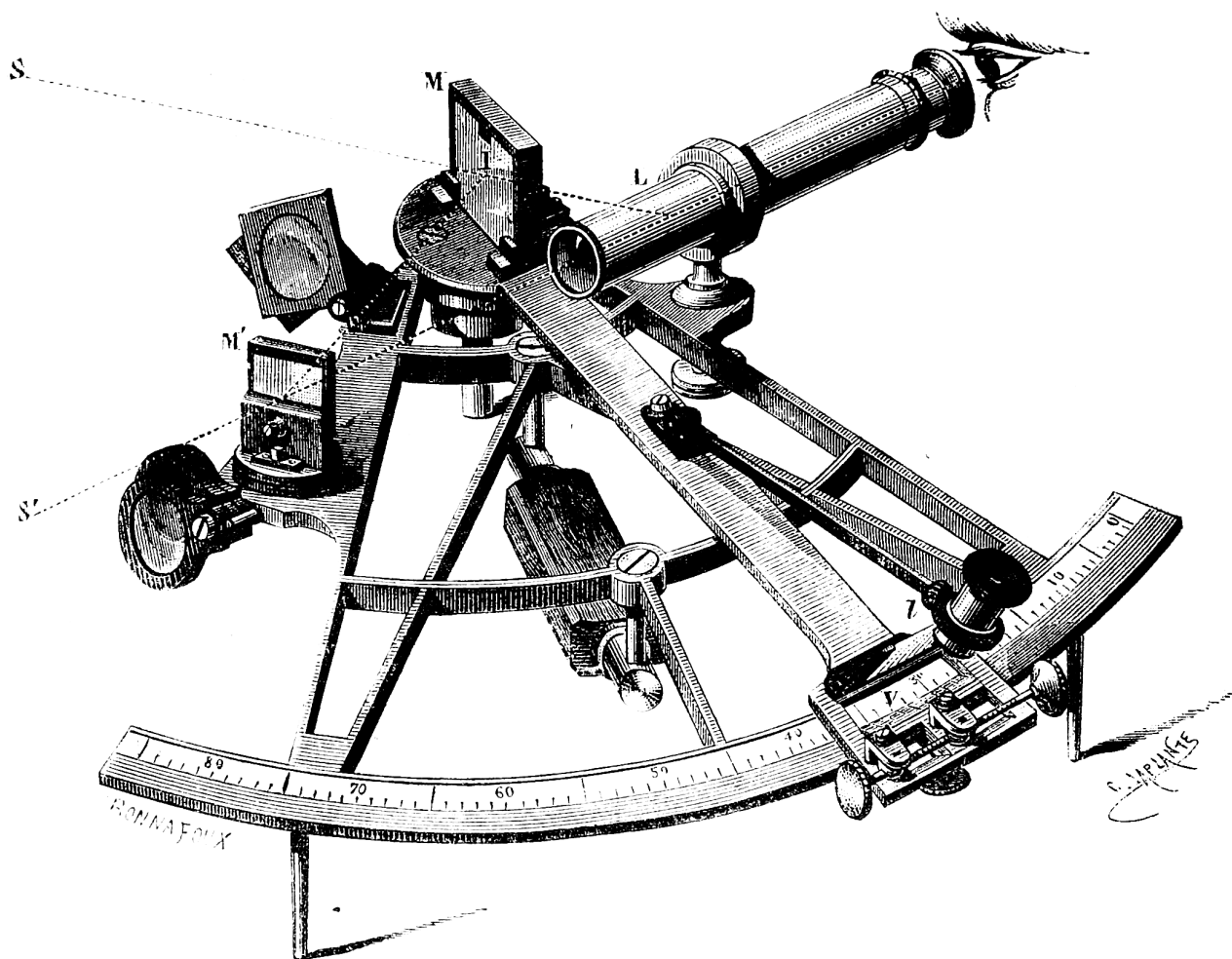




ALMANAQUE NÁUTICO PERSEIS 2009

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

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Introducción

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

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

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

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

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

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

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna						
	SD: 16/3 PMG: 12 ^h 03 ^m 7			Edad: 4 ^d 5 SD: 15/0 PMG: 15 ^h 49 ^m	PHE { 4 ^h : 55/2 12 ^h : 55/4 20 ^h : 55/6 R°: 42 ^m														
	hG ☉	Dec				hG ☾		Dif	Dec		Dif	Náutico	Civil	Hora	R°	Hora	R°		
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m	m		
0	179	08.6	-23	00.5	129	33.6	-9 50.7	60 N	7 09	8 06	9 02	10 33	2	21	22	86			
1	194	08.3		00.3	144	07.9 ¹⁵³	37.5 ¹³²	58	7 02	7 54	8 45	29	5		25	83			
2	209	08.0	-23	00.1	158	42.2 ¹⁵³	24.3 ¹³²	56	6 56	44	31	25	8		28	79			
3	224	07.7	-22	59.9	173	16.5 ¹⁵³	-9 11.0 ¹³³	54	50	36	19	22	10		30	77			
4	239	07.4		59.7	187	50.9 ¹⁵⁴	-8 57.7 ¹³³	52	44	28	8 08	19	12		32	74			
5	254	07.1	-22	59.5	202	25.3 ¹⁵⁴	-8 44.4 ¹³³	50	6 39	7 20	7 59	10 16	14	21	34	72			
6	269	06.8	-22	59.3	216	59.7 ¹⁵⁴	-8 31.0 ¹³⁴	45	6 28	7 05	7 38	10 10	19	21	38	67			
7	284	06.5		59.1	231	34.1 ¹⁵⁴	17.6 ¹³⁴	40	18	6 52	22	05	23		42	62			
8	299	06.2		58.8	246	08.5 ¹⁵⁴	-8 04.1 ¹³⁵	35	08	40	7 08	10 01	25		44	60			
9	314	05.9		58.6	260	42.9 ¹⁵⁴	-7 50.6 ¹³⁵	30	6 00	30	6 56	9 57	28		47	56			
10	329	05.6		58.4	275	17.4 ¹⁵⁵	37.1 ¹³⁵	20	5 44	6 11	35	50	34		51	52			
11	344	05.3	-22	58.2	289	51.8 ¹⁵⁴	-7 23.5 ¹³⁶	10 N	5 28	5 54	6 17	9 44	38	21	55	47			
12	359	05.0	-22	58.0	304	26.3 ¹⁵⁵	-7 09.8 ¹³⁷	0	5 11	5 37	6 00	9 39	42	21	59	42			
13	14	04.7		57.8	319	00.7 ¹⁵⁴	-6 56.2 ¹³⁶	10 S	4 53	20	5 43	33	46	22	02	38			
14	29	04.4		57.6	333	35.2 ¹⁵⁵	42.5 ¹³⁷	20	31	5 00	24	27	51		06	33			
15	44	04.1		57.4	348	09.7 ¹⁵⁵	28.7 ¹³⁸	30	4 02	4 35	5 02	20	56		10	29			
16	59	03.8		57.1	2	44.1 ¹⁵⁴	14.9 ¹³⁸	35	3 44	20	4 50	16	59		13	25			
17	74	03.5	-22	56.9	17	18.6 ¹⁵⁵	-6 01.1 ¹³⁸	40	3 21	4 02	4 35	9 12	62	22	15	22			
18	89	03.2	-22	56.7	31	53.1 ¹⁵⁵	-5 47.3 ¹³⁸	45	2 51	3 40	4 17	9 06	67	22	18	19			
19	104	03.0		56.5	46	27.6 ¹⁵⁵	33.4 ¹³⁹	50	2 07	3 11	3 55	9 00	71	22	14				
20	119	02.7		56.3	61	02.1 ¹⁵⁵	19.5 ¹³⁹	52	1 41	2 57	45	8 57	74		24	11			
21	134	02.4		56.0	75	36.6 ¹⁵⁵	-5 05.5 ¹⁴⁰	54	1 01	39	33	54	76		26	9			
22	149	02.1		55.8	90	11.1 ¹⁵⁵	-4 51.6 ¹³⁹	56	** **	2 18	19	50	79		28	7			
23	164	01.8		55.6	104	45.6 ¹⁵⁵	37.5 ¹⁴¹	58	** **	1 50	3 03	46	82		30	4			
24	179	01.5	-22	55.4	119	20.0 ¹⁵⁴	-4 23.5 ¹⁴⁰	60 S	** **	1 06	2 43	8 42	85	22	32	2			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 17 ^h 14 ^m 0		Mag: -4.4 PMG: 15 ^h 17 ^m			Mag: +1.3 PMG: 11 ^h 32 ^m			Mag: -1.9 PMG: 13 ^h 20 ^m			Mag: +1.0 PMG: 4 ^h 49 ^m							
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec						
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'		
0	100	46.8	130	48.3	-13	49.1	186	55.4	-24	05.6	159	37.8	-20	46.6	287	31.8	+5	08.9	
1	115	49.2	145	48.2		48.0	201	55.8		05.5	174	39.7		46.5	302	34.3		08.9	
2	130	51.7	160	48.1		46.9	216	56.2		05.5	189	41.6		46.3	317	36.8		08.9	
3	145	54.2	175	47.9		45.8	231	56.6		05.5	204	43.4		46.2	332	39.2		08.9	
4	160	56.6	190	47.8		44.8	246	57.0		05.4	219	45.3		46.1	347	41.7		08.9	
5	175	59.1	205	47.7	-13	43.7	261	57.4	-24	05.4	234	47.1	-20	46.0	2	44.1	+5	08.9	
6	191	01.6	220	47.6	-13	42.6	276	57.8	-24	05.4	249	49.0	-20	45.9	17	46.6	+5	08.9	
7	206	04.0	235	47.4		41.5	291	58.2		05.3	264	50.9		45.8	32	49.1		08.9	
8	221	06.5	250	47.3		40.4	306	58.6		05.3	279	52.7		45.6	47	51.5		09.0	
9	236	09.0	265	47.2		39.3	321	59.0		05.3	294	54.6		45.5	62	54.0		09.0	
10	251	11.4	280	47.1		38.2	336	59.4		05.2	309	56.4		45.4	77	56.5		09.0	
11	266	13.9	295	47.0	-13	37.1	351	59.8	-24	05.2	324	58.3	-20	45.3	92	58.9	+5	09.0	
12	281	16.4	310	46.9	-13	36.0	7	00.2	-24	05.2	340	00.2	-20	45.2	108	01.4	+5	09.0	
13	296	18.8	325	46.7		34.9	22	00.6		05.1	355	02.0		45.1	123	03.8		09.0	
14	311	21.3	340	46.6		33.8	37	01.0		05.1	10	03.9		45.0	138	06.3		09.0	
15	326	23.7	355	46.5		32.7	52	01.4		05.1	25	05.7		44.8	153	08.8		09.0	
16	341	26.2	10	46.4		31.6	67	01.8		05.0	40	07.6		44.7	168	11.2		09.1	
17	356	28.7	25	46.3	-13	30.5	82	02.2	-24	05.0	55	09.5	-20	44.6	183	13.7	+5	09.1	
18	11	31.1	40	46.2	-13	29.4	97	02.6	-24	05.0	70	11.3	-20	44.5	198	16.2	+5	09.1	
19	26	33.6	55	46.1		28.3	112	03.0		04.9	85	13.2		44.4	213	18.6		09.1	
20	41	36.1	70	46.0		27.2	127	03.4		04.9	100	15.1		44.3	228	21.1		09.1	
21	56	38.5	85	45.9		26.1	142	03.8		04.8	115	16.9		44.1	243	23.6		09.1	
22	71	41.0	100	45.7		25.0	157	04.2		04.8	130	18.8		44.0	258	26.0		09.1	
23	86	43.5	115	45.6		23.9	172	04.7		04.8	145	20.6		43.9	273	28.5		09.1	
24	101	45.9	130	45.5	-13	22.8	187	05.1	-24	04.7	160	22.5	-20	43.8	288	30.9	+5	09.2	
Dif	—		-1		+11		+4		0		+19		+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 1				Edad: 5 ^d 5 PHE { 4 ^h : 55 ^m 8 12 ^h : 56 ^m 0 20 ^h : 56 ^m 2 R°: 43 ^m												
	hG ☉		Dec		hG ☾		Dif							Civil	Náutico	Hora	R°
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m	
0	179	01.5	-22	55.4	119	20.0	-4	23.5	60 N	15 07	16 03	16 59	10 35 1	22 48 88			
1	194	01.2		55.1	133	54.5 ¹⁵⁵	-4	09.4 ¹⁴¹	58	24	15	17 07	34 4	48 84			
2	209	00.9		54.9	148	29.0 ¹⁵⁵	-3	55.3 ¹⁴¹	56	38	24	13	33 7	47 82			
3	224	00.6		54.7	163	03.4 ¹⁵⁴		41.2 ¹⁴¹	54	15 50	33	19	32 10	47 78			
4	239	00.3		54.5	177	37.9 ¹⁵⁵		27.1 ¹⁴¹	52	16 00	41	24	31 12	46 76			
5	254	00.0	-22	54.2	192	12.3 ¹⁵⁴	-3	12.9 ¹⁴²	50	16 10	16 48	17 29	10 30 14	22 46 74			
6	268	59.7	-22	54.0	206	46.8 ¹⁵⁵	-2	58.7 ¹⁴²	45	16 30	17 04	17 41	10 29 18	22 45 69			
7	283	59.4		53.8	221	21.2 ¹⁵⁴		44.5 ¹⁴²	40	16 46	17	17 51	28 22	44 65			
8	298	59.2		53.6	235	55.6 ¹⁵⁴		30.2 ¹⁴³	35	17 00	28	18 00	26 26	44 61			
9	313	58.9		53.3	250	30.0 ¹⁵⁴		16.0 ¹⁴²	30	12	38	08	25 29	43 58			
10	328	58.6		53.1	265	04.4 ¹⁵⁴	-2	01.7 ¹⁴³	20	33	17 57	24	24 34	43 52			
11	343	58.3	-22	52.9	279	38.7 ¹⁵³	-1	47.4 ¹⁴³	10 N	17 51	18 14	18 40	10 22 39	22 42 48			
12	358	58.0	-22	52.6	294	13.1 ¹⁵⁴	-1	33.0 ¹⁴⁴	0	18 08	18 30	18 56	10 21 43	22 41 44			
13	13	57.7		52.4	308	47.4 ¹⁵³		18.7 ¹⁴³	10 S	25	18 48	19 15	19 48	40 40			
14	28	57.4		52.2	323	21.7 ¹⁵³	-1	04.3 ¹⁴⁴	20	18 43	19 08	19 37	18 52	39 35			
15	43	57.1		51.9	337	56.0 ¹⁵³	-0	49.9 ¹⁴⁴	30	19 05	32	20 05	16 57	39 29			
16	58	56.8		51.7	352	30.2 ¹⁵²		35.5 ¹⁴⁴	35	18	19 47	23	15 60	38 26			
17	73	56.5	-22	51.5	7	04.5 ¹⁵³	-0	21.1 ¹⁴⁴	40	19 32	20 05	20 46	10 14 64	22 37 23			
18	88	56.3	-22	51.2	21	38.7 ¹⁵²	-0	06.6 ¹⁴⁵	45	19 50	20 27	21 15	10 13 68	22 37 19			
19	103	56.0		51.0	36	12.9 ¹⁵²	+0	07.8 ¹⁴⁴	50	20 11	20 55	21 58	11 73	36 14			
20	118	55.7		50.7	50	47.0 ¹⁵¹		22.3 ¹⁴⁵	52	22	21 10	22 24	11 75	35 13			
21	133	55.4		50.5	65	21.2 ¹⁵²		36.7 ¹⁴⁴	54	34	27	23 02	10 77	35 10			
22	148	55.1		50.3	79	55.3 ¹⁵¹	+0	51.2 ¹⁴⁵	56	20 47	21 48	** **	09 80	35 7			
23	163	54.8		50.0	94	29.3 ¹⁵⁰	+1	05.7 ¹⁴⁵	58	21 03	22 15	** **	08 83	34 5			
24	178	54.5	-22	49.8	109	03.4 ¹⁵¹	+1	20.2 ¹⁴⁵	60 S	21 23	22 56	** **	10 07 87	22 34 1			

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 17 ^h 10 ^m 1		Mag: -4.4 PMG: 15 ^h 17 ^m		Mag: +1.3 PMG: 11 ^h 31 ^m		Mag: -1.9 PMG: 13 ^h 17 ^m		Mag: +1.0 PMG: 4 ^h 45 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	101	45.9	130	45.5	-13	22.8	187	05.1	-24	04.7
1	116	48.4	145	45.4		21.7	202	05.5		04.7
2	131	50.9	160	45.3		20.6	217	05.9		04.6
3	146	53.3	175	45.2		19.5	232	06.3		04.6
4	161	55.8	190	45.1		18.4	247	06.7		04.6
5	176	58.2	205	45.0	-13	17.3	262	07.1	-24	04.5
6	192	00.7	220	44.9	-13	16.2	277	07.5	-24	04.5
7	207	03.2	235	44.8		15.1	292	07.9		04.4
8	222	05.6	250	44.7		14.0	307	08.3		04.4
9	237	08.1	265	44.6		12.8	322	08.7		04.4
10	252	10.6	280	44.5		11.7	337	09.1		04.3
11	267	13.0	295	44.4	-13	10.6	352	09.5	-24	04.3
12	282	15.5	310	44.3	-13	09.5	7	09.9	-24	04.2
13	297	18.0	325	44.2		08.4	22	10.3		04.2
14	312	20.4	340	44.2		07.3	37	10.7		04.1
15	327	22.9	355	44.1		06.2	52	11.1		04.1
16	342	25.3	10	44.0		05.1	67	11.5		04.0
17	357	27.8	25	43.9	-13	04.0	82	11.9	-24	04.0
18	12	30.3	40	43.8	-13	02.9	97	12.3	-24	03.9
19	27	32.7	55	43.7		01.8	112	12.7		03.9
20	42	35.2	70	43.6	-13	00.7	127	13.1		03.8
21	57	37.7	85	43.5	-12	59.5	142	13.5		03.8
22	72	40.1	100	43.4		58.4	157	13.9		03.7
23	87	42.6	115	43.4		57.3	172	14.3		03.7
24	102	45.1	130	43.3	-12	56.2	187	14.7	-24	03.6
Dif	—		-1		+11		+4		0	
							+19		+1	
									+25	
									0	

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16 ^h 3				Edad: 6 ^d 5	PHE	4 ^h : 56 ^m 4 12 ^h : 56 ^m 7 20 ^h : 56 ^m 9			R°: 46 ^m			R°		R°	
	PMG: 12 ^h 04 ^m 6															
	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	54.5	-22	49.8	109	03.4	+1	20.2	60 N	7 09	8 05	9 01	10 36	2	**	**
1	193	54.2		49.5	123	37.4 ¹⁵⁰		34.7 ¹⁴⁵	58	7 02	7 54	8 45	38	5	**	**
2	208	53.9		49.3	138	11.3 ¹⁴⁹	+1	49.3 ¹⁴⁶	56	6 55	44	31	40	8	**	**
3	223	53.7		49.0	152	45.3 ¹⁵⁰	+2	03.8 ¹⁴⁵	54	49	35	18	42	10	**	**
4	238	53.4		48.8	167	19.2 ¹⁴⁹		18.3 ¹⁴⁵	52	44	27	8 08	43	13	**	**
5	253	53.1	-22	48.6	181	53.0 ¹⁴⁸	+2	32.9 ¹⁴⁶	50	6 39	7 20	7 58	10 44	16	**	**
6	268	52.8	-22	48.3	196	26.8 ¹⁴⁸	+2	47.4 ¹⁴⁵	45	6 28	7 05	7 38	10 47	21	23 54	72
7	283	52.5		48.1	211	00.6 ¹⁴⁸	+3	02.0 ¹⁴⁶	40	18	6 52	22	50	24	49	68
8	298	52.2		47.8	225	34.3 ¹⁴⁷		16.5 ¹⁴⁵	35	09	40	7 08	52	28	45	64
9	313	51.9		47.6	240	08.0 ¹⁴⁷		31.1 ¹⁴⁶	30	6 00	30	6 56	54	31	41	61
10	328	51.6		47.3	254	41.7 ¹⁴⁷	+3	45.6 ¹⁴⁵	20	5 45	6 12	36	10 58	35	35	56
11	343	51.4	-22	47.1	269	15.2 ¹⁴⁵	+4	00.2 ¹⁴⁶	10 N	5 29	5 55	6 18	11 01	40	23 30	50
12	358	51.1	-22	46.8	283	48.8 ¹⁴⁶	+4	14.8 ¹⁴⁶	0	5 12	5 38	6 01	11 04	44	23 25	46
13	13	50.8		46.6	298	22.3 ¹⁴⁵		29.3 ¹⁴⁵	10 S	4 54	21	5 44	07	49	20	41
14	28	50.5		46.3	312	55.7 ¹⁴⁴		43.9 ¹⁴⁶	20	32	5 01	25	10	54	14	37
15	43	50.2		46.0	327	29.1 ¹⁴⁴	+4	58.4 ¹⁴⁵	30	4 04	4 37	5 04	13	60	08	32
16	58	49.9		45.8	342	02.5 ¹⁴⁴	+5	12.9 ¹⁴⁵	35	3 45	22	4 51	15	63	04	29
17	73	49.6	-22	45.5	356	35.8 ¹⁴³	+5	27.5 ¹⁴⁶	40	3 23	4 04	4 37	11 18	66	23 00	26
18	88	49.4	-22	45.3	11	09.0 ¹⁴²	+5	42.0 ¹⁴⁵	45	2 54	3 42	4 19	11 21	70	22 56	21
19	103	49.1		45.0	25	42.2 ¹⁴²	+5	56.5 ¹⁴⁵	50	2 11	3 14	3 58	24	76	50	17
20	118	48.8		44.8	40	15.3 ¹⁴¹	+6	11.0 ¹⁴⁵	52	1 45	2 59	47	26	78	48	14
21	133	48.5		44.5	54	48.3 ¹⁴⁰		25.5 ¹⁴⁵	54	1 07	42	35	27	81	45	12
22	148	48.2		44.2	69	21.3 ¹⁴⁰		40.0 ¹⁴⁵	56	** **	2 21	22	29	84	42	9
23	163	47.9		44.0	83	54.2 ¹³⁹	+6	54.5 ¹⁴⁵	58	** **	1 54	3 06	31	87	39	5
24	178	47.6	-22	43.7	98	27.1 ¹³⁹	+7	08.9 ¹⁴⁴	60 S	** **	1 13	2 46	11 34	91	22 35	2

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 17 ^h 06 ^m 2		Mag: -4.4 PMG: 15 ^h 17 ^m		Mag: +1.3 PMG: 11 ^h 31 ^m		Mag: -1.9 PMG: 13 ^h 14 ^m		Mag: +1.0 PMG: 4 ^h 41 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	102	45.1	130	43.3	-12	56.2	187	14.7	-24	03.6
1	117	47.5	145	43.2		55.1	202	15.1		03.6
2	132	50.0	160	43.1		54.0	217	15.5		03.5
3	147	52.5	175	43.0		52.9	232	15.9		03.5
4	162	54.9	190	42.9		51.7	247	16.3		03.4
5	177	57.4	205	42.9	-12	50.6	262	16.7	-24	03.4
6	192	59.8	220	42.8	-12	49.5	277	17.1	-24	03.3
7	208	02.3	235	42.7		48.4	292	17.5		03.3
8	223	04.8	250	42.6		47.3	307	17.9		03.2
9	238	07.2	265	42.6		46.2	322	18.3		03.2
10	253	09.7	280	42.5		45.0	337	18.7		03.1
11	268	12.2	295	42.4	-12	43.9	352	19.1	-24	03.1
12	283	14.6	310	42.3	-12	42.8	7	19.5	-24	03.0
13	298	17.1	325	42.3		41.7	22	19.9		02.9
14	313	19.6	340	42.2		40.6	37	20.3		02.9
15	328	22.0	355	42.1		39.5	52	20.7		02.8
16	343	24.5	10	42.1		38.3	67	21.1		02.8
17	358	27.0	25	42.0	-12	37.2	82	21.5	-24	02.7
18	13	29.4	40	41.9	-12	36.1	97	21.9	-24	02.7
19	28	31.9	55	41.9		35.0	112	22.3		02.6
20	43	34.3	70	41.8		33.9	127	22.7		02.5
21	58	36.8	85	41.7		32.7	142	23.1		02.5
22	73	39.3	100	41.7		31.6	157	23.5		02.4
23	88	41.7	115	41.6		30.5	172	23.9		02.4
24	103	44.2	130	41.5	-12	29.4	187	24.3	-24	02.3
Dif	—		-1		+11		+4		+1	

h m	h m	h m	h m	h m	h m
7 09	8 05	9 01	10 36	2	** ** *
7 02	7 54	8 45	38	5	** ** *
6 55	44	31	40	8	** ** *
49	35	18	42	10	** ** *
44	27	8 08	43	13	** ** *
6 39	7 20	7 58	10 44	16	** ** *
6 28	7 05	7 38	10 47	21	23 54 72
18	6 52	22	50	24	49 68
09	40	7 08	52	28	45 64
6 00	30	6 56	54	31	41 61
5 45	6 12	36	10 58	35	35 56
5 29	5 55	6 18	11 01	40	23 30 50
5 12	5 38	6 01	11 04	44	23 25 46
4 54	21	5 44	07	49	20 41
32	5 01	25	10	54	14 37
4 04	4 37	5 04	13	60	08 32
3 45	22	4 51	15	63	04 29
3 23	4 04	4 37	11 18	66	23 00 26
2 54	3 42	4 19	11 21	70	22 56 21
2 11	3 14	3 58	24	76	50 17
1 45	2 59	47	26	78	48 14
1 07	42	35	27	81	45 12
** **	2 21	22	29	84	42 9
** **	1 54	3 06	31	87	39 5
** **	1 13	2 46	11 34	91	22 35 2

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16/3 PMG: 12 ^h 05 ^m 1			Edad: 7 ^d 5 SD: 15/5 PMG: 18 ^h 00 ^m	PHE { 4 ^h : 57/2 12 ^h : 57/5 20 ^h : 57/8 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	
0	178	47.6	-22	43.7	98	27.1	+7	08.9	60 N	15	10	16	06	17	02	10	38	3
1	193	47.4		43.5	112	59.9 ¹³⁸		23.4 ¹⁴⁵	58		26	17		09		43	7	
2	208	47.1		43.2	127	32.6 ¹³⁷		37.8 ¹⁴⁴	56		40	27		15		48	10	
3	223	46.8		42.9	142	05.3 ¹³⁷	+7	52.2 ¹⁴⁴	54	15	52	35	21			52	14	
4	238	46.5		42.7	156	37.9 ¹³⁶	+8	06.6 ¹⁴⁴	52	16	03	43	26			10	56	
5	253	46.2	-22	42.4	171	10.4 ¹³⁵	+8	21.0 ¹⁴⁴	50	16	12	16	50	17	31	11	00	
6	268	45.9	-22	42.1	185	42.9 ¹³⁵	+8	35.3 ¹⁴³	45	16	32	17	06	17	43	11	08	
7	283	45.7		41.9	200	15.3 ¹³⁴	+8	49.7 ¹⁴⁴	40	16	48	18	17	52		14	27	
8	298	45.4		41.6	214	47.6 ¹³³	+9	04.0 ¹⁴³	35	17	02	30	18	01		20	31	
9	313	45.1		41.3	229	19.8 ¹³²		18.3 ¹⁴³	30		14	40	10			25	34	
10	328	44.8		41.1	243	52.0 ¹³²		32.5 ¹⁴²	20		34	17	58	25		33	40	
11	343	44.5	-22	40.8	258	24.0 ¹³⁰	+9	46.8 ¹⁴³	10 N	17	52	18	15	18	41	11	41	
12	358	44.2	-22	40.5	272	56.0 ¹³⁰	+10	01.0 ¹⁴²	0	18	09	18	31	18	57	11	48	
13	13	44.0		40.3	287	27.9 ¹²⁹		15.1 ¹⁴¹	10 S		26	18	49	19	16	11	56	
14	28	43.7		40.0	301	59.8 ¹²⁹		29.3 ¹⁴²	20	18	44	19	08	19	37	12	04	
15	43	43.4		39.7	316	31.5 ¹²⁷		43.4 ¹⁴¹	30	19	05	32	20	05		13	63	
16	58	43.1		39.4	331	03.2 ¹²⁷	+10	57.5 ¹⁴¹	35		18	19	47	23		18	66	
17	73	42.8	-22	39.2	345	34.7 ¹²⁵	+11	11.5 ¹⁴⁰	40	19	32	20	05	20	46	12	24	
18	88	42.6	-22	38.9	0	06.2 ¹²⁵	+11	25.5 ¹⁴⁰	45	19	49	20	26	21	15	12	31	
19	103	42.3		38.6	14	37.6 ¹²⁴		39.5 ¹⁴⁰	50	20	11	20	54	21	57	40	79	
20	118	42.0		38.3	29	08.9 ¹²³	+11	53.4 ¹³⁹	52		21	21	09	22	22	44	82	
21	133	41.7		38.1	43	40.1 ¹²²	+12	07.3 ¹³⁹	54		33	25	22	58		48	85	
22	148	41.4		37.8	58	11.2 ¹²¹		21.2 ¹³⁹	56	20	46	21	46	** ** *		53	89	
23	163	41.2		37.5	72	42.3 ¹²¹		35.0 ¹³⁸	58	21	02	22	12	** ** *		12	58	
24	178	40.9	-22	37.2	87	13.2 ¹¹⁹	+12	48.8 ¹³⁸	60 S	21	21	22	51	** ** *		13	05	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 17 ^h 02 ^m 3		Mag: -4.4 PMG: 15 ^h 17 ^m		Mag: +1.3 PMG: 11 ^h 30 ^m		Mag: -1.9 PMG: 13 ^h 11 ^m		Mag: +0.9 PMG: 4 ^h 37 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	103	44.2	130	41.5	-12	29.4	187	24.3	-24	02.3
1	118	46.7	145	41.5		28.2	202	24.7		02.2
2	133	49.1	160	41.4		27.1	217	25.1		02.2
3	148	51.6	175	41.4		26.0	232	25.5		02.1
4	163	54.1	190	41.3		24.9	247	25.9		02.0
5	178	56.5	205	41.2	-12	23.7	262	26.3	-24	02.0
6	193	59.0	220	41.2	-12	22.6	277	26.7	-24	01.9
7	209	01.4	235	41.1		21.5	292	27.1		01.9
8	224	03.9	250	41.1		20.4	307	27.5		01.8
9	239	06.4	265	41.0		19.2	322	27.9		01.7
10	254	08.8	280	41.0		18.1	337	28.3		01.7
11	269	11.3	295	40.9	-12	17.0	352	28.7	-24	01.6
12	284	13.8	310	40.9	-12	15.9	7	29.1	-24	01.5
13	299	16.2	325	40.8		14.7	22	29.4		01.5
14	314	18.7	340	40.8		13.6	37	29.8		01.4
15	329	21.2	355	40.7		12.5	52	30.2		01.3
16	344	23.6	10	40.7		11.3	67	30.6		01.3
17	359	26.1	25	40.6	-12	10.2	82	31.0	-24	01.2
18	14	28.6	40	40.6	-12	09.1	97	31.4	-24	01.1
19	29	31.0	55	40.5		08.0	112	31.8		01.0
20	44	33.5	70	40.5		06.8	127	32.2		01.0
21	59	35.9	85	40.4		05.7	142	32.6		00.9
22	74	38.4	100	40.4		04.6	157	33.0		00.8
23	89	40.9	115	40.4		03.4	172	33.4		00.8
24	104	43.3	130	40.3	-12	02.3	187	33.8	-24	00.7
Dif	—		-1		+11		+4		+1	
							+19		+1	
									+25	
									0	

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16 ^h 3			Edad: 8 ^d 5	PHE { 4 ^h : 58 ^m 1 12 ^h : 58 ^m 3 20 ^h : 58 ^m 6	SD: 15 ^h 8		PMG: 18 ^h 49 ^m	R ^o : 54 ^m		Náutico	Civil	Hora	R ^o	Hora	R ^o
	hG ☉	Dec	Dif													
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m		
0	178	40.9	-22	37.2	87	13.2	+12 48.8	60 N	7 08	8 04	9 00	10 41 6	1 50 100			
1	193	40.6		36.9	101	44.0 ¹¹⁸	+13 02.5 ¹³⁷	58	7 01	7 53	8 43	50 11	41 95			
2	208	40.3		36.7	116	14.7 ¹¹⁷	16.2 ¹³⁷	56	6 55	43	30	10 58 15	34 91			
3	223	40.0		36.4	130	45.4 ¹¹⁷	29.8 ¹³⁶	54	49	35	18	11 06 18	28 87			
4	238	39.8		36.1	145	15.9 ¹¹⁵	43.4 ¹³⁶	52	44	27	8 07	12 21	22 85			
5	253	39.5	-22	35.8	159	46.3 ¹¹⁴	+13 56.9 ¹³⁵	50	6 39	7 20	7 58	11 18 24	1 17 82			
6	268	39.2	-22	35.5	174	16.6 ¹¹³	+14 10.4 ¹³⁵	45	6 28	7 05	7 38	11 31 29	1 06 76			
7	283	38.9		35.2	188	46.8 ¹¹²	23.8 ¹³⁴	40	18	6 52	22	41 33	0 57 72			
8	298	38.6		35.0	203	17.0 ¹¹²	37.1 ¹³³	35	09	41	7 09	51 36	49 68			
9	313	38.4		34.7	217	47.0 ¹¹⁰	+14 50.4 ¹³³	30	6 01	31	6 57	11 59 39	42 65			
10	328	38.1		34.4	232	16.9 ¹⁰⁹	+15 03.7 ¹³³	20	5 45	6 12	36	12 13 44	31 59			
11	343	37.8	-22	34.1	246	46.6 ¹⁰⁷	+15 16.9 ¹³²	10 N	5 30	5 56	6 19	12 25 49	0 20 55			
12	358	37.5	-22	33.8	261	16.3 ¹⁰⁷	+15 30.0 ¹³¹	0	5 13	5 39	6 02	12 37 53	0 11 50			
13	13	37.3		33.5	275	45.9 ¹⁰⁶	43.1 ¹³¹	10 S	4 55	22	5 45	12 48 58	0 01 47			
14	28	37.0		33.2	290	15.3 ¹⁰⁴	+15 56.1 ¹³⁰	20	33	5 02	27	13 01 62	*** **			
15	43	36.7		32.9	304	44.7 ¹⁰⁴	+16 09.0 ¹²⁹	30	4 05	4 38	5 05	16 67	*** **			
16	58	36.4		32.6	319	13.9 ¹⁰²	21.8 ¹²⁸	35	3 47	24	4 53	24 70	*** **			
17	73	36.2	-22	32.4	333	43.0 ¹⁰¹	+16 34.6 ¹²⁸	40	3 25	4 06	4 39	13 34 74	23 55 37			
18	88	35.9	-22	32.1	348	12.0 ¹⁰⁰	+16 47.3 ¹²⁷	45	2 56	3 45	4 21	13 45 79	23 43 32			
19	103	35.6		31.8	2	40.8 ⁹⁸	+17 00.0 ¹²⁷	50	2 14	16	4 00	13 59 84	27 27			
20	118	35.3		31.5	17	09.6 ⁹⁸	+17 12.5 ¹²⁵	52	1 49	3 02	3 50	14 06 87	20 24			
21	133	35.0		31.2	31	38.2 ⁹⁶	25.0 ¹²⁵	54	1 13	2 45	38	13 90	12 21			
22	148	34.8		30.9	46	06.7 ⁹⁵	37.4 ¹²⁴	56	*** **	2 25	25	22 93	23 03 17			
23	163	34.5		30.6	60	35.1 ⁹⁴	+17 49.8 ¹²⁴	58	*** **	1 59	3 09	31 98	22 52 13			
24	178	34.2	-22	30.3	75	03.3 ⁹²	+18 02.0 ¹²²	60 S	*** **	1 20	2 50	14 42 104	22 41 7			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 16 ^h 58 ^m 3		Mag: -4.5 PMG: 15 ^h 17 ^m			Mag: +1.3 PMG: 11 ^h 29 ^m			Mag: -1.9 PMG: 13 ^h 08 ^m			Mag: +0.9 PMG: 4 ^h 33 ^m				
	hG ♈	Dec	hG ♀	Dec	Dif	hG ♂	Dec	Dif	hG ♃	Dec	Dif	hG ♄	Dec	Dif		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	104	43.3	130	40.3	-12 02.3		187	33.8	-24 00.7		162	36.3	-20 35.3	291 28.9	+5 10.3	
1	119	45.8	145	40.3	-12 01.2		202	34.2	00.6		177	38.2	35.2	306 31.4	10.3	
2	134	48.3	160	40.2	-12 00.0		217	34.6	00.5		192	40.0	35.0	321 33.8	10.3	
3	149	50.7	175	40.2	-11 58.9		232	35.0	00.5		207	41.9	34.9	336 36.3	10.3	
4	164	53.2	190	40.2		57.8	247	35.4	00.4		222	43.8	34.8	351 38.8	10.3	
5	179	55.7	205	40.1	-11 56.6		262	35.8	-24 00.3		237	45.6	-20 34.7	6 41.3	+5 10.4	
6	194	58.1	220	40.1	-11 55.5		277	36.2	-24 00.2		252	47.5	-20 34.6	21 43.7	+5 10.4	
7	210	00.6	235	40.1		54.4	292	36.6	00.2		267	49.3	34.4	36 46.2	10.4	
8	225	03.1	250	40.0		53.2	307	37.0	-24 00.1		282	51.2	34.3	51 48.7	10.4	
9	240	05.5	265	40.0		52.1	322	37.4	-24 00.0		297	53.1	34.2	66 51.2	10.4	
10	255	08.0	280	40.0		51.0	337	37.8	-23 59.9		312	54.9	34.1	81 53.7	10.5	
11	270	10.4	295	39.9	-11 49.8		352	38.2	-23 59.9		327	56.8	-20 34.0	96 56.1	+5 10.5	
12	285	12.9	310	39.9	-11 48.7		7 38.6	-23 59.8			342	58.6	-20 33.8	111 58.6	+5 10.5	
13	300	15.4	325	39.9		47.5	22 39.0	59.7			358	00.5	33.7	127 01.1	10.5	
14	315	17.8	340	39.8		46.4	37 39.4	59.6			13 02.3	33.6		142 03.6	10.5	
15	330	20.3	355	39.8		45.3	52 39.8	59.5			28 04.2	33.5		157 06.1	10.6	
16	345	22.8	10 39.8		44.1		67 40.2	59.5			43 06.1	33.4		172 08.5	10.6	
17	0	25.2	25 39.8	-11 43.0			82 40.6	-23 59.4			58 07.9	-20 33.2		187 11.0	+5 10.6	
18	15	27.7	40 39.7	-11 41.9			97 41.0	-23 59.3			73 09.8	-20 33.1		202 13.5	+5 10.6	
19	30	30.2	55 39.7		40.7		112 41.4	59.2			88 11.6	33.0		217 16.0	10.6	
20	45	32.6	70 39.7		39.6		127 41.8	59.1			103 13.5	32.9		232 18.5	10.6	
21	60	35.1	85 39.7		38.4		142 42.2	59.1			118 15.3	32.8		247 20.9	10.7	
22	75	37.5	100 39.7		37.3		157 42.6	59.0			133 17.2	32.6		262 23.4	10.7	
23	90	40.0	115 39.6		36.2		172 43.0	58.9			148 19.1	32.5		277 25.9	10.7	
24	105	42.5	130 39.6	-11 35.0			187 43.4	-23 58.8			163 20.9	-20 32.4		292 28.4	+5 10.7	
Dif	—		0	+11			+4	+1			+19	+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 9			Edad: 9 ^d 5 PHE { 4 ^h : 58/9 12 ^h : 59/2 20 ^h : 59/5 PMG: 19 ^h 43 ^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	h m	h m	h m	h m	
0	178	34.2	-22	30.3	75	03.3	+18	02.0	60 N	15 14	16 09	17 05	10 47 12	3 30 106				
1	193	33.9		30.0	89	31.5		14.2	58	30	20	11	11 01 18	16 100				
2	208	33.7		29.7	103	59.5		26.2	56	43	29	18	13 23	3 05 95				
3	223	33.4		29.4	118	27.4		38.2	54	15 55	38	23	24 26	2 55 91				
4	238	33.1		29.1	132	55.1	+18	50.1	52	16 05	45	29	33 30	47 87				
5	253	32.9	-22	28.8	147	22.8	+19	01.9	50	16 15	16 52	17 33	11 42 32	2 39 84				
6	268	32.6	-22	28.5	161	50.3	+19	13.6	45	16 34	17 07	17 44	12 00 37	2 22 79				
7	283	32.3		28.2	176	17.7		25.2	40	16 50	20	17 54	14 42	2 09 74				
8	298	32.0		27.9	190	44.9		36.8	35	17 03	31	18 03	27 45	1 57 72				
9	313	31.8		27.6	205	12.0		48.2	30	15	41	11	38 47	47 69				
10	328	31.5		27.3	219	39.0	+19	59.5	20	35	17 59	27	12 57 52	30 64				
11	343	31.2	-22	26.9	234	05.9	+20	10.7	10 N	17 53	18 16	18 42	13 14 55	1 15 60				
12	358	30.9	-22	26.6	248	32.6	+20	21.8	0	18 10	18 32	18 58	13 30 58	1 01 56				
13	13	30.7		26.3	262	59.2		32.8	10 S	26	18 49	19 16	13 46 62	0 48 51				
14	28	30.4		26.0	277	25.7		43.7	20	18 44	19 09	19 38	14 03 66	33 48				
15	43	30.1		25.7	291	52.0	+20	54.5	30	19 05	33	20 05	23 70	16 43				
16	58	29.9		25.4	306	18.2	+21	05.1	35	18	19 47	23	34 73	0 06 40				
17	73	29.6	-22	25.1	320	44.3	+21	15.7	40	19 32	20 04	20 45	14 48 75	** ** *				
18	88	29.3	-22	24.8	335	10.2	+21	26.1	45	19 49	20 26	21 14	15 04 79	** ** *				
19	103	29.0		24.5	349	36.0		36.4	50	20 10	20 53	21 55	23 85	23 54 38				
20	118	28.8		24.2	4	01.7		46.6	52	20	21 07	22 19	33 88	44 35				
21	133	28.5		23.8	18	27.2	+21	56.7	54	32	24	22 53	43 91	33 32				
22	148	28.2		23.5	32	52.6	+22	06.6	56	20 45	21 44	** ** *	15 55 96	20 29				
23	163	28.0		23.2	47	17.9		16.4	58	21 00	22 09	** ** *	16 09 101	23 05 24				
24	178	27.7	-22	22.9	61	43.0	+22	26.1	60 S	21 19	22 46	** ** *	16 26 108	22 48 16				
UT	ARIES			VENUS			MARTE			JÚPITER				SATURNO				
	PMG: 16 ^h 54 ^m 4			Mag: -4.5 PMG: 15 ^h 17 ^m			Mag: +1.3 PMG: 11 ^h 29 ^m			Mag: -1.9 PMG: 13 ^h 05 ^m				Mag: +0.9 PMG: 4 ^h 29 ^m				
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	105	42.5	130	39.6	-11	35.0	187	43.4	-23	58.8	163	20.9	-20	32.4	292	28.4	+5	10.7
1	120	44.9	145	39.6		33.9	202	43.8		58.7	178	22.8		32.3	307	30.9		10.7
2	135	47.4	160	39.6		32.7	217	44.2		58.6	193	24.6		32.2	322	33.3		10.8
3	150	49.9	175	39.6		31.6	232	44.6		58.6	208	26.5		32.0	337	35.8		10.8
4	165	52.3	190	39.6		30.4	247	45.0		58.5	223	28.3		31.9	352	38.3		10.8
5	180	54.8	205	39.5	-11	29.3	262	45.4	-23	58.4	238	30.2	-20	31.8	7	40.8	+5	10.8
6	195	57.3	220	39.5	-11	28.2	277	45.8	-23	58.3	253	32.0	-20	31.7	22	43.3	+5	10.8
7	210	59.7	235	39.5		27.0	292	46.2		58.2	268	33.9		31.6	37	45.8		10.9
8	226	02.2	250	39.5		25.9	307	46.6		58.1	283	35.8		31.4	52	48.2		10.9
9	241	04.7	265	39.5		24.7	322	47.0		58.0	298	37.6		31.3	67	50.7		10.9
10	256	07.1	280	39.5		23.6	337	47.3		58.0	313	39.5		31.2	82	53.2		10.9
11	271	09.6	295	39.5	-11	22.4	352	47.7	-23	57.9	328	41.3	-20	31.1	97	55.7	+5	11.0
12	286	12.0	310	39.5	-11	21.3	7	48.1	-23	57.8	343	43.2	-20	30.9	112	58.2	+5	11.0
13	301	14.5	325	39.5		20.2	22	48.5		57.7	358	45.0		30.8	128	00.7		11.0
14	316	17.0	340	39.5		19.0	37	48.9		57.6	13	46.9		30.7	143	03.1		11.0
15	331	19.4	355	39.5		17.9	52	49.3		57.5	28	48.8		30.6	158	05.6		11.0
16	346	21.9	10	39.4		16.7	67	49.7		57.4	43	50.6		30.5	173	08.1		11.1
17	1	24.4	25	39.4	-11	15.6	82	50.1	-23	57.3	58	52.5	-20	30.3	188	10.6	+5	11.1
18	16	26.8	40	39.4	-11	14.4	97	50.5	-23	57.2	73	54.3	-20	30.2	203	13.1	+5	11.1
19	31	29.3	55	39.4		13.3	112	50.9		57.1	88	56.2		30.1	218	15.6		11.1
20	46	31.8	70	39.4		12.1	127	51.3		57.0	103	58.0		30.0	233	18.1		11.1
21	61	34.2	85	39.4		11.0	142	51.7		57.0	118	59.9		29.9	248	20.5		11.2
22	76	36.7	100	39.4		09.8	157	52.1		56.9	134	01.8		29.7	263	23.0		11.2
23	91	39.2	115	39.4		08.7	172	52.5		56.8	149	03.6		29.6	278	25.5		11.2
24	106	41.6	130	39.4	-11	07.5	187	52.9	-23	56.7	164	05.5	-20	29.5	293	28.0	+5	11.2
Dif	—			0 +11			+4 +1			+19 +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 4			Edad: 10 ^d 5 PHE { SD: 16/2 PMG: 20 ^h 43 ^m 4 ^h : 59/8 12 ^h : 60/1 20 ^h : 60/3 R°: 65 ^m															
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°				
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m
0	178	27.7	-22	22.9	61	43.0	+22	26.1	60 N	7 07	8 03	8 58	10 59	26			5 16	104	
1	193	27.4		22.6	76	08.0		35.6	58	7 00	7 52	42	11 19	33			4 56	97	
2	208	27.2		22.3	90	32.9		45.1	56	6 54	42	28		36	38		40	92	
3	223	26.9		21.9	104	57.6	+22	54.3	54		49	34	17	11 50	41		26	88	
4	238	26.6		21.6	119	22.3	+23	03.5	52		43	26	8 06	12 03	44		14	85	
5	253	26.3	-22	21.3	133	46.7	+23	12.5	50	6 39	7 19	7 57	12 14	46			4 03	83	
6	268	26.1	-22	21.0	148	11.1	+23	21.3	45	6 28	7 04	7 38	12 37	50			3 41	79	
7	283	25.8		20.7	162	35.3		30.1	40		18	6 52	12 56	53			23	76	
8	298	25.5		20.3	176	59.4		38.6	35		09	41	7 09	12 54			3 09	72	
9	313	25.3		20.0	191	23.4		47.0	30	6 01	31	6 57		25	57		2 56	70	
10	328	25.0		19.7	205	47.2	+23	55.3	20	5 46	6 13	37	13 49	59			34	67	
11	343	24.7	-22	19.4	220	10.9	+24	03.4	10 N	5 30	5 57	6 19	14 09	62			2 15	64	
12	358	24.5	-22	19.0	234	34.5	+24	11.4	0	5 14	5 40	6 03	14 28	64			1 57	61	
13	13	24.2		18.7	248	58.0		19.2	10 S	4 56	23	5 46	14 48	66			39	59	
14	28	23.9		18.4	263	21.3		26.9	20		35	5 04	28	15 09	68		1 21	55	
15	43	23.7		18.1	277	44.5		34.4	30	4 07	4 40	5 07		33	70		0 59	52	
16	58	23.4		17.7	292	07.6		41.7	35	3 49	25	4 55	15 47	72			46	50	
17	73	23.1	-22	17.4	306	30.6	+24	48.9	40	3 27	4 08	4 40	16 03	74			0 32	46	
18	88	22.9	-22	17.1	320	53.4	+24	55.9	45	2 59	3 47	4 23	16 23	77			0 15	43	
19	103	22.6		16.7	335	16.2	+25	02.7	50	2 18	19	4 02	16 48	80			***	***	***
20	118	22.3		16.4	349	38.8		09.4	52	1 54	3 05	3 52	17 01	81			***	***	***
21	133	22.1		16.1	4	01.3		15.8	54	1 20	2 49	41	14	84			***	***	***
22	148	21.8		15.7	18	23.7		22.2	56	***	***	29	28	31	86		23	49	48
23	163	21.5		15.4	32	46.0		28.3	58	***	***	2 03	3 12	17 50	91		29	44	
24	178	21.3	-22	15.1	47	08.1	+25	34.3	60 S	***	***	1 27	2 54	18 14	98		23 04	38	

UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 16 ^h 50 ^m 5			Mag: -4.5 PMG: 15 ^h 17 ^m			Mag: +1.3 PMG: 11 ^h 28 ^m			Mag: -1.9 PMG: 13 ^h 02 ^m			Mag: +0.9 PMG: 4 ^h 25 ^m			
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	106	41.6	130	39.4	-11	07.5	187	52.9	-23	56.7	164	05.5	-20	29.5	293	28.0
1	121	44.1	145	39.5		06.4	202	53.3		56.6	179	07.3		29.4	308	30.5
2	136	46.5	160	39.5		05.2	217	53.7		56.5	194	09.2		29.2	323	33.0
3	151	49.0	175	39.5		04.1	232	54.1		56.4	209	11.0		29.1	338	35.5
4	166	51.5	190	39.5		02.9	247	54.5		56.3	224	12.9		29.0	353	37.9
5	181	53.9	205	39.5	-11	01.8	262	54.9	-23	56.2	239	14.7	-20	28.9	8	40.4
6	196	56.4	220	39.5	-11	00.6	277	55.3	-23	56.1	254	16.6	-20	28.8	23	42.9
7	211	58.9	235	39.5	-10	59.5	292	55.7		56.0	269	18.5		28.6	38	45.4
8	227	01.3	250	39.5		58.3	307	56.1		55.9	284	20.3		28.5	53	47.9
9	242	03.8	265	39.5		57.2	322	56.5		55.8	299	22.2		28.4	68	50.4
10	257	06.3	280	39.5		56.0	337	56.9		55.7	314	24.0		28.3	83	52.9
11	272	08.7	295	39.5	-10	54.9	352	57.3	-23	55.6	329	25.9	-20	28.1	98	55.4
12	287	11.2	310	39.6	-10	53.7	7	57.7	-23	55.5	344	27.7	-20	28.0	113	57.8
13	302	13.7	325	39.6		52.6	22	58.1		55.4	359	29.6		27.9	129	00.3
14	317	16.1	340	39.6		51.4	37	58.5		55.3	14	31.4		27.8	144	02.8
15	332	18.6	355	39.6		50.3	52	58.8		55.2	29	33.3		27.7	159	05.3
16	347	21.0	10	39.6		49.1	67	59.2		55.1	44	35.2		27.5	174	07.8
17	2	23.5	25	39.7	-10	47.9	82	59.6	-23	55.0	59	37.0	-20	27.4	189	10.3
18	17	26.0	40	39.7	-10	46.8	98	00.0	-23	54.9	74	38.9	-20	27.3	204	12.8
19	32	28.4	55	39.7		45.6	113	00.4		54.8	89	40.7		27.2	219	15.3
20	47	30.9	70	39.7		44.5	128	00.8		54.7	104	42.6		27.0	234	17.8
21	62	33.4	85	39.7		43.3	143	01.2		54.6	119	44.4		26.9	249	20.2
22	77	35.8	100	39.8		42.2	158	01.6		54.5	134	46.3		26.8	264	22.7
23	92	38.3	115	39.8		41.0	173	02.0		54.4	149	48.2		26.7	279	25.2
24	107	40.8	130	39.8	-10	39.9	188	02.4	-23	54.3	164	50.0	-20	26.6	294	27.7
Dif	—			0 +12			+4 +1			+19 +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 8			Edad: 11 ^d 5 PHE { SD: 16:5 PMG: 21 ^h 48 ^m 4 ^h : 60:5 12 ^h : 60:7 20 ^h : 60:9 R°: 67 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Civil			Náutico	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m	
0	178	21.3	-22	15.1	47	08.1	+25	34.3	60 N	15 17	16 12	17 07	11 25 58	7 00 81			
1	193	21.0		14.7	61	30.2		40.1	58	33	23	14	11 52 61	6 33 78			
2	208	20.8		14.4	75	52.2		45.7	56	46	32	20	12 14 61	6 12 76			
3	223	20.5		14.1	90	14.0		51.1	54	15 58	40	26	31 63	5 54 76			
4	238	20.2		13.7	104	35.8	+25	56.3	52	16 08	48	31	12 47 63	39 75			
5	253	20.0	-22	13.4	118	57.4	+26	01.4	51	16 17	16 55	17 36	13 00 64	5 26 74			
6	268	19.7	-22	13.0	133	19.0	+26	06.3	49	16 36	17 10	17 46	13 27 65	5 00 72			
7	283	19.4		12.7	147	40.4		11.0	47	16 52	22	17 56	13 49 65	4 39 71			
8	298	19.2		12.4	162	01.8		15.4	44	17 05	33	18 04	14 06 66	21 70			
9	313	18.9		12.0	176	23.1		19.8	44	17	17 43	12	22 66	4 06 69			
10	328	18.7		11.7	190	44.3		23.9	41	37	18 00	28	14 48 67	3 41 68			
11	343	18.4	-22	11.3	205	05.4	+26	27.8	39	10 N	17 54	18 17	15 11 66	3 19 66			
12	358	18.1	-22	11.0	219	26.4	+26	31.5	37	0	18 10	18 33	15 32 67	2 58 66			
13	13	17.9		10.6	233	47.4		35.0	35	10 S	27	18 50	15 54 66	38 64			
14	28	17.6		10.3	248	08.3		38.3	33	20	18 45	19 09	16 17 66	2 16 63			
15	43	17.3		09.9	262	29.1		41.5	32	30	19 06	33	20 05	43 67	1 51 61		
16	58	17.1		09.6	276	49.8		44.4	29	35	18	19 47	23	16 59 67	36 60		
17	73	16.8	-22	09.3	291	10.4	+26	47.1	27	40	19 32	20 04	20 44	17 17 67	1 18 59		
18	88	16.6	-22	08.9	305	31.0	+26	49.6	25	45	19 49	20 25	21 13	17 40 66	0 58 57		
19	103	16.3		08.6	319	51.6		51.9	23	50	20 09	20 52	21 53	18 08 66	32 54		
20	118	16.0		08.2	334	12.0		54.1	22	52	19	21 06	22 16	22 66	19 53		
21	133	15.8		07.9	348	32.4		56.0	19	54	31	22	22 48	38 66	0 05 51		
22	148	15.5		07.5	2	52.8		57.7	17	56	43	21 41	** **	18 57 65	** ** *		
23	163	15.3		07.2	17	13.1	+26	59.1	14	58	20 58	22 06	** **	19 21 64	** ** *		
24	178	15.0	-22	06.8	31	33.4	+27	00.4	13	60 S	21 16	22 41	** **	19 52 62	23 42 78		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 16 ^h 46 ^m 5		Mag: -4.5 PMG: 15 ^h 17 ^m		Mag: +1.3 PMG: 11 ^h 28 ^m		Mag: -1.9 PMG: 12 ^h 59 ^m		Mag: +0.9 PMG: 4 ^h 21 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	107	40.8	130	39.8	-10	39.9	188	02.4	-23	54.3	164	50.0	-20	26.6	294	27.7	+5	11.8
1	122	43.2	145	39.8		38.7	203	02.8		54.2	179	51.9		26.4	309	30.2		11.8
2	137	45.7	160	39.9		37.5	218	03.2		54.1	194	53.7		26.3	324	32.7		11.8
3	152	48.1	175	39.9		36.4	233	03.6		54.0	209	55.6		26.2	339	35.2		11.8
4	167	50.6	190	39.9		35.2	248	04.0		53.9	224	57.4		26.1	354	37.7		11.9
5	182	53.1	205	40.0	-10	34.1	263	04.4	-23	53.7	239	59.3	-20	25.9	9	40.2	+5	11.9
6	197	55.5	220	40.0	-10	32.9	278	04.8	-23	53.6	255	01.1	-20	25.8	24	42.7	+5	11.9
7	212	58.0	235	40.0		31.8	293	05.2		53.5	270	03.0		25.7	39	45.1		11.9
8	228	00.5	250	40.0		30.6	308	05.6		53.4	285	04.8		25.6	54	47.6		12.0
9	243	02.9	265	40.1		29.4	323	06.0		53.3	300	06.7		25.4	69	50.1		12.0
10	258	05.4	280	40.1		28.3	338	06.4		53.2	315	08.6		25.3	84	52.6		12.0
11	273	07.9	295	40.2	-10	27.1	353	06.8	-23	53.1	330	10.4	-20	25.2	99	55.1	+5	12.0
12	288	10.3	310	40.2	-10	26.0	8	07.2	-23	53.0	345	12.3	-20	25.1	114	57.6	+5	12.1
13	303	12.8	325	40.2		24.8	23	07.6		52.9	0	14.1		25.0	130	00.1		12.1
14	318	15.3	340	40.3		23.6	38	08.0		52.8	15	16.0		24.8	145	02.6		12.1
15	333	17.7	355	40.3		22.5	53	08.4		52.6	30	17.8		24.7	160	05.1		12.1
16	348	20.2	10	40.3		21.3	68	08.7		52.5	45	19.7		24.6	175	07.6		12.2
17	3	22.6	25	40.4	-10	20.2	83	09.1	-23	52.4	60	21.5	-20	24.5	190	10.1	+5	12.2
18	18	25.1	40	40.4	-10	19.0	98	09.5	-23	52.3	75	23.4	-20	24.3	205	12.6	+5	12.2
19	33	27.6	55	40.5		17.8	113	09.9		52.2	90	25.3		24.2	220	15.1		12.2
20	48	30.0	70	40.5		16.7	128	10.3		52.1	105	27.1		24.1	235	17.6		12.3
21	63	32.5	85	40.6		15.5	143	10.7		52.0	120	29.0		24.0	250	20.0		12.3
22	78	35.0	100	40.6		14.3	158	11.1		51.8	135	30.8		23.8	265	22.5		12.3
23	93	37.4	115	40.7		13.2	173	11.5		51.7	150	32.7		23.7	280	25.0		12.3
24	108	39.9	130	40.7	-10	12.0	188	11.9	-23	51.6	165	34.5	-20	23.6	295	27.5	+5	12.4
Dif	—		0		+12		+4		+1		+19		+1		+25			

UT	SOL				LUNA							Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna			
	SD: 16'3 PMG: 12 ^h 07 ^m 2				Edad: 12 ^d 5 PHE { SD: 16'6 PMG: 22 ^h 55 ^m R°: 65 ^m 4 ^h : 61'1 12 ^h : 61'2 20 ^h : 61'3																	
	hG ☉		Dec		hG ☾		Dif		Dec		Dif		Náutico	Civil		Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m	
0	178	15.0	-22	06.8	31	33.4			+27	00.4	11	60 N	7	06	8	01	8	56	12	23	96	
1	193	14.8		06.4	45	53.6	12			01.5	11	58	6	59	7	51	40		12	53	90	
2	208	14.5		06.1	60	13.8	12			02.4	9	56		53		41	27		13	15	87	
3	223	14.2		05.7	74	33.9	11			03.0	6	54		48		33	15			34	84	
4	238	14.0		05.4	88	54.0	11			03.4	4	52		43		26	8	05	13	50	82	
5	253	13.7	-22	05.0	103	14.1	11		+27	03.7	3	50	6	38	7	19	7	56	14	04	80	
6	268	13.5	-22	04.7	117	34.2	11		+27	03.7	0	45	6	27	7	04	7	37	14	32	77	
7	283	13.2		04.3	131	54.2	10			03.5	2	40		18		6	52	22	14	54	75	
8	298	12.9		03.9	146	14.2	10			03.1	4	35		09		41	7	09	15	12	74	
9	313	12.7		03.6	160	34.2	10			02.5	6	30	6	01		31	6	57		28	72	
10	328	12.4		03.2	174	54.2	10			01.6	9	20	5	46	6	13	37		15	55	70	
11	343	12.2	-22	02.9	189	14.1	9		+27	00.6	10	10 N	5	31	5	57	6	20	16	17	69	
12	358	11.9	-22	02.5	203	34.1	10		+26	59.3	13	0	5	15	5	41	6	04	16	39	66	
13	13	11.7		02.1	217	54.1	10			57.9	14	10 S	4	57		24	5	47	17	00	65	
14	28	11.4		01.8	232	14.0	9			56.2	17	20		36		5	05	29		23	62	
15	43	11.2		01.4	246	34.0	10			54.3	19	30	4	09	4	42	5	09	17	50	59	
16	58	10.9		01.0	260	54.0	10			52.2	21	35	3	51		27	4	56	18	06	57	
17	73	10.6	-22	00.7	275	14.0	10		+26	49.8	24	40	3	30	4	10	4	42	18	24	56	
18	88	10.4	-22	00.3	289	33.9	9		+26	47.3	25	45	3	02	3	49	4	26	18	46	53	
19	103	10.1	-21	59.9	303	54.0	11			44.5	28	50	2	21		22	4	05	19	14	49	
20	118	09.9		59.6	318	14.0	10			41.6	29	52	1	58	3	08	3	55		28	47	
21	133	09.6		59.2	332	34.1	11			38.4	32	54	1	26	2	52	44		19	44	44	
22	148	09.4		58.8	346	54.1	10			35.0	34	56	** ** *			33	31		20	02	41	
23	163	09.1		58.5	1	14.3	12			31.4	36	58	** ** *			2	09	3	16		25	35
24	178	08.9	-21	58.1	15	34.4	11		+26	27.6	38	60 S	** ** *			1	34	2	58	20	54	28

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 16 ^h 42 ^m 6		Mag: -4.5 PMG: 15 ^h 17 ^m				Mag: +1.3 PMG: 11 ^h 27 ^m				Mag: -1.9 PMG: 12 ^h 56 ^m				Mag: +0.9 PMG: 4 ^h 17 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	108	39.9	130	40.7	-10	12.0	188	11.9	-23	51.6	165	34.5	-20	23.6	295	27.5	+5	12.4
1	123	42.4	145	40.8		10.8	203	12.3		51.5	180	36.4		23.5	310	30.0		12.4
2	138	44.8	160	40.8		09.7	218	12.7		51.4	195	38.2		23.3	325	32.5		12.4
3	153	47.3	175	40.9		08.5	233	13.1		51.3	210	40.1		23.2	340	35.0		12.4
4	168	49.8	190	40.9		07.4	248	13.5		51.1	225	42.0		23.1	355	37.5		12.5
5	183	52.2	205	41.0	-10	06.2	263	13.9	-23	51.0	240	43.8	-20	23.0	10	40.0	+5	12.5
6	198	54.7	220	41.0	-10	05.0	278	14.3	-23	50.9	255	45.7	-20	22.9	25	42.5	+5	12.5
7	213	57.1	235	41.1		03.9	293	14.7		50.8	270	47.5		22.7	40	45.0		12.5
8	228	59.6	250	41.1		02.7	308	15.1		50.7	285	49.4		22.6	55	47.5		12.6
9	244	02.1	265	41.2		01.5	323	15.5		50.5	300	51.2		22.5	70	50.0		12.6
10	259	04.5	280	41.2	-10	00.4	338	15.9		50.4	315	53.1		22.4	85	52.5		12.6
11	274	07.0	295	41.3	-9	59.2	353	16.3	-23	50.3	330	54.9	-20	22.2	100	55.0	+5	12.6
12	289	09.5	310	41.4	-9	58.0	8	16.7	-23	50.2	345	56.8	-20	22.1	115	57.5	+5	12.7
13	304	11.9	325	41.4		56.9	23	17.1		50.1	0	58.6		22.0	131	00.0		12.7
14	319	14.4	340	41.5		55.7	38	17.5		49.9	16	00.5		21.9	146	02.5		12.7
15	334	16.9	355	41.5		54.5	53	17.8		49.8	31	02.4		21.7	161	05.0		12.7
16	349	19.3	10	41.6		53.4	68	18.2		49.7	46	04.2		21.6	176	07.5		12.8
17	4	21.8	25	41.7	-9	52.2	83	18.6	-23	49.6	61	06.1	-20	21.5	191	10.0	+5	12.8
18	19	24.3	40	41.7	-9	51.0	98	19.0	-23	49.4	76	07.9	-20	21.4	206	12.5	+5	12.8
19	34	26.7	55	41.8		49.9	113	19.4		49.3	91	09.8		21.2	221	15.0		12.8
20	49	29.2	70	41.9		48.7	128	19.8		49.2	106	11.6		21.1	236	17.4		12.9
21	64	31.6	85	41.9		47.5	143	20.2		49.1	121	13.5		21.0	251	19.9		12.9
22	79	34.1	100	42.0		46.3	158	20.6		48.9	136	15.3		20.9	266	22.4		12.9
23	94	36.6	115	42.1		45.2	173	21.0		48.8	151	17.2		20.7	281	24.9		12.9
24	109	39.0	130	42.1	-9	44.0	188	21.4	-23	48.7	166	19.0	-20	20.6	296	27.4	+5	13.0
Dif	—		+1		+12		+4		+1		+19		+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 6			Edad: 13 ^d 5 PHE { 4 ^h : 61/3 12 ^h : 61/3 20 ^h : 61/3 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
0	178	08.9	-21 58.1	15	34.4	+26 27.6	40	60 N	15 21	16 16	17 11	13 59	113	9 05	20
1	193	08.6		29	54.6	12	23.6	58	37	26	17	14 23	105	8 41	27
2	208	08.4		44	14.8	12	19.4	56	15 49	35	23	42	100		32
3	223	08.1		58	35.1	13	15.0	54	16 01	43	28	14 58	96	8 04	36
4	238	07.9		72	55.4	13	10.3	52	11	50	33	15 12	92	7 50	39
5	253	07.6	-21 56.2	87	15.8	14	+26 05.5	50	16 20	16 57	17 38	15 24	90	7 38	41
6	268	07.4	-21 55.9	101	36.2	14	+26 00.5	45	16 39	17 12	17 48	15 49	84	7 12	46
7	283	07.1		115	56.7	15	+25 55.2	40	16 54	24	17 58	16 09	80	6 51	50
8	298	06.9		130	17.3	16	49.8	35	17 07	35	18 06	26	77		52
9	313	06.6		144	37.9	16	44.1	30	18	17 44	14	16 40	74	6 19	55
10	328	06.4		158	58.5	16	38.3	20	38	18 02	29	17 05	69	5 53	59
11	343	06.1	-21 54.0	173	19.3	18	+25 32.2	10 N	17 55	18 18	18 44	17 26	65	5 31	62
12	358	05.9	-21 53.6	187	40.1	18	+25 26.0	0	18 11	18 34	18 59	17 45	62	5 11	64
13	13	05.6		202	00.9	18	19.5	10 S	28	18 50	19 17	18 05	58	4 50	67
14	28	05.4		216	21.9	20	12.9	20	18 45	19 09	19 38	25	55		70
15	43	05.1		230	42.9	20	+25 06.1	30	19 06	32	20 05	18 49	51	4 01	74
16	58	04.9		245	04.0	21	+24 59.1	35	18	19 47	22	19 03	48	3 46	76
17	73	04.6	-21 51.7	259	25.2	22	+24 51.9	40	19 31	20 03	20 44	19 20	44	3 28	79
18	88	04.4	-21 51.3	273	46.5	23	+24 44.5	45	19 48	20 24	21 11	19 39	40	3 07	81
19	103	04.1		288	07.9	24	36.9	50	20 08	20 51	21 50	20 03	35	2 39	87
20	118	03.9		302	29.4	25	29.1	52	18	21 04	22 13	15	31		88
21	133	03.6		316	50.9	25	21.2	54	29	20	22 43	28	28	2 10	92
22	148	03.4		331	12.6	27	13.0	56	42	21 38	** **	20 43	24	1 52	95
23	163	03.1		345	34.3	27	+24 04.7	58	20 56	22 02	** **	21 00	20	29	101
24	178	02.9	-21 49.0	359	56.1	28	+23 56.2	60 S	21 14	22 35	** **	21 22	12	1 00	109
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 16 ^h 38 ^m 7		Mag: -4.5 PMG: 15 ^h 17 ^m			Mag: +1.3 PMG: 11 ^h 26 ^m			Mag: -1.9 PMG: 12 ^h 53 ^m			Mag: +0.9 PMG: 4 ^h 13 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	'	°	°	'	°	°	'	°	'
0	109	39.0	130 42.1	-9 44.0	188 21.4	-23 48.7	166 19.0	-20 20.6	296 27.4	116 57.4	+5 13.0				
1	124	41.5	145 42.2	42.8	203 21.8	48.6	181 20.9	20.5	311 29.9	131 59.9	13.0				
2	139	44.0	160 42.3	41.7	218 22.2	48.4	196 22.8	20.4	326 32.4	147 02.4	13.4				
3	154	46.4	175 42.3	40.5	233 22.6	48.3	211 24.6	20.2	341 34.9	162 04.9	13.1				
4	169	48.9	190 42.4	39.3	248 23.0	48.2	226 26.5	20.1	356 37.4	177 07.4	13.1				
5	184	51.4	205 42.5	-9 38.2	263 23.4	-23 48.0	241 28.3	-20 20.0	11 39.9	297 27.5	+5 13.1				
6	199	53.8	220 42.6	-9 37.0	278 23.8	-23 47.9	256 30.2	-20 19.9	26 42.4	207 12.4	+5 13.1				
7	214	56.3	235 42.7	35.8	293 24.2	47.8	271 32.0	19.7	41 44.9	222 14.9	13.2				
8	229	58.8	250 42.7	34.6	308 24.6	47.7	286 33.9	19.6	56 47.4	237 17.4	13.2				
9	245	01.2	265 42.8	33.5	323 25.0	47.5	301 35.7	19.5	71 49.9	252 19.9	13.2				
10	260	03.7	280 42.9	32.3	338 25.4	47.4	316 37.6	19.4	86 52.4	267 22.5	13.2				
11	275	06.1	295 43.0	-9 31.1	353 25.8	-23 47.3	331 39.4	-20 19.2	101 54.9	282 25.0	+5 13.3				
12	290	08.6	310 43.0	-9 29.9	8 26.2	-23 47.1	346 41.3	-20 19.1	116 57.4	297 27.5	+5 13.3				
13	305	11.1	325 43.1	28.8	23 26.5	47.0	1 43.2	19.0	131 59.9		13.3				
14	320	13.5	340 43.2	27.6	38 26.9	46.9	16 45.0	18.9	147 02.4		13.4				
15	335	16.0	355 43.3	26.4	53 27.3	46.7	31 46.9	18.7	162 04.9		13.4				
16	350	18.5	10 43.4	25.3	68 27.7	46.6	46 48.7	18.6	177 07.4		13.4				
17	5 20.9	25 43.5	-9 24.1	83 28.1	-23 46.5	61 50.6	-20 18.5	192 09.9	297 27.5		+5 13.4				
18	20 23.4	40 43.6	-9 22.9	98 28.5	-23 46.3	76 52.4	-20 18.4	207 12.4			+5 13.5				
19	35 25.9	55 43.6	21.7	113 28.9	46.2	91 54.3	18.2	222 14.9			13.5				
20	50 28.3	70 43.7	20.6	128 29.3	46.0	106 56.1	18.1	237 17.4			13.5				
21	65 30.8	85 43.8	19.4	143 29.7	45.9	121 58.0	18.0	252 19.9			13.6				
22	80 33.3	100 43.9	18.2	158 30.1	45.8	136 59.8	17.9	267 22.5			13.6				
23	95 35.7	115 44.0	17.0	173 30.5	45.6	152 01.7	17.7	282 25.0			13.6				
24	110 38.2	130 44.1	-9 15.9	188 30.9	-23 45.5	167 03.5	-20 17.6	297 27.5			+5 13.6				
Dif	—		+1 +12		+4 +1		+19 +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 08 ^m 0			Edad: 14 ^d 5 PHE { 4 ^h : 61'3 12 ^h : 61'2 20 ^h : 61'0 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	178	02.9	-21	49.0	359	56.1	+23	56.2	60 N	7 04	7 59	8 53	15 52	111	9 25	9	
1	193	02.6		48.6	14	18.1	30	47.6	58	6 58	49	38	16 08	106	9 08	15	
2	208	02.4		48.2	28	40.1	30	38.7	56	52	40	25	22 101		8 53	20	
3	223	02.1		47.8	43	02.3	32	29.7	54	47	32	14	34 97		40	24	
4	238	01.9		47.4	57	24.5	32	20.6	52	42	25	8 04	44 94		29	27	
5	253	01.6	-21	47.0	71	46.9	34	+23 11.2	50	6 37	7 18	7 55	16 54	90	8 19	30	
6	268	01.4	-21	46.6	86	09.3	34	+23 01.7	45	6 27	7 04	7 37	17 13	85	7 58	35	
7	283	01.2		46.2	100	31.9	36	+22 52.0	40	18	6 51	21	29 80		41	40	
8	298	00.9		45.8	114	54.6	37	42.2	35	09	41	7 08	43 75		26	44	
9	313	00.7		45.4	129	17.4	38	32.2	30	6 02	31	6 57	17 54	73	7 14	46	
10	328	00.4		45.1	143	40.3	39	22.0	20	5 47	6 14	37	18 14	67	6 52	52	
11	343	00.2	-21	44.7	158	03.3	40	+22 11.7	10 N	5 32	5 58	6 20	18 31	62	6 33	56	
12	357	59.9	-21	44.3	172	26.5	42	+22 01.3	0	5 16	5 42	6 04	18 47	58	6 15	60	
13	12	59.7		43.9	186	49.7	42	+21 50.7	10 S	4 59	25	5 48	19 03	53	5 57	64	
14	27	59.5		43.5	201	13.1	44	39.9	20	38	5 06	31	20 48		38	68	
15	42	59.2		43.1	215	36.6	45	29.0	30	4 11	4 43	5 10	40 42		15	74	
16	57	59.0		42.7	230	00.2	46	17.9	35	3 54	29	4 58	19 51	39	5 02	77	
17	72	58.7	-21	42.3	244	23.9	47	+21 06.7	40	3 32	4 13	4 45	20 04	36	4 47	80	
18	87	58.5	-21	41.9	258	47.8	49	+20 55.4	45	3 05	3 52	4 28	20 19	31	4 28	86	
19	102	58.2		41.5	273	11.7	49	43.9	50	2 25	25	4 08	38 25		4 06	91	
20	117	58.0		41.1	287	35.8	51	32.3	52	2 03	3 12	3 58	46 23		3 54	95	
21	132	57.8		40.6	302	00.0	52	20.6	54	1 33	2 56	47	20 56	19	42	98	
22	147	57.5		40.2	316	24.4	54	+20 08.7	56	0 33	38	34	21 07	16	27	102	
23	162	57.3		39.8	330	48.8	54	+19 56.7	58	** **	2 14	20	20 11		3 10	108	
24	177	57.0	-21	39.4	345	13.4	56	+19 44.6	60 S	** **	1 41	3 02	21 34	6	2 49	115	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 16 ^h 34 ^m 7			Mag: -4.5 PMG: 15 ^h 17 ^m			Mag: +1.3 PMG: 11 ^h 26 ^m			Mag: -1.9 PMG: 12 ^h 50 ^m			Mag: +0.9 PMG: 4 ^h 09 ^m				
	hG ♊	Dec		hG ♊	Dec		hG ♊	Dec		hG ♊	Dec		hG ♊	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	110	38.2	130	44.1	-9	15.9	188	30.9	-23	45.5	167	03.5	-20	17.6	297	27.5	
1	125	40.6	145	44.2		14.7	203	31.3		45.4	182	05.4		17.5	312	30.0	
2	140	43.1	160	44.3		13.5	218	31.7		45.2	197	07.3		17.4	327	32.5	
3	155	45.6	175	44.4		12.3	233	32.1		45.1	212	09.1		17.2	342	35.0	
4	170	48.0	190	44.5		11.1	248	32.5		44.9	227	11.0		17.1	357	37.5	
5	185	50.5	205	44.6	-9	10.0	263	32.9	-23	44.8	242	12.8	-20	17.0	12	40.0	
6	200	53.0	220	44.7	-9	08.8	278	33.3	-23	44.7	257	14.7	-20	16.9	27	42.5	
7	215	55.4	235	44.8		07.6	293	33.7		44.5	272	16.5		16.7	42	45.0	
8	230	57.9	250	44.9		06.4	308	34.1		44.4	287	18.4		16.6	57	47.5	
9	246	00.4	265	45.0		05.3	323	34.5		44.2	302	20.2		16.5	72	50.0	
10	261	02.8	280	45.1		04.1	338	34.8		44.1	317	22.1		16.4	87	52.5	
11	276	05.3	295	45.2	-9	02.9	353	35.2	-23	44.0	332	23.9	-20	16.2	102	55.0	
12	291	07.8	310	45.3	-9	01.7	8	35.6	-23	43.8	347	25.8	-20	16.1	117	57.5	
13	306	10.2	325	45.4	-9	00.5	23	36.0		43.7	2	27.6		16.0	133	00.0	
14	321	12.7	340	45.5	-8	59.4	38	36.4		43.5	17	29.5		15.8	148	02.5	
15	336	15.1	355	45.6		58.2	53	36.8		43.4	32	31.4		15.7	163	05.0	
16	351	17.6	10	45.7		57.0	68	37.2		43.2	47	33.2		15.6	178	07.5	
17	6	20.1	25	45.8	-8	55.8	83	37.6	-23	43.1	62	35.1	-20	15.5	193	10.0	
18	21	22.5	40	45.9	-8	54.7	98	38.0	-23	42.9	77	36.9	-20	15.3	208	12.5	
19	36	25.0	55	46.0		53.5	113	38.4		42.8	92	38.8		15.2	223	15.0	
20	51	27.5	70	46.2		52.3	128	38.8		42.6	107	40.6		15.1	238	17.5	
21	66	29.9	85	46.3		51.1	143	39.2		42.5	122	42.5		15.0	253	20.0	
22	81	32.4	100	46.4		49.9	158	39.6		42.3	137	44.3		14.8	268	22.6	
23	96	34.9	115	46.5		48.7	173	40.0		42.2	152	46.2		14.7	283	25.1	
24	111	37.3	130	46.6	-8	47.6	188	40.4	-23	42.1	167	48.0	-20	14.6	298	27.6	
Dif	—			+1 +12			+4 +1			+19 +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 4			Edad: 15 ^d 5 PHE { 4 ^h : 60/9 12 ^h : 60/7 20 ^h : 60/4 SD: 16/6 PMG: 1 ^h 02 ^m R°: 56 ^m						Civil		Náutico	Hora	R°	Hora	R°		
	hG ☉	Dec		hG ☾	Dif	Dec	Dif											
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m
0	177	57.0	-21 39.4	345	13.4	+19 44.6	122	60 N	15 25	16 19	17 14	17 43 105	9 34 5					
1	192	56.8	39.0	359	38.1	32.4	57	58	40	29	20	17 54 100	23 9					
2	207	56.6	38.6	14	03.0	20.0	59	56	15 53	38	26	18 03 96	13 13					
3	222	56.3	38.2	28	27.9	+19 07.5	125	54	16 04	46	31	11 92	9 04 16					
4	237	56.1	37.8	42	53.0	+18 54.9	126	52	14	16 53	36	18 89	8 56 20					
5	252	55.8	-21 37.4	57	18.2	+18 42.2	127	50	16 22	17 00	17 40	18 24 86	8 49 22					
6	267	55.6	-21 37.0	71	43.5	+18 29.3	129	45	16 41	17 14	17 50	18 38 80	8 33 28					
7	282	55.4	36.6	86	09.0	16.4	129	40	16 56	26	17 59	49 75	21 32					
8	297	55.1	36.2	100	34.6	+18 03.4	130	35	17 09	36	18 08	18 58 72	10 36					
9	312	54.9	35.7	115	00.2	+17 50.2	132	30	20	17 46	15	19 07 68	8 00 40					
10	327	54.6	35.3	129	26.1	36.9	133	20	39	18 03	30	21 62	7 44 45					
11	342	54.4	-21 34.9	143	52.0	+17 23.6	133	10 N	17 56	18 19	18 45	19 33 57	7 29 50					
12	357	54.2	-21 34.5	158	18.1	+17 10.1	135	0	18 12	18 34	19 00	19 45 52	7 15 55					
13	12	53.9	34.1	172	44.3	+16 56.6	135	10 S	28	18 51	17	19 56 48	7 01 60					
14	27	53.7	33.7	187	10.6	42.9	137	20	18 45	19 10	19 38	20 08 43	6 46 65					
15	42	53.5	33.3	201	37.0	29.2	137	30	19 05	32	20 05	22 37	29 71					
16	57	53.2	32.8	216	03.5	15.4	138	35	17	19 46	22	30 34	19 74					
17	72	53.0	-21 32.4	230	30.2	+16 01.4	140	40	19 31	20 03	20 43	20 40 29	6 07 78					
18	87	52.7	-21 32.0	244	57.0	+15 47.5	139	45	19 47	20 23	21 10	20 50 25	5 54 82					
19	102	52.5	31.6	259	23.9	33.4	141	50	20 07	20 49	21 48	21 03 19	37 88					
20	117	52.3	31.2	273	50.9	19.2	142	52	17	21 02	22 09	09 17	29 91					
21	132	52.0	30.7	288	18.1	+15 05.0	142	54	27	17	22 38	15 14	20 95					
22	147	51.8	30.3	302	45.3	+14 50.7	143	56	40	35	23 27	23 10	5 09 100					
23	162	51.6	29.9	317	12.7	36.3	144	58	20 54	21 58	** **	31 7	4 58 104					
24	177	51.3	-21 29.5	331	40.2	+14 21.8	145	60 S	21 11	22 29	** **	21 40 3	4 44 110					
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 16 ^h 30 ^m 8		Mag: -4.5 PMG: 15 ^h 17 ^m		Mag: +1.3 PMG: 11 ^h 25 ^m		Mag: -1.9 PMG: 12 ^h 47 ^m		Mag: +0.9 PMG: 4 ^h 05 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	111	37.3	130 46.6	-8 47.6	188 40.4	-23 42.1	167 48.0	-20 14.6	298 27.6	+5 14.3								
1	126	39.8	145 46.7	46.4	203 40.8	41.9	182 49.9	14.5	313 30.1	14.4								
2	141	42.3	160 46.8	45.2	218 41.2	41.8	197 51.7	14.3	328 32.6	14.4								
3	156	44.7	175 47.0	44.0	233 41.6	41.6	212 53.6	14.2	343 35.1	14.4								
4	171	47.2	190 47.1	42.8	248 42.0	41.4	227 55.5	14.1	358 37.6	14.5								
5	186	49.6	205 47.2	-8 41.7	263 42.4	-23 41.3	242 57.3	-20 13.9	13 40.1	+5 14.5								
6	201	52.1	220 47.3	-8 40.5	278 42.8	-23 41.1	257 59.2	-20 13.8	28 42.6	+5 14.5								
7	216	54.6	235 47.4	39.3	293 43.1	41.0	273 01.0	13.7	43 45.1	14.6								
8	231	57.0	250 47.6	38.1	308 43.5	40.8	288 02.9	13.6	58 47.6	14.6								
9	246	59.5	265 47.7	36.9	323 43.9	40.7	303 04.7	13.4	73 50.1	14.6								
10	262	02.0	280 47.8	35.7	338 44.3	40.5	318 06.6	13.3	88 52.6	14.7								
11	277	04.4	295 47.9	-8 34.6	353 44.7	-23 40.4	333 08.4	-20 13.2	103 55.2	+5 14.7								
12	292	06.9	310 48.1	-8 33.4	8 45.1	-23 40.2	348 10.3	-20 13.1	118 57.7	+5 14.7								
13	307	09.4	325 48.2	32.2	23 45.5	40.1	3 12.1	12.9	134 00.2	14.7								
14	322	11.8	340 48.3	31.0	38 45.9	39.9	18 14.0	12.8	149 02.7	14.8								
15	337	14.3	355 48.4	29.8	53 46.3	39.8	33 15.8	12.7	164 05.2	14.8								
16	352	16.8	10 48.6	28.6	68 46.7	39.6	48 17.7	12.6	179 07.7	14.8								
17	7 19.2	25 48.7	-8 27.5	83 47.1	-23 39.4	63 19.5	-20 12.4	194 10.2	+5 14.9									
18	22 21.7	40 48.8	-8 26.3	98 47.5	-23 39.3	78 21.4	-20 12.3	209 12.7	+5 14.9									
19	37 24.1	55 49.0	25.1	113 47.9	39.1	93 23.3	12.2	224 15.2	14.9									
20	52 26.6	70 49.1	23.9	128 48.3	39.0	108 25.1	12.0	239 17.7	15.0									
21	67 29.1	85 49.2	22.7	143 48.7	38.8	123 27.0	11.9	254 20.2	15.0									
22	82 31.5	100 49.4	21.5	158 49.1	38.7	138 28.8	11.8	269 22.8	15.0									
23	97 34.0	115 49.5	20.4	173 49.5	38.5	153 30.7	11.7	284 25.3	15.1									
24	112 36.5	130 49.7	-8 19.2	188 49.9	-23 38.3	168 32.5	-20 11.5	299 27.8	+5 15.1									
Dif	—	+1	+12	+4	+2	+19	+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 08 ^m 8			Edad: 16 ^d 5 PHE { SD: 16:4 PMG: 1 ^h 58 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	177	51.3	-21 29.5	331	40.2	+14 21.8	60 N	7 03	7 57	8 50	19 28	98	9 39	3	
1	192	51.1	29.0	346	07.8	+14 07.3	58	6 56	47	36	34	94	32	6	
2	207	50.9	28.6	0	35.5	+13 52.7	56	51	38	23	39	90	26	10	
3	222	50.6	28.2	15	03.3	38.0	54	46	30	12	43	87	20	13	
4	237	50.4	27.8	29	31.2	23.3	52	41	23	8 03	47	84	16	15	
5	252	50.2	-21 27.3	43	59.3	+13 08.5	50	6 36	7 17	7 54	19 50	82	9 11	18	
6	267	49.9	-21 26.9	58	27.4	+12 53.7	45	6 26	7 03	7 36	19 58	76	9 01	23	
7	282	49.7	26.5	72	55.7	38.8	40	17	6 51	21	20 04	72	8 53	28	
8	297	49.5	26.1	87	24.1	23.8	35	09	40	7 08	10	68	46	31	
9	312	49.2	25.6	101	52.6	+12 08.8	30	6 02	31	6 57	15	64	40	34	
10	327	49.0	25.2	116	21.1	+11 53.7	20	5 47	6 14	38	23	58	29	40	
11	342	48.8	-21 24.8	130	49.8	+11 38.6	10 N	5 32	5 58	6 21	20 30	54	8 19	46	
12	357	48.5	-21 24.3	145	18.6	+11 23.5	0	5 17	5 43	6 05	20 37	48	8 10	50	
13	12	48.3	23.9	159	47.5	+11 08.3	10 S	5 00	26	5 49	44	43	8 01	55	
14	27	48.1	23.5	174	16.5	+10 53.0	20	4 39	5 08	32	51	39	7 51	60	
15	42	47.9	23.0	188	45.6	37.7	30	4 13	4 45	12	20 59	33	40	66	
16	57	47.6	22.6	203	14.8	22.4	35	3 56	31	5 00	21 04	29	33	70	
17	72	47.4	-21 22.2	217	44.1	+10 07.1	40	3 35	4 15	4 47	21 09	26	7 25	74	
18	87	47.2	-21 21.7	232	13.5	+9 51.7	45	3 08	3 55	4 31	21 15	22	7 16	79	
19	102	46.9	21.3	246	42.9	36.2	50	2 30	28	11	22	17	05	85	
20	117	46.7	20.8	261	12.5	20.8	52	2 08	15	4 01	26	14	7 00	87	
21	132	46.5	20.4	275	42.2	+9 05.3	54	1 40	3 00	3 50	29	12	6 55	90	
22	147	46.3	20.0	290	11.9	+8 49.8	56	0 51	2 42	38	33	9	49	93	
23	162	46.0	19.5	304	41.8	34.2	58	** **	2 19	24	38	5	42	97	
24	177	45.8	-21 19.1	319	11.7	+8 18.6	60 S	** **	1 49	3 07	21 43	2	6 34	101	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 16 ^h 26 ^m 9		Mag: -4.5 PMG: 15 ^h 17 ^m		Mag: +1.3 PMG: 11 ^h 24 ^m		Mag: -1.9 PMG: 12 ^h 44 ^m		Mag: +0.9 PMG: 4 ^h 01 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	112	36.5	130	49.7	-8 19.2	188	49.9	-23 38.3	168	32.5	-20 11.5	299	27.8	+5 15.1
1	127	38.9	145	49.8	18.0	203	50.3	38.2	183	34.4	11.4	314	30.3	15.1
2	142	41.4	160	49.9	16.8	218	50.7	38.0	198	36.2	11.3	329	32.8	15.2
3	157	43.9	175	50.1	15.6	233	51.1	37.9	213	38.1	11.1	344	35.3	15.2
4	172	46.3	190	50.2	14.4	248	51.4	37.7	228	39.9	11.0	359	37.8	15.2
5	187	48.8	205	50.4	-8 13.2	263	51.8	-23 37.5	243	41.8	-20 10.9	14	40.3	+5 15.3
6	202	51.2	220	50.5	-8 12.0	278	52.2	-23 37.4	258	43.6	-20 10.8	29	42.8	+5 15.3
7	217	53.7	235	50.6	10.9	293	52.6	37.2	273	45.5	10.6	44	45.4	15.3
8	232	56.2	250	50.8	09.7	308	53.0	37.0	288	47.3	10.5	59	47.9	15.4
9	247	58.6	265	50.9	08.5	323	53.4	36.9	303	49.2	10.4	74	50.4	15.4
10	263	01.1	280	51.1	07.3	338	53.8	36.7	318	51.1	10.3	89	52.9	15.4
11	278	03.6	295	51.2	-8 06.1	353	54.2	-23 36.5	333	52.9	-20 10.1	104	55.4	+5 15.4
12	293	06.0	310	51.4	-8 04.9	8	54.6	-23 36.4	348	54.8	-20 10.0	119	57.9	+5 15.5
13	308	08.5	325	51.5	03.7	23	55.0	36.2	3	56.6	09.9	135	00.4	15.5
14	323	11.0	340	51.7	02.5	38	55.4	36.1	18	58.5	09.7	150	02.9	15.5
15	338	13.4	355	51.8	01.4	53	55.8	35.9	34	00.3	09.6	165	05.5	15.6
16	353	15.9	10	52.0	-8 00.2	68	56.2	35.7	49	02.2	09.5	180	08.0	15.6
17	8	18.4	25	52.1	-7 59.0	83	56.6	-23 35.5	64	04.0	-20 09.4	195	10.5	+5 15.6
18	23	20.8	40	52.3	-7 57.8	98	57.0	-23 35.4	79	05.9	-20 09.2	210	13.0	+5 15.7
19	38	23.3	55	52.5	56.6	113	57.4	35.2	94	07.7	09.1	225	15.5	15.7
20	53	25.7	70	52.6	55.4	128	57.8	35.0	109	09.6	09.0	240	18.0	15.7
21	68	28.2	85	52.8	54.2	143	58.2	34.9	124	11.4	08.8	255	20.5	15.8
22	83	30.7	100	52.9	53.0	158	58.6	34.7	139	13.3	08.7	270	23.1	15.8
23	98	33.1	115	53.1	51.8	173	59.0	34.5	154	15.1	08.6	285	25.6	15.8
24	113	35.6	130	53.3	-7 50.7	188	59.4	-23 34.4	169	17.0	-20 08.5	300	28.1	+5 15.9
Dif	—	+1	+12	+4	+2	+19	+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 09 ^m 1			Edad: 17 ^d 5 PHE { SD: 16/2 PMG: 2 ^h 49 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	177	45.8	-21	19.1	319	11.7	+8	18.6	60 N	15 30	16 23	17 17	21 06	93	9 42	1
1	192	45.6		18.6	333	41.7 ¹¹⁰	+8	03.1 ¹⁵⁵	58	44	33	23	08 89		38 6	
2	207	45.3		18.2	348	11.8 ¹¹¹	+7	47.4 ¹⁵⁷	56	15 57	41	29	09 86		36 8	
3	222	45.1		17.8	2	42.0 ¹¹²		31.8 ¹⁵⁶	54	16 07	49	34	10 83		33 11	
4	237	44.9		17.3	17	12.3 ¹¹³		16.2 ¹⁵⁶	52	17	16 56	38	11 81		31 14	
5	252	44.7	-21	16.9	31	42.7 ¹¹⁴	+7	00.5 ¹⁵⁷	50	16 25	17 02	17 43	21 12	78	9 29	16
6	267	44.4	-21	16.4	46	13.1 ¹¹⁴	+6	44.8 ¹⁵⁷	45	16 43	17 16	17 53	21 14	73	9 24	21
7	282	44.2		16.0	60	43.6 ¹¹⁵		29.1 ¹⁵⁷	40	16 58	28	18 01	16 69		21 25	
8	297	44.0		15.5	75	14.2 ¹¹⁶	+6	13.4 ¹⁵⁷	35	17 11	38	09	18 64		17 29	
9	312	43.8		15.1	89	44.9 ¹¹⁷	+5	57.7 ¹⁵⁷	30	22	17 48	17	19 61		14 32	
10	327	43.5		14.6	104	15.6 ¹¹⁷		42.0 ¹⁵⁷	20	41	18 04	31	21 56		09 38	
11	342	43.3	-21	14.2	118	46.5 ¹¹⁹	+5	26.2 ¹⁵⁸	10 N	17 57	18 20	18 46	21 24	50	9 05	42
12	357	43.1	-21	13.7	133	17.4 ¹¹⁹	+5	10.5 ¹⁵⁷	0	18 13	18 35	19 01	21 25	46	9 00	48
13	12	42.9		13.3	147	48.3 ¹¹⁹	+4	54.8 ¹⁵⁷	10 S	29	18 51	18	27 42		8 56	52
14	27	42.6		12.8	162	19.4 ¹²¹		39.0 ¹⁵⁸	20	18 45	19 10	19 38	30 36		51 57	
15	42	42.4		12.4	176	50.5 ¹²¹		23.3 ¹⁵⁷	30	19 05	32	20 04	32 31		46 63	
16	57	42.2		11.9	191	21.7 ¹²²	+4	07.6 ¹⁵⁷	35	17	19 46	21	33 28		43 66	
17	72	42.0	-21	11.5	205	52.9 ¹²²	+3	51.8 ¹⁵⁸	40	19 30	20 02	20 41	21 35	24	8 39	70
18	87	41.7	-21	11.0	220	24.2 ¹²³	+3	36.1 ¹⁵⁷	45	19 46	20 22	21 08	21 37	20	8 35	74
19	102	41.5		10.6	234	55.6 ¹²⁴		20.4 ¹⁵⁷	50	20 05	20 47	21 45	39 15		30 80	
20	117	41.3		10.1	249	27.0 ¹²⁴	+3	04.6 ¹⁵⁸	52	15	21 00	22 05	40 13		27 83	
21	132	41.1		09.7	263	58.5 ¹²⁵	+2	48.9 ¹⁵⁷	54	25	15	22 32	41 10		25 85	
22	147	40.9		09.2	278	30.0 ¹²⁵		33.2 ¹⁵⁷	56	37	32	23 15	42 8		22 88	
23	162	40.6		08.8	293	01.6 ¹²⁶		17.5 ¹⁵⁷	58	20 51	21 54	** **	43 5		19 92	
24	177	40.4	-21	08.3	307	33.3 ¹²⁷	+2	01.8 ¹⁵⁷	60 S	21 07	22 23	** **	21 45	1	8 15	96

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 16 ^h 22 ^m 9		Mag: -4.5 PMG: 15 ^h 16 ^m		Mag: +1.3 PMG: 11 ^h 24 ^m		Mag: -1.9 PMG: 12 ^h 41 ^m		Mag: +0.9 PMG: 3 ^h 57 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	113	35.6	130	53.3	-7	50.7	188	59.4	-23	34.4
1	128	38.1	145	53.4		49.5	203	59.8		34.2
2	143	40.5	160	53.6		48.3	219	00.1		34.0
3	158	43.0	175	53.7		47.1	234	00.5		33.8
4	173	45.5	190	53.9		45.9	249	00.9		33.7
5	188	47.9	205	54.1	-7	44.7	264	01.3	-23	33.5
6	203	50.4	220	54.2	-7	43.5	279	01.7	-23	33.3
7	218	52.9	235	54.4		42.3	294	02.1		33.2
8	233	55.3	250	54.6		41.1	309	02.5		33.0
9	248	57.8	265	54.7		39.9	324	02.9		32.8
10	264	00.2	280	54.9		38.7	339	03.3		32.6
11	279	02.7	295	55.1	-7	37.6	354	03.7	-23	32.5
12	294	05.2	310	55.3	-7	36.4	9	04.1	-23	32.3
13	309	07.6	325	55.4		35.2	24	04.5		32.1
14	324	10.1	340	55.6		34.0	39	04.9		31.9
15	339	12.6	355	55.8		32.8	54	05.3		31.7
16	354	15.0	10	56.0		31.6	69	05.7		31.6
17	9	17.5	25	56.1	-7	30.4	84	06.1	-23	31.4
18	24	20.0	40	56.3	-7	29.2	99	06.5	-23	31.2
19	39	22.4	55	56.5		28.0	114	06.9		31.0
20	54	24.9	70	56.7		26.8	129	07.3		30.9
21	69	27.3	85	56.8		25.6	144	07.7		30.7
22	84	29.8	100	57.0		24.4	159	08.1		30.5
23	99	32.3	115	57.2		23.2	174	08.5		30.3
24	114	34.7	130	57.4	-7	22.1	189	08.9	-23	30.1
Dif	—		+2		+12		+4		+2	
							+19		+1	
									+25	
									0	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16:3			Edad: 18 ^d 5 PHE { 4 ^h : 58 ^m 3 12 ^h : 58 ^m 0 20 ^h : 57 ^m 7												
	PMG: 12 ^h 09 ^m 5			SD: 15:9 PMG: 3 ^h 37 ^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	177	40.4	-21 08.3	307	33.3	+2 01.8	60 N	7 01	7 55	8 47	22 39	91	9 43	2		
1	192	40.2	07.8	322	05.0 ¹²⁷	+1 46.2 ¹⁵⁶	58	6 55	45	33	37	87	44	5		
2	207	40.0	07.4	336	36.8 ¹²⁸	30.5 ¹⁵⁷	56	49	37	21	35	84	44	8		
3	222	39.8	06.9	351	08.6 ¹²⁸	+1 14.9 ¹⁵⁶	54	44	29	10	33	81	44	1		
4	237	39.5	06.5	5	40.5 ¹²⁹	+0 59.3 ¹⁵⁶	52	40	22	8 01	32	78	45	12		
5	252	39.3	-21 06.0	20	12.4 ¹²⁹	+0 43.7 ¹⁵⁶	50	6 35	7 16	7 53	22 30	76	9 45	15		
6	267	39.1	-21 05.5	34	44.4 ¹³⁰	+0 28.1 ¹⁵⁶	45	6 26	7 02	7 35	22 27	71	9 45	20		
7	282	38.9	05.1	49	16.4 ¹³⁰	+0 12.5 ¹⁵⁶	40	17	6 50	20	25	66	46	24		
8	297	38.7	04.6	63	48.5 ¹³¹	-0 03.0 ¹⁵⁵	35	09	40	7 08	22	63	46	27		
9	312	38.4	04.1	78	20.6 ¹³¹	18.5 ¹⁵⁵	30	6 01	31	6 57	20	60	46	31		
10	327	38.2	03.7	92	52.8 ¹³²	34.0 ¹⁵⁵	20	5 47	6 14	38	17	54	47	36		
11	342	38.0	-21 03.2	107	25.0 ¹³²	-0 49.5 ¹⁵⁵	10 N	5 33	5 59	6 21	22 14	49	9 47	41		
12	357	37.8	-21 02.7	121	57.2 ¹³²	-1 04.9 ¹⁵⁴	0	5 18	5 44	6 06	22 11	45	9 48	45		
13	12	37.6	02.3	136	29.5 ¹³³	20.3 ¹⁵⁴	10 S	5 01	27	5 50	09	40	48	50		
14	27	37.4	01.8	151	01.8 ¹³³	35.7 ¹⁵⁴	20	4 41	5 09	33	06	36	48	55		
15	42	37.1	01.3	165	34.2 ¹³⁴	-1 51.1 ¹⁵⁴	30	4 15	4 47	14	03	30	49	60		
16	57	36.9	00.9	180	06.6 ¹³⁴	-2 06.4 ¹⁵³	35	3 58	33	5 02	22 01	27	49	64		
17	72	36.7	-21 00.4	194	39.0 ¹³⁴	-2 21.7 ¹⁵³	40	3 38	4 17	4 49	21 59	24	9 49	67		
18	87	36.5	-20 59.9	209	11.5 ¹³⁵	-2 36.9 ¹⁵²	45	3 11	3 57	4 33	21 57	20	9 49	72		
19	102	36.3	59.5	223	44.0 ¹³⁵	-2 52.2 ¹⁵³	50	2 34	32	14	54	15	50	77		
20	117	36.1	59.0	238	16.5 ¹³⁵	-3 07.3 ¹⁵¹	52	2 14	19	4 04	53	13	50	79		
21	132	35.8	58.5	252	49.1 ¹³⁶	22.5 ¹⁵²	54	1 47	3 04	3 54	51	11	50	82		
22	147	35.6	58.0	267	21.6 ¹³⁵	37.6 ¹⁵¹	56	1 04	2 47	42	50	8	50	85		
23	162	35.4	57.6	281	54.3 ¹³⁷	-3 52.7 ¹⁵¹	58	** **	2 25	28	48	5	51	88		
24	177	35.2	-20 57.1	296	26.9 ¹³⁶	-4 07.7 ¹⁵⁰	60 S	** **	1 56	3 12	21 46	2	9 51	91		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 16 ^h 19 ^m 0		Mag: -4.6 PMG: 15 ^h 16 ^m		Mag: +1.3 PMG: 11 ^h 23 ^m		Mag: -1.9 PMG: 12 ^h 38 ^m		Mag: +0.9 PMG: 3 ^h 53 ^m									
	hG ♈		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec									
h	°	'	°	'	°	'	°	'	°	'								
0	114	34.7	130	57.4	-7	22.1	189	08.9	-23	30.1	170	01.5	-20	05.4	301	28.5	+5	16.7
1	129	37.2	145	57.6		20.9	204	09.3		29.9	185	03.3		05.2	316	31.0		16.7
2	144	39.7	160	57.8		19.7	219	09.6		29.8	200	05.2		05.1	331	33.5		16.8
3	159	42.1	175	58.0		18.5	234	10.0		29.6	215	07.0		05.0	346	36.1		16.8
4	174	44.6	190	58.1		17.3	249	10.4		29.4	230	08.9		04.8	1	38.6		16.9
5	189	47.1	205	58.3	-7	16.1	264	10.8	-23	29.2	245	10.7	-20	04.7	16	41.1	+5	16.9
6	204	49.5	220	58.5	-7	14.9	279	11.2	-23	29.0	260	12.6	-20	04.6	31	43.6	+5	16.9
7	219	52.0	235	58.7		13.7	294	11.6		28.8	275	14.4		04.5	46	46.1		17.0
8	234	54.5	250	58.9		12.5	309	12.0		28.7	290	16.3		04.3	61	48.7		17.0
9	249	56.9	265	59.1		11.3	324	12.4		28.5	305	18.1		04.2	76	51.2		17.0
10	264	59.4	280	59.3		10.1	339	12.8		28.3	320	20.0		04.1	91	53.7		17.1
11	280	01.8	295	59.5	-7	08.9	354	13.2	-23	28.1	335	21.8	-20	03.9	106	56.2	+5	17.1
12	295	04.3	310	59.7	-7	07.7	9	13.6	-23	27.9	350	23.7	-20	03.8	121	58.7	+5	17.1
13	310	06.8	325	59.9		06.5	24	14.0		27.7	5	25.5		03.7	137	01.3		17.2
14	325	09.2	341	00.1		05.3	39	14.4		27.5	20	27.4		03.5	152	03.8		17.2
15	340	11.7	356	00.3		04.1	54	14.8		27.3	35	29.3		03.4	167	06.3		17.2
16	355	14.2	11	00.5		02.9	69	15.2		27.2	50	31.1		03.3	182	08.8		17.3
17	10	16.6	26	00.7	-7	01.7	84	15.6	-23	27.0	65	33.0	-20	03.2	197	11.3	+5	17.3
18	25	19.1	41	00.9	-7	00.6	99	16.0	-23	26.8	80	34.8	-20	03.0	212	13.9	+5	17.4
19	40	21.6	56	01.1	-6	59.4	114	16.4		26.6	95	36.7		02.9	227	16.4		17.4
20	55	24.0	71	01.3		58.2	129	16.8		26.4	110	38.5		02.8	242	18.9		17.4
21	70	26.5	86	01.5		57.0	144	17.2		26.2	125	40.4		02.6	257	21.4		17.5
22	85	29.0	101	01.7		55.8	159	17.6		26.0	140	42.2		02.5	272	24.0		17.5
23	100	31.4	116	01.9		54.6	174	18.0		25.8	155	44.1		02.4	287	26.5		17.5
24	115	33.9	131	02.1	-6	53.4	189	18.4	-23	25.6	170	45.9	-20	02.2	302	29.0	+5	17.6
Dif	—		+2		+12		+4		+2		+19		+1		+25		0	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:3			Edad: 19 ^d 5	PHE {	4 ^h : 57:4 12 ^h : 57:1 20 ^h : 56:7			Final del crepúsculo			Hora	R°	Hora	R°
	PMG: 12 ^h 09 ^m 8								PMG: 4 ^h 22 ^m R°: 45 ^m						
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico					
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	177	35.2	-20 57.1	296	26.9	-4 07.7		60 N	15 34	16 27	17 21	** ** *	9 45	2	
1	192	35.0		310	59.5 ¹³⁶	22.7 ¹⁵⁰		58	15 48	36	26	** ** *	49	5	
2	207	34.8		325	32.2 ¹³⁷	37.7 ¹⁵⁰		56	16 00	45	32	23 59 82	52	8	
3	222	34.6		340	04.9 ¹³⁷	-4 52.6 ¹⁴⁹		54	11	52	37	54 79	55	11	
4	237	34.3		354	37.7 ¹³⁸	-5 07.4 ¹⁴⁸		52	20	16 59	41	50 76	9 57	14	
5	252	34.1	-20 54.7	9	10.4 ¹³⁷	-5 22.3 ¹⁴⁹		50	16 28	17 05	17 45	23 46 74	10 00	16	
6	267	33.9	-20 54.2	23	43.2 ¹³⁸	-5 37.0 ¹⁴⁷		45	16 46	17 19	17 55	23 38 69	10 05	21	
7	282	33.7		38	16.0 ¹³⁸	-5 51.8 ¹⁴⁸		40	17 00	30	18 03	31 65	10	24	
8	297	33.5		52	48.8 ¹³⁸	-6 06.5 ¹⁴⁷		35	13	40	11	25 61	13	28	
9	312	33.3		67	21.6 ¹³⁸	21.1 ¹⁴⁶		30	23	17 49	18	20 58	17	31	
10	327	33.1		81	54.4 ¹³⁸	35.7 ¹⁴⁶		20	42	18 05	33	11 53	23	36	
11	342	32.9	-20 51.8	96	27.2 ¹³⁸	-6 50.2 ¹⁴⁵		10 N	17 58	18 21	18 46	23 03 49	10 28	40	
12	357	32.7	-20 51.3	111	00.1 ¹³⁹	-7 04.7 ¹⁴⁵		0	18 13	18 36	19 01	22 56 45	10 33	45	
13	12	32.4		125	33.0 ¹³⁹	19.1 ¹⁴⁴		10 S	29	18 52	18	49 41	38	49	
14	27	32.2		140	05.8 ¹³⁸	33.5 ¹⁴⁴		20	18 46	19 10	19 38	42 36	43	54	
15	42	32.0		154	38.7 ¹³⁹	-7 47.9 ¹⁴⁴		30	19 05	31	20 04	33 32	49	59	
16	57	31.8		169	11.6 ¹³⁹	-8 02.1 ¹⁴²		35	16	19 45	20	28 29	53	62	
17	72	31.6	-20 48.9	183	44.5 ¹³⁹	-8 16.4 ¹⁴³		40	19 29	20 01	20 40	22 23 25	10 56	66	
18	87	31.4	-20 48.4	198	17.4 ¹³⁹	-8 30.5 ¹⁴¹		45	19 45	20 20	21 06	22 17 21	11 01	70	
19	102	31.2		212	50.3 ¹³⁹	44.6 ¹⁴¹		50	20 04	45	21 42	09 17	07	74	
20	117	31.0		227	23.2 ¹³⁹	-8 58.7 ¹⁴¹		52	13	20 57	22 01	06 14	09	77	
21	132	30.8		241	56.1 ¹³⁹	-9 12.7 ¹⁴⁰		54	23	21 12	22 27	22 02 12	12	80	
22	147	30.6		256	29.0 ¹³⁹	26.6 ¹³⁹		56	35	29	23 05	21 58 9	15	83	
23	162	30.4		271	02.0 ¹⁴⁰	40.5 ¹³⁹		58	20 48	21 50	** ** *	53 6	19	86	
24	177	30.1	-20 45.5	285	34.9 ¹³⁹	-9 54.3 ¹³⁸		60 S	21 04	22 17	** ** *	21 48 3	11 22	90	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 16 ^h 15 ^m 1		Mag: -4.6 PMG: 15 ^h 16 ^m		Mag: +1.3 PMG: 11 ^h 22 ^m		Mag: -1.9 PMG: 12 ^h 35 ^m		Mag: +0.9 PMG: 3 ^h 49 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	115	33.9	131 02.1	-6 53.4	189 18.4	-23 25.6	170 45.9	-20 02.2	302 29.0	+5 17.6
1	130	36.3	146 02.3	52.2	204 18.8	25.4	185 47.8	02.1	317 31.5	17.6
2	145	38.8	161 02.5	51.0	219 19.2	25.2	200 49.6	02.0	332 34.0	17.7
3	160	41.3	176 02.7	49.8	234 19.6	25.0	215 51.5	01.9	347 36.6	17.7
4	175	43.7	191 02.9	48.6	249 20.0	24.9	230 53.3	01.7	2 39.1	17.7
5	190	46.2	206 03.1	-6 47.4	264 20.4	-23 24.7	245 55.2	-20 01.6	17 41.6	+5 17.8
6	205	48.7	221 03.4	-6 46.2	279 20.7	-23 24.5	260 57.0	-20 01.5	32 44.1	+5 17.8
7	220	51.1	236 03.6	45.0	294 21.1	24.3	275 58.9	01.3	47 46.7	17.8
8	235	53.6	251 03.8	43.8	309 21.5	24.1	291 00.7	01.2	62 49.2	17.9
9	250	56.1	266 04.0	42.6	324 21.9	23.9	306 02.6	01.1	77 51.7	17.9
10	265	58.5	281 04.2	41.4	339 22.3	23.7	321 04.5	00.9	92 54.2	18.0
11	281	01.0	296 04.4	-6 40.2	354 22.7	-23 23.5	336 06.3	-20 00.8	107 56.8	+5 18.0
12	296	03.4	311 04.7	-6 39.0	9 23.1	-23 23.3	351 08.2	-20 00.7	122 59.3	+5 18.0
13	311	05.9	326 04.9	37.8	24 23.5	23.1	6 10.0	00.5	138 01.8	18.1
14	326	08.4	341 05.1	36.6	39 23.9	22.9	21 11.9	00.4	153 04.3	18.1
15	341	10.8	356 05.3	35.4	54 24.3	22.7	36 13.7	00.3	168 06.9	18.1
16	356	13.3	11 05.5	34.2	69 24.7	22.5	51 15.6	-20 00.2	183 09.4	18.2
17	11	15.8	26 05.8	-6 33.0	84 25.1	-23 22.3	66 17.4	-20 00.0	198 11.9	+5 18.2
18	26	18.2	41 06.0	-6 31.8	99 25.5	-23 22.1	81 19.3	-19 59.9	213 14.4	+5 18.3
19	41	20.7	56 06.2	30.6	114 25.9	21.9	96 21.1	59.8	228 17.0	18.3
20	56	23.2	71 06.4	29.4	129 26.3	21.7	111 23.0	59.6	243 19.5	18.3
21	71	25.6	86 06.7	28.2	144 26.7	21.5	126 24.8	59.5	258 22.0	18.4
22	86	28.1	101 06.9	27.0	159 27.1	21.3	141 26.7	59.4	273 24.5	18.4
23	101	30.6	116 07.1	25.8	174 27.5	21.1	156 28.5	59.2	288 27.1	18.4
24	116	33.0	131 07.3	-6 24.6	189 27.9	-23 20.9	171 30.4	-19 59.1	303 29.6	+5 18.5
Dif	—		+2	+12	+4	+2	+19	+1	+25	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16:3			Edad: 20 ^d 5	PHE { 4 ^h : 56:5 12 ^h : 56:2 20 ^h : 55:9	Principio del crepúsculo		Salida de Luna			Puesta de Luna			
	PMG: 12 ^h 10 ^m 2					SD: 15:4		R°: 45 ^m			R°: 45 ^m		R°: 45 ^m	
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	h	m	h	m	h	m	m
0	177	30.1	-20 45.5	285	34.9	-9 54.3	138	6 59	7 52	8 44	0 10	89	9 47	3
1	192	29.9	45.0	300	07.8	-10 08.1	138	58	53	43	0 04	85	9 54	7
2	207	29.7	44.5	314	40.7	21.7	136	56	48	35	** ** *	**	10 00	11
3	222	29.5	44.0	329	13.6	35.4	137	54	43	27	8 08	** ** *	06	13
4	237	29.3	43.5	343	46.5	-10 48.9	135	52	38	20	7 59	** ** *	11	16
5	252	29.1	-20 43.0	358	19.4	-11 02.4	135	50	6 34	7 14	7 51	** ** *	10 16	18
6	267	28.9	-20 42.5	12	52.2	-11 15.9	135	45	6 25	7 01	7 33	** ** *	10 26	22
7	282	28.7	42.0	27	25.1	29.2	133	40	16	6 50	19	** ** *	34	26
8	297	28.5	41.5	41	58.0	42.5	133	35	09	40	7 07	** ** *	41	30
9	312	28.3	41.0	56	30.8	-11 55.8	133	30	6 01	31	6 56	** ** *	48	32
10	327	28.1	40.5	71	03.7	-12 09.0	132	20	5 47	6 14	38	** ** *	10 59	37
11	342	27.9	-20 40.0	85	36.5	-12 22.0	130	10 N	5 33	5 59	6 22	23 52	50	11 08 42
12	357	27.7	-20 39.5	100	09.3	-12 35.1	131	0	5 19	5 44	6 07	23 41	46	11 18 45
13	12	27.5	39.0	114	42.1	-12 48.0	129	10 S	5 02	29	5 51	30	42	27 49
14	27	27.3	38.5	129	14.9	-13 00.9	129	20	4 42	5 11	35	18	38	37 53
15	42	27.1	38.0	143	47.7	13.7	128	30	17	4 49	15	23 05	33	48 58
16	57	26.9	37.5	158	20.5	26.5	128	35	4 00	35	5 04	22 57	31	11 55 61
17	72	26.7	-20 37.0	172	53.2	-13 39.2	127	40	3 40	4 20	4 51	22 48	28	12 02 65
18	87	26.5	-20 36.5	187	25.9	-13 51.7	125	45	3 15	4 00	4 36	22 38	24	12 11 68
19	102	26.3	36.0	201	58.6	-14 04.3	126	50	2 39	3 35	17	26	19	21 74
20	117	26.1	35.5	216	31.3	16.7	124	52	2 19	23	4 08	20	17	26 76
21	132	25.9	35.0	231	04.0	29.1	124	54	1 54	3 09	3 57	14	15	32 78
22	147	25.7	34.5	245	36.6	41.4	123	56	1 16	2 52	46	22 07	12	38 82
23	162	25.5	34.0	260	09.3	-14 53.6	122	58	** ** *	31	32	21 59	8	45 85
24	177	25.3	-20 33.5	274	41.9	-15 05.7	121	60 S	** ** *	2 04	3 17	21 51	4	12 52 90

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 16 ^h 11 ^m 1		Mag: -4.6 PMG: 15 ^h 15 ^m		Mag: +1.3 PMG: 11 ^h 22 ^m		Mag: -1.9 PMG: 12 ^h 32 ^m		Mag: +0.9 PMG: 3 ^h 45 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	116	33.0	131	07.3	-6 24.6	189	27.9	-23 20.9	171	30.4	-19 59.1	303	29.6	+5 18.5
1	131	35.5	146	07.6	23.4	204	28.3	20.7	186	32.2	59.0	318	32.1	18.5
2	146	37.9	161	07.8	22.2	219	28.7	20.5	201	34.1	58.8	333	34.7	18.6
3	161	40.4	176	08.0	21.0	234	29.1	20.3	216	35.9	58.7	348	37.2	18.6
4	176	42.9	191	08.3	19.8	249	29.5	20.1	231	37.8	58.6	3	39.7	18.6
5	191	45.3	206	08.5	-6 18.6	264	29.9	-23 19.8	246	39.6	-19 58.4	18	42.2	+5 18.7
6	206	47.8	221	08.7	-6 17.4	279	30.3	-23 19.6	261	41.5	-19 58.3	33	44.8	+5 18.7
7	221	50.3	236	09.0	16.2	294	30.7	19.4	276	43.4	58.2	48	47.3	18.8
8	236	52.7	251	09.2	15.0	309	31.1	19.2	291	45.2	58.1	63	49.8	18.8
9	251	55.2	266	09.5	13.8	324	31.5	19.0	306	47.1	57.9	78	52.3	18.8
10	266	57.7	281	09.7	12.6	339	31.9	18.8	321	48.9	57.8	93	54.9	18.9
11	282	00.1	296	09.9	-6 11.4	354	32.3	-23 18.6	336	50.8	-19 57.7	108	57.4	+5 18.9
12	297	02.6	311	10.2	-6 10.2	9 32.7	-23 18.4	351	52.6	-19 57.5	123	59.9	+5 19.0	
13	312	05.0	326	10.4	09.0	24 33.1	18.2	6 54.5	57.4	139	02.5	19.0		
14	327	07.5	341	10.7	07.8	39 33.5	18.0	21 56.3	57.3	154	05.0	19.0		
15	342	10.0	356	10.9	06.6	54 33.9	17.8	36 58.2	57.1	169	07.5	19.1		
16	357	12.4	11 11.2	05.4	69 34.3	17.6	52 00.0	57.0	184	10.1	19.1			
17	12	14.9	26 11.4	-6 04.2	84 34.6	-23 17.3	67 01.9	-19 56.9	199	12.6	+5 19.2			
18	27	17.4	41 11.7	-6 03.0	99 35.0	-23 17.1	82 03.7	-19 56.7	214	15.1	+5 19.2			
19	42	19.8	56 11.9	01.8	114 35.4	16.9	97 05.6	56.6	229	17.6	19.2			
20	57	22.3	71 12.2	-6 00.6	129 35.8	16.7	112 07.4	56.5	244	20.2	19.3			
21	72	24.8	86 12.4	-5 59.4	144 36.2	16.5	127 09.3	56.3	259	22.7	19.3			
22	87	27.2	101 12.7	58.2	159 36.6	16.3	142 11.1	56.2	274	25.2	19.4			
23	102	29.7	116 12.9	57.0	174 37.0	16.1	157 13.0	56.1	289	27.8	19.4			
24	117	32.2	131 13.2	-5 55.8	189 37.4	-23 15.9	172 14.8	-19 55.9	304	30.3	+5 19.4			
Dif	—		+2	+12	+4	+2	+19	+1	+25	0				

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:3				Edad: 21 ^d 5 PHE { 4 ^h : 55:7 12 ^h : 55:4 20 ^h : 55:2												
	PMG: 12 ^h 10 ^m 5				PMG: 5 ^h 52 ^m R°: 46 ^m												
	hG ☉		Dec		hG ☾ Dif		Dec Dif				Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m		
0	177	25.3	-20	33.5	274	41.9	-15	05.7	60 N	15 39	16 31	17 24	1 39 90	9 50 5			
1	192	25.1		33.0	289	14.4 ¹³⁵		17.8 ¹²¹	58	15 52	40	30	29 86	10 01 10			
2	207	24.9		32.5	303	47.0 ¹³⁶		29.8 ¹²⁰	56	16 04	48	35	21 81	11 13			
3	222	24.7		32.0	318	19.5 ¹³⁵		41.7 ¹¹⁹	54	14	16 55	40	13 78	19 17			
4	237	24.5		31.5	332	52.0 ¹³⁵		-15 53.5 ¹¹⁸	52	23	17 02	44	06 75	27 19			
5	252	24.3	-20	31.0	347	24.5 ¹³⁵		-16 05.2 ¹¹⁷	50	16 31	17 08	17 48	1 00 73	10 34 21			
6	267	24.1	-20	30.4	1	57.0 ¹³⁵		-16 16.9 ¹¹⁷	45	16 49	17 21	17 57	0 47 67	10 48 26			
7	282	23.9		29.9	16	29.4 ¹³⁴		28.4 ¹¹⁵	40	17 03	32	18 05	36 64	11 00 30			
8	297	23.7		29.4	31	01.8 ¹³⁴		39.9 ¹¹⁵	35	15	42	13	26 61	11 33			
9	312	23.5		28.9	45	34.1 ¹³³		-16 51.3 ¹¹⁴	30	25	17 51	20	18 58	20 35			
10	327	23.3		28.4	60	06.5 ¹³⁴		-17 02.7 ¹¹⁴	20	43	18 07	34	0 04 54	36 39			
11	342	23.1	-20	27.9	74	38.8 ¹³³		-17 13.9 ¹¹²	10 N	17 59	18 21	18 47	** ** *	11 50 43			
12	357	22.9	-20	27.4	89	11.1 ¹³³		-17 25.0 ¹¹¹	0	18 14	18 36	19 02	** ** *	12 03 46			
13	12	22.7		26.8	103	43.3 ¹³²		36.1 ¹¹¹	10 S	29	18 52	18	** ** *	16 50			
14	27	22.5		26.3	118	15.5 ¹³²		47.1 ¹¹⁰	20	18 45	19 09	19 38	23 56 41	30 54			
15	42	22.3		25.8	132	47.7 ¹³²		-17 58.0 ¹⁰⁹	30	19 04	31	20 03	38 37	46 58			
16	57	22.1		25.3	147	19.8 ¹³¹		-18 08.8 ¹⁰⁸	35	15	44	19	28 35	12 56 60			
17	72	21.9	-20	24.8	161	52.0 ¹³²		-18 19.5 ¹⁰⁷	40	19 28	19 59	20 38	23 16 32	13 07 63			
18	87	21.7	-20	24.2	176	24.0 ¹³⁰		-18 30.1 ¹⁰⁶	45	19 43	20 18	21 04	23 02 29	13 19 67			
19	102	21.5		23.7	190	56.1 ¹³¹		40.6 ¹⁰⁵	50	20 02	43	38	22 45 24	35 72			
20	117	21.3		23.2	205	28.1 ¹³⁰		-18 51.0 ¹⁰⁴	52	11	20 55	21 57	37 22	42 75			
21	132	21.1		22.7	220	00.1 ¹³⁰		-19 01.4 ¹⁰⁴	54	21	21 09	22 21	29 19	13 50 78			
22	147	20.9		22.2	234	32.0 ¹²⁹		11.6 ¹⁰²	56	32	25	22 56	19 16	14 00 80			
23	162	20.8		21.6	249	03.9 ¹²⁹		21.8 ¹⁰²	58	20 45	21 45	** ** *	22 07 13	10 85			
24	177	20.6	-20	21.1	263	35.8 ¹²⁹		-19 31.9 ¹⁰¹	60 S	21 00	22 11	** ** *	21 55 7	14 22 90			

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 16 ^h 07 ^m 2		Mag: -4.6 PMG: 15 ^h 15 ^m		Mag: +1.3 PMG: 11 ^h 21 ^m		Mag: -1.9 PMG: 12 ^h 29 ^m		Mag: +0.9 PMG: 3 ^h 41 ^m	
	hG ♈		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec	
h	°	'	°	'	°	'	°	'	°	'
0	117	32.2	131	13.2	-5	55.8	189	37.4	-23	15.9
1	132	34.6	146	13.4		54.6	204	37.8		15.6
2	147	37.1	161	13.7		53.4	219	38.2		15.4
3	162	39.5	176	13.9		52.2	234	38.6		15.2
4	177	42.0	191	14.2		51.0	249	39.0		15.0
5	192	44.5	206	14.4	-5	49.8	264	39.4	-23	14.8
6	207	46.9	221	14.7	-5	48.6	279	39.8	-23	14.6
7	222	49.4	236	15.0		47.4	294	40.2		14.3
8	237	51.9	251	15.2		46.2	309	40.6		14.1
9	252	54.3	266	15.5		45.0	324	41.0		13.9
10	267	56.8	281	15.8		43.8	339	41.4		13.7
11	282	59.3	296	16.0	-5	42.6	354	41.8	-23	13.5
12	298	01.7	311	16.3	-5	41.4	9	42.2	-23	13.2
13	313	04.2	326	16.5		40.2	24	42.6		13.0
14	328	06.7	341	16.8		39.0	39	43.0		12.8
15	343	09.1	356	17.1		37.8	54	43.4		12.6
16	358	11.6	11	17.4		36.6	69	43.8		12.4
17	13	14.0	26	17.6	-5	35.4	84	44.2	-23	12.1
18	28	16.5	41	17.9	-5	34.2	99	44.6	-23	11.9
19	43	19.0	56	18.2		33.0	114	45.0		11.7
20	58	21.4	71	18.4		31.8	129	45.4		11.5
21	73	23.9	86	18.7		30.6	144	45.8		11.2
22	88	26.4	101	19.0		29.4	159	46.2		11.0
23	103	28.8	116	19.3		28.2	174	46.6		10.8
24	118	31.3	131	19.5	-5	27.0	189	47.0	-23	10.6
Dif	—		+3		+12		+4		+2	
							+19		+1	
									+25	

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16:3			Edad: 22 ^d 5	PHE { 4 ^h : 55'0 12 ^h : 54'8 20 ^h : 54'7									
	PMG: 12 ^h 10 ^m 8					SD: 15'0								
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	h	m	h	m	h	m	m
0	177	20.6	-20 21.1	263	35.8	-19 31.9	99	6 56	7 49	8 41	3 09	90	9 55	10
1	192	20.4	20.6	278	07.6 ¹²⁸	41.8	99	51	40	28	2 55	83	10 11	15
2	207	20.2	20.1	292	39.4 ¹²⁸	-19 51.7	98	56	46	32	16	42	79	24
3	222	20.0	19.5	307	11.2 ¹²⁸	-20 01.5	97	54	41	25	8 06	31	76	36
4	237	19.8	19.0	321	42.9 ¹²⁷	11.2	97	52	37	19	7 57	21	73	46
5	252	19.6	-20 18.5	336	14.6 ¹²⁷	-20 20.7	95	50	6 33	7 13	7 49	2 13	70	10 55
6	267	19.4	-20 18.0	350	46.2 ¹²⁶	-20 30.2	95	45	6 24	7 00	7 32	1 54	67	11 14
7	282	19.2	17.4	5	17.8 ¹²⁶	39.6	94	40	16	6 49	18	40	62	30
8	297	19.0	16.9	19	49.4 ¹²⁶	48.9	93	35	08	39	7 06	27	60	44
9	312	18.8	16.4	34	20.9 ¹²⁵	-20 58.1	92	30	6 01	30	6 56	1 16	58	11 55
10	327	18.7	15.8	48	52.4 ¹²⁵	-21 07.2	91	20	5 47	14	38	0 58	54	12 15
11	342	18.5	-20 15.3	63	23.8 ¹²⁴	-21 16.2	90	10 N	5 34	6 00	6 22	0 42	50	12 33
12	357	18.3	-20 14.8	77	55.2 ¹²⁴	-21 25.0	88	0	5 19	5 45	6 07	0 27	47	12 49
13	12	18.1	14.2	92	26.6 ¹²⁴	33.8	88	10 S	5 03	30	5 52	0 12	44	13 06
14	27	17.9	13.7	106	57.9 ¹²³	42.5	87	20	4 44	5 12	36	** ** *	**	24
15	42	17.7	13.2	121	29.2 ¹²³	51.1	86	30	19	4 51	17	** ** *	**	44
16	57	17.5	12.6	136	00.5 ¹²³	-21 59.6	85	35	4 03	38	5 06	** ** *	**	13 56
17	72	17.3	-20 12.1	150	31.7 ¹²²	-22 07.9	83	40	3 43	4 22	4 53	23 48	37	14 10
18	87	17.1	-20 11.6	165	02.8 ¹²¹	-22 16.2	83	45	3 18	4 03	4 38	23 31	34	14 26
19	102	17.0	11.0	179	34.0 ¹²²	24.4	82	50	2 43	3 39	20	23 09	31	47 69
20	117	16.8	10.5	194	05.0 ¹²⁰	32.4	80	52	24	27	11	22 59	29	14 57
21	132	16.6	10.0	208	36.1 ¹²¹	40.4	80	54	2 01	3 13	4 01	48	26	15 08
22	147	16.4	09.4	223	07.1 ¹²⁰	48.2	78	56	1 26	2 57	3 50	35	23	20 77
23	162	16.2	08.9	237	38.1 ¹²⁰	-22 55.9	77	58	** ** *	37	37	20	19	35 81
24	177	16.0	-20 08.3	252	09.0 ¹¹⁹	-23 03.6	77	60 S	** ** *	2 11	3 22	22 02	13	15 52

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 16 ^h 03 ^m 3		Mag: -4.6 PMG: 15 ^h 14 ^m		Mag: +1.3 PMG: 11 ^h 21 ^m		Mag: -1.9 PMG: 12 ^h 27 ^m		Mag: +0.8 PMG: 3 ^h 37 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	118	31.3	131 19.5	-5 27.0	189 47.0	-23 10.6	172 59.3	-19 52.8	305 31.1	+5 20.4
1	133	33.8	146 19.8	25.8	204 47.4	10.3	188 01.1	52.6	320 33.6	20.5
2	148	36.2	161 20.1	24.6	219 47.8	10.1	203 03.0	52.5	335 36.2	20.5
3	163	38.7	176 20.4	23.4	234 48.2	09.9	218 04.9	52.4	350 38.7	20.5
4	178	41.1	191 20.7	22.2	249 48.6	09.7	233 06.7	52.2	5 41.2	20.6
5	193	43.6	206 20.9	-5 21.0	264 49.0	-23 09.4	248 08.6	-19 52.1	20 43.8	+5 20.6
6	208	46.1	221 21.2	-5 19.8	279 49.4	-23 09.2	263 10.4	-19 52.0	35 46.3	+5 20.7
7	223	48.5	236 21.5	18.6	294 49.8	09.0	278 12.3	51.8	50 48.8	20.7
8	238	51.0	251 21.8	17.4	309 50.2	08.8	293 14.1	51.7	65 51.4	20.8
9	253	53.5	266 22.1	16.2	324 50.6	08.5	308 16.0	51.6	80 53.9	20.8
10	268	55.9	281 22.4	15.0	339 51.0	08.3	323 17.8	51.4	95 56.4	20.8
11	283	58.4	296 22.7	-5 13.8	354 51.4	-23 08.1	338 19.7	-19 51.3	110 59.0	+5 20.9
12	299	00.9	311 23.0	-5 12.6	9 51.8	-23 07.8	353 21.5	-19 51.2	126 01.5	+5 20.9
13	314	03.3	326 23.2	11.4	24 52.2	07.6	8 23.4	51.0	141 04.1	21.0
14	329	05.8	341 23.5	10.1	39 52.6	07.4	23 25.2	50.9	156 06.6	21.0
15	344	08.3	356 23.8	08.9	54 53.0	07.1	38 27.1	50.8	171 09.1	21.1
16	359	10.7	11 24.1	07.7	69 53.4	06.9	53 28.9	50.6	186 11.7	21.1
17	14	13.2	26 24.4	-5 06.5	84 53.8	-23 06.7	68 30.8	-19 50.5	201 14.2	+5 21.1
18	29	15.6	41 24.7	-5 05.3	99 54.2	-23 06.4	83 32.6	-19 50.4	216 16.7	+5 21.2
19	44	18.1	56 25.0	04.1	114 54.6	06.2	98 34.5	50.2	231 19.3	21.2
20	59	20.6	71 25.3	02.9	129 55.0	06.0	113 36.3	50.1	246 21.8	21.3
21	74	23.0	86 25.6	01.7	144 55.4	05.7	128 38.2	50.0	261 24.4	21.3
22	89	25.5	101 25.9	-5 00.5	159 55.8	05.5	143 40.0	49.8	276 26.9	21.4
23	104	28.0	116 26.2	-4 59.3	174 56.2	05.3	158 41.9	49.7	291 29.4	21.4
24	119	30.4	131 26.5	-4 58.1	189 56.6	-23 05.0	173 43.7	-19 49.6	306 32.0	+5 21.4
Dif	—		+3	+12	+4	+2	+19	+1	+25	0

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16 ^h 3			Edad: 23 ^d 5 PHE { 4 ^h : 54 ^h 5 12 ^h : 54 ^h 4 20 ^h : 54 ^h 3											
	PMG: 12 ^h 11 ^m 1			SD: 14 ^h 9 PMG: 7 ^h 26 ^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	177	16.0	-20 08.3	252	09.0	-23 03.6	75	60 N	15 44	16 35	17 28	4 39 84		10 05 18	
1	192	15.8	07.8	266	39.9 ¹¹⁹	11.1	75	58	15 57	44	33	18 78		26 24	
2	207	15.7	07.3	281	10.7 ¹¹⁸	18.5	74	56	16 08	52	38	4 01 74		43 29	
3	222	15.5	06.7	295	41.5 ¹¹⁸	25.8	73	54	18	16 59	43	3 47 70		10 58 31	
4	237	15.3	06.2	310	12.3 ¹¹⁸	33.0	72	52	27	17 05	47	34 69		11 11 33	
5	252	15.1	-20 05.6	324	43.0 ¹¹⁷	-23 40.0	70	50	16 34	17 11	17 51	3 23 67		11 22 35	
6	267	14.9	-20 05.1	339	13.7 ¹¹⁷	-23 47.0	70	45	16 51	17 24	18 00	3 01 62		11 46 38	
7	282	14.7	04.5	353	44.3 ¹¹⁶	-23 53.9	69	40	17 05	34	07	2 42 61		12 05 40	
8	297	14.6	04.0	8	14.9 ¹¹⁶	-24 00.6	67	35	17	44	15	27 58		21 42	
9	312	14.4	03.5	22	45.5 ¹¹⁶	07.2	66	30	27	17 52	22	2 14 56		34 44	
10	327	14.2	02.9	37	16.0 ¹¹⁵	13.7	65	20	17 45	18 08	35	1 52 53		12 58 46	
11	342	14.0	-20 02.4	51	46.5 ¹¹⁵	-24 20.1	64	10 N	18 00	18 22	18 48	1 32 51		13 19 48	
12	357	13.8	-20 01.8	66	16.9 ¹¹⁴	-24 26.4	63	0	18 15	18 37	19 02	1 14 49		13 38 49	
13	12	13.7	01.3	80	47.3 ¹¹⁴	32.6	62	10 S	29	18 52	18	0 56 47		13 57 51	
14	27	13.5	00.7	95	17.7 ¹¹⁴	38.6	60	20	18 45	19 09	19 37	37 45		14 17 54	
15	42	13.3	-20 00.2	109	48.0 ¹¹³	44.5	59	30	19 04	30	20 02	15 42		41 56	
16	57	13.1	-19 59.6	124	18.3 ¹¹³	50.4	59	35	15	43	18	0 03 39		14 55 57	
17	72	12.9	-19 59.1	138	48.6 ¹¹³	-24 56.1	57	40	19 27	19 58	20 37	** ** *		15 12 58	
18	87	12.8	-19 58.5	153	18.8 ¹¹²	-25 01.6	55	45	19 42	20 17	21 01	** ** *		15 31 60	
19	102	12.6	58.0	167	49.0 ¹¹²	07.1	55	50	20 00	40	35	23 40 40		15 56 63	
20	117	12.4	57.4	182	19.2 ¹¹²	12.4	53	52	08	20 52	21 53	28 39		16 08 64	
21	132	12.2	56.9	196	49.3 ¹¹¹	17.7	53	54	18	21 05	22 16	23 14 37		21 67	
22	147	12.0	56.3	211	19.4 ¹¹¹	22.8	51	56	29	21	22 47	22 58 35		37 69	
23	162	11.9	55.7	225	49.4 ¹¹⁰	27.8	50	58	42	21 40	** ** *	39 31		16 56 72	
24	177	11.7	-19 55.2	240	19.4 ¹¹⁰	-25 32.6	48	60 S	20 56	22 04	** ** *	22 15 27		17 19 78	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG 15 ^h 59 ^m 3		Mag: -4.6 PMG: 15 ^h 14 ^m			Mag: +1.3 PMG: 11 ^h 20 ^m			Mag: -1.9 PMG: 12 ^h 24 ^m			Mag: +0.8 PMG: 3 ^h 33 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	119	30.4	131 26.5	-4 58.1	189 56.6	-23 05.0	173 43.7	-19 49.6	306 32.0	5 21.4					
1	134	32.9	146 26.8	56.9	204 57.0	04.8	188 45.6	49.4	321 34.5	21.5					
2	149	35.4	161 27.1	55.7	219 57.4	04.6	203 47.5	49.3	336 37.1	21.5					
3	164	37.8	176 27.4	54.5	234 57.8	04.3	218 49.3	49.2	351 39.6	21.6					
4	179	40.3	191 27.7	53.3	249 58.2	04.1	233 51.2	49.0	6 42.1	21.6					
5	194	42.8	206 28.0	-4 52.1	264 58.6	-23 03.8	248 53.0	-19 48.9	21 44.7	+5 21.7					
6	209	45.2	221 28.3	-4 50.9	279 59.0	-23 03.6	263 54.9	-19 48.7	36 47.2	+5 21.7					
7	224	47.7	236 28.6	49.7	294 59.4	03.4	278 56.7	48.6	51 49.7	21.7					
8	239	50.1	251 28.9	48.5	309 59.8	03.1	293 58.6	48.5	66 52.3	21.8					
9	254	52.6	266 29.3	47.3	325 00.2	02.9	309 00.4	48.3	81 54.8	21.8					
10	269	55.1	281 29.6	46.1	340 00.6	02.7	324 02.3	48.2	96 57.4	21.9					
11	284	57.5	296 29.9	-4 44.9	355 01.0	-23 02.4	339 04.1	-19 48.1	111 59.9	+5 21.9					
12	300	00.0	311 30.2	-4 43.7	10 01.4	-23 02.2	354 06.0	-19 47.9	127 02.5	+5 22.0					
13	315	02.5	326 30.5	42.5	25 01.8	01.9	9 07.8	47.8	142 05.0	22.0					
14	330	04.9	341 30.8	41.3	40 02.2	01.7	24 09.7	47.7	157 07.5	22.1					
15	345	07.4	356 31.1	40.1	55 02.6	01.4	39 11.5	47.5	172 10.1	22.1					
16	0	09.9	11 31.5	38.9	70 03.0	01.2	54 13.4	47.4	187 12.6	22.1					
17	15	12.3	26 31.8	-4 37.7	85 03.4	-23 01.0	69 15.2	-19 47.3	202 15.2	+5 22.2					
18	30	14.8	41 32.1	-4 36.5	100 03.8	-23 00.7	84 17.1	-19 47.1	217 17.7	+5 22.2					
19	45	17.3	56 32.4	35.3	115 04.2	00.5	99 18.9	47.0	232 20.2	22.3					
20	60	19.7	71 32.7	34.1	130 04.6	-23 00.2	114 20.8	46.9	247 22.8	22.3					
21	75	22.2	86 33.1	32.8	145 05.0	-23 00.0	129 22.6	46.7	262 25.3	22.4					
22	90	24.6	101 33.4	31.6	160 05.4	-22 59.7	144 24.5	46.6	277 27.9	22.4					
23	105	27.1	116 33.7	30.4	175 05.8	59.5	159 26.4	46.5	292 30.4	22.5					
24	120	29.6	131 34.0	-4 29.2	190 06.2	-22 59.2	174 28.2	-19 46.3	307 33.0	+5 22.5					
Dif	—		+3	+12	+4	+2	+19	+1	+25	0					

ALMANAQUE NÁUTICO PERSEIS

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16/3			Edad: 25 ^d 5 PHE	SD: 14/7	PMG: 9 ^h 06 ^m			Final del crepúsculo			Salida de Luna		Puesta de Luna	
	hG ☉	Dec							Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	°	h m	h m	h m	h m m		h m m		
0	177	07.5	-19 41.7	228	11.7	-26 52.3	60 N	15 49	16 39	17 32	7 12 45		10 59 60		
1	192	07.4	41.1	242	41.2 ¹⁰⁵	54.0	58	16 01	48	37	6 41 47		11 30 58		
2	207	07.2	40.5	257	10.6 ¹⁰⁴	55.6	56	12	16 55	42	6 18 47		11 53 58		
3	222	07.0	39.9	271	40.0 ¹⁰⁴	57.1	54	22	17 02	46	5 59 48		12 12 57		
4	237	06.9	39.4	286	09.4 ¹⁰⁴	58.5	52	30	08	50	43 48		28 56		
5	252	06.7	-19 38.8	300	38.7 ¹⁰³	-26 59.7	50	16 38	17 14	17 53	5 29 49		12 42 56		
6	267	06.5	-19 38.2	315	08.1 ¹⁰⁴	-27 00.8	45	16 54	17 26	18 02	5 01 49		13 10 55		
7	282	06.3	37.7	329	37.4 ¹⁰³	01.7	40	17 07	37	10	4 38 50		33 53		
8	297	06.2	37.1	344	06.8 ¹⁰⁴	02.6	35	19	46	17	20 50		13 51 53		
9	312	06.0	36.5	358	36.1 ¹⁰³	03.3	30	29	17 54	23	4 04 51		14 07 53		
10	327	05.8	35.9	13	05.5 ¹⁰⁴	03.9	20	17 46	18 09	36	3 38 50		34 52		
11	342	05.7	-19 35.3	27	34.8 ¹⁰³	-27 04.3	10 N	18 01	18 23	18 49	3 15 51		14 57 51		
12	357	05.5	-19 34.8	42	04.1 ¹⁰³	-27 04.6	0	18 15	18 37	19 03	2 54 50		15 18 51		
13	12	05.4	34.2	56	33.5 ¹⁰⁴	04.8	10 S	30	18 52	18	32 51		15 39 50		
14	27	05.2	33.6	71	02.8 ¹⁰³	04.9	20	18 45	19 09	19 37	2 09 51		16 02 50		
15	42	05.0	33.0	85	32.1 ¹⁰³	04.8	30	19 03	29	20 01	1 43 51		29 48		
16	57	04.9	32.4	100	01.4 ¹⁰³	04.6	35	14	42	16	27 51		16 45 47		
17	72	04.7	-19 31.9	114	30.8 ¹⁰⁴	-27 04.3	40	19 26	19 57	20 35	1 09 51		17 03 47		
18	87	04.5	-19 31.3	129	00.1 ¹⁰³	-27 03.8	45	19 40	20 15	20 59	0 48 50		17 25 46		
19	102	04.4	30.7	143	29.4 ¹⁰³	03.2	50	19 58	38	21 31	20 50		17 53 44		
20	117	04.2	30.1	157	58.8 ¹⁰⁴	02.5	52	20 06	20 49	21 49	0 07 50		18 07 43		
21	132	04.0	29.5	172	28.1 ¹⁰³	01.7	54	15	21 02	22 10	** ** *		23 41		
22	147	03.9	28.9	186	57.5 ¹⁰⁴	-27 00.7	56	26	17	22 39	** ** *		18 41 40		
23	162	03.7	28.4	201	26.8 ¹⁰³	-26 59.6	58	38	35	23 28	23 59 67		19 04 38		
24	177	03.6	-19 27.8	215	56.2 ¹⁰⁴	-26 58.4	60 S	20 52	21 58	** ** *	23 29 71		19 34 34		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 15 ^h 51 ^m 5		Mag: -4.6 PMG: 15 ^h 13 ^m		Mag: +1.3 PMG: 11 ^h 19 ^m		Mag: -1.9 PMG: 12 ^h 18 ^m		Mag: +0.8 PMG: 3 ^h 25 ^m						
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄						
h	°	'	°	'	°	'	°	'	°	'					
0	121	28.7	131	42.2	-4	00.4	190	15.9	-22	53.2					
1	136	31.2	146	42.5	-3	59.2	205	16.3	52.9	175	12.7				
2	151	33.6	161	42.9	58.0	220	16.7	52.7	205	16.4					
3	166	36.1	176	43.2	56.8	235	17.1	52.4	220	18.2					
4	181	38.6	191	43.6	55.6	250	17.5	52.2	235	20.1					
5	196	41.0	206	43.9	-3	54.3	265	17.9	-22	51.9					
6	211	43.5	221	44.3	-3	53.1	280	18.3	-22	51.6					
7	226	46.0	236	44.6	51.9	295	18.7	51.4	265	23.8					
8	241	48.4	251	45.0	50.7	310	19.1	51.1	280	25.6					
9	256	50.9	266	45.4	49.5	325	19.5	50.9	295	27.5					
10	271	53.4	281	45.7	48.3	340	19.9	50.6	310	29.3					
11	286	55.8	296	46.1	-3	47.1	355	20.3	-22	50.3					
12	301	58.3	311	46.5	-3	45.9	10	20.7	-22	50.1					
13	317	00.7	326	46.8	44.7	25	21.1	49.8	355	34.9					
14	332	03.2	341	47.2	43.5	40	21.5	49.5	10	36.7					
15	347	05.7	356	47.5	42.3	55	21.9	49.3	25	38.6					
16	2	08.1	11	47.9	41.1	70	22.3	49.0	40	40.4					
17	17	10.6	26	48.3	-3	39.9	85	22.7	-22	48.7					
18	32	13.1	41	48.7	-3	38.7	100	23.1	-22	48.5					
19	47	15.5	56	49.0	37.5	115	23.5	48.2	85	46.0					
20	62	18.0	71	49.4	36.3	130	23.9	48.0	100	47.9					
21	77	20.5	86	49.8	35.1	145	24.3	47.7	115	49.7					
22	92	22.9	101	50.1	33.9	160	24.7	47.4	130	51.6					
23	107	25.4	116	50.5	32.7	175	25.1	47.2	145	53.4					
24	122	27.9	131	50.9	-3	31.5	190	25.5	-22	46.9					
Dif	—		+4		+12		+4		+3						
							+19		+1						
									+25						
									0						

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16:2			Edad: 26 ^d 5 PHE { 4 ^h : 54:0 12 ^h : 54:0 20 ^h : 54:0										
	PMG: 12 ^h 11 ^m 9			SD: 14:7 PMG: 9 ^h 57 ^m R°: 49 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	h	m	h	m	h	m	m
0	177	03.6	-19 27.8	215	56.2	-26 58.4	14	60 N	6 51	7 43	8 33	7 57	24	11 59 80
1	192	03.4	27.2	230	25.6 ¹⁰⁴	57.0	15	58	46	35	21	28	29	12 28 74
2	207	03.2	26.6	244	54.9 ¹⁰³	55.5	16	56	41	27	10	7 05	33	12 51 70
3	222	03.1	26.0	259	24.3 ¹⁰⁴	53.9	15	54	37	21	8 01	6 47	36	13 09 66
4	237	02.9	25.4	273	53.8 ¹⁰⁵	52.2	17	52	33	15	7 53	31	38	24 66
5	252	02.8	-19 24.8	288	23.2 ¹⁰⁴	-26 50.3	19	50	6 29	7 09	7 45	6 18	39	13 38 63
6	267	02.6	-19 24.2	302	52.6 ¹⁰⁴	-26 48.3	20	45	6 21	6 57	7 29	5 50	42	14 05 61
7	282	02.4	23.7	317	22.1 ¹⁰⁵	46.1	22	40	14	47	16	28	44	26 59
8	297	02.3	23.1	331	51.6 ¹⁰⁵	43.9	22	35	07	37	7 04	5 10	45	14 44 57
9	312	02.1	22.5	346	21.0 ¹⁰⁴	41.5	24	30	6 00	29	6 55	4 55	45	15 00 55
10	327	02.0	21.9	0	50.6 ¹⁰⁶	39.0	25	20	5 47	14	37	28	48	26 53
11	342	01.8	-19 21.3	15	20.1 ¹⁰⁵	-26 36.3	27	10 N	5 35	6 00	6 22	4 06	48	15 48 51
12	357	01.6	-19 20.7	29	49.6 ¹⁰⁵	-26 33.6	27	0	5 21	5 46	6 08	3 44	50	16 09 49
13	12	01.5	20.1	44	19.2 ¹⁰⁶	30.7	29	10 S	5 05	32	5 54	23	52	29 48
14	27	01.3	19.5	58	48.8 ¹⁰⁶	27.7	30	20	4 47	5 15	39	3 00	53	16 52 45
15	42	01.2	18.9	73	18.4 ¹⁰⁶	24.5	32	30	23	4 54	21	2 34	54	17 17 43
16	57	01.0	18.3	87	48.1 ¹⁰⁷	21.2	33	35	4 08	42	5 10	18	55	32 42
17	72	00.9	-19 17.7	102	17.7 ¹⁰⁶	-26 17.8	34	40	3 49	4 27	4 58	2 00	56	17 50 40
18	87	00.7	-19 17.1	116	47.4 ¹⁰⁷	-26 14.3	35	45	3 25	4 09	4 44	1 38	58	18 11 37
19	102	00.5	16.5	131	17.1 ¹⁰⁷	10.7	36	50	2 53	3 46	26	1 10	60	37 34
20	117	00.4	15.9	145	46.9 ¹⁰⁸	06.9	38	52	35	35	18	0 57	61	18 50 32
21	132	00.2	15.3	160	16.7 ¹⁰⁸	-26 03.0	39	54	2 14	22	4 09	41	62	19 04 31
22	147	00.1	14.7	174	46.5 ¹⁰⁸	-25 59.0	40	56	1 45	3 07	3 58	0 22	64	21 28
23	161	59.9	14.1	189	16.3 ¹⁰⁸	54.8	42	58	0 56	2 49	46	** ** *	**	19 42 23
24	176	59.8	-19 13.5	203	46.2 ¹⁰⁹	-25 50.6	42	60 S	** ** *	2 26	3 32	** ** *	**	20 08 17

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 15 ^h 47 ^m 5		Mag: -4.6 PMG: 15 ^h 12 ^m		Mag: +1.3 PMG: 11 ^h 18 ^m		Mag: -1.9 PMG: 12 ^h 15 ^m		Mag: +0.8 PMG: 3 ^h 21 ^m	
	hG ♂	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	122	27.9	131 50.9	-3 31.5	190 25.5	-22 46.9	175 57.1	-19 39.8	309 35.2	+5 24.7
1	137	30.3	146 51.3	30.3	205 25.9	46.6	190 59.0	39.7	324 37.7	24.8
2	152	32.8	161 51.6	29.1	220 26.4	46.3	206 00.8	39.5	339 40.3	24.8
3	167	35.2	176 52.0	27.9	235 26.8	46.1	221 02.7	39.4	354 42.8	24.9
4	182	37.7	191 52.4	26.7	250 27.2	45.8	236 04.5	39.3	9 45.4	24.9
5	197	40.2	206 52.8	-3 25.5	265 27.6	-22 45.5	251 06.4	-19 39.1	24 47.9	+5 25.0
6	212	42.6	221 53.2	-3 24.3	280 28.0	-22 45.3	266 08.2	-19 39.0	39 50.5	+5 25.0
7	227	45.1	236 53.6	23.1	295 28.4	45.0	281 10.1	38.9	54 53.0	25.1
8	242	47.6	251 53.9	21.9	310 28.8	44.7	296 11.9	38.7	69 55.6	25.1
9	257	50.0	266 54.3	20.7	325 29.2	44.5	311 13.8	38.6	84 58.1	25.2
10	272	52.5	281 54.7	19.5	340 29.6	44.2	326 15.6	38.5	100 00.7	25.2
11	287	55.0	296 55.1	-3 18.3	355 30.0	-22 43.9	341 17.5	-19 38.3	115 03.3	+5 25.3
12	302	57.4	311 55.5	-3 17.1	10 30.4	-22 43.6	356 19.4	-19 38.2	130 05.8	+5 25.3
13	317	59.9	326 55.9	15.9	25 30.8	43.4	11 21.2	38.0	145 08.4	25.4
14	333	02.4	341 56.3	14.7	40 31.2	43.1	26 23.1	37.9	160 10.9	25.4
15	348	04.8	356 56.7	13.5	55 31.6	42.8	41 24.9	37.8	175 13.5	25.5
16	3	07.3	11 57.0	12.3	70 32.0	42.5	56 26.8	37.6	190 16.0	25.5
17	18	09.7	26 57.4	-3 11.1	85 32.4	-22 42.3	71 28.6	-19 37.5	205 18.6	+5 25.6
18	33	12.2	41 57.8	-3 09.9	100 32.8	-22 42.0	86 30.5	-19 37.4	220 21.1	+5 25.6
19	48	14.7	56 58.2	08.7	115 33.2	41.7	101 32.3	37.2	235 23.7	25.7
20	63	17.1	71 58.6	07.5	130 33.6	41.4	116 34.2	37.1	250 26.2	25.7
21	78	19.6	86 59.0	06.3	145 34.1	41.2	131 36.0	37.0	265 28.8	25.8
22	93	22.1	101 59.4	05.1	160 34.5	40.9	146 37.9	36.8	280 31.3	25.8
23	108	24.5	116 59.8	03.9	175 34.9	40.6	161 39.7	36.7	295 33.9	25.9
24	123	27.0	132 00.2	-3 02.7	190 35.3	-22 40.3	176 41.6	-19 36.5	310 36.4	+5 25.9
Dif	—		+4	+12	+4	+3	+19	+1	+26	0

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16 ^h 2			Edad: 27 ^d 5 PHE { 4 ^h : 54 ^m 1 12 ^h : 54 ^m 1 20 ^h : 54 ^m 2											
	PMG: 12 ^h 12 ^m 1			SD: 14 ^h 7 PMG: 10 ^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	
0	176	59.8	-19 13.5	203	46.2	-25 50.6		60 N	15 54	16 44	17 36	8 21 12		13 19 88	
1	191	59.6	12.9	218	16.1 ¹⁰⁹	46.2 ⁴⁴		58	16 06	52	41	7 57 18		13 42 81	
2	206	59.5	12.3	232	46.0 ¹⁰⁹	41.7 ⁴⁵		56	16	16 59	45	38 23		14 01 77	
3	221	59.3	11.7	247	16.0 ¹¹⁰	37.1 ⁴⁶		54	25	17 05	49	23 25		16 74	
4	236	59.2	11.1	261	46.0 ¹¹⁰	32.3 ⁴⁸		52	34	11	53	7 09 28		30 71	
5	251	59.0	-19 10.5	276	16.0 ¹¹⁰	-25 27.4 ⁴⁹		50	16 41	17 17	17 56	6 57 30		14 41 69	
6	266	58.9	-19 09.9	290	46.1 ¹¹¹	-25 22.4 ⁵⁰		45	16 57	17 29	18 04	6 32 33		15 06 65	
7	281	58.7	09.3	305	16.2 ¹¹¹	17.3 ⁵¹		40	17 10	39	12	6 12 36		25 62	
8	296	58.6	08.7	319	46.3 ¹¹¹	12.1 ⁵²		35	21	48	18	5 55 39		41 59	
9	311	58.4	08.1	334	16.5 ¹¹²	06.8 ⁵³		30	30	17 56	25	40 41		15 55 57	
10	326	58.3	07.5	348	46.7 ¹¹²	-25 01.3 ⁵⁵		20	17 47	18 10	37	5 16 44		16 19 53	
11	341	58.1	-19 06.9	3	17.0 ¹¹³	-24 55.7 ⁵⁶		10 N	18 02	18 24	18 50	4 54 47		16 39 51	
12	356	58.0	-19 06.3	17	47.3 ¹¹³	-24 50.0 ⁵⁷		0	18 16	18 38	19 03	4 34 49		16 58 48	
13	11	57.8	05.7	32	17.6 ¹¹³	44.2 ⁵⁸		10 S	30	18 52	18	4 15 51		17 17 45	
14	26	57.7	05.0	46	48.0 ¹¹⁴	38.3 ⁵⁹		20	18 45	19 09	19 36	3 53 54		17 37 42	
15	41	57.5	04.4	61	18.4 ¹¹⁴	32.2 ⁶¹		30	19 02	29	20 00	28 57		18 00 39	
16	56	57.4	03.8	75	48.9 ¹¹⁵	26.0 ⁶²		35	13	41	15	3 13 59		14 36	
17	71	57.2	-19 03.2	90	19.4 ¹¹⁵	-24 19.8 ⁶²		40	19 24	19 55	20 33	2 56 61		18 30 33	
18	86	57.1	-19 02.6	104	49.9 ¹¹⁵	-24 13.4 ⁶⁴		45	19 38	20 13	20 56	2 36 63		18 48 31	
19	101	56.9	02.0	119	20.5 ¹¹⁶	06.9 ⁶⁵		50	19 55	35	21 28	2 10 67		19 11 26	
20	116	56.8	01.4	133	51.1 ¹¹⁶	-24 00.3 ⁶⁶		52	20 03	46	21 44	1 58 68		22 24	
21	131	56.6	00.8	148	21.8 ¹¹⁷	-23 53.5 ⁶⁸		54	12	20 58	22 04	43 71		35 21	
22	146	56.5	-19 00.1	162	52.5 ¹¹⁷	46.7 ⁶⁸		56	23	21 13	22 31	26 75		19 49 18	
23	161	56.3	-18 59.5	177	23.3 ¹¹⁸	39.7 ⁷⁰		58	34	30	23 12	1 06 78		20 05 15	
24	176	56.2	-18 58.9	191	54.1 ¹¹⁸	-23 32.7 ⁷⁰		60 S	20 48	21 52	** **	0 40 85		20 25 10	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG 15 ^h 43 ^m 6		Mag: -4.6 PMG: 15 ^h 12 ^m			Mag: +1.3 PMG: 11 ^h 17 ^m			Mag: -1.9 PMG: 12 ^h 12 ^m			Mag: +0.8 PMG: 3 ^h 17 ^m			
	hG ♈		hG ♀			hG ♂			hG ♃			hG ♄			
h	°	'	°	°	'	°	'	°	°	'	°	'	°	°	'
0	123	27.0	132 00.2	-3 02.7		190 35.3	-22 40.3		176 41.6	-19 36.5		310 36.4	+5 25.9		
1	138	29.5	147 00.6	01.5		205 35.7	40.0		191 43.4	36.4		325 39.0	26.0		
2	153	31.9	162 01.0	-3 00.3		220 36.1	39.8		206 45.3	36.3		340 41.6	26.0		
3	168	34.4	177 01.4	-2 59.1		235 36.5	39.5		221 47.2	36.1		355 44.1	26.1		
4	183	36.9	192 01.8	57.9		250 36.9	39.2		236 49.0	36.0		10 46.7	26.1		
5	198	39.3	207 02.3	-2 56.7		265 37.3	-22 38.9		251 50.9	-19 35.9		25 49.2	+5 26.2		
6	213	41.8	222 02.7	-2 55.5		280 37.7	-22 38.6		266 52.7	-19 35.7		40 51.8	+5 26.2		
7	228	44.2	237 03.1	54.3		295 38.1	38.4		281 54.6	35.6		55 54.3	26.3		
8	243	46.7	252 03.5	53.1		310 38.5	38.1		296 56.4	35.4		70 56.9	26.3		
9	258	49.2	267 03.9	51.9		325 38.9	37.8		311 58.3	35.3		85 59.4	26.4		
10	273	51.6	282 04.3	50.7		340 39.3	37.5		327 00.1	35.2		101 02.0	26.4		
11	288	54.1	297 04.7	-2 49.5		355 39.7	-22 37.2		342 02.0	-19 35.0		116 04.6	+5 26.5		
12	303	56.6	312 05.1	-2 48.3		10 40.1	-22 37.0		357 03.8	-19 34.9		131 07.1	+5 26.5		
13	318	59.0	327 05.5	47.1		25 40.6	36.7		12 05.7	34.8		146 09.7	26.6		
14	334	01.5	342 06.0	45.9		40 41.0	36.4		27 07.6	34.6		161 12.2	26.6		
15	349	04.0	357 06.4	44.7		55 41.4	36.1		42 09.4	34.5		176 14.8	26.7		
16	4	06.4	12 06.8	43.5		70 41.8	35.8		57 11.3	34.3		191 17.3	26.7		
17	19	08.9	27 07.2	-2 42.3		85 42.2	-22 35.5		72 13.1	-19 34.2		206 19.9	+5 26.8		
18	34	11.3	42 07.6	-2 41.1		100 42.6	-22 35.2		87 15.0	-19 34.1		221 22.4	+5 26.8		
19	49	13.8	57 08.1	39.9		115 43.0	35.0		102 16.8	33.9		236 25.0	26.9		
20	64	16.3	72 08.5	38.7		130 43.4	34.7		117 18.7	33.8		251 27.6	26.9		
21	79	18.7	87 08.9	37.5		145 43.8	34.4		132 20.5	33.7		266 30.1	27.0		
22	94	21.2	102 09.3	36.3		160 44.2	34.1		147 22.4	33.5		281 32.7	27.0		
23	109	23.7	117 09.8	35.1		175 44.6	33.8		162 24.2	33.4		296 35.2	27.1		
24	124	26.1	132 10.2	-2 33.9		190 45.0	-22 33.5		177 26.1	-19 33.2		311 37.8	+5 27.1		
Dif	—		+4	+12		+4	+3		+19	+1		+26	+1		

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'2 PMG: 12 ^h 12 ^m 4			Edad: 28 ^d 5 PHE { SD: 14'8 PMG: 11 ^h 35 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	176	56.2	-18 58.9	191	54.1	-23 32.7	72	60 N	6 48	7 40	8 29	8 33	6	14 47	88
1	191	56.1	58.3	206	25.0 ¹¹⁹	25.5	72	58	43	32	17	15	12	15 03	84
2	206	55.9	57.7	220	55.9 ¹¹⁹	18.2	73	56	39	25	8 07	8 01	15	18	79
3	221	55.8	57.1	235	26.8 ¹¹⁹	10.9	73	54	35	18	7 58	7 48	18	30	76
4	236	55.6	56.4	249	57.8 ¹²⁰	-23 03.4	75	52	31	12	50	37	21	41	73
5	251	55.5	-18 55.8	264	28.9 ¹²¹	-22 55.8	76	50	6 28	7 07	7 43	7 27	23	15 50	72
6	266	55.3	-18 55.2	279	00.0 ¹²¹	-22 48.1	77	45	6 20	6 55	7 27	7 05	28	16 11	66
7	281	55.2	54.6	293	31.1 ¹²¹	40.3	78	40	12	45	14	6 48	31	27	63
8	296	55.0	54.0	308	02.3 ¹²²	32.4	79	35	6 06	36	7 03	34	34	40	60
9	311	54.9	53.3	322	33.5 ¹²²	24.3	81	30	5 59	28	6 54	21	37	16 52	57
10	326	54.8	52.7	337	04.8 ¹²³	16.2	81	20	47	14	37	6 00	40	17 12	53
11	341	54.6	-18 52.1	351	36.2 ¹²⁴	-22 08.0	82	10 N	5 35	6 00	6 23	5 41	43	17 30	49
12	356	54.5	-18 51.5	6	07.5 ¹²³	-21 59.7	83	0	5 22	5 47	6 09	5 23	47	17 46	46
13	11	54.3	50.9	20	39.0 ¹²⁵	51.3	84	10 S	5 06	33	5 55	5 06	49	18 02	42
14	26	54.2	50.2	35	10.5 ¹²⁵	42.7	86	20	4 48	5 16	40	4 47	53	19	39
15	41	54.1	49.6	49	42.0 ¹²⁵	34.1	86	30	25	4 56	22	25	57	39	34
16	56	53.9	49.0	64	13.6 ¹²⁶	25.4	87	35	4 10	44	12	4 12	59	18 50	32
17	71	53.8	-18 48.4	78	45.2 ¹²⁶	-21 16.6	88	40	3 52	4 30	5 01	3 57	62	19 03	29
18	86	53.6	-18 47.7	93	16.9 ¹²⁷	-21 07.7	89	45	3 29	4 12	4 47	3 39	66	19 19	25
19	101	53.5	47.1	107	48.6 ¹²⁷	-20 58.6	91	50	2 57	3 50	30	17	70	37	21
20	116	53.4	46.5	122	20.4 ¹²⁸	49.5	91	52	41	39	22	3 06	73	46	19
21	131	53.2	45.9	136	52.2 ¹²⁸	40.3	92	54	2 21	27	13	2 54	76	19 56	16
22	146	53.1	45.2	151	24.1 ¹²⁹	31.0	93	56	1 54	3 12	4 03	41	78	20 07	13
23	161	52.9	44.6	165	56.0 ¹²⁹	21.6	94	58	1 13	2 55	3 51	24	83	20	9
24	176	52.8	-18 44.0	180	28.0 ¹³⁰	-20 12.2	94	60 S	** **	2 34	3 37	2 05	88	20 35	5
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 15 ^h 39 ^m 7		Mag: -4.7 PMG: 15 ^h 11 ^m			Mag: +1.3 PMG: 11 ^h 17 ^m			Mag: -1.9 PMG: 12 ^h 09 ^m			Mag: +0.8 PMG: 3 ^h 13 ^m			
	hG ♂		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	'	°	°	'	°	°	'	°	'
0	124	26.1	132	10.2	-2 33.9	190	45.0	-22 33.5	177	26.1	-19 33.2	311	37.8	+5 27.1	
1	139	28.6	147	10.6	32.7	205	45.4	33.2	192	27.9	33.1	326	40.3	27.2	
2	154	31.1	162	11.0	31.5	220	45.9	32.9	207	29.8	33.0	341	42.9	27.2	
3	169	33.5	177	11.5	30.3	235	46.3	32.6	222	31.6	32.8	356	45.5	27.3	
4	184	36.0	192	11.9	29.1	250	46.7	32.4	237	33.5	32.7	11	48.0	27.3	
5	199	38.5	207	12.3	-2 27.9	265	47.1	-22 32.1	252	35.4	-19 32.5	26	50.6	+5 27.4	
6	214	40.9	222	12.8	-2 26.7	280	47.5	-22 31.8	267	37.2	-19 32.4	41	53.1	+5 27.4	
7	229	43.4	237	13.2	25.5	295	47.9	31.5	282	39.1	32.3	56	55.7	27.5	
8	244	45.8	252	13.6	24.3	310	48.3	31.2	297	40.9	32.1	71	58.3	27.5	
9	259	48.3	267	14.1	23.1	325	48.7	30.9	312	42.8	32.0	87	00.8	27.6	
10	274	50.8	282	14.5	21.9	340	49.1	30.6	327	44.6	31.9	102	03.4	27.6	
11	289	53.2	297	15.0	-2 20.7	355	49.5	-22 30.3	342	46.5	-19 31.7	117	05.9	+5 27.7	
12	304	55.7	312	15.4	-2 19.5	10	49.9	-22 30.0	357	48.3	-19 31.6	132	08.5	+5 27.7	
13	319	58.2	327	15.8	18.3	25	50.3	29.7	12	50.2	31.4	147	11.1	27.8	
14	335	00.6	342	16.3	17.1	40	50.8	29.4	27	52.0	31.3	162	13.6	27.8	
15	350	03.1	357	16.7	15.9	55	51.2	29.1	42	53.9	31.2	177	16.2	27.9	
16	5	05.6	12	17.2	14.7	70	51.6	28.8	57	55.7	31.0	192	18.7	27.9	
17	20	08.0	27	17.6	-2 13.5	85	52.0	-22 28.5	72	57.6	-19 30.9	207	21.3	+5 28.0	
18	35	10.5	42	18.1	-2 12.3	100	52.4	-22 28.2	87	59.4	-19 30.7	222	23.9	+5 28.0	
19	50	13.0	57	18.5	11.1	115	52.8	27.9	103	01.3	30.6	237	26.4	28.1	
20	65	15.4	72	19.0	10.0	130	53.2	27.6	118	03.2	30.5	252	29.0	28.2	
21	80	17.9	87	19.4	08.8	145	53.6	27.3	133	05.0	30.3	267	31.5	28.2	
22	95	20.3	102	19.9	07.6	160	54.0	27.1	148	06.9	30.2	282	34.1	28.3	
23	110	22.8	117	20.3	06.4	175	54.4	26.8	163	08.7	30.0	297	36.7	28.3	
24	125	25.3	132	20.8	-2 05.2	190	54.9	-22 26.5	178	10.6	-19 29.9	312	39.2	+5 28.4	
Dif	—		+4	+12		+4	+3		+19	+1		+26		+	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16/2 PMG: 12 ^h 12 ^m 6			Edad: 29 ^d 5 PHE { SD: 14/8 PMG: 12 ^h 21 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	m	h m m	m
0	176	52.8	-18 44.0	180	28.0	-20 12.2		60 N	15 59	16 48	17 40	8 39	4	16 15	88
1	191	52.7	43.3	195	00.0 ¹³⁰	-20 02.6 ⁹⁶		58	16 10	16 56	44	27	7	27	83
2	206	52.5	42.7	209	32.1 ¹³¹	-19 52.9 ⁹⁷		56	20	17 03	48	16	11	37	80
3	221	52.4	42.1	224	04.2 ¹³¹	43.2 ⁹⁷		54	29	09	52	8 06	14	46	77
4	236	52.3	41.4	238	36.3 ¹³¹	33.3 ⁹⁹		52	37	15	56	7 58	16	16 54	74
5	251	52.1	-18 40.8	253	08.6 ¹³³	-19 23.4 ⁹⁹		50	16 44	17 20	17 59	7 50	18	17 02	71
6	266	52.0	-18 40.2	267	40.8 ¹³²	-19 13.4 ¹⁰⁰		45	16 59	17 31	18 07	7 33	23	17 17	67
7	281	51.9	39.5	282	13.1 ¹³³	-19 03.3 ¹⁰¹		40	17 12	41	14	19	27	30	62
8	296	51.7	38.9	296	45.5 ¹³⁴	-18 53.1 ¹⁰²		35	23	50	20	7 08	30	40	60
9	311	51.6	38.3	311	17.9 ¹³⁴	42.8 ¹⁰³		30	32	17 57	26	6 58	32	17 49	57
10	326	51.5	37.6	325	50.4 ¹³⁵	32.4 ¹⁰⁴		20	17 48	18 12	38	40	37	18 05	52
11	341	51.3	-18 37.0	340	22.9 ¹³⁵	-18 22.0 ¹⁰⁴		10 N	18 03	18 25	18 50	6 24	42	18 19	48
12	356	51.2	-18 36.4	354	55.4 ¹³⁵	-18 11.5 ¹⁰⁵		0	18 16	18 38	19 03	6 10	45	18 32	44
13	11	51.1	35.7	9	28.0 ¹³⁶	-18 00.8 ¹⁰⁷		10 S	30	18 52	18	5 55	49	44	41
14	26	50.9	35.1	24	00.7 ¹³⁷	-17 50.2 ¹⁰⁶		20	18 44	19 08	36	40	52	18 58	36
15	41	50.8	34.4	38	33.3 ¹³⁶	39.4 ¹⁰⁸		30	19 01	27	19 59	22	57	19 13	32
16	56	50.7	33.8	53	06.1 ¹³⁸	28.5 ¹⁰⁹		35	11	39	20 13	5 11	60	22	29
17	71	50.5	-18 33.2	67	38.9 ¹³⁸	-17 17.6 ¹⁰⁹		40	19 23	19 53	20 31	4 59	63	19 32	26
18	86	50.4	-18 32.5	82	11.7 ¹³⁸	-17 06.6 ¹¹⁰		45	19 36	20 10	20 53	4 45	67	19 44	22
19	101	50.3	31.9	96	44.5 ¹³⁸	-16 55.5 ¹¹¹		50	19 53	32	21 24	27	72	19 58	17
20	116	50.1	31.2	111	17.5 ¹⁴⁰	44.3 ¹¹²		52	20 01	42	39	19	74	20 05	15
21	131	50.0	30.6	125	50.4 ¹³⁹	33.1 ¹¹²		54	09	20 54	21 59	4 10	76	12	12
22	146	49.9	30.0	140	23.4 ¹⁴⁰	21.8 ¹¹³		56	19	21 08	22 23	3 59	80	20	10
23	161	49.8	29.3	154	56.5 ¹⁴¹	-16 10.4 ¹¹⁴		58	30	25	22 59	47	84	29	7
24	176	49.6	-18 28.7	169	29.5 ¹⁴⁰	-15 58.9 ¹¹⁵		60 S	20 43	21 45	** **	3 33	88	20 40	2
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 15 ^h 35 ^m 8		Mag: -4.7 PMG: 15 ^h 10 ^m			Mag: +1.3 PMG: 11 ^h 16 ^m			Mag: -1.9 PMG: 12 ^h 06 ^m			Mag: +0.8 PMG: 3 ^h 09 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃		Dec		hG ♄		Dec
h	°	'	°	°	'	°	'	°	°	'	°	'	°	'	°
0	125	25.3	132	20.8	-2 05.2	190	54.9	-22 26.5	178	10.6	-19 29.9		312	39.2	+5 28.4
1	140	27.7	147	21.2	04.0	205	55.3	26.2	193	12.4	29.8		327	41.8	28.4
2	155	30.2	162	21.7	02.8	220	55.7	25.9	208	14.3	29.6		342	44.3	28.5
3	170	32.7	177	22.1	01.6	235	56.1	25.6	223	16.1	29.5		357	46.9	28.5
4	185	35.1	192	22.6	-2 00.4	250	56.5	25.3	238	18.0	29.4		12	49.5	28.6
5	200	37.6	207	23.1	-1 59.2	265	56.9	-22 24.9	253	19.8	-19 29.2		27	52.0	+5 28.6
6	215	40.1	222	23.5	-1 58.0	280	57.3	-22 24.6	268	21.7	-19 29.1		42	54.6	+5 28.7
7	230	42.5	237	24.0	56.8	295	57.7	24.3	283	23.5	28.9		57	57.2	28.7
8	245	45.0	252	24.5	55.6	310	58.1	24.0	298	25.4	28.8		72	59.7	28.8
9	260	47.5	267	24.9	54.4	325	58.5	23.7	313	27.3	28.7		88	02.3	28.8
10	275	49.9	282	25.4	53.2	340	59.0	23.4	328	29.1	28.5		103	04.8	28.9
11	290	52.4	297	25.8	-1 52.0	355	59.4	-22 23.1	343	31.0	-19 28.4		118	07.4	+5 28.9
12	305	54.8	312	26.3	-1 50.8	10	59.8	-22 22.8	358	32.8	-19 28.2		133	10.0	+5 29.0
13	320	57.3	327	26.8	49.6	26	00.2	22.5	13	34.7	28.1		148	12.5	29.0
14	335	59.8	342	27.3	48.4	41	00.6	22.2	28	36.5	28.0		163	15.1	29.1
15	351	02.2	357	27.7	47.3	56	01.0	21.9	43	38.4	27.8		178	17.7	29.2
16	6	04.7	12	28.2	46.1	71	01.4	21.6	58	40.2	27.7		193	20.2	29.2
17	21	07.2	27	28.7	-1 44.9	86	01.8	-22 21.3	73	42.1	-19 27.5		208	22.8	+5 29.3
18	36	09.6	42	29.1	-1 43.7	101	02.2	-22 21.0	88	43.9	-19 27.4		223	25.4	+5 29.3
19	51	12.1	57	29.6	42.5	116	02.7	20.7	103	45.8	27.3		238	27.9	29.4
20	66	14.6	72	30.1	41.3	131	03.1	20.4	118	47.7	27.1		253	30.5	29.4
21	81	17.0	87	30.6	40.1	146	03.5	20.1	133	49.5	27.0		268	33.0	29.5
22	96	19.5	102	31.1	38.9	161	03.9	19.8	148	51.4	26.8		283	35.6	29.5
23	111	21.9	117	31.5	37.7	176	04.3	19.5	163	53.2	26.7		298	38.2	29.6
24	126	24.4	132	32.0	-1 36.5	191	04.7	-22 19.1	178	55.1	-19 26.6		313	40.7	+5 29.6
Dif	—		+5		+12	+4		+3	+19		+1	+26		+1	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'2 PMG: 12 ^h 12 ^m 8			Edad: 0 ^d 7 PHE { SD: 14'9 PMG: 13 ^h 05 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	176	49.6	-18 28.7	169	29.5	-15 58.9	115	60 N	6 45	7 36	8 25		8 43	2	17 43 86
1	191	49.5	28.0	184	02.7 ¹⁴²	47.4	115	58	40	28	14		34	6	50 83
2	206	49.4	27.4	198	35.8 ¹⁴¹	35.8	116	56	36	22	8 04		27	8	17 57 79
3	221	49.2	26.7	213	09.0 ¹⁴²	24.1	117	54	32	16	7 55		20	11	18 03 76
4	236	49.1	26.1	227	42.3 ¹⁴³	12.4	117	52	29	10	47		14	14	08 74
5	251	49.0	-18 25.4	242	15.6 ¹⁴³	-15 00.6	118	50	6 26	7 05	7 40		8 08	16	18 13 72
6	266	48.9	-18 24.8	256	48.9 ¹⁴³	-14 48.7 ¹¹⁹	119	45	6 18	6 54	7 25		7 56	21	18 24 66
7	281	48.7	24.1	271	22.3 ¹⁴⁴	36.8 ¹¹⁹	119	40	11	44	13		46	25	32 63
8	296	48.6	23.5	285	55.7 ¹⁴⁴	24.8 ¹²⁰	120	35	6 05	35	7 02		38	27	40 59
9	311	48.5	22.8	300	29.1 ¹⁴⁴	12.7 ¹²¹	121	30	5 59	28	6 53		30	30	46 56
10	326	48.4	22.2	315	02.6 ¹⁴⁵	-14 00.5 ¹²²	122	20	47	14	37		17	35	18 57 51
11	341	48.2	-18 21.5	329	36.1 ¹⁴⁵	-13 48.3 ¹²²	122	10 N	5 35	6 01	6 23		7 06	39	19 07 47
12	356	48.1	-18 20.9	344	09.7 ¹⁴⁶	-13 36.1 ¹²²	122	0	5 22	5 47	6 09		6 55	43	19 16 42
13	11	48.0	20.2	358	43.2 ¹⁴⁵	23.7 ¹²⁴	124	10 S	5 07	33	5 56		44	47	25 38
14	26	47.9	19.6	13	16.9 ¹⁴⁷	-13 11.3 ¹²⁴	124	20	4 50	5 18	41		32	52	34 34
15	41	47.7	18.9	27	50.5 ¹⁴⁶	-12 58.9 ¹²⁴	124	30	27	4 58	24		19	56	45 29
16	56	47.6	18.3	42	24.2 ¹⁴⁷	46.4 ¹²⁵	125	35	4 12	46	14		11	59	51 26
17	71	47.5	-18 17.6	56	57.9 ¹⁴⁷	-12 33.8 ¹²⁶	126	40	3 55	4 33	5 03		6 02	63	19 58 23
18	86	47.4	-18 17.0	71	31.7 ¹⁴⁸	-12 21.2 ¹²⁶	126	45	3 33	4 16	4 50		5 52	66	20 06 19
19	101	47.2	16.3	86	05.5 ¹⁴⁸	-12 08.5 ¹²⁷	127	50	3 02	3 54	33		39	71	15 15
20	116	47.1	15.7	100	39.3 ¹⁴⁸	-11 55.8 ¹²⁷	127	52	2 47	44	25		33	74	20 12
21	131	47.0	15.0	115	13.1 ¹⁴⁸	43.0 ¹²⁸	128	54	27	32	17		26	77	24 11
22	146	46.9	14.4	129	47.0 ¹⁴⁹	30.1 ¹²⁹	129	56	2 03	18	4 07		19	79	30 8
23	161	46.8	13.7	144	20.9 ¹⁴⁹	17.2 ¹²⁹	129	58	1 27	3 01	3 56		11	82	36 5
24	176	46.6	-18 13.0	158	54.8 ¹⁴⁹	-11 04.3 ¹²⁹	129	60 S	** **	2 41	3 43		5 01	87	20 42 2
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 15 ^h 31 ^m 8			Mag: -4.7 PMG: 15 ^h 09 ^m			Mag: +1.3 PMG: 11 ^h 15 ^m			Mag: -1.9 PMG: 12 ^h 03 ^m			Mag: +0.8 PMG: 3 ^h 05 ^m		
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	126	24.4	132 32.0	-1 36.5	191 04.7	-22 19.1	178 55.1	-19 26.6	313 40.7	+5 29.6			313 40.7	+5 29.6	
1	141	26.9	147 32.5	35.3	206 05.1	18.8	193 56.9	26.4	328 43.3	29.7			328 43.3	29.7	
2	156	29.3	162 33.0	34.1	221 05.5	18.5	208 58.8	26.3	343 45.9	29.7			343 45.9	29.7	
3	171	31.8	177 33.5	32.9	236 06.0	18.2	224 00.6	26.1	358 48.4	29.8			358 48.4	29.8	
4	186	34.3	192 34.0	31.8	251 06.4	17.9	239 02.5	26.0	13 51.0	29.9			13 51.0	29.9	
5	201	36.7	207 34.4	-1 30.6	266 06.8	-22 17.6	254 04.3	-19 25.9	28 53.6	+5 29.9			28 53.6	+5 29.9	
6	216	39.2	222 34.9	-1 29.4	281 07.2	-22 17.3	269 06.2	-19 25.7	43 56.1	+5 30.0			43 56.1	+5 30.0	
7	231	41.7	237 35.4	28.2	296 07.6	17.0	284 08.0	25.6	58 58.7	30.0			58 58.7	30.0	
8	246	44.1	252 35.9	27.0	311 08.0	16.6	299 09.9	25.5	74 01.3	30.1			74 01.3	30.1	
9	261	46.6	267 36.4	25.8	326 08.4	16.3	314 11.8	25.3	89 03.8	30.1			89 03.8	30.1	
10	276	49.1	282 36.9	24.6	341 08.8	16.0	329 13.6	25.2	104 06.4	30.2			104 06.4	30.2	
11	291	51.5	297 37.4	-1 23.4	356 09.3	-22 15.7	344 15.5	-19 25.0	119 09.0	+5 30.2			119 09.0	+5 30.2	
12	306	54.0	312 37.9	-1 22.2	11 09.7	-22 15.4	359 17.3	-19 24.9	134 11.5	+5 30.3			134 11.5	+5 30.3	
13	321	56.4	327 38.4	21.0	26 10.1	15.1	14 19.2	24.8	149 14.1	30.3			149 14.1	30.3	
14	336	58.9	342 38.9	19.9	41 10.5	14.8	29 21.0	24.6	164 16.7	30.4			164 16.7	30.4	
15	352	01.4	357 39.4	18.7	56 10.9	14.4	44 22.9	24.5	179 19.2	30.5			179 19.2	30.5	
16	7 03.8	12 39.9	17.5	71 11.3	14.1	14.1	59 24.7	24.3	194 21.8	30.5			194 21.8	30.5	
17	22 06.3	27 40.4	-1 16.3	86 11.7	-22 13.8	74 26.6	-19 24.2	209 24.4	+5 30.6				209 24.4	+5 30.6	
18	37 08.8	42 40.9	-1 15.1	101 12.1	-22 13.5	89 28.4	-19 24.1	224 26.9	+5 30.6				224 26.9	+5 30.6	
19	52 11.2	57 41.4	13.9	116 12.6	13.2	104 30.3	23.9	239 29.5	30.7				239 29.5	30.7	
20	67 13.7	72 41.9	12.7	131 13.0	12.9	119 32.2	23.8	254 32.1	30.7				254 32.1	30.7	
21	82 16.2	87 42.4	11.5	146 13.4	12.5	134 34.0	23.6	269 34.6	30.8				269 34.6	30.8	
22	97 18.6	102 42.9	10.3	161 13.8	12.2	149 35.9	23.5	284 37.2	30.8				284 37.2	30.8	
23	112 21.1	117 43.4	9.2	176 14.2	11.9	164 37.7	23.4	299 39.8	30.9				299 39.8	30.9	
24	127 23.6	132 43.9	-1 08.0	191 14.6	-22 11.6	179 39.6	-19 23.2	314 42.4	+5 30.9				314 42.4	+5 30.9	
Dif	—		+5 +12		+4 +3		+19 +1		+26 +1						

UT	SOL				● LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16/2 PMG: 12 ^h 13 ^m 0				Edad: 1 ^d 7 PHE { 4 ^h : 55/2 12 ^h : 55/3 20 ^h : 55/5 R°: 42 ^m													
	hG ☉		Dec		hG ☾		Dif				Civil		Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m		
0	176	46.6	-18	13.0	158	54.8	-11	04.3	60 N	16 04	16 53	17 44	8 45 2	19 09 86				
1	191	46.5		12.4	173	28.8 ¹⁵⁰	-10	51.3 ¹³⁰	58	15	17 00	48	40 5	13 82				
2	206	46.4		11.7	188	02.7 ¹⁴⁹		38.2 ¹³¹	56	25	07	52	35 8	16 79				
3	221	46.3		11.1	202	36.7 ¹⁵⁰		25.1 ¹³¹	54	33	13	56	31 10	19 77				
4	236	46.2		10.4	217	10.8 ¹⁵¹	-10	11.9 ¹³²	52	41	18	17 59	28 12	22 74				
5	251	46.0	-18	09.7	231	44.8 ¹⁵⁰	-9	58.7 ¹³²	50	16 48	17 23	18 02	8 24 14	19 25 72				
6	266	45.9	-18	09.1	246	18.9 ¹⁵¹	-9	45.5 ¹³²	45	17 02	17 34	18 09	8 17 19	19 30 67				
7	281	45.8		08.4	260	53.0 ¹⁵¹		32.2 ¹³³	40	14	43	16	11 22	35 63				
8	296	45.7		07.8	275	27.1 ¹⁵¹		18.8 ¹³⁴	35	25	52	22	05 26	39 59				
9	311	45.6		07.1	290	01.2 ¹⁵¹	-9	05.5 ¹³³	30	34	17 59	28	8 00 29	42 57				
10	326	45.5		06.4	304	35.4 ¹⁵²	-8	52.0 ¹³⁵	20	17 50	18 13	39	7 52 34	48 51				
11	341	45.3	-18	05.8	319	09.6 ¹⁵²	-8	38.6 ¹³⁴	10 N	18 03	18 25	18 51	7 45 38	19 54 46				
12	356	45.2	-18	05.1	333	43.8 ¹⁵²	-8	25.0 ¹³⁶	0	18 17	18 38	19 04	7 38 42	19 58 43				
13	11	45.1		04.4	348	18.0 ¹⁵²	-8	11.5 ¹³⁵	10 S	30	18 52	18	31 47	20 03 38				
14	26	45.0		03.8	2	52.2 ¹⁵²	-7	57.9 ¹³⁶	20	18 44	19 07	35	24 51	08 34				
15	41	44.9		03.1	17	26.5 ¹⁵³		44.2 ¹³⁷	30	19 00	26	19 57	15 57	14 28				
16	56	44.8		02.4	32	00.7 ¹⁵²		30.6 ¹³⁶	35	10	38	20 12	10 60	17 26				
17	71	44.7	-18	01.8	46	35.0 ¹⁵³	-7	16.8 ¹³⁸	40	19 21	19 51	20 29	7 05 62	20 21 22				
18	86	44.5	-18	01.1	61	09.3 ¹⁵³	-7	03.1 ¹³⁷	45	19 34	20 08	20 50	6 58 67	20 25 18				
19	101	44.4	-18	00.4	75	43.6 ¹⁵³	-6	49.3 ¹³⁸	50	50	29	21 20	50 72	30 14				
20	116	44.3	-17	59.8	90	17.9 ¹⁵³		35.5 ¹³⁸	52	19 58	39	35	47 74	32 12				
21	131	44.2		59.1	104	52.2 ¹⁵³		21.6 ¹³⁹	54	20 06	20 50	21 53	43 76	35 9				
22	146	44.1		58.4	119	26.5 ¹⁵³	-6	07.7 ¹³⁹	56	15	21 04	22 16	38 79	38 7				
23	161	44.0		57.8	134	00.8 ¹⁵³	-5	53.8 ¹³⁹	58	26	20	22 48	33 83	41 4				
24	176	43.9	-17	57.1	148	35.2 ¹⁵⁴	-5	39.8 ¹⁴⁰	60 S	20 39	21 39	** **	6 28 86	20 44 1				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 15 ^h 27 ^m 9		Mag: -4.7 PMG: 15 ^h 09 ^m				Mag: +1.3 PMG: 11 ^h 15 ^m				Mag: -1.9 PMG: 12 ^h 00 ^m				Mag: +0.8 PMG: 3 ^h 01 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	127	23.6	132	43.9	-1	08.0	191	14.6	-22	11.6	179	39.6	-19	23.2	314	42.4	+5	30.9
1	142	26.0	147	44.4		06.8	206	15.0		11.3	194	41.4		23.1	329	44.9		31.0
2	157	28.5	162	44.9		05.6	221	15.5		10.9	209	43.3		22.9	344	47.5		31.1
3	172	30.9	177	45.5		04.4	236	15.9		10.6	224	45.1		22.8	359	50.1		31.1
4	187	33.4	192	46.0		03.2	251	16.3		10.3	239	47.0		22.6	14	52.6		31.2
5	202	35.9	207	46.5	-1	02.0	266	16.7	-22	10.0	254	48.9	-19	22.5	29	55.2	+5	31.2
6	217	38.3	222	47.0	-1	00.8	281	17.1	-22	09.7	269	50.7	-19	22.4	44	57.8	+5	31.3
7	232	40.8	237	47.5	-0	59.7	296	17.5		09.3	284	52.6		22.2	60	00.3		31.3
8	247	43.3	252	48.0		58.5	311	18.0		09.0	299	54.4		22.1	75	02.9		31.4
9	262	45.7	267	48.6		57.3	326	18.4		08.7	314	56.3		21.9	90	05.5		31.4
10	277	48.2	282	49.1		56.1	341	18.8		08.4	329	58.1		21.8	105	08.0		31.5
11	292	50.7	297	49.6	-0	54.9	356	19.2	-22	08.0	345	00.0	-19	21.7	120	10.6	+5	31.6
12	307	53.1	312	50.1	-0	53.7	11	19.6	-22	07.7	0	01.8	-19	21.5	135	13.2	+5	31.6
13	322	55.6	327	50.7		52.5	26	20.0		07.4	15	03.7		21.4	150	15.8		31.7
14	337	58.0	342	51.2		51.4	41	20.4		07.1	30	05.5		21.2	165	18.3		31.7
15	353	00.5	357	51.7		50.2	56	20.9		06.7	45	07.4		21.1	180	20.9		31.8
16	8	03.0	12	52.2		49.0	71	21.3		06.4	60	09.3		21.0	195	23.5		31.8
17	23	05.4	27	52.8	-0	47.8	86	21.7	-22	06.1	75	11.1	-19	20.8	210	26.0	+5	31.9
18	38	07.9	42	53.3	-0	46.6	101	22.1	-22	05.8	90	13.0	-19	20.7	225	28.6	+5	32.0
19	53	10.4	57	53.8		45.4	116	22.5		05.4	105	14.8		20.5	240	31.2		32.0
20	68	12.8	72	54.4		44.3	131	22.9		05.1	120	16.7		20.4	255	33.8		32.1
21	83	15.3	87	54.9		43.1	146	23.4		04.8	135	18.5		20.3	270	36.3		32.1
22	98	17.8	102	55.4		41.9	161	23.8		04.4	150	20.4		20.1	285	38.9		32.2
23	113	20.2	117	56.0		40.7	176	24.2		04.1	165	22.2		20.0	300	41.5		32.2
24	128	22.7	132	56.5	-0	39.5	191	24.6	-22	03.8	180	24.1	-19	19.8	315	44.0	+5	32.3
Dif	—		+5		+12		+4		+3		+19		+1		+26		+1	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 12 ^h 13 ^m 2			Edad: 2 ^d 7 PHE { SD: 15:1 PMG: 14 ^h 30 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora
h	°	'	°	°	'	°	°	h m	h m	h m	h m	m	h m	m
0	176	43.9	-17 57.1	148	35.2	-5 39.8	60 N	6 41	7 32	8 20	8 47	1	20 35	87
1	191	43.8		163	09.5 ¹⁵³	25.9 ¹³⁹	58	37	25	10	45	4	35	84
2	206	43.6	55.7	177	43.8 ¹⁵³	-5 11.8 ¹⁴¹	56	33	19	8 00	43	7	35	81
3	221	43.5	55.1	192	18.2 ¹⁵⁴	-4 57.8 ¹⁴⁰	54	30	13	7 52	41	10	36	78
4	236	43.4	54.4	206	52.5 ¹⁵³	43.7 ¹⁴¹	52	26	07	44	40	12	36	75
5	251	43.3	-17 53.7	221	26.9 ¹⁵⁴	-4 29.6 ¹⁴¹	50	6 23	7 02	7 38	8 38	14	20 37	72
6	266	43.2	-17 53.0	236	01.3 ¹⁵⁴	-4 15.5 ¹⁴¹	45	6 16	6 52	7 23	8 36	18	20 37	68
7	281	43.1	52.4	250	35.6 ¹⁵³	-4 01.3 ¹⁴²	40	10	42	11	33	22	38	64
8	296	43.0	51.7	265	10.0 ¹⁵⁴	-3 47.1 ¹⁴²	35	6 04	34	7 01	31	26	38	61
9	311	42.9	51.0	279	44.3 ¹⁵³	32.9 ¹⁴²	30	5 58	27	6 52	29	29	39	57
10	326	42.8	50.3	294	18.7 ¹⁵⁴	18.7 ¹⁴²	20	47	13	36	26	34	39	52
11	341	42.7	-17 49.7	308	53.0 ¹⁵³	-3 04.5 ¹⁴²	10 N	5 35	6 01	6 23	8 23	38	20 40	47
12	356	42.6	-17 49.0	323	27.4 ¹⁵⁴	-2 50.2 ¹⁴³	0	5 23	5 48	6 10	8 20	43	20 41	43
13	11	42.4	48.3	338	01.7 ¹⁵³	35.9 ¹⁴³	10 S	5 08	34	5 57	18	46	41	39
14	26	42.3	47.6	352	36.0 ¹⁵³	21.6 ¹⁴³	20	4 51	19	42	15	51	42	34
15	41	42.2	46.9	7	10.3 ¹⁵³	-2 07.3 ¹⁴³	30	29	5 00	26	12	56	42	29
16	56	42.1	46.3	21	44.6 ¹⁵³	-1 52.9 ¹⁴⁴	35	4 15	4 49	16	10	59	43	25
17	71	42.0	-17 45.6	36	18.9 ¹⁵³	-1 38.6 ¹⁴³	40	3 58	4 35	5 05	8 07	64	20 43	23
18	86	41.9	-17 44.9	50	53.2 ¹⁵³	-1 24.2 ¹⁴⁴	45	3 36	4 19	4 52	8 05	67	20 43	19
19	101	41.8	44.2	65	27.5 ¹⁵³	-1 09.8 ¹⁴⁴	50	3 07	3 58	37	02	72	44	14
20	116	41.7	43.5	80	01.8 ¹⁵³	-0 55.4 ¹⁴⁴	52	2 52	48	29	8 01	74	44	12
21	131	41.6	42.9	94	36.0 ¹⁵²	41.0 ¹⁴⁴	54	34	36	21	7 59	77	44	10
22	146	41.5	42.2	109	10.3 ¹⁵³	26.5 ¹⁴⁵	56	2 11	23	11	57	80	45	7
23	161	41.4	41.5	123	44.5 ¹⁵²	-0 12.1 ¹⁴⁴	58	1 39	3 07	4 01	56	82	45	4
24	176	41.3	-17 40.8	138	18.7 ¹⁵²	+0 02.4 ¹⁴⁵	60 S	** **	2 48	3 48	7 54	86	20 45	2

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 15 ^h 24 ^m 0		Mag: -4.7 PMG: 15 ^h 08 ^m		Mag: +1.3 PMG: 11 ^h 14 ^m		Mag: -1.9 PMG: 11 ^h 57 ^m		Mag: +0.8 PMG: 2 ^h 57 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	128	22.7	132	56.5	-0 39.5	191	24.6	-22 03.8	180	24.1	-19 19.8	315	44.0	+5 32.3
1	143	25.2	147	57.0	38.3	206	25.0	03.4	195	26.0	19.7	330	46.6	32.3
2	158	27.6	162	57.6	37.2	221	25.4	03.1	210	27.8	19.6	345	49.2	32.4
3	173	30.1	177	58.1	36.0	236	25.9	02.8	225	29.7	19.4	0	51.8	32.5
4	188	32.5	192	58.7	34.8	251	26.3	02.5	240	31.5	19.3	15	54.3	32.5
5	203	35.0	207	59.2	-0 33.6	266	26.7	-22 02.1	255	33.4	-19 19.1	30	56.9	+5 32.6
6	218	37.5	222	59.8	-0 32.4	281	27.1	-22 01.8	270	35.2	-19 19.0	45	59.5	+5 32.6
7	233	39.9	238	00.3	31.2	296	27.5	01.5	285	37.1	18.8	61	02.1	32.7
8	248	42.4	253	00.9	30.1	311	27.9	01.1	300	38.9	18.7	76	04.6	32.7
9	263	44.9	268	01.4	28.9	326	28.4	00.8	315	40.8	18.6	91	07.2	32.8
10	278	47.3	283	02.0	27.7	341	28.8	00.5	330	42.7	18.4	106	09.8	32.9
11	293	49.8	298	02.5	-0 26.5	356	29.2	-22 00.1	345	44.5	-19 18.3	121	12.3	+5 32.9
12	308	52.3	313	03.1	-0 25.3	11	29.6	-21 59.8	0	46.4	-19 18.1	136	14.9	+5 33.0
13	323	54.7	328	03.6	24.2	26	30.0	59.4	15	48.2	18.0	151	17.5	33.0
14	338	57.2	343	04.2	23.0	41	30.5	59.1	30	50.1	17.9	166	20.1	33.1
15	353	59.7	358	04.7	21.8	56	30.9	58.8	45	51.9	17.7	181	22.6	33.1
16	9	02.1	13	05.3	20.6	71	31.3	58.4	60	53.8	17.6	196	25.2	33.2
17	24	04.6	28	05.8	-0 19.4	86	31.7	-21 58.1	75	55.6	-19 17.4	211	27.8	+5 33.3
18	39	07.0	43	06.4	-0 18.3	101	32.1	-21 57.8	90	57.5	-19 17.3	226	30.4	+5 33.3
19	54	09.5	58	07.0	17.1	116	32.5	57.4	105	59.4	17.2	241	32.9	33.4
20	69	12.0	73	07.5	15.9	131	33.0	57.1	121	01.2	17.0	256	35.5	33.4
21	84	14.4	88	08.1	14.7	146	33.4	56.7	136	03.1	16.9	271	38.1	33.5
22	99	16.9	103	08.7	13.6	161	33.8	56.4	151	04.9	16.7	286	40.7	33.6
23	114	19.4	118	09.2	12.4	176	34.2	56.1	166	06.8	16.6	301	43.2	33.6
24	129	21.8	133	09.8	-0 11.2	191	34.6	-21 55.7	181	08.6	-19 16.4	316	45.8	+5 33.7
Dif	—		+6 +12		+4 +3		+19 +1		+26 +1					

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16:2			Edad: 3 ^d 7	PHE { 4 ^h : 56:1 12 ^h : 56:3 20 ^h : 56:5 R°: 44 ^m										
	PMG: 12 ^h 13 ^m 3					SD: 15:3			PMG: 15 ^h 13 ^m						
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m	h m m		h m m	
0	176	41.3	-17	40.8	138	18.7	+0 02.4	60 N	16 09	16 57	17 48	8 48 1	22 02 90		
1	191	41.2		40.1	152	52.8 ¹⁵¹	16.8 ¹⁴⁴	58	20	17 04	52	49 5	21 59 86		
2	206	41.1		39.4	167	27.0 ¹⁵²	31.3 ¹⁴⁵	56	29	10	56	50 8	56 83		
3	221	41.0		38.7	182	01.1 ¹⁵¹	+0 45.8 ¹⁴⁵	54	37	16	17 59	51 10	54 80		
4	236	40.9		38.1	196	35.2 ¹⁵¹	+1 00.3 ¹⁴⁵	52	44	21	18 02	52 12	51 78		
5	251	40.8	-17	37.4	211	09.3 ¹⁵¹	+1 14.8 ¹⁴⁵	50	16 51	17 26	18 05	8 52 15	21 49 76		
6	266	40.7	-17	36.7	225	43.4 ¹⁵¹	+1 29.3 ¹⁴⁵	45	17 05	17 37	18 12	8 54 19	21 45 70		
7	281	40.6		36.0	240	17.4 ¹⁵⁰	43.8 ¹⁴⁵	40	17	46	18	55 24	42 66		
8	296	40.5		35.3	254	51.5 ¹⁵¹	+1 58.3 ¹⁴⁵	35	27	17 53	24	57 26	39 62		
9	311	40.4		34.6	269	25.4 ¹⁴⁹	+2 12.8 ¹⁴⁵	30	36	18 01	29	8 58 29	36 59		
10	326	40.3		33.9	283	59.4 ¹⁵⁰	27.3 ¹⁴⁵	20	17 51	14	40	9 00 34	31 54		
11	341	40.2	-17	33.2	298	33.3 ¹⁴⁹	+2 41.8 ¹⁴⁵	10 N	18 04	18 26	18 52	9 01 40	21 27 49		
12	356	40.1	-17	32.5	313	07.2 ¹⁴⁹	+2 56.3 ¹⁴⁵	0	18 17	18 39	19 04	9 03 44	21 24 44		
13	11	40.0		31.9	327	41.1 ¹⁴⁹	+3 10.8 ¹⁴⁵	10 S	30	18 52	18	04 49	20 40		
14	26	39.9		31.2	342	14.9 ¹⁴⁸	25.3 ¹⁴⁵	20	43	19 07	34	06 53	16 35		
15	41	39.8		30.5	356	48.7 ¹⁴⁸	39.8 ¹⁴⁵	30	18 59	25	19 56	08 58	11 31		
16	56	39.7		29.8	11	22.5 ¹⁴⁸	+3 54.3 ¹⁴⁵	35	19 09	36	20 10	09 62	08 28		
17	71	39.6	-17	29.1	25	56.2 ¹⁴⁷	+4 08.8 ¹⁴⁵	40	19 19	19 49	20 26	9 11 65	21 06 24		
18	86	39.5	-17	28.4	40	29.9 ¹⁴⁷	+4 23.3 ¹⁴⁵	45	19 32	20 05	20 47	9 12 69	21 02 20		
19	101	39.4		27.7	55	03.5 ¹⁴⁶	37.8 ¹⁴⁵	50	47	25	21 15	14 74	20 58 15		
20	116	39.3		27.0	69	37.1 ¹⁴⁶	+4 52.2 ¹⁴⁴	52	19 55	35	30	15 77	56 13		
21	131	39.2		26.3	84	10.7 ¹⁴⁶	+5 06.7 ¹⁴⁵	54	20 03	46	21 47	16 79	54 11		
22	146	39.1		25.6	98	44.2 ¹⁴⁵	21.1 ¹⁴⁴	56	12	20 59	22 08	17 82	52 8		
23	161	39.0		24.9	113	17.6 ¹⁴⁴	35.6 ¹⁴⁵	58	22	21 14	22 37	18 85	49 6		
24	176	38.9	-17	24.2	127	51.1 ¹⁴⁵	+5 50.0 ¹⁴⁴	60 S	20 34	21 32	23 26	9 20 88	20 47 1		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG		Mag: -4.7		Mag: +1.3		Mag: -1.9		Mag: +0.8									
	15 ^h 20 ^m 0		PMG: 15 ^h 07 ^m		PMG: 11 ^h 13 ^m		PMG: 11 ^h 54 ^m		PMG: 2 ^h 52 ^m									
	hG ♈		hG ♀	Dec	hG ♂		hG ♃		hG ♄		Dec							
h	°	'	°	'	°	'	°	'	°	'	°	'						
0	129	21.8	133	09.8	-0	11.2	191	34.6	-21	55.7	181	08.6	-19	16.4				
1	144	24.3	148	10.4		10.0	206	35.1		55.4	196	10.5		16.3				
2	159	26.8	163	10.9		08.8	221	35.5		55.0	211	12.4		16.2				
3	174	29.2	178	11.5		07.7	236	35.9		54.7	226	14.2		16.0				
4	189	31.7	193	12.1		06.5	251	36.3		54.4	241	16.1		15.9				
5	204	34.1	208	12.6	-0	05.3	266	36.7	-21	54.0	256	17.9	-19	15.7				
6	219	36.6	223	13.2	-0	04.1	281	37.2	-21	53.7	271	19.8	-19	15.6				
7	234	39.1	238	13.8		03.0	296	37.6		53.3	286	21.6		15.5				
8	249	41.5	253	14.4		01.8	311	38.0		53.0	301	23.5		15.3				
9	264	44.0	268	15.0	-0	00.6	326	38.4		52.6	316	25.3		15.2				
10	279	46.5	283	15.5	+0	00.6	341	38.8		52.3	331	27.2		15.0				
11	294	48.9	298	16.1	+0	01.7	356	39.3	-21	52.0	346	29.1	-19	14.9				
12	309	51.4	313	16.7	+0	02.9	11	39.7	-21	51.6	1	30.9	-19	14.7				
13	324	53.9	328	17.3		04.1	26	40.1		51.3	16	32.8		14.6				
14	339	56.3	343	17.9		05.3	41	40.5		50.9	31	34.6		14.5				
15	354	58.8	358	18.5		06.4	56	40.9		50.6	46	36.5		14.3				
16	10	01.3	13	19.0		07.6	71	41.4		50.2	61	38.3		14.2				
17	25	03.7	28	19.6	+0	08.8	86	41.8	-21	49.9	76	40.2	-19	14.0				
18	40	06.2	43	20.2	+0	10.0	101	42.2	-21	49.5	91	42.1	-19	13.9				
19	55	08.6	58	20.8		11.1	116	42.6		49.2	106	43.9		13.7				
20	70	11.1	73	21.4		12.3	131	43.1		48.8	121	45.8		13.6				
21	85	13.6	88	22.0		13.5	146	43.5		48.5	136	47.6		13.5				
22	100	16.0	103	22.6		14.6	161	43.9		48.1	151	49.5		13.3				
23	115	18.5	118	23.2		15.8	176	44.3		47.8	166	51.3		13.2				
24	130	21.0	133	23.8	+0	17.0	191	44.7	-21	47.4	181	53.2	-19	13.0				
Dif	—		+6		+12		+4		+3		+19		+1		+26		+	

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna														
	SD: 16:2 PMG: 12 ^h 13 ^m 5			Edad: 4 ^d 7 PHE { 4 ^h : 56'6 12 ^h : 56'8 20 ^h : 57'0 R°: 47 ^m																							
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°												
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	h m	m	h m	m											
0	176	38.9	-17	24.2	127	51.1	+5	50.0	60 N	6 37	7 28	8 16	8 49	3	23 32	95											
1	191	38.8		23.5	142	24.4 ¹⁴³	+6	04.4 ¹⁴⁴	58	34	21	8 06	54	6	25	91											
2	206	38.7		22.8	156	57.8 ¹⁴⁴		18.8 ¹⁴⁴	56	30	15	7 57	8 58	9	19	87											
3	221	38.7		22.1	171	31.1 ¹⁴³		33.1 ¹⁴³	54	27	10	49	9 01	12	14	84											
4	236	38.6		21.4	186	04.3 ¹⁴²	+6	47.5 ¹⁴⁴	52	24	05	41	04	15	09	81											
5	251	38.5	-17	20.7	200	37.5 ¹⁴²	+7	01.8 ¹⁴³	50	6 21	7 00	7 35	9 07	17	23 05	78											
6	266	38.4	-17	20.0	215	10.6 ¹⁴¹	+7	16.2 ¹⁴⁴	45	6 14	6 50	7 21	9 13	22	22 55	73											
7	281	38.3		19.3	229	43.7 ¹⁴¹		30.5 ¹⁴³	40	08	41	09	19	25	48	68											
8	296	38.2		18.6	244	16.7 ¹⁴⁰		44.7 ¹⁴²	35	6 03	33	7 00	23	29	41	65											
9	311	38.1		17.9	258	49.7 ¹⁴⁰	+7	59.0 ¹⁴³	30	5 57	26	6 51	27	32	35	62											
10	326	38.0		17.2	273	22.6 ¹³⁹	+8	13.2 ¹⁴²	20	46	13	36	34	38	25	57											
11	341	37.9	-17	16.5	287	55.4 ¹³⁸	+8	27.4 ¹⁴²	10 N	5 35	6 01	6 23	9 41	42	22 16	52											
12	356	37.8	-17	15.8	302	28.2 ¹³⁸	+8	41.6 ¹⁴²	0	5 23	5 48	6 10	9 47	46	22 08	48											
13	11	37.7		15.1	317	00.9 ¹³⁷	+8	55.7 ¹⁴¹	10 S	5 09	35	5 57	53	50	22 00	44											
14	26	37.6		14.4	331	33.6 ¹³⁷	+9	09.9 ¹⁴²	20	4 53	20	44	9 59	55	21 51	40											
15	41	37.6		13.7	346	06.2 ¹³⁶		24.0 ¹⁴¹	30	31	5 02	28	10 06	61	42	34											
16	56	37.5		13.0	0	38.7 ¹³⁵		38.0 ¹⁴⁰	35	17	4 51	19	11	64	36	31											
17	71	37.4	-17	12.3	15	11.2 ¹³⁵	+9	52.1 ¹⁴¹	40	4 01	4 38	5 08	10 16	67	21 30	27											
18	86	37.3	-17	11.6	29	43.6 ¹³⁴	+10	06.1 ¹⁴⁰	45	3 40	4 22	4 55	10 21	72	21 22	24											
19	101	37.2		10.9	44	15.9 ¹³³		20.0 ¹³⁹	50	3 12	4 02	40	28	77	13	19											
20	116	37.1		10.1	58	48.2 ¹³³		34.0 ¹⁴⁰	52	2 58	3 52	33	32	79	09	16											
21	131	37.0		09.4	73	20.4 ¹³²	+10	47.8 ¹³⁸	54	40	41	25	35	82	05	13											
22	146	36.9		08.7	87	52.5 ¹³¹	+11	01.7 ¹³⁹	56	2 19	28	16	39	85	21 00	10											
23	161	36.9		08.0	102	24.6 ¹³¹		15.5 ¹³⁸	58	1 50	3 13	4 06	43	89	20 55	6											
24	176	36.8	-17	07.3	116	56.5 ¹²⁹	+11	29.3 ¹³⁸	60 S	1 01	2 55	3 54	10 48	93	20 48	3											
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO														
	PMG: 15 ^h 16 ^m 1			Mag: -4.7 PMG: 15 ^h 06 ^m			Mag: +1.3 PMG: 11 ^h 13 ^m			Mag: -1.9 PMG: 11 ^h 51 ^m			Mag: +0.8 PMG: 2 ^h 48 ^m														
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec													
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'											
0	130	21.0	133	23.8	+0	17.0	191	44.7	-21	47.4	181	53.2	-19	13.0	317	47.7	+5	35.1									
1	145	23.4	148	24.4		18.2	206	45.2		47.1	196	55.1		12.9	332	50.3		35.1									
2	160	25.9	163	25.0		19.3	221	45.6		46.7	211	56.9		12.8	347	52.8		35.2									
3	175	28.4	178	25.6		20.5	236	46.0		46.4	226	58.8		12.6	2	55.4		35.3									
4	190	30.8	193	26.2		21.7	251	46.4		46.0	242	00.6		12.5	17	58.0		35.3									
5	205	33.3	208	26.8	+0	22.8	266	46.8	-21	45.7	257	02.5	-19	12.3	33	00.6	+5	35.4									
6	220	35.7	223	27.4	+0	24.0	281	47.3	-21	45.3	272	04.3	-19	12.2	48	03.2	+5	35.4									
7	235	38.2	238	28.0		25.2	296	47.7		45.0	287	06.2		12.0	63	05.7		35.5									
8	250	40.7	253	28.6		26.3	311	48.1		44.6	302	08.1		11.9	78	08.3		35.6									
9	265	43.1	268	29.2		27.5	326	48.5		44.3	317	09.9		11.8	93	10.9		35.6									
10	280	45.6	283	29.8		28.7	341	49.0		43.9	332	11.8		11.6	108	13.5		35.7									
11	295	48.1	298	30.5	+0	29.9	356	49.4	-21	43.6	347	13.6	-19	11.5	123	16.1	+5	35.7									
12	310	50.5	313	31.1	+0	31.0	11	49.8	-21	43.2	2	15.5	-19	11.3	138	18.6	+5	35.8									
13	325	53.0	328	31.7		32.2	26	50.2		42.8	17	17.3		11.2	153	21.2		35.9									
14	340	55.5	343	32.3		33.4	41	50.7		42.5	32	19.2		11.0	168	23.8		35.9									
15	355	57.9	358	32.9		34.5	56	51.1		42.1	47	21.1		10.9	183	26.4		36.0									
16	11	00.4	13	33.5		35.7	71	51.5		41.8	62	22.9		10.8	198	29.0		36.0									
17	26	02.9	28	34.2	+0	36.9	86	51.9	-21	41.4	77	24.8	-19	10.6	213	31.5	+5	36.1									
18	41	05.3	43	34.8	+0	38.0	101	52.4	-21	41.1	92	26.6	-19	10.5	228	34.1	+5	36.2									
19	56	07.8	58	35.4		39.2	116	52.8		40.7	107	28.5		10.3	243	36.7		36.2									
20	71	10.2	73	36.0		40.4	131	53.2		40.3	122	30.3		10.2	258	39.3		36.3									
21	86	12.7	88	36.6		41.5	146	53.6		40.0	137	32.2		10.0	273	41.9		36.3									
22	101	15.2	103	37.3		42.7	161	54.0		39.6	152	34.1		09.9	288	44.4		36.4									
23	116	17.6	118	37.9		43.9	176	54.5		39.3	167	35.9		09.8	303	47.0		36.5									
24	131	20.1	133	38.5	+0	45.0	191	54.9	-21	38.9	182	37.8	-19	09.6	318	49.6	+5	36.5									
Dif	—			+6			+12			+4			+4			+19			+1			+26			+1		

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16:2 PMG: 12 ^h 13 ^m 6			Edad: 5 ^d 7 PHE { 4 ^h : 57/2 12 ^h : 57/5 20 ^h : 57/7 R°: 51 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	m	h m	m			
0	176	36.8	-17	07.3	116	56.5	+11	29.3	60 N	16 14	17 02	17 53	8 52	4	** ** *			
1	191	36.7		06.6	131	28.4 ¹²⁹		43.0 ¹³⁷	58	25	08	56	9 00	9	** ** *			
2	206	36.6		05.9	146	00.3 ¹²⁹	+11	56.7 ¹³⁷	56	33	14	17 59	07 12		** ** *			
3	221	36.5		05.2	160	32.0 ¹²⁷	+12	10.4 ¹³⁷	54	41	20	18 02	13 16		** ** *			
4	236	36.4		04.5	175	03.7 ¹²⁷		24.0 ¹³⁶	52	48	25	05	19 18		** ** *			
5	251	36.4	-17	03.8	189	35.3 ¹²⁶	+12	37.5 ¹³⁵	50	16 54	17 29	18 08	9 24	21	** ** *			
6	266	36.3	-17	03.0	204	06.8 ¹²⁵	+12	51.0 ¹³⁵	45	17 08	17 39	18 14	9 35	26	** ** *			
7	281	36.2		02.3	218	38.2 ¹²⁴	+13	04.5 ¹³⁵	40	19	48	20	44	30	23 56 72			
8	296	36.1		01.6	233	09.5 ¹²³		17.9 ¹³⁴	35	29	17 55	26	52	34	46 68			
9	311	36.0		00.9	247	40.8 ¹²³		31.3 ¹³⁴	30	37	18 02	31	9 59	37	37 65			
10	326	35.9	-17	00.2	262	12.0 ¹²²		44.6 ¹³³	20	17 52	15	41	10 12	41	22 60			
11	341	35.9	-16	59.5	276	43.1 ¹²¹	+13	57.8 ¹³²	10 N	18 05	18 27	18 52	10 23	45	23 08 56			
12	356	35.8	-16	58.7	291	14.1 ¹²⁰	+14	11.0 ¹³²	0	18 17	18 39	19 04	10 33	50	22 56 52			
13	11	35.7		58.0	305	45.0 ¹¹⁹		24.2 ¹³²	10 S	29	18 52	17	43	54	44 48			
14	26	35.6		57.3	320	15.8 ¹¹⁸		37.2 ¹³⁰	20	43	19 06	34	10 54	59	31 43			
15	41	35.5		56.6	334	46.5 ¹¹⁷	+14	50.3 ¹³¹	30	18 58	24	19 55	11 07	64	16 39			
16	56	35.5		55.9	349	17.2 ¹¹⁷	+15	03.2 ¹²⁹	35	19 07	35	20 08	15	66	22 07 36			
17	71	35.4	-16	55.2	3	47.7 ¹¹⁵	+15	16.1 ¹²⁹	40	19 17	19 47	20 24	11 23	70	21 57 33			
18	86	35.3	-16	54.4	18	18.2 ¹¹⁵	+15	28.9 ¹²⁸	45	19 30	20 03	20 44	11 33	75	21 46 28			
19	101	35.2		53.7	32	48.5 ¹¹³		41.7 ¹²⁸	50	44	22	21 11	45	81	32 23			
20	116	35.1		53.0	47	18.8 ¹¹³	+15	54.4 ¹²⁷	52	51	31	25	51	83	25 21			
21	131	35.1		52.3	61	48.9 ¹¹¹	+16	07.0 ¹²⁶	54	19 59	42	21 41	11 57	86	18 18			
22	146	35.0		51.6	76	19.0 ¹¹¹		19.6 ¹²⁶	56	20 08	20 54	22 01	12 04	90	10 15			
23	161	34.9		50.8	90	49.0 ¹¹⁰		32.1 ¹²⁵	58	17	21 09	22 28	12	94	21 01 11			
24	176	34.8	-16	50.1	105	18.8 ¹⁰⁸	+16	44.5 ¹²⁴	60 S	20 29	21 26	23 08	12 21	99	20 51 6			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 15 ^h 12 ^m 2		Mag: -4.7 PMG: 15 ^h 05 ^m			Mag: +1.3 PMG: 11 ^h 12 ^m			Mag: -1.9 PMG: 11 ^h 48 ^m			Mag: +0.8 PMG: 2 ^h 44 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	131	20.1	133	38.5	+0	45.0	191	54.9	-21	38.9	182	37.8	-19	09.6	318	49.6	+5	36.5
1	146	22.6	148	39.2		46.2	206	55.3		38.5	197	39.6		09.5	333	52.2		36.6
2	161	25.0	163	39.8		47.3	221	55.7		38.2	212	41.5		09.3	348	54.8		36.6
3	176	27.5	178	40.4		48.5	236	56.2		37.8	227	43.3		09.2	3	57.4		36.7
4	191	30.0	193	41.1		49.7	251	56.6		37.5	242	45.2		09.0	18	59.9		36.8
5	206	32.4	208	41.7	+0	50.8	266	57.0	-21	37.1	257	47.1	-19	08.9	34	02.5	+5	36.8
6	221	34.9	223	42.3	+0	52.0	281	57.4	-21	36.7	272	48.9	-19	08.8	49	05.1	+5	36.9
7	236	37.4	238	43.0		53.2	296	57.9		36.4	287	50.8		08.6	64	07.7		36.9
8	251	39.8	253	43.6		54.3	311	58.3		36.0	302	52.6		08.5	79	10.3		37.0
9	266	42.3	268	44.3		55.5	326	58.7		35.6	317	54.5		08.3	94	12.9		37.1
10	281	44.7	283	44.9		56.6	341	59.2		35.3	332	56.4		08.2	109	15.4		37.1
11	296	47.2	298	45.5	+0	57.8	356	59.6	-21	34.9	347	58.2	-19	08.0	124	18.0	+5	37.2
12	311	49.7	313	46.2	+0	59.0	12	00.0	-21	34.6	3	00.1	-19	07.9	139	20.6	+5	37.2
13	326	52.1	328	46.8	+1	00.1	27	00.4		34.2	18	01.9		07.8	154	23.2		37.3
14	341	54.6	343	47.5		01.3	42	00.9		33.8	33	03.8		07.6	169	25.8		37.4
15	356	57.1	358	48.1		02.4	57	01.3		33.5	48	05.6		07.5	184	28.4		37.4
16	11	59.5	13	48.8		03.6	72	01.7		33.1	63	07.5		07.3	199	30.9		37.5
17	27	02.0	28	49.4	+1	04.8	87	02.1	-21	32.7	78	09.4	-19	07.2	214	33.5	+5	37.6
18	42	04.5	43	50.1	+1	05.9	102	02.6	-21	32.4	93	11.2	-19	07.0	229	36.1	+5	37.6
19	57	06.9	58	50.7		07.1	117	03.0		32.0	108	13.1		06.9	244	38.7		37.7
20	72	09.4	73	51.4		08.2	132	03.4		31.6	123	14.9		06.7	259	41.3		37.7
21	87	11.8	88	52.1		09.4	147	03.8		31.2	138	16.8		06.6	274	43.9		37.8
22	102	14.3	103	52.7		10.6	162	04.3		30.9	153	18.7		06.5	289	46.5		37.9
23	117	16.8	118	53.4		11.7	177	04.7		30.5	168	20.5		06.3	304	49.0		37.9
24	132	19.2	133	54.0	+1	12.9	192	05.1	-21	30.1	183	22.4	-19	06.2	319	51.6	+5	38.0
Dif	—		+6		+12		+4		+4		+19		+1		+26		+	

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16:2 PMG: 12 ^h 13 ^m 7			Edad: 6 ^d 7 PHE { 4 ^h : 57/9 12 ^h : 58/1 20 ^h : 58/3 Rº: 56 ^m	hG ☾ Dif	Dec		Dif			Hora	Rº	Hora	Rº	
	hG ☉	Dec													
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	176	34.8	-16 50.1	105	18.8	+16 44.5	60 N	6 34	7 24	8 11	8 56	9	1 07	101	101
1	191	34.8	49.4	119	48.6 ¹⁰⁸	+16 56.9 ¹²⁴	58	30	18	8 01	9 09	14	0 56	95	95
2	206	34.7	48.7	134	18.3 ¹⁰⁷	+17 09.1 ¹²²	56	27	12	7 53	19	19	46	91	91
3	221	34.6	47.9	148	47.8 ¹⁰⁵	21.3 ¹²²	54	24	07	45	29	21	38	87	87
4	236	34.5	47.2	163	17.3 ¹⁰⁵	33.4 ¹²¹	52	21	7 02	38	37	25	30	84	84
5	251	34.4	-16 46.5	177	46.6 ¹⁰³	+17 45.5 ¹²¹	50	6 19	6 57	7 32	9 45	27	0 23	81	81
6	266	34.4	-16 45.8	192	15.9 ¹⁰³	+17 57.4 ¹¹⁹	45	6 12	6 47	7 19	10 01	32	0 08	76	76
7	281	34.3	45.0	206	45.0 ¹⁰¹	+18 09.3 ¹¹⁹	40	07	39	7 08	14	37	**	**	**
8	296	34.2	44.3	221	14.1 ¹⁰¹	21.1 ¹¹⁸	35	6 01	32	6 58	26	39	**	**	**
9	311	34.2	43.6	235	43.0 ⁹⁹	32.7 ¹¹⁶	30	5 56	25	50	36	42	**	**	**
10	326	34.1	42.9	250	11.8 ⁹⁸	44.4 ¹¹⁷	20	46	12	35	10 53	47	**	**	**
11	341	34.0	-16 42.1	264	40.5 ⁹⁷	+18 55.9 ¹¹⁵	10 N	5 35	6 00	6 22	11 08	51	**	**	**
12	356	33.9	-16 41.4	279	09.1 ⁹⁶	+19 07.3 ¹¹⁴	0	5 24	5 49	6 10	11 23	54	23	48	57
13	11	33.9	40.7	293	37.6 ⁹⁵	18.6 ¹¹³	10 S	5 10	36	5 58	37	58	32	53	53
14	26	33.8	39.9	308	06.0 ⁹⁴	29.9 ¹¹³	20	4 54	21	45	11 53	62	23	14	51
15	41	33.7	39.2	322	34.3 ⁹³	41.0 ¹¹¹	30	33	5 04	30	12 11	66	22	55	46
16	56	33.6	38.5	337	02.4 ⁹¹	+19 52.1 ¹¹¹	35	20	4 53	21	21	70	43	44	44
17	71	33.6	-16 37.7	351	30.5 ⁹¹	+20 03.0 ¹⁰⁹	40	4 04	4 41	5 10	12 33	73	22	30	40
18	86	33.5	-16 37.0	5	58.4 ⁸⁹	+20 13.9 ¹⁰⁹	45	3 44	4 25	4 58	12 48	77	22	14	37
19	101	33.4	36.3	20	26.2 ⁸⁸	24.6 ¹⁰⁷	50	17	4 06	44	13 06	82	21	55	32
20	116	33.4	35.6	34	53.9 ⁸⁷	35.2 ¹⁰⁶	52	3 03	3 57	37	14	85	46	29	29
21	131	33.3	34.8	49	21.5 ⁸⁶	45.8 ¹⁰⁶	54	2 47	46	29	23	88	36	26	26
22	146	33.2	34.1	63	49.0 ⁸⁵	+20 56.2 ¹⁰⁴	56	27	34	20	34	92	25	22	22
23	161	33.2	33.4	78	16.4 ⁸⁴	+21 06.5 ¹⁰³	58	2 00	19	4 11	13 46	97	21	12	17
24	176	33.1	-16 32.6	92	43.6 ⁸²	+21 16.7 ¹⁰²	60 S	1 20	3 02	3 59	14 00	104	20	57	11

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 15 ^h 08 ^m 2		Mag: -4.7 PMG: 15 ^h 04 ^m		Mag: +1.3 PMG: 11 ^h 11 ^m		Mag: -1.9 PMG: 11 ^h 45 ^m		Mag: +0.7 PMG: 2 ^h 40 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	132	19.2	133 54.0	+1 12.9	192 05.1	-21 30.1	183 22.4	-19 06.2	319 51.6	+5 38.0
1	147	21.7	148 54.7	14.0	207 05.6	29.8	198 24.2	06.0	334 54.2	38.0
2	162	24.2	163 55.4	15.2	222 06.0	29.4	213 26.1	05.9	349 56.8	38.1
3	177	26.6	178 56.0	16.3	237 06.4	29.0	228 27.9	05.7	4 59.4	38.2
4	192	29.1	193 56.7	17.5	252 06.8	28.7	243 29.8	05.6	20 02.0	38.2
5	207	31.6	208 57.4	+1 18.7	267 07.3	-21 28.3	258 31.7	-19 05.5	35 04.6	+5 38.3
6	222	34.0	223 58.0	+1 19.8	282 07.7	-21 27.9	273 33.5	-19 05.3	50 07.1	+5 38.4
7	237	36.5	238 58.7	21.0	297 08.1	27.5	288 35.4	05.2	65 09.7	38.4
8	252	39.0	253 59.4	22.1	312 08.6	27.2	303 37.2	05.0	80 12.3	38.5
9	267	41.4	269 00.0	23.3	327 09.0	26.8	318 39.1	04.9	95 14.9	38.5
10	282	43.9	284 00.7	24.4	342 09.4	26.4	333 41.0	04.7	110 17.5	38.6
11	297	46.3	299 01.4	+1 25.6	357 09.8	-21 26.0	348 42.8	-19 04.6	125 20.1	+5 38.7
12	312	48.8	314 02.1	+1 26.7	12 10.3	-21 25.7	3 44.7	-19 04.5	140 22.7	+5 38.7
13	327	51.3	329 02.8	27.9	27 10.7	25.3	18 46.5	04.3	155 25.3	38.8
14	342	53.7	344 03.4	29.0	42 11.1	24.9	33 48.4	04.2	170 27.8	38.9
15	357	56.2	359 04.1	30.2	57 11.6	24.5	48 50.3	04.0	185 30.4	38.9
16	12	58.7	14 04.8	31.3	72 12.0	24.2	63 52.1	03.9	200 33.0	39.0
17	28	01.1	29 05.5	+1 32.5	87 12.4	-21 23.8	78 54.0	-19 03.7	215 35.6	+5 39.0
18	43	03.6	44 06.2	+1 33.6	102 12.8	-21 23.4	93 55.8	-19 03.6	230 38.2	+5 39.1
19	58	06.1	59 06.9	34.8	117 13.3	23.0	108 57.7	03.4	245 40.8	39.2
20	73	08.5	74 07.6	35.9	132 13.7	22.6	123 59.5	03.3	260 43.4	39.2
21	88	11.0	89 08.2	37.1	147 14.1	22.3	139 01.4	03.2	275 46.0	39.3
22	103	13.5	104 08.9	38.2	162 14.6	21.9	154 03.3	03.0	290 48.5	39.4
23	118	15.9	119 09.6	39.4	177 15.0	21.5	169 05.1	02.9	305 51.1	39.4
24	133	18.4	134 10.3	+1 40.5	192 15.4	-21 21.1	184 07.0	-19 02.7	320 53.7	+5 39.5
Dif	—		+7	+12	+4	+4	+19	+1	+26	+

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 16:2 PMG: 12 ^h 13 ^m 8			Edad: 7 ^d 7 PHE { 4 ^h : 58/6 12 ^h : 58/8 20 ^h : 59/0 PMG: 18 ^h 31 ^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	h m m		
0	176	33.1	-16	32.6	92	43.6	+21	16.7	60 N	16 20	17 07	17 57	9 05 18	2 48 103			
1	191	33.0		31.9	107	10.8	82	26.8	58	29	13	18 00	23 24	31 96			
2	206	33.0		31.1	121	37.8	80	36.8	56	38	18	03	38 29	17 91			
3	221	32.9		30.4	136	04.7	79	46.7	54	45	24	06	9 50 33	2 05 86			
4	236	32.8		29.7	150	31.5	78	+21 56.4	52	52	28	09	10 02 36	1 54 84			
5	251	32.8	-16	28.9	164	58.1	76	+22 06.0	50	16 58	17 32	18 11	10 12 38	1 44 81			
6	266	32.7	-16	28.2	179	24.7	76	+22 15.5	45	17 11	17 42	18 17	10 33 43	1 24 76			
7	281	32.6		27.5	193	51.1	74	24.9	40	22	50	22	10 51 46	1 08 73			
8	296	32.6		26.7	208	17.5	74	34.2	35	31	17 57	28	11 05 49	0 54 70			
9	311	32.5		26.0	222	43.7	72	43.3	30	39	18 04	32	18 51	42 68			
10	326	32.4		25.2	237	09.8	71	+22 52.3	20	17 53	16	42	40 54	22 63			
11	341	32.4	-16	24.5	251	35.8	70	+23 01.2	10 N	18 06	18 27	18 53	11 59 57	0 04 60			
12	356	32.3	-16	23.8	266	01.6	68	+23 09.9	0	18 17	18 39	19 04	12 17 60	*** ** *			
13	11	32.2		23.0	280	27.4	68	18.5	10 S	29	18 51	17	35 62	*** ** *			
14	26	32.2		22.3	294	53.0	66	27.0	20	42	19 05	33	12 55 64	*** ** *			
15	41	32.1		21.5	309	18.5	65	35.3	30	18 57	22	19 53	13 17 68	23 41 54			
16	56	32.0		20.8	323	43.9	64	43.5	35	19 05	33	20 06	31 70	27 53			
17	71	32.0	-16	20.1	338	09.2	63	+23 51.6	40	19 15	19 45	20 21	13 46 72	23 10 52			
18	86	31.9	-16	19.3	352	34.4	62	+23 59.5	45	19 27	20 00	20 41	14 05 75	22 51 49			
19	101	31.9		18.6	6	59.5	61	+24 07.3	50	41	19	21 07	28 79	27 45			
20	116	31.8		17.8	21	24.4	59	14.9	52	48	28	20	39 82	15 43			
21	131	31.7		17.1	35	49.3	59	22.4	54	19 55	38	35	14 51 85	22 02 41			
22	146	31.7		16.3	50	14.0	57	29.7	56	20 04	20 49	21 54	15 06 88	21 47 37			
23	161	31.6		15.6	64	38.7	57	36.9	58	13	21 03	22 18	23 93	29 33			
24	176	31.6	-16	14.8	79	03.2	55	+24 44.0	60 S	20 24	21 19	22 53	15 44 101	21 08 25			

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 15 ^h 04 ^m 3		Mag: -4.7 PMG: 15 ^h 03 ^m		Mag: +1.3 PMG: 11 ^h 11 ^m		Mag: -1.9 PMG: 11 ^h 42 ^m		Mag: +0.7 PMG: 2 ^h 36 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	133	18.4	134	10.3	+1	40.5	192	15.4	-21	21.1
1	148	20.8	149	11.0		41.7	207	15.9		20.7
2	163	23.3	164	11.7		42.8	222	16.3		20.4
3	178	25.8	179	12.4		44.0	237	16.7		20.0
4	193	28.2	194	13.1		45.1	252	17.2		19.6
5	208	30.7	209	13.8	+1	46.3	267	17.6	-21	19.2
6	223	33.2	224	14.5	+1	47.4	282	18.0	-21	18.8
7	238	35.6	239	15.2		48.6	297	18.4		18.5
8	253	38.1	254	15.9		49.7	312	18.9		18.1
9	268	40.6	269	16.6		50.9	327	19.3		17.7
10	283	43.0	284	17.3		52.0	342	19.7		17.3
11	298	45.5	299	18.1	+1	53.2	357	20.2	-21	16.9
12	313	47.9	314	18.8	+1	54.3	12	20.6	-21	16.5
13	328	50.4	329	19.5		55.4	27	21.0		16.2
14	343	52.9	344	20.2		56.6	42	21.5		15.8
15	358	55.3	359	20.9		57.7	57	21.9		15.4
16	13	57.8	14	21.6	+1	58.9	72	22.3		15.0
17	29	00.3	29	22.3	+2	00.0	87	22.8	-21	14.6
18	44	02.7	44	23.1	+2	01.2	102	23.2	-21	14.2
19	59	05.2	59	23.8		02.3	117	23.6		13.8
20	74	07.7	74	24.5		03.4	132	24.1		13.4
21	89	10.1	89	25.2		04.6	147	24.5		13.1
22	104	12.6	104	26.0		05.7	162	24.9		12.7
23	119	15.1	119	26.7		06.9	177	25.4		12.3
24	134	17.5	134	27.4	+2	08.0	192	25.8	-21	11.9
Dif	—		+7		+11		+4		+4	
							+19		+1	
									+26	
									+1	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'2 PMG: 12 ^h 13 ^m 9			Edad: 8 ^d 7 PHE { 4 ^h : 59'2 12 ^h : 59'4 20 ^h : 59'6 R°: 64 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m		
0	176	31.6	-16	14.8	79	03.2	+24	44.0	60 N	6 30	7 20	8 06	9 23	39	4 31	91		
1	191	31.5		14.1	93	27.6		50.9	58	27	14	7 57	9 47	45	4 07	85		
2	206	31.4		13.3	107	51.9	+24	57.6	56	24	08	49	10 07	48	3 48	81		
3	221	31.4		12.6	122	16.1	+25	04.2	54	21	7 03	41	23	51	31	79		
4	236	31.3		11.8	136	40.2		10.6	52	18	6 59	35	38	52	18	77		
5	251	31.3	-16	11.1	151	04.2	+25	16.8	50	6 16	6 54	7 29	10 50	54	3 05	76		
6	266	31.2	-16	10.3	165	28.1	+25	22.9	45	6 10	6 45	7 16	11 16	56	2 40	73		
7	281	31.2		09.6	179	51.9		28.9	40	05	37	7 06	37	57	21	70		
8	296	31.1		08.8	194	15.6		34.6	35	6 00	30	6 56	11 54	58	2 04	69		
9	311	31.0		08.1	208	39.2		40.2	30	5 55	23	48	12 09	59	1 50	67		
10	326	31.0		07.3	223	02.7		45.7	20	45	12	34	34	61	25	65		
11	341	30.9	-16	06.6	237	26.1	+25	50.9	10 N	5 35	6 00	6 22	12 56	62	1 04	64		
12	356	30.9	-16	05.8	251	49.4	+25	56.0	0	5 24	5 49	6 10	13 17	63	0 45	61		
13	11	30.8		05.1	266	12.6	+26	01.0	10 S	5 11	37	5 59	37	64	25	60		
14	26	30.8		04.3	280	35.8		05.7	20	4 55	23	46	13 59	66	0 05	57		
15	41	30.7		03.6	294	58.8		10.3	30	35	5 06	31	14 25	67	***	***		
16	56	30.7		02.8	309	21.8		14.7	35	22	4 55	23	41	67	***	***		
17	71	30.6	-16	02.1	323	44.7	+26	18.9	40	4 07	4 43	5 13	14 58	68	***	***		
18	86	30.5	-16	01.3	338	07.4	+26	23.0	45	3 47	4 28	5 01	15 20	69	23	40		
19	101	30.5	-16	00.6	352	30.2		26.8	50	22	10	4 47	15 47	70	23	12		
20	116	30.4	-15	59.8	6	52.8		30.5	52	3 08	4 01	41	16 01	70	22	58		
21	131	30.4		59.1	21	15.3		34.0	54	2 53	3 51	33	16	72	43	61		
22	146	30.3		58.3	35	37.8		37.4	56	34	39	25	34	73	24	60		
23	161	30.3		57.5	50	00.2		40.5	58	2 10	25	16	16	56	75	22	02	
24	176	30.2	-15	56.8	64	22.6	+26	43.5	60 S	1 36	3 09	4 05	17 25	77	21	33		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 15 ^h 00 ^m 4		Mag: -4.7 PMG: 15 ^h 01 ^m			Mag: +1.3 PMG: 11 ^h 10 ^m			Mag: -1.9 PMG: 11 ^h 39 ^m			Mag: +0.7 PMG: 2 ^h 32 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	134	17.5	134	27.4	+2	08.0	192	25.8	-21	11.9	184	51.6	-18	59.3	321	55.9	+5	41.0
1	149	20.0	149	28.1		09.1	207	26.2		11.5	199	53.5		59.1	336	58.5		41.1
2	164	22.4	164	28.9		10.3	222	26.7		11.1	214	55.3		59.0	352	01.1		41.1
3	179	24.9	179	29.6		11.4	237	27.1		10.7	229	57.2		58.8	7	03.7		41.2
4	194	27.4	194	30.3		12.6	252	27.5		10.3	244	59.1		58.7	22	06.3		41.3
5	209	29.8	209	31.1	+2	13.7	267	28.0	-21	09.9	260	00.9	-18	58.5	37	08.9	+5	41.3
6	224	32.3	224	31.8	+2	14.8	282	28.4	-21	09.5	275	02.8	-18	58.4	52	11.4	+5	41.4
7	239	34.8	239	32.6		16.0	297	28.8		09.1	290	04.7		58.2	67	14.0		41.5
8	254	37.2	254	33.3		17.1	312	29.3		08.8	305	06.5		58.1	82	16.6		41.5
9	269	39.7	269	34.0		18.2	327	29.7		08.4	320	08.4		57.9	97	19.2		41.6
10	284	42.2	284	34.8		19.4	342	30.1		08.0	335	10.2		57.8	112	21.8		41.6
11	299	44.6	299	35.5	+2	20.5	357	30.6	-21	07.6	350	12.1	-18	57.7	127	24.4	+5	41.7
12	314	47.1	314	36.3	+2	21.6	12	31.0	-21	07.2	5	14.0	-18	57.5	142	27.0	+5	41.8
13	329	49.6	329	37.0		22.8	27	31.4		06.8	20	15.8		57.4	157	29.6		41.8
14	344	52.0	344	37.8		23.9	42	31.9		06.4	35	17.7		57.2	172	32.2		41.9
15	359	54.5	359	38.5		25.1	57	32.3		06.0	50	19.5		57.1	187	34.8		42.0
16	14	56.9	14	39.3		26.2	72	32.8		05.6	65	21.4		56.9	202	37.4		42.0
17	29	59.4	29	40.0	+2	27.3	87	33.2	-21	05.2	80	23.3	-18	56.8	217	40.0	+5	42.1
18	45	01.9	44	40.8	+2	28.5	102	33.6	-21	04.8	95	25.1	-18	56.6	232	42.6	+5	42.2
19	60	04.3	59	41.5		29.6	117	34.1		04.4	110	27.0		56.5	247	45.2		42.2
20	75	06.8	74	42.3		30.7	132	34.5		04.0	125	28.8		56.4	262	47.8		42.3
21	90	09.3	89	43.1		31.8	147	34.9		03.6	140	30.7		56.2	277	50.3		42.4
22	105	11.7	104	43.8		33.0	162	35.4		03.2	155	32.6		56.1	292	52.9		42.4
23	120	14.2	119	44.6		34.1	177	35.8		02.8	170	34.4		55.9	307	55.5		42.5
24	135	16.7	134	45.4	+2	35.2	192	36.2	-21	02.4	185	36.3	-18	55.8	322	58.1	+5	42.6
Dif	—		+7		+11		+4		+4		+19		+1		+26		+1	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'2 PMG: 12 ^h 14 ^m 0			Edad: 9 ^d 7 PHE { SD: 16'3 PMG: 20 ^h 35 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	Rº	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	176	30.2	-15	56.8	64	22.6	+26 43.5	60 N	16 25	17 11	18 01	10 02 77	6 02 58	
1	191	30.2		56.0	78	44.8	46.3	58	34	17	04	32 74	5 32 60	
2	206	30.1		55.3	93	07.0	48.8	56	42	22	07	10 55 73	5 09 61	
3	221	30.1		54.5	107	29.2	51.2	54	49	27	09	11 14 72	4 50 62	
4	236	30.0		53.7	121	51.3	53.4	52	16 56	32	12	30 71	35 62	
5	251	30.0	-15	53.0	136	13.3	+26 55.5	50	17 01	17 36	18 14	11 44 70	4 21 63	
6	266	29.9	-15	52.2	150	35.2	+26 57.3	45	17 14	17 45	18 20	12 12 69	3 53 63	
7	281	29.9		51.5	164	57.2	+26 58.9	40	24	52	25	34 68	31 64	
8	296	29.8		50.7	179	19.0	+27 00.4	35	33	17 59	29	12 52 68	3 13 64	
9	311	29.8		49.9	193	40.8	01.6	30	41	18 06	34	13 08 67	2 57 64	
10	326	29.7		49.2	208	02.6	02.7	20	17 54	17	43	35 66	30 65	
11	341	29.7	-15	48.4	222	24.3	+27 03.5	10 N	18 06	18 28	18 53	13 58 65	2 08 64	
12	356	29.7	-15	47.6	236	46.0	+27 04.2	0	18 18	18 39	19 04	14 20 64	1 46 64	
13	11	29.6		46.9	251	07.6	04.7	10 S	29	18 51	16	14 41 64	25 64	
14	26	29.6		46.1	265	29.2	05.0	20	41	19 04	32	15 05 62	1 02 64	
15	41	29.5		45.4	279	50.8	05.0	30	18 55	21	19 51	32 61	0 35 64	
16	56	29.5		44.6	294	12.3	04.9	35	19 04	31	20 04	15 48 60	20 63	
17	71	29.4	-15	43.8	308	33.9	+27 04.6	40	19 13	19 43	20 19	16 06 59	0 02 63	
18	86	29.4	-15	43.1	322	55.3	+27 04.1	45	19 24	19 57	20 38	16 29 57	*** ** *	
19	101	29.3		42.3	337	16.8	03.4	50	38	20 15	21 02	16 57 55	*** ** *	
20	116	29.3		41.5	351	38.3	02.5	52	44	24	15	17 11 54	*** ** *	
21	131	29.3		40.8	5	59.7	+27 01.4	54	51	33	30	28 52	23 44 81	
22	146	29.2		40.0	20	21.1	+27 00.0	56	19 59	45	21 47	17 47 50	24 85	
23	161	29.2		39.2	34	42.5	+26 58.5	58	20 08	20 57	22 10	18 11 46	23 01 88	
24	176	29.1	-15	38.4	49	03.9	+26 56.8	60 S	20 18	21 13	22 40	18 42 41	22 29 94	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 14 ^h 56 ^m 4		Mag: -4.8 PMG: 15 ^h 00 ^m		Mag: +1.3 PMG: 11 ^h 09 ^m		Mag: -1.9 PMG: 11 ^h 36 ^m		Mag: +0.7 PMG: 2 ^h 28 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	135	16.7	134	45.4	+2	35.2	185	36.3	-18	55.8
1	150	19.1	149	46.1		36.4	200	38.2		55.6
2	165	21.6	164	46.9		37.5	215	40.0		55.5
3	180	24.1	179	47.7		38.6	230	41.9		55.3
4	195	26.5	194	48.4		39.8	245	43.7		55.2
5	210	29.0	209	49.2	+2	40.9	260	45.6	-18	55.0
6	225	31.4	224	50.0	+2	42.0	275	47.5	-18	54.9
7	240	33.9	239	50.7		43.1	290	49.3		54.8
8	255	36.4	254	51.5		44.3	305	51.2		54.6
9	270	38.8	269	52.3		45.4	320	53.0		54.5
10	285	41.3	284	53.1		46.5	335	54.9		54.3
11	300	43.8	299	53.9	+2	47.6	350	56.8	-18	54.2
12	315	46.2	314	54.6	+2	48.8	5	58.6	-18	54.0
13	330	48.7	329	55.4		49.9	21	00.5		53.9
14	345	51.2	344	56.2		51.0	36	02.4		53.7
15	0	53.6	359	57.0		52.1	51	04.2		53.6
16	15	56.1	14	57.8		53.3	66	06.1		53.4
17	30	58.6	29	58.6	+2	54.4	81	07.9	-18	53.3
18	46	01.0	44	59.4	+2	55.5	96	09.8	-18	53.2
19	61	03.5	60	00.2		56.6	111	11.7		53.0
20	76	05.9	75	01.0		57.7	126	13.5		52.9
21	91	08.4	90	01.8	+2	58.9	141	15.4		52.7
22	106	10.9	105	02.6	+3	00.0	156	17.3		52.6
23	121	13.3	120	03.4	+3	01.1	171	19.1		52.4
24	136	15.8	135	04.2	+3	02.2	186	21.0	-18	52.3
Dif	—		+8		+11		+4		+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 7 PHE { 4 ^h : 60:3 12 ^h : 60:4 20 ^h : 60:5 PMG: 21 ^h 39 ^m R°: 62 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	176	29.1	-15 38.4	49	03.9	+26 56.8	19	60 N	6 26	7 16	8 01	11 19	104	7 00	29	
1	191	29.1	37.7	63	25.3	54.9	24	58	23	10	7 53	11 46	98	6 32	36	
2	206	29.0	36.9	77	46.7	52.8	24	56	20	05	45	12 08	92	6 10	40	
3	221	29.0	36.1	92	08.1	50.5	24	54	18	7 00	38	26	89	5 52	44	
4	236	29.0	35.4	106	29.5	48.0	24	52	15	6 56	32	41	86	37	46	
5	251	28.9	-15 34.6	120	50.9	45.3	24	50	6 13	6 52	7 26	12 54	84	5 24	47	
6	266	28.9	-15 33.8	135	12.3	42.4	24	45	6 08	6 43	7 14	13 21	80	4 56	52	
7	281	28.8	33.1	149	33.7	39.3	24	40	6 03	35	7 03	13 42	77	35	53	
8	296	28.8	32.3	163	55.1	36.0	24	35	5 58	28	6 55	14 00	74	17	55	
9	311	28.8	31.5	178	16.6	32.5	25	30	54	22	47	15	72	4 01	57	
10	326	28.7	30.7	192	38.1	28.8	25	20	45	11	34	14 41	69	3 35	60	
11	341	28.7	-15 30.0	206	59.6	24.9	25	10 N	5 35	6 00	6 22	15 03	66	3 12	62	
12	356	28.6	-15 29.2	221	21.1	20.8	25	0	5 24	5 49	6 11	15 24	63	2 50	64	
13	11	28.6	28.4	235	42.6	16.5	25	10 S	5 12	37	5 59	15 45	60	29	66	
14	26	28.6	27.6	250	04.2	12.1	26	20	4 57	24	47	16 07	57	2 06	68	
15	41	28.5	26.9	264	25.8	07.4	26	30	37	5 08	33	33	53	1 39	70	
16	56	28.5	26.1	278	47.5	02.5	27	35	25	4 58	25	16 48	51	23	72	
17	71	28.5	-15 25.3	293	09.2	57.4	27	40	4 10	4 46	5 15	17 05	49	1 05	73	
18	86	28.4	-15 24.5	307	30.9	52.2	27	45	3 51	4 32	5 04	17 26	45	0 42	75	
19	101	28.4	23.7	321	52.7	46.7	28	50	26	14	4 51	17 52	41	14	78	
20	116	28.4	23.0	336	14.5	41.1	28	52	3 14	4 05	44	18 05	38	0 00	79	
21	131	28.3	22.2	350	36.3	35.3	28	54	2 59	3 55	37	20	34	** ** *	**	
22	146	28.3	21.4	4	58.3	29.3	30	56	41	44	30	37	30	** ** *	**	
23	161	28.2	20.6	19	20.2	23.1	29	58	2 19	31	21	18 57	26	** ** *	**	
24	176	28.2	-15 19.9	33	42.2	16.7	30	60 S	1 49	3 16	4 11	19 23	18	** ** *	**	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 14 ^h 52 ^m 5		Mag: -4.8 PMG: 14 ^h 59 ^m		Mag: +1.3 PMG: 11 ^h 09 ^m		Mag: -1.9 PMG: 11 ^h 33 ^m		Mag: +0.7 PMG: 2 ^h 24 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	136	15.8	135	04.2	+3 02.2	192	46.8	-20 52.7	186	21.0	-18 52.3	324	00.4	+5 44.1
1	151	18.3	150	05.0	03.3	207	47.2	52.3	201	22.8	52.1	339	03.0	44.2
2	166	20.7	165	05.8	04.5	222	47.6	51.9	216	24.7	52.0	354	05.6	44.3
3	181	23.2	180	06.6	05.6	237	48.1	51.5	231	26.6	51.8	9	08.2	44.3
4	196	25.7	195	07.4	06.7	252	48.5	51.1	246	28.4	51.7	24	10.8	44.4
5	211	28.1	210	08.2	+3 07.8	267	49.0	-20 50.7	261	30.3	-18 51.5	39	13.4	+5 44.5
6	226	30.6	225	09.0	+3 08.9	282	49.4	-20 50.2	276	32.2	-18 51.4	54	16.0	+5 44.5
7	241	33.1	240	09.8	10.1	297	49.9	49.8	291	34.0	51.3	69	18.6	44.6
8	256	35.5	255	10.6	11.2	312	50.3	49.4	306	35.9	51.1	84	21.2	44.7
9	271	38.0	270	11.4	12.3	327	50.7	49.0	321	37.7	51.0	99	23.8	44.7
10	286	40.4	285	12.3	13.4	342	51.2	48.6	336	39.6	50.8	114	26.4	44.8
11	301	42.9	300	13.1	+3 14.5	357	51.6	-20 48.2	351	41.5	-18 50.7	129	29.0	+5 44.9
12	316	45.4	315	13.9	+3 15.6	12	52.1	-20 47.8	6	43.3	-18 50.5	144	31.6	+5 44.9
13	331	47.8	330	14.7	16.7	27	52.5	47.4	21	45.2	50.4	159	34.2	45.0
14	346	50.3	345	15.5	17.9	42	52.9	46.9	36	47.1	50.2	174	36.8	45.1
15	1	52.8	0	16.4	19.0	57	53.4	46.5	51	48.9	50.1	189	39.4	45.1
16	16	55.2	15	17.2	20.1	72	53.8	46.1	66	50.8	49.9	204	42.0	45.2
17	31	57.7	30	18.0	+3 21.2	87	54.3	-20 45.7	81	52.6	-18 49.8	219	44.6	+5 45.3
18	47	00.2	45	18.8	+3 22.3	102	54.7	-20 45.3	96	54.5	-18 49.6	234	47.2	+5 45.3
19	62	02.6	60	19.7	23.4	117	55.2	44.9	111	56.4	49.5	249	49.8	45.4
20	77	05.1	75	20.5	24.5	132	55.6	44.4	126	58.2	49.4	264	52.4	45.5
21	92	07.5	90	21.3	25.6	147	56.0	44.0	142	00.1	49.2	279	55.0	45.5
22	107	10.0	105	22.2	26.7	162	56.5	43.6	157	02.0	49.1	294	57.6	45.6
23	122	12.5	120	23.0	27.9	177	56.9	43.2	172	03.8	48.9	310	00.2	45.7
24	137	14.9	135	23.9	+3 29.0	192	57.4	-20 42.8	187	05.7	-18 48.8	325	02.8	+5 45.7
Dif	—		+8 +11		+4 +4		+19 +1		+26 +1		+26 +1		+26 +1	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 12 ^h 14 ^m 1			Edad: 11 ^d 7 PHE { 4 ^h : 60'6 12 ^h : 60'6 20 ^h : 60'7 R°: 59 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m
0	176	28.2	-15	19.9	33	42.2	+25	16.7	60 N	16 30	17 16	18 06	13 03 112	7 29 13
1	191	28.2		19.1	48	04.3		10.1	58	39	22	08	24 105	7 08 19
2	206	28.1		18.3	62	26.5	+25	03.3	56	46	26	11	40 100	6 50 25
3	221	28.1		17.5	76	48.7	+24	56.4	54	53	31	13	13 55 95	36 28
4	236	28.1		16.7	91	10.9		49.3	52	16 59	35	15	14 07 92	23 31
5	251	28.0	-15	15.9	105	33.3	+24	42.0	50	17 05	17 39	18 17	14 18 89	6 11 35
6	266	28.0	-15	15.2	119	55.7	+24	34.5	45	17 17	17 47	18 22	14 41 83	5 48 39
7	281	28.0		14.4	134	18.1		26.8	40	26	17 55	27	14 59 79	28 44
8	296	28.0		13.6	148	40.7		19.0	35	35	18 01	31	15 14 76	5 12 47
9	311	27.9		12.8	163	03.3		10.9	30	42	07	35	27 73	4 58 50
10	326	27.9		12.0	177	26.0	+24	02.8	20	17 55	18	44	15 50 67	35 54
11	341	27.9	-15	11.2	191	48.7	+23	54.4	10 N	18 07	18 28	18 54	16 09 63	4 14 58
12	356	27.8	-15	10.5	206	11.6	+23	45.9	0	18 18	18 39	19 04	16 27 59	3 54 62
13	11	27.8		09.7	220	34.5		37.2	10 S	29	18 50	16	16 45 55	35 64
14	26	27.8		08.9	234	57.5		28.3	20	40	19 03	31	17 04 51	3 14 68
15	41	27.7		08.1	249	20.6		19.2	30	18 54	19	19 49	26 46	2 49 73
16	56	27.7		07.3	263	43.7		10.0	35	19 02	29	20 01	39 43	35 75
17	71	27.7	-15	06.5	278	07.0	+23	00.7	40	19 11	19 40	20 16	17 54 39	2 18 78
18	86	27.7	-15	05.7	292	30.3	+22	51.1	45	19 22	19 54	20 34	18 11 35	1 57 83
19	101	27.6		04.9	306	53.8		41.4	50	35	20 11	20 58	33 29	32 88
20	116	27.6		04.2	321	17.3		31.6	52	41	20	21 10	43 26	19 91
21	131	27.6		03.4	335	40.9		21.6	54	48	29	24	18 54 23	1 05 94
22	146	27.6		02.6	350	04.6		11.4	56	19 55	39	21 41	19 07 20	0 49 98
23	161	27.5		01.8	4	28.4	+22	01.1	58	20 04	20 52	22 01	23 14	29 103
24	176	27.5	-15	01.0	18	52.3	+21	50.7	60 S	20 13	21 06	22 29	19 41 8	0 03 112

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 14 ^h 48 ^m 6		Mag: -4.8 PMG: 14 ^h 58 ^m		Mag: +1.3 PMG: 11 ^h 08 ^m		Mag: -1.9 PMG: 11 ^h 30 ^m		Mag: +0.7 PMG: 2 ^h 19 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	137	14.9	135	23.9	192	57.4	187	05.7	325	02.8
1	152	17.4	150	24.7	207	57.8	202	07.6	340	05.4
2	167	19.9	165	25.5	222	58.3	217	09.4	355	08.0
3	182	22.3	180	26.4	237	58.7	232	11.3	10	10.6
4	197	24.8	195	27.2	252	59.1	247	13.1	25	13.2
5	212	27.3	210	28.1	267	59.6	262	15.0	40	15.8
6	227	29.7	225	28.9	283	00.0	277	16.9	55	18.4
7	242	32.2	240	29.8	298	00.5	292	18.7	70	21.0
8	257	34.7	255	30.6	313	00.9	307	20.6	85	23.6
9	272	37.1	270	31.5	328	01.4	322	22.5	100	26.2
10	287	39.6	285	32.3	343	01.8	337	24.3	115	28.8
11	302	42.0	300	33.2	358	02.3	352	26.2	130	31.4
12	317	44.5	315	34.1	13	02.7	7	28.1	145	34.0
13	332	47.0	330	34.9	28	03.1	22	29.9	160	36.6
14	347	49.4	345	35.8	44	03.6	37	31.8	175	39.3
15	2	51.9	0	36.6	55	04.0	52	33.7	190	41.9
16	17	54.4	15	37.5	73	04.5	67	35.5	205	44.5
17	32	56.8	30	38.4	88	04.9	82	37.4	220	47.1
18	47	59.3	45	39.2	103	05.4	97	39.2	235	49.7
19	63	01.8	60	40.1	118	05.8	112	41.1	250	52.3
20	78	04.2	75	41.0	133	06.3	127	43.0	265	54.9
21	93	06.7	90	41.9	148	06.7	142	44.8	280	57.5
22	108	09.2	105	42.7	163	07.2	157	46.7	296	00.1
23	123	11.6	120	43.6	178	07.6	172	48.6	311	02.7
24	138	14.1	135	44.5	193	08.1	187	50.4	326	05.3
Dif	—		+9		+11		+4		+1	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16'2			Edad: 12 ^d 7	PHE	4 ^h : 60'6 12 ^h : 60'6 20 ^h : 60'5 R°: 53 ^m				Náutico			Civil	Hora		R°	Hora		R°
	PMG: 12 ^h 14 ^m 2																		
	hG ☉	Dec		hG ☾	Dif	Dec	Dif												
h	°	'	°	°	'	°	'	°		h	m	h	m	h	m	h	m	m	
0	176	27.5	-15	01.0	18	52.3	+21	50.7	60 N	6	21	7	11	7	56	14	55	109	
1	191	27.5	-15	00.2	33	16.3	50	40.1	58	19	06	48	15	09	103	7	42	6	
2	206	27.5	-14	59.4	47	40.4	51	29.3	56	17	01	41	20	99	15	16			
3	221	27.4		58.6	62	04.6	52	18.4	54	14	56	34	30	95	7	04	20		
4	236	27.4		57.8	76	28.8	52	+21	52	12	52	28	39	92	6	54	23		
5	251	27.4	-14	57.0	90	53.2	54	+20	50	6	10	6	49	7	23	15	47	89	
6	266	27.4	-14	56.2	105	17.7	55	+20	45	6	06	6	40	7	11	16	04	83	
7	281	27.3		55.5	119	42.3	56	33.4	40	6	01	33	7	01	18	78	6	12	
8	296	27.3		54.7	134	06.9	56	21.8	35	5	57	27	6	53	30	73	5	59	
9	311	27.3		53.9	148	31.7	58	+20	30	53	21	46	40	70		48	43		
10	326	27.3		53.1	162	56.6	59	+19	20	44	10	33	16	57	65	29	48		
11	341	27.2	-14	52.3	177	21.6	60	+19	10 N	5	35	6	00	6	21	17	12	52	
12	356	27.2	-14	51.5	191	46.6	60	+19	0	5	24	5	49	6	11	17	26	55	
13	11	27.2		50.7	206	11.8	62	21.8	10 S	5	13	38	6	00	40	50		39	
14	26	27.2		49.9	220	37.1	63	+19	20	4	58	25	5	48	17	55	45	22	
15	41	27.2		49.1	235	02.5	64	+18	30	39	09	35	18	12	40	4	02	72	
16	56	27.1		48.3	249	28.0	65	44.4	35	27	5	00	22	36		3	50	75	
17	71	27.1	-14	47.5	263	53.6	66	+18	40	4	13	4	48	5	18	18	33	32	
18	86	27.1	-14	46.7	278	19.2	66	+18	45	3	55	4	35	5	07	18	46	28	
19	101	27.1		45.9	292	45.0	68	+18	50	31	18	4	54	19	02	22	3	00	
20	116	27.1		45.1	307	10.9	69	+17	52	19	09	48	09	20		2	50	93	
21	131	27.0		44.3	321	36.9	70	39.6	54	3	05	4	00	42	17	17		39	
22	146	27.0		43.5	336	03.0	71	26.3	56	2	49	3	50	34	27	13		27	
23	161	27.0		42.7	350	29.2	72	+17	58	28	37	26	37	9		2	12	106	
24	176	27.0	-14	41.9	4	55.5	73	+16	60 S	2	01	3	23	4	16	19	49	4	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 14 ^h 44 ^m 6		Mag: -4.8 PMG: 14 ^h 56 ^m		Mag: +1.3 PMG: 11 ^h 07 ^m		Mag: -1.9 PMG: 11 ^h 27 ^m		Mag: +0.7 PMG: 2 ^h 15 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	138	14.1	135	44.5	+3	55.4	193	08.1	-20	32.6
1	153	16.5	150	45.4		56.5	208	08.5		32.2
2	168	19.0	165	46.2		57.6	223	08.9		31.8
3	183	21.5	180	47.1		58.7	238	09.4		31.3
4	198	23.9	195	48.0	+3	59.8	253	09.8		30.9
5	213	26.4	210	48.9	+4	00.9	268	10.3	-20	30.5
6	228	28.9	225	49.8	+4	02.0	283	10.7	-20	30.0
7	243	31.3	240	50.7		03.1	298	11.2		29.6
8	258	33.8	255	51.6		04.2	313	11.6		29.2
9	273	36.3	270	52.5		05.2	328	12.1		28.7
10	288	38.7	285	53.4		06.3	343	12.5		28.3
11	303	41.2	300	54.3	+4	07.4	358	13.0	-20	27.9
12	318	43.7	315	55.2	+4	08.5	13	13.4	-20	27.5
13	333	46.1	330	56.1		09.6	28	13.9		27.0
14	348	48.6	345	57.0		10.7	43	14.3		26.6
15	3	51.0	0	57.9		11.8	58	14.8		26.2
16	18	53.5	15	58.8		12.9	73	15.2		25.7
17	33	56.0	30	59.7	+4	14.0	88	15.7	-20	25.3
18	48	58.4	46	00.6	+4	15.0	103	16.1	-20	24.9
19	64	00.9	61	01.5		16.1	118	16.6		24.4
20	79	03.4	76	02.4		17.2	133	17.0		24.0
21	94	05.8	91	03.3		18.3	148	17.5		23.5
22	109	08.3	106	04.2		19.4	163	17.9		23.1
23	124	10.8	121	05.1		20.5	178	18.4		22.7
24	139	13.2	136	06.1	+4	21.6	193	18.8	-20	22.2
Dif	—		+9	+11			+4	+4		+19
										+1
										+26
										+1

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 12 ^h 14 ^m 2			Edad: 13 ^d 7 PHE { 4 ^h : 60'4 12 ^h : 60'3 20 ^h : 60'1 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	176	27.0	-14	41.9	4	55.5	+16	59.4	60 N	16 36	17 21	18 10	16 44 103	7 48 4
1	191	27.0		41.1	19	21.9	74	45.9 ¹³⁵	58	44	26	13	52 98	39 8
2	206	27.0		40.3	33	48.5	76	32.2 ¹³⁷	56	51	31	15	16 59 94	31 11
3	221	26.9		39.5	48	15.1	76	18.4 ¹³⁸	54	16 57	35	17	17 05 91	24 14
4	236	26.9		38.7	62	41.8	77	+16 04.5 ¹³⁹	52	17 03	39	19	11 88	17 18
5	251	26.9	-14	37.9	77	08.6	78	+15 50.5 ¹⁴⁰	50	17 08	17 42	18 20	17 16 85	7 11 20
6	266	26.9	-14	37.1	91	35.5	79	+15 36.5 ¹⁴⁰	45	17 19	17 50	18 25	17 27 79	6 59 25
7	281	26.9		36.3	106	02.5	80	22.3 ¹⁴²	40	29	17 57	29	36 74	48 30
8	296	26.9		35.5	120	29.6	81	+15 08.1 ¹⁴²	35	37	18 03	33	43 71	39 34
9	311	26.9		34.7	134	56.8	82	+14 53.8 ¹⁴³	30	44	09	37	17 50 67	31 37
10	326	26.8		33.9	149	24.1	83	39.4 ¹⁴⁴	20	17 56	19	45	18 02 61	17 43
11	341	26.8	-14	33.1	163	51.5	84	+14 24.9 ¹⁴⁵	10 N	18 07	18 29	18 54	18 12 56	6 04 49
12	356	26.8	-14	32.2	178	19.0	85	+14 10.4 ¹⁴⁵	0	18 18	18 39	19 04	18 21 51	5 53 53
13	11	26.8		31.4	192	46.6	86	+13 55.7 ¹⁴⁷	10 S	28	18 50	15	30 47	41 58
14	26	26.8		30.6	207	14.3	87	41.0 ¹⁴⁷	20	39	19 02	29	40 41	28 63
15	41	26.8		29.8	221	42.1	88	26.3 ¹⁴⁷	30	18 52	18	48	52 35	14 68
16	56	26.8		29.0	236	10.0	89	+13 11.4 ¹⁴⁹	35	19 00	27	19 59	18 58 32	5 05 72
17	71	26.8	-14	28.2	250	38.0	90	+12 56.5 ¹⁴⁹	40	19 09	19 38	20 13	19 05 28	4 55 77
18	86	26.7	-14	27.4	265	06.0	90	+12 41.5 ¹⁵⁰	45	19 19	19 51	20 31	19 14 23	4 44 81
19	101	26.7		26.6	279	34.2	92	26.5 ¹⁵⁰	50	31	20 08	20 53	24 18	29 88
20	116	26.7		25.8	294	02.4	92	+12 11.4 ¹⁵¹	52	37	15	21 05	29 15	23 90
21	131	26.7		25.0	308	30.8	94	+11 56.3 ¹⁵¹	54	43	24	18	34 13	15 94
22	146	26.7		24.2	322	59.2	94	41.0 ¹⁵³	56	51	34	34	40 9	4 07 97
23	161	26.7		23.4	337	27.7	95	25.8 ¹⁵²	58	19 59	20 46	21 53	46 6	3 58 101
24	176	26.7	-14	22.5	351	56.3	96	+11 10.5 ¹⁵³	60 S	20 08	21 00	22 18	19 53 3	3 47 106

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 14 ^h 40 ^m 7		Mag: -4.8 PMG: 14 ^h 55 ^m		Mag: +1.3 PMG: 11 ^h 06 ^m		Mag: -1.9 PMG: 11 ^h 24 ^m		Mag: +0.7 PMG: 2 ^h 11 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	139	13.2	136	06.1	+4	21.6	193	18.8	-20	22.2
1	154	15.7	151	07.0		22.6	208	19.3		21.8
2	169	18.2	166	07.9		23.7	223	19.7		21.4
3	184	20.6	181	08.8		24.8	238	20.2		20.9
4	199	23.1	196	09.8		25.9	253	20.6		20.5
5	214	25.5	211	10.7	+4	27.0	268	21.1	-20	20.0
6	229	28.0	226	11.6	+4	28.0	283	21.5	-20	19.6
7	244	30.5	241	12.5		29.1	298	22.0		19.2
8	259	32.9	256	13.5		30.2	313	22.4		18.7
9	274	35.4	271	14.4		31.3	328	22.9		18.3
10	289	37.9	286	15.4		32.4	343	23.3		17.8
11	304	40.3	301	16.3	+4	33.4	358	23.8	-20	17.4
12	319	42.8	316	17.2	+4	34.5	13	24.2	-20	17.0
13	334	45.3	331	18.2		35.6	28	24.7		16.5
14	349	47.7	346	19.1		36.7	43	25.1		16.1
15	4	50.2	1	20.1		37.7	58	25.6		15.6
16	19	52.6	16	21.0		38.8	73	26.0		15.2
17	34	55.1	31	22.0	+4	39.9	88	26.5	-20	14.7
18	49	57.6	46	22.9	+4	41.0	103	26.9	-20	14.3
19	65	00.0	61	23.9		42.0	118	27.4		13.9
20	80	02.5	76	24.8		43.1	133	27.8		13.4
21	95	05.0	91	25.8		44.2	148	28.3		13.0
22	110	07.4	106	26.7		45.2	163	28.8		12.5
23	125	09.9	121	27.7		46.3	178	29.2		12.1
24	140	12.4	136	28.6	+4	47.4	193	29.7	-20	11.6
Dif	—		+9		+11		+5		+4	
							+19		+1	
									+26	
									+1	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'2			Edad: 14 ^d 7 PHE	SD: 16'3			Principio del crepúsculo		Salida de Luna	Puesta de Luna					
	PMG: 12 ^h 14 ^m 2				PMG: 0 ^h 33 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	176	26.7	-14	22.5	351	56.3	+11	10.5	60 N	6 17	7 06	7 51	18 27	97	7 52	2
1	191	26.7		21.7	6	25.0	97	+10	55.1 ¹⁵⁴	58	15	7 01	43	30	94	47 6
2	206	26.7		20.9	20	53.8	98		39.7 ¹⁵⁴	56	13	6 57	36	33	91	42 10
3	221	26.7		20.1	35	22.6	98		24.2 ¹⁵⁵	54	11	53	30	36	87	38 12
4	236	26.7		19.3	49	51.6 ¹⁰⁰		+10	08.7 ¹⁵⁵	52	09	49	24	39	84	35 14
5	251	26.6	-14	18.5	64	20.6 ¹⁰⁰		+9	53.1 ¹⁵⁶	50	6 07	6 45	7 19	18 41	82	7 31 17
6	266	26.6	-14	17.7	78	49.7 ¹⁰¹		+9	37.5 ¹⁵⁶	45	6 03	6 38	7 08	18 46	76	7 24 22
7	281	26.6		16.9	93	18.9 ¹⁰²			21.9 ¹⁵⁶	40	5 59	31	6 59	50	72	18 27
8	296	26.6		16.0	107	48.2 ¹⁰³		+9	06.2 ¹⁵⁷	35	55	25	51	54	68	13 30
9	311	26.6		15.2	122	17.5 ¹⁰³		+8	50.5 ¹⁵⁷	30	51	19	44	18 57	64	08 34
10	326	26.6		14.4	136	46.9 ¹⁰⁴			34.8 ¹⁵⁷	20	43	6 09	32	19 03	58	7 00 39
11	341	26.6	-14	13.6	151	16.5 ¹⁰⁶		+8	19.0 ¹⁵⁸	10 N	5 34	5 59	6 21	19 08	53	6 53 44
12	356	26.6	-14	12.8	165	46.0 ¹⁰⁵		+8	03.2 ¹⁵⁸	0	5 25	5 49	6 11	19 12	48	6 46 49
13	11	26.6		12.0	180	15.7 ¹⁰⁷		+7	47.3 ¹⁵⁹	10 S	5 13	39	6 00	17	43	39 54
14	26	26.6		11.1	194	45.4 ¹⁰⁷			31.5 ¹⁵⁸	20	4 59	26	5 49	21	39	31 60
15	41	26.6		10.3	209	15.2 ¹⁰⁸		+7	15.6 ¹⁵⁹	30	41	11	36	27	32	22 66
16	56	26.6		09.5	223	45.1 ¹⁰⁹		+6	59.7 ¹⁵⁹	35	30	5 02	29	30	29	17 70
17	71	26.6	-14	08.7	238	15.0 ¹⁰⁹		+6	43.8 ¹⁵⁹	40	4 16	4 51	5 20	19 33	26	6 12 73
18	86	26.6	-14	07.9	252	45.0 ¹¹⁰		+6	27.8 ¹⁶⁰	45	3 58	4 38	5 10	19 37	22	6 05 78
19	101	26.6		07.1	267	15.1 ¹¹¹		+6	11.9 ¹⁵⁹	50	36	22	4 58	42	16	5 57 83
20	116	26.6		06.2	281	45.2 ¹¹¹		+5	55.9 ¹⁶⁰	52	24	14	52	44	14	53 86
21	131	26.6		05.4	296	15.4 ¹¹²			39.9 ¹⁶⁰	54	3 11	4 05	46	47	11	49 89
22	146	26.6		04.6	310	45.7 ¹¹³			23.9 ¹⁶⁰	56	2 55	3 55	39	49	9	44 93
23	161	26.6		03.8	325	16.0 ¹¹³		+5	07.9 ¹⁶⁰	58	36	43	31	52	6	39 96
24	176	26.6	-14	02.9	339	46.4 ¹¹⁴		+4	51.8 ¹⁶¹	60 S	2 11	3 30	4 22	19 56	2	5 33 100

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 14 ^h 36 ^m 8		Mag: -4.8 PMG: 14 ^h 53 ^m		Mag: +1.3 PMG: 11 ^h 06 ^m		Mag: -2.0 PMG: 11 ^h 21 ^m		Mag: +0.7 PMG: 2 ^h 07 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	140	12.4	136	28.6	+4	47.4	193	29.7	-20	11.6	189	20.0	-18	38.2	328	10.4	+5	50.7
1	155	14.8	151	29.6		48.5	208	30.1		11.2	204	21.9		38.0	343	13.0		50.8
2	170	17.3	166	30.6		49.5	223	30.6		10.7	219	23.7		37.9	358	15.6		50.8
3	185	19.8	181	31.5		50.6	238	31.0		10.3	234	25.6		37.7	13	18.2		50.9
4	200	22.2	196	32.5		51.7	253	31.5		09.8	249	27.5		37.6	28	20.8		51.0
5	215	24.7	211	33.5	+4	52.7	268	31.9	-20	09.4	264	29.3	-18	37.4	43	23.4	+5	51.1
6	230	27.1	226	34.4	+4	53.8	283	32.4	-20	08.9	279	31.2	-18	37.3	58	26.0	+5	51.1
7	245	29.6	241	35.4		54.9	298	32.8		08.5	294	33.1		37.1	73	28.6		51.2
8	260	32.1	256	36.4		55.9	313	33.3		08.0	309	35.0		37.0	88	31.3		51.3
9	275	34.5	271	37.4		57.0	328	33.7		07.6	324	36.8		36.8	103	33.9		51.3
10	290	37.0	286	38.3		58.0	343	34.2		07.1	339	38.7		36.7	118	36.5		51.4
11	305	39.5	301	39.3	+4	59.1	358	34.7	-20	06.7	354	40.6	-18	36.5	133	39.1	+5	51.5
12	320	41.9	316	40.3	+5	00.2	13	35.1	-20	06.2	9	42.4	-18	36.4	148	41.7	+5	51.5
13	335	44.4	331	41.3		01.2	28	35.6		05.8	24	44.3		36.3	163	44.3		51.6
14	350	46.9	346	42.3		02.3	43	36.0		05.3	39	46.2		36.1	178	46.9		51.7
15	5	49.3	1	43.3		03.4	58	36.5		04.9	54	48.0		36.0	193	49.5		51.8
16	20	51.8	16	44.3		04.4	73	36.9		04.4	69	49.9		35.8	208	52.1		51.8
17	35	54.3	31	45.3	+5	05.5	88	37.4	-20	04.0	84	51.8	-18	35.7	223	54.8	+5	51.9
18	50	56.7	46	46.2	+5	06.5	103	37.8	-20	03.5	99	53.6	-18	35.5	238	57.4	+5	52.0
19	65	59.2	61	47.2		07.6	118	38.3		03.1	114	55.5		35.4	254	00.0		52.0
20	81	01.6	76	48.2		08.7	133	38.8		02.6	129	57.4		35.2	269	02.6		52.1
21	96	04.1	91	49.2		09.7	148	39.2		02.2	144	59.2		35.1	284	05.2		52.2
22	111	06.6	106	50.2		10.8	163	39.7		01.7	160	01.1		34.9	299	07.8		52.3
23	126	09.0	121	51.2		11.8	178	40.1		01.3	175	03.0		34.8	314	10.4		52.3
24	141	11.5	136	52.2	+5	12.9	193	40.6	-20	00.8	190	04.8	-18	34.6	329	13.0	+5	52.4
Dif	—		+10	+11		+5	+5			+19	+1			+26		+1		

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 12 ^h 14 ^m 2			Edad: 15 ^d 7 PHE { 4 ^h : 59:2 12 ^h : 59:0 20 ^h : 58:7 Rº: 47 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	Rº	Hora	Rº
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m	h m m
0	176	26.6	-14	02.9	339	46.4	+4	51.8	60 N	16 41	17 26	18 15	20 04 95	7 54 2	
1	191	26.6		02.1	354	16.9 ¹¹⁵		35.8 ¹⁶⁰	58	49	30	17	04 90	53 5	
2	206	26.6		01.3	8	47.4 ¹¹⁵		19.8 ¹⁶⁰	56	16 55	35	19	04 87	52 8	
3	221	26.6	-14	00.5	23	18.0 ¹¹⁶	+4	03.7 ¹⁶¹	54	17 01	39	20	03 85	50 1	
4	236	26.6	-13	59.7	37	48.6 ¹¹⁶	+3	47.7 ¹⁶⁰	52	07	42	22	03 82	49 14	
5	251	26.6	-13	58.8	52	19.3 ¹¹⁷	+3	31.6 ¹⁶¹	50	17 12	17 45	18 23	20 03 79	7 48 16	
6	266	26.6	-13	58.0	66	50.0 ¹¹⁷	+3	15.6 ¹⁶⁰	45	17 22	17 53	18 27	20 02 74	7 46 21	
7	281	26.6		57.2	81	20.8 ¹¹⁸	+2	59.5 ¹⁶¹	40	31	17 59	31	02 69	45 25	
8	296	26.6		56.4	95	51.7 ¹¹⁹		43.5 ¹⁶⁰	35	39	18 05	35	02 65	43 29	
9	311	26.6		55.5	110	22.6 ¹¹⁹		27.4 ¹⁶¹	30	46	10	38	01 63	42 32	
10	326	26.6		54.7	124	53.5 ¹¹⁹	+2	11.4 ¹⁶⁰	20	17 57	20	46	01 56	39 38	
11	341	26.6	-13	53.9	139	24.5 ¹²⁰	+1	55.4 ¹⁶⁰	10 N	18 08	18 29	18 54	20 01 51	7 37 43	
12	356	26.6	-13	53.1	153	55.6 ¹²¹	+1	39.4 ¹⁶⁰	0	18 18	18 39	19 04	20 00 47	7 35 47	
13	11	26.6		52.2	168	26.7 ¹²¹		23.4 ¹⁶⁰	10 S	28	18 49	15	00 42	33 52	
14	26	26.6		51.4	182	57.8 ¹²¹	+1	07.4 ¹⁶⁰	20	38	19 01	28	20 00 37	31 57	
15	41	26.6		50.6	197	29.0 ¹²²	+0	51.4 ¹⁶⁰	30	51	16	46	19 59 32	28 63	
16	56	26.6		49.8	212	00.2 ¹²²		35.5 ¹⁵⁹	35	18 58	25	19 57	59 28	27 66	
17	71	26.6	-13	48.9	226	31.5 ¹²³	+0	19.5 ¹⁶⁰	40	19 06	19 35	20 10	19 59 24	7 25 70	
18	86	26.6	-13	48.1	241	02.8 ¹²³	+0	03.6 ¹⁵⁹	45	19 16	19 48	20 27	19 59 20	7 23 75	
19	101	26.6		47.3	255	34.1 ¹²³	-0	12.3 ¹⁵⁹	50	28	20 04	20 49	58 16	20 81	
20	116	26.6		46.4	270	05.5 ¹²⁴		28.2 ¹⁵⁹	52	33	11	21 00	58 13	19 83	
21	131	26.6		45.6	284	37.0 ¹²⁵		44.0 ¹⁵⁸	54	39	20	12	58 11	18 86	
22	146	26.6		44.8	299	08.4 ¹²⁴	-0	59.9 ¹⁵⁹	56	46	29	27	58 8	17 88	
23	161	26.6		44.0	313	39.9 ¹²⁵	-1	15.7 ¹⁵⁸	58	19 54	40	21 45	58 5	15 92	
24	176	26.6	-13	43.1	328	11.4 ¹²⁵	-1	31.5 ¹⁵⁸	60 S	20 02	20 53	22 08	19 58 1	7 13 96	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 14 ^h 32 ^m 8		Mag: -4.8 PMG: 14 ^h 52 ^m		Mag: +1.3 PMG: 11 ^h 05 ^m		Mag: -2.0 PMG: 11 ^h 18 ^m		Mag: +0.7 PMG: 2 ^h 03 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	141	11.5	136	52.2	+5	12.9	190	04.8	-18	34.6
1	156	14.0	151	53.2		13.9	205	06.7		34.5
2	171	16.4	166	54.3		15.0	220	08.6		34.3
3	186	18.9	181	55.3		16.0	235	10.4		34.2
4	201	21.4	196	56.3		17.1	250	12.3		34.0
5	216	23.8	211	57.3	+5	18.1	265	14.2	-18	33.9
6	231	26.3	226	58.3	+5	19.2	280	16.1	-18	33.7
7	246	28.7	241	59.3		20.2	295	17.9		33.6
8	261	31.2	257	00.3		21.3	310	19.8		33.4
9	276	33.7	272	01.4		22.3	325	21.7		33.3
10	291	36.1	287	02.4		23.4	340	23.5		33.1
11	306	38.6	302	03.4	+5	24.4	355	25.4	-18	33.0
12	321	41.1	317	04.4	+5	25.5	10	27.3	-18	32.8
13	336	43.5	332	05.5		26.5	25	29.1		32.7
14	351	46.0	347	06.5		27.6	40	31.0		32.5
15	6	48.5	2	07.5		28.6	55	32.9		32.4
16	21	50.9	17	08.6		29.7	70	34.7		32.2
17	36	53.4	32	09.6	+5	30.7	85	36.6	-18	32.1
18	51	55.9	47	10.6	+5	31.8	100	38.5	-18	31.9
19	66	58.3	62	11.7		32.8	115	40.4		31.8
20	82	00.8	77	12.7		33.8	130	42.2		31.7
21	97	03.2	92	13.8		34.9	145	44.1		31.5
22	112	05.7	107	14.8		35.9	160	46.0		31.4
23	127	08.2	122	15.9		37.0	175	47.8		31.2
24	142	10.6	137	16.9	+5	38.0	190	49.7	-18	31.1
Dif	—		+10		+10		+19		+1	
					+5		+1		+26	

UT	SOL			LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16 ^d 2 PMG: 12 ^h 14 ^m 2			Edad: 16 ^d 7 PHE { 4 ^h : 58 ^m 4 12 ^h : 58 ^m 1 20 ^h : 57 ^m 8 PMG: 2 ^h 11 ^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	26.6	-13	43.1	328	11.4	-1	31.5	60 N	6 12	7 01	7 46	21 39	92	7 56	2
1	191	26.6		42.3	342	43.0	-1	47.2	58	11	6 57	38	34	89	7 58	6
2	206	26.7		41.5	357	14.6	-2	02.9	56	09	53	32	31	85	8 00	8
3	221	26.7		40.6	11	46.2		18.6	54	07	49	26	28	82	01	1
4	236	26.7		39.8	26	17.9		34.3	52	06	45	21	25	79	03	14
5	251	26.7	-13	39.0	40	49.6	-2	49.9	50	6 04	6 42	7 16	21 22	77	8 04	16
6	266	26.7	-13	38.1	55	21.3	-3	05.5	45	6 00	6 35	7 05	21 16	72	8 07	21
7	281	26.7		37.3	69	53.0		21.1	40	5 57	29	6 57	11	68	10	25
8	296	26.7		36.5	84	24.8		36.6	35	53	23	49	07	64	12	28
9	311	26.7		35.6	98	56.6	-3	52.1	30	50	18	42	21 04	60	14	31
10	326	26.7		34.8	113	28.4	-4	07.5	20	42	6 08	31	20 57	56	17	37
11	341	26.7	-13	34.0	128	00.2	-4	22.9	10 N	5 34	5 59	6 21	20 52	50	8 20	42
12	356	26.7	-13	33.1	142	32.0	-4	38.3	0	5 25	5 50	6 11	20 47	46	8 22	47
13	11	26.8		32.3	157	03.9	-4	53.6	10 S	14	39	6 01	42	42	25	51
14	26	26.8		31.5	171	35.8	-5	08.9	20	5 01	27	5 50	37	37	28	56
15	41	26.8		30.6	186	07.7		24.1	30	4 43	13	38	31	32	31	62
16	56	26.8		29.8	200	39.6		39.3	35	32	5 04	31	27	29	33	65
17	71	26.8	-13	28.9	215	11.6	-5	54.4	40	4 19	4 54	5 23	20 23	26	8 35	69
18	86	26.8	-13	28.1	229	43.5	-6	09.5	45	4 02	4 41	5 13	20 19	21	8 38	73
19	101	26.8		27.3	244	15.5		24.5	50	3 40	25	5 01	14	16	41	78
20	116	26.8		26.4	258	47.5		39.5	52	29	18	4 56	11	15	42	81
21	131	26.9		25.6	273	19.4	-6	54.4	54	17	10	50	09	11	44	83
22	146	26.9		24.8	287	51.4	-7	09.3	56	3 02	4 00	43	06	9	45	87
23	161	26.9		23.9	302	23.4		24.2	58	2 44	3 49	36	20 03	6	47	90
24	176	26.9	-13	23.1	316	55.5	-7	38.9	60 S	2 21	3 36	4 27	19 59	3	8 49	94

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 14 ^h 28 ^m 9		Mag: -4.8 PMG: 14 ^h 50 ^m		Mag: +1.3 PMG: 11 ^h 04 ^m		Mag: -2.0 PMG: 11 ^h 15 ^m		Mag: +0.7 PMG: 1 ^h 59 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	142	10.6	137	16.9	+5	38.0	193	51.6	-19	49.8	190	49.7	-18	31.1	330	15.7	+5	54.1
1	157	13.1	152	18.0		39.0	208	52.1		49.3	205	51.6		30.9	345	18.4		54.2
2	172	15.6	167	19.0		40.1	223	52.5		48.8	220	53.4		30.8	0	21.0		54.3
3	187	18.0	182	20.1		41.1	238	53.0		48.4	235	55.3		30.6	15	23.6		54.3
4	202	20.5	197	21.1		42.2	253	53.4		47.9	250	57.2		30.5	30	26.2		54.4
5	217	23.0	212	22.2	+5	43.2	268	53.9	-19	47.4	265	59.1	-18	30.3	45	28.8	+5	54.5
6	232	25.4	227	23.2	+5	44.2	283	54.4	-19	47.0	281	00.9	-18	30.2	60	31.4	+5	54.6
7	247	27.9	242	24.3		45.3	298	54.8		46.5	296	02.8		30.0	75	34.0		54.6
8	262	30.3	257	25.4		46.3	313	55.3		46.0	311	04.7		29.9	90	36.7		54.7
9	277	32.8	272	26.4		47.3	328	55.7		45.6	326	06.5		29.7	105	39.3		54.8
10	292	35.3	287	27.5		48.4	343	56.2		45.1	341	08.4		29.6	120	41.9		54.8
11	307	37.7	302	28.6	+5	49.4	358	56.7	-19	44.6	356	10.3	-18	29.4	135	44.5	+5	54.9
12	322	40.2	317	29.6	+5	50.4	13	57.1	-19	44.2	11	12.2	-18	29.3	150	47.1	+5	55.0
13	337	42.7	332	30.7		51.5	28	57.6		43.7	26	14.0		29.1	165	49.7		55.1
14	352	45.1	347	31.8		52.5	43	58.1		43.2	41	15.9		29.0	180	52.3		55.1
15	7	47.6	2	32.9		53.5	58	58.5		42.8	56	17.8		28.8	195	55.0		55.2
16	22	50.1	17	34.0		54.6	73	59.0		42.3	71	19.6		28.7	210	57.6		55.3
17	37	52.5	32	35.0	+5	55.6	88	59.5	-19	41.8	86	21.5	-18	28.5	226	00.2	+5	55.4
18	52	55.0	47	36.1	+5	56.6	103	59.9	-19	41.3	101	23.4	-18	28.4	241	02.8	+5	55.4
19	67	57.5	62	37.2		57.6	119	00.4		40.9	116	25.2		28.2	256	05.4		55.5
20	82	59.9	77	38.3		58.7	134	00.8		40.4	131	27.1		28.1	271	08.0		55.6
21	98	02.4	92	39.4	+5	59.7	149	01.3		39.9	146	29.0		27.9	286	10.7		55.6
22	113	04.8	107	40.5	+6	00.7	164	01.8		39.5	161	30.9		27.8	301	13.3		55.7
23	128	07.3	122	41.6		01.7	179	02.2		39.0	176	32.7		27.6	316	15.9		55.8
24	143	09.8	137	42.7	+6	02.8	194	02.7	-19	38.5	191	34.6	-18	27.5	331	18.5	+5	55.9
Dif	—		+11 +10		+5 +5		+19 +1		+26 +1		+26 +1		+26 +1		+26 +1		+26 +1	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16:2 PMG: 12 ^h 14 ^m 2			Edad: 17 ^d 7 PHE { 4 ^h : 57:5 12 ^h : 57:2 20 ^h : 56:9 PMG: 2 ^h 58 ^m R°: 46 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	h m	h m	m	
0	176	26.9	-13	23.1	316	55.5	-7 38.9	60 N	16 46	17 30	18 19	23 11	93	7 58	3	
1	191	26.9		22.2	331	27.5 ¹³⁰	-7 53.6 ¹⁴⁷	58	16 53		35	21	23 03	88	8 04	6
2	206	26.9		21.4	345	59.5 ¹³⁰	-8 08.3 ¹⁴⁷	56	17 00		39	22	22 56	84		08 10
3	221	26.9		20.5	0	31.5 ¹³⁰		54		05	42	24		50	81	13 12
4	236	27.0		19.7	15	03.6 ¹³¹		52		10	46	25		44	78	17 15
5	251	27.0	-13	18.9	29	35.6 ¹³⁰	-8 51.9 ¹⁴⁵	50	17 15	17 49	18 27	22 39	76	8 20	18	
6	266	27.0	-13	18.0	44	07.7 ¹³¹	-9 06.3 ¹⁴⁴	45	17 25	17 55	18 30	22 28	70	8 28	22	
7	281	27.0		17.2	58	39.7 ¹³⁰		40		34	18 01	33		19	66	35 26
8	296	27.0		16.3	73	11.7 ¹³⁰		35		41	07	37		11	63	40 30
9	311	27.0		15.5	87	43.8 ¹³¹	-9 49.2 ¹⁴²	30		47	12	40		22 04	60	45 33
10	326	27.1		14.7	102	15.8 ¹³⁰	-10 03.4 ¹⁴²	20		17 58	21	47		21 53	55	8 54 38
11	341	27.1	-13	13.8	116	47.9 ¹³¹	-10 17.5 ¹⁴¹	10 N	18 08	18 30	18 55	21 42	51	9 02	42	
12	356	27.1	-13	13.0	131	19.9 ¹³⁰	-10 31.5 ¹⁴⁰	0	18 18	18 39	19 03	21 33	47	9 09	46	
13	11	27.1		12.1	145	51.9 ¹³⁰		10 S		27	18 49	14		24	42	16 51
14	26	27.1		11.3	160	24.0 ¹³¹	-10 59.4 ¹³⁹	20		37	19 00	27		14	38	24 55
15	41	27.1		10.4	174	56.0 ¹³⁰	-11 13.2 ¹³⁸	30		49	14	44		21 03	33	33 60
16	56	27.2		09.6	189	28.0 ¹³⁰		35	18 56		23	19 54		20 56	31	38 63
17	71	27.2	-13	08.7	204	00.0 ¹³⁰	-11 40.7 ¹³⁷	40	19 04	19 33	20 07	20 49	27	9 44	67	
18	86	27.2	-13	07.9	218	32.0 ¹³⁰	-11 54.3 ¹³⁶	45	19 13	19 45	20 23	20 40	24	9 51	71	
19	101	27.2		07.0	233	04.0 ¹³⁰	-12 07.8 ¹³⁵	50		24	20 00	44		30	19	9 59 76
20	116	27.3		06.2	247	36.0 ¹³⁰		52		29	07	20 55		26	16	10 03 79
21	131	27.3		05.3	262	07.9 ¹²⁹		54		35	15	21 07		20	14	07 82
22	146	27.3		04.5	276	39.9 ¹³⁰	-12 48.0 ¹³³	56		42	24	20		15	11	12 84
23	161	27.3		03.6	291	11.8 ¹²⁹	-13 01.2 ¹³²	58		49	35	37		09	7	17 88
24	176	27.3	-13	02.8	305	43.7 ¹²⁹	-13 14.4 ¹³²	60 S	19 57	20 47	21 58	20 02	3	10 23	92	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 14 ^h 25 ^m 0		Mag: -4.8 PMG: 14 ^h 48 ^m		Mag: +1.3 PMG: 11 ^h 03 ^m		Mag: -2.0 PMG: 11 ^h 12 ^m		Mag: +0.7 PMG: 1 ^h 54 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	143	09.8	137	42.7	194	02.7	191	34.6	331	18.5
1	158	12.2	152	43.8		03.8	206	36.5		21.1
2	173	14.7	167	44.9	04.8	224	03.6		1	23.7
3	188	17.2	182	46.0	05.8	239	04.1		16	26.4
4	203	19.6	197	47.1	06.8	254	04.6		31	29.0
5	218	22.1	212	48.2	+6 07.9	269	05.0	-19 36.1	46	31.6
6	233	24.6	227	49.3	+6 08.9	284	05.5	-19 35.7	61	34.2
7	248	27.0	242	50.4		299	06.0		76	36.8
8	263	29.5	257	51.5		314	06.4		91	39.4
9	278	31.9	272	52.6		329	06.9		106	42.1
10	293	34.4	287	53.7		344	07.3		121	44.7
11	308	36.9	302	54.8	+6 14.0	359	07.8	-19 33.3	136	47.3
12	323	39.3	317	56.0	+6 15.0	14	08.3	-19 32.8	151	49.9
13	338	41.8	332	57.1		29	08.7		166	52.5
14	353	44.3	347	58.2		44	09.2		181	55.2
15	8	46.7	2	59.3		59	09.7		196	57.8
16	23	49.2	18	00.5		74	10.1		212	00.4
17	38	51.7	33	01.6	+6 20.1	89	10.6	-19 30.4	227	03.0
18	53	54.1	48	02.7	+6 21.1	104	11.1	-19 29.9	242	05.6
19	68	56.6	63	03.9		119	11.5		257	08.2
20	83	59.1	78	05.0		134	12.0		272	10.9
21	99	01.5	93	06.1		149	12.5		287	13.5
22	114	04.0	108	07.3		164	12.9		302	16.1
23	129	06.4	123	08.4		179	13.4		317	18.7
24	144	08.9	138	09.6	+6 27.1	194	13.9	-19 27.0	332	21.3
Dif	—		+11		+10		+5		+19	

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: 18 ^d 7 PHE { 4 ^h : 56'6 12 ^h : 56'4 20 ^h : 56'1 SD: 15'5 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	
0	176	27.3	-13	02.8	305	43.7	-13	14.4	6 08	6 57	7 41	** ** *	** ** *	8 01	4	
1	191	27.4		01.9	320	15.7 ¹³⁰		27.5 ¹³¹	06	52	34	** ** *	** ** *	10	9	
2	206	27.4		01.1	334	47.6 ¹²⁹		40.5 ¹³⁰	05	48	27	** ** *	** ** *	18	12	
3	221	27.4	-13	00.3	349	19.4 ¹²⁸	-13	53.4 ¹²⁹	04	45	22	** ** *	** ** *	25	16	
4	236	27.4	-12	59.4	3	51.3 ¹²⁹	-14	06.3 ¹²⁹	02	42	17	** ** *	** ** *	32	18	
5	251	27.5	-12	58.5	18	23.2 ¹²⁹	-14	19.0 ¹²⁷	6 01	6 39	7 12	23 55 73	8 38 20			
6	266	27.5	-12	57.7	32	55.0 ¹²⁸	-14	31.7 ¹²⁷	5 58	6 32	7 02	23 38 69	8 50 25			
7	281	27.5		56.8	47	26.8 ¹²⁸		44.3 ¹²⁶	55	26	6 54	25 65	9 01 29			
8	296	27.5		56.0	61	58.6 ¹²⁸	-14	56.8 ¹²⁵	51	21	47	14 62	10 32			
9	311	27.5		55.1	76	30.4 ¹²⁸	-15	09.3 ¹²⁵	48	16	41	23 04 59	18 35			
10	326	27.6		54.3	91	02.1 ¹²⁷		21.6 ¹²³	41	6 07	30	22 48 54	32 39			
11	341	27.6	-12	53.4	105	33.9 ¹²⁸	-15	33.9 ¹²³	5 34	5 58	6 20	22 33 51	9 44 43			
12	356	27.6	-12	52.6	120	05.6 ¹²⁷	-15	46.0 ¹²¹	5 25	5 50	6 11	22 20 47	9 55 47			
13	11	27.7		51.7	134	37.3 ¹²⁷	-15	58.1 ¹²¹	15	40	6 01	22 06 45	10 07 51			
14	26	27.7		50.9	149	08.9 ¹²⁶	-16	10.1 ¹²⁰	5 02	28	5 51	21 52 41	19 55			
15	41	27.7		50.0	163	40.6 ¹²⁷		22.0 ¹¹⁹	4 45	15	40	36 36	33 60			
16	56	27.7		49.2	178	12.2 ¹²⁶		33.8 ¹¹⁸	34	5 06	33	27 34	41 63			
17	71	27.8	-12	48.3	192	43.8 ¹²⁶	-16	45.6 ¹¹⁸	4 22	4 56	5 25	21 16 31	10 51 65			
18	86	27.8	-12	47.5	207	15.4 ¹²⁶	-16	57.2 ¹¹⁶	4 05	4 44	5 16	21 04 27	11 02 69			
19	101	27.8		46.6	221	46.9 ¹²⁵	-17	08.7 ¹¹⁵	3 45	29	05	20 49 22	15 75			
20	116	27.8		45.7	236	18.4 ¹²⁵		20.2 ¹¹⁵	34	22	5 00	42 20	22 77			
21	131	27.9		44.9	250	49.9 ¹²⁵		31.6 ¹¹⁴	23	14	4 54	34 18	29 80			
22	146	27.9		44.0	265	21.4 ¹²⁵		42.8 ¹¹²	3 09	4 05	48	26 14	36 84			
23	161	27.9		43.2	279	52.8 ¹²⁴	-17	54.0 ¹¹²	2 52	3 55	41	16 11	45 87			
24	176	28.0	-12	42.3	294	24.3 ¹²⁵	-18	05.1 ¹¹¹	2 31	3 43	4 33	20 05 6	11 55 93			
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO			
	PMG 14 ^h 21 ^m 0			Mag: -4.8 PMG: 14 ^h 46 ^m			Mag: +1.3 PMG: 11 ^h 03 ^m			Mag: -2.0 PMG: 11 ^h 09 ^m			Mag: +0.7 PMG: 1 ^h 50 ^m			
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	
0	144	08.9	138	09.6	+6	27.1	194	13.9	-19	27.0	192	19.5	-18	23.9	332	21.3
1	159	11.4	153	10.7		28.1	209	14.4		26.6	207	21.4		23.7	347	24.0
2	174	13.8	168	11.9		29.1	224	14.8		26.1	222	23.3		23.6	2	26.6
3	189	16.3	183	13.0		30.1	239	15.3		25.6	237	25.2		23.4	17	29.2
4	204	18.8	198	14.2		31.1	254	15.8		25.1	252	27.0		23.3	32	31.8
5	219	21.2	213	15.3	+6	32.1	269	16.2	-19	24.6	267	28.9	-18	23.1	47	34.4
6	234	23.7	228	16.5	+6	33.1	284	16.7	-19	24.1	282	30.8	-18	23.0	62	37.1
7	249	26.2	243	17.6		34.1	299	17.2		23.7	297	32.6		22.8	77	39.7
8	264	28.6	258	18.8		35.1	314	17.6		23.2	312	34.5		22.7	92	42.3
9	279	31.1	273	19.9		36.1	329	18.1		22.7	327	36.4		22.5	107	44.9
10	294	33.6	288	21.1		37.1	344	18.6		22.2	342	38.3		22.4	122	47.5
11	309	36.0	303	22.3	+6	38.1	359	19.0	-19	21.7	357	40.1	-18	22.2	137	50.1
12	324	38.5	318	23.4	+6	39.1	14	19.5	-19	21.2	12	42.0	-18	22.1	152	52.8
13	339	40.9	333	24.6		40.1	29	20.0		20.7	27	43.9		21.9	167	55.4
14	354	43.4	348	25.8		41.1	44	20.4		20.2	42	45.8		21.8	182	58.0
15	9	45.9	3	27.0		42.1	59	20.9		19.8	57	47.6		21.6	198	00.6
16	24	48.3	18	28.1		43.1	74	21.4		19.3	72	49.5		21.5	213	03.3
17	39	50.8	33	29.3	+6	44.1	89	21.9	-19	18.8	87	51.4	-18	21.3	228	05.9
18	54	53.3	48	30.5	+6	45.1	104	22.3	-19	18.3	102	53.3	-18	21.2	243	08.5
19	69	55.7	63	31.7		46.1	119	22.8		17.8	117	55.1		21.0	258	11.1
20	84	58.2	78	32.9		47.1	134	23.3		17.3	132	57.0		20.9	273	13.7
21	100	00.7	93	34.1		48.1	149	23.7		16.8	147	58.9		20.7	288	16.4
22	115	03.1	108	35.2		49.1	164	24.2		16.3	163	00.8		20.6	303	19.0
23	130	05.6	123	36.4		50.1	179	24.7		15.8	178	02.6		20.4	318	21.6
24	145	08.0	138	37.6	+6	51.0	194	25.2	-19	15.4	193	04.5	-18	20.3	333	24.2
Dif	—		+12	+10		+5	+5			+19	+1		+26		+1	

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16:2 PMG: 12 ^h 14 ^m 1				Edad: 19 ^d 7 PHE { 4 ^h : 55 ^m 8 12 ^h : 55 ^m 6 20 ^h : 55 ^m 4 PMG: 4 ^h 31 ^m R°: 48 ^m													
	hG ☉		Dec		hG ☾		Dif				Dec		Dif		Civil	Náutico	Hora	R°
h	°	'	°	'	°	'	°	'	°	'	h m	h m	h m	h m	h m	m	h m	m
0	176	28.0	-12	42.3	294	24.3	-18	05.1	60 N	16 51	17 35	18 24	0 44	92	8 05	8		
1	191	28.0		41.5	308	55.6 ¹²³		16.0 ¹⁰⁹	58	16 58	39	25	31	87	19	13		
2	206	28.0		40.6	323	27.0 ¹²⁴		26.9 ¹⁰⁹	56	17 04	43	26	20	82	30	17		
3	221	28.0		39.7	337	58.3 ¹²³		37.7 ¹⁰⁸	54	09	46	28	11	78	41	20		
4	236	28.1		38.9	352	29.6 ¹²³		48.4 ¹⁰⁷	52	14	49	29	0 02	76	50	23		
5	251	28.1	-12	38.0	7	00.9 ¹²³	-18	59.0 ¹⁰⁶	50	17 19	17 52	18 30	** ** *		8 58	25		
6	266	28.1	-12	37.2	21	32.1 ¹²²	-19	09.5 ¹⁰⁵	45	17 28	17 58	18 33	** ** *		9 15	30		
7	281	28.2		36.3	36	03.3 ¹²²		19.9 ¹⁰⁴	40	36	18 04	35	** ** *		30	33		
8	296	28.2		35.4	50	34.5 ¹²²		30.2 ¹⁰³	35	43	09	38	** ** *		42	36		
9	311	28.2		34.6	65	05.7 ¹²²		40.3 ¹⁰¹	30	49	13	41	** ** *		9 53	38		
10	326	28.3		33.7	79	36.8 ¹²¹	-19	50.4 ¹⁰¹	20	17 59	22	48	23 42	55	10 11	42		
11	341	28.3	-12	32.9	94	07.9 ¹²¹	-20	00.4 ¹⁰⁰	10 N	18 09	18 30	18 55	23 24	52	10 27	46		
12	356	28.3	-12	32.0	108	38.9 ¹²⁰	-20	10.3 ⁹⁹	0	18 18	18 39	19 03	23 07	50	10 42	49		
13	11	28.4		31.1	123	09.9 ¹²⁰		20.1 ⁹⁸	10 S	26	48	13	22 51	46	10 58	51		
14	26	28.4		30.3	137	40.9 ¹²⁰		29.7 ⁹⁶	20	36	18 59	26	33	44	11 14	55		
15	41	28.4		29.4	152	11.9 ¹²⁰		39.3 ⁹⁶	30	47	19 12	42	12	41	33	58		
16	56	28.5		28.5	166	42.8 ¹¹⁹		48.8 ⁹⁵	35	18 54	20	19 52	22 01	38	44	61		
17	71	28.5	-12	27.7	181	13.7 ¹¹⁹	-20	58.1 ⁹³	40	19 01	19 30	20 04	21 47	36	11 56	64		
18	86	28.5	-12	26.8	195	44.6 ¹¹⁹	-21	07.4 ⁹³	45	19 10	19 41	20 20	21 31	33	12 11	68		
19	101	28.6		25.9	210	15.4 ¹¹⁸		16.5 ⁹¹	50	21	19 56	40	11	29	30	72		
20	116	28.6		25.1	224	46.2 ¹¹⁸		25.5 ⁹⁰	52	25	20 03	20 50	21 02	26	39	74		
21	131	28.6		24.2	239	16.9 ¹¹⁷		34.5 ⁹⁰	54	31	10	21 01	20 52	23	12 49	76		
22	146	28.7		23.4	253	47.7 ¹¹⁸		43.3 ⁸⁸	56	37	19	14	40	21	13 00	80		
23	161	28.7		22.5	268	18.4 ¹¹⁷	-21	52.0 ⁸⁷	58	44	29	30	27	16	12	85		
24	176	28.8	-12	21.6	282	49.0 ¹¹⁶	-22	00.6 ⁸⁶	60 S	19 51	20 40	21 49	20 11	11	13 28	90		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 14 ^h 17 ^m 1		Mag: -4.8 PMG: 14 ^h 44 ^m		Mag: +1.3 PMG: 11 ^h 02 ^m		Mag: -2.0 PMG: 11 ^h 06 ^m		Mag: +0.6 PMG: 1 ^h 46 ^m	
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'
0	145	08.0	138	37.6	+6	51.0	194	25.2	-19	15.4
1	160	10.5	153	38.8		52.0	209	25.6		14.9
2	175	13.0	168	40.0		53.0	224	26.1		14.4
3	190	15.4	183	41.2		54.0	239	26.6		13.9
4	205	17.9	198	42.4		55.0	254	27.0		13.4
5	220	20.4	213	43.6	+6	56.0	269	27.5	-19	12.9
6	235	22.8	228	44.8	+6	57.0	284	28.0	-19	12.4
7	250	25.3	243	46.0		57.9	299	28.5		11.9
8	265	27.8	258	47.3		58.9	314	28.9		11.4
9	280	30.2	273	48.5	+6	59.9	329	29.4		10.9
10	295	32.7	288	49.7	+7	00.9	344	29.9		10.4
11	310	35.2	303	50.9	+7	01.9	359	30.4	-19	09.9
12	325	37.6	318	52.1	+7	02.8	14	30.8	-19	09.4
13	340	40.1	333	53.3		03.8	29	31.3		08.9
14	355	42.5	348	54.6		04.8	44	31.8		08.4
15	10	45.0	3	55.8		05.8	59	32.2		08.0
16	25	47.5	18	57.0		06.8	74	32.7		07.5
17	40	49.9	33	58.3	+7	07.7	89	33.2	-19	07.0
18	55	52.4	48	59.5	+7	08.7	104	33.7	-19	06.5
19	70	54.9	64	00.7		09.7	119	34.1		06.0
20	85	57.3	79	02.0		10.7	134	34.6		05.5
21	100	59.8	94	03.2		11.6	149	35.1		05.0
22	116	02.3	109	04.4		12.6	164	35.6		04.5
23	131	04.7	124	05.7		13.6	179	36.0		04.0
24	146	07.2	139	06.9	+7	14.5	194	36.5	-19	03.5
Dif	—		+12	+10	+5		+5	+19	+2	

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: 20 ^d 7 PHE { 4 ^h : 55:2 12 ^h : 55:0 20 ^h : 54:8 SD: 15:1 PMG: 5 ^h 19 ^m R°: 50 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	m	m	h m	m
0	176	28.8	-12	21.6	282	49.0	-22	00.6	60 N	6 03	6 51	7 35	2 16	88	8 13	14
1	191	28.8		20.8	297	19.6 ¹¹⁶		09.1 ⁸⁵	58	02	48	29	1 58	81	32	20
2	206	28.8		19.9	311	50.2 ¹¹⁶		17.5 ⁸⁴	56	01	44	23	42	78	8 47	25
3	221	28.9		19.0	326	20.8 ¹¹⁶		25.7 ⁸²	54	6 00	41	18	29	75	9 01	28
4	236	28.9		18.2	340	51.3 ¹¹⁵		33.9 ⁸²	52	5 59	38	13	18	72	13	30
5	251	28.9	-12	17.3	355	21.8 ¹¹⁵	-22	41.9 ⁸⁰	50	5 58	6 35	7 09	1 08	69	9 23	32
6	266	29.0	-12	16.4	9	52.3 ¹¹⁵	-22	49.8 ⁷⁹	45	5 55	6 29	6 59	0 47	65	9 45	36
7	281	29.0		15.5	24	22.7 ¹¹⁴	-22	57.6 ⁷⁸	40	52	24	52	30	62	10 03	39
8	296	29.1		14.7	38	53.1 ¹¹⁴	-23	05.3 ⁷⁷	35	49	19	45	16	60	18	41
9	311	29.1		13.8	53	23.5 ¹¹⁴		12.9 ⁷⁶	30	46	15	39	0 03	58	31	43
10	326	29.1		12.9	67	53.8 ¹¹³		20.4 ⁷⁵	20	40	6 06	29	** ** *	**	10 53	46
11	341	29.2	-12	12.1	82	24.1 ¹¹³	-23	27.7 ⁷³	10 N	5 33	5 58	6 19	** ** *	**	11 13	48
12	356	29.2	-12	11.2	96	54.3 ¹¹²	-23	35.0 ⁷³	0	5 25	5 50	6 11	23 57	50	11 31	50
13	11	29.3		10.3	111	24.6 ¹¹³		42.1 ⁷¹	10 S	15	40	6 02	37	49	11 49	52
14	26	29.3		09.5	125	54.8 ¹¹²		49.1 ⁷⁰	20	5 03	30	5 52	23 17	47	12 09	54
15	41	29.3		08.6	140	24.9 ¹¹¹	-23	56.0 ⁶⁹	30	4 47	16	41	22 53	45	31	57
16	56	29.4		07.7	154	55.1 ¹¹²	-24	02.7 ⁶⁷	35	37	5 08	35	39	43	12 45	58
17	71	29.4	-12	06.8	169	25.2 ¹¹¹	-24	09.4 ⁶⁷	40	4 24	4 59	5 27	22 23	42	13 00	61
18	86	29.5	-12	06.0	183	55.3 ¹¹¹	-24	15.9 ⁶⁵	45	4 09	4 47	5 19	22 04	39	13 19	63
19	101	29.5		05.1	198	25.3 ¹¹⁰		22.3 ⁶⁴	50	3 49	33	08	21 40	36	42	66
20	116	29.6		04.2	212	55.3 ¹¹⁰		28.6 ⁶³	52	39	26	5 04	28	35	13 53	68
21	131	29.6		03.3	227	25.3 ¹¹⁰		34.8 ⁶²	54	28	19	4 58	15	33	14 05	71
22	146	29.6		02.5	241	55.3 ¹¹⁰		40.8 ⁶⁰	56	3 15	10	52	21 01	30	20	73
23	161	29.7		01.6	256	25.2 ¹⁰⁹		46.8 ⁶⁰	58	2 59	4 00	46	20 43	27	37	77
24	176	29.7	-12	00.7	270	55.1 ¹⁰⁹	-24	52.6 ⁵⁸	60 S	2 40	3 49	4 38	20 22	20	14 58	83

