49.3		28.0	20	17	18 40	19 08	22 12 57	28 62				
15	48	49.9		39.6	175	12.6		27.6	30	34	19 00	31	33 56	8 06 63				
16	63	49.8		40.3	189	35.9		27.1	35	44	12	19 46	22 46 55	7 54 63				
17	78	49.7	-18	40.9	203	59.2		26.4	40	18 56	19 26	20 04	23 00 54	7 39 63				
18	93	49.6	-18	41.5	218	22.5		25.6	45	19 09	19 43	20 27	23 17 53	7 22 64				
19	108	49.5		42.2	232	45.8		24.6	50	26	20 05	20 58	39 50	7 00 65				
20	123	49.4		42.8	247	09.2		23.4	52	34	16	21 14	23 49 49	6 50 65				
21	138	49.3		43.4	261	32.5		22.1	54	43	28	33	** ** *	39 65				
22	153	49.2		44.0	275	55.9		20.6	56	19 53	42	21 59	** ** *	26 65				
23	168	49.0		44.7	290	19.4		19.0	58	20 04	20 59	22 37	** ** *	6 10 66				
24	183	48.9	-18	45.3	304	42.8		17.2	60 S	20 17	21 20	** ** *	** ** *	5 52 66				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 20 ^h 19 ^m 1		Mag: -4.0 PMG: 14 ^h 33 ^m				Mag: +1.7 PMG: 8 ^h 49 ^m				Mag: -2.8 PMG: 0 ^h 47 ^m				Mag: -0.3 PMG: 0 ^h 07 ^m			
h	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
0	54	23.1	141	51.1	-25	31.7	227	42.5	-1	27.7	348	05.7	+20	42.0	358	14.5	+17	25.3
1	69	25.5	156	50.3		31.7	242	43.6		28.3	3	08.5		42.0	13	17.2		25.2
2	84	28.0	171	49.4		31.7	257	44.6		29.0	18	11.3		41.9	28	19.9		25.2
3	99	30.5	186	48.6		31.7	272	45.7		29.6	33	14.1		41.9	43	22.5		25.2
4	114	32.9	201	47.7		31.7	287	46.7		30.2	48	16.9		41.9	58	25.2		25.1
5	129	35.4	216	46.9	-25	31.8	302	47.8	-1	30.8	63	19.7	+20	41.8	73	27.9	+17	25.1
6	144	37.9	231	46.0	-25	31.8	317	48.8	-1	31.4	78	22.5	+20	41.8	88	30.5	+17	25.0
7	159	40.3	246	45.2		31.8	332	49.9		32.0	93	25.3		41.7	103	33.2		25.0
8	174	42.8	261	44.3		31.8	347	51.0		32.6	108	28.1		41.7	118	35.9		24.9
9	189	45.3	276	43.5		31.8	2	52.0		33.2	123	30.9		41.6	133	38.6		24.9
10	204	47.7	291	42.6		31.8	17	53.1		33.8	138	33.7		41.6	148	41.2		24.9
11	219	50.2	306	41.7	-25	31.8	32	54.1	-1	34.4	153	36.5	+20	41.5	163	43.9	+17	24.8
12	234	52.7	321	40.9	-25	31.8	47	55.2	-1	35.0	168	39.3	+20	41.5	178	46.6	+17	24.8
13	249	55.1	336	40.0		31.8	62	56.2		35.6	183	42.1		41.4	193	49.2		24.7
14	264	57.6	351	39.2		31.8	77	57.3		36.2	198	45.0		41.4	208	51.9		24.7
15	280	00.0	6	38.3		31.8	92	58.4		36.8	213	47.8		41.3	223	54.6		24.6
16	295	02.5	21	37.5		31.8	107	59.4		37.4	228	50.6		41.3	238	57.3		24.6
17	310	05.0	36	36.6	-25	31.8	123	00.5	-1	38.0	243	53.4	+20	41.2	253	59.9	+17	24.6
18	325	07.4	51	35.8	-25	31.8	138	01.5	-1	38.6	258	56.2	+20	41.2	269	02.6	+17	24.5
19	340	09.9	66	34.9		31.8	153	02.6		39.2	273	59.0		41.1	284	05.3		24.5
20	355	12.4	81	34.1		31.7	168	03.6		39.8	289	01.8		41.1	299	07.9		24.4
21	10	14.8	96	33.2		31.7	183	04.7		40.4	304	04.6		41.0	314	10.6		24.4
22	25	17.3	111	32.4		31.7	198	05.8		41.0	319	07.4		41.0	329	13.3		24.3
23	40	19.8	126	31.5		31.7	213	06.8		41.6	334	10.2		40.9	344	16.0		24.3
24	55	22.2	141	30.7	-25	31.7	228	07.9	-1	42.2	349	13.0	+20	40.9	359	18.6	+17	24.3
Dif	—		-9		0		+11		-6		+28		0		+27		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 8			Edad: 19 ^d 7 PHE { 4 ^h : 59/8 12 ^h : 59/7 20 ^h : 59/6 R°: 60 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m	
0	183	48.9	-18	45.3	304	42.8	+22	17.2	60 N	6 20	7 12	8 01	19 42	86	13 05	34		
1	198	48.8		45.9	319	06.3	45	15.3	58	15	7 04	7 49	19 58	83	12 49	37		
2	213	48.7		46.5	333	29.8	45	13.2	56	11	6 57	39	20 11	81	35	40		
3	228	48.6		47.1	347	53.4	46	11.0	54	07	50	30	23	78	23	4		
4	243	48.5		47.8	2	16.9	45	08.6	52	03	44	22	33	77	12	43		
5	258	48.4	-18	48.4	16	40.6	47	+22	50	6 00	6 39	7 15	20 43	74	12 03	44		
6	273	48.2	-18	49.0	31	04.2	46	+22	45	5 52	6 27	6 59	21 02	72	11 43	47		
7	288	48.1		49.6	45	27.9	47	+22	40	45	17	46	18	69	26	50		
8	303	48.0		50.2	59	51.7	48	+21	35	38	09	36	31	67	12	52		
9	318	47.9		50.9	74	15.4	47	54.4	30	32	6 01	26	21	43	65	11 00	53	
10	333	47.8		51.5	88	39.3	49	51.1	20	20	5 46	6 10	22	03	62	10 40	55	
11	348	47.7	-18	52.1	103	03.1	48	+21	10 N	5 07	5 33	5 55	22	20	60	10 22	57	
12	3	47.5	-18	52.7	117	27.0	49	+21	0	4 54	5 19	5 41	22	36	58	10 05	59	
13	18	47.4		53.3	131	51.0	50	40.3	10 S	39	5 05	27	22	52	55	9 48	61	
14	33	47.3		53.9	146	15.0	50	36.4	20	4 21	4 49	5 13	23	09	53	30	63	
15	48	47.2		54.6	160	39.1	51	32.4	30	3 58	29	4 55	29	50	9	09	65	
16	63	47.1		55.2	175	03.2	51	28.2	35	43	17	45	41	48	8	57	66	
17	78	46.9	-18	55.8	189	27.4	52	+21	40	3 25	4 03	4 34	23	54	46	8	42	68
18	93	46.8	-18	56.4	203	51.6	52	+21	45	3 02	3 46	4 20	**	**	**	8	26	69
19	108	46.7		57.0	218	15.9	53	14.9	50	2 31	24	4 03	**	**	**	8	05	72
20	123	46.6		57.6	232	40.2	53	10.1	52	2 15	13	3 55	**	**	**	7	55	73
21	138	46.5		58.2	247	04.6	54	05.2	54	1 56	3 01	46	0	00	48	44	75	
22	153	46.3		58.8	261	29.0	54	+21	56	1 30	2 47	36	13	46	31	77		
23	168	46.2	-18	59.5	275	53.6	56	+20	58	0 51	30	25	28	44	7	16	79	
24	183	46.1	-19	00.1	290	18.1	55	+20	60 S	**	**	2 09	3	12	0	46	41	6 58 82

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 20 ^h 15 ^m 2		Mag: -4.1 PMG: 14 ^h 35 ^m			Mag: +1.7 PMG: 8 ^h 47 ^m			Mag: -2.8 PMG: 0 ^h 43 ^m			Mag: -0.4 PMG: 0 ^h 03 ^m							
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'					
0	55	22.2	141	30.7	-25	31.7	228	07.9	-1	42.2	349	13.0	+20	40.9	359	18.6	+17	24.3	
1	70	24.7	156	29.8		31.7	243	08.9		42.8	4	15.8		40.8	14	21.3		24.2	
2	85	27.2	171	28.9		31.7	258	10.0		43.4	19	18.6		40.8	29	24.0		24.2	
3	100	29.6	186	28.1		31.6	273	11.0		44.0	34	21.4		40.7	44	26.6		24.1	
4	115	32.1	201	27.2		31.6	288	12.1		44.6	49	24.2		40.7	59	29.3		24.1	
5	130	34.5	216	26.4	-25	31.6	303	13.2	-1	45.2	64	27.0	+20	40.6	74	32.0	+17	24.0	
6	145	37.0	231	25.5	-25	31.6	318	14.2	-1	45.9	79	29.8	+20	40.6	89	34.7	+17	24.0	
7	160	39.5	246	24.7		31.6	333	15.3		46.5	94	32.6		40.5	104	37.3		23.9	
8	175	41.9	261	23.8		31.5	348	16.3		47.1	109	35.4		40.5	119	40.0		23.9	
9	190	44.4	276	23.0		31.5	3	17.4		47.7	124	38.2		40.4	134	42.7		23.9	
10	205	46.9	291	22.1		31.5	18	18.5		48.3	139	41.1		40.4	149	45.4		23.8	
11	220	49.3	306	21.3	-25	31.5	33	19.5	-1	48.9	154	43.9	+20	40.3	164	48.0	+17	23.8	
12	235	51.8	321	20.4	-25	31.4	48	20.6	-1	49.5	169	46.7	+20	40.3	179	50.7	+17	23.7	
13	250	54.3	336	19.6		31.4	63	21.6		50.1	184	49.5		40.2	194	53.4		23.7	
14	265	56.7	351	18.7		31.4	78	22.7		50.7	199	52.3		40.2	209	56.0		23.6	
15	280	59.2	6	17.9		31.3	93	23.7		51.3	214	55.1		40.1	224	58.7		23.6	
16	296	01.7	21	17.0		31.3	108	24.8		51.9	229	57.9		40.1	240	01.4		23.6	
17	311	04.1	36	16.2	-25	31.3	123	25.9	-1	52.5	245	00.7	+20	40.0	255	04.1	+17	23.5	
18	326	06.6	51	15.3	-25	31.2	138	26.9	-1	53.1	260	03.5	+20	40.0	270	06.7	+17	23.5	
19	341	09.0	66	14.5		31.2	153	28.0		53.7	275	06.3		39.9	285	09.4		23.4	
20	356	11.5	81	13.6		31.1	168	29.0		54.3	290	09.1		39.9	300	12.1		23.4	
21	11	14.0	96	12.8		31.1	183	30.1		54.9	305	11.9		39.9	315	14.7		23.3	
22	26	16.4	111	11.9		31.1	198	31.1		55.5	320	14.7		39.8	330	17.4		23.3	
23	41	18.9	126	11.1		31.0	213	32.2		56.1	335	17.5		39.8	345	20.1		23.3	
24	56	21.4	141	10.2	-25	31.0	228	33.3	-1	56.7	350	20.4	+20	39.7	0	22.8	+17	23.2	
Dif	—		-9			0	+11			-6	+28			0	-8973				

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'2		Edad: 20 ^d 7		PHE { 4 ^h : 59'5 12 ^h : 59'4 20 ^h : 59'3				Civil		Náutico		Hora R°	
	PMG: 11 ^h 45 ^m 0		SD: 16'2		PMG: 4 ^h 50 ^m	R°: 57 ^m								
	hG ☉	Dec	hG ☾	Dif	Dec	Dif								
h	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	h m	h m
0	183	46.1	-19 00.1		290 18.1	+20 49.8	60 N	15 26	16 16	17 08	21 08	90	13 39	24
1	198	46.0		00.7	304 42.8	57 44.3	58	38	24	13	21	86	26	27
2	213	45.8		01.3	319 07.5	57 38.8	56	48	31	17	32	83	15	29
3	228	45.7		01.9	333 32.3	58 33.1	54	15 58	38	21	41	81	13 04	32
4	243	45.6		02.5	347 57.1	58 27.2	52	16 06	44	25	50	79	12 55	34
5	258	45.5	-19 03.1		2 22.0	59 21.3	50	16 13	16 49	17 29	21 57	77	12 47	36
6	273	45.4	-19 03.7		16 47.0	60 21.3	45	16 29	17 01	17 37	22 14	73	12 30	39
7	288	45.2		04.3	31 12.0	60 08.9	40	42	11	44	27	70	16	42
8	303	45.1		04.9	45 37.1	61 20.2	35	16 53	20	51	38	67	12 04	44
9	318	45.0		05.5	60 02.3	62 56.1	30	17 03	28	17 57	22 48	65	11 53	47
10	333	44.9		06.1	74 27.5	62 49.5	20	20	43	18 10	23 05	61	35	50
11	348	44.7	-19 06.7		88 52.8	63 42.8	10 N	17 35	17 57	18 22	23 20	57	11 19	53
12	3	44.6	-19 07.3		103 18.2	64 35.9	0	17 49	18 11	18 36	23 34	54	11 04	56
13	18	44.5		07.9	117 43.7	65 28.9	10 S	18 03	25	18 51	23 47	52	10 49	59
14	33	44.3		08.5	132 09.2	65 21.8	20	18	18 42	19 10	** ** *	**	33	62
15	48	44.2		09.1	146 34.8	66 14.6	30	36	19 02	33	** ** *	**	14	65
16	63	44.1		09.7	161 00.5	67 19 07.3	35	46	14	19 48	** ** *	**	10 03	67
17	78	44.0	-19 10.3		175 26.3	68 18 59.8	40	18 58	19 29	20 07	** ** *	**	9 50	70
18	93	43.8	-19 10.9		189 52.1	68 18 52.3	45	19 12	19 46	20 30	0 10	43	9 35	73
19	108	43.7		11.5	204 18.0	69 44.6	50	29	20 09	21 02	29 39	17	77	77
20	123	43.6		12.1	218 44.0	70 36.8	52	37	20	19	38	38	9 08	79
21	138	43.4		12.7	233 10.1	71 28.9	54	47	33	21 40	48	36	8 59	80
22	153	43.3		13.3	247 36.2	71 20.9	56	19 57	20 48	22 08	0 59	34	48	83
23	168	43.2		13.9	262 02.4	72 12.7	58	20 09	21 05	22 53	1 12	31	35	86
24	183	43.0	-19 14.5		276 28.7	73 18 04.5	60 S	20 23	21 28	** ** *	1 27	28	8 20	90

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG		Mag: -4.1		Mag: +1.7		Mag: -2.8		Mag: -0.4		
	20 ^h 11 ^m 3		PMG: 14 ^h 36 ^m		PMG: 8 ^h 45 ^m		PMG: 0 ^h 39 ^m		PMG: 23 ^h 54 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	56	21.4	141	10.2	-25 31.0	228 33.3	-1 56.7	350 20.4	+20 39.7	0 22.8	+17 23.2
1	71	23.8	156	09.4	30.9	243 34.3	57.3	5 23.2	39.7	15 25.4	23.2
2	86	26.3	171	08.5	30.9	258 35.4	57.9	20 26.0	39.6	30 28.1	23.1
3	101	28.8	186	07.7	30.8	273 36.4	58.5	35 28.8	39.6	45 30.8	23.1
4	116	31.2	201	06.8	30.8	288 37.5	59.1	50 31.6	39.5	60 33.5	23.0
5	131	33.7	216	06.0	-25 30.7	303 38.5	-1 59.7	65 34.4	+20 39.5	75 36.1	+17 23.0
6	146	36.2	231	05.1	-25 30.7	318 39.6	-2 00.3	80 37.2	+20 39.4	90 38.8	+17 23.0
7	161	38.6	246	04.3	30.6	333 40.7	00.9	95 40.0	39.4	105 41.5	22.9
8	176	41.1	261	03.4	30.6	348 41.7	01.5	110 42.8	39.3	120 44.1	22.9
9	191	43.5	276	02.6	30.5	3 42.8	02.1	125 45.6	39.3	135 46.8	22.8
10	206	46.0	291	01.8	30.4	18 43.8	02.7	140 48.4	39.2	150 49.5	22.8
11	221	48.5	306	00.9	-25 30.4	33 44.9	-2 03.3	155 51.3	+20 39.2	165 52.2	+17 22.7
12	236	50.9	321	00.1	-25 30.3	48 45.9	-2 03.9	170 54.1	+20 39.1	180 54.8	+17 22.7
13	251	53.4	335	59.2	30.3	63 47.0	04.5	185 56.9	39.1	195 57.5	22.6
14	266	55.9	350	58.4	30.2	78 48.1	05.1	200 59.7	39.0	211 00.2	22.6
15	281	58.3	5 57.5	30.1	93 49.1	05.7	216 02.5	39.0	226 02.8	22.6	
16	297	00.8	20 56.7	30.1	108 50.2	06.3	231 05.3	38.9	241 05.5	22.5	
17	312	03.3	35 55.8	-25 30.0	123 51.2	-2 06.9	246 08.1	+20 38.9	256 08.2	+17 22.5	
18	327	05.7	50 55.0	-25 29.9	138 52.3	-2 07.5	261 10.9	+20 38.8	271 10.9	+17 22.4	
19	342	08.2	65 54.1	29.9	153 53.4	08.1	276 13.7	38.8	286 13.5	22.4	
20	357	10.6	80 53.3	29.8	168 54.4	08.7	291 16.5	38.7	301 16.2	22.3	
21	12	13.1	95 52.4	29.7	183 55.5	09.3	306 19.4	38.7	316 18.9	22.3	
22	27	15.6	110 51.6	29.6	198 56.5	09.9	321 22.2	38.6	331 21.6	22.3	
23	42	18.0	125 50.8	29.6	213 57.6	10.5	336 25.0	38.6	346 24.2	22.2	
24	57	20.5	140 49.9	-25 29.5	228 58.6	-2 11.1	351 27.8	+20 38.5	1 26.9	+17 22.2	
Dif	—		-8	+1	+11	-6	+28	0	+27	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 2			Edad: 21 ^d 7 PHE { SD: 16:1 PMG: 5 ^h 47 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m
0	183	43.0	-19	14.5	276	28.7	+18	04.5	60 N	6 23	7 16	8 06	22 38	90
1	198	42.9		15.1	290	55.1	+17	56.1	58	18	08	7 54	47 87	13 53
2	213	42.8		15.7	305	21.5		47.7	56	14	7 00	43	22 55	84
3	228	42.7		16.3	319	48.1		39.1	54	10	6 54	34	23 02	81
4	243	42.5		16.9	334	14.7		30.5	52	06	48	25	09 78	29 27
5	258	42.4	-19	17.5	348	41.3	+17	21.7	50	6 02	6 42	7 18	23 14	77
6	273	42.3	-19	18.1	3	08.1	+17	12.8	45	5 54	6 30	7 02	23 27	72
7	288	42.1		18.7	17	34.9	+17	03.9	40	47	20	6 49	37 69	12 58
8	303	42.0		19.2	32	01.9	+16	54.8	35	40	10	38	45 66	48 40
9	318	41.9		19.8	46	28.9		45.7	30	33	6 02	28	23 53	63
10	333	41.7		20.4	60	55.9		36.4	20	21	5 47	6 11	** ** *	25 46
11	348	41.6	-19	21.0	75	23.1	+16	27.1	10 N	5 08	5 34	5 56	** ** *	12 12
12	3	41.4	-19	21.6	89	50.3	+16	17.6	0	4 54	5 20	5 42	** ** *	12 00
13	18	41.3		22.2	104	17.6	+16	08.1	10 S	39	5 05	5 27	** ** *	11 48
14	33	41.2		22.8	118	45.0	+15	58.5	20	4 20	4 48	5 12	0 02	48
15	48	41.0		23.4	133	12.4		48.8	30	3 57	28	4 54	19 44	19 64
16	63	40.9		23.9	147	40.0		39.0	35	41	16	44	29 41	10 67
17	78	40.8	-19	24.5	162	07.6	+15	29.1	40	3 23	4 01	4 32	0 40	39
18	93	40.6	-19	25.1	176	35.3	+15	19.1	45	3 00	3 43	4 18	0 53	35
19	108	40.5		25.7	191	03.1	+15	09.1	50	2 28	21	4 01	1 08	32
20	123	40.4		26.3	205	30.9	+14	58.9	52	2 11	3 10	3 52	16 30	27 79
21	138	40.2		26.9	219	58.8		48.7	54	1 50	2 57	43	24 28	19 82
22	153	40.1		27.4	234	26.8		38.4	56	1 22	42	33	33 25	11 84
23	168	39.9		28.0	248	54.9		28.0	58	0 37	24	21	43 23	10 01
24	183	39.8	-19	28.6	263	23.0	+14	17.6	60 S	** ** *	2 02	3 07	1 55	19

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 20 ^h 07 ^m 3		Mag: -4.1 PMG: 14 ^h 37 ^m		Mag: +1.7 PMG: 8 ^h 43 ^m		Mag: -2.8 PMG: 0 ^h 34 ^m		Mag: -0.4 PMG: 23 ^h 50 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	57	20.5	140	49.9	-25	29.5	228	58.6	-2	11.1
1	72	23.0	155	49.1		29.4	243	59.7		11.7
2	87	25.4	170	48.2		29.3	259	00.8		12.3
3	102	27.9	185	47.4		29.3	274	01.8		12.9
4	117	30.4	200	46.5		29.2	289	02.9		13.5
5	132	32.8	215	45.7	-25	29.1	304	03.9	-2	14.1
6	147	35.3	230	44.8	-25	29.0	319	05.0	-2	14.7
7	162	37.8	245	44.0		28.9	334	06.1		15.3
8	177	40.2	260	43.2		28.8	349	07.1		15.9
9	192	42.7	275	42.3		28.8	4	08.2		16.5
10	207	45.1	290	41.5		28.7	19	09.2		17.1
11	222	47.6	305	40.6	-25	28.6	34	10.3	-2	17.8
12	237	50.1	320	39.8	-25	28.5	49	11.3	-2	18.4
13	252	52.5	335	38.9		28.4	64	12.4		19.0
14	267	55.0	350	38.1		28.3	79	13.5		19.6
15	282	57.5	5	37.2		28.2	94	14.5		20.2
16	297	59.9	20	36.4		28.1	109	15.6		20.8
17	313	02.4	35	35.6	-25	28.0	124	16.6	-2	21.4
18	328	04.9	50	34.7	-25	27.9	139	17.7	-2	22.0
19	343	07.3	65	33.9		27.8	154	18.7		22.6
20	358	09.8	80	33.0		27.7	169	19.8		23.2
21	13	12.3	95	32.2		27.6	184	20.9		23.8
22	28	14.7	110	31.4		27.5	199	21.9		24.4
23	43	17.2	125	30.5		27.4	214	23.0		25.0
24	58	19.6	140	29.7	-25	27.3	229	24.0	-2	25.6
Dif	—		-8		+1		+11		-6	
							+28		-1	
									+27	
									0	

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna										
	SD: 16:2 PMG: 11 ^h 45 ^m 5			Edad: 22 ^d 7 PHE { 4 ^h : 58'7 12 ^h : 58'6 20 ^h : 58'4 R°: 50 ^m																				
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°									
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	m	h m	m									
0	183	39.8	-19	28.6	263	23.0	+14	17.6	60 N	15 22	16 12	17 05	** ** *	14 19	13									
1	198	39.7		29.2	277	51.2	92	+14 07.1 ¹⁰⁵	58	34	21	10	** ** *		12 16									
2	213	39.5		29.8	292	19.5	93	+13 56.5 ¹⁰⁶	56	45	28	15	** ** *		06 19									
3	228	39.4		30.3	306	47.9	94	45.8 ¹⁰⁷	54	15 55	35	19	** ** *		14 01 21									
4	243	39.2		30.9	321	16.3	94	35.1 ¹⁰⁷	52	16 03	41	23	** ** *		13 56 23									
5	258	39.1	-19	31.5	335	44.8	95	+13 24.2 ¹⁰⁹	50	16 11	16 47	17 27	** ** *		13 52 25									
6	273	38.9	-19	32.1	350	13.4	96	+13 13.4 ¹⁰⁸	45	16 27	16 59	17 35	** ** *		13 42 29									
7	288	38.8		32.7	4	42.1	97	+13 02.4 ¹¹⁰	40	41	17 10	43	** ** *		34 33									
8	303	38.7		33.2	19	10.8	97	+12 51.4 ¹¹⁰	35	16 52	19	50	** ** *		28 35									
9	318	38.5		33.8	33	39.6	98	40.3 ¹¹¹	30	17 02	28	17 57	** ** *		22 37									
10	333	38.4		34.4	48	08.5	99	29.2 ¹¹¹	20	19	43	18 10	0 06	59	11 42									
11	348	38.2	-19	35.0	62	37.4	99	+12 18.0 ¹¹²	10 N	17 35	17 57	18 23	0 17	55	13 02 46									
12	3	38.1	-19	35.5	77	06.4	100	+12 06.7 ¹¹³	0	17 49	18 11	18 37	0 28	51	12 53 50									
13	18	37.9		36.1	91	35.5	101	+11 55.4 ¹¹³	10 S	18 04	26	18 52	39	47	44 54									
14	33	37.8		36.7	106	04.6	101	44.0 ¹¹⁴	20	19	18 43	19 11	0 50	44	34 58									
15	48	37.7		37.2	120	33.8	102	32.5 ¹¹⁵	30	37	19 04	35	1 03	39	23 63									
16	63	37.5		37.8	135	03.1	103	21.0 ¹¹⁵	35	18 48	16	19 51	10	37	17 65									
17	78	37.4	-19	38.4	149	32.4	103	+11 09.5 ¹¹⁵	40	19 00	19 31	20 10	1 19	34	12 10 68									
18	93	37.2	-19	39.0	164	01.8	104	+10 57.9 ¹¹⁶	45	19 15	19 49	20 34	1 28	31	12 01 72									
19	108	37.1		39.5	178	31.3	105	46.2 ¹¹⁷	50	32	20 13	21 07	40	27	11 51 76									
20	123	36.9		40.1	193	00.8	105	34.5 ¹¹⁷	52	41	24	24	46	24	46 78									
21	138	36.8		40.7	207	30.4	106	22.8 ¹¹⁷	54	19 50	37	21 47	52	22	41 80									
22	153	36.6		41.2	222	00.0	106	+10 10.9 ¹¹⁹	56	20 01	20 53	22 17	1 58	20	35 83									
23	168	36.5		41.8	236	29.7	107	+9 59.1 ¹¹⁸	58	13	21 11	23 13	2 06	17	28 86									
24	183	36.3	-19	42.4	250	59.5	108	+9 47.2 ¹¹⁹	60 S	20 28	21 35	** ** *	2 14	14	11 21 89									
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO											
	PMG: 20 ^h 03 ^m 4			Mag: -4.1 PMG: 14 ^h 39 ^m			Mag: +1.7 PMG: 8 ^h 42 ^m			Mag: -2.8 PMG: 0 ^h 30 ^m			Mag: -0.4 PMG: 23 ^h 46 ^m											
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec										
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'								
0	58	19.6	140	29.7	-25	27.3	229	24.0	-2	25.6	352	35.3	+20	37.3	2	31.0	+17	21.1						
1	73	22.1	155	28.8		27.2	244	25.1		26.2	7	38.1		37.3	17	33.7		21.1						
2	88	24.6	170	28.0		27.1	259	26.2		26.8	22	40.9		37.2	32	36.4		21.1						
3	103	27.0	185	27.2		27.0	274	27.2		27.4	37	43.7		37.2	47	39.1		21.0						
4	118	29.5	200	26.3		26.8	289	28.3		28.0	52	46.5		37.1	62	41.7		21.0						
5	133	32.0	215	25.5	-25	26.7	304	29.3	-2	28.6	67	49.3	+20	37.1	77	44.4	+17	20.9						
6	148	34.4	230	24.6	-25	26.6	319	30.4	-2	29.2	82	52.2	+20	37.0	92	47.1	+17	20.9						
7	163	36.9	245	23.8		26.5	334	31.4		29.8	97	55.0		37.0	107	49.8		20.8						
8	178	39.4	260	23.0		26.4	349	32.5		30.4	112	57.8		36.9	122	52.4		20.8						
9	193	41.8	275	22.1		26.3	4	33.6		31.0	128	00.6		36.8	137	55.1		20.7						
10	208	44.3	290	21.3		26.1	19	34.6		31.6	143	03.4		36.8	152	57.8		20.7						
11	223	46.8	305	20.4	-25	26.0	34	35.7	-2	32.2	158	06.2	+20	36.7	168	00.5	+17	20.7						
12	238	49.2	320	19.6	-25	25.9	49	36.7	-2	32.8	173	09.1	+20	36.7	183	03.1	+17	20.6						
13	253	51.7	335	18.8		25.8	64	37.8		33.3	188	11.9		36.6	198	05.8		20.6						
14	268	54.1	350	17.9		25.7	79	38.9		33.9	203	14.7		36.6	213	08.5		20.5						
15	283	56.6	5	17.1		25.5	94	39.9		34.5	218	17.5		36.5	228	11.1		20.5						
16	298	59.1	20	16.3		25.4	109	41.0		35.1	233	20.3		36.5	243	13.8		20.4						
17	314	01.5	35	15.4	-25	25.3	124	42.0	-2	35.7	248	23.1	+20	36.4	258	16.5	+17	20.4						
18	329	04.0	50	14.6	-25	25.1	139	43.1	-2	36.3	263	25.9	+20	36.4	273	19.2	+17	20.4						
19	344	06.5	65	13.7		25.0	154	44.2		36.9	278	28.8		36.3	288	21.8		20.3						
20	359	08.9	80	12.9		24.9	169	45.2		37.5	293	31.6		36.3	303	24.5		20.3						
21	14	11.4	95	12.1		24.8	184	46.3		38.1	308	34.4		36.2	318	27.2		20.2						
22	29	13.9	110	11.2		24.6	199	47.3		38.7	323	37.2		36.2	333	29.9		20.2						
23	44	16.3	125	10.4		24.5	214	48.4		39.3	338	40.0		36.1	348	32.5		20.1						
24	59	18.8	140	09.6	-25	24.3	229	49.4	-2	39.9	353	42.8	+20	36.1	3	35.2	+17	20.1						
Dif	—			-8			+1			+11			-6			+28			-1			+27		

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'2 PMG: 11 ^h 45 ^m 7			Edad: 23 ^d 7 PHE { 4 ^h : 58'3 12 ^h : 58'1 20 ^h : 58'0 SD: 15'9 PMG: 7 ^h 31 ^m R°: 48 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	183	36.3	-19	42.4	250	59.5	+9 47.2	60 N	6 27	7 20	8 11	0 08	88	14 32	10
1	198	36.2		42.9	265	29.3 ¹⁰⁸	35.2 ¹²⁰	58	22	11	7 58	14 85		28 14	
2	213	36.0		43.5	279	59.2 ¹⁰⁹	23.3 ¹¹⁹	56	17	7 04	47	19 82		25 16	
3	228	35.9		44.1	294	29.2 ¹¹⁰	+9 11.2 ¹²¹	54	13	6 57	37	23 80		22 18	
4	243	35.7		44.6	308	59.2 ¹¹⁰	+8 59.2 ¹²⁰	52	09	51	29	27 78		19 20	
5	258	35.6	-19	45.2	323	29.2 ¹¹⁰	+8 47.0 ¹²²	50	6 05	6 45	7 21	0 31	75	14 17	22
6	273	35.4	-19	45.7	337	59.3 ¹¹¹	+8 34.9 ¹²¹	45	5 56	6 32	7 05	0 39	71	14 11	27
7	288	35.3		46.3	352	29.5 ¹¹²	22.7 ¹²²	40	49	22	6 51	46 67		07 30	
8	303	35.1		46.9	6	59.7 ¹¹²	+8 10.5 ¹²²	35	41	12	39	51 64		14 03	33
9	318	35.0		47.4	21	30.0 ¹¹³	+7 58.2 ¹²³	30	35	6 04	29	0 56	61	13 59	36
10	333	34.8		48.0	36	00.3 ¹¹³	45.9 ¹²³	20	22	5 49	6 12	1 05	56	53 40	
11	348	34.7	-19	48.5	50	30.7 ¹¹⁴	+7 33.6 ¹²³	10 N	5 09	5 34	5 57	1 12	53	13 48	44
12	3	34.5	-19	49.1	65	01.1 ¹¹⁴	+7 21.2 ¹²⁴	0	4 55	5 20	5 42	1 19	49	13 43	48
13	18	34.4		49.7	79	31.6 ¹¹⁵	+7 08.9 ¹²³	10 S	39	5 05	28	26 45		38 51	
14	33	34.2		50.2	94	02.2 ¹¹⁶	+6 56.4 ¹²⁵	20	4 20	4 48	5 12	34 41		32 56	
15	48	34.1		50.8	108	32.7 ¹¹⁵	44.0 ¹²⁴	30	3 55	27	4 54	42 37		26 60	
16	63	33.9		51.3	123	03.4 ¹¹⁷	31.5 ¹²⁵	35	40	15	43	47 34		22 63	
17	78	33.7	-19	51.9	137	34.0 ¹¹⁶	+6 19.0 ¹²⁵	40	3 21	4 00	4 31	1 53	30	13 18	66
18	93	33.6	-19	52.4	152	04.7 ¹¹⁷	+6 06.5 ¹²⁵	45	2 57	3 41	4 16	1 59	27	13 13	70
19	108	33.4		53.0	166	35.5 ¹¹⁸	+5 54.0 ¹²⁵	50	24	18	3 58	2 07	23	07 74	
20	123	33.3		53.5	181	06.3 ¹¹⁸	41.4 ¹²⁶	52	2 06	3 07	50	10 21		04 77	
21	138	33.1		54.1	195	37.1 ¹¹⁸	28.8 ¹²⁶	54	1 44	2 53	40	14 19		13 01	79
22	153	33.0		54.7	210	08.0 ¹¹⁹	16.2 ¹²⁶	56	1 14	38	30	18 17		12 58	81
23	168	32.8		55.2	224	39.0 ¹²⁰	+5 03.6 ¹²⁶	58	0 18	2 19	17	23 14		54 84	
24	183	32.6	-19	55.8	239	09.9 ¹¹⁹	+4 50.9 ¹²⁷	60 S	** **	1 56	3 03	2 28	11	12 50	87

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 19 ^h 59 ^m 5		Mag: -4.1 PMG: 14 ^h 40 ^m		Mag: +1.7 PMG: 8 ^h 40 ^m		Mag: -2.8 PMG: 0 ^h 25 ^m		Mag: -0.4 PMG: 23 ^h 41 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	59	18.8	140	09.6	-25	24.3	229	49.4	-2	39.9
1	74	21.2	155	08.7		24.2	244	50.5		40.5
2	89	23.7	170	07.9		24.1	259	51.6		41.1
3	104	26.2	185	07.1		23.9	274	52.6		41.7
4	119	28.6	200	06.2		23.8	289	53.7		42.3
5	134	31.1	215	05.4	-25	23.6	304	54.7	-2	42.9
6	149	33.6	230	04.6	-25	23.5	319	55.8	-2	43.5
7	164	36.0	245	03.7		23.4	334	56.9		44.1
8	179	38.5	260	02.9		23.2	349	57.9		44.7
9	194	41.0	275	02.1		23.1	4	59.0		45.3
10	209	43.4	290	01.2		22.9	20	00.0		45.9
11	224	45.9	305	00.4	-25	22.8	35	01.1	-2	46.5
12	239	48.4	319	59.6	-25	22.6	50	02.1	-2	47.1
13	254	50.8	334	58.7		22.4	65	03.2		47.7
14	269	53.3	349	57.9		22.3	80	04.3		48.3
15	284	55.7	4	57.1		22.1	95	05.3		48.9
16	299	58.2	19	56.2		22.0	110	06.4		49.5
17	315	00.7	34	55.4	-25	21.8	125	07.4	-2	50.1
18	330	03.1	49	54.6	-25	21.7	140	08.5	-2	50.7
19	345	05.6	64	53.7		21.5	155	09.6		51.3
20	0	08.1	79	52.9		21.3	170	10.6		51.9
21	15	10.5	94	52.1		21.2	185	11.7		52.5
22	30	13.0	109	51.3		21.0	200	12.7		53.1
23	45	15.5	124	50.4		20.8	215	13.8		53.7
24	60	17.9	139	49.6	-25	20.7	230	14.9	-2	54.3
Dif	—		-8	+2		+11	-6		+28	-1

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 11 ^h 45 ^m 9			Edad: 24 ^d 7 PHE { 4 ^h : 57/8 12 ^h : 57/6 20 ^h : 57/5 SD: 15/8 PMG: 8 ^h 19 ^m R°: 47 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	183	32.6	-19	55.8	239	09.9	+4 50.9	60 N	15 18	16 09	17 02	1 36 86	14 42 11	
1	198	32.5		56.3	253	40.9 ¹²⁰	38.3 ¹²⁶	58	31	18	07	39 83	42 12	
2	213	32.3		56.9	268	12.0 ¹²¹	25.6 ¹²⁷	56	42	26	12	41 80	41 15	
3	228	32.2		57.4	282	43.1 ¹²¹	12.9 ¹²⁷	54	15 52	33	17	43 78	40 18	
4	243	32.0		58.0	297	14.2 ¹²¹	+4 00.2 ¹²⁷	52	16 01	39	21	45 75	39 20	
5	258	31.9	-19	58.5	311	45.3 ¹²¹	+3 47.5 ¹²⁷	50	16 09	16 45	17 25	1 46 74	14 39 21	
6	273	31.7	-19	59.0	326	16.5 ¹²²	+3 34.7 ¹²⁸	45	16 26	16 58	17 34	1 50 69	14 38 25	
7	288	31.5	-19	59.6	340	47.8 ¹²³	22.0 ¹²⁷	40	39	17 09	42	53 65	37 28	
8	303	31.4	-20	00.1	355	19.0 ¹²²	+3 09.3 ¹²⁷	35	16 51	18	49	55 63	36 31	
9	318	31.2		00.7	9	50.3 ¹²³	+2 56.5 ¹²⁸	30	17 01	27	17 56	1 57 60	35 34	
10	333	31.1		01.2	24	21.6 ¹²³	43.7 ¹²⁸	20	19	43	18 10	2 01 56	33 39	
11	348	30.9	-20	01.8	38	53.0 ¹²⁴	+2 31.0 ¹²⁷	10 N	17 35	17 57	18 23	2 05 51	14 32 43	
12	3	30.7	-20	02.3	53	24.4 ¹²⁴	+2 18.2 ¹²⁸	0	17 50	18 12	18 37	2 08 47	14 31 46	
13	18	30.6		02.9	67	55.8 ¹²⁴	+2 05.4 ¹²⁸	10 S	18 04	27	18 53	11 44	29 51	
14	33	30.4		03.4	82	27.2 ¹²⁴	+1 52.6 ¹²⁸	20	20	18 44	19 13	15 39	28 55	
15	48	30.2		03.9	96	58.7 ¹²⁵	39.9 ¹²⁷	30	39	19 06	37	19 34	26 60	
16	63	30.1		04.5	111	30.2 ¹²⁵	27.1 ¹²⁸	35	18 50	18	19 53	21 32	25 62	
17	78	29.9	-20	05.0	126	01.7 ¹²⁵	+1 14.3 ¹²⁸	40	19 02	19 34	20 12	2 23 29	14 24 65	
18	93	29.8	-20	05.6	140	33.2 ¹²⁵	+1 01.5 ¹²⁸	45	19 17	19 52	20 37	2 26 26	14 23 69	
19	108	29.6		06.1	155	04.8 ¹²⁶	+0 48.7 ¹²⁸	50	36	20 16	21 12	30 21	21 74	
20	123	29.4		06.6	169	36.4 ¹²⁶	36.0 ¹²⁷	52	44	28	30	31 20	21 75	
21	138	29.3		07.2	184	08.0 ¹²⁶	23.2 ¹²⁸	54	19 54	42	21 53	33 18	20 77	
22	153	29.1		07.7	198	39.6 ¹²⁶	+0 10.4 ¹²⁸	56	20 05	20 58	22 26	35 15	19 80	
23	168	28.9		08.3	213	11.2 ¹²⁶	-0 02.3 ¹²⁷	58	18	21 17	** **	37 13	18 82	
24	183	28.8	-20	08.8	227	42.9 ¹²⁷	-0 15.1 ¹²⁸	60 S	20 33	21 42	** **	2 39 11	14 17 85	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 19 ^h 55 ^m 5		Mag: -4.1 PMG: 14 ^h 42 ^m			Mag: +1.7 PMG: 8 ^h 38 ^m			Mag: -2.9 PMG: 0 ^h 21 ^m			Mag: -0.4 PMG: 23 ^h 37 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	60	17.9	139	49.6	-25	20.7	230	14.9	-2	54.3	354	50.4	+20	34.9
1	75	20.4	154	48.8		20.5	245	15.9		54.9	9	53.3		34.8
2	90	22.8	169	47.9		20.3	260	17.0		55.5	24	56.1		34.8
3	105	25.3	184	47.1		20.2	275	18.0		56.1	39	58.9		34.7
4	120	27.8	199	46.3		20.0	290	19.1		56.7	55	01.7		34.7
5	135	30.2	214	45.5	-25	19.8	305	20.1	-2	57.3	70	04.5	+20	34.6
6	150	32.7	229	44.6	-25	19.6	320	21.2	-2	57.9	85	07.3	+20	34.5
7	165	35.2	244	43.8		19.5	335	22.3		58.5	100	10.2		34.5
8	180	37.6	259	43.0		19.3	350	23.3		59.1	115	13.0		34.4
9	195	40.1	274	42.1		19.1	5	24.4	-2	59.7	130	15.8		34.4
10	210	42.6	289	41.3		18.9	20	25.4	-3	00.3	145	18.6		34.3
11	225	45.0	304	40.5	-25	18.8	35	26.5	-3	00.9	160	21.4	+20	34.3
12	240	47.5	319	39.7	-25	18.6	50	27.6	-3	01.5	175	24.3	+20	34.2
13	255	50.0	334	38.8		18.4	65	28.6		02.1	190	27.1		34.2
14	270	52.4	349	38.0		18.2	80	29.7		02.7	205	29.9		34.1
15	285	54.9	4	37.2		18.0	95	30.7		03.2	220	32.7		34.1
16	300	57.3	19	36.4		17.8	110	31.8		03.8	235	35.5		34.0
17	315	59.8	34	35.5	-25	17.6	125	32.9	-3	04.4	250	38.4	+20	34.0
18	331	02.3	49	34.7	-25	17.4	140	33.9	-3	05.0	265	41.2	+20	33.9
19	346	04.7	64	33.9		17.3	155	35.0		05.6	280	44.0		33.9
20	1	07.2	79	33.1		17.1	170	36.0		06.2	295	46.8		33.8
21	16	09.7	94	32.2		16.9	185	37.1		06.8	310	49.6		33.8
22	31	12.1	109	31.4		16.7	200	38.2		07.4	325	52.5		33.7
23	46	14.6	124	30.6		16.5	215	39.2		08.0	340	55.3		33.7
24	61	17.1	139	29.8	-25	16.3	230	40.3	-3	08.6	355	58.1	+20	33.6
Dif	—		-8		+2		+11		-6		+28		-1	
											+27		0	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'2			Edad: 25 ^d 7	PHE { 4 ^h : 57'3 12 ^h : 57'2 20 ^h : 57'0										
	PMG: 11 ^h 46 ^m 2														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	h	m	h	m	h	m	h	m
0	183	28.8	-20 08.8	227	42.9	-0 15.1		60 N	6 31	7 24	8 16	3 02	85	14 53	10
1	198	28.6	09.3	242	14.6 ¹²⁷	27.8 ¹²⁷		58	26	15	8 02	02	81	54	14
2	213	28.4	09.9	256	46.3 ¹²⁷	40.5 ¹²⁷		56	21	07	7 51	01	79	56	16
3	228	28.3	10.4	271	18.0 ¹²⁷	-0 53.2 ¹²⁷		54	16	7 00	41	01	76	58	18
4	243	28.1	10.9	285	49.8 ¹²⁸	-1 05.9 ¹²⁷		52	12	6 54	32	00	75	14	59
5	258	27.9	-20 11.5	300	21.5 ¹²⁷	-1 18.6 ¹²⁷		50	6 08	6 48	7 24	3 00	72	15 00	22
6	273	27.8	-20 12.0	314	53.3 ¹²⁸	-1 31.3 ¹²⁷		45	5 59	6 35	7 07	2 59	68	15 03	26
7	288	27.6	12.5	329	25.0 ¹²⁷	44.0 ¹²⁷		40	51	24	6 53	58	65	05	29
8	303	27.4	13.1	343	56.8 ¹²⁸	-1 56.6 ¹²⁶		35	43	14	41	58	61	07	32
9	318	27.3	13.6	358	28.6 ¹²⁸	-2 09.2 ¹²⁶		30	36	6 05	31	57	59	09	35
10	333	27.1	14.1	13	00.4 ¹²⁸	21.9 ¹²⁷		20	23	5 50	6 13	57	54	12	39
11	348	26.9	-20 14.6	27	32.3 ¹²⁹	-2 34.4 ¹²⁵		10 N	5 09	5 35	5 57	2 56	50	15 15	43
12	3	26.8	-20 15.2	42	04.1 ¹²⁸	-2 47.0 ¹²⁶		0	4 55	5 21	5 43	2 55	47	15 17	47
13	18	26.6	15.7	56	35.9 ¹²⁸	-2 59.6 ¹²⁶		10 S	39	5 05	28	55	42	20	50
14	33	26.4	16.2	71	07.8 ¹²⁹	-3 12.1 ¹²⁵		20	4 19	4 48	5 12	54	39	23	54
15	48	26.2	16.7	85	39.6 ¹²⁸	24.6 ¹²⁵		30	3 55	26	4 53	53	34	26	58
16	63	26.1	17.3	100	11.5 ¹²⁹	37.1 ¹²⁵		35	39	4 13	42	53	31	27	62
17	78	25.9	-20 17.8	114	43.4 ¹²⁹	-3 49.6 ¹²⁵		40	3 19	3 58	4 29	2 52	29	15 29	65
18	93	25.7	-20 18.3	129	15.2 ¹²⁸	-4 02.0 ¹²⁴		45	2 55	3 39	4 14	2 52	25	15 32	68
19	108	25.6	18.8	143	47.1 ¹²⁹	14.4 ¹²⁴		50	20	15	3 56	51	22	35	72
20	123	25.4	19.4	158	19.0 ¹²⁹	26.8 ¹²⁴		52	2 02	3 04	47	51	20	36	74
21	138	25.2	19.9	172	50.8 ¹²⁸	39.1 ¹²³		54	1 38	2 50	38	51	17	37	76
22	153	25.0	20.4	187	22.7 ¹²⁹	-4 51.4 ¹²³		56	1 06	34	26	50	16	39	78
23	168	24.9	20.9	201	54.6 ¹²⁹	-5 03.7 ¹²³		58	** **	2 14	3 14	50	13	40	82
24	183	24.7	-20 21.5	216	26.5 ¹²⁹	-5 16.0 ¹²³		60 S	** **	1 49	2 59	2 50	10	15 42	85

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 19 ^h 51 ^m 6		Mag: -4.1 PMG: 14 ^h 43 ^m		Mag: +1.7 PMG: 8 ^h 37 ^m		Mag: -2.9 PMG: 0 ^h 16 ^m		Mag: -0.3 PMG: 23 ^h 33 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	61	17.1	139	29.8	-25	16.3	230	40.3	-3	08.6	355	58.1	+20	33.6	5	43.5	+17	18.0
1	76	19.5	154	29.0		16.1	245	41.3		09.2	11	00.9		33.6	20	46.2		18.0
2	91	22.0	169	28.1		15.9	260	42.4		09.8	26	03.7		33.5	35	48.8		18.0
3	106	24.5	184	27.3		15.7	275	43.4		10.4	41	06.6		33.5	50	51.5		17.9
4	121	26.9	199	26.5		15.5	290	44.5		11.0	56	09.4		33.4	65	54.2		17.9
5	136	29.4	214	25.7	-25	15.3	305	45.6	-3	11.6	71	12.2	+20	33.4	80	56.9	+17	17.8
6	151	31.8	229	24.9	-25	15.1	320	46.6	-3	12.2	86	15.0	+20	33.3	95	59.5	+17	17.8
7	166	34.3	244	24.0		14.9	335	47.7		12.8	101	17.8		33.3	111	02.2		17.7
8	181	36.8	259	23.2		14.7	350	48.7		13.4	116	20.7		33.2	126	04.9		17.7
9	196	39.2	274	22.4		14.4	5	49.8		14.0	131	23.5		33.1	141	07.5		17.7
10	211	41.7	289	21.6		14.2	20	50.9		14.6	146	26.3		33.1	156	10.2		17.6
11	226	44.2	304	20.8	-25	14.0	35	51.9	-3	15.2	161	29.1	+20	33.0	171	12.9	+17	17.6
12	241	46.6	319	19.9	-25	13.8	50	53.0	-3	15.8	176	31.9	+20	33.0	186	15.6	+17	17.5
13	256	49.1	334	19.1		13.6	65	54.0		16.4	191	34.8		32.9	201	18.2		17.5
14	271	51.6	349	18.3		13.4	80	55.1		17.0	206	37.6		32.9	216	20.9		17.4
15	286	54.0	4	17.5		13.2	95	56.2		17.6	221	40.4		32.8	231	23.6		17.4
16	301	56.5	19	16.7		12.9	110	57.2		18.1	236	43.2		32.8	246	26.2		17.4
17	316	58.9	34	15.8	-25	12.7	125	58.3	-3	18.7	251	46.0	+20	32.7	261	28.9	+17	17.3
18	332	01.4	49	15.0	-25	12.5	140	59.3	-3	19.3	266	48.9	+20	32.7	276	31.6	+17	17.3
19	347	03.9	64	14.2		12.3	156	00.4		19.9	281	51.7		32.6	291	34.3		17.2
20	2	06.3	79	13.4		12.1	171	01.5		20.5	296	54.5		32.6	306	36.9		17.2
21	17	08.8	94	12.6		11.8	186	02.5		21.1	311	57.3		32.5	321	39.6		17.1
22	32	11.3	109	11.8		11.6	201	03.6		21.7	327	00.1		32.5	336	42.3		17.1
23	47	13.7	124	11.0		11.4	216	04.6		22.3	342	03.0		32.4	351	45.0		17.1
24	62	16.2	139	10.1	-25	11.2	231	05.7	-3	22.9	357	05.8	+20	32.4	6	47.6	+17	17.0
Dif	—		-8		+2		+11		-6		+28		-1		+27			

UT	SOL				● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16:2 PMG: 11 ^h 46 ^m 5				Edad: 26 ^d 7 PHE { SD: 15:5 PMG: 9 ^h 53 ^m 4 ^h : 56:8 12 ^h : 56:7 20 ^h : 56:5 R°: 47 ^m													
	hG ☉		Dec		hG ☾		Dif				Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m		
0	183	24.7	-20	21.5	216	26.5	-5	16.0	60 N	15 14	16 06	17 00	4 27 83	15 03 12				
1	198	24.5		22.0	230	58.4 ¹²⁹		28.2 ¹²²	58	28	15	05	23 81	08 15				
2	213	24.3		22.5	245	30.2 ¹²⁸		40.4 ¹²²	56	40	23	10	20 78	12 17				
3	228	24.2		23.0	260	02.1 ¹²⁹	-5	52.6 ¹²²	54	50	31	15	17 76	16 19				
4	243	24.0		23.5	274	34.0 ¹²⁹	-6	04.7 ¹²¹	52	15 59	37	19	15 73	19 22				
5	258	23.8	-20	24.0	289	05.9 ¹²⁹	-6	16.8 ¹²¹	50	16 07	16 43	17 24	4 12 72	15 22 24				
6	273	23.6	-20	24.6	303	37.7 ¹²⁸	-6	28.8 ¹²⁰	45	16 24	16 57	17 33	4 07 68	15 29 27				
7	288	23.5		25.1	318	09.6 ¹²⁹		40.9 ¹²¹	40	38	17 08	41	4 03 64	34 31				
8	303	23.3		25.6	332	41.4 ¹²⁸	-6	52.8 ¹¹⁹	35	16 50	18	49	3 59 61	39 34				
9	318	23.1		26.1	347	13.3 ¹²⁹	-7	04.8 ¹²⁰	30	17 01	27	17 56	56 59	44 35				
10	333	22.9		26.6	1	45.1 ¹²⁸		16.7 ¹¹⁹	20	19	43	18 10	51 54	51 40				
11	348	22.7	-20	27.1	16	17.0 ¹²⁹	-7	28.5 ¹¹⁸	10 N	17 35	17 57	18 23	3 46 50	15 58 43				
12	3	22.6	-20	27.6	30	48.8 ¹²⁸	-7	40.3 ¹¹⁸	0	17 50	18 12	18 38	3 42 46	16 04 47				
13	18	22.4		28.2	45	20.6 ¹²⁸	-7	52.1 ¹¹⁸	10 S	18 05	28	18 54	37 43	10 50				
14	33	22.2		28.7	59	52.4 ¹²⁸	-8	03.8 ¹¹⁷	20	22	18 46	19 14	33 39	17 54				
15	48	22.0		29.2	74	24.2 ¹²⁸		15.5 ¹¹⁷	30	41	19 07	39	27 35	24 59				
16	63	21.9		29.7	88	56.0 ¹²⁸		27.1 ¹¹⁶	35	18 52	20	19 55	24 33	29 60				
17	78	21.7	-20	30.2	103	27.8 ¹²⁸	-8	38.7 ¹¹⁶	40	19 05	19 36	20 15	3 21 30	16 34 63				
18	93	21.5	-20	30.7	117	59.6 ¹²⁸	-8	50.2 ¹¹⁵	45	19 20	19 55	20 41	3 17 27	16 40 66				
19	108	21.3		31.2	132	31.3 ¹²⁷	-9	01.7 ¹¹⁵	50	39	20 20	21 16	13 22	47 70				
20	123	21.1		31.7	147	03.1 ¹²⁸		13.2 ¹¹⁵	52	48	32	21 35	11 20	50 73				
21	138	21.0		32.2	161	34.8 ¹²⁷		24.5 ¹¹³	54	19 58	20 46	22 00	08 19	53 75				
22	153	20.8		32.7	176	06.5 ¹²⁷		35.9 ¹¹⁴	56	20 09	21 03	22 36	06 16	16 57 78				
23	168	20.6		33.2	190	38.2 ¹²⁷		47.2 ¹¹³	58	22	23	** **	03 14	17 02 80				
24	183	20.4	-20	33.7	205	09.9 ¹²⁷	-9	58.4 ¹¹²	60 S	20 38	21 50	** **	3 00 11	17 07 83				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 19 ^h 47 ^m 7		Mag: -4.1 PMG: 14 ^h 44 ^m				Mag: +1.7 PMG: 8 ^h 35 ^m				Mag: -2.9 PMG: 0 ^h 12 ^m				Mag: -0.3 PMG: 23 ^h 29 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	62	16.2	139	10.1	-25	11.2	231	05.7	-3	22.9	357	05.8	+20	32.4	6	47.6	+17	17.0
1	77	18.7	154	09.3		10.9	246	06.8		23.5	12	08.6		32.3	21	50.3		17.0
2	92	21.1	169	08.5		10.7	261	07.8		24.1	27	11.4		32.3	36	53.0		16.9
3	107	23.6	184	07.7		10.5	276	08.9		24.7	42	14.2		32.2	51	55.6		16.9
4	122	26.1	199	06.9		10.2	291	09.9		25.3	57	17.1		32.2	66	58.3		16.8
5	137	28.5	214	06.1	-25	10.0	306	11.0	-3	25.9	72	19.9	+20	32.1	82	01.0	+17	16.8
6	152	31.0	229	05.3	-25	09.8	321	12.0	-3	26.5	87	22.7	+20	32.1	97	03.7	+17	16.8
7	167	33.4	244	04.4		09.5	336	13.1		27.1	102	25.5		32.0	112	06.3		16.7
8	182	35.9	259	03.6		09.3	351	14.2		27.7	117	28.4		31.9	127	09.0		16.7
9	197	38.4	274	02.8		09.1	6	15.2		28.3	132	31.2		31.9	142	11.7		16.6
10	212	40.8	289	02.0		08.8	21	16.3		28.8	147	34.0		31.8	157	14.4		16.6
11	227	43.3	304	01.2	-25	08.6	36	17.3	-3	29.4	162	36.8	+20	31.8	172	17.0	+17	16.6
12	242	45.8	319	00.4	-25	08.3	51	18.4	-3	30.0	177	39.6	+20	31.7	187	19.7	+17	16.5
13	257	48.2	333	59.6		08.1	66	19.5		30.6	192	42.5		31.7	202	22.4		16.5
14	272	50.7	348	58.8		07.8	81	20.5		31.2	207	45.3		31.6	217	25.0		16.4
15	287	53.2	3	58.0		07.6	96	21.6		31.8	222	48.1		31.6	232	27.7		16.4
16	302	55.6	18	57.1		07.3	111	22.6		32.4	237	50.9		31.5	247	30.4		16.3
17	317	58.1	33	56.3	-25	07.1	126	23.7	-3	33.0	252	53.7	+20	31.5	262	33.1	+17	16.3
18	333	00.6	48	55.5	-25	06.8	141	24.8	-3	33.6	267	56.6	+20	31.4	277	35.7	+17	16.3
19	348	03.0	63	54.7		06.6	156	25.8		34.2	282	59.4		31.4	292	38.4		16.2
20	3	05.5	78	53.9		06.3	171	26.9		34.8	298	02.2		31.3	307	41.1		16.2
21	18	07.9	93	53.1		06.1	186	27.9		35.4	313	05.0		31.3	322	43.7		16.1
22	33	10.4	108	52.3		05.8	201	29.0		36.0	328	07.9		31.2	337	46.4		16.1
23	48	12.9	123	51.5		05.6	216	30.1		36.6	343	10.7		31.2	352	49.1		16.0
24	63	15.3	138	50.7	-25	05.3	231	31.1	-3	37.2	358	13.5	+20	31.1	7	51.8	+17	16.0
Dif	—		-8		+2		+11		-6		+28		-1		+27		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 8			Edad: 27 ^d 7 PHE { 4 ^h : 56'3 12 ^h : 56'2 20 ^h : 56'0 R°: 47 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	183	20.4	-20 33.7	205	09.9	-9 58.4	60 N	6 35	7 28	8 20	5 50	83	15 15	15	
1	198	20.2	34.2	219	41.6 ¹²⁷	-10 09.6 ¹¹²	58	29	19	8 07	44	79	23	18	
2	213	20.0	34.8	234	13.2 ¹²⁶	20.7 ¹¹¹	56	24	11	7 55	38	77	29	21	
3	228	19.9	35.3	248	44.9 ¹²⁷	31.8 ¹¹¹	54	19	7 03	45	33	74	35	23	
4	243	19.7	35.8	263	16.5 ¹²⁶	42.8 ¹¹⁰	52	14	6 57	35	28	72	41	25	
5	258	19.5	-20 36.3	277	48.1 ¹²⁶	-10 53.7 ¹⁰⁹	50	6 10	6 50	7 27	5 24	70	15 46	26	
6	273	19.3	-20 36.8	292	19.7 ¹²⁶	-11 04.6 ¹⁰⁹	45	6 01	6 37	7 10	5 15	66	15 56	31	
7	288	19.1	37.3	306	51.3 ¹²⁶	15.4 ¹⁰⁸	40	5 53	26	6 55	07	63	16 05	33	
8	303	18.9	37.8	321	22.8 ¹²⁵	26.2 ¹⁰⁸	35	45	16	43	5 00	61	13	35	
9	318	18.7	38.3	335	54.3 ¹²⁵	36.9 ¹⁰⁷	30	38	6 07	33	4 55	58	19	38	
10	333	18.6	38.8	350	25.9 ¹²⁶	47.6 ¹⁰⁷	20	24	5 51	6 14	45	54	31	42	
11	348	18.4	-20 39.3	4	57.4 ¹²⁵	-11 58.2 ¹⁰⁶	10 N	5 10	5 36	5 58	4 36	51	16 41	45	
12	3	18.2	-20 39.7	19	28.8 ¹²⁴	-12 08.7 ¹⁰⁵	0	4 55	5 21	5 43	4 28	48	16 51	48	
13	18	18.0	40.2	34	00.3 ¹²⁵	19.2 ¹⁰⁵	10 S	39	5 05	28	20	44	17 00	51	
14	33	17.8	40.7	48	31.7 ¹²⁴	29.6 ¹⁰⁴	20	4 19	4 47	5 11	12	41	11	54	
15	48	17.6	41.2	63	03.2 ¹²⁵	39.9 ¹⁰³	30	3 54	26	4 52	4 02	37	23	57	
16	63	17.4	41.7	77	34.5 ¹²³	-12 50.1 ¹⁰²	35	38	4 13	41	3 57	34	29	60	
17	78	17.3	-20 42.2	92	05.9 ¹²⁴	-13 00.3 ¹⁰²	40	3 18	3 57	4 28	3 51	32	17 37	63	
18	93	17.1	-20 42.7	106	37.3 ¹²⁴	-13 10.5 ¹⁰²	45	2 52	3 38	4 13	3 44	28	17 46	66	
19	108	16.9	43.2	121	08.6 ¹²³	20.5 ¹⁰⁰	50	2 17	13	3 54	35	25	17 57	70	
20	123	16.7	43.7	135	39.9 ¹²³	30.5 ¹⁰⁰	52	1 58	3 01	45	31	23	18 03	71	
21	138	16.5	44.2	150	11.2 ¹²³	40.4 ⁹⁹	54	1 33	2 47	35	27	21	08	73	
22	153	16.3	44.7	164	42.5 ¹²³	-13 50.3 ⁹⁹	56	0 57	30	24	22	19	15	75	
23	168	16.1	45.2	179	13.7 ¹²²	-14 00.1 ⁹⁸	58	** **	2 10	3 10	17	16	22	78	
24	183	15.9	-20 45.7	193	44.9 ¹²²	-14 09.8 ⁹⁷	60 S	** **	1 43	2 55	3 11	13	18 30	81	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 19 ^h 43 ^m 7		Mag: -4.1 PMG: 14 ^h 45 ^m		Mag: +1.6 PMG: 8 ^h 33 ^m		Mag: -2.9 PMG: 0 ^h 07 ^m		Mag: -0.3 PMG: 23 ^h 24 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	63	15.3	138	50.7	-25	05.3	231	31.1	-3	37.2	358	13.5	+20	31.1	7	51.8	+17	16.0
1	78	17.8	153	49.9		05.1	246	32.2		37.8	13	16.3		31.1	22	54.4		16.0
2	93	20.3	168	49.1		04.8	261	33.2		38.3	28	19.1		31.0	37	57.1		15.9
3	108	22.7	183	48.3		04.5	276	34.3		38.9	43	22.0		31.0	52	59.8		15.9
4	123	25.2	198	47.5		04.3	291	35.4		39.5	58	24.8		30.9	68	02.4		15.8
5	138	27.7	213	46.7	-25	04.0	306	36.4	-3	40.1	73	27.6	+20	30.8	83	05.1	+17	15.8
6	153	30.1	228	45.8	-25	03.7	321	37.5	-3	40.7	88	30.4	+20	30.8	98	07.8	+17	15.7
7	168	32.6	243	45.0		03.5	336	38.5		41.3	103	33.3		30.7	113	10.5		15.7
8	183	35.0	258	44.2		03.2	351	39.6		41.9	118	36.1		30.7	128	13.1		15.7
9	198	37.5	273	43.4		02.9	6	40.7		42.5	133	38.9		30.6	143	15.8		15.6
10	213	40.0	288	42.6		02.7	21	41.7		43.1	148	41.7		30.6	158	18.5		15.6
11	228	42.4	303	41.8	-25	02.4	36	42.8	-3	43.7	163	44.5	+20	30.5	173	21.1	+17	15.5
12	243	44.9	318	41.0	-25	02.1	51	43.8	-3	44.3	178	47.4	+20	30.5	188	23.8	+17	15.5
13	258	47.4	333	40.2		01.9	66	44.9		44.9	193	50.2		30.4	203	26.5		15.4
14	273	49.8	348	39.4		01.6	81	46.0		45.5	208	53.0		30.4	218	29.2		15.4
15	288	52.3	3	38.6		01.3	96	47.0		46.0	223	55.8		30.3	233	31.8		15.4
16	303	54.8	18	37.8		01.0	111	48.1		46.6	238	58.7		30.3	248	34.5		15.3
17	318	57.2	33	37.0	-25	00.7	126	49.1	-3	47.2	254	01.5	+20	30.2	263	37.2	+17	15.3
18	333	59.7	48	36.2	-25	00.5	141	50.2	-3	47.8	269	04.3	+20	30.2	278	39.8	+17	15.2
19	349	02.2	63	35.4	-25	00.2	156	51.3		48.4	284	07.1		30.1	293	42.5		15.2
20	4	04.6	78	34.6	-24	59.9	171	52.3		49.0	299	10.0		30.1	308	45.2		15.2
21	19	07.1	93	33.8		59.6	186	53.4		49.6	314	12.8		30.0	323	47.9		15.1
22	34	09.5	108	33.0		59.3	201	54.4		50.2	329	15.6		30.0	338	50.5		15.1
23	49	12.0	123	32.2		59.1	216	55.5		50.8	344	18.4		29.9	353	53.2		15.0
24	64	14.5	138	31.4	-24	58.8	231	56.6	-3	51.4	359	21.2	+20	29.8	8	55.9	+17	15.0
Dif	—		-8	+3		+11	-6			+28	-1			+27				

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna	Puesta de Luna		
	SD: 16'2			Edad: 28 ^d 7 PHE { 4 ^h : 55'9 12 ^h : 55'7 20 ^h : 55'6 R°: 49 ^m										
	PMG: 11 ^h 47 ^m 1			SD: 15'2					PMG: 11 ^h 27 ^m					
hG ☉		Dec	hG ☾ Dif		Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m	
0	183	15.9	-20	45.7	193	44.9	-14 09.8	60 N	15 11	16 03	16 57	7 13 80	15 30 20	
1	198	15.7		46.1	208	16.1 ¹²²	19.4 ⁹⁶	58	25	13	17 03	7 03 77	41 23	
2	213	15.5		46.6	222	47.3 ¹²²	29.0 ⁹⁶	56	37	21	08	6 55 73	50 26	
3	228	15.4		47.1	237	18.4 ¹²¹	38.4 ⁹⁴	54	47	29	13	47 72	15 58 28	
4	243	15.2		47.6	251	49.6 ¹²²	47.8 ⁹⁴	52	15 57	36	18	40 70	16 06 29	
5	258	15.0	-20	48.1	266	20.7 ¹²¹	-14 57.2 ⁹⁴	50	16 05	16 42	17 22	6 34 68	16 12 31	
6	273	14.8	-20	48.6	280	51.7 ¹²⁰	-15 06.4 ⁹²	45	16 23	16 55	17 32	6 21 64	16 27 34	
7	288	14.6		49.1	295	22.8 ¹²¹	15.6 ⁹²	40	37	17 07	40	10 62	38 37	
8	303	14.4		49.5	309	53.8 ¹²⁰	24.7 ⁹¹	35	16 50	17	48	6 01 59	48 39	
9	318	14.2		50.0	324	24.8 ¹²⁰	33.7 ⁹⁰	30	17 00	26	17 56	5 53 57	16 57 41	
10	333	14.0		50.5	338	55.8 ¹²⁰	42.6 ⁸⁹	20	19	43	18 10	39 54	17 13 43	
11	348	13.8	-20	51.0	353	26.7 ¹¹⁹	-15 51.5 ⁸⁹	10 N	17 35	17 58	18 24	5 27 51	17 26 47	
12	3	13.6	-20	51.5	7	57.7 ¹²⁰	-16 00.3 ⁸⁸	0	17 51	18 13	18 39	5 16 48	17 39 49	
13	18	13.4		51.9	22	28.6 ¹¹⁹	08.9 ⁸⁶	10 S	18 06	29	18 55	5 04 46	17 51 52	
14	33	13.2		52.4	36	59.5 ¹¹⁹	17.5 ⁸⁶	20	23	18 47	19 16	4 53 42	18 05 54	
15	48	13.0		52.9	51	30.3 ¹¹⁸	26.1 ⁸⁶	30	42	19 09	41	39 39	20 57	
16	63	12.8		53.4	66	01.2 ¹¹⁹	34.5 ⁸⁴	35	18 54	23	19 58	31 38	29 59	
17	78	12.6	-20	53.9	80	32.0 ¹¹⁸	-16 42.9 ⁸⁴	40	19 07	19 39	20 18	4 23 35	18 40 60	
18	93	12.4	-20	54.3	95	02.7 ¹¹⁷	-16 51.1 ⁸²	45	19 23	19 58	20 44	4 12 33	18 52 63	
19	108	12.3		54.8	109	33.5 ¹¹⁸	-16 59.3 ⁸²	50	42	20 23	21 21	4 00 29	19 07 66	
20	123	12.1		55.3	124	04.2 ¹¹⁷	-17 07.4 ⁸¹	52	19 51	36	21 41	3 54 27	14 68	
21	138	11.9		55.8	138	34.9 ¹¹⁷	15.4 ⁸⁰	54	20 01	20 50	22 07	48 25	21 70	
22	153	11.7		56.2	153	05.6 ¹¹⁷	23.3 ⁷⁹	56	13	21 08	22 47	41 23	30 72	
23	168	11.5		56.7	167	36.3 ¹¹⁷	31.2 ⁷⁹	58	27	29	** **	33 21	40 74	
24	183	11.3	-20	57.2	182	06.9 ¹¹⁶	-17 38.9 ⁷⁷	60 S	20 43	21 57	** **	3 24 18	19 51 78	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 19 ^h 39 ^m 8		Mag: -4.1 PMG: 14 ^h 47 ^m			Mag: +1.6 PMG: 8 ^h 32 ^m			Mag: -2.9 PMG: 0 ^h 03 ^m			Mag: -0.3 PMG: 23 ^h 20 ^m		
	hG ♈		hG ♀ Dec			hG ♂ Dec			hG ♃ Dec			hG ♄ Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	64	14.5	138	31.4	-24	58.8	231	56.6	-3	51.4	359	21.2	+20	29.8
1	79	16.9	153	30.6		58.5	246	57.6		52.0	14	24.1		29.8
2	94	19.4	168	29.8		58.2	261	58.7		52.6	29	26.9		29.7
3	109	21.9	183	29.0		57.9	276	59.7		53.2	44	29.7		29.7
4	124	24.3	198	28.2		57.6	292	00.8		53.7	59	32.5		29.6
5	139	26.8	213	27.5	-24	57.3	307	01.9	-3	54.3	74	35.4	+20	29.6
6	154	29.3	228	26.7	-24	57.0	322	02.9	-3	54.9	89	38.2	+20	29.5
7	169	31.7	243	25.9		56.7	337	04.0		55.5	104	41.0		29.5
8	184	34.2	258	25.1		56.4	352	05.0		56.1	119	43.8		29.4
9	199	36.7	273	24.3		56.1	7	06.1		56.7	134	46.7		29.4
10	214	39.1	288	23.5		55.8	22	07.2		57.3	149	49.5		29.3
11	229	41.6	303	22.7	-24	55.5	37	08.2	-3	57.9	164	52.3	+20	29.3
12	244	44.0	318	21.9	-24	55.2	52	09.3	-3	58.5	179	55.1	+20	29.2
13	259	46.5	333	21.1		54.9	67	10.3		59.1	194	58.0		29.2
14	274	49.0	348	20.3		54.6	82	11.4	-3	59.7	210	00.8		29.1
15	289	51.4	3	19.5		54.3	97	12.5	-4	00.2	225	03.6		29.1
16	304	53.9	18	18.7		54.0	112	13.5		00.8	240	06.4		29.0
17	319	56.4	33	17.9	-24	53.7	127	14.6	-4	01.4	255	09.2	+20	28.9
18	334	58.8	48	17.1	-24	53.4	142	15.6	-4	02.0	270	12.1	+20	28.9
19	350	01.3	63	16.4		53.1	157	16.7		02.6	285	14.9		28.8
20	5	03.8	78	15.6		52.8	172	17.8		03.2	300	17.7		28.8
21	20	06.2	93	14.8		52.4	187	18.8		03.8	315	20.5		28.7
22	35	08.7	108	14.0		52.1	202	19.9		04.4	330	23.4		28.7
23	50	11.1	123	13.2		51.8	217	20.9		05.0	345	26.2		28.6
24	65	13.6	138	12.4	-24	51.5	232	22.0	-4	05.6	0	29.0	+20	28.6
Dif	—		-8 +3			+11 -6			-8972 -1			+27 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 4				Edad: 0 ^d 0 PHE { 4 ^h : 55:4 12 ^h : 55:3 20 ^h : 55:1 R°: 49 ^m													
	hG ☉		Dec		hG ☾ Dif		Dec Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	183	11.3	-20	57.2	182	06.9	-17	38.9	76	6 38	7 32	8 25	8 33	74	15	50	28	
1	198	11.1		57.6	196	37.5		46.5	76	32	22	8 11	20	71	16	04	31	
2	213	10.9		58.1	211	08.1		54.1	75	27	14	7 59	8 08	69		16	32	
3	228	10.7		58.6	225	38.7		01.6	76	22	7 06	48	7 59	67		26	34	
4	243	10.5		59.1	240	09.3		08.9	73	17	6 59	39	50	65		35	36	
5	258	10.3	-20	59.5	254	39.8		16.2	73	6 13	6 53	7 30	7 42	64	16	43	37	
6	273	10.1	-21	00.0	269	10.3		23.4	72	6 03	6 39	7 12	7 25	62	17	01	39	
7	288	09.9	-21	00.5	283	40.8		30.5	71	5 55	28	6 58	12	59		15	42	
8	303	09.7		00.9	298	11.2		37.5	70	47	18	45	7 00	58		27	43	
9	318	09.5		01.4	312	41.6		44.4	69	39	6 09	34	6 50	56		38	44	
10	333	09.3		01.9	327	12.0		51.2	68	25	5 52	6 16	33	53	17	56	47	
11	348	09.1	-21	02.3	341	42.4		58.0	68	5 11	5 37	5 59	6 18	51	18	13	47	
12	3	08.9	-21	02.8	356	12.8		04.6	66	4 56	5 22	5 44	6 04	49	18	28	49	
13	18	08.7		03.3	10	43.2		11.1	65	39	5 06	28	5 50	47		43	51	
14	33	08.5		03.7	25	13.5		17.5	64	4 19	4 47	5 11	35	45	18	59	53	
15	48	08.3		04.2	39	43.8		23.9	64	3 53	25	4 52	18	43	19	17	55	
16	63	08.1		04.6	54	14.1		30.1	62	36	4 12	40	5 09	41		28	56	
17	78	07.9	-21	05.1	68	44.3		36.2	61	3 16	3 56	4 27	4 58	39	19	40	58	
18	93	07.6	-21	05.6	83	14.6		42.3	61	2 50	3 36	4 12	4 45	36	19	55	59	
19	108	07.4		06.0	97	44.8		48.2	59	2 14	3 11	3 52	29	34	20	13	61	
20	123	07.2		06.5	112	15.0		54.0	58	1 53	2 58	43	21	33		22	62	
21	138	07.0		06.9	126	45.2		59.8	58	1 27	44	33	13	31		31	64	
22	153	06.8		07.4	141	15.4		05.4	56	0 47	26	21	4 04	29		42	65	
23	168	06.6		07.9	155	45.6		10.9	55	** **	2 05	3 07	3 54	26	20	54	67	
24	183	06.4	-21	08.3	170	15.7		16.3	54	** **	1 37	2 51	3 42	23	21	09	69	

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 19 ^h 35 ^m 9		Mag: -4.1 PMG: 14 ^h 48 ^m				Mag: +1.6 PMG: 8 ^h 30 ^m				Mag: -2.9 PMG: 23 ^h 54 ^m				Mag: -0.3 PMG: 23 ^h 16 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	65	13.6	138	12.4	-24	51.5	232	22.0	-4	05.6	15	29.0	+20	28.6	10	00.0	+17	14.0
1	80	16.1	153	11.6		51.2	247	23.1		06.1	30	31.8		28.5	25	02.6		13.9
2	95	18.5	168	10.8		50.9	262	24.1		06.7	45	34.7		28.5	40	05.3		13.9
3	110	21.0	183	10.1		50.5	277	25.2		07.3	60	37.5		28.4	55	08.0		13.9
4	125	23.5	198	09.3		50.2	292	26.2		07.9	75	40.3		28.4	70	10.7		13.8
5	140	25.9	213	08.5	-24	49.9	307	27.3	-4	08.5	90	43.1	+20	28.3	85	13.3	+17	13.8
6	155	28.4	228	07.7	-24	49.6	322	28.4	-4	09.1	105	46.0	+20	28.3	100	16.0	+17	13.7
7	170	30.9	243	06.9		49.2	337	29.4		09.7	120	48.8		28.2	115	18.7		13.7
8	185	33.3	258	06.1		48.9	352	30.5		10.3	135	51.6		28.1	130	21.3		13.6
9	200	35.8	273	05.3		48.6	7	31.5		10.9	150	54.4		28.1	145	24.0		13.6
10	215	38.3	288	04.6		48.3	22	32.6		11.5	165	57.3		28.0	160	26.7		13.6
11	230	40.7	303	03.8	-24	47.9	37	33.7	-4	12.0	180	00.1	+20	28.0	175	29.3	+17	13.5
12	245	43.2	318	03.0	-24	47.6	52	34.7	-4	12.6	195	02.9	+20	27.9	190	32.0	+17	13.5
13	260	45.6	333	02.2		47.3	67	35.8		13.2	210	05.7		27.9	205	34.7		13.4
14	275	48.1	348	01.4		46.9	82	36.8		13.8	225	08.5		27.8	220	37.4		13.4
15	290	50.6	3	00.6		46.6	97	37.9		14.4	240	11.4		27.8	235	40.0		13.4
16	305	53.0	17	59.9		46.3	112	39.0		15.0	255	14.2		27.7	250	42.7		13.3
17	320	55.5	32	59.1	-24	45.9	127	40.0	-4	15.6	270	17.0	+20	27.7	265	45.4	+17	13.3
18	335	58.0	47	58.3	-24	45.6	142	41.1	-4	16.2	285	19.8	+20	27.6	280	48.0	+17	13.2
19	351	00.4	62	57.5		45.3	157	42.1		16.8	300	22.7		27.6	295	50.7		13.2
20	6	02.9	77	56.7		44.9	172	43.2		17.3	315	25.5		27.5	310	53.4		13.1
21	21	05.4	92	56.0		44.6	187	44.3		17.9	330	28.3		27.5	325	56.0		13.1
22	36	07.8	107	55.2		44.2	202	45.3		18.5	345	31.1		27.4	340	58.7		13.1
23	51	10.3	122	54.4		43.9	217	46.4		19.1	360	34.0		27.4	356	01.4		13.0
24	66	12.8	137	53.6	-24	43.5	232	47.4	-4	19.7	1	36.8	+20	27.3	11	04.1	+17	13.0
Dif	—		-8		+3		+11		-6		+28		-1		+27			

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'2			Edad: 1 ^d 0	PHE {	4 ^h : 55'0 12 ^h : 54'9 20 ^h : 54'7 R°: 50 ^m								
	PMG: 11 ^h 47 ^m 7													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	183	06.4	-21 08.3	170	15.7	-20 16.3		60 N	15 08	16 01	16 55	9 47 64	16 18 39	
1	198	06.2	08.8	184	45.8 ¹¹¹	21.7	54	58	22	11	17 01	31 62	35 40	
2	213	06.0	09.2	199	15.9 ¹¹¹	26.9	52	56	35	19	07	17 61	16 48 42	
3	228	05.8	09.7	213	46.0 ¹¹¹	32.0	51	54	45	27	12	9 06 60	17 00 43	
4	243	05.6	10.1	228	16.1 ¹¹¹	37.0	50	52	15 55	34	17	8 55 59	11 43	
5	258	05.4	-21 10.6	242	46.2 ¹¹¹	-20 42.0	50	50	16 04	16 41	17 21	8 46 58	17 20 44	
6	273	05.2	-21 11.0	257	16.2 ¹¹⁰	-20 46.8	48	45	16 22	16 54	17 31	8 27 56	17 40 45	
7	288	05.0	11.5	271	46.3 ¹¹¹	51.5	47	40	36	17 06	40	8 11 55	17 57 46	
8	303	04.8	11.9	286	16.3 ¹¹⁰	-20 56.1	46	35	16 49	17	48	7 58 54	18 10 47	
9	318	04.6	12.4	300	46.3 ¹¹⁰	-21 00.6	45	30	17 00	26	17 55	46 54	22 48	
10	333	04.3	12.8	315	16.3 ¹¹⁰	05.0	44	20	19	43	18 10	26 52	18 43 48	
11	348	04.1	-21 13.3	329	46.3 ¹¹⁰	-21 09.3	43	10 N	17 36	17 58	18 24	7 09 51	19 00 50	
12	3	03.9	-21 13.7	344	16.3 ¹¹⁰	-21 13.4	41	0	17 51	18 14	18 39	6 53 50	19 17 50	
13	18	03.7	14.2	358	46.3 ¹¹⁰	17.5	41	10 S	18 07	30	18 57	37 49	34 50	
14	33	03.5	14.6	13	16.2 ¹⁰⁹	21.5	40	20	24	18 48	19 17	20 48	19 52 51	
15	48	03.3	15.1	27	46.2 ¹¹⁰	25.4	39	30	44	19 11	19 43	6 01 46	20 12 52	
16	63	03.1	15.5	42	16.1 ¹⁰⁹	29.1	37	35	18 56	25	20 00	5 50 44	24 53	
17	78	02.9	-21 16.0	56	46.1 ¹¹⁰	-21 32.8	37	40	19 09	19 41	20 21	5 37 43	20 38 53	
18	93	02.7	-21 16.4	71	16.0 ¹⁰⁹	-21 36.3	35	45	19 25	20 01	20 47	5 21 43	20 54 54	
19	108	02.5	16.8	85	45.9 ¹⁰⁹	39.7	34	50	45	27	21 25	5 03 40	21 14 55	
20	123	02.2	17.3	100	15.8 ¹⁰⁹	43.1	34	52	19 54	40	21 46	4 54 39	24 55	
21	138	02.0	17.7	114	45.8 ¹¹⁰	46.3	32	54	20 05	20 55	22 14	44 38	35 56	
22	153	01.8	18.2	129	15.7 ¹⁰⁹	49.4	31	56	17	21 12	22 59	33 37	21 47 56	
23	168	01.6	18.6	143	45.6 ¹⁰⁹	52.4	30	58	31	21 35	** **	20 35	22 01 57	
24	183	01.4	-21 19.0	158	15.5 ¹⁰⁹	-21 55.3	29	60 S	20 48	22 04	** **	4 05 33	22 18 58	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 19 ^h 31 ^m 9		Mag: -4.1 PMG: 14 ^h 49 ^m			Mag: +1.6 PMG: 8 ^h 28 ^m			Mag: -2.9 PMG: 23 ^h 49 ^m			Mag: -0.3 PMG: 23 ^h 12 ^m		
	hG ♈	hG ♀		Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°
0	66	12.8	137	53.6	-24 43.5	232	47.4	-4 19.7	1	36.8	+20 27.3	11	04.1	+17 13.0
1	81	15.2	152	52.9	43.2	247	48.5	20.3	16	39.6	27.2	26	06.7	12.9
2	96	17.7	167	52.1	42.8	262	49.6	20.9	31	42.4	27.2	41	09.4	12.9
3	111	20.1	182	51.3	42.5	277	50.6	21.5	46	45.3	27.1	56	12.1	12.9
4	126	22.6	197	50.5	42.1	292	51.7	22.0	61	48.1	27.1	71	14.7	12.8
5	141	25.1	212	49.8	-24 41.8	307	52.7	-4 22.6	76	50.9	+20 27.0	86	17.4	+17 12.8
6	156	27.5	227	49.0	-24 41.4	322	53.8	-4 23.2	91	53.7	+20 27.0	101	20.1	+17 12.7
7	171	30.0	242	48.2	41.1	337	54.9	23.8	106	56.6	26.9	116	22.7	12.7
8	186	32.5	257	47.4	40.7	352	55.9	24.4	121	59.4	26.9	131	25.4	12.6
9	201	34.9	272	46.7	40.4	7 57.0	25.0	25.0	137	02.2	26.8	146	28.1	12.6
10	216	37.4	287	45.9	40.0	22 58.0	25.6	25.6	152	05.0	26.8	161	30.8	12.6
11	231	39.9	302	45.1	-24 39.6	37 59.1	-4 26.2	26.2	167	07.9	+20 26.7	176	33.4	+17 12.5
12	246	42.3	317	44.3	-24 39.3	53 00.2	-4 26.7	26.7	182	10.7	+20 26.7	191	36.1	+17 12.5
13	261	44.8	332	43.6	38.9	68 01.2	27.3	27.3	197	13.5	26.6	206	38.8	12.4
14	276	47.3	347	42.8	38.6	83 02.3	27.9	27.9	212	16.3	26.6	221	41.4	12.4
15	291	49.7	2 42.0	38.2	38.2	98 03.4	28.5	28.5	227	19.1	26.5	236	44.1	12.4
16	306	52.2	17 41.3	37.8	37.8	113 04.4	29.1	29.1	242	22.0	26.4	251	46.8	12.3
17	321	54.6	32 40.5	-24 37.5	37.5	128 05.5	-4 29.7	29.7	257	24.8	+20 26.4	266	49.4	+17 12.3
18	336	57.1	47 39.7	-24 37.1	37.1	143 06.5	-4 30.3	30.3	272	27.6	+20 26.3	281	52.1	+17 12.2
19	351	59.6	62 38.9	36.7	36.7	158 07.6	30.9	30.9	287	30.4	26.3	296	54.8	12.2
20	7	02.0	77 38.2	36.4	36.4	173 08.7	31.4	31.4	302	33.3	26.2	311	57.4	12.2
21	22	04.5	92 37.4	36.0	36.0	188 09.7	32.0	32.0	317	36.1	26.2	327	00.1	12.1
22	37	07.0	107 36.6	35.6	35.6	203 10.8	32.6	32.6	332	38.9	26.1	342	02.8	12.1
23	52	09.4	122 35.9	35.2	35.2	218 11.8	33.2	33.2	347	41.7	26.1	357	05.5	12.0
24	67	11.9	137 35.1	-24 34.9	34.9	233 12.9	-4 33.8	33.8	2	44.6	+20 26.0	12	08.1	+17 12.0
Dif	—		-8		+4	+11		-6	+28		-1	+27		0

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'2			Edad: 2 ^d 0	PHE { 4 ^h : 54'6 12 ^h : 54'5 20 ^h : 54'4 R°: 49 ^m										
	PMG: 11 ^h 48 ^m 1														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	h	m	h	m	h	m	h	m
0	183	01.4	-21	158	15.5	-21	55.3	6	41	7	36	8	29	10	51
1	198	01.2		172	45.4 ¹⁰⁹	-21	58.1	35	26		15		33	52	17
2	213	01.0		187	15.3 ¹⁰⁹	-22	00.8	30	17		8	02		18	51
3	228	00.7		201	45.2 ¹⁰⁹		03.4	24	09		7	51		10	06
4	243	00.5		216	15.1 ¹⁰⁹		05.8	20	02		42		9	54	51
5	258	00.3	-21	230	45.0 ¹⁰⁹	-22	08.2	6	15	6	56	7	33	9	44
6	273	00.1	-21	245	14.9 ¹⁰⁹	-22	10.4	6	05	6	42	7	15	9	23
7	287	59.9		259	44.8 ¹⁰⁹		12.6	5	56	30	7	00		9	06
8	302	59.7		274	14.7 ¹⁰⁹		14.6		48	19	6	47		8	52
9	317	59.5		288	44.6 ¹⁰⁹		16.5		41	6	10	36		40	50
10	332	59.2		303	14.5 ¹⁰⁹		18.3		26	5	53	17		18	50
11	347	59.0	-21	317	44.4 ¹⁰⁹	-22	20.0	5	12	5	38	6	00	8	00
12	2	58.8	-21	332	14.3 ¹⁰⁹	-22	21.6	4	56	5	22	5	44	7	43
13	17	58.6		346	44.2 ¹⁰⁹		23.1	39	5	06	29		26	49	24
14	32	58.4		1	14.2 ¹¹⁰		24.5	4	19	4	47	5	11	7	08
15	47	58.2		15	44.1 ¹⁰⁹		25.7	3	52	25	4	52		6	47
16	62	57.9		30	14.0 ¹⁰⁹		26.9		36	4	11	40		34	49
17	77	57.7	-21	44	44.0 ¹¹⁰	-22	28.0	3	15	3	55	4	26	6	20
18	92	57.5	-21	59	14.0 ¹¹⁰	-22	28.9	2	48	3	35	4	10	6	04
19	107	57.3		73	43.9 ¹⁰⁹		29.7	2	11	3	09	3	51	5	43
20	122	57.1		88	13.9 ¹¹⁰		30.4	1	50	2	56		41	33	47
21	137	56.8		102	43.9 ¹¹⁰		31.1	1	22		41	31		22	47
22	152	56.6		117	13.9 ¹¹⁰		31.6	0	36		23	18		5	10
23	167	56.4		131	43.9 ¹¹⁰		32.0	** **	2	01	3	04		4	55
24	182	56.2	-21	146	13.9 ¹¹⁰	-22	32.3	** **	1	31	2	48		4	38
			</												

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 11 ^h 48 ^m 4			Edad: 3 ^d 0 PHE { SD: 14:8 PMG: 14 ^h 44 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	182	56.2	-21 29.4	146	13.9	-22 32.3	1	60 N	15 05	15 59	16 53	11 42 38	17 48 63	
1	197	56.0	29.8	160	44.0 ¹¹¹	32.4	1	58	20	16 09	17 00	25 39	18 06 61	
2	212	55.7	30.2	175	14.0 ¹¹⁰	32.5	1	56	33	18	05	11 09 41	21 59	
3	227	55.5	30.6	189	44.1 ¹¹¹	32.5	0	54	44	26	11	10 57 41	34 58	
4	242	55.3	31.1	204	14.2 ¹¹¹	32.3	2	52	15 53	33	15	45 42	45 57	
5	257	55.1	-21 31.5	218	44.3 ¹¹¹	-22 32.1	2	50	16 02	16 39	17 20	10 35 43	18 55 57	
6	272	54.9	-21 31.9	233	14.4 ¹¹¹	-22 31.7	4	45	16 21	16 54	17 30	10 14 44	19 16 55	
7	287	54.6	32.3	247	44.6 ¹¹²	31.3	4	40	36	17 06	39	9 57 45	33 54	
8	302	54.4	32.7	262	14.7 ¹¹¹	30.7	6	35	16 49	16	48	42 46	19 47 53	
9	317	54.2	33.1	276	44.9 ¹¹²	30.0	7	30	17 00	26	17 55	30 46	20 00 52	
10	332	54.0	33.6	291	15.1 ¹¹²	29.2	8	20	19	43	18 10	9 08 48	21 50	
11	347	53.7	-21 34.0	305	45.3 ¹¹²	-22 28.3	9	10 N	17 36	17 59	18 25	8 50 48	20 39 50	
12	2	53.5	-21 34.4	320	15.5 ¹¹²	-22 27.3	10	0	17 52	18 14	18 40	8 32 49	20 56 49	
13	17	53.3	34.8	334	45.8 ¹¹³	26.2	11	10 S	18 08	31	18 58	8 15 50	21 13 47	
14	32	53.1	35.2	349	16.0 ¹¹²	25.0	12	20	26	18 50	19 18	7 57 50	32 45	
15	47	52.8	35.6	3	46.3 ¹¹³	23.7	13	30	46	19 13	19 45	35 51	21 53 44	
16	62	52.6	36.0	18	16.7 ¹¹⁴	22.3	14	35	18 58	27	20 02	23 51	22 05 43	
17	77	52.4	-21 36.4	32	47.0 ¹¹³	-22 20.8	15	40	19 11	19 43	20 23	7 08 53	22 19 42	
18	92	52.2	-21 36.9	47	17.4 ¹¹⁴	-22 19.1	17	45	19 28	20 04	20 50	6 51 53	22 35 41	
19	107	51.9	37.3	61	47.8 ¹¹⁴	17.4	17	50	48	30	21 29	30 54	22 56 39	
20	122	51.7	37.7	76	18.2 ¹¹⁴	15.6	18	52	19 57	43	21 51	20 54	23 06 38	
21	137	51.5	38.1	90	48.6 ¹¹⁴	13.6	20	54	20 08	20 59	22 20	6 09 55	17 37	
22	152	51.3	38.5	105	19.1 ¹¹⁵	11.6	20	56	21	21 17	23 14	5 56 55	29 36	
23	167	51.0	38.9	119	49.6 ¹¹⁵	09.4	22	58	35	21 40	** **	41 56	23 44 34	
24	182	50.8	-21 39.3	134	20.1 ¹¹⁵	-22 07.2	22	60 S	20 52	22 12	** **	5 23 57	** **	**
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG 19 ^h 24 ^m 1		Mag: -4.1 PMG: 14 ^h 52 ^m			Mag: +1.6 PMG: 8 ^h 25 ^m			Mag: -2.9 PMG: 23 ^h 40 ^m			Mag: -0.3 PMG: 23 ^h 03 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	'	°	°	'	°	°	'	°
0	68	11.0	137	16.9	-24 25.5	233	38.3	-4 47.8	3	52.3	+20 24.7	13	12.2	+17 11.0
1	83	13.5	152	16.1	25.1	248	39.4	48.4	18	55.2	24.7	28	14.8	11.0
2	98	16.0	167	15.4	24.7	263	40.5	49.0	33	58.0	24.6	43	17.5	10.9
3	113	18.4	182	14.6	24.3	278	41.5	49.6	49	00.8	24.6	58	20.2	10.9
4	128	20.9	197	13.9	23.9	293	42.6	50.2	64	03.6	24.5	73	22.8	10.8
5	143	23.4	212	13.1	-24 23.5	308	43.7	-4 50.8	79	06.5	+20 24.5	88	25.5	+17 10.8
6	158	25.8	227	12.3	-24 23.1	323	44.7	-4 51.4	94	09.3	+20 24.4	103	28.2	+17 10.8
7	173	28.3	242	11.6	22.7	338	45.8	51.9	109	12.1	24.4	118	30.8	10.7
8	188	30.7	257	10.8	22.2	353	46.8	52.5	124	14.9	24.3	133	33.5	10.7
9	203	33.2	272	10.1	21.8	8	47.9	53.1	139	17.8	24.3	148	36.2	10.6
10	218	35.7	287	09.3	21.4	23	49.0	53.7	154	20.6	24.2	163	38.8	10.6
11	233	38.1	302	08.6	-24 21.0	38	50.0	-4 54.3	169	23.4	+20 24.1	178	41.5	+17 10.6
12	248	40.6	317	07.8	-24 20.6	53	51.1	-4 54.9	184	26.2	+20 24.1	193	44.2	+17 10.5
13	263	43.1	332	07.1	20.2	68	52.1	55.4	199	29.0	24.0	208	46.8	10.5
14	278	45.5	347	06.4	19.7	83	53.2	56.0	214	31.9	24.0	223	49.5	10.4
15	293	48.0	2	05.6	19.3	98	54.3	56.6	229	34.7	23.9	238	52.2	10.4
16	308	50.5	17	04.9	18.9	113	55.3	57.2	244	37.5	23.9	253	54.8	10.4
17	323	52.9	32	04.1	-24 18.5	128	56.4	-4 57.8	259	40.3	+20 23.8	268	57.5	+17 10.3
18	338	55.4	47	03.4	-24 18.1	143	57.4	-4 58.4	274	43.2	+20 23.8	284	00.2	+17 10.3
19	353	57.9	62	02.6	17.6	158	58.5	58.9	289	46.0	23.7	299	02.8	10.2
20	9	00.3	77	01.9	17.2	173	59.6	-4 59.5	304	48.8	23.7	314	05.5	10.2
21	24	02.8	92	01.1	16.8	189	00.6	-5 00.1	319	51.6	23.6	329	08.2	10.2
22	39	05.2	107	00.4	16.3	204	01.7	00.7	334	54.5	23.6	344	10.8	10.1
23	54	07.7	121	59.6	15.9	219	02.7	01.3	349	57.3	23.5	359	13.5	10.1
24	69	10.2	136	58.9	-24 15.5	234	03.8	-5 01.9	5	00.1	+20 23.5	14	16.2	+17 10.0
Dif	—		-7	+4		+11	-6		+28		-1	+27		0