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 14 ^h 13 ^m 2		Mag: -4.8 PMG: 14 ^h 42 ^m		Mag: +1.3 PMG: 11 ^h 01 ^m		Mag: -2.0 PMG: 11 ^h 03 ^m		Mag: +0.6 PMG: 1 ^h 42 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	146	07.2	139	06.9	+7	14.5	194	36.5	-19	03.5
1	161	09.7	154	08.2		15.5	209	37.0		03.0
2	176	12.1	169	09.4		16.5	224	37.5		02.5
3	191	14.6	184	10.7		17.4	239	37.9		02.0
4	206	17.0	199	11.9		18.4	254	38.4		01.5
5	221	19.5	214	13.2	+7	19.4	269	38.9	-19	01.0
6	236	22.0	229	14.4	+7	20.3	284	39.4	-19	00.5
7	251	24.4	244	15.7		21.3	299	39.9	-19	00.0
8	266	26.9	259	17.0		22.3	314	40.3	-18	59.5
9	281	29.4	274	18.2		23.2	329	40.8		59.0
10	296	31.8	289	19.5		24.2	344	41.3		58.5
11	311	34.3	304	20.8	+7	25.1	359	41.8	-18	58.0
12	326	36.8	319	22.0	+7	26.1	14	42.2	-18	57.4
13	341	39.2	334	23.3		27.1	29	42.7		56.9
14	356	41.7	349	24.6		28.0	44	43.2		56.4
15	11	44.1	4	25.9		29.0	59	43.7		55.9
16	26	46.6	19	27.2		29.9	74	44.1		55.4
17	41	49.1	34	28.4	+7	30.9	89	44.6	-18	54.9
18	56	51.5	49	29.7	+7	31.8	104	45.1	-18	54.4
19	71	54.0	64	31.0		32.8	119	45.6		53.9
20	86	56.5	79	32.3		33.7	134	46.1		53.4
21	101	58.9	94	33.6		34.7	149	46.5		52.9
22	117	01.4	109	34.9		35.6	164	47.0		52.4
23	132	03.9	124	36.2		36.6	179	47.5		51.9
24	147	06.3	139	37.5	+7	37.5	194	48.0	-18	51.4
Dif	—		+13 +10		+5 +5		+19 +2		+26 +1	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 12 ^h 14 ^m 0			Edad: 21 ^d 7 PHE { SD: 14:9 PMG: 6 ^h 09 ^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	29.7	-12 00.7	270	55.1	-24 52.6	57	60 N	16 57	17 40	18 29	3 44 77	8 27 29	
1	191	29.8	-11 59.9	285	25.0 ¹⁰⁹	-24 58.3	57	58	17 03	44	30	19 72	8 52 34	
2	206	29.8	59.0	299	54.8 ¹⁰⁸	-25 03.8	55	56	08	47	30	3 00 68	9 12 37	
3	221	29.9	58.1	314	24.6 ¹⁰⁸	09.3	55	54	13	50	31	2 44 65	29 38	
4	236	29.9	57.2	328	54.4 ¹⁰⁸	14.6	53	52	18	53	32	30 64	43 40	
5	251	30.0	-11 56.3	343	24.2 ¹⁰⁸	-25 19.8	52	50	17 22	17 55	18 33	2 17 63	9 55 42	
6	266	30.0	-11 55.5	357	53.9 ¹⁰⁷	-25 24.8	50	45	17 31	18 01	18 35	1 52 60	10 21 44	
7	281	30.0	54.6	12	23.7 ¹⁰⁸	29.8	50	40	38	06	38	32 58	42 45	
8	296	30.1	53.7	26	53.3 ¹⁰⁶	34.6	48	35	45	10	40	16 56	10 59 46	
9	311	30.1	52.8	41	23.0 ¹⁰⁷	39.3	47	30	17 50	15	43	1 01 56	11 14 47	
10	326	30.2	52.0	55	52.7 ¹⁰⁷	43.9	46	20	18 00	23	49	0 37 54	11 39 48	
11	341	30.2	-11 51.1	70	22.3 ¹⁰⁶	-25 48.3	44	10 N	18 09	18 30	18 55	0 16 52	12 01 49	
12	356	30.3	-11 50.2	84	51.9 ¹⁰⁶	-25 52.6	43	0	18 17	18 38	19 03	** ** *	12 21 51	
13	11	30.3	49.3	99	21.5 ¹⁰⁶	-25 56.8	42	10 S	26	47	12	** ** *	12 41 52	
14	26	30.4	48.4	113	51.0 ¹⁰⁵	-26 00.9	41	20	35	18 58	24	** ** *	13 03 53	
15	41	30.4	47.6	128	20.5 ¹⁰⁵	04.9	40	30	45	19 10	40	23 38 49	28 54	
16	56	30.5	46.7	142	50.1 ¹⁰⁶	08.7	38	35	52	18	19 49	22 49	13 43 55	
17	71	30.5	-11 45.8	157	19.6 ¹⁰⁵	-26 12.4	37	40	18 59	19 27	20 01	23 05 48	14 01 55	
18	86	30.6	-11 44.9	171	49.0 ¹⁰⁴	-26 15.9	35	45	19 07	19 38	20 16	22 43 48	14 22 56	
19	101	30.6	44.0	186	18.5 ¹⁰⁵	19.4	35	50	17	52	35	16 47	14 48 58	
20	116	30.7	43.2	200	47.9 ¹⁰⁴	22.7	33	52	21	19 58	44	22 03 46	15 01 59	
21	131	30.7	42.3	215	17.4 ¹⁰⁵	25.8	31	54	26	20 05	20 55	21 48 45	16 60	
22	146	30.8	41.4	229	46.8 ¹⁰⁴	28.9	31	56	32	14	21 07	31 44	33 61	
23	161	30.8	40.5	244	16.2 ¹⁰⁴	31.8	29	58	38	23	22	21 10 42	15 54 63	
24	176	30.9	-11 39.6	258	45.6 ¹⁰⁴	-26 34.6	28	60 S	19 46	20 34	21 40	20 42 40	16 21 67	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 14 ^h 09 ^m 3		Mag: -4.8 PMG: 14 ^h 40 ^m		Mag: +1.2 PMG: 11 ^h 00 ^m		Mag: -2.0 PMG: 11 ^h 00 ^m		Mag: +0.6 PMG: 1 ^h 38 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	147	06.3	139 37.5	+7 37.5	194 48.0	-18 51.4	194 34.6	-18 13.1	335 30.1	+6 03.0
1	162	08.8	154 38.8	38.5	209 48.5	50.9	209 36.4	12.9	350 32.8	03.1
2	177	11.3	169 40.1	39.4	224 48.9	50.4	224 38.3	12.8	5 35.4	03.2
3	192	13.7	184 41.4	40.4	239 49.4	49.8	239 40.2	12.6	20 38.0	03.2
4	207	16.2	199 42.7	41.3	254 49.9	49.3	254 42.1	12.5	35 40.6	03.3
5	222	18.6	214 44.0	+7 42.3	269 50.4	-18 48.8	269 43.9	-18 12.3	50 43.3	+6 03.4
6	237	21.1	229 45.3	+7 43.2	284 50.9	-18 48.3	284 45.8	-18 12.2	65 45.9	+6 03.5
7	252	23.6	244 46.6	44.2	299 51.3	47.8	299 47.7	12.0	80 48.5	03.6
8	267	26.0	259 48.0	45.1	314 51.8	47.3	314 49.6	11.9	95 51.2	03.6
9	282	28.5	274 49.3	46.1	329 52.3	46.8	329 51.5	11.7	110 53.8	03.7
10	297	31.0	289 50.6	47.0	344 52.8	46.3	344 53.3	11.6	125 56.4	03.8
11	312	33.4	304 51.9	+7 47.9	359 53.3	-18 45.8	359 55.2	-18 11.4	140 59.0	+6 03.9
12	327	35.9	319 53.3	+7 48.9	14 53.7	-18 45.3	14 57.1	-18 11.3	156 01.7	+6 03.9
13	342	38.4	334 54.6	49.8	29 54.2	44.7	29 59.0	11.1	171 04.3	04.0
14	357	40.8	349 55.9	50.7	44 54.7	44.2	45 00.8	11.0	186 06.9	04.1
15	12	43.3	4 57.2	51.7	59 55.2	43.7	60 02.7	10.8	201 09.5	04.2
16	27	45.8	19 58.6	52.6	74 55.7	43.2	75 04.6	10.7	216 12.2	04.2
17	42	48.2	34 59.9	+7 53.6	89 56.1	-18 42.7	90 06.5	-18 10.5	231 14.8	+6 04.3
18	57	50.7	50 01.3	+7 54.5	104 56.6	-18 42.2	105 08.4	-18 10.4	246 17.4	+6 04.4
19	72	53.1	65 02.6	55.4	119 57.1	41.7	120 10.2	10.2	261 20.0	04.5
20	87	55.6	80 03.9	56.4	134 57.6	41.1	135 12.1	10.1	276 22.7	04.5
21	102	58.1	95 05.3	57.3	149 58.1	40.6	150 14.0	09.9	291 25.3	04.6
22	118	00.5	110 06.6	58.2	164 58.6	40.1	165 15.9	09.8	306 27.9	04.7
23	133	03.0	125 08.0	+7 59.1	179 59.0	39.6	180 17.8	09.6	321 30.6	04.8
24	148	05.5	140 09.4	+8 00.1	194 59.5	-18 39.1	195 19.6	-18 09.5	336 33.2	+6 04.9
Dif	—		+13	+9	+5	+5	+19	+2	+26	+1

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'2 PMG: 12 ^h 13 ^m 9			Edad: 22 ^d 7 PHE { 4 ^h : 54'3 12 ^h : 54'2 20 ^h : 54'2 SD: 14'8 PMG: 6 ^h 59 ^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	176	30.9	-11	39.6	258	45.6	-26	34.6	60 N	5 58	6 46	7 30	5 01	54	8 56	51
1	191	30.9		38.8	273	14.9 ¹⁰³		37.3	58	57	43	24	4 31	54	9 26	51
2	206	31.0		37.9	287	44.3 ¹⁰⁴		39.8	56	57	40	18	4 08	54	9 49	51
3	221	31.0		37.0	302	13.6 ¹⁰³		42.2	54	56	37	13	3 49	54	10 07	52
4	236	31.1		36.1	316	43.0 ¹⁰⁴		44.5	52	55	34	09	34	53	23	52
5	251	31.1	-11	35.2	331	12.3 ¹⁰³	-26	46.7	50	5 54	6 32	7 05	3 20	53	10 37	51
6	266	31.2	-11	34.3	345	41.6 ¹⁰³	-26	48.7	45	5 52	6 26	6 56	2 52	53	11 05	51
7	281	31.2		33.5	0	10.9 ¹⁰³		50.6	40	50	21	49	30	53	27	51
8	296	31.3		32.6	14	40.2 ¹⁰³		52.4	35	47	17	43	2 12	53	11 45	51
9	311	31.3		31.7	29	09.5 ¹⁰³		54.0	30	45	13	37	1 57	52	12 01	51
10	326	31.4		30.8	43	38.8 ¹⁰³		55.5	20	39	6 05	27	31	51	27	51
11	341	31.5	-11	29.9	58	08.1 ¹⁰³	-26	56.9	10 N	5 33	5 57	6 19	1 08	51	12 50	51
12	356	31.5	-11	29.0	72	37.4 ¹⁰³	-26	58.1	0	5 25	5 49	6 11	0 47	51	13 12	50
13	11	31.6		28.1	87	06.6 ¹⁰²	-26	59.2	10 S	16	41	6 02	26	50	33	50
14	26	31.6		27.3	101	35.9 ¹⁰³	-27	00.2	20	5 04	31	5 53	0 04	50	13 56	50
15	41	31.7		26.4	116	05.2 ¹⁰³		01.1	30	4 49	18	43	** ** *	**	14 22	50
16	56	31.7		25.5	130	34.4 ¹⁰²		01.8	35	39	10	37	** ** *	**	38	50
17	71	31.8	-11	24.6	145	03.7 ¹⁰³	-27	02.4	40	4 27	5 01	5 30	23	53 54	14 56	49
18	86	31.8	-11	23.7	159	33.0 ¹⁰³	-27	02.9	45	4 12	4 51	5 22	23	31 55	15 18	49
19	101	31.9		22.8	174	02.3 ¹⁰³		03.2	50	3 54	37	12	23	03 56	15 46	48
20	116	32.0		21.9	188	31.5 ¹⁰²		03.4	52	44	31	07	22	49 57	16 00	47
21	131	32.0		21.0	203	00.8 ¹⁰³		03.5	54	34	23	5 02	33	58	16	46
22	146	32.1		20.1	217	30.1 ¹⁰³		03.4	56	21	15	4 57	22	15 59	34	46
23	161	32.1		19.3	231	59.4 ¹⁰³		03.3	58	3 07	4 06	50	21	52 60	16 57	45
24	176	32.2	-11	18.4	246	28.7 ¹⁰³	-27	02.9	60 S	2 49	3 55	4 43	21	22 63	17 28	42
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 14 ^h 05 ^m 3			Mag: -4.8 PMG: 14 ^h 38 ^m			Mag: +1.2 PMG: 11 ^h 00 ^m			Mag: -2.0 PMG: 10 ^h 57 ^m			Mag: +0.6 PMG: 1 ^h 34 ^m			
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	148	05.5	140	09.4	+8	00.1	194	59.5	-18	39.1	195	19.6	-18	09.5	336	33.2
1	163	07.9	155	10.7		01.0	210	00.0		38.6	210	21.5		09.3	351	35.8
2	178	10.4	170	12.1		01.9	225	00.5		38.0	225	23.4		09.2	6	38.4
3	193	12.9	185	13.4		02.8	240	01.0		37.5	240	25.3		09.0	21	41.1
4	208	15.3	200	14.8		03.8	255	01.5		37.0	255	27.1		08.9	36	43.7
5	223	17.8	215	16.2	+8	04.7	270	01.9	-18	36.5	270	29.0	-18	08.7	51	46.3
6	238	20.3	230	17.5	+8	05.6	285	02.4	-18	36.0	285	30.9	-18	08.6	66	48.9
7	253	22.7	245	18.9		06.5	300	02.9		35.5	300	32.8		08.4	81	51.6
8	268	25.2	260	20.3		07.5	315	03.4		34.9	315	34.7		08.3	96	54.2
9	283	27.6	275	21.7		08.4	330	03.9		34.4	330	36.5		08.1	111	56.8
10	298	30.1	290	23.0		09.3	345	04.4		33.9	345	38.4		08.0	126	59.5
11	313	32.6	305	24.4	+8	10.2	0	04.8	-18	33.4	0	40.3	-18	07.8	142	02.1
12	328	35.0	320	25.8	+8	11.1	15	05.3	-18	32.9	15	42.2	-18	07.6	157	04.7
13	343	37.5	335	27.2		12.1	30	05.8		32.3	30	44.1		07.5	172	07.3
14	358	40.0	350	28.6		13.0	45	06.3		31.8	45	45.9		07.3	187	10.0
15	13	42.4	5	30.0		13.9	60	06.8		31.3	60	47.8		07.2	202	12.6
16	28	44.9	20	31.4		14.8	75	07.3		30.8	75	49.7		07.0	217	15.2
17	43	47.4	35	32.7	+8	15.7	90	07.8	-18	30.2	90	51.6	-18	06.9	232	17.9
18	58	49.8	50	34.1	+8	16.6	105	08.2	-18	29.7	105	53.5	-18	06.7	247	20.5
19	73	52.3	65	35.5		17.5	120	08.7		29.2	120	55.4		06.6	262	23.1
20	88	54.7	80	36.9		18.4	135	09.2		28.7	135	57.2		06.4	277	25.7
21	103	57.2	95	38.4		19.3	150	09.7		28.2	150	59.1		06.3	292	28.4
22	118	59.7	110	39.8		20.3	165	10.2		27.6	166	01.0		06.1	307	31.0
23	134	02.1	125	41.2		21.2	180	10.7		27.1	181	02.9		06.0	322	33.6
24	149	04.6	140	42.6	+8	22.1	195	11.2	-18	26.6	196	04.8	-18	05.8	337	36.3
Dif	—			+14	+9		+5	+5		+19	+2		+26	+1		

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 16'2 PMG: 12 ^h 13 ^m 8			Edad: 23 ^d 7 PHE { 4 ^h : 54'1 12 ^h : 54'1 20 ^h : 54'1 PMG: 7 ^h 50 ^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	176	32.2	-11	18.4	246	28.7	-27	02.9	60 N	17 02	17 45	18 34	5 55 31	9 47 73				
1	191	32.2		17.5	260	58.0 ¹⁰³		02.5	58	08	48	34	25 35	10 17 69				
2	206	32.3		16.6	275	27.3 ¹⁰³		01.9	56	13	51	34	5 02 38	40 66				
3	221	32.4		15.7	289	56.6 ¹⁰³		01.2	54	17	54	35	4 43 40	10 59 64				
4	236	32.4		14.8	304	26.0 ¹⁰⁴		-27 00.4	52	22	56	35	27 41	11 15 62				
5	251	32.5	-11	13.9	318	55.3 ¹⁰³		-26 59.4	50	17 25	17 58	18 36	4 13 43	11 28 61				
6	266	32.5	-11	13.0	333	24.7 ¹⁰⁴		-26 58.4	45	17 34	18 04	18 38	3 45 44	11 56 59				
7	281	32.6		12.1	347	54.0 ¹⁰³		57.1	40	41	08	40	23 46	12 18 57				
8	296	32.7		11.2	2	23.4 ¹⁰⁴		55.8	35	47	12	42	3 05 46	36 56				
9	311	32.7		10.3	16	52.8 ¹⁰⁴		54.3	30	17 52	16	44	2 49 47	12 52 55				
10	326	32.8		09.4	31	22.2 ¹⁰⁴		52.7	20	18 01	23	49	2 22 49	13 18 53				
11	341	32.8	-11	08.6	45	51.6 ¹⁰⁴		-26 51.0	10 N	18 09	18 31	18 55	1 59 50	13 41 52				
12	356	32.9	-11	07.7	60	21.1 ¹⁰⁵		-26 49.1	0	18 17	18 38	19 03	1 38 50	14 02 50				
13	11	33.0		06.8	74	50.5 ¹⁰⁴		47.2	10 S	25	47	12	1 16 52	23 49				
14	26	33.0		05.9	89	20.0 ¹⁰⁵		45.1	20	34	18 56	23	0 54 52	14 46 47				
15	41	33.1		05.0	103	49.5 ¹⁰⁵		42.8	30	44	19 08	37	27 53	15 12 45				
16	56	33.2		04.1	118	19.0 ¹⁰⁵		40.5	35	49	16	47	0 11 54	28 43				
17	71	33.2	-11	03.2	132	48.6 ¹⁰⁶		-26 38.0	40	18 56	19 24	19 58	** ** *	15 45 43				
18	86	33.3	-11	02.3	147	18.1 ¹⁰⁵		-26 35.3	45	19 04	19 35	20 12	** ** *	16 07 40				
19	101	33.3		01.4	161	47.7 ¹⁰⁶		32.6	50	13	47	30	23 59 65	34 38				
20	116	33.4	-11	00.5	176	17.3 ¹⁰⁶		29.7	52	17	19 54	39	46 67	16 47 36				
21	131	33.5	-10	59.6	190	47.0 ¹⁰⁷		26.7	54	22	20 00	20 49	31 69	17 02 35				
22	146	33.5		58.7	205	16.6 ¹⁰⁶		23.6	56	27	08	21 01	23 14 71	20 32				
23	161	33.6		57.8	219	46.3 ¹⁰⁷		20.4	58	33	17	15	22 52 75	17 42 28				
24	176	33.7	-10	56.9	234	16.0 ¹⁰⁷		-26 17.0	60 S	19 40	20 27	21 32	22 25 80	18 10 22				
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 14 ^h 01 ^m 4			Mag: -4.8 PMG: 14 ^h 36 ^m			Mag: +1.2 PMG: 10 ^h 59 ^m			Mag: -2.0 PMG: 10 ^h 54 ^m			Mag: +0.6 PMG: 1 ^h 29 ^m					
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	149	04.6	140	42.6	+8	22.1	195	11.2	-18	26.6	196	04.8	-18	05.8	337	36.3	+6	06.7
1	164	07.1	155	44.0		23.0	210	11.6		26.1	211	06.6		05.7	352	38.9		06.8
2	179	09.5	170	45.4		23.9	225	12.1		25.5	226	08.5		05.5	7	41.5		06.9
3	194	12.0	185	46.8		24.8	240	12.6		25.0	241	10.4		05.4	22	44.2		06.9
4	209	14.5	200	48.3		25.7	255	13.1		24.5	256	12.3		05.2	37	46.8		07.0
5	224	16.9	215	49.7	+8	26.6	270	13.6	-18	24.0	271	14.2	-18	05.1	52	49.4	+6	07.1
6	239	19.4	230	51.1	+8	27.5	285	14.1	-18	23.4	286	16.0	-18	04.9	67	52.0	+6	07.2
7	254	21.9	245	52.5		28.4	300	14.6		22.9	301	17.9		04.8	82	54.7		07.2
8	269	24.3	260	54.0		29.3	315	15.1		22.4	316	19.8		04.6	97	57.3		07.3
9	284	26.8	275	55.4		30.2	330	15.5		21.8	331	21.7		04.5	112	59.9		07.4
10	299	29.2	290	56.8		31.1	345	16.0		21.3	346	23.6		04.3	128	02.6		07.5
11	314	31.7	305	58.3	+8	32.0	0	16.5	-18	20.8	1	25.4	-18	04.2	143	05.2	+6	07.5
12	329	34.2	320	59.7	+8	32.9	15	17.0	-18	20.3	16	27.3	-18	04.0	158	07.8	+6	07.6
13	344	36.6	336	01.2		33.8	30	17.5		19.7	31	29.2		03.9	173	10.5		07.7
14	359	39.1	351	02.6		34.6	45	18.0		19.2	46	31.1		03.7	188	13.1		07.8
15	14	41.6	6	04.1		35.5	60	18.5		18.7	61	33.0		03.6	203	15.7		07.9
16	29	44.0	21	05.5		36.4	75	19.0		18.1	76	34.9		03.4	218	18.4		07.9
17	44	46.5	36	07.0	+8	37.3	90	19.5	-18	17.6	91	36.7	-18	03.3	233	21.0	+6	08.0
18	59	49.0	51	08.4	+8	38.2	105	19.9	-18	17.1	106	38.6	-18	03.1	248	23.6	+6	08.1
19	74	51.4	66	09.9		39.1	120	20.4		16.6	121	40.5		03.0	263	26.2		08.2
20	89	53.9	81	11.4		40.0	135	20.9		16.0	136	42.4		02.8	278	28.9		08.2
21	104	56.4	96	12.8		40.9	150	21.4		15.5	151	44.3		02.7	293	31.5		08.3
22	119	58.8	111	14.3		41.7	165	21.9		15.0	166	46.2		02.5	308	34.1		08.4
23	135	01.3	126	15.8		42.6	180	22.4		14.4	181	48.0		02.4	323	36.8		08.5
24	150	03.7	141	17.2	+8	43.5	195	22.9	-18	13.9	196	49.9	-18	02.2	338	39.4	+6	08.6
Dif	—			+14	+9		+5	+5		+19	+2		+26	+1				

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna							
	SD: 16'2 PMG: 12 ^h 13 ^m 7			Edad: 24 ^d 7 PHE { 4 ^h : 54'1 12 ^h : 54'2 20 ^h : 54'2 PMG: 8 ^h 40 ^m R°: 49 ^m																
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°					
h	°	'	°	°	'	°	°	h	m	h	m	h	m	m	h	m	m			
0	176	33.7	-10	56.9	234	16.0	-26	17.0	53	6	41	7	24	6	26	16	11	00	86	
1	191	33.7		56.0	248	45.7 ¹⁰⁷		13.5	53	38	18		6	00	22		26	79		
2	206	33.8		55.1	263	15.5 ¹⁰⁸		09.9	52	35	13		5	40	26		11	46	75	
3	221	33.9		54.2	277	45.3 ¹⁰⁸		06.1	52	33	09		23	29		12	03	71		
4	236	33.9		53.3	292	15.1 ¹⁰⁸		-26	51	30	05		5	08	31		17	69		
5	251	34.0	-10	52.4	306	45.0 ¹⁰⁹		-25	51	28	01		4	56	33	12	29	68		
6	266	34.1	-10	51.5	321	14.9 ¹⁰⁹		-25	49	23	53		4	29	37	12	55	63		
7	281	34.1		50.6	335	44.8 ¹⁰⁹		50.0	47	19	46		4	09	39	13	15	61		
8	296	34.2		49.7	350	14.7 ¹⁰⁹		45.6	45	15	40		3	51	41		32	59		
9	311	34.3		48.8	4	44.7 ¹¹⁰		41.1	43	11	35		3	36	43	13	47	56		
10	326	34.3		47.9	19	14.7 ¹¹⁰		36.5	38	6	26		3	11	45	14	11	54		
11	341	34.4	-10	47.0	33	44.8 ¹¹¹		-25	32	5	18		2	49	47	14	33	50		
12	356	34.5	-10	46.1	48	14.8 ¹¹⁰		-25	25	5	10		2	28	50	14	52	49		
13	11	34.5		45.2	62	45.0 ¹¹²		22.0	16	41	6	03	2	08	51	15	12	46		
14	26	34.6		44.3	77	15.1 ¹¹¹		16.9	5	32	5	54	1	46	53		33	43		
15	41	34.7		43.4	91	45.3 ¹¹²		11.8	4	50	20	44	20	56		15	57	40		
16	56	34.7		42.5	106	15.5 ¹¹²		06.4	41	12	39		1	05	57	16	11	39		
17	71	34.8	-10	41.6	120	45.8 ¹¹³		-25	4	30	5	04	5	32	0	47	59	16	28	36
18	86	34.9	-10	40.7	135	16.1 ¹¹³		-24	4	16	4	54	5	25	0	26	62	16	47	33
19	101	34.9		39.8	149	46.4 ¹¹³		49.8	3	58	41	15	**	**	**	17	12	29		
20	116	35.0		38.9	164	16.8 ¹¹⁴		44.0	49	35	11		**	**	**		23	27		
21	131	35.1		38.0	178	47.2 ¹¹⁴		38.1	39	28	06		**	**	**		37	24		
22	146	35.2		37.1	193	17.7 ¹¹⁵		32.1	27	20	5	01	**	**	**	17	52	21		
23	161	35.2		36.2	207	48.2 ¹¹⁵		26.0	3	14	11	4	55	**	**	**	18	10	17	
24	176	35.3	-10	35.3	222	18.7 ¹¹⁵		-24	2	57	4	49	4	49	23	45	88	18	32	12
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO								
	PMG: 13 ^h 57 ^m 5		Mag: -4.8 PMG: 14 ^h 33 ^m			Mag: +1.2 PMG: 10 ^h 58 ^m			Mag: -2.0 PMG: 10 ^h 51 ^m			Mag: +0.6 PMG: 1 ^h 25 ^m								
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec							
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'			
0	150	03.7	141	17.2	+8	195	22.9	-18	196	49.9	-18	02.2	338	39.4	+6	08.6				
1	165	06.2	156	18.7		210	23.4	13.4	211	51.8	02.0		353	42.0		08.6				
2	180	08.7	171	20.2		225	23.9	12.8	226	53.7	01.9		8	44.7		08.7				
3	195	11.1	186	21.7		240	24.4	12.3	241	55.6	01.7		23	47.3		08.8				
4	210	13.6	201	23.1		255	24.9	11.8	256	57.5	01.6		38	49.9		08.9				
5	225	16.1	216	24.6	+8	270	25.3	-18	271	59.3	-18	01.4	53	52.6	+6	08.9				
6	240	18.5	231	26.1	+8	285	25.8	-18	287	01.2	-18	01.3	68	55.2	+6	09.0				
7	255	21.0	246	27.6		300	26.3	10.2	302	03.1	01.1		83	57.8		09.1				
8	270	23.5	261	29.1		315	26.8	09.6	317	05.0	01.0		99	00.5		09.2				
9	285	25.9	276	30.6		330	27.3	09.1	332	06.9	00.8		114	03.1		09.3				
10	300	28.4	291	32.1		345	27.8	08.5	347	08.8	00.7		129	05.7		09.3				
11	315	30.9	306	33.6	+8	0	28.3	-18	2	10.6	-18	00.5	144	08.3	+6	09.4				
12	330	33.3	321	35.1	+8	15	28.8	-18	17	12.5	-18	00.4	159	11.0	+6	09.5				
13	345	35.8	336	36.6		30	29.3	06.9	32	14.4	00.2		174	13.6		09.6				
14	0	38.2	351	38.1		45	29.8	06.4	47	16.3	-18	00.1	189	16.2		09.7				
15	15	40.7	6	39.6		60	30.3	05.9	62	18.2	-17	59.9	204	18.9		09.7				
16	30	43.2	21	41.1		75	30.8	05.3	77	20.1		59.8	219	21.5		09.8				
17	45	45.6	36	42.6	+8	90	31.3	-18	92	21.9	-17	59.6	234	24.1	+6	09.9				
18	60	48.1	51	44.2	+8	105	31.8	-18	107	23.8	-17	59.5	249	26.8	+6	10.0				
19	75	50.6	66	45.7	+9	120	32.2	03.7	122	25.7		59.3	264	29.4		10.0				
20	90	53.0	81	47.2		135	32.7	03.2	137	27.6		59.2	279	32.0		10.1				
21	105	55.5	96	48.7		150	33.2	02.6	152	29.5		59.0	294	34.7		10.2				
22	120	58.0	111	50.3		165	33.7	02.1	167	31.4		58.9	309	37.3		10.3				
23	136	00.4	126	51.8		180	34.2	01.5	182	33.2		58.7	324	39.9		10.4				
24	151	02.9	141	53.3	+9	195	34.7	-18	197	35.1	-17	58.6	339	42.6	+6	10.4				
Dif	—		+15	+9		+5	+5		+19	+2		+2	+26	+1						

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 16:2 PMG: 12 ^h 13 ^m 6			Edad: 25 ^d 7 PHE { SD: 14:8 PMG: 9 ^h 29 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	m	h m	m			
0	176	35.3	-10	35.3	222	18.7	-24	19.8	60 N	17 07	17 50	18 38	6 42	8	12 26 89			
1	191	35.4		34.4	236	49.3 ¹¹⁶		13.4 ⁶⁴	58	12	53	38	22	13	12 45 83			
2	206	35.4		33.5	251	19.9 ¹¹⁶		07.0 ⁶⁴	56	17	55	38	6 06	17	13 01 79			
3	221	35.5		32.6	265	50.5 ¹¹⁶	-24	00.4 ⁶⁶	54	21	17 58	39	5 52	20	14 76			
4	236	35.6		31.7	280	21.2 ¹¹⁷	-23	53.7 ⁶⁷	52	25	18 00	39	39	24	26 73			
5	251	35.7	-10	30.8	294	52.0 ¹¹⁸	-23	46.9 ⁶⁸	50	17 29	18 02	18 39	5 29	25	13 37 70			
6	266	35.7	-10	29.9	309	22.8 ¹¹⁸	-23	40.0 ⁶⁹	45	17 36	18 06	18 40	5 06	30	13 58 67			
7	281	35.8		29.0	323	53.6 ¹¹⁸		33.0 ⁷⁰	40	43	10	42	4 48	33	14 16 63			
8	296	35.9		28.0	338	24.5 ¹¹⁹		25.8 ⁷²	35	48	14	44	32	36	31 59			
9	311	36.0		27.1	352	55.4 ¹¹⁹		18.6 ⁷²	30	17 53	18	46	4 19	38	14 43 58			
10	326	36.0		26.2	7	26.4 ¹²⁰		11.3 ⁷³	20	18 02	24	50	3 56	42	15 05 53			
11	341	36.1	-10	25.3	21	57.4 ¹²⁰	-23	03.8 ⁷⁵	10 N	18 10	18 31	18 56	3 36	45	15 23 50			
12	356	36.2	-10	24.4	36	28.4 ¹²⁰	-22	56.2 ⁷⁶	0	18 17	18 38	19 02	3 18	47	15 41 46			
13	11	36.3		23.5	50	59.5 ¹²¹		48.6 ⁷⁶	10 S	24	46	11	2 59	50	15 58 43			
14	26	36.3		22.6	65	30.6 ¹²¹		40.8 ⁷⁸	20	32	18 55	21	39	53	16 16 40			
15	41	36.4		21.7	80	01.8 ¹²²		32.9 ⁷⁹	30	42	19 06	35	16	57	37 36			
16	56	36.5		20.8	94	33.0 ¹²²		24.9 ⁸⁰	35	47	13	44	2 02	59	16 50 33			
17	71	36.6	-10	19.9	109	04.3 ¹²³	-22	16.9 ⁸⁰	40	18 53	19 21	19 55	1 46	62	17 04 30			
18	86	36.6	-10	19.0	123	35.6 ¹²³	-22	08.7 ⁸²	45	19 00	19 31	20 08	1 28	65	17 20 27			
19	101	36.7		18.1	138	07.0 ¹²⁴	-22	00.4 ⁸³	50	09	43	26	1 04	69	41 22			
20	116	36.8		17.1	152	38.4 ¹²⁴	-21	52.0 ⁸⁴	52	13	49	34	0 53	71	17 50 21			
21	131	36.9		16.2	167	09.8 ¹²⁴		43.5 ⁸⁵	54	17	19 56	44	40	74	18 01 18			
22	146	36.9		15.3	181	41.3 ¹²⁵		34.9 ⁸⁶	56	22	20 03	20 55	25	77	13 15			
23	161	37.0		14.4	196	12.9 ¹²⁶		26.2 ⁸⁷	58	28	11	21 08	0 07	82	27 11			
24	176	37.1	-10	13.5	210	44.4 ¹²⁵	-21	17.4 ⁸⁸	60 S	19 34	20 21	21 23	** ** *	**	18 44 6			
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG 13 ^h 53 ^m 5			Mag: -4.8 PMG: 14 ^h 31 ^m			Mag: +1.2 PMG: 10 ^h 57 ^m			Mag: -2.0 PMG: 10 ^h 48 ^m			Mag: +0.6 PMG: 1 ^h 21 ^m					
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	151	02.9	141	53.3	+9	04.4	195	34.7	-18	01.0	197	35.1	-17	58.6	339	42.6	+6	10.4
1	166	05.3	156	54.9		05.2	210	35.2	-18	00.5	212	37.0		58.4	354	45.2		10.5
2	181	07.8	171	56.4		06.1	225	35.7	-17	59.9	227	38.9		58.3	9	47.8		10.6
3	196	10.3	186	57.9		06.9	240	36.2		59.4	242	40.8		58.1	24	50.5		10.7
4	211	12.7	201	59.5		07.8	255	36.7		58.8	257	42.7		58.0	39	53.1		10.7
5	226	15.2	217	01.0	+9	08.6	270	37.2	-17	58.3	272	44.6	-17	57.8	54	55.7	+6	10.8
6	241	17.7	232	02.6	+9	09.5	285	37.7	-17	57.8	287	46.4	-17	57.7	69	58.4	+6	10.9
7	256	20.1	247	04.1		10.3	300	38.2		57.2	302	48.3		57.5	85	01.0		11.0
8	271	22.6	262	05.7		11.2	315	38.7		56.7	317	50.2		57.3	100	03.6		11.1
9	286	25.1	277	07.3		12.0	330	39.2		56.1	332	52.1		57.2	115	06.3		11.1
10	301	27.5	292	08.8		12.9	345	39.7		55.6	347	54.0		57.0	130	08.9		11.2
11	316	30.0	307	10.4	+9	13.7	0	40.2	-17	55.0	2	55.9	-17	56.9	145	11.5	+6	11.3
12	331	32.5	322	11.9	+9	14.6	15	40.7	-17	54.5	17	57.7	-17	56.7	160	14.2	+6	11.4
13	346	34.9	337	13.5		15.4	30	41.2		53.9	32	59.6		56.6	175	16.8		11.5
14	1	37.4	352	15.1		16.3	45	41.7		53.4	48	01.5		56.4	190	19.4		11.5
15	16	39.8	7	16.7		17.1	60	42.2		52.9	63	03.4		56.3	205	22.1		11.6
16	31	42.3	22	18.2		17.9	75	42.7		52.3	78	05.3		56.1	220	24.7		11.7
17	46	44.8	37	19.8	+9	18.8	90	43.2	-17	51.8	93	07.2	-17	56.0	235	27.3	+6	11.8
18	61	47.2	52	21.4	+9	19.6	105	43.7	-17	51.2	108	09.1	-17	55.8	250	30.0	+6	11.8
19	76	49.7	67	23.0		20.5	120	44.2		50.7	123	10.9		55.7	265	32.6		11.9
20	91	52.2	82	24.6		21.3	135	44.6		50.1	138	12.8		55.5	280	35.3		12.0
21	106	54.6	97	26.2		22.1	150	45.1		49.6	153	14.7		55.4	295	37.9		12.1
22	121	57.1	112	27.8		23.0	165	45.6		49.0	168	16.6		55.2	310	40.5		12.2
23	136	59.6	127	29.4		23.8	180	46.1		48.5	183	18.5		55.1	325	43.2		12.2
24	152	02.0	142	31.0	+9	24.6	195	46.6	-17	47.9	198	20.4	-17	54.9	340	45.8	+6	12.3
Dif	—			+16	+8		+5	+5		+19	+2		+26	+1				

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'2 PMG: 12 ^h 13 ^m 5			Edad: 26 ^d 7 PHE { 4 ^h : 54'5 12 ^h : 54'7 20 ^h : 54'8 Rº: 46 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	176	37.1	-10	13.5	210	44.4	-21 17.4	60 N	5 48	6 36	7 18	6 50	4	13 55	88
1	191	37.2		12.6	225	16.1 ¹²⁷	-21 08.5 ⁸⁹	58	48	33	13	35	9	14 08	84
2	206	37.3		11.7	239	47.8 ¹²⁷	-20 59.5 ⁹⁰	56	48	31	09	23	13	20	80
3	221	37.3		10.8	254	19.5 ¹²⁷	50.5 ⁹⁰	54	47	28	04	12	16	30	77
4	236	37.4		09.9	268	51.2 ¹²⁷	41.3 ⁹²	52	47	26	7 01	6 03	18	39	75
5	251	37.5	-10	08.9	283	23.0 ¹²⁸	-20 32.0 ⁹³	50	5 47	6 24	6 57	5 54	20	14 47	72
6	266	37.6	-10	08.0	297	54.9 ¹²⁹	-20 22.6 ⁹⁴	45	5 46	6 20	6 50	5 36	25	15 05	67
7	281	37.6		07.1	312	26.8 ¹²⁹	13.2 ⁹⁴	40	45	16	43	21	28	19	63
8	296	37.7		06.2	326	58.7 ¹²⁹	-20 03.6 ⁹⁶	35	43	12	38	5 08	32	30	60
9	311	37.8		05.3	341	30.7 ¹³⁰	-19 54.0 ⁹⁶	30	41	09	33	4 57	34	41	57
10	326	37.9		04.4	356	02.8 ¹³¹	44.2 ⁹⁸	20	37	6 03	25	38	38	15 58	53
11	341	38.0	-10	03.5	10	34.8 ¹³⁰	-19 34.4 ⁹⁸	10 N	5 31	5 56	6 17	4 21	42	16 13	49
12	356	38.1	-10	02.5	25	07.0 ¹³²	-19 24.4 ¹⁰⁰	0	5 25	5 49	6 10	4 05	46	16 27	45
13	11	38.1		01.6	39	39.1 ¹³¹	14.4 ¹⁰⁰	10 S	17	41	6 03	3 49	50	41	42
14	26	38.2	-10	00.7	54	11.3 ¹³²	-19 04.3 ¹⁰¹	20	5 06	32	5 55	32	53	16 56	37
15	41	38.3	-9	59.8	68	43.6 ¹³³	-18 54.1 ¹⁰²	30	4 52	21	46	13	57	17 13	33
16	56	38.4		58.9	83	15.9 ¹³³	43.9 ¹⁰²	35	43	14	41	3 01	60	23	30
17	71	38.5	-9	58.0	97	48.2 ¹³³	-18 33.5 ¹⁰⁴	40	4 33	5 06	5 34	2 48	63	17 34	27
18	86	38.5	-9	57.1	112	20.6 ¹³⁴	-18 23.0 ¹⁰⁵	45	4 19	4 57	5 27	2 33	66	17 47	23
19	101	38.6		56.1	126	53.0 ¹³⁴	12.5 ¹⁰⁵	50	4 02	45	19	13	72	18 03	19
20	116	38.7		55.2	141	25.5 ¹³⁵	-18 01.9 ¹⁰⁶	52	3 54	39	15	2 04	74	11	16
21	131	38.8		54.3	155	58.0 ¹³⁵	-17 51.2 ¹⁰⁷	54	44	32	10	1 54	76	19	14
22	146	38.9		53.4	170	30.5 ¹³⁵	40.4 ¹⁰⁸	56	33	25	06	42	80	28	11
23	161	39.0		52.5	185	03.1 ¹³⁶	29.5 ¹⁰⁹	58	20	17	5 00	29	83	38	8
24	176	39.0	-9	51.6	199	35.7 ¹³⁶	-17 18.6 ¹⁰⁹	60 S	3 05	4 07	4 54	1 13	88	18 50	4

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 13 ^h 49 ^m 6		Mag: -4.8 PMG: 14 ^h 28 ^m		Mag: +1.2 PMG: 10 ^h 57 ^m		Mag: -2.0 PMG: 10 ^h 45 ^m		Mag: +0.6 PMG: 1 ^h 17 ^m	
	hG ♂		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	152	02.0	142	31.0	+9	24.6	198	20.4	-17	54.9
1	167	04.5	157	32.6		25.5	213	22.3		54.8
2	182	07.0	172	34.2		26.3	228	24.2		54.6
3	197	09.4	187	35.8		27.1	243	26.0		54.5
4	212	11.9	202	37.4		27.9	258	27.9		54.3
5	227	14.3	217	39.0	+9	28.8	273	29.8	-17	54.2
6	242	16.8	232	40.6	+9	29.6	288	31.7	-17	54.0
7	257	19.3	247	42.2		30.4	303	33.6		53.9
8	272	21.7	262	43.8		31.2	318	35.5		53.7
9	287	24.2	277	45.5		32.1	333	37.4		53.5
10	302	26.7	292	47.1		32.9	348	39.2		53.4
11	317	29.1	307	48.7	+9	33.7	3	41.1	-17	53.2
12	332	31.6	322	50.3	+9	34.5	18	43.0	-17	53.1
13	347	34.1	337	52.0		35.3	33	44.9		52.9
14	2	36.5	352	53.6		36.1	48	46.8		52.8
15	17	39.0	7	55.3		37.0	63	48.7		52.6
16	32	41.5	22	56.9		37.8	78	50.6		52.5
17	47	43.9	37	58.5	+9	38.6	93	52.5	-17	52.3
18	62	46.4	53	00.2	+9	39.4	108	54.4	-17	52.2
19	77	48.8	68	01.8		40.2	123	56.2		52.0
20	92	51.3	83	03.5		41.0	138	58.1		51.9
21	107	53.8	98	05.2		41.8	154	00.0		51.7
22	122	56.2	113	06.8		42.6	169	01.9		51.6
23	137	58.7	128	08.5		43.4	184	03.8		51.4
24	153	01.2	143	10.1	+9	44.2	199	05.7	-17	51.3
Dif	—		+16		+8		+19		+2	
									+26	
									+1	

UT	SOL		● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16:2 PMG: 12 ^h 13 ^m 3		Edad: 27 ^d 7 PHE { 4 ^h : 54/9 12 ^h : 55/0 20 ^h : 55/2 R°: 43 ^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	176	39.0	-9 51.6	199	35.7	-17 18.6	60 N	17 12	17 55	18 43	6 54 3	15 23 88			
1	191	39.1		214	08.4 ¹³⁷	-17 07.5 ¹¹¹	58	17		57 43	44 7	32 84			
2	206	39.2	49.7	228	41.1 ¹³⁷	-16 56.4 ¹¹¹	56	21	17 59	42	36 9	40 81			
3	221	39.3	48.8	243	13.8 ¹³⁷	45.2 ¹¹²	54	25	18 01	42	28 12	47 78			
4	236	39.4	47.9	257	46.6 ¹³⁸	34.0 ¹¹²	52	29	03	42	21 14	54 74			
5	251	39.5	-9 47.0	272	19.4 ¹³⁸	-16 22.6 ¹¹⁴	50	17 32	18 05	18 42	6 14 17	15 59 73			
6	266	39.6	-9 46.0	286	52.3 ¹³⁹	-16 11.2 ¹¹⁴	45	17 39	18 09	18 43	6 01 21	16 12 67			
7	281	39.6	45.1	301	25.2 ¹³⁹	-15 59.7 ¹¹⁵	40	45	13	44	5 49 26	22 63			
8	296	39.7	44.2	315	58.1 ¹³⁹	48.1 ¹¹⁶	35	50	16	45	40 28	30 60			
9	311	39.8	43.3	330	31.1 ¹⁴⁰	36.5 ¹¹⁶	30	17 55	19	47	31 31	38 57			
10	326	39.9	42.4	345	04.1 ¹⁴⁰	24.8 ¹¹⁷	20	18 03	25	51	16 36	16 51 52			
11	341	40.0	-9 41.4	359	37.1 ¹⁴⁰	-15 13.0 ¹¹⁸	10 N	18 10	18 31	18 56	5 03 40	17 02 47			
12	356	40.1	-9 40.5	14	10.2 ¹⁴¹	-15 01.1 ¹¹⁹	0	18 17	18 38	19 02	4 51 44	17 12 44			
13	11	40.2	39.6	28	43.3 ¹⁴¹	-14 49.2 ¹¹⁹	10 S	24	45	10	39 48	23 39			
14	26	40.3	38.7	43	16.4 ¹⁴¹	37.2 ¹²⁰	20	31	18 53	20	25 53	33 36			
15	41	40.3	37.8	57	49.6 ¹⁴²	25.1 ¹²¹	30	40	19 04	33	10 57	46 30			
16	56	40.4	36.8	72	22.8 ¹⁴²	12.9 ¹²²	35	45	11	41	4 01 60	17 53 27			
17	71	40.5	-9 35.9	86	56.0 ¹⁴²	-14 00.7 ¹²²	40	18 50	19 18	19 52	3 51 64	18 01 24			
18	86	40.6	-9 35.0	101	29.3 ¹⁴³	-13 48.5 ¹²²	45	18 57	19 28	20 04	3 39 68	18 10 21			
19	101	40.7	34.1	116	02.6 ¹⁴³	36.1 ¹²⁴	50	19 05	39	21	25 72	22 16			
20	116	40.8	33.2	130	36.0 ¹⁴⁴	23.7 ¹²⁴	52	09	45	29	18 75	27 14			
21	131	40.9	32.2	145	09.3 ¹⁴³	-13 11.2 ¹²⁵	54	13	51	38	10 78	33 11			
22	146	41.0	31.3	159	42.7 ¹⁴⁴	-12 58.7 ¹²⁵	56	17	19 57	20 48	3 02 80	39 9			
23	161	41.1	30.4	174	16.1 ¹⁴⁴	46.1 ¹²⁶	58	22	20 05	21 01	2 52 84	46 6			
24	176	41.1	-9 29.5	188	49.6 ¹⁴⁵	-12 33.5 ¹²⁶	60 S	19 28	20 14	21 15	2 41 88	18 54 2			

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 13 ^h 45 ^m 7		Mag: -4.8 PMG: 14 ^h 26 ^m		Mag: +1.2 PMG: 10 ^h 56 ^m		Mag: -2.0 PMG: 10 ^h 42 ^m		Mag: +0.6 PMG: 1 ^h 13 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	153	01.2	143	10.1	195	58.7	199	05.7	341	49.0
1	168	03.6	158	11.8	210	59.2	214	07.6	356	51.7
2	183	06.1	173	13.5	225	59.7	229	09.5	11	54.3
3	198	08.6	188	15.2	241	00.2	244	11.3	26	57.0
4	213	11.0	203	16.8	256	00.7	259	13.2	41	59.6
5	228	13.5	218	18.5	271	01.2	274	15.1	57	02.2
6	243	15.9	233	20.2	286	01.7	289	17.0	72	04.9
7	258	18.4	248	21.9	301	02.2	304	18.9	87	07.5
8	273	20.9	263	23.6	316	02.7	319	20.8	102	10.1
9	288	23.3	278	25.3	331	03.2	334	22.7	117	12.8
10	303	25.8	293	27.0	346	03.7	349	24.6	132	15.4
11	318	28.3	308	28.6	1	04.2	4	26.5	147	18.1
12	333	30.7	323	30.3	16	04.7	19	28.3	162	20.7
13	348	33.2	338	32.1	31	05.2	34	30.2	177	23.3
14	3	35.7	353	33.8	46	05.7	49	32.1	192	26.0
15	18	38.1	8	35.5	61	06.2	64	34.0	207	28.6
16	33	40.6	23	37.2	76	06.7	79	35.9	222	31.2
17	48	43.1	38	38.9	91	07.2	94	37.8	237	33.9
18	63	45.5	53	40.6	106	07.7	109	39.7	252	36.5
19	78	48.0	68	42.3	121	08.3	124	41.6	267	39.1
20	93	50.4	83	44.0	136	08.8	139	43.5	282	41.8
21	108	52.9	98	45.8	151	09.3	154	45.4	297	44.4
22	123	55.4	113	47.5	166	09.8	169	47.2	312	47.1
23	138	57.8	128	49.2	181	10.3	184	49.1	327	49.7
24	154	00.3	143	51.0	196	10.8	199	51.0	342	52.3
Dif	—		+17	+8	+5	+6	+19	+2	+26	+1

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16:2 PMG: 12 ^h 13 ^m 2			Edad: 28 ^d 7 PHE { 4 ^h : 55:3 12 ^h : 55:5 20 ^h : 55:6 PMG: 11 ^h 45 ^m R°: 43 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	176	41.1	-9 29.5	188	49.6	-12 33.5	60 N	5 42	6 30	7 13		6 57	2	16 51	87
1	191	41.2		203	23.0 ¹⁴⁴	20.7 ¹²⁸	58	43	28	08		51	5	16 56	83
2	206	41.3		217	56.5 ¹⁴⁵	-12 08.0 ¹²⁷	56	43	26	04		45	8	17 01	80
3	221	41.4		232	30.1 ¹⁴⁶	-11 55.1 ¹²⁹	54	43	24	7 00		40	11	05	77
4	236	41.5		247	03.6 ¹⁴⁵	42.2 ¹²⁹	52	43	22	6 56		35	13	08	75
5	251	41.6	-9 24.8	261	37.2 ¹⁴⁶	-11 29.3 ¹²⁹	50	5 43	6 21	6 53		6 31	15	17 12	72
6	266	41.7	-9 23.9	276	10.8 ¹⁴⁶	-11 16.3 ¹³⁰	45	5 43	6 17	6 46		6 22	20	17 19	68
7	281	41.8		290	44.4 ¹⁴⁶	-11 03.2 ¹³¹	40	42	13	41		15	23	25	64
8	296	41.9		305	18.1 ¹⁴⁷	-10 50.1 ¹³¹	35	41	10	36		08	27	30	60
9	311	42.0		319	51.7 ¹⁴⁶	36.9 ¹³²	30	39	07	31		6 02	30	35	57
10	326	42.1		334	25.4 ¹⁴⁷	23.7 ¹³²	20	35	6 01	23		5 52	35	43	51
11	341	42.2	-9 19.3	348	59.1 ¹⁴⁷	-10 10.4 ¹³³	10 N	5 31	5 55	6 16		5 43	39	17 49	48
12	356	42.3	-9 18.4	3	32.8 ¹⁴⁷	-9 57.1 ¹³³	0	5 25	5 49	6 10		5 35	43	17 56	43
13	11	42.3		18	06.6 ¹⁴⁸	43.7 ¹³⁴	10 S	17	42	6 03		27	47	18 02	39
14	26	42.4		32	40.3 ¹⁴⁷	30.2 ¹³⁵	20	5 07	33	5 56		18	51	09	34
15	41	42.5		47	14.1 ¹⁴⁸	16.8 ¹³⁴	30	4 54	23	47		07	57	16	29
16	56	42.6		61	47.9 ¹⁴⁸	-9 03.2 ¹³⁶	35	46	16	42		5 01	60	20	27
17	71	42.7	-9 13.7	76	21.7 ¹⁴⁸	-8 49.7 ¹³⁵	40	4 35	5 09	5 37		4 55	63	18 25	23
18	86	42.8	-9 12.8	90	55.5 ¹⁴⁸	-8 36.0 ¹³⁷	45	4 23	5 00	5 30		4 47	67	18 31	19
19	101	42.9		105	29.4 ¹⁴⁹	22.4 ¹³⁶	50	4 06	4 48	22		37	72	38	14
20	116	43.0		120	03.2 ¹⁴⁸	-8 08.7 ¹³⁷	52	3 58	43	19		33	74	41	12
21	131	43.1		134	37.1 ¹⁴⁹	-7 54.9 ¹³⁸	54	49	37	15		28	77	44	10
22	146	43.2		149	10.9 ¹⁴⁸	41.1 ¹³⁸	56	39	30	10		22	80	48	7
23	161	43.3		163	44.8 ¹⁴⁹	27.3 ¹³⁸	58	27	22	5 05		16	83	52	4
24	176	43.4	-9 07.2	178	18.7 ¹⁴⁹	-7 13.4 ¹³⁹	60 S	3 12	4 13	4 59		4 09	87	18 56	2
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 13 ^h 41 ^m 7			Mag: -4.8 PMG: 14 ^h 23 ^m			Mag: +1.2 PMG: 10 ^h 55 ^m			Mag: -2.0 PMG: 10 ^h 39 ^m			Mag: +0.6 PMG: 1 ^h 08 ^m		
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	154	00.3	143 51.0	+10 03.2	196 10.8	-17 21.2	199 51.0	-17 47.6	342 52.3	+6 16.1					
1	169	02.8	158 52.7	03.9	211 11.3	20.7	214 52.9	47.5	357 55.0	16.2					
2	184	05.2	173 54.4	04.7	226 11.8	20.1	229 54.8	47.3	12 57.6	16.3					
3	199	07.7	188 56.2	05.5	241 12.3	19.5	244 56.7	47.2	28 00.3	16.4					
4	214	10.2	203 57.9	06.2	256 12.8	19.0	259 58.6	47.0	43 02.9	16.4					
5	229	12.6	218 59.7	+10 07.0	271 13.3	-17 18.4	275 00.5	-17 46.9	58 05.5	+6 16.5					
6	244	15.1	234 01.4	+10 07.8	286 13.8	-17 17.8	290 02.4	-17 46.7	73 08.2	+6 16.6					
7	259	17.6	249 03.2	08.5	301 14.3	17.3	305 04.3	46.5	88 10.8	16.7					
8	274	20.0	264 04.9	09.3	316 14.8	16.7	320 06.2	46.4	103 13.4	16.8					
9	289	22.5	279 06.7	10.1	331 15.4	16.1	335 08.0	46.2	118 16.1	16.8					
10	304	24.9	294 08.5	10.8	346 15.9	15.6	350 09.9	46.1	133 18.7	16.9					
11	319	27.4	309 10.2	+10 11.6	1 16.4	-17 15.0	5 11.8	-17 45.9	148 21.4	+6 17.0					
12	334	29.9	324 12.0	+10 12.4	16 16.9	-17 14.4	20 13.7	-17 45.8	163 24.0	+6 17.1					
13	349	32.3	339 13.8	13.1	31 17.4	13.9	35 15.6	45.6	178 26.6	17.2					
14	4 34.8	354 15.6	13.9	46 17.9	13.3	50 17.5	45.5	193 29.3	17.2						
15	19 37.3	9 17.3	14.6	61 18.4	12.7	65 19.4	45.3	208 31.9	17.3						
16	34 39.7	24 19.1	15.4	76 18.9	12.2	80 21.3	45.2	223 34.6	17.4						
17	49 42.2	39 20.9	+10 16.1	91 19.4	-17 11.6	95 23.2	-17 45.0	238 37.2	+6 17.5						
18	64 44.7	54 22.7	+10 16.9	106 19.9	-17 11.0	110 25.1	-17 44.9	253 39.8	+6 17.6						
19	79 47.1	69 24.5	17.6	121 20.5	10.5	125 27.0	44.7	268 42.5	17.6						
20	94 49.6	84 26.3	18.4	136 21.0	09.9	140 28.9	44.6	283 45.1	17.7						
21	109 52.0	99 28.1	19.1	151 21.5	09.3	155 30.7	44.4	298 47.7	17.8						
22	124 54.5	114 29.9	19.9	166 22.0	08.7	170 32.6	44.3	313 50.4	17.9						
23	139 57.0	129 31.7	20.6	181 22.5	08.2	185 34.5	44.1	328 53.0	18.0						
24	154 59.4	144 33.5	+10 21.4	196 23.0	-17 07.6	200 36.4	-17 44.0	343 55.7	+6 18.0						
Dif	—	+18	+8	+5	+6	+19	+2	+26	+1						

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 12 ^h 13 ^m 0			Edad: 29 ^d 7 PHE { 4 ^h : 55:8 12 ^h : 56:0 20 ^h : 56:1 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	176	43.4	-9 07.2	178	18.7	-7 13.4		60 N	17 17	18 00	18 48	6 59 1	18 18 87		
1	191	43.5	06.3	192	52.6 ¹⁴⁹	-6 59.5 ¹³⁹		58	22	02	47	56 4	19 84		
2	206	43.6	05.4	207	26.5 ¹⁴⁹	45.6 ¹³⁹		56	26	03	47	53 7	21 81		
3	221	43.7	04.4	222	00.4 ¹⁴⁹	31.6 ¹⁴⁰		54	29	05	46	51 9	22 78		
4	236	43.8	03.5	236	34.4 ¹⁵⁰	17.5 ¹⁴¹		52	33	07	46	48 13	23 76		
5	251	43.9	-9 02.6	251	08.3 ¹⁴⁹	-6 03.5 ¹⁴⁰		50	17 36	18 08	18 46	6 46 15	18 24 74		
6	266	44.0	-9 01.6	265	42.2 ¹⁴⁹	-5 49.4 ¹⁴¹		45	17 42	18 12	18 46	6 42 19	18 27 68		
7	281	44.1	-9 00.7	280	16.1 ¹⁴⁹	35.2 ¹⁴²		40	47	15	46	38 23	29 64		
8	296	44.2	-8 59.8	294	50.1 ¹⁵⁰	21.1 ¹⁴¹		35	52	18	47	35 26	30 61		
9	311	44.3	58.8	309	24.0 ¹⁴⁹	-5 06.9 ¹⁴²		30	17 56	20	48	32 29	32 58		
10	326	44.4	57.9	323	58.0 ¹⁵⁰	-4 52.7 ¹⁴²		20	18 04	26	52	27 34	34 53		
11	341	44.5	-8 57.0	338	31.9 ¹⁴⁹	-4 38.4 ¹⁴³		10 N	18 10	18 31	18 56	6 22 39	18 37 47		
12	356	44.6	-8 56.1	353	05.8 ¹⁴⁹	-4 24.1 ¹⁴³		0	18 16	18 37	19 02	6 18 43	18 39 43		
13	11	44.7	55.1	7	39.8 ¹⁵⁰	-4 09.8 ¹⁴³		10 S	23	44	09	14 47	41 39		
14	26	44.8	54.2	22	13.7 ¹⁴⁹	-3 55.5 ¹⁴³		20	30	18 52	18	09 53	43 34		
15	41	44.9	53.3	36	47.6 ¹⁴⁹	41.1 ¹⁴⁴		30	37	19 02	31	04 58	45 29		
16	56	45.0	52.3	51	21.5 ¹⁴⁹	26.7 ¹⁴⁴		35	42	08	39	6 01 61	47 26		
17	71	45.1	-8 51.4	65	55.5 ¹⁵⁰	-3 12.3 ¹⁴⁴		40	18 47	19 15	19 48	5 58 64	18 48 23		
18	86	45.2	-8 50.5	80	29.4 ¹⁴⁹	-2 57.8 ¹⁴⁵		45	18 54	19 24	20 01	5 54 68	18 50 19		
19	101	45.3	49.5	95	03.3 ¹⁴⁹	43.4 ¹⁴⁴		50	19 01	35	16	49 73	52 14		
20	116	45.4	48.6	109	37.2 ¹⁴⁹	28.9 ¹⁴⁵		52	04	40	24	47 76	53 12		
21	131	45.5	47.7	124	11.0 ¹⁴⁸	-2 14.4 ¹⁴⁵		54	08	46	32	45 78	54 10		
22	146	45.6	46.7	138	44.9 ¹⁴⁹	-1 59.9 ¹⁴⁵		56	12	52	42	42 81	55 7		
23	161	45.7	45.8	153	18.8 ¹⁴⁹	45.3 ¹⁴⁶		58	17	19 59	20 54	39 84	56 5		
24	176	45.8	-8 44.8	167	52.6 ¹⁴⁸	-1 30.8 ¹⁴⁵		60 S	19 22	20 08	21 07	5 36 87	18 58 1		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 13 ^h 37 ^m 8		Mag: -4.8 PMG: 14 ^h 20 ^m			Mag: +1.2 PMG: 10 ^h 54 ^m			Mag: -2.0 PMG: 10 ^h 36 ^m			Mag: +0.6 PMG: 1 ^h 04 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	154	59.4	144 33.5	+10 21.4		196 23.0	-17 07.6		200 36.4	-17 44.0	343 55.7	+6 18.0			
1	170	01.9	159 35.3	22.1		211 23.5	07.0		215 38.3	43.8	358 58.3	18.1			
2	185	04.4	174 37.1	22.9		226 24.0	06.5		230 40.2	43.7	14 00.9	18.2			
3	200	06.8	189 38.9	23.6		241 24.5	05.9		245 42.1	43.5	29 03.6	18.3			
4	215	09.3	204 40.7	24.3		256 25.1	05.3		260 44.0	43.4	44 06.2	18.4			
5	230	11.8	219 42.5	+10 25.1		271 25.6	-17 04.7		275 45.9	-17 43.2	59 08.9	+6 18.4			
6	245	14.2	234 44.4	+10 25.8		286 26.1	-17 04.2		290 47.8	-17 43.0	74 11.5	+6 18.5			
7	260	16.7	249 46.2	26.5		301 26.6	03.6		305 49.7	42.9	89 14.1	18.6			
8	275	19.2	264 48.0	27.3		316 27.1	03.0		320 51.6	42.7	104 16.8	18.7			
9	290	21.6	279 49.9	28.0		331 27.6	02.4		335 53.5	42.6	119 19.4	18.8			
10	305	24.1	294 51.7	28.7		346 28.1	01.9		350 55.4	42.4	134 22.1	18.8			
11	320	26.5	309 53.5	+10 29.5		1 28.6	-17 01.3		5 57.2	-17 42.3	149 24.7	+6 18.9			
12	335	29.0	324 55.4	+10 30.2		16 29.2	-17 00.7		20 59.1	-17 42.1	164 27.3	+6 19.0			
13	350	31.5	339 57.2	30.9		31 29.7	-17 00.1		36 01.0	42.0	179 30.0	19.1			
14	5	33.9	354 59.1	31.7		46 30.2	-16 59.6		51 02.9	41.8	194 32.6	19.2			
15	20	36.4	10 00.9	32.4		61 30.7	59.0		66 04.8	41.7	209 35.3	19.2			
16	35	38.9	25 02.8	33.1		76 31.2	58.4		81 06.7	41.5	224 37.9	19.3			
17	50	41.3	40 04.6	+10 33.8		91 31.7	-16 57.8		96 08.6	-17 41.4	239 40.5	+6 19.4			
18	65	43.8	55 06.5	+10 34.5		106 32.2	-16 57.3		111 10.5	-17 41.2	254 43.2	+6 19.5			
19	80	46.3	70 08.4	35.3		121 32.7	56.7		126 12.4	41.1	269 45.8	19.6			
20	95	48.7	85 10.2	36.0		136 33.3	56.1		141 14.3	40.9	284 48.5	19.6			
21	110	51.2	100 12.1	36.7		151 33.8	55.5		156 16.2	40.8	299 51.1	19.7			
22	125	53.6	115 14.0	37.4		166 34.3	54.9		171 18.1	40.6	314 53.7	19.8			
23	140	56.1	130 15.8	38.1		181 34.8	54.4		186 20.0	40.5	329 56.4	19.9			
24	155	58.6	145 17.7	+10 38.8		196 35.3	-16 53.8		201 21.9	-17 40.3	344 59.0	+6 20.0			
Dif	—		+18	+7		+5	+6		+19	+2		+26	+1		

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'2 PMG: 12 ^h 12 ^m 9			Edad: 0 ^d 9 PHE { 4 ^h : 56'3 12 ^h : 56'5 20 ^h : 56'6 R°: 44 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	176	45.8	-8 44.8	167	52.6	-1 30.8	60 N	5 37	6 25	7 07	7 00	2	19 45	91	
1	191	45.9		182	26.5 ¹⁴⁹	16.2 ¹⁴⁶	58	38	23	7 03	00	5	43	87	
2	206	46.0		197	00.3 ¹⁴⁸	-1 01.6 ¹⁴⁶	56	38	21	6 59	00	8	42	83	
3	221	46.1		211	34.1 ¹⁴⁸	-0 47.0 ¹⁴⁶	54	39	20	55	00	11	40	81	
4	236	46.2		226	07.9 ¹⁴⁸	32.4 ¹⁴⁶	52	39	18	52	01	12	39	78	
5	251	46.3	-8 40.2	240	41.6 ¹⁴⁷	-0 17.7 ¹⁴⁷	50	5 39	6 17	6 49	7 01	14	19 38	75	
6	266	46.4	-8 39.2	255	15.4 ¹⁴⁸	-0 03.1 ¹⁴⁶	45	5 40	6 14	6 43	7 01	19	19 35	71	
7	281	46.5		269	49.1 ¹⁴⁷	+0 11.5 ¹⁴⁶	40	39	11	38	01	23	33	66	
8	296	46.6		284	22.8 ¹⁴⁷	26.2 ¹⁴⁷	35	38	08	33	01	26	31	63	
9	311	46.7		298	56.5 ¹⁴⁷	40.9 ¹⁴⁷	30	37	05	29	01	29	30	59	
10	326	46.8		313	30.2 ¹⁴⁷	+0 55.6 ¹⁴⁷	20	34	6 00	22	01	35	27	54	
11	341	46.9	-8 34.5	328	03.8 ¹⁴⁶	+1 10.2 ¹⁴⁶	10 N	5 30	5 54	6 16	7 01	40	19 24	50	
12	356	47.0	-8 33.6	342	37.4 ¹⁴⁶	+1 24.9 ¹⁴⁷	0	5 24	5 49	6 10	7 01	44	19 22	45	
13	11	47.1		357	11.0 ¹⁴⁶	39.6 ¹⁴⁷	10 S	17	42	6 03	01	49	20	40	
14	26	47.3		11	44.6 ¹⁴⁶	+1 54.3 ¹⁴⁷	20	5 08	34	5 57	02	53	17	36	
15	41	47.4		26	18.1 ¹⁴⁵	+2 09.0 ¹⁴⁷	30	4 56	24	49	02	58	14	31	
16	56	47.5		40	51.6 ¹⁴⁵	23.7 ¹⁴⁷	35	48	18	44	02	62	13	27	
17	71	47.6	-8 28.9	55	25.1 ¹⁴⁵	+2 38.4 ¹⁴⁷	40	4 38	5 11	5 39	7 02	65	19 11	24	
18	86	47.7	-8 28.0	69	58.5 ¹⁴⁴	+2 53.1 ¹⁴⁷	45	4 26	5 03	5 33	7 02	70	19 09	20	
19	101	47.8		84	32.0 ¹⁴⁵	+3 07.8 ¹⁴⁷	50	10	4 52	26	02	75	06	15	
20	116	47.9		99	05.3 ¹⁴³	22.5 ¹⁴⁷	52	4 03	47	22	03	76	05	13	
21	131	48.0		113	38.7 ¹⁴⁴	37.1 ¹⁴⁶	54	3 54	41	19	03	79	04	10	
22	146	48.1		128	12.0 ¹⁴³	+3 51.8 ¹⁴⁷	56	45	35	14	03	82	02	8	
23	161	48.2		142	45.3 ¹⁴³	+4 06.5 ¹⁴⁷	58	33	28	10	03	85	19 01	5	
24	176	48.3	-8 22.3	157	18.5 ¹⁴²	+4 21.2 ¹⁴⁷	60 S	3 20	4 19	5 05	7 03	89	18 59	2	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 13 ^h 33 ^m 9			Mag: -4.8 PMG: 14 ^h 17 ^m			Mag: +1.2 PMG: 10 ^h 53 ^m			Mag: -2.0 PMG: 10 ^h 33 ^m			Mag: +0.6 PMG: 1 ^h 00 ^m		
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	155	58.6	145 17.7	+10 38.8	196 35.3	-16 53.8	201 21.9	-17 40.3	344 59.0	+6 20.0					
1	171	01.0	160 19.6	39.5	211 35.8	53.2	216 23.8	40.1	0 01.7	20.0					
2	186	03.5	175 21.5	40.3	226 36.4	52.6	231 25.7	40.0	15 04.3	20.1					
3	201	06.0	190 23.4	41.0	241 36.9	52.1	246 27.6	39.8	30 06.9	20.2					
4	216	08.4	205 25.3	41.7	256 37.4	51.5	261 29.5	39.7	45 09.6	20.3					
5	231	10.9	220 27.2	+10 42.4	271 37.9	-16 50.9	276 31.3	-17 39.5	60 12.2	+6 20.4					
6	246	13.4	235 29.1	+10 43.1	286 38.4	-16 50.3	291 33.2	-17 39.4	75 14.9	+6 20.4					
7	261	15.8	250 31.0	43.8	301 38.9	49.7	306 35.1	39.2	90 17.5	20.5					
8	276	18.3	265 32.9	44.5	316 39.5	49.2	321 37.0	39.1	105 20.1	20.6					
9	291	20.8	280 34.8	45.2	331 40.0	48.6	336 38.9	38.9	120 22.8	20.7					
10	306	23.2	295 36.7	45.9	346 40.5	48.0	351 40.8	38.8	135 25.4	20.8					
11	321	25.7	310 38.6	+10 46.6	1 41.0	-16 47.4	6 42.7	-17 38.6	150 28.1	+6 20.8					
12	336	28.1	325 40.5	+10 47.3	16 41.5	-16 46.8	21 44.6	-17 38.5	165 30.7	+6 20.9					
13	351	30.6	340 42.4	48.0	31 42.0	46.2	36 46.5	38.3	180 33.4	21.0					
14	6	33.1	355 44.4	48.7	46 42.6	45.7	51 48.4	38.2	195 36.0	21.1					
15	21	35.5	10 46.3	49.3	61 43.1	45.1	66 50.3	38.0	210 38.6	21.2					
16	36	38.0	25 48.2	50.0	76 43.6	44.5	81 52.2	37.9	225 41.3	21.2					
17	51	40.5	40 50.2	+10 50.7	91 44.1	-16 43.9	96 54.1	-17 37.7	240 43.9	+6 21.3					
18	66	42.9	55 52.1	+10 51.4	106 44.6	-16 43.3	111 56.0	-17 37.6	255 46.6	+6 21.4					
19	81	45.4	70 54.0	52.1	121 45.1	42.7	126 57.9	37.4	270 49.2	21.5					
20	96	47.9	85 56.0	52.8	136 45.7	42.2	141 59.8	37.3	285 51.8	21.6					
21	111	50.3	100 57.9	53.5	151 46.2	41.6	157 01.7	37.1	300 54.5	21.7					
22	126	52.8	115 59.9	54.1	166 46.7	41.0	172 03.6	36.9	315 57.1	21.7					
23	141	55.2	131 01.8	54.8	181 47.2	40.4	187 05.5	36.8	330 59.8	21.8					
24	156	57.7	146 03.8	+10 55.5	196 47.7	-16 39.8	202 07.4	-17 36.6	346 02.4	+6 21.9					
Dif	—		+19	+7	+5	+6	+19	+2	+26	+1					

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1			Edad: 1 ^d 9	PHE { 4 ^h : 56 ^m /8 12 ^h : 56 ^m /9 20 ^h : 57 ^m /1									
	PMG: 12 ^h 12 ^m 7					SD: 15 ^h 4			PMG: 13 ^h 56 ^m	R ^o : 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
0	176	48.3	-8 22.3	157	18.5	+4 21.2		60 N	17 22	18 05	18 53	7 02 2	21 16 94	
1	191	48.4	21.4	171	51.7 ¹⁴²	35.8 ¹⁴⁶		58	27	06	52	05 6	10 90	
2	206	48.5	20.5	186	24.9 ¹⁴²	+4 50.4 ¹⁴⁶		56	30	08	51	08 9	05 87	
3	221	48.7	19.5	200	58.0 ¹⁴¹	+5 05.1 ¹⁴⁷		54	33	09	50	11 11	21 01 81	
4	236	48.8	18.6	215	31.1 ¹⁴¹	19.7 ¹⁴⁶		52	36	10	49	13 14	20 57 81	
5	251	48.9	-8 17.6	230	04.1 ¹⁴⁰	+5 34.3 ¹⁴⁶		50	17 39	18 11	18 49	7 15 16	20 53 78	
6	266	49.0	-8 16.7	244	37.1 ¹⁴⁰	+5 48.9 ¹⁴⁶		45	17 45	18 14	18 48	7 20 21	20 46 72	
7	281	49.1	15.8	259	10.0 ¹³⁹	+6 03.5 ¹⁴⁶		40	50	17	48	24 25	39 69	
8	296	49.2	14.8	273	42.9 ¹³⁹	18.0 ¹⁴⁵		35	54	19	49	27 29	34 65	
9	311	49.3	13.9	288	15.8 ¹³⁹	32.5 ¹⁴⁵		30	17 58	22	50	30 32	29 62	
10	326	49.4	12.9	302	48.6 ¹³⁸	+6 47.1 ¹⁴⁶		20	18 04	27	52	36 37	21 56	
11	341	49.5	-8 12.0	317	21.3 ¹³⁷	+7 01.5 ¹⁴⁴		10 N	18 10	18 31	18 56	7 41 41	20 14 51	
12	356	49.6	-8 11.0	331	54.0 ¹³⁷	+7 16.0 ¹⁴⁵		0	18 16	18 37	19 01	7 45 46	20 07 47	
13	11	49.8	10.1	346	26.7 ¹³⁷	30.5 ¹⁴⁵		10 S	22	43	08	50 50	20 00 43	
14	26	49.9	09.2	0	59.3 ¹³⁶	44.9 ¹⁴⁴		20	28	18 50	16	7 55 55	19 53 38	
15	41	50.0	08.2	15	31.8 ¹³⁵	+7 59.3 ¹⁴⁴		30	35	19 00	28	8 00 61	45 33	
16	56	50.1	07.3	30	04.3 ¹³⁵	+8 13.7 ¹⁴⁴		35	40	05	36	04 63	40 30	
17	71	50.2	-8 06.3	44	36.8 ¹³⁵	+8 28.0 ¹⁴³		40	18 44	19 12	19 45	8 07 68	19 35 26	
18	86	50.3	-8 05.4	59	09.2 ¹³⁴	+8 42.3 ¹⁴³		45	18 50	19 20	19 57	8 12 71	19 29 22	
19	101	50.4	04.4	73	41.5 ¹³³	+8 56.6 ¹⁴³		50	18 57	30	20 11	17 77	21 18	
20	116	50.5	03.5	88	13.8 ¹³³	+9 10.9 ¹⁴³		52	19 00	35	19	19 80	18 15	
21	131	50.7	02.5	102	46.0 ¹³²	25.1 ¹⁴²		54	04	41	27	22 82	14 13	
22	146	50.8	01.6	117	18.1 ¹³¹	39.3 ¹⁴²		56	07	47	36	25 85	10 10	
23	161	50.9	-8 00.7	131	50.2 ¹³¹	+9 53.4 ¹⁴¹		58	12	19 53	47	28 89	06 6	
24	176	51.0	-7 59.7	146	22.2 ¹³⁰	+10 07.5 ¹⁴¹		60 S	19 16	20 01	20 59	8 32 93	19 01 3	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 13 ^h 29 ^m 9		Mag: -4.8 PMG: 14 ^h 14 ^m			Mag: +1.2 PMG: 10 ^h 52 ^m			Mag: -2.0 PMG: 10 ^h 30 ^m			Mag: +0.6 PMG: 0 ^h 56 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	156	57.7	146 03.8	+10 55.5	196 47.7	-16 39.8	202 07.4	-17 36.6	346 02.4	+6 21.9				
1	172	00.2	161 05.7	56.2	211 48.3	39.2	217 09.3	36.5	1 05.0	22.0				
2	187	02.6	176 07.7	56.8	226 48.8	38.6	232 11.2	36.3	16 07.7	22.1				
3	202	05.1	191 09.7	57.5	241 49.3	38.1	247 13.1	36.2	31 10.3	22.1				
4	217	07.6	206 11.6	58.2	256 49.8	37.5	262 15.0	36.0	46 13.0	22.2				
5	232	10.0	221 13.6	+10 58.9	271 50.3	-16 36.9	277 16.9	-17 35.9	61 15.6	+6 22.3				
6	247	12.5	236 15.6	+10 59.5	286 50.9	-16 36.3	292 18.8	-17 35.7	76 18.3	+6 22.4				
7	262	15.0	251 17.6	+11 00.2	301 51.4	35.7	307 20.7	35.6	91 20.9	22.5				
8	277	17.4	266 19.5	00.9	316 51.9	35.1	322 22.6	35.4	106 23.5	22.5				
9	292	19.9	281 21.5	01.5	331 52.4	34.5	337 24.5	35.3	121 26.2	22.6				
10	307	22.4	296 23.5	02.2	346 52.9	33.9	352 26.3	35.1	136 28.8	22.7				
11	322	24.8	311 25.5	+11 02.9	1 53.5	-16 33.3	7 28.2	-17 35.0	151 31.5	+6 22.8				
12	337	27.3	326 27.5	+11 03.5	16 54.0	-16 32.8	22 30.1	-17 34.8	166 34.1	+6 22.9				
13	352	29.7	341 29.5	04.2	31 54.5	32.2	37 32.0	34.7	181 36.8	22.9				
14	7	32.2	356 31.5	04.8	46 55.0	31.6	52 33.9	34.5	196 39.4	23.0				
15	22	34.7	11 33.5	05.5	61 55.6	31.0	67 35.8	34.4	211 42.0	23.1				
16	37	37.1	26 35.5	06.1	76 56.1	30.4	82 37.7	34.2	226 44.7	23.2				
17	52	39.6	41 37.5	+11 06.8	91 56.6	-16 29.8	97 39.6	-17 34.0	241 47.3	+6 23.3				
18	67	42.1	56 39.5	+11 07.5	106 57.1	-16 29.2	112 41.5	-17 33.9	256 50.0	+6 23.3				
19	82	44.5	71 41.5	08.1	121 57.6	28.6	127 43.4	33.7	271 52.6	23.4				
20	97	47.0	86 43.6	08.7	136 58.2	28.0	142 45.3	33.6	286 55.2	23.5				
21	112	49.5	101 45.6	09.4	151 58.7	27.4	157 47.2	33.4	301 57.9	23.6				
22	127	51.9	116 47.6	10.0	166 59.2	26.8	172 49.1	33.3	317 00.5	23.7				
23	142	54.4	131 49.7	10.7	181 59.7	26.3	187 51.0	33.1	332 03.2	23.7				
24	157	56.8	146 51.7	+11 11.3	197 00.3	-16 25.7	202 52.9	-17 33.0	347 05.8	+6 23.8				
Dif	—		+20	+7	+5	+6	+19	+2	+26		+1			

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16 ^h 1			Edad: 2 ^d 9	PHE {	4 ^h : 57 ^h 3 12 ^h : 57 ^h 4 20 ^h : 57 ^h 6									
	PMG: 12 ^h 12 ^m 5							R°: 50 ^m							
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	h	m	h	m	h	m	m	
0	176	51.0	-7 59.7	146	22.2	+10 07.5	141	5 31	6 19	7 01	7 04	4	22 50	99	
1	191	51.1	58.8	160	54.2 ¹³⁰	21.6 ¹⁴¹	58	33	18	6 57	11 8		40 94		
2	206	51.2	57.8	175	26.1 ¹²⁹	35.6 ¹⁴⁰	56	34	16	54	17 11		32 90		
3	221	51.3	56.9	189	57.9 ¹²⁸	+10 49.6 ¹⁴⁰	54	34	15	51	22 15		24 86		
4	236	51.5	55.9	204	29.7 ¹²⁸	+11 03.6 ¹⁴⁰	52	35	14	48	27 17		18 83		
5	251	51.6	-7 55.0	219	01.4 ¹²⁷	+11 17.5 ¹³⁹	50	5 35	6 13	6 45	7 31	20	22 11	81	
6	266	51.7	-7 54.0	233	33.0 ¹²⁶	+11 31.3 ¹³⁸	45	5 36	6 10	6 40	7 41	25	21 58	76	
7	281	51.8	53.1	248	04.6 ¹²⁶	45.2 ¹³⁹	40	36	08	35	49 29		48 71		
8	296	51.9	52.1	262	36.0 ¹²⁴	+11 58.9 ¹³⁷	35	36	05	31	7 56	32	39 67		
9	311	52.0	51.2	277	07.5 ¹²⁵	+12 12.7 ¹³⁸	30	35	6 03	27	8 02	35	31 64		
10	326	52.2	50.3	291	38.8 ¹²³	26.3 ¹³⁶	20	33	5 58	21	13 40		17 59		
11	341	52.3	-7 49.3	306	10.1 ¹²³	+12 39.9 ¹³⁶	10 N	5 29	5 54	6 15	8 22	45	21 05	55	
12	356	52.4	-7 48.4	320	41.3 ¹²²	+12 53.5 ¹³⁶	0	5 24	5 48	6 09	8 31	49	20 54	51	
13	11	52.5	47.4	335	12.4 ¹²¹	+13 07.0 ¹³⁵	10 S	18	42	6 04	40 53		43 47		
14	26	52.6	46.5	349	43.4 ¹²⁰	20.5 ¹³⁵	20	5 09	35	5 57	8 50	57	31 43		
15	41	52.7	45.5	4	14.4 ¹²⁰	33.9 ¹³⁴	30	4 57	26	50	9 01	63	18 37		
16	56	52.9	44.6	18	45.3 ¹¹⁹	+13 47.2 ¹³³	35	50	20	46	07 67		10 35		
17	71	53.0	-7 43.6	33	16.1 ¹¹⁸	+14 00.5 ¹³³	40	4 41	5 14	5 41	9 15	70	20 01	31	
18	86	53.1	-7 42.7	47	46.8 ¹¹⁷	+14 13.7 ¹³²	45	4 29	5 06	5 36	9 23	75	19 51	27	
19	101	53.2	41.7	62	17.5 ¹¹⁷	26.9 ¹³²	50	15	4 56	29	34 80		39 22		
20	116	53.3	40.8	76	48.0 ¹¹⁵	40.0 ¹³¹	52	4 07	51	26	39 82		33 19		
21	131	53.5	39.8	91	18.5 ¹¹⁵	+14 53.0 ¹³⁰	54	3 59	45	23	44 85		27 16		
22	146	53.6	38.9	105	48.9 ¹¹⁴	+15 06.0 ¹³⁰	56	50	39	19	50 89		20 13		
23	161	53.7	37.9	120	19.2 ¹¹³	18.9 ¹²⁹	58	40	33	15	9 57	93	12 10		
24	176	53.8	-7 37.0	134	49.5 ¹¹³	+15 31.7 ¹²⁸	60 S	3 27	4 25	5 10	10 05	97	19 04	4	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 13 ^h 26 ^m 0			Mag: -4.8 PMG: 14 ^h 11 ^m			Mag: +1.2 PMG: 10 ^h 52 ^m			Mag: -2.0 PMG: 10 ^h 27 ^m			Mag: +0.5 PMG: 0 ^h 51 ^m		
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	157	56.8	146	51.7	+11 11.3	197	00.3	-16 25.7	202	52.9	-17 33.0	347	05.8	+6 23.8	
1	172	59.3	161	53.7	12.0	212	00.8	25.1	217	54.8	32.8	2	08.5	23.9	
2	188	01.8	176	55.8	12.6	227	01.3	24.5	232	56.7	32.7	17	11.1	24.0	
3	203	04.2	191	57.8	13.2	242	01.8	23.9	247	58.6	32.5	32	13.7	24.1	
4	218	06.7	206	59.9	13.9	257	02.4	23.3	263	00.5	32.4	47	16.4	24.2	
5	233	09.2	222	01.9	+11 14.5	272	02.9	-16 22.7	278	02.4	-17 32.2	62	19.0	+6 24.2	
6	248	11.6	237	04.0	+11 15.2	287	03.4	-16 22.1	293	04.3	-17 32.1	77	21.7	+6 24.3	
7	263	14.1	252	06.0	15.8	302	03.9	21.5	308	06.2	31.9	92	24.3	24.4	
8	278	16.6	267	08.1	16.4	317	04.5	20.9	323	08.1	31.8	107	27.0	24.5	
9	293	19.0	282	10.1	17.0	332	05.0	20.3	338	10.0	31.6	122	29.6	24.6	
10	308	21.5	297	12.2	17.7	347	05.5	19.7	353	11.9	31.5	137	32.2	24.6	
11	323	24.0	312	14.3	+11 18.3	2	06.0	-16 19.1	8	13.8	-17 31.3	152	34.9	+6 24.7	
12	338	26.4	327	16.4	+11 18.9	17	06.6	-16 18.5	23	15.7	-17 31.1	167	37.5	+6 24.8	
13	353	28.9	342	18.4	19.5	32	07.1	17.9	38	17.6	31.0	182	40.2	24.9	
14	8	31.3	357	20.5	20.2	47	07.6	17.3	53	19.5	30.8	197	42.8	25.0	
15	23	33.8	12	22.6	20.8	62	08.1	16.7	68	21.4	30.7	212	45.5	25.0	
16	38	36.3	27	24.7	21.4	77	08.7	16.1	83	23.3	30.5	227	48.1	25.1	
17	53	38.7	42	26.8	+11 22.0	92	09.2	-16 15.5	98	25.2	-17 30.4	242	50.8	+6 25.2	
18	68	41.2	57	28.9	+11 22.6	107	09.7	-16 14.9	113	27.1	-17 30.2	257	53.4	+6 25.3	
19	83	43.7	72	31.0	23.2	122	10.2	14.3	128	29.0	30.1	272	56.0	25.4	
20	98	46.1	87	33.1	23.9	137	10.8	13.7	143	30.9	29.9	287	58.7	25.4	
21	113	48.6	102	35.2	24.5	152	11.3	13.1	158	32.8	29.8	303	01.3	25.5	
22	128	51.1	117	37.3	25.1	167	11.8	12.5	173	34.7	29.6	318	04.0	25.6	
23	143	53.5	132	39.4	25.7	182	12.4	11.9	188	36.6	29.5	333	06.6	25.7	
24	158	56.0	147	41.5	+11 26.3	197	12.9	-16 11.3	203	38.5	-17 29.3	348	09.3	+6 25.8	
Dif	—		+21	+6		+5	+6		+19	+2		+26	+1		

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1			Edad: 3 ^d 9	PHE { 4 ^h : 57'7 12 ^h : 57'9 20 ^h : 58'0										
	PMG: 12 ^h 12 ^m 3														
	hG ☉	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	53.8	-7 37.0	134	49.5	+15 31.7		60 N	17 28	18 10	18 58	7 08 7	** ** *	** ** *	
1	191	53.9	36.0	149	19.6 ¹¹¹	44.5 ¹²⁸		58	31	11	56	19 12	** ** *	** ** *	
2	206	54.1	35.1	163	49.7 ¹¹¹	+15 57.2 ¹²⁷		56	34	12	55	28 17	** ** *	** ** *	
3	221	54.2	34.1	178	19.6 ¹⁰⁹	+16 09.8 ¹²⁶		54	37	13	54	37 19	23 50 87		
4	236	54.3	33.2	192	49.5 ¹⁰⁹	22.3 ¹²⁵		52	40	14	53	44 23	41 83		
5	251	54.4	-7 32.2	207	19.3 ¹⁰⁸	+16 34.8 ¹²⁵		50	17 42	18 15	18 52	7 51 25	23 32 81		
6	266	54.5	-7 31.3	221	49.0 ¹⁰⁷	+16 47.1 ¹²³		45	17 47	18 17	18 51	8 06 30	23 14 75		
7	281	54.7	30.3	236	18.6 ¹⁰⁶	+16 59.4 ¹²³		40	52	19	50	18 34	22 59 71		
8	296	54.8	29.4	250	48.2 ¹⁰⁶	+17 11.7 ¹²³		35	56	21	50	28 38	46 69		
9	311	54.9	28.4	265	17.6 ¹⁰⁴	23.8 ¹²¹		30	17 59	23	51	37 41	35 66		
10	326	55.0	27.5	279	46.9 ¹⁰³	35.9 ¹²¹		20	18 05	27	53	8 53 45	16 62		
11	341	55.1	-7 26.5	294	16.2 ¹⁰³	+17 47.8 ¹¹⁹		10 N	18 10	18 32	18 56	9 07 49	22 00 58		
12	356	55.3	-7 25.6	308	45.3 ¹⁰¹	+17 59.7 ¹¹⁹		0	18 16	18 36	19 01	9 20 53	21 45 55		
13	11	55.4	24.6	323	14.4 ¹⁰¹	+18 11.5 ¹¹⁸		10 S	21	42	07	33 57	30 51		
14	26	55.5	23.7	337	43.4 ¹⁰⁰	23.2 ¹¹⁷		20	27	49	15	9 47 61	21 14 47		
15	41	55.6	22.7	352	12.2 ⁹⁸	34.8 ¹¹⁶		30	33	18 57	26	10 04 65	20 55 44		
16	56	55.8	21.7	6	41.0 ⁹⁸	46.3 ¹¹⁵		35	37	19 03	33	14 68	45 40		
17	71	55.9	-7 20.8	21	09.7 ⁹⁷	+18 57.8 ¹¹⁵		40	18 41	19 09	19 42	10 25 71	20 32 38		
18	86	56.0	-7 19.8	35	38.3 ⁹⁶	+19 09.1 ¹¹³		45	18 47	19 17	19 53	10 38 75	20 18 34		
19	101	56.1	18.9	50	06.8 ⁹⁵	20.3 ¹¹²		50	53	26	20 07	10 54 81	20 01 28		
20	116	56.3	17.9	64	35.2 ⁹⁴	31.4 ¹¹¹		52	56	31	13	11 01 84	19 52 27		
21	131	56.4	17.0	79	03.5 ⁹³	42.5 ¹¹¹		54	18 59	36	21	09 88	43 24		
22	146	56.5	16.0	93	31.7 ⁹²	+19 53.4 ¹⁰⁹		56	19 02	41	30	19 91	33 20		
23	161	56.6	15.1	107	59.8 ⁹¹	+20 04.2 ¹⁰⁸		58	06	48	40	30 95	22 15		
24	176	56.7	-7 14.1	122	27.8 ⁹⁰	+20 15.0 ¹⁰⁸		60 S	19 11	19 55	20 52	11 42 102	19 08 10		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 13 ^h 22 ^m 1		Mag: -4.8 PMG: 14 ^h 07 ^m		Mag: +1.2 PMG: 10 ^h 51 ^m		Mag: -2.0 PMG: 10 ^h 24 ^m		Mag: +0.5 PMG: 0 ^h 47 ^m						
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	°	°	°	°	°	°	°	°	°						
0	158	56.0	147 41.5	+11 26.3	197 12.9	-16 11.3	203 38.5	-17 29.3	348 09.3	+6 25.8					
1	173	58.5	162 43.6	26.9	212 13.4	10.7	218 40.4	29.2	3 11.9	25.8					
2	189	00.9	177 45.8	27.5	227 13.9	10.1	233 42.3	29.0	18 14.5	25.9					
3	204	03.4	192 47.9	28.1	242 14.5	09.5	248 44.2	28.9	33 17.2	26.0					
4	219	05.8	207 50.0	28.7	257 15.0	08.9	263 46.1	28.7	48 19.8	26.1					
5	234	08.3	222 52.1	+11 29.3	272 15.5	-16 08.3	278 48.0	-17 28.6	63 22.5	+6 26.2					
6	249	10.8	237 54.3	+11 29.9	287 16.1	-16 07.7	293 50.0	-17 28.4	78 25.1	+6 26.3					
7	264	13.2	252 56.4	30.5	302 16.6	07.1	308 51.9	28.2	93 27.8	26.3					
8	279	15.7	267 58.6	31.1	317 17.1	06.5	323 53.8	28.1	108 30.4	26.4					
9	294	18.2	283 00.7	31.7	332 17.6	05.9	338 55.7	27.9	123 33.1	26.5					
10	309	20.6	298 02.9	32.2	347 18.2	05.3	353 57.6	27.8	138 35.7	26.6					
11	324	23.1	313 05.0	+11 32.8	2 18.7	-16 04.7	8 59.5	-17 27.6	153 38.3	+6 26.7					
12	339	25.6	328 07.2	+11 33.4	17 19.2	-16 04.1	24 01.4	-17 27.5	168 41.0	+6 26.7					
13	354	28.0	343 09.3	34.0	32 19.8	03.5	39 03.3	27.3	183 43.6	26.8					
14	9	30.5	358 11.5	34.6	47 20.3	02.9	54 05.2	27.2	198 46.3	26.9					
15	24	32.9	13 13.7	35.2	62 20.8	02.3	69 07.1	27.0	213 48.9	27.0					
16	39	35.4	28 15.8	35.7	77 21.4	01.7	84 09.0	26.9	228 51.6	27.1					
17	54	37.9	43 18.0	+11 36.3	92 21.9	-16 01.1	99 10.9	-17 26.7	243 54.2	+6 27.1					
18	69	40.3	58 20.2	+11 36.9	107 22.4	-16 00.5	114 12.8	-17 26.6	258 56.8	+6 27.2					
19	84	42.8	73 22.4	37.5	122 23.0	-15 59.9	129 14.7	26.4	273 59.5	27.3					
20	99	45.3	88 24.5	38.0	137 23.5	59.3	144 16.6	26.3	289 02.1	27.4					
21	114	47.7	103 26.7	38.6	152 24.0	58.7	159 18.5	26.1	304 04.8	27.5					
22	129	50.2	118 28.9	39.2	167 24.5	58.1	174 20.4	26.0	319 07.4	27.5					
23	144	52.7	133 31.1	39.7	182 25.1	57.5	189 22.3	25.8	334 10.1	27.6					
24	159	55.1	148 33.3	+11 40.3	197 25.6	-15 56.8	204 24.2	-17 25.7	349 12.7	+6 27.7					
Dif	—	+22	+6	+5	+6	+19	+2	+26	+1						

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16 ^h 1			Edad: 4 ^d 9	PHE { 4 ^h : 58 ^m /2 12 ^h : 58 ^m /3 20 ^h : 58 ^m /5										
	PMG: 12 ^h 12 ^m 1					SD: 15 ^h 8		PMG: 16 ^h 26 ^m			Rº: 58 ^m				
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	Rº	Hora	Rº
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m		h m m	
0	176	56.7	-7 14.1	122	27.8	+20 15.0	106	60 N	5 26	6 14	6 55	7 15 15		0 29 102	
1	191	56.9		136	55.7	89	25.6	58	27	13	52	31 21		14 95	
2	206	57.0		151	23.5	88	36.1	56	29	12	49	45 25		0 02 90	
3	221	57.1		165	51.2	87	46.5	54	30	11	46	7 56 29		** ** *	
4	236	57.3		180	18.8	86	+20 56.8	52	31	10	43	8 07 31		** ** *	
5	251	57.4	-7 09.3	194	46.3	85	+21 06.9	50	5 31	6 09	6 41	8 16 34		** ** *	
6	266	57.5	-7 08.4	209	13.7	84	+21 17.0	45	5 33	6 07	6 36	8 36 38		** ** *	
7	281	57.6		223	41.0	83	26.9	40	33	05	32	8 52 42		** ** *	
8	296	57.8		238	08.2	82	36.7	35	33	03	28	9 06 44		23 55 68	
9	311	57.9		252	35.3	81	46.5	30	33	6 01	25	18 47		41 67	
10	326	58.0		267	02.3	80	+21 56.0	20	31	5 57	19	38 51		23 18 64	
11	341	58.1	-7 03.6	281	29.2	79	+22 05.5	10 N	5 28	5 53	6 14	9 56 54		22 58 61	
12	356	58.3	-7 02.7	295	56.0	78	+22 14.8	0	5 24	5 48	6 09	10 13 57		22 40 58	
13	11	58.4		310	22.7	77	24.1	10 S	18	43	6 04	30 60		21 57	
14	26	58.5	-7 00.7	324	49.4	77	33.1	20	5 10	36	5 58	10 48 63		22 01 54	
15	41	58.7	-6 59.8	339	15.9	75	42.1	30	4 59	27	52	11 09 67		21 39 51	
16	56	58.8		353	42.3	74	50.9	35	52	22	48	22 69		25 49	
17	71	58.9	-6 57.9	8	08.6	73	+22 59.6	40	4 43	5 16	5 44	11 36 72		21 10 47	
18	86	59.0	-6 56.9	22	34.8	72	+23 08.2	45	4 32	5 08	5 39	11 53 75		20 52 44	
19	101	59.2		37	01.0	72	16.6	50	19	4 59	32	12 15 79		29 40	
20	116	59.3		51	27.0	70	24.9	52	12	55	30	25 82		19 37	
21	131	59.4		65	52.9	69	33.1	54	4 04	50	27	37 85		20 07 34	
22	146	59.6		80	18.8	69	41.1	56	3 56	44	23	12 50 89		19 53 31	
23	161	59.7		94	44.5	67	49.0	58	46	38	19	13 05 94		37 26	
24	176	59.8	-6 51.2	109	10.2	67	+23 56.8	60 S	3 34	4 31	5 15	13 24 101		19 18 19	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 13 ^h 18 ^m 1		Mag: -4.8 PMG: 14 ^h 04 ^m		Mag: +1.2 PMG: 10 ^h 50 ^m		Mag: -2.0 PMG: 10 ^h 21 ^m		Mag: +0.5 PMG: 0 ^h 43 ^m						
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	°	°	'	°	°	°	'					
0	159	55.1	148	33.3	+11 40.3	197	25.6	-15 56.8	204	24.2	-17 25.7	349	12.7	+6 27.7	
1	174	57.6	163	35.5		212	26.1	56.2	219	26.1	25.5	4	15.4	27.8	
2	190	00.1	178	37.7		227	26.7	55.6	234	28.0	25.3	19	18.0	27.9	
3	205	02.5	193	39.9		242	27.2	55.0	249	29.9	25.2	34	20.6	28.0	
4	220	05.0	208	42.1		257	27.7	54.4	264	31.8	25.0	49	23.3	28.0	
5	235	07.4	223	44.4	+11 43.1	272	28.3	-15 53.8	279	33.7	-17 24.9	64	25.9	+6 28.1	
6	250	09.9	238	46.6	+11 43.7	287	28.8	-15 53.2	294	35.6	-17 24.7	79	28.6	+6 28.2	
7	265	12.4	253	48.8		302	29.3	52.6	309	37.5	24.6	94	31.2	28.3	
8	280	14.8	268	51.0		317	29.9	52.0	324	39.4	24.4	109	33.9	28.4	
9	295	17.3	283	53.3		332	30.4	51.4	339	41.3	24.3	124	36.5	28.4	
10	310	19.8	298	55.5		347	30.9	50.8	354	43.2	24.1	139	39.2	28.5	
11	325	22.2	313	57.7	+11 46.4	2	31.5	-15 50.2	9	45.2	-17 24.0	154	41.8	+6 28.6	
12	340	24.7	329	00.0	+11 47.0	17	32.0	-15 49.5	24	47.1	-17 23.8	169	44.5	+6 28.7	
13	355	27.2	344	02.2		32	32.5	48.9	39	49.0	23.7	184	47.1	28.8	
14	10	29.6	359	04.5		47	33.1	48.3	54	50.9	23.5	199	49.7	28.8	
15	25	32.1	14	06.7		62	33.6	47.7	69	52.8	23.4	214	52.4	28.9	
16	40	34.6	29	09.0		77	34.1	47.1	84	54.7	23.2	229	55.0	29.0	
17	55	37.0	44	11.2	+11 49.7	92	34.7	-15 46.5	99	56.6	-17 23.1	244	57.7	+6 29.1	
18	70	39.5	59	13.5	+11 50.2	107	35.2	-15 45.9	114	58.5	-17 22.9	260	00.3	+6 29.2	
19	85	41.9	74	15.8		122	35.8	45.3	130	00.4	22.8	275	03.0	29.2	
20	100	44.4	89	18.0		137	36.3	44.7	145	02.3	22.6	290	05.6	29.3	
21	115	46.9	104	20.3		152	36.8	44.0	160	04.2	22.4	305	08.3	29.4	
22	130	49.3	119	22.6		167	37.4	43.4	175	06.1	22.3	320	10.9	29.5	
23	145	51.8	134	24.9		182	37.9	42.8	190	08.0	22.1	335	13.5	29.6	
24	160	54.3	149	27.1	+11 53.4	197	38.4	-15 42.2	205	09.9	-17 22.0	350	16.2	+6 29.7	
Dif	—		+22	+5		+5	+6		+19	+2		+26	+1		

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna				
	SD: 16 ^h 1			Edad: 5 ^d 9	PHE { 4 ^h : 58/6 12 ^h : 58/7 20 ^h : 58/9	PMG: 12 ^h 11 ^m 9			SD: 15 ^h 9	R°: 61 ^m							
	hG ☉	Dec				hG ☾					Dif	Dec	Dif	Civil	Náutico	Hora	R°
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m
0	176	59.8	-6	51.2	109	10.2	+23	56.8	60 N	17 33	18 14	19 03	7 30	30	2 11	94	
1	191	59.9		50.2	123	35.7	65	+24	04.4	58	36	15	19 01	7 52	36	1 49	88
2	207	00.1		49.3	138	01.2	65		11.8	56	39	16	18 59	8 10	40	32	84
3	222	00.2		48.3	152	26.6	64		19.1	54	41	17	58	25	43	17	81
4	237	00.3		47.3	166	51.9	63		26.3	52	43	17	56	38	46	1 04	78
5	252	00.5	-6	46.4	181	17.1	62	+24	33.3	50	17 46	18 18	18 55	8 50	47	0 53	76
6	267	00.6	-6	45.4	195	42.2	61	+24	40.2	45	17 50	18 20	18 54	9 14	50	0 29	73
7	282	00.7		44.5	210	07.2	60		46.9	40	54	21	53	34	52	0 10	71
8	297	00.9		43.5	224	32.1	59		53.5	35	17 57	23	52	9 50	54	** ** *	**
9	312	01.0		42.5	238	57.0	59	+24	59.9	30	18 00	24	52	10 05	55	** ** *	**
10	327	01.1		41.6	253	21.7	57	+25	06.1	20	06	28	54	29	57	** ** *	**
11	342	01.3	-6	40.6	267	46.4	57	+25	12.2	10 N	18 11	18 32	18 56	10 50	59	23 59	62
12	357	01.4	-6	39.7	282	11.0	56	+25	18.2	0	18 15	18 36	19 00	11 10	60	23 38	62
13	12	01.5		38.7	296	35.5	55		24.0	10 S	20	41	06	30	62	23 18	61
14	27	01.7		37.7	310	59.9	54		29.6	20	25	47	13	11 51	64	22 55	60
15	42	01.8		36.8	325	24.3	54		35.1	30	31	18 55	24	12 16	66	30	59
16	57	01.9		35.8	339	48.5	52		40.4	35	34	19 00	30	31	66	22 14	59
17	72	02.1	-6	34.9	354	12.7	52	+25	45.5	40	18 38	19 06	19 39	12 48	68	21 57	57
18	87	02.2	-6	33.9	8	36.9	52	+25	50.5	45	18 43	19 13	19 49	13 08	70	21 36	56
19	102	02.3		32.9	23	00.9	50		55.3	50	49	22	20 02	34	72	21 09	54
20	117	02.5		32.0	37	24.9	50	+25	59.9	52	51	26	08	13 47	73	20 56	53
21	132	02.6		31.0	51	48.8	49	+26	04.4	54	54	31	15	14 02	74	41	52
22	147	02.7		30.0	66	12.6	48		08.7	56	18 57	36	24	19	76	24	50
23	162	02.9		29.1	80	36.4	48		12.8	58	19 01	42	33	14 39	80	20 03	48
24	177	03.0	-6	28.1	95	00.1	47	+26	16.8	60 S	19 05	19 48	20 44	15 05	85	19 37	42

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 13 ^h 14 ^m 2		Mag: -4.8 PMG: 14 ^h 00 ^m		Mag: +1.2 PMG: 10 ^h 49 ^m		Mag: -2.0 PMG: 10 ^h 18 ^m		Mag: +0.5 PMG: 0 ^h 39 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	160	54.3	149	27.1	+11	53.4	197	38.4	-15	42.2	205	09.9	-17	22.0	350	16.2	+6	29.7
1	175	56.7	164	29.4		53.9	212	39.0		41.6	220	11.8		21.8	5	18.8		29.7
2	190	59.2	179	31.7		54.4	227	39.5		41.0	235	13.7		21.7	20	21.5		29.8
3	206	01.7	194	34.0		54.9	242	40.0		40.4	250	15.6		21.5	35	24.1		29.9
4	221	04.1	209	36.3		55.5	257	40.6		39.7	265	17.6		21.4	50	26.8		30.0
5	236	06.6	224	38.6	+11	56.0	272	41.1	-15	39.1	280	19.5	-17	21.2	65	29.4	+6	30.1
6	251	09.0	239	40.9	+11	56.5	287	41.7	-15	38.5	295	21.4	-17	21.1	80	32.1	+6	30.1
7	266	11.5	254	43.2		57.0	302	42.2		37.9	310	23.3		20.9	95	34.7		30.2
8	281	14.0	269	45.5		57.5	317	42.7		37.3	325	25.2		20.8	110	37.4		30.3
9	296	16.4	284	47.9		58.0	332	43.3		36.7	340	27.1		20.6	125	40.0		30.4
10	311	18.9	299	50.2		58.5	347	43.8		36.0	355	29.0		20.5	140	42.6		30.5
11	326	21.4	314	52.5	+11	59.0	2	44.3	-15	35.4	10	30.9	-17	20.3	155	45.3	+6	30.5
12	341	23.8	329	54.8	+11	59.5	17	44.9	-15	34.8	25	32.8	-17	20.2	170	47.9	+6	30.6
13	356	26.3	344	57.2	+12	00.0	32	45.4		34.2	40	34.7		20.0	185	50.6		30.7
14	11	28.8	359	59.5	+12	00.5	47	46.0		33.6	55	36.6		19.9	200	53.2		30.8
15	26	31.2	15	01.8		01.0	62	46.5		33.0	70	38.5		19.7	215	55.9		30.9
16	41	33.7	30	04.2		01.5	77	47.0		32.3	85	40.4		19.5	230	58.5		30.9
17	56	36.2	45	06.5	+12	02.0	92	47.6	-15	31.7	100	42.4	-17	19.4	246	01.2	+6	31.0
18	71	38.6	60	08.9	+12	02.5	107	48.1	-15	31.1	115	44.3	-17	19.2	261	03.8	+6	31.1
19	86	41.1	75	11.2		03.0	122	48.7		30.5	130	46.2		19.1	276	06.5		31.2
20	101	43.5	90	13.6		03.5	137	49.2		29.9	145	48.1		18.9	291	09.1		31.3
21	116	46.0	105	15.9		04.0	152	49.7		29.2	160	50.0		18.8	306	11.7		31.4
22	131	48.5	120	18.3		04.5	167	50.3		28.6	175	51.9		18.6	321	14.4		31.4
23	146	50.9	135	20.7		04.9	182	50.8		28.0	190	53.8		18.5	336	17.0		31.5
24	161	53.4	150	23.0	+12	05.4	197	51.4	-15	27.4	205	55.7	-17	18.3	351	19.7	+6	31.6
Dif	—		+23		+5		+5		+6		+19		+2		+26		+1	

UT	SOL		 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16 ^h 1		Edad: 6 ^d 9	PHE { 4 ^h : 59 ^h 0 12 ^h : 59 ^h 1 20 ^h : 59 ^h 2 Rº: 62 ^m	SD: 16 ^h 1											
	PMG: 12 ^h 11 ^m 7				PMG: 18 ^h 25 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	Rº	Hora	Rº		
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	177	03.0	-6	28.1	95	00.1	+26	16.8	38	60 N	5	20	6	08	6	49
1	192	03.1		27.2	109	23.8		20.6	38	58		22		07	46	28
2	207	03.3		26.2	123	47.4		24.2	36	56		24		07	44	8
3	222	03.4		25.2	138	10.9		27.7	35	54		25		06	41	9
4	237	03.5		24.3	152	34.3		30.9	32	52		26		05	39	24
5	252	03.7	-6	23.3	166	57.8	+26	34.0	31	50	5	27	6	05	6	37
6	267	03.8	-6	22.3	181	21.1	+26	37.0	30	45	5	29	6	03	6	33
7	282	04.0		21.4	195	44.4		39.7	27	40		30		02	29	10
8	297	04.1		20.4	210	07.7		42.3	26	35		31		6	00	26
9	312	04.2		19.5	224	30.9		44.7	24	30		31	5	59	23	11
10	327	04.4		18.5	238	54.0		46.9	22	20		30		55	17	26
11	342	04.5	-6	17.5	253	17.1	+26	48.9	20	10 N	5	27	5	52	6	13
12	357	04.6	-6	16.6	267	40.2	+26	50.8	19	0	5	23	5	48	6	08
13	12	04.8		15.6	282	03.2		52.4	16	10 S		18		43	6	04
14	27	04.9		14.6	296	26.2		53.9	15	20		11		37	5	59
15	42	05.1		13.7	310	49.2		55.2	13	30	5	00		29	53	13
16	57	05.2		12.7	325	12.1		56.3	11	35	4	54		24	50	37
17	72	05.3	-6	11.7	339	35.0	+26	57.3	10	40	4	46	5	18	5	46
18	87	05.5	-6	10.8	353	57.9	+26	58.0	7	45	4	35	5	11	5	41
19	102	05.6		09.8	8	20.7		58.6	6	50		22		5	03	36
20	117	05.8		08.8	22	43.5		59.0	4	52		16	4	59	33	15
21	132	05.9		07.9	37	06.3		59.2	2	54		09	54	31	16	58
22	147	06.0		06.9	51	29.1		59.2	0	56	4	01	49	27	35	57
23	162	06.2		06.0	65	51.8		59.0	2	58	3	52	43	24	15	59
24	177	06.3	-6	05.0	80	14.6	+26	58.7	3	60 S	3	41	4	36	5	20
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG 13 ^h 10 ^m 3		Mag: -4.8 PMG: 13 ^h 56 ^m			Mag: +1.2 PMG: 10 ^h 48 ^m			Mag: -2.0 PMG: 10 ^h 15 ^m			Mag: +0.5 PMG: 0 ^h 35 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	161	53.4	150	23.0	+12	05.4	197	51.4	-15	27.4	205	55.7	-17	18.3		
1	176	55.9	165	25.4		05.9	212	51.9		26.8	220	57.6		18.2		
2	191	58.3	180	27.8		06.4	227	52.4		26.1	235	59.5		18.0		
3	207	00.8	195	30.2		06.8	242	53.0		25.5	251	01.4		17.9		
4	222	03.3	210	32.6		07.3	257	53.5		24.9	266	03.3		17.7		
5	237	05.7	225	34.9	+12	07.8	272	54.1	-15	24.3	281	05.3	-17	17.6		
6	252	08.2	240	37.3	+12	08.3	287	54.6	-15	23.7	296	07.2	-17	17.4		
7	267	10.7	255	39.7		08.7	302	55.2		23.0	311	09.1		17.3		
8	282	13.1	270	42.1		09.2	317	55.7		22.4	326	11.0		17.1		
9	297	15.6	285	44.5		09.7	332	56.2		21.8	341	12.9		17.0		
10	312	18.0	300	46.9		10.1	347	56.8		21.2	356	14.8		16.8		
11	327	20.5	315	49.4	+12	10.6	2	57.3	-15	20.6	11	16.7	-17	16.6		
12	342	23.0	330	51.8	+12	11.0	17	57.9	-15	19.9	26	18.6	-17	16.5		
13	357	25.4	345	54.2		11.5	32	58.4		19.3	41	20.5		16.3		
14	12	27.9	0	56.6		12.0	47	59.0		18.7	56	22.4		16.2		
15	27	30.4	15	59.0		12.4	62	59.5		18.1	71	24.4		16.0		
16	42	32.8	31	01.5		12.9	78	00.0		17.4	86	26.3		15.9		
17	57	35.3	46	03.9	+12	13.3	93	00.6	-15	16.8	101	28.2	-17	15.7		
18	72	37.8	61	06.3	+12	13.8	108	01.1	-15	16.2	116	30.1	-17	15.6		
19	87	40.2	76	08.8		14.2	123	01.7		15.6	131	32.0		15.4		
20	102	42.7	91	11.2		14.6	138	02.2		14.9	146	33.9		15.3		
21	117	45.2	106	13.7		15.1	153	02.8		14.3	161	35.8		15.1		
22	132	47.6	121	16.1		15.5	168	03.3		13.7	176	37.7		15.0		
23	147	50.1	136	18.6		16.0	183	03.8		13.1	191	39.6		14.8		
24	162	52.5	151	21.0	+12	16.4	198	04.4	-15	12.4	206	41.6	-17	14.7		
Dif	—		+24		+5		+5		+6		+19		+2		+26	
															+1	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'1 PMG: 12 ^h 11 ^m 5			Edad: 7 ^d 9 PHE { 4 ^h : 59'3 12 ^h : 59'4 20 ^h : 59'5 PMG: 19 ^h 27 ^m R°: 61 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	177	06.3	-6 05.0	80	14.6	+26 58.7	6	60 N	17 38	18 19	19 08	9 00 93	4 54 37	
1	192	06.4	04.0	94	37.3	58.1	6	58	40	20	05	30 86	25 43	
2	207	06.6	03.1	109	00.0	57.4	7	56	43	20	03	9 52 83	4 03 45	
3	222	06.7	02.1	123	22.7	56.5	9	54	45	20	01	10 10 80	3 44 48	
4	237	06.9	01.1	137	45.4	55.4	11	52	47	21	19 00	26 78	28 50	
5	252	07.0	-6 00.2	152	08.1	+26 54.1	13	50	17 49	18 21	18 59	10 39 77	3 15 51	
6	267	07.2	-5 59.2	166	30.8	+26 52.6	15	45	17 53	18 22	18 56	11 07 73	2 47 54	
7	282	07.3	58.2	180	53.5	51.0	16	40	56	23	55	29 71	25 56	
8	297	07.4	57.3	195	16.2	49.1	19	35	17 59	25	54	11 47 69	2 07 57	
9	312	07.6	56.3	209	38.9	47.1	20	30	18 02	26	54	12 02 68	1 51 58	
10	327	07.7	55.3	224	01.6	44.9	22	20	07	29	54	29 65	24 60	
11	342	07.9	-5 54.4	238	24.3	+26 42.5	24	10 N	18 11	18 32	18 56	12 51 64	1 01 61	
12	357	08.0	-5 53.4	252	47.1	+26 39.9	26	0	18 15	18 36	19 00	13 13 61	0 40 62	
13	12	08.1	52.4	267	09.8	37.1	28	10 S	19	40	05	34 59	0 19 63	
14	27	08.3	51.5	281	32.6	34.2	29	20	23	46	11	13 56 58	** ** *	
15	42	08.4	50.5	295	55.4	31.0	32	30	29	53	21	14 23 54	** ** *	
16	57	08.6	49.5	310	18.2	27.7	33	35	32	18 57	27	38 53	** ** *	
17	72	08.7	-5 48.6	324	41.0	+26 24.2	35	40	18 35	19 03	19 35	14 56 51	** ** *	
18	87	08.9	-5 47.6	339	03.8	+26 20.5	37	45	18 39	19 09	19 45	15 18 48	23 40 77	
19	102	09.0	46.6	353	26.7	16.6	39	50	44	17	19 57	45 44	13 82	
20	117	09.2	45.6	7	49.6	12.5	41	52	47	21	20 03	15 59 42	23 00 84	
21	132	09.3	44.7	22	12.6	08.3	42	54	49	26	10	16 14 39	22 45 87	
22	147	09.4	43.7	36	35.5	+26 03.9	44	56	52	30	18	32 36	27 91	
23	162	09.6	42.7	50	58.5	+25 59.3	46	58	55	36	26	16 54 31	22 06 95	
24	177	09.7	-5 41.8	65	21.6	+25 54.5	48	60 S	18 59	19 42	20 37	17 22 24	21 38 103	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 13 ^h 06 ^m 3		Mag: -4.8 PMG: 13 ^h 52 ^m			Mag: +1.2 PMG: 10 ^h 47 ^m			Mag: -2.0 PMG: 10 ^h 12 ^m			Mag: +0.5 PMG: 0 ^h 30 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	'	°	°	'	°	°	'	°
0	162	52.5	151 21.0	+12 16.4	198 04.4	-15 12.4	206 41.6	-17 14.7	352 23.2	+6 33.5				
1	177	55.0	166 23.5	16.8	213 04.9	11.8	221 43.5	14.5	7 25.8	33.6				
2	192	57.5	181 26.0	17.3	228 05.5	11.2	236 45.4	14.4	22 28.5	33.7				
3	207	59.9	196 28.4	17.7	243 06.0	10.5	251 47.3	14.2	37 31.1	33.8				
4	223	02.4	211 30.9	18.1	258 06.6	09.9	266 49.2	14.1	52 33.8	33.9				
5	238	04.9	226 33.4	+12 18.5	273 07.1	-15 09.3	281 51.1	-17 13.9	67 36.4	+6 33.9				
6	253	07.3	241 35.9	+12 19.0	288 07.7	-15 08.7	296 53.0	-17 13.8	82 39.1	+6 34.0				
7	268	09.8	256 38.4	19.4	303 08.2	08.0	311 54.9	13.6	97 41.7	34.1				
8	283	12.3	271 40.9	19.8	318 08.8	07.4	326 56.9	13.4	112 44.4	34.2				
9	298	14.7	286 43.3	20.2	333 09.3	06.8	341 58.8	13.3	127 47.0	34.3				
10	313	17.2	301 45.8	20.6	348 09.8	06.1	357 00.7	13.1	142 49.7	34.3				
11	328	19.7	316 48.3	+12 21.1	3 10.4	-15 05.5	12 02.6	-17 13.0	157 52.3	+6 34.4				
12	343	22.1	331 50.9	+12 21.5	18 10.9	-15 04.9	27 04.5	-17 12.8	172 54.9	+6 34.5				
13	358	24.6	346 53.4	21.9	33 11.5	04.3	42 06.4	12.7	187 57.6	34.6				
14	13	27.0	1 55.9	22.3	48 12.0	03.6	57 08.3	12.5	203 00.2	34.7				
15	28	29.5	16 58.4	22.7	63 12.6	03.0	72 10.2	12.4	218 02.9	34.8				
16	43	32.0	32 00.9	23.1	78 13.1	02.4	87 12.2	12.2	233 05.5	34.8				
17	58	34.4	47 03.4	+12 23.5	93 13.7	-15 01.7	102 14.1	-17 12.1	248 08.2	+6 34.9				
18	73	36.9	62 06.0	+12 23.9	108 14.2	-15 01.1	117 16.0	-17 11.9	263 10.8	+6 35.0				
19	88	39.4	77 08.5	24.3	123 14.8	-15 00.5	132 17.9	11.8	278 13.5	35.1				
20	103	41.8	92 11.0	24.7	138 15.3	-14 59.8	147 19.8	11.6	293 16.1	35.2				
21	118	44.3	107 13.6	25.1	153 15.9	59.2	162 21.7	11.5	308 18.8	35.2				
22	133	46.8	122 16.1	25.5	168 16.4	58.6	177 23.6	11.3	323 21.4	35.3				
23	148	49.2	137 18.7	25.9	183 17.0	57.9	192 25.5	11.2	338 24.1	35.4				
24	163	51.7	152 21.2	+12 26.3	198 17.5	-14 57.3	207 27.5	-17 11.0	353 26.7	+6 35.5				
Dif	—		+25	+4	+5	+6	+19	+2	+26	+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 11 ^m 0		Edad: 9 ^d 9 PHE { SD: 16:3 PMG: 21 ^h 26 ^m 4 ^h : 59/7 12 ^h : 59/7 20 ^h : 59/7 R°: 54 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	177	13.3	-5	18.5	50	50.7	+23 08.1	60 N	17 43	18 24	19 13	12 19 107	5 49 8	
1	192	13.4		17.5	65	15.3	+22 59.2	58	45	24	10	35 102	32 14	
2	207	13.6		16.5	79	39.9		56	47	24	07	12 49 96	17 19	
3	222	13.7		15.6	94	04.6		54	49	24	05	13 01 92	5 05 22	
4	237	13.9		14.6	108	29.4		52	51	24	03	11 89	4 54 26	
5	252	14.0	-5	13.6	122	54.2	+22 21.8	50	17 52	18 24	19 02	13 20 87	4 44 28	
6	267	14.2	-5	12.6	137	19.2	+22 12.1	45	17 56	18 25	18 59	13 40 80	4 24 33	
7	282	14.3		11.7	151	44.2	+22 02.2	40	17 58	25	57	13 55 77	4 07 37	
8	297	14.5		10.7	166	09.3	+21 52.2	35	18 01	26	56	14 09 72	3 52 42	
9	312	14.6		09.7	180	34.5		30	03	27	55	20 69	40 44	
10	327	14.8		08.8	194	59.7		20	07	29	55	40 64	19 49	
11	342	14.9	-5	07.8	209	25.1	+21 21.4	10 N	18 11	18 32	18 56	14 57 59	3 00 53	
12	357	15.1	-5	06.8	223	50.5	+21 10.8	0	18 14	18 35	18 59	15 13 55	2 42 57	
13	12	15.2		05.8	238	16.0	+21 00.1	10 S	18	39	19 03	28 51	25 60	
14	27	15.4		04.9	252	41.6	+20 49.3	20	22	44	10	15 45 47	2 06 65	
15	42	15.5		03.9	267	07.3		30	26	50	19	16 04 41	1 43 70	
16	57	15.7		02.9	281	33.1		35	29	18 55	25	16 38	30 73	
17	72	15.8	-5	01.9	295	59.0	+20 16.1	40	18 32	19 00	19 32	16 28 35	1 15 77	
18	87	16.0	-5	01.0	310	24.9	+20 04.7	45	18 36	19 05	19 41	16 43 30	0 57 81	
19	102	16.1	-5	00.0	324	50.9	+19 53.3	50	40	13	52	17 02 24	35 86	
20	117	16.3	-4	59.0	339	17.1		52	42	17	19 58	10 22	24 89	
21	132	16.4		58.0	353	43.3		54	44	20	20 04	20 19	0 12 92	
22	147	16.6		57.1	8	09.6		56	47	25	12	31 15	** ** *	
23	162	16.7		56.1	22	36.0	+19 06.2	58	50	30	20	43 11	** ** *	
24	177	16.9	-4	55.1	37	02.4	+18 54.1	60 S	18 53	19 36	20 29	17 57 6	** ** *	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 12 ^h 58 ^m 5		Mag: -4.7 PMG: 13 ^h 44 ^m		Mag: +1.2 PMG: 10 ^h 46 ^m		Mag: -2.0 PMG: 10 ^h 06 ^m		Mag: +0.5 PMG: 0 ^h 22 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	164	50.8	153	23.6	+12 35.0	198 30.8	-14 42.0	208 13.4	-17 07.4	354 30.2	+6 37.4			
1	179	53.3	168	26.2	35.3	213 31.3	41.4	223 15.3	07.2	9 32.9	37.5			
2	194	55.8	183	28.9	35.6	228 31.9	40.8	238 17.3	07.1	24 35.5	37.6			
3	209	58.2	198	31.5	36.0	243 32.4	40.1	253 19.2	06.9	39 38.2	37.7			
4	225	00.7	213	34.2	36.3	258 33.0	39.5	268 21.1	06.7	54 40.8	37.7			
5	240	03.1	228	36.8	+12 36.6	273 33.5	-14 38.8	283 23.0	-17 06.6	69 43.5	+6 37.8			
6	255	05.6	243	39.5	+12 37.0	288 34.1	-14 38.2	298 24.9	-17 06.4	84 46.1	+6 37.9			
7	270	08.1	258	42.2	37.3	303 34.6	37.6	313 26.8	06.3	99 48.8	38.0			
8	285	10.5	273	44.8	37.6	318 35.2	36.9	328 28.8	06.1	114 51.4	38.1			
9	300	13.0	288	47.5	37.9	333 35.7	36.3	343 30.7	06.0	129 54.1	38.1			
10	315	15.5	303	50.2	38.2	348 36.3	35.6	358 32.6	05.8	144 56.7	38.2			
11	330	17.9	318	52.9	+12 38.6	3 36.8	-14 35.0	13 34.5	-17 05.7	159 59.4	+6 38.3			
12	345	20.4	333	55.6	+12 38.9	18 37.4	-14 34.4	28 36.4	-17 05.5	175 02.0	+6 38.4			
13	0	22.9	348	58.3	39.2	33 38.0	33.7	43 38.4	05.4	190 04.7	38.5			
14	15	25.3	4	00.9	39.5	48 38.5	33.1	58 40.3	05.2	205 07.3	38.6			
15	30	27.8	19	03.6	39.8	63 39.1	32.4	73 42.2	05.1	220 09.9	38.6			
16	45	30.3	34	06.3	40.1	78 39.6	31.8	88 44.1	04.9	235 12.6	38.7			
17	60	32.7	49	09.1	+12 40.4	93 40.2	-14 31.1	103 46.0	-17 04.8	250 15.2	+6 38.8			
18	75	35.2	64	11.8	+12 40.7	108 40.7	-14 30.5	118 47.9	-17 04.6	265 17.9	+6 38.9			
19	90	37.6	79	14.5	41.0	123 41.3	29.9	133 49.9	04.5	280 20.5	39.0			
20	105	40.1	94	17.2	41.3	138 41.9	29.2	148 51.8	04.3	295 23.2	39.0			
21	120	42.6	109	19.9	41.6	153 42.4	28.6	163 53.7	04.2	310 25.8	39.1			
22	135	45.0	124	22.6	41.9	168 43.0	27.9	178 55.6	04.0	325 28.5	39.2			
23	150	47.5	139	25.4	42.2	183 43.5	27.3	193 57.5	03.9	340 31.1	39.3			
24	165	50.0	154	28.1	+12 42.5	198 44.1	-14 26.6	208 59.5	-17 03.7	355 33.8	+6 39.4			
Dif	—		+27	+3		+6	+6	+19	+2	+26	+1			

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'1			Edad: 10 ^d 9 PHE	$\left\{ \begin{array}{l} 4^h: 59'7 \\ 12^h: 59'7 \\ 20^h: 59'6 \\ R^{\circ}: 51^m \end{array} \right.$												
	PMG: 12 ^h 10 ^m 7				SD: 16'3 PMG: 22 ^h 20 ^m												
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	177	16.9	-4	55.1	37	02.4	+18	54.1	60 N	5	08	5	56	6	38	14	06
1	192	17.0		54.1	51	29.0	76	42.0 ¹²¹	58	11	56	35	17	98	46	9	
2	207	17.2		53.2	65	55.6	76	29.7 ¹²³	56	13	56	33	25	95	36	13	
3	222	17.3		52.2	80	22.4	78	17.3 ¹²⁴	54	16	57	32	33	91	27	17	
4	237	17.5		51.2	94	49.2	78	+18 04.8 ¹²⁵	52	17	57	30	40	88	20	19	
5	252	17.7	-4	50.2	109	16.1	79	+17 52.1 ¹²⁷	50	5	56	6	29	14	47	85	
6	267	17.8	-4	49.3	123	43.1	80	+17 39.4 ¹²⁷	45	5	56	6	25	15	00	80	
7	282	18.0		48.3	138	10.1	80	26.6 ¹²⁸	40	24	56	23	12	74	44	32	
8	297	18.1		47.3	152	37.3	82	13.6 ¹³⁰	35	26	55	20	21	71	34	35	
9	312	18.3		46.3	167	04.6	83	+17 00.6 ¹³⁰	30	27	54	18	29	68	24	39	
10	327	18.4		45.4	181	31.9	83	+16 47.5 ¹³¹	20	27	52	14	44	61	4	08	
11	342	18.6	-4	44.4	195	59.3	84	+16 34.2 ¹³³	10 N	5	50	6	11	15	56	56	
12	357	18.7	-4	43.4	210	26.8	85	+16 20.9 ¹³³	0	5	47	6	07	16	08	51	
13	12	18.9		42.4	224	54.4	86	+16 07.5 ¹³⁴	10 S	18	43	04	19	47	25	58	
14	27	19.0		41.5	239	22.1	87	+15 54.0 ¹³⁵	20	12	38	6	00	32	42	3	
15	42	19.2		40.5	253	49.8	87	40.4 ¹³⁶	30	5	32	5	56	45	37	2	
16	57	19.4		39.5	268	17.7	89	26.7 ¹³⁷	35	4	58	28	53	16	54	33	
17	72	19.5	-4	38.5	282	45.6	89	+15 12.9 ¹³⁸	40	4	50	5	50	17	03	29	
18	87	19.7	-4	37.6	297	13.6	90	+14 59.1 ¹³⁸	45	4	42	5	47	17	13	25	
19	102	19.8		36.6	311	41.7	91	45.1 ¹⁴⁰	50	30	10	42	26	20	2	01	
20	117	20.0		35.6	326	09.9	92	31.1 ¹⁴⁰	52	25	06	41	32	17	1	53	
21	132	20.1		34.6	340	38.1	92	17.0 ¹⁴¹	54	18	5	38	39	14	44	93	
22	147	20.3		33.7	355	06.4	93	+14 02.8 ¹⁴²	56	11	4	58	36	46	11	34	
23	162	20.5		32.7	9	34.8	94	+13 48.5 ¹⁴³	58	4	03	53	33	17	54	7	
24	177	20.6	-4	31.7	24	03.3	95	+13 34.2 ¹⁴³	60 S	3	53	4	47	5	30	18	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 12 ^h 54 ^m 5		Mag: -4.7 PMG: 13 ^h 40 ^m		Mag: +1.2 PMG: 10 ^h 45 ^m		Mag: -2.0 PMG: 10 ^h 03 ^m		Mag: +0.5 PMG: 0 ^h 18 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	165	50.0	154	28.1	+12	42.5	208	59.5	-17	03.7
1	180	52.4	169	30.9		42.7	224	01.4		03.6
2	195	54.9	184	33.6		43.0	239	03.3		03.4
3	210	57.4	199	36.3		43.3	254	05.2		03.2
4	225	59.8	214	39.1		43.6	269	07.1		03.1
5	241	02.3	229	41.8	+12	43.9	284	09.1	-17	02.9
6	256	04.7	244	44.6	+12	44.1	299	11.0	-17	02.8
7	271	07.2	259	47.4		44.4	314	12.9		02.6
8	286	09.7	274	50.1		44.7	329	14.8		02.5
9	301	12.1	289	52.9		44.9	344	16.7		02.3
10	316	14.6	304	55.7		45.2	359	18.7		02.2
11	331	17.1	319	58.4	+12	45.5	14	20.6	-17	02.0
12	346	19.5	335	01.2	+12	45.7	29	22.5	-17	01.9
13	1	22.0	350	04.0		46.0	44	24.4		01.7
14	16	24.5	5	06.8		46.2	59	26.3		01.6
15	31	26.9	20	09.6		46.5	74	28.3		01.4
16	46	29.4	35	12.4		46.7	89	30.2		01.3
17	61	31.9	50	15.2	+12	47.0	104	32.1	-17	01.1
18	76	34.3	65	18.0	+12	47.2	119	34.0	-17	01.0
19	91	36.8	80	20.8		47.5	134	35.9		00.8
20	106	39.2	95	23.6		47.7	149	37.9		00.7
21	121	41.7	110	26.4		48.0	164	39.8		00.5
22	136	44.2	125	29.2		48.2	179	41.7		00.4
23	151	46.6	140	32.1		48.4	194	43.6		00.2
24	166	49.1	155	34.9	+12	48.7	209	45.6	-17	00.1
Dif	—		+28		+3		+19		+2	

UT	SOL			LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'1 PMG: 12 ^h 10 ^m 5			Edad: 11 ^d 9 PHE { 4 ^h : 59'5 12 ^h : 59'4 20 ^h : 59'3 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	177	20.6	-4	31.7	24	03.3	+13	34.2	60 N	17 48	18 29	19 18	15 49 99	6 02	3
1	192	20.8		30.7	38	31.9	96	19.8	58	50	29	14	15 55 94	5 55	7
2	207	20.9		29.7	53	00.5	96	+13	05.3	51	28	12	16 00 91	49	10
3	222	21.1		28.8	67	29.2	97	+12	50.8	53	28	09	04 88	44	13
4	237	21.2		27.8	81	58.0	98		36.2	54	28	07	08 85	39	15
5	252	21.4	-4	26.8	96	26.9	99	+12	21.5	50	17 55	18 28	19 05	16 12 82	5 34 18
6	267	21.6	-4	25.8	110	55.8	99	+12	06.8	45	17 58	18 27	19 02	16 20 76	5 24 24
7	282	21.7		24.9	125	24.9	101	+11	52.0	40	18 01	28	18 59	26 72	16 28
8	297	21.9		23.9	139	53.9	100		37.1	35	03	28	57	32 68	09 31
9	312	22.0		22.9	154	23.1	102		22.2	30	04	28	56	37 64	5 03 34
10	327	22.2		21.9	168	52.3	102	+11	07.2	20	08	30	55	45 59	4 52 40
11	342	22.4	-4	20.9	183	21.6	103	+10	52.2	10 N	18 11	18 32	18 56	16 52 54	4 42 45
12	357	22.5	-4	20.0	197	51.0	104	+10	37.1	0	18 14	18 34	18 59	16 59 49	4 33 50
13	12	22.7		19.0	212	20.4	104		22.0	10 S	17	38	19 02	17 06 44	23 55
14	27	22.8		18.0	226	49.9	105	+10	06.8	20	20	42	08	14 39	13 60
15	42	23.0		17.0	241	19.5	106	+9	51.5	30	24	48	16	22 33	4 02 66
16	57	23.2		16.1	255	49.1	106		36.3	35	26	52	22	27 30	3 55 70
17	72	23.3	-4	15.1	270	18.8	107	+9	20.9	40	18 29	18 56	19 28	17 32 26	3 47 74
18	87	23.5	-4	14.1	284	48.6	108	+9	05.6	45	18 32	19 02	19 37	17 38 22	3 38 79
19	102	23.6		13.1	299	18.4	108	+8	50.2	50	36	09	48	46 16	27 84
20	117	23.8		12.1	313	48.3	109		34.7	52	38	12	53	49 14	22 87
21	132	24.0		11.2	328	18.2	109		19.2	54	39	15	19 59	53 12	17 89
22	147	24.1		10.2	342	48.2	110	+8	03.7	56	42	19	20 06	17 57 9	10 93
23	162	24.3		09.2	357	18.3	111	+7	48.2	58	44	24	13	18 01 6	3 03 97
24	177	24.4	-4	08.2	11	48.4	111	+7	32.6	60 S	18 47	19 29	20 22	18 06 3	2 55 101
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 12 ^h 50 ^m 6		Mag: -4.7 PMG: 13 ^h 35 ^m		Mag: +1.2 PMG: 10 ^h 44 ^m		Mag: -2.0 PMG: 10 ^h 00 ^m		Mag: +0.5 PMG: 0 ^h 13 ^m						
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄						
h	°	'	°	'	°	'	°	'	°	'					
0	166	49.1	155	34.9	+12	48.7	198	57.5	-14	11.1					
1	181	51.6	170	37.7		48.9	213	58.1		10.4					
2	196	54.0	185	40.5		49.1	228	58.6		09.8					
3	211	56.5	200	43.4		49.4	243	59.2		09.1					
4	226	59.0	215	46.2		49.6	258	59.8		08.5					
5	242	01.4	230	49.1	+12	49.8	274	00.3	-14	07.8					
6	257	03.9	245	51.9	+12	50.0	289	00.9	-14	07.2					
7	272	06.4	260	54.8		50.3	304	01.4		06.5					
8	287	08.8	275	57.6		50.5	319	02.0		05.9					
9	302	11.3	291	00.5		50.7	334	02.6		05.2					
10	317	13.7	306	03.4		50.9	349	03.1		04.6					
11	332	16.2	321	06.2	+12	51.1	4	03.7	-14	03.9					
12	347	18.7	336	09.1	+12	51.3	19	04.3	-14	03.2					
13	2	21.1	351	12.0		51.5	34	04.8		02.6					
14	17	23.6	6	14.9		51.7	49	05.4		01.9					
15	32	26.1	21	17.7		51.9	64	06.0		01.3					
16	47	28.5	36	20.6		52.1	79	06.5	-14	00.6					
17	62	31.0	51	23.5	+12	52.3	94	07.1	-14	00.0					
18	77	33.5	66	26.4	+12	52.5	109	07.6	-13	59.3					
19	92	35.9	81	29.3		52.7	124	08.2		58.7					
20	107	38.4	96	32.2		52.9	139	08.8		58.0					
21	122	40.8	111	35.1		53.1	154	09.3		57.3					
22	137	43.3	126	38.0		53.2	169	09.9		56.7					
23	152	45.8	141	41.0		53.4	184	10.5		56.0					
24	167	48.2	156	43.9	+12	53.6	199	11.0	-13	55.4					
Dif	—		+29		+2		+6		+7						
									+19						
									+2						
									+26						
									+1						

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'1 PMG: 12 ^h 10 ^m 2			Edad: 12 ^d 9 PHE { SD: 16'1 PMG: *** **m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	177	24.4	-4	08.2		11	48.4	5 02	5 50	6 32		17 28	95	6 05	2
1	192	24.6		07.2		26	18.6 ¹¹²	05	51	30		29 92		6 02	6
2	207	24.8		06.3		40	48.8 ¹¹²	08	51	28		31 88		5 59	9
3	222	24.9		05.3		55	19.1 ¹¹³	11	52	27		32 85		57	1
4	237	25.1		04.3		69	49.5 ¹¹⁴	13	52	26		33 83		54	14
5	252	25.2	-4	03.3		84	19.8 ¹¹³	5 15	5 52	6 24	17 34	80	5 52	17	
6	267	25.4	-4	02.3		98	50.3 ¹¹⁵	5 19	5 53	6 22	17 36	75	5 48	21	
7	282	25.6		01.4		113	20.8 ¹¹⁵	21	53	20	38 71		44	25	
8	297	25.7	-4	00.4		127	51.3 ¹¹⁵	23	52	18	40 66		40	30	
9	312	25.9	-3	59.4		142	21.9 ¹¹⁶	24	52	16	41 63		37	33	
10	327	26.1		58.4		156	52.6 ¹¹⁷	25	51	13	44 57		32	38	
11	342	26.2	-3	57.4		171	23.2 ¹¹⁶	5 24	5 49	6 10	17 46	52	5 27	44	
12	357	26.4	-3	56.5		185	54.0 ¹¹⁸	5 22	5 46	6 07	17 48	48	5 23	48	
13	12	26.5		55.5		200	24.8 ¹¹⁸	19	43	04	50 43		18	53	
14	27	26.7		54.5		214	55.6 ¹¹⁸	13	39	6 01	53 37		13	58	
15	42	26.9		53.5		229	26.4 ¹¹⁸	05	33	5 57	55 32		08	64	
16	57	27.0		52.5		243	57.3 ¹¹⁹	5 00	29	55	57 28		05	67	
17	72	27.2	-3	51.6		258	28.3 ¹²⁰	4 53	5 25	5 52	17 58	25	5 01	71	
18	87	27.4	-3	50.6		272	59.2 ¹¹⁹	4 45	5 20	5 49	18 00	21	4 57	75	
19	102	27.5		49.6		287	30.3 ¹²¹	34	13	46	02 16		51	82	
20	117	27.7		48.6		302	01.3 ¹²⁰	29	10	44	03 14		49	84	
21	132	27.8		47.6		316	32.4 ¹²¹	23	06	42	05 11		46	87	
22	147	28.0		46.7		331	03.5 ¹²¹	16	5 02	40	06 8		43	90	
23	162	28.2		45.7		345	34.7 ¹²²	08	4 58	38	07 6		40	93	
24	177	28.3	-3	44.7		0	05.9 ¹²²	4 00	4 53	5 35	18 09	2	4 36	97	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 12 ^h 46 ^m 7		Mag: -4.7 PMG: 13 ^h 30 ^m		Mag: +1.2 PMG: 10 ^h 43 ^m		Mag: -2.0 PMG: 9 ^h 57 ^m		Mag: +0.5 PMG: 0 ^h 09 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	167	48.2	156	43.9	+12	199	11.0	-13	210	31.7	-16	357	40.8	+6	43.2
1	182	50.7	171	46.8		214	11.6		225	33.6		12	43.5		43.3
2	197	53.2	186	49.7		229	12.2		240	35.6		27	46.1		43.4
3	212	55.6	201	52.7		244	12.7		255	37.5		42	48.8		43.5
4	227	58.1	216	55.6		259	13.3		270	39.4		57	51.4		43.5
5	243	00.6	231	58.5	+12	274	13.9	-13	285	41.3	-16	72	54.1	+6	43.6
6	258	03.0	247	01.5	+12	289	14.4	-13	300	43.3	-16	87	56.7	+6	43.7
7	273	05.5	262	04.4		304	15.0		315	45.2		102	59.4		43.8
8	288	08.0	277	07.4		319	15.6		330	47.1		118	02.0		43.9
9	303	10.4	292	10.3		334	16.1		345	49.0		133	04.7		43.9
10	318	12.9	307	13.3		349	16.7		0	51.0		148	07.3		44.0
11	333	15.3	322	16.2	+12	4	17.3	-13	15	52.9	-16	163	10.0	+6	44.1
12	348	17.8	337	19.2	+12	19	17.8	-13	30	54.8	-16	178	12.6	+6	44.2
13	3	20.3	352	22.2		34	18.4		45	56.8		193	15.3		44.3
14	18	22.7	7	25.1		49	19.0		60	58.7		208	17.9		44.3
15	33	25.2	22	28.1		64	19.5		76	00.6		223	20.6		44.4
16	48	27.7	37	31.1		79	20.1		91	02.5		238	23.2		44.5
17	63	30.1	52	34.1	+12	94	20.7	-13	106	04.5	-16	253	25.9	+6	44.6
18	78	32.6	67	37.1	+12	109	21.2	-13	121	06.4	-16	268	28.5	+6	44.7
19	93	35.1	82	40.1		124	21.8		136	08.3		283	31.2		44.7
20	108	37.5	97	43.0		139	22.4		151	10.2		298	33.8		44.8
21	123	40.0	112	46.0		154	22.9		166	12.2		313	36.4		44.9
22	138	42.4	127	49.0		169	23.5		181	14.1		328	39.1		45.0
23	153	44.9	142	52.1		184	24.1		196	16.0		343	41.7		45.1
24	168	47.4	157	55.1	+12	199	24.7	-13	211	17.9	-16	358	44.4	+6	45.1
Dif	—		+30		+1	+6		+7	+19		+2	+26		+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 0		Edad: 13 ^d 9 PHE { SD: 16:0 PMG: **h **m		4 ^h : 58:7 12 ^h : 58:5 20 ^h : 58:2 R°: **m													
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m			
0	177	28.3	-3	44.7	0	05.9	+1 13.2	60 N	17 53	18 34	19 23	19 03 94	6 07 3					
1	192	28.5		43.7	14	37.1 ¹²²	+0 57.3 ¹⁵⁹	58	54	33	19	19 01 90	08 5					
2	207	28.7		42.7	29	08.4 ¹²³	41.4 ¹⁵⁹	56	55	32	16	18 59 87	08 8					
3	222	28.8		41.8	43	39.6 ¹²²	25.6 ¹⁵⁸	54	57	32	13	57 84	08 1					
4	237	29.0		40.8	58	10.9 ¹²³	+0 09.7 ¹⁵⁹	52	58	31	11	56 81	08 14					
5	252	29.2	-3	39.8	72	42.3 ¹²⁴	-0 06.1 ¹⁵⁸	50	17 59	18 31	19 08	18 54 79	6 09 15					
6	267	29.3	-3	38.8	87	13.6 ¹²³	-0 21.9 ¹⁵⁸	45	18 01	18 30	19 04	18 51 74	6 09 21					
7	282	29.5		37.8	101	45.0 ¹²⁴	37.7 ¹⁵⁸	40	03	30	19 01	49 69	09 25					
8	297	29.7		36.8	116	16.4 ¹²⁴	-0 53.5 ¹⁵⁸	35	04	30	18 59	46 66	10 28					
9	312	29.8		35.9	130	47.9 ¹²⁵	-1 09.2 ¹⁵⁷	30	06	30	57	44 62	10 32					
10	327	30.0		34.9	145	19.3 ¹²⁴	25.0 ¹⁵⁸	20	08	30	56	41 56	10 38					
11	342	30.2	-3	33.9	159	50.8 ¹²⁵	-1 40.7 ¹⁵⁷	10 N	18 11	18 32	18 56	18 38 52	6 11 42					
12	357	30.3	-3	32.9	174	22.3 ¹²⁵	-1 56.4 ¹⁵⁷	0	18 13	18 34	18 58	18 36 46	6 11 47					
13	12	30.5		31.9	188	53.8 ¹²⁵	-2 12.0 ¹⁵⁶	10 S	16	37	19 01	33 42	11 52					
14	27	30.7		31.0	203	25.3 ¹²⁵	27.7 ¹⁵⁷	20	18	41	06	30 38	11 57					
15	42	30.8		30.0	217	56.9 ¹²⁶	43.3 ¹⁵⁶	30	22	46	14	27 32	12 62					
16	57	31.0		29.0	232	28.5 ¹²⁶	-2 58.9 ¹⁵⁶	35	24	49	19	25 29	12 66					
17	72	31.2	-3	28.0	247	00.0 ¹²⁵	-3 14.5 ¹⁵⁶	40	18 26	18 53	19 25	18 23 25	6 12 70					
18	87	31.3	-3	27.0	261	31.6 ¹²⁶	-3 30.0 ¹⁵⁵	45	18 28	18 58	19 33	18 21 21	6 12 74					
19	102	31.5		26.0	276	03.2 ¹²⁶	-3 45.5 ¹⁵⁵	50	32	19 04	43	18 16	13 79					
20	117	31.7		25.1	290	34.9 ¹²⁷	-4 00.9 ¹⁵⁴	52	33	07	48	17 14	13 82					
21	132	31.8		24.1	305	06.5 ¹²⁶	16.4 ¹⁵⁵	54	35	10	19 53	16 11	13 84					
22	147	32.0		23.1	319	38.1 ¹²⁶	31.8 ¹⁵⁴	56	36	14	20 00	14 9	13 88					
23	162	32.2		22.1	334	09.8 ¹²⁷	-4 47.1 ¹⁵³	58	38	18	07	13 5	13 91					
24	177	32.3	-3	21.1	348	41.4 ¹²⁶	-5 02.4 ¹⁵³	60 S	18 41	19 23	20 15	18 11 2	6 13 95					
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 12 ^h 42 ^m 8		Mag: -4.6 PMG: 13 ^h 26 ^m			Mag: +1.2 PMG: 10 ^h 42 ^m			Mag: -2.0 PMG: 9 ^h 54 ^m			Mag: +0.5 PMG: 0 ^h 05 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°			
0	168	47.4	157	55.1	+12	57.2	199	24.7	-13	39.5	211	17.9	-16	52.8	358	44.4	+6	45.1
1	183	49.8	172	58.1		57.3	214	25.2		38.9	226	19.9		52.6	13	47.0		45.2
2	198	52.3	188	01.1		57.4	229	25.8		38.2	241	21.8		52.5	28	49.7		45.3
3	213	54.8	203	04.1		57.5	244	26.4		37.6	256	23.7		52.3	43	52.3		45.4
4	228	57.2	218	07.1		57.6	259	26.9		36.9	271	25.7		52.2	58	55.0		45.5
5	243	59.7	233	10.2	+12	57.7	274	27.5	-13	36.2	286	27.6	-16	52.0	73	57.6	+6	45.5
6	259	02.2	248	13.2	+12	57.9	289	28.1	-13	35.6	301	29.5	-16	51.9	89	00.3	+6	45.6
7	274	04.6	263	16.2		58.0	304	28.6		34.9	316	31.4		51.7	104	02.9		45.7
8	289	07.1	278	19.3		58.1	319	29.2		34.2	331	33.4		51.6	119	05.6		45.8
9	304	09.6	293	22.3		58.2	334	29.8		33.6	346	35.3		51.4	134	08.2		45.9
10	319	12.0	308	25.4		58.3	349	30.4		32.9	1	37.2		51.3	149	10.9		45.9
11	334	14.5	323	28.4	+12	58.4	4	30.9	-13	32.2	16	39.2	-16	51.1	164	13.5	+6	46.0
12	349	16.9	338	31.5	+12	58.4	19	31.5	-13	31.6	31	41.1	-16	51.0	179	16.2	+6	46.1
13	4	19.4	353	34.5		58.5	34	32.1		30.9	46	43.0		50.8	194	18.8		46.2
14	19	21.9	8	37.6		58.6	49	32.6		30.2	61	44.9		50.7	209	21.5		46.3
15	34	24.3	23	40.7		58.7	64	33.2		29.6	76	46.9		50.5	224	24.1		46.3
16	49	26.8	38	43.7		58.8	79	33.8		28.9	91	48.8		50.4	239	26.7		46.4
17	64	29.3	53	46.8	+12	58.9	94	34.4	-13	28.2	106	50.7	-16	50.2	254	29.4	+6	46.5
18	79	31.7	68	49.9	+12	58.9	109	34.9	-13	27.6	121	52.7	-16	50.1	269	32.0	+6	46.6
19	94	34.2	83	53.0		59.0	124	35.5		26.9	136	54.6		49.9	284	34.7		46.7
20	109	36.7	98	56.0		59.1	139	36.1		26.2	151	56.5		49.8	299	37.3		46.7
21	124	39.1	113	59.1		59.2	154	36.7		25.6	166	58.5		49.6	314	40.0		46.8
22	139	41.6	129	02.2		59.2	169	37.2		24.9	182	00.4		49.5	329	42.6		46.9
23	154	44.0	144	05.3		59.3	184	37.8		24.2	197	02.3		49.3	344	45.3		47.0
24	169	46.5	159	08.4	+12	59.4	199	38.4	-13	23.6	212	04.2	-16	49.2	359	47.9	+6	47.1
Dif	—		+31		+1		+6		+7		+19		+2		+26		+1	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1			Edad: 14 ^d 9 PHE { 4 ^h : 58 ^m /0 12 ^h : 57 ^m /8 20 ^h : 57 ^m /5										
	PMG: 12 ^h 09 ^m 7			SD: 15 ^h 8 PMG: 0 ^h 47 ^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	177	32.3	-3 21.1	348	41.4	-5 02.4	60 N	4 56	5 44	6 26	20 37 94	6 10 2		
1	192	32.5	20.1	3	13.1 ¹²⁷	17.7 ¹⁵³	58	5 00	45	24	31 90	13 6		
2	207	32.7	19.2	17	44.8 ¹²⁷	32.9 ¹⁵²	56	03	46	23	26 86	16 10		
3	222	32.8	18.2	32	16.4 ¹²⁶	-5 48.1 ¹⁵²	54	06	47	22	21 83	19 12		
4	237	33.0	17.2	46	48.1 ¹²⁷	-6 03.3 ¹⁵²	52	08	47	21	17 80	22 15		
5	252	33.2	-3 16.2	61	19.8 ¹²⁷	-6 18.4 ¹⁵¹	50	5 10	5 48	6 20	20 13 77	6 24 17		
6	267	33.3	-3 15.2	75	51.5 ¹²⁷	-6 33.4 ¹⁵⁰	45	5 15	5 49	6 18	20 05 72	6 30 22		
7	282	33.5	14.2	90	23.2 ¹²⁷	-6 48.5 ¹⁵¹	40	18	49	16	19 58 68	34 26		
8	297	33.7	13.3	104	54.9 ¹²⁷	-7 03.4 ¹⁴⁹	35	20	50	15	52 64	38 30		
9	312	33.8	12.3	119	26.5 ¹²⁶	18.3 ¹⁴⁹	30	22	50	13	46 62	42 32		
10	327	34.0	11.3	133	58.2 ¹²⁷	33.2 ¹⁴⁹	20	23	49	11	37 56	48 37		
11	342	34.2	-3 10.3	148	29.9 ¹²⁷	-7 48.0 ¹⁴⁸	10 N	5 23	5 48	6 09	19 30 51	6 53 42		
12	357	34.3	-3 09.3	163	01.6 ¹²⁷	-8 02.7 ¹⁴⁷	0	5 22	5 46	6 06	19 22 48	6 58 47		
13	12	34.5	08.3	177	33.3 ¹²⁷	17.5 ¹⁴⁸	10 S	19	43	04	15 43	7 03 51		
14	27	34.7	07.4	192	04.9 ¹²⁶	32.1 ¹⁴⁶	20	14	39	6 01	19 08 38	08 56		
15	42	34.9	06.4	206	36.6 ¹²⁷	-8 46.7 ¹⁴⁶	30	06	34	5 58	18 59 33	14 62		
16	57	35.0	05.4	221	08.3 ¹²⁷	-9 01.2 ¹⁴⁵	35	5 01	31	57	54 30	18 65		
17	72	35.2	-3 04.4	235	39.9 ¹²⁶	-9 15.7 ¹⁴⁵	40	4 55	5 27	5 54	18 48 27	7 22 68		
18	87	35.4	-3 03.4	250	11.6 ¹²⁷	-9 30.1 ¹⁴⁴	45	4 47	5 22	5 52	18 42 23	7 26 73		
19	102	35.5	02.4	264	43.2 ¹²⁶	44.4 ¹⁴³	50	37	16	49	34 18	32 78		
20	117	35.7	01.4	279	14.8 ¹²⁶	-9 58.7 ¹⁴³	52	33	14	48	31 16	35 80		
21	132	35.9	-3 00.5	293	46.4 ¹²⁶	-10 13.0 ¹⁴³	54	27	10	46	27 13	37 84		
22	147	36.0	-2 59.5	308	18.0 ¹²⁶	27.1 ¹⁴¹	56	21	07	44	23 10	41 86		
23	162	36.2	58.5	322	49.6 ¹²⁶	41.2 ¹⁴¹	58	14	5 03	43	18 7	44 90		
24	177	36.4	-2 57.5	337	21.2 ¹²⁶	-10 55.2 ¹⁴⁰	60 S	4 06	4 58	5 40	18 13 3	7 48 94		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 12 ^h 38 ^m 8		Mag: -4.6 PMG: 13 ^h 21 ^m		Mag: +1.2 PMG: 10 ^h 41 ^m		Mag: -2.0 PMG: 9 ^h 50 ^m		Mag: +0.5 PMG: 0 ^h 01 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	169	46.5	159	08.4	+12 59.4	199 38.4	-13 23.6	212 04.2	-16 49.2	359 47.9	+6 47.1
1	184	49.0	174	11.5	59.4	214 38.9	22.9	227 06.2	49.0	14 50.6	47.1
2	199	51.4	189	14.6	59.5	229 39.5	22.2	242 08.1	48.9	29 53.2	47.2
3	214	53.9	204	17.7	59.5	244 40.1	21.6	257 10.0	48.7	44 55.9	47.3
4	229	56.4	219	20.9	59.6	259 40.7	20.9	272 12.0	48.5	59 58.5	47.4
5	244	58.8	234	24.0	+12 59.6	274 41.2	-13 20.2	287 13.9	-16 48.4	75 01.2	+6 47.5
6	260	01.3	249	27.1	+12 59.7	289 41.8	-13 19.6	302 15.8	-16 48.2	90 03.8	+6 47.5
7	275	03.8	264	30.2	59.7	304 42.4	18.9	317 17.8	48.1	105 06.5	47.6
8	290	06.2	279	33.4	59.8	319 43.0	18.2	332 19.7	47.9	120 09.1	47.7
9	305	08.7	294	36.5	59.8	334 43.5	17.6	347 21.6	47.8	135 11.7	47.8
10	320	11.2	309	39.6	59.8	349 44.1	16.9	2 23.6	47.6	150 14.4	47.9
11	335	13.6	324	42.8	+12 59.9	4 44.7	-13 16.2	17 25.5	-16 47.5	165 17.0	+6 47.9
12	350	16.1	339	45.9	+12 59.9	19 45.3	-13 15.5	32 27.4	-16 47.3	180 19.7	+6 48.0
13	5 18.5	354 49.1	+12 59.9	34 45.8	14.9	47 29.4	47.2			195 22.3	48.1
14	20 21.0	9 52.2	+13 00.0	49 46.4	14.2	62 31.3	47.0			210 25.0	48.2
15	35 23.5	24 55.4	00.0	64 47.0	13.5	77 33.2	46.9			225 27.6	48.2
16	50 25.9	39 58.5	00.0	79 47.6	12.9	92 35.1	46.7			240 30.3	48.3
17	65 28.4	55 01.7	+13 00.0	94 48.1	-13 12.2	107 37.1	-16 46.6			255 32.9	+6 48.4
18	80 30.9	70 04.8	+13 00.1	109 48.7	-13 11.5	122 39.0	-16 46.4			270 35.6	+6 48.5
19	95 33.3	85 08.0	00.1	124 49.3	10.8	137 40.9	46.3			285 38.2	48.6
20	110 35.8	100 11.2	00.1	139 49.9	10.2	152 42.9	46.1			300 40.9	48.6
21	125 38.3	115 14.4	00.1	154 50.5	09.5	167 44.8	46.0			315 43.5	48.7
22	140 40.7	130 17.5	00.1	169 51.0	08.8	182 46.7	45.8			330 46.2	48.8
23	155 43.2	145 20.7	00.1	184 51.6	08.1	197 48.7	45.7			345 48.8	48.9
24	170 45.7	160 23.9	+13 00.1	199 52.2	-13 07.5	212 50.6	-16 45.5			0 51.5	+6 49.0
Dif	—	+31	0	+6	+7	+19	+2			-8974	+1

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1			Edad: 15 ^d 9 PHE	SD: 15 ^h 6				Final del crepúsculo			Salida de Luna		Puesta de Luna	
	PMG: 12 ^h 09 ^m 4				PMG: 1 ^h 34 ^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	177	36.4	-2 57.5	337	21.2	-10 55.2		60 N	17 58	18 39	19 28	22 11 94	6 12 4		
1	192	36.6		351	52.8 ¹²⁶	-11 09.2 ¹⁴⁰		58	17 59	38	24	22 01 89	19 8		
2	207	36.7		6	24.3 ¹²⁵	23.1 ¹³⁹		56	18 00	37	20	21 52 85	26 11		
3	222	36.9		20	55.8 ¹²⁵	36.9 ¹³⁸		54	00	36	17	44 81	31 15		
4	237	37.1		35	27.4 ¹²⁶	-11 50.6 ¹³⁷		52	01	35	14	37 78	37 17		
5	252	37.2	-2 52.6	49	58.9 ¹²⁵	-12 04.3 ¹³⁷		50	18 02	18 34	19 12	21 30 76	6 41 20		
6	267	37.4	-2 51.6	64	30.4 ¹²⁵	-12 17.9 ¹³⁶		45	18 03	18 33	19 07	21 17 71	6 52 24		
7	282	37.6		79	01.8 ¹²⁴	31.5 ¹³⁶		40	05	32	03	21 06 66	7 00 28		
8	297	37.7		93	33.3 ¹²⁵	44.9 ¹³⁴		35	06	31	19 01	20 56 64	08 31		
9	312	37.9		108	04.7 ¹²⁴	-12 58.3 ¹³⁴		30	07	31	18 59	48 60	14 35		
10	327	38.1		122	36.1 ¹²⁴	-13 11.6 ¹³³		20	09	31	57	33 56	25 40		
11	342	38.3	-2 46.7	137	07.5 ¹²⁴	-13 24.8 ¹³²		10 N	18 11	18 32	18 56	20 21 52	7 35 44		
12	357	38.4	-2 45.7	151	38.9 ¹²⁴	-13 38.0 ¹³²		0	18 13	18 33	18 57	20 10 48	7 45 47		
13	12	38.6		166	10.2 ¹²³	-13 51.0 ¹³⁰		10 S	15	36	19 00	19 58 45	7 54 52		
14	27	38.8		180	41.6 ¹²⁴	-14 04.0 ¹³⁰		20	17	39	05	46 40	8 04 56		
15	42	39.0		195	12.9 ¹²³	16.9 ¹²⁹		30	19	43	11	32 36	16 61		
16	57	39.1		209	44.2 ¹²³	29.7 ¹²⁸		35	21	46	16	24 33	23 64		
17	72	39.3	-2 40.8	224	15.4 ¹²²	-14 42.5 ¹²⁸		40	18 23	18 50	19 22	19 15 30	8 30 68		
18	87	39.5	-2 39.8	238	46.6 ¹²²	-14 55.1 ¹²⁶		45	18 25	18 54	19 29	19 05 26	8 39 72		
19	102	39.6		253	17.9 ¹²³	-15 07.7 ¹²⁶		50	27	19 00	38	18 52 22	50 77		
20	117	39.8		267	49.0 ¹²¹	20.1 ¹²⁴		52	28	02	43	47 18	8 55 80		
21	132	40.0		282	20.2 ¹²²	32.5 ¹²⁴		54	30	05	48	40 16	9 01 82		
22	147	40.2		296	51.3 ¹²¹	44.8 ¹²³		56	31	09	19 54	33 13	07 85		
23	162	40.3		311	22.4 ¹²¹	-15 57.0 ¹²²		58	33	12	20 01	25 10	14 89		
24	177	40.5	-2 33.9	325	53.5 ¹²¹	-16 09.2 ¹²²		60 S	18 34	19 17	20 08	18 16 5	9 22 94		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 12 ^h 34 ^m 9		Mag: -4.6 PMG: 13 ^h 16 ^m		Mag: +1.2 PMG: 10 ^h 40 ^m		Mag: -2.0 PMG: 9 ^h 47 ^m		Mag: +0.5 PMG: 23 ^h 52 ^m						
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	°	'	°	°	'	°	'	°	'						
0	170	45.7	160 23.9	+13 00.1	199 52.2	-13 07.5	212 50.6	-16 45.5	0 51.5						
1	185	48.1	175 27.1	00.1	214 52.8	06.8	227 52.5	45.4	15 54.1						
2	200	50.6	190 30.3	00.1	229 53.3	06.1	242 54.5	45.2	30 56.7						
3	215	53.0	205 33.5	00.1	244 53.9	05.5	257 56.4	45.1	45 59.4						
4	230	55.5	220 36.7	00.1	259 54.5	04.8	272 58.3	44.9	61 02.0						
5	245	58.0	235 39.9	+13 00.1	274 55.1	-13 04.1	288 00.3	-16 44.8	76 04.7						
6	261	00.4	250 43.1	+13 00.1	289 55.7	-13 03.4	303 02.2	-16 44.6	91 07.3						
7	276	02.9	265 46.3	+13 00.1	304 56.2	02.8	318 04.1	44.5	106 10.0						
8	291	05.4	280 49.5	+13 00.0	319 56.8	02.1	333 06.1	44.3	121 12.6						
9	306	07.8	295 52.8	00.0	334 57.4	01.4	348 08.0	44.2	136 15.3						
10	321	10.3	310 56.0	00.0	349 58.0	00.7	3 10.0	44.0	151 17.9						
11	336	12.8	325 59.2	+13 00.0	4 58.5	-13 00.1	18 11.9	-16 43.9	166 20.6						
12	351	15.2	341 02.4	+12 59.9	19 59.1	-12 59.4	33 13.8	-16 43.7	181 23.2						
13	6	17.7	356 05.7	59.9	34 59.7	58.7	48 15.8	43.6	196 25.9						
14	21	20.1	11 08.9	59.9	50 00.3	58.0	63 17.7	43.4	211 28.5						
15	36	22.6	26 12.2	59.8	65 00.9	57.3	78 19.6	43.3	226 31.2						
16	51	25.1	41 15.4	59.8	80 01.4	56.7	93 21.6	43.1	241 33.8						
17	66	27.5	56 18.7	+12 59.8	95 02.0	-12 56.0	108 23.5	-16 43.0	256 36.5						
18	81	30.0	71 21.9	+12 59.7	110 02.6	-12 55.3	123 25.4	-16 42.8	271 39.1						
19	96	32.5	86 25.2	59.7	125 03.2	54.6	138 27.4	42.7	286 41.7						
20	111	34.9	101 28.4	59.6	140 03.8	54.0	153 29.3	42.5	301 44.4						
21	126	37.4	116 31.7	59.6	155 04.3	53.3	168 31.2	42.4	316 47.0						
22	141	39.9	131 34.9	59.5	170 04.9	52.6	183 33.2	42.2	331 49.7						
23	156	42.3	146 38.2	59.5	185 05.5	51.9	198 35.1	42.1	346 52.3						
24	171	44.8	161 41.5	+12 59.4	200 06.1	-12 51.2	213 37.0	-16 41.9	1 55.0						
Dif	—		+32	0	+6	+7	+19	+2	+26	+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 2			Edad: 16 ^d 9 PHE { 4 ^h : 56 ^s 5 12 ^h : 56 ^s 3 20 ^h : 56 ^s 1 PMG: 2 ^h 21 ^m R°: 49 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	177	40.5	-2 33.9	325	53.5	-16 09.2	120	60 N	4 49	5 38	6 20	23 45	92	6 16	7		
1	192	40.7		340	24.6 ¹²¹		21.2 ¹²⁰	58		54	40		30	86	27	12	
2	207	40.9		354	55.6 ¹²⁰		33.1 ¹¹⁹	56	4 58	41	18		17	81	37	15	
3	222	41.0		9	26.6 ¹²⁰		45.0 ¹¹⁹	54	5 01	42	17		23	05	78	46	18
4	237	41.2		23	57.6 ¹²⁰	-16 56.7 ¹¹⁷		52		04	43	16	22	55	75	6 54	21
5	252	41.4	-2 28.9	38	28.5 ¹¹⁹	-17 08.4 ¹¹⁷		50	5 06	5 44	6 16	22	46	73	7 01	23	
6	267	41.5	-2 27.9	52	59.4 ¹¹⁹	-17 20.0 ¹¹⁶		45	5 11	5 45	6 14	22	28	68	7 16	28	
7	282	41.7		67	30.3 ¹¹⁹		31.4 ¹¹⁴	40		15	46		12	65	28	32	
8	297	41.9		82	01.2 ¹¹⁹		42.8 ¹¹⁴	35		18	47		12	00	62	39	35
9	312	42.1		96	32.0 ¹¹⁸	-17 54.1 ¹¹³		30		19	47	11	21	48	60	7 49	37
10	327	42.2		111	02.8 ¹¹⁸	-18 05.2 ¹¹¹		20		22	47	09	29	56	8 05	42	
11	342	42.4	-2 23.0	125	33.5 ¹¹⁷	-18 16.3 ¹¹¹		10 N	5 22	5 47	6 08	21	13	53	8 19	46	
12	357	42.6	-2 22.0	140	04.3 ¹¹⁸	-18 27.3 ¹¹⁰		0	5 21	5 45	6 06	20	58	49	8 32	49	
13	12	42.8		154	34.9 ¹¹⁶		38.2 ¹⁰⁹	10 S		19	43	04	43	46	8 46	52	
14	27	42.9		169	05.6 ¹¹⁷		48.9 ¹⁰⁷	20		14	40	02	26	44	9 00	56	
15	42	43.1		183	36.3 ¹¹⁷	-18 59.6 ¹⁰⁷		30		08	36	6 00	20	08	39	17	60
16	57	43.3		198	06.9 ¹¹⁶	-19 10.2 ¹⁰⁶		35	5 03		33	5 58	19	57	37	27	63
17	72	43.5	-2 17.1	212	37.4 ¹¹⁵	-19 20.6 ¹⁰⁴		40	4 57	5 29	5 57	19	45	34	9 38	66	
18	87	43.6	-2 16.1	227	08.0 ¹¹⁶	-19 31.0 ¹⁰⁴		45	4 50	5 25	5 55	19	31	31	9 51	70	
19	102	43.8		241	38.5 ¹¹⁵		41.3 ¹⁰³	50		41	20	52	14	26	10 07	75	
20	117	44.0		256	09.0 ¹¹⁵	-19 51.4 ¹⁰¹		52		37	17	51	19	05	24	15	77
21	132	44.2		270	39.4 ¹¹⁴	-20 01.4 ¹⁰⁰		54		31	14	50	18	56	22	23	80
22	147	44.3		285	09.8 ¹¹⁴		11.4 ¹⁰⁰	56		26	11	49	46	18	32	84	
23	162	44.5		299	40.2 ¹¹⁴		21.2 ⁹⁸	58		19	07	47	35	14	43	88	
24	177	44.7	-2 10.2	314	10.5 ¹¹³	-20 30.9 ⁹⁷		60 S	4 11	5 03	5 45	18	21	9	10 56	93	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 12 ^h 31 ^m 0		Mag: -4.5 PMG: 13 ^h 10 ^m		Mag: +1.2 PMG: 10 ^h 39 ^m		Mag: -2.0 PMG: 9 ^h 44 ^m		Mag: +0.5 PMG: 23 ^h 48 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	171	44.8	161	41.5	+12 59.4	200	06.1	-12 51.2	213	37.0	-16 41.9	1	55.0	+6 50.9
1	186	47.3	176	44.8	59.4	215	06.7	50.6	228	39.0	41.8	16	57.6	50.9
2	201	49.7	191	48.0	59.3	230	07.3	49.9	243	40.9	41.6	32	00.3	51.0
3	216	52.2	206	51.3	59.2	245	07.8	49.2	258	42.9	41.5	47	02.9	51.1
4	231	54.6	221	54.6	59.2	260	08.4	48.5	273	44.8	41.3	62	05.6	51.2
5	246	57.1	236	57.9	+12 59.1	275	09.0	-12 47.9	288	46.7	-16 41.2	77	08.2	+6 51.3
6	261	59.6	252	01.2	+12 59.0	290	09.6	-12 47.2	303	48.7	-16 41.0	92	10.9	+6 51.3
7	277	02.0	267	04.5	58.9	305	10.2	46.5	318	50.6	40.9	107	13.5	51.4
8	292	04.5	282	07.8	58.9	320	10.7	45.8	333	52.5	40.7	122	16.2	51.5
9	307	07.0	297	11.1	58.8	335	11.3	45.1	348	54.5	40.6	137	18.8	51.6
10	322	09.4	312	14.4	58.7	350	11.9	44.4	3	56.4	40.4	152	21.4	51.6
11	337	11.9	327	17.7	+12 58.6	5	12.5	-12 43.8	18	58.4	-16 40.3	167	24.1	+6 51.7
12	352	14.4	342	21.0	+12 58.5	20	13.1	-12 43.1	34	00.3	-16 40.1	182	26.7	+6 51.8
13	7	16.8	357	24.3	58.4	35	13.7	42.4	49	02.2	40.0	197	29.4	51.9
14	22	19.3	12	27.7	58.3	50	14.2	41.7	64	04.2	39.8	212	32.0	52.0
15	37	21.7	27	31.0	58.2	65	14.8	41.0	79	06.1	39.7	227	34.7	52.0
16	52	24.2	42	34.3	58.1	80	15.4	40.4	94	08.0	39.5	242	37.3	52.1
17	67	26.7	57	37.7	+12 58.0	95	16.0	-12 39.7	109	10.0	-16 39.4	257	40.0	+6 52.2
18	82	29.1	72	41.0	+12 57.9	110	16.6	-12 39.0	124	11.9	-16 39.2	272	42.6	+6 52.3
19	97	31.6	87	44.3	57.8	125	17.2	38.3	139	13.9	39.1	287	45.3	52.4
20	112	34.1	102	47.7	57.7	140	17.7	37.6	154	15.8	38.9	302	47.9	52.4
21	127	36.5	117	51.0	57.6	155	18.3	36.9	169	17.7	38.8	317	50.6	52.5
22	142	39.0	132	54.4	57.5	170	18.9	36.3	184	19.7	38.6	332	53.2	52.6
23	157	41.5	147	57.7	57.4	185	19.5	35.6	199	21.6	38.5	347	55.8	52.7
24	172	43.9	163	01.1	+12 57.2	200	20.1	-12 34.9	214	23.6	-16 38.3	2	58.5	+6 52.7
Dif	—		+33	-1		+6	+7		+19	+2		+26	+1	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1			Edad: 17 ^d 9 PHE { 4 ^h : 55 ^m /8 12 ^h : 55 ^m /6 20 ^h : 55 ^m /4										
	PMG: 12 ^h 08 ^m 9			SD: 15 ^h 2 PMG: 3 ^h 10 ^m R°: 49 ^m					Civil	Náutico	Hora	R°	Hora	R°
hG ☉	Dec	hG ☾ Dif	Dec	Dif	h m	h m	h m	h m m	R°	Hora	R°			
0	177 44.7	-2 10.2	314 10.5	-20 30.9	60 N	18 02	18 44	19 33	** ** *	6 23 11				
1	192 44.9	09.2	328 40.8 ¹¹³	40.5 ⁹⁶	58	03	42	29	** ** *	39 17				
2	207 45.0	08.2	343 11.1 ¹¹³	50.0 ⁹⁵	56	04	41	24	** ** *	6 52 22				
3	222 45.2	07.2	357 41.4 ¹¹³	-20 59.4 ⁹⁴	54	04	39	21	** ** *	7 04 22				
4	237 45.4	06.2	12 11.6 ¹¹²	-21 08.7 ⁹³	52	05	38	18	** ** *	15 27				
5	252 45.6	-2 05.3	26 41.8 ¹¹²	-21 17.9 ⁹²	50	18 05	18 37	19 15	23 59 67	7 24 30				
6	267 45.7	-2 04.3	41 11.9 ¹¹¹	-21 26.9 ⁹⁰	45	18 06	18 35	19 10	23 36 63	7 44 34				
7	282 45.9	03.3	55 42.1 ¹¹²	35.8 ⁸⁹	40	07	34	05	17 61	8 00 37				
8	297 46.1	02.3	70 12.1 ¹¹⁰	44.7 ⁸⁹	35	08	33	02	23 02 59	14 39				
9	312 46.3	01.3	84 42.2 ¹¹¹	-21 53.4 ⁸⁷	30	08	32	19 00	22 48 58	26 42				
10	327 46.5	-2 00.3	99 12.2 ¹¹⁰	-22 02.0 ⁸⁶	20	10	32	18 57	25 55	8 47 44				
11	342 46.6	-1 59.3	113 42.2 ¹¹⁰	-22 10.4 ⁸⁴	10 N	18 11	18 32	18 56	22 06 52	9 05 47				
12	357 46.8	-1 58.3	128 12.2 ¹¹⁰	-22 18.8 ⁸³	0	18 12	18 33	18 57	21 47 51	9 21 51				
13	12 47.0	57.4	142 42.1 ¹⁰⁹	27.1 ⁸⁴	10 S	14	35	18 59	29 49	38 53				
14	27 47.2	56.4	157 12.0 ¹⁰⁹	35.2 ⁸¹	20	15	37	19 03	21 10 46	9 56 56				
15	42 47.3	55.4	171 41.9 ¹⁰⁹	43.2 ⁸⁰	30	17	41	09	20 47 44	10 17 59				
16	57 47.5	54.4	186 11.7 ¹⁰⁸	51.1 ⁷⁹	35	18	43	13	34 42	30 61				
17	72 47.7	-1 53.4	200 41.5 ¹⁰⁸	-22 58.9 ⁷⁸	40	18 19	18 47	19 18	20 19 40	10 44 63				
18	87 47.9	-1 52.4	215 11.3 ¹⁰⁸	-23 06.5 ⁷⁶	45	18 21	18 50	19 25	20 02 37	11 01 66				
19	102 48.0	51.4	229 41.1 ¹⁰⁸	14.0 ⁷⁵	50	23	55	34	19 40 33	22 70				
20	117 48.2	50.4	244 10.8 ¹⁰⁷	21.5 ⁷⁵	52	24	18 58	38	29 32	32 72				
21	132 48.4	49.5	258 40.5 ¹⁰⁷	28.8 ⁷³	54	25	19 00	43	18 29	43 75				
22	147 48.6	48.5	273 10.1 ¹⁰⁶	35.9 ⁷¹	56	26	03	48	19 04 27	11 56 78				
23	162 48.8	47.5	287 39.8 ¹⁰⁷	43.0 ⁷¹	58	27	07	19 54	18 49 22	12 11 82				
24	177 48.9	-1 46.5	302 09.4 ¹⁰⁶	-23 49.9 ⁶⁹	60 S	18 28	19 10	20 01	18 30 17	12 29 88				

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 12 ^h 27 ^m 0		Mag: -4.5 PMG: 13 ^h 05 ^m		Mag: +1.2 PMG: 10 ^h 38 ^m		Mag: -2.0 PMG: 9 ^h 41 ^m		Mag: +0.5 PMG: 23 ^h 44 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	172 43.9	163 01.1	+12 57.2	200 20.1	-12 34.9	214 23.6	-16 38.3	2 58.5	+6 52.7	
1	187 46.4	178 04.4	57.1	215 20.7	34.2	229 25.5	38.2	18 01.1	52.8	
2	202 48.9	193 07.8	57.0	230 21.3	33.5	244 27.4	38.0	33 03.8	52.9	
3	217 51.3	208 11.1	56.9	245 21.8	32.8	259 29.4	37.9	48 06.4	53.0	
4	232 53.8	223 14.5	56.7	260 22.4	32.2	274 31.3	37.7	63 09.1	53.1	
5	247 56.2	238 17.9	+12 56.6	275 23.0	-12 31.5	289 33.3	-16 37.6	78 11.7	+6 53.1	
6	262 58.7	253 21.3	+12 56.5	290 23.6	-12 30.8	304 35.2	-16 37.4	93 14.4	+6 53.2	
7	278 01.2	268 24.6	56.3	305 24.2	30.1	319 37.1	37.3	108 17.0	53.3	
8	293 03.6	283 28.0	56.2	320 24.8	29.4	334 39.1	37.1	123 19.7	53.4	
9	308 06.1	298 31.4	56.0	335 25.4	28.7	349 41.0	37.0	138 22.3	53.4	
10	323 08.6	313 34.8	55.9	350 25.9	28.0	4 43.0	36.8	153 25.0	53.5	
11	338 11.0	328 38.2	+12 55.7	5 26.5	-12 27.4	19 44.9	-16 36.7	168 27.6	+6 53.6	
12	353 13.5	343 41.6	+12 55.6	20 27.1	-12 26.7	34 46.8	-16 36.5	183 30.2	+6 53.7	
13	8 16.0	358 45.0	55.4	35 27.7	26.0	49 48.8	36.4	198 32.9	53.8	
14	23 18.4	13 48.4	55.3	50 28.3	25.3	64 50.7	36.2	213 35.5	53.8	
15	38 20.9	28 51.8	55.1	65 28.9	24.6	79 52.7	36.1	228 38.2	53.9	
16	53 23.4	43 55.2	54.9	80 29.5	23.9	94 54.6	35.9	243 40.8	54.0	
17	68 25.8	58 58.6	+12 54.8	95 30.1	-12 23.2	109 56.5	-16 35.8	258 43.5	+6 54.1	
18	83 28.3	74 02.0	+12 54.6	110 30.6	-12 22.5	124 58.5	-16 35.6	273 46.1	+6 54.2	
19	98 30.7	89 05.4	54.4	125 31.2	21.9	140 00.4	35.5	288 48.8	54.2	
20	113 33.2	104 08.8	54.3	140 31.8	21.2	155 02.4	35.3	303 51.4	54.3	
21	128 35.7	119 12.3	54.1	155 32.4	20.5	170 04.3	35.2	318 54.1	54.4	
22	143 38.1	134 15.7	53.9	170 33.0	19.8	185 06.3	35.0	333 56.7	54.5	
23	158 40.6	149 19.1	53.7	185 33.6	19.1	200 08.2	34.9	348 59.3	54.5	
24	173 43.1	164 22.5	+12 53.5	200 34.2	-12 18.4	215 10.1	-16 34.7	4 02.0	+6 54.6	
Dif	—	+34	-2	+6	+7	+19	+2	+26	+	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16 ^h 1			Edad: 18 ^d 9 PHE { 4 ^h : 55 ^m /2 12 ^h : 55 ^m /0 20 ^h : 54 ^m /9													
	PMG: 12 ^h 08 ^m 6			SD: 15 ^h 1 PMG: 3 ^h 59 ^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	177	48.9	-1 46.5	302	09.4	-23 49.9		60 N	4 43	5 32	6 14	1 17	83	6 34	23		
1	192	49.1		316	39.0 ¹⁰⁶	-23 56.7	68	58	48	34	13	0 56	77	6 56	28		
2	207	49.3		331	08.5 ¹⁰⁵	-24 03.4	67	56	52	36	13	38	74	7 14	32		
3	222	49.5		345	38.1 ¹⁰⁶	09.9	65	54	56	37	12	23	71	29	35		
4	237	49.6		0	07.6 ¹⁰⁵	16.4	65	52	4 59	38	12	0 10	69	42	37		
5	252	49.8	-1 41.6	14	37.0 ¹⁰⁴	-24 22.7	63	50	5 02	5 39	6 11	** ** *	**	7 54	38		
6	267	50.0	-1 40.6	29	06.5 ¹⁰⁵	-24 28.9	62	45	5 07	5 41	6 11	** ** *	**	8 18	41		
7	282	50.2		43	35.9 ¹⁰⁴	34.9	60	40	12	43	10	** ** *	**	37	43		
8	297	50.4		58	05.3 ¹⁰⁴	40.9	60	35	15	44	09	** ** *	**	8 53	45		
9	312	50.5		72	34.7 ¹⁰⁴	46.7	58	30	17	45	09	23 46	54	9 08	45		
10	327	50.7		87	04.1 ¹⁰⁴	52.3	56	20	20	46	08	23 20	53	31	48		
11	342	50.9	-1 35.6	101	33.4 ¹⁰³	-24 57.9	56	10 N	5 21	5 45	6 06	22 58	53	9 52	50		
12	357	51.1	-1 34.6	116	02.7 ¹⁰³	-25 03.3	54	0	5 21	5 45	6 05	22 38	51	10 12	51		
13	12	51.3		130	32.0 ¹⁰³	08.6	53	10 S	19	43	04	22 18	50	31	53		
14	27	51.4		145	01.3 ¹⁰³	13.8	52	20	15	41	03	21 56	49	10 52	54		
15	42	51.6		159	30.6 ¹⁰³	18.8	50	30	09	37	01	31	48	11 16	56		
16	57	51.8		173	59.8 ¹⁰²	23.7	49	35	05	35	00	21 16	48	31	57		
17	72	52.0	-1 29.7	188	29.0 ¹⁰²	-25 28.5	48	40	5 00	5 32	5 59	20 59	46	11 47	59		
18	87	52.1	-1 28.7	202	58.2 ¹⁰²	-25 33.2	47	45	4 53	5 28	5 57	20 39	45	12 07	60		
19	102	52.3		217	27.4 ¹⁰²	37.7	45	50	45	23	55	13	43	32	62		
20	117	52.5		231	56.6 ¹⁰²	42.1	44	52	40	21	55	20 01	42	44	64		
21	132	52.7		246	25.7 ¹⁰¹	46.4	43	54	36	18	54	19 47	40	12 58	65		
22	147	52.9		260	54.9 ¹⁰²	50.5	41	56	30	15	53	31	38	13 14	67		
23	162	53.0		275	24.0 ¹⁰¹	54.5	40	58	24	12	52	19 11	36	33	71		
24	177	53.2	-1 22.8	289	53.1 ¹⁰¹	-25 58.4	39	60 S	4 17	5 08	5 50	18 47	31	13 57	75		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG 12 ^h 23 ^m 1		Mag: -4.4 PMG: 13 ^h 00 ^m			Mag: +1.2 PMG: 10 ^h 37 ^m			Mag: -2.0 PMG: 9 ^h 38 ^m			Mag: +0.5 PMG: 23 ^h 40 ^m					
	hG ♈		hG ♀ Dec			hG ♂ Dec			hG ♃ Dec			hG ♄ Dec					
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°		
0	173	43.1	164	22.5	+12 53.5	200	34.2	-12 18.4	215	10.1	-16 34.7	4	02.0	+6 54.6			
1	188	45.5	179	26.0		215	34.8		230	12.1		19	04.6				
2	203	48.0	194	29.4		230	35.3		245	14.0		34	07.3				
3	218	50.5	209	32.9		245	35.9		260	16.0		49	09.9				
4	233	52.9	224	36.3		260	36.5		275	17.9		64	12.6				
5	248	55.4	239	39.7	+12 52.6	275	37.1	-12 15.0	290	19.8	-16 34.0	79	15.2	+6 55.0			
6	263	57.8	254	43.2	+12 52.4	290	37.7	-12 14.3	305	21.8	-16 33.8	94	17.9	+6 55.1			
7	279	00.3	269	46.7		305	38.3		320	23.7		109	20.5				
8	294	02.8	284	50.1		320	38.9		335	25.7		124	23.2				
9	309	05.2	299	53.6		335	39.5		350	27.6		139	25.8				
10	324	07.7	314	57.0		350	40.1		5	29.6		154	28.5				
11	339	10.2	330	00.5	+12 51.4	5	40.7	-12 10.8	20	31.5	-16 33.1	169	31.1	+6 55.5			
12	354	12.6	345	04.0	+12 51.1	20	41.2	-12 10.1	35	33.5	-16 32.9	184	33.7	+6 55.6			
13	9	15.1	0	07.4		35	41.8		50	35.4		199	36.4				
14	24	17.6	15	10.9		50	42.4		65	37.3		214	39.0				
15	39	20.0	30	14.4		65	43.0		80	39.3		229	41.7				
16	54	22.5	45	17.9		80	43.6		95	41.2		244	44.3				
17	69	25.0	60	21.4	+12 50.0	95	44.2	-12 06.7	110	43.2	-16 32.2	259	47.0	+6 55.9			
18	84	27.4	75	24.8	+12 49.8	110	44.8	-12 06.0	125	45.1	-16 32.0	274	49.6	+6 56.0			
19	99	29.9	90	28.3		125	45.4		140	47.1		289	52.3				
20	114	32.3	105	31.8		140	46.0		155	49.0		304	54.9				
21	129	34.8	120	35.3		155	46.6		170	51.0		319	57.5				
22	144	37.3	135	38.8		170	47.2		185	52.9		335	00.2				
23	159	39.7	150	42.3		185	47.8		200	54.8		350	02.8				
24	174	42.2	165	45.8	+12 48.3	200	48.3	-12 01.8	215	56.8	-16 31.1	5	05.5	+6 56.5			
Dif	—		+35			-2			+19			+1			+26		
						+6			+7						+1		

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16 ^h 1			Edad: 19 ^d 9 PHE { 4 ^h : 54 ^m 7 12 ^h : 54 ^m 6 20 ^h : 54 ^m 5											
	PMG: 12 ^h 08 ^m 3			SD: 14 ^h 9 PMG: 4 ^h 50 ^m R°: 52 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	177	53.2	-1 22.8	289	53.1	-25 58.4	38	60 N	18 07	18 49	19 39	2 40 65	6 57 41		
1	192	53.4	21.8	304	22.2 ¹⁰¹	-26 02.2	38	58	08	47	33	2 13 62	7 24 44		
2	207	53.6	20.8	318	51.3 ¹⁰¹	05.8	36	56	08	45	29	1 52 60	7 46 45		
3	222	53.8	19.8	333	20.4 ¹⁰¹	09.3	35	54	08	43	25	34 59	8 04 44		
4	237	53.9	18.8	347	49.5 ¹⁰¹	12.6	33	52	08	42	21	19 59	19 47		
5	252	54.1	-1 17.8	2	18.5 ¹⁰⁰	-26 15.9	33	50	18 08	18 40	19 18	1 06 58	8 32 48		
6	267	54.3	-1 16.8	16	47.6 ¹⁰¹	-26 19.0	31	45	18 09	18 38	19 12	0 39 57	8 59 49		
7	282	54.5	15.9	31	16.6 ¹⁰⁰	21.9	29	40	09	36	08	18 56	9 20 50		
8	297	54.7	14.9	45	45.7 ¹⁰¹	24.8	29	35	09	35	04	0 01 55	38 50		
9	312	54.8	13.9	60	14.7 ¹⁰⁰	27.5	27	30	10	33	19 01	** ** *	9 53 51		
10	327	55.0	12.9	74	43.7 ¹⁰⁰	30.0	25	20	10	32	18 58	** ** *	10 19 51		
11	342	55.2	-1 11.9	89	12.8 ¹⁰¹	-26 32.5	25	10 N	18 11	18 32	18 56	23 51 50	10 42 51		
12	357	55.4	-1 10.9	103	41.8 ¹⁰⁰	-26 34.8	23	0	18 12	18 32	18 56	23 29 51	11 03 51		
13	12	55.6	09.9	118	10.8 ¹⁰⁰	37.0	22	10 S	12	33	18 58	23 08 51	24 51		
14	27	55.7	08.9	132	39.8 ¹⁰⁰	39.0	20	20	13	35	19 01	22 45 52	11 46 52		
15	42	55.9	07.9	147	08.8 ¹⁰⁰	40.9	19	30	15	38	06	19 52	12 12 52		
16	57	56.1	07.0	161	37.8 ¹⁰⁰	42.7	18	35	15	41	10	22 04 52	28 52		
17	72	56.3	-1 06.0	176	06.9 ¹⁰¹	-26 44.4	17	40	18 16	18 43	19 15	21 45 53	12 46 52		
18	87	56.5	-1 05.0	190	35.9 ¹⁰⁰	-26 45.9	15	45	18 17	18 47	19 21	21 24 52	13 07 53		
19	102	56.7	04.0	205	04.9 ¹⁰⁰	47.3	14	50	19	51	29	20 56 53	34 53		
20	117	56.8	03.0	219	33.9 ¹⁰⁰	48.5	12	52	19	53	33	43 53	13 48 52		
21	132	57.0	02.0	234	03.0 ¹⁰¹	49.6	11	54	20	55	37	27 53	14 03 53		
22	147	57.2	-1 01.0	248	32.0 ¹⁰⁰	50.6	10	56	21	18 58	42	20 09 53	21 53		
23	162	57.4	-1 00.0	263	01.0 ¹⁰⁰	51.5	9	58	21	19 01	48	19 47 53	14 44 52		
24	177	57.6	-0 59.1	277	30.1 ¹⁰¹	-26 52.2	7	60 S	18 22	19 04	19 55	19 18 54	15 12 53		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 12 ^h 19 ^m 2		Mag: -4.4 PMG: 12 ^h 54 ^m			Mag: +1.2 PMG: 10 ^h 36 ^m			Mag: -2.0 PMG: 9 ^h 35 ^m			Mag: +0.5 PMG: 23 ^h 35 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	174	42.2	165	45.8	+12 48.3	200	48.3	-12 01.8	215	56.8	-16 31.1	5 05.5	+6 56.5		
1	189	44.7	180	49.3	48.1	215	48.9	01.1	230	58.7	31.0	20 08.1	56.6		
2	204	47.1	195	52.8	47.8	230	49.5	-12 00.4	246	00.7	30.8	35 10.8	56.6		
3	219	49.6	210	56.4	47.6	245	50.1	-11 59.7	261	02.6	30.7	50 13.4	56.7		
4	234	52.1	225	59.9	47.3	260	50.7	59.0	276	04.6	30.5	65 16.1	56.8		
5	249	54.5	241	03.4	+12 47.1	275	51.3	-11 58.3	291	06.5	-16 30.4	80 18.7	+6 56.9		
6	264	57.0	256	06.9	+12 46.8	290	51.9	-11 57.7	306	08.5	-16 30.2	95 21.4	+6 56.9		
7	279	59.5	271	10.4	46.5	305	52.5	57.0	321	10.4	30.1	110 24.0	57.0		
8	295	01.9	286	14.0	46.3	320	53.1	56.3	336	12.4	29.9	125 26.6	57.1		
9	310	04.4	301	17.5	46.0	335	53.7	55.6	351	14.3	29.8	140 29.3	57.2		
10	325	06.8	316	21.0	45.7	350	54.3	54.9	6 16.3	29.6	155 31.9	57.3			
11	340	09.3	331	24.6	+12 45.5	5 54.9	-11 54.2	21 18.2	-16 29.5	170 34.6	+6 57.3				
12	355	11.8	346	28.1	+12 45.2	20 55.5	-11 53.5	36 20.1	-16 29.3	185 37.2	+6 57.4				
13	10	14.2	1	31.7	44.9	35 56.1	52.8	51 22.1	29.2	200 39.9	57.5				
14	25	16.7	16	35.2	44.6	50 56.7	52.1	66 24.0	29.0	215 42.5	57.6				
15	40	19.2	31	38.7	44.3	65 57.3	51.4	81 26.0	28.9	230 45.2	57.6				
16	55	21.6	46	42.3	44.0	80 57.8	50.7	96 27.9	28.7	245 47.8	57.7				
17	70	24.1	61	45.9	+12 43.7	95 58.4	-11 50.0	111 29.9	-16 28.6	260 50.4	+6 57.8				
18	85	26.6	76	49.4	+12 43.5	110 59.0	-11 49.3	126 31.8	-16 28.4	275 53.1	+6 57.9				
19	100	29.0	91	53.0	43.2	125 59.6	48.6	141 33.8	28.3	290 55.7	57.9				
20	115	31.5	106	56.5	42.9	141 00.2	47.9	156 35.7	28.1	305 58.4	58.0				
21	130	34.0	122	00.1	42.6	156 00.8	47.2	171 37.7	28.0	321 01.0	58.1				
22	145	36.4	137	03.7	42.3	171 01.4	46.5	186 39.6	27.8	336 03.7	58.2				
23	160	38.9	152	07.2	41.9	186 02.0	45.8	201 41.6	27.7	351 06.3	58.3				
24	175	41.3	167	10.8	+12 41.6	201 02.6	-11 45.1	216 43.5	-16 27.5	6 09.0	+6 58.3				
Dif	—		+35 -3			+6 +7			+19 +1		+26 +1				

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'1 PMG: 12 ^h 08 ^m 0			Edad: 20 ^d 9 PHE { 4 ^h : 54'4 12 ^h : 54'3 20 ^h : 54'3 R°: 50 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m		
0	177	57.6	-0	59.1		277	30.1	-26	52.2	6	0	4	37	5	26	6	08	
1	192	57.7		58.1	100	291	59.1	52.8	5	58	42	28	07		3	45	40	
2	207	57.9		57.1	101	306	28.2	53.3	6	56	47	30	07		3	15	43	
3	222	58.1		56.1	101	320	57.3	53.6	3	54	51	32	07		2	52	45	
4	237	58.3		55.1	101	335	26.4	53.8	2	52	54	34	07		33	46	8	
5	252	58.5	-0	54.1	101	349	55.5	-26	53.9	1	50	4	57	5	35	18	46	
6	267	58.7	-0	53.1	101	4	24.6	-26	53.9	0	45	5	03	5	38	46	58	
7	282	58.8		52.1	101	18	53.7	53.7	2	40	08	40	07		2	04	47	
8	297	59.0		51.1	102	33	22.9	53.4	3	35	12	41	06		1	36	48	
9	312	59.2		50.2	101	47	52.0	52.9	2	30	15	42	06		9	48	56	
10	327	59.4		49.2	102	62	21.2	52.3	5	30	18	44	06		0	56	49	
11	342	59.6	-0	48.2	102	76	50.4	-26	51.6	6	20	18	44	06	40	50	10	
12	357	59.7	-0	47.2	102	91	19.6	-26	50.8	7	10	5	20	5	44	0	13	51
13	12	59.9		46.2	102	105	48.8	49.8	8	10	19	43	04		**	**	**	
14	28	00.1		45.2	102	120	18.0	48.7	10	0	19	43	04		23	59	52	
15	43	00.3		44.2	103	134	47.3	47.5	11	10	16	41	03		37	53	12	
16	58	00.5		43.2	103	149	16.6	46.2	12	10	16	41	03		57	52	15	
17	73	00.7	-0	42.2	103	163	45.9	-26	44.7	13	30	10	38	02	23	11	55	
18	88	00.8	-0	41.3	103	178	15.2	-26	43.1	14	35	07	36	02	23	11	55	
19	103	01.0		40.3	104	192	44.6	41.3	15	35	07	36	02		22	56	56	
20	118	01.2		39.3	103	207	13.9	39.5	16	40	5	02	5	34	6	01	22	
21	133	01.4		38.3	104	221	43.3	37.5	17	45	4	56	5	30	22	16	59	
22	148	01.6		37.3	105	236	12.8	35.4	18	50	48	26	5	59	21	49	61	
23	163	01.8		36.3	104	250	42.2	33.1	19	52	44	24	58		36	62	40	
24	178	01.9	-0	35.3	105	265	11.7	-26	30.7	20	54	40	22	58	20	65	14	
										21	56	35	20	57	21	02	67	
										22	58	22	58	57	21	02	67	
										23	56	17	56	56	20	40	70	
										24	55	13	55	55	20	12	74	
											4	23	5	55	20	12	74	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1			Edad: 21 ^d 9 PHE { 4 ^h : 54/2 12 ^h : 54/2 20 ^h : 54/2											
	PMG: 12 ^h 07 ^m 7			SD: 14 ^h 8 PMG: 6 ^h 32 ^m R°: 50 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m		h m m	
0	178	01.9	-0 35.3	265	11.7	-26 30.7		60 N	18 12	18 54	19 44	4 25 22		8 44 81	
1	193	02.1	34.3	279	41.2 ¹⁰⁵	28.2	25	58	12	51	38	3 58 27		9 11 75	
2	208	02.3	33.3	294	10.8 ¹⁰⁶	25.6	26	56	12	49	33	37 30		32 71	
3	223	02.5	32.4	308	40.3 ¹⁰⁵	22.9	27	54	12	47	29	19 33		9 49 69	
4	238	02.7	31.4	323	09.9 ¹⁰⁶	20.0	29	52	12	45	25	3 04 35		10 04 67	
5	253	02.9	-0 30.4	337	39.5 ¹⁰⁶	-26 17.0	30	50	18 11	18 44	19 22	2 51 36		10 17 65	
6	268	03.0	-0 29.4	352	09.2 ¹⁰⁷	-26 13.9	31	45	18 11	18 41	19 15	2 24 39		10 44 61	
7	283	03.2	28.4	6	38.9 ¹⁰⁷	10.6	33	40	11	38	10	2 03 41		11 05 59	
8	298	03.4	27.4	21	08.6 ¹⁰⁷	07.3	33	35	11	36	06	1 45 43		22 57	
9	313	03.6	26.4	35	38.4 ¹⁰⁸	03.8	35	30	11	35	19 03	30 44		11 37 56	
10	328	03.8	25.4	50	08.2 ¹⁰⁸	-26 00.2	36	20	11	33	18 58	1 04 46		12 02 54	
11	343	04.0	-0 24.4	64	38.0 ¹⁰⁸	-25 56.4	38	10 N	18 11	18 32	18 56	0 41 48		12 24 51	
12	358	04.1	-0 23.5	79	07.8 ¹⁰⁸	-25 52.6	38	0	18 11	18 32	18 56	0 20 50		12 45 49	
13	13	04.3	22.5	93	37.7 ¹⁰⁹	48.6	40	10 S	11	32	57	** ** *		13 05 47	
14	28	04.5	21.5	108	07.7 ¹¹⁰	44.5	41	20	12	34	18 59	** ** *		26 45	
15	43	04.7	20.5	122	37.6 ¹⁰⁹	40.3	42	30	12	36	19 04	** ** *		13 51 42	
16	58	04.9	19.5	137	07.6 ¹¹⁰	35.9	44	35	13	38	07	23 52 58		14 06 40	
17	73	05.1	-0 18.5	151	37.7 ¹¹¹	-25 31.5	44	40	18 13	18 40	19 12	23 35 61		14 23 38	
18	88	05.2	-0 17.5	166	07.8 ¹¹¹	-25 26.9	46	45	18 14	18 43	19 17	23 15 64		14 43 36	
19	103	05.4	16.5	180	37.9 ¹¹¹	22.2	47	50	14	46	24	22 50 68		15 09 32	
20	118	05.6	15.6	195	08.0 ¹¹¹	17.4	48	52	15	48	28	38 70		21 30	
21	133	05.8	14.6	209	38.2 ¹¹²	12.4	50	54	15	50	32	25 71		35 28	
22	148	06.0	13.6	224	08.5 ¹¹³	07.4	50	56	15	52	37	22 09 74		15 51 26	
23	163	06.2	12.6	238	38.8 ¹¹³	-25 02.2	52	58	16	55	42	21 50 78		16 11 21	
24	178	06.4	-0 11.6	253	09.1 ¹¹³	-24 56.9	53	60 S	18 16	18 58	19 48	21 26 84		16 35 16	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG 12 ^h 11 ^m 3		Mag: -4.3 PMG: 12 ^h 42 ^m		Mag: +1.2 PMG: 10 ^h 34 ^m		Mag: -2.1 PMG: 9 ^h 29 ^m		Mag: +0.5 PMG: 23 ^h 27 ^m						
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	°	°	°	°	°	°	°	°						
0	176	40.5	168	37.3	+12 33.4	201	17.0	-11 28.3	217	30.3	-16 24.0	7	12.4	+7 00.2	
1	191	42.9	183	40.9	33.0	216	17.6	27.6	232	32.3	23.8	22	15.0	00.2	
2	206	45.4	198	44.6	32.7	231	18.2	26.9	247	34.2	23.7	37	17.7	00.3	
3	221	47.9	213	48.2	32.3	246	18.8	26.2	262	36.2	23.5	52	20.3	00.4	
4	236	50.3	228	51.9	31.9	261	19.4	25.5	277	38.1	23.4	67	23.0	00.5	
5	251	52.8	243	55.5	+12 31.5	276	20.0	-11 24.8	292	40.1	-16 23.2	82	25.6	+7 00.5	
6	266	55.3	258	59.2	+12 31.1	291	20.6	-11 24.1	307	42.0	-16 23.1	97	28.3	+7 00.6	
7	281	57.7	274	02.8	30.7	306	21.2	23.4	322	44.0	22.9	112	30.9	00.7	
8	297	00.2	289	06.5	30.3	321	21.8	22.7	337	45.9	22.8	127	33.6	00.8	
9	312	02.7	304	10.1	29.9	336	22.4	22.0	352	47.9	22.6	142	36.2	00.8	
10	327	05.1	319	13.8	29.5	351	23.0	21.2	7	49.9	22.5	157	38.8	00.9	
11	342	07.6	334	17.4	+12 29.1	6	23.6	-11 20.5	22	51.8	-16 22.3	172	41.5	+7 01.0	
12	357	10.1	349	21.1	+12 28.7	21	24.2	-11 19.8	37	53.8	-16 22.2	187	44.1	+7 01.1	
13	12	12.5	4	24.8	28.3	36	24.8	19.1	52	55.7	22.0	202	46.8	01.2	
14	27	15.0	19	28.4	27.9	51	25.4	18.4	67	57.7	21.9	217	49.4	01.2	
15	42	17.4	34	32.1	27.5	66	26.0	17.7	82	59.6	21.7	232	52.1	01.3	
16	57	19.9	49	35.8	27.1	81	26.6	17.0	98	01.6	21.6	247	54.7	01.4	
17	72	22.4	64	39.4	+12 26.7	96	27.2	-11 16.3	113	03.5	-16 21.4	262	57.3	+7 01.5	
18	87	24.8	79	43.1	+12 26.3	111	27.8	-11 15.6	128	05.5	-16 21.3	278	00.0	+7 01.5	
19	102	27.3	94	46.8	25.8	126	28.4	14.9	143	07.4	21.1	293	02.6	01.6	
20	117	29.8	109	50.5	25.4	141	29.0	14.2	158	09.4	21.0	308	05.3	01.7	
21	132	32.2	124	54.1	25.0	156	29.6	13.5	173	11.3	20.8	323	07.9	01.8	
22	147	34.7	139	57.8	24.6	171	30.2	12.8	188	13.3	20.7	338	10.5	01.8	
23	162	37.2	155	01.5	24.1	186	30.8	12.1	203	15.3	20.5	353	13.2	01.9	
24	177	39.6	170	05.2	+12 23.7	201	31.4	-11 11.4	218	17.2	-16 20.4	8	15.8	+7 02.0	
Dif	—		+37	-4		+6	+7		+20	+1		+26		+1	

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'1 PMG: 12 ^h 07 ^m 4			Edad: 22 ^d 9 PHE { 4 ^h : 54'3 12 ^h : 54'3 20 ^h : 54'4 SD: 14'8 PMG: 7 ^h 22 ^m R°: 47 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	06.4	-0	253	09.1	-24	56.9	60 N	4	30	5	20	6	01	4	47
1	193	06.5		267	39.4 ¹¹³		51.5 ⁵⁴	58	36	23	02		25	17	26	81
2	208	06.7		282	09.9 ¹¹⁵		46.0 ⁵⁵	56	41	25	02		4	07	21	43
3	223	06.9		296	40.3 ¹¹⁴		40.4 ⁵⁶	54	45	27	02		3	52	24	10
4	238	07.1		311	10.8 ¹¹⁵		34.7 ⁵⁷	52	49	29	03		39	26	11	71
5	253	07.3	-0	325	41.3 ¹¹⁵	-24	28.8 ⁵⁹	50	4	53	5	31	6	03	3	27
6	268	07.5	-0	340	11.9 ¹¹⁶	-24	22.8 ⁶⁰	45	5	00	5	34	6	03	3	03
7	283	07.6		354	42.5 ¹¹⁶		16.8 ⁶⁰	40	05	36	03		2	44	35	12
8	298	07.8		9	13.2 ¹¹⁷		10.6 ⁶²	35	09	38	04		28	38	19	59
9	313	08.0		23	43.9 ¹¹⁷	-24	04.3 ⁶³	30	12	40	04		2	14	40	33
10	328	08.2		38	14.6 ¹¹⁷	-23	57.8 ⁶⁵	20	17	42	04		1	50	43	12
11	343	08.4	-0	52	45.4 ¹¹⁸	-23	51.3 ⁶⁵	10 N	5	19	5	43	6	04	1	29
12	358	08.6	+0	67	16.2 ¹¹⁸	-23	44.7 ⁶⁶	0	5	20	5	44	6	04	1	10
13	13	08.8		81	47.1 ¹¹⁹		37.9 ⁶⁸	10 S	19	43	04		0	51	50	13
14	28	08.9		96	18.1 ¹²⁰		31.1 ⁶⁸	20	16	42	04		30	53	14	11
15	43	09.1		110	49.0 ¹¹⁹		24.1 ⁷⁰	30	12	40	03		0	06	56	33
16	58	09.3		125	20.0 ¹²⁰		17.1 ⁷⁰	35	08	38	03		**	**	**	14
17	73	09.5	+0	139	51.1 ¹²¹	-23	09.9 ⁷²	40	5	04	5	36	6	03	**	**
18	88	09.7	+0	154	22.2 ¹²¹	-23	02.6 ⁷³	45	4	59	5	33	6	02	**	**
19	103	09.9		168	53.4 ¹²²	-22	55.2 ⁷⁴	50	51	30	02		23	58	70	41
20	118	10.0		183	24.6 ¹²²		47.7 ⁷⁵	52	48	28	02		48	72	15	51
21	133	10.2		197	55.8 ¹²²		40.1 ⁷⁶	54	44	26	01		36	76	16	03
22	148	10.4		212	27.1 ¹²³		32.4 ⁷⁷	56	39	24	01		23	79	17	17
23	163	10.6		226	58.4 ¹²³		24.6 ⁷⁸	58	34	21	01		23	08	83	32
24	178	10.8	+0	241	29.8 ¹²⁴	-22	16.7 ⁷⁹	60 S	4	28	5	18	6	00	22	50

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 12 ^h 07 ^m 4		Mag: -4.2 PMG: 12 ^h 37 ^m		Mag: +1.2 PMG: 10 ^h 33 ^m		Mag: -2.1 PMG: 9 ^h 26 ^m		Mag: +0.5 PMG: 23 ^h 23 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	177	39.6	170	05.2	+12	23.7	201	31.4	-11	11.4
1	192	42.1	185	08.9		23.3	216	32.0		10.7
2	207	44.6	200	12.6		22.8	231	32.6		09.9
3	222	47.0	215	16.3		22.4	246	33.2		09.2
4	237	49.5	230	20.0		21.9	261	33.8		08.5
5	252	51.9	245	23.7	+12	21.5	276	34.4	-11	07.8
6	267	54.4	260	27.4	+12	21.0	291	35.0	-11	07.1
7	282	56.9	275	31.1		20.6	306	35.6		06.4
8	297	59.3	290	34.8		20.1	321	36.2		05.7
9	313	01.8	305	38.5		19.7	336	36.8		05.0
10	328	04.3	320	42.2		19.2	351	37.4		04.3
11	343	06.7	335	45.9	+12	18.8	6	38.1	-11	03.6
12	358	09.2	350	49.6	+12	18.3	21	38.7	-11	02.9
13	13	11.7	5	53.3		17.8	36	39.3		02.1
14	28	14.1	20	57.0		17.4	51	39.9		01.4
15	43	16.6	36	00.8		16.9	66	40.5	-11	00.7
16	58	19.0	51	04.5		16.4	81	41.1	-11	00.0
17	73	21.5	66	08.2	+12	15.9	96	41.7	-10	59.3
18	88	24.0	81	11.9	+12	15.5	111	42.3	-10	58.6
19	103	26.4	96	15.7		15.0	126	42.9		57.9
20	118	28.9	111	19.4		14.5	141	43.5		57.2
21	133	31.4	126	23.1		14.0	156	44.1		56.5
22	148	33.8	141	26.8		13.5	171	44.7		55.7
23	163	36.3	156	30.6		13.0	186	45.3		55.0
24	178	38.8	171	34.3	+12	12.5	201	45.9	-10	54.3
Dif	—		+37		-5		+6		+7	
							+20		+1	
									+26	
									+1	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1 PMG: 12 ^h 07 ^m 1			Edad: 23 ^d 9 PHE { 4 ^h : 54 ⁵ / ₅ 12 ^h : 54 ⁶ / ₆ 20 ^h : 54 ⁷ / ₇ 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	178	10.8	+0 12.1	241	29.8	-22 16.7	60 N	18 17	18 59	19 49	4 58 6	11 32 88		
1	193	11.0		256	01.2 ¹²⁴	08.7 ⁸⁰	58	17	56	43	42 10	11 47 84		
2	208	11.2		270	32.7 ¹²⁵	-22 00.6 ⁸¹	56	16	53	38	28 14	12 01 79		
3	223	11.3		285	04.2 ¹²⁵	-21 52.4 ⁸²	54	15	51	33	16 17	12 76		
4	238	11.5		299	35.8 ¹²⁶	44.1 ⁸³	52	15	49	29	4 05 20	22 74		
5	253	11.7	+0 17.1	314	07.4 ¹²⁶	-21 35.7 ⁸⁴	50	18 15	18 47	19 25	3 56 22	12 31 71		
6	268	11.9	+0 18.0	328	39.0 ¹²⁶	-21 27.2 ⁸⁵	45	18 14	18 43	19 18	3 36 26	12 50 66		
7	283	12.1		343	10.7 ¹²⁷	18.6 ⁸⁶	40	13	40	12	19 31	13 05 63		
8	298	12.3		357	42.4 ¹²⁷	09.9 ⁸⁷	35	13	38	07	3 06 33	18 60		
9	313	12.5		12	14.2 ¹²⁸	-21 01.1 ⁸⁸	30	12	36	19 04	2 54 35	30 57		
10	328	12.6		26	46.0 ¹²⁸	-20 52.2 ⁸⁹	20	11	33	18 59	33 40	13 49 52		
11	343	12.8	+0 23.0	41	17.9 ¹²⁹	-20 43.2 ⁹⁰	10 N	18 11	18 32	18 56	2 15 43	14 05 49		
12	358	13.0	+0 24.0	55	49.8 ¹²⁹	-20 34.1 ⁹¹	0	18 10	18 31	18 55	1 58 46	14 21 45		
13	13	13.2		70	21.8 ¹³⁰	25.0 ⁹¹	10 S	10	31	55	41 50	36 42		
14	28	13.4		84	53.8 ¹³⁰	15.7 ⁹³	20	10	32	18 57	23 53	14 52 38		
15	43	13.6		99	25.8 ¹³⁰	-20 06.3 ⁹⁴	30	10	34	19 01	1 02 57	15 11 34		
16	58	13.8		113	57.9 ¹³¹	-19 56.9 ⁹⁴	35	10	35	04	0 50 59	22 31		
17	73	14.0	+0 28.9	128	30.0 ¹³¹	-19 47.3 ⁹⁶	40	18 10	18 37	19 08	0 36 62	15 34 28		
18	88	14.1	+0 29.9	143	02.2 ¹³²	-19 37.7 ⁹⁶	45	18 10	18 39	19 13	0 19 65	15 48 25		
19	103	14.3		157	34.4 ¹³²	28.0 ⁹⁷	50	10	42	20	** ** *	16 06 20		
20	118	14.5		172	06.7 ¹³³	18.2 ⁹⁸	52	10	44	23	** ** *	14 18		
21	133	14.7		186	39.0 ¹³³	-19 08.2 ¹⁰⁰	54	10	45	27	** ** *	24 15		
22	148	14.9		201	11.3 ¹³³	-18 58.3 ⁹⁹	56	10	47	31	** ** *	34 12		
23	163	15.1		215	43.7 ¹³⁴	48.2 ¹⁰¹	58	10	49	36	** ** *	46 9		
24	178	15.3	+0 35.8	230	16.1 ¹³⁴	-18 38.0 ¹⁰²	60 S	18 10	18 52	19 41	** ** *	16 59 5		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG 12 ^h 03 ^m 4		Mag: -4.2 PMG: 12 ^h 31 ^m			Mag: +1.2 PMG: 10 ^h 33 ^m			Mag: -2.1 PMG: 9 ^h 22 ^m			Mag: +0.5 PMG: 23 ^h 19 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°
0	178	38.8	171	34.3	+12 12.5	201	45.9	-10 54.3	219	04.2	-16 16.8	9	19.2	+7 03.8
1	193	41.2	186	38.0	12.0	216	46.5	53.6	234	06.1	16.7	24	21.9	03.9
2	208	43.7	201	41.8	11.5	231	47.1	52.9	249	08.1	16.6	39	24.5	03.9
3	223	46.2	216	45.5	11.0	246	47.8	52.2	264	10.1	16.4	54	27.2	04.0
4	238	48.6	231	49.3	10.5	261	48.4	51.5	279	12.0	16.3	69	29.8	04.1
5	253	51.1	246	53.0	+12 10.0	276	49.0	-10 50.8	294	14.0	-16 16.1	84	32.4	+7 04.2
6	268	53.5	261	56.8	+12 09.5	291	49.6	-10 50.0	309	15.9	-16 16.0	99	35.1	+7 04.2
7	283	56.0	277	00.5	09.0	306	50.2	49.3	324	17.9	15.8	114	37.7	04.3
8	298	58.5	292	04.2	08.5	321	50.8	48.6	339	19.8	15.7	129	40.4	04.4
9	314	00.9	307	08.0	08.0	336	51.4	47.9	354	21.8	15.5	144	43.0	04.5
10	329	03.4	322	11.8	07.5	351	52.0	47.2	9	23.8	15.4	159	45.7	04.5
11	344	05.9	337	15.5	+12 06.9	6	52.6	-10 46.5	24	25.7	-16 15.2	174	48.3	+7 04.6
12	359	08.3	352	19.3	+12 06.4	21	53.2	-10 45.8	39	27.7	-16 15.1	189	50.9	+7 04.7
13	14	10.8	7	23.0	05.9	36	53.8	45.1	54	29.7	14.9	204	53.6	04.8
14	29	13.3	22	26.8	05.4	51	54.4	44.3	69	31.6	14.8	219	56.2	04.8
15	44	15.7	37	30.5	04.8	66	55.1	43.6	84	33.6	14.6	234	58.9	04.9
16	59	18.2	52	34.3	04.3	81	55.7	42.9	99	35.5	14.5	250	01.5	05.0
17	74	20.7	67	38.1	+12 03.8	96	56.3	-10 42.2	114	37.5	-16 14.3	265	04.1	+7 05.1
18	89	23.1	82	41.8	+12 03.2	111	56.9	-10 41.5	129	39.5	-16 14.2	280	06.8	+7 05.1
19	104	25.6	97	45.6	02.7	126	57.5	40.8	144	41.4	14.1	295	09.4	05.2
20	119	28.0	112	49.4	02.1	141	58.1	40.1	159	43.4	13.9	310	12.1	05.3
21	134	30.5	127	53.1	01.6	156	58.7	39.3	174	45.3	13.8	325	14.7	05.4
22	149	33.0	142	56.9	01.1	171	59.3	38.6	189	47.3	13.6	340	17.3	05.4
23	164	35.4	158	00.7	+12 00.5	186	59.9	37.9	204	49.3	13.5	355	20.0	05.5
24	179	37.9	173	04.4	+11 59.9	202	00.5	-10 37.2	219	51.2	-16 13.3	10	22.6	+7 05.6
Dif	—		+38		-5	+6		+7	+20		+1	+26		+

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'1			Edad: 24 ^d 9 PHE { 4 ^h : 54'8 12 ^h : 54'9 20 ^h : 55'1												
	PMG: 12 ^h 06 ^m 8			SD: 14'9 PMG: 8 ^h 55 ^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	178	15.3	+0 35.8	230	16.1	-18 38.0		60 N	4 24	5 14	5 55	5 04	4	13 00	87	
1	193	15.4		244	48.6 ¹³⁵	27.8 ¹⁰²		58	30	17	56	4 52	8	11 83		
2	208	15.6		259	21.1 ¹³⁵	17.4 ¹⁰⁴		56	35	20	57	42	11	20 80		
3	223	15.8		273	53.6 ¹³⁵	-18 07.0 ¹⁰⁴		54	40	22	57	33	14	28 77		
4	238	16.0		288	26.2 ¹³⁶	-17 56.5 ¹⁰⁵		52	44	24	58	25	16	36 74		
5	253	16.2	+0 40.8	302	58.8 ¹³⁶	-17 45.9 ¹⁰⁶		50	4 48	5 26	5 58	4 18	18	13 42	72	
6	268	16.4	+0 41.7	317	31.5 ¹³⁷	-17 35.2 ¹⁰⁷		45	4 56	5 30	5 59	4 02	23	13 56	67	
7	283	16.6		332	04.2 ¹³⁷	24.5 ¹⁰⁷		40	5 02	33	6 00	3 50	26	14 08	63	
8	298	16.7		346	36.9 ¹³⁷	13.6 ¹⁰⁹		35	06	36	01	39	29	18 60		
9	313	16.9		1	09.6 ¹³⁷	-17 02.7 ¹⁰⁹		30	10	38	01	29	32	27 56		
10	328	17.1		15	42.4 ¹³⁸	-16 51.7 ¹¹⁰		20	15	40	02	3 13	36	41 52		
11	343	17.3	+0 46.7	30	15.3 ¹³⁹	-16 40.6 ¹¹¹		10 N	5 18	5 42	6 03	2 58	41	14 54	48	
12	358	17.5	+0 47.7	44	48.2 ¹³⁹	-16 29.5 ¹¹¹		0	5 19	5 43	6 04	2 44	45	15 06	44	
13	13	17.7		59	21.1 ¹³⁹	18.2 ¹¹³		10 S	19	43	04	31	48	18 40		
14	28	17.9		73	54.0 ¹³⁹	-16 06.9 ¹¹³		20	17	42	04	2 16	52	30 36		
15	43	18.1		88	27.0 ¹⁴⁰	-15 55.6 ¹¹³		30	13	41	05	1 59	57	45 31		
16	58	18.2		103	00.0 ¹⁴⁰	44.1 ¹¹⁵		35	10	40	05	49	60	15 53	28	
17	73	18.4	+0 52.6	117	33.0 ¹⁴⁰	-15 32.6 ¹¹⁵		40	5 06	5 38	6 05	1 38	63	16 02	25	
18	88	18.6	+0 53.6	132	06.1 ¹⁴¹	-15 21.0 ¹¹⁶		45	5 01	5 36	6 05	1 24	67	16 13	22	
19	103	18.8		146	39.2 ¹⁴¹	-15 09.3 ¹¹⁷		50	4 55	33	05	08	72	26 17		
20	118	19.0		161	12.3 ¹⁴¹	-14 57.5 ¹¹⁸		52	52	31	05	1 00	74	32 15		
21	133	19.2		175	45.5 ¹⁴²	45.7 ¹¹⁸		54	48	30	05	0 52	76	39 12		
22	148	19.4		190	18.6 ¹⁴¹	33.8 ¹¹⁹		56	44	28	05	42	80	46 10		
23	163	19.6		204	51.9 ¹⁴³	21.8 ¹²⁰		58	39	26	05	31	83	16 55	6	
24	178	19.7	+0 59.5	219	25.1 ¹⁴²	-14 09.8 ¹²⁰		60 S	4 34	5 23	6 05	0 18	88	17 04	3	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 11 ^h 59 ^m 5		Mag: -4.1 PMG: 12 ^h 25 ^m		Mag: +1.2 PMG: 10 ^h 32 ^m		Mag: -2.1 PMG: 9 ^h 19 ^m		Mag: +0.5 PMG: 23 ^h 14 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	179	37.9	173	04.4	+11 59.9	202 00.5	-10 37.2	219 51.2	-16 13.3	10 22.6	+7 05.6			
1	194	40.4	188	08.2	59.4	217 01.2	36.5	234 53.2	13.2	25 25.3	05.6			
2	209	42.8	203	12.0	58.8	232 01.8	35.8	249 55.1	13.0	40 27.9	05.7			
3	224	45.3	218	15.8	58.3	247 02.4	35.0	264 57.1	12.9	55 30.5	05.8			
4	239	47.8	233	19.6	57.7	262 03.0	34.3	279 59.1	12.7	70 33.2	05.9			
5	254	50.2	248	23.3	+11 57.2	277 03.6	-10 33.6	295 01.0	-16 12.6	85 35.8	+7 05.9			
6	269	52.7	263	27.1	+11 56.6	292 04.2	-10 32.9	310 03.0	-16 12.4	100 38.5	+7 06.0			
7	284	55.1	278	30.9	56.0	307 04.8	32.2	325 05.0	12.3	115 41.1	06.1			
8	299	57.6	293	34.7	55.4	322 05.4	31.5	340 06.9	12.1	130 43.7	06.2			
9	315	00.1	308	38.5	54.9	337 06.0	30.7	355 08.9	12.0	145 46.4	06.2			
10	330	02.5	323	42.3	54.3	352 06.7	30.0	10 10.8	11.8	160 49.0	06.3			
11	345	05.0	338	46.0	+11 53.7	7 07.3	-10 29.3	25 12.8	-16 11.7	175 51.7	+7 06.4			
12	0	07.5	353	49.8	+11 53.1	22 07.9	-10 28.6	40 14.8	-16 11.6	190 54.3	+7 06.5			
13	15	09.9	8	53.6	52.6	37 08.5	27.9	55 16.7	11.4	205 56.9	06.5			
14	30	12.4	23	57.4	52.0	52 09.1	27.1	70 18.7	11.3	220 59.6	06.6			
15	45	14.9	39	01.2	51.4	67 09.7	26.4	85 20.7	11.1	236 02.2	06.7			
16	60	17.3	54	05.0	50.8	82 10.3	25.7	100 22.6	11.0	251 04.9	06.8			
17	75	19.8	69	08.8	+11 50.2	97 10.9	-10 25.0	115 24.6	-16 10.8	266 07.5	+7 06.8			
18	90	22.3	84	12.6	+11 49.6	112 11.6	-10 24.3	130 26.6	-16 10.7	281 10.1	+7 06.9			
19	105	24.7	99	16.4	49.0	127 12.2	23.6	145 28.5	10.5	296 12.8	07.0			
20	120	27.2	114	20.2	48.4	142 12.8	22.8	160 30.5	10.4	311 15.4	07.0			
21	135	29.6	129	24.0	47.8	157 13.4	22.1	175 32.5	10.2	326 18.1	07.1			
22	150	32.1	144	27.8	47.2	172 14.0	21.4	190 34.4	10.1	341 20.7	07.2			
23	165	34.6	159	31.6	46.6	187 14.6	20.7	205 36.4	09.9	356 23.3	07.3			
24	180	37.0	174	35.4	+11 46.0	202 15.2	-10 20.0	220 38.4	-16 09.8	11 26.0	+7 07.3			
Dif	—		+38		-6	+6		+7	+20	+1	+26		+1	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:0 PMG: 12 ^h 06 ^m 5			Edad: 25 ^d 9 PHE { 4 ^h : 55/3 12 ^h : 55/4 20 ^h : 55/6 PMG: 9 ^h 39 ^m R°: 44 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m	
0	178	19.7	+0	59.5	219	25.1	-14 09.8	60 N	18 22	19 04	19 55	5 08 2	14 27 87	
1	193	19.9	+1	00.5	233	58.4 ¹⁴³	-13 57.7 ¹²¹	58	21	19 01	48	5 00 6	34 83	
2	208	20.1		01.5	248	31.7 ¹⁴³	45.5 ¹²²	56	20	18 57	42	4 53 9	40 80	
3	223	20.3		02.5	263	05.0 ¹⁴³	33.3 ¹²²	54	19	55	37	47 11	45 78	
4	238	20.5		03.4	277	38.3 ¹⁴³	21.0 ¹²³	52	18	52	33	41 14	50 75	
5	253	20.7	+1	04.4	292	11.7 ¹⁴⁴	-13 08.6 ¹²⁴	50	18 18	18 50	19 29	4 36 16	14 54 73	
6	268	20.9	+1	05.4	306	45.1 ¹⁴⁴	-12 56.1 ¹²⁵	45	18 16	18 46	19 20	4 25 21	15 03 68	
7	283	21.1		06.4	321	18.5 ¹⁴⁴	43.6 ¹²⁵	40	15	42	14	16 24	11 64	
8	298	21.2		07.4	335	52.0 ¹⁴⁵	31.1 ¹²⁵	35	14	39	09	08 28	18 60	
9	313	21.4		08.4	350	25.4 ¹⁴⁴	18.4 ¹²⁷	30	13	37	05	4 01 31	23 58	
10	328	21.6		09.4	4	58.9 ¹⁴⁵	-12 05.8 ¹²⁶	20	12	34	19 00	3 49 36	33 52	
11	343	21.8	+1	10.3	19	32.4 ¹⁴⁵	-11 53.0 ¹²⁸	10 N	18 11	18 32	18 56	3 39 39	15 42 47	
12	358	22.0	+1	11.3	34	05.9 ¹⁴⁵	-11 40.2 ¹²⁸	0	18 10	18 30	18 54	3 29 44	15 50 43	
13	13	22.2		12.3	48	39.5 ¹⁴⁶	27.3 ¹²⁹	10 S	09	30	54	19 48	15 58 39	
14	28	22.4		13.3	63	13.0 ¹⁴⁵	14.4 ¹²⁹	20	08	30	56	3 08 52	16 06 35	
15	43	22.6		14.3	77	46.6 ¹⁴⁶	-11 01.4 ¹³⁰	30	07	31	18 59	2 56 57	16 29	
16	58	22.7		15.3	92	20.2 ¹⁴⁶	-10 48.4 ¹³⁰	35	07	32	19 02	49 60	21 27	
17	73	22.9	+1	16.3	106	53.8 ¹⁴⁶	-10 35.3 ¹³¹	40	18 06	18 33	19 05	2 41 63	16 27 24	
18	88	23.1	+1	17.2	121	27.4 ¹⁴⁶	-10 22.1 ¹³²	45	18 06	18 35	19 09	2 31 68	16 35 19	
19	103	23.3		18.2	136	01.0 ¹⁴⁶	-10 08.9 ¹³²	50	05	38	15	20 72	43 15	
20	118	23.5		19.2	150	34.7 ¹⁴⁷	-9 55.6 ¹³³	52	05	39	18	14 75	47 13	
21	133	23.7		20.2	165	08.3 ¹⁴⁶	42.3 ¹³³	54	05	40	22	08 77	51 11	
22	148	23.9		21.2	179	42.0 ¹⁴⁷	28.9 ¹³⁴	56	05	42	25	2 02 80	16 56 8	
23	163	24.1		22.2	194	15.7 ¹⁴⁷	15.5 ¹³⁴	58	04	44	30	1 54 83	17 01 5	
24	178	24.2	+1	23.2	208	49.4 ¹⁴⁷	-9 02.0 ¹³⁵	60 S	18 04	18 46	19 35	1 46 87	17 07 2	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 11 ^h 55 ^m 6		Mag: -4.1 PMG: 12 ^h 19 ^m		Mag: +1.2 PMG: 10 ^h 31 ^m		Mag: -2.1 PMG: 9 ^h 16 ^m		Mag: +0.5 PMG: 23 ^h 10 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	180	37.0	174	35.4	+11	46.0	202	15.2	-10	20.0
1	195	39.5	189	39.2		45.4	217	15.8		19.2
2	210	42.0	204	43.0		44.8	232	16.5		18.5
3	225	44.4	219	46.8		44.2	247	17.1		17.8
4	240	46.9	234	50.6		43.5	262	17.7		17.1
5	255	49.4	249	54.4	+11	42.9	277	18.3	-10	16.4
6	270	51.8	264	58.3	+11	42.3	292	18.9	-10	15.6
7	285	54.3	280	02.1		41.7	307	19.5		14.9
8	300	56.8	295	05.9		41.1	322	20.2		14.2
9	315	59.2	310	09.7		40.4	337	20.8		13.5
10	331	01.7	325	13.5		39.8	352	21.4		12.7
11	346	04.1	340	17.3	+11	39.2	7	22.0	-10	12.0
12	1	06.6	355	21.1	+11	38.5	22	22.6	-10	11.3
13	16	09.1	10	25.0		37.9	37	23.2		10.6
14	31	11.5	25	28.8		37.3	52	23.8		09.9
15	46	14.0	40	32.6		36.6	67	24.5		09.1
16	61	16.5	55	36.4		36.0	82	25.1		08.4
17	76	18.9	70	40.2	+11	35.3	97	25.7	-10	07.7
18	91	21.4	85	44.1	+11	34.7	112	26.3	-10	07.0
19	106	23.9	100	47.9		34.0	127	26.9		06.2
20	121	26.3	115	51.7		33.4	142	27.5		05.5
21	136	28.8	130	55.5		32.7	157	28.2		04.8
22	151	31.2	145	59.3		32.1	172	28.8		04.1
23	166	33.7	161	03.2		31.4	187	29.4		03.3
24	181	36.2	176	07.0	+11	30.8	202	30.0	-10	02.6
Dif	—		+38		-6		+6		+7	
								+20	+1	
									+26	+1

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'0 PMG: 12 ^h 06 ^m 2			Edad: 26 ^d 9 PHE { 4 ^h : 55'8 12 ^h : 56'0 20 ^h : 56'2 R°: 43 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	h	m	h	m	h	m	m	
0	178	24.2	+1 23.2	208	49.4	-9 02.0	60 N	4 17	5 08	5 49	5 10	2	15 54	88	
1	193	24.4		223	23.1 ¹⁴⁷	-8 48.5 ¹³⁵	58	24	11	51	06	5	15 57	85	
2	208	24.6		237	56.8 ¹⁴⁷	34.9 ¹³⁶	56	30	14	52	5 02	8	16 00	81	
3	223	24.8		252	30.5 ¹⁴⁷	21.3 ¹³⁶	54	35	17	52	4 58	11	03	78	
4	238	25.0		267	04.2 ¹⁴⁷	-8 07.6 ¹³⁷	52	39	20	53	55	13	05	76	
5	253	25.2	+1 28.1	281	37.9 ¹⁴⁷	-7 53.9 ¹³⁷	50	4 43	5 22	5 54	4 52	15	16 07	73	
6	268	25.4	+1 29.1	296	11.7 ¹⁴⁸	-7 40.2 ¹³⁷	45	4 52	5 26	5 56	4 46	19	16 11	69	
7	283	25.6		310	45.4 ¹⁴⁷	26.4 ¹³⁸	40	4 58	30	57	40	24	15	64	
8	298	25.7		325	19.1 ¹⁴⁷	-7 12.5 ¹³⁹	35	5 03	33	58	36	26	18	61	
9	313	25.9		339	52.9 ¹⁴⁸	-6 58.6 ¹³⁹	30	07	35	5 59	32	29	21	58	
10	328	26.1		354	26.6 ¹⁴⁷	44.7 ¹³⁹	20	13	39	6 01	25	34	25	53	
11	343	26.3	+1 34.0	9	00.3 ¹⁴⁷	-6 30.7 ¹⁴⁰	10 N	5 16	5 41	6 02	4 18	40	16 29	48	
12	358	26.5	+1 35.0	23	34.1 ¹⁴⁸	-6 16.7 ¹⁴⁰	0	5 18	5 42	6 03	4 13	43	16 33	44	
13	13	26.7		38	07.8 ¹⁴⁷	-6 02.7 ¹⁴⁰	10 S	19	43	04	07	47	37	39	
14	28	26.9		52	41.5 ¹⁴⁷	-5 48.6 ¹⁴¹	20	17	43	05	4 00	53	41	35	
15	43	27.1		67	15.3 ¹⁴⁸	34.4 ¹⁴²	30	14	42	06	3 53	58	45	30	
16	58	27.2		81	49.0 ¹⁴⁷	20.3 ¹⁴¹	35	12	41	06	49	60	48	26	
17	73	27.4	+1 39.9	96	22.7 ¹⁴⁷	-5 06.1 ¹⁴²	40	5 08	5 40	6 07	3 44	64	16 51	23	
18	88	27.6	+1 40.9	110	56.4 ¹⁴⁷	-4 51.8 ¹⁴³	45	5 04	5 38	6 08	3 39	68	16 54	19	
19	103	27.8		125	30.1 ¹⁴⁷	37.6 ¹⁴²	50	4 58	36	08	32	73	16 58	15	
20	118	28.0		140	03.8 ¹⁴⁷	23.3 ¹⁴³	52	55	35	09	29	75	17 00	12	
21	133	28.2		154	37.5 ¹⁴⁷	-4 08.9 ¹⁴⁴	54	52	34	09	25	78	02	10	
22	148	28.4		169	11.1 ¹⁴⁶	-3 54.6 ¹⁴³	56	48	32	09	22	80	04	8	
23	163	28.6		183	44.8 ¹⁴⁷	40.2 ¹⁴⁴	58	44	30	10	17	84	06	5	
24	178	28.8	+1 46.8	198	18.5 ¹⁴⁷	-3 25.7 ¹⁴⁵	60 S	4 39	5 28	6 10	3 13	87	17 09	2	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 11 ^h 51 ^m 6			Mag: -4.2 PMG: 12 ^h 12 ^m			Mag: +1.2 PMG: 10 ^h 30 ^m			Mag: -2.1 PMG: 9 ^h 13 ^m			Mag: +0.6 PMG: 23 ^h 06 ^m		
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	181	36.2	176 07.0	+11 30.8	202 30.0	-10 02.6	221 25.6	-16 06.3	12 29.3	+7 09.1					
1	196	38.6	191 10.8	30.1	217 30.6	01.9	236 27.5	06.1	27 31.9	09.2					
2	211	41.1	206 14.7	29.4	232 31.2	01.2	251 29.5	06.0	42 34.6	09.2					
3	226	43.6	221 18.5	28.8	247 31.9	-10 00.5	266 31.5	05.9	57 37.2	09.3					
4	241	46.0	236 22.3	28.1	262 32.5	-9 59.7	281 33.4	05.7	72 39.8	09.4					
5	256	48.5	251 26.1	+11 27.4	277 33.1	-9 59.0	296 35.4	-16 05.6	87 42.5	+7 09.5					
6	271	51.0	266 30.0	+11 26.7	292 33.7	-9 58.3	311 37.4	-16 05.4	102 45.1	+7 09.5					
7	286	53.4	281 33.8	26.1	307 34.3	57.6	326 39.3	05.3	117 47.8	09.6					
8	301	55.9	296 37.6	25.4	322 35.0	56.8	341 41.3	05.1	132 50.4	09.7					
9	316	58.4	311 41.5	24.7	337 35.6	56.1	356 43.3	05.0	147 53.0	09.7					
10	332	00.8	326 45.3	24.0	352 36.2	55.4	11 45.3	04.8	162 55.7	09.8					
11	347	03.3	341 49.1	+11 23.4	7 36.8	-9 54.7	26 47.2	-16 04.7	177 58.3	+7 09.9					
12	2 05.7	356 53.0	+11 22.7	22 37.4	-9 53.9	41 49.2	-16 04.5	193 00.9	+7 10.0						
13	17 08.2	11 56.8	22.0	37 38.0	53.2	56 51.2	04.4	208 03.6	10.0						
14	32 10.7	27 00.6	21.3	52 38.7	52.5	71 53.1	04.3	223 06.2	10.1						
15	47 13.1	42 04.5	20.6	67 39.3	51.7	86 55.1	04.1	238 08.8	10.2						
16	62 15.6	57 08.3	19.9	82 39.9	51.0	101 57.1	04.0	253 11.5	10.2						
17	77 18.1	72 12.1	+11 19.2	97 40.5	-9 50.3	116 59.1	-16 03.8	268 14.1	+7 10.3						
18	92 20.5	87 16.0	+11 18.5	112 41.1	-9 49.6	132 01.0	-16 03.7	283 16.8	+7 10.4						
19	107 23.0	102 19.8	17.8	127 41.8	48.8	147 03.0	03.5	298 19.4	10.5						
20	122 25.5	117 23.6	17.1	142 42.4	48.1	162 05.0	03.4	313 22.0	10.5						
21	137 27.9	132 27.5	16.4	157 43.0	47.4	177 06.9	03.2	328 24.7	10.6						
22	152 30.4	147 31.3	15.7	172 43.6	46.7	192 08.9	03.1	343 27.3	10.7						
23	167 32.8	162 35.2	15.0	187 44.2	45.9	207 10.9	02.9	358 29.9	10.8						
24	182 35.3	177 39.0	+11 14.3	202 44.9	-9 45.2	222 12.9	-16 02.8	13 32.6	+7 10.8						
Dif	—	+38	-7	+6	+7	+20	+1	+26	+1						

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:0 PMG: 12 ^h 05 ^m 9			Edad: 27 ^d 9 PHE { SD: 15:3 PMG: 11 ^h 06 ^m 4 ^h : 56:4 12 ^h : 56:6 20 ^h : 56:8 R°: 45 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	178	28.8	+1	46.8	198	18.5	-3 25.7	60 N	18 27	19 09	20 01	5 12 2	17 22 91	
1	193	28.9		47.8	212	52.1 ¹⁴⁶	-3 11.3 ¹⁴⁴	58	25	05	19 53	11 5	22 87	
2	208	29.1		48.7	227	25.7 ¹⁴⁶	-2 56.8 ¹⁴⁵	56	24	19 02	47	10 8	21 84	
3	223	29.3		49.7	241	59.3 ¹⁴⁶	42.3 ¹⁴⁵	54	23	18 59	41	09 10	21 81	
4	238	29.5		50.7	256	32.9 ¹⁴⁶	27.8 ¹⁴⁵	52	22	56	36	08 13	21 78	
5	253	29.7	+1	51.7	271	06.5 ¹⁴⁶	-2 13.2 ¹⁴⁶	50	18 21	18 53	19 32	5 07 15	17 20 76	
6	268	29.9	+1	52.7	285	40.0 ¹⁴⁵	-1 58.6 ¹⁴⁶	45	18 19	18 48	19 23	5 05 20	17 20 71	
7	283	30.1		53.7	300	13.5 ¹⁴⁵	44.0 ¹⁴⁶	40	17	44	16	04 23	19 67	
8	298	30.3		54.6	314	47.1 ¹⁴⁶	29.4 ¹⁴⁶	35	16	41	11	02 27	19 63	
9	313	30.4		55.6	329	20.5 ¹⁴⁴	14.8 ¹⁴⁶	30	15	38	06	5 01 30	19 59	
10	328	30.6		56.6	343	54.0 ¹⁴⁵	-1 00.1 ¹⁴⁷	20	12	34	19 00	4 59 35	18 54	
11	343	30.8	+1	57.6	358	27.5 ¹⁴⁵	-0 45.4 ¹⁴⁷	10 N	18 11	18 32	18 56	4 58 39	17 17 50	
12	358	31.0	+1	58.6	13	00.9 ¹⁴⁴	-0 30.7 ¹⁴⁷	0	18 09	18 30	18 54	4 56 44	17 17 45	
13	13	31.2	+1	59.6	27	34.3 ¹⁴⁴	16.0 ¹⁴⁷	10 S	08	29	53	54 49	16 41	
14	28	31.4	+2	00.5	42	07.6 ¹⁴³	-0 01.3 ¹⁴⁷	20	06	28	54	53 53	16 35	
15	43	31.6		01.5	56	41.0 ¹⁴⁴	+0 13.5 ¹⁴⁸	30	05	29	56	51 58	15 30	
16	58	31.8		02.5	71	14.3 ¹⁴³	28.2 ¹⁴⁷	35	04	29	18 59	49 62	14 28	
17	73	32.0	+2	03.5	85	47.6 ¹⁴³	+0 43.0 ¹⁴⁸	40	18 03	18 30	19 02	4 48 66	17 14 24	
18	88	32.1	+2	04.5	100	20.8 ¹⁴²	+0 57.7 ¹⁴⁷	45	18 02	18 31	19 06	4 47 69	17 13 20	
19	103	32.3		05.4	114	54.0 ¹⁴²	+1 12.5 ¹⁴⁸	50	01	33	11	45 75	13 15	
20	118	32.5		06.4	129	27.2 ¹⁴²	27.3 ¹⁴⁸	52	01	34	14	44 77	12 14	
21	133	32.7		07.4	144	00.4 ¹⁴²	42.1 ¹⁴⁸	54	00	35	17	43 80	12 11	
22	148	32.9		08.4	158	33.5 ¹⁴¹	+1 56.9 ¹⁴⁸	56	18 00	36	20	42 83	12 8	
23	163	33.1		09.4	173	06.6 ¹⁴¹	+2 11.7 ¹⁴⁸	58	17 59	38	24	41 86	11 6	
24	178	33.3	+2	10.4	187	39.6 ¹⁴⁰	+2 26.6 ¹⁴⁹	60 S	17 58	18 39	19 28	4 40 89	17 11 2	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO				
	PMG 11 ^h 47 ^m 7		Mag: -4.2 PMG: 12 ^h 06 ^m		Mag: +1.2 PMG: 10 ^h 29 ^m		Mag: -2.1 PMG: 9 ^h 10 ^m		Mag: +0.6 PMG: 23 ^h 02 ^m				
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'			
0	182	35.3	177	39.0	+11 14.3	202	44.9	-9 45.2	222	12.9	-16 02.8	13 32.6	+7 10.8
1	197	37.8	192	42.8	13.6	217	45.5	44.5	237	14.8	02.7	28 35.2	10.9
2	212	40.2	207	46.7	12.9	232	46.1	43.8	252	16.8	02.5	43 37.8	11.0
3	227	42.7	222	50.5	12.1	247	46.7	43.0	267	18.8	02.4	58 40.5	11.0
4	242	45.2	237	54.4	11.4	262	47.4	42.3	282	20.8	02.2	73 43.1	11.1
5	257	47.6	252	58.2	+11 10.7	277	48.0	-9 41.6	297	22.7	-16 02.1	88 45.8	+7 11.2
6	272	50.1	268	02.0	+11 10.0	292	48.6	-9 40.8	312	24.7	-16 01.9	103 48.4	+7 11.3
7	287	52.6	283	05.9	09.3	307	49.2	40.1	327	26.7	01.8	118 51.0	11.3
8	302	55.0	298	09.7	08.5	322	49.8	39.4	342	28.6	01.6	133 53.7	11.4
9	317	57.5	313	13.6	07.8	337	50.5	38.7	357	30.6	01.5	148 56.3	11.5
10	333	00.0	328	17.4	07.1	352	51.1	37.9	12 32.6	01.3	163 58.9	11.5	
11	348	02.4	343	21.2	+11 06.4	7 51.7	-9 37.2	27 34.6	-16 01.2	179 01.6	+7 11.6		
12	3 04.9		358	25.1	+11 05.6	22 52.3	-9 36.5	42 36.5	-16 01.1	194 04.2	+7 11.7		
13	18 07.3		13 28.9		04.9	37 53.0	35.7	57 38.5	00.9	209 06.8	11.8		
14	33 09.8		28 32.8		04.2	52 53.6	35.0	72 40.5	00.8	224 09.5	11.8		
15	48 12.3		43 36.6		03.4	67 54.2	34.3	87 42.5	00.6	239 12.1	11.9		
16	63 14.7		58 40.4		02.7	82 54.8	33.5	102 44.4	00.5	254 14.7	12.0		
17	78 17.2		73 44.3	+11 01.9		97 55.4	-9 32.8	117 46.4	-16 00.3	269 17.4	+7 12.0		
18	93 19.7		88 48.1	+11 01.2		112 56.1	-9 32.1	132 48.4	-16 00.2	284 20.0	+7 12.1		
19	108 22.1		103 52.0	+11 00.4		127 56.7	31.4	147 50.4	-16 00.0	299 22.7	12.2		
20	123 24.6		118 55.8	+10 59.7		142 57.3	30.6	162 52.3	-15 59.9	314 25.3	12.2		
21	138 27.1		133 59.7		58.9	157 57.9	29.9	177 54.3	59.8	329 27.9	12.3		
22	153 29.5		149 03.5		58.2	172 58.6	29.2	192 56.3	59.6	344 30.6	12.4		
23	168 32.0		164 07.3		57.4	187 59.2	28.4	207 58.3	59.5	359 33.2	12.5		
24	183 34.4		179 11.2	+10 56.7		202 59.8	-9 27.7	223 00.2	-15 59.3	14 35.8	+7 12.5		
Dif	—		+38 -7		+6 +7		+20 +1		+26 +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 6			Edad: 28 ^d 9 PHE { 4 ^h : 57'0 12 ^h : 57'2 20 ^h : 57'4 R°: 46 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m	
0	178	33.3	+2	10.4	187	39.6	+2	26.6	4	10	5	01	5	43	5	14	2
1	193	33.5		11.3	202	12.6 ¹⁴⁰		41.4 ¹⁴⁸	17	05		45	16	6		49	90
2	208	33.6		12.3	216	45.6 ¹⁴⁰	+2	56.2 ¹⁴⁸	24	09		46	18	8		45	87
3	223	33.8		13.3	231	18.5 ¹³⁹	+3	11.0 ¹⁴⁸	29	12		48	19	12		42	84
4	238	34.0		14.3	245	51.4 ¹³⁹		25.8 ¹⁴⁸	34	15		49	21	13		39	81
5	253	34.2	+2	15.3	260	24.2 ¹³⁸	+3	40.6 ¹⁴⁸	4	39	5	17	5	50	5	22	16
6	268	34.4	+2	16.2	274	57.0 ¹³⁸	+3	55.4 ¹⁴⁸	4	48	5	23	5	52	5	25	21
7	283	34.6		17.2	289	29.8 ¹³⁸	+4	10.3 ¹⁴⁹	4	55		27	54	27	25		26
8	298	34.8		18.2	304	02.5 ¹³⁷		25.1 ¹⁴⁸	5	00		30	55	29	29		22
9	313	35.0		19.2	318	35.2 ¹³⁷		39.8 ¹⁴⁷	05	33		33	57	31	32		18
10	328	35.2		20.2	333	07.8 ¹³⁶	+4	54.6 ¹⁴⁸	11	37	5	59	34	37		12	57
11	343	35.3	+2	21.1	347	40.3 ¹³⁵	+5	09.4 ¹⁴⁸	5	15	5	40	6	01	5	37	42
12	358	35.5	+2	22.1	2	12.9 ¹³⁶	+5	24.2 ¹⁴⁸	5	18	5	42	6	02	5	40	46
13	13	35.7		23.1	16	45.3 ¹³⁴		38.9 ¹⁴⁷	19		43	04	43	50		17	57
14	28	35.9		24.1	31	17.7 ¹³⁴	+5	53.7 ¹⁴⁸	20	18	43	05	46	55		51	39
15	43	36.1		25.1	45	50.1 ¹³⁴	+6	08.4 ¹⁴⁷	30	15	43	07	49	61		45	33
16	58	36.3		26.0	60	22.4 ¹³³		23.1 ¹⁴⁷	35	13	43	08	51	65		42	30
17	73	36.5	+2	27.0	74	54.7 ¹³³	+6	37.8 ¹⁴⁷	40	5	11	5	42	6	09	5	54
18	88	36.7	+2	28.0	89	26.9 ¹³²	+6	52.5 ¹⁴⁷	45	5	07	5	41	6	10	5	56
19	103	36.8		29.0	103	59.0 ¹³¹	+7	07.1 ¹⁴⁶	50	5	01	39	11	6	00	77	28
20	118	37.0		30.0	118	31.1 ¹³¹		21.8 ¹⁴⁷	52	4	59	38	12	01	80		26
21	133	37.2		30.9	133	03.1 ¹³⁰		36.4 ¹⁴⁶	54	56	37	13	03	82		23	12
22	148	37.4		31.9	147	35.1 ¹³⁰	+7	51.0 ¹⁴⁶	56	53	36	13	05	85		20	9
23	163	37.6		32.9	162	07.0 ¹²⁹	+8	05.5 ¹⁴⁵	58	49	35	14	07	89		17	6
24	178	37.8	+2	33.9	176	38.8 ¹²⁸	+8	20.1 ¹⁴⁶	60	4	44	5	33	6	15	6	09
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 11 ^h 43 ^m 8			Mag: -4.2 PMG: 12 ^h 00 ^m			Mag: +1.2 PMG: 10 ^h 28 ^m			Mag: -2.1 PMG: 9 ^h 07 ^m			Mag: +0.6 PMG: 22 ^h 58 ^m				
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	183	34.4		179	11.2	+10	202	59.8	-9	223	00.2	-15	14	35.8	+7	12.5	
1	198	36.9		194	15.0		218	00.4	27.0	238	02.2		29	38.5		12.6	
2	213	39.4		209	18.9		233	01.1	26.2	253	04.2		44	41.1		12.7	
3	228	41.8		224	22.7		248	01.7	25.5	268	06.2		59	43.7		12.7	
4	243	44.3		239	26.6		263	02.3	24.8	283	08.2		74	46.4		12.8	
5	258	46.8		254	30.4	+10	278	02.9	-9	298	10.1	-15	89	49.0	+7	12.9	
6	273	49.2		269	34.2	+10	293	03.6	-9	313	12.1	-15	104	51.6	+7	13.0	
7	288	51.7		284	38.1		308	04.2	22.6	328	14.1		119	54.3		13.0	
8	303	54.2		299	41.9		323	04.8	21.8	343	16.1		134	56.9		13.1	
9	318	56.6		314	45.8		338	05.4	21.1	358	18.0		149	59.5		13.2	
10	333	59.1		329	49.6		353	06.1	20.4	13	20.0		165	02.2		13.2	
11	349	01.6		344	53.4	+10	8	06.7	-9	28	22.0	-15	180	04.8	+7	13.3	
12	4	04.0		359	57.3	+10	23	07.3	-9	43	24.0	-15	195	07.4	+7	13.4	
13	19	06.5		15	01.1		38	07.9	18.2	58	26.0		210	10.1		13.4	
14	34	08.9		30	05.0		53	08.6	17.4	73	27.9		225	12.7		13.5	
15	49	11.4		45	08.8		68	09.2	16.7	88	29.9		240	15.3		13.6	
16	64	13.9		60	12.6		83	09.8	16.0	103	31.9		255	18.0		13.7	
17	79	16.3		75	16.5	+10	98	10.4	-9	118	33.9	-15	270	20.6	+7	13.7	
18	94	18.8		90	20.3	+10	113	11.1	-9	133	35.8	-15	285	23.2	+7	13.8	
19	109	21.3		105	24.2		128	11.7	13.8	148	37.8		300	25.9		13.9	
20	124	23.7		120	28.0		143	12.3	13.0	163	39.8		315	28.5		13.9	
21	139	26.2		135	31.8		158	12.9	12.3	178	41.8		330	31.1		14.0	
22	154	28.7		150	35.7		173	13.6	11.6	193	43.8		345	33.8		14.1	
23	169	31.1		165	39.5		188	14.2	10.8	208	45.7		0	36.4		14.2	
24	184	33.6		180	43.3	+10	203	14.8	-9	223	47.7	-15	15	39.0	+7	14.2	
Dif	—			+38			-8			+20			+1			+26	
							+7									+	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 0 PMG: 12 ^h 05 ^m 3			Edad: 29 ^d 9 PHE { 4 ^h : 57 ^m 6 12 ^h : 57 ^m 8 20 ^h : 58 ^m 0 R°: 50 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	h	m	h	m	h	m	m
0	178	37.8	+2	33.9	176	38.8	+8 20.1	60 N	18 32	19 14	20 06	5 16	4	20 27 100
1	193	38.0		34.9	191	10.6 ¹²⁸	34.6 ¹⁴⁵	58	30	10	19 58	22	7	19 95
2	208	38.2		35.8	205	42.3 ¹²⁷	+8 49.0 ¹⁴⁴	56	28	06	51	26	11	12 91
3	223	38.4		36.8	220	14.0 ¹²⁷	+9 03.5 ¹⁴⁵	54	27	19 02	45	31	13	06 87
4	238	38.5		37.8	234	45.6 ¹²⁶	17.9 ¹⁴⁴	52	25	18 59	40	34	17	20 00 84
5	253	38.7	+2	38.8	249	17.1 ¹²⁵	+9 32.3 ¹⁴⁴	50	18 24	18 57	19 36	5 38	19	19 55 81
6	268	38.9	+2	39.8	263	48.5 ¹²⁴	+9 46.6 ¹⁴³	45	18 21	18 51	19 26	5 46	24	19 44 76
7	283	39.1		40.7	278	19.9 ¹²⁴	+10 00.9 ¹⁴³	40	19	46	18	52	28	35 71
8	298	39.3		41.7	292	51.2 ¹²³	15.2 ¹⁴³	35	17	43	13	5 58	31	27 68
9	313	39.5		42.7	307	22.5 ¹²³	29.5 ¹⁴³	30	16	40	08	6 03	34	20 65
10	328	39.7		43.7	321	53.6 ¹²¹	43.6 ¹⁴¹	20	13	35	19 01	11	40	19 09 59
11	343	39.9	+2	44.7	336	24.7 ¹²¹	+10 57.8 ¹⁴²	10 N	18 11	18 32	18 56	6 19	44	18 59 54
12	358	40.0	+2	45.6	350	55.8 ¹²¹	+11 11.9 ¹⁴¹	0	18 09	18 29	18 53	6 26	49	18 49 51
13	13	40.2		46.6	5	26.7 ¹¹⁹	26.0 ¹⁴¹	10 S	07	28	52	33	54	40 46
14	28	40.4		47.6	19	57.6 ¹¹⁹	40.0 ¹⁴⁰	20	05	27	52	41	58	30 41
15	43	40.6		48.6	34	28.4 ¹¹⁸	+11 54.0 ¹⁴⁰	30	02	26	54	50	64	18 37
16	58	40.8		49.5	48	59.1 ¹¹⁷	+12 07.9 ¹³⁹	35	01	27	56	6 56	66	12 33
17	73	41.0	+2	50.5	63	29.7 ¹¹⁶	+12 21.7 ¹³⁸	40	18 00	18 27	18 58	7 02	70	18 04 30
18	88	41.2	+2	51.5	78	00.3 ¹¹⁶	+12 35.6 ¹³⁹	45	17 59	18 28	19 02	7 09	74	17 55 26
19	103	41.4		52.5	92	30.8 ¹¹⁵	+12 49.3 ¹³⁷	50	57	29	06	17	80	45 21
20	118	41.6		53.5	107	01.2 ¹¹⁴	+13 03.0 ¹³⁷	52	56	30	09	21	83	40 19
21	133	41.7		54.4	121	31.5 ¹¹³	16.7 ¹³⁷	54	55	30	11	25	86	35 16
22	148	41.9		55.4	136	01.7 ¹¹²	30.3 ¹³⁶	56	54	31	15	30	89	29 13
23	163	42.1		56.4	150	31.9 ¹¹²	43.8 ¹³⁵	58	53	32	18	36	93	23 9
24	178	42.3	+2	57.4	165	02.0 ¹¹¹	+13 57.3 ¹³⁵	60 S	17 52	18 33	19 22	7 42	97	17 16 4

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO			
	PMG: 11 ^h 39 ^m 8		Mag: -4.2 PMG: 11 ^h 54 ^m		Mag: +1.2 PMG: 10 ^h 27 ^m		Mag: -2.1 PMG: 9 ^h 04 ^m		Mag: +0.6 PMG: 22 ^h 53 ^m			
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'		
0	184	33.6	180	43.3	+10	38.1	203	14.8	-9	10.1		
1	199	36.0	195	47.2		37.3	218	15.5		09.4		
2	214	38.5	210	51.0		36.5	233	16.1		08.6		
3	229	41.0	225	54.8		35.7	248	16.7		07.9		
4	244	43.4	240	58.7		34.9	263	17.3		07.2		
5	259	45.9	256	02.5	+10	34.1	278	18.0	-9	06.4		
6	274	48.4	271	06.3	+10	33.3	293	18.6	-9	05.7		
7	289	50.8	286	10.2		32.5	308	19.2		05.0		
8	304	53.3	301	14.0		31.7	323	19.9		04.2		
9	319	55.8	316	17.8		30.8	338	20.5		03.5		
10	334	58.2	331	21.7		30.0	353	21.1		02.8		
11	350	00.7	346	25.5	+10	29.2	8	21.7	-9	02.0		
12	5	03.2	1	29.3	+10	28.4	23	22.4	-9	01.3		
13	20	05.6	16	33.2		27.6	38	23.0	-9	00.5		
14	35	08.1	31	37.0		26.8	53	23.6	-8	59.8		
15	50	10.5	46	40.8		26.0	68	24.3		59.1		
16	65	13.0	61	44.6		25.1	83	24.9		58.3		
17	80	15.5	76	48.5	+10	24.3	98	25.5	-8	57.6		
18	95	17.9	91	52.3	+10	23.5	113	26.1	-8	56.9		
19	110	20.4	106	56.1		22.7	128	26.8		56.1		
20	125	22.9	121	59.9		21.8	143	27.4		55.4		
21	140	25.3	137	03.8		21.0	158	28.0		54.6		
22	155	27.8	152	07.6		20.2	173	28.7		53.9		
23	170	30.3	167	11.4		19.4	188	29.3		53.2		
24	185	32.7	182	15.2	+10	18.5	203	29.9	-8	52.4		
Dif	—		+38	-8		+6	+7		+20	+1	+26	+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 0			Edad: 1 ^d 3 PHE { SD: 15'8 PMG: 13 ^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	178	42.3	+2	57.4	165	02.0	+13	57.3	4 03	4 55	5 37	5 20	7	22	07 103		
1	193	42.5		58.3	179	32.0 ¹¹⁰	+14	10.7 ¹³⁴	11	4 59	39	29	12	21	54 97		
2	208	42.7	+2	59.3	194	01.9 ¹⁰⁹		24.0 ¹³³	18	5 03	41	37	15	43	92		
3	223	42.9	+3	00.3	208	31.7 ¹⁰⁸		37.3 ¹³³	24	07	43	44	19	33	88		
4	238	43.1		01.3	223	01.4 ¹⁰⁷	+14	50.5 ¹³²	29	10	44	51	21	24	85		
5	253	43.2	+3	02.3	237	31.0 ¹⁰⁶	+15	03.7 ¹³²	4 34	5 13	5 45	5 57	24	21	16 83		
6	268	43.4	+3	03.2	252	00.6 ¹⁰⁶	+15	16.7 ¹³⁰	4 44	5 19	5 48	6 10	29	21	00 77		
7	283	43.6		04.2	266	30.1 ¹⁰⁵		29.7 ¹³⁰	51	23	50	20	33	20	46 74		
8	298	43.8		05.2	280	59.4 ¹⁰³		42.6 ¹²⁹	4 57	27	52	29	37	35	70		
9	313	44.0		06.2	295	28.7 ¹⁰³	+15	55.5 ¹²⁹	5 02	30	54	37	40	25	67		
10	328	44.2		07.1	309	57.9 ¹⁰²	+16	08.3 ¹²⁸	09	35	5 57	6 51	45	20	08 63		
11	343	44.4	+3	08.1	324	27.0 ¹⁰¹	+16	21.0 ¹²⁷	5 14	5 39	6 00	7 03	49	19	53 59		
12	358	44.6	+3	09.1	338	56.0 ¹⁰⁰	+16	33.6 ¹²⁶	5 17	5 41	6 02	7 15	53	19	40 54		
13	13	44.7		10.1	353	25.0 ¹⁰⁰		46.1 ¹²⁵	18	43	04	27	57	26	51		
14	28	44.9		11.0	7	53.8 ⁹⁸	+16	58.5 ¹²⁴	18	44	06	39	61	19	11 47		
15	43	45.1		12.0	22	22.5 ⁹⁷	+17	10.9 ¹²⁴	17	44	08	7 54	66	18	55 42		
16	58	45.3		13.0	36	51.2 ⁹⁷		23.2 ¹²³	15	44	10	8 02	70	45	40		
17	73	45.5	+3	14.0	51	19.7 ⁹⁵	+17	35.3 ¹²¹	5 13	5 44	6 11	8 12	73	18	34 37		
18	88	45.7	+3	14.9	65	48.2 ⁹⁵	+17	47.4 ¹²¹	5 09	5 43	6 13	8 23	77	18	21 33		
19	103	45.9		15.9	80	16.5 ⁹³	+17	59.4 ¹²⁰	05	42	15	37	83	18	06 27		
20	118	46.1		16.9	94	44.8 ⁹³	+18	11.3 ¹¹⁹	02	42	15	44	85	17	59 24		
21	133	46.3		17.9	109	12.9 ⁹¹		23.1 ¹¹⁸	5 00	41	16	51	89	51	21		
22	148	46.4		18.8	123	41.0 ⁹¹		34.9 ¹¹⁸	4 57	40	17	8 59	93	42	18		
23	163	46.6		19.8	138	09.0 ⁹⁰		46.5 ¹¹⁶	53	39	18	9 09	96	32	13		
24	178	46.8	+3	20.8	152	36.9 ⁸⁹	+18	58.0 ¹¹⁵	4 49	5 38	6 20	9 19	103	17	20 8		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 11 ^h 35 ^m 9			Mag: -4.2 PMG: 11 ^h 48 ^m			Mag: +1.2 PMG: 10 ^h 26 ^m			Mag: -2.1 PMG: 9 ^h 00 ^m			Mag: +0.6 PMG: 22 ^h 49 ^m				
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°		
0	185	32.7	182	15.2	+10	18.5	203	29.9	-8	52.4	224	35.3	-15	52.4	16	42.2	
1	200	35.2	197	19.1		17.7	218	30.6		51.7	239	37.3		52.3	31	44.8	
2	215	37.7	212	22.9		16.9	233	31.2		51.0	254	39.3		52.1	46	47.5	
3	230	40.1	227	26.7		16.0	248	31.8		50.2	269	41.2		52.0	61	50.1	
4	245	42.6	242	30.5		15.2	263	32.5		49.5	284	43.2		51.9	76	52.7	
5	260	45.0	257	34.3	+10	14.3	278	33.1	-8	48.7	299	45.2	-15	51.7	91	55.4	
6	275	47.5	272	38.1	+10	13.5	293	33.7	-8	48.0	314	47.2	-15	51.6	106	58.0	
7	290	50.0	287	42.0		12.7	308	34.3		47.3	329	49.2		51.4	122	00.6	
8	305	52.4	302	45.8		11.8	323	35.0		46.5	344	51.2		51.3	137	03.3	
9	320	54.9	317	49.6		11.0	338	35.6		45.8	359	53.1		51.1	152	05.9	
10	335	57.4	332	53.4		10.1	353	36.2		45.1	14	55.1		51.0	167	08.5	
11	350	59.8	347	57.2	+10	09.3	8	36.9	-8	44.3	29	57.1	-15	50.9	182	11.1	
12	6	02.3	3	01.0	+10	08.4	23	37.5	-8	43.6	44	59.1	-15	50.7	197	13.8	
13	21	04.8	18	04.8		07.6	38	38.1		42.8	60	01.1		50.6	212	16.4	
14	36	07.2	33	08.6		06.7	53	38.8		42.1	75	03.1		50.4	227	19.0	
15	51	09.7	48	12.4		05.9	68	39.4		41.4	90	05.1		50.3	242	21.7	
16	66	12.1	63	16.2		05.0	83	40.0		40.6	105	07.0		50.1	257	24.3	
17	81	14.6	78	20.1	+10	04.2	98	40.7	-8	39.9	120	09.0	-15	50.0	272	26.9	
18	96	17.1	93	23.9	+10	03.3	113	41.3	-8	39.1	135	11.0	-15	49.9	287	29.6	
19	111	19.5	108	27.7		02.5	128	41.9		38.4	150	13.0		49.7	302	32.2	
20	126	22.0	123	31.5		01.6	143	42.6		37.7	165	15.0		49.6	317	34.8	
21	141	24.5	138	35.3	+10	00.8	158	43.2		36.9	180	17.0		49.4	332	37.4	
22	156	26.9	153	39.1	+9	59.9	173	43.8		36.2	195	19.0		49.3	347	40.1	
23	171	29.4	168	42.9		59.0	188	44.5		35.4	210	21.0		49.1	2	42.7	
24	186	31.9	183	46.7	+9	58.2	203	45.1	-8	34.7	225	22.9	-15	49.0	17	45.3	
Dif	—			+38			-8			+20			+1			+26	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16'0 PMG: 12 ^h 04 ^m 7			Edad: 2 ^d 3 PHE { 4 ^h : 58'6 12 ^h : 58'7 20 ^h : 58'8 PMG: 14 ^h 21 ^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
0	178	46.8	+3	20.8	152	36.9	+18 58.0	60 N	18 37	19 19	20 12	5 27	12	23 50	98
1	193	47.0		21.8	167	04.7 88	+19 09.4 114	58	34	14	20 04	41	18	31	92
2	208	47.2		22.7	181	32.3 86	20.7 113	56	32	10	19 56	5 52	23	15	87
3	223	47.4		23.7	195	59.9 86	31.9 112	54	30	06	50	6 03	26	23 01	88
4	238	47.6		24.7	210	27.4 85	43.0 111	52	29	03	44	12 29		22 49	82
5	253	47.8	+3	25.7	224	54.8 84	+19 54.0 110	50	18 27	19 00	19 39	6 21	31	22 39	79
6	268	47.9	+3	26.6	239	22.1 83	+20 04.9 109	45	18 24	18 54	19 29	6 39	36	22 17	75
7	283	48.1		27.6	253	49.3 82	15.6 107	40	21	49	21	6 53	41	22 00	72
8	298	48.3		28.6	268	16.4 81	26.3 107	35	19	44	14	7 06	43	21 45	69
9	313	48.5		29.6	282	43.4 80	36.8 105	30	17	41	09	17 46		32	68
10	328	48.7		30.5	297	10.3 79	47.2 104	20	14	36	19 01	36 50		21 11	64
11	343	48.9	+3	31.5	311	37.1 78	+20 57.5 103	10 N	18 11	18 32	18 56	7 52	54	20 52	61
12	358	49.1	+3	32.5	326	03.9 78	+21 07.7 102	0	18 08	18 29	18 53	8 08	57	20 34	59
13	13	49.3		33.4	340	30.5 76	17.8 101	10 S	05	26	51	24 60		20 17	56
14	28	49.4		34.4	354	57.0 75	27.7 99	20	03	25	50	8 40	64	19 58	53
15	43	49.6		35.4	9	23.4 74	37.5 98	30	18 00	24	52	9 00	68	37	50
16	58	49.8		36.4	23	49.8 74	47.2 97	35	17 59	24	53	12 70		25	47
17	73	50.0	+3	37.3	38	16.0 72	+21 56.8 96	40	17 57	18 24	18 55	9 25	73	19 11	44
18	88	50.2	+3	38.3	52	42.1 71	+22 06.2 94	45	17 55	18 24	18 58	9 40	77	18 54	41
19	103	50.4		39.3	67	08.2 71	15.5 93	50	52	25	19 02	10 00	82	33	37
20	118	50.6		40.3	81	34.2 70	24.7 92	52	51	25	04	09 85		23	34
21	133	50.8		41.2	96	00.0 68	33.7 90	54	50	25	06	20 87		12	32
22	148	50.9		42.2	110	25.8 68	42.6 89	56	49	26	09	32 91		18 00	28
23	163	51.1		43.2	124	51.5 67	+22 51.4 88	58	48	27	12	10 45	97	17 45	23
24	178	51.3	+3	44.1	139	17.1 66	+23 00.0 86	60 S	17 46	18 27	19 16	11 02	103	17 28	17

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO				
	PMG: 11 ^h 32 ^m 0		Mag: -4.2 PMG: 11 ^h 42 ^m		Mag: +1.2 PMG: 10 ^h 25 ^m		Mag: -2.1 PMG: 8 ^h 57 ^m		Mag: +0.6 PMG: 22 ^h 45 ^m				
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'			
0	186	31.9	183	46.7	+9 58.2	203	45.1	-8 34.7	225	22.9	-15 49.0	17 45.3	+7 17.5
1	201	34.3	198	50.5	57.3	218	45.7	33.9	240	24.9	48.9	32 48.0	17.6
2	216	36.8	213	54.2	56.5	233	46.4	33.2	255	26.9	48.7	47 50.6	17.7
3	231	39.3	228	58.0	55.6	248	47.0	32.5	270	28.9	48.6	62 53.2	17.7
4	246	41.7	244	01.8	54.7	263	47.6	31.7	285	30.9	48.4	77 55.9	17.8
5	261	44.2	259	05.6	+9 53.9	278	48.3	-8 31.0	300	32.9	-15 48.3	92 58.5	+7 17.9
6	276	46.6	274	09.4	+9 53.0	293	48.9	-8 30.2	315	34.9	-15 48.2	108 01.1	+7 17.9
7	291	49.1	289	13.2	52.1	308	49.5	29.5	330	36.9	48.0	123 03.7	18.0
8	306	51.6	304	17.0	51.2	323	50.2	28.8	345	38.8	47.9	138 06.4	18.1
9	321	54.0	319	20.8	50.4	338	50.8	28.0	0	40.8	47.7	153 09.0	18.1
10	336	56.5	334	24.6	49.5	353	51.4	27.3	15	42.8	47.6	168 11.6	18.2
11	351	59.0	349	28.3	+9 48.6	8	52.1	-8 26.5	30	44.8	-15 47.4	183 14.3	+7 18.3
12	7	01.4	4	32.1	+9 47.7	23	52.7	-8 25.8	45	46.8	-15 47.3	198 16.9	+7 18.3
13	22	03.9	19	35.9	46.9	38	53.4	25.0	60	48.8	47.2	213 19.5	18.4
14	37	06.4	34	39.7	46.0	53	54.0	24.3	75	50.8	47.0	228 22.1	18.5
15	52	08.8	49	43.5	45.1	68	54.6	23.6	90	52.8	46.9	243 24.8	18.5
16	67	11.3	64	47.2	44.2	83	55.3	22.8	105	54.8	46.7	258 27.4	18.6
17	82	13.7	79	51.0	+9 43.4	98	55.9	-8 22.1	120	56.8	-15 46.6	273 30.0	+7 18.7
18	97	16.2	94	54.8	+9 42.5	113	56.5	-8 21.3	135	58.7	-15 46.4	288 32.7	+7 18.7
19	112	18.7	109	58.6	41.6	128	57.2	20.6	151	00.7	46.3	303 35.3	18.8
20	127	21.1	125	02.3	40.7	143	57.8	19.8	166	02.7	46.2	318 37.9	18.9
21	142	23.6	140	06.1	39.8	158	58.4	19.1	181	04.7	46.0	333 40.5	18.9
22	157	26.1	155	09.9	38.9	173	59.1	18.4	196	06.7	45.9	348 43.2	19.0
23	172	28.5	170	13.6	38.0	188	59.7	17.6	211	08.7	45.7	3 45.8	19.1
24	187	31.0	185	17.4	+9 37.2	204	00.4	-8 16.9	226	10.7	-15 45.6	18 48.4	+7 19.1
Dif	—		+38	-9		+6	+7		+20	+1		+26	+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 4			Edad: 3 ^d 3 PHE { 4 ^h : 58 ^m 9 12 ^h : 59 ^m 0 20 ^h : 59 ^m 0 PMG: 15 ^h 19 ^m R°: 61 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	h	m	h	m	h	m	h	m
0	178	51.3	+3 44.1	139	17.1	+23 00.0	85	60 N	3 56	4 49	5 31	5 39	25	***	***
1	193	51.5		153	42.6	+23 08.5	85	58	4 05	54	34	5 59	31	***	***
2	208	51.7		168	08.0		83	56	12	4 58	36	6 15	36	***	***
3	223	51.9		182	33.3		82	54	19	5 02	38	29	39	***	***
4	238	52.1		196	58.5		80	52	24	05	39	41	42	***	***
5	253	52.3	+3 49.0	211	23.7	+23 41.0	80	50	4 29	5 08	5 41	6 52	44	23 58	70
6	268	52.4	+3 50.0	225	48.7	+23 48.7	77	45	4 40	5 15	5 44	7 15	47	23 32	68
7	283	52.6		240	13.7	+23 56.3	76	40	48	20	47	34	49	23 12	66
8	298	52.8		254	38.6	+24 03.8	75	35	4 54	24	50	7 49	52	22 54	66
9	313	53.0		269	03.4		73	30	5 00	28	52	8 03	53	40	65
10	328	53.2		283	28.1		71	20	08	33	55	26	56	22 15	63
11	343	53.4	+3 54.8	297	52.8	+24 25.2	70	10 N	5 13	5 37	5 58	8 46	58	21 53	63
12	358	53.6	+3 55.8	312	17.3	+24 32.1	69	0	5 16	5 40	6 01	9 05	60	21 33	61
13	13	53.7		326	41.8		67	10 S	18	43	04	24	62	21 13	60
14	28	53.9		341	06.2		65	20	19	45	07	9 44	64	20 51	59
15	43	54.1		355	30.6		64	30	18	46	10	10 08	66	27	57
16	58	54.3	+3 59.7	9	54.8	+24 57.9	62	35	17	46	11	22	68	20 12	56
17	73	54.5	+4 00.6	24	19.0	+25 03.9	60	40	5 15	5 46	6 13	10 38	70	19 55	55
18	88	54.7	+4 01.6	38	43.2	+25 09.8	59	45	5 12	5 46	6 15	10 57	73	19 35	53
19	103	54.9		53	07.2		58	50	08	45	18	11 22	75	19 10	50
20	118	55.1		67	31.2		55	52	06	45	19	34	77	18 57	49
21	133	55.2		81	55.1		54	54	04	45	20	11 47	79	44	47
22	148	55.4		96	19.0		52	56	5 01	44	21	12 03	82	28	44
23	163	55.6		110	42.8		51	58	4 58	44	23	22	85	18 08	41
24	178	55.8	+4 07.4	125	06.5	+25 41.7	49	60 S	4 54	5 43	6 24	12 45	92	17 45	35
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 11 ^h 28 ^m 0		Mag: -4.2 PMG: 11 ^h 36 ^m			Mag: +1.2 PMG: 10 ^h 24 ^m			Mag: -2.1 PMG: 8 ^h 54 ^m			Mag: +0.6 PMG: 22 ^h 41 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	187	31.0		185	17.4	+9 37.2	204	00.4	-8 16.9	226	10.7	-15 45.6	18	48.4	
1	202	33.5		200	21.2	36.3	219	01.0	16.1	241	12.7	45.5	33	51.0	
2	217	35.9		215	24.9	35.4	234	01.6	15.4	256	14.7	45.3	48	53.7	
3	232	38.4		230	28.7	34.5	249	02.3	14.6	271	16.7	45.2	63	56.3	
4	247	40.9		245	32.4	33.6	264	02.9	13.9	286	18.7	45.0	78	58.9	
5	262	43.3		260	36.2	+9 32.7	279	03.5	-8 13.1	301	20.6	-15 44.9	94	01.6	
6	277	45.8		275	39.9	+9 31.8	294	04.2	-8 12.4	316	22.6	-15 44.8	109	04.2	
7	292	48.2		290	43.7	30.9	309	04.8	11.7	331	24.6	44.6	124	06.8	
8	307	50.7		305	47.4	30.0	324	05.5	10.9	346	26.6	44.5	139	09.4	
9	322	53.2		320	51.2	29.1	339	06.1	10.2	1	28.6	44.3	154	12.1	
10	337	55.6		335	54.9	28.2	354	06.7	09.4	16	30.6	44.2	169	14.7	
11	352	58.1		350	58.7	+9 27.3	9	07.4	-8 08.7	31	32.6	-15 44.0	184	17.3	
12	8	00.6		6	02.4	+9 26.4	24	08.0	-8 07.9	46	34.6	-15 43.9	199	19.9	
13	23	03.0		21	06.2	25.5	39	08.6	07.2	61	36.6	43.8	214	22.6	
14	38	05.5		36	09.9	24.6	54	09.3	06.4	76	38.6	43.6	229	25.2	
15	53	08.0		51	13.7	23.7	69	09.9	05.7	91	40.6	43.5	244	27.8	
16	68	10.4		66	17.4	22.8	84	10.6	04.9	106	42.6	43.3	259	30.4	
17	83	12.9		81	21.1	+9 21.9	99	11.2	-8 04.2	121	44.6	-15 43.2	274	33.1	
18	98	15.4		96	24.9	+9 21.0	114	11.8	-8 03.5	136	46.6	-15 43.1	289	35.7	
19	113	17.8		111	28.6	20.1	129	12.5	02.7	151	48.6	42.9	304	38.3	
20	128	20.3		126	32.3	19.2	144	13.1	02.0	166	50.6	42.8	319	41.0	
21	143	22.7		141	36.1	18.3	159	13.8	01.2	181	52.5	42.6	334	43.6	
22	158	25.2		156	39.8	17.4	174	14.4	-8 00.5	196	54.5	42.5	349	46.2	
23	173	27.7		171	43.5	16.5	189	15.0	-7 59.7	211	56.5	42.4	4	48.8	
24	188	30.1		186	47.2	+9 15.6	204	15.7	-7 59.0	226	58.5	-15 42.2	19	51.5	
Dif	—		+37		-9	+6		+7	+20		+1	+26		+	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG: 12 ^h 04 ^m 1			Edad: 4 ^d 3 PHE { 4 ^h : 59'1 12 ^h : 59'2 20 ^h : 59'2 PMG: 16 ^h 20 ^m R°: 61 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	178	55.8	+4	07.4	125	06.5	+25	41.7	60 N	18 42	19 25	20 18	6 04 51	1 28 78
1	193	56.0		08.4	139	30.1	46	46.4	58	39	19	09	30 54	1 03 75
2	208	56.2		09.4	153	53.8	47	50.9	56	36	14	20 01	6 51 55	0 42 73
3	223	56.4		10.3	168	17.3	45	55.3	54	34	10	19 54	7 08 56	25 72
4	238	56.5		11.3	182	40.8	45	+25	59.5	52	32	07	48	0 11 70
5	253	56.7	+4	12.3	197	04.3	45	+26	03.5	50	18 30	19 03	19 43	** ** *
6	268	56.9	+4	13.2	211	27.7	44	+26	07.4	45	18 27	18 56	19 32	8 02 59
7	283	57.1		14.2	225	51.0	43	11.1	40	23	51	23	23 60	** ** *
8	298	57.3		15.2	240	14.3	43	14.6	35	21	46	16	41 60	** ** *
9	313	57.5		16.1	254	37.6	43	17.9	30	18	42	10	8 56 60	23 45 59
10	328	57.7		17.1	269	00.8	42	21.0	20	14	36	19 02	9 22 61	23 18 61
11	343	57.9	+4	18.1	283	24.0	42	+26	24.0	10 N	18 11	18 32	18 56	9 44 61
12	358	58.0	+4	19.0	297	47.1	41	+26	26.8	0	18 07	18 28	18 52	10 05 62
13	13	58.2		20.0	312	10.2	41	29.4	10 S	04	25	50	26 62	22 13 62
14	28	58.4		21.0	326	33.3	41	31.9	20	18 01	23	49	10 48 63	21 50 63
15	43	58.6		21.9	340	56.3	40	34.1	22	30	17 58	22	49	11 14 63
16	58	58.8		22.9	355	19.3	40	36.2	35	56	21	50	30 63	21 08 64
17	73	59.0	+4	23.9	9	42.3	40	+26	38.1	40	17 54	18 21	18 52	11 48 63
18	88	59.2	+4	24.8	24	05.3	40	+26	39.8	45	17 51	18 20	18 54	12 10 63
19	103	59.3		25.8	38	28.2	39	41.3	50	48	20	58	37 63	20 00 65
20	118	59.5		26.8	52	51.1	39	42.6	52	47	20	18 59	12 51 63	19 46 66
21	133	59.7		27.7	67	14.0	39	43.8	54	45	21	19 02	13 06 63	31 65
22	148	59.9		28.7	81	36.9	39	44.8	56	44	21	04	25 63	19 12 66
23	164	00.1		29.7	95	59.8	39	45.6	58	42	21	07	13 47 63	18 49 67
24	179	00.3	+4	30.6	110	22.6	38	+26	46.2	60 S	17 40	18 21	19 10	14 17 62

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 11 ^h 24 ^m 1		Mag: -4.2 PMG: 11 ^h 30 ^m		Mag: +1.2 PMG: 10 ^h 23 ^m		Mag: -2.1 PMG: 8 ^h 51 ^m		Mag: +0.6 PMG: 22 ^h 37 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	188	30.1	186	47.2	+9	15.6	204	15.7	-7	59.0
1	203	32.6	201	51.0		14.7	219	16.3		58.2
2	218	35.1	216	54.7		13.8	234	17.0		57.5
3	233	37.5	231	58.4		12.9	249	17.6		56.7
4	248	40.0	247	02.1		11.9	264	18.2		56.0
5	263	42.5	262	05.8	+9	11.0	279	18.9	-7	55.2
6	278	44.9	277	09.5	+9	10.1	294	19.5	-7	54.5
7	293	47.4	292	13.2		09.2	309	20.2		53.7
8	308	49.9	307	16.9		08.3	324	20.8		53.0
9	323	52.3	322	20.7		07.4	339	21.4		52.2
10	338	54.8	337	24.4		06.5	354	22.1		51.5
11	353	57.2	352	28.1	+9	05.6	9	22.7	-7	50.7
12	8	59.7	7	31.8	+9	04.6	24	23.4	-7	50.0
13	24	02.2	22	35.5		03.7	39	24.0		49.3
14	39	04.6	37	39.2		02.8	54	24.7		48.5
15	54	07.1	52	42.8		01.9	69	25.3		47.8
16	69	09.6	67	46.5	+9	01.0	84	25.9		47.0
17	84	12.0	82	50.2	+9	00.0	99	26.6	-7	46.3
18	99	14.5	97	53.9	+8	59.1	114	27.2	-7	45.5
19	114	17.0	112	57.6		58.2	129	27.9		44.8
20	129	19.4	128	01.3		57.3	144	28.5		44.0
21	144	21.9	143	05.0		56.4	159	29.2		43.3
22	159	24.4	158	08.6		55.4	174	29.8		42.5
23	174	26.8	173	12.3		54.5	189	30.4		41.8
24	189	29.3	188	16.0	+8	53.6	204	31.1	-7	41.0
Dif	—		+37		-9		+6		+7	
							+20		+1	
									+26	
									+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 8			Edad: 5 ^d 3 PHE { 4 ^h : 59/2 12 ^h : 59/2 20 ^h : 59/3 PMG: 17 ^h 21 ^m R ^o : 61 ^m															
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°				
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m	m		
0	179	00.3	+4	30.6	110	22.6	+26	46.2	4	60 N	3	49	4	42	5	25			
1	194	00.5		31.6	124	45.5	39	46.6	4	58	3	58		48	28	7	24		
2	209	00.6		32.6	139	08.3	38	46.8	2	56	4	06		53	30	7	46		
3	224	00.8		33.5	153	31.1	38	46.9	1	54	13	4	57	33	8	04	75		
4	239	01.0		34.5	167	54.0	39	46.8	1	52	19	5	01	35	20	73			
5	254	01.2	+4	35.5	182	16.8	38	+26	46.5	3	50	4	25	5	04	8	33		
6	269	01.4	+4	36.4	196	39.6	38	+26	46.0	5	45	4	36	5	11	9	01		
7	284	01.6		37.4	211	02.5	39	45.3	7	40	45	17	44		23	68			
8	299	01.8		38.4	225	25.3	38	44.4	9	35	51	21	47		41	67			
9	314	01.9		39.3	239	48.2	39	43.4	10	30	4	57	25	49	9	56	66		
10	329	02.1		40.3	254	11.0	38	42.2	12	20	5	06	32	54	10	23	64		
11	344	02.3	+4	41.2	268	33.9	39	+26	40.7	15	10 N	5	12	5	36	10	45		
12	359	02.5	+4	42.2	282	56.8	39	+26	39.2	15	0	5	16	5	40	6	01		
13	14	02.7		43.2	297	19.7	39	37.4	18	10 S	18		43	04	28	60			
14	29	02.9		44.1	311	42.7	40	35.4	20	20	19	45	07	11	51	58	22		
15	44	03.1		45.1	326	05.6	39	33.3	21	30	19	47	11	12	17	56	27		
16	59	03.2		46.1	340	28.6	40	31.0	23	35	18	47	13	33	54	22	12		
17	74	03.4	+4	47.0	354	51.6	40	+26	28.5	25	40	5	17	5	48	6	15		
18	89	03.6	+4	48.0	9	14.6	40	+26	25.8	27	45	5	14	5	48	6	18		
19	104	03.8		49.0	23	37.7	41	22.9	29	50	11	49	21	40	48	21	05		
20	119	04.0		49.9	38	00.8	41	19.9	30	52	09	48	22	13	54	46	20		
21	134	04.2		50.9	52	24.0	42	16.6	33	54	07	48	24	14	09	45	36		
22	149	04.3		51.8	66	47.1	41	13.2	34	56	05	48	25	28	41	20	18		
23	164	04.5		52.8	81	10.3	42	09.6	36	58	5	02	48	27	14	50	37		
24	179	04.7	+4	53.8	95	33.6	43	+26	05.9	37	60 S	4	59	5	48	6	29		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 11 ^h 20 ^m 2		Mag: -4.1 PMG: 11 ^h 24 ^m			Mag: +1.2 PMG: 10 ^h 21 ^m			Mag: -2.1 PMG: 8 ^h 48 ^m			Mag: +0.6 PMG: 22 ^h 32 ^m							
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec						
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'					
0	189	29.3	188	16.0	+8	53.6	204	31.1	-7	41.0	227	46.5	-15	38.9	20	54.4	+7	22.3	
1	204	31.7	203	19.7		52.7	219	31.7		40.3	242	48.5		38.7	35	57.1		22.4	
2	219	34.2	218	23.3		51.8	234	32.4		39.5	257	50.5		38.6	50	59.7		22.4	
3	234	36.7	233	27.0		50.8	249	33.0		38.8	272	52.5		38.4	66	02.3		22.5	
4	249	39.1	248	30.7		49.9	264	33.7		38.0	287	54.5		38.3	81	04.9		22.5	
5	264	41.6	263	34.3	+8	49.0	279	34.3	-7	37.3	302	56.5	-15	38.2	96	07.6	+7	22.6	
6	279	44.1	278	38.0	+8	48.1	294	34.9	-7	36.5	317	58.5	-15	38.0	111	10.2	+7	22.7	
7	294	46.5	293	41.6		47.1	309	35.6		35.8	333	00.5		37.9	126	12.8		22.7	
8	309	49.0	308	45.3		46.2	324	36.2		35.0	348	02.5		37.7	141	15.4		22.8	
9	324	51.5	323	48.9		45.3	339	36.9		34.3	3	04.5		37.6	156	18.0		22.9	
10	339	53.9	338	52.6		44.3	354	37.5		33.5	18	06.5		37.5	171	20.7		22.9	
11	354	56.4	353	56.2	+8	43.4	9	38.2	-7	32.8	33	08.5	-15	37.3	186	23.3	+7	23.0	
12	9	58.8	8	59.9	+8	42.5	24	38.8	-7	32.0	48	10.5	-15	37.2	201	25.9	+7	23.1	
13	25	01.3	24	03.5		41.6	39	39.5		31.3	63	12.5		37.0	216	28.5		23.1	
14	40	03.8	39	07.2		40.6	54	40.1		30.5	78	14.5		36.9	231	31.2		23.2	
15	55	06.2	54	10.8		39.7	69	40.7		29.8	93	16.5		36.8	246	33.8		23.3	
16	70	08.7	69	14.5		38.8	84	41.4		29.0	108	18.5		36.6	261	36.4		23.3	
17	85	11.2	84	18.1	+8	37.8	99	42.0	-7	28.3	123	20.5	-15	36.5	276	39.0	+7	23.4	
18	100	13.6	99	21.7	+8	36.9	114	42.7	-7	27.5	138	22.5	-15	36.3	291	41.6	+7	23.4	
19	115	16.1	114	25.4		36.0	129	43.3		26.8	153	24.5		36.2	306	44.3		23.5	
20	130	18.6	129	29.0		35.1	144	44.0		26.0	168	26.5		36.1	321	46.9		23.6	
21	145	21.0	144	32.6		34.1	159	44.6		25.2	183	28.5		35.9	336	49.5		23.6	
22	160	23.5	159	36.2		33.2	174	45.3		24.5	198	30.5		35.8	351	52.1		23.7	
23	175	26.0	174	39.8		32.3	189	45.9		23.7	213	32.5		35.6	6	54.8		23.8	
24	190	28.4	189	43.5	+8	31.3	204	46.6	-7	23.0	228	34.5	-15	35.5	21	57.4	+7	23.8	
Dif	—		+36			-9		+6		+8		+20		+1		+26		+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 5		Edad: 6 ^d 3 PHE { 4 ^h : 59/3 12 ^h : 59/3 20 ^h : 59/2 PMG: 18 ^h 22 ^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	h m	h m	h m	h m
0	179	04.7	+4 53.8	95	33.6	+26 05.9	60 N	18 47	19 30	20 24	8 18 101	3 32 23			
1	194	04.9	54.7	109	56.9	+26 02.0	58	43	24	14	8 43 94	3 07 29			
2	209	05.1	55.7	124	20.3	+25 57.8	56	40	19	20 06	9 02 90	2 47 33			
3	224	05.3	56.6	138	43.6	53.6	54	38	14	19 58	19 86	30 37			
4	239	05.5	57.6	153	07.1	49.1	52	36	10	52	33 83	16 39			
5	254	05.6	+4 58.6	167	30.6	+25 44.5	50	18 34	19 07	19 46	9 45 81	2 03 42			
6	269	05.8	+4 59.5	181	54.1	+25 39.7	45	18 29	18 59	19 34	10 11 76	1 37 46			
7	284	06.0	+5 00.5	196	17.7	34.7	40	25	53	25	31 73	1 17 48			
8	299	06.2	01.4	210	41.4	29.5	35	22	48	18	10 48 70	0 59 51			
9	314	06.4	02.4	225	05.1	24.2	30	19	43	12	11 02 68	44 53			
10	329	06.6	03.4	239	28.9	18.7	20	15	37	19 03	27 64	0 19 55			
11	344	06.7	+5 04.3	253	52.7	+25 13.1	10 N	18 11	18 32	18 56	11 48 62	** ** **			
12	359	06.9	+5 05.3	268	16.6	+25 07.3	0	18 07	18 28	18 52	12 08 58	** ** **			
13	14	07.1	06.2	282	40.5	+25 01.3	10 S	18 03	24	49	28 55	** ** **			
14	29	07.3	07.2	297	04.6	+24 55.1	20	17 59	22	47	12 49 52	23 58 64			
15	44	07.5	08.2	311	28.7	48.8	30	55	19	47	13 13 49	35 68			
16	59	07.7	09.1	325	52.8	42.3	35	53	18	48	27 47	21 71			
17	74	07.9	+5 10.1	340	17.0	+24 35.7	40	17 50	18 17	18 49	13 44 43	23 05 74			
18	89	08.0	+5 11.0	354	41.3	+24 28.9	45	17 47	18 17	18 51	14 04 40	22 46 78			
19	104	08.2	12.0	9	05.7	21.9	50	44	16	53	28 35	22 84			
20	119	08.4	13.0	23	30.2	14.8	52	42	16	55	40 33	22 11 86			
21	134	08.6	13.9	37	54.7	07.6	54	41	16	57	14 54 29	21 58 89			
22	149	08.8	14.9	52	19.3	+24 00.1	56	39	16	18 59	15 09 26	43 93			
23	164	09.0	15.8	66	43.9	+23 52.6	58	36	16	19 01	27 22	25 98			
24	179	09.1	+5 16.8	81	08.7	+23 44.8	60 S	17 34	18 16	19 04	15 50 15	21 03 105			

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 11 ^h 16 ^m 3		Mag: -4.1 PMG: 11 ^h 18 ^m		Mag: +1.2 PMG: 10 ^h 20 ^m		Mag: -2.1 PMG: 8 ^h 45 ^m		Mag: +0.6 PMG: 22 ^h 28 ^m	
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'
0	190	28.4	189 43.5	+8 31.3	204 46.6	-7 23.0	228 34.5	-15 35.5	21 57.4	+7 23.8
1	205	30.9	204 47.1	30.4	219 47.2	22.2	243 36.5	35.4	37 00.0	23.9
2	220	33.3	219 50.7	29.5	234 47.9	21.5	258 38.5	35.2	52 02.6	24.0
3	235	35.8	234 54.3	28.5	249 48.5	20.7	273 40.5	35.1	67 05.2	24.0
4	250	38.3	249 57.9	27.6	264 49.1	20.0	288 42.5	35.0	82 07.9	24.1
5	265	40.7	265 01.5	+8 26.7	279 49.8	-7 19.2	303 44.5	-15 34.8	97 10.5	+7 24.1
6	280	43.2	280 05.1	+8 25.7	294 50.4	-7 18.5	318 46.5	-15 34.7	112 13.1	+7 24.2
7	295	45.7	295 08.7	24.8	309 51.1	17.7	333 48.5	34.5	127 15.7	24.3
8	310	48.1	310 12.3	23.9	324 51.7	17.0	348 50.5	34.4	142 18.3	24.3
9	325	50.6	325 15.9	22.9	339 52.4	16.2	3 52.5	34.3	157 21.0	24.4
10	340	53.1	340 19.5	22.0	354 53.0	15.5	18 54.5	34.1	172 23.6	24.5
11	355	55.5	355 23.1	+8 21.1	9 53.7	-7 14.7	33 56.6	-15 34.0	187 26.2	+7 24.5
12	10	58.0	10 26.7	+8 20.1	24 54.3	-7 14.0	48 58.6	-15 33.8	202 28.8	+7 24.6
13	26	00.5	25 30.2	19.2	39 55.0	13.2	64 00.6	33.7	217 31.4	24.6
14	41	02.9	40 33.8	18.3	54 55.6	12.4	79 02.6	33.6	232 34.1	24.7
15	56	05.4	55 37.4	17.3	69 56.3	11.7	94 04.6	33.4	247 36.7	24.8
16	71	07.8	70 41.0	16.4	84 56.9	10.9	109 06.6	33.3	262 39.3	24.8
17	86	10.3	85 44.6	+8 15.5	99 57.6	-7 10.2	124 08.6	-15 33.2	277 41.9	+7 24.9
18	101	12.8	100 48.1	+8 14.5	114 58.2	-7 09.4	139 10.6	-15 33.0	292 44.5	+7 25.0
19	116	15.2	115 51.7	13.6	129 58.9	08.7	154 12.6	32.9	307 47.2	25.0
20	131	17.7	130 55.3	12.7	144 59.5	07.9	169 14.6	32.7	322 49.8	25.1
21	146	20.2	145 58.8	11.7	160 00.2	07.2	184 16.6	32.6	337 52.4	25.1
22	161	22.6	161 02.4	10.8	175 00.8	06.4	199 18.6	32.5	352 55.0	25.2
23	176	25.1	176 05.9	09.9	190 01.5	05.7	214 20.6	32.3	7 57.6	25.3
24	191	27.6	191 09.5	+8 08.9	205 02.1	-7 04.9	229 22.6	-15 32.2	23 00.3	+7 25.3
Dif	—	—	+36	-9	+6	+8	+20	+1	+26	+1

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16:0			Edad: 7 ^d 3	PHE { 4 ^h : 59'2 12 ^h : 59'2 20 ^h : 59'1										
	PMG: 12 ^h 03 ^m 2					SD: 16:1		PMG: 19 ^h 20 ^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	179	09.1	+5	16.8	81	08.7	+23	3	42	4	36	5	19	9	59
1	194	09.3		17.8	95	33.5	58	36.9	79	58			10	17	98
2	209	09.5		18.7	109	58.4	59	28.9	80	56			32	94	20
3	224	09.7		19.7	124	23.4	60	20.7	82	54			45	90	3
4	239	09.9		20.6	138	48.5	61	12.4	83	52			10	56	87
5	254	10.1	+5	21.6	153	13.6	61	+23	03.9	85	50		11	06	84
6	269	10.2	+5	22.5	167	38.9	63	+22	55.3	86	45		11	27	79
7	284	10.4		23.5	182	04.2	63	46.5	88	40			44	74	2
8	299	10.6		24.5	196	29.6	64	37.6	89	35			11	58	71
9	314	10.8		25.4	210	55.1	65	28.6	90	30			12	10	68
10	329	11.0		26.4	225	20.6	65	19.4	92	20			31	63	1
11	344	11.2	+5	27.3	239	46.3	67	+22	10.0	94	10	N	12	50	58
12	359	11.3	+5	28.3	254	12.0	67	+22	00.6	94	0		13	06	55
13	14	11.5		29.2	268	37.9	69	+21	51.0	96	10	S	23	51	0
14	29	11.7		30.2	283	03.8	69	41.3	97	20			13	41	47
15	44	11.9		31.1	297	29.8	70	31.4	99	30			14	02	42
16	59	12.1		32.1	311	55.9	71	21.4	100	35			14	39	0
17	74	12.2	+5	33.1	326	22.0	71	+21	11.3	101	40		14	27	36
18	89	12.4	+5	34.0	340	48.3	73	+21	01.0	103	45		14	44	31
19	104	12.6		35.0	355	14.7	74	+20	50.7	103	50		15	03	27
20	119	12.8		35.9	9	41.1	74	40.2	105	52			13	23	37
21	134	13.0		36.9	24	07.6	75	29.5	107	54			23	21	27
22	149	13.2		37.8	38	34.3	77	18.8	107	56			35	17	16
23	164	13.3		38.8	53	01.0	77	+20	07.9	109	58		15	49	13
24	179	13.5	+5	39.7	67	27.8	78	+19	57.0	109	60	S	16	05	7

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO										
	PMG		Mag: -4.2		Mag: +1.2		Mag: -2.1		Mag: +0.6										
	11 ^h 12 ^m 3		PMG: 11 ^h 13 ^m		PMG: 10 ^h 19 ^m		PMG: 8 ^h 41 ^m		PMG: 22 ^h 24 ^m										
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec									
h	°	'	°	'	°	'	°	'	°	'									
0	191	27.6	191	09.5	+8	08.9	205	02.1	-7	04.9	229	22.6	-15	32.2	23	00.3	+7	25.3	
1	206	30.0	206	13.0		08.0	220	02.8		04.2	244	24.6		32.1	38	02.9		25.4	
2	221	32.5	221	16.6		07.0	235	03.4		03.4	259	26.7		31.9	53	05.5		25.5	
3	236	35.0	236	20.1		06.1	250	04.1		02.6	274	28.7		31.8	68	08.1		25.5	
4	251	37.4	251	23.7		05.2	265	04.7		01.9	289	30.7		31.6	83	10.7		25.6	
5	266	39.9	266	27.2	+8	04.2	280	05.3	-7	01.1	304	32.7	-15	31.5	98	13.3	+7	25.6	
6	281	42.3	281	30.7	+8	03.3	295	06.0	-7	00.4	319	34.7	-15	31.4	113	16.0	+7	25.7	
7	296	44.8	296	34.3		02.4	310	06.6	-6	59.6	334	36.7		31.2	128	18.6		25.8	
8	311	47.3	311	37.8		01.4	325	07.3		58.9	349	38.7		31.1	143	21.2		25.8	
9	326	49.7	326	41.3	+8	00.5	340	07.9		58.1	4	40.7		31.0	158	23.8		25.9	
10	341	52.2	341	44.9	+7	59.6	355	08.6		57.4	19	42.7		30.8	173	26.4		26.0	
11	356	54.7	356	48.4	+7	58.6	10	09.3	-6	56.6	34	44.7	-15	30.7	188	29.1	+7	26.0	
12	11	57.1	11	51.9	+7	57.7	25	09.9	-6	55.8	49	46.7	-15	30.5	203	31.7	+7	26.1	
13	26	59.6	26	55.4		56.8	40	10.6		55.1	64	48.8		30.4	218	34.3		26.1	
14	42	02.1	41	58.9		55.8	55	11.2		54.3	79	50.8		30.3	233	36.9		26.2	
15	57	04.5	57	02.4		54.9	70	11.9		53.6	94	52.8		30.1	248	39.5		26.3	
16	72	07.0	72	06.0		54.0	85	12.5		52.8	109	54.8		30.0	263	42.1		26.3	
17	87	09.5	87	09.5	+7	53.0	100	13.2	-6	52.1	124	56.8	-15	29.9	278	44.8	+7	26.4	
18	102	11.9	102	13.0	+7	52.1	115	13.8	-6	51.3	139	58.8	-15	29.7	293	47.4	+7	26.4	
19	117	14.4	117	16.5		51.2	130	14.5		50.6	155	00.8		29.6	308	50.0		26.5	
20	132	16.8	132	20.0		50.2	145	15.1		49.8	170	02.8		29.4	323	52.6		26.6	
21	147	19.3	147	23.4		49.3	160	15.8		49.0	185	04.8		29.3	338	55.2		26.6	
22	162	21.8	162	26.9		48.3	175	16.4		48.3	200	06.8		29.2	353	57.8		26.7	
23	177	24.2	177	30.4		47.4	190	17.1		47.5	215	08.9		29.0	9	00.5		26.8	
24	192	26.7	192	33.9	+7	46.5	205	17.7	-6	46.8	230	10.9	-15	28.9	24	03.1	+7	26.8	
Dif	—		+35		-9		+7		+8		+20		+1		+26		+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 0			Edad: 8 ^d 3 PHE { SD: 16'1 PMG: 20 ^h 14 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	179	13.5	+5 39.7	67	27.8	+19 57.0	60 N	18 51	19 35	20 30	11 43 101	4 06 6		
1	194	13.7	40.7	81	54.7	45.9 ¹¹¹	58	48	29	20	11 55 96	3 53 11		
2	209	13.9	41.6	96	21.6	34.7 ¹¹²	56	45	23	11	12 06 92	42 14		
3	224	14.1	42.6	110	48.7	81 23.3 ¹¹⁴	54	42	18	20 03	15 88	32 18		
4	239	14.3	43.5	125	15.8	81 11.9 ¹¹⁴	52	39	14	19 56	23 85	23 21		
5	254	14.4	+5 44.5	139	43.1	83 +19 00.3 ¹¹⁶	50	18 37	19 10	19 50	12 30 83	3 15 23		
6	269	14.6	+5 45.5	154	10.4	83 +18 48.7 ¹¹⁶	45	18 32	19 02	19 37	12 46 77	2 58 29		
7	284	14.8	46.4	168	37.8	84 36.9 ¹¹⁸	40	27	18 55	27	12 58 73	44 33		
8	299	15.0	47.4	183	05.3	85 25.1 ¹¹⁸	35	24	49	20	13 09 69	32 36		
9	314	15.2	48.3	197	32.9	86 13.1 ¹²⁰	30	21	45	13	18 66	22 39		
10	329	15.3	49.3	212	00.6	87 +18 01.0 ¹²¹	20	15	37	19 03	34 61	2 04 44		
11	344	15.5	+5 50.2	226	28.4	88 +17 48.8 ¹²²	10 N	18 10	18 32	18 56	13 48 56	1 48 49		
12	359	15.7	+5 51.2	240	56.2	88 +17 36.6 ¹²²	0	18 06	18 27	18 51	14 01 51	1 33 53		
13	14	15.9	52.1	255	24.2	90 24.2 ¹²⁴	10 S	18 02	23	48	14 47	18 57		
14	29	16.1	53.1	269	52.2	90 +17 11.7 ¹²⁵	20	17 58	20	45	28 42	1 02 61		
15	44	16.2	54.0	284	20.3	91 +16 59.2 ¹²⁵	30	53	17	45	44 36	0 43 67		
16	59	16.4	55.0	298	48.5	92 46.5 ¹²⁷	35	50	16	45	14 53 33	32 70		
17	74	16.6	+5 55.9	313	16.8	93 +16 33.8 ¹²⁷	40	17 47	18 14	18 46	15 03 30	0 19 74		
18	89	16.8	+5 56.9	327	45.1	93 +16 20.9 ¹²⁹	45	17 44	18 13	18 47	15 15 26	0 04 79		
19	104	17.0	57.8	342	13.6	95 +16 08.0 ¹²⁹	50	40	12	49	30 20	** ** *	**	
20	119	17.2	58.8	356	42.1	95 +15 55.0 ¹³⁰	52	38	11	50	36 18	** ** *	**	
21	134	17.3	+5 59.7	11	10.7	96 41.9 ¹³¹	54	36	11	52	44 15	** ** *	**	
22	149	17.5	+6 00.7	25	39.4	97 28.7 ¹³²	56	33	11	53	15 52 12	** ** *	**	
23	164	17.7	01.6	40	08.1	97 15.5 ¹³²	58	31	10	55	16 02 8	** ** *	**	
24	179	17.9	+6 02.6	54	37.0	99 +15 02.1 ¹³⁴	60 S	17 28	18 10	18 58	16 12 5	** ** *	**	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 11 ^h 08 ^m 4		Mag: -4.2 PMG: 11 ^h 07 ^m		Mag: +1.2 PMG: 10 ^h 18 ^m		Mag: -2.1 PMG: 8 ^h 38 ^m		Mag: +0.6 PMG: 22 ^h 20 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	192	26.7	192 33.9	+7 46.5	205 17.7	-6 46.8	230 10.9	-15 28.9	24 03.1	+7 26.8
1	207	29.2	207 37.4	45.5	220 18.4	46.0	245 12.9	28.8	39 05.7	26.9
2	222	31.6	222 40.9	44.6	235 19.0	45.3	260 14.9	28.6	54 08.3	26.9
3	237	34.1	237 44.3	43.7	250 19.7	44.5	275 16.9	28.5	69 10.9	27.0
4	252	36.6	252 47.8	42.7	265 20.3	43.7	290 18.9	28.3	84 13.5	27.1
5	267	39.0	267 51.3	+7 41.8	280 21.0	-6 43.0	305 20.9	-15 28.2	99 16.2	+7 27.1
6	282	41.5	282 54.7	+7 40.9	295 21.6	-6 42.2	320 22.9	-15 28.1	114 18.8	+7 27.2
7	297	43.9	297 58.2	40.0	310 22.3	41.5	335 25.0	27.9	129 21.4	27.2
8	312	46.4	313 01.7	39.0	325 22.9	40.7	350 27.0	27.8	144 24.0	27.3
9	327	48.9	328 05.1	38.1	340 23.6	40.0	5 29.0	27.7	159 26.6	27.4
10	342	51.3	343 08.6	37.2	355 24.2	39.2	20 31.0	27.5	174 29.2	27.4
11	357	53.8	358 12.0	+7 36.2	10 24.9	-6 38.4	35 33.0	-15 27.4	189 31.9	+7 27.5
12	12	56.3	13 15.5	+7 35.3	25 25.5	-6 37.7	50 35.0	-15 27.3	204 34.5	+7 27.5
13	27	58.7	28 18.9	34.4	40 26.2	36.9	65 37.0	27.1	219 37.1	27.6
14	43	01.2	43 22.4	33.4	55 26.9	36.2	80 39.1	27.0	234 39.7	27.7
15	58	03.7	58 25.8	32.5	70 27.5	35.4	95 41.1	26.8	249 42.3	27.7
16	73	06.1	73 29.2	31.6	85 28.2	34.6	110 43.1	26.7	264 44.9	27.8
17	88	08.6	88 32.7	+7 30.6	100 28.8	-6 33.9	125 45.1	-15 26.6	279 47.5	+7 27.8
18	103	11.1	103 36.1	+7 29.7	115 29.5	-6 33.1	140 47.1	-15 26.4	294 50.2	+7 27.9
19	118	13.5	118 39.5	28.8	130 30.1	32.4	155 49.1	26.3	309 52.8	28.0
20	133	16.0	133 42.9	27.9	145 30.8	31.6	170 51.1	26.2	324 55.4	28.0
21	148	18.4	148 46.3	26.9	160 31.4	30.9	185 53.2	26.0	339 58.0	28.1
22	163	20.9	163 49.8	26.0	175 32.1	30.1	200 55.2	25.9	355 00.6	28.1
23	178	23.4	178 53.2	25.1	190 32.7	29.3	215 57.2	25.8	10 03.2	28.2
24	193	25.8	193 56.6	+7 24.2	205 33.4	-6 28.6	230 59.2	-15 25.6	25 05.9	+7 28.3
Dif	—		+34	-9	+7	+8	+20	+1	+26	+1

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16:0 PMG: 12 ^h 02 ^m 7			Edad: 9 ^d 3 SD: 16:1 PMG: 21 ^h 04 ^m	PHE { 4 ^h : 58'9 12 ^h : 58'8 20 ^h : 58'7 R°: 48 ^m										
	hG ☉	Dec				hG ☾		Dif	Dec		Dif	Náutico	Civil	Hora	R°
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	179	17.9	+6 02.6	54	37.0	+15 02.1	60 N	3 34	4 29	5 13	13 24	97	4 12	4	
1	194	18.1	03.5	69	05.9	+14 48.7 ¹³⁴	58	45	36	17	31	93	4 04	7	
2	209	18.2	04.5	83	34.9	35.2 ¹³⁵	56	3 54	42	20	38	89	3 56	11	
3	224	18.4	05.4	98	04.0	21.7 ¹³⁵	54	4 02	47	23	43	87	50	14	
4	239	18.6	06.4	112	33.1	+14 08.0 ¹³⁷	52	09	51	26	48	84	44	16	
5	254	18.8	+6 07.3	127	02.4	+13 54.3 ¹³⁷	50	4 15	4 55	5 28	13 53	81	3 38	19	
6	269	19.0	+6 08.3	141	31.7	+13 40.5 ¹³⁸	45	4 28	5 03	5 33	14 03	75	3 27	24	
7	284	19.1	09.2	156	01.0	26.7 ¹³⁸	40	38	10	38	11	71	17	28	
8	299	19.3	10.2	170	30.5	+13 12.7 ¹⁴⁰	35	46	16	41	18	67	08	32	
9	314	19.5	11.1	185	00.0	+12 58.7 ¹⁴⁰	30	4 52	20	45	24	64	3 01	35	
10	329	19.7	12.1	199	29.6	44.7 ¹⁴⁰	20	5 02	28	50	35	58	2 48	41	
11	344	19.9	+6 13.0	213	59.3	+12 30.6 ¹⁴¹	10 N	5 09	5 34	5 55	14 44	53	2 37	45	
12	359	20.0	+6 13.9	228	29.0	+12 16.4 ¹⁴²	0	5 14	5 39	5 59	14 52	49	2 26	50	
13	14	20.2	14.9	242	58.8	+12 02.2 ¹⁴²	10 S	18	43	6 04	15 01	44	15	54	
14	29	20.4	15.8	257	28.7	+11 47.9 ¹⁴³	20	20	46	08	10	39	2 03	60	
15	44	20.6	16.8	271	58.6	33.5 ¹⁴⁴	30	21	49	13	20	34	1 50	65	
16	59	20.8	17.7	286	28.6	19.1 ¹⁴⁴	35	21	51	16	26	31	42	68	
17	74	20.9	+6 18.7	300	58.7	+11 04.6 ¹⁴⁵	40	5 21	5 52	6 19	15 33	27	1 33	72	
18	89	21.1	+6 19.6	315	28.8	+10 50.1 ¹⁴⁵	45	5 19	5 53	6 23	15 41	22	1 23	76	
19	104	21.3	20.6	329	59.0	35.6 ¹⁴⁵	50	17	55	27	50	18	10	82	
20	119	21.5	21.5	344	29.3	20.9 ¹⁴⁷	52	16	55	29	54	15	1 04	84	
21	134	21.7	22.5	358	59.6	+10 06.3 ¹⁴⁶	54	15	56	31	15 59	13	0 57	88	
22	149	21.8	23.4	13	30.0	+9 51.6 ¹⁴⁷	56	13	56	33	16 04	10	49	91	
23	164	22.0	24.4	28	00.4	36.8 ¹⁴⁸	58	11	57	36	10	7	41	95	
24	179	22.2	+6 25.3	42	30.9	+9 22.0 ¹⁴⁸	60 S	5 09	5 57	6 39	16 17	2	0 31	100	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 11 ^h 04 ^m 5		Mag: -4.3 PMG: 11 ^h 02 ^m		Mag: +1.2 PMG: 10 ^h 17 ^m		Mag: -2.1 PMG: 8 ^h 35 ^m		Mag: +0.6 PMG: 22 ^h 16 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	193	25.8	193	56.6	+7 24.2	205	33.4	-6 28.6	230	59.2	-15 25.6	25	05.9	+7 28.3
1	208	28.3	209	00.0	23.2	220	34.1	27.8	246	01.2	25.5	40	08.5	28.3
2	223	30.8	224	03.4	22.3	235	34.7	27.1	261	03.2	25.4	55	11.1	28.4
3	238	33.2	239	06.8	21.4	250	35.4	26.3	276	05.3	25.2	70	13.7	28.4
4	253	35.7	254	10.2	20.5	265	36.0	25.5	291	07.3	25.1	85	16.3	28.5
5	268	38.2	269	13.6	+7 19.5	280	36.7	-6 24.8	306	09.3	-15 24.9	100	18.9	+7 28.6
6	283	40.6	284	17.0	+7 18.6	295	37.3	-6 24.0	321	11.3	-15 24.8	115	21.5	+7 28.6
7	298	43.1	299	20.3	17.7	310	38.0	23.3	336	13.3	24.7	130	24.1	28.7
8	313	45.6	314	23.7	16.8	325	38.6	22.5	351	15.3	24.5	145	26.8	28.7
9	328	48.0	329	27.1	15.8	340	39.3	21.7	6	17.4	24.4	160	29.4	28.8
10	343	50.5	344	30.5	14.9	355	39.9	21.0	21	19.4	24.3	175	32.0	28.9
11	358	52.9	359	33.9	+7 14.0	10	40.6	-6 20.2	36	21.4	-15 24.1	190	34.6	+7 28.9
12	13	55.4	14	37.2	+7 13.1	25	41.3	-6 19.5	51	23.4	-15 24.0	205	37.2	+7 29.0
13	28	57.9	29	40.6	12.2	40	41.9	18.7	66	25.4	23.9	220	39.8	29.0
14	44	00.3	44	44.0	11.2	55	42.6	17.9	81	27.4	23.7	235	42.4	29.1
15	59	02.8	59	47.3	10.3	70	43.2	17.2	96	29.5	23.6	250	45.1	29.2
16	74	05.3	74	50.7	09.4	85	43.9	16.4	111	31.5	23.5	265	47.7	29.2
17	89	07.7	89	54.0	+7 08.5	100	44.5	-6 15.7	126	33.5	-15 23.3	280	50.3	+7 29.3
18	104	10.2	104	57.4	+7 07.6	115	45.2	-6 14.9	141	35.5	-15 23.2	295	52.9	+7 29.3
19	119	12.7	120	00.7	06.6	130	45.9	14.1	156	37.5	23.0	310	55.5	29.4
20	134	15.1	135	04.1	05.7	145	46.5	13.4	171	39.6	22.9	325	58.1	29.5
21	149	17.6	150	07.4	04.8	160	47.2	12.6	186	41.6	22.8	341	00.7	29.5
22	164	20.0	165	10.7	03.9	175	47.8	11.9	201	43.6	22.6	356	03.3	29.6
23	179	22.5	180	14.1	03.0	190	48.5	11.1	216	45.6	22.5	11	05.9	29.6
24	194	25.0	195	17.4	+7 02.1	205	49.1	-6 10.3	231	47.6	-15 22.4	26	08.6	+7 29.7
Dif	—		+34	-9		+7	+8		+20	+1		+26	+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 4			Edad: 10 ^d 3 PHE { SD: 16'0 PMG: 21 ^h 52 ^m 4 ^h : 58'6 12 ^h : 58'5 20 ^h : 58'4 R°: 47 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m	
0	179	22.2	+6	25.3	42	30.9	+9	22.0	60 N	18 56	19 40	20 37	15 01	94	4 16 2	
1	194	22.4		26.2	57	01.5 ¹¹⁶	+9	07.2 ¹⁴⁸	58	52	33	25	04	91	11 6	
2	209	22.5		27.2	71	32.1 ¹¹⁶	+8	52.3 ¹⁴⁹	56	49	27	16	07	87	07 9	
3	224	22.7		28.1	86	02.8 ¹¹⁷		37.4 ¹⁴⁹	54	45	22	07	10	84	04 11	
4	239	22.9		29.1	100	33.5 ¹¹⁷		22.4 ¹⁵⁰	52	42	17	20 00	12	81	4 00 15	
5	254	23.1	+6	30.0	115	04.3 ¹¹⁸	+8	07.4 ¹⁵⁰	50	18 40	19 13	19 53	15 14	79	3 57 17	
6	269	23.3	+6	31.0	129	35.1 ¹¹⁸	+7	52.4 ¹⁵⁰	45	18 34	19 04	19 40	15 18	74	3 51 21	
7	284	23.4		31.9	144	06.0 ¹¹⁹		37.3 ¹⁵¹	40	29	18 57	30	22	69	45 26	
8	299	23.6		32.9	158	36.9 ¹¹⁹		22.2 ¹⁵¹	35	25	51	21	25	66	40 30	
9	314	23.8		33.8	173	07.9 ¹²⁰	+7	07.1 ¹⁵¹	30	22	46	14	28	62	36 32	
10	329	24.0		34.7	187	38.9 ¹²⁰	+6	52.0 ¹⁵¹	20	16	38	19 04	33	56	29 38	
11	344	24.1	+6	35.7	202	10.0 ¹²¹	+6	36.8 ¹⁵²	10 N	18 10	18 32	18 56	15 37	51	3 22 43	
12	359	24.3	+6	36.6	216	41.1 ¹²¹	+6	21.6 ¹⁵²	0	18 06	18 26	18 51	15 41	47	3 16 47	
13	14	24.5		37.6	231	12.2 ¹²¹	+6	06.3 ¹⁵³	10 S	18 01	22	47	45	42	09 53	
14	29	24.7		38.5	245	43.4 ¹²²	+5	51.1 ¹⁵²	20	17 56	18	44	49	37	3 03 57	
15	44	24.9		39.5	260	14.7 ¹²³		35.8 ¹⁵³	30	51	15	42	54	32	2 55 63	
16	59	25.0		40.4	274	46.0 ¹²³		20.5 ¹⁵³	35	48	13	42	15	57	28	
17	74	25.2	+6	41.3	289	17.3 ¹²³	+5	05.2 ¹⁵³	40	17 44	18 11	18 42	16	00	25	
18	89	25.4	+6	42.3	303	48.7 ¹²⁴	+4	49.9 ¹⁵³	45	17 40	18 09	18 43	16	03	21	
19	104	25.6		43.2	318	20.1 ¹²⁴		34.5 ¹⁵⁴	50	35	08	45	08	15	32 80	
20	119	25.7		44.2	332	51.5 ¹²⁴		19.2 ¹⁵³	52	33	07	46	09	14	28 83	
21	134	25.9		45.1	347	23.0 ¹²⁵	+4	03.8 ¹⁵⁴	54	31	06	47	12	11	25 85	
22	149	26.1		46.0	1	54.5 ¹²⁵	+3	48.4 ¹⁵⁴	56	28	05	48	14	9	20 89	
23	164	26.3		47.0	16	26.0 ¹²⁵		33.0 ¹⁵⁴	58	25	05	50	17	5	16 91	
24	179	26.5	+6	47.9	30	57.6 ¹²⁶	+3	17.6 ¹⁵⁴	60 S	17 22	18 04	18 52	16 19	3	2 11 95	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 11 ^h 00 ^m 5		Mag: -4.3 PMG: 10 ^h 56 ^m			Mag: +1.2 PMG: 10 ^h 16 ^m			Mag: -2.1 PMG: 8 ^h 32 ^m			Mag: +0.6 PMG: 22 ^h 12 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	
0	194	25.0	195	17.4	+7	02.1	205	49.1	-6	10.3	231	47.6	-15	22.4	26	08.6
1	209	27.4	210	20.7		01.2	220	49.8		09.6	246	49.7		22.2	41	11.2
2	224	29.9	225	24.0	+7	00.2	235	50.5		08.8	261	51.7		22.1	56	13.8
3	239	32.4	240	27.3	+6	59.3	250	51.1		08.0	276	53.7		22.0	71	16.4
4	254	34.8	255	30.7		58.4	265	51.8		07.3	291	55.7		21.8	86	19.0
5	269	37.3	270	34.0	+6	57.5	280	52.4	-6	06.5	306	57.7	-15	21.7	101	21.6
6	284	39.8	285	37.3	+6	56.6	295	53.1	-6	05.8	321	59.8	-15	21.6	116	24.2
7	299	42.2	300	40.6		55.7	310	53.7		05.0	337	01.8		21.4	131	26.8
8	314	44.7	315	43.9		54.8	325	54.4		04.2	352	03.8		21.3	146	29.5
9	329	47.2	330	47.2		53.9	340	55.1		03.5	7	05.8		21.2	161	32.1
10	344	49.6	345	50.5		53.0	355	55.7		02.7	22	07.8		21.0	176	34.7
11	359	52.1	0	53.8	+6	52.1	10	56.4	-6	02.0	37	09.9	-15	20.9	191	37.3
12	14	54.5	15	57.0	+6	51.1	25	57.0	-6	01.2	52	11.9	-15	20.8	206	39.9
13	29	57.0	31	00.3		50.2	40	57.7	-6	00.4	67	13.9		20.6	221	42.5
14	44	59.5	46	03.6		49.3	55	58.4	-5	59.7	82	15.9		20.5	236	45.1
15	60	01.9	61	06.9		48.4	70	59.0		58.9	97	18.0		20.4	251	47.7
16	75	04.4	76	10.2		47.5	85	59.7		58.1	112	20.0		20.2	266	50.3
17	90	06.9	91	13.4	+6	46.6	101	00.3	-5	57.4	127	22.0	-15	20.1	281	52.9
18	105	09.3	106	16.7	+6	45.7	116	01.0	-5	56.6	142	24.0	-15	20.0	296	55.6
19	120	11.8	121	19.9		44.8	131	01.6		55.9	157	26.1		19.8	311	58.2
20	135	14.3	136	23.2		43.9	146	02.3		55.1	172	28.1		19.7	327	00.8
21	150	16.7	151	26.5		43.0	161	03.0		54.3	187	30.1		19.6	342	03.4
22	165	19.2	166	29.7		42.1	176	03.6		53.6	202	32.1		19.4	357	06.0
23	180	21.6	181	33.0		41.2	191	04.3		52.8	217	34.2		19.3	12	08.6
24	195	24.1	196	36.2	+6	40.3	206	04.9	-5	52.0	232	36.2	-15	19.2	27	11.2
Dif	—		+33 -9			+7 +8			+20 +1			+26 +1				