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'2 PMG: 11 ^h 48 ^m 8			Edad: 4 ^d 0 SD: 14'8 PMG: 15 ^h 33 ^m	PHE { 4 ^h : 54'2 12 ^h : 54'1 20 ^h : 54'1 R°: 47 ^m										
	hG ☉	Dec		hG ☾		Dif		Dec	Dif		Náutico	Civil	Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	182	50.8	-21 39.3	134	20.1	-22 07.2	24	60 N	6 45	7 39	8 33	12 20	27	18 51	70
1	197	50.6	39.7	148	50.6 ¹¹⁵	04.8	24	58	38	29	18	12 04	29	19 07	67
2	212	50.4	40.1	163	21.2 ¹¹⁶	-22 02.4	24	56	32	20	8 06	11 50	31	20 66	
3	227	50.1	40.5	177	51.8 ¹¹⁶	-21 59.8	26	54	27	12	7 54	38 33	32	64	
4	242	49.9	40.9	192	22.4 ¹¹⁶	57.1	27	52	22	7 05	45	27 35	42	62	
5	257	49.7	-21 41.3	206	53.1 ¹¹⁷	-21 54.4	27	50	6 18	6 58	7 36	11 18	35	19 52	60
6	272	49.4	-21 41.7	221	23.8 ¹¹⁷	-21 51.5	29	45	6 07	6 44	7 17	10 58	38	20 11	58
7	287	49.2	42.1	235	54.5 ¹¹⁷	48.6	29	40	5 58	32	7 02	42 39	27	56	
8	302	49.0	42.5	250	25.2 ¹¹⁷	45.5	31	35	50	21	6 49	28 41	40	55	
9	317	48.8	42.9	264	56.0 ¹¹⁸	42.3	32	30	42	6 12	38	10 16	42	20 52	53
10	332	48.5	43.3	279	26.8 ¹¹⁸	39.1	32	20	27	5 54	18	9 56	44	21 11	51
11	347	48.3	-21 43.7	293	57.7 ¹¹⁹	-21 35.7	34	10 N	5 13	5 39	6 01	9 38	46	21 29	48
12	2	48.1	-21 44.1	308	28.5 ¹¹⁸	-21 32.3	34	0	4 57	5 23	5 45	9 21	48	21 45	46
13	17	47.8	44.5	322	59.4 ¹¹⁹	28.7	36	10 S	39	5 06	29	9 05	49	22 00	45
14	32	47.6	44.9	337	30.4 ¹²⁰	25.0	37	20	4 19	4 47	5 12	8 47	51	17	43
15	47	47.4	45.3	352	01.3 ¹¹⁹	21.3	37	30	3 52	24	4 51	26 53	37	40	
16	62	47.1	45.7	6	32.3 ¹²⁰	17.4	39	35	35	4 10	39	14 54	22	48	39
17	77	46.9	-21 46.1	21	03.4 ¹²¹	-21 13.5	39	40	3 14	3 54	4 26	8 01	55	23 01	37
18	92	46.7	-21 46.5	35	34.4 ¹²⁰	-21 09.5	40	45	2 46	3 33	4 09	7 44	57	23 16	36
19	107	46.4	46.9	50	05.5 ¹²¹	05.3	42	50	2 08	3 07	3 49	24 59	35	33	
20	122	46.2	47.3	64	36.6 ¹²¹	-21 01.1	42	52	1 46	2 54	39	14 60	44	31	
21	137	46.0	47.6	79	07.8 ¹²²	-20 56.8	43	54	1 17	38	29	7 04	61	23 54	29
22	152	45.7	48.0	93	39.0 ¹²²	52.3	45	56	0 23	2 20	16	6 51	63	*** **	***
23	167	45.5	48.4	108	10.2 ¹²²	47.8	45	58	*** **	1 57	3 02	37 65	*** **	***	***
24	182	45.3	-21 48.8	122	41.5 ¹²³	-20 43.2	46	60 S	** **	1 25	2 45	6 20	67	0 01	32

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 19 ^h 20 ^m 1		Mag: -4.1 PMG: 14 ^h 53 ^m		Mag: +1.6 PMG: 8 ^h 23 ^m		Mag: -2.9 PMG: 23 ^h 36 ^m		Mag: -0.3 PMG: 22 ^h 59 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	69	10.2	136	58.9	-24	15.5	234	03.8	-5	01.9	5	00.1	+20	23.5	14	16.2	+17	10.0
1	84	12.6	151	58.2		15.0	249	04.9		02.4	20	02.9		23.4	29	18.8		10.0
2	99	15.1	166	57.4		14.6	264	05.9		03.0	35	05.7		23.3	44	21.5		09.9
3	114	17.6	181	56.7		14.2	279	07.0		03.6	50	08.6		23.3	59	24.2		09.9
4	129	20.0	196	55.9		13.7	294	08.1		04.2	65	11.4		23.2	74	26.8		09.9
5	144	22.5	211	55.2	-24	13.3	309	09.1	-5	04.8	80	14.2	+20	23.2	89	29.5	+17	09.8
6	159	25.0	226	54.5	-24	12.9	324	10.2	-5	05.4	95	17.0	+20	23.1	104	32.2	+17	09.8
7	174	27.4	241	53.7		12.4	339	11.2		05.9	110	19.9		23.1	119	34.8		09.7
8	189	29.9	256	53.0		12.0	354	12.3		06.5	125	22.7		23.0	134	37.5		09.7
9	204	32.4	271	52.3		11.5	9	13.4		07.1	140	25.5		23.0	149	40.2		09.7
10	219	34.8	286	51.5		11.1	24	14.4		07.7	155	28.3		22.9	164	42.8		09.6
11	234	37.3	301	50.8	-24	10.7	39	15.5	-5	08.3	170	31.2	+20	22.9	179	45.5	+17	09.6
12	249	39.7	316	50.0	-24	10.2	54	16.5	-5	08.8	185	34.0	+20	22.8	194	48.2	+17	09.5
13	264	42.2	331	49.3		09.8	69	17.6		09.4	200	36.8		22.8	209	50.8		09.5
14	279	44.7	346	48.6		09.3	84	18.7		10.0	215	39.6		22.7	224	53.5		09.5
15	294	47.1	1	47.8		08.9	99	19.7		10.6	230	42.4		22.6	239	56.2		09.4
16	309	49.6	16	47.1		08.4	114	20.8		11.2	245	45.3		22.6	254	58.8		09.4
17	324	52.1	31	46.4	-24	08.0	129	21.8	-5	11.8	260	48.1	+20	22.5	270	01.5	+17	09.3
18	339	54.5	46	45.6	-24	07.5	144	22.9	-5	12.3	275	50.9	+20	22.5	285	04.2	+17	09.3
19	354	57.0	61	44.9		07.1	159	24.0		12.9	290	53.7		22.4	300	06.8		09.3
20	9	59.5	76	44.2		06.6	174	25.0		13.5	305	56.6		22.4	315	09.5		09.2
21	25	01.9	91	43.4		06.1	189	26.1		14.1	320	59.4		22.3	330	12.2		09.2
22	40	04.4	106	42.7		05.7	204	27.1		14.7	336	02.2		22.3	345	14.8		09.1
23	55	06.9	121	42.0		05.2	219	28.2		15.2	351	05.0		22.2	0	17.5		09.1
24	70	09.3	136	41.3	-24	04.8	234	29.3	-5	15.8	6	07.8	+20	22.2	15	20.1	+17	09.1
Dif	—		-7	+4		+11	-6			+28	-1			+27				

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'2 PMG: 11 ^h 49 ^m 2			Edad: 5 ^d 0 PHE { 4 ^h : 54'1 12 ^h : 54'1 20 ^h : 54'2 R°: 46 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	h m	h m
0	182	45.3	-21 48.8	122	41.5	-20 43.2	47	60 N	15 02	15 57	16 52	12 47 19	20 01 75	
1	197	45.0		137	12.8 ¹²³	38.5	47	58	18	16 07	16 58	33 22	14 72	
2	212	44.8		151	44.1 ¹²³	33.7	48	56	31	16	17 04	21 25	26 69	
3	227	44.6		166	15.5 ¹²⁴	28.8	49	54	42	24	09	11 26	36 67	
4	242	44.3		180	46.9 ¹²⁴	23.8	50	52	15 52	32	14	12 02 28	44 66	
5	257	44.1	-21 50.7	195	18.4 ¹²⁵	-20 18.8	50	50	16 01	16 38	17 19	11 53 30	20 52 64	
6	272	43.9	-21 51.1	209	49.8 ¹²⁴	-20 13.6	52	45	16 20	16 53	17 30	11 36 33	21 09 61	
7	287	43.6		224	21.4 ¹²⁶	08.4	52	40	35	17 05	39	21 35	23 58	
8	302	43.4		238	52.9 ¹²⁵	-20 03.0	54	35	16 48	16	47	11 09 37	35 55	
9	317	43.2		253	24.5 ¹²⁶	-19 57.6	54	30	17 00	26	17 55	10 58 39	21 45 54	
10	332	42.9		267	56.1 ¹²⁶	52.1	55	20	19	43	18 10	40 42	22 02 51	
11	347	42.7	-21 53.0	282	27.8 ¹²⁷	-19 46.5	56	10 N	17 37	17 59	18 25	10 24 44	22 17 48	
12	2	42.5	-21 53.4	296	59.4 ¹²⁶	-19 40.8	57	0	17 53	18 15	18 41	10 09 46	22 31 46	
13	17	42.2		311	31.2 ¹²⁸	35.0	58	10 S	18 09	32	18 59	9 54 48	22 45 43	
14	32	42.0		326	02.9 ¹²⁷	29.1	59	20	27	18 51	19 20	38 50	23 00 40	
15	47	41.7		340	34.7 ¹²⁸	23.2	59	30	47	19 14	19 47	19 54	17 37	
16	62	41.5		355	06.6 ¹²⁹	17.1	61	35	18 59	29	20 04	9 08 55	27 35	
17	77	41.3	-21 55.3	9	38.4 ¹²⁸	-19 11.0	61	40	19 13	19 45	20 26	8 56 57	23 38 34	
18	92	41.0	-21 55.7	24	10.3 ¹²⁹	-19 04.8	62	45	19 30	20 06	20 54	8 41 59	23 52 30	
19	107	40.8		38	42.3 ¹³⁰	-18 58.5	63	50	19 50	33	21 33	23 62	** ** *	
20	122	40.5		53	14.2 ¹²⁹	52.1	64	52	20 00	20 47	21 56	14 64	** ** *	
21	137	40.3		67	46.2 ¹³⁰	45.6	65	54	11	21 02	22 27	8 05 65	** ** *	
22	152	40.1		82	18.3 ¹³¹	39.1	65	56	24	21	** ** *	7 54 68	0 05 28	
23	167	39.8		96	50.3 ¹³⁰	32.5	66	58	39	21 46	** ** *	42 69	18 25	
24	182	39.6	-21 57.9	111	22.5 ¹³²	-18 25.8	67	60 S	20 57	22 19	** ** *	7 27 73	0 33 22	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 19 ^h 16 ^m 2		Mag: -4.1 PMG: 14 ^h 54 ^m			Mag: +1.6 PMG: 8 ^h 21 ^m			Mag: -2.8 PMG: 23 ^h 31 ^m			Mag: -0.3 PMG: 22 ^h 55 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	70	09.3	136	41.3	-24 04.8	234	29.3	-5 15.8	6	07.8	+20 22.2	15	20.1	+17 09.1
1	85	11.8	151	40.5	04.3	249	30.3	16.4	21	10.7	22.1	30	22.8	09.0
2	100	14.2	166	39.8	03.8	264	31.4	17.0	36	13.5	22.1	45	25.5	09.0
3	115	16.7	181	39.1	03.4	279	32.5	17.6	51	16.3	22.0	60	28.1	08.9
4	130	19.2	196	38.3	02.9	294	33.5	18.1	66	19.1	22.0	75	30.8	08.9
5	145	21.6	211	37.6	-24 02.5	309	34.6	-5 18.7	81	22.0	+20 21.9	90	33.5	+17 08.9
6	160	24.1	226	36.9	-24 02.0	324	35.6	-5 19.3	96	24.8	+20 21.8	105	36.1	+17 08.8
7	175	26.6	241	36.2	01.5	339	36.7	19.9	111	27.6	21.8	120	38.8	08.8
8	190	29.0	256	35.4	01.1	354	37.8	20.5	126	30.4	21.7	135	41.5	08.7
9	205	31.5	271	34.7	00.6	9	38.8	21.0	141	33.2	21.7	150	44.1	08.7
10	220	34.0	286	34.0	-24 00.1	24	39.9	21.6	156	36.1	21.6	165	46.8	08.7
11	235	36.4	301	33.3	-23 59.6	39	40.9	-5 22.2	171	38.9	+20 21.6	180	49.5	+17 08.6
12	250	38.9	316	32.6	-23 59.2	54	42.0	-5 22.8	186	41.7	+20 21.5	195	52.1	+17 08.6
13	265	41.3	331	31.8	58.7	69	43.1	23.4	201	44.5	21.5	210	54.8	08.5
14	280	43.8	346	31.1	58.2	84	44.1	23.9	216	47.4	21.4	225	57.5	08.5
15	295	46.3	1	30.4	57.7	99	45.2	24.5	231	50.2	21.4	241	00.1	08.5
16	310	48.7	16	29.7	57.3	114	46.2	25.1	246	53.0	21.3	256	02.8	08.4
17	325	51.2	31	28.9	-23 56.8	129	47.3	-5 25.7	261	55.8	+20 21.3	271	05.4	+17 08.4
18	340	53.7	46	28.2	-23 56.3	144	48.4	-5 26.3	276	58.6	+20 21.2	286	08.1	+17 08.3
19	355	56.1	61	27.5	55.8	159	49.4	26.8	292	01.5	21.2	301	10.8	08.3
20	10	58.6	76	26.8	55.3	174	50.5	27.4	307	04.3	21.1	316	13.4	08.3
21	26	01.1	91	26.1	54.9	189	51.6	28.0	322	07.1	21.0	331	16.1	08.2
22	41	03.5	106	25.4	54.4	204	52.6	28.6	337	09.9	21.0	346	18.8	08.2
23	56	06.0	121	24.6	53.9	219	53.7	29.2	352	12.7	20.9	1	21.4	08.2
24	71	08.5	136	23.9	-23 53.4	234	54.7	-5 29.7	7	15.6	+20 20.9	16	24.1	+17 08.1
Dif	—		-7		+5	+11		-6	+28		-1	+27		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 6			Edad: 6 ^d 0	PHE { 4 ^h : 54'2 12 ^h : 54'3 20 ^h : 54'4 R°: 44 ^m											
	hG ☉	Dec		hG ☾		Dif		Dec	Dif		Náutico	Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	182	39.6	-21	57.9	111	22.5	-18	25.8	60 N	6 48	7 43	8 37	13 06	14	21 16	77
1	197	39.4		58.3	125	54.6 ¹³¹		19.0 ⁶⁸	58	41	32	22	12 55	18	26	74
2	212	39.1		58.6	140	26.8 ¹³²		12.1 ⁶⁹	56	35	23	8 09	46	19	35	71
3	227	38.9		59.0	154	59.0 ¹³²	-18	05.1 ⁷⁰	54	30	15	7 57	37	22	43	69
4	242	38.6		59.4	169	31.2 ¹³²	-17	58.1 ⁷⁰	52	25	08	47	30	23	50	67
5	257	38.4	-21	59.7	184	03.5 ¹³³	-17	51.0 ⁷¹	50	6 20	7 01	7 38	12 23	25	21 56	65
6	272	38.1	-22	00.1	198	35.8 ¹³³	-17	43.8 ⁷²	45	6 09	6 46	7 19	12 09	28	22 10	61
7	287	37.9		00.5	213	08.2 ¹³⁴		36.5 ⁷³	40	6 00	34	7 04	11 56	32	21	59
8	302	37.7		00.8	227	40.5 ¹³³		29.2 ⁷³	35	5 52	23	6 51	46	34	30	57
9	317	37.4		01.2	242	13.0 ¹³⁵		21.8 ⁷⁴	30	44	6 13	39	37	36	39	54
10	332	37.2		01.6	256	45.4 ¹³⁴		14.3 ⁷⁵	20	28	5 56	19	22	39	22 53	50
11	347	36.9	-22	01.9	271	17.9 ¹³⁵	-17	06.7 ⁷⁶	10 N	5 13	5 40	6 02	11 08	42	23 05	47
12	2	36.7	-22	02.3	285	50.4 ¹³⁵	-16	59.0 ⁷⁷	0	4 58	5 24	5 46	10 55	45	23 17	44
13	17	36.4		02.6	300	22.9 ¹³⁵		51.3 ⁷⁷	10 S	40	5 07	29	42	48	28	42
14	32	36.2		03.0	314	55.5 ¹³⁶		43.5 ⁷⁸	20	4 19	4 47	5 12	28	51	40	39
15	47	36.0		03.4	329	28.1 ¹³⁶		35.6 ⁷⁹	30	3 52	24	4 51	13	54	23 54	35
16	62	35.7		03.7	344	00.7 ¹³⁶		27.7 ⁷⁹	35	34	4 10	39	10 03	56	***	***
17	77	35.5	-22	04.1	358	33.4 ¹³⁷	-16	19.7 ⁸⁰	40	3 13	3 53	4 25	9 53	58	***	***
18	92	35.2	-22	04.4	13	06.1 ¹³⁷	-16	11.6 ⁸¹	45	2 45	3 32	4 09	9 40	62	***	***
19	107	35.0		04.8	27	38.8 ¹³⁷	-16	03.4 ⁸²	50	2 05	3 05	3 48	25	65	0 08	27
20	122	34.7		05.2	42	11.5 ¹³⁷	-15	55.1 ⁸³	52	1 43	2 52	38	18	67	15	26
21	137	34.5		05.5	56	44.3 ¹³⁸		46.8 ⁸³	54	1 11	36	27	10	69	23	24
22	152	34.2		05.9	71	17.1 ¹³⁸		38.5 ⁸³	56	***	***	2 17	9 02	70	33	22
23	167	34.0		06.2	85	49.9 ¹³⁸		30.0 ⁸⁵	58	***	***	1 53	8 51	73	43	20
24	182	33.7	-22	06.6	100	22.8 ¹³⁹	-15	21.5 ⁸⁵	60 S	***	***	1 19	8 40	76	0 55	17

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG 19 ^h 12 ^m 3		Mag: -4.2 PMG: 14 ^h 55 ^m			Mag: +1.6 PMG: 8 ^h 20 ^m			Mag: -2.8 PMG: 23 ^h 27 ^m			Mag: -0.3 PMG: 22 ^h 50 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	71	08.5	136	23.9	-23	53.4	234	54.7	-5	29.7	7	15.6	+20	20.9	16	24.1
1	86	10.9	151	23.2		52.9	249	55.8		30.3	22	18.4		20.8	31	26.8
2	101	13.4	166	22.5		52.4	264	56.9		30.9	37	21.2		20.8	46	29.4
3	116	15.8	181	21.8		51.9	279	57.9		31.5	52	24.0		20.7	61	32.1
4	131	18.3	196	21.1		51.4	294	59.0		32.1	67	26.9		20.7	76	34.8
5	146	20.8	211	20.4	-23	50.9	310	00.0	-5	32.6	82	29.7	+20	20.6	91	37.4
6	161	23.2	226	19.6	-23	50.5	325	01.1	-5	33.2	97	32.5	+20	20.6	106	40.1
7	176	25.7	241	18.9		50.0	340	02.2		33.8	112	35.3		20.5	121	42.7
8	191	28.2	256	18.2		49.5	355	03.2		34.4	127	38.1		20.5	136	45.4
9	206	30.6	271	17.5		49.0	10	04.3		34.9	142	41.0		20.4	151	48.1
10	221	33.1	286	16.8		48.5	25	05.3		35.5	157	43.8		20.3	166	50.7
11	236	35.6	301	16.1	-23	48.0	40	06.4	-5	36.1	172	46.6	+20	20.3	181	53.4
12	251	38.0	316	15.4	-23	47.5	55	07.5	-5	36.7	187	49.4	+20	20.2	196	56.1
13	266	40.5	331	14.7		47.0	70	08.5		37.3	202	52.2		20.2	211	58.7
14	281	43.0	346	14.0		46.5	85	09.6		37.8	217	55.1		20.1	227	01.4
15	296	45.4	1	13.3		46.0	100	10.7		38.4	232	57.9		20.1	242	04.0
16	311	47.9	16	12.6		45.4	115	11.7		39.0	248	00.7		20.0	257	06.7
17	326	50.3	31	11.9	-23	44.9	130	12.8	-5	39.6	263	03.5	+20	20.0	272	09.4
18	341	52.8	46	11.1	-23	44.4	145	13.8	-5	40.1	278	06.3	+20	19.9	287	12.0
19	356	55.3	61	10.4		43.9	160	14.9		40.7	293	09.2		19.9	302	14.7
20	11	57.7	76	09.7		43.4	175	16.0		41.3	308	12.0		19.8	317	17.4
21	27	00.2	91	09.0		42.9	190	17.0		41.9	323	14.8		19.8	332	20.0
22	42	02.7	106	08.3		42.4	205	18.1		42.5	338	17.6		19.7	347	22.7
23	57	05.1	121	07.6		41.9	220	19.1		43.0	353	20.4		19.7	2	25.3
24	72	07.6	136	06.9	-23	41.4	235	20.2	-5	43.6	8	23.3	+20	19.6	17	28.0
Dif	—		-7	+5		+11	-6			+28	-1		+27		0	

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 16'2			Edad: 7 ^d 0	PHE {	4 ^h : 54'5 12 ^h : 54'6 20 ^h : 54'8											
	PMG: 11 ^h 49 ^m 9																
	hG ☉	Dec							hG ☾	Dif	Dec	Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m				
0	182	33.7	-22	06.6	100	22.8	-15 21.5	60 N	15 00	15 55	16 50	13 20	12	22 33 78			
1	197	33.5		06.9	114	55.7 ¹³⁹	12.9 ⁸⁶	58	16	16 06	16 57	13 14		40 75			
2	212	33.3		07.3	129	28.6 ¹³⁹	-15 04.2 ⁸⁷	56	29	15	17 03	13 05	17	46 73			
3	227	33.0		07.6	144	01.5 ¹³⁹	-14 55.5 ⁸⁷	54	41	23	09	12 59	19	52 70			
4	242	32.8		08.0	158	34.5 ¹⁴⁰	46.7 ⁸⁸	52	15 51	31	14	53 21		22 57 68			
5	257	32.5	-22	08.3	173	07.5 ¹⁴⁰	-14 37.8 ⁸⁹	50	16 00	16 38	17 18	12 48	23	23 01 67			
6	272	32.3	-22	08.7	187	40.5 ¹⁴⁰	-14 28.9 ⁸⁹	45	16 19	16 52	17 29	12 37	26	23 11 63			
7	287	32.0		09.0	202	13.5 ¹⁴⁰	19.9 ⁹⁰	40	35	17 05	39	28 29		20 59			
8	302	31.8		09.4	216	46.6 ¹⁴¹	10.9 ⁹⁰	35	16 48	16	47	20 31		27 57			
9	317	31.5		09.7	231	19.7 ¹⁴¹	-14 01.7 ⁹²	30	17 00	26	17 55	13 34		33 54			
10	332	31.3		10.1	245	52.8 ¹⁴¹	-13 52.6 ⁹¹	20	20	17 44	18 11	12 01	37	43 51			
11	347	31.0	-22	10.4	260	25.9 ¹⁴¹	-13 43.3 ⁹³	10 N	17 37	18 00	18 26	11 50	41	23 52 48			
12	2	30.8	-22	10.7	274	59.1 ¹⁴²	-13 34.0 ⁹³	0	17 54	18 16	18 42	11 40	44	*** ** **			
13	17	30.5		11.1	289	32.2 ¹⁴¹	24.6 ⁹⁴	10 S	18 10	33	19 00	30 47		*** ** **			
14	32	30.3		11.4	304	05.4 ¹⁴²	15.2 ⁹⁴	20	28	18 52	21	19 50		*** ** **			
15	47	30.0		11.8	318	38.6 ¹⁴²	-13 05.7 ⁹⁵	30	18 49	19 16	19 49	11 07	54	*** ** **			
16	62	29.8		12.1	333	11.9 ¹⁴³	-12 56.1 ⁹⁶	35	19 01	30	20 06	10 59	57	0 02 33			
17	77	29.5	-22	12.4	347	45.1 ¹⁴²	-12 46.5 ⁹⁶	40	19 15	19 48	20 28	10 51	59	0 12 29			
18	92	29.3	-22	12.8	2	18.4 ¹⁴³	-12 36.8 ⁹⁷	45	19 32	20 09	20 56	10 42	62	0 22 27			
19	107	29.0		13.1	16	51.6 ¹⁴²	27.1 ⁹⁷	50	19 53	36	21 37	30 66		35 23			
20	122	28.8		13.5	31	24.9 ¹⁴³	17.3 ⁹⁸	52	20 03	20 50	22 01	25 67		41 22			
21	137	28.5		13.8	45	58.2 ¹⁴³	-12 07.4 ⁹⁹	54	14	21 06	22 34	19 69		47 20			
22	152	28.3		14.1	60	31.6 ¹⁴⁴	-11 57.5 ⁹⁹	56	27	26	*** **	12 72		0 55 18			
23	167	28.0		14.5	75	04.9 ¹⁴³	47.5 ¹⁰⁰	58	20 43	21 51	*** **	10 04	75	1 03 15			
24	182	27.8	-22	14.8	89	38.3 ¹⁴⁴	-11 37.5 ¹⁰⁰	60 S	21 01	22 26	*** **	9 56	77	1 12 13			

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 19 ^h 08 ^m 3		Mag: -4.2 PMG: 14 ^h 56 ^m			Mag: +1.6 PMG: 8 ^h 18 ^m			Mag: -2.8 PMG: 23 ^h 22 ^m			Mag: -0.3 PMG: 22 ^h 46 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	72	07.6	136	06.9	-23	41.4	235	20.2	-5	43.6	8	23.3	+20	19.6	17	28.0	+17	07.2
1	87	10.1	151	06.2		40.8	250	21.3		44.2	23	26.1		19.5	32	30.7		07.1
2	102	12.5	166	05.5		40.3	265	22.3		44.8	38	28.9		19.5	47	33.3		07.1
3	117	15.0	181	04.8		39.8	280	23.4		45.3	53	31.7		19.4	62	36.0		07.1
4	132	17.4	196	04.1		39.3	295	24.4		45.9	68	34.5		19.4	77	38.7		07.0
5	147	19.9	211	03.4	-23	38.8	310	25.5	-5	46.5	83	37.4	+20	19.3	92	41.3	+17	07.0
6	162	22.4	226	02.7	-23	38.3	325	26.6	-5	47.1	98	40.2	+20	19.3	107	44.0	+17	06.9
7	177	24.8	241	02.0		37.7	340	27.6		47.6	113	43.0		19.2	122	46.6		06.9
8	192	27.3	256	01.3		37.2	355	28.7		48.2	128	45.8		19.2	137	49.3		06.9
9	207	29.8	271	00.6		36.7	10	29.8		48.8	143	48.6		19.1	152	52.0		06.8
10	222	32.2	286	00.0		36.2	25	30.8		49.4	158	51.5		19.1	167	54.6		06.8
11	237	34.7	300	59.3	-23	35.6	40	31.9	-5	49.9	173	54.3	+20	19.0	182	57.3	+17	06.7
12	252	37.2	315	58.6	-23	35.1	55	32.9	-5	50.5	188	57.1	+20	19.0	198	00.0	+17	06.7
13	267	39.6	330	57.9		34.6	70	34.0		51.1	203	59.9		18.9	213	02.6		06.7
14	282	42.1	345	57.2		34.0	85	35.1		51.7	219	02.7		18.9	228	05.3		06.6
15	297	44.6	0	56.5		33.5	100	36.1		52.2	234	05.6		18.8	243	07.9		06.6
16	312	47.0	15	55.8		33.0	115	37.2		52.8	249	08.4		18.7	258	10.6		06.5
17	327	49.5	30	55.1	-23	32.4	130	38.2	-5	53.4	264	11.2	+20	18.7	273	13.3	+17	06.5
18	342	51.9	45	54.4	-23	31.9	145	39.3	-5	54.0	279	14.0	+20	18.6	288	15.9	+17	06.5
19	357	54.4	60	53.7		31.4	160	40.4		54.6	294	16.8		18.6	303	18.6		06.4
20	12	56.9	75	53.0		30.8	175	41.4		55.1	309	19.6		18.5	318	21.2		06.4
21	27	59.3	90	52.3		30.3	190	42.5		55.7	324	22.5		18.5	333	23.9		06.4
22	43	01.8	105	51.7		29.8	205	43.5		56.3	339	25.3		18.4	348	26.6		06.3
23	58	04.3	120	51.0		29.2	220	44.6		56.9	354	28.1		18.4	3	29.2		06.3
24	73	06.7	135	50.3	-23	28.7	235	45.7	-5	57.4	9	30.9	+20	18.3	18	31.9	+17	06.2
Dif	—		-7		+5		+11		-6		+28		-1		+27			

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna											
	SD: 16'2 PMG: 11 ^h 50 ^m 3			Edad: 8 ^d 0 PHE { SD: 14'9 PMG: 18 ^h 34 ^m																				
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº									
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m								
0	182	27.8	-22	14.8	89	38.3	-11	37.5	60 N	6 51	7 46	8 41	13 32	10	23 51	80								
1	197	27.5		15.1	104	11.6 ¹⁴³		27.4 ¹⁰¹	58	44	35	25	27 12		55 77									
2	212	27.3		15.5	118	45.0 ¹⁴⁴		17.3 ¹⁰¹	56	38	26	12	22 15		23 59	75								
3	227	27.0		15.8	133	18.4 ¹⁴⁴	-11	07.1 ¹⁰²	54	32	18	8 00	18 17		*** ** *									
4	242	26.7		16.1	147	51.8 ¹⁴⁴	-10	56.8 ¹⁰³	52	27	10	7 50	14 19		*** ** *									
5	257	26.5	-22	16.5	162	25.2 ¹⁴⁴	-10	46.5 ¹⁰³	50	6 22	7 03	7 41	13 11	20	*** ** *									
6	272	26.2	-22	16.8	176	58.6 ¹⁴⁴	-10	36.1 ¹⁰⁴	45	6 11	6 48	7 22	13 03	25	*** ** *									
7	287	26.0		17.1	191	32.1 ¹⁴⁵		25.7 ¹⁰⁴	40	6 02	36	7 06	12 57	27	*** ** *									
8	302	25.7		17.5	206	05.5 ¹⁴⁴		15.3 ¹⁰⁴	35	5 53	25	6 52	51 31		*** ** *									
9	317	25.5		17.8	220	39.0 ¹⁴⁵	-10	04.8 ¹⁰⁵	30	45	6 15	41	47 32		*** ** *									
10	332	25.2		18.1	235	12.4 ¹⁴⁴	-9	54.2 ¹⁰⁶	20	30	5 57	21	38 37		*** ** *									
11	347	25.0	-22	18.4	249	45.9 ¹⁴⁵	-9	43.6 ¹⁰⁶	10 N	5 14	5 41	6 03	12 31	40	*** ** *									
12	2	24.7	-22	18.8	264	19.4 ¹⁴⁵	-9	32.9 ¹⁰⁷	0	4 58	5 24	5 47	12 24	44	0 01	44								
13	17	24.5		19.1	278	52.8 ¹⁴⁴		22.2 ¹⁰⁷	10 S	40	5 07	30	17 47		10 40									
14	32	24.2		19.4	293	26.3 ¹⁴⁵		11.4 ¹⁰⁸	20	4 19	4 48	5 12	09 51		19 37									
15	47	23.9		19.7	307	59.8 ¹⁴⁵	-9	00.6 ¹⁰⁸	30	3 51	24	4 51	12 01	55	29 33									
16	62	23.7		20.1	322	33.3 ¹⁴⁵	-8	49.7 ¹⁰⁹	35	34	4 10	39	11 56	58	35 30									
17	77	23.4	-22	20.4	337	06.7 ¹⁴⁴	-8	38.8 ¹⁰⁹	40	3 12	3 53	4 25	11 50	61	0 41	29								
18	92	23.2	-22	20.7	351	40.2 ¹⁴⁵	-8	27.9 ¹⁰⁹	45	2 44	3 31	4 08	11 44	64	0 49	25								
19	107	22.9		21.0	6	13.7 ¹⁴⁵		16.9 ¹¹⁰	50	2 03	3 04	3 47	36 68		0 58	22								
20	122	22.7		21.3	20	47.2 ¹⁴⁵	-8	05.8 ¹¹¹	52	1 39	2 50	37	32 70		1 03	19								
21	137	22.4		21.7	35	20.7 ¹⁴⁵	-7	54.7 ¹¹¹	54	1 06	34	26	28 72		07 18									
22	152	22.1		22.0	49	54.1 ¹⁴⁴		43.6 ¹¹¹	56	*** **	2 14	3 13	24 74		13 15									
23	167	21.9		22.3	64	27.6 ¹⁴⁵		32.4 ¹¹²	58	*** **	1 49	2 57	19 76		18 14									
24	182	21.6	-22	22.6	79	01.1 ¹⁴⁵	-7	21.2 ¹¹²	60 S	*** **	1 14	2 39	11 13	80	1 25	10								
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO											
	PMG 19 ^h 04 ^m 4			Mag: -4.2 PMG: 14 ^h 57 ^m			Mag: +1.6 PMG: 8 ^h 16 ^m			Mag: -2.8 PMG: 23 ^h 18 ^m			Mag: -0.3 PMG: 22 ^h 42 ^m											
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec													
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'								
0	73	06.7	135	50.3	-23	28.7	235	45.7	-5	57.4	9	30.9	+20	18.3	18	31.9	+17	06.2						
1	88	09.2	150	49.6		28.1	250	46.7		58.0	24	33.7		18.3	33	34.5		06.2						
2	103	11.7	165	48.9		27.6	265	47.8		58.6	39	36.6		18.2	48	37.2		06.2						
3	118	14.1	180	48.2		27.1	280	48.9		59.1	54	39.4		18.2	63	39.9		06.1						
4	133	16.6	195	47.5		26.5	295	49.9	-5	59.7	69	42.2		18.1	78	42.5		06.1						
5	148	19.1	210	46.9	-23	26.0	310	51.0	-6	00.3	84	45.0	+20	18.1	93	45.2	+17	06.0						
6	163	21.5	225	46.2	-23	25.4	325	52.0	-6	00.9	99	47.8	+20	18.0	108	47.8	+17	06.0						
7	178	24.0	240	45.5		24.9	340	53.1		01.4	114	50.6		18.0	123	50.5		06.0						
8	193	26.4	255	44.8		24.3	355	54.2		02.0	129	53.5		17.9	138	53.2		05.9						
9	208	28.9	270	44.1		23.8	10	55.2		02.6	144	56.3		17.8	153	55.8		05.9						
10	223	31.4	285	43.5		23.2	25	56.3		03.2	159	59.1		17.8	168	58.5		05.9						
11	238	33.8	300	42.8	-23	22.7	40	57.3	-6	03.7	175	01.9	+20	17.7	184	01.1	+17	05.8						
12	253	36.3	315	42.1	-23	22.1	55	58.4	-6	04.3	190	04.7	+20	17.7	199	03.8	+17	05.8						
13	268	38.8	330	41.4		21.5	70	59.5		04.9	205	07.5		17.6	214	06.5		05.7						
14	283	41.2	345	40.7		21.0	86	00.5		05.5	220	10.4		17.6	229	09.1		05.7						
15	298	43.7	0	40.1		20.4	101	01.6		06.0	235	13.2		17.5	244	11.8		05.7						
16	313	46.2	15	39.4		19.9	116	02.7		06.6	250	16.0		17.5	259	14.4		05.6						
17	328	48.6	30	38.7	-23	19.3	131	03.7	-6	07.2	265	18.8	+20	17.4	274	17.1	+17	05.6						
18	343	51.1	45	38.0	-23	18.8	146	04.8	-6	07.8	280	21.6	+20	17.4	289	19.8	+17	05.5						
19	358	53.5	60	37.4		18.2	161	05.8		08.3	295	24.4		17.3	304	22.4		05.5						
20	13	56.0	75	36.7		17.6	176	06.9		08.9	310	27.3		17.3	319	25.1		05.5						
21	28	58.5	90	36.0		17.1	191	08.0		09.5	325	30.1		17.2	334	27.7		05.4						
22	44	00.9	105	35.3		16.5	206	09.0		10.0	340	32.9		17.2	349	30.4		05.4						
23	59	03.4	120	34.7		15.9	221	10.1		10.6	355	35.7		17.1	4	33.1		05.4						
24	74	05.9	135	34.0	-23	15.4	236	11.1	-6	11.2	10	38.5	+20	17.0	19	35.7	+17	05.3						
Dif	—			-7			+6			+11			-6			+28			-1			+27		

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16:2 PMG: 11 ^h 50 ^m 8			Edad: 9 ^d 0 PHE { 4 ^h : 55/5 12 ^h : 55/8 20 ^h : 56/0 R°: 45 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m	
0	182	21.6	-22	22.6	79	01.1	-7	21.2	60 N	14 58	15 54	16 49	13 42 10	*** ** *	
1	197	21.4		22.9	93	34.5 ¹⁴⁴	-7	09.9 ¹¹³	58	15 14	16 04	16 56	39 13	*** ** *	
2	212	21.1		23.2	108	08.0 ¹⁴⁵	-6	58.6 ¹¹³	56	28	14	17 02	37 15	*** ** *	
3	227	20.9		23.6	122	41.4 ¹⁴⁴		47.2 ¹¹⁴	54	40	22	08	35 17	0 02 73	
4	242	20.6		23.9	137	14.9 ¹⁴⁵		35.9 ¹¹³	52	50	30	13	33 19	05 71	
5	257	20.3	-22	24.2	151	48.3 ¹⁴⁴	-6	24.4 ¹¹⁵	50	15 59	16 37	17 18	13 31 21	0 08 69	
6	272	20.1	-22	24.5	166	21.7 ¹⁴⁴	-6	13.0 ¹¹⁴	45	16 19	16 52	17 29	13 28 24	0 14 65	
7	287	19.8		24.8	180	55.1 ¹⁴⁴	-6	01.4 ¹¹⁶	40	35	17 05	39	24 28	19 61	
8	302	19.6		25.1	195	28.6 ¹⁴⁵	-5	49.9 ¹¹⁵	35	16 48	16	47	22 30	24 58	
9	317	19.3		25.4	210	01.9 ¹⁴³		38.3 ¹¹⁶	30	17 00	26	17 56	19 33	27 56	
10	332	19.0		25.7	224	35.3 ¹⁴⁴		26.7 ¹¹⁶	20	20	17 44	18 11	15 37	34 51	
11	347	18.8	-22	26.0	239	08.7 ¹⁴⁴	-5	15.0 ¹¹⁷	10 N	17 38	18 00	18 27	13 11 41	0 40 47	
12	2	18.5	-22	26.4	253	42.0 ¹⁴³	-5	03.3 ¹¹⁷	0	17 54	18 17	18 43	13 08 44	0 45 44	
13	17	18.3		26.7	268	15.4 ¹⁴⁴	-4	51.6 ¹¹⁷	10 S	18 11	34	19 01	04 48	50 41	
14	32	18.0		27.0	282	48.7 ¹⁴³		39.8 ¹¹⁸	20	29	18 54	23	13 00 52	0 56 36	
15	47	17.7		27.3	297	22.0 ¹⁴³		28.0 ¹¹⁸	30	18 50	19 18	19 51	12 56 57	1 02 32	
16	62	17.5		27.6	311	55.3 ¹⁴³		16.2 ¹¹⁸	35	19 03	32	20 08	54 59	05 31	
17	77	17.2	-22	27.9	326	28.5 ¹⁴²	-4	04.3 ¹¹⁹	40	19 17	19 50	20 30	12 51 62	1 10 27	
18	92	17.0	-22	28.2	341	01.8 ¹⁴³	-3	52.4 ¹¹⁹	45	19 34	20 11	20 59	12 48 65	1 14 24	
19	107	16.7		28.5	355	35.0 ¹⁴²		40.5 ¹¹⁹	50	19 56	39	21 41	44 69	20 20	
20	122	16.4		28.8	10	08.2 ¹⁴²		28.6 ¹¹⁹	52	20 06	20 53	22 05	42 71	22 19	
21	137	16.2		29.1	24	41.4 ¹⁴²		16.6 ¹²⁰	54	17	21 10	22 40	40 73	25 17	
22	152	15.9		29.4	39	14.5 ¹⁴¹	-3	04.6 ¹²⁰	56	31	30	*** **	38 76	28 15	
23	167	15.6		29.7	53	47.6 ¹⁴¹	-2	52.5 ¹²¹	58	20 46	21 56	*** **	35 79	32 12	
24	182	15.4	-22	30.0	68	20.8 ¹⁴²	-2	40.4 ¹²¹	60 S	21 05	22 34	*** **	12 33 81	1 35 10	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 19 ^h 00 ^m 5		Mag: -4.2 PMG: 14 ^h 58 ^m			Mag: +1.6 PMG: 8 ^h 15 ^m			Mag: -2.8 PMG: 23 ^h 13 ^m			Mag: -0.3 PMG: 22 ^h 38 ^m			
	hG ♈		hG ♀			hG ♂			hG ♃			hG ♄			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	74	05.9	135	34.0	-23	15.4	236	11.1	-6	11.2	10	38.5	+20	17.0	
1	89	08.3	150	33.3		14.8	251	12.2		11.8	25	41.3		17.0	
2	104	10.8	165	32.7		14.2	266	13.3		12.3	40	44.2		16.9	
3	119	13.3	180	32.0		13.7	281	14.3		12.9	55	47.0		16.9	
4	134	15.7	195	31.3		13.1	296	15.4		13.5	70	49.8		16.8	
5	149	18.2	210	30.7	-23	12.5	311	16.4	-6	14.1	85	52.6	+20	16.8	
6	164	20.7	225	30.0	-23	11.9	326	17.5	-6	14.6	100	55.4	+20	16.7	
7	179	23.1	240	29.3		11.4	341	18.6		15.2	115	58.2		16.7	
8	194	25.6	255	28.7		10.8	356	19.6		15.8	131	01.1		16.6	
9	209	28.0	270	28.0		10.2	11	20.7		16.3	146	03.9		16.6	
10	224	30.5	285	27.3		09.6	26	21.8		16.9	161	06.7		16.5	
11	239	33.0	300	26.7	-23	09.0	41	22.8	-6	17.5	176	09.5	+20	16.5	
12	254	35.4	315	26.0	-23	08.5	56	23.9	-6	18.1	191	12.3	+20	16.4	
13	269	37.9	330	25.3		07.9	71	24.9		18.6	206	15.1		16.4	
14	284	40.4	345	24.7		07.3	86	26.0		19.2	221	17.9		16.3	
15	299	42.8	0	24.0		06.7	101	27.1		19.8	236	20.8		16.3	
16	314	45.3	15	23.4		06.1	116	28.1		20.3	251	23.6		16.2	
17	329	47.8	30	22.7	-23	05.5	131	29.2	-6	20.9	266	26.4	+20	16.1	
18	344	50.2	45	22.0	-23	05.0	146	30.2	-6	21.5	281	29.2	+20	16.1	
19	359	52.7	60	21.4		04.4	161	31.3		22.1	296	32.0		16.0	
20	14	55.2	75	20.7		03.8	176	32.4		22.6	311	34.8		16.0	
21	29	57.6	90	20.1		03.2	191	33.4		23.2	326	37.6		15.9	
22	45	00.1	105	19.4		02.6	206	34.5		23.8	341	40.5		15.9	
23	60	02.5	120	18.7		02.0	221	35.5		24.3	356	43.3		15.8	
24	75	05.0	135	18.1	-23	01.4	236	36.6	-6	24.9	11	46.1	+20	15.8	
Dif	—		-7			+6	+11			-6			+28		
													-1		
													+27		
													0		