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna									
	SD: 16'0 PMG: 12 ^h 02 ^m 1			Edad: 11 ^d 3 PHE { 4 ^h : 58'2 12 ^h : 58'1 20 ^h : 57'9 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	26.5	+6	47.9	30	57.6	+3	17.6	60 N	3	27	4	23	5	07	16	35	93	4	18	3	
1	194	26.6		48.9	45	29.2 ¹²⁶	+3	02.2 ¹⁵⁴	58		38		30		11		35	89		17	6	
2	209	26.8		49.8	60	00.8 ¹²⁶	+2	46.8 ¹⁵⁴	56		48		36		15		34	86		16	9	
3	224	27.0		50.7	74	32.5 ¹²⁷		31.3 ¹⁵⁵	54		3	56	41	18			34	82		15	12	
4	239	27.2		51.7	89	04.2 ¹²⁷		15.9 ¹⁵⁴	52		4	04	46	21			33	80		15	13	
5	254	27.3	+6	52.6	103	35.9 ¹²⁷	+2	00.5 ¹⁵⁴	50		4	10	4	51	5	24	16	33	77	4	14	16
6	269	27.5	+6	53.6	118	07.7 ¹²⁸	+1	45.1 ¹⁵⁴	45		4	24	5	00	5	30	16	32	72	4	12	21
7	284	27.7		54.5	132	39.4 ¹²⁷		29.6 ¹⁵⁵	40		34		07	34			31	68		11	25	
8	299	27.9		55.4	147	11.2 ¹²⁸	+1	14.2 ¹⁵⁴	35		43		13	39			31	64		10	28	
9	314	28.0		56.4	161	43.0 ¹²⁸	+0	58.8 ¹⁵⁴	30		4	50	18	42			30	61		08	32	
10	329	28.2		57.3	176	14.9 ¹²⁹		43.3 ¹⁵⁵	20		5	00	26	49			29	56		07	37	
11	344	28.4	+6	58.2	190	46.7 ¹²⁸	+0	27.9 ¹⁵⁴	10 N		5	08	5	33	5	54	16	28	51	4	05	42
12	359	28.6	+6	59.2	205	18.6 ¹²⁹	+0	12.5 ¹⁵⁴	0		5	14	5	38	5	59	16	28	46	4	03	47
13	14	28.7	+7	00.1	219	50.5 ¹²⁹	-0	02.9 ¹⁵⁴	10 S		18		43	6	04		27	42		02	51	
14	29	28.9		01.1	234	22.4 ¹²⁹		18.3 ¹⁵⁴	20		21		47	09			26	37		4	00	56
15	44	29.1		02.0	248	54.4 ¹³⁰		33.7 ¹⁵⁴	30		23		50	14			26	31		3	58	61
16	59	29.3		02.9	263	26.3 ¹²⁹	-0	49.0 ¹⁵³	35		23		52	17			25	28		57	64	
17	74	29.4	+7	03.9	277	58.3 ¹³⁰	-1	04.4 ¹⁵⁴	40		5	23	5	54	6	21	16	25	24	3	55	69
18	89	29.6	+7	04.8	292	30.2 ¹²⁹	-1	19.7 ¹⁵³	45		5	22	5	56	6	25	16	24	21	3	54	73
19	104	29.8		05.7	307	02.2 ¹³⁰		35.1 ¹⁵⁴	50		20		58	30			23	16		52	78	
20	119	30.0		06.7	321	34.2 ¹³⁰	-1	50.4 ¹⁵³	52		19		58	32			23	14		51	80	
21	134	30.1		07.6	336	06.2 ¹³⁰	-2	05.7 ¹⁵³	54		18		5	59	35		23	11		50	83	
22	149	30.3		08.6	350	38.2 ¹³⁰		20.9 ¹⁵²	56		17		6	00	37		23	8		49	86	
23	164	30.5		09.5	5	10.3 ¹³¹		36.2 ¹⁵³	58		16		01	40			22	6		47	90	
24	179	30.7	+7	10.4	19	42.3 ¹³⁰	-2	51.4 ¹⁵²	60 S		5	14	6	02	6	44	16	22	2	3	46	93

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 10 ^h 56 ^m 6		Mag: -4.3 PMG: 10 ^h 51 ^m		Mag: +1.2 PMG: 10 ^h 15 ^m		Mag: -2.1 PMG: 8 ^h 28 ^m		Mag: +0.6 PMG: 22 ^h 07 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	195	24.1	196	36.2	+6	40.3	206	04.9	-5	52.0	232	36.2	-15	19.2	27	11.2	+7	31.1
1	210	26.6	211	39.4		39.4	221	05.6		51.3	247	38.2		19.0	42	13.8		31.1
2	225	29.0	226	42.7		38.5	236	06.3		50.5	262	40.2		18.9	57	16.4		31.2
3	240	31.5	241	45.9		37.6	251	06.9		49.8	277	42.3		18.7	72	19.0		31.3
4	255	34.0	256	49.1		36.7	266	07.6		49.0	292	44.3		18.6	87	21.6		31.3
5	270	36.4	271	52.4	+6	35.9	281	08.2	-5	48.2	307	46.3	-15	18.5	102	24.3	+7	31.4
6	285	38.9	286	55.6	+6	35.0	296	08.9	-5	47.5	322	48.3	-15	18.3	117	26.9	+7	31.4
7	300	41.4	301	58.8		34.1	311	09.6		46.7	337	50.4		18.2	132	29.5		31.5
8	315	43.8	317	02.0		33.2	326	10.2		45.9	352	52.4		18.1	147	32.1		31.5
9	330	46.3	332	05.2		32.3	341	10.9		45.2	7	54.4		17.9	162	34.7		31.6
10	345	48.8	347	08.4		31.4	356	11.6		44.4	22	56.4		17.8	177	37.3		31.7
11	0	51.2	2	11.6	+6	30.5	11	12.2	-5	43.6	37	58.5	-15	17.7	192	39.9	+7	31.7
12	15	53.7	17	14.8	+6	29.6	26	12.9	-5	42.9	53	00.5	-15	17.5	207	42.5	+7	31.8
13	30	56.1	32	18.0		28.7	41	13.5		42.1	68	02.5		17.4	222	45.1		31.8
14	45	58.6	47	21.2		27.9	56	14.2		41.4	83	04.5		17.3	237	47.7		31.9
15	61	01.1	62	24.4		27.0	71	14.9		40.6	98	06.6		17.1	252	50.3		31.9
16	76	03.5	77	27.6		26.1	86	15.5		39.8	113	08.6		17.0	267	52.9		32.0
17	91	06.0	92	30.8	+6	25.2	101	16.2	-5	39.1	128	10.6	-15	16.9	282	55.6	+7	32.0
18	106	08.5	107	34.0	+6	24.3	116	16.8	-5	38.3	143	12.6	-15	16.8	297	58.2	+7	32.1
19	121	10.9	122	37.1		23.4	131	17.5		37.5	158	14.7		16.6	313	00.8		32.2
20	136	13.4	137	40.3		22.6	146	18.2		36.8	173	16.7		16.5	328	03.4		32.2
21	151	15.9	152	43.5		21.7	161	18.8		36.0	188	18.7		16.4	343	06.0		32.3
22	166	18.3	167	46.6		20.8	176	19.5		35.2	203	20.8		16.2	358	08.6		32.3
23	181	20.8	182	49.8		19.9	191	20.2		34.5	218	22.8		16.1	13	11.2		32.4
24	196	23.2	197	52.9	+6	19.0	206	20.8	-5	33.7	233	24.8	-15	16.0	28	13.8	+7	32.4
Dif	—		+32	-9			+7	+8			+20	+1			+26	+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 8		Edad: 12 ^d 3 PHE { 4 ^h : 57:8 12 ^h : 57:6 20 ^h : 57:4 R°: 47 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m	m	h m	m
0	179	30.7	+7 10.4	19	42.3	-2 51.4	60 N	19 01	19 46	20 43	18 08	93	4 21	2
1	194	30.8		34	14.3 ¹³⁰	-3 06.6 ¹⁵²	58	18 57	38	31	04	88	23	6
2	209	31.0	12.3	48	46.4 ¹³¹	21.8 ¹⁵²	56	53	32	21	18 00	85	25	9
3	224	31.2	13.2	63	18.4 ¹³⁰	37.0 ¹⁵²	54	49	26	12	17 56	83	27	11
4	239	31.4	14.2	77	50.5 ¹³¹	-3 52.1 ¹⁵¹	52	46	21	20 04	53	80	28	14
5	254	31.5	+7 15.1	92	22.5 ¹³⁰	-4 07.2 ¹⁵¹	50	18 43	19 16	19 57	17 50	78	4 30	16
6	269	31.7	+7 16.0	106	54.6 ¹³¹	-4 22.3 ¹⁵¹	45	18 37	19 07	19 43	17 44	72	4 33	21
7	284	31.9	17.0	121	26.6 ¹³⁰	37.3 ¹⁵⁰	40	31	18 59	32	39	68	36	25
8	299	32.1	17.9	135	58.7 ¹³¹	-4 52.3 ¹⁵⁰	35	27	53	23	35	64	38	29
9	314	32.2	18.8	150	30.7 ¹³⁰	-5 07.3 ¹⁵⁰	30	23	47	16	31	61	40	32
10	329	32.4	19.8	165	02.8 ¹³¹	22.2 ¹⁴⁹	20	16	39	19 05	25	55	44	37
11	344	32.6	+7 20.7	179	34.8 ¹³⁰	-5 37.1 ¹⁴⁹	10 N	18 10	18 32	18 56	17 19	51	4 47	42
12	359	32.8	+7 21.6	194	06.8 ¹³⁰	-5 52.0 ¹⁴⁹	0	18 05	18 26	18 50	17 14	46	4 50	46
13	14	32.9	22.6	208	38.9 ¹³¹	-6 06.8 ¹⁴⁸	10 S	18 00	21	46	09	42	53	50
14	29	33.1	23.5	223	10.9 ¹³⁰	21.6 ¹⁴⁸	20	17 54	17	42	17 03	38	56	55
15	44	33.3	24.4	237	42.9 ¹³⁰	36.3 ¹⁴⁷	30	48	12	40	16 57	32	4 59	61
16	59	33.4	25.4	252	14.9 ¹³⁰	-6 51.0 ¹⁴⁷	35	45	10	40	53	30	5 01	65
17	74	33.6	+7 26.3	266	46.9 ¹³⁰	-7 05.7 ¹⁴⁷	40	17 41	18 08	18 39	16 49	26	5 04	68
18	89	33.8	+7 27.2	281	18.9 ¹³⁰	-7 20.3 ¹⁴⁶	45	17 36	18 06	18 40	16 45	22	5 07	72
19	104	34.0	28.1	295	50.9 ¹³⁰	34.9 ¹⁴⁶	50	31	04	41	39	17	10	77
20	119	34.1	29.1	310	22.9 ¹³⁰	-7 49.4 ¹⁴⁵	52	29	03	42	37	15	11	80
21	134	34.3	30.0	324	54.8 ¹²⁹	-8 03.9 ¹⁴⁵	54	26	02	42	34	13	13	83
22	149	34.5	30.9	339	26.7 ¹²⁹	18.3 ¹⁴⁴	56	23	18 01	43	31	10	15	85
23	164	34.7	31.9	353	58.7 ¹³⁰	32.7 ¹⁴⁴	58	20	17 59	45	28	6	17	89
24	179	34.8	+7 32.8	8	30.6 ¹²⁹	-8 47.0 ¹⁴³	60 S	17 16	17 58	18 46	16 24	3	5 19	93

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 10 ^h 52 ^m 7		Mag: -4.4 PMG: 10 ^h 46 ^m		Mag: +1.2 PMG: 10 ^h 14 ^m		Mag: -2.2 PMG: 8 ^h 25 ^m		Mag: +0.6 PMG: 22 ^h 03 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	196	23.2	197 52.9	+6 19.0	206 20.8	-5 33.7	233 24.8	-15 16.0	28 13.8	+7 32.4
1	211	25.7	212 56.1	18.2	221 21.5	32.9	248 26.8	15.8	43 16.4	32.5
2	226	28.2	227 59.2	17.3	236 22.1	32.2	263 28.9	15.7	58 19.0	32.6
3	241	30.6	243 02.4	16.4	251 22.8	31.4	278 30.9	15.6	73 21.6	32.6
4	256	33.1	258 05.5	15.6	266 23.5	30.6	293 32.9	15.4	88 24.2	32.7
5	271	35.6	273 08.7	+6 14.7	281 24.1	-5 29.9	308 35.0	-15 15.3	103 26.8	+7 32.7
6	286	38.0	288 11.8	+6 13.8	296 24.8	-5 29.1	323 37.0	-15 15.2	118 29.4	+7 32.8
7	301	40.5	303 14.9	12.9	311 25.5	28.4	338 39.0	15.0	133 32.0	32.8
8	316	43.0	318 18.0	12.1	326 26.1	27.6	353 41.1	14.9	148 34.6	32.9
9	331	45.4	333 21.2	11.2	341 26.8	26.8	8 43.1	14.8	163 37.3	32.9
10	346	47.9	348 24.3	10.3	356 27.4	26.1	23 45.1	14.6	178 39.9	33.0
11	1	50.4	3 27.4	+6 09.5	11 28.1	-5 25.3	38 47.1	-15 14.5	193 42.5	+7 33.1
12	16	52.8	18 30.5	+6 08.6	26 28.8	-5 24.5	53 49.2	-15 14.4	208 45.1	+7 33.1
13	31	55.3	33 33.6	07.7	41 29.4	23.8	68 51.2	14.2	223 47.7	33.2
14	46	57.7	48 36.7	06.9	56 30.1	23.0	83 53.2	14.1	238 50.3	33.2
15	62	00.2	63 39.8	06.0	71 30.8	22.2	98 55.3	14.0	253 52.9	33.3
16	77	02.7	78 42.9	05.2	86 31.4	21.5	113 57.3	13.8	268 55.5	33.3
17	92	05.1	93 46.0	+6 04.3	101 32.1	-5 20.7	128 59.3	-15 13.7	283 58.1	+7 33.4
18	107	07.6	108 49.1	+6 03.4	116 32.8	-5 19.9	144 01.4	-15 13.6	299 00.7	+7 33.4
19	122	10.1	123 52.2	02.6	131 33.4	19.2	159 03.4	13.4	314 03.3	33.5
20	137	12.5	138 55.3	01.7	146 34.1	18.4	174 05.4	13.3	329 05.9	33.6
21	152	15.0	153 58.3	+6 00.9	161 34.7	17.6	189 07.5	13.2	344 08.5	33.6
22	167	17.5	169 01.4	+6 00.0	176 35.4	16.9	204 09.5	13.0	359 11.1	33.7
23	182	19.9	184 04.5	+5 59.2	191 36.1	16.1	219 11.5	12.9	14 13.7	33.7
24	197	22.4	199 07.5	+5 58.3	206 36.7	-5 15.3	234 13.6	-15 12.8	29 16.3	+7 33.8
Dif	—		+31	-9	+7	+8	+20	+1	+26	+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 5			Edad: 13 ^d 3 PHE { 4 ^h : 57/3 12 ^h : 57/1 20 ^h : 56/9 R°: **m										
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora
h	°	'	°	°	'	°	°	h	m	h	m	h	m	m
0	179	34.8	+7 32.8	8	30.6	-8 47.0	60 N	3 19	4 17	5 01	19 41	93	4 23	4
1	194	35.0		23	02.5 ¹²⁹	-9 01.3 ¹⁴³	58	31	24	06	32	89	29	7
2	209	35.2		37	34.4 ¹²⁹	15.5 ¹⁴²	56	42	31	10	25	85	34	10
3	224	35.3		52	06.2 ¹²⁸	29.7 ¹⁴²	54	51	36	13	19	82	38	14
4	239	35.5		66	38.1 ¹²⁹	43.8 ¹⁴¹	52	3 59	42	17	13	79	42	16
5	254	35.7	+7 37.4	81	09.9 ¹²⁸	-9 57.8 ¹⁴⁰	50	4 05	4 46	5 20	19 08	76	4 46	18
6	269	35.9	+7 38.4	95	41.7 ¹²⁸	-10 11.8 ¹⁴⁰	45	4 20	4 56	5 26	18 56	72	4 54	23
7	284	36.0		110	13.5 ¹²⁸	25.8 ¹⁴⁰	40	31	5 04	31	47	67	5 01	27
8	299	36.2		124	45.2 ¹²⁷	39.6 ¹³⁸	35	40	10	36	39	64	07	30
9	314	36.4		139	17.0 ¹²⁸	-10 53.4 ¹³⁸	30	47	16	40	32	61	12	33
10	329	36.5		153	48.7 ¹²⁷	-11 07.2 ¹³⁸	20	4 59	25	47	20	56	21	38
11	344	36.7	+7 43.0	168	20.4 ¹²⁷	-11 20.9 ¹³⁷	10 N	5 07	5 32	5 53	18 10	52	5 29	42
12	359	36.9	+7 43.9	182	52.1 ¹²⁷	-11 34.5 ¹³⁶	0	5 13	5 37	5 58	18 00	48	5 36	47
13	14	37.0		197	23.7 ¹²⁶	-11 48.1 ¹³⁶	10 S	18	42	6 04	17 51	44	43	52
14	29	37.2		211	55.3 ¹²⁶	-12 01.5 ¹³⁴	20	21	47	09	41	39	5 51	56
15	44	37.4		226	26.9 ¹²⁶	15.0 ¹³⁵	30	24	51	15	29	35	6 00	62
16	59	37.6		240	58.5 ¹²⁶	28.3 ¹³³	35	24	54	19	23	32	06	64
17	74	37.7	+7 48.6	255	30.1 ¹²⁶	-12 41.6 ¹³³	40	5 24	5 56	6 23	17 15	29	6 12	67
18	89	37.9	+7 49.5	270	01.6 ¹²⁵	-12 54.8 ¹³²	45	5 24	5 58	6 28	17 07	24	6 19	72
19	104	38.1		284	33.1 ¹²⁵	-13 07.9 ¹³¹	50	23	6 01	33	16 56	20	27	77
20	119	38.2		299	04.5 ¹²⁴	21.0 ¹³¹	52	23	02	36	52	17	31	80
21	134	38.4		313	35.9 ¹²⁴	34.0 ¹³⁰	54	22	03	38	47	14	36	82
22	149	38.6		328	07.3 ¹²⁴	46.9 ¹²⁹	56	21	04	41	41	12	40	86
23	164	38.7		342	38.7 ¹²⁴	-13 59.8 ¹²⁹	58	20	05	45	34	9	46	89
24	179	38.9	+7 55.1	357	10.0 ¹²³	-14 12.5 ¹²⁷	60 S	5 18	6 07	6 49	16 27	5	6 52	93
UT	ARIES		VENUS		MARTE		JÚPITER				SATURNO			
	PMG: 10 ^h 48 ^m 7		Mag: -4.4 PMG: 10 ^h 41 ^m		Mag: +1.2 PMG: 10 ^h 13 ^m		Mag: -2.2 PMG: 8 ^h 22 ^m				Mag: +0.6 PMG: 21 ^h 59 ^m			
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	°	°	'	°	°	°	'				
0	197	22.4	199	07.5	+5 58.3	206	36.7	-5 15.3	234	13.6	-15 12.8	29	16.3	+7 33.8
1	212	24.9	214	10.6	57.5	221	37.4	14.6	249	15.6	12.6	44	18.9	33.8
2	227	27.3	229	13.7	56.6	236	38.1	13.8	264	17.6	12.5	59	21.5	33.9
3	242	29.8	244	16.7	55.8	251	38.7	13.0	279	19.7	12.4	74	24.1	33.9
4	257	32.2	259	19.8	54.9	266	39.4	12.3	294	21.7	12.3	89	26.7	34.0
5	272	34.7	274	22.8	+5 54.1	281	40.1	-5 11.5	309	23.7	-15 12.1	104	29.3	+7 34.0
6	287	37.2	289	25.8	+5 53.2	296	40.7	-5 10.7	324	25.8	-15 12.0	119	31.9	+7 34.1
7	302	39.6	304	28.9	52.4	311	41.4	10.0	339	27.8	11.9	134	34.5	34.2
8	317	42.1	319	31.9	51.6	326	42.1	09.2	354	29.8	11.7	149	37.1	34.2
9	332	44.6	334	34.9	50.7	341	42.7	08.4	9	31.9	11.6	164	39.8	34.3
10	347	47.0	349	38.0	49.9	356	43.4	07.7	24	33.9	11.5	179	42.4	34.3
11	2	49.5	4	41.0	+5 49.0	11	44.1	-5 06.9	39	35.9	-15 11.3	194	45.0	+7 34.4
12	17	52.0	19	44.0	+5 48.2	26	44.7	-5 06.1	54	38.0	-15 11.2	209	47.6	+7 34.4
13	32	54.4	34	47.0	47.4	41	45.4	05.4	69	40.0	11.1	224	50.2	34.5
14	47	56.9	49	50.0	46.5	56	46.1	04.6	84	42.0	10.9	239	52.8	34.5
15	62	59.3	64	53.0	45.7	71	46.7	03.8	99	44.1	10.8	254	55.4	34.6
16	78	01.8	79	56.0	44.9	86	47.4	03.1	114	46.1	10.7	269	58.0	34.6
17	93	04.3	94	59.0	+5 44.0	101	48.1	-5 02.3	129	48.2	-15 10.5	285	00.6	+7 34.7
18	108	06.7	110	02.0	+5 43.2	116	48.7	-5 01.5	144	50.2	-15 10.4	300	03.2	+7 34.8
19	123	09.2	125	05.0	42.4	131	49.4	-5 00.8	159	52.2	10.3	315	05.8	34.8
20	138	11.7	140	08.0	41.5	146	50.1	-5 00.0	174	54.3	10.2	330	08.4	34.9
21	153	14.1	155	11.0	40.7	161	50.7	-4 59.2	189	56.3	10.0	345	11.0	34.9
22	168	16.6	170	14.0	39.9	176	51.4	58.5	204	58.3	09.9	0	13.6	35.0
23	183	19.1	185	17.0	39.1	191	52.1	57.7	220	00.4	09.8	15	16.2	35.0
24	198	21.5	200	19.9	+5 38.2	206	52.7	-4 56.9	235	02.4	-15 09.6	30	18.8	+7 35.1
Dif	—		+30	-8		+7	+8		+20	+1		+26		+

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:0 PMG: 12 ^h 01 ^m 3			Edad: 14 ^d 3 PHE { 4 ^h : 56:7 12 ^h : 56:5 20 ^h : 56:3 PMG: 0 ^h 12 ^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	179	38.9	+7 55.1	357	10.0	-14 12.5		60 N	19 06	19 51	20 50	21 14 93	4 27 6	
1	194	39.1		11	41.3 ¹²³	25.2 ¹²⁷		58	19 01	43	37	21 01 88	36 10	
2	209	39.3	56.9	26	12.6 ¹²³	37.8 ¹²⁶		56	18 57	36	26	20 50 84	44 14	
3	224	39.4	57.8	40	43.9 ¹²³	-14 50.3 ¹²⁵		54	53	30	16	41 79	52 17	
4	239	39.6	58.8	55	15.1 ¹²²	-15 02.8 ¹²⁵		52	49	25	08	32 77	4 58 20	
5	254	39.8	+7 59.7	69	46.2 ¹²¹	-15 15.1 ¹²³		50	18 46	19 20	20 01	20 24 75	5 04 22	
6	269	39.9	+8 00.6	84	17.4 ¹²²	-15 27.4 ¹²³		45	18 39	19 10	19 46	20 08 70	5 17 27	
7	284	40.1	01.5	98	48.5 ¹²¹	39.6 ¹²²		40	33	19 01	34	19 54 66	28 30	
8	299	40.3	02.4	113	19.6 ¹²¹	-15 51.7 ¹²¹		35	29	18 54	25	43 63	37 34	
9	314	40.4	03.4	127	50.6 ¹²⁰	-16 03.7 ¹²⁰		30	24	49	17	33 61	45 36	
10	329	40.6	04.3	142	21.6 ¹²⁰	15.6 ¹¹⁹		20	17	39	19 05	16 57	5 59 41	
11	344	40.8	+8 05.2	156	52.6 ¹²⁰	-16 27.5 ¹¹⁹		10 N	18 10	18 32	18 56	19 02 52	6 11 45	
12	359	40.9	+8 06.1	171	23.5 ¹¹⁹	-16 39.2 ¹¹⁷		0	18 05	18 25	18 50	18 48 49	6 23 49	
13	14	41.1	07.1	185	54.4 ¹¹⁹	-16 50.9 ¹¹⁷		10 S	17 59	20	45	35 46	35 52	
14	29	41.3	08.0	200	25.2 ¹¹⁸	-17 02.5 ¹¹⁶		20	53	15	41	20 43	6 47 56	
15	44	41.4	08.9	214	56.1 ¹¹⁹	13.9 ¹¹⁴		30	46	10	38	18 04 38	7 02 60	
16	59	41.6	09.8	229	26.8 ¹¹⁷	25.3 ¹¹⁴		35	42	08	37	17 55 35	10 64	
17	74	41.8	+8 10.7	243	57.6 ¹¹⁸	-17 36.6 ¹¹³		40	17 38	18 05	18 36	17 44 32	7 19 67	
18	89	41.9	+8 11.7	258	28.3 ¹¹⁷	-17 47.8 ¹¹²		45	17 33	18 02	18 36	17 31 29	7 31 70	
19	104	42.1	12.6	272	59.0 ¹¹⁷	-17 58.9 ¹¹¹		50	27	18 00	37	16 25	44 76	
20	119	42.3	13.5	287	29.6 ¹¹⁶	-18 09.9 ¹¹⁰		52	24	17 58	37	09 22	51 78	
21	134	42.4	14.4	302	00.2 ¹¹⁶	20.8 ¹⁰⁹		54	21	57	38	17 01 20	7 58 81	
22	149	42.6	15.3	316	30.8 ¹¹⁶	31.6 ¹⁰⁸		56	18	56	38	16 53 16	8 06 84	
23	164	42.8	16.3	331	01.3 ¹¹⁵	42.3 ¹⁰⁷		58	15	54	39	43 12	15 88	
24	179	42.9	+8 17.2	345	31.8 ¹¹⁵	-18 52.9 ¹⁰⁶		60 S	17 10	17 52	18 40	16 32 7	8 25 93	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 10 ^h 44 ^m 8		Mag: -4.5 PMG: 10 ^h 37 ^m			Mag: +1.2 PMG: 10 ^h 12 ^m			Mag: -2.2 PMG: 8 ^h 19 ^m			Mag: +0.6 PMG: 21 ^h 55 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°
0	198	21.5	200	19.9	+5 38.2	206	52.7	-4 56.9	235	02.4	-15 09.6	30	18.8	+7 35.1
1	213	24.0	215	22.9	37.4	221	53.4	56.1	250	04.5	09.5	45	21.4	35.1
2	228	26.5	230	25.9	36.6	236	54.1	55.4	265	06.5	09.4	60	24.0	35.2
3	243	28.9	245	28.8	35.8	251	54.7	54.6	280	08.5	09.2	75	26.6	35.2
4	258	31.4	260	31.8	35.0	266	55.4	53.8	295	10.6	09.1	90	29.2	35.3
5	273	33.8	275	34.7	+5 34.2	281	56.1	-4 53.1	310	12.6	-15 09.0	105	31.8	+7 35.3
6	288	36.3	290	37.7	+5 33.3	296	56.7	-4 52.3	325	14.6	-15 08.9	120	34.4	+7 35.4
7	303	38.8	305	40.6	32.5	311	57.4	51.5	340	16.7	08.7	135	37.0	35.4
8	318	41.2	320	43.6	31.7	326	58.1	50.8	355	18.7	08.6	150	39.6	35.5
9	333	43.7	335	46.5	30.9	341	58.7	50.0	10	20.8	08.5	165	42.2	35.5
10	348	46.2	350	49.4	30.1	356	59.4	49.2	25	22.8	08.3	180	44.8	35.6
11	3 48.6	5 52.4	+5 29.3	12 00.1	-4 48.5	40 24.8	-15 08.2	195 47.4	+7 35.7					
12	18 51.1	20 55.3	+5 28.5	27 00.7	-4 47.7	55 26.9	-15 08.1	210 50.0	+7 35.7					
13	33 53.6	35 58.2	27.7	42 01.4	46.9	70 28.9	07.9	225 52.6	35.8					
14	48 56.0	51 01.1	26.9	57 02.1	46.2	85 31.0	07.8	240 55.2	35.8					
15	63 58.5	66 04.0	26.1	72 02.7	45.4	100 33.0	07.7	255 57.8	35.9					
16	79 00.9	81 06.9	25.3	87 03.4	44.6	115 35.0	07.6	271 00.4	35.9					
17	94 03.4	96 09.8	+5 24.5	102 04.1	-4 43.8	130 37.1	-15 07.4	286 03.0	+7 36.0					
18	109 05.9	111 12.7	+5 23.7	117 04.7	-4 43.1	145 39.1	-15 07.3	301 05.6	+7 36.0					
19	124 08.3	126 15.6	22.9	132 05.4	42.3	160 41.2	07.2	316 08.2	36.1					
20	139 10.8	141 18.5	22.1	147 06.1	41.5	175 43.2	07.0	331 10.8	36.1					
21	154 13.3	156 21.4	21.3	162 06.7	40.8	190 45.3	06.9	346 13.4	36.2					
22	169 15.7	171 24.3	20.5	177 07.4	40.0	205 47.3	06.8	1 16.0	36.2					
23	184 18.2	186 27.2	19.7	192 08.1	39.2	220 49.3	06.6	16 18.6	36.3					
24	199 20.7	201 30.1	+5 18.9	207 08.8	-4 38.5	235 51.4	-15 06.5	31 21.2	+7 36.3					
Dif	—	+29	-8	+7	+8	+20	+1	+26	+					

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna					
	SD: 16'0 PMG: 12 ^h 01 ^m 0			Edad: 15 ^d 3 PHE { 4 ^h : 56'1 12 ^h : 55'9 20 ^h : 55'7 PMG: 1 ^h 00 ^m R°: 50 ^m																	
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Náutico	Civil		Hora	R°	Hora	R°					
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m			
0	179	42.9	+8	17.2	345	31.8	-18	52.9	60 N	3	12	4	10	4	55	22	47	88			
1	194	43.1		18.1	0	02.2	114	-19	03.4	58	25	18		5	00	29	82	46			
2	209	43.3		19.0	14	32.6	114		13.8	56	36	25		05	14	77	4	58			
3	224	43.4		19.9	29	03.0	114		24.1	54	45	31		09	22	00	75	5			
4	239	43.6		20.8	43	33.3	113		34.3	52	3	53		12	21	49	72	18			
5	254	43.8	+8	21.8	58	03.6	113	-19	44.4	50	4	01	4	42	5	15	21	39			
6	269	43.9	+8	22.7	72	33.9	113	-19	54.4	45	4	16	4	52	5	22	21	18			
7	284	44.1		23.6	87	04.1	112	-20	04.3	40	27	5	01	28	21	00	64	5			
8	299	44.3		24.5	101	34.2	111		14.1	35	37	07	33		20	46	61	6			
9	314	44.4		25.4	116	04.4	112		23.7	30	45	13	38		34	59		21			
10	329	44.6		26.4	130	34.5	111		33.3	20	4	57	23	45	20	13	56	40			
11	344	44.8	+8	27.3	145	04.5	110	-20	42.7	10 N	5	06	5	30	5	52	19	54			
12	359	44.9	+8	28.2	159	34.6	111	-20	52.1	0	5	13	5	37	5	58	19	37			
13	14	45.1		29.1	174	04.6	110	-21	01.3	10 S	18	42	6	04		21	48				
14	29	45.3		30.0	188	34.5	109		10.4	20	22	48	10		19	03	45	7			
15	44	45.4		30.9	203	04.4	109		19.4	30	25	53	17		18	42	42	8			
16	59	45.6		31.8	217	34.3	109		28.3	35	26	55	21		30	40		14			
17	74	45.7	+8	32.8	232	04.1	108	-21	37.1	40	5	26	5	58	6	25	18	16			
18	89	45.9	+8	33.7	246	33.9	108	-21	45.7	45	5	27	6	01	6	30	18	00			
19	104	46.1		34.6	261	03.7	108	-21	54.3	50	26	04	36		17	41	30	9			
20	119	46.2		35.5	275	33.4	107	-22	02.7	52	26	05	39		31	29		09			
21	134	46.4		36.4	290	03.1	107		11.0	54	25	06	42		21	26		19			
22	149	46.6		37.3	304	32.8	107		19.2	56	25	08	45		17	09	23	30			
23	164	46.7		38.2	319	02.4	106		27.3	58	24	09	49		16	55	19	43			
24	179	46.9	+8	39.2	333	32.0	106	-22	35.3	60 S	5	23	6	11	6	53	16	39			
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO								
	PMG: 10 ^h 40 ^m 9			Mag: -4.5 PMG: 10 ^h 32 ^m			Mag: +1.2 PMG: 10 ^h 11 ^m			Mag: -2.2 PMG: 8 ^h 15 ^m			Mag: +0.6 PMG: 21 ^h 51 ^m								
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'			
0	199	20.7		201	30.1	+5	18.9	207	08.8	-4	38.5	235	51.4	-15	06.5	31	21.2	+7			
1	214	23.1		216	32.9		18.1	222	09.4		37.7	250	53.4		06.4	46	23.8				
2	229	25.6		231	35.8		17.3	237	10.1		36.9	265	55.5		06.3	61	26.4				
3	244	28.1		246	38.7		16.5	252	10.8		36.2	280	57.5		06.1	76	29.0				
4	259	30.5		261	41.5		15.8	267	11.4		35.4	295	59.5		06.0	91	31.6				
5	274	33.0		276	44.4	+5	15.0	282	12.1	-4	34.6	311	01.6	-15	05.9	106	34.2	+7			
6	289	35.4		291	47.2	+5	14.2	297	12.8	-4	33.8	326	03.6	-15	05.7	121	36.8	+7			
7	304	37.9		306	50.1		13.4	312	13.4		33.1	341	05.7		05.6	136	39.4				
8	319	40.4		321	52.9		12.6	327	14.1		32.3	356	07.7		05.5	151	42.0				
9	334	42.8		336	55.8		11.9	342	14.8		31.5	11	09.8		05.4	166	44.6				
10	349	45.3		351	58.6		11.1	357	15.4		30.8	26	11.8		05.2	181	47.1				
11	4	47.8		7	01.5	+5	10.3	12	16.1	-4	30.0	41	13.9	-15	05.1	196	49.7	+7			
12	19	50.2		22	04.3	+5	09.5	27	16.8	-4	29.2	56	15.9	-15	05.0	211	52.3	+7			
13	34	52.7		37	07.1		08.8	42	17.5		28.5	71	17.9		04.8	226	54.9				
14	49	55.2		52	09.9		08.0	57	18.1		27.7	86	20.0		04.7	241	57.5				
15	64	57.6		67	12.7		07.2	72	18.8		26.9	101	22.0		04.6	257	00.1				
16	80	00.1		82	15.6		06.4	87	19.5		26.1	116	24.1		04.5	272	02.7				
17	95	02.6		97	18.4	+5	05.7	102	20.1	-4	25.4	131	26.1	-15	04.3	287	05.3	+7			
18	110	05.0		112	21.2	+5	04.9	117	20.8	-4	24.6	146	28.2	-15	04.2	302	07.9	+7			
19	125	07.5		127	24.0		04.2	132	21.5		23.8	161	30.2		04.1	317	10.5				
20	140	09.9		142	26.8		03.4	147	22.2		23.1	176	32.3		03.9	332	13.1				
21	155	12.4		157	29.6		02.6	162	22.8		22.3	191	34.3		03.8	347	15.7				
22	170	14.9		172	32.4		01.9	177	23.5		21.5	206	36.4		03.7	2	18.3				
23	185	17.3		187	35.1		01.1	192	24.2		20.7	221	38.4		03.6	17	20.9				
24	200	19.8		202	37.9	+5	00.4	207	24.8	-4	20.0	236	40.4	-15	03.4	32	23.5	+7			
Dif	—			+28			-8			+7			+8			+20			+1		

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:0			Edad: 16 ^d 3 PHE	SD: 15:2				Final del crepúsculo		Salida de Luna		Puesta de Luna	
	PMG: 12 ^h 00 ^m 7				PMG: 1 ^h 50 ^m				R°: 51 ^m					
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	179	46.9	+8 39.2	333	32.0	-22 35.3	78	60 N	19 11	19 57	20 57	** ** *	4 42	18
1	194	47.1	40.1	348	01.6 ¹⁰⁶	43.1	77	58	06	48	43	23 51 69	5 01	24
2	209	47.2	41.0	2	31.1 ¹⁰⁵	50.8	77	56	19 01	41	31	31 67	17	28
3	224	47.4	41.9	17	00.6 ¹⁰⁵	-22 58.4	76	54	18 57	34	21	15 65	31	30
4	239	47.5	42.8	31	30.1 ¹⁰⁵	-23 05.9	75	52	53	28	12	23 01 64	43	33
5	254	47.7	+8 43.7	45	59.5 ¹⁰⁴	-23 13.3	74	50	18 49	19 23	20 05	22 49 62	5 53	35
6	269	47.9	+8 44.6	60	28.9 ¹⁰⁴	-23 20.5	72	45	18 42	19 12	19 49	22 24 60	6 15	39
7	284	48.0	45.5	74	58.3 ¹⁰⁴	27.6	71	40	35	19 03	37	22 04 58	33	41
8	299	48.2	46.5	89	27.6 ¹⁰³	34.6	70	35	30	18 56	27	21 47 57	6 48	43
9	314	48.4	47.4	103	56.9 ¹⁰³	41.5	69	30	25	50	19	33 56	7 02	44
10	329	48.5	48.3	118	26.2 ¹⁰³	48.2	67	20	17	40	19 06	21 09 54	24	47
11	344	48.7	+8 49.2	132	55.4 ¹⁰²	-23 54.9	67	10 N	18 10	18 32	18 57	20 48 53	7 44	49
12	359	48.8	+8 50.1	147	24.6 ¹⁰²	-24 01.4	65	0	18 04	18 25	18 49	20 28 52	8 02	51
13	14	49.0	51.0	161	53.8 ¹⁰²	07.7	63	10 S	17 58	19	44	20 09 50	20	53
14	29	49.2	51.9	176	23.0 ¹⁰²	14.0	63	20	51	13	39	19 48 49	8 40	55
15	44	49.3	52.8	190	52.1 ¹⁰¹	20.1	61	30	44	08	36	24 47	9 02	58
16	59	49.5	53.7	205	21.3 ¹⁰²	26.1	60	35	40	05	34	19 10 46	16	59
17	74	49.6	+8 54.6	219	50.4 ¹⁰¹	-24 31.9	58	40	17 35	18 02	18 34	18 54 44	9 31	62
18	89	49.8	+8 55.6	234	19.4 ¹⁰⁰	-24 37.7	58	45	17 29	17 59	18 33	18 35 42	9 50	63
19	104	50.0	56.5	248	48.5 ¹⁰¹	43.3	56	50	23	56	33	11 40	10 13	67
20	119	50.1	57.4	263	17.5 ¹⁰⁰	48.8	55	52	20	54	33	18 00 38	24	68
21	134	50.3	58.3	277	46.5 ¹⁰⁰	54.1	53	54	17	52	33	17 47 36	37	70
22	149	50.4	+8 59.2	292	15.5 ¹⁰⁰	-24 59.3	52	56	13	51	34	32 34	10 51	73
23	164	50.6	+9 00.1	306	44.4 ⁹⁹	-25 04.4	51	58	09	49	34	17 14 31	11 08	77
24	179	50.8	+9 01.0	321	13.4 ¹⁰⁰	-25 09.4	50	60 S	17 05	17 47	18 35	16 53 25	11 29	82

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 10 ^h 36 ^m 9		Mag: -4.5 PMG: 10 ^h 28 ^m		Mag: +1.2 PMG: 10 ^h 10 ^m		Mag: -2.2 PMG: 8 ^h 12 ^m		Mag: +0.6 PMG: 21 ^h 47 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	200	19.8	202 37.9	+5 00.4	207 24.8	-4 20.0	236 40.4	-15 03.4	32 23.5	+7 37.6
1	215	22.3	217 40.7	+4 59.6	222 25.5	19.2	251 42.5	03.3	47 26.1	37.6
2	230	24.7	232 43.5	58.9	237 26.2	18.4	266 44.5	03.2	62 28.7	37.7
3	245	27.2	247 46.3	58.1	252 26.9	17.7	281 46.6	03.0	77 31.3	37.7
4	260	29.7	262 49.0	57.4	267 27.5	16.9	296 48.6	02.9	92 33.9	37.8
5	275	32.1	277 51.8	+4 56.6	282 28.2	-4 16.1	311 50.7	-15 02.8	107 36.5	+7 37.8
6	290	34.6	292 54.5	+4 55.9	297 28.9	-4 15.4	326 52.7	-15 02.7	122 39.1	+7 37.9
7	305	37.0	307 57.3	55.1	312 29.5	14.6	341 54.8	02.5	137 41.7	37.9
8	320	39.5	323 00.0	54.4	327 30.2	13.8	356 56.8	02.4	152 44.3	38.0
9	335	42.0	338 02.8	53.6	342 30.9	13.0	11 58.9	02.3	167 46.9	38.0
10	350	44.4	353 05.5	52.9	357 31.6	12.3	27 00.9	02.1	182 49.4	38.1
11	5	46.9	8 08.3	+4 52.1	12 32.2	-4 11.5	42 03.0	-15 02.0	197 52.0	+7 38.1
12	20	49.4	23 11.0	+4 51.4	27 32.9	-4 10.7	57 05.0	-15 01.9	212 54.6	+7 38.2
13	35	51.8	38 13.7	50.7	42 33.6	10.0	72 07.1	01.8	227 57.2	38.2
14	50	54.3	53 16.5	49.9	57 34.2	09.2	87 09.1	01.6	242 59.8	38.3
15	65	56.8	68 19.2	49.2	72 34.9	08.4	102 11.2	01.5	258 02.4	38.3
16	80	59.2	83 21.9	48.5	87 35.6	07.6	117 13.2	01.4	273 05.0	38.4
17	96	01.7	98 24.6	+4 47.7	102 36.3	-4 06.9	132 15.3	-15 01.3	288 07.6	+7 38.4
18	111	04.2	113 27.3	+4 47.0	117 36.9	-4 06.1	147 17.3	-15 01.1	303 10.2	+7 38.5
19	126	06.6	128 30.0	46.3	132 37.6	05.3	162 19.4	01.0	318 12.8	38.5
20	141	09.1	143 32.7	45.6	147 38.3	04.6	177 21.4	00.9	333 15.4	38.6
21	156	11.5	158 35.4	44.8	162 39.0	03.8	192 23.5	00.7	348 18.0	38.6
22	171	14.0	173 38.1	44.1	177 39.6	03.0	207 25.5	00.6	3 20.6	38.7
23	186	16.5	188 40.8	43.4	192 40.3	02.2	222 27.6	00.5	18 23.2	38.7
24	201	18.9	203 43.5	+4 42.7	207 41.0	-4 01.5	237 29.6	-15 00.4	33 25.8	+7 38.8
Dif	—		+27	-7	+7	+8	+20	+1	+26	0

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'0 PMG: 12 ^h 00 ^m 5			Edad: 17 ^d 3 PHE { 4 ^h : 55'0 12 ^h : 54'9 20 ^h : 54'8 PMG: 2 ^h 41 ^m R°: 51 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	179	50.8	+9	01.0	321	13.4	99	-25	09.4	60 N	3	04	4	04	4	49	0	15
1	194	50.9		01.9	335	42.3	99		14.2	58	18	12		55	**	**	**	25
2	209	51.1		02.8	350	11.2	99		18.9	56	29	20	4	59	**	**	**	5
3	224	51.2		03.7	4	40.1	99		23.5	54	39	26	5	04	**	**	**	6
4	239	51.4		04.6	19	09.0	99		27.9	52	48	32		08	**	**	**	16
5	254	51.6	+9	05.5	33	37.8	98	-25	32.3	50	3	56	4	37	5	11	23	51
6	269	51.7	+9	06.4	48	06.7	99	-25	36.4	45	4	12	4	48	5	19	23	24
7	284	51.9		07.3	62	35.5	98		40.5	40	24	4	57	25	23	02	52	7
8	299	52.0		08.2	77	04.3	98		44.4	35	34	5	05	31	22	44	52	31
9	314	52.2		09.1	91	33.1	98		48.2	30	42	11		35	29	52	7	46
10	329	52.4		10.1	106	01.9	98		51.8	20	4	55	21	44	22	03	52	8
11	344	52.5	+9	11.0	120	30.7	98	-25	55.3	10 N	5	05	5	29	5	51	21	41
12	359	52.7	+9	11.9	134	59.5	98	-25	58.7	0	5	12	5	36	5	57	21	20
13	14	52.8		12.8	149	28.3	98	-26	02.0	10 S	18		42	6	04	20	59	52
14	29	53.0		13.7	163	57.1	98		05.1	20	22		48	10		37	51	9
15	44	53.1		14.6	178	25.8	97		08.1	30	26		54	18	20	11	51	10
16	59	53.3		15.5	192	54.6	98		10.9	28	27		57	22	19	56	51	15
17	74	53.5	+9	16.4	207	23.3	97	-26	13.7	40	5	28	6	00	6	27	19	38
18	89	53.6	+9	17.3	221	52.1	98	-26	16.3	45	5	29	6	03	6	33	19	17
19	104	53.8		18.2	236	20.8	97		18.7	24	29		07	39	18	51	49	11
20	119	53.9		19.1	250	49.6	98		21.0	23	29		08	42		38	49	32
21	134	54.1		20.0	265	18.3	97		23.2	22	29		10	46		23	48	11
22	149	54.2		20.9	279	47.1	98		25.3	21	29		12	49	18	06	47	12
23	164	54.4		21.8	294	15.8	97		27.2	19	28		14	54	17	45	46	25
24	179	54.6	+9	22.7	308	44.6	98	-26	29.0	18	5	28	6	16	6	58	17	18

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 10 ^h 33 ^m 0		Mag: -4.6 PMG: 10 ^h 23 ^m		Mag: +1.2 PMG: 10 ^h 09 ^m		Mag: -2.2 PMG: 8 ^h 09 ^m		Mag: +0.7 PMG: 21 ^h 43 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	201	18.9	203	43.5	+4	207	41.0	-4	237	29.6	-15	233	25.8	+7	38.8
1	216	21.4	218	46.2		222	41.6	-4	252	31.7		48	28.3		38.8
2	231	23.9	233	48.9		237	42.3	-3	267	33.7	-15	63	30.9		38.9
3	246	26.3	248	51.5		252	43.0		282	35.8	-15	78	33.5		38.9
4	261	28.8	263	54.2		267	43.7		297	37.8	-14	93	36.1		39.0
5	276	31.3	278	56.9	+4	282	44.3	-3	312	39.9	-14	108	38.7	+7	39.0
6	291	33.7	293	59.6	+4	297	45.0	-3	327	41.9	-14	123	41.3	+7	39.1
7	306	36.2	309	02.2		312	45.7		342	44.0		138	43.9		39.1
8	321	38.7	324	04.9		327	46.4		357	46.0		153	46.5		39.2
9	336	41.1	339	07.5		342	47.0		12	48.1		168	49.1		39.2
10	351	43.6	354	10.2		357	47.7		27	50.1		183	51.7		39.3
11	6	46.0	9	12.8	+4	12	48.4	-3	42	52.2	-14	198	54.3	+7	39.3
12	21	48.5	24	15.4	+4	27	49.1	-3	57	54.3	-14	213	56.9	+7	39.4
13	36	51.0	39	18.1		42	49.7		72	56.3		228	59.4		39.4
14	51	53.4	54	20.7		57	50.4		87	58.4		244	02.0		39.5
15	66	55.9	69	23.3		72	51.1		103	00.4		259	04.6		39.5
16	81	58.4	84	26.0		87	51.8		118	02.5		274	07.2		39.5
17	97	00.8	99	28.6	+4	102	52.4	-3	133	04.5	-14	289	09.8	+7	39.6
18	112	03.3	114	31.2	+4	117	53.1	-3	148	06.6	-14	304	12.4	+7	39.6
19	127	05.8	129	33.8		132	53.8		163	08.6		319	15.0		39.7
20	142	08.2	144	36.4		147	54.5		178	10.7		334	17.6		39.7
21	157	10.7	159	39.0		162	55.1		193	12.7		349	20.2		39.8
22	172	13.2	174	41.6		177	55.8		208	14.8		4	22.8		39.8
23	187	15.6	189	44.2		192	56.5		223	16.9		19	25.3		39.9
24	202	18.1	204	46.8	+4	207	57.2	-3	238	18.9	-14	34	27.9	+7	39.9
Dif	—		+26	-7		+7	+8		+21	+1		+26	0		

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'9		Edad: 18 ^d 3		PHE { 4 ^h : 54'6 12 ^h : 54'5 20 ^h : 54'4				Civil		Náutico		Hora R°	
	PMG: 12 ^h 00 ^m 2		SD: 14'9		PMG: 3 ^h 32 ^m	R°: 52 ^m								
	hG ☉	Dec	hG ☾	Dif	Dec	Dif								
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	179	54.6	+9 22.7		308	44.6	-26 29.0	60 N	19 16	20 02	21 04	1 29 51	5 34 56	
1	194	54.7		23.6	323	13.4	30.6	58	10	19 53	20 49	1 00 51	6 03 55	
2	209	54.9		24.5	337	42.1	32.2	56	05	45	36	0 38 52	25 55	
3	224	55.0		25.4	352	10.9	33.5	54	19 00	38	26	20 52	43 55	
4	239	55.2		26.3	6	39.7	34.8	52	18 56	32	17	0 05 51	6 59 54	
5	254	55.3	+9 27.2		21	08.5	-26 35.9	50	18 52	19 27	20 09	** ** *	7 12 54	
6	269	55.5	+9 28.1		35	37.3	-26 36.9	45	18 44	19 15	19 52	** ** *	7 40 53	
7	284	55.7		29.0	50	06.1	37.8	40	37	19 06	39	23 54 45	8 02 53	
8	299	55.8		29.9	64	34.9	38.5	35	32	18 58	29	36 46	20 52	
9	314	56.0		30.8	79	03.8	39.1	30	27	51	20	23 21 47	8 35 53	
10	329	56.1		31.7	93	32.6	39.5	20	18	40	19 07	22 55 48	9 01 52	
11	344	56.3	+9 32.6		108	01.5	-26 39.9	10 N	18 10	18 32	18 57	22 32 50	9 24 51	
12	359	56.4	+9 33.5		122	30.4	-26 40.1	0	18 04	18 25	18 49	22 11 51	9 45 51	
13	14	56.6		34.4	136	59.3	40.1	10 S	17 57	18	43	21 51 51	10 06 51	
14	29	56.7		35.3	151	28.2	40.1	20	50	12	38	28 53	28 51	
15	44	56.9		36.2	165	57.1	39.9	30	42	06	34	21 02 54	10 55 49	
16	59	57.0		37.1	180	26.1	39.5	35	37	18 03	32	20 47 54	11 10 49	
17	74	57.2	+9 38.0		194	55.0	-26 39.1	40	17 32	17 59	18 31	20 29 55	11 28 48	
18	89	57.3	+9 38.9		209	24.0	-26 38.5	45	17 26	17 56	18 30	20 07 57	11 50 47	
19	104	57.5		39.8	223	53.0	37.8	50	19	52	29	19 40 58	12 17 46	
20	119	57.7		40.6	238	22.1	36.9	52	16	50	29	27 59	30 46	
21	134	57.8		41.5	252	51.1	35.9	54	12	48	29	19 11 61	12 45 45	
22	149	58.0		42.4	267	20.2	34.8	56	08	46	29	18 53 62	13 04 43	
23	164	58.1		43.3	281	49.3	33.6	58	17 04	44	29	31 64	26 41	
24	179	58.3	+9 44.2		296	18.5	-26 32.2	60 S	16 59	17 41	18 29	18 03 66	13 54 39	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 10 ^h 29 ^m 1		Mag: -4.6 PMG: 10 ^h 19 ^m		Mag: +1.2 PMG: 10 ^h 08 ^m		Mag: -2.2 PMG: 8 ^h 06 ^m		Mag: +0.7 PMG: 21 ^h 38 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	202	18.1	204	46.8	+4 25.9	207 57.2	-3 42.9	238 18.9	-14 57.3	34 27.9	+7 39.9
1	217	20.5	219	49.4	25.2	222 57.8	42.2	253 21.0	57.2	49 30.5	40.0
2	232	23.0	234	52.0	24.6	237 58.5	41.4	268 23.0	57.1	64 33.1	40.0
3	247	25.5	249	54.6	23.9	252 59.2	40.6	283 25.1	57.0	79 35.7	40.1
4	262	27.9	264	57.1	23.2	267 59.9	39.8	298 27.1	56.8	94 38.3	40.1
5	277	30.4	279	59.7	+4 22.5	283 00.5	-3 39.1	313 29.2	-14 56.7	109 40.9	+7 40.2
6	292	32.9	295	02.3	+4 21.9	298 01.2	-3 38.3	328 31.3	-14 56.6	124 43.5	+7 40.2
7	307	35.3	310	04.8	21.2	313 01.9	37.5	343 33.3	56.5	139 46.1	40.3
8	322	37.8	325	07.4	20.5	328 02.6	36.7	358 35.4	56.3	154 48.6	40.3
9	337	40.3	340	10.0	19.9	343 03.2	36.0	13 37.4	56.2	169 51.2	40.4
10	352	42.7	355	12.5	19.2	358 03.9	35.2	28 39.5	56.1	184 53.8	40.4
11	7	45.2	10	15.1	+4 18.5	13 04.6	-3 34.4	43 41.5	-14 56.0	199 56.4	+7 40.5
12	22	47.6	25	17.6	+4 17.9	28 05.3	-3 33.6	58 43.6	-14 55.8	214 59.0	+7 40.5
13	37	50.1	40	20.1	17.2	43 05.9	32.9	73 45.7	55.7	230 01.6	40.5
14	52	52.6	55	22.7	16.6	58 06.6	32.1	88 47.7	55.6	245 04.2	40.6
15	67	55.0	70	25.2	15.9	73 07.3	31.3	103 49.8	55.5	260 06.8	40.6
16	82	57.5	85	27.7	15.3	88 08.0	30.6	118 51.8	55.3	275 09.3	40.7
17	98	00.0	100	30.3	+4 14.6	103 08.6	-3 29.8	133 53.9	-14 55.2	290 11.9	+7 40.7
18	113	02.4	115	32.8	+4 14.0	118 09.3	-3 29.0	148 56.0	-14 55.1	305 14.5	+7 40.8
19	128	04.9	130	35.3	13.3	133 10.0	28.2	163 58.0	55.0	320 17.1	40.8
20	143	07.4	145	37.8	12.7	148 10.7	27.5	179 00.1	54.8	335 19.7	40.9
21	158	09.8	160	40.3	12.0	163 11.4	26.7	194 02.1	54.7	350 22.3	40.9
22	173	12.3	175	42.8	11.4	178 12.0	25.9	209 04.2	54.6	5 24.9	41.0
23	188	14.8	190	45.3	10.7	193 12.7	25.1	224 06.3	54.5	20 27.5	41.0
24	203	17.2	205	47.8	+4 10.1	208 13.4	-3 24.4	239 08.3	-14 54.3	35 30.0	+7 41.1
Dif	—		+25		-7	+7	+8	+21	+1	+26	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 9 PMG: 12 ^h 00 ^m 0			Edad: 19 ^d 3 PHE { SD: 14 ^h 8 PMG: 4 ^h 24 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	h	m	h	m	h	m	m		
0	179	58.3	+9	44.2	296	18.5	-26 32.2	15	60 N	2 56	3 57	4 43	2 20	28	6 30	76
1	194	58.4		45.1	310	47.7 ¹⁰²	30.7	16	58	3 11	4 06	49	1 51	34	6 58	71
2	209	58.6		46.0	325	16.9 ¹⁰²	29.1	16	56	23	14	54	30	36	7 20	68
3	224	58.7		46.9	339	46.1 ¹⁰²	27.3	18	54	34	21	4 59	1 12	38	38	65
4	239	58.9		47.8	354	15.3 ¹⁰²	25.4	19	52	43	27	5 03	0 56	40	7 53	64
5	254	59.0	+9	48.7	8	44.6 ¹⁰³	-26 23.4	20	50	3 51	4 33	5 07	0 43	41	8 06	63
6	269	59.2	+9	49.6	23	14.0 ¹⁰⁴	-26 21.3	21	45	4 08	4 45	5 15	0 16	43	8 33	60
7	284	59.3		50.5	37	43.3 ¹⁰³	19.0	23	40	21	4 54	22	** ** *	**	8 55	57
8	299	59.5		51.4	52	12.7 ¹⁰⁴	16.6	24	35	31	5 02	28	** ** *	**	9 12	57
9	314	59.6		52.3	66	42.1 ¹⁰⁴	14.1	25	30	40	09	33	** ** *	**	28	55
10	329	59.8		53.2	81	11.6 ¹⁰⁵	11.5	26	20	4 53	20	42	23 43	44	9 53	53
11	344	59.9	+9	54.0	95	41.1 ¹⁰⁵	-26 08.7	28	10 N	5 03	5 28	5 50	23 22	46	10 15	52
12	0	00.1	+9	54.9	110	10.6 ¹⁰⁵	-26 05.8	29	0	5 11	5 36	5 57	23 02	49	10 36	50
13	15	00.2		55.8	124	40.2 ¹⁰⁶	-26 02.8	30	10 S	18	42	6 04	22 42	51	10 57	48
14	30	00.4		56.7	139	09.8 ¹⁰⁶	-25 59.7	31	20	23	49	11	22 21	53	11 19	46
15	45	00.5		57.6	153	39.4 ¹⁰⁶	56.4	33	30	27	55	19	21 56	56	44	44
16	60	00.7		58.5	168	09.1 ¹⁰⁷	53.0	34	35	29	5 58	24	41	57	11 59	43
17	75	00.8	+9	59.4	182	38.8 ¹⁰⁷	-25 49.5	35	40	5 30	6 02	6 29	21 24	59	12 16	41
18	90	01.0	+10	00.3	197	08.6 ¹⁰⁸	-25 45.9	36	45	5 31	6 05	6 35	21 04	62	12 37	39
19	105	01.1		01.2	211	38.4 ¹⁰⁸	42.1	38	50	32	10	42	20 38	65	13 03	36
20	120	01.3		02.1	226	08.2 ¹⁰⁸	38.3	38	52	32	11	46	26	66	16	34
21	135	01.4		02.9	240	38.1 ¹⁰⁹	34.3	40	54	32	13	49	20 12	68	30	33
22	150	01.6		03.8	255	08.0 ¹⁰⁹	30.2	41	56	32	15	53	19 55	71	13 47	30
23	165	01.7		04.7	269	38.0 ¹¹⁰	26.0	42	58	32	18	6 58	35	75	14 07	27
24	180	01.9	+10	05.6	284	08.0 ¹¹⁰	-25 21.6	44	60 S	5 32	6 20	7 03	19 09	81	14 33	21

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 10 ^h 25 ^m 1		Mag: -4.6 PMG: 10 ^h 15 ^m		Mag: +1.2 PMG: 10 ^h 07 ^m		Mag: -2.2 PMG: 8 ^h 02 ^m		Mag: +0.7 PMG: 21 ^h 34 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	203	17.2	205	47.8	+4 10.1	208	13.4	-3 24.4	239	08.3	-14 54.3	35	30.0	+7 41.1
1	218	19.7	220	50.3	09.5	223	14.1	23.6	254	10.4	54.2	50	32.6	41.1
2	233	22.1	235	52.8	08.8	238	14.7	22.8	269	12.4	54.1	65	35.2	41.2
3	248	24.6	250	55.3	08.2	253	15.4	22.0	284	14.5	54.0	80	37.8	41.2
4	263	27.1	265	57.8	07.6	268	16.1	21.3	299	16.6	53.8	95	40.4	41.2
5	278	29.5	281	00.3	+4 06.9	283	16.8	-3 20.5	314	18.6	-14 53.7	110	43.0	+7 41.3
6	293	32.0	296	02.7	+4 06.3	298	17.4	-3 19.7	329	20.7	-14 53.6	125	45.6	+7 41.3
7	308	34.5	311	05.2	05.7	313	18.1	18.9	344	22.8	53.5	140	48.1	41.4
8	323	36.9	326	07.7	05.0	328	18.8	18.2	359	24.8	53.3	155	50.7	41.4
9	338	39.4	341	10.1	04.4	343	19.5	17.4	14	26.9	53.2	170	53.3	41.5
10	353	41.9	356	12.6	03.8	358	20.2	16.6	29	28.9	53.1	185	55.9	41.5
11	8	44.3	11	15.1	+4 03.2	13	20.8	-3 15.8	44	31.0	-14 53.0	200	58.5	+7 41.6
12	23	46.8	26	17.5	+4 02.6	28	21.5	-3 15.1	59	33.1	-14 52.8	216	01.1	+7 41.6
13	38	49.3	41	19.9	01.9	43	22.2	14.3	74	35.1	52.7	231	03.7	41.7
14	53	51.7	56	22.4	01.3	58	22.9	13.5	89	37.2	52.6	246	06.2	41.7
15	68	54.2	71	24.8	00.7	73	23.5	12.7	104	39.3	52.5	261	08.8	41.7
16	83	56.6	86	27.3	+4 00.1	88	24.2	12.0	119	41.3	52.3	276	11.4	41.8
17	98	59.1	101	29.7	+3 59.5	103	24.9	-3 11.2	134	43.4	-14 52.2	291	14.0	+7 41.8
18	114	01.6	116	32.1	+3 58.9	118	25.6	-3 10.4	149	45.4	-14 52.1	306	16.6	+7 41.9
19	129	04.0	131	34.5	58.3	133	26.3	09.7	164	47.5	52.0	321	19.2	41.9
20	144	06.5	146	37.0	57.7	148	26.9	08.9	179	49.6	51.9	336	21.7	42.0
21	159	09.0	161	39.4	57.1	163	27.6	08.1	194	51.6	51.7	351	24.3	42.0
22	174	11.4	176	41.8	56.5	178	28.3	07.3	209	53.7	51.6	6	26.9	42.1
23	189	13.9	191	44.2	55.9	193	29.0	06.6	224	55.8	51.5	21	29.5	42.1
24	204	16.4	206	46.6	+3 55.3	208	29.7	-3 05.8	239	57.8	-14 51.4	36	32.1	+7 42.2
Dif	—		+24		-6	+7		+8	+21		+1	+26		0

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 15'9 PMG: 11 ^h 59 ^m 8			Edad: 20 ^d 3 PHE { 4 ^h : 54'2 12 ^h : 54'2 20 ^h : 54'3 SD: 14'8 PMG: 5 ^h 14 ^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		
0	180	01.9	+10	05.6	284	08.0	-25 21.6	60 N	19 21	20 08	21 11	2 48 15	7 46 84					
1	195	02.0		06.5	298	38.1 ¹¹¹	17.1 ⁴⁵	58	15	19 58	20 55	25 20	8 09 79					
2	210	02.2		07.4	313	08.2 ¹¹¹	12.6 ⁴⁵	56	09	50	42	2 06 24	28 74					
3	225	02.3		08.3	327	38.3 ¹¹¹	07.9 ⁴⁷	54	04	42	31	1 50 27	43 72					
4	240	02.5		09.2	342	08.5 ¹¹²	-25 03.1 ⁴⁸	52	19 00	36	21	36 30	8 57 69					
5	255	02.6	+10	10.0	356	38.8 ¹¹³	-24 58.1 ⁵⁰	50	18 56	19 30	20 12	1 24 31	9 09 67					
6	270	02.8	+10	10.9	11	09.1 ¹¹³	-24 53.1 ⁵⁰	45	18 47	19 18	19 55	0 59 35	9 33 63					
7	285	02.9		11.8	25	39.4 ¹¹³	47.9 ⁵²	40	40	19 08	41	39 38	9 52 61					
8	300	03.1		12.7	40	09.8 ¹¹⁴	42.7 ⁵²	35	33	18 59	31	22 40	10 09 58					
9	315	03.2		13.6	54	40.2 ¹¹⁴	37.3 ⁵⁴	30	28	52	22	0 08 41	23 56					
10	330	03.4		14.5	69	10.7 ¹¹⁵	31.8 ⁵⁵	20	19	41	19 07	*** ** *	10 46 53					
11	345	03.5	+10	15.3	83	41.2 ¹¹⁵	-24 26.2 ⁵⁶	10 N	18 11	18 32	18 57	*** ** *	11 07 50					
12	0	03.7	+10	16.2	98	11.8 ¹¹⁶	-24 20.4 ⁵⁸	0	18 03	18 24	18 49	23 51 46	11 26 47					
13	15	03.8		17.1	112	42.4 ¹¹⁶	14.6 ⁵⁸	10 S	17 56	17	42	33 49	11 45 45					
14	30	03.9		18.0	127	13.1 ¹¹⁷	08.7 ⁵⁹	20	48	10	36	23 14 52	12 05 42					
15	45	04.1		18.9	141	43.8 ¹¹⁷	-24 02.6 ⁶¹	30	39	04	32	22 52 56	28 39					
16	60	04.2		19.8	156	14.6 ¹¹⁸	-23 56.5 ⁶¹	35	34	18 00	30	38 59	42 37					
17	75	04.4	+10	20.6	170	45.4 ¹¹⁸	-23 50.2 ⁶³	40	17 29	17 56	18 28	22 23 62	12 57 35					
18	90	04.5	+10	21.5	185	16.3 ¹¹⁹	-23 43.8 ⁶⁴	45	17 22	17 52	18 26	22 06 64	13 16 32					
19	105	04.7		22.4	199	47.2 ¹¹⁹	37.3 ⁶⁵	50	15	48	25	21 43 69	39 28					
20	120	04.8		23.3	214	18.1 ¹¹⁹	30.7 ⁶⁶	52	11	46	25	32 71	13 50 26					
21	135	05.0		24.2	228	49.2 ¹²¹	24.0 ⁶⁷	54	07	43	24	20 74	14 03 23					
22	150	05.1		25.1	243	20.2 ¹²⁰	17.2 ⁶⁸	56	17 03	41	24	21 06 77	17 20					
23	165	05.3		25.9	257	51.3 ¹²¹	10.3 ⁶⁹	58	16 58	39	24	20 50 80	34 16					
24	180	05.4	+10	26.8	272	22.5 ¹²²	-23 03.3 ⁷⁰	60 S	16 53	17 36	18 24	20 30 86	14 54 12					
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 10 ^h 21 ^m 2		Mag: -4.6 PMG: 10 ^h 11 ^m			Mag: +1.2 PMG: 10 ^h 06 ^m			Mag: -2.2 PMG: 7 ^h 59 ^m			Mag: +0.7 PMG: 21 ^h 30 ^m						
	hG ♈		hG ♀			hG ♂			hG ♃			hG ♄						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	204	16.4	206	46.6	+3	55.3	208	29.7	-3	05.8	239	57.8	-14	51.4	36	32.1		
1	219	18.8	221	49.0		54.7	223	30.3		05.0	254	59.9		51.2	51	34.7		
2	234	21.3	236	51.4		54.1	238	31.0		04.2	270	02.0		51.1	66	37.2		
3	249	23.8	251	53.8		53.5	253	31.7		03.5	285	04.0		51.0	81	39.8		
4	264	26.2	266	56.2		52.9	268	32.4		02.7	300	06.1		50.9	96	42.4		
5	279	28.7	281	58.6	+3	52.3	283	33.0	-3	01.9	315	08.2	-14	50.7	111	45.0		
6	294	31.1	297	01.0	+3	51.7	298	33.7	-3	01.1	330	10.2	-14	50.6	126	47.6		
7	309	33.6	312	03.3		51.1	313	34.4	-3	00.4	345	12.3		50.5	141	50.2		
8	324	36.1	327	05.7		50.5	328	35.1	-2	59.6	0	14.4		50.4	156	52.7		
9	339	38.5	342	08.1		50.0	343	35.8		58.8	15	16.4		50.3	171	55.3		
10	354	41.0	357	10.4		49.4	358	36.4		58.0	30	18.5		50.1	186	57.9		
11	9	43.5	12	12.8	+3	48.8	13	37.1	-2	57.3	45	20.6	-14	50.0	202	00.5		
12	24	45.9	27	15.2	+3	48.2	28	37.8	-2	56.5	60	22.6	-14	49.9	217	03.1		
13	39	48.4	42	17.5		47.7	43	38.5		55.7	75	24.7		49.8	232	05.7		
14	54	50.9	57	19.9		47.1	58	39.2		54.9	90	26.8		49.6	247	08.2		
15	69	53.3	72	22.2		46.5	73	39.8		54.2	105	28.8		49.5	262	10.8		
16	84	55.8	87	24.6		45.9	88	40.5		53.4	120	30.9		49.4	277	13.4		
17	99	58.2	102	26.9	+3	45.4	103	41.2	-2	52.6	135	33.0	-14	49.3	292	16.0		
18	115	00.7	117	29.2	+3	44.8	118	41.9	-2	51.8	150	35.1	-14	49.2	307	18.6		
19	130	03.2	132	31.6		44.2	133	42.6		51.1	165	37.1		49.0	322	21.1		
20	145	05.6	147	33.9		43.7	148	43.2		50.3	180	39.2		48.9	337	23.7		
21	160	08.1	162	36.2		43.1	163	43.9		49.5	195	41.3		48.8	352	26.3		
22	175	10.6	177	38.5		42.6	178	44.6		48.7	210	43.3		48.7	7	28.9		
23	190	13.0	192	40.9		42.0	193	45.3		48.0	225	45.4		48.5	22	31.5		
24	205	15.5	207	43.2	+3	41.5	208	46.0	-2	47.2	240	47.5	-14	48.4	37	34.0		
Dif	—		+24			-6	+7			+8			+21			+1		

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15'9 PMG: 11 ^h 59 ^m 5			Edad: 21 ^d 3 PHE { 4 ^h : 54'3 12 ^h : 54'4 20 ^h : 54'4 SD: 14'8 PMG: 6 ^h 02 ^m R°: 46 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m	
0	180	05.4	+10	26.8	272	22.5	-23	03.3	60 N	2 47	3 51	4 37	3 03	8	9 10	87		
1	195	05.5		27.7	286	53.7 ¹²²	-22	56.2	71 58	3 03	4 00	44	2 45	13	28	81		
2	210	05.7		28.6	301	25.0 ¹²³		49.0	72 56	17	09	49	30	17	42	78		
3	225	05.8		29.5	315	56.3 ¹²³		41.7	73 54	28	16	54	17	20	9 55	74		
4	240	06.0		30.3	330	27.7 ¹²⁴		34.2	75 52	38	23	4 59	2 06	22	10 06	72		
5	255	06.1	+10	31.2	344	59.1 ¹²⁴	-22	26.7	75 50	3 46	4 29	5 03	1 55	25	10 16	69		
6	270	06.3	+10	32.1	359	30.6 ¹²⁵	-22	19.1	76 45	4 04	4 41	5 12	1 34	29	10 36	65		
7	285	06.4		33.0	14	02.1 ¹²⁵		11.4	77 40	17	51	19	17	32	10 53	61		
8	300	06.6		33.9	28	33.7 ¹²⁶	-22	03.5	79 35	28	4 59	26	1 02	35	11 07	58		
9	315	06.7		34.7	43	05.3 ¹²⁶	-21	55.6	79 30	37	5 06	31	0 49	37	19	56		
10	330	06.8		35.6	57	37.0 ¹²⁷		47.6	80 20	4 52	18	40	27	41	39	52		
11	345	07.0	+10	36.5	72	08.7 ¹²⁷	-21	39.5	81 10 N	5 02	5 27	5 49	0 08	44	11 57	49		
12	0	07.1	+10	37.4	86	40.4 ¹²⁷	-21	31.3	82 0	5 11	5 35	5 56	** ** *	**	12 13	46		
13	15	07.3		38.2	101	12.3 ¹²⁹		23.0	83 10 S	18	42	6 04	** ** *	**	30	42		
14	30	07.4		39.1	115	44.1 ¹²⁸		14.6	84 20	23	49	11	** ** *	**	12 47	39		
15	45	07.5		40.0	130	16.0 ¹²⁹	-21	06.1	85 30	28	5 56	20	23 48	56	13 07	35		
16	60	07.7		40.9	144	48.0 ¹³⁰	-20	57.5	86 35	30	6 00	25	37	59	19	32		
17	75	07.8	+10	41.7	159	20.0 ¹³⁰	-20	48.8	87 40	5 32	6 04	6 31	23 25	61	13 32	30		
18	90	08.0	+10	42.6	173	52.1 ¹³¹	-20	40.0	88 45	5 34	6 08	6 38	23 10	65	13 48	26		
19	105	08.1		43.5	188	24.2 ¹³¹		31.1	89 50	35	12	45	22 52	70	14 07	22		
20	120	08.3		44.4	202	56.3 ¹³¹		22.2	89 52	35	15	49	43	73	16	20		
21	135	08.4		45.2	217	28.5 ¹³²		13.1	91 54	36	17	53	34	75	26	17		
22	150	08.5		46.1	232	00.8 ¹³³	-20	04.0	91 56	36	19	6 57	23	78	37	15		
23	165	08.7		47.0	246	33.1 ¹³³	-19	54.8	92 58	36	22	7 02	22 10	82	14 50	11		
24	180	08.8	+10	47.9	261	05.4 ¹³³	-19	45.4	94 60 S	5 36	6 25	7 08	21 56	86	15 06	6		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 10 ^h 17 ^m 3		Mag: -4.7 PMG: 10 ^h 08 ^m			Mag: +1.2 PMG: 10 ^h 04 ^m			Mag: -2.2 PMG: 7 ^h 56 ^m			Mag: +0.7 PMG: 21 ^h 26 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	205	15.5	207	43.2	+3	41.5	208	46.0	-2	47.2	240	47.5	-14	48.4	37	34.0	+7	43.2
1	220	18.0	222	45.5		40.9	223	46.6		46.4	255	49.5		48.3	52	36.6		43.3
2	235	20.4	237	47.8		40.3	238	47.3		45.6	270	51.6		48.2	67	39.2		43.3
3	250	22.9	252	50.1		39.8	253	48.0		44.9	285	53.7		48.1	82	41.8		43.3
4	265	25.4	267	52.4		39.3	268	48.7		44.1	300	55.8		47.9	97	44.4		43.4
5	280	27.8	282	54.7	+3	38.7	283	49.4	-2	43.3	315	57.8	-14	47.8	112	46.9	+7	43.4
6	295	30.3	297	57.0	+3	38.2	298	50.0	-2	42.5	330	59.9	-14	47.7	127	49.5	+7	43.5
7	310	32.7	312	59.3		37.6	313	50.7		41.8	346	02.0		47.6	142	52.1		43.5
8	325	35.2	328	01.5		37.1	328	51.4		41.0	1	04.0		47.5	157	54.7		43.6
9	340	37.7	343	03.8		36.5	343	52.1		40.2	16	06.1		47.3	172	57.3		43.6
10	355	40.1	358	06.1		36.0	358	52.8		39.4	31	08.2		47.2	187	59.8		43.6
11	10	42.6	13	08.4	+3	35.5	13	53.5	-2	38.7	46	10.3	-14	47.1	203	02.4	+7	43.7
12	25	45.1	28	10.6	+3	34.9	28	54.1	-2	37.9	61	12.3	-14	47.0	218	05.0	+7	43.7
13	40	47.5	43	12.9		34.4	43	54.8		37.1	76	14.4		46.8	233	07.6		43.8
14	55	50.0	58	15.2		33.9	58	55.5		36.3	91	16.5		46.7	248	10.1		43.8
15	70	52.5	73	17.4		33.3	73	56.2		35.5	106	18.6		46.6	263	12.7		43.9
16	85	54.9	88	19.7		32.8	88	56.9		34.8	121	20.6		46.5	278	15.3		43.9
17	100	57.4	103	21.9	+3	32.3	103	57.5	-2	34.0	136	22.7	-14	46.4	293	17.9	+7	43.9
18	115	59.9	118	24.2	+3	31.8	118	58.2	-2	33.2	151	24.8	-14	46.2	308	20.5	+7	44.0
19	131	02.3	133	26.4		31.2	133	58.9		32.4	166	26.9		46.1	323	23.0		44.0
20	146	04.8	148	28.6		30.7	148	59.6		31.7	181	28.9		46.0	338	25.6		44.1
21	161	07.2	163	30.9		30.2	164	00.3		30.9	196	31.0		45.9	353	28.2		44.1
22	176	09.7	178	33.1		29.7	179	01.0		30.1	211	33.1		45.8	8	30.8		44.2
23	191	12.2	193	35.3		29.2	194	01.6		29.3	226	35.2		45.6	23	33.3		44.2
24	206	14.6	208	37.5	+3	28.7	209	02.3	-2	28.6	241	37.2	-14	45.5	38	35.9	+7	44.2
Dif	—		+23		-5		+7		+8		+21		+1		+26			

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15°9		Edad: 22 ^d 3	PHE { 4 ^h : 54'5 12 ^h : 54'6 20 ^h : 54'8	SD: 14'8	PMG: 6 ^h 48 ^m			R°: 44 ^m	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	hG ☉	Dec								Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m		
0	180	08.8	+10	47.9	261	05.4	-19 45.4	60 N	19 26	20 13	21 18	3 11 5	10 37 86		
1	195	09.0		48.7	275	37.8 ¹³⁴	36.0 ⁹⁴	58	19	20 03	21 01	2 58 9	10 49 82		
2	210	09.1		49.6	290	10.2 ¹³⁴	26.5 ⁹⁵	56	13	19 54	20 47	47 12	11 00 79		
3	225	09.2		50.5	304	42.7 ¹³⁵	17.0 ⁹⁵	54	08	46	36	37 15	09 76		
4	240	09.4		51.4	319	15.2 ¹³⁵	-19 07.3 ⁹⁷	52	19 03	40	25	28 17	18 73		
5	255	09.5	+10	52.2	333	47.8 ¹³⁶	-18 57.5 ⁹⁸	50	18 59	19 33	20 16	2 20 20	11 25 71		
6	270	09.7	+10	53.1	348	20.4 ¹³⁶	-18 47.7 ⁹⁸	45	18 49	19 20	19 58	2 03 24	11 41 66		
7	285	09.8		54.0	2	53.1 ¹³⁷	37.8 ⁹⁹	40	42	10	44	1 49 27	11 54 62		
8	300	09.9		54.8	17	25.8 ¹³⁷	27.8 ¹⁰⁰	35	35	19 01	32	37 30	12 05 59		
9	315	10.1		55.7	31	58.5 ¹³⁷	17.7 ¹⁰¹	30	29	18 54	23	26 33	15 56		
10	330	10.2		56.6	46	31.3 ¹³⁸	-18 07.5 ¹⁰²	20	19	42	19 08	1 08 37	31 52		
11	345	10.4	+10	57.4	61	04.1 ¹³⁸	-17 57.3 ¹⁰²	10 N	18 11	18 32	18 57	0 52 41	12 46 47		
12	0	10.5	+10	58.3	75	36.9 ¹³⁸	-17 46.9 ¹⁰⁴	0	18 03	18 24	18 48	0 37 45	12 59 44		
13	15	10.6	+10	59.2	90	09.8 ¹³⁹	36.5 ¹⁰⁴	10 S	17 55	16	41	22 48	13 12 40		
14	30	10.8	+11	00.1	104	42.8 ¹⁴⁰	26.0 ¹⁰⁵	20	47	09	35	0 06 52	26 36		
15	45	10.9		00.9	119	15.8 ¹⁴⁰	15.5 ¹⁰⁵	30	37	18 02	30	** ** *	42 32		
16	60	11.0		01.8	133	48.8 ¹⁴⁰	-17 04.8 ¹⁰⁷	35	32	17 58	27	** ** *	13 51 29		
17	75	11.2	+11	02.7	148	21.8 ¹⁴⁰	-16 54.1 ¹⁰⁷	40	17 26	17 54	18 25	** ** *	14 02 26		
18	90	11.3	+11	03.5	162	54.9 ¹⁴¹	-16 43.3 ¹⁰⁸	45	17 19	17 49	18 23	** ** *	14 14 23		
19	105	11.5		04.4	177	28.0 ¹⁴¹	32.4 ¹⁰⁹	50	11	44	21	** ** *	29 18		
20	120	11.6		05.3	192	01.2 ¹⁴²	21.5 ¹⁰⁹	52	07	42	21	23 56 73	36 16		
21	135	11.7		06.1	206	34.4 ¹⁴²	-16 10.4 ¹¹¹	54	17 03	39	20	49 75	43 14		
22	150	11.9		07.0	221	07.6 ¹⁴²	-15 59.3 ¹¹¹	56	16 58	36	20	41 79	14 52 11		
23	165	12.0		07.9	235	40.9 ¹⁴³	48.2 ¹¹¹	58	53	34	19	32 82	15 01 8		
24	180	12.1	+11	08.7	250	14.2 ¹⁴³	-15 36.9 ¹¹³	60 S	16 47	17 30	18 19	23 22 86	15 12 4		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 10 ^h 13 ^m 3		Mag: -4.7 PMG: 10 ^h 04 ^m		Mag: +1.2 PMG: 10 ^h 03 ^m		Mag: -2.2 PMG: 7 ^h 52 ^m		Mag: +0.7 PMG: 21 ^h 22 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	206	14.6	208	37.5	209	02.3	241	37.2	38	35.9
1	221	17.1	223	39.8	224	03.0	256	39.3	53	38.5
2	236	19.6	238	42.0	239	03.7	271	41.4	68	41.1
3	251	22.0	253	44.2	254	04.4	286	43.5	83	43.7
4	266	24.5	268	46.4	269	05.0	301	45.5	98	46.2
5	281	27.0	283	48.6	284	05.7	316	47.6	113	48.8
6	296	29.4	298	50.8	299	06.4	331	49.7	128	51.4
7	311	31.9	313	53.0	314	07.1	346	51.8	143	54.0
8	326	34.3	328	55.2	329	07.8	1	53.8	158	56.5
9	341	36.8	343	57.4	344	08.5	16	55.9	173	59.1
10	356	39.3	358	59.6	359	09.1	31	58.0	189	01.7
11	11	41.7	14	01.8	14	09.8	47	00.1	204	04.3
12	26	44.2	29	03.9	29	10.5	62	02.1	219	06.8
13	41	46.7	44	06.1	44	11.2	77	04.2	234	09.4
14	56	49.1	59	08.3	59	11.9	92	06.3	249	12.0
15	71	51.6	74	10.5	74	12.6	107	08.4	264	14.6
16	86	54.1	89	12.6	89	13.2	122	10.5	279	17.1
17	101	56.5	104	14.8	104	13.9	137	12.5	294	19.7
18	116	59.0	119	16.9	119	14.6	152	14.6	309	22.3
19	132	01.5	134	19.1	134	15.3	167	16.7	324	24.9
20	147	03.9	149	21.2	149	16.0	182	18.8	339	27.4
21	162	06.4	164	23.4	164	16.7	197	20.9	354	30.0
22	177	08.8	179	25.5	179	17.3	212	22.9	9	32.6
23	192	11.3	194	27.7	194	18.0	227	25.0	24	35.2
24	207	13.8	209	29.8	209	18.7	242	27.1	39	37.7
Dif	—		+22	-5	+7	+8	+21	+1	+26	0

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15'9 PMG: 11 ^h 59 ^m 1				Edad: 23 ^d 3 PHE { 4 ^h : 54'9 12 ^h : 55'1 20 ^h : 55'3 R°: 44 ^m															
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m			
0	180	12.1	+11	08.7	250	14.2	-15	36.9	60 N	2	39	3	44	4	32	3	16			
1	195	12.3		09.6	264	47.5 ¹⁴³		25.6 ¹¹³	58	2	56	3	54	38	3	07	7			
2	210	12.4		10.5	279	20.9 ¹⁴⁴		14.2 ¹¹⁴	56	3	10	4	03	44	2	59	10			
3	225	12.5		11.3	293	54.3 ¹⁴⁴	-15	02.7 ¹¹⁵	54	22	11	50		52	12	25	78			
4	240	12.7		12.2	308	27.7 ¹⁴⁴	-14	51.2 ¹¹⁵	52	32	18	55		45	15	31	73			
5	255	12.8	+11	13.1	323	01.2 ¹⁴⁵	-14	39.6 ¹¹⁶	50	3	41	4	24	4	59	2	40			
6	270	12.9	+11	13.9	337	34.7 ¹⁴⁵	-14	27.9 ¹¹⁷	45	4	00	4	37	5	08	2	27			
7	285	13.1		14.8	352	08.2 ¹⁴⁵		16.2 ¹¹⁷	40	14	48	16		16	25	12	56			
8	300	13.2		15.6	6	41.7 ¹⁴⁵	-14	04.4 ¹¹⁸	35	25	4	57	23	2	07	28	63			
9	315	13.4		16.5	21	15.3 ¹⁴⁶	-13	52.5 ¹¹⁹	30	35	5	04	29	1	59	31	56			
10	330	13.5		17.4	35	48.9 ¹⁴⁶		40.6 ¹¹⁹	20	4	50	16	39	45	36	23	51			
11	345	13.6	+11	18.2	50	22.5 ¹⁴⁶	-13	28.6 ¹²⁰	10 N	5	01	5	26	5	48	1	33			
12	0	13.8	+11	19.1	64	56.1 ¹⁴⁶	-13	16.5 ¹²¹	0	5	10	5	35	5	56	1	22			
13	15	13.9		20.0	79	29.8 ¹⁴⁷	-13	04.4 ¹²¹	10 S	18	42	6	04	1	10	48	13			
14	30	14.0		20.8	94	03.5 ¹⁴⁷	-12	52.2 ¹²²	20	24	50	12		0	58	52	35			
15	45	14.2		21.7	108	37.2 ¹⁴⁷		39.9 ¹²³	30	29	5	57	22	44	56	14	30			
16	60	14.3		22.5	123	10.9 ¹⁴⁷		27.6 ¹²³	35	32	6	01	27	36	59	20	28			
17	75	14.4	+11	23.4	137	44.7 ¹⁴⁸	-12	15.2 ¹²⁴	40	5	34	6	05	6	33	0	26			
18	90	14.6	+11	24.3	152	18.5 ¹⁴⁸	-12	02.8 ¹²⁴	45	5	36	6	10	6	40	0	15			
19	105	14.7		25.1	166	52.3 ¹⁴⁸	-11	50.3 ¹²⁵	50	38	15	49		0	02	71	47			
20	120	14.8		26.0	181	26.1 ¹⁴⁸		37.7 ¹²⁶	52	38	18	52		**	**	**	52			
21	135	14.9		26.8	195	59.9 ¹⁴⁸		25.1 ¹²⁶	54	39	20	6	57	**	**	**	14			
22	150	15.1		27.7	210	33.7 ¹⁴⁸	-11	12.4 ¹²⁷	56	40	23	7	01	**	**	**	15			
23	165	15.2		28.6	225	07.6 ¹⁴⁹	-10	59.7 ¹²⁷	58	40	26	07		**	**	**	09			
24	180	15.3	+11	29.4	239	41.5 ¹⁴⁹	-10	46.9 ¹²⁸	60 S	5	41	6	29	7	13	**	**			
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 10 ^h 09 ^m 4				Mag: -4.7 PMG: 10 ^h 01 ^m				Mag: +1.2 PMG: 10 ^h 02 ^m				Mag: -2.2 PMG: 7 ^h 49 ^m				Mag: +0.7 PMG: 21 ^h 18 ^m			
	hG ♈		hG ♀		hG ♂		hG ♎		hG ♊		hG ♋		hG ♏		hG ♐		hG ♑			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	207	13.8	209	29.8	+3	16.9	209	18.7	-2	09.9	242	27.1	-14	42.7	39	37.7	+7	45.2		
1	222	16.2	224	31.9		16.5	224	19.4		09.2	257	29.2		42.5	54	40.3		45.3		
2	237	18.7	239	34.1		16.0	239	20.1		08.4	272	31.3		42.4	69	42.9		45.3		
3	252	21.2	254	36.2		15.5	254	20.8		07.6	287	33.3		42.3	84	45.4		45.3		
4	267	23.6	269	38.3		15.1	269	21.4		06.8	302	35.4		42.2	99	48.0		45.4		
5	282	26.1	284	40.4	+3	14.6	284	22.1	-2	06.1	317	37.5	-14	42.1	114	50.6	+7	45.4		
6	297	28.6	299	42.5	+3	14.2	299	22.8	-2	05.3	332	39.6	-14	41.9	129	53.2	+7	45.5		
7	312	31.0	314	44.6		13.7	314	23.5		04.5	347	41.7		41.8	144	55.7		45.5		
8	327	33.5	329	46.7		13.3	329	24.2		03.7	2	43.7		41.7	159	58.3		45.5		
9	342	36.0	344	48.8		12.8	344	24.9		03.0	17	45.8		41.6	175	00.9		45.6		
10	357	38.4	359	50.9		12.4	359	25.5		02.2	32	47.9		41.5	190	03.5		45.6		
11	12	40.9	14	53.0	+3	11.9	14	26.2	-2	01.4	47	50.0	-14	41.3	205	06.0	+7	45.7		
12	27	43.3	29	55.1	+3	11.5	29	26.9	-2	00.6	62	52.1	-14	41.2	220	08.6	+7	45.7		
13	42	45.8	44	57.2		11.0	44	27.6	-1	59.9	77	54.2		41.1	235	11.2		45.7		
14	57	48.3	59	59.3		10.6	59	28.3		59.1	92	56.2		41.0	250	13.7		45.8		
15	72	50.7	75	01.4		10.1	74	29.0		58.3	107	58.3		40.9	265	16.3		45.8		
16	87	53.2	90	03.5		09.7	89	29.7		57.5	123	00.4		40.8	280	18.9		45.9		
17	102	55.7	105	05.5	+3	09.3	104	30.3	-1	56.8	138	02.5	-14	40.6	295	21.5	+7	45.9		
18	117	58.1	120	07.6	+3	08.8	119	31.0	-1	56.0	153	04.6	-14	40.5	310	24.0	+7	45.9		
19	133	00.6	135	09.7		08.4	134	31.7		55.2	168	06.7		40.4	325	26.6		46.0		
20	148	03.1	150	11.7		08.0	149	32.4		54.4	183	08.7		40.3	340	29.2		46.0		
21	163	05.5	165	13.8		07.5	164	33.1		53.6	198	10.8		40.2	355	31.7		46.1		
22	178	08.0	180	15.9		07.1	179	33.8		52.9	213	12.9		40.1	10	34.3		46.1		
23	193	10.4	195	17.9		06.7	194	34.5		52.1	228	15.0		39.9	25	36.9		46.1		
24	208	12.9	210	20.0	+3	06.3	209	35.1	-1	51.3	243	17.1	-14	39.8	40	39.5	+7	46.2		
Dif	—		+21		-4		+7		+8		+21		+1		+26		0			

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15°9			Edad: 24 ^d 3 PHE { 4 ^h : 55/4 12 ^h : 55/7 20 ^h : 55/9										
	PMG: 11 ^h 58 ^m 9			SD: 15°1 PMG: 8 ^h 16 ^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	180	15.3	+11 29.4	239	41.5	-10 46.9		60 N	19 31	20 19	21 26	3 20 2	13 29 86	
1	195	15.5	30.3	254	15.3 ¹⁴⁸	34.1 ¹²⁸		58	24	20 08	21 08	14 5	33 83	
2	210	15.6	31.1	268	49.2 ¹⁴⁹	21.2 ¹²⁹		56	17	19 59	20 53	09 8	37 80	
3	225	15.7	32.0	283	23.1 ¹⁴⁹	-10 08.2 ¹³⁰		54	12	51	41	04 11	41 77	
4	240	15.9	32.8	297	57.1 ¹⁵⁰	-9 55.2 ¹³⁰		52	06	43	30	3 00 13	44 75	
5	255	16.0	+11 33.7	312	31.0 ¹⁴⁹	-9 42.2 ¹³⁰		50	19 02	19 37	20 20	2 56 16	13 47 72	
6	270	16.1	+11 34.6	327	04.9 ¹⁴⁹	-9 29.0 ¹³²		45	18 52	19 23	20 01	2 48 20	13 54 67	
7	285	16.3	35.4	341	38.9 ¹⁵⁰	15.9 ¹³¹		40	44	12	19 46	41 24	13 59 63	
8	300	16.4	36.3	356	12.8 ¹⁴⁹	-9 02.7 ¹³²		35	37	19 03	34	35 27	14 03 60	
9	315	16.5	37.1	10	46.8 ¹⁵⁰	-8 49.4 ¹³³		30	30	18 55	25	30 30	07 57	
10	330	16.7	38.0	25	20.7 ¹⁴⁹	36.1 ¹³³		20	20	42	19 09	21 34	14 52	
11	345	16.8	+11 38.8	39	54.7 ¹⁵⁰	-8 22.7 ¹³⁴		10 N	18 11	18 32	18 57	2 13 39	14 20 48	
12	0	16.9	+11 39.7	54	28.7 ¹⁵⁰	-8 09.3 ¹³⁴		0	18 02	18 23	18 48	2 05 43	14 26 43	
13	15	17.0	40.5	69	02.6 ¹⁴⁹	-7 55.9 ¹³⁴		10 S	17 54	15	40	1 58 47	31 39	
14	30	17.2	41.4	83	36.6 ¹⁵⁰	42.4 ¹³⁵		20	45	08	33	50 51	37 35	
15	45	17.3	42.2	98	10.6 ¹⁵⁰	28.8 ¹³⁶		30	35	18 00	28	40 57	44 29	
16	60	17.4	43.1	112	44.6 ¹⁵⁰	15.2 ¹³⁶		35	30	17 55	25	35 59	48 26	
17	75	17.6	+11 43.9	127	18.5 ¹⁴⁹	-7 01.6 ¹³⁶		40	17 23	17 51	18 22	1 29 63	14 52 23	
18	90	17.7	+11 44.8	141	52.5 ¹⁵⁰	-6 47.9 ¹³⁷		45	17 16	17 46	18 20	1 22 66	14 57 19	
19	105	17.8	45.7	156	26.5 ¹⁵⁰	34.2 ¹³⁷		50	07	40	18	13 72	15 03 14	
20	120	17.9	46.5	171	00.4 ¹⁴⁹	20.4 ¹³⁸		52	17 03	38	17	09 74	05 13	
21	135	18.1	47.4	185	34.4 ¹⁵⁰	-6 06.6 ¹³⁸		54	16 58	35	16	04 77	08 11	
22	150	18.2	48.2	200	08.3 ¹⁴⁹	-5 52.8 ¹³⁸		56	53	32	15	1 00 79	11 8	
23	165	18.3	49.1	214	42.3 ¹⁵⁰	38.9 ¹³⁹		58	48	29	14	0 54 82	15 5	
24	180	18.4	+11 49.9	229	16.2 ¹⁴⁹	-5 24.9 ¹⁴⁰		60 S	16 42	17 25	18 14	0 48 86	15 19 2	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 10 ^h 05 ^m 5		Mag: -4.7 PMG: 9 ^h 57 ^m		Mag: +1.2 PMG: 10 ^h 01 ^m		Mag: -2.2 PMG: 7 ^h 46 ^m		Mag: +0.7 PMG: 21 ^h 14 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	208	12.9	210 20.0	+3 06.3	209 35.1	-1 51.3	243	17.1	-14 39.8	40 39.5	+7 46.2
1	223	15.4	225 22.0	05.8	224 35.8	50.5	258	19.2	39.7	55 42.0	46.2
2	238	17.8	240 24.1	05.4	239 36.5	49.8	273	21.3	39.6	70 44.6	46.3
3	253	20.3	255 26.1	05.0	254 37.2	49.0	288	23.3	39.5	85 47.2	46.3
4	268	22.8	270 28.1	04.6	269 37.9	48.2	303	25.4	39.3	100 49.7	46.3
5	283	25.2	285 30.2	+3 04.2	284 38.6	-1 47.4	318	27.5	-14 39.2	115 52.3	+7 46.4
6	298	27.7	300 32.2	+3 03.7	299 39.2	-1 46.7	333	29.6	-14 39.1	130 54.9	+7 46.4
7	313	30.2	315 34.2	03.3	314 39.9	45.9	348	31.7	39.0	145 57.4	46.4
8	328	32.6	330 36.2	02.9	329 40.6	45.1	3	33.8	38.9	161 00.0	46.5
9	343	35.1	345 38.2	02.5	344 41.3	44.3	18	35.9	38.8	176 02.6	46.5
10	358	37.6	0 40.3	02.1	359 42.0	43.6	33	38.0	38.6	191 05.1	46.6
11	13	40.0	15 42.3	+3 01.7	14 42.7	-1 42.8	48	40.0	-14 38.5	206 07.7	+7 46.6
12	28	42.5	30 44.3	+3 01.3	29 43.4	-1 42.0	63	42.1	-14 38.4	221 10.3	+7 46.6
13	43	44.9	45 46.3	00.9	44 44.0	41.2	78	44.2	38.3	236 12.9	46.7
14	58	47.4	60 48.3	00.5	59 44.7	40.4	93	46.3	38.2	251 15.4	46.7
15	73	49.9	75 50.3	+3 00.1	74 45.4	39.7	108	48.4	38.1	266 18.0	46.7
16	88	52.3	90 52.3	+2 59.7	89 46.1	38.9	123	50.5	37.9	281 20.6	46.8
17	103	54.8	105 54.3	+2 59.3	104 46.8	-1 38.1	138	52.6	-14 37.8	296 23.1	+7 46.8
18	118	57.3	120 56.3	+2 58.9	119 47.5	-1 37.3	153	54.7	-14 37.7	311 25.7	+7 46.9
19	133	59.7	135 58.2	58.5	134 48.2	36.6	168	56.8	37.6	326 28.3	46.9
20	149	02.2	151 00.2	58.2	149 48.9	35.8	183	58.8	37.5	341 30.8	46.9
21	164	04.7	166 02.2	57.8	164 49.5	35.0	199	00.9	37.4	356 33.4	47.0
22	179	07.1	181 04.2	57.4	179 50.2	34.2	214	03.0	37.2	11 36.0	47.0
23	194	09.6	196 06.1	57.0	194 50.9	33.5	229	05.1	37.1	26 38.5	47.1
24	209	12.1	211 08.1	+2 56.6	209 51.6	-1 32.7	244	07.2	-14 37.0	41 41.1	+7 47.1
Dif	—		+20	-4	+7	+8	+21	+1		+26	0

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna									
	SD: 15°9' PMG: 11 ^h 58 ^m 7				Edad: 25 ^d 3 PHE { 4 ^h : 56°1' 12 ^h : 56°3' 20 ^h : 56°6' PMG: 8 ^h 59 ^m R°: 43 ^m																			
	hG ☉	Dec			hG ☾	Dif				Náutico	Civil		Hora	R°	Hora	R°								
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m						
0	180	18.4	+11	49.9	229	16.2	-5	24.9	60 N	2	30	3	37	4	26	3	22	2						
1	195	18.6		50.8	243	50.1 ¹⁴⁹	-5	11.0 ¹³⁹	58	2	49		48	33	19	6	56	85						
2	210	18.7		51.6	258	24.0 ¹⁴⁹	-4	57.0 ¹⁴⁰	56	3	04	3	58	39	17	8	57	82						
3	225	18.8		52.5	272	57.9 ¹⁴⁹		43.0 ¹⁴⁰	54		16	4	06	45	15	11	58	79						
4	240	19.0		53.3	287	31.8 ¹⁴⁹		28.9 ¹⁴¹	52		27		14	50	13	13	59	76						
5	255	19.1	+11	54.2	302	05.7 ¹⁴⁹	-4	14.8 ¹⁴¹	50	3	37	4	20	4	55	3	12	14						
6	270	19.2	+11	55.0	316	39.5 ¹⁴⁸	-4	00.7 ¹⁴¹	45	3	56	4	34	5	05	3	08	19						
7	285	19.3		55.8	331	13.4 ¹⁴⁹	-3	46.5 ¹⁴²	40	4	11		45	13	05	23	02	66						
8	300	19.5		56.7	345	47.2 ¹⁴⁸		32.3 ¹⁴²	35		23	4	54	21	02	27	03	62						
9	315	19.6		57.5	0	21.0 ¹⁴⁸		18.1 ¹⁴²	30		33	5	02	27	3	00	29	04	59					
10	330	19.7		58.4	14	54.8 ¹⁴⁸	-3	03.8 ¹⁴³	20	4	48		15	37	2	55	35	06	53					
11	345	19.8	+11	59.2	29	28.5 ¹⁴⁷	-2	49.5 ¹⁴³	10 N	5	00	5	25	5	47	2	52	39	15	08	48			
12	0	20.0	+12	00.1	44	02.3 ¹⁴⁸	-2	35.2 ¹⁴³	0	5	10	5	34	5	55	2	48	44	15	09	44			
13	15	20.1		00.9	58	36.0 ¹⁴⁷		20.8 ¹⁴⁴	10 S		18		42	6	04	45	48		10	40				
14	30	20.2		01.8	73	09.7 ¹⁴⁷	-2	06.5 ¹⁴³	20		24		50	13	41	53		12	35					
15	45	20.3		02.6	87	43.3 ¹⁴⁶	-1	52.1 ¹⁴⁴	30		30	5	58	23	37	58		13	30					
16	60	20.5		03.5	102	17.0 ¹⁴⁷		37.6 ¹⁴⁵	35		33	6	03	29	34	61		14	27					
17	75	20.6	+12	04.3	116	50.6 ¹⁴⁶	-1	23.2 ¹⁴⁴	40	5	36	6	07	6	35	2	32	64	15	15	24			
18	90	20.7	+12	05.1	131	24.2 ¹⁴⁶	-1	08.7 ¹⁴⁵	45	5	38	6	12	6	43	2	28	69	15	16	20			
19	105	20.8		06.0	145	57.7 ¹⁴⁵	-0	54.2 ¹⁴⁵	50		41		18	52	25	73		17	15					
20	120	20.9		06.8	160	31.2 ¹⁴⁵		39.7 ¹⁴⁵	52		41		21	6	56	23	75		18	13				
21	135	21.1		07.7	175	04.7 ¹⁴⁵		25.2 ¹⁴⁵	54		42		24	7	00	21	78		19	10				
22	150	21.2		08.5	189	38.2 ¹⁴⁵	-0	10.7 ¹⁴⁵	56		43		27	05	19	81		19	9					
23	165	21.3		09.4	204	11.6 ¹⁴⁴	+0	03.9 ¹⁴⁶	58		44		30	11	16	84		20	6					
24	180	21.4	+12	10.2	218	45.0 ¹⁴⁴	+0	18.5 ¹⁴⁶	60 S	5	45	6	34	7	17	2	14	87	15	21	2			
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO							
	PMG: 10 ^h 01 ^m 5				Mag: -4.7 PMG: 9 ^h 54 ^m				Mag: +1.2 PMG: 10 ^h 00 ^m				Mag: -2.2 PMG: 7 ^h 42 ^m				Mag: +0.7 PMG: 21 ^h 10 ^m							
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	209	12.1	211	08.1	+2	56.6	209	51.6	-1	32.7	244	07.2	-14	37.0	41	41.1	+7	47.1						
1	224	14.5	226	10.1		56.2	224	52.3		31.9	259	09.3		36.9	56	43.7		47.1						
2	239	17.0	241	12.0		55.9	239	53.0		31.1	274	11.4		36.8	71	46.2		47.2						
3	254	19.4	256	14.0		55.5	254	53.7		30.4	289	13.5		36.7	86	48.8		47.2						
4	269	21.9	271	15.9		55.1	269	54.3		29.6	304	15.6		36.6	101	51.4		47.2						
5	284	24.4	286	17.9	+2	54.7	284	55.0	-1	28.8	319	17.7	-14	36.4	116	53.9	+7	47.3						
6	299	26.8	301	19.8	+2	54.4	299	55.7	-1	28.0	334	19.8	-14	36.3	131	56.5	+7	47.3						
7	314	29.3	316	21.8		54.0	314	56.4		27.3	349	21.8		36.2	146	59.1		47.3						
8	329	31.8	331	23.7		53.6	329	57.1		26.5	4	23.9		36.1	162	01.6		47.4						
9	344	34.2	346	25.6		53.3	344	57.8		25.7	19	26.0		36.0	177	04.2		47.4						
10	359	36.7	1	27.6		52.9	359	58.5		24.9	34	28.1		35.9	192	06.8		47.5						
11	14	39.2	16	29.5	+2	52.6	14	59.2	-1	24.1	49	30.2	-14	35.7	207	09.3	+7	47.5						
12	29	41.6	31	31.4	+2	52.2	29	59.8	-1	23.4	64	32.3	-14	35.6	222	11.9	+7	47.5						
13	44	44.1	46	33.3		51.8	45	00.5		22.6	79	34.4		35.5	237	14.5		47.6						
14	59	46.5	61	35.3		51.5	60	01.2		21.8	94	36.5		35.4	252	17.0		47.6						
15	74	49.0	76	37.2		51.1	75	01.9		21.0	109	38.6		35.3	267	19.6		47.6						
16	89	51.5	91	39.1		50.8	90	02.6		20.3	124	40.7		35.2	282	22.1		47.7						
17	104	53.9	106	41.0	+2	50.4	105	03.3	-1	19.5	139	42.8	-14	35.1	297	24.7	+7	47.7						
18	119	56.4	121	42.9	+2	50.1	120	04.0	-1	18.7	154	44.9	-14	34.9	312	27.3	+7	47.7						
19	134	58.9	136	44.8		49.7	135	04.7		17.9	169	47.0		34.8	327	29.8		47.8						
20	150	01.3	151	46.7		49.4	150	05.3		17.2	184	49.1		34.7	342	32.4		47.8						
21	165	03.8	166	48.6		49.1	165	06.0		16.4	199	51.2		34.6	357	35.0		47.9						
22	180	06.3	181	50.5		48.7	180	06.7		15.6	214	53.3		34.5	12	37.5		47.9						
23	195	08.7	196	52.4		48.4	195	07.4		14.8	229	55.3		34.4	27	40.1		47.9						
24	210	11.2	211	54.3	+2	48.0	210	08.1	-1	14.1	244	57.4	-14	34.3	42	42.7	+7	48.0						
Dif	—				+19				+7				+21				+1				+26			
					-4				+8												0			

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15°9 PMG: 11 ^h 58 ^m 5			Edad: 26 ^d 3 PHE { 4 ^h : 56°9 12 ^h : 57°1 20 ^h : 57°4 PMG: 9 ^h 42 ^m R°: 46 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	180	21.4	+12 10.2	218	45.0	+0 18.5	60 N	19 36	20 25	21 34	3 24	3	16 23	93	
1	195	21.6	11.0	233	18.4 ¹⁴⁴	33.1 ¹⁴⁶	58	28	13	21 15	25 5		21 89		
2	210	21.7	11.9	247	51.7 ¹⁴³	+0 47.7 ¹⁴⁶	56	21	20 03	20 59	25 9		19 86		
3	225	21.8	12.7	262	25.0 ¹⁴³	+1 02.3 ¹⁴⁶	54	15	19 55	46	26 11		17 83		
4	240	21.9	13.6	276	58.2 ¹⁴²	17.0 ¹⁴⁷	52	10	47	34	26 14		15 80		
5	255	22.0	+12 14.4	291	31.4 ¹⁴²	+1 31.6 ¹⁴⁶	50	19 05	19 40	20 24	3 26	16	16 14	77	
6	270	22.2	+12 15.2	306	04.6 ¹⁴²	+1 46.3 ¹⁴⁷	45	18 54	19 26	20 04	3 27	21	16 10	73	
7	285	22.3	16.1	320	37.7 ¹⁴¹	+2 01.0 ¹⁴⁷	40	46	14	19 49	28 24		08 68		
8	300	22.4	16.9	335	10.7 ¹⁴⁰	15.6 ¹⁴⁶	35	38	19 05	36	29 27		05 65		
9	315	22.5	17.8	349	43.8 ¹⁴¹	30.3 ¹⁴⁷	30	32	18 57	26	29 31		16 03	61	
10	330	22.6	18.6	4	16.7 ¹³⁹	45.0 ¹⁴⁷	20	20	43	19 10	30 36		15 59	56	
11	345	22.8	+12 19.4	18	49.7 ¹⁴⁰	+2 59.7 ¹⁴⁷	10 N	18 11	18 32	18 58	3 31	41	15 56	51	
12	0	22.9	+12 20.3	33	22.6 ¹³⁹	+3 14.4 ¹⁴⁷	0	18 02	18 23	18 48	3 32	45	15 53	46	
13	15	23.0	21.1	47	55.4 ¹³⁸	29.1 ¹⁴⁷	10 S	17 53	14	39	33 49		50 42		
14	30	23.1	22.0	62	28.2 ¹³⁸	43.8 ¹⁴⁷	20	44	18 06	32	34 54		47 37		
15	45	23.2	22.8	77	00.9 ¹³⁷	+3 58.5 ¹⁴⁷	30	33	17 58	26	35 60		43 32		
16	60	23.4	23.6	91	33.6 ¹³⁷	+4 13.3 ¹⁴⁸	35	27	53	23	35 63		41 29		
17	75	23.5	+12 24.5	106	06.2 ¹³⁶	+4 28.0 ¹⁴⁷	40	17 20	17 48	18 20	3 36	67	15 39	25	
18	90	23.6	+12 25.3	120	38.7 ¹³⁵	+4 42.7 ¹⁴⁷	45	17 13	17 43	18 17	3 37	71	15 36	21	
19	105	23.7	26.1	135	11.3 ¹³⁶	+4 57.4 ¹⁴⁷	50	17 03	36	14	38 76		32 17		
20	120	23.8	27.0	149	43.7 ¹³⁴	+5 12.1 ¹⁴⁷	52	16 59	34	13	38 79		31 14		
21	135	24.0	27.8	164	16.1 ¹³⁴	26.7 ¹⁴⁶	54	54	31	12	39 81		29 12		
22	150	24.1	28.6	178	48.4 ¹³³	41.4 ¹⁴⁷	56	49	27	11	40 83		28 9		
23	165	24.2	29.5	193	20.7 ¹³³	+5 56.1 ¹⁴⁷	58	43	24	10	40 87		26 6		
24	180	24.3	+12 30.3	207	52.9 ¹³²	+6 10.8 ¹⁴⁷	60 S	16 36	17 20	18 09	3 41	91	15 23	3	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 9 ^h 57 ^m 6		Mag: -4.7 PMG: 9 ^h 51 ^m		Mag: +1.2 PMG: 9 ^h 59 ^m		Mag: -2.2 PMG: 7 ^h 39 ^m		Mag: +0.7 PMG: 21 ^h 06 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	210	11.2	211 54.3	+2 48.0	210 08.1	-1 14.1	244 57.4	-14 34.3	42 42.7	+7 48.0
1	225	13.7	226 56.1	47.7	225 08.8	13.3	259 59.5	34.1	57 45.2	48.0
2	240	16.1	241 58.0	47.4	240 09.5	12.5	275 01.6	34.0	72 47.8	48.0
3	255	18.6	256 59.9	47.0	255 10.2	11.7	290 03.7	33.9	87 50.3	48.1
4	270	21.0	272 01.8	46.7	270 10.8	11.0	305 05.8	33.8	102 52.9	48.1
5	285	23.5	287 03.6	+2 46.4	285 11.5	-1 10.2	320 07.9	-14 33.7	117 55.5	+7 48.1
6	300	26.0	302 05.5	+2 46.1	300 12.2	-1 09.4	335 10.0	-14 33.6	132 58.0	+7 48.2
7	315	28.4	317 07.4	45.7	315 12.9	08.6	350 12.1	33.5	148 00.6	48.2
8	330	30.9	332 09.2	45.4	330 13.6	07.8	5 14.2	33.3	163 03.2	48.2
9	345	33.4	347 11.1	45.1	345 14.3	07.1	20 16.3	33.2	178 05.7	48.3
10	0	35.8	2 12.9	44.8	0 15.0	06.3	35 18.4	33.1	193 08.3	48.3
11	15	38.3	17 14.8	+2 44.5	15 15.7	-1 05.5	50 20.5	-14 33.0	208 10.8	+7 48.4
12	30	40.8	32 16.6	+2 44.1	30 16.4	-1 04.7	65 22.6	-14 32.9	223 13.4	+7 48.4
13	45	43.2	47 18.5	43.8	45 17.0	04.0	80 24.7	32.8	238 16.0	48.4
14	60	45.7	62 20.3	43.5	60 17.7	03.2	95 26.8	32.7	253 18.5	48.5
15	75	48.1	77 22.2	43.2	75 18.4	02.4	110 28.9	32.5	268 21.1	48.5
16	90	50.6	92 24.0	42.9	90 19.1	01.6	125 31.0	32.4	283 23.7	48.5
17	105	53.1	107 25.8	+2 42.6	105 19.8	-1 00.9	140 33.1	-14 32.3	298 26.2	+7 48.6
18	120	55.5	122 27.6	+2 42.3	120 20.5	-1 00.1	155 35.2	-14 32.2	313 28.8	+7 48.6
19	135	58.0	137 29.5	42.0	135 21.2	-0 59.3	170 37.3	32.1	328 31.3	48.6
20	151	00.5	152 31.3	41.7	150 21.9	58.5	185 39.4	32.0	343 33.9	48.7
21	166	02.9	167 33.1	41.4	165 22.6	57.8	200 41.5	31.9	358 36.5	48.7
22	181	05.4	182 34.9	41.1	180 23.2	57.0	215 43.6	31.8	13 39.0	48.7
23	196	07.9	197 36.7	40.8	195 23.9	56.2	230 45.7	31.6	28 41.6	48.8
24	211	10.3	212 38.5	+2 40.5	210 24.6	-0 55.4	245 47.8	-14 31.5	43 44.1	+7 48.8
Dif	—		+18	-3	+7	+8	+21	+1	+26	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 9 PMG: 11 ^h 58 ^m 3			Edad: 27 ^d 3 PHE { SD: 15 ^h 7 PMG: 10 ^h 28 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec		Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	h	m	h	m	h	m	m
0	180	24.3	+12 30.3	207	52.9	+6 10.8	60 N	2 22	3 31	4 20		3 27	3	17 56 99
1	195	24.4		222	25.0 ¹³¹	25.4 ¹⁴⁶	58	41	43	28		30	8	50 94
2	210	24.5		236	57.1 ¹³¹	40.0 ¹⁴⁶	56	2 57	3 53	35		34	10	45 90
3	225	24.7		251	29.1 ¹³⁰	+6 54.7 ¹⁴⁷	54	3 10	4 01	41		37	13	40 87
4	240	24.8		266	01.1 ¹³⁰	+7 09.3 ¹⁴⁶	52	22	09	46		40	15	35 84
5	255	24.9	+12 34.5	280	32.9 ¹²⁸	+7 23.9 ¹⁴⁶	50	3 32	4 16	4 51		3 42	18	17 31 82
6	270	25.0	+12 35.3	295	04.7 ¹²⁸	+7 38.4 ¹⁴⁵	45	3 52	4 30	5 02		3 48	23	17 23 76
7	285	25.1		309	36.5 ¹²⁸	+7 53.0 ¹⁴⁶	40	4 07	42	11		52	27	16 71
8	300	25.2		324	08.1 ¹²⁶	+8 07.5 ¹⁴⁵	35	20	4 52	18		3 56	31	10 67
9	315	25.4		338	39.7 ¹²⁶	22.0 ¹⁴⁵	30	30	5 00	25		4 00	34	17 04 65
10	330	25.5		353	11.2 ¹²⁵	36.5 ¹⁴⁵	20	47	13	36		06	39	16 55 59
11	345	25.6	+12 39.5	7	42.7 ¹²⁵	+8 50.9 ¹⁴⁴	10 N	4 59	5 24	5 46		4 12	43	16 47 54
12	0	25.7	+12 40.3	22	14.1 ¹²⁴	+9 05.4 ¹⁴⁵	0	5 09	5 34	5 55		4 17	48	16 39 50
13	15	25.8		36	45.3 ¹²²	19.8 ¹⁴⁴	10 S	18	42	6 04		22	53	32 45
14	30	25.9		51	16.6 ¹²³	34.2 ¹⁴⁴	20	25	5 51	13		28	57	24 41
15	45	26.0		65	47.7 ¹²¹	+9 48.5 ¹⁴³	30	31	6 00	24		35	62	15 35
16	60	26.2		80	18.7 ¹²⁰	+10 02.8 ¹⁴³	35	35	04	30		38	67	10 32
17	75	26.3	+12 44.4	94	49.7 ¹²⁰	+10 17.1 ¹⁴³	40	5 38	6 09	6 37		4 43	70	16 04 29
18	90	26.4	+12 45.2	109	20.6 ¹¹⁹	+10 31.3 ¹⁴²	45	5 40	6 15	6 45		4 48	74	15 57 25
19	105	26.5		123	51.4 ¹¹⁸	45.5 ¹⁴²	50	43	21	55		54	80	49 20
20	120	26.6		138	22.1 ¹¹⁷	+10 59.7 ¹⁴²	52	45	24	6 59		4 57	82	45 17
21	135	26.7		152	52.8 ¹¹⁷	+11 13.8 ¹⁴¹	54	46	27	7 04		5 00	85	41 15
22	150	26.8		167	23.3 ¹¹⁵	27.9 ¹⁴¹	56	47	30	09		03	89	37 11
23	165	26.9		181	53.8 ¹¹⁵	41.9 ¹⁴⁰	58	48	34	15		07	92	32 8
24	180	27.1	+12 50.2	196	24.1 ¹¹³	+11 55.9 ¹⁴⁰	60 S	5 49	6 38	7 22		5 12	95	15 26 4

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG 9 ^h 53 ^m 7		Mag: -4.7 PMG: 9 ^h 48 ^m		Mag: +1.2 PMG: 9 ^h 58 ^m		Mag: -2.2 PMG: 7 ^h 36 ^m		Mag: +0.7 PMG: 21 ^h 01 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	211	10.3	212	38.5	210	24.6	-0 55.4	245	47.8	43 44.1	+7 48.8
1	226	12.8	227	40.3	225	25.3	54.7	260	49.9	58 46.7	48.8
2	241	15.3	242	42.1	240	26.0	53.9	275	52.0	73 49.3	48.9
3	256	17.7	257	43.9	255	26.7	53.1	290	54.1	88 51.8	48.9
4	271	20.2	272	45.7	270	27.4	52.3	305	56.2	103 54.4	48.9
5	286	22.6	287	47.5	285	28.1	-0 51.5	320	58.3	118 56.9	+7 49.0
6	301	25.1	302	49.3	300	28.8	-0 50.8	336	00.4	133 59.5	+7 49.0
7	316	27.6	317	51.1	315	29.5	50.0	351	02.5	149 02.1	49.0
8	331	30.0	332	52.9	330	30.1	49.2	6 04.6	30.6	164 04.6	49.1
9	346	32.5	347	54.6	345	30.8	48.4	21 06.7	30.5	179 07.2	49.1
10	1	35.0	2 56.4	37.7	0 31.5	47.7	36 08.8	30.4	30.4	194 09.7	49.1
11	16	37.4	17 58.2	+2 37.4	15 32.2	-0 46.9	51 10.9	-14 30.3	30.3	209 12.3	+7 49.2
12	31	39.9	33 00.0	+2 37.1	30 32.9	-0 46.1	66 13.0	-14 30.2	30.2	224 14.8	+7 49.2
13	46	42.4	48 01.7	36.8	45 33.6	45.3	81 15.1	30.1	30.1	239 17.4	49.2
14	61	44.8	63 03.5	36.6	60 34.3	44.6	96 17.2	30.0	30.0	254 20.0	49.3
15	76	47.3	78 05.2	36.3	75 35.0	43.8	111 19.4	29.8	29.8	269 22.5	49.3
16	91	49.7	93 07.0	36.0	90 35.7	43.0	126 21.5	29.7	29.7	284 25.1	49.3
17	106	52.2	108 08.8	+2 35.8	105 36.3	-0 42.2	141 23.6	-14 29.6	29.6	299 27.6	+7 49.4
18	121	54.7	123 10.5	+2 35.5	120 37.0	-0 41.5	156 25.7	-14 29.5	29.5	314 30.2	+7 49.4
19	136	57.1	138 12.3	35.3	135 37.7	40.7	171 27.8	29.4	29.4	329 32.7	49.4
20	151	59.6	153 14.0	35.0	150 38.4	39.9	186 29.9	29.3	29.3	344 35.3	49.5
21	167	02.1	168 15.7	34.7	165 39.1	39.1	201 32.0	29.2	29.2	359 37.9	49.5
22	182	04.5	183 17.5	34.5	180 39.8	38.4	216 34.1	29.1	29.1	14 40.4	49.5
23	197	07.0	198 19.2	34.2	195 40.5	37.6	231 36.2	29.0	29.0	29 43.0	49.6
24	212	09.5	213 20.9	+2 34.0	210 41.2	-0 36.8	246 38.3	-14 28.8	28.8	44 45.5	+7 49.6
Dif	—		+18	-3	+7	+8	+21	+1		+26	0

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'9 PMG: 11 ^h 58 ^m 1			Edad: 28 ^d 3 PHE { 4 ^h : 58'4 12 ^h : 58'6 20 ^h : 58'8 R°: 53 ^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	27.1	+12 50.2	196	24.1	+11 55.9		60 N	19 41	20 31	21 43	3 30 6	19 35 103	
1	195	27.2		210	54.4 ¹¹³	+12 09.9 ¹⁴⁰		58	33	19	22	38 10	24 98	
2	210	27.3	51.9	225	24.6 ¹¹²	23.8 ¹³⁹		56	25	20 08	21 05	44 14	15 93	
3	225	27.4	52.7	239	54.7 ¹¹¹	37.6 ¹³⁸		54	19	19 59	20 51	50 17	19 07 89	
4	240	27.5	53.5	254	24.7 ¹¹⁰	+12 51.4 ¹³⁸		52	13	51	39	3 55 20	18 59 87	
5	255	27.6	+12 54.3	268	54.6 ¹⁰⁹	+13 05.2 ¹³⁸		50	19 08	19 44	20 28	4 00 22	18 53 84	
6	270	27.7	+12 55.1	283	24.5 ¹⁰⁹	+13 18.9 ¹³⁷		45	18 57	19 29	20 07	4 11 27	18 39 78	
7	285	27.8	56.0	297	54.2 ¹⁰⁷	32.5 ¹³⁶		40	48	16	19 51	19 32	27 74	
8	300	28.0	56.8	312	23.8 ¹⁰⁶	46.1 ¹³⁶		35	40	19 06	38	27 35	17 71	
9	315	28.1	57.6	326	53.3 ¹⁰⁵	+13 59.6 ¹³⁵		30	33	18 58	28	34 38	18 09 67	
10	330	28.2	58.4	341	22.8 ¹⁰⁵	+14 13.1 ¹³⁵		20	21	44	19 11	45 43	17 54 63	
11	345	28.3	+12 59.3	355	52.1 ¹⁰³	+14 26.5 ¹³⁴		10 N	18 11	18 33	18 58	4 55 48	17 41 59	
12	0	28.4	+13 00.1	10	21.4 ¹⁰³	+14 39.8 ¹³³		0	18 01	18 23	18 47	5 05 52	17 29 55	
13	15	28.5	00.9	24	50.5 ¹⁰¹	+14 53.0 ¹³²		10 S	17 52	14	39	15 56	17 51	
14	30	28.6	01.7	39	19.6 ¹⁰¹	+15 06.2 ¹³²		20	42	18 05	31	25 61	17 05 46	
15	45	28.7	02.5	53	48.5 ⁹⁹	19.4 ¹³²		30	31	17 56	24	37 67	16 50 41	
16	60	28.8	03.3	68	17.3 ⁹⁸	32.4 ¹³⁰		35	25	51	21	45 69	42 38	
17	75	28.9	+13 04.2	82	46.1 ⁹⁸	+15 45.4 ¹³⁰		40	17 18	17 45	18 17	5 53 73	16 33 34	
18	90	29.0	+13 05.0	97	14.7 ⁹⁶	+15 58.3 ¹²⁹		45	17 09	17 40	18 14	6 02 78	16 22 30	
19	105	29.2	05.8	111	43.2 ⁹⁵	+16 11.1 ¹²⁸		50	16 59	33	11	14 83	09 25	
20	120	29.3	06.6	126	11.7 ⁹⁵	23.9 ¹²⁸		52	55	30	09	19 86	16 02 23	
21	135	29.4	07.4	140	40.0 ⁹³	36.5 ¹²⁶		54	50	27	08	25 89	15 56 19	
22	150	29.5	08.3	155	08.2 ⁹²	+16 49.1 ¹²⁶		56	44	23	07	32 92	48 16	
23	165	29.6	09.1	169	36.3 ⁹¹	+17 01.6 ¹²⁵		58	38	19	05	39 97	40 12	
24	180	29.7	+13 09.9	184	04.3 ⁹⁰	+17 14.0 ¹²⁴		60 S	16 31	17 15	18 04	6 47 102	15 30 7	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 9 ^h 49 ^m 8		Mag: -4.7 PMG: 9 ^h 45 ^m			Mag: +1.2 PMG: 9 ^h 57 ^m			Mag: -2.2 PMG: 7 ^h 32 ^m			Mag: +0.7 PMG: 20 ^h 57 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	°	'	°	°	'	°	°	'	
0	212	09.5	213 20.9	+2 34.0	210 41.2	-0 36.8		246 38.3	-14 28.8		44 45.5	+7 49.6		
1	227	11.9	228 22.7	33.7	225 41.9	36.0		261 40.4	28.7		59 48.1	49.6		
2	242	14.4	243 24.4	33.5	240 42.6	35.3		276 42.5	28.6		74 50.6	49.7		
3	257	16.9	258 26.1	33.2	255 43.3	34.5		291 44.6	28.5		89 53.2	49.7		
4	272	19.3	273 27.8	33.0	270 43.9	33.7		306 46.7	28.4		104 55.8	49.7		
5	287	21.8	288 29.6	+2 32.7	285 44.6	-0 32.9		321 48.8	-14 28.3		119 58.3	+7 49.8		
6	302	24.2	303 31.3	+2 32.5	300 45.3	-0 32.2		336 50.9	-14 28.2		135 00.9	+7 49.8		
7	317	26.7	318 33.0	32.3	315 46.0	31.4		351 53.1	28.1		150 03.4	49.8		
8	332	29.2	333 34.7	32.0	330 46.7	30.6		6 55.2	28.0		165 06.0	49.9		
9	347	31.6	348 36.4	31.8	345 47.4	29.8		21 57.3	27.8		180 08.5	49.9		
10	2 34.1	3 38.1	31.6	0 48.1	29.1	36 59.4		36 59.4	27.7		195 11.1	49.9		
11	17 36.6	18 39.8	+2 31.3	15 48.8	-0 28.3	52 01.5		52 01.5	-14 27.6		210 13.6	+7 50.0		
12	32 39.0	33 41.5	+2 31.1	30 49.5	-0 27.5	67 03.6		67 03.6	-14 27.5		225 16.2	+7 50.0		
13	47 41.5	48 43.2	30.9	45 50.2	26.7	82 05.7		82 05.7	27.4		240 18.7	50.0		
14	62 44.0	63 44.9	30.6	60 50.9	26.0	97 07.8		97 07.8	27.3		255 21.3	50.0		
15	77 46.4	78 46.5	30.4	75 51.5	25.2	112 09.9		112 09.9	27.2		270 23.9	50.1		
16	92 48.9	93 48.2	30.2	90 52.2	24.4	127 12.0		127 12.0	27.1		285 26.4	50.1		
17	107 51.4	108 49.9	+2 30.0	105 52.9	-0 23.6	142 14.1		142 14.1	-14 27.0		300 29.0	+7 50.1		
18	122 53.8	123 51.6	+2 29.8	120 53.6	-0 22.8	157 16.3		157 16.3	-14 26.9		315 31.5	+7 50.2		
19	137 56.3	138 53.3	29.5	135 54.3	22.1	172 18.4		172 18.4	26.7		330 34.1	50.2		
20	152 58.7	153 54.9	29.3	150 55.0	21.3	187 20.5		187 20.5	26.6		345 36.6	50.2		
21	168 01.2	168 56.6	29.1	165 55.7	20.5	202 22.6		202 22.6	26.5		0 39.2	50.3		
22	183 03.7	183 58.3	28.9	180 56.4	19.7	217 24.7		217 24.7	26.4		15 41.7	50.3		
23	198 06.1	198 59.9	28.7	195 57.1	19.0	232 26.8		232 26.8	26.3		30 44.3	50.3		
24	213 08.6	214 01.6	+2 28.5	210 57.8	-0 18.2	247 28.9		247 28.9	-14 26.2		45 46.8	+7 50.4		
Dif	—	+17	-2	+7	+8	+21		+21	+1		+26	0		

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15 ^h 9 PMG: 11 ^h 57 ^m 9			Edad: 29 ^d 3 PHE { 4 ^h : 59 ^h 0 12 ^h : 59 ^h 2 20 ^h : 59 ^h 3 PMG: 12 ^h 10 ^m R°: 58 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	h	m	h	m	h	m	m				
0	180	29.7	+13	09.9	184	04.3	+17	14.0	60 N	2 12	3 24	4 14	3 36	11	21 18 104			
1	195	29.8		10.7	198	32.2	89	26.4	58	34	37	23	48	16	21 02 97			
2	210	29.9		11.5	213	00.0	88	38.6	56	2 51	47	30	3 58	20	20 48 93			
3	225	30.0		12.3	227	27.7	87	50.7	54	3 05	3 56	36	4 07	24	36 89			
4	240	30.1		13.1	241	55.3	86	02.8	52	17	4 05	42	15	27	26 86			
5	255	30.2	+13	14.0	256	22.7	84	14.8	50	3 27	4 12	4 47	4 22	30	20 17 83			
6	270	30.3	+13	14.8	270	50.1	84	26.6	45	3 48	4 27	4 59	4 38	34	19 57 78			
7	285	30.4		15.6	285	17.3	82	38.4	40	4 04	39	5 08	4 51	38	41 75			
8	300	30.5		16.4	299	44.5	82	50.0	35	17	49	16	5 02	42	28 72			
9	315	30.7		17.2	314	11.5	80	01.6	30	28	4 58	23	12	44	19 16 70			
10	330	30.8		18.0	328	38.4	79	13.0	20	45	5 12	35	28	49	18 57 65			
11	345	30.9	+13	18.8	343	05.3	79	24.4	10 N	4 58	5 23	5 45	5 43	53	18 40 61			
12	0	31.0	+13	19.6	357	32.0	77	35.6	0	5 09	5 33	5 55	5 57	57	18 24 58			
13	15	31.1		20.5	11	58.6	76	46.7	10 S	18	42	6 04	6 11	61	18 08 55			
14	30	31.2		21.3	26	25.1	75	57.8	20	25	5 51	14	26	65	17 51 52			
15	45	31.3		22.1	40	51.4	73	08.7	30	33	6 01	25	44	69	31 48			
16	60	31.4		22.9	55	17.7	73	19.4	35	36	6 06	32	6 54	72	20 46			
17	75	31.5	+13	23.7	69	43.9	72	30.1	40	5 39	6 11	6 39	7 06	75	17 07 43			
18	90	31.6	+13	24.5	84	09.9	70	40.7	45	5 43	6 17	6 48	7 20	79	16 52 39			
19	105	31.7		25.3	98	35.9	70	51.1	50	46	24	6 58	7 37	84	34 33			
20	120	31.8		26.1	113	01.7	68	01.4	52	48	27	7 02	45	87	25 31			
21	135	31.9		26.9	127	27.5	68	11.6	54	49	31	8 08	7 54	90	15 28			
22	150	32.0		27.7	141	53.1	66	21.6	56	50	34	13	8 04	95	16 04 25			
23	165	32.1		28.5	156	18.6	65	31.5	58	52	38	20	16	99	15 52 20			
24	180	32.2	+13	29.4	170	44.0	64	41.3	60 S	5 54	6 43	7 27	8 29	106	15 37 14			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 9 ^h 45 ^m 8		Mag: -4.7 PMG: 9 ^h 43 ^m			Mag: +1.2 PMG: 9 ^h 56 ^m			Mag: -2.2 PMG: 7 ^h 29 ^m			Mag: +0.7 PMG: 20 ^h 53 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	213	08.6	214	01.6	+2	28.5	210	57.8	-0	18.2	247	28.9	-14	26.2	45	46.8	+7	50.4
1	228	11.1	229	03.2		28.3	225	58.5		17.4	262	31.0		26.1	60	49.4		50.4
2	243	13.5	244	04.9		28.1	240	59.2		16.6	277	33.1		26.0	75	51.9		50.4
3	258	16.0	259	06.5		27.9	255	59.8		15.9	292	35.3		25.9	90	54.5		50.5
4	273	18.5	274	08.2		27.7	271	00.5		15.1	307	37.4		25.8	105	57.0		50.5
5	288	20.9	289	09.8	+2	27.5	286	01.2	-0	14.3	322	39.5	-14	25.6	120	59.6	+7	50.5
6	303	23.4	304	11.5	+2	27.3	301	01.9	-0	13.5	337	41.6	-14	25.5	136	02.2	+7	50.5
7	318	25.8	319	13.1		27.1	316	02.6		12.8	352	43.7		25.4	151	04.7		50.6
8	333	28.3	334	14.7		26.9	331	03.3		12.0	7	45.8		25.3	166	07.3		50.6
9	348	30.8	349	16.4		26.7	346	04.0		11.2	22	47.9		25.2	181	09.8		50.6
10	3	33.2	4	18.0		26.5	1	04.7		10.4	37	50.1		25.1	196	12.4		50.7
11	18	35.7	19	19.6	+2	26.3	16	05.4	-0	09.7	52	52.2	-14	25.0	211	14.9	+7	50.7
12	33	38.2	34	21.2	+2	26.1	31	06.1	-0	08.9	67	54.3	-14	24.9	226	17.5	+7	50.7
13	48	40.6	49	22.9		25.9	46	06.8		08.1	82	56.4		24.8	241	20.0		50.8
14	63	43.1	64	24.5		25.7	61	07.5		07.3	97	58.5		24.7	256	22.6		50.8
15	78	45.6	79	26.1		25.6	76	08.2		06.6	113	00.6		24.6	271	25.1		50.8
16	93	48.0	94	27.7		25.4	91	08.8		05.8	128	02.7		24.4	286	27.7		50.8
17	108	50.5	109	29.3	+2	25.2	106	09.5	-0	05.0	143	04.9	-14	24.3	301	30.2	+7	50.9
18	123	53.0	124	30.9	+2	25.0	121	10.2	-0	04.2	158	07.0	-14	24.2	316	32.8	+7	50.9
19	138	55.4	139	32.5		24.8	136	10.9		03.5	173	09.1		24.1	331	35.3		50.9
20	153	57.9	154	34.1		24.7	151	11.6		02.7	188	11.2		24.0	346	37.9		51.0
21	169	00.3	169	35.7		24.5	166	12.3		01.9	203	13.3		23.9	1	40.4		51.0
22	184	02.8	184	37.3		24.3	181	13.0		01.1	218	15.4		23.8	16	43.0		51.0
23	199	05.3	199	38.9		24.1	196	13.7	-0	00.4	233	17.6		23.7	31	45.5		51.0
24	214	07.7	214	40.5	+2	24.0	211	14.4	+0	00.4	248	19.7	-14	23.6	46	48.1	+7	51.1
Dif	—		+16			-2	+7		+8		+21		+1		+26		0	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15'9 PMG: 11 ^h 57 ^m 8			Edad: 30 ^d 3 PHE { 4 ^h : 59'5 12 ^h : 59'6 20 ^h : 59'7 R°: 62 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	180	32.2	+13 29.4	170	44.0	+21 41.3	63	60 N	19 46	20 37	21 52	3 47 21	23 02 89		
1	195	32.3		185	09.3	+21 51.0	97	58	37	24	29	4 04 27	22 39 84		
2	210	32.4		199	34.5	+22 00.5	95	56	29	13	21 11	18 32	21 81		
3	225	32.5		213	59.6		61	54	23	20 03	20 56	31 35	22 05 79		
4	240	32.6		228	24.6		60	52	17	19 55	43	42 37	21 52 77		
5	255	32.7	+13 33.4	242	49.5	+22 28.3	91	50	19 11	19 47	20 32	4 52 40	21 40 76		
6	270	32.8	+13 34.2	257	14.3	+22 37.2	89	45	18 59	19 31	20 11	5 12 45	21 15 73		
7	285	32.9		271	39.0		89	40	50	19	19 54	29 48	20 56 71		
8	300	33.0		286	03.6	+22 54.7	86	35	41	19 08	40	44 50	40 69		
9	315	33.1		300	28.1	+23 03.3	86	30	34	18 59	29	5 56 52	26 68		
10	330	33.2		314	52.5		84	20	22	45	19 12	6 17 56	20 02 66		
11	345	33.3	+13 38.2	329	16.8	+23 19.9	82	10 N	18 11	18 33	18 58	6 36 58	19 41 65		
12	0	33.4	+13 39.0	343	41.0	+23 28.0	81	0	18 01	18 22	18 47	6 54 61	19 22 63		
13	15	33.5		358	05.1		51	10 S	17 51	13	38	7 12 63	19 03 61		
14	30	33.6		40.6	12 29.2		51	20	41	18 04	30	31 66	18 43 58		
15	45	33.7		41.4	26 53.1		49	30	29	17 54	22	7 53 69	19 56		
16	60	33.8		42.2	41 16.9	+23 58.8	75	35	23	49	18	8 06 71	18 06 54		
17	75	33.9	+13 43.0	55	40.7	+24 06.1	73	40	17 15	17 43	18 15	8 21 73	17 50 52		
18	90	34.0	+13 43.8	70	04.3	+24 13.3	72	45	17 06	17 37	18 11	8 39 76	17 31 50		
19	105	34.1		44.6	84 27.9		70	50	16 56	29	07	9 01 81	17 07 47		
20	120	34.2		45.4	98 51.4		68	52	51	26	06	12 83	16 56 45		
21	135	34.3		46.2	113 14.8		66	54	45	23	04	24 86	43 43		
22	150	34.4		47.0	127 38.2		65	56	39	19	02	39 88	29 39		
23	165	34.5		47.8	142 01.4		63	58	33	14	18 01	9 55 93	16 12 35		
24	180	34.6	+13 48.6	156	24.6	+24 52.7	62	60 S	16 25	17 10	17 59	10 15 100	15 51 29		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 9 ^h 41 ^m 9		Mag: -4.7 PMG: 9 ^h 40 ^m		Mag: +1.2 PMG: 9 ^h 55 ^m		Mag: -2.3 PMG: 7 ^h 26 ^m		Mag: +0.7 PMG: 20 ^h 49 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	214	07.7	214	40.5	+2 24.0	211	14.4	+0 00.4	248	19.7	-14 23.6	46	48.1	+7 51.1
1	229	10.2	229	42.1	23.8	226	15.1	01.2	263	21.8	23.5	61	50.6	51.1
2	244	12.7	244	43.7	23.6	241	15.8	01.9	278	23.9	23.4	76	53.2	51.1
3	259	15.1	259	45.2	23.5	256	16.5	02.7	293	26.0	23.3	91	55.7	51.2
4	274	17.6	274	46.8	23.3	271	17.2	03.5	308	28.1	23.2	106	58.3	51.2
5	289	20.1	289	48.4	+2 23.2	286	17.9	+0 04.3	323	30.3	-14 23.0	122	00.8	+7 51.2
6	304	22.5	304	50.0	+2 23.0	301	18.5	+0 05.0	338	32.4	-14 22.9	137	03.4	+7 51.3
7	319	25.0	319	51.5	22.9	316	19.2	05.8	353	34.5	22.8	152	05.9	51.3
8	334	27.5	334	53.1	22.7	331	19.9	06.6	8	36.6	22.7	167	08.4	51.3
9	349	29.9	349	54.7	22.5	346	20.6	07.4	23	38.7	22.6	182	11.0	51.3
10	4	32.4	4	56.2	22.4	1	21.3	08.1	38	40.9	22.5	197	13.5	51.4
11	19	34.8	19	57.8	+2 22.2	16	22.0	+0 08.9	53	43.0	-14 22.4	212	16.1	+7 51.4
12	34	37.3	34	59.3	+2 22.1	31	22.7	+0 09.7	68	45.1	-14 22.3	227	18.6	+7 51.4
13	49	39.8	50	00.9	22.0	46	23.4	10.5	83	47.2	22.2	242	21.2	51.5
14	64	42.2	65	02.4	21.8	61	24.1	11.2	98	49.3	22.1	257	23.7	51.5
15	79	44.7	80	04.0	21.7	76	24.8	12.0	113	51.5	22.0	272	26.3	51.5
16	94	47.2	95	05.5	21.5	91	25.5	12.8	128	53.6	21.9	287	28.8	51.5
17	109	49.6	110	07.0	+2 21.4	106	26.2	+0 13.6	143	55.7	-14 21.8	302	31.4	+7 51.6
18	124	52.1	125	08.6	+2 21.2	121	26.9	+0 14.3	158	57.8	-14 21.7	317	33.9	+7 51.6
19	139	54.6	140	10.1	21.1	136	27.6	15.1	173	59.9	21.5	332	36.5	51.6
20	154	57.0	155	11.6	21.0	151	28.3	15.9	189	02.1	21.4	347	39.0	51.6
21	169	59.5	170	13.2	20.8	166	29.0	16.7	204	04.2	21.3	2	41.6	51.7
22	185	01.9	185	14.7	20.7	181	29.6	17.4	219	06.3	21.2	17	44.1	51.7
23	200	04.4	200	16.2	20.6	196	30.3	18.2	234	08.4	21.1	32	46.6	51.7
24	215	06.9	215	17.7	+2 20.5	211	31.0	+0 19.0	249	10.6	-14 21.0	47	49.2	+7 51.8
Dif	—		+16 -1		+7 +8		+21 +1		+25 0					

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'9 PMG: 11 ^h 57 ^m 6			Edad: 1 ^d 9 SD: 16'3 PMG: 14 ^h 10 ^m	PHE { 4 ^h : 59'8 12 ^h : 59'9 20 ^h : 59'9 R°: 63 ^m										
	hG ☉	Dec	Dif			Náutico		Civil	Hora		R°	Hora	R°		
h	°	'	°	°	'	°	'	h	m	h	m	h	m	h	m
0	180	34.6	+13 48.6	156	24.6	+24 52.7	60	60 N	2 03	3 18	4 09	4 08	42	** ** *	** ** *
1	195	34.7	49.4	170	47.7 41	+24 58.7 60	58		26	31	17	31	47	** ** *	** ** *
2	210	34.8	50.2	185	10.7 40	+25 04.5 58	56		44	42	25	4 50	49	23 42	60
3	225	34.9	51.0	199	33.6 39	10.1 56	54		2 59	3 52	32	5 06	51	24	6
4	240	35.0	51.8	213	56.5 39	15.6 55	52		3 11	4 00	38	19	54	23 09	61
5	255	35.1	+13 52.6	228	19.3 38	+25 20.9 53	50		3 22	4 08	4 44	5 32	54	22 56	62
6	270	35.2	+13 53.4	242	42.1 38	+25 26.0 51	45		3 44	4 24	4 55	5 57	56	22 28	63
7	285	35.3	54.2	257	04.8 37	30.9 49	40		4 01	36	5 05	6 17	58	22 07	63
8	300	35.4	55.0	271	27.4 36	35.7 48	35		15	47	14	34	59	21 49	63
9	315	35.5	55.8	285	50.0 36	40.3 46	30		26	4 56	21	6 48	60	34	63
10	330	35.6	56.6	300	12.5 35	44.7 44	20		44	5 10	33	7 13	61	21 08	63
11	345	35.7	+13 57.3	314	34.9 34	+25 48.9 42	10 N		4 57	5 22	5 44	7 34	63	20 46	63
12	0	35.8	+13 58.1	328	57.3 34	+25 52.9 40	0		5 08	5 33	5 54	7 55	63	20 25	63
13	15	35.8	58.9	343	19.7 34	+25 56.8 39	10 S		18	43	6 04	8 15	64	20 04	63
14	30	35.9	+13 59.7	357	42.0 33	+26 00.4 36	20		26	5 52	15	8 37	65	19 41	64
15	45	36.0	+14 00.5	12	04.2 32	03.9 35	30		34	6 02	26	9 02	66	15	64
16	60	36.1	01.3	26	26.4 32	07.2 33	35		37	07	33	17	67	19 00	63
17	75	36.2	+14 02.1	40	48.6 32	+26 10.3 31	40		5 41	6 13	6 41	9 34	68	18 42	63
18	90	36.3	+14 02.9	55	10.7 31	+26 13.2 29	45		5 45	6 19	6 50	9 55	69	18 21	63
19	105	36.4	03.7	69	32.8 31	16.0 28	50		49	27	7 01	10 22	69	17 54	62
20	120	36.5	04.5	83	54.9 31	18.5 25	52		50	30	06	35	70	41	62
21	135	36.6	05.3	98	16.9 30	20.9 24	54		52	34	11	10 50	71	26	61
22	150	36.7	06.0	112	38.9 30	23.0 21	56		54	38	17	11 07	72	17 08	61
23	165	36.8	06.8	127	00.9 30	25.0 20	58		56	42	24	28	73	16 47	59
24	180	36.9	+14 07.6	141	22.9 30	+26 26.8 18	60 S		5 58	6 47	7 32	11 55	75	16 20	57

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG 9 ^h 38 ^m 0		Mag: -4.7 PMG: 9 ^h 38 ^m		Mag: +1.2 PMG: 9 ^h 53 ^m		Mag: -2.3 PMG: 7 ^h 22 ^m		Mag: +0.7 PMG: 20 ^h 45 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	215	06.9	215	17.7	+2 20.5	211	31.0	+0 19.0	249	10.6	-14 21.0	47	49.2	+7 51.8	
1	230	09.3	230	19.3	20.3	226	31.7	19.8	264	12.7	20.9	62	51.7	51.8	
2	245	11.8	245	20.8	20.2	241	32.4	20.5	279	14.8	20.8	77	54.3	51.8	
3	260	14.3	260	22.3	20.1	256	33.1	21.3	294	16.9	20.7	92	56.8	51.8	
4	275	16.7	275	23.8	20.0	271	33.8	22.1	309	19.1	20.6	107	59.4	51.9	
5	290	19.2	290	25.3	+2 19.8	286	34.5	+0 22.8	324	21.2	-14 20.5	123	01.9	+7 51.9	
6	305	21.7	305	26.8	+2 19.7	301	35.2	+0 23.6	339	23.3	-14 20.4	138	04.5	+7 51.9	
7	320	24.1	320	28.3	19.6	316	35.9	24.4	354	25.4	20.3	153	07.0	51.9	
8	335	26.6	335	29.8	19.5	331	36.6	25.2	9	27.6	20.2	168	09.6	52.0	
9	350	29.1	350	31.3	19.4	346	37.3	25.9	24	29.7	20.1	183	12.1	52.0	
10	5	31.5	5	32.8	19.3	1	38.0	26.7	39	31.8	20.0	198	14.6	52.0	
11	20	34.0	20	34.3	+2 19.2	16	38.7	+0 27.5	54	33.9	-14 19.9	213	17.2	+7 52.1	
12	35	36.4	35	35.8	+2 19.1	31	39.4	+0 28.3	69	36.1	-14 19.7	228	19.7	+7 52.1	
13	50	38.9	50	37.3	19.0	46	40.1	29.0	84	38.2	19.6	243	22.3	52.1	
14	65	41.4	65	38.7	18.9	61	40.8	29.8	99	40.3	19.5	258	24.8	52.1	
15	80	43.8	80	40.2	18.8	76	41.4	30.6	114	42.4	19.4	273	27.4	52.2	
16	95	46.3	95	41.7	18.7	91	42.1	31.4	129	44.6	19.3	288	29.9	52.2	
17	110	48.8	110	43.2	+2 18.6	106	42.8	+0 32.1	144	46.7	-14 19.2	303	32.4	+7 52.2	
18	125	51.2	125	44.6	+2 18.5	121	43.5	+0 32.9	159	48.8	-14 19.1	318	35.0	+7 52.2	
19	140	53.7	140	46.1	18.4	136	44.2	33.7	174	50.9	19.0	333	37.5	52.3	
20	155	56.2	155	47.6	18.3	151	44.9	34.4	189	53.1	18.9	348	40.1	52.3	
21	170	58.6	170	49.0	18.2	166	45.6	35.2	204	55.2	18.8	3	42.6	52.3	
22	186	01.1	185	50.5	18.1	181	46.3	36.0	219	57.3	18.7	18	45.2	52.3	
23	201	03.6	200	52.0	18.0	196	47.0	36.8	234	59.5	18.6	33	47.7	52.4	
24	216	06.0	215	53.4	+2 17.9	211	47.7	+0 37.5	250	01.6	-14 18.5	48	50.2	+7 52.4	
Dif	—		+15	-1		+7	+8		+21	+1		+25			0

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15'9 PMG: 11 ^h 57 ^m 5			Edad: 2 ^d 9 PHE { 4 ^h : 59'9 12 ^h : 59'9 20 ^h : 59'9 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	180	36.9	+14	07.6	141	22.9	+26	26.8	60 N	19 51	20 43	22 01	4 50	75	0 31 58
1	195	37.0		08.4	155	44.8	29	28.4	58	42	29	21 36	5 18	73	0 03 60
2	210	37.1		09.2	170	06.7	29	29.8	56	33	17	17	39	72	** ** *
3	225	37.1		10.0	184	28.7	30	31.0	54	26	20 07	21 01	5 57	71	** ** *
4	240	37.2		10.8	198	50.6	29	32.0	52	20	19 58	20 48	6 13	70	** ** *
5	255	37.3	+14	11.5	213	12.4	28	+26 32.8	50	19 14	19 50	20 37	6 26	69	23 58 46
6	270	37.4	+14	12.3	227	34.3	29	+26 33.5	45	19 02	19 34	20 14	6 53	68	23 31 50
7	285	37.5		13.1	241	56.2	29	33.9	40	18 52	21	19 56	7 15	67	23 10 52
8	300	37.6		13.9	256	18.1	29	34.2	35	43	10	42	33	66	22 52 55
9	315	37.7		14.7	270	40.0	29	34.2	30	35	19 01	31	7 48	66	37 56
10	330	37.8		15.5	285	01.8	28	34.1	20	23	18 45	19 12	8 14	65	22 11 59
11	345	37.9	+14	16.3	299	23.7	29	+26 33.8	10 N	18 11	18 33	18 58	8 37	64	21 49 60
12	0	38.0	+14	17.0	313	45.6	29	+26 33.3	0	18 01	18 22	18 47	8 58	63	21 28 62
13	15	38.0		17.8	328	07.5	29	32.6	10 S	17 51	12	37	9 19	62	21 07 64
14	30	38.1		18.6	342	29.5	30	31.7	20	40	18 02	29	9 42	61	20 45 66
15	45	38.2		19.4	356	51.4	29	30.6	30	27	17 52	20	10 08	60	19 68
16	60	38.3		20.2	11	13.4	30	29.3	35	20	47	16	24	59	20 03 69
17	75	38.4	+14	20.9	25	35.4	30	+26 27.8	40	17 12	17 40	18 12	10 42	58	19 45 71
18	90	38.5	+14	21.7	39	57.4	30	+26 26.2	45	17 03	17 34	18 08	11 04	56	19 24 72
19	105	38.6		22.5	54	19.4	30	24.3	50	16 52	26	04	31	54	18 56 76
20	120	38.7		23.3	68	41.5	31	22.3	52	47	22	02	11 45	53	43 77
21	135	38.8		24.1	83	03.6	31	20.0	54	41	19	18 00	12 01	51	27 79
22	150	38.8		24.8	97	25.7	31	17.6	56	35	14	17 58	19	49	18 09 81
23	165	38.9		25.6	111	47.9	32	15.0	58	28	10	56	12 41	46	17 46 85
24	180	39.0	+14	26.4	126	10.1	32	+26 12.2	60 S	16 20	17 05	17 54	13 10	41	17 17 90

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 9 ^h 34 ^m 0		Mag: -4.7 PMG: 9 ^h 36 ^m		Mag: +1.2 PMG: 9 ^h 52 ^m		Mag: -2.3 PMG: 7 ^h 19 ^m		Mag: +0.7 PMG: 20 ^h 41 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	216	06.0	215	53.4	+2	17.9	211	47.7	+0	37.5	250	01.6	-14	18.5	48	50.2	+7	52.4
1	231	08.5	230	54.9		17.8	226	48.4		38.3	265	03.7		18.4	63	52.8		52.4
2	246	10.9	245	56.3		17.7	241	49.1		39.1	280	05.8		18.3	78	55.3		52.4
3	261	13.4	260	57.8		17.6	256	49.8		39.9	295	08.0		18.2	93	57.9		52.5
4	276	15.9	275	59.2		17.6	271	50.5		40.6	310	10.1		18.1	109	00.4		52.5
5	291	18.3	291	00.6	+2	17.5	286	51.2	+0	41.4	325	12.2	-14	18.0	124	02.9	+7	52.5
6	306	20.8	306	02.1	+2	17.4	301	51.9	+0	42.2	340	14.4	-14	17.9	139	05.5	+7	52.5
7	321	23.3	321	03.5		17.3	316	52.6		43.0	355	16.5		17.8	154	08.0		52.6
8	336	25.7	336	05.0		17.3	331	53.3		43.7	10	18.6		17.7	169	10.6		52.6
9	351	28.2	351	06.4		17.2	346	54.0		44.5	25	20.7		17.6	184	13.1		52.6
10	6	30.7	6	07.8		17.1	1	54.7		45.3	40	22.9		17.4	199	15.6		52.7
11	21	33.1	21	09.2	+2	17.0	16	55.3	+0	46.0	55	25.0	-14	17.3	214	18.2	+7	52.7
12	36	35.6	36	10.7	+2	17.0	31	56.0	+0	46.8	70	27.1	-14	17.2	229	20.7	+7	52.7
13	51	38.1	51	12.1		16.9	46	56.7		47.6	85	29.3		17.1	244	23.3		52.7
14	66	40.5	66	13.5		16.8	61	57.4		48.4	100	31.4		17.0	259	25.8		52.8
15	81	43.0	81	14.9		16.8	76	58.1		49.1	115	33.5		16.9	274	28.3		52.8
16	96	45.4	96	16.3		16.7	91	58.8		49.9	130	35.7		16.8	289	30.9		52.8
17	111	47.9	111	17.7	+2	16.7	106	59.5	+0	50.7	145	37.8	-14	16.7	304	33.4	+7	52.8
18	126	50.4	126	19.2	+2	16.6	122	00.2	+0	51.4	160	39.9	-14	16.6	319	36.0	+7	52.8
19	141	52.8	141	20.6		16.5	137	00.9		52.2	175	42.1		16.5	334	38.5		52.9
20	156	55.3	156	22.0		16.5	152	01.6		53.0	190	44.2		16.4	349	41.0		52.9
21	171	57.8	171	23.4		16.4	167	02.3		53.8	205	46.3		16.3	4	43.6		52.9
22	187	00.2	186	24.8		16.4	182	03.0		54.5	220	48.5		16.2	19	46.1		52.9
23	202	02.7	201	26.2		16.3	197	03.7		55.3	235	50.6		16.1	34	48.7		53.0
24	217	05.2	216	27.5	+2	16.3	212	04.4	+0	56.1	250	52.7	-14	16.0	49	51.2	+7	53.0
Dif	—		+14		-1		+7		+8		+21		+1		+25			

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'9 PMG: 11 ^h 57 ^m 3				Edad: 3 ^d 9 PHE { 4 ^h : 59'8 12 ^h : 59'8 20 ^h : 59'7 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	39.0	+14	26.4	126	10.1	+26	12.2	60 N	1 53	3 11	4 03	6 05	98	1 29	29	
1	195	39.1		27.2	140	32.4 33		09.2 30	58	2 18	25	12	31	92	1 03	35	
2	210	39.2		28.0	154	54.7 33		06.1 31	56	37	37	21	6 51	88	0 42	40	
3	225	39.3		28.7	169	17.1 34	+26	02.7 34	54	2 53	47	28	7 08	85	25	42	
4	240	39.4		29.5	183	39.5 34	+25	59.2 35	52	3 06	3 56	34	23	82	0 10	45	
5	255	39.4	+14	30.3	198	01.9 34	+25	55.5 37	50	3 18	4 04	4 40	7 35	80	** ** *	**	
6	270	39.5	+14	31.1	212	24.5 36	+25	51.6 39	45	3 41	4 20	4 52	8 01	76	** ** *	**	
7	285	39.6		31.8	226	47.0 35		47.5 41	40	3 58	33	5 03	22	73	** ** *	**	
8	300	39.7		32.6	241	09.7 37		43.3 42	35	4 12	44	11	39	71	23	47	
9	315	39.8		33.4	255	32.3 36		38.8 45	30	24	4 54	19	8 54	69	33	48	
10	330	39.9		34.2	269	55.1 38		34.2 46	20	42	5 09	32	9 19	66	23	10	
11	345	40.0	+14	34.9	284	17.9 38	+25	29.4 48	10 N	4 56	5 22	5 43	9 41	63	22	49	
12	0	40.0	+14	35.7	298	40.8 39	+25	24.5 49	0	5 08	5 33	5 54	10 01	60	22	30	
13	15	40.1		36.5	313	03.7 39		19.3 52	10 S	18	43	6 04	21	58	22	11	
14	30	40.2		37.2	327	26.8 41		14.0 53	20	26	5 53	15	10 43	55	21	65	
15	45	40.3		38.0	341	49.9 41		08.5 55	30	35	6 03	28	11 08	51	27	69	
16	60	40.4		38.8	356	13.0 41	+25	02.9 56	35	39	09	35	23	49	21	12	
17	75	40.5	+14	39.6	10	36.3 43	+24	57.0 59	40	5 43	6 15	6 43	11 40	47	20	56	
18	90	40.5	+14	40.3	24	59.6 43	+24	51.0 60	45	5 47	6 22	6 52	12 00	44	20	36	
19	105	40.6		41.1	39	23.0 44		44.9 61	50	52	30	7 04	25	40	12	83	
20	120	40.7		41.9	53	46.5 45		38.5 64	52	53	33	09	38	37	20	00	
21	135	40.8		42.6	68	10.1 46		32.1 64	54	55	37	15	12 52	34	19	46	
22	150	40.9		43.4	82	33.7 46		25.4 67	56	57	41	21	13 08	31	30	92	
23	165	40.9		44.2	96	57.4 47		18.6 68	58	5 59	46	28	27	26	19	11	
24	180	41.0	+14	44.9	111	21.3 49	+24	11.6 70	60 S	6 02	6 51	7 36	13 51	20	18	47	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 9 ^h 30 ^m 1		Mag: -4.7 PMG: 9 ^h 33 ^m		Mag: +1.2 PMG: 9 ^h 51 ^m		Mag: -2.3 PMG: 7 ^h 15 ^m		Mag: +0.7 PMG: 20 ^h 37 ^m	
	hG ♈		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec	
h	°	'	°	'	°	'	°	'	°	'
0	217	05.2	216	27.5	212	04.4	250	52.7	49	51.2
1	232	07.6	231	28.9	227	05.1	265	54.9	64	53.7
2	247	10.1	246	30.3	242	05.8	280	57.0	79	56.3
3	262	12.6	261	31.7	257	06.5	295	59.1	94	58.8
4	277	15.0	276	33.1	272	07.2	311	01.3	110	01.3
5	292	17.5	291	34.5	287	07.9	326	03.4	125	03.9
6	307	19.9	306	35.8	302	08.6	341	05.5	140	06.4
7	322	22.4	321	37.2	317	09.3	356	07.7	155	09.0
8	337	24.9	336	38.6	332	10.0	11	09.8	170	11.5
9	352	27.3	351	40.0	347	10.7	26	11.9	185	14.0
10	7	29.8	6	41.3	2	11.4	41	14.1	200	16.6
11	22	32.3	21	42.7	17	12.1	56	16.2	215	19.1
12	37	34.7	36	44.1	32	12.7	71	18.4	230	21.6
13	52	37.2	51	45.4	47	13.4	86	20.5	245	24.2
14	67	39.7	66	46.8	62	14.1	101	22.6	260	26.7
15	82	42.1	81	48.1	77	14.8	116	24.8	275	29.2
16	97	44.6	96	49.5	92	15.5	131	26.9	290	31.8
17	112	47.1	111	50.8	107	16.2	146	29.0	305	34.3
18	127	49.5	126	52.2	122	16.9	161	31.2	320	36.8
19	142	52.0	141	53.5	137	17.6	176	33.3	335	39.4
20	157	54.4	156	54.9	152	18.3	191	35.5	350	41.9
21	172	56.9	171	56.2	167	19.0	206	37.6	5	44.5
22	187	59.4	186	57.5	182	19.7	221	39.7	20	47.0
23	203	01.8	201	58.9	197	20.4	236	41.9	35	49.5
24	218	04.3	217	00.2	212	21.1	251	44.0	50	52.1
Dif	—		+14		0		+21		+25	
					+7					
					+8					

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'9 PMG: 11 ^h 57 ^m 2			Edad: 4 ^d 9 PHE { SD: 16'2 PMG: 17 ^h 15 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	180	41.0	+14 44.9	111	21.3	+24 11.6	72	60 N	19 56	20 49	22 12	7 43 104	1 58 15	
1	195	41.1	45.7	125	45.2	+24 04.4	72	58	46	34	21 44	8 03 98	38 21	
2	210	41.2	46.5	140	09.2	+23 57.2	72	56	38	22	23	19 93	22 25	
3	225	41.3	47.2	154	33.2	49.7	75	54	30	11	21 07	33 89	1 07 29	
4	240	41.4	48.0	168	57.4	42.1	76	52	23	20 02	20 53	45 86	0 55 31	
5	255	41.4	+14 48.8	183	21.7	+23 34.3	78	50	19 17	19 54	20 41	8 55 84	0 44 34	
6	270	41.5	+14 49.5	197	46.1	+23 26.4	79	45	19 04	19 37	20 17	9 17 79	0 21 39	
7	285	41.6	50.3	212	10.5	18.3	81	40	18 54	23	19 59	35 75	0 02 43	
8	300	41.7	51.1	226	35.1	10.1	82	35	45	12	44	9 50 71	** ** *	
9	315	41.8	51.8	240	59.7	+23 01.8	83	30	37	19 02	32	10 03 68	** ** *	
10	330	41.8	52.6	255	24.5	+22 53.3	85	20	23	18 46	19 13	25 64	** ** *	
11	345	41.9	+14 53.4	269	49.3	+22 44.6	87	10 N	18 11	18 33	18 59	10 44 60	23 45 50	
12	0	42.0	+14 54.1	284	14.2	+22 35.8	88	0	18 01	18 22	18 47	11 01 57	23 29 54	
13	15	42.1	54.9	298	39.3	26.9	89	10 S	17 50	12	37	19 53	23 13 58	
14	30	42.1	55.6	313	04.4	17.8	91	20	39	18 01	27	38 49	22 56 62	
15	45	42.2	56.4	327	29.7	+22 08.6	92	30	26	17 50	19	11 59 44	36 67	
16	60	42.3	57.2	341	55.0	+21 59.3	93	35	18	45	14	12 12 41	24 71	
17	75	42.4	+14 57.9	356	20.4	+21 49.8	95	40	17 10	17 38	18 10	12 27 37	22 10 75	
18	90	42.5	+14 58.7	10	46.0	+21 40.2	96	45	17 00	17 31	18 06	12 44 34	21 54 79	
19	105	42.5	+14 59.4	25	11.6	30.4	98	50	16 49	23	18 01	13 05 28	35 84	
20	120	42.6	+15 00.2	39	37.4	20.5	99	52	43	19	17 59	15 26	25 87	
21	135	42.7	01.0	54	03.2	10.5	100	54	37	15	57	26 23	14 90	
22	150	42.8	01.7	68	29.1	+21 00.4	101	56	31	10	54	39 19	21 02 94	
23	165	42.8	02.5	82	55.2	+20 50.2	102	58	23	05	52	13 53 16	20 48 98	
24	180	42.9	+15 03.2	97	21.3	+20 39.8	104	60 S	16 15	17 00	17 50	14 11 10	20 32 103	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 9 ^h 26 ^m 2		Mag: -4.7 PMG: 9 ^h 31 ^m		Mag: +1.2 PMG: 9 ^h 50 ^m		Mag: -2.3 PMG: 7 ^h 12 ^m		Mag: +0.7 PMG: 20 ^h 33 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	218	04.3	217 00.2	+2 15.6	212 21.1	+1 14.6	251 44.0	-14 13.6	50 52.1	+7 53.6
1	233	06.8	232 01.5	15.6	227 21.8	15.4	266 46.2	13.5	65 54.6	53.6
2	248	09.2	247 02.9	15.6	242 22.5	16.1	281 48.3	13.4	80 57.1	53.6
3	263	11.7	262 04.2	15.6	257 23.2	16.9	296 50.4	13.3	95 59.7	53.6
4	278	14.2	277 05.5	15.6	272 23.9	17.7	311 52.6	13.2	111 02.2	53.6
5	293	16.6	292 06.8	+2 15.6	287 24.6	+1 18.4	326 54.7	-14 13.1	126 04.7	+7 53.7
6	308	19.1	307 08.1	+2 15.6	302 25.3	+1 19.2	341 56.9	-14 13.0	141 07.3	+7 53.7
7	323	21.6	322 09.5	15.6	317 26.0	20.0	356 59.0	12.9	156 09.8	53.7
8	338	24.0	337 10.8	15.6	332 26.7	20.8	12 01.1	12.8	171 12.3	53.7
9	353	26.5	352 12.1	15.6	347 27.4	21.5	27 03.3	12.7	186 14.9	53.8
10	8	28.9	7 13.4	15.6	2 28.1	22.3	42 05.4	12.6	201 17.4	53.8
11	23	31.4	22 14.7	+2 15.6	17 28.8	+1 23.1	57 07.6	-14 12.5	216 19.9	+7 53.8
12	38	33.9	37 16.0	+2 15.6	32 29.5	+1 23.8	72 09.7	-14 12.4	231 22.5	+7 53.8
13	53	36.3	52 17.3	15.6	47 30.2	24.6	87 11.9	12.3	246 25.0	53.8
14	68	38.8	67 18.6	15.6	62 30.9	25.4	102 14.0	12.2	261 27.5	53.9
15	83	41.3	82 19.9	15.6	77 31.6	26.1	117 16.1	12.1	276 30.1	53.9
16	98	43.7	97 21.2	15.6	92 32.3	26.9	132 18.3	12.0	291 32.6	53.9
17	113	46.2	112 22.5	+2 15.6	107 33.0	+1 27.7	147 20.4	-14 11.9	306 35.1	+7 53.9
18	128	48.7	127 23.8	+2 15.7	122 33.7	+1 28.5	162 22.6	-14 11.8	321 37.6	+7 53.9
19	143	51.1	142 25.1	15.7	137 34.4	29.2	177 24.7	11.7	336 40.2	54.0
20	158	53.6	157 26.3	15.7	152 35.1	30.0	192 26.9	11.6	351 42.7	54.0
21	173	56.0	172 27.6	15.7	167 35.8	30.8	207 29.0	11.5	6 45.2	54.0
22	188	58.5	187 28.9	15.7	182 36.4	31.5	222 31.2	11.4	21 47.8	54.0
23	204	01.0	202 30.2	15.8	197 37.1	32.3	237 33.3	11.3	36 50.3	54.1
24	219	03.4	217 31.4	+2 15.8	212 37.8	+1 33.1	252 35.4	-14 11.2	51 52.8	+7 54.1
Dif	—		+13	0	+7	+8	+21	+1	+25	0

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 9			Edad: 5 ^d 9	PHE { 4 ^h : 59/3 12 ^h : 59/2 20 ^h : 59/0 R°: 52 ^m										
	PMG: 11 ^h 57 ^m 1					Náutico		Civil	Hora		R°	Hora	R°		
	hG ☉	Dec		hG ☾	Dif	Dec	Dif								
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	180	42.9	+15	97	21.3	+20	39.8	60 N	1 42	3 05	3 58	9 27	102	2 13	8
1	195	43.0		111	47.6	73	29.3	58	2 10	19	4 07	41	96	1 59	12
2	210	43.1		126	14.0	74	18.7	56	30	31	16	9 52	92	47	16
3	225	43.1		140	40.4	74	+20 08.0	54	2 47	42	23	10 02	89	36	23
4	240	43.2		155	07.0	76	+19 57.1	52	3 01	3 51	30	11 86		26	20
5	255	43.3	+15	169	33.6	76	+19 46.2	50	3 13	4 00	4 36	10 19	83	1 18	25
6	270	43.4	+15	184	00.4	78	+19 35.1	45	3 37	4 17	4 49	10 36	77	1 00	30
7	285	43.4		198	27.3	79	23.9	40	3 55	31	5 00	10 50	73	0 45	34
8	300	43.5		212	54.3	80	12.6	35	4 10	42	09	11 01	69	32	38
9	315	43.6		227	21.3	80	+19 01.2	30	22	4 52	17	11 66		21	41
10	330	43.7		241	48.5	82	+18 49.7	20	41	5 08	31	29 60		0 01	46
11	345	43.7	+15	256	15.8	83	+18 38.1	10 N	4 55	5 21	5 43	11 44	56	**	** ** *
12	0	43.8	+15	270	43.2	84	+18 26.4	0	5 07	5 32	5 54	11 58	52	**	** ** *
13	15	43.9		285	10.6	84	14.6	10 S	18	43	6 05	12 12	47	**	** ** *
14	30	44.0		299	38.2	86	+18 02.7	20	27	5 53	16	27 43		23	58 59
15	45	44.0		314	05.9	87	+17 50.7	30	36	6 04	29	43 39		43	65
16	60	44.1		328	33.6	87	38.6	35	40	10	36	12 53	35	35	68
17	75	44.2	+15	343	01.5	89	+17 26.4	40	5 45	6 17	6 45	13 04	32	23	25 71
18	90	44.3	+15	357	29.5	90	+17 14.1	45	5 49	6 24	6 55	13 18	27	23	13 76
19	105	44.3		11	57.6	91	+17 01.7	50	54	33	7 07	33 22		22	59 81
20	120	44.4		26	25.7	91	+16 49.2	52	56	36	12	41 19		52	84
21	135	44.5		40	54.0	93	36.7	54	5 58	40	18	49 17		44	88
22	150	44.5		55	22.3	93	24.1	56	6 01	45	25	13 58	14	36	91
23	165	44.6		69	50.8	95	+16 11.3	58	03	50	33	14 09	9	26	95
24	180	44.7	+15	84	19.3	95	+15 58.5	60 S	6 06	6 56	7 41	14 21	5	22	15 100

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 9 ^h 22 ^m 2		Mag: -4.7 PMG: 9 ^h 29 ^m		Mag: +1.2 PMG: 9 ^h 49 ^m		Mag: -2.3 PMG: 7 ^h 09 ^m		Mag: +0.8 PMG: 20 ^h 29 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	°	'	°	°	'	°	°	'				
0	219	03.4	217	31.4	+2	212	37.8	+1	252	35.4	-14	51	52.8	+7	54.1
1	234	05.9	232	32.7		227	38.5		267	37.6	11.1	66	55.4		54.1
2	249	08.4	247	34.0		242	39.2		282	39.7	11.0	81	57.9		54.1
3	264	10.8	262	35.3		257	39.9		297	41.9	10.9	97	00.4		54.1
4	279	13.3	277	36.5		272	40.6		312	44.0	10.8	112	02.9		54.2
5	294	15.8	292	37.8	+2	287	41.3	+1	327	46.2	-14	127	05.5	+7	54.2
6	309	18.2	307	39.0	+2	302	42.0	+1	342	48.3	-14	142	08.0	+7	54.2
7	324	20.7	322	40.3		317	42.7		357	50.5	10.5	157	10.5		54.2
8	339	23.2	337	41.6		332	43.4		12	52.6	10.4	172	13.1		54.2
9	354	25.6	352	42.8		347	44.1		27	54.8	10.3	187	15.6		54.3
10	9	28.1	7	44.1		2	44.8		42	56.9	10.2	202	18.1		54.3
11	24	30.5	22	45.3	+2	17	45.5	+1	57	59.1	-14	217	20.7	+7	54.3
12	39	33.0	37	46.6	+2	32	46.2	+1	73	01.2	-14	232	23.2	+7	54.3
13	54	35.5	52	47.8		47	46.9		88	03.4	09.9	247	25.7		54.3
14	69	37.9	67	49.0		62	47.6		103	05.5	09.8	262	28.2		54.4
15	84	40.4	82	50.3		77	48.3		118	07.7	09.7	277	30.8		54.4
16	99	42.9	97	51.5		92	49.0		133	09.8	09.6	292	33.3		54.4
17	114	45.3	112	52.7	+2	107	49.7	+1	148	12.0	-14	307	35.8	+7	54.4
18	129	47.8	127	54.0	+2	122	50.4	+1	163	14.1	-14	322	38.3	+7	54.4
19	144	50.3	142	55.2		137	51.1		178	16.3	09.3	337	40.9		54.5
20	159	52.7	157	56.4		152	51.8		193	18.4	09.2	352	43.4		54.5
21	174	55.2	172	57.7		167	52.5		208	20.6	09.1	7	45.9		54.5
22	189	57.7	187	58.9		182	53.2		223	22.7	09.0	22	48.5		54.5
23	205	00.1	203	00.1		197	53.9		238	24.9	08.9	37	51.0		54.5
24	220	02.6	218	01.3	+2	212	54.6	+1	253	27.0	-14	52	53.5	+7	54.6
Dif	—		+12		0	+7		+8	+21		+1	+25		0	

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15'9 PMG: 11 ^h 57 ^m 0			Edad: 6 ^d 9 PHE { 4 ^h : 58'9 12 ^h : 58'7 20 ^h : 58'6 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	44.7	+15 21.3	84	19.3	+15 58.5	60 N	20 01	20 55	22 23	11 09	96	2 21	4	
1	195	44.8	22.0	98	47.9	96 45.6	58	19 50	40	21 52	17 92		11	9	
2	210	44.8	22.8	113	16.7	98 32.7	56	42	27	30	24 89		2 03	12	
3	225	44.9	23.5	127	45.5	98 19.6	54	34	16	21 12	31 85		1 56	15	
4	240	45.0	24.3	142	14.4	99 +15 06.5	52	27	20 06	20 57	37 82		49	18	
5	255	45.0	+15 25.0	156	43.4	100 +14 53.3	50	19 20	19 57	20 45	11 42	80	1 43	20	
6	270	45.1	+15 25.8	171	12.5	101 +14 40.1	45	19 07	19 39	20 20	11 53	75	1 30	25	
7	285	45.2	26.5	185	41.6	101 26.7	40	18 56	25	20 01	12 03	70	19	29	
8	300	45.2	27.2	200	10.9	103 +14 13.3	35	46	13	19 46	10 67		10	33	
9	315	45.3	28.0	214	40.3	104 +13 59.8	30	38	19 04	34	17 64		1 02	36	
10	330	45.4	28.7	229	09.7	104 46.3	20	24	18 47	19 14	29 58		0 47	42	
11	345	45.4	+15 29.5	243	39.2	105 +13 32.7	10 N	18 12	18 34	18 59	12 40	53	0 35	46	
12	0	45.5	+15 30.2	258	08.8	106 +13 19.0	0	18 00	18 22	18 47	12 50	48	0 23	50	
13	15	45.6	31.0	272	38.5	107 +13 05.3	10 S	17 49	11	36	12 59	45	0 11	55	
14	30	45.6	31.7	287	08.2	107 +12 51.5	20	37	18 00	26	13 10	39	** ** *	**	
15	45	45.7	32.4	301	38.1	109 37.7	30	24	17 49	17	22 33		** ** *	**	
16	60	45.8	33.2	316	08.0	109 23.8	35	16	43	13	28 31		** ** *	**	
17	75	45.9	+15 33.9	330	38.0	110 +12 09.8	40	17 08	17 36	18 08	13 36	27	** ** *	**	
18	90	45.9	+15 34.7	345	08.1	111 +11 55.8	45	16 57	17 28	18 03	13 45	23	** ** *	**	
19	105	46.0	35.4	359	38.2	111 41.7	50	45	19	17 58	13 55	19	** ** *	**	
20	120	46.1	36.1	14	08.4	112 27.6	52	39	15	56	14 00	16	** ** *	**	
21	135	46.1	36.9	28	38.7	113 +11 13.4	54	33	11	53	06 13		** ** *	**	
22	150	46.2	37.6	43	09.1	114 +10 59.2	56	26	06	51	12 10		** ** *	**	
23	165	46.2	38.3	57	39.6	115 44.9	58	18	17 01	48	18 8		** ** *	**	
24	180	46.3	+15 39.1	72	10.1	115 +10 30.6	60 S	16 09	16 55	17 45	14 26	3	23 55	94	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 9 ^h 18 ^m 3		Mag: -4.7 PMG: 9 ^h 27 ^m		Mag: +1.2 PMG: 9 ^h 48 ^m		Mag: -2.3 PMG: 7 ^h 05 ^m		Mag: +0.8 PMG: 20 ^h 25 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	220	02.6	218	01.3	212	54.6	253	27.0	52	53.5
1	235	05.0	233	02.5	227	55.3	268	29.2	67	56.0
2	250	07.5	248	03.8	242	56.0	283	31.3	82	58.6
3	265	10.0	263	05.0	257	56.7	298	33.5	98	01.1
4	280	12.4	278	06.2	272	57.4	313	35.6	113	03.6
5	295	14.9	293	07.4	287	58.1	328	37.8	128	06.1
6	310	17.4	308	08.6	302	58.8	343	39.9	143	08.7
7	325	19.8	323	09.8	317	59.5	358	42.1	158	11.2
8	340	22.3	338	11.0	333	00.2	13	44.2	173	13.7
9	355	24.8	353	12.2	348	00.9	28	46.4	188	16.2
10	10	27.2	8	13.4	3	01.6	43	48.5	203	18.8
11	25	29.7	23	14.6	18	02.3	58	50.7	218	21.3
12	40	32.2	38	15.8	33	03.0	73	52.8	233	23.8
13	55	34.6	53	17.0	48	03.7	88	55.0	248	26.3
14	70	37.1	68	18.1	63	04.4	103	57.2	263	28.9
15	85	39.5	83	19.3	78	05.1	118	59.3	278	31.4
16	100	42.0	98	20.5	93	05.8	134	01.5	293	33.9
17	115	44.5	113	21.7	108	06.5	149	03.6	308	36.4
18	130	46.9	128	22.9	123	07.2	164	05.8	323	39.0
19	145	49.4	143	24.0	138	07.9	179	07.9	338	41.5
20	160	51.9	158	25.2	153	08.6	194	10.1	353	44.0
21	175	54.3	173	26.4	168	09.3	209	12.2	8	46.5
22	190	56.8	188	27.6	183	10.0	224	14.4	23	49.1
23	205	59.3	203	28.7	198	10.7	239	16.6	38	51.6
24	221	01.7	218	29.9	213	11.4	254	18.7	53	54.1
Dif	—		+12	+1	+7	+8	+22	+1	+25	

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15'9 PMG: 11 ^h 56 ^m 9				Edad: 7 ^d 9 PHE { 4 ^h : 58'4 12 ^h : 58'3 20 ^h : 58'1 SD: 15'9 PMG: 19 ^h 49 ^m R°: 46 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	180	46.3	+15	39.1	72	10.1	+10	30.6	60 N	1	31	2	58	3	52	12	45	93
1	195	46.4		39.8	86	40.7 ¹¹⁶		16.3 ¹⁴³	58	2	01	3	13	4	03	49	89	20 7
2	210	46.4		40.5	101	11.3 ¹¹⁶	+10	01.9 ¹⁴⁴	56		23		26		12	53	86	15 10
3	225	46.5		41.3	115	42.0 ¹¹⁷	+9	47.4 ¹⁴⁵	54		41		37		19	56	83	11 11
4	240	46.6		42.0	130	12.8 ¹¹⁸		33.0 ¹⁴⁴	52	2	56		47		26	12	59	81 07 15
5	255	46.6	+15	42.7	144	43.7 ¹¹⁹	+9	18.5 ¹⁴⁵	50	3	08	3	56	4	33	13	02	78 2 03 17
6	270	46.7	+15	43.5	159	14.6 ¹¹⁹	+9	03.9 ¹⁴⁶	45	3	33	4	14	4	46	13	08	73 1 55 22
7	285	46.8		44.2	173	45.6 ¹²⁰	+8	49.3 ¹⁴⁶	40	3	52		28	4	58	13	68	48 26
8	300	46.8		44.9	188	16.6 ¹²⁰		34.7 ¹⁴⁶	35	4	07		40	5	07	17	65	43 29
9	315	46.9		45.7	202	47.7 ¹²¹		20.0 ¹⁴⁷	30		20	4	50		15	21	61	38 32
10	330	47.0		46.4	217	18.8 ¹²¹	+8	05.3 ¹⁴⁷	20		39	5	07		30	27	56	29 38
11	345	47.0	+15	47.1	231	50.1 ¹²³	+7	50.6 ¹⁴⁷	10 N	4	54	5	20	5	42	13	33	51 1 21 42
12	0	47.1	+15	47.9	246	21.3 ¹²²	+7	35.9 ¹⁴⁷	0	5	07	5	32	5	53	13	38	47 1 13 48
13	15	47.1		48.6	260	52.7 ¹²⁴		21.1 ¹⁴⁸	10 S		18		43	6	05	44	41	1 06 51
14	30	47.2		49.3	275	24.0 ¹²³	+7	06.3 ¹⁴⁸	20		28	5	54		17	49	37	0 57 57
15	45	47.3		50.1	289	55.5 ¹²⁵	+6	51.5 ¹⁴⁸	30		37	6	05		30	55	32	48 62
16	60	47.3		50.8	304	26.9 ¹²⁴		36.6 ¹⁴⁹	35		42		12	38		13	59	29 43 65
17	75	47.4	+15	51.5	318	58.5 ¹²⁶	+6	21.8 ¹⁴⁸	40	5	46	6	19	6	47	14	03	25 0 36 70
18	90	47.4	+15	52.2	333	30.1 ¹²⁶	+6	06.9 ¹⁴⁹	45	5	51	6	26	6	57	14	08	21 0 29 74
19	105	47.5		53.0	348	01.7 ¹²⁶	+5	51.9 ¹⁵⁰	50		57		35	7	10	14	16	20 79
20	120	47.6		53.7	2	33.4 ¹²⁷		37.0 ¹⁴⁹	52	5	59		39		15	16	14	16 82
21	135	47.6		54.4	17	05.1 ¹²⁷		22.1 ¹⁴⁹	54	6	01		44	22		19	12	12 84
22	150	47.7		55.2	31	36.9 ¹²⁸	+5	07.1 ¹⁵⁰	56		04		49	29		22	9	07 87
23	165	47.8		55.9	46	08.7 ¹²⁸	+4	52.1 ¹⁵⁰	58		07	6	54	37		26	6	0 01 91
24	180	47.8	+15	56.6	60	40.5 ¹²⁸	+4	37.1 ¹⁵⁰	60 S	6	10	7	00	7	46	14	29	3 ** ** *
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 9 ^h 14 ^m 4		Mag: -4.7 PMG: 9 ^h 25 ^m				Mag: +1.2 PMG: 9 ^h 47 ^m				Mag: -2.3 PMG: 7 ^h 02 ^m				Mag: +0.8 PMG: 20 ^h 21 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	221	01.7	218	29.9	+2	18.8	213	11.4	+2	09.9	254	18.7	-14	06.5	53	54.1	+7	55.0
1	236	04.2	233	31.1		18.9	228	12.1		10.7	269	20.9		06.4	68	56.6		55.0
2	251	06.6	248	32.2		19.0	243	12.8		11.5	284	23.0		06.3	83	59.1		55.0
3	266	09.1	263	33.4		19.1	258	13.5		12.2	299	25.2		06.2	99	01.7		55.0
4	281	11.6	278	34.5		19.2	273	14.2		13.0	314	27.3		06.1	114	04.2		55.1
5	296	14.0	293	35.7	+2	19.3	288	14.9	+2	13.8	329	29.5	-14	06.0	129	06.7	+7	55.1
6	311	16.5	308	36.8	+2	19.4	303	15.6	+2	14.5	344	31.7	-14	05.9	144	09.2	+7	55.1
7	326	19.0	323	38.0		19.5	318	16.3		15.3	359	33.8		05.8	159	11.8		55.1
8	341	21.4	338	39.1		19.6	333	17.0		16.1	14	36.0		05.7	174	14.3		55.1
9	356	23.9	353	40.3		19.7	348	17.7		16.8	29	38.1		05.6	189	16.8		55.1
10	11	26.4	8	41.4		19.8	3	18.4		17.6	44	40.3		05.6	204	19.3		55.2
11	26	28.8	23	42.6	+2	19.9	18	19.1	+2	18.4	59	42.5	-14	05.5	219	21.8	+7	55.2
12	41	31.3	38	43.7	+2	20.1	33	19.8	+2	19.1	74	44.6	-14	05.4	234	24.4	+7	55.2
13	56	33.8	53	44.8		20.2	48	20.5		19.9	89	46.8		05.3	249	26.9		55.2
14	71	36.2	68	46.0		20.3	63	21.2		20.7	104	48.9		05.2	264	29.4		55.2
15	86	38.7	83	47.1		20.4	78	21.9		21.4	119	51.1		05.1	279	31.9		55.2
16	101	41.1	98	48.2		20.5	93	22.6		22.2	134	53.3		05.0	294	34.4		55.3
17	116	43.6	113	49.4	+2	20.6	108	23.3	+2	23.0	149	55.4	-14	04.9	309	37.0	+7	55.3
18	131	46.1	128	50.5	+2	20.8	123	24.0	+2	23.7	164	57.6	-14	04.8	324	39.5	+7	55.3
19	146	48.5	143	51.6		20.9	138	24.7		24.5	179	59.7		04.7	339	42.0		55.3
20	161	51.0	158	52.7		21.0	153	25.4		25.3	195	01.9		04.6	354	44.5		55.3
21	176	53.5	173	53.9		21.1	168	26.1		26.0	210	04.1		04.5	9	47.0		55.3
22	191	55.9	188	55.0		21.3	183	26.8		26.8	225	06.2		04.4	24	49.6		55.4
23	206	58.4	203	56.1		21.4	198	27.5		27.6	240	08.4		04.3	39	52.1		55.4
24	222	00.9	218	57.2	+2	21.5	213	28.2	+2	28.3	255	10.6	-14	04.2	54	54.6	+7	55.4
Dif	—		+11		+1		+7		+8		+22		+1		+25			
0																		

UT	SOL		LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 15'9 PMG: 11 ^h 56 ^m 8		Edad: 8 ^d 9 PHE { 4 ^h : 57'9 12 ^h : 57'8 20 ^h : 57'6 R°: 46 ^m															
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m					
0	180	47.8	+15	56.6	60	40.5	+4 37.1	60 N	20 06	21 01	22 35	14 18 91	2 29 2					
1	195	47.9		57.3	75	12.4 ¹²⁹	22.1 ¹⁵⁰	58	19 55	20 45	22 00	18 87	27 5					
2	210	47.9		58.1	89	44.4 ¹³⁰	+4 07.1 ¹⁵⁰	56	46	31	21 36	19 84	25 8					
3	225	48.0		58.8	104	16.3 ¹²⁹	+3 52.1 ¹⁵⁰	54	37	20	18	19 81	23 1					
4	240	48.0	+15	59.5	118	48.3 ¹³⁰	37.1 ¹⁵⁰	52	30	10	21 02	20 78	22 13					
5	255	48.1	+16	00.2	133	20.4 ¹³¹	+3 22.0 ¹⁵¹	50	19 23	20 01	20 49	14 20 76	2 20 16					
6	270	48.2	+16	00.9	147	52.5 ¹³¹	+3 07.0 ¹⁵⁰	45	19 09	19 42	20 23	14 21 71	2 17 21					
7	285	48.2		01.7	162	24.6 ¹³¹	+2 51.9 ¹⁵¹	40	18 58	27	20 04	21 67	14 25					
8	300	48.3		02.4	176	56.7 ¹³¹	36.9 ¹⁵⁰	35	48	15	19 48	22 63	12 28					
9	315	48.3		03.1	191	28.9 ¹³²	21.8 ¹⁵¹	30	39	19 05	35	22 60	10 31					
10	330	48.4		03.8	206	01.1 ¹³²	+2 06.7 ¹⁵¹	20	25	18 48	15	23 55	07 36					
11	345	48.5	+16	04.6	220	33.4 ¹³³	+1 51.7 ¹⁵⁰	10 N	18 12	18 34	19 00	14 24 50	2 03 42					
12	0	48.5	+16	05.3	235	05.6 ¹³²	+1 36.6 ¹⁵¹	0	18 00	18 22	18 47	14 25 45	2 01 45					
13	15	48.6		06.0	249	37.9 ¹³³	21.6 ¹⁵⁰	10 S	17 49	18 10	36	25 41	1 57 51					
14	30	48.6		06.7	264	10.2 ¹³³	+1 06.5 ¹⁵¹	20	36	17 59	25	26 36	54 55					
15	45	48.7		07.4	278	42.6 ¹³⁴	+0 51.5 ¹⁵⁰	30	22	47	16	27 31	50 61					
16	60	48.7		08.1	293	14.9 ¹³³	36.4 ¹⁵¹	35	14	41	11	28 27	48 64					
17	75	48.8	+16	08.9	307	47.3 ¹³⁴	+0 21.4 ¹⁵⁰	40	17 05	17 34	18 06	14 28 25	1 46 67					
18	90	48.8	+16	09.6	322	19.7 ¹³⁴	+0 06.4 ¹⁵⁰	45	16 55	17 26	18 00	14 29 20	1 43 72					
19	105	48.9		10.3	336	52.1 ¹³⁴	-0 08.6 ¹⁵⁰	50	42	16	17 55	30 15	39 77					
20	120	49.0		11.0	351	24.6 ¹³⁵	23.6 ¹⁵⁰	52	36	12	52	30 14	38 79					
21	135	49.0		11.7	5	57.1 ¹³⁵	38.6 ¹⁵⁰	54	29	07	50	31 11	36 82					
22	150	49.1		12.4	20	29.5 ¹³⁴	-0 53.6 ¹⁵⁰	56	22	17 02	47	31 9	34 85					
23	165	49.1		13.2	35	02.0 ¹³⁵	-1 08.6 ¹⁵⁰	58	14	16 57	44	32 5	32 88					
24	180	49.2	+16	13.9	49	34.5 ¹³⁵	-1 23.5 ¹⁴⁹	60 S	16 04	16 51	17 41	14 32 3	1 29 92					
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 9 ^h 10 ^m 4		Mag: -4.7 PMG: 9 ^h 23 ^m		Mag: +1.2 PMG: 9 ^h 46 ^m		Mag: -2.3 PMG: 6 ^h 58 ^m		Mag: +0.8 PMG: 20 ^h 17 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	222	00.9	218	57.2	+2	21.5	213	28.2	+2	28.3	255	10.6	-14	04.2	54	54.6	+7	55.4
1	237	03.3	233	58.3		21.7	228	28.9		29.1	270	12.7		04.1	69	57.1		55.4
2	252	05.8	248	59.4		21.8	243	29.6		29.8	285	14.9		04.1	84	59.6		55.4
3	267	08.2	264	00.5		21.9	258	30.3		30.6	300	17.1		04.0	100	02.2		55.4
4	282	10.7	279	01.6		22.1	273	31.0		31.4	315	19.2		03.9	115	04.7		55.4
5	297	13.2	294	02.7	+2	22.2	288	31.7	+2	32.1	330	21.4	-14	03.8	130	07.2	+7	55.5
6	312	15.6	309	03.8	+2	22.3	303	32.4	+2	32.9	345	23.5	-14	03.7	145	09.7	+7	55.5
7	327	18.1	324	04.9		22.5	318	33.1		33.7	0	25.7		03.6	160	12.2		55.5
8	342	20.6	339	06.0		22.6	333	33.8		34.4	15	27.9		03.5	175	14.7		55.5
9	357	23.0	354	07.1		22.8	348	34.5		35.2	30	30.0		03.4	190	17.3		55.5
10	12	25.5	9	08.2		22.9	3	35.2		36.0	45	32.2		03.3	205	19.8		55.5
11	27	28.0	24	09.3	+2	23.1	18	35.9	+2	36.7	60	34.4	-14	03.2	220	22.3	+7	55.6
12	42	30.4	39	10.4	+2	23.2	33	36.6	+2	37.5	75	36.5	-14	03.1	235	24.8	+7	55.6
13	57	32.9	54	11.5		23.4	48	37.3		38.3	90	38.7		03.0	250	27.3		55.6
14	72	35.4	69	12.6		23.5	63	38.0		39.0	105	40.9		02.9	265	29.8		55.6
15	87	37.8	84	13.7		23.7	78	38.7		39.8	120	43.0		02.8	280	32.4		55.6
16	102	40.3	99	14.7		23.8	93	39.4		40.5	135	45.2		02.8	295	34.9		55.6
17	117	42.7	114	15.8	+2	24.0	108	40.1	+2	41.3	150	47.4	-14	02.7	310	37.4	+7	55.6
18	132	45.2	129	16.9	+2	24.1	123	40.8	+2	42.1	165	49.5	-14	02.6	325	39.9	+7	55.7
19	147	47.7	144	18.0		24.3	138	41.5		42.8	180	51.7		02.5	340	42.4		55.7
20	162	50.1	159	19.0		24.4	153	42.2		43.6	195	53.9		02.4	355	44.9		55.7
21	177	52.6	174	20.1		24.6	168	42.9		44.4	210	56.0		02.3	10	47.5		55.7
22	192	55.1	189	21.2		24.8	183	43.6		45.1	225	58.2		02.2	25	50.0		55.7
23	207	57.5	204	22.2		24.9	198	44.3		45.9	241	00.4		02.1	40	52.5		55.7
24	223	00.0	219	23.3	+2	25.1	213	45.0	+2	46.7	256	02.6	-14	02.0	55	55.0	+7	55.7
Dif	—		+11		+1		+7		+8		+22		+1		+25		0	

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 9 PMG: 11 ^h 56 ^m 7				Edad: 9 ^d 9 PHE { 4 ^h : 57/5 12 ^h : 57/3 20 ^h : 57/1 PMG: 21 ^h 21 ^m R°: 45 ^m												
	hG ☉	Dec			hG ☾	Dif				Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m	
0	180	49.2	+16	13.9	49	34.5	-1	23.5	60 N	1 18	2 51	3 47	15 49	90	2 31	3	
1	195	49.2		14.6	64	07.0 ¹³⁵		38.5 ¹⁵⁰	58	1 52	3 08	3 58	45	87	32	6	
2	210	49.3		15.3	78	39.6 ¹³⁶	-1	53.4 ¹⁴⁹	56	2 17	21	4 07	43	83	33	0	
3	225	49.3		16.0	93	12.1 ¹³⁵	-2	08.3 ¹⁴⁹	54	35	33	15	40	81	34	12	
4	240	49.4		16.7	107	44.7 ¹³⁶		23.2 ¹⁴⁹	52	2 51	43	23	38	78	35	14	
5	255	49.4	+16	17.4	122	17.2 ¹³⁵	-2	38.0 ¹⁴⁸	50	3 04	3 52	4 29	15 36	76	2 36	16	
6	270	49.5	+16	18.1	136	49.8 ¹³⁶	-2	52.9 ¹⁴⁹	45	3 30	4 11	4 44	15 32	70	2 38	20	
7	285	49.5		18.9	151	22.4 ¹³⁶	-3	07.7 ¹⁴⁸	40	3 49	26	4 55	28	67	39	25	
8	300	49.6		19.6	165	54.9 ¹³⁵		22.5 ¹⁴⁸	35	4 05	38	5 05	25	63	40	28	
9	315	49.7		20.3	180	27.5 ¹³⁶		37.3 ¹⁴⁸	30	18	4 48	14	22	60	41	31	
10	330	49.7		21.0	195	00.1 ¹³⁶	-3	52.0 ¹⁴⁷	20	38	5 05	29	18	54	43	36	
11	345	49.8	+16	21.7	209	32.7 ¹³⁶	-4	06.7 ¹⁴⁷	10 N	4 54	5 19	5 41	15 14	50	2 45	41	
12	0	49.8	+16	22.4	224	05.3 ¹³⁶	-4	21.4 ¹⁴⁷	0	5 07	5 32	5 53	15 10	45	2 46	46	
13	15	49.9		23.1	238	37.9 ¹³⁶		36.1 ¹⁴⁷	10 S	18	43	6 05	06	41	48	49	
14	30	49.9		23.8	253	10.4 ¹³⁵	-4	50.7 ¹⁴⁶	20	28	5 55	17	15	02	37	49	55
15	45	50.0		24.5	267	43.0 ¹³⁶	-5	05.3 ¹⁴⁶	30	38	6 07	32	14	58	31	51	60
16	60	50.0		25.2	282	15.6 ¹³⁶		19.8 ¹⁴⁵	35	43	13	40	55	29	52	63	
17	75	50.1	+16	25.9	296	48.2 ¹³⁶	-5	34.4 ¹⁴⁶	40	5 48	6 20	6 49	14 53	25	2 53	67	
18	90	50.1	+16	26.6	311	20.7 ¹³⁵	-5	48.9 ¹⁴⁵	45	5 54	6 29	7 00	14 49	21	2 55	71	
19	105	50.2		27.3	325	53.3 ¹³⁶	-6	03.3 ¹⁴⁴	50	5 59	38	13	45	17	56	76	
20	120	50.2		28.0	340	25.9 ¹³⁶		17.7 ¹⁴⁴	52	6 02	42	19	44	14	57	78	
21	135	50.3		28.8	354	58.4 ¹³⁵		32.1 ¹⁴⁴	54	05	47	25	42	12	58	81	
22	150	50.3		29.5	9	30.9 ¹³⁵	-6	46.5 ¹⁴⁴	56	07	52	33	40	9	2 59	84	
23	165	50.4		30.2	24	03.5 ¹³⁶	-7	00.8 ¹⁴³	58	10	6 58	41	37	7	3 00	87	
24	180	50.4	+16	30.9	38	36.0 ¹³⁵	-7	15.0 ¹⁴²	60 S	6 14	7 04	7 51	14 35	3	3 01	91	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 9 ^h 06 ^m 5		Mag: -4.7 PMG: 9 ^h 22 ^m		Mag: +1.2 PMG: 9 ^h 45 ^m		Mag: -2.3 PMG: 6 ^h 55 ^m		Mag: +0.8 PMG: 20 ^h 13 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	223	00.0	219	23.3	+2	25.1	213	45.0	+2	46.7
1	238	02.5	234	24.4		25.3	228	45.7		47.4
2	253	04.9	249	25.4		25.4	243	46.4		48.2
3	268	07.4	264	26.5		25.6	258	47.1		48.9
4	283	09.9	279	27.5		25.8	273	47.8		49.7
5	298	12.3	294	28.6	+2	25.9	288	48.5	+2	50.5
6	313	14.8	309	29.6	+2	26.1	303	49.2	+2	51.2
7	328	17.2	324	30.7		26.3	318	49.9		52.0
8	343	19.7	339	31.7		26.4	333	50.6		52.8
9	358	22.2	354	32.8		26.6	348	51.3		53.5
10	13	24.6	9	33.8		26.8	3	52.0		54.3
11	28	27.1	24	34.9	+2	27.0	18	52.7	+2	55.0
12	43	29.6	39	35.9	+2	27.2	33	53.4	+2	55.8
13	58	32.0	54	36.9		27.3	48	54.1		56.6
14	73	34.5	69	38.0		27.5	63	54.8		57.3
15	88	37.0	84	39.0		27.7	78	55.5		58.1
16	103	39.4	99	40.0		27.9	93	56.2		58.9
17	118	41.9	114	41.1	+2	28.1	108	56.9	+2	59.6
18	133	44.3	129	42.1	+2	28.3	123	57.6	+3	00.4
19	148	46.8	144	43.1		28.5	138	58.3		01.1
20	163	49.3	159	44.2		28.6	153	59.0		01.9
21	178	51.7	174	45.2		28.8	168	59.7		02.7
22	193	54.2	189	46.2		29.0	184	00.4		03.4
23	208	56.7	204	47.2		29.2	199	01.1		04.2
24	223	59.1	219	48.2	+2	29.4	214	01.8	+3	04.9
Dif	—		+10		+2		+7		+8	
								+22	+1	
									+25	0

UT	SOL			LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15°9			Edad: 10 ^d 9 PHE	4^h: 57°0 12^h: 56°8 20^h: 56°6 R°: 47^m					Civil		Náutico		Hora R°	
	PMG: 11 ^h 56 ^m 6	hG ☉	Dec							Hora	R°	Hora	R°		
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		h m	h m	h m	h m m	h m m	h m m	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	180	50.4	+16 30.9	38	36.0	-7 15.0		60 N	20 10	21 07	22 49	17 19 92	2 34 3		
1	195	50.5		53	08.5 ¹³⁵		29.3 ¹⁴³	58	19 59	20 50	22 09	12 88	38 7		
2	210	50.5	32.3	67	41.0 ¹³⁵		43.4 ¹⁴¹	56	50	36	21 43	06 84	42 10		
3	225	50.5	33.0	82	13.4 ¹³⁴	-7 57.6 ¹⁴²		54	41	24	23	17 01 80	46 12		
4	240	50.6	33.7	96	45.9 ¹³⁵	-8 11.7 ¹⁴¹		52	33	13	21 07	16 56 78	49 15		
5	255	50.6	+16 34.4	111	18.4 ¹³⁵	-8 25.7 ¹⁴⁰		50	19 26	20 04	20 53	16 52 75	2 52 17		
6	270	50.7	+16 35.1	125	50.8 ¹³⁴	-8 39.7 ¹⁴⁰		45	19 12	19 45	20 26	16 42 71	2 58 22		
7	285	50.7	35.8	140	23.2 ¹³⁴	-8 53.6 ¹³⁹		40	19 00	30	20 06	35 66	3 04 26		
8	300	50.8	36.5	154	55.6 ¹³⁴	-9 07.5 ¹³⁹		35	18 50	17	19 50	28 63	08 29		
9	315	50.8	37.2	169	27.9 ¹³³	21.4 ¹³⁹		30	41	19 06	37	22 60	12 33		
10	330	50.9	37.9	184	00.3 ¹³⁴	35.2 ¹³⁸		20	25	18 49	16	12 55	19 38		
11	345	50.9	+16 38.6	198	32.6 ¹³³	-9 48.9 ¹³⁷		10 N	18 12	18 34	19 00	16 04 50	3 26 41		
12	0	51.0	+16 39.3	213	04.9 ¹³³	-10 02.6 ¹³⁷		0	18 00	18 22	18 47	15 55 47	3 32 46		
13	15	51.0	40.0	227	37.2 ¹³³	16.2 ¹³⁶		10 S	17 48	18 10	35	47 43	37 51		
14	30	51.1	40.6	242	09.5 ¹³³	29.8 ¹³⁶		20	35	17 58	25	39 38	44 54		
15	45	51.1	41.3	256	41.7 ¹³²	43.3 ¹³⁵		30	21	46	14	29 34	51 60		
16	60	51.1	42.0	271	13.9 ¹³²	-10 56.8 ¹³⁵		35	12	39	09	24 30	3 55 63		
17	75	51.2	+16 42.7	285	46.1 ¹³²	-11 10.2 ¹³⁴		40	17 03	17 31	18 04	15 18 27	4 00 66		
18	90	51.2	+16 43.4	300	18.3 ¹³²	-11 23.5 ¹³³		45	16 52	17 23	17 58	15 10 24	4 06 70		
19	105	51.3	44.1	314	50.4 ¹³¹	36.8 ¹³³		50	39	13	52	15 02 18	12 76		
20	120	51.3	44.8	329	22.5 ¹³¹	-11 50.0 ¹³²		52	32	09	49	14 58 16	15 78		
21	135	51.4	45.5	343	54.6 ¹³¹	-12 03.2 ¹³²		54	25	17 04	46	54 14	19 80		
22	150	51.4	46.2	358	26.6 ¹³⁰	16.3 ¹³¹		56	18	16 59	43	49 11	23 83		
23	165	51.5	46.9	12	58.6 ¹³⁰	29.3 ¹³⁰		58	16 09	53	40	44 7	27 87		
24	180	51.5	+16 47.6	27	30.6 ¹³⁰	-12 42.3 ¹³⁰		60 S	15 59	16 46	17 37	14 38 4	4 32 90		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 9 ^h 02 ^m 6		Mag: -4.7 PMG: 9 ^h 20 ^m		Mag: +1.2 PMG: 9 ^h 43 ^m		Mag: -2.3 PMG: 6 ^h 51 ^m		Mag: +0.8 PMG: 20 ^h 09 ^m						
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	223	59.1	219	48.2	+2 29.4		214	01.8	+3 04.9		256	54.7	-13 59.9	56 55.3	+7 56.1
1	239	01.6	234	49.2	29.6		229	02.5	05.7		271	56.9	59.8	71 57.8	56.1
2	254	04.1	249	50.3	29.8		244	03.2	06.5		286	59.0	59.7	87 00.3	56.1
3	269	06.5	264	51.3	30.0		259	03.9	07.2		302	01.2	59.6	102 02.8	56.1
4	284	09.0	279	52.3	30.2		274	04.6	08.0		317	03.4	59.5	117 05.4	56.1
5	299	11.5	294	53.3	+2 30.4		289	05.3	+3 08.8		332	05.6	-13 59.4	132 07.9	+7 56.1
6	314	13.9	309	54.3	+2 30.6		304	06.0	+3 09.5		347	07.7	-13 59.3	147 10.4	+7 56.1
7	329	16.4	324	55.3	30.8		319	06.7	10.3		2 09.9	59.2	59.2	162 12.9	56.1
8	344	18.8	339	56.3	31.0		334	07.4	11.0		17 12.1	59.1	59.1	177 15.4	56.2
9	359	21.3	354	57.3	31.3		349	08.1	11.8		32 14.3	59.1	59.1	192 17.9	56.2
10	14	23.8	9	58.3	31.5		4	08.8	12.6		47 16.4	59.0	59.0	207 20.4	56.2
11	29	26.2	24	59.3	+2 31.7		19	09.5	+3 13.3		62 18.6	-13 58.9	58.9	222 22.9	+7 56.2
12	44	28.7	40	00.3	+2 31.9		34	10.2	+3 14.1		77 20.8	-13 58.8	58.8	237 25.4	+7 56.2
13	59	31.2	55	01.3	32.1		49	10.9	14.8		92 23.0	58.7	58.7	252 27.9	56.2
14	74	33.6	70	02.3	32.3		64	11.6	15.6		107 25.2	58.6	58.6	267 30.4	56.2
15	89	36.1	85	03.2	32.5		79	12.3	16.4		122 27.3	58.5	58.5	282 33.0	56.2
16	104	38.6	100	04.2	32.7		94	13.0	17.1		137 29.5	58.4	58.4	297 35.5	56.2
17	119	41.0	115	05.2	+2 33.0		109	13.7	+3 17.9		152 31.7	-13 58.3	58.3	312 38.0	+7 56.3
18	134	43.5	130	06.2	+2 33.2		124	14.4	+3 18.6		167 33.9	-13 58.3	58.3	327 40.5	+7 56.3
19	149	45.9	145	07.2	33.4		139	15.1	19.4		182 36.1	58.2	58.2	342 43.0	56.3
20	164	48.4	160	08.2	33.6		154	15.8	20.2		197 38.2	58.1	58.1	357 45.5	56.3
21	179	50.9	175	09.1	33.8		169	16.5	20.9		212 40.4	58.0	58.0	12 48.0	56.3
22	194	53.3	190	10.1	34.1		184	17.2	21.7		227 42.6	57.9	57.9	27 50.5	56.3
23	209	55.8	205	11.1	34.3		199	17.9	22.4		242 44.8	57.8	57.8	42 53.0	56.3
24	224	58.3	220	12.0	+2 34.5		214	18.6	+3 23.2		257 47.0	-13 57.7	57.7	57 55.5	+7 56.3
Dif	—		+10		+2		+7		+8		+22		+1	+25	

UT	SOL			LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 9 PMG: 11 ^h 56 ^m 5			Edad: 11 ^d 9 PHE { 4 ^h : 56 ^m 5 12 ^h : 56 ^m 3 20 ^h : 56 ^m 1 PMG: 22 ^h 53 ^m R°: 49 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico		Civil	Hora		R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	51.5	+16	47.6	27	30.6	-12	42.3	60 N	1 04	2 45	3 42	18 51	92	2 37	6	
1	195	51.5		48.3	42	02.6 ¹³⁰	-12	55.2 ¹²⁹	58	1 43	3 02	3 53	40 87		45	9	
2	210	51.6		49.0	56	34.5 ¹²⁹	-13	08.0 ¹²⁸	56	2 09	16	4 03	30 83		52	13	
3	225	51.6		49.7	71	06.4 ¹²⁹		20.7 ¹²⁷	54	29	28	12	21 80		2 58	16	
4	240	51.7		50.3	85	38.2 ¹²⁸		33.4 ¹²⁷	52	46	39	19	14 77		3 04	18	
5	255	51.7	+16	51.0	100	10.1 ¹²⁹	-13	46.0 ¹²⁶	50	2 59	3 48	4 26	18 07	75	3 09	20	
6	270	51.7	+16	51.7	114	41.8 ¹²⁷	-13	58.6 ¹²⁶	45	3 26	4 08	4 41	17 53	69	3 20	25	
7	285	51.8		52.4	129	13.6 ¹²⁸	-14	11.1 ¹²⁵	40	3 47	23	4 53	41 66		30	28	
8	300	51.8		53.1	143	45.3 ¹²⁷		23.5 ¹²⁴	35	4 03	36	5 03	31 63		37	32	
9	315	51.9		53.8	158	17.0 ¹²⁷		35.8 ¹²³	30	16	4 46	12	22 60		45	34	
10	330	51.9		54.5	172	48.6 ¹²⁶	-14	48.0 ¹²²	20	37	5 04	27	17 07	56	3 57	39	
11	345	51.9	+16	55.1	187	20.2 ¹²⁶	-15	00.2 ¹²²	10 N	4 53	5 19	5 41	16 54	52	4 07	44	
12	0	52.0	+16	55.8	201	51.8 ¹²⁶	-15	12.3 ¹²¹	0	5 06	5 31	5 53	16 42	48	4 18	47	
13	15	52.0		56.5	216	23.3 ¹²⁵		24.3 ¹²⁰	10 S	18	43	6 05	30 45		28	51	
14	30	52.1		57.2	230	54.8 ¹²⁵		36.2 ¹¹⁹	20	29	5 55	18	17 41		38	56	
15	45	52.1		57.9	245	26.3 ¹²⁵		48.1 ¹¹⁹	30	39	6 08	33	16 03	36	51	60	
16	60	52.1		58.6	259	57.7 ¹²⁴	-15	59.9 ¹¹⁸	35	44	15	41	15 54	34	4 58	63	
17	75	52.2	+16	59.3	274	29.0 ¹²³	-16	11.5 ¹¹⁶	40	5 50	6 22	6 51	15 45	31	5 06	67	
18	90	52.2	+16	59.9	289	00.4 ¹²⁴	-16	23.1 ¹¹⁶	45	5 56	6 31	7 02	15 34	27	5 16	70	
19	105	52.3	+17	00.6	303	31.7 ¹²³		34.7 ¹¹⁶	50	6 02	41	16	20 23		28	75	
20	120	52.3		01.3	318	02.9 ¹²²		46.1 ¹¹⁴	52	05	45	22	14 20		33	78	
21	135	52.3		02.0	332	34.1 ¹²²	-16	57.4 ¹¹³	54	07	50	29	08 17		39	81	
22	150	52.4		02.7	347	05.3 ¹²²	-17	08.7 ¹¹³	56	11	6 55	37	15 00	15	46	84	
23	165	52.4		03.3	1	36.4 ¹²¹		19.9 ¹¹²	58	14	7 01	45	14 51	11	5 54	87	
24	180	52.4	+17	04.0	16	07.5 ¹²¹	-17	31.0 ¹¹¹	60 S	6 17	7 08	7 55	14 42	7	6 02	92	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 8 ^h 58 ^m 6		Mag: -4.7 PMG: 9 ^h 19 ^m		Mag: +1.2 PMG: 9 ^h 42 ^m		Mag: -2.3 PMG: 6 ^h 48 ^m		Mag: +0.8 PMG: 20 ^h 05 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	224	58.3	220	12.0	+2	34.5	214	18.6	+3	23.2	257	47.0	-13	57.7	57	55.5	+7	56.3
1	240	00.7	235	13.0		34.8	229	19.3		24.0	272	49.1		57.6	72	58.0		56.3
2	255	03.2	250	14.0		35.0	244	20.0		24.7	287	51.3		57.6	88	00.5		56.4
3	270	05.7	265	14.9		35.2	259	20.7		25.5	302	53.5		57.5	103	03.0		56.4
4	285	08.1	280	15.9		35.4	274	21.4		26.2	317	55.7		57.4	118	05.6		56.4
5	300	10.6	295	16.9	+2	35.7	289	22.1	+3	27.0	332	57.9	-13	57.3	133	08.1	+7	56.4
6	315	13.1	310	17.8	+2	35.9	304	22.8	+3	27.8	348	00.1	-13	57.2	148	10.6	+7	56.4
7	330	15.5	325	18.8		36.2	319	23.5		28.5	3	02.2		57.1	163	13.1		56.4
8	345	18.0	340	19.7		36.4	334	24.2		29.3	18	04.4		57.0	178	15.6		56.4
9	0	20.4	355	20.7		36.6	349	24.9		30.0	33	06.6		56.9	193	18.1		56.4
10	15	22.9	10	21.6		36.9	4	25.6		30.8	48	08.8		56.9	208	20.6		56.4
11	30	25.4	25	22.6	+2	37.1	19	26.3	+3	31.5	63	11.0	-13	56.8	223	23.1	+7	56.4
12	45	27.8	40	23.5	+2	37.4	34	27.0	+3	32.3	78	13.2	-13	56.7	238	25.6	+7	56.5
13	60	30.3	55	24.5		37.6	49	27.7		33.1	93	15.3		56.6	253	28.1		56.5
14	75	32.8	70	25.4		37.8	64	28.4		33.8	108	17.5		56.5	268	30.6		56.5
15	90	35.2	85	26.4		38.1	79	29.1		34.6	123	19.7		56.4	283	33.1		56.5
16	105	37.7	100	27.3		38.3	94	29.8		35.3	138	21.9		56.3	298	35.6		56.5
17	120	40.2	115	28.3	+2	38.6	109	30.5	+3	36.1	153	24.1	-13	56.3	313	38.1	+7	56.5
18	135	42.6	130	29.2	+2	38.8	124	31.2	+3	36.9	168	26.3	-13	56.2	328	40.6	+7	56.5
19	150	45.1	145	30.1		39.1	139	31.9		37.6	183	28.4		56.1	343	43.1		56.5
20	165	47.6	160	31.1		39.3	154	32.6		38.4	198	30.6		56.0	358	45.6		56.5
21	180	50.0	175	32.0		39.6	169	33.3		39.1	213	32.8		55.9	13	48.1		56.5
22	195	52.5	190	32.9		39.8	184	34.0		39.9	228	35.0		55.8	28	50.6		56.6
23	210	54.9	205	33.9		40.1	199	34.7		40.6	243	37.2		55.7	43	53.1		56.6
24	225	57.4	220	34.8	+2	40.4	214	35.4	+3	41.4	258	39.4	-13	55.7	58	55.6	+7	56.6
Dif	—		+9		+2		+7		+8		+22		+1		+25		0	

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'8 PMG: 11 ^h 56 ^m 5		Edad: 12 ^d 9 PHE { 4 ^h : 56'0 12 ^h : 55'8 20 ^h : 55'7 R°: 50 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	h m	h m
0	180	52.4	+17 04.0	16 07.5	-17 31.0		60 N	20 15	21 14	23 06	20 23 89	2 43 8		
1	195	52.5	04.7	30 38.5 ¹²⁰	42.0 ¹¹⁰		58	20 04	20 56	22 18	20 07 83	2 54 14		
2	210	52.5	05.4	45 09.5 ¹²⁰	-17 52.9 ¹⁰⁹		56	19 53	41	21 50	19 53 80	3 05 17		
3	225	52.6	06.1	59 40.5 ¹²⁰	-18 03.7 ¹⁰⁸		54	45	28	29	41 77	14 20		
4	240	52.6	06.7	74 11.4 ¹¹⁹	14.4 ¹⁰⁷		52	37	17	21 12	31 74	22 23		
5	255	52.6	+17 07.4	88 42.3 ¹¹⁹	-18 25.0 ¹⁰⁶		50	19 29	20 08	20 57	19 22 71	3 29 25		
6	270	52.7	+17 08.1	103 13.1 ¹¹⁸	-18 35.5 ¹⁰⁵		45	19 14	19 48	20 30	19 02 68	3 45 30		
7	285	52.7	08.8	117 43.9 ¹¹⁸	46.0 ¹⁰⁵		40	19 02	32	20 09	18 47 64	3 58 33		
8	300	52.7	09.4	132 14.6 ¹¹⁷	-18 56.3 ¹⁰³		35	18 51	19	19 52	34 61	4 09 36		
9	315	52.8	10.1	146 45.3 ¹¹⁷	-19 06.5 ¹⁰²		30	42	19 08	39	22 60	19 39		
10	330	52.8	10.8	161 15.9 ¹¹⁶	16.7 ¹⁰²		20	26	18 50	17	18 03 56	36 43		
11	345	52.8	+17 11.5	175 46.5 ¹¹⁶	-19 26.7 ¹⁰⁰		10 N	18 13	18 35	19 01	17 46 53	4 51 46		
12	0	52.9	+17 12.1	190 17.1 ¹¹⁶	-19 36.7 ¹⁰⁰		0	18 00	18 22	18 47	17 30 50	5 05 49		
13	15	52.9	12.8	204 47.6 ¹¹⁵	46.5 ⁹⁸		10 S	17 47	18 09	35	17 15 47	19 52		
14	30	52.9	13.5	219 18.1 ¹¹⁵	-19 56.2 ⁹⁷		20	34	17 57	24	16 58 44	34 56		
15	45	53.0	14.1	233 48.5 ¹¹⁴	-20 05.9 ⁹⁷		30	19	44	13	39 41	5 51 60		
16	60	53.0	14.8	248 18.9 ¹¹⁴	15.4 ⁹⁵		35	11	37	07	28 38	6 01 62		
17	75	53.0	+17 15.5	262 49.2 ¹¹³	-20 24.8 ⁹⁴		40	17 01	17 29	18 02	16 16 35	6 13 65		
18	90	53.1	+17 16.2	277 19.5 ¹¹³	-20 34.1 ⁹³		45	16 49	17 21	17 56	16 01 32	6 26 69		
19	105	53.1	16.8	291 49.8 ¹¹³	43.4 ⁹³		50	35	10	49	15 43 28	43 73		
20	120	53.1	17.5	306 20.0 ¹¹²	-20 52.5 ⁹¹		52	29	06	46	34 26	6 51 76		
21	135	53.2	18.2	320 50.2 ¹¹²	-21 01.5 ⁹⁰		54	22	17 01	43	25 23	7 00 78		
22	150	53.2	18.8	335 20.3 ¹¹¹	10.4 ⁸⁹		56	14	16 55	40	15 20	10 81		
23	165	53.2	19.5	349 50.4 ¹¹¹	19.2 ⁸⁸		58	16 05	49	37	15 02 17	21 86		
24	180	53.3	+17 20.2	4 20.4 ¹¹⁰	-21 27.8 ⁸⁶		60 S	15 55	16 42	17 33	14 49 11	7 34 91		
UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO				
	PMG: 8 ^h 54 ^m 7		Mag: -4.7 PMG: 9 ^h 17 ^m		Mag: +1.2 PMG: 9 ^h 41 ^m		Mag: -2.3 PMG: 6 ^h 44 ^m			Mag: +0.8 PMG: 20 ^h 01 ^m				
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'		
0	225	57.4	220 34.8	+2 40.4	214 35.4	+3 41.4	258 39.4	-13 55.7	58 55.6	+7 56.6				
1	240	59.9	235 35.7	40.6	229 36.1	42.2	273 41.6	55.6	73 58.2	56.6				
2	256	02.3	250 36.6	40.9	244 36.8	42.9	288 43.8	55.5	89 00.7	56.6				
3	271	04.8	265 37.6	41.1	259 37.5	43.7	303 45.9	55.4	104 03.2	56.6				
4	286	07.3	280 38.5	41.4	274 38.2	44.4	318 48.1	55.3	119 05.7	56.6				
5	301	09.7	295 39.4	+2 41.7	289 38.9	+3 45.2	333 50.3	-13 55.2	134 08.2	+7 56.6				
6	316	12.2	310 40.3	+2 41.9	304 39.6	+3 45.9	348 52.5	-13 55.1	149 10.7	+7 56.6				
7	331	14.7	325 41.2	42.2	319 40.3	46.7	3 54.7	55.1	164 13.2	56.6				
8	346	17.1	340 42.1	42.5	334 41.0	47.5	18 56.9	55.0	179 15.7	56.6				
9	1 19.6	355 43.0	42.7	349 41.7	48.2	33 59.1	54.9	194 18.2	56.6					
10	16 22.0	10 44.0	43.0	4 42.4	49.0	49 01.3	54.8	209 20.7	56.7					
11	31 24.5	25 44.9	+2 43.3	19 43.1	+3 49.7	64 03.5	-13 54.7	224 23.2	+7 56.7					
12	46 27.0	40 45.8	+2 43.5	34 43.8	+3 50.5	79 05.6	-13 54.6	239 25.7	+7 56.7					
13	61 29.4	55 46.7	43.8	49 44.5	51.2	94 07.8	54.6	254 28.2	56.7					
14	76 31.9	70 47.6	44.1	64 45.2	52.0	109 10.0	54.5	269 30.7	56.7					
15	91 34.4	85 48.5	44.4	79 45.9	52.7	124 12.2	54.4	284 33.2	56.7					
16	106 36.8	100 49.4	44.6	94 46.6	53.5	139 14.4	54.3	299 35.7	56.7					
17	121 39.3	115 50.3	+2 44.9	109 47.3	+3 54.3	154 16.6	-13 54.2	314 38.2	+7 56.7					
18	136 41.8	130 51.2	+2 45.2	124 48.0	+3 55.0	169 18.8	-13 54.1	329 40.7	+7 56.7					
19	151 44.2	145 52.1	45.5	139 48.7	55.8	184 21.0	54.0	344 43.2	56.7					
20	166 46.7	160 52.9	45.8	154 49.4	56.5	199 23.2	54.0	359 45.7	56.7					
21	181 49.2	175 53.8	46.0	169 50.1	57.3	214 25.4	53.9	14 48.2	56.7					
22	196 51.6	190 54.7	46.3	184 50.8	58.0	229 27.6	53.8	29 50.7	56.7					
23	211 54.1	205 55.6	46.6	199 51.5	58.8	244 29.8	53.7	44 53.2	56.8					
24	226 56.5	220 56.5	+2 46.9	214 52.2	+3 59.5	259 32.0	-13 53.6	59 55.7	+7 56.8					
Dif	—	+9	+3	+7	+8	+22	+1	+25	0					

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 4				Edad: 13 ^d 9 PHE SD: 15 ^h 1 PMG: **h **m R°: **m													
	hG ☉	Dec			hG ☾	Dif				Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	180	53.3	+17	20.2	4	20.4	-21	27.8	60 N	0 46	2 38	3 37	21 52	80	2 51	15		
1	195	53.3		20.8	18	50.4 ¹¹⁰		36.4 ⁸⁶	58	1 34	2 56	49	30 75		3 08	20		
2	210	53.3		21.5	33	20.4 ¹¹⁰		44.8 ⁸⁴	56	2 02	3 11	3 59	21 13	71	22	24		
3	225	53.3		22.2	47	50.3 ¹⁰⁹	-21	53.2 ⁸⁴	54	24	24	4 08	20 58	68	34	22		
4	240	53.4		22.8	62	20.2 ¹⁰⁹	-22	01.4 ⁸²	52	41	35	16	45	67	45	30		
5	255	53.4	+17	23.5	76	50.0 ¹⁰⁸	-22	09.5 ⁸¹	50	2 55	3 45	4 23	20 33	66	3 54	32		
6	270	53.4	+17	24.2	91	19.8 ¹⁰⁸	-22	17.5 ⁸⁰	45	3 23	4 05	4 38	20 10	62	4 15	36		
7	285	53.5		24.8	105	49.6 ¹⁰⁸		25.4 ⁷⁹	40	3 44	21	4 51	19 51	60	31	39		
8	300	53.5		25.5	120	19.3 ¹⁰⁷		33.2 ⁷⁸	35	4 00	34	5 01	35	59	45	41		
9	315	53.5		26.2	134	49.0 ¹⁰⁷		40.8 ⁷⁶	30	14	4 45	11	19 22	57	4 58	42		
10	330	53.6		26.8	149	18.6 ¹⁰⁶		48.4 ⁷⁶	20	36	5 03	27	18 59	55	5 19	45		
11	345	53.6	+17	27.5	163	48.2 ¹⁰⁶	-22	55.8 ⁷⁴	10 N	4 52	5 18	5 40	18 39	53	5 37	48		
12	0	53.6	+17	28.1	178	17.8 ¹⁰⁶	-23	03.1 ⁷³	0	5 06	5 31	5 53	18 20	52	5 54	51		
13	15	53.6		28.8	192	47.3 ¹⁰⁵		10.3 ⁷²	10 S	18	44	6 06	18 02	49	6 11	53		
14	30	53.7		29.5	207	16.8 ¹⁰⁵		17.3 ⁷⁰	20	29	5 56	19	17 42	48	30	55		
15	45	53.7		30.1	221	46.2 ¹⁰⁴		24.3 ⁷⁰	30	40	6 09	34	20	45	6 51	59		
16	60	53.7		30.8	236	15.6 ¹⁰⁴		31.1 ⁶⁸	35	46	16	43	17 06	44	7 03	61		
17	75	53.7	+17	31.4	250	45.0 ¹⁰⁴	-23	37.8 ⁶⁷	40	5 52	6 24	6 53	16 51	42	7 18	62		
18	90	53.8	+17	32.1	265	14.4 ¹⁰⁴	-23	44.4 ⁶⁶	45	5 58	6 33	7 04	16 33	40	7 35	65		
19	105	53.8		32.8	279	43.7 ¹⁰³		50.8 ⁶⁴	50	6 04	43	18	11	36	7 56	69		
20	120	53.8		33.4	294	13.0 ¹⁰³	-23	57.2 ⁶⁴	52	07	48	25	16 00	35	8 07	70		
21	135	53.8		34.1	308	42.2 ¹⁰²	-24	03.4 ⁶²	54	10	53	32	15 48	33	18	73		
22	150	53.9		34.7	323	11.4 ¹⁰²		09.5 ⁶¹	56	14	6 59	40	35	29	31	76		
23	165	53.9		35.4	337	40.6 ¹⁰²		15.4 ⁵⁹	58	17	7 05	7 49	19 26		8 47	80		
24	180	53.9	+17	36.0	352	09.8 ¹⁰²	-24	21.3 ⁵⁹	60 S	6 21	7 12	8 00	15 00	21	9 05	86		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 8 ^h 50 ^m 8		Mag: -4.7 PMG: 9 ^h 16 ^m				Mag: +1.2 PMG: 9 ^h 40 ^m				Mag: -2.3 PMG: 6 ^h 41 ^m				Mag: +0.8 PMG: 19 ^h 57 ^m			
	hG ♀		hG ♀	Dec			hG ♂	Dec			hG ♃	Dec			hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	226	56.5	220	56.5	+2	46.9	214	52.2	+3	59.5	259	32.0	-13	53.6	59	55.7	+7	56.8
1	241	59.0	235	57.4		47.2	229	52.9	+4	00.3	274	34.1		53.5	74	58.2		56.8
2	257	01.5	250	58.3		47.5	244	53.6		01.1	289	36.3		53.5	90	00.7		56.8
3	272	03.9	265	59.1		47.8	259	54.3		01.8	304	38.5		53.4	105	03.2		56.8
4	287	06.4	281	00.0		48.1	274	55.0		02.6	319	40.7		53.3	120	05.7		56.8
5	302	08.9	296	00.9	+2	48.4	289	55.7	+4	03.3	334	42.9	-13	53.2	135	08.2	+7	56.8
6	317	11.3	311	01.8	+2	48.6	304	56.4	+4	04.1	349	45.1	-13	53.1	150	10.7	+7	56.8
7	332	13.8	326	02.6		48.9	319	57.1		04.8	4	47.3		53.0	165	13.2		56.8
8	347	16.3	341	03.5		49.2	334	57.8		05.6	19	49.5		53.0	180	15.7		56.8
9	2	18.7	356	04.4		49.5	349	58.5		06.3	34	51.7		52.9	195	18.2		56.8
10	17	21.2	11	05.2		49.8	4	59.2		07.1	49	53.9		52.8	210	20.7		56.8
11	32	23.7	26	06.1	+2	50.1	19	59.9	+4	07.8	64	56.1	-13	52.7	225	23.2	+7	56.8
12	47	26.1	41	07.0	+2	50.4	35	00.6	+4	08.6	79	58.3	-13	52.6	240	25.7	+7	56.8
13	62	28.6	56	07.8		50.7	50	01.3		09.4	95	00.5		52.6	255	28.2		56.8
14	77	31.0	71	08.7		51.0	65	02.0		10.1	110	02.7		52.5	270	30.6		56.9
15	92	33.5	86	09.5		51.3	80	02.7		10.9	125	04.9		52.4	285	33.1		56.9
16	107	36.0	101	10.4		51.7	95	03.4		11.6	140	07.1		52.3	300	35.6		56.9
17	122	38.4	116	11.3	+2	52.0	110	04.1	+4	12.4	155	09.3	-13	52.2	315	38.1	+7	56.9
18	137	40.9	131	12.1	+2	52.3	125	04.8	+4	13.1	170	11.5	-13	52.1	330	40.6	+7	56.9
19	152	43.4	146	13.0		52.6	140	05.5		13.9	185	13.7		52.1	345	43.1		56.9
20	167	45.8	161	13.8		52.9	155	06.2		14.6	200	15.9		52.0	0	45.6		56.9
21	182	48.3	176	14.7		53.2	170	06.9		15.4	215	18.1		51.9	15	48.1		56.9
22	197	50.8	191	15.5		53.5	185	07.6		16.1	230	20.3		51.8	30	50.6		56.9
23	212	53.2	206	16.4		53.8	200	08.3		16.9	245	22.5		51.7	45	53.1		56.9
24	227	55.7	221	17.2	+2	54.1	215	09.0	+4	17.6	260	24.7	-13	51.7	60	55.6	+7	56.9
Dif	—		+9 +3				+7 +8				+22 +1		+25 0					

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 : 55 ^m 1 12 ^h : 54 ^m 9 20 ^h : 54 ^m 8												
	PMG: 11 ^h 56 ^m 4			SD: 15 ^h 0 PMG: 0 ^h 32 ^m Rº: 52 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	Rº	Hora	Rº	
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m		
0	180	53.9	+17 36.0	352	09.8	-24 21.3	57	60 N	20 20	21 20	23 33	23 12 60	3 06 27			
1	195	53.9	36.7	6	38.9 ¹⁰¹	27.0	57	58	20 08	21 01	22 28	22 45 58	28 32			
2	210	54.0	37.3	21	08.0 ¹⁰¹	32.6	56	56	19 57	20 46	21 57	24 57	3 46 36			
3	225	54.0	38.0	35	37.1 ¹⁰¹	38.0	54	54	48	32	34	22 06 57	4 01 38			
4	240	54.0	38.7	50	06.1 ¹⁰⁰	43.4	54	52	40	21	17	21 52 56	15 39			
5	255	54.0	+17 39.3	64	35.2 ¹⁰¹	-24 48.6	52	50	19 32	20 11	21 02	21 39 56	4 26 41			
6	270	54.1	+17 40.0	79	04.2 ¹⁰⁰	-24 53.6	50	45	19 17	19 50	20 33	21 12 55	4 51 43			
7	285	54.1	40.6	93	33.1 ⁹⁹	-24 58.6	50	40	19 04	34	20 11	20 51 55	5 10 45			
8	300	54.1	41.3	108	02.1 ¹⁰⁰	-25 03.4	48	35	18 53	21	19 54	34 54	26 47			
9	315	54.1	41.9	122	31.0 ⁹⁹	08.1	47	30	43	19 09	40	20 19 54	5 40 48			
10	330	54.2	42.6	136	59.9 ⁹⁹	12.7	46	20	27	18 50	18	19 54 53	6 04 50			
11	345	54.2	+17 43.2	151	28.8 ⁹⁹	-25 17.1	44	10 N	18 13	18 35	19 01	19 32 52	6 25 51			
12	0	54.2	+17 43.9	165	57.7 ⁹⁹	-25 21.4	43	0	18 00	18 22	18 47	19 12 51	6 45 52			
13	15	54.2	44.5	180	26.5 ⁹⁸	25.6	42	10 S	17 47	18 09	34	18 51 51	7 04 53			
14	30	54.2	45.2	194	55.4 ⁹⁹	29.6	40	20	33	17 56	23	30 50	25 55			
15	45	54.3	45.8	209	24.2 ⁹⁸	33.5	39	30	18	43	12	18 05 49	7 50 55			
16	60	54.3	46.5	223	53.0 ⁹⁸	37.3	38	35	17 09	36	06	17 50 49	8 04 57			
17	75	54.3	+17 47.1	238	21.8 ⁹⁸	-25 41.0	37	40	16 59	17 27	18 00	17 33 48	8 20 58			
18	90	54.3	+17 47.7	252	50.5 ⁹⁷	-25 44.5	35	45	16 47	17 18	17 54	17 13 47	8 40 59			
19	105	54.4	48.4	267	19.3 ⁹⁸	47.9	34	50	32	08	47	16 47 46	9 05 61			
20	120	54.4	49.0	281	48.1 ⁹⁸	51.1	32	52	26	17 03	44	35 45	17 62			
21	135	54.4	49.7	296	16.8 ⁹⁷	54.2	31	54	18	16 57	40	21 44	31 64			
22	150	54.4	50.3	310	45.5 ⁹⁷	-25 57.2	30	56	10	52	37	16 04 43	9 47 65			
23	165	54.4	51.0	325	14.3 ⁹⁸	-26 00.1	29	58	16 01	45	33	15 45 40	10 07 67			
24	180	54.4	+17 51.6	339	43.0 ⁹⁷	-26 02.8	27	60 S	15 50	16 38	17 29	15 21 37	10 31 70			

UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO		
	PMG: 8 ^h 46 ^m 8		Mag: -4.7 PMG: 9 ^h 14 ^m		Mag: +1.2 PMG: 9 ^h 39 ^m		Mag: -2.3 PMG: 6 ^h 37 ^m			Mag: +0.8 PMG: 19 ^h 53 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'
0	227	55.7	221	17.2	+2 54.1	215 09.0	+4 17.6	260 24.7	-13 51.7	60 55.6	+7 56.9	
1	242	58.1	236	18.0	54.5	230 09.7	18.4	275 26.9	51.6	75 58.1	56.9	
2	258	00.6	251	18.9	54.8	245 10.5	19.1	290 29.1	51.5	91 00.6	56.9	
3	273	03.1	266	19.7	55.1	260 11.2	19.9	305 31.3	51.4	106 03.1	56.9	
4	288	05.5	281	20.6	55.4	275 11.9	20.7	320 33.5	51.3	121 05.6	56.9	
5	303	08.0	296	21.4	+2 55.7	290 12.6	+4 21.4	335 35.7	-13 51.2	136 08.1	+7 56.9	
6	318	10.5	311	22.2	+2 56.0	305 13.3	+4 22.2	350 37.9	-13 51.2	151 10.6	+7 56.9	
7	333	12.9	326	23.1	56.4	320 14.0	22.9	5 40.1	51.1	166 13.1	57.0	
8	348	15.4	341	23.9	56.7	335 14.7	23.7	20 42.3	51.0	181 15.6	57.0	
9	3 17.9	356 24.7	57.0	350 15.4	24.4	350 15.4	24.4	35 44.5	50.9	196 18.1	57.0	
10	18 20.3	11 25.5	57.3	5 16.1	25.2	5 16.1	25.2	50 46.7	50.8	211 20.6	57.0	
11	33 22.8	26 26.4	+2 57.7	20 16.8	+4 25.9	20 16.8	+4 25.9	65 48.9	-13 50.8	226 23.0	+7 57.0	
12	48 25.3	41 27.2	+2 58.0	35 17.5	+4 26.7	35 17.5	+4 26.7	80 51.1	-13 50.7	241 25.5	+7 57.0	
13	63 27.7	56 28.0	58.3	50 18.2	27.4	50 18.2	27.4	95 53.3	50.6	256 28.0	57.0	
14	78 30.2	71 28.8	58.7	65 18.9	28.2	65 18.9	28.2	110 55.5	50.5	271 30.5	57.0	
15	93 32.6	86 29.7	59.0	80 19.6	28.9	80 19.6	28.9	125 57.7	50.4	286 33.0	57.0	
16	108 35.1	101 30.5	59.3	95 20.3	29.7	95 20.3	29.7	140 59.9	50.4	301 35.5	57.0	
17	123 37.6	116 31.3	+2 59.7	110 21.0	+4 30.4	110 21.0	+4 30.4	156 02.1	-13 50.3	316 38.0	+7 57.0	
18	138 40.0	131 32.1	+3 00.0	125 21.7	+4 31.2	125 21.7	+4 31.2	171 04.3	-13 50.2	331 40.5	+7 57.0	
19	153 42.5	146 32.9	+3 00.3	140 22.4	31.9	140 22.4	31.9	186 06.5	50.1	346 43.0	57.0	
20	168 45.0	161 33.7	00.7	155 23.1	32.7	155 23.1	32.7	201 08.7	50.0	1 45.5	57.0	
21	183 47.4	176 34.5	01.0	170 23.8	33.4	170 23.8	33.4	216 10.9	50.0	16 48.0	57.0	
22	198 49.9	191 35.3	01.3	185 24.5	34.2	185 24.5	34.2	231 13.1	49.9	31 50.5	57.0	
23	213 52.4	206 36.2	01.7	200 25.2	34.9	200 25.2	34.9	246 15.3	49.8	46 53.0	57.0	
24	228 54.8	221 37.0	+3 02.0	215 25.9	+4 35.7	215 25.9	+4 35.7	261 17.5	-13 49.7	61 55.4	+7 57.0	
Dif	—	+8	+3	+7	+8	+7	+8	+22	+1	+25	0	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8			Edad: 15 ^d 9 PHE { 4 ^h : 54 ^m 7 12 ^h : 54 ^m 6 20 ^h : 54 ^m 5													
	PMG: 11 ^h 56 ^m 4			SD: 14 ^h 9 PMG: 1 ^h 24 ^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	180	54.4	+17	51.6	339	43.0	-26	02.8	60 N	0 19	2 32	3 32	**	**	*	3 33	48
1	195	54.5		52.3	354	11.7	97	05.4	26	58	1 24	2 51	44	23	43	40	4 00
2	210	54.5		52.9	8	40.4	97	07.9	25	56	1 55	3 07	3 55	21	42		22
3	225	54.5		53.5	23	09.1	97	10.2	23	54	2 18	20	4 04	23	03	43	39
4	240	54.5		54.2	37	37.8	97	12.4	22	52	36	31	12	22	48	44	4 54
5	255	54.5	+17	54.8	52	06.5	97	-26	14.4	20	50	2 51	3 41	4 20	22	35	45
6	270	54.6	+17	55.5	66	35.2	97	-26	16.4	20	45	3 20	4 02	4 36	22	07	47
7	285	54.6		56.1	81	03.9	97	18.2	18	40	41	18	4 49	21	46	47	5 55
8	300	54.6		56.7	95	32.6	97	19.8	16	35	3 58	32	5 00	28	48		6 13
9	315	54.6		57.4	110	01.3	97	21.3	15	30	4 12	4 43	09	21	13	49	28
10	330	54.6		58.0	124	30.0	97	22.7	14	20	34	5 02	26	20	47	49	6 54
11	345	54.6	+17	58.6	138	58.8	98	-26	24.0	13	10 N	4 52	5 18	5 40	20	24	51
12	0	54.7	+17	59.3	153	27.5	97	-26	25.1	11	0	5 06	5 31	5 53	20	03	51
13	15	54.7	+17	59.9	167	56.2	97	26.1	10	10 S	18	44	6 06	19	42	52	7 57
14	30	54.7	+18	00.6	182	25.0	98	27.0	9	20	30	5 57	20	19	20	52	8 20
15	45	54.7		01.2	196	53.7	97	27.7	7	30	41	6 10	35	18	54	53	8 45
16	60	54.7		01.8	211	22.5	98	28.3	6	35	47	18	44	39	53		9 01
17	75	54.7	+18	02.5	225	51.2	97	-26	28.8	5	40	5 53	6 26	6 55	18	21	54
18	90	54.7	+18	03.1	240	20.0	98	-26	29.1	3	45	6 00	6 35	7 07	18	00	54
19	105	54.8		03.7	254	48.8	98	29.3	2	50	07	46	21	17	33	55	10 06
20	120	54.8		04.4	269	17.7	99	29.4	1	52	10	51	28	20	55		19
21	135	54.8		05.0	283	46.5	98	29.3	1	54	13	6 56	36	17	05	56	35
22	150	54.8		05.6	298	15.3	98	29.1	2	56	17	7 02	44	16	47	57	10 52
23	165	54.8		06.3	312	44.2	99	28.8	3	58	21	09	7 54	16	25	58	11 14
24	180	54.8	+18	06.9	327	13.1	99	-26	28.3	5	60 S	6 25	7 16	8 04	15	58	59

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 8 ^h 42 ^m 9		Mag: -4.7 PMG: 9 ^h 13 ^m		Mag: +1.2 PMG: 9 ^h 38 ^m		Mag: -2.4 PMG: 6 ^h 34 ^m		Mag: +0.8 PMG: 19 ^h 49 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	228	54.8	221	37.0	215	25.9	+4	35.7	261	17.5
1	243	57.3	236	37.8	230	26.6		36.4	276	19.7
2	258	59.8	251	38.6	245	27.3		37.2	291	22.0
3	274	02.2	266	39.4	260	28.0		37.9	306	24.2
4	289	04.7	281	40.2	275	28.7		38.7	321	26.4
5	304	07.1	296	41.0	290	29.4	+4	39.4	336	28.6
6	319	09.6	311	41.7	305	30.1	+4	40.2	351	30.8
7	334	12.1	326	42.5	320	30.8		40.9	6	33.0
8	349	14.5	341	43.3	335	31.5		41.7	21	35.2
9	4	17.0	356	44.1	350	32.2		42.4	36	37.4
10	19	19.5	11	44.9	5	32.9		43.2	51	39.6
11	34	21.9	26	45.7	20	33.6	+4	43.9	66	41.8
12	49	24.4	41	46.5	35	34.3	+4	44.7	81	44.0
13	64	26.9	56	47.3	50	35.0		45.4	96	46.2
14	79	29.3	71	48.1	65	35.7		46.2	111	48.5
15	94	31.8	86	48.8	80	36.4		46.9	126	50.7
16	109	34.3	101	49.6	95	37.1		47.7	141	52.9
17	124	36.7	116	50.4	110	37.8	+4	48.4	156	55.1
18	139	39.2	131	51.2	125	38.5	+4	49.2	171	57.3
19	154	41.6	146	51.9	140	39.2		49.9	186	59.5
20	169	44.1	161	52.7	155	39.9		50.7	202	01.7
21	184	46.6	176	53.5	170	40.6		51.4	217	03.9
22	199	49.0	191	54.3	185	41.3		52.2	232	06.1
23	214	51.5	206	55.0	200	42.0		52.9	247	08.3
24	229	54.0	221	55.8	215	42.7	+4	53.7	262	10.6
Dif	—		+8		+4		+7		+22	

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
0	1</																							

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'8 PMG: 11 ^h 56 ^m 3			Edad: 16 ^d 9 PHE { 4 ^h : 54'4 12 ^h : 54'3 20 ^h : 54'3 PMG: 2 ^h 16 ^m R°: 51 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m	m	h m	m
0	180	54.8	+18 06.9	327	13.1	-26 28.3	60 N	20 25	21 27	** **	0 12 36		4 21 69	
1	195	54.8	07.5	341	42.0 ⁹⁹	27.8	58	12	21 07	22 39	** ** *	**	4 49 66	
2	210	54.9	08.1	356	11.0 ¹⁰⁰	27.0	56	20 01	20 50	22 05	** ** *	**	5 11 64	
3	225	54.9	08.8	10	39.9 ⁹⁹	26.2	54	19 52	36	21 40	23 46 31		29 62	
4	240	54.9	09.4	25	08.9 ¹⁰⁰	25.2	52	43	25	21	32 33		44 61	
5	255	54.9	+18 10.0	39	37.9 ¹⁰⁰	-26 24.1	50	19 35	20 14	21 06	23 20 34		5 58 59	
6	270	54.9	+18 10.7	54	06.9 ¹⁰⁰	-26 22.9	45	19 19	19 53	20 36	22 54 38		6 25 57	
7	285	54.9	11.3	68	36.0 ¹⁰¹	21.5	40	19 06	36	20 14	33 41		6 46 57	
8	300	54.9	11.9	83	05.1 ¹⁰¹	20.0	35	18 54	22	19 56	16 42		7 04 55	
9	315	54.9	12.5	97	34.2 ¹⁰¹	18.4	30	45	19 11	42	22 02 43		19 55	
10	330	54.9	13.2	112	03.4 ¹⁰²	16.6	20	28	18 51	19	21 36 46		7 45 53	
11	345	55.0	+18 13.8	126	32.6 ¹⁰²	-26 14.7	10 N	18 13	18 36	19 02	21 15 47		8 07 52	
12	0	55.0	+18 14.4	141	01.8 ¹⁰²	-26 12.7	0	18 00	18 22	18 47	20 54 50		8 28 51	
13	15	55.0	15.0	155	31.0 ¹⁰²	10.6	10 S	17 47	18 09	34	34 51		8 49 49	
14	30	55.0	15.7	170	00.3 ¹⁰³	08.3	20	32	17 56	22	20 12 53		9 11 48	
15	45	55.0	16.3	184	29.6 ¹⁰³	06.0	30	16	42	11	19 47 55		37 46	
16	60	55.0	16.9	198	59.0 ¹⁰⁴	03.5	35	17 07	34	18 05	32 57		9 52 45	
17	75	55.0	+18 17.5	213	28.4 ¹⁰⁴	-26 00.8	40	16 57	17 26	17 58	19 15 58		10 09 44	
18	90	55.0	+18 18.1	227	57.8 ¹⁰⁴	-25 58.1	45	16 44	17 16	17 52	18 54 60		10 30 43	
19	105	55.0	18.8	242	27.3 ¹⁰⁵	55.2	50	29	05	44	28 63		10 57 40	
20	120	55.0	19.4	256	56.8 ¹⁰⁵	52.2	52	23	17 00	41	15 65		11 10 38	
21	135	55.0	20.0	271	26.3 ¹⁰⁵	49.0	54	15	16 54	37	18 01 66		25 36	
22	150	55.0	20.6	285	55.9 ¹⁰⁶	45.8	56	16 06	48	34	17 44 68		11 42 35	
23	165	55.1	21.2	300	25.5 ¹⁰⁶	42.4	58	15 56	41	30	17 23 71		12 03 32	
24	180	55.1	+18 21.9	314	55.2 ¹⁰⁷	-25 38.9	60 S	15 45	16 34	17 25	16 57 76		12 29 27	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 8 ^h 39 ^m 0		Mag: -4.7 PMG: 9 ^h 12 ^m		Mag: +1.2 PMG: 9 ^h 37 ^m		Mag: -2.4 PMG: 6 ^h 30 ^m		Mag: +0.8 PMG: 19 ^h 45 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	229	54.0	221	55.8	215	42.7	262	10.6	62	55.2
1	244	56.4	236	56.6	230	43.4	277	12.8	77	57.7
2	259	58.9	251	57.3	245	44.1	292	15.0	93	00.2
3	275	01.4	266	58.1	260	44.8	307	17.2	108	02.6
4	290	03.8	281	58.8	275	45.5	322	19.4	123	05.1
5	305	06.3	296	59.6	290	46.2	337	21.6	138	07.6
6	320	08.8	312	00.4	305	46.9	352	23.8	153	10.1
7	335	11.2	327	01.1	320	47.6	7	26.1	168	12.6
8	350	13.7	342	01.9	335	48.3	22	28.3	183	15.1
9	5	16.1	357	02.6	350	49.0	37	30.5	198	17.6
10	20	18.6	12	03.4	5	49.7	52	32.7	213	20.1
11	35	21.1	27	04.1	20	50.4	67	34.9	228	22.5
12	50	23.5	42	04.9	35	51.1	82	37.1	243	25.0
13	65	26.0	57	05.6	50	51.8	97	39.3	258	27.5
14	80	28.5	72	06.4	65	52.5	112	41.6	273	30.0
15	95	30.9	87	07.1	80	53.2	127	43.8	288	32.5
16	110	33.4	102	07.9	95	53.9	142	46.0	303	35.0
17	125	35.9	117	08.6	110	54.6	157	48.2	318	37.4
18	140	38.3	132	09.3	125	55.3	172	50.4	333	39.9
19	155	40.8	147	10.1	140	56.0	187	52.6	348	42.4
20	170	43.2	162	10.8	155	56.7	202	54.9	3	44.9
21	185	45.7	177	11.6	170	57.4	217	57.1	18	47.4
22	200	48.2	192	12.3	185	58.1	232	59.3	33	49.9
23	215	50.6	207	13.0	200	58.8	248	01.5	48	52.4
24	230	53.1	222	13.7	215	59.5	263	03.7	63	54.8
Dif	—		+7	+4	+7	+7	+22	+1	+25	0

UT	SOL				LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna						
	SD: 15'8 PMG: 11 ^h 56 ^m 3				Edad: 17 ^d 9 PHE { 4 ^h : 54'2 12 ^h : 54'2 20 ^h : 54'2 SD: 14'8 PMG: 3 ^h 07 ^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	55.1	+18	21.9	314	55.2	-25	38.9	36	58	60 N	**	**	2	25	3	27	0	48	19	5	30	82
1	195	55.1		22.5	329	24.9	107	35.3	36	58	58	1	13	2	45	40		23	25		5	55	76
2	210	55.1		23.1	343	54.7	108	31.5	38	56	56	1	48	3	02	3	51	0	03	28	6	15	72
3	225	55.1		23.7	358	24.5	108	27.7	38	54	54	2	12	16	4	01	**	**	**		31	69	
4	240	55.1		24.3	12	54.3	108	23.7	40	52	52	31	27	09			**	**	**		45	67	
5	255	55.1	+18	24.9	27	24.2	109	-25	19.6	41	50	2	46	3	38	4	17	23	54	27	6	57	66
6	270	55.1	+18	25.5	41	54.1	109	-25	15.4	42	45	3	16	3	59	4	33	23	32	31	7	22	62
7	285	55.1		26.2	56	24.1	110		11.1	43	40	39	4	16	47		23	14	34		43	59	
8	300	55.1		26.8	70	54.2	111		06.6	45	35	3	56	30	4	58	22	58	37	7	59	58	
9	315	55.1		27.4	85	24.2	110	-25	02.0	46	30	4	11	4	42	5	08		45	38	8	14	55
10	330	55.1		28.0	99	54.4	112	-24	57.4	46	20	33	5	01	25		22	42		38	53		
11	345	55.1	+18	28.6	114	24.5	111	-24	52.6	48	10 N	4	51	5	17	5	39	22	02	45	8	59	51
12	0	55.1	+18	29.2	128	54.8	113	-24	47.6	50	0	5	06	5	31	5	53	21	44	47	9	19	48
13	15	55.1		29.8	143	25.1	113		42.6	50	10 S	19		44	6	06		25	50		38	46	
14	30	55.1		30.4	157	55.4	113		37.5	51	20	31	5	57	20		21	05	53	9	59	44	
15	45	55.1		31.1	172	25.8	114		32.2	53	30	42	6	11	37		20	42	56	10	23	41	
16	60	55.1		31.7	186	56.2	114		26.9	53	35	48	19		46		29	58		37	39		
17	75	55.1	+18	32.3	201	26.7	115	-24	21.4	55	40	5	55	6	28	6	57	20	13	60	10	53	37
18	90	55.1	+18	32.9	215	57.2	115	-24	15.8	56	45	6	02	6	37	7	09	19	54	64	11	13	34
19	105	55.1		33.5	230	27.8	116		10.1	57	50	09	49	24		24	31	67		37	30		
20	120	55.1		34.1	244	58.4	116	-24	04.3	58	52	13	54	31		20	69		11	48	29		
21	135	55.1		34.7	259	29.1	117	-23	58.4	59	54	16	6	59	39		19	07	71	12	01	27	
22	150	55.1		35.3	273	59.9	118		52.3	61	56	20	7	05	48		18	52	75		17	23	
23	165	55.1		35.9	288	30.7	118		46.2	61	58	24	12	7	58		34	79		35	19		
24	180	55.1	+18	36.5	303	01.5	118	-23	40.0	62	60 S	6	28	7	20	8	09	18	13	84	12	56	15

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 8 ^h 35 ^m 0		Mag: -4.7 PMG: 9 ^h 11 ^m		Mag: +1.2 PMG: 9 ^h 36 ^m		Mag: -2.4 PMG: 6 ^h 27 ^m		Mag: +0.8 PMG: 19 ^h 41 ^m									
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄									
h	°	'	°	'	°	'	°	'	°	'								
0	230	53.1	222	13.7	+3	215	59.5	+5	263	03.7	-13	46.0	63	54.8	+7	57.1		
1	245	55.6	237	14.5		231	00.2		278	06.0		45.9	78	57.3		57.1		
2	260	58.0	252	15.2		246	00.9		293	08.2		45.9	93	59.8		57.1		
3	276	00.5	267	15.9		261	01.6		308	10.4		45.8	109	02.3		57.1		
4	291	03.0	282	16.7		276	02.3		323	12.6		45.7	124	04.8		57.1		
5	306	05.4	297	17.4	+3	291	03.0	+5	338	14.8	-13	45.7	139	07.2	+7	57.1		
6	321	07.9	312	18.1	+3	306	03.7	+5	353	17.1	-13	45.6	154	09.7	+7	57.1		
7	336	10.4	327	18.8		321	04.4		8	19.3		45.5	169	12.2		57.1		
8	351	12.8	342	19.5		336	05.1		23	21.5		45.4	184	14.7		57.1		
9	6	15.3	357	20.3		351	05.8		38	23.7		45.4	199	17.2		57.1		
10	21	17.7	12	21.0		6	06.5		53	25.9		45.3	214	19.7		57.1		
11	36	20.2	27	21.7	+3	24.1	21	07.2	+5	19.8	68	28.2	-13	45.2	229	22.1	+7	57.1
12	51	22.7	42	22.4	+3	24.5	36	07.9	+5	20.5	83	30.4	-13	45.1	244	24.6	+7	57.1
13	66	25.1	57	23.1		24.9	51	08.6		21.3	98	32.6		45.1	259	27.1		57.1
14	81	27.6	72	23.8		25.3	66	09.3		22.0	113	34.8		45.0	274	29.6		57.1
15	96	30.1	87	24.5		25.7	81	10.0		22.7	128	37.0		44.9	289	32.1		57.1
16	111	32.5	102	25.2		26.2	96	10.7		23.5	143	39.3		44.8	304	34.5		57.1
17	126	35.0	117	26.0	+3	26.6	111	11.4	+5	24.2	158	41.5	-13	44.8	319	37.0	+7	57.1
18	141	37.5	132	26.7	+3	27.0	126	12.1	+5	25.0	173	43.7	-13	44.7	334	39.5	+7	57.1
19	156	39.9	147	27.4		27.4	141	12.8		25.7	188	45.9		44.6	349	42.0		57.1
20	171	42.4	162	28.1		27.8	156	13.5		26.5	203	48.2		44.5	4	44.5		57.1
21	186	44.9	177	28.8		28.2	171	14.2		27.2	218	50.4		44.5	19	46.9		57.1
22	201	47.3	192	29.5		28.6	186	14.9		27.9	233	52.6		44.4	34	49.4		57.1
23	216	49.8	207	30.2		29.0	201	15.6		28.7	248	54.8		44.3	49	51.9		57.1
24	231	52.2	222	30.9	+3	29.5	216	16.3	+5	29.4	263	57.1	-13	44.3	64	54.4	+7	57.1
Dif	—		+7		+4		+7		+7		+22		+1		+25		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 : 54/2 12 ^h : 54/2 20 ^h : 54/2	SD: 14 ^h 7				Civil		Náutico		Hora R°	
	PMG: 11 ^h 56 ^m 3	hG ☉	Dec		hG ☾	Dif			Dec	Dif				
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	180	55.1	+18 36.5	303	01.5	-23 40.0	64	60 N	20 30	21 33	** **	1 07 11	6 52 85	
1	195	55.1		317	32.5 ¹²⁰		64	58	16	21 12	22 52	0 48 15	7 11 80	
2	210	55.1		332	03.4 ¹¹⁹		66	56	20 05	20 55	22 12	31 20	27 76	
3	225	55.1		346	34.4 ¹²⁰		66	54	19 55	41	21 46	17 23	40 74	
4	240	55.1		1	05.5 ¹²¹		67	52	46	28	26	0 05 25	7 52 71	
5	255	55.1	+18 39.5	15	36.6 ¹²¹	-23 07.2	67	50	19 38	20 18	21 10	** ** *	8 03 68	
6	270	55.1	+18 40.1	30	07.8 ¹²²	-23 00.3	69	45	19 21	19 55	20 39	** ** *	8 24 65	
7	285	55.1		44	39.1 ¹²³	-22 53.3	70	40	19 08	38	20 16	23 48 29	42 61	
8	300	55.1		59	10.4 ¹²³		70	35	18 56	24	19 58	35 31	8 57 58	
9	315	55.1		73	41.7 ¹²³		72	30	46	19 12	43	23 35	9 09 56	
10	330	55.1		88	13.1 ¹²⁴		73	20	29	18 52	20	23 04 38	31 52	
11	345	55.1	+18 43.1	102	44.6 ¹²⁵	-22 24.5	73	10 N	18 14	18 36	19 02	22 47 42	9 50 49	
12	0	55.1	+18 43.7	117	16.1 ¹²⁵	-22 17.0	75	0	18 00	18 22	18 47	22 31 45	10 07 46	
13	15	55.1		131	47.6 ¹²⁵		76	10 S	17 46	18 08	34	22 15 48	24 43	
14	30	55.1		146	19.3 ¹²⁷	-22 01.8	76	20	32	17 55	22	21 58 52	10 43 40	
15	45	55.1		160	51.0 ¹²⁷	-21 54.0	78	30	15	41	09	38 56	11 04 36	
16	60	55.1		175	22.7 ¹²⁷		79	35	17 06	33	18 03	27 58	16 34	
17	75	55.1	+18 46.7	189	54.5 ¹²⁸	-21 38.2	79	40	16 55	17 24	17 57	21 13 61	11 30 31	
18	90	55.1	+18 47.3	204	26.3 ¹²⁸	-21 30.2	80	45	16 42	17 14	17 50	20 58 64	11 47 28	
19	105	55.1		218	58.2 ¹²⁹		82	50	27	17 02	42	38 69	12 07 24	
20	120	55.1		233	30.2 ¹³⁰		82	52	19	16 57	38	29 71	17 22	
21	135	55.1		248	02.2 ¹³⁰	-21 05.5	83	54	11	51	35	18 74	28 19	
22	150	55.1		262	34.2 ¹³⁰	-20 57.0	85	56	16 03	45	31	20 07 76	40 17	
23	165	55.1		277	06.4 ¹³²		85	58	15 52	38	26	19 53 80	12 54 13	
24	180	55.1	+18 50.9	291	38.5 ¹³¹	-20 39.9	86	60 S	15 41	16 30	17 22	19 37 85	13 11 9	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 8 ^h 31 ^m 1	Mag: -4.7 PMG: 9 ^h 10 ^m	Mag: -4.7 PMG: 9 ^h 10 ^m	Mag: +1.2 PMG: 9 ^h 34 ^m	Mag: +1.2 PMG: 9 ^h 34 ^m	Mag: -2.4 PMG: 6 ^h 23 ^m	Mag: -2.4 PMG: 6 ^h 23 ^m	Mag: +0.8 PMG: 19 ^h 37 ^m	Mag: +0.8 PMG: 19 ^h 37 ^m	
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	°	'	°	'	°	°	'
0	231	52.2	222 30.9	+3 29.5	216 16.3	+5 29.4	263 57.1	-13 44.3	64 54.4	+7 57.1
1	246	54.7	237 31.5		231 17.0		278 59.3		79 56.9	
2	261	57.2	252 32.2		246 17.7		294 01.5		94 59.3	
3	276	59.6	267 32.9		261 18.4		309 03.7		110 01.8	
4	292	02.1	282 33.6		276 19.1		324 06.0		125 04.3	
5	307	04.6	297 34.3	+3 31.6	291 19.8	+5 33.1	339 08.2	-13 43.9	140 06.8	+7 57.1
6	322	07.0	312 35.0	+3 32.0	306 20.5	+5 33.9	354 10.4	-13 43.8	155 09.3	+7 57.1
7	337	09.5	327 35.7		321 21.2		9 12.6		170 11.7	
8	352	12.0	342 36.4		336 21.9		24 14.9		185 14.2	
9	7	14.4	357 37.1		351 22.6		39 17.1		200 16.7	
10	22	16.9	12 37.7		6 23.3		54 19.3		215 19.2	
11	37	19.4	27 38.4	+3 34.1	21 24.0	+5 37.6	69 21.6	-13 43.5	230 21.6	+7 57.1
12	52	21.8	42 39.1	+3 34.6	36 24.7	+5 38.3	84 23.8	-13 43.4	245 24.1	+7 57.1
13	67	24.3	57 39.8		51 25.4		99 26.0		260 26.6	
14	82	26.7	72 40.5		66 26.1		114 28.2		275 29.1	
15	97	29.2	87 41.1		81 26.8		129 30.5		290 31.6	
16	112	31.7	102 41.8		96 27.5		144 32.7		305 34.0	
17	127	34.1	117 42.5	+3 36.7	111 28.2	+5 42.0	159 34.9	-13 43.0	320 36.5	+7 57.1
18	142	36.6	132 43.1	+3 37.1	126 28.9	+5 42.8	174 37.2	-13 43.0	335 39.0	+7 57.1
19	157	39.1	147 43.8		141 29.6		189 39.4		350 41.5	
20	172	41.5	162 44.5		156 30.3		204 41.6		5 43.9	
21	187	44.0	177 45.2		171 31.0		219 43.9		20 46.4	
22	202	46.5	192 45.8		186 31.7		234 46.1		35 48.9	
23	217	48.9	207 46.5		201 32.4		249 48.3		50 51.4	
24	232	51.4	222 47.1	+3 39.8	216 33.1	+5 47.2	264 50.5	-13 42.5	65 53.8	+7 57.1
Dif	—		+7	+4	+7	+7	+22	+1	+25	

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: 19 ^d 9 PHE SD: 14/8 PMG: 4 ^h 42 ^m R°: 45 ^m												
	hG ☉	Dec			hG ☾	Dif				Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	55.1	+18	50.9	291	38.5	-20	39.9	60 N	** **	2	19	3	22	1	18	6
1	195	55.1		51.5	306	10.7 ¹³²		31.3 ⁸⁶	58	1	00	40	36	1	03	11	
2	210	55.1		52.0	320	43.0 ¹³³		22.5 ⁸⁸	56	1	40	2	57	47	0	51	14
3	225	55.1		52.6	335	15.3 ¹³³		13.6 ⁸⁹	54	2	06	3	12	3	57	40	17
4	240	55.1		53.2	349	47.7 ¹³⁴	-20	04.7 ⁸⁹	52	26		24	4	06	30	19	
5	255	55.1	+18	53.8	4	20.2 ¹³⁵	-19	55.6 ⁹¹	50	2	42	3	35	4	14	0	21
6	270	55.1	+18	54.4	18	52.6 ¹³⁴	-19	46.5 ⁹¹	45	3	13	3	57	4	31	0	03
7	285	55.0		55.0	33	25.2 ¹³⁶		37.3 ⁹²	40	36	4	14	45	**	**	**	
8	300	55.0		55.6	47	57.8 ¹³⁶		28.0 ⁹³	35	3	54	28	4	56	**	**	**
9	315	55.0		56.2	62	30.4 ¹³⁶		18.6 ⁹⁴	30	4	09	4	40	5	07	23	58
10	330	55.0		56.7	77	03.1 ¹³⁷	-19	09.2 ⁹⁴	20	32	5	00	24		42	36	
11	345	55.0	+18	57.3	91	35.8 ¹³⁷	-18	59.6 ⁹⁶	10 N	4	50	5	17	5	39	23	29
12	0	55.0	+18	57.9	106	08.6 ¹³⁸	-18	50.0 ⁹⁶	0	5	06	5	31	5	53	23	16
13	15	55.0		58.5	120	41.4 ¹³⁸		40.3 ⁹⁷	10 S	19		44	6	07	23	03	
14	30	55.0		59.1	135	14.3 ¹³⁹		30.5 ⁹⁸	20	31	5	58	21		22	50	
15	45	55.0	+18	59.7	149	47.2 ¹³⁹		20.7 ⁹⁸	30	43	6	12	38		34	55	
16	60	55.0	+19	00.3	164	20.2 ¹⁴⁰		10.7 ¹⁰⁰	35	50		20	47		25	58	
17	75	55.0	+19	00.8	178	53.2 ¹⁴⁰	-18	00.7 ¹⁰⁰	40	5	56	6	29	6	58	22	14
18	90	55.0	+19	01.4	193	26.3 ¹⁴¹	-17	50.6 ¹⁰¹	45	6	04	6	39	7	11	22	02
19	105	54.9		02.0	207	59.4 ¹⁴¹		40.4 ¹⁰²	50	12		51	27		21	47	
20	120	54.9		02.6	222	32.6 ¹⁴²		30.2 ¹⁰²	52	15	6	56	34		40	72	
21	135	54.9		03.2	237	05.8 ¹⁴²		19.8 ¹⁰⁴	54	19	7	02	42		32	74	
22	150	54.9		03.7	251	39.1 ¹⁴³	-17	09.4 ¹⁰⁴	56	23		09	7	51	23	77	
23	165	54.9		04.3	266	12.3 ¹⁴²	-16	59.0 ¹⁰⁴	58	27	16		8	02	13	81	
24	180	54.9	+19	04.9	280	45.7 ¹⁴⁴	-16	48.4 ¹⁰⁶	60 S	6	32	7	24	8	13	21	02

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 8 ^h 27 ^m 2		Mag: -4.7 PMG: 9 ^h 08 ^m		Mag: +1.2 PMG: 9 ^h 33 ^m		Mag: -2.4 PMG: 6 ^h 20 ^m		Mag: +0.8 PMG: 19 ^h 33 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	232	51.4	222	47.1	+3	39.8	216	33.1	+5	47.2
1	247	53.9	237	47.8		40.2	231	33.8		48.0
2	262	56.3	252	48.5		40.7	246	34.5		48.7
3	277	58.8	267	49.1		41.1	261	35.2		49.4
4	293	01.2	282	49.8		41.6	276	35.9		50.2
5	308	03.7	297	50.4	+3	42.0	291	36.6	+5	50.9
6	323	06.2	312	51.1	+3	42.4	306	37.3	+5	51.7
7	338	08.6	327	51.7		42.9	321	38.0		52.4
8	353	11.1	342	52.4		43.3	336	38.7		53.1
9	8	13.6	357	53.1		43.8	351	39.4		53.9
10	23	16.0	12	53.7		44.2	6	40.1		54.6
11	38	18.5	27	54.3	+3	44.7	21	40.8	+5	55.3
12	53	21.0	42	55.0	+3	45.1	36	41.5	+5	56.1
13	68	23.4	57	55.6		45.6	51	42.2		56.8
14	83	25.9	72	56.3		46.0	66	42.9		57.6
15	98	28.3	87	56.9		46.5	81	43.6		58.3
16	113	30.8	102	57.6		47.0	96	44.3		59.0
17	128	33.3	117	58.2	+3	47.4	111	45.0	+5	59.8
18	143	35.7	132	58.8	+3	47.9	126	45.7	+6	00.5
19	158	38.2	147	59.5		48.3	141	46.4		01.2
20	173	40.7	163	00.1		48.8	156	47.1		02.0
21	188	43.1	178	00.8		49.2	171	47.8		02.7
22	203	45.6	193	01.4		49.7	186	48.5		03.5
23	218	48.1	208	02.0		50.2	201	49.2		04.2
24	233	50.5	223	02.7	+3	50.6	216	49.9	+6	04.9
Dif	—		+6		+5		+7		+7	

0	180	55.1	+18	50.9	291	38.5	-20	39.9	60 N	**	**	2	19	3	22	1	18	6	8	17	85
1	195	55.1		51.5	306	10.7 ¹³²		31.3 ⁸⁶	58	1	00		40	36	1	03	11		31	81	
2	210	55.1		52.0	320	43.0 ¹³³		22.5 ⁸⁸	56	1	40	2	57	47	0	51	14		43	77	
3	225	55.1		52.6	335	15.3 ¹³³		13.6 ⁸⁹	54	2	06	3	12	3	57	40	17		8	54	
4	240	55.1		53.2	349	47.7 ¹³⁴	-20	04.7 ⁸⁹	52	26		24		4	06	30	19		9	03	
5	255	55.1	+18	53.8	4	20.2 ¹³⁵	-19	55.6 ⁹¹	50	2	42	3	35	4	14	0	21	22		9	11
6	270	55.1	+18	54.4	18	52.6 ¹³⁴	-19	46.5 ⁹¹	45	3	13	3	57	4	31	0	03	25		9	29
7	285	55.0		55.0	33	25.2 ¹³⁶		37.3 ⁹²	40	36	4	14		45	**	**	**		43	61	
8	300	55.0		55.6	47	57.8 ¹³⁶		28.0 ⁹³	35	3	54	28	4	56	**	**	**		9	55	
9	315	55.0		56.2	62	30.4 ¹³⁶		18.6 ⁹⁴	30	4	09	4	40	5	07	23	58	31		10	05
10	330	55.0		56.7	77	03.1 ¹³⁷	-19	09.2 ⁹⁴	20	32	5	00		24		42	36		23	51	
11	345	55.0	+18	57.3	91	35.8 ¹³⁷	-18	59.6 ⁹⁶	10 N	4	50	5	17	5	39	23	29	39		10	39
12	0	55.0	+18	57.9	106	08.6 ¹³⁸	-18	50.0 ⁹⁶	0	5	06	5	31	5	53	23	16	43		10	53
13	15	55.0		58.5	120	41.4 ¹³⁸		40.3 ⁹⁷	10 S	19		44	6	07		23	03	47		11	07
14	30	55.0		59.1	135	14.3 ¹³⁹		30.5 ⁹⁸	20	31	5	58	21			22	50	51		23	36
15	45	55.0	+18	59.7	149	47.2 ¹³⁹		20.7 ⁹⁸	30	43	6	12	38			34	55		40	32	
16	60	55.0	+19	00.3	164	20.2 ¹⁴⁰		10.7 ¹⁰⁰	35	50		20	47			25	58		11	50	
17	75	55.0	+19	00.8	178	53.2 ¹⁴⁰	-18	00.7 ¹⁰⁰	40	5	56	6	29	6	58	22	14	62		12	01
18	90	55.0	+19	01.4	193	26.3 ¹⁴¹	-17	50.6 ¹⁰¹	45	6	04	6	39	7	11	22	02	65		12	15
19	105	54.9		02.0	207	59.4 ¹⁴¹		40.4 ¹⁰²	50	12		51	27			21	47	70		31	19
20	120	54.9		02.6	222	32.6 ¹⁴²		30.2 ¹⁰²	52	15	6	56	34			40	72		39	17	
21	135	54.9		03.2	237	05.8 ¹⁴²		19.8 ¹⁰⁴	54	19	7	02	42			32	74		47	15	
22	150	54.9		03.7	251	39.1 ¹⁴³	-17	09.4 ¹⁰⁴	56	23		09	7	51		23	77		12	57	
23	165	54.9		04.3	266	12.3 ¹⁴²	-16	59.0 ¹⁰⁴	58	27	16		8	02		13	81		13	07	
24	180	54.9	+19	04.9	280	45.7 ¹⁴⁴	-16	48.4 ¹⁰⁶	60 S	6	32	7	24	8	13	21	02	84		13	20

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: 20 ^d 9 PHE { 4 ^h : 54'5 12 ^h : 54'6 20 ^h : 54'7 PMG: 5 ^h 27 ^m R°: 42 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	m	h m	m	
0	180	54.9	+19 04.9	280	45.7	-16 48.4		60 N	20 35	21 40	** **	1 24	4	9 42	84	
1	195	54.9	05.5	295	19.1 ¹⁴⁴	37.8 ¹⁰⁶		58	21	21 17	23 06	14	7	9 52	80	
2	210	54.9	06.1	309	52.5 ¹⁴⁴	27.1 ¹⁰⁷		56	20 09	20 59	22 20	1 05	10	10 00	77	
3	225	54.9	06.6	324	25.9 ¹⁴⁴	16.3 ¹⁰⁸		54	19 58	45	21 52	0 57	13	08	77	
4	240	54.8	07.2	338	59.4 ¹⁴⁵	-16 05.5 ¹⁰⁸		52	49	32	31	49	16	14	72	
5	255	54.8	+19 07.8	353	33.0 ¹⁴⁶	-15 54.6 ¹⁰⁹		50	19 41	20 21	21 14	0 43	17	10 20	70	
6	270	54.8	+19 08.4	8	06.6 ¹⁴⁶	-15 43.6 ¹¹⁰		45	19 24	19 58	20 42	0 28	22	10 33	65	
7	285	54.8	08.9	22	40.2 ¹⁴⁶	32.6 ¹¹⁰		40	19 09	40	18	17	25	44	61	
8	300	54.8	09.5	37	13.8 ¹⁴⁶	21.5 ¹¹¹		35	18 57	26	20 00	0 06	29	10 53	58	
9	315	54.8	10.1	51	47.5 ¹⁴⁷	-15 10.3 ¹¹²		30	47	19 13	19 45	** ** *	**	11 01	55	
10	330	54.8	10.6	66	21.3 ¹⁴⁸	-14 59.0 ¹¹³		20	29	18 53	21	** ** *	**	14	51	
11	345	54.7	+19 11.2	80	55.0 ¹⁴⁷	-14 47.7 ¹¹³		10 N	18 14	18 36	19 03	** ** *	**	11 26	46	
12	0	54.7	+19 11.8	95	28.8 ¹⁴⁸	-14 36.4 ¹¹³		0	18 00	18 22	18 47	23 59	43	11 37	43	
13	15	54.7	12.4	110	02.6 ¹⁴⁸	24.9 ¹¹⁵		10 S	17 46	18 08	34	50	46	48	39	
14	30	54.7	12.9	124	36.5 ¹⁴⁹	13.4 ¹¹⁵		20	31	17 54	21	41	50	11 59	35	
15	45	54.7	13.5	139	10.4 ¹⁴⁹	-14 01.8 ¹¹⁶		30	14	39	08	29	56	12 12	31	
16	60	54.7	14.1	153	44.3 ¹⁴⁹	-13 50.2 ¹¹⁶		35	17 04	31	18 02	23	58	20	27	
17	75	54.7	+19 14.6	168	18.3 ¹⁵⁰	-13 38.5 ¹¹⁷		40	16 53	17 22	17 55	23 16	61	12 29	24	
18	90	54.6	+19 15.2	182	52.3 ¹⁵⁰	-13 26.8 ¹¹⁷		45	16 40	17 12	17 48	23 07	65	12 39	20	
19	105	54.6	15.8	197	26.3 ¹⁵⁰	14.9 ¹¹⁹		50	24	17 00	39	22 57	69	50	17	
20	120	54.6	16.3	212	00.3 ¹⁵⁰	-13 03.1 ¹¹⁸		52	17	16 54	36	52	72	12 56	14	
21	135	54.6	16.9	226	34.4 ¹⁵¹	-12 51.1 ¹²⁰		54	16 08	48	32	46	75	13 02	12	
22	150	54.6	17.5	241	08.5 ¹⁵¹	39.1 ¹²⁰		56	15 59	42	28	40	78	09	9	
23	165	54.6	18.0	255	42.6 ¹⁵¹	27.1 ¹²⁰		58	49	35	23	34	80	16	7	
24	180	54.5	+19 18.6	270	16.8 ¹⁵²	-12 15.0 ¹²¹		60 S	15 36	16 26	17 19	22 26	84	13 25	3	
UT	ARIES		VENUS			MARTE			JÚPITER		SATURNO					
	PMG: 8 ^h 23 ^m 3		Mag: -4.6 PMG: 9 ^h 07 ^m			Mag: +1.2 PMG: 9 ^h 32 ^m			Mag: -2.4 PMG: 6 ^h 16 ^m		Mag: +0.8 PMG: 19 ^h 29 ^m					
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	233	50.5	223	02.7	+3 50.6		216	49.9	+6 04.9		265	44.2	-13 40.9		66 53.2	+7 57.0
1	248	53.0	238	03.3		51.1	231	50.6	05.7		280	46.4	40.8		81 55.7	57.0
2	263	55.5	253	03.9		51.6	246	51.3	06.4		295	48.7	40.7		96 58.1	57.0
3	278	57.9	268	04.5		52.0	261	52.0	07.1		310	50.9	40.7		112 00.6	56.9
4	294	00.4	283	05.2		52.5	276	52.7	07.9		325	53.1	40.6		127 03.1	56.9
5	309	02.8	298	05.8	+3 53.0		291	53.4	+6 08.6		340	55.4	-13 40.5		142 05.6	+7 56.9
6	324	05.3	313	06.4	+3 53.4		306	54.1	+6 09.3		355	57.6	-13 40.5		157 08.0	+7 56.9
7	339	07.8	328	07.0		53.9	321	54.8	10.1		10 59.9	40.4			172 10.5	56.9
8	354	10.2	343	07.7		54.4	336	55.5	10.8		26 02.1	40.3			187 13.0	56.9
9	9	12.7	358	08.3		54.8	351	56.2	11.6		41 04.3	40.3			202 15.4	56.9
10	24	15.2	13	08.9		55.3	6	56.9	12.3		56 06.6	40.2			217 17.9	56.9
11	39	17.6	28	09.5	+3 55.8		21	57.6	+6 13.0		71 08.8	-13 40.1			232 20.4	+7 56.9
12	54	20.1	43	10.1	+3 56.3		36	58.3	+6 13.8		86 11.1	-13 40.1			247 22.8	+7 56.9
13	69	22.6	58	10.7		56.7	51	59.0	14.5		101 13.3	40.0			262 25.3	56.9
14	84	25.0	73	11.3		57.2	66	59.7	15.2		116 15.6	39.9			277 27.8	56.9
15	99	27.5	88	12.0		57.7	82	00.4	16.0		131 17.8	39.9			292 30.2	56.9
16	114	30.0	103	12.6		58.2	97	01.1	16.7		146 20.0	39.8			307 32.7	56.9
17	129	32.4	118	13.2	+3 58.6		112	01.8	+6 17.4		161 22.3	-13 39.7			322 35.2	+7 56.9
18	144	34.9	133	13.8	+3 59.1		127	02.5	+6 18.2		176 24.5	-13 39.7			337 37.7	+7 56.9
19	159	37.3	148	14.4	+3 59.6		142	03.2	18.9		191 26.8	39.6			352 40.1	56.9
20	174	39.8	163	15.0	+4 00.1		157	03.9	19.6		206 29.0	39.5			7 42.6	56.9
21	189	42.3	178	15.6		00.6	172	04.6	20.4		221 31.3	39.5			22 45.1	56.8
22	204	44.7	193	16.2		01.0	187	05.3	21.1		236 33.5	39.4			37 47.5	56.8
23	219	47.2	208	16.8		01.5	202	06.0	21.8		251 35.7	39.3			52 50.0	56.8
24	234	49.7	223	17.4	+4 02.0		217	06.7	+6 22.6		266 38.0	-13 39.3			67 52.5	+7 56.8
Dif	—		+6 +5			+7 +7			+22 +1		+25 0					

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 4			Edad: 21 ^d 9 PHE { 4 ^h : 54 ^m 9 12 ^h : 55 ^m 1 20 ^h : 55 ^m 2 PMG: 6 ^h 09 ^m R°: 43 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h	m	h	m	h	m	m	
0	180	54.5	+19	18.6	270	16.8	-12 15.0	60 N	** **	2 12	3 18	1 28	3	11 06 84	
1	195	54.5		19.2	284	51.0 ¹⁵²	-12 02.8 ¹²²	58	0 46	35	31	21	6	12 81	
2	210	54.5		19.7	299	25.1 ¹⁵¹	-11 50.6 ¹²²	56	1 32	2 53	43	15	9	17 78	
3	225	54.5		20.3	313	59.4 ¹⁵³	38.3 ¹²³	54	2 00	3 08	3 54	10	11	22 75	
4	240	54.5		20.9	328	33.6 ¹⁵²	26.0 ¹²³	52	21	20	4 03	05	13	26 73	
5	255	54.4	+19	21.4	343	07.9 ¹⁵³	-11 13.6 ¹²⁴	50	2 38	3 32	4 11	1 00	16	11 30 70	
6	270	54.4	+19	22.0	357	42.1 ¹⁵²	-11 01.2 ¹²⁴	45	3 10	3 54	4 29	0 50	20	11 38 66	
7	285	54.4		22.5	12	16.4 ¹⁵³	-10 48.7 ¹²⁵	40	34	4 12	43	42	24	45 62	
8	300	54.4		23.1	26	50.7 ¹⁵³	36.1 ¹²⁶	35	3 52	27	4 55	35	27	51 58	
9	315	54.4		23.7	41	25.1 ¹⁵⁴	23.5 ¹²⁶	30	4 08	39	5 05	29	29	11 56 56	
10	330	54.4		24.2	55	59.4 ¹⁵³	-10 10.9 ¹²⁶	20	31	4 59	23	18	34	12 05 50	
11	345	54.3	+19	24.8	70	33.8 ¹⁵⁴	-9 58.2 ¹²⁷	10 N	4 50	5 16	5 39	0 08	39	12 12 47	
12	0	54.3	+19	25.3	85	08.2 ¹⁵⁴	-9 45.4 ¹²⁸	0	5 05	5 31	5 53	** ** *	**	12 20 42	
13	15	54.3		25.9	99	42.5 ¹⁵³	32.7 ¹²⁷	10 S	19	45	6 07	** ** *	**	27 38	
14	30	54.3		26.5	114	16.9 ¹⁵⁴	19.8 ¹²⁹	20	32	5 59	22	** ** *	**	34 34	
15	45	54.2		27.0	128	51.4 ¹⁵⁵	-9 06.9 ¹²⁹	30	45	6 14	39	** ** *	**	43 29	
16	60	54.2		27.6	143	25.8 ¹⁵⁴	-8 54.0 ¹²⁹	35	51	22	6 49	** ** *	**	47 27	
17	75	54.2	+19	28.1	158	00.2 ¹⁵⁴	-8 41.0 ¹³⁰	40	5 58	6 31	7 00	** ** *	**	12 53 23	
18	90	54.2	+19	28.7	172	34.6 ¹⁵⁴	-8 28.0 ¹³⁰	45	6 06	6 41	7 13	** ** *	**	12 59 20	
19	105	54.2		29.2	187	09.1 ¹⁵⁵	14.9 ¹³¹	50	14	54	29	** ** *	**	13 07 15	
20	120	54.1		29.8	201	43.5 ¹⁵⁴	-8 01.8 ¹³¹	52	17	6 59	37	** ** *	**	10 13	
21	135	54.1		30.3	216	18.0 ¹⁵⁵	-7 48.6 ¹³²	54	21	7 05	45	** ** *	**	14 11	
22	150	54.1		30.9	230	52.4 ¹⁵⁴	35.4 ¹³²	56	26	12	7 55	23 58	78	18 8	
23	165	54.1		31.4	245	26.9 ¹⁵⁵	22.2 ¹³²	58	30	19	8 05	54	81	23 5	
24	180	54.0	+19	32.0	260	01.3 ¹⁵⁴	-7 08.9 ¹³³	60 S	6 35	7 28	8 18	23 50	85	13 28 3	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG 8 ^h 19 ^m 3		Mag: -4.6 PMG: 9 ^h 06 ^m			Mag: +1.2 PMG: 9 ^h 31 ^m			Mag: -2.4 PMG: 6 ^h 13 ^m			Mag: +0.8 PMG: 19 ^h 25 ^m			
	hG ♈		hG ♀ Dec			hG ♂ Dec			hG ♃ Dec			hG ♄ Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	234	49.7	223	17.4	+4	02.0	217	06.7	+6	22.6	266	38.0	-13	39.3	
1	249	52.1	238	18.0		02.5	232	07.4		23.3	281	40.2		39.2	
2	264	54.6	253	18.6		03.0	247	08.1		24.0	296	42.5		39.1	
3	279	57.1	268	19.2		03.5	262	08.8		24.8	311	44.7		39.1	
4	294	59.5	283	19.8		04.0	277	09.5		25.5	326	47.0		39.0	
5	310	02.0	298	20.4	+4	04.5	292	10.2	+6	26.2	341	49.2	-13	38.9	
6	325	04.4	313	21.0	+4	04.9	307	10.9	+6	27.0	356	51.5	-13	38.9	
7	340	06.9	328	21.6		05.4	322	11.6		27.7	11	53.7		38.8	
8	355	09.4	343	22.2		05.9	337	12.3		28.4	26	56.0		38.7	
9	10	11.8	358	22.7		06.4	352	13.0		29.2	41	58.2		38.7	
10	25	14.3	13	23.3		06.9	7	13.7		29.9	57	00.5		38.6	
11	40	16.8	28	23.9	+4	07.4	22	14.4	+6	30.6	72	02.7	-13	38.5	
12	55	19.2	43	24.5	+4	07.9	37	15.1	+6	31.4	87	04.9	-13	38.5	
13	70	21.7	58	25.1		08.4	52	15.8		32.1	102	07.2		38.4	
14	85	24.2	73	25.7		08.9	67	16.5		32.8	117	09.4		38.3	
15	100	26.6	88	26.3		09.4	82	17.2		33.6	132	11.7		38.3	
16	115	29.1	103	26.8		09.9	97	17.9		34.3	147	13.9		38.2	
17	130	31.6	118	27.4	+4	10.4	112	18.6	+6	35.0	162	16.2	-13	38.2	
18	145	34.0	133	28.0	+4	10.9	127	19.3	+6	35.7	177	18.4	-13	38.1	
19	160	36.5	148	28.6		11.4	142	20.0		36.5	192	20.7		38.0	
20	175	38.9	163	29.1		11.9	157	20.7		37.2	207	22.9		38.0	
21	190	41.4	178	29.7		12.4	172	21.4		37.9	222	25.2		37.9	
22	205	43.9	193	30.3		12.9	187	22.1		38.7	237	27.4		37.8	
23	220	46.3	208	30.9		13.4	202	22.8		39.4	252	29.7		37.8	
24	235	48.8	223	31.4	+4	13.9	217	23.5	+6	40.1	267	31.9	-13	37.7	
Dif	—		+6			+5	+7		+7		+22		+1		+25
															0

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 4			Edad: 22 ^d 9 PHE { SD: 15 ^h 1 PMG: 6 ^h 52 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif				Civil	Náutico	Hora	Rº	Hora	Rº
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	h	m
0	180	54.0	+19	32.0	260	01.3	-7	08.9	60 N	20 39	21 46	** **	1 31	2	12 30	86		
1	195	54.0		32.5	274	35.8 ¹⁵⁵	-6	55.5 ¹³⁴	58	25	23	23 26	27	6	33	82		
2	210	54.0		33.1	289	10.3 ¹⁵⁵		42.2 ¹³³	56	12	21 04	22 28	24	8	35	79		
3	225	54.0		33.6	303	44.7 ¹⁵⁴		28.8 ¹³⁴	54	20 02	20 49	21 58	21	10	37	76		
4	240	54.0		34.2	318	19.2 ¹⁵⁵		15.3 ¹³⁵	52	19 52	35	36	18	13	39	74		
5	255	53.9	+19	34.7	332	53.6 ¹⁵⁴	-6	01.8 ¹³⁵	50	19 44	20 24	21 18	1 16	14	12 40	72		
6	270	53.9	+19	35.3	347	28.1 ¹⁵⁵	-5	48.3 ¹³⁵	45	19 26	20 01	20 45	1 10	19	12 44	67		
7	285	53.9		35.8	2	02.5 ¹⁵⁴		34.7 ¹³⁶	40	19 11	19 42	21	06	22	47	63		
8	300	53.9		36.4	16	36.9 ¹⁵⁴		21.1 ¹³⁶	35	18 59	27	20 02	1 02	26	49	60		
9	315	53.8		36.9	31	11.4 ¹⁵⁵	-5	07.5 ¹³⁶	30	48	19 15	19 46	0 58	29	52	56		
10	330	53.8		37.5	45	45.8 ¹⁵⁴	-4	53.8 ¹³⁷	20	30	18 54	22	52	34	55	52		
11	345	53.8	+19	38.0	60	20.2 ¹⁵⁴	-4	40.1 ¹³⁷	10 N	18 15	18 37	19 03	0 47	38	12 59	46		
12	0	53.7	+19	38.6	74	54.6 ¹⁵⁴	-4	26.4 ¹³⁷	0	18 00	18 22	18 47	0 42	42	13 02	42		
13	15	53.7		39.1	89	28.9 ¹⁵³	-4	12.6 ¹³⁸	10 S	17 46	18 08	34	36	47	05	38		
14	30	53.7		39.6	104	03.3 ¹⁵⁴	-3	58.8 ¹³⁸	20	30	17 54	20	31	51	08	34		
15	45	53.7		40.2	118	37.7 ¹⁵⁴		45.0 ¹³⁸	30	13	38	08	25	56	12	28		
16	60	53.6		40.7	133	12.0 ¹⁵³		31.2 ¹³⁸	35	17 03	30	18 01	21	59	14	26		
17	75	53.6	+19	41.3	147	46.3 ¹⁵³	-3	17.3 ¹³⁹	40	16 51	17 21	17 54	0 17	62	13 16	23		
18	90	53.6	+19	41.8	162	20.6 ¹⁵³	-3	03.4 ¹³⁹	45	16 38	17 10	17 46	0 12	66	13 19	19		
19	105	53.6		42.3	176	54.9 ¹⁵³	-2	49.4 ¹⁴⁰	50	22	16 58	37	06	71	22	14		
20	120	53.5		42.9	191	29.1 ¹⁵²		35.4 ¹⁴⁰	52	14	52	34	04	73	23	13		
21	135	53.5		43.4	206	03.4 ¹⁵³		21.4 ¹⁴⁰	54	16 05	46	30	0 01	75	25	10		
22	150	53.5		44.0	220	37.6 ¹⁵²	-2	07.4 ¹⁴⁰	56	15 56	39	25	** **	**	26	8		
23	165	53.4		44.5	235	11.8 ¹⁵²	-1	53.4 ¹⁴⁰	58	45	31	21	** **	**	28	6		
24	180	53.4	+19	45.0	249	46.0 ¹⁵²	-1	39.3 ¹⁴¹	60 S	15 32	16 23	17 15	** **	**	13 31	2		
UT	ARIES		VENUS			MARTE			JÚPITER				SATURNO					
	PMG: 8 ^h 15 ^m 4		Mag: -4.6 PMG: 9 ^h 06 ^m			Mag: +1.2 PMG: 9 ^h 30 ^m			Mag: -2.4 PMG: 6 ^h 09 ^m				Mag: +0.9 PMG: 19 ^h 21 ^m					
	hG ♈		hG ♀		Dec	hG ♂		Dec	hG ♃		Dec		hG ♄		Dec			
h	°	'	°	'	°	°	'	'	°	'	°	'	°	'	°	'	°	'
0	235	48.8	223	31.4	+4	13.9	217	23.5	+6	40.1	267	31.9	-13	37.7	68	51.6	+7	56.7
1	250	51.3	238	32.0		14.4	232	24.2		40.9	282	34.2		37.6	83	54.1		56.6
2	265	53.7	253	32.6		14.9	247	24.9		41.6	297	36.5		37.6	98	56.6		56.6
3	280	56.2	268	33.1		15.4	262	25.6		42.3	312	38.7		37.5	113	59.0		56.6
4	295	58.7	283	33.7		15.9	277	26.3		43.1	327	41.0		37.5	129	01.5		56.6
5	311	01.1	298	34.3	+4	16.4	292	27.0	+6	43.8	342	43.2	-13	37.4	144	03.9	+7	56.6
6	326	03.6	313	34.8	+4	16.9	307	27.7	+6	44.5	357	45.5	-13	37.3	159	06.4	+7	56.6
7	341	06.1	328	35.4		17.5	322	28.4		45.2	12	47.7		37.3	174	08.9		56.6
8	356	08.5	343	35.9		18.0	337	29.1		46.0	27	50.0		37.2	189	11.3		56.6
9	11	11.0	358	36.5		18.5	352	29.8		46.7	42	52.2		37.1	204	13.8		56.6
10	26	13.4	13	37.1		19.0	7	30.5		47.4	57	54.5		37.1	219	16.3		56.6
11	41	15.9	28	37.6	+4	19.5	22	31.2	+6	48.2	72	56.7	-13	37.0	234	18.7	+7	56.6
12	56	18.4	43	38.2	+4	20.0	37	31.9	+6	48.9	87	59.0	-13	37.0	249	21.2	+7	56.5
13	71	20.8	58	38.7		20.5	52	32.6		49.6	103	01.2		36.9	264	23.6		56.5
14	86	23.3	73	39.3		21.0	67	33.3		50.3	118	03.5		36.8	279	26.1		56.5
15	101	25.8	88	39.8		21.6	82	34.0		51.1	133	05.8		36.8	294	28.6		56.5
16	116	28.2	103	40.4		22.1	97	34.7		51.8	148	08.0		36.7	309	31.0		56.5
17	131	30.7	118	40.9	+4	22.6	112	35.4	+6	52.5	163	10.3	-13	36.6	324	33.5	+7	56.5
18	146	33.2	133	41.5	+4	23.1	127	36.1	+6	53.3	178	12.5	-13	36.6	339	35.9	+7	56.5
19	161	35.6	148	42.0		23.6	142	36.8		54.0	193	14.8		36.5	354	38.4		56.5
20	176	38.1	163	42.6		24.2	157	37.5		54.7	208	17.0		36.5	9	40.9		56.5
21	191	40.5	178	43.1		24.7	172	38.2		55.4	223	19.3		36.4	24	43.3		56.5
22	206	43.0	193	43.7		25.2	187	38.9		56.2	238	21.6		36.3	39	45.8		56.5
23	221	45.5	208	44.2		25.7	202	39.6		56.9	253	23.8		36.3	54	48.2		56.4
24	236	47.9	223	44.8	+4	26.3	217	40.3	+6	57.6	268	26.1	-13	36.2	69	50.7	+7	56.4
Dif	—		+6		+5	+7		+7			+23		+1		+25		0	

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15/8 PMG: 11 ^h 56 ^m 5			Edad: 23 ^d 9 PHE SD: 15/3 PMG: 7 ^h 34 ^m										
	hG ☉	Dec		hG ☾	Dif			Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h	m	h	m	h	m	m
0	180	53.4	+19	45.0	249	46.0	-1 39.3	60 N	** **	2 06	3 13	1 33	3	13 56 88
1	195	53.4		45.6	264	20.1 ¹⁵¹	25.2 ¹⁴¹	58	0 26	30	28	33	5	55 85
2	210	53.4		46.1	278	54.2 ¹⁵¹	-1 11.1 ¹⁴¹	56	1 24	2 48	40	32	8	54 82
3	225	53.3		46.6	293	28.3 ¹⁵¹	-0 57.0 ¹⁴¹	54	1 54	3 04	3 51	31	11	53 80
4	240	53.3		47.2	308	02.3 ¹⁵⁰	42.8 ¹⁴²	52	2 17	17	4 00	31	13	53 77
5	255	53.3	+19	47.7	322	36.3 ¹⁵⁰	-0 28.6 ¹⁴²	50	2 34	3 29	4 09	1 30	15	13 52 75
6	270	53.2	+19	48.2	337	10.3 ¹⁵⁰	-0 14.4 ¹⁴²	45	3 08	3 52	4 27	1 29	20	13 51 69
7	285	53.2		48.8	351	44.3 ¹⁵⁰	-0 00.2 ¹⁴²	40	32	4 10	41	28	24	50 65
8	300	53.2		49.3	6	18.2 ¹⁴⁹	+0 14.0 ¹⁴²	35	3 51	25	4 54	28	26	49 62
9	315	53.1		49.8	20	52.1 ¹⁴⁹	28.3 ¹⁴³	30	4 06	38	5 04	27	30	48 59
10	330	53.1		50.4	35	25.9 ¹⁴⁸	42.5 ¹⁴²	20	31	4 59	23	26	35	47 53
11	345	53.1	+19	50.9	49	59.7 ¹⁴⁸	+0 56.8 ¹⁴³	10 N	4 50	5 16	5 38	1 25	39	13 45 49
12	0	53.0	+19	51.4	64	33.5 ¹⁴⁸	+1 11.1 ¹⁴³	0	5 05	5 31	5 53	1 24	43	13 44 45
13	15	53.0		52.0	79	07.2 ¹⁴⁷	25.4 ¹⁴³	10 S	19	45	6 07	23	48	43 40
14	30	53.0		52.5	93	40.9 ¹⁴⁷	39.7 ¹⁴³	20	33	5 59	23	22	52	42 35
15	45	52.9		53.0	108	14.5 ¹⁴⁶	+1 54.1 ¹⁴⁴	30	46	6 15	40	21	57	40 31
16	60	52.9		53.6	122	48.1 ¹⁴⁶	+2 08.4 ¹⁴³	35	5 52	23	6 50	20	61	40 27
17	75	52.9	+19	54.1	137	21.7 ¹⁴⁶	+2 22.8 ¹⁴⁴	40	6 00	6 33	7 02	1 19	65	13 39 24
18	90	52.8	+19	54.6	151	55.2 ¹⁴⁵	+2 37.1 ¹⁴³	45	6 07	6 43	7 16	1 18	69	13 38 20
19	105	52.8		55.1	166	28.6 ¹⁴⁴	+2 51.5 ¹⁴⁴	50	16	6 56	32	17	74	36 16
20	120	52.8		55.7	181	02.0 ¹⁴⁴	+3 05.9 ¹⁴⁴	52	20	7 02	40	17	75	36 13
21	135	52.7		56.2	195	35.4 ¹⁴⁴	20.2 ¹⁴³	54	24	08	49	16	78	35 11
22	150	52.7		56.7	210	08.7 ¹⁴³	34.6 ¹⁴⁴	56	28	15	7 58	16	80	34 9
23	165	52.7		57.2	224	41.9 ¹⁴²	+3 49.0 ¹⁴⁴	58	33	23	8 09	15	84	34 5
24	180	52.6	+19	57.8	239	15.1 ¹⁴²	+4 03.4 ¹⁴⁴	60 S	6 38	7 31	8 22	1 15	87	13 33 2

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 8 ^h 11 ^m 5		Mag: -4.6 PMG: 9 ^h 05 ^m		Mag: +1.2 PMG: 9 ^h 29 ^m		Mag: -2.4 PMG: 6 ^h 05 ^m		Mag: +0.9 PMG: 19 ^h 17 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	236	47.9	223	44.8	+4	26.3	217	40.3	+6	57.6
1	251	50.4	238	45.3		26.8	232	41.0		58.3
2	266	52.9	253	45.8		27.3	247	41.7		59.1
3	281	55.3	268	46.4		27.8	262	42.4	+6	59.8
4	296	57.8	283	46.9		28.4	277	43.1	+7	00.5
5	312	00.3	298	47.4	+4	28.9	292	43.8	+7	01.2
6	327	02.7	313	48.0	+4	29.4	307	44.5	+7	02.0
7	342	05.2	328	48.5		29.9	322	45.2		02.7
8	357	07.7	343	49.0		30.5	337	45.9		03.4
9	12	10.1	358	49.6		31.0	352	46.6		04.2
10	27	12.6	13	50.1		31.5	7	47.3		04.9
11	42	15.0	28	50.6	+4	32.1	22	48.0	+7	05.6
12	57	17.5	43	51.2	+4	32.6	37	48.7	+7	06.3
13	72	20.0	58	51.7		33.1	52	49.4		07.1
14	87	22.4	73	52.2		33.7	67	50.1		07.8
15	102	24.9	88	52.7		34.2	82	50.8		08.5
16	117	27.4	103	53.3		34.7	97	51.5		09.2
17	132	29.8	118	53.8	+4	35.3	112	52.2	+7	10.0
18	147	32.3	133	54.3	+4	35.8	127	52.9	+7	10.7
19	162	34.8	148	54.8		36.4	142	53.6		11.4
20	177	37.2	163	55.3		36.9	157	54.3		12.1
21	192	39.7	178	55.9		37.4	172	54.9		12.8
22	207	42.1	193	56.4		38.0	187	55.6		13.6
23	222	44.6	208	56.9		38.5	202	56.3		14.3
24	237	47.1	223	57.4	+4	39.1	217	57.0	+7	15.0
Dif	—		+5		+5		+7		+7	
							+23		+1	
									+25	
									0	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 5			Edad: 24 ^d 9 PHE { 4 ^h : 57 ^o 0 12 ^h : 57 ^o 3 20 ^h : 57 ^o 6 PMG: 8 ^h 18 ^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	52.6	+19 57.8	239	15.1	+4 03.4	60 N	20 44	21 53	** **	1 36 3	15 24 95		
1	195	52.6	58.3	253	48.2 ¹⁴¹	17.8 ¹⁴⁴	58	29	28	** **	38 7	20 90		
2	210	52.6	58.8	268	21.3 ¹⁴¹	32.2 ¹⁴⁴	56	16	21 08	22 37	40 10	16 87		
3	225	52.5	59.3	282	54.3 ¹⁴⁰	+4 46.5 ¹⁴³	54	20 05	20 52	22 04	42 12	13 83		
4	240	52.5	+19 59.8	297	27.3 ¹⁴⁰	+5 00.9 ¹⁴⁴	52	19 55	39 21	21 41	44 14	10 80		
5	255	52.5	+20 00.4	312	00.2 ¹³⁹	+5 15.3 ¹⁴⁴	50	19 46	20 27	21 22	1 45 17	15 07 78		
6	270	52.4	+20 00.9	326	33.0 ¹³⁸	+5 29.7 ¹⁴⁴	45	19 28	20 03	20 48	1 49 21	15 00 74		
7	285	52.4	01.4	341	05.8 ¹³⁸	44.1 ¹⁴⁴	40	13	19 44	23	52 25	14 55 69		
8	300	52.3	01.9	355	38.5 ¹³⁷	+5 58.4 ¹⁴³	35	19 01	29	20 04	54 29	51 65		
9	315	52.3	02.4	10	11.1 ¹³⁶	+6 12.8 ¹⁴⁴	30	18 50	19 16	19 48	1 57 31	47 62		
10	330	52.3	03.0	24	43.7 ¹³⁶	27.1 ¹⁴³	20	31	18 55	23	2 01 37	40 57		
11	345	52.2	+20 03.5	39	16.2 ¹³⁵	+6 41.5 ¹⁴⁴	10 N	18 15	18 37	19 04	2 04 42	14 34 52		
12	0	52.2	+20 04.0	53	48.6 ¹³⁴	+6 55.8 ¹⁴³	0	18 00	18 22	18 48	2 07 46	14 29 47		
13	15	52.2	04.5	68	21.0 ¹³⁴	+7 10.1 ¹⁴³	10 S	17 45	18 08	33	11 50	23 44		
14	30	52.1	05.0	82	53.3 ¹³³	24.4 ¹⁴³	20	30	17 53	20	14 55	17 39		
15	45	52.1	05.5	97	25.5 ¹³²	38.7 ¹⁴³	30	12	38	07	18 61	11 33		
16	60	52.0	06.0	111	57.6 ¹³¹	+7 53.0 ¹⁴³	35	17 02	29	18 00	21 63	07 30		
17	75	52.0	+20 06.6	126	29.7 ¹³¹	+8 07.2 ¹⁴²	40	16 50	17 19	17 52	2 24 67	14 03 27		
18	90	52.0	+20 07.1	141	01.7 ¹³⁰	+8 21.5 ¹⁴³	45	16 36	17 08	17 44	2 27 71	13 58 23		
19	105	51.9	07.6	155	33.6 ¹²⁹	35.7 ¹⁴²	50	19	16 56	35	31 76	52 18		
20	120	51.9	08.1	170	05.4 ¹²⁸	+8 49.9 ¹⁴²	52	11	50	31	32 79	49 16		
21	135	51.8	08.6	184	37.2 ¹²⁸	+9 04.1 ¹⁴²	54	16 02	43	27	34 82	46 13		
22	150	51.8	09.1	199	08.8 ¹²⁶	18.2 ¹⁴¹	56	15 53	36	23	36 85	43 10		
23	165	51.8	09.6	213	40.4 ¹²⁶	32.3 ¹⁴¹	58	41	28	18	39 88	39 7		
24	180	51.7	+20 10.1	228	11.9 ¹²⁵	+9 46.4 ¹⁴¹	60 S	15 28	16 19	17 12	2 42 91	13 35 4		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 8 ^h 07 ^m 5		Mag: -4.6 PMG: 9 ^h 04 ^m		Mag: +1.2 PMG: 9 ^h 28 ^m		Mag: -2.4 PMG: 6 ^h 02 ^m		Mag: +0.9 PMG: 19 ^h 14 ^m					
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	°	'	°	'	°	'	°	'			
0	237	47.1	223 57.4	+4 39.1	217 57.0	+7 15.0	269 20.4	-13 34.8	70 49.7	+7 56.2				
1	252	49.5	238 57.9	39.6	232 57.7	15.7	284 22.6	34.7	85 52.1	56.2				
2	267	52.0	253 58.4	40.2	247 58.4	16.5	299 24.9	34.7	100 54.6	56.2				
3	282	54.5	268 58.9	40.7	262 59.1	17.2	314 27.2	34.6	115 57.0	56.1				
4	297	56.9	283 59.5	41.2	277 59.8	17.9	329 29.4	34.5	130 59.5	56.1				
5	312	59.4	299 00.0	+4 41.8	293 00.5	+7 18.6	344 31.7	-13 34.5	146 01.9	+7 56.1				
6	328	01.9	314 00.5	+4 42.3	308 01.2	+7 19.4	359 34.0	-13 34.4	161 04.4	+7 56.1				
7	343	04.3	329 01.0	42.9	323 01.9	20.1	14 36.2	34.4	176 06.9	56.1				
8	358	06.8	344 01.5	43.4	338 02.6	20.8	29 38.5	34.3	191 09.3	56.1				
9	13	09.3	359 02.0	44.0	353 03.3	21.5	44 40.8	34.2	206 11.8	56.1				
10	28	11.7	14 02.5	44.5	8 04.0	22.2	59 43.0	34.2	221 14.2	56.1				
11	43	14.2	29 03.0	+4 45.1	23 04.7	+7 23.0	74 45.3	-13 34.1	236 16.7	+7 56.0				
12	58	16.6	44 03.5	+4 45.6	38 05.4	+7 23.7	89 47.6	-13 34.1	251 19.1	+7 56.0				
13	73	19.1	59 04.0	46.2	53 06.1	24.4	104 49.8	34.0	266 21.6	56.0				
14	88	21.6	74 04.5	46.7	68 06.8	25.1	119 52.1	34.0	281 24.0	56.0				
15	103	24.0	89 05.0	47.3	83 07.5	25.8	134 54.4	33.9	296 26.5	56.0				
16	118	26.5	104 05.5	47.9	98 08.2	26.6	149 56.6	33.8	311 28.9	56.0				
17	133	29.0	119 06.0	+4 48.4	113 08.9	+7 27.3	164 58.9	-13 33.8	326 31.4	+7 56.0				
18	148	31.4	134 06.5	+4 49.0	128 09.6	+7 28.0	180 01.2	-13 33.7	341 33.8	+7 56.0				
19	163	33.9	149 07.0	49.5	143 10.3	28.7	195 03.4	33.7	356 36.3	55.9				
20	178	36.4	164 07.5	50.1	158 11.0	29.5	210 05.7	33.6	11 38.7	55.9				
21	193	38.8	179 07.9	50.6	173 11.7	30.2	225 08.0	33.6	26 41.2	55.9				
22	208	41.3	194 08.4	51.2	188 12.4	30.9	240 10.3	33.5	41 43.6	55.9				
23	223	43.8	209 08.9	51.8	203 13.1	31.6	255 12.5	33.4	56 46.1	55.9				
24	238	46.2	224 09.4	+4 52.3	218 13.8	+7 32.3	270 14.8	-13 33.4	71 48.5	+7 55.9				
Dif	—	+5	+6	+7	+7		+23	+1	+25					