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'2			Edad: 10 ^d 0 PHE { 4 ^h : 56'3 12 ^h : 56'6 20 ^h : 56'9 R°: 47 ^m												
	PMG: 11 ^h 51 ^m 2			PMG: 20 ^h 03 ^m												
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	°	h m	h m	h m	h m	m	h m	m
0	182	15.4	-22 30.0	68	20.8	-2 40.4	121	58 N	6 53	7 49	8 45	13 52	10	1 11	82	
1	197	15.1	30.3	82	53.8 ¹⁴⁰	28.3 ¹²¹	58	46	38	29	52	12	12	80		
2	212	14.8	30.6	97	26.9 ¹⁴¹	16.2 ¹²¹	56	40	29	15	52	15	14	77		
3	227	14.6	30.9	111	59.9 ¹⁴⁰	-2 04.1 ¹²¹	54	34	20	8 03	52	17	15	74		
4	242	14.3	31.2	126	32.9 ¹⁴⁰	-1 51.9 ¹²²	52	29	12	7 53	52	19	16	72		
5	257	14.1	-22 31.5	141	05.8 ¹³⁹	-1 39.7 ¹²²	50	6 24	7 05	7 43	13 52	21	1 17	70		
6	272	13.8	-22 31.8	155	38.8 ¹⁴⁰	-1 27.5 ¹²²	45	6 13	6 50	7 24	13 52	25	1 19	66		
7	287	13.5	32.1	170	11.7 ¹³⁹	15.2 ¹²³	40	6 04	37	7 08	52	28	20	63		
8	302	13.3	32.3	184	44.5 ¹³⁸	-1 03.0 ¹²²	35	5 55	26	6 54	52	31	22	60		
9	317	13.0	32.6	199	17.3 ¹³⁸	-0 50.7 ¹²³	30	46	6 16	42	52	34	23	57		
10	332	12.7	32.9	213	50.1 ¹³⁸	38.4 ¹²³	20	31	5 58	22	52	38	25	53		
11	347	12.5	-22 33.2	228	22.9 ¹³⁸	-0 26.1 ¹²³	10 N	5 15	5 41	6 04	13 52	43	1 27	49		
12	2	12.2	-22 33.5	242	55.6 ¹³⁷	-0 13.7 ¹²⁴	0	4 59	5 25	5 47	13 52	46	1 29	45		
13	17	11.9	33.8	257	28.3 ¹³⁷	-0 01.3 ¹²⁴	10 S	41	5 08	31	52	50	31	41		
14	32	11.7	34.1	272	00.9 ¹³⁶	+0 11.0 ¹²³	20	4 19	4 48	5 12	52	55	32	38		
15	47	11.4	34.4	286	33.5 ¹³⁶	23.4 ¹²⁴	30	3 51	24	4 51	53	58	34	33		
16	62	11.1	34.7	301	06.1 ¹³⁶	35.8 ¹²⁴	35	33	4 10	39	53	61	36	30		
17	77	10.9	-22 34.9	315	38.6 ¹³⁵	+0 48.2 ¹²⁴	40	3 11	3 52	4 25	13 53	64	1 37	27		
18	92	10.6	-22 35.2	330	11.1 ¹³⁵	+1 00.7 ¹²⁵	45	2 43	3 31	4 07	13 53	68	1 38	25		
19	107	10.3	35.5	344	43.5 ¹³⁴	13.1 ¹²⁴	50	2 01	3 03	3 46	53	72	40	21		
20	122	10.1	35.8	359	15.9 ¹³⁴	25.6 ¹²⁵	52	1 36	2 49	36	53	75	41	19		
21	137	09.8	36.1	13	48.2 ¹³³	38.1 ¹²⁵	54	1 01	32	24	53	77	42	16		
22	152	09.5	36.4	28	20.5 ¹³³	+1 50.5 ¹²⁴	56	** ** *	2 12	3 11	54	78	43	14		
23	167	09.3	36.6	42	52.7 ¹³²	+2 03.0 ¹²⁵	58	** ** *	1 46	2 56	54	81	44	12		
24	182	09.0	-22 36.9	57	24.9 ¹³²	+2 15.5 ¹²⁵	60 S	** ** *	1 08	2 37	13 54	84	1 45	9		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 18 ^h 56 ^m 6		Mag: -4.2 PMG: 14 ^h 59 ^m		Mag: +1.6 PMG: 8 ^h 13 ^m		Mag: -2.8 PMG: 23 ^h 09 ^m		Mag: -0.3 PMG: 22 ^h 33 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	75	05.0	135	18.1	-23	01.4	236	36.6	-6	24.9
1	90	07.5	150	17.4		00.8	251	37.7		25.5
2	105	09.9	165	16.8	-23	00.2	266	38.7		26.0
3	120	12.4	180	16.1	-22	59.6	281	39.8		26.6
4	135	14.9	195	15.5		59.0	296	40.9		27.2
5	150	17.3	210	14.8	-22	58.4	311	41.9	-6	27.8
6	165	19.8	225	14.2	-22	57.8	326	43.0	-6	28.3
7	180	22.3	240	13.5		57.2	341	44.0		28.9
8	195	24.7	255	12.9		56.6	356	45.1		29.5
9	210	27.2	270	12.2		56.0	11	46.2		30.0
10	225	29.6	285	11.6		55.4	26	47.2		30.6
11	240	32.1	300	10.9	-22	54.8	41	48.3	-6	31.2
12	255	34.6	315	10.3	-22	54.2	56	49.3	-6	31.7
13	270	37.0	330	09.6		53.6	71	50.4		32.3
14	285	39.5	345	09.0		53.0	86	51.5		32.9
15	300	42.0	0	08.3		52.4	101	52.5		33.4
16	315	44.4	15	07.7		51.8	116	53.6		34.0
17	330	46.9	30	07.1	-22	51.2	131	54.6	-6	34.6
18	345	49.4	45	06.4	-22	50.5	146	55.7	-6	35.2
19	0	51.8	60	05.8		49.9	161	56.8		35.7
20	15	54.3	75	05.1		49.3	176	57.8		36.3
21	30	56.8	90	04.5		48.7	191	58.9		36.9
22	45	59.2	105	03.8		48.1	207	00.0		37.4
23	61	01.7	120	03.2		47.5	222	01.0		38.0
24	76	04.1	135	02.6	-22	46.9	237	02.1	-6	38.6
Dif	—		-6		+6		+11		-6	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16:2 PMG: 11 ^h 51 ^m 6			Edad: 11 ^d 0 PHE { SD: 15:5 PMG: 20 ^h 50 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	Rº	Hora	Rº			
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m				
0	182	09.0	-22 36.9	57	24.9	+2 15.5		60 N	14 56	15 52	16 48	14 02 11	2 33 87					
1	197	08.7	37.2	71	57.1 ¹³²	28.0 ¹²⁵		58	15 13	16 03	16 55	04 15	32 83					
2	212	08.4	37.5	86	29.2 ¹³¹	40.5 ¹²⁵		56	27	13	17 02	07 17	31 80					
3	227	08.2	37.8	101	01.2 ¹³⁰	+2 53.0 ¹²⁵		54	39	22	07	09 20	29 78					
4	242	07.9	38.0	115	33.2 ¹³⁰	+3 05.6 ¹²⁶		52	49	29	13	11 22	28 76					
5	257	07.6	-22 38.3	130	05.1 ¹²⁹	+3 18.1 ¹²⁵		50	15 59	16 37	17 18	14 13 23	2 27 74					
6	272	07.4	-22 38.6	144	37.0 ¹²⁹	+3 30.6 ¹²⁵		45	16 18	16 52	17 29	14 17 28	2 25 69					
7	287	07.1	38.9	159	08.8 ¹²⁸	43.1 ¹²⁵		40	35	17 05	39	20 31	23 66					
8	302	06.8	39.1	173	40.6 ¹²⁸	+3 55.6 ¹²⁵		35	16 48	16	48	23 34	22 62					
9	317	06.6	39.4	188	12.3 ¹²⁷	+4 08.2 ¹²⁶		30	17 00	26	17 56	26 37	20 60					
10	332	06.3	39.7	202	43.9 ¹²⁶	20.7 ¹²⁵		20	21	17 44	18 12	30 42	18 55					
11	347	06.0	-22 39.9	217	15.5 ¹²⁶	+4 33.2 ¹²⁵		10 N	17 38	18 01	18 27	14 35 45	2 16 51					
12	2	05.7	-22 40.2	231	47.0 ¹²⁵	+4 45.7 ¹²⁵		0	17 55	18 18	18 44	14 38 49	2 14 47					
13	17	05.5	40.5	246	18.5 ¹²⁵	+4 58.2 ¹²⁵		10 S	18 12	35	19 02	42 53	12 44					
14	32	05.2	40.8	260	49.9 ¹²⁴	+5 10.7 ¹²⁵		20	31	18 55	24	47 56	10 39					
15	47	04.9	41.0	275	21.2 ¹²³	23.2 ¹²⁵		30	18 52	19 19	19 52	51 62	07 35					
16	62	04.7	41.3	289	52.5 ¹²³	35.7 ¹²⁵		35	19 05	34	20 10	54 64	06 32					
17	77	04.4	-22 41.6	304	23.7 ¹²²	+5 48.2 ¹²⁵		40	19 19	19 51	20 33	14 57 68	2 04 30					
18	92	04.1	-22 41.8	318	54.8 ¹²¹	+6 00.6 ¹²⁴		45	19 36	20 13	21 02	15 01 71	2 03 26					
19	107	03.8	42.1	333	25.9 ¹²¹	13.1 ¹²⁵		50	19 58	42	21 44	05 76	01 21					
20	122	03.6	42.4	347	56.9 ¹²⁰	25.5 ¹²⁴		52	20 08	20 56	22 09	08 77	2 00 20					
21	137	03.3	42.6	2	27.8 ¹¹⁹	37.9 ¹²⁴		54	20	21 13	22 47	10 80	1 58 18					
22	152	03.0	42.9	16	58.6 ¹¹⁸	+6 50.3 ¹²⁴		56	34	21 33	** **	12 83	57 16					
23	167	02.8	43.1	31	29.4 ¹¹⁸	+7 02.7 ¹²⁴		58	20 49	22 00	** **	15 85	56 13					
24	182	02.5	-22 43.4	46	00.1 ¹¹⁷	+7 15.1 ¹²⁴		60 S	21 08	22 40	** **	15 18 89	1 54 11					
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 18 ^h 52 ^m 6		Mag: -4.2 PMG: 15 ^h 00 ^m			Mag: +1.6 PMG: 8 ^h 11 ^m			Mag: -2.8 PMG: 23 ^h 04 ^m			Mag: -0.3 PMG: 22 ^h 29 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	'	'	°	'	°	'	'	'				
0	76	04.1	135	02.6	-22	46.9	237	02.1	-6	38.6	12	53.6	+20	14.5	21	43.3	+17	03.5
1	91	06.6	150	01.9		46.2	252	03.1		39.1	27	56.4		14.5	36	45.9		03.5
2	106	09.1	165	01.3		45.6	267	04.2		39.7	42	59.2		14.4	51	48.6		03.4
3	121	11.5	180	00.7		45.0	282	05.3		40.3	58	02.0		14.4	66	51.2		03.4
4	136	14.0	195	00.0		44.4	297	06.3		40.8	73	04.8		14.3	81	53.9		03.4
5	151	16.5	209	59.4	-22	43.7	312	07.4	-6	41.4	88	07.6	+20	14.3	96	56.5	+17	03.3
6	166	18.9	224	58.7	-22	43.1	327	08.4	-6	42.0	103	10.5	+20	14.2	111	59.2	+17	03.3
7	181	21.4	239	58.1		42.5	342	09.5		42.5	118	13.3		14.1	127	01.8		03.3
8	196	23.9	254	57.5		41.9	357	10.6		43.1	133	16.1		14.1	142	04.5		03.2
9	211	26.3	269	56.8		41.2	12	11.6		43.7	148	18.9		14.0	157	07.1		03.2
10	226	28.8	284	56.2		40.6	27	12.7		44.2	163	21.7		14.0	172	09.8		03.1
11	241	31.3	299	55.6	-22	40.0	42	13.7	-6	44.8	178	24.5	+20	13.9	187	12.5	+17	03.1
12	256	33.7	314	55.0	-22	39.3	57	14.8	-6	45.4	193	27.3	+20	13.9	202	15.1	+17	03.1
13	271	36.2	329	54.3		38.7	72	15.9		45.9	208	30.1		13.8	217	17.8		03.0
14	286	38.6	344	53.7		38.1	87	16.9		46.5	223	32.9		13.8	232	20.4		03.0
15	301	41.1	359	53.1		37.4	102	18.0		47.1	238	35.7		13.7	247	23.1		03.0
16	316	43.6	14	52.4		36.8	117	19.1		47.6	253	38.6		13.7	262	25.7		02.9
17	331	46.0	29	51.8	-22	36.2	132	20.1	-6	48.2	268	41.4	+20	13.6	277	28.4	+17	02.9
18	346	48.5	44	51.2	-22	35.5	147	21.2	-6	48.8	283	44.2	+20	13.6	292	31.0	+17	02.9
19	1	51.0	59	50.6		34.9	162	22.2		49.3	298	47.0		13.5	307	33.7		02.8
20	16	53.4	74	49.9		34.2	177	23.3		49.9	313	49.8		13.5	322	36.3		02.8
21	31	55.9	89	49.3		33.6	192	24.4		50.5	328	52.6		13.4	337	39.0		02.7
22	46	58.4	104	48.7		33.0	207	25.4		51.0	343	55.4		13.4	352	41.6		02.7
23	62	00.8	119	48.1		32.3	222	26.5		51.6	358	58.2		13.3	7	44.3		02.7
24	77	03.3	134	47.4	-22	31.7	237	27.5	-6	52.2	14	01.0	+20	13.3	22	46.9	+17	02.6
Dif	—		-6		+6		+11		-6		+28		-1		+27			

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16:2			Edad: 12 ^d 0	PHE { 4 ^h : 58'1 12 ^h : 58'4 20 ^h : 58'7												
	PMG: 11 ^h 52 ^m 1					SD: 15'8				PMG: 21 ^h 40 ^m			Rº: 53 ^m				
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Náutico	Civil		Hora	Rº	Hora	Rº	
h	°	'	°	°	'		°	'	°	h	m	h	m	h	m	h	m
0	182	02.5	-22	43.4	46	00.1	+7	15.1	60 N	6 56	7 52	8 48	14 13	15	4 00	90	
1	197	02.2		43.7	60	30.8 ¹¹⁷		27.5 ¹²⁴	58	49	41	32	19	18	3 55	87	
2	212	01.9		43.9	75	01.3 ¹¹⁵		39.8 ¹²³	56	42	31	18	24	21	51	84	
3	227	01.7		44.2	89	31.8 ¹¹⁵	+7	52.1 ¹²³	54	37	22	8 06	29	23	47	81	
4	242	01.4		44.4	104	02.2 ¹¹⁴	+8	04.4 ¹²³	52	31	15	7 55	33	25	44	79	
5	257	01.1	-22	44.7	118	32.5 ¹¹³	+8	16.7 ¹²³	50	6 26	7 07	7 46	14 36	28	3 41	77	
6	272	00.8	-22	45.0	133	02.8 ¹¹³	+8	28.9 ¹²²	45	6 15	6 52	7 26	14 45	31	3 34	73	
7	287	00.6		45.2	147	33.0 ¹¹²		41.1 ¹²²	40	6 05	39	7 09	51	36	29	69	
8	302	00.3		45.5	162	03.1 ¹¹¹	+8	53.3 ¹²²	35	5 56	28	6 56	14 57	39	24	66	
9	317	00.0		45.7	176	33.1 ¹¹⁰	+9	05.4 ¹²¹	30	48	6 17	44	15 03	40	20	63	
10	331	59.7		46.0	191	03.0 ¹⁰⁹		17.6 ¹²²	20	32	5 59	23	12	45	13	59	
11	346	59.5	-22	46.2	205	32.9 ¹⁰⁹	+9	29.7 ¹²¹	10 N	5 16	5 43	6 05	15 20	49	3 07	55	
12	1	59.2	-22	46.5	220	02.6 ¹⁰⁷	+9	41.7 ¹²⁰	0	5 00	5 26	5 48	15 27	53	3 01	51	
13	16	58.9		46.7	234	32.3 ¹⁰⁷	+9	53.7 ¹²⁰	10 S	4 41	5 08	31	35	56	2 56	46	
14	31	58.6		47.0	249	01.9 ¹⁰⁶	+10	05.7 ¹²⁰	20	4 19	4 49	5 13	43	61	49	43	
15	46	58.4		47.2	263	31.4 ¹⁰⁵		17.7 ¹²⁰	30	3 51	24	4 52	53	65	42	39	
16	61	58.1		47.5	278	00.8 ¹⁰⁴		29.6 ¹¹⁹	35	33	4 10	39	15 58	68	38	36	
17	76	57.8	-22	47.7	292	30.2 ¹⁰⁴	+10	41.4 ¹¹⁸	40	3 11	3 52	4 24	16 05	70	2 34	33	
18	91	57.5	-22	48.0	306	59.4 ¹⁰²	+10	53.3 ¹¹⁹	45	2 42	3 30	4 07	16 12	74	2 29	29	
19	106	57.2		48.2	321	28.6 ¹⁰²	+11	05.1 ¹¹⁸	50	1 59	3 02	3 45	21	78	22	26	
20	121	57.0		48.5	335	57.6 ¹⁰⁰		16.8 ¹¹⁷	52	1 34	2 48	35	25	81	20	23	
21	136	56.7		48.7	350	26.6 ¹⁰⁰		28.5 ¹¹⁷	54	0 57	31	23	30	83	16	21	
22	151	56.4		49.0	4	55.5 ⁹⁹		40.1 ¹¹⁶	56	** ** *	2 10	3 10	35	85	13	19	
23	166	56.1		49.2	19	24.3 ⁹⁸	+11	51.7 ¹¹⁶	58	** ** *	1 43	2 54	40	89	09	16	
24	181	55.9	-22	49.4	33	53.0 ⁹⁷	+12	03.3 ¹¹⁶	60 S	** ** *	1 03	2 35	16 47	92	2 05	13	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 18 ^h 48 ^m 7		Mag: -4.2 PMG: 15 ^h 01 ^m		Mag: +1.6 PMG: 8 ^h 10 ^m		Mag: -2.8 PMG: 23 ^h 00 ^m		Mag: -0.3 PMG: 22 ^h 25 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	77	03.3	134	47.4	-22	31.7	237	27.5	-6	52.2
1	92	05.7	149	46.8		31.0	252	28.6		52.7
2	107	08.2	164	46.2		30.4	267	29.7		53.3
3	122	10.7	179	45.6		29.7	282	30.7		53.9
4	137	13.1	194	45.0		29.1	297	31.8		54.4
5	152	15.6	209	44.3	-22	28.4	312	32.8	-6	55.0
6	167	18.1	224	43.7	-22	27.8	327	33.9	-6	55.6
7	182	20.5	239	43.1		27.1	342	35.0		56.1
8	197	23.0	254	42.5		26.5	357	36.0		56.7
9	212	25.5	269	41.9		25.8	12	37.1		57.3
10	227	27.9	284	41.3		25.2	27	38.2		57.8
11	242	30.4	299	40.6	-22	24.5	42	39.2	-6	58.4
12	257	32.9	314	40.0	-22	23.9	57	40.3	-6	58.9
13	272	35.3	329	39.4		23.2	72	41.3	-6	59.5
14	287	37.8	344	38.8		22.5	87	42.4	-7	00.1
15	302	40.2	359	38.2		21.9	102	43.5		00.6
16	317	42.7	14	37.6		21.2	117	44.5		01.2
17	332	45.2	29	37.0	-22	20.6	132	45.6	-7	01.8
18	347	47.6	44	36.4	-22	19.9	147	46.6	-7	02.3
19	2	50.1	59	35.8		19.2	162	47.7		02.9
20	17	52.6	74	35.1		18.6	177	48.8		03.5
21	32	55.0	89	34.5		17.9	192	49.8		04.0
22	47	57.5	104	33.9		17.2	207	50.9		04.6
23	63	00.0	119	33.3		16.6	222	51.9		05.2
24	78	02.4	134	32.7	-22	15.9	237	53.0	-7	05.7
Dif	—		-6		+7		+11		-6	
									+28	
									-1	
									+27	

UT	SOL			☉ LUNA					Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna							
	SD: 16°2 PMG: 11 ^h 52 ^m 5			Edad: 13 ^d 0 PHE { 4 ^h : 59°0 12 ^h : 59°2 20 ^h : 59°5 R°: 58 ^m																				
	hG ☉	Dec		hG ☾	Dif	Dec	Dif						Civil	Náutico	Hora	R°		Hora	R°					
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m		h m m							
0	181	55.9	-22	49.4	33	53.0	+12	03.3	60 N	14 55	15 51	16 48	14 28 22		5 30 93									
1	196	55.6		49.7	48	21.6	96	14.7	58	15 12	16 03	16 55	37 25		22 89									
2	211	55.3		49.9	62	50.2	96	26.2	56	26	12	17 01	45 28		15 86									
3	226	55.0		50.2	77	18.6	94	37.6	54	38	21	07	52 30		08 84									
4	241	54.7		50.4	91	46.9	93	+12 48.9	52	49	29	13	14 58 33		5 03 81									
5	256	54.5	-22	50.6	106	15.1	92	+13 00.1	50	15 58	16 36	17 18	15 04 34		4 58 79									
6	271	54.2	-22	50.9	120	43.3	92	+13 11.3	45	16 18	16 52	17 29	15 16 39		4 47 75									
7	286	53.9		51.1	135	11.3	90	22.5	40	35	17 05	39	27 41		38 71									
8	301	53.6		51.4	149	39.3	90	33.6	35	16 48	16	48	36 44		30 69									
9	316	53.3		51.6	164	07.1	88	44.6	30	17 00	27	17 56	43 47		23 66									
10	331	53.1		51.8	178	34.9	88	+13 55.5	20	21	17 45	18 12	15 57 50		12 61									
11	346	52.8	-22	52.1	193	02.6	87	+14 06.4	10 N	17 39	18 02	18 28	16 09 54		4 02 58									
12	1	52.5	-22	52.3	207	30.1	85	+14 17.2	0	17 56	18 19	18 45	16 20 57		3 52 55									
13	16	52.2		52.5	221	57.6	85	27.9	10 S	18 13	36	19 03	31 60		42 52									
14	31	51.9		52.8	236	24.9	83	38.6	20	32	18 56	25	44 63		32 48									
15	46	51.7		53.0	250	52.2	83	49.2	30	18 53	19 21	19 54	16 58 67		21 43									
16	61	51.4		53.2	265	19.4	82	+14 59.7	35	19 06	36	20 12	17 06 69		14 41									
17	76	51.1	-22	53.5	279	46.4	80	+15 10.1	40	19 21	19 53	20 35	17 15 72		3 07 38									
18	91	50.8	-22	53.7	294	13.4	80	+15 20.5	45	19 38	20 15	21 04	17 26 76		2 58 35									
19	106	50.5		53.9	308	40.3	79	30.8	50	20 00	44	21 48	39 80		48 30									
20	121	50.3		54.1	323	07.0	77	40.9	52	11	20 59	22 13	46 81		43 28									
21	136	50.0		54.4	337	33.7	77	+15 51.0	54	23	21 16	22 53	17 53 84		37 27									
22	151	49.7		54.6	352	00.3	76	+16 01.1	56	36	21 37	** **	18 00 87		32 23									
23	166	49.4		54.8	6	26.8	75	11.0	58	20 52	22 04	** **	09 90		25 21									
24	181	49.1	-22	55.0	20	53.1	73	+16 20.8	60 S	21 12	22 47	** **	18 19 94		2 18 17									
UT	ARIES			VENUS			MARTE			JÚPITER				SATURNO										
	PMG 18 ^h 44 ^m 8			Mag: -4.2 PMG: 15 ^h 02 ^m			Mag: +1.5 PMG: 8 ^h 08 ^m			Mag: -2.8 PMG: 22 ^h 55 ^m				Mag: -0.2 PMG: 22 ^h 21 ^m										
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec									
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'						
0	78	02.4	134	32.7	-22	15.9	237	53.0	-7	05.7	15	08.4	+20	12.0	23	50.6	+17	01.8						
1	93	04.9	149	32.1		15.2	252	54.1		06.3	30	11.2		12.0	38	53.2		01.7						
2	108	07.4	164	31.5		14.6	267	55.1		06.8	45	14.0		11.9	53	55.9		01.7						
3	123	09.8	179	30.9		13.9	282	56.2		07.4	60	16.8		11.9	68	58.5		01.7						
4	138	12.3	194	30.3		13.2	297	57.2		08.0	75	19.6		11.8	84	01.2		01.6						
5	153	14.7	209	29.7	-22	12.5	312	58.3	-7	08.5	90	22.4	+20	11.8	99	03.8	+17	01.6						
6	168	17.2	224	29.1	-22	11.9	327	59.4	-7	09.1	105	25.2	+20	11.7	114	06.5	+17	01.6						
7	183	19.7	239	28.5		11.2	343	00.4		09.7	120	28.0		11.7	129	09.1		01.5						
8	198	22.1	254	27.9		10.5	358	01.5		10.2	135	30.8		11.6	144	11.8		01.5						
9	213	24.6	269	27.3		09.8	13	02.6		10.8	150	33.6		11.5	159	14.4		01.5						
10	228	27.1	284	26.7		09.2	28	03.6		11.3	165	36.4		11.5	174	17.1		01.4						
11	243	29.5	299	26.1	-22	08.5	43	04.7	-7	11.9	180	39.2	+20	11.4	189	19.7	+17	01.4						
12	258	32.0	314	25.5	-22	07.8	58	05.7	-7	12.5	195	42.0	+20	11.4	204	22.4	+17	01.3						
13	273	34.5	329	24.9		07.1	73	06.8		13.0	210	44.9		11.3	219	25.0		01.3						
14	288	36.9	344	24.3		06.4	88	07.9		13.6	225	47.7		11.3	234	27.7		01.3						
15	303	39.4	359	23.7		05.8	103	08.9		14.2	240	50.5		11.2	249	30.3		01.2						
16	318	41.8	14	23.1		05.1	118	10.0		14.7	255	53.3		11.2	264	33.0		01.2						
17	333	44.3	29	22.5	-22	04.4	133	11.0	-7	15.3	270	56.1	+20	11.1	279	35.6	+17	01.2						
18	348	46.8	44	22.0	-22	03.7	148	12.1	-7	15.8	285	58.9	+20	11.1	294	38.3	+17	01.1						
19	3	49.2	59	21.4		03.0	163	13.2		16.4	301	01.7		11.0	309	40.9		01.1						
20	18	51.7	74	20.8		02.3	178	14.2		17.0	316	04.5		11.0	324	43.6		01.1						
21	33	54.2	89	20.2		01.6	193	15.3		17.5	331	07.3		10.9	339	46.2		01.0						
22	48	56.6	104	19.6		00.9	208	16.3		18.1	346	10.1		10.9	354	48.9		01.0						
23	63	59.1	119	19.0	-22	00.2	223	17.4		18.6	1	12.9		10.8	9	51.5		01.0						
24	79	01.6	134	18.4	-21	59.6	238	18.5	-7	19.2	16	15.7	+20	10.8	24	54.2	+17	00.9						
Dif	—			-6			+7			+11			-6			+28			-1			+26		

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16/2 PMG: 11 ^h 52 ^m 9			Edad: 14 ^d 0 PHE { 4 ^h : 59/8 12 ^h : 60/0 20 ^h : 60/2 R°: 62 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	181	49.1	-22	55.0	20	53.1	+16	20.8	98	60 N	6 58	7 55	8 51	14 50	32	7 03	92
1	196	48.8		55.3	35	19.4	73	30.6	98	58	51	43	34	15 02	35	6 51	88
2	211	48.6		55.5	49	45.6	72	40.2	96	56	45	33	20	13 38		41	85
3	226	48.3		55.7	64	11.6	70	49.8	96	54	39	25	8 08	22 41		32	83
4	241	48.0		55.9	78	37.6	70	+16 59.2	94	52	33	17	7 57	31 42		24	81
5	256	47.7	-22	56.1	93	03.5	69	+17 08.6	94	50	6 28	7 09	7 48	15 38	44	6 17	79
6	271	47.4	-22	56.4	107	29.3	68	+17 17.9	93	45	6 17	6 54	7 27	15 55	47	6 02	75
7	286	47.2		56.6	121	54.9	66	27.0	91	40	6 07	41	7 11	16 08	50	5 49	72
8	301	46.9		56.8	136	20.5	66	36.1	91	35	5 58	29	6 57	20 51		39	70
9	316	46.6		57.0	150	46.0	65	45.0	89	30	49	19	45	30 53		29	68
10	331	46.3		57.2	165	11.4	64	+17 53.9	89	20	33	6 00	24	16 47	56	13	65
11	346	46.0	-22	57.5	179	36.7	63	+18 02.6	87	10 N	5 17	5 44	6 06	17 03	58	5 00	61
12	1	45.7	-22	57.7	194	01.9	62	+18 11.2	86	0	5 01	5 27	5 49	17 17	61	4 47	58
13	16	45.4		57.9	208	26.9	60	19.7	85	10 S	4 42	5 09	32	31 63		34	56
14	31	45.2		58.1	222	51.9	60	28.1	84	20	4 20	4 49	5 13	17 47	65	20	53
15	46	44.9		58.3	237	16.8	59	36.4	83	30	3 51	25	4 52	18 05	68	4 04	50
16	61	44.6		58.5	251	41.7	59	44.6	82	35	33	4 10	39	15 70		3 55	48
17	76	44.3	-22	58.7	266	06.4	57	+18 52.6	80	40	3 11	3 52	4 25	18 27	72	3 45	45
18	91	44.0	-22	58.9	280	31.0	56	+19 00.6	80	45	2 41	3 30	4 07	18 42	74	3 33	42
19	106	43.7		59.1	294	55.5	55	08.4	78	50	1 58	3 01	3 45	18 59	77	18	38
20	121	43.4		59.4	309	20.0	55	16.0	76	52	1 32	2 47	35	19 07	79	11	37
21	136	43.2		59.6	323	44.3	53	23.6	76	54	0 53	29	23	17 80		3 04	34
22	151	42.9	-22	59.8	338	08.6	53	31.0	74	56	** **	2 08	3 09	27 83		2 55	32
23	166	42.6	-23	00.0	352	32.8	52	38.3	73	58	** **	1 41	2 53	39 85		46	29
24	181	42.3	-23	00.2	6	56.9	51	+19 45.5	72	60 S	** **	0 58	2 33	19 53	88	2 35	25

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 18 ^h 40 ^m 8		Mag: -4.2 PMG: 15 ^h 03 ^m			Mag: +1.5 PMG: 8 ^h 06 ^m			Mag: -2.8 PMG: 22 ^h 51 ^m			Mag: -0.2 PMG: 22 ^h 16 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	79	01.6	134	18.4	-21	59.6	238	18.5	-7	19.2	16	15.7	+20	10.8		
1	94	04.0	149	17.8		58.9	253	19.5		19.8	31	18.5		10.7		
2	109	06.5	164	17.2		58.2	268	20.6		20.3	46	21.3		10.7		
3	124	09.0	179	16.7		57.5	283	21.6		20.9	61	24.1		10.6		
4	139	11.4	194	16.1		56.8	298	22.7		21.4	76	26.9		10.6		
5	154	13.9	209	15.5	-21	56.1	313	23.8	-7	22.0	91	29.7	+20	10.5		
6	169	16.3	224	14.9	-21	55.4	328	24.8	-7	22.6	106	32.5	+20	10.5		
7	184	18.8	239	14.3		54.7	343	25.9		23.1	121	35.3		10.4		
8	199	21.3	254	13.7		54.0	358	26.9		23.7	136	38.1		10.4		
9	214	23.7	269	13.2		53.3	13	28.0		24.2	151	40.9		10.3		
10	229	26.2	284	12.6		52.6	28	29.1		24.8	166	43.7		10.3		
11	244	28.7	299	12.0	-21	51.9	43	30.1	-7	25.4	181	46.5	+20	10.2		
12	259	31.1	314	11.4	-21	51.2	58	31.2	-7	25.9	196	49.3	+20	10.2		
13	274	33.6	329	10.8		50.5	73	32.3		26.5	211	52.1		10.1		
14	289	36.1	344	10.3		49.7	88	33.3		27.0	226	54.9		10.1		
15	304	38.5	359	09.7		49.0	103	34.4		27.6	241	57.7		10.0		
16	319	41.0	14	09.1		48.3	118	35.4		28.2	257	00.5		10.0		
17	334	43.5	29	08.5	-21	47.6	133	36.5	-7	28.7	272	03.3	+20	09.9		
18	349	45.9	44	08.0	-21	46.9	148	37.6	-7	29.3	287	06.1	+20	09.9		
19	4	48.4	59	07.4		46.2	163	38.6		29.8	302	08.9		09.8		
20	19	50.8	74	06.8		45.5	178	39.7		30.4	317	11.7		09.8		
21	34	53.3	89	06.2		44.8	193	40.7		31.0	332	14.5		09.7		
22	49	55.8	104	05.7		44.1	208	41.8		31.5	347	17.3		09.7		
23	64	58.2	119	05.1		43.3	223	42.9		32.1	2	20.1		09.6		
24	80	00.7	134	04.5	-21	42.6	238	43.9	-7	32.6	17	22.9	+20	09.6		
Dif	—		-6		+7		+11		-6		+28		-1		+26	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16'2 PMG: 11 ^h 53 ^m 4			Edad: 15 ^d 0 PHE { 4 ^h : 60'4 12 ^h : 60'5 20 ^h : 60'6 R°: ***m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	181	42.3	-23 00.2	6	56.9	+19 45.5	70	60 N	14 54	15 51	16 47	15 22 48	8 35 81		
1	196	42.0	00.4	21	20.9	50 52.5	70	58	15 11	16 02	16 54	37 51	19 79		
2	211	41.7	00.6	35	44.8	49 +19 59.5	70	56	25	12	17 01	15 51 52	8 06 78		
3	226	41.4	00.8	50	08.6	48 +20 06.2	67	54	38	21	07	16 03 53	7 55 76		
4	241	41.2	01.0	64	32.4	48 12.9	67	52	48	29	13	13 55	45 74		
5	256	40.9	-23 01.2	78	56.0	46 +20 19.4	65	50	15 58	16 36	17 18	16 22 56	7 36 73		
6	271	40.6	-23 01.4	93	19.6	46 +20 25.7	63	45	16 18	16 52	17 29	16 42 57	7 17 71		
7	286	40.3	01.6	107	43.1	45 32.0	63	40	35	17 05	39	16 58 58	7 01 70		
8	301	40.0	01.8	122	06.6	45 38.1	61	35	16 49	17	48	17 11 59	6 49 68		
9	316	39.7	02.0	136	29.9	43 44.0	59	30	17 01	27	17 57	23 60	37 68		
10	331	39.4	02.2	150	53.2	43 49.8	58	20	22	17 46	18 13	17 43 62	18 65		
11	346	39.1	-23 02.4	165	16.4	42 +20 55.4	56	10 N	17 40	18 03	18 29	18 01 62	6 01 64		
12	1	38.9	-23 02.6	179	39.6	42 +21 01.0	56	0	17 57	18 20	18 46	18 18 63	5 45 63		
13	16	38.6	02.8	194	02.6	40 06.3	53	10 S	18 14	37	19 04	34 64	30 60		
14	31	38.3	03.0	208	25.6	40 11.5	52	20	33	18 58	27	18 52 65	5 13 59		
15	46	38.0	03.2	222	48.6	40 16.6	51	30	18 55	19 22	19 55	19 13 66	4 54 56		
16	61	37.7	03.4	237	11.5	39 21.5	49	35	19 08	37	20 14	25 67	43 55		
17	76	37.4	-23 03.5	251	34.3	38 +21 26.2	47	40	19 22	19 55	20 36	19 39 67	4 30 54		
18	91	37.1	-23 03.7	265	57.0	37 +21 30.9	47	45	19 40	20 17	21 06	19 56 68	4 15 52		
19	106	36.8	03.9	280	19.7	37 35.3	44	50	20 02	20 46	21 51	20 16 69	3 56 50		
20	121	36.5	04.1	294	42.3	36 39.6	43	52	13	21 01	22 17	26 70	48 48		
21	136	36.2	04.3	309	04.9	36 43.7	41	54	25	18	22 58	37 70	38 46		
22	151	36.0	04.5	323	27.4	35 47.7	40	56	39	21 40	** ** *	20 50 71	27 45		
23	166	35.7	04.7	337	49.9	35 51.5	38	58	20 55	22 08	** ** *	21 04 72	15 42		
24	181	35.4	-23 04.9	352	12.3	34 +21 55.2	37	60 S	21 15	22 53	** ** *	21 21 74	3 00 39		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 18 ^h 36 ^m 9		Mag: -4.2 PMG: 15 ^h 04 ^m			Mag: +1.5 PMG: 8 ^h 05 ^m			Mag: -2.8 PMG: 22 ^h 46 ^m			Mag: -0.2 PMG: 22 ^h 12 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	'	°	'	'	°	'	'	°	'
0	80	00.7	134	04.5	-21 42.6	238	43.9	-7 32.6	17	22.9	+20 09.6	25	57.7	+17 00.1	
1	95	03.2	149	04.0	41.9	253	45.0	33.2	32	25.7	09.5	41	00.4	+17 00.1	
2	110	05.6	164	03.4	41.2	268	46.0	33.8	47	28.5	09.5	56	03.0	+17 00.0	
3	125	08.1	179	02.8	40.5	283	47.1	34.3	62	31.3	09.4	71	05.7	00.0	
4	140	10.6	194	02.3	39.7	298	48.2	34.9	77	34.1	09.3	86	08.3	+17 00.0	
5	155	13.0	209	01.7	-21 39.0	313	49.2	-7 35.4	92	36.9	+20 09.3	101	10.9	+16 59.9	
6	170	15.5	224	01.1	-21 38.3	328	50.3	-7 36.0	107	39.7	+20 09.2	116	13.6	+16 59.9	
7	185	18.0	239	00.6	37.6	343	51.3	36.5	122	42.5	09.2	131	16.2	59.8	
8	200	20.4	254	00.0	36.9	358	52.4	37.1	137	45.3	09.1	146	18.9	59.8	
9	215	22.9	268	59.4	36.1	13	53.5	37.7	152	48.1	09.1	161	21.5	59.8	
10	230	25.3	283	58.9	35.4	28	54.5	38.2	167	50.9	09.0	176	24.2	59.7	
11	245	27.8	298	58.3	-21 34.7	43	55.6	-7 38.8	182	53.7	+20 09.0	191	26.8	+16 59.7	
12	260	30.3	313	57.8	-21 33.9	58	56.6	-7 39.3	197	56.5	+20 08.9	206	29.5	+16 59.7	
13	275	32.7	328	57.2	33.2	73	57.7	39.9	212	59.3	08.9	221	32.1	59.6	
14	290	35.2	343	56.6	32.5	88	58.8	40.4	228	02.1	08.8	236	34.8	59.6	
15	305	37.7	358	56.1	31.8	103	59.8	41.0	243	04.9	08.8	251	37.4	59.6	
16	320	40.1	13	55.5	31.0	119	00.9	41.6	258	07.7	08.7	266	40.0	59.5	
17	335	42.6	28	55.0	-21 30.3	134	01.9	-7 42.1	273	10.5	+20 08.7	281	42.7	+16 59.5	
18	350	45.1	43	54.4	-21 29.6	149	03.0	-7 42.7	288	13.2	+20 08.6	296	45.3	+16 59.5	
19	5	47.5	58	53.9	28.8	164	04.1	43.2	303	16.0	08.6	311	48.0	59.4	
20	20	50.0	73	53.3	28.1	179	05.1	43.8	318	18.8	08.5	326	50.6	59.4	
21	35	52.5	88	52.7	27.3	194	06.2	44.3	333	21.6	08.5	341	53.3	59.4	
22	50	54.9	103	52.2	26.6	209	07.2	44.9	348	24.4	08.4	356	55.9	59.3	
23	65	57.4	118	51.6	25.9	224	08.3	45.5	3	27.2	08.4	11	58.6	59.3	
24	80	59.8	133	51.1	-21 25.1	239	09.4	-7 46.0	18	30.0	+20 08.3	27	01.2	+16 59.3	
Dif	—		-6		+7	+11		-6	+28		-1		+26		0

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'2 PMG: 11 ^h 53 ^m 9				Edad: 16 ^d 0 PHE { 4 ^h : 60'7 12 ^h : 60'8 20 ^h : 60'8 SD: 16'5 PMG: 0 ^h 33 ^m R°: 63 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	181	35.4	-23	04.9	352	12.3	+21	55.2	60 N	7 00	7 57	8 54	16 10	70	9 56	63		
1	196	35.1		05.0	6	34.7	34	+21	58.7	58	6 53	45	37	28	69	38	63	
2	211	34.8		05.2	20	57.0	33	+22	02.0	56	47	35	23	43	69	24	63	
3	226	34.5		05.4	35	19.3	33		05.2	54	41	27	8 10	16 56	68	9 11	63	
4	241	34.2		05.6	49	41.6	33		08.2	52	35	19	7 59	17 08	67	8 59	64	
5	256	33.9	-23	05.8	64	03.8	32	+22	11.1	50	6 30	7 11	7 50	17 18	67	8 49	64	
6	271	33.6	-23	06.0	78	26.0	32	+22	13.8	45	6 18	6 55	7 29	17 39	66	8 28	64	
7	286	33.3		06.1	92	48.1	31		16.3	40	6 08	42	7 13	17 56	66	8 11	64	
8	301	33.1		06.3	107	10.2	31		18.6	35	5 59	31	6 59	18 10	66	7 57	64	
9	316	32.8		06.5	121	32.3	31		20.8	30	50	20	46	23	65	45	63	
10	331	32.5		06.7	135	54.3	30		22.9	20	34	6 02	26	18 45	64	23	64	
11	346	32.2	-23	06.9	150	16.3	30	+22	24.7	10 N	5 18	5 45	6 07	19 03	64	7 05	63	
12	1	31.9	-23	07.0	164	38.3	30	+22	26.4	0	5 01	5 28	5 50	19 21	63	6 48	63	
13	16	31.6		07.2	179	00.3	30		27.9	10 S	4 43	5 10	33	38	63	30	64	
14	31	31.3		07.4	193	22.3	30		29.3	20	4 20	4 50	5 14	19 57	62	6 12	63	
15	46	31.0		07.6	207	44.2	29		30.5	30	3 52	25	4 52	20 19	61	5 50	63	
16	61	30.7		07.7	222	06.1	29		31.5	35	33	4 10	40	32	60	38	63	
17	76	30.4	-23	07.9	236	28.1	30	+22	32.3	40	3 11	3 52	4 25	20 46	60	5 24	62	
18	91	30.1	-23	08.1	250	50.0	29	+22	33.0	45	2 41	3 30	4 07	21 04	59	5 07	62	
19	106	29.8		08.2	265	11.9	29		33.5	50	1 57	3 01	3 45	25	58	4	46	61
20	121	29.5		08.4	279	33.8	29		33.9	52	1 30	2 46	34	36	57	36	61	
21	136	29.2		08.6	293	55.7	29		34.1	54	0 49	29	22	21 47	56	24	61	
22	151	29.0		08.8	308	17.5	28		34.1	56	** ** *	2 07	3 08	22 01	55	4	12	60
23	166	28.7		08.9	322	39.4	29		33.9	58	** ** *	1 39	2 52	16	54	3	57	60
24	181	28.4	-23	09.1	337	01.3	29	+22	33.6	60 S	** ** *	0 54	2 32	22 35	52	3	39	59

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 18 ^h 33 ^m 0		Mag: -4.2 PMG: 15 ^h 05 ^m		Mag: +1.5 PMG: 8 ^h 03 ^m		Mag: -2.8 PMG: 22 ^h 42 ^m		Mag: -0.2 PMG: 22 ^h 08 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	80	59.8	133	51.1	-21	25.1	239	09.4	-7	46.0
1	96	02.3	148	50.5		24.4	254	10.4		46.6
2	111	04.8	163	50.0		23.6	269	11.5		47.1
3	126	07.2	178	49.4		22.9	284	12.5		47.7
4	141	09.7	193	48.9		22.2	299	13.6		48.2
5	156	12.2	208	48.3	-21	21.4	314	14.7	-7	48.8
6	171	14.6	223	47.8	-21	20.7	329	15.7	-7	49.3
7	186	17.1	238	47.2		19.9	344	16.8		49.9
8	201	19.6	253	46.7		19.2	359	17.8		50.5
9	216	22.0	268	46.2		18.4	14	18.9		51.0
10	231	24.5	283	45.6		17.7	29	20.0		51.6
11	246	27.0	298	45.1	-21	16.9	44	21.0	-7	52.1
12	261	29.4	313	44.5	-21	16.2	59	22.1	-7	52.7
13	276	31.9	328	44.0		15.4	74	23.1		53.2
14	291	34.3	343	43.4		14.7	89	24.2		53.8
15	306	36.8	358	42.9		13.9	104	25.3		54.3
16	321	39.3	13	42.4		13.2	119	26.3		54.9
17	336	41.7	28	41.8	-21	12.4	134	27.4	-7	55.4
18	351	44.2	43	41.3	-21	11.7	149	28.5	-7	56.0
19	6	46.7	58	40.8		10.9	164	29.5		56.6
20	21	49.1	73	40.2		10.1	179	30.6		57.1
21	36	51.6	88	39.7		09.4	194	31.6		57.7
22	51	54.1	103	39.1		08.6	209	32.7		58.2
23	66	56.5	118	38.6		07.9	224	33.8		58.8
24	81	59.0	133	38.1	-21	07.1	239	34.8	-7	59.3
Dif	—		-5		+8		+11		-6	