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna				
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 6				Edad: 25 ^d 9 PHE { 4 ^h : 57/9 12 ^h : 58/2 20 ^h : 58/5 PMG: 9 ^h 05 ^m R°: 51 ^m															
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m		
0	180	51.7	+20	10.1	228	11.9	+9	46.4	60 N	** **	2 00	3 09	1 39	5	16 59	101				
1	195	51.7		10.6	242	43.3 ¹²⁴	+10	00.5 ¹⁴¹	58	** **	25	24	45	9	50 96					
2	210	51.6		11.1	257	14.6 ¹²³		14.5 ¹⁴⁰	56	1 16	2 44	37	50	12	43 92					
3	225	51.6		11.7	271	45.8 ¹²²		28.5 ¹⁴⁰	54	1 49	3 00	48	54	15	36 89					
4	240	51.5		12.2	286	17.0 ¹²²		42.5 ¹⁴⁰	52	2 12	14	3 58	1 58	18	30 86					
5	255	51.5	+20	12.7	300	48.0 ¹²⁰	+10	56.5 ¹⁴⁰	50	2 30	3 26	4 06	2 02	20	16 25	83				
6	270	51.5	+20	13.2	315	19.0 ¹²⁰	+11	10.4 ¹³⁹	45	3 05	3 50	4 25	2 10	25	16 14	77				
7	285	51.4		13.7	329	49.8 ¹¹⁸		24.2 ¹³⁸	40	30	4 09	40	17	29	16 04	73				
8	300	51.4		14.2	344	20.6 ¹¹⁸		38.1 ¹³⁹	35	3 49	24	4 52	23	33	15 56	69				
9	315	51.3		14.7	358	51.3 ¹¹⁷	+11	51.9 ¹³⁸	30	4 05	37	5 03	28	36	49 66					
10	330	51.3		15.2	13	21.9 ¹¹⁶	+12	05.6 ¹³⁷	20	30	4 58	22	38	40	37 61					
11	345	51.2	+20	15.7	27	52.3 ¹¹⁴	+12	19.3 ¹³⁷	10 N	4 49	5 16	5 38	2 46	45	15 26	56				
12	0	51.2	+20	16.2	42	22.7 ¹¹⁴	+12	33.0 ¹³⁷	0	5 05	5 31	5 53	2 53	50	15 16	52				
13	15	51.2		16.7	56	53.0 ¹¹³	+12	46.6 ¹³⁶	10 S	20	5 46	6 08	3 01	54	15 07	47				
14	30	51.1		17.2	71	23.2 ¹¹²	+13	00.2 ¹³⁶	20	33	6 00	24	09	59	14 56	43				
15	45	51.1		17.7	85	53.2 ¹¹⁰		13.7 ¹³⁵	30	47	16	42	19	64	44 38					
16	60	51.0		18.2	100	23.2 ¹¹⁰		27.2 ¹³⁵	35	5 54	25	6 52	24	68	37 35					
17	75	51.0	+20	18.7	114	53.1 ¹⁰⁹	+13	40.6 ¹³⁴	40	6 01	6 34	7 04	3 31	71	14 30	31				
18	90	50.9	+20	19.2	129	22.9 ¹⁰⁸	+13	54.0 ¹³⁴	45	6 09	6 45	7 18	3 38	76	14 21	27				
19	105	50.9		19.7	143	52.5 ¹⁰⁶	+14	07.3 ¹³³	50	18	6 58	35	47	81	10 22					
20	120	50.8		20.2	158	22.1 ¹⁰⁶		20.6 ¹³³	52	22	7 04	43	51	84	14 05	20				
21	135	50.8		20.7	172	51.5 ¹⁰⁴		33.8 ¹³²	54	26	11	7 52	3 56	86	13 59	17				
22	150	50.8		21.2	187	20.8 ¹⁰³	+14	46.9 ¹³¹	56	31	18	8 02	4 01	90	53 14					
23	165	50.7		21.7	201	50.0 ¹⁰²	+15	00.0 ¹³¹	58	36	26	13	07	93	46 11					
24	180	50.7	+20	22.2	216	19.2 ¹⁰²	+15	13.0 ¹³⁰	60 S	6 42	7 35	8 26	4 13	99	13 39	6				
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 8 ^h 03 ^m 6				Mag: -4.6 PMG: 9 ^h 03 ^m				Mag: +1.2 PMG: 9 ^h 27 ^m				Mag: -2.4 PMG: 5 ^h 58 ^m				Mag: +0.9 PMG: 19 ^h 10 ^m			
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	238	46.2	224	09.4	+4	52.3	218	13.8	+7	32.3	270	14.8	-13	33.4	71	48.5	+7	55.9		
1	253	48.7	239	09.9		52.9	233	14.5		33.1	285	17.1		33.3	86	51.0		55.9		
2	268	51.1	254	10.4		53.4	248	15.2		33.8	300	19.4		33.3	101	53.4		55.9		
3	283	53.6	269	10.9		54.0	263	15.9		34.5	315	21.6		33.2	116	55.9		55.8		
4	298	56.1	284	11.4		54.6	278	16.6		35.2	330	23.9		33.2	131	58.3		55.8		
5	313	58.5	299	11.8	+4	55.1	293	17.3	+7	35.9	345	26.2	-13	33.1	147	00.8	+7	55.8		
6	329	01.0	314	12.3	+4	55.7	308	18.0	+7	36.6	0	28.4	-13	33.1	162	03.3	+7	55.8		
7	344	03.5	329	12.8		56.3	323	18.7		37.4	15	30.7		33.0	177	05.7		55.8		
8	359	05.9	344	13.3		56.8	338	19.4		38.1	30	33.0		32.9	192	08.2		55.8		
9	14	08.4	359	13.7		57.4	353	20.1		38.8	45	35.3		32.9	207	10.6		55.8		
10	29	10.9	14	14.2		58.0	8	20.8		39.5	60	37.5		32.8	222	13.0		55.7		
11	44	13.3	29	14.7	+4	58.5	23	21.5	+7	40.2	75	39.8	-13	32.8	237	15.5	+7	55.7		
12	59	15.8	44	15.2	+4	59.1	38	22.1	+7	41.0	90	42.1	-13	32.7	252	17.9	+7	55.7		
13	74	18.2	59	15.6	+4	59.7	53	22.8		41.7	105	44.4		32.7	267	20.4		55.7		
14	89	20.7	74	16.1	+5	00.2	68	23.5		42.4	120	46.6		32.6	282	22.8		55.7		
15	104	23.2	89	16.6		00.8	83	24.2		43.1	135	48.9		32.6	297	25.3		55.7		
16	119	25.6	104	17.1		01.4	98	24.9		43.8	150	51.2		32.5	312	27.7		55.7		
17	134	28.1	119	17.5	+5	01.9	113	25.6	+7	44.5	165	53.5	-13	32.4	327	30.2	+7	55.6		
18	149	30.6	134	18.0	+5	02.5	128	26.3	+7	45.3	180	55.8	-13	32.4	342	32.6	+7	55.6		
19	164	33.0	149	18.5		03.1	143	27.0		46.0	195	58.0		32.3	357	35.1		55.6		
20	179	35.5	164	18.9		03.7	158	27.7		46.7	211	00.3		32.3	12	37.5		55.6		
21	194	38.0	179	19.4		04.2	173	28.4		47.4	226	02.6		32.2	27	40.0		55.6		
22	209	40.4	194	19.9		04.8	188	29.1		48.1	241	04.9		32.2	42	42.4		55.6		
23	224	42.9	209	20.3		05.4	203	29.8		48.8	256	07.1		32.1	57	44.9		55.6		
24	239	45.4	224	20.8	+5	06.0	218	30.5	+7	49.6	271	09.4	-13	32.1	72	47.3	+7	55.5		
Dif	—		+5		+6		+7		+7		+23		+1		+24		0			

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 26 ^d 9 PHE { 4 ^h : 58 ^m 8 12 ^h : 59 ^m 0 20 ^h : 59 ^m 3					Civil			Hora		Hora	
	PMG: 11 ^h 56 ^m 7			PMG: 9 ^h 56 ^m R°: 55 ^m					Náutico			R°		R°	
	hG ☉	Dec		hG ☾	Dif	Dec	Dif								
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	50.7	+20 22.2	216	19.2	+15 13.0	130	60 N	20 48	22 00	** **	1 44	8	18 40	105
1	195	50.6	22.7	230	48.1	26.0	128	58	33	21 33	** **	1 54	13	26	99
2	210	50.6	23.1	245	17.0	38.8	128	56	19	21 13	22 46	2 02	17	15	94
3	225	50.5	23.6	259	45.8	+15 51.6	128	54	20 08	20 56	22 10	09 21	18 05	90	96
4	240	50.5	24.1	274	14.5	+16 04.4	128	52	19 58	42	21 45	16 23	17 56	87	87
5	255	50.4	+20 24.6	288	43.0	+16 17.0	126	50	19 49	20 30	21 26	2 22	26	17 48	84
6	270	50.4	+20 25.1	303	11.4	+16 29.6	126	45	19 30	20 05	20 51	2 35	31	17 31	79
7	285	50.3	25.6	317	39.7	42.1	125	40	15	19 46	25	46	35	17	75
8	300	50.3	26.1	332	07.9	+16 54.6	125	35	19 02	31	20 06	2 56	38	17 05	72
9	315	50.2	26.6	346	36.0	+17 06.9	123	30	18 51	19 17	19 49	3 04	41	16 55	69
10	330	50.2	27.1	1	03.9	19.2	123	20	32	18 56	24	18	47	38	64
11	345	50.1	+20 27.6	15	31.8	+17 31.4	122	10 N	18 15	18 38	19 04	3 31	51	16 22	61
12	0	50.1	+20 28.0	29	59.5	+17 43.5	121	0	18 00	18 22	18 48	3 43	55	16 08	58
13	15	50.0	28.5	44	27.1	+17 55.5	120	10 S	17 45	18 08	33	3 55	59	15 54	54
14	30	50.0	29.0	58	54.6	+18 07.4	119	20	29	17 53	20	4 08	63	39	50
15	45	49.9	29.5	73	21.9	19.3	119	30	11	37	18 06	23	68	22	45
16	60	49.9	30.0	87	49.1	31.0	117	35	17 00	28	17 59	32	71	12	43
17	75	49.8	+20 30.5	102	16.2	+18 42.7	117	40	16 48	17 18	17 51	4 42	74	15 01	39
18	90	49.8	+20 31.0	116	43.2	+18 54.2	115	45	16 34	17 07	17 43	4 54	79	14 48	35
19	105	49.7	31.4	131	10.1	+19 05.7	115	50	17	16 54	34	5 08	85	32	30
20	120	49.7	31.9	145	36.8	17.0	113	52	09	47	30	15	87	25	27
21	135	49.6	32.4	160	03.4	28.2	112	54	16 00	41	25	22	91	16	24
22	150	49.6	32.9	174	29.9	39.4	112	56	15 50	34	20	31	94	14 07	20
23	165	49.5	33.4	188	56.3	+19 50.4	110	58	38	25	15	40	99	13 57	16
24	180	49.5	+20 33.8	203	22.6	+20 01.3	109	60 S	15 24	16 16	17 10	5 52	104	13 45	10

UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO			
	PMG: 7 ^h 59 ^m 7		Mag: -4.6 PMG: 9 ^h 02 ^m		Mag: +1.2 PMG: 9 ^h 26 ^m		Mag: -2.4 PMG: 5 ^h 54 ^m			Mag: +0.9 PMG: 19 ^h 06 ^m			
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	
0	239	45.4	224	20.8	+5 06.0	218	30.5	+7 49.6	271	09.4	-13 32.1	72 47.3	+7 55.5
1	254	47.8	239	21.2	06.6	233	31.2	50.3	286	11.7	32.0	87 49.8	55.5
2	269	50.3	254	21.7	07.1	248	31.9	51.0	301	14.0	32.0	102 52.2	55.5
3	284	52.7	269	22.2	07.7	263	32.6	51.7	316	16.3	31.9	117 54.7	55.5
4	299	55.2	284	22.6	08.3	278	33.3	52.4	331	18.5	31.8	132 57.1	55.5
5	314	57.7	299	23.1	+5 08.9	293	34.0	+7 53.1	346	20.8	-13 31.8	147 59.6	+7 55.5
6	330	00.1	314	23.5	+5 09.4	308	34.7	+7 53.9	1 23.1	-13 31.7	163 02.0	+7 55.4	
7	345	02.6	329	24.0	10.0	323	35.4	54.6	16 25.4	31.7	178 04.5	55.4	
8	0	05.1	344	24.4	10.6	338	36.1	55.3	31 27.7	31.6	193 06.9	55.4	
9	15	07.5	359	24.9	11.2	353	36.8	56.0	46 29.9	31.6	208 09.3	55.4	
10	30	10.0	14 25.3	11.8	8	37.5	56.7		61 32.2	31.5	223 11.8	55.4	
11	45	12.5	29 25.8	+5 12.4	23 38.2	+7 57.4			76 34.5	-13 31.5	238 14.2	+7 55.4	
12	60	14.9	44 26.2	+5 13.0	38 38.9	+7 58.1			91 36.8	-13 31.4	253 16.7	+7 55.4	
13	75	17.4	59 26.7	13.5	53 39.6	58.9			106 39.1	31.4	268 19.1	55.3	
14	90	19.9	74 27.1	14.1	68 40.3	+7 59.6			121 41.4	31.3	283 21.6	55.3	
15	105	22.3	89 27.6	14.7	83 41.0	+8 00.3			136 43.6	31.3	298 24.0	55.3	
16	120	24.8	104 28.0	15.3	98 41.7	01.0			151 45.9	31.2	313 26.5	55.3	
17	135	27.2	119 28.5	+5 15.9	113 42.3	+8 01.7			166 48.2	-13 31.2	328 28.9	+7 55.3	
18	150	29.7	134 28.9	+5 16.5	128 43.0	+8 02.4			181 50.5	-13 31.1	343 31.3	+7 55.3	
19	165	32.2	149 29.4	17.1	143 43.7	03.1			196 52.8	31.1	358 33.8	55.2	
20	180	34.6	164 29.8	17.7	158 44.4	03.8			211 55.1	31.0	13 36.2	55.2	
21	195	37.1	179 30.2	18.2	173 45.1	04.6			226 57.4	31.0	28 38.7	55.2	
22	210	39.6	194 30.7	18.8	188 45.8	05.3			241 59.6	30.9	43 41.1	55.2	
23	225	42.0	209 31.1	19.4	203 46.5	06.0			257 01.9	30.8	58 43.6	55.2	
24	240	44.5	224 31.6	+5 20.0	218 47.2	+8 06.7			272 04.2	-13 30.8	73 46.0	+7 55.2	
Dif	—		+4	+6	+7	+7	+23			+1	+24		0

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 7			Edad: 27 ^d 9 PHE { 4 ^h : 59 ^m 6 12 ^h : 59 ^m 8 20 ^h : 60 ^m 0 Rº: 61 ^m	hG ☾ Dif	Dec		Dif							
	hG ☉	Dec							Hora		Rº	Hora	Rº		
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	180	49.5	+20 33.8	203	22.6	+20 01.3	108	60 N	** **	1 53	3 05	1 52	16	20 25	99
1	195	49.4	34.3	217	48.7	71	12.1	58	** *	2 20	20	2 07	21	20 05	93
2	210	49.4	34.8	232	14.7	70	22.8	56	1 07	40	34	19	26	19 49	89
3	225	49.3	35.3	246	40.5	68	33.4	54	1 43	2 57	45	30	30	35	86
4	240	49.3	35.8	261	06.3	68	43.9	52	2 08	3 11	3 55	39	33	23	83
5	255	49.2	+20 36.2	275	31.9	66	+20 54.2	50	2 27	3 23	4 04	2 48	35	19 12	82
6	270	49.2	+20 36.7	289	57.4	65	+21 04.4	45	3 02	3 48	4 23	3 06	40	18 50	77
7	285	49.1	37.2	304	22.8	64	14.5	40	28	4 07	38	21	44	32	75
8	300	49.0	37.7	318	48.1	63	24.5	35	3 48	23	4 51	34	47	17	73
9	315	49.0	38.1	333	13.2	61	34.3	30	4 04	36	5 02	3 45	50	18 04	71
10	330	48.9	38.6	347	38.2	60	44.1	20	29	4 57	21	4 05	53	17 42	68
11	345	48.9	+20 39.1	2	03.1	59	+21 53.6	10 N	4 49	5 15	5 38	4 22	56	17 23	65
12	0	48.8	+20 39.5	16	27.9	58	+22 03.1	0	5 05	5 31	5 53	4 38	60	17 06	62
13	15	48.8	40.0	30	52.6	57	12.4	10 S	20	5 46	6 08	4 54	63	16 48	59
14	30	48.7	40.5	45	17.1	55	21.6	20	34	6 01	24	5 11	66	29	57
15	45	48.7	41.0	59	41.5	54	30.6	30	48	17	43	31	70	16 07	54
16	60	48.6	41.4	74	05.8	53	39.5	35	5 55	26	6 53	43	73	15 55	51
17	75	48.5	+20 41.9	88	30.0	52	+22 48.2	40	6 03	6 36	7 05	5 56	76	15 40	49
18	90	48.5	+20 42.4	102	54.1	51	+22 56.9	45	6 11	6 47	7 20	6 13	79	15 23	45
19	105	48.4	42.8	117	18.0	49	+23 05.3	50	20	7 00	37	33	84	15 02	41
20	120	48.4	43.3	131	41.8	48	13.6	52	24	07	45	42	87	14 52	38
21	135	48.3	43.8	146	05.6	48	21.8	54	29	13	7 55	6 53	90	40	36
22	150	48.3	44.2	160	29.2	46	29.8	56	34	21	8 05	7 05	94	27	33
23	165	48.2	44.7	174	52.7	45	37.6	58	39	29	17	19	99	14 13	28
24	180	48.1	+20 45.2	189	16.1	44	+23 45.3	60 S	6 45	7 38	8 30	7 36	105	13 55	21
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG 7 ^h 55 ^m 7			Mag: -4.6 PMG: 9 ^h 02 ^m			Mag: +1.2 PMG: 9 ^h 24 ^m			Mag: -2.4 PMG: 5 ^h 51 ^m			Mag: +0.9 PMG: 19 ^h 02 ^m		
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	240	44.5	224	31.6	+5 20.0	218	47.2	+8 06.7	272	04.2	-13 30.8	73	46.0	+7 55.2	
1	255	47.0	239	32.0	20.6	233	47.9	07.4	287	06.5	30.7	88	48.5	55.1	
2	270	49.4	254	32.4	21.2	248	48.6	08.1	302	08.8	30.7	103	50.9	55.1	
3	285	51.9	269	32.9	21.8	263	49.3	08.8	317	11.1	30.6	118	53.3	55.1	
4	300	54.3	284	33.3	22.4	278	50.0	09.5	332	13.4	30.6	133	55.8	55.1	
5	315	56.8	299	33.7	+5 23.0	293	50.7	+8 10.3	347	15.6	-13 30.5	148	58.2	+7 55.1	
6	330	59.3	314	34.2	+5 23.6	308	51.4	+8 11.0	2	17.9	-13 30.5	164	00.7	+7 55.1	
7	346	01.7	329	34.6	24.2	323	52.1	11.7	17	20.2	30.4	179	03.1	55.0	
8	1	04.2	344	35.0	24.8	338	52.8	12.4	32	22.5	30.4	194	05.5	55.0	
9	16	06.7	359	35.4	25.4	353	53.5	13.1	47	24.8	30.3	209	08.0	55.0	
10	31	09.1	14	35.9	26.0	8	54.2	13.8	62	27.1	30.3	224	10.4	55.0	
11	46	11.6	29	36.3	+5 26.6	23	54.9	+8 14.5	77	29.4	-13 30.2	239	12.9	+7 55.0	
12	61	14.1	44	36.7	+5 27.2	38	55.6	+8 15.2	92	31.7	-13 30.2	254	15.3	+7 55.0	
13	76	16.5	59	37.1	27.8	53	56.3	15.9	107	34.0	30.1	269	17.8	54.9	
14	91	19.0	74	37.6	28.4	68	57.0	16.6	122	36.2	30.1	284	20.2	54.9	
15	106	21.5	89	38.0	29.0	83	57.7	17.4	137	38.5	30.0	299	22.6	54.9	
16	121	23.9	104	38.4	29.6	98	58.4	18.1	152	40.8	30.0	314	25.1	54.9	
17	136	26.4	119	38.8	+5 30.2	113	59.0	+8 18.8	167	43.1	-13 29.9	329	27.5	+7 54.9	
18	151	28.8	134	39.2	+5 30.8	128	59.7	+8 19.5	182	45.4	-13 29.9	344	30.0	+7 54.8	
19	166	31.3	149	39.7	31.4	144	00.4	20.2	197	47.7	29.8	359	32.4	54.8	
20	181	33.8	164	40.1	32.0	159	01.1	20.9	212	50.0	29.8	14	34.8	54.8	
21	196	36.2	179	40.5	32.6	174	01.8	21.6	227	52.3	29.7	29	37.3	54.8	
22	211	38.7	194	40.9	33.2	189	02.5	22.3	242	54.6	29.7	44	39.7	54.8	
23	226	41.2	209	41.3	33.8	204	03.2	23.0	257	56.9	29.6	59	42.2	54.8	
24	241	43.6	224	41.7	+5 34.4	219	03.9	+8 23.7	272	59.2	-13 29.6	74	44.6	+7 54.7	
Dif	—		+4	+6		+7	+7		+23	+1		+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 ^m /2 12 ^h : 60 ^m /3 20 ^h : 60 ^m /5 R°: 65 ^m										
	PMG: 11 ^h 56 ^m 8			PMG: 11 ^h 52 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	180	48.1	+20 45.2	189	16.1	+23 45.3	76	60 N	20 52	22 06	** **	2 08 33	22 04 74	
1	195	48.1	45.6	203	39.4	+23 52.9	76	58	36	21 38	** **	28 39	21 38 73	
2	210	48.0	46.1	218	02.6	+24 00.2	73	56	23	17	22 56	2 45 42	18 72	
3	225	48.0	46.6	232	25.6	07.4	72	54	11	21 00	22 16	3 00 45	21 01 71	
4	240	47.9	47.0	246	48.6	14.5	71	52	20 01	20 45	21 50	12 47	20 46 71	
5	255	47.9	+20 47.5	261	11.5	+24 21.4	69	50	19 51	20 33	21 30	3 23 49	20 34 70	
6	270	47.8	+20 47.9	275	34.3	+24 28.1	67	45	19 32	20 08	20 54	3 46 53	20 07 70	
7	285	47.7	48.4	289	56.9	34.6	65	40	17	19 48	28	4 05 55	19 47 68	
8	300	47.7	48.9	304	19.5	41.0	64	35	19 03	32	20 07	21 56	30 68	
9	315	47.6	49.3	318	42.0	47.2	62	30	18 52	19 19	19 51	35 57	19 15 67	
10	330	47.6	49.8	333	04.4	53.3	61	20	33	18 57	25	4 58 60	18 50 66	
11	345	47.5	+20 50.2	347	26.7	+24 59.1	58	10 N	18 16	18 39	19 05	5 18 63	18 28 66	
12	0	47.4	+20 50.7	1	48.9	+25 04.8	57	0	18 00	18 23	18 48	5 38 63	18 08 65	
13	15	47.4	51.2	16	11.0	10.3	55	10 S	17 45	18 07	33	5 57 65	17 47 65	
14	30	47.3	51.6	30	33.1	15.6	53	20	29	17 52	19	6 17 68	26 63	
15	45	47.3	52.1	44	55.0	20.7	51	30	17 10	36	18 05	41 70	17 01 62	
16	60	47.2	52.5	59	16.9	25.7	50	35	16 59	27	17 58	6 56 70	16 46 61	
17	75	47.1	+20 53.0	73	38.7	+25 30.5	48	40	16 47	17 17	17 50	7 12 72	16 29 60	
18	90	47.1	+20 53.4	88	00.5	+25 35.1	46	45	16 33	17 05	17 42	7 32 74	16 08 59	
19	105	47.0	53.9	102	22.1	39.5	44	50	15	16 52	32	7 57 77	15 43 57	
20	120	46.9	54.3	116	43.7	43.7	42	52	16 07	45	28	8 09 78	30 56	
21	135	46.9	54.8	131	05.2	47.7	40	54	15 57	39	23	23 79	16 55	
22	150	46.8	55.2	145	26.7	51.5	38	56	47	31	18	39 82	15 00 53	
23	165	46.8	55.7	159	48.1	55.2	37	58	35	23	13	8 58 85	14 41 49	
24	180	46.7	+20 56.1	174	09.4	+25 58.6	34	60 S	15 21	16 13	17 07	9 21 91	14 16 45	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 7 ^h 51 ^m 8		Mag: -4.6 PMG: 9 ^h 01 ^m		Mag: +1.2 PMG: 9 ^h 23 ^m		Mag: -2.4 PMG: 5 ^h 47 ^m		Mag: +0.9 PMG: 18 ^h 58 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	241	43.6	224	41.7	219	03.9	272	59.2	74	44.6
1	256	46.1	239	42.2	234	04.6	288	01.5	89	47.0
2	271	48.6	254	42.6	249	05.3	303	03.8	104	49.5
3	286	51.0	269	43.0	264	06.0	318	06.0	119	51.9
4	301	53.5	284	43.4	279	06.7	333	08.3	134	54.3
5	316	56.0	299	43.8	294	07.4	348	10.6	149	56.8
6	331	58.4	314	44.2	309	08.1	3	12.9	164	59.2
7	347	00.9	329	44.6	324	08.8	18	15.2	180	01.7
8	2	03.3	344	45.0	339	09.5	33	17.5	195	04.1
9	17	05.8	359	45.4	354	10.2	48	19.8	210	06.5
10	32	08.3	14	45.8	9	10.9	63	22.1	225	09.0
11	47	10.7	29	46.2	24	11.6	78	24.4	240	11.4
12	62	13.2	44	46.6	39	12.3	93	26.7	255	13.9
13	77	15.7	59	47.0	54	13.0	108	29.0	270	16.3
14	92	18.1	74	47.4	69	13.6	123	31.3	285	18.7
15	107	20.6	89	47.8	84	14.3	138	33.6	300	21.2
16	122	23.1	104	48.2	99	15.0	153	35.9	315	23.6
17	137	25.5	119	48.6	114	15.7	168	38.2	330	26.0
18	152	28.0	134	49.0	129	16.4	183	40.5	345	28.5
19	167	30.5	149	49.4	144	17.1	198	42.8	0	30.9
20	182	32.9	164	49.8	159	17.8	213	45.1	15	33.3
21	197	35.4	179	50.2	174	18.5	228	47.4	30	35.8
22	212	37.8	194	50.6	189	19.2	243	49.7	45	38.2
23	227	40.3	209	51.0	204	19.9	258	52.0	60	40.6
24	242	42.8	224	51.4	219	20.6	273	54.3	75	43.1
Dif	—		+4	+6	+7	+7	+23	0	+24	0

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 9			Edad: 0 ^d 5 SD: 16 ^h 5 PMG: 12 ^h 57 ^m	PHE { 4 ^h : 60 ^h /6 12 ^h : 60 ^h /7 20 ^h : 60 ^h /7 R°: 65 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	h	m	h	m	h	m	h	m
0	180	46.7	+20 56.1	174	09.4	+25 58.6	33	60 N	** *	1 47	3 01	2 41	63	23 18	41
1	195	46.6	56.6	188	30.7	+26 01.9	33	58	** *	2 15	17	3 07	64	22 51	46
2	210	46.6	57.0	202	51.9	05.0	31	56	0 57	36	31	27	65	30	48
3	225	46.5	57.5	217	13.1	07.8	28	54	1 37	2 53	42	45	65	22 12	51
4	240	46.4	57.9	231	34.2	10.5	27	52	2 03	3 08	3 53	3 59	66	21 57	53
5	255	46.4	+20 58.4	245	55.3	+26 13.0	25	50	2 23	3 21	4 02	4 12	66	21 44	54
6	270	46.3	+20 58.8	260	16.3	+26 15.3	23	45	3 00	3 46	4 21	4 39	65	21 17	56
7	285	46.3	59.3	274	37.3	17.3	20	40	26	4 05	37	5 00	66	20 55	59
8	300	46.2	+20 59.7	288	58.3	19.2	19	35	3 46	21	4 50	17	66	38	59
9	315	46.1	+21 00.2	303	19.2	20.9	17	30	4 03	35	5 02	32	66	20 22	61
10	330	46.1	00.6	317	40.1	22.4	15	20	28	4 57	21	5 58	66	19 56	63
11	345	46.0	+21 01.0	332	01.0	+26 23.7	13	10 N	4 49	5 15	5 38	6 21	65	19 34	64
12	0	45.9	+21 01.5	346	21.9	+26 24.8	11	0	5 05	5 31	5 53	6 41	66	19 13	65
13	15	45.9	01.9	0	42.7	25.7	9	10 S	20	5 46	6 09	7 02	66	18 52	66
14	30	45.8	02.4	15	03.5	26.3	6	20	35	6 02	25	25	65	29	67
15	45	45.7	02.8	29	24.3	26.8	5	30	49	18	44	7 51	65	18 03	68
16	60	45.7	03.2	43	45.1	27.1	3	35	5 56	27	6 55	8 06	65	17 47	70
17	75	45.6	+21 03.7	58	05.9	+26 27.2	1	40	6 04	6 37	7 07	8 24	64	17 29	70
18	90	45.5	+21 04.1	72	26.7	+26 27.1	1	45	6 13	6 49	7 22	8 46	63	17 07	72
19	105	45.5	04.6	86	47.4	26.7	4	50	22	7 03	40	9 14	62	16 40	73
20	120	45.4	05.0	101	08.2	26.2	5	52	27	09	48	27	62	26	74
21	135	45.3	05.4	115	29.0	25.5	7	54	31	16	7 57	9 42	61	16 11	75
22	150	45.3	05.9	129	49.8	24.5	10	56	36	23	8 08	10 01	60	15 53	76
23	165	45.2	06.3	144	10.6	23.4	11	58	42	32	20	23	58	30	78
24	180	45.1	+21 06.7	158	31.4	+26 22.1	13	60 S	6 48	7 42	8 34	10 52	56	15 01	81
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG 7 ^h 47 ^m 9			Mag: -4.6 PMG: 9 ^h 00 ^m			Mag: +1.2 PMG: 9 ^h 22 ^m			Mag: -2.5 PMG: 5 ^h 44 ^m			Mag: +0.9 PMG: 18 ^h 54 ^m		
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	242	42.8	224 51.4	+5 49.2	219 20.6	+8 40.7	273 54.3	-13 28.4	75 43.1	+7 54.3					
1	257	45.2	239 51.8	49.8	234 21.3	41.4	288 56.6	28.4	90 45.5	54.3					
2	272	47.7	254 52.1	50.5	249 22.0	42.1	303 58.9	28.3	105 48.0	54.2					
3	287	50.2	269 52.5	51.1	264 22.7	42.8	319 01.2	28.3	120 50.4	54.2					
4	302	52.6	284 52.9	51.7	279 23.4	43.5	334 03.5	28.3	135 52.8	54.2					
5	317	55.1	299 53.3	+5 52.3	294 24.1	+8 44.2	349 05.8	-13 28.2	150 55.3	+7 54.2					
6	332	57.6	314 53.7	+5 53.0	309 24.8	+8 44.9	4 08.1	-13 28.2	165 57.7	+7 54.2					
7	348	00.0	329 54.1	53.6	324 25.5	45.6	19 10.4	28.1	181 00.1	54.1					
8	3 02.5	344 54.4	54.2	339 26.1	46.3	34 12.7	28.1	196 02.6	54.1						
9	18 05.0	359 54.8	54.8	354 26.8	47.0	49 15.0	28.0	211 05.0	54.1						
10	33 07.4	14 55.2	55.5	9 27.5	47.7	64 17.3	28.0	226 07.4	54.1						
11	48 09.9	29 55.6	+5 56.1	24 28.2	+8 48.4	79 19.6	-13 27.9	241 09.9	+7 54.0						
12	63 12.3	44 56.0	+5 56.7	39 28.9	+8 49.1	94 21.9	-13 27.9	256 12.3	+7 54.0						
13	78 14.8	59 56.3	57.4	54 29.6	49.8	109 24.2	27.8	271 14.7	54.0						
14	93 17.3	74 56.7	58.0	69 30.3	50.5	124 26.5	27.8	286 17.2	54.0						
15	108 19.7	89 57.1	58.6	84 31.0	51.2	139 28.8	27.8	301 19.6	54.0						
16	123 22.2	104 57.5	59.3	99 31.7	51.9	154 31.1	27.7	316 22.0	53.9						
17	138 24.7	119 57.8	+5 59.9	114 32.4	+8 52.6	169 33.4	-13 27.7	331 24.5	+7 53.9						
18	153 27.1	134 58.2	+6 00.5	129 33.1	+8 53.3	184 35.7	-13 27.6	346 26.9	+7 53.9						
19	168 29.6	149 58.6	01.1	144 33.8	54.0	199 38.1	27.6	1 29.3	53.9						
20	183 32.1	164 59.0	01.8	159 34.5	54.7	214 40.4	27.5	16 31.8	53.9						
21	198 34.5	179 59.3	02.4	174 35.2	55.4	229 42.7	27.5	31 34.2	53.8						
22	213 37.0	194 59.7	03.0	189 35.9	56.1	244 45.0	27.4	46 36.6	53.8						
23	228 39.5	210 00.1	03.7	204 36.6	56.8	259 47.3	27.4	61 39.0	53.8						
24	243 41.9	225 00.4	+6 04.3	219 37.3	+8 57.5	274 49.6	-13 27.4	76 41.5	+7 53.8						
Dif	—	+4	+6	+7	+7	+23	0	+24	0						

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 11 ^h 57 ^m 0			Edad: 1 ^d 5 SD: 16 ^h 5 PMG: 14 ^h 02 ^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	45.1	+21 06.7	158	31.4	+26 22.1	16	60 N	20 56	22 13	** **	3 44 94	23 59 20	
1	195	45.1	07.2	172	52.2	20.5	16	58	40	21 43	** **	4 11 89	37 26	
2	210	45.0	07.6	187	13.0	18.8	17	56	26	21	23 07	32 86	18 31	
3	225	44.9	08.0	201	33.9	16.9	19	54	14	21 03	22 22	4 50 82	23 03 34	
4	240	44.9	08.5	215	54.8	14.7	22	52	20 03	20 49	21 55	5 05 80	22 50 37	
5	255	44.8	+21 08.9	230	15.7	+26 12.4	23	50	19 54	20 36	21 34	5 18 79	22 38 39	
6	270	44.7	+21 09.3	244	36.7	+26 09.9	25	45	19 34	20 10	20 56	5 44 76	22 13 45	
7	285	44.6	09.8	258	57.7	07.1	28	40	18	19 50	30	6 06 73	21 54 47	
8	300	44.6	10.2	273	18.7	04.2	29	35	19 05	34	20 09	23 72	37 51	
9	315	44.5	10.6	287	39.7	+26 01.1	31	30	18 53	19 20	19 52	6 38 71	21 23 53	
10	330	44.4	11.1	302	00.9	+25 57.7	34	20	33	18 58	26	7 04 68	20 59 56	
11	345	44.4	+21 11.5	316	22.0	+25 54.2	35	10 N	18 16	18 39	19 06	7 26 66	20 38 59	
12	0	44.3	+21 11.9	330	43.2	+25 50.5	37	0	18 01	18 23	18 49	7 47 64	20 18 62	
13	15	44.2	12.3	345	04.5	46.6	39	10 S	17 45	18 07	33	8 08 61	19 58 65	
14	30	44.2	12.8	359	25.8	42.5	41	20	28	17 52	19	30 59	36 68	
15	45	44.1	13.2	13	47.2	38.2	43	30	17 09	35	18 05	8 56 56	19 11 72	
16	60	44.0	13.6	28	08.6	33.7	45	35	16 58	26	17 57	9 11 55	18 57 73	
17	75	43.9	+21 14.0	42	30.1	+25 29.0	47	40	16 46	17 16	17 49	9 28 53	18 39 77	
18	90	43.9	+21 14.5	56	51.6	+25 24.2	48	45	16 31	17 04	17 40	9 49 50	18 19 79	
19	105	43.8	14.9	71	13.3	19.1	51	50	13	16 50	30	10 16 46	17 53 84	
20	120	43.7	15.3	85	35.0	13.9	52	52	16 04	44	26	29 44	40 86	
21	135	43.7	15.7	99	56.7	08.5	54	54	15 55	37	21	10 43 42	26 89	
22	150	43.6	16.1	114	18.6	+25 02.9	56	56	44	29	16	11 01 38	17 09 92	
23	165	43.5	16.6	128	40.5	+24 57.1	58	58	32	20	11	21 34	16 48 97	
24	180	43.4	+21 17.0	143	02.5	+24 51.1	60	60 S	15 17	16 10	17 05	11 48 27	16 22 105	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 7 ^h 43 ^m 9		Mag: -4.5 PMG: 9 ^h 00 ^m		Mag: +1.2 PMG: 9 ^h 21 ^m		Mag: -2.5 PMG: 5 ^h 40 ^m		Mag: +0.9 PMG: 18 ^h 50 ^m					
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	°	°	°	°	°	°	°	°					
0	243 41.9	225 00.4	+6 04.3	219 37.3	+8 57.5	274 49.6	-13 27.4	76 41.5	+7 53.8					
1	258 44.4	240 00.8	05.0	234 37.9	58.2	289 51.9	27.3	91 43.9	53.7					
2	273 46.8	255 01.2	05.6	249 38.6	58.9	304 54.2	27.3	106 46.3	53.7					
3	288 49.3	270 01.5	06.2	264 39.3	+8 59.6	319 56.5	27.2	121 48.8	53.7					
4	303 51.8	285 01.9	06.9	279 40.0	+9 00.3	334 58.8	27.2	136 51.2	53.7					
5	318 54.2	300 02.3	+6 07.5	294 40.7	+9 01.0	350 01.1	-13 27.1	151 53.6	+7 53.7					
6	333 56.7	315 02.6	+6 08.1	309 41.4	+9 01.7	5 03.4	-13 27.1	166 56.1	+7 53.6					
7	348 59.2	330 03.0	08.8	324 42.1	02.4	20 05.7	27.0	181 58.5	53.6					
8	4 01.6	345 03.3	09.4	339 42.8	03.1	35 08.1	27.0	197 00.9	53.6					
9	19 04.1	0 03.7	10.1	354 43.5	03.8	50 10.4	27.0	212 03.3	53.6					
10	34 06.6	15 04.1	10.7	9 44.2	04.5	65 12.7	26.9	227 05.8	53.5					
11	49 09.0	30 04.4	+6 11.3	24 44.9	+9 05.2	80 15.0	-13 26.9	242 08.2	+7 53.5					
12	64 11.5	45 04.8	+6 12.0	39 45.6	+9 05.9	95 17.3	-13 26.8	257 10.6	+7 53.5					
13	79 14.0	60 05.1	12.6	54 46.3	06.6	110 19.6	26.8	272 13.1	53.5					
14	94 16.4	75 05.5	13.3	69 47.0	07.3	125 21.9	26.7	287 15.5	53.5					
15	109 18.9	90 05.8	13.9	84 47.7	08.0	140 24.2	26.7	302 17.9	53.4					
16	124 21.3	105 06.2	14.6	99 48.3	08.7	155 26.5	26.7	317 20.4	53.4					
17	139 23.8	120 06.5	+6 15.2	114 49.0	+9 09.4	170 28.9	-13 26.6	332 22.8	+7 53.4					
18	154 26.3	135 06.9	+6 15.9	129 49.7	+9 10.1	185 31.2	-13 26.6	347 25.2	+7 53.4					
19	169 28.7	150 07.2	16.5	144 50.4	10.8	200 33.5	26.5	2 27.6	53.3					
20	184 31.2	165 07.6	17.1	159 51.1	11.5	215 35.8	26.5	17 30.1	53.3					
21	199 33.7	180 07.9	17.8	174 51.8	12.2	230 38.1	26.5	32 32.5	53.3					
22	214 36.1	195 08.3	18.4	189 52.5	12.9	245 40.4	26.4	47 34.9	53.3					
23	229 38.6	210 08.6	19.1	204 53.2	13.6	260 42.7	26.4	62 37.3	53.2					
24	244 41.1	225 09.0	+6 19.7	219 53.9	+9 14.3	275 45.1	-13 26.3	77 39.8	+7 53.2					
Dif	—	+4	+6	+7	+7	+23	0	+24	0					

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8 PMG: 11 ^h 57 ^m 2			Edad: 2 ^d 5 PHE { SD: 16 ^h 5 PMG: 15 ^h 05 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	43.4	+21	17.0	143	02.5	+24	51.1	60 N	***	1 41	2 57	5 18	107	***
1	195	43.4		17.4	157	24.5	30	45.0	58	***	2 10	3 14	40	100	***
2	210	43.3		17.8	171	46.7	32	38.7	56	0 47	33	28	5 58	95	23 49
3	225	43.2		18.2	186	08.9	32	32.2	54	1 32	2 50	40	6 12	92	37 23
4	240	43.1		18.7	200	31.3	34	25.5	52	1 59	3 05	3 51	25	89	27 26
5	255	43.1	+21	19.1	214	53.7	34	+24	18.6	50	2 20	3 18	4 00	6 37	86
6	270	43.0	+21	19.5	229	16.2	35	+24	11.6	45	2 58	3 44	4 20	7 00	81
7	285	42.9		19.9	243	38.8	36	+24	04.4	40	3 24	4 04	36	19	77
8	300	42.8		20.3	258	01.5	37	+23	57.1	35	3 45	20	4 49	35	74
9	315	42.8		20.7	272	24.3	38		49.5	30	4 02	34	5 01	7 49	71
10	330	42.7		21.1	286	47.2	39		41.8	20	28	4 57	21	8 12	67
11	345	42.6	+21	21.6	301	10.1	39	+23	34.0	10 N	4 48	5 15	5 38	8 32	63
12	0	42.5	+21	22.0	315	33.2	41	+23	26.0	0	5 06	5 31	5 54	8 51	59
13	15	42.5		22.4	329	56.4	42		17.8	10 S	21	5 47	6 09	9 09	57
14	30	42.4		22.8	344	19.7	43		09.5	20	35	6 02	26	29	53
15	45	42.3		23.2	358	43.1	44	+23	01.0	30	50	19	45	9 52	48
16	60	42.2		23.6	13	06.6	45	+22	52.3	35	5 57	28	6 56	10 06	45
17	75	42.2	+21	24.0	27	30.2	46	+22	43.5	40	6 05	6 39	7 09	10 21	42
18	90	42.1	+21	24.4	41	53.9	47	+22	34.6	45	6 14	6 51	7 24	10 39	39
19	105	42.0		24.8	56	17.7	48		25.5	50	24	7 05	42	11 02	33
20	120	41.9		25.2	70	41.6	49		16.2	52	29	11	7 50	13	30
21	135	41.9		25.6	85	05.7	51	+22	06.8	54	33	18	8 00	25	28
22	150	41.8		26.1	99	29.8	51	+21	57.3	56	39	26	11	39	24
23	165	41.7		26.5	113	54.1	53		47.6	58	44	35	23	11 55	19
24	180	41.6	+21	26.9	128	18.4	53	+21	37.8	60 S	6 50	7 45	8 38	12 15	13

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 7 ^h 40 ^m 0		Mag: -4.5 PMG: 8 ^h 59 ^m		Mag: +1.2 PMG: 9 ^h 20 ^m		Mag: -2.5 PMG: 5 ^h 36 ^m		Mag: +0.9 PMG: 18 ^h 46 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	244	41.1	225	09.0	+6	19.7	219	53.9	+9	14.3
1	259	43.5	240	09.3		20.4	234	54.6		15.0
2	274	46.0	255	09.7		21.0	249	55.3		15.7
3	289	48.4	270	10.0		21.7	264	56.0		16.4
4	304	50.9	285	10.4		22.3	279	56.7		17.1
5	319	53.4	300	10.7	+6	23.0	294	57.4	+9	17.8
6	334	55.8	315	11.0	+6	23.6	309	58.1	+9	18.4
7	349	58.3	330	11.4		24.3	324	58.7		19.1
8	5	00.8	345	11.7		24.9	339	59.4		19.8
9	20	03.2	0	12.1		25.6	355	00.1		20.5
10	35	05.7	15	12.4		26.2	10	00.8		21.2
11	50	08.2	30	12.7	+6	26.9	25	01.5	+9	21.9
12	65	10.6	45	13.1	+6	27.6	40	02.2	+9	22.6
13	80	13.1	60	13.4		28.2	55	02.9		23.3
14	95	15.6	75	13.7		28.9	70	03.6		24.0
15	110	18.0	90	14.1		29.5	85	04.3		24.7
16	125	20.5	105	14.4		30.2	100	05.0		25.4
17	140	22.9	120	14.7	+6	30.8	115	05.7	+9	26.1
18	155	25.4	135	15.1	+6	31.5	130	06.4	+9	26.8
19	170	27.9	150	15.4		32.1	145	07.1		27.5
20	185	30.3	165	15.7		32.8	160	07.7		28.2
21	200	32.8	180	16.0		33.5	175	08.4		28.8
22	215	35.3	195	16.4		34.1	190	09.1		29.5
23	230	37.7	210	16.7		34.8	205	09.8		30.2
24	245	40.2	225	17.0	+6	35.4	220	10.5	+9	30.9
Dif	—		+3		+7		+7		+7	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 11 ^h 57 ^m 3			Edad: 3 ^d 5 PHE { 4 ^h : 60 ^h 2 12 ^h : 60 ^h 1 20 ^h : 59 ^h 9 PMG: 16 ^h 04 ^m R°: 54 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	180	41.6	+21 26.9	128	18.4	+21 37.8	100	60 N	21 00	22 20	** **	7 05 105	0 19 10		
1	195	41.6	27.3	142	42.9	55 27.8	101	58	20 43	21 48	** **	20 100	0 03 15		
2	210	41.5	27.7	157	07.5	56 17.7	101	56	29	25	23 20	33 95	** ** *		
3	225	41.4	28.1	171	32.2	57 +21 07.5	102	54	17	21 07	22 28	44 92	** ** *		
4	240	41.3	28.5	185	57.0	58 +20 57.1	104	52	20 06	20 52	21 59	7 54 88	23 53 19		
5	255	41.2	+21 28.9	200	22.0	60 +20 46.7	104	50	19 56	20 38	21 37	8 03 85	23 46 22		
6	270	41.2	+21 29.3	214	47.0	60 +20 36.0	107	45	19 36	20 12	20 59	8 21 80	23 32 27		
7	285	41.1	29.7	229	12.2	62 25.3	107	40	20	19 52	32	36 76	19 32		
8	300	41.0	30.1	243	37.5	63 14.4	109	35	19 06	35	20 11	8 49 72	09 35		
9	315	40.9	30.5	258	02.9	64 +20 03.4	110	30	18 54	19 21	19 54	9 00 69	23 00 38		
10	330	40.8	30.9	272	28.4	65 +19 52.3	111	20	34	18 58	27	19 63	22 44 44		
11	345	40.8	+21 31.3	286	54.0	66 +19 41.1	112	10 N	18 17	18 40	19 06	9 35 59	22 30 48		
12	0	40.7	+21 31.7	301	19.7	67 +19 29.8	113	0	18 01	18 23	18 49	9 50 55	22 17 53		
13	15	40.6	32.1	315	45.6	69 18.3	115	10 S	17 45	18 08	34	10 06 50	22 04 57		
14	30	40.5	32.5	330	11.5	69 +19 06.7	116	20	28	17 52	19	22 46	21 50 61		
15	45	40.4	32.8	344	37.6	71 +18 55.0	117	30	17 09	35	18 04	40 41	33 67		
16	60	40.4	33.2	359	03.8	72 43.3	117	35	16 58	25	17 56	10 51 38	23 71		
17	75	40.3	+21 33.6	13	30.1	73 +18 31.4	119	40	16 45	17 15	17 48	11 03 35	21 12 75		
18	90	40.2	+21 34.0	27	56.6	75 +18 19.4	120	45	16 30	17 03	17 39	11 18 30	20 59 79		
19	105	40.1	34.4	42	23.1	75 +18 07.3	121	50	11	16 48	29	35 25	43 85		
20	120	40.0	34.8	56	49.7	76 +17 55.1	122	52	16 03	42	25	43 23	36 87		
21	135	40.0	35.2	71	16.5	78 42.8	123	54	15 53	35	20	11 53 19	27 91		
22	150	39.9	35.6	85	43.4	79 30.4	124	56	42	27	14	12 03 16	18 94		
23	165	39.8	36.0	100	10.4	80 17.9	125	58	29	18	09	14 12	20 07 98		
24	180	39.7	+21 36.4	114	37.5	81 +17 05.3	126	60 S	15 14	16 08	17 02	12 28 7	19 54 104		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO				
	PMG: 7 ^h 36 ^m 1		Mag: -4.5 PMG: 8 ^h 59 ^m		Mag: +1.2 PMG: 9 ^h 19 ^m		Mag: -2.5 PMG: 5 ^h 32 ^m		Mag: +0.9 PMG: 18 ^h 42 ^m				
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'			
0	245	40.2	225	17.0	+6 35.4	220	10.5	+9 30.9	276	40.7	-13 25.4	78 38.0	+7 52.6
1	260	42.7	240	17.3	36.1	235	11.2	31.6	291	43.0	25.3	93 40.4	52.6
2	275	45.1	255	17.7	36.8	250	11.9	32.3	306	45.3	25.3	108 42.8	52.6
3	290	47.6	270	18.0	37.4	265	12.6	33.0	321	47.7	25.2	123 45.2	52.6
4	305	50.1	285	18.3	38.1	280	13.3	33.7	336	50.0	25.2	138 47.7	52.5
5	320	52.5	300	18.6	+6 38.8	295	14.0	+9 34.4	351	52.3	-13 25.2	153 50.1	+7 52.5
6	335	55.0	315	18.9	+6 39.4	310	14.7	+9 35.1	6 54.6	-13 25.1	168 52.5	+7 52.5	
7	350	57.4	330	19.3	40.1	325	15.4	35.7	21 57.0	25.1	183 54.9	52.5	
8	5 59.9	345	19.6	40.7	340	16.1	36.4	36 59.3	25.1	198 57.4	52.4		
9	21 02.4	0 19.9	41.4	355	16.7	37.1	52 01.6	25.0	213 59.8	52.4			
10	36 04.8	15 20.2	42.1	10 17.4	37.8	67 03.9	25.0	229 02.2	52.4				
11	51 07.3	30 20.5	+6 42.7	25 18.1	+9 38.5	82 06.3	-13 24.9	244 04.6	+7 52.4				
12	66 09.8	45 20.8	+6 43.4	40 18.8	+9 39.2	97 08.6	-13 24.9	259 07.0	+7 52.3				
13	81 12.2	60 21.1	44.1	55 19.5	39.9	112 10.9	24.9	274 09.5	52.3				
14	96 14.7	75 21.5	44.7	70 20.2	40.6	127 13.2	24.8	289 11.9	52.3				
15	111 17.2	90 21.8	45.4	85 20.9	41.3	142 15.6	24.8	304 14.3	52.3				
16	126 19.6	105 22.1	46.1	100 21.6	42.0	157 17.9	24.8	319 16.7	52.2				
17	141 22.1	120 22.4	+6 46.7	115 22.3	+9 42.6	172 20.2	-13 24.7	334 19.1	+7 52.2				
18	156 24.6	135 22.7	+6 47.4	130 23.0	+9 43.3	187 22.5	-13 24.7	349 21.6	+7 52.2				
19	171 27.0	150 23.0	48.1	145 23.7	44.0	202 24.9	24.6	4 24.0	52.2				
20	186 29.5	165 23.3	48.7	160 24.4	44.7	217 27.2	24.6	19 26.4	52.1				
21	201 31.9	180 23.6	49.4	175 25.0	45.4	232 29.5	24.6	34 28.8	52.1				
22	216 34.4	195 23.9	50.1	190 25.7	46.1	247 31.9	24.5	49 31.2	52.1				
23	231 36.9	210 24.2	50.8	205 26.4	46.8	262 34.2	24.5	64 33.7	52.0				
24	246 39.3	225 24.5	+6 51.4	220 27.1	+9 47.4	277 36.5	-13 24.5	79 36.1	+7 52.0				
Dif	—	+3	+7	+7	+7	+23	0	+24	0				

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15/8 PMG: 11 ^h 57 ^m 4				Edad: 4 ^d 5 PHE { 4 ^h : 59/7 12 ^h : 59/5 20 ^h : 59/3 PMG: 16 ^h 58 ^m R°: 49 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	180	39.7	+21	36.4	114	37.5	+17	05.3	60 N	** **	1 35	2 54	8 50	100	0 29	6		
1	195	39.6		36.8	129	04.7	+16	52.6 ¹²⁷	58	** **	2 06	3 11	9 00	95	18	10		
2	210	39.5		37.1	143	32.0		39.8 ⁸³	56	0 34	29	25	08	92	09	13		
3	225	39.5		37.5	157	59.4		27.0 ¹²⁸	54	1 26	2 47	38	16	88	0 00	17		
4	240	39.4		37.9	172	27.0		14.0 ¹³⁰	52	1 55	3 03	49	22	86	** **	**		
5	255	39.3	+21	38.3	186	54.6	+16	01.0 ¹³⁰	50	2 17	3 16	3 58	9 28	83	** **	**		
6	270	39.2	+21	38.7	201	22.4	+15	47.9 ¹³¹	45	2 56	3 42	4 18	9 41	77	23	59	23	
7	285	39.1		39.1	215	50.2		34.7 ¹³²	40	3 23	4 03	35	9 52	72	51	27		
8	300	39.1		39.4	230	18.2		21.5 ¹³²	35	3 44	19	4 48	10 01	69	44	31		
9	315	39.0		39.8	244	46.3	+15	08.1 ¹³⁴	30	4 01	33	5 00	09	65	38	34		
10	330	38.9		40.2	259	14.5	+14	54.7 ¹³⁴	20	27	4 56	20	22	60	28	39		
11	345	38.8	+21	40.6	273	42.7	+14	41.2 ¹³⁵	10 N	4 48	5 15	5 38	10 34	55	23	18	45	
12	0	38.7	+21	41.0	288	11.1	+14	27.7 ¹³⁵	0	5 06	5 32	5 54	10 45	51	23	10	49	
13	15	38.6		41.4	302	39.6		14.1 ¹³⁶	10 S	21	5 47	6 10	10 56	46	23	01	53	
14	30	38.5		41.7	317	08.2	+14	00.4 ¹³⁷	20	36	6 03	27	11 08	41	22	51	59	
15	45	38.5		42.1	331	36.9	+13	46.6 ¹³⁸	30	51	20	46	21	36	40	64		
16	60	38.4		42.5	346	05.6		32.8 ¹³⁸	35	5 58	30	6 57	29	33	34	67		
17	75	38.3	+21	42.9	0	34.5	+13	18.9 ¹³⁹	40	6 07	6 40	7 10	11 38	29	22	27	71	
18	90	38.2	+21	43.2	15	03.5 ¹⁰⁰	+13	05.0 ¹³⁹	45	6 16	6 52	7 25	11 48	24	22	18	76	
19	105	38.1		43.6	29	32.6 ¹⁰¹	+12	51.0 ¹⁴⁰	50	26	7 07	44	12 00	19	08	81		
20	120	38.0		44.0	44	01.7 ¹⁰¹		36.9 ¹⁴¹	52	31	13	7 53	06	17	22	03	84	
21	135	38.0		44.4	58	31.0 ¹⁰³		22.8 ¹⁴¹	54	36	21	8 03	12	14	21	58	86	
22	150	37.9		44.7	73	00.4 ¹⁰⁴	+12	08.6 ¹⁴²	56	41	29	14	19	11	52	89		
23	165	37.8		45.1	87	29.8 ¹⁰⁴	+11	54.4 ¹⁴²	58	47	38	27	26	8	45	93		
24	180	37.7	+21	45.5	101	59.3 ¹⁰⁵	+11	40.1 ¹⁴³	60 S	6 53	7 48	8 42	12 35	4	21	38	97	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 7 ^h 32 ^m 1		Mag: -4.5 PMG: 8 ^h 58 ^m		Mag: +1.2 PMG: 9 ^h 18 ^m		Mag: -2.5 PMG: 5 ^h 29 ^m		Mag: +0.9 PMG: 18 ^h 39 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	246	39.3	225	24.5	+6	51.4	220	27.1	+9	47.4	277	36.5	-13	24.5	79	36.1	+7	52.0
1	261	41.8	240	24.8		52.1	235	27.8		48.1	292	38.8		24.4	94	38.5		52.0
2	276	44.3	255	25.1		52.8	250	28.5		48.8	307	41.2		24.4	109	40.9		52.0
3	291	46.7	270	25.4		53.4	265	29.2		49.5	322	43.5		24.4	124	43.3		51.9
4	306	49.2	285	25.7		54.1	280	29.9		50.2	337	45.8		24.3	139	45.8		51.9
5	321	51.7	300	26.0	+6	54.8	295	30.6	+9	50.9	352	48.2	-13	24.3	154	48.2	+7	51.9
6	336	54.1	315	26.3	+6	55.5	310	31.3	+9	51.6	7	50.5	-13	24.2	169	50.6	+7	51.9
7	351	56.6	330	26.6		56.1	325	32.0		52.3	22	52.8		24.2	184	53.0		51.8
8	6	59.1	345	26.9		56.8	340	32.7		52.9	37	55.2		24.2	199	55.4		51.8
9	22	01.5	0	27.2		57.5	355	33.3		53.6	52	57.5		24.1	214	57.8		51.8
10	37	04.0	15	27.5		58.2	10	34.0		54.3	67	59.8		24.1	230	00.3		51.7
11	52	06.4	30	27.8	+6	58.8	25	34.7	+9	55.0	83	02.2	-13	24.1	245	02.7	+7	51.7
12	67	08.9	45	28.1	+6	59.5	40	35.4	+9	55.7	98	04.5	-13	24.0	260	05.1	+7	51.7
13	82	11.4	60	28.4	+7	00.2	55	36.1		56.4	113	06.8		24.0	275	07.5		51.7
14	97	13.8	75	28.7		00.9	70	36.8		57.0	128	09.2		24.0	290	09.9		51.6
15	112	16.3	90	29.0		01.5	85	37.5		57.7	143	11.5		23.9	305	12.3		51.6
16	127	18.8	105	29.3		02.2	100	38.2		58.4	158	13.8		23.9	320	14.8		51.6
17	142	21.2	120	29.6	+7	02.9	115	38.9	+9	59.1	173	16.2	-13	23.9	335	17.2	+7	51.6
18	157	23.7	135	29.9	+7	03.6	130	39.6	+9	59.8	188	18.5	-13	23.8	350	19.6	+7	51.5
19	172	26.2	150	30.1		04.3	145	40.3	+10	00.5	203	20.8		23.8	5	22.0		51.5
20	187	28.6	165	30.4		04.9	160	40.9		01.1	218	23.2		23.8	20	24.4		51.5
21	202	31.1	180	30.7		05.6	175	41.6		01.8	233	25.5		23.7	35	26.8		51.4
22	217	33.5	195	31.0		06.3	190	42.3		02.5	248	27.8		23.7	50	29.3		51.4
23	232	36.0	210	31.3		07.0	205	43.0		03.2	263	30.2		23.7	65	31.7		51.4
24	247	38.5	225	31.6	+7	07.7	220	43.7	+10	03.9	278	32.5	-13	23.6	80	34.1	+7	51.4
Dif	—		+3 +7		+7 +7		+7 +7		+23 0		+23 0		+24 0		+24 0		0 0	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 5 ^d 5	PHE { 4 ^h : 59/0 12 ^h : 58/8 20 ^h : 58/6	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	PMG: 11 ^h 57 ^m 6					PMG: 17 ^h 47 ^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	37.7	+21	45.5	101	59.3	+11	40.1	60 N	21 04	22 26	** **	10 30 94	0 35 4	
1	195	37.6		45.9	116	28.9 ¹⁰⁶		25.8 ¹⁴³	58	20 47	21 53	** **	35 90	28 8	
2	210	37.5		46.2	130	58.7 ¹⁰⁸	+11	11.5 ¹⁴³	56	32	29	23 39	40 87	22 11	
3	225	37.4		46.6	145	28.5 ¹⁰⁸	+10	57.1 ¹⁴⁴	54	19	21 10	22 34	44 84	17 14	
4	240	37.3		47.0	159	58.3 ¹⁰⁸		42.6 ¹⁴⁵	52	20 08	20 54	22 03	48 81	12 16	
5	255	37.3	+21	47.3	174	28.3 ¹¹⁰	+10	28.1 ¹⁴⁵	50	19 58	20 41	21 41	10 51 79	0 08 18	
6	270	37.2	+21	47.7	188	58.3 ¹¹⁰	+10	13.6 ¹⁴⁵	45	19 38	20 14	21 01	10 58 74	** ** *	
7	285	37.1		48.1	203	28.5 ¹¹²	+9	59.0 ¹⁴⁶	40	21	19 53	20 34	11 04 70	** ** *	
8	300	37.0		48.5	217	58.7 ¹¹²		44.4 ¹⁴⁶	35	19 07	37	20 12	10 65	** ** *	
9	315	36.9		48.8	232	29.0 ¹¹³		29.8 ¹⁴⁶	30	18 55	19 22	19 55	14 63	** ** *	
10	330	36.8		49.2	246	59.3 ¹¹³		15.1 ¹⁴⁷	20	35	18 59	28	22 57	** ** *	
11	345	36.7	+21	49.5	261	29.8 ¹¹⁵	+9	00.4 ¹⁴⁷	10 N	18 17	18 40	19 07	11 29 52	** ** *	
12	0	36.6	+21	49.9	276	00.3 ¹¹⁵	+8	45.6 ¹⁴⁸	0	18 01	18 23	18 49	11 36 47	23 59 46	
13	15	36.6		50.3	290	30.9 ¹¹⁶		30.9 ¹⁴⁷	10 S	17 45	18 08	34	42 43	54 51	
14	30	36.5		50.6	305	01.6 ¹¹⁷		16.1 ¹⁴⁸	20	28	17 52	19	49 38	50 56	
15	45	36.4		51.0	319	32.3 ¹¹⁷	+8	01.2 ¹⁴⁹	30	17 08	34	18 04	11 57 33	44 62	
16	60	36.3		51.4	334	03.1 ¹¹⁸	+7	46.4 ¹⁴⁸	35	16 57	25	17 56	12 02 29	41 65	
17	75	36.2	+21	51.7	348	34.0 ¹¹⁹	+7	31.5 ¹⁴⁹	40	16 44	17 14	17 47	12 07 25	23 38 68	
18	90	36.1	+21	52.1	3	04.9 ¹¹⁹	+7	16.6 ¹⁴⁹	45	16 28	17 02	17 38	12 12 22	23 34 73	
19	105	36.0		52.4	17	35.9 ¹²⁰	+7	01.7 ¹⁴⁹	50	10	16 47	28	19 17	29 78	
20	120	35.9		52.8	32	07.0 ¹²¹	+6	46.7 ¹⁵⁰	52	16 01	40	23	23 14	27 80	
21	135	35.8		53.2	46	38.2 ¹²²		31.8 ¹⁴⁹	54	15 51	33	18	26 12	24 83	
22	150	35.7		53.5	61	09.4 ¹²²		16.8 ¹⁵⁰	56	40	25	13	30 10	21 86	
23	165	35.7		53.9	75	40.6 ¹²²	+6	01.8 ¹⁵⁰	58	27	16	07	34 7	18 89	
24	180	35.6	+21	54.2	90	12.0 ¹²⁴	+5	46.8 ¹⁵⁰	60 S	15 11	16 06	17 00	12 39 3	23 15 93	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 7 ^h 28 ^m 2		Mag: -4.5 PMG: 8 ^h 58 ^m		Mag: +1.2 PMG: 9 ^h 17 ^m		Mag: -2.5 PMG: 5 ^h 25 ^m		Mag: +0.9 PMG: 18 ^h 35 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	247	38.5	225	31.6	+7	07.7	220	43.7	+10	03.9
1	262	40.9	240	31.9		08.3	235	44.4		04.6
2	277	43.4	255	32.1		09.0	250	45.1		05.2
3	292	45.9	270	32.4		09.7	265	45.8		05.9
4	307	48.3	285	32.7		10.4	280	46.5		06.6
5	322	50.8	300	33.0	+7	11.1	295	47.2	+10	07.3
6	337	53.3	315	33.3	+7	11.8	310	47.9	+10	08.0
7	352	55.7	330	33.5		12.4	325	48.5		08.6
8	7	58.2	345	33.8		13.1	340	49.2		09.3
9	23	00.7	0	34.1		13.8	355	49.9		10.0
10	38	03.1	15	34.4		14.5	10	50.6		10.7
11	53	05.6	30	34.6	+7	15.2	25	51.3	+10	11.4
12	68	08.0	45	34.9	+7	15.9	40	52.0	+10	12.0
13	83	10.5	60	35.2		16.6	55	52.7		12.7
14	98	13.0	75	35.5		17.3	70	53.4		13.4
15	113	15.4	90	35.7		17.9	85	54.1		14.1
16	128	17.9	105	36.0		18.6	100	54.8		14.8
17	143	20.4	120	36.3	+7	19.3	115	55.4	+10	15.4
18	158	22.8	135	36.5	+7	20.0	130	56.1	+10	16.1
19	173	25.3	150	36.8		20.7	145	56.8		16.8
20	188	27.8	165	37.1		21.4	160	57.5		17.5
21	203	30.2	180	37.3		22.1	175	58.2		18.1
22	218	32.7	195	37.6		22.8	190	58.9		18.8
23	233	35.2	210	37.9		23.5	205	59.6		19.5
24	248	37.6	225	38.1	+7	24.1	221	00.3	+10	20.2
Dif	—		+3		+7		+7		+7	
									+23	0
										+24
										0

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8 PMG: 11 ^h 57 ^m 7				Edad: 6 ^d 5 PHE { 4 ^h : 58 [°] 3 12 ^h : 58 [°] 1 20 ^h : 57 [°] 9 PMG: 18 ^h 34 ^m R°: 45 ^m												
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	35.6	+21	54.2	90	12.0	+5	46.8	60 N	** **	1 29	2 51	12 04	91	0 39	2	
1	195	35.5		54.6	104	43.3 ¹²³		31.8 ¹⁵⁰	58	** **	2 02	3 08	05 88		36	6	
2	210	35.4		55.0	119	14.8 ¹²⁵		16.8 ¹⁵⁰	56	0 16	26	23	07 84		33	9	
3	225	35.3		55.3	133	46.3 ¹²⁵	+5	01.7 ¹⁵¹	54	1 21	2 45	36	08 81		31	11	
4	240	35.2		55.7	148	17.8 ¹²⁵	+4	46.7 ¹⁵⁰	52	1 52	3 01	47	09 79		28	14	
5	255	35.1	+21	56.0	162	49.4 ¹²⁶	+4	31.6 ¹⁵¹	50	2 14	3 14	3 57	12 10	77	0 26	17	
6	270	35.0	+21	56.4	177	21.1 ¹²⁷	+4	16.5 ¹⁵¹	45	2 54	3 41	4 17	12 12	72	0 22	21	
7	285	34.9		56.7	191	52.8 ¹²⁷	+4	01.5 ¹⁵⁰	40	3 21	4 02	34	14 67		18	25	
8	300	34.8		57.1	206	24.6 ¹²⁸	+3	46.4 ¹⁵¹	35	3 43	18	4 48	15 64		15	29	
9	315	34.7		57.4	220	56.4 ¹²⁸		31.3 ¹⁵¹	30	4 00	33	5 00	17 60		12	32	
10	330	34.7		57.8	235	28.2 ¹²⁸		16.2 ¹⁵¹	20	27	4 56	20	19 55		07	37	
11	345	34.6	+21	58.1	250	00.1 ¹²⁹	+3	01.1 ¹⁵¹	10 N	4 48	5 15	5 38	12 21	50	0 03	42	
12	0	34.5	+21	58.5	264	32.1 ¹³⁰	+2	46.1 ¹⁵⁰	0	5 06	5 32	5 54	12 23	46	** **	**	**
13	15	34.4		58.8	279	04.1 ¹³⁰		31.0 ¹⁵¹	10 S	22	5 48	6 10	25 41		** **	**	**
14	30	34.3		59.2	293	36.1 ¹³⁰		15.9 ¹⁵¹	20	37	6 04	28	27 37		** **	**	**
15	45	34.2		59.5	308	08.1 ¹³⁰	+2	00.8 ¹⁵¹	30	5 52	21	47	30 31		** **	**	**
16	60	34.1	+21	59.9	322	40.3 ¹³²	+1	45.8 ¹⁵⁰	35	6 00	31	6 59	31 28		** **	**	**
17	75	34.0	+22	00.2	337	12.4 ¹³¹	+1	30.7 ¹⁵¹	40	6 08	6 42	7 12	12 32	25	** **	**	**
18	90	33.9	+22	00.6	351	44.6 ¹³²	+1	15.7 ¹⁵⁰	45	6 17	6 54	7 27	12 34	21	** **	**	**
19	105	33.8		00.9	6	16.8 ¹³²	+1	00.6 ¹⁵¹	50	28	7 09	46	36 16		** **	**	**
20	120	33.7		01.2	20	49.1 ¹³³	+0	45.6 ¹⁵⁰	52	33	15	7 55	37 14		** **	**	**
21	135	33.6		01.6	35	21.3 ¹³²		30.6 ¹⁵⁰	54	38	23	8 05	38 12		** **	**	**
22	150	33.5		01.9	49	53.7 ¹³⁴		15.5 ¹⁵¹	56	43	31	17	40 8		** **	**	**
23	165	33.4		02.3	64	26.0 ¹³³	+0	00.5 ¹⁵⁰	58	49	40	30	41 6		** **	**	**
24	180	33.3	+22	02.6	78	58.4 ¹³⁴	-0	14.4 ¹⁴⁹	60 S	6 55	7 51	8 45	12 42	3	** **	**	**

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 7 ^h 24 ^m 3		Mag: -4.5 PMG: 8 ^h 57 ^m		Mag: +1.2 PMG: 9 ^h 16 ^m		Mag: -2.5 PMG: 5 ^h 21 ^m		Mag: +0.9 PMG: 18 ^h 31 ^m									
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec									
h	°	'	°	'	°	'	°	'	°	'								
0	248	37.6	225	38.1	+7	24.1	221	00.3	+10	20.2	279	28.7	-13	22.8	81	32.0	+7	50.7
1	263	40.1	240	38.4		24.8	236	01.0		20.9	294	31.0		22.8	96	34.4		50.6
2	278	42.5	255	38.6		25.5	251	01.6		21.5	309	33.4		22.8	111	36.8		50.6
3	293	45.0	270	38.9		26.2	266	02.3		22.2	324	35.7		22.8	126	39.2		50.6
4	308	47.5	285	39.2		26.9	281	03.0		22.9	339	38.1		22.7	141	41.6		50.5
5	323	49.9	300	39.4	+7	27.6	296	03.7	+10	23.6	354	40.4	-13	22.7	156	44.1	+7	50.5
6	338	52.4	315	39.7	+7	28.3	311	04.4	+10	24.2	9	42.7	-13	22.7	171	46.5	+7	50.5
7	353	54.9	330	39.9		29.0	326	05.1		24.9	24	45.1		22.6	186	48.9		50.4
8	8	57.3	345	40.2		29.7	341	05.8		25.6	39	47.4		22.6	201	51.3		50.4
9	23	59.8	0	40.5		30.4	356	06.5		26.3	54	49.8		22.6	216	53.7		50.4
10	39	02.3	15	40.7		31.1	11	07.2		26.9	69	52.1		22.5	231	56.1		50.3
11	54	04.7	30	41.0	+7	31.8	26	07.9	+10	27.6	84	54.5	-13	22.5	246	58.5	+7	50.3
12	69	07.2	45	41.2	+7	32.5	41	08.5	+10	28.3	99	56.8	-13	22.5	262	00.9	+7	50.3
13	84	09.6	60	41.5		33.2	56	09.2		29.0	114	59.2		22.5	277	03.3		50.3
14	99	12.1	75	41.7		33.9	71	09.9		29.6	130	01.5		22.4	292	05.7		50.2
15	114	14.6	90	42.0		34.6	86	10.6		30.3	145	03.9		22.4	307	08.2		50.2
16	129	17.0	105	42.2		35.3	101	11.3		31.0	160	06.2		22.4	322	10.6		50.2
17	144	19.5	120	42.5	+7	36.0	116	12.0	+10	31.7	175	08.6	-13	22.3	337	13.0	+7	50.1
18	159	22.0	135	42.7	+7	36.7	131	12.7	+10	32.3	190	10.9	-13	22.3	352	15.4	+7	50.1
19	174	24.4	150	43.0		37.4	146	13.4		33.0	205	13.3		22.3	7	17.8		50.1
20	189	26.9	165	43.2		38.0	161	14.1		33.7	220	15.6		22.3	22	20.2		50.0
21	204	29.4	180	43.5		38.7	176	14.7		34.4	235	18.0		22.2	37	22.6		50.0
22	219	31.8	195	43.7		39.4	191	15.4		35.0	250	20.3		22.2	52	25.0		50.0
23	234	34.3	210	44.0		40.1	206	16.1		35.7	265	22.7		22.2	67	27.4		49.9
24	249	36.8	225	44.2	+7	40.8	221	16.8	+10	36.4	280	25.0	-13	22.1	82	29.8	+7	49.9
Dif	—		+3		+7		+7		+7		+23		0		+24		0	

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15/8 PMG: 11 ^h 57 ^m 9			Edad: 7 ^d 5 PHE { 4 ^h : 57/6 12 ^h : 57/4 20 ^h : 57/2 R°: 46 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	180	33.3	+22 02.6	78	58.4	-0 14.4		60 N	21 08	22 33	** **	13 35 90	0 41 3	
1	195	33.3	02.9	93	30.8 ¹³⁴	29.4 ¹⁵⁰		58	20 50	21 57	** **	33 86	42 6	
2	210	33.2	03.3	108	03.2 ¹³⁴	44.4 ¹⁵⁰		56	35	33	** **	31 83	42 9	
3	225	33.1	03.6	122	35.7 ¹³⁵	-0 59.3 ¹⁴⁹		54	22	21 13	22 40	29 80	42 12	
4	240	33.0	04.0	137	08.1 ¹³⁴	-1 14.2 ¹⁴⁹		52	10	20 57	22 07	28 77	42 14	
5	255	32.9	+22 04.3	151	40.6 ¹³⁵	-1 29.1 ¹⁴⁹		50	20 00	20 43	21 44	13 27 75	0 43 15	
6	270	32.8	+22 04.6	166	13.2 ¹³⁶	-1 44.0 ¹⁴⁹		45	19 40	20 16	21 04	13 24 70	0 43 21	
7	285	32.7	05.0	180	45.7 ¹³⁵	-1 58.8 ¹⁴⁸		40	23	19 55	20 36	21 66	43 25	
8	300	32.6	05.3	195	18.3 ¹³⁶	-2 13.6 ¹⁴⁸		35	19 09	38	20 14	19 63	44 27	
9	315	32.5	05.6	209	50.8 ¹³⁵	28.5 ¹⁴⁹		30	18 57	24	19 56	17 60	44 31	
10	330	32.4	06.0	224	23.4 ¹³⁶	43.2 ¹⁴⁷		20	36	19 00	29	14 54	44 36	
11	345	32.3	+22 06.3	238	56.1 ¹³⁷	-2 58.0 ¹⁴⁸		10 N	18 18	18 41	19 08	13 11 50	0 45 40	
12	0	32.2	+22 06.6	253	28.7 ¹³⁶	-3 12.7 ¹⁴⁷		0	18 01	18 24	18 50	13 09 45	0 45 45	
13	15	32.1	07.0	268	01.3 ¹³⁶	27.4 ¹⁴⁷		10 S	17 45	18 08	34	06 41	45 50	
14	30	32.0	07.3	282	34.0 ¹³⁷	42.1 ¹⁴⁷		20	28	17 51	19	04 36	46 54	
15	45	31.9	07.6	297	06.6 ¹³⁶	-3 56.7 ¹⁴⁶		30	17 08	34	18 03	13 01 31	46 60	
16	60	31.8	08.0	311	39.3 ¹³⁷	-4 11.3 ¹⁴⁶		35	16 56	24	17 55	12 59 28	46 63	
17	75	31.7	+22 08.3	326	12.0 ¹³⁷	-4 25.9 ¹⁴⁶		40	16 43	17 13	17 47	12 57 25	0 46 67	
18	90	31.6	+22 08.6	340	44.7 ¹³⁷	-4 40.4 ¹⁴⁵		45	16 27	17 01	17 37	12 55 20	0 47 70	
19	105	31.5	09.0	355	17.4 ¹³⁷	-4 54.9 ¹⁴⁵		50	16 08	16 46	27	52 16	47 76	
20	120	31.4	09.3	9	50.1 ¹³⁷	-5 09.4 ¹⁴⁵		52	15 59	39	22	51 14	47 78	
21	135	31.3	09.6	24	22.8 ¹³⁷	23.9 ¹⁴⁵		54	49	32	17	50 11	47 81	
22	150	31.2	09.9	38	55.5 ¹³⁷	38.3 ¹⁴⁴		56	38	23	11	48 9	47 84	
23	165	31.1	10.3	53	28.2 ¹³⁷	-5 52.6 ¹⁴³		58	24	14	17 05	47 6	47 87	
24	180	31.0	+22 10.6	68	00.9 ¹³⁷	-6 06.9 ¹⁴³		60 S	15 09	16 03	16 59	12 45 3	0 48 90	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 7 ^h 20 ^m 3		Mag: -4.5 PMG: 8 ^h 57 ^m		Mag: +1.2 PMG: 9 ^h 14 ^m		Mag: -2.5 PMG: 5 ^h 18 ^m		Mag: +0.9 PMG: 18 ^h 27 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	249	36.8	225	44.2	221	16.8	+10 36.4	280	25.0	-13 22.1	
1	264	39.2	240	44.4		41.5	37.0	295	27.4	22.1	
2	279	41.7	255	44.7		42.2	37.7	310	29.7	22.1	
3	294	44.1	270	44.9		43.0	38.4	325	32.1	22.1	
4	309	46.6	285	45.2		43.7	39.1	340	34.4	22.0	
5	324	49.1	300	45.4	+7 44.4	296	20.3	+10 39.7	355	36.8	-13 22.0
6	339	51.5	315	45.7	+7 45.1	311	20.9	+10 40.4	10 39.1	-13 22.0	
7	354	54.0	330	45.9	45.8	326	21.6	41.1	25 41.5	21.9	
8	9	56.5	345	46.1	46.5	341	22.3	41.7	40 43.8	21.9	
9	24	58.9	0	46.4	47.2	356	23.0	42.4	55 46.2	21.9	
10	40	01.4	15	46.6	47.9	11	23.7	43.1	70 48.6	21.9	
11	55	03.9	30	46.8	+7 48.6	26	24.4	+10 43.8	85 50.9	-13 21.8	
12	70	06.3	45	47.1	+7 49.3	41	25.1	+10 44.4	100 53.3	-13 21.8	
13	85	08.8	60	47.3	50.0	56	25.8	45.1	115 55.6	21.8	
14	100	11.3	75	47.5	50.7	71	26.4	45.8	130 58.0	21.7	
15	115	13.7	90	47.8	51.4	86	27.1	46.4	146 00.3	21.7	
16	130	16.2	105	48.0	52.1	101	27.8	47.1	161 02.7	21.7	
17	145	18.6	120	48.2	+7 52.8	116	28.5	+10 47.8	176 05.0	-13 21.7	
18	160	21.1	135	48.5	+7 53.5	131	29.2	+10 48.4	191 07.4	-13 21.6	
19	175	23.6	150	48.7	54.2	146	29.9	49.1	206 09.8	21.6	
20	190	26.0	165	48.9	54.9	161	30.6	49.8	221 12.1	21.6	
21	205	28.5	180	49.1	55.6	176	31.3	50.5	236 14.5	21.6	
22	220	31.0	195	49.4	56.3	191	32.0	51.1	251 16.8	21.5	
23	235	33.4	210	49.6	57.0	206	32.6	51.8	266 19.2	21.5	
24	250	35.9	225	49.8	+7 57.8	221	33.3	+10 52.5	281 21.5	-13 21.5	

Dif	—	+2	+7	+7	+7	+7	+24	0	+24

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15 ^h 8 PMG: 11 ^h 58 ^m 0				Edad: 8 ^d 5 PHE { 4 ^h : 57 ^h 0 12 ^h : 56 ^h 8 20 ^h : 56 ^h 6 Rº: 46 ^m															
	hG ☉		Dec		hG ☾		Dif			Dif			Náutico	Civil	Hora	Rº	Hora	Rº		
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m		
0	180	31.0	+22	10.6	68	00.9	-6	06.9	60 N	** **	1 23	2 48	15 05	90	0 44	3				
1	195	30.9		10.9	82	33.6 ¹³⁷		21.2 ¹⁴³	58	** **	1 58	3 06	14 59	86	48	6				
2	210	30.8		11.2	97	06.3 ¹³⁷		35.5 ¹⁴³	56	** **	2 23	21	54	83	51	9				
3	225	30.7		11.6	111	39.0 ¹³⁷	-6	49.7 ¹⁴²	54	1 16	42	34	49	80	54	12				
4	240	30.6		11.9	126	11.7 ¹³⁷	-7	03.8 ¹⁴¹	52	1 48	2 58	45	45	77	56	15				
5	255	30.5	+22	12.2	140	44.4 ¹³⁷	-7	17.9 ¹⁴¹	50	2 11	3 12	3 55	14 42	74	0 58	17				
6	270	30.4	+22	12.5	155	17.1 ¹³⁷	-7	32.0 ¹⁴¹	45	2 52	3 40	4 16	14 34	69	1 04	21				
7	285	30.3		12.8	169	49.8 ¹³⁷	-7	46.0 ¹⁴⁰	40	3 20	4 01	33	27	66	08	25				
8	300	30.2		13.2	184	22.5 ¹³⁷	-8	00.0 ¹⁴⁰	35	42	18	47	22	62	11	29				
9	315	30.1		13.5	198	55.1 ¹³⁶	-8	13.9 ¹³⁹	30	3 59	32	4 59	17	59	15	31				
10	330	30.0		13.8	213	27.8 ¹³⁷		27.8 ¹³⁹	20	4 27	4 56	5 20	08	54	20	37				
11	345	29.9	+22	14.1	228	00.4 ¹³⁶	-8	41.6 ¹³⁸	10 N	4 48	5 15	5 38	14 01	49	1 25	42				
12	0	29.8	+22	14.4	242	33.1 ¹³⁷	-8	55.4 ¹³⁸	0	5 06	5 32	5 54	13 54	45	1 30	45				
13	15	29.7		14.8	257	05.7 ¹³⁶	-9	09.1 ¹³⁷	10 S	22	5 48	6 11	47	42	35	49				
14	30	29.6		15.1	271	38.3 ¹³⁶		22.8 ¹³⁷	20	37	6 04	28	40	37	40	54				
15	45	29.5		15.4	286	10.9 ¹³⁶		36.4 ¹³⁶	30	5 53	22	6 48	32	32	46	59				
16	60	29.4		15.7	300	43.5 ¹³⁶	-9	50.0 ¹³⁶	35	6 01	32	7 00	27	29	49	62				
17	75	29.3	+22	16.0	315	16.0 ¹³⁵	-10	03.5 ¹³⁵	40	6 09	6 43	7 13	13 22	26	1 53	66				
18	90	29.2	+22	16.3	329	48.6 ¹³⁶	-10	17.0 ¹³⁵	45	6 19	6 56	7 29	13 15	23	1 57	70				
19	105	29.1		16.6	344	21.1 ¹³⁵		30.4 ¹³⁴	50	30	7 10	48	08	18	2 03	74				
20	120	29.0		16.9	358	53.6 ¹³⁵		43.7 ¹³³	52	34	17	7 57	05	15	05	77				
21	135	28.9		17.3	13	26.1 ¹³⁵	-10	57.0 ¹³³	54	39	25	8 08	13 01	13	08	79				
22	150	28.8		17.6	27	58.5 ¹³⁴	-11	10.2 ¹³²	56	45	33	19	12 57	11	11	82				
23	165	28.7		17.9	42	31.0 ¹³⁵		23.4 ¹³²	58	51	43	32	53	7	14	86				
24	180	28.6	+22	18.2	57	03.4 ¹³⁴	-11	36.5 ¹³¹	60 S	6 58	7 53	8 48	12 48	4	2 18	89				
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG 7 ^h 16 ^m 4				Mag: -4.5 PMG: 8 ^h 57 ^m				Mag: +1.2 PMG: 9 ^h 13 ^m				Mag: -2.5 PMG: 5 ^h 14 ^m				Mag: +0.9 PMG: 18 ^h 23 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	250	35.9	225	49.8	+7	57.8	221	33.3	+10	52.5	281	21.5	-13	21.5	83	27.6	+7	49.1		
1	265	38.4	240	50.1		58.5	236	34.0		53.1	296	23.9		21.5	98	30.0		49.1		
2	280	40.8	255	50.3		59.2	251	34.7		53.8	311	26.3		21.4	113	32.4		49.1		
3	295	43.3	270	50.5	+7	59.9	266	35.4		54.5	326	28.6		21.4	128	34.8		49.0		
4	310	45.7	285	50.7	+8	00.6	281	36.1		55.1	341	31.0		21.4	143	37.2		49.0		
5	325	48.2	300	50.9	+8	01.3	296	36.8	+10	55.8	356	33.3	-13	21.4	158	39.6	+7	49.0		
6	340	50.7	315	51.2	+8	02.0	311	37.5	+10	56.5	11	35.7	-13	21.3	173	42.0	+7	48.9		
7	355	53.1	330	51.4		02.7	326	38.1		57.1	26	38.1		21.3	188	44.4		48.9		
8	10	55.6	345	51.6		03.4	341	38.8		57.8	41	40.4		21.3	203	46.8		48.9		
9	25	58.1	0	51.8		04.1	356	39.5		58.5	56	42.8		21.3	218	49.2		48.8		
10	41	00.5	15	52.0		04.9	11	40.2		59.1	71	45.2		21.2	233	51.6		48.8		
11	56	03.0	30	52.2	+8	05.6	26	40.9	+10	59.8	86	47.5	-13	21.2	248	54.0	+7	48.8		
12	71	05.5	45	52.5	+8	06.3	41	41.6	+11	00.4	101	49.9	-13	21.2	263	56.4	+7	48.7		
13	86	07.9	60	52.7		07.0	56	42.3		01.1	116	52.2		21.2	278	58.8		48.7		
14	101	10.4	75	52.9		07.7	71	42.9		01.8	131	54.6		21.1	294	01.2		48.7		
15	116	12.9	90	53.1		08.4	86	43.6		02.4	146	57.0		21.1	309	03.6		48.6		
16	131	15.3	105	53.3		09.1	101	44.3		03.1	161	59.3		21.1	324	06.0		48.6		
17	146	17.8	120	53.5	+8	09.9	116	45.0	+11	03.8	177	01.7	-13	21.1	339	08.4	+7	48.6		
18	161	20.2	135	53.7	+8	10.6	131	45.7	+11	04.4	192	04.1	-13	21.0	354	10.8	+7	48.5		
19	176	22.7	150	54.0		11.3	146	46.4		05.1	207	06.4		21.0	9	13.2		48.5		
20	191	25.2	165	54.2		12.0	161	47.1		05.8	222	08.8		21.0	24	15.6		48.5		
21	206	27.6	180	54.4		12.7	176	47.8		06.4	237	11.2		21.0	39	18.0		48.4		
22	221	30.1	195	54.6		13.4	191	48.4		07.1	252	13.5		20.9	54	20.4		48.4		
23	236	32.6	210	54.8		14.1	206	49.1		07.8	267	15.9		20.9	69	22.8		48.4		
24	251	35.0	225	55.0	+8	14.9	221	49.8	+11	08.4	282	18.3	-13	20.9	84	25.2	+7	48.3		
Dif	—				+2 +7				+7 +7				+24 0				+24 0			

UT	SOL			LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8 PMG: 11 ^h 58 ^m 2			Edad: 9 ^d 5 PHE { 4 ^h : 56 ^m 4 12 ^h : 56 ^m 2 20 ^h : 56 ^m 0 R°: 47 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	h m	h m	h m	h m
0	180	28.6	+22	18.2	57	03.4	-11	36.5	60 N	21 11	22 39	** **	16 35	90	0 47	5
1	195	28.5		18.5	71	35.8 ¹³⁴	-11	49.6 ¹³¹	58	20 53	22 02	** **	25 86		0 54	9
2	210	28.4		18.8	86	08.2 ¹³⁴	-12	02.5 ¹²⁹	56	37	21 36	** **	17 82		1 00	12
3	225	28.3		19.1	100	40.5 ¹³³		15.5 ¹³⁰	54	24	16	22 46	09 79		06	14
4	240	28.2		19.4	115	12.8 ¹³³		28.3 ¹²⁸	52	13	21 00	22 11	16 02 77		11	17
5	255	28.1	+22	19.7	129	45.1 ¹³³	-12	41.1 ¹²⁸	50	20 02	20 46	21 47	15 56 74		1 15	19
6	270	28.0	+22	20.0	144	17.4 ¹³³	-12	53.8 ¹²⁷	45	19 41	20 18	21 06	15 43 69		1 25	24
7	285	27.9		20.3	158	49.6 ¹³²	-13	06.5 ¹²⁷	40	24	19 57	20 37	33 65		33	28
8	300	27.8		20.6	173	21.9 ¹³³		19.0 ¹²⁵	35	19 10	39	20 15	24 62		40	31
9	315	27.7		20.9	187	54.0 ¹³¹		31.5 ¹²⁵	30	18 58	25	19 58	16 59		46	34
10	330	27.6		21.2	202	26.2 ¹³²		44.0 ¹²⁵	20	37	19 01	30	15 02 55		1 57	38
11	345	27.5	+22	21.5	216	58.3 ¹³¹	-13	56.4 ¹²⁴	10 N	18 19	18 41	19 08	14 50 51		2 07	42
12	0	27.4	+22	21.8	231	30.4 ¹³¹	-14	08.7 ¹²³	0	18 02	18 24	18 50	14 39 47		2 15	47
13	15	27.3		22.1	246	02.4 ¹³⁰		20.9 ¹²²	10 S	17 45	18 08	34	29 43		24	51
14	30	27.2		22.4	260	34.5 ¹³¹		33.0 ¹²¹	20	28	17 51	19	17 39		34	54
15	45	27.1		22.7	275	06.5 ¹³⁰		45.1 ¹²¹	30	17 07	34	18 03	14 04 35		45	59
16	60	27.0		23.0	289	38.4 ¹²⁹	-14	57.1 ¹²⁰	35	16 56	24	17 55	13 56 33		51	62
17	75	26.9	+22	23.3	304	10.3 ¹²⁹	-15	09.0 ¹¹⁹	40	16 42	17 13	17 46	13 48 29		2 59	65
18	90	26.8	+22	23.6	318	42.2 ¹²⁹	-15	20.9 ¹¹⁹	45	16 26	17 00	17 37	13 38 25		3 07	69
19	105	26.7		23.9	333	14.1 ¹²⁹		32.7 ¹¹⁸	50	16 07	16 45	26	26 21		17	75
20	120	26.5		24.2	347	45.9 ¹²⁸		44.3 ¹¹⁶	52	15 58	38	21	20 19		22	77
21	135	26.4		24.5	2	17.7 ¹²⁸	-15	56.0 ¹¹⁷	54	47	30	16	14 17		27	80
22	150	26.3		24.8	16	49.4 ¹²⁷	-16	07.5 ¹¹⁵	56	36	22	10	08 13		33	83
23	165	26.2		25.1	31	21.1 ¹²⁷		18.9 ¹¹⁴	58	22	12	17 04	13 00 10		40	86
24	180	26.1	+22	25.4	45	52.8 ¹²⁷	-16	30.3 ¹¹⁴	60 S	15 06	16 02	16 57	12 52 6		3 47	91

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 7 ^h 12 ^m 5		Mag: -4.5 PMG: 8 ^h 56 ^m		Mag: +1.2 PMG: 9 ^h 12 ^m		Mag: -2.5 PMG: 5 ^h 10 ^m		Mag: +0.9 PMG: 18 ^h 19 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	251	35.0	225	55.0	+8	14.9	221	49.8	+11	08.4
1	266	37.5	240	55.2		15.6	236	50.5		09.1
2	281	40.0	255	55.4		16.3	251	51.2		09.7
3	296	42.4	270	55.6		17.0	266	51.9		10.4
4	311	44.9	285	55.8		17.7	281	52.6		11.1
5	326	47.3	300	56.0	+8	18.4	296	53.2	+11	11.7
6	341	49.8	315	56.2	+8	19.2	311	53.9	+11	12.4
7	356	52.3	330	56.4		19.9	326	54.6		13.0
8	11	54.7	345	56.6		20.6	341	55.3		13.7
9	26	57.2	0	56.8		21.3	356	56.0		14.4
10	41	59.7	15	57.0		22.0	11	56.7		15.0
11	57	02.1	30	57.2	+8	22.8	26	57.4	+11	15.7
12	72	04.6	45	57.4	+8	23.5	41	58.1	+11	16.3
13	87	07.1	60	57.6		24.2	56	58.7		17.0
14	102	09.5	75	57.8		24.9	71	59.4		17.7
15	117	12.0	90	58.0		25.6	87	00.1		18.3
16	132	14.5	105	58.2		26.4	102	00.8		19.0
17	147	16.9	120	58.4	+8	27.1	117	01.5	+11	19.6
18	162	19.4	135	58.6	+8	27.8	132	02.2	+11	20.3
19	177	21.8	150	58.8		28.5	147	02.9		21.0
20	192	24.3	165	59.0		29.2	162	03.5		21.6
21	207	26.8	180	59.1		30.0	177	04.2		22.3
22	222	29.2	195	59.3		30.7	192	04.9		22.9
23	237	31.7	210	59.5		31.4	207	05.6		23.6
24	252	34.2	225	59.7	+8	32.1	222	06.3	+11	24.3

Dif	—	+2	+7	+7	+7	+24	0	+24

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 10 ^d 5	PHE { 4 ^h : 55 ^m 8 12 ^h : 55 ^m 7 20 ^h : 55 ^m 5 Rº: 49 ^m									
	PMG: 11 ^h 58 ^m 3					SD: 15 ^h 2		PMG: 21 ^h 38 ^m			Rº: 49 ^m			
	hG ☉	Dec		hG ☾	Dif			Náutico	Civil		Hora	Rº	Hora	Rº
h	°	'	°	°	'	°	°	h m	h m	h m	h m m		h m m	
0	180	26.1	+22 25.4	45	52.8	-16 30.3	60 N	** **	1 17	2 45	18 05 90		0 52 7	
1	195	26.0	25.7	60	24.4 ¹²⁶	41.6 ¹¹³	58	** **	1 55	3 04	17 51 84		1 03 11	
2	210	25.9	26.0	74	56.0 ¹²⁶	-16 52.8 ¹¹²	56	** **	2 20	19	39 80		12 15	
3	225	25.8	26.3	89	27.5 ¹²⁵	-17 03.9 ¹¹¹	54	1 10	40	32	28 77		20 19	
4	240	25.7	26.5	103	59.0 ¹²⁵	14.9 ¹¹⁰	52	1 45	2 57	44	19 74		28 20	
5	255	25.6	+22 26.8	118	30.5 ¹²⁵	-17 25.9 ¹¹⁰	50	2 09	3 11	3 54	17 10 72		1 34 23	
6	270	25.5	+22 27.1	133	01.9 ¹²⁴	-17 36.7 ¹⁰⁸	45	2 50	3 38	4 15	16 52 68		1 49 27	
7	285	25.4	27.4	147	33.3 ¹²⁴	47.5 ¹⁰⁸	40	3 19	4 00	32	38 64		2 01 31	
8	300	25.3	27.7	162	04.6 ¹²³	-17 58.2 ¹⁰⁷	35	41	17	46	26 61		11 34	
9	315	25.2	28.0	176	35.9 ¹²³	-18 08.7 ¹⁰⁵	30	3 59	32	4 59	16 15 59		20 37	
10	330	25.1	28.3	191	07.2 ¹²³	19.2 ¹⁰⁵	20	4 27	4 55	5 20	15 57 55		35 41	
11	345	25.0	+22 28.6	205	38.4 ¹²²	-18 29.6 ¹⁰⁴	10 N	4 48	5 15	5 38	15 41 52		2 49 45	
12	0	24.8	+22 28.8	220	09.5 ¹²¹	-18 40.0 ¹⁰⁴	0	5 06	5 32	5 55	15 26 49		3 02 48	
13	15	24.7	29.1	234	40.7 ¹²²	-18 50.2 ¹⁰²	10 S	22	5 49	6 11	15 12 46		15 51	
14	30	24.6	29.4	249	11.7 ¹²⁰	-19 00.3 ¹⁰¹	20	38	6 05	29	14 56 43		28 55	
15	45	24.5	29.7	263	42.8 ¹²¹	10.3 ¹⁰⁰	30	5 53	23	6 49	39 39		44 59	
16	60	24.4	30.0	278	13.8 ¹²⁰	20.3 ¹⁰⁰	35	6 02	33	7 01	29 36		3 53 62	
17	75	24.3	+22 30.3	292	44.7 ¹¹⁹	-19 30.1 ⁹⁸	40	6 10	6 44	7 14	14 17 34		4 04 65	
18	90	24.2	+22 30.5	307	15.6 ¹¹⁹	-19 39.8 ⁹⁷	45	6 20	6 57	7 30	14 03 31		4 16 69	
19	105	24.1	30.8	321	46.5 ¹¹⁹	49.5 ⁹⁷	50	31	7 12	50	13 47 26		32 73	
20	120	24.0	31.1	336	17.3 ¹¹⁸	-19 59.0 ⁹⁵	52	36	19	7 59	39 24		39 75	
21	135	23.9	31.4	350	48.1 ¹¹⁸	-20 08.4 ⁹⁴	54	41	27	8 10	31 21		47 78	
22	150	23.8	31.6	5	18.8 ¹¹⁷	17.8 ⁹⁴	56	47	35	21	21 18		4 56 81	
23	165	23.7	31.9	19	49.5 ¹¹⁷	27.0 ⁹²	58	6 53	45	35	13 10 14		5 06 85	
24	180	23.6	+22 32.2	34	20.2 ¹¹⁷	-20 36.2 ⁹²	60 S	7 00	7 56	8 51	12 58 9		5 18 90	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 7 ^h 08 ^m 5		Mag: -4.5 PMG: 8 ^h 56 ^m		Mag: +1.2 PMG: 9 ^h 11 ^m		Mag: -2.5 PMG: 5 ^h 06 ^m		Mag: +0.9 PMG: 18 ^h 16 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	252	34.2	225	59.7	+8 32.1	222	06.3	+11 24.3	283	15.1	-13 20.4	85	22.7	+7 47.5
1	267	36.6	240	59.9	32.9	237	07.0	24.9	298	17.5	20.4	100	25.1	47.4
2	282	39.1	256	00.1	33.6	252	07.7	25.6	313	19.9	20.3	115	27.5	47.4
3	297	41.6	271	00.3	34.3	267	08.3	26.2	328	22.3	20.3	130	29.9	47.4
4	312	44.0	286	00.5	35.0	282	09.0	26.9	343	24.6	20.3	145	32.3	47.3
5	327	46.5	301	00.6	+8 35.7	297	09.7	+11 27.5	358	27.0	-13 20.3	160	34.7	+7 47.3
6	342	49.0	316	00.8	+8 36.5	312	10.4	+11 28.2	13	29.4	-13 20.3	175	37.1	+7 47.2
7	357	51.4	331	01.0	37.2	327	11.1	28.8	28	31.8	20.2	190	39.5	47.2
8	12	53.9	346	01.2	37.9	342	11.8	29.5	43	34.1	20.2	205	41.9	47.2
9	27	56.3	1	01.4	38.6	357	12.4	30.2	58	36.5	20.2	220	44.3	47.1
10	42	58.8	16	01.5	39.4	12	13.1	30.8	73	38.9	20.2	235	46.7	47.1
11	58	01.3	31	01.7	+8 40.1	27	13.8	+11 31.5	88	41.3	-13 20.2	250	49.1	+7 47.1
12	73	03.7	46	01.9	+8 40.8	42	14.5	+11 32.1	103	43.6	-13 20.1	265	51.5	+7 47.0
13	88	06.2	61	02.1	41.6	57	15.2	32.8	118	46.0	20.1	280	53.9	47.0
14	103	08.7	76	02.3	42.3	72	15.9	33.4	133	48.4	20.1	295	56.3	46.9
15	118	11.1	91	02.4	43.0	87	16.6	34.1	148	50.8	20.1	310	58.6	46.9
16	133	13.6	106	02.6	43.7	102	17.2	34.7	163	53.2	20.1	326	01.0	46.9
17	148	16.1	121	02.8	+8 44.5	117	17.9	+11 35.4	178	55.5	-13 20.0	341	03.4	+7 46.8
18	163	18.5	136	03.0	+8 45.2	132	18.6	+11 36.0	193	57.9	-13 20.0	356	05.8	+7 46.8
19	178	21.0	151	03.1	45.9	147	19.3	36.7	209	00.3	20.0	11	08.2	46.8
20	193	23.5	166	03.3	46.6	162	20.0	37.4	224	02.7	20.0	26	10.6	46.7
21	208	25.9	181	03.5	47.4	177	20.7	38.0	239	05.0	20.0	41	13.0	46.7
22	223	28.4	196	03.6	48.1	192	21.4	38.7	254	07.4	20.0	56	15.4	46.6
23	238	30.8	211	03.8	48.8	207	22.0	39.3	269	09.8	19.9	71	17.8	46.6
24	253	33.3	226	04.0	+8 49.6	222	22.7	+11 40.0	284	12.2	-13 19.9	86	20.2	+7 46.6
Dif	—		+2 +7		+7 +7		+7 +7		+24 0		+24 0		+24 0	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8			Edad: 11 ^d 5	PHE {	4 ^h : 55 ^m /4 12 ^h : 55 ^m /2 20 ^h : 55 ^m /1			Final del crepúsculo			Salida de Luna		Puesta de Luna		
	PMG: 11 ^h 58 ^m 5								SD: 15 ^h 1			PMG: 22 ^h 27 ^m			R°: 51 ^m	
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	180	23.6	+22	32.2	34	20.2	-20	36.2	60 N	21 14	22 45	** **	19 35	83	0 59	13
1	195	23.4		32.5	48	50.8 ¹¹⁶		45.2	58	20 55	22 06	** **	19 15	78	1 14	18
2	210	23.3		32.7	63	21.3 ¹¹⁵	-20	54.1	56	40	21 39	** **	18 59	73	27	22
3	225	23.2		33.0	77	51.8 ¹¹⁵	-21	02.9	54	26	19	22 51	45	71	39	24
4	240	23.1		33.3	92	22.3 ¹¹⁵		11.7	52	15	21 02	22 15	33	69	48	28
5	255	23.0	+22	33.6	106	52.7 ¹¹⁴	-21	20.3	50	20 04	20 48	21 50	18 22	67	1 57	30
6	270	22.9	+22	33.8	121	23.1 ¹¹⁴	-21	28.8	45	19 43	20 20	21 08	18 00	63	2 16	34
7	285	22.8		34.1	135	53.5 ¹¹⁴		37.2	40	26	19 58	20 39	17 42	61	32	36
8	300	22.7		34.4	150	23.7 ¹¹²		45.5	35	19 11	40	20 17	27	59	45	39
9	315	22.6		34.7	164	54.0 ¹¹³	-21	53.7	30	18 59	26	19 59	17 14	58	2 57	40
10	330	22.5		34.9	179	24.2 ¹¹²	-22	01.7	20	37	19 02	31	16 52	55	3 16	45
11	345	22.3	+22	35.2	193	54.4 ¹¹²	-22	09.7	10 N	18 19	18 42	19 09	16 33	53	3 34	47
12	0	22.2	+22	35.5	208	24.5 ¹¹¹	-22	17.6	0	18 02	18 25	18 51	16 15	51	3 50	49
13	15	22.1		35.7	222	54.6 ¹¹¹		25.3	10 S	17 45	18 08	34	15 58	48	4 06	52
14	30	22.0		36.0	237	24.6 ¹¹⁰		32.9	20	28	17 51	19	39	46	23	56
15	45	21.9		36.3	251	54.6 ¹¹⁰		40.4	30	17 07	33	18 03	18	43	43	59
16	60	21.8		36.5	266	24.6 ¹¹⁰		47.8	35	16 55	23	17 55	15 05	41	4 55	61
17	75	21.7	+22	36.8	280	54.5 ¹⁰⁹	-22	55.1	40	16 42	17 12	17 46	14 51	39	5 09	63
18	90	21.6	+22	37.1	295	24.4 ¹⁰⁹	-23	02.3	45	16 26	16 59	17 36	14 34	36	5 25	66
19	105	21.5		37.3	309	54.2 ¹⁰⁸		09.4	50	16 06	44	25	13	33	45	70
20	120	21.3		37.6	324	24.0 ¹⁰⁸		16.3	52	15 57	37	20	14 03	31	5 54	72
21	135	21.2		37.8	338	53.8 ¹⁰⁸		23.1	54	46	29	15	13 52	29	6 05	74
22	150	21.1		38.1	353	23.5 ¹⁰⁷		29.8	56	34	20	09	39	26	17	78
23	165	21.0		38.4	7	53.2 ¹⁰⁷		36.4	58	20	11	17 03	24	23	31	82
24	180	20.9	+22	38.6	22	22.8 ¹⁰⁶	-23	42.9	60 S	15 04	16 00	16 56	13 07	17	6 48	87

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 7 ^h 04 ^m 6		Mag: -4.4 PMG: 8 ^h 56 ^m		Mag: +1.2 PMG: 9 ^h 10 ^m		Mag: -2.5 PMG: 5 ^h 02 ^m		Mag: +0.9 PMG: 18 ^h 12 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	253	33.3	226	04.0	+8	49.6	222	22.7	+11	40.0
1	268	35.8	241	04.2		50.3	237	23.4		40.6
2	283	38.2	256	04.3		51.0	252	24.1		41.3
3	298	40.7	271	04.5		51.8	267	24.8		41.9
4	313	43.2	286	04.7		52.5	282	25.5		42.6
5	328	45.6	301	04.8	+8	53.2	297	26.1	+11	43.2
6	343	48.1	316	05.0	+8	53.9	312	26.8	+11	43.9
7	358	50.6	331	05.1		54.7	327	27.5		44.5
8	13	53.0	346	05.3		55.4	342	28.2		45.2
9	28	55.5	1	05.5		56.1	357	28.9		45.8
10	43	57.9	16	05.6		56.9	12	29.6		46.5
11	59	00.4	31	05.8	+8	57.6	27	30.2	+11	47.1
12	74	02.9	46	06.0	+8	58.3	42	30.9	+11	47.8
13	89	05.3	61	06.1		59.1	57	31.6		48.4
14	104	07.8	76	06.3	+8	59.8	72	32.3		49.1
15	119	10.3	91	06.4	+9	00.5	87	33.0		49.7
16	134	12.7	106	06.6		01.3	102	33.7		50.4
17	149	15.2	121	06.7	+9	02.0	117	34.3	+11	51.0
18	164	17.7	136	06.9	+9	02.7	132	35.0	+11	51.7
19	179	20.1	151	07.1		03.5	147	35.7		52.3
20	194	22.6	166	07.2		04.2	162	36.4		53.0
21	209	25.1	181	07.4		04.9	177	37.1		53.6
22	224	27.5	196	07.5		05.7	192	37.8		54.3
23	239	30.0	211	07.7		06.4	207	38.4		54.9
24	254	32.4	226	07.8	+9	07.1	222	39.1	+11	55.6
Dif	—		+2		+7		+7		+6	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15/8 PMG: 11 ^h 58 ^m 7			Edad: 12 ^d 5 PHE { 4 ^h : 55/0 12 ^h : 54/8 20 ^h : 54/7 PMG: 23 ^h 18 ^m R ^o : 52 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R ^o	Hora	R ^o
h	°	'	°	°	'	°	'	h	m	h	m	h	m	h	m
0	180	20.9	+22 38.6	22	22.8	-23 42.9	63	60 N	** **	1 12	2 43	20 58	66	1 12	22
1	195	20.8	38.9	36	52.5 ¹⁰⁷	49.2	63	58	** **	1 51	3 02	33 63		32	28
2	210	20.7	39.1	51	22.0 ¹⁰⁵	-23 55.5	63	56	** **	2 18	17	20 12	62	1 49	31
3	225	20.6	39.4	65	51.6 ¹⁰⁶	-24 01.6	61	54	1 06	38	31	19 56	60	2 03	34
4	240	20.4	39.6	80	21.1 ¹⁰⁵	07.6	60	52	1 42	2 55	42	42 59		16	35
5	255	20.3	+22 39.9	94	50.6 ¹⁰⁵	-24 13.4	58	50	2 07	3 09	3 53	19 29	59	2 27	37
6	270	20.2	+22 40.2	109	20.0 ¹⁰⁴	-24 19.2	58	45	2 49	3 37	4 14	19 03	58	2 50	40
7	285	20.1	40.4	123	49.4 ¹⁰⁴	24.8	56	40	3 18	3 59	32	18 43	56	3 08	43
8	300	20.0	40.7	138	18.8 ¹⁰⁴	30.3	55	35	40	4 17	46	26 56		24	44
9	315	19.9	40.9	152	48.1 ¹⁰³	35.7	54	30	3 58	31	4 59	18 12	54	3 37	46
10	330	19.8	41.2	167	17.4 ¹⁰³	40.9	52	20	4 26	4 55	5 20	17 47	53	4 01	47
11	345	19.7	+22 41.4	181	46.7 ¹⁰³	-24 46.1	52	10 N	4 48	5 15	5 38	17 26	52	4 21	49
12	0	19.5	+22 41.7	196	16.0 ¹⁰³	-24 51.1	50	0	5 07	5 33	5 55	17 06	51	4 39	52
13	15	19.4	41.9	210	45.2 ¹⁰²	-24 56.0	49	10 S	23	5 49	6 12	16 46	51	4 58	53
14	30	19.3	42.2	225	14.4 ¹⁰²	-25 00.7	47	20	39	6 06	30	25 49		5 19	54
15	45	19.2	42.4	239	43.6 ¹⁰²	05.3	46	30	5 54	24	6 50	16 01	48	42	56
16	60	19.1	42.7	254	12.7 ¹⁰¹	09.8	45	35	6 03	34	7 02	15 46	47	5 56	57
17	75	19.0	+22 42.9	268	41.9 ¹⁰²	-25 14.2	44	40	6 12	6 45	7 16	15 30	46	6 12	59
18	90	18.9	+22 43.2	283	11.0 ¹⁰¹	-25 18.5	43	45	6 21	6 58	7 32	15 10	45	6 31	61
19	105	18.7	43.4	297	40.1 ¹⁰¹	22.6	41	50	33	7 14	7 52	14 46	42	6 55	63
20	120	18.6	43.7	312	09.1 ¹⁰⁰	26.6	40	52	38	21	8 01	34 41		7 06	65
21	135	18.5	43.9	326	38.2 ¹⁰¹	30.4	38	54	43	29	12	21 39		19	67
22	150	18.4	44.2	341	07.2 ¹⁰⁰	34.2	38	56	49	37	24	14 05	38	35	68
23	165	18.3	44.4	355	36.2 ¹⁰⁰	37.8	36	58	6 55	47	38	13 47	35	7 53	71
24	180	18.2	+22 44.6	10	05.2 ¹⁰⁰	-25 41.3	35	60 S	7 02	7 58	8 54	13 24	31	8 15	75
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG 7 ^h 00 ^m 7			Mag: -4.4 PMG: 8 ^h 55 ^m			Mag: +1.2 PMG: 9 ^h 09 ^m			Mag: -2.5 PMG: 4 ^h 59 ^m			Mag: +0.9 PMG: 18 ^h 08 ^m		
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	254	32.4	226 07.8	+9 07.1	222 39.1	+11 55.6	285 09.4	-13 19.5	87 17.5	+7 45.6					
1	269	34.9	241 08.0	07.9	237 39.8	56.2	300 11.8	19.5	102 19.9	45.6					
2	284	37.4	256 08.1	08.6	252 40.5	56.8	315 14.2	19.5	117 22.3	45.6					
3	299	39.8	271 08.3	09.3	267 41.2	57.5	330 16.6	19.5	132 24.7	45.5					
4	314	42.3	286 08.4	10.1	282 41.9	58.1	345 19.0	19.5	147 27.1	45.5					
5	329	44.8	301 08.6	+9 10.8	297 42.5	+11 58.8	0 21.4	-13 19.4	162 29.5	+7 45.4					
6	344	47.2	316 08.7	+9 11.5	312 43.2	+11 59.4	15 23.8	-13 19.4	177 31.9	+7 45.4					
7	359	49.7	331 08.9	12.3	327 43.9	+12 00.1	30 26.2	19.4	192 34.2	45.4					
8	14	52.2	346 09.0	13.0	342 44.6	00.7	45 28.6	19.4	207 36.6	45.3					
9	29	54.6	1 09.1	13.8	357 45.3	01.4	60 30.9	19.4	222 39.0	45.3					
10	44	57.1	16 09.3	14.5	12 46.0	02.0	75 33.3	19.4	237 41.4	45.2					
11	59	59.6	31 09.4	+9 15.2	27 46.6	+12 02.7	90 35.7	-13 19.4	252 43.8	+7 45.2					
12	75	02.0	46 09.6	+9 16.0	42 47.3	+12 03.3	105 38.1	-13 19.3	267 46.2	+7 45.2					
13	90	04.5	61 09.7	16.7	57 48.0	03.9	120 40.5	19.3	282 48.6	45.1					
14	105	06.9	76 09.9	17.4	72 48.7	04.6	135 42.9	19.3	297 51.0	45.1					
15	120	09.4	91 10.0	18.2	87 49.4	05.2	150 45.3	19.3	312 53.3	45.0					
16	135	11.9	106 10.1	18.9	102 50.1	05.9	165 47.7	19.3	327 55.7	45.0					
17	150	14.3	121 10.3	+9 19.7	117 50.7	+12 06.5	180 50.1	-13 19.3	342 58.1	+7 45.0					
18	165	16.8	136 10.4	+9 20.4	132 51.4	+12 07.2	195 52.5	-13 19.3	358 00.5	+7 44.9					
19	180	19.3	151 10.6	21.1	147 52.1	07.8	210 54.9	19.3	13 02.9	44.9					
20	195	21.7	166 10.7	21.9	162 52.8	08.5	225 57.3	19.2	28 05.3	44.8					
21	210	24.2	181 10.8	22.6	177 53.5	09.1	240 59.7	19.2	43 07.6	44.8					
22	225	26.7	196 11.0	23.4	192 54.1	09.7	256 02.1	19.2	58 10.0	44.7					
23	240	29.1	211 11.1	24.1	207 54.8	10.4	271 04.5	19.2	73 12.4	44.7					
24	255	31.6	226 11.2	+9 24.8	222 55.5	+12 11.0	286 06.9	-13 19.2	88 14.8	+7 44.7					
Dif	—		+1	+7	+7	+6	+24	0	+24	0		+24			

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 9			Edad: 13 ^d 5 PHE { 4 ^h : 54/6 12 ^h : 54/5 20 ^h : 54/4 SD: 14 ^h 9 PMG: **h **m R°: **m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	180	18.2	+22 44.6	10	05.2	-25 41.3	33	60 N	21 17	22 51	** **	22 04 44	1 34 41	
1	195	18.0	44.9	24	34.1	99	44.6	58	20 58	22 09	** **	21 36 46	2 00 43	
2	210	17.9	45.1	39	03.1	100	47.8	56	42	21 42	** **	21 14 47	20 45	
3	225	17.8	45.4	53	32.0	99	50.9	54	28	21	22 57	20 56 48	37 46	
4	240	17.7	45.6	68	00.9	99	53.9	52	16	21 04	22 18	41 48	2 51 47	
5	255	17.6	+22 45.8	82	29.9	100	-25 56.7	50	20 06	20 50	21 53	20 28 48	3 04 47	
6	270	17.5	+22 46.1	96	58.8	99	-25 59.4	45	19 44	20 21	21 10	20 01 49	3 30 49	
7	285	17.4	46.3	111	27.6	98	-26 02.0	40	27	19 59	20 40	19 39 50	3 51 49	
8	300	17.2	46.6	125	56.5	99	04.4	35	19 12	42	18	22 50	4 08 50	
9	315	17.1	46.8	140	25.4	99	06.7	30	18 59	27	20 00	19 06 51	23 50	
10	330	17.0	47.0	154	54.3	99	08.9	20	38	19 03	19 32	18 40 51	4 48 51	
11	345	16.9	+22 47.3	169	23.1	98	-26 10.9	10 N	18 20	18 43	19 10	18 18 51	5 10 51	
12	0	16.8	+22 47.5	183	52.0	99	-26 12.9	0	18 03	18 25	18 51	17 57 52	5 31 51	
13	15	16.7	47.7	198	20.8	98	14.6	10 S	17 46	18 08	35	37 51	5 51 52	
14	30	16.5	48.0	212	49.7	99	16.3	20	28	17 51	19	17 14 52	6 13 52	
15	45	16.4	48.2	227	18.5	98	17.8	30	17 07	33	18 03	16 49 51	38 53	
16	60	16.3	48.4	241	47.4	99	19.2	35	16 55	23	17 55	33 52	6 53 53	
17	75	16.2	+22 48.7	256	16.2	98	-26 20.4	40	16 41	17 12	17 46	16 16 52	7 11 53	
18	90	16.1	+22 48.9	270	45.1	99	-26 21.6	45	16 25	16 59	17 36	15 55 52	7 32 53	
19	105	15.9	49.1	285	13.9	98	22.6	50	16 05	43	24	28 52	7 58 54	
20	120	15.8	49.4	299	42.8	99	23.4	8	52	15 56	36	15 52	8 11 54	
21	135	15.7	49.6	314	11.7	99	24.2	6	54	45	28	14	26 54	
22	150	15.6	49.8	328	40.5	98	24.8	8	56	33	19	08	8 43 52	
23	165	15.5	50.0	343	09.4	99	25.2	4	58	19	16 10	17 02	9 04 55	
24	180	15.4	+22 50.3	357	38.3	99	-26 25.6	4	60 S	15 02	15 59	16 55	9 30 56	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 6 ^h 56 ^m 8		Mag: -4.4 PMG: 8 ^h 55 ^m		Mag: +1.1 PMG: 9 ^h 08 ^m		Mag: -2.5 PMG: 4 ^h 55 ^m		Mag: +1.0 PMG: 18 ^h 04 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	255	31.6	226 11.2	+9 24.8	222 55.5	+12 11.0	286 06.9	-13 19.2	88 14.8	+7 44.7				
1	270	34.1	241 11.4	25.6	237 56.2	11.7	301 09.2	19.2	103 17.2	44.6				
2	285	36.5	256 11.5	26.3	252 56.9	12.3	316 11.6	19.2	118 19.6	44.6				
3	300	39.0	271 11.6	27.1	267 57.6	12.9	331 14.0	19.2	133 22.0	44.5				
4	315	41.4	286 11.8	27.8	282 58.2	13.6	346 16.4	19.1	148 24.3	44.5				
5	330	43.9	301 11.9	+9 28.5	297 58.9	+12 14.2	1 18.8	-13 19.1	163 26.7	+7 44.5				
6	345	46.4	316 12.0	+9 29.3	312 59.6	+12 14.9	16 21.2	-13 19.1	178 29.1	+7 44.4				
7	0	48.8	331 12.1	30.0	328 00.3	15.5	31 23.6	19.1	193 31.5	44.4				
8	15	51.3	346 12.3	30.8	343 01.0	16.1	46 26.0	19.1	208 33.9	44.3				
9	30	53.8	1 12.4	31.5	358 01.6	16.8	61 28.4	19.1	223 36.3	44.3				
10	45	56.2	16 12.5	32.2	13 02.3	17.4	76 30.8	19.1	238 38.6	44.2				
11	60	58.7	31 12.6	+9 33.0	28 03.0	+12 18.1	91 33.2	-13 19.1	253 41.0	+7 44.2				
12	76	01.2	46 12.8	+9 33.7	43 03.7	+12 18.7	106 35.6	-13 19.0	268 43.4	+7 44.2				
13	91	03.6	61 12.9	34.5	58 04.4	19.3	121 38.0	19.0	283 45.8	44.1				
14	106	06.1	76 13.0	35.2	73 05.0	20.0	136 40.4	19.0	298 48.2	44.1				
15	121	08.5	91 13.1	36.0	88 05.7	20.6	151 42.8	19.0	313 50.5	44.0				
16	136	11.0	106 13.3	36.7	103 06.4	21.3	166 45.2	19.0	328 52.9	44.0				
17	151	13.5	121 13.4	+9 37.4	118 07.1	+12 21.9	181 47.6	-13 19.0	343 55.3	+7 44.0				
18	166	15.9	136 13.5	+9 38.2	133 07.8	+12 22.5	196 50.0	-13 19.0	358 57.7	+7 43.9				
19	181	18.4	151 13.6	38.9	148 08.5	23.2	211 52.4	19.0	14 00.1	43.9				
20	196	20.9	166 13.7	39.7	163 09.1	23.8	226 54.8	19.0	29 02.5	43.8				
21	211	23.3	181 13.9	40.4	178 09.8	24.4	241 57.2	18.9	44 04.8	43.8				
22	226	25.8	196 14.0	41.2	193 10.5	25.1	256 59.6	18.9	59 07.2	43.7				
23	241	28.3	211 14.1	41.9	208 11.2	25.7	272 02.0	18.9	74 09.6	43.7				
24	256	30.7	226 14.2	+9 42.6	223 11.9	+12 26.4	287 04.5	-13 18.9	89 12.0	+7 43.7				
Dif	—		+1	+7	+7	+6	+24	0	+24					

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15/8 PMG: 11 ^h 59 ^m 1				Edad: 14 ^d 5 PHE SD: 14/8 PMG: 0 ^h 10 ^m R°: 51 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	180	15.4	+22	50.3	357	38.3	-26	25.6	2	60 N	** **	1 07	2 41	22 48	24	2 15	62	
1	195	15.2		50.5	12	07.2	99	25.8	0	58	** **	1 48	3 00		22 29	2 43	60	
2	210	15.1		50.7	26	36.1	99	25.8	0	56	** **	2 16	16	22 01	33	3 05	59	
3	225	15.0		50.9	41	05.0	99	25.8	0	54	1 01	37	30	21 44	35	23	58	
4	240	14.9		51.2	55	34.0	100	25.6	2	52	1 39	2 54	41		29 37	38	57	
5	255	14.8	+22	51.4	70	02.9	99	-26	3	50	2 05	3 08	3 52	21 16	38	3 51	57	
6	270	14.6	+22	51.6	84	31.9	100	-26	5	45	2 48	3 37	4 14	20 50	41	4 19	55	
7	285	14.5		51.8	99	00.9	100	24.2	6	40	3 17	3 59	31		29 43	40	55	
8	300	14.4		52.0	113	29.9	100	23.5	7	35	40	4 16	46	20 12	44	4 58	54	
9	315	14.3		52.3	127	58.9	100	22.7	8	30	3 58	31	4 58	19 57	45	5 13	54	
10	330	14.2		52.5	142	28.0	101	21.7	10	20	4 26	4 55	5 20		31 47	5 39	53	
11	345	14.0	+22	52.7	156	57.0	100	-26	11	10 N	4 48	5 15	5 38	19 09	49	6 01	52	
12	0	13.9	+22	52.9	171	26.1	101	-26	12	0	5 07	5 33	5 55	18 49	50	6 22	51	
13	15	13.8		53.1	185	55.2	101	18.1	13	10 S	23	5 50	6 12		28 52	6 43	50	
14	30	13.7		53.4	200	24.4	102	16.6	15	20	39	6 07	30	18 06	53	7 05	49	
15	45	13.6		53.6	214	53.5	101	15.0	16	30	5 55	25	6 51	17 40	55		31 48	
16	60	13.5		53.8	229	22.7	102	13.2	18	35	6 04	35	7 03		25 56	7 46	47	
17	75	13.3	+22	54.0	243	51.9	102	-26	18	40	6 13	6 47	7 17	17 08	57	8 04	46	
18	90	13.2	+22	54.2	258	21.2	103	-26	20	45	6 23	7 00	7 33	16 47	58	8 25	45	
19	105	13.1		54.4	272	50.5	103	07.3	21	50	34	15	7 53		20 61	8 52	43	
20	120	13.0		54.6	287	19.8	103	05.0	23	52	39	22	8 03	16 07	62	9 05	42	
21	135	12.8		54.9	301	49.1	103	02.6	24	54	44	30	14	15 52	64	20	41	
22	150	12.7		55.1	316	18.5	104	-26	24	56	50	39	26		35 65	37	40	
23	165	12.6		55.3	330	47.9	104	-25	27	58	6 57	7 49	40	15 14	67	9 59	37	
24	180	12.5	+22	55.5	345	17.3	104	-25	27	60 S	7 04	8 00	8 56	14 47	71	10 26	33	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 6 ^h 52 ^m 8		Mag: -4.4 PMG: 8 ^h 55 ^m		Mag: +1.1 PMG: 9 ^h 07 ^m		Mag: -2.6 PMG: 4 ^h 51 ^m		Mag: +1.0 PMG: 18 ^h 00 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	256	30.7	226	14.2	+9	42.6	223	11.9	+12	26.4
1	271	33.2	241	14.3		43.4	238	12.5		27.0
2	286	35.7	256	14.4		44.1	253	13.2		27.6
3	301	38.1	271	14.6		44.9	268	13.9		28.3
4	316	40.6	286	14.7		45.6	283	14.6		28.9
5	331	43.0	301	14.8	+9	46.4	298	15.3	+12	29.5
6	346	45.5	316	14.9	+9	47.1	313	15.9	+12	30.2
7	1	48.0	331	15.0		47.9	328	16.6		30.8
8	16	50.4	346	15.1		48.6	343	17.3		31.4
9	31	52.9	1	15.2		49.3	358	18.0		32.1
10	46	55.4	16	15.3		50.1	13	18.7		32.7
11	61	57.8	31	15.4	+9	50.8	28	19.3	+12	33.3
12	77	00.3	46	15.5	+9	51.6	43	20.0	+12	34.0
13	92	02.8	61	15.6		52.3	58	20.7		34.6
14	107	05.2	76	15.8		53.1	73	21.4		35.2
15	122	07.7	91	15.9		53.8	88	22.1		35.9
16	137	10.2	106	16.0		54.6	103	22.7		36.5
17	152	12.6	121	16.1	+9	55.3	118	23.4	+12	37.1
18	167	15.1	136	16.2	+9	56.1	133	24.1	+12	37.8
19	182	17.5	151	16.3		56.8	148	24.8		38.4
20	197	20.0	166	16.4		57.6	163	25.5		39.0
21	212	22.5	181	16.5		58.3	178	26.1		39.7
22	227	24.9	196	16.6		59.0	193	26.8		40.3
23	242	27.4	211	16.7	+9	59.8	208	27.5		40.9
24	257	29.9	226	16.8	+10	00.5	223	28.2	+12	41.6
Dif	—		+1		+7		+7		+6	

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8			Edad: 15 ^d 5	PHE { 4 ^h : 54 ^m /2 12 ^h : 54 ^m /1 20 ^h : 54 ^m /1	PMG: 1 ^h 01 ^m			R°: 50 ^m						
	hG ☉	Dec				hG ☾				Dif	Dec	Dif	Civil	Náutico	Hora
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	m	h m	m
0	180	12.5	+22	55.5	345	17.3	-25	54.8	60 N	21 20	22 56	** **	23 12 13	3 17 79	
1	195	12.4		55.7	359	46.8 ¹⁰⁵		51.9	58	21 00	22 13	** **	22 51 18	3 43 74	
2	210	12.2		55.9	14	16.3 ¹⁰⁵		48.9	56	20 44	21 45	** **	34 22	4 04 70	
3	225	12.1		56.1	28	45.9 ¹⁰⁶		45.8	54	30	23	23 02	19 25	21 67	
4	240	12.0		56.3	43	15.5 ¹⁰⁶		42.6	52	18	21 06	22 21	22 06 27	35 66	
5	255	11.9	+22	56.5	57	45.1 ¹⁰⁶	-25	39.2	50	20 07	20 51	21 55	21 54 30	4 48 64	
6	270	11.8	+22	56.7	72	14.8 ¹⁰⁷	-25	35.7	45	19 45	20 23	21 12	21 31 33	5 14 61	
7	285	11.6		56.9	86	44.5 ¹⁰⁷		32.1	40	28	20 00	20 42	21 12 36	35 58	
8	300	11.5		57.1	101	14.2 ¹⁰⁷		28.4	35	13	19 43	19	20 56 38	5 52 57	
9	315	11.4		57.3	115	44.0 ¹⁰⁸		24.6	30	19 00	28	20 01	42 40	6 07 55	
10	330	11.3		57.5	130	13.9 ¹⁰⁹		20.6	20	18 39	19 03	19 32	20 18 43	32 53	
11	345	11.1	+22	57.7	144	43.8 ¹⁰⁹	-25	16.5	10 N	18 20	18 43	19 10	19 58 45	6 53 51	
12	0	11.0	+22	57.9	159	13.7 ¹⁰⁹	-25	12.3	0	18 03	18 25	18 52	19 39 48	7 13 49	
13	15	10.9		58.1	173	43.7 ¹¹⁰		08.0	10 S	17 46	18 09	35	19 20 50	33 47	
14	30	10.8		58.3	188	13.7 ¹¹⁰	-25	03.6	20	28	17 52	19	18 59 53	7 54 45	
15	45	10.7		58.5	202	43.7 ¹¹⁰	-24	59.0	30	17 07	33	18 03	35 56	8 19 43	
16	60	10.5		58.7	217	13.9 ¹¹²		54.4	35	16 55	23	17 54	21 58	33 42	
17	75	10.4	+22	58.9	231	44.0 ¹¹¹	-24	49.6	40	16 41	17 11	17 45	18 05 60	8 50 39	
18	90	10.3	+22	59.1	246	14.2 ¹¹²	-24	44.7	45	16 25	16 58	17 35	17 45 63	9 10 37	
19	105	10.2		59.3	260	44.5 ¹¹³		39.7	50	16 04	43	24	21 66	35 34	
20	120	10.0		59.5	275	14.8 ¹¹³		34.5	52	15 55	35	19	17 09 68	9 47 32	
21	135	09.9		59.7	289	45.2 ¹¹⁴		29.3	54	44	27	13	16 56 70	10 01 30	
22	150	09.8	+22	59.9	304	15.6 ¹¹⁴		23.9	56	32	19	07	40 73	17 27	
23	165	09.7	+23	00.1	318	46.1 ¹¹⁵		18.5	58	18	16 09	17 01	16 21 77	36 23	
24	180	09.6	+23	00.3	333	16.6 ¹¹⁵	-24	12.9	60 S	15 01	15 57	16 54	15 58 82	10 59 19	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG		Mag: -4.4		Mag: +1.1		Mag: -2.6		Mag: +1.0	
	6 ^h 48 ^m 9		PMG: 8 ^h 55 ^m		PMG: 9 ^h 06 ^m		PMG: 4 ^h 47 ^m		PMG: 17 ^h 57 ^m	
h	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	257	29.9	226	16.8	+10	00.5	223	28.2	+12	41.6
1	272	32.3	241	16.9		01.3	238	28.9		42.2
2	287	34.8	256	17.0		02.0	253	29.5		42.8
3	302	37.3	271	17.1		02.8	268	30.2		43.4
4	317	39.7	286	17.2		03.5	283	30.9		44.1
5	332	42.2	301	17.3	+10	04.3	298	31.6	+12	44.7
6	347	44.7	316	17.3	+10	05.0	313	32.2	+12	45.3
7	2	47.1	331	17.4		05.8	328	32.9		46.0
8	17	49.6	346	17.5		06.5	343	33.6		46.6
9	32	52.0	1	17.6		07.3	358	34.3		47.2
10	47	54.5	16	17.7		08.0	13	35.0		47.8
11	62	57.0	31	17.8	+10	08.8	28	35.6	+12	48.5
12	77	59.4	46	17.9	+10	09.5	43	36.3	+12	49.1
13	93	01.9	61	18.0		10.3	58	37.0		49.7
14	108	04.4	76	18.1		11.0	73	37.7		50.4
15	123	06.8	91	18.2		11.8	88	38.4		51.0
16	138	09.3	106	18.2		12.5	103	39.0		51.6
17	153	11.8	121	18.3	+10	13.3	118	39.7	+12	52.2
18	168	14.2	136	18.4	+10	14.0	133	40.4	+12	52.9
19	183	16.7	151	18.5		14.8	148	41.1		53.5
20	198	19.2	166	18.6		15.5	163	41.7		54.1
21	213	21.6	181	18.7		16.3	178	42.4		54.7
22	228	24.1	196	18.8		17.0	193	43.1		55.4
23	243	26.5	211	18.8		17.8	208	43.8		56.0
24	258	29.0	226	18.9	+10	18.5	223	44.5	+12	56.6
Dif	—		+1		+7		+7		+6	
									+24	
									0	
									+24	
									0	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15/8 PMG: 11 ^h 59 ^m 5			Edad: 16 ^d 5 PHE { 4 ^h : 54/1 12 ^h : 54/0 20 ^h : 54/0 SD: 14/7 PMG: 1 ^h 51 ^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	180	09.6	+23	00.3	333	16.6	-24	12.9	60 N	** *	1 02	2 39	23 25	8	4 36	84	
1	195	09.4		00.5	347	47.2 ¹¹⁶		07.2 ⁵⁷	58	** *	1 46	2 59	23 09	12	4 57	79	
2	210	09.3		00.7	2	17.8 ¹¹⁶	-24	01.4	58	** *	2 14	3 15	22 56	15	5 14	75	
3	225	09.2		00.9	16	48.5 ¹¹⁷	-23	55.5	54	0 57	35	29	44	18	28	73	
4	240	09.1		01.1	31	19.2 ¹¹⁷		49.5 ⁶⁰	52	1 37	2 52	41	33	21	41	70	
5	255	08.9	+23	01.3	45	50.0 ¹¹⁸	-23	43.4	50	2 03	3 07	3 51	22 24	23	5 52	68	
6	270	08.8	+23	01.4	60	20.8 ¹¹⁸	-23	37.2	45	2 47	3 36	4 13	22 04	27	6 15	63	
7	285	08.7		01.6	74	51.7 ¹¹⁹		30.9 ⁶³	40	3 17	3 58	31	21 48	30	33	61	
8	300	08.6		01.8	89	22.7 ¹²⁰		24.4 ⁶⁵	35	39	4 16	46	34	33	6 49	58	
9	315	08.4		02.0	103	53.7 ¹²⁰		17.9 ⁶⁵	30	3 58	31	4 58	22	35	7 02	56	
10	330	08.3		02.2	118	24.7 ¹²⁰		11.3 ⁶⁶	20	4 26	4 55	5 20	21 01	40	25	52	
11	345	08.2	+23	02.4	132	55.9 ¹²²	-23	04.5	10 N	4 49	5 16	5 39	20 43	43	7 44	50	
12	0	08.1	+23	02.6	147	27.0 ¹²¹	-22	57.7	0	5 07	5 33	5 56	20 27	45	8 02	47	
13	15	07.9		02.7	161	58.3 ¹²³		50.7 ⁷⁰	10 S	24	5 50	6 13	20 10	48	20	44	
14	30	07.8		02.9	176	29.5 ¹²²		43.7 ⁷⁰	20	40	6 07	31	19 52	52	8 39	42	
15	45	07.7		03.1	191	00.9 ¹²⁴		36.5 ⁷²	30	5 56	26	6 52	31	56	9 02	37	
16	60	07.6		03.3	205	32.3 ¹²⁴		29.3 ⁷²	35	6 04	36	7 04	19	58	15	35	
17	75	07.4	+23	03.5	220	03.8 ¹²⁵	-22	21.9	40	6 14	6 48	7 18	19 05	60	9 29	33	
18	90	07.3	+23	03.7	234	35.3 ¹²⁵	-22	14.5	45	6 24	7 01	7 34	18 48	64	9 47	30	
19	105	07.2		03.8	249	06.8 ¹²⁵	-22	06.9	50	35	16	7 55	27	68	10 09	25	
20	120	07.1		04.0	263	38.5 ¹²⁷	-21	59.3	52	40	24	8 04	17	71	19	24	
21	135	06.9		04.2	278	10.2 ¹²⁷		51.5 ⁷⁸	54	46	32	15	18 06	73	31	21	
22	150	06.8		04.4	292	41.9 ¹²⁷		43.7 ⁷⁸	56	52	41	27	17 53	76	44	18	
23	165	06.7		04.5	307	13.7 ¹²⁸		35.8 ⁷⁹	58	6 58	7 51	42	38	80	10 59	15	
24	180	06.6	+23	04.7	321	45.6 ¹²⁹	-21	27.8	60 S	7 06	8 02	8 59	17 20	85	11 18	10	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 6 ^h 45 ^m 0		Mag: -4.4 PMG: 8 ^h 55 ^m		Mag: +1.1 PMG: 9 ^h 05 ^m		Mag: -2.6 PMG: 4 ^h 43 ^m		Mag: +1.0 PMG: 17 ^h 53 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	258	29.0	226	18.9	+10	18.5	223	44.5	+12	56.6
1	273	31.5	241	19.0		19.3	238	45.1		57.2
2	288	33.9	256	19.1		20.0	253	45.8		57.9
3	303	36.4	271	19.2		20.8	268	46.5		58.5
4	318	38.9	286	19.2		21.5	283	47.2		59.1
5	333	41.3	301	19.3	+10	22.3	298	47.8	+12	59.7
6	348	43.8	316	19.4	+10	23.0	313	48.5	+13	00.4
7	3	46.3	331	19.5		23.8	328	49.2		01.0
8	18	48.7	346	19.5		24.5	343	49.9		01.6
9	33	51.2	1	19.6		25.3	358	50.6		02.2
10	48	53.7	16	19.7		26.0	13	51.2		02.9
11	63	56.1	31	19.8	+10	26.8	28	51.9	+13	03.5
12	78	58.6	46	19.8	+10	27.5	43	52.6	+13	04.1
13	94	01.0	61	19.9		28.3	58	53.3		04.7
14	109	03.5	76	20.0		29.0	73	53.9		05.3
15	124	06.0	91	20.0		29.8	88	54.6		06.0
16	139	08.4	106	20.1		30.5	103	55.3		06.6
17	154	10.9	121	20.2	+10	31.3	118	56.0	+13	07.2
18	169	13.4	136	20.3	+10	32.0	133	56.7	+13	07.8
19	184	15.8	151	20.3		32.8	148	57.3		08.5
20	199	18.3	166	20.4		33.6	163	58.0		09.1
21	214	20.8	181	20.5		34.3	178	58.7		09.7
22	229	23.2	196	20.5		35.1	193	59.4		10.3
23	244	25.7	211	20.6		35.8	209	00.0		10.9
24	259	28.1	226	20.6	+10	36.6	224	00.7	+13	11.5
Dif	—		+1	+8		+7	+6	+24		0
									+24	

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8			Edad: 17 ^d 5 PHE { 4 ^h : 54 ^m 1 12 ^h : 54 ^m 1 20 ^h : 54 ^m 1											
	PMG: 11 ^h 59 ^m 7			SD: 14 ^h 7 PMG: 2 ^h 38 ^m R°: 45 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	h m	m
0	180	06.6	+23 04.7	321	45.6	-21 27.8	81	60 N	21 22	23 01	** **	23 33	5	6 00	85
1	195	06.4	04.9	336	17.5 ¹²⁹	19.7	81	58	21 02	22 16	** **	21 9		16	80
2	210	06.3	05.1	350	49.4 ¹²⁹	11.5	82	56	20 45	21 47	** **	11 12		29	77
3	225	06.2	05.2	5	21.5 ¹³¹	-21 03.2	83	54	32	25	23 06	23 02 14		41	77
4	240	06.1	05.4	19	53.6 ¹³¹	-20 54.8	84	52	19	21 08	22 24	22 54 16		6 51	71
5	255	05.9	+23 05.6	34	25.7 ¹³¹	-20 46.3	85	50	20 09	20 53	21 57	22 47 18		7 00	68
6	270	05.8	+23 05.8	48	57.9 ¹³²	-20 37.7	86	45	19 47	20 24	21 13	22 31 23		7 18	65
7	285	05.7	05.9	63	30.2 ¹³³	29.1	86	40	29	20 02	20 43	18 26		34	61
8	300	05.5	06.1	78	02.5 ¹³³	20.3	88	35	14	19 44	20	22 07 29		47	58
9	315	05.4	06.3	92	34.8 ¹³³	11.5	88	30	19 01	29	20 02	21 57 32		7 58	55
10	330	05.3	06.4	107	07.3 ¹³⁵	-20 02.6	89	20	18 39	19 04	19 33	41 36		8 17	51
11	345	05.2	+23 06.6	121	39.7 ¹³⁴	-19 53.6	90	10 N	18 21	18 44	19 11	21 26 40		8 34	47
12	0	05.0	+23 06.8	136	12.3 ¹³⁶	-19 44.5	91	0	18 03	18 26	18 52	21 12 44		8 49	44
13	15	04.9	06.9	150	44.9 ¹³⁶	35.4	91	10 S	17 46	18 09	35	20 58 47		9 04	41
14	30	04.8	07.1	165	17.5 ¹³⁶	26.1	93	20	28	17 52	19	44 50		21	37
15	45	04.7	07.3	179	50.2 ¹³⁷	16.8	93	30	17 07	33	18 03	27 55		39	34
16	60	04.5	07.4	194	23.0 ¹³⁸	-19 07.4	94	35	16 55	23	17 54	17 57		9 50	31
17	75	04.4	+23 07.6	208	55.8 ¹³⁸	-18 57.9	95	40	16 41	17 11	17 45	20 05 61		10 02	29
18	90	04.3	+23 07.8	223	28.6 ¹³⁸	-18 48.3	96	45	16 24	16 58	17 35	19 52 64		10 17	25
19	105	04.2	07.9	238	01.5 ¹³⁹	38.7	96	50	16 04	42	24	35 69		34	21
20	120	04.0	08.1	252	34.5 ¹⁴⁰	29.0	97	52	15 54	35	18	28 71		43	18
21	135	03.9	08.3	267	07.5 ¹⁴⁰	19.1	99	54	43	27	13	19 74		10 52	16
22	150	03.8	08.4	281	40.6 ¹⁴¹	-18 09.3	98	56	31	18	07	19 09 77		11 02	14
23	165	03.6	08.6	296	13.7 ¹⁴¹	-17 59.3 ¹⁰⁰	100	58	15 16	16 08	17 00	18 58 80		14	10
24	180	03.5	+23 08.7	310	46.9 ¹⁴²	-17 49.3 ¹⁰⁰	100	60 S	14 59	15 56	16 53	18 45 84		11 28	6

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 6 ^h 41 ^m 0		Mag: -4.4 PMG: 8 ^h 55 ^m		Mag: +1.1 PMG: 9 ^h 04 ^m		Mag: -2.6 PMG: 4 ^h 39 ^m		Mag: +1.0 PMG: 17 ^h 49 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	259	28.1	226 20.6	+10 36.6	224 00.7	+13 11.5	289 58.4	-13 18.5	92 03.0	+7 40.4
1	274	30.6	241 20.7	37.3	239 01.4	12.2	305 00.8	18.5	107 05.3	40.4
2	289	33.1	256 20.8	38.1	254 02.1	12.8	320 03.2	18.5	122 07.7	40.3
3	304	35.5	271 20.8	38.8	269 02.7	13.4	335 05.6	18.5	137 10.1	40.3
4	319	38.0	286 20.9	39.6	284 03.4	14.0	350 08.1	18.5	152 12.4	40.2
5	334	40.5	301 21.0	+10 40.3	299 04.1	+13 14.6	5 10.5	-13 18.5	167 14.8	+7 40.2
6	349	42.9	316 21.0	+10 41.1	314 04.8	+13 15.3	20 12.9	-13 18.5	182 17.2	+7 40.1
7	4 45.4	331 21.1	41.8	329 05.4	15.9	35 15.4	18.5	197 19.6	40.1	
8	19 47.9	346 21.1	42.6	344 06.1	16.5	50 17.8	18.5	212 21.9	40.0	
9	34 50.3	1 21.2	43.3	359 06.8	17.1	65 20.2	18.5	227 24.3	40.0	
10	49 52.8	16 21.2	44.1	14 07.5	17.7	80 22.6	18.5	242 26.7	39.9	
11	64 55.3	31 21.3	+10 44.8	29 08.2	+13 18.3	95 25.1	-13 18.5	257 29.0	+7 39.9	
12	79 57.7	46 21.4	+10 45.6	44 08.8	+13 19.0	110 27.5	-13 18.5	272 31.4	+7 39.8	
13	95 00.2	61 21.4	46.4	59 09.5	19.6	125 29.9	18.5	287 33.8	39.8	
14	110 02.6	76 21.5	47.1	74 10.2	20.2	140 32.4	18.5	302 36.1	39.7	
15	125 05.1	91 21.5	47.9	89 10.9	20.8	155 34.8	18.5	317 38.5	39.7	
16	140 07.6	106 21.6	48.6	104 11.5	21.4	170 37.2	18.5	332 40.9	39.7	
17	155 10.0	121 21.6	+10 49.4	119 12.2	+13 22.0	185 39.7	-13 18.5	347 43.2	+7 39.6	
18	170 12.5	136 21.7	+10 50.1	134 12.9	+13 22.7	200 42.1	-13 18.5	2 45.6	+7 39.6	
19	185 15.0	151 21.7	50.9	149 13.6	23.3	215 44.5	18.5	17 48.0	39.5	
20	200 17.4	166 21.8	51.6	164 14.2	23.9	230 47.0	18.5	32 50.3	39.5	
21	215 19.9	181 21.8	52.4	179 14.9	24.5	245 49.4	18.5	47 52.7	39.4	
22	230 22.4	196 21.9	53.1	194 15.6	25.1	260 51.8	18.5	62 55.1	39.4	
23	245 24.8	211 21.9	53.9	209 16.3	25.7	275 54.3	18.5	77 57.4	39.3	
24	260 27.3	226 22.0	+10 54.7	224 16.9	+13 26.3	290 56.7	-13 18.5	92 59.8	+7 39.3	
Dif	—	+1	+8	+7	+6	+24	0	+24		

UT	SOL				LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 15/8 PMG: 11 ^h 59 ^m 9				Edad: 18 ^d 5 PHE { 4 ^h : 54/2 12 ^h : 54/2 20 ^h : 54/3 PMG: 3 ^h 23 ^m R°: 43 ^m																
	hG ☉		Dec		hG ☾		Dif		Dec			Dif			Náutico	Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m
0	180	03.5	+23	08.7	310	46.9	-17	49.3	101	58	60 N	** **	0 58	2 38	23 38	3	7 25	84			
1	195	03.4		08.9	325	20.1 ¹⁴²		39.2	102	58	58	** **	1 44	2 57	30 6	36	80				
2	210	03.3		09.1	339	53.4 ¹⁴³		29.0	103	56	56	** **	2 12	3 14	23 9	46	76				
3	225	03.1		09.2	354	26.7 ¹⁴³		18.7	103	54	54	0 53	34	28	16 12	7 54	74				
4	240	03.0		09.4	9	00.1 ¹⁴⁴	-17	08.4	103	52	52	1 35	2 52	40	10 14	8 02	71				
5	255	02.9	+23	09.5	23	33.5 ¹⁴⁴	-16	58.0	104	50	50	2 02	3 06	3 51	23 05	16	8 08	69			
6	270	02.7	+23	09.7	38	07.0 ¹⁴⁵	-16	47.5	105	45	45	2 46	3 36	4 13	22 54	20	8 23	64			
7	285	02.6		09.8	52	40.5 ¹⁴⁵		37.0	105	40	40	3 16	3 58	31	44 24	35	60				
8	300	02.5		10.0	67	14.0 ¹⁴⁵		26.4	106	35	35	39	4 16	45	36 27	45	57				
9	315	02.4		10.1	81	47.6 ¹⁴⁶		15.7	107	30	30	3 58	31	4 58	29 30	8 53	55				
10	330	02.2		10.3	96	21.3 ¹⁴⁷	-16	05.0	107	20	20	4 26	4 56	5 20	17 34	9 08	51				
11	345	02.1	+23	10.4	110	55.0 ¹⁴⁷	-15	54.2	108	10 N	10 N	4 49	5 16	5 39	22 06	38	9 21	47			
12	0	02.0	+23	10.6	125	28.7 ¹⁴⁷	-15	43.3	109	0	0	5 08	5 34	5 56	21 56	42	9 33	43			
13	15	01.8		10.7	140	02.5 ¹⁴⁸		32.3	110	10 S	10 S	24	5 51	6 13	45 46	45	39				
14	30	01.7		10.9	154	36.3 ¹⁴⁸		21.3	110	20	20	40	6 08	32	34 50	9 58	35				
15	45	01.6		11.0	169	10.2 ¹⁴⁹	-15	10.3	110	30	30	5 57	26	6 53	22 54	10 13	30				
16	60	01.5		11.2	183	44.1 ¹⁴⁹	-14	59.1	112	35	35	6 05	37	7 05	14 58	21	28				
17	75	01.3	+23	11.3	198	18.1 ¹⁵⁰	-14	47.9	112	40	40	6 14	6 48	7 19	21 06	60	10 31	25			
18	90	01.2	+23	11.5	212	52.0 ¹⁴⁹	-14	36.7	112	45	45	6 25	7 02	7 36	20 56	64	10 42	21			
19	105	01.1		11.6	227	26.1 ¹⁵¹		25.3	114	50	50	36	18	7 56	44 69	10 55	17				
20	120	00.9		11.8	242	00.1 ¹⁵⁰		14.0	113	52	52	41	25	8 06	39 71	11 01	15				
21	135	00.8		11.9	256	34.2 ¹⁵¹	-14	02.5	115	54	54	47	33	17	33 73	08	13				
22	150	00.7		12.1	271	08.4 ¹⁵²	-13	51.0	115	56	56	6 53	42	29	26 76	16	10				
23	165	00.5		12.2	285	42.6 ¹⁵²		39.5	115	58	58	7 00	7 52	8 44	18 79	24	7				
24	180	00.4	+23	12.3	300	16.8 ¹⁵²	-13	27.8	117	60 S	60 S	7 07	8 03	9 01	20 09	83	11 34	4			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO						
	PMG: 6 ^h 37 ^m 1		Mag: -4.4 PMG: 8 ^h 55 ^m				Mag: +1.1 PMG: 9 ^h 02 ^m				Mag: -2.6 PMG: 4 ^h 35 ^m				Mag: +1.0 PMG: 17 ^h 45 ^m						
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	260	27.3	226	22.0	+10	54.7	224	16.9	+13	26.3	290	56.7	-13	18.5	92	59.8	+7	39.3			
1	275	29.8	241	22.0		55.4	239	17.6		27.0	305	59.1		18.5	108	02.2		39.2			
2	290	32.2	256	22.1		56.2	254	18.3		27.6	321	01.6		18.5	123	04.5		39.2			
3	305	34.7	271	22.1		56.9	269	19.0		28.2	336	04.0		18.5	138	06.9		39.1			
4	320	37.1	286	22.1		57.7	284	19.6		28.8	351	06.4		18.5	153	09.3		39.1			
5	335	39.6	301	22.2	+10	58.4	299	20.3	+13	29.4	6	08.9	-13	18.5	168	11.6	+7	39.0			
6	350	42.1	316	22.2	+10	59.2	314	21.0	+13	30.0	21	11.3	-13	18.5	183	14.0	+7	39.0			
7	5	44.5	331	22.3	+10	59.9	329	21.7		30.6	36	13.7		18.5	198	16.3		38.9			
8	20	47.0	346	22.3	+11	00.7	344	22.3		31.2	51	16.2		18.5	213	18.7		38.9			
9	35	49.5	1	22.4		01.4	359	23.0		31.9	66	18.6		18.5	228	21.1		38.8			
10	50	51.9	16	22.4		02.2	14	23.7		32.5	81	21.1		18.5	243	23.4		38.8			
11	65	54.4	31	22.4	+11	03.0	29	24.4	+13	33.1	96	23.5	-13	18.5	258	25.8	+7	38.7			
12	80	56.9	46	22.5	+11	03.7	44	25.0	+13	33.7	111	25.9	-13	18.5	273	28.2	+7	38.7			
13	95	59.3	61	22.5		04.5	59	25.7		34.3	126	28.4		18.5	288	30.5		38.6			
14	111	01.8	76	22.6		05.2	74	26.4		34.9	141	30.8		18.5	303	32.9		38.6			
15	126	04.3	91	22.6		06.0	89	27.1		35.5	156	33.2		18.5	318	35.3		38.5			
16	141	06.7	106	22.6		06.7	104	27.7		36.1	171	35.7		18.5	333	37.6		38.5			
17	156	09.2	121	22.7	+11	07.5	119	28.4	+13	36.7	186	38.1	-13	18.5	348	40.0	+7	38.4			
18	171	11.6	136	22.7	+11	08.2	134	29.1	+13	37.3	201	40.6	-13	18.5	3	42.3	+7	38.4			
19	186	14.1	151	22.7		09.0	149	29.8		38.0	216	43.0		18.6	18	44.7		38.3			
20	201	16.6	166	22.8		09.7	164	30.4		38.6	231	45.4		18.6	33	47.1		38.3			
21	216	19.0	181	22.8		10.5	179	31.1		39.2	246	47.9		18.6	48	49.4		38.2			
22	231	21.5	196	22.8		11.3	194	31.8		39.8	261	50.3		18.6	63	51.8		38.2			
23	246	24.0	211	22.9		12.0	209	32.4		40.4	276	52.8		18.6	78	54.2		38.1			
24	261	26.4	226	22.9	+11	12.8	224	33.1	+13	41.0	291	55.2	-13	18.6	93	56.5	+7	38.1			
Dif	—		0 +8				+7 +6				+24 0				+24 0						

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 : 54/4 12 ^h : 54/5 20 ^h : 54/7	Final del crepúsculo			Salida de Luna		Puesta de Luna			
	PMG: 12 ^h 00 ^m 1					Civil			Náutico		Hora R°		Hora R°	
	hG ☉	Dec		hG ☾	Dif	Dec	Dif							
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	h m
0	180	00.4	+23 12.3	300	16.8	-13 27.8		60 N	21 24	23 06	** **	23 41	2	8 49 82
1	195	00.3		314	51.0 ¹⁵²	16.2 ¹¹⁶		58	21 04	22 18	** **	36 5		8 56 79
2	210	00.2		329	25.3 ¹⁵³	-13 04.4 ¹¹⁸		56	20 47	21 49	** **	32 8		9 02 76
3	225	00.0		343	59.6 ¹⁵³	-12 52.6 ¹¹⁸		54	33	27	23 10	28 10		08 73
4	239	59.9		358	34.0 ¹⁵⁴	40.8 ¹¹⁸		52	21	21 09	22 26	24 13		13 71
5	254	59.8	+23 13.0	13	08.4 ¹⁵⁴	-12 28.9 ¹¹⁹		50	20 10	20 54	21 59	23 21	15	9 17 69
6	269	59.6	+23 13.2	27	42.8 ¹⁵⁴	-12 17.0 ¹¹⁹		45	19 48	20 25	21 14	23 14	19	9 27 64
7	284	59.5		42	17.2 ¹⁵⁴	-12 05.0 ¹²⁰		40	30	20 03	20 44	08 23		35 61
8	299	59.4		56	51.7 ¹⁵⁵	-11 52.9 ¹²¹		35	15	19 44	21	23 03	26	42 57
9	314	59.2		71	26.2 ¹⁵⁵	40.8 ¹²¹		30	19 02	29	20 03	22 59	28	48 55
10	329	59.1		86	00.7 ¹⁵⁵	28.6 ¹²²		20	18 40	19 05	19 34	51 33		9 59 49
11	344	59.0	+23 13.9	100	35.3 ¹⁵⁶	-11 16.4 ¹²²		10 N	18 21	18 44	19 11	22 44	37	10 08 45
12	359	58.9	+23 14.0	115	09.9 ¹⁵⁶	-11 04.2 ¹²²		0	18 04	18 26	18 52	22 38	41	10 16 42
13	14	58.7		129	44.5 ¹⁵⁶	-10 51.9 ¹²³		10 S	17 46	18 09	36	31 46		24 38
14	29	58.6		144	19.1 ¹⁵⁶	39.5 ¹²⁴		20	28	17 52	20	24 50		33 34
15	44	58.5		158	53.7 ¹⁵⁶	27.1 ¹²⁴		30	17 07	33	18 03	16 55		43 29
16	59	58.3		173	28.4 ¹⁵⁷	14.6 ¹²⁵		35	16 55	23	17 55	12 57		49 26
17	74	58.2	+23 14.6	188	03.1 ¹⁵⁷	-10 02.1 ¹²⁵		40	16 41	17 11	17 45	22 06	61	10 56 23
18	89	58.1	+23 14.8	202	37.8 ¹⁵⁷	-9 49.6 ¹²⁵		45	16 24	16 58	17 35	22 00	65	11 03 20
19	104	57.9		217	12.6 ¹⁵⁸	37.0 ¹²⁶		50	16 03	42	23	21 53	69	12 15
20	119	57.8		231	47.3 ¹⁵⁷	24.4 ¹²⁶		52	15 54	35	18	50 71		16 13
21	134	57.7		246	22.1 ¹⁵⁸	-9 11.7 ¹²⁷		54	43	26	13	46 74		21 11
22	149	57.5		260	56.9 ¹⁵⁸	-8 59.0 ¹²⁷		56	30	17	06	42 76		26 8
23	164	57.4		275	31.7 ¹⁵⁸	46.2 ¹²⁸		58	15 16	16 07	17 00	37 79		31 6
24	179	57.3	+23 15.5	290	06.5 ¹⁵⁸	-8 33.4 ¹²⁸		60 S	14 58	15 56	16 52	21 32	82	11 38 2
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 6 ^h 33 ^m 2		Mag: -4.4 PMG: 8 ^h 54 ^m		Mag: +1.1 PMG: 9 ^h 01 ^m		Mag: -2.6 PMG: 4 ^h 32 ^m		Mag: +1.0 PMG: 17 ^h 41 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	261	26.4	226	22.9	224	33.1	291	55.2	93	56.5				
1	276	28.9	241	22.9	239	33.8	306	57.7	108	58.9				
2	291	31.4	256	22.9	254	34.5	322	00.1	124	01.2				
3	306	33.8	271	23.0	269	35.1	337	02.5	139	03.6				
4	321	36.3	286	23.0	284	35.8	352	05.0	154	06.0				
5	336	38.7	301	23.0	299	36.5	7	07.4	169	08.3				
6	351	41.2	316	23.1	314	37.2	22	09.9	184	10.7				
7	6	43.7	331	23.1	329	37.8	37	12.3	199	13.1				
8	21	46.1	346	23.1	344	38.5	52	14.8	214	15.4				
9	36	48.6	1	23.1	359	39.2	67	17.2	229	17.8				
10	51	51.1	16	23.1	14	39.9	82	19.6	244	20.1				
11	66	53.5	31	23.2	29	40.5	97	22.1	259	22.5				
12	81	56.0	46	23.2	44	41.2	112	24.5	274	24.9				
13	96	58.5	61	23.2	59	41.9	127	27.0	289	27.2				
14	112	00.9	76	23.2	74	42.5	142	29.4	304	29.6				
15	127	03.4	91	23.3	89	43.2	157	31.9	319	31.9				
16	142	05.9	106	23.3	104	43.9	172	34.3	334	34.3				
17	157	08.3	121	23.3	119	44.6	187	36.8	349	36.7				
18	172	10.8	136	23.3	134	45.2	202	39.2	4	39.0				
19	187	13.2	151	23.3	149	45.9	217	41.7	19	41.4				
20	202	15.7	166	23.3	164	46.6	232	44.1	34	43.7				
21	217	18.2	181	23.4	179	47.3	247	46.6	49	46.1				
22	232	20.6	196	23.4	194	47.9	262	49.0	64	48.5				
23	247	23.1	211	23.4	209	48.6	277	51.5	79	50.8				
24	262	25.6	226	23.4	224	49.3	292	53.9	94	53.2				
Dif	—		0	+8	+7	+6	+24	0	+24	-1				

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15'7 PMG: 12 ^h 00 ^m 3			Edad: 20 ^d 5 PHE SD: 14'9 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	57.3	+23	15.5	290	06.5	-8 33.4	60 N	** **	0 54	2 37	23 43	2	10 11	83	
1	194	57.1		15.7	304	41.3 ¹⁵⁸	20.6 ¹²⁸	58	** **	1 42	2 57	41 6		15 80		
2	209	57.0		15.8	319	16.2 ¹⁵⁹	-8 07.7 ¹²⁹	56	** **	2 11	3 13	40 8		18 77		
3	224	56.9		15.9	333	51.0 ¹⁵⁸	-7 54.8 ¹²⁹	54	0 50	33	27	38 11		21 7		
4	239	56.7		16.0	348	25.9 ¹⁵⁹	41.8 ¹³⁰	52	1 34	2 51	40	37 12		24 71		
5	254	56.6	+23	16.1	3	00.8 ¹⁵⁹	-7 28.8 ¹³⁰	50	2 01	3 06	3 50	23 36	14	10 26	70	
6	269	56.5	+23	16.3	17	35.7 ¹⁵⁹	-7 15.8 ¹³⁰	45	2 46	3 35	4 13	23 33	19	10 31	65	
7	284	56.4		16.4	32	10.6 ¹⁵⁹	-7 02.7 ¹³¹	40	3 16	3 58	31	31 22		36 61		
8	299	56.2		16.5	46	45.5 ¹⁵⁹	-6 49.6 ¹³¹	35	39	4 16	45	29 25		39 58		
9	314	56.1		16.6	61	20.4 ¹⁵⁹	36.5 ¹³¹	30	3 58	31	4 58	27 29		43 54		
10	329	56.0		16.7	75	55.3 ¹⁵⁹	23.3 ¹³²	20	4 27	4 56	5 20	24 33		48 50		
11	344	55.8	+23	16.9	90	30.2 ¹⁵⁹	-6 10.1 ¹³²	10 N	4 49	5 16	5 39	23 21	38	10 53	45	
12	359	55.7	+23	17.0	105	05.1 ¹⁵⁹	-5 56.8 ¹³³	0	5 08	5 34	5 57	23 19	42	10 58	41	
13	14	55.6		17.1	119	40.0 ¹⁵⁹	43.5 ¹³³	10 S	25	5 51	6 14	17 46		11 02	37	
14	29	55.4		17.2	134	14.9 ¹⁵⁹	30.2 ¹³³	20	41	6 08	32	14 50		07 33		
15	44	55.3		17.3	148	49.9 ¹⁶⁰	16.9 ¹³³	30	5 57	27	6 53	11 55		12 28		
16	59	55.2		17.4	163	24.8 ¹⁵⁹	-5 03.5 ¹³⁴	35	6 06	38	7 06	09 59		15 26		
17	74	55.0	+23	17.5	177	59.7 ¹⁵⁹	-4 50.1 ¹³⁴	40	6 15	6 49	7 20	23 07	62	11 19	22	
18	89	54.9	+23	17.7	192	34.6 ¹⁵⁹	-4 36.7 ¹³⁴	45	6 26	7 03	7 37	23 05	66	11 23	18	
19	104	54.8		17.8	207	09.5 ¹⁵⁹	23.2 ¹³⁵	50	37	19	7 57	02 71		27 15		
20	119	54.6		17.9	221	44.4 ¹⁵⁹	-4 09.7 ¹³⁵	52	42	26	8 07	01 72		29 13		
21	134	54.5		18.0	236	19.3 ¹⁵⁹	-3 56.2 ¹³⁵	54	48	34	18	23 00	74	32 10		
22	149	54.4		18.1	250	54.1 ¹⁵⁸	42.6 ¹³⁶	56	6 54	43	30	22 58	78	34 8		
23	164	54.2		18.2	265	29.0 ¹⁵⁹	29.1 ¹³⁵	58	7 01	7 53	8 45	56 81		37 5		
24	179	54.1	+23	18.3	280	03.9 ¹⁵⁹	-3 15.5 ¹³⁶	60 S	7 08	8 05	9 02	22 54	84	11 40	3	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 6 ^h 29 ^m 2		Mag: -4.4 PMG: 8 ^h 54 ^m			Mag: +1.1 PMG: 9 ^h 00 ^m			Mag: -2.6 PMG: 4 ^h 28 ^m			Mag: +1.0 PMG: 17 ^h 38 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	262	25.6	226	23.4	+11 30.9	224	49.3	+13 55.5	292	53.9	-13 18.7	94	53.2	+7 36.9
1	277	28.0	241	23.4	31.7	239	49.9	56.1	307	56.4	18.7	109	55.5	36.8
2	292	30.5	256	23.4	32.4	254	50.6	56.7	322	58.8	18.7	124	57.9	36.7
3	307	33.0	271	23.4	33.2	269	51.3	57.3	338	01.3	18.7	140	00.2	36.7
4	322	35.4	286	23.4	33.9	284	52.0	57.9	353	03.7	18.7	155	02.6	36.6
5	337	37.9	301	23.5	+11 34.7	299	52.6	+13 58.5	8	06.2	-13 18.7	170	05.0	+7 36.6
6	352	40.4	316	23.5	+11 35.4	314	53.3	+13 59.1	23	08.6	-13 18.7	185	07.3	+7 36.5
7	7	42.8	331	23.5	36.2	329	54.0	+13 59.7	38	11.1	18.7	200	09.7	36.5
8	22	45.3	346	23.5	36.9	344	54.7	+14 00.3	53	13.5	18.8	215	12.0	36.4
9	37	47.7	1	23.5	37.7	359	55.3	00.9	68	16.0	18.8	230	14.4	36.4
10	52	50.2	16	23.5	38.5	14	56.0	01.5	83	18.4	18.8	245	16.7	36.3
11	67	52.7	31	23.5	+11 39.2	29	56.7	+14 02.1	98	20.9	-13 18.8	260	19.1	+7 36.3
12	82	55.1	46	23.5	+11 40.0	44	57.3	+14 02.7	113	23.3	-13 18.8	275	21.5	+7 36.2
13	97	57.6	61	23.5	40.7	59	58.0	03.3	128	25.8	18.8	290	23.8	36.2
14	113	00.1	76	23.5	41.5	74	58.7	03.9	143	28.2	18.8	305	26.2	36.1
15	128	02.5	91	23.5	42.2	89	59.4	04.5	158	30.7	18.8	320	28.5	36.1
16	143	05.0	106	23.5	43.0	105	00.0	05.1	173	33.2	18.8	335	30.9	36.0
17	158	07.5	121	23.5	+11 43.7	120	00.7	+14 05.7	188	35.6	-13 18.8	350	33.2	+7 36.0
18	173	09.9	136	23.5	+11 44.5	135	01.4	+14 06.3	203	38.1	-13 18.8	5	35.6	+7 35.9
19	188	12.4	151	23.5	45.3	150	02.0	06.9	218	40.5	18.8	20	38.0	35.9
20	203	14.8	166	23.5	46.0	165	02.7	07.5	233	43.0	18.9	35	40.3	35.8
21	218	17.3	181	23.5	46.8	180	03.4	08.1	248	45.4	18.9	50	42.7	35.8
22	233	19.8	196	23.5	47.5	195	04.1	08.7	263	47.9	18.9	65	45.0	35.7
23	248	22.2	211	23.5	48.3	210	04.7	09.3	278	50.3	18.9	80	47.4	35.6
24	263	24.7	226	23.5	+11 49.0	225	05.4	+14 09.9	293	52.8	-13 18.9	95	49.7	+7 35.6
Dif	—		0 +8			+7 +6			+25 0			+24 -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 ^m 4 12 ^h : 55 ^m 6 20 ^h : 55 ^m 8										
	PMG: 12 ^h 00 ^m 5			SD: 15 ^h 1 PMG: 5 ^h 29 ^m R°: 42 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	179	54.1	+23 18.3	280	03.9	-3 15.5		60 N	21 25	23 09	** **	23 45 3	11 34 85	
1	194	54.0	18.4	294	38.7 ¹⁵⁸	-3 01.8 ¹³⁷		58	21 05	22 20	** **	47 5	35 81	
2	209	53.8	18.5	309	13.6 ¹⁵⁹	-2 48.2 ¹³⁶		56	20 48	21 51	** **	48 8	35 78	
3	224	53.7	18.6	323	48.4 ¹⁵⁸	34.5 ¹³⁷		54	34	28	23 14	49 11	35 76	
4	239	53.6	18.7	338	23.2 ¹⁵⁸	20.8 ¹³⁷		52	22	21 11	22 28	49 14	35 74	
5	254	53.4	+23 18.8	352	58.0 ¹⁵⁸	-2 07.1 ¹³⁷		50	20 11	20 56	22 01	23 50 16	11 36 71	
6	269	53.3	+23 18.9	7	32.7 ¹⁵⁷	-1 53.4 ¹³⁷		45	19 49	20 26	21 16	23 52 20	11 36 67	
7	284	53.2	19.1	22	07.5 ¹⁵⁸	39.6 ¹³⁸		40	31	20 03	20 45	53 24	37 62	
8	299	53.0	19.2	36	42.2 ¹⁵⁷	25.9 ¹³⁷		35	16	19 45	22	54 27	37 59	
9	314	52.9	19.3	51	16.9 ¹⁵⁷	-1 12.1 ¹³⁸		30	19 03	30	20 03	56 29	37 57	
10	329	52.8	19.4	65	51.6 ¹⁵⁷	-0 58.3 ¹³⁸		20	18 41	19 05	19 34	57 35	38 51	
11	344	52.6	+23 19.5	80	26.3 ¹⁵⁷	-0 44.4 ¹³⁹		10 N	18 22	18 45	19 12	23 59 40	11 38 47	
12	359	52.5	+23 19.6	95	00.9 ¹⁵⁶	-0 30.6 ¹³⁸		0	18 04	18 27	18 53	** ** *	11 39 42	
13	14	52.4	19.7	109	35.6 ¹⁵⁷	16.7 ¹³⁹		10 S	17 47	18 10	36	** ** *	39 39	
14	29	52.2	19.7	124	10.1 ¹⁵⁵	-0 02.8 ¹³⁹		20	28	17 52	20	** ** *	40 34	
15	44	52.1	19.8	138	44.7 ¹⁵⁶	+0 11.0 ¹³⁸		30	17 07	34	18 03	** ** *	40 29	
16	59	52.0	19.9	153	19.2 ¹⁵⁵	24.9 ¹³⁹		35	16 55	23	17 55	** ** *	41 25	
17	74	51.8	+23 20.0	167	53.7 ¹⁵⁵	+0 38.9 ¹⁴⁰		40	16 41	17 11	17 45	** ** *	11 41 23	
18	89	51.7	+23 20.1	182	28.2 ¹⁵⁵	+0 52.8 ¹³⁹		45	16 24	16 58	17 35	** ** *	11 41 19	
19	104	51.6	20.2	197	02.6 ¹⁵⁴	+1 06.7 ¹³⁹		50	16 03	42	23	** ** *	42 14	
20	119	51.4	20.3	211	37.0 ¹⁵⁴	20.7 ¹⁴⁰		52	15 53	34	18	** ** *	42 12	
21	134	51.3	20.4	226	11.4 ¹⁵⁴	34.6 ¹³⁹		54	42	26	12	** ** *	42 10	
22	149	51.2	20.5	240	45.7 ¹⁵³	+1 48.6 ¹⁴⁰		56	30	17	06	** ** *	42 8	
23	164	51.0	20.6	255	20.0 ¹⁵³	+2 02.6 ¹⁴⁰		58	15 15	16 07	17 00	** ** *	42 6	
24	179	50.9	+23 20.7	269	54.3 ¹⁵³	+2 16.6 ¹⁴⁰		60 S	14 58	15 55	16 52	** ** *	11 43 2	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 6 ^h 25 ^m 3		Mag: -4.3 PMG: 8 ^h 54 ^m			Mag: +1.1 PMG: 8 ^h 59 ^m			Mag: -2.6 PMG: 4 ^h 24 ^m			Mag: +1.0 PMG: 17 ^h 34 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°
0	263	24.7	226	23.5	+11 49.0	225	05.4	+14 09.9	293	52.8	-13 18.9	95	49.7	+7 35.6
1	278	27.2	241	23.5	49.8	240	06.1	10.5	308	55.3	18.9	110	52.1	35.5
2	293	29.6	256	23.5	50.5	255	06.7	11.0	323	57.7	18.9	125	54.4	35.5
3	308	32.1	271	23.5	51.3	270	07.4	11.6	339	00.2	18.9	140	56.8	35.4
4	323	34.6	286	23.5	52.1	285	08.1	12.2	354	02.6	18.9	155	59.1	35.4
5	338	37.0	301	23.5	+11 52.8	300	08.8	+14 12.8	9	05.1	-13 18.9	171	01.5	+7 35.3
6	353	39.5	316	23.5	+11 53.6	315	09.4	+14 13.4	24	07.6	-13 19.0	186	03.9	+7 35.3
7	8	42.0	331	23.5	54.3	330	10.1	14.0	39	10.0	19.0	201	06.2	35.2
8	23	44.4	346	23.5	55.1	345	10.8	14.6	54	12.5	19.0	216	08.6	35.2
9	38	46.9	1	23.5	55.8	0	11.4	15.2	69	14.9	19.0	231	10.9	35.1
10	53	49.3	16	23.5	56.6	15	12.1	15.8	84	17.4	19.0	246	13.3	35.1
11	68	51.8	31	23.4	+11 57.3	30	12.8	+14 16.4	99	19.9	-13 19.0	261	15.6	+7 35.0
12	83	54.3	46	23.4	+11 58.1	45	13.4	+14 17.0	114	22.3	-13 19.0	276	18.0	+7 34.9
13	98	56.7	61	23.4	58.8	60	14.1	17.6	129	24.8	19.0	291	20.3	34.9
14	113	59.2	76	23.4	+11 59.6	75	14.8	18.2	144	27.2	19.0	306	22.7	34.8
15	129	01.7	91	23.4	+12 00.4	90	15.5	18.8	159	29.7	19.0	321	25.0	34.8
16	144	04.1	106	23.4	01.1	105	16.1	19.4	174	32.2	19.1	336	27.4	34.7
17	159	06.6	121	23.4	+12 01.9	120	16.8	+14 19.9	189	34.6	-13 19.1	351	29.7	+7 34.7
18	174	09.1	136	23.3	+12 02.6	135	17.5	+14 20.5	204	37.1	-13 19.1	6	32.1	+7 34.6
19	189	11.5	151	23.3	03.4	150	18.1	21.1	219	39.6	19.1	21	34.4	34.6
20	204	14.0	166	23.3	04.1	165	18.8	21.7	234	42.0	19.1	36	36.8	34.5
21	219	16.5	181	23.3	04.9	180	19.5	22.3	249	44.5	19.1	51	39.1	34.5
22	234	18.9	196	23.3	05.6	195	20.1	22.9	264	47.0	19.1	66	41.5	34.4
23	249	21.4	211	23.3	06.4	210	20.8	23.5	279	49.4	19.1	81	43.8	34.4
24	264	23.8	226	23.2	+12 07.1	225	21.5	+14 24.1	294	51.9	-13 19.2	96	46.2	+7 34.3
Dif	—		0 +8		+7 +6				+25 0		+24		-1	

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna				
	SD: 15 ⁷ PMG: 12 ^h 00 ^m 7				Edad: 22 ^d 5 PHE SD: 15 ² PMG: 6 ^h 11 ^m															
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m		
0	179	50.9	+23	20.7	269	54.3	+2	16.6	60 N	**	**	0 52	2 36	23 48	4	12 59	89			
1	194	50.7		20.8	284	28.5 ¹⁵²		30.6 ¹⁴⁰	58	**	**	1 41	2 56		52 8	56	86			
2	209	50.6		20.9	299	02.6 ¹⁵¹		44.6 ¹⁴⁰	56	**	**	2 11	3 13	23 56	11	53	83			
3	224	50.5		21.0	313	36.8 ¹⁵²	+2	58.6 ¹⁴⁰	54	0 47	33	27	**	**	**	51	88			
4	239	50.3		21.0	328	10.9 ¹⁵¹	+3	12.6 ¹⁴⁰	52	1 33	2 51	39	**	**	**	49	77			
5	254	50.2	+23	21.1	342	44.9 ¹⁵⁰	+3	26.6 ¹⁴⁰	50	2 00	3 06	3 50	**	**	**	12 47	75			
6	269	50.1	+23	21.2	357	18.9 ¹⁵⁰	+3	40.6 ¹⁴⁰	45	2 46	3 35	4 13	**	**	**	12 43	69			
7	284	49.9		21.3	11	52.8 ¹⁴⁹	+3	54.6 ¹⁴⁰	40	3 16	3 58	31	**	**	**	39	66			
8	299	49.8		21.4	26	26.7 ¹⁴⁹	+4	08.6 ¹⁴⁰	35	39	4 16	46	**	**	**	36	62			
9	314	49.7		21.5	41	00.5 ¹⁴⁸		22.6 ¹⁴⁰	30	3 58	31	4 59	**	**	**	34	59			
10	329	49.5		21.6	55	34.3 ¹⁴⁸		36.6 ¹⁴⁰	20	4 27	4 56	5 21	**	**	**	29	54			
11	344	49.4	+23	21.6	70	08.1 ¹⁴⁸	+4	50.6 ¹⁴⁰	10 N	4 49	5 16	5 39	**	**	**	12 25	49			
12	359	49.3	+23	21.7	84	41.7 ¹⁴⁶	+5	04.6 ¹⁴⁰	0	5 08	5 35	5 57	0 01	43		12 21	45			
13	14	49.1		21.8	99	15.4 ¹⁴⁷		18.6 ¹⁴⁰	10 S	25	5 52	6 14	03	47		18	40			
14	29	49.0		21.9	113	48.9 ¹⁴⁵		32.6 ¹⁴⁰	20	41	6 09	33	04	53		14	36			
15	44	48.9		22.0	128	22.4 ¹⁴⁵	+5	46.6 ¹⁴⁰	30	5 58	28	6 54	06	58		09	31			
16	59	48.7		22.0	142	55.9 ¹⁴⁵	+6	00.6 ¹⁴⁰	35	6 07	38	7 06	08	60		06	29			
17	74	48.6	+23	22.1	157	29.3 ¹⁴⁴	+6	14.6 ¹⁴⁰	40	6 16	6 50	7 21	0 09	64		12 04	24			
18	89	48.5	+23	22.2	172	02.6 ¹⁴³	+6	28.5 ¹³⁹	45	6 26	7 04	7 37	0 11	68		12 00	21			
19	104	48.3		22.3	186	35.9 ¹⁴³		42.5 ¹⁴⁰	50	38	20	7 58	13	72		11 56	16			
20	119	48.2		22.3	201	09.1 ¹⁴²	+6	56.4 ¹³⁹	52	43	27	8 08	13	76		54	14			
21	134	48.1		22.4	215	42.2 ¹⁴¹	+7	10.4 ¹⁴⁰	54	49	35	19	14	78		52	12			
22	149	47.9		22.5	230	15.3 ¹⁴¹		24.3 ¹³⁹	56	6 55	44	32	16	80		50	9			
23	164	47.8		22.6	244	48.3 ¹⁴⁰		38.2 ¹³⁹	58	7 02	7 54	8 46	17	83		48	6			
24	179	47.6	+23	22.6	259	21.2 ¹³⁹	+7	52.1 ¹³⁹	60 S	7 09	8 06	9 04	0 18	87		11 45	3			
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 6 ^h 21 ^m 4				Mag: -4.3 PMG: 8 ^h 54 ^m				Mag: +1.1 PMG: 8 ^h 58 ^m				Mag: -2.6 PMG: 4 ^h 20 ^m				Mag: +1.0 PMG: 17 ^h 30 ^m			
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	264	23.8	226	23.2	+12	07.1	225	21.5	+14	24.1	294	51.9	-13	19.2	96	46.2	+7	34.3		
1	279	26.3	241	23.2		07.9	240	22.2		24.7	309	54.3		19.2	111	48.6		34.2		
2	294	28.8	256	23.2		08.7	255	22.8		25.3	324	56.8		19.2	126	50.9		34.2		
3	309	31.2	271	23.2		09.4	270	23.5		25.8	339	59.3		19.2	141	53.3		34.1		
4	324	33.7	286	23.2		10.2	285	24.2		26.4	355	01.7		19.2	156	55.6		34.1		
5	339	36.2	301	23.1	+12	10.9	300	24.8	+14	27.0	10	04.2	-13	19.2	171	58.0	+7	34.0		
6	354	38.6	316	23.1	+12	11.7	315	25.5	+14	27.6	25	06.7	-13	19.2	187	00.3	+7	34.0		
7	9	41.1	331	23.1		12.4	330	26.2		28.2	40	09.1		19.2	202	02.7		33.9		
8	24	43.6	346	23.1		13.2	345	26.8		28.8	55	11.6		19.3	217	05.0		33.9		
9	39	46.0	1	23.0		13.9	0	27.5		29.4	70	14.1		19.3	232	07.4		33.8		
10	54	48.5	16	23.0		14.7	15	28.2		30.0	85	16.6		19.3	247	09.7		33.7		
11	69	50.9	31	23.0	+12	15.4	30	28.8	+14	30.5	100	19.0	-13	19.3	262	12.1	+7	33.7		
12	84	53.4	46	23.0	+12	16.2	45	29.5	+14	31.1	115	21.5	-13	19.3	277	14.4	+7	33.6		
13	99	55.9	61	22.9		16.9	60	30.2		31.7	130	24.0		19.3	292	16.8		33.6		
14	114	58.3	76	22.9		17.7	75	30.9		32.3	145	26.4		19.3	307	19.1		33.5		
15	130	00.8	91	22.9		18.5	90	31.5		32.9	160	28.9		19.4	322	21.5		33.5		
16	145	03.3	106	22.8		19.2	105	32.2		33.5	175	31.4		19.4	337	23.8		33.4		
17	160	05.7	121	22.8	+12	20.0	120	32.9	+14	34.1	190	33.8	-13	19.4	352	26.2	+7	33.4		
18	175	08.2	136	22.8	+12	20.7	135	33.5	+14	34.6	205	36.3	-13	19.4	7	28.5	+7	33.3		
19	190	10.7	151	22.7		21.5	150	34.2		35.2	220	38.8		19.4	22	30.8		33.2		
20	205	13.1	166	22.7		22.2	165	34.9		35.8	235	41.3		19.4	37	33.2		33.2		
21	220	15.6	181	22.7		23.0	180	35.5		36.4	250	43.7		19.4	52	35.5		33.1		
22	235	18.1	196	22.6		23.7	195	36.2		37.0	265	46.2		19.5	67	37.9		33.1		
23	250	20.5	211	22.6		24.5	210	36.9		37.6	280	48.7		19.5	82	40.2		33.0		
24	265	23.0	226	22.6	+12	25.2	225	37.5	+14	38.1	295	51.1	-13	19.5	97	42.6	+7	33.0		
Dif	—				0 +8				+7 +6				+25 0				+23 -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 : 56/9 12 ^h : 57/2 20 ^h : 57/5	SD: 15/5			PMG: 6 ^h 55 ^m	R°: 48 ^m	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	hG ☉	Dec									Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h m	h m	h m	m	h m	m	h m	m	
0	179	47.6	+23 22.6	259	21.2	+7 52.1		60 N	21 27	23 12	** **		23 52 6		14 28 96		
1	194	47.5		273	54.0 ¹³⁸	+8 05.9 ¹³⁸		58	21 06	22 22	** **		** ** *		22 91		
2	209	47.4		288	26.8 ¹³⁸		19.8 ¹³⁹	56	20 49	21 52	** **		** ** *		16 87		
3	224	47.2		302	59.5 ¹³⁷		33.6 ¹³⁸	54	35	30	23 16		0 00 13		11 83		
4	239	47.1		317	32.1 ¹³⁶	+8 47.4 ¹³⁸		52	23	21 12	22 30		03 15		06 81		
5	254	47.0	+23 23.0	332	04.7 ¹³⁶	+9 01.2 ¹³⁸		50	20 12	20 56	22 02		0 06 17		14 02 78		
6	269	46.8	+23 23.1	346	37.2 ¹³⁵	+9 15.0 ¹³⁸		45	19 49	20 27	21 16		0 12 22		13 52 74		
7	284	46.7		1	09.6 ¹³⁴		28.8 ¹³⁸	40	31	20 04	20 46		17 26		45 69		
8	299	46.6		15	41.9 ¹³³		42.5 ¹³⁷	35	16	19 46	23		21 30		38 66		
9	314	46.4		30	14.1 ¹³²	+9 56.2 ¹³⁷		30	19 03	31	20 04		25 33		33 62		
10	329	46.3		44	46.3 ¹³²	+10 09.8 ¹³⁶		20	18 41	19 06	19 35		32 38		23 57		
11	344	46.2	+23 23.4	59	18.3 ¹³⁰	+10 23.5 ¹³⁷		10 N	18 22	18 45	19 12		0 39 42		13 14 53		
12	359	46.0	+23 23.5	73	50.3 ¹³⁰	+10 37.1 ¹³⁶		0	18 05	18 27	18 53		0 44 47		13 06 49		
13	14	45.9		88	22.2 ¹²⁹	+10 50.7 ¹³⁶		10 S	17 47	18 10	36		50 51		12 58 45		
14	29	45.7		102	54.0 ¹²⁸	+11 04.2 ¹³⁵		20	29	17 53	20		0 57 55		50 40		
15	44	45.6		117	25.7 ¹²⁷		17.8 ¹³⁶	30	17 07	34	18 04		1 04 61		40 35		
16	59	45.5		131	57.3 ¹²⁶		31.2 ¹³⁴	35	16 55	23	17 55		08 64		35 31		
17	74	45.3	+23 23.8	146	28.9 ¹²⁶	+11 44.7 ¹³⁵		40	16 41	17 11	17 46		1 13 67		12 28 29		
18	89	45.2	+23 23.8	161	00.3 ¹²⁴	+11 58.1 ¹³⁴		45	16 24	16 58	17 35		1 19 71		12 21 24		
19	104	45.1		175	31.7 ¹²⁴	+12 11.5 ¹³⁴		50	16 03	42	23		25 77		12 20		
20	119	44.9		190	02.9 ¹²²		24.8 ¹³³	52	15 53	34	18		29 79		08 17		
21	134	44.8		204	34.1 ¹²²		38.1 ¹³³	54	42	26	12		32 82		12 04 14		
22	149	44.7		219	05.1 ¹²⁰	+12 51.3 ¹³²		56	30	17	06		36 85		11 59 12		
23	164	44.5		233	36.1 ¹²⁰	+13 04.5 ¹³²		58	15 15	16 07	17 00		40 89		54 8		
24	179	44.4	+23 24.2	248	06.9 ¹¹⁸	+13 17.7 ¹³²		60 S	14 58	15 55	16 52		1 45 93		11 48 4		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO								
	PMG: 6 ^h 17 ^m 4		Mag: -4.3 PMG: 8 ^h 55 ^m		Mag: +1.1 PMG: 8 ^h 57 ^m		Mag: -2.6 PMG: 4 ^h 16 ^m		Mag: +1.0 PMG: 17 ^h 26 ^m								
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec							
h	°	'	°	'	°	'	°	'	°	'							
0	265	23.0	226	22.6	+12 25.2	225	37.5	+14 38.1	295	51.1	-13 19.5	97	42.6	+7 33.0			
1	280	25.4	241	22.5	26.0	240	38.2	38.7	310	53.6	19.5	112	44.9	32.9			
2	295	27.9	256	22.5	26.7	255	38.9	39.3	325	56.1	19.5	127	47.3	32.9			
3	310	30.4	271	22.5	27.5	270	39.5	39.9	340	58.6	19.5	142	49.6	32.8			
4	325	32.8	286	22.4	28.2	285	40.2	40.5	356	01.0	19.5	157	52.0	32.7			
5	340	35.3	301	22.4	+12 29.0	300	40.9	+14 41.0	11	03.5	-13 19.6	172	54.3	+7 32.7			
6	355	37.8	316	22.3	+12 29.7	315	41.5	+14 41.6	26	06.0	-13 19.6	187	56.7	+7 32.6			
7	10	40.2	331	22.3	30.5	330	42.2	42.2	41	08.5	19.6	202	59.0	32.6			
8	25	42.7	346	22.3	31.2	345	42.9	42.8	56	10.9	19.6	218	01.4	32.5			
9	40	45.2	1	22.2	32.0	0	43.5	43.4	71	13.4	19.6	233	03.7	32.5			
10	55	47.6	16	22.2	32.7	15	44.2	44.0	86	15.9	19.6	248	06.1	32.4			
11	70	50.1	31	22.1	+12 33.5	30	44.9	+14 44.5	101	18.4	-13 19.7	263	08.4	+7 32.3			
12	85	52.6	46	22.1	+12 34.3	45	45.6	+14 45.1	116	20.8	-13 19.7	278	10.7	+7 32.3			
13	100	55.0	61	22.0	35.0	60	46.2	45.7	131	23.3	19.7	293	13.1	32.2			
14	115	57.5	76	22.0	35.8	75	46.9	46.3	146	25.8	19.7	308	15.4	32.2			
15	130	59.9	91	22.0	36.5	90	47.6	46.8	161	28.3	19.7	323	17.8	32.1			
16	146	02.4	106	21.9	37.3	105	48.2	47.4	176	30.8	19.7	338	20.1	32.1			
17	161	04.9	121	21.9	+12 38.0	120	48.9	+14 48.0	191	33.2	-13 19.8	353	22.5	+7 32.0			
18	176	07.3	136	21.8	+12 38.8	135	49.6	+14 48.6	206	35.7	-13 19.8	8	24.8	+7 31.9			
19	191	09.8	151	21.8	39.5	150	50.2	49.2	221	38.2	19.8	23	27.2	31.9			
20	206	12.3	166	21.7	40.3	165	50.9	49.7	236	40.7	19.8	38	29.5	31.8			
21	221	14.7	181	21.7	41.0	180	51.6	50.3	251	43.2	19.8	53	31.9	31.8			
22	236	17.2	196	21.6	41.8	195	52.2	50.9	266	45.6	19.8	68	34.2	31.7			
23	251	19.7	211	21.6	42.5	210	52.9	51.5	281	48.1	19.9	83	36.5	31.7			
24	266	22.1	226	21.5	+12 43.3	225	53.6	+14 52.0	296	50.6	-13 19.9	98	38.9	+7 31.6			
Dif	—		0		+8	+7		+6	+25		0	+23		-1			

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7 PMG: 12 ^h 01 ^m 2			Edad: 24 ^d 5 PHE { 4 ^h : 57 ^m 8 12 ^h : 58 ^m 1 20 ^h : 58 ^m 5 PMG: 7 ^h 43 ^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	179	44.4	+23	24.2	248	06.9	+13	17.7	60 N	** **	0 50	2 36	23 58	12	16 04	101
1	194	44.2		24.2	262	37.7 ¹¹⁸		30.8 ¹³¹	58	** **	1 40	2 56	0 00	10	15 53	96
2	209	44.1		24.3	277	08.3 ¹¹⁶		43.9 ¹³¹	56	** **	2 10	3 13	07 14		43 92	
3	224	44.0		24.4	291	38.9 ¹¹⁶	+13	56.9 ¹³⁰	54	0 46	32	27	13 17		34 89	
4	239	43.8		24.4	306	09.3 ¹¹⁴	+14	09.9 ¹³⁰	52	1 32	2 50	39	18 20		27 85	
5	254	43.7	+23	24.5	320	39.6 ¹¹³	+14	22.8 ¹²⁹	50	2 00	3 06	3 50	0 23	23	15 20	82
6	269	43.6	+23	24.5	335	09.8 ¹¹²	+14	35.6 ¹²⁸	45	2 46	3 35	4 13	0 34	27	15 06	77
7	284	43.4		24.6	349	40.0 ¹¹²	+14	48.4 ¹²⁸	40	3 16	3 58	31	43 32		14 54	73
8	299	43.3		24.6	4	10.0 ¹¹⁰	+15	01.2 ¹²⁸	35	39	4 16	46	51 35		44 69	
9	314	43.2		24.7	18	39.9 ¹⁰⁹		13.8 ¹²⁶	30	3 58	31	4 59	0 58	38	35 67	
10	329	43.0		24.7	33	09.6 ¹⁰⁷		26.5 ¹²⁷	20	4 27	4 56	5 21	1 10	43	20 62	
11	344	42.9	+23	24.8	47	39.3 ¹⁰⁷	+15	39.0 ¹²⁵	10 N	4 50	5 17	5 40	1 21	47	14 07	57
12	359	42.7	+23	24.8	62	08.9 ¹⁰⁶	+15	51.5 ¹²⁵	0	5 09	5 35	5 57	1 31	51	13 55	53
13	14	42.6		24.9	76	38.3 ¹⁰⁴	+16	04.0 ¹²⁵	10 S	26	5 52	6 15	41 55		43 49	
14	29	42.5		24.9	91	07.6 ¹⁰³		16.3 ¹²³	20	42	6 09	33	1 52	60	30 45	
15	44	42.3		25.0	105	36.8 ¹⁰²		28.6 ¹²³	30	5 58	28	6 55	2 05	64	15 40	
16	59	42.2		25.0	120	05.9 ¹⁰¹		40.8 ¹²²	35	6 07	39	7 07	12 68		13 06	38
17	74	42.1	+23	25.0	134	34.9 ¹⁰⁰	+16	53.0 ¹²²	40	6 17	6 51	7 21	2 20	72	12 57	34
18	89	41.9	+23	25.1	149	03.7 ⁹⁸	+17	05.1 ¹²¹	45	6 27	7 04	7 38	2 30	76	12 45	31
19	104	41.8		25.1	163	32.5 ⁹⁸		17.1 ¹²⁰	50	39	20	7 59	42 81		32 25	
20	119	41.6		25.2	178	01.1 ⁹⁶		29.0 ¹¹⁹	52	44	28	8 09	48 83		25 23	
21	134	41.5		25.2	192	29.6 ⁹⁵		40.9 ¹¹⁹	54	50	36	20	2 54	87	18 20	
22	149	41.4		25.2	206	57.9 ⁹³	+17	52.6 ¹¹⁷	56	6 56	45	33	3 01	90	11 16	
23	164	41.2		25.3	221	26.2 ⁹³	+18	04.3 ¹¹⁷	58	7 03	7 55	8 47	09 94		12 02	12
24	179	41.1	+23	25.3	235	54.3 ⁹¹	+18	15.9 ¹¹⁶	60 S	7 10	8 07	9 05	3 18	99	11 52	8

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 6 ^h 13 ^m 5		Mag: -4.3 PMG: 8 ^h 55 ^m		Mag: +1.1 PMG: 8 ^h 56 ^m		Mag: -2.6 PMG: 4 ^h 12 ^m		Mag: +1.0 PMG: 17 ^h 23 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	266	22.1	226	21.5	+12	43.3	225	53.6	+14	52.0	296	50.6	-13	19.9	98	38.9	+7	31.6
1	281	24.6	241	21.5		44.0	240	54.2		52.6	311	53.1		19.9	113	41.2		31.5
2	296	27.0	256	21.4		44.8	255	54.9		53.2	326	55.6		19.9	128	43.6		31.5
3	311	29.5	271	21.4		45.5	270	55.6		53.8	341	58.0		19.9	143	45.9		31.4
4	326	32.0	286	21.3		46.3	285	56.2		54.4	357	00.5		19.9	158	48.3		31.4
5	341	34.4	301	21.2	+12	47.0	300	56.9	+14	54.9	12	03.0	-13	20.0	173	50.6	+7	31.3
6	356	36.9	316	21.2	+12	47.8	315	57.6	+14	55.5	27	05.5	-13	20.0	188	53.0	+7	31.3
7	11	39.4	331	21.1		48.5	330	58.2		56.1	42	08.0		20.0	203	55.3		31.2
8	26	41.8	346	21.1		49.3	345	58.9		56.7	57	10.5		20.0	218	57.6		31.1
9	41	44.3	1	21.0		50.0	0	59.6		57.2	72	12.9		20.0	234	00.0		31.1
10	56	46.8	16	21.0		50.8	16	00.2		57.8	87	15.4		20.1	249	02.3		31.0
11	71	49.2	31	20.9	+12	51.5	31	00.9	+14	58.4	102	17.9	-13	20.1	264	04.7	+7	31.0
12	86	51.7	46	20.8	+12	52.3	46	01.6	+14	58.9	117	20.4	-13	20.1	279	07.0	+7	30.9
13	101	54.2	61	20.8		53.0	61	02.2	+14	59.5	132	22.9		20.1	294	09.4		30.8
14	116	56.6	76	20.7		53.8	76	02.9	+15	00.1	147	25.4		20.1	309	11.7		30.8
15	131	59.1	91	20.7		54.5	91	03.6		00.7	162	27.8		20.2	324	14.0		30.7
16	147	01.5	106	20.6		55.3	106	04.2		01.2	177	30.3		20.2	339	16.4		30.7
17	162	04.0	121	20.5	+12	56.0	121	04.9	+15	01.8	192	32.8	-13	20.2	354	18.7	+7	30.6
18	177	06.5	136	20.5	+12	56.8	136	05.6	+15	02.4	207	35.3	-13	20.2	9	21.1	+7	30.6
19	192	08.9	151	20.4		57.5	151	06.2		03.0	222	37.8		20.2	24	23.4		30.5
20	207	11.4	166	20.3		58.2	166	06.9		03.5	237	40.3		20.3	39	25.7		30.4
21	222	13.9	181	20.3		59.0	181	07.6		04.1	252	42.8		20.3	54	28.1		30.4
22	237	16.3	196	20.2	+12	59.7	196	08.2		04.7	267	45.3		20.3	69	30.4		30.3
23	252	18.8	211	20.1	+13	00.5	211	08.9		05.2	282	47.7		20.3	84	32.8		30.3
24	267	21.3	226	20.1	+13	01.2	226	09.5	+15	05.8	297	50.2	-13	20.3	99	35.1	+7	30.2
Dif	—		-1		+7		+7		+6		+25		0		+23		-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 : 58 ^m /8 12 ^h : 59 ^m /1 20 ^h : 59 ^m /4 R°: 58 ^m											
	PMG: 12 ^h 01 ^m 4				SD: 16 ^h 0 PMG: 8 ^h 35 ^m											
	hG ☉		Dec		hG ☾		Dif				Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	m	h m	m
0	179	41.1	+23	25.3	235	54.3	+18	15.9	60 N	21 27	23 14	** ** *	** ** *	**	17 45	103
1	194	41.0		25.4	250	22.3	90	27.4	58	21 07	22 23	** ** *	0 10	17	29	96
2	209	40.8		25.4	264	50.1	88	38.9	56	20 50	21 53	** ** *	21 20		15	91
3	224	40.7		25.4	279	17.9	88	+18 50.2	54	36	30	23 18	30 24		17 03	88
4	239	40.6		25.5	293	45.5	86	+19 01.4	52	23	21 12	22 31	38 27		16 52	85
5	254	40.4	+23	25.5	308	13.0	85	+19 12.6	50	20 13	20 57	22 03	0 46	29	16 42	83
6	269	40.3	+23	25.5	322	40.3	83	+19 23.6	45	19 50	20 27	21 17	1 01	35	16 23	78
7	284	40.1		25.6	337	07.5	82	34.6	40	32	20 05	20 46	15 38		16 07	74
8	299	40.0		25.6	351	34.6	81	45.4	35	17	19 47	23	26 42		15 53	72
9	314	39.9		25.6	6	01.6	80	+19 56.2	30	19 04	31	20 05	36 44		42	69
10	329	39.7		25.7	20	28.5	79	+20 06.9	20	18 42	19 06	19 35	1 53	49	22	65
11	344	39.6	+23	25.7	34	55.2	77	+20 17.4	10 N	18 23	18 46	19 13	2 08	53	15 04	62
12	359	39.5	+23	25.7	49	21.7	75	+20 27.8	0	18 05	18 28	18 54	2 22	56	14 48	59
13	14	39.3		25.8	63	48.2	75	38.2	10 S	17 48	18 10	37	36 60		32	56
14	29	39.2		25.8	78	14.5	73	48.4	20	29	17 53	21	2 52	63	14 15	53
15	44	39.0		25.8	92	40.7	72	+20 58.5	30	17 08	34	18 04	3 09	69	13 55	49
16	59	38.9		25.9	107	06.7	70	+21 08.5	35	16 55	24	17 55	20 71		44	46
17	74	38.8	+23	25.9	121	32.7	70	+21 18.4	40	16 41	17 12	17 46	3 32	74	13 31	43
18	89	38.6	+23	25.9	135	58.5	68	+21 28.1	45	16 24	16 58	17 35	3 46	78	13 16	39
19	104	38.5		25.9	150	24.1	66	37.8	50	16 04	42	24	4 03	84	12 57	34
20	119	38.4		26.0	164	49.7	66	47.3	52	15 54	35	18	11 87		48	32
21	134	38.2		26.0	179	15.1	64	+21 56.7	54	43	26	13	21 89		38	29
22	149	38.1		26.0	193	40.4	63	+22 05.9	56	30	17	07	31 93		27	26
23	164	37.9		26.0	208	05.5	61	15.1	58	15 15	16 07	17 00	43 98		14	21
24	179	37.8	+23	26.0	222	30.5	60	+22 24.1	60 S	14 58	15 55	16 52	4 57	104	12 00	14

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 6 ^h 09 ^m 6		Mag: -4.3 PMG: 8 ^h 55 ^m		Mag: +1.1 PMG: 8 ^h 55 ^m		Mag: -2.6 PMG: 4 ^h 08 ^m		Mag: +1.0 PMG: 17 ^h 19 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	267	21.3	226	20.1	+13	01.2	297	50.2	-13	20.3
1	282	23.7	241	20.0		02.0	312	52.7		20.4
2	297	26.2	256	19.9		02.7	327	55.2		20.4
3	312	28.7	271	19.9		03.5	342	57.7		20.4
4	327	31.1	286	19.8		04.2	358	00.2		20.4
5	342	33.6	301	19.7	+13	05.0	13	02.7	-13	20.4
6	357	36.0	316	19.6	+13	05.7	28	05.2	-13	20.5
7	12	38.5	331	19.6		06.5	43	07.7		20.5
8	27	41.0	346	19.5		07.2	58	10.2		20.5
9	42	43.4	1	19.4		08.0	73	12.6		20.5
10	57	45.9	16	19.3		08.7	88	15.1		20.5
11	72	48.4	31	19.3	+13	09.5	103	17.6	-13	20.6
12	87	50.8	46	19.2	+13	10.2	118	20.1	-13	20.6
13	102	53.3	61	19.1		10.9	133	22.6		20.6
14	117	55.8	76	19.0		11.7	148	25.1		20.6
15	132	58.2	91	19.0		12.4	163	27.6		20.7
16	148	00.7	106	18.9		13.2	178	30.1		20.7
17	163	03.1	121	18.8	+13	13.9	193	32.6	-13	20.7
18	178	05.6	136	18.7	+13	14.7	208	35.1	-13	20.7
19	193	08.1	151	18.6		15.4	223	37.6		20.7
20	208	10.5	166	18.6		16.2	238	40.1		20.8
21	223	13.0	181	18.5		16.9	253	42.6		20.8
22	238	15.5	196	18.4		17.6	268	45.1		20.8
23	253	17.9	211	18.3		18.4	283	47.6		20.8
24	268	20.4	226	18.2	+13	19.1	298	50.1	-13	20.9
Dif	—		-1		+7		+25		0	

UT	SOL			 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15°7' PMG: 12 ^h 01 ^m 6			Edad: 26 ^d 5 PHE { 4 ^h : 59°7' 12 ^h : 60°0' 20 ^h : 60°2' R°: 62 ^m	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°		
	hG ☉	Dec													hG ☾	Dif
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	179	37.8	+23	222	30.5	+22	24.1	60 N	** **	0 49	2 36	0 10	22	19 28	88	
1	194	37.7		236	55.4		32.9	58	** **	1 40	2 56		27	19 05	84	
2	209	37.5		251	20.2		41.7	56	** **	2 10	3 13		41	18 46	82	
3	224	37.4		265	44.8		50.2	54	0 45	33	27	0 54	37	31	79	
4	239	37.3		280	09.3	+22	58.7	52	1 32	2 51	40	1 05	39	17	78	
5	254	37.1	+23	294	33.7	+23	07.0	50	2 00	3 06	3 50	1 15	42	18 05	77	
6	269	37.0	+23	308	57.9	+23	15.2	45	2 46	3 36	4 13	1 36	46	17 41	74	
7	284	36.9		323	22.1		23.2	40	3 16	3 58	31	1 53	49	21	72	
8	299	36.7		337	46.1		31.1	35	40	4 16	46	2 08	51	17 05	70	
9	314	36.6		352	09.9		38.8	30	3 58	32	4 59	20	53	16 51	69	
10	329	36.4		6	33.7		46.4	20	4 27	4 57	5 21	2 42	56	27	67	
11	344	36.3	+23	20	57.3	+23	53.9	10 N	4 50	5 17	5 40	3 01	59	16 06	66	
12	359	36.2	+23	35	20.8	+24	01.1	0	5 09	5 35	5 58	3 18	62	15 47	64	
13	14	36.0		49	44.2		08.2	10 S	26	5 53	6 15	36	64	28	62	
14	29	35.9		64	07.5		15.2	20	42	6 10	34	3 55	67	15 08	60	
15	44	35.8		78	30.7		22.0	30	5 59	29	6 55	4 18	70	14 44	58	
16	59	35.6		92	53.7		28.7	35	6 08	39	7 08	31	72	30	56	
17	74	35.5	+23	107	16.7	+24	35.1	40	6 17	6 51	7 22	4 46	74	14 14	55	
18	89	35.3	+23	121	39.5	+24	41.4	45	6 27	7 05	7 39	5 04	77	13 55	52	
19	104	35.2		136	02.2		47.6	50	39	21	7 59	27	81	31	49	
20	119	35.1		150	24.8		53.6	52	45	28	8 09	38	83	20	47	
21	134	34.9		164	47.3	+24	59.4	54	50	37	20	5 50	86	13 07	45	
22	149	34.8		179	09.7	+25	05.0	56	6 56	46	33	6 04	89	12 53	41	
23	164	34.7		193	32.0		10.4	58	7 03	7 56	8 48	21	93	35	38	
24	179	34.5	+23	207	54.2	+25	15.7	60 S	7 11	8 08	9 05	6 41	100	12 14	32	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 6 ^h 05 ^m 6		Mag: -4.3 PMG: 8 ^h 55 ^m			Mag: +1.1 PMG: 8 ^h 54 ^m			Mag: -2.6 PMG: 4 ^h 04 ^m			Mag: +1.0 PMG: 17 ^h 15 ^m			
	hG ♈	Dec	hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°	
0	268	20.4	226	18.2	+13	19.1	226	25.5	+15	19.4	298	50.1	-13	20.9	
1	283	22.9	241	18.2		19.9	241	26.2		20.0	313	52.6		20.9	
2	298	25.3	256	18.1		20.6	256	26.8		20.5	328	55.0		20.9	
3	313	27.8	271	18.0		21.4	271	27.5		21.1	343	57.5		20.9	
4	328	30.3	286	17.9		22.1	286	28.2		21.7	359	00.0		21.0	
5	343	32.7	301	17.8	+13	22.9	301	28.8	+15	22.2	14	02.5	-13	21.0	
6	358	35.2	316	17.7	+13	23.6	316	29.5	+15	22.8	29	05.0	-13	21.0	
7	13	37.6	331	17.6		24.3	331	30.2		23.3	44	07.5		21.0	
8	28	40.1	346	17.5		25.1	346	30.8		23.9	59	10.0		21.1	
9	43	42.6	1	17.5		25.8	1	31.5		24.5	74	12.5		21.1	
10	58	45.0	16	17.4		26.6	16	32.1		25.0	89	15.0		21.1	
11	73	47.5	31	17.3	+13	27.3	31	32.8	+15	25.6	104	17.5	-13	21.1	
12	88	50.0	46	17.2	+13	28.1	46	33.5	+15	26.1	119	20.0	-13	21.1	
13	103	52.4	61	17.1		28.8	61	34.1		26.7	134	22.5		21.2	
14	118	54.9	76	17.0		29.5	76	34.8		27.3	149	25.0		21.2	
15	133	57.4	91	16.9		30.3	91	35.5		27.8	164	27.5		21.2	
16	148	59.8	106	16.8		31.0	106	36.1		28.4	179	30.0		21.2	
17	164	02.3	121	16.7	+13	31.8	121	36.8	+15	28.9	194	32.5	-13	21.3	
18	179	04.8	136	16.6	+13	32.5	136	37.5	+15	29.5	209	35.0	-13	21.3	
19	194	07.2	151	16.5		33.2	151	38.1		30.1	224	37.5		21.3	
20	209	09.7	166	16.4		34.0	166	38.8		30.6	239	40.1		21.3	
21	224	12.1	181	16.3		34.7	181	39.4		31.2	254	42.6		21.4	
22	239	14.6	196	16.2		35.5	196	40.1		31.7	269	45.1		21.4	
23	254	17.1	211	16.1		36.2	211	40.8		32.3	284	47.6		21.4	
24	269	19.5	226	16.0	+13	36.9	226	41.4	+15	32.8	299	50.1	-13	21.5	
Dif	—		-1		+7		+7		+6		+25		0		+23
															-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 /4 12 ^h : 60 ^h /7 20 ^h : 60 ^h /8 R°: 66 ^m														
	PMG: 12 ^h 01 ^m 8			SD: 16 ^h 4														
	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	34.5	+23	26.3	207	54.2	+25	15.7	51	60 N	21 28	23 15	** **	0 32	47	20 56	57	
1	194	34.4		26.4	222	16.3		20.8	51	58	21 07	22 23	** **	0 56	51	29	59	
2	209	34.2		26.4	236	38.3	30	25.8	50	56	20 50	21 53	** **	1 15	53	20 08	60	
3	224	34.1		26.4	251	00.2	29	30.5	47	54	36	31	23 19	31	55	19 50	61	
4	239	34.0		26.4	265	22.0	28	35.1	46	52	24	21 13	22 31	44	57	35	62	
5	254	33.8	+23	26.4	279	43.7	27	+25 39.4	43	50	20 13	20 58	22 03	1 57	57	19 22	62	
6	269	33.7	+23	26.4	294	05.4	27	+25 43.6	42	45	19 50	20 28	21 18	2 22	59	18 55	63	
7	284	33.6		26.4	308	26.9	25	47.6	40	40	32	20 05	20 47	42	61	33	65	
8	299	33.4		26.4	322	48.4	25	51.5	39	35	17	19 47	24	2 59	62	15	65	
9	314	33.3		26.4	337	09.8	24	55.1	36	30	19 04	32	20 05	3 13	63	18 00	65	
10	329	33.1		26.4	351	31.1	23	+25 58.5	34	20	18 42	19 07	19 36	3 38	64	17 34	66	
11	344	33.0	+23	26.3	5	52.3	22	+26 01.8	33	10 N	18 23	18 46	19 13	4 00	65	17 12	66	
12	359	32.9	+23	26.3	20	13.5	22	+26 04.8	30	0	18 05	18 28	18 54	4 20	66	16 51	66	
13	14	32.7		26.3	34	34.5	20	07.7	29	10 S	17 48	18 11	37	4 40	67	30	66	
14	29	32.6		26.3	48	55.6	21	10.4	27	20	29	17 53	21	5 02	67	16 08	66	
15	44	32.5		26.3	63	16.5	19	12.8	24	30	17 08	35	18 04	28	68	15 42	66	
16	59	32.3		26.3	77	37.4	19	15.1	23	35	16 56	24	17 56	5 43	68	26	67	
17	74	32.2	+23	26.3	91	58.3	19	+26 17.2	21	40	16 42	17 12	17 46	6 00	69	15 09	66	
18	89	32.1	+23	26.3	106	19.0	17	+26 19.1	19	45	16 25	16 59	17 36	6 21	70	14 47	67	
19	104	31.9		26.3	120	39.8	18	20.7	16	50	16 04	42	24	6 48	70	20	66	
20	119	31.8		26.3	135	00.4	16	22.2	15	52	15 54	35	19	7 01	71	14 07	66	
21	134	31.6		26.3	149	21.1	17	23.5	13	54	43	27	13	16	71	13 52	66	
22	149	31.5		26.3	163	41.7	16	24.5	10	56	30	18	07	33	72	34	66	
23	164	31.4		26.3	178	02.2	15	25.4	9	58	15 15	16 07	17 00	7 54	73	13 13	65	
24	179	31.2	+23	26.2	192	22.7	15	+26 26.1	7	60 S	14 58	15 56	16 53	8 21	75	12 46	64	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 6 ^h 01 ^m 7		Mag: -4.3 PMG: 8 ^h 55 ^m			Mag: +1.1 PMG: 8 ^h 53 ^m			Mag: -2.6 PMG: 4 ^h 00 ^m			Mag: +1.0 PMG: 17 ^h 12 ^m						
	hG ♈		hG ♀			hG ♂			hG ♃			hG ♄						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	269	19.5	226	16.0	+13	36.9	226	41.4	+15	32.8	299	50.1	-13	21.5	101	27.3		
1	284	22.0	241	15.9		37.7	241	42.1		33.4	314	52.6		21.5	116	29.6		
2	299	24.5	256	15.8		38.4	256	42.8		34.0	329	55.1		21.5	131	32.0		
3	314	26.9	271	15.7		39.2	271	43.4		34.5	344	57.6		21.5	146	34.3		
4	329	29.4	286	15.6		39.9	286	44.1		35.1	0	00.1		21.6	161	36.6		
5	344	31.9	301	15.5	+13	40.6	301	44.7	+15	35.6	15	02.6	-13	21.6	176	39.0		
6	359	34.3	316	15.4	+13	41.4	316	45.4	+15	36.2	30	05.1	-13	21.6	191	41.3		
7	14	36.8	331	15.3		42.1	331	46.1		36.7	45	07.6		21.6	206	43.6		
8	29	39.3	346	15.2		42.9	346	46.7		37.3	60	10.1		21.7	221	46.0		
9	44	41.7	1	15.1		43.6	1	47.4		37.8	75	12.6		21.7	236	48.3		
10	59	44.2	16	15.0		44.3	16	48.1		38.4	90	15.1		21.7	251	50.6		
11	74	46.6	31	14.9	+13	45.1	31	48.7	+15	39.0	105	17.6	-13	21.7	266	53.0		
12	89	49.1	46	14.8	+13	45.8	46	49.4	+15	39.5	120	20.1	-13	21.8	281	55.3		
13	104	51.6	61	14.7		46.5	61	50.0		40.1	135	22.6		21.8	296	57.6		
14	119	54.0	76	14.6		47.3	76	50.7		40.6	150	25.2		21.8	312	00.0		
15	134	56.5	91	14.5		48.0	91	51.4		41.2	165	27.7		21.9	327	02.3		
16	149	59.0	106	14.3		48.8	106	52.0		41.7	180	30.2		21.9	342	04.6		
17	165	01.4	121	14.2	+13	49.5	121	52.7	+15	42.3	195	32.7	-13	21.9	357	06.9		
18	180	03.9	136	14.1	+13	50.2	136	53.4	+15	42.8	210	35.2	-13	21.9	12	09.3		
19	195	06.4	151	14.0		51.0	151	54.0		43.4	225	37.7		22.0	27	11.6		
20	210	08.8	166	13.9		51.7	166	54.7		43.9	240	40.2		22.0	42	13.9		
21	225	11.3	181	13.8		52.4	181	55.3		44.5	255	42.7		22.0	57	16.3		
22	240	13.8	196	13.7		53.2	196	56.0		45.0	270	45.2		22.1	72	18.6		
23	255	16.2	211	13.6		53.9	211	56.7		45.6	285	47.8		22.1	87	20.9		
24	270	18.7	226	13.4	+13	54.6	226	57.3	+15	46.1	300	50.3	-13	22.1	102	23.3		
Dif	—		-1			+7	+7			+6	+25			0	+23			-1

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 15'7 PMG: 12 ^h 02 ^m 0				Edad: 28 ^d 5 PHE { 4 ^h : 61'0 12 ^h : 61'1 20 ^h : 61'2 Rº: 66 ^m														
	hG ☉		Dec		hG ☾		Dif			Dif			Náutico	Civil	Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m
0	179	31.2	+23	26.2	192	22.7	+26	26.1	4	60 N	** **	0 49	2 36	1 19	82	21 53	29		
1	194	31.1		26.2	206	43.2	15	26.5	4	58	** **	1 41	2 57	1 47	79	28	35		
2	209	31.0		26.2	221	03.6	14	26.8	3	56	** **	2 11	3 13	2 08	78	21 08	39		
3	224	30.8		26.2	235	24.1	15	26.8	0	54	0 45	33	28	26	76	20 51	43		
4	239	30.7		26.2	249	44.5	14	26.7	1	52	1 32	2 51	40	41	75	37	45		
5	254	30.5	+23	26.2	264	04.8	13	+26	26.3	4	50	2 00	3 06	3 51	2 54	75	20 24	47	
6	269	30.4	+23	26.1	278	25.2	14	+26	25.8	5	45	2 46	3 36	4 13	3 21	73	19 58	51	
7	284	30.3		26.1	292	45.5	13	25.0	8	40	3 17	3 59	32	3 43	71	38	53		
8	299	30.1		26.1	307	05.9	14	24.0	10	35	40	4 17	4 47	4 01	70	20	56		
9	314	30.0		26.1	321	26.2	13	22.8	12	30	3 59	32	5 00	16	70	19 05	58		
10	329	29.9		26.1	335	46.5	13	21.4	14	20	4 28	4 57	22	4 42	69	18 40	61		
11	344	29.7	+23	26.1	350	06.8	13	+26	19.8	16	10 N	4 51	5 18	5 41	5 05	67	18 18	63	
12	359	29.6	+23	26.0	4	27.1	13	+26	18.0	18	0	5 10	5 36	5 58	5 26	66	17 57	65	
13	14	29.5		26.0	18	47.5	14	16.0	20	10 S	27	5 53	6 16	5 47	65	36	68		
14	29	29.3		26.0	33	07.8	13	13.8	22	20	43	6 10	34	6 09	64	17 14	70		
15	44	29.2		26.0	47	28.1	13	11.4	24	30	5 59	29	6 56	36	61	16 48	72		
16	59	29.0		25.9	61	48.5	14	08.7	27	35	6 08	40	7 08	6 51	61	33	74		
17	74	28.9	+23	25.9	76	08.9	14	+26	05.9	28	40	6 18	6 52	7 22	7 09	59	16 15	76	
18	89	28.8	+23	25.9	90	29.3	14	+26	02.9	30	45	6 28	7 05	7 39	7 31	57	15 54	78	
19	104	28.6		25.9	104	49.7	14	+25	59.6	33	50	40	21	8 00	7 58	55	26	82	
20	119	28.5		25.8	119	10.1	14	56.2	34	52	45	29	10	8 12	53	15 13	83		
21	134	28.4		25.8	133	30.6	15	52.5	37	54	51	37	21	27	51	14 58	85		
22	149	28.2		25.8	147	51.1	15	48.7	38	56	6 57	46	34	8 45	49	40	88		
23	164	28.1		25.7	162	11.7	16	44.6	41	58	7 04	7 56	8 48	9 07	46	14 18	92		
24	179	28.0	+23	25.7	176	32.3	16	+25	40.4	42	60 S	7 11	8 08	9 06	9 36	39	13 50	98	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO				
	PMG 5 ^h 57 ^m 8		Mag: -4.3 PMG: 8 ^h 55 ^m				Mag: +1.1 PMG: 8 ^h 52 ^m				Mag: -2.7 PMG: 3 ^h 56 ^m				Mag: +1.0 PMG: 17 ^h 08 ^m				
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	270	18.7	226	13.4	+13	54.6	226	57.3	+15	46.1	300	50.3	-13	22.1	102	23.3	+7	25.8	
1	285	21.1	241	13.3		55.4	241	58.0		46.7	315	52.8		22.1	117	25.6		25.7	
2	300	23.6	256	13.2		56.1	256	58.7		47.2	330	55.3		22.2	132	27.9		25.7	
3	315	26.1	271	13.1		56.9	271	59.3		47.8	345	57.8		22.2	147	30.3		25.6	
4	330	28.5	286	13.0		57.6	287	00.0		48.3	1	00.3		22.2	162	32.6		25.5	
5	345	31.0	301	12.9	+13	58.3	302	00.6	+15	48.9	16	02.8	-13	22.3	177	34.9	+7	25.5	
6	0	33.5	316	12.7	+13	59.1	317	01.3	+15	49.4	31	05.3	-13	22.3	192	37.2	+7	25.4	
7	15	35.9	331	12.6	+13	59.8	332	02.0		50.0	46	07.9		22.3	207	39.6		25.4	
8	30	38.4	346	12.5	+14	00.5	347	02.6		50.5	61	10.4		22.3	222	41.9		25.3	
9	45	40.9	1	12.4		01.3	2	03.3		51.1	76	12.9		22.4	237	44.2		25.2	
10	60	43.3	16	12.3		02.0	17	03.9		51.6	91	15.4		22.4	252	46.6		25.2	
11	75	45.8	31	12.1	+14	02.7	32	04.6	+15	52.2	106	17.9	-13	22.4	267	48.9	+7	25.1	
12	90	48.3	46	12.0	+14	03.5	47	05.3	+15	52.7	121	20.4	-13	22.5	282	51.2	+7	25.0	
13	105	50.7	61	11.9		04.2	62	05.9		53.3	136	22.9		22.5	297	53.5		25.0	
14	120	53.2	76	11.8		04.9	77	06.6		53.8	151	25.5		22.5	312	55.9		24.9	
15	135	55.6	91	11.6		05.7	92	07.2		54.4	166	28.0		22.6	327	58.2		24.8	
16	150	58.1	106	11.5		06.4	107	07.9		54.9	181	30.5		22.6	343	00.5		24.8	
17	166	00.6	121	11.4	+14	07.1	122	08.6	+15	55.4	196	33.0	-13	22.6	358	02.9	+7	24.7	
18	181	03.0	136	11.3	+14	07.8	137	09.2	+15	56.0	211	35.5	-13	22.6	13	05.2	+7	24.7	
19	196	05.5	151	11.1		08.6	152	09.9		56.5	226	38.1		22.7	28	07.5		24.6	
20	211	08.0	166	11.0		09.3	167	10.6		57.1	241	40.6		22.7	43	09.8		24.5	
21	226	10.4	181	10.9		10.0	182	11.2		57.6	256	43.1		22.7	58	12.2		24.5	
22	241	12.9	196	10.7		10.8	197	11.9		58.2	271	45.6		22.8	73	14.5		24.4	
23	256	15.4	211	10.6		11.5	212	12.5		58.7	286	48.1		22.8	88	16.8		24.3	
24	271	17.8	226	10.5	+14	12.2	227	13.2	+15	59.3	301	50.6	-13	22.8	103	19.2	+7	24.3	
Dif	—		-1		+7		+7		+5		+25		0		+23		-1		

ALMANAQUE NÁUTICO PERSEIS

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 {	4 ^h : 61 ^m /2 12 ^h : 61 ^m /1 20 ^h : 60 ^m /9 R°: 57 ^m		Náutico	Civil		Hora	R°	Hora	R°		
	PMG: 12 ^h 02 ^m 5	hG ☉	Dec												hG ☾	Dif
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	179	24.7	+23	161	05.5	+23	00.9	60 N	** **	0 51	2 37	4 27	111	22	36	7
1	194	24.6		175	28.0	+22	52.1	58	** **	1 42	2 57	4 45	105		23	12
2	209	24.4		189	50.5		43.0	56	** **	2 11	3 14	5 01	99		12	16
3	224	24.3		204	13.1		33.8	54	0 47	34	28	13	96	22	02	20
4	239	24.2		218	35.8		24.5	52	1 33	2 52	41	25	92	21	53	23
5	254	24.0	+23	232	58.7	+22	14.9	50	2 01	3 07	3 51	5 35	89	21	46	25
6	269	23.9	+23	247	21.6	+22	05.3	45	2 47	3 37	4 14	5 56	83	21	29	31
7	284	23.7		261	44.7	+21	55.4	40	3 17	3 59	32	6 13	79		15	35
8	299	23.6		276	07.8		45.4	35	41	4 17	4 47	27	75	21	03	39
9	314	23.5		290	31.1		35.3	30	3 59	33	5 00	6 39	73	20	53	42
10	329	23.3		304	54.5		25.0	20	4 28	4 58	22	7 00	68		35	47
11	344	23.2	+23	319	17.9	+21	14.6	10 N	4 51	5 18	5 41	7 18	63	20	19	52
12	359	23.1	+23	333	41.5	+21	04.0	0	5 10	5 36	5 59	7 35	59	20	04	56
13	14	22.9		348	05.3	+20	53.3	10 S	27	5 53	6 16	7 52	55	19	49	61
14	29	22.8		2	29.1		42.5	20	5 43	6 11	35	8 10	51		33	65
15	44	22.7		16	53.0		31.5	30	6 00	30	6 56	31	45	14	71	
16	59	22.5		31	17.1		20.3	35	08	40	7 08	43	42	19	03	74
17	74	22.4	+23	45	41.2	+20	09.1	40	6 18	6 52	7 23	8 56	39	18	50	79
18	89	22.3	+23	60	05.5	+19	57.7	45	6 28	7 06	7 39	9 13	34	18	35	83
19	104	22.1		74	29.9		46.2	50	40	22	8 00	33	28	17	89	
20	119	22.0		88	54.4		34.5	52	45	29	10	42	26	18	08	92
21	134	21.9		103	19.0		22.7	54	51	37	21	9 52	23	17	58	95
22	149	21.7		117	43.7	+19	10.9	56	6 57	46	34	10 04	20		47	99
23	164	21.6		132	08.6	+18	58.8	58	7 04	7 57	8 48	18	15	34	104	
24	179	21.5	+23	146	33.6	+18	46.7	60 S	7 11	8 08	9 06	10 34	9	17	19	109

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 5 ^h 49 ^m 9		Mag: -4.3 PMG: 8 ^h 56 ^m		Mag: +1.1 PMG: 8 ^h 50 ^m		Mag: -2.7 PMG: 3 ^h 48 ^m		Mag: +1.0 PMG: 17 ^h 00 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	272	17.0	226	07.2	+14	29.7			104	15.0					
1	287	19.4	241	07.0		30.4			119	17.3					
2	302	21.9	256	06.9		31.1			134	19.6					
3	317	24.4	271	06.7		31.8			149	21.9					
4	332	26.8	286	06.6		32.6			164	24.2					
5	347	29.3	301	06.4	+14	33.3			179	26.6					
6	2	31.8	316	06.3	+14	34.0			194	28.9					
7	17	34.2	331	06.1		34.7			209	31.2					
8	32	36.7	346	06.0		35.5			224	33.5					
9	47	39.1	1	05.8		36.2			239	35.9					
10	62	41.6	16	05.7		36.9			254	38.2					
11	77	44.1	31	05.5	+14	37.6			269	40.5					
12	92	46.5	46	05.3	+14	38.3			284	42.8					
13	107	49.0	61	05.2		39.1			299	45.2					
14	122	51.5	76	05.0		39.8			314	47.5					
15	137	53.9	91	04.9		40.5			329	49.8					
16	152	56.4	106	04.7		41.2			344	52.1					
17	167	58.9	121	04.6	+14	41.9			359	54.4					
18	183	01.3	136	04.4	+14	42.7			14	56.8					
19	198	03.8	151	04.3		43.4			29	59.1					
20	213	06.2	166	04.1		44.1			45	01.4					
21	228	08.7	181	03.9		44.8			60	03.7					
22	243	11.2	196	03.8		45.5			75	06.0					
23	258	13.6	211	03.6		46.3			90	08.4					
24	273	16.1	226	03.5	+14	47.0			105	10.7					
Dif	—		-2		+7		+7	+5	+25		0	+23		-1	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 15 ^h 7 PMG: 12 ^h 02 ^m 7			Edad: 2 ^d 2 PHE { 4 ^h : 60 ^s 8 12 ^h : 60 ^s 6 20 ^h : 60 ^s 4 PMG: 14 ^h 47 ^m R°: 53 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m					
0	179	21.5	+23	23.4	146	33.6	+18 46.7	60 N	21 28	23 12	** **	6 18 106	22 43 5					
1	194	21.3		23.4	160	58.7	61 34.5 ¹²²	58	21 07	22 23	** **	30 101	35 9					
2	209	21.2		23.3	175	23.9	62 22.1 ¹²⁴	56	20 51	21 53	** **	40 97	28 12					
3	224	21.1		23.2	189	49.2	63 +18 09.6 ¹²⁵	54	36	31	23 17	49 93	22 15					
4	239	20.9		23.2	204	14.6	64 +17 57.0 ¹²⁶	52	24	21 13	22 31	6 57 90	16 18					
5	254	20.8	+23	23.1	218	40.2	66 +17 44.3 ¹²⁷	50	20 13	20 58	22 03	7 04 87	22 11 20					
6	269	20.7	+23	23.0	233	05.8	66 +17 31.5 ¹²⁸	45	19 51	20 28	21 18	7 19 82	22 00 25					
7	284	20.5		23.0	247	31.6	68 18.6 ¹²⁹	40	33	20 06	20 47	32 77	21 50 30					
8	299	20.4		22.9	261	57.5	69 +17 05.6 ¹³⁰	35	18	19 48	24	42 73	42 33					
9	314	20.3		22.8	276	23.6	71 +16 52.6 ¹³⁰	30	19 05	32	20 06	7 52 69	35 36					
10	329	20.1		22.7	290	49.7	71 39.4 ¹³²	20	18 43	19 07	19 37	8 08 63	22 42					
11	344	20.0	+23	22.7	305	15.9	72 +16 26.1 ¹³³	10 N	18 24	18 47	19 14	8 21 59	21 11 47					
12	359	19.9	+23	22.6	319	42.3	74 +16 12.7 ¹³⁴	0	18 06	18 29	18 55	8 34 54	21 00 52					
13	14	19.7		22.5	334	08.8	75 +15 59.2 ¹³⁵	10 S	17 49	18 12	38	8 47 49	20 50 56					
14	29	19.6		22.5	348	35.3	75 45.7 ¹³⁵	20	30	17 54	22	9 01 44	38 62					
15	44	19.5		22.4	3	02.0	77 32.0 ¹³⁷	30	17 09	36	18 05	16 39	25 68					
16	59	19.3		22.3	17	28.8	78 18.3 ¹³⁷	35	16 57	25	17 57	25 36	17 72					
17	74	19.2	+23	22.2	31	55.8	80 +15 04.5 ¹³⁸	40	16 43	17 13	17 47	9 35 32	20 09 75					
18	89	19.1	+23	22.1	46	22.8	80 +14 50.6 ¹³⁹	45	16 26	17 00	17 37	9 47 28	19 58 80					
19	104	18.9		22.1	60	49.9	81 36.6 ¹⁴⁰	50	16 05	16 44	25	10 01 23	46 85					
20	119	18.8		22.0	75	17.2	83 22.6 ¹⁴⁰	52	15 55	36	20	08 20	40 88					
21	134	18.7		21.9	89	44.5	83 +14 08.5 ¹⁴¹	54	44	28	14	15 17	33 92					
22	149	18.5		21.8	104	12.0	85 +13 54.3 ¹⁴²	56	32	19	08	24 13	26 95					
23	164	18.4		21.8	118	39.6	86 40.1 ¹⁴²	58	17	16 09	17 01	33 10	18 98					
24	179	18.3	+23	21.7	133	07.3	87 +13 25.7 ¹⁴⁴	60 S	15 00	15 57	16 54	10 43 6	19 08 103					
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 5 ^h 46 ^m 0		Mag: -4.3 PMG: 8 ^h 56 ^m		Mag: +1.1 PMG: 8 ^h 49 ^m		Mag: -2.7 PMG: 3 ^h 44 ^m		Mag: +1.0 PMG: 16 ^h 57 ^m									
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄									
h	°	'	°	'	°	'	°	'	°	'								
0	273	16.1	226	03.5	+14	47.0	227	44.9	+16	25.0								
1	288	18.6	241	03.3		47.7	242	45.5		25.5								
2	303	21.0	256	03.1		48.4	257	46.2		26.1								
3	318	23.5	271	03.0		49.1	272	46.8		26.6								
4	333	26.0	286	02.8		49.8	287	47.5		27.1								
5	348	28.4	301	02.6	+14	50.6	302	48.1	+16	27.6								
6	3	30.9	316	02.5	+14	51.3	317	48.8	+16	28.2								
7	18	33.4	331	02.3		52.0	332	49.5		28.7								
8	33	35.8	346	02.1		52.7	347	50.1		29.2								
9	48	38.3	1	02.0		53.4	2	50.8		29.8								
10	63	40.7	16	01.8		54.1	17	51.4		30.3								
11	78	43.2	31	01.6	+14	54.9	32	52.1	+16	30.8								
12	93	45.7	46	01.5	+14	55.6	47	52.7	+16	31.3								
13	108	48.1	61	01.3		56.3	62	53.4		31.9								
14	123	50.6	76	01.1		57.0	77	54.1		32.4								
15	138	53.1	91	01.0		57.7	92	54.7		32.9								
16	153	55.5	106	00.8		58.4	107	55.4		33.4								
17	168	58.0	121	00.6	+14	59.1	122	56.0	+16	34.0								
18	184	00.5	136	00.4	+14	59.8	137	56.7	+16	34.5								
19	199	02.9	151	00.3	+15	00.6	152	57.4		35.0								
20	214	05.4	166	00.1		01.3	167	58.0		35.5								
21	229	07.9	180	59.9		02.0	182	58.7		36.1								
22	244	10.3	195	59.7		02.7	197	59.3		36.6								
23	259	12.8	210	59.6		03.4	213	00.0		37.1								
24	274	15.2	225	59.4	+15	04.1	228	00.6	+16	37.6								
Dif	—		-2		+7		+7		+5		+25		0		+23		-1	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15 ^h 7 PMG: 12 ^h 02 ^m 9			Edad: 3 ^d 2 PHE { 4 ^h : 60 ^m 2 12 ^h : 59 ^m 9 20 ^h : 59 ^m 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	179	18.3	+23	21.7	133	07.3	+13	25.7	60 N	** *	0 53	2 38	8 04	99	22 48	4		
1	194	18.1		21.6	147	35.0	87	+13 11.4	58	** *	1 43	2 58	11 95		44	7		
2	209	18.0		21.5	162	02.9	89	+12 56.9	56	** *	2 13	3 15	17 91		40	10		
3	224	17.9		21.4	176	30.9	90	42.4	54	0 49	35	29	22 89		37	13		
4	239	17.7		21.3	190	59.0	91	27.8	52	1 35	2 53	41	27 86		34	15		
5	254	17.6	+23	21.3	205	27.2	92	+12 13.2	50	2 02	3 08	3 52	8 31	83	22 31	17		
6	269	17.5	+23	21.2	219	55.5	93	+11 58.5	45	2 48	3 37	4 15	8 41	77	22 25	22		
7	284	17.3		21.1	234	23.9	94	43.8	40	3 18	4 00	33	49 73		20	26		
8	299	17.2		21.0	248	52.3	94	29.0	35	3 41	18	4 48	8 55	69	15	30		
9	314	17.1		20.9	263	20.9	96	+11 14.2	30	4 00	33	5 01	9 01	66	11	34		
10	329	16.9		20.8	277	49.6	97	+10 59.3	20	29	4 58	23	11 60		22 04	39		
11	344	16.8	+23	20.7	292	18.4	98	+10 44.4	10 N	4 52	5 19	5 42	9 20	55	21 58	44		
12	359	16.7	+23	20.6	306	47.2	98	+10 29.4	0	5 10	5 37	5 59	9 28	50	21 52	49		
13	14	16.5		20.5	321	16.2	100	+10 14.4	10 S	27	5 54	6 17	36 46		46	54		
14	29	16.4		20.5	335	45.3	101	+9 59.4	20	5 44	6 11	35	45 41		40	59		
15	44	16.3		20.4	350	14.4	101	44.3	30	6 00	30	6 56	9 55	35	33	64		
16	59	16.2		20.3	4	43.6	102	29.2	35	09	40	7 09	10 01	31	29	67		
17	74	16.0	+23	20.2	19	12.9	103	+9 14.0	40	6 18	6 52	7 23	10 07	28	21 24	71		
18	89	15.9	+23	20.1	33	42.3	104	+8 58.8	45	6 28	7 06	7 39	10 15	23	21 18	76		
19	104	15.8		20.0	48	11.8	105	43.6	50	40	22	8 00	24 18		11	82		
20	119	15.6		19.9	62	41.4	106	28.3	52	45	29	10	28 16		08	84		
21	134	15.5		19.8	77	11.0	106	+8 13.1	54	51	37	21	32 14		05	86		
22	149	15.4		19.7	91	40.8	108	+7 57.8	56	6 57	46	34	37 11		21 01	89		
23	164	15.2		19.6	106	10.6	108	42.4	58	7 04	7 57	8 48	43 7		20 56	94		
24	179	15.1	+23	19.5	120	40.5	109	+7 27.1	60 S	7 11	8 08	9 06	10 49	3	20 51	98		
UT	ARIES		VENUS			MARTE			JÚPITER				SATURNO					
	PMG 5 ^h 42 ^m 0		Mag: -4.2 PMG: 8 ^h 56 ^m			Mag: +1.1 PMG: 8 ^h 48 ^m			Mag: -2.7 PMG: 3 ^h 40 ^m				Mag: +1.0 PMG: 16 ^h 53 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	274	15.2	225	59.4	+15	04.1	228	00.6	+16	37.6	304	52.9	-13	25.4	106	06.3	+7	19.5
1	289	17.7	240	59.2		04.8	243	01.3		38.1	319	55.5		25.4	121	08.6		19.4
2	304	20.2	255	59.0		05.5	258	02.0		38.7	334	58.0		25.5	136	11.0		19.3
3	319	22.6	270	58.9		06.2	273	02.6		39.2	350	00.5		25.5	151	13.3		19.3
4	334	25.1	285	58.7		07.0	288	03.3		39.7	5	03.1		25.6	166	15.6		19.2
5	349	27.6	300	58.5	+15	07.7	303	03.9	+16	40.2	20	05.6	-13	25.6	181	17.9	+7	19.1
6	4	30.0	315	58.3	+15	08.4	318	04.6	+16	40.8	35	08.2	-13	25.6	196	20.2	+7	19.1
7	19	32.5	330	58.1		09.1	333	05.2		41.3	50	10.7		25.7	211	22.5		19.0
8	34	35.0	345	58.0		09.8	348	05.9		41.8	65	13.3		25.7	226	24.9		18.9
9	49	37.4	0	57.8		10.5	3	06.6		42.3	80	15.8		25.8	241	27.2		18.8
10	64	39.9	15	57.6		11.2	18	07.2		42.8	95	18.4		25.8	256	29.5		18.8
11	79	42.4	30	57.4	+15	11.9	33	07.9	+16	43.4	110	20.9	-13	25.8	271	31.8	+7	18.7
12	94	44.8	45	57.2	+15	12.6	48	08.5	+16	43.9	125	23.4	-13	25.9	286	34.1	+7	18.6
13	109	47.3	60	57.0		13.3	63	09.2		44.4	140	26.0		25.9	301	36.4		18.6
14	124	49.7	75	56.8		14.0	78	09.8		44.9	155	28.5		26.0	316	38.8		18.5
15	139	52.2	90	56.7		14.7	93	10.5		45.4	170	31.1		26.0	331	41.1		18.4
16	154	54.7	105	56.5		15.4	108	11.2		45.9	185	33.6		26.0	346	43.4		18.4
17	169	57.1	120	56.3	+15	16.1	123	11.8	+16	46.5	200	36.2	-13	26.1	1	45.7	+7	18.3
18	184	59.6	135	56.1	+15	16.9	138	12.5	+16	47.0	215	38.7	-13	26.1	16	48.0	+7	18.2
19	200	02.1	150	55.9		17.6	153	13.1		47.5	230	41.3		26.2	31	50.3		18.2
20	215	04.5	165	55.7		18.3	168	13.8		48.0	245	43.8		26.2	46	52.6		18.1
21	230	07.0	180	55.5		19.0	183	14.4		48.5	260	46.4		26.3	61	55.0		18.0
22	245	09.5	195	55.3		19.7	198	15.1		49.0	275	48.9		26.3	76	57.3		17.9
23	260	11.9	210	55.1		20.4	213	15.7		49.6	290	51.5		26.3	91	59.6		17.9
24	275	14.4	225	55.0	+15	21.1	228	16.4	+16	50.1	305	54.0	-13	26.4	107	01.9	+7	17.8
Dif	—		-2 +7			+7 +5			+25 0				+23 -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 : 59/4 12 ^h : 59/1 20 ^h : 58/8	Latitud			Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	PMG: 12 ^h 03 ^m 1									PMG: 16 ^h 30 ^m			R°: 47 ^m			
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	°	'	°	h m	h m	h m	h m	m	h m	m
0	179	15.1	+23 19.5	120	40.5	+7 27.1	60 N	21 27	23 10	** **	9 43 95	22 52	3			
1	194	15.0	19.4	135	10.5 ¹¹⁰	+7 11.7 ¹⁵⁴	58	21 07	22 22	** **	46 91	51	6			
2	209	14.8	19.3	149	40.5 ¹¹⁰	+6 56.3 ¹⁵⁴	56	20 50	21 52	** **	48 88	50	9			
3	224	14.7	19.2	164	10.6 ¹¹¹	40.9 ¹⁵⁴	54	36	30	23 14	51 84	50	1			
4	239	14.6	19.1	178	40.8 ¹¹²	25.5 ¹⁵⁴	52	24	21 13	22 30	53 82	49	14			
5	254	14.5	+23 19.0	193	11.1 ¹¹³	+6 10.0 ¹⁵⁵	50	20 13	20 58	22 03	9 54 80	22 48	17			
6	269	14.3	+23 18.9	207	41.4 ¹¹³	+5 54.6 ¹⁵⁴	45	19 51	20 28	21 18	9 58 75	22 47	21			
7	284	14.2	18.8	222	11.8 ¹¹⁴	39.1 ¹⁵⁵	40	33	20 06	20 47	10 02 69	46	25			
8	299	14.1	18.7	236	42.3 ¹¹⁵	23.6 ¹⁵⁵	35	18	19 48	24	04 66	45	29			
9	314	13.9	18.6	251	12.9 ¹¹⁶	+5 08.1 ¹⁵⁵	30	19 05	32	20 06	07 63	45	32			
10	329	13.8	18.5	265	43.5 ¹¹⁶	+4 52.7 ¹⁵⁴	20	18 43	19 08	19 37	11 57	43	38			
11	344	13.7	+23 18.4	280	14.1 ¹¹⁶	+4 37.2 ¹⁵⁵	10 N	18 24	18 47	19 14	10 15 52	22 42	42			
12	359	13.5	+23 18.3	294	44.9 ¹¹⁸	+4 21.7 ¹⁵⁵	0	18 07	18 29	18 55	10 18 48	22 41	47			
13	14	13.4	18.2	309	15.7 ¹¹⁸	+4 06.1 ¹⁵⁶	10 S	17 49	18 12	39	22 43	40	51			
14	29	13.3	18.0	323	46.5 ¹¹⁸	+3 50.6 ¹⁵⁵	20	31	17 55	22	26 37	39	56			
15	44	13.2	17.9	338	17.4 ¹¹⁹	35.1 ¹⁵⁵	30	17 10	36	18 06	30 32	37	62			
16	59	13.0	17.8	352	48.4 ¹²⁰	19.6 ¹⁵⁵	35	16 58	26	17 57	32 29	36	65			
17	74	12.9	+23 17.7	7	19.5 ¹²¹	+3 04.1 ¹⁵⁵	40	16 43	17 14	17 48	10 35 25	22 35	69			
18	89	12.8	+23 17.6	21	50.5 ¹²⁰	+2 48.6 ¹⁵⁵	45	16 27	17 01	17 38	10 38 22	22 34	73			
19	104	12.6	17.5	36	21.7 ¹²²	33.1 ¹⁵⁵	50	16 06	16 45	26	42 16	33	78			
20	119	12.5	17.4	50	52.9 ¹²²	17.7 ¹⁵⁴	52	15 56	37	21	44 14	32	81			
21	134	12.4	17.3	65	24.1 ¹²²	+2 02.2 ¹⁵⁵	54	45	29	15	46 11	31	83			
22	149	12.2	17.1	79	55.4 ¹²³	+1 46.7 ¹⁵⁵	56	33	20	09	48 9	30	87			
23	164	12.1	17.0	94	26.8 ¹²⁴	31.3 ¹⁵⁴	58	18	16 10	17 02	50 6	30	89			
24	179	12.0	+23 16.9	108	58.2 ¹²⁴	+1 15.8 ¹⁵⁵	60 S	15 01	15 58	16 55	10 52 3	22 29	93			

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 5 ^h 38 ^m 1		Mag: -4.2 PMG: 8 ^h 56 ^m		Mag: +1.1 PMG: 8 ^h 47 ^m		Mag: -2.7 PMG: 3 ^h 36 ^m		Mag: +1.0 PMG: 16 ^h 49 ^m					
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄					
h	°	'	°	'	°	'	°	'	°	'				
0	275	14.4	225	55.0	+15 21.1	228	16.4	+16 50.1	305	54.0	-13 26.4	107	01.9	+7 17.8
1	290	16.8	240	54.8	21.8	243	17.1	50.6	320	56.6	26.4	122	04.2	17.7
2	305	19.3	255	54.6	22.5	258	17.7	51.1	335	59.1	26.5	137	06.5	17.7
3	320	21.8	270	54.4	23.2	273	18.4	51.6	351	01.7	26.5	152	08.8	17.6
4	335	24.2	285	54.2	23.9	288	19.0	52.1	6	04.2	26.5	167	11.2	17.5
5	350	26.7	300	54.0	+15 24.6	303	19.7	+16 52.7	21	06.8	-13 26.6	182	13.5	+7 17.5
6	5	29.2	315	53.8	+15 25.3	318	20.3	+16 53.2	36	09.3	-13 26.6	197	15.8	+7 17.4
7	20	31.6	330	53.6	26.0	333	21.0	53.7	51	11.9	26.7	212	18.1	17.3
8	35	34.1	345	53.4	26.7	348	21.7	54.2	66	14.4	26.7	227	20.4	17.2
9	50	36.6	0	53.2	27.4	3	22.3	54.7	81	17.0	26.8	242	22.7	17.2
10	65	39.0	15	53.0	28.1	18	23.0	55.2	96	19.6	26.8	257	25.0	17.1
11	80	41.5	30	52.8	+15 28.8	33	23.6	+16 55.7	111	22.1	-13 26.9	272	27.3	+7 17.0
12	95	44.0	45	52.6	+15 29.5	48	24.3	+16 56.2	126	24.7	-13 26.9	287	29.7	+7 17.0
13	110	46.4	60	52.4	30.2	63	24.9	56.8	141	27.2	26.9	302	32.0	16.9
14	125	48.9	75	52.2	30.9	78	25.6	57.3	156	29.8	27.0	317	34.3	16.8
15	140	51.3	90	52.0	31.6	93	26.2	57.8	171	32.3	27.0	332	36.6	16.8
16	155	53.8	105	51.8	32.3	108	26.9	58.3	186	34.9	27.1	347	38.9	16.7
17	170	56.3	120	51.6	+15 33.0	123	27.6	+16 58.8	201	37.4	-13 27.1	2	41.2	+7 16.6
18	185	58.7	135	51.4	+15 33.7	138	28.2	+16 59.3	216	40.0	-13 27.2	17	43.5	+7 16.5
19	201	01.2	150	51.2	34.4	153	28.9	+16 59.8	231	42.5	27.2	32	45.8	16.5
20	216	03.7	165	51.0	35.1	168	29.5	+17 00.3	246	45.1	27.2	47	48.1	16.4
21	231	06.1	180	50.8	35.8	183	30.2	00.8	261	47.7	27.3	62	50.5	16.3
22	246	08.6	195	50.6	36.5	198	30.8	01.3	276	50.2	27.3	77	52.8	16.3
23	261	11.1	210	50.4	37.2	213	31.5	01.9	291	52.8	27.4	92	55.1	16.2
24	276	13.5	225	50.2	+15 37.9	228	32.1	+17 02.4	306	55.3	-13 27.4	107	57.4	+7 16.1
Dif	—		-2		+7	+7		+5	+26		0	+23		-1

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 5 ^d 2	PHE {	4 ^h : 58 ^m 5 12 ^h : 58 ^m 2 20 ^h : 57 ^m 9								
	PMG: 12 ^h 03 ^m 3							SD: 16 ^h 0			R ^o : 46 ^m			
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	h m	h m
0	179	12.0	+23	16.9	108	58.2	+1	15.8	60 N	** **	0 57	2 39	11 18	92
1	194	11.9		16.8	123	29.6 ¹²⁴	+1	00.4 ¹⁵⁴	58	** *	1 45	3 00	17 88	57 6
2	209	11.7		16.7	138	01.1 ¹²⁵	+0	45.0 ¹⁵⁴	56	** *	2 14	16	16 85	22 59 10
3	224	11.6		16.6	152	32.6 ¹²⁵		29.6 ¹⁵⁴	54	0 52	36	30	15 82	23 01 12
4	239	11.5		16.4	167	04.2 ¹²⁶	+0	14.2 ¹⁵⁴	52	1 36	2 54	42	15 79	03 15
5	254	11.3	+23	16.3	181	35.8 ¹²⁶	-0	01.2 ¹⁵⁴	50	2 04	3 09	3 53	11 14	77
6	269	11.2	+23	16.2	196	07.4 ¹²⁶	-0	16.5 ¹⁵³	45	2 49	3 38	4 16	11 13	71
7	284	11.1		16.1	210	39.1 ¹²⁷		31.8 ¹⁵³	40	3 19	4 01	34	11 68	
8	299	11.0		16.0	225	10.8 ¹²⁷	-0	47.1 ¹⁵³	35	3 42	19	4 48	10 64	14 29
9	314	10.8		15.8	239	42.6 ¹²⁸	-1	02.4 ¹⁵³	30	4 01	34	5 01	10 60	17 31
10	329	10.7		15.7	254	14.4 ¹²⁸		17.6 ¹⁵²	20	30	4 59	23	08 55	21 37
11	344	10.6	+23	15.6	268	46.2 ¹²⁸	-1	32.9 ¹⁵³	10 N	4 52	5 19	5 42	11 07	50
12	359	10.5	+23	15.5	283	18.1 ¹²⁹	-1	48.1 ¹⁵²	0	5 11	5 37	6 00	11 06	46
13	14	10.3		15.3	297	50.0 ¹²⁹	-2	03.2 ¹⁵¹	10 S	28	5 54	17	05 41	31 50
14	29	10.2		15.2	312	21.9 ¹²⁹		18.4 ¹⁵²	20	5 44	6 11	35	03 37	35 55
15	44	10.1		15.1	326	53.8 ¹²⁹		33.5 ¹⁵¹	30	6 00	30	6 56	02 32	39 60
16	59	09.9		15.0	341	25.8 ¹³⁰	-2	48.6 ¹⁵¹	35	09	41	7 09	01 29	41 64
17	74	09.8	+23	14.8	355	57.8 ¹³⁰	-3	03.6 ¹⁵⁰	40	6 18	6 52	7 23	11 00	25
18	89	09.7	+23	14.7	10	29.8 ¹³⁰	-3	18.6 ¹⁵⁰	45	6 29	7 06	7 39	11 00	20
19	104	09.6		14.6	25	01.9 ¹³¹		33.6 ¹⁵⁰	50	40	22	8 00	10 58	17
20	119	09.4		14.5	39	33.9 ¹³⁰	-3	48.6 ¹⁵⁰	52	45	29	10	58 14	53 78
21	134	09.3		14.3	54	06.0 ¹³¹	-4	03.5 ¹⁴⁹	54	51	37	21	57 12	54 82
22	149	09.2		14.2	68	38.1 ¹³¹		18.4 ¹⁴⁹	56	6 57	46	33	57 9	57 84
23	164	09.1		14.1	83	10.2 ¹³¹		33.2 ¹⁴⁸	58	7 04	7 56	8 48	56 6	23 59
24	179	08.9	+23	13.9	97	42.4 ¹³²	-4	48.0 ¹⁴⁸	60 S	7 11	8 08	9 05	10 55	3

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 5 ^h 34 ^m 2		Mag: -4.2 PMG: 8 ^h 57 ^m		Mag: +1.1 PMG: 8 ^h 45 ^m		Mag: -2.7 PMG: 3 ^h 32 ^m		Mag: +1.0 PMG: 16 ^h 46 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	276	13.5	225	50.2	+15	37.9	228	32.1	+17	02.4
1	291	16.0	240	50.0		38.5	243	32.8		02.9
2	306	18.5	255	49.7		39.2	258	33.5		03.4
3	321	20.9	270	49.5		39.9	273	34.1		03.9
4	336	23.4	285	49.3		40.6	288	34.8		04.4
5	351	25.8	300	49.1	+15	41.3	303	35.4	+17	04.9
6	6	28.3	315	48.9	+15	42.0	318	36.1	+17	05.4
7	21	30.8	330	48.7		42.7	333	36.7		05.9
8	36	33.2	345	48.5		43.4	348	37.4		06.4
9	51	35.7	0	48.3		44.1	3	38.0		06.9
10	66	38.2	15	48.1		44.8	18	38.7		07.4
11	81	40.6	30	47.8	+15	45.5	33	39.4	+17	07.9
12	96	43.1	45	47.6	+15	46.2	48	40.0	+17	08.4
13	111	45.6	60	47.4		46.9	63	40.7		08.9
14	126	48.0	75	47.2		47.5	78	41.3		09.4
15	141	50.5	90	47.0		48.2	93	42.0		09.9
16	156	52.9	105	46.8		48.9	108	42.6		10.5
17	171	55.4	120	46.5	+15	49.6	123	43.3	+17	11.0
18	186	57.9	135	46.3	+15	50.3	138	43.9	+17	11.5
19	202	00.3	150	46.1		51.0	153	44.6		12.0
20	217	02.8	165	45.9		51.7	168	45.2		12.5
21	232	05.3	180	45.7		52.4	183	45.9		13.0
22	247	07.7	195	45.4		53.0	198	46.6		13.5
23	262	10.2	210	45.2		53.7	213	47.2		14.0
24	277	12.7	225	45.0	+15	54.4	228	47.9	+17	14.5
Dif	—		-2		+7		+7		+5	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7 PMG: 12 ^h 03 ^m 5			Edad: 6 ^d 2 PHE { SD: 15 ^h 7 PMG: 18 ^h 03 ^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	08.9	+23	13.9	97	42.4	-4	48.0	60 N	21 26	23 06	** **	12 50 90	22 58 4	
1	194	08.8		13.8	112	14.6 ¹³²	-5	02.7 ¹⁴⁷	58	21 06	22 20	** **	45 87	23 03 8	
2	209	08.7		13.7	126	46.7 ¹³¹		17.4 ¹⁴⁷	56	20 50	21 51	** **	41 83	09 11	
3	224	08.6		13.5	141	18.9 ¹³²		32.1 ¹⁴⁷	54	36	30	23 11	37 81	13 14	
4	239	08.4		13.4	155	51.1 ¹³²	-5	46.7 ¹⁴⁶	52	24	21 12	22 29	34 78	18 16	
5	254	08.3	+23	13.3	170	23.3 ¹³²	-6	01.3 ¹⁴⁶	50	20 13	20 57	22 02	12 31 75	23 21 19	
6	269	08.2	+23	13.1	184	55.5 ¹³²	-6	15.8 ¹⁴⁵	45	19 51	20 28	21 17	12 24 71	23 30 23	
7	284	08.1		13.0	199	27.8 ¹³³		30.3 ¹⁴⁵	40	33	20 06	20 47	19 66	37 27	
8	299	07.9		12.8	214	00.0 ¹³²		44.8 ¹⁴⁵	35	18	19 48	24	14 63	43 30	
9	314	07.8		12.7	228	32.3 ¹³³	-6	59.2 ¹⁴⁴	30	19 05	33	20 06	10 60	48 33	
10	329	07.7		12.6	243	04.5 ¹³²	-7	13.5 ¹⁴³	20	18 43	19 08	19 37	12 03 55	23 58 38	
11	344	07.5	+23	12.4	257	36.8 ¹³³	-7	27.8 ¹⁴³	10 N	18 25	18 48	19 15	11 57 50	** ** **	
12	359	07.4	+23	12.3	272	09.0 ¹³²	-7	42.0 ¹⁴²	0	18 07	18 30	18 56	11 52 46	** ** **	
13	14	07.3		12.1	286	41.3 ¹³³	-7	56.2 ¹⁴²	10 S	17 50	18 13	39	46 42	** ** **	
14	29	07.2		12.0	301	13.5 ¹³²	-8	10.4 ¹⁴²	20	32	17 56	23	40 37	** ** **	
15	44	07.0		11.9	315	45.8 ¹³³		24.4 ¹⁴⁰	30	17 11	37	18 07	34 32	** ** **	
16	59	06.9		11.7	330	18.1 ¹³³		38.5 ¹⁴¹	35	16 58	26	17 58	30 29	** ** **	
17	74	06.8	+23	11.6	344	50.3 ¹³²	-8	52.4 ¹³⁹	40	16 44	17 15	17 49	11 25 26	** ** **	
18	89	06.7	+23	11.4	359	22.6 ¹³³	-9	06.3 ¹³⁹	45	16 28	17 01	17 39	11 20 22	** ** **	
19	104	06.6		11.3	13	54.8 ¹³²		20.2 ¹³⁹	50	16 07	16 46	27	15 17	** ** **	
20	119	06.4		11.1	28	27.1 ¹³³		34.0 ¹³⁸	52	15 57	38	22	12 15	** ** **	
21	134	06.3		11.0	42	59.3 ¹³²	-9	47.7 ¹³⁷	54	47	30	16	09 13	** ** **	
22	149	06.2		10.8	57	31.6 ¹³³	-10	01.4 ¹³⁷	56	34	21	10	06 10	** ** **	
23	164	06.1		10.7	72	03.8 ¹³²		15.0 ¹³⁶	58	20	11	17 04	11 02 7	** ** **	
24	179	05.9	+23	10.5	86	36.0 ¹³²	-10	28.6 ¹³⁶	60 S	15 02	16 00	16 56	10 58 4	0 02 91	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 5 ^h 30 ^m 3		Mag: -4.2 PMG: 8 ^h 57 ^m			Mag: +1.1 PMG: 8 ^h 44 ^m			Mag: -2.7 PMG: 3 ^h 28 ^m			Mag: +1.0 PMG: 16 ^h 42 ^m			
	hG ♈		hG ♀			hG ♂			hG ♃			hG ♄			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	277	12.7	225	45.0	+15	54.4	228	47.9	+17	14.5	307	56.8	-13	28.5	
1	292	15.1	240	44.8		55.1	243	48.5		15.0	322	59.4		28.6	
2	307	17.6	255	44.6		55.8	258	49.2		15.5	338	01.9		28.6	
3	322	20.1	270	44.3		56.5	273	49.8		16.0	353	04.5		28.7	
4	337	22.5	285	44.1		57.2	288	50.5		16.5	8	07.1		28.7	
5	352	25.0	300	43.9	+15	57.8	303	51.1	+17	17.0	23	09.6	-13	28.8	
6	7	27.4	315	43.7	+15	58.5	318	51.8	+17	17.5	38	12.2	-13	28.8	
7	22	29.9	330	43.4		59.2	333	52.4		18.0	53	14.8		28.9	
8	37	32.4	345	43.2	+15	59.9	348	53.1		18.5	68	17.4		28.9	
9	52	34.8	0	43.0	+16	00.6	3	53.7		19.0	83	19.9		29.0	
10	67	37.3	15	42.7		01.3	18	54.4		19.5	98	22.5		29.0	
11	82	39.8	30	42.5	+16	01.9	33	55.1	+17	20.0	113	25.1	-13	29.1	
12	97	42.2	45	42.3	+16	02.6	48	55.7	+17	20.5	128	27.6	-13	29.1	
13	112	44.7	60	42.1		03.3	63	56.4		21.0	143	30.2		29.2	
14	127	47.2	75	41.8		04.0	78	57.0		21.5	158	32.8		29.2	
15	142	49.6	90	41.6		04.7	93	57.7		21.9	173	35.3		29.3	
16	157	52.1	105	41.4		05.4	108	58.3		22.4	188	37.9		29.3	
17	172	54.5	120	41.1	+16	06.0	123	59.0	+17	22.9	203	40.5	-13	29.4	
18	187	57.0	135	40.9	+16	06.7	138	59.6	+17	23.4	218	43.0	-13	29.4	
19	202	59.5	150	40.7		07.4	154	00.3		23.9	233	45.6		29.5	
20	218	01.9	165	40.4		08.1	169	00.9		24.4	248	48.2		29.5	
21	233	04.4	180	40.2		08.7	184	01.6		24.9	263	50.8		29.6	
22	248	06.9	195	40.0		09.4	199	02.2		25.4	278	53.3		29.6	
23	263	09.3	210	39.7		10.1	214	02.9		25.9	293	55.9		29.7	
24	278	11.8	225	39.5	+16	10.8	229	03.6	+17	26.4	308	58.5	-13	29.7	
Dif	—		-2			+7	+7			+5	+26			0	+23
															-1

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15'7 PMG: 12 ^h 03 ^m 7			Edad: 7 ^d 2 PHE { SD: 15'5 PMG: 18 ^h 49 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m		
0	179	05.9	+23	10.5	86	36.0	-10	28.6	60 N	** **	1 01	2 41	14 20	91	23 02	6		
1	194	05.8		10.4	101	08.2 ¹³²		42.1 ¹³⁵	58	** **	1 47	3 01		12 86		11 11		
2	209	05.7		10.2	115	40.4 ¹³²	-10	55.5 ¹³⁴	56	** **	2 16	18	14 04	83	20	14		
3	224	05.6		10.1	130	12.6 ¹³²	-11	08.9 ¹³⁴	54	0 56	38	32	13 58	79	27	17		
4	239	05.4		09.9	144	44.8 ¹³²		22.2 ¹³³	52	1 39	2 55	44	52	77	34	19		
5	254	05.3	+23	09.8	159	16.9 ¹³¹	-11	35.4 ¹³²	50	2 06	3 10	3 54	13 46	75	23 40	22		
6	269	05.2	+23	09.6	173	49.1 ¹³²	-11	48.6 ¹³²	45	2 50	3 39	4 17	13 35	69	23 53	26		
7	284	05.1		09.5	188	21.2 ¹³¹	-12	01.6 ¹³⁰	40	3 20	4 02	34	25	66	** **	** **		
8	299	04.9		09.3	202	53.3 ¹³¹		14.7 ¹³¹	35	3 43	20	4 49	17	62	** **	** **		
9	314	04.8		09.2	217	25.4 ¹³¹		27.6 ¹²⁹	30	4 01	35	5 02	13 10	60	** **	** **		
10	329	04.7		09.0	231	57.5 ¹³¹		40.5 ¹²⁹	20	30	4 59	24	12 58	55	** **	** **		
11	344	04.6	+23	08.8	246	29.6 ¹³¹	-12	53.3 ¹²⁸	10 N	4 53	5 20	5 43	12 47	51	0 06	42		
12	359	04.5	+23	08.7	261	01.6 ¹³⁰	-13	06.1 ¹²⁸	0	5 11	5 38	6 00	12 38	46	0 14	46		
13	14	04.3		08.5	275	33.6 ¹³⁰		18.7 ¹²⁶	10 S	28	5 54	17	28	43	21	51		
14	29	04.2		08.4	290	05.6 ¹³⁰		31.3 ¹²⁶	20	5 44	6 12	36	17	39	30	54		
15	44	04.1		08.2	304	37.6 ¹³⁰		43.9 ¹²⁶	30	6 00	30	6 57	12 06	34	39	60		
16	59	04.0		08.0	319	09.6 ¹³⁰	-13	56.3 ¹²⁴	35	09	41	7 09	11 59	31	45	62		
17	74	03.8	+23	07.9	333	41.5 ¹²⁹	-14	08.7 ¹²⁴	40	6 18	6 52	7 23	11 51	29	0 51	66		
18	89	03.7	+23	07.7	348	13.4 ¹²⁹	-14	21.0 ¹²³	45	6 28	7 06	7 39	11 42	25	0 58	70		
19	104	03.6		07.6	2	45.3 ¹²⁹		33.2 ¹²²	50	40	21	8 00	32	20	1 07	75		
20	119	03.5		07.4	17	17.2 ¹²⁹		45.3 ¹²¹	52	45	29	09	27	18	11	78		
21	134	03.4		07.2	31	49.0 ¹²⁸	-14	57.4 ¹²¹	54	51	37	20	22	15	16	80		
22	149	03.2		07.1	46	20.8 ¹²⁸	-15	09.4 ¹²⁰	56	6 57	46	33	16	12	21	83		
23	164	03.1		06.9	60	52.6 ¹²⁸		21.2 ¹¹⁸	58	7 03	7 56	8 47	09	9	26	87		
24	179	03.0	+23	06.7	75	24.3 ¹²⁷	-15	33.1 ¹¹⁹	60 S	7 11	8 07	9 04	11 02	5	1 33	90		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG 5 ^h 26 ^m 3			Mag: -4.2 PMG: 8 ^h 58 ^m			Mag: +1.1 PMG: 8 ^h 43 ^m			Mag: -2.7 PMG: 3 ^h 24 ^m			Mag: +1.0 PMG: 16 ^h 38 ^m					
	hG ♈		Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	278	11.8	225	39.5	+16	10.8	229	03.6	+17	26.4	308	58.5	-13	29.7	109	48.1	+7	12.6
1	293	14.3	240	39.2		11.5	244	04.2		26.9	324	01.1		29.8	124	50.4		12.6
2	308	16.7	255	39.0		12.1	259	04.9		27.4	339	03.6		29.8	139	52.8		12.5
3	323	19.2	270	38.8		12.8	274	05.5		27.9	354	06.2		29.9	154	55.1		12.4
4	338	21.7	285	38.5		13.5	289	06.2		28.4	9	08.8		29.9	169	57.4		12.3
5	353	24.1	300	38.3	+16	14.2	304	06.8	+17	28.9	24	11.3	-13	30.0	184	59.7	+7	12.3
6	8	26.6	315	38.0	+16	14.8	319	07.5	+17	29.4	39	13.9	-13	30.0	200	02.0	+7	12.2
7	23	29.0	330	37.8		15.5	334	08.1		29.9	54	16.5		30.1	215	04.3		12.1
8	38	31.5	345	37.6		16.2	349	08.8		30.3	69	19.1		30.1	230	06.6		12.0
9	53	34.0	0	37.3		16.9	4	09.4		30.8	84	21.6		30.2	245	08.9		12.0
10	68	36.4	15	37.1		17.5	19	10.1		31.3	99	24.2		30.2	260	11.2		11.9
11	83	38.9	30	36.8	+16	18.2	34	10.7	+17	31.8	114	26.8	-13	30.3	275	13.5	+7	11.8
12	98	41.4	45	36.6	+16	18.9	49	11.4	+17	32.3	129	29.4	-13	30.3	290	15.8	+7	11.7
13	113	43.8	60	36.3		19.5	64	12.0		32.8	144	32.0		30.4	305	18.1		11.7
14	128	46.3	75	36.1		20.2	79	12.7		33.3	159	34.5		30.4	320	20.4		11.6
15	143	48.8	90	35.8		20.9	94	13.4		33.8	174	37.1		30.5	335	22.7		11.5
16	158	51.2	105	35.6		21.6	109	14.0		34.3	189	39.7		30.5	350	25.0		11.4
17	173	53.7	120	35.3	+16	22.2	124	14.7	+17	34.8	204	42.3	-13	30.6	5	27.3	+7	11.4
18	188	56.2	135	35.1	+16	22.9	139	15.3	+17	35.2	219	44.8	-13	30.6	20	29.6	+7	11.3
19	203	58.6	150	34.9		23.6	154	16.0		35.7	234	47.4		30.7	35	31.9		11.2
20	219	01.1	165	34.6		24.2	169	16.6		36.2	249	50.0		30.7	50	34.2		11.1
21	234	03.5	180	34.4		24.9	184	17.3		36.7	264	52.6		30.8	65	36.5		11.1
22	249	06.0	195	34.1		25.6	199	17.9		37.2	279	55.2		30.8	80	38.8		11.0
23	264	08.5	210	33.8		26.2	214	18.6		37.7	294	57.7		30.9	95	41.1		10.9
24	279	10.9	225	33.6	+16	26.9	229	19.2	+17	38.2	310	00.3	-13	30.9	110	43.4	+7	10.8
Dif	—			-2 +7			+7 +5			+26 -1			+23 -1					

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7 PMG: 12 ^h 03 ^m 9			Edad: 8 ^d 2 PHE { 4 ^h : 56 ^m 1 12 ^h : 55 ^m 9 SD: 15 ^h 3 PMG: 19 ^h 36 ^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	h m
0	179	03.0	+23 06.7	75	24.3	-15 33.1	60 N	21 25	23 02	** **	15 51 90	23 08 11		
1	194	02.9	06.6	89	56.1 ¹²⁸	44.8 ¹¹⁷	58	21 05	22 18	** **	38 85	22 15		
2	209	02.8	06.4	104	27.7 ¹²⁶	-15 56.4 ¹¹⁶	56	20 49	21 50	** **	27 81	34 19		
3	224	02.6	06.2	118	59.4 ¹²⁷	-16 08.0 ¹¹⁶	54	35	29	23 08	17 78	44 22		
4	239	02.5	06.1	133	31.0 ¹²⁶	19.5 ¹¹⁵	52	23	21 11	22 27	09 74	23 53 25		
5	254	02.4	+23 05.9	148	02.7 ¹²⁷	-16 30.9 ¹¹⁴	50	20 12	20 57	22 01	15 01 72	** * *	**	
6	269	02.3	+23 05.7	162	34.2 ¹²⁵	-16 42.2 ¹¹³	45	19 50	20 28	21 17	14 44 68	** * *	**	
7	284	02.1	05.5	177	05.8 ¹²⁶	-16 53.4 ¹¹²	40	33	20 05	20 47	31 64	0 04 30		
8	299	02.0	05.4	191	37.3 ¹²⁵	-17 04.5 ¹¹¹	35	18	19 48	24	19 62	13 33		
9	314	01.9	05.2	206	08.7 ¹²⁴	15.6 ¹¹¹	30	19 05	33	20 06	14 10 59	21 36		
10	329	01.8	05.0	220	40.2 ¹²⁵	26.5 ¹⁰⁹	20	18 44	19 08	19 37	13 53 55	36 40		
11	344	01.7	+23 04.9	235	11.6 ¹²⁴	-17 37.4 ¹⁰⁹	10 N	18 25	18 48	19 15	13 38 51	0 48 44		
12	359	01.6	+23 04.7	249	43.0 ¹²⁴	-17 48.2 ¹⁰⁸	0	18 08	18 30	18 56	13 24 48	1 00 47		
13	14	01.4	04.5	264	14.3 ¹²³	-17 58.9 ¹⁰⁷	10 S	17 50	18 13	39	13 11 45	12 51		
14	29	01.3	04.3	278	45.6 ¹²³	-18 09.5 ¹⁰⁶	20	32	17 56	24	12 56 42	24 55		
15	44	01.2	04.1	293	16.9 ¹²³	19.9 ¹⁰⁴	30	17 11	38	18 07	40 37	39 59		
16	59	01.1	04.0	307	48.1 ¹²²	30.4 ¹⁰⁵	35	16 59	27	17 59	30 35	47 62		
17	74	01.0	+23 03.8	322	19.3 ¹²²	-18 40.7 ¹⁰³	40	16 45	17 16	17 50	12 20 32	1 57 65		
18	89	00.8	+23 03.6	336	50.5 ¹²²	-18 50.9 ¹⁰²	45	16 29	17 02	17 40	12 07 29	2 08 69		
19	104	00.7	03.4	351	21.6 ¹²¹	-19 01.0 ¹⁰¹	50	16 08	16 47	28	11 52 24	22 74		
20	119	00.6	03.3	5	52.7 ¹²¹	11.0 ¹⁰⁰	52	15 59	39	23	45 22	29 75		
21	134	00.5	03.1	20	23.7 ¹²⁰	20.9 ⁹⁹	54	48	31	17	37 19	36 78		
22	149	00.4	02.9	34	54.7 ¹²⁰	30.8 ⁹⁹	56	36	23	11	28 16	44 82		
23	164	00.2	02.7	49	25.7 ¹²⁰	40.5 ⁹⁷	58	21	13	17 05	18 13	2 53 86		
24	179	00.1	+23 02.5	63	56.7 ¹²⁰	-19 50.1 ⁹⁶	60 S	15 04	16 01	16 58	11 07 8	3 03 91		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 5 ^h 22 ^m 4		Mag: -4.2 PMG: 8 ^h 58 ^m		Mag: +1.1 PMG: 8 ^h 42 ^m		Mag: -2.7 PMG: 3 ^h 19 ^m		Mag: +1.0 PMG: 16 ^h 35 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	279	10.9	225	33.6	+16 26.9	229	19.2	+17 38.2	310	00.3	-13 30.9	110	43.4	+7 10.8
1	294	13.4	240	33.3	27.6	244	19.9	38.6	325	02.9	31.0	125	45.7	10.8
2	309	15.9	255	33.1	28.2	259	20.5	39.1	340	05.5	31.0	140	48.0	10.7
3	324	18.3	270	32.8	28.9	274	21.2	39.6	355	08.1	31.1	155	50.3	10.6
4	339	20.8	285	32.6	29.6	289	21.8	40.1	10	10.6	31.1	170	52.6	10.5
5	354	23.3	300	32.3	+16 30.2	304	22.5	+17 40.6	25	13.2	-13 31.2	185	54.9	+7 10.5
6	9	25.7	315	32.1	+16 30.9	319	23.1	+17 41.1	40	15.8	-13 31.3	200	57.2	+7 10.4
7	24	28.2	330	31.8	31.6	334	23.8	41.6	55	18.4	31.3	215	59.5	10.3
8	39	30.6	345	31.6	32.2	349	24.4	42.0	70	21.0	31.4	231	01.8	10.2
9	54	33.1	0	31.3	32.9	4	25.1	42.5	85	23.6	31.4	246	04.1	10.2
10	69	35.6	15	31.0	33.6	19	25.7	43.0	100	26.1	31.5	261	06.4	10.1
11	84	38.0	30	30.8	+16 34.2	34	26.4	+17 43.5	115	28.7	-13 31.5	276	08.7	+7 10.0
12	99	40.5	45	30.5	+16 34.9	49	27.1	+17 44.0	130	31.3	-13 31.6	291	11.0	+7 09.9
13	114	43.0	60	30.3	35.5	64	27.7	44.5	145	33.9	31.6	306	13.3	09.9
14	129	45.4	75	30.0	36.2	79	28.4	44.9	160	36.5	31.7	321	15.6	09.8
15	144	47.9	90	29.7	36.9	94	29.0	45.4	175	39.1	31.7	336	17.9	09.7
16	159	50.4	105	29.5	37.5	109	29.7	45.9	190	41.6	31.8	351	20.2	09.6
17	174	52.8	120	29.2	+16 38.2	124	30.3	+17 46.4	205	44.2	-13 31.8	6	22.5	+7 09.6
18	189	55.3	135	28.9	+16 38.8	139	31.0	+17 46.9	220	46.8	-13 31.9	21	24.8	+7 09.5
19	204	57.8	150	28.7	39.5	154	31.6	47.3	235	49.4	32.0	36	27.1	09.4
20	220	00.2	165	28.4	40.2	169	32.3	47.8	250	52.0	32.0	51	29.4	09.3
21	235	02.7	180	28.1	40.8	184	32.9	48.3	265	54.6	32.1	66	31.7	09.3
22	250	05.1	195	27.9	41.5	199	33.6	48.8	280	57.2	32.1	81	34.0	09.2
23	265	07.6	210	27.6	42.1	214	34.2	49.3	295	59.7	32.2	96	36.3	09.1
24	280	10.1	225	27.3	+16 42.8	229	34.9	+17 49.7	311	02.3	-13 32.2	111	38.6	+7 09.0
Dif	—	-3	+7		+7	+5		+26	-1		+23		-1	

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^s5 12^h: 55^s3 20^h: 55^s2											
	PMG: 12 ^h 04 ^m 1									SD: 15 ^h 1			PMG: 20 ^h 24 ^m			R ^o : 50 ^m	
	hG ☉	Dec		hG ☾	Dif		Dec	Dif		Náutico	Civil		Hora	R ^o	Hora	R ^o	
h	°	'	°	°	'	°	'	°	°	h	m	h	m	h	m	h	m
0	179	00.1	+23	02.5	63	56.7	−19	50.1	60 N	**	**	1 06	2 43	17 21	85	23 19	18
1	194	00.0		02.3	78	27.5 ¹¹⁸	−19	59.6	58	**	**	1 50	3 03	17 03	79		37 24
2	208	59.9		02.2	92	58.4 ¹¹⁹	−20	09.1	56	**	**	2 18	19	16 48	75	23 53	28
3	223	59.8		02.0	107	29.2 ¹¹⁸		18.4	54	1	01	40	33	35	72	**	**
4	238	59.7		01.8	122	00.0 ¹¹⁸		27.6	52	1	41	2 57	45	23	71	**	**
5	253	59.5	+23	01.6	136	30.8 ¹¹⁸	−20	36.7	50	2	08	3 12	3 56	16 13	69	0 02	27
6	268	59.4	+23	01.4	151	01.5 ¹¹⁷	−20	45.8	45	2	51	3 41	4 18	15 52	65	0 19	32
7	283	59.3		01.2	165	32.1 ¹¹⁶	−20	54.7	40	3	21	4 03	35	35	62	34	34
8	298	59.2		01.0	180	02.8 ¹¹⁷	−21	03.5	35	3	44	21	4 50	21	60	46	37
9	313	59.1		00.8	194	33.3 ¹¹⁵		12.2	30	4	02	4 36	5 03	15 09	57	0 57	39
10	328	59.0		00.7	209	03.9 ¹¹⁶		20.8	20	31	5 00	25	25	14 48	54	1 16	43
11	343	58.8	+23	00.5	223	34.4 ¹¹⁵	−21	29.3	10 N	4	53	5 20	5 43	14 29	53	1 32	46
12	358	58.7	+23	00.3	238	04.9 ¹¹⁵	−21	37.6	0	5	12	5 38	6 00	14 12	50	1 47	49
13	13	58.6	+23	00.1	252	35.3 ¹¹⁴		45.9	10 S	28	5 55	18	13	56	47	2 03	51
14	28	58.5	+22	59.9	267	05.7 ¹¹⁴	−21	54.1	20	5	44	6 12	36	38	45	19	55
15	43	58.4		59.7	281	36.1 ¹¹⁴	−22	02.1	30	6	00	30	6 57	17	42	38	59
16	58	58.3		59.5	296	06.4 ¹¹³		10.1	35	09	41	7 09	13	05	40	2 49	61
17	73	58.1	+22	59.3	310	36.7 ¹¹³	−22	17.9	40	6	18	6 52	7 23	12 52	37	3 02	63
18	88	58.0	+22	59.1	325	06.9 ¹¹²	−22	25.6	45	6	28	7 05	7 39	12 36	34	3 17	67
19	103	57.9		58.9	339	37.1 ¹¹²		33.2	50	40	21	7 59	16	31		36	70
20	118	57.8		58.7	354	07.3 ¹¹²		40.7	52	45	28	8 09	12	07	28	44	73
21	133	57.7		58.5	8	37.4 ¹¹¹		48.1	74	54	50	36	20	11	56	26	3 54
22	148	57.6		58.3	23	07.5 ¹¹¹	−22	55.4	73	56	6 56	45	32	44	24	4 06	78
23	163	57.4		58.1	37	37.6 ¹¹¹	−23	02.6	72	58	7 03	7 55	8 46	31	19	19	82
24	178	57.3	+22	57.9	52	07.6 ¹¹⁰	−23	09.6	70	60 S	7 10	8 06	9 03	11 15	14	4 34	88

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG		Mag: −4.2		Mag: +1.1		Mag: −2.7		Mag: +1.1	
	5 ^h 18 ^m 5		PMG: 8 ^h 58 ^m		PMG: 8 ^h 41 ^m		PMG: 3 ^h 15 ^m		PMG: 16 ^h 31 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	280	10.1	225	27.3	+16	42.8	229	34.9	+17	49.7
1	295	12.5	240	27.1		43.5	244	35.5		50.2
2	310	15.0	255	26.8		44.1	259	36.2		50.7
3	325	17.5	270	26.5		44.8	274	36.8		51.2
4	340	19.9	285	26.3		45.4	289	37.5		51.7
5	355	22.4	300	26.0	+16	46.1	304	38.1	+17	52.1
6	10	24.9	315	25.7	+16	46.7	319	38.8	+17	52.6
7	25	27.3	330	25.5		47.4	334	39.4		53.1
8	40	29.8	345	25.2		48.0	349	40.1		53.6
9	55	32.3	0	24.9		48.7	4	40.7		54.0
10	70	34.7	15	24.6		49.3	19	41.4		54.5
11	85	37.2	30	24.4	+16	50.0	34	42.0	+17	55.0
12	100	39.6	45	24.1	+16	50.6	49	42.7	+17	55.5
13	115	42.1	60	23.8		51.3	64	43.3		55.9
14	130	44.6	75	23.5		51.9	79	44.0		56.4
15	145	47.0	90	23.3		52.6	94	44.6		56.9
16	160	49.5	105	23.0		53.2	109	45.3		57.4
17	175	52.0	120	22.7	+16	53.9	124	45.9	+17	57.8
18	190	54.4	135	22.4	+16	54.5	139	46.6	+17	58.3
19	205	56.9	150	22.1		55.2	154	47.2		58.8
20	220	59.4	165	21.9		55.8	169	47.9		59.3
21	236	01.8	180	21.6		56.5	184	48.5	+17	59.7
22	251	04.3	195	21.3		57.1	199	49.2	+18	00.2
23	266	06.8	210	21.0		57.8	214	49.8		00.7
24	281	09.2	225	20.7	+16	58.4	229	50.5	+18	01.2
Dif	—		−3		+7		+7		+5	
									+26	−1
									+23	−1

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7 PMG: 12 ^h 04 ^m 3			Edad: 10 ^d 2 PHE { 4 ^h : 55 ^o 0 12 ^h : 54 ^o 9 20 ^h : 54 ^o 7 R°: 52 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	h m		
0	178	57.3	+22 57.9	52	07.6	-23 09.6	69	60 N	21 23	22 58	** **	18 46	73	23 37	34
1	193	57.2		66	37.6 ¹¹⁰	16.5	69	58	21 04	22 16	** **	22 69		** **	**
2	208	57.1		81	07.5 ¹⁰⁹	23.3	68	56	20 48	21 48	** **	18 03	66	** **	**
3	223	57.0		95	37.4 ¹⁰⁹	30.0	67	54	34	27	23 03	17 47	64	0 06	33
4	238	56.9		110	07.3 ¹⁰⁹	36.6	66	52	22	21 10	22 25	34	62	18	33
5	253	56.8	+22 56.9	124	37.1 ¹⁰⁸	-23 43.1	65	50	20 12	20 56	21 59	17 22	61	0 29	34
6	268	56.6	+22 56.7	139	06.9 ¹⁰⁸	-23 49.4	63	45	19 50	20 27	21 16	16 57	59	0 51	38
7	283	56.5		153	36.7 ¹⁰⁸	-23 55.6	62	40	32	20 05	20 46	37	58	1 08	41
8	298	56.4		168	06.5 ¹⁰⁸	-24 01.7	61	35	18	19 47	24	21	56	23	43
9	313	56.3		182	36.2 ¹⁰⁷	07.7	60	30	19 05	32	20 06	16 06	56	36	44
10	328	56.2		197	05.9 ¹⁰⁷	13.6	59	20	18 44	19 08	19 37	15 42	54	1 59	46
11	343	56.1	+22 55.7	211	35.5 ¹⁰⁶	-24 19.3	57	10 N	18 25	18 48	19 15	15 22	52	2 18	49
12	358	56.0	+22 55.5	226	05.1 ¹⁰⁶	-24 25.0	55	0	18 08	18 30	18 56	15 02	51	2 36	51
13	13	55.8		240	34.7 ¹⁰⁶	30.5	55	10 S	17 51	18 14	40	14 43	50	2 54	53
14	28	55.7		255	04.3 ¹⁰⁶	35.8	53	20	33	17 57	24	14 23	48	3 14	54
15	43	55.6		269	33.8 ¹⁰⁵	41.1	53	30	12	38	08	13 59	46	37	56
16	58	55.5		284	03.3 ¹⁰⁵	46.2	51	35	17 00	28	18 00	45	45	3 50	58
17	73	55.4	+22 54.4	298	32.8 ¹⁰⁵	-24 51.2	50	40	16 46	17 17	17 51	13 29	44	4 05	60
18	88	55.3	+22 54.2	313	02.2 ¹⁰⁴	-24 56.1	49	45	16 30	17 04	17 41	13 10	42	4 24	62
19	103	55.2		327	31.6 ¹⁰⁴	-25 00.9	48	50	10	16 48	29	12 47	39	46	66
20	118	55.1		342	01.0 ¹⁰⁴	05.5	46	52	16 00	41	24	35	38	4 57	67
21	133	54.9		356	30.4 ¹⁰⁴	10.1	46	54	15 49	33	19	22	36	5 10	69
22	148	54.8		53.3	10 59.7 ¹⁰³	14.4	43	56	37	24	13	12 08	33	24	72
23	163	54.7		53.1	25 29.0 ¹⁰³	18.7	43	58	23	14	17 06	11 50	31	5 41	75
24	178	54.6	+22 52.9	39	58.3 ¹⁰³	-25 22.9	42	60 S	15 06	16 03	16 59	11 29	26	6 02	79
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 5 ^h 14 ^m 5		Mag: -4.2 PMG: 8 ^h 59 ^m		Mag: +1.1 PMG: 8 ^h 40 ^m		Mag: -2.7 PMG: 3 ^h 11 ^m		Mag: +1.1 PMG: 16 ^h 27 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	281	09.2	225	20.7	229	50.5	312	04.5	112	33.7					
1	296	11.7	240	20.5	244	51.1	327	07.1	127	36.0					
2	311	14.1	255	20.2	259	51.8	342	09.7	142	38.3					
3	326	16.6	270	19.9	274	52.5	357	12.3	157	40.6					
4	341	19.1	285	19.6	289	53.1	12	14.9	172	42.9					
5	356	21.5	300	19.3	304	53.8	27	17.5	187	45.2					
6	11	24.0	315	19.0	319	54.4	42	20.1	202	47.5					
7	26	26.5	330	18.7	334	55.1	57	22.7	217	49.8					
8	41	28.9	345	18.5	349	55.7	72	25.3	232	52.1					
9	56	31.4	0	18.2	4	56.4	87	27.9	247	54.4					
10	71	33.9	15	17.9	19	57.0	102	30.5	262	56.7					
11	86	36.3	30	17.6	34	57.7	117	33.1	277	59.0					
12	101	38.8	45	17.3	49	58.3	132	35.7	293	01.3					
13	116	41.2	60	17.0	64	59.0	147	38.3	308	03.5					
14	131	43.7	75	16.7	79	59.6	162	40.9	323	05.8					
15	146	46.2	90	16.4	95	00.3	177	43.5	338	08.1					
16	161	48.6	105	16.1	110	00.9	192	46.1	353	10.4					
17	176	51.1	120	15.8	125	01.6	207	48.7	8	12.7					
18	191	53.6	135	15.6	140	02.2	222	51.3	23	15.0					
19	206	56.0	150	15.3	155	02.9	237	53.9	38	17.3					
20	221	58.5	165	15.0	170	03.5	252	56.5	53	19.6					
21	237	01.0	180	14.7	185	04.2	267	59.1	68	21.9					
22	252	03.4	195	14.4	200	04.8	283	01.7	83	24.2					
23	267	05.9	210	14.1	215	05.5	298	04.3	98	26.5					
24	282	08.4	225	13.8	230	06.1	313	06.9	113	28.8					
Dif	—		-3	+6	+7	+5	+26	-1	+23	-1					

UT	SOL			O LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 11 ^d 2	PHE { 4 ^h : 54/6 12 ^h : 54/5 20 ^h : 54/4									
	PMG: 12 ^h 04 ^m 4					SD: 14 ^h 9		PMG: 22 ^h 06 ^m			R°: 51 ^m			
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	h	m	h	m	h	m	m
0	178	54.6	+22 52.9	39	58.3	-25 22.9		60 N	** **	1 11	2 46	19 59	50	** **
1	193	54.5	52.7	54	27.6 ¹⁰³	26.9	40	58	** **	1 53	3 05	31 51		0 01 38
2	208	54.4	52.5	68	56.9 ¹⁰³	30.8	39	56	** **	2 21	21	19 09	51	21 40
3	223	54.3	52.3	83	26.1 ¹⁰²	34.5	37	54	1 05	42	35	18 51	52	37 42
4	238	54.2	52.0	97	55.3 ¹⁰²	38.2	37	52	1 44	2 59	47	36 51		0 51 43
5	253	54.1	+22 51.8	112	24.5 ¹⁰²	-25 41.7	35	50	2 10	3 13	3 57	18 23	51	1 03 44
6	268	53.9	+22 51.6	126	53.7 ¹⁰²	-25 45.0	33	45	2 53	3 42	4 19	17 56	52	1 29 45
7	283	53.8	51.4	141	22.9 ¹⁰²	48.3	33	40	3 23	4 04	36	35 51		1 49 47
8	298	53.7	51.2	155	52.0 ¹⁰¹	51.4	31	35	3 45	22	4 51	17 52		2 06 47
9	313	53.6	50.9	170	21.1 ¹⁰¹	54.4	30	30	4 03	4 36	5 04	17 02	51	20 49
10	328	53.5	50.7	184	50.3 ¹⁰²	-25 57.3	29	20	32	5 01	25	16 36	51	2 45 50
11	343	53.4	+22 50.5	199	19.4 ¹⁰¹	-26 00.0	27	10 N	4 54	5 21	5 44	16 14	51	3 07 50
12	358	53.3	+22 50.3	213	48.5 ¹⁰¹	-26 02.6	26	0	5 12	5 38	6 01	15 53	51	3 27 51
13	13	53.2	50.0	228	17.5 ¹⁰⁰	05.1	25	10 S	29	5 55	18	33 51		3 47 52
14	28	53.1	49.8	242	46.6 ¹⁰¹	07.5	24	20	5 45	6 12	36	15 11	50	4 08 53
15	43	53.0	49.6	257	15.7 ¹⁰¹	09.7	22	30	6 00	30	6 56	14 45	51	33 54
16	58	52.8	49.4	271	44.7 ¹⁰⁰	11.8	21	35	09	40	7 08	30 50		4 48 54
17	73	52.7	+22 49.1	286	13.8 ¹⁰¹	-26 13.7	19	40	6 18	6 52	7 22	14 13	50	5 05 55
18	88	52.6	+22 48.9	300	42.8 ¹⁰⁰	-26 15.6	19	45	6 28	7 05	7 39	13 52	49	5 26 55
19	103	52.5	48.7	315	11.9 ¹⁰¹	17.3	17	50	39	20	7 59	26 48		5 52 56
20	118	52.4	48.4	329	40.9 ¹⁰⁰	18.8	15	52	44	28	8 08	13 13	48	6 04 57
21	133	52.3	48.2	344	10.0 ¹⁰¹	20.3	15	54	50	36	19	12 58	48	19 58
22	148	52.2	48.0	358	39.0 ¹⁰⁰	21.6	13	56	6 56	44	31	41 48		36 58
23	163	52.1	47.7	13	08.0 ¹⁰⁰	22.8	12	58	7 02	7 54	8 45	12 21	46	6 56 60
24	178	52.0	+22 47.5	27	37.1 ¹⁰¹	-26 23.8	10	60 S	7 09	8 05	9 02	11 55	44	7 21 62

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 5 ^h 10 ^m 6		Mag: -4.2 PMG: 8 ^h 59 ^m		Mag: +1.1 PMG: 8 ^h 39 ^m		Mag: -2.7 PMG: 3 ^h 07 ^m		Mag: +1.1 PMG: 16 ^h 24 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	282	08.4	225	13.8	230	06.1	313	06.9	113	28.8
1	297	10.8	240	13.5	245	06.8	328	09.5	128	31.1
2	312	13.3	255	13.2	260	07.4	343	12.1	143	33.3
3	327	15.7	270	12.9	275	08.1	358	14.7	158	35.6
4	342	18.2	285	12.6	290	08.7	13	17.3	173	37.9
5	357	20.7	300	12.3	305	09.4	28	19.9	188	40.2
6	12	23.1	315	12.0	320	10.0	43	22.5	203	42.5
7	27	25.6	330	11.7	335	10.6	58	25.1	218	44.8
8	42	28.1	345	11.4	350	11.3	73	27.7	233	47.1
9	57	30.5	0	11.1	5	11.9	88	30.3	248	49.4
10	72	33.0	15	10.8	20	12.6	103	32.9	263	51.7
11	87	35.5	30	10.5	35	13.2	118	35.5	278	54.0
12	102	37.9	45	10.2	50	13.9	133	38.1	293	56.3
13	117	40.4	60	09.9	65	14.5	148	40.7	308	58.6
14	132	42.9	75	09.5	80	15.2	163	43.4	324	00.8
15	147	45.3	90	09.2	95	15.8	178	46.0	339	03.1
16	162	47.8	105	08.9	110	16.5	193	48.6	354	05.4
17	177	50.2	120	08.6	125	17.1	208	51.2	9	07.7
18	192	52.7	135	08.3	140	17.8	223	53.8	24	10.0
19	207	55.2	150	08.0	155	18.4	238	56.4	39	12.3
20	222	57.6	165	07.7	170	19.1	253	59.0	54	14.6
21	238	00.1	180	07.4	185	19.7	269	01.6	69	16.9
22	253	02.6	195	07.1	200	20.4	284	04.2	84	19.2
23	268	05.0	210	06.8	215	21.0	299	06.8	99	21.5
24	283	07.5	225	06.5	230	21.7	314	09.4	114	23.7
Dif	—		-3		+6		+26		-1	
			+6		+5				-1	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 12 ^d 2 PHE { 4 ^h : 54 ^m 3 12 ^h : 54 ^m 2 20 ^h : 54 ^m 2 R°: 50 ^m										
	PMG: 12 ^h 04 ^m 6			SD: 14 ^h 8 PMG: 22 ^h 57 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m		h m m	h m m
0	178	52.0	+22 47.5	27	37.1	-26 23.8	10	60 N	21 21	22 53	** **		20 49 29	0 11 56
1	193	51.9	47.3	42	06.1 ¹⁰⁰	24.8	8	58	21 02	22 13	** **		22 33	0 39 55
2	208	51.8	47.0	56	35.1 ¹⁰⁰	25.6	8	56	20 46	21 46	** **		20 00 37	1 01 54
3	223	51.7	46.8	71	04.2 ¹⁰¹	26.2	6	54	33	26	22 59		19 43 38	19 54
4	238	51.5	46.6	85	33.2 ¹⁰⁰	26.8	6	52	21	21 09	22 22		27 40	34 54
5	253	51.4	+22 46.3	100	02.3 ¹⁰¹	-26 27.2	4	50	20 11	20 54	21 57		19 14 41	1 47 54
6	268	51.3	+22 46.1	114	31.3 ¹⁰⁰	-26 27.4	2	45	19 49	20 26	21 15		18 48 43	2 14 54
7	283	51.2	45.9	129	00.4 ¹⁰¹	27.6	2	40	32	20 04	20 45		26 45	36 53
8	298	51.1	45.6	143	29.5 ¹⁰¹	27.6	0	35	17	19 47	23		18 09 45	2 53 53
9	313	51.0	45.4	157	58.6 ¹⁰¹	27.5	1	30	19 05	32	20 05		17 53 47	3 09 52
10	328	50.9	45.1	172	27.7 ¹⁰¹	27.3	2	20	18 44	19 08	19 37		27 49	35 52
11	343	50.8	+22 44.9	186	56.8 ¹⁰¹	-26 26.9	4	10 N	18 25	18 48	19 15		17 05 50	3 57 52
12	358	50.7	+22 44.7	201	25.9 ¹⁰¹	-26 26.4	5	0	18 08	18 31	18 57		16 44 51	4 18 51
13	13	50.6	44.4	215	55.0 ¹⁰¹	25.8	6	10 S	17 51	18 14	40		24 51	4 39 50
14	28	50.5	44.2	230	24.2 ¹⁰²	25.0	8	20	33	17 57	25		16 01 53	5 01 50
15	43	50.4	43.9	244	53.4 ¹⁰²	24.1	9	30	13	39	09		15 36 53	27 49
16	58	50.3	43.7	259	22.6 ¹⁰²	23.1	10	35	17 01	29	18 01		20 55	5 42 49
17	73	50.2	+22 43.4	273	51.8 ¹⁰²	-26 22.0	11	40	16 47	17 18	17 52		15 03 55	6 00 48
18	88	50.1	+22 43.2	288	21.0 ¹⁰²	-26 20.7	13	45	16 31	17 05	17 42		14 41 57	6 21 48
19	103	50.0	42.9	302	50.2 ¹⁰²	19.3	14	50	11	16 49	31		14 59	6 48 47
20	118	49.8	42.7	317	19.5 ¹⁰³	17.8	15	52	16 02	42	26		14 01 59	7 01 46
21	133	49.7	42.5	331	48.8 ¹⁰³	16.1	17	54	15 51	34	20		13 46 60	17 44
22	148	49.6	42.2	346	18.1 ¹⁰³	14.3	18	56	39	26	14		29 61	34 44
23	163	49.5	42.0	0	47.5 ¹⁰⁴	12.4	19	58	25	16	08		13 07 63	7 56 42
24	178	49.4	+22 41.7	15	16.8 ¹⁰³	-26 10.4	20	60 S	15 09	16 05	17 01		12 39 66	8 23 40

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 5 ^h 06 ^m 7		Mag: -4.2 PMG: 9 ^h 00 ^m		Mag: +1.1 PMG: 8 ^h 38 ^m		Mag: -2.7 PMG: 3 ^h 03 ^m		Mag: +1.1 PMG: 16 ^h 20 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	283	07.5	225 06.5	+17 28.9	230 21.7	+18 23.4	314 09.4	-13 36.5	114 23.7	+7 03.4
1	298	10.0	240 06.1	29.5	245 22.3	23.9	329 12.0	36.5	129 26.0	03.3
2	313	12.4	255 05.8	30.1	260 23.0	24.3	344 14.6	36.6	144 28.3	03.3
3	328	14.9	270 05.5	30.8	275 23.6	24.8	359 17.3	36.6	159 30.6	03.2
4	343	17.4	285 05.2	31.4	290 24.3	25.2	14 19.9	36.7	174 32.9	03.1
5	358	19.8	300 04.9	+17 32.0	305 24.9	+18 25.7	29 22.5	-13 36.8	189 35.2	+7 03.0
6	13	22.3	315 04.6	+17 32.6	320 25.6	+18 26.2	44 25.1	-13 36.8	204 37.5	+7 02.9
7	28	24.7	330 04.2	33.2	335 26.2	26.6	59 27.7	36.9	219 39.8	02.9
8	43	27.2	345 03.9	33.9	350 26.9	27.1	74 30.3	37.0	234 42.0	02.8
9	58	29.7	0 03.6	34.5	5 27.5	27.5	89 32.9	37.0	249 44.3	02.7
10	73	32.1	15 03.3	35.1	20 28.2	28.0	104 35.5	37.1	264 46.6	02.6
11	88	34.6	30 03.0	+17 35.7	35 28.8	+18 28.4	119 38.1	-13 37.1	279 48.9	+7 02.5
12	103	37.1	45 02.7	+17 36.3	50 29.5	+18 28.9	134 40.8	-13 37.2	294 51.2	+7 02.4
13	118	39.5	60 02.3	36.9	65 30.1	29.3	149 43.4	37.3	309 53.5	02.4
14	133	42.0	75 02.0	37.6	80 30.8	29.8	164 46.0	37.3	324 55.8	02.3
15	148	44.5	90 01.7	38.2	95 31.4	30.2	179 48.6	37.4	339 58.1	02.2
16	163	46.9	105 01.4	38.8	110 32.1	30.7	194 51.2	37.5	355 00.4	02.1
17	178	49.4	120 01.0	+17 39.4	125 32.7	+18 31.1	209 53.8	-13 37.5	10 02.6	+7 02.0
18	193	51.9	135 00.7	+17 40.0	140 33.4	+18 31.6	224 56.4	-13 37.6	25 04.9	+7 02.0
19	208	54.3	150 00.4	40.6	155 34.0	32.0	239 59.1	37.7	40 07.2	01.9
20	223	56.8	165 00.1	41.2	170 34.7	32.5	255 01.7	37.7	55 09.5	01.8
21	238	59.2	179 59.8	41.9	185 35.3	32.9	270 04.3	37.8	70 11.8	01.7
22	254	01.7	194 59.4	42.5	200 36.0	33.4	285 06.9	37.8	85 14.1	01.6
23	269	04.2	209 59.1	43.1	215 36.6	33.8	300 09.5	37.9	100 16.4	01.6
24	284	06.6	224 58.8	+17 43.7	230 37.2	+18 34.3	315 12.1	-13 38.0	115 18.6	+7 01.5
Dif	—		-3	+6	+6	+5	+26	-1	+23	-1

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7			Edad: 13 ^d 2	PHE	SD: 14 ^h 7		R ^e : 48 ^m	Náutico		Civil	Hora	R°	Hora	R°	
	PMG: 12 ^h 04 ^m 8															
	hG ☉	Dec		hG ☾	Dif	Dec	Dif									
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	49.4	+22	15	16.8	-26	10.4	22	60 N	** **	1 17	2 48	21 18	16	1 07	74
1	193	49.3		29	46.2 ¹⁰⁴		08.2	22	58	** **	1 57	3 07	20 55	21	34	70
2	208	49.2		44	15.6 ¹⁰⁴		06.0	22	56	** **	2 23	23	37	24	1 55	67
3	223	49.1		58	45.1 ¹⁰⁵		03.6	24	54	1 11	2 44	37	21	28	2 13	65
4	238	49.0		73	14.6 ¹⁰⁵	-26	01.0	26	52	1 47	3 01	48	20 07	30	28	63
5	253	48.9	+22	87	44.1 ¹⁰⁵	-25	58.4	26	50	2 12	3 15	3 59	19 55	32	2 41	62
6	268	48.8	+22	102	13.6 ¹⁰⁵	-25	55.6	28	45	2 55	3 43	4 20	19 31	35	3 08	59
7	283	48.7		116	43.2 ¹⁰⁶		52.7	29	40	3 24	4 05	38	19 11	38	29	57
8	298	48.6		131	12.8 ¹⁰⁶		49.7	30	35	3 46	23	4 52	18 54	40	3 46	56
9	313	48.5		145	42.5 ¹⁰⁷		46.5	32	30	4 04	4 37	5 05	40	42	4 01	55
10	328	48.4		160	12.2 ¹⁰⁷		43.2	33	20	32	5 01	26	18 16	44	27	52
11	343	48.3	+22	174	41.9 ¹⁰⁷	-25	39.8	34	10 N	4 54	5 21	5 44	17 55	46	4 49	51
12	358	48.2	+22	189	11.6 ¹⁰⁷	-25	36.3	35	0	5 13	5 39	6 01	17 35	48	5 09	50
13	13	48.1		203	41.4 ¹⁰⁸		32.7	36	10 S	29	5 55	18	17 15	51	29	48
14	28	48.0		218	11.3 ¹⁰⁹		28.9	38	20	5 45	6 12	36	16 54	53	5 51	46
15	43	47.9		232	41.1 ¹⁰⁸		25.1	38	30	6 00	30	6 56	29	56	6 16	44
16	58	47.8		247	11.0 ¹⁰⁹		21.1	40	35	09	40	7 08	16 15	57	31	43
17	73	47.7	+22	261	41.0 ¹¹⁰	-25	17.0	41	40	6 18	6 51	7 22	15 58	59	6 48	41
18	88	47.6	+22	276	11.0 ¹¹⁰	-25	12.7	43	45	6 27	7 04	7 38	15 38	61	7 09	39
19	103	47.5		290	41.0 ¹¹⁰		08.4	43	50	39	20	7 58	13	64	35	36
20	118	47.4		305	11.1 ¹¹¹	-25	03.9	45	52	44	27	8 07	15 00	67	7 47	35
21	133	47.3		319	41.2 ¹¹¹	-24	59.3	46	54	49	35	18	14 46	69	8 01	33
22	148	47.2		334	11.4 ¹¹²		54.6	47	56	6 55	43	30	30	71	18	30
23	163	47.1		348	41.6 ¹¹²		49.8	48	58	7 01	7 53	8 43	14 10	75	8 38	27
24	178	47.0	+22	3	11.9 ¹¹³	-24	44.9	49	60 S	7 08	8 04	9 00	13 45	80	9 03	22

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 5 ^h 02 ^m 7		Mag: -4.2 PMG: 9 ^h 00 ^m		Mag: +1.1 PMG: 8 ^h 37 ^m		Mag: -2.7 PMG: 2 ^h 59 ^m		Mag: +1.1 PMG: 16 ^h 16 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	284	06.6	224	58.8	+17	230	37.2	+18	315	12.1	-13	115	18.6	+7	01.5
1	299	09.1	239	58.4		245	37.9		330	14.8		130	20.9		01.4
2	314	11.6	254	58.1		260	38.5		345	17.4		145	23.2		01.3
3	329	14.0	269	57.8		275	39.2		0	20.0		160	25.5		01.2
4	344	16.5	284	57.5		290	39.8		15	22.6		175	27.8		01.2
5	359	19.0	299	57.1	+17	305	40.5	+18	30	25.2	-13	190	30.1	+7	01.1
6	14	21.4	314	56.8	+17	320	41.1	+18	45	27.8	-13	205	32.4	+7	01.0
7	29	23.9	329	56.5		335	41.8		60	30.5		220	34.6		00.9
8	44	26.4	344	56.1		350	42.4		75	33.1		235	36.9		00.8
9	59	28.8	359	55.8		5	43.1		90	35.7		250	39.2		00.7
10	74	31.3	14	55.5		20	43.7		105	38.3		265	41.5		00.7
11	89	33.7	29	55.1	+17	35	44.4	+18	120	40.9	-13	280	43.8	+7	00.6
12	104	36.2	44	54.8	+17	50	45.0	+18	135	43.6	-13	295	46.1	+7	00.5
13	119	38.7	59	54.5		65	45.7		150	46.2		310	48.4		00.4
14	134	41.1	74	54.1		80	46.3		165	48.8		325	50.6		00.3
15	149	43.6	89	53.8		95	47.0		180	51.4		340	52.9		00.3
16	164	46.1	104	53.5		110	47.6		195	54.0		355	55.2		00.2
17	179	48.5	119	53.1	+17	125	48.3	+18	210	56.7	-13	10	57.5	+7	00.1
18	194	51.0	134	52.8	+17	140	48.9	+18	225	59.3	-13	25	59.8	+7	00.0
19	209	53.5	149	52.4		155	49.6		241	01.9		41	02.1	+6	59.9
20	224	55.9	164	52.1		170	50.2		256	04.5		56	04.3		59.9
21	239	58.4	179	51.8		185	50.9		271	07.1		71	06.6		59.8
22	255	00.8	194	51.4		200	51.5		286	09.8		86	08.9		59.7
23	270	03.3	209	51.1		215	52.1		301	12.4		101	11.2		59.6
24	285	05.8	224	50.7	+17	230	52.8	+18	316	15.0	-13	116	13.5	+6	59.5
Dif	—		-3	+6		+6	+4		+26	-1		+23	-1		

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 14 ^d 2	PHE { 4 ^h : 54'0 12 ^h : 54'0 20 ^h : 54'0									
	PMG: 12 ^h 04 ^m 9					SD: 14 ^h 7			PMG: **h **m		R°: **m			
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	178	47.0	+22 35.5	3	11.9	-24 44.9	50	60 N	21 19	22 47	** ** *	21 34 9	2 21 84	
1	193	46.9	35.3	17	42.2 ¹¹³	39.9	50	58	21 00	22 10	** ** *	16 14	2 44 78	
2	208	46.8	35.0	32	12.5 ¹¹³	34.7	52	56	20 45	21 44	** ** *	21 01 18	3 02 75	
3	223	46.7	34.7	46	42.9 ¹¹⁴	29.4	53	54	32	24	22 54	20 49 20	18 71	
4	238	46.6	34.4	61	13.4 ¹¹⁵	24.1	53	52	20	21 07	22 19	37 23	31 69	
5	253	46.5	+22 34.2	75	43.9 ¹¹⁵	-24 18.6	55	50	20 10	20 53	21 55	20 27 25	3 43 67	
6	268	46.4	+22 33.9	90	14.4 ¹¹⁵	-24 13.0	56	45	19 49	20 25	21 13	20 06 29	4 07 63	
7	283	46.3	33.6	104	45.0 ¹¹⁶	07.3	57	40	31	20 04	20 45	19 49 32	26 60	
8	298	46.2	33.4	119	15.7 ¹¹⁷	-24 01.4	59	35	17	19 46	23	34 35	42 58	
9	313	46.1	33.1	133	46.4 ¹¹⁷	-23 55.5	59	30	19 05	32	20 05	22 36	4 56 56	
10	328	46.0	32.8	148	17.1 ¹¹⁷	49.5	60	20	18 44	19 08	19 37	19 00 40	5 19 53	
11	343	45.9	+22 32.5	162	47.9 ¹¹⁸	-23 43.3	62	10 N	18 25	18 48	19 15	18 41 44	5 40 50	
12	358	45.8	+22 32.3	177	18.8 ¹¹⁹	-23 37.1	62	0	18 09	18 31	18 57	18 23 47	5 59 47	
13	13	45.7	32.0	191	49.7 ¹¹⁹	30.7	64	10 S	17 52	18 15	41	18 06 49	6 17 45	
14	28	45.6	31.7	206	20.6 ¹¹⁹	24.2	65	20	34	17 58	25	17 47 52	6 37 43	
15	43	45.5	31.4	220	51.6 ¹²⁰	17.7	65	30	14	40	10	25 56	7 00 40	
16	58	45.4	31.2	235	22.7 ¹²¹	11.0	67	35	17 02	30	18 01	17 12 58	14 37	
17	73	45.3	+22 30.9	249	53.8 ¹²¹	-23 04.2	68	40	16 49	17 19	17 53	16 57 61	7 29 35	
18	88	45.2	+22 30.6	264	25.0 ¹²²	-22 57.3	69	45	16 33	17 06	17 43	16 39 64	7 48 32	
19	103	45.1	30.3	278	56.2 ¹²²	50.4	69	50	13	16 51	32	17 68	8 11 28	
20	118	45.0	30.1	293	27.5 ¹²³	43.3	71	52	16 04	44	27	16 07 70	22 26	
21	133	44.9	29.8	307	58.9 ¹²⁴	36.1	72	54	15 53	36	22	15 55 72	34 24	
22	148	44.8	29.5	322	30.3 ¹²⁴	28.8	73	56	41	28	16	41 76	8 48 21	
23	163	44.7	29.2	337	01.7 ¹²⁴	21.4	74	58	28	18	10	25 79	9 05 17	
24	178	44.6	+22 28.9	351	33.2 ¹²⁵	-22 13.9	75	60 S	15 11	16 07	17 03	15 05 85	9 25 12	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 4 ^h 58 ^m 8		Mag: -4.2 PMG: 9 ^h 01 ^m		Mag: +1.1 PMG: 8 ^h 36 ^m		Mag: -2.7 PMG: 2 ^h 54 ^m		Mag: +1.1 PMG: 16 ^h 13 ^m	
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	°	'	°	'	°	'	
0	285	05.8	224 50.7	+17 58.2	230 52.8	+18 45.0	316 15.0	-13 39.6	116 13.5	+6 59.5
1	300	08.2	239 50.4	58.8	245 53.4	45.4	331 17.6	39.6	131 15.8	59.4
2	315	10.7	254 50.0	+17 59.4	260 54.1	45.9	346 20.3	39.7	146 18.0	59.4
3	330	13.2	269 49.7	+18 00.0	275 54.7	46.3	1 22.9	39.8	161 20.3	59.3
4	345	15.6	284 49.4	+18 00.6	290 55.4	46.7	16 25.5	39.8	176 22.6	59.2
5	0	18.1	299 49.0	+18 01.2	305 56.0	+18 47.2	31 28.1	-13 39.9	191 24.9	+6 59.1
6	15	20.6	314 48.7	+18 01.8	320 56.7	+18 47.6	46 30.8	-13 40.0	206 27.2	+6 59.0
7	30	23.0	329 48.3	02.4	335 57.3	48.1	61 33.4	40.0	221 29.5	58.9
8	45	25.5	344 48.0	02.9	350 58.0	48.5	76 36.0	40.1	236 31.7	58.9
9	60	28.0	359 47.6	03.5	5 58.6	48.9	91 38.6	40.2	251 34.0	58.8
10	75	30.4	14 47.3	04.1	20 59.3	49.4	106 41.3	40.2	266 36.3	58.7
11	90	32.9	29 46.9	+18 04.7	35 59.9	+18 49.8	121 43.9	-13 40.3	281 38.6	+6 58.6
12	105	35.3	44 46.6	+18 05.3	51 00.6	+18 50.2	136 46.5	-13 40.4	296 40.9	+6 58.5
13	120	37.8	59 46.2	05.9	66 01.2	50.7	151 49.1	40.4	311 43.2	58.5
14	135	40.3	74 45.9	06.5	81 01.9	51.1	166 51.8	40.5	326 45.4	58.4
15	150	42.7	89 45.5	07.1	96 02.5	51.6	181 54.4	40.6	341 47.7	58.3
16	165	45.2	104 45.2	07.7	111 03.1	52.0	196 57.0	40.6	356 50.0	58.2
17	180	47.7	119 44.8	+18 08.3	126 03.8	+18 52.4	211 59.6	-13 40.7	11 52.3	+6 58.1
18	195	50.1	134 44.5	+18 08.8	141 04.4	+18 52.9	227 02.3	-13 40.8	26 54.6	+6 58.0
19	210	52.6	149 44.1	09.4	156 05.1	53.3	242 04.9	40.8	41 56.8	58.0
20	225	55.1	164 43.8	10.0	171 05.7	53.7	257 07.5	40.9	56 59.1	57.9
21	240	57.5	179 43.4	10.6	186 06.4	54.2	272 10.2	41.0	72 01.4	57.8
22	256	00.0	194 43.1	11.2	201 07.0	54.6	287 12.8	41.1	87 03.7	57.7
23	271	02.5	209 42.7	11.8	216 07.7	55.0	302 15.4	41.1	102 06.0	57.6
24	286	04.9	224 42.3	+18 12.4	231 08.3	+18 55.5	317 18.1	-13 41.2	117 08.2	+6 57.5
Dif	—	—	-3	+6	+6	+4	+26	-1	+23	-1

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7			Edad: 15 ^d 2	PHE { 4 ^h : 54'0 12 ^h : 54'0 20 ^h : 54'0										
	PMG: 12 ^h 05 ^m 1					SD: 14 ^h 7		R°: 46 ^m							
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	178	44.6	+22 28.9	351	33.2	-22 13.9	75	60 N	** **	1 23	2 51	21 43	5	3 45	85
1	193	44.5	28.7	6	04.8 ¹²⁶	-22 06.4	75	58	** **	2 01	3 10	30	9	4 02	81
2	208	44.4	28.4	20	36.4 ¹²⁶	-21 58.7	77	56	** **	26	26	19	12	17	76
3	223	44.3	28.1	35	08.1 ¹²⁷	50.9	78	54	1 16	2 47	39	09	15	29	74
4	238	44.2	27.8	49	39.8 ¹²⁷	43.0	79	52	1 51	3 03	3 50	21 00	17	40	71
5	253	44.1	+22 27.5	64	11.6 ¹²⁸	-21 35.1	79	50	2 15	3 17	4 00	20 52	19	4 50	68
6	268	44.0	+22 27.2	78	43.4 ¹²⁸	-21 27.0	81	45	2 57	3 45	4 22	20 35	24	5 10	64
7	283	43.9	26.9	93	15.3 ¹²⁹	18.9	81	40	3 26	4 06	39	21	27	26	61
8	298	43.8	26.7	107	47.3 ¹³⁰	10.6	83	35	3 48	24	4 53	20 09	30	40	58
9	313	43.7	26.4	122	19.3 ¹³⁰	-21 02.3	83	30	4 05	4 38	5 06	19 58	33	5 52	56
10	328	43.6	26.1	136	51.3 ¹³⁰	-20 53.9	84	20	33	5 02	27	40	37	6 12	52
11	343	43.6	+22 25.8	151	23.4 ¹³¹	-20 45.4	85	10 N	4 55	5 22	5 45	19 25	40	6 30	48
12	358	43.5	+22 25.5	165	55.6 ¹³²	-20 36.8	86	0	5 13	5 39	6 01	19 10	44	6 46	45
13	13	43.4	25.2	180	27.8 ¹³²	28.1	87	10 S	29	5 55	18	18 55	48	7 02	43
14	28	43.3	24.9	195	00.1 ¹³³	19.3	88	20	5 45	6 12	36	39	51	20	38
15	43	43.2	24.6	209	32.5 ¹³⁴	10.4	89	30	6 00	30	6 56	21	55	40	34
16	58	43.1	24.3	224	04.9 ¹³⁴	-20 01.5	89	35	08	40	7 08	18 10	58	7 51	33
17	73	43.0	+22 24.0	238	37.3 ¹³⁴	-19 52.4	91	40	6 17	6 51	7 21	17 58	61	8 04	30
18	88	42.9	+22 23.7	253	09.8 ¹³⁵	-19 43.3	91	45	6 27	7 04	7 37	17 43	65	8 20	26
19	103	42.8	23.4	267	42.4 ¹³⁶	34.1	92	50	38	19	7 57	25	69	39	22
20	118	42.7	23.2	282	15.0 ¹³⁶	24.8	93	52	43	26	8 06	17	71	48	20
21	133	42.6	22.9	296	47.7 ¹³⁷	15.5	93	54	48	33	16	17 07	74	8 58	17
22	148	42.5	22.6	311	20.4 ¹³⁷	-19 06.0	95	56	6 54	42	28	16 57	76	9 09	15
23	163	42.4	22.3	325	53.2 ¹³⁸	-18 56.5	95	58	7 00	7 51	42	44	80	22	11
24	178	42.3	+22 22.0	340	26.0 ¹³⁸	-18 46.9	96	60 S	7 07	8 02	8 58	16 30	84	9 37	7