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'2 PMG: 11 ^h 54 ^m 3			Edad: 17 ^d 0 PHE { SD: 16'6 PMG: 1 ^h 36 ^m 4 ^h : 60'8 12 ^h : 60'8 20 ^h : 60'7 R°: 63 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	181	28.4	-23	09.1	337	01.3	+22 33.6	60 N	14 53	15 51	16 47	17 20 86	10 59 42	
1	196	28.1		09.3	351	23.3	30 33.0	58	15 10	16 02	16 54	37 83	41 46	
2	211	27.8		09.4	5	45.2	29 32.4	56	25	12	17 01	17 52 80	27 47	
3	226	27.5		09.6	20	07.1	29 31.5	54	37	21	07	18 04 79	14 44	
4	241	27.2		09.7	34	29.0	29 30.5	52	48	29	13	15 77	10 03 50	
5	256	26.9	-23	09.9	48	51.0	30 +22 29.3	50	15 58	16 36	17 18	18 25 76	9 53 51	
6	271	26.6	-23	10.1	63	13.0	30 +22 28.0	45	16 19	16 52	17 30	18 45 73	9 32 54	
7	286	26.3		10.2	77	35.0	30 26.5	40	35	17 06	40	19 02 71	15 55	
8	301	26.0		10.4	91	57.0	30 24.8	35	16 49	17	49	16 69	9 01 57	
9	316	25.7		10.6	106	19.1	31 22.9	30	17 01	28	17 58	28 68	8 48 58	
10	331	25.4		10.7	120	41.1	30 20.9	20	22	17 46	18 14	19 49 65	27 60	
11	346	25.1	-23	10.9	135	03.3	32 +22 18.7	10 N	17 41	18 04	18 30	20 07 63	8 08 62	
12	1	24.8	-23	11.0	149	25.4	31 +22 16.4	0	17 58	18 21	18 47	20 24 61	7 51 63	
13	16	24.5		11.2	163	47.6	32 13.9	10 S	18 16	39	19 06	41 59	34 64	
14	31	24.2		11.3	178	09.8	32 11.2	20	34	18 59	28	20 59 57	7 15 65	
15	46	23.9		11.5	192	32.0	32 08.3	30	30	18 56	19 24	19 57	21 20 54	
16	61	23.6		11.7	206	54.3	33 05.3	35	19 09	39	20 15	32 53	41 68	
17	76	23.3	-23	11.8	221	16.7	34 +22 02.2	40	19 24	19 57	20 38	21 46 51	6 26 69	
18	91	23.1	-23	12.0	235	39.0	33 +21 58.8	45	19 42	20 19	21 08	22 03 48	6 09 70	
19	106	22.8		12.1	250	01.5	35 55.4	50	20 04	20 48	21 53	23 45	5 47 72	
20	121	22.5		12.3	264	23.9	34 51.7	52	15	21 03	22 20	33 43	37 73	
21	136	22.2		12.4	278	46.5	36 47.9	54	27	21	23 03	43 42	25 74	
22	151	21.9		12.6	293	09.0	35 43.9	56	41	21 43	** **	22 56 40	5 12 75	
23	166	21.6		12.7	307	31.7	37 39.8	58	20 57	22 12	** **	23 10 37	4 57 77	
24	181	21.3	-23	12.9	321	54.4	37 +21 35.5	60 S	21 17	22 59	** **	23 27 33	4 38 79	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 18 ^h 29 ^m 0		Mag: -4.2 PMG: 15 ^h 06 ^m			Mag: +1.5 PMG: 8 ^h 01 ^m			Mag: -2.8 PMG: 22 ^h 37 ^m			Mag: -0.2 PMG: 22 ^h 04 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	81	59.0	133	38.1	-21	07.1	239	34.8	-7	59.3	19	37.1	+20	07.1
1	97	01.5	148	37.5		06.3	254	35.9	-7	59.9	34	39.8		07.1
2	112	03.9	163	37.0		05.6	269	36.9	-8	00.4	49	42.6		07.0
3	127	06.4	178	36.5		04.8	284	38.0		01.0	64	45.4		07.0
4	142	08.8	193	36.0		04.0	299	39.1		01.5	79	48.2		06.9
5	157	11.3	208	35.4	-21	03.3	314	40.1	-8	02.1	94	51.0	+20	06.9
6	172	13.8	223	34.9	-21	02.5	329	41.2	-8	02.6	109	53.8	+20	06.8
7	187	16.2	238	34.4		01.7	344	42.2		03.2	124	56.6		06.8
8	202	18.7	253	33.8		01.0	359	43.3		03.7	139	59.4		06.7
9	217	21.2	268	33.3	-21	00.2	14	44.3		04.3	155	02.2		06.7
10	232	23.6	283	32.8	-20	59.4	29	45.4		04.9	170	05.0		06.6
11	247	26.1	298	32.3	-20	58.6	44	46.5	-8	05.4	185	07.7	+20	06.6
12	262	28.6	313	31.7	-20	57.9	59	47.5	-8	06.0	200	10.5	+20	06.5
13	277	31.0	328	31.2		57.1	74	48.6		06.5	215	13.3		06.5
14	292	33.5	343	30.7		56.3	89	49.6		07.1	230	16.1		06.4
15	307	36.0	358	30.2		55.5	104	50.7		07.6	245	18.9		06.4
16	322	38.4	13	29.7		54.8	119	51.8		08.2	260	21.7		06.4
17	337	40.9	28	29.1	-20	54.0	134	52.8	-8	08.7	275	24.5	+20	06.3
18	352	43.3	43	28.6	-20	53.2	149	53.9	-8	09.3	290	27.3	+20	06.3
19	7	45.8	58	28.1		52.4	164	54.9		09.8	305	30.1		06.2
20	22	48.3	73	27.6		51.6	179	56.0		10.4	320	32.8		06.2
21	37	50.7	88	27.1		50.9	194	57.1		10.9	335	35.6		06.1
22	52	53.2	103	26.5		50.1	209	58.1		11.5	350	38.4		06.1
23	67	55.7	118	26.0		49.3	224	59.2		12.0	5	41.2		06.0
24	82	58.1	133	25.5	-20	48.5	240	00.2	-8	12.6	20	44.0	+20	06.0
Dif	—		-5		+8		+11		-6		+28		0	
													+26	
													0	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'2 PMG: 11 ^h 54 ^m 8			Edad: 18 ^d 0 PHE { 4 ^h : 60'6 12 ^h : 60'5 20 ^h : 60'3 PMG: 2 ^h 39 ^m R°: 60 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	181	21.3	-23	12.9	321	54.4	+21	35.5	60 N	7	02	7	59	8	56	18	46	93
1	196	21.0		13.0	336	17.1	37	31.1	58	6	55	47	39	19	00	89	27	31
2	211	20.7		13.2	350	39.9	38	26.5	56	48	37	25		12	86		14	34
3	226	20.4		13.3	5	02.8	39	21.8	54	42	28	12		23	83		11	03
4	241	20.1		13.4	19	25.7	39	16.9	52	37	20	8	01	32	82		10	53
5	256	19.8	-23	13.6	33	48.7	40	+21	50	6	31	7	13	7	51	19	41	79
6	271	19.5	-23	13.7	48	11.8	41	+21	45	6	20	6	57	7	31	19	58	76
7	286	19.2		13.9	62	34.9	41	+21	40	10	44	14		20	13	72	10	10
8	301	18.9		14.0	76	58.1	42	+20	35	6	00	32	7	00	25	70	9	58
9	316	18.6		14.2	91	21.4	43		30	5	52	21	6	48	36	68	46	51
10	331	18.3		14.3	105	44.8	44		20	35	6	03	27	20	54	64	27	54
11	346	18.0	-23	14.4	120	08.2	44	+20	10 N	5	19	5	46	6	08	21	10	61
12	1	17.7	-23	14.6	134	31.7	45	+20	0	5	02	5	29	5	51	21	25	58
13	16	17.4		14.7	148	55.2	45		10 S	4	44	5	11	34	40	55	38	62
14	31	17.1		14.8	163	18.9	47		20	4	21	4	50	5	15	21	56	51
15	46	16.8		15.0	177	42.6	47		30	3	52	26	4	53	22	14	48	8
16	61	16.5		15.1	192	06.4	48	+20	35	34	4	10	40		25	45	7	49
17	76	16.2	-23	15.2	206	30.3	49	+20	40	3	11	3	52	4	25	22	37	42
18	91	15.9	-23	15.4	220	54.3	50	+19	45	2	41	3	30	4	07	22	51	39
19	106	15.6		15.5	235	18.3	50		50	1	56	3	01	3	45	23	08	36
20	121	15.3		15.6	249	42.5	52		52	1	29	2	46	34		16	34	50
21	136	15.0		15.8	264	06.7	52		54	0	46	28	22		25	32	39	83
22	151	14.7		15.9	278	31.0	53		56	** ** *	2	06	3	08		36	28	27
23	166	14.4		16.0	292	55.4	54		58	** ** *	1	37	2	52		23	47	26
24	181	14.1	-23	16.2	307	19.9	55	+19	60 S	** ** *	0	50	2	32	** ** *	5	57	91

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 18 ^h 25 ^m 1		Mag: -4.2 PMG: 15 ^h 07 ^m		Mag: +1.5 PMG: 7 ^h 59 ^m		Mag: -2.8 PMG: 22 ^h 33 ^m		Mag: -0.2 PMG: 22 ^h 00 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	82	58.1	133	25.5	240	00.2	20	44.0	29	08.0
1	98	00.6	148	25.0	255	01.3	35	46.8	44	10.6
2	113	03.1	163	24.5	270	02.4	50	49.6	59	13.2
3	128	05.5	178	24.0	285	03.4	65	52.3	74	15.9
4	143	08.0	193	23.5	300	04.5	80	55.1	89	18.5
5	158	10.4	208	23.0	315	05.5	95	57.9	104	21.2
6	173	12.9	223	22.4	330	06.6	111	00.7	119	23.8
7	188	15.4	238	21.9	345	07.7	126	03.5	134	26.4
8	203	17.8	253	21.4	0	08.7	141	06.3	149	29.1
9	218	20.3	268	20.9	15	09.8	156	09.1	164	31.7
10	233	22.8	283	20.4	30	10.8	171	11.8	179	34.3
11	248	25.2	298	19.9	45	11.9	186	14.6	194	37.0
12	263	27.7	313	19.4	60	13.0	201	17.4	209	39.6
13	278	30.2	328	18.9	75	14.0	216	20.2	224	42.3
14	293	32.6	343	18.4	90	15.1	231	23.0	239	44.9
15	308	35.1	358	17.9	105	16.1	246	25.8	254	47.5
16	323	37.6	13	17.4	120	17.2	261	28.6	269	50.2
17	338	40.0	28	16.9	135	18.3	276	31.3	284	52.8
18	353	42.5	43	16.4	150	19.3	291	34.1	299	55.4
19	8	44.9	58	15.9	165	20.4	306	36.9	314	58.1
20	23	47.4	73	15.4	180	21.4	321	39.7	330	00.7
21	38	49.9	88	14.9	195	22.5	336	42.5	345	03.4
22	53	52.3	103	14.4	210	23.6	351	45.3	0	06.0
23	68	54.8	118	13.9	225	24.6	6	48.0	15	08.6
24	83	57.3	133	13.4	240	25.7	21	50.8	30	11.3
Dif	—		-5		+8		+28		+26	
							0		0	

UT	SOL				LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16'3 PMG: 11 ^h 55 ^m 3				Edad: 19 ^d 0 PHE { SD: 16'4 PMG: 3 ^h 39 ^m 4 ^h : 60'2 12 ^h : 60'0 20 ^h : 59'8 R°: 57 ^m													
	hG ☉	Dec	hG ☾	Dif	Dec	Dif	Civil	Náutico			Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m		
0	181	14.1	-23	16.2	307	19.9	+19	09.0	60 N	14 53	15 50	16 47	20 19 93	12 09 19				
1	196	13.8		16.3	321	44.4	55	+19 01.2	58	15 10	16 02	16 55	29 89	11 58 22				
2	211	13.5		16.4	336	09.1	57	+18 53.3	56	25	12	17 01	38 86	48 25				
3	226	13.2		16.5	350	33.8	57	45.3	54	38	21	07	46 84	40 27				
4	241	12.9		16.7	4	58.7	59	37.2	52	49	29	13	20 54 81	32 30				
5	256	12.6	-23	16.8	19	23.6	59	+18 28.9	50	15 58	16 37	17 18	21 00 79	11 25 32				
6	271	12.3	-23	16.9	33	48.6	60	+18 20.5	45	16 19	16 53	17 30	21 14 74	11 10 36				
7	286	12.0		17.0	48	13.7	61	12.0	40	36	17 06	40	25 71	10 57 39				
8	301	11.7		17.2	62	38.9	62	+18 03.4	35	16 50	18	50	35 68	46 43				
9	316	11.4		17.3	77	04.2	63	+17 54.7	30	17 02	28	17 58	44 65	37 45				
10	331	11.1		17.4	91	29.6	64	45.8	20	23	17 47	18 15	21 58 61	21 48				
11	346	10.8	-23	17.5	105	55.1	65	+17 36.9	10 N	17 42	18 05	18 31	22 11 57	10 07 52				
12	1	10.5	-23	17.6	120	20.7	66	+17 27.9	0	17 59	18 22	18 48	22 23 53	9 53 56				
13	16	10.2		17.8	134	46.3	66	18.7	10 S	18 17	18 40	19 07	35 50	40 58				
14	31	09.9		17.9	149	12.1	68	09.4	20	35	19 00	29	22 47 46	25 63				
15	46	09.6		18.0	163	37.9	68	+17 00.1	30	18 57	25	19 58	23 02 41	9 08 67				
16	61	09.3		18.1	178	03.9	70	+16 50.6	35	19 10	40	20 17	10 39	8 58 70				
17	76	09.0	-23	18.2	192	29.9	70	+16 41.1	40	19 25	19 58	20 40	23 19 37	8 47 72				
18	91	08.7	-23	18.3	206	56.1	72	+16 31.4	45	19 43	20 21	21 10	23 30 33	8 34 75				
19	106	08.4		18.5	221	22.3	72	21.7	50	20 06	20 50	21 55	44 28	18 80				
20	121	08.1		18.6	235	48.6	73	11.8	52	16	21 05	22 23	50 26	10 82				
21	136	07.8		18.7	250	15.0	74	+16 01.9	54	29	23	23 08	23 57 24	8 02 84				
22	151	07.5		18.8	264	41.5	75	+15 51.9	56	20 43	21 45	** ** *	** ** *	7 52 87				
23	166	07.2		18.9	279	08.1	76	41.7	58	21 00	22 15	** ** *	** ** *	41 90				
24	181	06.9	-23	19.0	293	34.8	77	+15 31.5	60 S	21 20	23 03	** ** *	0 00 23	7 28 94				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 18 ^h 21 ^m 2		Mag: -4.3 PMG: 15 ^h 08 ^m				Mag: +1.5 PMG: 7 ^h 58 ^m				Mag: -2.8 PMG: 22 ^h 28 ^m				Mag: -0.2 PMG: 21 ^h 55 ^m			
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec	hG ♆	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	83	57.3	133	13.4	-20	29.4	240	25.7	-8	25.8	21	50.8	+20	04.8	30	11.3	+16	56.9
1	98	59.7	148	12.9		28.6	255	26.7		26.3	36	53.6		04.7	45	13.9		56.9
2	114	02.2	163	12.4		27.8	270	27.8		26.9	51	56.4		04.7	60	16.5		56.9
3	129	04.7	178	11.9		27.0	285	28.9		27.4	66	59.2		04.6	75	19.2		56.8
4	144	07.1	193	11.4		26.2	300	29.9		28.0	82	01.9		04.6	90	21.8		56.8
5	159	09.6	208	10.9	-20	25.4	315	31.0	-8	28.5	97	04.7	+20	04.5	105	24.4	+16	56.8
6	174	12.1	223	10.4	-20	24.6	330	32.0	-8	29.0	112	07.5	+20	04.5	120	27.1	+16	56.7
7	189	14.5	238	10.0		23.7	345	33.1		29.6	127	10.3		04.5	135	29.7		56.7
8	204	17.0	253	09.5		22.9	0	34.2		30.1	142	13.1		04.4	150	32.3		56.7
9	219	19.4	268	09.0		22.1	15	35.2		30.7	157	15.9		04.4	165	35.0		56.6
10	234	21.9	283	08.5		21.3	30	36.3		31.2	172	18.6		04.3	180	37.6		56.6
11	249	24.4	298	08.0	-20	20.5	45	37.3	-8	31.8	187	21.4	+20	04.3	195	40.2	+16	56.6
12	264	26.8	313	07.5	-20	19.7	60	38.4	-8	32.3	202	24.2	+20	04.2	210	42.9	+16	56.5
13	279	29.3	328	07.0		18.9	75	39.4		32.9	217	27.0		04.2	225	45.5		56.5
14	294	31.8	343	06.6		18.0	90	40.5		33.4	232	29.8		04.1	240	48.1		56.5
15	309	34.2	358	06.1		17.2	105	41.6		34.0	247	32.5		04.1	255	50.8		56.5
16	324	36.7	13	05.6		16.4	120	42.6		34.5	262	35.3		04.0	270	53.4		56.4
17	339	39.2	28	05.1	-20	15.6	135	43.7	-8	35.1	277	38.1	+20	04.0	285	56.1	+16	56.4
18	354	41.6	43	04.6	-20	14.7	150	44.7	-8	35.6	292	40.9	+20	03.9	300	58.7	+16	56.4
19	9	44.1	58	04.1		13.9	165	45.8		36.2	307	43.6		03.9	316	01.3		56.3
20	24	46.6	73	03.7		13.1	180	46.9		36.7	322	46.4		03.8	331	04.0		56.3
21	39	49.0	88	03.2		12.3	195	47.9		37.2	337	49.2		03.8	346	06.6		56.3
22	54	51.5	103	02.7		11.5	210	49.0		37.8	352	52.0		03.7	1	09.2		56.2
23	69	53.9	118	02.2		10.6	225	50.0		38.3	7	54.8		03.7	16	11.9		56.2
24	84	56.4	133	01.7	-20	09.8	240	51.1	-8	38.9	22	57.5	+20	03.6	31	14.5	+16	56.2
Dif	—		-5		+8		+11		-5		+28		0		+26		0	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'3 PMG: 11 ^h 55 ^m 8			Edad: 20 ^d 0 PHE { 4 ^h : 59'6 12 ^h : 59'4 20 ^h : 59'1 PMG: 4 ^h 36 ^m R°: 52 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	181	06.9	-23	19.0	293	34.8	+15	31.5	60 N	7	04	8	01	21	52	90
1	196	06.6		19.1	308	01.6	78	21.3	58	6	57	7	49	41	58	87
2	211	06.3		19.2	322	28.5	79	10.9	56		50		39	26	04	84
3	226	06.0		19.3	336	55.5	80	+15	54	44	30		14	10	81	07
4	241	05.6		19.4	351	22.6	81	+14	52	38	22	8	03	15	78	12
5	256	05.3	-23	19.5	5	49.7	81	+14	50	6	33	7	14	7	53	19
6	271	05.0	-23	19.6	20	17.0	83	+14	45	6	21	6	58	7	32	28
7	286	04.7		19.7	34	44.3	83	17.8	40	11	45		15	36	69	36
8	301	04.4		19.9	49	11.7	84	+14	35	6	02	33	7	01	43	66
9	316	04.1		20.0	63	39.3	86	+13	30	5	53	23	6	49	49	63
10	331	03.8		20.1	78	06.9	86	45.1	20	36	6	04	28	22	59	58
11	346	03.5	-23	20.2	92	34.6	87	+13	10 N	5	20	5	47	6	09	23
12	1	03.2	-23	20.3	107	02.4	88	+13	0	5	03	5	30	5	52	16
13	16	02.9		20.4	121	30.2	88	11.7	10 S	4	44	5	11	35	25	46
14	31	02.6		20.5	135	58.2	90	+13	20	4	22	4	51	5	16	33
15	46	02.3		20.5	150	26.3	91	+12	30	3	53	26	4	54	43	38
16	61	02.0		20.6	164	54.4	91	37.7	35	34	4	11	41	49	35	10
17	76	01.7	-23	20.7	179	22.6	92	+12	40	3	11	3	53	4	26	23
18	91	01.4	-23	20.8	193	50.9	93	+12	45	2	41	3	30	4	08	**
19	106	01.1		20.9	208	19.3	94	+12	50	1	56	3	01	3	45	**
20	121	00.8		21.0	222	47.8	95	+11	52	1	28	2	46	34	**	
21	136	00.5		21.1	237	16.4	96	39.8	54	0	43	28	22	**		
22	151	00.2		21.2	251	45.0	96	28.1	56	**	**	2	06	3	08	0
23	165	59.9		21.3	266	13.7	97	16.3	58	**	**	1	36	2	51	**
24	180	59.6	-23	21.4	280	42.6	99	+11	60 S	**	**	0	48	2	31	0

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 18 ^h 17 ^m 2		Mag: -4.3 PMG: 15 ^h 08 ^m			Mag: +1.5 PMG: 7 ^h 56 ^m			Mag: -2.8 PMG: 22 ^h 24 ^m			Mag: -0.2 PMG: 21 ^h 51 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'		
0	84	56.4	133	01.7	-20	09.8	240	51.1	-8	38.9	22	57.5	+20	03.6		
1	99	58.9	148	01.3		09.0	255	52.2		39.4	38	00.3		03.6		
2	115	01.3	163	00.8		08.1	270	53.2		40.0	53	03.1		03.5		
3	130	03.8	178	00.3		07.3	285	54.3		40.5	68	05.9		03.5		
4	145	06.3	192	59.9		06.5	300	55.3		41.1	83	08.6		03.4		
5	160	08.7	207	59.4	-20	05.6	315	56.4	-8	41.6	98	11.4	+20	03.4		
6	175	11.2	222	58.9	-20	04.8	330	57.5	-8	42.2	113	14.2	+20	03.4		
7	190	13.7	237	58.4		04.0	345	58.5		42.7	128	17.0		03.3		
8	205	16.1	252	58.0		03.1	0	59.6		43.2	143	19.8		03.3		
9	220	18.6	267	57.5		02.3	16	00.6		43.8	158	22.5		03.2		
10	235	21.0	282	57.0		01.5	31	01.7		44.3	173	25.3		03.2		
11	250	23.5	297	56.6	-20	00.6	46	02.7	-8	44.9	188	28.1	+20	03.1		
12	265	26.0	312	56.1	-19	59.8	61	03.8	-8	45.4	203	30.9	+20	03.1		
13	280	28.4	327	55.6		59.0	76	04.9		46.0	218	33.6		03.0		
14	295	30.9	342	55.2		58.1	91	05.9		46.5	233	36.4		03.0		
15	310	33.4	357	54.7		57.3	106	07.0		47.1	248	39.2		02.9		
16	325	35.8	12	54.2		56.4	121	08.0		47.6	263	42.0		02.9		
17	340	38.3	27	53.8	-19	55.6	136	09.1	-8	48.1	278	44.7	+20	02.8		
18	355	40.8	42	53.3	-19	54.8	151	10.2	-8	48.7	293	47.5	+20	02.8		
19	10	43.2	57	52.8		53.9	166	11.2		49.2	308	50.3		02.7		
20	25	45.7	72	52.4		53.1	181	12.3		49.8	323	53.1		02.7		
21	40	48.2	87	51.9		52.2	196	13.3		50.3	338	55.8		02.6		
22	55	50.6	102	51.5		51.4	211	14.4		50.9	353	58.6		02.6		
23	70	53.1	117	51.0		50.5	226	15.5		51.4	9	01.4		02.6		
24	85	55.5	132	50.6	-19	49.7	241	16.5	-8	51.9	24	04.1	+20	02.5		
Dif	—		-5		+8		+11		-5		+28		0		+26	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 16:3 PMG: 11 ^h 56 ^m 3			Edad: 21 ^d 0 PHE { 4 ^h : 58/9 12 ^h : 58/7 20 ^h : 58/4 SD: 16:1 PMG: 5 ^h 28 ^m R°: 50 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m	h m m			
0	180	59.6	-23	21.4	280	42.6	+11	04.5	60 N	14 53	15 51	16 48	23 22 86	12 42 11				
1	195	59.3		21.5	295	11.4 ⁹⁸	+10	52.6 ¹¹⁹	58	15 11	16 02	16 55	25 84	37 14				
2	210	58.9		21.6	309	40.4 ¹⁰⁰		40.7 ¹¹⁹	56	25	13	17 02	28 81	33 17				
3	225	58.6		21.6	324	09.5 ¹⁰¹		28.7 ¹²⁰	54	38	22	08	31 79	29 19				
4	240	58.3		21.7	338	38.6 ¹⁰¹		16.6 ¹²¹	52	49	30	14	33 77	26 21				
5	255	58.0	-23	21.8	353	07.8 ¹⁰²	+10	04.6 ¹²⁰	50	15 59	16 37	17 19	23 36 74	12 23 23				
6	270	57.7	-23	21.9	7	37.1 ¹⁰³	+9	52.5 ¹²¹	45	16 20	16 53	17 31	23 41 70	12 16 27				
7	285	57.4		22.0	22	06.4 ¹⁰³		40.3 ¹²²	40	36	17 07	41	45 66	11 30				
8	300	57.1		22.1	36	35.8 ¹⁰⁴		28.1 ¹²²	35	16 51	19	50	49 63	06 33				
9	315	56.8		22.2	51	05.3 ¹⁰⁵		15.9 ¹²²	30	17 03	29	17 59	52 60	12 01 36				
10	330	56.5		22.2	65	34.9 ¹⁰⁶	+9	03.6 ¹²³	20	24	17 48	18 16	23 57 56	11 54 41				
11	345	56.2	-23	22.3	80	04.5 ¹⁰⁶	+8	51.3 ¹²³	10 N	17 43	18 05	18 32	** ** *	11 47 45				
12	0	55.9	-23	22.4	94	34.3 ¹⁰⁸	+8	38.9 ¹²⁴	0	18 00	18 23	18 49	** ** *	11 40 49				
13	15	55.6		22.5	109	04.0 ¹⁰⁷		26.6 ¹²³	10 S	18	18 41	19 08	** ** *	34 53				
14	30	55.3		22.6	123	33.9 ¹⁰⁹		14.1 ¹²⁵	20	37	19 01	30	** ** *	27 57				
15	45	55.0		22.6	138	03.8 ¹⁰⁹	+8	01.7 ¹²⁴	30	18 59	26	19 59	** ** *	19 62				
16	60	54.7		22.7	152	33.8 ¹¹⁰	+7	49.2 ¹²⁵	35	19 12	41	20 18	** ** *	15 64				
17	75	54.4	-23	22.8	167	03.9 ¹¹¹	+7	36.7 ¹²⁵	40	19 27	19 59	20 41	** ** *	11 09 68				
18	90	54.0	-23	22.9	181	34.0 ¹¹¹	+7	24.2 ¹²⁵	45	19 45	20 22	21 12	0 03 29	11 03 71				
19	105	53.7		22.9	196	04.2 ¹¹²	+7	11.7 ¹²⁵	50	20 07	20 52	21 57	12 25	10 56 75				
20	120	53.4		23.0	210	34.4 ¹¹²	+6	59.1 ¹²⁶	52	18	21 07	22 25	16 23	52 78				
21	135	53.1		23.1	225	04.7 ¹¹³		46.5 ¹²⁶	54	30	25	23 11	21 20	49 80				
22	150	52.8		23.2	239	35.1 ¹¹⁴		33.9 ¹²⁶	56	20 45	21 47	** ** *	26 18	44 83				
23	165	52.5		23.2	254	05.5 ¹¹⁴		21.2 ¹²⁷	58	21 01	22 17	** ** *	32 15	40 85				
24	180	52.2	-23	23.3	268	36.0 ¹¹⁵	+6	08.6 ¹²⁶	60 S	21 22	23 07	** ** *	0 38 12	10 34 89				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 18 ^h 13 ^m 3		Mag: -4.3 PMG: 15 ^h 09 ^m			Mag: +1.5 PMG: 7 ^h 54 ^m			Mag: -2.8 PMG: 22 ^h 20 ^m			Mag: -0.2 PMG: 21 ^h 47 ^m						
	hG ♈	Dec	hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	85	55.5	132	50.6	-19	49.7	241	16.5	-8	51.9	24	04.1	+20	02.5	32	17.6	+16	55.4
1	100	58.0	147	50.1		48.8	256	17.6		52.5	39	06.9		02.5	47	20.3		55.4
2	116	00.5	162	49.6		48.0	271	18.6		53.0	54	09.7		02.4	62	22.9		55.4
3	131	02.9	177	49.2		47.1	286	19.7		53.6	69	12.5		02.4	77	25.5		55.4
4	146	05.4	192	48.7		46.3	301	20.8		54.1	84	15.2		02.3	92	28.2		55.3
5	161	07.9	207	48.3	-19	45.4	316	21.8	-8	54.7	99	18.0	+20	02.3	107	30.8	+16	55.3
6	176	10.3	222	47.8	-19	44.6	331	22.9	-8	55.2	114	20.8	+20	02.2	122	33.4	+16	55.3
7	191	12.8	237	47.4		43.7	346	23.9		55.7	129	23.6		02.2	137	36.0		55.2
8	206	15.3	252	46.9		42.9	1	25.0		56.3	144	26.3		02.1	152	38.7		55.2
9	221	17.7	267	46.5		42.0	16	26.0		56.8	159	29.1		02.1	167	41.3		55.2
10	236	20.2	282	46.0		41.2	31	27.1		57.4	174	31.9		02.0	182	43.9		55.1
11	251	22.7	297	45.6	-19	40.3	46	28.2	-8	57.9	189	34.6	+20	02.0	197	46.6	+16	55.1
12	266	25.1	312	45.1	-19	39.4	61	29.2	-8	58.4	204	37.4	+20	01.9	212	49.2	+16	55.1
13	281	27.6	327	44.7		38.6	76	30.3		59.0	219	40.2		01.9	227	51.8		55.1
14	296	30.0	342	44.2		37.7	91	31.3	-8	59.5	234	42.9		01.9	242	54.4		55.0
15	311	32.5	357	43.8		36.9	106	32.4	-9	00.1	249	45.7		01.8	257	57.1		55.0
16	326	35.0	12	43.3		36.0	121	33.5		00.6	264	48.5		01.8	272	59.7		55.0
17	341	37.4	27	42.9	-19	35.1	136	34.5	-9	01.1	279	51.3	+20	01.7	288	02.3	+16	54.9
18	356	39.9	42	42.5	-19	34.3	151	35.6	-9	01.7	294	54.0	+20	01.7	303	05.0	+16	54.9
19	11	42.4	57	42.0		33.4	166	36.6		02.2	309	56.8		01.6	318	07.6		54.9
20	26	44.8	72	41.6		32.5	181	37.7		02.8	324	59.6		01.6	333	10.2		54.9
21	41	47.3	87	41.1		31.7	196	38.7		03.3	340	02.3		01.5	348	12.8		54.8
22	56	49.8	102	40.7		30.8	211	39.8		03.8	355	05.1		01.5	3	15.5		54.8
23	71	52.2	117	40.3		29.9	226	40.9		04.4	10	07.9		01.4	18	18.1		54.8
24	86	54.7	132	39.8	-19	29.1	241	41.9	-9	04.9	25	10.6	+20	01.4	33	20.7	+16	54.7
Dif	—		-4		+9		+11		-5		+28		0		+26		0	

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16'3 PMG: 11 ^h 56 ^m 8			Edad: 22 ^d 0 PHE { 4 ^h : 58'2 12 ^h : 57'9 20 ^h : 57'7 SD: 15'9 PMG: 6 ^h 18 ^m R°: 47 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m		
0	180	52.2	-23	23.3	268	36.0	+6	08.6	60 N	7 06	8 02	9 00	** ** *	12 53	10		
1	195	51.9		23.4	283	06.6 ¹¹⁶	+5	55.9 ¹²⁷	58	6 58	7 51	8 43	** ** *	51	13		
2	210	51.6		23.4	297	37.2 ¹¹⁶		43.2 ¹²⁷	56	51	41	28	** ** *	50	15		
3	225	51.3		23.5	312	07.8 ¹¹⁶		30.5 ¹²⁷	54	45	31	15	** ** *	48	18		
4	240	51.0		23.6	326	38.5 ¹¹⁷		17.7 ¹²⁸	52	39	23	8 04	** ** *	47	20		
5	255	50.7	-23	23.6	341	09.3 ¹¹⁸	+5	05.0 ¹²⁷	50	6 34	7 16	7 54	** ** *	12 46	21		
6	270	50.4	-23	23.7	355	40.1 ¹¹⁸	+4	52.2 ¹²⁸	45	6 22	7 00	7 34	** ** *	12 43	26		
7	285	50.1		23.8	10	11.0 ¹¹⁹		39.5 ¹²⁷	40	12	6 46	17	** ** *	41	29		
8	300	49.7		23.8	24	41.9 ¹¹⁹		26.7 ¹²⁸	35	6 03	34	7 03	** ** *	39	32		
9	315	49.4		23.9	39	12.9 ¹²⁰		13.9 ¹²⁸	30	5 54	24	6 50	** ** *	37	35		
10	330	49.1		24.0	53	43.9 ¹²⁰	+4	01.1 ¹²⁸	20	37	6 05	29	** ** *	35	39		
11	345	48.8	-23	24.0	68	15.0 ¹²¹	+3	48.3 ¹²⁸	10 N	5 21	5 48	6 10	0 02	51	12 32 43		
12	0	48.5	-23	24.1	82	46.1 ¹²¹	+3	35.5 ¹²⁸	0	5 04	5 30	5 53	0 06	48	12 29 47		
13	15	48.2		24.1	97	17.3 ¹²²		22.7 ¹²⁸	10 S	4 45	5 12	35	11	44	27 51		
14	30	47.9		24.2	111	48.5 ¹²²	+3	09.9 ¹²⁸	20	4 23	4 52	5 16	16	39	24 55		
15	45	47.6		24.3	126	19.8 ¹²³	+2	57.1 ¹²⁸	30	3 54	27	4 54	21	35	21 59		
16	60	47.3		24.3	140	51.1 ¹²³		44.2 ¹²⁹	35	35	4 12	41	24	33	19 62		
17	75	47.0	-23	24.4	155	22.4 ¹²³	+2	31.4 ¹²⁸	40	3 12	3 54	4 26	0 28	29	12 17 65		
18	90	46.7	-23	24.4	169	53.8 ¹²⁴	+2	18.6 ¹²⁸	45	2 41	3 31	4 08	0 32	26	12 14 69		
19	105	46.4		24.5	184	25.2 ¹²⁴	+2	05.8 ¹²⁸	50	1 56	3 01	3 46	37	21	11 74		
20	120	46.0		24.5	198	56.7 ¹²⁵	+1	52.9 ¹²⁹	52	1 28	2 46	35	39	20	10 76		
21	135	45.7		24.6	213	28.2 ¹²⁵		40.1 ¹²⁸	54	0 42	28	23	41	18	09 77		
22	150	45.4		24.6	227	59.7 ¹²⁵		27.3 ¹²⁸	56	** ** *	2 06	3 08	44	15	07 80		
23	165	45.1		24.7	242	31.3 ¹²⁶		14.5 ¹²⁸	58	** ** *	1 36	2 52	47	13	05 83		
24	180	44.8	-23	24.7	257	02.9 ¹²⁶	+1	01.7 ¹²⁸	60 S	** ** *	0 46	2 31	0 50	10	12 03 86		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 18 ^h 09 ^m 4			Mag: -4.3 PMG: 15 ^h 10 ^m			Mag: +1.5 PMG: 7 ^h 53 ^m			Mag: -2.8 PMG: 22 ^h 15 ^m			Mag: -0.2 PMG: 21 ^h 43 ^m				
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°		
0	86	54.7	132	39.8	-19	29.1	241	41.9	-9	04.9	25	10.6	+20	01.4	33	20.7	
1	101	57.1	147	39.4		28.2	256	43.0		05.5	40	13.4		01.3	48	23.4	
2	116	59.6	162	38.9		27.3	271	44.0		06.0	55	16.2		01.3	63	26.0	
3	132	02.1	177	38.5		26.5	286	45.1		06.5	70	18.9		01.2	78	28.6	
4	147	04.5	192	38.1		25.6	301	46.2		07.1	85	21.7		01.2	93	31.2	
5	162	07.0	207	37.6	-19	24.7	316	47.2	-9	07.6	100	24.5	+20	01.2	108	33.9	
6	177	09.5	222	37.2	-19	23.9	331	48.3	-9	08.2	115	27.2	+20	01.1	123	36.5	
7	192	11.9	237	36.8		23.0	346	49.3		08.7	130	30.0		01.1	138	39.1	
8	207	14.4	252	36.3		22.1	1	50.4		09.2	145	32.8		01.0	153	41.7	
9	222	16.9	267	35.9		21.2	16	51.5		09.8	160	35.5		01.0	168	44.4	
10	237	19.3	282	35.5		20.4	31	52.5		10.3	175	38.3		00.9	183	47.0	
11	252	21.8	297	35.1	-19	19.5	46	53.6	-9	10.9	190	41.1	+20	00.9	198	49.6	
12	267	24.3	312	34.6	-19	18.6	61	54.6	-9	11.4	205	43.8	+20	00.8	213	52.2	
13	282	26.7	327	34.2		17.7	76	55.7		11.9	220	46.6		00.8	228	54.9	
14	297	29.2	342	33.8		16.8	91	56.7		12.5	235	49.4		00.7	243	57.5	
15	312	31.6	357	33.3		16.0	106	57.8		13.0	250	52.1		00.7	259	00.1	
16	327	34.1	12	32.9		15.1	121	58.9		13.5	265	54.9		00.7	274	02.7	
17	342	36.6	27	32.5	-19	14.2	136	59.9	-9	14.1	280	57.7	+20	00.6	289	05.4	
18	357	39.0	42	32.1	-19	13.3	152	01.0	-9	14.6	296	00.4	+20	00.6	304	08.0	
19	12	41.5	57	31.6		12.4	167	02.0		15.2	311	03.2		00.5	319	10.6	
20	27	44.0	72	31.2		11.5	182	03.1		15.7	326	05.9		00.5	334	13.2	
21	42	46.4	87	30.8		10.7	197	04.2		16.2	341	08.7		00.4	349	15.9	
22	57	48.9	102	30.4		09.8	212	05.2		16.8	356	11.5		00.4	4	18.5	
23	72	51.4	117	30.0		08.9	227	06.3		17.3	11	14.2		00.3	19	21.1	
24	87	53.8	132	29.5	-19	08.0	242	07.3	-9	17.8	26	17.0	+20	00.3	34	23.7	
Dif	—		-4		+9		+11		-5		+28		0		+26		0

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16:3 PMG: 11 ^h 57 ^m 3				Edad: 23 ^d 0 PHE { SD: 15:7 PMG: 7 ^h 05 ^m R°: 46 ^m 4 ^h : 57/5 12 ^h : 57/2 20 ^h : 57/0													
	hG ☉	Dec	hG ☾	Dif	Dec	Dif	Civil	Náutico			Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m		
0	180	44.8	-23	24.7	257	02.9	+1	01.7	60 N	14 54	15 51	16 48	0 48 85	13 03 10				
1	195	44.5		24.8	271	34.5 ¹²⁶	+0	48.9 ¹²⁸	58	15 11	16 03	16 56	49 81	04 13				
2	210	44.2		24.8	286	06.2 ¹²⁷		36.1 ¹²⁸	56	26	13	17 02	49 79	05 15				
3	225	43.9		24.9	300	37.9 ¹²⁷		23.4 ¹²⁷	54	39	22	09	50 76	06 17				
4	240	43.6		24.9	315	09.7 ¹²⁸	+0	10.6 ¹²⁸	52	15 50	31	14	50 74	07 19				
5	255	43.3	-23	25.0	329	41.4 ¹²⁷	-0	02.2 ¹²⁸	50	16 00	16 38	17 20	0 50 72	13 07 22				
6	270	43.0	-23	25.0	344	13.2 ¹²⁸	-0	14.9 ¹²⁷	45	16 20	16 54	17 31	0 51 68	13 09 25				
7	285	42.6		25.1	358	45.0 ¹²⁸		27.6 ¹²⁷	40	37	17 08	42	51 65	10 28				
8	300	42.3		25.1	13	16.9 ¹²⁹		40.3 ¹²⁷	35	16 51	20	17 51	52 61	11 31				
9	315	42.0		25.2	27	48.8 ¹²⁹	-0	53.0 ¹²⁷	30	17 04	30	18 00	52 59	12 34				
10	330	41.7		25.2	42	20.7 ¹²⁹	-1	05.7 ¹²⁷	20	25	17 49	17	53 54	14 38				
11	345	41.4	-23	25.2	56	52.6 ¹²⁹	-1	18.4 ¹²⁷	10 N	17 44	18 06	18 33	0 53 51	13 15 42				
12	0	41.1	-23	25.3	71	24.5 ¹²⁹	-1	31.0 ¹²⁶	0	18 01	18 24	18 50	0 54 46	13 16 46				
13	15	40.8		25.3	85	56.5 ¹³⁰		43.7 ¹²⁷	10 S	19	18 42	19 09	55 42	18 49				
14	30	40.5		25.4	100	28.5 ¹³⁰	-1	56.3 ¹²⁶	20	18 38	19 02	19 31	55 39	19 54				
15	45	40.2		25.4	115	00.5 ¹³⁰	-2	08.9 ¹²⁶	30	19 00	27	20 01	56 34	20 59				
16	60	39.9		25.4	129	32.5 ¹³⁰		21.4 ¹²⁵	35	13	19 42	19	57 31	21 61				
17	75	39.5	-23	25.5	144	04.6 ¹³¹	-2	34.0 ¹²⁶	40	19 28	20 01	20 42	0 57 28	13 22 64				
18	90	39.2	-23	25.5	158	36.6 ¹³⁰	-2	46.5 ¹²⁵	45	19 46	20 23	21 13	0 58 25	13 23 68				
19	105	38.9		25.5	173	08.7 ¹³¹	-2	59.0 ¹²⁵	50	20 08	20 53	21 59	58 21	25 72				
20	120	38.6		25.6	187	40.8 ¹³¹	-3	11.5 ¹²⁵	52	19	21 08	22 27	59 19	26 73				
21	135	38.3		25.6	202	12.9 ¹³¹		23.9 ¹²⁴	54	32	26	23 14	59 17	26 76				
22	150	38.0		25.6	216	45.1 ¹³²		36.4 ¹²⁵	56	20 46	21 49	** ** *	0 59 15	27 78				
23	165	37.7		25.7	231	17.2 ¹³¹	-3	48.7 ¹²³	58	21 03	22 19	** ** *	1 00 12	28 81				
24	180	37.4	-23	25.7	245	49.3 ¹³¹	-4	01.1 ¹²⁴	60 S	21 23	23 10	** ** *	1 00 10	13 29 84				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 18 ^h 05 ^m 4		Mag: -4.3 PMG: 15 ^h 10 ^m				Mag: +1.5 PMG: 7 ^h 51 ^m				Mag: -2.8 PMG: 22 ^h 11 ^m				Mag: -0.2 PMG: 21 ^h 39 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	87	53.8	132	29.5	-19	08.0	242	07.3	-9	17.8	26	17.0	+20	00.3	34	23.7	+16	54.0
1	102	56.3	147	29.1		07.1	257	08.4		18.4	41	19.8		00.2	49	26.4		54.0
2	117	58.8	162	28.7		06.2	272	09.4		18.9	56	22.5		00.2	64	29.0		54.0
3	133	01.2	177	28.3		05.3	287	10.5		19.5	71	25.3		00.2	79	31.6		54.0
4	148	03.7	192	27.9		04.4	302	11.6		20.0	86	28.0		00.1	94	34.2		53.9
5	163	06.1	207	27.5	-19	03.6	317	12.6	-9	20.5	101	30.8	+20	00.1	109	36.9	+16	53.9
6	178	08.6	222	27.1	-19	02.7	332	13.7	-9	21.1	116	33.6	+20	00.0	124	39.5	+16	53.9
7	193	11.1	237	26.6		01.8	347	14.7		21.6	131	36.3	+20	00.0	139	42.1		53.8
8	208	13.5	252	26.2	-19	00.9	2	15.8	22.1	146	39.1	+19	59.9	154	44.7		53.8	
9	223	16.0	267	25.8	-19	00.0	17	16.9	22.7	161	41.9		59.9	169	47.3		53.8	
10	238	18.5	282	25.4	-18	59.1	32	17.9	23.2	176	44.6		59.8	184	50.0		53.8	
11	253	20.9	297	25.0	-18	58.2	47	19.0	-9	23.7	191	47.4	+19	59.8	199	52.6	+16	53.7
12	268	23.4	312	24.6	-18	57.3	62	20.0	-9	24.3	206	50.1	+19	59.8	214	55.2	+16	53.7
13	283	25.9	327	24.2		56.4	77	21.1	24.8	221	52.9		59.7	229	57.8		53.7	
14	298	28.3	342	23.8		55.5	92	22.1	25.3	236	55.6		59.7	245	00.5		53.6	
15	313	30.8	357	23.4		54.6	107	23.2	25.9	251	58.4		59.6	260	03.1		53.6	
16	328	33.2	12	23.0		53.7	122	24.3	26.4	267	01.2		59.6	275	05.7		53.6	
17	343	35.7	27	22.6	-18	52.8	137	25.3	-9	27.0	282	03.9	+19	59.5	290	08.3	+16	53.6
18	358	38.2	42	22.2	-18	51.9	152	26.4	-9	27.5	297	06.7	+19	59.5	305	10.9	+16	53.5
19	13	40.6	57	21.7		51.0	167	27.4	28.0	312	09.4		59.4	320	13.6		53.5	
20	28	43.1	72	21.3		50.1	182	28.5	28.6	327	12.2		59.4	335	16.2		53.5	
21	43	45.6	87	20.9		49.2	197	29.6	29.1	342	15.0		59.4	350	18.8		53.5	
22	58	48.0	102	20.5		48.3	212	30.6	29.6	357	17.7		59.3	5	21.4		53.4	
23	73	50.5	117	20.1		47.4	227	31.7	30.2	12	20.5		59.3	20	24.0		53.4	
24	88	53.0	132	19.7	-18	46.5	242	32.7	-9	30.7	27	23.2	+19	59.2	35	26.7	+16	53.4
Dif	—		-4		+9		+11		-5		+28		0		+26		0	

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'3 PMG: 11 ^h 57 ^m 8			Edad: 24 ^d 0 PHE { 4 ^h : 56'8 12 ^h : 56'6 20 ^h : 56'4 SD: 15'5 PMG: 7 ^h 51 ^m R°: 46 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	180	37.4	-23	25.7	245	49.3	-4	01.1	60 N	7 07	8 04	9 02	2 13	83	13 13	11
1	195	37.1		25.7	260	21.5 ¹³²		13.5 ¹²⁴	58	6 59	7 52	8 44	10 80		17 14	
2	210	36.8		25.8	274	53.7 ¹³²		25.8 ¹²³	56	53	42	29	08 77		20 17	
3	225	36.4		25.8	289	25.9 ¹³²		38.0 ¹²²	54	46	33	17	06 75		23 19	
4	240	36.1		25.8	303	58.0 ¹³¹	-4	50.3 ¹²³	52	41	24	8 05	04 73		26 21	
5	255	35.8	-23	25.9	318	30.2 ¹³²	-5	02.5 ¹²²	50	6 35	7 17	7 56	2 02 71	13 29	22	
6	270	35.5	-23	25.9	333	02.4 ¹³²	-5	14.7 ¹²²	45	6 24	7 01	7 35	1 59 67	13 34	26	
7	285	35.2		25.9	347	34.6 ¹³²		26.8 ¹²¹	40	13	6 47	18	56 63		38 30	
8	300	34.9		25.9	2	06.9 ¹³³		38.9 ¹²¹	35	6 04	35	7 04	53 61		42 33	
9	315	34.6		26.0	16	39.1 ¹³²	-5	51.0 ¹²¹	30	5 55	25	6 51	51 58		46 35	
10	330	34.3		26.0	31	11.3 ¹³²	-6	03.0 ¹²⁰	20	38	6 06	30	47 53		52 39	
11	345	34.0	-23	26.0	45	43.5 ¹³²	-6	15.0 ¹²⁰	10 N	5 22	5 49	6 11	1 44 49	13 57	43	
12	0	33.6	-23	26.0	60	15.7 ¹³²	-6	27.0 ¹²⁰	0	5 05	5 31	5 54	1 40 46	14 02	46	
13	15	33.3		26.0	74	48.0 ¹³³		38.9 ¹¹⁹	10 S	4 46	5 13	36	37 42		07 50	
14	30	33.0		26.1	89	20.2 ¹³²	-6	50.8 ¹¹⁹	20	4 24	4 53	5 17	34 38		13 53	
15	45	32.7		26.1	103	52.4 ¹³²	-7	02.6 ¹¹⁸	30	3 54	28	4 55	30 34		19 57	
16	60	32.4		26.1	118	24.6 ¹³²		14.4 ¹¹⁸	35	36	4 13	42	28 32		22 60	
17	75	32.1	-23	26.1	132	56.9 ¹³³	-7	26.2 ¹¹⁸	40	3 13	3 54	4 27	1 25 29	14 26	63	
18	90	31.8	-23	26.1	147	29.1 ¹³²	-7	37.9 ¹¹⁷	45	2 42	3 32	4 09	1 23 25	14 31	66	
19	105	31.5		26.1	162	01.3 ¹³²	-7	49.5 ¹¹⁶	50	1 56	3 02	3 47	19 22		37 70	
20	120	31.2		26.2	176	33.5 ¹³²	-8	01.2 ¹¹⁷	52	1 28	2 47	36	18 20		39 72	
21	135	30.8		26.2	191	05.7 ¹³²		12.7 ¹¹⁵	54	0 41	29	23	16 18		42 74	
22	150	30.5		26.2	205	37.9 ¹³²		24.3 ¹¹⁶	56	** **	2 06	3 09	14 16		45 77	
23	165	30.2		26.2	220	10.1 ¹³²		35.7 ¹¹⁴	58	** **	1 36	2 52	12 14		49 79	
24	180	29.9	-23	26.2	234	42.3 ¹³²	-8	47.2 ¹¹⁵	60 S	** **	0 45	2 32	1 10 11	14 53	82	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG 18 ^h 01 ^m 5		Mag: -4.3 PMG: 15 ^h 11 ^m		Mag: +1.5 PMG: 7 ^h 49 ^m		Mag: -2.8 PMG: 22 ^h 06 ^m		Mag: -0.2 PMG: 21 ^h 34 ^m							
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'						
0	88	53.0	132	19.7	-18	46.5	242	32.7	+19	59.2						
1	103	55.4	147	19.3		45.6	257	33.8		59.2						
2	118	57.9	162	19.0		44.6	272	34.8		59.1						
3	134	00.4	177	18.6		43.7	287	35.9		59.1						
4	149	02.8	192	18.2		42.8	302	37.0		59.0						
5	164	05.3	207	17.8	-18	41.9	317	38.0	+19	59.0						
6	179	07.7	222	17.4	-18	41.0	332	39.1	+19	59.0						
7	194	10.2	237	17.0		40.1	347	40.1		58.9						
8	209	12.7	252	16.6		39.2	2	41.2		58.9						
9	224	15.1	267	16.2		38.3	17	42.3		58.8						
10	239	17.6	282	15.8		37.4	32	43.3		58.8						
11	254	20.1	297	15.4	-18	36.4	47	44.4	+19	58.7						
12	269	22.5	312	15.0	-18	35.5	62	45.4	+19	58.7						
13	284	25.0	327	14.6		34.6	77	46.5		58.6						
14	299	27.5	342	14.2		33.7	92	47.5		58.6						
15	314	29.9	357	13.9		32.8	107	48.6		58.6						
16	329	32.4	12	13.5		31.9	122	49.7		58.5						
17	344	34.9	27	13.1	-18	30.9	137	50.7	+19	58.5						
18	359	37.3	42	12.7	-18	30.0	152	51.8	+19	58.4						
19	14	39.8	57	12.3		29.1	167	52.8		58.4						
20	29	42.2	72	11.9		28.2	182	53.9		58.3						
21	44	44.7	87	11.6		27.2	197	54.9		58.3						
22	59	47.2	102	11.2		26.3	212	56.0		58.3						
23	74	49.6	117	10.8		25.4	227	57.1		58.2						
24	89	52.1	132	10.4	-18	24.5	242	58.1	+19	58.2						
Dif	—		-4		+9		+11		+28		0		+26		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 3			Edad: 25 ^d 0 PHE { 4 ^h : 56/2 12 ^h : 56/0 20 ^h : 55/9 SD: 15:3 PMG: 8 ^h 37 ^m R°: 47 ^m																
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°					
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m	h m m					
0	180	29.9	-23	26.2	234	42.3	-8	47.2	60 N	14 54	15 52	16 49	3 36 82	13 24 14						
1	195	29.6		26.2	249	14.4 ¹³¹	-8	58.6 ¹¹⁴	58	15 12	16 04	16 57	30 79	31 16						
2	210	29.3		26.2	263	46.6 ¹³²	-9	09.9 ¹¹³	56	27	14	17 03	25 76	37 19						
3	225	29.0		26.2	278	18.8 ¹³²		21.2 ¹¹³	54	39	23	10	21 74	42 21						
4	240	28.7		26.3	292	50.9 ¹³¹		32.4 ¹¹²	52	15 51	32	15	17 72	47 23						
5	255	28.4	-23	26.3	307	23.0 ¹³¹	-9	43.6 ¹¹²	50	16 00	16 39	17 21	3 13 70	13 51 25						
6	270	28.0	-23	26.3	321	55.2 ¹³²	-9	54.7 ¹¹¹	45	16 21	16 55	17 32	3 06 65	14 00 29						
7	285	27.7		26.3	336	27.3 ¹³¹	-10	05.8 ¹¹¹	40	38	17 09	43	2 59 63	08 32						
8	300	27.4		26.3	350	59.4 ¹³¹		16.8 ¹¹⁰	35	16 52	20	17 52	54 59	15 34						
9	315	27.1		26.3	5	31.5 ¹³¹		27.8 ¹¹⁰	30	17 05	31	18 01	49 57	21 36						
10	330	26.8		26.3	20	03.5 ¹³⁰		38.7 ¹⁰⁹	20	26	17 50	18	40 53	31 40						
11	345	26.5	-23	26.3	34	35.6 ¹³¹	-10	49.6 ¹⁰⁹	10 N	17 45	18 07	18 34	2 33 50	14 40 43						
12	0	26.2	-23	26.3	49	07.6 ¹³⁰	-11	00.4 ¹⁰⁸	0	18 02	18 25	18 51	2 26 46	14 48 47						
13	15	25.9		26.3	63	39.7 ¹³¹		11.1 ¹⁰⁷	10 S	20	18 43	19 10	19 43	14 57 50						
14	30	25.6		26.3	78	11.7 ¹³⁰		21.8 ¹⁰⁷	20	18 39	19 03	19 32	12 40	15 06 53						
15	45	25.2		26.3	92	43.7 ¹³⁰		32.4 ¹⁰⁶	30	19 01	28	20 02	04 36	16 57						
16	60	24.9		26.3	107	15.6 ¹²⁹		43.0 ¹⁰⁶	35	14	19 44	20	2 00 33	22 60						
17	75	24.6	-23	26.3	121	47.6 ¹³⁰	-11	53.5 ¹⁰⁵	40	19 29	20 02	20 44	1 54 31	15 29 62						
18	90	24.3	-23	26.3	136	19.5 ¹²⁹	-12	03.9 ¹⁰⁴	45	19 47	20 24	21 14	1 48 27	15 37 65						
19	105	24.0		26.3	150	51.5 ¹³⁰		14.3 ¹⁰⁴	50	20 10	20 54	22 00	41 23	47 69						
20	120	23.7		26.3	165	23.4 ¹²⁹		24.6 ¹⁰³	52	20	21 09	22 28	38 21	51 71						
21	135	23.4		26.3	179	55.3 ¹²⁹		34.8 ¹⁰²	54	33	27	23 15	34 20	15 56 73						
22	150	23.1		26.3	194	27.1 ¹²⁸		45.0 ¹⁰²	56	20 47	21 50	** ** *	30 18	16 02 75						
23	165	22.7		26.3	208	59.0 ¹²⁹	-12	55.1 ¹⁰¹	58	21 04	22 20	** ** *	26 15	08 78						
24	180	22.4	-23	26.2	223	30.8 ¹²⁸	-13	05.2 ¹⁰¹	60 S	21 24	23 11	** ** *	1 21 12	16 15 81						
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO								
	PMG: 17 ^h 57 ^m 6		Mag: -4.3 PMG: 15 ^h 12 ^m			Mag: +1.5 PMG: 7 ^h 48 ^m			Mag: -2.8 PMG: 22 ^h 02 ^m			Mag: -0.2 PMG: 21 ^h 30 ^m								
	hG ♈		hG ♀			hG ♂			hG ♃			hG ♄								
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	89	52.1	132	10.4	242	58.1	28	29.3	36	29.5	216	52.7	36	29.5	216	52.7				
1	104	54.6	147	10.0	257	59.2	43	32.1	51	32.1	231	52.7	51	32.1	246	52.7				
2	119	57.0	162	09.7	273	00.2	58	34.8	66	34.8	246	52.7	66	34.8	261	52.7				
3	134	59.5	177	09.3	288	01.3	73	37.6	81	37.4	261	52.6	81	37.4	276	52.6				
4	150	02.0	192	08.9	303	02.4	88	40.3	96	40.0	276	52.6	96	40.0	291	52.6				
5	165	04.4	207	08.5	318	03.4	99	43.1	105	42.6	291	52.6	105	42.6	306	52.6				
6	180	06.9	222	08.2	333	04.5	109	45.8	113	45.2	306	52.6	113	45.2	321	52.6				
7	195	09.3	237	07.8	348	05.5	118	48.6	121	47.8	321	52.5	121	47.8	336	52.5				
8	210	11.8	252	07.4		06.6	129	51.3	130	50.5	336	52.5	130	50.5	351	52.5				
9	225	14.3	267	07.0	18	07.6	139	54.1	140	53.1	351	52.5	140	53.1	366	52.5				
10	240	16.7	282	06.7	33	08.7	148	56.8	149	55.7	366	52.5	149	55.7	381	52.5				
11	255	19.2	297	06.3	48	09.8	157	59.6	158	58.3	381	52.4	158	58.3	396	52.4				
12	270	21.7	312	05.9	63	10.8	166	02.3	167	00.9	396	52.4	167	00.9	411	52.4				
13	285	24.1	327	05.6	78	11.9	175	05.1	176	03.5	411	52.4	176	03.5	426	52.4				
14	300	26.6	342	05.2	93	12.9	184	07.8	185	06.2	426	52.3	185	06.2	441	52.3				
15	315	29.1	357	04.8	108	14.0	193	10.6	194	08.8	441	52.3	194	08.8	456	52.3				
16	330	31.5	12	04.5	123	15.1	202	13.3	203	11.4	456	52.3	203	11.4	471	52.3				
17	345	34.0	27	04.1	138	16.1	211	16.1	212	14.0	471	52.3	212	14.0	486	52.3				
18	0	36.5	42	03.7	153	17.2	220	18.8	221	16.6	486	52.2	221	16.6	501	52.2				
19	15	38.9	57	03.4	168	18.2	229	21.6	230	19.2	501	52.2	230	19.2	516	52.2				
20	30	41.4	72	03.0	183	19.3	238	24.3	239	21.8	516	52.2	239	21.8	531	52.2				
21	45	43.8	87	02.6	198	20.3	247	27.0	248	24.5	531	52.2	248	24.5	546	52.2				
22	60	46.3	102	02.3	213	21.4	256	29.8	257	27.1	546	52.1	257	27.1	561	52.1				
23	75	48.8	117	01.9	228	22.5	265	32.5	266	29.7	561	52.1	266	29.7	576	52.1				
24	90	51.2	132	01.6	243	23.5	274	35.3	275	32.3	576	52.1	275	32.3	591	52.1				
Dif	—		-4			+9			+27			0			+26			0		

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16:3 PMG: 11 ^h 58 ^m 8			Edad: 26 ^d 0 PHE { 4 ^h : 55:7 12 ^h : 55:5 20 ^h : 55:4 PMG: 9 ^h 24 ^m R°: 47 ^m				Náutico	Civil		Hora	R°	Hora	R°		
	hG ☉	Dec		hG ☾	Dif	Dec									Dif	
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	180	22.4	-23	26.2	223	30.8	-13	05.2	60 N	7 08	8 05	9 03	4 58	80	13 38	18
1	195	22.1		26.2	238	02.6		15.2	58	7 00	7 53	8 45	49	77	47	21
2	210	21.8		26.2	252	34.4		25.1	56	6 54	43	30	41	75	13 56	23
3	225	21.5		26.2	267	06.1		34.9	54	47	34	18	35	71	14 03	25
4	240	21.2		26.2	281	37.9		44.7	52	42	25	8 06	29	69	10	27
5	255	20.9	-23	26.2	296	09.6	-13	54.4	50	6 36	7 18	7 57	4 23	68	14 16	29
6	270	20.6	-23	26.2	310	41.3	-14	04.1	45	6 25	7 02	7 36	4 11	65	14 29	32
7	285	20.3		26.2	325	12.9		13.7	40	14	6 48	19	4 02	61	40	35
8	300	19.9		26.2	339	44.6		23.2	35	6 05	37	7 05	3 53	59	49	37
9	315	19.6		26.1	354	16.2		32.6	30	5 56	26	6 52	46	57	14 57	39
10	330	19.3		26.1	8	47.8		41.9	20	39	6 07	31	33	54	15 11	42
11	345	19.0	-23	26.1	23	19.3	-14	51.2	10 N	5 23	5 50	6 12	3 23	50	15 23	46
12	0	18.7	-23	26.1	37	50.9	-15	00.4	0	5 06	5 32	5 55	3 12	48	15 35	48
13	15	18.4		26.1	52	22.4		09.5	10 S	4 47	5 14	37	3 02	45	47	50
14	30	18.1		26.0	66	53.9		18.6	20	4 25	4 54	5 18	2 52	41	15 59	53
15	45	17.8		26.0	81	25.3		27.6	30	3 55	29	4 56	40	37	16 13	57
16	60	17.4		26.0	95	56.8		36.5	35	37	4 14	43	33	35	22	58
17	75	17.1	-23	26.0	110	28.2	-15	45.3	40	3 14	3 55	4 28	2 25	33	16 31	61
18	90	16.8	-23	26.0	124	59.6	-15	54.0	45	2 43	3 33	4 10	2 15	31	16 42	64
19	105	16.5		25.9	139	30.9	-16	02.7	50	1 57	3 03	3 47	2 04	27	16 56	67
20	120	16.2		25.9	154	02.3		11.3	52	1 29	2 48	37	1 59	25	17 02	69
21	135	15.9		25.9	168	33.6		19.8	54	0 42	30	24	54	23	09	70
22	150	15.6		25.9	183	04.9		28.2	56	** **	2 07	3 10	48	20	17	72
23	165	15.3		25.8	197	36.1		36.6	58	** **	1 37	2 53	41	18	26	75
24	180	14.9	-23	25.8	212	07.3	-16	44.8	60 S	** **	0 46	2 33	1 33	15	17 36	78

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 17 ^h 53 ^m 6		Mag: -4.3 PMG: 15 ^h 12 ^m		Mag: +1.4 PMG: 7 ^h 46 ^m		Mag: -2.8 PMG: 21 ^h 58 ^m		Mag: -0.2 PMG: 21 ^h 26 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	90	51.2	132	01.6	243	23.5	29	35.3	37	32.3
1	105	53.7	147	01.2	258	24.6	44	38.0	52	34.9
2	120	56.2	162	00.9	273	25.6	59	40.8	67	37.5
3	135	58.6	177	00.5	288	26.7	74	43.5	82	40.1
4	151	01.1	192	00.1	303	27.7	89	46.3	97	42.8
5	166	03.6	206	59.8	318	28.8	104	49.0	112	45.4
6	181	06.0	221	59.4	333	29.9	119	51.7	127	48.0
7	196	08.5	236	59.1	348	30.9	134	54.5	142	50.6
8	211	11.0	251	58.7	3	32.0	149	57.2	157	53.2
9	226	13.4	266	58.4	18	33.0	165	00.0	172	55.8
10	241	15.9	281	58.0	33	34.1	180	02.7	187	58.4
11	256	18.3	296	57.7	48	35.2	195	05.5	203	01.1
12	271	20.8	311	57.3	63	36.2	210	08.2	218	03.7
13	286	23.3	326	57.0	78	37.3	225	10.9	233	06.3
14	301	25.7	341	56.6	93	38.3	240	13.7	248	08.9
15	316	28.2	356	56.3	108	39.4	255	16.4	263	11.5
16	331	30.7	11	55.9	123	40.4	270	19.2	278	14.1
17	346	33.1	26	55.6	138	41.5	285	21.9	293	16.7
18	1	35.6	41	55.2	153	42.6	300	24.7	308	19.3
19	16	38.1	56	54.9	168	43.6	315	27.4	323	21.9
20	31	40.5	71	54.6	183	44.7	330	30.1	338	24.6
21	46	43.0	86	54.2	198	45.7	345	32.9	353	27.2
22	61	45.5	101	53.9	213	46.8	0	35.6	8	29.8
23	76	47.9	116	53.5	228	47.8	15	38.4	23	32.4
24	91	50.4	131	53.2	243	48.9	30	41.1	38	35.0
Dif	—		-3		+10		+27		+26	
							0		0	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16:3 PMG: 11 ^h 59 ^m 3			Edad: 27 ^d 0 PHE { 4 ^h : 55/3 12 ^h : 55/1 20 ^h : 55/0 PMG: 10 ^h 11 ^m R°: 49 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	m	h m	m			
0	180	14.9	-23	25.8	212	07.3	-16	44.8	60 N	14 56	15 53	16 50	6 18	76	13 56 24			
1	195	14.6		25.8	226	38.5 ¹²²	-16	53.0	58	15 13	16 05	16 58	6 06	73	14 08 27			
2	210	14.3		25.7	241	09.7 ¹²²	-17	01.1	56	28	15	17 05	5 56	70	19 29			
3	225	14.0		25.7	255	40.9 ¹²²		09.1	54	41	24	11	46	69	28 32			
4	240	13.7		25.7	270	12.0 ¹²¹		17.0	52	15 52	33	16	38	67	37 33			
5	255	13.4	-23	25.7	284	43.1 ¹²¹	-17	24.9	50	16 02	16 40	17 22	5 31	65	14 45 34			
6	270	13.1	-23	25.6	299	14.1 ¹²⁰	-17	32.6	45	16 22	16 56	17 33	5 16	62	15 01 37			
7	285	12.8		25.6	313	45.2 ¹²¹		40.3	40	39	17 10	44	5 03	59	15 39			
8	300	12.5		25.6	328	16.2 ¹²⁰		47.9	35	16 53	22	17 53	4 52	58	26 41			
9	315	12.1		25.5	342	47.2 ¹²⁰	-17	55.4	30	17 06	32	18 02	43	56	36 42			
10	330	11.8		25.5	357	18.1 ¹¹⁹	-18	02.8	20	27	17 51	19	27	53	15 53 45			
11	345	11.5	-23	25.4	11	49.1 ¹²⁰	-18	10.1	10 N	17 46	18 08	18 35	4 13	50	16 09 46			
12	0	11.2	-23	25.4	26	20.0 ¹¹⁹	-18	17.3	0	18 03	18 26	18 52	4 00	48	16 23 49			
13	15	10.9		25.4	40	50.8 ¹¹⁸		24.4	10 S	21	18 44	19 11	3 47	46	37 51			
14	30	10.6		25.3	55	21.7 ¹¹⁹		31.5	20	18 40	19 04	19 33	3 33	43	16 52 53			
15	45	10.3		25.3	69	52.5 ¹¹⁸		38.4	30	19 02	29	20 03	17	41	17 10 55			
16	60	10.0		25.3	84	23.3 ¹¹⁸		45.3	35	15	19 44	21	3 08	39	20 57			
17	75	09.6	-23	25.2	98	54.1 ¹¹⁸	-18	52.1	40	19 30	20 03	20 44	2 58	37	17 32 58			
18	90	09.3	-23	25.2	113	24.8 ¹¹⁷	-18	58.7	45	19 48	20 25	21 15	2 46	34	17 46 60			
19	105	09.0		25.1	127	55.5 ¹¹⁷	-19	05.3	50	20 10	20 55	22 01	31	31	18 03 62			
20	120	08.7		25.1	142	26.2 ¹¹⁷		11.8	52	21	21 10	22 29	24	30	11 64			
21	135	08.4		25.0	156	56.9 ¹¹⁷		18.2	54	34	28	23 15	17	28	19 66			
22	150	08.1		25.0	171	27.5 ¹¹⁶		24.5	56	20 48	21 50	** **	2 08	26	29 68			
23	165	07.8		24.9	185	58.2 ¹¹⁷		30.7	58	21 05	22 20	** **	1 59	24	41 70			
24	180	07.5	-23	24.9	200	28.7 ¹¹⁵	-19	36.8	60 S	21 25	23 11	** **	1 48	21	18 54 73			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 17 ^h 49 ^m 7		Mag: -4.3 PMG: 15 ^h 13 ^m			Mag: +1.4 PMG: 7 ^h 44 ^m			Mag: -2.8 PMG: 21 ^h 53 ^m			Mag: -0.1 PMG: 21 ^h 22 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	91	50.4	131	53.2	-17	39.2	243	48.9	-10	08.8	30	41.1	+19	56.1	38	35.0	+16	51.5
1	106	52.8	146	52.9		38.2	258	50.0		09.3	45	43.8		56.1	53	37.6		51.5
2	121	55.3	161	52.5		37.3	273	51.0		09.9	60	46.6		56.0	68	40.2		51.4
3	136	57.8	176	52.2		36.3	288	52.1		10.4	75	49.3		56.0	83	42.8		51.4
4	152	00.2	191	51.8		35.4	303	53.1		10.9	90	52.0		56.0	98	45.4		51.4
5	167	02.7	206	51.5	-17	34.4	318	54.2	-10	11.4	105	54.8	+19	55.9	113	48.1	+16	51.4
6	182	05.2	221	51.2	-17	33.4	333	55.2	-10	11.9	120	57.5	+19	55.9	128	50.7	+16	51.3
7	197	07.6	236	50.8		32.5	348	56.3		12.5	136	00.3		55.8	143	53.3		51.3
8	212	10.1	251	50.5		31.5	3	57.4		13.0	151	03.0		55.8	158	55.9		51.3
9	227	12.6	266	50.2		30.5	18	58.4		13.5	166	05.7		55.8	173	58.5		51.3
10	242	15.0	281	49.8		29.6	33	59.5		14.0	181	08.5		55.7	189	01.1		51.2
11	257	17.5	296	49.5	-17	28.6	49	00.5	-10	14.6	196	11.2	+19	55.7	204	03.7	+16	51.2
12	272	19.9	311	49.2	-17	27.6	64	01.6	-10	15.1	211	13.9	+19	55.6	219	06.3	+16	51.2
13	287	22.4	326	48.9		26.7	79	02.7		15.6	226	16.7		55.6	234	08.9		51.2
14	302	24.9	341	48.5		25.7	94	03.7		16.1	241	19.4		55.6	249	11.5		51.1
15	317	27.3	356	48.2		24.7	109	04.8		16.7	256	22.1		55.5	264	14.1		51.1
16	332	29.8	11	47.9		23.7	124	05.8		17.2	271	24.9		55.5	279	16.8		51.1
17	347	32.3	26	47.6	-17	22.8	139	06.9	-10	17.7	286	27.6	+19	55.4	294	19.4	+16	51.1
18	2	34.7	41	47.2	-17	21.8	154	07.9	-10	18.2	301	30.3	+19	55.4	309	22.0	+16	51.0
19	17	37.2	56	46.9		20.8	169	09.0		18.7	316	33.1		55.4	324	24.6		51.0
20	32	39.7	71	46.6		19.9	184	10.1		19.3	331	35.8		55.3	339	27.2		51.0
21	47	42.1	86	46.3		18.9	199	11.1		19.8	346	38.6		55.3	354	29.8		51.0
22	62	44.6	101	45.9		17.9	214	12.2		20.3	1	41.3		55.2	9	32.4		50.9
23	77	47.1	116	45.6		16.9	229	13.2		20.8	16	44.0		55.2	24	35.0		50.9
24	92	49.5	131	45.3	-17	15.9	244	14.3	-10	21.4	31	46.7	+19	55.2	39	37.6	+16	50.9
Dif	—		-3		+10		+11		-5		+27		0		+26		0	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16:3 PMG: 11 ^h 59 ^m 8			Edad: 28 ^d 0 PHE { 4 ^h : 54:9 12 ^h : 54:7 20 ^h : 54:6 R°: 49 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	07.5	-23	24.9	200	28.7	-19 36.8	60 N	7 09	8 06	9 03	7 34	68	14 20	34
1	195	07.2		24.8	214	59.3 ¹¹⁶	42.8 60	58	7 01	7 54	8 46	19	65	35	36
2	210	06.8		24.8	229	29.9 ¹¹⁶	48.7 59	56	6 54	44	31	7 06	64	14 48	38
3	225	06.5		24.8	244	00.4 ¹¹⁵	-19 54.5 58	54	48	34	18	6 55	62	15 00	39
4	240	06.2		24.7	258	30.9 ¹¹⁵	-20 00.3 58	52	43	26	8 07	45	61	10	40
5	255	05.9	-23	24.6	273	01.4 ¹¹⁵	-20 05.9 56	50	6 37	7 19	7 57	6 36	60	15 19	41
6	270	05.6	-23	24.6	287	31.8 ¹¹⁴	-20 11.4 55	45	6 25	7 03	7 37	6 18	58	15 38	43
7	285	05.3		24.5	302	02.3 ¹¹⁵	16.8 54	40	15	6 49	20	6 02	57	15 54	44
8	300	05.0		24.5	316	32.7 ¹¹⁴	22.1 53	35	6 06	37	7 06	5 50	55	16 07	45
9	315	04.7		24.4	331	03.1 ¹¹⁴	27.4 53	30	5 57	27	6 53	39	54	18	46
10	330	04.3		24.4	345	33.4 ¹¹³	32.5 51	20	40	6 08	32	20	52	38	48
11	345	04.0	-23	24.3	0	03.8 ¹¹⁴	-20 37.5 50	10 N	5 24	5 51	6 13	5 03	51	16 55	49
12	0	03.7	-23	24.3	14	34.1 ¹¹³	-20 42.4 49	0	5 07	5 33	5 56	4 48	49	17 12	49
13	15	03.4		24.2	29	04.4 ¹¹³	47.2 48	10 S	4 48	5 15	38	33	47	28	50
14	30	03.1		24.1	43	34.7 ¹¹³	52.0 48	20	4 26	4 55	5 19	4 16	46	17 45	52
15	45	02.8		24.1	58	05.0 ¹¹³	-20 56.6 46	30	3 57	30	4 57	3 58	44	18 05	53
16	60	02.5		24.0	72	35.2 ¹¹²	-21 01.1 45	35	38	4 15	44	47	43	17	53
17	75	02.2	-23	24.0	87	05.5 ¹¹³	-21 05.5 44	40	3 15	3 56	4 29	3 35	41	18 30	55
18	90	01.9	-23	23.9	101	35.7 ¹¹²	-21 09.8 43	45	2 44	3 34	4 11	3 20	40	18 46	56
19	105	01.5		23.8	116	05.9 ¹¹²	14.0 42	50	1 58	3 04	3 49	3 02	38	19 05	58
20	120	01.2		23.8	130	36.1 ¹¹²	18.1 41	52	1 31	2 49	38	2 54	36	15	58
21	135	00.9		23.7	145	06.3 ¹¹²	22.1 40	54	0 44	31	25	45	35	25	59
22	150	00.6		23.7	159	36.4 ¹¹¹	26.0 39	56	** **	2 09	3 11	34	34	37	60
23	165	00.3		23.6	174	06.6 ¹¹²	29.8 38	58	** **	1 39	2 54	23	31	19 51	61
24	180	00.0	-23	23.5	188	36.7 ¹¹¹	-21 33.4 36	60 S	** **	0 48	2 34	2 09	29	20 07	62

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 17 ^h 45 ^m 8		Mag: -4.3 PMG: 15 ^h 13 ^m		Mag: +1.4 PMG: 7 ^h 43 ^m		Mag: -2.8 PMG: 21 ^h 49 ^m		Mag: -0.1 PMG: 21 ^h 18 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	92	49.5	131	45.3	-17	15.9	244	14.3	-10	21.4
1	107	52.0	146	45.0		15.0	259	15.3		21.9
2	122	54.4	161	44.7		14.0	274	16.4		22.4
3	137	56.9	176	44.4		13.0	289	17.5		22.9
4	152	59.4	191	44.0		12.0	304	18.5		23.4
5	168	01.8	206	43.7	-17	11.1	319	19.6	-10	24.0
6	183	04.3	221	43.4	-17	10.1	334	20.6	-10	24.5
7	198	06.8	236	43.1		09.1	349	21.7		25.0
8	213	09.2	251	42.8		08.1	4	22.7		25.5
9	228	11.7	266	42.5		07.1	19	23.8		26.0
10	243	14.2	281	42.2		06.1	34	24.9		26.6
11	258	16.6	296	41.9	-17	05.2	49	25.9	-10	27.1
12	273	19.1	311	41.5	-17	04.2	64	27.0	-10	27.6
13	288	21.6	326	41.2		03.2	79	28.0		28.1
14	303	24.0	341	40.9		02.2	94	29.1		28.6
15	318	26.5	356	40.6		01.2	109	30.1		29.2
16	333	28.9	11	40.3	-17	00.2	124	31.2		29.7
17	348	31.4	26	40.0	-16	59.2	139	32.3	-10	30.2
18	3	33.9	41	39.7	-16	58.2	154	33.3	-10	30.7
19	18	36.3	56	39.4		57.3	169	34.4		31.2
20	33	38.8	71	39.1		56.3	184	35.4		31.8
21	48	41.3	86	38.8		55.3	199	36.5		32.3
22	63	43.7	101	38.5		54.3	214	37.6		32.8
23	78	46.2	116	38.2		53.3	229	38.6		33.3
24	93	48.7	131	37.9	-16	52.3	244	39.7	-10	33.8
Dif	—		-3	+10		+11	-5	+27		0
									+26	0

UT	SOL				● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16:3 PMG: 12 ^h 00 ^m 2				Edad: 29 ^d 0 PHE { 4 ^h : 54:5 12 ^h : 54:4 20 ^h : 54:4 R°: 50 ^m													
	hG ☉		Dec		hG ☾		Dif				Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m		
0	180	00.0	-23	23.5	188	36.7	-21	33.4	60 N	14 57	15 55	16 52	8 42 56	14 54 46				
1	194	59.7		23.4	203	06.8 ¹¹¹		37.0 ³⁶	58	15 15	16 06	16 59	24 56	15 11 47				
2	209	59.4		23.4	217	36.9 ¹¹¹		40.5 ³⁵	56	29	17	17 06	8 10 55	26 47				
3	224	59.1		23.3	232	07.0 ¹¹¹		43.8 ³³	54	42	26	12	7 57 55	39 47				
4	239	58.7		23.2	246	37.1 ¹¹¹		47.1 ³³	52	15 53	34	18	46 54	15 50 48				
5	254	58.4	-23	23.2	261	07.2 ¹¹¹	-21	50.2 ³¹	50	16 03	16 41	17 23	7 36 54	16 00 48				
6	269	58.1	-23	23.1	275	37.3 ¹¹¹	-21	53.3 ³¹	45	16 24	16 57	17 35	7 16 53	16 21 48				
7	284	57.8		23.0	290	07.3 ¹¹⁰		56.2 ²⁹	40	40	17 11	45	6 59 52	38 48				
8	299	57.5		23.0	304	37.4 ¹¹¹	-21	59.1 ²⁹	35	16 55	23	17 54	45 52	16 52 49				
9	314	57.2		22.9	319	07.4 ¹¹⁰	-22	01.8 ²⁷	30	17 07	33	18 03	33 51	17 04 49				
10	329	56.9		22.8	333	37.4 ¹¹⁰		04.4 ²⁶	20	28	17 52	20	6 12 51	26 49				
11	344	56.6	-23	22.7	348	07.5 ¹¹¹	-22	06.9 ²⁵	10 N	17 47	18 09	18 36	5 54 50	17 44 49				
12	359	56.3	-23	22.7	2	37.5 ¹¹⁰	-22	09.3 ²⁴	0	18 04	18 27	18 53	5 37 50	18 01 50				
13	14	55.9		22.6	17	07.5 ¹¹⁰		11.6 ²³	10 S	22	18 45	19 12	20 49	18 50				
14	29	55.6		22.5	31	37.5 ¹¹⁰		13.8 ²²	20	18 40	19 05	19 34	5 02 49	37 50				
15	44	55.3		22.4	46	07.5 ¹¹⁰		15.8 ²⁰	30	19 03	30	20 03	4 42 47	18 58 50				
16	59	55.0		22.3	60	37.5 ¹¹⁰		17.8 ²⁰	35	16	19 45	22	30 47	19 10 50				
17	74	54.7	-23	22.3	75	07.5 ¹¹⁰	-22	19.7 ¹⁹	40	19 31	20 03	20 45	4 16 47	19 25 50				
18	89	54.4	-23	22.2	89	37.5 ¹¹⁰	-22	21.4 ¹⁷	45	19 49	20 26	21 16	4 00 45	19 42 50				
19	104	54.1		22.1	104	07.5 ¹¹⁰		23.1 ¹⁷	50	20 11	20 56	22 01	3 40 44	20 03 49				
20	119	53.8		22.0	118	37.6 ¹¹¹		24.6 ¹⁵	52	22	21 11	22 29	30 44	13 49				
21	134	53.5		21.9	133	07.6 ¹¹⁰		26.0 ¹⁴	54	34	29	23 14	20 43	24 50				
22	149	53.2		21.8	147	37.6 ¹¹⁰		27.3 ¹³	56	20 48	21 51	** **	3 08 42	37 49				
23	164	52.8		21.8	162	07.6 ¹¹⁰		28.5 ¹²	58	21 05	22 20	** **	2 54 41	20 52 49				
24	179	52.5	-23	21.7	176	37.6 ¹¹⁰	-22	29.6 ¹¹	60 S	21 25	23 10	** **	2 38 39	21 09 50				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 17 ^h 41 ^m 8		Mag: -4.3 PMG: 15 ^h 14 ^m				Mag: +1.4 PMG: 7 ^h 41 ^m				Mag: -2.8 PMG: 21 ^h 45 ^m				Mag: -0.1 PMG: 21 ^h 14 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	93	48.7	131	37.9	-16	52.3	244	39.7	-10	33.8	32	52.3	+19	54.2	40	40.1	+16	50.3
1	108	51.1	146	37.6		51.3	259	40.7		34.3	47	55.0		54.2	55	42.7		50.3
2	123	53.6	161	37.3		50.3	274	41.8		34.9	62	57.7		54.1	70	45.3		50.3
3	138	56.1	176	37.0		49.3	289	42.8		35.4	78	00.4		54.1	85	47.9		50.3
4	153	58.5	191	36.7		48.3	304	43.9		35.9	93	03.2		54.0	100	50.6		50.2
5	169	01.0	206	36.4	-16	47.3	319	45.0	-10	36.4	108	05.9	+19	54.0	115	53.2	+16	50.2
6	184	03.4	221	36.1	-16	46.3	334	46.0	-10	36.9	123	08.6	+19	54.0	130	55.8	+16	50.2
7	199	05.9	236	35.8		45.3	349	47.1		37.5	138	11.3		53.9	145	58.4		50.2
8	214	08.4	251	35.5		44.3	4	48.1		38.0	153	14.1		53.9	161	01.0		50.2
9	229	10.8	266	35.2		43.3	19	49.2		38.5	168	16.8		53.9	176	03.6		50.1
10	244	13.3	281	35.0		42.3	34	50.2		39.0	183	19.5		53.8	191	06.2		50.1
11	259	15.8	296	34.7	-16	41.3	49	51.3	-10	39.5	198	22.2	+19	53.8	206	08.8	+16	50.1
12	274	18.2	311	34.4	-16	40.3	64	52.4	-10	40.0	213	24.9	+19	53.7	221	11.4	+16	50.1
13	289	20.7	326	34.1		39.3	79	53.4		40.6	228	27.7		53.7	236	14.0		50.0
14	304	23.2	341	33.8		38.3	94	54.5		41.1	243	30.4		53.7	251	16.6		50.0
15	319	25.6	356	33.5		37.3	109	55.5		41.6	258	33.1		53.6	266	19.2		50.0
16	334	28.1	11	33.2		36.3	124	56.6		42.1	273	35.8		53.6	281	21.8		50.0
17	349	30.6	26	32.9	-16	35.3	139	57.6	-10	42.6	288	38.6	+19	53.5	296	24.4	+16	49.9
18	4	33.0	41	32.7	-16	34.3	154	58.7	-10	43.1	303	41.3	+19	53.5	311	27.0	+16	49.9
19	19	35.5	56	32.4		33.3	169	59.8		43.6	318	44.0		53.5	326	29.6		49.9
20	34	37.9	71	32.1		32.3	185	00.8		44.2	333	46.7		53.4	341	32.2		49.9
21	49	40.4	86	31.8		31.3	200	01.9		44.7	348	49.4		53.4	356	34.8		49.9
22	64	42.9	101	31.5		30.3	215	02.9		45.2	3	52.2		53.4	11	37.4		49.8
23	79	45.3	116	31.3		29.3	230	04.0		45.7	18	54.9		53.3	26	40.0		49.8
24	94	47.8	131	31.0	-16	28.3	245	05.0	-10	46.2	33	57.6	+19	53.3	41	42.6	+16	49.8
Dif	—		-3		+10		+11		-5		+27		0		+26			

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'3 PMG: 12 ^h 00 ^m 7			Edad: 0 ^d 3 SD: 14'8 PMG: 12 ^h 39 ^m	PHE { 4 ^h : 54'3 12 ^h : 54'2 20 ^h : 54'1 R°: 49 ^m	Dif		Náutico	Civil		Hora	R°	Hora	R°	
	hG ☉	Dec		hG ☾		Dif									Dec
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	179	52.5	-23	176	37.6	-22	29.6	10	58	7	09	8	06	9	04
1	194	52.2		191	07.6 ¹¹⁰		30.6	9	58	7	02	7	54	8	46
2	209	51.9		205	37.6 ¹¹⁰		31.5	8	56	6	55		44	32	
3	224	51.6		220	07.6 ¹¹⁰		32.3	8	54	49	35	19			
4	239	51.3		234	37.7 ¹¹¹		33.0	7	52	43	27	8	08	40	46
5	254	51.0	-23	249	07.7 ¹¹⁰	-22	33.5	5	50	6	38	7	20	7	58
6	269	50.7	-23	263	37.8 ¹¹¹	-22	34.0	5	45	6	26	7	03	7	37
7	284	50.4		278	07.8 ¹¹⁰		34.3	3	40	16	6	50	21	7	51
8	299	50.1		292	37.9 ¹¹¹		34.5	2	35	6	07	38	7	06	37
9	314	49.7		307	08.0 ¹¹¹		34.7	2	30	5	58	28	6	54	24
10	329	49.4		321	38.0 ¹¹⁰		34.7	0	20	41	6	09	33	7	03
11	344	49.1	-23	336	08.1 ¹¹¹	-22	34.6	1	10 N	5	25	5	52	6	14
12	359	48.8	-23	350	38.2 ¹¹¹	-22	34.4	2	0	5	08	5	34	5	57
13	14	48.5		5	08.4 ¹¹²		34.1	3	10 S	4	49	5	16	39	6
14	29	48.2		19	38.5 ¹¹¹		33.6	5	20	4	27	4	56	5	21
15	44	47.9		34	08.6 ¹¹¹		33.1	5	30	3	58	31	4	59	29
16	59	47.6		48	38.8 ¹¹²		32.5	6	35	39	4	16	46	17	50
17	74	47.3	-23	63	09.0 ¹¹²	-22	31.8	7	40	3	16	3	58	4	31
18	89	47.0	-23	77	39.2 ¹¹²	-22	30.9	9	45	2	45	3	35	4	13
19	104	46.6		92	09.4 ¹¹²		30.0	9	50	2	00	3	05	3	50
20	119	46.3		106	39.6 ¹¹²		28.9	11	52	1	32	2	50	39	14
21	134	46.0		121	09.9 ¹¹³		27.7	12	54	0	47	33	27	4	03
22	149	45.7		135	40.1 ¹¹²		26.5	12	56	** ** *	2	10	3	13	3
23	164	45.4		150	10.4 ¹¹³		25.1	14	58	** ** *	1	41	2	56	3
24	179	45.1	-23	164	40.7 ¹¹³	-22	23.6	15	60 S	** ** *	0	51	2	36	3

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO										
	PMG: 17 ^h 37 ^m 9		Mag: -4.3 PMG: 15 ^h 14 ^m		Mag: +1.4 PMG: 7 ^h 39 ^m		Mag: -2.8 PMG: 21 ^h 40 ^m		Mag: -0.1 PMG: 21 ^h 09 ^m										
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec									
h	°	'	°	'	°	'	°	'	°	'									
0	94	47.8	131	31.0	-16	28.3	245	05.0	-10	46.2	33	57.6	+19	53.3	41	42.6	+16	49.8	
1	109	50.3	146	30.7		27.3	260	06.1		46.7	49	00.3		53.2	56	45.2		49.8	
2	124	52.7	161	30.4		26.2	275	07.2		47.3	64	03.0		53.2	71	47.8		49.8	
3	139	55.2	176	30.1		25.2	290	08.2		47.8	79	05.8		53.2	86	50.4		49.7	
4	154	57.7	191	29.9		24.2	305	09.3		48.3	94	08.5		53.1	101	53.0		49.7	
5	170	00.1	206	29.6	-16	23.2	320	10.3	-10	48.8	109	11.2	+19	53.1	116	55.6	+16	49.7	
6	185	02.6	221	29.3	-16	22.2	335	11.4	-10	49.3	124	13.9	+19	53.1	131	58.2	+16	49.7	
7	200	05.0	236	29.1		21.2	350	12.4		49.8	139	16.6		53.0	147	00.8		49.6	
8	215	07.5	251	28.8		20.2	5	13.5		50.3	154	19.3		53.0	162	03.4		49.6	
9	230	10.0	266	28.5		19.2	20	14.6		50.9	169	22.1		52.9	177	06.0		49.6	
10	245	12.4	281	28.2		18.1	35	15.6		51.4	184	24.8		52.9	192	08.6		49.6	
11	260	14.9	296	28.0	-16	17.1	50	16.7	-10	51.9	199	27.5	+19	52.9	207	11.2	+16	49.6	
12	275	17.4	311	27.7	-16	16.1	65	17.7	-10	52.4	214	30.2	+19	52.8	222	13.8	+16	49.5	
13	290	19.8	326	27.4		15.1	80	18.8		52.9	229	32.9		52.8	237	16.4		49.5	
14	305	22.3	341	27.2		14.1	95	19.9		53.4	244	35.6		52.8	252	19.0		49.5	
15	320	24.8	356	26.9		13.1	110	20.9		53.9	259	38.4		52.7	267	21.6		49.5	
16	335	27.2	11	26.6		12.0	125	22.0		54.4	274	41.1		52.7	282	24.2		49.4	
17	350	29.7	26	26.4	-16	11.0	140	23.0	-10	55.0	289	43.8	+19	52.6	297	26.8	+16	49.4	
18	5	32.2	41	26.1	-16	10.0	155	24.1	-10	55.5	304	46.5	+19	52.6	312	29.3	+16	49.4	
19	20	34.6	56	25.8		09.0	170	25.1		56.0	319	49.2		52.6	327	31.9		49.4	
20	35	37.1	71	25.6		08.0	185	26.2		56.5	334	51.9		52.5	342	34.5		49.4	
21	50	39.5	86	25.3		06.9	200	27.3		57.0	349	54.6		52.5	357	37.1		49.3	
22	65	42.0	101	25.1		05.9	215	28.3		57.5	4	57.4		52.5	12	39.7		49.3	
23	80	44.5	116	24.8		04.9	230	29.4		58.0	20	00.1		52.4	27	42.3		49.3	
24	95	46.9	131	24.5	-16	03.9	245	30.4	-10	58.5	35	02.8	+19	52.4	42	44.9	+16	49.3	
Dif	—		-3	+10			+11	-5			+27	0			+26				