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG 4 ^h 54 ^m 9		Mag: -4.2 PMG: 9 ^h 01 ^m		Mag: +1.1 PMG: 8 ^h 35 ^m		Mag: -2.7 PMG: 2 ^h 50 ^m		Mag: +1.1 PMG: 16 ^h 09 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	286	04.9	224	42.3	+18 12.4	231	08.3	+18 55.5	317	18.1	-13 41.2	117	08.2	+6 57.5	
1	301	07.4	239	42.0	12.9	246	09.0	55.9	332	20.7	41.3	132	10.5	57.5	
2	316	09.8	254	41.6	13.5	261	09.6	56.3	347	23.3	41.3	147	12.8	57.4	
3	331	12.3	269	41.3	14.1	276	10.3	56.8	2	25.9	41.4	162	15.1	57.3	
4	346	14.8	284	40.9	14.7	291	10.9	57.2	17	28.6	41.5	177	17.4	57.2	
5	1	17.2	299	40.6	+18 15.3	306	11.6	+18 57.6	32	31.2	-13 41.5	192	19.7	+6 57.1	
6	16	19.7	314	40.2	+18 15.9	321	12.2	+18 58.1	47	33.8	-13 41.6	207	21.9	+6 57.0	
7	31	22.2	329	39.8	16.4	336	12.8	58.5	62	36.5	41.7	222	24.2	57.0	
8	46	24.6	344	39.5	17.0	351	13.5	58.9	77	39.1	41.8	237	26.5	56.9	
9	61	27.1	359	39.1	17.6	6	14.1	59.4	92	41.7	41.8	252	28.8	56.8	
10	76	29.6	14	38.7	18.2	21	14.8	+18 59.8	107	44.4	41.9	267	31.0	56.7	
11	91	32.0	29	38.4	+18 18.8	36	15.4	+19 00.2	122	47.0	-13 42.0	282	33.3	+6 56.6	
12	106	34.5	44	38.0	+18 19.3	51	16.1	+19 00.6	137	49.6	-13 42.0	297	35.6	+6 56.5	
13	121	37.0	59	37.7	19.9	66	16.7	01.1	152	52.3	42.1	312	37.9	56.5	
14	136	39.4	74	37.3	20.5	81	17.4	01.5	167	54.9	42.2	327	40.2	56.4	
15	151	41.9	89	36.9	21.1	96	18.0	01.9	182	57.5	42.2	342	42.4	56.3	
16	166	44.3	104	36.6	21.6	111	18.7	02.4	198	00.2	42.3	357	44.7	56.2	
17	181	46.8	119	36.2	+18 22.2	126	19.3	+19 02.8	213	02.8	-13 42.4	12	47.0	+6 56.1	
18	196	49.3	134	35.8	+18 22.8	141	20.0	+19 03.2	228	05.4	-13 42.5	27	49.3	+6 56.0	
19	211	51.7	149	35.5	23.4	156	20.6	03.6	243	08.1	42.5	42	51.6	55.9	
20	226	54.2	164	35.1	23.9	171	21.2	04.1	258	10.7	42.6	57	53.8	55.9	
21	241	56.7	179	34.7	24.5	186	21.9	04.5	273	13.4	42.7	72	56.1	55.8	
22	256	59.1	194	34.4	25.1	201	22.5	04.9	288	16.0	42.7	87	58.4	55.7	
23	272	01.6	209	34.0	25.6	216	23.2	05.4	303	18.6	42.8	103	00.7	55.6	
24	287	04.1	224	33.6	+18 26.2	231	23.8	+19 05.8	318	21.3	-13 42.9	118	02.9	+6 55.5	
Dif	—		-4	+6		+6	+4		+26	-1		+23	-1		

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna	Puesta de Luna			
	SD: 15 ^h 7			Edad: 16 ^d 2 PHE { 4 ^h : 54 ^h 1 12 ^h : 54 ^h 1 20 ^h : 54 ^h 2											
	PMG: 12 ^h 05 ^m 3			SD: 14 ^h 7 PMG: 1 ^h 21 ^m R°: 43 ^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	42.3	+22 22.0	340	26.0	-18 46.9		60 N	21 16	22 42	** **	21 48 4	5 10 84		
1	193	42.2	21.7	354	58.9 ¹³⁹	37.2 ⁹⁷		58	20 58	22 06	** **	39 7	23 80		
2	208	42.2	21.4	9	31.9 ¹⁴⁰	27.4 ⁹⁸		56	43	21 41	** **	31 10	33 77		
3	223	42.1	21.1	24	04.9 ¹⁴⁰	17.6 ⁹⁸		54	30	22	22 49	24 12	43 73		
4	238	42.0	20.8	38	37.9 ¹⁴⁰	-18 07.7 ⁹⁹		52	19	21 05	22 16	17 15	51 71		
5	253	41.9	+22 20.5	53	11.0 ¹⁴¹	-17 57.7 ¹⁰⁰		50	20 09	20 52	21 53	21 11 17	5 58 69		
6	268	41.8	+22 20.2	67	44.1 ¹⁴¹	-17 47.6 ¹⁰¹		45	19 48	20 24	21 12	20 59 21	6 14 65		
7	283	41.7	19.9	82	17.3 ¹⁴²	37.5 ¹⁰¹		40	31	20 03	20 43	48 25	27 61		
8	298	41.6	19.6	96	50.6 ¹⁴³	27.2 ¹⁰³		35	17	19 46	22	39 28	38 58		
9	313	41.5	19.3	111	23.9 ¹⁴³	16.9 ¹⁰³		30	19 04	31	20 04	31 30	6 48 55		
10	328	41.4	18.9	125	57.2 ¹⁴³	-17 06.6 ¹⁰³		20	18 43	19 08	19 37	17 35	7 04 51		
11	343	41.3	+22 18.6	140	30.6 ¹⁴⁴	-16 56.1 ¹⁰⁵		10 N	18 26	18 48	19 15	20 05 39	7 18 47		
12	358	41.2	+22 18.3	155	04.1 ¹⁴⁵	-16 45.6 ¹⁰⁵		0	18 09	18 31	18 57	19 54 42	7 31 44		
13	13	41.2	18.0	169	37.6 ¹⁴⁵	35.1 ¹⁰⁵		10 S	17 52	18 15	41	43 46	45 39		
14	28	41.1	17.7	184	11.1 ¹⁴⁵	24.4 ¹⁰⁷		20	35	17 59	26	30 50	7 58 36		
15	43	41.0	17.4	198	44.7 ¹⁴⁶	13.7 ¹⁰⁷		30	15	41	11	16 55	8 14 32		
16	58	40.9	17.1	213	18.4 ¹⁴⁷	-16 02.9 ¹⁰⁸		35	17 03	31	18 02	19 08 57	24 28		
17	73	40.8	+22 16.8	227	52.1 ¹⁴⁷	-15 52.1 ¹⁰⁸		40	16 50	17 20	17 54	18 59 60	8 34 26		
18	88	40.7	+22 16.5	242	25.8 ¹⁴⁷	-15 41.2 ¹⁰⁹		45	16 34	17 07	17 44	18 48 64	8 46 22		
19	103	40.6	16.2	256	59.6 ¹⁴⁸	30.2 ¹¹⁰		50	15	16 52	33	34 69	9 01 18		
20	118	40.5	15.9	271	33.4 ¹⁴⁸	19.2 ¹¹⁰		52	16 06	46	29	28 71	08 16		
21	133	40.4	15.5	286	07.3 ¹⁴⁹	-15 08.1 ¹¹¹		54	15 55	38	23	21 73	15 14		
22	148	40.4	15.2	300	41.2 ¹⁴⁹	-14 56.9 ¹¹²		56	44	30	18	13 76	24 11		
23	163	40.3	14.9	315	15.1 ¹⁴⁹	45.7 ¹¹²		58	30	20	12	18 04 80	33 8		
24	178	40.2	+22 14.6	329	49.1 ¹⁵⁰	-14 34.4 ¹¹³		60 S	15 14	16 10	17 05	17 54 84	9 44 4		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 4 ^h 50 ^m 9		Mag: -4.1 PMG: 9 ^h 02 ^m			Mag: +1.1 PMG: 8 ^h 34 ^m			Mag: -2.8 PMG: 2 ^h 46 ^m			Mag: +1.1 PMG: 16 ^h 05 ^m			
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	'	°	'	°	'	°	°	'	°
0	287	04.1	224 33.6	+18 26.2	231 23.8	+19 05.8	318 21.3	-13 42.9	118 02.9	+6 55.5					
1	302	06.5	239 33.2	26.8	246 24.5	06.2	333 23.9	43.0	133 05.2	55.4					
2	317	09.0	254 32.9	27.4	261 25.1	06.6	348 26.5	43.0	148 07.5	55.4					
3	332	11.5	269 32.5	27.9	276 25.8	07.1	3 29.2	43.1	163 09.8	55.3					
4	347	13.9	284 32.1	28.5	291 26.4	07.5	18 31.8	43.2	178 12.1	55.2					
5	2	16.4	299 31.7	+18 29.1	306 27.1	+19 07.9	33 34.4	-13 43.2	193 14.3	+6 55.1					
6	17	18.8	314 31.4	+18 29.6	321 27.7	+19 08.3	48 37.1	-13 43.3	208 16.6	+6 55.0					
7	32	21.3	329 31.0	30.2	336 28.3	08.8	63 39.7	43.4	223 18.9	54.9					
8	47	23.8	344 30.6	30.8	351 29.0	09.2	78 42.4	43.5	238 21.2	54.8					
9	62	26.2	359 30.2	31.3	6 29.6	09.6	93 45.0	43.5	253 23.4	54.8					
10	77	28.7	14 29.9	31.9	21 30.3	10.0	108 47.6	43.6	268 25.7	54.7					
11	92	31.2	29 29.5	+18 32.4	36 30.9	+19 10.4	123 50.3	-13 43.7	283 28.0	+6 54.6					
12	107	33.6	44 29.1	+18 33.0	51 31.6	+19 10.9	138 52.9	-13 43.8	298 30.3	+6 54.5					
13	122	36.1	59 28.7	33.6	66 32.2	11.3	153 55.6	43.8	313 32.6	54.4					
14	137	38.6	74 28.4	34.1	81 32.9	11.7	168 58.2	43.9	328 34.8	54.3					
15	152	41.0	89 28.0	34.7	96 33.5	12.1	184 00.8	44.0	343 37.1	54.3					
16	167	43.5	104 27.6	35.3	111 34.2	12.6	199 03.5	44.0	358 39.4	54.2					
17	182	45.9	119 27.2	+18 35.8	126 34.8	+19 13.0	214 06.1	-13 44.1	13 41.7	+6 54.1					
18	197	48.4	134 26.8	+18 36.4	141 35.4	+19 13.4	229 08.8	-13 44.2	28 43.9	+6 54.0					
19	212	50.9	149 26.4	36.9	156 36.1	13.8	244 11.4	44.3	43 46.2	53.9					
20	227	53.3	164 26.1	37.5	171 36.7	14.2	259 14.1	44.3	58 48.5	53.8					
21	242	55.8	179 25.7	38.1	186 37.4	14.7	274 16.7	44.4	73 50.8	53.7					
22	257	58.3	194 25.3	38.6	201 38.0	15.1	289 19.3	44.5	88 53.0	53.7					
23	273	00.7	209 24.9	39.2	216 38.7	15.5	304 22.0	44.6	103 55.3	53.6					
24	288	03.2	224 24.5	+18 39.7	231 39.3	+19 15.9	319 24.6	-13 44.6	118 57.6	+6 53.5					
Dif	—		-4	+6	+6		+4	+26		-1	+23		-		-1

UT	SOL				LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7 PMG: 12 ^h 05 ^m 4				Edad: 17 ^d 2 PHE { 4 ^h : 54 ^m /2 12 ^h : 54 ^m /3 20 ^h : 54 ^m /4 PMG: 2 ^h 04 ^m R°: 42 ^m													
	hG ☉		Dec		hG ☾		Dif		Dec			Dif			Náutico	Civil	Hora	R°
h	°	'	°	'	°	'	°	'	°	'	°	'	h m	h m	h m	m	h m	m
0	178	40.2	+22	14.6	329	49.1	-14	34.4	60 N	** **	1 29	2 55	21 52	2	6 34	83		
1	193	40.1		14.3	344	23.2 ¹⁵¹		23.1 ¹¹³	58	** **	2 05	3 13	46 5	43 79				
2	208	40.0		14.0	358	57.3 ¹⁵¹		11.7 ¹¹⁴	56	** **	30	28	41 8	50 76				
3	223	39.9		13.7	13	31.4 ¹⁵¹	-14	00.2 ¹¹⁵	54	1 22	2 49	41	36 11	6 56 74				
4	238	39.8		13.3	28	05.6 ¹⁵²	-13	48.7 ¹¹⁵	52	1 55	3 06	3 52	32 13	7 02 71				
5	253	39.7	+22	13.0	42	39.8 ¹⁵²	-13	37.1 ¹¹⁶	50	2 18	3 19	4 02	21 28 15	7 07 69				
6	268	39.6	+22	12.7	57	14.0 ¹⁵²	-13	25.5 ¹¹⁶	45	2 59	3 47	4 23	21 20 19	7 19 64				
7	283	39.6		12.4	71	48.3 ¹⁵³		13.8 ¹¹⁷	40	3 27	4 08	40	13 22	28 60				
8	298	39.5		12.1	86	22.6 ¹⁵³	-13	02.0 ¹¹⁸	35	3 49	25	4 54	07 25	36 57				
9	313	39.4		11.8	100	56.9 ¹⁵³	-12	50.2 ¹¹⁸	30	4 07	4 39	5 07	21 01 29	43 54				
10	328	39.3		11.4	115	31.3 ¹⁵⁴		38.4 ¹¹⁸	20	34	5 03	27	20 52 33	7 55 49				
11	343	39.2	+22	11.1	130	05.8 ¹⁵⁵	-12	26.5 ¹¹⁹	10 N	4 56	5 22	5 45	20 44 37	8 05 45				
12	358	39.1	+22	10.8	144	40.2 ¹⁵⁴	-12	14.5 ¹²⁰	0	5 13	5 39	6 02	20 36 41	8 15 41				
13	13	39.0		10.5	159	14.7 ¹⁵⁵	-12	02.5 ¹²⁰	10 S	29	5 56	18	29 45	24 38				
14	28	39.0		10.1	173	49.2 ¹⁵⁵	-11	50.5 ¹²⁰	20	5 45	6 12	36	20 50	34 34				
15	43	38.9		09.8	188	23.8 ¹⁵⁶		38.4 ¹²¹	30	6 00	30	6 56	11 54	46 29				
16	58	38.8		09.5	202	58.4 ¹⁵⁶		26.2 ¹²²	35	08	39	7 07	20 05 57	8 52 27				
17	73	38.7	+22	09.2	217	33.0 ¹⁵⁶	-11	14.0 ¹²²	40	6 17	6 50	7 21	19 59 60	9 00 23				
18	88	38.6	+22	08.8	232	07.6 ¹⁵⁶	-11	01.7 ¹²³	45	6 26	7 03	7 36	19 52 64	9 08 20				
19	103	38.5		08.5	246	42.3 ¹⁵⁷	-10	49.5 ¹²²	50	37	18	7 55	43 69	19 15				
20	118	38.4		08.2	261	17.0 ¹⁵⁷		37.1 ¹²⁴	52	42	25	8 05	39 71	24 13				
21	133	38.4		07.9	275	51.8 ¹⁵⁸		24.7 ¹²⁴	54	47	32	15	34 74	29 11				
22	148	38.3		07.5	290	26.5 ¹⁵⁷	-10	12.3 ¹²⁴	56	52	40	26	29 76	35 9				
23	163	38.2		07.2	305	01.3 ¹⁵⁸	-9	59.8 ¹²⁵	58	6 58	7 50	40	24 79	41 6				
24	178	38.1	+22	06.9	319	36.1 ¹⁵⁸	-9	47.3 ¹²⁵	60 S	7 05	8 00	8 55	19 18 82	9 48 3				

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 4 ^h 47 ^m 0		Mag: -4.1 PMG: 9 ^h 03 ^m		Mag: +1.1 PMG: 8 ^h 33 ^m		Mag: -2.8 PMG: 2 ^h 42 ^m		Mag: +1.1 PMG: 16 ^h 02 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	288	03.2	224	24.5	+18	39.7	231	39.3	+19	15.9
1	303	05.7	239	24.1		40.3	246	40.0		16.3
2	318	08.1	254	23.8		40.8	261	40.6		16.7
3	333	10.6	269	23.4		41.4	276	41.3		17.2
4	348	13.1	284	23.0		41.9	291	41.9		17.6
5	3	15.5	299	22.6	+18	42.5	306	42.5	+19	18.0
6	18	18.0	314	22.2	+18	43.0	321	43.2	+19	18.4
7	33	20.4	329	21.8		43.6	336	43.8		18.8
8	48	22.9	344	21.4		44.1	351	44.5		19.2
9	63	25.4	359	21.0		44.7	6	45.1		19.7
10	78	27.8	14	20.6		45.2	21	45.8		20.1
11	93	30.3	29	20.2	+18	45.8	36	46.4	+19	20.5
12	108	32.8	44	19.9	+18	46.3	51	47.1	+19	20.9
13	123	35.2	59	19.5		46.9	66	47.7		21.3
14	138	37.7	74	19.1		47.4	81	48.4		21.7
15	153	40.2	89	18.7		48.0	96	49.0		22.1
16	168	42.6	104	18.3		48.5	111	49.6		22.6
17	183	45.1	119	17.9	+18	49.1	126	50.3	+19	23.0
18	198	47.6	134	17.5	+18	49.6	141	50.9	+19	23.4
19	213	50.0	149	17.1		50.2	156	51.6		23.8
20	228	52.5	164	16.7		50.7	171	52.2		24.2
21	243	54.9	179	16.3		51.3	186	52.9		24.6
22	258	57.4	194	15.9		51.8	201	53.5		25.0
23	273	59.9	209	15.5		52.3	216	54.2		25.4
24	289	02.3	224	15.1	+18	52.9	231	54.8	+19	25.8
Dif	—		-4		+5		+6		+4	
							+26		-1	
									+23	
									-	

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 5 12 ^h : 54 ^m 6 20 ^h : 54 ^m 7								
	PMG: 12 ^h 05 ^m 5								SD: 14 ^h 8		PMG: 2 ^h 46 ^m		Rº: 41 ^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	38.1	+22 06.9	319	36.1	-9 47.3	60 N	21 13	22 36	** **	21 54	2	7 57	82
1	193	38.0	06.5	334	10.9 ¹⁵⁸	34.7 ¹²⁶	58	20 56	22 02	** **	51	5	8 02	78
2	208	37.9	06.2	348	45.8 ¹⁵⁹	22.1 ¹²⁶	56	41	21 38	** **	49	8	06	76
3	223	37.9	05.9	3	20.7 ¹⁵⁹	-9 09.5 ¹²⁶	54	28	19	22 44	47	10	10	73
4	238	37.8	05.5	17	55.6 ¹⁵⁹	-8 56.8 ¹²⁷	52	17	21 03	22 13	45	12	13	71
5	253	37.7	+22 05.2	32	30.5 ¹⁵⁹	-8 44.1 ¹²⁷	50	20 07	20 50	21 50	21 43	14	8 16	69
6	268	37.6	+22 04.9	47	05.4 ¹⁵⁹	-8 31.3 ¹²⁸	45	19 46	20 23	21 10	21 39	18	8 23	64
7	283	37.5	04.5	61	40.4 ¹⁶⁰	18.5 ¹²⁸	40	30	20 02	20 42	35	22	28	60
8	298	37.5	04.2	76	15.4 ¹⁶⁰	-8 05.7 ¹²⁸	35	16	19 45	21	32	26	33	57
9	313	37.4	03.9	90	50.4 ¹⁶⁰	-7 52.8 ¹²⁹	30	19 04	31	20 04	30	28	37	54
10	328	37.3	03.5	105	25.4 ¹⁶⁰	39.9 ¹²⁹	20	18 43	19 08	19 36	25	33	44	49
11	343	37.2	+22 03.2	120	00.4 ¹⁶⁰	-7 26.9 ¹³⁰	10 N	18 26	18 48	19 15	21 21	37	8 50	45
12	358	37.1	+22 02.9	134	35.4 ¹⁶⁰	-7 14.0 ¹²⁹	0	18 09	18 31	18 57	21 17	41	8 56	41
13	13	37.0	02.5	149	10.5 ¹⁶¹	-7 01.0 ¹³⁰	10 S	17 53	18 15	42	14	45	9 02	37
14	28	37.0	02.2	163	45.6 ¹⁶¹	-6 47.9 ¹³¹	20	36	17 59	27	10	49	08	33
15	43	36.9	01.8	178	20.6 ¹⁶⁰	34.8 ¹³¹	30	16	42	11	05	54	15	28
16	58	36.8	01.5	192	55.7 ¹⁶¹	21.7 ¹³¹	35	17 04	32	18 03	21 02	58	19	25
17	73	36.7	+22 01.2	207	30.8 ¹⁶¹	-6 08.6 ¹³¹	40	16 51	17 21	17 55	20 59	61	9 23	22
18	88	36.6	+22 00.8	222	05.9 ¹⁶¹	-5 55.4 ¹³²	45	16 36	17 09	17 46	20 56	64	9 28	19
19	103	36.6	00.5	236	41.0 ¹⁶¹	42.2 ¹³²	50	17	16 54	35	52	69	34	15
20	118	36.5	+22 00.1	251	16.1 ¹⁶¹	29.0 ¹³²	52	16 08	47	30	50	71	37	12
21	133	36.4	+21 59.8	265	51.3 ¹⁶²	15.7 ¹³³	54	15 57	40	25	48	73	40	10
22	148	36.3	59.4	280	26.4 ¹⁶¹	-5 02.5 ¹³²	56	46	32	20	45	76	44	7
23	163	36.2	59.1	295	01.5 ¹⁶¹	-4 49.1 ¹³⁴	58	33	23	14	43	78	47	5
24	178	36.2	+21 58.8	309	36.7 ¹⁶²	-4 35.8 ¹³³	60 S	15 17	16 12	17 07	20 40	82	9 51	3

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 4 ^h 43 ^m 1		Mag: -4.1 PMG: 9 ^h 03 ^m		Mag: +1.1 PMG: 8 ^h 32 ^m		Mag: -2.8 PMG: 2 ^h 38 ^m		Mag: +1.1 PMG: 15 ^h 58 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	289	02.3	224 15.1	+18 52.9	231 54.8	+19 25.8	320 28.2	-13 46.4	119 52.2	+6 51.4
1	304	04.8	239 14.7	53.4	246 55.4	26.3	335 30.8	46.5	134 54.4	51.3
2	319	07.3	254 14.3	54.0	261 56.1	26.7	350 33.5	46.6	149 56.7	51.2
3	334	09.7	269 13.9	54.5	276 56.7	27.1	5 36.1	46.7	164 59.0	51.2
4	349	12.2	284 13.5	55.0	291 57.4	27.5	20 38.8	46.7	180 01.2	51.1
5	4	14.7	299 13.1	+18 55.6	306 58.0	+19 27.9	35 41.4	-13 46.8	195 03.5	+6 51.0
6	19	17.1	314 12.7	+18 56.1	321 58.7	+19 28.3	50 44.1	-13 46.9	210 05.8	+6 50.9
7	34	19.6	329 12.3	56.6	336 59.3	28.7	65 46.7	47.0	225 08.1	50.8
8	49	22.0	344 11.9	57.2	352 00.0	29.1	80 49.4	47.0	240 10.3	50.7
9	64	24.5	359 11.5	57.7	7 00.6	29.5	95 52.0	47.1	255 12.6	50.6
10	79	27.0	14 11.1	58.3	22 01.2	29.9	110 54.7	47.2	270 14.9	50.6
11	94	29.4	29 10.7	+18 58.8	37 01.9	+19 30.3	125 57.3	-13 47.3	285 17.1	+6 50.5
12	109	31.9	44 10.3	+18 59.3	52 02.5	+19 30.7	141 00.0	-13 47.4	300 19.4	+6 50.4
13	124	34.4	59 09.9	+18 59.9	67 03.2	31.1	156 02.6	47.4	315 21.7	50.3
14	139	36.8	74 09.4	+19 00.4	82 03.8	31.6	171 05.3	47.5	330 24.0	50.2
15	154	39.3	89 09.0	00.9	97 04.5	32.0	186 07.9	47.6	345 26.2	50.1
16	169	41.8	104 08.6	01.4	112 05.1	32.4	201 10.6	47.7	0 28.5	50.0
17	184	44.2	119 08.2	+19 02.0	127 05.8	+19 32.8	216 13.3	-13 47.7	15 30.8	+6 49.9
18	199	46.7	134 07.8	+19 02.5	142 06.4	+19 33.2	231 15.9	-13 47.8	30 33.0	+6 49.9
19	214	49.2	149 07.4	03.0	157 07.0	33.6	246 18.6	47.9	45 35.3	49.8
20	229	51.6	164 07.0	03.6	172 07.7	34.0	261 21.2	48.0	60 37.6	49.7
21	244	54.1	179 06.6	04.1	187 08.3	34.4	276 23.9	48.0	75 39.8	49.6
22	259	56.5	194 06.2	04.6	202 09.0	34.8	291 26.5	48.1	90 42.1	49.5
23	274	59.0	209 05.7	05.1	217 09.6	35.2	306 29.2	48.2	105 44.4	49.4
24	290	01.5	224 05.3	+19 05.7	232 10.3	+19 35.6	321 31.8	-13 48.3	120 46.7	+6 49.3
Dif	—		-4 +5		+6 +4		+27 -1		+23 -1	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7 PMG: 12 ^h 05 ^m 7			Edad: 19 ^d 2 PHE { 4 ^h : 54 ^m 9 12 ^h : 55 ^m 0 20 ^h : 55 ^m 2 PMG: 3 ^h 27 ^m R°: 41 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	h	m	h	m	h	m	h	m
0	178	36.2	+21 58.8	309	36.7	-4 35.8	134	60 N	*** **	1 35	2 58	21 56	3	9 19	82
1	193	36.1	58.4	324	11.8 ¹⁶¹	22.4 ¹³⁴		58	*** **	2 09	3 16	56	6	20	80
2	208	36.0	58.1	338	46.9 ¹⁶¹	-4 09.1 ¹³³		56	*** **	33	31	57	8	22	76
3	223	35.9	57.7	353	22.1 ¹⁶²	-3 55.7 ¹³⁴		54	1 28	2 52	43	57	10	23	74
4	238	35.8	57.4	7	57.2 ¹⁶¹	42.2 ¹³⁵		52	1 59	3 08	3 54	57	12	24	71
5	253	35.8	+21 57.0	22	32.3 ¹⁶¹	-3 28.8 ¹³⁴		50	2 21	3 22	4 04	21 57	14	9 25	69
6	268	35.7	+21 56.7	37	07.5 ¹⁶²	-3 15.3 ¹³⁵		45	3 01	3 49	4 25	21 57	19	9 27	65
7	283	35.6	56.3	51	42.6 ¹⁶¹	-3 01.8 ¹³⁵		40	29	4 09	42	57	23	28	61
8	298	35.5	56.0	66	17.7 ¹⁶¹	-2 48.3 ¹³⁵		35	3 51	26	4 55	58	25	30	58
9	313	35.5	55.6	80	52.8 ¹⁶¹	34.8 ¹³⁵		30	4 08	4 41	5 08	58	28	31	55
10	328	35.4	55.3	95	27.9 ¹⁶¹	21.2 ¹³⁶		20	35	5 04	28	58	33	33	50
11	343	35.3	+21 54.9	110	03.0 ¹⁶¹	-2 07.6 ¹³⁶		10 N	4 56	5 23	5 46	21 58	38	9 35	46
12	358	35.2	+21 54.5	124	38.1 ¹⁶¹	-1 54.0 ¹³⁶		0	5 14	5 40	6 02	21 58	42	9 37	41
13	13	35.2	54.2	139	13.2 ¹⁶¹	40.4 ¹³⁶		10 S	30	5 56	18	59	46	39	37
14	28	35.1	53.8	153	48.2 ¹⁶⁰	26.8 ¹³⁶		20	5 45	6 12	35	59	51	41	33
15	43	35.0	53.5	168	23.3 ¹⁶¹	-1 13.2 ¹³⁶		30	6 00	29	6 55	21 59	56	43	28
16	58	34.9	53.1	182	58.3 ¹⁶⁰	-0 59.5 ¹³⁷		35	08	39	7 07	22 00	58	44	25
17	73	34.8	+21 52.8	197	33.3 ¹⁶⁰	-0 45.9 ¹³⁶		40	6 16	6 50	7 20	22 00	62	9 45	22
18	88	34.8	+21 52.4	212	08.3 ¹⁶⁰	-0 32.2 ¹³⁷		45	6 25	7 02	7 35	22 00	66	9 47	18
19	103	34.7	52.1	226	43.3 ¹⁶⁰	18.5 ¹³⁷		50	36	17	7 54	01	70	49	14
20	118	34.6	51.7	241	18.3 ¹⁶⁰	-0 04.8 ¹³⁷		52	40	23	8 03	01	72	49	13
21	133	34.5	51.3	255	53.2 ¹⁵⁹	+0 08.9 ¹³⁷		54	45	31	13	01	75	50	10
22	148	34.5	51.0	270	28.1 ¹⁵⁹	22.6 ¹³⁷		56	51	39	24	01	78	51	8
23	163	34.4	50.6	285	03.0 ¹⁵⁹	36.3 ¹³⁷		58	6 57	48	37	01	81	52	5
24	178	34.3	+21 50.3	299	37.9 ¹⁵⁹	+0 50.1 ¹³⁸		60 S	7 03	7 58	8 53	22 02	84	9 54	2
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 4 ^h 39 ^m 1			Mag: -4.1 PMG: 9 ^h 04 ^m			Mag: +1.1 PMG: 8 ^h 31 ^m			Mag: -2.8 PMG: 2 ^h 33 ^m			Mag: +1.1 PMG: 15 ^h 54 ^m		
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	290	01.5	224 05.3	+19 05.7	232 10.3	+19 35.6	321 31.8	-13 48.3	120 46.7	+6 49.3					
1	305	03.9	239 04.9	06.2	247 10.9	36.0	336 34.5	48.4	135 48.9	49.2					
2	320	06.4	254 04.5	06.7	262 11.6	36.4	351 37.2	48.4	150 51.2	49.2					
3	335	08.9	269 04.1	07.2	277 12.2	36.8	6 39.8	48.5	165 53.5	49.1					
4	350	11.3	284 03.7	07.8	292 12.8	37.2	21 42.5	48.6	180 55.7	49.0					
5	5	13.8	299 03.3	+19 08.3	307 13.5	+19 37.6	36 45.1	-13 48.7	195 58.0	+6 48.9					
6	20	16.3	314 02.8	+19 08.8	322 14.1	+19 38.0	51 47.8	-13 48.8	211 00.3	+6 48.8					
7	35	18.7	329 02.4	09.3	337 14.8	38.4	66 50.5	48.8	226 02.5	48.7					
8	50	21.2	344 02.0	09.8	352 15.4	38.8	81 53.1	48.9	241 04.8	48.6					
9	65	23.7	359 01.6	10.4	7 16.1	39.2	96 55.8	49.0	256 07.1	48.5					
10	80	26.1	14 01.2	10.9	22 16.7	39.6	111 58.4	49.1	271 09.3	48.5					
11	95	28.6	29 00.7	+19 11.4	37 17.3	+19 40.0	127 01.1	-13 49.1	286 11.6	+6 48.4					
12	110	31.0	44 00.3	+19 11.9	52 18.0	+19 40.4	142 03.8	-13 49.2	301 13.9	+6 48.3					
13	125	33.5	58 59.9	12.4	67 18.6	40.8	157 06.4	49.3	316 16.1	48.2					
14	140	36.0	73 59.5	13.0	82 19.3	41.2	172 09.1	49.4	331 18.4	48.1					
15	155	38.4	88 59.1	13.5	97 19.9	41.6	187 11.7	49.5	346 20.7	48.0					
16	170	40.9	103 58.6	14.0	112 20.6	42.0	202 14.4	49.5	1 23.0	47.9					
17	185	43.4	118 58.2	+19 14.5	127 21.2	+19 42.4	217 17.1	-13 49.6	16 25.2	+6 47.8					
18	200	45.8	133 57.8	+19 15.0	142 21.9	+19 42.8	232 19.7	-13 49.7	31 27.5	+6 47.7					
19	215	48.3	148 57.4	15.5	157 22.5	43.2	247 22.4	49.8	46 29.8	47.7					
20	230	50.8	163 56.9	16.0	172 23.1	43.6	262 25.0	49.9	61 32.0	47.6					
21	245	53.2	178 56.5	16.5	187 23.8	44.0	277 27.7	49.9	76 34.3	47.5					
22	260	55.7	193 56.1	17.1	202 24.4	44.4	292 30.4	50.0	91 36.6	47.4					
23	275	58.1	208 55.7	17.6	217 25.1	44.8	307 33.0	50.1	106 38.8	47.3					
24	291	00.6	223 55.2	+19 18.1	232 25.7	+19 45.2	322 35.7	-13 50.2	121 41.1	+6 47.2					
Dif	—		-4	+5	+6	+4	+27	-1	+23	-1					

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 20 ^d 2	PHE { 4 ^h : 55 ^m 4 12 ^h : 55 ^m 6 20 ^h : 55 ^m 8	Final del crepúsculo			Salida de Luna		Puesta de Luna			
	PMG: 12 ^h 05 ^m 8	PMG: 4 ^h 08 ^m	R°: 43 ^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	178	34.3	+21 50.3	299	37.9	+0 50.1		60 N	21 10	22 30	** **	21 59 3	10 41 86	
1	193	34.2	49.9	314	12.8 ¹⁵⁹	+1 03.8 ¹³⁷		58	20 53	21 58	** **	22 02 6	40 82	
2	208	34.2	49.5	328	47.6 ¹⁵⁸	17.6 ¹³⁸		56	39	35	23 33	05 9	38 79	
3	223	34.1	49.2	343	22.4 ¹⁵⁸	31.3 ¹³⁷		54	26	17	22 39	07 12	37 76	
4	238	34.0	48.8	357	57.2 ¹⁵⁸	45.1 ¹³⁸		52	15	21 01	22 09	09 14	35 74	
5	253	34.0	+21 48.4	12	31.9 ¹⁵⁷	+1 58.8 ¹³⁷		50	20 06	20 48	21 47	22 11 17	10 34 72	
6	268	33.9	+21 48.1	27	06.6 ¹⁵⁷	+2 12.6 ¹³⁸		45	19 45	20 21	21 08	22 16 21	10 32 66	
7	283	33.8	47.7	41	41.3 ¹⁵⁷	26.4 ¹³⁸		40	29	20 01	20 41	20 24	29 63	
8	298	33.7	47.3	56	16.0 ¹⁵⁷	40.1 ¹³⁷		35	15	19 44	20	23 28	28 59	
9	313	33.7	47.0	70	50.6 ¹⁵⁶	+2 53.9 ¹³⁸		30	19 03	30	20 03	26 31	26 57	
10	328	33.6	46.6	85	25.2 ¹⁵⁶	+3 07.7 ¹³⁸		20	18 43	19 07	19 36	31 36	23 52	
11	343	33.5	+21 46.2	99	59.7 ¹⁵⁵	+3 21.5 ¹³⁸		10 N	18 26	18 48	19 15	22 36 40	10 21 47	
12	358	33.4	+21 45.9	114	34.2 ¹⁵⁵	+3 35.2 ¹³⁷		0	18 09	18 32	18 58	22 40 45	10 18 43	
13	13	33.4	45.5	129	08.7 ¹⁵⁵	+3 49.0 ¹³⁸		10 S	17 53	16	42	45 48	16 39	
14	28	33.3	45.1	143	43.1 ¹⁵⁴	+4 02.8 ¹³⁸		20	36	18 00	27	50 52	14 34	
15	43	33.2	44.8	158	17.5 ¹⁵⁴	16.5 ¹³⁷		30	17	17 43	12	55 58	11 29	
16	58	33.2	44.4	172	51.9 ¹⁵⁴	30.3 ¹³⁸		35	17 06	33	18 04	22 58 61	09 27	
17	73	33.1	+21 44.0	187	26.2 ¹⁵³	+4 44.0 ¹³⁷		40	16 53	17 23	17 56	23 02 64	10 07 24	
18	88	33.0	+21 43.6	202	00.4 ¹⁵²	+4 57.8 ¹³⁸		45	16 37	17 10	17 47	23 06 68	10 05 20	
19	103	32.9	43.3	216	34.6 ¹⁵²	+5 11.5 ¹³⁷		50	19	16 56	37	11 73	03 15	
20	118	32.9	42.9	231	08.8 ¹⁵²	25.2 ¹³⁷		52	10	49	32	13 76	02 13	
21	133	32.8	42.5	245	42.9 ¹⁵¹	39.0 ¹³⁸		54	16 00	42	27	16 78	10 00 11	
22	148	32.7	42.1	260	17.0 ¹⁵¹	+5 52.7 ¹³⁷		56	15 49	34	22	19 81	9 59 8	
23	163	32.7	41.8	274	51.0 ¹⁵⁰	+6 06.4 ¹³⁷		58	36	25	16	22 84	57 6	
24	178	32.6	+21 41.4	289	25.0 ¹⁵⁰	+6 20.1 ¹³⁷		60 S	15 21	16 15	17 10	23 26 88	9 56 2	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 4 ^h 35 ^m 2		Mag: -4.1 PMG: 9 ^h 05 ^m		Mag: +1.1 PMG: 8 ^h 30 ^m		Mag: -2.8 PMG: 2 ^h 29 ^m		Mag: +1.1 PMG: 15 ^h 51 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	291	00.6	223 55.2	+19 18.1	232 25.7	+19 45.2	322 35.7	-13 50.2	121 41.1	+6 47.2
1	306	03.1	238 54.8	18.6	247 26.4	45.5	337 38.4	50.3	136 43.4	47.1
2	321	05.5	253 54.4	19.1	262 27.0	45.9	352 41.0	50.3	151 45.6	47.0
3	336	08.0	268 53.9	19.6	277 27.6	46.3	7 43.7	50.4	166 47.9	46.9
4	351	10.5	283 53.5	20.1	292 28.3	46.7	22 46.3	50.5	181 50.2	46.9
5	6	12.9	298 53.1	+19 20.6	307 28.9	+19 47.1	37 49.0	-13 50.6	196 52.4	+6 46.8
6	21	15.4	313 52.7	+19 21.1	322 29.6	+19 47.5	52 51.7	-13 50.7	211 54.7	+6 46.7
7	36	17.9	328 52.2	21.6	337 30.2	47.9	67 54.3	50.7	226 57.0	46.6
8	51	20.3	343 51.8	22.1	352 30.9	48.3	82 57.0	50.8	241 59.2	46.5
9	66	22.8	358 51.4	22.6	7 31.5	48.7	97 59.7	50.9	257 01.5	46.4
10	81	25.3	13 50.9	23.1	22 32.2	49.1	113 02.3	51.0	272 03.8	46.3
11	96	27.7	28 50.5	+19 23.6	37 32.8	+19 49.5	128 05.0	-13 51.1	287 06.0	+6 46.2
12	111	30.2	43 50.1	+19 24.1	52 33.4	+19 49.9	143 07.7	-13 51.2	302 08.3	+6 46.1
13	126	32.6	58 49.6	24.6	67 34.1	50.3	158 10.3	51.2	317 10.6	46.1
14	141	35.1	73 49.2	25.1	82 34.7	50.6	173 13.0	51.3	332 12.8	46.0
15	156	37.6	88 48.8	25.6	97 35.4	51.0	188 15.7	51.4	347 15.1	45.9
16	171	40.0	103 48.3	26.1	112 36.0	51.4	203 18.3	51.5	2 17.3	45.8
17	186	42.5	118 47.9	+19 26.6	127 36.7	+19 51.8	218 21.0	-13 51.6	17 19.6	+6 45.7
18	201	45.0	133 47.4	+19 27.1	142 37.3	+19 52.2	233 23.7	-13 51.6	32 21.9	+6 45.6
19	216	47.4	148 47.0	27.6	157 37.9	52.6	248 26.3	51.7	47 24.1	45.5
20	231	49.9	163 46.6	28.1	172 38.6	53.0	263 29.0	51.8	62 26.4	45.4
21	246	52.4	178 46.1	28.6	187 39.2	53.4	278 31.7	51.9	77 28.7	45.3
22	261	54.8	193 45.7	29.1	202 39.9	53.7	293 34.4	52.0	92 30.9	45.2
23	276	57.3	208 45.2	29.6	217 40.5	54.1	308 37.0	52.1	107 33.2	45.2
24	291	59.7	223 44.8	+19 30.1	232 41.2	+19 54.5	323 39.7	-13 52.1	122 35.5	+6 45.1
Dif	—		-4	+5	+6	+4	+27	-1	+23	-1

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 21 ^d 2	PHE { 4 ^h : 56 ^o 0 12 ^h : 56 ^o 3 20 ^h : 56 ^o 5									
	PMG: 12 ^h 05 ^m 9					SD: 15 ^h 2		PMG: 4 ^h 51 ^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
0	178	32.6	+21	41.4	289	25.0	+6	20.1	60 N	** ** *	1 42	3 02	22 02	5
1	193	32.5		41.0	303	58.9 ¹⁴⁹		33.7 ¹³⁶	58	** ** *	2 14	19	08	9
2	208	32.5		40.6	318	32.8 ¹⁴⁹	+6	47.4 ¹³⁷	56	0 39	37	33	14	12
3	223	32.4		40.2	333	06.6 ¹⁴⁸	+7	01.0 ¹³⁶	54	1 33	2 55	46	19	15
4	238	32.3		39.9	347	40.3 ¹⁴⁷		14.7 ¹³⁷	52	2 03	3 11	3 57	23	18
5	253	32.3	+21	39.5	2	14.0 ¹⁴⁷	+7	28.3 ¹³⁶	50	2 25	3 24	4 06	22 28	19
6	268	32.2	+21	39.1	16	47.7 ¹⁴⁷	+7	41.9 ¹³⁶	45	3 04	3 51	4 27	22 37	24
7	283	32.1		38.7	31	21.2 ¹⁴⁵	+7	55.5 ¹³⁶	40	31	4 11	43	44	29
8	298	32.0		38.3	45	54.8 ¹⁴⁶	+8	09.0 ¹³⁵	35	3 52	28	4 57	51	32
9	313	32.0		38.0	60	28.2 ¹⁴⁴		22.6 ¹³⁶	30	4 09	4 42	5 09	22 57	34
10	328	31.9		37.6	75	01.6 ¹⁴⁴		36.1 ¹³⁵	20	36	5 05	29	23 07	39
11	343	31.8	+21	37.2	89	34.9 ¹⁴³	+8	49.6 ¹³⁵	10 N	4 57	5 23	5 46	23 16	44
12	358	31.8	+21	36.8	104	08.2 ¹⁴³	+9	03.0 ¹³⁴	0	5 14	5 40	6 02	23 25	47
13	13	31.7		36.4	118	41.4 ¹⁴²		16.5 ¹³⁵	10 S	30	5 56	18	33	52
14	28	31.6		36.0	133	14.5 ¹⁴¹		29.9 ¹³⁴	20	44	6 12	35	42	56
15	43	31.6		35.6	147	47.5 ¹⁴⁰		43.3 ¹³⁴	30	5 59	29	6 55	53	61
16	58	31.5		35.3	162	20.5 ¹⁴⁰	+9	56.7 ¹³⁴	35	6 07	38	7 06	23 59	64
17	73	31.4	+21	34.9	176	53.4 ¹³⁹	+10	10.0 ¹³³	40	6 15	6 49	7 19	** ** *	**
18	88	31.4	+21	34.5	191	26.2 ¹³⁸	+10	23.3 ¹³³	45	6 24	7 01	7 34	** ** *	**
19	103	31.3		34.1	205	59.0 ¹³⁸		36.6 ¹³³	50	35	15	7 52	** ** *	**
20	118	31.2		33.7	220	31.7 ¹³⁷	+10	49.9 ¹³³	52	39	22	8 01	** ** *	**
21	133	31.2		33.3	235	04.3 ¹³⁶	+11	03.1 ¹³²	54	44	29	11	** ** *	**
22	148	31.1		32.9	249	36.8 ¹³⁵		16.3 ¹³²	56	49	37	22	** ** *	**
23	163	31.1		32.5	264	09.3 ¹³⁵		29.4 ¹³¹	58	6 55	46	35	** ** *	**
24	178	31.0	+21	32.1	278	41.6 ¹³³	+11	42.5 ¹³¹	60 S	7 01	7 56	8 50	** ** *	**

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 4 ^h 31 ^m 3		Mag: -4.1 PMG: 9 ^h 05 ^m		Mag: +1.1 PMG: 8 ^h 29 ^m		Mag: -2.8 PMG: 2 ^h 25 ^m		Mag: +1.1 PMG: 15 ^h 47 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	291	59.7	223	44.8	+19	30.1	232	41.2	+19	54.5
1	307	02.2	238	44.4		30.6	247	41.8		54.9
2	322	04.7	253	43.9		31.1	262	42.4		55.3
3	337	07.1	268	43.5		31.6	277	43.1		55.7
4	352	09.6	283	43.0		32.1	292	43.7		56.1
5	7	12.1	298	42.6	+19	32.6	307	44.4	+19	56.4
6	22	14.5	313	42.1	+19	33.0	322	45.0	+19	56.8
7	37	17.0	328	41.7		33.5	337	45.7		57.2
8	52	19.5	343	41.3		34.0	352	46.3		57.6
9	67	21.9	358	40.8		34.5	7	47.0		58.0
10	82	24.4	13	40.4		35.0	22	47.6		58.4
11	97	26.9	28	39.9	+19	35.5	37	48.2	+19	58.8
12	112	29.3	43	39.5	+19	36.0	52	48.9	+19	59.1
13	127	31.8	58	39.0		36.4	67	49.5		59.5
14	142	34.2	73	38.6		36.9	82	50.2	+19	59.9
15	157	36.7	88	38.1		37.4	97	50.8	+20	00.3
16	172	39.2	103	37.7		37.9	112	51.5		00.7
17	187	41.6	118	37.2	+19	38.4	127	52.1	+20	01.0
18	202	44.1	133	36.8	+19	38.9	142	52.7	+20	01.4
19	217	46.6	148	36.3		39.3	157	53.4		01.8
20	232	49.0	163	35.9		39.8	172	54.0		02.2
21	247	51.5	178	35.4		40.3	187	54.7		02.6
22	262	54.0	193	35.0		40.8	202	55.3		02.9
23	277	56.4	208	34.5		41.2	217	56.0		03.3
24	292	58.9	223	34.0	+19	41.7	232	56.6	+20	03.7
Dif	—		-4		+5		+6		+4	
								+27		-1
									+23	
										-1

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7				Edad: 22 ^d 2 PHE { 4 ^h : 56 ^m 8 12 ^h : 57 ^m 1 20 ^h : 57 ^m 3 Rº: 48 ^m													
	PMG: 12 ^h 06 ^m 0				PMG: 5 ^h 36 ^m													
	hG ☉		Dec		hG ☾		Dif				Civil	Náutico	Hora	Rº	Hora	Rº		
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m			
0	178	31.0	+21	32.1	278	41.6	+11	42.5	60 N	21 07	22 24	** **	22 07	8	13 37	96		
1	193	30.9		31.7	293	13.9 ¹³³	+11	55.6 ¹³¹	58	20 50	21 54	** **	17 13		28 91			
2	208	30.9		31.4	307	46.1 ¹³²	+12	08.6 ¹³⁰	56	36	32	23 20	26 16		20 87			
3	223	30.8		31.0	322	18.2 ¹³¹		21.6 ¹³⁰	54	24	21 14	22 33	34 20		13 84			
4	238	30.7		30.6	336	50.2 ¹³⁰		34.6 ¹³⁰	52	13	20 59	22 05	41 22		06 81			
5	253	30.7	+21	30.2	351	22.2 ¹³⁰	+12	47.5 ¹²⁹	50	20 04	20 46	21 44	22 47	25	13 01	78		
6	268	30.6	+21	29.8	5	54.0 ¹²⁸	+13	00.3 ¹²⁸	45	19 44	20 20	21 06	23 01	30	12 48	73		
7	283	30.5		29.4	20	25.8 ¹²⁸		13.2 ¹²⁹	40	28	20 00	20 39	13 34		38 69			
8	298	30.5		29.0	34	57.5 ¹²⁷		25.9 ¹²⁷	35	14	19 43	19	23 37		29 66			
9	313	30.4		28.6	49	29.0 ¹²⁵		38.7 ¹²⁸	30	19 03	29	20 02	31 40		22 63			
10	328	30.4		28.2	64	00.5 ¹²⁵	+13	51.4 ¹²⁷	20	18 43	19 07	19 35	23 46	45	12 09	58		
11	343	30.3	+21	27.8	78	31.9 ¹²⁴	+14	04.0 ¹²⁶	10 N	18 26	18 48	19 15	** ** *		11 57	54		
12	358	30.2	+21	27.4	93	03.2 ¹²³	+14	16.6 ¹²⁶	0	18 10	18 32	18 58	** ** *		11 47	49		
13	13	30.2		27.0	107	34.4 ¹²²		29.1 ¹²⁵	10 S	17 54	16	42	** ** *		36 46			
14	28	30.1		26.6	122	05.5 ¹²¹		41.6 ¹²⁵	20	37	18 01	28	** ** *		25 42			
15	43	30.0		26.2	136	36.5 ¹²⁰	+14	54.0 ¹²⁴	30	18	17 44	13	** ** *		12 37			
16	58	30.0		25.8	151	07.4 ¹¹⁹	+15	06.4 ¹²⁴	35	17 07	34	18 06	** ** *		11 05	34		
17	73	29.9	+21	25.4	165	38.3 ¹¹⁹	+15	18.7 ¹²³	40	16 54	17 24	17 57	0 06	68	10 57	30		
18	88	29.9	+21	25.0	180	09.0 ¹¹⁷	+15	30.9 ¹²²	45	16 39	17 12	17 48	0 14	72	10 47	26		
19	103	29.8		24.6	194	39.6 ¹¹⁶		43.1 ¹²²	50	21	16 58	38	24 77		35 22			
20	118	29.7		24.2	209	10.1 ¹¹⁵	+15	55.2 ¹²¹	52	12	51	34	29 79		30 19			
21	133	29.7		23.7	223	40.4 ¹¹³	+16	07.3 ¹²¹	54	16 02	44	29	34 82		24 16			
22	148	29.6		23.3	238	10.7 ¹¹³		19.3 ¹²⁰	56	15 51	36	24	40 85		17 14			
23	163	29.6		22.9	252	40.9 ¹¹²		31.2 ¹¹⁹	58	39	28	18	46 89		10 10			
24	178	29.5	+21	22.5	267	11.0 ¹¹¹	+16	43.1 ¹¹⁹	60 S	15 24	16 18	17 12	0 54	93	10 02	5		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 4 ^h 27 ^m 3		Mag: -4.1 PMG: 9 ^h 06 ^m				Mag: +1.1 PMG: 8 ^h 28 ^m				Mag: -2.8 PMG: 2 ^h 21 ^m				Mag: +1.1 PMG: 15 ^h 44 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♎		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	292	58.9	223	34.0	+19	41.7	232	56.6	+20	03.7	324	43.8	-13	54.1	123	29.8	+6	42.9
1	308	01.4	238	33.6		42.2	247	57.2		04.1	339	46.5		54.2	138	32.0		42.8
2	323	03.8	253	33.1		42.7	262	57.9		04.5	354	49.2		54.3	153	34.3		42.7
3	338	06.3	268	32.7		43.2	277	58.5		04.8	9	51.9		54.4	168	36.6		42.6
4	353	08.7	283	32.2		43.6	292	59.2		05.2	24	54.5		54.5	183	38.8		42.5
5	8	11.2	298	31.8	+19	44.1	307	59.8	+20	05.6	39	57.2	-13	54.6	198	41.1	+6	42.4
6	23	13.7	313	31.3	+19	44.6	323	00.5	+20	06.0	54	59.9	-13	54.6	213	43.3	+6	42.4
7	38	16.1	328	30.8		45.0	338	01.1		06.3	70	02.6		54.7	228	45.6		42.3
8	53	18.6	343	30.4		45.5	353	01.7		06.7	85	05.3		54.8	243	47.9		42.2
9	68	21.1	358	29.9		46.0	8	02.4		07.1	100	07.9		54.9	258	50.1		42.1
10	83	23.5	13	29.5		46.4	23	03.0		07.5	115	10.6		55.0	273	52.4		42.0
11	98	26.0	28	29.0	+19	46.9	38	03.7	+20	07.8	130	13.3	-13	55.1	288	54.7	+6	41.9
12	113	28.5	43	28.5	+19	47.4	53	04.3	+20	08.2	145	16.0	-13	55.1	303	56.9	+6	41.8
13	128	30.9	58	28.1		47.9	68	05.0		08.6	160	18.7		55.2	318	59.2		41.7
14	143	33.4	73	27.6		48.3	83	05.6		09.0	175	21.3		55.3	334	01.4		41.6
15	158	35.8	88	27.2		48.8	98	06.2		09.3	190	24.0		55.4	349	03.7		41.5
16	173	38.3	103	26.7		49.2	113	06.9		09.7	205	26.7		55.5	4	06.0		41.4
17	188	40.8	118	26.2	+19	49.7	128	07.5	+20	10.1	220	29.4	-13	55.6	19	08.2	+6	41.4
18	203	43.2	133	25.8	+19	50.2	143	08.2	+20	10.5	235	32.1	-13	55.7	34	10.5	+6	41.3
19	218	45.7	148	25.3		50.6	158	08.8		10.8	250	34.7		55.7	49	12.7		41.2
20	233	48.2	163	24.8		51.1	173	09.5		11.2	265	37.4		55.8	64	15.0		41.1
21	248	50.6	178	24.4		51.6	188	10.1		11.6	280	40.1		55.9	79	17.3		41.0
22	263	53.1	193	23.9		52.0	203	10.7		11.9	295	42.8		56.0	94	19.5		40.9
23	278	55.6	208	23.4		52.5	218	11.4		12.3	310	45.5		56.1	109	21.8		40.8
24	293	58.0	223	23.0	+19	52.9	233	12.0	+20	12.7	325	48.1	-13	56.2	124	24.0	+6	40.7
Dif	—		-5		+5		+6		+4		+27		-1		+23		-	

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 15 ^h 7			Edad: 23 ^d 2	PHE { 4 ^h : 57 ^m /6 12 ^h : 57 ^m /9 20 ^h : 58 ^m /2	SD: 15 ^h 7		R°: 54 ^m	Náutico		Civil	Hora	R°	Hora	R°		
	PMG: 12 ^h 06 ^m 1	hG ☉	Dec			hG ☾										Dif	Dec
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m	h	m
0	178	29.5	+21	22.5	267	11.0	+16 43.1	60 N	** **	1 48	3 06	22 15	16	15 13	100		
1	193	29.4		22.1	281	40.9	+16 54.9	58	** **	2 18	22	30 21		14 59	94		
2	208	29.4		21.7	296	10.8	+17 06.6	56	0 53	41	36	42 26		47 90			
3	223	29.3		21.3	310	40.5	18.2	54	1 39	2 59	49	22 54	29	37 83			
4	238	29.3		20.9	325	10.2	29.8	52	2 07	3 14	3 59	23 03	32	27 83			
5	253	29.2	+21	20.5	339	39.7	+17 41.3	50	2 28	3 27	4 09	23 12	35	14 19	80		
6	268	29.2	+21	20.1	354	09.1	+17 52.7	45	3 06	3 53	4 29	23 31	39	14 01	76		
7	283	29.1		19.7	8	38.4	+18 04.1	40	33	4 13	45	23 47	42	13 47	72		
8	298	29.0		19.2	23	07.5	15.4	35	3 54	29	4 58	** **	** *	35	69		
9	313	29.0		18.8	37	36.6	26.5	30	4 10	4 43	5 10	** **	** **	25	66		
10	328	28.9		18.4	52	05.5	37.6	20	37	5 05	30	** **	** **	13 07	61		
11	343	28.9	+21	18.0	66	34.4	+18 48.7	10 N	4 57	5 24	5 47	0 00	48	12 51	58		
12	358	28.8	+21	17.6	81	03.1	+18 59.6	0	5 14	5 40	6 02	0 12	52	12 36	55		
13	13	28.7		17.2	95	31.7	+19 10.4	10 S	30	5 56	18	25 56		22 51			
14	28	28.7		16.8	110	00.1	21.2	20	44	6 11	35	38 60		12 07	47		
15	43	28.6		16.3	124	28.5	31.9	30	5 59	28	6 54	0 54	65	11 49	43		
16	58	28.6		15.9	138	56.7	42.4	35	6 06	37	7 05	1 03	68	39 40			
17	73	28.5	+21	15.5	153	24.8	+19 52.9	40	6 14	6 48	7 18	1 14	71	11 27	38		
18	88	28.5	+21	15.1	167	52.8	+20 03.3	45	6 23	7 00	7 33	1 26	75	11 13	34		
19	103	28.4		14.7	182	20.7	13.6	50	33	14	51	41 80		10 57	29		
20	118	28.4		14.2	196	48.4	23.7	52	38	20	7 59	48 83		49 26			
21	133	28.3		13.8	211	16.0	33.8	54	42	27	8 09	1 56	86	40 24			
22	148	28.2		13.4	225	43.5	43.8	56	47	35	20	2 05	90	31 20			
23	163	28.2		13.0	240	10.9	+20 53.7	58	53	44	32	15 94		20 16			
24	178	28.1	+21	12.6	254	38.1	+21 03.4	60 S	6 59	7 53	8 47	2 27	100	10 07	11		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 4 ^h 23 ^m 4		Mag: -4.1 PMG: 9 ^h 07 ^m		Mag: +1.1 PMG: 8 ^h 27 ^m		Mag: -2.8 PMG: 2 ^h 16 ^m		Mag: +1.1 PMG: 15 ^h 40 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	293	58.0	223	23.0	+19 52.9	233	12.0	+20 12.7	325	48.1	-13 56.2	124	24.0	+6 40.7
1	309	00.5	238	22.5	53.4	248	12.7	13.0	340	50.8	56.3	139	26.3	40.6
2	324	03.0	253	22.0	53.9	263	13.3	13.4	355	53.5	56.4	154	28.5	40.5
3	339	05.4	268	21.6	54.3	278	14.0	13.8	10	56.2	56.4	169	30.8	40.4
4	354	07.9	283	21.1	54.8	293	14.6	14.2	25	58.9	56.5	184	33.1	40.3
5	9	10.3	298	20.6	+19 55.2	308	15.2	+20 14.5	41	01.6	-13 56.6	199	35.3	+6 40.2
6	24	12.8	313	20.1	+19 55.7	323	15.9	+20 14.9	56	04.2	-13 56.7	214	37.6	+6 40.2
7	39	15.3	328	19.7	56.1	338	16.5	15.3	71	06.9	56.8	229	39.8	40.1
8	54	17.7	343	19.2	56.6	353	17.2	15.6	86	09.6	56.9	244	42.1	40.0
9	69	20.2	358	18.7	57.0	8	17.8	16.0	101	12.3	57.0	259	44.4	39.9
10	84	22.7	13	18.3	57.5	23	18.5	16.4	116	15.0	57.0	274	46.6	39.8
11	99	25.1	28	17.8	+19 57.9	38	19.1	+20 16.7	131	17.7	-13 57.1	289	48.9	+6 39.7
12	114	27.6	43	17.3	+19 58.4	53	19.7	+20 17.1	146	20.3	-13 57.2	304	51.1	+6 39.6
13	129	30.1	58	16.8	58.8	68	20.4	17.5	161	23.0	57.3	319	53.4	39.5
14	144	32.5	73	16.4	59.3	83	21.0	17.8	176	25.7	57.4	334	55.6	39.4
15	159	35.0	88	15.9	+19 59.7	98	21.7	18.2	191	28.4	57.5	349	57.9	39.3
16	174	37.5	103	15.4	+20 00.2	113	22.3	18.6	206	31.1	57.6	5	00.2	39.2
17	189	39.9	118	14.9	+20 00.6	128	23.0	+20 18.9	221	33.8	-13 57.7	20	02.4	+6 39.1
18	204	42.4	133	14.5	+20 01.1	143	23.6	+20 19.3	236	36.5	-13 57.7	35	04.7	+6 39.0
19	219	44.8	148	14.0	01.5	158	24.2	19.7	251	39.1	57.8	50	06.9	39.0
20	234	47.3	163	13.5	02.0	173	24.9	20.0	266	41.8	57.9	65	09.2	38.9
21	249	49.8	178	13.0	02.4	188	25.5	20.4	281	44.5	58.0	80	11.4	38.8
22	264	52.2	193	12.5	02.8	203	26.2	20.7	296	47.2	58.1	95	13.7	38.7
23	279	54.7	208	12.1	03.3	218	26.8	21.1	311	49.9	58.2	110	16.0	38.6
24	294	57.2	223	11.6	+20 03.7	233	27.5	+20 21.5	326	52.6	-13 58.3	125	18.2	+6 38.5
Dif	—		-5 +4		+6 +4		+27 -1		-1		+23		-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 2				Edad: 24 ^d 2 PHE { 4 ^h : 58'5 12 ^h : 58'8 20 ^h : 59'1 SD: 15'9 PMG: 7 ^h 18 ^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	h m m	h m m			
0	178	28.1	+21	12.6	254	38.1	+21	03.4	60 N	21 03	22 18	** **	22 31 32		16 53 95				
1	193	28.1		12.1	269	05.2	81	13.1	58	20 47	21 50	** **	22 51 38		33 89				
2	208	28.0		11.7	283	32.2	80	22.7	56	33	28	23 09	23 08 42		17 85				
3	223	28.0		11.3	297	59.1	79	32.1	54	21	21 11	22 27	23 44		16 02 83				
4	238	27.9		10.9	312	25.8	77	41.4	52	11	20 56	22 01	35 47		15 50 80				
5	253	27.9	+21	10.4	326	52.5	77	+21 50.6	50	20 02	20 43	21 41	23 47 48		15 39 78				
6	268	27.8	+21	10.0	341	18.9	74	+21 59.7	45	19 42	20 18	21 04	** ** *		15 17 74				
7	283	27.8		09.6	355	45.3	74	+22 08.7	40	27	19 58	20 38	** ** *		14 59 72				
8	298	27.7		09.1	10	11.6	73	17.5	35	13	42	17	0 00 45		44 69				
9	313	27.7		08.7	24	37.7	71	26.3	30	19 02	29	20 01	11 48		31 67				
10	328	27.6		08.3	39	03.7	70	34.9	20	18 42	19 06	19 35	31 51		14 08 65				
11	343	27.6	+21	07.9	53	29.5	68	+22 43.3	10 N	18 25	18 48	19 15	0 48 55		13 49 62				
12	358	27.5	+21	07.4	67	55.3	68	+22 51.7	0	18 10	18 32	18 58	1 04 58		13 31 60				
13	13	27.5		07.0	82	20.9	66	+22 59.9	10 S	17 54	17	43	21 60		13 13 58				
14	28	27.4		06.6	96	46.4	65	+23 08.0	20	38	18 01	28	38 64		12 54 55				
15	43	27.4		06.1	111	11.8	64	16.0	30	19	17 45	14	1 59 67		32 52				
16	58	27.3		05.7	125	37.0	62	23.8	35	17 08	36	18 07	2 11 69		19 50				
17	73	27.3	+21	05.3	140	02.2	62	+23 31.5	40	16 56	17 25	17 59	2 25 72		12 05 47				
18	88	27.2	+21	04.8	154	27.2	60	+23 39.0	45	16 41	17 14	17 50	2 41 76		11 47 45				
19	103	27.1		04.4	168	52.0	58	46.4	50	23	17 00	40	3 01 81		26 40				
20	118	27.1		04.0	183	16.8	58	+23 53.7	52	14	16 54	36	11 83		15 38				
21	133	27.1		03.5	197	41.5	57	+24 00.8	54	16 05	47	31	22 86		11 04 35				
22	148	27.0		03.1	212	06.0	55	07.8	56	15 54	39	26	35 89		10 51 32				
23	163	27.0		02.7	226	30.4	54	14.6	58	42	30	21	3 49 94		36 27				
24	178	26.9	+21	02.2	240	54.7	53	+24 21.3	60 S	15 28	16 21	17 15	4 07 100		10 18 21				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO				
	PMG: 4 ^h 19 ^m 5		Mag: -4.1 PMG: 9 ^h 08 ^m				Mag: +1.1 PMG: 8 ^h 26 ^m				Mag: -2.8 PMG: 2 ^h 12 ^m				Mag: +1.1 PMG: 15 ^h 36 ^m				
	hG ♈	hG ♀			Dec			hG ♂	Dec			hG ♃	Dec			hG ♄	Dec		
h	°	'	°	'	°	'		°	'	°	'	°	'	°	'	°	'	°	'
0	294	57.2	223	11.6	+20	03.7		233	27.5	+20	21.5	326	52.6	-13	58.3	125	18.2	+6	38.5
1	309	59.6	238	11.1		04.2		248	28.1		21.8	341	55.3		58.4	140	20.5		38.4
2	325	02.1	253	10.6		04.6		263	28.7		22.2	356	58.0		58.4	155	22.7		38.3
3	340	04.6	268	10.1		05.0		278	29.4		22.6	12	00.6		58.5	170	25.0		38.2
4	355	07.0	283	09.7		05.5		293	30.0		22.9	27	03.3		58.6	185	27.2		38.1
5	10	09.5	298	09.2	+20	05.9		308	30.7	+20	23.3	42	06.0	-13	58.7	200	29.5	+6	38.0
6	25	11.9	313	08.7	+20	06.4		323	31.3	+20	23.6	57	08.7	-13	58.8	215	31.8	+6	37.9
7	40	14.4	328	08.2		06.8		338	32.0		24.0	72	11.4		58.9	230	34.0		37.8
8	55	16.9	343	07.7		07.2		353	32.6		24.4	87	14.1		59.0	245	36.3		37.7
9	70	19.3	358	07.2		07.7		8	33.2		24.7	102	16.8		59.1	260	38.5		37.7
10	85	21.8	13	06.7		08.1		23	33.9		25.1	117	19.5		59.2	275	40.8		37.6
11	100	24.3	28	06.3	+20	08.5		38	34.5	+20	25.4	132	22.2	-13	59.2	290	43.0	+6	37.5
12	115	26.7	43	05.8	+20	09.0		53	35.2	+20	25.8	147	24.9	-13	59.3	305	45.3	+6	37.4
13	130	29.2	58	05.3		09.4		68	35.8		26.1	162	27.6		59.4	320	47.5		37.3
14	145	31.7	73	04.8		09.8		83	36.4		26.5	177	30.2		59.5	335	49.8		37.2
15	160	34.1	88	04.3		10.2		98	37.1		26.9	192	32.9		59.6	350	52.1		37.1
16	175	36.6	103	03.8		10.7		113	37.7		27.2	207	35.6		59.7	5	54.3		37.0
17	190	39.1	118	03.3	+20	11.1		128	38.4	+20	27.6	222	38.3	-13	59.8	20	56.6	+6	36.9
18	205	41.5	133	02.8	+20	11.5		143	39.0	+20	27.9	237	41.0	-13	59.9	35	58.8	+6	36.8
19	220	44.0	148	02.3		12.0		158	39.7		28.3	252	43.7	-14	00.0	51	01.1		36.7
20	235	46.4	163	01.9		12.4		173	40.3		28.6	267	46.4	-14	00.0	66	03.3		36.6
21	250	48.9	178	01.4		12.8		188	40.9		29.0	282	49.1	-14	00.1	81	05.6		36.5
22	265	51.4	193	00.9		13.2		203	41.6		29.4	297	51.8		00.2	96	07.8		36.4
23	280	53.8	208	00.4		13.7		218	42.2		29.7	312	54.5		00.3	111	10.1		36.3
24	295	56.3	222	59.9	+20	14.1		233	42.9	+20	30.1	327	57.2	-14	00.4	126	12.3	+6	36.2
Dif	—		-5 +4				+6 +4				+27 -1				+23 -1				

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'7 PMG: 12 ^h 06 ^m 2				Edad: 25 ^d 2 PHE { 4 ^h : 59'4 12 ^h : 59'7 20 ^h : 60'0 SD: 16'1 PMG: 8 ^h 16 ^m R°: 64 ^m												
	hG ☉		Dec		hG ☾ Dif		Dec Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	26.9	+21	02.2	240	54.7	+24	21.3	60 N	** **	1 55	3 10	23 03	63	18 28	73	
1	193	26.9		01.8	255	18.8		27.8	58	** **	2 23	26	29 64		18 02	71	
2	208	26.8		01.3	269	42.9		34.1	56	1 04	2 45	40	23 50	64	17 42	70	
3	223	26.8		00.9	284	06.8		40.4	54	1 45	3 02	3 51	** **	** *	25	69	
4	238	26.7	+21	00.5	298	30.7		46.4	52	2 12	17	4 02	** **	** *	17 10	69	
5	253	26.7	+21	00.0	312	54.4	+24	52.3	50	2 32	3 29	4 11	** **	** *	16 57	69	
6	268	26.6	+20	59.6	327	18.0	+24	58.1	45	3 09	3 55	4 30	0 10	51	16 31	68	
7	283	26.6		59.1	341	41.5	+25	03.6	40	35	4 15	46	29 53		16 11	67	
8	298	26.5		58.7	356	04.9		09.1	35	3 55	31	4 59	45 55		15 53	67	
9	313	26.5		58.2	10	28.2		14.3	30	4 12	4 44	5 11	0 59	56	38	67	
10	328	26.4		57.8	24	51.3		19.4	20	38	5 06	30	1 22	59	15 13	66	
11	343	26.4	+20	57.4	39	14.4	+25	24.3	10 N	4 58	5 24	5 47	1 43	60	14 51	65	
12	358	26.3	+20	56.9	53	37.4	+25	29.1	0	5 15	5 41	6 03	2 02	62	14 31	64	
13	13	26.3		56.5	68	00.3		33.6	10 S	30	5 56	18	21 64		14 11	63	
14	28	26.2		56.0	82	23.0		38.0	20	44	6 11	35	2 42	66	13 49	62	
15	43	26.2		55.6	96	45.7		42.3	30	5 58	27	6 53	3 06	68	24	61	
16	58	26.2		55.1	111	08.3		46.3	35	6 05	37	7 04	20 69		13 09	60	
17	73	26.1	+20	54.7	125	30.8	+25	50.2	40	6 13	6 47	7 16	3 37	70	12 52	59	
18	88	26.1	+20	54.2	139	53.2	+25	53.9	45	6 22	6 58	7 31	3 57	72	12 32	58	
19	103	26.0		53.8	154	15.5	+25	57.4	50	32	7 12	49	4 22	74	12 06	56	
20	118	26.0		53.3	168	37.7	+26	00.8	52	36	18	7 57	34 76		11 53	55	
21	133	25.9		52.9	182	59.9		03.9	31	54	41	25	8 07	4 48	77	39 54	
22	148	25.9		52.4	197	21.9		06.9	30	56	45	33	17	5 04	80	23 52	
23	163	25.8		52.0	211	43.9		09.7	28	58	51	41	29	23 83	11 03	49	
24	178	25.8	+20	51.5	226	05.8	+26	12.3	26	60 S	6 57	7 51	8 43	5 47	88	10 39 44	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 4 ^h 15 ^m 5		Mag: -4.1 PMG: 9 ^h 08 ^m		Mag: +1.1 PMG: 8 ^h 25 ^m		Mag: -2.8 PMG: 2 ^h 08 ^m		Mag: +1.1 PMG: 15 ^h 33 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	295	56.3	222	59.9	+20	14.1	232	57.2	-14	00.4
1	310	58.8	237	59.4		14.5	248	59.9		00.5
2	326	01.2	252	58.9		14.9	263	02.6		00.6
3	341	03.7	267	58.4		15.3	278	05.3		00.7
4	356	06.2	282	57.9		15.8	293	07.9		00.8
5	11	08.6	297	57.4	+20	16.2	308	10.6	-14	00.9
6	26	11.1	312	56.9	+20	16.6	323	13.3	-14	00.9
7	41	13.6	327	56.4		17.0	338	16.0		01.0
8	56	16.0	342	55.9		17.4	353	18.7		01.1
9	71	18.5	357	55.4		17.8	8	21.4		01.2
10	86	20.9	12	54.9		18.3	23	24.1		01.3
11	101	23.4	27	54.4	+20	18.7	38	26.8	-14	01.4
12	116	25.9	42	53.9	+20	19.1	53	29.5	-14	01.5
13	131	28.3	57	53.4		19.5	68	32.2		01.6
14	146	30.8	72	52.9		19.9	83	34.9		01.7
15	161	33.3	87	52.4		20.3	98	37.6		01.8
16	176	35.7	102	51.9		20.7	113	40.3		01.9
17	191	38.2	117	51.4	+20	21.1	128	43.0	-14	01.9
18	206	40.7	132	50.9	+20	21.6	143	45.7	-14	02.0
19	221	43.1	147	50.4		22.0	158	48.4		02.1
20	236	45.6	162	49.9		22.4	173	51.1		02.2
21	251	48.1	177	49.4		22.8	188	53.8		02.3
22	266	50.5	192	48.9		23.2	203	56.5		02.4
23	281	53.0	207	48.4		23.6	218	59.2		02.5
24	296	55.4	222	47.9	+20	24.0	233	01.9	-14	02.6
Dif	—		-5 +4		+6 +3		+27 -1		+23 -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 3			Edad: 26 ^d 2 PHE { 4 ^h : 60 ^s /3 12 ^h : 60 ^s /5 20 ^h : 60 ^s /7 SD: 16:4 PMG: 9 ^h 20 ^m R°: 65 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	°	'	°	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	178	25.8	+20 51.5	226	05.8	+26 12.3	60 N	20 59	22 12	** ** *	** ** *	** ** *	19 41	40
1	193	25.8	51.1	240	27.6	28 14.7	58	44	21 45	** ** *	** ** *	** ** *	19 13	46
2	208	25.7	50.6	254	49.4	28 17.0	56	30	24	22 59	** ** *	** ** *	18 52	49
3	223	25.7	50.2	269	11.1	27 19.0	54	19	21 07	22 22	0 07 65		34	52
4	238	25.6	49.7	283	32.7	26 20.8	52	09	20 53	21 57	22 65		19	53
5	253	25.6	+20 49.2	297	54.2	25 +26 22.5	50	20 00	20 41	21 37	0 35 65		18 06	55
6	268	25.5	+20 48.8	312	15.7	25 +26 24.0	45	19 41	20 16	21 02	1 01 66		17 39	57
7	283	25.5	48.3	326	37.1	24 25.2	40	25	19 57	20 36	22 66		18	59
8	298	25.5	47.9	340	58.5	24 26.3	35	12	41	16	40 65		17 00	60
9	313	25.4	47.4	355	19.8	23 27.2	30	19 01	28	20 00	1 55 66		16 45	61
10	328	25.4	47.0	9	41.1	23 27.9	20	18 42	19 06	19 34	2 21 65		16 19	62
11	343	25.3	+20 46.5	24	02.3	22 +26 28.4	10 N	18 25	18 48	19 14	2 43 66		15 56	64
12	358	25.3	+20 46.0	38	23.5	22 +26 28.7	0	18 10	18 32	18 58	3 04 65		15 35	65
13	13	25.3	45.6	52	44.6	21 28.8	10 S	17 55	17	43	25 65		15 14	66
14	28	25.2	45.1	67	05.7	21 28.7	20	38	18 02	29	3 48 64		14 51	68
15	43	25.2	44.7	81	26.7	20 28.4	30	20	17 46	15	4 14 64		25	69
16	58	25.1	44.2	95	47.7	20 27.9	35	17 09	37	08	29 64		14 09	70
17	73	25.1	+20 43.7	110	08.7	20 +26 27.2	40	16 57	17 27	18 00	4 47 64		13 51	71
18	88	25.1	+20 43.3	124	29.7	20 +26 26.2	45	16 43	17 15	17 52	5 09 63		13 30	72
19	103	25.0	42.8	138	50.6	19 25.1	50	25	17 02	42	36 62		13 02	73
20	118	25.0	42.3	153	11.5	19 23.8	52	17	16 56	38	5 50 61		12 48	75
21	133	24.9	41.9	167	32.4	19 22.3	54	16 08	49	34	6 05 61		33	75
22	148	24.9	41.4	181	53.2	18 20.6	56	15 57	42	29	24 59		12 15	76
23	163	24.9	40.9	196	14.1	19 18.7	58	45	33	23	6 46 58		11 52	79
24	178	24.8	+20 40.5	210	34.9	18 +26 16.6	60 S	15 32	16 24	17 18	7 15 55		11 23	82
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 4 ^h 11 ^m 6		Mag: -4.1 PMG: 9 ^h 09 ^m		Mag: +1.1 PMG: 8 ^h 24 ^m		Mag: -2.8 PMG: 2 ^h 04 ^m		Mag: +1.1 PMG: 15 ^h 29 ^m					
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄					
h	°	'	°	'	°	'	°	'	°	'				
0	296	55.4	222	47.9	233	58.3	+20 38.5	329 01.9	-14 02.6	127 06.4	+6 34.0			
1	311	57.9	237	47.4	248	58.9	38.8	344 04.6	02.7	142 08.7	33.9			
2	327	00.4	252	46.9	263	59.6	39.2	359 07.3	02.8	157 10.9	33.8			
3	342	02.8	267	46.4	279	00.2	39.5	14 10.0	02.9	172 13.2	33.7			
4	357	05.3	282	45.9	294	00.9	39.8	29 12.7	02.9	187 15.4	33.6			
5	12	07.8	297	45.4	+20 309	01.5	+20 40.2	44 15.4	-14 03.0	202 17.7	+6 33.5			
6	27	10.2	312	44.8	+20 324	02.2	+20 40.5	59 18.1	-14 03.1	217 19.9	+6 33.4			
7	42	12.7	327	44.3	26.8	339 02.8	40.9	74 20.8	03.2	232 22.2	33.3			
8	57	15.2	342	43.8	27.2	354 03.4	41.2	89 23.5	03.3	247 24.4	33.2			
9	72	17.6	357	43.3	27.6	9 04.1	41.6	104 26.2	03.4	262 26.7	33.1			
10	87	20.1	12	42.8	28.0	24 04.7	41.9	119 28.9	03.5	277 28.9	33.0			
11	102	22.6	27	42.3	+20 39	05.4	+20 42.2	134 31.6	-14 03.6	292 31.2	+6 32.9			
12	117	25.0	42	41.8	+20 54	06.0	+20 42.6	149 34.3	-14 03.7	307 33.4	+6 32.8			
13	132	27.5	57	41.3	29.2	69 06.7	42.9	164 37.0	03.8	322 35.7	32.7			
14	147	29.9	72	40.8	29.6	84 07.3	43.3	179 39.7	03.9	337 37.9	32.7			
15	162	32.4	87	40.2	30.0	99 07.9	43.6	194 42.4	04.0	352 40.2	32.6			
16	177	34.9	102	39.7	30.3	114 08.6	44.0	209 45.1	04.1	7 42.4	32.5			
17	192	37.3	117	39.2	+20 30.7	129 09.2	+20 44.3	224 47.8	-14 04.1	22 44.7	+6 32.4			
18	207	39.8	132	38.7	+20 31.1	144 09.9	+20 44.6	239 50.5	-14 04.2	37 46.9	+6 32.3			
19	222	42.3	147	38.2	31.5	159 10.5	45.0	254 53.2	04.3	52 49.2	32.2			
20	237	44.7	162	37.7	31.9	174 11.2	45.3	269 55.9	04.4	67 51.4	32.1			
21	252	47.2	177	37.2	32.3	189 11.8	45.7	284 58.6	04.5	82 53.7	32.0			
22	267	49.7	192	36.6	32.7	204 12.4	46.0	300 01.3	04.6	97 55.9	31.9			
23	282	52.1	207	36.1	33.1	219 13.1	46.3	315 04.1	04.7	112 58.2	31.8			
24	297	54.6	222	35.6	+20 33.4	234 13.7	+20 46.7	330 06.8	-14 04.8	128 00.4	+6 31.7			
Dif	—		-5 +4		+6 +3		+27		-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 4			Edad: 27 ^d 2 PHE { 4 ^h : 60°9 12 ^h : 61°0 20 ^h : 61°2 R°: 64 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	178	24.8	+20	210	34.9	+26	16.6	60 N	** **	2 01	3 14	0 06	96	20 21	20
1	193	24.8		224	55.8	19	14.3	58	** *	28	29	33	91	19 59	27
2	208	24.7		239	16.6	18	11.8	56	1 14	2 49	43	0 54	87	41	31
3	223	24.7		253	37.4	18	09.0	54	1 51	3 06	3 54	1 12	84	26	34
4	238	24.7		267	58.2	18	06.1	52	2 16	20	4 04	27	82	12	38
5	253	24.6	+20	282	19.1	19	+26	50	2 36	3 32	4 13	1 40	81	19 01	40
6	268	24.6	+20	296	39.9	18	+25	45	3 11	3 57	4 32	2 07	77	18 36	45
7	283	24.6		311	00.8	19	56.2	40	37	4 16	4 48	28	75	17	48
8	298	24.5		325	21.6	18	52.4	35	3 57	32	5 01	2 45	74	18 00	51
9	313	24.5		339	42.5	19	48.5	30	4 13	4 45	12	3 01	71	17 46	54
10	328	24.5		354	03.4	19	44.4	20	39	5 07	31	26	70	21	58
11	343	24.4	+20	8	24.3	19	+25	10 N	4 58	5 25	5 48	3 49	67	17 00	61
12	358	24.4	+20	22	45.2	19	+25	0	5 15	5 41	6 03	4 09	65	16 40	64
13	13	24.4		37	06.2	20	30.8	10 S	30	5 56	18	30	63	16 20	67
14	28	24.3		51	27.2	20	25.9	20	44	6 11	34	4 52	61	15 59	70
15	43	24.3		65	48.2	20	20.8	30	5 57	27	6 52	5 18	58	34	73
16	58	24.2		80	09.3	21	15.5	35	6 05	36	7 03	33	56	19	76
17	73	24.2	+20	94	30.4	21	+25	40	6 12	6 46	7 15	5 51	53	15 02	78
18	88	24.2	+20	108	51.6	22	+25	45	6 21	6 57	7 29	6 12	51	14 42	81
19	103	24.1		123	12.7	21	+24	50	30	7 10	47	38	47	15	87
20	118	24.1		137	34.0	23	52.3	52	34	16	7 55	6 51	45	14 03	88
21	133	24.1		151	55.3	23	46.0	54	39	23	8 04	7 06	42	13 48	92
22	148	24.0		166	16.6	23	39.5	56	43	30	14	23	39	31	95
23	163	24.0		180	38.0	24	32.9	58	49	38	26	7 44	34	13 11	100
24	178	24.0	+20	194	59.4	24	+24	60 S	6 54	7 48	8 40	8 10	28	12 45	107

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 4 ^h 07 ^m 7		Mag: -4.1 PMG: 9 ^h 10 ^m		Mag: +1.1 PMG: 8 ^h 23 ^m		Mag: -2.8 PMG: 1 ^h 59 ^m		Mag: +1.1 PMG: 15 ^h 26 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	°	°	'	°	°	°	'								
0	297	54.6	222	35.6	+20	33.4	234	13.7	+20	46.7	330	06.8	-14	04.8	128	00.4	+6	31.7
1	312	57.1	237	35.1		33.8	249	14.4		47.0	345	09.5		04.9	143	02.7		31.6
2	327	59.5	252	34.6		34.2	264	15.0		47.3	0	12.2		05.0	158	04.9		31.5
3	343	02.0	267	34.1		34.6	279	15.7		47.7	15	14.9		05.1	173	07.2		31.4
4	358	04.4	282	33.5		35.0	294	16.3		48.0	30	17.6		05.2	188	09.4		31.3
5	13	06.9	297	33.0	+20	35.4	309	16.9	+20	48.3	45	20.3	-14	05.3	203	11.7	+6	31.2
6	28	09.4	312	32.5	+20	35.7	324	17.6	+20	48.7	60	23.0	-14	05.4	218	13.9	+6	31.1
7	43	11.8	327	32.0		36.1	339	18.2		49.0	75	25.7		05.5	233	16.2		31.0
8	58	14.3	342	31.4		36.5	354	18.9		49.4	90	28.4		05.5	248	18.4		30.9
9	73	16.8	357	30.9		36.9	9	19.5		49.7	105	31.1		05.6	263	20.7		30.8
10	88	19.2	12	30.4		37.3	24	20.2		50.0	120	33.8		05.7	278	22.9		30.7
11	103	21.7	27	29.9	+20	37.6	39	20.8	+20	50.4	135	36.5	-14	05.8	293	25.2	+6	30.6
12	118	24.2	42	29.4	+20	38.0	54	21.5	+20	50.7	150	39.2	-14	05.9	308	27.4	+6	30.5
13	133	26.6	57	28.8		38.4	69	22.1		51.0	165	41.9		06.0	323	29.7		30.4
14	148	29.1	72	28.3		38.8	84	22.7		51.4	180	44.7		06.1	338	31.9		30.3
15	163	31.6	87	27.8		39.1	99	23.4		51.7	195	47.4		06.2	353	34.2		30.3
16	178	34.0	102	27.3		39.5	114	24.0		52.0	210	50.1		06.3	8	36.4		30.2
17	193	36.5	117	26.7	+20	39.9	129	24.7	+20	52.4	225	52.8	-14	06.4	23	38.6	+6	30.1
18	208	38.9	132	26.2	+20	40.2	144	25.3	+20	52.7	240	55.5	-14	06.5	38	40.9	+6	30.0
19	223	41.4	147	25.7		40.6	159	26.0		53.0	255	58.2		06.6	53	43.1		29.9
20	238	43.9	162	25.2		41.0	174	26.6		53.4	271	00.9		06.7	68	45.4		29.8
21	253	46.3	177	24.6		41.3	189	27.2		53.7	286	03.6		06.8	83	47.6		29.7
22	268	48.8	192	24.1		41.7	204	27.9		54.0	301	06.3		06.9	98	49.9		29.6
23	283	51.3	207	23.6		42.1	219	28.5		54.3	316	09.0		07.0	113	52.1		29.5
24	298	53.7	222	23.0	+20	42.4	234	29.2	+20	54.7	331	11.8	-14	07.1	128	54.4	+6	29.4
Dif	—		-5		+4		+6		+3		+27		-1		+22		-	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 28 ^d 2	PHE {	4 ^h : 61 ^h 3 12 ^h : 61 ^h 3 20 ^h : 61 ^h 3 R°: 61 ^m									
	PMG: 12 ^h 06 ^m 4								SD: 16 ^h 7			PMG: 11 ^h 29 ^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	24.0	+20 29.1	194	59.4	+24 26.0	70	60 N	20 55	22 05	** **	1 42 111		20 41 11	
1	193	24.0	28.6	209	20.9	19.0	70	58	40	21 40	** **	2 04 104		26 15	
2	208	23.9	28.1	223	42.5	11.8	72	56	27	20	22 50	21 99		12 20	
3	223	23.9	27.6	238	04.1	+24 04.4	74	54	16	21 04	22 16	36 95		20 00 24	
4	238	23.9	27.1	252	25.8	+23 56.8	76	52	20 06	20 50	21 52	2 49 92		19 50 27	
5	253	23.8	+20 26.7	266	47.6	+23 49.0	78	50	19 57	20 38	21 34	3 01 89		19 41 30	
6	268	23.8	+20 26.2	281	09.4	+23 41.1	79	45	19 39	20 14	20 59	3 24 84		19 21 35	
7	283	23.8	25.7	295	31.3	32.9	82	40	24	19 55	34	43 80		19 05 40	
8	298	23.7	25.2	309	53.3	24.6	83	35	11	40	20 14	3 59 76		18 51 44	
9	313	23.7	24.7	324	15.3	16.2	84	30	19 00	27	19 59	4 12 74		40 46	
10	328	23.7	24.2	338	37.5	+23 07.5	87	20	18 41	19 05	33	36 69		19 51	
11	343	23.6	+20 23.7	352	59.7	+22 58.7	88	10 N	18 25	18 48	19 14	4 56 65		18 01 56	
12	358	23.6	+20 23.2	7	22.0	+22 49.7	90	0	18 10	18 32	18 58	5 14 62		17 44 60	
13	13	23.6	22.8	21	44.3	40.5	92	10 S	17 55	17	43	33 58		27 64	
14	28	23.6	22.3	36	06.8	31.2	93	20	39	18 03	30	5 53 54		17 09 68	
15	43	23.5	21.8	50	29.3	21.7	95	30	21	17 47	16	6 16 49		16 47 74	
16	58	23.5	21.3	64	51.9	12.0	97	35	17 11	38	09	29 47		35 77	
17	73	23.5	+20 20.8	79	14.6	+22 02.2	98	40	16 59	17 28	18 01	6 44 44		16 20 81	
18	88	23.4	+20 20.3	93	37.4	+21 52.2	100	45	16 45	17 17	17 53	7 03 39		16 03 85	
19	103	23.4	19.8	108	00.3	42.1	101	50	28	17 04	44	25 34		15 42 91	
20	118	23.4	19.3	122	23.3	31.8	103	52	20	16 58	40	36 31		31 94	
21	133	23.4	18.8	136	46.4	21.3	105	54	11	52	36	7 48 28		20 97	
22	148	23.3	18.3	151	09.6	+21 10.7	106	56	16 00	44	31	8 02 24		15 06 102	
23	163	23.3	17.8	165	32.8	+20 59.9	108	58	15 49	36	26	18 20		14 51 106	
24	178	23.3	+20 17.3	179	56.2	+20 49.0	109	60 S	15 36	16 27	17 21	8 38 13		14 32 113	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 4 ^h 03 ^m 8			Mag: -4.1 PMG: 9 ^h 11 ^m			Mag: +1.1 PMG: 8 ^h 22 ^m			Mag: -2.8 PMG: 1 ^h 55 ^m			Mag: +1.1 PMG: 15 ^h 22 ^m		
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	'	°	°	'	°	'	°	°	'
0	298	53.7	222 23.0	+20 42.4	234 29.2	+20 54.7	331 11.8	-14 07.1	128 54.4	+6 29.4					
1	313	56.2	237 22.5	42.8	249 29.8	55.0	346 14.5	07.2	143 56.6	29.3					
2	328	58.7	252 22.0	43.2	264 30.5	55.3	1 17.2	07.2	158 58.9	29.2					
3	344	01.1	267 21.5	43.5	279 31.1	55.7	16 19.9	07.3	174 01.1	29.1					
4	359	03.6	282 20.9	43.9	294 31.7	56.0	31 22.6	07.4	189 03.4	29.0					
5	14	06.1	297 20.4	+20 44.3	309 32.4	+20 56.3	46 25.3	-14 07.5	204 05.6	+6 28.9					
6	29	08.5	312 19.9	+20 44.6	324 33.0	+20 56.6	61 28.0	-14 07.6	219 07.9	+6 28.8					
7	44	11.0	327 19.3	45.0	339 33.7	57.0	76 30.7	07.7	234 10.1	28.7					
8	59	13.4	342 18.8	45.3	354 34.3	57.3	91 33.4	07.8	249 12.3	28.6					
9	74	15.9	357 18.3	45.7	9 35.0	57.6	106 36.2	07.9	264 14.6	28.5					
10	89	18.4	12 17.7	46.0	24 35.6	57.9	121 38.9	08.0	279 16.8	28.4					
11	104	20.8	27 17.2	+20 46.4	39 36.3	+20 58.3	136 41.6	-14 08.1	294 19.1	+6 28.3					
12	119	23.3	42 16.7	+20 46.8	54 36.9	+20 58.6	151 44.3	-14 08.2	309 21.3	+6 28.2					
13	134	25.8	57 16.1	47.1	69 37.5	58.9	166 47.0	08.3	324 23.6	28.1					
14	149	28.2	72 15.6	47.5	84 38.2	59.3	181 49.7	08.4	339 25.8	28.0					
15	164	30.7	87 15.0	47.8	99 38.8	59.6	196 52.4	08.5	354 28.1	27.9					
16	179	33.2	102 14.5	48.2	114 39.5	+20 59.9	211 55.2	08.6	9 30.3	27.8					
17	194	35.6	117 14.0	+20 48.5	129 40.1	+21 00.2	226 57.9	-14 08.7	24 32.6	+6 27.7					
18	209	38.1	132 13.4	+20 48.9	144 40.8	+21 00.5	242 00.6	-14 08.8	39 34.8	+6 27.6					
19	224	40.5	147 12.9	49.2	159 41.4	00.9	257 03.3	08.9	54 37.0	27.5					
20	239	43.0	162 12.4	49.6	174 42.0	01.2	272 06.0	09.0	69 39.3	27.4					
21	254	45.5	177 11.8	49.9	189 42.7	01.5	287 08.7	09.1	84 41.5	27.3					
22	269	47.9	192 11.3	50.3	204 43.3	01.8	302 11.4	09.2	99 43.8	27.2					
23	284	50.4	207 10.7	50.6	219 44.0	02.2	317 14.2	09.3	114 46.0	27.1					
24	299	52.9	222 10.2	+20 51.0	234 44.6	+21 02.5	332 16.9	-14 09.4	129 48.3	+6 27.0					
Dif	—		-5	+4	+6	+3	+27	-1	+22	-1					

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7			Edad: 29 ^d 2	PHE { 4 ^h : 61 ^h /3 12 ^h : 61 ^h /3 20 ^h : 61 ^h /2										
	PMG: 12 ^h 06 ^m 5					PMG: 12 ^h 30 ^m		Rº: 57 ^m							
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	Rº	Hora	Rº
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	m	h m m	m
0	178	23.3	+20 17.3	179	56.2	+20 49.0	110	60 N	** **	2 08	3 18	3 33 111	20 52	6	
1	193	23.3	16.8	194	19.7	45 38.0	110	58	** **	33	33	3 48 105	41	11	
2	208	23.2	16.3	208	43.2	45 26.8	112	56	1 23	2 53	46	4 00 101	32	15	
3	223	23.2	15.8	223	06.9	47 15.4	114	54	1 57	3 09	3 57	11 97	24	18	
4	238	23.2	15.3	237	30.7	48 +20 04.0	114	52	2 21	23	4 07	21 94	17	20	
5	253	23.2	+20 14.8	251	54.5	48 +19 52.3	117	50	2 40	3 35	4 16	4 30 90	20 11	22	
6	268	23.1	+20 14.3	266	18.5	50 +19 40.6	117	45	3 14	3 59	4 34	4 48 85	19 56	29	
7	283	23.1	13.8	280	42.5	50 28.7	119	40	39	4 18	4 49	5 03 80	45	33	
8	298	23.1	13.3	295	06.7	52 16.7	120	35	3 59	34	5 02	15 76	35	36	
9	313	23.1	12.8	309	31.0	53 +19 04.5	122	30	4 15	4 47	13	26 73	26	40	
10	328	23.0	12.3	323	55.4	54 +18 52.2	123	20	40	5 08	32	5 45 67	19 10	46	
11	343	23.0	+20 11.8	338	19.8	54 +18 39.8	124	10 N	4 59	5 25	5 48	6 01 62	18 57	51	
12	358	23.0	+20 11.3	352	44.4	56 +18 27.3	125	0	5 15	5 41	6 03	6 16 58	18 44	56	
13	13	23.0	10.8	7	09.1	57 14.6	127	10 S	30	5 55	18	31 53	31	60	
14	28	22.9	10.3	21	33.9	58 +18 01.9	127	20	43	6 10	33	6 47 48	17	66	
15	43	22.9	09.8	35	58.8	59 +17 49.0	129	30	5 57	26	6 51	7 05 43	18 01	71	
16	58	22.9	09.3	50	23.8	60 36.0	130	35	6 04	35	7 02	16 40	17 52	75	
17	73	22.9	+20 08.8	64	48.9	61 +17 22.9	131	40	6 11	6 44	7 14	7 28 36	17 41	79	
18	88	22.9	+20 08.3	79	14.1	62 +17 09.7	132	45	6 19	6 55	7 28	7 42 31	17 28	84	
19	103	22.8	07.8	93	39.4	63 +16 56.3	134	50	28	7 08	45	7 59 26	13	89	
20	118	22.8	07.3	108	04.8	64 42.9	134	52	32	14	7 52	8 07 23	17 05	93	
21	133	22.8	06.8	122	30.3	65 29.4	135	54	36	21	8 01	16 20	16 57	96	
22	148	22.8	06.3	136	55.9	66 15.7	137	56	41	28	11	26 17	48	99	
23	163	22.8	05.8	151	21.7	68 +16 02.0	137	58	46	36	23	38 12	37	104	
24	178	22.7	+20 05.3	165	47.5	68 +15 48.1	139	60 S	6 51	7 45	8 36	8 51 7	16 25	109	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 3 ^h 59 ^m 8		Mag: -4.1 PMG: 9 ^h 12 ^m		Mag: +1.1 PMG: 8 ^h 21 ^m		Mag: -2.8 PMG: 1 ^h 51 ^m		Mag: +1.1 PMG: 15 ^h 18 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	299	52.9	222 10.2	+20 51.0	234 44.6	+21 02.5	332 16.9	-14 09.4	129 48.3	+6 27.0
1	314	55.3	237 09.7	51.3	249 45.3	02.8	347 19.6	09.5	144 50.5	26.9
2	329	57.8	252 09.1	51.6	264 45.9	03.1	2 22.3	09.6	159 52.8	26.9
3	345	00.3	267 08.6	52.0	279 46.6	03.4	17 25.0	09.6	174 55.0	26.8
4	0	02.7	282 08.0	52.3	294 47.2	03.8	32 27.7	09.7	189 57.3	26.7
5	15	05.2	297 07.5	+20 52.7	309 47.8	+21 04.1	47 30.5	-14 09.8	204 59.5	+6 26.6
6	30	07.7	312 07.0	+20 53.0	324 48.5	+21 04.4	62 33.2	-14 09.9	220 01.7	+6 26.5
7	45	10.1	327 06.4	53.4	339 49.1	04.7	77 35.9	10.0	235 04.0	26.4
8	60	12.6	342 05.9	53.7	354 49.8	05.0	92 38.6	10.1	250 06.2	26.3
9	75	15.0	357 05.3	54.0	9 50.4	05.4	107 41.3	10.2	265 08.5	26.2
10	90	17.5	12 04.8	54.4	24 51.1	05.7	122 44.0	10.3	280 10.7	26.1
11	105	20.0	27 04.2	+20 54.7	39 51.7	+21 06.0	137 46.8	-14 10.4	295 13.0	+6 26.0
12	120	22.4	42 03.7	+20 55.0	54 52.3	+21 06.3	152 49.5	-14 10.5	310 15.2	+6 25.9
13	135	24.9	57 03.1	55.4	69 53.0	06.6	167 52.2	10.6	325 17.4	25.8
14	150	27.4	72 02.6	55.7	84 53.6	06.9	182 54.9	10.7	340 19.7	25.7
15	165	29.8	87 02.0	56.0	99 54.3	07.3	197 57.6	10.8	355 21.9	25.6
16	180	32.3	102 01.5	56.4	114 54.9	07.6	213 00.4	10.9	10 24.2	25.5
17	195	34.8	117 00.9	+20 56.7	129 55.6	+21 07.9	228 03.1	-14 11.0	25 26.4	+6 25.4
18	210	37.2	132 00.4	+20 57.0	144 56.2	+21 08.2	243 05.8	-14 11.1	40 28.7	+6 25.3
19	225	39.7	146 59.9	57.4	159 56.9	08.5	258 08.5	11.2	55 30.9	25.2
20	240	42.2	161 59.3	57.7	174 57.5	08.8	273 11.2	11.3	70 33.1	25.1
21	255	44.6	176 58.8	58.0	189 58.1	09.2	288 14.0	11.4	85 35.4	25.0
22	270	47.1	191 58.2	58.3	204 58.8	09.5	303 16.7	11.5	100 37.6	24.9
23	285	49.5	206 57.7	58.7	219 59.4	09.8	318 19.4	11.6	115 39.9	24.8
24	300	52.0	221 57.1	+20 59.0	235 00.1	+21 10.1	333 22.1	-14 11.7	130 42.1	+6 24.7
Dif	—		-5	+3	+6	+3	+27	-1	+22	-1

UT	SOL			● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 30 ^d 2 PHE { 4 ^h : 61'1 12 ^h : 60'9 20 ^h : 60'7 R°: 52 ^m											
	PMG: 12 ^h 06 ^m 5			SD: 16'6 PMG: 13 ^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	178	22.7	+20 05.3	165	47.5	+15 48.1	69	60 N	20 51	21 59	** **	5 24 105	20 58 4		
1	193	22.7	04.7	180	13.4	34.2	139	58	37	35	** **	33 101	52 8		
2	208	22.7	04.2	194	39.5	20.2	140	56	24	16	22 41	41 97	47 11		
3	223	22.7	03.7	209	05.6	71	+15 06.1	54	13	21 00	22 10	48 94	42 14		
4	238	22.7	03.2	223	31.9	73	+14 51.9	52	20 04	20 47	21 48	5 55 90	37 17		
5	253	22.6	+20 02.7	237	58.2	73	+14 37.6	50	19 55	20 35	21 30	6 00 88	20 33 20		
6	268	22.6	+20 02.2	252	24.7	75	+14 23.2	45	19 37	20 12	20 56	6 13 81	20 25 24		
7	283	22.6	01.7	266	51.2	75	+14 08.8	40	22	19 53	32	23 77	18 28		
8	298	22.6	01.2	281	17.9	77	+13 54.2	35	19 10	38	20 13	31 73	11 33		
9	313	22.6	00.6	295	44.6	77	39.6	30	18 59	25	19 57	39 69	20 06 36		
10	328	22.5	+20 00.1	310	11.5	79	24.9	20	41	19 04	33	6 52 63	19 56 42		
11	343	22.5	+19 59.6	324	38.4	79	+13 10.2	10 N	18 25	18 47	19 14	7 03 59	19 48 47		
12	358	22.5	+19 59.1	339	05.4	80	+12 55.4	0	18 10	18 32	18 58	7 14 53	19 40 51		
13	13	22.5	58.6	353	32.6	82	40.5	10 S	17 55	18	43	24 49	31 57		
14	28	22.5	58.1	7	59.8	82	25.5	20	40	18 03	30	35 44	23 61		
15	43	22.5	57.5	22	27.1	83	+12 10.5	30	22	17 48	17	48 38	12 68		
16	58	22.4	57.0	36	54.6	85	+11 55.4	35	12	39	10	7 56 34	07 71		
17	73	22.4	+19 56.5	51	22.1	85	+11 40.3	40	17 00	17 30	18 03	8 04 30	19 00 75		
18	88	22.4	+19 56.0	65	49.7	86	+11 25.1	45	16 47	17 19	17 55	8 13 26	18 52 80		
19	103	22.4	55.5	80	17.4	87	+11 09.8	50	30	06	46	25 20	42 86		
20	118	22.4	54.9	94	45.2	88	+10 54.5	52	22	17 01	42	30 18	38 89		
21	133	22.4	54.4	109	13.1	89	39.2	54	14	16 54	38	36 15	33 92		
22	148	22.4	53.9	123	41.1	90	23.7	56	16 04	47	34	43 12	27 95		
23	163	22.3	53.4	138	09.1	90	+10 08.3	58	15 53	39	29	50 8	21 99		
24	178	22.3	+19 52.8	152	37.3	92	+9 52.8	60 S	15 40	16 31	17 24	8 58 5	18 14 103		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 3 ^h 55 ^m 9		Mag: -4.1 PMG: 9 ^h 13 ^m		Mag: +1.1 PMG: 8 ^h 20 ^m		Mag: -2.8 PMG: 1 ^h 46 ^m		Mag: +1.1 PMG: 15 ^h 15 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	300	52.0	221	57.1	+20 59.0	235	00.1	+21 10.1	333	22.1	-14 11.7	130	42.1	+6 24.7
1	315	54.5	236	56.5	59.3	250	00.7	10.4	348	24.8	11.8	145	44.4	24.6
2	330	56.9	251	56.0	+20 59.6	265	01.4	10.7	3	27.6	11.9	160	46.6	24.5
3	345	59.4	266	55.4	+21 00.0	280	02.0	11.0	18	30.3	12.0	175	48.8	24.4
4	1	01.9	281	54.9	+21 00.3	295	02.7	11.3	33	33.0	12.1	190	51.1	24.3
5	16	04.3	296	54.3	+21 00.6	310	03.3	+21 11.7	48	35.7	-14 12.2	205	53.3	+6 24.2
6	31	06.8	311	53.8	+21 00.9	325	03.9	+21 12.0	63	38.4	-14 12.3	220	55.6	+6 24.1
7	46	09.3	326	53.2	01.3	340	04.6	12.3	78	41.2	12.4	235	57.8	24.0
8	61	11.7	341	52.7	01.6	355	05.2	12.6	93	43.9	12.5	251	00.0	23.9
9	76	14.2	356	52.1	01.9	10	05.9	12.9	108	46.6	12.6	266	02.3	23.8
10	91	16.7	11	51.6	02.2	25	06.5	13.2	123	49.3	12.7	281	04.5	23.7
11	106	19.1	26	51.0	+21 02.5	40	07.2	+21 13.5	138	52.1	-14 12.8	296	06.8	+6 23.6
12	121	21.6	41	50.5	+21 02.8	55	07.8	+21 13.8	153	54.8	-14 12.9	311	09.0	+6 23.5
13	136	24.0	56	49.9	03.1	70	08.5	14.1	168	57.5	13.0	326	11.3	23.4
14	151	26.5	71	49.3	03.5	85	09.1	14.4	184	00.2	13.1	341	13.5	23.3
15	166	29.0	86	48.8	03.8	100	09.8	14.8	199	03.0	13.2	356	15.7	23.2
16	181	31.4	101	48.2	04.1	115	10.4	15.1	214	05.7	13.3	11	18.0	23.1
17	196	33.9	116	47.7	+21 04.4	130	11.0	+21 15.4	229	08.4	-14 13.4	26	20.2	+6 23.0
18	211	36.4	131	47.1	+21 04.7	145	11.7	+21 15.7	244	11.1	-14 13.5	41	22.5	+6 22.9
19	226	38.8	146	46.5	05.0	160	12.3	16.0	259	13.9	13.6	56	24.7	22.8
20	241	41.3	161	46.0	05.3	175	13.0	16.3	274	16.6	13.7	71	26.9	22.7
21	256	43.8	176	45.4	05.6	190	13.6	16.6	289	19.3	13.8	86	29.2	22.6
22	271	46.2	191	44.9	05.9	205	14.3	16.9	304	22.0	13.9	101	31.4	22.5
23	286	48.7	206	44.3	06.2	220	14.9	17.2	319	24.8	14.0	116	33.7	22.4
24	301	51.1	221	43.7	+21 06.5	235	15.6	+21 17.5	334	27.5	-14 14.1	131	35.9	+6 22.3
Dif	—		-6		+3	+6		+3	+27		-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 06 ^m 5				Edad: 1 ^d 9 PHE { 4 ^h : 60 ^s 5 12 ^h : 60 ^s 3 20 ^h : 60 ^s 0 R°: 50 ^m												
	hG ☉		Dec		hG ☾ Dif		Dec Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	h m	h m	h m
0	178	22.3	+19	52.8	152	37.3	+9	52.8	60 N	** *	2 15	3 22	7 09	100	21 02	3	
1	193	22.3		52.3	167	05.5	92	37.2	58	0 28	39	37	14	96	21 00	6	
2	208	22.3		51.8	181	33.8	93	21.7	56	1 32	2 58	3 50	18	93	20 58	9	
3	223	22.3		51.3	196	02.2	94	+9 06.0	54	2 03	3 13	4 00	22	89	56	12	
4	238	22.3		50.7	210	30.7	95	+8 50.4	52	26	27	10	25	86	54	15	
5	253	22.3	+19	50.2	224	59.3	96	+8 34.7	50	2 44	3 38	4 18	7 28	84	20 53	17	
6	268	22.2	+19	49.7	239	27.9	96	+8 18.9	45	3 17	4 02	4 37	7 34	79	20 49	22	
7	283	22.2		49.2	253	56.7	98	+8 03.2	40	3 41	20	4 51	40	73	46	27	
8	298	22.2		48.6	268	25.5	98	+7 47.4	35	4 00	35	5 04	44	70	44	30	
9	313	22.2		48.1	282	54.4	99	31.6	30	16	4 48	14	48	67	42	33	
10	328	22.2		47.6	297	23.3	99	+7 15.7	20	4 41	5 09	33	7 55	61	38	39	
11	343	22.2	+19	47.0	311	52.4	101	+6 59.9	10 N	5 00	5 26	5 48	8 02	54	20 35	44	
12	358	22.2	+19	46.5	326	21.5	101	+6 44.0	0	5 15	5 41	6 03	8 07	50	20 31	49	
13	13	22.2		46.0	340	50.7	102	28.1	10 S	29	5 55	17	13	45	28	54	
14	28	22.2		45.4	355	20.0	103	+6 12.1	20	43	6 09	33	19	40	24	59	
15	43	22.1		44.9	9	49.3	103	+5 56.2	30	5 56	25	6 50	26	34	20	65	
16	58	22.1		44.4	24	18.7	104	40.2	35	6 03	33	7 01	30	31	18	68	
17	73	22.1	+19	43.8	38	48.2	105	+5 24.3	40	6 10	6 43	7 12	8 34	27	20 15	73	
18	88	22.1	+19	43.3	53	17.7	105	+5 08.3	45	6 18	6 53	7 26	8 39	23	20 12	77	
19	103	22.1		42.8	67	47.3	106	+4 52.3	50	26	7 06	42	45	18	08	83	
20	118	22.1		42.2	82	17.0	107	36.3	52	30	12	50	48	16	07	84	
21	133	22.1		41.7	96	46.7	107	20.3	54	34	18	7 59	51	13	05	87	
22	148	22.1		41.2	111	16.5	108	+4 04.3	56	39	25	8 08	55	10	02	91	
23	163	22.1		40.6	125	46.4	109	+3 48.3	58	43	33	19	8 58	7	20 00	94	
24	178	22.1	+19	40.1	140	16.3	109	+3 32.3	60 S	6 49	7 41	8 32	9 03	3	19 57	98	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 3 ^h 52 ^m 0		Mag: -4.1 PMG: 9 ^h 13 ^m		Mag: +1.1 PMG: 8 ^h 19 ^m		Mag: -2.8 PMG: 1 ^h 42 ^m		Mag: +1.1 PMG: 15 ^h 11 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	301	51.1	221	43.7	+21	06.5	235	15.6	+21	17.5
1	316	53.6	236	43.2		06.8	250	16.2		17.8
2	331	56.1	251	42.6		07.2	265	16.9		18.1
3	346	58.5	266	42.1		07.5	280	17.5		18.4
4	2	01.0	281	41.5		07.8	295	18.1		18.7
5	17	03.5	296	40.9	+21	08.1	310	18.8	+21	19.0
6	32	05.9	311	40.4	+21	08.4	325	19.4	+21	19.3
7	47	08.4	326	39.8		08.7	340	20.1		19.6
8	62	10.9	341	39.2		09.0	355	20.7		19.9
9	77	13.3	356	38.7		09.2	10	21.4		20.2
10	92	15.8	11	38.1		09.5	25	22.0		20.5
11	107	18.3	26	37.5	+21	09.8	40	22.7	+21	20.8
12	122	20.7	41	37.0	+21	10.1	55	23.3	+21	21.1
13	137	23.2	56	36.4		10.4	70	24.0		21.4
14	152	25.6	71	35.8		10.7	85	24.6		21.7
15	167	28.1	86	35.3		11.0	100	25.2		22.0
16	182	30.6	101	34.7		11.3	115	25.9		22.3
17	197	33.0	116	34.1	+21	11.6	130	26.5	+21	22.6
18	212	35.5	131	33.6	+21	11.9	145	27.2	+21	22.9
19	227	38.0	146	33.0		12.2	160	27.8		23.2
20	242	40.4	161	32.4		12.5	175	28.5		23.5
21	257	42.9	176	31.9		12.7	190	29.1		23.8
22	272	45.4	191	31.3		13.0	205	29.8		24.1
23	287	47.8	206	30.7		13.3	220	30.4		24.4
24	302	50.3	221	30.1	+21	13.6	235	31.1	+21	24.7
Dif	—		-6		+3		+6		+3	
							+27		-1	
									+22	
									-	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 2 ^d 9 PHE { 4 ^h : 59 ^m 7 12 ^h : 59 ^m 4 20 ^h : 59 ^m 1 R°: 48 ^m										
	PMG: 12 ^h 06 ^m 5			SD: 16 ^h 3 PMG: 15 ^h 09 ^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	22.1	+19 40.1	140	16.3	+3 32.3		60 N	20 47	21 53	** **	8 49 96	21 05 3	
1	193	22.1		154	46.3 ¹¹⁰	16.2 ¹⁶¹		58	33	30	23 22	50 92	06 7	
2	208	22.1		169	16.3 ¹¹⁰	+3 00.2 ¹⁶⁰		56	21	21 12	22 33	51 88	07 10	
3	223	22.0		183	46.4 ¹¹¹	+2 44.2 ¹⁶⁰		54	10	20 56	22 05	51 86	08 12	
4	238	22.0		198	16.5 ¹¹¹	28.2 ¹⁶⁰		52	20 01	44	21 43	51 84	09 15	
5	253	22.0	+19 37.4	212	46.7 ¹¹²	+2 12.2 ¹⁶⁰		50	19 52	20 32	21 26	8 52 81	21 10 17	
6	268	22.0	+19 36.9	227	17.0 ¹¹³	+1 56.3 ¹⁵⁹		45	19 35	20 09	20 53	8 53 75	21 11 22	
7	283	22.0		241	47.3 ¹¹³	40.3 ¹⁶⁰		40	20	19 51	30	53 71	13 26	
8	298	22.0		256	17.6 ¹¹³	24.3 ¹⁶⁰		35	19 08	37	20 11	54 67	14 30	
9	313	22.0		270	48.0 ¹¹⁴	+1 08.4 ¹⁵⁹		30	18 58	24	19 56	55 63	15 33	
10	328	22.0		285	18.5 ¹¹⁵	+0 52.5 ¹⁵⁹		20	40	19 04	32	56 57	17 38	
11	343	22.0	+19 34.1	299	49.0 ¹¹⁵	+0 36.5 ¹⁶⁰		10 N	18 24	18 47	19 13	8 56 53	21 19 43	
12	358	22.0	+19 33.6	314	19.5 ¹¹⁵	+0 20.6 ¹⁵⁹		0	18 10	18 32	18 57	8 57 48	21 20 48	
13	13	22.0		328	50.1 ¹¹⁶	+0 04.8 ¹⁵⁸		10 S	17 56	18	44	58 44	22 52	
14	28	22.0		343	20.7 ¹¹⁶	-0 11.1 ¹⁵⁹		20	41	18 04	31	8 59 39	23 58	
15	43	22.0		357	51.4 ¹¹⁷	26.9 ¹⁵⁸		30	23	17 49	18	9 00 33	25 63	
16	58	22.0		12	22.1 ¹¹⁷	42.7 ¹⁵⁸		35	14	41	11	01 29	26 66	
17	73	22.0	+19 30.9	26	52.9 ¹¹⁸	-0 58.5 ¹⁵⁸		40	17 02	17 31	18 04	9 01 26	21 28 69	
18	88	22.0	+19 30.3	41	23.7 ¹¹⁸	-1 14.3 ¹⁵⁸		45	16 49	17 21	17 57	9 02 22	21 29 74	
19	103	22.0		55	54.5 ¹¹⁸	30.0 ¹⁵⁷		50	33	09	48	03 17	31 79	
20	118	22.0		70	25.4 ¹¹⁹	-1 45.7 ¹⁵⁷		52	25	17 03	45	04 14	31 82	
21	133	22.0		84	56.3 ¹¹⁹	-2 01.4 ¹⁵⁷		54	17	16 57	41	04 12	32 85	
22	148	22.0		99	27.2 ¹¹⁹	17.0 ¹⁵⁶		56	16 07	50	36	05 9	33 88	
23	163	22.0		113	58.2 ¹²⁰	32.6 ¹⁵⁶		58	15 56	43	32	05 7	34 91	
24	178	22.0	+19 27.0	128	29.1 ¹¹⁹	-2 48.2 ¹⁵⁶		60 S	15 44	16 34	17 27	9 06 3	21 35 95	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 3 ^h 48 ^m 0		Mag: -4.0 PMG: 9 ^h 14 ^m		Mag: +1.1 PMG: 8 ^h 18 ^m		Mag: -2.8 PMG: 1 ^h 38 ^m		Mag: +1.1 PMG: 15 ^h 08 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	302	50.3	221	30.1	235	31.1	335	33.0	132	29.6				
1	317	52.8	236	29.6	250	31.7	350	35.7	147	31.9				
2	332	55.2	251	29.0	265	32.3	5	38.4	162	34.1				
3	347	57.7	266	28.4	280	33.0	20	41.2	177	36.3				
4	3	00.1	281	27.8	295	33.6	35	43.9	192	38.6				
5	18	02.6	296	27.3	310	34.3	50	46.6	207	40.8				
6	33	05.1	311	26.7	325	34.9	65	49.4	222	43.1				
7	48	07.5	326	26.1	340	35.6	80	52.1	237	45.3				
8	63	10.0	341	25.6	355	36.2	95	54.8	252	47.5				
9	78	12.5	356	25.0	10	36.9	110	57.6	267	49.8				
10	93	14.9	11	24.4	25	37.5	126	00.3	282	52.0				
11	108	17.4	26	23.8	40	38.2	141	03.0	297	54.2				
12	123	19.9	41	23.2	55	38.8	156	05.8	312	56.5				
13	138	22.3	56	22.7	70	39.5	171	08.5	327	58.7				
14	153	24.8	71	22.1	85	40.1	186	11.2	343	00.9				
15	168	27.2	86	21.5	100	40.8	201	14.0	358	03.2				
16	183	29.7	101	20.9	115	41.4	216	16.7	13	05.4				
17	198	32.2	116	20.4	130	42.0	231	19.4	28	07.7				
18	213	34.6	131	19.8	145	42.7	246	22.2	43	09.9				
19	228	37.1	146	19.2	160	43.3	261	24.9	58	12.1				
20	243	39.6	161	18.6	175	44.0	276	27.6	73	14.4				
21	258	42.0	176	18.0	190	44.6	291	30.4	88	16.6				
22	273	44.5	191	17.5	205	45.3	306	33.1	103	18.8				
23	288	47.0	206	16.9	220	45.9	321	35.8	118	21.1				
24	303	49.4	221	16.3	235	46.6	336	38.6	133	23.3				
Dif	—		-6	+3	+6	+3	+27	-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 06 ^m 5			Edad: 3 ^d 9	PHE { 4 ^h : 58'8 12 ^h : 58'5 20 ^h : 58'2 R°: 47 ^m														
	hG ☉	Dec		hG ☾		Dif		Dec	Dif		Náutico	Civil	Hora	R°	Hora	R°			
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m			
0	178	22.0	+19	27.0	128	29.1	-2 48.2	60 N	** **	2 21	3 27	10 25	94	21 08	4				
1	193	22.0		26.5	143	00.2 ¹²¹	-3 03.8 ¹⁵⁶	58	0 51	2 44	41	22 90		13	7				
2	208	22.0		25.9	157	31.2 ¹²⁰	19.3 ¹⁵⁵	56	1 40	3 02	3 53	19 87		17	10				
3	223	22.0		25.4	172	02.3 ¹²¹	34.7 ¹⁵⁴	54	2 09	17	4 04	17 83		20	14				
4	238	22.0		24.8	186	33.4 ¹²¹	-3 50.1 ¹⁵⁴	52	30	30	13	15 80		24	16				
5	253	22.0	+19	24.3	201	04.5 ¹²¹	-4 05.5 ¹⁵⁴	50	2 48	3 41	4 21	10 13	78	21 27	18				
6	268	22.0	+19	23.7	215	35.7 ¹²²	-4 20.9 ¹⁵⁴	45	3 20	4 04	4 39	10 08	73	21 33	23				
7	283	22.0		23.2	230	06.9 ¹²²	36.2 ¹⁵³	40	3 44	22	4 53	04 69		39	27				
8	298	22.0		22.6	244	38.1 ¹²²	-4 51.4 ¹⁵²	35	4 02	37	5 05	10 01	65	44	30				
9	313	22.0		22.0	259	09.3 ¹²²	-5 06.6 ¹⁵²	30	18	4 49	15	9 58	62	48	33				
10	328	22.0		21.5	273	40.5 ¹²²	21.8 ¹⁵²	20	4 41	5 10	33	53 57		21 55	39				
11	343	22.0	+19	20.9	288	11.8 ¹²³	-5 36.9 ¹⁵¹	10 N	5 00	5 26	5 49	9 49	52	22 02	43				
12	358	22.0	+19	20.4	302	43.1 ¹²³	-5 52.0 ¹⁵¹	0	5 16	5 41	6 03	9 45	48	22 08	47				
13	13	22.0		19.8	317	14.4 ¹²³	-6 07.0 ¹⁵⁰	10 S	29	5 55	17	42 42		14	52				
14	28	22.0		19.3	331	45.7 ¹²³	21.9 ¹⁴⁹	20	42	6 09	32	38 38		21	56				
15	43	22.0		18.7	346	17.0 ¹²³	36.8 ¹⁴⁹	30	5 55	24	49	33 33		28	62				
16	58	22.0		18.1	0	48.3 ¹²³	-6 51.7 ¹⁴⁹	35	6 01	32	6 59	30 30		32	65				
17	73	22.0	+19	17.6	15	19.7 ¹²⁴	-7 06.5 ¹⁴⁸	40	6 08	6 41	7 10	9 27	27	22 37	69				
18	88	22.0	+19	17.0	29	51.0 ¹²³	-7 21.2 ¹⁴⁷	45	6 16	6 52	7 24	9 24	22	22 43	73				
19	103	22.0		16.5	44	22.4 ¹²⁴	35.9 ¹⁴⁷	50	24	7 04	40	20 17		50	78				
20	118	22.0		15.9	58	53.8 ¹²⁴	-7 50.6 ¹⁴⁷	52	28	09	47	18 15		53	80				
21	133	22.0		15.3	73	25.1 ¹²³	-8 05.1 ¹⁴⁵	54	32	15	7 56	16 13		22 57	83				
22	148	22.0		14.8	87	56.5 ¹²⁴	19.7 ¹⁴⁶	56	36	22	8 05	14 10		23 01	86				
23	163	22.0		14.2	102	27.9 ¹²⁴	34.1 ¹⁴⁴	58	40	29	16	12 6		05	89				
24	178	22.0	+19	13.6	116	59.3 ¹²⁴	-8 48.5 ¹⁴⁴	60 S	6 45	7 38	8 28	9 09	3	23 10	93				
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 3 ^h 44 ^m 1			Mag: -4.0 PMG: 9 ^h 15 ^m			Mag: +1.1 PMG: 8 ^h 17 ^m			Mag: -2.8 PMG: 1 ^h 33 ^m			Mag: +1.1 PMG: 15 ^h 04 ^m						
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	°	'	°	'	°	'	°	'	°	°	'	°	'			
0	303	49.4		221	16.3	+21	20.1	235	46.6	+21	31.7	336	38.6	-14	18.9	133	23.3	+6	17.5
1	318	51.9		236	15.7		20.4	250	47.2		32.0	351	41.3		19.0	148	25.5		17.4
2	333	54.4		251	15.1		20.7	265	47.9		32.3	6	44.0		19.1	163	27.8		17.3
3	348	56.8		266	14.6		20.9	280	48.5		32.6	21	46.8		19.2	178	30.0		17.2
4	3	59.3		281	14.0		21.2	295	49.2		32.9	36	49.5		19.3	193	32.3		17.1
5	19	01.7		296	13.4	+21	21.4	310	49.8	+21	33.2	51	52.2	-14	19.4	208	34.5	+6	17.0
6	34	04.2		311	12.8	+21	21.7	325	50.5	+21	33.5	66	55.0	-14	19.5	223	36.7	+6	16.9
7	49	06.7		326	12.2		21.9	340	51.1		33.7	81	57.7		19.6	238	39.0		16.8
8	64	09.1		341	11.6		22.2	355	51.8		34.0	97	00.4		19.7	253	41.2		16.7
9	79	11.6		356	11.0		22.4	10	52.4		34.3	112	03.2		19.8	268	43.4		16.6
10	94	14.1		11	10.5		22.7	25	53.0		34.6	127	05.9		19.9	283	45.7		16.5
11	109	16.5		26	09.9	+21	23.0	40	53.7	+21	34.9	142	08.7	-14	20.0	298	47.9	+6	16.4
12	124	19.0		41	09.3	+21	23.2	55	54.3	+21	35.2	157	11.4	-14	20.1	313	50.1	+6	16.3
13	139	21.5		56	08.7		23.5	70	55.0		35.5	172	14.1		20.2	328	52.4		16.2
14	154	23.9		71	08.1		23.7	85	55.6		35.7	187	16.9		20.3	343	54.6		16.1
15	169	26.4		86	07.5		24.0	100	56.3		36.0	202	19.6		20.4	358	56.8		16.0
16	184	28.8		101	06.9		24.2	115	56.9		36.3	217	22.3		20.5	13	59.1		15.9
17	199	31.3		116	06.4	+21	24.4	130	57.6	+21	36.6	232	25.1	-14	20.6	29	01.3	+6	15.8
18	214	33.8		131	05.8	+21	24.7	145	58.2	+21	36.9	247	27.8	-14	20.7	44	03.5	+6	15.7
19	229	36.2		146	05.2		24.9	160	58.9		37.1	262	30.6		20.8	59	05.8		15.6
20	244	38.7		161	04.6		25.2	175	59.5		37.4	277	33.3		20.9	74	08.0		15.5
21	259	41.2		176	04.0		25.4	191	00.2		37.7	292	36.0		21.1	89	10.2		15.4
22	274	43.6		191	03.4		25.7	206	00.8		38.0	307	38.8		21.2	104	12.5		15.3
23	289	46.1		206	02.8		25.9	221	01.5		38.3	322	41.5		21.3	119	14.7		15.2
24	304	48.6		221	02.2	+21	26.2	236	02.1	+21	38.6	337	44.3	-14	21.4	134	16.9	+6	15.1
Dif	—			-6			+3	+6			+3	+27			-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 06 ^m 5			Edad: 4 ^d 9 PHE { SD: 15 ^h 8 PMG: 16 ^h 44 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	h m	h m	h m			
0	178	22.0	+19	13.6	116	59.3	-8 48.5	60 N	20 42	21 46	** **	11 59	93	21 12	6			
1	193	22.0		13.1	131	30.7 ¹²⁴	-9 02.8 ¹⁴³	58	29	25	23 07	52	89	20	10			
2	208	22.0		12.5	146	02.1 ¹²⁴	17.1 ¹⁴³	56	17	21 07	22 25	46	85	27	13			
3	223	22.0		11.9	160	33.5 ¹²⁴	31.3 ¹⁴²	54	20 07	20 53	21 59	40	82	34	16			
4	238	22.0		11.4	175	04.9 ¹²⁴	45.4 ¹⁴¹	52	19 58	40	38	35	80	40	18			
5	253	22.0	+19	10.8	189	36.3 ¹²⁴	-9 59.5 ¹⁴¹	50	19 50	20 29	21 22	11 31	77	21 45	21			
6	268	22.0	+19	10.2	204	07.7 ¹²⁴	-10 13.5 ¹⁴⁰	45	19 33	20 07	20 50	11 21	72	21 56	26			
7	283	22.1		09.7	218	39.2 ¹²⁵	27.4 ¹³⁹	40	19	19 49	27	13	68	22 06	29			
8	298	22.1		09.1	233	10.6 ¹²⁴	41.3 ¹³⁹	35	19 07	35	20 09	06	64	14	33			
9	313	22.1		08.5	247	41.9 ¹²³	-10 55.1 ¹³⁸	30	18 57	23	19 54	11 00	61	21	36			
10	328	22.1		08.0	262	13.3 ¹²⁴	-11 08.8 ¹³⁷	20	39	19 03	31	10 50	56	34	40			
11	343	22.1	+19	07.4	276	44.7 ¹²⁴	-11 22.5 ¹³⁷	10 N	18 24	18 46	19 13	10 41	52	22 45	44			
12	358	22.1	+19	06.8	291	16.1 ¹²⁴	-11 36.0 ¹³⁵	0	18 10	18 32	18 57	10 33	47	22 55	48			
13	13	22.1		06.3	305	47.5 ¹²⁴	-11 49.5 ¹³⁵	10 S	17 56	18	44	24	44	23 06	52			
14	28	22.1		05.7	320	18.8 ¹²³	-12 03.0 ¹³⁵	20	41	18 05	31	16	39	17	56			
15	43	22.1		05.1	334	50.2 ¹²⁴	16.3 ¹³³	30	25	17 50	19	06	34	30	60			
16	58	22.1		04.5	349	21.5 ¹²³	29.6 ¹³³	35	15	42	13	10 00	31	37	64			
17	73	22.1	+19	04.0	3	52.9 ¹²⁴	-12 42.8 ¹³²	40	17 04	17 33	18 06	9 54	28	23 46	66			
18	88	22.1	+19	03.4	18	24.2 ¹²³	-12 55.9 ¹³¹	45	16 51	17 23	17 59	9 46	24	23 56	70			
19	103	22.2		02.8	32	55.5 ¹²³	-13 08.9 ¹³⁰	50	35	11	51	37	20	** ** *	**			
20	118	22.2		02.2	47	26.8 ¹²³	21.9 ¹³⁰	52	28	06	47	33	17	** ** *	**			
21	133	22.2		01.7	61	58.1 ¹²³	34.8 ¹²⁹	54	20	17 00	43	29	14	** ** *	**			
22	148	22.2		01.1	76	29.4 ¹²³	-13 47.6 ¹²⁸	56	10	16 53	39	24	12	** ** *	**			
23	163	22.2	+19	00.5	91	00.6 ¹²²	-14 00.3 ¹²⁷	58	16 00	46	35	18	9	** ** *	**			
24	178	22.2	+18	59.9	105	31.8 ¹²²	-14 12.9 ¹²⁶	60 S	15 48	16 38	17 30	9 12	5	** ** *	**			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 3 ^h 40 ^m 2		Mag: -4.0 PMG: 9 ^h 16 ^m			Mag: +1.1 PMG: 8 ^h 16 ^m			Mag: -2.8 PMG: 1 ^h 29 ^m			Mag: +1.1 PMG: 15 ^h 01 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	304	48.6	221	02.2	+21	26.2	236	02.1	+21	38.6	337	44.3	-14	21.4	134	16.9	+6	15.1
1	319	51.0	236	01.6		26.4	251	02.8		38.8	352	47.0		21.5	149	19.2		15.0
2	334	53.5	251	01.0		26.6	266	03.4		39.1	7	49.7		21.6	164	21.4		14.8
3	349	56.0	266	00.5		26.9	281	04.1		39.4	22	52.5		21.7	179	23.6		14.7
4	4	58.4	280	59.9		27.1	296	04.7		39.7	37	55.2		21.8	194	25.9		14.6
5	20	00.9	295	59.3	+21	27.3	311	05.4	+21	39.9	52	58.0	-14	21.9	209	28.1	+6	14.5
6	35	03.3	310	58.7	+21	27.6	326	06.0	+21	40.2	68	00.7	-14	22.0	224	30.3	+6	14.4
7	50	05.8	325	58.1		27.8	341	06.7		40.5	83	03.4		22.1	239	32.6		14.3
8	65	08.3	340	57.5		28.0	356	07.3		40.8	98	06.2		22.2	254	34.8		14.2
9	80	10.7	355	56.9		28.3	11	07.9		41.1	113	08.9		22.3	269	37.0		14.1
10	95	13.2	10	56.3		28.5	26	08.6		41.3	128	11.7		22.4	284	39.3		14.0
11	110	15.7	25	55.7	+21	28.7	41	09.2	+21	41.6	143	14.4	-14	22.5	299	41.5	+6	13.9
12	125	18.1	40	55.1	+21	29.0	56	09.9	+21	41.9	158	17.1	-14	22.6	314	43.7	+6	13.8
13	140	20.6	55	54.5		29.2	71	10.5		42.2	173	19.9		22.7	329	46.0		13.7
14	155	23.1	70	53.9		29.4	86	11.2		42.4	188	22.6		22.8	344	48.2		13.6
15	170	25.5	85	53.3		29.6	101	11.8		42.7	203	25.4		22.9	359	50.4		13.5
16	185	28.0	100	52.7		29.9	116	12.5		43.0	218	28.1		23.0	14	52.7		13.4
17	200	30.5	115	52.1	+21	30.1	131	13.1	+21	43.3	233	30.9	-14	23.1	29	54.9	+6	13.3
18	215	32.9	130	51.5	+21	30.3	146	13.8	+21	43.5	248	33.6	-14	23.2	44	57.1	+6	13.2
19	230	35.4	145	50.9		30.5	161	14.4		43.8	263	36.3		23.3	59	59.4		13.1
20	245	37.8	160	50.3		30.8	176	15.1		44.1	278	39.1		23.4	75	01.6		13.0
21	260	40.3	175	49.7		31.0	191	15.7		44.4	293	41.8		23.5	90	03.8		12.9
22	275	42.8	190	49.1		31.2	206	16.4		44.6	308	44.6		23.6	105	06.1		12.8
23	290	45.2	205	48.5		31.4	221	17.0		44.9	323	47.3		23.7	120	08.3		12.7
24	305	47.7	220	47.9	+21	31.6	236	17.7	+21	45.2	338	50.1	-14	23.9	135	10.5	+6	12.6
Dif	—		-6			+2	+6			+3	+27			-1	+22			-1

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8 PMG: 12 ^h 06 ^m 5			Edad: 5 ^d 9 PHE { 4 ^h : 56 ^m 9 12 ^h : 56 ^m 7 20 ^h : 56 ^m 4 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	22.2	+18	59.9	105	31.8	-14	12.9	60 N	** ** *	2	28	3	32	13	32
1	193	22.2		59.4	120	03.1 ¹²³		25.5 ¹²⁶	58	1	07	2	49	45	21	87
2	208	22.2		58.8	134	34.3 ¹²²		37.9 ¹²⁴	56	1	48	3	06	3	57	11
3	223	22.3		58.2	149	05.5 ¹²²	-14	50.3 ¹²⁴	54	2	15	21	4	07	13	02
4	238	22.3		57.6	163	36.6 ¹²¹	-15	02.6 ¹²³	52		35	33	16	12	55	76
5	253	22.3	+18	57.0	178	07.8 ¹²²	-15	14.8 ¹²²	50	2	52	3	44	4	24	12
6	268	22.3	+18	56.5	192	38.9 ¹²¹	-15	26.9 ¹²¹	45	3	23	4	07	4	41	12
7	283	22.3		55.9	207	10.0 ¹²¹		38.9 ¹²⁰	40	3	46	24	4	55	21	66
8	298	22.3		55.3	221	41.1 ¹²¹	-15	50.9 ¹²⁰	35	4	04	38	5	06	10	63
9	313	22.3		54.7	236	12.2 ¹²¹	-16	02.7 ¹¹⁸	30		19	4	50	17	12	01
10	328	22.3		54.1	250	43.2 ¹²⁰		14.5 ¹¹⁸	20	4	42	5	10	34	11	46
11	343	22.4	+18	53.5	265	14.2 ¹²⁰	-16	26.1 ¹¹⁶	10 N	5	01	5	27	5	49	11
12	358	22.4	+18	53.0	279	45.2 ¹²⁰	-16	37.7 ¹¹⁶	0	5	16	5	41	6	03	11
13	13	22.4		52.4	294	16.2 ¹²⁰	-16	49.2 ¹¹⁵	10 S		29	5	55	17	11	08
14	28	22.4		51.8	308	47.1 ¹¹⁹	-17	00.5 ¹¹³	20		41	6	08	31	10	55
15	43	22.4		51.2	323	18.1 ¹²⁰		11.8 ¹¹³	30	5	54	23	48	40	37	** ** *
16	58	22.4		50.6	337	49.0 ¹¹⁹		23.0 ¹¹²	35	6	00	31	6	58	31	35
17	73	22.5	+18	50.0	352	19.8 ¹¹⁸	-17	34.1 ¹¹¹	40	6	07	6	40	7	09	10
18	88	22.5	+18	49.4	6	50.7 ¹¹⁹	-17	45.1 ¹¹⁰	45	6	14	6	50	7	21	10
19	103	22.5		48.9	21	21.5 ¹¹⁸	-17	56.0 ¹⁰⁹	50		22	7	01	37	9	57
20	118	22.5		48.3	35	52.3 ¹¹⁸	-18	06.8 ¹⁰⁸	52		25	07	44	50	21	13
21	133	22.5		47.7	50	23.1 ¹¹⁸		17.5 ¹⁰⁷	54	29		13	7	52	43	18
22	148	22.5		47.1	64	53.8 ¹¹⁷		28.1 ¹⁰⁶	56	33		19	8	01	36	15
23	163	22.6		46.5	79	24.5 ¹¹⁷		38.6 ¹⁰⁵	58	37		26	12	27	11	34
24	178	22.6	+18	45.9	93	55.2 ¹¹⁷	-18	49.0 ¹⁰⁴	60 S	6	42	7	34	8	24	9

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 3 ^h 36 ^m 2		Mag: -4.0 PMG: 9 ^h 17 ^m		Mag: +1.1 PMG: 8 ^h 14 ^m		Mag: -2.8 PMG: 1 ^h 24 ^m		Mag: +1.1 PMG: 14 ^h 57 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	305	47.7	220	47.9	+21	31.6	236	17.7	+21	45.2
1	320	50.2	235	47.3		31.9	251	18.3		45.4
2	335	52.6	250	46.7		32.1	266	19.0		45.7
3	350	55.1	265	46.1		32.3	281	19.6		46.0
4	5	57.6	280	45.5		32.5	296	20.3		46.3
5	21	00.0	295	44.9	+21	32.7	311	20.9	+21	46.5
6	36	02.5	310	44.3	+21	32.9	326	21.6	+21	46.8
7	51	04.9	325	43.7		33.2	341	22.2		47.1
8	66	07.4	340	43.1		33.4	356	22.9		47.3
9	81	09.9	355	42.5		33.6	11	23.5		47.6
10	96	12.3	10	41.9		33.8	26	24.2		47.9
11	111	14.8	25	41.3	+21	34.0	41	24.8	+21	48.1
12	126	17.3	40	40.7	+21	34.2	56	25.5	+21	48.4
13	141	19.7	55	40.1		34.4	71	26.1		48.7
14	156	22.2	70	39.5		34.6	86	26.8		48.9
15	171	24.7	85	38.9		34.8	101	27.4		49.2
16	186	27.1	100	38.3		35.0	116	28.1		49.5
17	201	29.6	115	37.7	+21	35.2	131	28.7	+21	49.7
18	216	32.1	130	37.1	+21	35.4	146	29.4	+21	50.0
19	231	34.5	145	36.5		35.6	161	30.0		50.3
20	246	37.0	160	35.9		35.8	176	30.7		50.5
21	261	39.4	175	35.3		36.0	191	31.3		50.8
22	276	41.9	190	34.7		36.2	206	32.0		51.1
23	291	44.4	205	34.1		36.4	221	32.6		51.3
24	306	46.8	220	33.4	+21	36.6	236	33.3	+21	51.6
Dif	—		-6		+2		+6		+3	
							+27		-1	
									+22	
									-1	

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 12 ^h 06 ^m 5			Edad: 6 ^d 9 PHE { 4 ^h : 56 ^m 1 12 ^h : 55 ^m 9 20 ^h : 55 ^m 6 R°: 50 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	h m	h m	h m	h m	h m	h m	h m	h m
0	178	22.6	+18 45.9	93	55.2	-18 49.0		60 N	20 37	21 40	** **	15 04 89	21 27 15		
1	193	22.6		108	25.8 ¹¹⁶	-18 59.3 ¹⁰³		58	24	19	22 54	14 48 82	44 20		
2	208	22.6		122	56.5 ¹¹⁷	-19 09.5 ¹⁰²		56	13	21 03	22 18	34 78	21 58 25		
3	223	22.6		137	27.1 ¹¹⁶	19.6 ¹⁰¹		54	20 03	20 49	21 53	22 75	22 10 28		
4	238	22.6		151	57.6 ¹¹⁵	29.6 ¹⁰⁰		52	19 55	36	34	11 73	21 31		
5	253	22.7	+18 42.9	166	28.2 ¹¹⁶	-19 39.5 ⁹⁹		50	19 47	20 26	21 18	14 02 71	22 31 32		
6	268	22.7	+18 42.4	180	58.7 ¹¹⁵	-19 49.3 ⁹⁸		45	19 30	20 04	20 47	13 42 67	22 52 36		
7	283	22.7		195	29.1 ¹¹⁴	-19 58.9 ⁹⁶		40	17	19 47	25	27 63	23 09 38		
8	298	22.7		209	59.6 ¹¹⁵	-20 08.5 ⁹⁶		35	19 05	33	20 07	13 61	23 41		
9	313	22.7		224	30.0 ¹¹⁴	18.0 ⁹⁵		30	18 55	21	19 53	13 02 58	35 43		
10	328	22.8		239	00.4 ¹¹⁴	27.3 ⁹³		20	38	19 02	30	12 42 55	23 57 45		
11	343	22.8	+18 39.4	253	30.7 ¹¹³	-20 36.6 ⁹³		10 N	18 24	18 46	19 12	12 25 52	** ** *		
12	358	22.8	+18 38.8	268	01.1 ¹¹⁴	-20 45.7 ⁹¹		0	18 10	18 32	18 57	12 09 49	** ** *		
13	13	22.8		282	31.4 ¹¹³	-20 54.7 ⁹⁰		10 S	17 56	19	44	11 53 47	** ** *		
14	28	22.9		37.6	297 01.6 ¹¹²	-21 03.6 ⁸⁹		20	42	18 05	32	36 44	0 13 55		
15	43	22.9		311	31.9 ¹¹³	12.5 ⁸⁹		30	26	17 51	20	17 40	30 60		
16	58	22.9		326	02.1 ¹¹²	21.2 ⁸⁷		35	16	43	14	11 06 38	41 62		
17	73	22.9	+18 35.8	340	32.2 ¹¹¹	-21 29.7 ⁸⁵		40	17 06	17 35	18 07	10 53 36	0 52 65		
18	88	22.9	+18 35.2	355	02.4 ¹¹²	-21 38.2 ⁸⁵		45	16 53	17 25	18 00	10 38 33	1 06 69		
19	103	23.0		9	32.5 ¹¹¹	46.6 ⁸⁴		50	38	13	17 53	20 28	23 73		
20	118	23.0		24	02.6 ¹¹¹	-21 54.8 ⁸²		52	31	08	49	11 26	32 75		
21	133	23.0		38	32.6 ¹¹⁰	-22 03.0 ⁸²		54	23	17 03	46	10 01 24	41 77		
22	148	23.0		53	02.6 ¹¹⁰	11.0 ⁸⁰		56	14	16 56	42	9 51 20	1 51 81		
23	163	23.1		67	32.6 ¹¹⁰	18.9 ⁷⁹		58	16 04	49	38	38 17	2 02 86		
24	178	23.1	+18 31.6	82	02.6 ¹¹⁰	-22 26.7 ⁷⁸		60 S	15 52	16 42	17 33	9 24 12	2 16 90		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 3 ^h 32 ^m 3		Mag: -4.0 PMG: 9 ^h 18 ^m		Mag: +1.1 PMG: 8 ^h 13 ^m		Mag: -2.8 PMG: 1 ^h 20 ^m		Mag: +1.1 PMG: 14 ^h 54 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	306	46.8	220 33.4	+21 36.6	236 33.3	+21 51.6	339 56.0	-14 26.4	136 04.0	+6 10.1
1	321	49.3	235 32.8	36.8	251 33.9	51.9	354 58.7	26.5	151 06.3	10.0
2	336	51.8	250 32.2	37.0	266 34.6	52.1	10 01.5	26.6	166 08.5	09.9
3	351	54.2	265 31.6	37.2	281 35.2	52.4	25 04.2	26.7	181 10.7	09.8
4	6	56.7	280 31.0	37.4	296 35.9	52.6	40 07.0	26.8	196 13.0	09.
5	21	59.2	295 30.4	+21 37.6	311 36.5	+21 52.9	55 09.7	-14 26.9	211 15.2	+6 09.6
6	37	01.6	310 29.8	+21 37.8	326 37.2	+21 53.2	70 12.4	-14 27.0	226 17.4	+6 09.5
7	52	04.1	325 29.2	38.0	341 37.8	53.4	85 15.2	27.1	241 19.6	09.4
8	67	06.6	340 28.6	38.2	356 38.5	53.7	100 17.9	27.2	256 21.9	09.3
9	82	09.0	355 28.0	38.3	11 39.1	53.9	115 20.7	27.3	271 24.1	09.2
10	97	11.5	10 27.3	38.5	26 39.8	54.2	130 23.4	27.4	286 26.3	09.1
11	112	13.9	25 26.7	+21 38.7	41 40.4	+21 54.5	145 26.2	-14 27.5	301 28.6	+6 09.0
12	127	16.4	40 26.1	+21 38.9	56 41.1	+21 54.7	160 28.9	-14 27.6	316 30.8	+6 08.9
13	142	18.9	55 25.5	39.1	71 41.7	55.0	175 31.7	27.7	331 33.0	08.8
14	157	21.3	70 24.9	39.3	86 42.4	55.2	190 34.4	27.8	346 35.2	08.7
15	172	23.8	85 24.3	39.4	101 43.0	55.5	205 37.2	27.9	1 37.5	08.6
16	187	26.3	100 23.7	39.6	116 43.7	55.8	220 39.9	28.1	16 39.7	08.4
17	202	28.7	115 23.1	+21 39.8	131 44.3	+21 56.0	235 42.7	-14 28.2	31 41.9	+6 08.3
18	217	31.2	130 22.4	+21 40.0	146 45.0	+21 56.3	250 45.4	-14 28.3	46 44.2	+6 08.2
19	232	33.7	145 21.8	40.2	161 45.6	56.5	265 48.2	28.4	61 46.4	08.1
20	247	36.1	160 21.2	40.3	176 46.3	56.8	280 50.9	28.5	76 48.6	08.0
21	262	38.6	175 20.6	40.5	191 46.9	57.0	295 53.7	28.6	91 50.8	07.9
22	277	41.0	190 20.0	40.7	206 47.6	57.3	310 56.4	28.7	106 53.1	07.8
23	292	43.5	205 19.4	40.9	221 48.2	57.6	325 59.2	28.8	121 55.3	07.7
24	307	46.0	220 18.7	+21 41.0	236 48.9	+21 57.8	341 02.0	-14 28.9	136 57.5	+6 07.6
Dif	—		-6 +2		+7 +3		+27 -1		+22 -1	

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 12 ^h 06 ^m 4				Edad: 7 ^d 9 PHE { SD: 15 ^h 1 PMG: 19 ^h 11 ^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	178	23.1	+18	31.6	82	02.6	-22	26.7	60 N	** **	2 34	3 36	16 33 77	21 42 28		
1	193	23.1		31.0	96	32.5 ¹⁰⁹		34.3 ⁷⁶	58	1 20	2 54	3 49	16 10 73	22 04 33		
2	208	23.1		30.4	111	02.4 ¹⁰⁹		41.9 ⁷⁶	56	1 56	3 11	4 00	15 52 70	23 36		
3	223	23.2		29.8	125	32.3 ¹⁰⁹		49.3 ⁷⁴	54	2 21	25	10	37 68	38 38		
4	238	23.2		29.2	140	02.1 ¹⁰⁸	-22	56.7 ⁷⁴	52	40	37	19	24 66	22 52 39		
5	253	23.2	+18	28.6	154	31.9 ¹⁰⁸	-23	03.9 ⁷²	50	2 56	3 47	4 27	15 13 64	23 03 41		
6	268	23.2	+18	28.0	169	01.7 ¹⁰⁸	-23	11.0 ⁷¹	45	3 26	4 09	4 43	14 49 61	23 28 43		
7	283	23.3		27.3	183	31.5 ¹⁰⁸		17.9 ⁶⁹	40	3 48	26	4 57	30 59	23 47 45		
8	298	23.3		26.7	198	01.2 ¹⁰⁷		24.8 ⁶⁹	35	4 06	40	5 08	14 58	** ** *		
9	313	23.3		26.1	212	30.9 ¹⁰⁷		31.5 ⁶⁷	30	20	4 52	18	14 00 57	** ** *		
10	328	23.3		25.5	227	00.6 ¹⁰⁷		38.1 ⁶⁶	20	4 43	5 11	35	13 37 54	** ** *		
11	343	23.4	+18	24.9	241	30.2 ¹⁰⁶	-23	44.6 ⁶⁵	10 N	5 01	5 27	5 49	13 17 53	0 15 48		
12	358	23.4	+18	24.3	255	59.8 ¹⁰⁶	-23	51.0 ⁶⁴	0	5 16	5 41	6 03	12 58 51	0 32 51		
13	13	23.4		23.7	270	29.4 ¹⁰⁶	-23	57.2 ⁶²	10 S	29	5 54	16	40 49	0 50 52		
14	28	23.5		23.1	284	59.0 ¹⁰⁶	-24	03.4 ⁶²	20	41	6 07	31	12 20 47	1 08 55		
15	43	23.5		22.5	299	28.5 ¹⁰⁵		09.4 ⁶⁰	30	53	21	47	11 57 45	30 58		
16	58	23.5		21.9	313	58.0 ¹⁰⁵		15.2 ⁵⁸	35	5 59	29	6 56	44 43	43 59		
17	73	23.5	+18	21.2	328	27.5 ¹⁰⁵	-24	21.0 ⁵⁸	40	6 05	6 38	7 07	11 29 41	1 57 62		
18	88	23.6	+18	20.6	342	57.0 ¹⁰⁵	-24	26.6 ⁵⁶	45	6 12	6 47	7 19	11 11 39	2 15 64		
19	103	23.6		20.0	357	26.4 ¹⁰⁴		32.1 ⁵⁵	50	19	6 59	34	10 48 36	36 68		
20	118	23.6		19.4	11	55.9 ¹⁰⁵		37.5 ⁵⁴	52	23	7 04	41	37 35	47 69		
21	133	23.7		18.8	26	25.2 ¹⁰³		42.8 ⁵³	54	26	10	49	25 33	2 58 72		
22	148	23.7		18.2	40	54.6 ¹⁰⁴		47.9 ⁵¹	56	30	16	7 58	10 11 30	3 12 74		
23	163	23.7		17.6	55	24.0 ¹⁰⁴		52.9 ⁵⁰	58	34	23	8 08	9 55 27	28 78		
24	178	23.8	+18	17.0	69	53.3 ¹⁰³	-24	57.8 ⁴⁹	60 S	6 39	7 30	8 19	9 36 21	3 46 84		

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 3 ^h 28 ^m 4		Mag: -4.0 PMG: 9 ^h 19 ^m				Mag: +1.1 PMG: 8 ^h 12 ^m				Mag: -2.8 PMG: 1 ^h 16 ^m				Mag: +1.1 PMG: 14 ^h 50 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	307	46.0	220	18.7	+21	41.0	236	48.9	+21	57.8	341	02.0	-14	28.9	136	57.5	+6	07.6
1	322	48.4	235	18.1		41.2	251	49.5		58.1	356	04.7		29.0	151	59.7		07.5
2	337	50.9	250	17.5		41.4	266	50.2		58.3	11	07.5		29.1	167	02.0		07.4
3	352	53.4	265	16.9		41.6	281	50.9		58.6	26	10.2		29.2	182	04.2		07.3
4	7	55.8	280	16.3		41.7	296	51.5		58.8	41	13.0		29.3	197	06.4		07.2
5	22	58.3	295	15.7	+21	41.9	311	52.2	+21	59.1	56	15.7	-14	29.4	212	08.7	+6	07.1
6	38	00.8	310	15.0	+21	42.1	326	52.8	+21	59.3	71	18.5	-14	29.5	227	10.9	+6	07.0
7	53	03.2	325	14.4		42.2	341	53.5		59.6	86	21.2		29.6	242	13.1		06.9
8	68	05.7	340	13.8		42.4	356	54.1	+21	59.8	101	24.0		29.8	257	15.3		06.8
9	83	08.2	355	13.2		42.6	11	54.8	+22	00.1	116	26.7		29.9	272	17.6		06.7
10	98	10.6	10	12.6		42.7	26	55.4		00.3	131	29.5		30.0	287	19.8		06.6
11	113	13.1	25	11.9	+21	42.9	41	56.1	+22	00.6	146	32.2	-14	30.1	302	22.0	+6	06.5
12	128	15.5	40	11.3	+21	43.1	56	56.7	+22	00.8	161	35.0	-14	30.2	317	24.2	+6	06.4
13	143	18.0	55	10.7		43.2	71	57.4		01.1	176	37.7		30.3	332	26.5		06.3
14	158	20.5	70	10.1		43.4	86	58.0		01.3	191	40.5		30.4	347	28.7		06.1
15	173	22.9	85	09.5		43.5	101	58.7		01.6	206	43.2		30.5	2	30.9		06.0
16	188	25.4	100	08.8		43.7	116	59.3		01.8	221	46.0		30.6	17	33.1		05.9
17	203	27.9	115	08.2	+21	43.9	132	00.0	+22	02.1	236	48.7	-14	30.7	32	35.4	+6	05.8
18	218	30.3	130	07.6	+21	44.0	147	00.6	+22	02.3	251	51.5	-14	30.8	47	37.6	+6	05.7
19	233	32.8	145	07.0		44.2	162	01.3		02.6	266	54.3		30.9	62	39.8		05.6
20	248	35.3	160	06.4		44.3	177	01.9		02.8	281	57.0		31.0	77	42.0		05.5
21	263	37.7	175	05.7		44.5	192	02.6		03.1	296	59.8		31.1	92	44.3		05.4
22	278	40.2	190	05.1		44.6	207	03.2		03.3	312	02.5		31.2	107	46.5		05.3
23	293	42.7	205	04.5		44.8	222	03.9		03.6	327	05.3		31.4	122	48.7		05.2
24	308	45.1	220	03.9	+21	44.9	237	04.6	+22	03.8	342	08.0	-14	31.5	137	51.0	+6	05.1
Dif	—		-6		+2		+7		+3		+28		-1		+22		-	

UT	SOL				LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8 PMG: 12 ^h 06 ^m 4				Edad: 8 ^d 9 PHE { 4 ^h : 54 ^m 9 12 ^h : 54 ^m 7 20 ^h : 54 ^m 6 R°: 51 ^m														
	hG ☉		Dec		hG ☾		Dif				Dec		Dif		Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m
0	178	23.8	+18	17.0	69	53.3	-24	57.8	60 N	20 33	21 33	** **	17 50	58	22 10	49			
1	193	23.8		16.3	84	22.6 ¹⁰³	-25	02.6	58	20	21 14	22 43	23 57		37 50				
2	208	23.8		15.7	98	51.9 ¹⁰³		07.2	56	09	20 58	22 10	17 02	56	22 59	50			
3	223	23.9		15.1	113	21.2 ¹⁰³		11.7	54	20 00	44	21 47	16 45	55	23 16	50			
4	238	23.9		14.5	127	50.5 ¹⁰³		16.1	52	19 51	33	29	30 55		31 51				
5	253	23.9	+18	13.9	142	19.7 ¹⁰²	-25	20.4	50	19 44	20 23	21 14	16 17	55	23 44	51			
6	268	24.0	+18	13.2	156	48.9 ¹⁰²	-25	24.5	45	19 28	20 02	20 44	15 50	54	** **	** **			
7	283	24.0		12.6	171	18.1 ¹⁰²		28.5	40	15	19 45	22	29 54	** **	** **	** **			
8	298	24.0		12.0	185	47.3 ¹⁰²		32.4	39	35	19 04	31	20 05	15 12	53	0 04	46		
9	313	24.1		11.4	200	16.5 ¹⁰²		36.1	37	30	18 54	20	19 51	14 57	53	18 47			
10	328	24.1		10.8	214	45.7 ¹⁰²		39.8	37	20	37	19 01	29	31 53	0 42	49			
11	343	24.1	+18	10.1	229	14.8 ¹⁰¹	-25	43.3	35	10 N	18 23	18 45	19 11	14 10	51	1 03	50		
12	358	24.2	+18	09.5	243	44.0 ¹⁰²	-25	46.6	33	0	18 10	18 32	18 57	13 49	51	1 23	51		
13	13	24.2		08.9	258	13.1 ¹⁰¹		49.9	33	10 S	17 57	19	44	29 51		1 42	53		
14	28	24.2		08.3	272	42.2 ¹⁰¹		53.0	31	20	43	18 06	33	13 07	50	2 03	54		
15	43	24.3		07.7	287	11.3 ¹⁰¹		55.9	29	30	27	17 52	21	12 42	49	28 55			
16	58	24.3		07.0	301	40.4 ¹⁰¹	-25	58.8	29	35	18	45	15	27 49		42 56			
17	73	24.3	+18	06.4	316	09.5 ¹⁰¹	-26	01.5	27	40	17 07	17 36	18 09	12 10	48	2 59	57		
18	88	24.4	+18	05.8	330	38.6 ¹⁰¹	-26	04.1	26	45	16 55	17 27	18 02	11 50	47	3 19	58		
19	103	24.4		05.2	345	07.7 ¹⁰¹		06.6	25	50	41	16	17 55	24 46		44 60			
20	118	24.4		04.5	359	36.8 ¹⁰¹		08.9	23	52	34	11	52	11 12	45	3 56	61		
21	133	24.5		03.9	14	05.8 ¹⁰⁰		11.1	22	54	26	17 05	49	10 58	44	4 10	62		
22	148	24.5		03.3	28	34.9 ¹⁰¹		13.2	21	56	17	16 59	45	41 43		26 64			
23	163	24.5		02.7	43	04.0 ¹⁰¹		15.1	19	58	16 08	53	41	10 22	41	4 46	65		
24	178	24.6	+18	02.0	57	33.0 ¹⁰⁰	-26	16.9	18	60 S	15 57	16 45	17 37	9 57	38	5 10	69		

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 3 ^h 24 ^m 4		Mag: -4.0 PMG: 9 ^h 20 ^m				Mag: +1.1 PMG: 8 ^h 11 ^m				Mag: -2.8 PMG: 1 ^h 11 ^m				Mag: +1.1 PMG: 14 ^h 46 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	308	45.1	220	03.9	+21	44.9	237	04.6	+22	03.8	342	08.0	-14	31.5	137	51.0	+6	05.1
1	323	47.6	235	03.2		45.1	252	05.2		04.1	357	10.8		31.6	152	53.2		05.0
2	338	50.0	250	02.6		45.2	267	05.9		04.3	12	13.5		31.7	167	55.4		04.9
3	353	52.5	265	02.0		45.4	282	06.5		04.6	27	16.3		31.8	182	57.6		04.8
4	8	55.0	280	01.4		45.5	297	07.2		04.8	42	19.0		31.9	197	59.9		04.7
5	23	57.4	295	00.7	+21	45.7	312	07.8	+22	05.1	57	21.8	-14	32.0	213	02.1	+6	04.6
6	38	59.9	310	00.1	+21	45.8	327	08.5	+22	05.3	72	24.6	-14	32.1	228	04.3	+6	04.5
7	54	02.4	324	59.5		46.0	342	09.1		05.5	87	27.3		32.2	243	06.5		04.4
8	69	04.8	339	58.9		46.1	357	09.8		05.8	102	30.1		32.3	258	08.8		04.3
9	84	07.3	354	58.2		46.2	12	10.4		06.0	117	32.8		32.4	273	11.0		04.1
10	99	09.8	9	57.6		46.4	27	11.1		06.3	132	35.6		32.5	288	13.2		04.0
11	114	12.2	24	57.0	+21	46.5	42	11.7	+22	06.5	147	38.3	-14	32.6	303	15.4	+6	03.9
12	129	14.7	39	56.3	+21	46.7	57	12.4	+22	06.8	162	41.1	-14	32.7	318	17.6	+6	03.8
13	144	17.2	54	55.7		46.8	72	13.0		07.0	177	43.9		32.9	333	19.9		03.7
14	159	19.6	69	55.1		46.9	87	13.7		07.2	192	46.6		33.0	348	22.1		03.6
15	174	22.1	84	54.5		47.1	102	14.4		07.5	207	49.4		33.1	3	24.3		03.5
16	189	24.5	99	53.8		47.2	117	15.0		07.7	222	52.1		33.2	18	26.5		03.4
17	204	27.0	114	53.2	+21	47.3	132	15.7	+22	08.0	237	54.9	-14	33.3	33	28.8	+6	03.3
18	219	29.5	129	52.6	+21	47.5	147	16.3	+22	08.2	252	57.6	-14	33.4	48	31.0	+6	03.2
19	234	31.9	144	51.9		47.6	162	17.0		08.5	268	00.4		33.5	63	33.2		03.1
20	249	34.4	159	51.3		47.7	177	17.6		08.7	283	03.2		33.6	78	35.4		03.0
21	264	36.9	174	50.7		47.9	192	18.3		08.9	298	05.9		33.7	93	37.7		02.9
22	279	39.3	189	50.0		48.0	207	18.9		09.2	313	08.7		33.8	108	39.9		02.8
23	294	41.8	204	49.4		48.1	222	19.6		09.4	328	11.4		33.9	123	42.1		02.7
24	309	44.3	219	48.8	+21	48.3	237	20.2	+22	09.6	343	14.2	-14	34.0	138	44.3	+6	02.6
Dif	—		-6		+1		+7		+2		+28		-1		+22		-	

UT	SOL				LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna							
	SD: 15/8 PMG: 12 ^h 06 ^m 3				Edad: 9 ^d 9 PHE { 4 ^h : 54/5 12 ^h : 54/4 20 ^h : 54/3 Rº: 50 ^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	24.6	+18	02.0	57	33.0	-26	16.9	17	60 N	**	**	2	40	3	41	18	48	35	22	59	69		
1	193	24.6		01.4	72	02.1		18.6	17	58	1	31	3	00	3	53	18	20	39	23	27	65		
2	208	24.7		00.8	86	31.1		20.2	16	56	2	03		16	4	04	17	58	41	23	49	63		
3	223	24.7	+18	00.1	101	00.2		21.6	14	54		26		29	13		40	42		**	**	**		
4	238	24.7	+17	59.5	115	29.3		22.9	13	52	2	45		41	22		25	43		**	**	**		
5	253	24.8	+17	58.9	129	58.3	-26	24.0	11	50	3	00	3	51	4	29	17	12	44		**	**	**	
6	268	24.8	+17	58.2	144	27.4	-26	25.1	11	45	3	29	4	12	4	45	16	44	46	0	11	51		
7	283	24.9		57.6	158	56.5		26.0	9	40	3	51		28	4	58		23	47		32	51		
8	298	24.9		57.0	173	25.6		26.8	8	35	4	08		42	5	09	16	05	48	0	50	51		
9	313	24.9		56.4	187	54.6		27.4	6	30		22		4	53	19	15	50	48	1	05	51		
10	328	25.0		55.7	202	23.7		27.9	5	20	4	44		5	12	35		24	49		31	51		
11	343	25.0	+17	55.1	216	52.8	-26	28.3	4	10 N	5	02		5	27	5	50	15	01	50	1	53	51	
12	358	25.1	+17	54.5	231	22.0	-26	28.6	3	0	5	16		5	41	6	03	14	40	51	2	14	51	
13	13	25.1		53.8	245	51.1		28.7	1	10 S		28		5	54	16		14	20	51		35	51	
14	28	25.1		53.2	260	20.2		28.7	0	20		40		6	07	30		13	57	52	2	57	51	
15	43	25.2		52.5	274	49.4		28.6	1	30		51		20		45		31	53		3	23	50	
16	58	25.2		51.9	289	18.5		28.3	3	35	5	57		28	6	54		13	16	53		38	51	
17	73	25.3	+17	51.3	303	47.7	-26	27.9	4	40	6	03		6	36	7	05	12	58	54		3	56	50
18	88	25.3	+17	50.6	318	16.9	-26	27.4	5	45	6	10		6	45	7	17	12	37	54		4	17	50
19	103	25.4		50.0	332	46.1		26.8	6	50	17	6	56		31		12	10	55		44	49		
20	118	25.4		49.4	347	15.3		26.0	8	52	20	7	01		38		11	57	56		4	57	49	
21	133	25.4		48.7	1	44.6		25.1	9	54	23		06		46			42	56		5	12	49	
22	148	25.5		48.1	16	13.8		24.1	10	56	27		12		7	54		24	57		30	48		
23	163	25.5		47.4	30	43.1		22.9	12	58	31		19		8	04		11	03	57		5	51	48
24	178	25.6	+17	46.8	45	12.4	-26	21.7	12	60 S	6	35		7	26	8	14	10	35	59		6	19	46

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO								
	PMG: 3 ^h 20 ^m 5		Mag: -4.0 PMG: 9 ^h 21 ^m			Mag: +1.1 PMG: 8 ^h 10 ^m			Mag: -2.8 PMG: 1 ^h 07 ^m			Mag: +1.1 PMG: 14 ^h 43 ^m								
	hG ♈		hG ♀ Dec			hG ♂ Dec			hG ♃ Dec			hG ♄ Dec								
h	°	'	°	'	°	°	'	°	'	°	'	°	'	°						
0	309	44.3	219	48.8	+21	48.3	237	20.2	+22	09.6	343	14.2	-14	34.0	138	44.3	+6	02.6		
1	324	46.7	234	48.2		48.4	252	20.9		09.9	358	16.9		34.1	153	46.6		02.5		
2	339	49.2	249	47.5		48.5	267	21.5		10.1	13	19.7		34.3	168	48.8		02.3		
3	354	51.7	264	46.9		48.6	282	22.2		10.4	28	22.5		34.4	183	51.0		02.2		
4	9	54.1	279	46.3		48.8	297	22.9		10.6	43	25.2		34.5	198	53.2		02.1		
5	24	56.6	294	45.6	+21	48.9	312	23.5	+22	10.8	58	28.0	-14	34.6	213	55.5	+6	02.0		
6	39	59.0	309	45.0	+21	49.0	327	24.2	+22	11.1	73	30.7	-14	34.7	228	57.7	+6	01.9		
7	55	01.5	324	44.4		49.1	342	24.8		11.3	88	33.5		34.8	243	59.9		01.8		
8	70	04.0	339	43.7		49.3	357	25.5		11.5	103	36.3		34.9	259	02.1		01.7		
9	85	06.4	354	43.1		49.4	12	26.1		11.8	118	39.0		35.0	274	04.3		01.6		
10	100	08.9	9	42.5		49.5	27	26.8		12.0	133	41.8		35.1	289	06.6		01.5		
11	115	11.4	24	41.8	+21	49.6	42	27.4	+22	12.3	148	44.5	-14	35.2	304	08.8	+6	01.4		
12	130	13.8	39	41.2	+21	49.7	57	28.1	+22	12.5	163	47.3	-14	35.3	319	11.0	+6	01.3		
13	145	16.3	54	40.6		49.8	72	28.8		12.7	178	50.1		35.4	334	13.2		01.2		
14	160	18.8	69	39.9		50.0	87	29.4		13.0	193	52.8		35.6	349	15.5		01.1		
15	175	21.2	84	39.3		50.1	102	30.1		13.2	208	55.6		35.7	4	17.7		01.0		
16	190	23.7	99	38.6		50.2	117	30.7		13.4	223	58.3		35.8	19	19.9		00.9		
17	205	26.1	114	38.0	+21	50.3	132	31.4	+22	13.7	239	01.1	-14	35.9	34	22.1	+6	00.8		
18	220	28.6	129	37.4	+21	50.4	147	32.0	+22	13.9	254	03.9	-14	36.0	49	24.3	+6	00.6		
19	235	31.1	144	36.7		50.5	162	32.7		14.1	269	06.6		36.1	64	26.6		00.5		
20	250	33.5	159	36.1		50.6	177	33.3		14.3	284	09.4		36.2	79	28.8		00.4		
21	265	36.0	174	35.5		50.7	192	34.0		14.6	299	12.1		36.3	94	31.0		00.3		
22	280	38.5	189	34.8		50.8	207	34.7		14.8	314	14.9		36.4	109	33.2		00.2		
23	295	40.9	204	34.2		50.9	222	35.3		15.0	329	17.7		36.5	124	35.5	+6	00.1		
24	310	43.4	219	33.5	+21	51.0	237	36.0	+22	15.3	344	20.4	-14	36.6	139	37.7	+6	00.0		
Dif	—		-6			+1	+7			+2	+28			-1	+22			-		

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 12 ^h 06 ^m 3			Edad: 10 ^d 9 PHE { SD: 14 ^h 8 PMG: 21 ^h 43 ^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	25.6	+17 46.8	45	12.4	-26 21.7	14	60 N	20 28	21 27	23 24	19 23 20	*** ** *	*** ** *
1	193	25.6	46.2	59	41.7 ¹⁰³	20.3	14	58	16	21 08	22 32	18 59 24	*** ** *	*** ** *
2	208	25.7	45.5	74	11.1 ¹⁰⁴	18.7	16	56	20 05	20 53	22 03	39 28	*** ** *	*** ** *
3	223	25.7	44.9	88	40.5 ¹⁰⁴	17.1	16	54	19 56	40	21 41	22 31	0 06 62	0 06 62
4	238	25.7	44.2	103	09.9 ¹⁰⁴	15.3	18	52	48	29	24	18 08 33	22 60	22 60
5	253	25.8	+17 43.6	117	39.3 ¹⁰⁴	-26 13.4	19	50	19 41	20 19	21 09	17 56 34	0 35 59	0 35 59
6	268	25.8	+17 43.0	132	08.7 ¹⁰⁴	-26 11.3	21	45	19 25	19 59	20 41	17 30 38	1 02 57	1 02 57
7	283	25.9	42.3	146	38.2 ¹⁰⁵	09.2	21	40	13	43	20	17 10 40	23 56	23 56
8	298	25.9	41.7	161	07.7 ¹⁰⁵	06.9	23	35	19 02	30	20 03	16 53 41	41 55	41 55
9	313	26.0	41.0	175	37.2 ¹⁰⁵	04.5	24	30	18 53	18	19 49	38 43	1 56 54	1 56 54
10	328	26.0	40.4	190	06.8 ¹⁰⁶	-26 02.0	25	20	36	19 00	28	16 13 45	2 22 53	2 22 53
11	343	26.1	+17 39.7	204	36.4 ¹⁰⁶	-25 59.3	27	10 N	18 23	18 45	19 11	15 51 48	2 44 52	2 44 52
12	358	26.1	+17 39.1	219	06.0 ¹⁰⁶	-25 56.5	28	0	18 10	18 31	18 57	15 31 49	3 05 50	3 05 50
13	13	26.2	38.4	233	35.6 ¹⁰⁶	53.6	29	10 S	17 57	19	44	15 11 51	26 49	26 49
14	28	26.2	37.8	248	05.3 ¹⁰⁷	50.6	30	20	43	18 07	33	14 49 53	3 48 47	3 48 47
15	43	26.3	37.1	262	35.1 ¹⁰⁸	47.4	32	30	28	17 53	22	24 55	4 13 46	4 13 46
16	58	26.3	36.5	277	04.8 ¹⁰⁷	44.2	32	35	19	46	16	14 09 57	29 44	29 44
17	73	26.4	+17 35.9	291	34.6 ¹⁰⁸	-25 40.8	34	40	17 09	17 38	18 11	13 52 58	4 46 43	4 46 43
18	88	26.4	+17 35.2	306	04.4 ¹⁰⁸	-25 37.3	35	45	16 57	17 29	18 04	13 31 60	5 07 42	5 07 42
19	103	26.5	34.6	320	34.3 ¹⁰⁹	33.6	37	50	43	18	17 57	13 05 63	33 40	33 40
20	118	26.5	33.9	335	04.2 ¹⁰⁹	29.9	37	52	37	14	54	12 53 64	5 46 38	5 46 38
21	133	26.6	33.3	349	34.1 ¹⁰⁹	26.0	39	54	29	08	51	38 66	6 01 36	6 01 36
22	148	26.6	32.6	4	04.1 ¹¹⁰	22.0	40	56	21	17 03	48	21 68	18 34	18 34
23	163	26.7	32.0	18	34.1 ¹¹⁰	17.9	41	58	12	16 56	44	12 00 72	6 39 31	6 39 31
24	178	26.7	+17 31.3	33	04.2 ¹¹¹	-25 13.7	42	60 S	16 01	16 49	17 40	11 34 76	7 05 27	7 05 27

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 3 ^h 16 ^m 6		Mag: -4.0 PMG: 9 ^h 22 ^m			Mag: +1.1 PMG: 8 ^h 09 ^m			Mag: -2.8 PMG: 1 ^h 02 ^m			Mag: +1.1 PMG: 14 ^h 39 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	310	43.4	219 33.5	+21 51.0	237 36.0	+22 15.3	344 20.4	-14 36.6	139 37.7	+6 00.0				
1	325	45.9	234 32.9	51.1	252 36.6	15.5	359 23.2	36.7	154 39.9	+5 59.9				
2	340	48.3	249 32.3	51.2	267 37.3	15.7	14 26.0	36.9	169 42.1	59.8				
3	355	50.8	264 31.6	51.3	282 37.9	16.0	29 28.7	37.0	184 44.3	59.7				
4	10	53.3	279 31.0	51.5	297 38.6	16.2	44 31.5	37.1	199 46.6	59.6				
5	25	55.7	294 30.4	+21 51.6	312 39.2	+22 16.4	59 34.2	-14 37.2	214 48.8	+5 59.5				
6	40	58.2	309 29.7	+21 51.6	327 39.9	+22 16.6	74 37.0	-14 37.3	229 51.0	+5 59.4				
7	56	00.6	324 29.1	51.7	342 40.6	16.9	89 39.8	37.4	244 53.2	59.3				
8	71	03.1	339 28.4	51.8	357 41.2	17.1	104 42.5	37.5	259 55.4	59.2				
9	86	05.6	354 27.8	51.9	12 41.9	17.3	119 45.3	37.6	274 57.7	59.0				
10	101	08.0	9 27.1	52.0	27 42.5	17.6	134 48.1	37.7	289 59.9	58.9				
11	116	10.5	24 26.5	+21 52.1	42 43.2	+22 17.8	149 50.8	-14 37.8	305 02.1	+5 58.8				
12	131	13.0	39 25.9	+21 52.2	57 43.8	+22 18.0	164 53.6	-14 37.9	320 04.3	+5 58.7				
13	146	15.4	54 25.2	52.3	72 44.5	18.2	179 56.3	38.1	335 06.5	58.6				
14	161	17.9	69 24.6	52.4	87 45.2	18.5	194 59.1	38.2	350 08.8	58.5				
15	176	20.4	84 23.9	52.5	102 45.8	18.7	210 01.9	38.3	5 11.0	58.4				
16	191	22.8	99 23.3	52.6	117 46.5	18.9	225 04.6	38.4	20 13.2	58.3				
17	206	25.3	114 22.7	+21 52.7	132 47.1	+22 19.1	240 07.4	-14 38.5	35 15.4	+5 58.2				
18	221	27.8	129 22.0	+21 52.8	147 47.8	+22 19.4	255 10.2	-14 38.6	50 17.6	+5 58.1				
19	236	30.2	144 21.4	52.8	162 48.4	19.6	270 12.9	38.7	65 19.9	58.0				
20	251	32.7	159 20.7	52.9	177 49.1	19.8	285 15.7	38.8	80 22.1	57.9				
21	266	35.1	174 20.1	53.0	192 49.8	20.0	300 18.4	38.9	95 24.3	57.8				
22	281	37.6	189 19.4	53.1	207 50.4	20.3	315 21.2	39.0	110 26.5	57.7				
23	296	40.1	204 18.8	53.2	222 51.1	20.5	330 24.0	39.1	125 28.7	57.5				
24	311	42.5	219 18.1	+21 53.3	237 51.7	+22 20.7	345 26.7	-14 39.3	140 31.0	+5 57.4				
Dif	—		-6	+1	+7	+2	+28	-1	+22	-				

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: 11 ^d 9 PHE { 4 ^h : 54 ^o 0 12 ^h : 54 ^o 0 20 ^h : 54 ^o 0 PMG: 22 ^h 32 ^m R°: 47 ^m																	
	hG ☉		Dec		hG ☾		Dif		Dec			Dif			Náutico	Civil	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m	h	m	m
0	178	26.7	+17	31.3	33	04.2	-25	13.7	43	58	60 N	0 49	2 47	3 46	19 43	10	0 08	82				
1	193	26.8		30.6	47	34.3 ¹¹¹		09.4	43	58		1 41	3 05	3 57	23 16		32	76				
2	208	26.8		30.0	62	04.4 ¹¹¹		04.9	45	56		2 10	20	4 08	19 07	19	0 52	72				
3	223	26.9		29.3	76	34.6 ¹¹²	-25	00.3	46	54		32	33	17	18 53	22	1 08	70				
4	238	26.9		28.7	91	04.8 ¹¹²	-24	55.7	46	52		2 49	44	25	41 25		22	67				
5	253	27.0	+17	28.0	105	35.1 ¹¹³	-24	50.9	48	50		3 04	3 54	4 32	18 30	27	1 34	66				
6	268	27.0	+17	27.4	120	05.4 ¹¹³	-24	45.9	50	45		3 32	4 14	4 48	18 08	30	1 59	62				
7	283	27.1		26.7	134	35.8 ¹¹⁴		40.9	50	40		3 53	30	5 00	17 50	33	2 19	60				
8	298	27.1		26.1	149	06.2 ¹¹⁴		35.8	51	35		4 10	43	11	34 37		36	57				
9	313	27.2		25.4	163	36.6 ¹¹⁴		30.5	53	30		23	4 54	20	17 21	38	2 50	56				
10	328	27.2		24.8	178	07.1 ¹¹⁵		25.1	54	20		4 45	5 13	36	16 58	42	3 15	53				
11	343	27.3	+17	24.1	192	37.7 ¹¹⁶	-24	19.6	55	10 N		5 02	5 28	5 50	16 39	44	3 36	50				
12	358	27.3	+17	23.4	207	08.3 ¹¹⁶	-24	14.1	55	0		5 16	5 41	6 03	16 20	47	3 55	48				
13	13	27.4		22.8	221	38.9 ¹¹⁶		08.4	57	10 S		28	5 53	15	16 02	50	4 15	46				
14	28	27.4		22.1	236	09.6 ¹¹⁷	-24	02.5	59	20		39	6 06	29	15 42	53	35	44				
15	43	27.5		21.5	250	40.3 ¹¹⁷	-23	56.6	59	30		50	19	44	19 56		4 59	41				
16	58	27.5		20.8	265	11.1 ¹¹⁸		50.6	60	35		5 56	26	6 53	15 06	58	5 13	39				
17	73	27.6	+17	20.1	279	41.9 ¹¹⁸	-23	44.5	61	40		6 01	6 34	7 03	14 50	60	5 29	37				
18	88	27.7	+17	19.5	294	12.8 ¹¹⁹	-23	38.2	63	45		6 08	6 43	7 14	14 31	64	5 49	34				
19	103	27.7		18.8	308	43.7 ¹¹⁹		31.9	63	50		14	53	28	14 08	67	6 13	30				
20	118	27.8		18.2	323	14.7 ¹²⁰		25.4	65	52		17	6 58	35	13 57	69	24	29				
21	133	27.8		17.5	337	45.7 ¹²⁰		18.8	66	54		20	7 03	42	44 72		37	26				
22	148	27.9		16.8	352	16.8 ¹²¹		12.2	66	56		24	09	50	29 75		6 52	24				
23	163	27.9		16.2	6	48.0 ¹²²	-23	05.4	68	58		27	15	7 59	13 12	78	7 10	20				
24	178	28.0	+17	15.5	21	19.1 ¹²¹	-22	58.5	69	60 S		6 31	7 22	8 10	12 50	84	7 32	14				
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO					
	PMG 3 ^h 12 ^m 6				Mag: -4.0 PMG: 9 ^h 23 ^m				Mag: +1.1 PMG: 8 ^h 08 ^m				Mag: -2.8 PMG: 0 ^h 58 ^m				Mag: +1.1 PMG: 14 ^h 36 ^m					
	hG ♈				hG ♀ Dec				hG ♂ Dec				hG ♃ Dec				hG ♄ Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	311	42.5	219	18.1	+21	53.3	237	51.7	+22	20.7	345	26.7	-14	39.3	140	31.0	+5	57.4				
1	326	45.0	234	17.5		53.3	252	52.4		20.9	0	29.5		39.4	155	33.2		57.3				
2	341	47.5	249	16.9		53.4	267	53.0		21.1	15	32.3		39.5	170	35.4		57.2				
3	356	49.9	264	16.2		53.5	282	53.7		21.4	30	35.0		39.6	185	37.6		57.1				
4	11	52.4	279	15.6		53.6	297	54.4		21.6	45	37.8		39.7	200	39.8		57.0				
5	26	54.9	294	14.9	+21	53.6	312	55.0	+22	21.8	60	40.6	-14	39.8	215	42.1	+5	56.9				
6	41	57.3	309	14.3	+21	53.7	327	55.7	+22	22.0	75	43.3	-14	39.9	230	44.3	+5	56.8				
7	56	59.8	324	13.6		53.8	342	56.3		22.2	90	46.1		40.0	245	46.5		56.7				
8	72	02.3	339	13.0		53.9	357	57.0		22.5	105	48.9		40.1	260	48.7		56.6				
9	87	04.7	354	12.3		53.9	12	57.6		22.7	120	51.6		40.2	275	50.9		56.5				
10	102	07.2	9	11.7		54.0	27	58.3		22.9	135	54.4		40.3	290	53.2		56.4				
11	117	09.6	24	11.0	+21	54.1	42	59.0	+22	23.1	150	57.2	-14	40.5	305	55.4	+5	56.3				
12	132	12.1	39	10.4	+21	54.2	57	59.6	+22	23.3	165	59.9	-14	40.6	320	57.6	+5	56.1				
13	147	14.6	54	09.7		54.2	73	00.3		23.6	181	02.7		40.7	335	59.8		56.0				
14	162	17.0	69	09.1		54.3	88	00.9		23.8	196	05.5		40.8	351	02.0		55.9				
15	177	19.5	84	08.4		54.4	103	01.6		24.0	211	08.2		40.9	6	04.3		55.8				
16	192	22.0	99	07.8		54.4	118	02.3		24.2	226	11.0		41.0	21	06.5		55.7				
17	207	24.4	114	07.1	+21	54.5	133	02.9	+22	24.4	241	13.8	-14	41.1	36	08.7	+5	55.6				
18	222	26.9	129	06.5	+21	54.5	148	03.6	+22	24.6	256	16.5	-14	41.2	51	10.9	+5	55.5				
19	237	29.4	144	05.8		54.6	163	04.2		24.9	271	19.3		41.3	66	13.1		55.4				
20	252	31.8	159	05.2		54.7	178	04.9		25.1	286	22.1		41.4	81	15.3		55.3				
21	267	34.3	174	04.5		54.7	193	05.5		25.3	301	24.8		41.5	96	17.6		55.2				
22	282	36.8	189	03.9		54.8	208	06.2		25.5	316	27.6		41.7	111	19.8		55.1				
23	297	39.2	204	03.2		54.8	223	06.9		25.7	331	30.4		41.8	126	22.0		55.0				
24	312	41.7	219	02.6	+21	54.9	238	07.5	+22	25.9	346	33.1	-14	41.9	141	24.2	+5	54.8				
Dif	—				-6 +1				+7 +2				+28 -1				+22 -1					

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 15 ^h 8 PMG: 12 ^h 06 ^m 1			Edad: 12 ^d 9 PHE { 4 ^h : 54 ⁰ 12 ^h : 54 ⁰ 20 ^h : 54 ⁰ R°: 44 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m		h m m				
0	178	28.0	+17	15.5	21	19.1	-22	58.5	60 N	20 23	21 20	23 05	19 53 6	1 30 85				
1	193	28.1		14.8	35	50.4 ¹²³		51.5 ⁷⁰	58	11	21 03	22 23	39 10	1 48 81				
2	208	28.1		14.2	50	21.7 ¹²³		44.5 ⁷⁰	56	20 01	20 48	21 56	26 14	2 04 77				
3	223	28.2		13.5	64	53.0 ¹²³		37.3 ⁷²	54	19 52	36	35	15 17	18 73				
4	238	28.2		12.8	79	24.4 ¹²⁴		30.0 ⁷³	52	45	25	19	19 06 19	29 71				
5	253	28.3	+17	12.2	93	55.9 ¹²⁵	-22	22.6 ⁷⁴	50	19 38	20 15	21 05	18 57 21	2 40 68				
6	268	28.3	+17	11.5	108	27.3 ¹²⁴	-22	15.2 ⁷⁴	45	19 23	19 56	20 38	18 38 26	3 01 65				
7	283	28.4		10.9	122	58.9 ¹²⁶	-22	07.6 ⁷⁶	40	10	40	17	23 29	19 61				
8	298	28.5		10.2	137	30.5 ¹²⁶	-21	59.9 ⁷⁷	35	19 00	28	20 01	18 11 31	33 59				
9	313	28.5		09.5	152	02.2 ¹²⁷		52.1 ⁷⁸	30	18 51	19 17	19 47	17 59 35	3 46 56				
10	328	28.6		08.8	166	33.9 ¹²⁷		44.3 ⁷⁸	20	35	18 59	26	40 38	4 08 52				
11	343	28.6	+17	08.2	181	05.6 ¹²⁷	-21	36.3 ⁸⁰	10 N	18 22	18 44	19 10	17 23 42	4 26 49				
12	358	28.7	+17	07.5	195	37.4 ¹²⁸	-21	28.3 ⁸⁰	0	18 10	18 31	18 56	17 07 45	4 43 46				
13	13	28.8		06.8	210	09.3 ¹²⁹		20.1 ⁸²	10 S	17 57	19	44	16 52 48	5 01 43				
14	28	28.8		06.2	224	41.2 ¹²⁹		11.9 ⁸²	20	44	18 07	34	35 51	19 40				
15	43	28.9		05.5	239	13.2 ¹³⁰	-21	03.5 ⁸⁴	30	29	17 54	23	15 56	40 36				
16	58	28.9		04.8	253	45.2 ¹³⁰	-20	55.1 ⁸⁴	35	21	47	18	16 04 58	5 52 34				
17	73	29.0	+17	04.2	268	17.3 ¹³¹	-20	46.6 ⁸⁵	40	17 11	17 40	18 12	15 50 61	6 06 31				
18	88	29.1	+17	03.5	282	49.4 ¹³¹	-20	38.0 ⁸⁶	45	17 00	17 31	18 06	15 35 64	6 23 28				
19	103	29.1		02.8	297	21.6 ¹³²		29.3 ⁸⁷	50	16 46	21	18 00	15 69	43 24				
20	118	29.2		02.1	311	53.9 ¹³³		20.5 ⁸⁸	52	40	16	17 57	15 06 71	6 53 21				
21	133	29.2		01.5	326	26.2 ¹³³		11.6 ⁸⁹	54	33	11	54	14 56 74	7 03 20				
22	148	29.3		00.8	340	58.5 ¹³³	-20	02.7 ⁸⁹	56	25	06	51	44 77	16 16				
23	163	29.4	+17	00.1	355	30.9 ¹³⁴	-19	53.6 ⁹¹	58	16	17 00	48	30 81	30 13				
24	178	29.4	+16	59.4	10	03.4 ¹³⁵	-19	44.5 ⁹¹	60 S	16 06	16 53	17 44	14 14 85	7 46 9				
UT	ARIES		VENUS			MARTE			JÚPITER				SATURNO					
	PMG: 3 ^h 08 ^m 7		Mag: -4.0 PMG: 9 ^h 24 ^m			Mag: +1.1 PMG: 8 ^h 07 ^m			Mag: -2.9 PMG: 0 ^h 54 ^m				Mag: +1.1 PMG: 14 ^h 32 ^m					
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		hG ♅	Dec		
h	°	'	°	'	°	°	'	°	°	'	°	'	°	'	°	'		
0	312	41.7	219	02.6	+21	54.9	238	07.5	+22	25.9	346	33.1	-14	41.9	141	24.2	+5	54.8
1	327	44.1	234	01.9		55.0	253	08.2		26.1	1	35.9		42.0	156	26.4		54.7
2	342	46.6	249	01.3		55.0	268	08.8		26.4	16	38.7		42.1	171	28.7		54.6
3	357	49.1	264	00.6		55.1	283	09.5		26.6	31	41.4		42.2	186	30.9		54.5
4	12	51.5	279	00.0		55.1	298	10.2		26.8	46	44.2		42.3	201	33.1		54.4
5	27	54.0	293	59.3	+21	55.2	313	10.8	+22	27.0	61	47.0	-14	42.4	216	35.3	+5	54.3
6	42	56.5	308	58.7	+21	55.2	328	11.5	+22	27.2	76	49.7	-14	42.5	231	37.5	+5	54.2
7	57	58.9	323	58.0		55.3	343	12.1		27.4	91	52.5		42.6	246	39.7		54.1
8	73	01.4	338	57.4		55.3	358	12.8		27.6	106	55.3		42.8	261	42.0		54.0
9	88	03.9	353	56.7		55.4	13	13.5		27.8	121	58.0		42.9	276	44.2		53.9
10	103	06.3	8	56.1		55.4	28	14.1		28.0	137	00.8		43.0	291	46.4		53.8
11	118	08.8	23	55.4	+21	55.5	43	14.8	+22	28.3	152	03.6	-14	43.1	306	48.6	+5	53.7
12	133	11.2	38	54.8	+21	55.5	58	15.4	+22	28.5	167	06.3	-14	43.2	321	50.8	+5	53.5
13	148	13.7	53	54.1		55.6	73	16.1		28.7	182	09.1		43.3	336	53.0		53.4
14	163	16.2	68	53.5		55.6	88	16.8		28.9	197	11.9		43.4	351	55.3		53.3
15	178	18.6	83	52.8		55.6	103	17.4		29.1	212	14.6		43.5	6	57.5		53.2
16	193	21.1	98	52.1		55.7	118	18.1		29.3	227	17.4		43.6	21	59.7		53.1
17	208	23.6	113	51.5	+21	55.7	133	18.7	+22	29.5	242	20.2	-14	43.7	37	01.9	+5	53.0
18	223	26.0	128	50.8	+21	55.8	148	19.4	+22	29.7	257	23.0	-14	43.9	52	04.1	+5	52.9
19	238	28.5	143	50.2		55.8	163	20.1		29.9	272	25.7		44.0	67	06.3		52.8
20	253	31.0	158	49.5		55.8	178	20.7		30.1	287	28.5		44.1	82	08.6		52.7
21	268	33.4	173	48.9		55.9	193	21.4		30.3	302	31.3		44.2	97	10.8		52.6
22	283	35.9	188	48.2		55.9	208	22.0		30.5	317	34.0		44.3	112	13.0		52.5
23	298	38.4	203	47.6		56.0	223	22.7		30.7	332	36.8		44.4	127	15.2		52.4
24	313	40.8	218	46.9	+21	56.0	238	23.4	+22	31.0	347	39.6	-14	44.5	142	17.4	+5	52.2
Dif	—		-7			0	+7		+2		+28		-1		+22		-1	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15/8 PMG: 12 ^h 06 ^m 0			Edad: 13 ^d 9 PHE { SD: 14/7 PMG: **h **m 4 ^h : 54/1 12 ^h : 54/1 20 ^h : 54/2 R°: **m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	178	29.4	+16	59.4	10	03.4	-19	44.5	92	60 N	1 08	2 53	3 50	19 59	4 2 55 85
1	193	29.5		58.8	24	35.9 ¹³⁵		35.3	92	58	1 50	3 10	4 02	49 8	3 09 80
2	208	29.6		58.1	39	08.4 ¹³⁵		26.0	93	56	2 17	25	12	40 11	21 77
3	223	29.6		57.4	53	41.0 ¹³⁶		16.6	94	54	37	37	20	32 13	31 77
4	238	29.7		56.7	68	13.7 ¹³⁷	-19	07.1	95	52	2 54	48	28	25 15	40 72
5	253	29.8	+16	56.1	82	46.4 ¹³⁷	-18	57.6	95	50	3 08	3 57	4 35	19 18	18 3 48 70
6	268	29.8	+16	55.4	97	19.1 ¹³⁷	-18	47.9	97	45	3 35	4 17	4 50	19 04	22 4 06 64
7	283	29.9		54.7	111	52.0 ¹³⁹		38.2	97	40	3 55	32	5 02	18 52	26 20 61
8	298	30.0		54.0	126	24.8 ¹³⁸		28.5	97	35	4 12	45	12	42 29	32 58
9	313	30.0		53.3	140	57.7 ¹³⁹		18.6	99	30	25	4 56	21	34 31	4 42 56
10	328	30.1		52.7	155	30.7 ¹⁴⁰	-18	08.6	100	20	4 46	5 14	37	18 36	5 00 51
11	343	30.1	+16	52.0	170	03.7 ¹⁴⁰	-17	58.6	100	10 N	5 02	5 28	5 50	18 05	39 5 15 48
12	358	30.2	+16	51.3	184	36.8 ¹⁴¹	-17	48.5	101	0	5 16	5 41	6 03	17 52	43 5 29 44
13	13	30.3		50.6	199	09.9 ¹⁴¹		38.4	101	10 S	28	5 53	15	40 46	44 40
14	28	30.3		49.9	213	43.0 ¹⁴¹		28.1	103	20	38	6 05	28	26 51	5 59 37
15	43	30.4		49.3	228	16.2 ¹⁴²		17.8	103	30	49	17	42	11 55	6 16 32
16	58	30.5		48.6	242	49.5 ¹⁴³	-17	07.4	104	35	5 54	24	6 51	17 02	58 26 30
17	73	30.6	+16	47.9	257	22.8 ¹⁴³	-16	56.9	105	40	6 00	6 32	7 00	16 51	61 6 37 27
18	88	30.6	+16	47.2	271	56.1 ¹⁴³	-16	46.4	105	45	6 05	6 40	7 12	16 39	65 6 51 23
19	103	30.7		46.5	286	29.5 ¹⁴⁴		35.8	106	50	12	50	25	24 70	7 07 19
20	118	30.8		45.8	301	03.0 ¹⁴⁵		25.1	107	52	14	6 55	31	17 72	14 17
21	133	30.8		45.2	315	36.5 ¹⁴⁵		14.4	107	54	17	7 00	38	10 73	23 14
22	148	30.9		44.5	330	10.0 ¹⁴⁵	-16	03.6	108	56	20	05	46	16 01	77 32 12
23	163	31.0		43.8	344	43.6 ¹⁴⁶	-15	52.7	109	58	24	11	7 55	15 51	80 43 9
24	178	31.0	+16	43.1	359	17.2 ¹⁴⁶	-15	41.7	110	60 S	6 27	7 18	8 05	15 39	85 7 55 5

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 3 ^h 04 ^m 8		Mag: -4.0 PMG: 9 ^h 25 ^m			Mag: +1.1 PMG: 8 ^h 06 ^m			Mag: -2.9 PMG: 0 ^h 49 ^m			Mag: +1.1 PMG: 14 ^h 29 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°	
0	313	40.8	218	46.9	+21	56.0	238	23.4	+22	31.0	347	39.6	-14	44.5	
1	328	43.3	233	46.2		56.0	253	24.0		31.2	2	42.3		44.6	
2	343	45.7	248	45.6		56.0	268	24.7		31.4	17	45.1		44.7	
3	358	48.2	263	44.9		56.1	283	25.4		31.6	32	47.9		44.8	
4	13	50.7	278	44.3		56.1	298	26.0		31.8	47	50.6		45.0	
5	28	53.1	293	43.6	+21	56.1	313	26.7	+22	32.0	62	53.4	-14	45.1	
6	43	55.6	308	43.0	+21	56.2	328	27.3	+22	32.2	77	56.2	-14	45.2	
7	58	58.1	323	42.3		56.2	343	28.0		32.4	92	59.0		45.3	
8	74	00.5	338	41.6		56.2	358	28.7		32.6	108	01.7		45.4	
9	89	03.0	353	41.0		56.2	13	29.3		32.8	123	04.5		45.5	
10	104	05.5	8	40.3		56.3	28	30.0		33.0	138	07.3		45.6	
11	119	07.9	23	39.7	+21	56.3	43	30.6	+22	33.2	153	10.0	-14	45.7	
12	134	10.4	38	39.0	+21	56.3	58	31.3	+22	33.4	168	12.8	-14	45.8	
13	149	12.9	53	38.3		56.3	73	32.0		33.6	183	15.6		46.0	
14	164	15.3	68	37.7		56.3	88	32.6		33.8	198	18.4		46.1	
15	179	17.8	83	37.0		56.4	103	33.3		34.0	213	21.1		46.2	
16	194	20.2	98	36.4		56.4	118	34.0		34.2	228	23.9		46.3	
17	209	22.7	113	35.7	+21	56.4	133	34.6	+22	34.4	243	26.7	-14	46.4	
18	224	25.2	128	35.1	+21	56.4	148	35.3	+22	34.6	258	29.4	-14	46.5	
19	239	27.6	143	34.4		56.4	163	35.9		34.8	273	32.2		46.6	
20	254	30.1	158	33.7		56.4	178	36.6		35.0	288	35.0		46.7	
21	269	32.6	173	33.1		56.5	193	37.3		35.2	303	37.8		46.8	
22	284	35.0	188	32.4		56.5	208	37.9		35.4	318	40.5		46.9	
23	299	37.5	203	31.7		56.5	223	38.6		35.6	333	43.3		47.1	
24	314	40.0	218	31.1	+21	56.5	238	39.3	+22	35.8	348	46.1	-14	47.2	
Dif	—		-7			0	+7			+2	+28			-1	

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 15'8 PMG: 12 ^h 05 ^m 9				Edad: 14 ^d 9 PHE { 4 ^h : 54'2 12 ^h : 54'3 20 ^h : 54'4 SD: 14'8 PMG: 0 ^h 03 ^m R°: 43 ^m														
	hG ☉		Dec		hG ☾		Dif							Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	m	h m m	m			
0	178	31.0	+16	43.1	359	17.2	-15	41.7	60 N	20 17	21 13	22 50	20 03	3	4 20	83			
1	193	31.1		42.4	13	50.9 ¹⁴⁷		30.7 ¹¹⁰	58	20 06	20 57	22 13	19 57	5	29	80			
2	208	31.2		41.7	28	24.6 ¹⁴⁷		19.6 ¹¹¹	56	19 57	43	21 49	51	8	38	76			
3	223	31.2		41.0	42	58.3 ¹⁴⁷	-15	08.5 ¹¹¹	54	49	31	29	45	11	45	74			
4	238	31.3		40.3	57	32.1 ¹⁴⁸	-14	57.3 ¹¹²	52	41	21	14	40	13	52	71			
5	253	31.4	+16	39.7	72	05.9 ¹⁴⁸	-14	46.0 ¹¹³	50	19 34	20 12	21 00	19 36	15	4 58	69			
6	268	31.5	+16	39.0	86	39.8 ¹⁴⁹	-14	34.7 ¹¹³	45	19 20	19 53	20 34	19 26	20	5 10	65			
7	283	31.5		38.3	101	13.7 ¹⁴⁹		23.3 ¹¹⁴	40	19 08	38	20 14	18	23	21	61			
8	298	31.6		37.6	115	47.7 ¹⁵⁰		11.8 ¹¹⁵	35	18 58	25	19 58	11	26	30	57			
9	313	31.7		36.9	130	21.7 ¹⁵⁰	-14	00.3 ¹¹⁵	30	49	19 15	45	19 05	29	38	54			
10	328	31.7		36.2	144	55.7 ¹⁵⁰	-13	48.8 ¹¹⁵	20	34	18 58	25	18 54	34	5 51	50			
11	343	31.8	+16	35.5	159	29.8 ¹⁵¹	-13	37.1 ¹¹⁷	10 N	18 21	18 43	19 09	18 44	38	6 03	46			
12	358	31.9	+16	34.8	174	03.9 ¹⁵¹	-13	25.5 ¹¹⁶	0	18 09	18 31	18 56	18 35	42	6 13	43			
13	13	32.0		34.1	188	38.1 ¹⁵²		13.7 ¹¹⁸	10 S	17 57	19	45	26	46	24	39			
14	28	32.0		33.4	203	12.2 ¹⁵¹	-13	01.9 ¹¹⁸	20	45	18 08	34	17	50	36	34			
15	43	32.1		32.7	217	46.5 ¹⁵³	-12	50.1 ¹¹⁸	30	30	17 55	24	06	54	48	30			
16	58	32.2		32.1	232	20.7 ¹⁵²		38.2 ¹¹⁹	35	22	49	19	18 00	57	6 56	27			
17	73	32.2	+16	31.4	246	55.0 ¹⁵³	-12	26.2 ¹²⁰	40	17 13	17 41	18 14	17 52	61	7 04	25			
18	88	32.3	+16	30.7	261	29.3 ¹⁵³	-12	14.2 ¹²⁰	45	17 02	17 33	18 08	17 44	64	7 14	21			
19	103	32.4		30.0	276	03.7 ¹⁵⁴	-12	02.1 ¹²¹	50	16 49	23	02	34	68	26	16			
20	118	32.5		29.3	290	38.1 ¹⁵⁴	-11	50.0 ¹²¹	52	43	19	18 00	29	71	31	15			
21	133	32.5		28.6	305	12.5 ¹⁵⁴		37.8 ¹²²	54	36	14	17 57	23	74	37	12			
22	148	32.6		27.9	319	47.0 ¹⁵⁵		25.6 ¹²²	56	28	09	54	18	76	44	10			
23	163	32.7		27.2	334	21.4 ¹⁵⁴		13.4 ¹²²	58	20	17 03	51	11	79	7 52	6			
24	178	32.8	+16	26.5	348	55.9 ¹⁵⁵	-11	01.1 ¹²³	60 S	16 10	16 57	17 48	17 04	82	8 00	3			

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 3 ^h 00 ^m 8		Mag: -4.0 PMG: 9 ^h 26 ^m				Mag: +1.1 PMG: 8 ^h 05 ^m				Mag: -2.9 PMG: 0 ^h 45 ^m				Mag: +1.1 PMG: 14 ^h 25 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	314	40.0	218	31.1	+21	56.5	238	39.3	+22	35.8	348	46.1	-14	47.2	143	10.6	+5	49.6
1	329	42.4	233	30.4		56.5	253	39.9		36.0	3	48.8		47.3	158	12.8		49.5
2	344	44.9	248	29.8		56.5	268	40.6		36.2	18	51.6		47.4	173	15.0		49.4
3	359	47.3	263	29.1		56.5	283	41.2		36.4	33	54.4		47.5	188	17.2		49.3
4	14	49.8	278	28.4		56.5	298	41.9		36.6	48	57.2		47.6	203	19.5		49.2
5	29	52.3	293	27.8	+21	56.5	313	42.6	+22	36.8	63	59.9	-14	47.7	218	21.7	+5	49.1
6	44	54.7	308	27.1	+21	56.5	328	43.2	+22	37.0	79	02.7	-14	47.8	233	23.9	+5	49.0
7	59	57.2	323	26.4		56.5	343	43.9		37.2	94	05.5		47.9	248	26.1		48.9
8	74	59.7	338	25.8		56.5	358	44.6		37.4	109	08.3		48.1	263	28.3		48.7
9	90	02.1	353	25.1		56.5	13	45.2		37.5	124	11.0		48.2	278	30.5		48.6
10	105	04.6	8	24.5		56.5	28	45.9		37.7	139	13.8		48.3	293	32.7		48.5
11	120	07.1	23	23.8	+21	56.5	43	46.6	+22	37.9	154	16.6	-14	48.4	308	34.9	+5	48.4
12	135	09.5	38	23.1	+21	56.5	58	47.2	+22	38.1	169	19.3	-14	48.5	323	37.2	+5	48.3
13	150	12.0	53	22.5		56.5	73	47.9		38.3	184	22.1		48.6	338	39.4		48.2
14	165	14.5	68	21.8		56.5	88	48.5		38.5	199	24.9		48.7	353	41.6		48.1
15	180	16.9	83	21.1		56.5	103	49.2		38.7	214	27.7		48.8	8	43.8		48.0
16	195	19.4	98	20.5		56.5	118	49.9		38.9	229	30.4		48.9	23	46.0		47.9
17	210	21.8	113	19.8	+21	56.5	133	50.5	+22	39.1	244	33.2	-14	49.1	38	48.2	+5	47.8
18	225	24.3	128	19.1	+21	56.5	148	51.2	+22	39.3	259	36.0	-14	49.2	53	50.4	+5	47.6
19	240	26.8	143	18.5		56.5	163	51.9		39.5	274	38.8		49.3	68	52.7		47.5
20	255	29.2	158	17.8		56.5	178	52.5		39.7	289	41.5		49.4	83	54.9		47.4
21	270	31.7	173	17.1		56.4	193	53.2		39.8	304	44.3		49.5	98	57.1		47.3
22	285	34.2	188	16.5		56.4	208	53.9		40.0	319	47.1		49.6	113	59.3		47.2
23	300	36.6	203	15.8		56.4	223	54.5		40.2	334	49.9		49.7	129	01.5		47.1
24	315	39.1	218	15.1	+21	56.4	238	55.2	+22	40.4	349	52.6	-14	49.8	144	03.7	+5	47.0
Dif	—		-7		0		+7		+2		+28		-1		+22		-	

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: 15 ^d 9 PHE { SD: 14'8 PMG: 0 ^h 46 ^m											
	hG ☉		Dec	hG ☾ Dif		Dec	Dif		Náutico	Civil		Hora	Rº	Hora	Rº
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	178	32.8	+16 26.5	348	55.9	-11 01.1	60 N	1 23	2 59	3 55	20 06	2	5 43	83	
1	193	32.8	25.8	3	30.5 ¹⁵⁶	-10 48.7 ¹²⁴	58	1 59	3 15	4 06	20 02	6	49	79	
2	208	32.9	25.1	18	05.1 ¹⁵⁶	36.3 ¹²⁴	56	2 24	29	15	19 59	8	54	76	
3	223	33.0	24.4	32	39.6 ¹⁵⁵	23.8 ¹²⁵	54	43	41	24	56	10	5 59	73	
4	238	33.1	23.7	47	14.3 ¹⁵⁷	-10 11.4 ¹²⁴	52	2 59	3 51	31	53	13	6 03	71	
5	253	33.2	+16 23.0	61	48.9 ¹⁵⁶	-9 58.8 ¹²⁶	50	3 12	4 00	4 38	19 51	14	6 07	69	
6	268	33.2	+16 22.3	76	23.6 ¹⁵⁷	-9 46.2 ¹²⁶	45	3 38	4 19	4 52	19 46	18	6 15	64	
7	283	33.3	21.6	90	58.3 ¹⁵⁷	33.6 ¹²⁶	40	3 58	34	5 04	41	22	22	60	
8	298	33.4	20.9	105	33.0 ¹⁵⁷	20.9 ¹²⁷	35	4 14	47	14	37	25	27	58	
9	313	33.5	20.2	120	07.8 ¹⁵⁸	-9 08.2 ¹²⁷	30	26	4 57	23	34	28	32	55	
10	328	33.5	19.5	134	42.5 ¹⁵⁷	-8 55.5 ¹²⁷	20	4 47	5 14	38	28	32	41	50	
11	343	33.6	+16 18.8	149	17.3 ¹⁵⁸	-8 42.7 ¹²⁸	10 N	5 03	5 28	5 50	19 22	37	6 49	45	
12	358	33.7	+16 18.1	163	52.1 ¹⁵⁸	-8 29.9 ¹²⁸	0	5 16	5 41	6 02	19 17	41	6 56	41	
13	13	33.8	17.4	178	26.9 ¹⁵⁸	17.0 ¹²⁹	10 S	27	5 52	14	12	45	7 03	37	
14	28	33.9	16.7	193	01.8 ¹⁵⁹	-8 04.1 ¹²⁹	20	37	6 04	27	07	49	10	33	
15	43	33.9	16.0	207	36.7 ¹⁵⁹	-7 51.2 ¹²⁹	30	47	16	41	19 00	55	18	29	
16	58	34.0	15.3	222	11.5 ¹⁵⁸	38.2 ¹³⁰	35	52	22	49	18 57	57	23	26	
17	73	34.1	+16 14.6	236	46.4 ¹⁵⁹	-7 25.2 ¹³⁰	40	5 57	6 30	6 58	18 53	60	7 29	22	
18	88	34.2	+16 13.9	251	21.3 ¹⁵⁹	-7 12.2 ¹³⁰	45	6 03	6 38	7 09	18 48	65	7 35	19	
19	103	34.3	13.1	265	56.3 ¹⁶⁰	-6 59.1 ¹³¹	50	09	47	22	42	69	42	15	
20	118	34.3	12.4	280	31.2 ¹⁵⁹	46.0 ¹³¹	52	11	52	28	40	71	46	12	
21	133	34.4	11.7	295	06.2 ¹⁶⁰	32.9 ¹³¹	54	14	6 56	35	37	73	49	11	
22	148	34.5	11.0	309	41.1 ¹⁵⁹	19.7 ¹³²	56	17	7 01	42	34	76	54	8	
23	163	34.6	10.3	324	16.1 ¹⁶⁰	-6 06.5 ¹³²	58	20	07	7 50	30	79	7 58	6	
24	178	34.7	+16 09.6	338	51.1 ¹⁶⁰	-5 53.3 ¹³²	60 S	6 23	7 13	8 00	18 26	82	8 03	3	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 2 ^h 56 ^m 9		Mag: -4.0 PMG: 9 ^h 27 ^m		Mag: +1.1 PMG: 8 ^h 04 ^m		Mag: -2.9 PMG: 0 ^h 40 ^m		Mag: +1.1 PMG: 14 ^h 22 ^m									
	hG ♈		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec									
h	°	'	°	'	°	'	°	'	°	'								
0	315	39.1	218	15.1	+21	56.4	238	55.2	-14	49.8	144	03.7	+5	47.0				
1	330	41.6	233	14.5		56.4	253	55.9		49.9	159	05.9		46.9				
2	345	44.0	248	13.8		56.4	268	56.5		50.1	174	08.1		46.8				
3	0	46.5	263	13.1		56.4	283	57.2		50.2	189	10.4		46.7				
4	15	49.0	278	12.5		56.3	298	57.9		50.3	204	12.6		46.5				
5	30	51.4	293	11.8	+21	56.3	313	58.5	+22	50.4	219	14.8	+5	46.4				
6	45	53.9	308	11.1	+21	56.3	328	59.2	+22	50.5	234	17.0	+5	46.3				
7	60	56.3	323	10.5		56.3	343	59.8		50.6	249	19.2		46.2				
8	75	58.8	338	09.8		56.2	359	00.5		50.7	264	21.4		46.1				
9	91	01.3	353	09.1		56.2	14	01.2		50.8	279	23.6		46.0				
10	106	03.7	8	08.5		56.2	29	01.8		50.9	294	25.8		45.9				
11	121	06.2	23	07.8	+21	56.2	44	02.5	+22	51.1	309	28.1	+5	45.8				
12	136	08.7	38	07.1	+21	56.1	59	03.2	+22	51.2	324	30.3	+5	45.7				
13	151	11.1	53	06.5		56.1	74	03.8		51.3	339	32.5		45.6				
14	166	13.6	68	05.8		56.1	89	04.5		51.4	354	34.7		45.4				
15	181	16.1	83	05.1		56.1	104	05.2		51.5	9	36.9		45.3				
16	196	18.5	98	04.5		56.0	119	05.8		51.6	24	39.1		45.2				
17	211	21.0	113	03.8	+21	56.0	134	06.5	+22	51.7	39	41.3	+5	45.1				
18	226	23.4	128	03.1	+21	56.0	149	07.2	+22	51.8	54	43.5	+5	45.0				
19	241	25.9	143	02.5		55.9	164	07.8		51.9	69	45.7		44.9				
20	256	28.4	158	01.8		55.9	179	08.5		52.1	84	48.0		44.8				
21	271	30.8	173	01.1		55.9	194	09.2		52.2	99	50.2		44.7				
22	286	33.3	188	00.4		55.8	209	09.8		52.3	114	52.4		44.6				
23	301	35.8	202	59.8		55.8	224	10.5		52.4	129	54.6		44.4				
24	316	38.2	217	59.1	+21	55.7	239	11.2	+22	52.5	144	56.8	+5	44.3				
Dif	—		-7		0		+7		+2		+28		-1		+22		-	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 16 ^d 9 PHE { 4 ^h : 54 ^m 8 12 ^h : 54 ^m 9 20 ^h : 55 ^m 0										
	PMG: 12 ^h 05 ^m 6			SD: 14 ^h 9 PMG: 1 ^h 27 ^m R°: 41 ^m					Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	h m	h m	h m	h m m	h m m	h m m	
0	178	34.7	+16 09.6	338	51.1	-5 53.3	60 N	20 12	21 07	22 36	20 08 3	7 06 82		
1	193	34.7	08.9	353	26.1 ¹⁶⁰	40.1 ¹³²	58	20 02	20 51	22 05	08 5	08 79		
2	208	34.8	08.2	8	01.1 ¹⁶⁰	26.8 ¹³³	56	19 53	38	21 42	07 8	10 77		
3	223	34.9	07.5	22	36.1 ¹⁶⁰	13.5 ¹³³	54	45	27	23	06 11	12 74		
4	238	35.0	06.8	37	11.1 ¹⁶⁰	-5 00.1 ¹³⁴	52	37	17	21 08	06 12	14 71		
5	253	35.1	+16 06.1	51	46.1 ¹⁶⁰	-4 46.8 ¹³³	50	19 31	20 08	20 56	20 05 15	7 16 69		
6	268	35.2	+16 05.3	66	21.2 ¹⁶¹	-4 33.4 ¹³⁴	45	19 17	19 50	20 30	20 04 19	7 19 65		
7	283	35.2	04.6	80	56.2 ¹⁶⁰	20.0 ¹³⁴	40	19 06	35	20 11	03 22	22 61		
8	298	35.3	03.9	95	31.2 ¹⁶⁰	-4 06.6 ¹³⁴	35	18 56	23	19 56	02 26	25 57		
9	313	35.4	03.2	110	06.3 ¹⁶¹	-3 53.1 ¹³⁵	30	48	19 13	44	02 28	27 54		
10	328	35.5	02.5	124	41.3 ¹⁶⁰	39.7 ¹³⁴	20	33	18 56	24	20 00 33	31 49		
11	343	35.6	+16 01.8	139	16.4 ¹⁶¹	-3 26.2 ¹³⁵	10 N	18 21	18 43	19 08	19 59 38	7 34 45		
12	358	35.7	+16 01.1	153	51.4 ¹⁶⁰	-3 12.7 ¹³⁵	0	18 09	18 31	18 56	19 58 42	7 37 41		
13	13	35.7	+16 00.4	168	26.4 ¹⁶⁰	-2 59.1 ¹³⁶	10 S	17 58	19	45	57 46	40 37		
14	28	35.8	+15 59.6	183	01.5 ¹⁶¹	45.6 ¹³⁵	20	45	18 08	35	56 50	43 33		
15	43	35.9	58.9	197	36.5 ¹⁶⁰	32.0 ¹³⁶	30	32	17 57	25	55 55	47 28		
16	58	36.0	58.2	212	11.5 ¹⁶⁰	18.4 ¹³⁶	35	24	50	20	54 58	49 25		
17	73	36.1	+15 57.5	226	46.5 ¹⁶⁰	-2 04.8 ¹³⁶	40	17 15	17 43	18 15	19 53 62	7 51 22		
18	88	36.2	+15 56.8	241	21.6 ¹⁶¹	-1 51.2 ¹³⁶	45	17 04	17 35	18 10	19 53 65	7 54 18		
19	103	36.3	56.1	255	56.6 ¹⁶⁰	37.6 ¹³⁶	50	16 52	26	05	51 70	57 14		
20	118	36.3	55.3	270	31.6 ¹⁶⁰	24.0 ¹³⁶	52	46	22	02	51 72	7 58 13		
21	133	36.4	54.6	285	06.5 ¹⁵⁹	-1 10.3 ¹³⁷	54	39	17	18 00	50 75	8 00 10		
22	148	36.5	53.9	299	41.5 ¹⁶⁰	-0 56.6 ¹³⁷	56	32	13	17 57	50 77	02 7		
23	163	36.6	53.2	314	16.5 ¹⁶⁰	43.0 ¹³⁶	58	24	07	54	49 80	04 5		
24	178	36.7	+15 52.5	328	51.4 ¹⁵⁹	-0 29.3 ¹³⁷	60 S	16 15	17 01	17 51	19 48 83	8 06 2		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 2 ^h 53 ^m 0		Mag: -4.0 PMG: 9 ^h 28 ^m		Mag: +1.1 PMG: 8 ^h 03 ^m		Mag: -2.9 PMG: 0 ^h 36 ^m		Mag: +1.1 PMG: 14 ^h 18 ^m	
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	°	°	°	°	°	°	°	°	
0	316	38.2	217 59.1	+21 55.7	239 11.2	+22 44.9	350 59.2	-14 52.5	144 56.8	+5 44.3
1	331	40.7	232 58.4	55.7	254 11.8	45.0	6 02.0	52.6	159 59.0	44.2
2	346	43.2	247 57.8	55.7	269 12.5	45.2	21 04.8	52.7	175 01.2	44.1
3	1	45.6	262 57.1	55.6	284 13.2	45.4	36 07.6	52.8	190 03.4	44.0
4	16	48.1	277 56.4	55.6	299 13.8	45.6	51 10.3	52.9	205 05.6	43.9
5	31	50.6	292 55.8	+21 55.5	314 14.5	+22 45.8	66 13.1	-14 53.1	220 07.9	+5 43.8
6	46	53.0	307 55.1	+21 55.5	329 15.2	+22 45.9	81 15.9	-14 53.2	235 10.1	+5 43.7
7	61	55.5	322 54.4	55.4	344 15.8	46.1	96 18.7	53.3	250 12.3	43.6
8	76	57.9	337 53.7	55.4	359 16.5	46.3	111 21.4	53.4	265 14.5	43.4
9	92	00.4	352 53.1	55.3	14 17.2	46.5	126 24.2	53.5	280 16.7	43.3
10	107	02.9	7 52.4	55.3	29 17.9	46.6	141 27.0	53.6	295 18.9	43.2
11	122	05.3	22 51.7	+21 55.2	44 18.5	+22 46.8	156 29.8	-14 53.7	310 21.1	+5 43.1
12	137	07.8	37 51.0	+21 55.2	59 19.2	+22 47.0	171 32.6	-14 53.8	325 23.3	+5 43.0
13	152	10.3	52 50.4	55.1	74 19.9	47.2	186 35.3	53.9	340 25.5	42.9
14	167	12.7	67 49.7	55.1	89 20.5	47.4	201 38.1	54.1	355 27.8	42.8
15	182	15.2	82 49.0	55.0	104 21.2	47.5	216 40.9	54.2	10 30.0	42.7
16	197	17.7	97 48.4	55.0	119 21.9	47.7	231 43.7	54.3	25 32.2	42.6
17	212	20.1	112 47.7	+21 54.9	134 22.5	+22 47.9	246 46.4	-14 54.4	40 34.4	+5 42.4
18	227	22.6	127 47.0	+21 54.9	149 23.2	+22 48.1	261 49.2	-14 54.5	55 36.6	+5 42.3
19	242	25.0	142 46.3	54.8	164 23.9	48.2	276 52.0	54.6	70 38.8	42.2
20	257	27.5	157 45.7	54.7	179 24.5	48.4	291 54.8	54.7	85 41.0	42.1
21	272	30.0	172 45.0	54.7	194 25.2	48.6	306 57.5	54.8	100 43.2	42.0
22	287	32.4	187 44.3	54.6	209 25.9	48.7	322 00.3	54.9	115 45.4	41.9
23	302	34.9	202 43.6	54.6	224 26.5	48.9	337 03.1	55.1	130 47.6	41.8
24	317	37.4	217 43.0	+21 54.5	239 27.2	+22 49.1	352 05.9	-14 55.2	145 49.8	+5 41.7
Dif	—	-7	-1	+7	+2	+28	-1	+22	-1	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15/8 PMG: 12 ^h 05 ^m 5			Edad: 17 ^d 9 PHE { SD: 15/0 PMG: 2 ^h 08 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	36.7	+15	52.5	328	51.4	-0 29.3	60 N	1 35	3 05	4 00	20 11	2	8 28	84
1	193	36.8		51.7	343	26.4 ¹⁶⁰	15.6 ¹³⁷	58	2 07	21	10	13	6	27	81
2	208	36.9		51.0	358	01.3 ¹⁵⁹	-0 01.9 ¹³⁷	56	30	34	19	15	8	27	77
3	223	37.0		50.3	12	36.2 ¹⁵⁹	+0 11.8 ¹³⁷	54	2 48	45	27	17	11	26	75
4	238	37.0		49.6	27	11.1 ¹⁵⁹	25.6 ¹³⁸	52	3 03	3 55	34	18	13	25	73
5	253	37.1	+15	48.9	41	46.0 ¹⁵⁹	+0 39.3 ¹³⁷	50	3 16	4 04	4 41	20 20	15	8 25	70
6	268	37.2	+15	48.1	56	20.8 ¹⁵⁸	+0 53.0 ¹³⁷	45	3 41	4 22	4 55	20 23	20	8 24	66
7	283	37.3		47.4	70	55.7 ¹⁵⁹	+1 06.7 ¹³⁷	40	4 00	36	5 06	25	24	23	62
8	298	37.4		46.7	85	30.5 ¹⁵⁸	20.5 ¹³⁸	35	15	48	15	28	27	22	59
9	313	37.5		46.0	100	05.3 ¹⁵⁸	34.2 ¹³⁷	30	28	4 58	24	30	29	21	56
10	328	37.6		45.3	114	40.1 ¹⁵⁸	+1 48.0 ¹³⁸	20	4 48	5 15	38	33	35	20	51
11	343	37.7	+15	44.5	129	14.8 ¹⁵⁷	+2 01.7 ¹³⁷	10 N	5 03	5 29	5 51	20 37	39	8 19	46
12	358	37.8	+15	43.8	143	49.5 ¹⁵⁷	+2 15.4 ¹³⁷	0	5 16	5 41	6 02	20 40	43	8 18	42
13	13	37.9		43.1	158	24.2 ¹⁵⁷	29.2 ¹³⁸	10 S	26	5 52	13	43	47	17	38
14	28	37.9		42.4	172	58.9 ¹⁵⁷	42.9 ¹³⁷	20	36	6 03	25	46	52	16	34
15	43	38.0		41.6	187	33.6 ¹⁵⁷	+2 56.7 ¹³⁸	30	46	14	39	50	57	15	28
16	58	38.1		40.9	202	08.2 ¹⁵⁶	+3 10.4 ¹³⁷	35	50	21	47	52	60	14	26
17	73	38.2	+15	40.2	216	42.8 ¹⁵⁶	+3 24.1 ¹³⁷	40	5 55	6 27	6 56	20 55	63	8 13	23
18	88	38.3	+15	39.4	231	17.3 ¹⁵⁵	+3 37.9 ¹³⁸	45	6 00	6 35	7 06	20 58	67	8 12	19
19	103	38.4		38.7	245	51.8 ¹⁵⁵	+3 51.6 ¹³⁷	50	06	44	19	21 01	72	11	15
20	118	38.5		38.0	260	26.3 ¹⁵⁵	+4 05.3 ¹³⁷	52	08	48	24	03	74	11	12
21	133	38.6		37.3	275	00.8 ¹⁵⁵	19.0 ¹³⁷	54	11	53	31	05	76	10	10
22	148	38.7		36.5	289	35.2 ¹⁵⁴	32.7 ¹³⁷	56	13	6 58	38	07	79	09	8
23	163	38.8		35.8	304	09.6 ¹⁵⁴	+4 46.4 ¹³⁷	58	16	7 03	46	09	82	09	5
24	178	38.9	+15	35.1	318	43.9 ¹⁵³	+5 00.1 ¹³⁷	60 S	6 19	7 09	7 55	21 11	86	8 08	2

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 2 ^h 49 ^m 0		Mag: -4.0 PMG: 9 ^h 30 ^m			Mag: +1.1 PMG: 8 ^h 02 ^m			Mag: -2.9 PMG: 0 ^h 32 ^m			Mag: +1.1 PMG: 14 ^h 15 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	317	37.4	217	43.0	+21 54.5	239	27.2	+22 49.1	352	05.9	-14 55.2	145	49.8	+5 41.7
1	332	39.8	232	42.3	54.4	254	27.9	49.3	7	08.7	55.3	160	52.1	41.6
2	347	42.3	247	41.6	54.4	269	28.6	49.4	22	11.4	55.4	175	54.3	41.4
3	2	44.8	262	40.9	54.3	284	29.2	49.6	37	14.2	55.5	190	56.5	41.3
4	17	47.2	277	40.3	54.2	299	29.9	49.8	52	17.0	55.6	205	58.7	41.2
5	32	49.7	292	39.6	+21 54.2	314	30.6	+22 50.0	67	19.8	-14 55.7	221	00.9	+5 41.1
6	47	52.2	307	38.9	+21 54.1	329	31.2	+22 50.1	82	22.5	-14 55.8	236	03.1	+5 41.0
7	62	54.6	322	38.2	54.0	344	31.9	50.3	97	25.3	55.9	251	05.3	40.9
8	77	57.1	337	37.6	53.9	359	32.6	50.5	112	28.1	56.1	266	07.5	40.8
9	92	59.5	352	36.9	53.9	14	33.2	50.6	127	30.9	56.2	281	09.7	40.7
10	108	02.0	7	36.2	53.8	29	33.9	50.8	142	33.7	56.3	296	11.9	40.6
11	123	04.5	22	35.5	+21 53.7	44	34.6	+22 51.0	157	36.4	-14 56.4	311	14.1	+5 40.4
12	138	06.9	37	34.9	+21 53.6	59	35.3	+22 51.1	172	39.2	-14 56.5	326	16.4	+5 40.3
13	153	09.4	52	34.2	53.6	74	35.9	51.3	187	42.0	56.6	341	18.6	40.2
14	168	11.9	67	33.5	53.5	89	36.6	51.5	202	44.8	56.7	356	20.8	40.1
15	183	14.3	82	32.8	53.4	104	37.3	51.6	217	47.6	56.8	11	23.0	40.0
16	198	16.8	97	32.2	53.3	119	37.9	51.8	232	50.3	57.0	26	25.2	39.9
17	213	19.3	112	31.5	+21 53.2	134	38.6	+22 52.0	247	53.1	-14 57.1	41	27.4	+5 39.8
18	228	21.7	127	30.8	+21 53.2	149	39.3	+22 52.1	262	55.9	-14 57.2	56	29.6	+5 39.7
19	243	24.2	142	30.1	53.1	164	39.9	52.3	277	58.7	57.3	71	31.8	39.5
20	258	26.7	157	29.5	53.0	179	40.6	52.5	293	01.4	57.4	86	34.0	39.4
21	273	29.1	172	28.8	52.9	194	41.3	52.6	308	04.2	57.5	101	36.2	39.3
22	288	31.6	187	28.1	52.8	209	42.0	52.8	323	07.0	57.6	116	38.4	39.2
23	303	34.0	202	27.4	52.7	224	42.6	53.0	338	09.8	57.7	131	40.6	39.1
24	318	36.5	217	26.8	+21 52.6	239	43.3	+22 53.1	353	12.6	-14 57.8	146	42.9	+5 39.0
Dif	—		-7		-1	+7		+2	+28		-1	+22		-1

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 15 ^h 8 PMG: 12 ^h 05 ^m 3			Edad: 18 ^d 9 PHE { 4 ^h : 55 ^m 6 12 ^h : 55 ^m 8 20 ^h : 56 ^m 0 SD: 15 ^h 1 PMG: 2 ^h 50 ^m R°: 43 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m		h m m				
0	178	38.9	+15	35.1	318	43.9	+5	00.1	60 N	20 07	21 00	22 25	20 13 5	9 52 87				
1	193	39.0		34.3	333	18.2 ¹⁵³		13.8 ¹³⁷	58	19 57	20 45	21 56	19 7	48 84				
2	208	39.1		33.6	347	52.5 ¹⁵³		27.4 ¹³⁶	56	48	33	35	23 11	44 81				
3	223	39.2		32.9	2	26.7 ¹⁵²		41.1 ¹³⁷	54	40	22	18	28 13	41 78				
4	238	39.3		32.2	17	00.9 ¹⁵²		+5 54.7 ¹³⁶	52	34	13	21 03	31 16	38 75				
5	253	39.3	+15	31.4	31	35.1 ¹⁵²		+6 08.3 ¹³⁶	50	19 27	20 04	20 51	20 35 18	9 35 73				
6	268	39.4	+15	30.7	46	09.2 ¹⁵¹		+6 21.9 ¹³⁶	45	19 14	19 47	20 27	20 43 22	9 30 68				
7	283	39.5		30.0	60	43.2 ¹⁵⁰		35.5 ¹³⁶	40	19 03	33	20 08	49 26	25 64				
8	298	39.6		29.2	75	17.2 ¹⁵⁰		+6 49.1 ¹³⁶	35	18 54	21	19 54	55 29	21 60				
9	313	39.7		28.5	89	51.2 ¹⁵⁰		+7 02.6 ¹³⁵	30	46	19 11	41	20 59 33	17 58				
10	328	39.8		27.8	104	25.1 ¹⁴⁹		16.2 ¹³⁶	20	32	18 55	22	21 08 37	11 52				
11	343	39.9	+15	27.0	118	59.0 ¹⁴⁹		+7 29.7 ¹³⁵	10 N	18 20	18 42	19 07	21 16 41	9 05 49				
12	358	40.0	+15	26.3	133	32.8 ¹⁴⁸		+7 43.2 ¹³⁵	0	18 09	18 30	18 55	21 23 45	9 00 44				
13	13	40.1		25.6	148	06.6 ¹⁴⁸		+7 56.6 ¹³⁴	10 S	17 58	19	45	30 50	8 55 40				
14	28	40.2		24.8	162	40.3 ¹⁴⁷		+8 10.1 ¹³⁵	20	46	18 09	35	38 54	50 35				
15	43	40.3		24.1	177	13.9 ¹⁴⁶		23.5 ¹³⁴	30	33	17 58	26	47 59	43 31				
16	58	40.4		23.3	191	47.5 ¹⁴⁶		36.9 ¹³⁴	35	25	52	22	52 62	40 28				
17	73	40.5	+15	22.6	206	21.1 ¹⁴⁶		+8 50.2 ¹³³	40	17 17	17 45	18 17	21 58 65	8 36 24				
18	88	40.6	+15	21.9	220	54.6 ¹⁴⁵		+9 03.6 ¹³⁴	45	17 07	17 37	18 12	22 05 69	8 31 21				
19	103	40.7		21.1	235	28.0 ¹⁴⁴		16.9 ¹³³	50	16 54	29	07	13 75	26 16				
20	118	40.8		20.4	250	01.4 ¹⁴⁴		30.2 ¹³³	52	49	25	05	17 77	23 14				
21	133	40.9		19.7	264	34.7 ¹⁴³		43.4 ¹³²	54	43	21	03	21 80	20 12				
22	148	41.0		18.9	279	07.9 ¹⁴²		+9 56.7 ¹³³	56	36	16	18 00	26 83	17 10				
23	163	41.1		18.2	293	41.1 ¹⁴²		+10 09.9 ¹³²	58	28	11	17 58	31 86	14 6				
24	178	41.2	+15	17.4	308	14.2 ¹⁴¹		+10 23.0 ¹³¹	60 S	16 19	17 05	17 55	22 37 90	8 10 3				
UT	ARIES		VENUS			MARTE			JÚPITER				SATURNO					
	PMG: 2 ^h 45 ^m 1		Mag: -4.0 PMG: 9 ^h 31 ^m			Mag: +1.1 PMG: 8 ^h 01 ^m			Mag: -2.9 PMG: 0 ^h 27 ^m				Mag: +1.1 PMG: 14 ^h 11 ^m					
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	318	36.5	217	26.8	+21	52.6	239	43.3	+22	53.1	353	12.6	-14	57.8	146	42.9	+5	39.0
1	333	39.0	232	26.1		52.6	254	44.0		53.3	8	15.3		58.0	161	45.1		38.9
2	348	41.4	247	25.4		52.5	269	44.6		53.5	23	18.1		58.1	176	47.3		38.8
3	3	43.9	262	24.7		52.4	284	45.3		53.6	38	20.9		58.2	191	49.5		38.7
4	18	46.4	277	24.0		52.3	299	46.0		53.8	53	23.7		58.3	206	51.7		38.5
5	33	48.8	292	23.4	+21	52.2	314	46.7	+22	54.0	68	26.5	-14	58.4	221	53.9	+5	38.4
6	48	51.3	307	22.7	+21	52.1	329	47.3	+22	54.1	83	29.2	-14	58.5	236	56.1	+5	38.3
7	63	53.8	322	22.0		52.0	344	48.0		54.3	98	32.0		58.6	251	58.3		38.2
8	78	56.2	337	21.3		51.9	359	48.7		54.4	113	34.8		58.7	267	00.5		38.1
9	93	58.7	352	20.7		51.8	14	49.4		54.6	128	37.6		58.8	282	02.7		38.0
10	109	01.1	7	20.0		51.7	29	50.0		54.8	143	40.4		59.0	297	04.9		37.9
11	124	03.6	22	19.3	+21	51.6	44	50.7	+22	54.9	158	43.1	-14	59.1	312	07.1	+5	37.8
12	139	06.1	37	18.6	+21	51.5	59	51.4	+22	55.1	173	45.9	-14	59.2	327	09.3	+5	37.6
13	154	08.5	52	17.9		51.4	74	52.0		55.2	188	48.7		59.3	342	11.6		37.5
14	169	11.0	67	17.3		51.3	89	52.7		55.4	203	51.5		59.4	357	13.8		37.4
15	184	13.5	82	16.6		51.2	104	53.4		55.6	218	54.3		59.5	12	16.0		37.3
16	199	15.9	97	15.9		51.1	119	54.1		55.7	233	57.0		59.6	27	18.2		37.2
17	214	18.4	112	15.2	+21	51.0	134	54.7	+22	55.9	248	59.8	-14	59.7	42	20.4	+5	37.1
18	229	20.9	127	14.5	+21	50.9	149	55.4	+22	56.0	264	02.6	-14	59.8	57	22.6	+5	37.0
19	244	23.3	142	13.9		50.8	164	56.1		56.2	279	05.4	-15	00.0	72	24.8		36.9
20	259	25.8	157	13.2		50.7	179	56.8		56.4	294	08.2	-15	00.1	87	27.0		36.7
21	274	28.3	172	12.5		50.5	194	57.4		56.5	309	10.9		00.2	102	29.2		36.6
22	289	30.7	187	11.8		50.4	209	58.1		56.7	324	13.7		00.3	117	31.4		36.5
23	304	33.2	202	11.1		50.3	224	58.8		56.8	339	16.5		00.4	132	33.6		36.4
24	319	35.6	217	10.5	+21	50.2	239	59.5	+22	57.0	354	19.3	-15	00.5	147	35.8	+5	36.3
Dif	—		-7		-1		+7		+2		+28		-1		+22		-1	

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15/8 PMG: 12 ^h 05 ^m 2				Edad: 19 ^d 9 PHE { 4 ^h : 56/2 12 ^h : 56/4 20 ^h : 56/6 SD: 15/3 PMG: 3 ^h 33 ^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
0	178	41.2	+15	17.4	308	14.2	+10	23.0	60 N	1 47	3 11	4 05	20 18	6	11 19	93		
1	193	41.3		16.7	322	47.3 ¹⁴¹		36.2 ¹³²	58	2 15	26	15	26	11	12	87		
2	208	41.4		16.0	337	20.3 ¹⁴⁰	+10	49.2 ¹³⁰	56	37	38	23	34	14	11 05	84		
3	223	41.5		15.2	351	53.2 ¹³⁹	+11	02.3 ¹³¹	54	2 54	49	31	41	17	10 59	81		
4	238	41.6		14.5	6	26.1 ¹³⁹		15.3 ¹³⁰	52	3 08	3 59	38	47	20	53	78		
5	253	41.7	+15	13.7	20	58.9 ¹³⁸	+11	28.3 ¹³⁰	50	3 20	4 07	4 44	20 53	22	10 48	76		
6	268	41.8	+15	13.0	35	31.6 ¹³⁷	+11	41.2 ¹²⁹	45	3 44	4 24	4 57	21 05	27	10 38	70		
7	283	41.9		12.2	50	04.2 ¹³⁶	+11	54.1 ¹²⁹	40	4 03	38	5 08	15	31	29	66		
8	298	42.0		11.5	64	36.8 ¹³⁶	+12	07.0 ¹²⁹	35	17	4 50	17	24	34	21	64		
9	313	42.1		10.8	79	09.3 ¹³⁵		19.8 ¹²⁸	30	29	5 00	25	32	37	15	60		
10	328	42.2		10.0	93	41.7 ¹³⁴		32.6 ¹²⁸	20	4 49	16	39	45	42	10 03	56		
11	343	42.3	+15	09.3	108	14.1 ¹³⁴	+12	45.3 ¹²⁷	10 N	5 03	5 29	5 51	21 57	46	9 54	51		
12	358	42.4	+15	08.5	122	46.4 ¹³³	+12	58.0 ¹²⁷	0	5 15	5 40	6 02	22 08	50	9 44	48		
13	13	42.5		07.8	137	18.6 ¹³²	+13	10.6 ¹²⁶	10 S	26	5 51	13	20	53	35	43		
14	28	42.6		07.0	151	50.7 ¹³¹		23.2 ¹²⁶	20	35	6 01	24	32	57	25	39		
15	43	42.7		06.3	166	22.7 ¹³⁰		35.7 ¹²⁵	30	44	13	37	46	62	14	34		
16	58	42.8		05.5	180	54.7 ¹³⁰	+13	48.2 ¹²⁵	35	49	19	45	22 54	65	08	31		
17	73	42.9	+15	04.8	195	26.6 ¹²⁹	+14	00.6 ¹²⁴	40	5 53	6 25	6 53	23 03	68	9 00	29		
18	88	43.0	+15	04.0	209	58.4 ¹²⁸	+14	13.0 ¹²⁴	45	5 58	6 32	7 03	23 14	72	8 52	24		
19	103	43.1		03.3	224	30.1 ¹²⁷		25.3 ¹²³	50	6 03	41	15	28	77	42	20		
20	118	43.2		02.5	239	01.7 ¹²⁶		37.6 ¹²³	52	05	45	21	34	80	37	18		
21	133	43.3		01.8	253	33.3 ¹²⁶	+14	49.8 ¹²²	54	07	49	27	41	82	32	15		
22	148	43.4		01.0	268	04.7 ¹²⁴	+15	02.0 ¹²²	56	09	54	33	49	86	27	12		
23	163	43.5	+15	00.3	282	36.1 ¹²⁴		14.1 ¹²¹	58	12	6 59	41	23 57	90	20	9		
24	178	43.6	+14	59.5	297	07.4 ¹²³	+15	26.1 ¹²⁰	60 S	6 14	7 04	7 50	** ** *	**	8 13	5		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 2 ^h 41 ^m 2		Mag: -4.0 PMG: 9 ^h 32 ^m				Mag: +1.0 PMG: 8 ^h 00 ^m				Mag: -2.9 PMG: 0 ^h 23 ^m				Mag: +1.1 PMG: 14 ^h 08 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	319	35.6	217	10.5	+21	50.2	239	59.5	+22	57.0	354	19.3	-15	00.5	147	35.8	+5	36.3
1	334	38.1	232	09.8		50.1	255	00.1		57.1	9	22.1		00.6	162	38.0		36.2
2	349	40.6	247	09.1		50.0	270	00.8		57.3	24	24.8		00.7	177	40.2		36.1
3	4	43.0	262	08.4		49.9	285	01.5		57.5	39	27.6		00.9	192	42.4		36.0
4	19	45.5	277	07.7		49.7	300	02.2		57.6	54	30.4		01.0	207	44.6		35.8
5	34	48.0	292	07.1	+21	49.6	315	02.8	+22	57.8	69	33.2	-15	01.1	222	46.9	+5	35.7
6	49	50.4	307	06.4	+21	49.5	330	03.5	+22	57.9	84	36.0	-15	01.2	237	49.1	+5	35.6
7	64	52.9	322	05.7		49.4	345	04.2		58.1	99	38.8		01.3	252	51.3		35.5
8	79	55.4	337	05.0		49.3	0	04.9		58.2	114	41.5		01.4	267	53.5		35.4
9	94	57.8	352	04.3		49.1	15	05.5		58.4	129	44.3		01.5	282	55.7		35.3
10	110	00.3	7	03.7		49.0	30	06.2		58.5	144	47.1		01.6	297	57.9		35.2
11	125	02.7	22	03.0	+21	48.9	45	06.9	+22	58.7	159	49.9	-15	01.7	313	00.1	+5	35.1
12	140	05.2	37	02.3	+21	48.8	60	07.6	+22	58.8	174	52.7	-15	01.9	328	02.3	+5	34.9
13	155	07.7	52	01.6		48.6	75	08.2		59.0	189	55.4		02.0	343	04.5		34.8
14	170	10.1	67	00.9		48.5	90	08.9		59.1	204	58.2		02.1	358	06.7		34.7
15	185	12.6	82	00.3		48.4	105	09.6		59.3	220	01.0		02.2	13	08.9		34.6
16	200	15.1	96	59.6		48.3	120	10.3		59.4	235	03.8		02.3	28	11.1		34.5
17	215	17.5	111	58.9	+21	48.1	135	10.9	+22	59.6	250	06.6	-15	02.4	43	13.3	+5	34.4
18	230	20.0	126	58.2	+21	48.0	150	11.6	+22	59.7	265	09.3	-15	02.5	58	15.5	+5	34.3
19	245	22.5	141	57.5		47.9	165	12.3	+22	59.9	280	12.1		02.6	73	17.7		34.1
20	260	24.9	156	56.8		47.7	180	13.0	+23	00.0	295	14.9		02.7	88	19.9		34.0
21	275	27.4	171	56.2		47.6	195	13.6	+23	00.2	310	17.7		02.9	103	22.1		33.9
22	290	29.9	186	55.5		47.5	210	14.3		00.3	325	20.5		03.0	118	24.3		33.8
23	305	32.3	201	54.8		47.3	225	15.0		00.5	340	23.3		03.1	133	26.6		33.7
24	320	34.8	216	54.1	+21	47.2	240	15.7	+23	00.6	355	26.0	-15	03.2	148	28.8	+5	33.6
Dif	—		-7		-1		+7		+2		+28		-1		+22		-	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 20 ^d 9 PHE	SD: 15 ^h 4				Final del crepúsculo	Salida de Luna		Puesta de Luna		
	PMG: 12 ^h 05 ^m 0				PMG: 4 ^h 20 ^m					R°: 50 ^m				
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	178	43.6	+14 59.5	297	07.4	+15 26.1		60 N	20 01	20 54	22 14	20 24 12	12 52 96	
1	193	43.8	58.8	311	38.6 ¹²²	38.1 ¹²⁰		58	19 52	40	21 48	37 17	39 91	
2	208	43.9	58.0	326	09.7 ¹²¹	+15 50.0 ¹¹⁹		56	44	28	28	48 22	29 87	
3	223	44.0	57.3	340	40.7 ¹²⁰	+16 01.8 ¹¹⁸		54	36	17	21 12	20 58 25	20 83	
4	238	44.1	56.5	355	11.6 ¹¹⁹	13.6 ¹¹⁸		52	30	08	20 58	21 07 27	11 81	
5	253	44.2	+14 55.8	9	42.4 ¹¹⁸	+16 25.3 ¹¹⁷		50	19 24	20 00	20 46	21 15 30	12 04 78	
6	268	44.3	+14 55.0	24	13.2 ¹¹⁸	+16 37.0 ¹¹⁷		45	19 11	19 43	20 23	21 32 34	11 48 73	
7	283	44.4	54.3	38	43.8 ¹¹⁶	+16 48.5 ¹¹⁵		40	19 01	30	20 05	46 38	35 69	
8	298	44.5	53.5	53	14.4 ¹¹⁶	+17 00.0 ¹¹⁵		35	18 52	19	19 51	21 58 41	25 65	
9	313	44.6	52.8	67	44.8 ¹¹⁴	+17 11.5 ¹¹⁵		30	44	19 09	39	22 09 43	11 15 63	
10	328	44.7	52.0	82	15.2 ¹¹⁴	22.8 ¹¹³		20	31	18 54	21	27 47	10 59 59	
11	343	44.8	+14 51.3	96	45.4 ¹¹²	+17 34.1 ¹¹³		10 N	18 19	18 41	19 06	22 43 50	10 45 55	
12	358	44.9	+14 50.5	111	15.6 ¹¹²	+17 45.3 ¹¹²		0	18 08	18 30	18 55	22 58 54	10 32 51	
13	13	45.0	49.8	125	45.6 ¹¹⁰	+17 56.5 ¹¹²		10 S	17 58	19	45	23 13 57	18 48	
14	28	45.1	49.0	140	15.6 ¹¹⁰	+18 07.5 ¹¹⁰		20	47	18 09	36	29 60	10 04 44	
15	43	45.3	48.2	154	45.5 ¹⁰⁹	18.5 ¹¹⁰		30	34	17 59	27	48 64	9 48 40	
16	58	45.4	47.5	169	15.2 ¹⁰⁷	29.4 ¹⁰⁹		35	27	53	23	23 59 67	39 37	
17	73	45.5	+14 46.7	183	44.9 ¹⁰⁷	+18 40.2 ¹⁰⁸		40	17 18	17 47	18 19	** ** *	9 29 34	
18	88	45.6	+14 46.0	198	14.4 ¹⁰⁵	+18 50.9 ¹⁰⁷		45	17 09	17 40	18 14	** ** *	9 16 31	
19	103	45.7	45.2	212	43.9 ¹⁰⁵	+19 01.5 ¹⁰⁶		50	16 57	31	10	** ** *	9 02 25	
20	118	45.8	44.4	227	13.2 ¹⁰³	12.1 ¹⁰⁶		52	52	28	08	** ** *	8 55 23	
21	133	45.9	43.7	241	42.4 ¹⁰²	22.5 ¹⁰⁴		54	46	24	06	** ** *	47 20	
22	148	46.0	42.9	256	11.6 ¹⁰²	32.9 ¹⁰⁴		56	40	19	04	** ** *	39 16	
23	163	46.1	42.2	270	40.6 ¹⁰⁰	43.2 ¹⁰³		58	32	15	18 01	** ** *	29 13	
24	178	46.2	+14 41.4	285	09.5 ⁹⁹	+19 53.4 ¹⁰²		60 S	16 24	17 09	17 59	0 07 95	8 18 8	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO										
	PMG: 2 ^h 37 ^m 3		Mag: -4.0 PMG: 9 ^h 33 ^m		Mag: +1.0 PMG: 7 ^h 59 ^m		Mag: -2.9 PMG: 0 ^h 18 ^m		Mag: +1.1 PMG: 14 ^h 04 ^m										
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec									
h	°	'	°	'	°	'	°	'	°	'									
0	320	34.8	216	54.1	+21	47.2	240	15.7	+23	00.6	355	26.0	-15	03.2	148	28.8	+5	03.6	
1	335	37.2	231	53.4		47.0	255	16.3		00.8	10	28.8		03.3	163	31.0		33.5	
2	350	39.7	246	52.8		46.9	270	17.0		00.9	25	31.6		03.4	178	33.2		33.4	
3	5	42.2	261	52.1		46.8	285	17.7		01.1	40	34.4		03.5	193	35.4		33.2	
4	20	44.6	276	51.4		46.6	300	18.4		01.2	55	37.2		03.6	208	37.6		33.1	
5	35	47.1	291	50.7	+21	46.5	315	19.0	+23	01.4	70	39.9	-15	03.8	223	39.8	+5	33.0	
6	50	49.6	306	50.0	+21	46.3	330	19.7	+23	01.5	85	42.7	-15	03.9	238	42.0	+5	32.9	
7	65	52.0	321	49.3		46.2	345	20.4		01.7	100	45.5		04.0	253	44.2		32.8	
8	80	54.5	336	48.7		46.0	0	21.1		01.8	115	48.3		04.1	268	46.4		32.7	
9	95	57.0	351	48.0		45.9	15	21.8		02.0	130	51.1		04.2	283	48.6		32.6	
10	110	59.4	6	47.3		45.7	30	22.4		02.1	145	53.8		04.3	298	50.8		32.4	
11	126	01.9	21	46.6	+21	45.6	45	23.1	+23	02.2	160	56.6	-15	04.4	313	53.0	+5	32.3	
12	141	04.4	36	45.9	+21	45.4	60	23.8	+23	02.4	175	59.4	-15	04.5	328	55.2	+5	32.2	
13	156	06.8	51	45.2		45.3	75	24.5		02.5	191	02.2		04.6	343	57.4		32.1	
14	171	09.3	66	44.6		45.1	90	25.1		02.7	206	05.0		04.8	358	59.6		32.0	
15	186	11.7	81	43.9		45.0	105	25.8		02.8	221	07.8		04.9	14	01.8		31.9	
16	201	14.2	96	43.2		44.8	120	26.5		03.0	236	10.5		05.0	29	04.0		31.8	
17	216	16.7	111	42.5	+21	44.7	135	27.2	+23	03.1	251	13.3	-15	05.1	44	06.2	+5	31.7	
18	231	19.1	126	41.8	+21	44.5	150	27.9	+23	03.2	266	16.1	-15	05.2	59	08.4	+5	31.5	
19	246	21.6	141	41.1		44.4	165	28.5		03.4	281	18.9		05.3	74	10.6		31.4	
20	261	24.1	156	40.5		44.2	180	29.2		03.5	296	21.7		05.4	89	12.8		31.3	
21	276	26.5	171	39.8		44.0	195	29.9		03.7	311	24.5		05.5	104	15.0		31.2	
22	291	29.0	186	39.1		43.9	210	30.6		03.8	326	27.2		05.6	119	17.2		31.1	
23	306	31.5	201	38.4		43.7	225	31.3		04.0	341	30.0		05.8	134	19.4		31.0	
24	321	33.9	216	37.7	+21	43.5	240	31.9	+23	04.1	356	32.8	-15	05.9	149	21.7	+5	30.9	
Dif	—		-7		-2		+7		+1		+28		-1		+22			-1	

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8 PMG: 12 ^h 04 ^m 8				Edad: 21 ^d 9 PHE { 4 ^h : 57 ^m 5 12 ^h : 57 ^m 8 20 ^h : 58 ^m 0 PMG: 5 ^h 10 ^m R°: 55 ^m												
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	46.2	+14	41.4	285	09.5	+19	53.4	60 N	1 57	3 17	4 10	20 36	23	14 28	95	
1	193	46.4		40.7	299	38.3	+20	03.5	58	2 23	31	19	20 54	29	14 10	90	
2	208	46.5		39.9	314	07.0		13.5	56	43	43	27	21 10	33	13 56	85	
3	223	46.6		39.1	328	35.6		23.4	54	2 59	3 53	34	23 36		43 82		
4	238	46.7		38.4	343	04.1		33.2	52	3 12	4 02	41	34 39		32 79		
5	253	46.8	+14	37.6	357	32.5	+20	42.9	50	3 24	4 10	4 47	21 45	40	13 22	77	
6	268	46.9	+14	36.8	12	00.8	+20	52.5	45	3 47	4 27	4 59	22 06	45	13 01	73	
7	283	47.0		36.1	26	29.0	+21	02.0	40	4 05	40	5 10	24 47		12 44	70	
8	298	47.1		35.3	40	57.0		11.3	35	19	4 52	18	39 49		30 68		
9	313	47.2		34.6	55	25.0		20.6	30	31	5 01	26	22 52	51	12 18	65	
10	328	47.4		33.8	69	52.8		29.8	20	4 49	16	39	23 14	54	11 58	61	
11	343	47.5	+14	33.0	84	20.5	+21	38.9	10 N	5 04	5 29	5 51	23 33	57	11 40	58	
12	358	47.6	+14	32.3	98	48.1	+21	47.8	0	5 15	5 40	6 01	23 52	58	11 23	56	
13	13	47.7		31.5	113	15.7	+21	56.7	10 S	25	5 50	12	** ** *	**	11 06	53	
14	28	47.8		30.7	127	43.1	+22	05.4	20	34	6 00	23	** ** *	**	10 48	51	
15	43	47.9		30.0	142	10.3		14.0	30	42	11	35	** ** *	**	28 47		
16	58	48.0		29.2	156	37.5		22.5	35	47	16	43	** ** *	**	16 45		
17	73	48.2	+14	28.4	171	04.6	+22	30.9	40	5 51	6 23	6 51	0 11	70	10 03	41	
18	88	48.3	+14	27.7	185	31.5	+22	39.1	45	5 55	6 30	7 00	0 26	74	9 47	38	
19	103	48.4		26.9	199	58.4		47.3	50	5 59	38	12	45 78		27 34		
20	118	48.5		26.1	214	25.1	+22	55.3	52	6 01	41	17	0 54	80	18 31		
21	133	48.6		25.4	228	51.7	+23	03.2	54	03	45	23	1 03	84	9 07	29	
22	148	48.7		24.6	243	18.3		10.9	56	05	49	29	15 87		8 55	26	
23	163	48.8		23.8	257	44.7		18.5	58	08	54	36	27 92		42 21		
24	178	49.0	+14	23.0	272	11.0	+23	26.0	60 S	6 10	6 59	7 44	1 42	98	8 26	16	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 2 ^h 33 ^m 3		Mag: -4.0 PMG: 9 ^h 34 ^m		Mag: +1.0 PMG: 7 ^h 58 ^m		Mag: -2.9 PMG: 0 ^h 14 ^m		Mag: +1.1 PMG: 14 ^h 00 ^m									
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄									
h	°	'	°	'	°	'	°	'	°	'								
0	321	33.9	216	37.7	+21	43.5	240	31.9	+23	04.1	356	32.8	-15	05.9	149	21.7	+5	30.9
1	336	36.4	231	37.0		43.4	255	32.6		04.2	11	35.6		06.0	164	23.9		30.7
2	351	38.8	246	36.4		43.2	270	33.3		04.4	26	38.4		06.1	179	26.1		30.6
3	6	41.3	261	35.7		43.1	285	34.0		04.5	41	41.1		06.2	194	28.3		30.5
4	21	43.8	276	35.0		42.9	300	34.7		04.7	56	43.9		06.3	209	30.5		30.4
5	36	46.2	291	34.3	+21	42.7	315	35.3	+23	04.8	71	46.7	-15	06.4	224	32.7	+5	30.3
6	51	48.7	306	33.6	+21	42.5	330	36.0	+23	04.9	86	49.5	-15	06.5	239	34.9	+5	30.2
7	66	51.2	321	32.9		42.4	345	36.7		05.1	101	52.3		06.6	254	37.1		30.1
8	81	53.6	336	32.2		42.2	0	37.4		05.2	116	55.1		06.8	269	39.3		29.9
9	96	56.1	351	31.6		42.0	15	38.1		05.3	131	57.8		06.9	284	41.5		29.8
10	111	58.6	6	30.9		41.9	30	38.7		05.5	147	00.6		07.0	299	43.7		29.7
11	127	01.0	21	30.2	+21	41.7	45	39.4	+23	05.6	162	03.4	-15	07.1	314	45.9	+5	29.6
12	142	03.5	36	29.5	+21	41.5	60	40.1	+23	05.7	177	06.2	-15	07.2	329	48.1	+5	29.5
13	157	06.0	51	28.8		41.3	75	40.8		05.9	192	09.0		07.3	344	50.3		29.4
14	172	08.4	66	28.1		41.2	90	41.5		06.0	207	11.8		07.4	359	52.5		29.3
15	187	10.9	81	27.5		41.0	105	42.1		06.2	222	14.5		07.5	14	54.7		29.1
16	202	13.3	96	26.8		40.8	120	42.8		06.3	237	17.3		07.6	29	56.9		29.0
17	217	15.8	111	26.1	+21	40.6	135	43.5	+23	06.4	252	20.1	-15	07.8	44	59.1	+5	28.9
18	232	18.3	126	25.4	+21	40.4	150	44.2	+23	06.6	267	22.9	-15	07.9	60	01.3	+5	28.8
19	247	20.7	141	24.7		40.3	165	44.9		06.7	282	25.7		08.0	75	03.5		28.7
20	262	23.2	156	24.0		40.1	180	45.6		06.8	297	28.5		08.1	90	05.7		28.6
21	277	25.7	171	23.3		39.9	195	46.2		07.0	312	31.2		08.2	105	07.9		28.5
22	292	28.1	186	22.7		39.7	210	46.9		07.1	327	34.0		08.3	120	10.1		28.3
23	307	30.6	201	22.0		39.5	225	47.6		07.2	342	36.8		08.4	135	12.3		28.2
24	322	33.1	216	21.3	+21	39.3	240	48.3	+23	07.4	357	39.6	-15	08.5	150	14.5	+5	28.1
Dif	—		-7		-2		+7		+1		+28		-1		+22		-	

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15'8 PMG: 12 ^h 04 ^m 6			Edad: 22 ^d 9 PHE { 4 ^h : 58'3 12 ^h : 58'6 20 ^h : 58'8 Rº: 59 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	Rº	Hora	Rº
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m	h m m
0	178	49.0	+14	23.0	272	11.0	+23	26.0	60 N	19 56	20 47	22 04	20 59 47	16 03 82	
1	193	49.1		22.3	286	37.2	72	33.4	58	47	34	21 40	21 23 50	15 40 77	
2	208	49.2		21.5	301	03.3	71	40.7	56	39	22	21	43 52	21 75	
3	223	49.3		20.7	315	29.2	69	47.8	54	32	13	21 06	21 59 53	15 05 73	
4	238	49.4		20.0	329	55.1	69	54.7	52	26	20 04	20 53	22 13 55	14 51 72	
5	253	49.5	+14	19.2	344	20.9	68	01.6	50	19 20	19 56	20 42	22 25 56	14 39 71	
6	268	49.7	+14	18.4	358	46.5	66	08.3	45	19 08	19 40	20 19	22 51 57	14 14 69	
7	283	49.8		17.6	13	12.1	66	14.8	40	18 58	27	20 02	23 11 58	13 54 67	
8	298	49.9		16.9	27	37.5	64	21.2	35	49	16	19 48	28 59	38 66	
9	313	50.0		16.1	42	02.9	64	27.5	30	42	19 07	37	23 43 59	13 23 65	
10	328	50.1		15.3	56	28.1	62	33.6	20	29	18 52	19	** ** *	12 59 63	
11	343	50.3	+14	14.5	70	53.2	61	39.6	10 N	18 18	18 40	19 05	** ** *	12 38 62	
12	358	50.4	+14	13.8	85	18.3	61	45.4	0	18 08	18 29	18 54	** ** *	12 19 60	
13	13	50.5		13.0	99	43.2	59	51.1	10 S	17 58	19	45	0 10 60	11 59 59	
14	28	50.6		12.2	114	08.1	59	56.6	20	47	10	36	29 63	39 57	
15	43	50.7		11.4	128	32.8	57	02.0	30	35	18 00	28	0 52 66	15 55	
16	58	50.9		10.7	142	57.4	56	07.2	35	28	17 54	24	1 06 67	11 01 53	
17	73	51.0	+14	09.9	157	22.0	56	12.3	40	17 20	17 48	18 20	1 21 69	10 44 53	
18	88	51.1	+14	09.1	171	46.4	54	17.2	45	17 11	17 42	18 16	1 40 71	10 25 50	
19	103	51.2		08.3	186	10.8	54	22.0	50	17 00	34	12	2 03 75	10 01 47	
20	118	51.3		07.6	200	35.1	53	26.6	52	16 55	31	10	14 77	9 49 46	
21	133	51.5		06.8	214	59.2	51	31.0	54	49	27	09	27 79	36 44	
22	148	51.6		06.0	229	23.3	51	35.3	56	43	23	07	42 82	21 41	
23	163	51.7		05.2	243	47.3	50	39.4	58	36	18	05	2 59 86	9 03 38	
24	178	51.8	+14	04.4	258	11.2	49	43.4	60 S	16 28	17 13	18 03	3 20 92	8 42 31	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 2 ^h 29 ^m 4		Mag: -4.0 PMG: 9 ^h 35 ^m		Mag: +1.0 PMG: 7 ^h 56 ^m		Mag: -2.9 PMG: 0 ^h 09 ^m		Mag: +1.1 PMG: 13 ^h 57 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	322	33.1	216	21.3	240	48.3	357	39.6	150	14.5
1	337	35.5	231	20.6	255	49.0	12	42.4	165	16.7
2	352	38.0	246	19.9	270	49.6	27	45.2	180	18.9
3	7	40.5	261	19.2	285	50.3	42	47.9	195	21.1
4	22	42.9	276	18.5	300	51.0	57	50.7	210	23.3
5	37	45.4	291	17.9	315	51.7	72	53.5	225	25.5
6	52	47.8	306	17.2	330	52.4	87	56.3	240	27.7
7	67	50.3	321	16.5	345	53.1	102	59.1	255	29.9
8	82	52.8	336	15.8	0	53.7	118	01.8	270	32.1
9	97	55.2	351	15.1	15	54.4	133	04.6	285	34.3
10	112	57.7	6	14.4	30	55.1	148	07.4	300	36.5
11	128	00.2	21	13.8	45	55.8	163	10.2	315	38.7
12	143	02.6	36	13.1	60	56.5	178	13.0	330	40.9
13	158	05.1	51	12.4	75	57.2	193	15.8	345	43.1
14	173	07.6	66	11.7	90	57.8	208	18.5	0	45.3
15	188	10.0	81	11.0	105	58.5	223	21.3	15	47.5
16	203	12.5	96	10.3	120	59.2	238	24.1	30	49.7
17	218	15.0	111	09.6	135	59.9	253	26.9	45	51.9
18	233	17.4	126	09.0	151	00.6	268	29.7	60	54.1
19	248	19.9	141	08.3	166	01.3	283	32.5	75	56.3
20	263	22.3	156	07.6	181	02.0	298	35.2	90	58.5
21	278	24.8	171	06.9	196	02.6	313	38.0	106	00.7
22	293	27.3	186	06.2	211	03.3	328	40.8	121	02.9
23	308	29.7	201	05.5	226	04.0	343	43.6	136	05.1
24	323	32.2	216	04.8	241	04.7	358	46.4	151	07.3
Dif	—		-7	-2	+7	+1	+28	-1	+22	-1

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8 PMG: 12 ^h 04 ^m 4				Edad: 23 ^d 9 PHE { 4 ^h : 59 ^m 1 12 ^h : 59 ^m 3 20 ^h : 59 ^m 6 PMG: 7 ^h 04 ^m R°: 63 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico			Civil		Hora		R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	178	51.8	+14	04.4	258	11.2	+25	43.4	60 N	2 06	3 23	4 14	21 46	79	17 25	52		
1	193	51.9		03.7	272	35.1	49	47.2	58	30	36	23	22 13	77	16 57	55		
2	208	52.1		02.9	286	58.8	47	50.8	56	2 49	47	31	35	74	36	56		
3	223	52.2		02.1	301	22.5	47	54.3	54	3 04	3 57	38	22 52	74	18	58		
4	238	52.3		01.3	315	46.0	45	+25 57.5	52	17	4 06	44	23 08	72	16 03	58		
5	253	52.4	+14	00.5	330	09.5	45	+26 00.7	50	3 28	4 14	4 50	23 21	71	15 50	59		
6	268	52.6	+13	59.8	344	33.0	45	+26 03.6	45	3 50	4 30	5 02	23 48	70	15 23	60		
7	283	52.7		59.0	358	56.3	43	06.4	40	4 07	43	12	** ** *	**	15 01	61		
8	298	52.8		58.2	13	19.6	43	09.0	35	21	4 53	20	** ** *	**	14 44	61		
9	313	52.9		57.4	27	42.8	42	11.4	30	32	5 02	27	** ** *	**	28	62		
10	328	53.0		56.6	42	05.9	41	13.7	20	4 50	17	40	0 08	60	14 02	63		
11	343	53.2	+13	55.8	56	29.0	41	+26 15.7	10 N	5 04	5 29	5 51	0 30	61	13 40	63		
12	358	53.3	+13	55.1	70	52.0	40	+26 17.6	0	5 15	5 40	6 01	0 50	62	13 19	63		
13	13	53.4		54.3	85	14.9	39	19.4	10 S	25	49	11	1 10	63	12 58	63		
14	28	53.5		53.5	99	37.8	39	20.9	20	33	5 59	22	32	63	36	63		
15	43	53.7		52.7	114	00.6	38	22.3	30	41	6 09	34	1 58	64	12 10	63		
16	58	53.8		51.9	128	23.4	38	23.4	35	45	14	40	2 13	64	11 54	64		
17	73	53.9	+13	51.1	142	46.1	37	+26 24.4	40	5 48	6 20	6 48	2 30	65	11 37	63		
18	88	54.0	+13	50.3	157	08.7	36	+26 25.2	45	5 52	6 27	6 57	2 51	65	11 15	64		
19	103	54.2		49.6	171	31.3	36	25.9	50	56	34	7 08	3 18	66	10 48	64		
20	118	54.3		48.8	185	53.9	36	26.3	52	5 58	38	13	31	66	35	64		
21	133	54.4		48.0	200	16.4	35	26.6	54	6 00	41	18	3 46	66	20	63		
22	148	54.6		47.2	214	38.8	34	26.7	56	01	45	25	4 04	66	10 02	63		
23	163	54.7		46.4	229	01.3	35	26.6	58	03	50	31	25	67	9 41	63		
24	178	54.8	+13	45.6	243	23.6	33	+26 26.3	60 S	6 05	6 54	7 39	4 52	69	9 13	63		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 2 ^h 25 ^m 5			Mag: -4.0 PMG: 9 ^h 36 ^m			Mag: +1.0 PMG: 7 ^h 55 ^m			Mag: -2.9 PMG: 0 ^h 05 ^m			Mag: +1.1 PMG: 13 ^h 53 ^m					
	hG ♈			hG ♀			hG ♂			hG ♃			hG ♄					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	323	32.2	216	04.8	+21	34.5	241	04.7	+23	10.4	358	46.4	-15	11.2	151	07.3		
1	338	34.7	231	04.2		34.3	256	05.4		10.6	13	49.2		11.3	166	09.5		
2	353	37.1	246	03.5		34.1	271	06.1		10.7	28	51.9		11.4	181	11.7		
3	8	39.6	261	02.8		33.9	286	06.8		10.8	43	54.7		11.5	196	13.9		
4	23	42.1	276	02.1		33.6	301	07.4		10.9	58	57.5		11.6	211	16.1		
5	38	44.5	291	01.4	+21	33.4	316	08.1	+23	11.0	74	00.3	-15	11.7	226	18.3		
6	53	47.0	306	00.7	+21	33.2	331	08.8	+23	11.2	89	03.1	-15	11.9	241	20.5		
7	68	49.4	321	00.0		33.0	346	09.5		11.3	104	05.9		12.0	256	22.7		
8	83	51.9	335	59.3		32.8	1	10.2		11.4	119	08.6		12.1	271	24.9		
9	98	54.4	350	58.7		32.5	16	10.9		11.5	134	11.4		12.2	286	27.1		
10	113	56.8	5	58.0		32.3	31	11.6		11.7	149	14.2		12.3	301	29.3		
11	128	59.3	20	57.3	+21	32.1	46	12.2	+23	11.8	164	17.0	-15	12.4	316	31.5		
12	144	01.8	35	56.6	+21	31.9	61	12.9	+23	11.9	179	19.8	-15	12.5	331	33.7		
13	159	04.2	50	55.9		31.6	76	13.6		12.0	194	22.6		12.6	346	35.9		
14	174	06.7	65	55.2		31.4	91	14.3		12.1	209	25.3		12.7	1	38.1		
15	189	09.2	80	54.5		31.2	106	15.0		12.3	224	28.1		12.9	16	40.3		
16	204	11.6	95	53.9		31.0	121	15.7		12.4	239	30.9		13.0	31	42.5		
17	219	14.1	110	53.2	+21	30.7	136	16.4	+23	12.5	254	33.7	-15	13.1	46	44.7		
18	234	16.6	125	52.5	+21	30.5	151	17.1	+23	12.6	269	36.5	-15	13.2	61	46.9		
19	249	19.0	140	51.8		30.3	166	17.7		12.7	284	39.3		13.3	76	49.1		
20	264	21.5	155	51.1		30.0	181	18.4		12.8	299	42.0		13.4	91	51.3		
21	279	23.9	170	50.4		29.8	196	19.1		13.0	314	44.8		13.5	106	53.5		
22	294	26.4	185	49.7		29.6	211	19.8		13.1	329	47.6		13.6	121	55.7		
23	309	28.9	200	49.1		29.3	226	20.5		13.2	344	50.4		13.7	136	57.9		
24	324	31.3	215	48.4	+21	29.1	241	21.2	+23	13.3	359	53.2	-15	13.8	152	00.1		
Dif	—			-7			-2			+7			+28			+22		

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15'8 PMG: 12 ^h 04 ^m 2			Edad: 24 ^d 9 PHE { 4 ^h : 59'8 12 ^h : 60'0 20 ^h : 60'2 R°: 63 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	178	54.8	+13 45.6	243	23.6	+26 26.3	5	60 N	19 50	20 40	21 54	23 05 103	18 17 28		
1	193	54.9		257	46.0	25.8	7	58	42	28	32	30 97	17 52 34		
2	208	55.1		272	08.3	25.1	8	56	34	17	14	23 49 93	32 38		
3	223	55.2		286	30.6	24.3	11	54	28	20 08	21 00	** ** *	16 41		
4	238	55.3		300	52.8	23.2	12	52	22	19 59	20 48	** ** *	17 01 44		
5	253	55.4	+13 41.7	315	15.0	+26 22.0	14	50	19 16	19 52	20 37	** ** *	16 49 45		
6	268	55.6	+13 40.9	329	37.2	+26 20.6	16	45	19 05	19 37	20 16	** ** *	16 23 49		
7	283	55.7		343	59.4	19.0	18	40	18 55	24	19 59	0 09 69	16 02 52		
8	298	55.8		358	21.5	17.2	20	35	47	14	46	27 68	15 45 54		
9	313	56.0		12	43.7	15.2	22	30	40	19 05	35	0 42 67	30 56		
10	328	56.1		27	05.8	13.0	24	20	28	18 51	18	1 08 66	15 05 58		
11	343	56.2	+13 36.9	41	27.9	+26 10.6	25	10 N	18 17	18 39	19 04	1 31 64	14 43 60		
12	358	56.3	+13 36.1	55	50.0	+26 08.1	28	0	18 08	18 29	18 54	1 52 63	14 22 63		
13	13	56.5	35.3	70	12.1	05.3	29	10 S	17 58	20	44	2 13 62	14 01 65		
14	28	56.6	34.5	84	34.2	+26 02.4	31	20	48	10	36	2 35 61	13 39 67		
15	43	56.7	33.7	98	56.2	+25 59.3	34	30	36	18 01	29	3 02 58	13 13 70		
16	58	56.9	32.9	113	18.3	55.9	37	35	30	17 56	25	17 58	12 58 71		
17	73	57.0	+13 32.2	127	40.4	+25 52.4	38	40	17 22	17 50	18 22	3 35 56	12 40 73		
18	88	57.1	+13 31.4	142	02.5	+25 48.7	41	45	17 13	17 44	18 18	3 56 55	12 19 75		
19	103	57.3		30.6	156 24.6	44.9	43	50	17 03	37	15	4 24 52	11 52 78		
20	118	57.4		29.8	170 46.7	40.8	44	52	16 58	34	13	37 51	39 80		
21	133	57.5		29.0	185 08.8	36.5	46	54	53	30	12	4 52 49	23 83		
22	148	57.7		28.2	199 30.9	32.1	47	56	47	26	10	5 10 47	11 05 85		
23	163	57.8		27.4	213 53.0	27.4	48	58	40	22	08	5 32 44	10 44 88		
24	178	57.9	+13 26.6	228	15.2	+25 22.6		60 S	16 33	17 18	18 07	6 01 37	10 16 94		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 2 ^h 21 ^m 5		Mag: -4.0 PMG: 9 ^h 37 ^m			Mag: +1.0 PMG: 7 ^h 54 ^m			Mag: -2.9 PMG: 0 ^h 00 ^m			Mag: +1.1 PMG: 13 ^h 50 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	324	31.3	215 48.4	+21 29.1	241 21.2	+23 13.3	359 53.2	-15 13.8	152 00.1	+5 22.6					
1	339	33.8	230 47.7	28.8	256 21.9	13.4	14 56.0	14.0	167 02.3	22.5					
2	354	36.3	245 47.0	28.6	271 22.6	13.5	29 58.7	14.1	182 04.5	22.4					
3	9	38.7	260 46.3	28.4	286 23.2	13.7	45 01.5	14.2	197 06.7	22.3					
4	24	41.2	275 45.6	28.1	301 23.9	13.8	60 04.3	14.3	212 08.9	22.1					
5	39	43.7	290 44.9	+21 27.9	316 24.6	+23 13.9	75 07.1	-15 14.4	227 11.1	+5 22.0					
6	54	46.1	305 44.3	+21 27.6	331 25.3	+23 14.0	90 09.9	-15 14.5	242 13.3	+5 21.9					
7	69	48.6	320 43.6	27.4	346 26.0	14.1	105 12.7	14.6	257 15.5	21.8					
8	84	51.1	335 42.9	27.1	1 26.7	14.2	120 15.4	14.7	272 17.7	21.7					
9	99	53.5	350 42.2	26.9	16 27.4	14.3	135 18.2	14.8	287 19.9	21.6					
10	114	56.0	5 41.5	26.6	31 28.1	14.5	150 21.0	14.9	302 22.1	21.5					
11	129	58.4	20 40.8	+21 26.4	46 28.8	+23 14.6	165 23.8	-15 15.1	317 24.3	+5 21.3					
12	145	00.9	35 40.1	+21 26.1	61 29.5	+23 14.7	180 26.6	-15 15.2	332 26.5	+5 21.2					
13	160	03.4	50 39.5	25.9	76 30.1	14.8	195 29.4	15.3	347 28.7	21.1					
14	175	05.8	65 38.8	25.6	91 30.8	14.9	210 32.1	15.4	2 30.9	21.0					
15	190	08.3	80 38.1	25.4	106 31.5	15.0	225 34.9	15.5	17 33.1	20.9					
16	205	10.8	95 37.4	25.1	121 32.2	15.1	240 37.7	15.6	32 35.3	20.8					
17	220	13.2	110 36.7	+21 24.9	136 32.9	+23 15.2	255 40.5	-15 15.7	47 37.5	+5 20.6					
18	235	15.7	125 36.0	+21 24.6	151 33.6	+23 15.3	270 43.3	-15 15.8	62 39.7	+5 20.5					
19	250	18.2	140 35.3	24.4	166 34.3	15.5	285 46.1	15.9	77 41.9	20.4					
20	265	20.6	155 34.7	24.1	181 35.0	15.6	300 48.8	16.0	92 44.1	20.3					
21	280	23.1	170 34.0	23.9	196 35.7	15.7	315 51.6	16.2	107 46.3	20.2					
22	295	25.6	185 33.3	23.6	211 36.4	15.8	330 54.4	16.3	122 48.5	20.1					
23	310	28.0	200 32.6	23.3	226 37.1	15.9	345 57.2	16.4	137 50.7	19.9					
24	325	30.5	215 31.9	+21 23.1	241 37.7	+23 16.0	1 00.0	-15 16.5	152 52.9	+5 19.8					
Dif	—		-7		-3	+7	+1	-8972		-1		+22		-1	

UT	SOL			 LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna						
	SD: 15'8 PMG: 12 ^h 04 ^m 0			Edad: 25 ^d 9	PHE { 4 ^h : 60'4 12 ^h : 60'6 20 ^h : 60'7 R°: 62 ^m																
	hG ☉	Dec		hG ☾		Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°					
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	h	m		
0	178	57.9	+13	26.6	228	15.2	+25	22.6	50	60 N	2 15	3 29	4 19	** ** *	** ** *	18 45	14				
1	193	58.0		25.8	242	37.4		17.6	50	58	37	41	28	** ** *	** ** *	26	20				
2	208	58.2		25.0	256	59.6		12.4	52	56	2 55	3 52	35	** ** *	** ** *	18 10	25				
3	223	58.3		24.2	271	21.8		07.0	54	54	3 09	4 01	41	0 06	89	17 57	28				
4	238	58.4		23.4	285	44.1		01.4	56	52	21	10	47	20	86	45	31				
5	253	58.6	+13	22.6	300	06.4		55.7	57	50	3 32	4 17	4 53	0 32	84	17 34	34				
6	268	58.7	+13	21.8	314	28.7		49.7	60	45	3 53	4 32	5 04	0 58	79	17 12	39				
7	283	58.8		21.0	328	51.0		43.6	61	40	4 10	45	13	1 18	76	16 54	43				
8	298	59.0		20.2	343	13.4		37.3	63	35	23	4 55	22	35	74	39	46				
9	313	59.1		19.4	357	35.9		30.8	65	30	34	5 03	29	1 49	72	26	49				
10	328	59.2		18.6	11	58.3		24.2	66	20	4 51	18	41	2 14	68	16 03	54				
11	343	59.4	+13	17.8	26	20.9		17.3	69	10 N	5 04	5 29	5 51	2 35	65	15 43	58				
12	358	59.5	+13	17.0	40	43.4		10.3	70	0	5 15	5 39	6 01	2 55	62	15 25	61				
13	13	59.7		16.2	55	06.0		03.1	72	10 S	24	49	10	3 15	59	15 06	65				
14	28	59.8		15.4	69	28.7		55.7	74	20	32	5 58	20	3 36	56	14 46	68				
15	43	59.9		14.6	83	51.4		48.2	75	30	39	6 07	32	4 00	53	23	72				
16	59	00.1		13.8	98	14.1		40.4	78	35	42	12	38	15	50	14 09	75				
17	74	00.2	+13	13.0	112	36.9		32.5	79	40	5 46	6 18	6 45	4 31	48	13 53	79				
18	89	00.3	+13	12.2	126	59.8		24.5	80	45	5 49	6 24	6 54	4 51	44	13 34	82				
19	104	00.5		11.3	141	22.7		16.2	83	50	53	31	7 04	5 16	39	13 10	88				
20	119	00.6		10.5	155	45.7		07.8	84	52	54	34	09	28	37	12 59	90				
21	134	00.7		09.7	170	08.7		59.2	86	54	56	37	14	41	34	46	93				
22	149	00.9		08.9	184	31.8		50.5	87	56	57	41	20	5 57	30	30	98				
23	164	01.0		08.1	198	55.0		41.6	89	58	5 59	45	26	6 16	25	12 12	103				
24	179	01.2	+13	07.3	213	18.2		32.5	91	60 S	6 00	6 49	7 34	6 38	19	11 50	109				
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO								
	PMG: 2 ^h 17 ^m 6			Mag: -4.0 PMG: 9 ^h 38 ^m			Mag: +1.0 PMG: 7 ^h 53 ^m			Mag: -2.9 PMG: 23 ^h 52 ^m			Mag: +1.1 PMG: 13 ^h 46 ^m								
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'					
0	325	30.5	215	31.9	+21	23.1	241	37.7	+23	16.0	1	00.0	-15	16.5	152	52.9	+5	19.8			
1	340	32.9	230	31.2		22.8	256	38.4		16.1	16	02.8		16.6	167	55.1		19.7			
2	355	35.4	245	30.5		22.5	271	39.1		16.2	31	05.5		16.7	182	57.3		19.6			
3	10	37.9	260	29.9		22.3	286	39.8		16.3	46	08.3		16.8	197	59.5		19.5			
4	25	40.3	275	29.2		22.0	301	40.5		16.4	61	11.1		16.9	213	01.7		19.4			
5	40	42.8	290	28.5	+21	21.7	316	41.2	+23	16.5	76	13.9	-15	17.0	228	03.9	+5	19.2			
6	55	45.3	305	27.8	+21	21.5	331	41.9	+23	16.6	91	16.7	-15	17.1	243	06.1	+5	19.1			
7	70	47.7	320	27.1		21.2	346	42.6		16.7	106	19.5		17.3	258	08.3		19.0			
8	85	50.2	335	26.4		20.9	1	43.3		16.9	121	22.2		17.4	273	10.5		18.9			
9	100	52.7	350	25.7		20.7	16	44.0		17.0	136	25.0		17.5	288	12.7		18.8			
10	115	55.1	5	25.1		20.4	31	44.7		17.1	151	27.8		17.6	303	14.9		18.7			
11	130	57.6	20	24.4	+21	20.1	46	45.4	+23	17.2	166	30.6	-15	17.7	318	17.1	+5	18.6			
12	146	00.1	35	23.7	+21	19.8	61	46.1	+23	17.3	181	33.4	-15	17.8	333	19.3	+5	18.4			
13	161	02.5	50	23.0		19.6	76	46.8		17.4	196	36.2		17.9	348	21.5		18.3			
14	176	05.0	65	22.3		19.3	91	47.5		17.5	211	38.9		18.0	3	23.7		18.2			
15	191	07.4	80	21.6		19.0	106	48.1		17.6	226	41.7		18.1	18	25.9		18.1			
16	206	09.9	95	20.9		18.7	121	48.8		17.7	241	44.5		18.2	33	28.1		18.0			
17	221	12.4	110	20.3	+21	18.4	136	49.5	+23	17.8	256	47.3	-15	18.3	48	30.2	+5	17.9			
18	236	14.8	125	19.6	+21	18.2	151	50.2	+23	17.9	271	50.1	-15	18.5	63	32.4	+5	17.7			
19	251	17.3	140	18.9		17.9	166	50.9		18.0	286	52.9		18.6	78	34.6		17.6			
20	266	19.8	155	18.2		17.6	181	51.6		18.1	301	55.6		18.7	93	36.8		17.5			
21	281	22.2	170	17.5		17.3	196	52.3		18.2	316	58.4		18.8	108	39.0		17.4			
22	296	24.7	185	16.8		17.0	211	53.0		18.3	332	01.2		18.9	123	41.2		17.3			
23	311	27.2	200	16.1		16.7	226	53.7		18.4	347	04.0		19.0	138	43.4		17.2			
24	326	29.6	215	15.5	+21	16.5	241	54.4	+23	18.5	2	06.8	-15	19.1	153	45.6	+5	17.0			
Dif	—			-7			-3			+7			+1			+28			-1		

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 26 ^d 9 PHE $\left\{ \begin{array}{l} 4^h: 60^m/8 \\ 12^h: 60^m/9 \\ 20^h: 61^m/0 \end{array} \right.$										
	PMG: 12 ^h 03 ^m 8			SD: 16 ^h 5 PMG: 10 ^h 12 ^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	179	01.2	+13 07.3	213	18.2	+22 32.5	60 N	19 44	20 34	21 44	0 48 111		18 59	8
1	194	01.3	06.5	227	41.5	43 23.2	58	36	22	24	1 07 104		46	13
2	209	01.4	05.7	242	04.9	44 13.8	56	29	12	21 08	22 99		35	17
3	224	01.6	04.9	256	28.3	44 +22 04.3	54	23	20 03	20 54	35 95		25	20
4	239	01.7	04.1	270	51.8	45 +21 54.5	52	18	19 55	42	46 92		16	23
5	254	01.8	+13 03.3	285	15.4	46 +21 44.7	50	19 12	19 48	20 32	1 56 89		18 08	26
6	269	02.0	+13 02.5	299	39.0	46 +21 34.6	45	19 02	19 33	20 12	2 17 84		17 51	32
7	284	02.1	01.7	314	02.8	48 24.4	40	18 53	21	19 56	34 79		37	36
8	299	02.3	+13 00.9	328	26.6	48 14.1	35	45	11	43	2 49 75		25	40
9	314	02.4	+13 00.0	342	50.4	48 +21 03.6	30	38	19 03	33	3 01 72		17 15	42
10	329	02.5	+12 59.2	357	14.4	50 +20 53.0	20	26	18 49	16	22 67		16 57	48
11	344	02.7	+12 58.4	11	38.4	50 +20 42.2	10 N	18 16	18 38	19 03	3 40 63		16 41	53
12	359	02.8	+12 57.6	26	02.5	51 +20 31.2	0	18 07	18 28	18 53	3 57 59		16 26	57
13	14	03.0	56.8	40	26.7	52 20.2	10 S	17 58	19	44	4 14 55		16 11	61
14	29	03.1	56.0	54	50.9	52 +20 09.0	20	48	11	37	32 51		15 54	67
15	44	03.2	55.2	69	15.3	54 +19 57.6	30	37	18 02	30	4 53 46		35	73
16	59	03.4	54.4	83	39.7	54 46.1	35	31	17 57	27	5 05 43		24	76
17	74	03.5	+12 53.6	98	04.2	55 +19 34.5	40	17 24	17 52	18 24	5 19 39		15 12	79
18	89	03.7	+12 52.7	112	28.8	56 +19 22.7	45	17 16	17 46	18 21	5 35 35		14 56	84
19	104	03.8	51.9	126	53.5	57 +19 10.8	50	06	39	17	5 55 29		38	90
20	119	03.9	51.1	141	18.2	57 +18 58.8	52	17 01	37	16	6 05 26		29	93
21	134	04.1	50.3	155	43.0	58 46.6	54	16 56	33	15	15 23		19	96
22	149	04.2	49.5	170	08.0	60 34.3	56	51	30	13	27 20		14 08	100
23	164	04.4	48.7	184	33.0	60 21.9	58	45	26	12	41 15		13 55	105
24	179	04.5	+12 47.9	198	58.0	60 +18 09.4	60 S	16 38	17 22	18 11	6 57 10		13 39	111

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 2 ^h 13 ^m 7		Mag: -4.0 PMG: 9 ^h 39 ^m		Mag: +1.0 PMG: 7 ^h 52 ^m		Mag: -2.9 PMG: 23 ^h 47 ^m		Mag: +1.1 PMG: 13 ^h 43 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	326	29.6	215	15.5	241	54.4	2	06.8	153	45.6
1	341	32.1	230	14.8	256	55.1	17	09.6	168	47.8
2	356	34.6	245	14.1	271	55.8	32	12.3	183	50.0
3	11	37.0	260	13.4	286	56.5	47	15.1	198	52.2
4	26	39.5	275	12.7	301	57.2	62	17.9	213	54.4
5	41	41.9	290	12.0	316	57.9	77	20.7	228	56.6
6	56	44.4	305	11.4	331	58.6	92	23.5	243	58.8
7	71	46.9	320	10.7	346	59.3	107	26.3	259	01.0
8	86	49.3	335	10.0	2	00.0	122	29.0	274	03.2
9	101	51.8	350	09.3	17	00.7	137	31.8	289	05.4
10	116	54.3	5	08.6	32	01.4	152	34.6	304	07.6
11	131	56.7	20	07.9	47	02.1	167	37.4	319	09.8
12	146	59.2	35	07.3	62	02.8	182	40.2	334	12.0
13	162	01.7	50	06.6	77	03.5	197	43.0	349	14.2
14	177	04.1	65	05.9	92	04.2	212	45.7	4	16.4
15	192	06.6	80	05.2	107	04.8	227	48.5	19	18.6
16	207	09.0	95	04.5	122	05.5	242	51.3	34	20.8
17	222	11.5	110	03.8	137	06.2	257	54.1	49	23.0
18	237	14.0	125	03.1	152	06.9	272	56.9	64	25.2
19	252	16.4	140	02.5	167	07.6	287	59.6	79	27.3
20	267	18.9	155	01.8	182	08.3	303	02.4	94	29.5
21	282	21.4	170	01.1	197	09.0	318	05.2	109	31.7
22	297	23.8	185	00.4	212	09.7	333	08.0	124	33.9
23	312	26.3	199	59.7	227	10.4	348	10.8	139	36.1
24	327	28.8	214	59.0	242	11.1	3	13.6	154	38.3
Dif	—		-7		-3		+28		-1	
					+7				+22	
					+1				-1	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 12 ^h 03 ^m 6			Edad: 27 ^d 9 SD: 16 ^h 6 PMG: 11 ^h 10 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora
h	°	'	°	'	°	'	°	h	m	h	m	h	m	m
0	179	04.5	+12 47.9	198	58.0	+18 09.4	60 N	2 24	3 34	4 24	2 39	108	19 07	5
1	194	04.6	47.0	213	23.2	+17 56.7 ¹²⁷	58	2 44	46	32	2 51	103	18 59	9
2	209	04.8	46.2	227	48.5	63 43.9 ¹²⁸	56	3 00	3 56	39	3 01	99	52	12
3	224	04.9	45.4	242	13.8	63 31.0 ¹²⁹	54	14	4 05	45	10	95	45	16
4	239	05.1	44.6	256	39.2	64 18.0 ¹³⁰	52	26	13	51	18	92	39	19
5	254	05.2	+12 43.8	271	04.8	66 +17 04.9 ¹³¹	50	3 36	4 20	4 56	3 25	90	18 34	21
6	269	05.4	+12 43.0	285	30.4	66 +16 51.7 ¹³²	45	3 56	4 35	5 06	3 41	83	18 23	26
7	284	05.5	42.1	299	56.0	66 38.3 ¹³⁴	40	4 12	47	15	3 53	79	13	31
8	299	05.7	41.3	314	21.8	68 24.9 ¹³⁴	35	25	4 56	23	4 04	75	18 05	34
9	314	05.8	40.5	328	47.7	69 +16 11.3 ¹³⁶	30	35	5 05	30	13	72	17 57	39
10	329	05.9	39.7	343	13.6	69 +15 57.6 ¹³⁷	20	4 52	18	41	29	66	45	44
11	344	06.1	+12 38.9	357	39.6	70 +15 43.9 ¹³⁷	10 N	5 04	5 29	5 51	4 43	60	17 34	49
12	359	06.2	+12 38.0	12	05.8	72 +15 30.0 ¹³⁹	0	5 14	5 39	6 00	4 56	56	17 23	54
13	14	06.4	37.2	26	32.0	72 16.0 ¹⁴⁰	10 S	23	48	09	5 09	51	12	59
14	29	06.5	36.4	40	58.2	72 +15 02.0 ¹⁴⁰	20	30	5 56	19	23	46	17 01	64
15	44	06.7	35.6	55	24.6	74 +14 47.8 ¹⁴²	30	37	6 05	30	39	40	16 48	69
16	59	06.8	34.8	69	51.0	74 33.6 ¹⁴²	35	40	10	36	48	36	40	73
17	74	07.0	+12 33.9	84	17.6	76 +14 19.3 ¹⁴³	40	5 43	6 15	6 43	5 58	33	16 31	77
18	89	07.1	+12 33.1	98	44.2	76 +14 04.8 ¹⁴⁵	45	5 46	6 21	6 51	6 10	28	16 20	83
19	104	07.3	32.3	113	10.9	77 +13 50.3 ¹⁴⁵	50	49	27	7 00	24	23	08	88
20	119	07.4	31.5	127	37.7	78 35.8 ¹⁴⁵	52	50	30	05	31	20	16 02	91
21	134	07.5	30.7	142	04.5	78 21.1 ¹⁴⁷	54	52	33	10	38	18	15 55	94
22	149	07.7	29.8	156	31.5	80 +13 06.4 ¹⁴⁷	56	53	36	15	47	14	48	98
23	164	07.8	29.0	170	58.5	80 +12 51.5 ¹⁴⁹	58	54	40	21	6 56	10	40	101
24	179	08.0	+12 28.2	185	25.6	81 +12 36.6 ¹⁴⁹	60 S	5 56	6 44	7 28	7 07	6	15 30	106

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 2 ^h 09 ^m 7		Mag: -3.9 PMG: 9 ^h 41 ^m			Mag: +1.0 PMG: 7 ^h 51 ^m			Mag: -2.9 PMG: 23 ^h 43 ^m			Mag: +1.1 PMG: 13 ^h 39 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	'	'
0	327	28.8	214	59.0	+21 09.3	242	11.1	+23 20.8	3	13.6	-15 21.7	154	38.3	+5 14.2
1	342	31.2	229	58.4	08.9	257	11.8	20.9	18	16.3	21.8	169	40.5	14.1
2	357	33.7	244	57.7	08.6	272	12.5	21.0	33	19.1	21.9	184	42.7	14.0
3	12	36.2	259	57.0	08.3	287	13.2	21.1	48	21.9	22.1	199	44.9	13.9
4	27	38.6	274	56.3	08.0	302	13.9	21.2	63	24.7	22.2	214	47.1	13.8
5	42	41.1	289	55.6	+21 07.7	317	14.6	+23 21.3	78	27.5	-15 22.3	229	49.3	+5 13.7
6	57	43.5	304	54.9	+21 07.4	332	15.3	+23 21.4	93	30.2	-15 22.4	244	51.5	+5 13.5
7	72	46.0	319	54.3	07.0	347	16.0	21.4	108	33.0	22.5	259	53.7	13.4
8	87	48.5	334	53.6	06.7	2	16.7	21.5	123	35.8	22.6	274	55.9	13.3
9	102	50.9	349	52.9	06.4	17	17.4	21.6	138	38.6	22.7	289	58.1	13.2
10	117	53.4	4	52.2	06.1	32	18.1	21.7	153	41.4	22.8	305	00.3	13.1
11	132	55.9	19	51.5	+21 05.8	47	18.8	+23 21.8	168	44.2	-15 22.9	320	02.5	+5 13.0
12	147	58.3	34	50.8	+21 05.4	62	19.5	+23 21.9	183	46.9	-15 23.0	335	04.7	+5 12.8
13	163	00.8	49	50.2	05.1	77	20.2	22.0	198	49.7	23.1	350	06.9	12.7
14	178	03.3	64	49.5	04.8	92	20.9	22.1	213	52.5	23.2	5	09.1	12.6
15	193	05.7	79	48.8	04.4	107	21.6	22.2	228	55.3	23.4	20	11.2	12.5
16	208	08.2	94	48.1	04.1	122	22.3	22.2	243	58.1	23.5	35	13.4	12.4
17	223	10.7	109	47.4	+21 03.8	137	23.0	+23 22.3	259	00.8	-15 23.6	50	15.6	+5 12.3
18	238	13.1	124	46.8	+21 03.5	152	23.7	+23 22.4	274	03.6	-15 23.7	65	17.8	+5 12.1
19	253	15.6	139	46.1	03.1	167	24.4	22.5	289	06.4	23.8	80	20.0	12.0
20	268	18.0	154	45.4	02.8	182	25.2	22.6	304	09.2	23.9	95	22.2	11.9
21	283	20.5	169	44.7	02.5	197	25.9	22.7	319	12.0	24.0	110	24.4	11.8
22	298	23.0	184	44.0	02.1	212	26.6	22.8	334	14.8	24.1	125	26.6	11.7
23	313	25.4	199	43.3	01.8	227	27.3	22.8	349	17.5	24.2	140	28.8	11.6
24	328	27.9	214	42.7	+21 01.5	242	28.0	+23 22.9	4	20.3	-15 24.3	155	31.0	+5 11.4
Dif	—		-7 -3			+7 +1			+28 -1			+22 -1		

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 15'8 PMG: 12 ^h 03 ^m 3			Edad: 28 ^d 9 PHE { 4 ^h : 60'8 12 ^h : 60'7 20 ^h : 60'6 R°: 52 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	179	08.0	+12 28.2	185	25.6	+12 36.6	82	60 N	19 39	20 27	21 35	4 27	104	19 12	4	
1	194	08.1	27.4	199	52.8	21.7	149	58	31	16	16	34	99	08	7	
2	209	08.3	26.5	214	20.0	+12 06.6	151	56	25	20 06	21 01	40	96	04	11	
3	224	08.4	25.7	228	47.4	+11 51.5	151	54	19	19 58	20 48	45	93	19 01	13	
4	239	08.6	24.9	243	14.8	36.4	151	52	13	50	37	50	90	18 58	16	
5	254	08.7	+12 24.1	257	42.3	+11 21.1	153	50	19 09	19 44	20 27	4 55	86	18 55	18	
6	269	08.9	+12 23.2	272	09.9	+11 05.8	153	45	18 58	19 30	20 08	5 04	81	18 49	24	
7	284	09.0	22.4	286	37.5	+10 50.5	153	40	50	18	19 53	12	76	44	28	
8	299	09.2	21.6	301	05.2	35.0	155	35	42	09	40	19	72	39	32	
9	314	09.3	20.8	315	33.0	19.6	154	30	36	19 01	30	25	68	36	35	
10	329	09.5	19.9	330	00.9	+10 04.0	156	20	25	18 48	14	35	62	29	41	
11	344	09.6	+12 19.1	344	28.8	+9 48.5	155	10 N	18 16	18 37	19 02	5 43	58	18 23	46	
12	359	09.8	+12 18.3	358	56.9	+9 32.8	157	0	18 07	18 28	18 52	5 52	52	18 17	51	
13	14	09.9	17.4	13	24.9	17.2	156	10 S	17 58	19	44	6 00	47	11	56	
14	29	10.1	16.6	27	53.1	+9 01.4	158	20	49	11	37	09	42	18 05	61	
15	44	10.2	15.8	42	21.3	+8 45.7	157	30	39	18 03	31	19	36	17 57	68	
16	59	10.4	15.0	56	49.6	29.9	158	35	33	17 58	28	24	33	53	71	
17	74	10.5	+12 14.1	71	18.0	+8 14.0	159	40	17 26	17 54	18 25	6 31	29	17 48	75	
18	89	10.7	+12 13.3	85	46.4	+7 58.1	159	45	17 18	17 48	18 23	6 38	25	17 43	80	
19	104	10.8	12.5	100	14.9	42.2	159	50	09	42	20	47	19	36	85	
20	119	11.0	11.6	114	43.4	26.2	160	52	05	39	19	51	17	33	88	
21	134	11.1	10.8	129	12.0	+7 10.3	159	54	17 00	37	18	6 56	14	29	91	
22	149	11.3	10.0	143	40.7	+6 54.2	161	56	16 55	33	17	7 01	11	26	94	
23	164	11.4	09.1	158	09.5	38.2	160	58	49	30	16	06	8	21	98	
24	179	11.6	+12 08.3	172	38.3	+6 22.1	161	60 S	16 42	17 26	18 15	7 13	4	17 16	102	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 2 ^h 05 ^m 8		Mag: -3.9 PMG: 9 ^h 42 ^m			Mag: +1.0 PMG: 7 ^h 50 ^m			Mag: -2.9 PMG: 23 ^h 38 ^m			Mag: +1.1 PMG: 13 ^h 36 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	°	'	°	'	°	°	'	°	°	'	°	'	°
0	328	27.9	214	42.7	+21 01.5	242	28.0	+23 22.9	4	20.3	-15 24.3	155	31.0	+5 11.4		
1	343	30.4	229	42.0	01.1	257	28.7	23.0	19	23.1	24.4	170	33.2	11.3		
2	358	32.8	244	41.3	00.8	272	29.4	23.1	34	25.9	24.5	185	35.4	11.2		
3	13	35.3	259	40.6	00.4	287	30.1	23.2	49	28.7	24.7	200	37.6	11.1		
4	28	37.8	274	39.9	+21 00.1	302	30.8	23.3	64	31.4	24.8	215	39.8	11.0		
5	43	40.2	289	39.3	+20 59.8	317	31.5	+23 23.4	79	34.2	-15 24.9	230	42.0	+5 10.8		
6	58	42.7	304	38.6	+20 59.4	332	32.2	+23 23.4	94	37.0	-15 25.0	245	44.2	+5 10.7		
7	73	45.1	319	37.9	59.1	347	32.9	23.5	109	39.8	25.1	260	46.4	10.6		
8	88	47.6	334	37.2	58.7	2	33.6	23.6	124	42.6	25.2	275	48.5	10.5		
9	103	50.1	349	36.5	58.4	17	34.3	23.7	139	45.3	25.3	290	50.7	10.4		
10	118	52.5	4	35.9	58.0	32	35.0	23.8	154	48.1	25.4	305	52.9	10.3		
11	133	55.0	19	35.2	+20 57.7	47	35.7	+23 23.8	169	50.9	-15 25.5	320	55.1	+5 10.1		
12	148	57.5	34	34.5	+20 57.3	62	36.4	+23 23.9	184	53.7	-15 25.6	335	57.3	+5 10.0		
13	163	59.9	49	33.8	57.0	77	37.1	24.0	199	56.5	25.7	350	59.5	09.9		
14	179	02.4	64	33.1	56.6	92	37.8	24.1	214	59.3	25.8	6	01.7	09.8		
15	194	04.9	79	32.4	56.3	107	38.5	24.2	230	02.0	25.9	21	03.9	09.7		
16	209	07.3	94	31.8	55.9	122	39.2	24.2	245	04.8	26.1	36	06.1	09.6		
17	224	09.8	109	31.1	+20 55.6	137	39.9	+23 24.3	260	07.6	-15 26.2	51	08.3	+5 09.4		
18	239	12.3	124	30.4	+20 55.2	152	40.6	+23 24.4	275	10.4	-15 26.3	66	10.5	+5 09.3		
19	254	14.7	139	29.7	54.9	167	41.4	24.5	290	13.2	26.4	81	12.7	09.2		
20	269	17.2	154	29.0	54.5	182	42.1	24.6	305	15.9	26.5	96	14.9	09.1		
21	284	19.6	169	28.4	54.1	197	42.8	24.6	320	18.7	26.6	111	17.1	09.0		
22	299	22.1	184	27.7	53.8	212	43.5	24.7	335	21.5	26.7	126	19.2	08.9		
23	314	24.6	199	27.0	53.4	227	44.2	24.8	350	24.3	26.8	141	21.4	08.7		
24	329	27.0	214	26.3	+20 53.1	242	44.9	+23 24.9	5	27.1	-15 26.9	156	23.6	+5 08.6		
Dif	—		-7		-3	+7		+1	+28		-1	+22		-1		

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8 PMG: 12 ^h 03 ^m 1			Edad: 0 ^d 6 PHE { 4 ^h : 60 ^h 4 12 ^h : 60 ^h 2 20 ^h : 60 ^h 0 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	179	11.6	+12	08.3	172	38.3	+6 22.1	60 N	2 32	3 40	4 29	6 11	100	19 16	3
1	194	11.7		07.5	187	07.1 98	+6 06.0 ¹⁶¹	58	2 51	3 51	36	13	96	15	7
2	209	11.9		06.7	201	36.1 ¹⁰⁰	+5 49.9 ¹⁶¹	56	3 06	4 01	43	16	92	15	9
3	224	12.0		05.8	216	05.0 99	33.8 ¹⁶¹	54	19	09	49	18	89	14	13
4	239	12.2		05.0	230	34.1 ¹⁰¹	17.6 ¹⁶²	52	30	17	54	20	86	14	15
5	254	12.3	+12	04.2	245	03.2 ¹⁰¹	+5 01.4 ¹⁶²	50	3 40	4 24	4 59	6 21	84	19 13	18
6	269	12.5	+12	03.3	259	32.3 ¹⁰¹	+4 45.2 ¹⁶²	45	3 59	4 38	5 09	6 25	78	19 13	22
7	284	12.7		02.5	274	01.5 ¹⁰²	29.0 ¹⁶²	40	4 14	49	17	28	74	12	27
8	299	12.8		01.7	288	30.7 ¹⁰²	+4 12.8 ¹⁶²	35	27	4 58	25	31	69	11	31
9	314	13.0	+12	00.8	303	00.0 ¹⁰³	+3 56.6 ¹⁶²	30	37	5 06	31	33	66	11	33
10	329	13.1	+12	00.0	317	29.4 ¹⁰⁴	40.4 ¹⁶²	20	4 52	19	42	37	60	10	39
11	344	13.3	+11	59.1	331	58.8 ¹⁰⁴	+3 24.1 ¹⁶³	10 N	5 04	5 30	5 51	6 41	55	19 09	44
12	359	13.4	+11	58.3	346	28.2 ¹⁰⁴	+3 07.9 ¹⁶²	0	5 14	5 39	6 00	6 44	50	19 08	49
13	14	13.6		57.5	0	57.7 ¹⁰⁵	+2 51.6 ¹⁶³	10 S	22	47	08	47	46	07	54
14	29	13.7		56.6	15	27.3 ¹⁰⁶	35.4 ¹⁶²	20	29	5 55	17	51	40	06	59
15	44	13.9		55.8	29	56.9 ¹⁰⁶	19.1 ¹⁶³	30	35	6 03	28	55	34	05	65
16	59	14.0		55.0	44	26.5 ¹⁰⁶	+2 02.9 ¹⁶²	35	38	08	33	6 57	31	04	69
17	74	14.2	+11	54.1	58	56.2 ¹⁰⁷	+1 46.7 ¹⁶²	40	5 41	6 12	6 40	7 00	27	19 03	73
18	89	14.4	+11	53.3	73	25.9 ¹⁰⁷	+1 30.4 ¹⁶³	45	5 43	6 17	6 48	7 03	23	19 03	77
19	104	14.5		52.5	87	55.6 ¹⁰⁷	+1 14.2 ¹⁶²	50	46	23	6 57	06	18	01	83
20	119	14.7		51.6	102	25.4 ¹⁰⁸	+0 58.0 ¹⁶²	52	47	26	7 01	08	15	01	85
21	134	14.8		50.8	116	55.3 ¹⁰⁹	41.8 ¹⁶²	54	48	29	05	10	13	00	89
22	149	15.0		49.9	131	25.1 ¹⁰⁸	25.6 ¹⁶²	56	49	32	10	12	10	19 00	91
23	164	15.1		49.1	145	55.1 ¹¹⁰	+0 09.4 ¹⁶²	58	50	35	16	14	7	18 59	95
24	179	15.3	+11	48.3	160	25.0 ¹⁰⁹	-0 06.7 ¹⁶¹	60 S	5 51	6 39	7 23	7 17	3	18 58	99

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 2 ^h 01 ^m 9		Mag: -3.9 PMG: 9 ^h 43 ^m		Mag: +1.0 PMG: 7 ^h 49 ^m		Mag: -2.9 PMG: 23 ^h 34 ^m		Mag: +1.1 PMG: 13 ^h 32 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	329	27.0	214	26.3	+20	53.1	242	44.9	+23	24.9	5	27.1	-15	26.9	156	23.6	+5	08.6
1	344	29.5	229	25.7		52.7	257	45.6		24.9	20	29.8		27.0	171	25.8		08.5
2	359	32.0	244	25.0		52.3	272	46.3		25.0	35	32.6		27.1	186	28.0		08.4
3	14	34.4	259	24.3		52.0	287	47.0		25.1	50	35.4		27.2	201	30.2		08.3
4	29	36.9	274	23.6		51.6	302	47.7		25.2	65	38.2		27.3	216	32.4		08.1
5	44	39.4	289	22.9	+20	51.2	317	48.4	+23	25.3	80	41.0	-15	27.4	231	34.6	+5	08.0
6	59	41.8	304	22.3	+20	50.9	332	49.1	+23	25.3	95	43.7	-15	27.6	246	36.8	+5	07.9
7	74	44.3	319	21.6		50.5	347	49.8		25.4	110	46.5		27.7	261	39.0		07.8
8	89	46.8	334	20.9		50.1	2	50.5		25.5	125	49.3		27.8	276	41.2		07.7
9	104	49.2	349	20.2		49.8	17	51.3		25.6	140	52.1		27.9	291	43.4		07.6
10	119	51.7	4	19.5		49.4	32	52.0		25.6	155	54.9		28.0	306	45.6		07.4
11	134	54.1	19	18.9	+20	49.0	47	52.7	+23	25.7	170	57.6	-15	28.1	321	47.8	+5	07.3
12	149	56.6	34	18.2	+20	48.7	62	53.4	+23	25.8	186	00.4	-15	28.2	336	49.9	+5	07.2
13	164	59.1	49	17.5		48.3	77	54.1		25.8	201	03.2		28.3	351	52.1		07.1
14	180	01.5	64	16.8		47.9	92	54.8		25.9	216	06.0		28.4	6	54.3		07.0
15	195	04.0	79	16.2		47.5	107	55.5		26.0	231	08.8		28.5	21	56.5		06.8
16	210	06.5	94	15.5		47.2	122	56.2		26.1	246	11.5		28.6	36	58.7		06.7
17	225	08.9	109	14.8	+20	46.8	137	56.9	+23	26.1	261	14.3	-15	28.7	52	00.9	+5	06.6
18	240	11.4	124	14.1	+20	46.4	152	57.6	+23	26.2	276	17.1	-15	28.8	67	03.1	+5	06.5
19	255	13.9	139	13.4		46.0	167	58.4		26.3	291	19.9		28.9	82	05.3		06.4
20	270	16.3	154	12.8		45.6	182	59.1		26.3	306	22.6		29.0	97	07.5		06.3
21	285	18.8	169	12.1		45.3	197	59.8		26.4	321	25.4		29.2	112	09.7		06.1
22	300	21.2	184	11.4		44.9	213	00.5		26.5	336	28.2		29.3	127	11.9		06.0
23	315	23.7	199	10.7		44.5	228	01.2		26.6	351	31.0		29.4	142	14.1		05.9
24	330	26.2	214	10.1	+20	44.1	243	01.9	+23	26.6	6	33.8	-15	29.5	157	16.2	+5	05.8
Dif	—		-7		-4		+7		+1		+28		-1		+22		-	

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 9				Edad: 1 ^d 6 PHE { SD: 16 ^h 3 PMG: 13 ^h 46 ^m															
	hG ☉		Dec		hG ☾		Dif							Civil	Náutico	Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m	
0	179	15.3	+11	48.3	160	25.0	-0	06.7	60 N	19	33	20	21	21	27	7 51 97	19	19	4	
1	194	15.5		47.4	174	55.0 ¹¹⁰		22.8 ¹⁶¹	58	26		10	21	09	49 94		22	7		
2	209	15.6		46.6	189	25.0 ¹¹⁰		39.0 ¹⁶²	56	20	20	01	20	55	48 90		24	11		
3	224	15.8		45.7	203	55.0 ¹¹⁰		-0 55.1 ¹⁶¹	54	14	19	53		42	47 87		27	13		
4	239	15.9		44.9	218	25.1 ¹¹¹		-1 11.1 ¹⁶⁰	52	09		46		32	46 84		29	16		
5	254	16.1	+11	44.1	232	55.2 ¹¹¹		-1 27.2 ¹⁶¹	50	19	05	19	39	20	23	7 45 82	19	31	18	
6	269	16.2	+11	43.2	247	25.3 ¹¹¹		-1 43.2 ¹⁶⁰	45	18	55	19	26	20	04	7 43 77	19	35	23	
7	284	16.4		42.4	261	55.5 ¹¹²		-1 59.2 ¹⁶⁰	40	47		15		19 49	42 71		39	27		
8	299	16.6		41.5	276	25.7 ¹¹²		-2 15.2 ¹⁶⁰	35	40		19	06		38	40 68		42	31	
9	314	16.7		40.7	290	55.9 ¹¹²		31.1 ¹⁵⁹	30	34		18	59		28	39 65		44	34	
10	329	16.9		39.8	305	26.1 ¹¹²		-2 47.0 ¹⁵⁹	20	23			46		13	37 59		49	40	
11	344	17.0	+11	39.0	319	56.4 ¹¹³		-3 02.9 ¹⁵⁹	10 N	18	15	18	36		19 01	7 36 53	19	53	45	
12	359	17.2	+11	38.2	334	26.7 ¹¹³		-3 18.7 ¹⁵⁸	0	18	06	18	27		18 52	7 34 49	19	57	49	
13	14	17.4		37.3	348	57.0 ¹¹³		34.5 ¹⁵⁸	10 S	17	58		19		44	33 44	20	01	54	
14	29	17.5		36.5	3	27.3 ¹¹³		-3 50.3 ¹⁵⁸	20	49		12		38	31 39		05	59		
15	44	17.7		35.6	17	57.6 ¹¹³		-4 06.0 ¹⁵⁷	30	40		04		32	29 34		10	64		
16	59	17.8		34.8	32	28.0 ¹¹⁴		21.7 ¹⁵⁷	35	34		18	00		29	28 30		13	67	
17	74	18.0	+11	33.9	46	58.4 ¹¹⁴		-4 37.3 ¹⁵⁶	40	17	28	17	55		18 27	7 27 27	20	16	71	
18	89	18.2	+11	33.1	61	28.8 ¹¹⁴		-4 52.9 ¹⁵⁶	45	17	20	17	51		18 25	7 26 22	20	20	75	
19	104	18.3		32.2	75	59.2 ¹¹⁴		-5 08.4 ¹⁵⁵	50	12			45		23	24 18		24	81	
20	119	18.5		31.4	90	29.6 ¹¹⁴		23.9 ¹⁵⁵	52	08			43		22	23 16		26	84	
21	134	18.6		30.6	105	00.1 ¹¹⁵		39.4 ¹⁵⁵	54	17	03		40		21	23 12		29	86	
22	149	18.8		29.7	119	30.5 ¹¹⁴		-5 54.8 ¹⁵⁴	56	16	59		37		20	22 10		31	89	
23	164	19.0		28.9	134	01.0 ¹¹⁵		-6 10.2 ¹⁵⁴	58		53		34		20	21 7		34	92	
24	179	19.1	+11	28.0	148	31.5 ¹¹⁵		-6 25.5 ¹⁵³	60 S	16	47	17	30		18 19	7 20 3	20	37	96	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO					
	PMG: 1 ^h 57 ^m 9		Mag: -3.9 PMG: 9 ^h 44 ^m				Mag: +1.0 PMG: 7 ^h 48 ^m				Mag: -2.9 PMG: 23 ^h 29 ^m				Mag: +1.1 PMG: 13 ^h 29 ^m					
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	330	26.2	214	10.1	+20	44.1	243	01.9	+23	26.6	6	33.8	-15	29.5	157	16.2	+5	05.8		
1	345	28.6	229	09.4		43.7	258	02.6		26.7	21	36.5		29.6	172	18.4		05.7		
2	0	31.1	244	08.7		43.3	273	03.3		26.8	36	39.3		29.7	187	20.6		05.6		
3	15	33.6	259	08.0		42.9	288	04.0		26.8	51	42.1		29.8	202	22.8		05.4		
4	30	36.0	274	07.4		42.5	303	04.8		26.9	66	44.9		29.9	217	25.0		05.3		
5	45	38.5	289	06.7	+20	42.2	318	05.5	+23	27.0	81	47.7	-15	30.0	232	27.2	+5	05.2		
6	60	41.0	304	06.0	+20	41.8	333	06.2	+23	27.0	96	50.4	-15	30.1	247	29.4	+5	05.1		
7	75	43.4	319	05.3		41.4	348	06.9		27.1	111	53.2		30.2	262	31.6		05.0		
8	90	45.9	334	04.7		41.0	3	07.6		27.2	126	56.0		30.3	277	33.8		04.8		
9	105	48.4	349	04.0		40.6	18	08.3		27.2	141	58.8		30.4	292	36.0		04.7		
10	120	50.8	4	03.3		40.2	33	09.0		27.3	157	01.5		30.5	307	38.2		04.6		
11	135	53.3	19	02.6	+20	39.8	48	09.7	+23	27.4	172	04.3	-15	30.6	322	40.4	+5	04.5		
12	150	55.7	34	02.0	+20	39.4	63	10.5	+23	27.4	187	07.1	-15	30.7	337	42.5	+5	04.4		
13	165	58.2	49	01.3		39.0	78	11.2		27.5	202	09.9		30.8	352	44.7		04.3		
14	181	00.7	64	00.6		38.6	93	11.9		27.6	217	12.7		31.0	7	46.9		04.1		
15	196	03.1	78	59.9		38.2	108	12.6		27.6	232	15.4		31.1	22	49.1		04.0		
16	211	05.6	93	59.3		37.8	123	13.3		27.7	247	18.2		31.2	37	51.3		03.9		
17	226	08.1	108	58.6	+20	37.4	138	14.0	+23	27.8	262	21.0	-15	31.3	52	53.5	+5	03.8		
18	241	10.5	123	57.9	+20	37.0	153	14.7	+23	27.8	277	23.8	-15	31.4	67	55.7	+5	03.7		
19	256	13.0	138	57.2		36.6	168	15.4		27.9	292	26.5		31.5	82	57.9		03.5		
20	271	15.5	153	56.6		36.2	183	16.2		27.9	307	29.3		31.6	98	00.1		03.4		
21	286	17.9	168	55.9		35.8	198	16.9		28.0	322	32.1		31.7	113	02.3		03.3		
22	301	20.4	183	55.2		35.4	213	17.6		28.1	337	34.9		31.8	128	04.5		03.2		
23	316	22.8	198	54.5		35.0	228	18.3		28.1	352	37.7		31.9	143	06.6		03.1		
24	331	25.3	213	53.9	+20	34.5	243	19.0	+23	28.2	7	40.4	-15	32.0	158	08.8	+5	02.9		
Dif	—		-7		-4		+7		+1		+28		-1		+22		-1			