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16 ^h 3			Edad: 1 ^d 3	PHE { 4 ^h : 54 ^m 1 12 ^h : 54 ^m 0 20 ^h : 54 ^m 0	PMG: 12 ^h 01 ^m 2			PMG: 13 ^h 28 ^m	R°: 48 ^m						
	hG ☉	Dec				hG ☾					Dif	Dec	Dif	Civil	Náutico	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m		h m m		
0	179	45.1	-23 19.3	164	40.7	-22 23.6	16	60 N	14 59	15 57	16 53	10 21 30		16 38 68		
1	194	44.8		179	11.0 ¹¹³	22.0	17	58	15 16	16 08	17 01	10 04 33		16 55 66		
2	209	44.5		193	41.4 ¹¹⁴	20.3	18	56	31	18	07	9 49 35		17 10 63		
3	224	44.2		208	11.8 ¹¹⁴	18.5	18	54	44	27	13	37 36		22 62		
4	239	43.9		222	42.2 ¹¹⁴	16.6	19	52	15 55	35	19	26 37		33 60		
5	254	43.6	-23 18.8	237	12.6 ¹¹⁴	-22 14.6	20	50	16 04	16 43	17 24	9 16 38		17 42 60		
6	269	43.3	-23 18.7	251	43.0 ¹¹⁴	-22 12.5	21	45	16 25	16 59	17 36	8 55 41		18 03 57		
7	284	42.9		266	13.5 ¹¹⁵	10.3	22	40	42	17 12	46	39 41		19 56		
8	299	42.6		280	44.0 ¹¹⁵	08.0	23	35	16 56	24	17 56	24 43		33 54		
9	314	42.3		295	14.5 ¹¹⁵	05.6	24	30	17 08	34	18 04	8 12 44		18 45 53		
10	329	42.0		309	45.0 ¹¹⁵	03.0	26	20	29	17 53	21	7 51 46		19 05 51		
11	344	41.7	-23 18.1	324	15.6 ¹¹⁶	-22 00.4	26	10 N	17 48	18 10	18 37	7 33 47		19 23 49		
12	359	41.4	-23 18.0	338	46.2 ¹¹⁶	-21 57.7	27	0	18 05	18 28	18 54	7 16 48		19 39 48		
13	14	41.1		353	16.8 ¹¹⁶	54.9	28	10 S	22	18 46	19 13	6 59 49		19 56 46		
14	29	40.8		7	47.5 ¹¹⁷	51.9	30	20	18 41	19 06	19 35	41 50		20 14 44		
15	44	40.5		22	18.2 ¹¹⁷	48.9	30	30	19 03	31	20 04	20 52		34 42		
16	59	40.2		36	48.9 ¹¹⁷	45.8	31	35	16	19 46	23	6 07 54		46 40		
17	74	39.9	-23 17.4	51	19.7 ¹¹⁸	-21 42.5	33	40	19 31	20 04	20 46	5 53 55		20 59 39		
18	89	39.6	-23 17.3	65	50.4 ¹¹⁷	-21 39.2	33	45	19 49	20 26	21 16	5 37 55		21 15 37		
19	104	39.3		80	21.2 ¹¹⁸	35.8	34	50	20 11	20 56	22 01	16 57		35 34		
20	119	38.9		94	52.1 ¹¹⁹	32.3	35	52	22	21 11	22 28	5 06 58		44 33		
21	134	38.6		109	23.0 ¹¹⁹	28.6	37	54	34	29	23 12	4 55 59		21 54 32		
22	149	38.3		123	53.9 ¹¹⁹	24.9	37	56	20 49	21 51	** **	42 60		22 06 30		
23	164	38.0		138	24.8 ¹¹⁹	21.1	38	58	21 05	22 20	** **	27 62		19 29		
24	179	37.7	-23 16.6	152	55.8 ¹²⁰	-21 17.2	39	60 S	21 25	23 08	** **	4 10 64		22 35 26		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 17 ^h 34 ^m 0			Mag: -4.4 PMG: 15 ^h 15 ^m			Mag: +1.4 PMG: 7 ^h 37 ^m			Mag: -2.8 PMG: 21 ^h 36 ^m			Mag: -0.1 PMG: 21 ^h 05 ^m			
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	
0	95	46.9	131 24.5	-16 03.9	245 30.4	-10 58.5	35 02.8	+19 52.4	42 44.9	+16 49.3						
1	110	49.4	146 24.3	02.8	260 31.5	59.1	50 05.5	52.3	57 47.5	49.3						
2	125	51.9	161 24.0	01.8	275 32.5	-10 59.6	65 08.2	52.3	72 50.1	49.2						
3	140	54.3	176 23.8	-16 00.8	290 33.6	-11 00.1	80 10.9	52.3	87 52.7	49.2						
4	155	56.8	191 23.5	-15 59.8	305 34.7	00.6	95 13.6	52.2	102 55.3	49.2						
5	170	59.3	206 23.3	-15 58.7	320 35.7	-11 01.1	110 16.3	+19 52.2	117 57.9	+16 49.2						
6	186	01.7	221 23.0	-15 57.7	335 36.8	-11 01.6	125 19.0	+19 52.2	133 00.5	+16 49.2						
7	201	04.2	236 22.8	56.7	350 37.8	02.1	140 21.8	52.1	148 03.1	49.1						
8	216	06.7	251 22.5	55.7	5 38.9	02.6	155 24.5	52.1	163 05.7	49.1						
9	231	09.1	266 22.3	54.6	20 39.9	03.1	170 27.2	52.1	178 08.3	49.1						
10	246	11.6	281 22.0	53.6	35 41.0	03.6	185 29.9	52.0	193 10.9	49.1						
11	261	14.0	296 21.8	-15 52.6	50 42.1	-11 04.2	200 32.6	+19 52.0	208 13.5	+16 49.1						
12	276	16.5	311 21.5	-15 51.5	65 43.1	-11 04.7	215 35.3	+19 51.9	223 16.1	+16 49.0						
13	291	19.0	326 21.3	50.5	80 44.2	05.2	230 38.0	51.9	238 18.7	49.0						
14	306	21.4	341 21.0	49.5	95 45.2	05.7	245 40.7	51.9	253 21.3	49.0						
15	321	23.9	356 20.8	48.4	110 46.3	06.2	260 43.4	51.8	268 23.8	49.0						
16	336	26.4	11 20.5	47.4	125 47.3	06.7	275 46.1	51.8	283 26.4	48.9						
17	351	28.8	26 20.3	-15 46.4	140 48.4	-11 07.2	290 48.8	+19 51.8	298 29.0	+16 48.9						
18	6	31.3	41 20.0	-15 45.3	155 49.5	-11 07.7	305 51.6	+19 51.7	313 31.6	+16 48.9						
19	21	33.8	56 19.8	44.3	170 50.5	08.2	320 54.3	51.7	328 34.2	48.9						
20	36	36.2	71 19.6	43.3	185 51.6	08.7	335 57.0	51.7	343 36.8	48.9						
21	51	38.7	86 19.3	42.2	200 52.6	09.2	350 59.7	51.6	358 39.4	48.8						
22	66	41.2	101 19.1	41.2	215 53.7	09.8	6 02.4	51.6	13 42.0	48.8						
23	81	43.6	116 18.8	40.2	230 54.7	10.3	21 05.1	51.6	28 44.6	48.8						
24	96	46.1	131 18.6	-15 39.1	245 55.8	-11 10.8	36 07.8	+19 51.5	43 47.2	+16 48.8						
Dif	—		-2	+10	+11	-5	+27	0	+26	0						

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'3 PMG: 12 ^h 01 ^m 7			Edad: 2 ^d 3 PHE { 4 ^h : 54'0 12 ^h : 54'0 20 ^h : 54'0 PMG: 14 ^h 16 ^m R°: 46 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	179	37.7	-23	16.6	152	55.8	-21	17.2	60 N	7 10	8 06	9 03	10 51	22	17 46	74
1	194	37.4		16.4	167	26.8 ¹²⁰		13.1 ⁴¹	58	7 02	7 55	8 46	37 24		18 01	70
2	209	37.1		16.3	181	57.8 ¹²⁰		09.0 ⁴²	56	6 55	44	32	24 27		13 68	
3	224	36.8		16.2	196	28.9 ¹²¹		04.8 ⁴¹	54	49	35	19	13 28		24 66	
4	239	36.5		16.1	211	00.0 ¹²¹	-21	00.5 ⁴³	52	44	27	8 08	10 03	30	33 65	
5	254	36.2	-23	15.9	225	31.1 ¹²¹	-20	56.1 ⁴⁴	50	6 39	7 20	7 58	9 54	32	18 42	63
6	269	35.9	-23	15.8	240	02.3 ¹²²	-20	51.6 ⁴⁵	45	6 27	7 04	7 38	9 36	34	19 00	60
7	284	35.6		15.7	254	33.5 ¹²²		47.0 ⁴⁶	40	17	6 51	21	20 37		15 57	
8	299	35.3		15.5	269	04.8 ¹²³		42.4 ⁴⁶	35	6 07	39	7 07	9 07	39	27 55	
9	314	35.0		15.4	283	36.1 ¹²³		37.6 ⁴⁸	30	5 59	28	6 55	8 56	40	38 53	
10	329	34.7		15.3	298	07.4 ¹²³		32.7 ⁴⁹	20	42	6 10	34	37 42		19 56	51
11	344	34.3	-23	15.1	312	38.8 ¹²⁴	-20	27.8 ⁴⁹	10 N	5 26	5 52	6 15	8 20	45	20 12	48
12	359	34.0	-23	15.0	327	10.1 ¹²³	-20	22.7 ⁵¹	0	5 09	5 35	5 58	8 04	47	20 27	46
13	14	33.7		14.9	341	41.6 ¹²⁵		17.6 ⁵¹	10 S	4 50	5 17	41	7 48	49	42 43	
14	29	33.4		14.7	356	13.1 ¹²⁵		12.3 ⁵³	20	4 28	4 57	22	31 51		20 58	41
15	44	33.1		14.6	10	44.6 ¹²⁵		07.0 ⁵³	30	3 59	32	5 00	12 53		21 16	38
16	59	32.8		14.4	25	16.1 ¹²⁵	-20	01.6 ⁵⁴	35	40	4 17	4 47	7 01	54	26 37	
17	74	32.5	-23	14.3	39	47.7 ¹²⁶	-19	56.1 ⁵⁵	40	3 17	3 59	4 32	6 48	56	21 38	35
18	89	32.2	-23	14.2	54	19.3 ¹²⁶	-19	50.5 ⁵⁶	45	2 47	3 37	4 14	6 32	59	21 52	32
19	104	31.9		14.0	68	51.0 ¹²⁷		44.8 ⁵⁷	50	2 02	3 07	3 52	13 61		22 09	29
20	119	31.6		13.9	83	22.7 ¹²⁷		39.1 ⁵⁷	52	1 35	2 52	41	6 04	63	17 28	
21	134	31.3		13.7	97	54.4 ¹²⁷		33.2 ⁵⁹	54	0 51	34	29	5 54	64	26 26	
22	149	31.0		13.6	112	26.2 ¹²⁸		27.3 ⁵⁹	56	** **	2 13	3 15	42 66		36 24	
23	164	30.7		13.5	126	58.0 ¹²⁸		21.3 ⁶⁰	58	** **	1 43	2 58	29 68		22 48	21
24	179	30.4	-23	13.3	141	29.9 ¹²⁹	-19	15.2 ⁶¹	60 S	** **	0 55	2 38	5 14	71	23 01	19
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO			
	PMG 17 ^h 30 ^m 1			Mag: -4.4 PMG: 15 ^h 15 ^m			Mag: +1.4 PMG: 7 ^h 36 ^m			Mag: -2.8 PMG: 21 ^h 32 ^m			Mag: -0.1 PMG: 21 ^h 01 ^m			
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	96	46.1	131	18.6	-15	39.1	245	55.8	-11	10.8	36	07.8	+19	51.5	43	47.2
1	111	48.5	146	18.4		38.1	260	56.9		11.3	51	10.5		51.5	58	49.8
2	126	51.0	161	18.1		37.0	275	57.9		11.8	66	13.2		51.5	73	52.4
3	141	53.5	176	17.9		36.0	290	59.0		12.3	81	15.9		51.4	88	55.0
4	156	55.9	191	17.7		35.0	306	00.0		12.8	96	18.6		51.4	103	57.6
5	171	58.4	206	17.4	-15	33.9	321	01.1	-11	13.3	111	21.3	+19	51.3	119	00.1
6	187	00.9	221	17.2	-15	32.9	336	02.1	-11	13.8	126	24.0	+19	51.3	134	02.7
7	202	03.3	236	17.0		31.8	351	03.2		14.3	141	26.7		51.3	149	05.3
8	217	05.8	251	16.7		30.8	6	04.3		14.8	156	29.4		51.2	164	07.9
9	232	08.3	266	16.5		29.7	21	05.3		15.3	171	32.1		51.2	179	10.5
10	247	10.7	281	16.3		28.7	36	06.4		15.8	186	34.8		51.2	194	13.1
11	262	13.2	296	16.0	-15	27.7	51	07.4	-11	16.4	201	37.5	+19	51.1	209	15.7
12	277	15.7	311	15.8	-15	26.6	66	08.5	-11	16.9	216	40.2	+19	51.1	224	18.3
13	292	18.1	326	15.6		25.6	81	09.6		17.4	231	42.9		51.1	239	20.9
14	307	20.6	341	15.4		24.5	96	10.6		17.9	246	45.6		51.0	254	23.5
15	322	23.0	356	15.1		23.5	111	11.7		18.4	261	48.3		51.0	269	26.0
16	337	25.5	11	14.9		22.4	126	12.7		18.9	276	51.0		51.0	284	28.6
17	352	28.0	26	14.7	-15	21.4	141	13.8	-11	19.4	291	53.7	+19	50.9	299	31.2
18	7	30.4	41	14.5	-15	20.3	156	14.8	-11	19.9	306	56.4	+19	50.9	314	33.8
19	22	32.9	56	14.3		19.3	171	15.9		20.4	321	59.1		50.9	329	36.4
20	37	35.4	71	14.0		18.2	186	17.0		20.9	337	01.8		50.8	344	39.0
21	52	37.8	86	13.8		17.2	201	18.0		21.4	352	04.5		50.8	359	41.6
22	67	40.3	101	13.6		16.1	216	19.1		21.9	7	07.2		50.8	14	44.2
23	82	42.8	116	13.4		15.1	231	20.1		22.4	22	09.9		50.7	29	46.8
24	97	45.2	131	13.2	-15	14.0	246	21.2	-11	22.9	37	12.6	+19	50.7	44	49.3
Dif	—		-2		+10		+11		-5		+27		0		+26	

UT	SOL				● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:3 PMG: 12 ^h 02 ^m 2				Edad: 3 ^d 3 PHE { 4 ^h : 54/0 12 ^h : 54/0 20 ^h : 54/1 PMG: 15 ^h 02 ^m R°: 45 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif	Civil	Náutico			Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m	h m m	
0	179	30.4	-23	13.3	141	29.9	-19	15.2	60 N	15 01	15 59	16 55	11 13 16	19 00 76		
1	194	30.1		13.2	156	01.8 ¹²⁹		09.0	58	18	16 10	17 02	11 01 19	11 73		
2	209	29.8		13.0	170	33.7 ¹²⁹		02.7	56	33	20	09	10 51 21	21 70		
3	224	29.5		12.9	185	05.7 ¹³⁰		56.3	54	45	29	15	41 24	30 68		
4	239	29.2		12.7	199	37.7 ¹³⁰		49.9	52	15 56	37	21	33 25	38 66		
5	254	28.9	-23	12.6	214	09.8 ¹³¹		43.4	50	16 06	16 44	17 26	10 26 26	19 45 64		
6	269	28.6	-23	12.4	228	41.9 ¹³¹		36.8	45	16 27	17 00	17 37	10 10 30	20 00 60		
7	284	28.2		12.3	243	14.0 ¹³¹		30.1	40	43	14	48	9 57 32	12 58		
8	299	27.9		12.1	257	46.2 ¹³²		23.3	35	16 57	25	17 57	46 35	22 56		
9	314	27.6		12.0	272	18.4 ¹³²		16.5	30	17 09	36	18 06	36 37	31 54		
10	329	27.3		11.8	286	50.6 ¹³²		09.5	20	30	17 54	22	19 40	20 47 50		
11	344	27.0	-23	11.7	301	22.9 ¹³³		02.5	10 N	17 49	18 12	18 38	9 05 42	21 00 47		
12	359	26.7	-23	11.5	315	55.2 ¹³³		55.5	0	18 06	18 28	18 55	8 51 45	21 13 44		
13	14	26.4		11.4	330	27.6 ¹³⁴		48.3	10 S	23	18 46	19 13	37 48	25 42		
14	29	26.1		11.2	345	00.0 ¹³⁴		41.1	20	18 42	19 07	19 36	22 51	39 38		
15	44	25.8		11.0	359	32.4 ¹³⁴		33.7	30	19 04	31	20 05	8 05 54	21 54 35		
16	59	25.5		10.9	14	04.9 ¹³⁵		26.4	35	17	19 46	23	7 55 56	22 03 33		
17	74	25.2	-23	10.7	28	37.4 ¹³⁵		17 18.9	40	19 32	20 04	20 46	7 44 58	22 13 30		
18	89	24.9	-23	10.6	43	10.0 ¹³⁶		17 11.3	45	19 49	20 27	21 16	7 31 60	22 24 28		
19	104	24.6		10.4	57	42.6 ¹³⁶		17 03.7	50	20 12	20 56	22 00	14 64	38 25		
20	119	24.3		10.2	72	15.2 ¹³⁶		16 56.0	52	22	21 11	22 27	7 07 65	45 23		
21	134	24.0		10.1	86	47.8 ¹³⁶		48.3	54	34	28	23 10	6 58 67	22 52 21		
22	149	23.7		09.9	101	20.5 ¹³⁷		40.4	56	20 48	21 50	** **	48 70	23 00 19		
23	164	23.4		09.8	115	53.3 ¹³⁸		32.5	58	21 05	22 19	** **	37 72	09 17		
24	179	23.1	-23	09.6	130	26.1 ¹³⁸		16 24.6	60 S	21 25	23 05	** **	6 25 74	23 20 14		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 17 ^h 26 ^m 1		Mag: -4.4 PMG: 15 ^h 15 ^m		Mag: +1.4 PMG: 7 ^h 34 ^m		Mag: -2.8 PMG: 21 ^h 27 ^m		Mag: -0.1 PMG: 20 ^h 57 ^m							
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄							
h	°	'	°	'	°	'	°	'	°	'						
0	97	45.2	131	13.2	246	21.2	37	12.6	44	49.3						
1	112	47.7	146	12.9	261	22.2	52	15.3	59	51.9						
2	127	50.1	161	12.7	276	23.3	67	18.0	74	54.5						
3	142	52.6	176	12.5	291	24.4	82	20.7	89	57.1						
4	157	55.1	191	12.3	306	25.4	97	23.4	104	59.7						
5	172	57.5	206	12.1	321	26.5	112	26.1	120	02.3						
6	188	00.0	221	11.9	336	27.5	127	28.8	135	04.9						
7	203	02.5	236	11.7	351	28.6	142	31.5	150	07.5						
8	218	04.9	251	11.5	6	29.6	157	34.2	165	10.0						
9	233	07.4	266	11.2	21	30.7	172	36.9	180	12.6						
10	248	09.9	281	11.0	36	31.8	187	39.6	195	15.2						
11	263	12.3	296	10.8	51	32.8	202	42.3	210	17.8						
12	278	14.8	311	10.6	66	33.9	217	45.0	225	20.4						
13	293	17.3	326	10.4	81	34.9	232	47.7	240	23.0						
14	308	19.7	341	10.2	96	36.0	247	50.4	255	25.6						
15	323	22.2	356	10.0	111	37.0	262	53.1	270	28.2						
16	338	24.6	11	09.8	126	38.1	277	55.8	285	30.7						
17	353	27.1	26	09.6	141	39.2	292	58.5	300	33.3						
18	8	29.6	41	09.4	156	40.2	308	01.1	315	35.9						
19	23	32.0	56	09.2	171	41.3	323	03.8	330	38.5						
20	38	34.5	71	09.0	186	42.3	338	06.5	345	41.1						
21	53	37.0	86	08.8	201	43.4	353	09.2	0	43.7						
22	68	39.4	101	08.6	216	44.4	8	11.9	15	46.2						
23	83	41.9	116	08.4	231	45.5	23	14.6	30	48.8						
24	98	44.4	131	08.2	246	46.6	38	17.3	45	51.4						
Dif	—		-2		+11		+27		+26							
							0		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 7			Edad: 4 ^d 3 PHE { SD: 14'7 PMG: 15 ^h 47 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	179	23.1	-23	09.6	130	26.1	-16	24.6	81	60 N	7 10	8 06	9 03	11 29	12	20 16 76
1	194	22.8		09.4	144	58.9 ¹³⁸		16.5	81	58	7 02	7 55	8 46	20 15		24 74
2	209	22.5		09.3	159	31.7 ¹³⁸		08.4	81	56	6 56	45	32	12 17		31 72
3	224	22.2		09.1	174	04.6 ¹³⁹	-16	00.2	82	54	50	36	19	11 05	19	38 69
4	239	21.9		08.9	188	37.5 ¹³⁹	-15	52.0	82	52	44	28	8 08	10 58	21	44 67
5	254	21.6	-23	08.8	203	10.4 ¹³⁹	-15	43.6	84	50	6 39	7 20	7 59	10 52	23	20 49 65
6	269	21.3	-23	08.6	217	43.4 ¹⁴⁰	-15	35.2	84	45	6 27	7 04	7 38	10 40	26	21 00 62
7	284	21.0		08.4	232	16.4 ¹⁴⁰		26.8	84	40	17	6 51	22	29 30		10 58
8	299	20.7		08.2	246	49.5 ¹⁴¹		18.2	86	35	6 08	40	7 08	21 31		18 56
9	314	20.4		08.1	261	22.6 ¹⁴¹		09.7	85	30	5 59	29	6 55	10 13	34	25 53
10	329	20.1		07.9	275	55.7 ¹⁴¹	-15	01.0	87	20	43	6 11	34	9 59	38	37 50
11	344	19.8	-23	07.7	290	28.8 ¹⁴¹	-14	52.3	87	10 N	5 27	5 53	6 16	9 47	41	21 47 47
12	359	19.5	-23	07.6	305	02.0 ¹⁴²	-14	43.5	88	0	5 10	5 36	5 59	9 36	44	21 57 43
13	14	19.2		07.4	319	35.2 ¹⁴²		34.6	89	10 S	4 52	5 19	42	25 46		22 07 40
14	29	18.9		07.2	334	08.5 ¹⁴³		25.7	89	20	29	4 58	23	9 13	50	17 37
15	44	18.6		07.0	348	41.7 ¹⁴²		16.8	89	30	4 00	34	5 01	8 59	54	29 33
16	59	18.3		06.8	3	15.0 ¹⁴³	-14	07.7	91	35	3 42	19	4 48	51 56		36 31
17	74	18.0	-23	06.7	17	48.4 ¹⁴⁴	-13	58.6	91	40	3 19	4 01	4 33	8 42	58	22 43 29
18	89	17.7	-23	06.5	32	21.7 ¹⁴³	-13	49.5	91	45	2 49	3 38	4 16	8 31	61	22 52 26
19	104	17.4		06.3	46	55.1 ¹⁴⁴		40.2	93	50	2 05	3 09	3 53	18 65		23 03 22
20	119	17.1		06.1	61	28.5 ¹⁴⁴		31.0	92	52	1 38	2 54	43	12 67		08 20
21	134	16.8		06.0	76	02.0 ¹⁴⁵		21.6	94	54	0 55	37	31	8 05	69	13 18
22	149	16.5		05.8	90	35.5 ¹⁴⁵		12.2	94	56	** **	2 15	17	7 58	70	19 16
23	164	16.2		05.6	105	09.0 ¹⁴⁵	-13	02.8	94	58	** **	1 46	3 00	49 73		26 14
24	179	15.9	-23	05.4	119	42.5 ¹⁴⁵	-12	53.3	95	60 S	** **	1 00	2 40	7 39	77	23 34 11

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 17 ^h 22 ^m 2		Mag: -4.4 PMG: 15 ^h 16 ^m		Mag: +1.4 PMG: 7 ^h 32 ^m		Mag: -2.8 PMG: 21 ^h 23 ^m		Mag: -0.1 PMG: 20 ^h 53 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	98	44.4	131	08.2	-14	48.6	246	46.6	-11	35.0	38	17.3	+19	49.9	45	51.4	+16	47.9
1	113	46.8	146	08.0		47.5	261	47.6		35.5	53	20.0		49.9	60	54.0		47.9
2	128	49.3	161	07.8		46.5	276	48.7		36.0	68	22.7		49.8	75	56.6		47.8
3	143	51.8	176	07.6		45.4	291	49.7		36.5	83	25.4		49.8	90	59.2		47.8
4	158	54.2	191	07.4		44.3	306	50.8		37.0	98	28.1		49.8	106	01.8		47.8
5	173	56.7	206	07.2	-14	43.3	321	51.8	-11	37.5	113	30.7	+19	49.7	121	04.3	+16	47.8
6	188	59.1	221	07.0	-14	42.2	336	52.9	-11	38.0	128	33.4	+19	49.7	136	06.9	+16	47.8
7	204	01.6	236	06.9		41.1	351	54.0		38.5	143	36.1		49.7	151	09.5		47.8
8	219	04.1	251	06.7		40.1	366	55.0		39.0	158	38.8		49.6	166	12.1		47.7
9	234	06.5	266	06.5		39.0	381	56.1		39.5	173	41.5		49.6	181	14.7		47.7
10	249	09.0	281	06.3		37.9	396	57.1		40.0	188	44.2		49.6	196	17.3		47.7
11	264	11.5	296	06.1	-14	36.8	411	58.2	-11	40.5	203	46.9	+19	49.5	211	19.8	+16	47.7
12	279	13.9	311	05.9	-14	35.8	426	59.3	-11	41.0	218	49.6	+19	49.5	226	22.4	+16	47.7
13	294	16.4	326	05.7		34.7	441	00.3		41.5	233	52.2		49.5	241	25.0		47.6
14	309	18.9	341	05.5		33.6	456	01.4		42.0	248	54.9		49.4	256	27.6		47.6
15	324	21.3	356	05.4		32.6	471	02.4		42.5	263	57.6		49.4	271	30.2		47.6
16	339	23.8	11	05.2		31.5	486	03.5		43.0	279	00.3		49.4	286	32.7		47.6
17	354	26.3	26	05.0	-14	30.4	491	04.5	-11	43.5	294	03.0	+19	49.3	301	35.3	+16	47.6
18	9	28.7	41	04.8	-14	29.3	506	05.6	-11	44.0	309	05.7	+19	49.3	316	37.9	+16	47.6
19	24	31.2	56	04.6		28.3	521	06.7		44.5	324	08.4		49.3	331	40.5		47.5
20	39	33.6	71	04.5		27.2	536	07.7		45.0	339	11.0		49.2	346	43.1		47.5
21	54	36.1	86	04.3		26.1	551	08.8		45.5	354	13.7		49.2	1	45.7		47.5
22	69	38.6	101	04.1		25.0	566	09.8		46.0	9	16.4		49.2	16	48.2		47.5
23	84	41.0	116	03.9		23.9	581	10.9		46.5	24	19.1		49.1	31	50.8		47.5
24	99	43.5	131	03.7	-14	22.9	596	11.9	-11	47.0	39	21.8	+19	49.1	46	53.4	+16	47.5
Dif	—		-2		+11		+11		-5		+27		0		+26			

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16°3			Edad: 5 ^d 3	PHE { 4 ^h : 54°4 12 ^h : 54°5 20 ^h : 54°6									
	PMG: 12 ^h 03 ^m 2	PMG: 16 ^h 30 ^m	R°: 43 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	179	15.9	-23 05.4	119	42.5	-12 53.3		60 N	15 04	16 01	16 57	11 41 10	21 32 78	
1	194	15.6	05.2	134	16.0 ¹⁴⁵	43.7 ⁹⁶		58	21	12	17 04	35 12	38 75	
2	209	15.3	05.0	148	49.6 ¹⁴⁶	34.1 ⁹⁶		56	35	22	11	29 15	43 72	
3	224	15.0	04.8	163	23.2 ¹⁴⁶	24.4 ⁹⁷		54	47	31	17	24 17	47 70	
4	239	14.7	04.7	177	56.8 ¹⁴⁶	14.6 ⁹⁸		52	15 58	39	22	19 20	51 68	
5	254	14.4	-23 04.5	192	30.5 ¹⁴⁷	-12 04.9 ⁹⁷		50	16 08	16 46	17 28	11 15 21	21 54 67	
6	269	14.1	-23 04.3	207	04.2 ¹⁴⁷	-11 55.0 ⁹⁹		45	16 28	17 02	17 39	11 06 25	22 02 62	
7	284	13.8	04.1	221	37.8 ¹⁴⁶	45.1 ⁹⁹		40	45	15	49	10 59 27	08 59	
8	299	13.5	03.9	236	11.6 ¹⁴⁸	35.2 ⁹⁹		35	16 59	27	17 58	52 30	14 56	
9	314	13.2	03.7	250	45.3 ¹⁴⁷	25.2 ¹⁰⁰		30	17 11	37	18 07	47 32	18 54	
10	329	12.9	03.5	265	19.0 ¹⁴⁷	15.1 ¹⁰¹		20	32	17 56	23	37 36	27 49	
11	344	12.6	-23 03.3	279	52.8 ¹⁴⁸	-11 05.0 ¹⁰¹		10 N	17 50	18 13	18 39	10 28 40	22 34 46	
12	359	12.3	-23 03.1	294	26.6 ¹⁴⁸	-10 54.9 ¹⁰¹		0	18 07	18 29	18 56	10 20 43	22 40 43	
13	14	12.0	02.9	309	00.4 ¹⁴⁸	44.7 ¹⁰²		10 S	24	18 47	19 14	11 47	47 39	
14	29	11.7	02.7	323	34.2 ¹⁴⁸	34.4 ¹⁰³		20	18 43	19 07	19 36	10 03 49	22 54 36	
15	44	11.4	02.6	338	08.1 ¹⁴⁹	24.1 ¹⁰³		30	19 04	32	20 05	9 53 53	23 02 32	
16	59	11.1	02.4	352	41.9 ¹⁴⁸	13.8 ¹⁰³		35	17	19 47	23	47 56	07 29	
17	74	10.8	-23 02.2	7	15.8 ¹⁴⁹	-10 03.4 ¹⁰⁴		40	19 32	20 05	20 46	9 40 59	23 12 26	
18	89	10.5	-23 02.0	21	49.7 ¹⁴⁹	-9 52.9 ¹⁰⁵		45	19 50	20 27	21 16	9 32 62	23 18 23	
19	104	10.2	01.8	36	23.6 ¹⁴⁹	42.4 ¹⁰⁵		50	20 12	20 56	22 00	23 66	25 20	
20	119	09.9	01.6	50	57.5 ¹⁴⁹	31.9 ¹⁰⁵		52	22	21 10	22 26	19 67	28 18	
21	134	09.6	01.4	65	31.4 ¹⁴⁹	21.3 ¹⁰⁶		54	34	28	23 06	14 69	31 17	
22	149	09.3	01.2	80	05.4 ¹⁵⁰	-9 10.7 ¹⁰⁶		56	20 48	21 49	** ** *	08 72	35 15	
23	164	09.0	01.0	94	39.3 ¹⁴⁹	-9 00.0 ¹⁰⁷		58	21 04	22 17	** ** *	9 02 75	40 12	
24	179	08.7	-23 00.8	109	13.3 ¹⁵⁰	-8 49.3 ¹⁰⁷		60 S	21 24	23 01	** ** *	8 56 77	23 45 9	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 17 ^h 18 ^m 3	Mag: -4.4 PMG: 15 ^h 16 ^m	Mag: +1.4 PMG: 7 ^h 31 ^m	Mag: -2.7 PMG: 21 ^h 19 ^m	Mag: -0.1 PMG: 20 ^h 49 ^m									
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	°	°	°	°	°	°	°	°					
0	99	43.5	131 03.7	-14 22.9	247 11.9	-11 47.0	39 21.8	+19 49.1	46 53.4					
1	114	46.0	146 03.6	21.8	262 13.0	47.5	54 24.5	49.1	61 56.0					
2	129	48.4	161 03.4	20.7	277 14.1	48.0	69 27.1	49.1	76 58.6					
3	144	50.9	176 03.2	19.6	292 15.1	48.5	84 29.8	49.0	92 01.1					
4	159	53.4	191 03.1	18.6	307 16.2	49.0	99 32.5	49.0	107 03.7					
5	174	55.8	206 02.9	-14 17.5	322 17.2	-11 49.5	114 35.2	+19 49.0	122 06.3					
6	189	58.3	221 02.7	-14 16.4	337 18.3	-11 49.9	129 37.9	+19 48.9	137 08.9					
7	205	00.7	236 02.5	15.3	352 19.3	50.4	144 40.6	48.9	152 11.5					
8	220	03.2	251 02.4	14.2	7 20.4	50.9	159 43.2	48.9	167 14.0					
9	235	05.7	266 02.2	13.1	22 21.5	51.4	174 45.9	48.8	182 16.6					
10	250	08.1	281 02.0	12.1	37 22.5	51.9	189 48.6	48.8	197 19.2					
11	265	10.6	296 01.9	-14 11.0	52 23.6	-11 52.4	204 51.3	+19 48.8	212 21.8					
12	280	13.1	311 01.7	-14 09.9	67 24.6	-11 52.9	219 54.0	+19 48.7	227 24.3					
13	295	15.5	326 01.5	08.8	82 25.7	53.4	234 56.6	48.7	242 26.9					
14	310	18.0	341 01.4	07.7	97 26.7	53.9	249 59.3	48.7	257 29.5					
15	325	20.5	356 01.2	06.6	112 27.8	54.4	265 02.0	48.7	272 32.1					
16	340	22.9	11 01.1	05.5	127 28.9	54.9	280 04.7	48.6	287 34.7					
17	355	25.4	26 00.9	-14 04.5	142 29.9	-11 55.4	295 07.3	+19 48.6	302 37.2					
18	10	27.9	41 00.7	-14 03.4	157 31.0	-11 55.9	310 10.0	+19 48.6	317 39.8					
19	25	30.3	56 00.6	02.3	172 32.0	56.4	325 12.7	48.5	332 42.4					
20	40	32.8	71 00.4	01.2	187 33.1	56.9	340 15.4	48.5	347 45.0					
21	55	35.2	86 00.3	-14 00.1	202 34.1	57.4	355 18.1	48.5	2 47.5					
22	70	37.7	101 00.1	-13 59.0	217 35.2	57.9	10 20.7	48.4	17 50.1					
23	85	40.2	115 59.9	57.9	232 36.3	58.4	25 23.4	48.4	32 52.7					
24	100	42.6	130 59.8	-13 56.8	247 37.3	-11 58.9	40 26.1	+19 48.4	47 55.3					
Dif	—	—	-2	+11	+11	-5	+27	0	+26					
									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	54.4	54.5	54.6	54.5	54.3	54.1	53.8	53.6	53.5	53.5	53.5	53.6
2 - β Cas	<i>Caph</i>	2.3	357	42.6	42.8	42.9	42.8	42.5	42.2	41.8	41.5	41.3	41.3	41.4	41.6
3 - γ Peg	<i>Algenib</i>	2.8	356	41.7	41.8	41.8	41.8	41.6	41.4	41.2	40.9	40.8	40.8	40.8	40.9
4 - α Phe	<i>Ankaa</i>	2.4	353	26.1	26.2	26.3	26.2	26.1	25.8	25.5	25.2	25.1	25.0	25.1	25.2
5 - α Cas	<i>Schedar</i>	2.2	349	52.6	52.8	52.9	52.9	52.7	52.3	52.0	51.6	51.4	51.4	51.4	51.6
6 - β Cet	<i>Diphda</i>	2.0	349	6.4	6.5	6.6	6.5	6.4	6.2	5.9	5.7	5.6	5.5	5.5	5.6
7 - γ Cas	<i>Navi</i>	1.6	345	49.5	49.8	49.9	49.9	49.7	49.3	48.9	48.6	48.3	48.3	48.3	48.5
8 - β And	<i>Mirach</i>	2.1	342	34.2	34.3	34.4	34.4	34.2	34.0	33.7	33.5	33.3	33.2	33.2	33.3
9 - α Eri	<i>Achernar</i>	0.5	335	34.5	34.8	34.9	35.0	34.9	34.6	34.3	33.9	33.6	33.5	33.5	33.7
10 - γ And	<i>Almak</i>	2.3	329	1.6	1.7	1.9	1.9	1.8	1.6	1.3	1.0	0.8	0.6	0.6	0.6
12 - α Ari	<i>Hamal</i>	2.0	328	12.5	12.6	12.7	12.7	12.7	12.5	12.2	12.0	11.8	11.7	11.6	11.6
11 - α UMi	<i>Polaris</i>	2.0	321	53.8	66.8	77.4	83.3	81.9	73.8	61.9	48.4	36.6	28.7	26.0	30.2
13 - θ Eri	<i>Acamar</i>	3.3	315	26.1	26.3	26.4	26.5	26.5	26.4	26.2	25.9	25.6	25.5	25.4	25.4
14 - α Cet	<i>Menkar</i>	2.5	314	25.8	26.0	26.1	26.1	26.1	26.0	25.8	25.5	25.3	25.2	25.1	25.0
15 - β Per	<i>Algol</i>	2.1	312	57.5	57.6	57.8	57.8	57.8	57.6	57.4	57.1	56.8	56.6	56.5	56.5
16 - α Per	<i>Mirfak</i>	1.8	308	55.1	55.3	55.5	55.6	55.6	55.4	55.1	54.8	54.5	54.2	54.0	54.0
17 - η Tau	<i>Alcyone</i>	2.9	303	7.7	7.8	7.9	8.0	8.0	7.9	7.7	7.5	7.2	7.0	6.9	6.8
18 - γ Eri	<i>Zaurak</i>	3.0	300	29.5	29.6	29.8	29.9	29.9	29.8	29.6	29.4	29.2	29.0	28.9	28.8
19 - α Tau	<i>Aldebaran</i>	0.9	291	1.1	1.2	1.3	1.5	1.5	1.4	1.2	1.0	0.8	0.6	0.4	0.3
20 - β Ori	<i>Rigel</i>	0.1	281	21.8	21.9	22.0	22.2	22.2	22.2	22.0	21.8	21.6	21.4	21.2	21.1
21 - α Aur	<i>Capella</i>	0.1	280	49.5	49.6	49.8	50.0	50.0	50.0	49.8	49.5	49.2	48.9	48.6	48.5
22 - γ Ori	<i>Bellatrix</i>	1.6	278	42.9	43.0	43.1	43.2	43.3	43.3	43.1	42.9	42.7	42.5	42.3	42.2
23 - β Tau	<i>Elnath</i>	1.7	278	25.5	25.6	25.7	25.8	25.9	25.9	25.7	25.5	25.2	25.0	24.8	24.6
24 - δ Ori	<i>Mintaka</i>	2.2	276	59.8	59.8	60.0	60.1	60.2	60.1	60.0	59.8	59.6	59.4	59.2	59.1
25 - ϵ Ori	<i>Alnilam</i>	1.7	275	56.7	56.7	56.9	57.0	57.1	57.0	56.9	56.7	56.5	56.3	56.1	56.0
26 - ζ Ori	<i>Alnitak</i>	1.9	274	48.5	48.6	48.7	48.8	48.9	48.9	48.7	48.6	48.3	48.1	47.9	47.8
27 - κ Ori	<i>Saiph</i>	2.1	273	3.5	3.6	3.7	3.8	3.9	3.9	3.8	3.6	3.4	3.2	3.0	2.9
28 - α Ori	<i>Betelgeuse</i>	0.4	271	12.3	12.3	12.5	12.6	12.7	12.6	12.5	12.4	12.1	11.9	11.7	11.6
29 - β Aur	<i>Menkalinan</i>	1.9	270	6.9	7.0	7.1	7.3	7.4	7.4	7.2	7.0	6.7	6.4	6.1	5.9
30 - β CMa	<i>Mirzam</i>	2.0	264	19.3	19.4	19.5	19.6	19.7	19.8	19.7	19.5	19.3	19.1	18.9	18.7
31 - α Car	<i>Canopus</i>	-0.7	263	60.2	60.4	60.6	60.9	61.1	61.2	61.2	61.0	60.7	60.4	60.1	59.9
32 - γ Gem	<i>Alhena</i>	1.9	260	34.2	34.2	34.3	34.4	34.5	34.5	34.5	34.3	34.1	33.9	33.6	33.4
33 - α CMa	<i>Sirius</i>	-1.5	258	42.6	42.6	42.7	42.9	43.0	43.0	43.0	42.8	42.6	42.4	42.2	42.0
34 - ϵ CMa	<i>Adhara</i>	1.5	255	20.3	20.4	20.5	20.7	20.8	20.9	20.8	20.7	20.5	20.3	20.0	19.9
35 - δ CMa	<i>Wezen</i>	1.9	252	53.9	53.9	54.0	54.2	54.3	54.4	54.3	54.2	54.0	53.8	53.6	53.4
36 - η CMa	<i>Aludra</i>	2.5	248	58.3	58.3	58.4	58.6	58.8	58.8	58.8	58.7	58.5	58.3	58.0	57.8
37 - α Gem	<i>Castor</i>	2.0	246	20.8	20.8	20.9	21.1	21.2	21.2	21.2	21.0	20.8	20.6	20.3	20.1
38 - α CMi	<i>Procyon</i>	0.4	245	10.3	10.3	10.4	10.5	10.6	10.7	10.6	10.5	10.3	10.1	9.9	9.7
39 - β Gem	<i>Pollux</i>	1.1	243	40.1	40.1	40.2	40.3	40.4	40.5	40.4	40.3	40.1	39.9	39.6	39.4
40 - ζ Pup	<i>Naos</i>	2.3	239	5.9	5.9	6.0	6.2	6.4	6.5	6.5	6.4	6.3	6.0	5.8	5.5
41 - γ Vel	<i>Regor</i>	1.8	237	36.6	36.6	36.7	36.9	37.1	37.3	37.3	37.3	37.1	36.8	36.5	36.3
42 - ϵ Car	<i>Avior</i>	1.9	234	21.6	21.6	21.8	22.1	22.4	22.7	22.8	22.7	22.5	22.2	21.9	21.5
43 - δ Velorum		2.0	228	48.9	48.9	49.0	49.3	49.5	49.7	49.8	49.8	49.6	49.4	49.0	48.7
44 - ζ Hydrae		3.1	226	9.0	8.9	8.9	9.0	9.1	9.2	9.2	9.2	9.0	8.9	8.6	8.4
45 - λ Vel	<i>Suhail</i>	2.2	222	59.7	59.6	59.7	59.9	60.1	60.2	60.3	60.3	60.2	60.0	59.7	59.4
46 - β Car	<i>Miaplacidus</i>	1.7	221	41.0	40.9	41.1	41.5	42.0	42.4	42.7	42.8	42.6	42.2	41.7	41.2
47 - ι Car	<i>Aspidiske</i>	2.3	220	43.0	43.0	43.1	43.3	43.6	43.9	44.0	44.1	43.9	43.7	43.3	42.9
48 - α Lyn	<i>Elvashak</i>	3.1	219	44.1	44.0	44.0	44.1	44.2	44.3	44.3	44.3	44.2	44.0	43.7	43.4
49 - α Hyd	<i>Alphard</i>	2.0	218	6.0	6.0	6.0	6.1	6.2	6.3	6.3	6.3	6.2	6.0	5.8	5.5
50 - α Leo	<i>Regulus</i>	1.4	207	54.4	54.2	54.2	54.3	54.4	54.5	54.5	54.5	54.4	54.3	54.1	53.8

ESTRELLAS, 2000

Posiciones aparentes

377

DECLINACIÓN

Nº	NOMBRE	Mag		Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
			°	/	/	/	/	/	/	/	/	/	/	/	/
1 - α And	<i>Alpheratz</i>	2.1	+29	5.5	5.4	5.3	5.2	5.2	5.3	5.4	5.5	5.6	5.7	5.8	5.8
2 - β Cas	<i>Caph</i>	2.3	+59	9.2	9.1	8.9	8.8	8.7	8.7	8.8	9.0	9.1	9.3	9.4	9.5
3 - γ Peg	<i>Algenib</i>	2.8	+15	11.0	10.9	10.9	10.8	10.9	11.0	11.1	11.2	11.3	11.3	11.3	11.3
4 - α Phe	<i>Ankaa</i>	2.4	-42	18.7	18.7	18.6	18.4	18.3	18.1	18.0	18.0	18.1	18.2	18.3	18.4
5 - α Cas	<i>Schedar</i>	2.2	+56	32.4	32.3	32.2	32.1	32.0	32.0	32.1	32.2	32.4	32.5	32.6	32.7
6 - β Cet	<i>Diphda</i>	2.0	-17	59.4	59.4	59.4	59.3	59.2	59.1	59.0	58.9	58.9	59.0	59.0	59.1
7 - γ Cas	<i>Navi</i>	1.6	+60	43.2	43.1	43.0	42.9	42.8	42.7	42.8	42.9	43.1	43.2	43.4	43.5
8 - β And	<i>Mirach</i>	2.1	+35	37.3	37.2	37.1	37.1	37.0	37.1	37.1	37.3	37.4	37.5	37.6	37.6
9 - α Eri	<i>Achernar</i>	0.5	-57	14.6	14.6	14.5	14.3	14.1	14.0	13.9	13.8	13.9	14.0	14.2	14.3
10 - γ And	<i>Almak</i>	2.3	+42	19.9	19.8	19.8	19.7	19.6	19.6	19.6	19.7	19.8	20.0	20.1	20.1
12 - α Ari	<i>Hamal</i>	2.0	+23	27.7	27.7	27.6	27.6	27.6	27.6	27.7	27.8	27.9	27.9	28.0	28.0
11 - α UMi	<i>Polaris</i>	2.0	+89	16.1	16.1	16.0	15.9	15.7	15.6	15.5	15.6	15.7	15.9	16.1	16.2
13 - θ Eri	<i>Acamar</i>	3.3	-40	18.7	18.7	18.6	18.5	18.3	18.2	18.0	18.0	18.0	18.0	18.2	18.3
14 - α Cet	<i>Menkar</i>	2.5	+4	5.2	5.2	5.2	5.2	5.3	5.3	5.4	5.5	5.6	5.6	5.6	5.5
15 - β Per	<i>Algol</i>	2.1	+40	57.4	57.4	57.3	57.3	57.2	57.2	57.2	57.2	57.3	57.4	57.5	57.6
16 - α Per	<i>Mirfak</i>	1.8	+49	51.7	51.8	51.7	51.6	51.5	51.5	51.5	51.5	51.6	51.7	51.8	51.9
17 - η Tau	<i>Alcyone</i>	2.9	+24	6.3	6.2	6.2	6.2	6.2	6.2	6.2	6.3	6.3	6.4	6.4	6.5
18 - γ Eri	<i>Zaurak</i>	3.0	-13	30.7	30.8	30.8	30.7	30.7	30.5	30.4	30.3	30.3	30.3	30.4	30.5
19 - α Tau	<i>Aldebaran</i>	0.9	+16	30.5	30.4	30.4	30.4	30.4	30.5	30.5	30.6	30.6	30.6	30.6	30.6
20 - β Ori	<i>Rigel</i>	0.1	-8	12.3	12.3	12.4	12.3	12.3	12.2	12.1	12.0	11.9	12.0	12.0	12.1
21 - α Aur	<i>Capella</i>	0.1	+45	59.9	59.9	59.9	59.9	59.8	59.8	59.7	59.7	59.7	59.8	59.8	59.9
22 - γ Ori	<i>Bellatrix</i>	1.6	+6	20.8	20.8	20.8	20.8	20.8	20.9	21.0	21.0	21.1	21.1	21.0	21.0
23 - β Tau	<i>Elnath</i>	1.7	+28	36.4	36.4	36.4	36.4	36.4	36.4	36.4	36.4	36.4	36.4	36.4	36.4
24 - δ Ori	<i>Mintaka</i>	2.2	-0	18.1	18.1	18.2	18.1	18.1	18.0	18.0	17.9	17.8	17.8	17.9	18.0
25 - ϵ Ori	<i>Alnilam</i>	1.7	-1	12.3	12.3	12.3	12.3	12.3	12.2	12.1	12.0	12.0	12.0	12.1	12.1
26 - ζ Ori	<i>Alnitak</i>	1.9	-1	56.7	56.8	56.8	56.8	56.7	56.6	56.6	56.5	56.4	56.5	56.5	56.6
27 - κ Ori	<i>Saiph</i>	2.1	-9	40.4	40.4	40.4	40.4	40.4	40.3	40.2	40.1	40.0	40.0	40.1	40.2
28 - α Ori	<i>Betelgeuse</i>	0.4	+7	24.3	24.3	24.3	24.3	24.3	24.3	24.4	24.4	24.5	24.5	24.4	24.4
29 - β Aur	<i>Menkalinan</i>	1.9	+44	56.8	56.9	56.9	56.9	56.8	56.8	56.7	56.7	56.7	56.7	56.7	56.8
30 - β CMa	<i>Mirzam</i>	2.0	-17	57.5	57.6	57.6	57.6	57.6	57.5	57.4	57.3	57.2	57.2	57.3	57.4
31 - α Car	<i>Canopus</i>	-0.7	-52	41.9	42.1	42.1	42.1	42.0	41.9	41.7	41.6	41.5	41.5	41.6	41.7
32 - γ Gem	<i>Alhena</i>	1.9	+16	23.8	23.8	23.8	23.9	23.9	23.9	23.9	23.9	23.9	23.9	23.9	23.9
33 - α CMa	<i>Sirius</i>	-1.5	-16	43.1	43.2	43.3	43.2	43.2	43.1	43.0	42.9	42.8	42.8	42.9	43.0
34 - ϵ CMa	<i>Adhara</i>	1.5	-28	58.5	58.6	58.6	58.6	58.6	58.5	58.4	58.2	58.1	58.1	58.2	58.4
35 - δ CMa	<i>Wezen</i>	1.9	-26	23.7	23.8	23.9	23.9	23.9	23.7	23.6	23.5	23.4	23.4	23.5	23.6
36 - η CMa	<i>Aludra</i>	2.5	-29	18.3	18.4	18.5	18.5	18.5	18.4	18.2	18.1	18.0	18.0	18.1	18.2
37 - α Gem	<i>Castor</i>	2.0	+31	53.2	53.2	53.3	53.3	53.3	53.3	53.3	53.2	53.2	53.1	53.1	53.1
38 - α CMi	<i>Procyon</i>	0.4	+5	13.4	13.3	13.3	13.3	13.4	13.4	13.4	13.5	13.5	13.5	13.4	13.3
39 - β Gem	<i>Pollux</i>	1.1	+28	1.5	1.5	1.5	1.6	1.6	1.6	1.5	1.5	1.5	1.4	1.4	1.4
40 - ζ Pup	<i>Naos</i>	2.3	-40	0.2	0.4	0.5	0.5	0.5	0.4	0.3	0.1	0.0	0.0	0.1	0.2
41 - γ Vel	<i>Regor</i>	1.8	-47	20.2	20.4	20.5	20.6	20.5	20.4	20.3	20.2	20.0	20.0	20.1	20.2
42 - ϵ Car	<i>Avior</i>	1.9	-59	30.6	30.8	30.9	31.0	30.9	30.9	30.7	30.6	30.4	30.4	30.4	30.5
43 - δ Velorum		2.0	-54	42.5	42.7	42.8	42.9	42.9	42.8	42.7	42.5	42.4	42.3	42.4	42.5
44 - ζ Hydrae		3.1	+5	56.7	56.6	56.6	56.6	56.6	56.7	56.7	56.7	56.7	56.7	56.6	56.5
45 - λ Vel	<i>Suhail</i>	2.2	-43	25.9	26.1	26.2	26.3	26.3	26.2	26.1	26.0	25.9	25.8	25.8	25.9
46 - β Car	<i>Miaplacidus</i>	1.7	-69	42.9	43.1	43.3	43.4	43.4	43.4	43.3	43.1	42.9	42.9	42.9	43.0
47 - ι Car	<i>Aspidiske</i>	2.3	-59	16.4	16.6	16.8	16.9	16.9	16.8	16.7	16.6	16.4	16.3	16.4	16.5
48 - α Lyn	<i>Elvashak</i>	3.1	+34	23.4	23.5	23.5	23.6	23.6	23.6	23.6	23.5	23.4	23.4	23.3	23.2
49 - α Hyd	<i>Alphard</i>	2.0	-8	39.5	39.6	39.7	39.7	39.7	39.7	39.6	39.5	39.5	39.5	39.6	39.7
50 - α Leo	<i>Regulus</i>	1.4	+11	58.0	57.9	57.9	57.9	58.0	58.0	58.0	58.0	58.0	58.0	57.9	57.8