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8 PMG: 12 ^h 02 ^m 6				Edad: 2 ^d 6 PHE { 4 ^h : 58 ^m 9 12 ^h : 58 ^m 6 20 ^h : 58 ^m 3 Rº: 49 ^m													
	hG ☉		Dec		hG ☾ Dif		Dec Dif			Náutico	Civil		Hora	Rº	Hora	Rº		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	179	19.1	+11	28.0	148	31.5	-6	25.5	60 N	2	40	3	46	4	34	9	28	
1	194	19.3		27.2	163	01.9 ¹¹⁴		40.7 ¹⁵²	58	2	57	3	56		41	23	92	
2	209	19.4		26.3	177	32.4 ¹¹⁵	-6	55.9 ¹⁵²	56	3	12	4	05		47	18	88	
3	224	19.6		25.5	192	02.9 ¹¹⁵	-7	11.0 ¹⁵¹	54		24		13		52	14	85	
4	239	19.8		24.6	206	33.4 ¹¹⁵		26.1 ¹⁵¹	52		34		20	4	57	10	82	
5	254	19.9	+11	23.8	221	04.0 ¹¹⁶	-7	41.1 ¹⁵⁰	50	3	44	4	27	5	02	9	07	
6	269	20.1	+11	22.9	235	34.5 ¹¹⁵	-7	56.1 ¹⁵⁰	45	4	02	4	40	5	11	9	00	
7	284	20.3		22.1	250	05.0 ¹¹⁵	-8	11.0 ¹⁴⁹	40		17		4	51	19	8	53	
8	299	20.4		21.2	264	35.5 ¹¹⁵		25.9 ¹⁴⁹	35		28	5	00		26	48	67	
9	314	20.6		20.4	279	06.1 ¹¹⁶		40.6 ¹⁴⁷	30		38		07	32	44	63	18	
10	329	20.8		19.5	293	36.6 ¹¹⁵	-8	55.3 ¹⁴⁷	20	4	53		20		42	36	58	
11	344	20.9	+11	18.7	308	07.1 ¹¹⁵	-9	10.0 ¹⁴⁷	10 N	5	05	5	30	5	51	8	29	
12	359	21.1	+11	17.8	322	37.6 ¹¹⁵	-9	24.6 ¹⁴⁶	0	5	14	5	38	5	59	8	23	
13	14	21.2		17.0	337	08.2 ¹¹⁶		39.1 ¹⁴⁵	10 S		21		46	6	07	17	44	
14	29	21.4		16.1	351	38.7 ¹¹⁵	-9	53.5 ¹⁴⁴	20	28	5	53		16		10	40	
15	44	21.6		15.3	6	09.2 ¹¹⁵	-10	07.9 ¹⁴⁴	30	33	6	01		25		8	03	
16	59	21.7		14.4	20	39.7 ¹¹⁵		22.2 ¹⁴³	35	36		05		31	7	58	32	
17	74	21.9	+11	13.6	35	10.3 ¹¹⁶	-10	36.4 ¹⁴²	40	5	38	6	09	6	37	7	54	
18	89	22.1	+11	12.7	49	40.8 ¹¹⁵	-10	50.6 ¹⁴²	45	5	40	6	14	6	44	7	48	
19	104	22.2		11.9	64	11.3 ¹¹⁵	-11	04.7 ¹⁴¹	50	42		20		53	42	19	45	
20	119	22.4		11.0	78	41.8 ¹¹⁵		18.7 ¹⁴⁰	52	43		22		6	57	39	16	
21	134	22.6		10.2	93	12.3 ¹¹⁵		32.6 ¹³⁹	54	43		25		7	01	35	14	
22	149	22.7		09.3	107	42.7 ¹¹⁴	-11	46.5 ¹³⁹	56	44		27		06		32	11	
23	164	22.9		08.4	122	13.2 ¹¹⁵	-12	00.2 ¹³⁷	58	45		30		11		28	8	
24	179	23.1	+11	07.6	136	43.7 ¹¹⁵	-12	13.9 ¹³⁷	60 S	5	45	6	34	7	17	7	23	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 1 ^h 54 ^m 0		Mag: -3.9 PMG: 9 ^h 45 ^m				Mag: +1.0 PMG: 7 ^h 46 ^m				Mag: -2.9 PMG: 23 ^h 25 ^m				Mag: +1.1 PMG: 13 ^h 25 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	331	25.3	213	53.9	+20	34.5	243	19.0	+23	28.2	7	40.4	-15	32.0	158	08.8	+5	02.9
1	346	27.8	228	53.2		34.1	258	19.7		28.3	22	43.2		32.1	173	11.0		02.8
2	1	30.2	243	52.5		33.7	273	20.5		28.3	37	46.0		32.2	188	13.2		02.7
3	16	32.7	258	51.8		33.3	288	21.2		28.4	52	48.8		32.3	203	15.4		02.6
4	31	35.2	273	51.2		32.9	303	21.9		28.4	67	51.5		32.4	218	17.6		02.5
5	46	37.6	288	50.5	+20	32.5	318	22.6	+23	28.5	82	54.3	-15	32.5	233	19.8	+5	02.4
6	61	40.1	303	49.8	+20	32.1	333	23.3	+23	28.6	97	57.1	-15	32.6	248	22.0	+5	02.2
7	76	42.6	318	49.2		31.6	348	24.0		28.6	112	59.9		32.7	263	24.2		02.1
8	91	45.0	333	48.5		31.2	3	24.8		28.7	128	02.6		32.9	278	26.4		02.0
9	106	47.5	348	47.8		30.8	18	25.5		28.7	143	05.4		33.0	293	28.5		01.9
10	121	50.0	3	47.1		30.4	33	26.2		28.8	158	08.2		33.1	308	30.7		01.8
11	136	52.4	18	46.5	+20	30.0	48	26.9	+23	28.9	173	11.0	-15	33.2	323	32.9	+5	01.6
12	151	54.9	33	45.8	+20	29.5	63	27.6	+23	28.9	188	13.8	-15	33.3	338	35.1	+5	01.5
13	166	57.3	48	45.1		29.1	78	28.3		29.0	203	16.5		33.4	353	37.3		01.4
14	181	59.8	63	44.4		28.7	93	29.1		29.0	218	19.3		33.5	8	39.5		01.3
15	197	02.3	78	43.8		28.3	108	29.8		29.1	233	22.1		33.6	23	41.7		01.2
16	212	04.7	93	43.1		27.8	123	30.5		29.1	248	24.9		33.7	38	43.9		01.1
17	227	07.2	108	42.4	+20	27.4	138	31.2	+23	29.2	263	27.6	-15	33.8	53	46.1	+5	00.9
18	242	09.7	123	41.8	+20	27.0	153	31.9	+23	29.3	278	30.4	-15	33.9	68	48.3	+5	00.8
19	257	12.1	138	41.1		26.6	168	32.7		29.3	293	33.2		34.0	83	50.4		00.7
20	272	14.6	153	40.4		26.1	183	33.4		29.4	308	36.0		34.1	98	52.6		00.6
21	287	17.1	168	39.8		25.7	198	34.1		29.4	323	38.7		34.2	113	54.8		00.5
22	302	19.5	183	39.1		25.3	213	34.8		29.5	338	41.5		34.3	128	57.0		00.3
23	317	22.0	198	38.4		24.8	228	35.5		29.5	353	44.3		34.4	143	59.2		00.2
24	332	24.5	213	37.7	+20	24.4	243	36.2	+23	29.6	8	47.1	-15	34.5	159	01.4	+5	00.1
Dif	—		-7		-4		+7		+1		+28		-1		+22		-	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 15°8 PMG: 12 ^h 02 ^m 3			Edad: 3 ^d 6 SD: 15°8 PMG: 15 ^h 24 ^m	PHE { 4 ^h : 58'0 12 ^h : 57'7 20 ^h : 57'4 R°: 49 ^m													
	hG ☉	Dec				hG ☾			Dif	Dec	Dif	Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m			
0	179	23.1	+11	07.6	136	43.7	-12 13.9	60 N	19 27	20 14	21 18	11 04	95	19 28	8			
1	194	23.2		06.7	151	14.1 ¹¹⁴	27.5 ¹³⁶	58	20	20 04	21 02	10 55	90	38	13			
2	209	23.4		05.9	165	44.6 ¹¹⁵	41.1 ¹³⁶	56	15	19 55	20 48	46	87	47	16			
3	224	23.6		05.0	180	15.0 ¹¹⁴	-12 54.5 ¹³⁴	54	09	48	37	39	83	19 55	20			
4	239	23.7		04.2	194	45.4 ¹¹⁴	-13 07.9 ¹³⁴	52	05	41	27	32	81	20 03	22			
5	254	23.9	+11	03.3	209	15.8 ¹¹⁴	-13 21.2 ¹³³	50	19 01	19 35	20 18	10 27	77	20 09	24			
6	269	24.1	+11	02.5	223	46.2 ¹¹⁴	-13 34.3 ¹³¹	45	18 51	19 22	20 00	10 14	73	20 23	29			
7	284	24.2		01.6	238	16.6 ¹¹⁴	-13 47.5 ¹³²	40	44	12	19 46	10 04	68	35	33			
8	299	24.4	+11	00.7	252	47.0 ¹¹⁴	-14 00.5 ¹³⁰	35	37	19 04	35	9 55	65	45	36			
9	314	24.6	+10	59.9	267	17.3 ¹¹³	13.4 ¹²⁹	30	32	18 56	25	47	62	20 54	38			
10	329	24.7		59.0	281	47.7 ¹¹⁴	26.2 ¹²⁸	20	22	44	11	34	57	21 09	43			
11	344	24.9	+10	58.2	296	18.0 ¹¹³	-14 39.0 ¹²⁸	10 N	18 13	18 35	19 00	9 22	54	21 23	46			
12	359	25.1	+10	57.3	310	48.3 ¹¹³	-14 51.6 ¹²⁶	0	18 06	18 27	18 51	9 12	49	21 35	50			
13	14	25.2		56.5	325	18.6 ¹¹³	-15 04.2 ¹²⁶	10 S	17 58	19	44	9 01	46	21 48	53			
14	29	25.4		55.6	339	48.8 ¹¹²	16.7 ¹²⁵	20	50	12	38	8 50	41	22 02	57			
15	44	25.6		54.7	354	19.1 ¹¹³	29.0 ¹²³	30	41	05	33	37	37	17	62			
16	59	25.8		53.9	8	49.3 ¹¹²	41.3 ¹²³	35	36	18 01	31	30	34	26	65			
17	74	25.9	+10	53.0	23	19.5 ¹¹²	-15 53.5 ¹²²	40	17 30	17 57	18 29	8 22	30	22 37	67			
18	89	26.1	+10	52.2	37	49.7 ¹¹²	-16 05.6 ¹²¹	45	17 23	17 53	18 27	8 12	27	22 49	71			
19	104	26.3		51.3	52	19.9 ¹¹²	17.6 ¹²⁰	50	15	48	25	8 01	22	23 04	76			
20	119	26.4		50.4	66	50.0 ¹¹¹	29.5 ¹¹⁹	52	11	46	25	7 55	20	11	78			
21	134	26.6		49.6	81	20.1 ¹¹¹	41.3 ¹¹⁸	54	07	43	24	49	17	19	81			
22	149	26.8		48.7	95	50.2 ¹¹¹	-16 53.0 ¹¹⁷	56	17 02	41	24	43	14	27	85			
23	164	26.9		47.9	110	20.3 ¹¹¹	-17 04.6 ¹¹⁶	58	16 57	38	23	36	10	37	89			
24	179	27.1	+10	47.0	124	50.4 ¹¹¹	-17 16.0 ¹¹⁴	60 S	16 52	17 35	18 23	7 28	6	23 49	94			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 1 ^h 50 ^m 1		Mag: -3.9 PMG: 9 ^h 46 ^m			Mag: +1.0 PMG: 7 ^h 45 ^m			Mag: -2.9 PMG: 23 ^h 21 ^m			Mag: +1.1 PMG: 13 ^h 22 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃		Dec		hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	332	24.5	213	37.7	+20	24.4	243	36.2	+23	29.6	8	47.1	-15	34.5	159	01.4	+5	00.1
1	347	26.9	228	37.1		24.0	258	37.0		29.6	23	49.8		34.6	174	03.6	+5	00.0
2	2	29.4	243	36.4		23.5	273	37.7		29.7	38	52.6		34.7	189	05.8	+4	59.9
3	17	31.8	258	35.7		23.1	288	38.4		29.7	53	55.4		34.8	204	08.0		59.7
4	32	34.3	273	35.1		22.7	303	39.1		29.8	68	58.2		34.9	219	10.2		59.6
5	47	36.8	288	34.4	+20	22.2	318	39.9	+23	29.8	84	00.9	-15	35.0	234	12.3	+4	59.5
6	62	39.2	303	33.7	+20	21.8	333	40.6	+23	29.9	99	03.7	-15	35.1	249	14.5	+4	59.4
7	77	41.7	318	33.1		21.3	348	41.3		30.0	114	06.5		35.3	264	16.7		59.3
8	92	44.2	333	32.4		20.9	3	42.0		30.0	129	09.3		35.4	279	18.9		59.2
9	107	46.6	348	31.7		20.5	18	42.7		30.1	144	12.0		35.5	294	21.1		59.0
10	122	49.1	3	31.1		20.0	33	43.5		30.1	159	14.8		35.6	309	23.3		58.9
11	137	51.6	18	30.4	+20	19.6	48	44.2	+23	30.2	174	17.6	-15	35.7	324	25.5	+4	58.8
12	152	54.0	33	29.7	+20	19.1	63	44.9	+23	30.2	189	20.4	-15	35.8	339	27.7	+4	58.7
13	167	56.5	48	29.1		18.7	78	45.6		30.3	204	23.1		35.9	354	29.9		58.6
14	182	58.9	63	28.4		18.2	93	46.3		30.3	219	25.9		36.0	9	32.0		58.4
15	198	01.4	78	27.7		17.8	108	47.1		30.4	234	28.7		36.1	24	34.2		58.3
16	213	03.9	93	27.0		17.3	123	47.8		30.4	249	31.5		36.2	39	36.4		58.2
17	228	06.3	108	26.4	+20	16.9	138	48.5	+23	30.5	264	34.2	-15	36.3	54	38.6	+4	58.1
18	243	08.8	123	25.7	+20	16.4	153	49.2	+23	30.5	279	37.0	-15	36.4	69	40.8	+4	58.0
19	258	11.3	138	25.0		16.0	168	50.0		30.6	294	39.8		36.5	84	43.0		57.8
20	273	13.7	153	24.4		15.5	183	50.7		30.6	309	42.5		36.6	99	45.2		57.7
21	288	16.2	168	23.7		15.1	198	51.4		30.6	324	45.3		36.7	114	47.4		57.6
22	303	18.7	183	23.0		14.6	213	52.1		30.7	339	48.1		36.8	129	49.6		57.5
23	318	21.1	198	22.4		14.2	228	52.9		30.7	354	50.9		36.9	144	51.7		57.4
24	333	23.6	213	21.7	+20	13.7	243	53.6	+23	30.8	9	53.6	-15	37.0	159	53.9	+4	57.2
Dif	—		-7		-4		+7		+1		+28		-1		+22		-1	

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15/8 PMG: 12 ^h 02 ^m 1			Edad: 4 ^d 6 PHE { SD: 15/6 PMG: 16 ^h 13 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	179	27.1	+10 47.0	124	50.4	-17 16.0		60 N	2 47	3 51	4 38	12 39	92	19 36	13	
1	194	27.3		139	20.4 ¹¹⁰	27.4 ¹¹⁴		58	3 04	4 01	45	25	86	19 51	18	
2	209	27.5		153	50.4 ¹¹⁰	38.7 ¹¹³		56	17	10	51	13	82	20 03	23	
3	224	27.6		168	20.4 ¹¹⁰	-17 49.9 ¹¹²		54	29	17	4 56	12 02	79	15	25	
4	239	27.8		182	50.4 ¹¹⁰	-18 01.0 ¹¹¹		52	39	24	5 00	11 53	76	25	27	
5	254	28.0	+10 42.7	197	20.3 ¹⁰⁹	-18 11.9 ¹⁰⁹		50	3 47	4 30	5 05	11 44	74	20 33	30	
6	269	28.1	+10 41.8	211	50.3 ¹¹⁰	-18 22.8 ¹⁰⁹		45	4 05	4 43	5 14	11 27	69	20 52	35	
7	284	28.3		226	20.2 ¹⁰⁹	33.6 ¹⁰⁸		40	19	4 53	21	12	66	21 08	37	
8	299	28.5		240	50.0 ¹⁰⁸	44.2 ¹⁰⁶		35	30	5 01	28	11 00	63	21	40	
9	314	28.7		255	19.9 ¹⁰⁹	-18 54.7 ¹⁰⁵		30	39	08	33	10 49	61	32	42	
10	329	28.8		269	49.7 ¹⁰⁸	-19 05.2 ¹⁰⁵		20	4 54	20	43	31	57	21 52	45	
11	344	29.0	+10 37.5	284	19.5 ¹⁰⁸	-19 15.5 ¹⁰³		10 N	5 05	5 30	5 51	10 16	53	22 09	49	
12	359	29.2	+10 36.6	298	49.3 ¹⁰⁸	-19 25.7 ¹⁰²		0	5 13	5 38	5 59	10 01	51	22 25	51	
13	14	29.4		313	19.0 ¹⁰⁷	35.8 ¹⁰¹		10 S	20	45	6 06	9 47	47	41	54	
14	29	29.5		327	48.8 ¹⁰⁸	45.8 ¹⁰⁰		20	26	52	14	31	44	22 59	56	
15	44	29.7		342	18.5 ¹⁰⁷	-19 55.7 ⁹⁹		30	31	5 59	23	14	40	23 19	60	
16	59	29.9		356	48.2 ¹⁰⁷	-20 05.4 ⁹⁷		35	33	6 03	28	9 04	38	31	62	
17	74	30.1	+10 32.3	11	17.8 ¹⁰⁶	-20 15.1 ⁹⁷		40	5 35	6 07	6 34	8 52	35	23 44	64	
18	89	30.2	+10 31.4	25	47.4 ¹⁰⁶	-20 24.6 ⁹⁵		45	5 37	6 11	6 41	8 39	31	*** ** *	***	
19	104	30.4		30.6	40 17.0 ¹⁰⁶	34.0 ⁹⁴		50	38	16	49	23	26	*** ** *	***	
20	119	30.6		29.7	54 46.6 ¹⁰⁶	43.3 ⁹³		52	39	18	52	15	24	*** ** *	***	
21	134	30.7		28.8	69 16.2 ¹⁰⁶	-20 52.5 ⁹²		54	39	20	6 56	8 06	22	*** ** *	***	
22	149	30.9		28.0	83 45.7 ¹⁰⁵	-21 01.6 ⁹¹		56	40	23	7 01	7 57	19	*** ** *	***	
23	164	31.1		27.1	98 15.2 ¹⁰⁵	10.5 ⁸⁹		58	40	25	06	46	15	*** ** *	***	
24	179	31.3	+10 26.2	112	44.7 ¹⁰⁵	-21 19.4 ⁸⁹		60 S	5 40	6 28	7 11	7 34	10	*** ** *	***	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 1 ^h 46 ^m 1		Mag: -3.9 PMG: 9 ^h 47 ^m			Mag: +1.0 PMG: 7 ^h 44 ^m			Mag: -2.9 PMG: 23 ^h 16 ^m			Mag: +1.1 PMG: 13 ^h 18 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	333	23.6	213	21.7	+20 13.7	243	53.6	+23 30.8	9	53.6	-15 37.0	159	53.9	+4 57.2
1	348	26.1	228	21.1	13.2	258	54.3	30.8	24	56.4	37.1	174	56.1	57.1
2	3	28.5	243	20.4	12.8	273	55.0	30.9	39	59.2	37.2	189	58.3	57.0
3	18	31.0	258	19.7	12.3	288	55.8	30.9	55	02.0	37.3	205	00.5	56.9
4	33	33.4	273	19.1	11.9	303	56.5	31.0	70	04.7	37.4	220	02.7	56.8
5	48	35.9	288	18.4	+20 11.4	318	57.2	+23 31.0	85	07.5	-15 37.5	235	04.9	+4 56.6
6	63	38.4	303	17.7	+20 10.9	333	57.9	+23 31.1	100	10.3	-15 37.6	250	07.1	+4 56.5
7	78	40.8	318	17.1	10.5	348	58.7	31.1	115	13.1	37.7	265	09.3	56.4
8	93	43.3	333	16.4	10.0	3	59.4	31.2	130	15.8	37.8	280	11.4	56.3
9	108	45.8	348	15.7	09.5	19	00.1	31.2	145	18.6	37.9	295	13.6	56.2
10	123	48.2	3	15.1	09.1	34	00.8	31.2	160	21.4	38.0	310	15.8	56.1
11	138	50.7	18	14.4	+20 08.6	49	01.6	+23 31.3	175	24.1	-15 38.1	325	18.0	+4 55.9
12	153	53.2	33	13.7	+20 08.1	64	02.3	+23 31.3	190	26.9	-15 38.2	340	20.2	+4 55.8
13	168	55.6	48	13.1	07.7	79	03.0	31.4	205	29.7	38.3	355	22.4	55.7
14	183	58.1	63	12.4	07.2	94	03.7	31.4	220	32.5	38.4	10	24.6	55.6
15	199	00.5	78	11.7	06.7	109	04.5	31.5	235	35.2	38.6	25	26.8	55.5
16	214	03.0	93	11.1	06.2	124	05.2	31.5	250	38.0	38.7	40	28.9	55.3
17	229	05.5	108	10.4	+20 05.8	139	05.9	+23 31.5	265	40.8	-15 38.8	55	31.1	+4 55.2
18	244	07.9	123	09.8	+20 05.3	154	06.7	+23 31.6	280	43.5	-15 38.9	70	33.3	+4 55.1
19	259	10.4	138	09.1	04.8	169	07.4	31.6	295	46.3	39.0	85	35.5	55.0
20	274	12.9	153	08.4	04.3	184	08.1	31.7	310	49.1	39.1	100	37.7	54.9
21	289	15.3	168	07.8	03.9	199	08.8	31.7	325	51.9	39.2	115	39.9	54.7
22	304	17.8	183	07.1	03.4	214	09.6	31.7	340	54.6	39.3	130	42.1	54.6
23	319	20.3	198	06.5	02.9	229	10.3	31.8	355	57.4	39.4	145	44.3	54.5
24	334	22.7	213	05.8	+20 02.4	244	11.0	+23 31.8	11	00.2	-15 39.5	160	46.5	+4 54.4
Dif	—		-7	-5		+7	0		+28	-1		+22	-1	

UT	SOL				LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna				
	SD: 15 ^h 8 PMG: 12 ^h 01 ^m 8				Edad: 5 ^d 6 PHE { 4 ^h : 56/2 12 ^h : 56/0 20 ^h : 55/7 PMG: 17 ^h 04 ^m R°: 52 ^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	31.3	+10	26.2	112	44.7	-21	19.4	60 N	19 21	20 08	21 10	14 11 84	19 49 23					
1	194	31.4		25.4	127	14.1		28.1	58	15	19 58	20 54	13 51 79	20 09 28					
2	209	31.6		24.5	141	43.5		36.7	56	10	50	42	35 75	26 32					
3	224	31.8		23.6	156	13.0		45.2	54	05	43	31	21 72	40 34					
4	239	32.0		22.7	170	42.3		53.5	52	19 00	36	21	13 09 70	20 52 37					
5	254	32.2	+10	21.9	185	11.7		01.8	50	18 56	19 31	20 13	12 58 68	21 03 39					
6	269	32.3	+10	21.0	199	41.0		09.9	45	18 48	19 19	19 56	12 36 65	21 27 41					
7	284	32.5		20.1	214	10.3		17.9	40	41	09	43	18 62	21 45 43					
8	299	32.7		19.3	228	39.6		25.8	35	35	19 01	32	12 03 60	22 01 45					
9	314	32.9		18.4	243	08.9		33.5	30	29	18 54	23	11 50 59	14 46					
10	329	33.0		17.5	257	38.1		41.1	20	20	43	19 09	28 56	37 49					
11	344	33.2	+10	16.6	272	07.3		48.6	10 N	18 12	18 34	18 59	11 09 54	22 58 50					
12	359	33.4	+10	15.8	286	36.5		56.0	0	18 05	18 26	18 50	10 52 51	23 16 52					
13	14	33.6		14.9	301	05.7		03.3	10 S	17 58	19	44	34 49	35 53					
14	29	33.7		14.0	315	34.9		10.4	20	50	13	38	10 15 47	23 55 55					
15	44	33.9		13.2	330	04.0		17.4	30	42	06	34	9 54 44	** ** *					
16	59	34.1		12.3	344	33.1		24.3	35	37	18 03	32	42 42	** ** *					
17	74	34.3	+10	11.4	359	02.2		31.1	40	17 31	17 59	18 30	9 27 40	** ** *					
18	89	34.5	+10	10.5	13	31.3		37.7	45	17 25	17 55	18 29	9 10 38	0 00 68					
19	104	34.6		09.7	28	00.3		44.2	50	18	51	28	8 49 34	20 71					
20	119	34.8		08.8	42	29.4		50.6	52	14	49	28	39 32	29 74					
21	134	35.0		07.9	56	58.4		56.8	54	10	46	28	28 30	40 76					
22	149	35.2		07.0	71	27.4		03.0	56	06	44	27	16 26	0 52 79					
23	164	35.4		06.2	85	56.4		09.0	58	17 01	42	27	8 01 23	1 06 83					
24	179	35.5	+10	05.3	100	25.3		14.8	60 S	16 56	17 39	18 27	7 44 18	1 23 88					
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 1 ^h 42 ^m 2		Mag: -3.9 PMG: 9 ^h 48 ^m			Mag: +1.0 PMG: 7 ^h 43 ^m			Mag: -2.9 PMG: 23 ^h 12 ^m			Mag: +1.1 PMG: 13 ^h 15 ^m							
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'					
0	334	22.7	213	05.8	+20	02.4	244	11.0	+23	31.8	11	00.2	-15	39.5	160	46.5	+4	54.4	
1	349	25.2	228	05.1		01.9	259	11.8		31.9	26	02.9		39.6	175	48.6		54.3	
2	4	27.7	243	04.5		01.4	274	12.5		31.9	41	05.7		39.7	190	50.8		54.1	
3	19	30.1	258	03.8		01.0	289	13.2		31.9	56	08.5		39.8	205	53.0		54.0	
4	34	32.6	273	03.1	+20	00.5	304	13.9		32.0	71	11.3		39.9	220	55.2		53.9	
5	49	35.0	288	02.5	+20	00.0	319	14.7	+23	32.0	86	14.0	-15	40.0	235	57.4	+4	53.8	
6	64	37.5	303	01.8	+19	59.5	334	15.4	+23	32.0	101	16.8	-15	40.1	250	59.6	+4	53.7	
7	79	40.0	318	01.2		59.0	349	16.1		32.1	116	19.6		40.2	266	01.8		53.5	
8	94	42.4	333	00.5		58.5	4	16.9		32.1	131	22.3		40.3	281	04.0		53.4	
9	109	44.9	347	59.8		58.0	19	17.6		32.2	146	25.1		40.4	296	06.1		53.3	
10	124	47.4	2	59.2		57.5	34	18.3		32.2	161	27.9		40.5	311	08.3		53.2	
11	139	49.8	17	58.5	+19	57.1	49	19.1	+23	32.2	176	30.6	-15	40.6	326	10.5	+4	53.1	
12	154	52.3	32	57.9	+19	56.6	64	19.8	+23	32.3	191	33.4	-15	40.7	341	12.7	+4	52.9	
13	169	54.8	47	57.2		56.1	79	20.5		32.3	206	36.2		40.8	356	14.9		52.8	
14	184	57.2	62	56.5		55.6	94	21.2		32.3	221	38.9		40.9	11	17.1		52.7	
15	199	59.7	77	55.9		55.1	109	22.0		32.4	236	41.7		41.0	26	19.3		52.6	
16	215	02.2	92	55.2		54.6	124	22.7		32.4	251	44.5		41.1	41	21.4		52.5	
17	230	04.6	107	54.6	+19	54.1	139	23.4	+23	32.4	266	47.3	-15	41.2	56	23.6	+4	52.3	
18	245	07.1	122	53.9	+19	53.6	154	24.2	+23	32.5	281	50.0	-15	41.3	71	25.8	+4	52.2	
19	260	09.5	137	53.3		53.1	169	24.9		32.5	296	52.8		41.4	86	28.0		52.1	
20	275	12.0	152	52.6		52.6	184	25.6		32.5	311	55.6		41.5	101	30.2		52.0	
21	290	14.5	167	51.9		52.1	199	26.4		32.6	326	58.3		41.6	116	32.4		51.9	
22	305	16.9	182	51.3		51.6	214	27.1		32.6	342	01.1		41.7	131	34.6		51.7	
23	320	19.4	197	50.6		51.1	229	27.8		32.6	357	03.9		41.8	146	36.8		51.6	
24	335	21.9	212	50.0	+19	50.6	244	28.6	+23	32.7	12	06.6	-15	41.9	161	38.9	+4	51.5	
Dif	—		-7			-5	+7			0	+28		-1		+22			-1	

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8 PMG: 12 ^h 01 ^m 5			Edad: 6 ^d 6 SD: 15 ^h 1 PMG: 17 ^h 56 ^m	PHE { 4 ^h : 55 ^s 5 12 ^h : 55 ^s 3 20 ^h : 55 ^s 1 Rº: 51 ^m										
	hG ☉	Dec				hG ☾		Dif	Dec		Dif	Náutico	Civil	Hora	Rº
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	179	35.5	+10 05.3	100	25.3	-24 14.8	58	60 N	2 54	3 57	4 43	15 35	66	20 12	41
1	194	35.7	04.4	114	54.3	20.6	58	58	3 10	4 06	49	15 10	63	37	44
2	209	35.9	03.5	129	23.2	26.2	56	56	22	14	55	14 50	62	20 58	45
3	224	36.1	02.7	143	52.1	31.7	55	54	33	21	4 59	33 61	21 14	4	4
4	239	36.3	01.8	158	21.0	37.0	53	52	43	28	5 04	19 59	29	29	47
5	254	36.4	+10 00.9	172	49.9	-24 42.2	52	50	3 51	4 33	5 08	14 06	59	21 42	47
6	269	36.6	+10 00.0	187	18.8	-24 47.3	51	45	4 08	4 45	5 16	13 41	57	22 08	48
7	284	36.8	+9 59.2	201	47.7	52.3	50	40	21	4 55	23	20 57		28	50
8	299	37.0	58.3	216	16.5	-24 57.1	48	35	32	5 03	29	13 03	56	22 46	49
9	314	37.2	57.4	230	45.4	-25 01.8	47	30	41	10	34	12 49	55	23 00	51
10	329	37.3	56.5	245	14.2	06.4	46	20	4 54	21	43	24 54		26	51
11	344	37.5	+9 55.6	259	43.0	-25 10.8	44	10 N	5 05	5 30	5 51	12 03	53	23 48	51
12	359	37.7	+9 54.8	274	11.8	-25 15.2	44	0	5 13	5 37	5 58	11 43	52	***	***
13	14	37.9	53.9	288	40.6	19.3	41	10 S	19	44	6 05	23 51		***	***
14	29	38.1	53.0	303	09.4	23.4	41	20	25	50	13	11 02	50	***	***
15	44	38.2	52.1	317	38.2	27.3	39	30	29	5 57	21	10 38	48	0 19	57
16	59	38.4	51.2	332	07.0	31.1	38	35	31	6 00	26	24 47		33	58
17	74	38.6	+9 50.4	346	35.8	-25 34.7	36	40	5 32	6 04	6 31	10 07	46	0 48	60
18	89	38.8	+9 49.5	1	04.6	-25 38.3	36	45	5 34	6 08	6 37	9 48	44	1 08	61
19	104	39.0	48.6	15	33.3	41.7	34	50	34	12	45	23 43		31	64
20	119	39.2	47.7	30	02.1	44.9	32	52	35	14	48	9 11	42	43	65
21	134	39.3	46.8	44	30.9	48.0	31	54	35	16	52	8 58	40	1 56	67
22	149	39.5	46.0	58	59.6	51.0	30	56	35	18	6 56	42 39		2 11	69
23	164	39.7	45.1	73	28.4	53.9	29	58	35	20	7 00	24 36		29	72
24	179	39.9	+9 44.2	87	57.2	-25 56.6	27	60 S	5 35	6 23	7 05	8 02	31	2 51	76

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 1 ^h 38 ^m 3		Mag: -3.9 PMG: 9 ^h 49 ^m		Mag: +1.0 PMG: 7 ^h 42 ^m		Mag: -2.9 PMG: 23 ^h 07 ^m		Mag: +1.1 PMG: 13 ^h 11 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	335	21.9	212	50.0	244	28.6	12	06.6	161	38.9
1	350	24.3	227	49.3	259	29.3	-15	41.9	176	41.1
2	5	26.8	242	48.7	274	30.0		42.0	191	43.3
3	20	29.3	257	48.0	289	30.8		42.1	206	45.5
4	35	31.7	272	47.3	304	31.5		42.2	221	47.7
5	50	34.2	287	46.7	319	32.2		42.3	236	49.9
6	65	36.7	302	46.0	334	33.0	-15	42.4	251	52.1
7	80	39.1	317	45.4	349	33.7		42.5	266	54.3
8	95	41.6	332	44.7	364	34.5		42.6	281	56.4
9	110	44.0	347	44.1	379	35.2		42.7	296	58.6
10	125	46.5	362	43.4	394	35.9		42.8	311	60.8
11	140	49.0	377	42.8	409	36.7	-15	42.9	326	63.0
12	155	51.4	392	42.1	424	37.4		43.0	341	65.2
13	170	53.9	407	41.4	439	38.1	-15	43.1	356	67.4
14	185	56.4	422	40.8	454	38.8		43.2	371	69.6
15	200	58.8	437	40.1	469	39.5		43.3	386	71.8
16	216	01.3	452	39.5	484	40.2		43.4	401	74.0
17	231	03.8	467	38.8	499	41.0	-15	43.5	416	76.2
18	246	06.2	482	38.2	514	41.8		43.6	431	78.4
19	261	08.7	497	37.5	529	42.6	-15	43.7	446	80.6
20	276	11.1	512	36.9	544	43.3		43.8	461	82.8
21	291	13.6	527	36.2	559	44.0		43.9	476	85.0
22	306	16.1	542	35.6	574	44.8		44.0	491	87.2
23	321	18.5	557	34.9	589	45.5		44.1	506	89.4
24	336	21.0	572	34.3	604	46.2	-15	44.2	521	91.6
Dif	—		-7	-5	+7	0	+28	-1	+22	-1

UT	SOL		 LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15/8 PMG: 12 ^h 01 ^m 2		Edad: 7 ^d 6 PHE { 4 ^h : 54/9 12 ^h : 54/8 20 ^h : 54/6 R°: 51 ^m SD: 15/0 PMG: 18 ^h 47 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	h m	h m
0	179	39.9	+9 44.2	87	57.2	-25 56.6	26	60 N	19 15	20 01	21 02	16 41 43	20 53 63	
1	194	40.1		102	25.9	-25 59.2	26	58	10	19 52	20 47	16 13 45	21 21 60	
2	209	40.3		116	54.7	-26 01.7	25	56	05	45	35	15 52 46	21 43 59	
3	224	40.4		131	23.5	04.0	23	54	19 00	38	25	34 47	22 01 58	
4	239	40.6		145	52.3	06.2	22	52	18 56	32	16	18 48	16 57	
5	254	40.8	+9 39.8	160	21.0	-26 08.3	21	50	18 52	19 26	20 08	15 05 48	22 29 57	
6	269	41.0	+9 38.9	174	49.8	-26 10.3	20	45	18 44	19 15	19 52	14 38 49	22 56 56	
7	284	41.2		189	18.6	12.1	18	40	38	19 06	39	14 17 49	23 18 54	
8	299	41.4		203	47.4	13.7	16	35	32	18 58	29	13 59 50	35 54	
9	314	41.6		218	16.2	15.3	16	30	27	52	20	44 50	23 51 53	
10	329	41.7		232	45.0	16.7	14	20	19	41	19 07	13 18 50	** ** *	
11	344	41.9	+9 34.5	247	13.9	-26 18.0	13	10 N	18 11	18 33	18 57	12 56 50	** ** *	
12	359	42.1	+9 33.6	261	42.7	-26 19.1	11	0	18 04	18 25	18 50	12 35 51	0 08 52	
13	14	42.3		276	11.5	20.2	11	10 S	17 58	19	44	12 14 51	28 52	
14	29	42.5		290	40.4	21.0	8	20	51	13	39	11 52 51	0 50 53	
15	44	42.7		305	09.3	21.8	8	30	43	07	35	26 52	1 16 52	
16	59	42.9		319	38.2	22.4	6	35	38	04	33	11 11 52	31 53	
17	74	43.0	+9 29.2	334	07.1	-26 22.9	5	40	17 33	18 01	18 32	10 53 52	1 48 53	
18	89	43.2	+9 28.3	348	36.0	-26 23.3	4	45	17 28	17 57	18 31	10 32 53	2 09 53	
19	104	43.4		3	04.9	23.5	2	50	21	53	31	10 06 52	35 54	
20	119	43.6		17	33.9	23.6	1	52	17	52	31	9 53 52	2 48 54	
21	134	43.8		32	02.9	23.6	0	54	14	50	31	38 52	3 03 54	
22	149	44.0		46	31.8	23.4	0	56	10	48	31	21 52	20 54	
23	164	44.2		61	00.9	23.1	3	58	06	46	31	9 00 52	3 41 55	
24	179	44.3	+9 23.0	75	29.9	-26 22.7	4	60 S	17 01	17 43	18 32	8 33 52	4 07 55	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 1 ^h 34 ^m 3		Mag: -3.9 PMG: 9 ^h 50 ^m		Mag: +1.0 PMG: 7 ^h 41 ^m		Mag: -2.8 PMG: 23 ^h 03 ^m		Mag: +1.1 PMG: 13 ^h 08 ^m	
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'
0	336	21.0	212 34.3	+19 38.1	244 46.2	+23 33.3	13 13.0	-15 44.3	162 31.4	+4 48.6
1	351	23.5	227 33.6	37.6	259 47.0	33.4	28 15.8	44.4	177 33.6	48.5
2	6	25.9	242 33.0	37.1	274 47.7	33.4	43 18.6	44.5	192 35.8	48.4
3	21	28.4	257 32.3	36.6	289 48.5	33.4	58 21.3	44.6	207 38.0	48.3
4	36	30.9	272 31.7	36.0	304 49.2	33.4	73 24.1	44.7	222 40.2	48.2
5	51	33.3	287 31.0	+19 35.5	319 49.9	+23 33.5	88 26.9	-15 44.8	237 42.3	+4 48.0
6	66	35.8	302 30.4	+19 35.0	334 50.7	+23 33.5	103 29.6	-15 44.9	252 44.5	+4 47.9
7	81	38.3	317 29.7	34.4	349 51.4	33.5	118 32.4	45.0	267 46.7	47.8
8	96	40.7	332 29.1	33.9	4 52.2	33.5	133 35.2	45.1	282 48.9	47.7
9	111	43.2	347 28.4	33.4	19 52.9	33.6	148 37.9	45.2	297 51.1	47.5
10	126	45.6	2 27.8	32.8	34 53.6	33.6	163 40.7	45.3	312 53.3	47.4
11	141	48.1	17 27.1	+19 32.3	49 54.4	+23 33.6	178 43.4	-15 45.4	327 55.5	+4 47.3
12	156	50.6	32 26.5	+19 31.7	64 55.1	+23 33.6	193 46.2	-15 45.5	342 57.6	+4 47.2
13	171	53.0	47 25.8	31.2	79 55.9	33.6	208 49.0	45.6	357 59.8	47.1
14	186	55.5	62 25.2	30.7	94 56.6	33.7	223 51.7	45.7	13 02.0	46.9
15	201	58.0	77 24.5	30.1	109 57.3	33.7	238 54.5	45.8	28 04.2	46.8
16	217	00.4	92 23.9	29.6	124 58.1	33.7	253 57.3	45.9	43 06.4	46.7
17	232	02.9	107 23.2	+19 29.0	139 58.8	+23 33.7	269 00.0	-15 46.0	58 08.6	+4 46.6
18	247	05.4	122 22.6	+19 28.5	154 59.6	+23 33.7	284 02.8	-15 46.1	73 10.8	+4 46.5
19	262	07.8	137 21.9	27.9	170 00.3	33.8	299 05.6	46.2	88 12.9	46.3
20	277	10.3	152 21.3	27.4	185 01.1	33.8	314 08.3	46.3	103 15.1	46.2
21	292	12.8	167 20.6	26.8	200 01.8	33.8	329 11.1	46.4	118 17.3	46.1
22	307	15.2	182 20.0	26.3	215 02.5	33.8	344 13.8	46.5	133 19.5	46.0
23	322	17.7	197 19.3	25.7	230 03.3	33.8	359 16.6	46.6	148 21.7	45.9
24	337	20.1	212 18.7	+19 25.2	245 04.0	+23 33.8	14 19.4	-15 46.7	163 23.9	+4 45.7
Dif	—	—	-6	-5	+7	0	+28	-1	+22	-1

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15/8 PMG: 12 ^h 00 ^m 9			Edad: 8 ^d 6 PHE { 4 ^h : 54/5 12 ^h : 54/4 20 ^h : 54/3 R°: 50 ^m SD: 14/9 PMG: 19 ^h 38 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	179	44.3	+9 23.0	75	29.9	-26 22.7	5	60 N	3 01	4 02	4 48	17 24	25	21 56 78
1	194	44.5	22.1	89	58.9 ¹⁰⁰	22.2	5	58	16	11	54	16 58	30	22 21 73
2	209	44.7	21.2	104	28.0 ¹⁰¹	21.5	7	56	28	18	4 58	38	32	42 69
3	224	44.9	20.3	118	57.1 ¹⁰¹	20.7	8	54	38	25	5 03	21	34	22 59 66
4	239	45.1	19.4	133	26.2 ¹⁰¹	19.8	9	52	47	31	07	16 06	37	23 13 65
5	254	45.3	+9 18.5	147	55.4 ¹⁰²	-26 18.7	11	50	3 55	4 37	5 11	15 53	38	23 26 63
6	269	45.5	+9 17.6	162	24.6 ¹⁰²	-26 17.5	12	45	4 11	4 48	5 18	15 27	41	23 52 60
7	284	45.7	16.7	176	53.8 ¹⁰²	16.2	13	40	23	4 57	25	15 06	43	** ** *
8	299	45.9	15.8	191	23.0 ¹⁰²	14.8	14	35	34	5 04	30	14 49	44	** ** *
9	314	46.0	15.0	205	52.3 ¹⁰³	13.2	16	30	42	11	35	34	45	** ** *
10	329	46.2	14.1	220	21.6 ¹⁰³	11.5	17	20	4 55	21	44	14 08	47	0 17 52
11	344	46.4	+9 13.2	234	50.9 ¹⁰³	-26 09.7	18	10 N	5 05	5 30	5 51	13 46	49	0 39 51
12	359	46.6	+9 12.3	249	20.2 ¹⁰³	-26 07.8	19	0	5 12	5 37	5 58	13 26	50	1 00 50
13	14	46.8	11.4	263	49.6 ¹⁰⁴	05.7	21	10 S	18	43	6 04	13 05	52	20 50
14	29	47.0	10.5	278	19.0 ¹⁰⁴	03.5	22	20	23	49	11	12 43	53	1 43 48
15	44	47.2	09.6	292	48.5 ¹⁰⁵	-26 01.2	23	30	27	55	19	18	54	2 08 48
16	59	47.4	08.7	307	18.0 ¹⁰⁵	-25 58.8	24	35	28	5 58	23	12 03	55	24 46
17	74	47.6	+9 07.8	321	47.5 ¹⁰⁵	-25 56.2	26	40	5 29	6 01	6 28	11 45	57	2 41 46
18	89	47.8	+9 06.9	336	17.0 ¹⁰⁵	-25 53.5	27	45	5 30	6 04	6 34	11 25	58	3 02 45
19	104	47.9	06.0	350	46.6 ¹⁰⁶	50.7	28	50	30	08	41	10 58	60	29 43
20	119	48.1	05.1	5	16.2 ¹⁰⁶	47.8	29	52	30	10	44	45	62	42 42
21	134	48.3	04.2	19	45.9 ¹⁰⁷	44.7	31	54	30	11	47	30	63	3 57 41
22	149	48.5	03.4	34	15.6 ¹⁰⁷	41.5	32	56	30	13	51	10 13	65	4 14 40
23	164	48.7	02.5	48	45.3 ¹⁰⁷	38.2	33	58	30	15	6 55	9 52	67	4 36 36
24	179	48.9	+9 01.6	63	15.1 ¹⁰⁸	-25 34.8	34	60 S	5 29	6 17	7 00	9 25	71	5 02 34

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 1 ^h 30 ^m 4		Mag: -3.9 PMG: 9 ^h 51 ^m		Mag: +1.0 PMG: 7 ^h 39 ^m		Mag: -2.8 PMG: 22 ^h 58 ^m		Mag: +1.1 PMG: 13 ^h 05 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	337	20.1	212	18.7	+19 25.2	245	04.0	+23 33.8	14	19.4	-15 46.7	163	23.9	+4 45.7
1	352	22.6	227	18.0	24.6	260	04.8	33.9	29	22.1	46.8	178	26.1	45.6
2	7	25.1	242	17.4	24.1	275	05.5	33.9	44	24.9	46.9	193	28.2	45.5
3	22	27.5	257	16.7	23.5	290	06.3	33.9	59	27.7	47.0	208	30.4	45.4
4	37	30.0	272	16.1	23.0	305	07.0	33.9	74	30.4	47.1	223	32.6	45.3
5	52	32.5	287	15.5	+19 22.4	320	07.8	+23 33.9	89	33.2	-15 47.2	238	34.8	+4 45.1
6	67	34.9	302	14.8	+19 21.9	335	08.5	+23 33.9	104	35.9	-15 47.2	253	37.0	+4 45.0
7	82	37.4	317	14.2	21.3	350	09.2	34.0	119	38.7	47.3	268	39.2	44.9
8	97	39.9	332	13.5	20.7	5	10.0	34.0	134	41.5	47.4	283	41.3	44.8
9	112	42.3	347	12.9	20.2	20	10.7	34.0	149	44.2	47.5	298	43.5	44.7
10	127	44.8	2	12.2	19.6	35	11.5	34.0	164	47.0	47.6	313	45.7	44.5
11	142	47.3	17	11.6	+19 19.1	50	12.2	+23 34.0	179	49.7	-15 47.7	328	47.9	+4 44.4
12	157	49.7	32	10.9	+19 18.5	65	13.0	+23 34.0	194	52.5	-15 47.8	343	50.1	+4 44.3
13	172	52.2	47	10.3	17.9	80	13.7	34.0	209	55.3	47.9	358	52.3	44.2
14	187	54.6	62	09.7	17.4	95	14.5	34.1	224	58.0	48.0	13	54.5	44.1
15	202	57.1	77	09.0	16.8	110	15.2	34.1	240	00.8	48.1	28	56.6	43.9
16	217	59.6	92	08.4	16.2	125	16.0	34.1	255	03.5	48.2	43	58.8	43.8
17	233	02.0	107	07.7	+19 15.7	140	16.7	+23 34.1	270	06.3	-15 48.3	59	01.0	+4 43.7
18	248	04.5	122	07.1	+19 15.1	155	17.4	+23 34.1	285	09.1	-15 48.4	74	03.2	+4 43.6
19	263	07.0	137	06.4	14.5	170	18.2	34.1	300	11.8	48.5	89	05.4	43.5
20	278	09.4	152	05.8	14.0	185	18.9	34.1	315	14.6	48.6	104	07.6	43.3
21	293	11.9	167	05.2	13.4	200	19.7	34.1	330	17.3	48.7	119	09.7	43.2
22	308	14.4	182	04.5	12.8	215	20.4	34.2	345	20.1	48.8	134	11.9	43.1
23	323	16.8	197	03.9	12.2	230	21.2	34.2	0	22.9	48.9	149	14.1	43.0
24	338	19.3	212	03.2	+19 11.7	245	21.9	+23 34.2	15	25.6	-15 49.0	164	16.3	+4 42.9
Dif	—		-6	-6		+7	0		+28	-1		+22		-1

UT	SOL		LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15'8		Edad: 9 ^d 6	PHE { 4 ^h : 54'2 12 ^h : 54'2 20 ^h : 54'1	SD: 14'8	PMG: 20 ^h 28 ^m			R°: 47 ^m						
	PMG: 12 ^h 00 ^m 6														
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m		
0	179	48.9	+9 01.6	63	15.1	-25 34.8	35	60 N	19 09	19 55	20 54	17 49 13	23 14 84		
1	194	49.1	+9 00.7	77	44.9 ¹⁰⁸	31.3	35	58	19 04	46	40	28 18	34 79		
2	209	49.3	+8 59.8	92	14.8 ¹⁰⁹	27.6	37	56	18 59	39	29	17 10 22	23 51 76		
3	224	49.5	58.9	106	44.7 ¹⁰⁹	23.9	37	54	55	33	19	16 55 25	*** ** **		
4	239	49.7	58.0	121	14.6 ¹⁰⁹	20.0	39	52	52	27	11	43 27	*** ** **		
5	254	49.9	+8 57.1	135	44.6 ¹¹⁰	-25 15.9	41	50	18 48	19 22	20 03	16 31 29	*** ** **		
6	269	50.0	+8 56.2	150	14.6 ¹¹⁰	-25 11.8	41	45	18 41	19 11	19 48	16 08 33	*** ** **		
7	284	50.2	55.3	164	44.7 ¹¹¹	07.6	42	40	35	19 02	36	15 49 35	0 12 59		
8	299	50.4	54.4	179	14.8 ¹¹¹	-25 03.2	44	35	29	18 55	26	33 38	29 57		
9	314	50.6	53.5	193	45.0 ¹¹²	-24 58.7	45	30	25	49	18	15 19 40	0 44 55		
10	329	50.8	52.6	208	15.2 ¹¹²	54.1	46	20	17	39	19 05	14 55 43	1 09 53		
11	344	51.0	+8 51.7	222	45.4 ¹¹²	-24 49.4	47	10 N	18 10	18 31	18 56	14 35 45	1 30 51		
12	359	51.2	+8 50.8	237	15.7 ¹¹³	-24 44.6	48	0	18 04	18 25	18 49	14 16 48	1 50 49		
13	14	51.4	49.9	251	46.1 ¹¹⁴	39.7	49	10 S	17 58	19	43	13 57 50	2 10 47		
14	29	51.6	49.0	266	16.5 ¹¹⁴	34.6	51	20	51	13	39	36 53	31 45		
15	44	51.8	48.1	280	46.9 ¹¹⁴	29.5	51	30	44	08	36	13 12 56	2 56 42		
16	59	52.0	47.2	295	17.4 ¹¹⁵	24.2	53	35	40	05	35	12 58 58	3 10 41		
17	74	52.2	+8 46.3	309	47.9 ¹¹⁵	-24 18.8	54	40	17 35	18 03	18 34	12 42 60	3 27 39		
18	89	52.4	+8 45.4	324	18.5 ¹¹⁶	-24 13.3	55	45	17 30	17 59	18 34	12 23 62	3 47 37		
19	104	52.6	44.5	338	49.1 ¹¹⁶	07.7	56	50	23	56	34	11 58 66	4 12 33		
20	119	52.7	43.6	353	19.8 ¹¹⁷	-24 02.0	57	52	21	55	34	47 67	24 32		
21	134	52.9	42.7	7	50.5 ¹¹⁷	-23 56.2	58	54	17	53	34	33 70	38 29		
22	149	53.1	41.8	22	21.3 ¹¹⁸	50.3	59	56	14	51	35	11 18 72	4 54 26		
23	164	53.3	40.9	36	52.1 ¹¹⁸	44.2	61	58	10	50	35	10 59 76	5 12 24		
24	179	53.5	+8 40.0	51	23.0 ¹¹⁹	-23 38.1	61	60 S	17 05	17 48	18 36	10 36 82	5 36 18		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG		Mag: -3.9		Mag: +1.0		Mag: -2.8		Mag: +1.1	
	1 ^h 26 ^m 5	PMG: 9 ^h 52 ^m	PMG: 7 ^h 38 ^m	PMG: 22 ^h 54 ^m	PMG: 13 ^h 01 ^m					
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'
0	338	19.3	212 03.2	+19 11.7	245 21.9	+23 34.2	15 25.6	-15 49.0	164 16.3	+4 42.9
1	353	21.7	227 02.6	11.1	260 22.7	34.2	30 28.4	49.1	179 18.5	42.7
2	8	24.2	242 02.0	10.5	275 23.4	34.2	45 31.1	49.2	194 20.7	42.6
3	23	26.7	257 01.3	09.9	290 24.2	34.2	60 33.9	49.3	209 22.9	42.5
4	38	29.1	272 00.7	09.4	305 24.9	34.2	75 36.7	49.4	224 25.0	42.4
5	53	31.6	287 00.0	+19 08.8	320 25.7	+23 34.2	90 39.4	-15 49.5	239 27.2	+4 42.3
6	68	34.1	301 59.4	+19 08.2	335 26.4	+23 34.2	105 42.2	-15 49.6	254 29.4	+4 42.1
7	83	36.5	316 58.8	07.6	350 27.2	34.2	120 44.9	49.7	269 31.6	42.0
8	98	39.0	331 58.1	07.0	5 27.9	34.2	135 47.7	49.8	284 33.8	41.9
9	113	41.5	346 57.5	06.4	20 28.7	34.3	150 50.4	49.9	299 36.0	41.8
10	128	43.9	1 56.8	05.9	35 29.4	34.3	165 53.2	50.0	314 38.1	41.6
11	143	46.4	16 56.2	+19 05.3	50 30.2	+23 34.3	180 56.0	-15 50.1	329 40.3	+4 41.5
12	158	48.9	31 55.6	+19 04.7	65 30.9	+23 34.3	195 58.7	-15 50.1	344 42.5	+4 41.4
13	173	51.3	46 54.9	04.1	80 31.7	34.3	211 01.5	50.2	359 44.7	41.3
14	188	53.8	61 54.3	03.5	95 32.4	34.3	226 04.2	50.3	14 46.9	41.2
15	203	56.2	76 53.6	02.9	110 33.2	34.3	241 07.0	50.4	29 49.1	41.0
16	218	58.7	91 53.0	02.3	125 33.9	34.3	256 09.7	50.5	44 51.2	40.9
17	234	01.2	106 52.4	+19 01.8	140 34.7	+23 34.3	271 12.5	-15 50.6	59 53.4	+4 40.8
18	249	03.6	121 51.7	+19 01.2	155 35.4	+23 34.3	286 15.3	-15 50.7	74 55.6	+4 40.7
19	264	06.1	136 51.1	+19 00.6	170 36.2	34.3	301 18.0	50.8	89 57.8	40.6
20	279	08.6	151 50.5	+19 00.0	185 37.0	34.3	316 20.8	50.9	105 00.0	40.4
21	294	11.0	166 49.8	+18 59.4	200 37.7	34.3	331 23.5	51.0	120 02.2	40.3
22	309	13.5	181 49.2	58.8	215 38.5	34.3	346 26.3	51.1	135 04.3	40.2
23	324	16.0	196 48.6	58.2	230 39.2	34.3	1 29.0	51.2	150 06.5	40.1
24	339	18.4	211 47.9	+18 57.6	245 40.0	+23 34.3	16 31.8	-15 51.3	165 08.7	+4 40.0
Dif	—		-6	-6	+8	0	+28	-1	+22	-1

UT	SOL			O LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna		
	SD: 15/8 PMG: 12 ^h 00 ^m 3			Edad: 10 ^d 6 PHE { 4 ^h : 54/1 12 ^h : 54/1 20 ^h : 54/1 Rº: 45 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		Rº	Hora	Rº			
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m	h	m
0	179	53.5	+8 40.0	51	23.0	-23 38.1	63	60 N	3 08	4 07	4 53	18 02	8	***	***	***	***	
1	194	53.7		65	53.9 ¹¹⁹		31.8	58	21	16	4 58	17 46	12	***	***	***	***	
2	209	53.9		80	24.8 ¹¹⁹		25.5	56	33	23	5 02	32 16		***	***	***	***	
3	224	54.1		94	55.9 ¹²¹		19.0	54	42	29	06	20 19		0 06	72			
4	239	54.3		109	26.9 ¹²⁰		12.4	52	51	35	10	10 21		18	70			
5	254	54.5	+8 35.5	123	58.1 ¹²²	-23 05.8	66	50	3 58	4 40	5 14	17 00	24	0 29	68			
6	269	54.7	+8 34.6	138	29.2 ¹²¹	-22 59.0	68	45	4 14	4 50	5 21	16 41	27	0 52	64			
7	284	54.9		153	00.5 ¹²³		52.1	40	26	4 59	27	24 31		1 11	60			
8	299	55.1		167	31.7 ¹²²		45.2	35	35	5 06	32	16 11	33	26	58			
9	314	55.3		182	03.1 ¹²⁴		38.1	30	43	12	36	15 59	35	1 39	56			
10	329	55.5		196	34.5 ¹²⁴		30.9	20	4 56	22	44	38 40		2 02	52			
11	344	55.7	+8 30.1	211	05.9 ¹²⁴	-22 23.6	73	10 N	5 05	5 30	5 51	15 20	43	2 21	50			
12	359	55.9	+8 29.2	225	37.4 ¹²⁵	-22 16.3	75	0	5 12	5 36	5 57	15 04	45	2 39	47			
13	14	56.1		240	08.9 ¹²⁵		08.8	10 S	17	42	6 03	14 47	49	2 57	44			
14	29	56.3		254	40.5 ¹²⁶	-22 01.2	76	20	21	47	09	29 52		3 16	42			
15	44	56.5		269	12.1 ¹²⁶	-21 53.5	77	30	25	52	16	14 08	56	38	38			
16	59	56.7		283	43.8 ¹²⁷		45.8	35	26	55	20	13 56	58	3 51	36			
17	74	56.9	+8 24.7	298	15.6 ¹²⁸	-21 37.9	79	40	5 26	5 58	6 25	13 42	61	4 06	33			
18	89	57.1	+8 23.8	312	47.4 ¹²⁸	-21 30.0	79	45	5 27	6 01	6 30	13 25	64	4 24	30			
19	104	57.3		327	19.2 ¹²⁸		21.9	50	27	04	36	13 04	69	45	26			
20	119	57.5		341	51.1 ¹²⁹		13.8	52	26	05	39	12 54	71	4 56	24			
21	134	57.6		356	23.1 ¹³⁰	-21 05.5	83	54	26	07	42	43 73		5 07	22			
22	149	57.8		10	55.1 ¹³⁰	-20 57.2	83	56	25	08	46	30 77		20	19			
23	164	58.0		25	27.1 ¹³⁰		48.8	58	25	10	50	12 15	81	36	15			
24	179	58.2	+8 18.4	39	59.2 ¹³¹	-20 40.3	85	60 S	5 24	6 12	6 54	11 58	85	5 54	10			
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG 1 ^h 22 ^m 5			Mag: -3.9 PMG: 9 ^h 53 ^m			Mag: +1.0 PMG: 7 ^h 37 ^m			Mag: -2.8 PMG: 22 ^h 50 ^m			Mag: +1.1 PMG: 12 ^h 58 ^m					
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec			
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	339	18.4		211	47.9	+18 57.6	245	40.0	+23 34.3	16	31.8	-15 51.3	165	08.7	+4 40.0			
1	354	20.9		226	47.3		260	40.7		31	34.5		180	10.9		39.8		
2	9	23.4		241	46.6		275	41.5		46	37.3		195	13.1		39.7		
3	24	25.8		256	46.0		290	42.2		61	40.1		210	15.3		39.6		
4	39	28.3		271	45.4		305	43.0		76	42.8		225	17.4		39.5		
5	54	30.7		286	44.7	+18 54.6	320	43.7	+23 34.3	91	45.6	-15 51.8	240	19.6	+4 39.4			
6	69	33.2		301	44.1	+18 54.0	335	44.5	+23 34.3	106	48.3	-15 51.9	255	21.8	+4 39.2			
7	84	35.7		316	43.5		350	45.2		121	51.1		270	24.0		39.1		
8	99	38.1		331	42.8		5	46.0		136	53.8		285	26.2		39.0		
9	114	40.6		346	42.2		20	46.8		151	56.6		300	28.4		38.9		
10	129	43.1		1	41.6		35	47.5		166	59.3		315	30.5		38.7		
11	144	45.5		16	40.9	+18 51.0	50	48.3	+23 34.3	182	02.1	-15 52.3	330	32.7	+4 38.6			
12	159	48.0		31	40.3	+18 50.4	65	49.0	+23 34.3	197	04.8	-15 52.4	345	34.9	+4 38.5			
13	174	50.5		46	39.7		80	49.8		212	07.6		0	37.1		38.4		
14	189	52.9		61	39.0		95	50.5		227	10.4		15	39.3		38.3		
15	204	55.4		76	38.4		110	51.3		242	13.1		30	41.5		38.1		
16	219	57.9		91	37.8		125	52.1		257	15.9		45	43.6		38.0		
17	235	00.3		106	37.2	+18 47.3	140	52.8	+23 34.3	272	18.6	-15 52.9	60	45.8	+4 37.9			
18	250	02.8		121	36.5	+18 46.7	155	53.6	+23 34.3	287	21.4	-15 53.0	75	48.0	+4 37.8			
19	265	05.2		136	35.9		170	54.3		302	24.1		90	50.2		37.7		
20	280	07.7		151	35.3		185	55.1		317	26.9		105	52.4		37.5		
21	295	10.2		166	34.6		200	55.8		332	29.6		120	54.6		37.4		
22	310	12.6		181	34.0		215	56.6		347	32.4		135	56.7		37.3		
23	325	15.1		196	33.4		230	57.4		2	35.1		150	58.9		37.2		
24	340	17.6		211	32.7	+18 43.0	245	58.1	+23 34.3	17	37.9	-15 53.6	166	01.1	+4 37.1			
Dif	—			-6			+8			0			+28			-1		

UT	SOL		LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15:8		Edad: 11 ^d 6	PHE {	4 ^h : 54:1 12 ^h : 54:2 20 ^h : 54:2	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	PMG: 12 ^h 00 ^m 0														
	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	58.2	+8	18.4	39	59.2	-20 40.3	60 N	19 03	19 48	20 46	18 10	5	0 38 85	
1	194	58.4		17.5	54	31.4 ¹³²	31.7 ⁸⁶	58	18 59	40	33	17 58	9	0 53 81	
2	209	58.6		16.6	69	03.6 ¹³²	23.0 ⁸⁷	56	54	34	23	48	12	1 07 77	
3	224	58.8		15.6	83	35.8 ¹³²	14.2 ⁸⁸	54	50	28	13	39	14	18 74	
4	239	59.0		14.7	98	08.2 ¹³⁴	-20 05.4 ⁸⁸	52	47	22	20 05	31	17	28 71	
5	254	59.2	+8	13.8	112	40.5 ¹³³	-19 56.4 ⁹⁰	50	18 44	19 17	19 58	17 24	18	1 37 69	
6	269	59.4	+8	12.9	127	12.9 ¹³⁴	-19 47.4 ⁹⁰	45	18 37	19 07	19 44	17 08	23	1 56 64	
7	284	59.6		12.0	141	45.4 ¹³⁵	38.3 ⁹¹	40	31	18 59	32	16 55	27	2 11 61	
8	299	59.8		11.1	156	17.9 ¹³⁵	29.0 ⁹³	35	27	52	23	44	30	24 58	
9	315	00.0		10.2	170	50.4 ¹³⁵	19.8 ⁹²	30	22	47	15	34	33	35 56	
10	330	00.2		09.3	185	23.0 ¹³⁶	10.4 ⁹⁴	20	15	38	19 04	18	36	2 54 52	
11	345	00.4	+8	08.4	199	55.7 ¹³⁷	-19 00.9 ⁹⁵	10 N	18 09	18 30	18 55	16 03	40	3 11 48	
12	0	00.6	+8	07.5	214	28.4 ¹³⁷	-18 51.4 ⁹⁵	0	18 03	18 24	18 48	15 49	44	3 26 45	
13	15	00.8		06.6	229	01.2 ¹³⁸	41.8 ⁹⁶	10 S	17 58	19	43	36	47	41 42	
14	30	01.0		05.7	243	34.0 ¹³⁸	32.1 ⁹⁷	20	52	14	40	21	51	3 58 37	
15	45	01.2		04.8	258	06.8 ¹³⁸	22.3 ⁹⁸	30	45	09	37	15 04	55	4 16 34	
16	60	01.4		03.8	272	39.7 ¹³⁹	12.4 ⁹⁹	35	41	07	36	14 54	58	27 31	
17	75	01.6	+8	02.9	287	12.6 ¹³⁹	-18 02.5 ⁹⁹	40	17 37	18 04	18 36	14 43	61	4 39 29	
18	90	01.8	+8	02.0	301	45.6 ¹⁴⁰	-17 52.5 ¹⁰⁰	45	17 32	18 02	18 36	14 29	65	4 54 25	
19	105	02.0		01.1	316	18.7 ¹⁴¹	42.4 ¹⁰¹	50	26	17 59	36	13	69	5 11 21	
20	120	02.2	+8	00.2	330	51.7 ¹⁴⁰	32.2 ¹⁰²	52	24	58	37	14 05	72	20 18	
21	135	02.4	+7	59.3	345	24.9 ¹⁴²	22.0 ¹⁰²	54	21	57	37	13 56	74	29 16	
22	150	02.6		58.4	359	58.0 ¹⁴¹	11.7 ¹⁰³	56	18	55	38	47	77	39 14	
23	165	02.8		57.5	14	31.3 ¹⁴³	-17 01.3 ¹⁰⁴	58	14	54	39	36	80	5 51 10	
24	180	03.0	+7	56.6	29	04.5 ¹⁴²	-16 50.8 ¹⁰⁵	60 S	17 10	17 52	18 40	13 23	84	6 04 7	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 1 ^h 18 ^m 6		Mag: -3.9 PMG: 9 ^h 54 ^m		Mag: +1.0 PMG: 7 ^h 36 ^m		Mag: -2.8 PMG: 22 ^h 45 ^m		Mag: +1.1 PMG: 12 ^h 54 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	340	17.6	211	32.7	+18 43.0	245	58.1	+23 34.3	17	37.9	-15 53.6	166	01.1	+4 37.1
1	355	20.0	226	32.1	42.4	260	58.9	34.3	32	40.6	53.6	181	03.3	36.9
2	10	22.5	241	31.5	41.8	275	59.6	34.3	47	43.4	53.7	196	05.5	36.8
3	25	25.0	256	30.9	41.1	291	00.4	34.3	62	46.1	53.8	211	07.7	36.7
4	40	27.4	271	30.2	40.5	306	01.2	34.3	77	48.9	53.9	226	09.8	36.6
5	55	29.9	286	29.6	+18 39.9	321	01.9	+23 34.3	92	51.6	-15 54.0	241	12.0	+4 36.4
6	70	32.3	301	29.0	+18 39.3	336	02.7	+23 34.3	107	54.4	-15 54.1	256	14.2	+4 36.3
7	85	34.8	316	28.3	38.6	351	03.4	34.3	122	57.1	54.2	271	16.4	36.2
8	100	37.3	331	27.7	38.0	6	04.2	34.3	137	59.9	54.3	286	18.6	36.1
9	115	39.7	346	27.1	37.4	21	05.0	34.3	153	02.6	54.4	301	20.8	36.0
10	130	42.2	1	26.5	36.7	36	05.7	34.3	168	05.4	54.5	316	22.9	35.8
11	145	44.7	16	25.8	+18 36.1	51	06.5	+23 34.3	183	08.1	-15 54.6	331	25.1	+4 35.7
12	160	47.1	31	25.2	+18 35.5	66	07.2	+23 34.3	198	10.9	-15 54.7	346	27.3	+4 35.6
13	175	49.6	46	24.6	34.9	81	08.0	34.2	213	13.6	54.8	1	29.5	35.5
14	190	52.1	61	24.0	34.2	96	08.8	34.2	228	16.4	54.9	16	31.7	35.4
15	205	54.5	76	23.3	33.6	111	09.5	34.2	243	19.1	54.9	31	33.9	35.2
16	220	57.0	91	22.7	33.0	126	10.3	34.2	258	21.9	55.0	46	36.0	35.1
17	235	59.5	106	22.1	+18 32.3	141	11.1	+23 34.2	273	24.6	-15 55.1	61	38.2	+4 35.0
18	251	01.9	121	21.5	+18 31.7	156	11.8	+23 34.2	288	27.4	-15 55.2	76	40.4	+4 34.9
19	266	04.4	136	20.8	31.1	171	12.6	34.2	303	30.1	55.3	91	42.6	34.8
20	281	06.8	151	20.2	30.4	186	13.3	34.2	318	32.9	55.4	106	44.8	34.6
21	296	09.3	166	19.6	29.8	201	14.1	34.2	333	35.6	55.5	121	46.9	34.5
22	311	11.8	181	19.0	29.1	216	14.9	34.2	348	38.4	55.6	136	49.1	34.4
23	326	14.2	196	18.3	28.5	231	15.6	34.2	3	41.1	55.7	151	51.3	34.3
24	341	16.7	211	17.7	+18 27.9	246	16.4	+23 34.1	18	43.9	-15 55.8	166	53.5	+4 34.1
Dif	—		-6		-6	+8		0	+27		-1	+22		-

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'9 PMG: 11 ^h 59 ^m 6			Edad: 12 ^d 6 PHE { 4 ^h : 54'3 12 ^h : 54'4 20 ^h : 54'4 R°: 43 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	03.0	+7	56.6	29	04.5	-16	50.8	60 N	3	15	4	13	4	57	18	15
1	195	03.2		55.7	43	37.8 ¹⁴³		40.3 ¹⁰⁵	58	27	20	5	02		07	6	14
2	210	03.4		54.7	58	11.2 ¹⁴⁴		29.7 ¹⁰⁶	56	38	27		06	18	00	9	24
3	225	03.6		53.8	72	44.5 ¹⁴³		19.0 ¹⁰⁷	54	47	33		10	17	53	12	32
4	240	03.8		52.9	87	18.0 ¹⁴⁵	-16	08.2 ¹⁰⁸	52	3	55	38	13		48	14	39
5	255	04.0	+7	52.0	101	51.4 ¹⁴⁴	-15	57.4 ¹⁰⁸	50	4	02	4	43	5	17	17	42
6	270	04.2	+7	51.1	116	25.0 ¹⁴⁶	-15	46.5 ¹⁰⁹	45	4	17	4	53	5	23	17	31
7	285	04.4		50.2	130	58.5 ¹⁴⁵		35.6 ¹⁰⁹	40	28	5	01	29		22	24	12
8	300	04.6		49.3	145	32.1 ¹⁴⁶		24.6 ¹¹⁰	35	37		08	33		14	27	22
9	315	04.9		48.4	160	05.7 ¹⁴⁶		13.5 ¹¹¹	30	45	13		38	17	07	29	31
10	330	05.1		47.4	174	39.4 ¹⁴⁷	-15	02.3 ¹¹²	20	4	56	22	45	16	54	35	46
11	345	05.3	+7	46.5	189	13.1 ¹⁴⁷	-14	51.1 ¹¹²	10 N	5	05	5	30	5	51	16	43
12	0	05.5	+7	45.6	203	46.9 ¹⁴⁸	-14	39.8 ¹¹³	0	5	11	5	35	5	56	16	33
13	15	05.7		44.7	218	20.7 ¹⁴⁸		28.5 ¹¹³	10 S	16		41	6	02	23	46	23
14	30	05.9		43.8	232	54.5 ¹⁴⁸		17.1 ¹¹⁴	20	20	45		08	16	12	50	35
15	45	06.1		42.9	247	28.3 ¹⁴⁸	-14	05.6 ¹¹⁵	30	22	50		14	15	59	55	50
16	60	06.3		42.0	262	02.2 ¹⁴⁹	-13	54.1 ¹¹⁵	35	23	52		18		52	58	4
17	75	06.5	+7	41.0	276	36.2 ¹⁵⁰	-13	42.5 ¹¹⁶	40	5	23	5	55	6	22	15	44
18	90	06.7	+7	40.1	291	10.1 ¹⁴⁹	-13	30.9 ¹¹⁶	45	5	23	5	57	6	27	15	34
19	105	06.9		39.2	305	44.1 ¹⁵⁰		19.2 ¹¹⁷	50	22	6	00	32		22	69	32
20	120	07.1		38.3	320	18.2 ¹⁵¹	-13	07.4 ¹¹⁸	52	22		01	35		17	71	38
21	135	07.3		37.4	334	52.2 ¹⁵⁰	-12	55.6 ¹¹⁸	54	21		02	38		10	74	45
22	150	07.5		36.5	349	26.3 ¹⁵¹		43.7 ¹¹⁹	56	20		03	41	15	04	76	5
23	165	07.7		35.6	4	00.4 ¹⁵¹		31.8 ¹¹⁹	58	19		05	44	14	56	80	6
24	180	07.9	+7	34.6	18	34.6 ¹⁵²	-12	19.8 ¹²⁰	60 S	5	18	6	06	6	48	14	47

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 1 ^h 14 ^m 7		Mag: -3.9 PMG: 9 ^h 55 ^m		Mag: +1.0 PMG: 7 ^h 35 ^m		Mag: -2.8 PMG: 22 ^h 41 ^m		Mag: +1.1 PMG: 12 ^h 51 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	341	16.7	211	17.7	+18	27.9	246	16.4	+23	34.1
1	356	19.2	226	17.1		27.2	261	17.2		34.1
2	11	21.6	241	16.5		26.6	276	17.9		34.1
3	26	24.1	256	15.8		25.9	291	18.7		34.1
4	41	26.6	271	15.2		25.3	306	19.5		34.1
5	56	29.0	286	14.6	+18	24.6	321	20.2	+23	34.1
6	71	31.5	301	14.0	+18	24.0	336	21.0	+23	34.1
7	86	34.0	316	13.4		23.3	351	21.8		34.1
8	101	36.4	331	12.7		22.7	6	22.5		34.1
9	116	38.9	346	12.1		22.0	21	23.3		34.0
10	131	41.3	1	11.5		21.4	36	24.1		34.0
11	146	43.8	16	10.9	+18	20.7	51	24.8	+23	34.0
12	161	46.3	31	10.3	+18	20.1	66	25.6	+23	34.0
13	176	48.7	46	09.6		19.4	81	26.4		34.0
14	191	51.2	61	09.0		18.8	96	27.1		34.0
15	206	53.7	76	08.4		18.1	111	27.9		34.0
16	221	56.1	91	07.8		17.5	126	28.7		33.9
17	236	58.6	106	07.2	+18	16.8	141	29.4	+23	33.9
18	252	01.1	121	06.5	+18	16.2	156	30.2	+23	33.9
19	267	03.5	136	05.9		15.5	171	31.0		33.9
20	282	06.0	151	05.3		14.8	186	31.7		33.9
21	297	08.4	166	04.7		14.2	201	32.5		33.9
22	312	10.9	181	04.1		13.5	216	33.3		33.8
23	327	13.4	196	03.5		12.9	231	34.0		33.8
24	342	15.8	211	02.8	+18	12.2	246	34.8	+23	33.8
Dif	—		-6 -7		+8 0		+27 -1		+22 -1	

UT	SOL		☉ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'9		Edad: 13 ^d 6 PHE { 4 ^h : 54'5 12 ^h : 54'6 20 ^h : 54'7											
	PMG: 11 ^h 59 ^m 3		PMG: 23 ^h 26 ^m Rº: 41 ^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	07.9	+7 34.6		18 34.6	-12 19.8	60 N	18 57	19 42	20 38	18 18 3		3 27 83	
1	195	08.1		33.7	33 08.8 ¹⁵²	-12 07.7 ¹²¹	58	53	34	27	13 6		34 80	
2	210	08.3		32.8	47 43.0 ¹⁵²	-11 55.7 ¹²⁰	56	49	28	16	09 8		40 77	
3	225	08.5		31.9	62 17.2 ¹⁵²	43.5 ¹²²	54	46	22	08	05 11		46 74	
4	240	08.7		31.0	76 51.5 ¹⁵³	31.3 ¹²²	52	42	17	20 00	18 02 13		51 71	
5	255	08.9	+7 30.1		91 25.8 ¹⁵³	-11 19.1 ¹²²	50	18 40	19 13	19 53	17 59 14		3 56 69	
6	270	09.1	+7 29.1		106 00.1 ¹⁵³	-11 06.8 ¹²³	45	18 33	19 04	19 40	17 52 19		4 05 65	
7	285	09.3		28.2	120 34.5 ¹⁵⁴	-10 54.4 ¹²⁴	40	28	18 56	29	46 23		13 61	
8	300	09.5		27.3	135 08.9 ¹⁵⁴	42.0 ¹²⁴	35	24	50	20	41 26		20 58	
9	315	09.7		26.4	149 43.3 ¹⁵⁴	29.6 ¹²⁴	30	20	44	13	36 29		26 55	
10	330	09.9		25.5	164 17.7 ¹⁵⁴	17.1 ¹²⁵	20	13	36	19 02	29 33		36 50	
11	345	10.2	+7 24.5		178 52.1 ¹⁵⁴	-10 04.5 ¹²⁶	10 N	18 08	18 29	18 54	17 22 38		4 45 46	
12	0	10.4	+7 23.6		193 26.6 ¹⁵⁵	-9 52.0 ¹²⁵	0	18 03	18 23	18 48	17 16 41		4 54 42	
13	15	10.6		22.7	208 01.1 ¹⁵⁵	39.3 ¹²⁷	10 S	17 57	19	43	09 46		5 02 38	
14	30	10.8		21.8	222 35.6 ¹⁵⁵	26.7 ¹²⁶	20	52	14	40	17 02 50		11 34	
15	45	11.0		20.9	237 10.1 ¹⁵⁵	13.9 ¹²⁸	30	46	10	38	16 54 55		21 29	
16	60	11.2		20.0	251 44.7 ¹⁵⁶	-9 01.2 ¹²⁷	35	43	08	38	50 58		27 26	
17	75	11.4	+7 19.0		266 19.3 ¹⁵⁶	-8 48.4 ¹²⁸	40	17 39	18 06	18 37	16 45 61		5 33 23	
18	90	11.6	+7 18.1		280 53.8 ¹⁵⁵	-8 35.6 ¹²⁸	45	17 35	18 04	18 38	16 39 65		5 40 20	
19	105	11.8		17.2	295 28.4 ¹⁵⁶	22.7 ¹²⁹	50	29	02	39	31 70		49 16	
20	120	12.0		16.3	310 03.1 ¹⁵⁷	-8 09.8 ¹²⁹	52	27	01	40	28 72		54 13	
21	135	12.2		15.4	324 37.7 ¹⁵⁶	-7 56.8 ¹³⁰	54	24	18 00	41	24 74		5 58 11	
22	150	12.4		14.4	339 12.3 ¹⁵⁶	43.8 ¹³⁰	56	21	17 59	42	20 77		6 03 9	
23	165	12.6		13.5	353 47.0 ¹⁵⁷	30.8 ¹³⁰	58	18	58	43	16 79		09 6	
24	180	12.8	+7 12.6		8 21.7 ¹⁵⁷	-7 17.7 ¹³¹	60 S	17 15	17 57	18 45	16 11 82		6 15 3	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 1 ^h 10 ^m 8		Mag: -3.9 PMG: 9 ^h 56 ^m		Mag: +1.0 PMG: 7 ^h 33 ^m		Mag: -2.8 PMG: 22 ^h 37 ^m		Mag: +1.1 PMG: 12 ^h 47 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	342	15.8	211 02.8	+18 12.2	246 34.8	+23 33.8	19 49.8	-15 58.0	167 45.9	+4 31.2				
1	357	18.3	226 02.2	11.5	261 35.6	33.8	34 52.5	58.0	182 48.0	31.1				
2	12	20.8	241 01.6	10.9	276 36.3	33.8	49 55.3	58.1	197 50.2	31.0				
3	27	23.2	256 01.0	10.2	291 37.1	33.8	64 58.0	58.2	212 52.4	30.9				
4	42	25.7	271 00.4	09.5	306 37.9	33.7	80 00.8	58.3	227 54.6	30.7				
5	57	28.2	285 59.8	+18 08.9	321 38.7	+23 33.7	95 03.5	-15 58.4	242 56.8	+4 30.6				
6	72	30.6	300 59.1	+18 08.2	336 39.4	+23 33.7	110 06.2	-15 58.5	257 58.9	+4 30.5				
7	87	33.1	315 58.5	07.5	351 40.2	33.7	125 09.0	58.6	273 01.1	30.4				
8	102	35.6	330 57.9	06.9	6 41.0	33.7	140 11.7	58.7	288 03.3	30.3				
9	117	38.0	345 57.3	06.2	21 41.7	33.6	155 14.5	58.8	303 05.5	30.1				
10	132	40.5	0 56.7	05.5	36 42.5	33.6	170 17.2	58.9	318 07.7	30.0				
11	147	42.9	15 56.1	+18 04.8	51 43.3	+23 33.6	185 20.0	-15 58.9	333 09.9	+4 29.9				
12	162	45.4	30 55.5	+18 04.2	66 44.1	+23 33.6	200 22.7	-15 59.0	348 12.0	+4 29.8				
13	177	47.9	45 54.9	03.5	81 44.8	33.6	215 25.4	59.1	3 14.2	29.7				
14	192	50.3	60 54.2	02.8	96 45.6	33.5	230 28.2	59.2	18 16.4	29.5				
15	207	52.8	75 53.6	02.1	111 46.4	33.5	245 30.9	59.3	33 18.6	29.4				
16	222	55.3	90 53.0	01.5	126 47.2	33.5	260 33.7	59.4	48 20.8	29.3				
17	237	57.7	105 52.4	+18 00.8	141 47.9	+23 33.5	275 36.4	-15 59.5	63 22.9	+4 29.2				
18	253	00.2	120 51.8	+18 00.1	156 48.7	+23 33.4	290 39.1	-15 59.6	78 25.1	+4 29.0				
19	268	02.7	135 51.2	+17 59.4	171 49.5	33.4	305 41.9	59.7	93 27.3	28.9				
20	283	05.1	150 50.6	58.7	186 50.3	33.4	320 44.6	59.7	108 29.5	28.8				
21	298	07.6	165 50.0	58.1	201 51.0	33.4	335 47.4	59.8	123 31.7	28.7				
22	313	10.0	180 49.3	57.4	216 51.8	33.3	350 50.1	-15 59.9	138 33.8	28.6				
23	328	12.5	195 48.7	56.7	231 52.6	33.3	5 52.8	-16 00.0	153 36.0	28.4				
24	343	15.0	210 48.1	+17 56.0	246 53.4	+23 33.3	20 55.6	-16 00.1	168 38.2	+4 28.3				
Dif	—		-6	-7	+8	0	+27	-1	+22	-1				

UT	SOL			LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'9			Edad: 14 ^d 6	PHE {	4 ^h : 54'9 12 ^h : 55'0 20 ^h : 55'1	R°: ***m		Náutico	Civil		Hora	R°	Hora	R°	
	PMG: 11 ^h 59 ^m 0															
	hG ☉	Dec		hG ☾	Dif	Dec	Dif									
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	12.8	+7 12.6	8	21.7	-7 17.7		60 N	3 21	4 18	5 02	18 21	2	4 50	83	
1	195	13.0		22	56.3 ¹⁵⁶	-7 04.6 ¹³¹		58	33	25	06	19	5	54	80	
2	210	13.2	10.7	37	31.0 ¹⁵⁷	-6 51.5 ¹³¹		56	43	31	10	17	8	4 57	77	
3	225	13.5	09.8	52	05.7 ¹⁵⁷	38.3 ¹³²		54	51	37	14	16	10	5 00	74	
4	240	13.7	08.9	66	40.5 ¹⁵⁸	25.1 ¹³²		52	3 59	42	17	15	12	02	72	
5	255	13.9	+7 08.0	81	15.2 ¹⁵⁷	-6 11.9 ¹³²		50	4 06	4 46	5 19	18 13	15	5 05	70	
6	270	14.1	+7 07.1	95	49.9 ¹⁵⁷	-5 58.6 ¹³³		45	4 19	4 55	5 26	18 11	19	5 10	65	
7	285	14.3	06.1	110	24.7 ¹⁵⁸	45.3 ¹³³		40	30	5 03	31	09	22	14	61	
8	300	14.5	05.2	124	59.4 ¹⁵⁷	32.0 ¹³³		35	39	09	35	07	25	18	58	
9	315	14.7	04.3	139	34.1 ¹⁵⁷	18.6 ¹³⁴		30	46	14	39	05	29	21	55	
10	330	14.9	03.4	154	08.9 ¹⁵⁸	-5 05.2 ¹³⁴		20	4 57	23	45	02	34	26	50	
11	345	15.1	+7 02.4	168	43.6 ¹⁵⁷	-4 51.8 ¹³⁴		10 N	5 05	5 29	5 51	18 00	37	5 31	46	
12	0	15.3	+7 01.5	183	18.4 ¹⁵⁸	-4 38.4 ¹³⁴		0	5 11	5 35	5 56	17 57	42	5 36	41	
13	15	15.5	+7 00.6	197	53.2 ¹⁵⁸	24.9 ¹³⁵		10 S	15	40	6 01	55	46	40	38	
14	30	15.7	+6 59.7	212	27.9 ¹⁵⁷	-4 11.5 ¹³⁴		20	18	44	06	52	51	45	33	
15	45	15.9	58.7	227	02.7 ¹⁵⁸	-3 57.9 ¹³⁶		30	20	48	12	49	56	50	28	
16	60	16.2	57.8	241	37.4 ¹⁵⁷	44.4 ¹³⁵		35	20	50	15	48	58	53	25	
17	75	16.4	+6 56.9	256	12.2 ¹⁵⁸	-3 30.9 ¹³⁵		40	5 20	5 52	6 19	17 46	61	5 56	23	
18	90	16.6	+6 56.0	270	47.0 ¹⁵⁸	-3 17.3 ¹³⁶		45	5 20	5 54	6 23	17 44	65	6 00	19	
19	105	16.8	55.1	285	21.7 ¹⁵⁷	-3 03.7 ¹³⁶		50	18	56	28	41	70	05	14	
20	120	17.0	54.1	299	56.4 ¹⁵⁷	-2 50.1 ¹³⁶		52	18	56	30	40	72	07	12	
21	135	17.2	53.2	314	31.2 ¹⁵⁸	36.4 ¹³⁷		54	17	57	33	38	75	09	11	
22	150	17.4	52.3	329	05.9 ¹⁵⁷	22.8 ¹³⁶		56	15	58	36	37	77	12	8	
23	165	17.6	51.3	343	40.6 ¹⁵⁷	-2 09.1 ¹³⁷		58	14	5 59	39	35	80	15	5	
24	180	17.8	+6 50.4	358	15.4 ¹⁵⁸	-1 55.4 ¹³⁷		60 S	5 12	6 00	6 42	17 33	84	6 18	2	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 1 ^h 06 ^m 8		Mag: -3.9 PMG: 9 ^h 57 ^m			Mag: +1.0 PMG: 7 ^h 32 ^m			Mag: -2.8 PMG: 22 ^h 32 ^m			Mag: +1.1 PMG: 12 ^h 44 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°
0	343	15.0	210	48.1	+17 56.0	246	53.4	+23 33.3	20	55.6	-16 00.1	168	38.2	+4 28.3		
1	358	17.4	225	47.5	55.3	261	54.1	33.3	35	58.3	00.2	183	40.4	28.2		
2	13	19.9	240	46.9	54.6	276	54.9	33.3	51	01.1	00.3	198	42.6	28.1		
3	28	22.4	255	46.3	54.0	291	55.7	33.2	66	03.8	00.4	213	44.7	28.0		
4	43	24.8	270	45.7	53.3	306	56.5	33.2	81	06.5	00.5	228	46.9	27.8		
5	58	27.3	285	45.1	+17 52.6	321	57.2	+23 33.2	96	09.3	-16 00.5	243	49.1	+4 27.7		
6	73	29.8	300	44.5	+17 51.9	336	58.0	+23 33.1	111	12.0	-16 00.6	258	51.3	+4 27.6		
7	88	32.2	315	43.9	51.2	351	58.8	33.1	126	14.8	00.7	273	53.5	27.5		
8	103	34.7	330	43.3	50.5	6	59.6	33.1	141	17.5	00.8	288	55.7	27.3		
9	118	37.2	345	42.6	49.8	22	00.3	33.1	156	20.2	00.9	303	57.8	27.2		
10	133	39.6	0	42.0	49.1	37	01.1	33.0	171	23.0	01.0	319	00.0	27.1		
11	148	42.1	15	41.4	+17 48.4	52	01.9	+23 33.0	186	25.7	-16 01.1	334	02.2	+4 27.0		
12	163	44.5	30	40.8	+17 47.7	67	02.7	+23 33.0	201	28.4	-16 01.2	349	04.4	+4 26.9		
13	178	47.0	45	40.2	47.0	82	03.5	33.0	216	31.2	01.2	4	06.6	26.7		
14	193	49.5	60	39.6	46.3	97	04.2	32.9	231	33.9	01.3	19	08.7	26.6		
15	208	51.9	75	39.0	45.6	112	05.0	32.9	246	36.7	01.4	34	10.9	26.5		
16	223	54.4	90	38.4	44.9	127	05.8	32.9	261	39.4	01.5	49	13.1	26.4		
17	238	56.9	105	37.8	+17 44.2	142	06.6	+23 32.8	276	42.1	-16 01.6	64	15.3	+4 26.2		
18	253	59.3	120	37.2	+17 43.5	157	07.3	+23 32.8	291	44.9	-16 01.7	79	17.5	+4 26.1		
19	269	01.8	135	36.6	42.8	172	08.1	32.8	306	47.6	01.8	94	19.6	26.0		
20	284	04.3	150	36.0	42.1	187	08.9	32.8	321	50.3	01.9	109	21.8	25.9		
21	299	06.7	165	35.4	41.4	202	09.7	32.7	336	53.1	01.9	124	24.0	25.8		
22	314	09.2	180	34.8	40.7	217	10.5	32.7	351	55.8	02.0	139	26.2	25.6		
23	329	11.6	195	34.2	40.0	232	11.2	32.7	6	58.5	02.1	154	28.4	25.5		
24	344	14.1	210	33.6	+17 39.3	247	12.0	+23 32.6	22	01.3	-16 02.2	169	30.5	+4 25.4		
Dif	—		-6		-7	+8		0	+27		-1	+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: 15 ^d 6 PHE { SD: 15°0 PMG: 0 ^h 07 ^m 4 ^h : 55/2 12 ^h : 55/4 20 ^h : 55/5 R°: 42 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h	m	h	m	h	m	m
0	180	17.8	+6 50.4	358	15.4	-1 55.4	60 N	18 51	19 35	20 31	18 23	3	6 13	84
1	195	18.0	49.5	12	50.1 ¹⁵⁷	41.7 ¹³⁷	58	47	28	20	24	6	14	80
2	210	18.2	48.6	27	24.8 ¹⁵⁷	28.0 ¹³⁷	56	44	22	10	25	9	14	78
3	225	18.5	47.6	41	59.5 ¹⁵⁷	14.3 ¹³⁷	54	41	17	20 02	26	11	14	75
4	240	18.7	46.7	56	34.1 ¹⁵⁶	-1 00.5 ¹³⁸	52	38	13	19 55	27	13	14	73
5	255	18.9	+6 45.8	71	08.8 ¹⁵⁷	-0 46.8 ¹³⁷	50	18 35	19 08	19 49	18 28	15	6 15	70
6	270	19.1	+6 44.9	85	43.4 ¹⁵⁶	-0 33.0 ¹³⁸	45	18 30	19 00	19 35	18 30	19	6 15	66
7	285	19.3	43.9	100	18.1 ¹⁵⁷	19.2 ¹³⁸	40	25	18 53	25	31	24	15	63
8	300	19.5	43.0	114	52.7 ¹⁵⁶	-0 05.5 ¹³⁷	35	21	47	17	32	27	16	58
9	315	19.7	42.1	129	27.3 ¹⁵⁶	+0 08.3 ¹³⁸	30	18	42	10	34	29	16	56
10	330	19.9	41.2	144	01.9 ¹⁵⁶	22.1 ¹³⁸	20	12	34	19 00	36	34	16	51
11	345	20.1	+6 40.2	158	36.4 ¹⁵⁵	+0 35.9 ¹³⁸	10 N	18 07	18 28	18 52	18 37	39	6 17	46
12	0	20.3	+6 39.3	173	11.0 ¹⁵⁶	+0 49.7 ¹³⁸	0	18 02	18 23	18 47	18 39	43	6 17	42
13	15	20.6	38.4	187	45.5 ¹⁵⁵	+1 03.6 ¹³⁹	10 S	17 57	18	43	41	47	18	38
14	30	20.8	37.4	202	20.0 ¹⁵⁵	17.4 ¹³⁸	20	53	15	40	43	51	18	34
15	45	21.0	36.5	216	54.5 ¹⁵⁵	31.2 ¹³⁸	30	47	11	39	45	56	18	29
16	60	21.2	35.6	231	29.0 ¹⁵⁵	45.0 ¹³⁸	35	44	10	39	46	60	18	26
17	75	21.4	+6 34.7	246	03.4 ¹⁵⁴	+1 58.9 ¹³⁹	40	17 41	18 08	18 39	18 47	63	6 19	22
18	90	21.6	+6 33.7	260	37.8 ¹⁵⁴	+2 12.7 ¹³⁸	45	17 37	18 06	18 40	18 49	67	6 19	19
19	105	21.8	32.8	275	12.2 ¹⁵⁴	26.5 ¹³⁸	50	32	05	42	51	72	19	15
20	120	22.0	31.9	289	46.5 ¹⁵³	40.4 ¹³⁹	52	30	04	43	52	74	19	13
21	135	22.2	30.9	304	20.9 ¹⁵⁴	+2 54.2 ¹³⁸	54	28	03	44	53	76	20	10
22	150	22.5	30.0	318	55.2 ¹⁵³	+3 08.0 ¹³⁸	56	25	03	46	54	79	20	8
23	165	22.7	29.1	333	29.4 ¹⁵²	21.8 ¹³⁸	58	22	02	47	55	83	20	5
24	180	22.9	+6 28.1	348	03.7 ¹⁵³	+3 35.6 ¹³⁸	60 S	17 19	18 01	18 49	18 57	85	6 20	3
UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO				
	PMG: 1 ^h 02 ^m 9		Mag: -3.9 PMG: 9 ^h 58 ^m		Mag: +0.9 PMG: 7 ^h 31 ^m		Mag: -2.8 PMG: 22 ^h 28 ^m			Mag: +1.1 PMG: 12 ^h 40 ^m				
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'		
0	344	14.1	210 33.6	+17 39.3	247 12.0	+23 32.6	22 01.3	-16 02.2	169 30.5	+4 25.4				
1	359	16.6	225 33.0	38.6	262 12.8	32.6	37 04.0	02.3	184 32.7	25.3				
2	14	19.0	240 32.4	37.9	277 13.6	32.6	52 06.8	02.4	199 34.9	25.2				
3	29	21.5	255 31.8	37.2	292 14.4	32.5	67 09.5	02.5	214 37.1	25.0				
4	44	24.0	270 31.2	36.5	307 15.2	32.5	82 12.2	02.5	229 39.3	24.9				
5	59	26.4	285 30.6	+17 35.8	322 15.9	+23 32.5	97 15.0	-16 02.6	244 41.4	+4 24.8				
6	74	28.9	300 30.0	+17 35.1	337 16.7	+23 32.4	112 17.7	-16 02.7	259 43.6	+4 24.7				
7	89	31.4	315 29.4	34.4	352 17.5	32.4	127 20.4	02.8	274 45.8	24.5				
8	104	33.8	330 28.8	33.6	7 18.3	32.4	142 23.2	02.9	289 48.0	24.4				
9	119	36.3	345 28.2	32.9	22 19.1	32.3	157 25.9	03.0	304 50.2	24.3				
10	134	38.8	0 27.6	32.2	37 19.9	32.3	172 28.6	03.1	319 52.3	24.2				
11	149	41.2	15 27.0	+17 31.5	52 20.6	+23 32.3	187 31.4	-16 03.1	334 54.5	+4 24.1				
12	164	43.7	30 26.4	+17 30.8	67 21.4	+23 32.2	202 34.1	-16 03.2	349 56.7	+4 23.9				
13	179	46.1	45 25.8	30.1	82 22.2	32.2	217 36.8	03.3	4 58.9	23.8				
14	194	48.6	60 25.2	29.3	97 23.0	32.2	232 39.6	03.4	20 01.1	23.7				
15	209	51.1	75 24.6	28.6	112 23.8	32.1	247 42.3	03.5	35 03.2	23.6				
16	224	53.5	90 24.0	27.9	127 24.6	32.1	262 45.0	03.6	50 05.4	23.4				
17	239	56.0	105 23.4	+17 27.2	142 25.3	+23 32.1	277 47.8	-16 03.7	65 07.6	+4 23.3				
18	254	58.5	120 22.8	+17 26.5	157 26.1	+23 32.0	292 50.5	-16 03.7	80 09.8	+4 23.2				
19	270	00.9	135 22.2	25.7	172 26.9	32.0	307 53.2	03.8	95 12.0	23.1				
20	285	03.4	150 21.6	25.0	187 27.7	32.0	322 55.9	03.9	110 14.1	23.0				
21	300	05.9	165 21.0	24.3	202 28.5	31.9	337 58.7	04.0	125 16.3	22.8				
22	315	08.3	180 20.4	23.6	217 29.3	31.9	353 01.4	04.1	140 18.5	22.7				
23	330	10.8	195 19.8	22.8	232 30.1	31.8	8 04.1	04.2	155 20.7	22.6				
24	345	13.3	210 19.2	+17 22.1	247 30.8	+23 31.8	23 06.9	-16 04.3	170 22.9	+4 22.5				
Dif	—		-6	-7	+8	0	+27	-1	+22	-1				

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 9			Edad: 16 ^d 6 PHE { 4 ^h : 55 ^m /7 12 ^h : 55 ^m /8 20 ^h : 56 ^m /0												
	PMG: 11 ^h 58 ^m 3			SD: 15 ^h 1 PMG: 0 ^h 49 ^m R°: 44 ^m												
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	'	°	h m	h m	h m	h m m	m	h m m	m
0	180	22.9	+6 28.1	348	03.7	+3 35.6	60 N	3 27	4 23	5 07	18 26	4	7 37	87		
1	195	23.1	27.2	2	37.9 ¹⁵²	+3 49.4 ¹³⁸	58	38	30	11	30	7	34	84		
2	210	23.3	26.3	17	12.0 ¹⁵¹	+4 03.2 ¹³⁸	56	47	35	14	34	10	32	80		
3	225	23.5	25.4	31	46.2 ¹⁵²	17.0 ¹³⁸	54	3 56	41	17	37	13	29	78		
4	240	23.7	24.4	46	20.3 ¹⁵¹	30.8 ¹³⁸	52	4 03	45	20	40	16	27	75		
5	255	23.9	+6 23.5	60	54.4 ¹⁵¹	+4 44.6 ¹³⁸	50	4 09	4 49	5 22	18 43	17	7 25	73		
6	270	24.2	+6 22.6	75	28.4 ¹⁵⁰	+4 58.3 ¹³⁷	45	4 22	4 58	5 28	18 49	22	7 21	68		
7	285	24.4	21.6	90	02.4 ¹⁵⁰	+5 12.1 ¹³⁸	40	32	5 05	32	55	25	18	63		
8	300	24.6	20.7	104	36.3 ¹⁴⁹	25.8 ¹³⁷	35	40	11	36	18 59	29	14	61		
9	315	24.8	19.8	119	10.3 ¹⁵⁰	39.5 ¹³⁷	30	47	16	40	19 03	32	12	57		
10	330	25.0	18.8	133	44.1 ¹⁴⁸	+5 53.2 ¹³⁷	20	4 57	23	45	10	37	07	53		
11	345	25.2	+6 17.9	148	18.0 ¹⁴⁹	+6 06.9 ¹³⁷	10 N	5 05	5 29	5 50	19 16	41	7 03	48		
12	0	25.4	+6 17.0	162	51.7 ¹⁴⁷	+6 20.6 ¹³⁷	0	5 10	5 34	5 55	19 22	45	6 59	44		
13	15	25.6	16.0	177	25.5 ¹⁴⁸	34.2 ¹³⁶	10 S	14	38	5 59	28	49	56	39		
14	30	25.9	15.1	191	59.2 ¹⁴⁷	+6 47.9 ¹³⁷	20	16	42	6 04	34	54	52	35		
15	45	26.1	14.2	206	32.9 ¹⁴⁷	+7 01.5 ¹³⁶	30	18	45	09	41	59	47	30		
16	60	26.3	13.2	221	06.5 ¹⁴⁶	15.1 ¹³⁶	35	18	47	12	46	61	44	28		
17	75	26.5	+6 12.3	235	40.0 ¹⁴⁵	+7 28.7 ¹³⁶	40	5 17	5 48	6 15	19 50	65	6 41	25		
18	90	26.7	+6 11.4	250	13.5 ¹⁴⁵	+7 42.2 ¹³⁵	45	5 16	5 50	6 19	19 56	69	6 38	21		
19	105	26.9	10.4	264	47.0 ¹⁴⁵	+7 55.7 ¹³⁵	50	14	51	24	20 03	74	34	16		
20	120	27.1	09.5	279	20.4 ¹⁴⁴	+8 09.2 ¹³⁵	52	13	52	26	06	76	32	14		
21	135	27.3	08.6	293	53.8 ¹⁴⁴	22.7 ¹³⁵	54	12	53	28	09	79	30	12		
22	150	27.6	07.6	308	27.1 ¹⁴³	36.2 ¹³⁵	56	10	53	30	13	82	28	9		
23	165	27.8	06.7	323	00.3 ¹⁴²	+8 49.6 ¹³⁴	58	09	54	33	18	85	25	7		
24	180	28.0	+6 05.8	337	33.5 ¹⁴²	+9 03.0 ¹³⁴	60 S	5 07	5 55	6 36	20 22	89	6 23	3		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO				
	PMG: 0 ^h 59 ^m 0		Mag: -3.9 PMG: 9 ^h 59 ^m		Mag: +0.9 PMG: 7 ^h 30 ^m		Mag: -2.8 PMG: 22 ^h 23 ^m		Mag: +1.1 PMG: 12 ^h 37 ^m				
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄				
h	°	'	°	°	'	°	°	'	°	°	'		
0	345	13.3	210 19.2	+17 22.1		247 30.8	+23 31.8		23 06.9	-16 04.3	170 22.9	+4 22.5	
1	0	15.7	225 18.6		21.4	262 31.6	31.8		38 09.6	04.3	185 25.0	22.4	
2	15	18.2	240 18.0		20.7	277 32.4	31.7		53 12.3	04.4	200 27.2	22.2	
3	30	20.6	255 17.4		19.9	292 33.2	31.7		68 15.1	04.5	215 29.4	22.1	
4	45	23.1	270 16.8		19.2	307 34.0	31.7		83 17.8	04.6	230 31.6	22.0	
5	60	25.6	285 16.2	+17 18.5		322 34.8	+23 31.6		98 20.5	-16 04.7	245 33.8	+4 21.9	
6	75	28.0	300 15.6	+17 17.7		337 35.6	+23 31.6		113 23.3	-16 04.8	260 35.9	+4 21.7	
7	90	30.5	315 15.0		17.0	352 36.4	31.5		128 26.0	04.8	275 38.1	21.6	
8	105	33.0	330 14.4		16.3	7 37.1	31.5		143 28.7	04.9	290 40.3	21.5	
9	120	35.4	345 13.8		15.5	22 37.9	31.5		158 31.4	05.0	305 42.5	21.4	
10	135	37.9	0 13.2		14.8	37 38.7	31.4		173 34.2	05.1	320 44.7	21.3	
11	150	40.4	15 12.6	+17 14.1		52 39.5	+23 31.4		188 36.9	-16 05.2	335 46.8	+4 21.1	
12	165	42.8	30 12.0	+17 13.3		67 40.3	+23 31.3		203 39.6	-16 05.3	350 49.0	+4 21.0	
13	180	45.3	45 11.4		12.6	82 41.1	31.3		218 42.4	05.4	5 51.2	20.9	
14	195	47.7	60 10.9		11.9	97 41.9	31.3		233 45.1	05.4	20 53.4	20.8	
15	210	50.2	75 10.3		11.1	112 42.7	31.2		248 47.8	05.5	35 55.6	20.6	
16	225	52.7	90 09.7		10.4	127 43.5	31.2		263 50.5	05.6	50 57.7	20.5	
17	240	55.1	105 09.1	+17 09.6		142 44.3	+23 31.1		278 53.3	-16 05.7	65 59.9	+4 20.4	
18	255	57.6	120 08.5	+17 08.9		157 45.0	+23 31.1		293 56.0	-16 05.8	81 02.1	+4 20.3	
19	271	00.1	135 07.9		08.1	172 45.8	31.0		308 58.7	05.9	96 04.3	20.2	
20	286	02.5	150 07.3		07.4	187 46.6	31.0		324 01.4	05.9	111 06.5	20.0	
21	301	05.0	165 06.7		06.7	202 47.4	31.0		339 04.2	06.0	126 08.6	19.9	
22	316	07.5	180 06.1		05.9	217 48.2	30.9		354 06.9	06.1	141 10.8	19.8	
23	331	09.9	195 05.5		05.2	232 49.0	30.9		9 09.6	06.2	156 13.0	19.7	
24	346	12.4	210 05.0	+17 04.4		247 49.8	+23 30.8		24 12.3	-16 06.3	171 15.2	+4 19.5	
Dif	—		-6	-7		+8	0		+27	-1		+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 0		Edad: 17 ^d 6 PHE { 4 ^h : 56.1 12 ^h : 56.3 20 ^h : 56.5 R°: 45 ^m													
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m		
0	180	28.0	+6	05.8	337	33.5	+9	03.0	60 N	18 45	19 29	20 23	18 30	6	9 04	91
1	195	28.2		04.8	352	06.7 ¹⁴²		16.3 ¹³³	58	42	22	13	37	10	8 58	86
2	210	28.4		03.9	6	39.8 ¹⁴¹		29.7 ¹³⁴	56	39	17	20 04	44	13	52	83
3	225	28.6		03.0	21	12.8 ¹⁴⁰		43.0 ¹³³	54	36	12	19 57	50	16	47	80
4	240	28.8		02.0	35	45.8 ¹⁴⁰	+9	56.2 ¹³²	52	33	08	50	18 56	18	42	78
5	255	29.1	+6	01.1	50	18.7 ¹³⁹	+10	09.5 ¹³³	50	18 31	19 04	19 44	19 00	21	8 38	75
6	270	29.3	+6	00.1	64	51.5 ¹³⁸	+10	22.6 ¹³¹	45	18 26	18 56	19 31	19 11	26	8 29	70
7	285	29.5	+5	59.2	79	24.3 ¹³⁸		35.8 ¹³²	40	22	49	22	20	30	21	66
8	300	29.7		58.3	93	57.1 ¹³⁸	+10	48.9 ¹³¹	35	18	44	14	28	33	15	63
9	315	29.9		57.3	108	29.7 ¹³⁶	+11	02.0 ¹³¹	30	15	39	19 08	35	35	09	60
10	330	30.1		56.4	123	02.3 ¹³⁶		15.0 ¹³⁰	20	10	32	18 58	47	40	8 00	54
11	345	30.3	+5	55.5	137	34.9 ¹³⁶	+11	28.0 ¹³⁰	10 N	18 05	18 27	18 51	19 57	44	7 51	51
12	0	30.6	+5	54.5	152	07.4 ¹³⁵	+11	41.0 ¹³⁰	0	18 01	18 22	18 46	20 07	48	7 43	47
13	15	30.8		53.6	166	39.8 ¹³⁴	+11	53.9 ¹²⁹	10 S	17 57	18	43	17	52	35	43
14	30	31.0		52.7	181	12.1 ¹³³	+12	06.7 ¹²⁸	20	53	15	41	28	56	27	38
15	45	31.2		51.7	195	44.4 ¹³³		19.6 ¹²⁹	30	48	12	40	40	61	17	34
16	60	31.4		50.8	210	16.6 ¹³²		32.3 ¹²⁷	35	46	11	40	47	64	12	30
17	75	31.6	+5	49.8	224	48.7 ¹³¹	+12	45.1 ¹²⁸	40	17 43	18 10	18 41	20 55	68	7 06	27
18	90	31.8	+5	48.9	239	20.8 ¹³¹	+12	57.7 ¹²⁶	45	17 39	18 09	18 43	21 05	71	6 59	23
19	105	32.1		48.0	253	52.8 ¹³⁰	+13	10.4 ¹²⁷	50	35	08	45	17	76	50	19
20	120	32.3		47.0	268	24.7 ¹²⁹		22.9 ¹²⁵	52	33	07	46	22	79	46	17
21	135	32.5		46.1	282	56.5 ¹²⁸		35.4 ¹²⁵	54	31	07	48	28	82	42	14
22	150	32.7		45.1	297	28.3 ¹²⁸	+13	47.9 ¹²⁵	56	29	06	49	35	85	37	11
23	165	32.9		44.2	312	00.0 ¹²⁷	+14	00.3 ¹²⁴	58	27	06	51	43	88	32	8
24	180	33.1	+5	43.3	326	31.6 ¹²⁶	+14	12.7 ¹²⁴	60 S	17 24	18 06	18 54	21 51	94	6 26	4

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 0 ^h 55 ^m 0		Mag: -3.9 PMG: 10 ^h 00 ^m		Mag: +0.9 PMG: 7 ^h 28 ^m		Mag: -2.8 PMG: 22 ^h 19 ^m		Mag: +1.1 PMG: 12 ^h 33 ^m	
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♏	Dec	hG ♎	Dec	
h	°	'	°	'	°	'	°	'	°	'
0	346	12.4	210 05.0	+17 04.4	247 49.8	+23 30.8	24 12.3	-16 06.3	171 15.2	+4 19.5
1	1	14.9	225 04.4	03.7	262 50.6	30.8	39 15.1	06.4	186 17.4	19.4
2	16	17.3	240 03.8	02.9	277 51.4	30.7	54 17.8	06.4	201 19.5	19.3
3	31	19.8	255 03.2	02.2	292 52.2	30.7	69 20.5	06.5	216 21.7	19.2
4	46	22.2	270 02.6	01.4	307 53.0	30.6	84 23.2	06.6	231 23.9	19.1
5	61	24.7	285 02.0	+17 00.7	322 53.8	+23 30.6	99 26.0	-16 06.7	246 26.1	+4 18.9
6	76	27.2	300 01.4	+16 59.9	337 54.6	+23 30.6	114 28.7	-16 06.8	261 28.3	+4 18.8
7	91	29.6	315 00.8	59.2	352 55.4	30.5	129 31.4	06.8	276 30.4	18.7
8	106	32.1	330 00.2	58.4	7 56.2	30.5	144 34.1	06.9	291 32.6	18.6
9	121	34.6	344 59.7	57.7	22 56.9	30.4	159 36.9	07.0	306 34.8	18.4
10	136	37.0	359 59.1	56.9	37 57.7	30.4	174 39.6	07.1	321 37.0	18.3
11	151	39.5	14 58.5	+16 56.1	52 58.5	+23 30.3	189 42.3	-16 07.2	336 39.2	+4 18.2
12	166	42.0	29 57.9	+16 55.4	67 59.3	+23 30.3	204 45.0	-16 07.3	351 41.3	+4 18.1
13	181	44.4	44 57.3	54.6	83 00.1	30.2	219 47.8	07.3	6 43.5	18.0
14	196	46.9	59 56.7	53.9	98 00.9	30.2	234 50.5	07.4	21 45.7	17.8
15	211	49.3	74 56.1	53.1	113 01.7	30.1	249 53.2	07.5	36 47.9	17.7
16	226	51.8	89 55.6	52.4	128 02.5	30.1	264 55.9	07.6	51 50.0	17.6
17	241	54.3	104 55.0	+16 51.6	143 03.3	+23 30.0	279 58.7	-16 07.7	66 52.2	+4 17.5
18	256	56.7	119 54.4	+16 50.8	158 04.1	+23 30.0	295 01.4	-16 07.7	81 54.4	+4 17.4
19	271	59.2	134 53.8	50.1	173 04.9	29.9	310 04.1	07.8	96 56.6	17.2
20	287	01.7	149 53.2	49.3	188 05.7	29.9	325 06.8	07.9	111 58.8	17.1
21	302	04.1	164 52.6	48.5	203 06.5	29.8	340 09.5	08.0	127 00.9	17.0
22	317	06.6	179 52.1	47.8	218 07.3	29.8	355 12.3	08.1	142 03.1	16.9
23	332	09.1	194 51.5	47.0	233 08.1	29.7	10 15.0	08.2	157 05.3	16.7
24	347	11.5	209 50.9	+16 46.2	248 08.9	+23 29.7	25 17.7	-16 08.2	172 07.5	+4 16.6
Dif	—	—	-6	-8	+8	0	+27	-1	+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 57 ^m 6			Edad: 18 ^d 6 PHE { 4 ^h : 56 ^m 6 12 ^h : 56 ^m 8 20 ^h : 57 ^m 0 PMG: 2 ^h 18 ^m R°: 49 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora
h	°	'	°	'	°	'	°	h	m	h	m	h	m	m
0	180	33.1	+5 43.3	326	31.6	+14 12.7	60 N	3 33	4 28	5 12	18 36	10	10 35	95
1	195	33.4		42.3	341	03.2 ¹²⁶		43	34	15	47	15	24	90
2	210	33.6		41.4	355	34.6 ¹²⁴		52	3 52	40	18	57	19	86
3	225	33.8		40.5	10	06.0 ¹²⁴		4 00	44	21	19	06	22	82
4	240	34.0		39.5	24	37.3 ¹²³		07	49	23	14	25	10	00
5	255	34.2	+5 38.6	39	08.5 ¹²²	+15 13.5 ¹²⁰	50	4 13	4 52	5 25	19	21	27	77
6	270	34.4	+5 37.6	53	39.7 ¹²²	+15 25.5 ¹²⁰	45	4 25	5 00	5 30	19	37	32	72
7	285	34.6		36.7	68	10.7 ¹²⁰		34	07	34	19	50	35	69
8	300	34.9		35.8	82	41.7 ¹²⁰		42	12	38	20	01	38	65
9	315	35.1		34.8	97	12.6 ¹¹⁹		48	17	41	10	41	9	09
10	330	35.3		33.9	111	43.4 ¹¹⁸		4 58	24	46	27	45	8	54
11	345	35.5	+5 32.9	126	14.2 ¹¹⁸	+16 24.4 ¹¹⁶	10 N	5 05	5 29	5 50	20	41	49	53
12	0	35.7	+5 32.0	140	44.8 ¹¹⁶	+16 36.0 ¹¹⁶	0	5 09	5 34	5 54	20	55	52	50
13	15	35.9		31.1	155	15.4 ¹¹⁶		13	37	5 58	21	09	55	46
14	30	36.2		30.1	169	45.9 ¹¹⁵		15	40	6 02	24	59	8	05
15	45	36.4		29.2	184	16.2 ¹¹³		15	43	07	41	63	7	51
16	60	36.6		28.2	198	46.5 ¹¹³		15	44	09	21	51	66	36
17	75	36.8	+5 27.3	213	16.8 ¹¹³	+17 32.7 ¹¹²	40	5 14	5 45	6 12	22	03	69	32
18	90	37.0	+5 26.3	227	46.9 ¹¹¹	+17 43.8 ¹¹¹	45	5 12	5 46	6 16	22	16	73	28
19	105	37.2		25.4	242	16.9 ¹¹⁰		10	47	19	33	78	09	23
20	120	37.5		24.5	256	46.8 ¹⁰⁹		09	48	21	41	80	7	03
21	135	37.7		23.5	271	16.7 ¹⁰⁹		07	48	23	22	50	83	18
22	150	37.9		22.6	285	46.5 ¹⁰⁸		05	48	25	23	00	86	16
23	165	38.1		21.6	300	16.1 ¹⁰⁶		03	48	28	11	91	40	11
24	180	38.3	+5 20.7	314	45.7 ¹⁰⁶	+18 48.8 ¹⁰⁷	60 S	5 01	5 49	6 30	23	25	96	7

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 0 ^h 51 ^m 1		Mag: -3.9 PMG: 10 ^h 01 ^m		Mag: +0.9 PMG: 7 ^h 27 ^m		Mag: -2.8 PMG: 22 ^h 15 ^m		Mag: +1.1 PMG: 12 ^h 30 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	347	11.5	209	50.9	+16 46.2	248 08.9	+23 29.7	25 17.7	-16 08.2	172 07.5	+4 16.6
1	2	14.0	224	50.3	45.5	263 09.7	29.6	40 20.4	08.3	187 09.7	16.5
2	17	16.5	239	49.7	44.7	278 10.5	29.6	55 23.1	08.4	202 11.8	16.4
3	32	18.9	254	49.2	43.9	293 11.3	29.5	70 25.9	08.5	217 14.0	16.3
4	47	21.4	269	48.6	43.2	308 12.1	29.5	85 28.6	08.6	232 16.2	16.1
5	62	23.8	284	48.0	+16 42.4	323 12.9	+23 29.4	100 31.3	-16 08.6	247 18.4	+4 16.0
6	77	26.3	299	47.4	+16 41.6	338 13.7	+23 29.4	115 34.0	-16 08.7	262 20.6	+4 15.9
7	92	28.8	314	46.8	40.8	353 14.5	29.3	130 36.7	08.8	277 22.7	15.8
8	107	31.2	329	46.2	40.1	8 15.3	29.3	145 39.5	08.9	292 24.9	15.6
9	122	33.7	344	45.7	39.3	23 16.1	29.2	160 42.2	09.0	307 27.1	15.5
10	137	36.2	359	45.1	38.5	38 16.9	29.2	175 44.9	09.0	322 29.3	15.4
11	152	38.6	14	44.5	+16 37.7	53 17.7	+23 29.1	190 47.6	-16 09.1	337 31.4	+4 15.3
12	167	41.1	29	43.9	+16 37.0	68 18.5	+23 29.1	205 50.3	-16 09.2	352 33.6	+4 15.2
13	182	43.6	44	43.4	36.2	83 19.3	29.0	220 53.1	09.3	7 35.8	15.0
14	197	46.0	59	42.8	35.4	98 20.1	28.9	235 55.8	09.4	22 38.0	14.9
15	212	48.5	74	42.2	34.6	113 20.9	28.9	250 58.5	09.4	37 40.2	14.8
16	227	50.9	89	41.6	33.8	128 21.7	28.8	266 01.2	09.5	52 42.3	14.7
17	242	53.4	104	41.0	+16 33.1	143 22.5	+23 28.8	281 03.9	-16 09.6	67 44.5	+4 14.5
18	257	55.9	119	40.5	+16 32.3	158 23.3	+23 28.7	296 06.6	-16 09.7	82 46.7	+4 14.4
19	272	58.3	134	39.9	31.5	173 24.1	28.7	311 09.4	09.8	97 48.9	14.3
20	288	00.8	149	39.3	30.7	188 24.9	28.6	326 12.1	09.8	112 51.1	14.2
21	303	03.3	164	38.7	29.9	203 25.7	28.6	341 14.8	09.9	127 53.2	14.1
22	318	05.7	179	38.2	29.1	218 26.5	28.5	356 17.5	10.0	142 55.4	13.9
23	333	08.2	194	37.6	28.4	233 27.3	28.4	11 20.2	10.1	157 57.6	13.8
24	348	10.7	209	37.0	+16 27.6	248 28.1	+23 28.4	26 22.9	-16 10.2	172 59.8	+4 13.7
Dif	—		-6		-8	+8	-1	+27	-1	+22	-1

UT	SOL		LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15°9 PMG: 11 ^h 57 ^m 3		Edad: 19 ^d 6 PHE { 4 ^h : 57/2 12 ^h : 57/3 20 ^h : 57/5 PMG: 3 ^h 07 ^m R°: 53 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	180	38.3	+5 20.7	314	45.7	+18 48.8	60 N	18 39	19 22	20 16	18 46 19	12 10 95		
1	195	38.5		329	15.2 ¹⁰⁵	+18 59.3 ¹⁰⁵	58	36	16	20 06	19 02 25	11 54 89		
2	210	38.8	18.8	343	44.6 ¹⁰⁴	+19 09.7 ¹⁰⁴	56	33	11	19 58	16 29	41 85		
3	225	39.0	17.9	358	13.9 ¹⁰³	20.0 ¹⁰³	54	31	07	51	28 32	29 82		
4	240	39.2	16.9	12	43.1 ¹⁰²	30.3 ¹⁰³	52	29	19 03	45	39 34	19 79		
5	255	39.4	+5 16.0	27	12.2 ¹⁰¹	+19 40.4 ¹⁰¹	50	18 27	18 59	19 39	19 48 37	11 10 77		
6	270	39.6	+5 15.0	41	41.2 ¹⁰⁰	+19 50.5 ¹⁰¹	45	18 22	18 52	19 27	20 09 40	10 51 72		
7	285	39.9	14.1	56	10.2 ¹⁰⁰	+20 00.4 ⁹⁹	40	19	46	18	25 43	36 68		
8	300	40.1	13.1	70	39.0 ⁹⁸	10.3 ⁹⁹	35	15	41	11	39 45	23 66		
9	315	40.3	12.2	85	07.7 ⁹⁷	20.0 ⁹⁷	30	13	37	19 05	20 51 48	10 11 64		
10	330	40.5	11.2	99	36.4 ⁹⁷	29.7 ⁹⁷	20	08	30	18 56	21 12 51	9 52 60		
11	345	40.7	+5 10.3	114	04.9 ⁹⁵	+20 39.3 ⁹⁶	10 N	18 04	18 25	18 50	21 30 54	9 35 57		
12	0	40.9	+5 09.4	128	33.4 ⁹⁵	+20 48.7 ⁹⁴	0	18 01	18 21	18 45	21 47 56	9 20 54		
13	15	41.2	08.4	143	01.7 ⁹³	+20 58.0 ⁹³	10 S	17 57	18	42	22 04 59	9 04 51		
14	30	41.4	07.5	157	30.0 ⁹³	+21 07.3 ⁹³	20	53	15	41	23 61	8 48 47		
15	45	41.6	06.5	171	58.2 ⁹²	16.4 ⁹¹	30	49	13	41	44 65	29 43		
16	60	41.8	05.6	186	26.2 ⁹⁰	25.4 ⁹⁰	35	47	12	42	22 57 66	18 41		
17	75	42.0	+5 04.6	200	54.2 ⁹⁰	+21 34.3 ⁸⁹	40	17 45	18 12	18 43	23 12 68	8 05 39		
18	90	42.2	+5 03.7	215	22.1 ⁸⁹	+21 43.1 ⁸⁸	45	17 42	18 11	18 45	23 29 71	7 50 36		
19	105	42.5	02.7	229	49.9 ⁸⁸	+21 51.8 ⁸⁷	50	38	10	48	23 51 75	32 31		
20	120	42.7	01.8	244	17.6 ⁸⁷	+22 00.4 ⁸⁶	52	37	10	49	** * *	24 28		
21	135	42.9	+5 00.8	258	45.2 ⁸⁶	08.8 ⁸⁴	54	35	10	51	** * *	14 26		
22	150	43.1	+4 59.9	273	12.6 ⁸⁴	17.2 ⁸⁴	56	33	10	53	** * *	7 04 22		
23	165	43.3	59.0	287	40.1 ⁸⁵	25.4 ⁸²	58	31	10	56	** * *	6 51 19		
24	180	43.6	+4 58.0	302	07.4 ⁸³	+22 33.5 ⁸¹	60 S	17 29	18 10	18 59	** * *	6 37 13		
UT	ARIES		VENUS		MARTE		JÚPITER				SATURNO			
	PMG: 0 ^h 47 ^m 2		Mag: -3.9 PMG: 10 ^h 02 ^m		Mag: +0.9 PMG: 7 ^h 26 ^m		Mag: -2.8 PMG: 22 ^h 10 ^m				Mag: +1.1 PMG: 12 ^h 26 ^m			
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃		Dec	hG ♎		Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'		
0	348	10.7	209	37.0	+16 27.6	248 28.1	+23 28.4	26 22.9	-16 10.2	172 59.8	+4 13.7			
1	3	13.1	224	36.4	26.8	263 29.0	28.3	41 25.7	10.2	188 01.9	13.6			
2	18	15.6	239	35.9	26.0	278 29.8	28.3	56 28.4	10.3	203 04.1	13.4			
3	33	18.1	254	35.3	25.2	293 30.6	28.2	71 31.1	10.4	218 06.3	13.3			
4	48	20.5	269	34.7	24.4	308 31.4	28.2	86 33.8	10.5	233 08.5	13.2			
5	63	23.0	284	34.1	+16 23.6	323 32.2	+23 28.1	101 36.5	-16 10.6	248 10.7	+4 13.1			
6	78	25.4	299	33.6	+16 22.8	338 33.0	+23 28.0	116 39.2	-16 10.6	263 12.8	+4 13.0			
7	93	27.9	314	33.0	22.0	353 33.8	28.0	131 41.9	10.7	278 15.0	12.8			
8	108	30.4	329	32.4	21.2	8 34.6	27.9	146 44.7	10.8	293 17.2	12.7			
9	123	32.8	344	31.9	20.4	23 35.4	27.9	161 47.4	10.9	308 19.4	12.6			
10	138	35.3	359	31.3	19.7	38 36.2	27.8	176 50.1	10.9	323 21.6	12.5			
11	153	37.8	14	30.7	+16 18.9	53 37.0	+23 27.7	191 52.8	-16 11.0	338 23.7	+4 12.3			
12	168	40.2	29	30.1	+16 18.1	68 37.8	+23 27.7	206 55.5	-16 11.1	353 25.9	+4 12.2			
13	183	42.7	44	29.6	17.3	83 38.6	27.6	221 58.2	11.2	8 28.1	12.1			
14	198	45.2	59	29.0	16.5	98 39.4	27.6	237 00.9	11.3	23 30.3	12.0			
15	213	47.6	74	28.4	15.7	113 40.3	27.5	252 03.6	11.3	38 32.4	11.9			
16	228	50.1	89	27.9	14.9	128 41.1	27.4	267 06.4	11.4	53 34.6	11.7			
17	243	52.6	104	27.3	+16 14.1	143 41.9	+23 27.4	282 09.1	-16 11.5	68 36.8	+4 11.6			
18	258	55.0	119	26.7	+16 13.3	158 42.7	+23 27.3	297 11.8	-16 11.6	83 39.0	+4 11.5			
19	273	57.5	134	26.1	12.5	173 43.5	27.3	312 14.5	11.6	98 41.2	11.4			
20	288	59.9	149	25.6	11.7	188 44.3	27.2	327 17.2	11.7	113 43.3	11.2			
21	304	02.4	164	25.0	10.9	203 45.1	27.1	342 19.9	11.8	128 45.5	11.1			
22	319	04.9	179	24.4	10.0	218 45.9	27.1	357 22.6	11.9	143 47.7	11.0			
23	334	07.3	194	23.9	09.2	233 46.7	27.0	12 25.3	12.0	158 49.9	10.9			
24	349	09.8	209	23.3	+16 08.4	248 47.5	+23 26.9	27 28.0	-16 12.0	173 52.1	+4 10.8			
Dif	—		-6	-8		+8	-1	+27	-1	+22	-1			

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15'9 PMG: 11 ^h 56 ^m 9			Edad: 20 ^d 6 PHE { 4 ^h : 57'7 12 ^h : 57'9 20 ^h : 58'1 SD: 15'7 PMG: 4 ^h 00 ^m R°: 57 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m	
0	180	43.6	+4	58.0	302	07.4	+22	33.5	60 N	3 39	4 33	5 16	19 05	36	13 45	85		
1	195	43.8		57.1	316	34.6	82	41.4	58	49	39	19	27	41	23	81		
2	210	44.0		56.1	331	01.7	81	49.3	56	3 57	44	22	19 45	43	13 06	77		
3	225	44.2		55.2	345	28.7	80	+22 57.0	54	4 04	48	24	20 00	46	12 51	77		
4	240	44.4		54.2	359	55.7	80	+23 04.6	52	10	52	26	13	48	38	73		
5	255	44.7	+4	53.3	14	22.5	78	+23 12.1	50	4 16	4 56	5 28	20 25	48	12 27	71		
6	270	44.9	+4	52.3	28	49.2	77	+23 19.4	45	4 28	5 03	5 33	20 49	51	12 03	69		
7	285	45.1		51.4	43	15.9	77	26.6	72	36	09	36	21 08	53	11 44	67		
8	300	45.3		50.4	57	42.5	76	33.7	71	44	14	39	24	55	29	65		
9	315	45.5		49.5	72	08.9	74	40.6	69	50	18	42	21 39	55	11 15	64		
10	330	45.7		48.5	86	35.3	74	47.4	68	4 58	24	46	22 03	57	10 52	62		
11	345	46.0	+4	47.6	101	01.6	73	+23 54.1	67	5 05	5 29	5 50	22 24	58	10 32	60		
12	0	46.2	+4	46.6	115	27.8	72	+24 00.7	66	5 09	5 33	5 54	22 43	60	10 14	57		
13	15	46.4		45.7	129	53.9	71	07.1	64	12	36	5 57	23 03	60	9 55	56		
14	30	46.6		44.7	144	19.9	70	13.3	62	20	13	39	6 01	24	62	35	54	
15	45	46.8		43.8	158	45.9	70	19.5	62	30	13	41	04	23 49	63	9 12	52	
16	60	47.1		42.8	173	11.7	68	25.4	59	35	12	41	07	** ** *	8 59	50		
17	75	47.3	+4	41.9	187	37.5	68	+24 31.3	59	40	5 11	5 42	6 09	** ** *	8 44	47		
18	90	47.5	+4	40.9	202	03.2	67	+24 37.0	57	45	5 09	5 43	6 12	** ** *	8 26	45		
19	105	47.7		40.0	216	28.8	66	42.5	55	50	06	43	15	** ** *	8 03	42		
20	120	47.9		39.0	230	54.3	65	47.9	54	52	04	43	17	0 01	77	7 52	40	
21	135	48.2		38.1	245	19.8	65	53.2	53	54	02	43	18	13	80	40	38	
22	150	48.4		37.1	259	45.1	63	+24 58.3	51	56	5 00	43	20	26	83	26	35	
23	165	48.6		36.2	274	10.4	63	+25 03.2	49	58	4 57	43	22	0 42	87	7 10	31	
24	180	48.8	+4	35.2	288	35.6	62	+25 08.1	49	60 S	4 55	5 43	6 24	1 01	93	6 50	25	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 0 ^h 43 ^m 2		Mag: -3.9 PMG: 10 ^h 03 ^m			Mag: +0.9 PMG: 7 ^h 24 ^m			Mag: -2.8 PMG: 22 ^h 06 ^m			Mag: +1.1 PMG: 12 ^h 23 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	
0	349	09.8	209	23.3	+16	08.4	248	47.5	+23	26.9	27	28.0	-16	12.0	173	52.1	+4	10.8
1	4	12.3	224	22.7		07.6	263	48.4		26.9	42	30.8		12.1	188	54.2		10.6
2	19	14.7	239	22.2		06.8	278	49.2		26.8	57	33.5		12.2	203	56.4		10.5
3	34	17.2	254	21.6		06.0	293	50.0		26.8	72	36.2		12.3	218	58.6		10.4
4	49	19.7	269	21.0		05.2	308	50.8		26.7	87	38.9		12.3	234	00.8		10.3
5	64	22.1	284	20.5	+16	04.4	323	51.6	+23	26.6	102	41.6	-16	12.4	249	02.9	+4	10.1
6	79	24.6	299	19.9	+16	03.6	338	52.4	+23	26.6	117	44.3	-16	12.5	264	05.1	+4	10.0
7	94	27.0	314	19.3		02.8	353	53.2		26.5	132	47.0		12.6	279	07.3		09.9
8	109	29.5	329	18.8		02.0	8	54.0		26.4	147	49.7		12.6	294	09.5		09.8
9	124	32.0	344	18.2		01.1	23	54.9		26.4	162	52.4		12.7	309	11.7		09.7
10	139	34.4	359	17.6	+16	00.3	38	55.7		26.3	177	55.1		12.8	324	13.8		09.5
11	154	36.9	14	17.1	+15	59.5	53	56.5	+23	26.2	192	57.8	-16	12.9	339	16.0	+4	09.4
12	169	39.4	29	16.5	+15	58.7	68	57.3	+23	26.2	208	00.6	-16	12.9	354	18.2	+4	09.3
13	184	41.8	44	16.0		57.9	83	58.1		26.1	223	03.3		13.0	9	20.4		09.2
14	199	44.3	59	15.4		57.1	98	58.9		26.0	238	06.0		13.1	24	22.5		09.0
15	214	46.8	74	14.8		56.2	113	59.7		26.0	253	08.7		13.2	39	24.7		08.9
16	229	49.2	89	14.3		55.4	129	00.6		25.9	268	11.4		13.3	54	26.9		08.8
17	244	51.7	104	13.7	+15	54.6	144	01.4	+23	25.8	283	14.1	-16	13.3	69	29.1	+4	08.7
18	259	54.2	119	13.1	+15	53.8	159	02.2	+23	25.8	298	16.8	-16	13.4	84	31.3	+4	08.6
19	274	56.6	134	12.6		53.0	174	03.0		25.7	313	19.5		13.5	99	33.4		08.4
20	289	59.1	149	12.0		52.1	189	03.8		25.6	328	22.2		13.6	114	35.6		08.3
21	305	01.5	164	11.5		51.3	204	04.6		25.6	343	24.9		13.6	129	37.8		08.2
22	320	04.0	179	10.9		50.5	219	05.5		25.5	358	27.6		13.7	144	40.0		08.1
23	335	06.5	194	10.3		49.7	234	06.3		25.4	13	30.3		13.8	159	42.1		07.9
24	350	08.9	209	09.8	+15	48.8	249	07.1	+23	25.4	28	33.0	-16	13.9	174	44.3	+4	07.8
Dif	—		-6		-8		+8		-1		+27		-1		+22		-1	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15'9 PMG: 11 ^h 56 ^m 6			Edad: 21 ^d 6 SD: 15'8 PMG: 4 ^h 57 ^m	PHE { 4 ^h : 58'3 12 ^h : 58'4 20 ^h : 58'6 R°: 60 ^m											
	hG ☉	Dec				hG ☾			Dif	Dec	Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	180	48.8	+4	35.2	288	35.6	+25	08.1	60 N	18 33	19 16	20 09	19 41	66	15 10	62
1	195	49.0		34.3	303	00.7	61	12.7	58	30	11	20 00	20 08	64	14 44	62
2	210	49.3		33.3	317	25.8	61	17.2	56	28	06	19 52	28	65	23	62
3	225	49.5		32.4	331	50.7	59	21.6	54	26	19 02	45	20 46	64	14 06	62
4	240	49.7		31.4	346	15.6	59	25.7	52	24	18 58	39	21 01	64	13 51	62
5	255	49.9	+4	30.5	0	40.5	59	+25 29.8	50	18 22	18 55	19 34	21 13	64	13 38	62
6	270	50.1	+4	29.5	15	05.2	57	+25 33.7	45	18 18	18 48	19 23	21 40	63	13 12	62
7	285	50.4		28.6	29	29.9	57	37.4	40	15	43	15	22 01	63	12 51	62
8	300	50.6		27.6	43	54.5	56	40.9	35	13	38	08	19	62	34	61
9	315	50.8		26.7	58	19.1	56	44.3	30	10	34	19 02	22 34	62	12 19	61
10	330	51.0		25.7	72	43.6	55	47.6	20	06	28	18 54	23 00	61	11 54	61
11	345	51.2	+4	24.8	87	08.0	54	+25 50.7	10 N	18 03	18 24	18 48	23 22	61	11 32	60
12	0	51.5	+4	23.8	101	32.4	54	+25 53.6	0	18 00	18 21	18 45	23 43	61	11 11	61
13	15	51.7		22.9	115	56.7	53	56.3	10 S	17 57	18	42	** ** *		10 51	60
14	30	51.9		21.9	130	20.9	52	+25 58.9	20	54	16	41	** ** *		29	59
15	45	52.1		21.0	144	45.1	52	+26 01.3	30	50	14	42	** ** *		10 04	59
16	60	52.3		20.0	159	09.3	52	03.6	35	48	14	43	0 03	64	9 49	58
17	75	52.6	+4	19.1	173	33.3	50	+26 05.7	40	17 46	18 13	18 45	0 20	65	9 31	58
18	90	52.8	+4	18.1	187	57.4	51	+26 07.6	45	17 44	18 13	18 47	0 40	66	9 11	57
19	105	53.0		17.2	202	21.3	49	09.3	50	41	13	51	1 06	67	8 45	56
20	120	53.2		16.2	216	45.3	50	10.9	52	40	13	53	18	69	32	56
21	135	53.4		15.3	231	09.2	49	12.3	54	38	14	55	33	69	18	54
22	150	53.7		14.3	245	33.0	48	13.6	56	37	14	18 57	1 49	71	8 01	53
23	165	53.9		13.4	259	56.8	48	14.6	58	35	14	19 00	2 09	73	7 41	52
24	180	54.1	+4	12.4	274	20.6	48	+26 15.5	60 S	17 33	18 15	19 03	2 34	76	7 15	50

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO										
	PMG: 0 ^h 39 ^m 3		Mag: -3.9 PMG: 10 ^h 04 ^m		Mag: +0.9 PMG: 7 ^h 23 ^m		Mag: -2.8 PMG: 22 ^h 02 ^m		Mag: +1.1 PMG: 12 ^h 19 ^m										
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec									
h	°	'	°	'	°	'	°	'	°	'									
0	350	08.9	209	09.8	+15	48.8	249	07.1	+23	25.4	28	33.0	-16	13.9	174	44.3	+4	07.8	
1	5	11.4	224	09.2		48.0	264	07.9		25.3	43	35.7		13.9	189	46.5		07.7	
2	20	13.9	239	08.7		47.2	279	08.7		25.2	58	38.4		14.0	204	48.7		07.6	
3	35	16.3	254	08.1		46.4	294	09.5		25.1	73	41.1		14.1	219	50.9		07.4	
4	50	18.8	269	07.5		45.5	309	10.4		25.1	88	43.8		14.2	234	53.0		07.3	
5	65	21.3	284	07.0	+15	44.7	324	11.2	+23	25.0	103	46.5	-16	14.2	249	55.2	+4	07.2	
6	80	23.7	299	06.4	+15	43.9	339	12.0	+23	24.9	118	49.3	-16	14.3	264	57.4	+4	07.1	
7	95	26.2	314	05.9		43.0	354	12.8		24.9	133	52.0		14.4	279	59.6		07.0	
8	110	28.7	329	05.3		42.2	9	13.6		24.8	148	54.7		14.4	295	01.7		06.8	
9	125	31.1	344	04.7		41.4	24	14.5		24.7	163	57.4		14.5	310	03.9		06.7	
10	140	33.6	359	04.2		40.5	39	15.3		24.6	179	00.1		14.6	325	06.1		06.6	
11	155	36.0	14	03.6	+15	39.7	54	16.1	+23	24.6	194	02.8	-16	14.7	340	08.3	+4	06.5	
12	170	38.5	29	03.1	+15	38.9	69	16.9	+23	24.5	209	05.5	-16	14.7	355	10.5	+4	06.3	
13	185	41.0	44	02.5		38.0	84	17.7		24.4	224	08.2		14.8	10	12.6		06.2	
14	200	43.4	59	02.0		37.2	99	18.6		24.4	239	10.9		14.9	25	14.8		06.1	
15	215	45.9	74	01.4		36.4	114	19.4		24.3	254	13.6		15.0	40	17.0		06.0	
16	230	48.4	89	00.8		35.5	129	20.2		24.2	269	16.3		15.0	55	19.2		05.9	
17	245	50.8	104	00.3	+15	34.7	144	21.0	+23	24.1	284	19.0	-16	15.1	70	21.3	+4	05.7	
18	260	53.3	118	59.7	+15	33.8	159	21.9	+23	24.1	299	21.7	-16	15.2	85	23.5	+4	05.6	
19	275	55.8	133	59.2		33.0	174	22.7		24.0	314	24.4		15.3	100	25.7		05.5	
20	290	58.2	148	58.6		32.2	189	23.5		23.9	329	27.1		15.3	115	27.9		05.4	
21	306	00.7	163	58.1		31.3	204	24.3		23.8	344	29.8		15.4	130	30.1		05.2	
22	321	03.2	178	57.5		30.5	219	25.2		23.8	359	32.5		15.5	145	32.2		05.1	
23	336	05.6	193	57.0		29.6	234	26.0		23.7	14	35.2		15.6	160	34.4		05.0	
24	351	08.1	208	56.4	+15	28.8	249	26.8	+23	23.6	29	37.9	-16	15.6	175	36.6	+4	04.9	
Dif	—		-6		-8		+8		-1		+27		-1		+22			-1	

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna												
	SD: 15'9 PMG: 11 ^h 56 ^m 2			Edad: 22 ^d 6 PHE { 4 ^h : 58'8 12 ^h : 59'0 20 ^h : 59'2 PMG: 5 ^h 57 ^m R°: 61 ^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	+4	12.4	274	20.6	+26	15.5	7	60 N	3	45	4	38	5	21	20	47	92	16	12	35			
1	195	54.3		11.4	288	44.3	47	16.2	6	58	3	54	43	23	21	12	87	15	46	40	40	40			
2	210	54.5		10.5	303	08.0	47	16.8	4	56	4	02	48	26		33	83		25	43	43	43			
3	225	54.8		09.5	317	31.6	46	17.2	2	54		08	52	28	21	50	80	15	08	45	48	48			
4	240	55.0		08.6	331	55.2	46	17.4	0	52		14	55	30	22	05	78	14	53	48	56	56			
5	255	55.2	+4	07.6	346	18.8	46	+26	17.4	1	50	4	19	4	59	5	31	22	17	77	14	40	49		
6	270	55.4	+4	06.7	0	42.3	45	+26	17.3	4	45	4	30	5	05	5	35	22	43	74	14	14	51		
7	285	55.6		05.7	15	05.9	46	16.9	5	40		39	11	38	23	04	71	13	53	53			53		
8	300	55.9		04.8	29	29.4	45	16.4	4	35		45	15	41		21	70		35	55			55		
9	315	56.1		03.8	43	52.8	44	15.8	6	30		51	19	43	23	36	68	13	20	56			56		
10	330	56.3		02.9	58	16.3	45	14.9	9	20		4	59	25	47	**	**	**	12	55	58			58	
11	345	56.5	+4	01.9	72	39.7	44	+26	13.9	10	10 N	5	04	5	29	5	50	**	**	**	12	32	60	60	
12	0	56.8	+4	00.9	87	03.2	45	+26	12.7	12	0	5	08	5	32	5	53	**	**	**	12	12	61	61	
13	15	57.0	+4	00.0	101	26.6	44		11.3	14	10 S		10	35	56	0	03	61	11	51	62			62	
14	30	57.2	+3	59.0	115	49.9	43		09.7	16	20		11	37	5	59	26	60		28	64			64	
15	45	57.4		58.1	130	13.3	44		08.0	17	30		10	38	6	02	0	52	59	11	03	65			65
16	60	57.6		57.1	144	36.7	44		06.1	19	35		09	39	04	1	07	59	10	47	66			66	
17	75	57.9	+3	56.2	159	00.1	44	+26	04.0	21	40		5	07	5	39	6	06	1	25	58	10	29	68	
18	90	58.1	+3	55.2	173	23.4	43	+26	01.7	23	45		5	05	5	39	6	08	1	46	57	10	08	69	
19	105	58.3		54.3	187	46.8	44	+25	59.3	24	50		5	01	39	11	2	13	56	9	41	71			71
20	120	58.5		53.3	202	10.1	43		56.7	26	52		4	59	38	12	27	54		28	71			71	
21	135	58.7		52.3	216	33.5	44		53.9	28	54		57	38	13	2	42	54	9	12	73			73	
22	150	59.0		51.4	230	56.8	43		50.9	30	56		55	38	15	3	00	52	8	54	75			75	
23	165	59.2		50.4	245	20.2	44		47.8	31	58		52	37	16	22	50	33	77					77	
24	180	59.4	+3	49.5	259	43.6	44	+25	44.4	34	60 S	4	48	5	37	6	18	3	50	47	8	05	80	80	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO											
	PMG: 0 ^h 35 ^m 4		Mag: -3.9 PMG: 10 ^h 05 ^m		Mag: +0.9 PMG: 7 ^h 22 ^m		Mag: -2.8 PMG: 21 ^h 58 ^m		Mag: +1.1 PMG: 12 ^h 16 ^m											
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec										
h	°	'	°	'	°	'	°	'	°	'										
0	351	08.1	208	56.4	+15	28.8	249	26.8	+23	23.6	29	37.9	-16	15.6	175	36.6	+4	04.9		
1	6	10.5	223	55.9		27.9	264	27.6		23.5	44	40.6		15.7	190	38.8		04.8		
2	21	13.0	238	55.3		27.1	279	28.4		23.5	59	43.3		15.8	205	40.9		04.6		
3	36	15.5	253	54.8		26.2	294	29.3		23.4	74	46.0		15.8	220	43.1		04.5		
4	51	17.9	268	54.2		25.4	309	30.1		23.3	89	48.7		15.9	235	45.3		04.4		
5	66	20.4	283	53.7	+15	24.5	324	30.9	+23	23.2	104	51.4	-16	16.0	250	47.5	+4	04.3		
6	81	22.9	298	53.1	+15	23.7	339	31.8	+23	23.2	119	54.1	-16	16.1	265	49.7	+4	04.1		
7	96	25.3	313	52.6		22.8	354	32.6		23.1	134	56.8		16.1	280	51.8		04.0		
8	111	27.8	328	52.0		22.0	9	33.4		23.0	149	59.5		16.2	295	54.0		03.9		
9	126	30.3	343	51.5		21.1	24	34.2		22.9	165	02.2		16.3	310	56.2		03.8		
10	141	32.7	358	50.9		20.3	39	35.1		22.8	180	04.9		16.4	325	58.4		03.7		
11	156	35.2	13	50.4	+15	19.4	54	35.9	+23	22.8	195	07.5	-16	16.4	341	00.5	+4	03.5		
12	171	37.7	28	49.8	+15	18.6	69	36.7	+23	22.7	210	10.2	-16	16.5	356	02.7	+4	03.4		
13	186	40.1	43	49.3		17.7	84	37.5		22.6	225	12.9		16.6	11	04.9		03.3		
14	201	42.6	58	48.7		16.9	99	38.4		22.5	240	15.6		16.6	26	07.1		03.2		
15	216	45.0	73	48.2		16.0	114	39.2		22.5	255	18.3		16.7	41	09.2		03.0		
16	231	47.5	88	47.6		15.2	129	40.0		22.4	270	21.0		16.8	56	11.4		02.9		
17	246	50.0	103	47.1	+15	14.3	144	40.9	+23	22.3	285	23.7	-16	16.9	71	13.6	+4	02.8		
18	261	52.4	118	46.5	+15	13.4	159	41.7	+23	22.2	300	26.4	-16	16.9	86	15.8	+4	02.7		
19	276	54.9	133	46.0		12.6	174	42.5		22.1	315	29.1		17.0	101	18.0		02.6		
20	291	57.4	148	45.4		11.7	189	43.3		22.1	330	31.8		17.1	116	20.1		02.4		
21	306	59.8	163	44.9		10.9	204	44.2		22.0	345	34.5		17.1	131	22.3		02.3		
22	322	02.3	178	44.3		10.0	219	45.0		21.9	0	37.2		17.2	146	24.5		02.2		
23	337	04.8	193	43.8		09.1	234	45.8		21.8	15	39.9		17.3	161	26.7		02.1		
24	352	07.2	208	43.2	+15	08.3	249	46.7	+23	21.7	30	42.6	-16	17.4	176	28.8	+4	01.9		
Dif	—		-5	-9		-9	+8	-1		-1	+27	-1		-1	+22	-1		-1		

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'9 PMG: 11 ^h 55 ^m 9			Edad: 23 ^d 6 PHE { 4 ^h : 59'3 12 ^h : 59'5 20 ^h : 59'6 PMG: 6 ^h 58 ^m 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	59.4	+3	49.5	259	43.6	+25 44.4	60 N	18 27	19 09	20 02	22 19 104	16 47 18	
1	195	59.6		48.5	274	06.9	40.9	58	25	05	19 53	39 98	26 24	
2	210	59.8		47.6	288	30.3	37.3	56	23	19 00	46	22 56 94	16 08 29	
3	226	00.1		46.6	302	53.7	33.4	54	21	18 57	40	23 10 90	15 53 32	
4	241	00.3		45.7	317	17.1	29.4	52	19	53	34	23 87	41 34	
5	256	00.5	+3	44.7	331	40.6	+25 25.2	50	18 18	18 50	19 29	23 34 84	15 29 37	
6	271	00.7	+3	43.7	346	04.0	+25 20.8	45	18 15	18 44	19 19	23 57 79	15 05 42	
7	286	01.0		42.8	0	27.5	16.2	40	12	39	11	** ** *	14 46 45	
8	301	01.2		41.8	14	51.0	11.5	35	10	35	05	** ** *	30 48	
9	316	01.4		40.9	29	14.5	06.6	30	08	32	19 00	** ** *	14 16 50	
10	331	01.6		39.9	43	38.0	+25 01.5	20	04	27	18 52	0 01 65	13 53 53	
11	346	01.8	+3	38.9	58	01.6	+24 56.3	10 N	18 02	18 23	18 47	0 23 63	13 32 57	
12	1	02.1	+3	38.0	72	25.2	+24 50.9	0	17 59	18 20	18 44	0 44 60	13 13 59	
13	16	02.3		37.0	86	48.8	45.3	10 S	57	18	42	1 04 58	12 53 63	
14	31	02.5		36.1	101	12.5	39.5	20	54	16	42	26 56	32 66	
15	46	02.7		35.1	115	36.2	33.6	30	51	15	43	1 51 53	12 08 69	
16	61	02.9		34.2	129	59.9	27.5	35	50	15	45	2 06 51	11 53 72	
17	76	03.2	+3	33.2	144	23.7	+24 21.2	40	17 48	18 15	18 47	2 23 49	11 37 74	
18	91	03.4	+3	32.2	158	47.5	+24 14.8	45	17 46	18 16	18 50	2 43 47	11 17 77	
19	106	03.6		31.3	173	11.3	08.2	50	44	16	54	3 09 43	10 52 81	
20	121	03.8		30.3	187	35.2	+24 01.4	52	43	17	56	21 41	39 84	
21	136	04.1		29.4	201	59.2	+23 54.5	54	42	17	18 58	36 38	25 87	
22	151	04.3		28.4	216	23.2	47.4	56	41	18	19 01	3 52 35	10 09 90	
23	166	04.5		27.4	230	47.2	40.1	58	39	18	04	4 12 31	9 50 94	
24	181	04.7	+3	26.5	245	11.2	+23 32.7	60 S	17 38	18 19	19 08	4 37 24	9 25 101	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG 0 ^h 31 ^m 4		Mag: -3.9 PMG: 10 ^h 05 ^m		Mag: +0.9 PMG: 7 ^h 20 ^m		Mag: -2.8 PMG: 21 ^h 53 ^m		Mag: +1.1 PMG: 12 ^h 12 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	352	07.2	208	43.2	+15 08.3	249 46.7	+23 21.7	30 42.6	-16 17.4	176 28.8	+4 01.9
1	7	09.7	223	42.7	07.4	264 47.5	21.7	45 45.3	17.4	191 31.0	01.8
2	22	12.1	238	42.1	06.6	279 48.3	21.6	60 48.0	17.5	206 33.2	01.7
3	37	14.6	253	41.6	05.7	294 49.2	21.5	75 50.7	17.6	221 35.4	01.6
4	52	17.1	268	41.1	04.8	309 50.0	21.4	90 53.3	17.6	236 37.6	01.5
5	67	19.5	283	40.5	+15 04.0	324 50.8	+23 21.3	105 56.0	-16 17.7	251 39.7	+4 01.3
6	82	22.0	298	40.0	+15 03.1	339 51.7	+23 21.2	120 58.7	-16 17.8	266 41.9	+4 01.2
7	97	24.5	313	39.4	02.2	354 52.5	21.2	136 01.4	17.8	281 44.1	01.1
8	112	26.9	328	38.9	01.4	9 53.3	21.1	151 04.1	17.9	296 46.3	01.0
9	127	29.4	343	38.3	+15 00.5	24 54.2	21.0	166 06.8	18.0	311 48.4	00.8
10	142	31.9	358	37.8	+14 59.6	39 55.0	20.9	181 09.5	18.1	326 50.6	00.7
11	157	34.3	13	37.3	+14 58.7	54 55.8	+23 20.8	196 12.2	-16 18.1	341 52.8	+4 00.6
12	172	36.8	28	36.7	+14 57.9	69 56.7	+23 20.7	211 14.9	-16 18.2	356 55.0	+4 00.5
13	187	39.3	43	36.2	57.0	84 57.5	20.7	226 17.6	18.3	11 57.1	00.3
14	202	41.7	58	35.6	56.1	99 58.3	20.6	241 20.3	18.3	26 59.3	00.2
15	217	44.2	73	35.1	55.2	114 59.2	20.5	256 22.9	18.4	42 01.5	+4 00.1
16	232	46.6	88	34.6	54.4	130 00.0	20.4	271 25.6	18.5	57 03.7	+4 00.0
17	247	49.1	103	34.0	+14 53.5	145 00.8	+23 20.3	286 28.3	-16 18.5	72 05.9	+3 59.9
18	262	51.6	118	33.5	+14 52.6	160 01.7	+23 20.2	301 31.0	-16 18.6	87 08.0	+3 59.7
19	277	54.0	133	32.9	51.7	175 02.5	20.1	316 33.7	18.7	102 10.2	59.6
20	292	56.5	148	32.4	50.9	190 03.3	20.1	331 36.4	18.7	117 12.4	59.5
21	307	59.0	163	31.9	50.0	205 04.2	20.0	346 39.1	18.8	132 14.6	59.4
22	323	01.4	178	31.3	49.1	220 05.0	19.9	1 41.8	18.9	147 16.7	59.2
23	338	03.9	193	30.8	48.2	235 05.9	19.8	16 44.5	19.0	162 18.9	59.1
24	353	06.4	208	30.2	+14 47.3	250 06.7	+23 19.7	31 47.1	-16 19.0	177 21.1	+3 59.0
Dif	—		-5	-9		+8	-1	+27	-1	+22	-1

UT	SOL			 LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 9			Edad: 24 ^d 6	PHE {	4 ^h : 59 ^m 8 12 ^h : 59 ^m 9 20 ^h : 60 ^m 0										
	PMG: 11 ^h 55 ^m 5					SD: 16 ^d 3				PMG: 7 ^h 58 ^m R°: 58 ^m						
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	'	°	h	m	h	m	h	m	m
0	181	04.7	+3 26.5	245	11.2	+23 32.7	76	60 N	3 51	4 43	5 26	** ** *		17 05	10	
1	196	04.9	25.5	259	35.4	25.1	76	58	3 59	48	28	** ** *		16 50	15	
2	211	05.2	24.6	273	59.5	51	77	56	4 06	52	30	** ** *		37 19		
3	226	05.4	23.6	288	23.8	53	79	54	12	56	31	** ** *		25 22		
4	241	05.6	22.6	302	48.0	52	81	52	18	4 59	33	** ** *		15 26		
5	256	05.8	+3 21.7	317	12.4	54	82	50	4 23	5 02	5 34	** ** *		16 06	28	
6	271	06.1	+3 20.7	331	36.8	54	84	45	4 33	5 08	5 37	** ** *		15 47	34	
7	286	06.3	19.8	346	01.2	54	85	40	41	13	40	0 15	76	31	38	
8	301	06.5	18.8	0	25.7	55	87	35	47	17	42	31	72	18	41	
9	316	06.7	17.8	14	50.3	56	88	30	52	20	44	0 44	70	15 06	44	
10	331	06.9	16.9	29	14.9	56	90	20	4 59	25	47	1 06	66	14 46	49	
11	346	07.2	+3 15.9	43	39.6	57	91	10 N	5 04	5 29	5 50	1 26	62	14 29	53	
12	1	07.4	+3 15.0	58	04.3	57	93	0	5 08	5 32	5 52	1 44	58	14 12	57	
13	16	07.6	14.0	72	29.1	58	94	10 S	09	34	55	2 02	55	13 56	60	
14	31	07.8	13.0	86	54.0	59	96	20	09	35	57	22	51	38	65	
15	46	08.1	12.1	101	18.9	59	98	30	08	36	5 59	44	47	17	70	
16	61	08.3	11.1	115	43.9	60	98	35	06	36	6 01	2 57	44	13 05	73	
17	76	08.5	+3 10.2	130	08.9	60	100	40	5 04	5 36	6 02	3 12	41	12 51	76	
18	91	08.7	+3 09.2	144	34.1	62	102	45	5 01	5 35	6 04	3 30	37	12 34	81	
19	106	08.9	08.2	158	59.2	61	103	50	4 57	34	06	3 52	32	13 86		
20	121	09.2	07.3	173	24.5	63	104	52	55	34	07	4 02	30	12 03	89	
21	136	09.4	06.3	187	49.8	63	106	54	52	33	08	14	26	11 52	92	
22	151	09.6	05.4	202	15.2	64	107	56	49	33	09	27	23	39	96	
23	166	09.8	04.4	216	40.7	65	108	58	46	32	11	4 43	18	24 101		
24	181	10.1	+3 03.4	231	06.2	65	110	60 S	4 42	5 31	6 12	5 01	13	11 06	107	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 0 ^h 27 ^m 5		Mag: -3.9 PMG: 10 ^h 06 ^m			Mag: +0.9 PMG: 7 ^h 19 ^m			Mag: -2.8 PMG: 21 ^h 49 ^m			Mag: +1.1 PMG: 12 ^h 09 ^m			
	hG ♈		hG ♀ Dec			hG ♂ Dec			hG ♃ Dec			hG ♄ Dec			
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	353	06.4	208 30.2	+14 47.3	250 06.7	+23 19.7	31 47.1	-16 19.0	177 21.1	+3 59.0					
1	8	08.8	223 29.7	46.5	265 07.5	19.6	46 49.8	19.1	192 23.3	58.9					
2	23	11.3	238 29.2	45.6	280 08.4	19.5	61 52.5	19.2	207 25.5	58.8					
3	38	13.8	253 28.6	44.7	295 09.2	19.4	76 55.2	19.2	222 27.6	58.6					
4	53	16.2	268 28.1	43.8	310 10.1	19.4	91 57.9	19.3	237 29.8	58.5					
5	68	18.7	283 27.6	+14 42.9	325 10.9	+23 19.3	107 00.6	-16 19.4	252 32.0	+3 58.4					
6	83	21.1	298 27.0	+14 42.0	340 11.7	+23 19.2	122 03.3	-16 19.4	267 34.2	+3 58.3					
7	98	23.6	313 26.5	41.2	355 12.6	19.1	137 05.9	19.5	282 36.3	58.1					
8	113	26.1	328 25.9	40.3	10 13.4	19.0	152 08.6	19.6	297 38.5	58.0					
9	128	28.5	343 25.4	39.4	25 14.3	18.9	167 11.3	19.6	312 40.7	57.9					
10	143	31.0	358 24.9	38.5	40 15.1	18.8	182 14.0	19.7	327 42.9	57.8					
11	158	33.5	13 24.3	+14 37.6	55 15.9	+23 18.7	197 16.7	-16 19.8	342 45.0	+3 57.7					
12	173	35.9	28 23.8	+14 36.7	70 16.8	+23 18.6	212 19.4	-16 19.8	357 47.2	+3 57.5					
13	188	38.4	43 23.3	35.8	85 17.6	18.6	227 22.1	19.9	12 49.4	57.4					
14	203	40.9	58 22.7	34.9	100 18.5	18.5	242 24.7	20.0	27 51.6	57.3					
15	218	43.3	73 22.2	34.1	115 19.3	18.4	257 27.4	20.0	42 53.8	57.2					
16	233	45.8	88 21.7	33.2	130 20.1	18.3	272 30.1	20.1	57 55.9	57.0					
17	248	48.3	103 21.1	+14 32.3	145 21.0	+23 18.2	287 32.8	-16 20.2	72 58.1	+3 56.9					
18	263	50.7	118 20.6	+14 31.4	160 21.8	+23 18.1	302 35.5	-16 20.2	88 00.3	+3 56.8					
19	278	53.2	133 20.1	30.5	175 22.7	18.0	317 38.2	20.3	103 02.5	56.7					
20	293	55.6	148 19.5	29.6	190 23.5	17.9	332 40.8	20.4	118 04.6	56.6					
21	308	58.1	163 19.0	28.7	205 24.4	17.8	347 43.5	20.4	133 06.8	56.4					
22	324	00.6	178 18.5	27.8	220 25.2	17.7	2 46.2	20.5	148 09.0	56.3					
23	339	03.0	193 18.0	26.9	235 26.1	17.6	17 48.9	20.6	163 11.2	56.2					
24	354	05.5	208 17.4	+14 26.0	250 26.9	+23 17.6	32 51.6	-16 20.6	178 13.3	+3 56.1					
Dif	—		-5	-9	+8		-1	+27	-1	+22		-1			

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15°9 PMG: 11 ^h 55 ^m 2			Edad: 25 ^d 6 PHE { 4 ^h : 60/1 12 ^h : 60/2 20 ^h : 60/2 PMG: 8 ^h 56 ^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	181	10.1	+3 03.4	231	06.2	+19 48.8	60 N	18 21	19 03	19 55	0 03 106	17 15 6		
1	196	10.3	02.5	245	31.8	37.7 ¹¹¹	58	19	18 59	47	17 101	17 05 10		
2	211	10.5	01.5	259	57.5	26.5 ¹¹²	56	17	55	40	30 96	16 56 14		
3	226	10.7	+3 00.5	274	23.2	15.1 ¹¹⁴	54	16	52	34	40 93	48 17		
4	241	10.9	+2 59.6	288	49.0	+19 03.7 ¹¹⁴	52	15	49	29	50 89	41 20		
5	256	11.2	+2 58.6	303	14.9	+18 52.1 ¹¹⁶	50	18 13	18 46	19 25	0 58 87	16 34 23		
6	271	11.4	+2 57.7	317	40.8	+18 40.3 ¹¹⁸	45	18 11	18 40	19 15	1 16 81	16 21 27		
7	286	11.6	56.7	332	06.9	28.5 ¹¹⁸	40	09	36	08	31 76	16 09 32		
8	301	11.8	55.7	346	32.9	16.5 ¹²⁰	35	07	32	19 02	43 73	15 59 36		
9	316	12.1	54.8	0	59.1	+18 04.4 ¹²¹	30	05	29	18 57	1 54 69	50 39		
10	331	12.3	53.8	15	25.3	+17 52.2 ¹²²	20	03	25	50	2 12 64	35 45		
11	346	12.5	+2 52.8	29	51.6	+17 39.9 ¹²³	10 N	18 00	18 21	18 46	2 28 59	15 22 49		
12	1	12.7	+2 51.9	44	18.0	+17 27.4 ¹²⁵	0	17 58	18 19	18 43	2 42 56	15 09 54		
13	16	12.9	50.9	58	44.5	14.9 ¹²⁵	10 S	56	17	42	2 57 51	14 56 59		
14	31	13.2	50.0	73	11.0	+17 02.2 ¹²⁷	20	55	17	42	3 13 46	43 63		
15	46	13.4	49.0	87	37.6	+16 49.5 ¹²⁷	30	53	16	44	31 41	27 69		
16	61	13.6	48.0	102	04.2	36.6 ¹²⁹	35	51	17	46	41 38	18 72		
17	76	13.8	+2 47.1	116	31.0	+16 23.6 ¹³⁰	40	17 50	18 17	18 49	3 53 34	14 07 76		
18	91	14.1	+2 46.1	130	57.8	+16 10.5 ¹³¹	45	17 49	18 18	18 52	4 07 30	13 55 81		
19	106	14.3	45.1	145	24.6	+15 57.4 ¹³¹	50	47	19	57	24 25	39 87		
20	121	14.5	44.2	159	51.6	44.1 ¹³³	52	46	20	18 59	32 22	32 90		
21	136	14.7	43.2	174	18.6	30.7 ¹³⁴	54	45	21	19 02	40 20	24 93		
22	151	14.9	42.2	188	45.7	17.2 ¹³⁵	56	45	22	05	4 50 16	15 96		
23	166	15.2	41.3	203	12.8	+15 03.6 ¹³⁶	58	44	23	09	5 01 12	13 05 100		
24	181	15.4	+2 40.3	217	40.0	+14 50.0 ¹³⁶	60 S	17 43	18 24	19 13	5 14 7	12 53 105		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 0 ^h 23 ^m 6		Mag: -3.9 PMG: 10 ^h 07 ^m		Mag: +0.9 PMG: 7 ^h 18 ^m		Mag: -2.8 PMG: 21 ^h 45 ^m		Mag: +1.1 PMG: 12 ^h 05 ^m						
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	°	°	'	°	°	°	'					
0	354	05.5	208	17.4	+14 26.0	250	26.9	+23 17.6	32	51.6	-16 20.6	178	13.3	+3 56.1	
1	9	08.0	223	16.9	25.1	265	27.7	17.5	47	54.2	20.7	193	15.5	55.9	
2	24	10.4	238	16.4	24.2	280	28.6	17.4	62	56.9	20.8	208	17.7	55.8	
3	39	12.9	253	15.8	23.3	295	29.4	17.3	77	59.6	20.8	223	19.9	55.7	
4	54	15.4	268	15.3	22.4	310	30.3	17.2	93	02.3	20.9	238	22.1	55.6	
5	69	17.8	283	14.8	+14 21.5	325	31.1	+23 17.1	108	05.0	-16 21.0	253	24.2	+3 55.5	
6	84	20.3	298	14.2	+14 20.6	340	32.0	+23 17.0	123	07.6	-16 21.0	268	26.4	+3 55.3	
7	99	22.7	313	13.7	19.7	355	32.8	16.9	138	10.3	21.1	283	28.6	55.2	
8	114	25.2	328	13.2	18.8	10	33.7	16.8	153	13.0	21.2	298	30.8	55.1	
9	129	27.7	343	12.7	17.9	25	34.5	16.7	168	15.7	21.2	313	32.9	55.0	
10	144	30.1	358	12.1	17.0	40	35.4	16.6	183	18.4	21.3	328	35.1	54.8	
11	159	32.6	13	11.6	+14 16.1	55	36.2	+23 16.5	198	21.0	-16 21.4	343	37.3	+3 54.7	
12	174	35.1	28	11.1	+14 15.2	70	37.1	+23 16.4	213	23.7	-16 21.4	358	39.5	+3 54.6	
13	189	37.5	43	10.6	14.3	85	37.9	16.3	228	26.4	21.5	13	41.6	54.5	
14	204	40.0	58	10.0	13.3	100	38.8	16.2	243	29.1	21.6	28	43.8	54.4	
15	219	42.5	73	09.5	12.4	115	39.6	16.1	258	31.7	21.6	43	46.0	54.2	
16	234	44.9	88	09.0	11.5	130	40.5	16.0	273	34.4	21.7	58	48.2	54.1	
17	249	47.4	103	08.4	+14 10.6	145	41.3	+23 15.9	288	37.1	-16 21.8	73	50.4	+3 54.0	
18	264	49.9	118	07.9	+14 09.7	160	42.2	+23 15.8	303	39.8	-16 21.8	88	52.5	+3 53.9	
19	279	52.3	133	07.4	08.8	175	43.0	15.7	318	42.4	21.9	103	54.7	53.7	
20	294	54.8	148	06.9	07.9	190	43.9	15.6	333	45.1	22.0	118	56.9	53.6	
21	309	57.2	163	06.4	07.0	205	44.7	15.5	348	47.8	22.0	133	59.1	53.5	
22	324	59.7	178	05.8	06.1	220	45.6	15.5	3	50.5	22.1	149	01.2	53.4	
23	340	02.2	193	05.3	05.1	235	46.4	15.4	18	53.1	22.1	164	03.4	53.3	
24	355	04.6	208	04.8	+14 04.2	250	47.3	+23 15.3	33	55.8	-16 22.2	179	05.6	+3 53.1	
Dif	—		-5	-9		+8	-1		+27		-1		+22		-1

UT	SOL			 LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'9 PMG: 11 ^h 54 ^m 8			Edad: 26 ^d 6 PHE { 4 ^h : 60/2 12 ^h : 60/2 20 ^h : 60/2 PMG: 9 ^h 51 ^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	15.4	+2	40.3	217	40.0	+14	50.0	138	60 N	3 56	4 48	5 30	1 49	103	17 21	5
1	196	15.6		39.3	232	07.3	83	36.2	138	58	4 04	52	32	1 58	99	15	8
2	211	15.8		38.4	246	34.7	84	22.4	138	56	11	56	34	2 06	95	10	11
3	226	16.1		37.4	261	02.1	84	+14	08.4	54	16	4 59	35	13	92	05	15
4	241	16.3		36.5	275	29.6	85	+13	54.4	52	22	5 02	36	19	89	17 01	17
5	256	16.5	+2	35.5	289	57.1	85	+13	40.3	50	4 26	5 05	5 37	2 25	86	16 57	19
6	271	16.7	+2	34.5	304	24.7	86	+13	26.1	45	4 35	5 10	5 40	2 37	81	16 48	25
7	286	16.9		33.6	318	52.4	87	+13	11.9	40	43	15	42	47	76	41	29
8	301	17.2		32.6	333	20.2	88	+12	57.5	35	48	18	44	2 56	72	35	33
9	316	17.4		31.6	347	48.0	88		43.1	30	4 53	21	45	3 03	69	29	36
10	331	17.6		30.7	2	15.9	89		28.6	20	5 00	26	48	16	63	20	41
11	346	17.8	+2	29.7	16	43.8	89	+12	14.0	10 N	5 04	5 29	5 50	3 27	58	16 11	47
12	1	18.1	+2	28.7	31	11.8	90	+11	59.4	0	5 07	5 31	5 52	3 38	53	16 03	52
13	16	18.3		27.8	45	39.9	91		44.7	10 S	08	32	53	48	48	15 55	56
14	31	18.5		26.8	60	08.0	91		29.9	20	08	33	55	3 59	43	46	62
15	46	18.7		25.8	74	36.2	92		15.0	30	05	33	57	4 12	37	36	68
16	61	18.9		24.9	89	04.5	93	+11	00.1	35	04	33	58	19	34	30	71
17	76	19.2	+2	23.9	103	32.8	93	+10	45.1	40	5 01	5 32	5 59	4 27	31	15 23	75
18	91	19.4	+2	22.9	118	01.1	93	+10	30.1	45	4 57	5 31	6 00	4 37	26	15 16	79
19	106	19.6		22.0	132	29.6	95	+10	15.0	50	52	30	02	49	20	06	85
20	121	19.8		21.0	146	58.1	95	+9	59.9	52	50	29	03	4 54	18	15 02	87
21	136	20.1		20.0	161	26.6	95		44.7	54	47	28	03	5 00	15	14 57	90
22	151	20.3		19.1	175	55.2	96		29.4	56	44	27	04	06	12	51	94
23	166	20.5		18.1	190	23.8	96	+9	14.1	58	40	26	05	13	9	45	98
24	181	20.7	+2	17.1	204	52.5	97	+8	58.7	60 S	4 36	5 25	6 06	5 21	5	14 38	102

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 0 ^h 19 ^m 6		Mag: -3.9 PMG: 10 ^h 08 ^m			Mag: +0.9 PMG: 7 ^h 16 ^m			Mag: -2.8 PMG: 21 ^h 40 ^m			Mag: +1.1 PMG: 12 ^h 02 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	355	04.6	208	04.8	+14	04.2	250	47.3	+23	15.3	33	55.8	-16	22.2	179	05.6	+3	53.1
1	10	07.1	223	04.3		03.3	265	48.1		15.2	48	58.5		22.3	194	07.8		53.0
2	25	09.6	238	03.7		02.4	280	49.0		15.1	64	01.2		22.3	209	09.9		52.9
3	40	12.0	253	03.2		01.5	295	49.8		15.0	79	03.8		22.4	224	12.1		52.8
4	55	14.5	268	02.7	+14	00.6	310	50.7		14.9	94	06.5		22.5	239	14.3		52.6
5	70	17.0	283	02.2	+13	59.6	325	51.5	+23	14.8	109	09.2	-16	22.5	254	16.5	+3	52.5
6	85	19.4	298	01.6	+13	58.7	340	52.4	+23	14.7	124	11.9	-16	22.6	269	18.6	+3	52.4
7	100	21.9	313	01.1		57.8	355	53.2		14.6	139	14.5		22.7	284	20.8		52.3
8	115	24.4	328	00.6		56.9	10	54.1		14.5	154	17.2		22.7	299	23.0		52.2
9	130	26.8	343	00.1		56.0	25	55.0		14.4	169	19.9		22.8	314	25.2		52.0
10	145	29.3	357	59.6		55.0	40	55.8		14.3	184	22.6		22.8	329	27.4		51.9
11	160	31.7	12	59.0	+13	54.1	55	56.7	+23	14.2	199	25.2	-16	22.9	344	29.5	+3	51.8
12	175	34.2	27	58.5	+13	53.2	70	57.5	+23	14.1	214	27.9	-16	23.0	359	31.7	+3	51.7
13	190	36.7	42	58.0		52.3	85	58.4		14.0	229	30.6		23.0	14	33.9		51.5
14	205	39.1	57	57.5		51.3	100	59.2		13.9	244	33.2		23.1	29	36.1		51.4
15	220	41.6	72	57.0		50.4	116	00.1		13.8	259	35.9		23.2	44	38.2		51.3
16	235	44.1	87	56.5		49.5	131	00.9		13.6	274	38.6		23.2	59	40.4		51.2
17	250	46.5	102	55.9	+13	48.6	146	01.8	+23	13.5	289	41.3	-16	23.3	74	42.6	+3	51.1
18	265	49.0	117	55.4	+13	47.6	161	02.7	+23	13.4	304	43.9	-16	23.3	89	44.8	+3	50.9
19	280	51.5	132	54.9		46.7	176	03.5		13.3	319	46.6		23.4	104	46.9		50.8
20	295	53.9	147	54.4		45.8	191	04.4		13.2	334	49.3		23.5	119	49.1		50.7
21	310	56.4	162	53.9		44.8	206	05.2		13.1	349	51.9		23.5	134	51.3		50.6
22	325	58.8	177	53.4		43.9	221	06.1		13.0	4	54.6		23.6	149	53.5		50.4
23	341	01.3	192	52.8		43.0	236	07.0		12.9	19	57.3		23.7	164	55.7		50.3
24	356	03.8	207	52.3	+13	42.0	251	07.8	+23	12.8	34	59.9	-16	23.7	179	57.8	+3	50.2
Dif	—		-5		-9		+9		-1		+27		-1		+22		-1	

UT	SOL		● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 9		Edad: 27 ^d 6 PHE { 4 ^h : 60/2 12 ^h : 60/1 20 ^h : 60/0 Rº: 50 ^m											
	PMG: 11 ^h 54 ^m 4		PMG: 10 ^h 43 ^m						Civil	Náutico	Hora	Rº	Hora	Rº
	hG ☉	Dec	hG ☾	Dif	Dec	Dif								
h	°	'	°	'	°	'	°	h	m	h	m	h	m	m
0	181	20.7	+2 17.1		204	52.5	+8 58.7	60 N	18 15	18 57	19 48	3 32	101	17 26 4
1	196	20.9		16.2	219	21.3 ⁹⁸	43.3 ¹⁵⁴	58	13	53	41	37	96	23 8
2	211	21.2		15.2	233	50.1 ⁹⁸	27.8 ¹⁵⁵	56	12	49	34	41	93	21 11
3	226	21.4		14.2	248	18.9 ⁹⁸	+8 12.3 ¹⁵⁵	54	11	46	29	45	89	20 13
4	241	21.6		13.3	262	47.9 ¹⁰⁰	+7 56.8 ¹⁵⁵	52	10	44	24	48	87	18 15
5	256	21.8	+2 12.3		277	16.8 ⁹⁹	+7 41.2 ¹⁵⁶	50	18 09	18 41	19 20	3 51	84	17 16 18
6	271	22.1	+2 11.3		291	45.8 ¹⁰⁰	+7 25.6 ¹⁵⁶	45	18 07	18 36	19 11	3 58	78	17 13 23
7	286	22.3		10.4	306	14.9 ¹⁰¹	+7 09.9 ¹⁵⁷	40	05	32	19 04	4 03	74	10 27
8	301	22.5		09.4	320	44.0 ¹⁰¹	+6 54.2 ¹⁵⁷	35	04	29	18 59	08	70	08 31
9	316	22.7		08.4	335	13.1 ¹⁰¹	38.5 ¹⁵⁷	30	03	27	55	12	66	05 35
10	331	22.9		07.5	349	42.3 ¹⁰²	22.7 ¹⁵⁸	20	18 01	23	48	19	60	17 01 40
11	346	23.2	+2 06.5		4	11.5 ¹⁰²	+6 06.9 ¹⁵⁸	10 N	17 59	18 20	18 45	4 25	55	16 58 45
12	1	23.4	+2 05.5		18	40.8 ¹⁰³	+5 51.1 ¹⁵⁸	0	17 58	18 18	18 42	4 31	50	16 55 50
13	16	23.6		04.6	33	10.1 ¹⁰³	35.2 ¹⁵⁹	10 S	56	17	42	36	46	51 55
14	31	23.8		03.6	47	39.5 ¹⁰⁴	19.4 ¹⁵⁸	20	55	17	43	42	41	48 60
15	46	24.1		02.6	62	08.9 ¹⁰⁴	+5 03.5 ¹⁵⁹	30	54	17	45	49	35	44 65
16	61	24.3		01.7	76	38.3 ¹⁰⁴	+4 47.5 ¹⁶⁰	35	53	18	47	53	32	41 70
17	76	24.5	+2 00.7		91	07.8 ¹⁰⁵	+4 31.6 ¹⁵⁹	40	17 52	18 19	18 50	4 58	27	16 38 74
18	91	24.7	+1 59.7		105	37.3 ¹⁰⁵	+4 15.6 ¹⁶⁰	45	17 51	18 20	18 55	5 03	23	16 35 78
19	106	24.9		58.8	120	06.9 ¹⁰⁶	+3 59.7 ¹⁵⁹	50	50	22	19 00	09	18	31 84
20	121	25.2		57.8	134	36.5 ¹⁰⁶	43.7 ¹⁶⁰	52	50	23	03	12	16	29 86
21	136	25.4		56.8	149	06.1 ¹⁰⁶	27.7 ¹⁶⁰	54	49	24	06	15	13	27 89
22	151	25.6		55.9	163	35.7 ¹⁰⁶	+3 11.6 ¹⁶¹	56	48	26	09	18	11	25 92
23	166	25.8		54.9	178	05.4 ¹⁰⁷	+2 55.6 ¹⁶⁰	58	48	27	13	22	8	23 95
24	181	26.1	+1 53.9		192	35.2 ¹⁰⁸	+2 39.6 ¹⁶⁰	60 S	17 47	18 29	19 18	5 26	4	16 20 99

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 0 ^h 15 ^m 7		Mag: -3.9 PMG: 10 ^h 09 ^m		Mag: +0.9 PMG: 7 ^h 15 ^m		Mag: -2.8 PMG: 21 ^h 36 ^m		Mag: +1.1 PMG: 11 ^h 58 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	356	03.8	207	52.3	+13 42.0	251	07.8	+23 12.8	34	59.9	-16 23.7	179	57.8	+3 50.2
1	11	06.2	222	51.8	41.1	266	08.7	12.7	50	02.6	23.8	195	00.0	50.1
2	26	08.7	237	51.3	40.2	281	09.5	12.6	65	05.3	23.8	210	02.2	50.0
3	41	11.2	252	50.8	39.2	296	10.4	12.5	80	07.9	23.9	225	04.4	49.8
4	56	13.6	267	50.3	38.3	311	11.3	12.4	95	10.6	24.0	240	06.5	49.7
5	71	16.1	282	49.7	+13 37.4	326	12.1	+23 12.3	110	13.3	-16 24.0	255	08.7	+3 49.6
6	86	18.6	297	49.2	+13 36.4	341	13.0	+23 12.2	125	15.9	-16 24.1	270	10.9	+3 49.5
7	101	21.0	312	48.7	35.5	356	13.8	12.1	140	18.6	24.2	285	13.1	49.3
8	116	23.5	327	48.2	34.6	11	14.7	12.0	155	21.3	24.2	300	15.2	49.2
9	131	26.0	342	47.7	33.6	26	15.6	11.9	170	23.9	24.3	315	17.4	49.1
10	146	28.4	357	47.2	32.7	41	16.4	11.8	185	26.6	24.3	330	19.6	49.0
11	161	30.9	12	46.7	+13 31.8	56	17.3	+23 11.7	200	29.3	-16 24.4	345	21.8	+3 48.9
12	176	33.3	27	46.2	+13 30.8	71	18.2	+23 11.6	215	31.9	-16 24.5	0	24.0	+3 48.7
13	191	35.8	42	45.6	29.9	86	19.0	11.5	230	34.6	24.5	15	26.1	48.6
14	206	38.3	57	45.1	28.9	101	19.9	11.3	245	37.3	24.6	30	28.3	48.5
15	221	40.7	72	44.6	28.0	116	20.8	11.2	260	39.9	24.6	45	30.5	48.4
16	236	43.2	87	44.1	27.0	131	21.6	11.1	275	42.6	24.7	60	32.7	48.2
17	251	45.7	102	43.6	+13 26.1	146	22.5	+23 11.0	290	45.3	-16 24.8	75	34.8	+3 48.1
18	266	48.1	117	43.1	+13 25.2	161	23.3	+23 10.9	305	47.9	-16 24.8	90	37.0	+3 48.0
19	281	50.6	132	42.6	24.2	176	24.2	10.8	320	50.6	24.9	105	39.2	47.9
20	296	53.1	147	42.1	23.3	191	25.1	10.7	335	53.2	24.9	120	41.4	47.8
21	311	55.5	162	41.6	22.3	206	25.9	10.6	350	55.9	25.0	135	43.5	47.6
22	326	58.0	177	41.1	21.4	221	26.8	10.5	5	58.6	25.1	150	45.7	47.5
23	342	00.4	192	40.5	20.4	236	27.7	10.4	21	01.2	25.1	165	47.9	47.4
24	357	02.9	207	40.0	+13 19.5	251	28.5	+23 10.3	36	03.9	-16 25.2	180	50.1	+3 47.3
Dif	—		-5	-9		+9	-1		+27	-1		+22	-1	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 9 PMG: 11 ^h 54 ^m 1			Edad: 28 ^d 6 PHE { 4 ^h : 59 ^m 9 12 ^h : 59 ^m 7 20 ^h : 59 ^m 5 R°: 49 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	181	26.1	+1 53.9	192	35.2	+2 39.6	161	60 N	4 02	4 53	5 35	5 13	98	17 30	3
1	196	26.3		207	04.9 ¹⁰⁷	23.5	161	58	09	4 57	36	13 95		31	7
2	211	26.5		221	34.7 ¹⁰⁸	+2 07.5	160	56	15	5 00	37	14 91		32	10
3	226	26.7		236	04.5 ¹⁰⁸	+1 51.5	160	54	20	03	39	14 88		33	11
4	241	26.9		250	34.3 ¹⁰⁸	35.4	161	52	25	06	39	15 85		33	16
5	256	27.2	+1 49.1	265	04.2 ¹⁰⁹	+1 19.4	160	50	4 29	5 08	5 40	5 15	83	17 34	18
6	271	27.4	+1 48.1	279	34.1 ¹⁰⁹	+1 03.3	161	45	4 38	5 13	5 42	5 16	77	17 36	23
7	286	27.6		294	04.0 ¹⁰⁹	+0 47.3	160	40	45	17	44	17 73		37	28
8	301	27.8		308	33.9 ¹⁰⁹	31.2	161	35	50	20	45	18 68		39	30
9	316	28.1		323	03.9 ¹¹⁰	+0 15.2	160	30	4 54	22	46	18 66		40	34
10	331	28.3		337	33.8 ¹⁰⁹	-0 00.8	160	20	5 00	26	48	19 60		41	40
11	346	28.5	+1 43.3	352	03.8 ¹¹⁰	-0 16.8	160	10 N	5 04	5 29	5 50	5 20	54	17 43	45
12	1	28.7	+1 42.3	6	33.9 ¹¹¹	-0 32.8	160	0	5 06	5 30	5 51	5 21	50	17 45	49
13	16	28.9		21	03.9 ¹¹⁰	-0 48.8	160	10 S	07	31	52	22 45		46	54
14	31	29.2		35	33.9 ¹¹⁰	-1 04.7	159	20	06	31	53	23 40		48	59
15	46	29.4		50	04.0 ¹¹¹	20.7	160	30	03	31	54	24 34		49	65
16	61	29.6		64	34.1 ¹¹¹	36.6	159	35	5 01	30	55	25 30		51	68
17	76	29.8	+1 37.5	79	04.2 ¹¹¹	-1 52.5	159	40	4 57	5 29	5 56	5 25	27	17 52	72
18	91	30.1	+1 36.5	93	34.3 ¹¹¹	-2 08.4	159	45	4 53	5 27	5 57	5 26	23	17 53	77
19	106	30.3		108	04.4 ¹¹¹	24.3	159	50	48	25	58	27 18		55	82
20	121	30.5		122	34.6 ¹¹²	40.1	158	52	45	24	58	28 15		55	85
21	136	30.7		137	04.7 ¹¹¹	-2 55.9	158	54	42	23	58	28 13		56	88
22	151	30.9		151	34.9 ¹¹²	-3 11.7	158	56	38	22	59	29 10		57	91
23	166	31.2		166	05.1 ¹¹²	27.5	158	58	34	20	5 59	30 7		58	94
24	181	31.4	+1 30.7	180	35.2 ¹¹¹	-3 43.2	157	60 S	4 30	5 19	6 00	5 30	4	17 59	98
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 0 ^h 11 ^m 8		Mag: -3.9 PMG: 10 ^h 10 ^m			Mag: +0.9 PMG: 7 ^h 14 ^m			Mag: -2.8 PMG: 21 ^h 32 ^m			Mag: +1.1 PMG: 11 ^h 55 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	357	02.9		207	40.0	+13 19.5	251	28.5	+23 10.3	36	03.9	-16 25.2	180	50.1	+3 47.3
1	12	05.4		222	39.5	18.5	266	29.4	10.2	51	06.6	25.2	195	52.2	47.1
2	27	07.8		237	39.0	17.6	281	30.3	10.0	66	09.2	25.3	210	54.4	47.0
3	42	10.3		252	38.5	16.6	296	31.1	09.9	81	11.9	25.4	225	56.6	46.9
4	57	12.8		267	38.0	15.7	311	32.0	09.8	96	14.5	25.4	240	58.8	46.8
5	72	15.2		282	37.5	+13 14.7	326	32.9	+23 09.7	111	17.2	-16 25.5	256	01.0	+3 46.7
6	87	17.7		297	37.0	+13 13.8	341	33.8	+23 09.6	126	19.9	-16 25.5	271	03.1	+3 46.5
7	102	20.2		312	36.5	12.8	356	34.6	09.5	141	22.5	25.6	286	05.3	46.4
8	117	22.6		327	36.0	11.9	11	35.5	09.4	156	25.2	25.7	301	07.5	46.3
9	132	25.1		342	35.5	10.9	26	36.4	09.3	171	27.8	25.7	316	09.7	46.2
10	147	27.6		357	35.0	10.0	41	37.2	09.2	186	30.5	25.8	331	11.8	46.0
11	162	30.0		12	34.5	+13 09.0	56	38.1	+23 09.0	201	33.1	-16 25.8	346	14.0	+3 45.9
12	177	32.5		27	34.0	+13 08.1	71	39.0	+23 08.9	216	35.8	-16 25.9	1	16.2	+3 45.8
13	192	34.9		42	33.5	07.1	86	39.8	08.8	231	38.5	25.9	16	18.4	45.7
14	207	37.4		57	33.0	06.1	101	40.7	08.7	246	41.1	26.0	31	20.5	45.6
15	222	39.9		72	32.4	05.2	116	41.6	08.6	261	43.8	26.1	46	22.7	45.4
16	237	42.3		87	31.9	04.2	131	42.5	08.5	276	46.4	26.1	61	24.9	45.3
17	252	44.8		102	31.4	+13 03.3	146	43.3	+23 08.4	291	49.1	-16 26.2	76	27.1	+3 45.2
18	267	47.3		117	30.9	+13 02.3	161	44.2	+23 08.3	306	51.7	-16 26.2	91	29.3	+3 45.1
19	282	49.7		132	30.4	01.3	176	45.1	08.1	321	54.4	26.3	106	31.4	44.9
20	297	52.2		147	29.9	+13 00.4	191	46.0	08.0	336	57.1	26.3	121	33.6	44.8
21	312	54.7		162	29.4	+12 59.4	206	46.8	07.9	351	59.7	26.4	136	35.8	44.7
22	327	57.1		177	28.9	58.5	221	47.7	07.8	7	02.4	26.5	151	38.0	44.6
23	342	59.6		192	28.4	57.5	236	48.6	07.7	22	05.0	26.5	166	40.1	44.5
24	358	02.1		207	27.9	+12 56.5	251	49.5	+23 07.6	37	07.7	-16 26.6	181	42.3	+3 44.3
Dif	—		-5		-10	+9		-1	+27		-1		+22		-1

UT	SOL		● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15 ^h 9		Edad: 29 ^d 6 PHE	SD: 16 ^h 2		R°: 50 ^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	181	31.4	+1	30.7	180	35.2	-3 43.2	60 N	18 09	18 50	19 41	6 51 97	17 33 5			
1	196	31.6		29.7	195	05.4 ¹¹²	-3 58.9 ¹⁵⁷	58	08	47	34	48 93	38 9			
2	211	31.8		28.7	209	35.6 ¹¹²	-4 14.5 ¹⁵⁶	56	07	44	29	45 90	42 12			
3	226	32.1		27.8	224	05.8 ¹¹²	30.2 ¹⁵⁷	54	06	41	24	42 87	46 14			
4	241	32.3		26.8	238	36.0 ¹¹²	-4 45.8 ¹⁵⁶	52	05	39	19	40 84	49 17			
5	256	32.5	+1	25.8	253	06.2 ¹¹²	-5 01.3 ¹⁵⁵	50	18 05	18 37	19 15	6 38 81	17 52 20			
6	271	32.7	+1	24.9	267	36.4 ¹¹²	-5 16.8 ¹⁵⁵	45	18 03	18 33	19 07	6 33 76	17 59 25			
7	286	32.9		23.9	282	06.6 ¹¹²	32.3 ¹⁵⁵	40	02	29	19 01	30 71	18 05 28			
8	301	33.2		22.9	296	36.8 ¹¹²	-5 47.7 ¹⁵⁴	35	01	26	18 56	26 68	09 33			
9	316	33.4		21.9	311	07.0 ¹¹²	-6 03.1 ¹⁵⁴	30	18 00	24	52	24 64	14 35			
10	331	33.6		21.0	325	37.3 ¹¹³	18.4 ¹⁵³	20	17 59	21	47	19 59	21 41			
11	346	33.8	+1	20.0	340	07.5 ¹¹²	-6 33.7 ¹⁵³	10 N	17 58	18 19	18 43	6 14 54	18 28 45			
12	1	34.0	+1	19.0	354	37.7 ¹¹²	-6 48.9 ¹⁵²	0	17 57	18 18	18 42	6 11 49	18 34 50			
13	16	34.3		18.1	9	07.9 ¹¹²	-7 04.1 ¹⁵²	10 S	56	17	42	07 44	40 54			
14	31	34.5		17.1	23	38.1 ¹¹²	19.2 ¹⁵¹	20	55	17	43	6 03 40	47 59			
15	46	34.7		16.1	38	08.2 ¹¹¹	34.3 ¹⁵¹	30	55	19	46	5 58 34	54 65			
16	61	34.9		15.2	52	38.4 ¹¹²	-7 49.3 ¹⁵⁰	35	54	20	49	55 32	18 59 67			
17	76	35.2	+1	14.2	67	08.6 ¹¹²	-8 04.2 ¹⁴⁹	40	17 54	18 21	18 52	5 52 28	19 04 71			
18	91	35.4	+1	13.2	81	38.8 ¹¹²	-8 19.2 ¹⁵⁰	45	17 53	18 23	18 57	5 49 24	19 10 75			
19	106	35.6		12.2	96	08.9 ¹¹¹	34.0 ¹⁴⁸	50	53	25	19 03	45 19	17 81			
20	121	35.8		11.3	110	39.1 ¹¹²	-8 48.8 ¹⁴⁸	52	53	26	06	43 16	20 83			
21	136	36.0		10.3	125	09.2 ¹¹¹	-9 03.5 ¹⁴⁷	54	53	28	09	41 14	24 86			
22	151	36.3		09.3	139	39.4 ¹¹²	18.2 ¹⁴⁷	56	52	29	13	39 11	28 89			
23	166	36.5		08.4	154	09.5 ¹¹¹	32.8 ¹⁴⁶	58	52	31	18	37 7	32 93			
24	181	36.7	+1	07.4	168	39.6 ¹¹¹	-9 47.3 ¹⁴⁵	60 S	17 52	18 33	19 23	5 34 4	19 37 97			
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG 0 ^h 07 ^m 8		Mag: -3.9 PMG: 10 ^h 10 ^m		Mag: +0.9 PMG: 7 ^h 12 ^m		Mag: -2.8 PMG: 21 ^h 28 ^m		Mag: +1.1 PMG: 11 ^h 51 ^m							
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'						
0	358	02.1	207	27.9	251	49.5	+23	07.6	37	07.7	-16	26.6	181	42.3	+3	44.3
1	13	04.5	222	27.4		55.6		07.5	52	10.3		26.6	196	44.5		44.2
2	28	07.0	237	26.9		54.6		07.3	67	13.0		26.7	211	46.7		44.1
3	43	09.4	252	26.4		53.6		07.2	82	15.6		26.8	226	48.8		44.0
4	58	11.9	267	25.9		52.7		07.1	97	18.3		26.8	241	51.0		43.8
5	73	14.4	282	25.4	+12	51.7		07.0	112	21.0	-16	26.9	256	53.2	+3	43.7
6	88	16.8	297	24.9	+12	50.7		06.9	127	23.6	-16	26.9	271	55.4	+3	43.6
7	103	19.3	312	24.4		49.8		06.8	142	26.3		27.0	286	57.5		43.5
8	118	21.8	327	23.9		48.8		06.7	157	28.9		27.0	301	59.7		43.4
9	133	24.2	342	23.4		47.8		06.5	172	31.6		27.1	317	01.9		43.2
10	148	26.7	357	22.9		46.9		06.4	187	34.2		27.1	332	04.1		43.1
11	163	29.2	12	22.4	+12	45.9		06.3	202	36.9	-16	27.2	347	06.3	+3	43.0
12	178	31.6	27	21.9	+12	44.9		06.2	217	39.5	-16	27.3	2	08.4	+3	42.9
13	193	34.1	42	21.4		43.9		06.1	232	42.2		27.3	17	10.6		42.7
14	208	36.5	57	20.9		43.0		06.0	247	44.8		27.4	32	12.8		42.6
15	223	39.0	72	20.5		42.0		05.8	262	47.5		27.4	47	15.0		42.5
16	238	41.5	87	20.0		41.0		05.7	277	50.1		27.5	62	17.1		42.4
17	253	43.9	102	19.5	+12	40.0		05.6	292	52.8	-16	27.5	77	19.3	+3	42.3
18	268	46.4	117	19.0	+12	39.1		05.5	307	55.4	-16	27.6	92	21.5	+3	42.1
19	283	48.9	132	18.5		38.1		05.4	322	58.1		27.6	107	23.7		42.0
20	298	51.3	147	18.0		37.1		05.2	338	00.7		27.7	122	25.8		41.9
21	313	53.8	162	17.5		36.1		05.1	353	03.4		27.8	137	28.0		41.8
22	328	56.3	177	17.0		35.2		05.0	8	06.0		27.8	152	30.2		41.6
23	343	58.7	192	16.5		34.2		04.9	23	08.7		27.9	167	32.4		41.5
24	359	01.2	207	16.0	+12	33.2		04.8	38	11.3	-16	27.9	182	34.6	+3	41.4
Dif	—		-5	-10		+9		-1	+27		-1		+22			-1

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15'9 PMG: 11 ^h 53 ^m 4			Edad: 1 ^d 2 PHE { 4 ^h : 58'7 12 ^h : 58'4 20 ^h : 58'1 R°: 50 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec		Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	h	m	h	m	h	m	m
0	181	36.7	+1 07.4	168	39.6	-9 47.3	60 N	4 07	4 58	5 40	8 28	97	17 38	7
1	196	36.9	06.4	183	09.7 ¹¹¹	-10 01.8 ¹⁴⁵	58	14	5 01	41	21	93	47	11
2	211	37.2	05.4	197	39.8 ¹¹¹	16.2 ¹⁴⁴	56	19	04	41	15	88	17 54	15
3	226	37.4	04.5	212	09.9 ¹¹¹	30.5 ¹⁴³	54	24	07	42	09	86	18 00	18
4	241	37.6	03.5	226	39.9 ¹¹⁰	44.7 ¹⁴²	52	29	09	43	8 04	83	06	21
5	256	37.8	+1 02.5	241	10.0 ¹¹¹	-10 58.9 ¹⁴²	50	4 33	5 11	5 43	7 59	80	18 12	23
6	271	38.0	+1 01.6	255	40.0 ¹¹⁰	-11 13.0 ¹⁴¹	45	4 41	5 15	5 45	7 49	75	18 24	27
7	286	38.3	+1 00.6	270	10.0 ¹¹⁰	27.1 ¹⁴¹	40	47	19	46	41	71	33	32
8	301	38.5	+0 59.6	284	40.0 ¹¹⁰	41.0 ¹³⁹	35	52	21	47	34	67	42	35
9	316	38.7	58.6	299	10.0 ¹¹⁰	-11 54.9 ¹³⁹	30	4 55	23	47	28	64	18 49	38
10	331	38.9	57.7	313	39.9 ¹⁰⁹	-12 08.7 ¹³⁸	20	5 01	26	48	18	58	19 02	42
11	346	39.1	+0 56.7	328	09.9 ¹¹⁰	-12 22.5 ¹³⁸	10 N	5 04	5 28	5 49	7 08	55	19 13	47
12	1	39.4	+0 55.7	342	39.8 ¹⁰⁹	-12 36.1 ¹³⁶	0	5 05	5 29	5 50	7 00	50	19 24	50
13	16	39.6	54.8	357	09.7 ¹⁰⁹	-12 49.7 ¹³⁶	10 S	05	30	51	6 51	46	34	55
14	31	39.8	53.8	11	39.5 ¹⁰⁸	-13 03.1 ¹³⁴	20	04	29	51	43	41	46	58
15	46	40.0	52.8	26	09.4 ¹⁰⁹	16.5 ¹³⁴	30	5 00	28	52	32	37	19 59	63
16	61	40.2	51.8	40	39.2 ¹⁰⁸	29.8 ¹³³	35	4 58	27	52	27	33	20 06	67
17	76	40.5	+0 50.9	55	09.1 ¹⁰⁹	-13 43.1 ¹³³	40	4 54	5 26	5 53	6 20	30	20 15	70
18	91	40.7	+0 49.9	69	38.8 ¹⁰⁷	-13 56.2 ¹³¹	45	4 49	5 24	5 53	6 13	26	20 25	74
19	106	40.9	48.9	84	08.6 ¹⁰⁸	-14 09.3 ¹³¹	50	43	21	53	6 04	21	38	79
20	121	41.1	48.0	98	38.4 ¹⁰⁸	22.2 ¹²⁹	52	40	20	53	5 59	19	43	82
21	136	41.4	47.0	113	08.1 ¹⁰⁷	35.1 ¹²⁹	54	37	18	53	55	16	50	84
22	151	41.6	46.0	127	37.8 ¹⁰⁷	-14 47.9 ¹²⁸	56	33	17	54	50	13	20 57	88
23	166	41.8	45.0	142	07.5 ¹⁰⁷	-15 00.5 ¹²⁶	58	28	15	54	44	10	21 05	92
24	181	42.0	+0 44.1	156	37.1 ¹⁰⁶	-15 13.1 ¹²⁶	60 S	4 23	5 13	5 54	5 38	6	21 14	97
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 0 ^h 03 ^m 9		Mag: -3.9 PMG: 10 ^h 11 ^m			Mag: +0.9 PMG: 7 ^h 11 ^m			Mag: -2.8 PMG: 21 ^h 23 ^m			Mag: +1.1 PMG: 11 ^h 48 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	359	01.2	207	16.0	+12 33.2	252	10.6	+23 04.8	38	11.3	-16 27.9	182	34.6	+3 41.4
1	14	03.7	222	15.5	32.2	267	11.4	04.6	53	14.0	28.0	197	36.7	41.3
2	29	06.1	237	15.0	31.2	282	12.3	04.5	68	16.6	28.0	212	38.9	41.2
3	44	08.6	252	14.5	30.3	297	13.2	04.4	83	19.3	28.1	227	41.1	41.0
4	59	11.0	267	14.0	29.3	312	14.1	04.3	98	21.9	28.1	242	43.3	40.9
5	74	13.5	282	13.5	+12 28.3	327	15.0	+23 04.2	113	24.5	-16 28.2	257	45.4	+3 40.8
6	89	16.0	297	13.0	+12 27.3	342	15.9	+23 04.0	128	27.2	-16 28.2	272	47.6	+3 40.7
7	104	18.4	312	12.5	26.3	357	16.7	03.9	143	29.8	28.3	287	49.8	40.5
8	119	20.9	327	12.1	25.4	12	17.6	03.8	158	32.5	28.4	302	52.0	40.4
9	134	23.4	342	11.6	24.4	27	18.5	03.7	173	35.1	28.4	317	54.1	40.3
10	149	25.8	357	11.1	23.4	42	19.4	03.6	188	37.8	28.5	332	56.3	40.2
11	164	28.3	12	10.6	+12 22.4	57	20.3	+23 03.4	203	40.4	-16 28.5	347	58.5	+3 40.1
12	179	30.8	27	10.1	+12 21.4	72	21.2	+23 03.3	218	43.1	-16 28.6	3	00.7	+3 39.9
13	194	33.2	42	09.6	20.4	87	22.1	03.2	233	45.7	28.6	18	02.9	39.8
14	209	35.7	57	09.1	19.4	102	23.0	03.1	248	48.3	28.7	33	05.0	39.7
15	224	38.1	72	08.6	18.4	117	23.8	02.9	263	51.0	28.7	48	07.2	39.6
16	239	40.6	87	08.1	17.5	132	24.7	02.8	278	53.6	28.8	63	09.4	39.5
17	254	43.1	102	07.6	+12 16.5	147	25.6	+23 02.7	293	56.3	-16 28.8	78	11.6	+3 39.3
18	269	45.5	117	07.2	+12 15.5	162	26.5	+23 02.6	308	58.9	-16 28.9	93	13.7	+3 39.2
19	284	48.0	132	06.7	14.5	177	27.4	02.5	324	01.6	28.9	108	15.9	39.1
20	299	50.5	147	06.2	13.5	192	28.3	02.3	339	04.2	29.0	123	18.1	39.0
21	314	52.9	162	05.7	12.5	207	29.2	02.2	354	06.8	29.1	138	20.3	38.8
22	329	55.4	177	05.2	11.5	222	30.1	02.1	9	09.5	29.1	153	22.4	38.7
23	344	57.9	192	04.7	10.5	237	31.0	02.0	24	12.1	29.2	168	24.6	38.6
24	0	00.3	207	04.2	+12 09.5	252	31.8	+23 01.8	39	14.8	-16 29.2	183	26.8	+3 38.5
Dif	—		-5	-10		+9	-1		+26		-1	+22		-1

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 15'9 PMG: 11 ^h 53 ^m 0			Edad: 2 ^d 2 PHE { 4 ^h : 57'9 12 ^h : 57'6 20 ^h : 57'3 R°: 52 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m				
0	181	42.0	+0	44.1	156	37.1	-15	13.1	60 N	18 03	18 44	19 34	10 05 96	17 45 11				
1	196	42.2		43.1	171	06.7 ¹⁰⁶		25.6 ¹²⁵	58	02	41	28	9 54 90	17 58 16				
2	211	42.5		42.1	185	36.3 ¹⁰⁶		38.0 ¹²⁴	56	02	39	23	43 87	18 09 20				
3	226	42.7		41.2	200	05.9 ¹⁰⁶		-15 50.3 ¹²³	54	01	36	18	35 82	18 23				
4	241	42.9		40.2	214	35.5 ¹⁰⁶		-16 02.5 ¹²²	52	01	34	14	27 80	27 26				
5	256	43.1	+0	39.2	229	05.0 ¹⁰⁵		-16 14.6 ¹²¹	50	18 00	18 32	19 11	9 19 78	18 35 28				
6	271	43.3	+0	38.2	243	34.5 ¹⁰⁵		-16 26.6 ¹²⁰	45	17 59	18 29	19 03	9 04 73	18 51 33				
7	286	43.6		37.3	258	04.0 ¹⁰⁵		38.5 ¹¹⁹	40	59	26	18 57	8 52 69	19 05 36				
8	301	43.8		36.3	272	33.4 ¹⁰⁴		-16 50.3 ¹¹⁸	35	58	23	53	41 66	17 39				
9	316	44.0		35.3	287	02.8 ¹⁰⁴		-17 02.0 ¹¹⁷	30	58	22	50	32 63	27 41				
10	331	44.2		34.4	301	32.2 ¹⁰⁴		13.6 ¹¹⁶	20	57	19	45	16 59	19 44 46				
11	346	44.4	+0	33.4	316	01.6 ¹⁰⁴		-17 25.1 ¹¹⁵	10 N	17 57	18 18	18 42	8 03 54	20 00 48				
12	1	44.7	+0	32.4	330	30.9 ¹⁰³		-17 36.5 ¹¹⁴	0	17 56	18 17	18 41	7 50 51	20 14 52				
13	16	44.9		31.4	345	00.2 ¹⁰³		47.7 ¹¹²	10 S	56	17	41	37 48	29 55				
14	31	45.1		30.5	359	29.5 ¹⁰³		-17 58.9 ¹¹²	20	56	18	43	24 44	20 44 59				
15	46	45.3		29.5	13	58.7 ¹⁰²		-18 10.0 ¹¹¹	30	56	20	47	09 39	21 02 63				
16	61	45.5		28.5	28	28.0 ¹⁰³		20.9 ¹⁰⁹	35	56	21	50	7 00 37	13 64				
17	76	45.8	+0	27.5	42	57.2 ¹⁰²		-18 31.8 ¹⁰⁹	40	17 56	18 23	18 54	6 50 34	21 25 67				
18	91	46.0	+0	26.6	57	26.3 ¹⁰¹		-18 42.5 ¹⁰⁷	45	17 56	18 25	19 00	6 39 30	21 39 71				
19	106	46.2		25.6	71	55.5 ¹⁰²		-18 53.1 ¹⁰⁶	50	56	28	06	25 25	21 57 75				
20	121	46.4		24.6	86	24.6 ¹⁰¹		-19 03.6 ¹⁰⁵	52	56	30	10	18 23	22 05 78				
21	136	46.6		23.7	100	53.7 ¹⁰¹		14.0 ¹⁰⁴	54	56	31	13	11 20	14 81				
22	151	46.9		22.7	115	22.7 ¹⁰⁰		24.3 ¹⁰³	56	56	33	18	6 03 17	25 83				
23	166	47.1		21.7	129	51.8 ¹⁰¹		34.4 ¹⁰¹	58	56	36	22	5 54 14	37 87				
24	181	47.3	+0	20.7	144	20.8 ¹⁰⁰		-19 44.5 ¹⁰¹	60 S	17 57	18 38	19 28	5 44 9	22 51 93				
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 23 ^h 56 ^m 0		Mag: -3.9 PMG: 10 ^h 12 ^m		Mag: +0.9 PMG: 7 ^h 09 ^m		Mag: -2.8 PMG: 21 ^h 19 ^m		Mag: +1.1 PMG: 11 ^h 45 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	0	00.3	207	04.2	+12	09.5	252	31.8	+23	01.8	39	14.8	-16	29.2	183	26.8	+3	38.5
1	15	02.8	222	03.8		08.5	267	32.7		01.7	54	17.4		29.3	198	29.0		38.4
2	30	05.3	237	03.3		07.5	282	33.6		01.6	69	20.1		29.3	213	31.1		38.2
3	45	07.7	252	02.8		06.5	297	34.5		01.5	84	22.7		29.4	228	33.3		38.1
4	60	10.2	267	02.3		05.5	312	35.4		01.3	99	25.3		29.4	243	35.5		38.0
5	75	12.6	282	01.8	+12	04.5	327	36.3	+23	01.2	114	28.0	-16	29.5	258	37.7	+3	37.9
6	90	15.1	297	01.3	+12	03.6	342	37.2	+23	01.1	129	30.6	-16	29.5	273	39.9	+3	37.7
7	105	17.6	312	00.8		02.6	357	38.1		01.0	144	33.2		29.6	288	42.0		37.6
8	120	20.0	327	00.4		01.6	12	39.0		00.8	159	35.9		29.6	303	44.2		37.5
9	135	22.5	341	59.9	+12	00.6	27	39.9		00.7	174	38.5		29.7	318	46.4		37.4
10	150	25.0	356	59.4	+11	59.6	42	40.8		00.6	189	41.2		29.7	333	48.6		37.3
11	165	27.4	11	58.9	+11	58.6	57	41.7	+23	00.4	204	43.8	-16	29.8	348	50.7	+3	37.1
12	180	29.9	26	58.4	+11	57.6	72	42.6	+23	00.3	219	46.4	-16	29.8	3	52.9	+3	37.0
13	195	32.4	41	57.9		56.6	87	43.5		00.2	234	49.1		29.9	18	55.1		36.9
14	210	34.8	56	57.5		55.5	102	44.4	+23	00.1	249	51.7		29.9	33	57.3		36.8
15	225	37.3	71	57.0		54.5	117	45.2	+22	59.9	264	54.3		30.0	48	59.4		36.6
16	240	39.7	86	56.5		53.5	132	46.1		59.8	279	57.0		30.0	64	01.6		36.5
17	255	42.2	101	56.0	+11	52.5	147	47.0	+22	59.7	294	59.6	-16	30.1	79	03.8	+3	36.4
18	270	44.7	116	55.5	+11	51.5	162	47.9	+22	59.6	310	02.3	-16	30.1	94	06.0	+3	36.3
19	285	47.1	131	55.0		50.5	177	48.8		59.4	325	04.9		30.2	109	08.2		36.2
20	300	49.6	146	54.6		49.5	192	49.7		59.3	340	07.5		30.2	124	10.3		36.0
21	315	52.1	161	54.1		48.5	207	50.6		59.2	355	10.2		30.3	139	12.5		35.9
22	330	54.5	176	53.6		47.5	222	51.5		59.0	10	12.8		30.3	154	14.7		35.8
23	345	57.0	191	53.1		46.5	237	52.4		58.9	25	15.4		30.4	169	16.9		35.7
24	0	59.5	206	52.6	+11	45.5	252	53.3	+22	58.8	40	18.1	-16	30.4	184	19.0	+3	35.6
Dif	—		-5		-10		+9		-1		+26		-1		+22		-1	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15'9 PMG: 11 ^h 52 ^m 7			Edad: 3 ^d 2	PHE { 4 ^h : 57'0 12 ^h : 56'8 20 ^h : 56'5 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	181	47.3	+0	20.7	144	20.8		60 N	4	12	5	03	5	44	11	41
1	196	47.5		19.8	158	49.8	100	58		18		06		45	24	84
2	211	47.7		18.8	173	18.7	99	56		24		08		45	11	10
3	226	48.0		17.8	187	47.6	99	54		28		10		46	10	57
4	241	48.2		16.8	202	16.5	99	52		32		12		46	47	74
5	256	48.4	+0	15.9	216	45.4	99	50	4	36	5	14	5	46	10	37
6	271	48.6	+0	14.9	231	14.2	98	45	4	43	5	18	5	47	10	17
7	286	48.8		13.9	245	43.1	99	40		49		21		48	10	01
8	301	49.1		12.9	260	11.9	98	35		53		23		48	9	47
9	316	49.3		12.0	274	40.6	97	30	4	57	24		48	35	61	20
10	331	49.5		11.0	289	09.4	98	20	5	01	27		49	9	15	57
11	346	49.7	+0	10.0	303	38.1	97	10 N	5	04	5	28	5	49	8	57
12	1	49.9	+0	09.1	318	06.8	97	0	5	05	5	29	5	49	8	41
13	16	50.2		08.1	332	35.5	97	10 S		04	29		50	25	50	24
14	31	50.4		07.1	347	04.1	96	20	5	02	28		50	8	08	47
15	46	50.6		06.1	1	32.7	96	30	4	58	26		49	7	48	44
16	61	50.8		05.2	16	01.3	96	35		55	24		49	37	41	17
17	76	51.0	+0	04.2	30	29.9	96	40	4	51	5	22	5	49	7	24
18	91	51.2	+0	03.2	44	58.5	96	45	4	46	5	20	5	49	7	09
19	106	51.5		02.2	59	27.0	95	50		39	17		49	6	50	31
20	121	51.7		01.3	73	55.5	95	52		35	15		49	41	29	23
21	136	51.9	+0	00.3	88	24.0	95	54		32	13		48	31	27	35
22	151	52.1	-0	00.7	102	52.5	95	56		27	11		48	20	24	23
23	166	52.3		01.6	117	20.9	94	58		22	09		48	6	08	19
24	181	52.6	-0	02.6	131	49.4	95	60 S	4	17	5	06	5	48	5	53

UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO								
	PMG: 23 ^h 52 ^m 1		Mag: -3.9 PMG: 10 ^h 13 ^m		Mag: +0.8 PMG: 7 ^h 08 ^m		Mag: -2.8 PMG: 21 ^h 15 ^m			Mag: +1.1 PMG: 11 ^h 41 ^m								
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec		hG ♄	Dec							
h	°	'	°	'	°	'	°	'	°	'	°	'						
0	0	59.5	206	52.6	+11	45.5	252	53.3	+22	58.8	40	18.1	-16	30.4	184	19.0	+3	35.6
1	16	01.9	221	52.2		44.5	267	54.2		58.6	55	20.7		30.5	199	21.2		35.4
2	31	04.4	236	51.7		43.5	282	55.1		58.5	70	23.3		30.5	214	23.4		35.3
3	46	06.9	251	51.2		42.5	297	56.0		58.4	85	26.0		30.6	229	25.6		35.2
4	61	09.3	266	50.7		41.5	312	56.9		58.3	100	28.6		30.6	244	27.7		35.1
5	76	11.8	281	50.3	+11	40.4	327	57.8	+22	58.1	115	31.2	-16	30.7	259	29.9	+3	34.9
6	91	14.2	296	49.8	+11	39.4	342	58.7	+22	58.0	130	33.9	-16	30.7	274	32.1	+3	34.8
7	106	16.7	311	49.3		38.4	357	59.6		57.9	145	36.5		30.8	289	34.3		34.7
8	121	19.2	326	48.8		37.4	13	00.5		57.7	160	39.1		30.8	304	36.5		34.6
9	136	21.6	341	48.3		36.4	28	01.4		57.6	175	41.7		30.9	319	38.6		34.5
10	151	24.1	356	47.9		35.4	43	02.3		57.5	190	44.4		30.9	334	40.8		34.3
11	166	26.6	11	47.4	+11	34.4	58	03.2	+22	57.3	205	47.0	-16	31.0	349	43.0	+3	34.2
12	181	29.0	26	46.9	+11	33.3	73	04.1	+22	57.2	220	49.6	-16	31.0	4	45.2	+3	34.1
13	196	31.5	41	46.4		32.3	88	05.0		57.1	235	52.3		31.1	19	47.3		34.0
14	211	34.0	56	46.0		31.3	103	05.9		56.9	250	54.9		31.1	34	49.5		33.9
15	226	36.4	71	45.5		30.3	118	06.9		56.8	265	57.5		31.2	49	51.7		33.7
16	241	38.9	86	45.0		29.3	133	07.8		56.7	281	00.2		31.2	64	53.9		33.6
17	256	41.4	101	44.5	+11	28.3	148	08.7	+22	56.5	296	02.8	-16	31.3	79	56.0	+3	33.5
18	271	43.8	116	44.1	+11	27.2	163	09.6	+22	56.4	311	05.4	-16	31.3	94	58.2	+3	33.4
19	286	46.3	131	43.6		26.2	178	10.5		56.3	326	08.0		31.4	110	00.4		33.2
20	301	48.7	146	43.1		25.2	193	11.4		56.1	341	10.7		31.4	125	02.6		33.1
21	316	51.2	161	42.6		24.2	208	12.3		56.0	356	13.3		31.5	140	04.8		33.0
22	331	53.7	176	42.2		23.2	223	13.2		55.9	11	15.9		31.5	155	06.9		32.9
23	346	56.1	191	41.7		22.1	238	14.1		55.7	26	18.5		31.6	170	09.1		32.8
24	1	58.6	206	41.2	+11	21.1	253	15.0	+22	55.6	41	21.2	-16	31.6	185	11.3	+3	32.6
Dif	—		-5	-10		+9	-1			+26	0			+22	-1			

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15°9 PMG: 11 ^h 52 ^m 3			Edad: 4 ^d 2 SD: 15°4 PMG: 15 ^h 46 ^m	PHE { 4 ^h : 56°2 12 ^h : 56°0 20 ^h : 55°8 R°: 53 ^m									
	hG ☉	Dec				hG ☾			Dif	Dec	Dif	Civil	Náutico	Hora
h	°	'	°	'	°	'	°	h	m	h	m	h	m	m
0	181	52.6	-0	02.6	131	49.4	-23 09.0	60 N	17 57	18 38	19 28	13 11	75	18 15 34
1	196	52.8		03.6	146	17.8	15.9	58	56	35	22	12 48	71	38 38
2	211	53.0		04.6	160	46.2	22.7	56	56	33	17	30	68	18 57 40
3	226	53.2		05.5	175	14.6	29.4	54	56	31	13	14	67	19 13 42
4	241	53.4		06.5	189	43.0	35.9	52	56	30	09	12	01	26 44
5	256	53.7	-0	07.5	204	11.3	-23 42.3	50	17 56	18 28	19 06	11 49	64	19 38 45
6	271	53.9	-0	08.5	218	39.7	-23 48.6	45	17 56	18 25	18 59	11 25	62	20 03 46
7	286	54.1		09.4	233	08.0	-23 54.8	40	55	22	54	11 06	60	23 47
8	301	54.3		10.4	247	36.3	-24 00.8	35	55	21	50	10 50	59	39 49
9	316	54.5		11.4	262	04.6	06.7	30	55	19	47	36	58	20 54 49
10	331	54.7		12.4	276	32.9	12.4	20	55	17	43	10 12	56	21 18 51
11	346	55.0	-0	13.3	291	01.2	-24 18.0	10 N	17 55	18 16	18 41	9 52	54	21 39 52
12	1	55.2	-0	14.3	305	29.4	-24 23.5	0	17 56	18 16	18 40	9 33	53	21 59 52
13	16	55.4		15.3	319	57.7	28.8	10 S	56	17	41	9 15	51	22 18 54
14	31	55.6		16.3	334	25.9	34.0	20	56	18	44	8 55	49	22 40 54
15	46	55.8		17.2	348	54.2	39.1	30	57	21	49	32	47	23 04 56
16	61	56.1		18.2	3	22.4	44.0	35	57	23	52	18	46	19 56
17	76	56.3	-0	19.2	17	50.6	-24 48.9	40	17 58	18 25	18 56	8 03	44	23 35 57
18	91	56.5	-0	20.1	32	18.9	-24 53.5	45	17 58	18 28	19 02	7 44	43	23 55 58
19	106	56.7		21.1	46	47.1	-24 58.1	50	59	31	09	21	40	** * *
20	121	56.9		22.1	61	15.3	-25 02.4	52	17 59	33	13	7 10	39	** * *
21	136	57.1		23.1	75	43.5	06.7	54	18 00	35	17	6 58	36	** * *
22	151	57.4		24.0	90	11.7	10.8	56	00	37	22	44	34	** * *
23	166	57.6		25.0	104	39.9	14.8	58	01	40	27	27	31	0 04 79
24	181	57.8	-0	26.0	119	08.1	-25 18.7	60 S	18 01	18 43	19 33	6 08	26	0 24 83

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 23 ^h 48 ^m 2		Mag: -3.9 PMG: 10 ^h 14 ^m			Mag: +0.8 PMG: 7 ^h 07 ^m			Mag: -2.7 PMG: 21 ^h 11 ^m			Mag: +1.1 PMG: 11 ^h 38 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	1	58.6	206	41.2	+11 21.1	253	15.0	+22 55.6	41	21.2	-16 31.6	185	11.3	+3 32.6	
1	17	01.1	221	40.8	20.1	268	15.9	55.5	56	23.8	31.6	200	13.5	32.5	
2	32	03.5	236	40.3	19.1	283	16.8	55.3	71	26.4	31.7	215	15.6	32.4	
3	47	06.0	251	39.8	18.0	298	17.7	55.2	86	29.1	31.7	230	17.8	32.3	
4	62	08.5	266	39.3	17.0	313	18.6	55.1	101	31.7	31.8	245	20.0	32.2	
5	77	10.9	281	38.9	+11 16.0	328	19.5	+22 54.9	116	34.3	-16 31.8	260	22.2	+3 32.0	
6	92	13.4	296	38.4	+11 15.0	343	20.5	+22 54.8	131	36.9	-16 31.9	275	24.4	+3 31.9	
7	107	15.8	311	37.9	13.9	358	21.4	54.7	146	39.5	31.9	290	26.5	31.8	
8	122	18.3	326	37.5	12.9	13	22.3	54.5	161	42.2	32.0	305	28.7	31.7	
9	137	20.8	341	37.0	11.9	28	23.2	54.4	176	44.8	32.0	320	30.9	31.5	
10	152	23.2	356	36.5	10.9	43	24.1	54.3	191	47.4	32.1	335	33.1	31.4	
11	167	25.7	11	36.0	+11 09.8	58	25.0	+22 54.1	206	50.0	-16 32.1	350	35.2	+3 31.3	
12	182	28.2	26	35.6	+11 08.8	73	25.9	+22 54.0	221	52.7	-16 32.2	5	37.4	+3 31.2	
13	197	30.6	41	35.1	07.8	88	26.8	53.8	236	55.3	32.2	20	39.6	31.1	
14	212	33.1	56	34.6	06.7	103	27.7	53.7	251	57.9	32.3	35	41.8	30.9	
15	227	35.6	71	34.2	05.7	118	28.7	53.6	267	00.5	32.3	50	43.9	30.8	
16	242	38.0	86	33.7	04.7	133	29.6	53.4	282	03.2	32.3	65	46.1	30.7	
17	257	40.5	101	33.2	+11 03.7	148	30.5	+22 53.3	297	05.8	-16 32.4	80	48.3	+3 30.6	
18	272	43.0	116	32.8	+11 02.6	163	31.4	+22 53.2	312	08.4	-16 32.4	95	50.5	+3 30.5	
19	287	45.4	131	32.3	01.6	178	32.3	53.0	327	11.0	32.5	110	52.7	30.3	
20	302	47.9	146	31.8	+11 00.6	193	33.2	52.9	342	13.6	32.5	125	54.8	30.2	
21	317	50.3	161	31.4	+10 59.5	208	34.1	52.7	357	16.3	32.6	140	57.0	30.1	
22	332	52.8	176	30.9	58.5	223	35.0	52.6	12	18.9	32.6	155	59.2	30.0	
23	347	55.3	191	30.4	57.5	238	36.0	52.5	27	21.5	32.7	171	01.4	29.8	
24	2	57.7	206	30.0	+10 56.4	253	36.9	+22 52.3	42	24.1	-16 32.7	186	03.5	+3 29.7	
Dif	—		-5	-10		+9	-1		+26		0		+22		-1

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15'9 PMG: 11 ^h 52 ^m 0			Edad: 5 ^d 2 SD: 15'2 PMG: 16 ^h 39 ^m	PHE { 4 ^h : 55'5 12 ^h : 55'3 20 ^h : 55'1 Rº: 52 ^m													
	hG ☉	Dec				hG ☾		Dif	Dec		Dif	Náutico	Civil	Hora	Rº	Hora	Rº	
h	°	'	°	°	'	°	°	'	h	m	h	m	h	m	h	m	m	
0	181	57.8	-0	26.0	119	08.1	-25	18.7	60 N	4	18	5	07	5	49	14	26	53
1	196	58.0		27.0	133	36.3	92	22.4	58	23	10		49			13	59	54
2	211	58.2		27.9	148	04.5	92	26.0	56	28	12		49			38	54	37
3	226	58.5		28.9	162	32.8	93	29.4	54	32	14		49			21	53	19
4	241	58.7		29.9	177	01.0	92	32.7	52	36	16		49			13	06	53
5	256	58.9	-0	30.9	191	29.2	92	-25	50	4	39	5	17	5	49	12	53	54
6	271	59.1	-0	31.8	205	57.4	92	-25	45	4	46	5	20	5	49	12	27	53
7	286	59.3		32.8	220	25.6	92	41.8	40	51	22		49			12	06	53
8	301	59.5		33.8	234	53.9	93	44.6	35	55	24		49			11	49	53
9	316	59.8		34.8	249	22.1	92	47.2	30	4	58	26	49			34	52	21
10	332	00.0		35.7	263	50.4	93	49.7	20	5	02	27	49			11	08	53
11	347	00.2	-0	36.7	278	18.6	92	-25	10 N	5	04	5	28	5	49	10	46	53
12	2	00.4	-0	37.7	292	46.9	93	-25	0	5	04	5	28	5	49	10	26	52
13	17	00.6		38.6	307	15.2	93	56.4	10 S	03	27	48				10	06	52
14	32	00.8		39.6	321	43.5	93	-25	20	5	00	26	48			9	44	52
15	47	01.1		40.6	336	11.8	93	-26	30	4	55	23	47			19	51	***
16	62	01.3		41.6	350	40.2	94	01.8	35	52	21	47				9	04	51
17	77	01.5	-0	42.5	5	08.5	93	-26	40	4	47	5	19	5	46	8	47	51
18	92	01.7	-0	43.5	19	36.9	94	-26	45	4	42	5	16	5	45	8	27	50
19	107	01.9		44.5	34	05.2	93	06.0	50	34	12	44				8	01	49
20	122	02.1		45.5	48	33.6	94	07.2	52	30	10	44				7	49	48
21	137	02.4		46.4	63	02.1	95	08.2	54	26	08	43				34	48	0
22	152	02.6		47.4	77	30.5	94	09.0	56	22	06	43				7	18	47
23	167	02.8		48.4	91	59.0	95	09.8	58	16	03	42				6	58	46
24	182	03.0	-0	49.4	106	27.4	94	-26	60 S	4	10	5	00	5	42	6	34	44

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 23 ^h 44 ^m 3		Mag: -3.9 PMG: 10 ^h 14 ^m		Mag: +0.8 PMG: 7 ^h 05 ^m		Mag: -2.7 PMG: 21 ^h 07 ^m		Mag: +1.1 PMG: 11 ^h 34 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	°	°	'	°	°	°	'
0	2	57.7	206	30.0	+10	56.4	253	36.9	+22	52.3
1	18	00.2	221	29.5		55.4	268	37.8		52.2
2	33	02.7	236	29.0		54.3	283	38.7		52.1
3	48	05.1	251	28.6		53.3	298	39.6		51.9
4	63	07.6	266	28.1		52.3	313	40.5		51.8
5	78	10.1	281	27.6	+10	51.2	328	41.5	+22	51.6
6	93	12.5	296	27.2	+10	50.2	343	42.4	+22	51.5
7	108	15.0	311	26.7		49.1	358	43.3		51.4
8	123	17.5	326	26.2		48.1	13	44.2		51.2
9	138	19.9	341	25.8		47.1	28	45.1		51.1
10	153	22.4	356	25.3		46.0	43	46.1		50.9
11	168	24.8	11	24.9	+10	45.0	58	47.0	+22	50.8
12	183	27.3	26	24.4	+10	43.9	73	47.9	+22	50.6
13	198	29.8	41	23.9		42.9	88	48.8		50.5
14	213	32.2	56	23.5		41.9	103	49.7		50.4
15	228	34.7	71	23.0		40.8	118	50.7		50.2
16	243	37.2	86	22.5		39.8	133	51.6		50.1
17	258	39.6	101	22.1	+10	38.7	148	52.5	+22	49.9
18	273	42.1	116	21.6	+10	37.7	163	53.4	+22	49.8
19	288	44.6	131	21.2		36.6	178	54.3		49.7
20	303	47.0	146	20.7		35.6	193	55.3		49.5
21	318	49.5	161	20.2		34.5	208	56.2		49.4
22	333	52.0	176	19.8		33.5	223	57.1		49.2
23	348	54.4	191	19.3		32.4	238	58.0		49.1
24	3	56.9	206	18.9	+10	31.4	253	59.0	+22	48.9
Dif	—		-5		-10		+9		-1	

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15'9 PMG: 11 ^h 51 ^m 6			Edad: 6 ^d 2 SD: 15'0 PMG: 17 ^h 31 ^m	PHE { 4 ^h : 55'0 12 ^h : 54'8 20 ^h : 54'7 R°: 50 ^m										
	hG ☉	Dec				hG ☾			Dif	Dec	Dif	Civil	Náutico	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	m	h m	m
0	182	03.0	-0	49.4	106	27.4	-26	10.4	17 51	18 32	19 21	15 19	31	19 44	73
1	197	03.2		50.3	120	55.9		10.8	51	30	16	14 53	35	20 11	69
2	212	03.4		51.3	135	24.5		11.2	51	28	12		32 37		32 66
3	227	03.7		52.3	149	53.0		11.4	51	26	08	14 14	40	20 49	66
4	242	03.9		53.3	164	21.6		11.4	51	25	04	13 59	41	21 04	62
5	257	04.1	-0	54.2	178	50.2	-26	11.4	17 51	18 24	19 01	13 47	42	21 16	62
6	272	04.3	-0	55.2	193	18.9	-26	11.2	17 52	18 21	18 55	13 20	44	21 43	59
7	287	04.5		56.2	207	47.5		10.9	52	19	51	12 59	45	22 04	57
8	302	04.7		57.2	222	16.2		10.4	52	18	47		42 46		21 56
9	317	04.9		58.1	236	44.9		09.8	53	17	44		26 48	22 36	55
10	332	05.2	-0	59.1	251	13.7		09.1	53	15	41	12 01	49	23 01	53
11	347	05.4	-1	00.1	265	42.5	-26	08.2	17 54	18 15	18 39	11 39	50	23 23	51
12	2	05.6	-1	01.0	280	11.3	-26	07.3	17 55	18 16	18 40	11 18	51	23 43	50
13	17	05.8		02.0	294	40.1		06.2	56	17	41	10 58	51	***	***
14	32	06.0		03.0	309	09.0		04.9	57	19	44		36 52	***	***
15	47	06.2		04.0	323	37.9		03.6	58	22	50	10 10	54	0 00	50
16	62	06.5		04.9	338	06.9		02.1	17 59	24	54	9 55	55		15 49
17	77	06.7	-1	05.9	352	35.9	-26	00.4	18 00	18 27	18 58	9 38	55	0 32	49
18	92	06.9	-1	06.9	7	04.9	-25	58.7	18 01	18 30	19 05	9 17	56	0 53	49
19	107	07.1		07.9	21	34.0		56.8	02	34	13	8 50	58	1 20	47
20	122	07.3		08.8	36	03.1		54.8	03	36	17		37 59		32 48
21	137	07.5		09.8	50	32.3		52.7	03	39	21		22 60	1 47	47
22	152	07.7		10.8	65	01.5		50.4	04	41	26	8 05	61	2 05	45
23	167	08.0		11.8	79	30.7		48.1	05	44	32	7 44	62	26	44
24	182	08.2	-1	12.7	94	00.0	-25	45.5	18 06	18 48	19 39	7 18	64	2 52	42

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 23 ^h 40 ^m 3		Mag: -3.9 PMG: 10 ^h 15 ^m		Mag: +0.8 PMG: 7 ^h 04 ^m		Mag: -2.7 PMG: 21 ^h 03 ^m		Mag: +1.1 PMG: 11 ^h 31 ^m						
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	3	56.9	206	18.9	+10 31.4	253	59.0	+22 48.9	43	26.9	-16 33.8	186	55.8	+3 26.8	
1	18	59.3	221	18.4	30.3	268	59.9	48.8	58	29.5	33.8	201	58.0	26.7	
2	34	01.8	236	17.9	29.3	284	00.8	48.6	73	32.1	33.8	217	00.2	26.6	
3	49	04.3	251	17.5	28.2	299	01.7	48.5	88	34.7	33.9	232	02.3	26.5	
4	64	06.7	266	17.0	27.2	314	02.7	48.4	103	37.3	33.9	247	04.5	26.3	
5	79	09.2	281	16.6	+10 26.1	329	03.6	+22 48.2	118	39.9	-16 34.0	262	06.7	+3 26.2	
6	94	11.7	296	16.1	+10 25.1	344	04.5	+22 48.1	133	42.5	-16 34.0	277	08.9	+3 26.1	
7	109	14.1	311	15.7	24.0	359	05.4	47.9	148	45.1	34.1	292	11.0	26.0	
8	124	16.6	326	15.2	23.0	14	06.4	47.8	163	47.8	34.1	307	13.2	25.8	
9	139	19.1	341	14.7	21.9	29	07.3	47.6	178	50.4	34.1	322	15.4	25.7	
10	154	21.5	356	14.3	20.9	44	08.2	47.5	193	53.0	34.2	337	17.6	25.6	
11	169	24.0	11	13.8	+10 19.8	59	09.1	+22 47.3	208	55.6	-16 34.2	352	19.8	+3 25.5	
12	184	26.4	26	13.4	+10 18.8	74	10.1	+22 47.2	223	58.2	-16 34.3	7	21.9	+3 25.4	
13	199	28.9	41	12.9	17.7	89	11.0	47.1	239	00.8	34.3	22	24.1	25.2	
14	214	31.4	56	12.5	16.7	104	11.9	46.9	254	03.4	34.3	37	26.3	25.1	
15	229	33.8	71	12.0	15.6	119	12.9	46.8	269	06.0	34.4	52	28.5	25.0	
16	244	36.3	86	11.5	14.5	134	13.8	46.6	284	08.6	34.4	67	30.6	24.9	
17	259	38.8	101	11.1	+10 13.5	149	14.7	+22 46.5	299	11.2	-16 34.5	82	32.8	+3 24.8	
18	274	41.2	116	10.6	+10 12.4	164	15.6	+22 46.3	314	13.8	-16 34.5	97	35.0	+3 24.6	
19	289	43.7	131	10.2	11.4	179	16.6	46.2	329	16.4	34.5	112	37.2	24.5	
20	304	46.2	146	09.7	10.3	194	17.5	46.0	344	19.0	34.6	127	39.4	24.4	
21	319	48.6	161	09.3	09.2	209	18.4	45.9	359	21.6	34.6	142	41.5	24.3	
22	334	51.1	176	08.8	08.2	224	19.4	45.7	14	24.2	34.7	157	43.7	24.2	
23	349	53.6	191	08.4	07.1	239	20.3	45.6	29	26.8	34.7	172	45.9	24.0	
24	4	56.0	206	07.9	+10 06.1	254	21.2	+22 45.4	44	29.5	-16 34.7	187	48.1	+3 23.9	
Dif	—		-5	-11		+9	-1		+26		0		+22		-1

ALMANAQUE NÁUTICO PERSEIS

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 16'0 PMG: 11 ^h 50 ^m 9			Edad: 8 ^d 2 PHE { 4 ^h : 54'3 12 ^h : 54'3 20 ^h : 54'2 PMG: 19 ^h 09 ^m R°: 46 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	h m	h m	h m	h m	m	h m	m				
0	182	13.3	-1	36.1	81	56.6	-24 09.6	60 N	17 44	18 26	19 15	16 08	10	22 20 84				
1	197	13.5		37.1	96	27.1 ¹¹⁵	-24 04.2	58	45	24	10	15 50	15	37 80				
2	212	13.7		38.0	110	57.6 ¹¹⁵	-23 58.6	56	46	23	06	35 18		22 51 76				
3	227	13.9		39.0	125	28.2 ¹¹⁶	53.0	56	46	21	03	23 20		23 04 73				
4	242	14.1		40.0	139	58.9 ¹¹⁷	47.3	52	47	20	19 00	11 24		14 71				
5	257	14.4	-1	41.0	154	29.6 ¹¹⁷	-23 41.4	50	17 47	18 19	18 57	15 01	26	23 24 68				
6	272	14.6	-1	41.9	169	00.3 ¹¹⁷	-23 35.4	60	17 48	18 17	18 51	14 40	29	23 44 64				
7	287	14.8		42.9	183	31.2 ¹¹⁹	29.4	60	49	16	47	23 32		** ** **				
8	302	15.0		43.9	198	02.0 ¹¹⁸	23.2	62	50	15	44	14 08	35	** ** **				
9	317	15.2		44.9	212	33.0 ¹²⁰	16.9	63	50	14	42	13 56	37	** ** **				
10	332	15.4		45.8	227	03.9 ¹¹⁹	10.5	64	52	14	39	34 41		** ** **				
11	347	15.6	-1	46.8	241	35.0 ¹²¹	-23 04.0	65	10 N	17 53	18 14	18 38	13 15	44 0 14 50				
12	2	15.8	-1	47.8	256	06.1 ¹²¹	-22 57.4	66	0	17 54	18 15	18 39	12 58	46 0 33 48				
13	17	16.1		48.7	270	37.2 ¹²¹	50.7	67	10 S	56	17	41	40 49	0 52 45				
14	32	16.3		49.7	285	08.4 ¹²²	43.9	68	20	57	19	45	12 21	53 1 12 42				
15	47	16.5		50.7	299	39.7 ¹²³	37.0	69	30	17 59	23	51	11 59	56 34 40				
16	62	16.7		51.7	314	11.0 ¹²³	30.0	70	35	18 00	26	18 55	47 57	1 48 37				
17	77	16.9	-1	52.6	328	42.4 ¹²⁴	-22 23.0	70	40	18 02	18 29	19 01	11 32	60 2 03 36				
18	92	17.1	-1	53.6	343	13.8 ¹²⁴	-22 15.8	72	45	18 03	18 33	19 07	11 14	63 2 22 32				
19	107	17.3		54.6	357	45.3 ¹²⁵	08.5	73	50	05	38	16	10 52	68 44 29				
20	122	17.5		55.6	12	16.8 ¹²⁵	-22 01.1	74	52	06	40	20	41 70	2 55 27				
21	137	17.7		56.5	26	48.4 ¹²⁶	-21 53.6	75	54	07	43	25	30 72	3 08 24				
22	152	18.0		57.5	41	20.1 ¹²⁷	46.0	76	56	08	46	31	16 75	22 21				
23	167	18.2		58.5	55	51.8 ¹²⁷	38.4	76	58	09	49	37	10 00	78 38 18				
24	182	18.4	-1	59.4	70	23.5 ¹²⁷	-21 30.6	78	60 S	18 11	18 53	19 44	9 40	84 3 58 13				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 23 ^h 32 ^m 5		Mag: -3.9 PMG: 10 ^h 16 ^m			Mag: +0.8 PMG: 7 ^h 01 ^m			Mag: -2.7 PMG: 20 ^h 54 ^m			Mag: +1.1 PMG: 11 ^h 24 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	5	55.2	205	57.1	+9	40.4	254	43.7	+22	41.8	45	31.8	-16	35.7	188	40.3	+3	21.0
1	20	57.6	220	56.7		39.4	269	44.7		41.7	60	34.4		35.7	203	42.5		20.9
2	36	00.1	235	56.2		38.3	284	45.6		41.5	75	37.0		35.8	218	44.7		20.8
3	51	02.6	250	55.8		37.2	299	46.5		41.4	90	39.6		35.8	233	46.9		20.7
4	66	05.0	265	55.3		36.1	314	47.5		41.2	105	42.2		35.8	248	49.1		20.5
5	81	07.5	280	54.9	+9	35.1	329	48.4	+22	41.1	120	44.8	-16	35.9	263	51.2	+3	20.4
6	96	09.9	295	54.4	+9	34.0	344	49.4	+22	40.9	135	47.4	-16	35.9	278	53.4	+3	20.3
7	111	12.4	310	54.0		32.9	359	50.3		40.8	150	50.0		35.9	293	55.6		20.2
8	126	14.9	325	53.5		31.8	14	51.3		40.6	165	52.6		36.0	308	57.8		20.0
9	141	17.3	340	53.1		30.8	29	52.2		40.5	180	55.2		36.0	323	59.9		19.9
10	156	19.8	355	52.7		29.7	44	53.1		40.3	195	57.8		36.0	339	02.1		19.8
11	171	22.3	10	52.2	+9	28.6	59	54.1	+22	40.1	211	00.4	-16	36.1	354	04.3	+3	19.7
12	186	24.7	25	51.8	+9	27.5	74	55.0	+22	40.0	226	03.0	-16	36.1	9	06.5	+3	19.6
13	201	27.2	40	51.3		26.4	89	56.0		39.8	241	05.6		36.2	24	08.7		19.4
14	216	29.7	55	50.9		25.4	104	56.9		39.7	256	08.2		36.2	39	10.8		19.3
15	231	32.1	70	50.4		24.3	119	57.9		39.5	271	10.8		36.2	54	13.0		19.2
16	246	34.6	85	50.0		23.2	134	58.8		39.4	286	13.3		36.3	69	15.2		19.1
17	261	37.0	100	49.5	+9	22.1	149	59.8	+22	39.2	301	15.9	-16	36.3	84	17.4	+3	19.0
18	276	39.5	115	49.1	+9	21.0	165	00.7	+22	39.1	316	18.5	-16	36.3	99	19.6	+3	18.8
19	291	42.0	130	48.7		20.0	180	01.7		38.9	331	21.1		36.4	114	21.7		18.7
20	306	44.4	145	48.2		18.9	195	02.6		38.8	346	23.7		36.4	129	23.9		18.6
21	321	46.9	160	47.8		17.8	210	03.6		38.6	1	26.3		36.4	144	26.1		18.5
22	336	49.4	175	47.3		16.7	225	04.5		38.4	16	28.9		36.5	159	28.3		18.4
23	351	51.8	190	46.9		15.6	240	05.5		38.3	31	31.5		36.5	174	30.4		18.2
24	6	54.3	205	46.5	+9	14.5	255	06.4	+22	38.1	46	34.1	-16	36.5	189	32.6	+3	18.1
Dif	—		-4		-11		+9		-2		+26		0		+22		-1	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16'0 PMG: 11 ^h 50 ^m 6			Edad: 9 ^d 2	PHE { 4 ^h : 54'2 12 ^h : 54'2 20 ^h : 54'3 R°: 44 ^m												
	hG ☉	Dec		hG ☾		Dif		Dec	Dif		Náutico	Civil	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	182	18.4	-1	59.4	70	23.5	-21	30.6	60 N	4	28	5	17	5	58	16	18
1	197	18.6	-2	00.4	84	55.3 ¹²⁸		22.7	58	32	19		58	16	05	10	23
2	212	18.8		01.4	99	27.2 ¹²⁹		14.8	56	36	20		57	15	53	14	**
3	227	19.0		02.4	113	59.1 ¹²⁹	-21	06.7	54	40	21		57	43	16	**	**
4	242	19.2		03.3	128	31.1 ¹³⁰	-20	58.6	52	43	22		56	35	18	**	**
5	257	19.4	-2	04.3	143	03.1 ¹³⁰	-20	50.4	50	4	46	5	23	5	55	15	27
6	272	19.6	-2	05.3	157	35.2 ¹³¹	-20	42.1	45	4	51	5	25	5	54	15	09
7	287	19.8		06.3	172	07.3 ¹³¹		33.7	40	55	26		53	14	55	28	0
8	302	20.1		07.2	186	39.5 ¹³²		25.2	35	4	58	27	52	43	31	14	58
9	317	20.3		08.2	201	11.7 ¹³²		16.6	30	5	00	28	52	33	33	26	56
10	332	20.5		09.2	215	44.0 ¹³³	-20	07.9	20	03	28		50	14	15	37	0
11	347	20.7	-2	10.1	230	16.3 ¹³³	-19	59.1	10 N	5	03	5	28	5	49	13	59
12	2	20.9	-2	11.1	244	48.7 ¹³⁴	-19	50.3	0	5	03	5	27	5	47	13	44
13	17	21.1		12.1	259	21.2 ¹³⁵		41.4	10 S	5	00	25	46	29	48	37	42
14	32	21.3		13.1	273	53.7 ¹³⁵		32.4	20	4	56	22	44	13	14	51	54
15	47	21.5		14.0	288	26.2 ¹³⁵		23.3	30	50	18		42	12	55	56	2
16	62	21.7		15.0	302	58.8 ¹³⁶		14.1	35	46	15		41	44	58	25	33
17	77	21.9	-2	16.0	317	31.4 ¹³⁶	-19	04.8	40	4	40	5	12	5	39	12	32
18	92	22.1	-2	16.9	332	04.1 ¹³⁷	-18	55.5	45	4	34	5	08	5	38	12	17
19	107	22.4		17.9	346	36.9 ¹³⁸		46.1	50	25	03		36	12	00	68	3
20	122	22.6		18.9	1	09.7 ¹³⁸		36.6	52	20	5	01	35	11	51	71	22
21	137	22.8		19.9	15	42.5 ¹³⁸		27.0	54	16	4	58	34	42	73	32	18
22	152	23.0		20.8	30	15.4 ¹³⁹		17.3	56	10	55		32	31	76	43	16
23	167	23.2		21.8	44	48.3 ¹³⁹	-18	07.6	58	4	04	52	31	18	80	3	56
24	182	23.4	-2	22.8	59	21.3 ¹⁴⁰	-17	57.8	60 S	3	56	4	48	5	30	11	04

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 23 ^h 28 ^m 5		Mag: -3.9 PMG: 10 ^h 17 ^m		Mag: +0.8 PMG: 6 ^h 59 ^m		Mag: -2.7 PMG: 20 ^h 50 ^m		Mag: +1.1 PMG: 11 ^h 20 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	6	54.3	205	46.5	+9	14.5	255	06.4	+22	38.1
1	21	56.8	220	46.0		13.5	270	07.4		38.0
2	36	59.2	235	45.6		12.4	285	08.3		37.8
3	52	01.7	250	45.1		11.3	300	09.3		37.7
4	67	04.2	265	44.7		10.2	315	10.2		37.5
5	82	06.6	280	44.2	+9	09.1	330	11.2	+22	37.3
6	97	09.1	295	43.8	+9	08.0	345	12.1	+22	37.2
7	112	11.5	310	43.4		06.9	0	13.1		37.0
8	127	14.0	325	42.9		05.8	15	14.0		36.9
9	142	16.5	340	42.5		04.7	30	15.0		36.7
10	157	18.9	355	42.1		03.7	45	15.9		36.6
11	172	21.4	10	41.6	+9	02.6	60	16.9	+22	36.4
12	187	23.9	25	41.2	+9	01.5	75	17.8	+22	36.2
13	202	26.3	40	40.7	+9	00.4	90	18.8		36.1
14	217	28.8	55	40.3	+8	59.3	105	19.7		35.9
15	232	31.3	70	39.9		58.2	120	20.7		35.8
16	247	33.7	85	39.4		57.1	135	21.6		35.6
17	262	36.2	100	39.0	+8	56.0	150	22.6	+22	35.4
18	277	38.7	115	38.5	+8	54.9	165	23.6	+22	35.3
19	292	41.1	130	38.1		53.8	180	24.5		35.1
20	307	43.6	145	37.7		52.7	195	25.5		35.0
21	322	46.0	160	37.2		51.6	210	26.4		34.8
22	337	48.5	175	36.8		50.5	225	27.4		34.6
23	352	51.0	190	36.4		49.5	240	28.3		34.5
24	7	53.4	205	35.9	+8	48.4	255	29.3	+22	34.3
Dif	—		-4	-11			+10	-2		
									+26	0
										+22
										-1

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG: 11 ^h 50 ^m 3			Edad: 10 ^d 2 PHE { SD: 14'8 PMG: 20 ^h 39 ^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	182	23.4	-2 22.8	59	21.3	-17 57.8	60 N	17 38	18 20	19 08	16 24 4	** ** *	** ** *	
1	197	23.6	23.8	73	54.3 ¹⁴⁰	47.9 ⁹⁹	58	39	18	04	15 7	** ** *	** ** *	
2	212	23.8	24.7	88	27.4 ¹⁴¹	37.9 ¹⁰⁰	56	40	17	19 01	16 07 10	0 07 77		
3	227	24.0	25.7	103	00.5 ¹⁴¹	27.9 ¹⁰⁰	54	41	16	18 57	15 59 13	17 7		
4	242	24.2	26.7	117	33.7 ¹⁴²	17.8 ¹⁰¹	52	42	15	55	53 15	25 71		
5	257	24.4	-2 27.6	132	06.9 ¹⁴²	-17 07.6 ¹⁰²	50	17 43	18 15	18 52	15 47 17	0 33 69		
6	272	24.6	-2 28.6	146	40.2 ¹⁴³	-16 57.3 ¹⁰³	45	17 44	18 13	18 47	15 34 22	0 48 65		
7	287	24.9	29.6	161	13.5 ¹⁴³	47.0 ¹⁰³	40	46	13	44	23 26	1 01 61		
8	302	25.1	30.6	175	46.8 ¹⁴³	36.6 ¹⁰⁴	35	47	12	41	14 28	12 58		
9	317	25.3	31.5	190	20.2 ¹⁴⁴	26.1 ¹⁰⁵	30	48	12	39	15 06 31	22 55		
10	332	25.5	32.5	204	53.6 ¹⁴⁴	15.5 ¹⁰⁶	20	50	12	37	14 52 36	38 51		
11	347	25.7	-2 33.5	219	27.1 ¹⁴⁵	-16 04.9 ¹⁰⁶	10 N	17 52	18 13	18 37	14 40 39	1 53 47		
12	2	25.9	-2 34.4	234	00.6 ¹⁴⁵	-15 54.2 ¹⁰⁷	0	17 54	18 14	18 38	14 29 43	2 06 43		
13	17	26.1	35.4	248	34.1 ¹⁴⁵	43.5 ¹⁰⁷	10 S	55	16	41	17 47	19 40		
14	32	26.3	36.4	263	07.7 ¹⁴⁶	32.6 ¹⁰⁹	20	17 58	20	45	14 05 50	33 36		
15	47	26.5	37.4	277	41.3 ¹⁴⁶	21.7 ¹⁰⁹	30	18 00	24	52	13 51 55	49 32		
16	62	26.7	38.3	292	15.0 ¹⁴⁷	-15 10.8 ¹⁰⁹	35	02	27	18 57	42 58	2 58 30		
17	77	26.9	-2 39.3	306	48.7 ¹⁴⁷	-14 59.8 ¹¹⁰	40	18 04	18 31	19 03	13 33 61	3 09 26		
18	92	27.1	-2 40.3	321	22.4 ¹⁴⁷	-14 48.7 ¹¹¹	45	18 06	18 35	19 10	13 22 64	3 21 23		
19	107	27.3	41.2	335	56.2 ¹⁴⁸	37.5 ¹¹²	50	08	41	19	08 69	36 19		
20	122	27.5	42.2	350	30.0 ¹⁴⁸	26.3 ¹¹²	52	09	43	24	13 02 71	43 16		
21	137	27.8	43.2	5	03.8 ¹⁴⁸	15.0 ¹¹³	54	11	46	29	12 55 74	50 15		
22	152	28.0	44.1	19	37.7 ¹⁴⁹	-14 03.7 ¹¹³	56	12	50	35	47 77	3 59 12		
23	167	28.2	45.1	34	11.6 ¹⁴⁹	-13 52.3 ¹¹⁴	58	14	53	42	38 80	4 09 8		
24	182	28.4	-2 46.1	48	45.5 ¹⁴⁹	-13 40.8 ¹¹⁵	60 S	18 15	18 58	19 50	12 28 83	4 19 6		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 23 ^h 24 ^m 6		Mag: -3.9 PMG: 10 ^h 18 ^m		Mag: +0.8 PMG: 6 ^h 58 ^m		Mag: -2.7 PMG: 20 ^h 46 ^m		Mag: +1.1 PMG: 11 ^h 17 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	7	53.4	205	35.9	+8 48.4	255	29.3	+22 34.3	47	36.1
1	22	55.9	220	35.5	47.3	270	30.3	34.2	62	38.7
2	37	58.4	235	35.1	46.2	285	31.2	34.0	77	41.2
3	53	00.8	250	34.6	45.1	300	32.2	33.8	92	43.8
4	68	03.3	265	34.2	44.0	315	33.1	33.7	107	46.4
5	83	05.8	280	33.8	+8 42.9	330	34.1	+22 33.5	122	49.0
6	98	08.2	295	33.3	+8 41.8	345	35.1	+22 33.4	137	51.6
7	113	10.7	310	32.9	40.7	0	36.0	33.2	152	54.1
8	128	13.1	325	32.5	39.6	15	37.0	33.0	167	56.7
9	143	15.6	340	32.0	38.5	30	37.9	32.9	182	59.3
10	158	18.1	355	31.6	37.4	45	38.9	32.7	198	01.9
11	173	20.5	10	31.2	+8 36.3	60	39.9	+22 32.6	213	04.5
12	188	23.0	25	30.7	+8 35.2	75	40.8	+22 32.4	228	07.0
13	203	25.5	40	30.3	34.1	90	41.8	32.2	243	09.6
14	218	27.9	55	29.9	33.0	105	42.8	32.1	258	12.2
15	233	30.4	70	29.4	31.9	120	43.7	31.9	273	14.8
16	248	32.9	85	29.0	30.8	135	44.7	31.7	288	17.3
17	263	35.3	100	28.6	+8 29.6	150	45.7	+22 31.6	303	19.9
18	278	37.8	115	28.1	+8 28.5	165	46.6	+22 31.4	318	22.5
19	293	40.3	130	27.7	27.4	180	47.6	31.2	333	25.1
20	308	42.7	145	27.3	26.3	195	48.5	31.1	348	27.6
21	323	45.2	160	26.8	25.2	210	49.5	30.9	3	30.2
22	338	47.6	175	26.4	24.1	225	50.5	30.8	18	32.8
23	353	50.1	190	26.0	23.0	240	51.4	30.6	33	35.4
24	8	52.6	205	25.5	+8 21.9	255	52.4	+22 30.4	48	37.9
Dif	—		-4	-11		+10	-2		+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 49 ^m 9			Edad: 11 ^d 2 PHE { 4 ^h : 54'5 12 ^h : 54'6 20 ^h : 54'7 R°: 42 ^m															
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Náutico	Civil		Hora	R°		Hora	R°		
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m	h	m	
0	182	28.4	-2	46.1	48	45.5	-13	40.8	60 N	4	33	5	22	6	03	16	28	3	
1	197	28.6		47.1	63	19.5 ¹⁵⁰		29.3 ¹¹⁵	58	37	23		02		22	7	16	80	
2	212	28.8		48.0	77	53.5 ¹⁵⁰		17.7 ¹¹⁶	56	41	24		01		17	9	24	76	
3	227	29.0		49.0	92	27.5 ¹⁵⁰		-13	54	44	25	6	00		12	12	30	74	
4	242	29.2		50.0	107	01.6 ¹⁵¹		-12	52	46	26	5	59		08	14	36	72	
5	257	29.4	-2	50.9	121	35.7 ¹⁵¹		-12	50	4	49	5	59	16	04	16	1	42	69
6	272	29.6	-2	51.9	136	09.8 ¹⁵¹		-12	45	4	53	5	57	15	56	20	1	53	64
7	287	29.8		52.9	150	44.0 ¹⁵²		18.9 ¹¹⁹	40	57	28		55	49	23	2	02	61	
8	302	30.0		53.9	165	18.1 ¹⁵¹		-12	35	4	59	29	54	42	27	10	58		
9	317	30.2		54.8	179	52.3 ¹⁵²		-11	30	5	01	29	53	37	29	17	55		
10	332	30.4		55.8	194	26.6 ¹⁵³		43.0 ¹²¹	20	03	29		51	28	34	29	50		
11	347	30.6	-2	56.8	209	00.8 ¹⁵²		-11	10 N	5	03	5	49	15	19	38	2	40	46
12	2	30.8	-2	57.7	223	35.1 ¹⁵³		-11	0	5	02	5	47	15	12	41	2	49	43
13	17	31.0		58.7	238	09.4 ¹⁵³		-11	10 S	4	59	24	45	15	04	46	2	59	39
14	32	31.2	-2	59.7	252	43.7 ¹⁵³		-10	20	55	20		42	14	55	50	3	09	35
15	47	31.4	-3	00.6	267	18.0 ¹⁵³		42.1 ¹²³	30	48	16		40	46	55	21	30		
16	62	31.6		01.6	281	52.4 ¹⁵⁴		29.8 ¹²³	35	43	13		38	40	58	28	27		
17	77	31.9	-3	02.6	296	26.8 ¹⁵⁴		-10	40	4	37	5	09	5	36	14	34	61	3
18	92	32.1	-3	03.6	311	01.2 ¹⁵⁴		-10	45	4	30	5	04	5	34	14	26	65	3
19	107	32.3		04.5	325	35.6 ¹⁵⁴		-9	50	20	4	59	31	17	70		55	16	
20	122	32.5		05.5	340	10.0 ¹⁵⁴		40.0 ¹²⁵	52	15	56		30	13	72	3	59	15	
21	137	32.7		06.5	354	44.5 ¹⁵⁵		27.4 ¹²⁶	54	10	53		29	09	74	4	05	12	
22	152	32.9		07.4	9	19.0 ¹⁵⁵		14.8 ¹²⁶	56	4	04	50	27	14	04	76	11	9	
23	167	33.1		08.4	23	53.4 ¹⁵⁴		-9	58	3	57	46	25	13	58	79	17	7	
24	182	33.3	-3	09.4	38	27.9 ¹⁵⁵		-8	60 S	3	50	4	41	5	24	13	51	83	4

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO										
	PMG: 23 ^h 20 ^m 7		Mag: -3.9 PMG: 10 ^h 19 ^m		Mag: +0.8 PMG: 6 ^h 56 ^m		Mag: -2.7 PMG: 20 ^h 42 ^m		Mag: +1.1 PMG: 11 ^h 13 ^m										
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec									
h	°	'	°	'	°	'	°	'	°	'									
0	8	52.6	205	25.5	+8	21.9	255	52.4	+22	30.4	48	37.9	-16	38.1	191	17.2	+3	12.4	
1	23	55.0	220	25.1		20.8	270	53.4		30.3	63	40.5		38.1	206	19.4		12.2	
2	38	57.5	235	24.7		19.7	285	54.4		30.1	78	43.1		38.2	221	21.6		12.1	
3	54	00.0	250	24.2		18.6	300	55.3		29.9	93	45.6		38.2	236	23.8		12.0	
4	69	02.4	265	23.8		17.5	315	56.3		29.8	108	48.2		38.2	251	25.9		11.9	
5	84	04.9	280	23.4	+8	16.4	330	57.3	+22	29.6	123	50.8	-16	38.2	266	28.1	+3	11.8	
6	99	07.4	295	23.0	+8	15.3	345	58.2	+22	29.4	138	53.4	-16	38.3	281	30.3	+3	11.6	
7	114	09.8	310	22.5		14.1	0	59.2		29.3	153	55.9		38.3	296	32.5		11.5	
8	129	12.3	325	22.1		13.0	16	00.2		29.1	168	58.5		38.3	311	34.7		11.4	
9	144	14.8	340	21.7		11.9	31	01.1		28.9	184	01.1		38.4	326	36.8		11.3	
10	159	17.2	355	21.2		10.8	46	02.1		28.8	199	03.6		38.4	341	39.0		11.2	
11	174	19.7	10	20.8	+8	09.7	61	03.1	+22	28.6	214	06.2	-16	38.4	356	41.2	+3	11.0	
12	189	22.1	25	20.4	+8	08.6	76	04.1	+22	28.4	229	08.8	-16	38.4	11	43.4	+3	10.9	
13	204	24.6	40	20.0		07.5	91	05.0		28.3	244	11.3		38.5	26	45.6		10.8	
14	219	27.1	55	19.5		06.4	106	06.0		28.1	259	13.9		38.5	41	47.7		10.7	
15	234	29.5	70	19.1		05.3	121	07.0		27.9	274	16.5		38.5	56	49.9		10.6	
16	249	32.0	85	18.7		04.1	136	07.9		27.8	289	19.0		38.6	71	52.1		10.5	
17	264	34.5	100	18.3	+8	03.0	151	08.9	+22	27.6	304	21.6	-16	38.6	86	54.3	+3	10.3	
18	279	36.9	115	17.8	+8	01.9	166	09.9	+22	27.4	319	24.2	-16	38.6	101	56.5	+3	10.2	
19	294	39.4	130	17.4	+8	00.8	181	10.9		27.3	334	26.7		38.6	116	58.6		10.1	
20	309	41.9	145	17.0	+7	59.7	196	11.8		27.1	349	29.3		38.7	132	00.8		10.0	
21	324	44.3	160	16.5		58.6	211	12.8		26.9	4	31.9		38.7	147	03.0		09.9	
22	339	46.8	175	16.1		57.4	226	13.8		26.8	19	34.4		38.7	162	05.2		09.7	
23	354	49.2	190	15.7		56.3	241	14.8		26.6	34	37.0		38.8	177	07.4		09.6	
24	9	51.7	205	15.3	+7	55.2	256	15.7	+22	26.4	49	39.6	-16	38.8	192	09.5	+3	09.5	
Dif	—		-4		-11		+10		-2		+26		0		+22			-1	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG: 11 ^h 49 ^m 6			Edad: 12 ^d 2 PHE { 4 ^h : 54'9 12 ^h : 55'0 20 ^h : 55'2 SD: 14'9 PMG: 22 ^h 04 ^m R°: 42 ^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	33.3	-3	09.4	38	27.9	-8	49.4	60 N	17 32	18 14	19 02	16 31	3
1	197	33.5		10.3	53	02.5 ¹⁵⁶		36.7 ¹²⁷	58	34	13	18 58	29	5
2	212	33.7		11.3	67	37.0 ¹⁵⁵		23.9 ¹²⁸	56	35	12	55	26	8
3	227	33.9		12.3	82	11.5 ¹⁵⁵		-8 11.1 ¹²⁸	54	36	11	52	24	11
4	242	34.1		13.2	96	46.1 ¹⁵⁶		-7 58.2 ¹²⁹	52	37	11	50	22	13
5	257	34.3	-3	14.2	111	20.6 ¹⁵⁵		-7 45.3 ¹²⁹	50	17 38	18 10	18 48	16 20	15
6	272	34.5	-3	15.2	125	55.2 ¹⁵⁶		-7 32.3 ¹³⁰	45	17 40	18 10	18 44	16 16	19
7	287	34.7		16.2	140	29.8 ¹⁵⁶		19.3 ¹³⁰	40	42	09	41	12	23
8	302	34.9		17.1	155	04.3 ¹⁵⁵		-7 06.3 ¹³⁰	35	44	09	38	09	26
9	317	35.1		18.1	169	38.9 ¹⁵⁶		-6 53.3 ¹³⁰	30	45	09	37	06	29
10	332	35.3		19.1	184	13.5 ¹⁵⁶		40.2 ¹³¹	20	48	10	36	16	02
11	347	35.5	-3	20.0	198	48.1 ¹⁵⁶		-6 27.0 ¹³²	10 N	17 51	18 12	18 36	15 57	38
12	2	35.7	-3	21.0	213	22.7 ¹⁵⁶		-6 13.9 ¹³¹	0	17 53	18 14	18 38	15 53	42
13	17	35.9		22.0	227	57.3 ¹⁵⁶		-6 00.7 ¹³²	10 S	55	16	41	50	46
14	32	36.1		22.9	242	31.9 ¹⁵⁶		-5 47.4 ¹³³	20	17 58	20	46	45	51
15	47	36.3		23.9	257	06.5 ¹⁵⁶		34.2 ¹³²	30	18 01	25	53	41	55
16	62	36.5		24.9	271	41.1 ¹⁵⁶		20.9 ¹³³	35	03	29	18 59	38	58
17	77	36.7	-3	25.8	286	15.7 ¹⁵⁶		-5 07.6 ¹³³	40	18 05	18 33	19 05	15 35	61
18	92	36.9	-3	26.8	300	50.3 ¹⁵⁶		-4 54.2 ¹³⁴	45	18 08	18 38	19 13	15 31	66
19	107	37.1		27.8	315	24.9 ¹⁵⁶		40.8 ¹³⁴	50	11	44	23	27	70
20	122	37.3		28.7	329	59.5 ¹⁵⁶		27.4 ¹³⁴	52	13	47	28	25	72
21	137	37.5		29.7	344	34.1 ¹⁵⁶		14.0 ¹³⁴	54	14	50	33	23	74
22	152	37.7		30.7	359	08.7 ¹⁵⁶		-4 00.5 ¹³⁵	56	16	54	40	20	77
23	167	37.9		31.6	13	43.3 ¹⁵⁶		-3 47.0 ¹³⁵	58	18	18 58	47	17	80
24	182	38.1	-3	32.6	28	17.9 ¹⁵⁶		-3 33.5 ¹³⁵	60 S	18 20	19 03	19 55	15 14	84
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 23 ^h 16 ^m 7		Mag: -3.9 PMG: 10 ^h 19 ^m			Mag: +0.8 PMG: 6 ^h 55 ^m			Mag: -2.7 PMG: 20 ^h 38 ^m			Mag: +1.1 PMG: 11 ^h 10 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	9	51.7	205	15.3	+7	55.2	256	15.7	+22	26.4	49	39.6	-16	38.8
1	24	54.2	220	14.8		54.1	271	16.7		26.3	64	42.1		38.8
2	39	56.6	235	14.4		53.0	286	17.7		26.1	79	44.7		38.8
3	54	59.1	250	14.0		51.9	301	18.7		25.9	94	47.3		38.9
4	70	01.6	265	13.6		50.7	316	19.7		25.8	109	49.8		38.9
5	85	04.0	280	13.1	+7	49.6	331	20.6	+22	25.6	124	52.4	-16	38.9
6	100	06.5	295	12.7	+7	48.5	346	21.6	+22	25.4	139	55.0	-16	38.9
7	115	09.0	310	12.3		47.4	1	22.6		25.3	154	57.5		39.0
8	130	11.4	325	11.9		46.3	16	23.6		25.1	170	00.1		39.0
9	145	13.9	340	11.4		45.1	31	24.5		24.9	185	02.6		39.0
10	160	16.4	355	11.0		44.0	46	25.5		24.7	200	05.2		39.1
11	175	18.8	10	10.6	+7	42.9	61	26.5	+22	24.6	215	07.8	-16	39.1
12	190	21.3	25	10.2	+7	41.8	76	27.5	+22	24.4	230	10.3	-16	39.1
13	205	23.7	40	09.8		40.7	91	28.5		24.2	245	12.9		39.1
14	220	26.2	55	09.3		39.5	106	29.5		24.1	260	15.4		39.2
15	235	28.7	70	08.9		38.4	121	30.4		23.9	275	18.0		39.2
16	250	31.1	85	08.5		37.3	136	31.4		23.7	290	20.6		39.2
17	265	33.6	100	08.1	+7	36.2	151	32.4	+22	23.6	305	23.1	-16	39.2
18	280	36.1	115	07.6	+7	35.0	166	33.4	+22	23.4	320	25.7	-16	39.3
19	295	38.5	130	07.2		33.9	181	34.4		23.2	335	28.2		39.3
20	310	41.0	145	06.8		32.8	196	35.3		23.0	350	30.8		39.3
21	325	43.5	160	06.4		31.7	211	36.3		22.9	5	33.4		39.3
22	340	45.9	175	06.0		30.5	226	37.3		22.7	20	35.9		39.4
23	355	48.4	190	05.5		29.4	241	38.3		22.5	35	38.5		39.4
24	10	50.8	205	05.1	+7	28.3	256	39.3	+22	22.4	50	41.0	-16	39.4
Dif	—		-4		-11		+10		-2		+26		0	
													+22	-1

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'0 PMG: 11 ^h 49 ^m 3			Edad: 13 ^d 2 PHE { 4 ^h : 55'3 12 ^h : 55'5 20 ^h : 55'6 R°: 43 ^m PMG: 22 ^h 46 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	182	38.1	-3	32.6	28	17.9	-3	33.5	60 N	4	38	5	27	6	08	
1	197	38.3		33.6	42	52.5 ¹⁵⁶		20.0 ¹³⁵	58	42	27	06	34	6	56	
2	212	38.5		34.5	57	27.0 ¹⁵⁵	-3	06.4 ¹³⁶	56	45	28	05	34	9	57	
3	227	38.7		35.5	72	01.6 ¹⁵⁶	-2	52.8 ¹³⁶	54	47	29	04	35	11	58	
4	242	38.9		36.5	86	36.1 ¹⁵⁵		39.2 ¹³⁶	52	50	29	03	35	13	3	
5	257	39.1	-3	37.5	101	10.6 ¹⁵⁵	-2	25.6 ¹³⁶	50	4	52	5	29	6	02	
6	272	39.3	-3	38.4	115	45.1 ¹⁵⁵	-2	11.9 ¹³⁷	45	4	56	5	30	5	59	
7	287	39.5		39.4	130	19.6 ¹⁵⁵	-1	58.2 ¹³⁷	40	4	59	30	57	35	23	
8	302	39.7		40.4	144	54.1 ¹⁵⁵		44.6 ¹³⁶	35	5	01	30	56	35	27	
9	317	39.9		41.3	159	28.6 ¹⁵⁵		30.9 ¹³⁷	30	02	30	54	35	30	07	
10	332	40.1		42.3	174	03.0 ¹⁵⁴		17.1 ¹³⁸	20	04	29	51	35	35	10	
11	347	40.3	-3	43.3	188	37.5 ¹⁵⁵	-1	03.4 ¹³⁷	10 N	5	03	5	28	5	49	
12	2	40.5	-3	44.2	203	11.9 ¹⁵⁴	-0	49.7 ¹³⁷	0	5	01	5	25	5	46	
13	17	40.7		45.2	217	46.3 ¹⁵⁴		35.9 ¹³⁸	10 S	4	58	22	43	36	47	
14	32	40.9		46.2	232	20.7 ¹⁵⁴		22.1 ¹³⁸	20	53	18	41	36	52	17	
15	47	41.1		47.1	246	55.0 ¹⁵³	-0	08.3 ¹³⁸	30	45	13	37	36	57	20	
16	62	41.3		48.1	261	29.4 ¹⁵⁴	+0	05.5 ¹³⁸	35	40	10	35	36	60	21	
17	77	41.5	-3	49.1	276	03.7 ¹⁵³	+0	19.3 ¹³⁸	40	4	34	5	06	5	33	
18	92	41.7	-3	50.0	290	38.0 ¹⁵³	+0	33.1 ¹³⁸	45	4	26	5	01	5	30	
19	107	41.9		51.0	305	12.2 ¹⁵²	+0	46.9 ¹³⁸	50	15	4	54	27	37	72	
20	122	42.1		52.0	319	46.5 ¹⁵³	+1	00.8 ¹³⁹	52	10	51	25	37	74	27	
21	137	42.3		52.9	334	20.7 ¹⁵²		14.6 ¹³⁸	54	4	05	48	24	37	76	
22	152	42.5		53.9	348	54.8 ¹⁵¹		28.5 ¹³⁹	56	3	58	44	22	37	79	
23	167	42.7		54.9	3	29.0 ¹⁵²		42.3 ¹³⁸	58	51	40	20	37	82	30	
24	182	42.9	-3	55.8	18	03.1 ¹⁵¹	+1	56.2 ¹³⁹	60 S	3	43	4	35	5	17	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 23 ^h 12 ^m 8		Mag: -3.9 PMG: 10 ^h 20 ^m			Mag: +0.8 PMG: 6 ^h 53 ^m			Mag: -2.7 PMG: 20 ^h 34 ^m			Mag: +1.1 PMG: 11 ^h 06 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	10	50.8	205	05.1	+7	28.3	256	39.3	+22	22.4	50	41.0	-16	39.4	193	01.9
1	25	53.3	220	04.7		27.2	271	40.3		22.2	65	43.6		39.4	208	04.0
2	40	55.8	235	04.3		26.0	286	41.3		22.0	80	46.1		39.5	223	06.2
3	55	58.2	250	03.9		24.9	301	42.2		21.8	95	48.7		39.5	238	08.4
4	71	00.7	265	03.4		23.8	316	43.2		21.7	110	51.3		39.5	253	10.6
5	86	03.2	280	03.0	+7	22.6	331	44.2	+22	21.5	125	53.8	-16	39.5	268	12.8
6	101	05.6	295	02.6	+7	21.5	346	45.2	+22	21.3	140	56.4	-16	39.6	283	15.0
7	116	08.1	310	02.2		20.4	1	46.2		21.2	155	58.9		39.6	298	17.1
8	131	10.6	325	01.8		19.2	16	47.2		21.0	171	01.5		39.6	313	19.3
9	146	13.0	340	01.3		18.1	31	48.2		20.8	186	04.0		39.6	328	21.5
10	161	15.5	355	00.9		17.0	46	49.2		20.6	201	06.6		39.6	343	23.7
11	176	18.0	10	00.5	+7	15.9	61	50.2	+22	20.5	216	09.1	-16	39.7	358	25.9
12	191	20.4	25	00.1	+7	14.7	76	51.1	+22	20.3	231	11.7	-16	39.7	13	28.0
13	206	22.9	39	59.7		13.6	91	52.1		20.1	246	14.2		39.7	28	30.2
14	221	25.3	54	59.2		12.5	106	53.1		19.9	261	16.8		39.7	43	32.4
15	236	27.8	69	58.8		11.3	121	54.1		19.8	276	19.3		39.8	58	34.6
16	251	30.3	84	58.4		10.2	136	55.1		19.6	291	21.9		39.8	73	36.8
17	266	32.7	99	58.0	+7	09.1	151	56.1	+22	19.4	306	24.5	-16	39.8	88	38.9
18	281	35.2	114	57.6	+7	07.9	166	57.1	+22	19.2	321	27.0	-16	39.8	103	41.1
19	296	37.7	129	57.2		06.8	181	58.1		19.1	336	29.6		39.9	118	43.3
20	311	40.1	144	56.7		05.7	196	59.1		18.9	351	32.1		39.9	133	45.5
21	326	42.6	159	56.3		04.5	212	00.1		18.7	6	34.7		39.9	148	47.7
22	341	45.1	174	55.9		03.4	227	01.1		18.5	21	37.2		39.9	163	49.8
23	356	47.5	189	55.5		02.2	242	02.1		18.4	36	39.8		39.9	178	52.0
24	11	50.0	204	55.1	+7	01.1	257	03.1	+22	18.2	51	42.3	-16	40.0	193	54.2
Dif	—		-4	-11			+10	-2			+26	0			+22	-1

UT	SOL		☉ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:0 PMG: 11 ^h 49 ^m 0		Edad: 14 ^d 2 PHE { 4 ^h : 55/8 12 ^h : 56/0 20 ^h : 56/2 R°: 46 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	182	42.9	-3 55.8	18	03.1	+1 56.2	60 N	17 26	18 08	18 56	16 37 4	5 18 87		
1	197	43.1	56.8	32	37.2 ¹⁵¹	+2 10.1 ¹³⁹	58	28	07	53	40 8	16 84		
2	212	43.3	57.8	47	11.3 ¹⁵¹	23.9 ¹³⁸	56	30	07	50	43 10	15 80		
3	227	43.5	58.7	61	45.3 ¹⁵⁰	37.8 ¹³⁹	54	31	07	47	46 12	13 78		
4	242	43.7	-3 59.7	76	19.3 ¹⁵⁰	+2 51.6 ¹³⁸	52	33	06	45	48 15	12 75		
5	257	43.9	-4 00.6	90	53.2 ¹⁴⁹	+3 05.5 ¹³⁹	50	17 34	18 06	18 44	16 50 17	5 11 73		
6	272	44.1	-4 01.6	105	27.1 ¹⁴⁹	+3 19.4 ¹³⁹	45	17 37	18 06	18 40	16 55 21	5 09 68		
7	287	44.2	02.6	120	01.0 ¹⁴⁹	33.2 ¹³⁸	40	39	06	37	16 58 26	07 64		
8	302	44.4	03.5	134	34.9 ¹⁴⁹	+3 47.1 ¹³⁹	35	41	06	36	17 02 28	05 60		
9	317	44.6	04.5	149	08.7 ¹⁴⁸	+4 00.9 ¹³⁸	30	43	07	35	05 31	03 58		
10	332	44.8	05.5	163	42.4 ¹⁴⁷	14.8 ¹³⁹	20	46	08	34	10 36	5 01 52		
11	347	45.0	-4 06.4	178	16.2 ¹⁴⁸	+4 28.6 ¹³⁸	10 N	17 49	18 10	18 35	17 14 41	4 58 48		
12	2	45.2	-4 07.4	192	49.9 ¹⁴⁷	+4 42.5 ¹³⁹	0	17 52	18 13	18 37	17 18 46	4 56 44		
13	17	45.4	08.4	207	23.5 ¹⁴⁶	+4 56.3 ¹³⁸	10 S	55	16	41	23 49	54 39		
14	32	45.6	09.3	221	57.1 ¹⁴⁶	+5 10.1 ¹³⁸	20	17 59	21	47	28 53	51 36		
15	47	45.8	10.3	236	30.7 ¹⁴⁶	23.9 ¹³⁸	30	18 03	27	18 55	33 59	49 30		
16	62	46.0	11.3	251	04.2 ¹⁴⁵	37.7 ¹³⁸	35	05	30	19 00	36 62	47 27		
17	77	46.2	-4 12.2	265	37.6 ¹⁴⁴	+5 51.4 ¹³⁷	40	18 07	18 35	19 07	17 40 65	4 45 24		
18	92	46.4	-4 13.2	280	11.0 ¹⁴⁴	+6 05.2 ¹³⁸	45	18 11	18 40	19 16	17 44 69	4 43 21		
19	107	46.6	14.2	294	44.4 ¹⁴⁴	19.0 ¹³⁸	50	14	47	26	49 74	41 16		
20	122	46.8	15.1	309	17.7 ¹⁴³	32.7 ¹³⁷	52	16	50	32	51 76	40 14		
21	137	47.0	16.1	323	51.0 ¹⁴³	+6 46.4 ¹³⁷	54	18	54	38	53 80	38 12		
22	152	47.2	17.0	338	24.2 ¹⁴²	+7 00.1 ¹³⁷	56	20	18 58	44	56 82	37 9		
23	167	47.4	18.0	352	57.4 ¹⁴²	13.8 ¹³⁷	58	22	19 03	19 52	17 59 86	36 6		
24	182	47.6	-4 19.0	7	30.5 ¹⁴¹	+7 27.4 ¹³⁶	60 S	18 25	19 08	20 01	18 03 89	4 34 3		
UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO				
	PMG: 23 ^h 08 ^m 9		Mag: -3.9 PMG: 10 ^h 21 ^m		Mag: +0.8 PMG: 6 ^h 51 ^m		Mag: -2.7 PMG: 20 ^h 30 ^m			Mag: +1.1 PMG: 11 ^h 03 ^m				
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♃	Dec	hG ♄	Dec			
h	°	'	°	°	'	°	'	°	'	°	'	°	'	
0	11	50.0	204 55.1	+7 01.1	257 03.1	+22 18.2		51	42.3	-16 40.0		193 54.2	+3 03.8	
1	26	52.4	219 54.7	+7 00.0	272 04.0	18.0		66	44.9	40.0		208 56.4	03.7	
2	41	54.9	234 54.2	+6 58.8	287 05.0	17.8		81	47.4	40.0		223 58.6	03.6	
3	56	57.4	249 53.8	57.7	302 06.0	17.7		96	49.9	40.0		239 00.8	03.4	
4	71	59.8	264 53.4	56.6	317 07.0	17.5		111	52.5	40.1		254 02.9	03.3	
5	87	02.3	279 53.0	+6 55.4	332 08.0	+22 17.3		126	55.0	-16 40.1		269 05.1	+3 03.2	
6	102	04.8	294 52.6	+6 54.3	347 09.0	+22 17.1		141	57.6	-16 40.1		284 07.3	+3 03.1	
7	117	07.2	309 52.2	53.1	2 10.0	17.0		157	00.1	40.1		299 09.5	03.0	
8	132	09.7	324 51.7	52.0	17 11.0	16.8		172	02.7	40.1		314 11.7	02.8	
9	147	12.2	339 51.3	50.9	32 12.0	16.6		187	05.2	40.2		329 13.8	02.7	
10	162	14.6	354 50.9	49.7	47 13.0	16.4		202	07.8	40.2		344 16.0	02.6	
11	177	17.1	9 50.5	+6 48.6	62 14.0	+22 16.3		217	10.3	-16 40.2		359 18.2	+3 02.5	
12	192	19.6	24 50.1	+6 47.4	77 15.0	+22 16.1		232	12.9	-16 40.2		14 20.4	+3 02.4	
13	207	22.0	39 49.7	46.3	92 16.0	15.9		247	15.4	40.2		29 22.6	02.2	
14	222	24.5	54 49.3	45.2	107 17.0	15.7		262	18.0	40.3		44 24.7	02.1	
15	237	26.9	69 48.8	44.0	122 18.0	15.5		277	20.5	40.3		59 26.9	02.0	
16	252	29.4	84 48.4	42.9	137 19.0	15.4		292	23.0	40.3		74 29.1	01.9	
17	267	31.9	99 48.0	+6 41.7	152 20.0	+22 15.2		307	25.6	-16 40.3		89 31.3	+3 01.8	
18	282	34.3	114 47.6	+6 40.6	167 21.0	+22 15.0		322	28.1	-16 40.4		104 33.5	+3 01.7	
19	297	36.8	129 47.2	39.5	182 22.0	14.8		337	30.7	40.4		119 35.7	01.5	
20	312	39.3	144 46.8	38.3	197 23.0	14.7		352	33.2	40.4		134 37.8	01.4	
21	327	41.7	159 46.4	37.2	212 24.0	14.5		7 35.8	40.4			149 40.0	01.3	
22	342	44.2	174 46.0	36.0	227 25.0	14.3		22 38.3	40.4			164 42.2	01.2	
23	357	46.7	189 45.5	34.9	242 26.0	14.1		37 40.8	40.4			179 44.4	01.1	
24	12	49.1	204 45.1	+6 33.7	257 27.0	+22 13.9		52 43.4	-16 40.5			194 46.6	+3 00.9	
Dif	—	—	-4	-11	+10	-2		+25	0			+22	-1	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'0 PMG: 11 ^h 48 ^m 7			Edad: 15 ^d 2 PHE { 4 ^h : 56'4 12 ^h : 56'5 20 ^h : 56'7 R°: ***m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	182	47.6	-4	19.0	7	30.5	+7	27.4	4	43	5	31	6	16	41	
1	197	47.7		19.9	22	03.5 ¹⁴⁰		41.1 ¹³⁷	46	32		11	48	9	40	
2	212	47.9		20.9	36	36.5 ¹⁴⁰	+7	54.7 ¹³⁶	49	32		09	53	13	35	
3	227	48.1		21.9	51	09.5 ¹⁴⁰	+8	08.2 ¹³⁵	51	32		07	16	58	16	
4	242	48.3		22.8	65	42.3 ¹³⁸		21.8 ¹³⁶	53	32		06	17	03	18	
5	257	48.5	-4	23.8	80	15.2 ¹³⁹	+8	35.3 ¹³⁵	50	4	55	5	32	6	05	
6	272	48.7	-4	24.8	94	47.9 ¹³⁷	+8	48.8 ¹³⁵	45	4	58	5	32	6	02	
7	287	48.9		25.7	109	20.6 ¹³⁷	+9	02.3 ¹³⁵	40	5	01	32	5	59	24	
8	302	49.1		26.7	123	53.3 ¹³⁷		15.8 ¹³⁵	35	02	32	57	30	32	05	
9	317	49.3		27.6	138	25.9 ¹³⁶		29.2 ¹³⁴	30	03	31	55	36	35	6	
10	332	49.5		28.6	152	58.4 ¹³⁵		42.6 ¹³⁴	20	04	30	52	46	40	5	
11	347	49.7	-4	29.6	167	30.9 ¹³⁵	+9	55.9 ¹³³	10 N	5	03	5	27	5	48	
12	2	49.9	-4	30.5	182	03.3 ¹³⁴	+10	09.2 ¹³³	0	5	01	5	25	5	45	
13	17	50.1		31.5	196	35.6 ¹³³		22.5 ¹³³	10 S	4	57	21	42	12	52	
14	32	50.2		32.5	211	07.9 ¹³³		35.8 ¹³³	20	51	17	39	21	56	27	
15	47	50.4		33.4	225	40.1 ¹³²	+10	49.0 ¹³²	30	43	11	35	32	61	19	
16	62	50.6		34.4	240	12.2 ¹³¹	+11	02.1 ¹³¹	35	37	07	32	38	64	14	
17	77	50.8	-4	35.4	254	44.2 ¹³⁰	+11	15.3 ¹³²	40	4	30	5	02	5	30	
18	92	51.0	-4	36.3	269	16.2 ¹³⁰	+11	28.3 ¹³⁰	45	4	22	4	57	5	26	
19	107	51.2		37.3	283	48.2 ¹³⁰		41.4 ¹³¹	50	11	50	22	19	03	77	
20	122	51.4		38.2	298	20.0 ¹²⁸	+11	54.4 ¹³⁰	52	4	05	46	21	07	80	
21	137	51.6		39.2	312	51.8 ¹²⁸	+12	07.3 ¹²⁹	54	3	59	43	19	13	82	
22	152	51.8		40.2	327	23.5 ¹²⁷		20.2 ¹²⁹	56	52	39	17	18	85	46	
23	167	52.0		41.1	341	55.1 ¹²⁶		33.1 ¹²⁹	58	45	34	14	25	88	42	
24	182	52.2	-4	42.1	356	26.7 ¹²⁶	+12	45.9 ¹²⁸	60 S	3	35	4	29	5	11	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 23 ^h 04 ^m 9		Mag: -3.9 PMG: 10 ^h 21 ^m			Mag: +0.8 PMG: 6 ^h 50 ^m			Mag: -2.7 PMG: 20 ^h 26 ^m			Mag: +1.1 PMG: 10 ^h 59 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	
0	12	49.1	204	45.1	+6	33.7	257	27.0	+22	13.9	52	43.4	-16	40.5	194	46.6
1	27	51.6	219	44.7		32.6	272	28.0		13.8	67	45.9		40.5	209	48.7
2	42	54.0	234	44.3		31.4	287	29.0		13.6	82	48.5		40.5	224	50.9
3	57	56.5	249	43.9		30.3	302	30.1		13.4	97	51.0		40.5	239	53.1
4	72	59.0	264	43.5		29.1	317	31.1		13.2	112	53.5		40.5	254	55.3
5	88	01.4	279	43.1	+6	28.0	332	32.1	+22	13.0	127	56.1	-16	40.6	269	57.5
6	103	03.9	294	42.7	+6	26.9	347	33.1	+22	12.9	142	58.6	-16	40.6	284	59.7
7	118	06.4	309	42.3		25.7	2	34.1		12.7	158	01.2		40.6	300	01.8
8	133	08.8	324	41.8		24.6	17	35.1		12.5	173	03.7		40.6	315	04.0
9	148	11.3	339	41.4		23.4	32	36.1		12.3	188	06.2		40.6	330	06.2
10	163	13.8	354	41.0		22.3	47	37.1		12.1	203	08.8		40.7	345	08.4
11	178	16.2	9	40.6	+6	21.1	62	38.1	+22	12.0	218	11.3	-16	40.7	0	10.6
12	193	18.7	24	40.2	+6	20.0	77	39.1	+22	11.8	233	13.8	-16	40.7	15	12.8
13	208	21.2	39	39.8		18.8	92	40.1		11.6	248	16.4		40.7	30	14.9
14	223	23.6	54	39.4		17.7	107	41.1		11.4	263	18.9		40.7	45	17.1
15	238	26.1	69	39.0		16.5	122	42.1		11.2	278	21.5		40.8	60	19.3
16	253	28.5	84	38.6		15.4	137	43.2		11.1	293	24.0		40.8	75	21.5
17	268	31.0	99	38.1	+6	14.2	152	44.2	+22	10.9	308	26.5	-16	40.8	90	23.7
18	283	33.5	114	37.7	+6	13.1	167	45.2	+22	10.7	323	29.1	-16	40.8	105	25.8
19	298	35.9	129	37.3		11.9	182	46.2		10.5	338	31.6		40.8	120	28.0
20	313	38.4	144	36.9		10.8	197	47.2		10.3	353	34.1		40.8	135	30.2
21	328	40.9	159	36.5		09.6	212	48.2		10.2	8	36.7		40.9	150	32.4
22	343	43.3	174	36.1		08.4	227	49.2		10.0	23	39.2		40.9	165	34.6
23	358	45.8	189	35.7		07.3	242	50.2		09.8	38	41.7		40.9	180	36.8
24	13	48.3	204	35.3	+6	06.1	257	51.3	+22	09.6	53	44.3	-16	40.9	195	38.9
Dif	—		-4		-11		+10		-2		+25		0		+22	

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna							
	SD: 16:0 PMG: 11 ^h 48 ^m 4			Edad: 16 ^d 2 PHE { SD: 15:5 PMG: 0 ^h 15 ^m																
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	Rº	Hora	Rº					
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m				
0	182	52.2	-4	42.1	356	26.7	+12 45.9	60 N	17 20	18 02	18 50	16 47	10	8 15	95					
1	197	52.3		43.0	10	58.2 ¹²⁵	+12 58.6 ¹²⁷	58	23	02	47	16 57	14	8 06	90					
2	212	52.5		44.0	25	29.6 ¹²⁴	+13 11.3 ¹²⁷	56	25	02	45	17 06	17	7 58	86					
3	227	52.7		45.0	40	00.9 ¹²³	24.0 ¹²⁷	54	26	02	43	14 20		51	83					
4	242	52.9		45.9	54	32.1 ¹²²	36.6 ¹²⁶	52	28	02	41	21 23		45	80					
5	257	53.1	-4	46.9	69	03.3 ¹²²	+13 49.1 ¹²⁵	50	17 30	18 02	18 39	17 27	26	7 39	78					
6	272	53.3	-4	47.9	83	34.4 ¹²¹	+14 01.6 ¹²⁵	45	17 33	18 02	18 36	17 41	30	7 27	73					
7	287	53.5		48.8	98	05.4 ¹²⁰	14.0 ¹²⁴	40	36	03	34	17 52	34	17	68					
8	302	53.7		49.8	112	36.3 ¹¹⁹	26.4 ¹²⁴	35	38	04	33	18 02	37	08	66					
9	317	53.9		50.7	127	07.2 ¹¹⁹	38.7 ¹²³	30	41	05	32	11 40		7	01	62				
10	332	54.0		51.7	141	38.0 ¹¹⁸	+14 50.9 ¹²²	20	45	07	32	26 44		6 48	57					
11	347	54.2	-4	52.7	156	08.7 ¹¹⁷	+15 03.1 ¹²²	10 N	17 48	18 09	18 34	18 39	48	6 37	53					
12	2	54.4	-4	53.6	170	39.3 ¹¹⁶	+15 15.2 ¹²¹	0	17 52	18 12	18 36	18 52	51	6 26	50					
13	17	54.6		54.6	185	09.8 ¹¹⁵	27.2 ¹²⁰	10 S	55	16	41	19 04	55	16	45					
14	32	54.8		55.5	199	40.2 ¹¹⁴	39.2 ¹²⁰	20	17 59	21	47	17 60		6 04	42					
15	47	55.0		56.5	214	10.6 ¹¹⁴	+15 51.1 ¹¹⁹	30	18 04	28	18 56	33 64		5 52	37					
16	62	55.2		57.5	228	40.8 ¹¹²	+16 02.9 ¹¹⁸	35	06	32	19 02	42 66		44	35					
17	77	55.4	-4	58.4	243	11.0 ¹¹²	+16 14.7 ¹¹⁸	40	18 09	18 37	19 09	19 52	70	5 36	31					
18	92	55.5	-4	59.4	257	41.1 ¹¹¹	+16 26.4 ¹¹⁷	45	18 13	18 43	19 18	20 05	73	5 27	27					
19	107	55.7	-5	00.3	272	11.1 ¹¹⁰	38.0 ¹¹⁶	50	17	50	30	20 78		15	22					
20	122	55.9		01.3	286	41.0 ¹⁰⁹	+16 49.5 ¹¹⁵	52	19	54	36	27 81		10	20					
21	137	56.1		02.3	301	10.9 ¹⁰⁹	+17 01.0 ¹¹⁵	54	22	18 58	42	35 83		5 04	17					
22	152	56.3		03.2	315	40.6 ¹⁰⁷	12.3 ¹¹³	56	24	19 02	49	43 88		4 57	15					
23	167	56.5		04.2	330	10.2 ¹⁰⁶	23.6 ¹¹³	58	27	07	19 58	20 53	92	50	11					
24	182	56.7	-5	05.1	344	39.8 ¹⁰⁶	+17 34.8 ¹¹²	60 S	18 30	19 13	20 07	21 05	97	4 42	7					
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO								
	PMG: 23 ^h 01 ^m 0		Mag: -3.9 PMG: 10 ^h 22 ^m			Mag: +0.7 PMG: 6 ^h 48 ^m			Mag: -2.7 PMG: 20 ^h 22 ^m			Mag: +1.1 PMG: 10 ^h 56 ^m								
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	13	48.3	204	35.3	+6	06.1	257	51.3	+22	09.6	53	44.3	-16	40.9	195	38.9	+2	58.1		
1	28	50.7	219	34.9		05.0	272	52.3		09.4	68	46.8		40.9	210	41.1		58.0		
2	43	53.2	234	34.5		03.8	287	53.3		09.2	83	49.3		40.9	225	43.3		57.9		
3	58	55.7	249	34.1		02.7	302	54.3		09.1	98	51.9		41.0	240	45.5		57.8		
4	73	58.1	264	33.7		01.5	317	55.3		08.9	113	54.4		41.0	255	47.7		57.6		
5	89	00.6	279	33.2	+6	00.4	332	56.3	+22	08.7	128	56.9	-16	41.0	270	49.9	+2	57.5		
6	104	03.0	294	32.8	+5	59.2	347	57.3	+22	08.5	143	59.5	-16	41.0	285	52.0	+2	57.4		
7	119	05.5	309	32.4		58.1	2	58.4		08.3	159	02.0		41.0	300	54.2		57.3		
8	134	08.0	324	32.0		56.9	17	59.4		08.1	174	04.5		41.0	315	56.4		57.2		
9	149	10.4	339	31.6		55.7	33	00.4		08.0	189	07.0		41.1	330	58.6		57.1		
10	164	12.9	354	31.2		54.6	48	01.4		07.8	204	09.6		41.1	346	00.8		56.9		
11	179	15.4	9	30.8	+5	53.4	63	02.4	+22	07.6	219	12.1	-16	41.1	1	02.9	+2	56.8		
12	194	17.8	24	30.4	+5	52.3	78	03.4	+22	07.4	234	14.6	-16	41.1	16	05.1	+2	56.7		
13	209	20.3	39	30.0		51.1	93	04.5		07.2	249	17.2		41.1	31	07.3		56.6		
14	224	22.8	54	29.6		50.0	108	05.5		07.0	264	19.7		41.1	46	09.5		56.5		
15	239	25.2	69	29.2		48.8	123	06.5		06.9	279	22.2		41.2	61	11.7		56.3		
16	254	27.7	84	28.8		47.6	138	07.5		06.7	294	24.7		41.2	76	13.9		56.2		
17	269	30.1	99	28.4	+5	46.5	153	08.5	+22	06.5	309	27.3	-16	41.2	91	16.0	+2	56.1		
18	284	32.6	114	28.0	+5	45.3	168	09.6	+22	06.3	324	29.8	-16	41.2	106	18.2	+2	56.0		
19	299	35.1	129	27.6		44.2	183	10.6		06.1	339	32.3		41.2	121	20.4		55.9		
20	314	37.5	144	27.1		43.0	198	11.6		05.9	354	34.8		41.2	136	22.6		55.8		
21	329	40.0	159	26.7		41.8	213	12.6		05.8	9	37.4		41.2	151	24.8		55.6		
22	344	42.5	174	26.3		40.7	228	13.6		05.6	24	39.9		41.3	166	27.0		55.5		
23	359	44.9	189	25.9		39.5	243	14.7		05.4	39	42.4		41.3	181	29.1		55.4		
24	14	47.4	204	25.5	+5	38.4	258	15.7	+22	05.2	54	44.9	-16	41.3	196	31.3	+2	55.3		
Dif	—		-4			-12	+10			-2			+25			0	+22			-1

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna							
	SD: 16'0 PMG: 11 ^h 48 ^m 1			Edad: 17 ^d 2 PHE { 4 ^h : 57'4 12 ^h : 57'5 20 ^h : 57'7 SD: 15'6 PMG: 1 ^h 04 ^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	m				
0	182	56.7	-5	05.1	344	39.8	+17	34.8	60 N	4	48	5	36	6	18	16	57	16				
1	197	56.8		06.1	359	09.3 ¹⁰⁵		46.0 ¹¹²	58		50	36	15		17	11	22	36	91			
2	212	57.0		07.1	13	38.7 ¹⁰⁴	+17	57.0 ¹¹⁰	56	53	36	13		23	26		24	87				
3	227	57.2		08.0	28	08.0 ¹⁰³	+18	07.9 ¹⁰⁹	54	55	36	11		34	29		14	83				
4	242	57.4		09.0	42	37.2 ¹⁰²		18.8 ¹⁰⁹	52	57	36	09		44	32		9	05	80			
5	257	57.6	-5	09.9	57	06.3 ¹⁰¹	+18	29.6 ¹⁰⁸	50	4	58	5	35	6	08	17	53	34	8	57	78	
6	272	57.8	-5	10.9	71	35.3 ¹⁰⁰	+18	40.3 ¹⁰⁷	45	5	01	5	35	6	04	18	11	38	8	40	73	
7	287	57.9		11.8	86	04.2 ⁹⁹	+18	50.9 ¹⁰⁶	40	03	34	6	01	26	42		25	70				
8	302	58.1		12.8	100	33.1 ⁹⁹	+19	01.4 ¹⁰⁵	35	04	33	5	59	39	44		14	66				
9	317	58.3		13.8	115	01.8 ⁹⁷		11.8 ¹⁰⁴	30	05	32	56		18	51	46		8	03	65		
10	332	58.5		14.7	129	30.5 ⁹⁷		22.1 ¹⁰³	20	05	30	52		19	10	50		7	45	61		
11	347	58.7	-5	15.7	143	59.0 ⁹⁵	+19	32.3 ¹⁰²	10 N	5	03	5	27	5	48	19	27	53	7	30	57	
12	2	58.9	-5	16.6	158	27.5 ⁹⁵	+19	42.4 ¹⁰¹	0	5	00	5	24	5	45	19	43	56	7	16	53	
13	17	59.1		17.6	172	55.9 ⁹⁴	+19	52.4 ¹⁰⁰	10 S	4	55	20	41	19	59	59		7	01	51		
14	32	59.2		18.6	187	24.1 ⁹²	+20	02.3 ⁹⁹	20	49	15	37		20	17	61		6	46	47		
15	47	59.4		19.5	201	52.3 ⁹²		12.1 ⁹⁸	30	40	08	32		37	65		29	42				
16	62	59.6		20.5	216	20.4 ⁹¹		21.8 ⁹⁶	35	34	5	04	30	20	48	67		19	40			
17	77	59.8	-5	21.4	230	48.4 ⁹⁰	+20	31.4 ⁹⁷	40	4	27	4	59	5	26	21	02	70	6	07	37	
18	93	00.0	-5	22.4	245	16.3 ⁸⁹	+20	40.9 ⁹⁵	45	4	17	4	53	5	23	21	18	73	5	54	33	
19	108	00.2		23.3	259	44.2 ⁸⁹		50.2 ⁹³	50	06	45	18		38	77		37	29				
20	123	00.3		24.3	274	11.9 ⁸⁷	+20	59.5 ⁹³	52	4	00	42	16	48	79		30	26				
21	138	00.5		25.3	288	39.5 ⁸⁶	+21	08.6 ⁹¹	54	3	54	38	14	21	58	82		21	24			
22	153	00.7		26.2	303	07.1 ⁸⁶		17.7 ⁹¹	56	46	33	11		22	11	85		12	20			
23	168	00.9		27.2	317	34.5 ⁸⁴		26.6 ⁸⁹	58	38	28	08		25	89		5	01	17			
24	183	01.1	-5	28.1	332	01.9 ⁸⁴	+21	35.4 ⁸⁸	60 S	3	28	4	22	5	05	22	42	95	4	49	11	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 22 ^h 57 ^m 1		Mag: -3.9 PMG: 10 ^h 23 ^m		Mag: +0.7 PMG: 6 ^h 46 ^m		Mag: -2.7 PMG: 20 ^h 18 ^m		Mag: +1.1 PMG: 10 ^h 52 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	14	47.4	204	25.5	+5	38.4	258	15.7	+22	05.2
1	29	49.9	219	25.1		37.2	273	16.7		05.0
2	44	52.3	234	24.7		36.0	288	17.7		04.8
3	59	54.8	249	24.3		34.9	303	18.8		04.6
4	74	57.3	264	23.9		33.7	318	19.8		04.5
5	89	59.7	279	23.5	+5	32.5	333	20.8	+22	04.3
6	105	02.2	294	23.1	+5	31.4	348	21.8	+22	04.1
7	120	04.6	309	22.7		30.2	3	22.9		03.9
8	135	07.1	324	22.3		29.1	18	23.9		03.7
9	150	09.6	339	21.9		27.9	33	24.9		03.5
10	165	12.0	354	21.5		26.7	48	25.9		03.3
11	180	14.5	9	21.1	+5	25.6	63	27.0	+22	03.2
12	195	17.0	24	20.7	+5	24.4	78	28.0	+22	03.0
13	210	19.4	39	20.3		23.2	93	29.0		02.8
14	225	21.9	54	19.9		22.1	108	30.1		02.6
15	240	24.4	69	19.5		20.9	123	31.1		02.4
16	255	26.8	84	19.1		19.7	138	32.1		02.2
17	270	29.3	99	18.7	+5	18.6	153	33.1	+22	02.0
18	285	31.7	114	18.3	+5	17.4	168	34.2	+22	01.8
19	300	34.2	129	17.9		16.2	183	35.2		01.7
20	315	36.7	144	17.5		15.1	198	36.2		01.5
21	330	39.1	159	17.1		13.9	213	37.3		01.3
22	345	41.6	174	16.6		12.7	228	38.3		01.1
23	0	44.1	189	16.2		11.6	243	39.3		00.9
24	15	46.5	204	15.8	+5	10.4	258	40.4	+22	00.7
Dif	—		-4		-12		+10		-2	
							+25		0	
									+22	
									-1	

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 : 57'8 12 ^h : 58'0 20 ^h : 58'1					Civil			Hora		Hora	
	PMG: 11 ^h 47 ^m 8			PMG: 1 ^h 56 ^m R°: 56 ^m					Náutico			R°		R°	
	hG ☉	Dec		hG ☾	Dif	Dec	Dif								
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	183	01.1	-5 28.1	332	01.9	+21 35.4	83	60 N	17 14	17 56	18 44	17 13 31	11 26 90		
1	198	01.2	29.1	346	29.2	44.0	86	58	17	56	42	33 36	11 07 84		
2	213	01.4	30.0	0	56.3	+21 52.6	86	56	19	57	39	17 49 40	10 51 81		
3	228	01.6	31.0	15	23.4	+22 01.0	81	54	22	57	38	18 03 42	37 78		
4	243	01.8	31.9	29	50.4	09.4	80	52	24	57	36	16 43	25 76		
5	258	02.0	-5 32.9	44	17.3	+22 17.6	82	50	17 25	17 58	18 35	18 27 45	10 15 74		
6	273	02.1	-5 33.9	58	44.2	+22 25.6	80	45	17 29	17 59	18 33	18 49 49	9 53 71		
7	288	02.3	34.8	73	10.9	33.6	80	40	33	18 00	31	19 08 50	35 68		
8	303	02.5	35.8	87	37.5	41.4	78	35	36	01	30	23 52	20 67		
9	318	02.7	36.7	102	04.1	49.1	77	30	38	02	30	19 37 53	9 08 64		
10	333	02.9	37.7	116	30.6	+22 56.6	75	20	43	05	31	20 00 55	8 46 62		
11	348	03.0	-5 38.6	130	57.0	+23 04.0	74	10 N	17 47	18 08	18 33	20 20 57	8 27 59		
12	3	03.2	-5 39.6	145	23.3	+23 11.3	73	0	17 51	18 12	18 36	20 39 58	8 09 57		
13	18	03.4	40.5	159	49.5	18.5	72	10 S	17 55	16	41	20 58 60	7 52 55		
14	33	03.6	41.5	174	15.6	25.5	70	20	18 00	22	48	21 18 62	33 52		
15	48	03.8	42.5	188	41.7	32.4	69	30	05	29	18 57	42 63	7 11 50		
16	63	03.9	43.4	203	07.7	39.1	67	35	08	34	19 04	21 55 65	6 59 48		
17	78	04.1	-5 44.4	217	33.5	+23 45.7	66	40	18 12	18 39	19 12	22 12 66	6 44 46		
18	93	04.3	-5 45.3	231	59.4	+23 52.2	65	45	18 16	18 46	19 21	22 31 68	6 27 43		
19	108	04.5	46.3	246	25.1	+23 58.5	63	50	21	54	34	22 55 71	6 06 39		
20	123	04.7	47.2	260	50.7	+24 04.7	62	52	23	18 58	40	23 07 71	5 56 37		
21	138	04.8	48.2	275	16.3	10.7	60	54	25	19 02	46	20 73	45 34		
22	153	05.0	49.1	289	41.8	16.6	59	56	28	07	19 54	36 75	32 32		
23	168	05.2	50.1	304	07.2	22.3	57	58	31	12	20 03	23 54 78	18 27		
24	183	05.4	-5 51.0	318	32.6	+24 27.9	56	60 S	18 35	19 18	20 13	** ** *	5 00 22		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 22 ^h 53 ^m 1		Mag: -3.9 PMG: 10 ^h 23 ^m		Mag: +0.7 PMG: 6 ^h 45 ^m		Mag: -2.7 PMG: 20 ^h 14 ^m		Mag: +1.1 PMG: 10 ^h 49 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	15	46.5	204	15.8	+5 10.4	258	40.4	+22 00.7	55	45.4	-16 41.6	197	23.7	+2 52.5
1	30	49.0	219	15.4	09.2	273	41.4	00.5	70	48.0	41.6	212	25.9	52.4
2	45	51.5	234	15.0	08.0	288	42.4	00.3	85	50.5	41.6	227	28.1	52.2
3	60	53.9	249	14.6	06.9	303	43.5	+22 00.2	100	53.0	41.6	242	30.3	52.1
4	75	56.4	264	14.2	05.7	318	44.5	+22 00.0	115	55.5	41.6	257	32.5	52.0
5	90	58.9	279	13.8	+5 04.5	333	45.5	+21 59.8	130	58.0	-16 41.7	272	34.7	+2 51.9
6	106	01.3	294	13.4	+5 03.4	348	46.6	+21 59.6	146	00.5	-16 41.7	287	36.8	+2 51.8
7	121	03.8	309	13.0	02.2	3	47.6	59.4	161	03.0	41.7	302	39.0	51.7
8	136	06.2	324	12.6	+5 01.0	18	48.6	59.2	176	05.6	41.7	317	41.2	51.5
9	151	08.7	339	12.2	+4 59.9	33	49.7	59.0	191	08.1	41.7	332	43.4	51.4
10	166	11.2	354	11.8	58.7	48	50.7	58.8	206	10.6	41.7	347	45.6	51.3
11	181	13.6	9	11.4	+4 57.5	63	51.7	+21 58.6	221	13.1	-16 41.7	2	47.8	+2 51.2
12	196	16.1	24	11.0	+4 56.3	78	52.8	+21 58.4	236	15.6	-16 41.7	17	49.9	+2 51.1
13	211	18.6	39	10.6	55.2	93	53.8	58.3	251	18.1	41.7	32	52.1	51.0
14	226	21.0	54	10.2	54.0	108	54.9	58.1	266	20.6	41.8	47	54.3	50.8
15	241	23.5	69	09.8	52.8	123	55.9	57.9	281	23.2	41.8	62	56.5	50.7
16	256	26.0	84	09.4	51.6	138	56.9	57.7	296	25.7	41.8	77	58.7	50.6
17	271	28.4	99	09.0	+4 50.5	153	58.0	+21 57.5	311	28.2	-16 41.8	93	00.9	+2 50.5
18	286	30.9	114	08.6	+4 49.3	168	59.0	+21 57.3	326	30.7	-16 41.8	108	03.1	+2 50.4
19	301	33.4	129	08.2	48.1	184	00.1	57.1	341	33.2	41.8	123	05.2	50.3
20	316	35.8	144	07.8	46.9	199	01.1	56.9	356	35.7	41.8	138	07.4	50.1
21	331	38.3	159	07.4	45.8	214	02.1	56.7	11	38.2	41.8	153	09.6	50.0
22	346	40.7	174	07.0	44.6	229	03.2	56.5	26	40.7	41.8	168	11.8	49.9
23	1	43.2	189	06.6	43.4	244	04.2	56.4	41	43.2	41.8	183	14.0	49.8
24	16	45.7	204	06.2	+4 42.2	259	05.3	+21 56.2	56	45.7	-16 41.9	198	16.2	+2 49.7
Dif	—		-4	-12		+10	-2		+25	0		+22	-1	

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 : 58'3 12 ^h : 58'4 20 ^h : 58'5													
	PMG: 11 ^h 47 ^m 5			SD: 15'8 PMG: 2 ^h 52 ^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	05.4	-5	51.0	318	32.6	+24	27.9	60 N	4	52	5	41	6	22	17	44
1	198	05.5		52.0	332	57.9		33.4	55		55		40		20	18	09
2	213	05.7		53.0	347	23.1		38.7	53	56	57		40		17		29
3	228	05.9		53.9	1	48.2		43.8	51	54	4	58	39	15		45	59
4	243	06.1		54.9	16	13.3		48.8	50	52	5	00	39	13		18	59
5	258	06.2	-5	55.8	30	38.3	+24	53.6	48	50	5	01	5	39	6	11	19
6	273	06.4	-5	56.8	45	03.2	+24	58.3	47	45	5	03	5	37	6	07	19
7	288	06.6		57.7	59	28.1	+25	02.8	45	40	05		36		03	19	58
8	303	06.8		58.7	73	52.9		07.2	44	35	06		35		6	00	20
9	318	06.9	-5	59.6	88	17.7		11.4	42	30	06		34		5	57	
10	333	07.1	-6	00.6	102	42.4		15.5	41	20	05		31		53	20	55
11	348	07.3	-6	01.5	117	07.0	+25	19.4	39	10 N	5	03	5	27	5	48	21
12	3	07.5	-6	02.5	131	31.6	+25	23.1	37	0	4	59	5	23	5	44	21
13	18	07.6		03.4	145	56.1		26.7	36	10 S		54		19		40	21
14	33	07.8		04.4	160	20.5		30.1	34	20	47		13		35	22	20
15	48	08.0		05.3	174	45.0		33.3	32	30	37		06		30	22	45
16	63	08.2		06.3	189	09.3		36.4	31	35	31		5	01	27	23	00
17	78	08.3	-6	07.2	203	33.6	+25	39.4	30	40	4	23	4	56	5	23	23
18	93	08.5	-6	08.2	217	57.9	+25	42.1	27	45	4	13	4	49	5	19	23
19	108	08.7		09.1	232	22.1		44.7	26	50	4	01		41	14		**
20	123	08.9		10.1	246	46.3		47.2	25	52	3	55		37	12		**
21	138	09.0		11.0	261	10.4		49.4	22	54	48		33	09			**
22	153	09.2		12.0	275	34.5		51.5	21	56	40		28	06			**
23	168	09.4		12.9	289	58.6		53.4	19	58	31		22	5	03		**
24	183	09.6	-6	13.9	304	22.6	+25	55.2	18	60 S	3	21	4	16	4	59	0

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO								
	PMG: 22 ^h 49 ^m 2		Mag: -3.9 PMG: 10 ^h 24 ^m		Mag: +0.7 PMG: 6 ^h 43 ^m		Mag: -2.7 PMG: 20 ^h 10 ^m		Mag: +1.1 PMG: 10 ^h 45 ^m								
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄								
h	°	'	°	°	°	°	°	°	°	°							
0	16	45.7	204	06.2	+4	259	05.3	+21	56.2	56	45.7	-16	41.9	198	16.2	+2	49.7
1	31	48.1	219	05.8		274	06.3		56.0	71	48.2		41.9	213	18.3		49.6
2	46	50.6	234	05.4		289	07.4		55.8	86	50.8		41.9	228	20.5		49.4
3	61	53.1	249	05.0		304	08.4		55.6	101	53.3		41.9	243	22.7		49.3
4	76	55.5	264	04.6		319	09.4		55.4	116	55.8		41.9	258	24.9		49.2
5	91	58.0	279	04.2	+4	334	10.5	+21	55.2	131	58.3	-16	41.9	273	27.1	+2	49.1
6	107	00.5	294	03.8	+4	349	11.5	+21	55.0	147	00.8	-16	41.9	288	29.3	+2	49.0
7	122	02.9	309	03.4		4	12.6		54.8	162	03.3		41.9	303	31.5		48.9
8	137	05.4	324	03.0		19	13.6		54.6	177	05.8		41.9	318	33.6		48.7
9	152	07.9	339	02.6		34	14.7		54.4	192	08.3		41.9	333	35.8		48.6
10	167	10.3	354	02.2		49	15.7		54.2	207	10.8		41.9	348	38.0		48.5
11	182	12.8	9	01.8	+4	29	16.8	+21	54.1	222	13.3	-16	41.9	3	40.2	+2	48.4
12	197	15.2	24	01.4	+4	28	17.8	+21	53.9	237	15.8	-16	42.0	18	42.4	+2	48.3
13	212	17.7	39	01.1		26	18.9		53.7	252	18.3		42.0	33	44.6		48.2
14	227	20.2	54	00.7		25	19.9		53.5	267	20.8		42.0	48	46.7		48.0
15	242	22.6	69	00.3		24	21.0		53.3	282	23.3		42.0	63	48.9		47.9
16	257	25.1	83	59.9		23	22.0		53.1	297	25.8		42.0	78	51.1		47.8
17	272	27.6	98	59.5	+4	22	23.0	+21	52.9	312	28.3	-16	42.0	93	53.3	+2	47.7
18	287	30.0	113	59.1	+4	21	24.1	+21	52.7	327	30.8	-16	42.0	108	55.5	+2	47.6
19	302	32.5	128	58.7		18	25.1		52.5	342	33.3		42.0	123	57.7		47.5
20	317	35.0	143	58.3		17	26.2		52.3	357	35.8		42.0	138	59.9		47.3
21	332	37.4	158	57.9		17	27.3		52.1	12	38.3		42.0	154	02.0		47.2
22	347	39.9	173	57.5		16	28.3		51.9	27	40.8		42.0	169	04.2		47.1
23	2	42.3	188	57.1		15	29.4		51.7	42	43.3		42.0	184	06.4		47.0
24	17	44.8	203	56.7	+4	13	30.4	+21	51.5	57	45.8	-16	42.0	199	08.6	+2	46.9
Dif	—		-4		-12	+10		-2		+25		0		+22		-1	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 16'0			Edad: 20 ^d 2 PHE { 4 ^h : 58'6 12 ^h : 58'7 20 ^h : 58'8					Final del crepúsculo			Salida de Luna		Puesta de Luna				
	PMG: 11 ^h 47 ^m 2			SD: 15'9 PMG: 3 ^h 52 ^m R°: 60 ^m					Final del crepúsculo			Salida de Luna		Puesta de Luna				
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	h m	h m	h m	h m	m	h m	m				
0	183	09.6	-6	13.9	304	22.6	+25 55.2	60 N	17 08	17 50	18 38	18 40 84	14 05 42					
1	198	09.7		14.8	318	46.6	50 56.8	58	12	51	36	19 06 80	13 39 46					
2	213	09.9		15.8	333	10.6	50 58.2	56	14	51	34	27 76	19 48					
3	228	10.1		16.7	347	34.5	49 +25 59.5	54	17	52	33	44 75	13 01 50					
4	243	10.2		17.7	1	58.4	49 +26 00.6	52	19	53	32	19 58 74	12 47 51					
5	258	10.4	-6	18.6	16	22.3	49 +26 01.5	50	17 21	17 53	18 31	20 11 72	12 34 52					
6	273	10.6	-6	19.6	30	46.1	48 +26 02.2	45	17 26	17 55	18 29	20 37 70	12 08 54					
7	288	10.8		20.5	45	09.9	48 02.8	40	30	57	28	20 58 68	11 47 55					
8	303	10.9		21.5	59	33.7	48 03.2	35	33	17 58	28	21 15 67	29 57					
9	318	11.1		22.4	73	57.5	48 03.4	30	36	18 00	28	30 65	11 14 58					
10	333	11.3		23.4	88	21.3	48 03.5	20	41	03	29	21 56 63	10 49 58					
11	348	11.4	-6	24.3	102	45.1	48 +26 03.3	10 N	17 46	18 07	18 32	22 17 62	10 27 59					
12	3	11.6	-6	25.3	117	08.8	47 +26 03.1	0	17 51	18 11	18 35	22 38 60	10 06 61					
13	18	11.8		26.2	131	32.5	47 02.6	10 S	17 55	16	41	22 58 58	9 46 61					
14	33	11.9		27.2	145	56.3	48 02.0	20	18 00	22	48	23 20 56	9 23 62					
15	48	12.1		28.1	160	20.0	47 01.2	30	06	30	18 59	23 45 55	8 58 63					
16	63	12.3		29.1	174	43.7	47 +26 00.2	35	10	35	19 06	*** ** *	43 63					
17	78	12.5	-6	30.0	189	07.4	47 +25 59.0	40	18 14	18 41	19 14	*** ** *	8 25 64					
18	93	12.6	-6	31.0	203	31.1	47 +25 57.7	45	18 18	18 48	19 24	*** ** *	8 04 65					
19	108	12.8		31.9	217	54.8	47 56.2	50	24	18 57	37	0 06 58	7 37 66					
20	123	13.0		32.9	232	18.5	47 54.5	52	26	19 01	44	18 59	24 67					
21	138	13.1		33.8	246	42.2	47 52.7	54	29	06	51	33 59	7 09 67					
22	153	13.3		34.8	261	06.0	48 50.7	56	32	11	19 59	0 51 57	6 52 68					
23	168	13.5		35.7	275	29.7	47 48.5	58	36	17	20 09	1 12 57	30 70					
24	183	13.6	-6	36.7	289	53.4	47 +25 46.1	60 S	18 40	19 24	20 20	1 39 55	6 03 71					
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 22 ^h 45 ^m 3		Mag: -3.9 PMG: 10 ^h 24 ^m			Mag: +0.7 PMG: 6 ^h 42 ^m			Mag: -2.7 PMG: 20 ^h 06 ^m			Mag: +1.1 PMG: 10 ^h 42 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	17	44.8	203	56.7	+4	13.9	259	30.4	+21	51.5	57	45.8	-16	42.0	199	08.6	+2	46.9
1	32	47.3	218	56.3		12.8	274	31.5		51.4	72	48.3		42.0	214	10.8		46.8
2	47	49.7	233	55.9		11.6	289	32.5		51.2	87	50.8		42.1	229	13.0		46.6
3	62	52.2	248	55.5		10.4	304	33.6		51.0	102	53.3		42.1	244	15.2		46.5
4	77	54.7	263	55.1		09.2	319	34.6		50.8	117	55.8		42.1	259	17.3		46.4
5	92	57.1	278	54.7	+4	08.0	334	35.7	+21	50.6	132	58.3	-16	42.1	274	19.5	+2	46.3
6	107	59.6	293	54.3	+4	06.8	349	36.7	+21	50.4	148	00.8	-16	42.1	289	21.7	+2	46.2
7	123	02.1	308	53.9		05.7	4	37.8		50.2	163	03.3		42.1	304	23.9		46.1
8	138	04.5	323	53.5		04.5	19	38.8		50.0	178	05.8		42.1	319	26.1		46.0
9	153	07.0	338	53.1		03.3	34	39.9		49.8	193	08.3		42.1	334	28.3		45.8
10	168	09.5	353	52.7		02.1	49	41.0		49.6	208	10.8		42.1	349	30.5		45.7
11	183	11.9	8	52.3	+4	00.9	64	42.0	+21	49.4	223	13.3	-16	42.1	4	32.6	+2	45.6
12	198	14.4	23	51.9	+3	59.7	79	43.1	+21	49.2	238	15.8	-16	42.1	19	34.8	+2	45.5
13	213	16.8	38	51.5		58.5	94	44.1		49.0	253	18.3		42.1	34	37.0		45.4
14	228	19.3	53	51.1		57.4	109	45.2		48.8	268	20.8		42.1	49	39.2		45.3
15	243	21.8	68	50.7		56.2	124	46.2		48.6	283	23.3		42.1	64	41.4		45.1
16	258	24.2	83	50.3		55.0	139	47.3		48.4	298	25.8		42.1	79	43.6		45.0
17	273	26.7	98	49.9	+3	53.8	154	48.4	+21	48.2	313	28.3	-16	42.1	94	45.8	+2	44.9
18	288	29.2	113	49.6	+3	52.6	169	49.4	+21	48.0	328	30.8	-16	42.1	109	47.9	+2	44.8
19	303	31.6	128	49.2		51.4	184	50.5		47.8	343	33.3		42.1	124	50.1		44.7
20	318	34.1	143	48.8		50.2	199	51.5		47.6	358	35.8		42.2	139	52.3		44.6
21	333	36.6	158	48.4		49.1	214	52.6		47.5	13	38.3		42.2	154	54.5		44.4
22	348	39.0	173	48.0		47.9	229	53.7		47.3	28	40.8		42.2	169	56.7		44.3
23	3	41.5	188	47.6		46.7	244	54.7		47.1	43	43.3		42.2	184	58.9		44.2
24	18	44.0	203	47.2	+3	45.5	259	55.8	+21	46.9	58	45.7	-16	42.2	200	01.1	+2	44.1
Dif	—		-4		-12		+11		-2		+25		0		+22		-1	

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna														
	SD: 16'0 PMG: 11 ^h 47 ^m 0			Edad: 21 ^d 2 PHE { 4 ^h : 58'9 12 ^h : 59'0 20 ^h : 59'1 SD: 16'0 PMG: 4 ^h 52 ^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	183	13.6	-6	36.7	289	53.4	+25	46.1	25	60 N	4	57	5	45	6	27	20	04	99	14	47	23					
1	198	13.8		37.6	304	17.2	48	43.6	25	58	4	59	45	24			26	93		25	28						
2	213	14.0		38.6	318	41.0	48	40.9	27	56	5	01	44	21			43	89	14	07	32						
3	228	14.1		39.5	333	04.8	48	38.0	29	54		02	43	19			20	59	85	13	51	36					
4	243	14.3		40.4	347	28.6	48	35.0	30	52		03	42	16			21	12	82		38	38					
5	258	14.5	-6	41.4	1	52.4	48	+25	31.8	32	50	5	04	5	42	6	14	21	23	80	13	26	40				
6	273	14.6	-6	42.3	16	16.3	49	+25	28.4	34	45	5	06	5	40	6	09	21	47	76	13	02	44				
7	288	14.8		43.3	30	40.1	48		24.8	36	40		07	38	05			22	06	72	12	42	47				
8	303	15.0		44.2	45	04.0	49		21.1	37	35		07	36	6	02		22	70		26	49					
9	318	15.1		45.2	59	28.0	50		17.2	39	30		07	35	5	59		35	68		12	12	51				
10	333	15.3		46.1	73	51.9	49		13.2	40	20		06	31	53			22	59	64	11	47	54				
11	348	15.5	-6	47.1	88	15.9	50	+25	08.9	43	10 N	5	03	5	27	5	48	23	19	61	11	26	57				
12	3	15.6	-6	48.0	102	39.9	50	+25	04.6	43	0	4	59	5	23	5	44	23	38	57	11	07	59				
13	18	15.8		49.0	117	04.0	51	+25	00.0	46	10 S		53	18	39			23	56	55	10	47	61				
14	33	16.0		49.9	131	28.1	51	+24	55.3	47	20		45	11	34			**	**	**		25	64				
15	48	16.1		50.8	145	52.2	51		50.4	49	30		35	5	03	28		**	**	**	10	01	66				
16	63	16.3		51.8	160	16.4	52		45.3	51	35		28	4	58	24		0	00	53	9	46	69				
17	78	16.4	-6	52.7	174	40.6	52	+24	40.1	52	40	4	20	4	52	5	20	0	18	51	9	29	71				
18	93	16.6	-6	53.7	189	04.9	53	+24	34.7	54	45	4	09	4	45	5	15	0	38	49	9	09	73				
19	108	16.8		54.6	203	29.2	53		29.2	55	50	3	56	36	10			1	04	46	8	43	77				
20	123	16.9		55.6	217	53.5	53		23.5	57	52		50	32	07			17	44		31	78					
21	138	17.1		56.5	232	17.9	54		17.6	59	54		43	27	04			32	42		16	81					
22	153	17.3		57.5	246	42.3	54		11.6	60	56		34	22	5	01		1	48	40	8	00	84				
23	168	17.4		58.4	261	06.8	55	+24	05.4	62	58		25	16	4	57		2	09	35	7	40	88				
24	183	17.6	-6	59.3	275	31.3	55	+23	59.1	63	60 S	3	14	4	09	4	53	2	34	30	7	14	94				
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO														
	PMG: 22 ^h 41 ^m 3			Mag: -3.9 PMG: 10 ^h 25 ^m			Mag: +0.7 PMG: 6 ^h 40 ^m			Mag: -2.6 PMG: 20 ^h 02 ^m			Mag: +1.1 PMG: 10 ^h 38 ^m														
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec													
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°												
0	18	44.0		203	47.2	+3	45.5	259	55.8	+21	46.9	58	45.7	-16	42.2	200	01.1	+2	44.1								
1	33	46.4		218	46.8		44.3	274	56.9		46.7	73	48.2		42.2	215	03.3		44.0								
2	48	48.9		233	46.4		43.1	289	57.9		46.5	88	50.7		42.2	230	05.4		43.9								
3	63	51.3		248	46.0		41.9	304	59.0		46.3	103	53.2		42.2	245	07.6		43.8								
4	78	53.8		263	45.6		40.7	320	00.0		46.1	118	55.7		42.2	260	09.8		43.6								
5	93	56.3		278	45.2	+3	39.5	335	01.1	+21	45.9	133	58.2	-16	42.2	275	12.0	+2	43.5								
6	108	58.7		293	44.8	+3	38.4	350	02.2	+21	45.7	149	00.7	-16	42.2	290	14.2	+2	43.4								
7	124	01.2		308	44.4		37.2	5	03.2		45.5	164	03.2		42.2	305	16.4		43.3								
8	139	03.7		323	44.0		36.0	20	04.3		45.3	179	05.7		42.2	320	18.6		43.2								
9	154	06.1		338	43.6		34.8	35	05.4		45.1	194	08.2		42.2	335	20.7		43.1								
10	169	08.6		353	43.2		33.6	50	06.4		44.9	209	10.6		42.2	350	22.9		42.9								
11	184	11.1		8	42.8	+3	32.4	65	07.5	+21	44.7	224	13.1	-16	42.2	5	25.1	+2	42.8								
12	199	13.5		23	42.5	+3	31.2	80	08.6	+21	44.5	239	15.6	-16	42.2	20	27.3	+2	42.7								
13	214	16.0		38	42.1		30.0	95	09.6		44.3	254	18.1		42.2	35	29.5		42.6								
14	229	18.5		53	41.7		28.8	110	10.7		44.1	269	20.6		42.2	50	31.7		42.5								
15	244	20.9		68	41.3		27.6	125	11.8		43.9	284	23.1		42.2	65	33.9		42.4								
16	259	23.4		83	40.9		26.4	140	12.8		43.7	299	25.6		42.2	80	36.1		42.3								
17	274	25.8		98	40.5	+3	25.3	155	13.9	+21	43.5	314	28.1	-16	42.2	95	38.2	+2	42.1								
18	289	28.3		113	40.1	+3	24.1	170	15.0	+21	43.3	329	30.5	-16	42.2	110	40.4	+2	42.0								
19	304	30.8		128	39.7		22.9	185	16.1		43.1	344	33.0		42.2	125	42.6		41.9								
20	319	33.2		143	39.3		21.7	200	17.1		42.9	359	35.5		42.2	140	44.8		41.8								
21	334	35.7		158	38.9		20.5	215	18.2		42.7	14	38.0		42.2	155	47.0		41.7								
22	349	38.2		173	38.5		19.3	230	19.3		42.5	29	40.5		42.2	170	49.2		41.6								
23	4	40.6		188	38.1		18.1	245	20.3		42.3	44	43.0		42.2	185	51.4		41.4								
24	19	43.1		203	37.7	+3	16.9	260	21.4	+21	42.1	59	45.5	-16	42.2	200	53.6	+2	41.3								
Dif	—			-4			-12			+11			-2			+25			0			+22			-1		

UT	SOL		 LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16°0		Edad: 22 ^d 2		PHE {	SD: 16°1			SD: 16°1		Salida de Luna		Puesta de Luna		
	PMG: 11 ^h 46 ^m 7		PMG: 5 ^h 52 ^m			PMG: 5 ^h 52 ^m			PMG: 5 ^h 52 ^m		Salida de Luna		Puesta de Luna		
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	h m	h m	h m	h m	m	h m	m	
0	183	17.6	-6	59.3	275	31.3	+23 59.1	60 N	17 03	17 44	18 32	21 43 102	15 10 12		
1	198	17.7	-7	00.3	289	55.9	56 52.6	58	06	45	31	21 59 96	14 53 18		
2	213	17.9		01.2	304	20.6	57 45.9	56	09	46	29	22 12 93	39 22		
3	228	18.1		02.2	318	45.3	57 39.1	54	12	47	28	24 89	27 25		
4	243	18.2		03.1	333	10.0	57 32.1	52	15	48	27	34 86	16 28		
5	258	18.4	-7	04.1	347	34.8	58 +23 25.0	50	17 17	17 49	18 27	22 43 84	14 06 30		
6	273	18.6	-7	05.0	1	59.7	59 +23 17.7	45	17 22	17 52	18 25	23 03 78	13 46 35		
7	288	18.7		05.9	16	24.6	59 10.3	40	26	54	25	18 74	29 39		
8	303	18.9		06.9	30	49.6	60 +23 02.7	35	30	56	25	32 70	15 42		
9	318	19.0		07.8	45	14.6	60 +22 55.0	30	34	17 58	25	23 43 68	13 03 44		
10	333	19.2		08.8	59	39.8	62 47.1	20	40	18 02	27	** ** *	12 41 50		
11	348	19.4	-7	09.7	74	04.9	61 +22 39.1	10 N	17 45	18 06	18 31	** ** *	12 23 53		
12	3	19.5	-7	10.6	88	30.2	63 +22 31.0	0	17 50	18 11	18 35	** ** *	12 06 56		
13	18	19.7		11.6	102	55.5	63 22.7	10 S	17 55	16	41	** ** *	11 48 60		
14	33	19.8		12.5	117	20.8	63 14.2	20	18 01	23	18 49	0 16 52	29 64		
15	48	20.0		13.5	131	46.2	64 +22 05.6	30	07	32	19 00	40 47	11 07 68		
16	63	20.2		14.4	146	11.7	65 +21 56.9	35	11	37	07	0 53 45	10 55 70		
17	78	20.3	-7	15.4	160	37.3	66 +21 48.0	40	18 16	18 43	19 16	1 09 42	10 40 74		
18	93	20.5	-7	16.3	175	02.9	66 +21 39.0	45	18 21	18 51	19 27	1 27 39	10 22 78		
19	108	20.6		17.2	189	28.6	67 29.9	50	27	19 00	41	1 50 35	10 00 83		
20	123	20.8		18.2	203	54.4	68 20.6	52	30	05	48	2 01 32	9 49 86		
21	138	20.9		19.1	218	20.2	68 11.1	54	33	10	19 55	14 29	37 89		
22	153	21.1		20.1	232	46.1	69 +21 01.6	56	36	15	20 04	28 26	24 91		
23	168	21.3		21.0	247	12.1	70 +20 51.9	58	40	22	14	2 44 22	9 08 96		
24	183	21.4	-7	21.9	261	38.1	70 +20 42.1	60 S	18 45	19 29	20 26	3 04 16	8 48 102		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 22 ^h 37 ^m 4		Mag: -3.9 PMG: 10 ^h 26 ^m		Mag: +0.7 PMG: 6 ^h 38 ^m		Mag: -2.6 PMG: 19 ^h 58 ^m		Mag: +1.1 PMG: 10 ^h 35 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	19	43.1	203	37.7	+3	16.9	260	21.4	+21	42.1
1	34	45.6	218	37.3		15.7	275	22.5		41.9
2	49	48.0	233	36.9		14.5	290	23.6		41.7
3	64	50.5	248	36.5		13.3	305	24.6		41.5
4	79	53.0	263	36.2		12.1	320	25.7		41.3
5	94	55.4	278	35.8	+3	10.9	335	26.8	+21	41.1
6	109	57.9	293	35.4	+3	09.7	350	27.9	+21	40.9
7	125	00.3	308	35.0		08.5	5	28.9		40.7
8	140	02.8	323	34.6		07.3	20	30.0		40.5
9	155	05.3	338	34.2		06.1	35	31.1		40.3
10	170	07.7	353	33.8		05.0	50	32.2		40.1
11	185	10.2	8	33.4	+3	03.8	65	33.2	+21	39.9
12	200	12.7	23	33.0	+3	02.6	80	34.3	+21	39.7
13	215	15.1	38	32.6		01.4	95	35.4		39.5
14	230	17.6	53	32.2	+3	00.2	110	36.5		39.3
15	245	20.1	68	31.8	+2	59.0	125	37.6		39.1
16	260	22.5	83	31.4		57.8	140	38.6		38.9
17	275	25.0	98	31.1	+2	56.6	155	39.7	+21	38.7
18	290	27.4	113	30.7	+2	55.4	170	40.8	+21	38.5
19	305	29.9	128	30.3		54.2	185	41.9		38.3
20	320	32.4	143	29.9		53.0	200	43.0		38.1
21	335	34.8	158	29.5		51.8	215	44.0		37.9
22	350	37.3	173	29.1		50.6	230	45.1		37.7
23	5	39.8	188	28.7		49.4	245	46.2		37.5
24	20	42.2	203	28.3	+2	48.2	260	47.3	+21	37.3
Dif	—		-4	-12			+11	-2		
									+25	0
										+22
										-1

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'0 PMG: 11 ^h 46 ^m 5			Edad: 23 ^d 2 SD: 16'1 PMG: 6 ^h 49 ^m	PHE { 4 ^h : 59'3 12 ^h : 59'4 20 ^h : 59'4 R°: 54 ^m											
	hG ☉	Dec	hG ☾			Dif		Dec	Dif		Náutico	Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	183	21.4	-7	21.9	261	38.1	+20	42.1	60 N	5 02	5 50	6 32	23 25	100	15 22	8
1	198	21.6		22.9	276	04.2	71	32.1	58	04	49	28	35	97	11	12
2	213	21.7		23.8	290	30.4	72	22.1	56	05	48	25	45	92	15	01
3	228	21.9		24.7	304	56.7	73	11.9	54	06	47	22	23 53	89	14	52
4	243	22.0		25.7	319	23.0	73	+20	52	07	46	20	** ** *	**	44	21
5	258	22.2	-7	26.6	333	49.4	74	+19	50	07	45	6 17	** ** *	**	14	36
6	273	22.4	-7	27.6	348	15.9	75	+19	45	08	42	6 12	** ** *	**	14	21
7	288	22.5		28.5	2	42.4	75	29.8	40	09	40	07	** ** *	**	14	08
8	303	22.7		29.4	17	09.0	76	19.0	35	09	38	03	** ** *	**	13	57
9	318	22.8		30.4	31	35.7	77	+19	30	08	36	6 00	** ** *	**	47	40
10	333	23.0		31.3	46	02.5	78	+18	20	06	32	5 54	0 03	62	31	44
11	348	23.1	-7	32.3	60	29.3	78	+18	10 N	5 03	5 27	5 48	0 20	58	13	16
12	3	23.3	-7	33.2	74	56.2	79	+18	0	4 58	5 22	5 43	0 35	55	13	02
13	18	23.4		34.1	89	23.2	80	23.2	10 S	52	17	38	0 51	51	12	48
14	33	23.6		35.1	103	50.3	81	11.7	20	44	10	32	1 08	47	33	62
15	48	23.7		36.0	118	17.4	81	+18	30	32	5 01	25	27	42	15	68
16	63	23.9		36.9	132	44.6	82	+17	35	25	4 56	21	38	39	12	05
17	78	24.1	-7	37.9	147	11.9	83	+17	40	4 16	4 49	5 17	1 51	36	11	54
18	93	24.2	-7	38.8	161	39.2	83	+17	45	4 05	4 42	5 12	2 06	32	11	40
19	108	24.4		39.7	176	06.6	84	12.6	50	3 51	32	05	25	26	23	84
20	123	24.5		40.7	190	34.1	85	+17	52	45	27	5 02	33	24	15	86
21	138	24.7		41.6	205	01.6	85	+16	54	37	22	4 59	43	21	11	06
22	153	24.8		42.6	219	29.3	87	35.8	56	28	17	56	2 54	18	10	55
23	168	25.0		43.5	233	56.9	86	23.4	58	18	10	52	3 06	14	44	97
24	183	25.1	-7	44.4	248	24.7	88	+16	60 S	3 06	4 03	4 47	3 20	10	10	30
UT	ARIES		VENUS			MARTE			JÚPITER				SATURNO			
	PMG: 22 ^h 33 ^m 5		Mag: -3.9 PMG: 10 ^h 26 ^m			Mag: +0.7 PMG: 6 ^h 36 ^m			Mag: -2.6 PMG: 19 ^h 54 ^m				Mag: +1.1 PMG: 10 ^h 31 ^m			
h	°	'	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec		
0	20	42.2	203	28.3	+2	48.2	260	47.3	+21	37.3	60	45.0	-16	42.2		
1	35	44.7	218	27.9		47.0	275	48.4		37.1	75	47.4		42.2		
2	50	47.2	233	27.5		45.8	290	49.5		36.9	90	49.9		42.2		
3	65	49.6	248	27.1		44.6	305	50.6		36.7	105	52.4		42.2		
4	80	52.1	263	26.7		43.4	320	51.6		36.5	120	54.9		42.2		
5	95	54.6	278	26.4	+2	42.2	335	52.7	+21	36.3	135	57.3	-16	42.2		
6	110	57.0	293	26.0	+2	41.0	350	53.8	+21	36.1	150	59.8	-16	42.2		
7	125	59.5	308	25.6		39.8	5	54.9		35.9	166	02.3		42.2		
8	141	01.9	323	25.2		38.6	20	56.0		35.7	181	04.8		42.2		
9	156	04.4	338	24.8		37.4	35	57.1		35.5	196	07.2		42.2		
10	171	06.9	353	24.4		36.2	50	58.2		35.3	211	09.7		42.2		
11	186	09.3	8	24.0	+2	35.0	65	59.2	+21	35.1	226	12.2	-16	42.2		
12	201	11.8	23	23.6	+2	33.8	81	00.3	+21	34.9	241	14.6	-16	42.2		
13	216	14.3	38	23.2		32.6	96	01.4		34.7	256	17.1		42.2		
14	231	16.7	53	22.8		31.4	111	02.5		34.5	271	19.6		42.2		
15	246	19.2	68	22.4		30.2	126	03.6		34.3	286	22.1		42.2		
16	261	21.7	83	22.0		29.0	141	04.7		34.1	301	24.5		42.2		
17	276	24.1	98	21.7	+2	27.8	156	05.8	+21	33.9	316	27.0	-16	42.2		
18	291	26.6	113	21.3	+2	26.6	171	06.9	+21	33.7	331	29.5	-16	42.2		
19	306	29.1	128	20.9		25.4	186	08.0		33.5	346	31.9		42.2		
20	321	31.5	143	20.5		24.2	201	09.1		33.3	1	34.4		42.2		
21	336	34.0	158	20.1		23.0	216	10.2		33.1	16	36.9		42.2		
22	351	36.4	173	19.7		21.8	231	11.2		32.9	31	39.3		42.2		
23	6	38.9	188	19.3		20.6	246	12.3		32.7	46	41.8		42.2		
24	21	41.4	203	18.9	+2	19.4	261	13.4	+21	32.5	61	44.3	-16	42.2		
Dif	—		-4		-12		+11		-2		+25		0		+22	

UT	SOL			☾ LUNA					Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 16'0 PMG: 11 ^h 46 ^m 2			Edad: 24 ^d 2 PHE { 4 ^h : 59'4 12 ^h : 59'4 20 ^h : 59'4 SD: 16'2 PMG: 7 ^h 43 ^m R°: 51 ^m							Civil			Náutico			Hora R°		
	hG ☉	Dec		hG ☾	Dif		Dec				Dif	Hora R°			Hora R°				
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	m	h m	m	h m	m	
0	183	25.1	-7	44.4	248	24.7	+16	10.9	60 N	16 57	17 39	18 27	** ** *		15 30	5			
1	198	25.3		45.4	262	52.5	88	+15	58.2 ¹²⁷	58	17 01	40	25	** ** *		23	9		
2	213	25.4		46.3	277	20.4	89		45.5 ¹²⁷	56	04	42	24	** ** *		16	12		
3	228	25.6		47.2	291	48.4	90		32.7 ¹²⁸	54	07	43	24	** ** *		10	15		
4	243	25.7		48.2	306	16.4	90		19.8 ¹²⁹	52	10	44	23	0 00	86	05	18		
5	258	25.9	-7	49.1	320	44.5	91	+15	06.8 ¹³⁰	50	17 13	17 45	18 23	0 07	83	15	00	20	
6	273	26.0	-7	50.0	335	12.7	92	+14	53.7 ¹³¹	45	17 19	17 48	18 22	0 21	78	14	50	25	
7	288	26.2		51.0	349	40.9	92		40.5 ¹³²	40	23	51	22	32	74	41	29		
8	303	26.3		51.9	4	09.2	93		27.3 ¹³²	35	28	53	22	42	70	33	33		
9	318	26.5		52.8	18	37.6	94		14.0 ¹³³	30	31	17 55	23	0 51	66	27	36		
10	333	26.6		53.8	33	06.0	94	+14	00.5 ¹³⁵	20	38	18 00	26	1 05	62	15	42		
11	348	26.8	-7	54.7	47	34.5	95	+13	47.0 ¹³⁵	10 N	17 44	18 05	18 30	1 18	57	14	05	46	
12	3	26.9	-7	55.6	62	03.1	96	+13	33.5 ¹³⁵	0	17 50	18 10	18 35	1 30	52	13	55	51	
13	18	27.1		56.6	76	31.7	96		19.8 ¹³⁷	10 S	17 55	16	41	42	48	45	56		
14	33	27.2		57.5	91	00.4	97	+13	06.1 ¹³⁷	20	18 01	24	18 50	1 55	43	35	60		
15	48	27.4		58.4	105	29.1	97	+12	52.3 ¹³⁸	30	09	33	19 02	2 09	38	23	66		
16	63	27.5	-7	59.4	119	57.9	98		38.4 ¹³⁹	35	13	39	09	17	35	16	69		
17	78	27.7	-8	00.3	134	26.8	99	+12	24.5 ¹³⁹	40	18 18	18 46	19 19	2 27	31	13	08	72	
18	93	27.8	-8	01.2	148	55.7	99	+12	10.5 ¹⁴⁰	45	18 23	18 54	19 30	2 38	26	12	58	77	
19	108	28.0		02.2	163	24.7	100	+11	56.4 ¹⁴¹	50	30	19 04	45	51	22	47	82		
20	123	28.1		03.1	177	53.7	100		42.2 ¹⁴²	52	33	09	19 52	2 57	19	41	86		
21	138	28.2		04.0	192	22.8	101		28.0 ¹⁴²	54	37	14	20 00	3 04	16	35	88		
22	153	28.4		04.9	206	52.0	102	+11	13.7 ¹⁴³	56	41	20	09	12	13	29	91		
23	168	28.5		05.9	221	21.2	102	+10	59.4 ¹⁴³	58	45	27	20	20	10	21	95		
24	183	28.7	-8	06.8	235	50.4	102	+10	45.0 ¹⁴⁴	60 S	18 50	19 35	20 33	3 30	6	12	12	100	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 22 ^h 29 ^m 5		Mag: -3.9 PMG: 10 ^h 27 ^m		Mag: +0.7 PMG: 6 ^h 35 ^m		Mag: -2.6 PMG: 19 ^h 50 ^m		Mag: +1.1 PMG: 10 ^h 28 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	21	41.4	203	18.9	+2	19.4	261	13.4	+21	32.5	61	44.3	-16	42.2	202	38.6	+2	35.8
1	36	43.8	218	18.5		18.2	276	14.5		32.3	76	46.7		42.2	217	40.8		35.7
2	51	46.3	233	18.1		17.0	291	15.6		32.1	91	49.2		42.2	232	43.0		35.6
3	66	48.8	248	17.7		15.8	306	16.7		31.9	106	51.7		42.2	247	45.2		35.5
4	81	51.2	263	17.4		14.5	321	17.8		31.7	121	54.1		42.2	262	47.3		35.4
5	96	53.7	278	17.0	+2	13.3	336	18.9	+21	31.5	136	56.6	-16	42.2	277	49.5	+2	35.3
6	111	56.2	293	16.6	+2	12.1	351	20.0	+21	31.3	151	59.1	-16	42.2	292	51.7	+2	35.1
7	126	58.6	308	16.2		10.9	6	21.1		31.1	167	01.5		42.2	307	53.9		35.0
8	142	01.1	323	15.8		09.7	21	22.2		30.9	182	04.0		42.1	322	56.1		34.9
9	157	03.6	338	15.4		08.5	36	23.3		30.6	197	06.5		42.1	337	58.3		34.8
10	172	06.0	353	15.0		07.3	51	24.4		30.4	212	08.9		42.1	353	00.5		34.7
11	187	08.5	8	14.6	+2	06.1	66	25.5	+21	30.2	227	11.4	-16	42.1	8	02.7	+2	34.6
12	202	10.9	23	14.2	+2	04.9	81	26.6	+21	30.0	242	13.8	-16	42.1	23	04.9	+2	34.5
13	217	13.4	38	13.8		03.7	96	27.7		29.8	257	16.3		42.1	38	07.1		34.4
14	232	15.9	53	13.5		02.5	111	28.8		29.6	272	18.8		42.1	53	09.2		34.2
15	247	18.3	68	13.1		01.3	126	29.9		29.4	287	21.2		42.1	68	11.4		34.1
16	262	20.8	83	12.7	+2	00.1	141	31.0		29.2	302	23.7		42.1	83	13.6		34.0
17	277	23.3	98	12.3	+1	58.9	156	32.1	+21	29.0	317	26.2	-16	42.1	98	15.8	+2	33.9
18	292	25.7	113	11.9	+1	57.7	171	33.2	+21	28.8	332	28.6	-16	42.1	113	18.0	+2	33.8
19	307	28.2	128	11.5		56.5	186	34.3		28.6	347	31.1		42.1	128	20.2		33.7
20	322	30.7	143	11.1		55.3	201	35.4		28.4	2	33.5		42.1	143	22.4		33.6
21	337	33.1	158	10.7		54.1	216	36.5		28.2	17	36.0		42.1	158	24.6		33.4
22	352	35.6	173	10.3		52.9	231	37.6		28.0	32	38.5		42.1	173	26.8		33.3
23	7	38.0	188	09.9		51.6	246	38.7		27.8	47	40.9		42.1	188	29.0		33.2
24	22	40.5	203	09.5	+1	50.4	261	39.8	+21	27.6	62	43.4	-16	42.1	203	31.1	+2	33.1
Dif	—		-4		-12		+11		-2		+25		0		+22		-1	

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'0 PMG: 11 ^h 46 ^m 0			Edad: 25 ^d 2 PHE { 4 ^h : 59'4 12 ^h : 59'4 20 ^h : 59'3 SD: 16'2 PMG: 8 ^h 34 ^m R°: 49 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	183	28.7	-8	06.8	235	50.4	+10 45.0	60 N	5 07	5 55	6 37	1 05	98	15 35	4
1	198	28.8		07.7	250	19.7 ¹⁰³	30.6 ¹⁴⁴	58	08	53	33	12	93	32	7
2	213	29.0		08.7	264	49.1 ¹⁰⁴	16.0 ¹⁴⁶	56	09	52	29	17	90	28	11
3	228	29.1		09.6	279	18.5 ¹⁰⁴	+10 01.5 ¹⁴⁵	54	09	50	26	22	87	25	14
4	243	29.3		10.5	293	48.0 ¹⁰⁵	+9 46.9 ¹⁴⁶	52	10	49	23	26	85	23	15
5	258	29.4	-8	11.5	308	17.5 ¹⁰⁵	+9 32.2 ¹⁴⁷	50	5 10	5 48	6 20	1 30	82	15 20	18
6	273	29.6	-8	12.4	322	47.0 ¹⁰⁵	+9 17.5 ¹⁴⁷	45	5 11	5 45	6 14	1 39	76	15 15	23
7	288	29.7		13.3	337	16.7 ¹⁰⁷	+9 02.7 ¹⁴⁸	40	11	42	09	46	72	10	27
8	303	29.8		14.2	351	46.3 ¹⁰⁶	+8 47.9 ¹⁴⁸	35	10	40	05	52	68	06	31
9	318	30.0		15.2	6	16.0 ¹⁰⁷	33.0 ¹⁴⁹	30	09	37	6 01	1 57	65	15 03	34
10	333	30.1		16.1	20	45.8 ¹⁰⁸	18.1 ¹⁴⁹	20	07	32	5 54	2 07	59	14 57	39
11	348	30.3	-8	17.0	35	15.5 ¹⁰⁷	+8 03.2 ¹⁴⁹	10 N	5 03	5 27	5 48	2 15	54	14 51	45
12	3	30.4	-8	18.0	49	45.4 ¹⁰⁹	+7 48.2 ¹⁵⁰	0	4 58	5 22	5 43	2 22	50	14 46	49
13	18	30.6		18.9	64	15.3 ¹⁰⁹	33.1 ¹⁵¹	10 S	51	16	37	30	45	41	53
14	33	30.7		19.8	78	45.2 ¹⁰⁹	18.1 ¹⁵⁰	20	42	5 08	30	38	40	35	59
15	48	30.8		20.7	93	15.1 ¹⁰⁹	+7 02.9 ¹⁵²	30	30	4 59	23	47	34	29	64
16	63	31.0		21.7	107	45.1 ¹¹⁰	+6 47.8 ¹⁵¹	35	22	53	19	52	31	25	68
17	78	31.1	-8	22.6	122	15.2 ¹¹¹	+6 32.6 ¹⁵²	40	4 13	4 46	5 14	2 58	28	14 20	72
18	93	31.3	-8	23.5	136	45.2 ¹¹⁰	+6 17.4 ¹⁵²	45	4 01	4 38	5 08	3 04	24	14 15	77
19	108	31.4		24.4	151	15.3 ¹¹¹	+6 02.2 ¹⁵²	50	3 47	28	5 01	13	18	09	82
20	123	31.5		25.4	165	45.5 ¹¹²	+5 46.9 ¹⁵³	52	39	23	4 58	16	17	07	84
21	138	31.7		26.3	180	15.7 ¹¹²	31.6 ¹⁵³	54	31	17	54	20	14	03	87
22	153	31.8		27.2	194	45.9 ¹¹²	16.3 ¹⁵³	56	22	11	51	25	11	14 00	90
23	168	32.0		28.2	209	16.1 ¹¹²	+5 00.9 ¹⁵⁴	58	3 11	4 04	46	30	8	13 56	93
24	183	32.1	-8	29.1	223	46.4 ¹¹³	+4 45.6 ¹⁵³	60 S	2 58	3 56	4 41	3 36	4	13 52	97
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 22 ^h 25 ^m 6			Mag: -3.9 PMG: 10 ^h 28 ^m			Mag: +0.7 PMG: 6 ^h 33 ^m			Mag: -2.6 PMG: 19 ^h 46 ^m			Mag: +1.1 PMG: 10 ^h 24 ^m		
	hG ♈		Dec	hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°
0	22	40.5	203 09.5	+1 50.4	261 39.8	+21 27.6	62 43.4	-16 42.1	203 31.1	+2 33.1	203 31.1	+2 33.1	203 31.1	+2 33.1	203 31.1
1	37	43.0	218 09.2	49.2	276 40.9	27.4	77 45.8	42.1	218 33.3	33.0	218 33.3	33.0	218 33.3	33.0	218 33.3
2	52	45.4	233 08.8	48.0	291 42.0	27.2	92 48.3	42.0	233 35.5	32.9	233 35.5	32.9	233 35.5	32.9	233 35.5
3	67	47.9	248 08.4	46.8	306 43.1	27.0	107 50.8	42.0	248 37.7	32.8	248 37.7	32.8	248 37.7	32.8	248 37.7
4	82	50.4	263 08.0	45.6	321 44.2	26.8	122 53.2	42.0	263 39.9	32.6	263 39.9	32.6	263 39.9	32.6	263 39.9
5	97	52.8	278 07.6	+1 44.4	336 45.4	+21 26.6	137 55.7	-16 42.0	278 42.1	+2 32.5	278 42.1	+2 32.5	278 42.1	+2 32.5	278 42.1
6	112	55.3	293 07.2	+1 43.2	351 46.5	+21 26.4	152 58.1	-16 42.0	293 44.3	+2 32.4	293 44.3	+2 32.4	293 44.3	+2 32.4	293 44.3
7	127	57.8	308 06.8	42.0	6 47.6	26.1	168 00.6	42.0	308 46.5	32.3	308 46.5	32.3	308 46.5	32.3	308 46.5
8	143	00.2	323 06.4	40.8	21 48.7	25.9	183 03.0	42.0	323 48.7	32.2	323 48.7	32.2	323 48.7	32.2	323 48.7
9	158	02.7	338 06.0	39.6	36 49.8	25.7	198 05.5	42.0	338 50.9	32.1	338 50.9	32.1	338 50.9	32.1	338 50.9
10	173	05.2	353 05.6	38.4	51 50.9	25.5	213 07.9	42.0	353 53.1	32.0	353 53.1	32.0	353 53.1	32.0	353 53.1
11	188	07.6	8 05.3	+1 37.1	66 52.0	+21 25.3	228 10.4	-16 42.0	8 55.2	+2 31.9	8 55.2	+2 31.9	8 55.2	+2 31.9	8 55.2
12	203	10.1	23 04.9	+1 35.9	81 53.1	+21 25.1	243 12.9	-16 42.0	23 57.4	+2 31.7	23 57.4	+2 31.7	23 57.4	+2 31.7	23 57.4
13	218	12.5	38 04.5	34.7	96 54.2	24.9	258 15.3	42.0	38 59.6	31.6	38 59.6	31.6	38 59.6	31.6	38 59.6
14	233	15.0	53 04.1	33.5	111 55.3	24.7	273 17.8	42.0	54 01.8	31.5	54 01.8	31.5	54 01.8	31.5	54 01.8
15	248	17.5	68 03.7	32.3	126 56.5	24.5	288 20.2	42.0	69 04.0	31.4	69 04.0	31.4	69 04.0	31.4	69 04.0
16	263	19.9	83 03.3	31.1	141 57.6	24.3	303 22.7	41.9	84 06.2	31.3	84 06.2	31.3	84 06.2	31.3	84 06.2
17	278	22.4	98 02.9	+1 29.9	156 58.7	+21 24.1	318 25.1	-16 41.9	99 08.4	+2 31.2	99 08.4	+2 31.2	99 08.4	+2 31.2	99 08.4
18	293	24.9	113 02.5	+1 28.7	171 59.8	+21 23.9	333 27.6	-16 41.9	114 10.6	+2 31.1	114 10.6	+2 31.1	114 10.6	+2 31.1	114 10.6
19	308	27.3	128 02.1	27.5	187 00.9	23.7	348 30.0	41.9	129 12.8	31.0	129 12.8	31.0	129 12.8	31.0	129 12.8
20	323	29.8	143 01.7	26.3	202 02.0	23.5	3 32.5	41.9	144 15.0	30.8	144 15.0	30.8	144 15.0	30.8	144 15.0
21	338	32.3	158 01.4	25.1	217 03.1	23.3	18 34.9	41.9	159 17.2	30.7	159 17.2	30.7	159 17.2	30.7	159 17.2
22	353	34.7	173 01.0	23.8	232 04.2	23.1	33 37.4	41.9	174 19.3	30.6	174 19.3	30.6	174 19.3	30.6	174 19.3
23	8	37.2	188 00.6	22.6	247 05.4	22.9	48 39.8	41.9	189 21.5	30.5	189 21.5	30.5	189 21.5	30.5	189 21.5
24	23	39.6	203 00.2	+1 21.4	262 06.5	+21 22.6	63 42.3	-16 41.9	204 23.7	+2 30.4	204 23.7	+2 30.4	204 23.7	+2 30.4	204 23.7
Dif	—		-4	-12	+11	-2	+25	0	+22	-1	+22	-1	+22	-1	+22

UT	SOL		 LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16:0 PMG: 11 ^h 45 ^m 8		Edad: 26 ^d 2 PHE { SD: 16:1 PMG: 9 ^h 23 ^m 4 ^h : 59:2 12 ^h : 59:2 20 ^h : 59:1 R°: 49 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	183	32.1	-8 29.1	223	46.4	+4 45.6	60 N	16 51	17 33	18 21	2 43 96	15 39 4		
1	198	32.2	30.0	238	16.7 ¹¹³	30.2 ¹⁵⁴	58	55	35	20	45 93	39 7		
2	213	32.4	30.9	252	47.0 ¹¹³	+4 14.7 ¹⁵⁵	56	16 59	37	20	47 90	39 10		
3	228	32.5	31.9	267	17.4 ¹¹⁴	+3 59.3 ¹⁵⁴	54	17 03	38	19	49 86	39 16		
4	243	32.7	32.8	281	47.7 ¹¹³	43.9 ¹⁵⁴	52	06	40	19	51 83	38 16		
5	258	32.8	-8 33.7	296	18.2 ¹¹⁵	+3 28.4 ¹⁵⁵	50	17 09	17 41	18 19	2 52 81	15 38 18		
6	273	32.9	-8 34.6	310	48.6 ¹¹⁴	+3 12.9 ¹⁵⁵	45	17 15	17 45	18 19	2 55 76	15 38 22		
7	288	33.1	35.6	325	19.0 ¹¹⁴	+2 57.4 ¹⁵⁵	40	20	48	19	2 58 71	37 27		
8	303	33.2	36.5	339	49.5 ¹¹⁵	41.9 ¹⁵⁵	35	25	51	20	3 00 68	37 30		
9	318	33.4	37.4	354	20.0 ¹¹⁵	26.4 ¹⁵⁵	30	29	53	21	02 65	37 33		
10	333	33.5	38.3	8	50.6 ¹¹⁶	+2 10.9 ¹⁵⁵	20	36	17 59	24	06 58	36 39		
11	348	33.6	-8 39.2	23	21.1 ¹¹⁵	+1 55.4 ¹⁵⁵	10 N	17 43	18 04	18 29	3 09 53	15 36 43		
12	3	33.8	-8 40.2	37	51.7 ¹¹⁶	+1 39.8 ¹⁵⁶	0	17 49	18 10	18 34	3 12 48	15 35 48		
13	18	33.9	41.1	52	22.2 ¹¹⁵	24.3 ¹⁵⁵	10 S	17 55	17	41	15 44	34 54		
14	33	34.0	42.0	66	52.8 ¹¹⁶	+1 08.7 ¹⁵⁶	20	18 02	25	18 51	18 39	34 58		
15	48	34.2	42.9	81	23.4 ¹¹⁶	+0 53.2 ¹⁵⁵	30	10	34	19 03	21 34	33 64		
16	63	34.3	43.9	95	54.1 ¹¹⁷	37.7 ¹⁵⁵	35	15	41	11	23 31	33 67		
17	78	34.5	-8 44.8	110	24.7 ¹¹⁶	+0 22.1 ¹⁵⁶	40	18 20	18 48	19 21	3 26 26	15 32 71		
18	93	34.6	-8 45.7	124	55.4 ¹¹⁷	+0 06.6 ¹⁵⁵	45	18 26	18 56	19 33	3 28 23	15 32 75		
19	108	34.7	46.6	139	26.0 ¹¹⁶	-0 08.9 ¹⁵⁵	50	33	19 07	49	31 18	31 81		
20	123	34.9	47.6	153	56.7 ¹¹⁷	24.5 ¹⁵⁶	52	37	12	19 56	33 15	31 83		
21	138	35.0	48.5	168	27.4 ¹¹⁷	40.0 ¹⁵⁵	54	41	18	20 05	34 13	30 86		
22	153	35.1	49.4	182	58.1 ¹¹⁷	-0 55.5 ¹⁵⁵	56	45	25	15	36 10	30 89		
23	168	35.3	50.3	197	28.8 ¹¹⁷	-1 11.0 ¹⁵⁵	58	49	32	26	38 7	29 92		
24	183	35.4	-8 51.2	211	59.5 ¹¹⁷	-1 26.5 ¹⁵⁵	60 S	18 55	19 40	20 40	3 40 4	15 29 96		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 22 ^h 21 ^m 7		Mag: -3.9 PMG: 10 ^h 28 ^m		Mag: +0.6 PMG: 6 ^h 31 ^m		Mag: -2.6 PMG: 19 ^h 42 ^m		Mag: +1.1 PMG: 10 ^h 21 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	23	39.6	203	00.2	+1 21.4	262	06.5	+21 22.6	63	42.3	-16 41.9	204	23.7	+2 30.4
1	38	42.1	217	59.8	20.2	277	07.6	22.4	78	44.7	41.9	219	25.9	30.3
2	53	44.6	232	59.4	19.0	292	08.7	22.2	93	47.2	41.9	234	28.1	30.2
3	68	47.0	247	59.0	17.8	307	09.8	22.0	108	49.6	41.9	249	30.3	30.0
4	83	49.5	262	58.6	16.6	322	10.9	21.8	123	52.1	41.8	264	32.5	29.9
5	98	52.0	277	58.2	+1 15.4	337	12.1	+21 21.6	138	54.5	-16 41.8	279	34.7	+2 29.8
6	113	54.4	292	57.9	+1 14.2	352	13.2	+21 21.4	153	57.0	-16 41.8	294	36.9	+2 29.7
7	128	56.9	307	57.5	12.9	7	14.3	21.2	168	59.4	41.8	309	39.1	29.6
8	143	59.4	322	57.1	11.7	22	15.4	21.0	184	01.9	41.8	324	41.3	29.5
9	159	01.8	337	56.7	10.5	37	16.5	20.8	199	04.3	41.8	339	43.5	29.4
10	174	04.3	352	56.3	09.3	52	17.7	20.6	214	06.8	41.8	354	45.6	29.3
11	189	06.8	7	55.9	+1 08.1	67	18.8	+21 20.4	229	09.2	-16 41.8	9	47.8	+2 29.1
12	204	09.2	22	55.5	+1 06.9	82	19.9	+21 20.2	244	11.7	-16 41.8	24	50.0	+2 29.0
13	219	11.7	37	55.1	05.7	97	21.0	20.0	259	14.1	41.8	39	52.2	28.9
14	234	14.1	52	54.7	04.5	112	22.2	19.7	274	16.6	41.7	54	54.4	28.8
15	249	16.6	67	54.3	03.3	127	23.3	19.5	289	19.0	41.7	69	56.6	28.7
16	264	19.1	82	54.0	02.0	142	24.4	19.3	304	21.5	41.7	84	58.8	28.6
17	279	21.5	97	53.6	+1 00.8	157	25.5	+21 19.1	319	23.9	-16 41.7	100	01.0	+2 28.5
18	294	24.0	112	53.2	+0 59.6	172	26.6	+21 18.9	334	26.3	-16 41.7	115	03.2	+2 28.4
19	309	26.5	127	52.8	58.4	187	27.8	18.7	349	28.8	41.7	130	05.4	28.2
20	324	28.9	142	52.4	57.2	202	28.9	18.5	4	31.2	41.7	145	07.6	28.1
21	339	31.4	157	52.0	56.0	217	30.0	18.3	19	33.7	41.7	160	09.8	28.0
22	354	33.9	172	51.6	54.8	232	31.2	18.1	34	36.1	41.7	175	11.9	27.9
23	9	36.3	187	51.2	53.5	247	32.3	17.9	49	38.6	41.6	190	14.1	27.8
24	24	38.8	202	50.8	+0 52.3	262	33.4	+21 17.7	64	41.0	-16 41.6	205	16.3	+2 27.7
Dif	—		-4		-12	+11		-2	+24		0	+22		-1

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'0 PMG: 11 ^h 45 ^m 5			Edad: 27 ^d 2 PHE { SD: 16'1 PMG: 10 ^h 12 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	183	35.4	-8	51.2	211	59.5	-1 26.5	60 N	5 11	6 00	6 42	4 19	96	15 43	5
1	198	35.5		52.2	226	30.2 ¹¹⁷	41.9 ¹⁵⁴	58	12	5 58	37	18 92		46	9
2	213	35.7		53.1	241	00.9 ¹¹⁷	-1 57.4 ¹⁵⁵	56	13	56	33	17 88		49	11
3	228	35.8		54.0	255	31.6 ¹¹⁷	-2 12.8 ¹⁵⁴	54	13	54	30	15 86		52	14
4	243	35.9		54.9	270	02.3 ¹¹⁷	28.2 ¹⁵⁴	52	13	52	27	14 83		54	16
5	258	36.1	-8	55.8	284	33.0 ¹¹⁷	-2 43.6 ¹⁵⁴	50	5 13	5 51	6 24	4 13	81	15 56	19
6	273	36.2	-8	56.8	299	03.7 ¹¹⁷	-2 59.0 ¹⁵⁴	45	5 13	5 47	6 17	4 11	75	16 00	24
7	288	36.3		57.7	313	34.5 ¹¹⁸	-3 14.4 ¹⁵⁴	40	13	44	12	09 71		04	28
8	303	36.5		58.6	328	05.2 ¹¹⁷	29.7 ¹⁵³	35	12	41	07	08 67		07	31
9	318	36.6	-8	59.5	342	35.9 ¹¹⁷	-3 45.0 ¹⁵³	30	11	38	6 03	07 63		10	34
10	333	36.7	-9	00.4	357	06.6 ¹¹⁷	-4 00.3 ¹⁵³	20	07	33	5 55	04 58		15	40
11	348	36.9	-9	01.3	11	37.3 ¹¹⁷	-4 15.5 ¹⁵²	10 N	5 03	5 27	5 49	4 02	53	16 19	45
12	3	37.0	-9	02.3	26	08.0 ¹¹⁷	-4 30.7 ¹⁵²	0	4 57	5 21	5 42	4 00	49	16 23	49
13	18	37.1		03.2	40	38.7 ¹¹⁷	-4 45.9 ¹⁵²	10 S	50	15	36	3 59	44	28	53
14	33	37.2		04.1	55	09.4 ¹¹⁷	-5 01.1 ¹⁵²	20	40	5 06	29	57 39		32	58
15	48	37.4		05.0	69	40.1 ¹¹⁷	16.2 ¹⁵¹	30	28	4 56	21	55 33		37	64
16	63	37.5		05.9	84	10.7 ¹¹⁶	31.3 ¹⁵¹	35	20	50	16	54 30		40	67
17	78	37.6	-9	06.9	98	41.4 ¹¹⁷	-5 46.3 ¹⁵⁰	40	4 10	4 43	5 11	3 52	27	16 43	71
18	93	37.8	-9	07.8	113	12.1 ¹¹⁷	-6 01.4 ¹⁵¹	45	3 57	4 34	5 05	3 51	23	16 47	75
19	108	37.9		08.7	127	42.7 ¹¹⁶	16.3 ¹⁴⁹	50	42	23	4 57	49 18		52	80
20	123	38.0		09.6	142	13.3 ¹¹⁶	31.3 ¹⁵⁰	52	34	18	54	48 16		54	82
21	138	38.1		10.5	156	43.9 ¹¹⁶	-6 46.1 ¹⁴⁸	54	26	12	50	47 13		56	85
22	153	38.3		11.4	171	14.5 ¹¹⁶	-7 01.0 ¹⁴⁹	56	16	4 06	46	46 11		16 59	88
23	168	38.4		12.3	185	45.1 ¹¹⁶	15.8 ¹⁴⁸	58	3 04	3 58	41	45 8		17 01	92
24	183	38.5	-9	13.3	200	15.7 ¹¹⁶	-7 30.5 ¹⁴⁷	60 S	2 50	3 50	4 35	3 44	4	17 05	95

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO				
	PMG: 22 ^h 17 ^m 8		Mag: -3.9 PMG: 10 ^h 29 ^m		Mag: +0.6 PMG: 6 ^h 29 ^m		Mag: -2.6 PMG: 19 ^h 38 ^m		Mag: +1.1 PMG: 10 ^h 17 ^m				
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'			
0	24	38.8	202	50.8	+0 52.3	262	33.4	+21 17.7	205	16.3	+2 27.7		
1	39	41.2	217	50.4	51.1	277	34.5	17.5	220	18.5	27.6		
2	54	43.7	232	50.1	49.9	292	35.7	17.3	235	20.7	27.5		
3	69	46.2	247	49.7	48.7	307	36.8	17.0	250	22.9	27.4		
4	84	48.6	262	49.3	47.5	322	37.9	16.8	265	25.1	27.2		
5	99	51.1	277	48.9	+0 46.3	337	39.0	+21 16.6	280	27.3	+2 27.1		
6	114	53.6	292	48.5	+0 45.1	352	40.2	+21 16.4	295	29.5	+2 27.0		
7	129	56.0	307	48.1	43.8	7	41.3	16.2	310	31.7	26.9		
8	144	58.5	322	47.7	42.6	22	42.4	16.0	325	33.9	26.8		
9	160	01.0	337	47.3	41.4	37	43.6	15.8	340	36.1	26.7		
10	175	03.4	352	46.9	40.2	52	44.7	15.6	355	38.3	26.6		
11	190	05.9	7	46.5	+0 39.0	67	45.8	+21 15.4	10	40.5	+2 26.5		
12	205	08.4	22	46.2	+0 37.8	82	47.0	+21 15.2	25	42.6	+2 26.3		
13	220	10.8	37	45.8	36.6	97	48.1	15.0	40	44.8	26.2		
14	235	13.3	52	45.4	35.3	112	49.2	14.8	55	47.0	26.1		
15	250	15.7	67	45.0	34.1	127	50.4	14.5	70	49.2	26.0		
16	265	18.2	82	44.6	32.9	142	51.5	14.3	85	51.4	25.9		
17	280	20.7	97	44.2	+0 31.7	157	52.6	+21 14.1	100	53.6	+2 25.8		
18	295	23.1	112	43.8	+0 30.5	172	53.8	+21 13.9	115	55.8	+2 25.7		
19	310	25.6	127	43.4	29.3	187	54.9	13.7	130	58.0	25.6		
20	325	28.1	142	43.0	28.0	202	56.1	13.5	146	00.2	25.4		
21	340	30.5	157	42.6	26.8	217	57.2	13.3	161	02.4	25.3		
22	355	33.0	172	42.2	25.6	232	58.3	13.1	176	04.6	25.2		
23	10	35.5	187	41.9	24.4	247	59.5	12.9	191	06.8	25.1		
24	25	37.9	202	41.5	+0 23.2	263	00.6	+21 12.7	206	09.0	+2 25.0		
Dif	—		-4	-12		+11	-2		+24	0		+22	-1

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16'0 PMG: 11 ^h 45 ^m 3			Edad: 28 ^d 2 PHE { SD: 16'0 PMG: 11 ^h 01 ^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	38.5	-9 13.3	200	15.7	-7 30.5		60 N	16 45	17 28	18 16	5 55 96	15 48 6					
1	198	38.7		214	46.2 ¹¹⁵	45.2 ¹⁴⁷		58	50	30	15	50 92	15 55 10					
2	213	38.8	15.1	229	16.8 ¹¹⁶	-7 59.9 ¹⁴⁷		56	54	32	15	45 88	16 00 14					
3	228	38.9	16.0	243	47.3 ¹¹⁵	-8 14.5 ¹⁴⁶		54	16 58	34	15	41 85	06 16					
4	243	39.0	16.9	258	17.8 ¹¹⁵	29.1 ¹⁴⁶		52	17 02	36	15	37 83	10 19					
5	258	39.2	-9 17.8	272	48.2 ¹¹⁴	-8 43.6 ¹⁴⁵		50	17 05	17 37	18 15	5 34 80	16 15 21					
6	273	39.3	-9 18.8	287	18.7 ¹¹⁵	-8 58.0 ¹⁴⁴		45	17 12	17 41	18 15	5 26 75	16 24 26					
7	288	39.4	19.7	301	49.1 ¹¹⁴	-9 12.4 ¹⁴⁴		40	18	45	16	20 71	32 30					
8	303	39.5	20.6	316	19.6 ¹¹⁵	26.7 ¹⁴³		35	23	48	18	15 67	38 34					
9	318	39.7	21.5	330	49.9 ¹¹³	41.0 ¹⁴³		30	27	51	19	10 64	44 37					
10	333	39.8	22.4	345	20.3 ¹¹⁴	-9 55.2 ¹⁴²		20	35	17 57	23	5 02 59	16 55 41					
11	348	39.9	-9 23.3	359	50.7 ¹¹⁴	-10 09.4 ¹⁴²		10 N	17 42	18 03	18 28	4 55 54	17 04 46					
12	3	40.0	-9 24.2	14	21.0 ¹¹³	-10 23.5 ¹⁴¹		0	17 49	18 10	18 34	4 49 49	17 12 50					
13	18	40.2	25.1	28	51.3 ¹¹³	37.5 ¹⁴⁰		10 S	17 55	17	42	43 45	21 54					
14	33	40.3	26.1	43	21.5 ¹¹²	-10 51.5 ¹⁴⁰		20	18 03	25	18 52	36 40	30 59					
15	48	40.4	27.0	57	51.8 ¹¹³	-11 05.4 ¹³⁹		30	11	36	19 05	28 36	41 63					
16	63	40.5	27.9	72	22.0 ¹¹²	19.2 ¹³⁸		35	16	42	13	24 32	47 67					
17	78	40.7	-9 28.8	86	52.2 ¹¹²	-11 32.9 ¹³⁷		40	18 22	18 50	19 24	4 19 29	17 54 70					
18	93	40.8	-9 29.7	101	22.3 ¹¹¹	-11 46.6 ¹³⁷		45	18 29	18 59	19 36	4 14 24	18 02 74					
19	108	40.9	30.6	115	52.5 ¹¹²	-12 00.2 ¹³⁶		50	37	19 11	19 53	07 20	12 79					
20	123	41.0	31.5	130	22.6 ¹¹¹	13.8 ¹³⁶		52	40	16	20 01	04 17	16 82					
21	138	41.2	32.4	144	52.6 ¹¹⁰	27.3 ¹³⁵		54	45	22	10	4 00 15	21 85					
22	153	41.3	33.3	159	22.7 ¹¹¹	40.7 ¹³⁴		56	49	29	20	3 57 12	27 88					
23	168	41.4	34.3	173	52.7 ¹¹⁰	-12 54.0 ¹³³		58	18 54	37	32	53 9	33 92					
24	183	41.5	-9 35.2	188	22.6 ¹⁰⁹	-13 07.2 ¹³²		60 S	19 00	19 46	20 47	3 48 5	18 40 97					
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 22 ^h 13 ^m 8		Mag: -3.9 PMG: 10 ^h 30 ^m			Mag: +0.6 PMG: 6 ^h 27 ^m			Mag: -2.6 PMG: 19 ^h 34 ^m			Mag: +1.1 PMG: 10 ^h 14 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	°	'	°	°	'	°	'	°	'				
0	25	37.9	202	41.5	+0	23.2	263	00.6	+21	12.7	65	39.5	-16	41.3	206	09.0	+2	25.0
1	40	40.4	217	41.1		22.0	278	01.7		12.4	80	41.9		41.3	221	11.2		24.9
2	55	42.9	232	40.7		20.8	293	02.9		12.2	95	44.4		41.3	236	13.4		24.8
3	70	45.3	247	40.3		19.5	308	04.0		12.0	110	46.8		41.3	251	15.6		24.7
4	85	47.8	262	39.9		18.3	323	05.2		11.8	125	49.2		41.3	266	17.7		24.6
5	100	50.2	277	39.5	+0	17.1	338	06.3	+21	11.6	140	51.7	-16	41.3	281	19.9	+2	24.4
6	115	52.7	292	39.1	+0	15.9	353	07.4	+21	11.4	155	54.1	-16	41.2	296	22.1	+2	24.3
7	130	55.2	307	38.7		14.7	8	08.6		11.2	170	56.5		41.2	311	24.3		24.2
8	145	57.6	322	38.3		13.5	23	09.7		11.0	185	59.0		41.2	326	26.5		24.1
9	161	00.1	337	38.0		12.2	38	10.9		10.8	201	01.4		41.2	341	28.7		24.0
10	176	02.6	352	37.6		11.0	53	12.0		10.6	216	03.8		41.2	356	30.9		23.9
11	191	05.0	7	37.2	+0	09.8	68	13.2	+21	10.3	231	06.3	-16	41.2	11	33.1	+2	23.8
12	206	07.5	22	36.8	+0	08.6	83	14.3	+21	10.1	246	08.7	-16	41.1	26	35.3	+2	23.7
13	221	10.0	37	36.4		07.4	98	15.4		09.9	261	11.1		41.1	41	37.5		23.6
14	236	12.4	52	36.0		06.2	113	16.6		09.7	276	13.6		41.1	56	39.7		23.4
15	251	14.9	67	35.6		04.9	128	17.7		09.5	291	16.0		41.1	71	41.9		23.3
16	266	17.3	82	35.2		03.7	143	18.9		09.3	306	18.4		41.1	86	44.1		23.2
17	281	19.8	97	34.8	+0	02.5	158	20.0	+21	09.1	321	20.8	-16	41.1	101	46.3	+2	23.1
18	296	22.3	112	34.4	+0	01.3	173	21.2	+21	08.9	336	23.3	-16	41.1	116	48.5	+2	23.0
19	311	24.7	127	34.0	+0	00.1	188	22.3		08.7	351	25.7		41.0	131	50.7		22.9
20	326	27.2	142	33.7	-0	01.1	203	23.5		08.5	6	28.1		41.0	146	52.9		22.8
21	341	29.7	157	33.3		02.4	218	24.6		08.2	21	30.5		41.0	161	55.0		22.7
22	356	32.1	172	32.9		03.6	233	25.8		08.0	36	33.0		41.0	176	57.2		22.6
23	11	34.6	187	32.5		04.8	248	26.9		07.8	51	35.4		41.0	191	59.4		22.4
24	26	37.1	202	32.1	-0	06.0	263	28.1	+21	07.6	66	37.8	-16	41.0	207	01.6	+2	22.3
Dif	—		-4		-12		+11		-2		+24		0		+22		-	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'1 PMG: 11 ^h 45 ^m 1			Edad: 29 ^d 2 PHE { 4 ^h : 58'0 12 ^h : 57'8 20 ^h : 57'6 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	41.5	-9 35.2	188	22.6	-13 07.2	132	5	16	6	04	6	47	7	31
1	198	41.6	36.1	202	52.6 ¹¹⁰	20.4	132	16	02	42		22	91	16	05
2	213	41.8	37.0	217	22.5 ¹⁰⁹	33.5	131	17	6	00	38	13	88	14	18
3	228	41.9	37.9	231	52.4 ¹⁰⁹	46.4	129	17	5	58	34	06	84	22	22
4	243	42.0	38.8	246	22.2 ¹⁰⁸	-13 59.4 ¹³⁰	130	17	56	30		7	00	81	29
5	258	42.1	-9 39.7	260	52.0 ¹⁰⁸	-14 12.2 ¹²⁸	128	5	16	5	54	6	27	6	54
6	273	42.2	-9 40.6	275	21.8 ¹⁰⁸	-14 24.9 ¹²⁷	127	5	16	5	50	6	20	6	41
7	288	42.4	41.5	289	51.6 ¹⁰⁸	37.6 ¹²⁷	127	15	46	14		31	69	17	02
8	303	42.5	42.4	304	21.3 ¹⁰⁷	-14 50.2 ¹²⁶	126	13	43	08		22	66	12	37
9	318	42.6	43.3	318	51.0 ¹⁰⁷	-15 02.7 ¹²⁵	125	12	40	6	04	14	63	21	40
10	333	42.7	44.2	333	20.6 ¹⁰⁶	15.1 ¹²⁴	124	08	34	5	56	6	01	58	36
11	348	42.8	-9 45.2	347	50.2 ¹⁰⁶	-15 27.4 ¹²³	123	5	03	5	27	5	49	5	49
12	3	43.0	-9 46.1	2	19.8 ¹⁰⁶	-15 39.6 ¹²²	122	4	56	5	21	5	42	5	38
13	18	43.1	47.0	16	49.3 ¹⁰⁵	-15 51.7 ¹²¹	121	49	14	35		28	47	15	55
14	33	43.2	47.9	31	18.8 ¹⁰⁵	-16 03.7 ¹²⁰	120	39	5	05	27	16	43	29	59
15	48	43.3	48.8	45	48.3 ¹⁰⁵	15.6 ¹¹⁹	119	25	4	54	19	5	04	38	44
16	63	43.4	49.7	60	17.7 ¹⁰⁴	27.5 ¹¹⁹	119	17	48	14		4	56	36	18
17	78	43.5	-9 50.6	74	47.1 ¹⁰⁴	-16 39.2 ¹¹⁷	117	4	06	4	40	5	08	4	48
18	93	43.7	-9 51.5	89	16.4 ¹⁰³	-16 50.8 ¹¹⁶	116	3	54	4	31	5	01	4	38
19	108	43.8	52.4	103	45.7 ¹⁰³	-17 02.4 ¹¹⁶	116	37	19	4	53	27	23	31	78
20	123	43.9	53.3	118	15.0 ¹⁰³	13.8 ¹¹⁴	114	29	13	49		21	21	38	80
21	138	44.0	54.2	132	44.3 ¹⁰³	25.1 ¹¹³	113	20	07	45		15	19	46	83
22	153	44.1	55.1	147	13.5 ¹⁰²	36.4 ¹¹³	113	3	09	4	00	40	09	15	19
23	168	44.2	56.0	161	42.6 ¹⁰¹	47.5 ¹¹¹	111	2	57	3	53	35	4	02	12
24	183	44.4	-9 56.9	176	11.8 ¹⁰²	-17 58.5 ¹¹⁰	110	2	42	3	44	4	30	3	53

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 22 ^h 09 ^m 9		Mag: -3.9 PMG: 10 ^h 30 ^m		Mag: +0.6 PMG: 6 ^h 26 ^m		Mag: -2.6 PMG: 19 ^h 30 ^m		Mag: +1.1 PMG: 10 ^h 10 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	26	37.1	202	32.1	-0 06.0	263	28.1	+21 07.6	66	37.8
1	41	39.5	217	31.7	07.2	278	29.2	07.4	81	40.2
2	56	42.0	232	31.3	08.5	293	30.4	07.2	96	42.7
3	71	44.5	247	30.9	09.7	308	31.5	07.0	111	45.1
4	86	46.9	262	30.5	10.9	323	32.7	06.8	126	47.5
5	101	49.4	277	30.1	-0 12.1	338	33.8	+21 06.6	141	49.9
6	116	51.8	292	29.7	-0 13.3	353	35.0	+21 06.3	156	52.4
7	131	54.3	307	29.3	14.5	8	36.1	06.1	171	54.8
8	146	56.8	322	29.0	15.8	23	37.3	05.9	186	57.2
9	161	59.2	337	28.6	17.0	38	38.4	05.7	201	59.6
10	177	01.7	352	28.2	18.2	53	39.6	05.5	217	02.1
11	192	04.2	7	27.8	-0 19.4	68	40.8	+21 05.3	232	04.5
12	207	06.6	22	27.4	-0 20.6	83	41.9	+21 05.1	247	06.9
13	222	09.1	37	27.0	21.9	98	43.1	04.9	262	09.3
14	237	11.6	52	26.6	23.1	113	44.2	04.7	277	11.7
15	252	14.0	67	26.2	24.3	128	45.4	04.4	292	14.2
16	267	16.5	82	25.8	25.5	143	46.5	04.2	307	16.6
17	282	18.9	97	25.4	-0 26.7	158	47.7	+21 04.0	322	19.0
18	297	21.4	112	25.0	-0 27.9	173	48.9	+21 03.8	337	21.4
19	312	23.9	127	24.6	29.2	188	50.0	03.6	352	23.8
20	327	26.3	142	24.3	30.4	203	51.2	03.4	7	26.3
21	342	28.8	157	23.9	31.6	218	52.3	03.2	22	28.7
22	357	31.3	172	23.5	32.8	233	53.5	03.0	37	31.1
23	12	33.7	187	23.1	34.0	248	54.7	02.8	52	33.5
24	27	36.2	202	22.7	-0 35.3	263	55.8	+21 02.5	67	35.9

Dif	—	-4	-12	+12	-2	+24	0	+22	-1

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:1 PMG: 11 ^h 45 ^m 0			Edad: 30 ^d 2 PHE { 4 ^h : 57/4 12 ^h : 57/2 20 ^h : 56/9 PMG: 12 ^h 42 ^m R°: 52 ^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	183	44.4	-9 56.9	176	11.8	-17 58.5	101	60 N	16 39	17 22	18 10	9 07 94	16 04 16	
1	198	44.5	57.8	190	40.9	-18 09.4	109	58	45	25	10	8 53 88	19 21	
2	213	44.6	58.7	205	09.9	20.2	108	56	49	27	10	41 84	32 25	
3	228	44.7	-9 59.6	219	38.9	30.9	107	54	53	29	10	30 81	43 28	
4	243	44.8	-10 00.5	234	07.9	41.5	106	52	16 57	32	11	21 78	16 53 30	
5	258	44.9	-10 01.4	248	36.9	-18 52.0	105	50	17 01	17 34	18 11	8 12 76	17 02 32	
6	273	45.0	-10 02.3	263	05.8	-19 02.4	104	45	17 08	17 38	18 12	7 55 71	17 21 36	
7	288	45.2	03.2	277	34.6	12.6	102	40	15	42	14	40 68	36 40	
8	303	45.3	04.1	292	03.5	22.8	102	35	20	46	15	28 65	17 49 43	
9	318	45.4	05.0	306	32.3	32.8	100	30	25	49	17	7 17 63	18 01 44	
10	333	45.5	05.9	321	01.0	42.7	99	20	33	17 56	22	6 59 59	21 47	
11	348	45.6	-10 06.8	335	29.8	-19 52.5	98	10 N	17 41	18 02	18 27	6 44 55	18 38 50	
12	3	45.7	-10 07.7	349	58.5	-20 02.2	97	0	17 48	18 09	18 34	6 29 52	18 54 53	
13	18	45.8	08.6	4	27.1	11.8	96	10 S	17 56	17	42	6 15 49	19 10 56	
14	33	45.9	09.5	18	55.8	21.2	94	20	18 04	26	18 52	5 59 46	28 58	
15	48	46.0	10.4	33	24.4	30.5	93	30	13	37	19 06	42 42	48 61	
16	63	46.2	11.3	47	52.9	39.8	93	35	18	44	15	32 39	19 59 64	
17	78	46.3	-10 12.2	62	21.4	-20 48.8	90	40	18 24	18 52	19 26	5 20 37	20 13 66	
18	93	46.4	-10 13.1	76	49.9	-20 57.8	90	45	18 31	19 02	19 40	5 07 33	20 29 69	
19	108	46.5	14.0	91	18.4	-21 06.7	89	50	40	14	19 57	4 50 29	49 72	
20	123	46.6	14.9	105	46.8	15.4	87	52	44	20	20 05	42 27	20 58 75	
21	138	46.7	15.8	120	15.2	24.0	86	54	48	27	15	34 24	21 09 77	
22	153	46.8	16.7	134	43.6	32.5	85	56	53	34	26	24 22	21 80	
23	168	46.9	17.6	149	11.9	40.8	83	58	18 59	42	39	14 17	35 84	
24	183	47.0	-10 18.5	163	40.2	-21 49.0	82	60 S	19 05	19 52	20 55	4 01 13	21 52 89	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 22 ^h 06 ^m 0		Mag: -3.9 PMG: 10 ^h 31 ^m		Mag: +0.6 PMG: 6 ^h 24 ^m		Mag: -2.6 PMG: 19 ^h 26 ^m		Mag: +1.1 PMG: 10 ^h 07 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	27	36.2	202	22.7	-0 35.3	263 55.8	+21 02.5	67 35.9	-16 40.5	207 54.3	+2 19.7
1	42	38.7	217	22.3	36.5	278 57.0	02.3	82 38.4	40.5	222 56.5	19.6
2	57	41.1	232	21.9	37.7	293 58.2	02.1	97 40.8	40.5	237 58.7	19.5
3	72	43.6	247	21.5	38.9	308 59.3	01.9	112 43.2	40.5	253 00.9	19.3
4	87	46.1	262	21.1	40.1	324 00.5	01.7	127 45.6	40.4	268 03.1	19.2
5	102	48.5	277	20.7	-0 41.4	339 01.6	+21 01.5	142 48.0	-16 40.4	283 05.3	+2 19.1
6	117	51.0	292	20.3	-0 42.6	354 02.8	+21 01.3	157 50.4	-16 40.4	298 07.5	+2 19.0
7	132	53.4	307	19.9	43.8	9 04.0	01.1	172 52.8	40.4	313 09.7	18.9
8	147	55.9	322	19.5	45.0	24 05.1	00.8	187 55.3	40.4	328 11.9	18.8
9	162	58.4	337	19.2	46.2	39 06.3	00.6	202 57.7	40.3	343 14.1	18.7
10	178	00.8	352	18.8	47.4	54 07.5	00.4	218 00.1	40.3	358 16.3	18.6
11	193	03.3	7	18.4	-0 48.7	69 08.6	+21 00.2	233 02.5	-16 40.3	13 18.5	+2 18.5
12	208	05.8	22	18.0	-0 49.9	84 09.8	+21 00.0	248 04.9	-16 40.3	28 20.7	+2 18.4
13	223	08.2	37	17.6	51.1	99 11.0	+20 59.8	263 07.3	40.3	43 22.9	18.2
14	238	10.7	52	17.2	52.3	114 12.1	59.6	278 09.7	40.2	58 25.1	18.1
15	253	13.2	67	16.8	53.5	129 13.3	59.4	293 12.2	40.2	73 27.3	18.0
16	268	15.6	82	16.4	54.8	144 14.5	59.1	308 14.6	40.2	88 29.5	17.9
17	283	18.1	97	16.0	-0 56.0	159 15.7	+20 58.9	323 17.0	-16 40.2	103 31.7	+2 17.8
18	298	20.6	112	15.6	-0 57.2	174 16.8	+20 58.7	338 19.4	-16 40.2	118 33.9	+2 17.7
19	313	23.0	127	15.2	58.4	189 18.0	58.5	353 21.8	40.1	133 36.1	17.6
20	328	25.5	142	14.8	-0 59.6	204 19.2	58.3	8 24.2	40.1	148 38.3	17.5
21	343	27.9	157	14.4	-1 00.9	219 20.3	58.1	23 26.6	40.1	163 40.5	17.4
22	358	30.4	172	14.0	02.1	234 21.5	57.9	38 29.0	40.1	178 42.7	17.3
23	13	32.9	187	13.6	03.3	249 22.7	57.7	53 31.4	40.0	193 44.9	17.2
24	28	35.3	202	13.3	-1 04.5	264 23.9	+20 57.4	68 33.8	-16 40.0	208 47.1	+2 17.0
Dif	—		-4	-12		+12	-2	+24	0	+22	-1

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'1 PMG: 11 ^h 44 ^m 8			Edad: 1 ^d 8 PHE { 4 ^h : 56'7 12 ^h : 56'5 20 ^h : 56'3 Rº: 54 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	183	47.0	-10	18.5	163	40.2	-21 49.0	60 N	5 21	6 09	6 52	10 41	83	16 20	28	
1	198	47.1		19.4	178	08.5	-21 57.1	58	21	06	47	21 78		40	32	
2	213	47.3		20.3	192	36.8	-22 05.1	56	20	04	42	10 05	74	16 57	35	
3	228	47.4		21.2	207	05.0	13.0	54	20	6 01	37	9 51	72	17 11	38	
4	243	47.5		22.1	221	33.2	20.7	52	20	5 59	34	39 70		23	40	
5	258	47.6	-10	23.0	236	01.3	-22 28.3	50	5 19	5 57	6 30	9 28	69	17 34	42	
6	273	47.7	-10	23.9	250	29.5	-22 35.7	45	5 18	5 52	6 22	9 06	65	17 57	44	
7	288	47.8		24.8	264	57.6	43.1	40	17	48	16	8 48	63	18 16	46	
8	303	47.9		25.7	279	25.7	50.3	35	15	45	10	33 61		32	47	
9	318	48.0		26.6	293	53.8	-22 57.3	30	13	41	6 05	8 20	60	18 45	49	
10	333	48.1		27.5	308	21.8	-23 04.3	20	08	34	5 57	7 58	57	19 08	51	
11	348	48.2	-10	28.4	322	49.8	-23 11.1	10 N	5 03	5 27	5 49	7 39	55	19 28	52	
12	3 48.3	-10	29.3	337	17.8	90	-23 17.7	0	4 56	5 20	5 41	7 21	54	19 47	53	
13	18 48.4		30.2	351	45.8	90	24.3	10 S	48	13	34	7 04	51	20 06	55	
14	33 48.5		31.1	6 13.8	90	30.7	30.7	20	37	5 03	26	6 45	49	26 56		
15	48 48.6		32.0	20 41.7	89	37.0	63	30	23	4 52	17	24 46		20 49	58	
16	63 48.7		32.9	35 09.7	90	43.1	61	35	14	45	11	6 11	45	21 03	59	
17	78 48.8	-10	33.7	49 37.6	89	-23 49.1	60	40	4 03	4 37	5 05	5 57	43	21 19	60	
18	93 48.9	-10	34.6	64 05.5	89	-23 55.0	59	45	3 50	4 27	4 58	5 40	40	21 38	62	
19	108 49.0		35.5	78 33.3	88	-24 00.7	57	50	32	15	49	19 37		22 01	65	
20	123 49.1		36.4	93 01.2	89	06.3	56	52	24	09	45	5 09	35	13 65		
21	138 49.2		37.3	107 29.0	88	11.8	55	54	14	4 02	40	4 58	33	26 67		
22	153 49.4		38.2	121 56.9	89	17.1	53	56	3 03	3 55	35	46 29		41 68		
23	168 49.5		39.1	136 24.7	88	22.3	52	58	2 50	47	30	31 26		22 59	71	
24	183 49.6	-10	40.0	150 52.5	88	-24 27.3	50	60 S	2 34	3 37	4 24	4 14	21	23 21	74	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 22 ^h 02 ^m 0		Mag: -3.9 PMG: 10 ^h 31 ^m		Mag: +0.6 PMG: 6 ^h 22 ^m		Mag: -2.6 PMG: 19 ^h 23 ^m		Mag: +1.1 PMG: 10 ^h 03 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	28	35.3	202	13.3	264	23.9	68	33.8	208	47.1
1	43	37.8	217	12.9	279	25.0	83	36.3	223	49.3
2	58	40.3	232	12.5	294	26.2	98	38.7	238	51.4
3	73	42.7	247	12.1	309	27.4	113	41.1	253	53.6
4	88	45.2	262	11.7	324	28.6	128	43.5	268	55.8
5	103	47.7	277	11.3	339	29.7	143	45.9	283	58.0
6	118	50.1	292	10.9	354	30.9	158	48.3	299	00.2
7	133	52.6	307	10.5	9	32.1	173	50.7	314	02.4
8	148	55.0	322	10.1	24	33.3	188	53.1	329	04.6
9	163	57.5	337	09.7	39	34.5	203	55.5	344	06.8
10	179	00.0	352	09.3	54	35.6	218	57.9	359	09.0
11	194	02.4	7	08.9	69	36.8	234	00.3	14	11.2
12	209	04.9	22	08.5	84	38.0	249	02.7	29	13.4
13	224	07.4	37	08.1	99	39.2	264	05.1	44	15.6
14	239	09.8	52	07.7	114	40.4	279	07.5	59	17.8
15	254	12.3	67	07.3	129	41.5	294	09.9	74	20.0
16	269	14.8	82	06.9	144	42.7	309	12.3	89	22.2
17	284	17.2	97	06.5	159	43.9	324	14.8	104	24.4
18	299	19.7	112	06.1	174	45.1	339	17.2	119	26.6
19	314	22.2	127	05.8	189	46.3	354	19.6	134	28.8
20	329	24.6	142	05.4	204	47.5	9	22.0	149	31.0
21	344	27.1	157	05.0	219	48.6	24	24.4	164	33.2
22	359	29.5	172	04.6	234	49.8	39	26.8	179	35.4
23	14	32.0	187	04.2	249	51.0	54	29.2	194	37.6
24	29	34.5	202	03.8	264	52.2	69	31.6	209	39.8
Dif	—		-4	-12	+12	-2	+24	0	+22	-1

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:1 PMG: 11 ^h 44 ^m 6			Edad: 2 ^d 8 PHE { 4 ^h : 56/0 12 ^h : 55/8 20 ^h : 55/6 R°: 53 ^m SD: 15/3 PMG: 14 ^h 28 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m	m	h m	m	
0	183	49.6	-10	40.0	150	52.5	-24 27.3	60 N	16 34	17 17	18 05	12 04	63	16 48 46	
1	198	49.7		40.9	165	20.3	88 32.2	58	39	20	05	11 39	62	17 12 49	
2	213	49.8		41.8	179	48.1	88 37.0	56	44	23	06		61	32 50	
3	228	49.9		42.7	194	15.9	88 41.7	54	49	25	06	11 03	60	17 49 50	
4	243	50.0		43.6	208	43.7	88 46.2	52	53	28	07	10 49	59	18 03 51	
5	258	50.1	-10	44.4	223	11.5	88 -24 50.5	50	16 57	17 30	18 07	10 37	58	18 16 50	
6	273	50.2	-10	45.3	237	39.3	88 -24 54.7	45	17 05	17 35	18 09	10 11	58	18 41 52	
7	288	50.3		46.2	252	07.0	87 -24 58.8	40	12	39	11	9 51	57	19 02 52	
8	303	50.4		47.1	266	34.8	88 -25 02.8	35	18	43	13		57	19 52	
9	318	50.5		48.0	281	02.6	88 06.6	30	23	47	15	9 20	56	34 52	
10	333	50.6		48.9	295	30.3	87 10.3	20	32	17 54	20	8 55	55	19 59 52	
11	348	50.7	-10	49.8	309	58.1	88 -25 13.8	10 N	17 40	18 02	18 26	8 34	54	20 20 53	
12	3	50.8	-10	50.7	324	25.9	88 -25 17.2	0	17 48	18 09	18 33	8 15	53	20 40 53	
13	18	50.9		51.5	338	53.7	88 20.4	10 S	17 56	17	42	7 55	53	21 01 53	
14	33	51.0		52.4	353	21.4	87 23.5	20	18 04	27	18 53	34	52	22 53	
15	48	51.0		53.3	7	49.2	88 26.5	30	30	14	39	19 08	7 10	50 21 47 53	
16	63	51.1		54.2	22	17.0	88 29.4	29	35	20	46	17	6 56	50 22 02 53	
17	78	51.2	-10	55.1	36	44.8	88 -25 32.1	27	40	18 26	18 55	19 29	6 40	48 22 19 53	
18	93	51.3	-10	56.0	51	12.7	89 -25 34.6	25	45	18 34	19 05	19 43	6 20	48 22 40 53	
19	108	51.4		56.9	65	40.5	88 37.0	24	50	43	18	20 01	5 56	46 23 06 53	
20	123	51.5		57.8	80	08.3	88 39.3	23	52	48	24	10	44	45 18 53	
21	138	51.6		58.6	94	36.2	89 41.5	22	54	52	31	20	31	44 33 52	
22	153	51.7	-10	59.5	109	04.0	88 43.5	20	56	18 58	39	32	5 15	43 23 49 53	
23	168	51.8	-11	00.4	123	31.9	89 45.3	18	58	19 03	47	20 45	4 57	40 ** ** *	
24	183	51.9	-11	01.3	137	59.8	89 -25 47.1	18	60 S	19 10	19 58	21 02	4 35	37 ** ** *	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 21 ^h 58 ^m 1		Mag: -3.9 PMG: 10 ^h 32 ^m		Mag: +0.6 PMG: 6 ^h 20 ^m		Mag: -2.6 PMG: 19 ^h 19 ^m		Mag: +1.1 PMG: 10 ^h 00 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	29	34.5	202	03.8	-1	33.8	264	52.2	+20	52.3	69	31.6	-16	39.5	209	39.8	+2	14.4
1	44	36.9	217	03.4		35.0	279	53.4		52.1	84	34.0		39.4	224	42.0		14.3
2	59	39.4	232	03.0		36.2	294	54.6		51.9	99	36.4		39.4	239	44.2		14.2
3	74	41.9	247	02.6		37.5	309	55.8		51.7	114	38.8		39.4	254	46.4		14.1
4	89	44.3	262	02.2		38.7	324	56.9		51.5	129	41.2		39.4	269	48.6		14.1
5	104	46.8	277	01.8	-1	39.9	339	58.1	+20	51.3	144	43.6	-16	39.3	284	50.8	+2	13.9
6	119	49.3	292	01.4	-1	41.1	354	59.3	+20	51.0	159	46.0	-16	39.3	299	53.0	+2	13.8
7	134	51.7	307	01.0		42.3	10	00.5		50.8	174	48.4		39.3	314	55.2		13.7
8	149	54.2	322	00.6		43.6	25	01.7		50.6	189	50.8		39.3	329	57.4		13.6
9	164	56.7	337	00.2		44.8	40	02.9		50.4	204	53.2		39.2	344	59.6		13.4
10	179	59.1	351	59.8		46.0	55	04.1		50.2	219	55.6		39.2	0	01.8		13.3
11	195	01.6	6	59.4	-1	47.2	70	05.3	+20	50.0	234	57.9	-16	39.2	15	04.0	+2	13.2
12	210	04.0	21	59.0	-1	48.4	85	06.5	+20	49.8	250	00.3	-16	39.2	30	06.2	+2	13.1
13	225	06.5	36	58.6		49.7	100	07.7		49.6	265	02.7		39.1	45	08.4		13.0
14	240	09.0	51	58.2		50.9	115	08.8		49.3	280	05.1		39.1	60	10.6		12.9
15	255	11.4	66	57.8		52.1	130	10.0		49.1	295	07.5		39.1	75	12.8		12.8
16	270	13.9	81	57.4		53.3	145	11.2		48.9	310	09.9		39.1	90	15.0		12.7
17	285	16.4	96	57.0	-1	54.5	160	12.4	+20	48.7	325	12.3	-16	39.0	105	17.2	+2	12.6
18	300	18.8	111	56.6	-1	55.8	175	13.6	+20	48.5	340	14.7	-16	39.0	120	19.4	+2	12.5
19	315	21.3	126	56.2		57.0	190	14.8		48.3	355	17.1		39.0	135	21.6		12.4
20	330	23.8	141	55.8		58.2	205	16.0		48.1	10	19.5		39.0	150	23.8		12.2
21	345	26.2	156	55.4	-1	59.4	220	17.2		47.8	25	21.9		38.9	165	26.0		12.1
22	0	28.7	171	55.0	-2	00.6	235	18.4		47.6	40	24.3		38.9	180	28.2		12.0
23	15	31.2	186	54.6		01.9	250	19.6		47.4	55	26.7		38.9	195	30.4		11.9
24	30	33.6	201	54.2	-2	03.1	265	20.8	+20	47.2	70	29.1	-16	38.9	210	32.6	+2	11.8
Dif	—		-4		-12		+12		-2		+24		0		+22		-	

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'1 PMG: 11 ^h 44 ^m 5				Edad: 3 ^d 8 PHE { SD: 15'1 PMG: 15 ^h 21 ^m													
	hG ☉		Dec		hG ☾		Dif			Dif			Náutico	Civil	Hora	Rº	Hora	Rº
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	183	51.9	-11	01.3	137	59.8	-25	47.1	15	60 N	5	25	6	14	6	57	13	07
1	198	52.0		02.2	152	27.7	89	48.6	15	58	25	11		51	12	41	43	
2	213	52.1		03.1	166	55.6	89	50.1	13	56	24	08		46	20	45	22	
3	228	52.2		03.9	181	23.6	90	51.4	13	54	24	05		41	12	03	46	
4	243	52.3		04.8	195	51.5	89	52.6	12	52	23	02		37	11	48	47	
5	258	52.4	-11	05.7	210	19.5	90	-25	53.6	10	50	5	23	6	00	11	35	
6	273	52.5	-11	06.6	224	47.5	90	-25	54.5	9	45	5	21	5	55	11	09	
7	288	52.6		07.5	239	15.6	91	55.3	8	40	19	50		18	10	48	49	
8	303	52.7		08.4	253	43.6	90	55.9	6	35	17	46		12	31	50	20	
9	318	52.8		09.2	268	11.7	91	56.4	5	30	14	42		6	10	16	50	
10	333	52.8		10.1	282	39.8	91	56.8	4	20	09	35		5	9	50	51	
11	348	52.9	-11	11.0	297	08.0	92	-25	57.0	2	10 N	5	03	5	28	9	28	
12	3	53.0	-11	11.9	311	36.2	92	-25	57.1	1	0	4	56	5	20	9	08	
13	18	53.1		12.8	326	04.4	92	57.0	1	10 S	47	12		33	8	48		
14	33	53.2		13.6	340	32.6	92	56.8	2	20	35	5	02	24	26	53		
15	48	53.3		14.5	355	00.9	93	56.5	3	30	21	4	50	15	8	00		
16	63	53.4		15.4	9	29.2	93	56.1	4	35	11	42		09	7	46		
17	78	53.5	-11	16.3	23	57.5	93	-25	55.5	6	40	4	00	4	34	7	28	
18	93	53.6	-11	17.2	38	25.9	94	-25	54.8	7	45	3	46	4	23	7	08	
19	108	53.7		18.0	52	54.3	94	53.9	9	50	28	10		45	6	42		
20	123	53.8		18.9	67	22.7	94	52.9	10	52	19	4	04	41	29	55		
21	138	53.8		19.8	81	51.2	95	51.8	11	54	3	08	3	57	36	6	15	
22	153	53.9		20.7	96	19.7	95	50.6	12	56	2	57		50	31	5	58	
23	168	54.0		21.5	110	48.3	96	49.2	14	58	43	41		25	37	57		
24	183	54.1	-11	22.4	125	16.9	96	-25	47.7	15	60 S	2	26	3	31	5	12	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 21 ^h 54 ^m 2		Mag: -3.9 PMG: 10 ^h 33 ^m				Mag: +0.6 PMG: 6 ^h 18 ^m				Mag: -2.6 PMG: 19 ^h 15 ^m				Mag: +1.1 PMG: 9 ^h 56 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	30	33.6	201	54.2	-2	03.1	265	20.8	+20	47.2	70	29.1	-16	38.9	210	32.6	+2	11.8
1	45	36.1	216	53.9		04.3	280	22.0		47.0	85	31.5		38.8	225	34.8		11.7
2	60	38.5	231	53.5		05.5	295	23.2		46.8	100	33.9		38.8	240	37.0		11.6
3	75	41.0	246	53.1		06.7	310	24.4		46.6	115	36.3		38.8	255	39.2		11.5
4	90	43.5	261	52.7		08.0	325	25.6		46.3	130	38.6		38.7	270	41.4		11.4
5	105	45.9	276	52.3	-2	09.2	340	26.8	+20	46.1	145	41.0	-16	38.7	285	43.6	+2	11.3
6	120	48.4	291	51.9	-2	10.4	355	28.0	+20	45.9	160	43.4	-16	38.7	300	45.8	+2	11.2
7	135	50.9	306	51.5		11.6	10	29.2		45.7	175	45.8		38.7	315	48.0		11.1
8	150	53.3	321	51.1		12.8	25	30.4		45.5	190	48.2		38.6	330	50.2		11.0
9	165	55.8	336	50.7		14.1	40	31.6		45.3	205	50.6		38.6	345	52.4		10.8
10	180	58.3	351	50.3		15.3	55	32.8		45.1	220	53.0		38.6	0	54.6		10.7
11	196	00.7	6	49.9	-2	16.5	70	34.0	+20	44.8	235	55.4	-16	38.5	15	56.8	+2	10.6
12	211	03.2	21	49.5	-2	17.7	85	35.2	+20	44.6	250	57.8	-16	38.5	30	59.0	+2	10.5
13	226	05.6	36	49.1		18.9	100	36.4		44.4	266	00.2		38.5	46	01.2		10.4
14	241	08.1	51	48.7		20.2	115	37.6		44.2	281	02.5		38.5	61	03.4		10.3
15	256	10.6	66	48.3		21.4	130	38.8		44.0	296	04.9		38.4	76	05.6		10.2
16	271	13.0	81	47.9		22.6	145	40.0		43.8	311	07.3		38.4	91	07.8		10.1
17	286	15.5	96	47.5	-2	23.8	160	41.3	+20	43.6	326	09.7	-16	38.4	106	10.0	+2	10.0
18	301	18.0	111	47.1	-2	25.0	175	42.5	+20	43.3	341	12.1	-16	38.3	121	12.2	+2	09.9
19	316	20.4	126	46.7		26.3	190	43.7		43.1	356	14.5		38.3	136	14.4		09.8
20	331	22.9	141	46.3		27.5	205	44.9		42.9	11	16.9		38.3	151	16.6		09.7
21	346	25.4	156	45.9		28.7	220	46.1		42.7	26	19.2		38.3	166	18.8		09.6
22	1	27.8	171	45.5		29.9	235	47.3		42.5	41	21.6		38.2	181	21.0		09.4
23	16	30.3	186	45.1		31.1	250	48.5		42.3	56	24.0		38.2	196	23.2		09.3
24	31	32.8	201	44.7	-2	32.4	265	49.7	+20	42.1	71	26.4	-16	38.2	211	25.4	+2	09.2
Dif	—		-4		-12		+12		-2		+24		0		+22		-1	

UT	SOL				 LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna					
	SD: 16:1 PMG: 11 ^h 44 ^m 3				Edad: 4 ^d 8 SD: 15:0 PMG: 16 ^h 12 ^m	PHE { 4 ^h : 54/9 12 ^h : 54/8 20 ^h : 54/6 R°: 50 ^m	h	m			h	m	h	m	h	m	h	m				
	hG ☉	Dec	hG ☾	Dif															Dec	Dif	Civil	Náutico
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	h	m	h	m	
0	183	54.1	-11	22.4	125	16.9	-25	47.7	60 N	16	28	17	11	18	00	13	48	23	18	41	80	
1	198	54.2		23.3	139	45.5	96	46.1	58	34	15		01		24	27		19	05	74		
2	213	54.3		24.2	154	14.2	97	44.3	56	40	18		01		13	05	30		24	71		
3	228	54.4		25.1	168	43.0	98	42.4	54	45	21		02		12	49	33		40	68		
4	243	54.5		25.9	183	11.7	97	40.4	52	49	24		03		35	35		19	54	66		
5	258	54.5	-11	26.8	197	40.6	99	-25 38.3	50	16	53	17	26	18	04	12	23	36	20	06	64	
6	273	54.6	-11	27.7	212	09.4	98	-25 36.0	45	17	02	17	32	18	06	11	57	40	20	30	62	
7	288	54.7		28.6	226	38.4	100	33.6	40	09		37	08		37	42		20	50	59		
8	303	54.8		29.4	241	07.3	99	31.1	35	15		41	11		21	43		21	06	58		
9	318	54.9		30.3	255	36.3	100	28.4	30	21		45	13		11	06	44		21	55		
10	333	55.0		31.2	270	05.4	101	25.6	20	31	17	53	19		10	41	47		21	45	53	
11	348	55.1	-11	32.1	284	34.5	101	-25 22.7	10 N	17	39	18	01	18	26	10	20	48		22	05	51
12	3	55.1	-11	32.9	299	03.7	102	-25 19.7	0	17	48	18	09	18	33	10	00	50		22	25	48
13	18	55.2		33.8	313	32.9	102	16.6	10 S	17	56		18	43		9	40	52		22	44	46
14	33	55.3		34.7	328	02.1	102	13.3	20	18	05	28	18	54		9	19	53		23	04	45
15	48	55.4		35.5	342	31.5	104	09.9	30		16		40	19	10	8	54	55		28	42	
16	63	55.5		36.4	357	00.8	103	06.4	35		22		48	19		39	57		42	40		
17	78	55.6	-11	37.3	11	30.3	105	-25 02.8	40	18	29	18	57	19	31	8	23	58		23	58	38
18	93	55.6	-11	38.2	25	59.7	104	-24 59.0	45	18	37	19	08	19	46	8	02	60	***	***	***	
19	108	55.7		39.0	40	29.3	106	55.2	50		47	22	20	05		7	37	62	***	***	***	
20	123	55.8		39.9	54	58.9	106	51.2	52		51		28	14		24	64		0	11	41	
21	138	55.9		40.8	69	28.5	106	47.1	54	18	56	35	25		7	10	65		25	40		
22	153	56.0		41.6	83	58.2	107	42.9	56	19	02	43	38		6	54	67		0	42	37	
23	168	56.1		42.5	98	28.0	108	38.5	58		08	19	53	20	52	34	70		1	02	35	
24	183	56.1	-11	43.4	112	57.8	108	-24 34.1	60 S	19	15	20	04	21	10	6	09	74		1	27	31
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO							
	PMG: 21 ^h 50 ^m 2		Mag: -3.9 PMG: 10 ^h 33 ^m				Mag: +0.6 PMG: 6 ^h 16 ^m				Mag: -2.6 PMG: 19 ^h 11 ^m				Mag: +1.1 PMG: 9 ^h 53 ^m							
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	31	32.8	201	44.7	-2	32.4	265	49.7	+20	42.1	71	26.4	-16	38.2	211	25.4	+2	09.2				
1	46	35.2	216	44.3		33.6	280	50.9		41.8	86	28.8		38.1	226	27.6		09.1				
2	61	37.7	231	43.9		34.8	295	52.1		41.6	101	31.2		38.1	241	29.8		09.0				
3	76	40.1	246	43.5		36.0	310	53.4		41.4	116	33.5		38.1	256	32.0		08.9				
4	91	42.6	261	43.1		37.2	325	54.6		41.2	131	35.9		38.1	271	34.2		08.8				
5	106	45.1	276	42.7	-2	38.5	340	55.8	+20	41.0	146	38.3	-16	38.0	286	36.4	+2	08.7				
6	121	47.5	291	42.3	-2	39.7	355	57.0	+20	40.8	161	40.7	-16	38.0	301	38.6	+2	08.6				
7	136	50.0	306	41.9		40.9	10	58.2		40.6	176	43.1		38.0	316	40.8		08.5				
8	151	52.5	321	41.5		42.1	25	59.4		40.3	191	45.5		37.9	331	43.0		08.4				
9	166	54.9	336	41.1		43.3	41	00.6		40.1	206	47.8		37.9	346	45.2		08.3				
10	181	57.4	351	40.6		44.5	56	01.9		39.9	221	50.2		37.9	1	47.4		08.2				
11	196	59.9	6	40.2	-2	45.8	71	03.1	+20	39.7	236	52.6	-16	37.8	16	49.7	+2	08.1				
12	212	02.3	21	39.8	-2	47.0	86	04.3	+20	39.5	251	55.0	-16	37.8	31	51.9	+2	07.9				
13	227	04.8	36	39.4		48.2	101	05.5		39.3	266	57.4		37.8	46	54.1		07.8				
14	242	07.3	51	39.0		49.4	116	06.7		39.1	281	59.7		37.7	61	56.3		07.7				
15	257	09.7	66	38.6		50.6	131	07.9		38.8	297	02.1		37.7	76	58.5		07.6				
16	272	12.2	81	38.2		51.9	146	09.2		38.6	312	04.5		37.7	92	00.7		07.5				
17	287	14.6	96	37.8	-2	53.1	161	10.4	+20	38.4	327	06.9	-16	37.7	107	02.9	+2	07.4				
18	302	17.1	111	37.4	-2	54.3	176	11.6	+20	38.2	342	09.3	-16	37.6	122	05.1	+2	07.3				
19	317	19.6	126	37.0		55.5	191	12.8		38.0	357	11.6		37.6	137	07.3		07.2				
20	332	22.0	141	36.6		56.7	206	14.0		37.8	12	14.0		37.6	152	09.5		07.1				
21	347	24.5	156	36.2		57.9	221	15.3		37.6	27	16.4		37.5	167	11.7		07.0				
22	2	27.0	171	35.8	-2	59.2	236	16.5		37.3	42	18.8		37.5	182	13.9		06.9				
23	17	29.4	186	35.4	-3	00.4	251	17.7		37.1	57	21.1		37.5	197	16.1		06.8				
24	32	31.9	201	35.0	-3	01.6	266	18.9	+20	36.9	72	23.5	-16	37.4	212	18.3	+2	06.7				
Dif	—		-4		-12		+12		-2		+24		0		+22		-					

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'1 PMG: 11 ^h 44 ^m 2			Edad: 5 ^d 8 SD: 14'9 PMG: 17 ^h 02 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	183	56.1	-11 43.4	112	57.8	-24 34.1	46	60 N	5 30	6 18	7 02	14 11	13	20 01	83
1	198	56.2		127	27.7 ¹⁰⁹		29.5	58	29	15	6 56	13 51	18	19	79
2	213	56.3		141	57.6 ¹⁰⁹		24.8	56	28	12	50	35	22	35	75
3	228	56.4		156	27.6 ¹¹⁰		20.1	54	27	09	45	22	24	20	48
4	243	56.5		170	57.6 ¹¹⁰		15.2	52	26	06	41	13 10	26	21 00	70
5	258	56.5	-11 47.7	185	27.7 ¹¹¹	-24 10.1	51	50	5 26	6 03	6 37	12 59	28	21 10	68
6	273	56.6	-11 48.6	199	57.9 ¹¹²	-24 05.0	51	45	5 23	5 58	6 28	12 37	32	21 32	63
7	288	56.7		214	28.1 ¹¹²	-23 59.8	52	40	21	52	20	19	35	21 49	61
8	303	56.8		228	58.4 ¹¹³		54.4	35	18	48	14	12 04	37	22 04	58
9	318	56.8		243	28.8 ¹¹⁴		49.0	30	16	44	6 08	11 50	40	16	56
10	333	56.9		257	59.2 ¹¹⁴		43.4	20	10	36	5 58	28	42	38	52
11	348	57.0	-11 52.9	272	29.6 ¹¹⁴	-23 37.7	57	10 N	5 03	5 28	5 49	11 08	45	22 56	49
12	3	57.1	-11 53.8	287	00.2 ¹¹⁶	-23 32.0	57	0	4 55	5 20	5 41	10 50	48	23 13	47
13	18	57.2		301	30.8 ¹¹⁶		26.1	10 S	46	11	32	32	50	30	44
14	33	57.2		316	01.4 ¹¹⁶		20.1	20	34	5 01	23	10 12	53	23 49	40
15	48	57.3		330	32.1 ¹¹⁷		14.0	30	18	4 48	13	9 49	56	***	***
16	63	57.4		345	02.9 ¹¹⁸		07.8	35	4 09	40	5 06	36	58	***	***
17	78	57.5	-11 58.1	359	33.7 ¹¹⁸	-23 01.5	63	40	3 57	4 31	4 59	9 21	59	***	***
18	93	57.5	-11 59.0	14	04.6 ¹¹⁹	-22 55.1	64	45	3 42	4 20	4 51	9 02	63	0 17	35
19	108	57.6	-11 59.9	28	35.6 ¹²⁰		48.6	50	23	06	41	8 39	66	40	33
20	123	57.7	-12 00.7	43	06.6 ¹²⁰		42.0	52	13	4 00	36	28	68	0 52	30
21	138	57.8		57	37.7 ¹²¹		35.3	54	3 03	3 52	31	15	71	1 05	28
22	153	57.8		72	08.8 ¹²¹		28.5	56	2 50	44	26	8 01	73	19	26
23	168	57.9		86	40.0 ¹²²		21.6	58	35	35	19	7 44	77	37	22
24	183	58.0	-12 04.2	101	11.3 ¹²³	-22 14.6	70	60 S	2 17	3 24	4 12	7 23	82	1 58	18

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 21 ^h 46 ^m 3		Mag: -3.9 PMG: 10 ^h 34 ^m		Mag: +0.5 PMG: 6 ^h 14 ^m		Mag: -2.6 PMG: 19 ^h 07 ^m		Mag: +1.1 PMG: 9 ^h 49 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	32	31.9	201	35.0	-3	01.6	266	18.9	+20	36.9
1	47	34.4	216	34.6		02.8	281	20.2		36.7
2	62	36.8	231	34.2		04.0	296	21.4		36.5
3	77	39.3	246	33.8		05.3	311	22.6		36.3
4	92	41.8	261	33.4		06.5	326	23.8		36.0
5	107	44.2	276	33.0	-3	07.7	341	25.1	+20	35.8
6	122	46.7	291	32.6	-3	08.9	356	26.3	+20	35.6
7	137	49.1	306	32.2		10.1	11	27.5		35.4
8	152	51.6	321	31.8		11.3	26	28.7		35.2
9	167	54.1	336	31.4		12.6	41	30.0		35.0
10	182	56.5	351	31.0		13.8	56	31.2		34.8
11	197	59.0	6	30.6	-3	15.0	71	32.4	+20	34.5
12	213	01.5	21	30.2	-3	16.2	86	33.6	+20	34.3
13	228	03.9	36	29.7		17.4	101	34.9		34.1
14	243	06.4	51	29.3		18.6	116	36.1		33.9
15	258	08.9	66	28.9		19.9	131	37.3		33.7
16	273	11.3	81	28.5		21.1	146	38.6		33.5
17	288	13.8	96	28.1	-3	22.3	161	39.8	+20	33.3
18	303	16.2	111	27.7	-3	23.5	176	41.0	+20	33.0
19	318	18.7	126	27.3		24.7	191	42.3		32.8
20	333	21.2	141	26.9		25.9	206	43.5		32.6
21	348	23.6	156	26.5		27.2	221	44.7		32.4
22	3	26.1	171	26.1		28.4	236	46.0		32.2
23	18	28.6	186	25.7		29.6	251	47.2		32.0
24	33	31.0	201	25.3	-3	30.8	266	48.4	+20	31.8
Dif	—		-4	-12		+12	-2	+24		0
										+22
										-1

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:1 PMG: 11 ^h 44 ^m 1			Edad: 6 ^d 8 SD: 14:8 PMG: 17 ^h 49 ^m	PHE { 4 ^h : 54:3 12 ^h : 54:3 20 ^h : 54:3 R°: 44 ^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	h m m
0	183	58.0	-12 04.2	101	11.3	-22 14.6	71	60 N	16 23	17 06	17 55	14 24 8	21 24 84		
1	198	58.1	05.0	115	42.6 ¹²³	07.5	71	58	29	10	56	14 09 12	38 79		
2	213	58.1	05.9	130	14.0 ¹²⁴	-22 00.3	72	56	35	14	57	13 57 15	21 50 76		
3	228	58.2	06.8	144	45.5 ¹²⁵	-21 53.0	73	54	40	17	58	46 18	22 00 73		
4	243	58.3	07.6	159	17.0 ¹²⁵	45.6	74	52	45	20	17 59	36 20	10 70		
5	258	58.3	-12 08.5	173	48.6 ¹²⁶	-21 38.1	75	50	16 49	17 23	18 00	13 27 23	22 18 68		
6	273	58.4	-12 09.3	188	20.2 ¹²⁶	-21 30.5	76	45	16 59	17 29	18 03	13 09 26	22 35 64		
7	288	58.5	10.2	202	51.9 ¹²⁷	22.9	76	40	17 06	34	06	12 54 29	22 50 60		
8	303	58.6	11.1	217	23.7 ¹²⁸	15.1	78	35	13	39	09	41 32	23 02 57		
9	318	58.6	11.9	231	55.5 ¹²⁸	-21 07.3	78	30	19	43	12	30 34	12 55		
10	333	58.7	12.8	246	27.3 ¹²⁸	-20 59.3	80	20	29	17 52	18	12 10 39	30 51		
11	348	58.8	-12 13.6	260	59.3 ¹³⁰	-20 51.3	80	10 N	17 39	18 00	18 25	11 53 42	23 45 48		
12	3	58.8	-12 14.5	275	31.3 ¹³⁰	-20 43.2	81	0	17 47	18 09	18 33	11 38 45	*** ** *		
13	18	58.9	15.3	290	03.3 ¹³⁰	35.0	82	10 S	17 56	18	43	22 48	*** ** *		
14	33	59.0	16.2	304	35.4 ¹³¹	26.7	83	20	18 06	29	18 55	11 05 51	*** ** *		
15	48	59.1	17.1	319	07.6 ¹³²	18.3	84	30	17	42	19 11	10 45 56	0 10 36		
16	63	59.1	17.9	333	39.8 ¹³²	09.9	84	35	23	50	22	34 57	22 35		
17	78	59.2	-12 18.8	348	12.1 ¹³³	-20 01.3	86	40	18 31	18 59	19 34	10 20 61	0 36 32		
18	93	59.3	-12 19.6	2	44.5 ¹³⁴	-19 52.7	86	45	18 40	19 11	19 49	10 05 64	0 52 29		
19	108	59.3	20.5	17	16.9 ¹³⁴	44.0	87	50	50	25	20 09	9 45 68	1 13 25		
20	123	59.4	21.3	31	49.3 ¹³⁴	35.2	88	52	18 55	32	19	36 70	22 23		
21	138	59.5	22.2	46	21.8 ¹³⁵	26.3	89	54	19 00	40	30	26 72	33 21		
22	153	59.5	23.1	60	54.4 ¹³⁶	17.3	90	56	06	48	44	14 76	45 18		
23	168	59.6	23.9	75	27.0 ¹³⁶	-19 08.3	90	58	13	19 58	20 59	9 01 79	1 59 15		
24	183	59.7	-12 24.8	89	59.7 ¹³⁷	-18 59.1	92	60 S	19 21	20 10	21 19	8 45 83	2 16 10		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 21 ^h 42 ^m 4		Mag: -3.9 PMG: 10 ^h 35 ^m		Mag: +0.5 PMG: 6 ^h 12 ^m		Mag: -2.5 PMG: 19 ^h 04 ^m		Mag: +1.1 PMG: 9 ^h 46 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	33	31.0	201	25.3	-3 30.8	266 48.4	+20 31.8	73 20.4	-16 36.6	213 11.2	+2 04.1
1	48	33.5	216	24.9	32.0	281 49.7	31.5	88 22.8	36.6	228 13.4	04.0
2	63	36.0	231	24.5	33.2	296 50.9	31.3	103 25.2	36.6	243 15.6	03.9
3	78	38.4	246	24.1	34.5	311 52.2	31.1	118 27.5	36.5	258 17.8	03.8
4	93	40.9	261	23.6	35.7	326 53.4	30.9	133 29.9	36.5	273 20.0	03.7
5	108	43.4	276	23.2	-3 36.9	341 54.6	+20 30.7	148 32.3	-16 36.5	288 22.2	+2 03.6
6	123	45.8	291	22.8	-3 38.1	356 55.9	+20 30.5	163 34.6	-16 36.4	303 24.4	+2 03.5
7	138	48.3	306	22.4	39.3	11 57.1	30.2	178 37.0	36.4	318 26.6	03.4
8	153	50.7	321	22.0	40.5	26 58.3	30.0	193 39.4	36.3	333 28.8	03.3
9	168	53.2	336	21.6	41.8	41 59.6	29.8	208 41.7	36.3	348 31.0	03.2
10	183	55.7	351	21.2	43.0	57 00.8	29.6	223 44.1	36.3	3 33.2	03.1
11	198	58.1	6	20.8	-3 44.2	72 02.1	+20 29.4	238 46.5	-16 36.2	18 35.4	+2 03.0
12	214	00.6	21	20.4	-3 45.4	87 03.3	+20 29.2	253 48.8	-16 36.2	33 37.7	+2 02.8
13	229	03.1	36	20.0	46.6	102 04.6	29.0	268 51.2	36.2	48 39.9	02.7
14	244	05.5	51	19.6	47.8	117 05.8	28.7	283 53.6	36.1	63 42.1	02.6
15	259	08.0	66	19.1	49.0	132 07.0	28.5	298 55.9	36.1	78 44.3	02.5
16	274	10.5	81	18.7	50.3	147 08.3	28.3	313 58.3	36.1	93 46.5	02.4
17	289	12.9	96	18.3	-3 51.5	162 09.5	+20 28.1	329 00.6	-16 36.0	108 48.7	+2 02.3
18	304	15.4	111	17.9	-3 52.7	177 10.8	+20 27.9	344 03.0	-16 36.0	123 50.9	+2 02.2
19	319	17.9	126	17.5	53.9	192 12.0	27.7	359 05.4	35.9	138 53.1	02.1
20	334	20.3	141	17.1	55.1	207 13.3	27.5	14 07.7	35.9	153 55.3	02.0
21	349	22.8	156	16.7	56.3	222 14.5	27.2	29 10.1	35.9	168 57.5	01.9
22	4	25.2	171	16.3	57.5	237 15.8	27.0	44 12.5	35.8	183 59.7	01.8
23	19	27.7	186	15.9	-3 58.8	252 17.0	26.8	59 14.8	35.8	199 01.9	01.7
24	34	30.2	201	15.5	-4 00.0	267 18.3	+20 26.6	74 17.2	-16 35.8	214 04.1	+2 01.6
Dif	—	—	-4	-12	+12	-2	+24	0	+22	-1	—

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna										
	SD: 16'1 PMG: 11 ^h 44 ^m 0			Edad: 7 ^d 8 PHE { SD: 14'8 PMG: 18 ^h 33 ^m																			
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº								
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m						
0	183	59.7	-12	24.8	89	59.7	-18	59.1	92	60 N	5	34	6	23	7	07	14	32	5	22	48	82	
1	198	59.7		25.6	104	32.4 ¹³⁷		49.9	92	58		33		19	7	00		21	9	22	57	79	
2	213	59.8		26.5	119	05.2 ¹³⁸		40.7	94	56		32		16	6	54		12	11	23	06	75	
3	228	59.9		27.3	133	38.1 ¹³⁹		31.3	94	54		31		12		49	14	04	14		13	73	
4	243	59.9		28.2	148	11.0 ¹³⁹		21.9	94	52		30		09		44	13	56	17		20	71	
5	259	00.0	-12	29.0	162	43.9 ¹³⁹	-18	12.4	95	50	5	29	6	06	6	40	13	50	18	23	26	69	
6	274	00.1	-12	29.9	177	16.9 ¹⁴⁰	-18	02.8	96	45	5	26	6	00	6	30	13	35	23	23	39	64	
7	289	00.1		30.7	191	50.0 ¹⁴¹	-17	53.1	97	40		23	5	55		22		23	27		50	60	
8	304	00.2		31.6	206	23.1 ¹⁴¹		43.4	97	35		20		50		16		13	29		23	59	57
9	319	00.2		32.4	220	56.2 ¹⁴¹		33.5	99	30		17	45	6	09	13	04	32		**	**	**	
10	334	00.3		33.3	235	29.4 ¹⁴²		23.7	98	20		10	36	5	59	12	49	36		**	**	**	
11	349	00.4	-12	34.1	250	02.7 ¹⁴³	-17	13.7	100	10 N	5	03	5	28	5	49	12	35	40		**	**	**
12	4	00.4	-12	35.0	264	36.0 ¹⁴³	-17	03.7	100	0	4	55	5	19	5	41	12	23	43	0	00	44	
13	19	00.5		35.8	279	09.3 ¹⁴³	-16	53.6	101	10 S		45	5	10	32		12	10	46		14	41	
14	34	00.6		36.7	293	42.7 ¹⁴⁴		43.4	102	20	32	4	59	22		11	56	51		29	37		
15	49	00.6		37.5	308	16.1 ¹⁴⁴		33.2	102	30		16		46	11		41	54		46	34		
16	64	00.7		38.4	322	49.6 ¹⁴⁵		22.9	103	35	4	06	38	5	04		31	58		0	57	30	
17	79	00.7	-12	39.2	337	23.1 ¹⁴⁵	-16	12.5	104	40	3	54	4	28	4	57	11	21	60	1	08	28	
18	94	00.8	-12	40.1	351	56.7 ¹⁴⁶	-16	02.0	105	45	3	38	4	16	4	48	11	09	63	1	21	25	
19	109	00.9		40.9	6	30.3 ¹⁴⁶	-15	51.5	105	50		18	4	02	37		10	53	69		38	20	
20	124	00.9		41.8	21	04.0 ¹⁴⁷		41.0	105	52	3	08	3	55	32		46	71		45	19		
21	139	01.0		42.6	35	37.7 ¹⁴⁷		30.3	107	54	2	57	48	27		38	73		1	54	16		
22	154	01.0		43.5	50	11.4 ¹⁴⁷		19.6	107	56		44	39	21		30	75		2	03	13		
23	169	01.1		44.3	64	45.2 ¹⁴⁸	-15	08.8	108	58		28	29	14		20	78		14	10			
24	184	01.2	-12	45.2	79	19.1 ¹⁴⁹	-14	58.0	108	60 S	2	08	3	17	4	06	10	08	83	2	26	7	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO										
	PMG: 21 ^h 38 ^m 4			Mag: -3.9 PMG: 10 ^h 35 ^m			Mag: +0.5 PMG: 6 ^h 10 ^m			Mag: -2.5 PMG: 19 ^h 00 ^m			Mag: +1.1 PMG: 9 ^h 42 ^m										
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♅	Dec	hG ♄	Dec												
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'			
0	34	30.2	201	15.5	-4	00.0	267	18.3	+20	26.6	74	17.2	-16	35.8	214	04.1	+2	01.6					
1	49	32.6	216	15.0	-4	01.2	282	19.5		26.4	89	19.5		35.7	229	06.3		01.5					
2	64	35.1	231	14.6		02.4	297	20.8		26.2	104	21.9		35.7	244	08.5		01.4					
3	79	37.6	246	14.2		03.6	312	22.0		26.0	119	24.3		35.7	259	10.7		01.3					
4	94	40.0	261	13.8		04.8	327	23.3		25.7	134	26.6		35.6	274	12.9		01.2					
5	109	42.5	276	13.4	-4	06.0	342	24.5	+20	25.5	149	29.0	-16	35.6	289	15.2	+2	01.1					
6	124	45.0	291	13.0	-4	07.3	357	25.8	+20	25.3	164	31.3	-16	35.5	304	17.4	+2	01.0					
7	139	47.4	306	12.6		08.5	12	27.0		25.1	179	33.7		35.5	319	19.6		00.9					
8	154	49.9	321	12.2		09.7	27	28.3		24.9	194	36.0		35.5	334	21.8		00.7					
9	169	52.4	336	11.7		10.9	42	29.5		24.7	209	38.4		35.4	349	24.0		00.6					
10	184	54.8	351	11.3		12.1	57	30.8		24.5	224	40.8		35.4	4	26.2		00.5					
11	199	57.3	6	10.9	-4	13.3	72	32.0	+20	24.2	239	43.1	-16	35.3	19	28.4	+2	00.4					
12	214	59.7	21	10.5	-4	14.5	87	33.3	+20	24.0	254	45.5	-16	35.3	34	30.6	+2	00.3					
13	230	02.2	36	10.1		15.7	102	34.5		23.8	269	47.8		35.3	49	32.8		00.2					
14	245	04.7	51	09.7		17.0	117	35.8		23.6	284	50.2		35.2	64	35.0	+2	00.1					
15	260	07.1	66	09.3		18.2	132	37.1		23.4	299	52.5		35.2	79	37.2	+2	00.0					
16	275	09.6	81	08.9		19.4	147	38.3		23.2	314	54.9		35.2	94	39.4	+1	59.9					
17	290	12.1	96	08.4	-4	20.6	162	39.6	+20	23.0	329	57.2	-16	35.1	109	41.6	+1	59.8					
18	305	14.5	111	08.0	-4	21.8	177	40.8	+20	22.7	344	59.6	-16	35.1	124	43.9	+1	59.7					
19	320	17.0	126	07.6		23.0	192	42.1		22.5	0	02.0		35.0	139	46.1		59.6					
20	335	19.5	141	07.2		24.2	207	43.3		22.3	15	04.3		35.0	154	48.3		59.5					
21	350	21.9	156	06.8		25.4	222	44.6		22.1	30	06.7		35.0	169	50.5		59.4					
22	5	24.4	171	06.4		26.7	237	45.9		21.9	45	09.0		34.9	184	52.7		59.3					
23	20	26.8	186	05.9		27.9	252	47.1		21.7	60	11.4		34.9	199	54.9		59.2					
24	35	29.3	201	05.5	-4	29.1	267	48.4	+20	21.4	75	13.7	-16	34.8	214	57.1	+1	59.1					
Dif	—		-4		-12		+13		-2		+24		0		+22		-						

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1			Edad: 8 ^d 8 PHE	SD: 14 ^h 8				Final del crepúsculo		Salida de Luna		Puesta de Luna	
	PMG: 11 ^h 43 ^m 9				PMG: 19 ^h 16 ^m				Civil		Náutico		Hora R°	
	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	01.2	-12 45.2	79	19.1	-14 58.0		60 N	16 17	17 01	17 50	4	**	**
1	199	01.2	46.0	93	52.9 ¹⁴⁸	47.1 ¹⁰⁹		58	24	05	51	30	7	**
2	214	01.3	46.9	108	26.8 ¹⁴⁹	36.1 ¹¹⁰		56	30	09	53	23	10	**
3	229	01.3	47.7	123	00.8 ¹⁵⁰	25.1 ¹¹⁰		54	36	13	54	18	12	**
4	244	01.4	48.5	137	34.8 ¹⁵⁰	14.0 ¹¹¹		52	41	16	56	13	14	**
5	259	01.5	-12 49.4	152	08.8 ¹⁵⁰	-14 02.9 ¹¹¹		50	16 46	17 19	17 57	14 08	16	**
6	274	01.5	-12 50.2	166	42.8 ¹⁵⁰	-13 51.7 ¹¹²		45	16 55	17 26	18 00	13 58	20	**
7	289	01.6	51.1	181	16.9 ¹⁵¹	40.4 ¹¹³		40	17 04	32	03	50	23	**
8	304	01.6	51.9	195	51.0 ¹⁵¹	29.1 ¹¹³		35	11	37	07	42	27	**
9	319	01.7	52.8	210	25.2 ¹⁵²	17.8 ¹¹³		30	17	42	10	36	29	0 07
10	334	01.7	53.6	224	59.4 ¹⁵²	-13 06.3 ¹¹⁵		20	28	17 51	17	25	34	21
11	349	01.8	-12 54.5	239	33.6 ¹⁵²	-12 54.8 ¹¹⁵		10 N	17 38	18 00	18 24	13 15	38	0 33
12	4	01.8	-12 55.3	254	07.8 ¹⁵²	-12 43.3 ¹¹⁵		0	17 47	18 08	18 33	13 06	42	0 44
13	19	01.9	56.1	268	42.1 ¹⁵³	31.7 ¹¹⁶		10 S	17 57	18	44	12 56	46	0 55
14	34	02.0	57.0	283	16.4 ¹⁵³	20.0 ¹¹⁷		20	18 07	30	18 56	47	49	1 06
15	49	02.0	57.8	297	50.8 ¹⁵⁴	-12 08.3 ¹¹⁷		30	19	44	19 13	35	55	20
16	64	02.1	58.7	312	25.1 ¹⁵³	-11 56.6 ¹¹⁷		35	25	18 52	24	29	57	27
17	79	02.1	-12 59.5	326	59.5 ¹⁵⁴	-11 44.8 ¹¹⁸		40	18 33	19 02	19 37	12 21	60	1 36
18	94	02.2	-13 00.3	341	33.9 ¹⁵⁴	-11 32.9 ¹¹⁹		45	18 42	19 14	19 53	12 12	64	1 46
19	109	02.2	01.2	356	08.4 ¹⁵⁵	21.0 ¹¹⁹		50	53	29	20 14	12 02	68	1 58
20	124	02.3	02.0	10	42.8 ¹⁵⁴	-11 09.0 ¹²⁰		52	18 59	36	24	11 57	70	2 04
21	139	02.3	02.9	25	17.3 ¹⁵⁵	-10 57.0 ¹²⁰		54	19 04	44	36	51	73	10
22	154	02.4	03.7	39	51.8 ¹⁵⁵	45.0 ¹²⁰		56	11	19 53	20 50	45	76	16
23	169	02.4	04.5	54	26.4 ¹⁵⁶	32.8 ¹²²		58	18	20 04	21 07	38	79	24
24	184	02.5	-13 05.4	69	00.9 ¹⁵⁵	-10 20.7 ¹²¹		60 S	19 26	20 16	21 28	11 31	82	2 33
														4
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 21 ^h 34 ^m 5		Mag: -3.9 PMG: 10 ^h 36 ^m		Mag: +0.5 PMG: 6 ^h 08 ^m		Mag: -2.5 PMG: 18 ^h 56 ^m		Mag: +1.1 PMG: 9 ^h 39 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	35	29.3	201	05.5	-4	29.1	267	48.4	+20	21.4				
1	50	31.8	216	05.1	30.3	282	49.7	21.2	90	16.1				
2	65	34.2	231	04.7	31.5	297	50.9	21.0	105	18.4				
3	80	36.7	246	04.3	32.7	312	52.2	20.8	120	20.8				
4	95	39.2	261	03.9	33.9	327	53.4	20.6	135	23.1				
5	110	41.6	276	03.5	-4	35.1	342	54.7	+20	20.4				
6	125	44.1	291	03.0	-4	36.3	357	56.0	+20	20.2				
7	140	46.6	306	02.6	37.5	12	57.2	19.9	180	30.2				
8	155	49.0	321	02.2	38.8	27	58.5	19.7	195	32.5				
9	170	51.5	336	01.8	40.0	42	59.8	19.5	210	34.9				
10	185	54.0	351	01.4	41.2	58	01.0	19.3	225	37.2				
11	200	56.4	6	01.0	-4	42.4	73	02.3	+20	19.1				
12	215	58.9	21	00.5	-4	43.6	88	03.6	+20	18.9				
13	231	01.3	36	00.1	44.8	103	04.8	18.7	270	44.3				
14	246	03.8	50	59.7	46.0	118	06.1	18.4	285	46.6				
15	261	06.3	65	59.3	47.2	133	07.4	18.2	300	49.0				
16	276	08.7	80	58.9	48.4	148	08.6	18.0	315	51.3				
17	291	11.2	95	58.4	-4	49.6	163	09.9	+20	17.8				
18	306	13.7	110	58.0	-4	50.8	178	11.2	+20	17.6				
19	321	16.1	125	57.6	52.1	193	12.5	17.4	0	58.3				
20	336	18.6	140	57.2	53.3	208	13.7	17.2	16	00.7				
21	351	21.1	155	56.8	54.5	223	15.0	17.0	31	03.0				
22	6	23.5	170	56.3	55.7	238	16.3	16.7	46	05.4				
23	21	26.0	185	55.9	56.9	253	17.6	16.5	61	07.7				
24	36	28.5	200	55.5	-4	58.1	268	18.8	+20	16.3				
Dif	—		-4	-12	+13	-2	+23	0	+22	-1				

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16'1			Edad: 9 ^d 8	PHE { 4 ^h : 54'7 12 ^h : 54'8 20 ^h : 54'9	R ^o : 41 ^m		Náutico			Civil		Hora		R ^o		
	PMG: 11 ^h 43 ^m 8																
	hG ☉	Dec		hG ☾	Dif	Dec	Dif										
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	184	02.5	-13 05.4	69	00.9	-10 20.7		60 N	5 39	6 28	7 12	14 41	3	0 10	82		
1	199	02.5		83	35.5 ¹⁵⁶	-10 08.5 ¹²²		58		37	23	7 05		37	6	16 79	
2	214	02.6		98	10.1 ¹⁵⁶	-9 56.2 ¹²³		56		36	20	6 59		33	9	21 76	
3	229	02.6		112	44.7 ¹⁵⁶		43.9 ¹²³	54		34	16	53		30	11	26 73	
4	244	02.7		127	19.3 ¹⁵⁶		31.6 ¹²³	52		33	13	48		27	13	31 70	
5	259	02.7	-13 09.6	141	54.0 ¹⁵⁷	-9 19.2 ¹²⁴		50	5 32	6 10	6 43	14 24	15	0 35	68		
6	274	02.8	-13 10.4	156	28.6 ¹⁵⁶	-9 06.8 ¹²⁴		45	5 28	6 03	6 33	14 18	20	0 43	64		
7	289	02.8		171	03.3 ¹⁵⁷	-8 54.3 ¹²⁵		40	25	5 57	25	13	23	50	61		
8	304	02.9		185	38.0 ¹⁵⁷		41.8 ¹²⁵	35	22	51	17	09	26	0 56	57		
9	319	02.9		200	12.7 ¹⁵⁷		29.2 ¹²⁶	30	18	46	11	14	05	29	1 02	54	
10	334	03.0		214	47.4 ¹⁵⁷		16.6 ¹²⁶	20	11	37	6 00	13	59	33	11	49	
11	349	03.0	-13 14.6	229	22.1 ¹⁵⁷	-8 04.0 ¹²⁶		10 N	5 03	5 28	5 50	13	53	38	1 19	45	
12	4	03.1	-13 15.4	243	56.9 ¹⁵⁸	-7 51.3 ¹²⁷		0	4 55	5 19	5 40	13	48	41	1 26	42	
13	19	03.1		258	31.6 ¹⁵⁷		38.6 ¹²⁷	10 S	44	5 09	31	42	46		33	38	
14	34	03.2		273	06.3 ¹⁵⁷		25.9 ¹²⁷	20	31	4 58	21	36	50	41	34		
15	49	03.2		287	41.1 ¹⁵⁸		13.1 ¹²⁸	30	14	44	09	30	54	50	29		
16	64	03.3		302	15.9 ¹⁵⁸	-7 00.2 ¹²⁹		35	4 03	35	5 02	26	57	1 55	26		
17	79	03.3	-13 19.6	316	50.6 ¹⁵⁷	-6 47.4 ¹²⁸		40	3 50	4 25	4 54	13	21	61	2 01	23	
18	94	03.4	-13 20.4	331	25.4 ¹⁵⁸	-6 34.5 ¹²⁹		45	3 34	4 13	4 45	13	16	65	2 07	20	
19	109	03.4		346	00.2 ¹⁵⁸		21.5 ¹³⁰	50	13	3 58	34	10	69	15	16		
20	124	03.4		0	34.9 ¹⁵⁷	-6 08.6 ¹²⁹		52	3 03	51	28	07	71	19	13		
21	139	03.5		15	09.7 ¹⁵⁸	-5 55.6 ¹³⁰		54	2 51	43	23	04	74	23	11		
22	154	03.5		29	44.5 ¹⁵⁸		42.5 ¹³¹	56	37	34	16	13	01	76	27	9	
23	169	03.6		44	19.2 ¹⁵⁷		29.4 ¹³¹	58	2 20	23	09	12	57	79	32	6	
24	184	03.6	-13 25.4	58	54.0 ¹⁵⁸	-5 16.3 ¹³¹		60 S	1 59	3 11	4 01	12	53	82	2 37	4	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 21 ^h 30 ^m 6		Mag: -3.9 PMG: 10 ^h 37 ^m		Mag: +0.5 PMG: 6 ^h 06 ^m		Mag: -2.5 PMG: 18 ^h 52 ^m		Mag: +1.1 PMG: 9 ^h 35 ^m						
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	36	28.5	200	55.5	-4 58.1	268	18.8	+20 16.3	76	10.1	-16 33.9	215	50.1	+1 56.6	
1	51	30.9	215	55.1	-4 59.3	283	20.1	16.1	91	12.4	33.8	230	52.3	56.5	
2	66	33.4	230	54.7	-5 00.5	298	21.4	15.9	106	14.7	33.8	245	54.5	56.4	
3	81	35.8	245	54.2	01.7	313	22.7	15.7	121	17.1	33.7	260	56.7	56.3	
4	96	38.3	260	53.8	02.9	328	23.9	15.5	136	19.4	33.7	275	59.0	56.2	
5	111	40.8	275	53.4	-5 04.1	343	25.2	+20 15.2	151	21.8	-16 33.6	291	01.2	+1 56.1	
6	126	43.2	290	53.0	-5 05.3	358	26.5	+20 15.0	166	24.1	-16 33.6	306	03.4	+1 56.0	
7	141	45.7	305	52.6	06.5	13	27.8	14.8	181	26.5	33.6	321	05.6	55.9	
8	156	48.2	320	52.1	07.8	28	29.0	14.6	196	28.8	33.5	336	07.8	55.8	
9	171	50.6	335	51.7	09.0	43	30.3	14.4	211	31.1	33.5	351	10.0	55.7	
10	186	53.1	350	51.3	10.2	58	31.6	14.2	226	33.5	33.4	6	12.2	55.6	
11	201	55.6	5	50.9	-5 11.4	73	32.9	+20 14.0	241	35.8	-16 33.4	21	14.4	+1 55.5	
12	216	58.0	20	50.4	-5 12.6	88	34.2	+20 13.7	256	38.2	-16 33.3	36	16.6	+1 55.4	
13	232	00.5	35	50.0	13.8	103	35.5	13.5	271	40.5	33.3	51	18.8	55.3	
14	247	02.9	50	49.6	15.0	118	36.7	13.3	286	42.8	33.3	66	21.1	55.1	
15	262	05.4	65	49.2	16.2	133	38.0	13.1	301	45.2	33.2	81	23.3	55.0	
16	277	07.9	80	48.8	17.4	148	39.3	12.9	316	47.5	33.2	96	25.5	54.9	
17	292	10.3	95	48.3	-5 18.6	163	40.6	+20 12.7	331	49.9	-16 33.1	111	27.7	+1 54.8	
18	307	12.8	110	47.9	-5 19.8	178	41.9	+20 12.5	346	52.2	-16 33.1	126	29.9	+1 54.7	
19	322	15.3	125	47.5	21.0	193	43.2	12.2	1	54.5	33.0	141	32.1	54.6	
20	337	17.7	140	47.1	22.2	208	44.4	12.0	16	56.9	33.0	156	34.3	54.5	
21	352	20.2	155	46.6	23.4	223	45.7	11.8	31	59.2	32.9	171	36.5	54.4	
22	7	22.7	170	46.2	24.6	238	47.0	11.6	47	01.5	32.9	186	38.7	54.3	
23	22	25.1	185	45.8	25.8	253	48.3	11.4	62	03.9	32.9	201	41.0	54.2	
24	37	27.6	200	45.4	-5 27.0	268	49.6	+20 11.2	77	06.2	-16 32.8	216	43.2	+1 54.1	
Dif	—		-4	-12	+13	-2			+23		0	+22		-1	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16 ^h 1			Edad: 10 ^d 8 PHE { 4 ^h : 55 ^m 1 12 ^h : 55 ^m 3 20 ^h : 55 ^m 5 R°: 43 ^m														
	PMG: 11 ^h 43 ^m 7			SD: 15 ^h 0 PMG: 20 ^h 39 ^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	03.6	-13	25.4	58	54.0	-5	16.3	60 N	16 12	16 56	17 45	14 44 3	1 32 82				
1	199	03.7		26.2	73	28.8 ¹⁵⁸	-5	03.2 ¹³¹	58	19	17 01	47	43 6	35 79				
2	214	03.7		27.0	88	03.5 ¹⁵⁷	-4	50.0 ¹³²	56	26	05	49	42 9	37 77				
3	229	03.7		27.9	102	38.3 ¹⁵⁸		36.9 ¹³¹	54	32	09	50	41 11	39 77				
4	244	03.8		28.7	117	13.1 ¹⁵⁸		23.6 ¹³³	52	37	12	52	40 13	41 72				
5	259	03.8	-13	29.5	131	47.8 ¹⁵⁷	-4	10.4 ¹³²	50	16 42	17 16	17 54	14 39 16	1 43 70				
6	274	03.9	-13	30.3	146	22.5 ¹⁵⁷	-3	57.1 ¹³³	45	16 52	17 23	17 57	14 38 19	1 47 65				
7	289	03.9		31.2	160	57.3 ¹⁵⁸		43.8 ¹³³	40	17 01	29	18 01	36 24	51 61				
8	304	04.0		32.0	175	32.0 ¹⁵⁷		30.5 ¹³³	35	09	35	05	35 27	53 58				
9	319	04.0		32.8	190	06.7 ¹⁵⁷		17.1 ¹³⁴	30	15	40	08	34 29	1 56 55				
10	334	04.0		33.6	204	41.4 ¹⁵⁷	-3	03.7 ¹³⁴	20	27	50	16	32 34	2 00 50				
11	349	04.1	-13	34.5	219	16.0 ¹⁵⁶	-2	50.3 ¹³⁴	10 N	17 37	17 59	18 24	14 31 38	2 04 46				
12	4	04.1	-13	35.3	233	50.7 ¹⁵⁷	-2	36.9 ¹³⁴	0	17 47	18 08	18 33	14 29 43	2 08 41				
13	19	04.2		36.1	248	25.4 ¹⁵⁷		23.5 ¹³⁴	10 S	17 57	19	44	28 46	11 38				
14	34	04.2		36.9	263	00.0 ¹⁵⁶	-2	10.0 ¹³⁵	20	18 08	31	18 57	26 51	15 33				
15	49	04.2		37.8	277	34.6 ¹⁵⁶	-1	56.5 ¹³⁵	30	20	45	19 15	24 56	19 29				
16	64	04.3		38.6	292	09.2 ¹⁵⁶		43.0 ¹³⁵	35	27	18 54	26	23 59	21 26				
17	79	04.3	-13	39.4	306	43.8 ¹⁵⁶	-1	29.5 ¹³⁵	40	18 35	19 04	19 39	14 22 62	2 24 23				
18	94	04.3	-13	40.2	321	18.3 ¹⁵⁵	-1	15.9 ¹³⁶	45	18 45	19 17	19 56	14 21 66	2 27 19				
19	109	04.4		41.1	335	52.9 ¹⁵⁶	-1	02.4 ¹³⁵	50	18 57	33	20 18	19 71	31 15				
20	124	04.4		41.9	350	27.4 ¹⁵⁵	-0	48.8 ¹³⁶	52	19 02	40	29	18 73	32 13				
21	139	04.5		42.7	5	01.9 ¹⁵⁵		35.2 ¹³⁶	54	08	49	41	18 75	34 11				
22	154	04.5		43.5	19	36.3 ¹⁵⁴		21.6 ¹³⁶	56	15	19 58	20 56	17 77	36 9				
23	169	04.5		44.3	34	10.8 ¹⁵⁵	-0	07.9 ¹³⁷	58	23	20 09	21 14	16 80	38 6				
24	184	04.6	-13	45.2	48	45.2 ¹⁵⁴	+0	05.7 ¹³⁶	60 S	19 31	20 22	21 37	14 15 83	2 41 3				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 21 ^h 26 ^m 6		Mag: -3.9 PMG: 10 ^h 37 ^m			Mag: +0.5 PMG: 6 ^h 04 ^m			Mag: -2.5 PMG: 18 ^h 49 ^m			Mag: +1.1 PMG: 9 ^h 32 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	37	27.6	200	45.4	-5	27.0	268	49.6	+20	11.2	77	06.2	-16	32.8	216	43.2	+1	54.1
1	52	30.1	215	44.9		28.2	283	50.9		11.0	92	08.6		32.8	231	45.4		54.0
2	67	32.5	230	44.5		29.4	298	52.2		10.8	107	10.9		32.7	246	47.6		53.9
3	82	35.0	245	44.1		30.6	313	53.5		10.5	122	13.2		32.7	261	49.8		53.8
4	97	37.4	260	43.7		31.9	328	54.7		10.3	137	15.6		32.6	276	52.0		53.7
5	112	39.9	275	43.2	-5	33.1	343	56.0	+20	10.1	152	17.9	-16	32.6	291	54.2	+1	53.6
6	127	42.4	290	42.8	-5	34.3	358	57.3	+20	09.9	167	20.2	-16	32.5	306	56.4	+1	53.5
7	142	44.8	305	42.4		35.5	373	58.6		09.7	182	22.6		32.5	321	58.7		53.4
8	157	47.3	320	42.0		36.7	388	59.9		09.5	197	24.9		32.5	337	00.9		53.3
9	172	49.8	335	41.5		37.9	403	01.2		09.3	212	27.2		32.4	352	03.1		53.2
10	187	52.2	350	41.1		39.1	418	02.5		09.0	227	29.6		32.4	7	05.3		53.1
11	202	54.7	5	40.7	-5	40.3	74	03.8	+20	08.8	242	31.9	-16	32.3	22	07.5	+1	53.0
12	217	57.2	20	40.2	-5	41.5	89	05.1	+20	08.6	257	34.2	-16	32.3	37	09.7	+1	52.9
13	232	59.6	35	39.8		42.7	104	06.4		08.4	272	36.6		32.2	52	11.9		52.8
14	248	02.1	50	39.4		43.9	119	07.7		08.2	287	38.9		32.2	67	14.1		52.7
15	263	04.5	65	39.0		45.1	134	09.0		08.0	302	41.2		32.1	82	16.3		52.6
16	278	07.0	80	38.5		46.3	149	10.3		07.8	317	43.5		32.1	97	18.6		52.5
17	293	09.5	95	38.1	-5	47.5	164	11.6	+20	07.6	332	45.9	-16	32.0	112	20.8	+1	52.4
18	308	11.9	110	37.7	-5	48.7	179	12.9	+20	07.3	347	48.2	-16	32.0	127	23.0	+1	52.3
19	323	14.4	125	37.2		49.9	194	14.2		07.1	2	50.5		31.9	142	25.2		52.2
20	338	16.9	140	36.8		51.1	209	15.5		06.9	17	52.9		31.9	157	27.4		52.1
21	353	19.3	155	36.4		52.3	224	16.8		06.7	32	55.2		31.9	172	29.6		52.0
22	8	21.8	170	36.0		53.5	239	18.1		06.5	47	57.5		31.8	187	31.8		51.9
23	23	24.3	185	35.5		54.7	254	19.4		06.3	62	59.9		31.8	202	34.1		51.8
24	38	26.7	200	35.1	-5	55.9	269	20.7	+20	06.1	78	02.2	-16	31.7	217	36.3	+1	51.7
Dif	—		-4		-12		+13		-2		+23		0		+22		-	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16:1 PMG: 11 ^h 43 ^m 7			Edad: 11 ^d 8 PHE { 4 ^h : 55:7 12 ^h : 55:9 20 ^h : 56:1 Rº: 45 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		Rº	Hora	Rº	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	184	04.6	-13 45.2	48	45.2	+0	05.7	60 N	5	43	6	33	7	17	14	47
1	199	04.6	46.0	63	19.5 ¹⁵³		19.3 ¹³⁶	58	41		28	10		49	7	54
2	214	04.6	46.8	77	53.9 ¹⁵⁴		33.0 ¹³⁷	56	40		23	7	03	51	9	54
3	229	04.7	47.6	92	28.2 ¹⁵³	+0	46.7 ¹³⁷	54	38		20	6	57	52	12	53
4	244	04.7	48.4	107	02.5 ¹⁵³	+1	00.4 ¹³⁷	52	36		16	51		53	15	53
5	259	04.7	-13 49.3	121	36.8 ¹⁵³	+1	14.1 ¹³⁷	50	5	35	6	13	6	46	14	55
6	274	04.8	-13 50.1	136	11.0 ¹⁵²	+1	27.8 ¹³⁷	45	5	31	6	05	6	36	14	57
7	289	04.8	50.9	150	45.2 ¹⁵²		41.5 ¹³⁷	40	27		5	59	27		15	00
8	304	04.8	51.7	165	19.3 ¹⁵¹	+1	55.2 ¹³⁷	35	23		53	19		02	27	51
9	319	04.9	52.5	179	53.5 ¹⁵²	+2	08.9 ¹³⁷	30	20		48	12		03	31	51
10	334	04.9	53.3	194	27.5 ¹⁵⁰		22.7 ¹³⁸	20	12		38	6	01	06	36	50
11	349	04.9	-13 54.2	209	01.6 ¹⁵¹	+2	36.4 ¹³⁷	10 N	5	04	5	29	5	50	15	09
12	4	05.0	-13 55.0	223	35.6 ¹⁵⁰	+2	50.1 ¹³⁷	0	4	54	5	19	5	40	15	12
13	19	05.0	55.8	238	09.6 ¹⁵⁰	+3	03.9 ¹³⁸	10 S	43		5	09	30		14	49
14	34	05.0	56.6	252	43.5 ¹⁴⁹		17.6 ¹³⁷	20	30		4	57	19		17	53
15	49	05.1	57.4	267	17.3 ¹⁴⁸		31.3 ¹³⁷	30	12		42	07		20	58	48
16	64	05.1	58.2	281	51.2 ¹⁴⁹		45.1 ¹³⁸	35	4	01		33	5	00	22	61
17	79	05.1	-13 59.0	296	25.0 ¹⁴⁸	+3	58.8 ¹³⁷	40	3	47	4	23	4	51	15	24
18	94	05.2	-13 59.9	310	58.7 ¹⁴⁷	+4	12.6 ¹³⁸	45	3	31	4	10	4	42	15	27
19	109	05.2	-14 00.7	325	32.4 ¹⁴⁷		26.3 ¹³⁷	50	3	09		3	54	30	30	73
20	124	05.2	01.5	340	06.0 ¹⁴⁶		40.0 ¹³⁷	52	2	58		47	24		31	76
21	139	05.2	02.3	354	39.6 ¹⁴⁶	+4	53.7 ¹³⁷	54		45		38	18		33	78
22	154	05.3	03.1	9	13.2 ¹⁴⁶	+5	07.5 ¹³⁸	56		30		28	12		34	81
23	169	05.3	03.9	23	46.7 ¹⁴⁵		21.2 ¹³⁷	58	2	12		17	4	04	36	84
24	184	05.3	-14 04.7	38	20.1 ¹⁴⁴	+5	34.9 ¹³⁷	60 S	1	50		3	04	3	55	15

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 21 ^h 22 ^m 7		Mag: -3.9 PMG: 10 ^h 38 ^m		Mag: +0.5 PMG: 6 ^h 02 ^m		Mag: -2.5 PMG: 18 ^h 45 ^m		Mag: +1.1 PMG: 9 ^h 28 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	38	26.7	200	35.1	-5	55.9	269	20.7	+20	06.1
1	53	29.2	215	34.7		57.1	284	22.0		05.9
2	68	31.7	230	34.2		58.3	299	23.3		05.6
3	83	34.1	245	33.8	-5	59.5	314	24.6		05.4
4	98	36.6	260	33.4	-6	00.7	329	25.9		05.2
5	113	39.0	275	32.9	-6	01.9	344	27.2	+20	05.0
6	128	41.5	290	32.5	-6	03.1	359	28.5	+20	04.8
7	143	44.0	305	32.1		04.3	14	29.8		04.6
8	158	46.4	320	31.6		05.5	29	31.1		04.4
9	173	48.9	335	31.2		06.7	44	32.4		04.2
10	188	51.4	350	30.8		07.9	59	33.7		03.9
11	203	53.8	5	30.3	-6	09.1	74	35.0	+20	03.7
12	218	56.3	20	29.9	-6	10.3	89	36.3	+20	03.5
13	233	58.8	35	29.5		11.5	104	37.6		03.3
14	249	01.2	50	29.0		12.7	119	38.9		03.1
15	264	03.7	65	28.6		13.8	134	40.3		02.9
16	279	06.1	80	28.2		15.0	149	41.6		02.7
17	294	08.6	95	27.7	-6	16.2	164	42.9	+20	02.5
18	309	11.1	110	27.3	-6	17.4	179	44.2	+20	02.2
19	324	13.5	125	26.9		18.6	194	45.5		02.0
20	339	16.0	140	26.4		19.8	209	46.8		01.8
21	354	18.5	155	26.0		21.0	224	48.1		01.6
22	9	20.9	170	25.6		22.2	239	49.4		01.4
23	24	23.4	185	25.1		23.4	254	50.8		01.2
24	39	25.9	200	24.7	-6	24.6	269	52.1	+20	01.0
Dif	—		-4	-12		+13	-2		+23	0

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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: 12 ^d 8 PHE { 4 ^h : 56 ^s 3 12 ^h : 56 ^s 5 20 ^h : 56 ^s 8 R°: 48 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m	h m m
0	184	05.3	-14	04.7	38	20.1	+5 34.9	60 N	16 06	16 51	17 41	14 51 6	4 19 90		
1	199	05.3		05.5	52	53.5 ¹⁴⁴	+5 48.6 ¹³⁷	58	14	16 56	43	14 56 9	16 85		
2	214	05.4		06.3	67	26.8 ¹⁴³	+6 02.2 ¹³⁶	56	21	17 01	45	15 00 12	12 83		
3	229	05.4		07.2	82	00.1 ¹⁴³	15.9 ¹³⁷	54	28	05	47	04 15	10 79		
4	244	05.4		08.0	96	33.3 ¹⁴²	29.6 ¹³⁷	52	33	09	49	08 17	07 77		
5	259	05.5	-14	08.8	111	06.5 ¹⁴²	+6 43.2 ¹³⁶	50	16 38	17 12	17 50	15 11 19	4 04 75		
6	274	05.5	-14	09.6	125	39.6 ¹⁴¹	+6 56.8 ¹³⁶	45	16 50	17 20	17 55	15 18 24	3 59 70		
7	289	05.5		10.4	140	12.6 ¹⁴⁰	+7 10.4 ¹³⁶	40	16 59	27	17 59	24 28	55 65		
8	304	05.5		11.2	154	45.6 ¹⁴⁰	24.0 ¹³⁶	35	17 07	33	18 03	29 31	51 62		
9	319	05.6		12.0	169	18.5 ¹³⁹	37.6 ¹³⁶	30	14	38	07	34 34	48 59		
10	334	05.6		12.8	183	51.4 ¹³⁹	+7 51.2 ¹³⁶	20	26	49	15	42 39	42 54		
11	349	05.6	-14	13.6	198	24.2 ¹³⁸	+8 04.7 ¹³⁵	10 N	17 37	17 58	18 23	15 49 43	3 37 50		
12	4	05.6	-14	14.4	212	56.9 ¹³⁷	+8 18.2 ¹³⁵	0	17 47	18 08	18 33	15 56 47	3 32 46		
13	19	05.7		15.2	227	29.6 ¹³⁷	31.7 ¹³⁵	10 S	17 57	19	45	16 03 51	28 41		
14	34	05.7		16.0	242	02.2 ¹³⁶	45.2 ¹³⁵	20	18 09	32	18 59	10 56	23 37		
15	49	05.7		16.8	256	34.7 ¹³⁵	+8 58.6 ¹³⁴	30	22	47	19 17	18 61	17 32		
16	64	05.7		17.6	271	07.1 ¹³⁴	+9 12.0 ¹³⁴	35	29	18 56	28	23 64	14 29		
17	79	05.7	-14	18.4	285	39.5 ¹³⁴	+9 25.4 ¹³⁴	40	18 38	19 07	19 42	16 29 67	3 10 26		
18	94	05.8	-14	19.3	300	11.8 ¹³³	+9 38.8 ¹³⁴	45	18 48	19 20	20 00	16 35 71	3 06 22		
19	109	05.8		20.1	314	44.1 ¹³³	+9 52.1 ¹³³	50	19 00	36	22	43 76	3 01 18		
20	124	05.8		20.9	329	16.3 ¹³²	+10 05.4 ¹³³	52	06	44	34	47 78	2 59 15		
21	139	05.8		21.7	343	48.3 ¹³⁰	18.7 ¹³³	54	12	19 53	20 47	51 81	56 13		
22	154	05.8		22.5	358	20.4 ¹³¹	31.9 ¹³²	56	19	20 03	21 03	16 55 84	54 10		
23	169	05.9		23.3	12	52.3 ¹²⁹	45.1 ¹³²	58	27	15	22	17 00 88	51 7		
24	184	05.9	-14	24.1	27	24.2 ¹²⁹	+10 58.3 ¹³²	60 S	19 37	20 29	21 47	17 06 91	2 47 4		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 21 ^h 18 ^m 8		Mag: -3.9 PMG: 10 ^h 39 ^m		Mag: +0.5 PMG: 6 ^h 00 ^m		Mag: -2.5 PMG: 18 ^h 41 ^m		Mag: +1.1 PMG: 9 ^h 25 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	39	25.9	200	24.7	-6	24.6	269	52.1	+20	01.0
1	54	28.3	215	24.2		25.8	284	53.4		00.8
2	69	30.8	230	23.8		27.0	299	54.7		00.5
3	84	33.3	245	23.4		28.2	314	56.0		00.3
4	99	35.7	260	22.9		29.4	329	57.3	+20	00.1
5	114	38.2	275	22.5	-6	30.6	344	58.7	+19	59.9
6	129	40.6	290	22.1	-6	31.8	360	00.0	+19	59.7
7	144	43.1	305	21.6		33.0	15	01.3		59.5
8	159	45.6	320	21.2		34.2	30	02.6		59.3
9	174	48.0	335	20.7		35.4	45	03.9		59.1
10	189	50.5	350	20.3		36.5	60	05.3		58.9
11	204	53.0	5	19.9	-6	37.7	75	06.6	+19	58.6
12	219	55.4	20	19.4	-6	38.9	90	07.9	+19	58.4
13	234	57.9	35	19.0		40.1	105	09.2		58.2
14	250	00.4	50	18.5		41.3	120	10.5		58.0
15	265	02.8	65	18.1		42.5	135	11.9		57.8
16	280	05.3	80	17.7		43.7	150	13.2		57.6
17	295	07.8	95	17.2	-6	44.9	165	14.5	+19	57.4
18	310	10.2	110	16.8	-6	46.1	180	15.8	+19	57.2
19	325	12.7	125	16.3		47.3	195	17.2		57.0
20	340	15.1	140	15.9		48.5	210	18.5		56.7
21	355	17.6	155	15.5		49.6	225	19.8		56.5
22	10	20.1	170	15.0		50.8	240	21.1		56.3
23	25	22.5	185	14.6		52.0	255	22.5		56.1
24	40	25.0	200	14.1	-6	53.2	270	23.8	+19	55.9
Dif	—		-4	-12			+13	-2		
									+23	+1
										+22
										-1

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16 ^h 1			Edad: 13 ^d 8	PHE {	4 ^h : 57 ^o 0 12 ^h : 57 ^o 2 20 ^h : 57 ^o 5		R°: 52 ^m								
	PMG: 11 ^h 43 ^m 6								SD: 15 ^h 5		PMG: 22 ^h 55 ^m					
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	184	05.9	-14 24.1	27	24.2	+10 58.3		60 N	5 48	6 37	7 22	14 57	8	5 49	94	
1	199	05.9	24.9	41	56.0 ¹²⁸	+11 11.4 ¹³¹		58	45	32	14	15 05	12	41	90	
2	214	05.9	25.7	56	27.7 ¹²⁷	24.5 ¹³¹		56	43	27	07	12 16		35	86	
3	229	05.9	26.5	70	59.3 ¹²⁶	37.5 ¹³⁰		54	41	23	7 01	19 19		29	83	
4	244	06.0	27.3	85	30.8 ¹²⁵	+11 50.5 ¹³⁰		52	39	19	6 55	25 22		24	80	
5	259	06.0	-14 28.1	100	02.3 ¹²⁵	+12 03.5 ¹³⁰		50	5 38	6 16	6 50	15 30	24	5 19	78	
6	274	06.0	-14 28.9	114	33.7 ¹²⁴	+12 16.4 ¹²⁹		45	5 33	6 08	6 38	15 42	29	5 09	73	
7	289	06.0	29.7	129	05.0 ¹²³	29.3 ¹²⁹		40	29	6 01	29	15 52	33	5 00	69	
8	304	06.0	30.5	143	36.2 ¹²²	42.1 ¹²⁸		35	25	5 55	21	16 00	36	4 53	66	
9	319	06.0	31.3	158	07.3 ¹²¹	+12 54.9 ¹²⁸		30	21	49	14	08 38		47	62	
10	334	06.1	32.1	172	38.4 ¹²¹	+13 07.6 ¹²⁷		20	13	39	6 01	21 43		36	58	
11	349	06.1	-14 32.9	187	09.3 ¹¹⁹	+13 20.3 ¹²⁷		10 N	5 04	5 29	5 51	16 32	48	4 27	53	
12	4	06.1	-14 33.6	201	40.2 ¹¹⁹	+13 32.9 ¹²⁶		0	4 54	5 19	5 40	16 43	51	4 18	49	
13	19	06.1	34.4	216	11.0 ¹¹⁸	45.5 ¹²⁶		10 S	42	5 08	30	16 54	55	09	45	
14	34	06.1	35.2	230	41.6 ¹¹⁶	+13 58.0 ¹²⁵		20	28	4 55	18	17 06	59	4 00	41	
15	49	06.1	36.0	245	12.2 ¹¹⁶	+14 10.5 ¹²⁵		30	4 10	40	5 05	19 64		3 49	36	
16	64	06.2	36.8	259	42.7 ¹¹⁵	22.9 ¹²⁴		35	3 59	31	4 58	27 67		43	33	
17	79	06.2	-14 37.6	274	13.2 ¹¹⁵	+14 35.2 ¹²³		40	3 45	4 20	4 49	17 36	70	3 36	30	
18	94	06.2	-14 38.4	288	43.5 ¹¹³	+14 47.5 ¹²³		45	3 27	4 07	4 39	17 46	75	3 28	26	
19	109	06.2	39.2	303	13.7 ¹¹²	+14 59.7 ¹²²		50	3 04	3 50	26	17 59	80	19	21	
20	124	06.2	40.0	317	43.8 ¹¹¹	+15 11.9 ¹²²		52	2 53	42	21	18 05	82	14	19	
21	139	06.2	40.8	332	13.9 ¹¹¹	24.0 ¹²¹		54	40	33	14	12 85		09	17	
22	154	06.2	41.6	346	43.8 ¹⁰⁹	36.0 ¹²⁰		56	24	23	4 07	19 88		3 04	13	
23	169	06.2	42.4	1	13.7 ¹⁰⁹	48.0 ¹²⁰		58	2 05	3 12	3 59	28 92		2 58	10	
24	184	06.2	-14 43.2	15	43.4 ¹⁰⁷	+15 59.8 ¹¹⁸		60 S	1 40	2 58	3 50	18 37	97	2 51	7	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 21 ^h 14 ^m 8		Mag: -3.9 PMG: 10 ^h 39 ^m		Mag: +0.4 PMG: 5 ^h 58 ^m		Mag: -2.5 PMG: 18 ^h 38 ^m		Mag: +1.1 PMG: 9 ^h 21 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	40	25.0	200	14.1	-6	53.2	270	23.8	+19	55.9	79	53.5	-16	29.3	219	22.6	+1	46.8
1	55	27.5	215	13.7		54.4	285	25.1		55.7	94	55.9		29.3	234	24.8		46.7
2	70	29.9	230	13.2		55.6	300	26.5		55.5	109	58.2		29.2	249	27.0		46.6
3	85	32.4	245	12.8		56.8	315	27.8		55.3	125	00.5		29.2	264	29.2		46.6
4	100	34.9	260	12.4		58.0	330	29.1		55.1	140	02.8		29.1	279	31.5		46.5
5	115	37.3	275	11.9	-6	59.2	345	30.5	+19	54.8	155	05.1	-16	29.1	294	33.7	+1	46.4
6	130	39.8	290	11.5	-7	00.3	0	31.8	+19	54.6	170	07.4	-16	29.0	309	35.9	+1	46.3
7	145	42.2	305	11.0		01.5	15	33.1		54.4	185	09.7		29.0	324	38.1		46.2
8	160	44.7	320	10.6		02.7	30	34.5		54.2	200	12.0		28.9	339	40.3		46.1
9	175	47.2	335	10.1		03.9	45	35.8		54.0	215	14.3		28.9	354	42.5		46.0
10	190	49.6	350	09.7		05.1	60	37.1		53.8	230	16.7		28.8	9	44.8		45.9
11	205	52.1	5	09.2	-7	06.3	75	38.5	+19	53.6	245	19.0	-16	28.8	24	47.0	+1	45.8
12	220	54.6	20	08.8	-7	07.5	90	39.8	+19	53.4	260	21.3	-16	28.7	39	49.2	+1	45.7
13	235	57.0	35	08.4		08.7	105	41.1		53.2	275	23.6		28.6	54	51.4		45.6
14	250	59.5	50	07.9		09.8	120	42.5		53.0	290	25.9		28.6	69	53.6		45.5
15	266	02.0	65	07.5		11.0	135	43.8		52.7	305	28.2		28.5	84	55.9		45.4
16	281	04.4	80	07.0		12.2	150	45.1		52.5	320	30.5		28.5	99	58.1		45.3
17	296	06.9	95	06.6	-7	13.4	165	46.5	+19	52.3	335	32.8	-16	28.4	115	00.3	+1	45.2
18	311	09.4	110	06.1	-7	14.6	180	47.8	+19	52.1	350	35.1	-16	28.4	130	02.5	+1	45.1
19	326	11.8	125	05.7		15.8	195	49.2		51.9	5	37.4		28.3	145	04.7		45.0
20	341	14.3	140	05.2		16.9	210	50.5		51.7	20	39.7		28.3	160	06.9		44.9
21	356	16.7	155	04.8		18.1	225	51.8		51.5	35	42.0		28.2	175	09.2		44.8
22	11	19.2	170	04.3		19.3	240	53.2		51.3	50	44.3		28.2	190	11.4		44.7
23	26	21.7	185	03.9		20.5	255	54.5		51.1	65	46.7		28.1	205	13.6		44.6
24	41	24.1	200	03.4	-7	21.7	270	55.9	+19	50.9	80	49.0	-16	28.1	220	15.8	+1	44.5
Dif	—		-4		-12		+13		-2		+23		+1		+22		-	

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16 ^h PMG: 11 ^h 43 ^m 6			Edad: 14 ^d 8 PHE { SD: 15 ^h 7 PMG: 23 ^h 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	184	06.2	-14 43.2	15	43.4	+15 59.8		60 N	16 01	16 47	17 36	15 05 14	7 23 97		
1	199	06.3		30	13.1 ¹⁰⁷	+16 11.7 ¹¹⁹		58	10	52	39	17 20	11 92		
2	214	06.3	44.8	44	42.7 ¹⁰⁶	23.4 ¹¹⁷		56	17	16 57	41	28 23	7 01 88		
3	229	06.3	45.5	59	12.1 ¹⁰⁴	35.1 ¹¹⁷		54	24	17 01	43	38 26	6 52 85		
4	244	06.3	46.3	73	41.5 ¹⁰⁴	46.7 ¹¹⁶		52	30	05	45	47 29	44 82		
5	259	06.3	-14 47.1	88	10.7 ¹⁰²	+16 58.2 ¹¹⁵		50	16 35	17 09	17 47	15 54 32	6 37 79		
6	274	06.3	-14 47.9	102	39.9 ¹⁰²	+17 09.6 ¹¹⁴		45	16 47	17 17	17 52	16 11 36	6 22 74		
7	289	06.3	48.7	117	09.0 ¹⁰¹	20.9 ¹¹³		40	16 56	25	17 57	25 39	6 09 71		
8	304	06.3	49.5	131	37.9 ⁹⁹	32.2 ¹¹³		35	17 05	31	18 01	36 42	5 59 67		
9	319	06.3	50.3	146	06.8 ⁹⁹	43.4 ¹¹²		30	12	37	05	16 46 45	49 65		
10	334	06.3	51.1	160	35.6 ⁹⁸	+17 54.5 ¹¹¹		20	25	48	14	17 04 49	34 60		
11	349	06.4	-14 51.9	175	04.2 ⁹⁶	+18 05.5 ¹¹⁰		10 N	17 36	17 58	18 23	17 20 52	5 20 56		
12	4	06.4	-14 52.6	189	32.8 ⁹⁶	+18 16.4 ¹⁰⁹		0	17 47	18 08	18 33	17 34 56	5 07 53		
13	19	06.4	53.4	204	01.2 ⁹⁴	27.3 ¹⁰⁹		10 S	17 58	20	18 45	17 49 58	4 54 50		
14	34	06.4	54.2	218	29.6 ⁹⁴	38.0 ¹⁰⁷		20	18 10	33	19 00	18 05 62	41 45		
15	49	06.4	55.0	232	57.9 ⁹³	48.7 ¹⁰⁷		30	23	48	19	23 66	25 41		
16	64	06.4	55.8	247	26.0 ⁹¹	+18 59.2 ¹⁰⁵		35	31	18 58	31	34 68	16 39		
17	79	06.4	-14 56.6	261	54.1 ⁹¹	+19 09.7 ¹⁰⁵		40	18 40	19 09	19 45	18 46 71	4 06 36		
18	94	06.4	-14 57.4	276	22.0 ⁸⁹	+19 20.0 ¹⁰³		45	18 51	19 23	20 03	19 01 74	3 54 32		
19	109	06.4	58.1	290	49.9 ⁸⁹	30.3 ¹⁰³		50	19 04	40	27	19 79	40 27		
20	124	06.4	58.9	305	17.6 ⁸⁷	40.4 ¹⁰¹		52	10	48	39	27 82	33 25		
21	139	06.4	-14 59.7	319	45.2 ⁸⁶	+19 50.5 ¹⁰¹		54	16	19 58	20 53	37 84	26 22		
22	154	06.4	-15 00.5	334	12.8 ⁸⁶	+20 00.4 ⁹⁹		56	24	20 08	21 09	19 47 89	17 19		
23	169	06.4	01.3	348	40.2 ⁸⁴	10.3 ⁹⁹		58	32	21	30	20 00 92	3 08 15		
24	184	06.4	-15 02.0	3	07.5 ⁸³	+20 20.0 ⁹⁷		60 S	19 42	20 35	21 58	20 14 99	2 58 10		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 21 ^h 10 ^m 9		Mag: -3.9 PMG: 10 ^h 40 ^m			Mag: +0.4 PMG: 5 ^h 56 ^m			Mag: -2.5 PMG: 18 ^h 34 ^m			Mag: +1.1 PMG: 9 ^h 18 ^m			
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec			
h	°	'	°	°	°	'	°	'	°	'	°	'	°	'	
0	41	24.1	200 03.4	-7 21.7	270 55.9	+19 50.9	80	49.0	-16 28.1	220 15.8	+1 44.5				
1	56	26.6	215 03.0	22.9	285 57.2	50.6	95	51.3	28.0	235 18.0	44.4				
2	71	29.1	230 02.5	24.1	300 58.6	50.4	110	53.6	27.9	250 20.3	44.3				
3	86	31.5	245 02.1	25.2	315 59.9	50.2	125	55.9	27.9	265 22.5	44.2				
4	101	34.0	260 01.6	26.4	331 01.3	50.0	140	58.2	27.8	280 24.7	44.1				
5	116	36.5	275 01.2	-7 27.6	346 02.6	+19 49.8	156	00.5	-16 27.8	295 26.9	+1 44.0				
6	131	38.9	290 00.7	-7 28.8	1 03.9	+19 49.6	171	02.8	-16 27.7	310 29.1	+1 43.9				
7	146	41.4	305 00.3	30.0	16 05.3	49.4	186	05.1	27.7	325 31.3	43.8				
8	161	43.8	319 59.8	31.1	31 06.6	49.2	201	07.4	27.6	340 33.6	43.7				
9	176	46.3	334 59.4	32.3	46 08.0	49.0	216	09.7	27.6	355 35.8	43.6				
10	191	48.8	349 58.9	33.5	61 09.3	48.8	231	12.0	27.5	10 38.0	43.5				
11	206	51.2	4 58.5	-7 34.7	76 10.7	+19 48.6	246	14.3	-16 27.4	25 40.2	+1 43.4				
12	221	53.7	19 58.0	-7 35.9	91 12.0	+19 48.3	261	16.6	-16 27.4	40 42.4	+1 43.3				
13	236	56.2	34 57.6	37.0	106 13.4	48.1	276	18.9	27.3	55 44.7	43.2				
14	251	58.6	49 57.1	38.2	121 14.7	47.9	291	21.2	27.3	70 46.9	43.1				
15	267	01.1	64 56.6	39.4	136 16.1	47.7	306	23.5	27.2	85 49.1	43.0				
16	282	03.6	79 56.2	40.6	151 17.4	47.5	321	25.8	27.2	100 51.3	42.9				
17	297	06.0	94 55.7	-7 41.8	166 18.8	+19 47.3	336	28.1	-16 27.1	115 53.5	+1 42.8				
18	312	08.5	109 55.3	-7 42.9	181 20.1	+19 47.1	351	30.4	-16 27.1	130 55.8	+1 42.7				
19	327	11.0	124 54.8	44.1	196 21.5	46.9	6	32.7	27.0	145 58.0	42.6				
20	342	13.4	139 54.4	45.3	211 22.9	46.7	21	35.0	26.9	161 00.2	42.5				
21	357	15.9	154 53.9	46.5	226 24.2	46.5	36	37.3	26.9	176 02.4	42.4				
22	12	18.3	169 53.5	47.7	241 25.6	46.3	51	39.6	26.8	191 04.6	42.3				
23	27	20.8	184 53.0	48.8	256 26.9	46.1	66	41.9	26.8	206 06.9	42.2				
24	42	23.3	199 52.6	-7 50.0	271 28.3	+19 45.8	81	44.2	-16 26.7	221 09.1	+1 42.1				
Dif	—		-5		-12		+14		-2		+23		+1		

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'1 PMG: 11 ^h 43 ^m 6			Edad: 15 ^d 8 PHE { SD: 15'8 PMG: ***h ***m										
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora
h	°	'	°	°	'	°	'	h	m	h	m	h	m	m
0	184	06.4	-15 02.0	3	07.5	+20 20.0	60 N	5 52	6 42	7 28	15 19	26	9 00	95
1	199	06.4	02.8	17	34.8	83 29.6	58	49	36	19	37	31	8 43	90
2	214	06.4	03.6	32	01.9	81 39.1	56	47	31	11	15 51	36	29	85
3	229	06.4	04.4	46	28.9	80 48.5	54	45	27	7 05	16 04	38	17	82
4	244	06.4	05.2	60	55.8	79 +20 57.8	52	43	23	6 59	16	40	8 06	80
5	259	06.4	-15 06.0	75	22.7	79 +21 07.0	50	5 41	6 19	6 53	16 26	42	7 56	78
6	274	06.4	-15 06.7	89	49.4	77 +21 16.0	45	5 36	6 10	6 41	16 47	46	7 36	74
7	289	06.4	07.5	104	16.0	76 24.9	40	31	6 03	31	17 04	48	20	71
8	304	06.4	08.3	118	42.5	75 33.7	35	27	5 57	23	18	51	7 06	69
9	319	06.4	09.1	133	08.9	74 42.4	30	22	51	15	31	52	6 54	67
10	334	06.4	09.8	147	35.3	74 51.0	20	13	40	6 02	17 53	55	34	63
11	349	06.4	-15 10.6	162	01.5	72 +21 59.4	10 N	5 04	5 29	5 51	18 12	57	6 16	61
12	4	06.4	-15 11.4	176	27.6	71 +22 07.7	0	4 54	5 19	5 40	18 30	59	6 00	57
13	19	06.4	12.2	190	53.6	70 15.9	10 S	42	5 07	29	18 47	62	5 44	54
14	34	06.4	12.9	205	19.6	70 24.0	20	27	4 54	17	19 07	63	26	52
15	49	06.4	13.7	219	45.4	68 31.9	30	4 08	38	5 04	29	66	5 06	49
16	64	06.4	14.5	234	11.1	67 39.7	35	3 56	29	4 56	42	68	4 55	46
17	79	06.4	-15 15.3	248	36.8	67 +22 47.3	40	3 42	4 17	4 47	19 57	70	4 42	43
18	94	06.4	-15 16.0	263	02.3	65 +22 54.8	45	3 23	4 04	4 36	20 15	72	4 26	40
19	109	06.4	16.8	277	27.8	65 +23 02.2	50	3 00	3 46	23	38	75	4 07	36
20	124	06.4	17.6	291	53.2	64 09.4	52	2 48	38	17	20 49	77	3 58	33
21	139	06.4	18.4	306	18.5	63 16.5	54	34	29	10	21 01	79	48	31
22	154	06.4	19.1	320	43.7	62 23.5	56	2 17	18	4 03	16	81	36	28
23	169	06.4	19.9	335	08.8	61 30.3	58	1 56	3 06	3 54	32	85	23	24
24	184	06.4	-15 20.7	349	33.8	60 +23 36.9	60 S	1 29	2 51	3 44	21 53	89	3 08	18

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 21 ^h 07 ^m 0		Mag: -3.9 PMG: 10 ^h 41 ^m		Mag: +0.4 PMG: 5 ^h 54 ^m		Mag: -2.5 PMG: 18 ^h 30 ^m		Mag: +1.1 PMG: 9 ^h 14 ^m						
	hG ♂	Dec	hG ♀	Dec	hG ♂	Dec	hG ♀	Dec	hG ♀	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	42	23.3	199	52.6	-7 50.0	271	28.3	+19 45.8	81	44.2	-16 26.7	221	09.1	+1 42.1	
1	57	25.7	214	52.1	51.2	286	29.6	45.6	96	46.5	26.7	236	11.3	42.0	
2	72	28.2	229	51.6	52.4	301	31.0	45.4	111	48.8	26.6	251	13.5	41.9	
3	87	30.7	244	51.2	53.5	316	32.4	45.2	126	51.1	26.5	266	15.8	41.8	
4	102	33.1	259	50.7	54.7	331	33.7	45.0	141	53.4	26.5	281	18.0	41.7	
5	117	35.6	274	50.3	-7 55.9	346	35.1	+19 44.8	156	55.7	-16 26.4	296	20.2	+1 41.6	
6	132	38.1	289	49.8	-7 57.1	1	36.4	+19 44.6	171	58.0	-16 26.4	311	22.4	+1 41.5	
7	147	40.5	304	49.3	58.2	16	37.8	44.4	187	00.2	26.3	326	24.6	41.4	
8	162	43.0	319	48.9	-7 59.4	31	39.2	44.2	202	02.5	26.3	341	26.9	41.3	
9	177	45.5	334	48.4	-8 00.6	46	40.5	44.0	217	04.8	26.2	356	29.1	41.2	
10	192	47.9	349	48.0	01.8	61	41.9	43.8	232	07.1	26.1	11	31.3	41.1	
11	207	50.4	4	47.5	-8 02.9	76	43.2	+19 43.6	247	09.4	-16 26.1	26	33.5	+1 41.0	
12	222	52.8	19	47.1	-8 04.1	91	44.6	+19 43.4	262	11.7	-16 26.0	41	35.7	+1 40.9	
13	237	55.3	34	46.6	05.3	106	46.0	43.2	277	14.0	26.0	56	38.0	40.8	
14	252	57.8	49	46.1	06.5	121	47.3	42.9	292	16.3	25.9	71	40.2	40.7	
15	268	00.2	64	45.7	07.6	136	48.7	42.7	307	18.6	25.9	86	42.4	40.6	
16	283	02.7	79	45.2	08.8	151	50.1	42.5	322	20.9	25.8	101	44.6	40.6	
17	298	05.2	94	44.7	-8 10.0	166	51.4	+19 42.3	337	23.2	-16 25.7	116	46.9	+1 40.5	
18	313	07.6	109	44.3	-8 11.1	181	52.8	+19 42.1	352	25.5	-16 25.7	131	49.1	+1 40.4	
19	328	10.1	124	43.8	12.3	196	54.2	41.9	7	27.8	25.6	146	51.3	40.3	
20	343	12.6	139	43.4	13.5	211	55.5	41.7	22	30.1	25.6	161	53.5	40.2	
21	358	15.0	154	42.9	14.7	226	56.9	41.5	37	32.3	25.5	176	55.7	40.1	
22	13	17.5	169	42.4	15.8	241	58.3	41.3	52	34.6	25.4	191	58.0	40.0	
23	28	20.0	184	42.0	17.0	256	59.7	41.1	67	36.9	25.4	207	00.2	39.9	
24	43	22.4	199	41.5	-8 18.2	272	01.0	+19 40.9	82	39.2	-16 25.3	222	02.4	+1 39.8	
Dif	—		-5	-12		+14	-2		+23		+1		+22		-1

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1			Edad: 16 ^d 8 PHE { 4 ^h : 58 ^m 8 12 ^h : 58 ^m 9 20 ^h : 59 ^m 0										
	PMG: 11 ^h 43 ^m 6			SD: 16 ^h 0 PMG: 0 ^h 43 ^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	184	06.4	-15 20.7	349	33.8	+23 36.9	65	60 N	15 56	16 42	17 32	15 45 49	10 35 79	
1	199	06.4	21.4	3	58.7	59 43.4	65	58	16 05	48	35	16 08 52	10 13 76	
2	214	06.4	22.2	18	23.5	58 49.8	64	56	13	53	37	27 53	9 54 74	
3	229	06.4	23.0	32	48.3	58 +23 56.0	62	54	20	16 58	40	42 55	39 72	
4	244	06.3	23.8	47	13.0	57 +24 02.1	61	52	26	17 02	42	16 56 55	26 71	
5	259	06.3	-15 24.5	61	37.6	56 +24 08.0	59	50	16 32	17 06	17 44	17 08 56	9 14 70	
6	274	06.3	-15 25.3	76	02.1	55 +24 13.8	58	45	16 44	17 15	17 50	17 33 57	8 50 68	
7	289	06.3	26.1	90	26.5	54 19.4	56	40	16 54	22	55	17 52 59	31 67	
8	304	06.3	26.8	104	50.9	54 24.8	54	35	17 03	29	17 59	18 09 59	15 65	
9	319	06.3	27.6	119	15.2	53 30.1	53	30	11	35	18 04	23 60	8 01 65	
10	334	06.3	28.4	133	39.4	52 35.3	52	20	24	47	13	18 48 60	7 37 63	
11	349	06.3	-15 29.1	148	03.6	52 +24 40.2	49	10 N	17 36	17 58	18 23	19 09 61	7 17 61	
12	4	06.3	-15 29.9	162	27.7	51 +24 45.1	49	0	17 47	18 09	18 33	19 29 61	6 57 61	
13	19	06.3	30.7	176	51.7	50 49.7	46	10 S	17 58	20	18 46	19 49 62	38 60	
14	34	06.3	31.4	191	15.6	49 54.2	45	20	18 11	34	19 01	20 10 63	6 18 58	
15	49	06.2	32.2	205	39.5	49 +24 58.5	43	30	25	18 50	21	35 63	5 55 56	
16	64	06.2	33.0	220	03.3	48 +25 02.7	42	35	33	19 00	33	20 50 63	41 55	
17	79	06.2	-15 33.7	234	27.1	48 +25 06.7	40	40	18 42	19 12	19 48	21 07 63	5 25 53	
18	94	06.2	-15 34.5	248	50.8	47 +25 10.6	39	45	18 53	19 26	20 07	21 27 64	5 06 52	
19	109	06.2	35.2	263	14.4	46 14.2	36	50	19 07	44	31	21 53 65	4 43 48	
20	124	06.2	36.0	277	38.0	46 17.7	35	52	13	19 53	44	22 06 64	31 48	
21	139	06.2	36.8	292	01.5	45 21.0	33	54	20	20 02	20 59	20 65	19 45	
22	154	06.2	37.5	306	25.0	45 24.2	32	56	28	13	21 16	37 65	4 04 43	
23	169	06.1	38.3	320	48.4	44 27.2	30	58	37	26	21 39	22 57 66	3 47 40	
24	184	06.1	-15 39.1	335	11.8	44 +25 30.0	28	60 S	19 47	20 42	22 09	23 22 66	3 26 35	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 21 ^h 03 ^m 0		Mag: -3.9 PMG: 10 ^h 42 ^m			Mag: +0.4 PMG: 5 ^h 51 ^m			Mag: -2.5 PMG: 18 ^h 27 ^m			Mag: +1.1 PMG: 9 ^h 10 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	43	22.4	199 41.5	-8 18.2	272 01.0	+19 40.9	82	39.2	-16 25.3	222 02.4	+1 39.8			
1	58	24.9	214 41.0	19.3	287 02.4	40.7	97	41.5	25.3	237 04.6	39.7			
2	73	27.3	229 40.6	20.5	302 03.8	40.5	112	43.8	25.2	252 06.9	39.6			
3	88	29.8	244 40.1	21.7	317 05.2	40.3	127	46.1	25.1	267 09.1	39.5			
4	103	32.3	259 39.6	22.8	332 06.5	40.1	142	48.4	25.1	282 11.3	39.4			
5	118	34.7	274 39.2	-8 24.0	347 07.9	+19 39.8	157	50.7	-16 25.0	297 13.5	+1 39.3			
6	133	37.2	289 38.7	-8 25.2	2 09.3	+19 39.6	172	52.9	-16 25.0	312 15.7	+1 39.2			
7	148	39.7	304 38.2	26.3	17 10.6	39.4	187	55.2	24.9	327 18.0	39.1			
8	163	42.1	319 37.8	27.5	32 12.0	39.2	202	57.5	24.8	342 20.2	39.0			
9	178	44.6	334 37.3	28.7	47 13.4	39.0	217	59.8	24.8	357 22.4	38.9			
10	193	47.1	349 36.8	29.8	62 14.8	38.8	233	02.1	24.7	12 24.6	38.8			
11	208	49.5	4 36.4	-8 31.0	77 16.2	+19 38.6	248	04.4	-16 24.7	27 26.9	+1 38.7			
12	223	52.0	19 35.9	-8 32.2	92 17.5	+19 38.4	263	06.7	-16 24.6	42 29.1	+1 38.6			
13	238	54.4	34 35.4	33.3	107 18.9	38.2	278	09.0	24.5	57 31.3	38.5			
14	253	56.9	49 35.0	34.5	122 20.3	38.0	293	11.2	24.5	72 33.5	38.4			
15	268	59.4	64 34.5	35.7	137 21.7	37.8	308	13.5	24.4	87 35.8	38.3			
16	284	01.8	79 34.0	36.8	152 23.1	37.6	323	15.8	24.4	102 38.0	38.2			
17	299	04.3	94 33.6	-8 38.0	167 24.4	+19 37.4	338	18.1	-16 24.3	117 40.2	+1 38.1			
18	314	06.8	109 33.1	-8 39.2	182 25.8	+19 37.2	353	20.4	-16 24.2	132 42.4	+1 38.0			
19	329	09.2	124 32.6	40.3	197 27.2	37.0	8	22.7	24.2	147 44.7	37.9			
20	344	11.7	139 32.2	41.5	212 28.6	36.8	23	24.9	24.1	162 46.9	37.8			
21	359	14.2	154 31.7	42.7	227 30.0	36.6	38	27.2	24.1	177 49.1	37.7			
22	14	16.6	169 31.2	43.8	242 31.4	36.4	53	29.5	24.0	192 51.3	37.7			
23	29	19.1	184 30.7	45.0	257 32.7	36.1	68	31.8	23.9	207 53.6	37.6			
24	44	21.6	199 30.3	-8 46.2	272 34.1	+19 35.9	83	34.1	-16 23.9	222 55.8	+1 37.5			
Dif	—		-5	-12	+14	-2	+23	+1		+22	-1			

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16.1 PMG: 11 ^h 43 ^m 6			Edad: 17 ^d 8 PHE { 4 ^h : 59.1 12 ^h : 59.2 20 ^h : 59.3 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	184	06.1	-15	335	11.8	+25	30.0	27	60 N	5	56	6	46	7	33	16	34
1	199	06.1		349	35.2		32.7	27	58		53		41		24	17	00
2	214	06.1		3	58.5		35.1	24	56		51		35		16	20	73
3	229	06.1		18	21.7		37.4	23	54		48		30		09	37	71
4	244	06.1		32	44.9		39.6	22	52		46		26	7	02	17	51
5	259	06.1	-15	47	08.1	+25	41.5	19	50	5	43	6	22	6	56	18	04
6	274	06.0	-15	61	31.3	+25	43.3	18	45	5	38	6	13	6	44	18	30
7	289	06.0		75	54.4		44.9	16	40		33		05		34	18	51
8	304	06.0		90	17.5		46.3	14	35		28		58		25	19	08
9	319	06.0		104	40.5		47.6	13	30		24		52		17	23	65
10	334	06.0		119	03.6		48.6	10	20		14		41	6	03	19	48
11	349	05.9	-15	133	26.6	+25	49.5	9	10 N	5	05	5	30	5	51	20	10
12	4	05.9	-15	147	49.6	+25	50.2	7	0	4	54	5	19	5	40	20	30
13	19	05.9		162	12.6		50.8	6	10 S		41		07		29	20	51
14	34	05.9		176	35.5		51.1	3	20		26		53		16	21	13
15	49	05.9		190	58.5		51.3	2	30		4	06	37	5	02	38	57
16	64	05.9		205	21.4		51.3	0	35		3	54	27	4	54	21	53
17	79	05.8	-15	219	44.4	+25	51.1	2	40		3	39	4	15	4	22	10
18	94	05.8	-15	234	07.3	+25	50.8	3	45		3	20	4	01	4	22	31
19	109	05.8		248	30.2		50.3	5	50		2	55	3	43		20	58
20	124	05.8		262	53.1		49.5	8	52			43	34		13	23	10
21	139	05.7		277	16.1		48.6	9	54			28	24	4	06		25
22	154	05.7		291	39.0		47.6	10	56		2	10	13	3	58	23	42
23	169	05.7		306	01.9		46.3	13	58		1	48	3	00		**	**
24	184	05.7	-15	320	24.8	+25	44.9	14	60 S	1	17	2	45	3	39	**	**

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 20 ^h 59 ^m 1		Mag: -3.9 PMG: 10 ^h 42 ^m		Mag: +0.4 PMG: 5 ^h 49 ^m		Mag: -2.5 PMG: 18 ^h 23 ^m		Mag: +1.1 PMG: 9 ^h 07 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	44	21.6	199	30.3	-8	46.2	272	34.1	+19	35.9	83	34.1	-16	23.9	222	55.8	+1	37.5
1	59	24.0	214	29.8		47.3	287	35.5		35.7	98	36.4		23.8	237	58.0		37.4
2	74	26.5	229	29.3		48.5	302	36.9		35.5	113	38.6		23.7	253	00.2		37.3
3	89	28.9	244	28.9		49.6	317	38.3		35.3	128	40.9		23.7	268	02.5		37.2
4	104	31.4	259	28.4		50.8	332	39.7		35.1	143	43.2		23.6	283	04.7		37.1
5	119	33.9	274	27.9	-8	52.0	347	41.1	+19	34.9	158	45.5	-16	23.6	298	06.9	+1	37.0
6	134	36.3	289	27.4	-8	53.1	2	42.5	+19	34.7	173	47.8	-16	23.5	313	09.1	+1	36.9
7	149	38.8	304	27.0		54.3	17	43.9		34.5	188	50.0		23.4	328	11.4		36.8
8	164	41.3	319	26.5		55.4	32	45.2		34.3	203	52.3		23.4	343	13.6		36.7
9	179	43.7	334	26.0		56.6	47	46.6		34.1	218	54.6		23.3	358	15.8		36.6
10	194	46.2	349	25.5		57.8	62	48.0		33.9	233	56.9		23.2	13	18.0		36.5
11	209	48.7	4	25.1	-8	58.9	77	49.4	+19	33.7	248	59.2	-16	23.2	28	20.3	+1	36.4
12	224	51.1	19	24.6	-9	00.1	92	50.8	+19	33.5	264	01.4	-16	23.1	43	22.5	+1	36.3
13	239	53.6	34	24.1		01.2	107	52.2		33.3	279	03.7		23.1	58	24.7		36.2
14	254	56.1	49	23.6		02.4	122	53.6		33.1	294	06.0		23.0	73	26.9		36.1
15	269	58.5	64	23.2		03.5	137	55.0		32.9	309	08.3		22.9	88	29.2		36.0
16	285	01.0	79	22.7		04.7	152	56.4		32.7	324	10.5		22.9	103	31.4		35.9
17	300	03.4	94	22.2	-9	05.9	167	57.8	+19	32.5	339	12.8	-16	22.8	118	33.6	+1	35.8
18	315	05.9	109	21.7	-9	07.0	182	59.2	+19	32.3	354	15.1	-16	22.7	133	35.8	+1	35.7
19	330	08.4	124	21.2		08.2	198	00.6		32.1	9	17.4		22.7	148	38.1		35.6
20	345	10.8	139	20.8		09.3	213	02.0		31.9	24	19.7		22.6	163	40.3		35.6
21	0	13.3	154	20.3		10.5	228	03.4		31.7	39	21.9		22.5	178	42.5		35.5
22	15	15.8	169	19.8		11.6	243	04.8		31.5	54	24.2		22.5	193	44.7		35.4
23	30	18.2	184	19.3		12.8	258	06.2		31.3	69	26.5		22.4	208	47.0		35.3
24	45	20.7	199	18.9	-9	13.9	273	07.6	+19	31.1	84	28.8	-16	22.4	223	49.2	+1	35.2
Dif	—		-5	-12			+14	-2			+23	+1			+22	-1		

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16'1			Edad: 18 ^d 8 PHE { 4 ^h : 59'4 12 ^h : 59'4 20 ^h : 59'4					Civil			Hora		Hora	
	PMG: 11 ^h 43 ^m 6			SD: 16'2 PMG: 2 ^h 45 ^m R°: 61 ^m					Náutico			R°		R°	
	hG ☉	Dec		hG ☾	Dif	Dec	Dif								
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	m
0	184	05.7	-15 57.2	320	24.8	+25 44.9	16	60 N	15 51	16 38	17 28	17 51 97	12 46 28		
1	199	05.7	57.9	334	47.8	40 43.3	16	58	16 01	44	31	18 14 91	22 34		
2	214	05.6	58.7	349	10.8	40 41.5	18	56	09	49	34	33 87	12 04 37		
3	229	05.6	-15 59.4	3	33.7	39 39.5	20	54	16	54	37	18 48 84	11 48 40		
4	244	05.6	-16 00.2	17	56.7	40 37.4	21	52	23	16 59	39	19 02 81	34 42		
5	259	05.6	-16 00.9	32	19.7	40 +25 35.1	23	50	16 29	17 03	17 42	19 14 79	11 22 44		
6	274	05.5	-16 01.7	46	42.8	41 +25 32.6	25	45	16 41	17 12	17 47	19 38 75	10 57 48		
7	289	05.5	02.4	61	05.8	40 29.9	27	40	16 52	20	53	19 58 72	37 50		
8	304	05.5	03.2	75	28.9	41 27.1	28	35	17 01	28	17 58	20 14 70	20 52		
9	319	05.5	03.9	89	52.0	41 24.0	31	30	09	34	18 03	28 68	10 06 54		
10	334	05.4	04.7	104	15.2	42 20.9	31	20	23	46	12	20 52 65	9 41 57		
11	349	05.4	-16 05.4	118	38.3	41 +25 17.5	34	10 N	17 35	17 57	18 22	21 13 61	9 20 58		
12	4	05.4	-16 06.1	133	01.6	43 +25 13.9	36	0	17 47	18 09	18 34	21 32 59	9 00 60		
13	19	05.3	06.9	147	24.8	42 10.2	37	10 S	17 59	21	18 47	21 51 57	8 40 62		
14	34	05.3	07.6	161	48.1	43 06.3	39	20	18 12	35	19 02	22 12 53	8 18 65		
15	49	05.3	08.4	176	11.4	43 +25 02.3	40	30	26	18 52	22	35 50	7 53 67		
16	64	05.3	09.1	190	34.8	44 +24 58.0	43	35	35	19 02	35	22 49 48	38 69		
17	79	05.2	-16 09.9	204	58.2	44 +24 53.6	44	40	18 45	19 14	19 51	23 05 46	7 21 70		
18	94	05.2	-16 10.6	219	21.6	44 +24 49.0	46	45	18 56	19 29	20 10	23 24 43	7 01 72		
19	109	05.2	11.3	233	45.2	46 44.3	47	50	19 10	48	36	23 48 38	6 35 75		
20	124	05.1	12.1	248	08.7	45 39.4	49	52	17	19 57	20 49	** ** *	22 77		
21	139	05.1	12.8	262	32.3	46 34.3	51	54	24	20 07	21 05	** ** *	6 07 79		
22	154	05.1	13.6	276	56.0	47 29.1	52	56	33	19	23	** ** *	5 51 81		
23	169	05.0	14.3	291	19.7	47 23.7	54	58	42	32	21 48	0 03 42	30 85		
24	184	05.0	-16 15.0	305	43.5	48 +24 18.1	56	60 S	19 53	20 48	22 22	0 28 38	5 04 90		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 20 ^h 55 ^m 2		Mag: -3.9 PMG: 10 ^h 43 ^m		Mag: +0.4 PMG: 5 ^h 47 ^m		Mag: -2.5 PMG: 18 ^h 19 ^m		Mag: +1.1 PMG: 9 ^h 03 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	45	20.7	199	18.9	-9 13.9	273 07.6	+19 31.1	84 28.8	-16 22.4	223 49.2	+1 35.2
1	60	23.2	214	18.4	15.1	288 09.0	30.9	99 31.0	22.3	238 51.4	35.1
2	75	25.6	229	17.9	16.3	303 10.4	30.7	114 33.3	22.2	253 53.6	35.0
3	90	28.1	244	17.4	17.4	318 11.8	30.5	129 35.6	22.2	268 55.9	34.9
4	105	30.6	259	16.9	18.6	333 13.2	30.3	144 37.8	22.1	283 58.1	34.8
5	120	33.0	274	16.4	-9 19.7	348 14.6	+19 30.1	159 40.1	-16 22.0	299 00.3	+1 34.7
6	135	35.5	289	16.0	-9 20.9	3 16.0	+19 29.8	174 42.4	-16 22.0	314 02.6	+1 34.6
7	150	37.9	304	15.5	22.0	18 17.4	29.6	189 44.7	21.9	329 04.8	34.5
8	165	40.4	319	15.0	23.2	33 18.8	29.4	204 46.9	21.8	344 07.0	34.4
9	180	42.9	334	14.5	24.3	48 20.2	29.2	219 49.2	21.8	359 09.2	34.3
10	195	45.3	349	14.0	25.5	63 21.6	29.0	234 51.5	21.7	14 11.5	34.2
11	210	47.8	4	13.5	-9 26.6	78 23.0	+19 28.8	249 53.8	-16 21.6	29 13.7	+1 34.1
12	225	50.3	19	13.1	-9 27.8	93 24.4	+19 28.6	264 56.0	-16 21.6	44 15.9	+1 34.0
13	240	52.7	34	12.6	28.9	108 25.9	28.4	279 58.3	21.5	59 18.1	33.9
14	255	55.2	49	12.1	30.1	123 27.3	28.2	295 00.6	21.5	74 20.4	33.8
15	270	57.7	64	11.6	31.2	138 28.7	28.0	310 02.8	21.4	89 22.6	33.8
16	286	00.1	79	11.1	32.4	153 30.1	27.8	325 05.1	21.3	104 24.8	33.7
17	301	02.6	94	10.6	-9 33.5	168 31.5	+19 27.6	340 07.4	-16 21.3	119 27.1	+1 33.6
18	316	05.1	109	10.2	-9 34.7	183 32.9	+19 27.4	355 09.6	-16 21.2	134 29.3	+1 33.5
19	331	07.5	124	09.7	35.8	198 34.3	27.2	10 11.9	21.1	149 31.5	33.4
20	346	10.0	139	09.2	37.0	213 35.7	27.0	25 14.2	21.1	164 33.7	33.3
21	1	12.4	154	08.7	38.1	228 37.2	26.8	40 16.5	21.0	179 36.0	33.2
22	16	14.9	169	08.2	39.3	243 38.6	26.6	55 18.7	20.9	194 38.2	33.1
23	31	17.4	184	07.7	40.4	258 40.0	26.4	70 21.0	20.9	209 40.4	33.0
24	46	19.8	199	07.2	-9 41.5	273 41.4	+19 26.2	85 23.3	-16 20.8	224 42.7	+1 32.9
Dif	—		-5	-11		+14	-2	+23	+1	+22	-1

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'1			Edad: 19 ^d 8	PHE	4 ^h : 59'4		R°: 59 ^m		Náutico	Civil		Hora	R°	Hora	R°	
	PMG: 11 ^h 43 ^m 7					12 ^h : 59'4											20 ^h : 59'4
	hG ☉	Dec		hG ☾	Dif	Dec	Dif										
h	°	'	°	°	'	°	'	°		h	m	h	m	h	m	h	m
0	184	05.0	-16	15.0	305	43.5	+24	18.1	60 N	6	01	6	51	7	38	19	28
1	199	05.0		15.8	320	07.3	48	12.3	58	5	57		45	28		19	45
2	214	04.9		16.5	334	31.2	49	06.4	59	56	54		39	20		20	00
3	229	04.9		17.3	348	55.1	49	+24	00.4	60	52		34	12		12	89
4	244	04.9		18.0	3	19.1	50	+23	54.2	62	49		29	06		23	86
5	259	04.8	-16	18.7	17	43.2	51	+23	47.8	64	50	5	46	6	25	7	00
6	274	04.8	-16	19.5	32	07.4	52	+23	41.2	66	45	5	41	6	16	6	47
7	289	04.8		20.2	46	31.6	52		34.6	66	40		35	07	36	21	10
8	304	04.7		20.9	60	55.9	53		27.7	69	35		30	6	00	24	70
9	319	04.7		21.7	75	20.2	53		20.7	70	30		25	5	54	36	68
10	334	04.7		22.4	89	44.6	54		13.5	72	20		15	42	6	04	21
11	349	04.6	-16	23.1	104	09.1	55	+23	06.2	73	10 N	5	05	5	30	5	52
12	4	04.6	-16	23.9	118	33.7	56	+22	58.8	74	0	4	54	5	19	5	40
13	19	04.6		24.6	132	58.3	56		51.2	76	10 S		41	5	06	28	22
14	34	04.5		25.3	147	23.0	57		43.4	78	20		25	4	52	15	23
15	49	04.5		26.1	161	47.8	58		35.5	79	30		4	05	35	5	01
16	64	04.4		26.8	176	12.7	59		27.5	80	35		3	52	25	4	52
17	79	04.4	-16	27.5	190	37.6	59	+22	19.3	82	40		3	36	4	12	4
18	94	04.4	-16	28.3	205	02.6	60	+22	10.9	84	45		3	17	3	58	4
19	109	04.3		29.0	219	27.7	61	+22	02.4	85	50		2	51	39	16	23
20	124	04.3		29.7	233	52.9	62	+21	53.8	86	52			38	30	10	0
21	139	04.3		30.4	248	18.2	63		45.1	87	54			22	20	4	02
22	154	04.2		31.2	262	43.5	63		36.2	89	56			2	03	3	08
23	169	04.2		31.9	277	09.0	65		27.1	91	58			1	39	2	54
24	184	04.1	-16	32.6	291	34.5	65	+21	18.0	91	60 S		1	04	2	38	3

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 20 ^h 51 ^m 3		Mag: -3.9 PMG: 10 ^h 44 ^m		Mag: +0.4 PMG: 5 ^h 45 ^m		Mag: -2.5 PMG: 18 ^h 16 ^m		Mag: +1.1 PMG: 9 ^h 00 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	46	19.8	199	07.2	-9	41.5	273	41.4	85	23.3
1	61	22.3	214	06.7		42.7	288	42.8	100	25.5
2	76	24.8	229	06.2		43.8	303	44.2	115	27.8
3	91	27.2	244	05.8		45.0	318	45.7	130	30.1
4	106	29.7	259	05.3		46.1	333	47.1	145	32.3
5	121	32.2	274	04.8	-9	47.3	348	48.5	160	34.6
6	136	34.6	289	04.3	-9	48.4	3	49.9	175	36.9
7	151	37.1	304	03.8		49.6	18	51.3	190	39.1
8	166	39.6	319	03.3		50.7	33	52.8	205	41.4
9	181	42.0	334	02.8		51.8	48	54.2	220	43.6
10	196	44.5	349	02.3		53.0	63	55.6	235	45.9
11	211	46.9	4	01.8	-9	54.1	78	57.0	250	48.2
12	226	49.4	19	01.3	-9	55.3	93	58.5	265	50.4
13	241	51.9	34	00.8		56.4	108	59.9	280	52.7
14	256	54.3	49	00.3		57.5	124	01.3	295	55.0
15	271	56.8	63	59.9		58.7	139	02.7	310	57.2
16	286	59.3	78	59.4	-9	59.8	154	04.2	325	59.5
17	302	01.7	93	58.9	-10	01.0	169	05.6	341	01.8
18	317	04.2	108	58.4	-10	02.1	184	07.0	356	04.0
19	332	06.7	123	57.9		03.2	199	08.4	11	06.3
20	347	09.1	138	57.4		04.4	214	09.9	26	08.5
21	2	11.6	153	56.9		05.5	229	11.3	41	10.8
22	17	14.0	168	56.4		06.7	244	12.7	56	13.1
23	32	16.5	183	55.9		07.8	259	14.2	71	15.3
24	47	19.0	198	55.4	-10	08.9	274	15.6	86	17.6
Dif	—		-5		-11		+14		+23	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16'1 PMG: 11 ^h 43 ^m 8			Edad: 20 ^d 8 PHE { 4 ^h : 59'4 12 ^h : 59'4 20 ^h : 59'3 PMG: 4 ^h 45 ^m R°: 54 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m m	h m m m	h m m m		
0	184	04.1	-16	32.6	291	34.5	+21	18.0	60 N	15 46	16 33	17 24	21 09 100	13 29 9		
1	199	04.1		33.4	306	00.1	66	+21	08.7	93	58	15 56	40	27	21 96	17 13
2	214	04.0		34.1	320	25.7	66	+20	59.3	94	56	16 05	46	30	32 91	13 06 17
3	229	04.0		34.8	334	51.5	68		49.7	96	54	12	51	33	41 88	12 56 20
4	244	04.0		35.5	349	17.3	68		40.0	97	52	19	16 56	36	49 85	47 23
5	259	03.9	-16	36.3	3	43.3	70	+20	30.2	98	50	16 26	17 00	17 39	21 56 82	12 39 26
6	274	03.9	-16	37.0	18	09.3	70	+20	20.3	99	45	16 39	17 10	17 45	22 11 77	12 22 31
7	289	03.8		37.7	32	35.4	71	+20	10.2	101	40	50	19	51	24 73	12 09 34
8	304	03.8		38.4	47	01.6	72	+20	00.0	102	35	16 59	26	17 56	34 70	11 57 38
9	319	03.7		39.2	61	27.8	72	+19	49.7	103	30	17 08	33	18 01	22 44 66	46 41
10	334	03.7		39.9	75	54.2	74		39.3	104	20	22	45	12	23 00 61	28 46
11	349	03.7	-16	40.6	90	20.6	74	+19	28.7	106	10 N	17 35	17 57	18 22	23 14 56	11 13 50
12	4	03.6	-16	41.3	104	47.2	76	+19	18.1	106	0	17 47	18 09	18 34	23 27 52	10 58 54
13	19	03.6		42.0	119	13.8	76	+19	07.3	108	10 S	17 59	22	18 47	40 47	43 58
14	34	03.5		42.8	133	40.5	77	+18	56.4	109	20	18 13	36	19 03	23 53 44	27 62
15	49	03.5		43.5	148	07.3	78		45.4	110	30	28	18 54	24	*** ** *	10 08 68
16	64	03.4		44.2	162	34.1	78		34.3	111	35	37	19 04	38	*** ** *	9 58 70
17	79	03.4	-16	44.9	177	01.1	80	+18	23.1	112	40	18 47	19 17	19 54	*** ** *	9 45 74
18	94	03.3	-16	45.6	191	28.1	80	+18	11.8	113	45	18 59	19 32	20 14	0 07 33	9 30 78
19	109	03.3		46.4	205	55.3	82	+18	00.3	115	50	19 14	19 52	41	26 29	12 83
20	124	03.2		47.1	220	22.5	82	+17	48.8	115	52	21	20 01	20 54	35 27	9 03 86
21	139	03.2		47.8	234	49.8	83		37.2	116	54	28	12	21 11	46 23	8 53 89
22	154	03.1		48.5	249	17.2	84		25.4	118	56	37	24	31	0 57 20	42 93
23	169	03.1		49.2	263	44.6	84		13.6	118	58	47	38	21 57	1 11 16	30 96
24	184	03.0	-16	49.9	278	12.2	86	+17	01.7	119	60 S	19 58	20 55	22 37	1 26 11	8 15 102

UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO								
	PMG: 20 ^h 47 ^m 3		Mag: -3.9 PMG: 10 ^h 45 ^m		Mag: +0.3 PMG: 5 ^h 42 ^m		Mag: -2.4 PMG: 18 ^h 12 ^m			Mag: +1.1 PMG: 8 ^h 56 ^m								
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	47	19.0	198	55.4	-10	08.9	274	15.6	+19	21.5	86	17.6	-16	19.2	225	36.2	+1	30.7
1	62	21.4	213	54.9		10.1	289	17.0		21.3	101	19.8		19.1	240	38.4		30.6
2	77	23.9	228	54.4		11.2	304	18.5		21.1	116	22.1		19.0	255	40.6		30.5
3	92	26.4	243	53.9		12.3	319	19.9		20.9	131	24.4		19.0	270	42.9		30.4
4	107	28.8	258	53.4		13.5	334	21.3		20.7	146	26.6		18.9	285	45.1		30.3
5	122	31.3	273	52.9	-10	14.6	349	22.8	+19	20.5	161	28.9	-16	18.8	300	47.3	+1	30.2
6	137	33.8	288	52.4	-10	15.7	4	24.2	+19	20.3	176	31.1	-16	18.8	315	49.6	+1	30.1
7	152	36.2	303	51.9		16.9	19	25.6		20.1	191	33.4		18.7	330	51.8		30.0
8	167	38.7	318	51.4		18.0	34	27.1		19.9	206	35.6		18.6	345	54.0		29.9
9	182	41.2	333	50.9		19.1	49	28.5		19.7	221	37.9		18.5	0	56.3		29.8
10	197	43.6	348	50.4		20.3	64	29.9		19.5	236	40.2		18.5	15	58.5		29.7
11	212	46.1	3	49.9	-10	21.4	79	31.4	+19	19.3	251	42.4	-16	18.4	31	00.7	+1	29.7
12	227	48.5	18	49.4	-10	22.5	94	32.8	+19	19.1	266	44.7	-16	18.3	46	03.0	+1	29.6
13	242	51.0	33	48.9		23.7	109	34.3		18.9	281	46.9		18.3	61	05.2		29.5
14	257	53.5	48	48.4		24.8	124	35.7		18.7	296	49.2		18.2	76	07.4		29.4
15	272	55.9	63	47.9		25.9	139	37.1		18.5	311	51.4		18.1	91	09.7		29.3
16	287	58.4	78	47.4		27.1	154	38.6		18.3	326	53.7		18.1	106	11.9		29.2
17	303	00.9	93	46.9	-10	28.2	169	40.0	+19	18.1	341	56.0	-16	18.0	121	14.1	+1	29.1
18	318	03.3	108	46.4	-10	29.3	184	41.5	+19	17.9	356	58.2	-16	17.9	136	16.3	+1	29.0
19	333	05.8	123	45.9		30.4	199	42.9		17.7	12	00.5		17.8	151	18.6		28.9
20	348	08.3	138	45.4		31.6	214	44.4		17.5	27	02.7		17.8	166	20.8		28.8
21	3	10.7	153	44.9		32.7	229	45.8		17.3	42	05.0		17.7	181	23.0		28.7
22	18	13.2	168	44.4		33.8	244	47.3		17.1	57	07.2		17.6	196	25.3		28.6
23	33	15.7	183	43.8		35.0	259	48.7		16.9	72	09.5		17.6	211	27.5		28.5
24	48	18.1	198	43.3	-10	36.1	274	50.2	+19	16.7	87	11.7	-16	17.5	226	29.7	+1	28.5
Dif	—		-5		-11		+14		-2		+23		+1		+22		-1	

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16.1 PMG: 11 ^h 43 ^m 8			Edad: 21 ^d 8 PHE { SD: 16.1 PMG: 5 ^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	184	03.0	-16 49.9	278	12.2	+17 01.7		60 N	6 05	6 56	7 43	22 49 97	13 38 7			
1	199	03.0	50.7	292	39.8 86	+16 49.6 121		58	6 01	49	33	22 57 92	30 10			
2	214	02.9	51.4	307	07.5 87	37.5 121		56	5 58	43	24	23 03 89	23 13			
3	229	02.9	52.1	321	35.3 88	25.3 122		54	55	38	16	09 86	16 16			
4	244	02.8	52.8	336	03.2 89	13.0 123		52	52	33	09	14 83	10 19			
5	259	02.8	-16 53.5	350	31.2 90	+16 00.6 124		50	5 49	6 28	7 03	23 18 81	13 05 20			
6	274	02.7	-16 54.2	4	59.2 90	+15 48.1 125		45	5 43	6 18	6 49	23 28 76	12 53 26			
7	289	02.7	54.9	19	27.4 92	35.5 126		40	37	10	38	37 71	43 30			
8	304	02.6	55.6	33	55.6 92	22.9 126		35	32	6 02	29	44 67	35 33			
9	319	02.6	56.4	48	23.8 92	+15 10.1 128		30	26	5 55	20	23 50 64	27 36			
10	334	02.5	57.1	62	52.2 94	+14 57.3 128		20	16	43	6 05	** ** *	14 42			
11	349	02.5	-16 57.8	77	20.6 94	+14 44.4 129		10 N	5 05	5 31	5 53	** ** *	12 03 46			
12	4	02.4	-16 58.5	91	49.2 96	+14 31.4 130		0	4 54	5 19	5 40	** ** *	11 52 51			
13	19	02.4	59.2	106	17.8 96	18.4 130		10 S	40	5 06	28	** ** *	41 55			
14	34	02.3	-16 59.9	120	46.4 96	+14 05.2 132		20	24	4 51	5 15	** ** *	29 60			
15	49	02.2	-17 00.6	135	15.2 98	+13 52.0 132		30	4 03	34	4 59	0 09 38	16 65			
16	64	02.2	01.3	149	44.0 98	38.7 133		35	3 50	23	50	18 35	11 08 68			
17	79	02.1	-17 02.0	164	12.9 99	+13 25.4 133		40	3 34	4 10	4 40	0 28 32	10 59 72			
18	94	02.1	-17 02.7	178	41.8 99	+13 11.9 135		45	3 13	3 55	4 28	0 40 28	10 48 77			
19	109	02.0	03.4	193	10.9 101	+12 58.5 134		50	2 46	35	13	0 55 22	35 82			
20	124	02.0	04.1	207	40.0 101	44.9 136		52	33	26	4 06	1 02 20	29 85			
21	139	01.9	04.9	222	09.2 102	31.3 136		54	2 16	15	3 59	09 18	22 88			
22	154	01.8	05.6	236	38.4 102	17.6 137		56	1 56	3 03	50	17 15	15 90			
23	169	01.8	06.3	251	07.7 103	+12 03.8 138		58	1 30	2 49	40	27 11	10 06 95			
24	184	01.7	-17 07.0	265	37.1 104	+11 50.0 138		60 S	0 50	2 32	3 29	1 37 7	9 57 98			

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 20 ^h 43 ^m 4		Mag: -3.9 PMG: 10 ^h 45 ^m		Mag: +0.3 PMG: 5 ^h 40 ^m		Mag: -2.4 PMG: 18 ^h 08 ^m		Mag: +1.1 PMG: 8 ^h 53 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	48	18.1	198 43.3	-10 36.1	274 50.2	+19 16.7	87 11.7	-16 17.5	226 29.7	+1 28.5
1	63	20.6	213 42.8	37.2	289 51.6	16.5	102 14.0	17.4	241 32.0	28.4
2	78	23.0	228 42.3	38.3	304 53.0	16.4	117 16.2	17.3	256 34.2	28.3
3	93	25.5	243 41.8	39.5	319 54.5	16.2	132 18.5	17.3	271 36.4	28.2
4	108	28.0	258 41.3	40.6	334 55.9	16.0	147 20.7	17.2	286 38.7	28.1
5	123	30.4	273 40.8	-10 41.7	349 57.4	+19 15.8	162 23.0	-16 17.1	301 40.9	+1 28.0
6	138	32.9	288 40.3	-10 42.8	4 58.9	+19 15.6	177 25.2	-16 17.1	316 43.1	+1 27.9
7	153	35.4	303 39.8	44.0	20 00.3	15.4	192 27.5	17.0	331 45.4	27.8
8	168	37.8	318 39.3	45.1	35 01.8	15.2	207 29.7	16.9	346 47.6	27.7
9	183	40.3	333 38.8	46.2	50 03.2	15.0	222 32.0	16.8	1 49.8	27.6
10	198	42.8	348 38.3	47.3	65 04.7	14.8	237 34.2	16.8	16 52.1	27.5
11	213	45.2	3 37.7	-10 48.5	80 06.1	+19 14.6	252 36.5	-16 16.7	31 54.3	+1 27.5
12	228	47.7	18 37.2	-10 49.6	95 07.6	+19 14.4	267 38.7	-16 16.6	46 56.5	+1 27.4
13	243	50.2	33 36.7	50.7	110 09.0	14.2	282 41.0	16.6	61 58.8	27.3
14	258	52.6	48 36.2	51.8	125 10.5	14.0	297 43.2	16.5	77 01.0	27.2
15	273	55.1	63 35.7	52.9	140 11.9	13.8	312 45.5	16.4	92 03.3	27.1
16	288	57.5	78 35.2	54.1	155 13.4	13.6	327 47.7	16.3	107 05.5	27.0
17	304	00.0	93 34.7	-10 55.2	170 14.9	+19 13.4	342 50.0	-16 16.3	122 07.7	+1 26.9
18	319	02.5	108 34.2	-10 56.3	185 16.3	+19 13.3	357 52.2	-16 16.2	137 10.0	+1 26.8
19	334	04.9	123 33.6	57.4	200 17.8	13.1	12 54.5	16.1	152 12.2	26.7
20	349	07.4	138 33.1	58.5	215 19.2	12.9	27 56.7	16.0	167 14.4	26.6
21	4	09.9	153 32.6	-10 59.7	230 20.7	12.7	42 59.0	16.0	182 16.7	26.5
22	19	12.3	168 32.1	-11 00.8	245 22.2	12.5	58 01.2	15.9	197 18.9	26.5
23	34	14.8	183 31.6	01.9	260 23.6	12.3	73 03.5	15.8	212 21.1	26.4
24	49	17.3	198 31.1	-11 03.0	275 25.1	+19 12.1	88 05.7	-16 15.8	227 23.4	+1 26.3
Dif	—		-5	-11	+15	-2	+22	+1	+22	-1

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna								
	SD: 16'1				Edad: 22 ^d 8	PHE	$\left\{ \begin{array}{l} 4^h: 59'0 \\ 12^h: 59'0 \\ 20^h: 58'9 \end{array} \right.$				PMG: 6 ^h 31 ^m		R°: 49 ^m		Hora		R°							
	PMG: 11 ^h 43 ^m 9																							
	hG ☉	Dec			hG ☾	Dif					Civil	Náutico		Hora	R°		Hora	R°						
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	h	m	m				
0	184	01.7	-17	07.0	265	37.1	+11	50.0	60 N	15	42	16	29	17	20	**	**	**	13	45	4			
1	199	01.7		07.7	280	06.6 ¹⁰⁵		36.1 ¹³⁹	58	15	52	36	24	**	**	**	**	40	8					
2	214	01.6		08.4	294	36.1 ¹⁰⁵		22.2 ¹³⁹	56	16	01	42	27	**	**	**	**	36	11					
3	229	01.5		09.1	309	05.6 ¹⁰⁵	+11	08.2 ¹⁴⁰	54	09		48	31	**	**	**	**	32	14					
4	244	01.5		09.8	323	35.3 ¹⁰⁷	+10	54.2 ¹⁴⁰	52	16		53	34	**	**	**	**	29	16					
5	259	01.4	-17	10.5	338	05.0 ¹⁰⁷	+10	40.1 ¹⁴¹	50	16	23	16	58	17	36	**	**	**	13	25	19			
6	274	01.4	-17	11.2	352	34.8 ¹⁰⁸	+10	26.0 ¹⁴¹	45	16	37	17	08	17	43	**	**	**	13	19	23			
7	289	01.3		11.9	7	04.6 ¹⁰⁸	+10	11.8 ¹⁴²	40	48		17	49	**	**	**	**	13	27					
8	304	01.2		12.6	21	34.5 ¹⁰⁹	+9	57.5 ¹⁴³	35	16	58	25	17	55	**	**	**	08	31					
9	319	01.2		13.3	36	04.4 ¹⁰⁹		43.2 ¹⁴³	30	17	07	32	18	00	**	**	**	13	03	34				
10	334	01.1		14.0	50	34.4 ¹¹⁰		28.9 ¹⁴³	20	22		45	11	0	01	58	12	56	39					
11	349	01.1	-17	14.7	65	04.5 ¹¹¹	+9	14.5 ¹⁴⁴	10 N	17	35	17	57	18	22	0	10	54	12	49	44			
12	4	01.0	-17	15.4	79	34.6 ¹¹¹	+9	00.1 ¹⁴⁴	0	17	47	18	09	18	34	0	19	49	12	43	48			
13	19	00.9		16.1	94	04.7 ¹¹¹	+8	45.6 ¹⁴⁵	10 S	18	00	22	18	48	27	45	36	53						
14	34	00.9		16.8	108	35.0 ¹¹³		31.1 ¹⁴⁵	20	14		37	19	05	37	40	29	58						
15	49	00.8		17.5	123	05.2 ¹¹²		16.5 ¹⁴⁶	30	30		18	55	26	47	35	21	63						
16	64	00.7		18.2	137	35.6 ¹¹⁴	+8	02.0 ¹⁴⁵	35	39		19	06	40	0	53	32	16	67					
17	79	00.7	-17	18.9	152	05.9 ¹¹³	+7	47.3 ¹⁴⁷	40	18	49	19	20	19	56	1	00	28	12	11	70			
18	94	00.6	-17	19.5	166	36.4 ¹¹⁵	+7	32.7 ¹⁴⁶	45	19	02	19	35	20	17	1	08	24	12	05	74			
19	109	00.5		20.2	181	06.8 ¹¹⁴		18.0 ¹⁴⁷	50	17		19	55	20	45	17	20	11	57	80				
20	124	00.5		20.9	195	37.3 ¹¹⁵	+7	03.3 ¹⁴⁷	52	24		20	05	21	00	22	17	54	82					
21	139	00.4		21.6	210	07.9 ¹¹⁶	+6	48.5 ¹⁴⁸	54	32		16	17		27	14	50	85						
22	154	00.3		22.3	224	38.5 ¹¹⁶		33.7 ¹⁴⁸	56	41		29	21	38	32	11	45	88						
23	169	00.3		23.0	239	09.2 ¹¹⁷		18.9 ¹⁴⁸	58	19	52	20	44	22	07	38	8	41	91					
24	184	00.2	-17	23.7	253	39.9 ¹¹⁷	+6	04.1 ¹⁴⁸	60 S	20	03	21	02	22	56	1	44	5	11	35	95			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO									
	PMG: 20 ^h 39 ^m 5		Mag: -3.9 PMG: 10 ^h 46 ^m				Mag: +0.3 PMG: 5 ^h 38 ^m				Mag: -2.4 PMG: 18 ^h 05 ^m				Mag: +1.1 PMG: 8 ^h 49 ^m									
	hG ♈		hG ♀	Dec			hG ♂	Dec			hG ♃	Dec			hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'						
0	49	17.3	198	31.1	-11	03.0	275	25.1	+19	12.1	88	05.7	-16	15.8	227	23.4	+1	26.3						
1	64	19.7	213	30.5		04.1	290	26.6		11.9	103	07.9		15.7	242	25.6		26.2						
2	79	22.2	228	30.0		05.2	305	28.0		11.7	118	10.2		15.6	257	27.8		26.1						
3	94	24.6	243	29.5		06.4	320	29.5		11.5	133	12.4		15.5	272	30.1		26.0						
4	109	27.1	258	29.0		07.5	335	31.0		11.3	148	14.7		15.5	287	32.3		25.9						
5	124	29.6	273	28.5	-11	08.6	350	32.4	+19	11.1	163	16.9	-16	15.4	302	34.5	+1	25.8						
6	139	32.0	288	28.0	-11	09.7	5	33.9	+19	10.9	178	19.2	-16	15.3	317	36.8	+1	25.7						
7	154	34.5	303	27.4		10.8	20	35.4		10.8	193	21.4		15.2	332	39.0		25.6						
8	169	37.0	318	26.9		11.9	35	36.8		10.6	208	23.7		15.2	347	41.3		25.5						
9	184	39.4	333	26.4		13.0	50	38.3		10.4	223	25.9		15.1	2	43.5		25.5						
10	199	41.9	348	25.9		14.1	65	39.8		10.2	238	28.1		15.0	17	45.7		25.4						
11	214	44.4	3	25.4	-11	15.3	80	41.2	+19	10.0	253	30.4	-16	14.9	32	48.0	+1	25.3						
12	229	46.8	18	24.8	-11	16.4	95	42.7	+19	09.8	268	32.6	-16	14.9	47	50.2	+1	25.2						
13	244	49.3	33	24.3		17.5	110	44.2		09.6	283	34.9		14.8	62	52.4		25.1						
14	259	51.8	48	23.8		18.6	125	45.7		09.4	298	37.1		14.7	77	54.7		25.0						
15	274	54.2	63	23.3		19.7	140	47.1		09.2	313	39.3		14.6	92	56.9		24.9						
16	289	56.7	78	22.7		20.8	155	48.6		09.0	328	41.6		14.6	107	59.1		24.8						
17	304	59.1	93	22.2	-11	21.9	170	50.1	+19	08.8	343	43.8	-16	14.5	123	01.4	+1	24.7						
18	320	01.6	108	21.7	-11	23.0	185	51.6	+19	08.7	358	46.1	-16	14.4	138	03.6	+1	24.6						
19	335	04.1	123	21.2		24.1	200	53.0		08.5	13	48.3		14.3	153	05.9		24.6						
20	350	06.5	138	20.6		25.2	215	54.5		08.3	28	50.5		14.3	168	08.1		24.5						
21	5	09.0	153	20.1		26.3	230	56.0		08.1	43	52.8		14.2	183	10.3		24.4						
22	20	11.5	168	19.6		27.5	245	57.5		07.9	58	55.0		14.1	198	12.6		24.3						
23	35	13.9	183	19.1		28.6	260	58.9		07.7	73	57.3		14.0	213	14.8		24.2						
24	50	16.4	198	18.5	-11	29.7	276	00.4	+19	07.5	88	59.5	-16	14.0	228	17.0	+1	24.1						
Dif	—		-5				+15				+22				+1				+22				-1	

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'2 PMG: 11 ^h 44 ^m 0			Edad: 23 ^d 8 PHE { SD: 16'0 PMG: 7 ^h 20 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m		
0	184	00.2	-17	23.7	253	39.9	+6	04.1	60 N	6 09	7 00	7 48	0 26	94	13 49	4		
1	199	00.1		24.4	268	10.6 ¹¹⁷	+5	49.2 ¹⁴⁹	58	05	6 53	38	29	90	48	7		
2	214	00.1		25.1	282	41.4 ¹¹⁸		34.3 ¹⁴⁹	56	6 02	47	28	32	87	47	10		
3	229	00.0		25.8	297	12.2 ¹¹⁸		19.4 ¹⁴⁹	54	5 58	41	20	35	84	46	12		
4	243	59.9		26.5	311	43.0 ¹¹⁸	+5	04.5 ¹⁴⁹	52	55	36	13	37	82	45	15		
5	258	59.8	-17	27.2	326	13.9 ¹¹⁹	+4	49.5 ¹⁵⁰	50	5 52	6 31	7 06	0 39	79	13 44	17		
6	273	59.8	-17	27.8	340	44.8 ¹¹⁹	+4	34.6 ¹⁴⁹	45	5 45	6 21	6 52	0 44	74	13 42	22		
7	288	59.7		28.5	355	15.8 ¹²⁰		19.6 ¹⁵⁰	40	39	12	41	48	70	40	26		
8	303	59.6		29.2	9	46.8 ¹²⁰	+4	04.6 ¹⁵⁰	35	34	6 04	31	51	66	39	29		
9	318	59.6		29.9	24	17.8 ¹²⁰	+3	49.6 ¹⁵⁰	30	28	5 57	22	54	63	37	33		
10	333	59.5		30.6	38	48.8 ¹²⁰		34.5 ¹⁵¹	20	17	44	6 07	0 59	58	35	38		
11	348	59.4	-17	31.3	53	19.9 ¹²¹	+3	19.5 ¹⁵⁰	10 N	5 06	5 31	5 53	1 04	52	13 33	43		
12	3	59.3	-17	32.0	67	51.0 ¹²¹	+3	04.5 ¹⁵⁰	0	4 54	5 19	5 41	1 08	48	13 31	47		
13	18	59.3		32.6	82	22.1 ¹²¹	+2	49.4 ¹⁵¹	10 S	40	5 06	28	12	44	29	52		
14	33	59.2		33.3	96	53.3 ¹²²		34.3 ¹⁵¹	20	23	4 51	5 14	17	38	27	57		
15	48	59.1		34.0	111	24.5 ¹²²		19.3 ¹⁵⁰	30	4 01	32	4 58	22	33	24	63		
16	63	59.1		34.7	125	55.7 ¹²²	+2	04.2 ¹⁵¹	35	3 48	21	49	25	30	23	65		
17	78	59.0	-17	35.4	140	26.9 ¹²²	+1	49.1 ¹⁵¹	40	3 31	4 08	4 38	1 28	27	13 21	69		
18	93	58.9	-17	36.1	154	58.2 ¹²³	+1	34.0 ¹⁵¹	45	3 10	3 52	4 26	1 32	22	13 19	74		
19	108	58.8		36.7	169	29.4 ¹²²		18.9 ¹⁵¹	50	2 42	32	10	37	17	17	79		
20	123	58.8		37.4	184	00.7 ¹²³	+1	03.8 ¹⁵¹	52	28	22	4 03	39	15	16	81		
21	138	58.7		38.1	198	32.0 ¹²³	+0	48.7 ¹⁵¹	54	2 10	3 11	3 55	41	13	15	83		
22	153	58.6		38.8	213	03.4 ¹²⁴		33.7 ¹⁵⁰	56	1 49	2 58	46	43	11	13	87		
23	168	58.5		39.5	227	34.7 ¹²³		18.6 ¹⁵¹	58	1 20	43	36	46	8	12	90		
24	183	58.4	-17	40.1	242	06.1 ¹²⁴	+0	03.5 ¹⁵¹	60 S	0 31	2 25	3 24	1 49	4	13 10	94		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 20 ^h 35 ^m 5			Mag: -3.9 PMG: 10 ^h 47 ^m			Mag: +0.3 PMG: 5 ^h 35 ^m			Mag: -2.4 PMG: 18 ^h 01 ^m			Mag: +1.1 PMG: 8 ^h 46 ^m					
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	50	16.4	198	18.5	-11	29.7	276	00.4	+19	07.5	88	59.5	-16	14.0	228	17.0		
1	65	18.9	213	18.0		30.8	291	01.9		07.3	104	01.7		13.9	243	19.3		
2	80	21.3	228	17.5		31.9	306	03.4		07.1	119	04.0		13.8	258	21.5		
3	95	23.8	243	17.0		33.0	321	04.9		07.0	134	06.2		13.7	273	23.8		
4	110	26.3	258	16.4		34.1	336	06.4		06.8	149	08.4		13.7	288	26.0		
5	125	28.7	273	15.9	-11	35.2	351	07.8	+19	06.6	164	10.7	-16	13.6	303	28.2		
6	140	31.2	288	15.4	-11	36.3	6	09.3	+19	06.4	179	12.9	-16	13.5	318	30.5		
7	155	33.6	303	14.9		37.4	21	10.8		06.2	194	15.2		13.4	333	32.7		
8	170	36.1	318	14.3		38.5	36	12.3		06.0	209	17.4		13.4	348	34.9		
9	185	38.6	333	13.8		39.6	51	13.8		05.8	224	19.6		13.3	3	37.2		
10	200	41.0	348	13.3		40.7	66	15.3		05.6	239	21.9		13.2	18	39.4		
11	215	43.5	3	12.7	-11	41.8	81	16.8	+19	05.5	254	24.1	-16	13.1	33	41.7		
12	230	46.0	18	12.2	-11	42.9	96	18.2	+19	05.3	269	26.3	-16	13.0	48	43.9		
13	245	48.4	33	11.7		44.0	111	19.7		05.1	284	28.6		13.0	63	46.1		
14	260	50.9	48	11.1		45.1	126	21.2		04.9	299	30.8		12.9	78	48.4		
15	275	53.4	63	10.6		46.2	141	22.7		04.7	314	33.0		12.8	93	50.6		
16	290	55.8	78	10.1		47.3	156	24.2		04.5	329	35.3		12.7	108	52.9		
17	305	58.3	93	09.5	-11	48.4	171	25.7	+19	04.3	344	37.5	-16	12.7	123	55.1		
18	321	00.7	108	09.0	-11	49.5	186	27.2	+19	04.1	359	39.7	-16	12.6	138	57.3		
19	336	03.2	123	08.5		50.6	201	28.7		04.0	14	42.0		12.5	153	59.6		
20	351	05.7	138	07.9		51.7	216	30.2		03.8	29	44.2		12.4	169	01.8		
21	6	08.1	153	07.4		52.8	231	31.7		03.6	44	46.4		12.3	184	04.1		
22	21	10.6	168	06.9		53.9	246	33.2		03.4	59	48.7		12.3	199	06.3		
23	36	13.1	183	06.3		55.0	261	34.7		03.2	74	50.9		12.2	214	08.5		
24	51	15.5	198	05.8	-11	56.1	276	36.2	+19	03.0	89	53.1	-16	12.1	229	10.8		
Dif	—			-5			+15			-2			+22			+1		
				-11									+22			-1		

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16/2		Edad: 24 ^d 8 PHE { 4 ^h : 58/4 12 ^h : 58/3 20 ^h : 58/2															
	PMG: 11 ^h 44 ^m 2		SD: 15/9 PMG: 8 ^h 07 ^m R°: 47 ^m															
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m					
0	183	58.4	-17	40.1	242	06.1	+0 03.5	60 N	15 37	16 25	17 16	2 00 93	13 53 5					
1	198	58.4		40.8	256	37.4 ¹²³	-0 11.6 ¹⁵¹	58	48	32	20	1 59 90	55 8					
2	213	58.3		41.5	271	08.8 ¹²⁴	26.6 ¹⁵⁰	56	15 57	39	24	59 86	57 10					
3	228	58.2		42.2	285	40.2 ¹²⁴	41.7 ¹⁵¹	54	16 06	45	28	59 83	13 58 14					
4	243	58.1		42.8	300	11.6 ¹²⁴	-0 56.7 ¹⁵⁰	52	13	50	31	59 80	14 00 15					
5	258	58.1	-17	43.5	314	43.0 ¹²⁴	-1 11.7 ¹⁵⁰	50	16 20	16 55	17 34	1 58 79	14 01 18					
6	273	58.0	-17	44.2	329	14.4 ¹²⁴	-1 26.8 ¹⁵¹	45	16 34	17 06	17 41	1 58 73	14 04 22					
7	288	57.9		44.9	343	45.9 ¹²⁵	41.8 ¹⁵⁰	40	46	15	48	58 68	06 27					
8	303	57.8		45.6	358	17.3 ¹²⁴	-1 56.8 ¹⁵⁰	35	16 56	23	54	57 65	08 30					
9	318	57.7		46.2	12	48.7 ¹²⁴	-2 11.7 ¹⁴⁹	30	17 05	31	17 59	57 62	10 33					
10	333	57.7		46.9	27	20.2 ¹²⁵	26.7 ¹⁵⁰	20	21	44	18 11	57 56	13 38					
11	348	57.6	-17	47.6	41	51.6 ¹²⁴	-2 41.6 ¹⁴⁹	10 N	17 35	17 57	18 22	1 56 52	14 16 43					
12	3	57.5	-17	48.2	56	23.1 ¹²⁵	-2 56.5 ¹⁴⁹	0	17 48	18 09	18 35	1 56 47	14 18 48					
13	18	57.4		48.9	70	54.5 ¹²⁴	-3 11.4 ¹⁴⁹	10 S	18 01	23	18 49	56 42	21 52					
14	33	57.3		49.6	85	25.9 ¹²⁴	26.3 ¹⁴⁹	20	15	38	19 06	55 38	24 56					
15	48	57.2		50.3	99	57.4 ¹²⁵	41.2 ¹⁴⁹	30	31	18 57	28	55 33	27 62					
16	63	57.2		50.9	114	28.8 ¹²⁴	-3 56.0 ¹⁴⁸	35	41	19 09	42	55 29	28 66					
17	78	57.1	-17	51.6	129	00.2 ¹²⁴	-4 10.8 ¹⁴⁸	40	18 52	19 22	19 59	1 55 26	14 30 69					
18	93	57.0	-17	52.3	143	31.7 ¹²⁵	-4 25.5 ¹⁴⁷	45	19 05	19 38	20 21	1 54 23	14 33 73					
19	108	56.9		52.9	158	03.1 ¹²⁴	40.3 ¹⁴⁸	50	21	19 59	20 50	54 18	36 78					
20	123	56.8		53.6	172	34.5 ¹²⁴	-4 55.0 ¹⁴⁷	52	28	20 09	21 05	54 15	37 80					
21	138	56.7		54.3	187	05.9 ¹²⁴	-5 09.7 ¹⁴⁷	54	36	21	23	54 13	38 83					
22	153	56.7		54.9	201	37.3 ¹²⁴	24.3 ¹⁴⁶	56	46	34	21 46	54 10	40 86					
23	168	56.6		55.6	216	08.7 ¹²⁴	38.9 ¹⁴⁶	58	19 56	20 50	22 18	54 7	42 89					
24	183	56.5	-17	56.3	230	40.1 ¹²⁴	-5 53.5 ¹⁴⁶	60 S	20 09	21 09	** **	1 53 5	14 44 93					
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG		Mag: -3.9		Mag: +0.3		Mag: -2.4		Mag: +1.1									
	20 ^h 31 ^m 6		PMG: 10 ^h 48 ^m		PMG: 5 ^h 33 ^m		PMG: 17 ^h 58 ^m		PMG: 8 ^h 42 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	51	15.5	198	05.8	-11	56.1	276	36.2	+19	03.0	89	53.1	-16	12.1	229	10.8	+1	22.0
1	66	18.0	213	05.3		57.2	291	37.7		02.8	104	55.4		12.0	244	13.0		21.9
2	81	20.5	228	04.7		58.2	306	39.2		02.7	119	57.6		12.0	259	15.3		21.8
3	96	22.9	243	04.2	-11	59.3	321	40.7		02.5	134	59.8		11.9	274	17.5		21.7
4	111	25.4	258	03.6	-12	00.4	336	42.2		02.3	150	02.1		11.8	289	19.7		21.6
5	126	27.9	273	03.1	-12	01.5	351	43.7	+19	02.1	165	04.3	-16	11.7	304	22.0	+1	21.5
6	141	30.3	288	02.6	-12	02.6	6	45.2	+19	01.9	180	06.5	-16	11.6	319	24.2	+1	21.4
7	156	32.8	303	02.0		03.7	21	46.7		01.7	195	08.7		11.6	334	26.5		21.4
8	171	35.2	318	01.5		04.8	36	48.2		01.5	210	11.0		11.5	349	28.7		21.3
9	186	37.7	333	00.9		05.9	51	49.7		01.4	225	13.2		11.4	4	30.9		21.2
10	201	40.2	348	00.4		07.0	66	51.2		01.2	240	15.4		11.3	19	33.2		21.1
11	216	42.6	2	59.9	-12	08.1	81	52.7	+19	01.0	255	17.7	-16	11.3	34	35.4	+1	21.0
12	231	45.1	17	59.3	-12	09.2	96	54.2	+19	00.8	270	19.9	-16	11.2	49	37.7	+1	20.9
13	246	47.6	32	58.8		10.2	111	55.7		00.6	285	22.1		11.1	64	39.9		20.8
14	261	50.0	47	58.2		11.3	126	57.2		00.4	300	24.3		11.0	79	42.1		20.7
15	276	52.5	62	57.7		12.4	141	58.7		00.3	315	26.6		10.9	94	44.4		20.7
16	291	55.0	77	57.2		13.5	157	00.2	+19	00.1	330	28.8		10.9	109	46.6		20.6
17	306	57.4	92	56.6	-12	14.6	172	01.7	+18	59.9	345	31.0	-16	10.8	124	48.9	+1	20.5
18	321	59.9	107	56.1	-12	15.7	187	03.2	+18	59.7	0	33.2	-16	10.7	139	51.1	+1	20.4
19	337	02.3	122	55.5		16.8	202	04.7		59.5	15	35.5		10.6	154	53.3		20.3
20	352	04.8	137	55.0		17.8	217	06.3		59.3	30	37.7		10.5	169	55.6		20.2
21	7	07.3	152	54.4		18.9	232	07.8		59.2	45	39.9		10.5	184	57.8		20.1
22	22	09.7	167	53.9		20.0	247	09.3		59.0	60	42.1		10.4	200	00.1		20.0
23	37	12.2	182	53.3		21.1	262	10.8		58.8	75	44.4		10.3	215	02.3		20.0
24	52	14.7	197	52.8	-12	22.2	277	12.3	+18	58.6	90	46.6	-16	10.2	230	04.6	+1	19.9
Dif	—		-5		-11		+15		-2		+22		+1		+22		-1	

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16:2 PMG: 11 ^h 44 ^m 3			Edad: 25 ^d 8 PHE { 4 ^h : 58 ^h 1 12 ^h : 57 ^h 9 20 ^h : 57 ^h 8 SD: 15:8 PMG: 8 ^h 54 ^m R°: 49 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	183	56.5	-17	56.3	230	40.1	-5 53.5	60 N	6 13	7 05	7 53	3 33	93	13 58	5	
1	198	56.4		56.9	245	11.4 ¹²³	-6 08.1 ¹⁴⁶	58	09	6 57	42	29 89		14 03	9	
2	213	56.3		57.6	259	42.8 ¹²⁴	22.6 ¹⁴⁵	56	05	51	33	25 86		07 13		
3	228	56.2		58.3	274	14.1 ¹²³	37.0 ¹⁴⁴	54	6 02	45	24	22 83		12 15		
4	243	56.1		58.9	288	45.4 ¹²³	-6 51.5 ¹⁴⁵	52	5 58	39	16	19 81		15 18		
5	258	56.0	-17	59.6	303	16.8 ¹²⁴	-7 05.9 ¹⁴⁴	50	5 55	6 34	7 10	3 17	78	14 19	20	
6	273	56.0	-18	00.3	317	48.0 ¹²²	-7 20.2 ¹⁴³	45	5 48	6 23	6 55	3 11	73	14 26	25	
7	288	55.9		00.9	332	19.3 ¹²³	34.5 ¹⁴³	40	41	14	43	06 69		33 28		
8	303	55.8		01.6	346	50.6 ¹²³	-7 48.8 ¹⁴³	35	35	6 06	33	3 02	66	38 32		
9	318	55.7		02.2	1	21.8 ¹²²	-8 03.0 ¹⁴²	30	29	5 58	23	2 59	62	43 35		
10	333	55.6		02.9	15	53.0 ¹²²	17.1 ¹⁴¹	20	18	45	6 08	53 57		51 40		
11	348	55.5	-18	03.6	30	24.2 ¹²²	-8 31.2 ¹⁴¹	10 N	5 06	5 32	5 54	2 48	52	14 59	44	
12	3	55.4	-18	04.2	44	55.4 ¹²²	-8 45.3 ¹⁴¹	0	4 54	5 19	5 41	2 43	48	15 06	48	
13	18	55.3		04.9	59	26.5 ¹²¹	-8 59.3 ¹⁴⁰	10 S	39	5 05	28	38 44		13 52		
14	33	55.2		05.5	73	57.6 ¹²¹	-9 13.3 ¹⁴⁰	20	22	4 50	5 13	33 39		20 57		
15	48	55.1		06.2	88	28.7 ¹²¹	27.2 ¹³⁹	30	4 00	31	4 57	28 33		29 62		
16	63	55.1		06.9	102	59.8 ¹²¹	41.1 ¹³⁹	35	3 46	19	47	24 31		34 65		
17	78	55.0	-18	07.5	117	30.8 ¹²⁰	-9 54.9 ¹³⁸	40	3 29	4 06	4 36	2 21	27	15 39	69	
18	93	54.9	-18	08.2	132	01.9 ¹²¹	-10 08.6 ¹³⁷	45	3 07	3 50	4 23	2 17	23	15 46	73	
19	108	54.8		08.8	146	32.8 ¹¹⁹	22.3 ¹³⁷	50	2 38	29	07	12 18		54 78		
20	123	54.7		09.5	161	03.8 ¹²⁰	35.9 ¹³⁶	52	23	19	4 00	09 17		15 57	81	
21	138	54.6		10.1	175	34.7 ¹¹⁹	-10 49.5 ¹³⁶	54	2 05	3 07	3 51	07 14		16 01	84	
22	153	54.5		10.8	190	05.6 ¹¹⁹	-11 03.0 ¹³⁵	56	1 42	2 54	42	04 11		06 86		
23	168	54.4		11.4	204	36.5 ¹¹⁹	16.4 ¹³⁴	58	1 10	38	31	2 01	8	11 90		
24	183	54.3	-18	12.1	219	07.4 ¹¹⁹	-11 29.8 ¹³⁴	60 S	** **	2 19	3 19	1 58	5	16 17	93	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 20 ^h 27 ^m 7			Mag: -3.9 PMG: 10 ^h 49 ^m			Mag: +0.3 PMG: 5 ^h 31 ^m			Mag: -2.4 PMG: 17 ^h 54 ^m			Mag: +1.1 PMG: 8 ^h 38 ^m			
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	52	14.7	197	52.8	-12	22.2	277	12.3	+18	58.6	90	46.6	-16	10.2	230	04.6
1	67	17.1	212	52.2		23.3	292	13.8		58.4	105	48.8		10.1	245	06.8
2	82	19.6	227	51.7		24.3	307	15.3		58.3	120	51.0		10.1	260	09.0
3	97	22.1	242	51.2		25.4	322	16.9		58.1	135	53.3		10.0	275	11.3
4	112	24.5	257	50.6		26.5	337	18.4		57.9	150	55.5		09.9	290	13.5
5	127	27.0	272	50.1	-12	27.6	352	19.9	+18	57.7	165	57.7	-16	09.8	305	15.8
6	142	29.5	287	49.5	-12	28.7	7	21.4	+18	57.5	180	59.9	-16	09.7	320	18.0
7	157	31.9	302	49.0		29.7	22	22.9		57.3	196	02.1		09.6	335	20.3
8	172	34.4	317	48.4		30.8	37	24.4		57.2	211	04.4		09.6	350	22.5
9	187	36.8	332	47.9		31.9	52	26.0		57.0	226	06.6		09.5	5	24.7
10	202	39.3	347	47.3		33.0	67	27.5		56.8	241	08.8		09.4	20	27.0
11	217	41.8	2	46.8	-12	34.0	82	29.0	+18	56.6	256	11.0	-16	09.3	35	29.2
12	232	44.2	17	46.2	-12	35.1	97	30.5	+18	56.4	271	13.3	-16	09.2	50	31.5
13	247	46.7	32	45.6		36.2	112	32.1		56.3	286	15.5		09.2	65	33.7
14	262	49.2	47	45.1		37.3	127	33.6		56.1	301	17.7		09.1	80	36.0
15	277	51.6	62	44.5		38.3	142	35.1		55.9	316	19.9		09.0	95	38.2
16	292	54.1	77	44.0		39.4	157	36.6		55.7	331	22.1		08.9	110	40.4
17	307	56.6	92	43.4	-12	40.5	172	38.2	+18	55.5	346	24.4	-16	08.8	125	42.7
18	322	59.0	107	42.9	-12	41.6	187	39.7	+18	55.4	1	26.6	-16	08.7	140	44.9
19	338	01.5	122	42.3		42.6	202	41.2		55.2	16	28.8		08.7	155	47.2
20	353	04.0	137	41.8		43.7	217	42.7		55.0	31	31.0		08.6	170	49.4
21	8	06.4	152	41.2		44.8	232	44.3		54.8	46	33.2		08.5	185	51.7
22	23	08.9	167	40.7		45.9	247	45.8		54.6	61	35.4		08.4	200	53.9
23	38	11.3	182	40.1		46.9	262	47.3		54.5	76	37.7		08.3	215	56.2
24	53	13.8	197	39.5	-12	48.0	277	48.9	+18	54.3	91	39.9	-16	08.3	230	58.4
Dif	—		-6	-11		+15	-2			+22		+1		+22		-1

UT	SOL				● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16:2 PMG: 11 ^h 44 ^m 5				Edad: 26 ^d 8 PHE { 4 ^h : 57:6 12 ^h : 57:5 20 ^h : 57:3 PMG: 9 ^h 43 ^m R°: 49 ^m													
	hG ☉		Dec		hG ☾		Dif				Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m		
0	183	54.3	-18	12.1	219	07.4	-11	29.8	60 N	15 33	16 21	17 13	5 06 94	14 03 9				
1	198	54.2		12.7	233	38.2 ¹¹⁸		43.1 ¹³³	58	44	29	17	4 58 90	12 13				
2	213	54.1		13.4	248	08.9 ¹¹⁷	-11	56.4 ¹³³	56	15 54	36	21	51 86	20 16				
3	228	54.0		14.0	262	39.7 ¹¹⁸	-12	09.6 ¹³²	54	16 02	42	25	45 83	27 19				
4	243	53.9		14.7	277	10.4 ¹¹⁷		22.7 ¹³¹	52	10	47	29	40 80	33 22				
5	258	53.8	-18	15.3	291	41.1 ¹¹⁷	-12	35.7 ¹³⁰	50	16 17	16 53	17 32	4 35 77	14 39 24				
6	273	53.7	-18	16.0	306	11.7 ¹¹⁶	-12	48.7 ¹³⁰	45	16 32	17 04	17 39	4 24 73	14 51 29				
7	288	53.6		16.6	320	42.3 ¹¹⁶	-13	01.6 ¹²⁹	40	44	13	46	15 69	15 01 33				
8	303	53.5		17.3	335	12.9 ¹¹⁶		14.4 ¹²⁸	35	16 55	22	52	08 65	10 35				
9	318	53.4		17.9	349	43.4 ¹¹⁵		27.2 ¹²⁸	30	17 04	30	17 58	4 01 62	18 38				
10	333	53.3		18.6	4	13.9 ¹¹⁵		39.9 ¹²⁷	20	20	44	18 10	3 50 57	31 43				
11	348	53.2	-18	19.2	18	44.3 ¹¹⁴	-13	52.5 ¹²⁶	10 N	17 35	17 57	18 22	3 40 53	15 43 47				
12	3	53.1	-18	19.9	33	14.7 ¹¹⁴	-14	05.0 ¹²⁵	0	17 48	18 10	18 35	3 31 49	15 54 50				
13	18	53.0		20.5	47	45.1 ¹¹⁴		17.4 ¹²⁴	10 S	18 02	24	18 50	22 45	16 05 54				
14	33	52.9		21.2	62	15.4 ¹¹³		29.8 ¹²⁴	20	16	40	19 08	12 41	17 58				
15	48	52.8		21.8	76	45.7 ¹¹³		42.1 ¹²³	30	33	18 59	30	3 01 37	31 62				
16	63	52.7		22.5	91	16.0 ¹¹³	-14	54.3 ¹²²	35	43	19 11	19 45	2 55 34	39 65				
17	78	52.6	-18	23.1	105	46.2 ¹¹²	-15	06.4 ¹²¹	40	18 54	19 25	20 02	2 48 30	16 48 68				
18	93	52.5	-18	23.8	120	16.4 ¹¹²	-15	18.5 ¹²¹	45	19 08	19 42	20 25	2 40 26	16 59 72				
19	108	52.4		24.4	134	46.5 ¹¹¹		30.4 ¹¹⁹	50	24	20 03	20 55	30 22	17 12 77				
20	123	52.3		25.0	149	16.6 ¹¹¹		42.3 ¹¹⁹	52	32	13	21 10	26 19	18 79				
21	138	52.2		25.7	163	46.6 ¹¹⁰	-15	54.1 ¹¹⁸	54	40	25	30	21 17	25 82				
22	153	52.1		26.3	178	16.6 ¹¹⁰	-16	05.8 ¹¹⁷	56	19 50	39	21 54	15 14	32 85				
23	168	52.0		27.0	192	46.6 ¹¹⁰		17.4 ¹¹⁶	58	20 01	20 56	22 30	09 11	41 89				
24	183	51.9	-18	27.6	207	16.5 ¹⁰⁹	-16	28.9 ¹¹⁵	60 S	20 14	21 16	** **	2 03 7	17 50 94				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 20 ^h 23 ^m 7		Mag: -3.9 PMG: 10 ^h 50 ^m				Mag: +0.2 PMG: 5 ^h 28 ^m				Mag: -2.4 PMG: 17 ^h 51 ^m				Mag: +1.1 PMG: 8 ^h 35 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	53	13.8	197	39.5	-12	48.0	277	48.9	+18	54.3	91	39.9	-16	08.3	230	58.4	+1	17.8
1	68	16.3	212	39.0		49.1	292	50.4		54.1	106	42.1		08.2	246	00.6		17.7
2	83	18.7	227	38.4		50.1	307	51.9		53.9	121	44.3		08.1	261	02.9		17.6
3	98	21.2	242	37.9		51.2	322	53.5		53.8	136	46.5		08.0	276	05.1		17.5
4	113	23.7	257	37.3		52.3	337	55.0		53.6	151	48.7		07.9	291	07.4		17.4
5	128	26.1	272	36.7	-12	53.3	352	56.5	+18	53.4	166	51.0	-16	07.8	306	09.6	+1	17.4
6	143	28.6	287	36.2	-12	54.4	7	58.1	+18	53.2	181	53.2	-16	07.8	321	11.9	+1	17.3
7	158	31.1	302	35.6		55.5	22	59.6		53.0	196	55.4		07.7	336	14.1		17.2
8	173	33.5	317	35.1		56.5	38	01.1		52.9	211	57.6		07.6	351	16.4		17.1
9	188	36.0	332	34.5		57.6	53	02.7		52.7	226	59.8		07.5	6	18.6		17.0
10	203	38.4	347	33.9		58.7	68	04.2		52.5	242	02.0		07.4	21	20.9		16.9
11	218	40.9	2	33.4	-12	59.7	83	05.8	+18	52.3	257	04.2	-16	07.3	36	23.1	+1	16.8
12	233	43.4	17	32.8	-13	00.8	98	07.3	+18	52.2	272	06.5	-16	07.3	51	25.3	+1	16.8
13	248	45.8	32	32.3		01.9	113	08.8		52.0	287	08.7		07.2	66	27.6		16.7
14	263	48.3	47	31.7		02.9	128	10.4		51.8	302	10.9		07.1	81	29.8		16.6
15	278	50.8	62	31.1		04.0	143	11.9		51.6	317	13.1		07.0	96	32.1		16.5
16	293	53.2	77	30.6		05.0	158	13.5		51.5	332	15.3		06.9	111	34.3		16.4
17	308	55.7	92	30.0	-13	06.1	173	15.0	+18	51.3	347	17.5	-16	06.8	126	36.6	+1	16.3
18	323	58.2	107	29.4	-13	07.2	188	16.6	+18	51.1	2	19.7	-16	06.7	141	38.8	+1	16.3
19	339	00.6	122	28.9		08.2	203	18.1		50.9	17	22.0		06.7	156	41.1		16.2
20	354	03.1	137	28.3		09.3	218	19.6		50.8	32	24.2		06.6	171	43.3		16.1
21	9	05.6	152	27.7		10.3	233	21.2		50.6	47	26.4		06.5	186	45.6		16.0
22	24	08.0	167	27.2		11.4	248	22.7		50.4	62	28.6		06.4	201	47.8		15.9
23	39	10.5	182	26.6		12.4	263	24.3		50.2	77	30.8		06.3	216	50.1		15.8
24	54	12.9	197	26.0	-13	13.5	278	25.8	+18	50.1	92	33.0	-16	06.2	231	52.3	+1	15.7
Dif	—		-6		-11		+15		-2		+22		+1		+22		-1	

UT	SOL				● LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 11 ^h 44 ^m 6				Edad: 27 ^d 8 PHE { 4 ^h : 57/2 12 ^h : 57/0 20 ^h : 56/8 Rº: 52 ^m													
	hG ☉		Dec		hG ☾		Dif		Dec			Dif			Náutico	Civil	Hora	Rº
h	°	'	°	'	°	'	°	'	°	'	°	'	h m	h m	h m	m	h m	m
0	183	51.9	-18	27.6	207	16.5	-16	28.9	114	58	60 N	6 17	7 09	7 58	6 40	93	14 12	13
1	198	51.8		28.2	221	46.4 ¹⁰⁹		40.3 ¹¹⁴	109	58		13	7 01	47	28	88	25	18
2	213	51.7		28.9	236	16.2 ¹⁰⁸	-16	51.6 ¹¹³	113	56		09	6 54	37	17	85	36	22
3	228	51.6		29.5	250	46.0 ¹⁰⁸	-17	02.9 ¹¹³	113	54		05	48	28	08	81	46	25
4	243	51.5		30.1	265	15.8 ¹⁰⁸		14.0 ¹¹¹	111	52		6 01	42	20	6 00	78	14 55	27
5	258	51.4	-18	30.8	279	45.5 ¹⁰⁷	-17	25.0 ¹¹⁰	110	50		5 58	6 37	7 13	5 52	76	15 03	29
6	273	51.3	-18	31.4	294	15.1 ¹⁰⁶	-17	36.0 ¹¹⁰	110	45		5 50	6 26	6 58	5 37	71	15 20	33
7	288	51.2		32.1	308	44.7 ¹⁰⁶		46.8 ¹⁰⁸	108	40		43	16	45	24	68	34	37
8	303	51.1		32.7	323	14.3 ¹⁰⁶	-17	57.6 ¹⁰⁸	108	35		37	08	34	13	65	45	40
9	318	51.0		33.3	337	43.8 ¹⁰⁵	-18	08.2 ¹⁰⁶	106	30		31	6 00	25	5 03	63	15 56	42
10	333	50.8		34.0	352	13.3 ¹⁰⁵		18.8 ¹⁰⁶	106	20		19	5 46	6 09	4 47	58	16 14	46
11	348	50.7	-18	34.6	6	42.8 ¹⁰⁵	-18	29.2 ¹⁰⁴	104	10 N		5 07	5 32	5 55	4 33	55	16 30	49
12	3	50.6	-18	35.2	21	12.2 ¹⁰⁴	-18	39.5 ¹⁰³	103	0		4 54	5 19	5 41	4 20	51	16 44	52
13	18	50.5		35.9	35	41.5 ¹⁰³		49.8 ¹⁰³	103	10 S		39	5 05	27	4 07	48	16 59	55
14	33	50.4		36.5	50	10.8 ¹⁰³	-18	59.9 ¹⁰¹	101	20		4 21	4 49	5 13	3 53	45	17 15	58
15	48	50.3		37.1	64	40.1 ¹⁰³	-19	09.9 ¹⁰⁰	100	30		3 59	30	4 56	38	40	33	62
16	63	50.2		37.8	79	09.3 ¹⁰²		19.9 ¹⁰⁰	100	35		44	18	46	29	37	44	64
17	78	50.1	-18	38.4	93	38.5 ¹⁰²	-19	29.7 ⁹⁸	98	40		3 26	4 04	4 35	3 18	35	17 56	67
18	93	50.0	-18	39.0	108	07.6 ¹⁰¹	-19	39.4 ⁹⁷	97	45		3 04	3 47	4 21	3 06	31	18 11	70
19	108	49.9		39.6	122	36.7 ¹⁰¹		49.0 ⁹⁶	96	50		2 34	26	4 05	2 52	26	29	74
20	123	49.7		40.3	137	05.7 ¹⁰⁰	-19	58.4 ⁹⁴	94	52		2 18	15	3 57	45	24	37	77
21	138	49.6		40.9	151	34.7 ¹⁰⁰	-20	07.8 ⁹⁴	94	54		1 59	3 03	48	38	21	47	79
22	153	49.5		41.5	166	03.7 ¹⁰⁰		17.1 ⁹³	93	56		1 34	2 49	38	29	19	18 57	82
23	168	49.4		42.1	180	32.6 ⁹⁹		26.2 ⁹¹	91	58		0 59	33	27	20	15	19 10	86
24	183	49.3	-18	42.8	195	01.5 ⁹⁹	-20	35.2 ⁹⁰	90	60 S	** **	2 12	3 14	2 10	10	19 24	91	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 20 ^h 19 ^m 8		Mag: -3.9 PMG: 10 ^h 51 ^m				Mag: +0.2 PMG: 5 ^h 26 ^m				Mag: -2.4 PMG: 17 ^h 47 ^m				Mag: +1.0 PMG: 8 ^h 31 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	54	12.9	197	26.0	-13	13.5	278	25.8	+18	50.1	92	33.0	-16	06.2	231	52.3	+1	15.7
1	69	15.4	212	25.5		14.6	293	27.4		49.9	107	35.2		06.2	246	54.5		15.7
2	84	17.9	227	24.9		15.6	308	28.9		49.7	122	37.4		06.1	261	56.8		15.6
3	99	20.3	242	24.3		16.7	323	30.5		49.5	137	39.6		06.0	276	59.0		15.5
4	114	22.8	257	23.7		17.7	338	32.0		49.4	152	41.8		05.9	292	01.3		15.4
5	129	25.3	272	23.2	-13	18.8	353	33.6	+18	49.2	167	44.1	-16	05.8	307	03.5	+1	15.3
6	144	27.7	287	22.6	-13	19.8	8	35.1	+18	49.0	182	46.3	-16	05.7	322	05.8	+1	15.2
7	159	30.2	302	22.0		20.9	23	36.7		48.8	197	48.5		05.6	337	08.0		15.1
8	174	32.7	317	21.5		21.9	38	38.3		48.7	212	50.7		05.6	352	10.3		15.1
9	189	35.1	332	20.9		23.0	53	39.8		48.5	227	52.9		05.5	7	12.5		15.0
10	204	37.6	347	20.3		24.0	68	41.4		48.3	242	55.1		05.4	22	14.8		14.9
11	219	40.1	2	19.7	-13	25.1	83	42.9	+18	48.2	257	57.3	-16	05.3	37	17.0	+1	14.8
12	234	42.5	17	19.2	-13	26.1	98	44.5	+18	48.0	272	59.5	-16	05.2	52	19.3	+1	14.7
13	249	45.0	32	18.6		27.2	113	46.0		47.8	288	01.7		05.1	67	21.5		14.6
14	264	47.4	47	18.0		28.2	128	47.6		47.6	303	03.9		05.0	82	23.8		14.6
15	279	49.9	62	17.4		29.3	143	49.2		47.5	318	06.1		05.0	97	26.0		14.5
16	294	52.4	77	16.9		30.3	158	50.7		47.3	333	08.3		04.9	112	28.3		14.4
17	309	54.8	92	16.3	-13	31.4	173	52.3	+18	47.1	348	10.5	-16	04.8	127	30.5	+1	14.3
18	324	57.3	107	15.7	-13	32.4	188	53.8	+18	47.0	3	12.7	-16	04.7	142	32.8	+1	14.2
19	339	59.8	122	15.1		33.5	203	55.4		46.8	18	14.9		04.6	157	35.0		14.1
20	355	02.2	137	14.6		34.5	218	57.0		46.6	33	17.1		04.5	172	37.3		14.1
21	10	04.7	152	14.0		35.6	233	58.5		46.4	48	19.4		04.4	187	39.5		14.0
22	25	07.2	167	13.4		36.6	249	00.1		46.3	63	21.6		04.3	202	41.8		13.9
23	40	09.6	182	12.8		37.7	264	01.7		46.1	78	23.8		04.3	217	44.0		13.8
24	55	12.1	197	12.3	-13	38.7	279	03.2	+18	45.9	93	26.0	-16	04.2	232	46.3	+1	13.7
Dif	—		-6		-10		+16		-2		+22		+1		+22		-	

UT	SOL		● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16'2		Edad: 28 ^d 8	PHE { 4 ^h : 56'7 12 ^h : 56'5 20 ^h : 56'3	SD: 15'5	PMG: 11 ^h 24 ^m			R°: 53 ^m						
	PMG: 11 ^h 44 ^m 8														
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m	
0	183	49.3	-18	42.8	195	01.5	-20 35.2	60 N	15 28	16 18	17 10	8 13 88	14 25 22		
1	198	49.2		43.4	209	30.3	98 44.2	58	40	26	14	7 56 82	43 27		
2	213	49.1		44.0	223	59.1	98 -20 52.9	56	50	33	19	42 78	14 58 31		
3	228	49.0		44.6	238	27.9	98 -21 01.6	54	15 59	39	23	29 76	15 11 33		
4	243	48.8		45.3	252	56.6	97 10.2	52	16 07	45	26	18 73	22 36		
5	258	48.7	-18	45.9	267	25.3	97 -21 18.6	50	16 15	16 50	17 30	7 08 72	15 32 38		
6	273	48.6	-18	46.5	281	53.9	96 -21 27.0	45	16 30	17 02	17 38	6 48 68	15 53 41		
7	288	48.5		47.1	296	22.5	96 35.2	40	43	12	45	32 64	16 11 43		
8	303	48.4		47.8	310	51.1	96 43.3	35	16 54	21	51	18 62	25 45		
9	318	48.3		48.4	325	19.6	95 51.2	30	17 03	29	17 58	6 06 61	16 38 47		
10	333	48.2		49.0	339	48.1	95 -21 59.1	20	20	43	18 10	5 45 58	17 00 49		
11	348	48.0	-18	49.6	354	16.5	94 -22 06.8	10 N	17 35	17 57	18 22	5 28 55	17 19 51		
12	3	47.9	-18	50.2	8	44.9	94 -22 14.4	0	17 48	18 10	18 36	5 11 53	17 36 54		
13	18	47.8		50.9	23	13.3	94 21.8	10 S	18 02	25	18 51	4 55 50	17 54 55		
14	33	47.7		51.5	37	41.6	93 29.2	20	17	18 41	19 09	38 47	18 13 57		
15	48	47.6		52.1	52	10.0	94 36.4	30	35	19 01	32	18 44	35 60		
16	63	47.4		52.7	66	38.2	92 43.5	35	45	13	19 47	4 06 43	18 48 61		
17	78	47.3	-18	53.3	81	06.5	93 -22 50.5	40	18 56	19 27	20 05	3 53 40	19 03 63		
18	93	47.2	-18	53.9	95	34.7	92 -22 57.3	45	19 10	19 45	20 28	3 37 38	19 21 65		
19	108	47.1		54.6	110	02.9	92 -23 04.0	50	27	20 07	20 59	18 34	43 68		
20	123	47.0		55.2	124	31.0	91 10.6	52	35	18	21 16	3 09 32	19 54 69		
21	138	46.8		55.8	138	59.2	92 17.0	54	44	30	21 36	2 59 29	20 06 71		
22	153	46.7		56.4	153	27.3	91 23.4	56	19 54	20 45	22 03	48 26	19 74		
23	168	46.6		57.0	167	55.3	90 29.5	58	20 06	21 02	22 43	35 23	36 76		
24	183	46.5	-18	57.6	182	23.4	91 -23 35.6	60 S	20 19	21 23	** **	2 20 18	20 55 81		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 20 ^h 15 ^m 9		Mag: -3.9 PMG: 10 ^h 52 ^m			Mag: +0.2 PMG: 5 ^h 23 ^m			Mag: -2.4 PMG: 17 ^h 44 ^m			Mag: +1.0 PMG: 8 ^h 28 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	55	12.1	197	12.3	-13	38.7	279	03.2	+18	45.9	93	26.0	-16	04.2	
1	70	14.5	212	11.7		39.7	294	04.8		45.8	108	28.2		04.1	
2	85	17.0	227	11.1		40.8	309	06.4		45.6	123	30.4		04.0	
3	100	19.5	242	10.5		41.8	324	07.9		45.4	138	32.6		03.9	
4	115	21.9	257	09.9		42.9	339	09.5		45.2	153	34.8		03.8	
5	130	24.4	272	09.3	-13	43.9	354	11.1	+18	45.1	168	37.0	-16	03.7	
6	145	26.9	287	08.8	-13	44.9	9	12.7	+18	44.9	183	39.2	-16	03.6	
7	160	29.3	302	08.2		46.0	24	14.2		44.7	198	41.4		03.6	
8	175	31.8	317	07.6		47.0	39	15.8		44.6	213	43.6		03.5	
9	190	34.3	332	07.0		48.1	54	17.4		44.4	228	45.8		03.4	
10	205	36.7	347	06.4		49.1	69	19.0		44.2	243	48.0		03.3	
11	220	39.2	2	05.8	-13	50.1	84	20.5	+18	44.1	258	50.2	-16	03.2	
12	235	41.7	17	05.3	-13	51.2	99	22.1	+18	43.9	273	52.4	-16	03.1	
13	250	44.1	32	04.7		52.2	114	23.7		43.7	288	54.6		03.0	
14	265	46.6	47	04.1		53.2	129	25.3		43.6	303	56.8		02.9	
15	280	49.0	62	03.5		54.3	144	26.8		43.4	318	59.0		02.8	
16	295	51.5	77	02.9		55.3	159	28.4		43.2	334	01.2		02.8	
17	310	54.0	92	02.3	-13	56.3	174	30.0	+18	43.1	349	03.4	-16	02.7	
18	325	56.4	107	01.7	-13	57.4	189	31.6	+18	42.9	4	05.6	-16	02.6	
19	340	58.9	122	01.2		58.4	204	33.2		42.7	19	07.8		02.5	
20	356	01.4	137	00.6	-13	59.4	219	34.7		42.6	34	10.0		02.4	
21	11	03.8	152	00.0	-14	00.5	234	36.3		42.4	49	12.2		02.3	
22	26	06.3	166	59.4		01.5	249	37.9		42.2	64	14.4		02.2	
23	41	08.8	181	58.8		02.5	264	39.5		42.1	79	16.6		02.1	
24	56	11.2	196	58.2	-14	03.5	279	41.1	+18	41.9	94	18.8	-16	02.0	
Dif	—		-6		-10		+16		-2		+22		+1		
													+23		
													-1		

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16:2 PMG: 11 ^h 45 ^m 0			Edad: 0 ^d 2 SD: 15:3 PMG: 12 ^h 17 ^m												
	PHE { 4 ^h : 56:1 12 ^h : 55:9 20 ^h : 55:8 R°: 53 ^m															
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	183	46.5	-18 57.6	182	23.4	-23 35.6	59	60 N	6 21	7 13	8 03	9 41	72	14 47	39	
1	198	46.4	58.2	196	51.4	41.5	59	58	16	7 05	7 51	18 69	15 10	42		
2	213	46.2	58.8	211	19.4	47.3	58	56	12	6 58	41	9 00	67	29 44		
3	228	46.1	-18 59.5	225	47.3	53.0	57	54	08	52	32	8 45	65	44 46		
4	243	46.0	-19 00.1	240	15.3	58.5	55	52	04	46	23	31 64	15 58	46		
5	258	45.9	-19 00.7	254	43.2	03.9	54	50	6 01	6 40	7 16	8 20	63	16 10	47	
6	273	45.7	-19 01.3	269	11.1	09.2	53	45	5 53	6 28	7 00	7 56	61	16 34	49	
7	288	45.6	01.9	283	39.0	14.3	51	40	45	18	6 47	36 60	16 54	50		
8	303	45.5	02.5	298	06.9	19.3	50	35	39	09	36	20 59	17 10	51		
9	318	45.4	03.1	312	34.7	24.2	49	30	32	6 01	27	7 07	57	25 51		
10	333	45.2	03.7	327	02.6	28.9	47	20	20	5 47	6 10	6 43	56	17 49	52	
11	348	45.1	-19 04.3	341	30.4	33.5	46	10 N	5 08	5 33	5 55	6 23	54	18 10	53	
12	3	45.0	-19 04.9	355	58.2	37.9	44	0	4 54	5 20	5 41	6 04	53	18 30	53	
13	18	44.9	05.5	10	26.0	42.2	43	10 S	39	5 05	5 27	5 45	52	18 49	54	
14	33	44.7	06.1	24	53.8	46.4	42	20	4 21	4 49	5 12	25 51	19 10	55		
15	48	44.6	06.7	39	21.6	50.4	40	30	3 57	29	4 55	5 02	49	35 55		
16	63	44.5	07.3	53	49.3	54.3	39	35	42	17	45	4 49	47	19 49	56	
17	78	44.4	-19 07.9	68	17.1	58.1	38	40	3 24	4 02	4 33	4 33	46	20 06	56	
18	93	44.2	-19 08.5	82	44.8	01.7	36	45	3 01	3 45	4 19	4 15	44	20 26	57	
19	108	44.1	09.1	97	12.6	05.2	35	50	2 30	23	4 02	3 52	42	20 51	57	
20	123	44.0	09.7	111	40.3	08.6	34	52	2 13	3 12	3 54	41 41	21 03	58		
21	138	43.8	10.3	126	08.0	11.8	32	54	1 53	2 59	45	28 40	17 58			
22	153	43.7	10.9	140	35.8	14.9	31	56	1 27	45	35	3 14	37	33 59		
23	168	43.6	11.5	155	03.5	17.8	29	58	0 46	27	23	2 58	34	21 52	60	
24	183	43.5	-19 12.1	169	31.3	20.6	28	60 S	** **	2 06	3 10	2 38	30	22 16	61	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 20 ^h 11 ^m 9		Mag: -3.9 PMG: 10 ^h 53 ^m		Mag: +0.2 PMG: 5 ^h 21 ^m		Mag: -2.4 PMG: 17 ^h 40 ^m		Mag: +1.0 PMG: 8 ^h 24 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	56	11.2	196	58.2	-14	03.5	279	41.1	+18	41.9	94	18.8	-16	02.0	233	40.3	+1	11.7
1	71	13.7	211	57.6		04.6	294	42.7		41.7	109	21.0		02.0	248	42.5		11.6
2	86	16.2	226	57.0		05.6	309	44.3		41.6	124	23.2		01.9	263	44.8		11.6
3	101	18.6	241	56.4		06.6	324	45.8		41.4	139	25.3		01.8	278	47.0		11.5
4	116	21.1	256	55.8		07.7	339	47.4		41.2	154	27.5		01.7	293	49.3		11.4
5	131	23.5	271	55.2	-14	08.7	354	49.0	+18	41.1	169	29.7	-16	01.6	308	51.6	+1	11.3
6	146	26.0	286	54.7	-14	09.7	9	50.6	+18	40.9	184	31.9	-16	01.5	323	53.8	+1	11.2
7	161	28.5	301	54.1		10.7	24	52.2		40.7	199	34.1		01.4	338	56.1		11.2
8	176	30.9	316	53.5		11.8	39	53.8		40.6	214	36.3		01.3	353	58.3		11.1
9	191	33.4	331	52.9		12.8	54	55.4		40.4	229	38.5		01.2	9	00.6		11.0
10	206	35.9	346	52.3		13.8	69	57.0		40.3	244	40.7		01.1	24	02.8		10.9
11	221	38.3	1	51.7	-14	14.8	84	58.6	+18	40.1	259	42.9	-16	01.1	39	05.1	+1	10.8
12	236	40.8	16	51.1	-14	15.8	100	00.2	+18	39.9	274	45.1	-16	01.0	54	07.3	+1	10.7
13	251	43.3	31	50.5		16.9	115	01.8		39.8	289	47.3		00.9	69	09.6		10.7
14	266	45.7	46	49.9		17.9	130	03.4		39.6	304	49.5		00.8	84	11.8		10.6
15	281	48.2	61	49.3		18.9	145	05.0		39.4	319	51.7		00.7	99	14.1		10.5
16	296	50.7	76	48.7		19.9	160	06.6		39.3	334	53.9		00.6	114	16.3		10.4
17	311	53.1	91	48.1	-14	20.9	175	08.2	+18	39.1	349	56.1	-16	00.5	129	18.6	+1	10.3
18	326	55.6	106	47.5	-14	22.0	190	09.8	+18	38.9	4	58.2	-16	00.4	144	20.8	+1	10.3
19	341	58.0	121	46.9		23.0	205	11.4		38.8	20	00.4		00.3	159	23.1		10.2
20	357	00.5	136	46.3		24.0	220	13.0		38.6	35	02.6		00.2	174	25.4		10.1
21	12	03.0	151	45.7		25.0	235	14.6		38.5	50	04.8		00.1	189	27.6		10.0
22	27	05.4	166	45.1		26.0	250	16.2		38.3	65	07.0	-16	00.1	204	29.9		09.9
23	42	07.9	181	44.5		27.0	265	17.8		38.1	80	09.2	-16	00.0	219	32.1		09.8
24	57	10.4	196	43.9	-14	28.1	280	19.4	+18	38.0	95	11.4	-15	59.9	234	34.4	+1	09.8
Dif	—		-6 -10		+16 -2		+22 +1		+23 -1									

UT	SOL				● LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 16°2 PMG: 11 ^h 45 ^m 2				Edad: 1 ^d 2 PHE { 4 ^h : 55/6 12 ^h : 55/4 20 ^h : 55/3 PMG: 13 ^h 10 ^m R°: 53 ^m														
	hG ☉		Dec		hG ☾		Dif				Civil			Náutico			Hora		R°
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m	h m m	h m m	
0	183	43.5	-19	12.1	169	31.3	-25	20.6	60 N	15 24	16 14	17 07	10 53 50	15 26 60					
1	198	43.3		12.7	183	59.0	87	23.3	58	36	22	11	27 51	15 52 59					
2	213	43.2		13.3	198	26.7	87	25.8	56	47	30	16	10 07 51	16 13 57					
3	228	43.1		13.9	212	54.5	88	28.2	54	15 56	37	20	9 50 51	30 57					
4	243	42.9		14.5	227	22.2	87	30.4	52	16 05	43	24	35 52	44 57					
5	258	42.8	-19	15.1	241	50.0	88	-25 32.5	50	16 12	16 48	17 28	9 23 52	16 57 56					
6	273	42.7	-19	15.7	256	17.7	87	-25 34.5	45	16 28	17 00	17 36	8 57 52	17 23 56					
7	288	42.5		16.3	270	45.5	88	36.3	40	41	11	44	36 53	17 44 55					
8	303	42.4		16.9	285	13.3	88	38.0	35	16 53	20	50	19 53	18 01 54					
9	318	42.3		17.5	299	41.1	88	39.6	30	17 03	28	17 57	8 04 53	16 54					
10	333	42.1		18.1	314	08.9	88	41.0	20	20	43	18 10	7 39 53	18 41 54					
11	348	42.0	-19	18.7	328	36.7	88	-25 42.3	10 N	17 35	17 57	18 23	7 17 53	19 03 53					
12	3	41.9	-19	19.3	343	04.6	89	-25 43.4	0	17 49	18 11	18 36	6 57 53	19 23 52					
13	18	41.7		19.8	357	32.4	88	44.4	10 S	18 03	25	18 52	37 53	19 43 52					
14	33	41.6		20.4	12	00.3	89	45.3	20	18	18 42	19 10	6 16 53	20 05 51					
15	48	41.5		21.0	26	28.2	89	46.0	30	36	19 03	34	5 51 53	30 50					
16	63	41.3		21.6	40	56.1	89	46.6	35	47	15	19 49	36 53	20 45 49					
17	78	41.2	-19	22.2	55	24.1	90	-25 47.1	40	18 59	19 30	20 08	5 19 53	21 02 49					
18	93	41.0	-19	22.8	69	52.0	89	-25 47.4	45	19 13	19 48	20 32	4 59 52	21 23 47					
19	108	40.9		23.4	84	20.0	90	47.6	50	31	20 11	21 04	34 52	21 48 47					
20	123	40.8		24.0	98	48.1	91	47.6	52	39	22	21	22 51	22 01 46					
21	138	40.6		24.5	113	16.1	90	47.6	54	48	35	21 43	4 08 51	15 45					
22	153	40.5		25.1	127	44.2	91	47.3	56	19 59	20 50	22 11	3 51 51	32 44					
23	168	40.4		25.7	142	12.3	91	47.0	58	20 11	21 08	23 00	32 50	22 52 42					
24	183	40.2	-19	26.3	156	40.4	91	-25 46.5	60 S	20 25	21 31	** **	3 08 49	23 17 39					
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO										
	PMG: 20 ^h 08 ^m 0		Mag: -3.9 PMG: 10 ^h 54 ^m		Mag: +0.2 PMG: 5 ^h 18 ^m		Mag: -2.4 PMG: 17 ^h 37 ^m		Mag: +1.0 PMG: 8 ^h 20 ^m										
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄										
h	°	'	°	'	°	'	°	'	°	'									
0	57	10.4	196	43.9	-14	28.1	280	19.4	95	11.4									
1	72	12.8	211	43.3		29.1	295	21.0	-15	59.9									
2	87	15.3	226	42.7		30.1	310	22.6		59.8									
3	102	17.8	241	42.1		31.1	325	24.2		59.7									
4	117	20.2	256	41.5		32.1	340	25.8		59.6									
5	132	22.7	271	40.9	-14	33.1	355	27.4	+18	59.4									
6	147	25.1	286	40.3	-14	34.1	10	29.0	+18	59.3									
7	162	27.6	301	39.7		35.1	25	30.6		59.2									
8	177	30.1	316	39.0		36.1	40	32.2		59.1									
9	192	32.5	331	38.4		37.2	55	33.8		59.0									
10	207	35.0	346	37.8		38.2	70	35.5		58.9									
11	222	37.5	1	37.2	-14	39.2	85	37.1	+18	58.9									
12	237	39.9	16	36.6	-14	40.2	100	38.7	+18	58.8									
13	252	42.4	31	36.0		41.2	115	40.3		58.7									
14	267	44.9	46	35.4		42.2	130	41.9		58.6									
15	282	47.3	61	34.8		43.2	145	43.5		58.5									
16	297	49.8	76	34.2		44.2	160	45.1		58.4									
17	312	52.3	91	33.6	-14	45.2	175	46.8	+18	58.3									
18	327	54.7	106	33.0	-14	46.2	190	48.4	+18	58.2									
19	342	57.2	121	32.4		47.2	205	50.0		58.1									
20	357	59.6	136	31.7		48.2	220	51.6		58.0									
21	13	02.1	151	31.1		49.2	235	53.2		57.9									
22	28	04.6	166	30.5		50.2	250	54.9		57.8									
23	43	07.0	181	29.9		51.2	265	56.5		57.7									
24	58	09.5	196	29.3	-14	52.2	280	58.1	+18	57.6									
Dif	—		-6		-10		+16		-2										

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'2 PMG: 11 ^h 45 ^m 4			Edad: 2 ^d 2 PHE { 4 ^h : 55'1 12 ^h : 55'0 20 ^h : 54'8 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	40.2	-19	26.3	156	40.4	-25	46.5	60 N	6 25	7 18	8 08	11 43	29	16 26	76		
1	198	40.1		26.9	171	08.6		45.9	58	20	09	7 56	11 18	33	16 51	71		
2	213	39.9		27.5	185	36.8		45.1	56	15	7 02	45	10 58	36	17 10	69		
3	228	39.8		28.0	200	05.0		44.2	54	11	6 55	35	41 39		27	66		
4	243	39.7		28.6	214	33.2		43.2	52	07	49	27	27 40		41	65		
5	258	39.5	-19	29.2	229	01.5	-25	42.0	50	6 03	6 43	7 19	10 15	41	17 53	64		
6	273	39.4	-19	29.8	243	29.9	-25	40.7	45	5 55	6 31	7 03	9 49	43	18 19	60		
7	288	39.2		30.4	257	58.3		39.3	40	47	20	6 50	29 45		39	58		
8	303	39.1		30.9	272	26.7		37.8	35	40	11	38	9 12	46	18 55	58		
9	318	39.0		31.5	286	55.1		36.1	30	34	6 03	28	8 57	47	19 10	56		
10	333	38.8		32.1	301	23.6		34.3	20	21	5 48	6 11	32 49		35	53		
11	348	38.7	-19	32.7	315	52.2	-25	32.3	10 N	5 08	5 34	5 56	8 10	51	19 56	52		
12	3	38.5	-19	33.2	330	20.8	-25	30.3	0	4 54	5 20	5 42	7 50	52	20 15	51		
13	18	38.4		33.8	344	49.4		28.1	10 S	39	5 05	5 27	30 53		35	48		
14	33	38.2		34.4	359	18.1		25.7	20	4 20	4 48	5 12	7 09	53	20 56	47		
15	48	38.1		35.0	13	46.8		23.3	30	3 56	28	4 54	6 44	55	21 20	44		
16	63	37.9		35.5	28	15.6		20.7	35	41	15	44	29 56		34	43		
17	78	37.8	-19	36.1	42	44.4	-25	18.0	40	3 22	4 01	4 31	6 12	57	21 51	41		
18	93	37.7	-19	36.7	57	13.2	-25	15.2	45	2 59	3 43	4 17	5 51	59	22 10	39		
19	108	37.5		37.3	71	42.2		12.2	50	26	20	4 00	26 60		35	36		
20	123	37.4		37.8	86	11.1		09.1	52	2 09	3 08	3 51	5 13	61	22 47	34		
21	138	37.2		38.4	100	40.2		05.9	54	1 47	2 55	42	4 59	62	23 00	33		
22	153	37.1		39.0	115	09.2	-25	02.6	56	1 19	40	31	42 64		16	30		
23	168	36.9		39.5	129	38.4	-24	59.1	58	0 30	2 22	19	4 22	66	34 27			
24	183	36.8	-19	40.1	144	07.5	-24	55.6	60 S	** **	1 59	3 05	3 57	69	23 56	23		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 20 ^h 04 ^m 1		Mag: -3.9 PMG: 10 ^h 54 ^m				Mag: +0.2 PMG: 5 ^h 16 ^m				Mag: -2.4 PMG: 17 ^h 33 ^m				Mag: +1.0 PMG: 8 ^h 17 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		hG ♅	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	58	09.5	196	29.3	-14	52.2	280	58.1	+18	34.2	96	03.9	-15	57.6	235	28.5	+1	07.8
1	73	12.0	211	28.7		53.2	295	59.7		34.0	111	06.0		57.5	250	30.8		07.8
2	88	14.4	226	28.1		54.2	311	01.4		33.9	126	08.2		57.4	265	33.0		07.7
3	103	16.9	241	27.4		55.2	326	03.0		33.7	141	10.4		57.4	280	35.3		07.6
4	118	19.4	256	26.8		56.2	341	04.6		33.5	156	12.6		57.3	295	37.6		07.5
5	133	21.8	271	26.2	-14	57.2	356	06.2	+18	33.4	171	14.8	-15	57.2	310	39.8	+1	07.4
6	148	24.3	286	25.6	-14	58.2	11	07.9	+18	33.2	186	17.0	-15	57.1	325	42.1	+1	07.4
7	163	26.8	301	25.0	-14	59.2	26	09.5		33.1	201	19.1		57.0	340	44.3		07.3
8	178	29.2	316	24.4	-15	00.2	41	11.1		32.9	216	21.3		56.9	355	46.6		07.2
9	193	31.7	331	23.7		01.2	56	12.8		32.8	231	23.5		56.8	10	48.8		07.1
10	208	34.1	346	23.1		02.1	71	14.4		32.6	246	25.7		56.7	25	51.1		07.0
11	223	36.6	1	22.5	-15	03.1	86	16.0	+18	32.5	261	27.9	-15	56.6	40	53.4	+1	07.0
12	238	39.1	16	21.9	-15	04.1	101	17.6	+18	32.3	276	30.0	-15	56.5	55	55.6	+1	06.9
13	253	41.5	31	21.3		05.1	116	19.3		32.2	291	32.2		56.4	70	57.9		06.8
14	268	44.0	46	20.6		06.1	131	20.9		32.0	306	34.4		56.3	86	00.1		06.7
15	283	46.5	61	20.0		07.1	146	22.6		31.9	321	36.6		56.2	101	02.4		06.6
16	298	48.9	76	19.4		08.1	161	24.2		31.7	336	38.8		56.1	116	04.7		06.6
17	313	51.4	91	18.8	-15	09.1	176	25.8	+18	31.5	351	40.9	-15	56.0	131	06.9	+1	06.5
18	328	53.9	106	18.2	-15	10.1	191	27.5	+18	31.4	6	43.1	-15	55.9	146	09.2	+1	06.4
19	343	56.3	121	17.5		11.0	206	29.1		31.2	21	45.3		55.8	161	11.4		06.3
20	358	58.8	136	16.9		12.0	221	30.7		31.1	36	47.5		55.7	176	13.7		06.2
21	14	01.3	151	16.3		13.0	236	32.4		30.9	51	49.7		55.6	191	16.0		06.2
22	29	03.7	166	15.7		14.0	251	34.0		30.8	66	51.8		55.5	206	18.2		06.1
23	44	06.2	181	15.0		15.0	266	35.7		30.6	81	54.0		55.4	221	20.5		06.0
24	59	08.6	196	14.4	-15	16.0	281	37.3	+18	30.5	96	56.2	-15	55.4	236	22.7	+1	05.9
Dif	—		-6		-10		+16		-2		+22		+1		+23		-	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna			
	SD: 16:2 PMG: 11 ^h 45 ^m 7			Edad: 3 ^d 2 PHE { 4 ^h : 54:7 12 ^h : 54:6 20 ^h : 54:5 PMG: 14 ^h 54 ^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	183	36.8	-19 40.1	144	07.5	-24 55.6	37	60 N	15 20	16 11	17 04	12 12	17	17 42	82		
1	198	36.6		158	36.8 ¹⁰³	51.9	37	58	33	20	09	11 51	22	18 02	78		
2	213	36.5		173	06.1 ¹⁰³	48.1	38	56	44	27	14	34 25		19 74			
3	228	36.3		187	35.4 ¹⁰³	44.1	40	54	15 54	34	18	20 27		33 77			
4	243	36.2		202	04.8 ¹⁰⁴	40.1	40	52	16 02	40	22	11 07	29	46 69			
5	258	36.0	-19 42.9	216	34.3 ¹⁰⁵	-24 35.9	42	50	16 10	16 46	17 26	10 56	31	18 57	67		
6	273	35.9	-19 43.5	231	03.8 ¹⁰⁵	-24 31.6	43	45	16 27	16 59	17 35	10 32	35	19 19	63		
7	288	35.7		245	33.4 ¹⁰⁶	27.2	44	40	40	17 09	42	10 14	37	37 61			
8	303	35.6		260	03.0 ¹⁰⁶	22.7	45	35	16 52	19	50	9 58	39	19 53	58		
9	318	35.4		274	32.7 ¹⁰⁷	18.1	46	30	17 02	27	17 56	44 41		20 06	56		
10	333	35.3		289	02.5 ¹⁰⁸	13.3	48	20	19	43	18 10	21 44		28 53			
11	348	35.1	-19 46.3	303	32.3 ¹⁰⁸	-24 08.5	48	10 N	17 35	17 57	18 23	9 01	46	20 48	50		
12	3	35.0	-19 46.9	318	02.2 ¹⁰⁹	-24 03.5	50	0	17 49	18 11	18 37	8 42	48	21 06	47		
13	18	34.8		332	32.2 ¹¹⁰	-23 58.4	51	10 S	18 04	26	18 53	23 51		23 45			
14	33	34.7		347	02.2 ¹¹⁰	53.2	52	20	20	18 44	19 12	8 02	54	21 43	42		
15	48	34.5		1	32.2 ¹¹⁰	47.9	53	30	38	19 04	36	7 39	56	22 04	39		
16	63	34.4		16	02.4 ¹¹²	42.5	54	35	18 49	17	19 52	25 58		17 37			
17	78	34.2	-19 49.7	30	32.6 ¹¹²	-23 36.9	56	40	19 01	19 32	20 11	7 09	60	22 32	34		
18	93	34.1	-19 50.2	45	02.8 ¹¹²	-23 31.3	56	45	19 16	19 51	20 35	6 50	62	22 49	32		
19	108	33.9		59	33.2 ¹¹⁴	25.6	57	50	34	20 14	21 09	26 65		23 11	28		
20	123	33.8		74	03.5 ¹¹³	19.7	59	52	42	26	27	14 67		21 26			
21	138	33.6		88	34.0 ¹¹⁵	13.8	59	54	19 52	39	21 49	6 01	69	33 23			
22	153	33.4		103	04.5 ¹¹⁵	07.7	61	56	20 03	20 55	22 20	5 46	72	23 46	21		
23	168	33.3		117	35.1 ¹¹⁶	-23 01.6	61	58	15	21 14	23 26	28 75		** ** *			
24	183	33.1	-19 53.6	132	05.8 ¹¹⁷	-22 55.3	63	60 S	20 30	21 38	** ** *	5 06	79	** ** *			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 20 ^h 00 ^m 1		Mag: -3.9 PMG: 10 ^h 55 ^m			Mag: +0.1 PMG: 5 ^h 13 ^m			Mag: -2.4 PMG: 17 ^h 30 ^m			Mag: +1.0 PMG: 8 ^h 13 ^m					
	hG ♈		hG ♀			hG ♂			hG ♃			hG ♄					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	59	08.6	196	14.4	-15 16.0		281	37.3	+18 30.5		96 56.2	-15 55.4		236 22.7	+1 05.9		
1	74	11.1	211	13.8	16.9		296	38.9	30.3		111 58.4	55.3		251 25.0	05.9		
2	89	13.6	226	13.2	17.9		311	40.6	30.2		127 00.5	55.2		266 27.3	05.8		
3	104	16.0	241	12.5	18.9		326	42.2	30.0		142 02.7	55.1		281 29.5	05.7		
4	119	18.5	256	11.9	19.9		341	43.9	29.9		157 04.9	55.0		296 31.8	05.6		
5	134	21.0	271	11.3	-15 20.9		356	45.5	+18 29.7		172 07.1	-15 54.9		311 34.0	+1 05.5		
6	149	23.4	286	10.6	-15 21.8		11 47.2	+18 29.6		187 09.2	-15 54.8		326 36.3	+1 05.5			
7	164	25.9	301	10.0	22.8		26 48.8	29.4		202 11.4	54.7		341 38.6	05.4			
8	179	28.4	316	09.4	23.8		41 50.5	29.3		217 13.6	54.6		356 40.8	05.3			
9	194	30.8	331	08.8	24.8		56 52.1	29.1		232 15.8	54.5		11 43.1	05.2			
10	209	33.3	346	08.1	25.8		71 53.8	29.0		247 17.9	54.4		26 45.3	05.1			
11	224	35.8	1 07.5	-15 26.7	86 55.4	+18 28.8				262 20.1	-15 54.3		41 47.6	+1 05.1			
12	239	38.2	16 06.9	-15 27.7	101 57.1	+18 28.7				277 22.3	-15 54.2		56 49.9	+1 05.0			
13	254	40.7	31 06.2	28.7	116 58.7	28.5				292 24.5	54.1		71 52.1	04.9			
14	269	43.1	46 05.6	29.7	132 00.4	28.4				307 26.6	54.0		86 54.4	04.8			
15	284	45.6	61 05.0	30.6	147 02.0	28.2				322 28.8	53.9		101 56.6	04.8			
16	299	48.1	76 04.3	31.6	162 03.7	28.1				337 31.0	53.8		116 58.9	04.7			
17	314	50.5	91 03.7	-15 32.6	177 05.4	+18 27.9				352 33.1	-15 53.7		132 01.2	+1 04.6			
18	329	53.0	106 03.1	-15 33.5	192 07.0	+18 27.8				7 35.3	-15 53.6		147 03.4	+1 04.5			
19	344	55.5	121 02.4	34.5	207 08.7	27.7				22 37.5	53.5		162 05.7	04.4			
20	359	57.9	136 01.8	35.5	222 10.3	27.5				37 39.7	53.4		177 08.0	04.4			
21	15	00.4	151 01.2	36.4	237 12.0	27.4				52 41.8	53.3		192 10.2	04.3			
22	30	02.9	166 00.5	37.4	252 13.6	27.2				67 44.0	53.2		207 12.5	04.2			
23	45	05.3	180 59.9	38.4	267 15.3	27.1				82 46.2	53.1		222 14.7	04.1			
24	60	07.8	195 59.2	-15 39.3	282 17.0	+18 26.9				97 48.3	-15 53.0		237 17.0	+1 04.1			
Dif	—		-6 -10			+17 -1			+22 +1			+23 -1					

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'2 PMG: 11 ^h 45 ^m 9			Edad: 4 ^d 2 SD: 14'8 PMG: 15 ^h 42 ^m	PHE { 4 ^h : 54'4 12 ^h : 54'3 20 ^h : 54'3 R°: 45 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m	
0	183	33.1	-19	53.6	132	05.8	-22	55.3	60 N	6 29	7 22	8 13	12 29	10	19 04 84	
1	198	33.0		54.1	146	36.5	117	48.9	58	24	13	8 00	12 13	14	20 79	
2	213	32.8		54.7	161	07.3	118	42.4	56	19	7 05	7 49	11 59	17	33 76	
3	228	32.7		55.2	175	38.1	118	35.9	54	14	6 58	39	47	20	44 75	
4	243	32.5		55.8	190	09.0	119	29.2	52	10	52	30	36	23	19 55 70	
5	258	32.4	-19	56.3	204	40.0	120	-22	50	6 06	6 46	7 22	11 27	25	20 04 68	
6	273	32.2	-19	56.9	219	11.0	120	-22	45	5 57	6 33	7 06	11 07	29	20 22 64	
7	288	32.0		57.4	233	42.2	122	08.6	40	49	23	6 52	10 51	32	38 60	
8	303	31.9		58.0	248	13.3	121	-22	35	42	13	40	37	35	20 51 57	
9	318	31.7		58.5	262	44.6	123	-21	30	35	6 04	30	25	37	21 02 55	
10	333	31.6		59.1	277	15.9	123	47.1	20	22	5 49	6 12	10 05	40	21 51	
11	348	31.4	-19	59.6	291	47.3	124	-21	10 N	5 09	5 35	5 57	9 47	43	21 38 47	
12	3	31.2	-20	00.2	306	18.7	124	-21	0	4 55	5 20	5 42	9 30	46	21 53 45	
13	18	31.1		00.7	320	50.2	125	24.8	10 S	39	5 05	28	9 14	49	22 08 42	
14	33	30.9		01.2	335	21.8	126	17.2	20	4 20	4 48	5 12	8 56	52	25 38	
15	48	30.8		01.8	349	53.4	126	09.5	30	3 55	27	4 53	35	56	43 35	
16	63	30.6		02.3	4	25.1	127	-21	35	39	4 14	43	23	57	22 54 32	
17	78	30.4	-20	02.9	18	56.9	128	-20	40	3 20	3 59	4 30	8 09	60	23 06 30	
18	93	30.3	-20	03.4	33	28.7	128	-20	45	2 56	3 41	4 15	7 52	63	23 21 26	
19	108	30.1		04.0	48	00.6	129	37.7	50	22	17	3 57	31	68	39 22	
20	123	30.0		04.5	62	32.6	130	29.5	52	2 04	3 05	49	21	70	47 20	
21	138	29.8		05.0	77	04.6	130	21.3	54	1 42	2 52	39	7 10	72	23 56 18	
22	153	29.6		05.6	91	36.7	131	13.0	56	1 11	36	28	6 58	74	** ** *	
23	168	29.5		06.1	106	08.9	132	-20	58	0 05	2 17	16	43	78	0 01 17	
24	183	29.3	-20	06.7	120	41.1	132	-19	60 S	** **	1 53	3 01	6 25	83	0 19 13	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 19 ^h 56 ^m 2		Mag: -3.9 PMG: 10 ^h 57 ^m			Mag: +0.1 PMG: 5 ^h 10 ^m			Mag: -2.4 PMG: 17 ^h 26 ^m			Mag: +1.0 PMG: 8 ^h 10 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	60	07.8	195	59.2	-15	39.3	282	17.0	+18	26.9	97	48.3	-15	53.0		
1	75	10.3	210	58.6		40.3	297	18.6		26.8	112	50.5		52.9		
2	90	12.7	225	58.0		41.3	312	20.3		26.6	127	52.7		52.8		
3	105	15.2	240	57.3		42.2	327	22.0		26.5	142	54.9		52.7		
4	120	17.6	255	56.7		43.2	342	23.6		26.3	157	57.0		52.6		
5	135	20.1	270	56.0	-15	44.2	357	25.3	+18	26.2	172	59.2	-15	52.5		
6	150	22.6	285	55.4	-15	45.1	12	27.0	+18	26.0	188	01.4	-15	52.4		
7	165	25.0	300	54.8		46.1	27	28.6		25.9	203	03.5		52.3		
8	180	27.5	315	54.1		47.0	42	30.3		25.8	218	05.7		52.2		
9	195	30.0	330	53.5		48.0	57	32.0		25.6	233	07.9		52.1		
10	210	32.4	345	52.8		49.0	72	33.6		25.5	248	10.0		52.0		
11	225	34.9	0	52.2	-15	49.9	87	35.3	+18	25.3	263	12.2	-15	51.9		
12	240	37.4	15	51.5	-15	50.9	102	37.0	+18	25.2	278	14.4	-15	51.8		
13	255	39.8	30	50.9		51.8	117	38.7		25.0	293	16.5		51.7		
14	270	42.3	45	50.3		52.8	132	40.3		24.9	308	18.7		51.6		
15	285	44.7	60	49.6		53.8	147	42.0		24.8	323	20.9		51.5		
16	300	47.2	75	49.0		54.7	162	43.7		24.6	338	23.0		51.4		
17	315	49.7	90	48.3	-15	55.7	177	45.4	+18	24.5	353	25.2	-15	51.3		
18	330	52.1	105	47.7	-15	56.6	192	47.0	+18	24.3	8	27.4	-15	51.2		
19	345	54.6	120	47.0		57.6	207	48.7		24.2	23	29.5		51.1		
20	0	57.1	135	46.4		58.5	222	50.4		24.0	38	31.7		51.0		
21	15	59.5	150	45.7	-15	59.5	237	52.1		23.9	53	33.9		50.9		
22	31	02.0	165	45.1	-16	00.4	252	53.7		23.8	68	36.0		50.8		
23	46	04.5	180	44.4		01.4	267	55.4		23.6	83	38.2		50.7		
24	61	06.9	195	43.8	-16	02.3	282	57.1	+18	23.5	98	40.3	-15	50.6		
Dif	—		-6		-10		+17		-1		+22		+1		+23	

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16°2			Edad: 5 ^d 2	PHE {	4 ^h : 54°/2 12 ^h : 54°/2 20 ^h : 54°/2			Final del crepúsculo			Salida de Luna		Puesta de Luna	
	PMG: 11 ^h 46 ^m 2								PMG: 16 ^h 27 ^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	m	h m m	m
0	183	29.3	-20 06.7	120	41.1	-19 56.1		60 N	15 16	16 08	17 01	12 39 6	20 28 82		
1	198	29.1		135	13.4 ¹³³	47.5 ⁸⁶		58	30	17	06	27 10	39 78		
2	213	29.0	07.7	149	45.7 ¹³³	38.8 ⁸⁷		56	41	25	12	16 13	49 75		
3	228	28.8	08.3	164	18.1 ¹³⁴	30.1 ⁸⁷		54	15 51	32	16	12 07 16	20 57 72		
4	243	28.6	08.8	178	50.6 ¹³⁵	21.2 ⁸⁹		52	16 00	38	20	11 59 18	21 05 70		
5	258	28.5	-20 09.3	193	23.1 ¹³⁵	-19 12.3 ⁸⁹		50	16 08	16 44	17 24	11 52 19	21 12 67		
6	273	28.3	-20 09.9	207	55.7 ¹³⁶	-19 03.3 ⁹⁰		45	16 25	16 57	17 33	11 36 24	21 26 63		
7	288	28.1	10.4	222	28.4 ¹³⁷	-18 54.3 ⁹⁰		40	39	17 08	42	23 27	38 60		
8	303	28.0	10.9	237	01.1 ¹³⁷	45.1 ⁹²		35	16 51	18	49	12 30	48 57		
9	318	27.8	11.5	251	33.9 ¹³⁸	35.9 ⁹²		30	17 01	27	17 56	11 02 32	21 57 54		
10	333	27.6	12.0	266	06.7 ¹³⁸	26.6 ⁹³		20	19	43	18 10	10 45 37	22 12 50		
11	348	27.5	-20 12.5	280	39.6 ¹³⁹	-18 17.3 ⁹³		10 N	17 35	17 57	18 23	10 30 41	22 25 47		
12	3	27.3	-20 13.1	295	12.5 ¹³⁹	-18 07.8 ⁹⁵		0	17 50	18 12	18 37	10 16 44	22 38 42		
13	18	27.1	13.6	309	45.5 ¹⁴⁰	-17 58.3 ⁹⁵		10 S	18 05	27	18 54	10 03 46	22 50 39		
14	33	27.0	14.1	324	18.6 ¹⁴¹	48.7 ⁹⁶		20	21	18 45	19 13	9 48 50	23 03 35		
15	48	26.8	14.6	338	51.7 ¹⁴¹	39.1 ⁹⁶		30	40	19 06	38	31 54	18 31		
16	63	26.6	15.2	353	24.9 ¹⁴²	29.3 ⁹⁸		35	18 51	19	19 54	20 58	26 29		
17	78	26.5	-20 15.7	7	58.2 ¹⁴³	-17 19.5 ⁹⁸		40	19 03	19 35	20 14	9 09 60	23 36 26		
18	93	26.3	-20 16.2	22	31.4 ¹⁴²	-17 09.7 ⁹⁸		45	19 18	19 54	20 39	8 55 64	23 47 22		
19	108	26.1	16.8	37	04.8 ¹⁴⁴	-16 59.7 ¹⁰⁰		50	37	20 18	21 13	39 68	** ** *		
20	123	26.0	17.3	51	38.2 ¹⁴⁴	49.7 ¹⁰⁰		52	46	30	32	31 70	** ** *		
21	138	25.8	17.8	66	11.6 ¹⁴⁴	39.6 ¹⁰¹		54	19 56	20 44	21 56	22 73	** ** *		
22	153	25.6	18.3	80	45.1 ¹⁴⁵	29.5 ¹⁰¹		56	20 07	21 00	22 30	12 76	0 07 15		
23	168	25.4	18.9	95	18.7 ¹⁴⁶	19.3 ¹⁰²		58	20	20	** ** *	8 01 79	18 12		
24	183	25.3	-20 19.4	109	52.3 ¹⁴⁶	-16 09.0 ¹⁰³		60 S	20 35	21 45	** ** *	7 48 83	0 32 8		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 19 ^h 52 ^m 3		Mag: -3.9 PMG: 10 ^h 58 ^m		Mag: +0.1 PMG: 5 ^h 08 ^m		Mag: -2.4 PMG: 17 ^h 23 ^m		Mag: +1.0 PMG: 8 ^h 06 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	61	06.9	195	43.8	-16 02.3	282	57.1	+18 23.5	98	40.3	-15 50.6	238	11.4	+1 02.2
1	76	09.4	210	43.1	03.3	297	58.8	23.3	113	42.5	50.5	253	13.6	02.1
2	91	11.9	225	42.5	04.2	313	00.5	23.2	128	44.7	50.4	268	15.9	02.1
3	106	14.3	240	41.8	05.2	328	02.2	23.1	143	46.8	50.3	283	18.2	02.0
4	121	16.8	255	41.2	06.1	343	03.8	22.9	158	49.0	50.2	298	20.4	01.9
5	136	19.2	270	40.5	-16 07.1	358	05.5	+18 22.8	173	51.2	-15 50.1	313	22.7	+1 01.8
6	151	21.7	285	39.9	-16 08.0	13	07.2	+18 22.6	188	53.3	-15 50.0	328	25.0	+1 01.8
7	166	24.2	300	39.2	08.9	28	08.9	22.5	203	55.5	49.9	343	27.2	01.7
8	181	26.6	315	38.6	09.9	43	10.6	22.4	218	57.7	49.8	358	29.5	01.6
9	196	29.1	330	37.9	10.8	58	12.3	22.2	233	59.8	49.7	13	31.8	01.5
10	211	31.6	345	37.3	11.8	73	14.0	22.1	249	02.0	49.6	28	34.0	01.5
11	226	34.0	0	36.6	-16 12.7	88	15.7	+18 22.0	264	04.1	-15 49.5	43	36.3	+1 01.4
12	241	36.5	15	35.9	-16 13.7	103	17.4	+18 21.8	279	06.3	-15 49.4	58	38.6	+1 01.3
13	256	39.0	30	35.3	14.6	118	19.1	21.7	294	08.5	49.3	73	40.8	01.2
14	271	41.4	45	34.6	15.5	133	20.7	21.5	309	10.6	49.2	88	43.1	01.2
15	286	43.9	60	34.0	16.5	148	22.4	21.4	324	12.8	49.1	103	45.4	01.1
16	301	46.4	75	33.3	17.4	163	24.1	21.3	339	14.9	49.0	118	47.6	01.0
17	316	48.8	90	32.7	-16 18.3	178	25.8	+18 21.1	354	17.1	-15 48.9	133	49.9	+1 00.9
18	331	51.3	105	32.0	-16 19.3	193	27.5	+18 21.0	9	19.3	-15 48.8	148	52.2	+1 00.9
19	346	53.7	120	31.3	20.2	208	29.2	20.9	24	21.4	48.7	163	54.4	00.8
20	1	56.2	135	30.7	21.1	223	30.9	20.7	39	23.6	48.6	178	56.7	00.7
21	16	58.7	150	30.0	22.1	238	32.6	20.6	54	25.7	48.5	193	59.0	00.6
22	32	01.1	165	29.4	23.0	253	34.3	20.5	69	27.9	48.4	209	01.2	00.6
23	47	03.6	180	28.7	23.9	268	36.0	20.3	84	30.0	48.3	224	03.5	00.5
24	62	06.1	195	28.0	-16 24.9	283	37.7	+18 20.2	99	32.2	-15 48.2	239	05.8	+1 00.4
Dif	—		-7	-9		+17	-1		+22	+1		+23	-1	

ALMANAQUE NÁUTICO PERSEIS

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16'2 PMG: 11 ^h 46 ^m 7			Edad: 7 ^d 2 SD: 14'8 PMG: 17 ^h 52 ^m					PHE { 4 ^h : 54'3 12 ^h : 54'4 20 ^h : 54'5 R°: 41 ^m									
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m				
0	183	21.0	-20	31.7	99	32.4	-11	44.7	60 N	15 13	16 05	16 59	12 49 4	23 10 81				
1	198	20.9		32.2	114	07.0 ¹⁵⁶		33.1 ¹¹⁶	58	27	14	17 04	44 7	14 78				
2	213	20.7		32.7	128	41.7 ¹⁵⁷		21.3 ¹¹⁸	56	38	23	10	40 9	18 75				
3	228	20.5		33.2	143	16.4 ¹⁵⁷	-11	09.6 ¹¹⁷	54	49	30	14	35 12	21 72				
4	243	20.3		33.7	157	51.2 ¹⁵⁸	-10	57.7 ¹¹⁹	52	15 58	37	19	32 13	24 70				
5	258	20.1	-20	34.2	172	25.9 ¹⁵⁷	-10	45.9 ¹¹⁸	50	16 06	16 43	17 23	12 28 16	23 27 68				
6	273	20.0	-20	34.8	187	00.7 ¹⁵⁸	-10	34.0 ¹¹⁹	45	16 24	16 56	17 32	12 21 19	23 33 63				
7	288	19.8		35.3	201	35.5 ¹⁵⁸		22.0 ¹²⁰	40	38	17 07	41	15 22	37 60				
8	303	19.6		35.8	216	10.4 ¹⁵⁹	-10	10.0 ¹²⁰	35	16 50	17	48	09 26	41 57				
9	318	19.4		36.3	230	45.2 ¹⁵⁸	-9	58.0 ¹²⁰	30	17 01	26	17 56	12 04 29	45 54				
10	333	19.2		36.8	245	20.1 ¹⁵⁹		45.9 ¹²¹	20	19	43	18 10	11 56 33	51 49				
11	348	19.0	-20	37.3	259	55.1 ¹⁶⁰	-9	33.8 ¹²¹	10 N	17 35	17 58	18 23	11 49 37	23 57 44				
12	3	18.9	-20	37.8	274	30.0 ¹⁵⁹	-9	21.6 ¹²²	0	17 50	18 12	18 38	11 42 41	** ** *				
13	18	18.7		38.3	289	04.9 ¹⁵⁹	-9	09.4 ¹²²	10 S	18 06	28	18 55	35 45	** ** *				
14	33	18.5		38.8	303	39.9 ¹⁶⁰	-8	57.2 ¹²²	20	22	18 46	19 15	28 49	** ** *				
15	48	18.3		39.2	318	14.9 ¹⁶⁰		44.9 ¹²³	30	41	19 08	40	19 54	** ** *				
16	63	18.1		39.7	332	49.9 ¹⁶⁰		32.5 ¹²⁴	35	18 53	21	19 56	14 57	** ** *				
17	78	17.9	-20	40.2	347	24.9 ¹⁶⁰	-8	20.2 ¹²³	40	19 06	19 37	20 16	11 09 59	0 02 23				
18	93	17.8	-20	40.7	2	00.0 ¹⁶¹	-8	07.8 ¹²⁴	45	19 21	19 56	20 42	11 02 63	0 09 21				
19	108	17.6		41.2	16	35.0 ¹⁶⁰	-7	55.3 ¹²⁵	50	40	20 21	21 18	10 54 68	19 16				
20	123	17.4		41.7	31	10.1 ¹⁶¹		42.9 ¹²⁴	52	49	34	21 38	51 69	23 14				
21	138	17.2		42.2	45	45.2 ¹⁶¹		30.4 ¹²⁵	54	19 59	20 48	22 03	47 72	28 12				
22	153	17.0		42.7	60	20.3 ¹⁶¹		17.8 ¹²⁶	56	20 11	21 05	22 40	42 75	33 10				
23	168	16.8		43.2	74	55.4 ¹⁶¹	-7	05.2 ¹²⁶	58	24	26	** ** *	37 78	39 7				
24	183	16.6	-20	43.7	89	30.5 ¹⁶¹	-6	52.6 ¹²⁶	60 S	20 40	21 53	** ** *	10 32 80	0 46 4				
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 19 ^h 44 ^m 4		Mag: -3.9 PMG: 11 ^h 00 ^m		Mag: +0.1 PMG: 5 ^h 02 ^m		Mag: -2.3 PMG: 17 ^h 16 ^m		Mag: +1.0 PMG: 7 ^h 59 ^m									
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄									
h	°	'	°	'	°	'	°	'	°	'								
0	63	05.2	195	12.0	284	18.8	+18	17.0	100	23.9	-15	45.7	240	00.2	+0	58.6		
1	78	07.7	210	11.3		47.9		16.9	115	26.1		45.6	255	02.5		58.6		
2	93	10.1	225	10.6		48.8		16.8	130	28.2		45.5	270	04.8		58.5		
3	108	12.6	240	10.0		49.7		16.6	145	30.4		45.4	285	07.1		58.4		
4	123	15.1	255	09.3		50.7		16.5	160	32.5		45.3	300	09.3		58.3		
5	138	17.5	270	08.6	-16	51.6	359	27.5	+18	16.4	175	34.7	-15	45.2	315	11.6	+0	58.3
6	153	20.0	285	07.9	-16	52.5	14	29.2	+18	16.2	190	36.8	-15	45.1	330	13.9	+0	58.2
7	168	22.5	300	07.3		53.4	29	30.9		16.1	205	39.0		45.0	345	16.1		58.1
8	183	24.9	315	06.6		54.3	44	32.7		16.0	220	41.1		44.8	0	18.4		58.1
9	198	27.4	330	05.9		55.2	59	34.4		15.9	235	43.3		44.7	15	20.7		58.0
10	213	29.8	345	05.2		56.1	74	36.1		15.7	250	45.4		44.6	30	23.0		57.9
11	228	32.3	0	04.5	-16	57.0	89	37.9	+18	15.6	265	47.6	-15	44.5	45	25.2	+0	57.8
12	243	34.8	15	03.9	-16	57.9	104	39.6	+18	15.5	280	49.7	-15	44.4	60	27.5	+0	57.8
13	258	37.2	30	03.2		58.8	119	41.3		15.4	295	51.9		44.3	75	29.8		57.7
14	273	39.7	45	02.5	-16	59.7	134	43.1		15.2	310	54.0		44.2	90	32.1		57.6
15	288	42.2	60	01.8	-17	00.6	149	44.8		15.1	325	56.2		44.1	105	34.3		57.5
16	303	44.6	75	01.1		01.5	164	46.5		15.0	340	58.3		44.0	120	36.6		57.5
17	318	47.1	90	00.5	-17	02.4	179	48.3	+18	14.9	356	00.4	-15	43.9	135	38.9	+0	57.4
18	333	49.6	104	59.8	-17	03.3	194	50.0	+18	14.7	11	02.6	-15	43.8	150	41.2	+0	57.3
19	348	52.0	119	59.1		04.2	209	51.7		14.6	26	04.7		43.7	165	43.4		57.3
20	3	54.5	134	58.4		05.1	224	53.5		14.5	41	06.9		43.6	180	45.7		57.2
21	18	57.0	149	57.7		06.0	239	55.2		14.4	56	09.0		43.5	195	48.0		57.1
22	33	59.4	164	57.0		06.9	254	57.0		14.2	71	11.2		43.4	210	50.2		57.0
23	49	01.9	179	56.3		07.8	269	58.7		14.1	86	13.3		43.3	225	52.5		57.0
24	64	04.3	194	55.7	-17	08.7	285	00.5	+18	14.0	101	15.5	-15	43.1	240	54.8	+0	56.9
Dif	—		-7		-9		+17		-1		+21		+1		+23		-1	