Nº	NOMBRE	Mag		Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
			°	/	/	/	/	/	/	/	/	/	/	/	/
51 - μ	Velorum	2.7	198	18.2	18.0	18.0	18.1	18.2	18.4	18.5	18.6	18.6	18.5	18.2	17.9
52 - ν	Hydrae	3.1	197	35.5	35.4	35.3	35.4	35.5	35.6	35.6	35.7	35.6	35.5	35.3	35.1
53 - β	UMa Merak	2.4	194	32.4	32.1	32.0	32.1	32.3	32.5	32.6	32.7	32.7	32.5	32.2	31.8
54 - α	UMa Dubhe	1.8	194	4.0	3.7	3.6	3.7	3.9	4.2	4.4	4.5	4.5	4.3	3.9	3.5
55 - β	Leo Denebola	2.1	182	44.2	44.0	43.9	43.9	43.9	44.0	44.1	44.1	44.1	44.1	43.9	43.7
56 - γ	Crv Gienah	2.6	176	2.9	2.7	2.6	2.6	2.6	2.7	2.8	2.9	2.9	2.9	2.7	2.5
57 - α	Cru Acrux	1.4	173	20.8	20.5	20.3	20.3	20.4	20.6	20.9	21.1	21.3	21.2	21.0	20.6
58 - γ	Cru Gacrux	1.6	172	12.4	12.1	11.9	11.9	12.0	12.1	12.3	12.6	12.7	12.6	12.4	12.1
59 - γ	Cen Muhlifain	2.2	169	37.2	36.9	36.8	36.7	36.8	36.9	37.1	37.2	37.3	37.3	37.1	36.8
60 - β	Cru Mimosa	1.3	168	4.1	3.8	3.6	3.5	3.6	3.7	4.0	4.2	4.4	4.3	4.1	3.8
61 - ε	UMa Alioth	1.8	166	29.8	29.4	29.2	29.1	29.2	29.4	29.6	29.8	29.9	29.9	29.7	29.4
62 - α^2	CVn Cor Caroli	2.9	165	59.8	59.5	59.3	59.3	59.3	59.4	59.5	59.6	59.7	59.7	59.6	59.3
63 - ε	Vir Vindemiatrix	2.8	164	27.5	27.3	27.1	27.1	27.1	27.1	27.2	27.3	27.4	27.4	27.2	27.0
64 - ζ	UMa Mizar	2.3	159	1.4	1.0	0.8	0.7	0.7	0.9	1.1	1.3	1.4	1.5	1.3	1.1
65 - α	Vir Spica	1.0	158	42.3	42.0	41.9	41.8	41.8	41.8	41.9	42.0	42.1	42.1	42.0	41.8
66 - η	UMa Alkaid	1.9	153	7.2	6.8	6.6	6.5	6.5	6.6	6.8	7.0	7.1	7.2	7.1	6.9
67 - β	Cen Hadar	0.6	149	2.9	2.4	2.1	1.9	1.9	2.0	2.2	2.4	2.7	2.8	2.6	2.3
68 - θ	Cen Menkent	2.1	148	20.0	19.7	19.5	19.4	19.3	19.3	19.4	19.6	19.7	19.7	19.7	19.4
69 - α	Boo Arcturus	0.0	146	5.3	5.1	4.9	4.8	4.8	4.8	4.9	5.0	5.1	5.1	5.1	4.9
70 - α^1	Cen Rigil Kentaurus	0.0	140	6.4	5.9	5.6	5.4	5.3	5.3	5.5	5.8	6.1	6.2	6.1	5.9
71 - α^2	Lib Zubenelgenubi	2.8	137	17.1	16.9	16.7	16.5	16.4	16.4	16.5	16.6	16.7	16.8	16.7	16.6
72 - β	UMi Kochab	2.1	137	20.1	19.4	18.8	18.5	18.4	18.7	19.2	19.7	20.3	20.7	20.8	20.5
73 - β	Lib Zubeneschamali	2.6	130	45.2	45.0	44.8	44.6	44.5	44.5	44.5	44.6	44.8	44.8	44.8	44.7
74 - α	CrB Alphecca	2.2	126	20.1	19.8	19.6	19.4	19.3	19.3	19.4	19.5	19.6	19.7	19.7	19.6
75 - α	Ser Unukalhai	2.7	123	56.3	56.1	55.9	55.7	55.6	55.6	55.6	55.7	55.8	55.9	55.9	55.8
76 - α	Sco Antares	0.9	112	39.4	39.1	38.9	38.6	38.5	38.4	38.4	38.5	38.6	38.7	38.8	38.7
77 - α	TrA Atria	1.9	107	51.1	50.5	49.9	49.4	49.0	48.8	48.9	49.1	49.5	49.9	50.1	49.9
78 - ε	Scorpii	2.3	107	28.1	27.8	27.5	27.3	27.1	27.0	27.0	27.1	27.2	27.4	27.4	27.3
79 - η	Oph Sabik	2.4	102	24.8	24.6	24.4	24.1	24.0	23.9	23.8	23.9	24.0	24.1	24.2	24.1
80 - α	Her Rasalgethi	3.1	101	20.7	20.5	20.3	20.1	19.9	19.9	19.8	19.9	20.0	20.2	20.3	20.2
81 - λ	Sco Shaula	1.6	96	36.5	36.2	35.9	35.7	35.5	35.3	35.2	35.3	35.5	35.6	35.7	35.7
82 - α	Oph Rasalhague	2.1	96	16.5	16.3	16.0	15.8	15.7	15.5	15.5	15.6	15.7	15.8	15.9	15.9
83 - θ	Sco Sargas	1.9	95	40.9	40.6	40.3	40.0	39.8	39.6	39.5	39.6	39.8	40.0	40.1	40.0
84 - γ	Dra Eltanin	2.2	90	51.5	51.3	51.0	50.7	50.5	50.3	50.3	50.5	50.7	51.0	51.2	51.2
85 - ε	Sgr Kaus Australis	1.9	83	58.1	57.8	57.6	57.3	57.1	56.9	56.8	56.8	57.0	57.1	57.2	57.2
86 - α	Lyr Vega	0.0	80	46.4	46.3	46.1	45.8	45.6	45.4	45.4	45.4	45.6	45.8	46.0	46.0
87 - σ	Sgr Nunki	2.0	76	11.6	11.4	11.2	11.0	10.7	10.5	10.4	10.4	10.5	10.7	10.8	10.8
88 - α	Aql Altair	0.8	62	18.8	18.6	18.5	18.3	18.1	17.9	17.7	17.7	17.8	17.9	18.0	18.1
89 - γ	Cyg Sadr	2.2	54	27.1	27.0	26.9	26.6	26.4	26.1	26.0	26.0	26.1	26.2	26.4	26.6
90 - α	Pav Peacock	1.9	53	36.3	36.1	35.8	35.5	35.1	34.7	34.5	34.4	34.5	34.7	34.9	35.1
91 - α	Cyg Deneb	1.3	49	39.0	39.0	38.8	38.6	38.3	38.1	37.9	37.9	38.0	38.1	38.4	38.5
92 - α	Cep Alderamin	2.4	40	21.9	21.9	21.8	21.5	21.1	20.7	20.5	20.4	20.5	20.8	21.1	21.4
93 - ε	Peg Enif	0.7	33	57.7	57.6	57.5	57.4	57.2	56.9	56.7	56.6	56.6	56.7	56.8	56.9
94 - δ	Cap Deneb Algedi	2.9	33	14.9	14.9	14.8	14.6	14.4	14.1	13.9	13.8	13.8	13.9	14.0	14.1
95 - α	Gru Al Na'ir	1.7	27	57.2	57.2	57.1	56.9	56.6	56.3	56.0	55.8	55.8	55.8	56.0	56.2
96 - β	Gruis	2.1	19	20.6	20.6	20.6	20.4	20.1	19.8	19.5	19.3	19.2	19.3	19.5	19.6
97 - α	PsA Fomalhaut	1.2	15	35.7	35.7	35.7	35.6	35.4	35.1	34.8	34.7	34.6	34.6	34.7	34.8
98 - β	Peg Scheat	2.4	14	3.7	3.8	3.8	3.6	3.4	3.2	3.0	2.8	2.7	2.8	2.8	3.0
99 - α	Peg Markab	2.5	13	48.9	49.0	49.0	48.8	48.7	48.4	48.2	48.0	48.0	48.0	48.1	48.2

ESTRELLAS, 2000

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Posiciones aparentes

DECLINACIÓN

Nº	NOMBRE	Mag		Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
			°	/	/	/	/	/	/	/	/	/	/	/	/
51 - μ	Velorum	2.7	-49	25.0	25.2	25.3	25.5	25.5	25.5	25.5	25.4	25.2	25.1	25.1	25.2
52 - ν	Hydrae	3.1	-16	11.6	11.7	11.8	11.8	11.8	11.8	11.7	11.7	11.6	11.6	11.6	11.7
53 - β	UMa Merak	2.4	+56	22.7	22.8	22.9	23.0	23.1	23.1	23.1	23.0	22.8	22.7	22.5	22.5
54 - α	UMa Dubhe	1.8	+61	44.8	44.9	45.0	45.2	45.3	45.3	45.2	45.1	44.9	44.8	44.6	44.5
55 - β	Leo Denebola	2.1	+14	34.3	34.2	34.2	34.2	34.3	34.3	34.4	34.4	34.3	34.3	34.2	34.0
56 - γ	Crv Gienah	2.6	-17	32.4	32.5	32.6	32.7	32.7	32.7	32.6	32.6	32.5	32.5	32.5	32.6
57 - α	Cru Acrux	1.4	-63	5.6	5.7	5.9	6.1	6.2	6.3	6.3	6.2	6.1	5.9	5.8	5.8
58 - γ	Cru Gacrux	1.6	-57	6.5	6.6	6.8	6.9	7.0	7.1	7.1	7.0	6.9	6.8	6.7	6.7
59 - γ	Cen Muhlifain	2.2	-48	57.3	57.4	57.6	57.7	57.8	57.9	57.9	57.8	57.7	57.6	57.5	57.5
60 - β	Cru Mimoso	1.3	-59	41.0	41.1	41.3	41.4	41.6	41.6	41.6	41.6	41.5	41.3	41.2	41.2
61 - ϵ	UMa Alioth	1.8	+55	57.4	57.4	57.5	57.6	57.7	57.8	57.8	57.8	57.6	57.5	57.3	57.1
62 - α^2	CVn Cor Caroli	2.9	+38	18.9	18.9	19.0	19.1	19.2	19.3	19.3	19.3	19.2	19.0	18.9	18.7
63 - ϵ	Vir Vindemiatrix	2.8	+10	57.5	57.5	57.4	57.5	57.5	57.6	57.6	57.6	57.6	57.5	57.4	57.3
64 - ζ	UMa Mizar	2.3	+54	55.3	55.3	55.4	55.5	55.6	55.7	55.8	55.7	55.6	55.5	55.3	55.1
65 - α	Vir Spica	1.0	-11	9.6	9.7	9.7	9.8	9.8	9.8	9.7	9.7	9.7	9.7	9.7	9.8
66 - η	UMa Alkaid	1.9	+49	18.6	18.6	18.6	18.8	18.9	19.0	19.0	19.0	18.9	18.8	18.6	18.4
67 - β	Cen Hadar	0.6	-60	22.0	22.1	22.2	22.4	22.5	22.6	22.7	22.7	22.6	22.5	22.3	22.3
68 - θ	Cen Menkent	2.1	-36	21.9	22.0	22.1	22.2	22.3	22.4	22.4	22.4	22.3	22.2	22.2	22.2
69 - α	Boo Arcturus	0.0	+19	10.9	10.8	10.8	10.9	10.9	11.0	11.1	11.1	11.0	11.0	10.8	10.7
70 - α^1	Cen Rigil Kentaurus	0.0	-60	49.7	49.8	49.9	50.1	50.2	50.3	50.4	50.4	50.3	50.2	50.1	50.0
71 - α^2	Lib Zubenelgenubi	2.8	-16	2.4	2.4	2.5	2.5	2.6	2.6	2.6	2.5	2.5	2.5	2.5	2.5
72 - β	UMi Kochab	2.1	+74	9.1	9.1	9.1	9.3	9.4	9.6	9.6	9.6	9.5	9.4	9.2	9.0
73 - β	Lib Zubeneshamali	2.6	-9	22.9	22.9	23.0	23.0	23.0	23.0	23.0	23.0	22.9	22.9	23.0	23.0
74 - α	CrB Alphecca	2.2	+26	42.8	42.7	42.7	42.8	42.9	43.0	43.1	43.1	43.1	43.0	42.9	42.7
75 - α	Ser Unukalhai	2.7	+6	25.6	25.5	25.4	25.5	25.5	25.6	25.6	25.7	25.7	25.6	25.6	25.5
76 - α	Sco Antares	0.9	-26	25.7	25.8	25.8	25.9	25.9	25.9	25.9	25.9	25.9	25.9	25.9	25.9
77 - α	TrA Atria	1.9	-69	1.4	1.3	1.3	1.4	1.5	1.7	1.8	1.9	1.9	1.8	1.7	1.6
78 - ϵ	Scorpii	2.3	-34	17.4	17.4	17.5	17.5	17.5	17.6	17.6	17.7	17.7	17.6	17.6	17.6
79 - η	Oph Sabik	2.4	-15	43.4	43.4	43.5	43.5	43.5	43.4	43.4	43.4	43.4	43.4	43.4	43.5
80 - α	Her Rasalgethi	3.1	+14	23.4	23.3	23.3	23.3	23.4	23.5	23.6	23.6	23.6	23.6	23.5	23.4
81 - λ	Sco Shaula	1.6	-37	6.1	6.1	6.1	6.1	6.1	6.2	6.2	6.3	6.3	6.3	6.2	6.2
82 - α	Oph Rasalhague	2.1	+12	33.6	33.5	33.5	33.5	33.6	33.7	33.7	33.8	33.8	33.8	33.7	33.6
83 - θ	Sco Sargas	1.9	-42	59.7	59.7	59.7	59.7	59.8	59.8	59.9	59.9	60.0	59.9	59.9	59.8
84 - γ	Dra Eltanin	2.2	+51	29.3	29.1	29.1	29.1	29.2	29.4	29.5	29.7	29.7	29.7	29.6	29.4
85 - ϵ	Sgr Kaus Australis	1.9	-34	23.0	23.0	23.0	22.9	23.0	23.0	23.0	23.1	23.1	23.1	23.1	23.0
86 - α	Lyr Vega	0.0	+38	47.0	46.9	46.8	46.8	46.9	47.0	47.2	47.3	47.4	47.4	47.3	47.2
87 - σ	Sgr Nunki	2.0	-26	17.8	17.7	17.7	17.7	17.7	17.7	17.7	17.7	17.7	17.8	17.8	17.7
88 - α	Aql Altair	0.8	+8	52.1	52.0	52.0	52.0	52.1	52.2	52.3	52.3	52.4	52.4	52.4	52.3
89 - γ	Cyg Sadr	2.2	+40	15.4	15.3	15.2	15.2	15.2	15.3	15.5	15.6	15.8	15.8	15.8	15.7
90 - α	Pav Peacock	1.9	-56	44.2	44.1	43.9	43.9	43.8	43.8	43.9	44.0	44.1	44.2	44.2	44.1
91 - α	Cyg Deneb	1.3	+45	16.9	16.7	16.6	16.6	16.6	16.7	16.9	17.1	17.2	17.3	17.3	17.2
92 - α	Cep Alderamin	2.4	+62	35.2	35.1	34.9	34.9	34.9	35.0	35.1	35.3	35.5	35.6	35.6	35.6
93 - ϵ	Peg Enif	0.7	+9	52.5	52.4	52.4	52.4	52.4	52.5	52.6	52.7	52.8	52.8	52.8	52.8
94 - δ	Cap Deneb Algedi	2.9	-16	7.8	7.8	7.7	7.7	7.6	7.5	7.4	7.4	7.4	7.5	7.5	7.5
95 - α	Gru Al Na'ir	1.7	-46	57.9	57.8	57.7	57.5	57.4	57.4	57.4	57.4	57.5	57.6	57.7	57.7
96 - β	Gruis	2.1	-46	53.3	53.2	53.1	53.0	52.9	52.8	52.8	52.8	52.9	53.0	53.1	53.1
97 - α	PsA Fomalhaut	1.2	-29	37.6	37.5	37.4	37.3	37.2	37.1	37.1	37.1	37.1	37.2	37.2	37.3
98 - β	Peg Scheat	2.4	+28	5.0	4.9	4.8	4.8	4.8	4.9	5.0	5.1	5.2	5.3	5.4	5.4
99 - α	Peg Markab	2.5	+15	12.3	12.2	12.2	12.1	12.2	12.3	12.4	12.5	12.6	12.6	12.7	12.6

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

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

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

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

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

2ª CORRECCIÓN

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

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

DETERMINACIÓN DE LA LATITUD
POR LA OBSERVACIÓN DE UNA ALTURA DE LA POLAR, 2000

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	-34.7	26 00	-43.1	52 00	-42.8	78 00	-33.8	104 00	-18.0	130 00	+1.5	156 00	+20.7
0 30	-35.0	26 30	-43.2	52 30	-42.7	78 30	-33.6	104 30	-17.7	130 30	+1.9	156 30	+21.0
1 00	-35.2	27 00	-43.3	53 00	-42.6	79 00	-33.3	105 00	-17.3	131 00	+2.2	157 00	+21.3
1 30	-35.4	27 30	-43.4	53 30	-42.5	79 30	-33.1	105 30	-16.9	131 30	+2.6	157 30	+21.7
2 00	-35.7	28 00	-43.4	54 00	-42.4	80 00	-32.8	106 00	-16.6	132 00	+3.0	158 00	+22.0
2 30	-35.9	28 30	-43.5	54 30	-42.3	80 30	-32.6	106 30	-16.2	132 30	+3.4	158 30	+22.3
3 00	-36.1	29 00	-43.6	55 00	-42.2	81 00	-32.3	107 00	-15.9	133 00	+3.8	159 00	+22.7
3 30	-36.3	29 30	-43.6	55 30	-42.1	81 30	-32.1	107 30	-15.5	133 30	+4.2	159 30	+23.0
4 00	-36.5	30 00	-43.7	56 00	-42.0	82 00	-31.8	108 00	-15.2	134 00	+4.5	160 00	+23.3
4 30	-36.8	30 30	-43.7	56 30	-41.9	82 30	-31.5	108 30	-14.8	134 30	+4.9	160 30	+23.6
5 00	-37.0	31 00	-43.8	57 00	-41.7	83 00	-31.2	109 00	-14.4	135 00	+5.3	161 00	+24.0
5 30	-37.2	31 30	-43.8	57 30	-41.6	83 30	-31.0	109 30	-14.1	135 30	+5.7	161 30	+24.3
6 00	-37.4	32 00	-43.9	58 00	-41.5	84 00	-30.7	110 00	-13.7	136 00	+6.1	162 00	+24.6
6 30	-37.6	32 30	-43.9	58 30	-41.4	84 30	-30.4	110 30	-13.3	136 30	+6.5	162 30	+24.9
7 00	-37.8	33 00	-43.9	59 00	-41.2	85 00	-30.1	111 00	-13.0	137 00	+6.8	163 00	+25.3
7 30	-38.0	33 30	-44.0	59 30	-41.1	85 30	-29.9	111 30	-12.6	137 30	+7.2	163 30	+25.6
8 00	-38.2	34 00	-44.0	60 00	-40.9	86 00	-29.6	112 00	-12.2	138 00	+7.6	164 00	+25.9
8 30	-38.4	34 30	-44.0	60 30	-40.8	86 30	-29.3	112 30	-11.9	138 30	+8.0	164 30	+26.2
9 00	-38.6	35 00	-44.1	61 00	-40.6	87 00	-29.0	113 00	-11.5	139 00	+8.4	165 00	+26.5
9 30	-38.7	35 30	-44.1	61 30	-40.5	87 30	-28.7	113 30	-11.1	139 30	+8.7	165 30	+26.8
10 00	-38.9	36 00	-44.1	62 00	-40.3	88 00	-28.4	114 00	-10.7	140 00	+9.1	166 00	+27.1
10 30	-39.1	36 30	-44.1	62 30	-40.2	88 30	-28.1	114 30	-10.4	140 30	+9.5	166 30	+27.4
11 00	-39.3	37 00	-44.1	63 00	-40.0	89 00	-27.8	115 00	-10.0	141 00	+9.9	167 00	+27.7
11 30	-39.5	37 30	-44.1	63 30	-39.9	89 30	-27.5	115 30	-9.6	141 30	+10.2	167 30	+28.0
12 00	-39.6	38 00	-44.1	64 00	-39.7	90 00	-27.2	116 00	-9.2	142 00	+10.6	168 00	+28.3
12 30	-39.8	38 30	-44.1	64 30	-39.5	90 30	-26.9	116 30	-8.9	142 30	+11.0	168 30	+28.6
13 00	-40.0	39 00	-44.1	65 00	-39.3	91 00	-26.6	117 00	-8.5	143 00	+11.4	169 00	+28.9
13 30	-40.1	39 30	-44.1	65 30	-39.2	91 30	-26.3	117 30	-8.1	143 30	+11.7	169 30	+29.2
14 00	-40.3	40 00	-44.1	66 00	-39.0	92 00	-26.0	118 00	-7.7	144 00	+12.1	170 00	+29.5
14 30	-40.4	40 30	-44.1	66 30	-38.8	92 30	-25.7	118 30	-7.4	144 30	+12.5	170 30	+29.8
15 00	-40.6	41 00	-44.1	67 00	-38.6	93 00	-25.4	119 00	-7.0	145 00	+12.8	171 00	+30.0
15 30	-40.7	41 30	-44.0	67 30	-38.4	93 30	-25.0	119 30	-6.6	145 30	+13.2	171 30	+30.3
16 00	-40.9	42 00	-44.0	68 00	-38.2	94 00	-24.7	120 00	-6.2	146 00	+13.6	172 00	+30.6
16 30	-41.0	42 30	-44.0	68 30	-38.1	94 30	-24.4	120 30	-5.8	146 30	+13.9	172 30	+30.9
17 00	-41.2	43 00	-44.0	69 00	-37.9	95 00	-24.1	121 00	-5.4	147 00	+14.3	173 00	+31.1
17 30	-41.3	43 30	-43.9	69 30	-37.7	95 30	-23.8	121 30	-5.1	147 30	+14.7	173 30	+31.4
18 00	-41.4	44 00	-43.9	70 00	-37.5	96 00	-23.4	122 00	-4.7	148 00	+15.0	174 00	+31.7
18 30	-41.6	44 30	-43.8	70 30	-37.2	96 30	-23.1	122 30	-4.3	148 30	+15.4	174 30	+32.0
19 00	-41.7	45 00	-43.8	71 00	-37.0	97 00	-22.8	123 00	-3.9	149 00	+15.7	175 00	+32.2
19 30	-41.8	45 30	-43.8	71 30	-36.8	97 30	-22.5	123 30	-3.5	149 30	+16.1	175 30	+32.5
20 00	-41.9	46 00	-43.7	72 00	-36.6	98 00	-22.1	124 00	-3.1	150 00	+16.5	176 00	+32.7
20 30	-42.1	46 30	-43.6	72 30	-36.4	98 30	-21.8	124 30	-2.8	150 30	+16.8	176 30	+33.0
21 00	-42.2	47 00	-43.6	73 00	-36.2	99 00	-21.5	125 00	-2.4	151 00	+17.2	177 00	+33.3
21 30	-42.3	47 30	-43.5	73 30	-36.0	99 30	-21.1	125 30	-2.0	151 30	+17.5	177 30	+33.5
22 00	-42.4	48 00	-43.5	74 00	-35.7	100 00	-20.8	126 00	-1.6	152 00	+17.9	178 00	+33.8
22 30	-42.5	48 30	-43.4	74 30	-35.5	100 30	-20.4	126 30	-1.2	152 30	+18.2	178 30	+34.0
23 00	-42.6	49 00	-43.3	75 00	-35.3	101 00	-20.1	127 00	-0.8	153 00	+18.6	179 00	+34.2
23 30	-42.7	49 30	-43.2	75 30	-35.0	101 30	-19.7	127 30	-0.5	153 30	+18.9	179 30	+34.5
24 00	-42.8	50 00	-43.2	76 00	-34.8	102 00	-19.4	128 00	-0.1	154 00	+19.3	180 00	+34.7
24 30	-42.9	50 30	-43.1	76 30	-34.6	102 30	-19.1	128 30	+0.3	154 30	+19.6	180 30	+35.0
25 00	-43.0	51 00	-43.0	77 00	-34.3	103 00	-18.7	129 00	+0.7	155 00	+20.0	181 00	+35.2
25 30	-43.1	51 30	-42.9	77 30	-34.1	103 30	-18.4	129 30	+1.1	155 30	+20.3	181 30	+35.4
26 00	-43.1	52 00	-42.8	78 00	-33.8	104 00	-18.0	130 00	+1.5	156 00	+20.7	182 00	+35.7

DETERMINACIÓN DE LA LATITUD
POR LA OBSERVACIÓN DE UNA ALTURA DE LA POLAR, 2000

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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	+35.7	208 00	+43.4	234 00	+42.4	260 00	+32.8	286 00	+16.6	312 00	-3.0	338 00	-22.0
182 30	+35.9	208 30	+43.5	234 30	+42.3	260 30	+32.6	286 30	+16.2	312 30	-3.4	338 30	-22.3
183 00	+36.1	209 00	+43.6	235 00	+42.2	261 00	+32.3	287 00	+15.9	313 00	-3.8	339 00	-22.7
183 30	+36.3	209 30	+43.6	235 30	+42.1	261 30	+32.1	287 30	+15.5	313 30	-4.2	339 30	-23.0
184 00	+36.5	210 00	+43.7	236 00	+42.0	262 00	+31.8	288 00	+15.2	314 00	-4.5	340 00	-23.3
184 30	+36.8	210 30	+43.7	236 30	+41.9	262 30	+31.5	288 30	+14.8	314 30	-4.9	340 30	-23.6
185 00	+37.0	211 00	+43.8	237 00	+41.7	263 00	+31.2	289 00	+14.4	315 00	-5.3	341 00	-24.0
185 30	+37.2	211 30	+43.8	237 30	+41.6	263 30	+31.0	289 30	+14.1	315 30	-5.7	341 30	-24.3
186 00	+37.4	212 00	+43.9	238 00	+41.5	264 00	+30.7	290 00	+13.7	316 00	-6.1	342 00	-24.6
186 30	+37.6	212 30	+43.9	238 30	+41.4	264 30	+30.4	290 30	+13.3	316 30	-6.5	342 30	-24.9
187 00	+37.8	213 00	+43.9	239 00	+41.2	265 00	+30.1	291 00	+13.0	317 00	-6.8	343 00	-25.3
187 30	+38.0	213 30	+44.0	239 30	+41.1	265 30	+29.9	291 30	+12.6	317 30	-7.2	343 30	-25.6
188 00	+38.2	214 00	+44.0	240 00	+40.9	266 00	+29.6	292 00	+12.2	318 00	-7.6	344 00	-25.9
188 30	+38.4	214 30	+44.0	240 30	+40.8	266 30	+29.3	292 30	+11.9	318 30	-8.0	344 30	-26.2
189 00	+38.6	215 00	+44.1	241 00	+40.6	267 00	+29.0	293 00	+11.5	319 00	-8.4	345 00	-26.5
189 30	+38.7	215 30	+44.1	241 30	+40.5	267 30	+28.7	293 30	+11.1	319 30	-8.7	345 30	-26.8
190 00	+38.9	216 00	+44.1	242 00	+40.3	268 00	+28.4	294 00	+10.7	320 00	-9.1	346 00	-27.1
190 30	+39.1	216 30	+44.1	242 30	+40.2	268 30	+28.1	294 30	+10.4	320 30	-9.5	346 30	-27.4
191 00	+39.3	217 00	+44.1	243 00	+40.0	269 00	+27.8	295 00	+10.0	321 00	-9.9	347 00	-27.7
191 30	+39.5	217 30	+44.1	243 30	+39.9	269 30	+27.5	295 30	+9.6	321 30	-10.2	347 30	-28.0
192 00	+39.6	218 00	+44.1	244 00	+39.7	270 00	+27.2	296 00	+9.2	322 00	-10.6	348 00	-28.3
192 30	+39.8	218 30	+44.1	244 30	+39.5	270 30	+26.9	296 30	+8.9	322 30	-11.0	348 30	-28.6
193 00	+40.0	219 00	+44.1	245 00	+39.3	271 00	+26.6	297 00	+8.5	323 00	-11.4	349 00	-28.9
193 30	+40.1	219 30	+44.1	245 30	+39.2	271 30	+26.3	297 30	+8.1	323 30	-11.7	349 30	-29.2
194 00	+40.3	220 00	+44.1	246 00	+39.0	272 00	+26.0	298 00	+7.7	324 00	-12.1	350 00	-29.5
194 30	+40.4	220 30	+44.1	246 30	+38.8	272 30	+25.7	298 30	+7.4	324 30	-12.5	350 30	-29.8
195 00	+40.6	221 00	+44.1	247 00	+38.6	273 00	+25.4	299 00	+7.0	325 00	-12.8	351 00	-30.0
195 30	+40.7	221 30	+44.0	247 30	+38.4	273 30	+25.0	299 30	+6.6	325 30	-13.2	351 30	-30.3
196 00	+40.9	222 00	+44.0	248 00	+38.2	274 00	+24.7	300 00	+6.2	326 00	-13.6	352 00	-30.6
196 30	+41.0	222 30	+44.0	248 30	+38.1	274 30	+24.4	300 30	+5.8	326 30	-13.9	352 30	-30.9
197 00	+41.2	223 00	+44.0	249 00	+37.9	275 00	+24.1	301 00	+5.4	327 00	-14.3	353 00	-31.1
197 30	+41.3	223 30	+43.9	249 30	+37.7	275 30	+23.8	301 30	+5.1	327 30	-14.7	353 30	-31.4
198 00	+41.4	224 00	+43.9	250 00	+37.5	276 00	+23.4	302 00	+4.7	328 00	-15.0	354 00	-31.7
198 30	+41.6	224 30	+43.8	250 30	+37.2	276 30	+23.1	302 30	+4.3	328 30	-15.4	354 30	-32.0
199 00	+41.7	225 00	+43.8	251 00	+37.0	277 00	+22.8	303 00	+3.9	329 00	-15.7	355 00	-32.2
199 30	+41.8	225 30	+43.8	251 30	+36.8	277 30	+22.5	303 30	+3.5	329 30	-16.1	355 30	-32.5
200 00	+41.9	226 00	+43.7	252 00	+36.6	278 00	+22.1	304 00	+3.1	330 00	-16.5	356 00	-32.7
200 30	+42.1	226 30	+43.6	252 30	+36.4	278 30	+21.8	304 30	+2.8	330 30	-16.8	356 30	-33.0
201 00	+42.2	227 00	+43.6	253 00	+36.2	279 00	+21.5	305 00	+2.4	331 00	-17.2	357 00	-33.3
201 30	+42.3	227 30	+43.5	253 30	+36.0	279 30	+21.1	305 30	+2.0	331 30	-17.5	357 30	-33.5
202 00	+42.4	228 00	+43.5	254 00	+35.7	280 00	+20.8	306 00	+1.6	332 00	-17.9	358 00	-33.8
202 30	+42.5	228 30	+43.4	254 30	+35.5	280 30	+20.4	306 30	+1.2	332 30	-18.2	358 30	-34.0
203 00	+42.6	229 00	+43.3	255 00	+35.3	281 00	+20.1	307 00	+0.8	333 00	-18.6	359 00	-34.2
203 30	+42.7	229 30	+43.2	255 30	+35.0	281 30	+19.7	307 30	+0.5	333 30	-18.9	359 30	-34.5
204 00	+42.8	230 00	+43.2	256 00	+34.8	282 00	+19.4	308 00	+0.1	334 00	-19.3	360 00	-34.7
204 30	+42.9	230 30	+43.1	256 30	+34.6	282 30	+19.1	308 30	-0.3	334 30	-19.6		
205 00	+43.0	231 00	+43.0	257 00	+34.3	283 00	+18.7	309 00	-0.7	335 00	-20.0		
205 30	+43.1	231 30	+42.9	257 30	+34.1	283 30	+18.4	309 30	-1.1	335 30	-20.3		
206 00	+43.1	232 00	+42.8	258 00	+33.8	284 00	+18.0	310 00	-1.5	336 00	-20.7		
206 30	+43.2	232 30	+42.7	258 30	+33.6	284 30	+17.7	310 30	-1.9	336 30	-21.0		
207 00	+43.3	233 00	+42.6	259 00	+33.3	285 00	+17.3	311 00	-2.2	337 00	-21.3		
207 30	+43.4	233 30	+42.5	259 30	+33.1	285 30	+16.9	311 30	-2.6	337 30	-21.7		
208 00	+43.4	234 00	+42.4	260 00	+32.8	286 00	+16.6	312 00	-3.0	338 00	-22.0		

DETERMINACIÓN DE LA LATITUD
POR LA OBSERVACIÓN DE UNA ALTURA DE LA POLAR, 2000

TABLA II

(SIEMPRE POSITIVA)

hL $\cap$	Altura											
	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°
°	/	/	/	/	/	/	/	/	/	/	/	/
0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.1	0.1	0.1
80	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3
100	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.4	0.5
120	0.0	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.4	0.5	0.6
140	0.0	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.4	0.5	0.6
160	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.4	0.4
180	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2
200	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.1	0.1	0.1
260	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3
280	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.4	0.5
300	0.0	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.4	0.5	0.6
320	0.0	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.4	0.5	0.6
340	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.4	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	-0.2	-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	+0.2
100	0.0	+0.2	+0.3	+0.3	+0.3	+0.2	0.0	-0.2	-0.3	-0.3	-0.3	-0.2	0.0
120	-0.1	+0.1	+0.3	+0.3	+0.4	+0.3	+0.1	0.0	-0.2	-0.3	-0.3	-0.3	-0.2
140	-0.1	0.0	+0.2	+0.3	+0.4	+0.3	+0.2	+0.1	-0.1	-0.3	-0.4	-0.4	-0.3
160	-0.1	0.0	+0.1	+0.3	+0.4	+0.4	+0.3	+0.2	0.0	-0.2	-0.4	-0.4	-0.4
180	-0.2	-0.1	0.0	+0.2	+0.3	+0.4	+0.4	+0.2	+0.1	-0.1	-0.3	-0.4	-0.5
200	-0.2	-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	-0.2
280	0.0	-0.2	-0.3	-0.3	-0.3	-0.2	0.0	+0.2	+0.3	+0.3	+0.3	+0.2	0.0
300	+0.1	-0.1	-0.3	-0.3	-0.4	-0.3	-0.1	0.0	+0.2	+0.3	+0.3	+0.3	+0.2
320	+0.1	0.0	-0.2	-0.3	-0.4	-0.3	-0.2	-0.1	+0.1	+0.3	+0.4	+0.4	+0.3
340	+0.1	0.0	-0.1	-0.3	-0.4	-0.4	-0.3	-0.2	0.0	+0.2	+0.4	+0.4	+0.4
360	+0.2	+0.1	0.0	-0.2	-0.3	-0.4	-0.4	-0.2	-0.1	+0.1	+0.3	+0.4	+0.5

Dic 32 corresponde al 1 de enero del año siguiente

hL [⌞]	Latitud												hL [⌞]
	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	
°	°	°	°	°	°	°	°	°	°	°	°	°	°
0	+0.5	+0.5	+0.5	+0.5	+0.5	+0.6	+0.6	+0.6	+0.7	+0.8	+0.9	+1.1	0
10	+0.4	+0.4	+0.4	+0.4	+0.4	+0.4	+0.5	+0.5	+0.5	+0.6	+0.7	+0.8	10
20	+0.2	+0.2	+0.2	+0.3	+0.3	+0.3	+0.3	+0.3	+0.4	+0.4	+0.5	+0.6	20
30	+0.1	+0.1	+0.1	+0.1	+0.1	+0.1	+0.1	+0.1	+0.2	+0.2	+0.2	+0.3	30
40	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	-0.1	40
50	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.3	-0.3	-0.4	50
60	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.4	-0.4	-0.4	-0.5	-0.6	-0.7	60
70	-0.4	-0.4	-0.4	-0.4	-0.5	-0.5	-0.5	-0.6	-0.6	-0.7	-0.8	-0.9	70
80	-0.5	-0.5	-0.5	-0.5	-0.6	-0.6	-0.6	-0.7	-0.8	-0.9	-1.0	-1.2	80
90	-0.6	-0.6	-0.6	-0.6	-0.7	-0.7	-0.8	-0.8	-0.9	-1.0	-1.2	-1.4	90
100	-0.7	-0.7	-0.7	-0.7	-0.8	-0.8	-0.9	-0.9	-1.0	-1.1	-1.3	-1.6	100
110	-0.7	-0.7	-0.7	-0.8	-0.8	-0.9	-0.9	-1.0	-1.1	-1.2	-1.4	-1.7	110
120	-0.7	-0.8	-0.8	-0.8	-0.8	-0.9	-1.0	-1.0	-1.1	-1.3	-1.5	-1.7	120
130	-0.7	-0.8	-0.8	-0.8	-0.8	-0.9	-1.0	-1.0	-1.1	-1.3	-1.5	-1.7	130
140	-0.7	-0.7	-0.8	-0.8	-0.8	-0.9	-0.9	-1.0	-1.1	-1.2	-1.4	-1.7	140
150	-0.7	-0.7	-0.7	-0.8	-0.8	-0.8	-0.9	-1.0	-1.1	-1.2	-1.4	-1.6	150
160	-0.6	-0.6	-0.7	-0.7	-0.7	-0.8	-0.8	-0.9	-1.0	-1.1	-1.2	-1.5	160
170	-0.6	-0.6	-0.6	-0.6	-0.6	-0.7	-0.7	-0.8	-0.8	-0.9	-1.1	-1.3	170
180	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.6	-0.6	-0.7	-0.8	-0.9	-1.1	180
190	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.5	-0.5	-0.6	-0.7	-0.8	190
200	-0.2	-0.2	-0.2	-0.3	-0.3	-0.3	-0.3	-0.3	-0.4	-0.4	-0.4	-0.5	200
210	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.2	-0.2	-0.2	-0.2	210
220	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	+0.1	220
230	+0.2	+0.2	+0.2	+0.2	+0.2	+0.2	+0.2	+0.2	+0.2	+0.3	+0.3	+0.3	230
240	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.4	+0.4	+0.4	+0.5	+0.5	+0.6	240
250	+0.4	+0.4	+0.4	+0.4	+0.4	+0.5	+0.5	+0.5	+0.6	+0.7	+0.8	+0.9	250
260	+0.5	+0.5	+0.5	+0.5	+0.6	+0.6	+0.6	+0.7	+0.8	+0.8	+1.0	+1.1	260
270	+0.6	+0.6	+0.6	+0.6	+0.7	+0.7	+0.8	+0.8	+0.9	+1.0	+1.1	+1.3	270
280	+0.7	+0.7	+0.7	+0.7	+0.7	+0.8	+0.8	+0.9	+1.0	+1.1	+1.3	+1.5	280
290	+0.7	+0.7	+0.7	+0.8	+0.8	+0.9	+0.9	+1.0	+1.1	+1.2	+1.4	+1.6	290
300	+0.7	+0.8	+0.8	+0.8	+0.8	+0.9	+0.9	+1.0	+1.1	+1.3	+1.5	+1.7	300
310	+0.7	+0.8	+0.8	+0.8	+0.8	+0.9	+1.0	+1.0	+1.1	+1.3	+1.5	+1.7	310
320	+0.7	+0.7	+0.8	+0.8	+0.8	+0.9	+0.9	+1.0	+1.1	+1.3	+1.4	+1.7	320
330	+0.7	+0.7	+0.7	+0.8	+0.8	+0.8	+0.9	+1.0	+1.1	+1.2	+1.4	+1.6	330
340	+0.6	+0.6	+0.7	+0.7	+0.7	+0.8	+0.8	+0.9	+1.0	+1.1	+1.3	+1.5	340
350	+0.6	+0.6	+0.6	+0.6	+0.6	+0.7	+0.7	+0.8	+0.9	+1.0	+1.1	+1.3	350
360	+0.5	+0.5	+0.5	+0.5	+0.5	+0.6	+0.6	+0.6	+0.7	+0.8	+0.9	+1.1	360

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

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

**CORRECCIONES PARA OBTENER LA ALTURA VERDADERA
DEL SOL (LIMBO INFERIOR), PLANETA O ESTRELLA, 2000**

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TABLA A				TABLA B = SOL (LIMBO INFERIOR)											
Depresión del horizonte				Semidiámetro, refracción y paralaje										Correc. adicional (2000)	
Elevación del observador	Corrección	Elevación del observador	Corrección	Altura apte. ⊙	Corrección	Altura apte. ⊙	Corrección	Altura apte. ⊙	Corrección	Altura apte. ⊙	Corrección	Altura apte. ⊙	Corrección		
1.6	-2.3	12.7	-6.4	6 15	+8.2	8 45	+10.2	13 23	+12.2	25 59	+14.2			Ene 1	+0'3
1.7	-2.4	13.1	-6.5	6 21	+8.3	8 54	+10.3	13 44	+12.3	27 12	+14.3			Ene 23	+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 6	-0'2
2.5	-2.9	15.3	-7.0	6 53	+8.8	9 47	+10.8	15 45	+12.8	35 16	+14.8			Jun 11	-0'3
2.7	-3.0	15.7	-7.1	7 00	+8.9	10 00	+10.9	16 13	+12.9	37 25	+14.9			Jul 27	-0'2
2.9	-3.1	16.2	-7.2	7 06	+9.0	10 12	+11.0	16 43	+13.0	39 49	+15.0			Sep 1	-0'1
3.1	-3.2	16.6	-7.3	7 14	+9.1	10 25	+11.1	17 14	+13.1	42 30	+15.1			Sep 25	0'0
3.3	-3.3	17.1	-7.4	7 21	+9.2	10 38	+11.2	17 47	+13.2	44 53	+15.2			Oct 17	+0'1
3.5	-3.4	17.6	-7.5	7 28	+9.3	10 52	+11.3	18 23	+13.3	47 30	+15.3			Nov 9	+0'2
3.7	-3.5	18.0	-7.6	7 36	+9.4	11 06	+11.4	19 01	+13.4	50 01	+15.4			Dic 14	+0'3
3.9	-3.6	18.5	-7.7	7 44	+9.5	11 21	+11.5	19 41	+13.5	52 51	+15.5			Dic 31	
4.2	-3.7	19.0	-7.8	7 52	+9.6	11 36	+11.6	20 24	+13.6	55 41	+15.6				
4.4	-3.8	19.5	-7.9	8 00	+9.7	11 52	+11.7	21 10	+13.7	58 31	+15.7				
4.7	-3.9	20.0	-8.0	8 08	+9.8	12 09	+11.8	21 59	+13.8	61 21	+15.8				
4.9	-4.0	20.5	-8.1	8 17	+9.9	12 26	+11.9	22 53	+13.9	64 11	+15.9				
5.2	-4.1	21.0	-8.2	8 26	+10.0	12 44	+12.0	23 50	+14.0	67 01	+16.0				
5.4	-4.2	21.5	-8.3	8 35	+10.1	13 03	+12.1	24 52	+14.1	69 51	+16.1				
5.7	-4.3	22.1	-8.4	8 45	+10.2	13 23	+12.2	25 59	+14.2						
6.0	-4.4	22.6	-8.5												
6.2	-4.5	23.1	-8.6												
6.5	-4.6	23.7	-8.7												
6.8	-4.7	24.2	-8.8												
7.1	-4.8	24.8	-8.9												
7.4	-4.9	25.4	-9.0												
7.7	-5.0	25.9	-9.1												
8.0	-5.1	26.5	-9.2												
8.4	-5.2	27.1	-9.3												
8.7	-5.3	27.7	-9.4												
9.0	-5.4	28.3	-9.5												
9.4	-5.5	28.9	-9.6												
9.7	-5.6	29.5	-9.7												
10.1	-5.7	30.1	-9.8												
10.4	-5.8	30.7	-9.9												
10.8	-5.9	31.3	-10.0												
11.2	-6.0	32.0	-10.1												
11.6	-6.1	32.6	-10.2												
11.9	-6.2	33.3	-10.3												
12.3	-6.3	33.9	-10.4												
12.7		34.6													

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