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'2 PMG: 11 ^h 47 ^m 0			Edad: 8 ^d 2	PHE { 4 ^h : 54'6 12 ^h : 54'8 20 ^h : 54'9 R°: 41 ^m													
	hG ☉	Dec		hG ☾		Dif		Dec	Dif		Náutico	Civil	Hora	R°	Hora	R°		
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m	m	
0	183	16.6	-20 43.7	89	30.5	-6 52.6	126	60 N	6	36	7	30	8	22	12	53	3	
1	198	16.4	44.2	104	05.6 ¹⁶¹	40.0	126	58	30	20	8	08	51	6	***	***	***	
2	213	16.3	44.7	118	40.8 ¹⁶²	27.3	127	56	25	12	7	56	49	8	***	***	***	
3	228	16.1	45.2	133	15.9 ¹⁶¹	14.6	127	54	20	7	05	46	47	11	***	***	***	
4	243	15.9	45.6	147	51.1 ¹⁶²	-6 01.9	127	52	16	6	58	37	45	13	***	***	***	
5	258	15.7	-20 46.1	162	26.2 ¹⁶¹	-5 49.1	128	50	6	11	6	52	7	28	12	44	14	
6	273	15.5	-20 46.6	177	01.4 ¹⁶²	-5 36.3	128	45	6	02	6	38	7	11	12	40	19	
7	288	15.3	47.1	191	36.5 ¹⁶¹	23.5	128	40	5	53	27	6	56	37	23	***	***	
8	303	15.1	47.6	206	11.7 ¹⁶²	-5 10.6	129	35	46	17	44	35	26	***	***	***	***	
9	318	14.9	48.1	220	46.8 ¹⁶¹	-4 57.7	129	30	38	6	08	33	33	28	***	***	***	
10	333	14.7	48.6	235	22.0 ¹⁶²	44.8	129	20	24	5	51	6	15	29	33	***	***	
11	348	14.6	-20 49.0	249	57.1 ¹⁶¹	-4 31.9	129	10 N	5	10	5	36	5	59	12	26	37	
12	3	14.4	-20 49.5	264	32.3 ¹⁶²	-4 18.9	130	0	4	56	5	21	5	43	12	23	41	
13	18	14.2	50.0	279	07.4 ¹⁶¹	-4 05.9	130	10 S	39	5	05	28	20	45	07	37		
14	33	14.0	50.5	293	42.6 ¹⁶²	-3 52.9	130	20	4	19	4	47	5	11	17	49	12	
15	48	13.8	51.0	308	17.7 ¹⁶¹	39.9	130	30	3	53	25	4	52	13	54	18	28	
16	63	13.6	51.5	322	52.8 ¹⁶¹	26.8	131	35	37	4	12	41	11	57	21	26		
17	78	13.4	-20 51.9	337	27.9 ¹⁶¹	-3 13.7	131	40	3	17	3	56	4	28	12	08	60	
18	93	13.2	-20 52.4	352	03.1 ¹⁶²	-3 00.6	131	45	2	51	3	37	4	12	12	05	64	
19	108	13.0	52.9	6	38.2 ¹⁶¹	-2 47.5	131	50	2	15	12	3	53	02	68	35	15	
20	123	12.8	53.4	21	13.2 ¹⁶⁰	34.3	132	52	1	56	3	00	44	12	00	71	37	
21	138	12.6	53.8	35	48.3 ¹⁶¹	21.1	132	54	1	31	2	45	34	11	59	72	40	
22	153	12.4	54.3	50	23.4 ¹⁶¹	-2 07.9	132	56	0	53	29	22	57	75	43	8		
23	168	12.2	54.8	64	58.4 ¹⁶⁰	-1 54.7	132	58	***	***	2	08	3	09	55	78	46	6
24	183	12.0	-20 55.3	79	33.4 ¹⁶⁰	-1 41.5	132	60 S	***	***	1	41	2	53	11	52	81	0

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 19 ^h 40 ^m 5		Mag: -3.9 PMG: 11 ^h 01 ^m		Mag: 0.0 PMG: 4 ^h 59 ^m		Mag: -2.3 PMG: 17 ^h 13 ^m		Mag: +1.0 PMG: 7 ^h 55 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	64	04.3	194	55.7	-17 08.7	285	00.5	+18 14.0	101	15.5	-15 43.1	240	54.8	+0 56.9	
1	79	06.8	209	55.0	09.6	300	02.2	13.9	116	17.6	43.0	255	57.1	56.8	
2	94	09.3	224	54.3	10.5	315	03.9	13.8	131	19.8	42.9	270	59.3	56.8	
3	109	11.7	239	53.6	11.4	330	05.7	13.6	146	21.9	42.8	286	01.6	56.7	
4	124	14.2	254	52.9	12.3	345	07.4	13.5	161	24.0	42.7	301	03.9	56.6	
5	139	16.7	269	52.2	-17 13.2	0	09.2	+18 13.4	176	26.2	-15 42.6	316	06.2	+0 56.5	
6	154	19.1	284	51.5	-17 14.1	15	10.9	+18 13.3	191	28.3	-15 42.5	331	08.4	+0 56.5	
7	169	21.6	299	50.8	14.9	30	12.7	13.1	206	30.5	42.4	346	10.7	56.4	
8	184	24.1	314	50.1	15.8	45	14.4	13.0	221	32.6	42.3	1	13.0	56.3	
9	199	26.5	329	49.5	16.7	60	16.2	12.9	236	34.8	42.2	16	15.3	56.3	
10	214	29.0	344	48.8	17.6	75	17.9	12.8	251	36.9	42.1	31	17.5	56.2	
11	229	31.4	359	48.1	-17 18.5	90	19.7	+18 12.7	266	39.1	-15 42.0	46	19.8	+0 56.1	
12	244	33.9	14	47.4	-17 19.4	105	21.5	+18 12.5	281	41.2	-15 41.9	61	22.1	+0 56.0	
13	259	36.4	29	46.7	20.3	120	23.2	12.4	296	43.3	41.7	76	24.4	56.0	
14	274	38.8	44	46.0	21.1	135	25.0	12.3	311	45.5	41.6	91	26.6	55.9	
15	289	41.3	59	45.3	22.0	150	26.7	12.2	326	47.6	41.5	106	28.9	55.8	
16	304	43.8	74	44.6	22.9	165	28.5	12.1	341	49.8	41.4	121	31.2	55.8	
17	319	46.2	89	43.9	-17 23.8	180	30.2	+18 11.9	356	51.9	-15 41.3	136	33.5	+0 55.7	
18	334	48.7	104	43.2	-17 24.7	195	32.0	+18 11.8	11	54.0	-15 41.2	151	35.8	+0 55.6	
19	349	51.2	119	42.5	25.6	210	33.8	11.7	26	56.2	41.1	166	38.0	55.5	
20	4	53.6	134	41.8	26.4	225	35.5	11.6	41	58.3	41.0	181	40.3	55.5	
21	19	56.1	149	41.1	27.3	240	37.3	11.5	57	00.5	40.9	196	42.6	55.4	
22	34	58.6	164	40.4	28.2	255	39.0	11.4	72	02.6	40.8	211	44.9	55.3	
23	50	01.0	179	39.7	29.1	270	40.8	11.2	87	04.7	40.7	226	47.1	55.3	
24	65	03.5	194	39.0	-17 29.9	285	42.6	+18 11.1	102	06.9	-15 40.6	241	49.4	+0 55.2	
Dif	—		-7	-9		+18	-1		+21		+1		+23		-1

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 2			Edad: 9 ^d 2	PHE { 4 ^h : 55 ^h :1 12 ^h : 55 ^h :3 20 ^h : 55 ^h :5									
	PMG: 11 ^h 47 ^m 4					SD: 15 ^h 0			PMG: 19 ^h 14 ^m		Rº: 43 ^m			
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	Rº	Hora	Rº
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	183	12.0	-20 55.3	79	33.4	-1 41.5		60 N	15 10	16 02	16 56	12 56 4	0 31 82	
1	198	11.8	55.7	94	08.5 ¹⁶¹	28.3 ¹³²		58	24	12	17 02	57 6	32 79	
2	213	11.6	56.2	108	43.5 ¹⁶⁰	15.0 ¹³³		56	36	20	08	57 9	33 76	
3	228	11.5	56.7	123	18.4 ¹⁵⁹	-1 01.7 ¹³³		54	47	28	13	58 11	33 74	
4	243	11.3	57.2	137	53.4 ¹⁶⁰	-0 48.4 ¹³³		52	15 56	35	17	58 14	34 71	
5	258	11.1	-20 57.6	152	28.3 ¹⁵⁹	-0 35.1 ¹³³		50	16 04	16 41	17 22	12 58 16	0 35 69	
6	273	10.9	-20 58.1	167	03.2 ¹⁵⁹	-0 21.8 ¹³³		45	16 22	16 55	17 31	12 59 20	0 36 65	
7	288	10.7	58.6	181	38.1 ¹⁵⁹	-0 08.4 ¹³⁴		40	37	17 07	40	13 00 24	37 61	
8	303	10.5	59.0	196	13.0 ¹⁵⁹	+0 04.9 ¹³³		35	16 49	17	48	01 26	38 58	
9	318	10.3	-20 59.5	210	47.8 ¹⁵⁸	18.3 ¹³⁴		30	17 00	26	17 55	01 30	39 55	
10	333	10.1	-21 00.0	225	22.6 ¹⁵⁸	31.7 ¹³⁴		20	19	43	18 10	02 35	40 50	
11	348	09.9	-21 00.5	239	57.4 ¹⁵⁸	+0 45.1 ¹³⁴		10 N	17 35	17 58	18 24	13 03 39	0 41 46	
12	3	09.7	-21 00.9	254	32.1 ¹⁵⁷	+0 58.4 ¹³³		0	17 51	18 13	18 39	13 04 43	0 43 41	
13	18	09.5	01.4	269	06.8 ¹⁵⁷	+1 11.9 ¹³⁵		10 S	18 07	29	18 56	05 47	44 37	
14	33	09.3	01.8	283	41.5 ¹⁵⁷	25.3 ¹³⁴		20	24	18 48	19 16	06 51	45 33	
15	48	09.1	02.3	298	16.2 ¹⁵⁷	38.7 ¹³⁴		30	43	19 10	42	07 56	46 29	
16	63	08.9	02.8	312	50.8 ¹⁵⁶	+1 52.1 ¹³⁴		35	18 55	23	19 59	08 59	47 26	
17	78	08.7	-21 03.2	327	25.4 ¹⁵⁶	+2 05.6 ¹³⁵		40	19 08	19 39	20 19	13 08 63	0 48 22	
18	93	08.5	-21 03.7	341	59.9 ¹⁵⁵	+2 19.0 ¹³⁴		45	19 24	19 59	20 45	13 09 66	0 49 19	
19	108	08.3	04.2	356	34.4 ¹⁵⁵	32.4 ¹³⁴		50	43	20 25	21 22	10 71	50 15	
20	123	08.1	04.6	11	08.9 ¹⁵⁵	45.9 ¹³⁵		52	19 52	37	21 43	11 73	50 13	
21	138	07.9	05.1	25	43.3 ¹⁵⁴	+2 59.3 ¹³⁴		54	20 03	20 52	22 10	11 75	51 11	
22	153	07.7	05.5	40	17.7 ¹⁵⁴	+3 12.8 ¹³⁵		56	15	21 10	22 52	12 78	51 9	
23	168	07.5	06.0	54	52.1 ¹⁵⁴	26.3 ¹³⁵		58	29	21 31	** **	13 80	52 6	
24	183	07.3	-21 06.5	69	26.4 ¹⁵³	+3 39.7 ¹³⁴		60 S	20 45	22 00	** **	13 13 84	0 53 3	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 19 ^h 36 ^m 5		Mag: -3.9 PMG: 11 ^h 02 ^m			Mag: 0.0 PMG: 4 ^h 57 ^m			Mag: -2.3 PMG: 17 ^h 09 ^m			Mag: +1.0 PMG: 7 ^h 52 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°
0	65	03.5	194	39.0	-17 29.9	285	42.6	+18 11.1	102	06.9	-15 40.6	241	49.4	+0 55.2
1	80	05.9	209	38.3	30.8	300	44.3	11.0	117	09.0	40.4	256	51.7	55.1
2	95	08.4	224	37.6	31.7	315	46.1	10.9	132	11.2	40.3	271	54.0	55.1
3	110	10.9	239	36.9	32.6	330	47.9	10.8	147	13.3	40.2	286	56.2	55.0
4	125	13.3	254	36.2	33.4	345	49.6	10.7	162	15.4	40.1	301	58.5	54.9
5	140	15.8	269	35.5	-17 34.3	0	51.4	+18 10.5	177	17.6	-15 40.0	317	00.8	+0 54.8
6	155	18.3	284	34.8	-17 35.2	15	53.2	+18 10.4	192	19.7	-15 39.9	332	03.1	+0 54.8
7	170	20.7	299	34.1	36.0	30	55.0	10.3	207	21.9	39.8	347	05.4	54.7
8	185	23.2	314	33.4	36.9	45	56.7	10.2	222	24.0	39.7	2	07.6	54.6
9	200	25.7	329	32.7	37.8	60	58.5	10.1	237	26.1	39.6	17	09.9	54.6
10	215	28.1	344	32.0	38.6	76	00.3	10.0	252	28.3	39.5	32	12.2	54.5
11	230	30.6	359	31.3	-17 39.5	91	02.1	+18 09.9	267	30.4	-15 39.3	47	14.5	+0 54.4
12	245	33.0	14	30.6	-17 40.4	106	03.8	+18 09.7	282	32.5	-15 39.2	62	16.7	+0 54.4
13	260	35.5	29	29.9	41.2	121	05.6	09.6	297	34.7	39.1	77	19.0	54.3
14	275	38.0	44	29.2	42.1	136	07.4	09.5	312	36.8	39.0	92	21.3	54.2
15	290	40.4	59	28.5	43.0	151	09.2	09.4	327	38.9	38.9	107	23.6	54.1
16	305	42.9	74	27.8	43.8	166	10.9	09.3	342	41.1	38.8	122	25.9	54.1
17	320	45.4	89	27.1	-17 44.7	181	12.7	+18 09.2	357	43.2	-15 38.7	137	28.1	+0 54.0
18	335	47.8	104	26.4	-17 45.6	196	14.5	+18 09.1	12	45.3	-15 38.6	152	30.4	+0 53.9
19	350	50.3	119	25.6	46.4	211	16.3	09.0	27	47.5	38.5	167	32.7	53.9
20	5	52.8	134	24.9	47.3	226	18.1	08.9	42	49.6	38.4	182	35.0	53.8
21	20	55.2	149	24.2	48.1	241	19.9	08.7	57	51.8	38.2	197	37.3	53.7
22	35	57.7	164	23.5	49.0	256	21.6	08.6	72	53.9	38.1	212	39.5	53.7
23	51	00.2	179	22.8	49.8	271	23.4	08.5	87	56.0	38.0	227	41.8	53.6
24	66	02.6	194	22.1	-17 50.7	286	25.2	+18 08.4	102	58.2	-15 37.9	242	44.1	+0 53.5
Dif	—		-7		-9	+18		-1	+21		+1	+23		-1

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16/2 PMG: 11 ^h 47 ^m 7			Edad: 10 ^d 2 PHE { 4 ^h : 55/8 12 ^h : 56/0 20 ^h : 56/3 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	07.3	-21	06.5	69	26.4	+3	39.7	60 N	6	39	7	34	8	27	13	00
1	198	07.1		06.9	84	00.6	+3	53.2	58	33	24	12		03	8	51	82
2	213	06.9		07.4	98	34.8	+4	06.6	56	28	15	8	00	06	11	49	79
3	228	06.7		07.8	113	09.0		20.1	54	23	08	7	49	09	13	47	76
4	243	06.5		08.3	127	43.1		33.5	52	18	7	01	40	12	15	45	74
5	258	06.2	-21	08.7	142	17.2	+4	47.0	50	6	14	6	54	7	31	13	14
6	273	06.0	-21	09.2	156	51.2	+5	00.4	45	6	04	6	40	7	13	13	19
7	288	05.8		09.7	171	25.2		13.9	40	5	55	29	6	59	24	26	38
8	303	05.6		10.1	185	59.1		27.3	35	47	18	46		27	29	36	60
9	318	05.4		10.6	200	32.9		40.7	30	40	6	09	35	31	32	34	57
10	333	05.2		11.0	215	06.7	+5	54.1	20	25	5	53	16	37	36	30	52
11	348	05.0	-21	11.5	229	40.5	+6	07.5	10 N	5	11	5	37	6	00	13	42
12	3	04.8	-21	11.9	244	14.2	+6	20.9	0	4	56	5	22	5	44	13	47
13	18	04.6		12.4	258	47.8		34.3	10 S	39	5	06	28	52	49	21	40
14	33	04.4		12.8	273	21.3	+6	47.7	20	4	19	4	47	5	11	13	57
15	48	04.2		13.3	287	54.8	+7	01.0	30	3	53	25	4	52	14	03	
16	63	04.0		13.7	302	28.3		14.4	35	36	4	11	40	07	61	13	27
17	78	03.8	-21	14.1	317	01.7	+7	27.7	40	3	16	3	55	4	27	14	11
18	93	03.6	-21	14.6	331	35.0	+7	41.0	45	2	49	3	35	4	11	14	15
19	108	03.4		15.0	346	08.2	+7	54.3	50	2	12	3	10	3	52	21	74
20	123	03.2		15.5	0	41.4	+8	07.6	52	1	52	2	57	42	24	76	
21	138	02.9		15.9	15	14.5		20.9	54	1	25	42	32	26	79	02	12
22	153	02.7		16.4	29	47.6		34.1	56	0	43	25	20	30	81	1	00
23	168	02.5		16.8	44	20.5	+8	47.3	58	** **	2	03	3	06	33	85	0
24	183	02.3	-21	17.3	58	53.4	+9	00.5	60 S	** **	1	34	2	50	14	37	89

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 19 ^h 32 ^m 6		Mag: -3.9 PMG: 11 ^h 03 ^m		Mag: 0.0 PMG: 4 ^h 54 ^m		Mag: -2.3 PMG: 17 ^h 06 ^m		Mag: +1.0 PMG: 7 ^h 48 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	66	02.6	194	22.1	-17	50.7	286	25.2	+18	08.4
1	81	05.1	209	21.4		51.6	301	27.0		08.3
2	96	07.5	224	20.7		52.4	316	28.8		08.2
3	111	10.0	239	20.0		53.3	331	30.6		08.1
4	126	12.5	254	19.2		54.1	346	32.4		08.0
5	141	14.9	269	18.5	-17	55.0	1	34.2	+18	07.9
6	156	17.4	284	17.8	-17	55.8	16	36.0	+18	07.8
7	171	19.9	299	17.1		56.7	31	37.7		07.6
8	186	22.3	314	16.4		57.5	46	39.5		07.5
9	201	24.8	329	15.7		58.4	61	41.3		07.4
10	216	27.3	344	14.9	-17	59.2	76	43.1		07.3
11	231	29.7	359	14.2	-18	00.1	91	44.9	+18	07.2
12	246	32.2	14	13.5	-18	00.9	106	46.7	+18	07.1
13	261	34.7	29	12.8		01.8	121	48.5		07.0
14	276	37.1	44	12.1		02.6	136	50.3		06.9
15	291	39.6	59	11.4		03.4	151	52.1		06.8
16	306	42.0	74	10.6		04.3	166	53.9		06.7
17	321	44.5	89	09.9	-18	05.1	181	55.7	+18	06.6
18	336	47.0	104	09.2	-18	06.0	196	57.5	+18	06.5
19	351	49.4	119	08.5		06.8	211	59.3		06.4
20	6	51.9	134	07.7		07.6	227	01.1		06.3
21	21	54.4	149	07.0		08.5	242	02.9		06.2
22	36	56.8	164	06.3		09.3	257	04.8		06.1
23	51	59.3	179	05.6		10.2	272	06.6		05.9
24	67	01.8	194	04.9	-18	11.0	287	08.4	+18	05.8
Dif	—		-7		-8		+18		-1	
							+21		+1	
									+23	
									-1	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16:2 PMG: 11 ^h 48 ^m 0			Edad: 11 ^d 2 PHE { 4 ^h : 56:5 12 ^h : 56:8 20 ^h : 57:1 R°: 50 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m		
0	183	02.3	-21	17.3	58	53.4	+9	00.5	60 N	15 07	16 00	16 54	13 04	7	3 19	90		
1	198	02.1		17.7	73	26.3 ¹³⁹		13.7 ¹³²	58	21	10	17 01	11 11		13	87		
2	213	01.9		18.1	87	59.0 ¹³⁷		26.9 ¹³²	56	34	19	06	17 14		08	83		
3	228	01.7		18.6	102	31.7 ¹³⁷		40.0 ¹³¹	54	45	26	11	22 17		3 03	8		
4	243	01.5		19.0	117	04.3 ¹³⁶	+9	53.1 ¹³¹	52	15 54	34	16	27 20		2 59	78		
5	258	01.3	-21	19.5	131	36.8 ¹³⁵	+10	06.2 ¹³¹	50	16 03	16 40	17 21	13 32	21	2 56	75		
6	273	01.0	-21	19.9	146	09.3 ¹³⁵	+10	19.2 ¹³⁰	45	16 21	16 54	17 31	13 41	27	2 48	70		
7	288	00.8		20.3	160	41.6 ¹³³		32.2 ¹³⁰	40	36	17 06	39	50	29	41	67		
8	303	00.6		20.8	175	13.9 ¹³³		45.2 ¹³⁰	35	16 49	16	48	13 56	34	36	63		
9	318	00.4		21.2	189	46.1 ¹³²	+10	58.2 ¹³⁰	30	17 00	26	17 55	14 03	36	31	60		
10	333	00.2		21.6	204	18.2 ¹³¹	+11	11.1 ¹²⁹	20	19	43	18 10	13 41		22	55		
11	348	00.0	-21	22.1	218	50.3 ¹³¹	+11	24.0 ¹²⁹	10 N	17 36	17 58	18 24	14 23	45	2 15	51		
12	2	59.8	-21	22.5	233	22.2 ¹²⁹	+11	36.8 ¹²⁸	0	17 52	18 14	18 40	14 32	49	2 08	47		
13	17	59.6		22.9	247	54.1 ¹²⁹	+11	49.6 ¹²⁸	10 S	18 08	30	18 57	41 53		2 01	43		
14	32	59.3		23.4	262	25.8 ¹²⁷	+12	02.4 ¹²⁸	20	25	18 49	19 18	14 50	58	1 54	38		
15	47	59.1		23.8	276	57.5 ¹²⁷		15.1 ¹²⁷	30	45	19 12	19 44	15 02	62	45	34		
16	62	58.9		24.2	291	29.1 ¹²⁶		27.8 ¹²⁷	35	18 56	25	20 01	08 65		40	31		
17	77	58.7	-21	24.7	306	00.6 ¹²⁵	+12	40.5 ¹²⁷	40	19 10	19 42	20 22	15 16	68	1 35	27		
18	92	58.5	-21	25.1	320	32.0 ¹²⁴	+12	53.1 ¹²⁶	45	19 26	20 02	20 49	15 24	73	1 29	23		
19	107	58.3		25.5	335	03.3 ¹²³	+13	05.6 ¹²⁵	50	46	28	21 27	35 77		21	19		
20	122	58.1		25.9	349	34.6 ¹²³		18.2 ¹²⁶	52	19 56	41	21 48	40 79		18	17		
21	137	57.8		26.4	4	05.7 ¹²¹		30.6 ¹²⁴	54	20 06	20 56	22 16	45 83		14	14		
22	152	57.6		26.8	18	36.7 ¹²⁰		43.0 ¹²⁴	56	18	21 14	23 05	51 86		10	12		
23	167	57.4		27.2	33	07.7 ¹²⁰	+13	55.4 ¹²⁴	58	33	21 37	** ** *	15 58 89		05	9		
24	182	57.2	-21	27.6	47	38.5 ¹¹⁸	+14	07.7 ¹²³	60 S	20 50	22 07	** ** *	16 06 93		1 00	5		
UT	ARIES		VENUS			MARTE			JÚPITER				SATURNO					
	PMG: 19 ^h 28 ^m 7		Mag: -3.9 PMG: 11 ^h 04 ^m			Mag: 0.0 PMG: 4 ^h 51 ^m			Mag: -2.3 PMG: 17 ^h 02 ^m				Mag: +1.0 PMG: 7 ^h 44 ^m					
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♊		Dec		hG ♉		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	67	01.8	194	04.9	-18	11.0	287	08.4	+18	05.8	103	49.3	-15	35.2	243	38.9	+0	51.9
1	82	04.2	209	04.1		11.8	302	10.2		05.7	118	51.4		35.1	258	41.1		51.8
2	97	06.7	224	03.4		12.7	317	12.0		05.6	133	53.5		35.0	273	43.4		51.7
3	112	09.1	239	02.7		13.5	332	13.8		05.5	148	55.7		34.9	288	45.7		51.7
4	127	11.6	254	02.0		14.3	347	15.6		05.4	163	57.8		34.8	303	48.0		51.6
5	142	14.1	269	01.2	-18	15.2	2	17.4	+18	05.3	178	59.9	-15	34.6	318	50.3	+0	51.5
6	157	16.5	284	00.5	-18	16.0	17	19.2	+18	05.2	194	02.0	-15	34.5	333	52.6	+0	51.5
7	172	19.0	298	59.8		16.8	32	21.1		05.1	209	04.2		34.4	348	54.9		51.4
8	187	21.5	313	59.0		17.6	47	22.9		05.0	224	06.3		34.3	3	57.1		51.3
9	202	23.9	328	58.3		18.5	62	24.7		04.9	239	08.4		34.2	18	59.4		51.3
10	217	26.4	343	57.6		19.3	77	26.5		04.8	254	10.5		34.1	34	01.7		51.2
11	232	28.9	358	56.9	-18	20.1	92	28.3	+18	04.7	269	12.7	-15	34.0	49	04.0	+0	51.1
12	247	31.3	13	56.1	-18	20.9	107	30.2	+18	04.6	284	14.8	-15	33.8	64	06.3	+0	51.1
13	262	33.8	28	55.4		21.8	122	32.0		04.5	299	16.9		33.7	79	08.6		51.0
14	277	36.3	43	54.7		22.6	137	33.8		04.4	314	19.0		33.6	94	10.8		50.9
15	292	38.7	58	53.9		23.4	152	35.6		04.3	329	21.2		33.5	109	13.1		50.9
16	307	41.2	73	53.2		24.2	167	37.4		04.2	344	23.3		33.4	124	15.4		50.8
17	322	43.6	88	52.5	-18	25.1	182	39.3	+18	04.1	359	25.4	-15	33.3	139	17.7	+0	50.7
18	337	46.1	103	51.7	-18	25.9	197	41.1	+18	04.0	14	27.5	-15	33.2	154	20.0	+0	50.7
19	352	48.6	118	51.0		26.7	212	42.9		03.9	29	29.7		33.0	169	22.3		50.6
20	7	51.0	133	50.3		27.5	227	44.7		03.8	44	31.8		32.9	184	24.6		50.5
21	22	53.5	148	49.5		28.3	242	46.6		03.7	59	33.9		32.8	199	26.8		50.5
22	37	56.0	163	48.8		29.2	257	48.4		03.6	74	36.0		32.7	214	29.1		50.4
23	52	58.4	178	48.1		30.0	272	50.2		03.5	89	38.1		32.6	229	31.4		50.3
24	68	00.9	193	47.3	-18	30.8	287	52.1	+18	03.4	104	40.3	-15	32.5	244	33.7	+0	50.3
Dif	—		-7		-8		+18		-1		+21		+1		+23		-	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16:2 PMG: 11 ^h 48 ^m 4			Edad: 12 ^d 2 PHE { 4 ^h : 57/4 12 ^h : 57/6 20 ^h : 57/9 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	182	57.2	-21	27.6	47	38.5	+14 07.7	60 N	6 43	7 37	8 31	13 11	12	4 49	96
1	197	57.0		28.1	62	09.3 ¹¹⁸	20.0 ¹²³	58	37	27	16	22	16	40	91
2	212	56.8		28.5	76	39.9 ¹¹⁶	32.2 ¹²²	56	31	18	8 04	31	20	31	87
3	227	56.5		28.9	91	10.4 ¹¹⁵	44.3 ¹²¹	54	26	11	7 53	39	23	24	84
4	242	56.3		29.3	105	40.9 ¹¹⁵	+14 56.4 ¹²¹	52	21	7 03	43	47	25	17	81
5	257	56.1	-21	29.8	120	11.2 ¹¹³	+15 08.5 ¹²¹	50	6 16	6 57	7 34	13 53	28	4 11	79
6	272	55.9	-21	30.2	134	41.5 ¹¹³	+15 20.4 ¹¹⁹	45	6 06	6 43	7 16	14 08	32	3 58	74
7	287	55.7		30.6	149	11.6 ¹¹¹	32.4 ¹²⁰	40	5 57	31	7 01	19	37	48	69
8	302	55.4		31.0	163	41.6 ¹¹⁰	44.2 ¹¹⁸	35	49	20	6 48	30	39	39	66
9	317	55.2		31.4	178	11.5 ¹⁰⁹	+15 56.0 ¹¹⁸	30	41	6 11	37	39	41	31	64
10	332	55.0		31.9	192	41.3 ¹⁰⁸	+16 07.7 ¹¹⁷	20	27	5 54	17	14 54	46	17	59
11	347	54.8	-21	32.3	207	11.0 ¹⁰⁷	+16 19.4 ¹¹⁷	10 N	5 12	5 38	6 01	15 08	50	3 06	54
12	2	54.6	-21	32.7	221	40.6 ¹⁰⁶	+16 30.9 ¹¹⁵	0	4 57	5 22	5 45	15 21	53	2 55	51
13	17	54.3		33.1	236	10.1 ¹⁰⁵	42.5 ¹¹⁶	10 S	39	5 06	29	34	57	44	47
14	32	54.1		33.5	250	39.5 ¹⁰⁴	+16 53.9 ¹¹⁴	20	4 19	4 47	5 11	15 48	60	32	43
15	47	53.9		33.9	265	08.8 ¹⁰³	+17 05.2 ¹¹³	30	3 52	25	4 51	16 04	65	19	38
16	62	53.7		34.3	279	37.9 ¹⁰¹	16.5 ¹¹³	35	35	4 11	40	13	68	11	36
17	77	53.5	-21	34.8	294	07.0 ¹⁰¹	+17 27.7 ¹¹²	40	3 14	3 54	4 26	16 24	71	2 02	33
18	92	53.2	-21	35.2	308	35.9 ⁹⁹	+17 38.9 ¹¹²	45	2 47	3 34	4 10	16 37	75	1 52	29
19	107	53.0		35.6	323	04.8 ⁹⁹	+17 49.9 ¹¹⁰	50	2 09	3 08	3 50	52	80	40	24
20	122	52.8		36.0	337	33.5 ⁹⁷	+18 00.9 ¹¹⁰	52	1 48	2 55	40	16 59	83	35	21
21	137	52.6		36.4	352	02.1 ⁹⁶	11.8 ¹⁰⁹	54	1 20	40	30	17 08	85	28	19
22	152	52.3		36.8	6	30.5 ⁹⁴	22.6 ¹⁰⁸	56	0 31	2 22	17	17	89	22	15
23	167	52.1		37.2	20	58.9 ⁹⁴	33.3 ¹⁰⁷	58	** **	1 59	3 03	27	93	14	12
24	182	51.9	-21	37.6	35	27.2 ⁹³	+18 43.9 ¹⁰⁶	60 S	** **	1 28	2 46	17 39	99	1 05	8
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 19 ^h 24 ^m 8			Mag: -3.9 PMG: 11 ^h 05 ^m			Mag: 0.0 PMG: 4 ^h 48 ^m			Mag: -2.3 PMG: 16 ^h 59 ^m			Mag: +1.0 PMG: 7 ^h 41 ^m		
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°
0	68	00.9	193	47.3	-18	30.8	287	52.1	+18 03.4	104	40.3	-15 32.5	244	33.7	+0 50.3
1	83	03.4	208	46.6		31.6	302	53.9	03.4	119	42.4	32.4	259	36.0	50.2
2	98	05.8	223	45.8		32.4	317	55.7	03.3	134	44.5	32.2	274	38.3	50.1
3	113	08.3	238	45.1		33.2	332	57.6	03.2	149	46.6	32.1	289	40.6	50.1
4	128	10.8	253	44.4		34.0	347	59.4	03.1	164	48.8	32.0	304	42.8	50.0
5	143	13.2	268	43.6	-18	34.8	3	01.2	+18 03.0	179	50.9	-15 31.9	319	45.1	+0 49.9
6	158	15.7	283	42.9	-18	35.7	18	03.1	+18 02.9	194	53.0	-15 31.8	334	47.4	+0 49.9
7	173	18.1	298	42.2		36.5	33	04.9	02.8	209	55.1	31.7	349	49.7	49.8
8	188	20.6	313	41.4		37.3	48	06.7	02.7	224	57.2	31.5	4	52.0	49.7
9	203	23.1	328	40.7		38.1	63	08.6	02.6	239	59.4	31.4	19	54.3	49.7
10	218	25.5	343	39.9		38.9	78	10.4	02.5	255	01.5	31.3	34	56.6	49.6
11	233	28.0	358	39.2	-18	39.7	93	12.3	+18 02.4	270	03.6	-15 31.2	49	58.9	+0 49.5
12	248	30.5	13	38.4	-18	40.5	108	14.1	+18 02.3	285	05.7	-15 31.1	65	01.1	+0 49.5
13	263	32.9	28	37.7		41.3	123	16.0	02.2	300	07.8	31.0	80	03.4	49.4
14	278	35.4	43	37.0		42.1	138	17.8	02.1	315	10.0	30.8	95	05.7	49.3
15	293	37.9	58	36.2		42.9	153	19.6	02.0	330	12.1	30.7	110	08.0	49.3
16	308	40.3	73	35.5		43.7	168	21.5	01.9	345	14.2	30.6	125	10.3	49.2
17	323	42.8	88	34.7	-18	44.5	183	23.3	+18 01.8	0	16.3	-15 30.5	140	12.6	+0 49.2
18	338	45.2	103	34.0	-18	45.3	198	25.2	+18 01.8	15	18.4	-15 30.4	155	14.9	+0 49.1
19	353	47.7	118	33.2		46.1	213	27.0	01.7	30	20.5	30.3	170	17.2	49.0
20	8	50.2	133	32.5		46.9	228	28.9	01.6	45	22.7	30.1	185	19.5	49.0
21	23	52.6	148	31.7		47.7	243	30.7	01.5	60	24.8	30.0	200	21.7	48.9
22	38	55.1	163	31.0		48.5	258	32.6	01.4	75	26.9	29.9	215	24.0	48.8
23	53	57.6	178	30.2		49.3	273	34.4	01.3	90	29.0	29.8	230	26.3	48.8
24	69	00.0	193	29.5	-18	50.1	288	36.3	+18 01.2	105	31.1	-15 29.7	245	28.6	+0 48.7
Dif	—		-7	-8		+18	-1		+21		+1		+23		-1

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 11 ^h 48 ^m 7			Edad: 13 ^d 2 PHE { SD: 15:8 PMG: 22 ^h 28 ^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	182	51.9	-21	37.6	35	27.2	+18 43.9	60 N	15 04	15 58	16 53	13 23 20	6 25 98	
1	197	51.7		38.0	49	55.3	91 +18 54.4	58	19	16 08	16 59	38 26	6 11 92	
2	212	51.4		38.4	64	23.3	90 +19 04.9	56	32	17	17 05	13 51 29	5 58 89	
3	227	51.2		38.8	78	51.2	89 15.2	54	43	25	10	14 02 33	48 85	
4	242	51.0		39.3	93	19.0	88 25.5	52	15 53	32	15	12 35	38 82	
5	257	50.8	-21	39.7	107	46.7	87 +19 35.6	50	16 02	16 39	17 20	14 21 37	5 30 80	
6	272	50.5	-21	40.1	122	14.3	86 +19 45.7	45	16 20	16 53	17 30	14 40 42	5 12 75	
7	287	50.3		40.5	136	41.7	84 +19 55.6	40	36	17 06	39	14 56 44	4 57 72	
8	302	50.1		40.9	151	09.0	83 +20 05.5	35	16 48	16	47	15 09 47	45 69	
9	317	49.9		41.3	165	36.2	82 15.2	30	17 00	26	17 55	20 50	35 66	
10	332	49.6		41.7	180	03.3	81 24.8	20	19	43	18 10	40 53	16 63	
11	347	49.4	-21	42.1	194	30.3	80 +20 34.4	10 N	17 36	17 59	18 25	15 58 56	4 00 59	
12	2	49.2	-21	42.5	208	57.2	79 +20 43.8	0	17 52	18 15	18 41	16 14 59	3 46 56	
13	17	49.0		42.9	223	23.9	77 +20 53.1	10 S	18 09	31	18 58	31 61	31 53	
14	32	48.7		43.3	237	50.6	77 +21 02.3	20	26	18 50	19 19	16 48 64	3 15 50	
15	47	48.5		43.7	252	17.1	75 11.4	30	46	19 13	19 46	17 09 67	2 57 46	
16	62	48.3		44.1	266	43.5	74 20.3	35	18 58	27	20 03	21 69	47 43	
17	77	48.0	-21	44.5	281	09.7	72 +21 29.2	40	19 12	19 44	20 24	17 35 72	2 35 40	
18	92	47.8	-21	44.8	295	35.9	72 +21 37.9	45	19 28	20 05	20 52	17 52 74	2 21 37	
19	107	47.6		45.2	310	02.0	71 46.5	50	49	31	21 31	18 12 79	2 04 32	
20	122	47.4		45.6	324	27.9	69 +21 55.0	52	19 59	20 45	21 53	22 81	1 56 30	
21	137	47.1		46.0	338	53.7	68 +22 03.3	54	20 10	21 00	22 23	33 83	47 27	
22	152	46.9		46.4	353	19.4	67 11.5	56	22	19	23 21	18 46 86	37 24	
23	167	46.7		46.8	7	45.0	66 19.6	58	37	21 42	** **	19 00 91	26 20	
24	182	46.4	-21	47.2	22	10.5	65 +22 27.6	60 S	20 54	22 15	** **	19 18 96	1 13 15	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 19 ^h 20 ^m 8		Mag: -3.9 PMG: 11 ^h 07 ^m		Mag: 0.0 PMG: 4 ^h 45 ^m		Mag: -2.3 PMG: 16 ^h 56 ^m		Mag: +1.0 PMG: 7 ^h 37 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	69	00.0	193	29.5	-18	50.1	288	36.3	-15	29.7
1	84	02.5	208	28.7		50.9	303	38.2		29.6
2	99	05.0	223	28.0		51.7	318	40.0		29.4
3	114	07.4	238	27.2		52.4	333	41.9		29.3
4	129	09.9	253	26.5		53.2	348	43.7		29.2
5	144	12.4	268	25.7	-18	54.0	3	45.6	+18	00.8
6	159	14.8	283	25.0	-18	54.8	18	47.4	+18	00.7
7	174	17.3	298	24.2		55.6	33	49.3		00.6
8	189	19.7	313	23.5		56.4	48	51.2		00.5
9	204	22.2	328	22.7		57.2	63	53.0		00.4
10	219	24.7	343	22.0		58.0	78	54.9		00.3
11	234	27.1	358	21.2	-18	58.7	93	56.8	+18	00.3
12	249	29.6	13	20.5	-18	59.5	108	58.6	+18	00.2
13	264	32.1	28	19.7	-19	00.3	124	00.5	+18	00.1
14	279	34.5	43	19.0		01.1	139	02.4	+18	00.0
15	294	37.0	58	18.2		01.9	154	04.2	+17	59.9
16	309	39.5	73	17.4		02.6	169	06.1		59.8
17	324	41.9	88	16.7	-19	03.4	184	08.0	+17	59.7
18	339	44.4	103	15.9	-19	04.2	199	09.8	+17	59.7
19	354	46.9	118	15.2		05.0	214	11.7		59.6
20	9	49.3	133	14.4		05.7	229	13.6		59.5
21	24	51.8	148	13.6		06.5	244	15.5		59.4
22	39	54.2	163	12.9		07.3	259	17.3		59.3
23	54	56.7	178	12.1		08.1	274	19.2		59.2
24	69	59.2	193	11.4	-19	08.8	289	21.1	+17	59.2
Dif	—		-8		-8		+19		-1	
							+21		+1	
									+23	
									-1	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'2 PMG: 11 ^h 49 ^m 1			Edad: 14 ^d 2 PHE { 4 ^h : 59'0 12 ^h : 59'2 20 ^h : 59'4 R°: 63 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	182	46.4	-21	22	10.5	+22	27.6	60 N	6	46	7	41	8	35	13	43
1	197	46.2		36	35.9		35.4	58		39		31		20	14	04
2	212	46.0		51	01.1		43.1	56		34		21		8	20	46
3	227	45.7		65	26.3		50.7	54		28		13		7	35	48
4	242	45.5		79	51.3	+22	58.1	52		23	7	06		46	47	50
5	257	45.3	-21	94	16.3	+23	05.4	50		6	19	6	59	7	14	58
6	272	45.1	-21	108	41.1	+23	12.5	45		6	08	6	45	7	15	22
7	287	44.8		123	05.8		19.5	40		5	59		33	7	40	56
8	302	44.6		137	30.4		26.4	35		51		22		6	15	56
9	317	44.4		151	55.0		33.1	30		43	6	12		38	16	10
10	332	44.1		166	19.4		39.7	20		28	5	55		19	33	60
11	347	43.9	-21	180	43.7	+23	46.1	10 N		5	13	5	39	6	16	54
12	2	43.7	-21	195	07.9	+23	52.4	0		4	57	5	23	5	17	13
13	17	43.4		209	32.0	+23	58.5	10 S		40	5	06		29	32	63
14	32	43.2		223	56.0	+24	04.4	20		4	19	4	47	5	17	52
15	47	42.9		238	19.9		10.2	30		3	52	24	4	51	18	16
16	62	42.7		252	43.8		15.9	35		35	4	10		39	30	68
17	77	42.5	-21	267	07.5	+24	21.4	40		3	13	3	53	4	18	47
18	92	42.2	-21	281	31.1	+24	26.7	45		2	46	3	33	4	19	06
19	107	42.0		295	54.7		31.9	50		2	07	3	06	3	49	31
20	122	41.8		310	18.1		36.9	52		1	44	2	53		39	43
21	137	41.5		324	41.5		41.7	54		1	14		37	28	19	56
22	152	41.3		339	04.8		46.4	56		0	16	2	19	15	20	12
23	167	41.1		353	28.0		50.9	58		**	**	1	55	3	31	77
24	182	40.8	-21	7	51.1	+24	55.2	60 S		**	**	1	23	2	20	54

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 19 ^h 16 ^m 9		Mag: -3.9 PMG: 11 ^h 08 ^m		Mag: -0.1 PMG: 4 ^h 42 ^m		Mag: -2.3 PMG: 16 ^h 52 ^m		Mag: +1.0 PMG: 7 ^h 33 ^m	
	hG ☿	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	69	59.2	193	11.4	-19	08.8	289	21.1	+17	59.2
1	85	01.6	208	10.6		09.6	304	23.0		59.1
2	100	04.1	223	09.8		10.4	319	24.8		59.0
3	115	06.6	238	09.1		11.2	334	26.7		58.9
4	130	09.0	253	08.3		11.9	349	28.6		58.8
5	145	11.5	268	07.5	-19	12.7	4	30.5	+17	58.7
6	160	14.0	283	06.8	-19	13.5	19	32.4	+17	58.7
7	175	16.4	298	06.0		14.2	34	34.3		58.6
8	190	18.9	313	05.3		15.0	49	36.1		58.5
9	205	21.4	328	04.5		15.7	64	38.0		58.4
10	220	23.8	343	03.7		16.5	79	39.9		58.4
11	235	26.3	358	03.0	-19	17.3	94	41.8	+17	58.3
12	250	28.7	13	02.2	-19	18.0	109	43.7	+17	58.2
13	265	31.2	28	01.4		18.8	124	45.6		58.1
14	280	33.7	43	00.6		19.5	139	47.5		58.0
15	295	36.1	57	59.9		20.3	154	49.4		58.0
16	310	38.6	72	59.1		21.1	169	51.3		57.9
17	325	41.1	87	58.3	-19	21.8	184	53.1	+17	57.8
18	340	43.5	102	57.6	-19	22.6	199	55.0	+17	57.7
19	355	46.0	117	56.8		23.3	214	56.9		57.7
20	10	48.5	132	56.0		24.1	229	58.8		57.6
21	25	50.9	147	55.3		24.8	245	00.7		57.5
22	40	53.4	162	54.5		25.6	260	02.6		57.4
23	55	55.8	177	53.7		26.3	275	04.5		57.3
24	70	58.3	192	52.9	-19	27.1	290	06.4	+17	57.3
Dif	—		-8		-8		+19		-1	
							+21		+1	
									+23	
									-1	

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 11 ^h 49 ^m 5			Edad: 15 ^d 2 PHE { SD: 16:2 PMG: *** **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	40.8	-21 56.4	7	51.1	+24 55.2	42	60 N	15 01	15 56	16 51	14 22 68	9 32 65	
1	197	40.6	56.7	22	14.2 41	+24 59.4	40	58	17	16 06	16 58	14 47 67	9 08 65	
2	212	40.3	57.1	36	37.2 40	+25 03.4	38	56	30	16	17 04	15 06 68	8 48 65	
3	227	40.1	57.5	51	00.1 39	07.2	38	54	41	24	09	23 67	32 65	
4	242	39.9	57.8	65	22.9 38	10.9	37	52	15 51	31	14	37 67	18 65	
5	257	39.6	-21 58.2	79	45.7 38	+25 14.4	35	50	16 01	16 38	17 19	15 50 66	8 05 65	
6	272	39.4	-21 58.6	94	08.3 36	+25 17.7	33	45	16 20	16 53	17 29	16 15 66	7 40 65	
7	287	39.2	58.9	108	31.0 37	20.8	31	40	35	17 05	39	36 66	20 64	
8	302	38.9	59.3	122	53.5 35	23.8	30	35	16 48	16	47	16 53 65	7 03 64	
9	317	38.7	-21 59.7	137	16.0 35	26.6	28	30	17 00	26	17 55	17 08 65	6 48 64	
10	332	38.4	-22 00.0	151	38.5 35	29.2	26	20	20	43	18 11	33 65	23 64	
11	347	38.2	-22 00.4	166	00.8 33	+25 31.6	24	10 N	17 37	17 59	18 26	17 55 64	6 02 64	
12	2	38.0	-22 00.8	180	23.2 34	+25 33.8	22	0	17 53	18 15	18 41	18 15 64	5 42 63	
13	17	37.7	01.1	194	45.5 33	35.9	21	10 S	18 10	32	18 59	35 63	22 63	
14	32	37.5	01.5	209	07.7 32	37.8	19	20	27	18 52	19 20	18 57 63	5 01 62	
15	47	37.2	01.9	223	29.9 32	39.4	16	30	18 48	19 15	19 48	19 23 61	4 36 62	
16	62	37.0	02.2	237	52.0 31	41.0	16	35	19 00	29	20 05	38 61	21 62	
17	77	36.7	-22 02.6	252	14.1 31	+25 42.3	13	40	19 14	19 46	20 27	19 55 60	4 05 60	
18	92	36.5	-22 02.9	266	36.2 31	+25 43.4	11	45	19 31	20 07	20 55	20 16 59	3 45 59	
19	107	36.3	03.3	280	58.2 30	44.4	10	50	19 52	34	21 35	42 58	19 59	
20	122	36.0	03.7	295	20.2 30	45.1	7	52	20 01	20 48	21 58	20 55 57	3 07 58	
21	137	35.8	04.0	309	42.2 30	45.7	6	54	20 13	21 04	22 30	21 10 56	2 53 58	
22	152	35.5	04.4	324	04.1 29	46.1	4	56	26	23	** ** *	27 55	37 56	
23	167	35.3	04.7	338	26.0 29	46.3	2	58	40	21 48	** ** *	21 48 53	2 18 55	
24	182	35.0	-22 05.1	352	47.9 29	+25 46.3	0	60 S	20 58	22 22	** ** *	22 14 50	1 55 51	
UT	ARIES		VENUS			MARTE			JÚPITER		SATURNO			
	PMG: 19 ^h 13 ^m 0		Mag: -3.9 PMG: 11 ^h 09 ^m			Mag: -0.1 PMG: 4 ^h 39 ^m			Mag: -2.3 PMG: 16 ^h 49 ^m		Mag: +1.0 PMG: 7 ^h 30 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	
0	70	58.3	192	52.9	-19 27.1	290	06.4	+17 57.3	107	12.4	-15 23.9	247	18.7	
1	86	00.8	207	52.2	27.8	305	08.3	57.2	122	14.5	23.8	262	20.9	
2	101	03.2	222	51.4	28.6	320	10.2	57.1	137	16.6	23.7	277	23.2	
3	116	05.7	237	50.6	29.3	335	12.1	57.1	152	18.7	23.6	292	25.5	
4	131	08.2	252	49.8	30.1	350	14.0	57.0	167	20.8	23.5	307	27.8	
5	146	10.6	267	49.1	-19 30.8	5	15.9	+17 56.9	182	22.9	-15 23.3	322	30.1	
6	161	13.1	282	48.3	-19 31.6	20	17.9	+17 56.8	197	25.1	-15 23.2	337	32.4	
7	176	15.6	297	47.5	32.3	35	19.8	56.8	212	27.2	23.1	352	34.7	
8	191	18.0	312	46.7	33.0	50	21.7	56.7	227	29.3	23.0	7	37.0	
9	206	20.5	327	46.0	33.8	65	23.6	56.6	242	31.4	22.8	22	39.3	
10	221	23.0	342	45.2	34.5	80	25.5	56.5	257	33.5	22.7	37	41.6	
11	236	25.4	357	44.4	-19 35.3	95	27.4	+17 56.5	272	35.6	-15 22.6	52	43.9	
12	251	27.9	12	43.6	-19 36.0	110	29.3	+17 56.4	287	37.7	-15 22.5	67	46.2	
13	266	30.3	27	42.8	36.7	125	31.2	56.3	302	39.8	22.4	82	48.5	
14	281	32.8	42	42.1	37.5	140	33.1	56.3	317	41.9	22.2	97	50.8	
15	296	35.3	57	41.3	38.2	155	35.1	56.2	332	44.0	22.1	112	53.1	
16	311	37.7	72	40.5	38.9	170	37.0	56.1	347	46.1	22.0	127	55.4	
17	326	40.2	87	39.7	-19 39.7	185	38.9	+17 56.1	2	48.2	-15 21.9	142	57.7	
18	341	42.7	102	38.9	-19 40.4	200	40.8	+17 56.0	17	50.3	-15 21.7	158	00.0	
19	356	45.1	117	38.1	41.1	215	42.7	55.9	32	52.4	21.6	173	02.3	
20	11	47.6	132	37.4	41.9	230	44.7	55.8	47	54.5	21.5	188	04.6	
21	26	50.1	147	36.6	42.6	245	46.6	55.8	62	56.6	21.4	203	06.9	
22	41	52.5	162	35.8	43.3	260	48.5	55.7	77	58.7	21.2	218	09.2	
23	56	55.0	177	35.0	44.1	275	50.4	55.6	93	00.8	21.1	233	11.5	
24	71	57.5	192	34.2	-19 44.8	290	52.3	+17 55.6	108	02.9	-15 21.0	248	13.8	
Dif	—		-8	-7		+19	-1		+21		+1	+23		

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'2 PMG: 11 ^h 49 ^m 9				Edad: 16 ^d 2 PHE { 4 ^h : 60'1 12 ^h : 60'2 20 ^h : 60'3 R°: 64 ^m															
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m			
0	182	35.0	-22	05.1	352	47.9	+25	46.3	1	60 N	6 49	7 44	8 39	15 30	94	10 37	38			
1	197	34.8		05.4	7	09.8	29	46.2	4	58	42	34	23	15 54	89	10 13	42			
2	212	34.6		05.8	21	31.6	28	45.8	5	56	36	24	8 10	16 14	85	9 53	46			
3	227	34.3		06.2	35	53.4	28	45.3	8	54	31	16	7 59	30 83		37	48			
4	242	34.1		06.5	50	15.3	29	44.5	9	52	26	09	48	44 81		23	49			
5	257	33.8	-22	06.9	64	37.1	28	+25	43.6	11	50	6 21	7 02	7 39	16 56	79	9 10 51			
6	272	33.6	-22	07.2	78	58.9	28	+25	42.5	13	45	6 10	6 47	7 20	17 21	76	8 45 53			
7	287	33.3		07.6	93	20.7	28		41.2	15	40	6 01	34	7 05	42 73	24	56			
8	302	33.1		07.9	107	42.5	28		39.7	17	35	5 52	24	6 51	17 58	72	8 07 57			
9	317	32.8		08.3	122	04.3	28		38.0	18	30	44	6 14	40	18 13	70	7 52 59			
10	332	32.6		08.6	136	26.1	28		36.2	21	20	29	5 56	20	38 66	27	61			
11	347	32.4	-22	09.0	150	47.9	28	+25	34.1	22	10 N	5 14	5 40	6 03	18 59	64	7 06 62			
12	2	32.1	-22	09.3	165	09.8	29	+25	31.9	25	0	4 58	5 24	5 46	19 19	62	6 45 64			
13	17	31.9		09.6	179	31.6	28		29.4	26	10 S	40	5 07	30	19 38	61	25 65			
14	32	31.6		10.0	193	53.5	29		26.8	28	20	4 19	4 48	5 12	20 00	57	6 03 66			
15	47	31.4		10.3	208	15.4	29		24.0	30	30	3 51	24	4 51	24 55	5 38	68			
16	62	31.1		10.7	222	37.3	29		21.0	31	35	34	4 10	39	39 53	23	69			
17	77	30.9	-22	11.0	236	59.2	29	+25	17.9	34	40	3 12	3 53	4 25	20 55	51	5 05 70			
18	92	30.6	-22	11.4	251	21.1	29	+25	14.5	36	45	2 44	3 32	4 08	21 15	48	4 44 72			
19	107	30.4		11.7	265	43.1	30		10.9	37	50	2 04	3 05	3 47	40 44	18	74			
20	122	30.1		12.0	280	05.1	30		07.2	39	52	1 41	2 51	38	21 52	42	4 05 75			
21	137	29.9		12.4	294	27.2	31	+25	03.3	41	54	1 09	35	26	22 06	40	3 51 75			
22	152	29.6		12.7	308	49.3	31	+24	59.2	43	56	** ** *	2 16	3 13	22 36		33 78			
23	167	29.4		13.1	323	11.4	31		54.9	45	58	** ** *	1 51	2 58	22 41	32	3 13 79			
24	182	29.1	-22	13.4	337	33.5	31	+24	50.4		60 S	** ** *	1 17	2 41	23 04	27	2 46 83			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO					
	PMG: 19 ^h 09 ^m 0		Mag: -3.9 PMG: 11 ^h 10 ^m				Mag: -0.1 PMG: 4 ^h 36 ^m				Mag: -2.3 PMG: 16 ^h 45 ^m				Mag: +1.0 PMG: 7 ^h 26 ^m					
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	71	57.5	192	34.2	-19	44.8			290	52.3	+17	55.6	108	02.9	-15	21.0	248	13.8	+0	44.2
1	86	59.9	207	33.4		45.5			305	54.3		55.5	123	05.0		20.9	263	16.1		44.1
2	102	02.4	222	32.6		46.2			320	56.2		55.4	138	07.1		20.8	278	18.4		44.1
3	117	04.8	237	31.9		47.0			335	58.1		55.4	153	09.2		20.6	293	20.7		44.0
4	132	07.3	252	31.1		47.7			351	00.1		55.3	168	11.3		20.5	308	23.0		43.9
5	147	09.8	267	30.3	-19	48.4			6	02.0	+17	55.2	183	13.4	-15	20.4	323	25.3	+0	43.9
6	162	12.2	282	29.5	-19	49.1			21	03.9	+17	55.2	198	15.5	-15	20.3	338	27.6	+0	43.8
7	177	14.7	297	28.7		49.8			36	05.8		55.1	213	17.6		20.1	353	29.9		43.8
8	192	17.2	312	27.9		50.6			51	07.8		55.1	228	19.7		20.0	8	32.2		43.7
9	207	19.6	327	27.1		51.3			66	09.7		55.0	243	21.8		19.9	23	34.5		43.6
10	222	22.1	342	26.3		52.0			81	11.7		54.9	258	23.9		19.8	38	36.8		43.6
11	237	24.6	357	25.5	-19	52.7			96	13.6	+17	54.9	273	26.0	-15	19.6	53	39.1	+0	43.5
12	252	27.0	12	24.7	-19	53.4			111	15.5	+17	54.8	288	28.1	-15	19.5	68	41.4	+0	43.5
13	267	29.5	27	24.0		54.1			126	17.5		54.7	303	30.2		19.4	83	43.7		43.4
14	282	32.0	42	23.2		54.8			141	19.4		54.7	318	32.3		19.3	98	46.0		43.3
15	297	34.4	57	22.4		55.6			156	21.3		54.6	333	34.3		19.1	113	48.3		43.3
16	312	36.9	72	21.6		56.3			171	23.3		54.5	348	36.4		19.0	128	50.6		43.2
17	327	39.3	87	20.8	-19	57.0			186	25.2	+17	54.5	3	38.5	-15	18.9	143	52.9	+0	43.2
18	342	41.8	102	20.0	-19	57.7			201	27.2	+17	54.4	18	40.6	-15	18.8	158	55.2	+0	43.1
19	357	44.3	117	19.2		58.4			216	29.1		54.4	33	42.7		18.6	173	57.5		43.0
20	12	46.7	132	18.4		59.1			231	31.1		54.3	48	44.8		18.5	188	59.8		43.0
21	27	49.2	147	17.6	-19	59.8			246	33.0		54.2	63	46.9		18.4	204	02.1		42.9
22	42	51.7	162	16.8	-20	00.5			261	35.0		54.2	78	49.0		18.3	219	04.4		42.9
23	57	54.1	177	16.0		01.2			276	36.9		54.1	93	51.1		18.1	234	06.7		42.8
24	72	56.6	192	15.2	-20	01.9			291	38.8	+17	54.1	108	53.2	-15	18.0	249	09.0	+0	42.8
Dif	—		-8		-7		+19		-1		+21		+1		+23		-1			

UT	SOL				LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16/2 PMG: 11 ^h 50 ^m 3				Edad: 17 ^d 2 PHE { SD: 16/4 PMG: 1 ^h 34 ^m 4 ^h : 60/3 12 ^h : 60/3 20 ^h : 60/3 R°: 61 ^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	182	29.1	-22	13.4	337	33.5	+24	50.4	60 N	14 59	15 54	16 50	17 04 104		11 15 20		
1	197	28.9		13.7	351	55.7		45.8	58	15 15	16 05	16 57		23 98	10 55 26		
2	212	28.6		14.1	6	18.0	33	41.0	56	28	14	17 03		39 94	39 29		
3	227	28.4		14.4	20	40.3	33	36.0	54	40	23	08	17 53	90	25 33		
4	242	28.1		14.7	35	02.7	34	30.8	52	15 50	30	13	18 05	87	12 36		
5	257	27.9	-22	15.1	49	25.1	34	+24 25.4	50	16 00	16 37	17 18	18 15	85	10 01 38		
6	272	27.6	-22	15.4	63	47.5	34	+24 19.9	45	16 19	16 52	17 29	18 37	80	9 38 43		
7	287	27.4		15.7	78	10.0	35	14.2	40	35	17 05	39	18 55	76	20 46		
8	302	27.1		16.1	92	32.6	36	08.3	35	16 48	16	47	19 10	73	9 04 49		
9	317	26.9		16.4	106	55.2	36	+24 02.2	30	17 00	26	17 56		23 70	8 51 51		
10	332	26.6		16.7	121	17.9	37	+23 56.0	20	20	17 44	18 11	19 44	66	28 54		
11	347	26.4	-22	17.1	135	40.7	38	+23 49.6	10 N	17 37	18 00	18 26	20 03	63	8 08 57		
12	2	26.1	-22	17.4	150	03.5	38	+23 43.0	0	17 54	18 16	18 42	20 21	59	7 49 60		
13	17	25.9		17.7	164	26.4	39	36.3	10 S	18 11	34	19 00		39 55	30 63		
14	32	25.6		18.1	178	49.4	40	29.4	20	29	18 53	22	20 57	52	7 09 67		
15	47	25.3		18.4	193	12.4	40	22.3	30	18 50	19 17	19 50	21 19	47	6 46 70		
16	62	25.1		18.7	207	35.6	42	15.1	35	19 02	31	20 07		32 44	32 72		
17	77	24.8	-22	19.0	221	58.8	42	+23 07.7	40	19 16	19 48	20 29	21 46	42	6 15 76		
18	92	24.6	-22	19.4	236	22.0	42	+23 00.2	45	19 33	20 10	20 58	22 03	38	5 56 79		
19	107	24.3		19.7	250	45.4	44	+22 52.4	50	19 54	37	21 39		24 33	32 83		
20	122	24.1		20.0	265	08.8	44	44.6	52	20 04	20 51	22 03		34 30	20 85		
21	137	23.8		20.3	279	32.3	45	36.5	54	20 16	21 08	22 36		46 27	5 06 88		
22	152	23.6		20.6	293	55.9	46	28.3	56	29	27	** **	22 58	24	4 51 91		
23	167	23.3		21.0	308	19.6	47	20.0	58	20 44	21 53	** **	23 13	20	32 96		
24	182	23.1	-22	21.3	322	43.3	47	+22 11.5	60 S	21 02	22 29	** **	23 31	14	4 09 102		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 19 ^h 05 ^m 1		Mag: -3.9 PMG: 11 ^h 12 ^m		Mag: -0.1 PMG: 4 ^h 33 ^m		Mag: -2.3 PMG: 16 ^h 42 ^m		Mag: +1.0 PMG: 7 ^h 22 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	72	56.6	192	15.2	-20	01.9	291	38.8	+17	54.1	108	53.2	-15	18.0	249	09.0	+0	42.8
1	87	59.1	207	14.4		02.6	306	40.8		54.0	123	55.3		17.9	264	11.3		42.7
2	103	01.5	222	13.6		03.3	321	42.7		53.9	138	57.4		17.8	279	13.6		42.6
3	118	04.0	237	12.8		04.0	336	44.7		53.9	153	59.5		17.6	294	15.9		42.6
4	133	06.5	252	12.0		04.7	351	46.7		53.8	169	01.6		17.5	309	18.2		42.5
5	148	08.9	267	11.2	-20	05.4	6	48.6	+17	53.8	184	03.7	-15	17.4	324	20.5	+0	42.5
6	163	11.4	282	10.4	-20	06.1	21	50.6	+17	53.7	199	05.8	-15	17.3	339	22.8	+0	42.4
7	178	13.8	297	09.6		06.8	36	52.5		53.7	214	07.9		17.1	354	25.1		42.3
8	193	16.3	312	08.8		07.5	51	54.5		53.6	229	10.0		17.0	9	27.4		42.3
9	208	18.8	327	08.0		08.2	66	56.4		53.5	244	12.0		16.9	24	29.7		42.2
10	223	21.2	342	07.2		08.9	81	58.4		53.5	259	14.1		16.8	39	32.0		42.2
11	238	23.7	357	06.4	-20	09.6	97	00.4	+17	53.4	274	16.2	-15	16.6	54	34.3	+0	42.1
12	253	26.2	12	05.6	-20	10.3	112	02.3	+17	53.4	289	18.3	-15	16.5	69	36.6	+0	42.1
13	268	28.6	27	04.8		11.0	127	04.3		53.3	304	20.4		16.4	84	38.9		42.0
14	283	31.1	42	04.0		11.7	142	06.2		53.3	319	22.5		16.2	99	41.2		41.9
15	298	33.6	57	03.2		12.4	157	08.2		53.2	334	24.6		16.1	114	43.5		41.9
16	313	36.0	72	02.4		13.0	172	10.2		53.2	349	26.7		16.0	129	45.8		41.8
17	328	38.5	87	01.6	-20	13.7	187	12.1	+17	53.1	4	28.8	-15	15.9	144	48.2	+0	41.8
18	343	41.0	102	00.8	-20	14.4	202	14.1	+17	53.1	19	30.9	-15	15.7	159	50.5	+0	41.7
19	358	43.4	116	59.9		15.1	217	16.1		53.0	34	33.0		15.6	174	52.8		41.6
20	13	45.9	131	59.1		15.8	232	18.1		53.0	49	35.0		15.5	189	55.1		41.6
21	28	48.3	146	58.3		16.5	247	20.0		52.9	64	37.1		15.4	204	57.4		41.5
22	43	50.8	161	57.5		17.1	262	22.0		52.9	79	39.2		15.2	219	59.7		41.5
23	58	53.3	176	56.7		17.8	277	24.0		52.8	94	41.3		15.1	235	02.0		41.4
24	73	55.7	191	55.9	-20	18.5	292	25.9	+17	52.8	109	43.4	-15	15.0	250	04.3	+0	41.4
Dif	—		-8 -7		+20 -1				+21 -1		+21 +1				+23 -1			

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16/2 PMG: 11 ^h 50 ^m 7			Edad: 18 ^d 2 PHE { SD: 16/4 PMG: 2 ^h 35 ^m R°: 58 ^m 4 ^h : 60/3 12 ^h : 60/2 20 ^h : 60/2													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	182	23.1	-22	21.3	322	43.3	+22	11.5	60 N	6 52	7 47	8 43	18 48	103	11 35	11	
1	197	22.8		21.6	337	07.2	49	+22	02.9	86	58	45	37	27	19 01	99	21 16
2	212	22.5		21.9	351	31.1	49	+21	54.1	88	56	39	27	13	13 94		11 08 20
3	227	22.3		22.2	5	55.1	50		45.1	90	54	33	19	8 01	23 91		10 58 23
4	242	22.0		22.6	20	19.2	51		36.0	91	52	28	11	7 51	32 88		48 26
5	257	21.8	-22	22.9	34	43.5	53	+21	26.8	92	50	6 23	7 04	7 42	19 40	85	10 39 29
6	272	21.5	-22	23.2	49	07.7	52	+21	17.4	94	45	6 12	6 49	7 22	19 57	80	10 21 34
7	287	21.3		23.5	63	32.1	54	+21	07.9	95	40	6 03	36	7 06	20 11	75	10 06 38
8	302	21.0		23.8	77	56.6	55	+20	58.3	96	35	5 54	25	6 53	23 72		9 53 41
9	317	20.7		24.1	92	21.2	56		48.5	98	30	46	6 15	41	33 69		42 44
10	332	20.5		24.4	106	45.8	56		38.6	99	20	30	5 57	21	20 50	64	22 49
11	347	20.2	-22	24.8	121	10.6	58	+20	28.5	101	10 N	5 15	5 41	6 04	21 06	59	9 05 53
12	2	20.0	-22	25.1	135	35.5	59	+20	18.3	102	0	4 59	5 25	5 47	21 20	55	8 49 57
13	17	19.7		25.4	150	00.4	59	+20	08.0	103	10 S	40	5 07	30	34 51		33 61
14	32	19.4		25.7	164	25.5	61	+19	57.5	105	20	4 19	4 48	5 12	21 49	46	8 16 65
15	47	19.2		26.0	178	50.6	61		47.0	105	30	3 51	24	4 51	22 06	41	7 56 70
16	62	18.9		26.3	193	15.9	63		36.3	107	35	34	4 10	39	16 38		44 73
17	77	18.7	-22	26.6	207	41.2	63	+19	25.4	109	40	3 12	3 52	4 25	22 28	34	7 31 76
18	92	18.4	-22	26.9	222	06.6	64	+19	14.5	109	45	2 43	3 31	4 08	22 41	30	7 15 80
19	107	18.1		27.2	236	32.2	66	+19	03.4	111	50	2 02	3 03	3 47	22 57	25	6 55 86
20	122	17.9		27.5	250	57.8	66	+18	52.3	111	52	1 38	2 49	36	23 04	23	45 89
21	137	17.6		27.8	265	23.5	67		41.0	113	54	1 04	33	25	13 20		34 92
22	152	17.4		28.1	279	49.4	69		29.5	115	56	** **	2 13	3 12	22 17		22 96
23	167	17.1		28.4	294	15.3	69		18.0	115	58	** **	1 48	2 57	33 12		6 08 100
24	182	16.8	-22	28.7	308	41.3	70	+18	06.4	116	60 S	** **	1 11	2 38	23 45	8	5 51 106
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 19 ^h 01 ^m 2			Mag: -3.9 PMG: 11 ^h 13 ^m			Mag: -0.2 PMG: 4 ^h 30 ^m			Mag: -2.3 PMG: 16 ^h 39 ^m			Mag: +1.0 PMG: 7 ^h 19 ^m				
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	73	55.7	191	55.9	-20	18.5	292	25.9	+17	52.8	109	43.4	-15	15.0	250	04.3	
1	88	58.2	206	55.1		19.2	307	27.9		52.7	124	45.5		14.9	265	06.6	
2	104	00.7	221	54.3		19.9	322	29.9		52.7	139	47.6		14.7	280	08.9	
3	119	03.1	236	53.5		20.5	337	31.9		52.6	154	49.7		14.6	295	11.2	
4	134	05.6	251	52.7		21.2	352	33.9		52.6	169	51.8		14.5	310	13.5	
5	149	08.1	266	51.8	-20	21.9	7	35.8	+17	52.5	184	53.8	-15	14.3	325	15.8	
6	164	10.5	281	51.0	-20	22.6	22	37.8	+17	52.5	199	55.9	-15	14.2	340	18.1	
7	179	13.0	296	50.2		23.2	37	39.8		52.4	214	58.0		14.1	355	20.4	
8	194	15.5	311	49.4		23.9	52	41.8		52.4	230	00.1		14.0	10	22.7	
9	209	17.9	326	48.6		24.6	67	43.8		52.3	245	02.2		13.8	25	25.0	
10	224	20.4	341	47.8		25.2	82	45.7		52.3	260	04.3		13.7	40	27.3	
11	239	22.8	356	47.0	-20	25.9	97	47.7	+17	52.2	275	06.4	-15	13.6	55	29.7	
12	254	25.3	11	46.1	-20	26.6	112	49.7	+17	52.2	290	08.5	-15	13.4	70	32.0	
13	269	27.8	26	45.3		27.2	127	51.7		52.1	305	10.5		13.3	85	34.3	
14	284	30.2	41	44.5		27.9	142	53.7		52.1	320	12.6		13.2	100	36.6	
15	299	32.7	56	43.7		28.6	157	55.7		52.0	335	14.7		13.1	115	38.9	
16	314	35.2	71	42.9		29.2	172	57.7		52.0	350	16.8		12.9	130	41.2	
17	329	37.6	86	42.1	-20	29.9	187	59.7	+17	51.9	5	18.9	-15	12.8	145	43.5	
18	344	40.1	101	41.2	-20	30.6	203	01.7	+17	51.9	20	21.0	-15	12.7	160	45.8	
19	359	42.6	116	40.4		31.2	218	03.7		51.9	35	23.1		12.5	175	48.1	
20	14	45.0	131	39.6		31.9	233	05.7		51.8	50	25.1		12.4	190	50.4	
21	29	47.5	146	38.8		32.5	248	07.6		51.8	65	27.2		12.3	205	52.7	
22	44	50.0	161	38.0		33.2	263	09.6		51.7	80	29.3		12.2	220	55.0	
23	59	52.4	176	37.1		33.9	278	11.6		51.7	95	31.4		12.0	235	57.3	
24	74	54.9	191	36.3	-20	34.5	293	13.6	+17	51.6	110	33.5	-15	11.9	250	59.7	
Dif	—			-8 -7			+20 0			+21 +1			+23 -1				

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 11 ^h 51 ^m 1			Edad: 19 ^d 2 SD: 16:4 PMG: 3 ^h 33 ^m					PHE { 4 ^h : 60'1 12 ^h : 59'9 20 ^h : 59'8 R°: 54 ^m						
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	182	16.8	-22 28.7	308	41.3	+18 06.4	72	60 N	14 57	15 53	16 49	20 31 99	11 46 8		
1	197	16.6	29.0	323	07.5	+17 54.6	118	58	15 13	16 04	16 56	40 95	37 11		
2	212	16.3	29.3	337	33.7	42.8	118	56	27	13	17 02	47 92	28 15		
3	227	16.0	29.6	352	00.0	30.8	120	54	39	22	08	20 54 88	21 17		
4	242	15.8	29.9	6	26.4	18.8	120	52	50	30	13	21 00 85	14 20		
5	257	15.5	-22 30.2	20	53.0	+17 06.6	122	50	15 59	16 37	17 18	21 05 83	11 08 23		
6	272	15.3	-22 30.5	35	19.6	+16 54.4	122	45	16 19	16 52	17 29	21 17 77	10 55 27		
7	287	15.0	30.8	49	46.3	42.0	124	40	35	17 05	39	26 73	44 31		
8	302	14.7	31.1	64	13.1	29.6	124	35	16 48	16	47	35 69	34 36		
9	317	14.5	31.4	78	40.0	17.0	126	30	17 00	26	17 56	42 66	26 38		
10	332	14.2	31.7	93	07.0	+16 04.4	126	20	20	17 44	18 11	21 54 60	10 11 44		
11	347	13.9	-22 32.0	107	34.1	+15 51.7	127	10 N	17 38	18 01	18 27	22 05 55	9 58 49		
12	2	13.7	-22 32.3	122	01.3	+15 38.9	128	0	17 55	18 17	18 43	22 15 51	9 46 53		
13	17	13.4	32.6	136	28.6	26.0	129	10 S	18 12	35	19 02	25 46	34 57		
14	32	13.1	32.9	150	56.0	+15 13.0	130	20	30	18 54	23	35 42	21 62		
15	47	12.9	33.2	165	23.4	+14 59.9	131	30	18 51	19 18	19 51	47 36	9 06 67		
16	62	12.6	33.5	179	51.0	46.8	131	35	19 04	33	20 09	22 54 33	8 57 71		
17	77	12.4	-22 33.7	194	18.7	+14 33.5	133	40	19 18	19 50	20 31	23 02 30	8 47 74		
18	92	12.1	-22 34.0	208	46.4	+14 20.2	133	45	19 35	20 12	21 00	23 11 25	8 35 79		
19	107	11.8	34.3	223	14.3	+14 06.9	133	50	19 57	40	21 42	22 20	21 84		
20	122	11.6	34.6	237	42.2	+13 53.4	135	52	20 07	20 54	22 07	27 18	14 87		
21	137	11.3	34.9	252	10.2	39.9	135	54	18	21 11	22 43	33 15	8 06 90		
22	152	11.0	35.2	266	38.3	26.3	136	56	32	31	** **	39 12	7 58 93		
23	167	10.8	35.5	281	06.5	+13 12.6	137	58	20 47	21 58	** **	45 10	48 97		
24	182	10.5	-22 35.7	295	34.8	+12 58.9	137	60 S	21 06	22 36	** **	23 53 6	7 37 102		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 18 ^h 57 ^m 2		Mag: -3.9 PMG: 11 ^h 14 ^m		Mag: -0.2 PMG: 4 ^h 26 ^m		Mag: -2.3 PMG: 16 ^h 35 ^m		Mag: +1.0 PMG: 7 ^h 15 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	74	54.9	191	36.3	-20 34.5	293	13.6	+17 51.6	110	33.5	-15 11.9	250	59.7	+0 40.0
1	89	57.3	206	35.5	35.2	308	15.6	51.6	125	35.6	11.8	266	02.0	39.9
2	104	59.8	221	34.7	35.8	323	17.6	51.6	140	37.6	11.6	281	04.3	39.9
3	120	02.3	236	33.8	36.5	338	19.7	51.5	155	39.7	11.5	296	06.6	39.8
4	135	04.7	251	33.0	37.1	353	21.7	51.5	170	41.8	11.4	311	08.9	39.8
5	150	07.2	266	32.2	-20 37.8	8	23.7	+17 51.4	185	43.9	-15 11.3	326	11.2	+0 39.7
6	165	09.7	281	31.4	-20 38.4	23	25.7	+17 51.4	200	46.0	-15 11.1	341	13.5	+0 39.7
7	180	12.1	296	30.6	39.1	38	27.7	51.3	215	48.1	11.0	356	15.8	39.6
8	195	14.6	311	29.7	39.7	53	29.7	51.3	230	50.1	10.9	11	18.1	39.6
9	210	17.1	326	28.9	40.4	68	31.7	51.3	245	52.2	10.7	26	20.4	39.5
10	225	19.5	341	28.1	41.0	83	33.7	51.2	260	54.3	10.6	41	22.8	39.4
11	240	22.0	356	27.2	-20 41.6	98	35.7	+17 51.2	275	56.4	-15 10.5	56	25.1	+0 39.4
12	255	24.4	11	26.4	-20 42.3	113	37.7	+17 51.2	290	58.5	-15 10.3	71	27.4	+0 39.3
13	270	26.9	26	25.6	42.9	128	39.7	51.1	306	00.5	10.2	86	29.7	39.3
14	285	29.4	41	24.8	43.6	143	41.8	51.1	321	02.6	10.1	101	32.0	39.2
15	300	31.8	56	23.9	44.2	158	43.8	51.0	336	04.7	10.0	116	34.3	39.2
16	315	34.3	71	23.1	44.9	173	45.8	51.0	351	06.8	09.8	131	36.6	39.1
17	330	36.8	86	22.3	-20 45.5	188	47.8	+17 51.0	6	08.9	-15 09.7	146	38.9	+0 39.1
18	345	39.2	101	21.4	-20 46.1	203	49.8	+17 50.9	21	10.9	-15 09.6	161	41.2	+0 39.0
19	0	41.7	116	20.6	46.8	218	51.8	50.9	36	13.0	09.4	176	43.5	38.9
20	15	44.2	131	19.8	47.4	233	53.9	50.9	51	15.1	09.3	191	45.9	38.9
21	30	46.6	146	19.0	48.0	248	55.9	50.8	66	17.2	09.2	206	48.2	38.8
22	45	49.1	161	18.1	48.7	263	57.9	50.8	81	19.3	09.0	221	50.5	38.8
23	60	51.6	176	17.3	49.3	278	59.9	50.8	96	21.3	08.9	236	52.8	38.7
24	75	54.0	191	16.5	-20 49.9	294	02.0	+17 50.7	111	23.4	-15 08.8	251	55.1	+0 38.7
Dif	—		-8	-6		+20	0		+21		+1	+23		-1

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16:2 PMG: 11 ^h 51 ^m 5			Edad: 20 ^d 2 PHE { 4 ^h : 59:7 12 ^h : 59:5 20 ^h : 59:3 PMG: 4 ^h 27 ^m R°: 50 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	182	10.5	-22	35.7	295	34.8	+12	58.9	60 N	6 54	7 50	8 46	22 10	96	11 54	5	
1	197	10.2		36.0	310	03.2	94	45.1	58	47	39	30	15	91	48	9	
2	212	09.9		36.3	324	31.6	94	31.2	56	41	30	16	19	88	43	12	
3	227	09.7		36.6	339	00.2	96	17.3	54	35	21	8 04	22	85	38	15	
4	242	09.4		36.9	353	28.8	96	+12 03.3	52	30	13	7 54	25	83	34	17	
5	257	09.1	-22	37.2	7	57.5	97	+11 49.3	50	6 25	7 06	7 44	22 28	80	11 31	19	
6	272	08.9	-22	37.4	22	26.3	98	+11 35.2	45	6 14	6 51	7 24	22 34	75	11 22	24	
7	287	08.6		37.7	36	55.2	99	21.1	40	6 04	38	7 08	39	71	15	29	
8	302	08.3		38.0	51	24.1	99	+11 06.8	35	5 55	27	6 55	44	67	10	31	
9	317	08.1		38.3	65	53.1	100	+10 52.6	30	47	6 17	43	48	63	11 04	35	
10	332	07.8		38.5	80	22.2	101	38.3	20	31	5 59	22	22 54	58	10 55	40	
11	347	07.5	-22	38.8	94	51.4	102	+10 23.9	10 N	5 16	5 42	6 05	23 00	53	10 47	45	
12	2	07.3	-22	39.1	109	20.7	103	+10 09.5	0	4 59	5 25	5 48	23 06	48	10 39	50	
13	17	07.0		39.4	123	50.0	103	+9 55.1	10 S	41	5 08	31	11	44	31	55	
14	32	06.7		39.6	138	19.4	104	40.6	20	4 19	4 48	5 13	17	39	23	59	
15	47	06.4		39.9	152	48.9	105	26.1	30	3 51	24	4 51	23	34	13	65	
16	62	06.2		40.2	167	18.4	105	+9 11.5	35	33	4 10	39	27	31	08	68	
17	77	05.9	-22	40.4	181	48.1	107	+8 56.9	40	3 11	3 52	4 24	23 32	27	10 01	72	
18	92	05.6	-22	40.7	196	17.7	106	+8 42.3	45	2 42	3 31	4 07	23 36	23	9 54	76	
19	107	05.4		41.0	210	47.5	108	27.6	50	2 00	3 02	3 46	42	18	45	82	
20	122	05.1		41.3	225	17.3	108	+8 12.9	52	1 35	2 48	35	45	16	41	84	
21	137	04.8		41.5	239	47.2	109	+7 58.1	54	0 59	31	24	48	13	36	87	
22	152	04.5		41.8	254	17.1	109	43.3	56	** **	2 11	3 11	51	11	31	90	
23	167	04.3		42.1	268	47.2	111	28.5	58	** **	1 45	2 55	55	8	25	93	
24	182	04.0	-22	42.3	283	17.2	110	+7 13.7	60 S	** **	1 06	2 36	23 59	4	9 19	97	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 18 ^h 53 ^m 3		Mag: -3.9 PMG: 11 ^h 16 ^m			Mag: -0.2 PMG: 4 ^h 23 ^m			Mag: -2.3 PMG: 16 ^h 32 ^m			Mag: +1.0 PMG: 7 ^h 11 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	75	54.0	191	16.5	-20	49.9	294	02.0	+17	50.7	111	23.4	-15	08.8	251	55.1	+0	38.7
1	90	56.5	206	15.6		50.6	309	04.0		50.7	126	25.5		08.6	266	57.4		38.6
2	105	58.9	221	14.8		51.2	324	06.0		50.7	141	27.6		08.5	281	59.7		38.6
3	121	01.4	236	14.0		51.8	339	08.0		50.6	156	29.7		08.4	297	02.0		38.5
4	136	03.9	251	13.1		52.4	354	10.1		50.6	171	31.7		08.2	312	04.4		38.5
5	151	06.3	266	12.3	-20	53.1	9	12.1	+17	50.6	186	33.8	-15	08.1	327	06.7	+0	38.4
6	166	08.8	281	11.4	-20	53.7	24	14.1	+17	50.5	201	35.9	-15	08.0	342	09.0	+0	38.3
7	181	11.3	296	10.6		54.3	39	16.2		50.5	216	38.0		07.9	357	11.3		38.3
8	196	13.7	311	09.8		54.9	54	18.2		50.5	231	40.0		07.7	12	13.6		38.2
9	211	16.2	326	08.9		55.6	69	20.2		50.4	246	42.1		07.6	27	15.9		38.2
10	226	18.7	341	08.1		56.2	84	22.3		50.4	261	44.2		07.5	42	18.2		38.1
11	241	21.1	356	07.3	-20	56.8	99	24.3	+17	50.4	276	46.3	-15	07.3	57	20.5	+0	38.1
12	256	23.6	11	06.4	-20	57.4	114	26.4	+17	50.3	291	48.3	-15	07.2	72	22.9	+0	38.0
13	271	26.1	26	05.6		58.0	129	28.4		50.3	306	50.4		07.1	87	25.2		38.0
14	286	28.5	41	04.7		58.6	144	30.4		50.3	321	52.5		06.9	102	27.5		37.9
15	301	31.0	56	03.9		59.3	159	32.5		50.3	336	54.6		06.8	117	29.8		37.9
16	316	33.4	71	03.1	-20	59.9	174	34.5		50.2	351	56.7		06.7	132	32.1		37.8
17	331	35.9	86	02.2	-21	00.5	189	36.6	+17	50.2	6	58.7	-15	06.5	147	34.4	+0	37.8
18	346	38.4	101	01.4	-21	01.1	204	38.6	+17	50.2	22	00.8	-15	06.4	162	36.7	+0	37.7
19	1	40.8	116	00.5		01.7	219	40.7		50.2	37	02.9		06.3	177	39.1		37.7
20	16	43.3	130	59.7		02.3	234	42.7		50.1	52	05.0		06.1	192	41.4		37.6
21	31	45.8	145	58.8		02.9	249	44.8		50.1	67	07.0		06.0	207	43.7		37.5
22	46	48.2	160	58.0		03.5	264	46.8		50.1	82	09.1		05.9	222	46.0		37.5
23	61	50.7	175	57.2		04.1	279	48.9		50.1	97	11.2		05.7	237	48.3		37.4
24	76	53.2	190	56.3	-21	04.7	294	50.9	+17	50.0	112	13.2	-15	05.6	252	50.6	+0	37.4
Dif	—		-8			-6	+20			0	+21			+1	+23			-1

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16 ^h 2 PMG: 11 ^h 51 ^m 9			Edad: 21 ^d 2 PHE { 4 ^h : 59 ^m 2 12 ^h : 59 ^m 0 20 ^h : 58 ^m 8 PMG: 5 ^h 17 ^m R°: 48 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m		h m m				
0	182	04.0	-22	42.3	283	17.2	+7	13.7	60 N	14 56	15 52	16 48	23 46 92	11 59 4				
1	197	03.7		42.6	297	47.4 ¹¹²	+6	58.8 ¹⁴⁹	58	15 12	16 03	16 55	46 89	57 7				
2	212	03.5		42.8	312	17.6 ¹¹²		43.9 ¹⁴⁹	56	26	13	17 01	47 86	55 10				
3	227	03.2		43.1	326	47.8 ¹¹²		29.0 ¹⁴⁹	54	38	21	07	47 83	53 13				
4	242	02.9		43.4	341	18.1 ¹¹³	+6	14.1 ¹⁴⁹	52	49	29	13	48 80	51 16				
5	257	02.6	-22	43.6	355	48.5 ¹¹⁴	+5	59.1 ¹⁵⁰	50	15 58	16 36	17 18	23 48 78	11 50 17				
6	272	02.4	-22	43.9	10	18.9 ¹¹⁴	+5	44.2 ¹⁴⁹	45	16 18	16 52	17 29	23 49 73	11 46 23				
7	287	02.1		44.2	24	49.4 ¹¹⁵		29.2 ¹⁵⁰	40	35	17 05	39	50 69	44 26				
8	302	01.8		44.4	39	19.9 ¹¹⁵	+5	14.2 ¹⁵⁰	35	16 48	16	48	51 65	41 30				
9	317	01.5		44.7	53	50.5 ¹¹⁶	+4	59.1 ¹⁵¹	30	17 00	26	17 56	51 62	39 33				
10	332	01.3		44.9	68	21.1 ¹¹⁶		44.1 ¹⁵⁰	20	21	17 45	18 12	52 57	35 39				
11	347	01.0	-22	45.2	82	51.8 ¹¹⁷	+4	29.1 ¹⁵⁰	10 N	17 39	18 01	18 28	23 53 52	11 32 43				
12	2	00.7	-22	45.4	97	22.5 ¹¹⁷	+4	14.0 ¹⁵¹	0	17 56	18 18	18 44	23 54 47	11 29 48				
13	17	00.4		45.7	111	53.3 ¹¹⁸	+3	58.9 ¹⁵¹	10 S	18 13	36	19 03	55 43	26 52				
14	32	00.2		45.9	126	24.1 ¹¹⁸		43.9 ¹⁵⁰	20	31	18 56	25	56 38	22 57				
15	46	59.9		46.2	140	55.0 ¹¹⁹		28.8 ¹⁵¹	30	18 53	19 20	19 53	57 33	18 63				
16	61	59.6		46.5	155	25.9 ¹¹⁹	+3	13.7 ¹⁵¹	35	19 05	35	20 11	58 29	16 66				
17	76	59.3	-22	46.7	169	56.8 ¹¹⁹	+2	58.6 ¹⁵¹	40	19 20	19 52	20 33	23 59 26	11 13 70				
18	91	59.1	-22	47.0	184	27.8 ¹²⁰	+2	43.5 ¹⁵¹	45	19 37	20 14	21 03	23 59 22	11 10 74				
19	106	58.8		47.2	198	58.8 ¹²⁰		28.4 ¹⁵¹	50	19 59	43	21 46	** ** *	07 79				
20	121	58.5		47.5	213	29.9 ¹²¹	+2	13.3 ¹⁵¹	52	20 09	20 57	22 11	** ** *	05 81				
21	136	58.2		47.7	228	01.0 ¹²¹	+1	58.2 ¹⁵¹	54	21	21 14	22 49	** ** *	03 84				
22	151	58.0		47.9	242	32.1 ¹²¹		43.1 ¹⁵¹	56	35	21 35	** ** *	** ** *	11 01 87				
23	166	57.7		48.2	257	03.3 ¹²²		28.0 ¹⁵¹	58	20 51	22 02	** ** *	** ** *	10 58 91				
24	181	57.4	-22	48.4	271	34.5 ¹²²	+1	12.9 ¹⁵¹	60 S	21 10	22 43	** ** *	** ** *	10 56 94				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 18 ^h 49 ^m 4		Mag: -3.9 PMG: 11 ^h 17 ^m			Mag: -0.2 PMG: 4 ^h 20 ^m			Mag: -2.3 PMG: 16 ^h 29 ^m			Mag: +1.0 PMG: 7 ^h 08 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	76	53.2	190	56.3	-21	04.7	294	50.9	+17	50.0	112	13.2	-15	05.6	252	50.6	+0	37.4
1	91	55.6	205	55.5		05.3	309	53.0		50.0	127	15.3		05.5	267	53.0		37.3
2	106	58.1	220	54.6		05.9	324	55.0		50.0	142	17.4		05.3	282	55.3		37.3
3	122	00.6	235	53.8		06.5	339	57.1		50.0	157	19.5		05.2	297	57.6		37.2
4	137	03.0	250	52.9		07.2	354	59.1		49.9	172	21.5		05.1	312	59.9		37.2
5	152	05.5	265	52.1	-21	07.7	10	01.2	+17	49.9	187	23.6	-15	04.9	328	02.2	+0	37.1
6	167	07.9	280	51.2	-21	08.3	25	03.3	+17	49.9	202	25.7	-15	04.8	343	04.5	+0	37.1
7	182	10.4	295	50.4		08.9	40	05.3		49.9	217	27.8		04.7	358	06.8		37.0
8	197	12.9	310	49.5		09.5	55	07.4		49.8	232	29.8		04.5	13	09.2		37.0
9	212	15.3	325	48.7		10.1	70	09.4		49.8	247	31.9		04.4	28	11.5		36.9
10	227	17.8	340	47.8		10.7	85	11.5		49.8	262	34.0		04.3	43	13.8		36.9
11	242	20.3	355	47.0	-21	11.3	100	13.6	+17	49.8	277	36.0	-15	04.1	58	16.1	+0	36.8
12	257	22.7	10	46.1	-21	11.9	115	15.6	+17	49.8	292	38.1	-15	04.0	73	18.4	+0	36.8
13	272	25.2	25	45.3		12.5	130	17.7		49.7	307	40.2		03.9	88	20.7		36.7
14	287	27.7	40	44.4		13.1	145	19.8		49.7	322	42.3		03.7	103	23.1		36.7
15	302	30.1	55	43.6		13.7	160	21.8		49.7	337	44.3		03.6	118	25.4		36.6
16	317	32.6	70	42.7		14.3	175	23.9		49.7	352	46.4		03.5	133	27.7		36.6
17	332	35.0	85	41.9	-21	14.9	190	26.0	+17	49.7	7	48.5	-15	03.3	148	30.0	+0	36.5
18	347	37.5	100	41.0	-21	15.5	205	28.1	+17	49.6	22	50.5	-15	03.2	163	32.3	+0	36.4
19	2	40.0	115	40.2		16.0	220	30.1		49.6	37	52.6		03.1	178	34.7		36.4
20	17	42.4	130	39.3		16.6	235	32.2		49.6	52	54.7		02.9	193	37.0		36.3
21	32	44.9	145	38.5		17.2	250	34.3		49.6	67	56.7		02.8	208	39.3		36.3
22	47	47.4	160	37.6		17.8	265	36.4		49.6	82	58.8		02.7	223	41.6		36.2
23	62	49.8	175	36.8		18.4	280	38.4		49.6	98	00.9		02.5	238	43.9		36.2
24	77	52.3	190	35.9	-21	18.9	295	40.5	+17	49.5	113	03.0	-15	02.4	253	46.2	+0	36.1
Dif	—		-9 -6			+21 0			+21 +1			+23 -1						

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'2 PMG: 11 ^h 52 ^m 4			Edad: 22 ^d 2 PHE { SD: 16'0 PMG: 6 ^h 05 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	h	m	h	m	h	m	h	m
0	181	57.4	-22 48.4	271	34.5	+1 12.9	150	60 N	6 57	7 53	8 49	** ** *	** ** *	12 03	4
1	196	57.1	48.7	286	05.7 ¹²²	+0 57.9	150	58	50	42	33	** ** *	** ** *	04	8
2	211	56.8	48.9	300	36.9 ¹²²	42.8	151	56	43	32	19	** ** *	** ** *	05	10
3	226	56.6	49.2	315	08.2 ¹²³	27.7	151	54	37	23	8 07	** ** *	** ** *	06	13
4	241	56.3	49.4	329	39.5 ¹²³	+0 12.7	150	52	32	15	7 56	** ** *	** ** *	07	15
5	256	56.0	-22 49.7	344	10.9 ¹²⁴	-0 02.4	151	50	6 27	7 08	7 46	** ** *	** ** *	12 07	18
6	271	55.7	-22 49.9	358	42.3 ¹²⁴	-0 17.4	150	45	6 16	6 53	7 26	** ** *	** ** *	12 09	22
7	286	55.4	50.1	13	13.6 ¹²³	32.4	150	40	6 06	40	7 10	** ** *	** ** *	10	26
8	301	55.2	50.4	27	45.1 ¹²⁵	-0 47.4	150	35	5 57	28	6 56	** ** *	** ** *	11	30
9	316	54.9	50.6	42	16.5 ¹²⁴	-1 02.4	150	30	48	18	44	** ** *	** ** *	12	33
10	331	54.6	50.9	56	47.9 ¹²⁴	17.4	150	20	32	6 00	24	** ** *	** ** *	14	38
11	346	54.3	-22 51.1	71	19.4 ¹²⁵	-1 32.3	149	10 N	5 17	5 43	6 06	** ** *	** ** *	12 15	43
12	1	54.0	-22 51.3	85	50.9 ¹²⁵	-1 47.2	149	0	5 00	5 26	5 49	** ** *	** ** *	12 17	47
13	16	53.8	51.6	100	22.4 ¹²⁵	-2 02.1	149	10 S	4 42	5 09	32	** ** *	** ** *	18	51
14	31	53.5	51.8	114	53.9 ¹²⁵	17.0	149	20	4 20	4 49	5 13	** ** *	** ** *	19	56
15	46	53.2	52.0	129	25.5 ¹²⁶	31.9	149	30	3 51	24	4 52	** ** *	** ** *	21	61
16	61	52.9	52.3	143	57.0 ¹²⁵	-2 46.7	148	35	33	4 10	39	** ** *	** ** *	22	65
17	76	52.6	-22 52.5	158	28.6 ¹²⁶	-3 01.5	148	40	3 11	3 52	4 24	** ** *	** ** *	12 23	68
18	91	52.4	-22 52.7	173	00.2 ¹²⁶	-3 16.3	148	45	2 41	3 30	4 07	** ** *	** ** *	12 24	73
19	106	52.1	53.0	187	31.8 ¹²⁶	31.1	148	50	1 58	3 02	3 45	0 00	18	26	77
20	121	51.8	53.2	202	03.3 ¹²⁵	-3 45.8	147	52	1 33	2 47	35	01	15	26	80
21	136	51.5	53.4	216	34.9 ¹²⁶	-4 00.5	147	54	0 55	30	23	01	13	27	82
22	151	51.2	53.7	231	06.6 ¹²⁷	15.2	147	56	** ** *	2 09	3 09	02	10	28	85
23	166	51.0	53.9	245	38.2 ¹²⁶	29.8	146	58	** ** *	1 42	2 54	03	7	29	88
24	181	50.7	-22 54.1	260	09.8 ¹²⁶	-4 44.4	146	60 S	** ** *	1 01	2 34	0 03	4	12 30	92

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 18 ^h 45 ^m 4		Mag: -3.9 PMG: 11 ^h 18 ^m		Mag: -0.2 PMG: 4 ^h 17 ^m		Mag: -2.3 PMG: 16 ^h 26 ^m		Mag: +1.0 PMG: 7 ^h 04 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	77	52.3	190 35.9	-21 18.9	295 40.5	+17 49.5	113 03.0	-15 02.4	253 46.2	+0 36.1
1	92	54.8	205 35.1	19.5	310 42.6	49.5	128 05.0	02.2	268 48.6	36.1
2	107	57.2	220 34.2	20.1	325 44.7	49.5	143 07.1	02.1	283 50.9	36.0
3	122	59.7	235 33.3	20.7	340 46.8	49.5	158 09.2	02.0	298 53.2	36.0
4	138	02.2	250 32.5	21.3	355 48.8	49.5	173 11.2	01.8	313 55.5	35.9
5	153	04.6	265 31.6	-21 21.8	10 50.9	+17 49.5	188 13.3	-15 01.7	328 57.8	+0 35.9
6	168	07.1	280 30.8	-21 22.4	25 53.0	+17 49.5	203 15.4	-15 01.6	344 00.2	+0 35.8
7	183	09.5	295 29.9	23.0	40 55.1	49.4	218 17.4	01.4	359 02.5	35.8
8	198	12.0	310 29.1	23.5	55 57.2	49.4	233 19.5	01.3	14 04.8	35.7
9	213	14.5	325 28.2	24.1	70 59.3	49.4	248 21.6	01.2	29 07.1	35.7
10	228	16.9	340 27.3	24.7	86 01.4	49.4	263 23.6	01.0	44 09.4	35.6
11	243	19.4	355 26.5	-21 25.2	101 03.5	+17 49.4	278 25.7	-15 00.9	59 11.8	+0 35.6
12	258	21.9	10 25.6	-21 25.8	116 05.6	+17 49.4	293 27.8	-15 00.8	74 14.1	+0 35.5
13	273	24.3	25 24.7	26.4	131 07.7	49.4	308 29.8	00.6	89 16.4	35.5
14	288	26.8	40 23.9	26.9	146 09.7	49.4	323 31.9	00.5	104 18.7	35.4
15	303	29.3	55 23.0	27.5	161 11.8	49.4	338 34.0	00.3	119 21.0	35.4
16	318	31.7	70 22.2	28.1	176 13.9	49.3	353 36.0	00.2	134 23.4	35.3
17	333	34.2	85 21.3	-21 28.6	191 16.0	+17 49.3	8 38.1	-15 00.1	149 25.7	+0 35.3
18	348	36.6	100 20.4	-21 29.2	206 18.1	+17 49.3	23 40.2	-14 59.9	164 28.0	+0 35.2
19	3	39.1	115 19.6	29.8	221 20.2	49.3	38 42.2	59.8	179 30.3	35.2
20	18	41.6	130 18.7	30.3	236 22.3	49.3	53 44.3	59.7	194 32.7	35.1
21	33	44.0	145 17.8	30.9	251 24.4	49.3	68 46.3	59.5	209 35.0	35.1
22	48	46.5	160 17.0	31.4	266 26.6	49.3	83 48.4	59.4	224 37.3	35.0
23	63	49.0	175 16.1	32.0	281 28.7	49.3	98 50.5	59.3	239 39.6	35.0
24	78	51.4	190 15.2	-21 32.5	296 30.8	+17 49.3	113 52.5	-14 59.1	254 41.9	+0 34.9
Dif	—		-9	-6	+21	0	+21	+1	+23	-1

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16 ^h 2			Edad: 23 ^d 2	PHE { 4 ^h : 58 ^o 0 12 ^h : 57 ^o 8 20 ^h : 57 ^o 6	SD: 15 ^h 8			PMG: 6 ^h 52 ^m	R°: 48 ^m						
	hG ☉	Dec									hG ☾	Dif	Dec	Dif	Civil	Náutico
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m	
0	181	50.7	-22 54.1	260	09.8	-4 44.4		60 N	14 55	15 51	16 47	1 18 92	12 07 6			
1	196	50.4	54.3	274	41.4 ¹²⁶	-4 59.0 ¹⁴⁶		58	15 11	16 02	16 55	15 88	12 8			
2	211	50.1	54.6	289	13.0 ¹²⁶	-5 13.5 ¹⁴⁵		56	25	12	17 01	13 85	15 12			
3	226	49.8	54.8	303	44.6 ¹²⁶	28.0 ¹⁴⁵		54	38	21	07	10 82	19 14			
4	241	49.5	55.0	318	16.3 ¹²⁷	42.5 ¹⁴⁵		52	49	29	12	08 80	22 17			
5	256	49.3	-22 55.2	332	47.9 ¹²⁶	-5 56.9 ¹⁴⁴		50	15 58	16 36	17 18	1 06 77	12 25 19			
6	271	49.0	-22 55.5	347	19.5 ¹²⁶	-6 11.3 ¹⁴⁴		45	16 18	16 52	17 29	1 02 72	12 31 24			
7	286	48.7	55.7	1	51.1 ¹²⁶	25.6 ¹⁴³		40	35	17 05	39	0 59 68	36 28			
8	301	48.4	55.9	16	22.7 ¹²⁶	39.9 ¹⁴³		35	16 49	17	48	56 64	41 31			
9	316	48.1	56.1	30	54.3 ¹²⁶	-6 54.1 ¹⁴²		30	17 01	27	17 57	53 61	45 34			
10	331	47.8	56.4	45	25.9 ¹²⁶	-7 08.4 ¹⁴³		20	21	17 45	18 13	49 56	52 38			
11	346	47.6	-22 56.6	59	57.5 ¹²⁶	-7 22.5 ¹⁴¹		10 N	17 40	18 02	18 29	0 45 51	12 58 43			
12	1	47.3	-22 56.8	74	29.1 ¹²⁶	-7 36.6 ¹⁴¹		0	17 57	18 19	18 45	0 41 47	13 04 47			
13	16	47.0	57.0	89	00.6 ¹²⁵	-7 50.7 ¹⁴¹		10 S	18 14	37	19 04	38 42	09 52			
14	31	46.7	57.2	103	32.2 ¹²⁶	-8 04.7 ¹⁴⁰		20	32	18 57	26	34 38	15 57			
15	46	46.4	57.4	118	03.8 ¹²⁶	18.7 ¹⁴⁰		30	18 54	19 21	19 54	30 33	22 62			
16	61	46.1	57.7	132	35.3 ¹²⁵	32.6 ¹³⁹		35	19 07	36	20 13	27 30	27 64			
17	76	45.8	-22 57.9	147	06.8 ¹²⁵	-8 46.5 ¹³⁹		40	19 21	19 54	20 35	0 25 26	13 31 68			
18	91	45.6	-22 58.1	161	38.3 ¹²⁵	-9 00.3 ¹³⁸		45	19 39	20 16	21 05	0 21 23	13 37 71			
19	106	45.3	58.3	176	09.8 ¹²⁵	14.1 ¹³⁸		50	20 01	20 45	21 49	18 18	43 77			
20	121	45.0	58.5	190	41.3 ¹²⁵	27.8 ¹³⁷		52	12	21 00	22 15	16 16	46 79			
21	136	44.7	58.7	205	12.7 ¹²⁴	41.4 ¹³⁶		54	23	17	22 55	14 14	49 82			
22	151	44.4	58.9	219	44.2 ¹²⁵	-9 55.0 ¹³⁶		56	37	21 38	** **	12 11	53 85			
23	166	44.1	59.1	234	15.6 ¹²⁴	-10 08.5 ¹³⁵		58	20 53	22 06	** **	10 8	13 57 88			
24	181	43.8	-22 59.3	248	47.0 ¹²⁴	-10 22.0 ¹³⁵		60 S	21 13	22 49	** **	0 07 5	14 02 92			

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 18 ^h 41 ^m 5		Mag: -3.9 PMG: 11 ^h 20 ^m		Mag: -0.3 PMG: 4 ^h 13 ^m		Mag: -2.2 PMG: 16 ^h 22 ^m		Mag: +1.0 PMG: 7 ^h 00 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	78	51.4	190	15.2	-21 32.5	296	30.8	+17 49.3	113	52.5	-14 59.1	254	41.9	+0 34.9
1	93	53.9	205	14.4	33.1	311	32.9	49.3	128	54.6	59.0	269	44.3	34.9
2	108	56.4	220	13.5	33.6	326	35.0	49.3	143	56.7	58.8	284	46.6	34.8
3	123	58.8	235	12.6	34.2	341	37.1	49.3	158	58.7	58.7	299	48.9	34.8
4	139	01.3	250	11.8	34.7	356	39.2	49.3	174	00.8	58.6	314	51.2	34.7
5	154	03.8	265	10.9	-21 35.3	11	41.3	+17 49.3	189	02.9	-14 58.4	329	53.6	+0 34.7
6	169	06.2	280	10.0	-21 35.8	26	43.4	+17 49.2	204	04.9	-14 58.3	344	55.9	+0 34.6
7	184	08.7	295	09.2	36.4	41	45.5	49.2	219	07.0	58.2	359	58.2	34.6
8	199	11.1	310	08.3	36.9	56	47.7	49.2	234	09.0	58.0	15	00.5	34.5
9	214	13.6	325	07.4	37.5	71	49.8	49.2	249	11.1	57.9	30	02.8	34.5
10	229	16.1	340	06.6	38.0	86	51.9	49.2	264	13.2	57.7	45	05.2	34.4
11	244	18.5	355	05.7	-21 38.5	101	54.0	+17 49.2	279	15.2	-14 57.6	60	07.5	+0 34.4
12	259	21.0	10	04.8	-21 39.1	116	56.1	+17 49.2	294	17.3	-14 57.5	75	09.8	+0 34.3
13	274	23.5	25	03.9	39.6	131	58.3	49.2	309	19.4	57.3	90	12.1	34.3
14	289	25.9	40	03.1	40.2	147	00.4	49.2	324	21.4	57.2	105	14.5	34.2
15	304	28.4	55	02.2	40.7	162	02.5	49.2	339	23.5	57.1	120	16.8	34.2
16	319	30.9	70	01.3	41.2	177	04.6	49.2	354	25.5	56.9	135	19.1	34.1
17	334	33.3	85	00.5	-21 41.8	192	06.8	+17 49.2	9	27.6	-14 56.8	150	21.4	+0 34.1
18	349	35.8	99	59.6	-21 42.3	207	08.9	+17 49.2	24	29.7	-14 56.6	165	23.8	+0 34.1
19	4	38.3	114	58.7	42.8	222	11.0	49.2	39	31.7	56.5	180	26.1	34.0
20	19	40.7	129	57.8	43.4	237	13.2	49.2	54	33.8	56.4	195	28.4	34.0
21	34	43.2	144	57.0	43.9	252	15.3	49.2	69	35.8	56.2	210	30.7	33.9
22	49	45.6	159	56.1	44.4	267	17.4	49.2	84	37.9	56.1	225	33.1	33.9
23	64	48.1	174	55.2	45.0	282	19.6	49.2	99	40.0	55.9	240	35.4	33.8
24	79	50.6	189	54.3	-21 45.5	297	21.7	+17 49.2	114	42.0	-14 55.8	255	37.7	+0 33.8
Dif	—		-9	-5		+21	0		+21	+1		+23	0	

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16/2 PMG: 11 ^h 53 ^m 3				Edad: 24 ^d 2 PHE { 4 ^h : 57/5 12 ^h : 57/3 20 ^h : 57/1 SD: 15/7 PMG: 7 ^h 40 ^m R°: 48 ^m															
	hG ☉		Dec		hG ☾		Dif								Hora R°		Hora R°			
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m			
0	181	43.8	-22	59.3	248	47.0	-10	22.0	60 N	6 59	7 56	8 52	2 50	92	12 13	7				
1	196	43.5		59.6	263	18.4 ¹²⁴		35.4 ¹³⁴	58	52	44	35	43	89	20	11				
2	211	43.3	-22	59.8	277	49.7 ¹²³	-10	48.8 ¹³⁴	56	45	34	21	38	84	27	15				
3	226	43.0	-23	00.0	292	21.0 ¹²³	-11	02.1 ¹³³	54	39	25	8 09	32	82	33	18				
4	241	42.7	-23	00.2	306	52.3 ¹²³		15.3 ¹³²	52	34	17	7 58	28	78	39	20				
5	256	42.4	-23	00.4	321	23.6 ¹²³	-11	28.5 ¹³²	50	6 29	7 10	7 48	2 23	77	12 44	22				
6	271	42.1	-23	00.6	335	54.9 ¹²³	-11	41.6 ¹³¹	45	6 17	6 54	7 28	2 14	72	12 55	26				
7	286	41.8		00.8	350	26.1 ¹²²	-11	54.6 ¹³⁰	40	6 07	41	7 12	07	67	13 04	30				
8	301	41.5		01.0	4	57.3 ¹²²	-12	07.6 ¹³⁰	35	5 58	30	6 58	2 00	64	12	33				
9	316	41.2		01.2	19	28.5 ¹²²		20.5 ¹²⁹	30	50	19	46	1 54	62	19	36				
10	331	41.0		01.4	33	59.6 ¹²¹		33.3 ¹²⁸	20	33	6 01	25	45	56	30	41				
11	346	40.7	-23	01.6	48	30.8 ¹²²	-12	46.1 ¹²⁸	10 N	5 18	5 44	6 07	1 36	52	13 41	45				
12	1	40.4	-23	01.8	63	01.9 ¹²¹	-12	58.8 ¹²⁷	0	5 01	5 27	5 50	1 28	48	13 51	49				
13	16	40.1		02.0	77	32.9 ¹²⁰	-13	11.4 ¹²⁶	10 S	4 42	5 09	32	20	44	14 01	52				
14	31	39.8		02.2	92	03.9 ¹²⁰		23.9 ¹²⁵	20	4 20	4 49	5 14	12	40	12	56				
15	46	39.5		02.4	106	34.9 ¹²⁰		36.4 ¹²⁵	30	3 52	25	4 52	1 03	35	24	61				
16	61	39.2		02.6	121	05.9 ¹²⁰	-13	48.8 ¹²⁴	35	33	4 10	39	0 57	32	31	64				
17	76	38.9	-23	02.8	135	36.8 ¹¹⁹	-14	01.1 ¹²³	40	3 11	3 52	4 25	0 51	29	14 39	67				
18	91	38.6	-23	03.0	150	07.7 ¹¹⁹	-14	13.4 ¹²³	45	2 41	3 30	4 07	0 44	25	14 48	72				
19	106	38.4		03.2	164	38.6 ¹¹⁹		25.5 ¹²¹	50	1 57	3 01	3 45	36	20	15 00	76				
20	121	38.1		03.3	179	09.4 ¹¹⁸		37.6 ¹²¹	52	1 31	2 46	34	32	18	05	79				
21	136	37.8		03.5	193	40.2 ¹¹⁸	-14	49.6 ¹²⁰	54	0 51	29	22	28	15	11	81				
22	151	37.5		03.7	208	11.0 ¹¹⁸	-15	01.6 ¹²⁰	56	** ** *	2 08	3 09	23	13	18	84				
23	166	37.2		03.9	222	41.7 ¹¹⁷		13.4 ¹¹⁸	58	** ** *	1 40	2 52	18	10	25	88				
24	181	36.9	-23	04.1	237	12.4 ¹¹⁷	-15	25.2 ¹¹⁸	60 S	** ** *	0 56	2 33	0 12	6	15 34	92				
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 18 ^h 37 ^m 6				Mag: -3.9 PMG: 11 ^h 21 ^m				Mag: -0.3 PMG: 4 ^h 10 ^m				Mag: -2.2 PMG: 16 ^h 19 ^m				Mag: +1.0 PMG: 6 ^h 56 ^m			
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	79	50.6	189	54.3	-21	45.5			297	21.7	+17	49.2	114	42.0	-14	55.8	255	37.7	+0	33.8
1	94	53.0	204	53.5		46.0			312	23.8		49.2	129	44.1		55.7	270	40.0		33.7
2	109	55.5	219	52.6		46.5			327	26.0		49.2	144	46.1		55.5	285	42.4		33.7
3	124	58.0	234	51.7		47.1			342	28.1		49.3	159	48.2		55.4	300	44.7		33.6
4	140	00.4	249	50.8		47.6			357	30.2		49.3	174	50.2		55.3	315	47.0		33.6
5	155	02.9	264	49.9	-21	48.1			12	32.4	+17	49.3	189	52.3	-14	55.1	330	49.4	+0	33.5
6	170	05.4	279	49.1	-21	48.6			27	34.5	+17	49.3	204	54.4	-14	55.0	345	51.7	+0	33.5
7	185	07.8	294	48.2		49.1			42	36.7		49.3	219	56.4		54.8	0	54.0		33.4
8	200	10.3	309	47.3		49.7			57	38.8		49.3	234	58.5		54.7	15	56.3		33.4
9	215	12.7	324	46.4		50.2			72	41.0		49.3	250	00.5		54.6	30	58.7		33.3
10	230	15.2	339	45.5		50.7			87	43.1		49.3	265	02.6		54.4	46	01.0		33.3
11	245	17.7	354	44.7	-21	51.2			102	45.3	+17	49.3	280	04.6	-14	54.3	61	03.3	+0	33.2
12	260	20.1	9	43.8	-21	51.7			117	47.4	+17	49.3	295	06.7	-14	54.1	76	05.6	+0	33.2
13	275	22.6	24	42.9		52.2			132	49.6		49.3	310	08.8		54.0	91	08.0		33.1
14	290	25.1	39	42.0		52.7			147	51.7		49.3	325	10.8		53.9	106	10.3		33.1
15	305	27.5	54	41.1		53.3			162	53.9		49.3	340	12.9		53.7	121	12.6		33.1
16	320	30.0	69	40.2		53.8			177	56.0		49.3	355	14.9		53.6	136	15.0		33.0
17	335	32.5	84	39.4	-21	54.3			192	58.2	+17	49.4	10	17.0	-14	53.4	151	17.3	+0	33.0
18	350	34.9	99	38.5	-21	54.8			208	00.3	+17	49.4	25	19.0	-14	53.3	166	19.6	+0	32.9
19	5	37.4	114	37.6		55.3			223	02.5		49.4	40	21.1		53.2	181	21.9		32.9
20	20	39.9	129	36.7		55.8			238	04.6		49.4	55	23.1		53.0	196	24.3		32.8
21	35	42.3	144	35.8		56.3			253	06.8		49.4	70	25.2		52.9	211	26.6		32.8
22	50	44.8	159	34.9		56.8			268	09.0		49.4	85	27.3		52.7	226	28.9		32.7
23	65	47.2	174	34.1		57.3			283	11.1		49.4	100	29.3		52.6	241	31.3		32.7
24	80	49.7	189	33.2	-21	57.8			298	13.3	+17	49.4	115	31.4	-14	52.5	256	33.6	+0	32.6
Dif	—		-9		-5		+22		0		+21		+1		+23					

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16°2			Edad: 25 ^d 2	PHE	SD: 15°5			R°: 50 ^m						
	PMG: 11 ^h 53 ^m 8														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	181	36.9	-23 04.1	237	12.4	-15 25.2		60 N	14 54	15 51	16 47	4 22 92	12 20 11		
1	196	36.6	04.3	251	43.0 ¹¹⁶	36.8 ¹¹⁶		58	15 11	16 02	16 54	12 87	31 16		
2	211	36.3	04.5	266	13.6 ¹¹⁶	48.4 ¹¹⁶		56	25	12	17 01	4 02 84	42 19		
3	226	36.0	04.7	280	44.2 ¹¹⁶	-15 59.9 ¹¹⁵		54	37	21	07	3 54 80	51 22		
4	241	35.7	04.9	295	14.7 ¹¹⁵	-16 11.4 ¹¹⁵		52	48	29	13	46 78	12 59 24		
5	256	35.4	-23 05.0	309	45.2 ¹¹⁵	-16 22.7 ¹¹³		50	15 58	16 36	17 18	3 40 75	13 06 27		
6	271	35.1	-23 05.2	324	15.7 ¹¹⁵	-16 33.9 ¹¹²		45	16 18	16 52	17 29	3 26 70	13 21 32		
7	286	34.9	05.4	338	46.1 ¹¹⁴	45.1 ¹¹²		40	35	17 05	39	14 67	34 35		
8	301	34.6	05.6	353	16.5 ¹¹⁴	-16 56.2 ¹¹¹		35	16 49	17	49	3 04 64	45 38		
9	316	34.3	05.8	7	46.8 ¹¹³	-17 07.1 ¹⁰⁹		30	17 01	27	17 57	2 56 61	13 55 40		
10	331	34.0	06.0	22	17.1 ¹¹³	18.0 ¹⁰⁹		20	22	17 46	18 13	41 57	14 11 44		
11	346	33.7	-23 06.1	36	47.3 ¹¹²	-17 28.8 ¹⁰⁸		10 N	17 40	18 03	18 29	2 28 53	14 26 47		
12	1	33.4	-23 06.3	51	17.5 ¹¹²	-17 39.5 ¹⁰⁷		0	17 58	18 20	18 46	2 16 50	14 40 50		
13	16	33.1	06.5	65	47.7 ¹¹²	-17 50.1 ¹⁰⁶		10 S	18 15	38	19 05	2 04 46	14 53 54		
14	31	32.8	06.7	80	17.8 ¹¹¹	-18 00.6 ¹⁰⁵		20	34	18 58	27	1 52 42	15 08 57		
15	46	32.5	06.9	94	47.9 ¹¹¹	11.0 ¹⁰⁴		30	18 55	19 23	19 56	38 37	25 61		
16	61	32.2	07.0	109	17.9 ¹¹⁰	21.3 ¹⁰³		35	19 08	38	20 14	29 36	35 63		
17	76	31.9	-23 07.2	123	47.9 ¹¹⁰	-18 31.5 ¹⁰²		40	19 23	19 56	20 37	1 20 32	15 46 66		
18	91	31.6	-23 07.4	138	17.9 ¹¹⁰	-18 41.6 ¹⁰¹		45	19 41	20 18	21 07	1 09 29	16 00 69		
19	106	31.3	07.6	152	47.8 ¹⁰⁹	-18 51.6 ¹⁰⁰		50	20 03	20 47	21 52	0 56 24	16 74		
20	121	31.0	07.7	167	17.7 ¹⁰⁹	-19 01.5 ⁹⁹		52	14	21 02	22 18	50 22	24 76		
21	136	30.8	07.9	181	47.5 ¹⁰⁸	11.4 ⁹⁹		54	26	20	23 00	43 20	32 79		
22	151	30.5	08.1	196	17.3 ¹⁰⁸	21.1 ⁹⁷		56	40	21 41	** **	36 17	42 82		
23	166	30.2	08.3	210	47.0 ¹⁰⁷	30.7 ⁹⁶		58	20 56	22 10	** **	28 13	16 53 86		
24	181	29.9	-23 08.4	225	16.7 ¹⁰⁷	-19 40.2 ⁹⁵		60 S	21 16	22 55	** **	0 18 9	17 06 90		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 18 ^h 33 ^m 6		Mag: -3.9 PMG: 11 ^h 22 ^m			Mag: -0.3 PMG: 4 ^h 07 ^m			Mag: -2.2 PMG: 16 ^h 16 ^m			Mag: +1.0 PMG: 6 ^h 53 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°	
0	80	49.7	189	33.2	-21 57.8	298	13.3	+17 49.4	115	31.4	-14 52.5	256	33.6	+0 32.6	
1	95	52.2	204	32.3	58.3	313	15.5	49.4	130	33.4	52.3	271	35.9	32.6	
2	110	54.6	219	31.4	58.8	328	17.6	49.5	145	35.5	52.2	286	38.2	32.5	
3	125	57.1	234	30.5	59.3	343	19.8	49.5	160	37.5	52.0	301	40.6	32.5	
4	140	59.6	249	29.6	-21 59.8	358	22.0	49.5	175	39.6	51.9	316	42.9	32.4	
5	156	02.0	264	28.7	-22 00.3	13	24.1	+17 49.5	190	41.6	-14 51.7	331	45.2	+0 32.4	
6	171	04.5	279	27.8	-22 00.8	28	26.3	+17 49.5	205	43.7	-14 51.6	346	47.6	+0 32.4	
7	186	07.0	294	27.0	01.3	43	28.5	49.5	220	45.7	51.5	1	49.9	32.3	
8	201	09.4	309	26.1	01.8	58	30.6	49.5	235	47.8	51.3	16	52.2	32.3	
9	216	11.9	324	25.2	02.2	73	32.8	49.6	250	49.8	51.2	31	54.6	32.2	
10	231	14.4	339	24.3	02.7	88	35.0	49.6	265	51.9	51.0	46	56.9	32.2	
11	246	16.8	354	23.4	-22 03.2	103	37.2	+17 49.6	280	53.9	-14 50.9	61	59.2	+0 32.1	
12	261	19.3	9	22.5	-22 03.7	118	39.4	+17 49.6	295	56.0	-14 50.8	77	01.5	+0 32.1	
13	276	21.7	24	21.6	04.2	133	41.5	49.6	310	58.1	50.6	92	03.9	32.0	
14	291	24.2	39	20.7	04.7	148	43.7	49.7	326	00.1	50.5	107	06.2	32.0	
15	306	26.7	54	19.8	05.2	163	45.9	49.7	341	02.2	50.3	122	08.5	31.9	
16	321	29.1	69	18.9	05.6	178	48.1	49.7	356	04.2	50.2	137	10.9	31.9	
17	336	31.6	84	18.0	-22 06.1	193	50.3	+17 49.7	11	06.3	-14 50.0	152	13.2	+0 31.9	
18	351	34.1	99	17.1	-22 06.6	208	52.5	+17 49.7	26	08.3	-14 49.9	167	15.5	+0 31.8	
19	6	36.5	114	16.3	07.1	223	54.6	49.8	41	10.4	49.8	182	17.9	31.8	
20	21	39.0	129	15.4	07.6	238	56.8	49.8	56	12.4	49.6	197	20.2	31.7	
21	36	41.5	144	14.5	08.0	253	59.0	49.8	71	14.5	49.5	212	22.5	31.7	
22	51	43.9	159	13.6	08.5	269	01.2	49.8	86	16.5	49.3	227	24.9	31.6	
23	66	46.4	174	12.7	09.0	284	03.4	49.8	101	18.6	49.2	242	27.2	31.6	
24	81	48.9	189	11.8	-22 09.5	299	05.6	+17 49.9	116	20.6	-14 49.1	257	29.5	+0 31.5	
Dif	—		-9		-5	+22		0	+21		+1	+23		0	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'2 PMG: 11 ^h 54 ^m 2			Edad: 26 ^d 2 PHE { 4 ^h : 56'4 12 ^h : 56'2 20 ^h : 56'1 SD: 15'4 PMG: 9 ^h 18 ^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	181	29.9	-23	08.4	225	16.7	-19	40.2	60 N	7 01	7 58	8 55	5 54	89	12 31	19		
1	196	29.6		08.6	239	46.4 ¹⁰⁷		49.5 ⁹³	58	6 54	46	38	39	83	12 47	24		
2	211	29.3		08.8	254	16.0 ¹⁰⁶	-19	58.8 ⁹²	56	47	36	23	26	79	13 01	27		
3	226	29.0		08.9	268	45.5 ¹⁰⁵	-20	08.0 ⁹³	54	41	27	11	14	77	13	30		
4	241	28.7		09.1	283	15.1 ¹⁰⁶		17.1 ⁹¹	52	36	19	8 00	5 04	74	23	33		
5	256	28.4	-23	09.3	297	44.5 ¹⁰⁴	-20	26.0 ⁸⁹	50	6 30	7 12	7 50	4 55	72	13 33	34		
6	271	28.1	-23	09.4	312	14.0 ¹⁰⁵	-20	34.9 ⁸⁹	45	6 19	6 56	7 30	4 36	68	13 53	38		
7	286	27.8		09.6	326	43.4 ¹⁰⁴		43.6 ⁸⁷	40	6 09	43	7 13	21	65	14 09	40		
8	301	27.5		09.8	341	12.7 ¹⁰³	-20	52.2 ⁸⁶	35	5 59	31	6 59	4 08	62	23	42		
9	316	27.2		09.9	355	42.1 ¹⁰⁴	-21	00.8 ⁸⁶	30	51	21	47	3 57	60	35	44		
10	331	26.9		10.1	10	11.3 ¹⁰²		09.2 ⁸⁴	20	35	6 02	26	38	57	14 55	48		
11	346	26.6	-23	10.2	24	40.6 ¹⁰³	-21	17.4 ⁸²	10 N	5 19	5 45	6 08	3 21	54	15 13	50		
12	1	26.3	-23	10.4	39	09.8 ¹⁰²	-21	25.6 ⁸²	0	5 02	5 28	5 50	3 06	51	15 30	52		
13	16	26.0		10.6	53	38.9 ¹⁰¹		33.7 ⁸¹	10 S	4 43	5 10	33	2 50	49	15 47	54		
14	31	25.7		10.7	68	08.0 ¹⁰¹		41.6 ⁷⁹	20	4 21	4 50	5 14	34	46	16 05	57		
15	46	25.4		10.9	82	37.1 ¹⁰¹		49.5 ⁷⁹	30	3 52	25	4 53	15	43	26	59		
16	61	25.1		11.0	97	06.1 ¹⁰⁰	-21	57.2 ⁷⁷	35	34	4 10	40	2 05	40	38	61		
17	76	24.8	-23	11.2	111	35.1 ¹⁰⁰	-22	04.8 ⁷⁶	40	3 11	3 52	4 25	1 52	38	16 52	63		
18	91	24.5	-23	11.4	126	04.1 ¹⁰⁰	-22	12.2 ⁷⁴	45	2 41	3 30	4 07	1 38	34	17 09	66		
19	106	24.2		11.5	140	33.0 ⁹⁹		19.6 ⁷⁴	50	1 56	3 01	3 45	20	31	30	69		
20	121	23.9		11.7	155	01.9 ⁹⁹		26.8 ⁷²	52	1 30	2 46	34	12	28	40	71		
21	136	23.6		11.8	169	30.7 ⁹⁸		33.9 ⁷¹	54	0 47	28	22	1 03	26	17 51	73		
22	151	23.3		12.0	183	59.5 ⁹⁸		40.9 ⁷⁰	56	** **	2 07	3 08	0 53	23	18 04	75		
23	166	23.0		12.1	198	28.3 ⁹⁸		47.8 ⁶⁹	58	** **	1 38	2 52	41	19	19	79		
24	181	22.8	-23	12.3	212	57.0 ⁹⁷	-22	54.5 ⁶⁷	60 S	** **	0 52	2 32	0 27	15	18 36	84		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 18 ^h 29 ^m 7		Mag: -3.9 PMG: 11 ^h 24 ^m				Mag: -0.3 PMG: 4 ^h 03 ^m				Mag: -2.2 PMG: 16 ^h 12 ^m				Mag: +1.0 PMG: 6 ^h 49 ^m			
	hG ♈		hG ♀	Dec			hG ♂	Dec			hG ♃	Dec			hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	81	48.9	189	11.8	-22	09.5	299	05.6	+17	49.9	116	20.6	-14	49.1	257	29.5	+0	31.5
1	96	51.3	204	10.9		09.9	314	07.8		49.9	131	22.7		48.9	272	31.9		31.5
2	111	53.8	219	10.0		10.4	329	10.0		49.9	146	24.7		48.8	287	34.2		31.4
3	126	56.2	234	09.1		10.9	344	12.2		49.9	161	26.8		48.6	302	36.5		31.4
4	141	58.7	249	08.2		11.3	359	14.4		50.0	176	28.8		48.5	317	38.9		31.4
5	157	01.2	264	07.3	-22	11.8	14	16.6	+17	50.0	191	30.8	-14	48.3	332	41.2	+0	31.3
6	172	03.6	279	06.4	-22	12.3	29	18.8	+17	50.0	206	32.9	-14	48.2	347	43.5	+0	31.3
7	187	06.1	294	05.5		12.7	44	21.0		50.0	221	34.9		48.1	2	45.9		31.2
8	202	08.6	309	04.6		13.2	59	23.2		50.1	236	37.0		47.9	17	48.2		31.2
9	217	11.0	324	03.7		13.7	74	25.4		50.1	251	39.0		47.8	32	50.5		31.1
10	232	13.5	339	02.8		14.1	89	27.6		50.1	266	41.1		47.6	47	52.9		31.1
11	247	16.0	354	01.9	-22	14.6	104	29.8	+17	50.1	281	43.1	-14	47.5	62	55.2	+0	31.1
12	262	18.4	9	01.0	-22	15.0	119	32.0	+17	50.2	296	45.2	-14	47.3	77	57.5	+0	31.0
13	277	20.9	24	00.1		15.5	134	34.2		50.2	311	47.2		47.2	92	59.9		31.0
14	292	23.3	38	59.2		16.0	149	36.4		50.2	326	49.3		47.0	108	02.2		30.9
15	307	25.8	53	58.3		16.4	164	38.6		50.2	341	51.3		46.9	123	04.5		30.9
16	322	28.3	68	57.4		16.9	179	40.9		50.3	356	53.4		46.8	138	06.9		30.8
17	337	30.7	83	56.5	-22	17.3	194	43.1	+17	50.3	11	55.4	-14	46.6	153	09.2	+0	30.8
18	352	33.2	98	55.6	-22	17.8	209	45.3	+17	50.3	26	57.5	-14	46.5	168	11.6	+0	30.7
19	7	35.7	113	54.7		18.2	224	47.5		50.4	41	59.5		46.3	183	13.9		30.7
20	22	38.1	128	53.8		18.7	239	49.7		50.4	57	01.6		46.2	198	16.2		30.7
21	37	40.6	143	52.9		19.1	254	51.9		50.4	72	03.6		46.0	213	18.6		30.6
22	52	43.1	158	52.0		19.6	269	54.2		50.5	87	05.6		45.9	228	20.9		30.6
23	67	45.5	173	51.1		20.0	284	56.4		50.5	102	07.7		45.8	243	23.2		30.5
24	82	48.0	188	50.2	-22	20.5	299	58.6	+17	50.5	117	09.7	-14	45.6	258	25.6	+0	30.5
Dif	—		-9		-5		+22		0		+20		+1		+23			

UT	SOL				● LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 11 ^h 54 ^m 7				Edad: 27 ^d 2 PHE { 4 ^h : 55 ^m 9 12 ^h : 55 ^m 8 20 ^h : 55 ^m 6 R°: 53 ^m												
	hG ☉		Dec		hG ☾		Dif							Civil	Náutico	Hora	R°
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m	
0	181	22.8	-23	12.3	212	57.0	-22	54.5	60 N	14 53	15 50	16 47	7 23 77	12 50 32			
1	196	22.5		12.4	227	25.7	-23	01.2	58	15 10	16 02	16 54	7 02 73	13 11 36			
2	211	22.2		12.6	241	54.4		07.7	56	25	12	17 01	6 45 71	28 39			
3	226	21.9		12.7	256	23.0		14.0	54	37	21	07	31 68	43 40			
4	241	21.6		12.9	270	51.6		20.3	52	48	29	13	18 67	13 56 42			
5	256	21.3	-23	13.0	285	20.2	-23	26.4	50	15 58	16 37	17 18	6 07 65	14 07 43			
6	271	21.0	-23	13.2	299	48.8	-23	32.4	45	16 19	16 52	17 30	5 44 63	14 31 45			
7	286	20.7		13.3	314	17.3		38.3	40	35	17 06	40	26 61	14 49 47			
8	301	20.4		13.5	328	45.7		44.0	35	16 49	18	49	5 10 60	15 05 48			
9	316	20.1		13.6	343	14.2		49.7	30	17 02	28	17 58	4 57 58	19 49			
10	331	19.8		13.7	357	42.6	-23	55.2	20	23	17 47	18 14	35 56	15 43 50			
11	346	19.5	-23	13.9	12	11.0	-24	00.5	10 N	17 41	18 04	18 30	4 15 54	16 03 52			
12	1	19.2	-23	14.0	26	39.4	-24	05.7	0	17 58	18 21	18 47	3 57 53	16 22 53			
13	16	18.9		14.2	41	07.7		10.9	10 S	18 16	39	19 06	39 51	16 41 54			
14	31	18.6		14.3	55	36.1		15.8	20	35	18 59	28	3 20 49	17 02 55			
15	46	18.3		14.4	70	04.4		20.7	30	18 57	19 24	19 57	2 58 46	25 57			
16	61	18.0		14.6	84	32.6		25.4	35	19 10	39	20 16	45 45	39 58			
17	76	17.7	-23	14.7	99	00.9	-24	30.0	40	19 25	19 57	20 39	2 30 43	17 55 59			
18	91	17.4	-23	14.9	113	29.1	-24	34.4	45	19 42	20 20	21 09	2 12 42	18 15 59			
19	106	17.1		15.0	127	57.4		38.7	50	20 05	20 49	21 54	1 51 38	39 61			
20	121	16.8		15.1	142	25.6		42.9	52	15	21 04	22 21	40 37	18 51 61			
21	136	16.5		15.3	156	53.7		47.0	54	28	22	23 05	29 35	19 04 63			
22	151	16.2		15.4	171	21.9		50.9	56	42	21 44	** **	16 32	19 64			
23	166	15.9		15.5	185	50.1		54.7	58	20 58	22 13	** **	1 00 30	19 38 65			
24	181	15.6	-23	15.7	200	18.2	-24	58.3	60 S	21 18	23 01	** **	0 42 25	20 00 69			
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO								
	PMG: 18 ^h 25 ^m 8		Mag: -3.9 PMG: 11 ^h 25 ^m		Mag: -0.4 PMG: 4 ^h 00 ^m		Mag: -2.2 PMG: 16 ^h 09 ^m		Mag: +1.0 PMG: 6 ^h 45 ^m								
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄								
h	°	'	°	'	°	'	°	'	°	'							
0	82	48.0	188	50.2	299	58.6	117	09.7	258	25.6							
1	97	50.5	203	49.3	315	00.8	132	11.8	273	27.9							
2	112	52.9	218	48.4	330	03.0	147	13.8	288	30.2							
3	127	55.4	233	47.4	345	05.3	162	15.9	303	32.6							
4	142	57.8	248	46.5	0	07.5	177	17.9	318	34.9							
5	158	00.3	263	45.6	15	09.7	192	20.0	333	37.3							
6	173	02.8	278	44.7	30	12.0	207	22.0	348	39.6							
7	188	05.2	293	43.8	45	14.2	222	24.0	3	41.9							
8	203	07.7	308	42.9	60	16.4	237	26.1	18	44.3							
9	218	10.2	323	42.0	75	18.7	252	28.1	33	46.6							
10	233	12.6	338	41.1	90	20.9	267	30.2	48	48.9							
11	248	15.1	353	40.2	105	23.1	282	32.2	63	51.3							
12	263	17.6	8	39.3	120	25.4	297	34.3	78	53.6							
13	278	20.0	23	38.4	135	27.6	312	36.3	93	56.0							
14	293	22.5	38	37.5	150	29.8	327	38.3	108	58.3							
15	308	25.0	53	36.5	165	32.1	342	40.4	124	00.6							
16	323	27.4	68	35.6	180	34.3	357	42.4	139	03.0							
17	338	29.9	83	34.7	195	36.6	12	44.5	154	05.3							
18	353	32.3	98	33.8	210	38.8	27	46.5	169	07.7							
19	8	34.8	113	32.9	225	41.1	42	48.6	184	10.0							
20	23	37.3	128	32.0	240	43.3	57	50.6	199	12.3							
21	38	39.7	143	31.1	255	45.6	72	52.6	214	14.7							
22	53	42.2	158	30.2	270	47.8	87	54.7	229	17.0							
23	68	44.7	173	29.3	285	50.1	102	56.7	244	19.4							
24	83	47.1	188	28.3	300	52.3	117	58.8	259	21.7							
Dif	—		-9		+22		+20		+23								
			-4		0		+1		0								

UT	SOL			● LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'2			Edad: 28 ^d 2 PHE { 4 ^h : 55'5 12 ^h : 55'3 20 ^h : 55'2														
	PMG: 11 ^h 55 ^m 2			PMG: 11 ^h 02 ^m Rº: 53 ^m														
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Náutico	Civil		Hora	Rº	Hora	Rº		
h	°	'	°	°	'	°	'	°	°	'	'	h	m	h	m	h	m	
0	181	15.6	-23	15.7		200	18.2	-24	58.3	36	60 N	7	03	8	00	8	57	
1	196	15.3		15.8		214	46.3	91	-25	01.9	58	6	56	7	48	40	8	15
2	211	15.0		15.9		229	14.4	91		05.2	56	49	38	25	7	56	56	14
3	226	14.7		16.1		243	42.5	91		08.5	54	43	29	13	39	56	23	53
4	241	14.4		16.2		258	10.6	91		11.6	52	37	21	8	02	25	56	38
5	256	14.1	-23	16.3		272	38.7	91	-25	14.6	50	6	32	7	14	7	52	14
6	271	13.7	-23	16.4		287	06.8	91	-25	17.4	45	6	20	6	58	7	31	6
7	286	13.4		16.6		301	34.9	91		20.2	40	10	44	15	27	55	36	53
8	301	13.1		16.7		316	02.9	90		22.7	35	6	01	32	7	01	6	10
9	316	12.8		16.8		330	31.0	91		25.2	30	5	52	22	6	48	5	55
10	331	12.5		16.9		344	59.1	91		27.5	20	36	6	03	27	31	53	33
11	346	12.2	-23	17.1		359	27.1	90	-25	29.7	10 N	5	20	5	46	6	09	5
12	1	11.9	-23	17.2		13	55.2	91	-25	31.7	0	5	03	5	29	5	51	4
13	16	11.6		17.3		28	23.3	91		33.6	10 S	4	44	5	11	34	30	52
14	31	11.3		17.4		42	51.3	90		35.4	20	4	21	4	51	5	15	4
15	46	11.0		17.5		57	19.4	91		37.0	30	3	52	26	4	53	3	44
16	61	10.7		17.7		71	47.5	91		38.5	35	34	4	11	40	30	51	37
17	76	10.4	-23	17.8		86	15.6	91	-25	39.9	40	3	11	3	53	4	25	3
18	91	10.1	-23	17.9		100	43.7	91	-25	41.1	45	2	41	3	30	4	07	2
19	106	09.8		18.0		115	11.8	91		42.2	50	1	56	3	01	3	45	29
20	121	09.5		18.1		129	39.9	91		43.2	52	1	29	2	46	34	17	48
21	136	09.2		18.2		144	08.0	91		44.0	54	0	45	28	22	2	04	46
22	151	08.9		18.4		158	36.1	91		44.7	56	** **	2	06	3	08	1	48
23	166	08.6		18.5		173	04.3	92		45.2	58	** **	1	37	2	51	30	44
24	181	08.3	-23	18.6		187	32.4	91	-25	45.6	60 S	** **	0	49	2	31	1	07

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 18 ^h 21 ^m 8		Mag: -3.9 PMG: 11 ^h 27 ^m		Mag: -0.4 PMG: 3 ^h 56 ^m		Mag: -2.2 PMG: 16 ^h 06 ^m		Mag: +1.0 PMG: 6 ^h 42 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	83	47.1	188	28.3	-22	30.8	300	52.3	+17	51.4
1	98	49.6	203	27.4		31.2	315	54.6		51.5
2	113	52.1	218	26.5		31.6	330	56.8		51.5
3	128	54.5	233	25.6		32.0	345	59.1		51.6
4	143	57.0	248	24.7		32.5	1	01.3		51.6
5	158	59.5	263	23.8	-22	32.9	16	03.6	+17	51.6
6	174	01.9	278	22.9	-22	33.3	31	05.9	+17	51.7
7	189	04.4	293	21.9		33.7	46	08.1		51.7
8	204	06.8	308	21.0		34.1	61	10.4		51.8
9	219	09.3	323	20.1		34.5	76	12.7		51.8
10	234	11.8	338	19.2		34.9	91	14.9		51.9
11	249	14.2	353	18.3	-22	35.3	106	17.2	+17	51.9
12	264	16.7	8	17.4	-22	35.7	121	19.5	+17	52.0
13	279	19.2	23	16.4		36.1	136	21.7		52.0
14	294	21.6	38	15.5		36.5	151	24.0		52.1
15	309	24.1	53	14.6		36.9	166	26.3		52.1
16	324	26.6	68	13.7		37.3	181	28.5		52.2
17	339	29.0	83	12.8	-22	37.7	196	30.8	+17	52.2
18	354	31.5	98	11.8	-22	38.1	211	33.1	+17	52.3
19	9	34.0	113	10.9		38.5	226	35.4		52.3
20	24	36.4	128	10.0		38.9	241	37.6		52.4
21	39	38.9	143	09.1		39.3	256	39.9		52.4
22	54	41.3	158	08.2		39.7	271	42.2		52.5
23	69	43.8	173	07.2		40.1	286	44.5		52.5
24	84	46.3	188	06.3	-22	40.5	301	46.8	+17	52.6
Dif	—		-9		-4		+23		0	
									+20	
									+1	
									+23	

UT	SOL				● LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16:3 PMG: 11 ^h 55 ^m 7				Edad: 29 ^d 2 PHE { 4 ^h : 55 ¹ 12 ^h : 54 ⁹ 20 ^h : 54 ⁸ PMG: 11 ^h 55 ^m R°: 51 ^m													
	hG ☉		Dec		hG ☾		Dif				Civil		Náutico		Hora R°		Hora R°	
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	m	h m	m		
0	181	08.3	-23	18.6	187	32.4	-25	45.6	60 N	14 53	15 51	16 47	9 38	36	14 14	71		
1	196	08.0		18.7	202	00.6	92	45.9	58	15 10	16 02	16 55	9 12	39		39 68		
2	211	07.7		18.8	216	28.8	92	46.1	56	25	12	17 01	8 52	41	14 59	65		
3	226	07.4		18.9	230	57.0	92	46.1	54	38	21	08	35	43	15 16	64		
4	241	07.1		19.0	245	25.3	93	46.0	52	49	30	13	21	44	30	63		
5	256	06.8	-23	19.1	259	53.5	92	-25	50	15 59	16 37	17 19	8 08	45	15 43	61		
6	271	06.5	-23	19.2	274	21.8	93	-25	45	16 19	16 53	17 30	7 42	46	16 09	59		
7	286	06.2		19.4	288	50.1	93	44.8	40	36	17 06	41	22	47	29	58		
8	301	05.9		19.5	303	18.4	93	44.2	35	16 50	18	50	7 04	49	16 46	57		
9	316	05.6		19.6	317	46.8	94	43.4	30	17 02	29	17 59	6 50	49	17 01	56		
10	331	05.3		19.7	332	15.2	94	42.5	20	24	17 48	18 15	24	51	26	54		
11	346	05.0	-23	19.8	346	43.6	94	-25	10 N	17 42	18 05	18 31	6 03	51	17 48	52		
12	1	04.6	-23	19.9	1	12.0	94	-25	0	17 59	18 22	18 48	5 42	52	18 08	51		
13	16	04.3		20.0	15	40.5	95	38.9	10 S	18 17	18 40	19 07	22	53	28	49		
14	31	04.0		20.1	30	09.0	95	37.5	20	36	19 00	30	5 00	54	18 49	48		
15	46	03.7		20.2	44	37.5	95	35.9	30	18 58	25	19 59	4 35	55	19 14	46		
16	61	03.4		20.3	59	06.1	96	34.2	35	19 11	41	20 17	21	54	28	45		
17	76	03.1	-23	20.4	73	34.7	96	-25	40	19 26	19 59	20 40	4 04	55	19 45	44		
18	91	02.8	-23	20.5	88	03.3	96	-25	45	19 44	20 21	21 11	3 43	56	20 05	42		
19	106	02.5		20.6	102	32.0	97	28.4	50	20 06	20 51	21 56	17	57	30	40		
20	121	02.2		20.7	117	00.7	97	26.2	52	17	21 06	22 24	3 05	57	42	39		
21	136	01.9		20.8	131	29.5	98	23.8	54	29	24	23 09	2 50	59	20 56	37		
22	151	01.6		20.9	145	58.3	98	21.4	56	20 44	21 46	** **	34	59	21 12	35		
23	166	01.3		21.0	160	27.1	98	18.8	58	21 00	22 16	** **	2 14	60	31	32		
24	181	01.0	-23	21.0	174	56.0	99	-25	60 S	21 21	23 05	** **	1 48	62	21 55	28		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 18 ^h 17 ^m 9		Mag: -3.9 PMG: 11 ^h 28 ^m				Mag: -0.4 PMG: 3 ^h 52 ^m				Mag: -2.2 PMG: 16 ^h 03 ^m				Mag: +1.0 PMG: 6 ^h 38 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	84	46.3	188	06.3	-22	40.5	301	46.8	+17	52.6	118	47.7	-14	38.6	260	17.9	+0	28.5
1	99	48.7	203	05.4		40.8	316	49.1		52.6	133	49.7		38.4	275	20.3		28.5
2	114	51.2	218	04.5		41.2	331	51.3		52.7	148	51.7		38.3	290	22.6		28.4
3	129	53.7	233	03.5		41.6	346	53.6		52.7	163	53.8		38.1	305	24.9		28.4
4	144	56.1	248	02.6		42.0	1	55.9		52.8	178	55.8		38.0	320	27.3		28.3
5	159	58.6	263	01.7	-22	42.4	16	58.2	+17	52.8	193	57.8	-14	37.8	335	29.6	+0	28.3
6	175	01.1	278	00.8	-22	42.8	32	00.5	+17	52.9	208	59.9	-14	37.7	350	32.0	+0	28.3
7	190	03.5	292	59.9		43.1	47	02.8		53.0	224	01.9		37.5	5	34.3		28.2
8	205	06.0	307	58.9		43.5	62	05.1		53.0	239	03.9		37.4	20	36.7		28.2
9	220	08.4	322	58.0		43.9	77	07.4		53.1	254	06.0		37.2	35	39.0		28.1
10	235	10.9	337	57.1		44.3	92	09.7		53.1	269	08.0		37.1	50	41.4		28.1
11	250	13.4	352	56.2	-22	44.7	107	12.0	+17	53.2	284	10.0	-14	37.0	65	43.7	+0	28.1
12	265	15.8	7	55.2	-22	45.0	122	14.3	+17	53.2	299	12.1	-14	36.8	80	46.0	+0	28.0
13	280	18.3	22	54.3		45.4	137	16.6		53.3	314	14.1		36.7	95	48.4		28.0
14	295	20.8	37	53.4		45.8	152	18.9		53.4	329	16.1		36.5	110	50.7		27.9
15	310	23.2	52	52.5		46.2	167	21.2		53.4	344	18.2		36.4	125	53.1		27.9
16	325	25.7	67	51.5		46.5	182	23.5		53.5	359	20.2		36.2	140	55.4		27.9
17	340	28.2	82	50.6	-22	46.9	197	25.8	+17	53.5	14	22.2	-14	36.1	155	57.8	+0	27.8
18	355	30.6	97	49.7	-22	47.3	212	28.1	+17	53.6	29	24.3	-14	35.9	171	00.1	+0	27.8
19	10	33.1	112	48.7		47.6	227	30.4		53.7	44	26.3		35.8	186	02.5		27.8
20	25	35.6	127	47.8		48.0	242	32.7		53.7	59	28.3		35.6	201	04.8		27.7
21	40	38.0	142	46.9		48.4	257	35.0		53.8	74	30.4		35.5	216	07.2		27.7
22	55	40.5	157	46.0		48.7	272	37.3		53.8	89	32.4		35.3	231	09.5		27.6
23	70	42.9	172	45.0		49.1	287	39.6		53.9	104	34.4		35.2	246	11.9		27.6
24	85	45.4	187	44.1	-22	49.4	302	42.0	+17	54.0	119	36.5	-14	35.0	261	14.2	+0	27.6
Dif	—		-9		-4		+23		+1		+20		+1		+23		0	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'3 PMG: 11 ^h 56 ^m 2			Edad: 0 ^d 5 PHE { SD: 14'9 PMG: 12 ^h 46 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	181	01.0	-23	21.0	174	56.0	-25 16.0	60 N	7 05	8 02	8 59	10 14	20	15 25	81
1	196	00.7		21.1	189	25.0 ¹⁰⁰	13.2 ²⁸	58	6 57	7 50	42	9 51	26	15 47	76
2	211	00.4		21.2	203	53.9 ⁹⁹	10.2 ³⁰	56	51	40	27	33	29	16 04	73
3	226	00.1		21.3	218	22.9 ¹⁰⁰	07.1 ³¹	54	44	31	14	18	31	20	70
4	240	59.8		21.4	232	52.0 ¹⁰¹	03.9 ³²	52	39	22	8 03	9 05	33	33	68
5	255	59.4	-23	21.5	247	21.1 ¹⁰¹	-25 00.6 ³³	50	6 33	7 15	7 53	8 53	34	16 44	66
6	270	59.1	-23	21.6	261	50.3 ¹⁰²	-24 57.1 ³⁵	45	6 22	6 59	7 33	8 28	38	17 08	63
7	285	58.8		21.7	276	19.5 ¹⁰²	53.5 ³⁶	40	11	45	16	8 09	40	27	60
8	300	58.5		21.8	290	48.8 ¹⁰³	49.8 ³⁷	35	6 02	34	7 02	7 53	42	43	58
9	315	58.2		21.8	305	18.1 ¹⁰³	46.0 ³⁸	30	5 53	23	6 50	39	43	17 57	56
10	330	57.9		21.9	319	47.4 ¹⁰³	42.1 ³⁹	20	37	6 04	28	7 15	45	18 20	53
11	345	57.6	-23	22.0	334	16.8 ¹⁰⁴	-24 38.0 ⁴¹	10 N	5 21	5 47	6 10	6 54	48	18 40	51
12	0	57.3	-23	22.1	348	46.3 ¹⁰⁵	-24 33.8 ⁴²	0	5 04	5 30	5 52	6 34	50	18 59	48
13	15	57.0		22.2	3	15.8 ¹⁰⁵	29.5 ⁴³	10 S	4 45	5 12	35	6 15	51	19 17	46
14	30	56.7		22.3	17	45.4 ¹⁰⁶	25.1 ⁴⁴	20	4 22	4 51	5 16	5 54	54	19 37	44
15	45	56.4		22.3	32	15.0 ¹⁰⁶	20.6 ⁴⁵	30	3 53	26	4 54	30	56	20 00	41
16	60	56.1		22.4	46	44.7 ¹⁰⁷	15.9 ⁴⁷	35	35	4 11	41	5 15	58	13	39
17	75	55.8	-23	22.5	61	14.5 ¹⁰⁸	-24 11.2 ⁴⁷	40	3 11	3 53	4 26	4 59	59	20 29	37
18	90	55.5	-23	22.6	75	44.3 ¹⁰⁸	-24 06.3 ⁴⁹	45	2 41	3 31	4 08	4 39	61	20 47	34
19	105	55.2		22.7	90	14.1 ¹⁰⁸	-24 01.3 ⁵⁰	50	1 56	3 01	3 45	14	64	21 10	30
20	120	54.8		22.7	104	44.0 ¹⁰⁹	-23 56.2 ⁵¹	52	1 28	2 46	35	4 02	66	21	28
21	135	54.5		22.8	119	14.0 ¹¹⁰	51.0 ⁵²	54	0 42	28	22	3 49	67	33	26
22	150	54.2		22.9	133	44.1 ¹¹¹	45.7 ⁵³	56	** **	2 06	3 08	33	69	21 47	24
23	165	53.9		23.0	148	14.2 ¹¹¹	40.3 ⁵⁴	58	** **	1 36	2 51	3 14	72	22 03	21
24	180	53.6	-23	23.0	162	44.3 ¹¹¹	-23 34.7 ⁵⁶	60 S	** **	0 47	2 31	2 50	77	22 23	16

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 18 ^h 14 ^m 0		Mag: -3.9 PMG: 11 ^h 30 ^m		Mag: -0.4 PMG: 3 ^h 49 ^m		Mag: -2.2 PMG: 15 ^h 59 ^m		Mag: +1.0 PMG: 6 ^h 34 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	85	45.4	187	44.1	302	42.0	119	36.5	261	14.2
1	100	47.9	202	43.2	317	44.3	134	38.5	276	16.6
2	115	50.3	217	42.2	332	46.6	149	40.5	291	18.9
3	130	52.8	232	41.3	347	48.9	164	42.6	306	21.3
4	145	55.3	247	40.4	2	51.2	179	44.6	321	23.6
5	160	57.7	262	39.5	17	53.5	194	46.6	336	26.0
6	176	00.2	277	38.5	32	55.9	209	48.7	351	28.3
7	191	02.7	292	37.6	47	58.2	224	50.7	6	30.6
8	206	05.1	307	36.7	63	00.5	239	52.7	21	33.0
9	221	07.6	322	35.7	78	02.8	254	54.7	36	35.3
10	236	10.1	337	34.8	93	05.2	269	56.8	51	37.7
11	251	12.5	352	33.9	108	07.5	284	58.8	66	40.0
12	266	15.0	7	32.9	123	09.8	300	00.8	81	42.4
13	281	17.4	22	32.0	138	12.2	315	02.9	96	44.7
14	296	19.9	37	31.1	153	14.5	330	04.9	111	47.1
15	311	22.4	52	30.1	168	16.8	345	06.9	126	49.4
16	326	24.8	67	29.2	183	19.2	0	09.0	141	51.8
17	341	27.3	82	28.3	198	21.5	15	11.0	156	54.1
18	356	29.8	97	27.3	213	23.8	30	13.0	171	56.5
19	11	32.2	112	26.4	228	26.2	45	15.0	186	58.8
20	26	34.7	127	25.5	243	28.5	60	17.1	202	01.2
21	41	37.2	142	24.5	258	30.9	75	19.1	217	03.5
22	56	39.6	157	23.6	273	33.2	90	21.1	232	05.9
23	71	42.1	172	22.7	288	35.5	105	23.1	247	08.3
24	86	44.6	187	21.7	303	37.9	120	25.2	262	10.6
Dif	—		-9	-3	+23	+1	+20	+2	+23	0

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16°3			Edad: 1 ^d 5	PHE {	4 ^h : 54'4			12 ^h : 54'3	20 ^h : 54'2	R°: 46 ^m			
	PMG: 11 ^h 56 ^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	180	53.6	-23 23.0	162	44.3	-23 34.7	56	60 N	14 53	15 51	16 48	10 34 12	16 46 83	
1	195	53.3	23.1	177	14.5 ¹¹²	29.1	56	58	15 11	16 03	16 55	17 16	17 03 79	
2	210	53.0	23.2	191	44.8 ¹¹³	23.3	58	56	25	13	17 02	10 02 19	17 76	
3	225	52.7	23.3	206	15.2 ¹¹⁴	17.4	59	54	38	22	08	9 49 22	30 72	
4	240	52.4	23.3	220	45.6 ¹¹⁴	11.5	59	52	49	30	14	38 24	41 70	
5	255	52.1	-23 23.4	235	16.0 ¹¹⁴	-23 05.4	61	50	15 59	16 38	17 19	9 27 27	17 50 68	
6	270	51.8	-23 23.5	249	46.6 ¹¹⁶	-22 59.2	62	45	16 20	16 54	17 31	9 06 31	18 11 63	
7	285	51.5	23.5	264	17.2 ¹¹⁶	52.9	63	40	37	17 07	41	8 49 34	27 61	
8	300	51.1	23.6	278	47.8 ¹¹⁶	46.5	64	35	16 51	19	51	35 36	41 58	
9	315	50.8	23.7	293	18.5 ¹¹⁷	40.0	65	30	17 03	30	17 59	22 38	18 53 55	
10	330	50.5	23.7	307	49.3 ¹¹⁸	33.4	66	20	24	17 48	18 16	8 00 42	19 13 52	
11	345	50.2	-23 23.8	322	20.2 ¹¹⁹	-22 26.7	67	10 N	17 43	18 06	18 32	7 42 44	19 31 49	
12	0	49.9	-23 23.9	336	51.1 ¹¹⁹	-22 19.9	68	0	18 00	18 23	18 49	7 24 47	19 47 46	
13	15	49.6	23.9	351	22.1 ¹²⁰	13.1	68	10 S	18	18 41	19 08	7 06 50	20 03 43	
14	30	49.3	24.0	5	53.1 ¹²⁰	-22 06.1	70	20	37	19 02	19 31	6 48 52	21 40	
15	45	49.0	24.0	20	24.2 ¹²¹	-21 59.0	71	30	18 59	27	20 00	26 56	41 36	
16	60	48.7	24.1	34	55.4 ¹²²	51.8	72	35	19 12	19 42	19	6 13 58	20 52 34	
17	75	48.4	-23 24.2	49	26.7 ¹²³	-21 44.5	73	40	19 27	20 00	20 42	5 58 60	21 06 31	
18	90	48.1	-23 24.2	63	58.0 ¹²³	-21 37.1	74	45	19 45	20 23	21 12	5 40 64	21 21 28	
19	105	47.8	24.3	78	29.3 ¹²³	29.7	74	50	20 08	20 52	21 58	18 68	40 24	
20	120	47.4	24.3	93	00.8 ¹²⁵	22.1	76	52	19	21 07	22 26	5 08 69	49 22	
21	135	47.1	24.4	107	32.3 ¹²⁵	14.5	76	54	31	25	23 13	4 56 71	21 59 20	
22	150	46.8	24.4	122	03.8 ¹²⁵	-21 06.7	78	56	20 45	21 48	** **	42 75	22 11 17	
23	165	46.5	24.5	136	35.5 ¹²⁷	-20 58.9	78	58	21 02	22 18	** **	26 78	24 13	
24	180	46.2	-23 24.6	151	07.2 ¹²⁷	-20 51.0	79	60 S	21 22	23 08	** **	4 07 82	22 39 10	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 18 ^h 10 ^m 0		Mag: -3.9 PMG: 11 ^h 31 ^m			Mag: -0.4 PMG: 3 ^h 45 ^m			Mag: -2.2 PMG: 15 ^h 56 ^m			Mag: +1.0 PMG: 6 ^h 30 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°
0	86	44.6	187	21.7	-22 57.7	303	37.9	+17 55.6	120	25.2	-14 31.4	262	10.6	+0 26.7
1	101	47.0	202	20.8	58.1	318	40.2	55.7	135	27.2	31.2	277	13.0	26.6
2	116	49.5	217	19.8	58.4	333	42.6	55.8	150	29.2	31.1	292	15.3	26.6
3	131	51.9	232	18.9	58.7	348	44.9	55.8	165	31.3	30.9	307	17.7	26.6
4	146	54.4	247	18.0	59.0	3	47.3	55.9	180	33.3	30.8	322	20.0	26.5
5	161	56.9	262	17.0	-22 59.4	18	49.6	+17 56.0	195	35.3	-14 30.6	337	22.4	+0 26.5
6	176	59.3	277	16.1	-22 59.7	33	52.0	+17 56.1	210	37.3	-14 30.5	352	24.7	+0 26.5
7	192	01.8	292	15.2	-23 00.0	48	54.3	56.2	225	39.4	30.3	7	27.1	26.4
8	207	04.3	307	14.2	-23 00.3	63	56.7	56.2	240	41.4	30.2	22	29.4	26.4
9	222	06.7	322	13.3	00.7	78	59.1	56.3	255	43.4	30.0	37	31.8	26.3
10	237	09.2	337	12.3	01.0	94	01.4	56.4	270	45.4	29.9	52	34.1	26.3
11	252	11.7	352	11.4	-23 01.3	109	03.8	+17 56.5	285	47.5	-14 29.7	67	36.5	+0 26.3
12	267	14.1	7	10.5	-23 01.6	124	06.1	+17 56.5	300	49.5	-14 29.6	82	38.8	+0 26.2
13	282	16.6	22	09.5	01.9	139	08.5	56.6	315	51.5	29.4	97	41.2	26.2
14	297	19.1	37	08.6	02.2	154	10.9	56.7	330	53.5	29.3	112	43.5	26.2
15	312	21.5	52	07.6	02.6	169	13.2	56.8	345	55.6	29.1	127	45.9	26.1
16	327	24.0	67	06.7	02.9	184	15.6	56.9	0	57.6	29.0	142	48.2	26.1
17	342	26.4	82	05.8	-23 03.2	199	18.0	+17 56.9	15	59.6	-14 28.8	157	50.6	+0 26.1
18	357	28.9	97	04.8	-23 03.5	214	20.3	+17 57.0	31	01.6	-14 28.6	172	53.0	+0 26.0
19	12	31.4	112	03.9	03.8	229	22.7	57.1	46	03.7	28.5	187	55.3	26.0
20	27	33.8	127	02.9	04.1	244	25.1	57.2	61	05.7	28.3	202	57.7	26.0
21	42	36.3	142	02.0	04.4	259	27.5	57.3	76	07.7	28.2	218	00.0	25.9
22	57	38.8	157	01.1	04.7	274	29.8	57.4	91	09.7	28.0	233	02.4	25.9
23	72	41.2	172	00.1	05.0	289	32.2	57.4	106	11.8	27.9	248	04.7	25.9
24	87	43.7	186	59.2	-23 05.3	304	34.6	+17 57.5	121	13.8	-14 27.7	263	07.1	+0 25.8
Dif	—		-9 -3			+24 +1			+20 +2		+24 0			

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'3 PMG: 11 ^h 57 ^m 2			Edad: 2 ^d 5 SD: 14'8 PMG: 14 ^h 22 ^m											PHE { 4 ^h : 54'2 12 ^h : 54'1 20 ^h : 54'1 R°: 44 ^m			
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	°	'	°	°	'	°	'	h	m	h	m	h	m	h	m	m		
0	180	46.2	-23	151	07.2	-20	51.0	60 N	7 06	8 03	9 01	10 46	8	18 09	83			
1	195	45.9		165	38.9 ¹²⁷		42.9 ⁸¹	58	6 59	7 51	8 43	33	11	22	78			
2	210	45.6		180	10.8 ¹²⁹		34.8 ⁸¹	56	52	41	29	21	15	33	75			
3	225	45.3		194	42.7 ¹²⁹		26.7 ⁸¹	54	46	32	16	11	17	42	73			
4	240	45.0		209	14.6 ¹²⁹		18.4 ⁸³	52	40	24	8 05	10 02	20	51	70			
5	255	44.7	-23	223	46.7 ¹³¹	-20	10.0 ⁸⁴	50	6 35	7 16	7 55	9 54	22	18 58	68			
6	270	44.4	-23	238	18.8 ¹³¹	-20	01.6 ⁸⁴	45	6 23	7 00	7 34	9 37	25	19 14	64			
7	285	44.0		252	50.9 ¹³¹	-19	53.0 ⁸⁶	40	13	6 47	17	23	29	28	60			
8	300	43.7		267	23.1 ¹³²		44.4 ⁸⁶	35	6 03	35	7 03	11	31	39	57			
9	315	43.4		281	55.4 ¹³³		35.7 ⁸⁷	30	5 54	24	6 51	9 00	34	19 48	55			
10	330	43.1		296	27.8 ¹³⁴		27.0 ⁸⁷	20	38	6 05	29	8 42	38	20 05	50			
11	345	42.8	-23	311	00.2 ¹³⁴	-19	18.1 ⁸⁹	10 N	5 22	5 48	6 11	8 26	41	20 20	46			
12	0	42.5	-23	325	32.7 ¹³⁵	-19	09.2 ⁸⁹	0	5 05	5 31	5 53	8 11	45	20 33	43			
13	15	42.2		340	05.2 ¹³⁵	-19	00.2 ⁹⁰	10 S	4 46	5 13	36	7 56	48	20 46	40			
14	30	41.9		354	37.8 ¹³⁶	-18	51.1 ⁹¹	20	4 23	4 52	5 17	40	51	21 01	36			
15	45	41.6		9	10.5 ¹³⁷		41.9 ⁹²	30	3 54	27	4 55	22	55	17	32			
16	60	41.3		23	43.2 ¹³⁷		32.7 ⁹²	35	35	4 12	42	7 11	57	26	30			
17	75	40.9	-23	38	16.0 ¹³⁸	-18	23.4 ⁹³	40	3 12	3 54	4 27	6 58	61	21 37	27			
18	90	40.6	-23	52	48.8 ¹³⁸	-18	14.0 ⁹⁴	45	2 41	3 31	4 09	6 44	63	21 49	24			
19	105	40.3		67	21.8 ¹⁴⁰	-18	04.5 ⁹⁵	50	1 56	3 01	3 46	26	68	22 04	20			
20	120	40.0		81	54.7 ¹³⁹	-17	55.0 ⁹⁵	52	1 28	2 46	35	17	70	11	18			
21	135	39.7		96	27.8 ¹⁴¹		45.4 ⁹⁶	54	0 41	28	23	6 07	73	19	15			
22	150	39.4		111	00.9 ¹⁴¹		35.7 ⁹⁷	56	** ** *	2 06	3 09	5 57	75	28	12			
23	165	39.1		125	34.0 ¹⁴¹		26.0 ⁹⁷	58	** ** *	1 36	2 52	44	79	37	10			
24	180	38.8	-23	140	07.2 ¹⁴²	-17	16.1 ⁹⁹	60 S	** ** *	0 45	2 31	5 29	83	22 49	6			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 18 ^h 06 ^m 1		Mag: -3.9 PMG: 11 ^h 33 ^m			Mag: -0.5 PMG: 3 ^h 41 ^m			Mag: -2.2 PMG: 15 ^h 53 ^m			Mag: +1.0 PMG: 6 ^h 27 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'				
0	87	43.7	186	59.2	-23	05.3	304	34.6	+17	57.5	121	13.8	-14	27.7	263	07.1	+0	25.8
1	102	46.2	201	58.2		05.6	319	37.0		57.6	136	15.8		27.6	278	09.4		25.8
2	117	48.6	216	57.3		05.9	334	39.3		57.7	151	17.8		27.4	293	11.8		25.7
3	132	51.1	231	56.3		06.2	349	41.7		57.8	166	19.8		27.3	308	14.2		25.7
4	147	53.6	246	55.4		06.5	4	44.1		57.9	181	21.9		27.1	323	16.5		25.7
5	162	56.0	261	54.5	-23	06.8	19	46.5	+17	57.9	196	23.9	-14	27.0	338	18.9	+0	25.6
6	177	58.5	276	53.5	-23	07.1	34	48.9	+17	58.0	211	25.9	-14	26.8	353	21.2	+0	25.6
7	193	00.9	291	52.6		07.4	49	51.3		58.1	226	27.9		26.7	8	23.6		25.6
8	208	03.4	306	51.6		07.7	64	53.7		58.2	241	30.0		26.5	23	25.9		25.5
9	223	05.9	321	50.7		08.0	79	56.0		58.3	256	32.0		26.3	38	28.3		25.5
10	238	08.3	336	49.7		08.3	94	58.4		58.4	271	34.0		26.2	53	30.6		25.5
11	253	10.8	351	48.8	-23	08.6	110	00.8	+17	58.5	286	36.0	-14	26.0	68	33.0	+0	25.4
12	268	13.3	6	47.8	-23	08.9	125	03.2	+17	58.6	301	38.0	-14	25.9	83	35.4	+0	25.4
13	283	15.7	21	46.9		09.1	140	05.6		58.7	316	40.1		25.7	98	37.7		25.4
14	298	18.2	36	46.0		09.4	155	08.0		58.7	331	42.1		25.6	113	40.1		25.3
15	313	20.7	51	45.0		09.7	170	10.4		58.8	346	44.1		25.4	128	42.4		25.3
16	328	23.1	66	44.1		10.0	185	12.8		58.9	1	46.1		25.3	143	44.8		25.3
17	343	25.6	81	43.1	-23	10.3	200	15.2	+17	59.0	16	48.1	-14	25.1	158	47.1	+0	25.2
18	358	28.0	96	42.2	-23	10.6	215	17.6	+17	59.1	31	50.2	-14	25.0	173	49.5	+0	25.2
19	13	30.5	111	41.2		10.8	230	20.0		59.2	46	52.2		24.8	188	51.9		25.2
20	28	33.0	126	40.3		11.1	245	22.4		59.3	61	54.2		24.6	203	54.2		25.1
21	43	35.4	141	39.3		11.4	260	24.8		59.4	76	56.2		24.5	218	56.6		25.1
22	58	37.9	156	38.4		11.7	275	27.2		59.5	91	58.2		24.3	233	58.9		25.1
23	73	40.4	171	37.4		11.9	290	29.6		59.6	107	00.3		24.2	249	01.3		25.0
24	88	42.8	186	36.5	-23	12.2	305	32.0	+17	59.7	122	02.3	-14	24.0	264	03.7	+0	25.0
Dif	—		-9		-3		+24		+1		+20		+2		+24			

UT	SOL				● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16:3 PMG: 11 ^h 57 ^m 7				Edad: 3 ^d 5 PHE { SD: 14:7 PMG: 15 ^h 06 ^m 4 ^h : 54:1 12 ^h : 54:0 20 ^h : 54:0 R°: 42 ^m													
	hG ☉	Dec	hG ☾	Dif	Dec	Dif	Civil	Náutico			Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m	h m m			
0	180	38.8	-23	25.6	140	07.2	-17	16.1	60 N	14 54	15 52	16 49	10 54 5	19 32 80				
1	195	38.5		25.6	154	40.5 ¹⁴³	-17	06.3 ⁹⁸	58	15 11	16 03	16 56	44 8	40 77				
2	210	38.2		25.7	169	13.8 ¹⁴³	-16	56.3 ¹⁰⁰	56	26	14	17 03	36 11	48 74				
3	225	37.8		25.7	183	47.2 ¹⁴⁴		46.3 ¹⁰⁰	54	39	23	09	28 14	19 55 7				
4	240	37.5		25.7	198	20.6 ¹⁴⁴		36.2 ¹⁰¹	52	15 50	31	15	22 15	20 01 69				
5	255	37.2	-23	25.8	212	54.1 ¹⁴⁵	-16	26.0 ¹⁰²	50	16 00	16 38	17 20	10 16 17	20 06 67				
6	270	36.9	-23	25.8	227	27.7 ¹⁴⁶	-16	15.8 ¹⁰²	45	16 21	16 55	17 32	10 02 22	20 18 63				
7	285	36.6		25.8	242	01.3 ¹⁴⁶	-16	05.5 ¹⁰³	40	38	17 08	42	9 52 25	28 59				
8	300	36.3		25.9	256	35.0 ¹⁴⁷	-15	55.2 ¹⁰³	35	16 52	20	17 52	42 28	36 56				
9	315	36.0		25.9	271	08.7 ¹⁴⁷		44.8 ¹⁰⁴	30	17 04	31	18 00	34 31	43 54				
10	330	35.7		25.9	285	42.4 ¹⁴⁷		34.3 ¹⁰⁵	20	25	17 49	17	20 35	20 55 49				
11	345	35.4	-23	25.9	300	16.3 ¹⁴⁹	-15	23.8 ¹⁰⁵	10 N	17 44	18 07	18 33	9 07 39	21 06 45				
12	0	35.0	-23	26.0	314	50.1 ¹⁴⁸	-15	13.2 ¹⁰⁶	0	18 01	18 24	18 50	8 56 42	21 16 42				
13	15	34.7		26.0	329	24.1 ¹⁵⁰	-15	02.6 ¹⁰⁶	10 S	19	18 42	19 09	44 46	26 38				
14	30	34.4		26.0	343	58.0 ¹⁴⁹	-14	51.9 ¹⁰⁷	20	18 38	19 03	19 32	31 50	37 34				
15	45	34.1		26.0	358	32.1 ¹⁵¹		41.1 ¹⁰⁸	30	19 00	28	20 01	17 54	49 29				
16	60	33.8		26.1	13	06.1 ¹⁵⁰		30.3 ¹⁰⁸	35	13	19 43	20	8 08 57	21 56 27				
17	75	33.5	-23	26.1	27	40.3 ¹⁵²	-14	19.4 ¹⁰⁹	40	19 28	20 01	20 43	7 59 59	22 04 24				
18	90	33.2	-23	26.1	42	14.4 ¹⁵¹	-14	08.5 ¹⁰⁹	45	19 46	20 24	21 14	7 47 64	22 13 20				
19	105	32.9		26.1	56	48.7 ¹⁵³	-13	57.5 ¹¹⁰	50	20 09	20 54	21 59	34 67	24 16				
20	120	32.6		26.1	71	22.9 ¹⁵²		46.5 ¹¹⁰	52	20	21 09	22 27	27 70	29 14				
21	135	32.2		26.1	85	57.2 ¹⁵³		35.4 ¹¹¹	54	32	27	23 15	20 72	34 13				
22	150	31.9		26.2	100	31.6 ¹⁵⁴		24.2 ¹¹²	56	20 46	21 49	** **	12 75	40 10				
23	165	31.6		26.2	115	06.0 ¹⁵⁴		13.0 ¹¹²	58	21 03	22 19	** **	7 03 78	47 8				
24	180	31.3	-23	26.2	129	40.5 ¹⁵⁵	-13	01.8 ¹¹²	60 S	21 24	23 10	** **	6 52 82	22 55 4				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 18 ^h 02 ^m 2		Mag: -3.9 PMG: 11 ^h 34 ^m				Mag: -0.5 PMG: 3 ^h 37 ^m				Mag: -2.2 PMG: 15 ^h 50 ^m				Mag: +0.9 PMG: 6 ^h 23 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♎	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	88	42.8	186	36.5	-23	12.2	305	32.0	+17	59.7	122	02.3	-14	24.0	264	03.7	+0	25.0
1	103	45.3	201	35.5		12.5	320	34.5		59.8	137	04.3		23.9	279	06.0		25.0
2	118	47.8	216	34.6		12.7	335	36.9	+17	59.9	152	06.3		23.7	294	08.4		24.9
3	133	50.2	231	33.6		13.0	350	39.3	+18	00.0	167	08.3		23.6	309	10.7		24.9
4	148	52.7	246	32.7		13.3	5	41.7	+18	00.1	182	10.3		23.4	324	13.1		24.9
5	163	55.2	261	31.7	-23	13.6	20	44.1	+18	00.2	197	12.4	-14	23.3	339	15.5	+0	24.8
6	178	57.6	276	30.8	-23	13.8	35	46.5	+18	00.3	212	14.4	-14	23.1	354	17.8	+0	24.8
7	194	00.1	291	29.8		14.1	50	48.9		00.3	227	16.4		22.9	9	20.2		24.8
8	209	02.5	306	28.9		14.3	65	51.4		00.4	242	18.4		22.8	24	22.5		24.7
9	224	05.0	321	27.9		14.6	80	53.8		00.5	257	20.4		22.6	39	24.9		24.7
10	239	07.5	336	27.0		14.9	95	56.2		00.6	272	22.5		22.5	54	27.3		24.7
11	254	09.9	351	26.0	-23	15.1	110	58.6	+18	00.7	287	24.5	-14	22.3	69	29.6	+0	24.7
12	269	12.4	6	25.1	-23	15.4	126	01.1	+18	00.8	302	26.5	-14	22.2	84	32.0	+0	24.6
13	284	14.9	21	24.1		15.6	141	03.5		00.9	317	28.5		22.0	99	34.3		24.6
14	299	17.3	36	23.2		15.9	156	05.9		01.0	332	30.5		21.9	114	36.7		24.6
15	314	19.8	51	22.2		16.2	171	08.4		01.1	347	32.5		21.7	129	39.1		24.5
16	329	22.3	66	21.3		16.4	186	10.8		01.2	2	34.6		21.5	144	41.4		24.5
17	344	24.7	81	20.3	-23	16.7	201	13.2	+18	01.4	17	36.6	-14	21.4	159	43.8	+0	24.5
18	359	27.2	96	19.4	-23	16.9	216	15.6	+18	01.5	32	38.6	-14	21.2	174	46.2	+0	24.4
19	14	29.7	111	18.4		17.2	231	18.1		01.6	47	40.6		21.1	189	48.5		24.4
20	29	32.1	126	17.5		17.4	246	20.5		01.7	62	42.6		20.9	204	50.9		24.4
21	44	34.6	141	16.5		17.7	261	23.0		01.8	77	44.6		20.8	219	53.2		24.3
22	59	37.0	156	15.6		17.9	276	25.4		01.9	92	46.6		20.6	234	55.6		24.3
23	74	39.5	171	14.6		18.1	291	27.8		02.0	107	48.7		20.4	249	58.0		24.3
24	89	42.0	186	13.7	-23	18.4	306	30.3	+18	02.1	122	50.7	-14	20.3	265	00.3	+0	24.2
Dif	—		-10		-3		+24		+1		+20		+2		+24		0	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'3 PMG: 11 ^h 58 ^m 2			Edad: 4 ^d 5 PHE { 4 ^h : 54'1 12 ^h : 54'1 20 ^h : 54'1 R°: 40 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	180	31.3	-23	26.2	129	40.5	-13	01.8	60 N	7 07	8 04	9 02	10 59	3	20 52	80
1	195	31.0		26.2	144	14.9 ¹⁵⁴	-12	50.5 ¹¹³	58	7 00	7 53	8 44	52	7	20 57	77
2	210	30.7		26.2	158	49.5 ¹⁵⁶		39.2 ¹¹³	56	6 53	42	30	47	9	21 02	74
3	225	30.4		26.2	173	24.0 ¹⁵⁵		27.8 ¹¹⁴	54	47	33	17	42	12	06	71
4	240	30.1		26.2	187	58.7 ¹⁵⁷		16.3 ¹¹⁵	52	41	25	8 06	37	14	10	69
5	255	29.8	-23	26.3	202	33.3 ¹⁵⁶	-12	04.8 ¹¹⁵	50	6 36	7 17	7 56	10 33	16	21 13	67
6	270	29.5	-23	26.3	217	08.0 ¹⁵⁷	-11	53.3 ¹¹⁵	45	6 24	7 01	7 35	10 24	20	21 21	62
7	285	29.1		26.3	231	42.7 ¹⁵⁷		41.7 ¹¹⁶	40	14	6 48	18	17	23	27	59
8	300	28.8		26.3	246	17.5 ¹⁵⁸		30.1 ¹¹⁶	35	6 04	36	7 04	10	27	32	56
9	315	28.5		26.3	260	52.3 ¹⁵⁸		18.4 ¹¹⁷	30	5 55	25	6 52	10 05	28	37	53
10	330	28.2		26.3	275	27.2 ¹⁵⁹	-11	06.7 ¹¹⁷	20	39	6 06	30	9 55	33	44	49
11	345	27.9	-23	26.3	290	02.0 ¹⁵⁸	-10	55.0 ¹¹⁷	10 N	5 23	5 49	6 12	9 46	37	21 51	45
12	0	27.6	-23	26.3	304	36.9 ¹⁵⁹	-10	43.2 ¹¹⁸	0	5 06	5 32	5 54	9 38	41	21 58	40
13	15	27.3		26.3	319	11.9 ¹⁶⁰		31.3 ¹¹⁹	10 S	4 47	5 14	37	30	44	22 04	37
14	30	27.0		26.3	333	46.8 ¹⁵⁹		19.4 ¹¹⁹	20	4 24	4 53	5 18	21	48	11	32
15	45	26.7		26.3	348	21.9 ¹⁶¹	-10	07.5 ¹¹⁹	30	3 55	28	4 56	11	53	18	28
16	60	26.3		26.3	2	56.9 ¹⁶⁰	-9	55.6 ¹¹⁹	35	36	4 13	43	9 05	56	23	25
17	75	26.0	-23	26.3	17	32.0 ¹⁶¹	-9	43.6 ¹²⁰	40	3 13	3 55	4 28	8 58	59	22 28	22
18	90	25.7	-23	26.3	32	07.0 ¹⁶⁰	-9	31.5 ¹²¹	45	2 42	3 32	4 09	8 51	62	22 33	19
19	105	25.4		26.3	46	42.2 ¹⁶²		19.5 ¹²⁰	50	1 57	3 02	3 47	41	67	40	15
20	120	25.1		26.3	61	17.3 ¹⁶¹	-9	07.3 ¹²²	52	1 29	2 47	36	37	69	43	13
21	135	24.8		26.3	75	52.5 ¹⁶²	-8	55.2 ¹²¹	54	0 41	29	24	32	71	47	11
22	150	24.5		26.3	90	27.7 ¹⁶²		43.0 ¹²²	56	** **	2 07	3 09	27	73	50	9
23	165	24.2		26.3	105	02.9 ¹⁶²		30.8 ¹²²	58	** **	1 37	2 53	21	76	55	6
24	180	23.8	-23	26.3	119	38.2 ¹⁶³	-8	18.5 ¹²³	60 S	** **	0 45	2 32	8 14	80	22 59	4

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 17 ^h 58 ^m 2		Mag: -3.9 PMG: 11 ^h 36 ^m		Mag: -0.5 PMG: 3 ^h 33 ^m		Mag: -2.2 PMG: 15 ^h 47 ^m		Mag: +0.9 PMG: 6 ^h 19 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	89	42.0	186	13.7	-23	18.4	306	30.3	+18	02.1
1	104	44.4	201	12.7		18.6	321	32.7		02.2
2	119	46.9	216	11.7		18.9	336	35.2		02.3
3	134	49.4	231	10.8		19.1	351	37.6		02.4
4	149	51.8	246	09.8		19.3	6	40.1		02.5
5	164	54.3	261	08.9	-23	19.6	21	42.5	+18	02.6
6	179	56.8	276	07.9	-23	19.8	36	45.0	+18	02.7
7	194	59.2	291	07.0		20.1	51	47.4		02.8
8	210	01.7	306	06.0		20.3	66	49.9		02.9
9	225	04.2	321	05.1		20.5	81	52.3		03.0
10	240	06.6	336	04.1		20.8	96	54.8		03.2
11	255	09.1	351	03.1	-23	21.0	111	57.2	+18	03.3
12	270	11.5	6	02.2	-23	21.2	126	59.7	+18	03.4
13	285	14.0	21	01.2		21.4	142	02.2		03.5
14	300	16.5	36	00.3		21.7	157	04.6		03.6
15	315	18.9	50	59.3		21.9	172	07.1		03.7
16	330	21.4	65	58.4		22.1	187	09.5		03.8
17	345	23.9	80	57.4	-23	22.3	202	12.0	+18	03.9
18	0	26.3	95	56.5	-23	22.6	217	14.5	+18	04.1
19	15	28.8	110	55.5		22.8	232	16.9		04.2
20	30	31.3	125	54.5		23.0	247	19.4		04.3
21	45	33.7	140	53.6		23.2	262	21.9		04.4
22	60	36.2	155	52.6		23.4	277	24.4		04.5
23	75	38.6	170	51.7		23.6	292	26.8		04.6
24	90	41.1	185	50.7	-23	23.9	307	29.3	+18	04.7
Dif	—		-10		-2		+25		+1	
							+20		+2	
									+24	

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16°3			Edad: 5 ^d 5	PHE { 4 ^h : 54/2 12 ^h : 54/3 20 ^h : 54/4									
	PMG: 11 ^h 58 ^m 7					SD: 14°8			PMG: 16 ^h 28 ^m		R°: 41 ^m			
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	180	23.8	-23 26.3	119	38.2	-8 18.5		60 N	14 55	15 53	16 50	11 02 4		22 12 79
1	195	23.5	26.3	134	13.4 ¹⁶²	-8 06.2 ¹²³		58	15 12	16 04	16 57	10 59 6		14 76
2	210	23.2	26.3	148	48.7 ¹⁶³	-7 53.9 ¹²³		56	27	15	17 04	56 9		16 74
3	225	22.9	26.3	163	24.0 ¹⁶³	41.6 ¹²³		54	40	24	10	54 10		17 72
4	240	22.6	26.3	177	59.4 ¹⁶⁴	29.2 ¹²⁴		52	15 51	32	16	51 13		19 69
5	255	22.3	-23 26.3	192	34.7 ¹⁶³	-7 16.8 ¹²⁴		50	16 01	16 39	17 21	10 49 15		22 20 67
6	270	22.0	-23 26.3	207	10.1 ¹⁶⁴	-7 04.3 ¹²⁵		45	16 22	16 56	17 33	10 44 19		22 23 63
7	285	21.7	26.3	221	45.5 ¹⁶⁴	-6 51.9 ¹²⁴		40	39	17 09	43	40 22		26 59
8	300	21.4	26.2	236	20.9 ¹⁶⁴	39.4 ¹²⁵		35	16 53	21	17 53	37 25		28 56
9	315	21.0	26.2	250	56.3 ¹⁶⁴	26.8 ¹²⁶		30	17 05	32	18 01	33 28		30 53
10	330	20.7	26.2	265	31.7 ¹⁶⁴	14.3 ¹²⁵		20	26	17 50	18	28 32		33 48
11	345	20.4	-23 26.2	280	07.1 ¹⁶⁴	-6 01.7 ¹²⁶		10 N	17 45	18 08	18 34	10 23 37		22 36 44
12	0	20.1	-23 26.2	294	42.6 ¹⁶⁵	-5 49.1 ¹²⁶		0	18 02	18 25	18 51	10 19 40		22 38 41
13	15	19.8	26.2	309	18.0 ¹⁶⁴	36.4 ¹²⁷		10 S	20	18 43	19 10	14 44		41 36
14	30	19.5	26.2	323	53.5 ¹⁶⁵	23.7 ¹²⁷		20	18 39	19 04	19 33	09 49		43 33
15	45	19.2	26.1	338	29.0 ¹⁶⁵	-5 11.1 ¹²⁶		30	19 01	29	20 02	04 53		46 28
16	60	18.9	26.1	353	04.5 ¹⁶⁵	-4 58.3 ¹²⁸		35	14	19 44	21	10 01 56		48 25
17	75	18.6	-23 26.1	7	40.0 ¹⁶⁵	-4 45.6 ¹²⁷		40	19 29	20 02	20 44	9 57 59		22 50 22
18	90	18.2	-23 26.1	22	15.5 ¹⁶⁵	-4 32.8 ¹²⁸		45	19 47	20 25	21 15	9 53 63		22 52 19
19	105	17.9	26.1	36	51.0 ¹⁶⁵	20.1 ¹²⁷		50	20 10	20 55	22 00	48 67		55 15
20	120	17.6	26.0	51	26.5 ¹⁶⁵	-4 07.3 ¹²⁸		52	21	21 10	22 28	46 69		56 13
21	135	17.3	26.0	66	02.0 ¹⁶⁵	-3 54.4 ¹²⁹		54	33	28	23 15	43 71		58 10
22	150	17.0	26.0	80	37.5 ¹⁶⁵	41.6 ¹²⁸		56	20 47	21 50	** **	40 74		22 59 9
23	165	16.7	26.0	95	13.0 ¹⁶⁵	28.7 ¹²⁹		58	21 04	22 20	** **	37 76		23 01 6
24	180	16.4	-23 25.9	109	48.5 ¹⁶⁵	-3 15.8 ¹²⁹		60 S	21 25	23 11	** **	9 34 79		23 03 3

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 17 ^h 54 ^m 3		Mag: -3.9 PMG: 11 ^h 37 ^m		Mag: -0.5 PMG: 3 ^h 29 ^m		Mag: -2.2 PMG: 15 ^h 43 ^m		Mag: +0.9 PMG: 6 ^h 15 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	90	41.1	185 50.7	-23 23.9	307 29.3	+18 04.7	123 39.0	-14 16.5	265 57.1	+0 23.5
1	105	43.6	200 49.7	24.1	322 31.8	04.9	138 41.0	16.3	280 59.5	23.5
2	120	46.0	215 48.8	24.3	337 34.3	05.0	153 43.0	16.2	296 01.8	23.5
3	135	48.5	230 47.8	24.5	352 36.7	05.1	168 45.0	16.0	311 04.2	23.4
4	150	51.0	245 46.9	24.7	7 39.2	05.2	183 47.0	15.9	326 06.6	23.4
5	165	53.4	260 45.9	-23 24.9	22 41.7	+18 05.3	198 49.0	-14 15.7	341 08.9	+0 23.4
6	180	55.9	275 45.0	-23 25.1	37 44.2	+18 05.4	213 51.0	-14 15.6	356 11.3	+0 23.3
7	195	58.4	290 44.0	25.3	52 46.7	05.6	228 53.1	15.4	11 13.7	23.3
8	211	00.8	305 43.0	25.5	67 49.1	05.7	243 55.1	15.2	26 16.0	23.3
9	226	03.3	320 42.1	25.7	82 51.6	05.8	258 57.1	15.1	41 18.4	23.3
10	241	05.8	335 41.1	25.9	97 54.1	05.9	273 59.1	14.9	56 20.8	23.2
11	256	08.2	350 40.2	-23 26.1	112 56.6	+18 06.0	289 01.1	-14 14.8	71 23.1	+0 23.2
12	271	10.7	5 39.2	-23 26.3	127 59.1	+18 06.2	304 03.1	-14 14.6	86 25.5	+0 23.2
13	286	13.1	20 38.2	26.5	143 01.6	06.3	319 05.1	14.4	101 27.9	23.1
14	301	15.6	35 37.3	26.7	158 04.1	06.4	334 07.1	14.3	116 30.2	23.1
15	316	18.1	50 36.3	26.9	173 06.6	06.5	349 09.1	14.1	131 32.6	23.1
16	331	20.5	65 35.4	27.1	188 09.1	06.7	4 11.1	14.0	146 35.0	23.1
17	346	23.0	80 34.4	-23 27.3	203 11.6	+18 06.8	19 13.1	-14 13.8	161 37.3	+0 23.0
18	1	25.5	95 33.4	-23 27.5	218 14.1	+18 06.9	34 15.2	-14 13.6	176 39.7	+0 23.0
19	16	27.9	110 32.5	27.7	233 16.6	07.0	49 17.2	13.5	191 42.1	23.0
20	31	30.4	125 31.5	27.9	248 19.1	07.2	64 19.2	13.3	206 44.5	22.9
21	46	32.9	140 30.5	28.0	263 21.6	07.3	79 21.2	13.2	221 46.8	22.9
22	61	35.3	155 29.6	28.2	278 24.1	07.4	94 23.2	13.0	236 49.2	22.9
23	76	37.8	170 28.6	28.4	293 26.6	07.5	109 25.2	12.8	251 51.6	22.9
24	91	40.3	185 27.7	-23 28.6	308 29.1	+18 07.7	124 27.2	-14 12.7	266 53.9	+0 22.8
Dif	—		-10	-2	+25	+1	+20	+2	+24	0

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna								
	SD: 16'3 PMG: 11 ^h 59 ^m 2			Edad: 6 ^d 5 SD: 14'8 PMG: 17 ^h 09 ^m	PHE { 4 ^h : 54'5 12 ^h : 54'7 20 ^h : 54'8 R°: 41 ^m																
	hG ☉	Dec				hG ☾		Dif	Dec		Dif	Náutico	Civil	Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	h	m			
0	180	16.4	-23	25.9	109	48.5	-3	15.8	60 N	7 08	8 05	9 03	11 06	3	23	31	82				
1	195	16.1		25.9	124	24.0 ¹⁶⁵	-3	02.9 ¹²⁹	58	7 01	7 53	8 45	05	6		30	79				
2	210	15.8		25.9	138	59.5 ¹⁶⁵	-2	50.0 ¹²⁹	56	6 54	43	31	05	8		30	75				
3	225	15.4		25.9	153	35.0 ¹⁶⁵		37.1 ¹²⁹	54	48	34	18	04	11		29	73				
4	240	15.1		25.8	168	10.5 ¹⁶⁵		24.1 ¹³⁰	52	42	26	8 07	04	13		28	71				
5	255	14.8	-23	25.8	182	46.0 ¹⁶⁵	-2	11.1 ¹³⁰	50	6 37	7 18	7 57	11 04	14	23	27	69				
6	270	14.5	-23	25.8	197	21.5 ¹⁶⁵	-1	58.2 ¹²⁹	45	6 25	7 02	7 36	11 03	19	23	26	64				
7	285	14.2		25.8	211	57.0 ¹⁶⁵		45.2 ¹³⁰	40	15	6 49	19	02	23		25	60				
8	300	13.9		25.7	226	32.4 ¹⁶⁴		32.1 ¹³¹	35	6 05	37	7 05	02	25		24	57				
9	315	13.6		25.7	241	07.9 ¹⁶⁵		19.1 ¹³⁰	30	5 56	26	6 53	01	28		23	55				
10	330	13.3		25.7	255	43.3 ¹⁶⁴	-1	06.1 ¹³⁰	20	40	6 07	31	00	33		21	50				
11	345	13.0	-23	25.6	270	18.8 ¹⁶⁵	-0	53.0 ¹³¹	10 N	5 24	5 50	6 13	11 00	37	23	20	45				
12	0	12.6	-23	25.6	284	54.2 ¹⁶⁴	-0	39.9 ¹³¹	0	5 07	5 33	5 55	10 59	41	23	19	41				
13	15	12.3		25.6	299	29.6 ¹⁶⁴		26.9 ¹³⁰	10 S	4 48	5 15	38	58	45		17	38				
14	30	12.0		25.5	314	05.0 ¹⁶⁴		13.8 ¹³¹	20	4 25	4 54	5 19	58	49		16	33				
15	45	11.7		25.5	328	40.4 ¹⁶⁴	-0	00.7 ¹³¹	30	3 56	29	4 57	57	54		14	29				
16	60	11.4		25.4	343	15.7 ¹⁶³	+0	12.4 ¹³¹	35	37	4 14	44	57	56		13	26				
17	75	11.1	-23	25.4	357	51.0 ¹⁶³	+0	25.5 ¹³¹	40	3 14	3 56	4 29	10 56	60	23	12	23				
18	90	10.8	-23	25.4	12	26.3 ¹⁶³	+0	38.6 ¹³¹	45	2 43	3 33	4 11	10 56	63	23	11	20				
19	105	10.5		25.3	27	01.6 ¹⁶³	+0	51.8 ¹³²	50	1 58	3 03	3 48	55	68		10	15				
20	120	10.2		25.3	41	36.9 ¹⁶³	+1	04.9 ¹³¹	52	1 30	2 48	37	55	70		09	13				
21	135	09.8		25.2	56	12.1 ¹⁶²		18.0 ¹³¹	54	0 42	30	25	54	73		08	11				
22	150	09.5		25.2	70	47.4 ¹⁶³		31.2 ¹³²	56	** **	2 08	3 10	54	75		08	8				
23	165	09.2		25.2	85	22.6 ¹⁶²		44.3 ¹³¹	58	** **	1 38	2 54	53	78		07	6				
24	180	08.9	-23	25.1	99	57.7 ¹⁶¹	+1	57.5 ¹³²	60 S	** **	0 47	2 33	10 53	81	23	06	3				
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO								
	PMG 17 ^h 50 ^m 4			Mag: -3.9 PMG: 11 ^h 39 ^m			Mag: -0.6 PMG: 3 ^h 25 ^m			Mag: -2.2 PMG: 15 ^h 40 ^m			Mag: +0.9 PMG: 6 ^h 11 ^m								
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'					
0	91	40.3	185	27.7	-23	28.6	308	29.1	+18	07.7	124	27.2	-14	12.7	266	53.9	+0	22.8			
1	106	42.7	200	26.7		28.8	323	31.6		07.8	139	29.2		12.5	281	56.3		22.8			
2	121	45.2	215	25.7		29.0	338	34.1		07.9	154	31.2		12.4	296	58.7		22.8			
3	136	47.6	230	24.8		29.1	353	36.6		08.0	169	33.2		12.2	312	01.1		22.7			
4	151	50.1	245	23.8		29.3	8	39.2		08.2	184	35.2		12.0	327	03.4		22.7			
5	166	52.6	260	22.8	-23	29.5	23	41.7	+18	08.3	199	37.2	-14	11.9	342	05.8	+0	22.7			
6	181	55.0	275	21.9	-23	29.7	38	44.2	+18	08.4	214	39.2	-14	11.7	357	08.2	+0	22.7			
7	196	57.5	290	20.9		29.8	53	46.7		08.6	229	41.2		11.6	12	10.5		22.6			
8	212	00.0	305	20.0		30.0	68	49.2		08.7	244	43.3		11.4	27	12.9		22.6			
9	227	02.4	320	19.0		30.2	83	51.7		08.8	259	45.3		11.2	42	15.3		22.6			
10	242	04.9	335	18.0		30.4	98	54.3		08.9	274	47.3		11.1	57	17.7		22.6			
11	257	07.4	350	17.1	-23	30.5	113	56.8	+18	09.1	289	49.3	-14	10.9	72	20.0	+0	22.5			
12	272	09.8	5	16.1	-23	30.7	128	59.3	+18	09.2	304	51.3	-14	10.8	87	22.4	+0	22.5			
13	287	12.3	20	15.1		30.9	144	01.8		09.3	319	53.3		10.6	102	24.8		22.5			
14	302	14.7	35	14.2		31.0	159	04.4		09.5	334	55.3		10.4	117	27.1		22.4			
15	317	17.2	50	13.2		31.2	174	06.9		09.6	349	57.3		10.3	132	29.5		22.4			
16	332	19.7	65	12.2		31.4	189	09.4		09.7	4	59.3		10.1	147	31.9		22.4			
17	347	22.1	80	11.3	-23	31.5	204	12.0	+18	09.9	20	01.3	-14	10.0	162	34.3	+0	22.4			
18	2	24.6	95	10.3	-23	31.7	219	14.5	+18	10.0	35	03.3	-14	09.8	177	36.6	+0	22.3			
19	17	27.1	110	09.3		31.8	234	17.0		10.1	50	05.3		09.6	192	39.0		22.3			
20	32	29.5	125	08.4		32.0	249	19.6		10.3	65	07.3		09.5	207	41.4		22.3			
21	47	32.0	140	07.4		32.2	264	22.1		10.4	80	09.3		09.3	222	43.8		22.3			
22	62	34.5	155	06.5		32.3	279	24.6		10.6	95	11.3		09.1	237	46.1		22.2			
23	77	36.9	170	05.5		32.5	294	27.2		10.7	110	13.3		09.0	252	48.5		22.2			
24	92	39.4	185	04.5	-23	32.6	309	29.7	+18	10.8	125	15.3	-14	08.8	267	50.9	+0	22.2			
Dif	—			-10			-2			+25			+1			+20			+2		

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16:3 PMG: 11 ^h 59 ^m 7			Edad: 7 ^d 5 PHE { 4 ^h : 55/0 12 ^h : 55/2 20 ^h : 55/4 R°: 43 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	m	h m	m			
0	180	08.9	-23	25.1	99	57.7	+1	57.5	60 N	14 56	15 54	16 51	11 09	4	** ** *			
1	195	08.6		25.1	114	32.9 ¹⁶²	+2	10.6 ¹³¹	58	15 14	16 06	16 58	11 7		** ** *			
2	210	08.3		25.0	129	08.0 ¹⁶¹		23.8 ¹³²	56	28	16	17 05	13 10		** ** *			
3	225	08.0		25.0	143	43.0 ¹⁶⁰		37.0 ¹³²	54	41	25	11	15 12		** ** *			
4	240	07.7		24.9	158	18.1 ¹⁶¹	+2	50.1 ¹³¹	52	15 52	33	17	17 14		** ** *			
5	255	07.4	-23	24.9	172	53.1 ¹⁶⁰	+3	03.3 ¹³²	50	16 02	16 41	17 22	11 18	17	** ** *			
6	270	07.1	-23	24.8	187	28.1 ¹⁶⁰	+3	16.4 ¹³¹	45	16 23	16 57	17 34	11 22	20	** ** *			
7	285	06.7		24.8	202	03.0 ¹⁵⁹		29.6 ¹³²	40	40	17 10	44	25 24		** ** *			
8	300	06.4		24.7	216	37.9 ¹⁵⁹		42.7 ¹³¹	35	16 54	22	17 54	27 27		** ** *			
9	315	06.1		24.7	231	12.8 ¹⁵⁹	+3	55.9 ¹³²	30	17 06	33	18 02	29 30		** ** *			
10	330	05.8		24.6	245	47.6 ¹⁵⁸	+4	09.0 ¹³¹	20	27	17 51	19	33 35		** ** *			
11	345	05.5	-23	24.6	260	22.4 ¹⁵⁸	+4	22.2 ¹³²	10 N	17 46	18 09	18 35	11 37	39	** ** *			
12	0	05.2	-23	24.5	274	57.2 ¹⁵⁸	+4	35.3 ¹³¹	0	18 03	18 26	18 52	11 40	43	** ** *			
13	15	04.9		24.5	289	31.9 ¹⁵⁷	+4	48.5 ¹³²	10 S	21	18 44	19 11	43 47		23 55 40			
14	30	04.6		24.4	304	06.5 ¹⁵⁶	+5	01.6 ¹³¹	20	18 40	19 05	19 34	47 51		49 36			
15	45	04.3		24.4	318	41.2 ¹⁵⁷		14.7 ¹³¹	30	19 02	29	20 03	51 56		43 31			
16	60	03.9		24.3	333	15.7 ¹⁵⁵		27.8 ¹³¹	35	15	19 45	22	53 59		39 29			
17	75	03.6	-23	24.2	347	50.3 ¹⁵⁶	+5	40.9 ¹³¹	40	19 30	20 03	20 45	11 56	62	23 35 26			
18	90	03.3	-23	24.2	2	24.7 ¹⁵⁴	+5	54.0 ¹³¹	45	19 48	20 26	21 15	11 59	66	23 31 21			
19	105	03.0		24.1	16	59.2 ¹⁵⁵	+6	07.1 ¹³¹	50	20 11	20 55	22 01	12 03	70	25 17			
20	120	02.7		24.1	31	33.5 ¹⁵³		20.2 ¹³¹	52	22	21 10	22 29	05 72		22 15			
21	135	02.4		24.0	46	07.9 ¹⁵⁴		33.2 ¹³⁰	54	34	28	23 15	07 74		19 13			
22	150	02.1		23.9	60	42.1 ¹⁵²		46.3 ¹³¹	56	20 48	21 51	** ** *	09 77		16 11			
23	165	01.8		23.9	75	16.4 ¹⁵³	+6	59.3 ¹³⁰	58	21 05	22 20	** ** *	11 81		13 7			
24	180	01.5	-23	23.8	89	50.5 ¹⁵¹	+7	12.3 ¹³⁰	60 S	21 25	23 11	** ** *	12 14	84	23 09 4			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 17 ^h 46 ^m 5		Mag: -3.9 PMG: 11 ^h 40 ^m			Mag: -0.6 PMG: 3 ^h 21 ^m			Mag: -2.2 PMG: 15 ^h 37 ^m			Mag: +0.9 PMG: 6 ^h 08 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	92	39.4	185	04.5	-23	32.6	309	29.7	+18	10.8	125	15.3	-14	08.8	267	50.9	+0	22.2
1	107	41.9	200	03.6		32.8	324	32.3		11.0	140	17.3		08.7	282	53.3		22.2
2	122	44.3	215	02.6		32.9	339	34.8		11.1	155	19.3		08.5	297	55.6		22.1
3	137	46.8	230	01.6		33.1	354	37.4		11.2	170	21.3		08.3	312	58.0		22.1
4	152	49.2	245	00.7		33.2	9	39.9		11.4	185	23.3		08.2	328	00.4		22.1
5	167	51.7	259	59.7	-23	33.4	24	42.4	+18	11.5	200	25.3	-14	08.0	343	02.8	+0	22.1
6	182	54.2	274	58.7	-23	33.5	39	45.0	+18	11.7	215	27.3	-14	07.8	358	05.1	+0	22.0
7	197	56.6	289	57.8		33.7	54	47.5		11.8	230	29.3		07.7	13	07.5		22.0
8	212	59.1	304	56.8		33.8	69	50.1		11.9	245	31.3		07.5	28	09.9		22.0
9	228	01.6	319	55.8		33.9	84	52.7		12.1	260	33.3		07.4	43	12.3		22.0
10	243	04.0	334	54.9		34.1	99	55.2		12.2	275	35.3		07.2	58	14.6		21.9
11	258	06.5	349	53.9	-23	34.2	114	57.8	+18	12.4	290	37.3	-14	07.0	73	17.0	+0	21.9
12	273	09.0	4	52.9	-23	34.4	130	00.3	+18	12.5	305	39.3	-14	06.9	88	19.4	+0	21.9
13	288	11.4	19	52.0		34.5	145	02.9		12.6	320	41.4		06.7	103	21.8		21.9
14	303	13.9	34	51.0		34.6	160	05.4		12.8	335	43.4		06.5	118	24.1		21.8
15	318	16.3	49	50.0		34.8	175	08.0		12.9	350	45.4		06.4	133	26.5		21.8
16	333	18.8	64	49.1		34.9	190	10.6		13.1	5	47.4		06.2	148	28.9		21.8
17	348	21.3	79	48.1	-23	35.0	205	13.1	+18	13.2	20	49.4	-14	06.1	163	31.3	+0	21.8
18	3	23.7	94	47.1	-23	35.2	220	15.7	+18	13.4	35	51.4	-14	05.9	178	33.7	+0	21.7
19	18	26.2	109	46.1		35.3	235	18.3		13.5	50	53.4		05.7	193	36.0		21.7
20	33	28.7	124	45.2		35.4	250	20.8		13.7	65	55.4		05.6	208	38.4		21.7
21	48	31.1	139	44.2		35.6	265	23.4		13.8	80	57.4		05.4	223	40.8		21.7
22	63	33.6	154	43.2		35.7	280	26.0		14.0	95	59.4		05.2	238	43.2		21.6
23	78	36.1	169	42.3		35.8	295	28.6		14.1	111	01.4		05.1	253	45.5		21.6
24	93	38.5	184	41.3	-23	35.9	310	31.1	+18	14.2	126	03.4	-14	04.9	268	47.9	+0	21.6
Dif	—		-10		-1		+26		+1		+20		+2		+24		0	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'3 PMG: 12 ^h 00 ^m 1			Edad: 8 ^d 5 SD: 15'1 PMG: 18 ^h 33 ^m	PHE { 4 ^h : 55'6 12 ^h : 55'9 20 ^h : 56'1 R°: 47 ^m													
	hG ☉	Dec				hG ☾		Dif	Dec		Dif	Náutico	Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	h	m
0	180	01.5	-23	23.8	89	50.5	+7	12.3	60 N	7 09	8 06	9 03	11 13	5	0 53	86		
1	195	01.2		23.8	104	24.6 ¹⁵¹		25.3 ¹³⁰	58	7 01	7 54	8 46	18	9	49	82		
2	210	00.8		23.7	118	58.7 ¹⁵¹		38.3 ¹³⁰	56	6 55	44	31	23	12	45	79		
3	225	00.5		23.6	133	32.7 ¹⁵⁰	+7	51.3 ¹³⁰	54	49	35	19	27	15	42	76		
4	240	00.2		23.6	148	06.6 ¹⁴⁹	+8	04.2 ¹²⁹	52	43	27	8 08	31	17	39	74		
5	254	59.9	-23	23.5	162	40.5 ¹⁴⁹	+8	17.1 ¹²⁹	50	6 38	7 19	7 58	11 35	19	0 36	72		
6	269	59.6	-23	23.4	177	14.3 ¹⁴⁸	+8	30.0 ¹²⁹	45	6 26	7 03	7 37	11 42	24	0 30	67		
7	284	59.3		23.4	191	48.0 ¹⁴⁷		42.9 ¹²⁹	40	15	6 50	20	49	27	25	64		
8	299	59.0		23.3	206	21.7 ¹⁴⁷	+8	55.8 ¹²⁹	35	6 06	38	7 06	54	31	21	60		
9	314	58.7		23.2	220	55.3 ¹⁴⁶	+9	08.6 ¹²⁸	30	5 57	27	6 54	11 59	33	18	57		
10	329	58.4		23.1	235	28.8 ¹⁴⁵		21.5 ¹²⁹	20	41	6 08	32	12 08	38	11	52		
11	344	58.1	-23	23.1	250	02.3 ¹⁴⁵	+9	34.3 ¹²⁸	10 N	5 25	5 51	6 14	12 16	41	0 05	48		
12	359	57.8	-23	23.0	264	35.7 ¹⁴⁴	+9	47.0 ¹²⁷	0	5 08	5 34	5 56	12 23	45	0 00	44		
13	14	57.4		22.9	279	09.0 ¹⁴³	+9	59.8 ¹²⁸	10 S	4 49	5 16	39	30	50	*** ** *			
14	29	57.1		22.8	293	42.3 ¹⁴³	+10	12.5 ¹²⁷	20	4 26	4 55	5 20	38	54	*** ** *			
15	44	56.8		22.8	308	15.5 ¹⁴²		25.2 ¹²⁷	30	3 57	30	4 58	47	58	*** ** *			
16	59	56.5		22.7	322	48.6 ¹⁴¹		37.9 ¹²⁷	35	38	4 15	45	52	62	*** ** *			
17	74	56.2	-23	22.6	337	21.6 ¹⁴⁰	+10	50.5 ¹²⁶	40	3 15	3 57	4 30	12 58	65	*** ** *			
18	89	55.9	-23	22.5	351	54.6 ¹⁴⁰	+11	03.1 ¹²⁶	45	2 45	3 34	4 12	13 05	69	23 52	25		
19	104	55.6		22.5	6	27.5 ¹³⁹		15.6 ¹²⁵	50	1 59	3 05	3 49	13	74	42	21		
20	119	55.3		22.4	21	00.3 ¹³⁸		28.2 ¹²⁶	52	1 31	2 49	38	17	76	37	19		
21	134	55.0		22.3	35	33.0 ¹³⁷		40.7 ¹²⁵	54	0 45	32	26	21	79	32	16		
22	149	54.7		22.2	50	05.6 ¹³⁶	+11	53.1 ¹²⁴	56	** ** *	2 09	3 12	26	82	27	13		
23	164	54.4		22.1	64	38.2 ¹³⁶	+12	05.6 ¹²⁵	58	** ** *	1 39	2 55	32	84	20	11		
24	179	54.0	-23	22.0	79	10.7 ¹³⁵	+12	17.9 ¹²³	60 S	** ** *	0 49	2 35	13 38	88	23 13	7		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 17 ^h 42 ^m 5		Mag: -3.9 PMG: 11 ^h 42 ^m			Mag: -0.6 PMG: 3 ^h 17 ^m			Mag: -2.2 PMG: 15 ^h 34 ^m			Mag: +0.9 PMG: 6 ^h 04 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	93	38.5	184	41.3	-23	35.9	310	31.1	+18	14.2	126	03.4	-14	04.9	268	47.9	+0	21.6
1	108	41.0	199	40.3		36.0	325	33.7		14.4	141	05.4		04.8	283	50.3		21.6
2	123	43.5	214	39.4		36.2	340	36.3		14.5	156	07.4		04.6	298	52.7		21.5
3	138	45.9	229	38.4		36.3	355	38.9		14.7	171	09.4		04.4	313	55.1		21.5
4	153	48.4	244	37.4		36.4	10	41.4		14.8	186	11.4		04.3	328	57.4		21.5
5	168	50.8	259	36.5	-23	36.5	25	44.0	+18	15.0	201	13.3	-14	04.1	343	59.8	+0	21.5
6	183	53.3	274	35.5	-23	36.6	40	46.6	+18	15.1	216	15.3	-14	03.9	359	02.2	+0	21.4
7	198	55.8	289	34.5		36.8	55	49.2		15.3	231	17.3		03.8	14	04.6		21.4
8	213	58.2	304	33.6		36.9	70	51.8		15.4	246	19.3		03.6	29	07.0		21.4
9	229	00.7	319	32.6		37.0	85	54.4		15.6	261	21.3		03.4	44	09.3		21.4
10	244	03.2	334	31.6		37.1	100	57.0		15.8	276	23.3		03.3	59	11.7		21.3
11	259	05.6	349	30.6	-23	37.2	115	59.6	+18	15.9	291	25.3	-14	03.1	74	14.1	+0	21.3
12	274	08.1	4	29.7	-23	37.3	131	02.1	+18	16.1	306	27.3	-14	03.0	89	16.5	+0	21.3
13	289	10.6	19	28.7		37.4	146	04.7		16.2	321	29.3		02.8	104	18.9		21.3
14	304	13.0	34	27.7		37.5	161	07.3		16.4	336	31.3		02.6	119	21.2		21.3
15	319	15.5	49	26.8		37.6	176	09.9		16.5	351	33.3		02.5	134	23.6		21.2
16	334	18.0	64	25.8		37.7	191	12.5		16.7	6	35.3		02.3	149	26.0		21.2
17	349	20.4	79	24.8	-23	37.8	206	15.1	+18	16.8	21	37.3	-14	02.1	164	28.4	+0	21.2
18	4	22.9	94	23.9	-23	37.9	221	17.7	+18	17.0	36	39.3	-14	02.0	179	30.8	+0	21.2
19	19	25.3	109	22.9		38.0	236	20.3		17.1	51	41.3		01.8	194	33.2		21.1
20	34	27.8	124	21.9		38.1	251	22.9		17.3	66	43.3		01.6	209	35.5		21.1
21	49	30.3	139	21.0		38.2	266	25.5		17.5	81	45.3		01.5	224	37.9		21.1
22	64	32.7	154	20.0		38.3	281	28.1		17.6	96	47.3		01.3	239	40.3		21.1
23	79	35.2	169	19.0		38.4	296	30.8		17.8	111	49.3		01.1	254	42.7		21.0
24	94	37.7	184	18.0	-23	38.5	311	33.4	+18	17.9	126	51.3	-14	01.0	269	45.1	+0	21.0
Dif	—		-10		-1		+26		+2		+20		+2		+24			

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16:3 PMG: 12 ^h 00 ^m 6			Edad: 9 ^d 5 PHE { SD: 15:3 PMG: 19 ^h 20 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	Rº	Hora	Rº			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m	h	m	m
0	179	54.0	-23	22.0	79	10.7	+12	17.9	60 N	14 58	15 55	16 52	11 18	9		2 19	91	
1	194	53.7		22.0	93	43.0 ¹³³		30.3 ¹²⁴	58	15 15	16 07	17 00	27	13		11	87	
2	209	53.4		21.9	108	15.3 ¹³³		42.6 ¹²³	56	30	17	06	35	16		2 04	84	
3	224	53.1		21.8	122	47.6 ¹³³	+12	54.9 ¹²³	54	43	26	13	42	19		1 58	80	
4	239	52.8		21.7	137	19.7 ¹³¹	+13	07.1 ¹²²	52	15 54	35	18	48	21		53	77	
5	254	52.5	-23	21.6	151	51.7 ¹³⁰	+13	19.3 ¹²²	50	16 03	16 42	17 23	11 54	23		1 48	75	
6	269	52.2	-23	21.5	166	23.7 ¹³⁰	+13	31.4 ¹²¹	45	16 24	16 58	17 35	12 06	28		1 37	71	
7	284	51.9		21.4	180	55.5 ¹²⁸		43.5 ¹²¹	40	41	17 11	46	16	32		29	66	
8	299	51.6		21.4	195	27.3 ¹²⁸	+13	55.5 ¹²⁰	35	16 55	23	17 55	25	35		21	63	
9	314	51.3		21.3	209	58.9 ¹²⁶	+14	07.5 ¹²⁰	30	17 07	34	18 04	32	38		15	60	
10	329	51.0		21.2	224	30.5 ¹²⁶		19.5 ¹²⁰	20	29	17 53	20	46	42		1 03	56	
11	344	50.7	-23	21.1	239	02.0 ¹²⁵	+14	31.4 ¹¹⁹	10 N	17 47	18 10	18 36	12 57	47		0 53	52	
12	359	50.3	-23	21.0	253	33.3 ¹²³	+14	43.2 ¹¹⁸	0	18 04	18 27	18 53	13 08	50		0 44	48	
13	14	50.0		20.9	268	04.6 ¹²³	+14	55.0 ¹¹⁸	10 S	22	18 45	19 12	20	53		35	44	
14	29	49.7		20.8	282	35.8 ¹²²	+15	06.7 ¹¹⁷	20	18 41	19 05	19 35	32	57		25	40	
15	44	49.4		20.7	297	06.9 ¹²¹		18.4 ¹¹⁷	30	19 03	30	20 04	45	63		14	35	
16	59	49.1		20.6	311	37.9 ¹²⁰		30.0 ¹¹⁶	35	16	19 45	22	13 54	65		08	32	
17	74	48.8	-23	20.5	326	08.7 ¹¹⁸	+15	41.6 ¹¹⁶	40	19 31	20 04	20 45	14 03	68		0 00	30	
18	89	48.5	-23	20.4	340	39.5 ¹¹⁸	+15	53.1 ¹¹⁵	45	19 49	20 26	21 16	14 14	72		** ** *	** *	
19	104	48.2		20.3	355	10.2 ¹¹⁷	+16	04.6 ¹¹⁵	50	20 11	20 56	22 01	27	77		** ** *	** *	
20	119	47.9		20.2	9	40.7 ¹¹⁵		15.9 ¹¹³	52	22	21 11	22 28	33	80		23 56	25	
21	134	47.6		20.1	24	11.2 ¹¹⁵		27.2 ¹¹³	54	34	29	23 14	40	82		48	22	
22	149	47.3		20.0	38	41.5 ¹¹³		38.5 ¹¹³	56	20 48	21 51	** ** *	48	85		40	19	
23	164	47.0		19.9	53	11.8 ¹¹³	+16	49.7 ¹¹²	58	21 05	22 20	** ** *	14 56	90		31	15	
24	179	46.7	-23	19.8	67	41.9 ¹¹¹	+17	00.8 ¹¹¹	60 S	21 25	23 09	** ** *	15 06	94		23 20	10	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 17 ^h 38 ^m 6		Mag: -3.9 PMG: 11 ^h 44 ^m			Mag: -0.6 PMG: 3 ^h 13 ^m			Mag: -2.2 PMG: 15 ^h 31 ^m			Mag: +0.9 PMG: 6 ^h 00 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♏	Dec		hG ♎	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	94	37.7	184	18.0	-23	38.5	311	33.4	+18	17.9	126	51.3	-14	01.0	269	45.1	+0	21.0
1	109	40.1	199	17.1		38.6	326	36.0		18.1	141	53.3		00.8	284	47.4		21.0
2	124	42.6	214	16.1		38.7	341	38.6		18.2	156	55.3		00.6	299	49.8		21.0
3	139	45.1	229	15.1		38.8	356	41.2		18.4	171	57.3		00.5	314	52.2		21.0
4	154	47.5	244	14.2		38.9	11	43.8		18.6	186	59.3		00.3	329	54.6		20.9
5	169	50.0	259	13.2	-23	38.9	26	46.4	+18	18.7	202	01.3	-14	00.2	344	57.0	+0	20.9
6	184	52.4	274	12.2	-23	39.0	41	49.0	+18	18.9	217	03.3	-14	00.0	359	59.4	+0	20.9
7	199	54.9	289	11.2		39.1	56	51.7		19.0	232	05.3	-13	59.8	15	01.7		20.9
8	214	57.4	304	10.3		39.2	71	54.3		19.2	247	07.3		59.7	30	04.1		20.8
9	229	59.8	319	09.3		39.3	86	56.9		19.4	262	09.3		59.5	45	06.5		20.8
10	245	02.3	334	08.3		39.4	101	59.5		19.5	277	11.3		59.3	60	08.9		20.8
11	260	04.8	349	07.4	-23	39.4	117	02.2	+18	19.7	292	13.2	-13	59.2	75	11.3	+0	20.8
12	275	07.2	4	06.4	-23	39.5	132	04.8	+18	19.9	307	15.2	-13	59.0	90	13.7	+0	20.8
13	290	09.7	19	05.4		39.6	147	07.4		20.0	322	17.2		58.8	105	16.1		20.7
14	305	12.2	34	04.4		39.7	162	10.0		20.2	337	19.2		58.7	120	18.4		20.7
15	320	14.6	49	03.5		39.7	177	12.7		20.3	352	21.2		58.5	135	20.8		20.7
16	335	17.1	64	02.5		39.8	192	15.3		20.5	7	23.2		58.3	150	23.2		20.7
17	350	19.6	79	01.5	-23	39.9	207	17.9	+18	20.7	22	25.2	-13	58.2	165	25.6	+0	20.7
18	5	22.0	94	00.6	-23	39.9	222	20.6	+18	20.8	37	27.2	-13	58.0	180	28.0	+0	20.6
19	20	24.5	108	59.6		40.0	237	23.2		21.0	52	29.2		57.8	195	30.4		20.6
20	35	26.9	123	58.6		40.1	252	25.8		21.2	67	31.2		57.7	210	32.7		20.6
21	50	29.4	138	57.6		40.1	267	28.5		21.3	82	33.2		57.5	225	35.1		20.6
22	65	31.9	153	56.7		40.2	282	31.1		21.5	97	35.2		57.3	240	37.5		20.5
23	80	34.3	168	55.7		40.3	297	33.8		21.7	112	37.2		57.2	255	39.9		20.5
24	95	36.8	183	54.7	-23	40.3	312	36.4	+18	21.9	127	39.2	-13	57.0	270	42.3	+0	20.5
Dif	—		-10		-1		+26		+2		+20		+2		+24		0	

UT	SOL			O LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16:3			Edad: 10 ^d 5 PHE { 4 ^h : 57/3 12 ^h : 57/6 20 ^h : 57/9 R°: 56 ^m													
	PMG: 12 ^h 01 ^m 1			SD: 15:6 PMG: 20 ^h 11 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	179	46.7	-23	19.8	67	41.9	+17	00.8	60 N	7	09	8	06	9	04	11	27
1	194	46.3		19.7	82	11.9		11.8	58	7	02	7	54	8	46	40	19
2	209	46.0		19.6	96	41.8		22.8	56	6	55	44	32	11	51	23	28
3	224	45.7		19.5	111	11.6		33.7	54	49	35	19	12	01	26	18	83
4	239	45.4		19.4	125	41.3		44.5	52	43	27	8	08	09	30	10	81
5	254	45.1	-23	19.3	140	10.9	+17	55.3	50	6	38	7	20	7	58	12	17
6	269	44.8	-23	19.2	154	40.3	+18	06.0	45	6	26	7	04	7	38	12	34
7	284	44.5		19.1	169	09.7		16.6	40	16	6	50	21	12	48	39	35
8	299	44.2		19.0	183	38.9		27.1	35	6	07	39	7	07	13	00	42
9	314	43.9		18.9	198	08.0		37.5	30	5	58	28	6	54	10	45	2
10	329	43.6		18.7	212	37.0		47.9	20	42	6	09	33	28	48	1	59
11	344	43.3	-23	18.6	227	05.9	+18	58.1	10 N	5	26	5	52	6	15	13	44
12	359	43.0	-23	18.5	241	34.7	+19	08.3	0	5	09	5	35	5	57	13	58
13	14	42.7		18.4	256	03.3		18.4	10 S	4	50	5	17	40	14	13	
14	29	42.4		18.3	270	31.8		28.4	20	4	27	4	56	5	21	29	62
15	44	42.1		18.2	285	00.2		38.3	30	3	58	32	4	59	48	65	0
16	59	41.7		18.1	299	28.5		48.1	35	40	4	16	46	14	59	67	40
17	74	41.4	-23	17.9	313	56.7	+19	57.8	40	3	17	3	58	4	31	15	11
18	89	41.1	-23	17.8	328	24.7	+20	07.5	45	2	46	3	36	4	13	15	26
19	104	40.8		17.7	342	52.7		17.0	50	2	01	3	06	3	51	44	78
20	119	40.5		17.6	357	20.5		26.4	52	1	33	2	51	40	15	53	80
21	134	40.2		17.5	11	48.1		35.7	54	0	48	33	28	16	02	84	**
22	149	39.9		17.3	26	15.7		45.0	56	**	**	2	11	3	13	13	87
23	164	39.6		17.2	40	43.1	+20	54.1	58	**	**	1	42	2	57	26	91
24	179	39.3	-23	17.1	55	10.5	+21	03.1	60 S	**	**	0	53	2	36	16	40

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 17 ^h 34 ^m 7		Mag: -4.0 PMG: 11 ^h 45 ^m			Mag: -0.7 PMG: 3 ^h 09 ^m			Mag: -2.2 PMG: 15 ^h 27 ^m			Mag: +0.9 PMG: 5 ^h 56 ^m					
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'			
0	95	36.8	183	54.7	-23	40.3	312	36.4	+18	21.9	127	39.2	-13	57.0	270	42.3	
1	110	39.3	198	53.8		40.4	327	39.0		22.0	142	41.2		56.8	285	44.7	
2	125	41.7	213	52.8		40.5	342	41.7		22.2	157	43.1		56.7	300	47.1	
3	140	44.2	228	51.8		40.5	357	44.3		22.4	172	45.1		56.5	315	49.5	
4	155	46.7	243	50.8		40.6	12	47.0		22.5	187	47.1		56.3	330	51.8	
5	170	49.1	258	49.9	-23	40.6	27	49.6	+18	22.7	202	49.1	-13	56.2	345	54.2	
6	185	51.6	273	48.9	-23	40.7	42	52.3	+18	22.9	217	51.1	-13	56.0	0	56.6	
7	200	54.1	288	47.9		40.7	57	54.9		23.0	232	53.1		55.8	15	59.0	
8	215	56.5	303	46.9		40.8	72	57.6		23.2	247	55.1		55.7	31	01.4	
9	230	59.0	318	46.0		40.8	88	00.2		23.4	262	57.1		55.5	46	03.8	
10	246	01.4	333	45.0		40.9	103	02.9		23.6	277	59.1		55.3	61	06.2	
11	261	03.9	348	44.0	-23	40.9	118	05.6	+18	23.7	293	01.1	-13	55.2	76	08.6	
12	276	06.4	3	43.1	-23	41.0	133	08.2	+18	23.9	308	03.1	-13	55.0	91	10.9	
13	291	08.8	18	42.1		41.0	148	10.9		24.1	323	05.0		54.8	106	13.3	
14	306	11.3	33	41.1		41.1	163	13.6		24.3	338	07.0		54.7	121	15.7	
15	321	13.8	48	40.1		41.1	178	16.2		24.4	353	09.0		54.5	136	18.1	
16	336	16.2	63	39.2		41.2	193	18.9		24.6	8	11.0		54.3	151	20.5	
17	351	18.7	78	38.2	-23	41.2	208	21.5	+18	24.8	23	13.0	-13	54.2	166	22.9	
18	6	21.2	93	37.2	-23	41.2	223	24.2	+18	25.0	38	15.0	-13	54.0	181	25.3	
19	21	23.6	108	36.3		41.3	238	26.9		25.1	53	17.0		53.8	196	27.7	
20	36	26.1	123	35.3		41.3	253	29.6		25.3	68	19.0		53.7	211	30.1	
21	51	28.6	138	34.3		41.3	268	32.2		25.5	83	21.0		53.5	226	32.5	
22	66	31.0	153	33.3		41.4	283	34.9		25.7	98	23.0		53.3	241	34.8	
23	81	33.5	168	32.4		41.4	298	37.6		25.8	113	24.9		53.1	256	37.2	
24	96	35.9	183	31.4	-23	41.4	313	40.3	+18	26.0	128	26.9	-13	53.0	271	39.6	
Dif	—		-10			0	+27		+2		+20		+2		+24		

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16:3			Edad: 11 ^d 5	PHE {	4 ^h : 58:3 12 ^h : 58:6 20 ^h : 58:9			Final del crepúsculo			Salida de Luna		Puesta de Luna		
	PMG: 12 ^h 01 ^m 6								PMG: 21 ^h 07 ^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	
0	179	39.3	-23	17.1	55	10.5	+21	03.1	60 N	15 00	15 57	16 54	11 42	27	5 25	94
1	194	39.0		17.0	69	37.6	81	12.0	58	17	16 09	17 01	11 59	33	5 08	89
2	209	38.7		16.9	84	04.7	81	20.8	56	32	19	08	12 14	37	4 54	85
3	224	38.4		16.7	98	31.7	80	29.5	54	44	28	14	27	40	41	82
4	239	38.1		16.6	112	58.5	78	38.1	52	15 55	36	20	39	41	31	79
5	254	37.8	-23	16.5	127	25.2	77	+21 46.5	50	16 05	16 43	17 25	12 49	43	4 21	77
6	269	37.5	-23	16.4	141	51.8	76	+21 54.9	45	16 26	16 59	17 37	13 10	47	4 01	73
7	284	37.2		16.2	156	18.2	74	+22 03.1	40	42	17 13	47	27	50	3 44	71
8	299	36.9		16.1	170	44.6	74	11.2	35	16 56	24	17 56	42	51	31	68
9	314	36.6		16.0	185	10.8	72	19.2	30	17 09	35	18 05	13 55	53	3 19	66
10	329	36.3		15.8	199	36.9	71	27.0	20	30	17 54	21	14 16	56	2 58	63
11	344	35.9	-23	15.7	214	02.9	70	+22 34.8	10 N	17 48	18 11	18 37	14 35	58	2 40	60
12	359	35.6	-23	15.6	228	28.7	68	+22 42.4	0	18 05	18 28	18 54	14 53	60	2 24	57
13	14	35.3		15.4	242	54.5	68	49.9	10 S	23	18 46	19 13	15 11	62	2 08	54
14	29	35.0		15.3	257	20.1	66	+22 57.2	20	18 42	19 06	19 35	31	64	1 50	52
15	44	34.7		15.2	271	45.6	65	+23 04.4	30	19 04	31	20 04	15 53	67	30	48
16	59	34.4		15.0	286	11.0	64	11.5	35	16	19 46	23	16 06	68	18	47
17	74	34.1	-23	14.9	300	36.2	62	+23 18.4	40	19 31	20 04	20 46	16 21	70	1 05	44
18	89	33.8	-23	14.8	315	01.4	62	+23 25.3	45	19 49	20 27	21 16	16 40	72	0 49	41
19	104	33.5		14.6	329	26.4	60	31.9	50	20 12	20 56	22 01	17 02	76	30	36
20	119	33.2		14.5	343	51.3	59	38.5	52	22	21 11	22 28	13	77	21	34
21	134	32.9		14.4	358	16.1	58	44.8	54	34	29	23 11	26	79	0 10	32
22	149	32.6		14.2	12	40.8	57	51.1	56	20 49	21 50	** ** *	40	82	** ** *	**
23	164	32.3		14.1	27	05.4	56	+23 57.2	58	21 05	22 19	** ** *	17 57	85	** ** *	**
24	179	32.0	-23	13.9	41	29.8	54	+24 03.1	60 S	21 25	23 07	** ** *	18 17	90	23 49	37

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 17 ^h 30 ^m 7		Mag: -4.0 PMG: 11 ^h 47 ^m		Mag: -0.7 PMG: 3 ^h 05 ^m		Mag: -2.2 PMG: 15 ^h 24 ^m		Mag: +0.9 PMG: 5 ^h 52 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	96	35.9	183	31.4	-23	41.4	313	40.3	+18	26.0
1	111	38.4	198	30.4		41.5	328	42.9		26.2
2	126	40.9	213	29.4		41.5	343	45.6		26.4
3	141	43.3	228	28.5		41.5	358	48.3		26.6
4	156	45.8	243	27.5		41.6	13	51.0		26.7
5	171	48.3	258	26.5	-23	41.6	28	53.7	+18	26.9
6	186	50.7	273	25.5	-23	41.6	43	56.4	+18	27.1
7	201	53.2	288	24.6		41.6	58	59.0		27.3
8	216	55.7	303	23.6		41.6	74	01.7		27.5
9	231	58.1	318	22.6		41.7	89	04.4		27.7
10	247	00.6	333	21.7		41.7	104	07.1		27.8
11	262	03.0	348	20.7	-23	41.7	119	09.8	+18	28.0
12	277	05.5	3	19.7	-23	41.7	134	12.5	+18	28.2
13	292	08.0	18	18.7		41.7	149	15.2		28.4
14	307	10.4	33	17.8		41.7	164	17.9		28.6
15	322	12.9	48	16.8		41.8	179	20.6		28.8
16	337	15.4	63	15.8		41.8	194	23.3		28.9
17	352	17.8	78	14.8	-23	41.8	209	26.0	+18	29.1
18	7	20.3	93	13.9	-23	41.8	224	28.7	+18	29.3
19	22	22.8	108	12.9		41.8	239	31.4		29.5
20	37	25.2	123	11.9		41.8	254	34.1		29.7
21	52	27.7	138	11.0		41.8	269	36.8		29.9
22	67	30.2	153	10.0		41.8	284	39.5		30.1
23	82	32.6	168	09.0		41.8	299	42.2		30.3
24	97	35.1	183	08.0	-23	41.8	314	44.9	+18	30.4
Dif	—		-10		0		+27		+2	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'3 PMG: 12 ^h 02 ^m 1			Edad: 12 ^d 5 PHE { SD: 16'1 PMG: 22 ^h 08 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m
0	179	32.0	-23	13.9	41	29.8	+24	03.1	60 N	7 10	8 06	9 03	12 09	53
1	194	31.7		13.8	55	54.2		08.9	58	7 02	7 55	8 46	32 55	37 76
2	209	31.4		13.6	70	18.4		14.6	57	6 56	45	32	12 51	56
3	224	31.1		13.5	84	42.5		20.1	55	49	36	19	13 07	57
4	239	30.8		13.4	99	06.6		25.4	53	44	27	8 08	20 58	5 50
5	254	30.5	-23	13.2	113	30.5	+24	30.6	52	6 39	7 20	7 58	13 32	59
6	269	30.2	-23	13.1	127	54.3	+24	35.7	51	6 27	7 04	7 38	13 57	60
7	284	29.9		12.9	142	18.0		40.5	48	17	6 51	21	14 17	60
8	299	29.6		12.8	156	41.6		45.3	48	6 08	39	7 07	33 62	39 66
9	314	29.3		12.6	171	05.1		49.8	45	5 59	29	6 55	14 48	61
10	329	29.0		12.5	185	28.6		54.2	44	43	6 10	34	15 12	63
11	344	28.7	-23	12.3	199	51.9	+24	58.4	42	5 27	5 53	6 16	15 33	63
12	359	28.4	-23	12.2	214	15.1	+25	02.5	41	5 10	5 36	5 58	15 53	64
13	14	28.1		12.0	228	38.2		06.4	39	4 51	5 18	41	16 13	64
14	29	27.8		11.9	243	01.3		10.1	37	20	28	4 58	16 35	64
15	44	27.5		11.7	257	24.2		13.7	36	30	4 00	33	5 00	64
16	59	27.2		11.6	271	47.1		17.1	34	35	3 41	18	4 47	64
17	74	26.9	-23	11.4	286	09.9	+25	20.3	32	40	3 18	4 00	4 32	66
18	89	26.6	-23	11.2	300	32.6	+25	23.3	30	45	2 48	3 37	4 15	65
19	104	26.3		11.1	314	55.2		26.2	29	50	2 03	3 08	3 52	65
20	119	26.0		10.9	329	17.7		28.9	27	52	1 36	2 53	42	66
21	134	25.7		10.8	343	40.2		31.4	25	54	0 53	35	29	66
22	149	25.4		10.6	358	02.5		33.7	23	56	** ** *	2 13	3 15	65
23	164	25.1		10.5	12	24.9		35.8	21	58	** ** *	1 44	2 59	66
24	179	24.8	-23	10.3	26	47.1	+25	37.8	20	60 S	** ** *	0 57	2 39	66

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 17 ^h 26 ^m 8		Mag: -4.0 PMG: 11 ^h 48 ^m		Mag: -0.7 PMG: 3 ^h 00 ^m		Mag: -2.2 PMG: 15 ^h 21 ^m		Mag: +0.9 PMG: 5 ^h 49 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	97	35.1	183	08.0	314	44.9	129	14.6	272	37.0
1	112	37.5	198	07.1	329	47.7	144	16.6	287	39.4
2	127	40.0	213	06.1	344	50.4	159	18.6	302	41.8
3	142	42.5	228	05.1	359	53.1	174	20.6	317	44.2
4	157	44.9	243	04.1	14	55.8	189	22.6	332	46.6
5	172	47.4	258	03.2	29	58.5	204	24.6	347	49.0
6	187	49.9	273	02.2	45	01.2	219	26.5	2	51.4
7	202	52.3	288	01.2	60	04.0	234	28.5	17	53.8
8	217	54.8	303	00.3	75	06.7	249	30.5	32	56.2
9	232	57.3	317	59.3	90	09.4	264	32.5	47	58.6
10	247	59.7	332	58.3	105	12.1	279	34.5	63	01.0
11	263	02.2	347	57.3	120	14.9	294	36.5	78	03.4
12	278	04.7	2	56.4	135	17.6	309	38.4	93	05.8
13	293	07.1	17	55.4	150	20.3	324	40.4	108	08.2
14	308	09.6	32	54.4	165	23.1	339	42.4	123	10.6
15	323	12.0	47	53.4	180	25.8	354	44.4	138	13.0
16	338	14.5	62	52.5	195	28.5	9	46.4	153	15.4
17	353	17.0	77	51.5	210	31.3	24	48.4	168	17.8
18	8	19.4	92	50.5	225	34.0	39	50.3	183	20.2
19	23	21.9	107	49.5	240	36.7	54	52.3	198	22.6
20	38	24.4	122	48.6	255	39.5	69	54.3	213	25.0
21	53	26.8	137	47.6	270	42.2	84	56.3	228	27.4
22	68	29.3	152	46.6	285	45.0	99	58.3	243	29.8
23	83	31.8	167	45.7	300	47.7	115	00.3	258	32.2
24	98	34.2	182	44.7	315	50.4	130	02.2	273	34.6
Dif	—		-10		0		+20		+2	
					+27		+2		0	

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16'3 PMG: 12 ^h 02 ^m 6			Edad: 13 ^d 5 PHE { 4 ^h : 60'0 12 ^h : 60'3 20 ^h : 60'5 R°: 64 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m	
0	179	24.8	-23	10.3	26	47.1	+25	37.8	60 N	15 02	15 59	16 56	13 02 83	8 18 52	
1	194	24.5		10.1	41	09.3		39.6	58	19	16 11	17 03	27 80	7 53 54	
2	209	24.1		10.0	55	31.4		41.2	56	34	21	10	13 47 78	33 56	
3	224	23.8		09.8	69	53.4		42.6	54	46	30	16	14 04 77	16 58	
4	239	23.5		09.6	84	15.4		43.9	52	15 57	38	21	18 76	7 02 58	
5	254	23.2	-23	09.5	98	37.4	+25	44.9	50	16 07	16 45	17 27	14 31 74	6 49 59	
6	269	22.9	-23	09.3	112	59.2	+25	45.8	45	16 27	17 01	17 38	14 57 72	6 23 61	
7	284	22.6		09.1	127	21.0		46.5	40	44	14	48	15 17 72	6 03 61	
8	299	22.3		09.0	141	42.8		47.0	35	16 58	26	17 57	35 70	5 45 62	
9	314	22.0		08.8	156	04.5		47.3	30	17 10	36	18 06	15 49 69	31 62	
10	329	21.7		08.6	170	26.2		47.4	20	31	17 55	22	16 15 67	5 05 64	
11	344	21.5	-23	08.5	184	47.9	+25	47.3	10 N	17 49	18 12	18 38	16 36 66	4 44 63	
12	359	21.2	-23	08.3	199	09.5	+25	47.0	0	18 06	18 29	18 55	16 57 64	4 23 65	
13	14	20.9		08.1	213	31.0		46.6	10 S	24	18 47	19 14	17 17 63	4 03 65	
14	29	20.6		08.0	227	52.6		45.9	20	18 42	19 07	19 36	17 39 61	3 41 65	
15	44	20.3		07.8	242	14.1		45.1	30	19 04	32	20 05	18 04 60	16 65	
16	59	20.0		07.6	256	35.5		44.1	35	17	19 47	23	19 58	3 01 66	
17	74	19.7	-23	07.4	270	57.0	+25	42.8	40	19 32	20 04	20 46	18 37 56	2 43 67	
18	89	19.4	-23	07.3	285	18.4	+25	41.4	45	19 50	20 27	21 16	18 57 55	2 23 66	
19	104	19.1		07.1	299	39.8		39.8	50	20 12	20 56	22 00	19 23 52	1 57 66	
20	119	18.8		06.9	314	01.2		38.0	52	22	21 11	22 27	36 50	44 67	
21	134	18.5		06.7	328	22.6		36.0	54	34	28	23 08	19 51 48	29 67	
22	149	18.2		06.6	342	43.9		33.8	56	20 48	21 50	** **	20 07 46	1 12 68	
23	164	17.9		06.4	357	05.3		31.4	58	21 05	22 18	** **	28 42	0 52 68	
24	179	17.6	-23	06.2	11	26.6	+25	28.8	60 S	21 24	23 03	** **	20 53 38	0 26 68	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 17 ^h 22 ^m 9		Mag: -4.0 PMG: 11 ^h 50 ^m			Mag: -0.7 PMG: 2 ^h 56 ^m			Mag: -2.2 PMG: 15 ^h 18 ^m			Mag: +0.9 PMG: 5 ^h 45 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	98	34.2	182	44.7	-23	41.4	315	50.4	+18	35.1	130	02.2	-13	44.8	
1	113	36.7	197	43.7		41.4	330	53.2		35.3	145	04.2		44.7	
2	128	39.2	212	42.7		41.4	345	55.9		35.5	160	06.2		44.5	
3	143	41.6	227	41.8		41.4	0	58.7		35.7	175	08.2		44.3	
4	158	44.1	242	40.8		41.3	16	01.4		35.9	190	10.2		44.1	
5	173	46.5	257	39.8	-23	41.3	31	04.2	+18	36.1	205	12.1	-13	44.0	
6	188	49.0	272	38.9	-23	41.2	46	07.0	+18	36.3	220	14.1	-13	43.8	
7	203	51.5	287	37.9		41.2	61	09.7		36.5	235	16.1		43.6	
8	218	53.9	302	36.9		41.2	76	12.5		36.7	250	18.1		43.5	
9	233	56.4	317	35.9		41.1	91	15.2		36.9	265	20.1		43.3	
10	248	58.9	332	35.0		41.1	106	18.0		37.1	280	22.1		43.1	
11	264	01.3	347	34.0	-23	41.0	121	20.7	+18	37.3	295	24.0	-13	42.9	
12	279	03.8	2	33.0	-23	41.0	136	23.5	+18	37.5	310	26.0	-13	42.8	
13	294	06.3	17	32.0		40.9	151	26.3		37.7	325	28.0		42.6	
14	309	08.7	32	31.1		40.9	166	29.0		37.9	340	30.0		42.4	
15	324	11.2	47	30.1		40.9	181	31.8		38.1	355	32.0		42.3	
16	339	13.7	62	29.1		40.8	196	34.6		38.3	10	33.9		42.1	
17	354	16.1	77	28.2	-23	40.7	211	37.4	+18	38.6	25	35.9	-13	41.9	
18	9	18.6	92	27.2	-23	40.7	226	40.1	+18	38.8	40	37.9	-13	41.7	
19	24	21.0	107	26.2		40.6	241	42.9		39.0	55	39.9		41.6	
20	39	23.5	122	25.2		40.6	256	45.7		39.2	70	41.9		41.4	
21	54	26.0	137	24.3		40.5	271	48.4		39.4	85	43.8		41.2	
22	69	28.4	152	23.3		40.5	286	51.2		39.6	100	45.8		41.1	
23	84	30.9	167	22.3		40.4	301	54.0		39.8	115	47.8		40.9	
24	99	33.4	182	21.4	-23	40.4	316	56.8	+18	40.0	130	49.8	-13	40.7	
Dif	—		-10			0	+28			+2	+20			+2	+24
															0

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna					
	SD: 16'3 PMG: 12 ^h 03 ^m 1			Edad: 14 ^d 5 PHE { 4 ^h : 60'7 12 ^h : 60'8 20 ^h : 61'0 R°: ***																	
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Náutico	Civil		Hora	R°	Hora	R°					
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m			
0	179	17.6	-23	06.2	11	26.6	+25	28.8	60 N	7 09	8 06	9 03	14 25	104	9 10	28					
1	194	17.3		06.0	25	48.0	24	26.1	58	7 02	7 54	8 46	14 47	98	8 47	34					
2	209	17.0		05.8	40	09.3	23	23.1	56	6 56	44	31	15 05	94	29	38					
3	224	16.7		05.7	54	30.7	24	19.9	54	50	36	19	21 90		14	40					
4	239	16.4		05.5	68	52.0	23	16.6	52	44	28	8 08	34 87		8 00	43					
5	254	16.1	-23	05.3	83	13.4	24	+25 13.1	50	6 39	7 20	7 59	15 45	86	7 48	45					
6	269	15.8	-23	05.1	97	34.8	24	+25 09.3	45	6 27	7 05	7 38	16 09	81	7 24	49					
7	284	15.5		04.9	111	56.2	24	05.4	40	17	6 51	22	29 77		7 04	52					
8	299	15.2		04.7	126	17.6	24	+25 01.3	35	08	40	7 08	45 74		6 47	54					
9	314	14.9		04.5	140	39.0	24	+24 57.0	30	6 00	29	6 56	16 58	73	33	56					
10	329	14.6		04.4	155	00.5	25	52.5	20	5 43	6 11	35	17 22	69	6 09	59					
11	344	14.3	-23	04.2	169	21.9	24	+24 47.8	10 N	5 27	5 54	6 17	17 42	66	5 47	62					
12	359	14.0	-23	04.0	183	43.4	25	+24 42.9	0	5 11	5 37	5 59	18 01	63	5 28	63					
13	14	13.7		03.8	198	05.0	26	37.8	10 S	4 52	5 19	42	20 60		5 08	66					
14	29	13.4		03.6	212	26.5	25	32.6	20	30	4 59	23	18 40	57	4 46	69					
15	44	13.1		03.4	226	48.1	26	27.2	30	4 01	34	5 02	19 04	52	21	72					
16	59	12.8		03.2	241	09.8	27	21.5	35	3 43	19	4 49	17 50		4 07	73					
17	74	12.5	-23	03.0	255	31.5	27	+24 15.7	40	3 20	4 01	4 34	19 33	47	3 50	75					
18	89	12.2	-23	02.8	269	53.2	27	+24 09.7	45	2 50	3 39	4 16	19 52	44	3 29	78					
19	104	11.9		02.6	284	14.9	27	+24 03.6	50	2 06	3 10	3 54	20 15	39	3 03	81					
20	119	11.6		02.4	298	36.8	29	+23 57.2	52	1 39	2 55	44	26 37		2 51	82					
21	134	11.3		02.2	312	58.6	28	50.7	54	0 58	38	31	39 34		36	85					
22	149	11.0		02.0	327	20.6	30	43.9	56	** **	2 16	18	20 53	30	20	87					
23	164	10.7		01.8	341	42.5	29	37.0	58	** **	1 48	3 01	21 10	26	2 00	91					
24	179	10.5	-23	01.6	356	04.6	31	+23 30.0	60 S	** **	1 03	2 41	21 31	19	1 34	97					
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO								
	PMG 17 ^h 18 ^m 9			Mag: -4.0 PMG: 11 ^h 51 ^m			Mag: -0.8 PMG: 2 ^h 52 ^m			Mag: -2.1 PMG: 15 ^h 15 ^m			Mag: +0.9 PMG: 5 ^h 41 ^m								
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'					
0	99	33.4	182	21.4	-23	40.4	316	56.8	+18	40.0	130	49.8	-13	40.7	274	32.2					
1	114	35.8	197	20.4		40.3	331	59.6		40.2	145	51.8		40.5	289	34.6					
2	129	38.3	212	19.4		40.2	347	02.3		40.4	160	53.7		40.4	304	37.0					
3	144	40.8	227	18.4		40.2	2	05.1		40.6	175	55.7		40.2	319	39.4					
4	159	43.2	242	17.5		40.1	17	07.9		40.8	190	57.7		40.0	334	41.8					
5	174	45.7	257	16.5	-23	40.0	32	10.7	+18	41.1	205	59.7	-13	39.8	349	44.2					
6	189	48.2	272	15.5	-23	40.0	47	13.5	+18	41.3	221	01.6	-13	39.7	4	46.6					
7	204	50.6	287	14.6		39.9	62	16.3		41.5	236	03.6		39.5	19	49.0					
8	219	53.1	302	13.6		39.8	77	19.1		41.7	251	05.6		39.3	34	51.4					
9	234	55.5	317	12.6		39.8	92	21.9		41.9	266	07.6		39.1	49	53.8					
10	249	58.0	332	11.6		39.7	107	24.7		42.1	281	09.6		39.0	64	56.2					
11	265	00.5	347	10.7	-23	39.6	122	27.5	+18	42.3	296	11.5	-13	38.8	79	58.6					
12	280	02.9	2	09.7	-23	39.5	137	30.3	+18	42.5	311	13.5	-13	38.6	95	01.0					
13	295	05.4	17	08.7		39.5	152	33.1		42.8	326	15.5		38.5	110	03.4					
14	310	07.9	32	07.8		39.4	167	35.9		43.0	341	17.5		38.3	125	05.8					
15	325	10.3	47	06.8		39.3	182	38.7		43.2	356	19.4		38.1	140	08.2					
16	340	12.8	62	05.8		39.2	197	41.5		43.4	11	21.4		37.9	155	10.6					
17	355	15.3	77	04.9	-23	39.1	212	44.3	+18	43.6	26	23.4	-13	37.8	170	13.1					
18	10	17.7	92	03.9	-23	39.0	227	47.1	+18	43.8	41	25.4	-13	37.6	185	15.5					
19	25	20.2	107	02.9		39.0	242	49.9		44.0	56	27.4		37.4	200	17.9					
20	40	22.7	122	01.9		38.9	257	52.7		44.3	71	29.3		37.2	215	20.3					
21	55	25.1	137	01.0		38.8	272	55.5		44.5	86	31.3		37.1	230	22.7					
22	70	27.6	152	00.0		38.7	287	58.3		44.7	101	33.3		36.9	245	25.1					
23	85	30.0	166	59.0		38.6	303	01.1		44.9	116	35.3		36.7	260	27.5					
24	100	32.5	181	58.1	-23	38.5	318	03.9	+18	45.1	131	37.2	-13	36.5	275	29.9					
Dif	—			-10			+1			+28			+2			+20			+2		

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:3 PMG: 12 ^h 03 ^m 5			Edad: 15 ^d 5 PHE { 4 ^h : 61'1 12 ^h : 61'1 20 ^h : 61'1 PMG: 0 ^h 16 ^m R°: 62 ^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	10.5	-23	01.6	356	04.6	+23	30.0	60 N	15 05	16 02	16 58	16 09 109	9 38 15
1	194	10.2		01.4	10	26.6	30	22.7	58	22	13	17 05	25 103	21 21
2	209	09.9		01.2	24	48.8	32	15.3	56	36	23	12	39 99	9 07 24
3	224	09.6		01.0	39	11.0	32	+23 07.7	54	48	32	18	16 51 95	8 54 28
4	239	09.3		00.8	53	33.3	33	+22 59.9	52	15 59	40	23	17 01 92	43 31
5	254	09.0	-23	00.6	67	55.6	33	+22 52.0	50	16 09	16 47	17 28	17 11 89	8 33 34
6	269	08.7	-23	00.4	82	18.0	34	+22 43.8	45	16 29	17 03	17 40	17 30 84	8 13 38
7	284	08.4	-23	00.2	96	40.5	35	35.6	40	45	16	50	46 79	7 56 43
8	299	08.1	-23	00.0	111	03.1	36	27.1	35	16 59	27	17 59	17 59 76	41 47
9	314	07.8	-22	59.8	125	25.7	36	18.5	30	17 11	38	18 07	18 11 72	29 49
10	329	07.5		59.6	139	48.4	37	09.7	20	32	17 56	23	31 67	7 08 53
11	344	07.2	-22	59.4	154	11.2	38	+22 00.8	10 N	17 50	18 13	18 39	18 48 63	6 49 57
12	359	06.9	-22	59.2	168	34.0	38	+21 51.7	0	18 07	18 30	18 56	19 04 59	6 31 61
13	14	06.6		59.0	182	57.0	40	42.4	10 S	24	18 47	19 14	20 54	6 14 64
14	29	06.3		58.8	197	20.0	40	33.0	20	18 43	19 08	19 37	37 50	5 55 68
15	44	06.0		58.6	211	43.1	41	23.4	30	19 05	32	20 05	19 56 45	33 73
16	59	05.8		58.3	226	06.3	42	13.7	35	17	19 47	23	20 07 43	20 75
17	74	05.5	-22	58.1	240	29.5	42	+21 03.8	40	19 32	20 05	20 46	20 20 39	5 05 79
18	89	05.2	-22	57.9	254	52.9	44	+20 53.8	45	19 50	20 27	21 16	20 36 34	4 47 83
19	104	04.9		57.7	269	16.3	44	43.6	50	20 12	20 56	21 59	20 54 29	24 88
20	119	04.6		57.5	283	39.8	45	33.3	52	22	21 10	22 25	21 03 26	13 91
21	134	04.3		57.3	298	03.5	47	22.8	54	34	27	23 05	13 23	4 01 94
22	149	04.0		57.1	312	27.2	47	12.2	56	20 48	21 48	** **	23 21	3 47 98
23	164	03.7		56.8	326	51.0	48	+20 01.5	58	21 04	22 16	** **	36 16	31 102
24	179	03.4	-22	56.6	341	14.9	49	+19 50.6	60 S	21 23	22 59	** **	21 50 11	3 11 109
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 17 ^h 15 ^m 0		Mag: -4.0 PMG: 11 ^h 53 ^m		Mag: -0.8 PMG: 2 ^h 47 ^m		Mag: -2.1 PMG: 15 ^h 12 ^m		Mag: +0.9 PMG: 5 ^h 37 ^m					
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄					
h	°	'	°	'	°	'	°	'	°	'				
0	100	32.5	181	58.1	-23	38.5	318	03.9	+18	45.1				
1	115	35.0	196	57.1		38.4	333	06.8		45.4				
2	130	37.4	211	56.1		38.3	348	09.6		45.6				
3	145	39.9	226	55.2		38.2	3	12.4		45.8				
4	160	42.4	241	54.2		38.1	18	15.2		46.0				
5	175	44.8	256	53.2	-23	38.0	33	18.0	+18	46.2				
6	190	47.3	271	52.2	-23	37.9	48	20.9	+18	46.5				
7	205	49.8	286	51.3		37.8	63	23.7		46.7				
8	220	52.2	301	50.3		37.7	78	26.5		46.9				
9	235	54.7	316	49.3		37.6	93	29.4		47.1				
10	250	57.2	331	48.4		37.5	108	32.2		47.3				
11	265	59.6	346	47.4	-23	37.4	123	35.0	+18	47.6				
12	281	02.1	1	46.4	-23	37.3	138	37.8	+18	47.8				
13	296	04.5	16	45.5		37.2	153	40.7		48.0				
14	311	07.0	31	44.5		37.1	168	43.5		48.2				
15	326	09.5	46	43.5		37.0	183	46.4		48.5				
16	341	11.9	61	42.6		36.9	198	49.2		48.7				
17	356	14.4	76	41.6	-23	36.8	213	52.0	+18	48.9				
18	11	16.9	91	40.6	-23	36.7	228	54.9	+18	49.1				
19	26	19.3	106	39.7		36.6	243	57.7		49.4				
20	41	21.8	121	38.7		36.4	259	00.6		49.6				
21	56	24.3	136	37.7		36.3	274	03.4		49.8				
22	71	26.7	151	36.8		36.2	289	06.2		50.0				
23	86	29.2	166	35.8		36.1	304	09.1		50.3				
24	101	31.7	181	34.8	-23	36.0	319	11.9	+18	50.5				
Dif	—		-10		+1		+28		+2					
							+20		+2					
									+24					
									0					

Nº	NOMBRE	Mag		Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
			°	/	/	/	/	/	/	/	/	/	/	/	/
1 - α And	<i>Alpheratz</i>	2.1	357	47.1	47.2	47.2	47.1	47.0	46.7	46.4	46.2	46.1	46.0	46.1	46.2
2 - β Cas	<i>Caph</i>	2.3	357	35.2	35.4	35.4	35.3	35.1	34.7	34.3	34.0	33.8	33.7	33.8	34.0
3 - γ Peg	<i>Algenib</i>	2.8	356	34.4	34.5	34.5	34.4	34.2	34.0	33.8	33.5	33.4	33.4	33.4	33.5
4 - α Phe	<i>Ankaa</i>	2.4	353	18.9	19.0	19.1	19.0	18.8	18.6	18.3	18.0	17.9	17.8	17.9	18.0
5 - α Cas	<i>Schedar</i>	2.2	349	44.7	44.9	44.9	44.9	44.6	44.3	43.9	43.6	43.4	43.3	43.3	43.5
6 - β Cet	<i>Diphda</i>	2.0	348	59.2	59.3	59.3	59.3	59.1	58.9	58.7	58.4	58.3	58.2	58.3	58.3
7 - γ Cas	<i>Navi</i>	1.6	345	41.1	41.3	41.5	41.4	41.2	40.8	40.4	40.0	39.7	39.6	39.7	39.8
8 - β And	<i>Mirach</i>	2.1	342	26.3	26.4	26.4	26.4	26.3	26.0	25.7	25.5	25.3	25.2	25.2	25.2
9 - α Eri	<i>Achernar</i>	0.5	335	28.9	29.2	29.4	29.4	29.3	29.1	28.7	28.4	28.1	28.0	28.0	28.2
10 - γ And	<i>Almak</i>	2.3	328	52.9	53.0	53.1	53.2	53.1	52.8	52.5	52.2	52.0	51.8	51.7	51.8
12 - α Ari	<i>Hamal</i>	2.0	328	4.5	4.6	4.7	4.7	4.6	4.4	4.1	3.9	3.7	3.5	3.5	3.5
11 - α UMi	<i>Polaris</i>	2.0	318	74.6	87.9	98.4	104.3	102.7	94.2	81.3	66.1	52.1	42.6	38.6	41.6
13 - θ Eri	<i>Acamar</i>	3.3	315	20.5	20.7	20.9	21.0	21.0	20.8	20.6	20.3	20.1	19.9	19.8	19.9
14 - α Cet	<i>Menkar</i>	2.5	314	18.4	18.5	18.6	18.6	18.6	18.4	18.2	18.0	17.8	17.6	17.5	17.5
15 - β Per	<i>Algol</i>	2.1	312	48.2	48.3	48.5	48.5	48.5	48.3	48.0	47.7	47.4	47.2	47.1	47.1
16 - α Per	<i>Mirfak</i>	1.8	308	44.9	45.1	45.3	45.4	45.3	45.2	44.9	44.5	44.2	43.9	43.7	43.7
17 - η Tau	<i>Alcyone</i>	2.9	302	59.2	59.3	59.4	59.5	59.5	59.4	59.2	58.9	58.6	58.4	58.3	58.2
18 - γ Eri	<i>Zaurak</i>	3.0	300	22.8	22.9	23.0	23.1	23.1	23.0	22.9	22.6	22.4	22.2	22.1	22.0
19 - α Tau	<i>Aldebaran</i>	0.9	290	52.9	53.0	53.1	53.2	53.2	53.1	53.0	52.7	52.5	52.3	52.1	52.0
20 - β Ori	<i>Rigel</i>	0.1	281	14.9	15.0	15.1	15.2	15.3	15.2	15.1	14.9	14.7	14.5	14.3	14.2
21 - α Aur	<i>Capella</i>	0.1	280	38.9	39.0	39.2	39.4	39.4	39.3	39.2	38.9	38.5	38.2	38.0	37.8
22 - γ Ori	<i>Bellatrix</i>	1.6	278	35.2	35.3	35.4	35.5	35.6	35.5	35.4	35.2	35.0	34.7	34.6	34.4
23 - β Tau	<i>Elnath</i>	1.7	278	16.4	16.5	16.6	16.8	16.8	16.8	16.6	16.4	16.1	15.9	15.6	15.5
24 - δ Ori	<i>Mintaka</i>	2.2	276	52.5	52.5	52.6	52.8	52.8	52.8	52.6	52.5	52.2	52.0	51.8	51.7
25 - ε Ori	<i>Alnilam</i>	1.7	275	49.4	49.5	49.6	49.7	49.8	49.7	49.6	49.4	49.2	49.0	48.8	48.6
26 - ζ Ori	<i>Alnitak</i>	1.9	274	41.3	41.3	41.4	41.6	41.6	41.6	41.5	41.3	41.0	40.8	40.6	40.5
27 - κ Ori	<i>Saiph</i>	2.1	272	56.7	56.8	56.9	57.0	57.1	57.1	57.0	56.8	56.5	56.3	56.1	56.0
28 - α Ori	<i>Betelgeuse</i>	0.4	271	4.5	4.6	4.7	4.8	4.9	4.9	4.7	4.6	4.3	4.1	3.9	3.7
29 - β Aur	<i>Menkalinan</i>	1.9	269	56.4	56.4	56.6	56.8	56.9	56.8	56.7	56.4	56.1	55.8	55.5	55.3
30 - β CMa	<i>Mirzam</i>	2.0	264	13.0	13.1	13.2	13.3	13.4	13.4	13.3	13.2	13.0	12.7	12.5	12.4
31 - α Car	<i>Canopus</i>	-0.7	263	57.1	57.2	57.5	57.7	57.9	58.0	58.0	57.8	57.5	57.2	56.9	56.7
32 - γ Gem	<i>Alhena</i>	1.9	260	25.9	25.9	26.0	26.1	26.2	26.2	26.1	26.0	25.7	25.5	25.3	25.1
33 - α CMa	<i>Sirius</i>	-1.5	258	36.3	36.3	36.4	36.6	36.7	36.7	36.6	36.5	36.3	36.0	35.8	35.7
34 - ε CMa	<i>Adhara</i>	1.5	255	14.7	14.8	14.9	15.1	15.2	15.2	15.2	15.1	14.9	14.6	14.4	14.2
35 - δ CMa	<i>Wezen</i>	1.9	252	48.1	48.1	48.2	48.4	48.5	48.5	48.5	48.4	48.2	47.9	47.7	47.5
36 - η CMa	<i>Aludra</i>	2.5	248	52.7	52.7	52.8	53.0	53.1	53.2	53.1	53.0	52.8	52.6	52.3	52.1
37 - α Gem	<i>Castor</i>	2.0	246	11.7	11.6	11.7	11.9	12.0	12.0	12.0	11.8	11.6	11.3	11.1	10.8
38 - α CMi	<i>Procyon</i>	0.4	245	2.8	2.8	2.9	3.0	3.1	3.1	3.1	3.0	2.8	2.6	2.3	2.1
39 - β Gem	<i>Pollux</i>	1.1	243	31.3	31.3	31.4	31.5	31.6	31.6	31.6	31.5	31.3	31.0	30.8	30.5
40 - ζ Pup	<i>Naos</i>	2.3	239	0.9	0.9	1.0	1.2	1.4	1.5	1.5	1.4	1.2	1.0	0.7	0.5
41 - γ Vel	<i>Regor</i>	1.8	237	32.3	32.3	32.4	32.6	32.8	32.9	33.0	32.9	32.7	32.5	32.2	31.9
42 - ε Car	<i>Avior</i>	1.9	234	18.9	18.9	19.1	19.4	19.6	19.9	20.0	19.9	19.7	19.4	19.0	18.7
43 - δ Velorum		2.0	228	45.1	45.1	45.2	45.4	45.7	45.9	46.0	45.9	45.8	45.5	45.1	44.8
44 - ζ Hydrae		3.1	226	1.4	1.3	1.3	1.4	1.5	1.6	1.6	1.5	1.4	1.2	1.0	0.7
45 - λ Vel	<i>Suhail</i>	2.2	222	54.5	54.5	54.5	54.7	54.9	55.0	55.1	55.1	54.9	54.7	54.4	54.1
46 - β Car	<i>Miaplacidus</i>	1.7	221	39.8	39.8	40.0	40.3	40.8	41.2	41.4	41.5	41.3	40.9	40.4	39.9
47 - ι Car	<i>Aspidiske</i>	2.3	220	39.4	39.4	39.5	39.7	40.0	40.2	40.4	40.4	40.2	40.0	39.6	39.2
48 - α Lyn	<i>Elvashak</i>	3.1	219	35.3	35.2	35.2	35.3	35.4	35.5	35.5	35.5	35.3	35.1	34.9	34.6
49 - α Hyd	<i>Alphard</i>	2.0	217	59.0	58.9	58.9	59.0	59.1	59.2	59.2	59.2	59.1	58.9	58.7	58.4
50 - α Leo	<i>Regulus</i>	1.4	207	46.7	46.6	46.5	46.6	46.7	46.8	46.8	46.8	46.7	46.6	46.4	46.1

ESTRELLAS, 2009
Posiciones aparentes377
DECLINACIÓN

Nº	NOMBRE	Mag		Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
			°	/	/	/	/	/	/	/	/	/	/	/	/
1 - α And	<i>Alpheratz</i>	2.1	+29	8.6	8.5	8.5	8.4	8.4	8.5	8.6	8.7	8.8	8.9	9.0	9.0
2 - β Cas	<i>Caph</i>	2.3	+59	12.3	12.2	12.1	12.0	11.9	11.9	12.0	12.1	12.3	12.5	12.6	12.7
3 - γ Peg	<i>Algenib</i>	2.8	+15	14.2	14.1	14.1	14.0	14.1	14.2	14.3	14.4	14.5	14.5	14.5	14.5
4 - α Phe	<i>Ankaa</i>	2.4	-42	15.6	15.5	15.4	15.3	15.1	15.0	14.9	14.9	14.9	15.1	15.2	15.2
5 - α Cas	<i>Schedar</i>	2.2	+56	35.6	35.5	35.4	35.2	35.2	35.2	35.2	35.4	35.5	35.7	35.8	35.9
6 - β Cet	<i>Diphda</i>	2.0	-17	56.3	56.3	56.2	56.1	56.0	55.9	55.8	55.7	55.7	55.8	55.8	55.9
7 - γ Cas	<i>Navi</i>	1.6	+60	46.3	46.2	46.1	46.0	45.9	45.9	45.9	46.1	46.2	46.4	46.5	46.6
8 - β And	<i>Mirach</i>	2.1	+35	40.4	40.3	40.2	40.2	40.1	40.1	40.2	40.3	40.5	40.6	40.7	40.7
9 - α Eri	<i>Achernar</i>	0.5	-57	11.7	11.6	11.5	11.3	11.1	11.0	10.9	10.9	10.9	11.0	11.2	11.3
10 - γ And	<i>Almak</i>	2.3	+42	22.7	22.6	22.6	22.5	22.4	22.4	22.4	22.5	22.6	22.8	22.9	22.9
12 - α Ari	<i>Hamal</i>	2.0	+23	30.5	30.5	30.4	30.4	30.4	30.4	30.5	30.6	30.6	30.7	30.8	30.8
11 - α UMi	<i>Polaris</i>	2.0	+89	18.6	18.7	18.6	18.4	18.3	18.2	18.1	18.1	18.2	18.4	18.6	18.8
13 - θ Eri	<i>Acamar</i>	3.3	-40	16.2	16.3	16.2	16.1	16.0	15.8	15.7	15.6	15.6	15.7	15.8	15.9
14 - α Cet	<i>Menkar</i>	2.5	+4	7.6	7.5	7.5	7.6	7.6	7.7	7.7	7.8	7.9	7.9	7.9	7.8
15 - β Per	<i>Algol</i>	2.1	+40	59.7	59.7	59.6	59.6	59.5	59.5	59.5	59.5	59.6	59.7	59.8	59.9
16 - α Per	<i>Mirfak</i>	1.8	+49	53.9	53.9	53.8	53.8	53.7	53.6	53.6	53.6	53.7	53.8	53.9	54.0
17 - η Tau	<i>Alcyone</i>	2.9	+24	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.2	8.2	8.3	8.3
18 - γ Eri	<i>Zaurak</i>	3.0	-13	29.0	29.0	29.0	29.0	28.9	28.8	28.7	28.6	28.6	28.6	28.7	28.8
19 - α Tau	<i>Aldebaran</i>	0.9	+16	31.7	31.7	31.7	31.7	31.7	31.7	31.8	31.8	31.8	31.9	31.9	31.8
20 - β Ori	<i>Rigel</i>	0.1	-8	11.5	11.5	11.6	11.5	11.5	11.4	11.3	11.2	11.2	11.2	11.3	11.4
21 - α Aur	<i>Capella</i>	0.1	+46	0.6	0.6	0.6	0.6	0.5	0.5	0.4	0.4	0.4	0.4	0.5	0.5
22 - γ Ori	<i>Bellatrix</i>	1.6	+6	21.5	21.5	21.5	21.5	21.5	21.5	21.6	21.6	21.7	21.7	21.6	21.6
23 - β Tau	<i>Elnath</i>	1.7	+28	37.0	37.0	37.0	37.0	37.0	36.9	36.9	36.9	36.9	37.0	37.0	37.0
24 - δ Ori	<i>Mintaka</i>	2.2	-0	17.5	17.6	17.6	17.6	17.6	17.5	17.4	17.4	17.3	17.3	17.4	17.5
25 - ϵ Ori	<i>Alnilam</i>	1.7	-1	11.8	11.8	11.8	11.8	11.8	11.7	11.7	11.6	11.6	11.6	11.6	11.7
26 - ζ Ori	<i>Alnitak</i>	1.9	-1	56.3	56.3	56.3	56.3	56.3	56.2	56.2	56.1	56.1	56.1	56.1	56.2
27 - κ Ori	<i>Saiph</i>	2.1	-9	40.0	40.1	40.1	40.1	40.0	40.0	39.9	39.8	39.7	39.8	39.8	39.9
28 - α Ori	<i>Betelgeuse</i>	0.4	+7	24.5	24.5	24.5	24.5	24.5	24.6	24.6	24.6	24.7	24.7	24.6	24.6
29 - β Aur	<i>Menkalinan</i>	1.9	+44	57.0	57.1	57.1	57.1	57.0	56.9	56.9	56.8	56.8	56.8	56.8	56.9
30 - β CMa	<i>Mirzam</i>	2.0	-17	57.7	57.8	57.8	57.8	57.7	57.6	57.5	57.4	57.4	57.4	57.5	57.6
31 - α Car	<i>Canopus</i>	-0.7	-52	42.1	42.2	42.3	42.3	42.2	42.1	41.9	41.8	41.7	41.7	41.8	42.0
32 - γ Gem	<i>Alhena</i>	1.9	+16	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.4
33 - α CMa	<i>Sirius</i>	-1.5	-16	43.7	43.8	43.9	43.9	43.8	43.8	43.7	43.6	43.5	43.5	43.6	43.8
34 - ϵ CMa	<i>Adhara</i>	1.5	-28	59.1	59.2	59.3	59.3	59.3	59.1	59.0	58.9	58.8	58.8	58.9	59.1
35 - δ CMa	<i>Wezen</i>	1.9	-26	24.5	24.6	24.7	24.7	24.6	24.6	24.4	24.3	24.3	24.3	24.3	24.5
36 - η CMa	<i>Aludra</i>	2.5	-29	19.3	19.4	19.5	19.5	19.5	19.4	19.3	19.1	19.1	19.1	19.1	19.3
37 - α Gem	<i>Castor</i>	2.0	+31	52.1	52.1	52.1	52.2	52.2	52.1	52.1	52.0	52.0	51.9	51.9	51.9
38 - α CMi	<i>Procyon</i>	0.4	+5	12.1	12.0	12.0	12.0	12.0	12.0	12.1	12.1	12.1	12.1	12.0	11.9
39 - β Gem	<i>Pollux</i>	1.1	+28	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.2	0.1	0.1	0.0	0.0
40 - ζ Pup	<i>Naos</i>	2.3	-40	1.7	1.9	2.0	2.0	2.0	1.9	1.8	1.7	1.6	1.6	1.6	1.8
41 - γ Vel	<i>Regor</i>	1.8	-47	21.8	22.0	22.1	22.1	22.1	22.0	21.9	21.8	21.7	21.6	21.7	21.8
42 - ϵ Car	<i>Avior</i>	1.9	-59	32.3	32.5	32.6	32.7	32.7	32.6	32.5	32.3	32.2	32.1	32.2	32.3
43 - δ Velorum		2.0	-54	44.5	44.7	44.8	44.9	44.9	44.8	44.7	44.6	44.4	44.4	44.4	44.5
44 - ζ Hydrae		3.1	+5	54.6	54.5	54.5	54.5	54.5	54.5	54.6	54.6	54.6	54.5	54.5	54.4
45 - λ Vel	<i>Suhail</i>	2.2	-43	28.1	28.3	28.4	28.5	28.5	28.5	28.4	28.2	28.1	28.1	28.1	28.2
46 - β Car	<i>Miaplacidus</i>	1.7	-69	45.2	45.4	45.5	45.7	45.7	45.7	45.5	45.4	45.2	45.2	45.2	45.3
47 - ι Car	<i>Aspidiske</i>	2.3	-59	18.7	18.9	19.1	19.2	19.2	19.2	19.1	18.9	18.8	18.7	18.7	18.8
48 - α Lyn	<i>Elvashak</i>	3.1	+34	21.1	21.1	21.2	21.2	21.3	21.2	21.2	21.1	21.0	21.0	20.9	20.8
49 - α Hyd	<i>Alphard</i>	2.0	-8	41.9	42.0	42.1	42.1	42.1	42.1	42.0	42.0	41.9	41.9	42.0	42.1
50 - α Leo	<i>Regulus</i>	1.4	+11	55.2	55.2	55.2	55.2	55.2	55.2	55.3	55.3	55.2	55.2	55.1	55.0

Nº	NOMBRE	Mag		Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
			°	/	/	/	/	/	/	/	/	/	/	/	/
51 - μ	Velorum	2.7	198	12.2	12.0	12.0	12.0	12.2	12.3	12.5	12.6	12.5	12.4	12.1	11.7
52 - ν	Hydrae	3.1	197	28.5	28.4	28.3	28.3	28.4	28.5	28.6	28.6	28.5	28.4	28.2	28.0
53 - β	UMa Merak	2.4	194	23.5	23.3	23.2	23.3	23.4	23.6	23.8	23.9	23.8	23.7	23.4	23.0
54 - α	UMa Dubhe	1.8	193	55.0	54.7	54.6	54.7	54.9	55.1	55.4	55.5	55.4	55.3	54.9	54.5
55 - β	Leo Denebola	2.1	182	36.8	36.6	36.5	36.5	36.5	36.6	36.7	36.8	36.8	36.7	36.5	36.3
56 - γ	Crv Gienah	2.6	175	55.6	55.4	55.3	55.2	55.3	55.3	55.4	55.5	55.5	55.5	55.3	55.1
57 - α	Cru Acrux	1.4	173	13.1	12.8	12.6	12.5	12.6	12.8	13.0	13.3	13.4	13.3	13.1	12.6
58 - γ	Cru Gacrux	1.6	172	4.7	4.3	4.2	4.1	4.1	4.3	4.5	4.7	4.8	4.7	4.5	4.1
59 - γ	Cen Muhlifain	2.2	169	29.5	29.2	29.0	28.9	29.0	29.1	29.2	29.4	29.4	29.4	29.2	28.9
60 - β	Cru Mimosa	1.3	167	56.0	55.6	55.4	55.3	55.3	55.5	55.7	55.9	56.0	56.0	55.8	55.4
61 - ε	UMa Alioth	1.8	166	23.2	22.9	22.7	22.6	22.7	22.9	23.1	23.3	23.4	23.4	23.3	23.0
62 - α^2	CVn Cor Caroli	2.9	165	52.9	52.7	52.5	52.4	52.5	52.6	52.7	52.8	52.9	52.9	52.8	52.5
63 - ε	Vir Vindemiatrix	2.8	164	20.3	20.1	20.0	19.9	19.9	19.9	20.0	20.1	20.1	20.1	20.0	19.8
64 - ζ	UMa Mizar	2.3	158	55.4	55.0	54.8	54.7	54.7	54.9	55.1	55.3	55.5	55.5	55.4	55.2
65 - α	Vir Spica	1.0	158	34.7	34.5	34.3	34.2	34.2	34.3	34.3	34.4	34.5	34.5	34.4	34.1
66 - η	UMa Alkaid	1.9	153	1.3	1.0	0.8	0.7	0.7	0.8	1.0	1.1	1.3	1.4	1.3	1.1
67 - β	Cen Hadar	0.6	148	52.9	52.5	52.2	51.9	51.9	51.9	52.1	52.3	52.5	52.6	52.5	52.2
68 - θ	Cen Menkent	2.1	148	11.6	11.3	11.1	11.0	10.9	10.9	11.0	11.1	11.2	11.3	11.2	10.9
69 - α	Boo Arcturus	0.0	145	58.7	58.5	58.3	58.2	58.1	58.2	58.2	58.3	58.4	58.5	58.4	58.3
70 - α^1	Cen Rigil Kentaurus	0.0	139	56.7	56.3	55.9	55.7	55.6	55.6	55.8	56.0	56.2	56.4	56.3	56.0
71 - α^2	Lib Zubenelgenubi	2.8	137	9.2	8.9	8.7	8.6	8.5	8.5	8.5	8.6	8.7	8.8	8.7	8.6
72 - β	UMi Kochab	2.1	137	19.9	19.2	18.7	18.3	18.3	18.6	19.1	19.7	20.2	20.6	20.7	20.5
73 - β	Lib Zubeneschamali	2.6	130	37.5	37.3	37.1	36.9	36.8	36.7	36.8	36.9	37.0	37.0	37.0	36.9
74 - α	CrB Alphecca	2.2	126	13.9	13.7	13.5	13.3	13.2	13.1	13.2	13.3	13.5	13.6	13.6	13.5
75 - α	Ser Unukalhai	2.7	123	49.3	49.0	48.8	48.6	48.5	48.5	48.5	48.6	48.7	48.8	48.8	48.7
76 - α	Sco Antares	0.9	112	30.6	30.3	30.1	29.8	29.7	29.6	29.6	29.6	29.8	29.9	29.9	29.8
77 - α	TrA Atria	1.9	107	35.9	35.4	34.8	34.2	33.8	33.6	33.6	33.9	34.2	34.6	34.7	34.6
78 - ε	Scorpii	2.3	107	18.8	18.5	18.3	18.0	17.8	17.7	17.7	17.7	17.9	18.0	18.1	18.0
79 - η	Oph Sabik	2.4	102	16.6	16.4	16.1	15.9	15.7	15.6	15.6	15.7	15.9	15.9	15.9	15.9
80 - α	Her Rasalgethi	3.1	101	14.2	14.0	13.8	13.5	13.4	13.3	13.3	13.3	13.4	13.6	13.7	13.6
81 - λ	Sco Shaula	1.6	96	26.7	26.5	26.2	25.9	25.7	25.5	25.5	25.5	25.7	25.8	25.9	25.8
82 - α	Oph Rasalhague	2.1	96	9.8	9.6	9.4	9.2	9.0	8.9	8.8	8.9	9.0	9.1	9.2	9.2
83 - θ	Sco Sargas	1.9	95	30.6	30.3	30.0	29.7	29.4	29.3	29.2	29.3	29.4	29.6	29.7	29.6
84 - γ	Dra Eltanin	2.2	90	48.2	47.9	47.7	47.3	47.1	47.0	47.0	47.1	47.4	47.6	47.8	47.9
85 - ε	Sgr Kaus Australis	1.9	83	48.5	48.3	48.1	47.8	47.5	47.3	47.2	47.2	47.4	47.5	47.6	47.6
86 - α	Lyr Vega	0.0	80	41.6	41.4	41.2	41.0	40.7	40.6	40.5	40.6	40.7	40.9	41.1	41.1
87 - σ	Sgr Nunki	2.0	76	2.7	2.5	2.3	2.1	1.8	1.6	1.5	1.5	1.6	1.7	1.8	1.8
88 - α	Aql Altair	0.8	62	11.8	11.7	11.5	11.3	11.1	10.9	10.7	10.7	10.8	10.9	11.0	11.0
89 - γ	Cyg Sadr	2.2	54	22.0	22.0	21.8	21.5	21.3	21.0	20.9	20.9	20.9	21.1	21.3	21.4
90 - α	Pav Peacock	1.9	53	24.8	24.7	24.4	24.1	23.7	23.3	23.1	23.0	23.0	23.2	23.5	23.6
91 - α	Cyg Deneb	1.3	49	34.3	34.2	34.1	33.8	33.5	33.3	33.1	33.0	33.1	33.3	33.5	33.6
92 - α	Cep Alderamin	2.4	40	18.8	18.8	18.6	18.3	17.9	17.5	17.3	17.2	17.3	17.5	17.9	18.1
93 - ε	Peg Enif	0.7	33	50.6	50.6	50.5	50.4	50.1	49.9	49.7	49.6	49.6	49.6	49.7	49.8
94 - δ	Cap Deneb Algedi	2.9	33	7.0	6.9	6.8	6.7	6.4	6.2	6.0	5.8	5.8	5.9	6.0	6.1
95 - α	Gru Al Na'ir	1.7	27	48.0	48.0	47.9	47.7	47.4	47.1	46.8	46.6	46.6	46.7	46.9	47.0
96 - β	Gruis	2.1	19	11.9	12.0	11.9	11.7	11.5	11.1	10.8	10.6	10.6	10.6	10.8	10.9
97 - α	PsA Fomalhaut	1.2	15	27.7	27.8	27.7	27.6	27.4	27.1	26.8	26.7	26.6	26.6	26.7	26.8
98 - β	Peg Scheat	2.4	13	56.9	56.9	56.9	56.8	56.5	56.3	56.0	55.9	55.8	55.8	55.9	56.0
99 - α	Peg Markab	2.5	13	41.8	41.9	41.8	41.7	41.5	41.3	41.0	40.9	40.8	40.8	40.9	41.0

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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	28.0	28.2	28.3	28.5	28.5	28.5	28.5	28.4	28.2	28.1	28.1	28.2
52 - ν	Hydrae	3.1	-16	14.5	14.6	14.7	14.8	14.8	14.8	14.7	14.7	14.6	14.6	14.6	14.7
53 - β	UMa Merak	2.4	+56	19.7	19.8	19.9	20.0	20.1	20.1	20.0	19.9	19.8	19.6	19.5	19.4
54 - α	UMa Dubhe	1.8	+61	41.8	41.9	42.0	42.1	42.2	42.2	42.1	42.0	41.8	41.7	41.5	41.4
55 - β	Leo Denebola	2.1	+14	31.1	31.0	31.0	31.0	31.1	31.1	31.2	31.1	31.1	31.0	30.9	30.8
56 - γ	Crv Gienah	2.6	-17	35.6	35.7	35.8	35.9	35.9	35.9	35.8	35.8	35.7	35.7	35.7	35.8
57 - α	Cru Acrux	1.4	-63	8.8	8.9	9.1	9.3	9.4	9.5	9.5	9.4	9.3	9.2	9.1	9.0
58 - γ	Cru Gacrux	1.6	-57	9.7	9.8	10.0	10.2	10.3	10.3	10.3	10.3	10.2	10.0	9.9	9.9
59 - γ	Cen Muhlifain	2.2	-49	0.5	0.6	0.7	0.9	1.0	1.1	1.0	1.0	0.9	0.8	0.7	0.7
60 - β	Cru Mimosa	1.3	-59	44.1	44.3	44.4	44.6	44.7	44.8	44.8	44.7	44.6	44.5	44.4	44.4
61 - ϵ	UMa Alioth	1.8	+55	54.2	54.2	54.3	54.5	54.6	54.7	54.7	54.6	54.5	54.3	54.1	54.0
62 - α^2	CVn Cor Caroli	2.9	+38	15.8	15.8	15.8	15.9	16.0	16.1	16.2	16.1	16.0	15.9	15.7	15.6
63 - ϵ	Vir Vindemiatrix	2.8	+10	54.4	54.3	54.3	54.3	54.4	54.4	54.5	54.5	54.5	54.4	54.3	54.2
64 - ζ	UMa Mizar	2.3	+54	52.3	52.3	52.3	52.5	52.6	52.7	52.7	52.7	52.6	52.4	52.2	52.1
65 - α	Vir Spica	1.0	-11	12.6	12.7	12.8	12.8	12.8	12.8	12.8	12.7	12.7	12.7	12.7	12.8
66 - η	UMa Alkaid	1.9	+49	15.7	15.7	15.7	15.8	16.0	16.1	16.1	16.1	16.0	15.9	15.7	15.5
67 - β	Cen Hadar	0.6	-60	24.8	24.9	25.0	25.2	25.3	25.4	25.5	25.5	25.4	25.3	25.2	25.1
68 - θ	Cen Menkent	2.1	-36	24.8	24.9	25.0	25.1	25.2	25.3	25.3	25.2	25.2	25.1	25.1	25.1
69 - α	Boo Arcturus	0.0	+19	7.8	7.8	7.8	7.8	7.9	8.0	8.0	8.0	8.0	7.9	7.8	7.7
70 - α^1	Cen Rigil Kentaurus	0.0	-60	52.2	52.3	52.4	52.5	52.7	52.8	52.8	52.8	52.8	52.6	52.5	52.4
71 - α^2	Lib Zubenelgenubi	2.8	-16	4.8	4.9	5.0	5.0	5.0	5.0	5.0	5.0	5.0	4.9	4.9	5.0
72 - β	UMi Kochab	2.1	+74	6.7	6.6	6.7	6.8	7.0	7.1	7.2	7.2	7.1	6.9	6.7	6.6
73 - β	Lib Zubeneshamali	2.6	-9	25.1	25.2	25.2	25.2	25.2	25.2	25.2	25.1	25.1	25.1	25.1	25.2
74 - α	CrB Alphecca	2.2	+26	40.8	40.7	40.7	40.7	40.8	40.9	41.0	41.1	41.1	41.0	40.9	40.7
75 - α	Ser Unukalhai	2.7	+6	23.6	23.6	23.5	23.6	23.6	23.7	23.7	23.8	23.8	23.8	23.7	23.6
76 - α	Sco Antares	0.9	-26	27.1	27.2	27.2	27.2	27.3	27.3	27.3	27.3	27.3	27.3	27.2	27.2
77 - α	TrA Atria	1.9	-69	2.5	2.5	2.5	2.6	2.7	2.8	2.9	3.0	3.0	2.9	2.8	2.7
78 - ϵ	Scorpii	2.3	-34	18.6	18.6	18.6	18.6	18.7	18.7	18.8	18.8	18.8	18.7	18.7	18.7
79 - η	Oph Sabik	2.4	-15	44.2	44.3	44.3	44.3	44.3	44.3	44.3	44.2	44.2	44.2	44.2	44.2
80 - α	Her Rasalgethi	3.1	+14	22.6	22.5	22.5	22.5	22.6	22.7	22.8	22.9	22.9	22.9	22.8	22.7
81 - λ	Sco Shaula	1.6	-37	6.6	6.6	6.6	6.6	6.7	6.7	6.7	6.8	6.8	6.8	6.7	6.7
82 - α	Oph Rasalhague	2.1	+12	33.0	33.0	32.9	33.0	33.0	33.1	33.2	33.3	33.3	33.3	33.3	33.2
83 - θ	Sco Sargas	1.9	-43	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.4	0.4	0.3	0.2
84 - γ	Dra Eltanin	2.2	+51	29.1	28.9	28.9	28.9	29.0	29.2	29.3	29.5	29.5	29.5	29.4	29.3
85 - ϵ	Sgr Kaus Australis	1.9	-34	22.9	22.8	22.8	22.8	22.8	22.8	22.8	22.9	22.9	22.9	22.9	22.8
86 - α	Lyr Vega	0.0	+38	47.4	47.2	47.2	47.2	47.3	47.5	47.6	47.7	47.8	47.8	47.8	47.6
87 - σ	Sgr Nunki	2.0	-26	17.2	17.2	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1
88 - α	Aql Altair	0.8	+8	53.5	53.4	53.4	53.4	53.5	53.6	53.7	53.8	53.8	53.8	53.8	53.8
89 - γ	Cyg Sadr	2.2	+40	17.1	17.0	16.9	16.9	16.9	17.1	17.2	17.4	17.5	17.6	17.6	17.5
90 - α	Pav Peacock	1.9	-56	42.4	42.3	42.2	42.1	42.1	42.1	42.1	42.2	42.3	42.4	42.4	42.3
91 - α	Cyg Deneb	1.3	+45	18.8	18.7	18.5	18.5	18.6	18.7	18.9	19.0	19.2	19.3	19.3	19.2
92 - α	Cep Alderamin	2.4	+62	37.6	37.4	37.3	37.2	37.2	37.3	37.5	37.7	37.9	38.0	38.0	38.0
93 - ϵ	Peg Enif	0.7	+9	55.0	54.9	54.9	54.9	55.0	55.1	55.2	55.3	55.4	55.4	55.4	55.4
94 - δ	Cap Deneb Algedi	2.9	-16	5.2	5.2	5.2	5.1	5.0	4.9	4.9	4.8	4.8	4.9	4.9	4.9
95 - α	Gru Al Na'ir	1.7	-46	55.2	55.1	54.9	54.8	54.7	54.6	54.6	54.7	54.8	54.8	54.9	54.9
96 - β	Gruis	2.1	-46	50.4	50.3	50.2	50.0	49.9	49.8	49.8	49.8	49.9	50.0	50.1	50.1
97 - α	PsA Fomalhaut	1.2	-29	34.6	34.5	34.4	34.3	34.2	34.1	34.0	34.0	34.1	34.1	34.2	34.2
98 - β	Peg Scheat	2.4	+28	8.1	8.0	7.9	7.9	7.9	8.0	8.1	8.2	8.4	8.4	8.5	8.5
99 - α	Peg Markab	2.5	+15	15.3	15.3	15.2	15.2	15.3	15.3	15.5	15.6	15.7	15.7	15.7	15.7

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

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

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

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

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

2ª CORRECCIÓN

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

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

DETERMINACIÓN DE LA LATITUD
POR LA OBSERVACIÓN DE UNA ALTURA DE LA POLAR, 2009

TABLA I

h.L.Υ	Corr.	h.L.Υ	Corr.	h.L.Υ	Corr.	h.L.Υ	Corr.	h.L.Υ	Corr.	h.L.Υ	Corr.	h.L.Υ	Corr.
° /	'	° /	'	° /	'	° /	'	° /	'	° /	'	° /	'
0 00	-31.5	26 00	-40.2	52 00	-40.8	78 00	-33.1	104 00	-18.7	130 00	-0.6	156 00	+17.7
0 30	-31.7	26 30	-40.3	52 30	-40.7	78 30	-32.9	104 30	-18.4	130 30	-0.2	156 30	+18.0
1 00	-31.9	27 00	-40.4	53 00	-40.6	79 00	-32.7	105 00	-18.1	131 00	+0.1	157 00	+18.4
1 30	-32.2	27 30	-40.4	53 30	-40.5	79 30	-32.4	105 30	-17.8	131 30	+0.5	157 30	+18.7
2 00	-32.4	28 00	-40.5	54 00	-40.5	80 00	-32.2	106 00	-17.4	132 00	+0.9	158 00	+19.0
2 30	-32.6	28 30	-40.6	54 30	-40.4	80 30	-32.0	106 30	-17.1	132 30	+1.2	158 30	+19.3
3 00	-32.8	29 00	-40.7	55 00	-40.3	81 00	-31.7	107 00	-16.8	133 00	+1.6	159 00	+19.6
3 30	-33.1	29 30	-40.8	55 30	-40.2	81 30	-31.5	107 30	-16.4	133 30	+2.0	159 30	+20.0
4 00	-33.3	30 00	-40.8	56 00	-40.1	82 00	-31.3	108 00	-16.1	134 00	+2.3	160 00	+20.3
4 30	-33.5	30 30	-40.9	56 30	-40.0	82 30	-31.0	108 30	-15.8	134 30	+2.7	160 30	+20.6
5 00	-33.7	31 00	-41.0	57 00	-39.9	83 00	-30.8	109 00	-15.4	135 00	+3.0	161 00	+20.9
5 30	-33.9	31 30	-41.0	57 30	-39.8	83 30	-30.5	109 30	-15.1	135 30	+3.4	161 30	+21.2
6 00	-34.1	32 00	-41.1	58 00	-39.7	84 00	-30.3	110 00	-14.8	136 00	+3.8	162 00	+21.5
6 30	-34.3	32 30	-41.1	58 30	-39.6	84 30	-30.0	110 30	-14.4	136 30	+4.1	162 30	+21.8
7 00	-34.5	33 00	-41.2	59 00	-39.5	85 00	-29.8	111 00	-14.1	137 00	+4.5	163 00	+22.1
7 30	-34.7	33 30	-41.2	59 30	-39.4	85 30	-29.5	111 30	-13.7	137 30	+4.9	163 30	+22.5
8 00	-34.9	34 00	-41.3	60 00	-39.2	86 00	-29.3	112 00	-13.4	138 00	+5.2	164 00	+22.8
8 30	-35.1	34 30	-41.3	60 30	-39.1	86 30	-29.0	112 30	-13.0	138 30	+5.6	164 30	+23.1
9 00	-35.3	35 00	-41.3	61 00	-39.0	87 00	-28.8	113 00	-12.7	139 00	+5.9	165 00	+23.4
9 30	-35.5	35 30	-41.4	61 30	-38.9	87 30	-28.5	113 30	-12.4	139 30	+6.3	165 30	+23.7
10 00	-35.7	36 00	-41.4	62 00	-38.7	88 00	-28.2	114 00	-12.0	140 00	+6.6	166 00	+24.0
10 30	-35.9	36 30	-41.4	62 30	-38.6	88 30	-28.0	114 30	-11.7	140 30	+7.0	166 30	+24.3
11 00	-36.1	37 00	-41.5	63 00	-38.5	89 00	-27.7	115 00	-11.3	141 00	+7.4	167 00	+24.5
11 30	-36.2	37 30	-41.5	63 30	-38.3	89 30	-27.4	115 30	-11.0	141 30	+7.7	167 30	+24.8
12 00	-36.4	38 00	-41.5	64 00	-38.2	90 00	-27.1	116 00	-10.6	142 00	+8.1	168 00	+25.1
12 30	-36.6	38 30	-41.5	64 30	-38.0	90 30	-26.9	116 30	-10.3	142 30	+8.4	168 30	+25.4
13 00	-36.8	39 00	-41.5	65 00	-37.9	91 00	-26.6	117 00	-9.9	143 00	+8.8	169 00	+25.7
13 30	-36.9	39 30	-41.5	65 30	-37.8	91 30	-26.3	117 30	-9.6	143 30	+9.1	169 30	+26.0
14 00	-37.1	40 00	-41.6	66 00	-37.6	92 00	-26.0	118 00	-9.2	144 00	+9.5	170 00	+26.3
14 30	-37.3	40 30	-41.6	66 30	-37.4	92 30	-25.8	118 30	-8.8	144 30	+9.8	170 30	+26.5
15 00	-37.4	41 00	-41.6	67 00	-37.3	93 00	-25.5	119 00	-8.5	145 00	+10.2	171 00	+26.8
15 30	-37.6	41 30	-41.6	67 30	-37.1	93 30	-25.2	119 30	-8.1	145 30	+10.5	171 30	+27.1
16 00	-37.7	42 00	-41.5	68 00	-37.0	94 00	-24.9	120 00	-7.8	146 00	+10.9	172 00	+27.4
16 30	-37.9	42 30	-41.5	68 30	-36.8	94 30	-24.6	120 30	-7.4	146 30	+11.2	172 30	+27.6
17 00	-38.0	43 00	-41.5	69 00	-36.6	95 00	-24.3	121 00	-7.1	147 00	+11.6	173 00	+27.9
17 30	-38.2	43 30	-41.5	69 30	-36.4	95 30	-24.0	121 30	-6.7	147 30	+11.9	173 30	+28.2
18 00	-38.3	44 00	-41.5	70 00	-36.3	96 00	-23.7	122 00	-6.4	148 00	+12.3	174 00	+28.5
18 30	-38.4	44 30	-41.5	70 30	-36.1	96 30	-23.4	122 30	-6.0	148 30	+12.6	174 30	+28.7
19 00	-38.6	45 00	-41.4	71 00	-35.9	97 00	-23.1	123 00	-5.6	149 00	+13.0	175 00	+29.0
19 30	-38.7	45 30	-41.4	71 30	-35.7	97 30	-22.8	123 30	-5.3	149 30	+13.3	175 30	+29.2
20 00	-38.8	46 00	-41.4	72 00	-35.5	98 00	-22.5	124 00	-4.9	150 00	+13.7	176 00	+29.5
20 30	-39.0	46 30	-41.3	72 30	-35.4	98 30	-22.2	124 30	-4.6	150 30	+14.0	176 30	+29.7
21 00	-39.1	47 00	-41.3	73 00	-35.2	99 00	-21.9	125 00	-4.2	151 00	+14.4	177 00	+30.0
21 30	-39.2	47 30	-41.3	73 30	-35.0	99 30	-21.6	125 30	-3.8	151 30	+14.7	177 30	+30.2
22 00	-39.3	48 00	-41.2	74 00	-34.8	100 00	-21.3	126 00	-3.5	152 00	+15.0	178 00	+30.5
22 30	-39.5	48 30	-41.2	74 30	-34.6	100 30	-21.0	126 30	-3.1	152 30	+15.4	178 30	+30.7
23 00	-39.6	49 00	-41.1	75 00	-34.4	101 00	-20.6	127 00	-2.7	153 00	+15.7	179 00	+31.0
23 30	-39.7	49 30	-41.1	75 30	-34.2	101 30	-20.3	127 30	-2.4	153 30	+16.0	179 30	+31.2
24 00	-39.8	50 00	-41.0	76 00	-34.0	102 00	-20.0	128 00	-2.0	154 00	+16.4	180 00	+31.5
24 30	-39.9	50 30	-41.0	76 30	-33.7	102 30	-19.7	128 30	-1.7	154 30	+16.7	180 30	+31.7
25 00	-40.0	51 00	-40.9	77 00	-33.5	103 00	-19.4	129 00	-1.3	155 00	+17.0	181 00	+31.9
25 30	-40.1	51 30	-40.8	77 30	-33.3	103 30	-19.1	129 30	-0.9	155 30	+17.4	181 30	+32.2
26 00	-40.2	52 00	-40.8	78 00	-33.1	104 00	-18.7	130 00	-0.6	156 00	+17.7	182 00	+32.4

DETERMINACIÓN DE LA LATITUD
POR LA OBSERVACIÓN DE UNA ALTURA DE LA POLAR, 2009

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TABLA I

h.L.Υ	Corr.	h.L.Υ	Corr.	h.L.Υ	Corr.	h.L.Υ	Corr.	h.L.Υ	Corr.	h.L.Υ	Corr.	h.L.Υ	Corr.
° /	'	° /	'	° /	'	° /	'	° /	'	° /	'	° /	'
182 00	+32.4	208 00	+40.5	234 00	+40.5	260 00	+32.2	286 00	+17.4	312 00	-0.9	338 00	-19.0
182 30	+32.6	208 30	+40.6	234 30	+40.4	260 30	+32.0	286 30	+17.1	312 30	-1.2	338 30	-19.3
183 00	+32.8	209 00	+40.7	235 00	+40.3	261 00	+31.7	287 00	+16.8	313 00	-1.6	339 00	-19.6
183 30	+33.1	209 30	+40.8	235 30	+40.2	261 30	+31.5	287 30	+16.4	313 30	-2.0	339 30	-20.0
184 00	+33.3	210 00	+40.8	236 00	+40.1	262 00	+31.3	288 00	+16.1	314 00	-2.3	340 00	-20.3
184 30	+33.5	210 30	+40.9	236 30	+40.0	262 30	+31.0	288 30	+15.8	314 30	-2.7	340 30	-20.6
185 00	+33.7	211 00	+41.0	237 00	+39.9	263 00	+30.8	289 00	+15.4	315 00	-3.0	341 00	-20.9
185 30	+33.9	211 30	+41.0	237 30	+39.8	263 30	+30.5	289 30	+15.1	315 30	-3.4	341 30	-21.2
186 00	+34.1	212 00	+41.1	238 00	+39.7	264 00	+30.3	290 00	+14.8	316 00	-3.8	342 00	-21.5
186 30	+34.3	212 30	+41.1	238 30	+39.6	264 30	+30.0	290 30	+14.4	316 30	-4.1	342 30	-21.8
187 00	+34.5	213 00	+41.2	239 00	+39.5	265 00	+29.8	291 00	+14.1	317 00	-4.5	343 00	-22.1
187 30	+34.7	213 30	+41.2	239 30	+39.4	265 30	+29.5	291 30	+13.7	317 30	-4.9	343 30	-22.5
188 00	+34.9	214 00	+41.3	240 00	+39.2	266 00	+29.3	292 00	+13.4	318 00	-5.2	344 00	-22.8
188 30	+35.1	214 30	+41.3	240 30	+39.1	266 30	+29.0	292 30	+13.0	318 30	-5.6	344 30	-23.1
189 00	+35.3	215 00	+41.3	241 00	+39.0	267 00	+28.8	293 00	+12.7	319 00	-5.9	345 00	-23.4
189 30	+35.5	215 30	+41.4	241 30	+38.9	267 30	+28.5	293 30	+12.4	319 30	-6.3	345 30	-23.7
190 00	+35.7	216 00	+41.4	242 00	+38.7	268 00	+28.2	294 00	+12.0	320 00	-6.6	346 00	-24.0
190 30	+35.9	216 30	+41.4	242 30	+38.6	268 30	+28.0	294 30	+11.7	320 30	-7.0	346 30	-24.3
191 00	+36.1	217 00	+41.5	243 00	+38.5	269 00	+27.7	295 00	+11.3	321 00	-7.4	347 00	-24.5
191 30	+36.2	217 30	+41.5	243 30	+38.3	269 30	+27.4	295 30	+11.0	321 30	-7.7	347 30	-24.8
192 00	+36.4	218 00	+41.5	244 00	+38.2	270 00	+27.1	296 00	+10.6	322 00	-8.1	348 00	-25.1
192 30	+36.6	218 30	+41.5	244 30	+38.0	270 30	+26.9	296 30	+10.3	322 30	-8.4	348 30	-25.4
193 00	+36.8	219 00	+41.5	245 00	+37.9	271 00	+26.6	297 00	+9.9	323 00	-8.8	349 00	-25.7
193 30	+36.9	219 30	+41.5	245 30	+37.8	271 30	+26.3	297 30	+9.6	323 30	-9.1	349 30	-26.0
194 00	+37.1	220 00	+41.6	246 00	+37.6	272 00	+26.0	298 00	+9.2	324 00	-9.5	350 00	-26.3
194 30	+37.3	220 30	+41.6	246 30	+37.4	272 30	+25.8	298 30	+8.8	324 30	-9.8	350 30	-26.5
195 00	+37.4	221 00	+41.6	247 00	+37.3	273 00	+25.5	299 00	+8.5	325 00	-10.2	351 00	-26.8
195 30	+37.6	221 30	+41.6	247 30	+37.1	273 30	+25.2	299 30	+8.1	325 30	-10.5	351 30	-27.1
196 00	+37.7	222 00	+41.5	248 00	+37.0	274 00	+24.9	300 00	+7.8	326 00	-10.9	352 00	-27.4
196 30	+37.9	222 30	+41.5	248 30	+36.8	274 30	+24.6	300 30	+7.4	326 30	-11.2	352 30	-27.6
197 00	+38.0	223 00	+41.5	249 00	+36.6	275 00	+24.3	301 00	+7.1	327 00	-11.6	353 00	-27.9
197 30	+38.2	223 30	+41.5	249 30	+36.4	275 30	+24.0	301 30	+6.7	327 30	-11.9	353 30	-28.2
198 00	+38.3	224 00	+41.5	250 00	+36.3	276 00	+23.7	302 00	+6.4	328 00	-12.3	354 00	-28.5
198 30	+38.4	224 30	+41.5	250 30	+36.1	276 30	+23.4	302 30	+6.0	328 30	-12.6	354 30	-28.7
199 00	+38.6	225 00	+41.4	251 00	+35.9	277 00	+23.1	303 00	+5.6	329 00	-13.0	355 00	-29.0
199 30	+38.7	225 30	+41.4	251 30	+35.7	277 30	+22.8	303 30	+5.3	329 30	-13.3	355 30	-29.2
200 00	+38.8	226 00	+41.4	252 00	+35.5	278 00	+22.5	304 00	+4.9	330 00	-13.7	356 00	-29.5
200 30	+39.0	226 30	+41.3	252 30	+35.4	278 30	+22.2	304 30	+4.6	330 30	-14.0	356 30	-29.7
201 00	+39.1	227 00	+41.3	253 00	+35.2	279 00	+21.9	305 00	+4.2	331 00	-14.4	357 00	-30.0
201 30	+39.2	227 30	+41.3	253 30	+35.0	279 30	+21.6	305 30	+3.8	331 30	-14.7	357 30	-30.2
202 00	+39.3	228 00	+41.2	254 00	+34.8	280 00	+21.3	306 00	+3.5	332 00	-15.0	358 00	-30.5
202 30	+39.5	228 30	+41.2	254 30	+34.6	280 30	+21.0	306 30	+3.1	332 30	-15.4	358 30	-30.7
203 00	+39.6	229 00	+41.1	255 00	+34.4	281 00	+20.6	307 00	+2.7	333 00	-15.7	359 00	-31.0
203 30	+39.7	229 30	+41.1	255 30	+34.2	281 30	+20.3	307 30	+2.4	333 30	-16.0	359 30	-31.2
204 00	+39.8	230 00	+41.0	256 00	+34.0	282 00	+20.0	308 00	+2.0	334 00	-16.4	360 00	-31.5
204 30	+39.9	230 30	+41.0	256 30	+33.7	282 30	+19.7	308 30	+1.7	334 30	-16.7		
205 00	+40.0	231 00	+40.9	257 00	+33.5	283 00	+19.4	309 00	+1.3	335 00	-17.0		
205 30	+40.1	231 30	+40.8	257 30	+33.3	283 30	+19.1	309 30	+0.9	335 30	-17.4		
206 00	+40.2	232 00	+40.8	258 00	+33.1	284 00	+18.7	310 00	+0.6	336 00	-17.7		
206 30	+40.3	232 30	+40.7	258 30	+32.9	284 30	+18.4	310 30	+0.2	336 30	-18.0		
207 00	+40.4	233 00	+40.6	259 00	+32.7	285 00	+18.1	311 00	-0.1	337 00	-18.4		
207 30	+40.4	233 30	+40.5	259 30	+32.4	285 30	+17.8	311 30	-0.5	337 30	-18.7		
208 00	+40.5	234 00	+40.5	260 00	+32.2	286 00	+17.4	312 00	-0.9	338 00	-19.0		

DETERMINACIÓN DE LA LATITUD
POR LA OBSERVACIÓN DE UNA ALTURA DE LA POLAR, 2009

TABLA II

(SIEMPRE POSITIVA)

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

TABLA III

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

Dic 32 corresponde al 1 de enero del año siguiente

hL [⌞]	Latitud												hL [⌞]
	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	
°	°	°	°	°	°	°	°	°	°	°	°	°	°
0	+0.5	+0.5	+0.5	+0.5	+0.5	+0.6	+0.6	+0.6	+0.7	+0.8	+0.9	+1.1	0
10	+0.4	+0.4	+0.4	+0.4	+0.4	+0.4	+0.5	+0.5	+0.6	+0.6	+0.7	+0.9	10
20	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.4	+0.4	+0.4	+0.5	+0.6	20
30	+0.1	+0.1	+0.1	+0.1	+0.2	+0.2	+0.2	+0.2	+0.2	+0.2	+0.3	+0.3	30
40	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	40
50	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.2	-0.2	-0.2	-0.2	-0.3	50
60	-0.2	-0.2	-0.2	-0.3	-0.3	-0.3	-0.3	-0.3	-0.4	-0.4	-0.5	-0.6	60
70	-0.3	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.5	-0.5	-0.6	-0.7	-0.8	70
80	-0.4	-0.5	-0.5	-0.5	-0.5	-0.5	-0.6	-0.6	-0.7	-0.8	-0.9	-1.1	80
90	-0.5	-0.5	-0.6	-0.6	-0.6	-0.6	-0.7	-0.7	-0.8	-0.9	-1.1	-1.3	90
100	-0.6	-0.6	-0.6	-0.7	-0.7	-0.7	-0.8	-0.8	-0.9	-1.0	-1.2	-1.4	100
110	-0.7	-0.7	-0.7	-0.7	-0.7	-0.8	-0.8	-0.9	-1.0	-1.1	-1.3	-1.5	110
120	-0.7	-0.7	-0.7	-0.8	-0.8	-0.8	-0.9	-1.0	-1.1	-1.2	-1.4	-1.6	120
130	-0.7	-0.7	-0.7	-0.8	-0.8	-0.8	-0.9	-1.0	-1.1	-1.2	-1.4	-1.6	130
140	-0.7	-0.7	-0.7	-0.8	-0.8	-0.8	-0.9	-1.0	-1.1	-1.2	-1.4	-1.6	140
150	-0.7	-0.7	-0.7	-0.7	-0.8	-0.8	-0.9	-0.9	-1.0	-1.1	-1.3	-1.5	150
160	-0.6	-0.6	-0.6	-0.7	-0.7	-0.7	-0.8	-0.8	-0.9	-1.0	-1.2	-1.4	160
170	-0.5	-0.6	-0.6	-0.6	-0.6	-0.7	-0.7	-0.8	-0.8	-0.9	-1.1	-1.2	170
180	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.6	-0.6	-0.7	-0.8	-0.9	-1.1	180
190	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.5	-0.5	-0.5	-0.6	-0.7	-0.8	190
200	-0.2	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.4	-0.4	-0.5	-0.6	200
210	-0.1	-0.1	-0.1	-0.1	-0.1	-0.2	-0.2	-0.2	-0.2	-0.2	-0.3	-0.3	210
220	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	220
230	+0.1	+0.1	+0.1	+0.1	+0.1	+0.1	+0.1	+0.2	+0.2	+0.2	+0.2	+0.3	230
240	+0.2	+0.2	+0.2	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.4	+0.4	+0.5	240
250	+0.3	+0.3	+0.4	+0.4	+0.4	+0.4	+0.4	+0.5	+0.5	+0.6	+0.7	+0.8	250
260	+0.4	+0.5	+0.5	+0.5	+0.5	+0.5	+0.6	+0.6	+0.7	+0.8	+0.9	+1.0	260
270	+0.5	+0.5	+0.6	+0.6	+0.6	+0.6	+0.7	+0.7	+0.8	+0.9	+1.0	+1.2	270
280	+0.6	+0.6	+0.6	+0.7	+0.7	+0.7	+0.8	+0.8	+0.9	+1.0	+1.2	+1.4	280
290	+0.7	+0.7	+0.7	+0.7	+0.7	+0.8	+0.8	+0.9	+1.0	+1.1	+1.3	+1.5	290
300	+0.7	+0.7	+0.7	+0.7	+0.8	+0.8	+0.9	+1.0	+1.1	+1.2	+1.4	+1.6	300
310	+0.7	+0.7	+0.7	+0.8	+0.8	+0.8	+0.9	+1.0	+1.1	+1.2	+1.4	+1.6	310
320	+0.7	+0.7	+0.7	+0.8	+0.8	+0.8	+0.9	+1.0	+1.1	+1.2	+1.4	+1.6	320
330	+0.7	+0.7	+0.7	+0.7	+0.8	+0.8	+0.9	+0.9	+1.0	+1.1	+1.3	+1.6	330
340	+0.6	+0.6	+0.6	+0.7	+0.7	+0.7	+0.8	+0.9	+0.9	+1.1	+1.2	+1.4	340
350	+0.5	+0.6	+0.6	+0.6	+0.6	+0.7	+0.7	+0.8	+0.8	+0.9	+1.1	+1.3	350
360	+0.5	+0.5	+0.5	+0.5	+0.5	+0.6	+0.6	+0.6	+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, 2009**

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TABLA A				TABLA B = SOL (LIMBO INFERIOR)											
Depresión del horizonte				Semidiámetro, refracción y paralaje										Correc. adicional (2009)	
Elevación del observador m	Corrección /	Elevación del observador m	Corrección /	Altura apte. ⊙	Corrección /	Altura apte. ⊙	Corrección /	Altura apte. ⊙	Corrección /	Altura apte. ⊙	Corrección /				
				6 15		8 45		13 23		25 59		Ene 1	+0'3		
1.6	-2.3	12.7	-6.4	6 21	+8.2	8 54	+10.2	13 44	+12.2	27 12	+14.2	Ene 22	+0'2		
1.7	-2.4	13.1	-6.5	6 27	+8.3	9 05	+10.3	14 06	+12.3	28 32	+14.3	Feb 26	+0'1		
1.9	-2.5	13.6	-6.6	6 33	+8.4	9 15	+10.4	14 29	+12.4	29 59	+14.4	Mar 22	0'0		
2.0	-2.6	14.0	-6.7	6 40	+8.5	9 26	+10.5	14 53	+12.5	31 34	+14.5	Abr 13	-0'1		
2.2	-2.7	14.4	-6.8	6 46	+8.6	9 37	+10.6	15 18	+12.6	33 19	+14.6	May 7	-0'2		
2.3	-2.8	14.8	-6.9	6 53	+8.7	9 47	+10.7	15 45	+12.7	35 16	+14.7	Jun 12	-0'3		
2.5	-2.9	15.3	-7.0	7 00	+8.8	10 00	+10.8	16 13	+12.8	37 25	+14.8	Jul 27	-0'2		
2.7	-3.0	15.7	-7.1	7 06	+8.9	10 12	+10.9	16 43	+12.9	39 49	+14.9	Sep 1	-0'1		
2.9	-3.1	16.2	-7.2	7 14	+9.0	10 25	+11.0	17 14	+13.0	42 30	+15.0	Sep 25	0'0		
3.1	-3.2	16.6	-7.3	7 21	+9.1	10 38	+11.1	17 47	+13.1	45 30	+15.1	Oct 17	+0'1		
3.3	-3.3	17.1	-7.4	7 28	+9.2	10 52	+11.2	18 23	+13.2	48 53	+15.2	Nov 10	+0'2		
3.5	-3.4	17.6	-7.5	7 36	+9.3	11 06	+11.3	19 01	+13.3	52 43	+15.3	Dic 15	+0'3		
3.7	-3.5	18.0	-7.6	7 44	+9.4	11 21	+11.4	19 41	+13.4	57 01	+15.4	Dic 31			
3.9	-3.6	18.5	-7.7	7 52	+9.5	11 36	+11.5	20 24	+13.5	61 51	+15.5				
4.2	-3.7	19.0	-7.8	8 00	+9.6	11 52	+11.6	21 10	+13.6	67 16	+15.6				
4.4	-3.8	19.5	-7.9	8 08	+9.7	12 09	+11.7	21 59	+13.7	73 14	+15.7				
4.7	-3.9	20.0	-8.0	8 17	+9.8	12 26	+11.8	22 53	+13.8	79 42	+15.8				
4.9	-4.0	20.5	-8.1	8 26	+10.0	12 44	+12.0	23 50	+13.9	86 30	+15.9				
5.2	-4.1	21.0	-8.2	8 35	+10.1	13 03	+12.1	24 52	+14.0	90 00	+16.0				
5.4	-4.2	21.5	-8.3	8 45		13 23		25 59							
5.7	-4.3	22.1	-8.4	TABLA C = PLANETAS Y ESTRELLAS											
6.0	-4.4	22.6	-8.5	Refracción				Paralaje (2009)							
6.2	-4.5	23.1	-8.6	Altura apte.	Corrección	Altura apte.	Corrección	Fechas	Venus para cualquier altura	Marte					
6.5	-4.6	23.7	-8.7							Altura aparente					
6.8	-4.7	24.2	-8.8	° /	/	° /	/			< 30°	> 30° < 60°	> 60°			
7.1	-4.8	24.8	-8.9	6 30	-7.8	14 00	-3.8	Ene 1	+0'2	+0'1	0'0	0'0			
7.4	-4.9	25.4	-9.0	6 40	-7.6	15 00	-3.6	Feb 4	+0'3	+0'1	0'0	0'0			
7.7	-5.0	25.9	-9.1	6 50	-7.5	16 00	-3.3	Feb 27	+0'4	+0'1	0'0	0'0			
8.0	-5.1	26.5	-9.2	7 00	-7.3	17 00	-3.1	Mar 17	+0'5	+0'1	0'0	0'0			
8.4	-5.2	27.1	-9.3	7 15	-7.1	18 00	-3.0	Abr 6	+0'4	+0'1	0'0	0'0			
8.7	-5.3	27.7	-9.4	7 30	-6.9	19 00	-2.8	Abr 24	+0'3	+0'1	0'0	0'0			
9.0	-5.4	28.3	-9.5	7 45	-6.7	20 00	-2.6	May 7	+0'3	+0'1	0'0	0'0			
9.4	-5.5	28.9	-9.6	8 00	-6.5	21 00	-2.5	May 15	+0'2	+0'1	0'0	0'0			
9.7	-5.6	29.5	-9.7	8 15	-6.3	22 00	-2.4	Jun 29	+0'1	+0'1	0'0	0'0			
10.1	-5.7	30.1	-9.8	8 30	-6.2	24 00	-2.2	Nov 23	+0'1	+0'1	0'0	0'0			
10.4	-5.8	30.7	-9.9	8 45	-6.0	26 00	-2.0	Dic 4	+0'1	+0'2	0'0	0'0			
10.8	-5.9	31.3	-10.0	9 00	-5.9	28 00	-1.8	Dic 31							
11.2	-6.0	32.0	-10.1	9 20	-5.7	32 00	-1.6								
11.6	-6.1	32.6	-10.2	9 40	-5.5	36 00	-1.3								
11.9	-6.2	33.3	-10.3	10 00	-5.3	40 00	-1.2								
12.3	-6.3	33.9	-10.4	10 30	-5.1	45 00	-1.0								
12.7		34.6		11 00	-4.8	50 00	-0.8								
				11 30	-4.6	60 00	-0.6								
				12 00	-4.5	70 00	-0.4								
				12 30	-4.3	80 00	-0.2								
				13 00	-4.1	90 00	0.0								

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